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: 3F1 Fy = 33.0 ksi DL Factor: 1.30 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

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$_{MIN}$	(No Impact) Pedestrian Load$_{MAX}$	(No Impact) Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	U_1 - U_1	-71.64	12.73	-72.01			0.90	1.24	14.17	-80.17	0.00	0.00	Vehicle	Vehicle	-----	-197.34	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	-----	-----	6.16	6.16
	U_1 - U_2	-90.83	25.68	-114.57			0.90	1.24	28.59	-127.56	0.00	0.00	Vehicle	Vehicle	-----	-283.90	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	-----	-----	3.72	3.72
	U_1 - U_3	-61.13	38.14	-126.52			0.90	1.24	42.46	-140.85	0.00	0.00	Vehicle	Vehicle	-----	-262.58	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	3.58	3.58
	U_1 - U_4	10.71	49.95	-117.98			0.90	1.24	55.61	-131.34	0.00	0.00	Vehicle	Vehicle	86.21	-156.83	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	11.88	11.88	4.39	4.39
	U_1 - U_5	12.86	50.22	-117.77			0.90	1.24	55.91	-131.11	0.00	0.00	Vehicle	Vehicle	89.40	-153.73	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	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	11.77	11.77	4.41	4.41
	U_1 - U_6	121.37	58.12	-92.65			0.90	1.24	64.70	-103.14	0.00	0.00	Vehicle	Vehicle	241.90	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	8.50	8.50	-----	-----
	U_2 - U_2	249.49	64.28	-56.12			0.90	1.24	71.57	-62.48	0.00	0.00	Vehicle	Vehicle	417.38	-----	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	-----	-----	7.75	7.75	-----	-----
	U_2 - U_3	376.92	65.54	-18.82			0.90	1.24	72.96	-20.95	0.00	0.00	Vehicle	Vehicle	584.84	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	10.05	10.05	-----	-----
	U_2 - U_5	319.74	70.62	-18.09			0.90	1.20	76.14	-19.51	0.00	0.00	Vehicle	Vehicle	514.64	-----	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	-----	-----	8.13	8.13	-----	-----
	U_2 - U_{19}	128.77	65.70	-53.19			0.90	1.20	70.84	-57.35	0.00	0.00	Vehicle	Vehicle	259.48	-----	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	-----	-----	8.19	8.19	-----	-----
	U_{19} - U_{11}	-70.90	59.22	-89.23			0.90	1.20	63.85	-96.21	0.00	0.00	Vehicle	Vehicle	-----	-217.24	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	-----	-----	5.47	5.47
	U_{11} - U_{12}	-252.96	52.48	-120.94			0.90	1.20	56.58	-130.39	0.00	0.00	Vehicle	Vehicle	-----	-498.36	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	4.29	4.29
	U_{12} - U_{13}	-391.95	45.01	-155.23			0.90	1.20	48.53	-167.36	0.00	0.00	Vehicle	Vehicle	-----	-727.10	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	-----	-----	4.45	4.45
	U_{13} - U_{14}	-482.99	37.52	-172.89			0.90	1.20	40.45	-186.41	0.00	0.00	Vehicle	Vehicle	-----	-870.23	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	-----	-----	4.53	4.53
	U_{14} - U_{15}	-454.44	37.37	-172.99			0.90	1.20	40.30	-186.52	0.00	0.00	Vehicle	Vehicle	-----	-872.25	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	-----	-----	4.52	4.52
	U_{15} - U_{16}	-502.02	28.69	-171.39			0.90	1.20	30.93	-184.79	0.00	0.00	Vehicle	Vehicle	-----	-892.86	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	-----	-----	4.47	4.47
	U_{16} - U_{17}	-467.99	20.84	-155.66			0.90	1.20	22.46	-167.83	0.00	0.00	Vehicle	Vehicle	-----	-826.56	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	-----	-----	5.12	5.12
	U_{17} - U_{18}	-368.86	12.89	-123.91			0.90	1.20	13.89	-133.60	0.00	0.00	Vehicle	Vehicle	-----	-653.20	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	-----	-----	4.51	4.51
	U_{18} - U_{19}	-251.56	6.44	-83.04			0.90	1.20	6.94	-89.54	0.00	0.00	Vehicle	Vehicle	-----	-443.43	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	4.76	4.76
	U_{19} - U_{20}	-117.89	1.60	-37.40			0.90	1.20	1.73	-40.32	0.00	0.00	Vehicle	Vehicle	-----	-205.67	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	-----	-----	13.88	13.88
Structure 2	U_1 - U_1	-118.23	4.94	-42.64			0.90	1.18	5.26	-45.40	0.00	0.00	Vehicle	Vehicle	-----	-212.72	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	11.66	11.66
	U_1 - U_2	-239.56	11.32	-85.69			0.90	1.18	12.05	-91.23	0.00	0.00	Vehicle	Vehicle	-----	-430.03	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.05	6.05
	U_1 - U_3	-350.44	18.88	-123.46			0.90	1.18	20.11	-131.45	0.00	0.00	Vehicle	Vehicle	-----	-626.46	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	4.00	0.69	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.53	5.53
	U_1 - U_4	-449.15	28.16	-153.71			0.90	1.18	29.98	-163.66	0.00	0.00	Vehicle	Vehicle	-----	-796.65	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	-----	-----	5.45	5.45
	U_1 - U_5	-483.26	37.26	-175.45			0.90	1.18	39.94	-186.80	0.00	0.00	Vehicle	Vehicle	-----	-871.07	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	-----	-----	5.37	5.37
	U_1 - U_6	-485.85	47.46	-186.05			0.90	1.18	50.53	-198.09	0.00	0.00	Vehicle	Vehicle	-----	-889.13	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	-----	-----	5.05	5.05
	U_2 - U_7	-428.85	56.22	-174.17			0.90	1.18	59.86	-185.44	0.00	0.00	Vehicle	Vehicle	-----	-798.57	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	-----	-----	4.92	4.92
	U_7 - U_8	-428.37	56.35	-173.85			0.90	1.18	60.00	-185.10	0.00	0.00	Vehicle	Vehicle	-----	-797.50	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	-----	-----	4.93	4.93
	U_8 - U_9	-335.42	64.61	-159.29			0.90	1.18	68.79	-169.60	0.00	0.00	Vehicle	Vehicle	-----	-656.52	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	4.66	4.66
	U_9 - U_{10}	-200.29	69.89	-133.95			0.90	1.18	74.42	-142.62	0.00	0.00	Vehicle	Vehicle	-----	-445.78	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	4.81	4.81
	U_{10} - U_{11}	-52.14	74.17	-100.58			0.90	1.18	78.97	-107.09	0.00	0.00	Vehicle	Vehicle	34.88	-207.00	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	12.19	12.19	6.70	6.70
	U_{11} - U_{12}	107.02	74.01	-66.75			0.90	1.18	78.80	-71.06	0.00	0.00	Vehicle	Vehicle	241.55	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	10.20	10.20	-----	-----
	U_{12} - U_{13}	259.33	73.30	-39.36			0.90	1.18	78.04	-41.91	0.00	0.00	Vehicle	Vehicle	438.57	-----	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	-----	-----	11.27	11.27	-----	-----
	U_{13} - U_{14}	391.98	68.96	-13.91			0.90	1.18	73.42	-14.81	0.00	0.00	Vehicle	Vehicle	605.01	-----	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	-----	-----	8.00	-----	-----	15.97	15.97	-----	-----
	U_{14} - U_{15}	439.40	69.55	-12.07			0.90	1.17	73.17	-12.70	0.00	0.00	Vehicle	Vehicle	668.35	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	15.37	15.37	-----	-----
	U_{15} - U_{16}	369.66	68.44	-27.99			0.90	1.17	72.00	-29.45	0.00	0.00	Vehicle	Vehicle	574.16	-----	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	-----	-----	12.54	12.54	-----	-----
	U_{16} - U_{17}	271.39	65.94	-49.23			0.90	1.17	69.38	-51.80	0.00	0.00	Vehicle	Vehicle	443.00	-----	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	-----	-----	11.14	11.14	-----	-----
	U_{17} - U_{18}	171.75	62.83	-75.03			0.90	1.17	66.10	-78.94	0.00	0.00	Vehicle	Vehicle	309.20	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	8.99	8.99	-----	-----
	U_{18} - U_{19}	72.78	57.29	-96.37			0.90	1.17	60.27	-101.39	0.00	0.00	Vehicle	Vehicle	172.97	-37.19	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	11.51	11.51	7.10	7.10
	U_{19} - U_{20}	-8.11	51.04	-122.88			0.90	1.17	53.70	-129.29	0.00	0.00	Vehicle	Vehicle	59.27	-178.61	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	15.43	15.43	5.30	5.30
	U_{20} - U_{21}	-60.13	43.14	-139.96			0.90	1.17	45.39	-147.25	0.00	0.00	Vehicle	Vehicle	-----	-269.60	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.27	5.27
	U_{21} - U_{22}	-82.18	34.30	-142.78			0.90	1.17	36.09	-150.22	0.00	0.00	Vehicle	Vehicle	-----	-302.13	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	-----	-----	5.02	5.02
	U_{22} - U_{23}	-82.40	34.18	-142.64			0.90	1.17	35.96	-150.07	0.00	0.00	Vehicle	Vehicle	-----	-302.22	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	-----	-----	5.03	5.03
	U_{23} - U_{24}	-65.94	42.39	-142.45			0.90	1.17	44.59	-149.87	0.00	0.00	Vehicle	Vehicle	-----	-280.56	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	-----	-----	5.14	5.14
	U_{24} - U_{25}	61.51	51.53	-109.64			0.90	1.17	53.18	-122.06	0.00	0.00	Vehicle	Vehicle	154.54	-78.71	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	15.76	15.76	4.85	4.85
	U_{25} - U_{26}	59.89	51.30	-110.06			0.90	1.24	57.11	-122.53	0.00	0.00	Vehicle	Vehicle	152.10	-81.43	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	10.70	10.70	5.10	5.10
	U_{26} - U_{27}	136.02	63.12	-84.02			0.90	1.17	66.41	-88.40	0.00	0.00	Vehicle	Vehicle	263.15	-----	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	-----	-----	9.49	9.49	-----	-----
	U_{27} - U_{28}	216.87	65.81	-59.16			0.90	1.17	69.24	-62.24	0.00	0.00	Vehicle	Vehicle	371.94	-----	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	-----	-----	11.94	11.94	-----	-----
	U_{28} - U_{29}	293.76	67.34	-31.61			0.90	1.17	70.85	-33.25	0.00	0.00	Vehicle	Vehicle	473.99	-----	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	-----	-----	13.81	13.81	-----	-----
	U_{29} - U_{30}	358.11	66.50	-16.63			0.90	1.17	69.96	-17.49	0.00	0.00	Vehicle	Vehicle	556.50	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	17.24	17.24	-----	-----
	U_{30} - U_{31}	339.33	75.81	-18.97			0.90	1.18	80.71	-20.20	0.00	0.00	Vehicle	Vehicle	546.05	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	15.18	15.18	-----	-----
	U_{31} - U_{32}	251.17	75.62	-29.40			0.90	1.18	80.51	-31.30	0.00	0.00	Vehicle	Vehicle	431.18	-----	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	-----	-----	11.03	11.03	-----	-----

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: 3F1 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 - 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	4.93	-3.46			0.90	1.24	5.49	-3.85	0.00	0.00	Vehicle	Vehicle	13.44	-----	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	-----	-----	**90.67**	**90.67**	-----	-----
	L_1 - L_2	74.27	69.46	-14.57			0.90	1.24	77.33	-16.22	0.00	0.00	Vehicle	Vehicle	197.07	-----	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	-----	-----	**5.54**	**5.54**	-----	-----
	L_2 - L_3	97.77	108.28	-27.46			0.90	1.24	120.55	-30.57	0.00	0.00	Vehicle	Vehicle	283.82	-----	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	-----	-----	**4.74**	**4.74**	-----	-----
	L_3 - L_4	66.93	120.25	-39.68			0.90	1.24	133.88	-44.17	0.00	0.00	Vehicle	Vehicle	261.05	-----	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**4.49**	**4.49**	-----	-----
	L_4 - L_5	-108.46	89.45	-59.66			0.90	1.24	99.58	-66.42	0.00	0.00	Vehicle	Vehicle	-----	-227.34	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	-----	-----	**5.90**	**5.90**
	L_5 - L_6	-237.28	53.53	-65.95			0.90	1.24	59.60	-73.43	0.00	0.00	Vehicle	Vehicle	-----	-403.92	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	-----	-----	**5.75**	**5.75**
	L_6 - L_7	-362.27	16.70	-69.01			0.90	1.24	18.59	-76.83	0.00	0.00	Vehicle	Vehicle	-----	-570.82	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	-----	-----	**7.58**	**7.58**
	L_7 - L_8	-478.66	1.59	-75.98			0.90	1.24	1.77	-84.59	0.00	0.00	Vehicle	Vehicle	-----	-732.22	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**8.52**	**8.52**
	L_8 - L_9	-477.02	0.17	-76.08			0.90	1.20	0.19	-82.03	0.00	0.00	Vehicle	Vehicle	-----	-726.76	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	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**8.81**	**8.81**
	L_9 - L_{10}	-301.43	13.91	-65.49			0.90	1.20	15.00	-70.61	0.00	0.00	Vehicle	Vehicle	-----	-483.65	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	-----	-----	**9.12**	**9.12**
	L_{10} - L_{11}	-104.46	42.07	-57.95			0.90	1.20	45.36	-62.48	0.00	0.00	Vehicle	Vehicle	-----	-217.02	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	-----	-----	**6.34**	**6.34**
	L_{11} - L_{12}	97.11	76.37	-51.34			0.90	1.20	82.34	-55.35	0.00	0.00	Vehicle	Vehicle	233.28	-----	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	-----	-----	**6.03**	**6.03**	-----	-----
	L_{12} - L_{13}	268.74	102.41	-44.43			0.90	1.20	110.42	-47.90	0.00	0.00	Vehicle	Vehicle	492.91	-----	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	-----	-----	**6.39**	**6.39**	-----	-----
	L_{13} - L_{14}	405.66	134.58	-37.32			0.90	1.20	145.11	-40.24	0.00	0.00	Vehicle	Vehicle	715.99	-----	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}	502.77	143.01	-20.83			0.90	1.20	154.19	-22.45	0.00	0.00	Vehicle	Vehicle	854.05	-----	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	-----	-----	**6.95**	**6.95**	-----	-----
	L_{15} - L_{16}	469.25	128.05	-16.90			0.90	1.20	138.06	-18.23	0.00	0.00	Vehicle	Vehicle	789.50	-----	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	-----	-----	**8.01**	**8.01**	-----	-----
	L_{16} - L_{17}	365.43	95.32	-11.54			0.90	1.20	102.78	-12.44	0.00	0.00	Vehicle	Vehicle	608.67	-----	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	-----	-----	**8.28**	**8.28**	-----	-----
	L_{17} - L_{18}	248.67	60.62	-8.82			0.90	1.20	65.36	-9.51	0.00	0.00	Vehicle	Vehicle	408.25	-----	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	-----	-----	**9.71**	**9.71**	-----	-----
	L_{18} - L_{19}	112.99	29.62	-24.63			0.90	1.20	31.93	-26.55	0.00	0.00	Vehicle	Vehicle	188.39	-----	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	-----	-----	**12.20**	**12.20**	-----	-----
	L_{19} - L_{20}	-14.26	23.49	-48.92			0.90	1.20	25.33	-52.74	0.00	0.00	Vehicle	Vehicle	14.39	-87.10	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	**20.41**	**20.41**	**7.76**	**7.76**
Structure 2	L_0 - L_1	15.26	7.48	-7.76			0.90	1.18	7.96	-8.26	0.00	0.00	Vehicle	Vehicle	30.19	-----	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	-----	-----	**77.62**	**77.62**	-----	-----
	L_1 - L_2	136.12	37.80	-4.98			0.90	1.18	40.24	-5.30	0.00	0.00	Vehicle	Vehicle	229.27	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**12.36**	**12.36**	-----	-----
	L_2 - L_3	262.92	75.35	-10.01			0.90	1.18	80.23	-10.66	0.00	0.00	Vehicle	Vehicle	446.08	-----	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	-----	-----	**8.89**	**8.89**	-----	-----
	L_3 - L_4	373.32	111.56	-17.44			0.90	1.18	118.77	-18.57	0.00	0.00	Vehicle	Vehicle	639.73	-----	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	-----	-----	**7.88**	**7.88**	-----	-----
	L_4 - L_5	456.80	139.93	-26.24			0.90	1.18	148.98	-27.94	0.00	0.00	Vehicle	Vehicle	787.51	-----	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	-----	-----	**8.01**	**8.01**	-----	-----
	L_5 - L_6	489.63	161.82	-35.63			0.90	1.18	172.29	-37.93	0.00	0.00	Vehicle	Vehicle	860.49	-----	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	-----	-----	**7.56**	**7.56**	-----	-----
	L_6 - L_7	479.27	171.56	-45.21			0.90	1.18	182.66	-48.14	0.00	0.00	Vehicle	Vehicle	860.51	-----	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	-----	-----	**7.33**	**7.33**	-----	-----
	L_7 - L_8	330.30	146.22	-62.01			0.90	1.18	155.68	-66.02	0.00	0.00	Vehicle	Vehicle	631.77	-----	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	-----	-----	**6.50**	**6.50**	-----	-----
	L_8 - L_9	189.19	119.83	-67.05			0.90	1.18	127.58	-71.39	0.00	0.00	Vehicle	Vehicle	411.80	-----	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	-----	-----	**7.14**	**7.14**	-----	-----
	L_9 - L_{10}	39.95	88.08	-71.42			0.90	1.18	93.78	-76.04	0.00	0.00	Vehicle	Vehicle	173.85	-46.91	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**8.76**	**8.76**	**10.09**	**10.09**
	L_{10} - L_{11}	-127.23	56.55	-71.98			0.90	1.18	60.20	-76.64	0.00	0.00	Vehicle	Vehicle	-----	-265.03	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	-----	-----	**6.83**	**6.83**
	L_{11} - L_{12}	-282.51	31.85	-71.36			0.90	1.18	33.91	-75.97	0.00	0.00	Vehicle	Vehicle	-----	-466.03	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	-----	-----	**8.53**	**8.53**
	L_{12} - L_{13}	-426.62	16.91	-68.94			0.90	1.18	18.00	-73.40	0.00	0.00	Vehicle	Vehicle	-----	-650.03	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	-----	-----	**11.56**	**11.56**
	L_{13} - L_{14}	-536.34	15.72	-88.30			0.90	1.18	16.74	-94.01	0.00	0.00	Vehicle	Vehicle	-----	-819.45	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	-----	-----	**10.41**	**10.41**
	L_{14} - L_{15}	-537.64	18.73	-76.41			0.90	1.17	19.76	-80.39	0.00	0.00	Vehicle	Vehicle	-----	-803.44	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**12.16**	**12.16**
	L_{15} - L_{16}	-475.53	17.36	-75.18			0.90	1.17	18.26	-79.07	0.00	0.00	Vehicle	Vehicle	-----	-720.97	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_{16} - L_{17}	-384.21	21.29	-68.01			0.90	1.17	22.40	-71.55	0.00	0.00	Vehicle	Vehicle	-----	-592.49	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	-----	-----	**9.27**	**9.27**
	L_{17} - L_{18}	-281.70	40.05	-65.32			0.90	1.17	42.14	-68.72	0.00	0.00	Vehicle	Vehicle	-----	-455.56	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	-----	-----	**6.49**	**6.49**
	L_{18} - L_{19}	-174.99	61.82	-59.60			0.90	1.17	65.04	-62.71	0.00	0.00	Vehicle	Vehicle	-----	-309.00	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_{19} - L_{20}	-76.34	81.54	-53.99			0.90	1.17	85.79	-56.80	0.00	0.00	Vehicle	Vehicle	12.28	-173.08	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	**8.80**	**8.80**	**8.76**	**8.76**
	L_{20} - L_{21}	4.59	101.67	-45.96			0.90	1.17	106.97	-48.36	0.00	0.00	Vehicle	Vehicle	145.03	-56.89	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	**8.97**	**8.97**	**16.93**	**16.93**
	L_{21} - L_{22}	56.15	117.70	-38.04			0.90	1.17	123.83	-40.02	0.00	0.00	Vehicle	Vehicle	233.97	-----	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	-----	-----	**7.34**	**7.34**	-----	-----
	L_{22} - L_{23}	63.16	110.42	-24.26			0.90	1.17	116.17	-25.52	0.00	0.00	Vehicle	Vehicle	233.13	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**7.76**	**7.76**	-----	-----
	L_{23} - L_{24}	15.68	99.94	-32.39			0.90	1.17	105.14	-34.07	0.00	0.00	Vehicle	Vehicle	157.07	-23.91	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	**9.03**	**9.03**	**24.36**	**24.36**
	L_{24} - L_{25}	-55.90	70.37	-36.67			0.90	1.17	74.04	-38.58	0.00	0.00	Vehicle	Vehicle	23.58	-122.83	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	**9.93**	**9.93**	**13.42**	**13.42**
	L_{25} - L_{26}	-156.92	54.20	-42.37			0.90	1.17	57.08	-44.58	0.00	0.00	Vehicle	Vehicle	-----	-235.17	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	-----	-----	**9.81**	**9.81**
	L_{26} - L_{27}	-217.71	30.68	-58.30			0.90	1.17	32.27	-61.33	0.00	0.00	Vehicle	Vehicle	-----	-362.75	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**8.31**	**8.31**
	L_{27} - L_{28}	-296.28	24.64	-82.42			0.90	1.17	25.93	-86.71	0.00	0.00	Vehicle	Vehicle	-----	-497.89	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	-----	-----	**8.66**	**8.66**
	L_{28} - L_{29}	-364.24	29.69	-108.90			0.90	1.17	31.24	-114.57	0.00	0.00	Vehicle	Vehicle	-----	-622.45	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**7.95**	**7.95**
	L_{29} - L_{30}	-418.31	31.74	-126.65			0.90	1.17	33.40	-133.25	0.00	0.00	Vehicle	Vehicle	-----	-717.02	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	-----	-----	**8.23**	**8.23**
	L_{30} - L_{31}	-350.66	15.72	-82.90			0.90	1.18	16.74	-88.27	0.00	0.00	Vehicle	Vehicle	-----	-570.61	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	-----	-----	**13.19**	**13.19**
	L_{31} - L_{32}	-275.63	16.12	-67.26			0.90	1.18	17.16	-71.61	0.00	0.00	Vehicle	Vehicle	-----	-451.42	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	-----	-----	**13.96**	**13.96**
	L_{32} - L_{33}	-178.96	17.60	-59.14			0.90	1.18	18.74	-62.97	0.00	0.00	Vehicle	Vehicle	-----	-314.51	7.48	43.48	35.9950	1434.68

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: 3F1 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	(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
North Truss - Verticals																																															
Structure 1	U_0 - L_0	-77.20	11.39	-81.40			0.90	1.24	12.68	-90.62	0.00	0.00	Vehicle	Vehicle	------	-218.18	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	------	------	------	------	------	2.95	2.95
	U_0 - L_1	-33.88	10.26	-57.62			0.90	1.24	11.42	-64.15	0.00	0.00	Vehicle	Vehicle	------	-127.43	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	------	------	------	------	------	4.96	4.96
	U_1 - L_2	10.41	9.66	-40.49			0.90	1.24	10.76	-45.08	0.00	0.00	Vehicle	Vehicle	27.51	-45.07	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	------	------	------	38.79	38.79	8.04	8.04
	U_1 - L_3	44.37	15.72	-31.98			0.90	1.24	17.50	-35.61	0.00	0.00	Vehicle	Vehicle	80.43	------	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	------	------	------	------	------	------	21.90	21.90	------	------
	U_2 - L_4	-16.71	1.17	-52.02			0.90	1.24	1.30	-57.91	0.00	0.00	Vehicle	Vehicle	------	-97.01	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	------	------	------	------	------	5.75	5.75
	U_3 - L_5	-109.52	4.20	-61.47			0.90	1.24	4.67	-68.44	0.00	0.00	Vehicle	Vehicle	------	-231.34	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	------	------	------	------	------	4.61	4.61
	U_4 - L_6	-143.61	0.43	-75.22			0.90	1.24	0.48	-83.74	0.00	0.00	Vehicle	Vehicle	------	-295.55	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	------	------	------	------	------	4.35	4.35
	U_5 - L_7	-142.76	2.22	-76.98			0.90	1.24	2.47	-85.70	0.00	0.00	Vehicle	Vehicle	------	-297.00	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	------	------	------	------	------	3.70	3.70
	U_6 - L_8	-391.96	2.83	-89.67			0.90	1.24	3.15	-99.83	0.00	0.00	Vehicle	Vehicle	------	-639.33	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	------	------	15.25	------	------	18.60	45.00	Pass	5.96	12.00	Pass	------	------	------	------	------	6.75	6.75
	U_7 - L_9	-223.26	7.38	-74.72			0.90	1.20	7.96	-80.56	0.00	0.00	Vehicle	Vehicle	------	-394.97	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	------	------	------	------	------	5.24	5.24
	U_8 - L_{10}	-225.85	5.07	-71.40			0.90	1.20	5.46	-76.98	0.00	0.00	Vehicle	Vehicle	------	-393.68	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	------	------	------	------	------	6.71	6.71
	U_9 - L_{11}	-198.80	5.98	-65.80			0.90	1.20	6.45	-70.94	0.00	0.00	Vehicle	Vehicle	------	-350.66	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	------	------	------	------	------	6.24	6.24
	U_{10} - L_{12}	-154.81	9.30	-60.60			0.90	1.20	10.02	-65.33	0.00	0.00	Vehicle	Vehicle	------	-286.18	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	------	------	------	------	------	5.78	5.78
	U_{11} - L_{13}	-109.06	15.26	-54.93			0.90	1.20	16.45	-59.22	0.00	0.00	Vehicle	Vehicle	------	-218.76	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	------	------	------	------	------	4.58	4.58
	U_{12} - L_{14}	-12.31	1.53	-49.62			0.90	1.20	1.65	-53.49	0.00	0.00	Vehicle	Vehicle	------	-85.54	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	------	------	------	------	------	6.21	6.21
	U_{13} - L_{15}	-5.62	21.58	-43.18			0.90	1.20	23.27	-46.55	0.00	0.00	Vehicle	Vehicle	22.95	-67.82	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	------	------	------	18.62	18.62	7.25	7.25
	U_{14} - L_{16}	-51.73	13.50	-50.27			0.90	1.20	14.56	-54.20	0.00	0.00	Vehicle	Vehicle	------	-137.72	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	------	------	------	------	------	5.34	5.34
	U_{17} - L_{17}	-127.32	8.57	-67.06			0.90	1.20	9.24	-72.30	0.00	0.00	Vehicle	Vehicle	------	-259.50	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	------	------	------	------	------	3.93	3.93
	U_{18} - L_{18}	-159.94	7.90	-77.23			0.90	1.20	8.52	-83.27	0.00	0.00	Vehicle	Vehicle	------	-316.17	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	------	------	------	------	------	4.39	4.39
	U_{19} - L_{19}	-191.17	6.68	-79.41			0.90	1.20	7.20	-85.62	0.00	0.00	Vehicle	Vehicle	------	-359.82	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	4.97	4.97
	U_{20} - L_{20}	-212.33	6.70	-84.46			0.90	1.20	7.22	-91.06	0.00	0.00	Vehicle	Vehicle	------	-394.41	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	------	------	------	------	------	4.06	4.06
Structure 2	U_0 - L_9	-206.69	8.40	-77.44			0.90	1.18	8.95	-82.45	0.00	0.00	Vehicle	Vehicle	------	-375.89	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	5.29	5.29
	U_1 - L_1	-188.76	8.63	-73.80			0.90	1.18	9.18	-78.57	0.00	0.00	Vehicle	Vehicle	------	-347.53	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	------	------	------	------	------	6.16	6.16
	U_1 - L_2	-155.92	9.10	-69.08			0.90	1.18	9.69	-73.55	0.00	0.00	Vehicle	Vehicle	------	-298.31	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	------	------	------	------	------	5.69	5.69
	U_2 - L_3	-134.58	10.31	-64.03			0.90	1.18	10.98	-68.17	0.00	0.00	Vehicle	Vehicle	------	-263.51	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	------	------	------	------	------	4.65	4.65
	U_3 - L_4	-64.49	12.80	-52.84			0.90	1.18	13.62	-56.26	0.00	0.00	Vehicle	Vehicle	------	-156.98	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	------	------	------	------	------	4.88	4.88
	U_4 - L_5	-19.94	21.69	-45.83			0.90	1.18	23.09	-48.80	0.00	0.00	Vehicle	Vehicle	4.09	-89.35	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	------	------	------	19.39	19.39	6.57	6.57
	U_5 - L_6	40.08	30.60	-32.23			0.90	1.18	32.58	-34.31	0.00	0.00	Vehicle	Vehicle	94.46	------	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	------	------	------	------	------	------	11.90	11.90	------	------
	U_6 - L_7	-26.04	0.35	-42.80			0.90	1.18	0.37	-45.57	0.00	0.00	Vehicle	Vehicle	------	-93.09	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	------	------	------	------	------	6.90	6.90
	U_7 - L_8	-125.25	14.91	-53.71			0.90	1.18	15.87	-57.19	0.00	0.00	Vehicle	Vehicle	------	-237.17	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	------	------	15.75	------	------	36.00	45.00	Pass	8.89	12.00	Pass	------	------	------	------	------	7.09	7.09
	U_8 - L_9	-174.53	6.84	-66.25			0.90	1.18	7.28	-70.54	0.00	0.00	Vehicle	Vehicle	------	-318.59	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	------	------	------	------	------	7.32	7.32
	U_9 - L_{10}	-202.66	2.87	-75.49			0.90	1.18	3.06	-80.38	0.00	0.00	Vehicle	Vehicle	------	-367.95	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	------	------	------	------	------	7.17	7.17
	U_{10} - L_{11}	-229.53	2.01	-80.90			0.90	1.18	2.14	-86.14	0.00	0.00	Vehicle	Vehicle	------	-410.36	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	------	------	------	------	------	6.21	6.21
	U_{11} - L_{12}	-250.85	2.85	-83.30			0.90	1.18	3.04	-88.69	0.00	0.00	Vehicle	Vehicle	------	-441.40	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	------	------	------	------	------	6.21	6.21
	U_{12} - L_{13}	-223.32	8.67	-83.31			0.90	1.18	9.23	-88.70	0.00	0.00	Vehicle	Vehicle	------	-405.63	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	------	------	------	------	------	5.26	5.26
	U_{13} - L_{14}	-343.31	1.87	-82.17			0.90	1.18	1.99	-87.48	0.00	0.00	Vehicle	Vehicle	------	-560.04	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	------	------	------	------	------	8.10	8.10
	U_{14} - L_{15}	-123.14	8.38	-68.57			0.90	1.17	8.82	-72.15	0.00	0.00	Vehicle	Vehicle	------	-253.87	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	------	------	------	------	------	7.86	7.86
	U_{15} - L_{16}	-156.70	6.52	-73.03			0.90	1.17	6.86	-76.84	0.00	0.00	Vehicle	Vehicle	------	-303.59	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	------	------	------	------	------	6.63	6.63
	U_{16} - L_{17}	-147.91	6.27	-72.91			0.90	1.17	6.60	-76.71	0.00	0.00	Vehicle	Vehicle	------	-292.01	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_{17} - L_{18}	-142.22	7.88	-66.93			0.90	1.17	8.29	-70.42	0.00	0.00	Vehicle	Vehicle	------	-276.43	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	------	------	------	------	------	6.18	6.18
	U_{18} - L_{19}	-111.48	8.81	-66.38			0.90	1.17	9.27	-69.84	0.00	0.00	Vehicle	Vehicle	------	-235.72	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_{19} - L_{20}	-76.55	15.69	-55.27			0.90	1.17	16.50	-58.15	0.00	0.00	Vehicle	Vehicle	------	-175.11	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	------	------	------	------	------	5.14	5.14
	U_{21} - L_{21}	-44.31	19.22	-46.93			0.90	1.17	20.23	-49.37	0.00	0.00	Vehicle	Vehicle	------	-121.79	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	------	------	------	------	------	6.00	6.00
	U_{22} - L_{22}	-21.25	1.14	-42.91			0.90	1.17	1.20	-45.14	0.00	0.00	Vehicle	Vehicle	------	-86.31	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	------	------	------	------	------	7.10	7.10
	U_{23} - L_{23}	-39.07	21.81	-42.97			0.90	1.17	22.94	-45.20	0.00	0.00	Vehicle	Vehicle	------	-109.55	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	------	------	------	------	------	6.67	6.67
	U_{24} - L_{24}	-74.84	16.58	-51.68			0.90	1.17	17.45	-54.37	0.00	0.00	Vehicle	Vehicle	------	-167.98	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	------	------	------	------	------	5.52	5.52
	U_{25} - L_{25}	-103.27	10.78	-66.19			0.90	1.17	11.34	-69.64	0.00	0.00	Vehicle	Vehicle	------	-224.78	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	------	------	15.75	------	------	31.50	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	5.86	5.86
	U_{26} - L_{26}	-120.22	10.17	-70.13			0.90	1.17	10.70	-73.78	0.00	0.00	Vehicle	Vehicle	------	-252.20	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	------	------	------	------	------	6.19	6.19
	U_{27} - L_{27}	-123.93	8.40	-75.52			0.90	1.17	8.84	-79.45	0.00	0.00	Vehicle	Vehicle	------	-264.40	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	6.29	6.29
	U_{28} - L_{28}	-135.60	7.64	-82.22			0.90	1.17	8.04	-86.51	0.00	0.00	Vehicle	Vehicle	------	-288.73	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	6.13	6.13
	U_{29} - L_{29}	-116.87	4.47	-77.01			0.90	1.17	4.70	-81.03	0.00	0.00	Vehicle	Vehicle	------	-257.27	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	7.07	7.07
	U_{30} - L_{30}	-262.02	3.24	-83.35			0.90	1.18	3.45	-88.75	0.00	0.00	Vehicle	Vehicle	------	-456.00	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	------	------	------	------	------	8.90	8.90
	U_{31} - L_{31}	-156.38	10.52	-73.42			0.90	1.18	11.20	-78.17	0.00	0.00	Vehicle	Vehicle	------	-304.91	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	------	------	16.32	------	------	20.13	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	6.83	6.83
	U_{32} - L_{32}	-185.51	7.49	-75.41			0.90	1.18	7.98	-80.29	0.00	0.00	Vehicle	Vehicle	------	-345.54	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	------	------	16.48	------	------	18.26	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	7.68	7.68
	U_{33} - L_{33}	-186.18	6.27	-75.60			0.90	1.18	6.68	-80.49	0.00	0.00	Vehicle	V

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: 3F1
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
North Truss - Diagonals Structure 1	U_1 - L_1	87.33	88.65	-16.02			0.90	1.24	98.70	-17.83	0.00	0.00	Vehicle	Vehicle	241.83	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**5.06**	**5.06**	-----	-----
	U_1 - L_2	23.35	64.80	-15.99			0.90	1.24	72.14	-17.80	0.00	0.00	Vehicle	Vehicle	124.13	-----	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	-----	-----	-----	-----	-----	**5.61**	**5.61**	-----	-----
	U_2 - L_3	-37.85	48.92	-24.75			0.90	1.24	54.46	-27.55	0.00	0.00	Vehicle	Vehicle	21.59	-85.03	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	-----	-----	-----	**8.55**	**8.55**	**10.75**	**10.75**
	U_3 - L_4	-92.19	30.15	-53.22			0.90	1.24	33.57	-59.25	0.00	0.00	Vehicle	Vehicle	-----	-196.87	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	-----	-----	-----	**----**	**----**	**4.12**	**4.12**
	U_4 - L_5	143.37	69.29	-12.50			0.90	1.24	77.13	-13.92	0.00	0.00	Vehicle	Vehicle	286.65	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**4.94**	**4.94**	-----	-----
	U_5 - L_6	177.90	82.49	-4.97			0.90	1.24	91.84	-5.54	0.00	0.00	Vehicle	Vehicle	350.65	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.15**	**5.15**	-----	-----
	U_6 - L_7	184.42	93.36	-1.95			0.90	1.24	103.93	-2.17	0.00	0.00	Vehicle	Vehicle	374.86	-----	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	-----	-----	-----	-----	-----	**4.49**	**4.49**	-----	-----
	U_7 - L_8	180.02	85.92	-3.11			0.90	1.24	95.65	-3.46	0.00	0.00	Vehicle	Vehicle	358.37	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.92**	**4.92**	-----	-----
	U_8 - L_9	268.98	81.60	-8.60			0.90	1.20	87.98	-9.28	0.00	0.00	Vehicle	Vehicle	464.04	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**7.88**	**7.88**	-----	-----
	U_9 - L_{10}	278.85	84.44	-8.21			0.90	1.20	91.05	-8.85	0.00	0.00	Vehicle	Vehicle	480.87	-----	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	-----	-----	-----	-----	-----	**7.51**	**7.51**	-----	-----
	U_{10} - L_{11}	285.04	83.35	-7.47			0.90	1.20	89.86	-8.06	0.00	0.00	Vehicle	Vehicle	487.37	-----	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	-----	-----	-----	-----	-----	**6.96**	**6.96**	-----	-----
	U_{11} - L_{12}	250.60	82.13	-11.37			0.90	1.20	88.56	-12.26	0.00	0.00	Vehicle	Vehicle	440.90	-----	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	-----	-----	-----	-----	-----	**5.95**	**5.95**	-----	-----
	U_{12} - L_{13}	189.65	73.27	-20.98			0.90	1.20	79.00	-22.62	0.00	0.00	Vehicle	Vehicle	349.24	-----	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	-----	-----	-----	-----	-----	**5.59**	**5.59**	-----	-----
	U_{13} - L_{14}	123.32	59.41	-27.79			0.90	1.20	64.06	-29.96	0.00	0.00	Vehicle	Vehicle	243.59	-----	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	-----	-----	-----	-----	-----	**4.75**	**4.75**	-----	-----
	U_{14} - L_{15}	-24.41	41.83	-43.95			0.90	1.20	45.10	-47.38	0.00	0.00	Vehicle	Vehicle	26.90	-93.33	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**10.02**	**10.02**	**6.41**	**6.41**
	U_{15} - L_{16}	48.53	59.16	-28.95			0.90	1.20	63.79	-31.22	0.00	0.00	Vehicle	Vehicle	146.02	-----	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	-----	-----	-----	-----	-----	**5.94**	**5.94**	-----	-----
	U_{16} - L_{16}	146.59	75.18	-11.72			0.90	1.20	81.06	-12.64	0.00	0.00	Vehicle	Vehicle	295.95	-----	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	-----	-----	-----	-----	-----	**4.66**	**4.66**	-----	-----
	U_{17} - L_{17}	182.46	80.03	-10.09			0.90	1.20	86.28	-10.88	0.00	0.00	Vehicle	Vehicle	349.36	-----	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	-----	-----	-----	-----	-----	**5.43**	**5.43**	-----	-----
	U_{18} - L_{18}	223.82	88.50	-8.43			0.90	1.20	95.42	-9.09	0.00	0.00	Vehicle	Vehicle	415.02	-----	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	-----	-----	-----	-----	-----	**5.10**	**5.10**	-----	-----
	U_{20} - L_{19}	232.72	83.92	-7.05			0.90	1.20	90.48	-7.60	0.00	0.00	Vehicle	Vehicle	420.16	-----	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	-----	-----	-----	-----	-----	**5.28**	**5.28**	-----	-----
	U_1 - L_1	213.54	76.75	-8.97			0.90	1.18	81.72	-9.55	0.00	0.00	Vehicle	Vehicle	383.83	-----	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	-----	-----	-----	-----	-----	**6.90**	**6.90**	-----	-----
	U_1 - L_2	200.48	77.06	-10.53			0.90	1.18	82.04	-11.21	0.00	0.00	Vehicle	Vehicle	367.28	-----	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	-----	-----	-----	-----	-----	**7.03**	**7.03**	-----	-----
	U_2 - L_3	172.81	73.85	-11.78			0.90	1.18	78.62	-12.54	0.00	0.00	Vehicle	Vehicle	326.86	-----	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	-----	-----	-----	-----	-----	**6.08**	**6.08**	-----	-----
	U_3 - L_4	147.16	72.93	-13.85			0.90	1.18	77.65	-14.75	0.00	0.00	Vehicle	Vehicle	292.25	-----	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	-----	-----	-----	-----	-----	**5.54**	**5.54**	-----	-----
	U_4 - L_5	99.10	57.08	-26.05			0.90	1.18	60.77	-27.73	0.00	0.00	Vehicle	Vehicle	142.84	-----	0.00	16.85	16.8486	556.00	131.71	13.3994	1.9682	61.41	28.23	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**6.23**	**6.23**	-----	-----
	U_5 - L_6	2.96	51.47	-33.57			0.90	1.18	54.80	-35.74	0.00	0.00	Vehicle	Vehicle	75.09	-42.61	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	-----	-----	-----	**7.75**	**7.75**	**9.20**	**9.20**
	U_6 - L_7	-85.74	33.26	-50.55			0.90	1.18	35.41	-53.82	0.00	0.00	Vehicle	Vehicle	-----	-181.43	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	-----	-----	-----	**----**	**----**	**5.08**	**5.08**
	U_7 - L_8	140.30	64.24	-26.24			0.90	1.18	68.40	-27.94	0.00	0.00	Vehicle	Vehicle	271.30	-----	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	-----	-----	-----	-----	-----	**6.77**	**6.77**	-----	-----
	U_8 - L_9	204.22	77.30	-12.64			0.90	1.18	82.31	-13.46	0.00	0.00	Vehicle	Vehicle	372.48	-----	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	-----	-----	-----	-----	-----	**6.15**	**6.15**	-----	-----
	U_9 - L_{10}	234.87	81.09	-7.75			0.90	1.18	86.34	-8.25	0.00	0.00	Vehicle	Vehicle	417.57	-----	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	-----	-----	-----	-----	-----	**6.29**	**6.29**	-----	-----
	U_{11} - L_{10}	263.10	92.53	-2.07			0.90	1.18	98.52	-2.20	0.00	0.00	Vehicle	Vehicle	470.10	-----	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	-----	-----	-----	-----	-----	**5.90**	**5.90**	-----	-----
	U_{12} - L_{11}	274.02	88.76	-2.52			0.90	1.18	94.50	-2.68	0.00	0.00	Vehicle	Vehicle	479.08	-----	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	-----	-----	-----	-----	-----	**6.04**	**6.04**	-----	-----
	U_{13} - L_{12}	254.94	86.49	-9.02			0.90	1.18	92.09	-9.61	0.00	0.00	Vehicle	Vehicle	451.14	-----	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	-----	-----	-----	-----	-----	**5.67**	**5.67**	-----	-----
	U_{14} - L_{13}	217.71	78.87	-10.37			0.90	1.18	83.98	-11.04	0.00	0.00	Vehicle	Vehicle	392.19	-----	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	-----	-----	-----	-----	-----	**6.67**	**6.67**	-----	-----
	U_{15} - L_{15}	110.05	62.80	-8.80			0.90	1.17	66.07	-9.26	0.00	0.00	Vehicle	Vehicle	228.95	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.18**	**8.18**	-----	-----
	U_{16} - L_{16}	132.30	70.38	-9.34			0.90	1.17	74.05	-9.83	0.00	0.00	Vehicle	Vehicle	268.25	-----	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	-----	-----	-----	-----	-----	**7.00**	**7.00**	-----	-----
	U_{17} - L_{17}	172.89	76.09	-6.58			0.90	1.17	80.06	-6.92	0.00	0.00	Vehicle	Vehicle	328.83	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.71**	**6.71**	-----	-----
	U_{18} - L_{18}	160.19	75.67	-7.84			0.90	1.17	79.62	-8.25	0.00	0.00	Vehicle	Vehicle	311.75	-----	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	-----	-----	-----	-----	-----	**6.16**	**6.16**	-----	-----
	U_{19} - L_{19}	152.35	77.77	-10.26			0.90	1.17	81.82	-10.80	0.00	0.00	Vehicle	Vehicle	304.41	-----	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	-----	-----	-----	-----	-----	**6.09**	**6.09**	-----	-----
	U_{20} - L_{20}	120.69	71.67	-16.30			0.90	1.17	75.40	-17.15	0.00	0.00	Vehicle	Vehicle	254.91	-----	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	-----	-----	-----	-----	-----	**6.40**	**6.40**	-----	-----
	U_{20} - L_{21}	76.08	61.09	-23.61			0.90	1.17	64.28	-24.83	0.00	0.00	Vehicle	Vehicle	182.47	-----	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	-----	-----	-----	-----	-----	**5.47**	**5.47**	-----	-----
	U_{21} - L_{22}	31.46	51.83	-32.18			0.90	1.17	54.53	-33.85	0.00	0.00	Vehicle	Vehicle	111.78	-3.12	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	-----	-----	-----	**7.27**	**7.27**	**10.55**	**10.55**
	U_{22} - L_{22}	24.30	49.93	-38.54			0.90	1.17	52.53	-40.55	0.00	0.00	Vehicle	Vehicle	99.88	-21.12	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**	**8.57**	**8.57**
	U_{23} - L_{23}	72.26	58.48	-27.82			0.90	1.17	61.53	-29.27	0.00	0.00	Vehicle	Vehicle	173.93	-----	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	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**5.78**	**5.78**	-----	-----
	U_{24} - L_{24}	112.13	71.41	-17.24			0.90	1.17	75.13	-18.14	0.00	0.00	Vehicle	Vehicle	243.44	-----	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	-----	-----	-----	-----	-----	**6.54**	**6.54**	-----	-----
	U_{25} - L_{25}	127.84	81.08	-12.99			0.90	1.17	85.30	-13.66	0.00	0.00	Vehicle	Vehicle	277.09	-----	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	-----	-----	-----	-----	-----	**6.13**	**6.13**	-----	-----
	U_{26} - L_{26}	132.67	81.34	-10.52			0.90	1.17	85.58	-11.07	0.00	0.00	Vehicle	Vehicle	283.72	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.05**	**6.05**	-----	-----
	U_{27} - L_{27}	137.94	82.58	-9.06			0.90	1.17	86.88	-9.53	0.00	0.00	Vehicle	Vehicle	292.27	-----	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	-----	-----	-----	-----	-----	**6.59**	**6.59**	-----	-----
	U_{28} - L_{28}	122.80	83.13	-5.35			0.90	1.17	87.46	-5.63	0.00	0.00	Vehicle	Vehicle	273.33	-----	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	-----	-----	-----	-----	-----	**6.04**	**6.04**	-----	-----
	U_{29} - L_{29}	102.75	72.53	-6.64			0.90	1.17	76.31	-6.98	0.00	0.00	Vehicle	Vehicle	232.78	-----	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	-----	-----	-----	-----	-----	**7.18**	**7.18**	-----	-----
	U_{30} - L_{31}	140.07	66.80	-10.85			0.90	1.18	71.13	-11.55	0.00	0.00	Vehicle	Vehicle	274.55	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.96**	**8.96**	-----	-----
	U_{31} - L_{32}	167.39	72.12	-11.94			0.90	1.18	76.78	-12.72	0.00	0.00	Vehicle	Vehicle	317.43	-----	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	-----	-----	-----	-----	-----	**7.95**	**7.95**	-----	-----
	U_{32} - L_{33}	202.10	80.14	-7.02			0.90	1.18	85.32	-7.47	0.00	0.00	Vehicle	Vehicle	373.65	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.53**	**7.53**	-----	-----
	U_{33} - L_{34}	201.91	84.74	-7.10			0.90	1.18	90.23	-7.56	0.00	0.00	Vehicle	Vehicle	379.78	-----	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	-----	-----	-----	-----	-----	**7.12**	**7.12**	-----	-----
	U_{34} - L_{35}	180.76	80.91	-8.48			0.90	1.18	86.14	-9.03	0.00	0.00	Vehicle	Vehicle	346.98	-----	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

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 3F1 **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, 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 - Upper Chord	Structure 1	U_0 - U_1	-52.64	13.30	-72.00			0.75	1.24	12.34	-66.80	0.00	0.00	Vehicle	Vehicle	-----	-155.26	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	-----	-----	7.68	7.68
		U_1 - U_2	-61.57	23.80	-110.10			0.75	1.24	22.08	-102.15	0.00	0.00	Vehicle	Vehicle	-----	-212.83	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	-----	-----	4.93	4.93
		U_2 - U_3	-26.99	33.10	-119.80			0.75	1.24	30.71	-111.14	0.00	0.00	Vehicle	Vehicle	4.84	-179.57	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	22.73	22.73	4.84	4.84
		U_3 - U_4	32.92	42.30	-106.90			0.75	1.24	39.24	-99.18	0.00	0.00	Vehicle	Vehicle	93.82	-86.13	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	16.26	16.26	6.03	6.03
		U_4 - U_5	34.77	42.50	-106.60			0.75	1.24	39.43	-98.90	0.00	0.00	Vehicle	Vehicle	96.46	-83.36	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	16.14	16.14	6.07	6.07
		U_5 - U_6	124.13	50.40	-90.50			0.75	1.24	46.76	-83.96	0.00	0.00	Vehicle	Vehicle	222.16	-----	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	-----	-----	11.70	11.70	-----	-----
		U_6 - U_7	223.19	59.80	-60.50			0.75	1.24	55.48	-56.13	0.00	0.00	Vehicle	Vehicle	362.27	-----	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	-----	-----	10.48	10.48	-----	-----
		U_7 - U_8	331.76	67.70	-26.20			0.75	1.24	62.81	-24.31	0.00	0.00	Vehicle	Vehicle	512.94	-----	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	-----	-----	12.39	12.39	-----	-----
		U_8 - U_9	267.61	59.00	-23.40			0.75	1.20	53.01	-21.02	0.00	0.00	Vehicle	Vehicle	416.81	-----	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	-----	-----	12.66	12.66	-----	-----
		U_9 - U_{10}	89.12	51.80	-60.80			0.75	1.20	46.54	-54.63	0.00	0.00	Vehicle	Vehicle	176.36	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	13.32	13.32	-----	-----
		U_{10} - U_{11}	-76.81	44.20	-91.60			0.75	1.20	39.71	-82.30	0.00	0.00	Vehicle	Vehicle	-----	-206.84	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	-----	-----	6.33	6.33
		U_{11} - U_{12}	-230.69	37.00	-122.20			0.75	1.20	33.24	-109.80	0.00	0.00	Vehicle	Vehicle	-----	-442.63	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	-----	-----	5.30	5.30
		U_{12} - U_{13}	-341.88	31.30	-146.10			0.75	1.20	28.12	-131.27	0.00	0.00	Vehicle	Vehicle	-----	-615.09	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	-----	-----	6.06	6.06
		U_{13} - U_{14}	-421.62	26.10	-155.30			0.75	1.20	23.45	-139.54	0.00	0.00	Vehicle	Vehicle	-----	-729.50	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	-----	-----	6.49	6.49
		U_{14} - U_{15}	-422.51	26.00	-155.40			0.75	1.20	23.36	-139.63	0.00	0.00	Vehicle	Vehicle	-----	-730.77	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	-----	-----	6.48	6.48
		U_{15} - U_{16}	-439.94	20.30	-159.20			0.75	1.20	18.24	-143.04	0.00	0.00	Vehicle	Vehicle	-----	-757.88	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.21	6.21
		U_{16} - U_{17}	-422.43	15.50	-150.10			0.75	1.20	13.93	-134.86	0.00	0.00	Vehicle	Vehicle	-----	-724.48	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.71	6.71
		U_{17} - U_{18}	-340.94	10.40	-126.10			0.75	1.20	9.34	-113.30	0.00	0.00	Vehicle	Vehicle	-----	-590.51	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	8.00	12.00	Pass	-----	-----	5.56	5.56
		U_{18} - U_{19}	-247.15	6.30	-87.30			0.75	1.20	5.66	-78.44	0.00	0.00	Vehicle	Vehicle	-----	-423.26	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	-----	-----	5.49	5.49
		U_{19} - U_{20}	-131.71	3.10	-42.60			0.75	1.20	2.79	-38.28	0.00	0.00	Vehicle	Vehicle	-----	-220.98	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	-----	-----	14.26	14.26
	Structure 2	U_0 - U_1	-131.51	6.80	-47.40			0.75	1.18	6.03	-42.06	0.00	0.00	Vehicle	Vehicle	-----	-225.63	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	12.27	12.27
		U_1 - U_2	-247.03	14.60	-90.90			0.75	1.18	12.95	-80.65	0.00	0.00	Vehicle	Vehicle	-----	-425.98	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.75	6.75
		U_2 - U_3	-347.15	22.70	-123.30			0.75	1.18	20.14	-109.40	0.00	0.00	Vehicle	Vehicle	-----	-593.51	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	-----	-----	6.68	6.68
		U_3 - U_4	-437.07	31.80	-151.50			0.75	1.18	28.21	-134.42	0.00	0.00	Vehicle	Vehicle	-----	-742.93	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	-----	-----	6.73	6.73
		U_4 - U_5	-468.70	38.90	-165.40			0.75	1.18	34.51	-146.75	0.00	0.00	Vehicle	Vehicle	-----	-800.09	15.14	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.94	6.94
		U_5 - U_6	-471.03	46.00	-163.50			0.75	1.18	40.81	-145.07	0.00	0.00	Vehicle	Vehicle	-----	-800.92	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	-----	-----	7.00	7.00
		U_6 - U_7	-414.41	51.20	-151.30			0.75	1.18	45.43	-134.24	0.00	0.00	Vehicle	Vehicle	-----	-713.24	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	-----	-----	6.91	6.91
		U_7 - U_8	-413.45	51.30	-151.10			0.75	1.18	45.52	-134.06	0.00	0.00	Vehicle	Vehicle	-----	-711.77	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	-----	-----	6.92	6.92
		U_8 - U_9	-321.98	56.10	-141.00			0.75	1.18	49.77	-125.10	0.00	0.00	Vehicle	Vehicle	-----	-581.21	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	6.43	6.43
		U_9 - U_{10}	-182.11	59.20	-121.70			0.75	1.18	52.53	-107.98	0.00	0.00	Vehicle	Vehicle	-----	-377.11	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	-----	-----	6.52	6.52
		U_{10} - U_{11}	-32.58	62.60	-93.20			0.75	1.18	55.54	-82.69	0.00	0.00	Vehicle	Vehicle	29.86	-149.85	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	16.98	16.98	8.91	8.91
		U_{11} - U_{12}	133.59	64.70	-68.30			0.75	1.18	57.41	-60.60	0.00	0.00	Vehicle	Vehicle	248.29	-----	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	-----	-----	13.54	13.54	-----	-----
		U_{12} - U_{13}	289.99	67.00	-43.60			0.75	1.18	59.45	-38.68	0.00	0.00	Vehicle	Vehicle	454.26	-----	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	-----	-----	14.28	14.28	-----	-----
		U_{13} - U_{14}	434.76	68.40	-17.40			0.75	1.18	60.69	-15.44	0.00	0.00	Vehicle	Vehicle	644.08	-----	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	-----	-----	18.61	18.61	-----	-----
		U_{14} - U_{15}	474.45	58.00	-15.00			0.75	1.17	50.85	-13.15	0.00	0.00	Vehicle	Vehicle	682.89	-----	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	-----	-----	21.43	21.43	-----	-----
		U_{15} - U_{16}	383.28	55.90	-34.50			0.75	1.17	49.01	-30.25	0.00	0.00	Vehicle	Vehicle	561.97	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	18.14	18.14	-----	-----
		U_{16} - U_{17}	279.57	52.40	-58.50			0.75	1.17	45.94	-51.29	0.00	0.00	Vehicle	Vehicle	423.17	-----	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	-----	-----	16.64	16.64	-----	-----
		U_{17} - U_{18}	172.63	48.60	-75.80			0.75	1.17	42.61	-66.46	0.00	0.00	Vehicle	Vehicle	279.81	-----	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	-----	-----	13.93	13.93	-----	-----
		U_{18} - U_{19}	74.36	43.40	-96.10			0.75	1.17	38.05	-84.26	0.00	0.00	Vehicle	Vehicle	146.14	-12.86	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	18.18	18.18	8.57	8.57
		U_{19} - U_{20}	-10.01	37.90	-114.50			0.75	1.17	33.23	-100.39	0.00	0.00	Vehicle	Vehicle	30.18	-143.52	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	24.99	24.99	6.80	6.80
		U_{20} - U_{21}	-62.06	31.80	-123.70			0.75	1.17	27.88	-108.45	0.00	0.00	Vehicle	Vehicle	-----	-221.66	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	-----	-----	7.14	7.14
		U_{21} - U_{22}	-88.74	27.50	-122.90			0.75	1.17	24.11	-107.75	0.00	0.00	Vehicle	Vehicle	-----	-255.43	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	-----	-----	6.94	6.94
		U_{22} - U_{23}	-88.92	27.60	-123.00			0.75	1.17	24.20	-107.84	0.00	0.00	Vehicle	Vehicle	-----	-255.78	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.93	6.93
		U_{23} - U_{24}	-76.67	33.90	-126.30			0.75	1.17	29.72	-110.73	0.00	0.00	Vehicle	Vehicle	-----	-243.62	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.86	6.86
		U_{24} - U_{25}	-37.64	39.60	-116.90			0.75	1.17	34.72	-102.49	0.00	0.00	Vehicle	Vehicle	-----	-182.18	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.39	6.39
		U_{25} - U_{26}	37.23	44.50	-98.30			0.75	1.17	39.02	-86.18	0.00	0.00	Vehicle	Vehicle	99.12	-63.64	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	18.69	18.69	7.94	7.94
		U_{26} - U_{27}	128.02	49.60	-79.70			0.75	1.17	43.49	-69.88	0.00	0.00	Vehicle	Vehicle	222.95	-----	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	-----	-----	14.68	14.68	-----	-----
		U_{27} - U_{28}	233.68	53.10	-60.70			0.75	1.17	46.56	-53.22	0.00	0.00	Vehicle	Vehicle	364.31	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	17.40	17.40	-----	-----
		U_{28} - U_{29}	337.65	56.10	-36.90			0.75	1.17	49.19	-32.35	0.00	0.00	Vehicle	Vehicle	502.89	-----	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	-----	-----	19.00	19.00	-----	-----
		U_{29} - U_{30}	437.10	58.00	-14.20			0.75	1.17	50.85	-12.45	0.00	0.00	Vehicle	Vehicle	634.33	-----	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	-----	-----	22.17	22.17	-----	-----
		U_{30} - U_{31}	420.53	69.00	-16.10			0.75	1.18	61.22	-14.28	0.00	0.00	Vehicle	Vehicle	626.27	-----	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	-----	-----	18.68	18.68	-----	-----
		U_{31} - U_{32}	300.69	67.80	-42.30			0.75	1.18	60.16	-37.53	0.00	0.00	Vehicle	Vehicle	469.10	-----	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

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: 3F1 **Condition:** As-Built

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

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

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

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	(No Impact) Pedestrian Load MAX	(No Impact) Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capicity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Lower Chord	Structure 1	L_0- L_1	8.49	11.40	-8.30			0.75	1.24	10.58	-7.70	0.00	0.00	Vehicle	Vehicle	24.79	-----	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	-----	-----	5.23	-----	-----	5.23	-----	-----	**46.72**	**46.72**	-----	-----
		L_1 - L_2	50.81	70.20	-13.90			0.75	1.24	65.13	-12.90	0.00	0.00	Vehicle	Vehicle	150.72	-----	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	-----	-----	**6.94**	**6.94**	-----	-----
		L_2 - L_3	61.22	100.50	-23.60			0.75	1.24	93.24	-21.89	0.00	0.00	Vehicle	Vehicle	200.80	-----	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	-----	-----	**6.51**	**6.51**	-----	-----
		L_3 - L_4	25.70	110.10	-32.70			0.75	1.24	102.15	-30.34	0.00	0.00	Vehicle	Vehicle	166.20	-6.03	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	**6.29**	**6.29**	**19.40**	**19.40**
		L_4 - L_5	-118.45	81.90	-48.10			0.75	1.24	75.98	-44.62	0.00	0.00	Vehicle	Vehicle	-----	-212.00	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**8.56**	**8.56**
		L_5 - L_6	-217.80	53.30	-57.70			0.75	1.24	49.45	-53.53	0.00	0.00	Vehicle	Vehicle	-352.73	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	-----	-----	**8.25**	**8.25**
		L_6 - L_7	-320.36	23.80	-66.20			0.75	1.24	22.08	-61.42	0.00	0.00	Vehicle	Vehicle	-----	-496.30	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	-----	-----	**10.17**	**10.17**
		L_7 - L_8	-417.18	0.20	-71.60			0.75	1.24	0.19	-66.43	0.00	0.00	Vehicle	Vehicle	-----	-628.69	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	-----	-----	**11.78**	**11.78**
		L_8 - L_9	-410.79	0.00	-76.40			0.75	1.20	0.00	-68.65	0.00	0.00	Vehicle	Vehicle	-----	-623.27	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	-----	-----	**11.49**	**11.49**
		L_9 - L_{10}	-247.75	20.60	-55.70			0.75	1.20	18.51	-50.05	0.00	0.00	Vehicle	Vehicle	-----	-387.14	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	-----	-----	**13.94**	**13.94**
		L_{10} - L_{11}	-65.21	53.20	-48.00			0.75	1.20	47.80	-43.13	0.00	0.00	Vehicle	Vehicle	-----	-140.84	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	-----	-----	**10.09**	**10.09**
		L_{11} - L_{12}	101.88	82.80	-40.90			0.75	1.20	74.40	-36.75	0.00	0.00	Vehicle	Vehicle	229.16	-----	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	-----	-----	**6.61**	**6.61**	-----	-----
		L_{12} - L_{13}	264.09	112.60	-35.10			0.75	1.20	101.17	-31.54	0.00	0.00	Vehicle	Vehicle	474.84	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**7.02**	**7.02**	-----	-----
		L_{13} - L_{14}	373.73	136.60	-29.50			0.75	1.20	122.74	-26.51	0.00	0.00	Vehicle	Vehicle	645.41	-----	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	-----	-----	**7.61**	**7.61**	-----	-----
		L_{14} - L_{15}	476.34	145.80	-19.30			0.75	1.20	131.00	-17.34	0.00	0.00	Vehicle	Vehicle	789.54	-----	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	-----	-----	**8.38**	**8.38**	-----	-----
		L_{15} - L_{16}	459.97	133.60	-14.40			0.75	1.20	120.04	-12.94	0.00	0.00	Vehicle	Vehicle	754.01	-----	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	-----	-----	**9.28**	**9.28**	-----	-----
		L_{16} - L_{17}	381.37	109.50	-9.60			0.75	1.20	98.39	-8.63	0.00	0.00	Vehicle	Vehicle	623.68	-----	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	-----	-----	**8.49**	**8.49**	-----	-----
		L_{17} - L_{18}	288.98	74.30	-6.50			0.75	1.20	66.76	-5.84	0.00	0.00	Vehicle	Vehicle	462.45	-----	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	-----	-----	**8.90**	**8.90**	-----	-----
		L_{18} - L_{19}	176.20	31.90	-5.50			0.75	1.20	28.66	-4.94	0.00	0.00	Vehicle	Vehicle	266.32	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**11.39**	**11.39**	-----	-----
		L_{19} - L_{20}	69.74	11.70	-19.20			0.75	1.20	10.51	-17.25	0.00	0.00	Vehicle	Vehicle	104.33	-----	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	-----	-----	**41.18**	**41.18**	-----	-----
		L_0- L_1	24.59	7.30	-8.70			0.75	1.18	6.48	-7.72	0.00	0.00	Vehicle	Vehicle	40.39	-----	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	-----	-----	**93.99**	**93.99**	-----	-----
		L_1 - L_2	138.59	48.30	-7.60			0.75	1.18	42.85	-6.74	0.00	0.00	Vehicle	Vehicle	235.88	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**11.55**	**11.55**	-----	-----
		L_2 - L_3	252.83	93.10	-15.80			0.75	1.18	82.60	-14.02	0.00	0.00	Vehicle	Vehicle	436.06	-----	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	-----	-----	**8.76**	**8.76**	-----	-----
		L_3 - L_4	352.30	123.60	-23.90			0.75	1.18	109.66	-21.21	0.00	0.00	Vehicle	Vehicle	600.56	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**8.73**	**8.73**	-----	-----
		L_4 - L_5	447.17	144.80	-33.10			0.75	1.18	128.47	-29.37	0.00	0.00	Vehicle	Vehicle	748.33	-----	11.00	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**9.36**	**9.36**	-----	-----
		L_5 - L_6	477.93	154.10	-40.20			0.75	1.18	136.73	-35.67	0.00	0.00	Vehicle	Vehicle	799.06	-----	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	-----	-----	**9.62**	**9.62**	-----	-----
		L_6 - L_7	482.68	154.40	-47.30			0.75	1.18	136.99	-41.97	0.00	0.00	Vehicle	Vehicle	805.57	-----	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	-----	-----	**9.74**	**9.74**	-----	-----
		L_7 - L_8	336.61	132.00	-57.10			0.75	1.18	117.12	-50.66	0.00	0.00	Vehicle	Vehicle	589.85	-----	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	-----	-----	**8.58**	**8.58**	-----	-----
		L_8 - L_9	196.05	111.40	-59.50			0.75	1.18	98.84	-52.79	0.00	0.00	Vehicle	Vehicle	383.35	-----	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	-----	-----	**9.14**	**9.14**	-----	-----
		L_9 - L_{10}	45.60	83.40	-62.60			0.75	1.18	74.00	-55.54	0.00	0.00	Vehicle	Vehicle	155.47	-12.93	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**11.03**	**11.03**	**13.92**	**13.92**
		L_{10} - L_{11}	-126.26	59.40	-64.00			0.75	1.18	52.70	-56.78	0.00	0.00	Vehicle	Vehicle	-----	-237.95	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**9.23**	**9.23**
		L_{11} - L_{12}	-284.87	37.10	-66.10			0.75	1.18	32.92	-58.65	0.00	0.00	Vehicle	Vehicle	-----	-446.57	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**11.01**	**11.01**
		L_{12} - L_{13}	-433.79	18.70	-71.20			0.75	1.18	16.59	-63.17	0.00	0.00	Vehicle	Vehicle	-----	-646.05	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	-----	-----	**13.32**	**13.32**
		L_{13} - L_{14}	-552.65	18.20	-72.50			0.75	1.18	16.15	-64.33	0.00	0.00	Vehicle	Vehicle	-----	-802.06	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	-----	-----	**14.96**	**14.96**
		L_{14} - L_{15}	-573.48	18.10	-76.80			0.75	1.17	15.87	-67.33	0.00	0.00	Vehicle	Vehicle	-----	-833.05	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	-----	-----	**13.99**	**13.99**
		L_{15} - L_{16}	-492.94	15.80	-60.80			0.75	1.17	13.85	-53.31	0.00	0.00	Vehicle	Vehicle	-----	-710.12	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**14.68**	**14.68**
		L_{16} - L_{17}	-395.30	31.50	-56.60			0.75	1.17	27.62	-49.62	0.00	0.00	Vehicle	Vehicle	-----	-578.40	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	-----	-----	**13.14**	**13.14**
		L_{17} - L_{18}	-288.04	50.30	-53.10			0.75	1.17	44.10	-46.56	0.00	0.00	Vehicle	Vehicle	-----	-434.98	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	-----	-----	**9.44**	**9.44**
		L_{18} - L_{19}	-175.85	67.60	-49.10			0.75	1.17	59.27	-43.05	0.00	0.00	Vehicle	Vehicle	-----	-284.56	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	-----	-----	**9.24**	**9.24**
		L_{19} - L_{20}	-78.08	88.20	-43.90			0.75	1.17	77.33	-38.49	0.00	0.00	Vehicle	Vehicle	-----	-151.53	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	-----	-----	**12.87**	**12.87**
	Structure 2	L_{20} - L_{21}	7.55	108.10	-38.60			0.75	1.17	94.78	-33.84	0.00	0.00	Vehicle	Vehicle	133.03	-34.18	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	**10.10**	**10.10**	**24.28**	**24.28**
		L_{21} - L_{22}	59.07	119.30	-32.50			0.75	1.17	104.60	-28.49	0.00	0.00	Vehicle	Vehicle	212.76	-----	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	-----	-----	**8.66**	**8.66**	-----	-----
		L_{22} - L_{23}	71.98	119.30	-34.60			0.75	1.17	104.60	-30.34	0.00	0.00	Vehicle	Vehicle	229.55	-----	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	-----	-----	**8.53**	**8.53**	-----	-----
		L_{23} - L_{24}	33.55	107.20	-40.10			0.75	1.17	93.99	-35.16	0.00	0.00	Vehicle	Vehicle	165.79	-2.09	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	**9.91**	**9.91**	**24.11**	**24.11**
		L_{24} - L_{25}	-45.09	84.80	-44.60			0.75	1.17	74.35	-39.10	0.00	0.00	Vehicle	Vehicle	38.04	-109.44	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	**9.74**	**9.74**	**13.52**	**13.52**
		L_{25} - L_{26}	-134.94	66.30	-48.90			0.75	1.17	58.13	-42.87	0.00	0.00	Vehicle	Vehicle	-----	-231.15	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	-----	-----	**10.23**	**10.23**
		L_{26} - L_{27}	-245.90	46.30	-51.50			0.75	1.17	40.59	-45.15	0.00	0.00	Vehicle	Vehicle	-----	-378.37	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	-----	-----	**10.67**	**10.67**
		L_{27} - L_{28}	-351.78	26.00	-54.40			0.75	1.17	22.80	-47.70	0.00	0.00	Vehicle	Vehicle	-----	-519.31	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	-----	-----	**14.59**	**14.59**
		L_{28} - L_{29}	-458.29	13.10	-63.60			0.75	1.17	11.49	-55.76	0.00	0.00	Vehicle	Vehicle	-----	-668.27	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**14.65**	**14.65**
		L_{29} - L_{30}	-542.18	14.90	-81.20			0.75	1.17	13.06	-71.19	0.00	0.00	Vehicle	Vehicle	-----	-797.38	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	-----	-----	**13.67**	**13.67**
		L_{30} - L_{31}	-514.03	17.80	-70.70			0.75	1.18	15.79	-62.73	0.00	0.00	Vehicle	Vehicle	-----	-749.79	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	-----	-----	**15.95**	**15.95**
		L_{31} - L_{32}	-411.21	18.40	-66.00			0.75	1.18	16.33	-58.56	0.00	0.00	Vehicle	Vehicle	-----	-610.70	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	-----	-----	**14.75**	**14.75**
		L_{32} - L_{33}	-287.47	33.10	-64.50			0.75	1.18	29.37	-57.23	0.00	0.00	Veh

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 3F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

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

E = 29000.0 ksi

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	(No Impact) Pedestrian Load MAX	(No Impact) Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Verticals	Structure 1	U_0 - L_0	-67.60	9.39	-131.84			0.75	1.24	8.71	-122.32	0.00	0.00	Vehicle	Vehicle	-----	-246.89	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	-----	-----	-----	-----	-----	2.26	2.26
		U_1 - L_1	-24.06	9.07	-60.77			0.75	1.24	8.41	-56.38	0.00	0.00	Vehicle	Vehicle	-----	-104.57	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	-----	-----	-----	-----	-----	5.82	5.82
		U_2 - L_2	12.88	7.61	-46.30			0.75	1.24	7.06	-42.96	0.00	0.00	Vehicle	Vehicle	25.92	-39.11	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	-----	-----	-----	-----	-----	8.49	8.49
		U_3 - L_3	37.35	23.89	-41.11			0.75	1.24	22.16	-38.14	0.00	0.00	Vehicle	Vehicle	77.36	-1.02	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	17.61	17.61
		U_4 - L_4	-15.53	6.97	-60.58			0.75	1.24	6.47	-56.20	0.00	0.00	Vehicle	Vehicle	-----	-93.25	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	-----	-----	-----	-----	-----	5.95	5.95
		U_5 - L_5	-92.52	16.42	-63.78			0.75	1.24	15.24	-59.17	0.00	0.00	Vehicle	Vehicle	-----	-197.19	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	-----	-----	-----	-----	-----	5.62	5.62
		U_6 - L_6	-117.01	4.26	-74.33			0.75	1.24	3.95	-68.96	0.00	0.00	Vehicle	Vehicle	-----	-241.76	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	5.67	5.67
		U_7 - L_7	-127.49	0.25	-81.61			0.75	1.24	0.23	-75.72	0.00	0.00	Vehicle	Vehicle	-----	-264.16	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	-----	-----	-----	-----	-----	4.39	4.39
		U_8 - L_8	-368.60	3.20	-119.25			0.75	1.24	2.97	-110.63	0.00	0.00	Vehicle	Vehicle	-----	-623.00	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	-----	-----	-----	6.30	6.30
		U_9 - L_9	-214.45	4.52	-99.29			0.75	1.20	4.06	-89.21	0.00	0.00	Vehicle	Vehicle	-----	-394.77	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	-----	-----	16.25	-----	-----	32.50	45.00	Pass	9.60	12.00	Pass	-----	-----	-----	-----	-----	4.83	4.83
		U_{10} - L_{10}	-198.57	2.64	-83.76			0.75	1.20	2.37	-75.26	0.00	0.00	Vehicle	Vehicle	-----	-355.97	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	7.23	7.23
		U_{11} - L_{11}	-171.30	10.70	-75.47			0.75	1.20	9.61	-67.81	0.00	0.00	Vehicle	Vehicle	-----	-310.84	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	-----	-----	-----	-----	-----	6.93	6.93
		U_{12} - L_{12}	-128.27	18.57	-70.41			0.75	1.20	16.68	-63.26	0.00	0.00	Vehicle	Vehicle	-----	-248.99	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	-----	-----	-----	-----	-----	6.39	6.39
		U_{13} - L_{13}	-96.55	22.94	-62.26			0.75	1.20	20.62	-55.94	0.00	0.00	Vehicle	Vehicle	-----	-198.24	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	-----	-----	-----	-----	-----	5.08	5.08
		U_{14} - L_{14}	-11.04	6.73	-58.18			0.75	1.20	6.04	-52.27	0.00	0.00	Vehicle	Vehicle	-----	-82.31	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	-----	-----	-----	-----	-----	6.38	6.38
		U_{15} - L_{15}	-2.54	33.23	-45.63			0.75	1.20	29.85	-41.00	0.00	0.00	Vehicle	Vehicle	35.51	-56.60	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	-----	-----	-----	-----	-----	14.41	14.41
		U_{16} - L_{16}	-31.31	25.22	-50.29			0.75	1.20	22.66	-45.19	0.00	0.00	Vehicle	Vehicle	-----	-99.45	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	-----	-----	-----	-----	-----	6.86	6.86
		U_{17} - L_{17}	-105.02	13.57	-69.37			0.75	1.20	12.19	-62.33	0.00	0.00	Vehicle	Vehicle	-----	-217.54	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	-----	-----	-----	-----	-----	4.91	4.91
		U_{18} - L_{18}	-126.66	4.39	-76.75			0.75	1.20	3.95	-68.96	0.00	0.00	Vehicle	Vehicle	-----	-254.30	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	5.78	5.78
		U_{19} - L_{19}	-166.54	4.11	-78.93			0.75	1.20	3.70	-70.92	0.00	0.00	Vehicle	Vehicle	-----	-308.69	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.34	6.34
		U_{20} - L_{20}	-184.30	3.82	-93.29			0.75	1.20	3.43	-83.82	0.00	0.00	Vehicle	Vehicle	-----	-348.55	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	-----	-----	-----	-----	-----	4.75	4.75
	Structure 2	U_0 - L_0	-203.39	10.20	-94.22			0.75	1.18	9.05	-83.60	0.00	0.00	Vehicle	Vehicle	-----	-373.08	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	5.25	5.25
		U_1 - L_1	-176.11	11.03	-80.62			0.75	1.18	9.79	-71.53	0.00	0.00	Vehicle	Vehicle	-----	-321.93	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	6.94	6.94
		U_2 - L_2	-137.45	10.45	-77.52			0.75	1.18	9.27	-68.78	0.00	0.00	Vehicle	Vehicle	-----	-268.10	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	-----	-----	-----	-----	-----	6.35	6.35
		U_3 - L_3	-117.61	10.86	-72.41			0.75	1.18	9.63	-64.25	0.00	0.00	Vehicle	Vehicle	-----	-236.41	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	-----	-----	-----	-----	-----	5.20	5.20
		U_4 - L_4	-50.97	24.25	-59.81			0.75	1.18	21.52	-53.07	0.00	0.00	Vehicle	Vehicle	-----	-135.24	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	-----	-----	-----	-----	-----	5.43	5.43
		U_5 - L_5	-13.79	30.16	-51.95			0.75	1.18	26.76	-46.09	0.00	0.00	Vehicle	Vehicle	16.87	-77.84	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	16.50	16.50
		U_6 - L_6	45.46	36.85	-40.60			0.75	1.18	32.70	-36.02	0.00	0.00	Vehicle	Vehicle	101.60	-----	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	-----	-----	-----	-----	-----	-----	-----	11.69	11.69
		U_7 - L_7	-22.33	3.64	-60.79			0.75	1.18	3.23	-53.93	0.00	0.00	Vehicle	Vehicle	-----	-99.14	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	5.90	5.90
		U_8 - L_8	-120.06	25.86	-56.05			0.75	1.18	22.94	-49.73	0.00	0.00	Vehicle	Vehicle	-----	-220.72	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	8.25	8.25
		U_9 - L_9	-177.00	18.29	-70.40			0.75	1.18	16.23	-62.46	0.00	0.00	Vehicle	Vehicle	-----	-311.30	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	8.23	8.23
		U_{10} - L_{10}	-205.85	13.98	-75.66			0.75	1.18	12.40	-67.13	0.00	0.00	Vehicle	Vehicle	-----	-354.88	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	-----	-----	-----	-----	-----	8.53	8.53
		U_{11} - L_{11}	-239.21	9.12	-78.50			0.75	1.18	8.09	-69.65	0.00	0.00	Vehicle	Vehicle	-----	-401.52	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	-----	-----	-----	-----	-----	7.55	7.55
		U_{12} - L_{12}	-257.92	3.95	-86.06			0.75	1.18	3.50	-76.36	0.00	0.00	Vehicle	Vehicle	-----	-434.57	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	-----	-----	-----	-----	-----	7.12	7.12
		U_{13} - L_{13}	-243.80	5.26	-89.59			0.75	1.18	4.67	-79.48	0.00	0.00	Vehicle	Vehicle	-----	-420.27	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	5.62	5.62
		U_{14} - L_{14}	-420.84	5.22	-111.41			0.75	1.18	4.63	-98.85	0.00	0.00	Vehicle	Vehicle	-----	-675.60	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	6.38	6.38
		U_{15} - L_{15}	-158.85	8.59	-91.16			0.75	1.17	7.53	-79.92	0.00	0.00	Vehicle	Vehicle	-----	-310.40	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	-----	-----	-----	-----	-----	6.65	6.65
		U_{16} - L_{16}	-174.03	6.70	-89.19			0.75	1.17	5.87	-78.20	0.00	0.00	Vehicle	Vehicle	-----	-327.89	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	-----	-----	-----	-----	-----	6.29	6.29
		U_{17} - L_{17}	-156.46	9.55	-82.34			0.75	1.17	8.37	-72.19	0.00	0.00	Vehicle	Vehicle	-----	-297.25	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	-----	-----	-----	-----	-----	6.47	6.47
		U_{18} - L_{18}	-142.20	13.73	-75.72			0.75	1.17	12.03	-66.39	0.00	0.00	Vehicle	Vehicle	-----	-271.17	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	6.55	6.55
		U_{19} - L_{19}	-113.66	19.16	-72.70			0.75	1.17	16.80	-63.74	0.00	0.00	Vehicle	Vehicle	-----	-230.62	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	6.24	6.24
		U_{20} - L_{20}	-76.52	24.44	-61.77			0.75	1.17	21.42	-54.16	0.00	0.00	Vehicle	Vehicle	-----	-169.88	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	5.51	5.51
		U_{21} - L_{21}	-45.78	25.81	-53.77			0.75	1.17	22.63	-47.15	0.00	0.00	Vehicle	Vehicle	-----	-120.80	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	6.25	6.25
		U_{22} - L_{22}	-17.71	6.55	-59.47			0.75	1.17	5.74	-52.14	0.00	0.00	Vehicle	Vehicle	-----	-90.81	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	-----	-----	-----	-----	-----	6.22	6.22
		U_{23} - L_{23}	-30.66	30.06	-45.92			0.75	1.17	26.36	-40.26	0.00	0.00	Vehicle	Vehicle	-----	-92.20	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	-----	-----	-----	-----	-----	7.70	7.70
		U_{24} - L_{24}	-62.03	25.60	-57.63			0.75	1.17	22.45	-50.53	0.00	0.00	Vehicle	Vehicle	-----	-146.32	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	-----	-----	-----	-----	-----	6.20	6.20
		U_{25} - L_{25}	-103.10	17.73	-67.60			0.75	1.17	15.54	-59.27	0.00	0.00	Vehicle	Vehicle	-----	-211.07	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	-----	-----	-----	-----	-----	6.89	6.89
		U_{26} - L_{26}	-134.31	15.06	-69.53			0.75	1.17	13.20	-60.96	0.00	0.00	Vehicle	Vehicle	-----	-253.84	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.27	7.27
		U_{27} - L_{27}	-155.93	7.27	-79.69			0.75	1.17	6.37	-69.87	0.00	0.00	Vehicle	Vehicle	-----	-293.54	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	-----	-----	-----	-----	-----	6.69	6.69
		U_{28} - L_{28}	-179.28	5.77	-85.97			0.75	1.17	5.06	-75.37	0.00	0.00	Vehicle	Vehicle	-----	-331.05	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	6.46	6.46
		U_{29} - L_{29}	-171.45	4.08	-83.69			0.75	1.17	3.57	-73.37	0.00	0.00	Vehicle	Vehicle	-----	-318.26	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.07	7.07
		U_{30} - L_{30}	-392.76	7.61	-109.64			0.75	1.18	6.75	-97.28	0.00	0.00	Vehicle	Vehicle	-----	-637.04	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	-----	-----	-----	-----	-----	6.78	6.78
		U_{31} - L_{31}	-203.21	8.69	-95.48			0.75	1.18	7.71	-84.71	0.00	0.00	Vehicle	Vehicle	-----	-374.30	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	-----	-----	-----	-----	-----	5.75	5.75
		U_{32} - L_{32}	-222.46	3.51	-88.57			0.75	1.18	3.11	-78.58	0.00	0.00	Vehicle	Vehicle	-----	-391.35	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	7.37	7.37
		U_{33} - L_{33}	-211.56	7.29	-86.54			0.75	1.18	6.47	-76.79	0.00	0

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: 3F1 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	(No Impact) Pedestrian Load MAX	(No Impact) Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capicity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Diagonals / Structure 1	U_0 - L_1	53.25	91.66	-14.12			0.75	1.24	85.04	-13.10	0.00	0.00	Vehicle	Vehicle	179.78	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**6.27**	**6.27**	-----	-----
	U_1 - L_2	10.78	68.76	-13.03			0.75	1.24	63.80	-12.08	0.00	0.00	Vehicle	Vehicle	96.94	-1.70	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	-----	-----	-----	**6.54**	**6.54**	**28.64**	**28.64**
	U_2 - L_3	-44.02	60.38	-37.28			0.75	1.24	56.02	-34.58	0.00	0.00	Vehicle	Vehicle	15.60	-102.18	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	-----	-----	-----	**8.42**	**8.42**	**8.39**	**8.39**
	U_3 - L_4	-76.72	42.75	-62.38			0.75	1.24	39.66	-57.87	0.00	0.00	Vehicle	Vehicle	-----	-174.96	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	-----	-----	-----	**-----**	**-----**	**4.49**	**4.49**
	U_4 - L_4	118.39	70.65	-32.71			0.75	1.24	65.55	-30.35	0.00	0.00	Vehicle	Vehicle	239.12	-----	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	-----	-----	-----	-----	-----	**6.20**	**6.20**	-----	-----
	U_5 - L_5	137.53	85.40	-21.22			0.75	1.24	79.23	-19.69	0.00	0.00	Vehicle	Vehicle	281.78	-----	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	-----	-----	-----	-----	-----	**6.48**	**6.48**	-----	-----
	U_6 - L_6	157.34	88.61	-5.26			0.75	1.24	82.21	-4.88	0.00	0.00	Vehicle	Vehicle	311.41	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.00**	**6.00**	-----	-----
	U_7 - L_7	149.30	90.23	-0.29			0.75	1.24	83.71	-0.27	0.00	0.00	Vehicle	Vehicle	302.92	-----	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	-----	-----	-----	-----	-----	**5.99**	**5.99**	-----	-----
	U_8 - L_8	249.09	107.50	-5.16			0.75	1.20	96.59	-4.64	0.00	0.00	Vehicle	Vehicle	449.38	-----	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	-----	-----	-----	-----	-----	**7.38**	**7.38**	-----	-----
	U_9 - L_{10}	260.26	97.50	-4.11			0.75	1.20	87.61	-3.70	0.00	0.00	Vehicle	Vehicle	452.22	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**8.01**	**8.01**	-----	-----
	U_{10} - L_{11}	236.30	94.76	-13.42			0.75	1.20	85.14	-12.06	0.00	0.00	Vehicle	Vehicle	417.88	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**7.92**	**7.92**	-----	-----
	U_{11} - L_{12}	211.92	90.15	-24.96			0.75	1.20	81.00	-22.43	0.00	0.00	Vehicle	Vehicle	380.80	-----	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	-----	-----	-----	-----	-----	**6.98**	**6.98**	-----	-----
	U_{12} - L_{13}	151.66	82.16	-31.80			0.75	1.20	73.82	-28.57	0.00	0.00	Vehicle	Vehicle	293.12	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**6.49**	**6.49**	-----	-----
	U_{13} - L_{14}	108.60	66.79	-39.40			0.75	1.20	60.01	-35.40	0.00	0.00	Vehicle	Vehicle	219.19	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.32**	**5.32**	-----	-----
	U_{15} - L_{14}	-24.45	52.61	-61.40			0.75	1.20	47.27	-55.17	0.00	0.00	Vehicle	Vehicle	29.67	-103.50	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	-----	-----	-----	**9.57**	**9.57**	**5.51**	**5.51**
	U_{16} - L_{15}	23.99	62.11	-44.92			0.75	1.20	55.81	-40.36	0.00	0.00	Vehicle	Vehicle	103.74	-21.28	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**7.23**	**7.23**	**8.63**	**8.63**
	U_{17} - L_{16}	120.03	71.67	-26.86			0.75	1.20	64.39	-24.13	0.00	0.00	Vehicle	Vehicle	239.75	-----	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	-----	-----	-----	-----	-----	**6.28**	**6.28**	-----	-----
	U_{18} - L_{17}	144.79	82.80	-16.22			0.75	1.20	74.40	-14.58	0.00	0.00	Vehicle	Vehicle	284.95	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.80**	**6.80**	-----	-----
	U_{19} - L_{18}	193.05	84.42	-5.31			0.75	1.20	75.85	-4.77	0.00	0.00	Vehicle	Vehicle	349.57	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.82**	**6.82**	-----	-----
	U_{20} - L_{19}	193.51	83.32	-4.34			0.75	1.20	74.86	-3.90	0.00	0.00	Vehicle	Vehicle	348.88	-----	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	-----	-----	-----	-----	-----	**6.90**	**6.90**	-----	-----
Structure 2	U_0 - L_1	202.41	82.89	-11.50			0.75	1.18	73.55	-10.20	0.00	0.00	Vehicle	Vehicle	358.75	-----	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	-----	-----	-----	-----	-----	**7.82**	**7.82**	-----	-----
	U_1 - L_2	190.86	82.81	-12.88			0.75	1.18	73.47	-11.43	0.00	0.00	Vehicle	Vehicle	343.63	-----	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	-----	-----	-----	-----	-----	**7.99**	**7.99**	-----	-----
	U_2 - L_3	155.85	82.45	-12.54			0.75	1.18	73.16	-11.12	0.00	0.00	Vehicle	Vehicle	297.70	-----	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	-----	-----	-----	-----	-----	**6.76**	**6.76**	-----	-----
	U_3 - L_4	134.05	76.67	-25.78			0.75	1.18	68.02	-22.87	0.00	0.00	Vehicle	Vehicle	262.70	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**6.51**	**6.51**	-----	-----
	U_4 - L_5	46.02	62.89	-36.95			0.75	1.18	55.80	-32.79	0.00	0.00	Vehicle	Vehicle	132.36	-----	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	-----	-----	-----	-----	-----	**6.84**	**6.84**	-----	-----
	U_5 - L_6	3.45	54.92	-45.69			0.75	1.18	48.73	-40.54	0.00	0.00	Vehicle	Vehicle	67.83	-48.22	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**8.71**	**8.71**	**8.12**	**8.12**
	U_6 - L_7	-84.29	44.02	-63.55			0.75	1.18	39.05	-56.38	0.00	0.00	Vehicle	Vehicle	-----	-182.87	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	-----	-----	-----	**-----**	**-----**	**4.88**	**4.88**
	U_7 - L_7	137.30	71.49	-39.23			0.75	1.18	63.43	-34.81	0.00	0.00	Vehicle	Vehicle	260.95	-----	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	-----	-----	-----	-----	-----	**7.35**	**7.35**	-----	-----
	U_8 - L_8	210.89	75.08	-31.52			0.75	1.18	66.61	-27.96	0.00	0.00	Vehicle	Vehicle	360.75	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.50**	**7.50**	-----	-----
	U_{10} - L_9	236.36	85.88	-21.80			0.75	1.18	76.19	-19.34	0.00	0.00	Vehicle	Vehicle	406.32	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.10**	**7.10**	-----	-----
	U_{11} - L_{10}	274.62	88.07	-15.54			0.75	1.18	78.14	-13.78	0.00	0.00	Vehicle	Vehicle	458.58	-----	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	-----	-----	-----	-----	-----	**7.29**	**7.29**	-----	-----
	U_{12} - L_{11}	281.06	85.98	-9.71			0.75	1.18	76.28	-8.61	0.00	0.00	Vehicle	Vehicle	464.55	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.39**	**7.39**	-----	-----
	U_{13} - L_{12}	278.12	85.70	-5.75			0.75	1.18	76.03	-5.10	0.00	0.00	Vehicle	Vehicle	460.40	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.57**	**6.57**	-----	-----
	U_{14} - L_{13}	235.45	84.26	-7.04			0.75	1.18	74.76	-6.25	0.00	0.00	Vehicle	Vehicle	403.26	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.25**	**7.25**	-----	-----
	U_{15} - L_{15}	143.03	82.07	-8.46			0.75	1.17	71.95	-7.42	0.00	0.00	Vehicle	Vehicle	279.47	-----	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	-----	-----	-----	-----	-----	**7.06**	**7.06**	-----	-----
	U_{16} - L_{16}	171.91	85.69	-8.50			0.75	1.17	75.13	-7.45	0.00	0.00	Vehicle	Vehicle	321.15	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.37**	**6.37**	-----	-----
	U_{17} - L_{17}	181.04	85.47	-9.94			0.75	1.17	74.94	-8.71	0.00	0.00	Vehicle	Vehicle	332.77	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.06**	**7.06**	-----	-----
	U_{18} - L_{18}	171.16	81.69	-15.65			0.75	1.17	71.62	-13.72	0.00	0.00	Vehicle	Vehicle	315.61	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.69**	**6.69**	-----	-----
	U_{19} - L_{19}	150.64	84.17	-21.99			0.75	1.17	73.80	-19.28	0.00	0.00	Vehicle	Vehicle	291.77	-----	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	-----	-----	-----	-----	-----	**6.78**	**6.78**	-----	-----
	U_{20} - L_{20}	125.86	74.23	-30.74			0.75	1.17	65.08	-26.95	0.00	0.00	Vehicle	Vehicle	248.23	-----	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	-----	-----	-----	-----	-----	**7.34**	**7.34**	-----	-----
	U_{26} - L_{21}	76.05	67.51	-32.29			0.75	1.17	59.19	-28.31	0.00	0.00	Vehicle	Vehicle	175.81	-----	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	-----	-----	-----	-----	-----	**5.94**	**5.94**	-----	-----
	U_{21} - L_{22}	38.34	56.71	-49.26			0.75	1.17	49.72	-43.19	0.00	0.00	Vehicle	Vehicle	114.48	-6.30	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**7.83**	**7.83**	**8.43**	**8.43**
	U_{23} - L_{22}	18.02	54.92	-52.85			0.75	1.17	48.15	-46.34	0.00	0.00	Vehicle	Vehicle	86.02	-36.81	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**8.51**	**8.51**	**7.36**	**7.36**
	U_{24} - L_{23}	58.54	61.21	-39.22			0.75	1.17	53.66	-34.38	0.00	0.00	Vehicle	Vehicle	145.87	-----	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	-----	-----	-----	-----	-----	**6.88**	**6.88**	-----	-----
	U_{25} - L_{24}	114.92	74.48	-33.44			0.75	1.17	65.30	-29.32	0.00	0.00	Vehicle	Vehicle	234.29	-----	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	-----	-----	-----	-----	-----	**7.48**	**7.48**	-----	-----
	U_{26} - L_{25}	142.93	82.57	-20.95			0.75	1.17	72.40	-18.37	0.00	0.00	Vehicle	Vehicle	279.93	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.01**	**7.01**	-----	-----
	U_{27} - L_{26}	173.71	78.01	-17.67			0.75	1.17	68.39	-15.49	0.00	0.00	Vehicle	Vehicle	314.73	-----	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	-----	-----	-----	-----	-----	**6.97**	**6.97**	-----	-----
	U_{28} - L_{27}	186.49	87.02	-8.12			0.75	1.17	76.29	-7.12	0.00	0.00	Vehicle	Vehicle	341.61	-----	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	-----	-----	-----	-----	-----	**6.86**	**6.86**	-----	-----
	U_{29} - L_{28}	190.57	85.38	-4.94			0.75	1.17	74.86	-4.33	0.00	0.00	Vehicle	Vehicle	345.05	-----	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	-----	-----	-----	-----	-----	**6.15**	**6.15**	-----	-----
	U_{30} - L_{29}	161.74	77.76	-6.72			0.75	1.17	68.18	-5.90	0.00	0.00	Vehicle	Vehicle	298.90	-----	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	-----	-----	-----	-----	-----	**7.17**	**7.17**	-----	-----
	U_{31} - L_{31}	191.49	85.84	-8.53			0.75	1.18	76.16	-7.57	0.00	0.00	Vehicle	Vehicle	347.95	-----	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	-----	-----	-----	-----	-----	**7.69**	**7.69**	-----	-----
	U_{32} - L_{32}	226.17	84.36	-9.36			0.75	1.18	74.84	-8.30	0.00	0.00	Vehicle	Vehicle	391.32	-----	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	-----	-----	-----	-----	-----	**7.37**	**7.37**	-----	-----
	U_{33} - L_{33}	243.26	91.02	-7.55			0.75	1.18	80.76	-6.70	0.00	0.00	Vehicle	Vehicle	421.22	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.44**	**7.44**	-----	-----
	U_{34} - L_{34}	238.98	89.53	-14.78			0.75	1.18	79.44	-13.11	0.00	0.00	Vehicle	Vehicle	413.94	-----	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	-----	-----	-----	-----	-----	**7.62**	**7.62**	-----	-----
	U_{35} - L_{35}	222.10	85.22	-20.27			0.75	1.18	75.61	-17.98	0.00	0.00	Vehicle	Vehicle	387.03	-----	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	-----	-----	-----	-----	-----	**7.35**	**7.35**	-----	-----
	U_{36} - $L_{36

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: 3F1 **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 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	-66.77	8.72	-41.84	2.20	-8.83	0.90	1.24	9.71	-46.58	2.20	-8.83	Vehicle	Vehicle	-----	-147.36	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	10.70	10.70
		U_1 - U_2	-86.66	20.69	-69.13	6.00	-16.34	0.90	1.24	23.04	-76.97	6.00	-16.34	Vehicle	Vehicle	-----	-212.71	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	6.22	6.22
		U_2 - U_3	-48.28	30.64	-71.10	9.44	-19.05	0.90	1.24	34.11	-79.15	9.44	-19.05	Vehicle	Vehicle	-----	-165.65	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	6.53	6.53
		U_3 - U_4	36.43	39.59	-61.64	12.72	-17.47	0.90	1.24	44.08	-68.63	12.72	-17.47	Vehicle	Vehicle	104.66	-41.85	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	14.40	14.40	8.77	8.77
		U_4 - U_5	38.78	39.73	-61.19	12.78	-17.37	0.90	1.24	44.23	-68.13	12.78	-17.37	Vehicle	Vehicle	107.91	-38.15	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	14.30	14.30	8.87	8.87
		U_5 - U_6	154.43	44.72	-38.98	15.13	-12.03	0.90	1.24	49.78	-43.39	15.13	-12.03	Vehicle	Vehicle	265.47	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	10.38	10.38	-----	-----
		U_6 - U_7	288.19	48.70	-20.38	17.11	-4.31	0.90	1.24	54.22	-22.69	17.11	-4.31	Vehicle	Vehicle	445.14	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	9.52	9.52	-----	-----
		U_7 - U_8	410.75	49.90	-4.75	22.59	0.00	0.90	1.24	55.56	-5.29	22.59	0.00	Pedestrian	Vehicle	635.56	-----	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	-----	-----	8.95	8.95	-----	-----
		U_8 - U_9	311.35	38.21	-8.16	19.05	0.00	0.90	1.20	41.20	-8.80	19.05	0.00	Pedestrian	Vehicle	483.07	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	10.42	10.42	-----	-----
		U_9 - U_{10}	78.25	38.54	-34.31	12.28	-6.83	0.90	1.20	41.55	-36.99	12.28	-6.83	Vehicle	Vehicle	155.74	-----	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	-----	Pass	10.67	-----	-----	15.18	15.18	-----	-----
		U_{10} - U_{11}	-141.75	36.32	-62.82	11.11	-18.45	0.90	1.20	39.15	-67.74	11.11	-18.45	Vehicle	Vehicle	-----	-272.33	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	-----	-----	6.73	6.73
		U_{11} - U_{12}	-338.40	33.43	-90.07	9.77	-27.96	0.90	1.20	36.04	-97.11	9.77	-27.96	Vehicle	Vehicle	-----	-566.16	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	-----	-----	4.88	4.88
		U_{12} - U_{13}	-480.50	29.25	-104.88	8.23	-34.35	0.90	1.20	31.53	-113.08	8.23	-34.35	Vehicle	Vehicle	-----	-771.65	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	-----	-----	5.81	5.81
		U_{13} - U_{14}	-571.10	24.82	-111.34	6.68	-37.24	0.90	1.20	26.76	-120.04	6.68	-37.24	Vehicle	Vehicle	-----	-898.49	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	-----	-----	6.30	6.30
		U_{14} - U_{15}	-571.52	24.70	-111.36	6.65	-37.25	0.90	1.20	26.63	-120.07	6.65	-37.25	Vehicle	Vehicle	-----	-899.07	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.30	6.30
		U_{15} - U_{16}	-582.34	19.26	-106.95	4.98	-36.14	0.90	1.20	20.77	-115.31	4.98	-36.14	Vehicle	Vehicle	-----	-906.95	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.46	6.46
		U_{16} - U_{17}	-539.92	14.37	-94.47	3.53	-31.87	0.90	1.20	15.49	-101.86	3.53	-31.87	Vehicle	Vehicle	-----	-834.31	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	-----	-----	7.73	7.73
		U_{17} - U_{18}	-422.72	9.30	-70.00	2.26	-25.07	0.90	1.20	10.03	-75.47	2.26	-25.07	Vehicle	Vehicle	-----	-647.65	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	-----	-----	7.26	7.26
		U_{18} - U_{19}	-286.53	5.25	-44.35	1.28	-16.97	0.90	1.20	5.66	-47.81	1.28	-16.97	Vehicle	Pedestrian	-----	-456.71	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	6.04	6.04
		U_{19} - U_{20}	-140.97	2.23	-19.78	0.55	-8.68	0.90	1.20	2.40	-21.32	0.55	-8.68	Vehicle	Pedestrian	-----	-222.27	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	-----	-----	17.88	17.88
	Structure 2	U_0 - U_1	-147.48	4.39	-28.27	0.45	-4.88	0.90	1.18	4.68	-30.10	0.45	-4.88	Vehicle	Vehicle	-----	-230.86	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	-----	-----	16.61	16.61
		U_1 - U_2	-319.09	9.33	-58.47	1.96	-13.36	0.90	1.18	9.93	-62.26	1.96	-13.36	Vehicle	Vehicle	-----	-495.75	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	-----	-----	7.59	7.59
		U_2 - U_3	-460.93	16.69	-85.05	3.77	-20.95	0.90	1.18	17.77	-90.55	3.77	-20.95	Vehicle	Vehicle	-----	-716.92	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	0.38	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	6.81	6.81
		U_3 - U_4	-580.02	25.42	-107.98	5.92	-27.68	0.90	1.18	27.07	-114.97	5.92	-27.68	Vehicle	Vehicle	-----	-903.49	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	-----	-----	6.62	6.62
		U_4 - U_5	-616.47	33.04	-116.22	7.86	-31.35	0.90	1.18	35.17	-123.74	7.86	-31.35	Vehicle	Vehicle	-----	-962.28	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	-----	-----	7.04	7.04
		U_5 - U_6	-604.69	40.73	-117.36	9.87	-32.88	0.90	1.18	43.37	-124.95	9.87	-32.88	Vehicle	Vehicle	-----	-948.53	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	-----	-----	7.06	7.06
		U_6 - U_7	-514.75	46.62	-107.08	11.56	-31.23	0.90	1.18	49.64	-114.01	11.56	-31.23	Vehicle	Vehicle	-----	-817.39	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	7.25	7.25
		U_7 - U_8	-512.80	46.67	-106.86	11.57	-31.18	0.90	1.18	49.68	-113.77	11.57	-31.18	Vehicle	Vehicle	-----	-814.54	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	-----	-----	7.28	7.28
		U_8 - U_9	-373.48	51.89	-93.31	13.16	-27.41	0.90	1.18	55.25	-99.34	13.16	-27.41	Vehicle	Vehicle	-----	-614.66	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	-----	-----	7.58	7.58
		U_9 - U_{10}	-181.02	54.31	-70.08	14.25	-21.42	0.90	1.18	57.83	-74.62	14.25	-21.42	Vehicle	Vehicle	-----	-332.32	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	-----	-----	9.45	9.45
		U_{10} - U_{11}	26.21	56.15	-49.12	15.21	-14.40	0.90	1.18	59.79	-52.30	15.21	-14.40	Vehicle	Vehicle	111.79	-33.91	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	14.79	14.79	15.21	15.21
		U_{11} - U_{12}	237.41	54.87	-27.50	15.56	-6.85	0.90	1.18	58.42	-29.28	15.56	-6.85	Vehicle	Vehicle	384.58	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	11.52	11.52	-----	-----
		U_{12} - U_{13}	435.92	53.91	-14.25	18.38	0.00	0.90	1.18	57.40	-15.17	18.38	0.00	Vehicle	Vehicle	641.31	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	12.25	12.25	-----	-----
		U_{13} - U_{14}	595.85	51.44	-13.32	24.32	0.00	0.90	1.18	54.77	-14.18	24.32	0.00	Pedestrian	Vehicle	877.42	-----	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	-----	-----	12.25	12.25	-----	-----
		U_{14} - U_{15}	615.52	46.35	-11.54	24.37	0.00	0.90	1.17	48.77	-12.14	24.37	0.00	Pedestrian	Vehicle	895.26	-----	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	-----	-----	12.97	12.97	-----	-----
		U_{15} - U_{16}	486.12	48.38	-19.04	18.61	0.00	0.90	1.17	50.90	-20.03	18.61	0.00	Pedestrian	Vehicle	722.32	-----	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	-----	-----	11.31	11.31	-----	-----
		U_{16} - U_{17}	339.23	48.13	-34.72	14.66	-2.95	0.90	1.17	50.63	-36.53	14.66	-2.95	Vehicle	Vehicle	506.82	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	13.92	13.92	-----	-----
		U_{17} - U_{18}	192.06	47.07	-52.89	15.12	-9.49	0.90	1.17	49.52	-55.65	15.12	-9.49	Vehicle	Vehicle	314.06	-----	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	-----	-----	11.60	11.60	-----	-----
		U_{18} - U_{19}	53.73	43.13	-70.20	15.12	-15.34	0.90	1.17	45.38	-73.86	15.12	-15.34	Vehicle	Vehicle	128.84	-26.17	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	15.70	15.70	9.49	9.49
		U_{19} - U_{20}	-59.08	38.25	-84.61	15.07	-19.84	0.90	1.17	40.24	-89.02	15.07	-19.84	Pedestrian	Vehicle	-----	-192.53	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	-----	-----	7.12	7.12
	Structure 3	U_0 - U_1	-125.50	31.90	-89.50	14.76	-22.39	0.90	1.17	33.56	-94.17	14.76	-22.39	Pedestrian	Vehicle	-----	-285.56	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	-----	-----	7.55	7.55
		U_1 - U_2	-146.93	26.35	-91.22	14.37	-22.74	0.90	1.17	27.73	-95.97	14.37	-22.74	Pedestrian	Vehicle	-----	-315.77	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.19	7.19
		U_2 - U_3	-146.70	26.43	-91.15	14.36	-22.72	0.90	1.17	27.81	-95.90	14.36	-22.72	Pedestrian	Vehicle	-----	-315.39	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.20	7.20
		U_3 - U_4	-112.76	32.13	-83.54	13.87	-21.04	0.90	1.17	33.81	-87.89	13.87	-21.04	Pedestrian	Vehicle	-----	-260.85	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	8.24	8.24
		U_4 - U_5	-36.27	37.07	-71.44	13.40	-17.33	0.90	1.17	39.00	-75.16	13.40	-17.33	Pedestrian	Vehicle	20.96	-144.87	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	16.35	16.35	8.74	8.74
		U_5 - U_6	80.70	40.39	-54.89	12.92	-12.15	0.90	1.17	42.49	-57.75	12.92	-12.15	Vehicle	Vehicle	160.14	-----	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	-----	-----	16.13	16.13	-----	-----
		U_6 - U_7	220.59	43.00	-37.66	12.57	-7.08	0.90	1.17	45.24	-39.62	12.57	-7.08	Vehicle	Vehicle	345.59	-----	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	-----	-----	12.06	12.06	-----	-----
		U_7 - U_8	363.31	43.49	-21.73	14.90	-2.16	0.90	1.17	45.76	-22.87	14.90	-2.16	Vehicle	Vehicle	531.79	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	14.87	14.87	-----	-----
		U_8 - U_9	503.82	43.60	-11.55	21.74	0.00	0.90	1.17	45.87	-12.15	21.74	0.00	Pedestrian	Vehicle	742.86	-----	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	-----	-----	11.37	11.37	-----	-----
		U_9 - U_{10}	616.57	42.90	-11.86	27.08	0.00	0.90	1.17	45.13	-12.47	27.08	0.00	Pedestrian	Vehicle	895.40	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	13.13	13.13	-----	-----
		U_{10}

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: 3F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

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

E = 29000.0 ksi

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	(No Impact) Pedestrian Load$_{MAX}$	(No Impact) Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Lower Chord	Structure 1	L_0- L_1	-2.01	7.87	-5.98	0.36	-2.06	0.90	1.24	8.76	-6.66	0.36	-2.06	Vehicle	Vehicle	8.78	-11.26	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	**57.63**	**57.63**	**63.36**	**63.36**
		L_1 - L_2	67.91	40.97	-11.39	9.23	-3.36	0.90	1.24	45.61	-12.68	9.23	-3.36	Vehicle	Vehicle	147.57	-----	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	-----	-----	**9.53**	**9.53**	-----	-----
		L_2 - L_3	78.84	72.77	-24.73	15.48	-7.39	0.90	1.24	81.01	-27.53	15.48	-7.39	Vehicle	Vehicle	207.81	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**7.28**	**7.28**	-----	-----
		L_3 - L_4	39.14	74.27	-34.54	18.09	-10.83	0.90	1.24	82.68	-38.45	18.09	-10.83	Vehicle	Vehicle	158.37	-----	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	-----	-----	**7.61**	**7.61**	-----	-----
		L_4 - L_5	-166.38	46.12	-50.11	10.96	-16.90	0.90	1.24	51.35	-55.79	10.96	-16.90	Vehicle	Vehicle	-----	-288.82	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	-----	-----	**5.99**	**5.99**
		L_5 - L_6	-301.23	22.96	-54.24	3.23	-18.93	0.90	1.24	25.56	-60.39	3.23	-18.93	Vehicle	Vehicle	-----	-470.10	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	-----	-----	**5.93**	**5.93**
		L_6 - L_7	-438.94	6.63	-58.44	0.00	-26.51	0.90	1.24	7.38	-65.06	0.00	-26.51	Vehicle	Pedestrian	-----	-689.66	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	-----	-----	**5.53**	**5.53**
		L_7 - L_8	-551.65	3.18	-58.59	0.00	-35.55	0.90	1.24	3.54	-65.23	0.00	-35.55	Vehicle	Pedestrian	-----	-848.15	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	-----	-----	**6.43**	**6.43**
		L_8 - L_9	-570.53	7.16	-64.44	0.00	-37.48	0.90	1.20	7.71	-69.48	0.00	-37.48	Vehicle	Pedestrian	-----	-880.73	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	-----	-----	**5.88**	**5.88**
		L_9 - L_{10}	-355.48	8.03	-37.75	0.00	-24.70	0.90	1.20	8.65	-40.70	0.00	-24.70	Vehicle	Pedestrian	-----	-547.14	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	-----	-----	**9.02**	**9.02**
		L_{10} - L_{11}	-118.48	31.62	-32.23	0.00	-12.43	0.90	1.20	34.09	-34.75	0.00	-12.43	Vehicle	Pedestrian	-----	-215.36	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	-----	-----	**8.09**	**8.09**
		L_{11} - L_{12}	103.45	54.95	-29.91	9.96	-9.47	0.90	1.20	59.25	-32.24	9.96	-9.47	Vehicle	Vehicle	211.51	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**8.28**	**8.28**	-----	-----
		L_{12} - L_{13}	300.60	85.20	-27.72	17.83	-8.14	0.90	1.20	91.86	-29.89	17.83	-8.14	Vehicle	Vehicle	510.20	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**7.34**	**7.34**	-----	-----
		L_{13} - L_{14}	441.19	98.44	-23.58	24.15	-6.61	0.90	1.20	106.14	-25.42	24.15	-6.61	Vehicle	Vehicle	711.54	-----	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	-----	-----	**8.17**	**8.17**	-----	-----
		L_{14} - L_{15}	547.00	102.15	-15.10	24.57	-3.49	0.90	1.20	110.14	-16.28	24.57	-3.49	Vehicle	Vehicle	854.28	-----	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	-----	-----	**9.33**	**9.33**	-----	-----
		L_{15} - L_{16}	506.09	88.71	-14.19	20.32	-2.03	0.90	1.20	95.65	-15.30	20.32	-2.03	Vehicle	Vehicle	782.26	-----	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	-----	-----	**11.17**	**11.17**	-----	-----
		L_{16} - L_{17}	398.75	65.29	-12.76	12.72	-0.83	0.90	1.20	70.40	-13.76	12.72	-0.83	Vehicle	Vehicle	609.89	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	**11.62**	**11.62**	-----	-----
		L_{17} - L_{18}	263.81	39.88	-10.55	4.81	0.00	0.90	1.20	42.99	-11.37	4.81	0.00	Vehicle	Vehicle	398.84	-----	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	-----	-----	**14.41**	**14.41**	-----	-----
		L_{18} - L_{19}	118.75	31.90	-8.31	0.71	-3.38	0.90	1.20	34.39	-8.96	0.71	-3.38	Vehicle	Pedestrian	199.09	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**11.16**	**11.16**	-----	-----
		L_{19} - L_{20}	-23.36	27.34	-8.04	1.28	-12.08	0.90	1.20	29.48	-8.67	1.28	-12.08	Vehicle	Pedestrian	7.96	-57.34	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	**17.84**	**17.84**	**19.28**	**19.28**
		L_0- L_1	-36.12	16.89	-11.39	1.33	-5.14	0.90	1.18	17.99	-12.13	1.33	-5.14	Vehicle	Pedestrian	-----	-69.41	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	-----	-----	**28.88**	**28.88**
		L_1 - L_2	132.64	27.55	-4.42	2.93	-0.06	0.90	1.18	29.34	-4.71	2.93	-0.06	Vehicle	Vehicle	210.57	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**17.07**	**17.07**	-----	-----
		L_2 - L_3	303.94	59.32	-9.36	10.52	-1.79	0.90	1.18	63.16	-9.97	10.52	-1.79	Vehicle	Vehicle	477.23	-----	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	-----	-----	**10.64**	**10.64**	-----	-----
		L_3 - L_4	445.73	84.01	-16.84	18.15	-3.63	0.90	1.18	89.44	-17.92	18.15	-3.63	Vehicle	Vehicle	695.73	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**9.65**	**9.65**	-----	-----
		L_4 - L_5	567.64	109.06	-27.01	24.81	-6.10	0.90	1.18	116.11	-28.76	24.81	-6.10	Vehicle	Vehicle	888.88	-----	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	-----	-----	**9.32**	**9.32**	-----	-----
		L_5 - L_6	603.43	116.11	-34.64	28.47	-8.06	0.90	1.18	123.62	-36.88	28.47	-8.06	Vehicle	Vehicle	945.17	-----	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	-----	-----	**9.62**	**9.62**	-----	-----
		L_6 - L_7	599.28	120.68	-43.89	30.25	-10.41	0.90	1.18	128.48	-46.73	30.25	-10.41	Vehicle	Vehicle	946.09	-----	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	-----	-----	**9.48**	**9.48**	-----	-----
		L_7 - L_8	373.73	96.88	-54.85	24.92	-13.66	0.90	1.18	103.14	-58.40	24.92	-13.66	Vehicle	Vehicle	619.93	-----	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	-----	-----	**9.38**	**9.38**	-----	-----
		L_8 - L_9	195.51	77.11	-59.02	19.51	-15.12	0.90	1.18	82.10	-62.83	19.51	-15.12	Vehicle	Vehicle	360.89	-----	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	-----	-----	**11.01**	**11.01**	-----	-----
		L_9 - L_{10}	-13.41	53.63	-60.97	12.45	-16.11	0.90	1.18	57.10	-64.91	12.45	-16.11	Vehicle	Vehicle	56.80	-101.82	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	**15.33**	**15.33**	**11.00**	**11.00**
		L_{10} - L_{11}	-217.51	32.89	-61.87	5.50	-17.02	0.90	1.18	35.01	-65.87	5.50	-17.02	Vehicle	Vehicle	-----	-368.40	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	-----	-----	**6.57**	**6.57**
		L_{11} - L_{12}	-420.12	16.77	-61.02	0.00	-23.35	0.90	1.18	17.85	-64.97	0.00	-23.35	Vehicle	Pedestrian	-----	-660.96	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.78**	**5.78**
		L_{12} - L_{13}	-591.61	16.84	-62.44	0.00	-30.09	0.90	1.18	17.93	-66.48	0.00	-30.09	Vehicle	Pedestrian	-----	-894.64	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**7.08**	**7.08**
		L_{13} - L_{14}	-724.42	15.78	-59.90	0.00	-35.12	0.90	1.18	16.80	-63.78	0.00	-35.12	Vehicle	Pedestrian	-----	-1070.31	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**8.00**	**8.00**
		L_{14} - L_{15}	-747.19	18.18	-69.08	0.00	-36.29	0.90	1.17	19.13	-72.68	0.00	-36.29	Vehicle	Pedestrian	-----	-1113.01	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**7.05**	**7.05**
		L_{15} - L_{16}	-632.29	16.68	-56.83	0.00	-31.22	0.90	1.17	17.55	-59.79	0.00	-31.22	Vehicle	Pedestrian	-----	-940.28	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	-----	-----	**7.07**	**7.07**
		L_{16} - L_{17}	-488.73	16.51	-40.58	0.00	-25.40	0.90	1.17	17.37	-42.69	0.00	-25.40	Vehicle	Pedestrian	-----	-723.86	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	-----	-----	**8.21**	**8.21**
		L_{17} - L_{18}	-337.06	29.67	-40.24	0.00	-18.13	0.90	1.17	31.22	-42.34	0.00	-18.13	Vehicle	Pedestrian	-----	-516.78	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	-----	-----	**6.46**	**6.46**
		L_{18} - L_{19}	-45.76	61.42	-35.64	8.92	-9.58	0.90	1.17	64.62	-37.50	8.92	-9.58	Vehicle	Vehicle	24.52	-108.23	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**11.22**	**11.22**	**14.08**	**14.08**
	Structure 2	L_{20} - L_{21}	68.06	78.61	-31.67	11.57	-9.12	0.90	1.17	82.70	-33.31	11.57	-9.12	Vehicle	Vehicle	196.00	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**10.84**	**10.84**	-----	-----
		L_{21} - L_{22}	134.01	82.54	-25.32	13.61	-8.81	0.90	1.17	86.84	-26.63	13.61	-8.81	Vehicle	Vehicle	287.10	-----	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	-----	-----	**9.56**	**9.56**	-----	-----
		L_{22} - L_{23}	122.68	79.56	-27.86	11.79	-7.57	0.90	1.17	83.71	-29.31	11.79	-7.57	Vehicle	Vehicle	268.31	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**10.06**	**10.06**	-----	-----
		L_{23} - L_{24}	46.89	66.48	-31.09	8.09	-7.09	0.90	1.17	69.94	-32.71	8.09	-7.09	Vehicle	Vehicle	151.88	-----	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	-----	-----	**13.12**	**13.12**	-----	-----
		L_{24} - L_{25}	-66.54	52.63	-34.63	3.32	-6.23	0.90	1.17	55.38	-36.44	3.32	-6.23	Vehicle	Vehicle	-----	-133.87	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	-----	-----	**13.92**	**13.92**
		L_{25} - L_{26}	-205.63	35.80	-37.09	0.00	-11.77	0.90	1.17	37.66	-39.02	0.00	-11.77	Vehicle	Vehicle	-----	-318.05	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	-----	-----	**9.43**	**9.43**
		L_{26} - L_{27}	-350.43	33.48	-37.81	0.00	-18.87	0.90	1.17	35.23	-39.78	0.00	-18.87	Vehicle	Pedestrian	-----	-531.80	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	-----	-----	**6.43**	**6.43**
		L_{27} - L_{28}	-494.65	28.10	-37.72	0.00	-25.89	0.90	1.17	29.57	-39.68	0.00	-25.89	Vehicle	Pedestrian	-----	-728.28	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	-----	-----	**8.43**	**8.43**
		L_{28} - L_{29}	-620.83	24.14	-42.22	0.00	-31.78	0.90	1.17	25.40	-44.42	0.00	-31.78	Vehicle	Pedestrian	-----	-906.14	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	-----	-----	**8.59**	**8.59**
		L_{29} - L_{30}	-716.91	18.98	-50.74	0.00	-36.29	0.90	1.17	19.97	-53.38	0.00	-36.29	Vehicle	Pedestrian	-----	-1048.56	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	-----	-----	**8.90**	**8.90**
		L_{30} - L_{31}	-850.71	28.37	-73.74	0.00	-35.97	0.90	1.18	30.20	-78.52	0.00	-35.97	Vehicle	Pedestrian	-----	-1254.75	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	42.83	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.80**	**5.80**
		L_{31} - $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: 3F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

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

E = 29000.0 ksi

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	(No Impact) Pedestrian Load$_{MAX}$	(No Impact) Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member 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	11.31	-51.21	3.44	-12.32	0.90	1.24	12.59	-57.02	3.44	-12.32	Vehicle	Vehicle	-----	-195.96	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	-----	-----	-----	-----	-----	4.40	4.40
		U$_1$ - L$_1$	-46.53	9.73	-36.29	2.93	-9.05	0.90	1.24	10.83	-40.40	2.93	-9.05	Vehicle	Vehicle	-----	-113.02	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	-----	-----	-----	-----	-----	7.56	7.56
		U$_2$ - L$_2$	-0.10	8.80	-25.87	2.84	-5.68	0.90	1.24	9.80	-28.80	2.84	-5.68	Vehicle	Vehicle	12.61	-37.57	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	43.66	43.66	12.22	12.22			
		U$_3$ - L$_3$	39.60	8.39	-13.55	2.69	-2.12	0.90	1.24	9.34	-15.08	2.69	-2.12	Vehicle	Vehicle	63.61	-----	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	-----	-----	-----	-----	41.56	41.56	-----	-----
		U$_4$ - L$_4$	-30.20	1.33	-23.15	0.00	-3.46	0.90	1.24	1.48	-25.77	0.00	-3.46	Vehicle	Vehicle	-----	-72.76	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	12.40	12.40			
		U$_5$ - L$_5$	-130.49	2.95	-31.86	0.00	-10.23	0.90	1.24	3.29	-35.47	0.00	-10.23	Vehicle	Vehicle	-----	-215.74	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	-----	-----	8.31	8.31			
		U$_6$ - L$_6$	-158.18	5.79	-31.60	0.00	-13.06	0.90	1.24	6.45	-35.18	0.00	-13.06	Vehicle	Pedestrian	-----	-268.34	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	-----	-----	7.25	7.25			
		U$_7$ - L$_7$	-152.32	9.97	-31.44	0.00	-13.24	0.90	1.24	11.10	-35.00	0.00	-13.24	Vehicle	Pedestrian	-----	-260.73	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	-----	-----	6.38	6.38			
		U$_8$ - L$_8$	-455.55	11.93	-50.53	0.00	-31.72	0.90	1.24	13.28	-56.25	0.00	-31.72	Vehicle	Pedestrian	-----	-706.57	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	6.93	6.93			
		U$_9$ - L$_9$	-287.55	2.66	-49.71	0.00	-18.20	0.90	1.20	2.87	-53.59	0.00	-18.20	Vehicle	Pedestrian	-----	-467.15	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	-----	-----	4.98	4.98			
		U$_{10}$ - L$_{10}$	-276.32	1.28	-49.17	0.00	-17.54	0.90	1.20	1.38	-53.02	0.00	-17.54	Vehicle	Vehicle	-----	-428.14	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	-----	-----	8.80	8.80			
		U$_{11}$ - L$_{11}$	-232.59	1.34	-45.52	0.00	-14.41	0.90	1.20	1.44	-49.08	0.00	-14.41	Vehicle	Vehicle	-----	-366.17	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	-----	-----	8.33	8.33			
		U$_{12}$ - L$_{12}$	-178.43	1.08	-35.86	0.00	-11.20	0.90	1.20	1.16	-38.66	0.00	-11.20	Vehicle	Vehicle	-----	-282.22	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	-----	-----	9.16	9.16			
		U$_{13}$ - L$_{13}$	-127.74	4.18	-29.73	0.00	-7.88	0.90	1.20	4.51	-32.05	0.00	-7.88	Vehicle	Vehicle	-----	-207.73	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	-----	-----	7.89	7.89			
		U$_{14}$ - L$_{14}$	-30.39	0.76	-24.74	0.00	-3.03	0.90	1.20	0.82	-26.68	0.00	-3.03	Vehicle	Vehicle	-----	-74.19	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	-----	-----	11.78	11.78			
		U$_{15}$ - L$_{15}$	-28.94	9.12	-22.16	1.55	-4.54	0.90	1.20	9.83	-23.89	1.55	-4.54	Vehicle	Vehicle	-----	-68.67	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	-----	-----	13.16	13.16			
		U$_{16}$ - L$_{16}$	-76.03	7.00	-26.40	1.39	-7.08	0.90	1.20	7.55	-28.47	1.39	-7.08	Vehicle	Vehicle	-----	-135.85	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	-----	-----	9.32	9.32			
		U$_{17}$ - L$_{17}$	-161.89	5.34	-35.88	1.30	-10.66	0.90	1.20	5.75	-38.68	1.30	-10.66	Vehicle	Vehicle	-----	-260.74	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	-----	-----	6.45	6.45			
		U$_{18}$ - L$_{18}$	-190.28	4.58	-35.33	1.12	-12.71	0.90	1.20	4.93	-38.09	1.12	-12.71	Vehicle	Pedestrian	-----	-313.40	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	-----	-----	6.60	6.60			
		U$_{19}$ - L$_{19}$	-228.17	3.92	-34.88	0.97	-14.98	0.90	1.20	4.23	-37.61	0.97	-14.98	Vehicle	Pedestrian	-----	-364.98	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	-----	-----	7.38	7.38			
		U$_{20}$ - L$_{20}$	-242.83	3.56	-35.75	0.95	-15.63	0.90	1.20	3.84	-38.54	0.95	-15.63	Vehicle	Pedestrian	-----	-386.10	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	-----	-----	6.26	6.26			
		U$_0$ - L$_0$	-303.03	8.63	-52.50	2.22	-15.08	0.90	1.18	9.19	-55.89	2.22	-15.08	Vehicle	Vehicle	-----	-466.60	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	-----	-----	6.07	6.07			
		U$_1$ - L$_1$	-268.78	8.75	-49.90	2.12	-13.67	0.90	1.18	9.32	-53.13	2.12	-13.67	Vehicle	Vehicle	-----	-418.48	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	-----	-----	7.60	7.60			
		U$_2$ - L$_2$	-220.87	9.45	-46.72	2.34	-12.32	0.90	1.18	10.06	-49.74	2.34	-12.32	Vehicle	Vehicle	-----	-351.80	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	7.11	7.11			
		U$_3$ - L$_3$	-175.23	10.12	-42.57	2.49	-10.35	0.90	1.18	10.78	-45.32	2.49	-10.35	Vehicle	Vehicle	-----	-286.71	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	45.00	Pass	4.91	12.00	Pass	-----	-----	6.10	6.10			
		U$_4$ - L$_4$	-82.08	8.78	-30.16	2.21	-6.62	0.90	1.18	9.35	-32.11	2.21	-6.62	Vehicle	Vehicle	-----	-148.44	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	-----	-----	8.01	8.01			
		U$_5$ - L$_5$	-19.89	9.37	-24.03	2.23	-4.16	0.90	1.18	9.98	-25.58	2.23	-4.16	Vehicle	Vehicle	-----	-59.12	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	12.53	12.53			
		U$_6$ - L$_6$	60.32	18.92	-13.34	1.75	-0.47	0.90	1.18	20.14	-14.20	1.75	-0.47	Vehicle	Vehicle	104.60	-----	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	-----	-----	-----	-----	18.24	18.24	-----	-----
		U$_7$ - L$_7$	-41.77	1.38	-23.18	0.00	-2.50	0.90	1.18	1.47	-24.68	0.00	-2.50	Vehicle	Vehicle	-----	-86.39	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	-----	-----	12.10	12.10			
		U$_8$ - L$_8$	-189.01	4.15	-32.33	0.00	-8.38	0.90	1.18	4.42	-34.42	0.00	-8.38	Vehicle	Vehicle	-----	-290.46	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	-----	-----	9.92	9.92			
		U$_9$ - L$_9$	-253.99	1.68	-40.19	0.00	-10.55	0.90	1.18	1.78	-42.79	0.00	-10.55	Vehicle	Vehicle	-----	-385.82	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	-----	-----	10.22	10.22			
		U$_{10}$ - L$_{10}$	-290.02	3.04	-40.75	0.00	-12.18	0.90	1.18	3.23	-43.39	0.00	-12.18	Vehicle	Vehicle	-----	-433.42	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	11.26	11.26			
		U$_{11}$ - L$_{11}$	-312.18	6.49	-43.89	0.00	-12.59	0.90	1.18	6.91	-46.73	0.00	-12.59	Vehicle	Vehicle	-----	-466.57	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	-----	-----	9.69	9.69			
		U$_{12}$ - L$_{12}$	-327.28	9.39	-40.04	0.00	-13.75	0.90	1.18	10.00	-42.63	0.00	-13.75	Vehicle	Vehicle	-----	-480.87	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	11.13	11.13			
		U$_{13}$ - L$_{13}$	-277.21	12.79	-33.93	0.45	-12.38	0.90	1.18	13.62	-36.13	0.45	-12.38	Vehicle	Pedestrian	-----	-423.44	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	8.51	8.51			
		U$_{14}$ - L$_{14}$	-505.44	16.15	-43.23	0.00	-21.41	0.90	1.18	17.19	-46.03	0.00	-21.41	Vehicle	Pedestrian	-----	-744.75	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	-----	-----	8.10	8.10			
		U$_{15}$ - L$_{15}$	-232.94	4.52	-47.40	1.67	-12.16	0.90	1.17	4.76	-49.87	1.67	-12.16	Pedestrian	Vehicle	-----	-367.65	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	-----	-----	9.17	9.17			
		U$_{16}$ - L$_{16}$	-260.12	5.14	-48.62	0.83	-13.04	0.90	1.17	5.41	-51.15	0.83	-13.04	Vehicle	Vehicle	-----	-404.65	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	-----	-----	7.94	7.94			
		U$_{17}$ - L$_{17}$	-228.24	5.80	-47.31	0.66	-11.76	0.90	1.17	6.10	-49.77	0.66	-11.76	Vehicle	Vehicle	-----	-361.42	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	7.94	7.94			
		U$_{18}$ - L$_{18}$	-209.27	6.98	-42.92	0.00	-11.28	0.90	1.17	7.34	-45.15	0.00	-11.28	Vehicle	Vehicle	-----	-330.75	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	-----	-----	8.15	8.15			
		U$_{19}$ - L$_{19}$	-166.55	7.47	-38.29	0.00	-9.53	0.90	1.17	7.86	-40.28	0.00	-9.53	Vehicle	Vehicle	-----	-268.88	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	-----	-----	8.56	8.56			
		U$_{20}$ - L$_{20}$	-113.95	7.51	-30.60	0.00	-7.50	0.90	1.17	7.90	-32.20	0.00	-7.50	Vehicle	Vehicle	-----	-189.99	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	-----	-----	8.11	8.11			
	Structure 2	U$_{21}$ - L$_{21}$	-62.76	11.11	-24.32	0.00	-5.22	0.90	1.17	11.69	-25.58	0.00	-5.22	Vehicle	Vehicle	-----	-114.85	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	10.86	10.86			
		U$_{22}$ - L$_{22}$	-38.94	1.30	-25.54	0.00	-2.15	0.90	1.17	1.37	-26.87	0.00	-2.15	Vehicle	Vehicle	-----	-85.55	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	45.00	Pass	6.56	12.00	Pass	-----	-----	11.27	11.27			
		U$_{23}$ - L$_{23}$	-74.43	7.95	-26.51	0.48	-6.10	0.90	1.17	8.37	-27.89	0.48	-6.10	Vehicle	Vehicle	-----	-133.02	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	9.54	9.54			
		U$_{24}$ - L$_{24}$	-121.36	7.79	-31.07	0.37	-8.17	0.90	1.17	8.20	-32.69	0.37	-8.17	Vehicle	Vehicle	-----	-200.27	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	7.76	7.76			
		U$_{25}$ - L$_{25}$	-169.12	7.49	-36.45	0.43	-9.94	0.90	1.17	7.88	-38.35	0.43	-9.94	Vehicle	Vehicle	-----	-269.72	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	-----	-----	8.92	8.92			
		U$_{26}$ - L$_{26}$	-207.97	6.77	-38.64	0.14	-11.42	0.90	1.17	7.13	-40.66	0.14	-11.42	Vehicle	Vehicle	-----	-323.22	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	-----	-----	9.08	9.08			
		U$_{27}$ - L$_{27}$	-219.96	5.57	-40.50	0.16	-11.49	0.90	1.17	5.86	-42.61	0.16	-11.49	Vehicle	Vehicle	-----	-341.34	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	9.47	9.47			
		U$_{28}$ - L$_{28}$	-240.91	8.05	-37.08	0.00	-12.60	0.90	1.17	8.47	-39.02	0.00	-12.60	Vehicle	Vehicle	-----	-363.90	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	10.90	10.90			
		U$_{29}$ - L$_{29}$	-202.73	12.36	-32.76	0.00	-10.35	0.90	1.17	13.01	-34.47	0.00	-10.35	Vehicle	Vehicle	-----	-308.35	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	-----	-----	14.14	14.14			
		U$_{30}$ - L$_{30}$	-518.05	13.05	-45.09	0.00	-22.08	0.90	1.18	13.89	-48.00	0.00	-22.08	Vehicle	Pedestrian	-----	-764.57	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	-----	-----	7.62	7.62			
		U$_{31}$ - L$_{31}$	-318.43	6.03	-47.33	0.87	-14.13	0.90	1.18	6.42	-50.40	0.87	-14.13	Vehicle	Vehicle	-----	-479.47	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	-----	-----	7.38	7.38			
		U$_{32}$ - L$_{32}$	-358.67	2.65	-50.99	0.00	-14.88	0.90	1.18	2.82	-54.29	0.00	-14.88	Vehicle	Vehicle	-----	-536.86	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88

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
(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: 3F1
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 (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	87.66	56.03	-15.25	14.00	-4.60	0.90	1.24	62.38	-16.98	14.00	-4.60	Vehicle	Vehicle	195.05	-----	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	-----	-----	-----	-----	-----	**7.99**	**7.99**	-----	-----
	U_1 - L_2	23.90	43.14	-14.93	9.20	-4.71	0.90	1.24	48.02	-16.62	9.20	-4.71	Vehicle	Vehicle	93.50	-----	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	-----	-----	-----	-----	-----	**8.41**	**8.41**	-----	-----
	U_2 - L_3	-49.02	20.82	-12.90	3.33	-4.32	0.90	1.24	23.18	-14.36	3.33	-4.32	Vehicle	Vehicle	-----	-82.39	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	-----	-----	-----	-----	-----	**19.86**	**19.86**
	U_3 - L_4	-108.88	12.09	-25.76	0.00	-6.30	0.90	1.24	13.46	-28.68	0.00	-6.30	Vehicle	Vehicle	-----	-178.82	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**7.93**	**7.93**
	U_4 - L_4	153.12	41.02	-5.14	10.11	0.00	0.90	1.24	45.66	-5.72	10.11	0.00	Vehicle	Vehicle	258.41	-----	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	-----	-----	-----	-----	-----	**8.13**	**8.13**	-----	-----
	U_5 - L_5	186.35	42.87	-3.82	13.44	0.00	0.90	1.24	47.73	-4.26	13.44	0.00	Vehicle	Vehicle	304.30	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**9.73**	**9.73**	-----	-----
	U_6 - L_6	177.52	38.55	-9.56	14.13	0.00	0.90	1.24	42.92	-10.64	14.13	0.00	Vehicle	Vehicle	286.58	-----	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	-----	-----	-----	-----	-----	**11.02**	**11.02**	-----	-----
	U_7 - L_7	173.18	35.06	-11.02	13.87	0.00	0.90	1.24	39.03	-12.27	13.87	0.00	Pedestrian	Vehicle	293.89	-----	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	-----	-----	-----	-----	-----	**9.03**	**9.03**	-----	-----
	U_8 - L_8	328.11	54.79	-3.40	19.45	-0.13	0.90	1.20	59.07	-3.66	19.45	-0.13	Vehicle	Vehicle	503.33	-----	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	-----	-----	-----	-----	-----	**10.74**	**10.74**	-----	-----
	U_9 - L_{10}	339.70	60.02	-2.39	19.74	0.00	0.90	1.20	64.72	-2.57	19.74	0.00	Vehicle	Vehicle	525.74	-----	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	-----	-----	-----	-----	-----	**9.62**	**9.62**	-----	-----
	U_{10} - L_{11}	313.22	57.26	-1.77	18.15	0.00	0.90	1.20	61.73	-1.90	18.15	0.00	Vehicle	Vehicle	487.43	-----	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	-----	-----	-----	-----	-----	**9.68**	**9.68**	-----	-----
	U_{11} - L_{12}	270.68	51.21	-1.77	14.84	0.00	0.90	1.20	55.21	-1.91	14.84	0.00	Vehicle	Vehicle	423.66	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**9.18**	**9.18**	-----	-----
	U_{12} - L_{13}	194.17	40.71	-5.80	10.79	0.00	0.90	1.20	43.90	-6.26	10.79	0.00	Vehicle	Vehicle	309.48	-----	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	-----	-----	-----	-----	-----	**9.95**	**9.95**	-----	-----
	U_{13} - L_{14}	123.57	32.57	-11.63	5.96	0.00	0.90	1.20	35.12	-12.54	5.96	0.00	Vehicle	Vehicle	206.29	-----	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	-----	-----	-----	-----	-----	**8.66**	**8.66**	-----	-----
	U_{14} - L_{14}	-16.32	25.92	-17.97	1.48	-2.35	0.90	1.20	27.95	-19.37	1.48	-2.35	Vehicle	Vehicle	15.11	-46.41	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**15.89**	**15.89**	**16.10**	**16.10**
	U_{15} - L_{15}	59.12	30.55	-12.06	6.08	-2.09	0.90	1.20	32.94	-13.00	6.08	-2.09	Vehicle	Vehicle	119.68	-----	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	-----	-----	-----	-----	-----	**11.19**	**11.19**	-----	-----
	U_{17} - L_{16}	172.14	43.05	-7.45	9.93	-1.86	0.90	1.20	46.42	-8.03	9.93	-1.86	Vehicle	Vehicle	284.13	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**7.59**	**7.59**	-----	-----
	U_{18} - L_{17}	210.78	42.98	-6.31	12.51	-1.53	0.90	1.20	46.34	-6.80	12.51	-1.53	Vehicle	Vehicle	334.26	-----	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	-----	-----	-----	-----	-----	**9.49**	**9.49**	-----	-----
	U_{19} - L_{18}	242.64	42.02	-5.04	13.73	-1.21	0.90	1.20	45.31	-5.43	13.73	-1.21	Vehicle	Vehicle	374.32	-----	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	-----	-----	-----	-----	-----	**10.32**	**10.32**	-----	-----
	U_{20} - L_{19}	257.76	36.82	-4.14	15.70	-1.03	0.90	1.20	39.70	-4.46	15.70	-1.03	Pedestrian	Vehicle	407.11	-----	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	-----	-----	-----	-----	-----	**8.17**	**8.17**	-----	-----
	U_0 - L_1	298.99	52.04	-9.13	14.21	-2.21	0.90	1.18	55.40	-9.72	14.21	-2.21	Vehicle	Vehicle	460.71	-----	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	-----	-----	-----	-----	-----	**8.64**	**8.64**	-----	-----
	U_1 - L_2	284.21	55.16	-10.88	14.05	-2.66	0.90	1.18	58.72	-11.58	14.05	-2.66	Vehicle	Vehicle	445.81	-----	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	-----	-----	-----	-----	-----	**8.40**	**8.40**	-----	-----
	U_2 - L_3	221.42	48.73	-11.61	11.83	-2.85	0.90	1.18	51.88	-12.36	11.83	-2.85	Vehicle	Vehicle	355.30	-----	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	-----	-----	-----	-----	-----	**8.27**	**8.27**	-----	-----
	U_3 - L_4	178.30	46.68	-13.12	10.08	-3.23	0.90	1.18	49.69	-13.96	10.08	-3.23	Vehicle	Vehicle	296.39	-----	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	-----	-----	-----	-----	-----	**8.02**	**8.02**	-----	-----
	U_4 - L_5	53.50	30.87	-11.24	5.37	-2.87	0.90	1.18	32.87	-11.97	5.37	-2.87	Vehicle	Vehicle	112.27	-----	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	-----	-----	-----	-----	-----	**11.39**	**11.39**	-----	-----
	U_5 - L_6	-16.51	24.87	-17.98	2.23	-2.92	0.90	1.18	26.48	-19.14	2.23	-2.92	Vehicle	Vehicle	12.95	-46.35	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	-----	-----	-----	**16.78**	**16.78**	**16.15**	**16.15**
	U_6 - L_7	-133.21	11.91	-32.55	0.00	-5.36	0.90	1.18	12.68	-34.65	0.00	-5.36	Vehicle	Vehicle	-----	-218.22	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	**6.52**	**6.52**
	U_7 - L_7	208.77	38.14	-8.96	8.33	0.00	0.90	1.18	40.60	-9.54	8.33	0.00	Vehicle	Vehicle	324.18	-----	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	-----	-----	-----	-----	-----	**9.72**	**9.72**	-----	-----
	U_8 - L_8	289.58	48.33	-2.03	10.70	0.00	0.90	1.18	51.46	-2.16	10.70	0.00	Vehicle	Vehicle	443.35	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**8.17**	**8.17**	-----	-----
	U_{10} - L_9	327.97	49.31	-2.01	12.66	0.00	0.90	1.18	52.50	-2.14	12.66	0.00	Vehicle	Vehicle	494.62	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.56**	**8.56**	-----	-----
	U_{11} - L_{10}	349.25	51.30	-6.89	12.70	0.00	0.90	1.18	54.62	-7.33	12.70	0.00	Vehicle	Vehicle	525.03	-----	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	-----	-----	-----	-----	-----	**9.07**	**9.07**	-----	-----
	U_{12} - L_{11}	358.20	48.15	-7.30	13.52	0.00	0.90	1.18	51.26	-7.77	13.52	0.00	Vehicle	Vehicle	532.29	-----	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	-----	-----	-----	-----	-----	**9.49**	**9.49**	-----	-----
	U_{13} - L_{12}	307.75	40.10	-13.82	12.26	-0.24	0.90	1.18	42.69	-14.71	12.26	-0.24	Vehicle	Vehicle	455.58	-----	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	-----	-----	-----	-----	-----	**11.00**	**11.00**	-----	-----
	U_{14} - L_{13}	260.20	32.39	-11.87	11.72	-1.50	0.90	1.18	34.48	-12.64	11.72	-1.50	Pedestrian	Vehicle	398.33	-----	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	-----	-----	-----	-----	-----	**11.20**	**11.20**	-----	-----
	U_{15} - L_{15}	208.42	43.02	-5.92	11.04	-2.51	0.90	1.17	45.26	-6.23	11.04	-2.51	Vehicle	Pedestrian	329.78	-----	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	-----	-----	-----	-----	-----	**9.77**	**9.77**	-----	-----
	U_{16} - L_{16}	243.55	49.54	-4.10	11.54	-1.48	0.90	1.17	52.13	-4.32	11.54	-1.48	Vehicle	Pedestrian	384.38	-----	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	-----	-----	-----	-----	-----	**7.81**	**7.81**	-----	-----
	U_{16} - L_{17}	255.86	50.13	-6.11	12.23	-0.85	0.90	1.17	52.74	-6.43	12.23	-0.85	Vehicle	Vehicle	401.18	-----	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	-----	-----	-----	-----	-----	**8.62**	**8.62**	-----	-----
	U_{17} - L_{18}	235.29	50.93	-7.16	11.35	-0.75	0.90	1.17	53.58	-7.53	11.35	-0.75	Vehicle	Vehicle	375.53	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.75**	**7.75**	-----	-----
	U_{18} - L_{19}	212.11	45.56	-8.75	11.09	0.00	0.90	1.17	47.93	-9.20	11.09	0.00	Vehicle	Vehicle	338.05	-----	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	-----	-----	-----	-----	-----	**9.15**	**9.15**	-----	-----
	U_{19} - L_{20}	168.24	42.85	-9.69	9.14	0.00	0.90	1.17	45.08	-10.19	9.14	0.00	Vehicle	Vehicle	277.31	-----	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	-----	-----	-----	-----	-----	**9.65**	**9.65**	-----	-----
	U_{20} - L_{21}	97.26	30.89	-13.57	6.66	0.00	0.90	1.17	32.50	-14.26	6.66	0.00	Vehicle	Vehicle	168.68	-----	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	-----	-----	-----	-----	-----	**10.17**	**10.17**	-----	-----
	U_{21} - L_{22}	30.60	25.43	-20.61	3.66	-2.18	0.90	1.17	26.76	-21.68	3.66	-2.18	Vehicle	Vehicle	74.57	-----	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	-----	-----	-----	-----	-----	**14.84**	**14.84**	-----	-----
	U_{23} - L_{22}	49.78	30.03	-15.65	5.11	-0.95	0.90	1.17	31.59	-16.47	5.11	-0.95	Vehicle	Vehicle	105.78	-----	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**11.96**	**11.96**	-----	-----
	U_{24} - L_{23}	115.07	35.87	-10.57	8.00	-0.72	0.90	1.17	37.74	-11.12	8.00	-0.72	Vehicle	Vehicle	198.66	-----	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	-----	-----	-----	-----	-----	**8.28**	**8.28**	-----	-----
	U_{25} - L_{24}	179.22	44.44	-10.27	10.10	-0.73	0.90	1.17	46.76	-10.81	10.10	-0.73	Vehicle	Vehicle	293.77	-----	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	-----	-----	-----	-----	-----	**9.07**	**9.07**	-----	-----
	U_{26} - L_{25}	220.97	44.53	-9.01	11.89	-0.57	0.90	1.17	46.85	-9.48	11.89	-0.57	Vehicle	Vehicle	348.17	-----	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	-----	-----	-----	-----	-----	**9.17**	**9.17**	-----	-----
	U_{27} - L_{26}	234.87	46.83	-7.16	11.45	-0.35	0.90	1.17	49.27	-7.53	11.45	-0.35	Vehicle	Vehicle	369.38	-----	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	-----	-----	-----	-----	-----	**8.44**	**8.44**	-----	-----
	U_{28} - L_{27}	253.15	44.50	-6.44	12.25	-0.28	0.90	1.17	46.82	-6.78	12.25	-0.28	Vehicle	Vehicle	389.95	-----	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	-----	-----	-----	-----	-----	**9.76**	**9.76**	-----	-----
	U_{29} - L_{28}	215.91	35.77	-13.71	10.20	0.00	0.90	1.17	37.64	-14.42	10.20	0.00	Vehicle	Vehicle	329.62	-----	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	-----	-----	-----	-----	-----	**11.55**	**11.55**	-----	-----
	U_{30} - L_{29}	180.73	30.78	-11.65	8.90	-0.90	0.90	1.17	32.38	-12.26	8.90	-0.90	Vehicle	Vehicle	277.04	-----	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	-----	-----	-----	-----	-----	**14.51**	**14.51**	-----	-----
	U_{30} - L_{31}	294.99	43.89	-6.98	12.90	-1.64	0.90	1.18	46.73	-7.43	12.90	-1.64	Vehicle	Vehicle	444.24	-----	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	-----	-----	-----	-----	-----	**10.33**	**10.33**	-----	-----
	U_{31} - L_{32}	342.70	51.43	-6.22	13.70	-0.55	0.90	1.18	54.76	-6.62	13.70	-0.55	Vehicle	Vehicle	516.70	-----	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	-----	-----	-----	-----	-----	**7.94**	**7.94**	-----	-----
	U_{32} - L_{33}	363.39	52.47	-3.21	14.16	0.00	0.90	1.18	55.86	-3.42	14.16	0.00	Vehicle	Vehicle	545.03	-----	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	-----	-----	-----	-----	-----	**8.61**	**8.61**	-----	-----
	U_{33} - L_{34}	349.50	54.12	-3.44	13.34	0.00	0.90	1.18	57.62	-3.66

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Structure: 3F1
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_0-U_1	-129.89	-23.02	-0.13	1.16	2.36	-10.97	-2.03	15.44	31.49	146.53
	U_1-U_2	-64.81	-51.14	0.18	1.98	-2.60	-16.26	2.44	25.51	-34.67	-217.23
	U_2-U_3	-29.58	44.50	0.63	0.26	-3.71	-12.41	11.13	38.98	-56.85	-157.76
	U_3-U_4	-52.27	61.68	1.81	2.90	-3.39	-15.01	24.11	38.73	-49.34	-200.47
	U_4-U_5	-29.58	44.50	0.63	0.26	-3.71	-12.41	11.13	38.98	-56.85	-157.76
	U_5-U_6	-64.81	-51.14	0.18	1.98	-2.60	-16.26	2.44	25.51	-34.67	-217.23
	U_6-U_7	-129.89	-23.02	-0.13	1.16	2.36	-10.97	-2.03	15.44	31.49	146.53
	L_0-L_1	1.19	145.97	2.36	2.64	-12.70	-1.01	31.93	35.28	-169.64	-13.49
	L_1-L_2	34.54	53.23	2.62	1.61	-8.76	-1.52	33.69	21.46	-105.00	-20.24
	L_2-L_3	-70.13	598.66	1.47	3.66	-14.29	11.08	19.59	48.90	-190.91	148.04
	L_3-L_4	75.82	8.01	2.62	6.12	6.35	-9.53	75.82	8.01	82.12	-123.29
	L_4-L_5	25.39	21.16	0.46	1.61	4.76	-3.81	25.39	21.16	0.46	-113.37
	L_5-L_6	101.46	-177.08	2.58	2.06	0.25	-12.03	33.38	26.68	3.20	-155.60
	L_6-L_7	-44.84	-160.13	2.06	1.72	0.21	-11.55	38.10	22.19	13.13	-160.04
	U_0-L_1	-56.63	-218.18	2.30	0.78	2.20	-14.94	29.73	13.12	2.56	-193.25
	U_1-L_1	-173.99	343.05	1.50	1.50	-4.74	-32.52	9.21	1.91	-200.52	-48.74
	U_1-L_2	-287.89	-237.50	1.96	1.13	-25.02	-9.42	25.33	14.59	-323.72	-121.91
	U_2-L_2	-196.26	-337.79	1.94	0.11	-15.86	-4.94	25.10	1.46	-209.25	-89.76
	U_2-L_3	-290.52	-154.89	3.71	0.15	-22.41	-8.06	37.71	2.03	-294.70	-72.35
	U_3-L_3	-190.08	-29.82	0.63	-0.60	-15.36	-0.62	8.19	-7.75	-198.75	-8.03
	U_3-L_4	-178.83	-40.24	0.56	-0.31	-12.27	-1.00	7.30	-8.56	-185.00	-13.43
	U_4-L_4	-290.19	260.74	0.41	-0.24	-18.69	7.54	5.36	-3.11	-137.06	97.61
	U_4-L_5	-27.02	-172.57	-0.39	0.94	5.15	-10.48	-5.03	11.97	65.80	-133.90
	U_5-L_5	-25.34	194.61	-0.18	1.11	5.64	-15.64	-5.38	12.39	72.18	-139.39
	U_5-L_6	-52.13	282.61	0.43	1.28	-1.90	-22.61	-5.44	18.30	-24.31	-288.93
	U_6-L_6	-52.13	282.61	0.43	1.28	-1.90	-22.61	-5.44	18.30	-24.31	-288.93
	U_6-L_7	-39.74	-324.61	0.43	1.13	-3.61	-13.13	3.53	15.47	-48.64	-199.53
	U_0-U_1	-360.75	-390.17	0.12	2.12	-4.37	-31.40	1.58	27.14	-55.78	-401.17
	U_1-U_2	-403.61	-397.50	1.59	4.07	-3.98	-31.40	1.58	27.14	-55.78	-401.17
	U_2-U_3	-349.76	-208.76	2.95	2.91	-14.28	-26.97	37.74	37.22	-182.43	-344.61
	U_3-U_4	-253.89	-280.84	2.29	3.17	-27.15	-8.36	29.27	40.51	-346.84	-106.75
	U_4-U_5	-237.13	-39.43	3.30	4.17	-21.08	-5.67	42.15	53.24	-269.26	-72.45
	U_5-U_6	-330.50	-152.27	3.30	3.65	-15.08	-3.33	42.15	53.24	-269.26	-72.45
	U_6-U_7	-116.81	170.72	3.52	2.83	-15.15	-2.91	45.01	36.16	-193.61	37.19
	L_1-L_2	-59.53	-197.47	2.29	1.98	-14.31	-1.46	29.89	7.98	-382.08	-62.92
	L_2-L_3	-48.21	-31.51	0.09	2.69	-18.90	-8.53	1.14	33.97	-238.62	-107.69
	L_3-L_4	10.71	137.69	2.47	2.69	-18.90	-8.53	1.14	33.97	-238.62	-107.69
	L_4-L_5	10.71	137.69	2.47	3.07	-14.00	-5.99	26.06	38.77	-183.00	-12.04
	L_5-L_6	57.19	-122.84	2.62	2.31	-16.10	-2.90	33.50	29.14	-203.23	-36.56
	L_6-L_7	-32.12	216.66	3.92	2.62	-16.10	-2.90	33.50	29.14	-203.23	-36.56
	U_0-L_1	85.58	3.84	2.50	1.07	-14.61	-4.49	31.54	13.56	-184.42	-56.65
	U_1-L_1	-14.12	-816.02	1.72	1.72	-7.23	-1.16	14.62	1.72	-87.42	-14.12
	U_1-L_2	823.61	100.42	8.39	0.94	-1.03	-0.45	107.19	12.06	-13.17	-5.69
	U_2-L_2	34.12	78.66	2.74	1.74	-9.41	-1.47	9.91	10.71	-101.71	-18.59
	U_2-L_3	150.29	-52.92	2.90	0.62	-14.51		30.97	37.78	5.30	-180.42
	U_3-L_3	17.33	-89.79	3.17	3.32	-4.47	-12.24	40.44	42.37	-57.14	-158.37
	U_3-L_4	30.75	-14.09	3.17	3.32	-4.47	-12.24	40.44	42.37	-57.14	-158.37
	U_4-L_4	-75.26	-230.76	3.33	2.04	-3.33	-18.74	42.53	26.00	-42.51	-239.39
	U_4-L_5	-108.29	-61.64	3.33	2.04	-3.33	-18.74	42.53	26.00	-42.51	-239.39
	U_5-L_5	-84.35	-278.75	3.29	2.84	-26.00	-11.01	42.01	36.32	-332.21	-140.69
	U_5-L_6	-311.98	-231.84	2.81	2.81	-26.00	-11.01	42.01	36.32	-332.21	-140.69
	U_6-L_6	-275.08	-274.62	2.06	2.06	-32.83	-14.01	26.47	26.47	-419.42	-179.00
	U_6-L_7	-257.08	-269.15	1.23	0.17	-25.08	-9.66	15.69	2.22	-320.42	-123.45
	U_0-L_0	-75.75	-60.94	1.21	0.21	-6.05	-2.60	7.65	2.64	-77.25	-29.76
	U_1-L_1	-154.97	-33.11	0.83	-0.20	-10.41	-0.59	10.63	-2.61	-132.98	-7.56
	U_2-L_2	-71.31	-134.31	0.76	0.16	-10.41	-0.59	10.63	-2.61	-132.98	-7.56
	U_3-L_3	40.07	-167.86	-0.37	0.37	1.04	-8.94	-4.80	4.77	-13.46	-115.67
	U_4-L_4	-10.53	-132.37	-0.29	0.48	2.02	-10.96	-3.78	6.22	26.16	-147.74
	U_5-L_5	-39.15	-126.36	-0.29	0.48	2.02	-10.96	-3.78	6.22	26.16	-147.74
	U_6-L_6	-140.16	-260.93	-0.12	0.43	-4.83	-19.47	-1.50	5.60	-62.49	-251.88
	U_6-L_7	-128.06	-54.04	2.79	2.43	3.74	-11.65	37.31	32.45	23.22	-155.65
	U_0-L_1	-70.10	-43.63	3.00	2.18	-3.13	-14.52	40.08	29.12	-41.78	-193.99
	U_1-L_1	-74.16	-13.92	3.00	2.18	-3.13	-14.52	40.08	29.12	-41.78	-193.99
	U_1-L_2	-187.19	-276.08	1.08	1.51	-4.97	-25.84	14.03	19.52	-64.27	-334.30
	U_2-L_2	-322.62	-140.33	1.08	1.51	-4.97	-25.84	14.03	19.52	-64.27	-334.30
	U_2-L_3	-162.95	-104.84	0.82	2.39	-18.50	-4.29	10.57	30.87	-213.44	-55.49
	U_3-L_3	-147.84	-26.72	1.80	2.84	-13.19	-1.53	23.31	36.72	-170.64	-19.77
	U_4-L_4	-36.15	-125.36	1.80	2.84	-13.19	-1.53	23.31	36.72	-170.64	-19.77
	U_5-L_5	10.77	46.02	2.55	1.53	-9.71	-1.05	33.01	19.80	-126.66	-13.62
	U_6-L_6	-16.16	-68.94	2.55	1.53	-9.71	-1.05	33.01	19.80	-126.66	-13.62
	U_6-L_7	-426.23	9.05	2.01	0.94	11.66	-13.70	76.08	12.61	155.79	-182.97
	U_0-L_1	-16.16	-68.94	2.55	1.53	-9.71	-1.05	33.01	19.80	-126.66	-13.62
	U_1-L_1	128.06	54.04	2.79	2.43	3.74	-11.65	37.31	32.45	23.22	-155.65
	U_1-L_2	-70.10	-43.63	3.00	2.18	-3.13	-14.52	40.08	29.12	-41.78	-193.99
	U_2-L_2	-74.16	-13.92	3.00	2.18	-3.13	-14.52	40.08	29.12	-41.78	-193.99
	U_2-L_3	-83.36	-95.45	3.18	0.83	-12.32	-5.48	42.46	11.04	-164.54	-73.21
	U_3-L_3	-83.36	-95.45	3.18	0.83	-12.32	-5.48	42.46	11.04	-164.54	-73.21
	U_4-L_4	-58.08	-62.68	2.26	1.85	-11.20	-8.75	24.70	-35.42	-149.66	-116.91
	U_5-L_5	-58.08	-62.68	2.26	1.85	-11.20	-8.75	24.70	-35.42	-149.66	-116.91
	U_6-L_6	-8.36	-30.51	1.85	2.65	-11.20	-8.75	24.70	-35.42	-149.66	-116.91

ZZ Axis Moment Properties

Member	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I_z (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F'$_y$/S_{top}	M_n (k-in)	Equivalent Mom. Factor a	C_m	C_b
U_0-U_1	-177.45	-9.85	127.88	220.42	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99800
U_1-U_2	-168.87	-58.52	127.88	220.42	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99800
U_2-U_3	-336.90	188.5	127.88	220.42	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99800
U_3-U_4	-380.44	222.3	127.88	220.42	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99800
U_4-U_5	-336.90	188.5	127.88	220.42	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99800
U_5-U_6	-168.87	-58.52	127.88	220.42	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99800
U_6-U_7	-177.45	-9.85	127.88	220.42	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99800
L_0-L_1	-42.53	235.63	218.99	172.22	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99800
L_1-L_2	-167.22	97.08	46.00	33.87	29.1	97.15	78.78	142.56	2586	1649.1	1.47	4704	0.99907
L_2-L_3	-339.35	970.21	138.2	138.17	111.77	788.97	3642	2197.7	145	6999	0.99845	4564.8	-0.350
L_3-L_4	-785.91	-156.99	784.10	-327.68	130.3	130.26	105.11	180.77	2955	1795.3	1.39	5965	0.99800
L_4-L_5	-114.33	98.96	102.92	-88.92	95.6	96.61	79.12	139.29	2172	1367.9	1.40	4465	0.99873
L_5-L_6	-175.29	-195.52	136.05	-432.48	96.6	96.61	83.55	130.29	2174	1387.9	1.40	4465	0.99873
L_6-L_7	-107.86	-179.39	136.05	-432.48	96.6	96.61	83.55	130.29	2174	1387.9	1.40	4465	0.99873
U_0-L_1	-86.96	-210.48	-322.29	-534.85	151.8	151.76	130.94	219.77	4535	2532.6	1.45	7252	0.99950
U_1-L_1	-167.22	-97.08	46.00	33.87	29.1	97.15	78.78	142.56	2586	1649.1	1.47	4704	0.99907
U_1-L_2	-341.31	-289.78	-795.08	-467.23	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99893
U_2-L_2	-222.51	-437.22	-521.97	-555.84	188.5	188.51	164.41	274.68	5476	3413.6	1.46	9064	0.99893
U_2-L_3	-372.73	-203.84	-761.76	-336.90	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99893
U_3-L_3	-236.43	-48.84	-505.45	-49.21	127.3	127.32	110.40	186.23	3668	2528.5	1.46	6146	0.99907
U_3-L_4	-224.05	-57.46	-423.03	-59.77	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99882
U_4-L_4	-318.28	334.53	-503.42	465.85	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99882
U_4-L_5	-41.67	-208.77	50.41	-398.40	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99863
U_5-L_5	-38.98	-239.39	50.41	-398.40	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99863
U_5-L_6	-74.85	-346.20	-99.38	-742.99	212.6	212.59	170.43	297.57	4967	2491.6	1.40	9520	0.99857
U_6-L_6	-74.85	-346.20	-99.38	-742.99	212.6	212.59	170.43	297.57	4967	2491.6	1.40	9520	0.99857
U_6-L_7	-107.86	-179.39	136.05	-432.48	96.6	96.61	83.55	130.29	2174	1387.9	1.40	4465	0.99873
U_0-U_1	-466.91	-471.94	-641.49	-1028.14	251.7	251.73	219.41	365.62	7161	3870.6	1.45	12066	0.99918
U_1-U_2	-466.91	-471.94	-641.49	-1028.14	251.7	251.73	219.41	365.62	7161	3870.6	1.45	12066	0.99918
U_2-U_3	-468.36	-185.62	-723.39	-1017.77	308.24	308.24	267.13	439.61	8616	4738.1	1.45	14779	0.99941
U_3-U_4	-405.63	-223.00	-691.85	-719.37	232.2	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99883
U_4-U_5	-292.00	-312.42	-780.94	-503.86	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99883
U_5-U_6	-388.70	-229.73	-702.97	-262.73	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99883
U_6-U_7	-253.47	-120.47	-658.30	-42.93	181.9	181.87	147.20	249.02	3787	2047.8	1.37	7099	0.99842
L_0-L_1	-130.22	-55.12	-648.37	104.53	181.9	181.87	147.20	249.02	3787	2047.8	1.37	7099	0.99842
L_1-L_2	-63.33	268.94	463.04	173.69	156.8	156.80	126.72	214.81	3285	1852.3	1.37	7099	0.99842
L_2-L_3	-38.98	-239.39	50.41	-398.40	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99863
L_3-L_4	-74.85	-346.20	-99.38	-742.99	212.6	212.59	170.43	297.57	4967	2491.6	1.40	9520	0.99857
L_4-L_5	-231.77	-152.13	-282.82	-1451.07	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99935
L_5-L_6	-1500.84	-16.19	1324.76	-33.89	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99935
L_6-L_7	-27.86	-334.02	-1387.97	-1387.97	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99935
U_0-L_1	-892.44	-89.95	-636.68	-231.62	173.0	173.03	144.25	241.17	3969	2180.7	1.39	7659	0.99862
U_1-L_1	-231.07	-113.04	-328.29	-338.92	181.9	181.87	147.20	249.02	3787	2047.8	1.37	7099	0.99842
U_1-L_2	-257.94	30.33	161.79	-236.51	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99863
U_2-L_2	-1172.22	58.18	31.27	-279.04	134.9	134.91	109.35	185.01	3285	1852.3	1.37	7099	0.99842
U_2-L_3	-1172.22	58.18	31.27	-279.04	134.9	134.91	109.35	185.01	3285	1852.3	1.37	7099	0.99842
U_3-L_3	-1172.22	58.18	31.27	-279.04	134.9	134.91	109.35	185.01	3285	1852.3	1.37	7099	0.99842
U_3-L_4	-1172.22	58.18	31.27	-279.04	134.9	134.91	109.35	185.01	3285	1852.3	1.37	7099	0.99842
U_4-L_4	-224.27	-18.93	-1172.22	-1172.22	134.9	134.91	109.35	185.01	3285	1852.3	1.37	7099	0.99842
U_4-L_5	-224.27	-18.93	-1172.22	-1172.22	134.9	134.91	109.35	185.01	3285	1852.3	1.37	7099	0.99842
U_5-L_5	-1172.22	-1172.22	-18.93	-224.27	134.9	134.91	109.35	185.01	3285	1852.3	1.37	7099	0.99842
U_5-L_6	-1172.22	-1172.22	-18.93	-224.27	134.9	134.91	109.35	185.01	3285	1852.3	1.37	7099	0.99842
U_6-L_6	-1172.22	-1172.22	-18.93	-224.27	134.9	134.91	109.35	185.01	3285	1852.3	1.37	7099	0.99842
U_6-L_7	-1172.22	-1172.22	-18.93	-224.27	134.9	134.91	109.35	185.01	3285	1852.3	1.37	7099	0.99842
U_0-L_0	-1172.22	-1172.22	-18.93	-224.27	134.9	134.91	109.35	185.01	3285	1852.3	1.37	7099	0.99842
U_1-L_1	-1172.22	-1172.22	-18.93	-224.27	134.9	134.91	109.35	185.01	3285	1852.3	1.37	7099	0.99842
U_2-L_2	-1172.22	-1172.22	-18.93	-224.27	134.9	134.91	109.35	185.01	3285	1852.3	1.37	7099	0.99842
U_3-L_3	-1172.22	-1172.22	-18.93	-224.27	134.9	134.91	109.35	185.01	3285	1852.3	1.37	7099	0.99842
U_4-L_4	-1172.22	-1172.22	-18.93	-224.27	134.9	134.91	109.35	185.01	3285	1852.3	1.37	7099	0.99842
U_5-L_5	-1172.22	-1172.22	-18.93	-224.27	134.9	134.91	109.35	185.01	3285	1852.3	1.37	7099	0.99842
U_6-L_6	-1172.22	-1172.22	-18.93	-224.27	134.9	134.91	109.35	185.01	3285	1852.3	1.37	7099	0.99842
U_6-L_7	-1172.22	-1172.22	-18.93	-224.27	134.9	134.91	109.35	185.01	3285	1852.3	1.37	7099	0.99842

M_y Information

YY Axis Moments from STAAD

Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
U_0-U_1	0.52	-2.28	-7.99	22.35	0.00	0.00	0.00	0.00	9.37	-20.34
U_1-U_2	-0.33	10.09	-11.90	-18.38	0.00	0.00	0.00	0.00	4.26	42.75
U_2-U_3	1.86	-1.38	-2.15	61.21	0.00	0.00	0.00	0.00	-0.05	33.08
U_3-U_4	-10.77	-2.78	22.18	-4.01	0.00	0.00	0.00	0.00	53.38	45.89
U_4-U_5	-0.54	-2.91	-11.04	-51.21	0.00	0.00	0.00	0.00	38.34	-7.77
U_5-U_6	-14.95	-4.02	52.03	12.18	0.00	0.00	0.00	0.00	-44.86	35.57
U_6-U_7	-28.61	-2.24	80.01	0.28	0.00	0.00	0.00	0.00	-118.43	-98.82
L_0-L_1	-30.83	15.36	-73.83	0.79	0.00	0.00	0.00	0.00	-280.91	-99.95
L_1-L_2	-21.81	-14.21	-5.93	62.72	0.00	0.00	0.00	0.00	-265.12	-137.91
L_2-L_3	-15.81	-17.84	22.49	64.83	0.00	0.00	0.00	0.00	-33.07	119.17
L_3-L_4	-16.54	1.47	36.24	29.41	0.00	0.00	0.00	0.00	91.55	64.89
L_4-L_5	-14.04	-3.74	15.26	45.27	0.00	0.00	0.00	0.00	-22.99	28.44
L_5-L_6	-13.75	-2.65	46.23	48.56	0.00	0.00	0.00	0.00	388.36	221.64
L_6-L_7	-13.61	-8.67	36.91	86.34	0.00	0.00	0.00	0.00	269.71	201.54
U_0-L_1	-11.99	-2.74	92.35	39.86	0.00	0.00	0.00	0.00	246.19	39.10
U_1-L_1	-10.08	2.56	86.01	43.05	0.00	0.00	0.00	0.00	114.76	30.76
U_1-L_2	-6.30	2.61	109.99	33.98	0.00	0.00	0.00	0.00	158.99	-40.97
U_2-L_2	-8.58	2.19	94.98	21.30	0.00	0.00	0.00	0.00	24.61	-67.76
U_2-L_3	-8.58	2.19	94.98	21.30	0.00	0.00	0.00	0.00	24.61	-67.76
U_3-L_3	-5.61	4.76	78.57	3.35	0.00	0.00	0.00	0.00	47.37	-108.99
U_3-L_4	-6.30	2.61	109.99	33.98	0.00	0.00	0.00	0.00	158.99	-40.97
U_4-L_4	-27.51	-64.31	-6.66	0.17	-7.34	1.63	0.00	0.00	269.71	201.54
U_4-L_5	-20.37	32.82	-0.93	-2.21	7.14	3.08	0.00	0.00	246.19	39.10
U_5-L_5	-38.36	21.11	-0.78	-0.20	6.65	43.05	0.00	0.00	114.76	30.76
U_5-L_6	-10.08	2.56	86.01	43.05	0.00	0.00	0.00	0.00	114.76	30.76
U_6-L_6	-6.30	2.61	109.99	33.98	0.00	0.00	0.00	0.00	158.99	-40.97
U_6-L_7	-8.58	2.19	94.98	21.30	0.00	0.00	0.00	0.00	24.61	-67.76
U_0-U_1	-47.37	-108.99	-0.61	-2.30	0.00	0.00	0.00	0.00	24.61	-67.76
U_1-U_2	-64.79	-122.89	0.12	0.22	3.26	-2.68	0.00	0.00	-82.14	-198.13
U_2-U_3	-2.60	-62.40	0.05	-0.02	-0.21	-0.67	0.00	0.00	-2.62	-68.46
U_3-U_4	-48.31	-162.62	0.05	-0.02	-0.21	-0.67	0.00	0.00	-2.62	-68.46
U_4-U_5	-64.79	-122.89	0.12	0.22	3.26	-2.68	0.00	0.00	-82.14	-198.13
U_5-U_6	-47.37	-108.99	-0.61	-2.30	0.00	0.00	0.00	0.00	24.61	-67.76
U_6-U_7	-27.51	-64.31	-6.66	0.17	-7.34	1.63	0.00	0.00	269.71	201.54
L_0-L_1	-20.37	32.82	-0.93	-2.21	7.14	3.08	0.00	0.00	246.19	39.10
L_1-L_2	-38.36	21.11	-0.78	-0.20	6.65	43.05	0.00	0.00	114.76	30.76
L_2-L_3	-13.61	-8.67	36.91	86.34	0.00	0.00	0.00	0.00	269.71	201.54
L_3-L_4	-13.75	-2.65	46.23	48.56	0.00	0.00	0.00	0.00	388.36	221.64
L_4-L_5	-14.04	-3.74	15.26	45.27	0.00	0.00	0.00	0.00	141.64

Axial - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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
Per AASHTO Standard Specifications for Truss Bridges (LDF) 1985 rev 1996

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

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

M_z Information

Location	Member	ZZ Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load 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_z (in^3)	I_z (in^4)	I_{ZZ} (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_{mx}	Equivalent Mom. Factor C_{mx}/a	Pass
Structure 1	L_0-L_1	-44.17	-99.07	0.40	-0.82	3.24	-3.51	5.33	-8.28	43.34	-60.20	0.00	0.00	-50.50	-139.56	-1.09	-181.05	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	0.006	0.60	0.60								
	L_1-L_2	-131.02	-112.64	-2.46	-9.42	-0.27	1.59	127.60	-310.06	165.62	-118.91	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	0.412	0.44	0.44	-33.01	-1.65	-7.80	-2.77	0.20	-0.44								
	L_2-L_3	-24.70	-79.95	-1.51	-6.75	0.82	1.84	-152.73	-116.95	10.92	-26.64	0.00	0.00	-275.05	-255.37	413.05	-71.61	99.5	99.53	91.00	120.43	3459	1372.0	1.26	4141	0.99991186	3294.8	0.500	0.80	0.80	-24.23	13.00	-2.91	5.52	171.6	31.02	39.38	1.27	
	L_3-L_4	18.36	16.12	-12.42	-6.74	0.89	3.33	-165.57	-89.98	11.93	-44.47	0.00	0.00	-191.89	-96.01	39.39	78.76	99.9	99.93	84.14	125.49	3459	1372.0	1.26	4141	0.99991186	3294.8	0.500	0.80	0.80	49.79	16.00	13.24	1.68	0.00	0.00	57.19	81.75	9.67	63.13	171.6	171.62	158.81	188.47	749.5								
	L_4-L_5	-68.34	210.22	-8.08	-5.61	-0.33	34.99	-507.89	-83.00	34.99	-35.03	0.00	0.00	-448.32	-52.6	52.59	76.68	114.47	3186	1.27	4045	0.99991186	3052.4	-0.097	0.56	-3.76	-1.76	-23.80	-3.09	0.31	-41.21	52.59	52.59	1.00	0.00	0.00	34.22	15.33	1.91	64.3	171.6	171.62	158.81	188.47	749.5								
	L_5-L_6	8.36	229.14	-6.39	-4.63	2.02	3.93	-85.34	-61.84	25.55	52.48	0.00	0.00	-100.08	217.49	45.50	366.11	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99992345	3448.5	0.125	0.65	0.65	28.81	91.29	3.07	-0.44	0.00	0.00	90.84	112.99	46.05	121.12	250.6	250.63	211.86	281.57	1450.4								
	L_6-L_7	61.83	117.52	5.22	-0.99	2.64	1.61	-117.02	-118.93	-32.61	17.80	0.00	0.00	-117.02	-118.93	-32.61	17.80	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99992345	4706.0	0.125	0.65	0.65	83.24	18.62	81.48	-83.72	288.5	288.46	246.31	327.09	1686.4	1.12								
	L_7-L_8	1.61	409.41	0.01	-0.14	0.29	6.52	0.13	-1.83	3.90	119.13	0.00	0.00	2.27	594.85	7.17	752.10	145.8	145.75	130.44	228.84	6500	2932.4	1.57	7552	0.99992915	4806.3	0.010	0.60	0.60	-9.51	-57.39	-0.41	-2.27	-2.23	-1.09																	
	L_8-L_9	-439.88	-25.12	0.15	0.01	5.44	0.11	1.89	0.14	70.41	1.36	0.00	0.00	0.00	0.00	0.00	0.00	145.8	145.75	130.74	228.84	6500	2932.4	1.57	7552	0.99992915	4806.4	-0.047	0.58	0.58	-5.36	-3.04	-14.30	-3.49	0.00	0.00	-129.14	-149.64	-103.59	-152.22	355.4	355.44	304.93	403.40	1093.1	1.13								
	L_9-L_{10}	-168.12	-117.13	-2.72	-5.10	3.54	1.65	-25.18	-65.97	45.84	21.75	0.00	0.00	0.00	0.00	0.00	0.00	145.8	145.75	130.74	228.84	6500	2932.4	1.57	7552	0.99992915	4806.4	0.010	0.60	0.60	81.91	15.82	14.36	11.92	0.00	0.00	104.62	126.26	84.57	126.81	288.5	288.46	246.31	327.09	1686.4	1.12								
	L_{10}-L_{11}	-168.12	-117.13	-2.72	-5.10	3.54	1.65	-25.18	-65.97	45.84	21.75	0.00	0.00	0.00	0.00	0.00	0.00	145.8	145.75	130.44	228.84	6500	2932.4	1.57	7552	0.99992915	4806.3	0.010	0.60	0.60	4.72	22.63	3.79	12.36	0.00	0.00	118.08	-7.13	116.67	-20.48	158.2	158.16	151.51	173.24	694.3	1.10								
	L_{11}-L_{12}	235.72	227.23	-3.17	-0.98	2.21	1.35	-41.01	-87.46	28.62	17.97	0.00	0.00	253.11	-382.96	194.64	-269.00	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99990394	3052.5	-0.693	0.42	0.42	45.80	3.67	-3.44	-3.80	0.00	0.00	80.46	13.84	23.20	41.86	158.2	158.16	151.51	173.24	694.3	1.10	5717	0.997858	5208.8	18.1	0.67	0.67	0.302	0.113	0.42	Yes
	L_{12}-L_{13}	-19.73	-128.50	-6.51	-6.28	2.20	1.08	-84.25	-81.27	-29.49	13.99	0.00	0.00	-135.18	-272.70	11.39	-148.87	130.1	130.08	121.10	170.72	3885	1793.2	1.31	5634	0.99992122	4288.6	0.496	0.80	0.80	70.65	67.31	0.93	2.39	-0.76	-0.32	12.07	30.92	10.09	-4.17	0.00	0.00	107.53	101.70	78.72	56.09	233.3	233.26	201.34	259.94	975.8	1.11	8719	0.9976998	7679.8	0.946	0.98	0.98	0.389	0.061	0.45	Yes
	L_{13}-L_{14}	-175.78	-425.21	-0.75	-14.97	1.72	1.47	-74.33	-193.67	22.29	19.01	0.00	0.00	-131.89	-804.55	257.50	-528.06	162.9	162.89	147.19	219.93	8087	2613.8	1.35	7258	0.9999106	5370.6	-0.164	0.53	0.53	71.72	13.77	-0.28	-4.31	0.00	0.00	108.67	40.29	15.08	16.79	321.7	321.70	275.89	363.71	1221.7	1.13	12002	0.9974173	10568.7	0.371	0.75	0.75	0.421	0.120	0.55	Yes
	L_{14}-L_{15}	-409.28	-20.70	-1.75	-0.14	5.57	0.10	-779.13	-42.96	-224.39	-55.76	0.00	0.00	-779.13	-42.96	-224.39	-55.76	162.9	162.89	147.19	219.93	8087	2613.8	1.35	7258	0.9999106	5370.6	-0.164	0.53	0.53	-160.91	-40.96	-0.74	5.16	0.00	0.00	-133.39	-82.92	-40.96	-0.74	5.16	0.00	0.00	-133.39	-82.92	-40.96	-0.74	5.16	0.00	0.00	-133.39	-82.92	-40.96	-0.74	5.16	0.00	0.00	-133.39	-82.92	431.2	1347.7	1.15	14237	0.9977272	12766.7	0.896	0.96	0.96	0.477	0.153	0.63	Yes
	L_{15}-L_{16}	-209.39	-318.68	-7.15	-14.57	0.61	0.49	-392.53	-698.38	23.02	-606.02	179.7	179.69	170.68	251.43	8743	3050.7	1.40	8297	0.99991322	5924.6	0.595	0.84	0.84	-84.13	-64.40	0.78	-3.01	-0.10	0.30	-56.28	-134.38	-111.08	-79.65	375.5	375.47	322.87	431.42	1347.7	1.15	14237	0.9977272	12766.7	0.896	0.96	0.96	0.477	0.153	0.63	Yes
	L_{16}-L_{17}	-374.86	83.94	-10.05	-6.35	0.61	0.15	-130.06	-82.16	7.93	-186.73	163.6	163.59	153.89	138.16	7954	2460.7	1.34	8297	0.99991322	5924.6	0.595	0.84	0.84	-60.50	72.88	3.43	-2.15	0.00	0.00	83.24	58.62	81.48	-83.72	288.5	288.46	246.31	327.09	1686.4	1.12	11124	0.9974442	9966.6	0.381	0.45	0.45	0.311	0.140	0.54	Yes
	L_{17}-L_{18}	-171.07	19.86	-6.46	-2.49	-0.53	1.10	-83.56	-32.26	-6.81	14.27	0.00	0.00	-331.02	-16.12	-231.24	44.27	121.1	121.08	112.11	157.22	3591	1640.0	1.30	5188	0.99990448	3891.8	0.049	0.62	0.62	-57.14	-10.20	1.94	-1.49	-0.45	-0.43	25.11	-19.24	-6.00	-5.52	0.00	0.00	-41.63	-38.27	-82.68	-20.44	213.3	213.34	184.04	236.66	908.1	1.11	7813	0.9977381	7024.3	0.249	0.70	0.70	0.355	0.074	0.43	Yes
	L_{18}-L_{19}	-209.33	253.78	-1.69	-0.08	1.88	2.28	-21.85	-21.34	-24.39	26.95	0.00	0.00	-299.23	330.46	-332.48	364.12	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99990394	2755.5	-0.031	0.57	0.57	-50.61	-21.61	-0.19	2.27	-1.93	0.05	-2.46	29.36	-25.00	0.00	0.00	0.00	-58.98	10.07	-26.28	-22.26	133.1	133.11	107.46	146.13	628.0	1.10	4822	0.9981102	4303.9	0.227	0.77	0.77	0.276	0.130	0.42	Yes
	L_{19}-L_{20}	-84.78	1.02	-1.20	1.05	0.55	-0.29	-15.49	7.05	-38.71	30.16	0.00	0.00	-143.34	52.49	-173.54	60.93	83.6	83.58	67.49	100.97	2740	1098.2	1.21	3332	0.99990559	2755.5	-0.234	0.51	0.51	-26.32	-5.87	2.28	0.51	-0.21	-0.06	29.43	6.59	3.93	-0.78	0.00	0.00	0.00	0.00	0.00	0.00

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
Condition: As-Built

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

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

* MCEB Table 6.6.2.1-1, 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

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) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{top} (in^3) | S_{bot} (in^3) | Z_z (in^3) | J (in^4) | I_{yy} (in^4) | Shape Factor | M_p (k-in) | Formula 1.8 Term * F$_y$/S_{top} | M_2 (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor $C_{m(x)}$ | $C_{m(x)}$ | M_2 Information: YY Axis Moments from STAAD — Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Min) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{top} (in^3) | S_{bot} (in^3) | S_w (in^3) | Z_y (in^3) | I_{zz} (in^4) | Shape Factor | M_p (k-in) | P_{allow} (k) | Formula 1.8 Term * F$_y$/S_{top} | M_2 (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor $C_{m(y)}$ | $C_{m(y)}$ | Tension: Yield — Axial Member | Yield — Moment Region | Yield — Total | Pass | Tension: Fracture — Axial Member | Fracture — Moment Region | Fracture — Total | Pass | Compression: Buckle — Axial Member | Buckle — Moment Region | Buckle — Total | Pass | Compression: Yield — Axial Member | Yield — Moment Region | Yield — Total | 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: 3F1
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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 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

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

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-L_1	-23.44	-7.53	-8.68	5.48	0.17	-0.74	-9.06	6.43	2.26	-1.90
	L_1-L_2	-3.41	-8.42	-1.92	0.28	0.24	-0.10	-13.33	3.79	3.23	-1.28
	L_2-L_3	-17.44	-23.64	-6.02	-0.15	-0.50	-0.04	-12.56	-0.27	-1.99	-2.51
	L_3-L_4	7.93	-13.27	-0.75	-0.67	0.09	-0.80	-10.01	-8.98	1.23	-10.62
	L_4-L_5	-14.61	18.52	-2.94	3.53	0.67	-0.47	-12.61	4.30	-0.69	-6.31
	L_5-L_6	-37.44	76.90	-2.34	1.81	-0.74	-0.22	-89.26	101.48	61.58	96.19
	L_6-L_7	-21.19	49.63	-1.06	1.42	-0.28	-0.54	-46.63	55.12	2.24	0.47
	L_7-L_8	-8.75	101.93	-1.63	2.56	0.22	0.04	-20.43	39.46	2.95	0.09
	L_8-L_9	-5.11	118.70	1.02	2.02	0.27	-0.17	-13.22	26.19	3.52	2.03
	L_9-L_{10}	-77.69	73.54	-2.36	1.27	0.25	-0.10	-140.67	116.96	66.77	93.95
	L_{10}-L_{11}	-43.88	73.22	-1.77	1.03	-0.07	-0.31	-22.84	13.27	-0.93	-4.06
	L_{11}-L_{12}	-22.72	22.20	-0.72	0.75	-0.22	-0.29	-28.85	8.39	-2.59	-6.79
	L_{12}-L_{13}	-65.20	48.77	-1.85	1.01	-0.61	-0.58	-23.88	13.12	-0.14	-7.56
	L_{13}-L_{14}	-24.90	8.63	-0.96	0.39	0.20	-0.63	-12.45	5.08	2.81	-8.16
	L_{14}-L_{15}	-0.81	4.23	-0.23	0.84	0.19	-0.45	-16.44	7.29	3.35	-10.45
	L_{15}-L_{16}	-25.30	9.99	-1.35	1.08	-0.24	-0.39	-17.52	14.03	-3.09	-5.06
	L_{16}-L_{17}	-37.01	20.01	-1.72	1.40	-0.28	-0.56	-22.19	18.56	1.39	-3.07
	L_{17}-L_{18}	-101.94	74.52	-3.25	2.74	0.36	-0.36	-42.05	30.49	4.70	-4.66
	L_{18}-L_{19}	-115.87	80.00	-3.63	2.91	-0.30	-0.36	-46.95	34.54	3.91	-3.51
	L_{19}-L_{20}	-75.88	78.94	2.17	2.52	0.67	-0.18	-28.13	32.63	0.94	-2.33
	L_{20}-L_{21}	-109.41	98.91	-2.52	2.68	0.33	-0.34	-32.22	34.28	4.19	-4.40
	L_{21}-L_{22}	-89.79	78.55	-2.30	2.32	-0.37	-0.37	-26.42	29.68	3.35	-4.75
	L_{22}-L_{23}	-90.87	71.82	-3.07	2.50	0.48	-0.42	-39.17	31.89	6.15	-5.30
	L_{23}-L_{24}	-68.78	53.41	-2.73	1.96	0.43	-0.35	-23.67	19.68	4.50	-3.86
	L_{24}-L_{25}	-20.35	3.86	-1.39	1.19	0.32	-0.61	-17.75	15.14	4.10	-7.82
	L_{25}-L_{26}	-1.38	-11.28	-1.21	0.73	0.11	-0.65	-11.63	11.68	2.50	-11.60
	L_{26}-L_{27}	6.85	-23.87	-0.86	0.29	0.50	-1.05	-10.92	3.73	4.32	-13.36
	L_{27}-L_{28}	-44.41	35.31	-1.63	0.97	0.29	-0.87	-20.79	12.39	3.53	-11.15
	L_{28}-L_{29}	-96.57	69.69	-2.22	2.03	0.24	-0.56	-36.26	29.07	4.29	-9.56
	L_{29}-L_{30}	-85.40	67.30	-2.62	1.83	-0.45	-0.39	-35.99	23.38	-5.33	-4.80
	L_{30}-L_{31}	-39.51	30.69	-2.08	2.01	0.72	-0.40	-18.40	14.03	2.18	-3.00
	L_{31}-L_{32}	-109.84	116.34	-3.23	2.86	0.28	0.03	-41.27	36.58	3.54	0.42
	L_{32}-L_{33}	-141.98	130.62	-4.22	3.50	0.54	-0.26	-53.85	44.74	6.01	-4.87
	L_{33}-L_{34}	-40.13	130.41	-2.73	3.96	0.48	-0.23	-23.67	19.68	4.50	-3.86
	L_{34}-L_{35}	-11.96	79.20	-2.15	2.68	0.42	-0.33	-27.11	33.79	5.26	-4.17
	L_{35}-L_{36}	-77.27	43.62	-2.77	1.66	0.46	-0.48	-43.62	37.55	5.96	-4.87
	L_{36}-L_{37}	-66.19	89.97	-3.28	2.75	0.22	-0.27	-41.40	34.66	2.74	-3.42
	L_{37}-L_{38}	-58.07	72.69	-2.96	2.15	0.31	-0.34	-38.04	31.68	2.74	-3.86
	L_{38}-L_{39}	-58.07	72.69	-2.96	2.15	0.31	-0.34	-37.26	27.17	3.86	-4.33
	L_{39}-L_{40}	-37.84	37.59	-2.16	1.29	0.03	-0.58	-27.21	16.29	-0.35	-7.46
	L_{40}-L_{41}	-37.84	37.59	-2.16	1.29	0.03	-0.58	-27.21	16.29	-0.35	-7.46
	U_0-L_1	-10.03	3.77	-1.19	0.33	0.19	-0.82	-15.07	4.13	2.36	-10.33
	L_1-L_2	-8.79	2.49	-1.03	0.44	0.19	-0.72	-13.03	3.64	2.49	-8.35
	L_2-L_3	-19.43	19.57	-1.35	1.16	0.21	-0.61	-17.09	14.66	2.60	-7.69
	L_3-L_4	-40.13	130.41	-2.73	3.96	0.48	-0.23	-26.48	19.68	4.50	-3.86
	L_4-L_5	-46.51	58.29	-3.00	2.51	0.41	-0.46	-37.89	31.70	5.20	-6.79
	L_5-L_6	-54.32	68.37	-2.99	2.68	0.34	-0.42	-37.76	33.87	4.28	-5.29
	L_6-L_7	-49.49	72.14	-2.96	2.96	0.34	-0.42	-44.72	36.83	5.40	-6.00
	L_7-L_8	-69.49	72.12	-3.96	3.56	0.23	-0.26	-49.57	44.58	2.94	-3.55
	L_8-L_9	-77.19	78.53	-3.96	3.56	0.23	-0.26	-49.57	44.58	2.94	-3.55
	L_9-L_{10}	-35.84	53.55	-2.38	2.89	0.55	-0.44	-30.34	36.86	7.07	-5.67
	L_{10}-L_{11}	-35.84	53.55	-2.38	2.89	0.55	-0.44	-30.34	36.86	7.07	-5.67
	L_{11}-L_{12}	-76.26	85.09	-2.80	2.47	0.43	-0.17	-35.76	31.65	5.47	-2.22
	L_{12}-L_{13}	-78.38	71.14	-2.87	1.94	0.39	-0.32	-36.62	24.72	4.96	-0.31
	L_{13}-L_{14}	-76.64	58.13	-2.84	1.89	0.39	-0.33	-35.75	24.72	4.96	-0.33
	L_{14}-L_{15}	-76.64	55.13	-2.84	2.17	-0.57	-0.62	-36.28	27.70	-0.84	-7.95
	L_{15}-L_{16}	-76.26	33.90	-2.80	1.97	-0.43	-0.59	-36.28	27.70	-0.84	-7.95
	L_{16}-L_{17}	-78.38	71.14	-2.87	1.94	0.39	-0.32	-36.62	24.72	4.96	-0.31
	L_{17}-L_{18}	-76.64	58.13	-2.84	1.89	0.39	-0.33	-35.75	24.72	4.96	-0.33
	L_{18}-L_{19}	-76.64	55.13	-2.84	2.17	-0.57	-0.62	-36.28	27.70	-0.84	-7.95
	L_{19}-L_{20}	-76.26	33.90	-2.80	1.97	-0.43	-0.59	-36.28	27.70	-0.84	-7.95
	L_{20}-L_{21}	6.26	-17.63	0.79	0.17	0.18	-0.91	-9.63	2.21	2.27	-11.60
	L_{21}-L_{22}	1.03	-9.85	1.05	0.72	0.62	-1.03	-13.47	9.16	7.92	-13.13
	L_{22}-L_{23}	-13.28	6.67	-1.01	0.33	0.20	-0.82	-14.88	5.03	2.67	-10.33
	L_{23}-L_{24}	-33.71	19.61	-1.91	1.50	0.36	-0.32	-24.45	19.22	4.59	-4.06
	L_{24}-L_{25}	-64.84	61.03	-2.64	2.46	0.20	-0.19	-42.03	36.21	2.51	-2.50
	L_{25}-L_{26}	-78.83	60.14	-3.85	3.00	0.48	-0.43	-49.16	38.29	6.16	-5.53
	L_{26}-L_{27}	-78.83	60.14	-3.85	3.00	0.48	-0.43	-49.16	38.29	6.16	-5.53
	L_{27}-L_{28}	-64.84	61.03	-2.64	2.46	0.20	-0.19	-42.03	36.21	2.51	-2.50
	L_{28}-L_{29}	-34.48	33.78	-2.60	2.46	0.20	-0.19	-37.26	34.69	-0.64	-10.84
	L_{29}-L_{30}	-90.42	64.48	-3.09	2.18	0.24	-0.22	-39.98	28.17	3.12	-2.86
	L_{30}-L_{31}	-90.42	64.48	-3.09	2.18	0.24	-0.22	-39.98	28.17	3.12	-2.86
	L_{31}-L_{32}	-33.53	18.27	-1.68	1.26	0.10	-0.35	-21.67	16.32	1.26	-4.52
	L_{32}-L_{33}	-33.53	18.27	-1.68	1.26	0.10	-0.35	-21.67	16.32	1.26	-4.52
	L_{33}-L_{34}	-1.49	-18.99	-0.86	0.35	0.37	-0.91	-11.09	4.48	4.74	-11.72
	L_{34}-L_{35}	-1.49	-18.99	-0.86	0.35	0.37	-0.91	-11.09	4.48	4.74	-11.72
	L_{35}-L_{36}	-33.85	37.99	-1.78	2.35	-0.39	-0.56	-23.07	16.13	-0.06	-8.38
	L_{36}-L_{37}	-61.82	22.38	-2.29	1.02	-0.44	-0.71	-29.63	13.20	-0.53	-10.91
	L_{37}-L_{38}	-61.82	22.38	-2.29	1.02	-0.44	-0.71	-29.63	13.20	-0.53	-10.91
	L_{38}-L_{39}	-33.85	37.99	-1.78	2.35	-0.39	-0.56	-23.07	16.13	-0.06	-8.38
	L_{39}-L_{40}	5.27	64.91	-1.38	2.42	0.21	-0.14	-18.38	32.36	2.85	-1.91
	L_{40}-L_{41}	5.27	64.91	-1.38	2.42	0.21	-0.14	-18.38	32.36	2.85	-1.91
	U_0-L_1	-38.99	50.41	-3.08	2.86	0.28	-0.05	-41.20	27.46	3.73	-1.24
	L_1-L_2	-30.65	37.99	-2.67	2.47	0.24	-0.04	-32.65	21.77	3.29	-1.09
	L_2-L_3	-7.78	19.68	-1.03	0.23	-0.17	-0.37	-13.76	3.51	-2.20	-4.38
	L_3-L_4	-7.78	19.68	-1.03	0.23	-0.17	-0.37	-13.76	3.51	-2.20	-4.38
	L_4-L_5	-30.65	37.99	-2.67	2.47	0.24	-0.04	-32.65	21.77	3.29	-1.09
	L_5-L_6	-38.99	50.41	-3.08	2.86	0.28	-0.05	-41.20	27.46	3.73	-1.24
	L_6-L_7	2.61	-8.77	-0.85	0.49	-0.65	-0.71	-11.33	2.40	-6.53	-8.71
	L_7-L_8	2.61	-8.77	-0.85	0.49	-0.65	-0.71	-11.33	2.40	-6.53	-8.71
	L_8-L_9	-5.74	-0.35	-0.05	0.43	0.69	-0.90	-9.60	5.85	-1.20	-11.18

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_{NA} (in^4)	Shape Factor	M_p (k-in)	Formula I.8 Terms * F/S_{bc}	M_u (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(LL)}$	Equivalent Mom. Factor $C_{b(DL)}$
Structure 1	U_0-L_1	-42.25	18.14	-27.54	7.32	15.6	19.63	15.58	25.56	5	804.0	1.66	857	1.5	773.7	-0.429	0.43
	L_1-L_2	-21.76	-6.01	-23.23	-12.61	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.276	0.71
	L_2-L_3	-78.70	-12.52	-0.04	-22.16	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.382	0.45
	L_3-L_4	-29.70	-29.05	11.90	-31.19	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.382	0.45
	L_4-L_5	-35.39	-37.29	13.73	-37.29	15.4	19.37	19.37	29.87	5	909.1	1.54	1400	1.5	958.8	-0.438	0.26
	L_5-L_6	-89.26	101.48	61.58	96.19	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.297	0.33
	L_6-L_7	-46.63	55.12	2.24	0.47	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.297	0.52
	L_7-L_8	-20.43	39.46	2.95	0.09	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.297	0.52
	L_8-L_9	-13.22	26.19	3.52	2.03	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.279	0.33
	L_9-L_{10}	-140.67	116.96	66.77	93.95	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2014.7	-0.037	0.21
	L_{10}-L_{11}	-22.84	13.27	-0.93	-4.06	0.00	0.00	0.00	0.00	0.00	1938.0	-0.997	0.20	0.00	25.85	112.77	-0.70
	L_{11}-L_{12}	-28.85	8.39	-2.59	-6.79	0.00	0.00	0.00	0.00	0.00	1389.6	1.53	2155	1.5	2115.6	-0.394	0.46
	L_{12}-L_{13}	-23.88	13.12	-0.14	-7.56	0.00	0.00	0.00	0.00	0.00	1389.6	1.53	2155	1.5	2115.6	-0.394	0.46
	L_{13}-L_{14}	-12.45	5.08	2.81	-8.16	0.00	0.00	0.00	0.00	0.00	1389.6	1.53	2155	1.5	2115.6	-0.394	0.46
	L_{14}-L_{15}	-16.44	7.29	3.35	-10.45	0.00	0.00	0.00	0.00	0.00	1389.6	1.53	2155	1.5	2115.6	-0.394	0.46
	L_{15}-L_{16}	-17.52	14.03	-3.09	-5.06	0.00	0.00	0.00	0.00	0.00	1389.6	1.53	2155	1.5	2115.6	-0.394	0.46
	L_{16}-L_{17}	-22.19	18.56	1.39	-3.07	0.00	0.00	0.00	0.00	0.00	1389.6	1.53	2155	1.5	2115.6	-0.394	0.46
	L_{17}-L_{18}	-42.05	30.49	4.70	-4.66	0.00	0.00	0.00	0.00	0.00	1389.6	1.53	2155	1.5	2115.6	-0.394	0.46
	L_{18}-L_{19}	-46.95	34.54	3.91	-3.51	0.00	0.00	0.00	0.00	0.00	1389.6	1.53	2155	1.5	2115.6	-0.394	0.46
	L_{19}-L_{20}	-28.13	32.63	0.94	-2.33	0.00	0.00	0.00	0.00	0.00	1389.6	1.53	2155	1.5	2115.6	-0.394	0.46
	L_{20}-L_{21}	-32.22	34.28	4.19	-4.40	0.00	0.00	0.00	0.00	0.00	1389.6	1.53	2155	1.5	2115.6	-0.394	0.46
	L_{21}-L_{22}	-26.42	29.68	3.35	-4.75	0.00	0.00	0.00	0.00	0.00	1389.6	1.53	2155	1.5	2115.6	-0.394	0.46
	L_{22}-L_{23}	-39.17	31.89	6.15	-5.30	0.00	0.00	0.00	0.00	0.00	1737.0	-0.797	0.28	0.00	1737.0	-0.797	0.28
	L_{23}-L_{24}	-23.67	19.68	4.50	-3.86	0.00	0.00	0.00	0.00	0.00	1737.0	-0.797	0.28	0.00	1737.0	-0.797	0.28
	L_{24}-L_{25}	-43.62	37.55	5.96	-4.87	0.00	0.00	0.00	0.00	0.00	1737.0	-0.797	0.28	0.00	1737.0	-0.797	0.28
	L_{25}-L_{26}	-41.40	34.66	2.74	-3.42	0.00	0.00	0.00	0.00	0.00	1737.0	-0.797	0.28	0.00	1737.0	-0.797	0.28
	L_{26}-L_{27}	-38.04	31.68	2.74	-3.86	0.00	0.00	0.00	0.00	0.00	1737.0	-0.797	0.28	0.00	1737.0	-0.797	0.28
	L_{27}-L_{28}	-37.26	27.17	3.86	-4.33	0.00	0.00	0.00	0.00	0.00	1737.0	-0.797	0.28	0.00	1737.0	-0.797	0.28
	L_{28}-L_{29}	-27.21	16.29	-0.35	-7.46	0.00	0.00	0.00	0.00	0.00	1737.0	-0.797	0.28	0.00	1737.0	-0.797	0.28
	L_{29}-L_{30}	-27.21	16.29	-0.35	-7.46	0.00	0.00	0.00	0.00	0.00	1737.0	-0.797	0.28	0.00	1737.0	-0.797	0.28
	U_0-L_1	-15.07	4.13	2.36	-10.33	0.00	0.00	0.00	0.00	0.00	751.9	1.54	782	1.5	763.3	-0.315	0.47
	L_1-L_2	-13.03	3.64	2.49	-8.35	0.00	0.00	0.00	0.00	0.00	751.9	1.54	782	1.5	763.3	-0.315	0.47
	L_2-L_3	-17.09	14.66	2.60	-7.69	0.00	0.00	0.00	0.00	0.00	47.48	44.48	21.88	15.46	15.4	15.42	15.42
	L_3-L_4	-26.48	19.68	4.50	-3.86	0.00	0.00	0.00	0.00	0.00	1389.6	1.53	2155	1.5	2115.6	-0.394	0.46
	L_4-L_5	-37.89	31.70	5.20	-6.79	0.00	0.00	0.00	0.00	0.00	109.72	116.98	-53.79	68.24	35.1	35.09	35.09
	L_5-L_6	-37.76	33.87	4.28	-5.29	0.00	0.00	0.00	0.00	0.00	119.71	132.93	-65.05	82.00	35.1	35.09	35.09
	L_6-L_7	-44.72	36.83	5.40	-6.00	0.00	0.00	0.00	0.00	0.00	155.29	152.23	-86.51	89.14	35.1	35.09	35.09
	L_7-L_8	-49.57	44.58	2.94	-3.55	0.00	0.00	0.00	0.00	0.00	155.29	152.23	-86.51	89.14	35.1	35.09	35.09
	L_8-L_9	-49.57	44.58	2.94	-3.55	0.00	0.00	0.00	0.00	0.00	61.94	169.54	-37.41	114.24	42.7	42.74	42.74
	L_9-L_{10}	-30.34	36.86	7.07	-5.67	0.00	0.00	0.00	0.00	0.00	61.94	169.54	-37.41	114.24	42.7	42.74	42.74
	L_{10}-L_{11}	-30.34	36.86	7.07	-5.67	0.00	0.00	0.00	0.00	0.00	149.50	134.62	-90.45	92.09	46.7	46.71	46.71
	L_{11}-L_{12}	-35.76	31.65	5.47	-2.22	0.00	0.00	0.00	0.00	0.00	149.50	134.62	-90.45	92.09	46.7	46.71	46.71
	L_{12}-L_{13}	-36.62	24.72	4.96	-0.31	0.00	0.00	0.00	0.00	0.00	133.15	139.99	-83.01	92.09	46.7	46.71	46.71
	L_{13}-L_{14}	-35.75	24.72	4.96	-0.33	0.00	0.00	0.00	0.00	0.00	133.15	139.99	-83.01	92.09	46.7	46.71	46.71
	L_{14}-L_{15}	-36.28	27.70	-0.84	-7.95	0.00	0.00	0.00	0.00	0.00	146.81	107.68	-100.73	61.34	38.8	38.83	38.83
	L_{15}-L_{16}	-36.28	27.70	-0.84	-7.95	0.00	0.00	0.00	0.00	0.00	146.81	107.68	-100.73	61.34	38.8	38.83	38.83
	L_{16}-L_{17}	-36.62	24.72	4.96	-0.31	0.00	0.00	0.00	0.00	0.00	149.50	134.62	-90.45	92.09	46.7	46.71	46.71
	L_{17}-L_{18}	-35.75	24.72	4.96	-0.33	0.00	0.00	0.00	0.00	0.00	133.15	139.99	-83.01	92.09	46.7	46.71	46.71
	L_{18}-L_{19}	-36.28	27.70	-0.84	-7.95	0.00	0.00	0.00	0.00	0.00	146.81	107.68	-100.73	61.34	38.8	38.83	38.83
	L_{19}-L_{20}	-36.28	27.70	-0.84	-7.95	0.00	0.00	0.00	0.00	0.00	146.81	107.68	-100.73	61.34	38.8	38.83	38.83
	L_{20}-L_{21}	-9.63	2.21	2.27	-11.60	0.00	0.00	0.00	0.00	0.00	-39.35	-20.05	19.80	18.02	17.24	17.24	17.24
	L_{21}-L_{22}	-13.47	9.16	7.92	-13.13	0.00	0.00	0.00	0.00	0.00	-16.17	-3.89	11.64	-29.88	19.4	15.42	15.42
	L_{22}-L_{23}	-40.88	5.03	2.67	-10.33	0.00	0.00	0.00	0.00	0.00	-40.88	-25.67	19.80	-37.57	19.4	15.42	15.42
	L_{23}-L_{24}	-24.45	19.22	4.59	-4.06	0.00	0.00	0.00	0.00	0.00	-75.61	50.47	-37.86	20.21	21.5	21.54	21.54
	L_{24}-L_{25}	-42.03	36.21	2.51	-2.50	0.00	0.00	0.00	0.00	0.00	-141.94	-112.88	77.91	59.39	30.9	30.99	30.99
	L_{25}-L_{26}	-49.16	38.29	6.16	-5.53	0.00	0.00	0.00	0.00	0.00	-166.39	127.96	-94.47	70.99	42.7	42.74	42.74
	L_{26}-L_{27}	-49.16	38.29	6.16	-5.53	0.00	0.00	0.00	0.00	0.00	-166.39	127.96	-94.47	70.99	42.7	42.74	42.74
	L_{27}-L_{28}	-42.03	36.21	2.51	-2.50	0.00	0.00	0.00	0.00	0.00	-141.94	-112.88	77.91	59.39	30.9	30.99	30.99
	L_{28}-L_{29}	-37.26	34.69	-0.64	-10.84	0.00	0.00	0.00	0.00	0.00	-107.36	-169.60	124.18	105.05	38.8	38.83	38.83
	L_{29}-L_{30}	-39.98	28.17	3.12	-2.86	0.00	0.00	0.00	0.00	0.00	-169.51	120.44	-113.49	80.11	38.8	38.83	38.83
	L_{30}-L_{31}	-39.98	28.17	3.12	-2.86	0.00	0.00	0.00	0.00	0.00	-172.05	119.63	-113.01	80.11	38.8	38.83	38.83
	L_{31}-L_{32}	-21.67	16.32	1.26	-4.52	0.00	0.00	0.00	0.00	0.00	-71.76	44.96	-41.95	17.68	19.4	19.37	19.37
	L_{32}-L_{33}	-18.23	12.57	1.26	-4.52	0.00	0.00	0.00	0.00	0.00	-62.86	37.29	-36.03	14.42	19.4	19.37	19.37
	L_{33}-L_{34}	-11.09	4.48	4.74	-11.72	0.00	0.00	0.00	0.00	0.00	-16.35	-18.87	4.22	-39.93	19.4	15.42	15.42
	L_{34}-L_{35}	-11.09	4.48	4.74	-11.72	0.00	0.00	0.00	0.00	0.00	-16.35	-18.87	4.22	-39.93	19.4	15.42	15.42
	L_{35}-L_{36}	-23.07	16.13	-0.06	-8.38	0.00	0.00	0.00	0.00	0.00	-100.00	70.36	-76.59	39.93	20.8	20.80	20.67
	L_{36}-L_{37}	-29.63	13.20	-0.53	-10.91	0.00	0.00	0.00	0.00	0.00	-118.88	48.25	-87.68	17.12	42.7	42.74	42.74
	L_{37}-L_{38}	-29.63	13.20	-0.53	-10.91	0.00	0.00	0.00	0

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
Condition: As-Built

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

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
For 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_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-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	-0.72	0.60	0.40	-11.30		8.91	10.02	4.45	-125.80
	U_2~U_3	-46.81	-20.76	0.10	-3.00	-16.60		1.11	20.56	-33.40	-184.81
	U_3~U_4	-112.19	86.51	0.90	2.40	-0.50	-17.10	10.02	26.72	-10.02	-190.37
	U_4~U_5	-15.68	66.14	1.50	2.40	-3.00	-15.30	16.70	24.49	-33.40	-172.56
	U_5~U_6	-9.16	61.58	1.50	2.20	-16.30	-4.50	16.70	24.49	-181.47	60.10
	U_6~U_7	42.76	120.09	1.70	2.20	-14.20	-1.10	18.93	24.49	-156.05	-12.25
	U_7~U_8	93.72	43.54	1.70	2.30	-0.90	-2.80	18.93	24.49	-156.05	-12.25
	U_8~U_9	-47.40	525.96	0.20	5.70	-18.30	13.80	2.23	63.46	-203.73	153.64
	U_9~U_{10}	474.61	-124.27	5.30	1.70	13.90	-164.90	57.14	2.16	123.99	-164.96
	U_{10}~U_{11}	46.76	20.63	1.40	1.70	-0.10	-10.40	15.09	18.33	-1.08	-112.13
	U_{11}~U_{12}	64.51	-138.68	1.30	1.60	-0.10	-0.80	22.64	1.62	9.70	-138.01
	U_{12}~U_{13}	27.83	-140.42	2.30	1.60	1.60	-15.50	24.80	10.76	10.78	-167.12
	U_{13}~U_{14}	-106.18	-154.99	1.60	0.60	-0.10	-17.50	17.25	6.47	-1.08	-188.69
	U_{14}~U_{15}	-137.97	-262.66	0.70	0.30	-1.30	-25.80	11.86	2.16	-163.95	-353.65
	U_{15}~U_{16}	-245.66	-182.98	1.10	0.80	-26.40	-9.80	11.86	8.63	-284.64	-105.66
	U_{16}~U_{17}	-123.52	-326.70	1.40	0.20	-19.20	-6.40	14.79	2.16	-207.01	-89.99
	U_{17}~U_{18}	-269.82	-144.58	0.50	0.10	-24.00	-8.50	5.39	1.08	-258.77	-91.65
	U_{18}~U_{19}	-134.16	-67.25	2.60	0.60	-3.10	-1.10	6.47	2.16	-156.07	-30.23
	U_{19}~U_{20}	-170.35	-20.48	0.40	-0.10	-12.30	-0.80	4.31	-1.08	-132.02	-8.63
	U_{20}~U_{21}	-186.12	24.46	0.50	-0.40	-8.50	6.60	5.39	-4.31	-91.65	71.16
	U_{21}~U_{22}	-70.88	119.67	2.90	0.50	-0.40	-10.70	2.13	13.74	-1.08	-112.73
	U_{22}~U_{23}	-70.88	-181.00	-0.20	1.40	-1.30	-17.90	2.13	14.91	-13.84	-190.58
	U_{23}~U_{24}	-70.88	-181.00	-0.20	1.40	-1.30	-17.90	2.13	14.91	-13.84	-190.58
	U_{24}~U_{25}	-327.18	-325.33	0.90	1.90	-4.20	-29.60	9.58	20.23	-344.03	-249.72
	U_{25}~U_{26}	-327.18	-325.33	0.90	1.90	-4.20	-29.60	9.58	20.23	-344.03	-249.72
	U_{26}~U_{27}	-396.09	-197.74	1.90	3.60	-10.30	-24.40	20.23	38.33	-109.66	-269.79
	U_{27}~U_{28}	-344.15	-179.39	2.80	2.50	-12.00	-31.80	29.81	26.62	-127.76	-338.57
	U_{28}~U_{29}	-224.10	-291.71	2.10	2.90	-20.80	-9.70	29.81	26.62	-413.10	-96.89
	U_{29}~U_{30}	-350.17	-90.75	2.30	3.10	-21.70	-7.70	24.49	33.01	-231.04	-81.98
	U_{30}~U_{31}	-227.23	-350.13	2.80	3.20	-21.70	-7.70	24.49	33.01	-231.04	-81.98
	U_{31}~U_{32}	-167.07	-39.82	3.00	3.10	-15.30	-3.90	31.94	33.01	-162.90	-41.52
	U_{32}~U_{33}	-77.09	-170.72	2.60	2.40	-17.60	-2.90	27.68	25.70	-157.06	-187.36
	U_{33}~U_{34}	-77.09	-170.72	2.60	2.40	-17.60	-2.90	24.49	33.71	-163.96	-89.43
	U_{34}~U_{35}	-261.00	-395.93	0.20	5.70	-0.50	-1.00	2.13	103.28	-5.32	-10.65
	U_{35}~U_{36}	-1192.75	-92.80	3.10	0.60	-14.50	-14.40	95.74	6.47	-238.83	-271.44
	U_{36}~U_{37}	-25.30	11.62	0.60	1.50	-8.50	-14.40	6.31	15.78	-89.43	-191.50
	U_{37}~U_{38}	-345.12	-0.72	0.60	1.50	-8.50	-14.40	6.31	15.78	-89.43	-191.50
	U_{38}~U_{39}	-150.58	-33.05	2.30	1.90	-3.30	-14.60	24.20	19.99	-34.72	-163.61
	U_{39}~U_{40}	-147.30	-4.36	2.70	1.90	-2.60	-19.40	28.41	19.99	-27.35	-204.11
	U_{40}~U_{41}	-147.30	-4.36	2.70	1.90	-2.60	-19.40	28.41	19.99	-27.35	-204.11
	U_{41}~U_{42}	-31.67	-34.01	2.20	0.40	-1.80	-21.10	23.15	4.21	-18.94	-221.99
	U_{42}~U_{43}	-98.04	-71.76	1.90	0.40	-1.80	-25.20	13.88	8.63	-19.75	-263.96
	U_{43}~U_{44}	-60.95	-66.97	0.90	1.20	-25.40	-10.40	9.47	12.63	-267.23	-109.42
	U_{44}~U_{45}	-60.95	-66.97	0.90	1.20	-25.40	-10.40	9.47	12.63	-267.23	-109.42
	U_{45}~U_{46}	-32.99	-28.60	2.60	2.60	-21.40	-7.40	21.04	27.35	-225.19	-76.79
	U_{46}~U_{47}	-15.12	113.76	1.90	2.70	-19.80	-4.20	19.99	28.41	-208.32	-44.19
	U_{47}~U_{48}	-15.12	113.76	1.90	2.70	-19.80	-4.20	21.04	27.35	-208.32	-44.19
	U_{48}~U_{49}	-2.69	209.81	1.00	2.00	-19.40	-2.20	15.78	21.04	-204.11	-23.15
	U_{49}~U_{50}	-2.69	209.81	1.00	2.00	-19.40	-2.20	15.78	21.04	-204.11	-23.15
	U_{50}~U_{51}	-122.28	-116.58	0.20	9.90	-26.60	-19.90	8.52	2.16	-279.86	-209.37
	U_{51}~U_{52}	-1153.78	-196.80	8.40	0.80	-0.80	-0.60	89.43	8.52	-8.52	-6.39
	U_{52}~U_{53}	-1153.78	-196.80	8.40	0.80	-0.80	-0.60	89.43	8.52	-8.52	-6.39
	U_{53}~U_{54}	-178.87	-59.61	2.40	2.60	-0.30	-17.40	25.55	27.68	-3.19	-185.26
	U_{54}~U_{55}	-178.87	-59.61	2.40	2.60	-0.30	-17.40	25.55	27.68	-3.19	-185.26
	U_{55}~U_{56}	-68.77	-178.57	3.30	2.60	-2.20	-22.70	35.14	27.68	-23.42	-241.69
	U_{56}~U_{57}	-68.77	-178.57	3.30	2.60	-2.20	-22.70	35.14	27.68	-23.42	-241.69
	U_{57}~U_{58}	-236.40	-153.06	2.50	0.90	-36.10		26.62	23.42	-9.58	-384.36
	U_{58}~U_{59}	-98.63	-313.14	2.60	2.50	-36.10	-12.30	27.68	26.62	-384.36	-130.96
	U_{59}~U_{60}	-236.40	-153.06	2.50	0.90	-36.10		26.62	23.42	-9.58	-384.36
	U_{60}~U_{61}	-350.27	-386.72	1.90	0.50	-37.60	-13.50	20.23	5.32	-400.33	-143.73
	U_{61}~U_{62}	-350.27	-386.72	1.90	0.50	-37.60	-13.50	20.23	5.32	-400.33	-143.73
	U_{62}~U_{63}	-278.82	-117.63	1.30	-0.30	-28.30	-5.70	13.84	-3.19	-301.31	-60.69
	U_{63}~U_{64}	-278.82	-117.63	1.30	-0.30	-28.30	-5.70	13.84	-3.19	-301.31	-60.69
	U_{64}~U_{65}	-186.12	-74.10	1.00	-0.60	-15.60	6.90	10.65	-6.39	-112.89	-73.46
	U_{65}~U_{66}	-186.12	-74.10	1.00	-0.60	-15.60	6.90	10.65	-6.39	-112.89	-73.46
	U_{66}~U_{67}	-139.59	-187.78	-0.10	0.80	1.80	-11.80	-1.08	6.47	19.41	-127.23
	U_{67}~U_{68}	-139.59	-187.78	-0.10	0.80	1.80	-11.80	-1.08	6.47	19.41	-127.23
	U_{68}~U_{69}	-47.42	-118.54	0.10	0.50	1.00	-8.60	2.16	6.47	-1.08	-146.64
	U_{69}~U_{70}	-52.50	-128.95	-0.10	0.80	1.60	-17.50	-1.08	8.63	5.39	-193.00
	U_{70}~U_{71}	-287.50	-127.73	1.30	0.30	-27.50	-6.30	10.78	15.09	-5.39	-193.00
	U_{71}~U_{72}	-277.57	-111.69	0.60	1.50	-1.60	-21.50	6.47	16.17	-10.78	-237.81
	U_{72}~U_{73}	-166.87	-243.73	1.60	1.40	-5.60	-27.70	10.78	15.09	-59.30	-298.66
	U_{73}~U_{74}	-287.50	-127.73	1.30	0.30	-27.50	-6.30	10.78	15.09	-5.39	-193.00
	U_{74}~U_{75}	-141.30	-113.93	0.90	1.60	-19.80	-3.60	9.70	17.25	-213.48	-38.82
	U_{75}~U_{76}	-140.41	-22.73	1.10	2.40	-13.10	-1.40	11.86	25.88	-141.24	-15.09
	U_{76}~U_{77}	-141.54	56.98	1.40	2.20	-14.20	-1.10	15.09	26.72	-153.10	-11.86
	U_{77}~U_{78}	3.07	40.55	1.70	1.40	-10.80	-1.70	18.33	15.99	-116.45	-18.33
	U_{78}~U_{79}	-136.80	470.88	0.10	5.70	-14.10	8.70	1.08	61.46	-152.03	93.80
	U_{79}~U_{80}	497.19	-34.44	5.60	0.30	15.10	-18.10	62.34	3.34	168.11	-201.51
	U_{80}~U_{81}	41.01	105.92	1.30	1.60	0.30	-11.80	14.47	17.81	3.34	-131.37
	U_{81}~U_{82}	113.01	44.44	2.40	1.60	1.20	-13.60	26.72	17.81	13.36	-151.41
	U_{82}~U_{83}	59.30	15.07	2.30	1.40	-2.30	-16.00	25.61	15.59	-25.61	-178.13
	U_{83}~U_{84}	80.04	-19.79	2.30	1.20	-14.30	-5.90	25.61	13.36	-159.20	-65.68
	U_{84}~U_{85}	80.24	-119.59	2.30	0.50	-16.60	-7.40	25.61	5.57	-184.81	-82.38
	U_{85}~U_{86}	-24.67	-27.08	1.40	0.10	-18.00	-5.50	15.99	1.11	-200.39	-61.23
	U_{86}~U_{87}	29.36	-160.66	1.00	-0.30	8.30	3.80	11.13	-3.34	-103.54	42.31

Location	Member	Pedestrian Load (Min) Start (k-ft)	Pedestrian Load (Min) End (k-ft)	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_b (in^3)	S_{tb} (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor f	M_p (k-in)	Formula I & S Trans.* F/ S_{bb}	M_z (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(a)}$	Equivalent Mom. Factor $C_{m(b)}$
Structure 1	U_1~U_2	0.00	0.00	0.00	0.00	0.00	0.00	-79.58	-12.12	-85.37	-164.45	90.2	90.24	72.24	127.46	2147	1328.6
	U_2~U_3	0.00	0.00	0.00	0.00	0.00	0.00	-59.42	-44.62	-95.2	-91.24	76.71	127.46	2147	1328.6	1.41	4206
	U_3~U_4	0.00	0.00	0.00	0.00	0.00	0.00	-132.82	147.20	-158.87	-135.03	90.2	90.24	76.71	127.46	2147	1328.6
	U_4~U_5	0.00	0.00	0.00	0.00	0.00	0.00	1.33	119.63	-43.82	-139.05	90.2	90.24	72.24	127.46	2147	1328.6
	U_5~U_6	0.00	0.00	0.00	0.00	0.00	0.00	9.80	111.90	-247.82	14.93	90.2	90.24	72.24	127.46	2147	1328.6
	U_6~U_7	0.00	0.00	0.00	0.00	0.00	0.00	80.20	187.96	-149.92	140.20	90.2	90.24	76.71	127.46	2147	1328.6
	U_7~U_8	0.00	0.00	0.00	0.00	0.00	0.00	145.66	52.25	-18.53	-17.61	90.2	90.24	76.71	127.46	2147	1328.6
	U_8~U_9	0.00	0.00	0.00	0.00	0.00	0.00	1.11	22.27	-12.25	-9.53	-1.70	-1.60	0.00	0.00	0.00	0.00
	U_9~U_{10}	0.00	0.00	0.00	0.00	0.00	0.00	-15.09	5.39	3.23	10.78	0.00	0.00	0.00	0.00	0.00	0.00
	U_{10}~U_{11}	0.00	0.00	0.00	0.00	0.00	0.00	80.41	90.64	59.39	-118.96	99.6	96.61	79.12	139.29	2174	1387.9
	U_{11}~U_{12}	0.00	0.00	0.00	0.00	0.00	0.00	113.30	-162.06	21.62	-359.69	99.6	96.61	83.93	139.29	2174	1387.9
	U_{12}~U_{13}	0.00	0.00	0.00	0.00	0.00	0.00	68.42	-168.52	92.20	-399.80	128.7	128.69	105.26	182.66	3153	1864.4
	U_{13}~U_{14}	0.00	0.00	0.00	0.00	0.00	0.00	115.60	-193.09	-139.43	-446.19	151.8	151.76	130.94	219.77	4535	2632.6
	U_{14}~U_{15}	0.00	0.00	0.00	0.00	0.00	0.00	163.95	-353.65	-214.61	-538.73	151.8	151.76	130.94	219.77	4535	2632.6
	U_{15}~U_{16}	0.00	0.00	0.00	0.00	0.00	0.00	303.94	-226.66	-689.40	-375.23	188.5	188.51	157.55	274.68	5476	3413.6
	U_{16}~U_{17}	0.00	0.00	0.00	0.00	0.00	0.00	140.95	-421.90	-429.09	-514.41	188.5	188.51	164.41	274.68	5476	3413.6
	U_{17}~U_{18}	0.00	0.00	0.00	0.00	0.00	0.00	343.50	-187.07	-686.91	-307.61	188.5	188.51	157.55	274.68	5476	3413.6
	U_{18}~U_{19}	0.00	0.00	0.00	0.00	0.00	0.00	152.89	-26.74	-439.72	-32.66	127.3	127.31	110.40	186.23	3668	2308.5
	U_{19}~U_{20}	0.00	0.00	0.00	0.00	0.00	0.00	215.85	-28.02	-393.86	-37.83	104.8	104.75	86.43	150.63	2589	1554.3
	U_{20}~U_{21}	0.00	0.00	0.00	0.00	0.00	0.00	-234.95	26.19	-361.10	124.31	104.8	104.75	86.43	150.63	2589	1554.3
	U_{21}~U_{22}	0.00	0.00	0.00	0.00	0.00	0.00	152.89	-206.74	-19.71	-312.73	104.8	104.75	86.43	150.63	2589	1554.3
	U_{22}~U_{23}	0.00	0.00	0.00	0.00	0.00	0.00	84.91	-215.33	-113.13	-483.06	138.2	138.15	119.05	199.70	3434	1990.9
	U_{23}~U_{24}	0.00	0.00	0.00	0.00	0.00	0.00	84.91	-215.33	-113.13	-483.06	138.2	138.15	119.05	199.70	3434	1990.9
	U_{24}~U_{25}	0.00	0.00	0.00	0.00	0.00	0.00	412.97	-396.63	-483.46	-632.62	232.7	232.70	198.86	340.10	6520	3217.6
	U_{25}~U_{26}	0.00	0.00	0.00	0.00	0.00	0.00	412.97	-396.63	-483.46	-632.62	232.7	232.70	198.86	340.10	6520	3217.6
	U_{26}~U_{27}	0.00	0.00	0.00	0.00	0.00	0.00	488.62	-207.23	-557.49	-584.78	251.7	251.73	219.41	365.62	7161	3870.6
	U_{27}~U_{28}	0.00	0.00	0.00	0.00	0.00	0.00	408.64	-198.61	-613.49	-673.36	232.7	232.70	189.45	340.10	6520	3217.6
	U_{28}~U_{29}	0.00	0.00	0.00	0.00	0.00	0.00	264.86	-345.67	-436.36	-513.37	232.7	232.70	189.45	340.10	6520	3217.6
	U_{29}~U_{30}	0.00	0.00	0.00	0.00	0.00	0.00	423.39	-75.07	-755.57	-224.55	198.9	198.88	169.65	285.08	5137	2713.1
	U_{30}~U_{31}	0.00	0.00	0.00	0.00	0.00	0.00	423.39	-75.07	-755.57	-224.55	198.9	198.88	169.65	285.08	5137	2713.1
	U_{31}~U_{32}	0.00	0.00	0.00	0.00	0.00	0.00	31.94	33.01	-162.90	-41.52	104.8	104.75	86.43	150.63	2589	1554.3
	U_{32}~U_{33}	0.00	0.00	0.00	0.00	0.00	0.00	175.66	94.68	-428.96	-2.21	196.8	196.80	134.62	214.81	3285	1852.3
	U_{33}~U_{34}	0.00	0.00	0.00	0.00	0.00	0.00	190.71	255.15	-396.30	181.80	196.8	196.80	128.72	214.81	3285	1852.3
	U_{34}~U_{35}	0.00	0.00	0.00	0.00	0.00	0.00	24.49	33.71	-163.96	-89.43	104.8	104.75	86.43	150.63	2589	1554.3
	U_{35}~U_{36}	0.00	0.00	0.00	0.00	0.00	0.00	336.53	1779.96	-346.22	1431.86	221.8	221.77	196.91	327.26	6244	3427.0
	U_{36}~U_{37}	0.00	0.00	0.00	0.00	0.00	0.00	675.54	-1.72	-1,000.17	-1,000.17	221.8	221.77	196.91	327.26	6244	3427.0
	U_{37}~U_{38}	0.00	0.00	0.00	0.00	0.00	0.00	24.69	-13.62	-149.15	-103.85	185.1	185.70	154.12	266.55	4767	2721.4
	U_{38}~U_{39}	0.00	0.00	0.00	0.00	0.00	0.00	6.31	15.78	-89.43	-191.50	104.8	104.75	86.43	150.63	2589	1554.3
	U_{39}~U_{40}	0.00	0.00	0.00	0.00	0.00	0.00	24.20	19.99	-34.72	-163.61	104.8	104.75	86.43	150.63	2589	1554.3
	U_{40}~U_{41}	0.00	0.00	0.00	0.00	0.00	0.00	28.41	19.99	27.35	-204.11	104.8	104.75	86.43	150.63	2589	1554.3
	U_{41}~U_{42}	0.00	0.00	0.00	0.00	0.00	0.00	23.15	4.21	-18.94	-221.99	104.8	104.75	86.43	150.63	2589	1554.3
	U_{42}~U_{43}	0.00	0.00	0.00	0.00	0.00	0.00	13.88	8.63	-19.75	-263.96	104.8	104.75	86.43	150.63	2589	1554.3
	U_{43}~U_{44}	0.00	0.00	0.00	0.00	0.00	0.00	9.47	12.63	-267.23	-109.42	104.8	104.75	86.43	150.63	2589	1554.3
	U_{44}~U_{45}	0.00	0.00	0.00	0.00	0.00	0.00	9.47	12.63	-267.23	-109.42	104.8	104.75	86.43	150.63	2589	1554.3
	U_{45}~U_{46}	0.00	0.00	0.00	0.00	0.00	0.00	21.04	27.35	-225.19	-76.79	104.8	104.75	86.43	150.63	2589	1554.3
	U_{46}~U_{47}	0.00	0.00	0.00	0.00	0.00	0.00	19.99	28.41	-208.32	-44.19	104.8	104.75	86.43	150.63	2589	1554.3
	U_{47}~U_{48}	0.00	0.00	0.00	0.00	0.00	0.00	21.04	27.35	-208.32	-44.19	104.8	104.75	86.43	150.63	2589	1554.3
	U_{48}~U_{49}	0.00	0.00	0.00	0.00	0.00	0.00	15.78	21.04	-204.11	-23.15	104.8	104.75	86.43	150.63	2589	1554.3
	U_{49}~U_{50}	0.00	0.00	0.00	0.00	0.00	0.00	15.78	21.04	-204.11	-23.15	104.8	104.75	86.43	150.63	2589	1554.3
	U_{50}~U_{51}	0.00	0.00	0.00	0.00	0.00	0.00	8.52	2.16	-279.86	-209.37	104.8	104.75	86.43	150.63	2589	1554.3
	U_{51}~U_{52}	0.00	0.00	0.00	0.00	0.00	0.00	89.43	8.52	-8.52	-6.39	104.8	104.75	86.43	150.63	2589	1554.3
	U_{52}~U_{53}	0.00	0.00	0.00	0.00	0.00	0.00	89.43	8.52	-8.52	-6.39	104.8	104.75	86.43	150.63	2589	1554.3
	U_{53}~U_{54}	0.00	0.00	0.00	0.00	0.00	0.00	25.55	27.68	-3.19	-185.26	104.8	104.75	86.43	150.63	2589	1554.3
	U_{54}~U_{55}	0.00	0.00	0.00	0.00	0.00	0.00	25.55	27.68	-3.19	-185.26	104.8	104.75	86.43	150.63	2589	1554.3
	U_{55}~U_{56}	0.00	0.00	0.00	0.00	0.00	0.00	35.14	27.68	-23.42	-241.69	104.8	104.75	86.43	150.63	2589	1554.3
	U_{56}~U_{57}	0.00	0.00	0.00	0.00	0.00	0.00	35.14	27.68	-23.42	-241.69	104.8	104.75	86.43	150.63	2589	1554.3
	U_{57}~U_{58}	0.00	0.00	0.00	0.00	0.00	0.00	26.62	23.42	-9.58	-384.36	104.8	104.75	86.43	150.63	2589	1554.3
	U_{58}~U_{59}	0.00	0.00	0.00	0.00	0.00	0.00	27.68	26.62	-384.36	-130.96	104.8	104.75	86.43	150.63	2589	1554.3
	U_{59}~U_{60}	0.00	0.00	0.00	0.00	0.00	0.00	26.62	23.42	-9.58	-384.36	104.8	104.75	86.43	150.63	2589	1554.3
	U_{60}~U_{61}	0.00	0.00	0.00	0.00	0.00	0.00	20.23	5.32	-400.33	-143.73	104.8	104.75	86.43	150.63	2589	1554.3
	U_{61}~U_{62}	0.00	0.00	0.00	0.00	0.00	0.00	20.23	5.32	-400.33	-143.73	104.8	104.75	86.43	150.63	2589	1554.3
	U_{62}~U_{63}	0.00	0.00	0.00	0.00	0.00	0.00	13.84	-3.19	-301.31	-60.69	104.8	104.75	86.43	150.63	2589	1554.3
	U_{63}~U_{64}	0.00	0.00	0.00	0.00	0.00	0.00	13.84	-3.19	-301.31	-60.69	104.8	104.75	86.43	150.63	2589	1554.3
	U_{64}~U_{65}	0.00	0.00	0.00	0.00	0.00	0.00	10.65	-6.39	-112.89	-73.46	104.8	104.75	86.43	150.63	2589	1554.3
	U_{65}~U_{66}	0.00	0.00	0.00	0.00	0.00	0.00	10.65	-6.39	-112.89	-73.46	104.8	104.75	86.43	150.63	2589	1554.3
	U_{66}~U_{67}	0.00	0.00	0.00	0.00	0.00	0.00	-1.08	6.47	19.41	-127.23	104.8	104.75	86.43	150.63	2589	1554.3
	U_{67}~U_{68}	0.00	0.00	0.00	0.00	0.00	0.00	-1.08	6.47	19.41	-127.23	104.8	104.75	86.43	150.63	2589	1554.3
	U_{68}~U_{69}	0.00	0.00	0.00	0.00	0.00	0.00	2.16	6.47	-1.08	-146.64	104.8	104.75	86.43	150.63	2589	1554.3
	U_{69}~U_{70}	0.00	0.00	0.00	0.00	0.00	0.00	-1.08	8.63	5.39	-193.00	104.8	104.75	86.43	150.63	2589	1554.3
	U_{70}~U_{71}	0.00

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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

Cycle Truck - Lower Bound

Structure 1 / Structure 2 / Structure 3

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	L_0-L_1	-15.54	-19.33	3.70	-5.50	2.70	-2.50	41.19	-61.23	30.06	-27.63
	L_1-L_2	39.76	-87.96	-3.70	-9.00	-0.10	1.50	-41.19	-100.20	-1.11	16.70
	L_2-L_3	79.59	-42.20	-9.00	-6.10	0.90	1.60	-120.24	-167.92	0.12	17.81
	L_3-L_4	-11.34	11.55	-13.40	-8.60	0.80	2.60	-149.18	-99.74	8.91	28.95
	L_4-L_5	-49.11	208.03	-6.40	-18.40	18.93	28.72	-75.14	167.40	18.93	28.72
	L_5-L_6	-0.46	181.07	-3.70	-7.20	1.40	3.50	-41.19	-80.16	15.59	38.37
	L_6-L_7	41.44	249.21	-7.60	-7.60	1.60	1.60	-120.24	-167.92	0.00	0.00
	L_7-L_8	-25.11	448.74	0.00	0.00	0.10	6.20	0.00	0.00	0.00	0.00
	L_8-L_9	425.89	-36.02	0.00	0.00	6.90	-0.40	0.00	0.00	74.40	-4.31
	L_9-L_{10}	150.02	-126.13	-2.80	-0.90	1.60	0.30	158.59	-273.91	188.02	-142.08
	L_{10}-L_{11}	120.44	-115.99	-3.80	-5.60	2.90	1.20	-60.37	-60.38	31.27	12.94
	L_{11}-L_{12}	198.58	-198.58	-5.30	-6.30	4.70	1.90	-31.27	-31.27	19.45	9.70
	L_0-L_{13}	-45.24	-121.26	-6.60	-9.60	1.60	0.70	-71.16	-97.94	17.25	7.55
	L_{13}-L_{14}	96.32	-264.98	-8.60	-13.90	1.30	0.90	-94.88	-149.87	14.02	9.70
	L_{14}-L_{15}	352.04	-66.08	-13.90	-8.60	1.30	0.90	-149.87	-94.88	14.02	9.70
	L_{15}-L_{16}	-191.89	-319.35	-6.80	-15.90	0.60	0.30	-344.76	-6.08	-72.31	-177.43
	L_{16}-L_{17}	339.58	44.88	-15.90	-6.80	0.30	0.60	-108.93	-94.88	5.39	-2.16
	L_{17}-L_{18}	-154.59	-31.26	-17.10	-3.40	0.20	-0.10	-76.55	-36.66	-2.16	-1.08
	L_{18}-L_{19}	-215.80	145.76	-7.20	-3.50	0.00	0.00	-27.63	34.25	-1.08	0.00
	L_{19}-L_{20}	-136.32	49.67	-3.50	-0.50	4.00	3.00	-5.39	-1.08	-0.90	-0.20
	L_{20}-L_{21}	-2.68	-185.02	2.70	-7.90	2.60	-3.00	28.75	-84.11	27.68	-53.24
	L_{21}-L_{22}	39.76	243.21	-5.30	-10.30	1.20	0.30	19.16	144.78	5.32	12.79
	L_{22}-L_{23}	-4.23	-180.72	-3.50	-9.70	-0.10	1.00	-37.26	-103.28	-1.06	10.65
	L_{23}-L_{24}	84.42	-84.42	-9.70	-3.50	1.00	0.10	-66.01	-37.26	10.65	-1.06
	L_{24}-L_{25}	-252.89	-295.03	-15.10	-13.30	0.90	1.60	-160.77	-141.61	9.58	17.04
	L_{25}-L_{26}	81.34	-249.09	-13.30	-15.10	1.60	0.90	-141.61	-160.77	17.04	9.58
	L_{26}-L_{27}	-475.08	-262.15	-22.40	-17.20	2.40	2.40	-238.49	-183.13	25.55	25.55
	L_{27}-L_{28}	-280.47	-64.51	-12.90	-15.10	2.00	3.50	-137.35	-160.77	21.29	37.26
	L_{28}-L_{29}	-292.36	219.74	-6.40	-12.90	1.90	2.00	-100.28	-111.78	26.62	21.29
	L_{29}-L_{30}	-225.83	141.30	-6.80	-6.40	1.70	1.90	-94.76	-68.14	18.10	26.20
	L_{30}-L_{31}	-201.52	258.65	-6.00	-6.80	1.50	1.70	-60.69	-94.76	26.20	18.10
	L_{31}-L_{32}	-160.03	387.16	-6.50	-7.40	1.50	3.80	-69.21	-78.79	15.97	40.44
	L_{32}-L_{33}	-202.71	204.45	-0.80	-6.50	2.40	-4.10	-8.52	2.13	14.91	-43.65
	L_{33}-L_{34}	-379.75	-103.16	0.10	-4.10	0.00	0.00	-11.57	-1.05	123.10	-28.30
	L_{34}-L_{35}	1072.48	-412.35	-1.10	-0.10	11.70	-2.50	-11.57	-1.05	123.10	-28.30
	L_{35}-L_{36}	331.46	-41.31	-0.30	-1.10	2.50	0.00	-5.26	-2.10	-42.14	15.78
	L_{36}-L_{37}	475.57	-49.03	-4.30	-6.30	4.00	1.90	-45.24	-87.32	42.08	10.52
	L_{37}-L_{38}	226.51	-226.51	-3.10	-4.30	1.90	1.90	-87.32	-45.24	10.52	42.08
	L_{38}-L_{39}	226.51	-41.81	-3.70	-6.90	3.20	1.30	-69.97	-83.12	33.67	13.68
	L_{39}-L_{40}	214.45	-56.43	-4.30	-12.00	1.90	2.00	-66.28	-126.23	19.99	21.94
	L_{40}-L_{41}	49.27	-122.46	-6.90	-14.70	2.00	4.60	-167.28	-174.63	16.83	12.63
	L_{41}-L_{42}	49.27	-202.49	-15.90	-16.60	1.60	1.20	-153.41	-496.27	85.94	-248.82
	L_{42}-L_{43}	-197.10	34.39	-16.60	-15.90	1.20	1.60	-248.82	-85.94	161.16	142.40
	L_{43}-L_{44}	-111.92	0.86	-10.70	-14.60	1.30	2.80	-112.67	-153.63	51.68	29.46
	L_{44}-L_{45}	-379.75	-103.16	-2.10	-10.70	0.00	1.30	-11.57	-1.05	123.10	-28.30
	L_{45}-L_{46}	-60.79	179.81	-5.60	-10.00	1.40	3.20	-58.92	-105.21	14.73	33.67
	L_{46}-L_{47}	-81.80	265.56	-7.70	-7.90	2.20	1.30	-81.01	-83.12	23.15	13.68
	L_{47}-L_{48}	-99.81	279.28	-7.90	-6.30	2.30	1.20	-133.85	-177.72	25.39	8.42
	L_{48}-L_{49}	-99.81	-279.28	-6.30	-5.50	-0.40	1.20	-133.85	-369.91	-135.22	-346.66
	L_{49}-L_{50}	-371.96	1004.43	-5.50	-7.70	-0.70	0.00	-346.66	-135.22	226.05	215.39
	L_{50}-L_{51}	1026.29	-362.30	-0.70	0.00	12.30	-3.10	-7.45	0.00	130.96	-33.01
	L_{51}-L_{52}	-226.76	-125.36	0.10	-6.80	-2.90	2.10	1.06	-6.52	-24.49	-32.36
	L_{52}-L_{53}	-278.05	-132.91	-2.00	-9.00	1.70	2.70	-21.29	-95.82	10.59	28.75
	L_{53}-L_{54}	-222.98	-243.21	-7.50	-11.30	2.10	2.30	-79.85	-120.31	22.36	26.49
	L_{54}-L_{55}	-187.98	-470.72	-9.40	-26.00	2.40	1.80	-100.08	-276.82	25.60	59.16
	L_{55}-L_{56}	-445.06	-93.48	-26.20	-24.10	2.10	0.40	-172.48	-256.59	22.36	4.26
	L_{56}-L_{57}	-291.78	-319.55	-24.10	-26.20	0.40	2.10	-168.22	-166.04	4.26	22.36
	L_{57}-L_{58}	-392.27	38.30	-16.90	-5.40	0.90	-0.30	-743.86	-24.95	-497.49	45.64
	L_{58}-L_{59}	-297.04	199.10	-12.00	-2.00	0.60	-0.30	-87.31	-87.31	-249.43	-170.38
	L_{59}-L_{60}	-297.04	-199.10	-12.00	-2.00	0.60	-0.30	-527.76	21.29	6.39	-3.19
	L_{60}-L_{61}	24.53	-109.42	2.20	-3.30	3.10	-4.30	23.72	-46.36	33.42	-46.36
	L_{61}-L_{62}	-139.90	-177.77	-3.30	-6.90	-0.30	0.60	23.72	-74.40	-3.23	6.47
	L_{62}-L_{63}	-11.57	-138.31	-6.90	-9.60	0.60	1.60	-35.08	-87.92	-11.65	-29.16
	L_{63}-L_{64}	47.96	-293.64	-2.90	-11.30	-0.20	0.90	-31.27	-121.84	-2.16	19.79
	L_{64}-L_{65}	-147.68	-148.96	-11.30	-6.70	0.90	-0.20	-122.08	-37.92	8.63	-2.16
	L_{65}-L_{66}	-147.68	348.63	-6.70	-11.30	1.60	0.90	-140.17	-178.98	2.16	17.25
	L_{66}-L_{67}	-341.10	86.20	-9.50	-12.90	1.20	1.10	-102.43	-139.09	12.94	11.86
	L_{67}-L_{68}	-201.09	152.50	-4.50	-9.50	0.90	1.20	-49.60	-66.85	9.70	20.49
	L_{68}-L_{69}	-201.09	-152.50	-9.50	-4.50	1.20	0.90	-66.85	-49.60	20.49	9.70
	L_{69}-L_{70}	-148.24	-148.96	-4.80	-6.70	1.60	-0.80	-51.75	-72.24	17.25	-8.63
	L_{70}-L_{71}	-148.24	348.63	-6.70	-4.80	1.60	1.60	-72.24	-51.75	-8.63	17.25
	L_{71}-L_{72}	-428.31	-26.46	0.00	0.00	7.10	-2.20	0.00	0.00	79.04	-23.60
	L_{72}-L_{73}	-428.31	-26.46	0.00	0.00	7.10	-2.20	0.00	0.00	79.04	-23.60
	L_{73}-L_{74}	70.66	27.55	-5.30	-8.00	-0.70	1.70	-59.07	-89.36	-7.76	18.93
	L_{74}-L_{75}	70.66	27.55	-8.00	-5.30	1.70	-0.70	-89.36	-59.07	18.93	-7.76
	L_{75}-L_{76}	194.48	-25.11	-7.70	-9.60	2.30	1.90	-43.46	-106.88	25.61	21.15
	L_{76}-L_{77}	194.48	-219.24	-9.60	-7.70	1.90	2.30	-106.88	-43.46	21.15	25.61
	L_{77}-L_{78}	-45.48	-80.88	-6.70	-13.90	1.30	0.90	-74.09	-154.73	14.47	8.57
	L_{78}-L_{79}	-45.48	80.88	-13.90	-6.70	0.90	1.30	-154.73	-74.09	8.57	14.47
	L_{79}-L_{80}	-74.44	-5.53	-6.50	-3.70	4.30	3.50	-72.36	-41.10	-97.89	-2.23

ZZ Axis Moment from STAAD

Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	S_{bb} (in^3)	Z_z (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F'$_y$/S_{bb}	M_2 (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mxb}
L_0-L_1	33.35	-174.53	18.87	-131.52	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99900094	2755.4	-0.191	0.52
L_1-L_2	0.00	0.00	0.00	-256.86	172.10	89.32	-31.71	99.10	91.00	226.43	2.49	7752	0.99900094	2755.4	-0.191	0.52
L_2-L_3	0.00	0.00	0.00	-258.67	-109.45	-3.16	92.65	99.9	99.93	84.14	1.25	4141	0.99991188	3294.8	0.524	0.81
L_3-L_4	0.00	0.00	0.00	-167.02	107.77	303.17	52.6	92.98	76.68	114.47	3186	3777	0.99991063	3052.4	-0.129	0.56
L_4-L_5	0.00	0.00	0.00	-64.15	131.19	19.67	286.05	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4320	0.9992345
L_5-L_6	0.00	0.00	0.00	-150.62	12.01	-30.72	76.75	104.9	104.93	76.75	136.37	4040	1678.1	1.31	4320	0.9992345
L_6-L_7	0.00	0.00	0.00	-32.65	583.36	-31.23	673.09	145.8	145.75	130.44	228.84	6500	2932.4	1.57	7552	0.9992915
L_7-L_8	0.00	0.00	0.00	553.65	-46.82	692.37	-32.43	145.8	145.75	136.74	228.84	6500	2932.4	1.57	7552	0.9992961
L_8-L_9	0.00	0.00	0.00	158.59	-273.91	188.02	-142.08	144.9	144.85	129.09	192.84	5010	2379.8	1.33	6364	0.9991456
L_9-L_{10}	0.00	0.00	0.00	103.31	-229.28	197.22	-133.96	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.9991387
L_{10}-L_{11}	0.00	0.00	0.00	166.15	-345.86	132.03	-264.94	92.6	92.58	76.68	114.47	3295	1304.9	1.24	3777	0.9991387
L_{11}-L_{12}	0.00	0.00	0.00	-151.32	-283.79	-36.39	-147.83	130.1	130.08	121.10	170.72	3885	1793.2	1.31	5634	0.9992922
L_0-L_{13}	0.00	0.00	0.00	-1.87	-936.30	143.44	-448.85	162.9	162.89	147.19	219.93	8087	2613.8	1.35	7258	0.999106
L_{13}-L_{14}	0.00	0.00	0.00	-641.27	-289.70	-428.43	-269.11	162.9	162.89	144.15	219.93	8087	2613.8	1.35	7258	0.999106
L_{14}-L_{15}	0.00	0.00	0.00	-344.76	-6.08	-72.31	-177.43	129.7	179.69	170.68	251.43	6763	3050.7	1.40	8297	0.9991322
L_{15}-L_{16}	0.00	0.00	0.00	-683.02	-65.00	-434.44	-55.54	103.9	103.89	138.16	290.43	5614	2460.7	1.34	6812	0.9991414
L_{16}-L_{17}	0.00	0.00	0.00	-76.55	-36.66	-2.16	-1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L_{17}-L_{18}	0.00	0.00	0.00	-27.63	34.25	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L_{18}-L_{19}	0.00	0.00	0.00	-184.22	63.17	236.08	106.83	83.6	83.58	67.49	100.97	2740	1098.2	1.21	3332	0.9990559
L_{19}-L_{20}	0.00	0.00	0.00	33.89	-349.87	32.51	-309.73	122.0	122.01	103.28	148.92	3592	1395.7	1.22	4914	0.9985333
L_{20}-L_{21}	0.00	0.00	0.00	-114.96	-441.59	28.16	-384.55	122.0	122.01	103.28	148.92	3592	1395.7	1.22	4914	0.9985333
L_{21}-L_{22}	0.00	0.00	0.00	-53.95	-369.19	6.89	-221.09	162.3	162.51	151.98	239.67	4946	2152.2	1.29	6919	0.9990438
L_{22}-L_{23}	0.00	0.00	0.00	-66.01	-54.38	5.32	-53.24	162.3	162.51	151.98	239.67	4946	2152.2	1.29	6919	0.9990438
L_{23}-L_{24}	0.00	0.00	0.00	-160.77	-141.61	9.58	17.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L_{24}-L_{25}	0.00	0.00	0.00	-537.70	-567.62	-316.24	-361.39	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10583	0.9992244
L_{25}-L_{26}	0.00	0.00	0.00	-141.61	-160.77	17.04	9.58	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10583	0.9992244
L_{26}-L_{27}	0.00	0.00	0.00	-238.49	-183.13	25.55	25.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L_{27}-L_{28}	0.00	0.00	0.00	-137.35	-160.77	21.29	37.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L_{28}-L_{29}	0.00	0.00	0.00	-100.28	-111.78	26.62	21.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L_{29}-L_{30}	0.00	0.00	0.00	-94.76	-68.14	18.10	26.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L_{30}-L_{31}	0.00	0.00	0.00	-60.69	-94.76	26.20	18.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L_{31}-L_{32}	0.00	0.00	0.00	-69.21	-78.79	15.97	40.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L_{32}-L_{33}	0.00	0.00	0.00	-8.52	2.13	14.91	-43.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L_{33}-L_{34}	0.00	0.00	0.00	-379.75	-103.16	0.10	-4.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L_{34}-L_{35}	0.00	0.00	0.00	-1379.15	-537.43	1554.22	-572.25	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.9990039
L_{35}-L_{36}	0.00	0.00	0.00	-437.74	-41.31	-414.16	15.78	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.9990039
L_{36}-L_{37}	0.00	0.00	0.00	-562.93	-177.26	666.45	-50.06	180.3	180.26	169.70	249.67	6400	2721.8	1.36	8197	0.9991157
L_{37}-L_{38}	0.00	0.00	0.00	-226.51	-87.32	226.51	-87.32	143.3	143.31	134.61	190.26	3680	1491.7	1.30	5251	0.9991157
L_{38}-L_{39}	0.00	0.00	0.00	-216.50	-162.41	338.23	-36.68	127.4	127.41	116.92	157.02	3868	1501.0	1.23	5182	0.9989888
L_{39}-L_{40}	0.00	0.00	0.00	-192.62	-240.09	354.77	-48.60	127.4	127.41	108.77	157.02	3868	1501.0	1.23	5182	0.9989891
L_{40}-L_{41}	0.00	0.00	0.00	-122.46	-111.19	49.27	-167.28	127.4	127.41	116.92	157.02	3868	1501.0	1.23	5182	0.9989888
L_{41}-L_{42}	0.00	0.00	0.00	-153.41	-496.27	85.94	-248.82	161.2	161.16	142.40	207.64	4974	2128.2	1.29	6852	0.999057
L_{42}-L_{43}	0.00	0.00	0.00	-197.10	-248.82	161.16	142.40	161.2	161.16	142.40	207.64	4974	2128.2	1.29	6852	0.999057
L_{43}-L_{44}	0.00	0.00	0.00	-294.84	-198.57	-127.71	39.41	161.2	161.16	150.63	207.64	4974	2128.2	1.29	6852	0.999057
L_{44}-L_{45}	0.00	0.00	0.00	-379.75	-103.16	0.10	-4.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L_{45}-L_{46}	0.00	0.00	0.00	-58.92	-105.21	14.73	33.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L_{46}-L_{47}	0.00	0.00	0.00	-81.01	-83.12	23.15	13.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L_{47}-L_{48}	0.00	0.00	0.00	-133.85	-177.72	25.39	8.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L_{48}-L_{49}	0.00	0.00	0.00	-133.85	-369.91	-135.22	-346.66	226.0	225.96	215.39	304.84	7460	3191.4	1.35	10060	0.9989785
L_{49}-L_{50}	0.00	0.00	0.00	-346.66	-135.22	226.05	215.39	226.0	225.96	215.39	304.84	7460	3191.4	1.35	10060	0.9989785
L_{50}-L_{51}	0.00	0.00	0.00	-7.45	0.00	130.96	-33.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L_{51}-L_{52}	0.00	0.00	0.00	-293.40	-174.06	-326.62	-133.92	226.0	225.96	215.39	304.84	7460	3191.4	1.35	10060	0.9989632
L_{52}-L_{53}	0.00	0.00	0.00	-333.79	-297.30	-384.99	-135.41	138.2	138.21	119.70	173.22	4364	1707.4	1.25	5716	0.9990142
L_{53}-L_{54}	0.00	0.00	0.00	-222.98	-243.21	-187.98	-470.72	138.2	138.21	119.70	173.22	4364	1707.4	1.25	5716	0.9990142
L_{54}-L_{55}	0.00	0.00	0.00	-186.06	-472.37	318.94	-284.33	168.8	168.54	149.99	224.57	5911	2429.7	1.33	7411	0.9991487
L_{55}-L_{56}	0.00	0.00	0.00	-445.06	-93.48	-26.20	-24.10	168.8	168.54	149.99	224.57	5911	2429.7	1.33	7411	0.9991487
L_{56}-L_{57}	0.00	0.00	0.00	-291.78	-319.55	-24.10	-26.20	168.8	168.54	149.99	224.57	5911	2429.7	1.33	7411	0.9991487
L_{57}-L_{58}	0.00	0.00	0.00	-392.27	38.30	-16.90	-5.40	0.90	-0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L_{58}-L_{59}	0.00	0.00	0.00	-87.31	-87.31	-249.43	-170.38	21.29	6.39	-3.19	0.00	0.00	0.00	0.00	0.00	0.00
L_{59}-L_{60}	0.00	0.00	0.00	-527.76	21.29	6.39	-3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L_{60}-L_{61}	0.00	0.00	0.00	62.72	-202.01	75.34	-202.01	83.6	83.58	67.49	100.97	2740	1098.2	1.21	3332	0.9990559
L_{61}-L_{62}	0.00	0.00	0.00	180.88	-327.82	172.47	-222.69	83.6	83.58	74.62	100.97	2740	1098.2	1.21	3332	0.9990559
L_{62}-L_{63}	0.00	0.00	0.00	-11.57	-138.31	-6.90	-9.60	0.60	1.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L_{63}-L_{64}	0.00	0.00	0.00	21.70	-540.11	55.55	-365.11	153.3	153.89	138.16	206.43	5612	2460.7	1.34	8297	0.9991322
L_{64}-L_{65}	0.00	0.00	0.00	-122.08	-37.92	8.63	-2.16	153.3	153.89	138.16	206.43	5612	2460.7	1.34	8297	0.9991322
L_{65}-L_{66}	0.00	0.00	0.00	-140.17	-178.98	2.16	17.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L_{66}-L_{67}	0.00	0.00	0.00	-102.43	-139.09	12.94	11.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L_{67}-L_{68}	0.00	0.00	0.00	-49.60	-66.85	9.70	20.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L_{68}-L_{69}	0.00	0.00	0.00	-66.85	-49.60	20.49	9.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L_{69}-L_{70}	0.00	0.00	0.00	-51.75	-72.24	17.25	-8.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L_{70}-L_{71}	0.00	0.00	0.00	-72.24	-51.75	-8.63	17.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L_{71}-L_{72}	0.00	0.00	0.00	0.00	0.00	79.04	-23.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L_{72}-L_{73}	0.00	0.00	0.00	0.00	0.00	79.04	-23.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L_{73}-L_{74}	0.00	0.00	0.00	-59.07	-89.36	-7.76	18.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L_{74}-L_{75}	0.00	0.00	0.00	-89.36	-59.07	18.93	-7.76	0.00	0.

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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

Owner Truss Vertical

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	0.56	-0.60	-0.59	1.82	0.00	0.00	0.00	0.00
	L_1~L_2	-9.06	15.16	0.47	-0.51	-2.22	2.56	0.00	0.00	0.00	0.00
	L_2~L_3	10.50	9.71	-0.46	-2.06	2.55	-2.06	0.00	0.00	0.00	0.00
	L_3~L_4	33.43	-34.38	1.71	-1.79	-1.09	1.56	0.00	0.00	0.00	0.00
	L_4~L_5	41.60	-42.42	1.90	-1.98	2.21	-2.25	0.00	0.00	0.00	0.00
	L_5~U_5	45.52	-51.05	-0.77	0.60	2.93	-3.18	0.00	0.00	0.00	0.00
	U_5~U_4	53.57	-55.55	0.41	-0.38	3.63	-4.08	0.00	0.00	0.00	0.00
	U_4~U_3	91.21	-101.85	-0.02	0.02	4.21	-4.43	0.00	0.00	0.00	0.00
	U_3~U_2	-20.53	21.18	0.31	-0.38	0.75	-0.79	0.00	0.00	0.00	0.00
	U_2~U_1	-135.19	156.91	0.37	-0.26	-3.69	4.51	0.00	0.00	0.00	0.00
	U_1~L_1	-88.41	88.14	0.26	-0.20	-1.50	2.86	0.00	0.00	0.00	0.00
	L_1~U_2	91.03	123.95	0.50	-0.48	-2.24	3.67	0.00	0.00	0.00	0.00
	U_2~L_2	-79.50	78.32	0.96	-0.88	-1.86	2.34	0.00	0.00	0.00	0.00
	L_2~U_3	-49.20	60.09	1.17	-1.16	-1.77	2.09	0.00	0.00	0.00	0.00
	U_3~L_3	-29.79	34.60	1.79	-2.04	-0.78	1.75	0.00	0.00	0.00	0.00
	L_3~U_4	-1.46	-2.70	2.22	2.15	2.92	-2.99	0.00	0.00	0.00	0.00
	U_4~L_4	26.52	-36.57	1.34	0.20	2.95	-2.98	0.00	0.00	0.00	0.00
	L_4~U_5	46.21	-55.82	-0.65	0.40	2.84	-2.96	0.00	0.00	0.00	0.00
	U_5~L_5	110.34	-114.53	-0.32	0.32	3.40	-5.04	0.00	0.00	0.00	0.00
	L_5~L_6	-121.24	-131.09	-0.28	0.28	5.22	-5.21	0.00	0.00	0.00	0.00
	L_6~L_7	-134.20	-173.18	-0.18	0.24	5.13	-5.63	0.00	0.00	0.00	0.00
	L_7~L_8	-114.26	-168.30	0.64	-0.74	4.10	-5.75	0.00	0.00	0.00	0.00
	L_8~L_9	-124.38	-133.15	0.62	-0.66	-3.57	4.13	0.00	0.00	0.00	0.00
	L_9~L_{10}	-113.27	-113.27	0.70	-0.72	-3.96	4.55	0.00	0.00	0.00	0.00
	L_{10}~L_{11}	-56.00	62.15	0.41	-0.44	-2.12	2.39	0.00	0.00	0.00	0.00
	L_{11}~L_{12}	-34.04	39.78	1.09	-1.08	-1.44	1.29	0.00	0.00	0.00	0.00
	L_{12}~L_{13}	-7.05	-12.30	1.69	-1.66	-1.41	1.77	0.00	0.00	0.00	0.00
	L_{13}~L_{14}	15.85	-15.58	1.82	-1.95	-1.77	1.85	0.00	0.00	0.00	0.00
	L_{14}~L_{15}	38.85	-44.93	0.96	-1.13	-2.13	2.36	0.00	0.00	0.00	0.00
	L_{15}~L_{16}	86.89	-96.05	-1.45	-1.35	3.70	-3.60	0.00	0.00	0.00	0.00
	L_{16}~L_{17}	155.08	-155.08	1.43	1.43	4.01	-4.27	0.00	0.00	0.00	0.00
	L_{17}~L_{18}	141.21	-149.39	-0.76	0.82	4.19	-4.39	0.00	0.00	0.00	0.00
	L_{18}~L_{19}	192.53	-192.81	-0.52	0.26	4.06	-4.16	0.00	0.00	0.00	0.00
	L_{19}~L_{20}	147.39	-149.75	-0.13	0.13	4.14	-4.14	0.00	0.00	0.00	0.00
	L_{20}~L_{21}	203.50	-203.15	-0.34	0.36	5.33	-5.14	0.00	0.00	0.00	0.00
	L_{21}~L_{22}	82.02	-39.41	0.94	-0.96	-1.44	2.29	0.00	0.00	0.00	0.00
	L_{22}~L_{23}	-159.87	162.82	0.54	-0.57	-5.19	5.14	0.00	0.00	0.00	0.00
	L_{23}~L_{24}	-113.84	113.84	0.43	-0.43	-4.35	4.35	0.00	0.00	0.00	0.00
	L_{24}~L_{25}	-130.37	127.18	0.55	-0.41	-3.82	4.36	0.00	0.00	0.00	0.00
	L_{25}~U_{26}	-113.07	114.60	0.86	-0.79	-4.02	4.54	0.00	0.00	0.00	0.00
	U_{26}~L_{26}	155.08	-155.08	1.43	1.43	4.01	-4.27	0.00	0.00	0.00	0.00
	L_{26}~U_{27}	-44.77	46.58	1.10	-1.04	-1.52	1.84	0.00	0.00	0.00	0.00
	U_{27}~L_{27}	-30.30	34.29	1.29	-1.33	-1.09	1.29	0.00	0.00	0.00	0.00
Structure 2	L_{27}~U_{28}	-3.70	4.34	1.67	-1.63	-0.77	0.76	0.00	0.00	0.00	0.00
	U_{28}~L_{28}	22.04	25.70	1.76	-1.72	1.76	0.00	0.00	0.00	0.00	0.00
	L_{28}~U_{29}	39.94	-42.12	1.44	1.26	2.78	-2.87	0.00	0.00	0.00	0.00
	U_{29}~L_{29}	88.55	-87.48	-0.89	0.79	3.52	-3.46	0.00	0.00	0.00	0.00
	L_{29}~U_{30}	134.76	-129.75	-0.15	0.86	3.98	-4.07	0.00	0.00	0.00	0.00
	U_{30}~L_{30}	138.22	-138.56	-0.74	0.25	5.55	-5.67	0.00	0.00	0.00	0.00
	L_{30}~U_{31}	124.45	-124.45	-0.29	0.29	5.39	-5.51	0.00	0.00	0.00	0.00
	U_{31}~L_{31}	173.80	-176.15	-0.28	0.24	5.67	-5.51	0.00	0.00	0.00	0.00
	L_{31}~U_{32}	134.53	-137.52	-0.38	0.38	5.49	-5.61	0.00	0.00	0.00	0.00
	U_{32}~L_{32}	-167.05	167.27	0.50	-0.55	-4.36	4.44	0.00	0.00	0.00	0.00
	L_{32}~U_{33}	-116.04	109.89	0.24	-0.39	-2.97	3.53	0.00	0.00	0.00	0.00
	U_{33}~L_{33}	-134.53	137.52	0.38	-0.28	-3.71	5.49	0.00	0.00	0.00	0.00
	L_{33}~U_{34}	-119.83	124.38	0.68	-0.50	-2.65	3.32	0.00	0.00	0.00	0.00
	U_{34}~L_{34}	-134.76	138.47	1.14	-0.97	-3.98	5.39	0.00	0.00	0.00	0.00
	L_{34}~U_{35}	-79.51	88.86	1.02	-0.99	-3.00	3.13	0.00	0.00	0.00	0.00
	U_{35}~L_{35}	-43.96	51.93	-1.35	1.67	-0.93	0.96	0.00	0.00	0.00	0.00
	L_{35}~U_{36}	-29.31	31.03	-2.01	2.20	-0.42	0.47	0.00	0.00	0.00	0.00
	U_{36}~L_{36}	-5.57	1.81	-2.04	1.93	2.54	-2.72	0.00	0.00	0.00	0.00
	L_{36}~U_{37}	28.94	-28.94	-1.76	1.76	3.29	-3.45	0.00	0.00	0.00	0.00
	U_{37}~L_{37}	55.25	-61.09	-0.58	0.41	2.52	-2.65	0.00	0.00	0.00	0.00
	L_{37}~U_{38}	111.85	-122.73	0.63	-0.63	3.11	-3.27	0.00	0.00	0.00	0.00
	U_{38}~L_{38}	-137.13	-150.74	-0.53	0.53	5.30	-5.32	0.00	0.00	0.00	0.00
	L_{38}~U_{39}	-165.72	-206.83	-0.39	0.52	4.74	-5.89	0.00	0.00	0.00	0.00
	U_{39}~L_{39}	-116.26	-116.26	-0.38	-0.38	-3.91	3.75	0.00	0.00	0.00	0.00
	L_{39}~U_{40}	-109.81	-112.89	0.35	-0.38	-4.02	4.34	0.00	0.00	0.00	0.00
	U_{40}~L_{40}	-93.86	90.20	0.43	-0.43	-3.44	3.91	0.00	0.00	0.00	0.00
	L_{40}~U_{41}	-38.40	-68.11	0.37	-0.27	-1.66	2.09	0.00	0.00	0.00	0.00
	U_{41}~L_{41}	-29.31	31.03	-2.01	2.20	-0.42	0.47	0.00	0.00	0.00	0.00
	L_{41}~U_{42}	-2.78	8.39	1.68	1.76	2.16	2.39	0.00	0.00	0.00	0.00
	U_{42}~L_{42}	25.87	28.68	2.02	-2.22	0.04	-0.04	0.00	0.00	0.00	0.00
	L_{42}~U_{43}	54.24	54.24	1.12	-1.09	2.81	3.06	0.00	0.00	0.00	0.00
	U_{43}~L_{43}	89.75	96.10	1.03	1.00	3.37	-3.42	0.00	0.00	0.00	0.00
	L_{43}~U_{44}	124.27	125.87	0.92	0.71	3.14	4.05	0.00	0.00	0.00	0.00
Structure 3	U_{44}~L_{44}	92.27	85.87	0.32	0.32	3.27	3.87	0.00	0.00	0.00	0.00
	L_{44}~L_{45}	142.63	166.18	0.07	0.09	4.76	5.23	0.00	0.00	0.00	0.00
	L_{45}~U_{46}	37.52	58.80	0.04	0.05	1.08	1.00	0.00	0.00	0.00	0.00
	U_{46}~L_{46}	-81.19	89.90	0.02	0.03	3.73	4.02	0.00	0.00	0.00	0.00
	L_{46}~U_{47}	-48.49	45.44	0.27	0.19	2.14	2.87	0.00	0.00	0.00	0.00
	U_{47}~L_{47}	-38.99	42.96	0.43	0.39	1.76	2.37	0.00	0.00	0.00	0.00
	L_{47}~U_{48}	-39.90	40.31	2.65	2.56	0.52	0.97	0.00	0.00	0.00	0.00
	U_{48}~L_{48}	-37.48	38.73	2.72	2.79	2.47	2.63	0.00	0.00	0.00	0.00
	L_{48}~U_{49}	-10.29	11.13	1.07	1.16	2.71	3.16	0.00	0.00	0.00	0.00
	U_{49}~L_{49}	3.53	11.97	0.49	0.48	3.92	3.46	0.00	0.00	0.00	0.00
	L_{49}~U_{50}	44.79	53.89	0.33	0.46	5.13	7.66	0.00	0.00	0.00	0.00

M_y Max. Neg. Mom.

Member	Start (k-in)	End (k-in)
U_1~L_1	-30.76	54.98
L_1~L_2	-4.94	12.34
L_2~L_3	-18.57	25.71
L_3~L_4	68.19	-70.58
L_4~L_5	81.64	-82.73
L_5~U_5	48.00	-57.68
U_5~U_4	68.29	-67.58
U_4~U_3	118.32	-132.12
U_3~U_2	3.43	-4.20
U_2~U_1	-115.16	116.72
U_1~L_1	-111.35	111.75
L_1~U_2	-150.56	154.51
U_2~L_2	-89.84	86.42
L_2~U_3	-47.55	61.61
U_3~L_3	-53.73	-73.83
L_3~U_4	-32.94	36.58
U_4~L_4	25.62	-30.79
L_4~U_5	50.92	-66.51
U_5~L_5	-138.98	144.38
L_5~L_6	53.69	-166.45
L_6~L_7	-127.17	139.70
L_7~L_8	-67.67	74.75
L_8~L_9	-153.13	163.98
L_9~L_{10}	-127.17	139.70
L_{10}~L_{11}	4.41	-4.65
L_{11}~L_{12}	-7.05	7.69
L_{12}~L_{13}	17.94	-17.68
L_{13}~L_{14}	19.37	-20.74
L_{14}~L_{15}	-15.21	17.09
L_{15}~L_{16}	-15.44	14.39
L_{16}~L_{17}	-155.08	155.08
L_{17}~L_{18}	-8.05	8.57
L_{18}~L_{19}	-9.52	2.71
L_{19}~L_{20}	-1.53	1.53
L_{20}~L_{21}	-3.63	3.88
L_{21}~L_{22}	-89.70	84.64
L_{22}~L_{23}	5.69	-5.98
L_{23}~L_{24}	-113.84	113.84
L_{24}~L_{25}	6.79	-4.36
L_{25}~U_{26}	9.04	-8.27
U_{26}~L_{26}	-155.08	155.08
L_{26}~U_{27}	11.54	-10.92
U_{27}~L_{27}	-30.30	34.29
L_{27}~U_{28}	17.56	-19.20
U_{28}~L_{28}	22.04	25.70
L_{28}~U_{29}	-15.11	13.20
U_{29}~L_{29}	-9.37	8.29
L_{29}~U_{30}	13.79	-14.03
U_{30}~L_{30}	-7.76	2.58
L_{30}~U_{31}	-12.45	12.45
U_{31}~L_{31}	-2.90	2.54
L_{31}~U_{32}	-13.44	13.44
U_{32}~L_{32}	5.27	-5.86
L_{32}~U_{33}	2.54	-4.17
U_{33}~L_{33}	-13.44	13.44
L_{33}~U_{34}	7.23	-5.30
U_{34}~L_{34}	-13.80	13.44
L_{34}~U_{35}	10.85	-10.56
U_{35}~L_{35}	-14.41	17.76
L_{35}~U_{36}	-29.31	31.03
U_{36}~L_{36}	-21.68	20.58
L_{36}~U_{37}	28.94	-28.94
U_{37}~L_{37}	-6.21	4.38
L_{37}~U_{38}	-13.72	13.72
U_{38}~L_{38}	-5.61	5.69
L_{38}~U_{39}	-4.11	5.50
U_{39}~L_{39}	-116.26	116.26
L_{39}~U_{40}	-3.43	3.46
U_{40}~L_{40}	-93.86	90.20
L_{40}~U_{41}	-38.40	68.11
U_{41}~L_{41}	-29.31	31.03
L_{41}~U_{42}	-2.78	8.39
U_{42}~L_{42}	25.87	28.68
L_{42}~U_{43}	54.24	54.24
U_{43}~L_{43}	89.75	96.10
L_{43}~U_{44}	-11.07	10.73
U_{44}~L_{44}	-9.91	7.67
L_{44}~L_{45}	-3.43	3.46
L_{45}~U_{46}	-8.47	6.56
U_{46}~L_{46}	0.17	-0.38
L_{46}~U_{47}	-0.78	0.99
U_{47}~L_{47}	-29.51	28.55
L_{47}~U_{48}	-30.32	31.05
U_{48}~L_{48}	-11.87	12.87
L_{48}~U_{49}	-5.50	5.32
U_{49}~L_{49}	-3.63	5.11

M_y Equivalent Mom. Factor

Member	a	$C_{m(x)}$	$C_{m(y)}$
U_1~L_1	-0.525	0.39	0.39
L_1~L_2	-0.774	0.29	0.29
L_2~L_3	-0.601	0.34	0.34
L_3~L_4	-0.966	0.21	0.21
L_4~L_5	-0.994	0.20	0.20
L_5~U_5	-0.993	0.20	0.20
U_5~U_4	-0.914	0.23	0.23
U_4~U_3	-0.914	0.23	0.23
U_3~U_2	0.302	0.93	0.20
U_2~U_1	-0.716	0.32	0.32
U_1~L_1	-0.916	0.23	0.23
L_1~U_2	-0.717	0.32	0.32
U_2~L_2	-0.916	0.23	0.23
L_2~U_3	-0.912	0.24	0.24
U_3~L_3	-0.928	0.21	0.27
L_3~U_4	-0.860	0.26	0.26
U_4~L_4	-0.810	0.28	0.28
L_4~U_5	-0.810	0.28	0.28
U_5~L_5	-0.715	0.32	0.32
L_5~L_6	-0.715	0.32	0.32
L_6~L_7	-0.715	0.32	0.32
L_7~L_8	-0.715	0.32	0.32
L_8~L_9	-0.715	0.32	0.32
L_9~L_{10}	-0.715	0.32	0.32
L_{10}~L_{11}	-0.715	0.32	0.32
L_{11}~L_{12}	-0.715	0.32	0.32
L_{12}~L_{13}	-0.715	0.32	0.32
L_{13}~L_{14}	-0.715	0.32	0.32
L_{14}~L_{15}	-0.715	0.32	0.32
L_{15}~L_{16}	-0.715	0.32	0.32
L_{16}~L_{17}	-0.715	0.32	0.32
L_{17}~L_{18}	-0.715	0.32	0.32
L_{18}~L_{19}	-0.715	0.32	0.32
L_{19}~L_{20}	-0.715	0.32	0.32
L_{20}~L_{21}	-0.715	0.32	0.32
L_{21}~L_{22}	-0.715	0.32	0.32
L_{22}~L_{23}	-0.715	0.32	0.32
L_{23}~L_{24}	-0.715	0.32	0.32
L_{24}~L_{25}	-0.715	0.32	0.32
L_{25}~U_{26}	-0.715	0.32	0.32
U_{26}~L_{26}	-0.715	0.32	0.32
L_{26}~U_{27}	-0.715	0.32	0.32
U_{27}~L_{27}	-0.715	0.32	0.32
L_{27}~U_{28}	-0.715	0.32	0.32
U_{28}~L_{28}	-0.715	0.32	0.32
L_{28}~U_{29}	-0.715	0.32	0.32
U_{29}~L_{29}	-0.715	0.32	0.32
L_{29}~U_{30}	-0.715	0.32	0.32
U_{30}~L_{30}	-0.715	0.32	0.32
L_{30}~U_{31}	-0.715	0.32	0.32
U_{31}~L_{31}	-0.715	0.32	0.32
L_{31}~U_{32}	-0.715	0.32	0.32
U_{32}~L_{32}	-0.715	0.32	0.32
L_{32}~U_{33}	-0.715	0.32	0.32
U_{33}~L_{33}	-0.715	0.32	0.32
L_{33}~U_{34}	-0.715	0.32	0.32
U_{34}~L_{34}	-0.715	0.32	0.32
L_{34}~U_{35}	-0.715	0.32	0.32
U_{35}~L_{35}	-0.715	0.32	0.32
L_{35}~U_{36}	-0.715	0.32	0.32
U_{36}~L_{36}	-0.715	0.32	0.32
L_{36}~U_{37}	-0.715	0.32	0.32
U_{37}~L_{37}	-0.715	0.32	0.32
L_{37}~U_{38}	-0.715	0.32	0.32
U_{38}~L_{38}	-0.715	0.32	0.32
L_{38}~U_{39}	-0.715	0.32	0.32
U_{39}~L_{39}	-0.715	0.32	0.32
L_{39}~U_{40}	-0.715	0.32	0.32
U_{40}~L_{40}	-0.715	0.32	0.32
L_{40}~U_{41}	-0.715	0.32	0.32
U_{41}~L_{41}	-0.715	0.32	0.32
L_{41}~U_{42}	-0.715	0.32	0.32
U_{42}~L_{42}	-0.715	0.32	0.32
L_{42}~U_{43}	-0.715	0.32	0.32
U_{43}~L_{43}	-0.715	0.32	0.32
L_{43}~U_{44}	-0.715	0.32	0.32
U_{44}~L_{44}	-0.715	0.32	0.32
L_{44}~L_{45}	-0.715	0.32	0.32
L_{45}~U_{46}	-0.715	0.32	0.32
U_{46}~L_{46}	-0.715	0.32	0.32
L_{46}~U_{47}	-0.715	0.32	0.32
U_{47}~L_{47}	-0.715	0.32	0.32
L_{47}~U_{48}	-0.715	0.32	0.32
U_{48}~L_{48}	-0.715	0.32	0.32
L_{48}~U_{49}	-0.715	0.32	0.32
U_{49}~L_{49}	-0.715	0.32	0.32
L_{49}~U_{50}	-0.715	0.32	0.32

M_y Information

YY Axis Moments from STAAD

Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
U_1~L_1	16.02	5.14	-81.84	-29.46	0.00	0.00	0.00	0.00	-115.70	37.10
L_1~L_2	9.52	4.51	-47.22	-7.16	0.00	0.00	0.00	0.00	-3.79	-5.06
L_2~L_3	6.19	-0.06	-19.22	2.45	0.00	0.00	0.00	0.00	-5.11	5.01
L_3~L_4	-64.37	-2.08	-0.87	-0.41	1.00	1.34	0.00	0.00	-122.31	-8.69
L_4~L_5	-3.92	-5.89	10.52	6.06	0.00	0.00	0.00	0.00	-144.58	-9.84
L_5~U_5	4.60	-1.10	6.71	-8.16	0.00	0.00	0.00	0.00	-144.37	-47.70
U_5~U_4	1.07	-1.14	-6.71	-43.71	13.97	0.00	0.00	0.00	-125.78	-5.41
U_4~U_3	-0.26	-0.06	3.15	2.52	0.00	0.00	0.00	0.00	-130.04	46.25
U_3~U_2	22.24	-22.07	-11.69	16.12	107.1	107.13	107.11	162.71	26	2056.9
U_2~U_1	4.64	-2.52	9.23	-12.75	0.00	0.00	0.00	0.00	-188.33	-131.85
U_1~L_1	-111.35	111.75	-141.61	154.69	35.5	35.52	35.44	58.46	14	1309.7
L_1~U_2	-150.56	154.51	-192.96	212.73	42.74	42.74	42.74	65.30	8	1389.6
U_2~L_2	-89.84	86.42	-129.43	134.60	21.1	21.09	21.09	39.46	10	1137.6
L_2~U_3	-47.55	61.61	-88.83	107.27	17.2	17.24	17.24	26.54	2	824.7
U_3~L_3	-53.73	-73.83	-63.76	-78.39	42.74	42.74	42.74	65.30	8	1389.6
L_3~U_4	-32.94	36.58	39.06	-45.43	0.00	0.00	0.00	0.00	-158.60	-111.26
U_4~L_4	25.62	-30.79	35.68	-89.34	0.00	0.00	0.00	0.00	-131.12	-121.25
L_4~U_5	50.92	-66.51	-99.91	-114.09	19.4	19.37	19.37	29.87	3	907.0
U_5~L_5	-138.98	144.38	212.82	-219.48	33.5	33.59	33.59	53.51	4	1157.1
L_5~L_6	53.69	-166.45	230.77	-243.46	42.7	42.74	42.74	65.30	8	1389.6
L_6~L_7	-127.17	139.70	-192.96	212.73	42.74	42.74	42.74	65.30	8	1389.6
L_7~L_8	-67.67	74.75	-102.19	-113.85	21.5	21.54	21.54	33.27	5	987.9
L_8~L_9	-153.13	163.98	-211.56	230.22	46.7	46.71	46.71	71.43	10	1711.0
L_9~L_{10}	-127.17	139.70	-192.96	212.73	42.74	42.74	42.74	65.30	8	1389.6
L_{10}~L_{11}	4.41	-4.65	-22.60	25.43	0.00	0.00	0.00	0.00	-9.17	105.26
L_{11}~L_{12}	-7.05	7.69	-15.36	13.69	0.00	0.00	0.00	0.00	-6.20	29.32
L_{12}~L_{13}	17.94	-17.68	-14.98	18.86	0.00	0.00	0.00	0.00	-3.28	6.27
L_{13}~L_{14}	19.37	-20.74	-19.81	19.72	0.00	0.00	0.00	0.00	-8.21	27.17
L_{14}~L_{15}	-15.21	17.09	-3.16	3.20	0.00	0.00	0.00	0.00	-2.78	6.91
L_{15}~L_{16}	-15.44	14.39	39.40	-38.29	0.00	0.00	0.00	0.00	4.39	-3.42
L_{16}~L_{17}	-155.08	155.08	-4.01	4.27	0.00	0.00	0.00	0.00	-29.62	30.79

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
Condition: As-Built

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

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

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

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

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-L_1	-12.55	3.37	0.40	0.27	0.27	-0.15	0.00	0.00	0.00	0.00
	L_1-L_2	-1.68	-7.06	-1.12	0.26	0.18	-0.05	0.00	0.00	0.00	0.00
	L_2-L_3	-4.74	-11.64	-1.24	0.10	0.04	-0.02	0.00	0.00	0.00	0.00
	L_3-L_4	-7.77	-11.75	-0.77	-0.52	0.23	-0.74	0.00	0.00	0.00	0.00
	L_4-L_5	-10.32	-11.78	-0.02	-1.02	0.26	-0.47	0.00	0.00	0.00	0.00
	L_5-L_6	-26.82	-58.45	-2.03	1.91	-0.79	-0.45	0.00	0.00	0.00	0.00
	L_6-L_7	-39.76	-86.83	-2.27	1.52	-0.46	-0.31	0.00	0.00	0.00	0.00
	L_7-L_8	-18.71	-34.00	0.09	-0.09	0.00	-0.01	0.00	0.00	0.00	0.00
	L_8-U_8	-9.60	-109.51	-1.37	2.58	0.20	-0.29	0.00	0.00	0.00	0.00
	U_0-U_1	-74.77	11.64	2.27	1.44	0.24	0.09	0.00	0.00	0.00	0.00
	U_1-U_2	-56.82	54.75	-2.04	1.02	-0.01	-0.45	0.00	0.00	0.00	0.00
	U_2-U_3	-60.52	2.20	2.40	1.01	-0.04	-0.63	0.00	0.00	0.00	0.00
	U_3-U_4	-55.23	39.04	-1.91	1.06	0.22	-0.82	0.00	0.00	0.00	0.00
	U_4-U_5	-20.96	7.36	-1.11	0.43	0.38	-0.77	0.00	0.00	0.00	0.00
	U_5-U_6	-1.76	32.25	-0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_6-U_7	-19.01	4.12	-1.31	1.08	0.00	-0.64	0.00	0.00	0.00	0.00
	U_7-U_8	-28.63	13.01	-1.92	1.50	0.00	-0.64	0.00	0.00	0.00	0.00
	U_0-L_1	-69.28	58.13	-3.10	2.69	-0.89	-0.03	0.00	0.00	0.00	0.00
	L_1-U_1	-39.21	61.35	-2.42	2.70	-0.89	-0.07	0.00	0.00	0.00	0.00
	L_1-L_2	-105.04	88.64	2.87	2.78	0.10	-0.14	0.00	0.00	0.00	0.00
	L_2-U_2	-82.69	87.74	-2.81	2.83	0.52	-0.48	0.00	0.00	0.00	0.00
	L_2-L_3	-87.97	71.76	-2.81	2.83	0.52	-0.48	0.00	0.00	0.00	0.00
	L_3-U_3	-81.28	63.04	-3.37	2.99	0.55	-0.45	0.00	0.00	0.00	0.00
	L_3-L_4	-58.53	53.53	-2.81	2.83	0.52	-0.48	0.00	0.00	0.00	0.00
	L_4-U_4	-17.30	7.21	-1.57	1.61	0.56	-0.83	0.00	0.00	0.00	0.00
	L_4-L_5	-11.49	11.45	-1.28	1.61	0.56	-0.83	0.00	0.00	0.00	0.00
	L_5-U_5	-7.42	-23.91	-1.09	0.34	0.89	-1.25	0.00	0.00	0.00	0.00
	L_5-L_6	-44.31	35.87	-1.63	1.05	-0.19	-0.74	0.00	0.00	0.00	0.00
	L_6-U_6	-66.38	68.64	-2.73	2.24	-0.74	-0.10	0.00	0.00	0.00	0.00
	L_6-L_7	-88.54	73.82	-2.63	1.93	-0.45	-0.57	0.00	0.00	0.00	0.00
	L_7-U_7	-101.48	94.04	-2.92	2.28	-0.12	-0.86	0.00	0.00	0.00	0.00
	L_7-L_8	-108.36	116.66	-3.01	2.70	-0.37	-0.09	0.00	0.00	0.00	0.00
	L_8-U_8	-154.28	139.69	-4.02	3.44	0.54	-0.14	0.00	0.00	0.00	0.00
Structure 2	U_0-L_1	-85.62	94.30	-2.70	3.04	0.85	-0.85	0.00	0.00	0.00	0.00
	L_1-U_1	-24.74	100.39	-2.81	3.44	0.42	-0.38	0.00	0.00	0.00	0.00
	U_1-L_2	-98.29	139.79	-4.29	4.53	0.57	-0.39	0.00	0.00	0.00	0.00
	L_2-U_2	-74.15	95.51	-3.63	2.99	0.22	-0.28	0.00	0.00	0.00	0.00
	U_2-L_3	-88.16	115.63	-3.15	3.63	0.19	-0.32	0.00	0.00	0.00	0.00
	L_3-U_3	-55.45	68.85	-3.19	2.13	0.26	-0.89	0.00	0.00	0.00	0.00
	U_3-L_4	-32.97	39.97	-2.22	1.37	0.31	-0.82	0.00	0.00	0.00	0.00
	L_4-U_4	-15.52	16.66	-1.26	0.56	0.19	-0.19	0.00	0.00	0.00	0.00
	U_4-L_5	-10.33	4.39	-1.23	0.46	0.53	-0.95	0.00	0.00	0.00	0.00
	L_5-U_5	-6.26	-5.26	-1.06	0.26	0.53	-0.95	0.00	0.00	0.00	0.00
	U_5-L_6	-17.67	16.19	-1.30	1.18	0.28	-0.71	0.00	0.00	0.00	0.00
	L_6-U_6	-44.70	44.11	-2.92	2.46	0.20	-0.80	0.00	0.00	0.00	0.00
	U_6-L_7	-55.66	65.11	-2.92	2.46	0.20	-0.80	0.00	0.00	0.00	0.00
	L_7-U_7	-69.18	80.37	-2.88	2.63	-0.52	-0.17	0.00	0.00	0.00	0.00
	U_7-L_8	-86.80	104.24	-3.04	2.77	-0.52	-0.17	0.00	0.00	0.00	0.00
	L_8-U_8	-106.02	102.50	-4.06	3.65	0.22	-0.24	0.00	0.00	0.00	0.00
	U_0-U_1	-39.07	10.06	-2.45	1.61	0.24	-0.06	0.00	0.00	0.00	0.00
	U_1-U_2	-47.57	127.97	-3.10	3.68	0.48	-0.41	0.00	0.00	0.00	0.00
	U_2-U_3	-73.64	119.64	-4.23	3.55	0.48	-0.41	0.00	0.00	0.00	0.00
	U_3-U_4	-89.45	99.26	-3.27	2.64	0.27	-0.26	0.00	0.00	0.00	0.00
	U_4-U_5	-86.48	82.53	-3.15	1.85	-0.10	-0.45	0.00	0.00	0.00	0.00
	U_5-U_6	-83.03	65.94	-3.15	1.85	-0.10	-0.45	0.00	0.00	0.00	0.00
	U_6-U_7	-60.13	67.65	-2.89	2.05	0.36	-1.02	0.00	0.00	0.00	0.00
	U_7-U_8	-45.51	52.05	-2.89	2.05	0.36	-1.02	0.00	0.00	0.00	0.00
	U_0-L_1	-12.59	-26.40	-0.91	0.37	0.25	-0.56	0.00	0.00	0.00	0.00
	L_1-U_1	-6.51	-17.79	-1.15	0.91	0.57	-1.03	0.00	0.00	0.00	0.00
	U_1-L_2	-11.88	0.88	-1.34	0.54	-0.31	-0.40	0.00	0.00	0.00	0.00
	L_2-U_2	-38.91	20.55	-1.84	1.54	-0.31	-0.40	0.00	0.00	0.00	0.00
	U_2-L_3	-25.84	8.85	-1.84	1.54	-0.31	-0.40	0.00	0.00	0.00	0.00
	L_3-U_3	-68.49	71.54	-3.45	2.89	0.40	-0.34	0.00	0.00	0.00	0.00
	U_3-L_4	-32.99	111.66	-2.77	3.01	0.03	-0.28	0.00	0.00	0.00	0.00
	L_4-U_4	-70.17	69.10	-2.86	2.61	-0.31	-0.26	0.00	0.00	0.00	0.00
	U_4-L_5	-86.86	56.37	-3.67	2.41	0.29	-0.22	0.00	0.00	0.00	0.00
	L_5-U_5	-102.99	111.66	-3.77	2.77	0.03	-0.28	0.00	0.00	0.00	0.00
	U_5-L_6	-77.53	67.15	-2.51	1.92	-0.47	-0.32	0.00	0.00	0.00	0.00
	L_6-U_6	-72.03	68.68	-2.51	1.92	-0.47	-0.32	0.00	0.00	0.00	0.00
	U_6-L_7	-2.84	82.09	1.78	2.87	0.23	0.11	0.00	0.00	0.00	0.00
	L_7-U_7	-54.59	58.66	2.71	2.24	-0.86	0.12	0.00	0.00	0.00	0.00
	U_7-L_8	-9.16	17.57	-1.09	0.10	-0.04	-0.46	0.00	0.00	0.00	0.00
	L_8-U_8	-8.16	17.57	-1.09	0.10	-0.04	-0.46	0.00	0.00	0.00	0.00
Structure 3	U_0-L_1	-0.12	-8.77	-0.76	0.28	-0.41	-0.71	0.00	0.00	0.00	0.00
	L_1-U_1	-0.12	-8.77	-0.76	0.28	-0.41	-0.71	0.00	0.00	0.00	0.00
	U_1-L_2	-23.22	7.61	-0.62	0.63	0.11	-0.10	0.00	0.00	0.00	0.00

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_{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$_y$/S$_{xx}$	M_2 (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor $C_{mx/\alpha}$
Structure 1	U_0-L_1	-42.59	37.40	-82.03	-88.69	-64.40	-23.39	100.5	100.48	125.29	66.1	1.20	3970	144	0.94257776	3126.1	0.725	0.89	0.89
	L_1-L_2	-18.00	-31.96	3.25	1.36	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	0.00	0.0	0.000	0.00	0.00
	L_2-L_3	-2.46	-17.53	5.01	7.45	6.50	0.00	0.00	0.00	0.00	0.0	1.00	0	0	0.00	0.0	0.000	0.00	0.00
	L_3-L_4	-18.34	-24.05	-28.79	-7.38	-0.41	2.01	-0.66	-0.66	-0.66	-0.7	1.00	0	0	-64.52	-114.43	-95.00	-82.77	94.0	0.00
	L_4-L_5	-26.16	-25.16	-2.86	-15.14	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	-150.63	-81.25	-120.33	-68.23	94.0	93.99	93.99	104.66	65.3	1.11	3454	171	0.95180782	2952.4	0.539	0.82	0.82
	L_5-L_6	-25.07	-27.41	-17.02	-15.56	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	85.30	15.26	0.23	-2.46	87.99	87.99	87.99	113.4	113.37	1.13	5519	25	0.91736734	3588.3	0.610	0.92	0.92
	L_6-L_7	-18.49	-23.66	-15.83	-10.28	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	164.88	65.25	164.88	65.25	147.96	147.96	147.96	167.25	201.8	1.13	5519	262	0.89848852	4728.8	0.491	0.80	0.80
	L_7-L_8	-8.07	-3.67	-9.58	-19.64	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	308.05	160.69	419.98	186.00	147.96	147.96	147.96	167.25	201.8	1.13	5519	245	0.96629795	4738.1	0.492	0.79	0.79
	L_8-U_8	-12.28	-5.90	-0.11	-0.07	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	259.08	182.56	242.97	174.80	148.0	147.96	147.96	167.25	201.8	1.13	5519	205	0.99994741	4689.9	0.705	0.88	0.88
	U_0-U_1	12.88	7.44	-8.42	-4.33	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	159.26	144.59	131.56	129.28	202.9	202.90	202.90	192.44	238.56	256.9	1.18	7872	228	0.96384651	6452.3	0.908	0.96	0.96
	U_1-U_2	14.85	12.56	-0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	158.54	119.86	78.65	1.87	202.9	202.90	202.90	192.44	238.56	256.9	1.18	7872	281	0.97081457	6457.7	0.909	0.96	0.96
	U_2-U_3	-3.33	-8.52	8.53	1.88	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	-57.40	-80.19	-41.98	-66.67	197.4	197.41	184.99	230.30	248.6	1.17	7600	299	0.96831336	6309.9	0.716	0.89	0.89
	U_3-U_4	-11.53	-17.01	-9.46	-16.10	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	-247.37	-125.46	-247.37	-125.46	197.4	197.41	184.99	230.30	248.6	1.17	7600	277	0.91252526	5901.6	0.833	0.93	0.93
	U_4-U_5	-23.22	-10.66	-4.68	-13.05	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	-259.67	-209.28	-235.56	-212.38	133.5	133.45	123.27	155.40	168.8	1.16	5128	176	0.93039181	4196.9	0.806	0.92	0.92
	U_5-L_6	-14.04	-20.43	-3.09	-16.51	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	-227.77	-233.72	-213.54	-228.61	94.0	93.99	93.99	104.66	65.3	1.11	3454	145	0.94237553	2925.7	0.575	0.99	0.99
	L_6-L_7	-23.44	-22.48	-0.19	-15.56	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	-156.46	-169.01	-132.45	-154.39	94.0	93.99	93.99	104.66	65.3	1.11	3454	111	0.93599495	2914.5	0.573	0.98	0.98
	L_7-L_8	-18.08	-22.60	-22.40	-26.25	-6.90	0.00	0.00	0.00	0.00	0.0	1.00	0	0	-55.46	-89.15	-72.15	-96.41	94.0	93.99	93.99	104.66	65.3	1.11	3454	123	0.93372272	2894.2	0.569	0.87	0.87
	L_8-U_8	-14.44	-16.51	-18.98	-12.61	-12.15	0.00	0.00	0.00	0.00	0.0	1.00	0	0	-58.98	-127.62	-113.4	113.37	132.15	82.6	132.15	147.15	168.8	1.14	4299	131	0.93199662	3588.3	0.705	0.75	0.75
	U_0-L_1	-24.27	-14.76	-43.08	-6.10	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	-10.82	-72.50	-35.28	-61.24	148.0	147.96	147.96	167.25	201.8	1.13	5519	207	0.99021955	4688.3	0.149	0.66	0.66
	L_1-U_1	-18.69	-28.55	-2.92	-2.96	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	42.36	152.17	42.36	152.17	147.96	147.96	147.96	167.25	201.8	1.13	5519	193	0.95372364	5072.2	0.256	0.74	0.74
	U_1-L_2	-6.63	-31.10	-1.42	-2.81	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	-16.77	-11.93	-8.30	-48.70	160.8	160.87	160.87	184.25	223.9	1.15	6080	136	0.94117764	5078.9	0.129	0.55	0.55
	L_2-U_2	-10.13	-49.14	1.72	2.16	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	-146.92	30.64	-131.51	36.05	173.7	173.70	173.70	202.71	247.5	1.17	6890	180	0.95421562	5469.3	0.209	0.68	0.68
	U_2-L_3	-5.95	-31.73	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	-15.69	-22.86	-12.02	-32.65	173.7	173.70	173.70	202.71	247.5	1.17	6890	209	0.94324341	5505.3	0.686	0.87	0.87
	L_3-U_3	-18.40	-10.46	2.67	-2.11	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	-118.64	-177.15	-91.25	-166.30	148.0	147.96	147.96	167.25	201.8	1.13	5519	217	0.96189757	4686.6	0.670	0.87	0.87
	L_3-L_4	-16.85	-7.34	0.31	-9.33	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	-123.53	-149.82	-123.53	-149.82	147.96	147.96	147.96	167.25	201.8	1.13	5519	196	0.96189757	4686.6	0.670	0.87	0.87
	L_4-U_4	-23.58	-11.15	-14.77	-17.06	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	-244.98	-186.35	-233.40	-193.02	103.1	103.08	103.08	116.41	73.3	1.13	3841	126	0.94564561	3779.0	0.753	0.90	0.90
	L_4-L_5	-8.82	-25.19	-41.76	-13.60	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	-38.35	-146.01	-79.87	-130.93	128.2	128.15	118.23	148.43	106.4	1.16	4898	160	0.94859530	4015.5	0.263	0.71	0.71
	L_5-U_5	-14.71	-18.91	-21.56	-2.32	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	-80.30	-173.71	-80.30	-173.71	147.96	147.96	147.96	167.25	201.8	1.13	5519	224	0.96189757	4686.6	0.670	0.87	0.87
	L_5-L_6	-14.59	-17.89	-33.67	-8.22	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	-27.05	-42.42	-2.24	-29.05	173.7	173.70	173.70	202.71	247.5	1.17	6890	204	0.95475135	5330.1	-0.638	0.34	0.34
	L_6-L_7	-4.34	-8.71	-31.59	-3.32	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	-188.85	-81.45	-188.85	-81.45	147.96	147.96	147.96	167.25	201.8	1.13	5519	203	0.95475135	4264.5	0.162	0.66	0.66
	L_7-L_8	-1.21	-7.52	-7.01	-0.66	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	213.52	105.48	205.99	-114.40	201.3	201.30	201.30	221.31	271.6	1.10	7303	171	0.91184461	6323.0	0.494	0.80	0.80
	L_8-U_8	-4.54	-8.71	-10.59	-3.32	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	262.52	141.32	258.43	144.59	173.7	173.70	173.70	202.71	247.5	1.17	6890	234	0.94517133	5417.8	0.538	0.82	0.82
	U_0-L_1	-42.59	37.40	-82.03	-88.69	-64.40	-23.39	100.5	100.48	125.29	66.1	1.20	3970	144	0.94257776	3126.1	0.725	0.89	0.89
	L_1-L_2	-18.00	-31.96	3.25	1.36	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	-82.03	-88.69	-64.40	-23.39	100.5	100.48	125.29	66.1	1.20	3970	144	0.94257776	3126.1	0.725	0.89	0.89
	L_2-L_3	-2.46	-17.53	5.01	7.45	6.50	0.00	0.00	0.00	0.00	0.0	1.00	0	0	-44.13	-61.77	-31.25	-30.52	94.0	93.99	93.99	104.66	65.3	1.11	3454	166	0.95577572	2947.1	0.714	0.89	0.89
	L_3-L_4	-18.34	-24.05	-28.79	-7.38	-0.41	2.01	-0.66	-0.66	-0.66	-0.7	1.00	0	0	-64.52	-114.43	-95.00	-82.77	94.0	93.99	93.99	104.66	65.3	1.11	3454	160	0.94257776	2947.1	0.714	0.89	0.89
	L_4-L_5	-26.16	-25.16	-2.86	-15.14	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	-150.63	-81.25	-120.33	-68.23	94.0	93.99	93.99	104.66	65.3	1.11	3454	171	0.95180782	2952.4	0.539	0.82	0.82
	L_5-L_6	-25.07	-27.41	-17.02	-15.56	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	85.30	15.26	0.23	-2.46	87.99	87.99	87.99	113.4	113.37	1.13	5519	25	0.91736734	3588.3	0.610	0.92	0.92
	L_6-L_7	-18.49	-23.66	-15.83	-10.28	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	164.88	65.25	164.88	65.25	147.96	147.96	147.96	167.25	201.8	1.13	5519	262	0.89848852	4728.8	0.491	0.80	0.80
	L_7-L_8	-8.07	-3.67	-9.58	-19.64	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	308.05	160.69	419.98	186.00	147.96	147.96	147.96	167.25	201.8	1.13	5519	245	0.96629795	4738.1	0.492	0.79	0.79
	L_8-U_8	-12.28	-5.90	-0.11	-0.07	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	259.08	182.56	242.97	174.80	148.0	147.96	147.96	167.25	201.8	1.13	5519	205	0.99994741	4689.9	0.705	0.88	0.88
	U_0-U_1	12.88	7.44	-8.42	-4.33	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	159.26	144.59	131.56	129.28	202.9	202.90	202.90	192.44	238.56	256.9	1.18	7872	228	0.96384651	6452.3	0.908	0.96	0.96
	U_1-U_2	14.85	12.56	-0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	158.54	119.86	78.65	1.87	202.9	202.90	202.90	192.44	238.56	256.9	1.18	7872	281	0.97081457	6457.7	0.909	0.96	0.96
	U_2-U_3	-3.33	-8.52	8.53	1.88	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	-57.40	-80.19	-41.98	-66.67	197.4	197.41	184.99	230.30	248.6	1.17	7600	299	0.96831336	6309.9	0.716	0.89	0.89
	U_3-U_4	-11.53	-17.01	-9.46	-16.10	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	-247.37	-125.46	-247.37	-125.46	197.4	197.41	184.99	230.30	248.6	1.17	7600	277	0.91252526	5901.6	0.833	0.93	0.93
	U_4-U_5	-23.22	-10.66	-4.68	-13.05	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	-259.67	-209.28	-235.56	-212.38	133.5	133.45	123.27	155.40	168.8	1.16	5128	176	0.93039181	4196.9	0.806	0.92	0.92
	U_5-L_6	-14.04	-20.43	-3.09	-16.51	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	-227.77	-233.72	-213.54	-228.61	94.0	93.99	93.99	104.66	65.3	1.11	3454	145	0.94237553	2925.7	0.575	0.99	0.99
	L_6-L_7	-23.44	-22.48	-0.19	-15.56	0.00	0.00	0.00	0.00	0.00	0.0	1.00	0	0	-156.46	-169.01	-132.45	-154.39	94.0	93.99	93.99	104.66	65.3	1.11	3454	111	0.93599495	2914.5	0.573	0.98	0.98
	L_7-L_8	-18.08	-22.60	-22.40	-26.25	-6.90	0.00	0.00	0.00	0.00	0.0	1.00	0	0	-55.46	-89.15	-72.15	-96.41	94.0	93.99	93.99	104.66	65.3	1.11	3454	123	0.93372272	2894.2	0.569	0.87	0.87
	L_8-U_8	-14.44	-16.51	-18.98	-12.61	-12.15	0.00	0.00	0.00

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
Condition: As-Built

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

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design for Buried Steel Box 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-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Min) 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 Start (k-ft)	Impact Pedestrian Load End (k-ft)
Structure 1	U_1 - U_2	89.33	-98.19	-1.58	1.39	2.69	-6.80	-0.65	0.45	2.38	-2.03
	U_2 - U_3	89.33	-98.19	-1.58	1.39	2.69	-6.80	-0.65	0.45	2.38	-2.03
	U_3 - U_4	-130.88	58.71	0.82	2.44	-4.20	-6.52	2.20	0.80	0.00	-1.36
	U_4 - U_5	-46.29	76.63	1.54	2.32	-4.03	-5.96	2.10	0.77	-2.72	-2.15
	U_5 - U_6	-26.07	74.96	1.72	2.26	-7.21	-1.94	0.47	0.77	1.36	-0.71
	U_6 - U_7	19.43	119.86	1.93	2.01	-4.70	0.63	0.62	0.72	1.37	0.17
	U_7 - U_8	131.01	62.39	2.11	1.70	-5.14	0.41	0.80	0.63	1.37	0.17
	U_8 - U_9	-71.37	656.06	0.85	3.60	-5.73	5.43	1.34	3.99	0.00	0.00
	U_9 - U_{10}	624.62	-195.24	2.01	0.55	-5.57	3.57	-1.52	0.00	0.00	0.00
	U_{10} - U_{11}	71.38	-13.83	0.91	1.65	-0.37	-5.09	0.28	0.49	0.23	-0.97
	U_{11} - U_{12}	97.28	223.12	1.48	1.39	0.44	-2.73	0.49	0.39	0.26	1.31
	U_{12} - U_{13}	35.32	221.77	1.72	1.28	-0.87	-0.93	0.56	0.33	0.24	-1.72
	U_{13} - U_{14}	-120.58	-238.24	1.49	0.57	-2.78	-7.72	0.44	0.14	-0.62	-1.62
	U_{14} - U_{15}	201.64	-42.36	1.36	0.76	-1.36	-2.12	0.44	0.24	0.00	-0.53
	U_{15} - U_{16}	380.63	263.81	1.30	0.76	-12.85	-5.69	0.32	0.20	2.38	-1.60
	U_{16} - U_{17}	227.35	-387.00	1.26	0.32	-8.60	-4.76	0.36	-0.03	1.84	-2.05
	U_{17} - U_{18}	-353.36	-172.80	0.50	-0.02	-13.13	-2.92	0.05	-0.04	-1.64	-0.73
	U_{18} - U_{19}	-227.35	-24.62	0.47	-0.19	-13.01	0.10	-0.08	-1.49	0.22	-2.53
	U_{19} - U_{20}	-214.14	19.61	0.38	-0.16	-4.35	0.71	0.09	-0.06	-1.42	0.34
	U_{20} - U_{21}	-232.24	7.36	0.39	-0.39	-3.30	1.42	0.06	-0.04	-1.35	0.05
	U_{21} - U_{22}	62.38	-379.27	0.52	-0.75	-4.03	0.00	0.00	-1.31	-0.42	2.10
	U_{22} - U_{23}	-113.13	-299.08	0.31	-0.86	-8.45	0.00	0.18	-0.50	-1.31	-0.42
	U_{23} - U_{24}	-125.13	-477.1	0.45	-0.29	-8.06	0.00	0.18	-0.50	-1.63	-0.42
	U_{24} - U_{25}	-433.72	-494.87	0.44	-1.41	-5.39	-16.14	0.08	0.00	-18.80	-68.80
	U_{25} - U_{26}	-483.37	-642.49	0.63	-2.01	-5.47	-22.53	0.00	0.00	-20.25	-74.13
	U_{26} - U_{27}	-543.26	-229.94	1.63	3.60	-7.59	-12.56	0.37	0.87	0.00	0.00
	U_{27} - U_{28}	-414.57	-309.81	2.70	2.33	-8.11	-13.53	0.64	0.56	0.00	0.00
	U_{28} - U_{29}	-388.32	-324.6	1.94	2.72	-7.24	-12.06	0.46	0.78	0.00	0.00
	U_{29} - U_{30}	-443.90	-59.15	2.38	3.11	-10.67	-2.67	0.49	0.82	0.00	0.00
	U_{30} - U_{31}	-80.76	30.89	2.81	2.21	-2.67	-0.49	0.49	0.37	0.00	0.00
	U_{31} - U_{32}	-165.92	101.76	3.27	2.82	-7.97	-2.18	0.77	0.79	1.44	-0.29
	U_{32} - U_{33}	-149.71	264.88	2.85	2.06	-7.13	0.31	0.73	0.60	-1.58	0.39
	U_{33} - U_{34}	-80.76	30.89	2.81	2.21	-2.67	-0.49	0.49	0.37	-1.77	-1.32
	U_{34} - U_{35}	-291.43	1663.41	1.56	4.95	-0.48	-0.10	-1.35	5.47	0.00	0.00
	U_{35} - U_{36}	-1538.34	-183.83	3.39	1.53	-7.07	-1.10	0.00	0.00	0.00	0.00
	U_{36} - U_{37}	-27.62	20.42	1.03	2.22	-1.69	-9.46	-0.01	-0.26	0.00	0.00
	U_{37} - U_{38}	-301.54	-342.83	1.80	2.63	-7.11	-13.31	0.57	0.85	0.00	0.00
	U_{38} - U_{39}	186.23	-23.02	1.92	2.26	0.77	-10.00	0.46	0.70	0.18	-1.19
	U_{39} - U_{40}	179.28	-73.30	2.53	1.82	-0.90	-9.19	0.59	0.66	0.03	-1.32
	U_{40} - U_{41}	206.24	-67.07	2.53	1.82	-0.90	-9.19	0.59	0.66	0.03	-1.32
	U_{41} - U_{42}	-76.62	-111.17	2.20	0.17	-3.60	-8.75	0.37	0.45	-1.30	0.74
	U_{42} - U_{43}	-158.30	-180.60	1.50	0.26	-5.03	-11.64	0.50	0.70	-1.82	1.06
	U_{43} - U_{44}	-164.26	-164.79	1.50	0.98	-13.45	-5.92	0.68	0.50	-1.67	-1.21
	U_{44} - U_{45}	-44.20	36.61	2.05	2.19	-8.86	-3.66	0.49	0.43	0.96	-0.34
	U_{45} - U_{46}	-44.20	54.61	2.05	2.19	-8.86	-3.66	0.49	0.43	0.96	-0.34
	U_{46} - U_{47}	-69.18	212.29	1.75	2.20	-7.89	-0.99	0.53	0.34	-1.06	0.43
	U_{47} - U_{48}	-69.18	212.29	1.75	2.20	-7.89	-0.99	0.53	0.34	-1.06	0.43
	U_{48} - U_{49}	-40.92	345.55	1.65	1.46	-7.04	-0.11	-0.61	0.31	-0.96	0.63
	U_{49} - U_{50}	-40.92	345.55	1.65	1.46	-7.04	-0.11	-0.61	0.31	-0.96	0.63
	U_{50} - U_{51}	-149.00	1535.72	0.85	5.03	-0.11	-0.79	-0.98	5.62	0.00	0.00
	U_{51} - U_{52}	1621.12	-341.75	2.69	1.74	-0.97	-0.51	0.68	-1.53	0.00	0.00
	U_{52} - U_{53}	-68.85	107.72	2.53	2.69	-8.69	0.52	0.39	0.38	-1.49	-0.24
	U_{53} - U_{54}	253.89	-149.73	1.93	2.51	-8.69	-6.69	0.52	0.39	0.38	-1.49
	U_{54} - U_{55}	84.18	-327.28	2.89	2.43	-3.12	-10.37	0.74	0.58	0.40	-1.98
	U_{55} - U_{56}	-68.85	107.72	2.53	2.69	-8.69	0.52	0.39	0.38	-1.49	-0.24
	U_{56} - U_{57}	-358.58	-362.06	2.31	2.07	-4.92	-15.43	0.54	0.55	1.52	-2.40
	U_{57} - U_{58}	-300.98	-456.98	2.54	2.25	-15.37	-9.03	0.69	0.61	-1.72	32.39
	U_{58} - U_{59}	327.41	-557.75	2.54	2.25	-15.37	-9.03	0.69	0.61	-1.72	32.39
	U_{59} - U_{60}	-569.52	-449.99	1.67	0.25	-12.50	-4.53	0.38	-0.04	-2.55	-1.21
	U_{60} - U_{61}	-406.59	-54.41	1.04	-0.54	-6.38	1.09	0.21	-0.18	-1.89	0.64
	U_{61} - U_{62}	-406.59	-54.41	1.04	-0.54	-6.38	1.09	0.21	-0.18	-1.89	0.64
	U_{62} - U_{63}	-290.66	-12.32	0.81	-0.83	-3.86	1.56	0.20	-0.01	-1.64	0.67
	U_{63} - U_{64}	-434.97	-311.66	0.38	0.27	-2.46	-7.05	0.25	0.07	3.50	-2.00
	U_{64} - U_{65}	-434.97	-311.66	0.38	0.27	-2.46	-7.05	0.25	0.07	3.50	-2.00
	U_{65} - U_{66}	-705.68	-108.92	1.86	1.18	8.97	-8.13	3.95	-1.36	0.00	0.00
	U_{66} - U_{67}	-705.68	-108.92	1.86	1.18	8.97	-8.13	3.95	-1.36	0.00	0.00
	U_{67} - U_{68}	-361.44	-188.05	0.36	1.46	4.13	-6.81	-0.02	0.37	1.24	-1.70
	U_{68} - U_{69}	-252.08	-374.95	0.96	1.46	-5.60	-11.73	0.20	0.27	3.26	-1.78
	U_{69} - U_{70}	-444.50	-187.91	0.76	-2.34	-3.85	0.12	0.29	0.43	-1.34	13.46
	U_{70} - U_{71}	-235.24	-84.64	1.01	1.68	-5.31	-0.67	0.14	0.15	-0.50	10.53
	U_{71} - U_{72}	-214.94	128.20	1.62	1.57	-5.92	0.29	0.39	0.52	-1.79	0.34
	U_{72} - U_{73}	-187.04	640.76	0.48	3.23	-4.91	3.19	-1.47	3.55	0.00	0.00
	U_{73} - U_{74}	-101.33	-63.04	1.46	0.12	-7.41	-1.15	0.53	0.02	-1.79	-0.65
	U_{74} - U_{75}	-55.62	-170.13	0.88	-0.39	-2.82	0.43	0.26	0.12	-1.52	-0.15
Structure 2	U_5 - U_{76}	-202.01	70.38	1.51	1.91	-7.18	-1.07	0.30	0.99	-1.62	-0.15
	U_{76} - U_{77}	-214.94	128.20	1.62	1.57	-5.92	0.29	0.39	0.52	-1.79	0.34
	U_{77} - U_{78}	-130.88	58.71	0.82	2.44	-4.20	-6.52	2.20	0.80	0.00	-1.36
	U_{78} - U_{79}	-46.29	76.63	1.54	2.32	-4.03	-5.96	2.10	0.77	-2.72	-2.15
	U_{79} - U_{80}	-26.07	74.96	1.72	2.26	-7.21	-1.94	0.47	0.77	1.36	-0.71
	U_{80} - U_{81}	19.43	119.86	1.93	2.01	-4.70	0.63	0.62	0.72	1.37	0.17
	U_{81} - U_{82}	131.01	62.39	2.11	1.70	-5.14	0.41	0.80	0.63	1.37	0.17
	U_{82} - U_{83}	-71.37	656.06	0.85	3.60	-5.73	5.43	1.34	3.99	0.00	0.00
	U_{83} - U_{84}	624.62	-195.24	2.01	0.55	-5.57	3.57	-1.52	0.00	0.00	0.00
	U_{84} - U_{85}	71.38	-13.83	0.91	1.65	-0.37	-5.09	0.28	0.49	0.23	-0.97
	U_{85} - U_{86}	97.28	223.12	1.48	1.39	0.44	-2.73	0.49	0.39	0.26	1.31
	U_{86} - U_{87}	35.32	221.77	1.72	1.28	-0.87	-0.93	0.56	0.33	0.24	-1.72
	U_{87} - U_{88}	-120.58	-238.24	1.49	0.57	-2.78	-7.72	0.44	0.14	-0.62	-1.62
	U_{88} - U_{89}	201.64	-42.36	1.36	0.76	-1.36	-2.12	0.44	0.24	0.00	-0.53
	U_{89} - U_{90}	380.63	263.81	1.30	0.76	-12.85	-5.69	0.32	0.20	2.38	-1.60
	U_{90} - U_{91}	227.35	-387.00	1.26	0.32	-8.60	-4.76	0.36	-0.03	1.84	-2.05
	U_{91} - U_{92}	-353.36	-172.80	0.50	-0.02	-13.13	-2.92	0.05	-0.04	-1.64	-0.73
	U_{92} - U_{93}	-227.35	-24.62	0.47	-0.19	-13.01	0.10	-0.08	-1.49	0.22	-2.53
	U_{93} - U_{94}	-214.14	19.61	0.38	-0.16	-4.35	0.71	0.09	-0.06	-1.42	0.34
	U_{94} - U_{95}	-232.24	7.36	0.39	-0.39	-3.30	1.42	0.06	-0.04	-1.35	0.05
	U_{95} - U_{96}	62.38	-379.27	0.52	-0.75	-4.03	0.00	0.00	-1.31	-0.42	2.10
	U_{96} - U_{97}	-113.13	-299.08	0.31	-0.86	-8.45	0.00	0.18	-0.50	-1.31	-0.42
	U_{97} - U_{98}	-125.13	-477.1	0.45	-0.29	-8.06	0.00	0.18	-0.50	-1.63	-0.42
	U_{98} - U_{99}	-433.72	-494.87	0.44	-1.41	-5.39	-16.14	0.08	0.00	-18.80	-68.80
	U_{99} - U_{100}	-483.37	-642.49	0.63	-2.01	-5.47	-22.53	0.00	0.00	-20.25	-74.13
	U_{100} - U_{101}	-543.26	-229.94	1.63	3.60	-7.59	-12.56	0.37	0.87	0.00	0.00
	U_{101} - U_{102}	-414.57	-309.81	2.70	2.33	-8.11	-13.53	0.64	0.56	0.00	0.00
	U_{102} - U_{103}	-388.32	-324.6	1.94	2.72	-7.24	-12.06	0.46	0.78	0.00	0.00
	U_{103} - U_{104}	-443.90	-59.15	2.38	3.11	-10.67	-2.67	0.49	0.82	0.00	0.00
	U_{104} - U_{105}	-80.76	30.89	2.81	2.21	-2.67	-0.49	0.49	0.37	0.00	0.00
	U_{105} - U_{106}	-165.92	101.76	3.27	2.82	-7.97	-2.18	0.77	0.79	1.44	-0.29
	U_{106} - U_{107}	-149.71	264.88	2.85	2.06	-7.13	0.31	0.73	0.60	-1.58	0.39
	U_{107} - U_{108}	-80.76	30.89	2.81	2.21	-2.67	-0.49	0.49	0.37	-1.77	-1.32
	U_{108} - U_{109}	-291.43	1663.41	1.56	4.95	-0.48	-0.10	-1.35	5.47	0.00	0.00
	U_{109} - U_{110}	-1538.34	-183.83	3.39	1.53	-7.07	-1.10	0.00	0.00	0.00	0.00
	U_{110} - U_{111}	-27.62	20.42	1.03	2.22	-1.69	-9.46	-0.01	-0.26	0.00	0.00
	U_{111} - U_{112}	-301.54	-342.83	1.80	2.63	-7.11	-13.31	0.57	0.85	0.00	0.00
	U_{112} - U_{113}	186.23	-23.02	1.92	2.26	0.77	-10.00	0.46	0.70	0.18	-1.19
	U_{113} - U_{114}	179.28	-73.30	2.53	1.82	-0.90	-9.19	0.59	0.66	0.03	-1.32
	U_{114} - U_{115}	206.24	-67.07	2.53	1.82	-0.90	-9.19	0.59	0.66	0.03	-1.32
	U_{115} - U_{116}	-76.62	-111.17	2.20	0.17	-3.60	-8.75	0.37	0.45	-1.30	0.74
	U_{116} - U_{117}	-158.30	-180.60	1.50	0.26	-5.03	-11.64	0.50	0.70	-1.82	1.06
	U_{117} - U_{118}	-164.26	-164.79	1.50	0.98	-13.45	-5.92	0.68	0.50	-1.67	-1.21
	U_{118} - U_{119}	-44.20	36.61	2.05	2.19	-8.86	-3.66	0.49	0.43	0.96	-0.34
	U_{119} - U_{120}	-44.20	54.61	2.05	2.19	-8.86	-3.66	0.49	0.43	0.96	-0.34
	U_{120} - U_{121}	-69.18	212.29	1.75	2.20	-7.89	-0.99	0.53	0.34	-1.06	0.43
	U_{121} - U_{122}	-69.18	212.29	1.75	2.20	-7.89	-0.99	0.53	0.34	-1.06	0.43
	U_{122} - U_{123}	-40.92	345.55	1.65	1.46	-7.04	-0.11	-0.61	0.31	-0.96	0.63
	U_{123} - U_{124}	-40.92	345.55	1.65	1.46	-7.04	-0.11	-0.61	0.31	-0.96	0.63
	U_{124} - U_{125}	-149.00	1535.72	0.85	5.03	-0.11	-0.79	-0.98	5.62	0.00	0.00
	U_{125} - U_{126}	1621.12	-341.75	2.69	1.74	-0.97	-0.51	0.68	-1.53	0.00	0.00
	U_{126} - U_{127}	-68.85	107.72	2.53	2.69	-8.69	0.52	0.39	0.38	-1.49	-0.24
	U_{127} - U_{128}	253.89	-149.73	1.93	2.51	-8.69	-6.69	0.52	0.39	0.38	-1.49
	U_{128} - U_{129}	84.18	-327.28	2.89	2.43	-3.12	-10.37	0.74	0.58	0.40	-1.98
	U_{129} - U_{130}	-68.85	107.72	2.53	2.69	-8.69	0.52	0.39	0.38	-1.49	-0.24
	U_{130} - U_{131}	-358.58	-362.06	2.31	2.07	-4.92	-15.43	0.54	0.55	1.52	-2.40
	U_{131} - U_{132}	-300.98	-456.98	2.54	2.25	-15.37	-9.03	0.69	0.61	-1.72	32.39
	U_{132} - U_{133}	327.41	-557.75	2.54	2.25	-15.37	-9.03	0.69	0.61	-1.72	32.39
	U_{133} - U_{134}	-569.52	-449.99	1.67	0.25	-12.50	-4.53	0.38	-0.04	-2.55	-1.21
	U_{134} - U_{135}	-406.59	-54.41	1.04	-0.54	-6.38	1.09	0.21	-0.18	-1.89	0.64
	U_{135} - U_{136}	-406.59	-54.41	1.04	-0.54	-6.38	1.09	0.21	-0.18	-1.89	0.64
	U_{136} - U_{137}	-290.66	-12.32	0.81	-0.83	-3.86	1.56	0.20	-0.01	-1.64	0.67
	U_{137} - U_{138}	-434.97	-311.66	0.38	0.27	-2.46	-7.05	0.25	0.07	3.50	-2.00
	U_{138} - U_{139}	-434.97	-311.66	0.38	0.27	-2.46	-7.05	0.25	0.07	3.50	-2.00
	U_{139} - U_{140}	-705.68	-108.92	1.86	1.18	8.97	-8.13	3.95	-1.36	0.00	0.00
	U_{140} - U_{141}	-705.68	-108.92	1.86	1.18	8.97	-8.13	3.95	-1.36	0.00	0.00
	U_{141} - U_{142}	-361.44	-188.05	0.36	1.46	4.13	-6.81	-0.02	0.37	1.24	-1.70
	U_{142} - U_{143}	-252.08	-374.95	0.96	1.46	-5.60	-11.73	0.20	0.27	3.26	-1.78
	U_{143} - U_{144}	-444.50	-187.91	0.76	-2.34	-3.85	0.12	0.29	0.43	-1.34	13.46
	U_{144} - U_{145}	-235.24	-84.64	1.01	1.68	-5.31	-0.67	0.14	0.15	-0.50	10.53
	U_{145} - U_{146}	-214.94	128.20	1.62	1.57	-5.92	0.29	0.39	0.52	-1.79	0.34
	U_{146} - U_{147}	-187.04	640.76	0.48	3.23	-4.91	3.19	-1.47	3.55	0.00	0.00
	U_{147} - U_{148}	-101.33	-63.04	1.46	0.12	-7.41	-1.15	0.53	0.02	-1.79	-0.65
	U_{148} - U_{76}	-55.62	-170.13	0.88	-0.39	-2.82	0.43	0.26	0.12	-1.52	-0.15

ZZ Axis Moment Properties

Location	Member	Mov. Pos. Mom. Start (k-in)	Mov. Pos. Mom. End (k-in)	Mov. Neg. Mom. Start (k-in)	Mov. Neg. Mom. End (k-in)	S_{xx} (in^3)	S_{tc} (in^3)	S_{bc} (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor f	M_p (k-in)	Formula I.8 Term = F/S_{xx}	M_u (k-in)	Equivalent Mem. Factor a	C_{mx}	C_{MAX}
Structure 1	U_1 - U_2	0.00	0.00	0.00	0.00	2.38	-2.03	-21.08	18.56	35.95	-90.81	-7.80	5.35	28.60	-24.37	88.73	-103.52
	U_2 - U_3	0.00	0.00	0.00	0.00	2.38	-2.03	-21.08	18.56	35.95	-90.81	-7.80	5.35	28.60	-24.37	88.73	-103.52
	U_3 - U_4	0.00	0.00	0.00	0.00	0.00	-1.36	10.99	32.58	-56.12	87.06	2.40	9.54	-10.84	-16.28	-155.85	118.68
	U_4 - U_5	0.00	0.00	0.00	0.00	0.00	-0.53	-5.72	-19.23	-72.24	52.66	8.58	3.81	-3.45	-33.46	-158.92	68.91
	U_5 - U_6	0.00	0.00	0.00	0.00	0.00	-0.59	-7.15	-1.36	-16.32	-8.51	-4.08	1.36	-59.02	-6.81	-90.92	-24.48
	U_6 - U_7	0.00	0.00	0.00	0.00	0.00	-0.59	-7.15	-1.36	-16.32	-8.51	-4.08	1.36	-59.02	-6.81	-90.92	-24.48
	U_7 - U_8	0.00	0.00	0.00	0.00	0.00	-0.59	-7.15	-1.36	-16.32	-8.51	-4.08	1.36	-59.02	-6.81	-90.92	-24.48
	U_8 - U_9	0.00	0.00	0.00	0.00	0.00	-0.59	-7.15	-1.36	-16.32	-8.51	-4.08	1.36	-59.02	-6.81	-90.92	-24.48
	U_9 - U_{10}	0.00	0.00	0.00	0.00	0.00	-0.59	-7.15	-1.36	-16.32	-8.51	-4.08	1.36	-59.02	-6.81	-90.92	-24.48
	U_{10} - U_{11}	0.00	0.00	0.00	0.00	0.00	-0.59	-7.15	-1.36	-16.32	-8.51	-4.08	1.36	-59.02	-6.81	-90.92	-24.48
	U_{11} - U_{12}	0.00	0.00	0.00	0.00	0.00	-0.59	-7.15	-1.36	-16.32	-8.51	-4.08	1.36	-59.02	-6.81	-90.92	-24.48
	U_{12} - U_{13}	0.00	0.00	0.00	0.00	0.00	-0.59	-7.15	-1.36	-16.32	-8.51	-4.08	1.36	-59.02	-6.81	-90.92	-24.48
	U_{13} - U_{14}	0.00	0.00	0.00	0.00	0.00	-0.59	-7.15	-1.36	-16.32	-8.51	-4.08	1.36	-59.02	-6.81	-90.92	-24.48
	U_{14} - U_{15}	0.00	0.00	0.00	0.00	0.00	-0.59	-7.15	-1.36	-16.32	-8.51	-4.08	1.36	-59.02	-6.81	-90.92	-24.48
	U_{15} - U_{16}	0.00	0.00	0.00	0.00	0.00	-0.59	-7.15	-1.36	-16.32	-8.51	-4.08	1.36	-59.02	-6.81	-90.92	-24.48
	U_{16} - U_{17}	0.00	0.00	0.00	0.00	0.00	-0.59	-7.15	-1.36	-16.32	-8.51	-4.08	1.36	-59.02	-6.81	-90.92	-24.48
	U_{17} - U_{18}	0.00	0.00	0.00	0.00	0.00	-0.59	-7.15	-1.36	-16.32	-8.51	-4.08	1.36	-59.02	-6.81	-90.92	-24.48
	U_{18} - U_{19}	0.00	0.00	0.00	0.00	0.00	-0.59	-7.15	-1.36	-16.32	-8.51	-4.08	1.36	-59.02	-6.81	-90.92	-24.48
	U_{19} - U_{20}	0.00	0.00	0.00	0.00	0.00	-0.59	-7.15	-1.36	-16.32	-8.51	-4.08	1.36	-59.02	-6.81	-90.92	-24.48
	U_{20} - U_{21}	0.00	0.00	0.00	0.00	0.00	-0.59	-7.15	-1.36	-16.32	-8.51	-4.08	1.36	-59.02	-6.81	-90.92	-24.48
	U_{21} - U_{22}	0.00	0.00	0.00	0.00	0.00	-0.59	-7.15	-1.36	-16.32	-8.51	-4.08	1.36	-59.02	-6.81	-90.92	-24.48
	U_{22} - U_{23}	0.00	0.00	0.00	0.00	0.00	-0.59	-7.15	-1.36	-16.32	-8.51	-4.08	1.36	-59.02	-6.81	-90.92	-24.48
	U_{23} - U_{24}	0.00	0.00	0.00	0.00	0.00	-0.59	-7.15	-1.36	-16.32	-8.51	-4.08	1.36	-59.02	-6.81	-90.92	-24.48
	U_{24} - U_{25}	0.00	0.00	0.00	0.00	0.00	-0.59	-7.15	-1.36	-16.32	-8.51	-4.08	1.36	-59.02	-6.81	-90.92	-24.48
	U_{25} - U_{26}	0.00	0.00	0.00	0.00	0.00	-0.59	-7.15	-1.36	-16.32	-8.51	-4.08	1.36	-59.02	-6.81	-90.92	-24.48
	U_{26} - U_{27}	0.00	0.00	0.00	0.00	0.00	-0.59	-7.15	-1.36	-16

Axial - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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
(-) Negative Stresses / Forces Indicate Buckling 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 Non-Tension/Compression Load)

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

M_z Information

M_y Information

| Location | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Max) End (k-in) | Lane Reduction & Impact Live Load 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. 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_{bot} | M_z (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor C_{mx} | Equivalent Mom. Factor C_{mx}/a | Pass | YY Axis Moments from STAAD: Dead Load (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Max) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Start (k-in) | Impact Pedestrian Load End (k-in) | Max. Pos. Mom. Start (k-in) | Max. Pos. Mom. End (k-in) | 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) | r_{min} (in) | Formula 1.8 Term * F$_y$/S_{bot} | M_y (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor C_{my} | Equivalent Mom. Factor C_{my}/a | Pass | Axial Compression (k) | Moment Compression (k-in) | Pass | Axial Tension (k) | Moment Tension (k-in) | Pass | Axial Compression (k) | Moment Compression (k-in) | Pass |
|---|---|---|---

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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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-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)	Max. Neg. Mom. Start (k-ft)	Max. Neg. Mom. End (k-ft)	S_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	I_z (in^4)	$I_{z/c}$ (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term * F_y/S_top	M_z (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(DL)}$	Equivalent Mom. Factor $C_{b(LL)}$	Pass
Structure 1	U_0–L_1	-15.70	54.51	0.00	-0.48	-2.45	2.31	0.03	-0.13	-0.04	0.43	2.63	-6.41	-32.77	30.63	0.34	-1.55	-0.48	5.10	-16.99	62.53	83.01	110.95	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.568	0.37	0.37
	L_1–L_2	-27.61	29.28	0.64	-0.59	-1.82	1.87	0.20	-0.18	-0.57	0.52	8.50	-7.52	-24.25	25.00	2.40	-2.14	-0.82	6.19	-24.85	27.90	-57.42	70.55	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.956	0.22	0.22
	L_2–U_3	-39.52	5.24	0.95	-0.70	-0.23	-0.26	0.35	-0.25	-11.36	10.71	14.77	-13.36	-16.71	2.34	-2.76	-3.13	4.21	21.50	-19.83	-3.82	14.91	15.45	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-1.000	0.00	0.00
	U_3–L_3	-40.61	-41.50	0.73	-0.73	-0.15	0.37	-0.21	-0.06	0.10	9.75	-9.77	-2.06	4.96	1.99	-2.46	-0.70	1.25	65.48	-66.64	50.12	-47.50	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.992	0.21	0.21
	L_3–L_4	56.81	-57.80	0.04	-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	0.00	74.04	-75.37	65.02	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-1.000	0.00	0.00
	L_4–U_5	64.44	-72.22	-0.10	0.10	1.43	-1.58	0.00	0.00	0.42	-0.47	-1.38	1.32	19.08	-21.16	0.00	0.00	0.52	-0.65	81.98	-92.17	108.57	-121.40	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.886	0.24	0.24
	U_5–L_5	54.62	-72.27	-0.10	0.10	1.46	-1.62	0.00	0.00	0.43	-0.48	-1.26	1.15	19.50	-21.36	0.00	0.00	0.51	-0.65	80.89	-92.17	108.57	-121.40	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.886	0.24	0.24
	L_5–L_6	109.00	-121.35	-0.51	0.56	1.64	-1.69	0.00	0.00	0.48	-0.51	-0.87	0.41	21.88	-22.62	0.00	0.00	0.58	-0.69	132.78	-148.12	181.73	99.62	18.5	18.45	18.36	30.78	3	1020.9	1.67	1016	1.5	913.3	0.548	0.82	0.82
	L_6–U_7	-42.62	47.12	-0.66	0.77	-1.30	1.58	0.00	0.00	-0.85	0.76	10.31	-11.41	21.16	0.00	0.00	0.00	0.02	-0.65	-66.81	74.66	-76.10	-27.86	107.1	107.13	162.71	26	2056.9	1.52	5369	1.5	5362.3	0.357	0.74	0.74
	U_7–L_7	-181.01	205.10	-0.11	0.00	-2.44	2.65	0.00	0.00	-0.94	1.08	-7.47	11.46	-31.57	34.33	0.00	0.00	-11.28	12.90	-234.05	264.73	-291.56	-174.57	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0	0.589	0.84	0.84
	L_7–L_8	-123.92	126.16	0.03	-0.09	-1.57	2.01	0.00	0.00	-0.65	0.66	0.43	-1.15	-20.26	26.02	0.00	0.00	-7.75	7.94	-160.54	162.92	-187.43	197.83	35.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2	-0.947	0.22	0.22
	U_8–L_8	-127.70	170.40	-0.03	0.01	-0.04	0.00	0.00	0.00	-0.68	0.85	-0.13	-0.36	-18.02	29.12	0.00	0.00	-4.12	10.22	-168.16	220.97	-189.49	295.45	42.7	42.74	42.74	65.30	9	1389.8	1.63	2155	1.5	2115.6	-0.732	0.31	0.31
	L_8–U_9	-106.29	107.56	0.15	-0.08	-1.60	1.74	0.00	0.00	-0.52	0.55	1.89	-0.97	-20.68	22.47	0.00	0.00	-6.18	6.60	-135.72	138.56	-163.06	169.04	21.1	21.09	21.09	36.46	10	1134.0	1.67	1170	1.5	1044.0	-0.976	0.21	0.21
	U_9–L_9	-66.48	79.89	0.25	-0.23	-1.26	1.40	0.00	0.00	-0.33	0.40	3.29	-2.95	-16.24	18.09	0.00	0.00	-4.24	4.82	-82.15	99.57	-107.53	127.37	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.844	0.26	0.26
	L_9–U_{10}	-31.84	36.79	-0.13	0.16	-0.47	0.57	-0.08	0.09	-0.15	0.18	1.51	-1.36	-7.48	8.33	0.00	0.00	-1.95	2.22	-37.83	45.84	-49.51	58.64	7.9	7.93	7.93	12.21	2	751.9	1.54	782	1.5	763.3	-0.994	0.21	0.21
	U_{10}–L_{10}	17.16	-23.89	0.59	0.58	1.34	-1.42	-0.06	0.01	0.27	-0.30	-7.59	7.52	17.35	-18.42	-1.20	1.31	3.18	-3.98	12.44	-21.02	44.87	-54.74	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.820	0.27	0.27
	L_{10}–U_{11}	60.46	-64.15	0.32	-0.32	1.46	-1.62	0.00	0.00	0.46	-0.51	11.18	-11.96	-19.98	20.51	-1.10	1.08	4.66	-4.92	-74.39	78.10	-74.25	79.12	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.644	0.32	0.32
	U_{11}–L_{11}	74.44	-85.11	-0.24	0.25	1.55	-1.61	-0.06	0.06	0.49	-0.46	-3.14	3.20	19.99	-20.82	-0.72	0.73	5.15	-5.53	92.69	-106.48	122.76	-137.70	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8	-0.891	0.24	0.24
	L_{11}–U_{12}	-107.77	162.63	-0.33	0.33	-1.39	2.40	-0.08	0.08	0.83	-0.87	-4.26	4.26	30.97	-21.71	0.01	0.00	5.60	-10.42	-99.56	-205.85	256.27	190.33	33.1	33.09	33.09	53.51	14	1187.1	1.65	1766	1.5	1737.0	0.982	0.83	0.83
	U_{12}–L_{12}	-164.37	-173.76	-0.29	0.28	2.27	-2.33	-0.07	0.07	0.91	-0.95	-3.70	3.56	-29.38	-20.38	-0.85	0.83	10.97	-11.39	-208.88	-221.27	266.14	159.78	42.7	42.74	42.74	65.30	9	1389.8	1.53	2155	1.5	2115.6	0.600	0.84	0.84
	L_{12}–U_{13}	-194.92	-235.55	-0.19	0.25	2.64	-2.35	-0.06	0.07	1.06	-1.17	-2.47	3.21	-26.39	-30.46	-0.77	0.88	12.73	-14.04	-250.19	-302.04	354.27	195.56	42.7	42.74	42.74	65.30	9	1389.8	1.53	2155	1.5	2115.6	0.643	0.86	0.86
	U_{13}–L_{13}	113.48	204.38	-0.24	0.24	-1.64	2.11	-0.06	0.06	-0.29	0.29	1.26	-1.05	-3.50	8.63	-169.42	293.35	0.00	0.00	0.00	0.00	0.00	0.00	42.7	42.74	42.74	65.30	9	1711.0	1.53	2357	1.5	2312.1	-0.971	0.23	0.23
	L_{13}–U_{14}	-201.32	204.79	0.59	-0.57	-2.95	3.04	0.15	-0.14	-0.91	0.88	7.59	-7.22	-37.70	38.79	1.81	-1.68	-10.88	10.92	-251.82	256.84	-310.70	316.65	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.981	0.21	0.21
	U_{14}–L_{14}	-79.54	88.71	0.40	-0.41	-1.24	1.45	0.10	-0.10	-0.37	0.41	5.09	-5.25	-15.86	18.53	1.18	-1.21	-4.46	4.87	-66.80	108.49	-124.02	139.40	21.5	21.54	21.54	33.27	3	987.9	1.54	1098	1.5	1066.2	-0.890	0.24	0.24
	L_{14}–U_{15}	-54.54	54.68	-0.46	0.46	1.24	-1.29	0.00	0.00	0.37	-0.41	-7.17	7.17	-17.62	17.86	1.18	-1.18	-3.61	3.61	-74.39	74.56	-82.57	82.74	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.544	0.40	0.40
	U_{15}–L_{15}	-4.54	12.92	0.60	-0.56	-0.92	1.00	0.13	-0.13	-0.17	0.21	7.60	-7.14	-11.69	13.98	1.51	-1.60	-2.09	2.92	-3.98	11.51	-21.60	34.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.613	0.35	0.35
	L_{15}–U_{16}	27.52	-27.99	0.56	-0.57	-0.44	0.52	0.10	-0.12	-0.04	0.05	12.69	-12.43	-5.63	6.69	1.22	-1.39	-0.43	0.60	51.49	-52.54	28.45	27.68	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.980	0.21	0.21
	U_{16}–L_{16}	59.94	-69.39	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	0.00	0.00	80.71	-94.15	105.91	-118.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-1.000	0.00	0.00
	L_{16}–U_{17}	130.31	-141.80	-0.20	0.18	-1.98	-2.06	0.00	0.00	-0.47	-0.50	-2.58	2.24	25.35	-26.32	0.00	0.00	0.58	-0.94	166.05	-181.43	-202.36	-218.56	20.8	20.80	20.67	34.64	5	1037.5	1.67	1143	1.5	1029.6	-0.925	0.23	0.23
	U_{17}–L_{17}	216.90	-221.45	0.01	0.00	2.75	-2.82	0.00	0.00	0.65	-0.66	3.51	-3.51	-36.08	36.08	0.00	0.00	0.80	-0.81	276.50	-282.22	337.29	-343.32	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.880	0.25	0.25
	L_{17}–U_{18}	193.18	-200.19	-0.16	0.24	2.37	-2.48	0.00	0.00	-2.10	3.07	30.22	-30.23	0.00	0.00	0.00	0.00	8.03	-8.10	248.40	-256.26	290.41	-301.47	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0	-0.963	0.21	0.21
	U_{18}–L_{18}	194.78	-194.55	0.30	0.36	2.19	-2.28	0.00	0.00	0.65	-0.65	-3.77	4.59	27.94	-29.12	0.00	0.00	0.89	-1.06	248.31	-246.95	289.54	-290.77	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0	-0.996	0.20	0.20
	L_{18}–U_{19}	177.10	-170.02	-0.48	0.47	-2.00	1.92	0.00	0.00	-0.59	0.56	7.08	-6.22	-25.50	25.50	0.00	0.00	0.00	0.00	225.60	-216.53	263.19	-253.65	43.0	43.01	43.24	43.16	15.6	1479.6	1.60	2266	1.5	2129.0	-0.955	0.22	0.22
	U_{19}–L_{19}	231.65	-230.62	-0.77	0.78	2.69	-1.97	0.07	-0.12	0.72	-0.68	-9.77	9.97	26.69	-25.16	0.89	-1.38	8.62	-8.14	288.44	-286.85	347.04	257.66	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	0.743	0.90	0.90
	L_{19}–U_{20}	26.62	-29.21	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	32.38	-35.37	38.97	112.60	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.707	0.37	0.37
	U_{20}–L_{20}	-220.23	219.22	0.17	-0.13	-2.69	2.66	0.02	-0.03	-0.80	0.75	2.11	-1.63	-33.96	33.57	0.19	0.27	-9.54	8.95	-281.33	280.36	-330.45	328.63	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.994	0.20	0.20
	L_{20}–U_{21}	-182.78	181.59	0.33	-0.33	-2.23	2.20	0.04	-0.04	-0.66	0.62	4.36	-3.35	-28.19	27.81	0.39	0.56	-7.91	7.41	-233.40	-232.07	-274.01	-272.41	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_{21}–L_{21}	-182.78	181.59	0.43	-0.42	-2.80	3.00	0.07	-0.08	-0.77	0.78	6.48	-5.24	-36.51	37.91	0.58	0.80	-9.88	9.28	-230.47	-229.25	-283.50	-285.20	42.7	42.74	42.74	65.30	9	1389.8	1.53	2155	1.5	2115.6	-0.994	0.20	0.20
	L_{21}–U_{22}	-159.35	160.90	0.52	-0.53	-2.22	2.72	0.00	0.00	-0.74	0.76	6.62	-6.64	-26.46	27.35	0.00	0.00	-8.84	9.07	-196.55	204.43	-243.52	257.64	38.8	38.83	38.83	59.23	6	1262.4	1.53	1993	1.5	1922.1	-0.943	0.22	0.22
	U_{22}–L_{22}	216.90	-221.45	0.01	0.00	2.75	-2.82	0.00	0.00	0.65	-0.66	3.51	-3.51	-36.08	36.08	0.00	0.00	0.80	-0.81	276.50	-282.22	337.29	-343.32	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.880	0.25	0.25
	L_{22}–U_{23}	-99.51	63.36	0.40	-0.40	-1.07	1.23	0.00	0.00	-0.34	0.35	5.02	-5.06	-13.48	15.00	0.00	0.00	-4.02	4.24	-70.83	75.79	-94.89	102.52	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.926	0.23	0.23
	U_{23}–L_{23}	37.52	-40.64	-0.49	0.50	1.37	-1.52	0.00	0.00	0.44	-0.49	-1.19	1.19	13.84	-14.84	0.00	0.00	0.49	-0.61	50.04	-54.19	68.71	-74.41	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.813	0.27	0.27
	L_{23}–U_{24}	4.56	-5.01	-0.09	0.11	-0.07	0.06	0.00	0.00	-0.07	0.09	-1.14	1.39	-0.85	0.77	0.00	0.00	-0.89	1.06	4.45	4.61	-4.13	-5.51	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.877	0.25	0.25
	U_{24}–L_{24}	28.89	-55.09	0.43	0.45	1.66	-1.68	-0.05	0.05	0.49	-0.48	-2.19	2.18	21.26	-20.61	-0.61	0.61	4.75	-4.93	84.50	-88.91	118.29	-123.62	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.957	0.22	0.22
	L_{24}–U_{25}	70.77	-74.09	-0.45	0.45	1.60	-1.66	-0.05	0.05	0.48	-0.48	-5.73	5.69	22.23	-21.01	-0.61	0.61	4.75	-4.93	84.50	-88.91	118.29	-123.62	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.957	0.22	0.22
	U_{25}–L_{25}	104.65	-105.00	-0.43	0.41	1.96	-1.92	-0.06	0.06	0.52	-0.51	-5.39	5.19	24.72	-24.29	-0.66	0.70	6.19	-6.12	-129.04	-129.75	168.18	168.18	18.7	18.71	18.61	31.48	8	970.0	1.68	1339	1.5	926.1	-0.999	0.20	0.20
	L_{25}–U_{26}	178.79	-179.72	-0.48	0.47	2.27	-2.26	-0.07	0.07	0.74	-0.73	-7.47	7.47	27.37	-27.37	-0.76	0.76	7.68	-7.68	213.37	-213.37	276.19	276.19	18.7	18.71	18.61	31.48	8	970.0	1.68	1339	1.5	926.1	-0.999	0.20	0.20
	U_{26}–L_{26}	189.58	-191.05	-0.27	0.33	2.57	-3.01	-0.06	0.05	0.80	-0.81	-3.36	4.17	37.55	-38.03	-0.72	0.65	9.58	-9.77	242.08	-242.95	295.26	-297.80	42.7	42.74	42.74	65.30	9	1389.6	1.53	2155	1.5	2115.6	-0.951	0.25	0.25
	L_{26}–U_{27}	53.53	-57.71	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	67.66	-72.82	82.66	89.01	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-1.000	0.00	0.00
	U_{27}–L_{27}	207.01	-210.59	-0.81	0.82	2.28	-2.17	0.00	0.00	0.81	-0.81	-10.26	10.49	28.76	-27.35	0.00	0.00	0.72	-0.71	255.77	-260.24	306.50	-309.31	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.991	0.20	0.20
	L_{27}–U_{28}	54.68	-58.85	-0.13	0.13	0.44	-0.51	-0.02	0.02	0.13	-0.13	-1.37	1.34	19.60	-19.60	0.00	0.00	-1.37	1.37	69.02	-74.29	84.32	84.32	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-1.000	0.00	0.00
	U_{28}–L_{28}	-251.15	245.11	0.26	-0.24	-2.68	2.57	-0.03	0.06	-0.81	0.77	3.33	-3.15	-34.28	32.27	-0.30	0.70	-9.76	9.25	-322.16	314.60	-371.06	361.24	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.974	0.21	0.21
	L_{28}–U_{29}	-185.39	176.08	0.19	-0.23	2.13	2.36	0.00	0.00	-0.56	0.56	2.39	-3.74	-27.21	30.09	0.00	0.00	-7.24	6.74	-237.90	226.64	-278.38	270.62	43.2	43.24	43.16	70.66	10	1516.6	1.63	2332	1.5	2140.4	-0.979	0.21	0.21
	U_{29}–L_{29}	54.68	58.85	-0.13	0.13	0.44	0.51	0.02	-0.02	0.13	0.13	1.37	1.34	19.60	19.60	0.00	0.00	1.37	1.37	69.02	74.29	84.32	84.32	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-1.000	0.00	0.00
	L_{29}–U_{30}	-185.34	192.19	0.04	0.01	-2.28	2.49	0.00	0.00	-0.64	0.64	0.47	0.09	-29.18	31.84	0.00	0.00	-7.63	7.72	-240.32	249.97	-278.87	291.24	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0	-0.958	0.22	0.22
	U_{30}–L_{30}	-116.39	129.36	0.21	-0.13	-1.99	1.58	0.00	0.00	-0.42	0.45	2.72	-2.64	-17.78	20.23	0.00	0.00	-4.99	5.40	-147.77	160.04	-174.43	194.46	26.8	26.85	26.85	41.24	7	1037.5	1.67	1143	1.5	1029.6	-0.897	0.24	0.24
	L_{30}–U_{31}	-52.79	62.48	-0.12	0.15	-0.42	0.47	0.00	0.00	-0.18	0.20	-1.52	1.85	-10.40	12.04	0.00	0.00	-2.18	2.58	-70.61	83.63	-75.66	89.04	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.892	0.26	0.26
	U_{31}–L_{31}	-19.17	20.05	-0.45	0.45	1.60	-1.66	-0.05	0.05	0.48	-0.48	-5.73	5.69	22.23	-21.01	-0.61	0.61	4.75	-4.93	-40.60	-41.58	-51.93	-52.99	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.877	0.25	0.25
	L_{31}–U_{32}	18.83	-25.55	-0.60	0.57	1.39	-1.50	-0.14	0.14	0.22	-0.25	-7.61	7.28	17.78	-19.14	-1.67	1.73	2.65	-3.02	14.58	-23.75	47.60	-58.10	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.879	0.27	0.27
	U_{32}–L_{32}	95.02	-96.90	-0.38	0.39	1.50	-1.57	-0.10	0.10	0.37	-0.40	-4.88	4.93	19.15	-20.02	-1.16	1.16	4.48	-4.75	-110.68	-119.56	-141.93	-152.09	21.5	21.54	21.54	33.27	3	987.9	1.54	1098	1.5	1066.2	-0.934	0.23	0.23
	L_{32}–U_{33}	77.27	-183.34	0.07	-0.07	1.64	-1.70	-0.01	0.01	0.05	-0.05	-0.97	0.97	-15.46	15.46	0.00	0.00	-0.97	0.97	-84.26	-197.34	248.37	248.37	38.8	38.83	38.83	59.23	6	1262.4	1.53	1993	1.5	1922.1	-0.997	0.20	0.20
	L_{33}–U_{34}	189.59	-202.30	-0.47	0.45	2.33	-2.37	-0.12	0.11	0.78	-0.81	-8.98	8.80	29.79	-30.32	1.45	-1.34	9.40	-9.72	-238.70	-255.45	-286.20	-302.40	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.943	0.22	0.22
	U_{34}–L_{34}	214.89	-270.10	-0.28	0.42	1.93	-2.46	-0.06	0.10	0.72	-0.93	-3.59	5.30	24.68	-31.44	-0.67	1.15	8.59	-11.12	-274.69	-344.23	322.62	224.02	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.798	0.28	0.28
	L_{35}–U_{36}	29.26	-29.26	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	0.00	0.00	0.00	34.96	-34.96	40.26	40.26	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-1.000	0.00	0.00
	U_{36}–L_{36}	28.09	-38.34	-0.49	0.47	1.62	-1.58	-0.15	0.16	0.50	-0.53	-6.59	6.29	21.59	-21.11	-1.84	1.87	3.94	-4.32	27.95	-41.68	72.30	0.86	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.012	0.60	0.60
	L_{36}–U_{37}	78.23	-95.55	-0.31	0.45	1.32	-1.66	-0.15	0.17	0.56	-0.71	-4.11	5.99	17.67	-22.14	-1.75	2.06	6.67	-8.56	94.08	-113.75	124.68	-153.00	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.815	0.27	0.27

M_y Information

YY Axis Moments from STAAD

| Location | Member | Dead Load

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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

M_7 Information

Location		Member	ZZ Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load 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_{fc} (in^3)	Z_c (in^3)	I (in^4)	$I_{c/n}$ (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term = F_y*S_fc	M_n (k-in)	YY Axis Moments from STAAD: Equivalent Mom. Factor a	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 (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_{req} (in^3)	S_{fc} (in^3)	S_{ft} (in^3)	Z_f (in^3)	$I_{f/n}$ (in^4)	Shape Factor	M_p (k-in)	F_{cm} (ksi)	Formula 1.8 Term = F_y*S_ft	M_n (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(x)}$	$C_{m(y)}$	Pass	Axial Force (k)	Moment (k-in)	Total	Pass	Axial Force (k)	Moment (k-in)	Total	Pass
Structure 1		U_0-L_1	3.65	-1.42	-0.29	0.30	-0.02	-0.08	0.15	0.01	-0.03	-0.02	-3.89	-4.06	-0.28	-0.11	1.75	0.12	-0.34	-0.23	-0.31	0.44	4.38	-3.28	15.6	15.63	15.58	25.96	5	804.0	1.66	857	1.5	773.7	-0.749	0.30	0.30	-84.92	-28.02	-2.45	-4.44	1.54	1.53	-1.09	-0.56	0.65	0.50	-32.73	-69.29	20.51	20.39	-16.17	-8.33	8.12	7.42	-152.95	-113.51	-83.74	-9.93	100.5	100.60	150.48	126.29	66.1	1.20	3970	144	0.94257776	3126.1	0.742	0.90	0.90	0.90	0.256	0.044	0.30	Yes	0.165	0.524	0.18	Yes	—	—	—

Axial AB Operating

Operating Loads - 3F1

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			-----	-542.97	-180	57	8	-852	8	-10	-40	102	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.255	1.00	Yes	0.732	0.203	0.94	Yes	1.00	**4.32**
		U_1 - U_2			-----	-563.09	-63	26	-192	-824	-7	-41	-47	-140	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.228	1.00	Yes	0.759	0.196	0.96	Yes	1.00	**2.68**
		U_2 - U_3			-----	-598.05	-140	201	-534	-553	5	27	5	225	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.181	1.00	Yes	0.806	0.131	0.94	Yes	1.00	**2.83**
		U_3 - U_4			248.17	-539.39	34	243	-259	-764	22	38	161	33	0.284	0.209	0.50	Yes	0.195	0.143	0.34	Yes	0.734	0.257	1.00	Yes	0.727	0.182	0.91	Yes	1.00	**3.24**
		U_4 - U_5			266.48	-569.02	85	231	-974	-239	25	-26	41	-64	0.305	0.243	0.55	Yes	0.210	0.167	0.38	Yes	0.774	0.217	1.00	Yes	0.767	0.232	1.00	Yes	1.00	**3.44**
		U_5 - U_6			582.68	-----	209	421	-1113	101	-124	-57	372	50	0.668	0.327	1.00	Yes	0.450	0.214	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.05**
		U_6 - U_7			804.57	-----	350	213	-751	-103	-273	-111	456	-94	0.769	0.222	1.00	Yes	0.538	0.153	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.16**
		U_7 - U_8			983.61	-----	41	1109	-1383	1780	-449	-12	259	-111	0.682	0.315	1.00	Yes	0.475	0.215	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.20**
		U_8 - U_9			912.03	-----	1182	-115	1223	-971	-379	-212	-275	159	0.747	0.252	1.00	Yes	0.511	0.171	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.01**
		U_9 - U_{10}			672.51	-----	235	281	150	-750	-156	22	117	612	0.729	0.266	1.00	Yes	0.494	0.179	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.49**
		U_{10} - U_{11}			-----	-596.36	307	-90	149	-1046	32	92	308	238	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.212	0.99	Yes	0.761	0.234	1.00	Yes	1.00	**4.03**
		U_{11} - U_{12}			-----	-872.40	217	-116	96	-831	101	406	247	620	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.174	1.00	Yes	0.818	0.138	0.96	Yes	1.00	**3.21**
		U_{12} - U_{13}			-----	-1177.17	-7	-243	-115	-1055	346	215	595	419	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.200	1.00	Yes	0.786	0.145	0.94	Yes	1.00	**3.07**
		U_{13} - U_{14}			-----	-1304.84	-156	-392	-403	-1631	225	181	398	526	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.241	1.00	Yes	0.748	0.180	0.93	Yes	1.00	**2.79**
		U_{14} - U_{15}			-----	-1297.04	-284	-257	-1532	-745	219	33	592	185	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.247	1.00	Yes	0.744	0.169	0.92	Yes	1.00	**2.75**
		U_{15} - U_{16}			-----	-1371.85	-157	-433	-1054	-789	89	37	463	195	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.199	1.00	Yes	0.786	0.116	0.91	Yes	1.00	**2.99**
		U_{16} - U_{17}			-----	-1306.43	-346	-209	-1591	-635	141	-52	625	78	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.235	1.00	Yes	0.749	0.176	0.93	Yes	1.00	**3.20**
		U_{17} - U_{18}			-----	-1019.33	-214	-70	-1050	-71	1	-62	420	15	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.189	1.00	Yes	0.798	0.171	0.97	Yes	1.00	**3.11**
		U_{18} - U_{19}			-----	-710.51	-202	-69	-858	-110	28	-121	398	-159	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.187	1.00	Yes	0.799	0.173	0.98	Yes	1.00	**3.29**
		U_{19} - U_{20}			-----	-570.38	-270	307	-1743	1349	-68	-131	352	-519	-----	-----	-----	-----	-----	-----	-----	-----	0.648	0.176	0.83	Yes	0.642	0.351	1.00	Yes	1.00	**7.96**
	Structure 2	U_0 - U_1			-----	-615.55	-86	-103	634	-1586	3	-70	-30	149	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.226	0.96	Yes	0.727	0.269	1.00	Yes	1.00	**7.83**
		U_1 - U_2			-----	-802.06	-46	-196	-25	-1328	-70	-220	-61	-268	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.212	1.00	Yes	0.774	0.201	0.98	Yes	1.00	**4.14**
		U_2 - U_3			-----	-1109.80	-95	-286	-189	-1805	-29	362	-2	538	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.205	1.00	Yes	0.788	0.184	0.98	Yes	1.00	**3.83**
		U_3 - U_4			-----	-1305.19	-425	-423	-655	-1668	523	892	398	502	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.249	1.00	Yes	0.743	0.149	0.90	Yes	1.00	**3.39**
		U_4 - U_5			-----	-1422.61	-462	-392	-706	-2213	760	301	451	324	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.262	1.00	Yes	0.730	0.183	0.92	Yes	1.00	**3.27**
		U_5 - U_6			-----	-1510.36	-435	-27	-1198	-1611	188	-203	370	490	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.216	1.00	Yes	0.775	0.134	0.91	Yes	1.00	**3.41**
		U_6 - U_7			-----	-1314.77	-301	-119	-1200	-1679	-126	-180	284	133	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.239	1.00	Yes	0.749	0.150	0.90	Yes	1.00	**3.14**
		U_7 - U_8			-----	-1348.55	-205	-192	-1814	-822	-101	-179	215	73	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.221	1.00	Yes	0.768	0.162	0.93	Yes	1.00	**3.29**
		U_8 - U_9			-----	-1152.86	-297	85	-1611	-573	-84	-193	385	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.209	1.00	Yes	0.782	0.171	0.96	Yes	1.00	**3.25**
		U_9 - U_{10}			-----	-926.01	-112	300	-1565	-287	-126	-145	249	8	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.193	1.00	Yes	0.799	0.190	0.99	Yes	1.00	**3.59**
		U_{10} - U_{11}			449.68	-769.49	143	344	-1460	-250	-165	-159	455	-9	0.380	0.261	0.65	Yes	0.258	0.170	0.43	Yes	0.769	0.226	1.00	Yes	0.765	0.206	0.98	Yes	1.00	**5.04**
		U_{11} - U_{12}			793.64	-----	222	522	-1760	-87	-337	-122	608	75	0.670	0.322	1.00	Yes	0.450	0.215	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.39**
		U_{12} - U_{13}			1058.32	-----	422	132	-1671	-829	-394	-367	692	-174	0.715	0.276	1.00	Yes	0.509	0.188	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.11**
		U_{13} - U_{14}			1491.17	-----	165	2103	-340	1388	-942	-439	-414	-492	0.733	0.259	1.00	Yes	0.519	0.171	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.28**
		U_{14} - U_{15}			1369.86	-----	2709	121	1230	-27	-1020	-802	-554	-486	0.674	0.320	1.00	Yes	0.477	0.211	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.40**
		U_{15} - U_{16}			1266.68	-----	139	476	-942	-1374	-629	-408	-211	859	0.766	0.229	1.00	Yes	0.545	0.155	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.40**
		U_{16} - U_{17}			971.23	-----	625	288	723	-1779	-188	-19	537	438	0.716	0.280	1.00	Yes	0.476	0.184	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.86**
		U_{17} - U_{18}			661.94	-----	423	293	167	-1205	12	259	247	835	0.664	0.327	1.00	Yes	0.442	0.216	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.10**
		U_{18} - U_{19}			515.17	-612.80	496	212	-74	-1220	113	120	422	473	0.517	0.276	0.80	Yes	0.339	0.176	0.52	Yes	0.728	0.263	1.00	Yes	0.724	0.207	0.94	Yes	1.00	**5.37**
		U_{19} - U_{20}			273.33	-693.96	284	192	-66	-1179	31	23	246	515	0.256	0.258	0.52	Yes	0.170	0.169	0.34	Yes	0.770	0.220	1.00	Yes	0.766	0.189	0.96	Yes	1.00	**4.07**
		U_{20} - U_{21}			-----	-841.18	155	-28	-256	-1246	-9	-53	337	318	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.220	1.00	Yes	0.768	0.180	0.95	Yes	1.00	**3.99**
		U_{21} - U_{22}			-----	-785.91	-45	-3	-703	-1268	1	67	162	391	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.275	1.00	Yes	0.717	0.184	0.91	Yes	1.00	**3.48**
		U_{22} - U_{23}			-----	-787.91	55	-47	-1274	-588	62	-3	445	132	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.268	1.00	Yes	0.719	0.184	0.91	Yes	1.00	**3.49**
		U_{23} - U_{24}			-----	-823.71	-57	126	-1238	-571	-22	-52	359	113	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.239	1.00	Yes	0.752	0.179	0.94	Yes	1.00	**3.79**
		U_{24} - U_{25}			237.97	-707.07	156	247	-1258	-310	-49	-85	430	-54	0.223	0.259	0.49	Yes	0.148	0.170	0.32	Yes	0.785	0.207	1.00	Yes	0.780	0.201	0.99	Yes	1.00	**3.78**
		U_{25} - U_{26}			454.29	-641.83	179	425	-1146	103	-150	-76	313	-17	0.456	0.240	0.70	Yes	0.299	0.153	0.46	Yes	0.763	0.237	1.00	Yes	0.758	0.194	0.96	Yes	1.00	**4.87**
		U_{26} - U_{27}			676.00	-----	323	379	-1453	-115	-225	-71	505	-91	0.679	0.321	1.00	Yes	0.452	0.212	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.78**
		U_{27} - U_{28}			942.72	-----	287	525	-1926	99	-340	-14	526	105	0.695	0.297	1.00	Yes	0.462	0.196	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.34**
		U_{28} - U_{29}			1186.90	-----	470	159	-1984	-639	-368	-258	649	-121	0.718	0.280	1.00	Yes	0.510	0.189	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.74**
		U_{29} - U_{30}			1505.59	-----	260	2104	-57	749	-854	-461	-268	-20	0.740	0.253	1.00	Yes	0.524	0.167	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.44**
		U_{30} - U_{31}			1467.60	-----	2434	23	903	-203	-703	-597	-203	-57	0.722	0.273	1.00	Yes	0.511	0.180	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.78**
		U_{31} - U_{32}			1083.06	-----	47	404	-196	-1386	-379	-192	135	907	0.731	0.261	1.00	Yes	0.521	0.179	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.23**
		U_{32} - U_{33}			828.23	-----	446	241	239	-1592	-68	18	606	598	0.700	0.298	1.00	Yes	0.470	0.199	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.32**
		U_{33} - U_{34}			649.92	-693.85	353	231	-444	-1393	33	270	403	1067	0.549	0.327	0.88	Yes	0.374	0.215	0.59	Yes	0.694	0.301	1.00	Yes	0.690	0.196	0.89	Yes	1.00	**6.28**
		U_{34} - U_{35}			-----	-870.32	315	38	-14	-1672	215	173	669	573	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.239	1.00	Yes	0.751	0.203	0.96	Yes	1.00	**4.57**
		U_{35} - U_{36}			-----	-1118.70	129	-161	-325	-1578	119	96	440	629	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.232	1.00	Yes	0.759	0.168	0.93	Yes	1.00	**4.11**
		U_{36} - U_{37}			-----	-1291.78	-83	14	-918	-1946	92	3	382	333	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.254	1.00	Yes	0.736	0.173	0.91	Yes	1.00	**4.04**
		U_{37} - U_{38}			-----	-1266.59	91	-177	-1815	-1079	51	18	382	303	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.266	1.00	Yes	0.721	0.162	0.89	Yes	1.00	**3.92**
		U_{38} - U_{39}			-----	-1445.45	72	-310	-1837	-1647	135	-35	750	247	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.245	1.00	Yes	0.742	0.152	0.90	Yes	1.00	**3.99**
		U_{39} - U_{40}			-----	-1388.02	-228	-341	-2409	-1233	36	-34	469	214	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.276	1.00	Yes	0.713	0.200	0.92	Yes	1.00	**3.76**
		U_{40} - U_{41}			-----	-1299.94	-255	-339	-1950	-972	48	-117	581	50	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.245	1.00	Yes	0.740	0.174	0.92	Yes	1.00	**3.88**
		U_{41} - U_{42}			-----	-1147.33	-152	-131	-1434	-103	-67	-101	393	22	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.173	1.00	Yes	0.814	0.146	0.97	Yes	1.00	**4.55**
		U_{42} - U_{43}			-----	-837.77	-134	-59	-1040	-91	-39	-95	348	-130	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.178	1.00	Yes	0.809	0.158	0.97	Yes	1.00	**4.85**
		U_{43} - U_{44}			-----	-596.82	-15	-211	-1703	1476	-70	33	201	-425	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.211	0.93	Yes	0.705	0.289	1.00	Yes	1.00	**8.00**
	Structure 3	U_0 - U_1			-----	-613.46	-1	-165	201	-1499	7	-78	281	75	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.262	0.96	Yes	0.690	0.302	1.00	Yes	1.00	**8.52**
		U_1 - U_2			-----	-714.69	-32	-142	111	-848	-63	-232	-43	-345	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.186	1.00	Yes	0.804	0.171	0.98	Yes	1.00	**3.67**
		U_2 - U_3			-----	-1016.23	-71	-168	73	-1057	-52	335	-4	481	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.190	1.00	Yes	0.795	0.172	0.97	Yes	1.00	**3.44**
		U_3 - U_4			-----	-1291.25	-189	-314	-463	-1471	491	823	460	694	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.242	1.00	Yes	0.740	0.162	0.91	Yes	1.00	**3.46**
		U_4 - U_5			-----	-1345.06	-399	-69	-466	-1072	686	229	475	281	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.215	1.00	Yes	0.771	0.118	0.89	Yes	1.00	**3.26**
		U_5 - U_6			-----	-1311.99	-188	-282	-497	-1681	141	-147	317	319	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.231	1.00	Yes	0.752	0.185	0.94	Yes	1.00	**3.04**
		U_6 - U_7			-----	-1308.84	-381	-108	-1706	-565	-86	-185	378	48	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.234	1.00	Yes	0.750	0.188	0.94	Yes	1.00	**3.03**
		U_7 - U_8			-----	-1186.47	-169	-12	-1068	-359	-56	-173	305	3	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.191	1.00	Yes	0.792	0.147	0.94	Yes	1.00	**3.09**
		U_8 - U_9			-----	-894.26	-103	175	-844	-41	-30	-154	305	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.146	1.00	Yes	0.839	0.140	0.98	Yes	1.00	**2.94**
		U_9 - U_{10}			-----	-611.03	-81	223	-928	-8	-96	-105	258	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.205	1.00	Yes	0.780	0.208	0.99	Yes	1.00	**3.44**
		U_{10} - U_{11}			625.08	-464.58	281	220	-1002	-50	-220	-134	558	-162	0.678	0.314	1.00	Yes	0.459	0.211	0.67	Yes	0.598	0.200	0.80	Yes	0.593	0.224	0.82	Yes	1.00	**6.22**
		U_{11} - U_{12}			846.48	-----	-28	946	-1260	1475	-416	-107	222	-322	0.694	0.298	1.00	Yes	0.474	0.203	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.06**
		U_{12} - U_{13}			989.48	-----	1122	106	1718	-1355	-514	-477	-261	145	0.686	0.312	1.00	Yes	0.478	0.213	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.74**
		U_{13} - U_{14}			863.71	-----	227	434	-278	-482	-338	-219	-143	520	0.826	0.174	1.00	Yes	0.577	0.120	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.79**
		U_{14} - U_{15}			624.01	-----	412	284	319	-955	-122	-40	321	144	0.715	0.281	1.00	Yes	0.482	0.184	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.07**
		U_{15} - U_{16}			381.61	-561.83	302	210	-129	-963	-57	137	117	440	0.437	0.303	0.75	Yes	0.300	0.208	0.51	Yes	0.764	0.232	1.00	Yes	0.758	0.229	0.99	Yes	1.00	**4.04**
		U_{16} - U_{17}			375.34	-560.39	368	112	-748	-452	83	74	407	214	0.430	0.247	0.68	Yes	0.295	0.169	0.47	Yes	0.763	0.229	1.00	Yes	0.756	0.178	0.94	Yes	1.00	**4.01**
		U_{17} - U_{18}			181.63	-568.52	289	-77	-593	-436	-40	71	288	211	0.208	0.190	0.40	Yes	0.140	0.124	0.27	Yes	0.774	0.217	1.00	Yes	0.767	0.141	0.91	Yes	1.00	**3.28**
		U_{18} - U_{19}			-----	-543.08	140	-43	-679	-265	-16	26	444	15	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.254	1.00	Yes	0.732	0.161	0.90	Yes	1.00	**3.18**
		U_{19} - U_{20}			-----	-554.33	159	-284	-1042	766	-108	100	330	-302	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.161	0.92	Yes	0.748	0.248	1.00	Yes	1.00	**5.30**

Operating Loads - 3F1

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

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

North Truss - Lower Chord

			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																		
	Structure 1	L_0 - L_1			248.29	-----	178	-494	1853	-1901	-48	-175	-53	-193	0.380	0.612	1.00	Yes	0.224	0.375	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**33.91**
		L_1 - L_2			441.88	-----	24	-708	154	-52	-508	-167	-31	-28	0.676	0.322	1.00	Yes	0.413	0.212	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.44**
		L_2 - L_3			681.11	-----	-782	-641	-25	10	-132	44	-32	19	0.784	0.210	1.00	Yes	0.453	0.126	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.54**
		L_3 - L_4			685.77	-----	-718	-381	77	220	215	133	52	68	0.789	0.208	1.00	Yes	0.469	0.134	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.44**
		L_4 - L_5			-----	-527.60	-717	-80	115	607	-245	572	58	39	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.187	1.00	Yes	0.804	0.190	1.00	Yes	1.00	**4.48**
		L_5 - L_6			-----	-726.17	-475	-54	164	596	271	85	75	129	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.148	1.00	Yes	0.838	0.132	0.97	Yes	1.00	**4.38**
		L_6 - L_7			-----	-1109.53	-660	-442	219	151	134	790	123	-120	-----	-----	-----	-----	-----	-----	-----	-----	0.903	0.095	1.00	Yes	0.893	0.104	1.00	Yes	1.00	**6.39**
		L_7 - L_8			-----	-1230.34	3	584	30	1454	-104	-100	-86	-179	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.204	1.00	Yes	0.779	0.192	0.98	Yes	1.00	**5.53**
		L_8 - L_9			-----	-1303.63	588	-31	1159	-21	-167	-171	-3	-175	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.160	1.00	Yes	0.826	0.153	0.98	Yes	1.00	**6.41**
		L_9 - L_{10}			-----	-1093.05	-124	-730	139	149	714	184	44	141	-----	-----	-----	-----	-----	-----	-----	-----	0.889	0.097	0.99	Yes	0.880	0.115	1.00	Yes	1.00	**7.64**
		L_{10} - L_{11}			-----	-548.68	-14	-588	521	-9	143	113	137	45	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.100	0.95	Yes	0.836	0.156	1.00	Yes	1.00	**5.08**
		L_{11} - L_{12}			587.10	-----	77	-715	467	-182	262	28	81	-26	0.760	0.235	1.00	Yes	0.456	0.153	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		L_{12} - L_{13}			1068.84	-----	-575	-697	160	-76	170	263	26	34	0.843	0.154	1.00	Yes	0.539	0.093	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.01**
		L_{13} - L_{14}			1269.34	-----	-152	-1543	343	-456	382	93	14	0	0.747	0.244	1.00	Yes	0.484	0.150	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		L_{14} - L_{15}			1580.97	-----	-1680	-942	-416	-15	-141	350	-85	-88	0.772	0.227	1.00	Yes	0.502	0.138	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.63**
		L_{15} - L_{16}			1557.14	-----	-907	-1708	-219	-371	-40	-351	-118	-57	0.761	0.230	1.00	Yes	0.488	0.135	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.28**
		L_{16} - L_{17}			1179.86	-----	-1379	-454	-433	96	-339	469	-104	-46	0.746	0.244	1.00	Yes	0.484	0.151	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.27**
		L_{17} - L_{18}			904.45	-----	-965	-261	-283	153	149	-184	-128	-62	0.788	0.210	1.00	Yes	0.504	0.126	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.84**
		L_{18} - L_{19}			483.45	-----	-501	340	-527	613	-92	281	-329	-21	0.740	0.252	1.00	Yes	0.500	0.160	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.11**
		L_{19} - L_{20}			201.64	-477.02	-258	63	-460	263	222	50	-65	-14	0.309	0.184	0.50	Yes	0.188	0.122	0.32	Yes	0.866	0.123	0.99	Yes	0.859	0.138	1.00	Yes	1.00	**6.69**
	Structure 2	L_0 - L_1			317.55	-----	206	-803	1106	-2605	22	76	-146	-508	0.386	0.613	1.00	Yes	0.229	0.394	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**28.76**
		L_1 - L_2			516.51	-----	379	-1273	184	-251	-632	-194	-41	23	0.627	0.363	1.00	Yes	0.373	0.230	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.49**
		L_2 - L_3			998.11	-----	-415	-1206	-38	-175	101	333	70	72	0.787	0.210	1.00	Yes	0.516	0.126	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.29**
		L_3 - L_4			1288.45	-----	-566	-1696	31	-440	466	201	153	81	0.757	0.236	1.00	Yes	0.510	0.147	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.20**
		L_4 - L_5			1719.03	-----	-1346	-1852	-387	-261	78	274	92	196	0.801	0.193	1.00	Yes	0.531	0.115	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.81**
		L_5 - L_6			1797.14	-----	-1527	-2328	-149	-403	309	34	109	-16	0.771	0.226	1.00	Yes	0.518	0.138	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.18**
		L_6 - L_7			1759.64	-----	-2437	-1644	-454	-124	21	536	-161	46	0.745	0.247	1.00	Yes	0.495	0.146	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.79**
		L_7 - L_8			1445.06	-----	-1370	-1370	-206	305	44	-152	-131	9	0.829	0.164	1.00	Yes	0.544	0.096	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.02**
		L_8 - L_9			1092.33	-----	-1242	-398	-113	514	-116	723	-29	14	0.764	0.236	1.00	Yes	0.515	0.149	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.10**
		L_9 - L_{10}			843.18	-589.62	-1324	-394	-113	710	291	-171	14	90	0.753	0.247	1.00	Yes	0.438	0.153	0.60	Yes	0.623	0.149	0.78	Yes	0.619	0.212	0.84	Yes	1.00	**6.49**
		L_{10} - L_{11}			-----	-720.25	-850	-76	114	542	-190	556	64	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.115	0.97	Yes	0.846	0.149	1.00	Yes	1.00	**5.57**
		L_{11} - L_{12}			-----	-1045.85	-911	-191	105	997	324	-70	82	238	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.120	0.99	Yes	0.858	0.136	1.00	Yes	1.00	**6.87**
		L_{12} - L_{13}			-----	-1544.60	-374	-184	438	-420	120	-163	200	-145	-----	-----	-----	-----	-----	-----	-----	-----	0.932	0.060	1.00	Yes	0.924	0.044	0.97	Yes	1.00	**10.38**
		L_{13} - L_{14}			-----	-1519.80	-367	1230	-595	2593	-262	-455	-247	-545	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.191	0.97	Yes	0.765	0.226	1.00	Yes	1.00	**6.73**
		L_{14} - L_{15}			-----	-1642.41	1124	-472	1979	-359	-522	-321	-317	-456	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.148	0.99	Yes	0.826	0.173	1.00	Yes	1.00	**9.03**
		L_{15} - L_{16}			-----	-1491.56	-469	-15	-1000	349	-214	96	12	398	-----	-----	-----	-----	-----	-----	-----	-----	0.900	0.088	0.99	Yes	0.892	0.099	1.00	Yes	1.00	**8.50**
		L_{16} - L_{17}			-----	-1160.01	209	-748	1211	121	96	96	404	191	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.145	1.00	Yes	0.845	0.149	1.00	Yes	1.00	**7.10**
		L_{17} - L_{18}			-----	-818.39	139	-825	470	228	208	53	100	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.126	1.00	Yes	0.859	0.132	1.00	Yes	1.00	**5.06**
		L_{18} - L_{19}			-----	-628.89	-169	-653	656	111	230	325	-1	34	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.148	1.00	Yes	0.838	0.127	0.97	Yes	1.00	**4.92**
		L_{19} - L_{20}			626.71	-579.86	-345	-1061	555	229	525	6	57	-44	0.710	0.285	1.00	Yes	0.420	0.179	0.60	Yes	0.778	0.205	0.99	Yes	0.773	0.205	0.98	Yes	1.00	**6.51**
		L_{20} - L_{21}			923.76	-408.91	-963	-1471	509	29	146	429	-89	-93	0.737	0.261	1.00	Yes	0.483	0.157	0.64	Yes	0.386	0.229	0.62	Yes	0.384	0.215	0.60	Yes	1.00	**6.60**
		L_{21} - L_{22}			876.82	-----	-1061	-1696	215	-98	423	99	-89	-26	0.699	0.293	1.00	Yes	0.468	0.184	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.99**
		L_{22} - L_{23}			896.98	-----	-1225	-1499	-158	198	-79	540	-21	3	0.715	0.277	1.00	Yes	0.478	0.175	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.40**
		L_{23} - L_{24}			933.64	-275.58	-1286	-1524	-6	345	270	-78	9	74	0.745	0.252	1.00	Yes	0.488	0.150	0.64	Yes	0.260	0.286	0.55	Yes	0.259	0.222	0.49	Yes	1.00	**6.68**
		L_{24} - L_{25}			565.98	-405.48	-1329	-444	218	339	-288	606	56	0	0.641	0.349	1.00	Yes	0.379	0.220	0.60	Yes	0.544	0.217	0.77	Yes	0.540	0.256	0.80	Yes	1.00	**6.64**
		L_{25} - L_{26}			-----	-622.09	-807	-858	111	680	208	-233	39	124	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.131	0.97	Yes	0.829	0.166	1.00	Yes	1.00	**7.68**
		L_{26} - L_{27}			-----	-798.92	-925	-349	-126	569	-158	578	-187	8	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.147	1.00	Yes	0.839	0.148	0.99	Yes	1.00	**6.47**
		L_{27} - L_{28}			-----	-1167.99	-67	216	-239	1156	88	197	-40	-15	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.119	0.98	Yes	0.851	0.143	1.00	Yes	1.00	**6.94**
		L_{28} - L_{29}			-----	-1586.86	-112	-330	-2	-1	171	-19	-85	16	-----	-----	-----	-----	-----	-----	-----	-----	0.957	0.037	1.00	Yes	0.949	0.033	0.99	Yes	1.00	**7.48**
		L_{29} - L_{30}			-----	-1630.72	-373	806	-462	2001	-65	-130	-10	-59	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.124	0.96	Yes	0.821	0.175	1.00	Yes	1.00	**6.27**
		L_{30} - L_{31}			-----	-1600.22	816	-338	2179	-428	-133	-116	-606	-487	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.166	0.98	Yes	0.805	0.190	1.00	Yes	1.00	**9.97**
		L_{31} - L_{32}			-----	-1569.23	-153	-254	303	-39	-59	73	-384	124	-----	-----	-----	-----	-----	-----	-----	-----	0.947	0.050	1.00	Yes	0.939	0.030	0.97	Yes	1.00	**13.01**
		L_{32} - L_{33}			-----	-1048.17	382	-373	992	157	148	10	-142	-66	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.099	0.97	Yes	0.860	0.135	1.00	Yes	1.00	**9.96**
		L_{33} - L_{34}			-----	-672.65	-127	-1149	403	174	556	129	10	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.163	0.96	Yes	0.790	0.201	1.00	Yes	1.00	**7.41**
		L_{34} - L_{35}			840.39	-587.37	-614	-1121	622	30	313	549	-28	71	0.750	0.245	1.00	Yes	0.437	0.151	0.59	Yes	0.621	0.197	0.82	Yes	0.617	0.179	0.80	Yes	1.00	**8.32**
		L_{35} - L_{36}			1058.86	-----	-309	-1343	353	-42	735	130	101	-41	0.741	0.250	1.00	Yes	0.499	0.158	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.88**
		L_{36} - L_{37}			1339.59	-----	-1059	-1707	221	-15	63	466	-98	13	0.768	0.227	1.00	Yes	0.505	0.134	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.37**
		L_{37} - L_{38}			1740.39	-----	-910	-2843	-62	-370	169	-93	-44	-10	0.737	0.260	1.00	Yes	0.490	0.151	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.32**
		L_{38} - L_{39}			1792.59	-----	-2145	-2127	-302	-176	-43	536	-26	-15	0.769	0.224	1.00	Yes	0.516	0.137	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.66**
		L_{39} - L_{40}			1696.48	-----	-1770	-1896	-202	-308	123	-338	-51	-35	0.791	0.202	1.00	Yes	0.524	0.120	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.90**
		L_{40} - L_{41}			1259.42	-----	-1950	-372	-311	-47	-373	334	-60	-10	0.740	0.258	1.00	Yes	0.498	0.160	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.47**
		L_{41} - L_{42}			1033.03	-----	-1092	-779	-162	-64	208	-111	-28	11	0.814	0.180	1.00	Yes	0.534	0.107	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.75**
		L_{42} - L_{43}			491.80	-----	-1596	349	-381	160	-430	253	-28	32	0.597	0.395	1.00	Yes	0.355	0.253	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.66**
		L_{43} - L_{44}			416.66	-----	-756	311	-1803	791	750	219	306	90	0.506	0.490	1.00	Yes	0.301	0.312	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**24.75**
	Structure 3	L_0 - L_1			433.01	-----	108	-363	672	-993	-32	-144	0	-1	0.663	0.328	1.00	Yes	0.404	0.221	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.59**
		L_1 - L_2			540.07	-----	252	-486	380	-442	-68	39	47	123	0.827	0.171	1.00	Yes	0.559	0.107	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.18**
		L_2 - L_3			878.22	-----	-118	-953	6	-178	182	360	19	5	0.765	0.230	1.00	Yes	0.490	0.139	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.63**
		L_3 - L_4			1187.13	-----	-287	-1383	63	-370	457	214	48	54	0.751	0.244	1.00	Yes	0.487	0.151	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.31**
		L_4 - L_5			1600.72	-----	-1528	-1214	-334	-219	192	362	83	125	0.782	0.210	1.00	Yes	0.502	0.123	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.78**
		L_5 - L_6			1526.93	-----	-752	-1897	-83	-355	304	126	141	77	0.746	0.250	1.00	Yes	0.485	0.151	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.63**
		L_6 - L_7			1311.48	-----	-1300	-593	-405	237	-92	553	-185	17	0.771	0.225	1.00	Yes	0.500	0.139	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.18**
		L_7 - L_8			1048.74	-----	-789	-549	-89	106	195	10	-30	39	0.828	0.163	1.00	Yes	0.529	0.097	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**
		L_8 - L_9			575.99	-----	-568	-132	-174	334	-151	548	-17	45	0.746	0.246	1.00	Yes	0.448	0.158	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.80**
		L_9 - L_{10}			-----	-535.94	-666	-298	6	494	349	140	73	140	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.168	1.00	Yes	0.817	0.176	1.00	Yes	1.00	**6.26**
		L_{10} - L_{11}			-----	-1081.88	-743	-542	-432	764	125	1100	-55	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.881	0.114	1.00	Yes	0.871	0.120	1.00	Yes	1.00	**9.72**
		L_{11} - L_{12}			-----	-1253.77	-40	463	-75	1202	-173	-181	-345	-534	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.191	1.00	Yes	0.794	0.159	0.96	Yes	1.00	**5.69**
		L_{12} - L_{13}			-----	-1249.62	450	-14	1166	-17	-241	-274	-559	-296	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.193	1.00	Yes	0.791	0.154	0.95	Yes	1.00	**6.09**
		L_{13} - L_{14}			-----	-1111.41	-285	-607	-51	282	400	170	-222	122	-----	-----	-----	-----	-----	-----	-----	-----	0.905	0.093	1.00	Yes	0.895	0.095	1.00	Yes	1.00	**5.85**
		L_{14} - L_{15}			-----	-749.39	-26	-291	572	167	56	-47	147	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.121	1.00	Yes	0.865	0.127	1.00	Yes	1.00	**4.25**
		L_{15} - L_{16}			-----	-532.86	32	-641	419	190	150	21	14	-57	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.173	1.00	Yes	0.812	0.170	0.99	Yes	1.00	**3.69**
		L_{16} - L_{17}			654.40	-226.57	-439	-775	319	29	126	358	92	-31	0.753	0.245	1.00	Yes	0.447	0.157	0.61	Yes	0.310	0.230	0.54	Yes	0.307	0.187	0.50	Yes	1.00	**3.76**
		L_{17} - L_{18}			658.31	-----	-824	-669	87	-9	232	-31	3	11	0.757	0.236	1.00	Yes	0.438	0.141	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.88**
		L_{18} - L_{19}			423.64	-----	-903	7	38	5	-140	364	22	-98	0.648	0.349	1.00	Yes	0.396	0.233	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.82**
		L_{19} - L_{20}			190.46	-311.89	-365	233	-1219	951	1024	279	280	77	0.291	0.586	0.88	Yes	0.172	0.353	0.53	Yes	0.566	0.428	1.00	Yes	0.562	0.366	0.93	Yes	1.00	**21.11**

Axial AB Operating

Operating Loads - 3F1

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 - Verticals	Structure 1	$U_0 - L_0$	-----	-331.70	-58	91	-183	230	-27	-9	-453	-145	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.236	0.98	Yes	0.702	0.294	1.00	Yes	1.00	**1.96**						
		$U_1 - L_1$	-----	-342.42	19	-7	-185	206	-5	-1	-619	-231	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.244	1.00	Yes	0.725	0.263	0.99	Yes	1.00	**3.58**						
		$U_2 - L_2$	91.41	-312.80	78	-86	-99	159	50	25	681	278	0.164	0.401	0.57	Yes	0.090	0.220	0.32	Yes	0.684	0.310	1.00	Yes	0.662	0.204	0.87	Yes	1.00	**5.57**						
		$U_3 - L_3$	234.94	-----	233	-231	-125	179	-114	38	945	259	0.423	0.572	1.00	Yes	0.232	0.315	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.79**						
		$U_4 - L_4$	-----	-339.82	150	-151	81	-86	-307	-136	793	226	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.244	1.00	Yes	0.719	0.193	0.92	Yes	1.00	**4.23**						
		$U_5 - L_5$	-----	-424.44	62	-86	223	-257	-25	16	181	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.108	0.88	Yes	0.732	0.261	1.00	Yes	1.00	**3.17**						
		$U_6 - L_6$	-----	-519.23	87	-84	262	-283	-181	-68	361	63	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.146	0.94	Yes	0.745	0.248	1.00	Yes	1.00	**3.05**						
		$U_7 - L_7$	-----	-437.58	134	-150	302	-322	-173	12	235	33	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.144	0.88	Yes	0.675	0.317	1.00	Yes	1.00	**2.26**						
		$U_8 - L_8$	-----	-1146.46	-6	-1	-40	45	-240	-30	1727	401	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.165	1.00	Yes	0.795	0.008	0.81	Yes	1.00	**4.91**						
		$U_9 - L_9$	-----	-667.51	-172	202	-376	435	-398	-179	132	-109	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.149	0.95	Yes	0.754	0.242	1.00	Yes	1.00	**3.60**						
		$U_{10} - L_{10}$	-----	-778.79	-122	104	-275	334	-759	-433	117	-238	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.190	1.00	Yes	0.768	0.173	0.95	Yes	1.00	**4.85**						
		$U_{11} - L_{11}$	-----	-663.62	-121	187	-348	474	-542	-309	-297	-352	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.171	0.97	Yes	0.772	0.220	1.00	Yes	1.00	**4.39**						
		$U_{12} - L_{12}$	-----	-541.02	-95	95	-274	292	-382	-213	359	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.158	0.94	Yes	0.742	0.250	1.00	Yes	1.00	**4.00**						
		$U_{13} - L_{13}$	-----	-394.96	-36	57	-176	212	-179	12	479	69	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.199	1.00	Yes	0.757	0.241	1.00	Yes	1.00	**3.29**						
		$U_{14} - L_{14}$	-----	-324.43	-141	163	-89	98	-29	-21	874	100	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.276	1.00	Yes	0.686	0.208	0.90	Yes	1.00	**4.44**						
		$U_{15} - L_{15}$	144.45	-310.87	-115	98	246	-265	33	128	409	-69	0.260	0.457	0.72	Yes	0.143	0.251	0.40	Yes	0.697	0.173	0.88	Yes	0.658	0.339	1.00	Yes	1.00	**5.02**						
		$U_{16} - L_{16}$	-----	-322.19	20	-30	239	-247	49	-79	289	-144	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.140	0.87	Yes	0.682	0.315	1.00	Yes	1.00	**3.62**						
		$U_{17} - L_{17}$	-----	-438.55	61	-75	214	-237	-120	-113	270	-130	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.133	0.96	Yes	0.757	0.240	1.00	Yes	1.00	**2.90**						
		$U_{18} - L_{18}$	-----	-535.25	145	-151	422	-436	-132	-122	325	-150	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.105	0.89	Yes	0.744	0.247	1.00	Yes	1.00	**3.02**						
		$U_{19} - L_{19}$	-----	-643.64	171	-170	535	-521	-116	-45	256	-101	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.114	0.92	Yes	0.749	0.248	1.00	Yes	1.00	**3.55**						
		$U_{20} - L_{20}$	-----	-571.30	160	-260	334	-482	33	4	712	93	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.240	1.00	Yes	0.665	0.224	0.89	Yes	1.00	**2.49**						
	Structure 2	$U_0 - L_0$	-----	-658.14	-165	215	-451	554	-40	-7	-739	-125	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.209	1.00	Yes	0.705	0.235	0.95	Yes	1.00	**3.63**						
		$U_1 - L_1$	-----	-709.71	-121	130	-468	491	-105	-5	-985	-136	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.180	1.00	Yes	0.761	0.208	0.97	Yes	1.00	**4.55**						
		$U_2 - L_2$	-----	-617.92	-107	118	-360	408	-107	-38	644	106	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.166	1.00	Yes	0.787	0.209	1.00	Yes	1.00	**4.34**						
		$U_3 - L_3$	-----	-497.60	-56	64	-217	236	74	-46	206	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.094	0.95	Yes	0.780	0.215	1.00	Yes	1.00	**3.64**						
		$U_4 - L_4$	-----	-355.74	-8	25	-166	180	-61	49	403	69	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.190	1.00	Yes	0.753	0.230	0.99	Yes	1.00	**3.72**						
		$U_5 - L_5$	109.77	-312.71	83	-70	-116	151	-94	104	706	68	0.197	0.397	0.60	Yes	0.109	0.218	0.33	Yes	0.706	0.289	1.00	Yes	0.662	0.192	0.86	Yes	1.00	**4.52**						
		$U_6 - L_6$	321.61	-----	175	-184	-176	184	-44	107	618	95	0.578	0.415	1.00	Yes	0.318	0.228	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.36**						
		$U_7 - L_7$	-----	-322.46	146	-172	103	-111	-29	-27	770	56	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.268	1.00	Yes	0.682	0.219	0.91	Yes	1.00	**4.87**						
		$U_8 - L_8$	-----	-464.91	63	-81	356	-371	-22	-65	198	-124	-----	-----	-----	-----	-----	-----	-----	-----	0.674	0.112	0.79	Yes	0.670	0.325	1.00	Yes	1.00	**4.06**						
		$U_9 - L_9$	-----	-693.90	150	-169	562	-584	-14	-229	670	8	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.157	0.93	Yes	0.744	0.248	1.00	Yes	1.00	**5.09**						
		$U_{10} - L_{10}$	-----	-798.82	172	-187	542	-571	-37	-128	562	-70	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.169	0.96	Yes	0.747	0.252	1.00	Yes	1.00	**5.12**						
		$U_{11} - L_{11}$	-----	-811.62	186	-186	513	-530	-184	-69	248	-136	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.111	0.93	Yes	0.759	0.234	1.00	Yes	1.00	**4.58**						
		$U_{12} - L_{12}$	-----	-867.60	163	-151	498	-518	-218	-34	561	32	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.160	1.00	Yes	0.752	0.222	0.98	Yes	1.00	**4.70**						
		$U_{13} - L_{13}$	-----	-743.93	212	-210	571	-553	-165	22	460	48	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.165	1.00	Yes	0.717	0.273	1.00	Yes	1.00	**3.93**						
		$U_{14} - L_{14}$	-----	-1112.29	125	-121	369	-354	-2	239	1195	309	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.182	1.00	Yes	0.738	0.065	0.81	Yes	1.00	**5.86**						
		$U_{15} - L_{15}$	-----	-733.31	-120	128	-596	581	-311	15	108	-79	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.157	0.98	Yes	0.707	0.285	1.00	Yes	1.00	**6.11**						
		$U_{16} - L_{16}$	-----	-708.36	-92	66	-446	455	-790	-256	-98	-313	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.174	1.00	Yes	0.759	0.193	0.96	Yes	1.00	**5.05**						
		$U_{17} - L_{17}$	-----	-667.40	-127	124	-446	477	-274	-185	366	-288	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.128	0.96	Yes	0.777	0.221	1.00	Yes	1.00	**4.76**						
		$U_{18} - L_{18}$	-----	-587.96	-97	97	-451	481	-113	-128	104	-229	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.099	0.89	Yes	0.749	0.246	1.00	Yes	1.00	**4.40**						
		$U_{19} - L_{19}$	-----	-497.36	-57	61	-253	267	-66	-33	359	-71	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.144	0.90	Yes	0.743	0.257	1.00	Yes	1.00	**3.88**						
		$U_{20} - L_{20}$	-----	-392.07	-11	17	-154	174	-175	-29	588	42	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.189	1.00	Yes	0.751	0.199	0.96	Yes	1.00	**3.87**						
	Structure 3	$U_0 - L_0$	-----	-329.71	26	-21	-215	232	-88	52	271	2	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.146	0.90	Yes	0.698	0.296	1.00	Yes	1.00	**4.24**						
		$U_1 - L_1$	-----	-329.86	-103	120	21	-18	-49	-55	816	118	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.252	1.00	Yes	0.698	0.154	0.86	Yes	1.00	**5.15**						
		$U_2 - L_2$	-----	-316.68	-51	45	243	-257	60	82	220	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.135	0.86	Yes	0.670	0.328	1.00	Yes	1.00	**4.52**						
		$U_3 - L_3$	-----	-379.12	3	-19	220	-236	72	44	509	20	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.172	0.95	Yes	0.726	0.270	1.00	Yes	1.00	**3.99**						
		$U_4 - L_4$	-----	-472.91	43	-42	304	-300	-84	-30	407	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.111	0.83	Yes	0.706	0.293	1.00	Yes	1.00	**3.74**						
		$U_5 - L_5$	-----	-569.97	71	-75	506	-532	-119	-23	417	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.139	0.90	Yes	0.726	0.272	1.00	Yes	1.00	**4.31**						
		$U_6 - L_6$	-----	-633.15	88	-89	535	-549	-133	2	636	15	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.150	0.94	Yes	0.737	0.255	1.00	Yes	1.00	**4.57**						
		$U_7 - L_7$	-----	-710.12	78	-75	547	-549	-151	16	643	33	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.135	0.96	Yes	0.761	0.233	1.00	Yes	1.00	**4.75**						
		$U_8 - L_8$	-----	-716.77	120	-125	636	-610	-114	28	513	21	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.173	0.98	Yes	0.691	0.304	1.00	Yes	1.00	**5.36**						
		$U_9 - L_9$	-----	-1054.25	-56	44	-50	30	-164	73	1663	214	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.222	1.00	Yes	0.699	0.010	0.71	Yes	1.00	**6.19**						
		$U_{10} - L_{10}$	-----	-738.31	-113	113	-473	466	-310	-34	443	-59	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.173	1.00	Yes	0.712	0.226	0.94	Yes	1.00	**5.26**						
		$U_{11} - L_{11}$	-----	-850.04	-81	59	-374	410	-691	-278	303	-224	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.180	1.00	Yes	0.737	0.176	0.92	Yes	1.00	**5.83**						
		$U_{12} - L_{12}$	-----	-834.31	-118	107	-451	470	-444	-339	-2	-368	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.153	1.00	Yes	0.780	0.207	0.99	Yes	1.00	**5.66**						
		$U_{13} - L_{13}$	-----	-836.81	-104	120	-429	483	-297	-199	816	-76	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.120	0.95	Yes	0.782	0.213	1.00	Yes	1.00	**6.06**						
		$U_{14} - L_{14}$	-----	-722.10	-96	120	-409	480	-207	11	1129	212	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.192	1.00	Yes	0.774	0.204	0.98	Yes	1.00	**5.48**						
		$U_{15} - L_{15}$	-----	-488.80	-44	58	-316	333	-67	61	426	78	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.156	0.87	Yes	0.704	0.291	1.00	Yes	1.00	**4.31**						
		$U_{16} - L_{16}$	-----	-336.08	-3	4	-68	82	-43	11	708	72	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.232	1.00	Yes	0.711	0.105	0.82	Yes	1.00	**5.15**						
		$U_{17} - L_{17}$	289.76	-----	-339	345	207	-228	-120	106	56	-102	0.521	0.475	1.00	Yes	0.287	0.261	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.55**						
		$U_{18} - L_{18}$	113.34	-321.36	-106	118	195	-249	-106	13	718	119	0.204	0.527	0.74	Yes	0.112	0.290	0.41	Yes	0.702	0.277	0.98	Yes	0.680	0.319	1.00	Yes	1.00	**5.89**						
		$U_{19} - L_{19}$	-----	-323.95	-47	36	239	-232	-83	-9	305	56	-----	-----	-----	-----	-----	-----	-----	-----	0.708	0.156	0.87	Yes	0.685	0.306	1.00	Yes	1.00	**3.49**						
		$U_{20} - L_{20}$	-----	-393.45	18	-27	36	-104	-49	-16	141	45	-----	-----	-----	-----	-----	-----	-----	-----	0.879	0.114	1.00	Yes	0.833	0.133	0.97	Yes	1.00	**2.40**						

Operating Loads - 3F1

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	$U_0 - L_1$	667.30	-----	-81	46	-18	-1	61	-81	-17	-4	0.875	0.115	1.00	Yes	0.529	0.064	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.32**
		$U_1 - L_2$	458.25	-----	-84	12	15	-19	-214	-186	-14	-21	0.824	0.169	1.00	Yes	0.453	0.093	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**
		$U_2 - L_3$	411.50	-282.30	-110	-14	-20	-74	-408	-13	50	-95	0.740	0.258	1.00	Yes	0.407	0.142	0.55	Yes	0.650	0.244	0.90	Yes	0.597	0.140	0.74	Yes	1.00	**6.51**
		$U_3 - L_4$	-----	-380.49	-34	-57	16	-64	-203	-127	-33	-207	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.120	1.00	Yes	0.805	0.082	0.89	Yes	1.00	**3.38**
		$U_4 - L_4$	562.77	-----	-81	45	-42	-7	-105	-187	-386	-205	0.825	0.172	1.00	Yes	0.454	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.75**
		$U_5 - L_5$	650.78	-----	-191	211	-94	87	-253	-291	-573	-144	0.769	0.224	1.00	Yes	0.423	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.51**
		$U_1 - L_6$	660.84	-----	-281	242	-83	102	-142	-179	282	118	0.781	0.212	1.00	Yes	0.430	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.12**
		$U_6 - L_7$	649.60	-----	-100	304	1	135	-89	-122	307	184	0.768	0.229	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.34**
		$U_8 - L_8$	985.12	-----	-102	343	19	138	281	400	286	105	0.788	0.204	1.00	Yes	0.488	0.115	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.56**
		$U_9 - L_{10}$	992.45	-----	-312	209	-79	87	172	488	265	207	0.793	0.201	1.00	Yes	0.491	0.113	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.32**
		$U_{10} - L_{11}$	994.45	-----	-242	187	-90	67	-29	321	265	176	0.840	0.154	1.00	Yes	0.520	0.086	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.34**
		$U_{11} - L_{12}$	848.16	-----	-261	94	-107	-1	-53	238	6	63	0.839	0.157	1.00	Yes	0.461	0.086	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.54**
		$U_{12} - L_{13}$	641.92	-----	-204	129	-85	26	-107	148	88	-98	0.782	0.208	1.00	Yes	0.492	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
		$U_{13} - L_{14}$	460.87	-----	-91	35	-20	-27	-73	-48	-24	-173	0.829	0.166	1.00	Yes	0.456	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.61**
		$U_{15} - L_{14}$	215.39	-291.33	-66	-20	6	-87	-284	-272	-606	-117	0.387	0.287	0.68	Yes	0.213	0.158	0.38	Yes	0.683	0.312	1.00	Yes	0.616	0.111	0.73	Yes	1.00	**4.21**
		$U_{16} - L_{15}$	357.65	-----	-114	78	-47	-10	-308	-288	-728	-97	0.643	0.356	1.00	Yes	0.354	0.196	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.55**
		$U_{17} - L_{16}$	521.13	-----	-139	100	-34	14	-403	-350	-111	-131	0.764	0.234	1.00	Yes	0.420	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.14**
		$U_{18} - L_{17}$	610.10	-----	-314	250	-112	76	-512	-472	-114	-120	0.721	0.271	1.00	Yes	0.397	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.32**
		$U_{19} - L_{18}$	688.71	-----	-346	255	-133	88	-427	-439	-69	-108	0.746	0.249	1.00	Yes	0.410	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.21**
		$U_{20} - L_{19}$	727.79	-----	-231	256	-94	92	-479	-329	-102	-39	0.788	0.210	1.00	Yes	0.434	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.62**
	Structure 2	$U_0 - L_1$	806.82	-----	-351	351	-115	100	15	-225	-60	-50	0.798	0.196	1.00	Yes	0.439	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.98**
		$U_1 - L_2$	785.03	-----	-402	292	-96	72	-182	100	-99	-29	0.777	0.214	1.00	Yes	0.427	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.92**
		$U_2 - L_3$	652.45	-----	-331	267	-85	65	-184	87	-24	89	0.771	0.221	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
		$U_3 - L_4$	595.04	-----	-185	124	-39	17	-164	58	102	59	0.793	0.203	1.00	Yes	0.436	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.00**
		$U_4 - L_5$	429.01	-----	-133	104	-2	-34	-168	-5	17	-169	0.772	0.219	1.00	Yes	0.424	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.62**
		$U_5 - L_6$	437.31	-278.84	-124	65	62	-107	-181	48	-73	-185	0.787	0.212	1.00	Yes	0.433	0.116	0.55	Yes	0.658	0.168	0.83	Yes	0.590	0.158	0.75	Yes	1.00	**6.08**
		$U_6 - L_7$	-----	-379.80	-46	-12	40	-98	-96	-302	109	-301	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.183	1.00	Yes	0.728	0.111	0.84	Yes	1.00	**3.84**
		$U_8 - L_7$	583.57	-----	-180	119	-37	-20	-199	-466	-404	-202	0.744	0.256	1.00	Yes	0.468	0.146	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.51**
		$U_8 - L_8$	675.32	-----	-306	230	-147	43	-374	-364	-621	-263	0.731	0.259	1.00	Yes	0.402	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.83**
		$U_{10} - L_9$	790.12	-----	-313	219	-144	61	-431	-475	153	-210	0.782	0.216	1.00	Yes	0.430	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.32**
		$U_{11} - L_{10}$	866.31	-----	-337	275	-110	129	-375	-434	121	-13	0.789	0.202	1.00	Yes	0.434	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		$U_{12} - L_{11}$	868.12	-----	-361	349	-118	154	-305	-361	218	74	0.791	0.203	1.00	Yes	0.435	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.17**
		$U_{13} - L_{12}$	754.76	-----	-432	375	-153	154	-175	-196	330	126	0.747	0.250	1.00	Yes	0.411	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.54**
		$U_{14} - L_{13}$	749.01	-----	-274	421	-25	155	-179	-167	374	185	0.741	0.251	1.00	Yes	0.408	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.27**
		$U_{14} - L_{15}$	637.99	-----	-219	356	24	72	126	131	222	-43	0.754	0.242	1.00	Yes	0.415	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.76**
		$U_{15} - L_{16}$	627.77	-----	-369	331	-66	71	-179	239	-13	22	0.742	0.252	1.00	Yes	0.408	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.73**
		$U_{16} - L_{17}$	708.46	-----	-336	326	-69	96	-303	356	-148	63	0.767	0.231	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.65**
		$U_{17} - L_{18}$	654.19	-----	-290	277	-67	80	-67	291	-23	104	0.773	0.217	1.00	Yes	0.425	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		$U_{18} - L_{19}$	660.63	-----	-284	248	-51	70	17	279	37	22	0.781	0.211	1.00	Yes	0.430	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.35**
		$U_{19} - L_{20}$	595.17	-----	-200	144	-39	7	26	267	164	-8	0.759	0.233	1.00	Yes	0.417	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.47**
		$U_{20} - L_{21}$	448.20	-----	-125	108	-7	-12	-14	102	53	-88	0.806	0.189	1.00	Yes	0.443	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.18**
		$U_{21} - L_{22}$	432.40	-202.17	-121	35	4	-69	-62	137	217	-138	0.778	0.218	1.00	Yes	0.428	0.120	0.55	Yes	0.478	0.155	0.64	Yes	0.428	0.155	0.59	Yes	1.00	**5.52**
		$U_{23} - L_{22}$	368.10	-228.16	-95	35	-24	-50	-187	-254	-741	-49	0.662	0.336	1.00	Yes	0.364	0.185	0.55	Yes	0.543	0.310	0.86	Yes	0.483	0.121	0.61	Yes	1.00	**4.93**
		$U_{24} - L_{23}$	407.03	-----	-112	100	-12	-14	-238	-217	-420	-42	0.732	0.265	1.00	Yes	0.403	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.91**
		$U_{25} - L_{24}$	542.11	-----	-182	159	-66	26	-357	-322	-677	-145	0.691	0.301	1.00	Yes	0.380	0.172	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.06**
		$U_{26} - L_{25}$	654.34	-----	-277	257	-31	43	-289	-356	107	37	0.774	0.222	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.40**
		$U_{27} - L_{26}$	665.37	-----	-288	284	-46	58	-247	-275	175	67	0.787	0.213	1.00	Yes	0.433	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.43**
		$U_{28} - L_{27}$	706.97	-----	-344	350	-49	68	-230	-294	199	110	0.766	0.227	1.00	Yes	0.421	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.67**
		$U_{29} - L_{28}$	635.59	-----	-362	339	-74	74	-96	-164	206	99	0.751	0.242	1.00	Yes	0.413	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
		$U_{30} - L_{29}$	628.20	-----	-218	348	37	103	-112	-138	289	142	0.743	0.249	1.00	Yes	0.408	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.99**
		$U_{30} - L_{31}$	763.66	-----	-295	423	11	75	124	288	276	-4	0.755	0.239	1.00	Yes	0.416	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.29**
		$U_{31} - L_{32}$	748.03	-----	-444	370	-75	78	-141	316	-8	46	0.740	0.253	1.00	Yes	0.407	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.31**
		$U_{32} - L_{33}$	876.93	-----	-357	338	-60	95	-311	303	-141	135	0.799	0.194	1.00	Yes	0.439	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.54**
		$U_{33} - L_{34}$	866.00	-----	-347	258	-69	90	-71	402	28	199	0.789	0.202	1.00	Yes	0.434	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.15**
		$U_{34} - L_{35}$	812.74	-----	-323	211	-107	40	3	304	294	-4	0.804	0.195	1.00	Yes	0.442	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.16**
		$U_{35} - L_{36}$	747.18	-----	-331	248	-105	21	-9	105	90	-92	0.809	0.186	1.00	Yes	0.445	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.90**
		$U_{36} - L_{37}$	605.26	-----	-201	125	-33	-11	-154	116	-29	-223	0.772	0.225	1.00	Yes	0.486	0.126	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.92**
		$U_{38} - L_{37}$	-----	-347.98	-30	-14	17	-69	-143	-240	-549	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.240	1.00	Yes	0.667	0.079	0.75	Yes	1.00	**3.06**
		$U_{39} - L_{38}$	319.09	-293.85	-89	49	55	-101	-278	-256	-547	-97	0.574	0.288	0.87	Yes	0.316	0.158	0.48	Yes	0.700	0.292	1.00	Yes	0.622	0.130	0.76	Yes	1.00	**5.19**
		$U_{40} - L_{39}$	357.58	-138.20	-120	83	-16	-27	-305	-306	-669	-83	0.643	0.347	1.00	Yes	0.354	0.191	0.55	Yes	0.331	0.269	0.61	Yes	0.292	0.154	0.45	Yes	1.00	**4.36**
		$U_{41} - L_{40}$	570.00	-----	-172	126	-20	4	-371	-361	-98	-84	0.760	0.235	1.00	Yes	0.418	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.04**
		$U_{42} - L_{41}$	625.87	-----	-317	265	-50	33	-408	-416	-69	-66	0.740	0.255	1.00	Yes	0.407	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.23**
		$U_{43} - L_{42}$	752.14	-----	-390	302	-66	46	-467	-463	-7	-48	0.744	0.251	1.00	Yes	0.409	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.50**
		$U_{44} - L_{43}$	787.45	-----	-279	325	-94	81	-450	-335	54	-22	0.779	0.218	1.00	Yes	0.428	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.65**
	Structure 3	$U_0 - L_1$	719.27	-----	-339	303	-112	93	-14	-245	-62	-53	0.779	0.214	1.00	Yes	0.428	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.72**
		$U_1 - L_2$	707.29	-----	-341	241	-100	68	-306	0	-125	-44	0.766	0.225	1.00	Yes	0.421	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.30**
		$U_2 - L_3$	640.18	-----	-341	235	-97	63	-240	189	-48	79	0.757	0.237	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.13**
		$U_3 - L_4$	554.97	-----	-151	105	-37	1	-141	7	92	-25	0.814	0.186	1.00	Yes	0.448	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.81**
		$U_4 - L_5$	420.91	-----	-131	82	-19	-29	-242	62	38	-178	0.757	0.238	1.00	Yes	0.416	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		$U_5 - L_6$	365.61	-332.28	-85	9	33	-112	-193	-153	-38	-300	0.658	0.230	0.89	Yes	0.362	0.127	0.49	Yes	0.778	0.212	1.00	Yes	0.703	0.143	0.85	Yes	1.00	**5.75**
		$U_7 - L_6$	421.22	-----	-81	30	-20	-35	-209	-292	-469	-197	0.758	0.239	1.00	Yes	0.417	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.83**
		$U_8 - L_7$	562.85	-----	-183	128	-95	14	-384	-402	-779	-228	0.686	0.312	1.00	Yes	0.432	0.179	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.76**
		$U_8 - L_8$	797.14	-----	-250	104	-113	-24	-496	-514	-603	-389	0.789	0.206	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.39**
		$U_{10} - L_9$	917.90	-----	-237	167	-120	43	-495	-558	-801	-353	0.775	0.215	1.00	Yes	0.480	0.122	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.84**
		$U_{11} - L_{10}$	998.05	-----	-316	238	-83	89	-476	-437	229	83	0.798	0.202	1.00	Yes	0.494	0.114	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.94**
		$U_{12} - L_{11}$	995.79	-----	-115	357	2	132	-308	-304	312	177	0.796	0.199	1.00	Yes	0.493	0.111	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.14**
		$U_{12} - L_{13}$	671.77	-----	-112	293	25	72	146	174	151	-21	0.794	0.199	1.00	Yes	0.437	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.95**
		$U_{13} - L_{14}$	665.35	-----	-291	226	-29	58	-93	242	43	76	0.787	0.210	1.00	Yes	0.433	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.48**
		$U_{14} - L_{15}$	701.96	-----	-208	176	-21	37	-215	246	119	59	0.830	0.163	1.00	Yes	0.456	0.090	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.67**
		$U_{15} - L_{16}$	600.56	-----	-90	43	-23	-3	-89	115	-34	40	0.881	0.119	1.00	Yes	0.484	0.065	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		$U_{17} - L_{16}$	-----	-395.16	-19	-33	-1	-51	-3	-7	-296	13	-----	-----	-----	-----	-----	-----	-----	-----	0.904	0.092	1.00	Yes	0.836	0.065	0.91	Yes	1.00	**3.33**
		$U_{18} - L_{17}$	268.34	-315.47	-70	4	-39	-68	-197	-200	-720	-53	0.483	0.298	0.79	Yes	0.265	0.164	0.43	Yes	0.726	0.265	1.00	Yes	0.668	0.090	0.76	Yes	1.00	**5.00**
		$U_{19} - L_{18}$	411.16	-117.60	-101	17	23	-18	-443	-340	143	110	0.739	0.258	1.00	Yes	0.407	0.142	0.55	Yes	0.270	0.241	0.52	Yes	0.249	0.129	0.38	Yes	1.00	**4.22**
		$U_{20} - L_{19}$	642.67	-----	-11	32	-14	-6	-440	-365	88	101	0.843	0.148	1.00	Yes	0.509	0.082	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.22**

Operating Loads - 3F1

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			-----	-541.30	-28	70	-60	-891	19	-25	-36	-96	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.263	1	Yes	0.730	0.212	0.95	Yes	1.00	**5.45**
		U_1 - U_2			-----	-551.46	-56	66	-215	-879	8	58	-48	7	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.240	1	Yes	0.744	0.209	0.96	Yes	1.00	**3.55**
		U_2 - U_3			105.21	-542.87	-100	235	-192	-757	15	-90	173	-167	0.121	0.209	0.33	Yes	0.081	0.136	0.22	Yes	0.739	0.255	1	Yes	0.732	0.180	0.92	Yes	1.00	**3.51**
		U_3 - U_4			271.36	-534.83	77	229	-215	-919	-75	-81	-10	-198	0.311	0.252	0.57	Yes	0.213	0.173	0.39	Yes	0.728	0.272	1	Yes	0.721	0.219	0.94	Yes	1.00	**4.48**
		U_4 - U_5			279.60	-542.70	87	226	-1091	-218	-154	-31	-135	-97	0.320	0.285	0.61	Yes	0.220	0.196	0.42	Yes	0.738	0.242	0.99	Yes	0.732	0.259	1.00	Yes	1.00	**4.57**
		U_5 - U_6			554.58	-----	215	362	-1274	53	-332	-34	-70	-296	0.636	0.359	1.00	Yes	0.429	0.234	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.47**
		U_6 - U_7			777.89	-----	287	194	-907	-188	-339	83	-417	-181	0.744	0.250	1.00	Yes	0.520	0.172	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.76**
		U_7 - U_8			952.44	-----	-43	1210	-1752	1959	-251	358	-344	127	0.660	0.333	1.00	Yes	0.460	0.227	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.38**
		U_8 - U_9			817.71	-----	1124	-142	1716	-1624	-102	232	60	280	0.670	0.322	1.00	Yes	0.458	0.219	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.82**
		U_9 - U_{10}			611.56	-----	222	222	49	-1167	112	393	203	451	0.663	0.334	1.00	Yes	0.449	0.224	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.19**
		U_{10} - U_{11}			-----	-598.83	221	-95	25	-1017	224	88	302	81	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.211	0.99	Yes	0.764	0.228	1.00	Yes	1.00	**4.66**
		U_{11} - U_{12}			-----	-876.72	166	-126	93	-1061	172	104	223	64	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.165	1	Yes	0.823	0.176	1.00	Yes	1.00	**4.04**
		U_{12} - U_{13}			-----	-1175.17	-42	-165	-144	-1252	225	-40	249	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.200	1	Yes	0.785	0.173	0.96	Yes	1.00	**4.28**
		U_{13} - U_{14}			-----	-1300.50	-115	-353	-325	-1952	154	61	90	-49	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.239	1	Yes	0.746	0.215	0.97	Yes	1.00	**4.15**
		U_{14} - U_{15}			-----	-1281.30	-257	-193	-1812	-792	182	-51	176	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.253	1	Yes	0.735	0.200	0.94	Yes	1.00	**4.03**
		U_{15} - U_{16}			-----	-1361.49	-77	-413	-1303	-806	22	-64	189	-195	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.208	1	Yes	0.781	0.144	0.93	Yes	1.00	**4.25**
		U_{16} - U_{17}			-----	-1293.96	-321	-183	-1780	-695	57	-179	-80	-257	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.242	1	Yes	0.742	0.196	0.94	Yes	1.00	**4.25**
		U_{17} - U_{18}			-----	-984.71	-169	-98	-1154	-144	-162	-241	-59	-210	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.219	1	Yes	0.770	0.188	0.96	Yes	1.00	**3.68**
		U_{18} - U_{19}			-----	-705.72	-200	-32	-871	-69	-203	-177	-7	-177	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.197	1	Yes	0.794	0.175	0.97	Yes	1.00	**3.77**
		U_{19} - U_{20}			-----	-641.92	-176	-21	-1369	907	-124	5	142	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.203	0.94	Yes	0.722	0.275	1.00	Yes	1.00	**9.46**
	Structure 2	U_0 - U_1			-----	-627.89	173	-145	439	-1475	96	183	27	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.176	0.93	Yes	0.742	0.250	1.00	Yes	1.00	**8.36**
		U_1 - U_2			-----	-749.80	-103	-156	-166	-1248	338	628	225	277	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.263	1	Yes	0.724	0.189	0.92	Yes	1.00	**4.09**
		U_2 - U_3			-----	-1103.25	-77	-233	-159	-1737	603	4	114	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.206	1	Yes	0.783	0.177	0.96	Yes	1.00	**4.58**
		U_3 - U_4			-----	-1301.45	-373	-313	-669	-2142	124	-281	212	-159	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.245	1	Yes	0.741	0.191	0.94	Yes	1.00	**4.20**
		U_4 - U_5			-----	-1394.30	-375	-346	-768	-2568	-49	-341	76	-284	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.270	1	Yes	0.716	0.213	0.93	Yes	1.00	**4.11**
		U_5 - U_6			-----	-1476.39	-394	-29	-1168	-1804	-100	-288	-100	-383	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.231	1	Yes	0.758	0.150	0.91	Yes	1.00	**4.58**
		U_6 - U_7			-----	-1256.91	-288	-91	-1131	-2045	-75	-256	-97	-307	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.278	1	Yes	0.716	0.182	0.90	Yes	1.00	**4.12**
		U_7 - U_8			-----	-1232.06	-178	-230	-2434	-886	-169	-210	-196	-199	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.288	1	Yes	0.702	0.217	0.92	Yes	1.00	**3.99**
		U_8 - U_9			-----	-1142.17	-314	73	-1792	-592	-196	-177	-92	-189	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.215	1	Yes	0.775	0.190	0.97	Yes	1.00	**4.45**
		U_9 - U_{10}			-----	-894.93	-114	256	-1801	-328	-255	-122	-132	-167	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.219	1	Yes	0.772	0.219	1.00	Yes	1.00	**4.69**
		U_{10} - U_{11}			446.65	-770.38	64	342	-1651	-314	-164	-85	-136	-207	0.377	0.258	0.64	Yes	0.257	0.166	0.43	Yes	0.770	0.221	1	Yes	0.766	0.233	1.00	Yes	1.00	**6.77**
		U_{11} - U_{12}			766.11	-----	143	486	-2077	-97	-380	-184	-260	-448	0.647	0.348	1.00	Yes	0.435	0.232	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.94**
		U_{12} - U_{13}			1040.32	-----	262	27	-1841	-1101	-503	-128	-610	-473	0.703	0.290	1.00	Yes	0.501	0.197	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.58**
		U_{13} - U_{14}			1362.65	-----	-311	3003	-409	1506	-681	283	-541	-165	0.670	0.325	1.00	Yes	0.474	0.213	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.11**
		U_{14} - U_{15}			1162.34	-----	2578	-53	4113	-3033	-414	275	-109	557	0.572	0.419	1.00	Yes	0.405	0.274	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.25**
		U_{15} - U_{16}			1157.01	-----	52	305	-1235	-1943	67	737	421	921	0.699	0.299	1.00	Yes	0.498	0.202	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.34**
		U_{16} - U_{17}			885.94	-----	570	226	546	-2299	337	327	553	219	0.653	0.347	1.00	Yes	0.434	0.228	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.75**
		U_{17} - U_{18}			690.48	-----	460	262	-184	-1637	51	186	189	151	0.693	0.306	1.00	Yes	0.461	0.203	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.41**
		U_{18} - U_{19}			410.83	-598.97	426	171	417	-1680	20	39	98	-74	0.412	0.300	0.72	Yes	0.271	0.190	0.47	Yes	0.712	0.108	0.82	Yes	0.707	0.285	1.00	Yes	1.00	**6.35**
		U_{19} - U_{20}			214.57	-700.59	262	135	-149	-1414	17	135	82	41	0.201	0.245	0.45	Yes	0.133	0.161	0.30	Yes	0.778	0.199	0.98	Yes	0.773	0.226	1.00	Yes	1.00	**5.27**
	Structure 3	U_0 - U_1			-----	-600.30	170	-176	386	-1587	58	133	-33	-209	-----	-----	-----	-----	-----	-----	-----	-----	0.682	0.215	0.9	Yes	0.675	0.319	1.00	Yes	1.00	**8.12**
		U_1 - U_2			-----	-669.91	-67	-120	4	-843	253	508	198	271	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.233	1	Yes	0.754	0.170	0.93	Yes	1.00	**3.61**
		U_2 - U_3			-----	-977.98	-74	-124	19	-1141	516	8	462	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.217	1	Yes	0.765	0.186	0.96	Yes	1.00	**3.88**
		U_3 - U_4			-----	-1318.48	-144	-207	-468	-1762	136	-238	195	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.227	1	Yes	0.756	0.194	0.96	Yes	1.00	**4.72**
		U_4 - U_5			-----	-1304.91	-326	-57	-420	-1410	-9	-311	50	-440	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.239	1	Yes	0.748	0.156	0.91	Yes	1.00	**4.20**
		U_5 - U_6			-----	-1275.91	-158	-234	-539	-1939	-46	-203	-70	-238	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.259	1	Yes	0.731	0.214	0.95	Yes	1.00	**4.18**
		U_6 - U_7			-----	-1273.07	-315	-96	-1984	-535	-78	-225	-7	-167	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.253	1	Yes	0.730	0.219	0.95	Yes	1.00	**4.18**
		U_7 - U_8			-----	-1129.36	-132	-56	-1330	-356	-201	-204	-68	-239	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.232	1	Yes	0.754	0.183	0.94	Yes	1.00	**4.13**
		U_8 - U_9			-----	-883.00	-124	171	-959	-53	-99	-112	-87	-206	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.160	1	Yes	0.828	0.159	0.99	Yes	1.00	**4.19**
		U_9 - U_{10}			-----	-593.10	-98	210	-1061	6	-206	-126	-206	-206	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.220	0.99	Yes	0.757	0.238	1.00	Yes	1.00	**4.41**
		U_{10} - U_{11}			606.52	-----	206	219	-1278	-149	-309	-54	-274	-184	0.658	0.336	1.00	Yes	0.446	0.225	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.47**
		U_{11} - U_{12}			828.58	-----	-168	1196	-1621	1503	-346	131	-316	9	0.679	0.314	1.00	Yes	0.464	0.214	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.30**
		U_{12} - U_{13}			935.92	-----	1169	-17	2055	-1734	-353	83	-101	363	0.648	0.348	1.00	Yes	0.452	0.237	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.45**
		U_{13} - U_{14}			750.19	-----	177	289	82	-981	-87	366	122	471	0.717	0.273	1.00	Yes	0.501	0.187	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.55**
		U_{14} - U_{15}			560.82	-----	380	213	263	-1262	64	137	307	1	0.643	0.352	1.00	Yes	0.434	0.229	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.70**
		U_{15} - U_{16}			271.12	-553.47	233	114	-79	-1064	7	127	68	93	0.311	0.274	0.59	Yes	0.213	0.188	0.41	Yes	0.753	0.210	0.97	Yes	0.746	0.253	1.00	Yes	1.00	**4.68**
		U_{16} - U_{17}			275.39	-578.45	273	58	-890	-439	42	55	154	-1	0.316	0.238	0.56	Yes	0.217	0.163	0.38	Yes	0.787	0.196	0.99	Yes	0.780	0.212	1.00	Yes	1.00	**4.84**
		U_{17} - U_{18}			99.63	-564.18	228	-129	-789	-553	-68	140	-35	-37	0.114	0.211	0.33	Yes	0.077	0.137	0.22	Yes	0.768	0.227	1	Yes	0.761	0.187	0.95	Yes	1.00	**3.72**
		U_{18} - U_{19}			-----	-540.10	38	-30	-935	-311	143	16	148	36	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.260	1	Yes	0.728	0.222	0.96	Yes	1.00	**3.47**
		U_{19} - U_{20}			-----	-593.93	127	-236	-804	135	-55	19	289	19	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.175	0.99	Yes	0.801	0.191	1.00	Yes	1.00	**6.25**

Operating Loads - 3F1

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			204.41	-----	733	-1215	529	-604	-392	-1485	56	184	0.313	0.683	1.00	Yes	0.184	0.409	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.06**
		L_1 - L_2			436.60	-----	-183	-684	45	-19	-577	144	19	24	0.668	0.329	1.00	Yes	0.408	0.216	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.38**
		L_2 - L_3			647.16	-----	-834	-604	-42	54	-65	-286	9	-9	0.745	0.248	1.00	Yes	0.431	0.148	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.68**
		L_3 - L_4			651.49	-150.16	-917	-564	39	190	-126	147	-32	39	0.750	0.245	1.00	Yes	0.445	0.159	0.61	Yes	0.205	0.234	0.44	Yes	0.203	0.222	0.43	Yes	1.00	**4.65**
		L_4 - L_5			-----	-539.88	-670	-529	100	501	-277	111	175	-120	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.143	0.98	Yes	0.823	0.177	1.00	Yes	1.00	**6.65**
		L_5 - L_6			-----	-754.06	-363	-470	137	578	-100	11	18	90	-----	-----	-----	-----	-----	-----	-----	-----	0.880	0.117	1	Yes	0.870	0.128	1.00	Yes	1.00	**6.77**
		L_6 - L_7			-----	-1067.03	-844	-829	135	8	34	-54	188	17	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.126	1	Yes	0.859	0.133	1.00	Yes	1.00	**8.15**
		L_7 - L_8			-----	-1266.95	-33	583	-21	1336	41	72	175	242	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.187	1	Yes	0.802	0.177	0.98	Yes	1.00	**8.39**
		L_8 - L_9			-----	-1273.22	554	-47	1355	-93	37	-14	153	33	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.174	1	Yes	0.806	0.179	0.99	Yes	1.00	**8.28**
		L_9 - L_{10}			-----	-986.16	-177	-1280	123	64	53	9	-4	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.106	0.91	Yes	0.794	0.201	1.00	Yes	1.00	**10.21**
		L_{10} - L_{11}			-----	-518.26	-255	-758	471	-21	-24	-3	74	7	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.118	0.92	Yes	0.790	0.201	1.00	Yes	1.00	**7.73**
		L_{11} - L_{12}			573.53	-----	21	-660	322	-200	-422	143	-19	22	0.743	0.249	1.00	Yes	0.446	0.161	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**
		L_{12} - L_{13}			1062.75	-----	-565	-848	64	-104	-67	6	-21	-33	0.839	0.158	1.00	Yes	0.536	0.094	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.47**
		L_{13} - L_{14}			1317.65	-----	-518	-1477	220	-396	-176	191	-110	67	0.775	0.219	1.00	Yes	0.502	0.134	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.21**
		L_{14} - L_{15}			1622.41	-----	-1539	-1297	-350	-83	-229	135	-64	-47	0.793	0.202	1.00	Yes	0.515	0.122	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.89**
		L_{15} - L_{16}			1563.75	-----	-839	-1793	-197	-388	-197	-165	-76	17	0.764	0.230	1.00	Yes	0.490	0.134	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.19**
		L_{16} - L_{17}			1252.30	-----	-1279	-671	-400	42	-161	123	-37	-68	0.792	0.202	1.00	Yes	0.514	0.124	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.91**
		L_{17} - L_{18}			940.74	-----	-849	-351	-183	-50	-4	-121	-40	-2	0.819	0.179	1.00	Yes	0.524	0.107	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.51**
		L_{18} - L_{19}			444.86	-----	-865	230	-264	189	-206	270	5	-14	0.681	0.316	1.00	Yes	0.461	0.198	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.79**
		L_{19} - L_{20}			360.23	-----	-315	37	-1338	894	-4	-1	-226	-56	0.551	0.448	1.00	Yes	0.336	0.302	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**19.73**
	Structure 2	L_0 - L_1			184.57	-----	674	-2222	649	-1495	-557	-1924	45	158	0.224	0.768	1.00	Yes	0.133	0.482	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**18.12**
		L_1 - L_2			533.49	-----	42	-1100	156	-213	-742	272	74	105	0.648	0.346	1.00	Yes	0.385	0.218	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.34**
		L_2 - L_3			1016.76	-----	-316	-1095	-14	-146	-51	-364	127	159	0.801	0.197	1.00	Yes	0.525	0.119	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.41**
		L_3 - L_4			1298.71	-----	-433	-1644	57	-338	-505	173	41	124	0.763	0.233	1.00	Yes	0.514	0.145	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.90**
		L_4 - L_5			1740.36	-----	-1779	-1661	-242	-230	187	-218	14	-7	0.811	0.183	1.00	Yes	0.537	0.108	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.94**
		L_5 - L_6			1793.98	-----	-1941	-2396	-33	-359	-177	132	-95	59	0.770	0.223	1.00	Yes	0.517	0.136	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.60**
		L_6 - L_7			1770.23	-----	-2607	-1855	-404	-115	11	254	55	-12	0.749	0.245	1.00	Yes	0.498	0.143	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.42**
		L_7 - L_8			1406.54	-----	-1501	-1414	-188	224	-285	-8	-74	80	0.806	0.189	1.00	Yes	0.530	0.111	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.36**
		L_8 - L_9			1149.25	-----	-1286	-726	-139	478	-137	198	37	-120	0.804	0.192	1.00	Yes	0.541	0.120	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.96**
		L_9 - L_{10}			870.66	-549.75	-1333	-563	-95	581	-11	-62	-34	31	0.777	0.221	1.00	Yes	0.452	0.138	0.60	Yes	0.581	0.142	0.73	Yes	0.577	0.213	0.80	Yes	1.00	**8.43**
		L_{10} - L_{11}			-----	-723.01	-859	-349	21	573	-122	87	130	-59	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.079	0.94	Yes	0.849	0.150	1.00	Yes	1.00	**7.57**
		L_{11} - L_{12}			-----	-1048.59	-1008	-408	-23	971	10	-95	121	274	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.106	0.98	Yes	0.860	0.137	1.00	Yes	1.00	**8.90**
		L_{12} - L_{13}			-----	-1445.54	-382	-236	-56	-875	-25	-177	420	209	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.123	1	Yes	0.865	0.087	0.96	Yes	1.00	**10.74**
		L_{13} - L_{14}			-----	-1516.77	-475	1328	-977	2676	-197	-256	213	233	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.170	0.95	Yes	0.763	0.234	1.00	Yes	1.00	**9.55**
		L_{14} - L_{15}			-----	-1492.33	1266	-548	2759	-828	-244	-167	24	-155	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.172	0.93	Yes	0.751	0.241	1.00	Yes	1.00	**8.53**
		L_{15} - L_{16}			-----	-1470.30	-513	-87	-1102	192	-115	13	-196	-134	-----	-----	-----	-----	-----	-----	-----	-----	0.887	0.109	1	Yes	0.879	0.110	0.99	Yes	1.00	**11.97**
		L_{16} - L_{17}			-----	-1157.76	25	-1197	1158	73	-60	-523	8	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.143	1	Yes	0.843	0.148	1.00	Yes	1.00	**9.98**
		L_{17} - L_{18}			-----	-792.78	-128	-1002	486	161	-24	151	13	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.134	0.98	Yes	0.832	0.160	1.00	Yes	1.00	**6.91**
		L_{18} - L_{19}			-----	-627.04	-261	-824	606	72	70	-289	-8	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.131	0.98	Yes	0.836	0.159	1.00	Yes	1.00	**7.12**
		L_{19} - L_{20}			-----	-532.34	-463	-1489	503	160	-151	161	-33	-28	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.202	0.92	Yes	0.709	0.287	1.00	Yes	1.00	**8.61**
		L_{20} - L_{21}			957.67	-328.64	-1161	-1556	344	-9	-4	50	6	-34	0.764	0.232	1.00	Yes	0.501	0.137	0.64	Yes	0.310	0.216	0.53	Yes	0.308	0.227	0.54	Yes	1.00	**7.69**
		L_{21} - L_{22}			918.47	-----	-1282	-1669	200	-162	23	217	-53	22	0.732	0.267	1.00	Yes	0.490	0.167	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.19**
		L_{22} - L_{23}			919.74	-----	-1112	-1672	-157	173	-196	-37	20	-37	0.733	0.265	1.00	Yes	0.491	0.166	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.08**
		L_{23} - L_{24}			967.75	-302.08	-1252	-1509	-11	291	-60	-12	-9	70	0.772	0.228	1.00	Yes	0.506	0.135	0.65	Yes	0.285	0.253	0.54	Yes	0.283	0.220	0.51	Yes	1.00	**7.56**
		L_{24} - L_{25}			647.64	-430.06	-1256	-478	93	441	-119	127	91	-92	0.734	0.262	1.00	Yes	0.434	0.168	0.61	Yes	0.577	0.149	0.73	Yes	0.573	0.242	0.82	Yes	1.00	**7.31**
		L_{25} - L_{26}			-----	-621.21	-692	-860	74	584	-35	-80	8	84	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.115	0.95	Yes	0.828	0.166	1.00	Yes	1.00	**8.00**
		L_{26} - L_{27}			-----	-796.60	-962	-533	138	490	-82	114	140	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.111	0.96	Yes	0.836	0.154	1.00	Yes	1.00	**8.13**
		L_{27} - L_{28}			-----	-1176.56	-1019	-734	60	1154	-177	-272	93	204	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.127	1	Yes	0.857	0.142	1.00	Yes	1.00	**11.60**
		L_{28} - L_{29}			-----	-1548.94	-184	-453	-202	-147	139	106	337	52	-----	-----	-----	-----	-----	-----	-----	-----	0.934	0.065	1	Yes	0.927	0.045	0.98	Yes	1.00	**13.15**
		L_{29} - L_{30}			-----	-1496.63	-495	1189	-753	2745	91	118	56	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.166	0.93	Yes	0.753	0.240	1.00	Yes	1.00	**8.56**
		L_{30} - L_{31}			-----	-1458.46	1240	-471	2984	-887	128	63	155	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.176	0.92	Yes	0.734	0.261	1.00	Yes	1.00	**9.69**
		L_{31} - L_{32}			-----	-1511.73	-277	-305	-703	210	94	51	-154	-162	-----	-----	-----	-----	-----	-----	-----	-----	0.912	0.086	1	Yes	0.904	0.070	0.98	Yes	1.00	**12.84**
		L_{32} - L_{33}			-----	-1041.90	-43	-882	1014	50	257	-222	-29	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.114	0.98	Yes	0.854	0.138	1.00	Yes	1.00	**8.98**
		L_{33} - L_{34}			-----	-690.80	167	-1046	526	89	-415	228	21	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.133	0.96	Yes	0.811	0.183	1.00	Yes	1.00	**7.01**
		L_{34} - L_{35}			848.32	-598.29	-481	-1183	644	-34	80	-420	-5	-57	0.757	0.240	1.00	Yes	0.441	0.148	0.59	Yes	0.632	0.120	0.76	Yes	0.628	0.189	0.82	Yes	1.00	**8.74**
		L_{35} - L_{36}			1117.67	-----	-459	-1444	500	-87	-170	195	-80	15	0.782	0.213	1.00	Yes	0.527	0.133	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.21**
		L_{36} - L_{37}			1328.05	-----	-959	-1858	296	-89	57	298	39	-7	0.761	0.230	1.00	Yes	0.500	0.135	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.30**
		L_{37} - L_{38}			1724.36	-----	-1040	-2884	-9	-455	-267	35	-75	53	0.730	0.270	1.00	Yes	0.485	0.158	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.31**
		L_{38} - L_{39}			1804.03	-----	-2097	-2381	-382	-84	-86	183	8	-60	0.774	0.223	1.00	Yes	0.520	0.135	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.77**
		L_{39} - L_{40}			1722.18	-----	-1925	-1941	-262	-386	-67	-93	-58	5	0.803	0.190	1.00	Yes	0.532	0.112	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.07**
		L_{40} - L_{41}			1289.83	-----	-1948	-410	-433	24	-152	123	1	-22	0.758	0.240	1.00	Yes	0.510	0.148	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.15**
		L_{41} - L_{42}			1052.55	-----	-1068	-826	-197	-94	26	-111	26	117	0.830	0.167	1.00	Yes	0.544	0.099	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.15**
		L_{42} - L_{43}			532.94	-----	-1503	393	-330	179	-93	271	130	57	0.647	0.350	1.00	Yes	0.385	0.225	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.73**
		L_{43} - L_{44}			239.14	-----	-613	89	-3002	1338	-585	-159	-151	-51	0.290	0.707	1.00	Yes	0.173	0.454	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**39.23**
	Structure 3	L_0 - L_1			277.83	-----	543	-1141	752	-1141	-240	-1106	38	195	0.425	0.572	1.00	Yes	0.259	0.374	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**16.56**
		L_1 - L_2			453.33	-----	197	-704	156	-190	-432	253	34	61	0.694	0.301	1.00	Yes	0.469	0.191	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.89**
		L_2 - L_3			949.99	-----	-303	-730	-24	-146	110	-224	92	134	0.827	0.169	1.00	Yes	0.530	0.102	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.23**
		L_3 - L_4			1203.69	-----	-178	-1319	46	-307	-404	181	27	114	0.761	0.230	1.00	Yes	0.494	0.142	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.92**
		L_4 - L_5			1638.21	-----	-1464	-1191	-274	-137	24	-259	24	14	0.800	0.195	1.00	Yes	0.514	0.114	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.96**
		L_5 - L_6			1559.77	-----	-1119	-1805	-38	-315	-141	283	-68	135	0.762	0.237	1.00	Yes	0.495	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.84**
		L_6 - L_7			1379.18	-----	-1212	-931	-346	201	-153	192	0	-26	0.811	0.183	1.00	Yes	0.525	0.112	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.77**
		L_7 - L_8			1053.67	-----	-865	-601	-94	46	-1	93	-24	70	0.831	0.164	1.00	Yes	0.532	0.098	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.55**
		L_8 - L_9			634.76	-----	-583	-235	-199	331	-67	-47	59	-89	0.822	0.170	1.00	Yes	0.493	0.112	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.99**
		L_9 - L_{10}			488.29	-535.49	-686	-470	-24	482	89	108	-16	26	0.632	0.201	0.84	Yes	0.368	0.121	0.49	Yes	0.823	0.125	0.95	Yes	0.816	0.182	1.00	Yes	1.00	**8.28**
		L_{10} - L_{11}			-----	-1045.89	-969	-889	66	64	41	-128	122	-128	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.099	0.96	Yes	0.842	0.152	1.00	Yes	1.00	**11.53**
		L_{11} - L_{12}			-----	-1246.81	-55	534	-126	1450	-96	-109	-120	-192	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.192	1	Yes	0.790	0.192	0.99	Yes	1.00	**8.38**
		L_{12} - L_{13}			-----	-1246.31	557	-34	1398	-58	-129	-138	-272	-256	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.199	1	Yes	0.789	0.185	0.98	Yes	1.00	**8.19**
		L_{13} - L_{14}			-----	-1046.46	-515	-952	12	159	153	51	-156	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.134	0.99	Yes	0.842	0.150	1.00	Yes	1.00	**7.92**
		L_{14} - L_{15}			-----	-737.81	-253	-541	562	138	-52	-286	-4	-63	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.134	1	Yes	0.851	0.124	0.98	Yes	1.00	**6.70**
		L_{15} - L_{16}			-----	-500.95	-246	-872	454	133	-72	282	7	-76	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.199	0.97	Yes	0.763	0.231	1.00	Yes	1.00	**6.04**
		L_{16} - L_{17}			606.70	-----	-30	-1136	213	-1	-140	-43	26	-68	0.698	0.297	1.00	Yes	0.415	0.193	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.41**
		L_{17} - L_{18}			639.71	-----	-498	-1016	26	-72	-22	110	10	103	0.736	0.263	1.00	Yes	0.426	0.158	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.53**
		L_{18} - L_{19}			434.68	-----	-923	-25	-34	34	25	236	50	-76	0.665	0.328	1.00	Yes	0.406	0.220	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.48**
		L_{19} - L_{20}			105.60	-----	-1849	990	-1256	936	1314	361	101	37	0.162	0.837	1.00	Yes	0.095	0.505	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**18.62**

Operating Loads - 3F1

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	$U_0 - L_0$			-----	-369.87	-25	48	-54	110	-100	-32	-348	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.169	1	Yes	0.783	0.141	0.93	Yes	1.00	**1.77**
		$U_1 - L_1$			-----	-358.94	19	-13	-156	185	39	15	-291	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.153	0.94	Yes	0.760	0.237	1.00	Yes	1.00	**4.47**
		$U_2 - L_2$			74.30	-333.34	65	-72	-174	228	33	9	-166	29	0.134	0.339	0.48	Yes	0.074	0.186	0.26	Yes	0.728	0.141	0.87	Yes	0.705	0.291	1.00	Yes	1.00	**6.27**
		$U_3 - L_3$			265.52	-324.79	230	-240	-75	128	-205	-47	-1	143	0.478	0.366	0.85	Yes	0.263	0.201	0.47	Yes	0.712	0.121	0.84	Yes	0.687	0.306	1.00	Yes	1.00	**7.53**
		$U_4 - L_4$			-----	-358.98	182	-183	70	-76	-184	-110	-97	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.111	0.9	Yes	0.760	0.234	1.00	Yes	1.00	**4.64**
		$U_5 - L_5$			-----	-428.17	14	-32	229	-250	-126	-52	-115	-89	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.102	0.88	Yes	0.739	0.254	1.00	Yes	1.00	**4.00**
		$U_6 - L_6$			-----	-520.83	48	-55	268	-289	-96	-22	98	75	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.089	0.88	Yes	0.747	0.253	1.00	Yes	1.00	**4.11**
		$U_7 - L_7$			-----	-443.23	118	-132	290	-313	-129	46	-119	57	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.121	0.87	Yes	0.684	0.308	1.00	Yes	1.00	**2.82**
		$U_8 - L_8$			-----	-1352.64	0	-6	39	-42	-194	-69	-202	-62	-----	-----	-----	-----	-----	-----	-----	-----	0.977	0.021	1	Yes	0.938	0.008	0.95	Yes	1.00	**6.07**
		$U_9 - L_9$			-----	-676.64	-166	190	-353	420	-224	-158	-244	-180	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.125	0.94	Yes	0.764	0.233	1.00	Yes	1.00	**3.43**
		$U_{10} - L_{10}$			-----	-824.97	-94	98	-269	346	-272	-198	88	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.109	0.97	Yes	0.814	0.180	1.00	Yes	1.00	**5.79**
		$U_{11} - L_{11}$			-----	-680.31	-78	127	-296	429	-174	-39	-133	6	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.094	0.91	Yes	0.792	0.199	1.00	Yes	1.00	**5.19**
		$U_{12} - L_{12}$			-----	-566.17	-38	42	-230	261	-171	6	-148	48	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.090	0.91	Yes	0.777	0.223	1.00	Yes	1.00	**4.86**
		$U_{13} - L_{13}$			-----	-405.29	-1	15	-160	190	-86	92	121	139	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.090	0.91	Yes	0.776	0.217	1.00	Yes	1.00	**3.85**
		$U_{14} - L_{14}$			-----	-355.51	-165	190	-94	100	-96	-24	151	21	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.119	0.92	Yes	0.752	0.243	1.00	Yes	1.00	**5.02**
		$U_{15} - L_{15}$			226.31	-318.60	-186	174	240	-251	-121	-83	67	-150	0.407	0.365	0.78	Yes	0.224	0.201	0.43	Yes	0.714	0.151	0.87	Yes	0.674	0.321	1.00	Yes	1.00	**5.92**
		$U_{16} - L_{16}$			-----	-320.78	-45	32	241	-247	-89	-116	-5	-145	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.139	0.87	Yes	0.679	0.315	1.00	Yes	1.00	**4.77**
		$U_{17} - L_{17}$			-----	-443.30	25	-51	211	-230	-86	-49	-122	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.118	0.95	Yes	0.765	0.233	1.00	Yes	1.00	**3.79**
		$U_{18} - L_{18}$			-----	-534.21	125	-130	429	-440	-164	-61	171	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.094	0.88	Yes	0.743	0.249	1.00	Yes	1.00	**4.12**
		$U_{19} - L_{19}$			-----	-647.16	139	-152	499	-512	-66	12	273	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.092	0.9	Yes	0.753	0.237	1.00	Yes	1.00	**4.67**
		$U_{20} - L_{20}$			-----	-578.04	167	-215	398	-471	33	4	764	100	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.227	1	Yes	0.673	0.219	0.90	Yes	1.00	**3.11**
	Structure 2	$U_0 - L_0$			-----	-615.52	-120	186	-377	478	-264	-45	-1156	-196	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.259	1	Yes	0.660	0.203	0.87	Yes	1.00	**3.23**
		$U_1 - L_1$			-----	-686.42	-120	128	-405	454	27	-68	-1059	-153	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.210	1	Yes	0.736	0.193	0.93	Yes	1.00	**4.92**
		$U_2 - L_2$			-----	-625.53	-88	97	-342	393	88	40	50	86	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.074	0.92	Yes	0.797	0.201	1.00	Yes	1.00	**5.00**
		$U_3 - L_3$			-----	-504.66	-49	55	-197	220	13	124	-72	98	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.090	0.95	Yes	0.791	0.200	1.00	Yes	1.00	**4.21**
		$U_4 - L_4$			-----	-372.28	23	-7	-145	165	-105	63	-95	99	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.080	0.93	Yes	0.788	0.210	1.00	Yes	1.00	**4.44**
		$U_5 - L_5$			188.55	-373.54	129	-120	-125	161	-112	102	164	143	0.339	0.254	0.60	Yes	0.187	0.140	0.33	Yes	0.844	0.107	0.96	Yes	0.790	0.206	1.00	Yes	1.00	**5.94**
		$U_6 - L_6$			375.33	-----	208	-221	-161	170	-132	102	-92	104	0.675	0.321	1.00	Yes	0.371	0.176	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.44**
		$U_7 - L_7$			-----	-420.27	-24	29	28	-35	-96	-9	-99	-28	-----	-----	-----	-----	-----	-----	-----	-----	0.949	0.046	1	Yes	0.889	0.045	0.94	Yes	1.00	**5.58**
		$U_8 - L_8$			-----	-467.09	16	-35	359	-364	-145	-139	-169	-162	-----	-----	-----	-----	-----	-----	-----	-----	0.677	0.118	0.8	Yes	0.673	0.319	1.00	Yes	1.00	**4.81**
		$U_9 - L_9$			-----	-697.97	88	-123	569	-587	-123	-56	-171	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.085	0.87	Yes	0.748	0.249	1.00	Yes	1.00	**5.76**
		$U_{10} - L_{10}$			-----	-799.55	120	-142	537	-561	-74	-40	69	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.081	0.88	Yes	0.748	0.248	1.00	Yes	1.00	**6.10**
		$U_{11} - L_{11}$			-----	-820.85	155	-176	512	-520	-41	30	19	0	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.069	0.9	Yes	0.767	0.230	1.00	Yes	1.00	**5.63**
		$U_{12} - L_{12}$			-----	-886.40	157	-158	518	-530	6	5	33	66	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.075	0.93	Yes	0.768	0.227	1.00	Yes	1.00	**5.55**
		$U_{13} - L_{13}$			-----	-747.92	245	-243	572	-561	-82	44	81	76	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.110	0.95	Yes	0.721	0.274	1.00	Yes	1.00	**4.17**
		$U_{14} - L_{14}$			-----	-1336.63	150	-146	-45	32	-61	127	-105	68	-----	-----	-----	-----	-----	-----	-----	-----	0.977	0.016	1	Yes	0.886	0.027	0.92	Yes	1.00	**6.14**
		$U_{15} - L_{15}$			-----	-744.68	-170	171	-576	576	-82	-47	-150	-87	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.138	0.97	Yes	0.718	0.275	1.00	Yes	1.00	**5.18**
		$U_{16} - L_{16}$			-----	-746.96	-118	107	-434	458	-158	-94	-307	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.107	0.97	Yes	0.801	0.194	1.00	Yes	1.00	**5.12**
		$U_{17} - L_{17}$			-----	-673.43	-132	137	-431	464	-181	-59	121	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.085	0.92	Yes	0.784	0.215	1.00	Yes	1.00	**5.01**
		$U_{18} - L_{18}$			-----	-596.26	-91	98	-409	451	-160	-33	-151	-12	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.085	0.88	Yes	0.760	0.231	1.00	Yes	1.00	**4.77**
		$U_{19} - L_{19}$			-----	-510.76	-32	40	-222	242	-157	-11	-153	18	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.084	0.86	Yes	0.763	0.233	1.00	Yes	1.00	**4.38**
		$U_{20} - L_{20}$			-----	-414.66	9	-3	-151	173	-153	18	69	70	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.096	0.95	Yes	0.794	0.198	1.00	Yes	1.00	**4.48**
		$U_{21} - L_{21}$			-----	-345.83	43	-40	-185	203	-134	37	-132	45	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.110	0.9	Yes	0.732	0.260	1.00	Yes	1.00	**4.67**
		$U_{22} - L_{22}$			-----	-391.82	119	-130	-62	62	-158	-56	-129	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.882	0.097	0.98	Yes	0.829	0.166	1.00	Yes	1.00	**5.44**
		$U_{23} - L_{23}$			-----	-326.72	-103	95	231	-239	-105	-79	-103	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.121	0.86	Yes	0.691	0.306	1.00	Yes	1.00	**5.48**
		$U_{24} - L_{24}$			-----	-379.19	-37	23	225	-233	-81	-62	-98	-86	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.103	0.89	Yes	0.726	0.266	1.00	Yes	1.00	**4.55**
		$U_{25} - L_{25}$			-----	-473.10	33	-40	298	-296	-82	-27	24	-28	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.081	0.8	Yes	0.706	0.287	1.00	Yes	1.00	**4.40**
		$U_{26} - L_{26}$			-----	-567.03	73	-102	506	-531	-78	-6	-8	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.081	0.84	Yes	0.723	0.272	1.00	Yes	1.00	**4.95**
		$U_{27} - L_{27}$			-----	-634.79	132	-165	541	-549	-59	42	-102	5	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.076	0.86	Yes	0.739	0.255	1.00	Yes	1.00	**4.76**
		$U_{28} - L_{28}$			-----	-707.60	143	-139	547	-548	-115	25	152	87	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.077	0.9	Yes	0.758	0.232	1.00	Yes	1.00	**4.84**
		$U_{29} - L_{29}$			-----	-718.79	206	-212	629	-620	-114	26	-68	47	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.120	0.93	Yes	0.693	0.301	1.00	Yes	1.00	**5.20**
		$U_{30} - L_{30}$			-----	-1309.61	48	-59	-79	54	-94	105	234	32	-----	-----	-----	-----	-----	-----	-----	-----	0.958	0.033	1	Yes	0.868	0.014	0.89	Yes	1.00	**6.32**
		$U_{31} - L_{31}$			-----	-772.97	-186	182	-496	502	-122	-62	-167	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.129	1	Yes	0.745	0.240	0.99	Yes	1.00	**4.62**
		$U_{32} - L_{32}$			-----	-925.40	-130	109	-407	447	-185	-96	27	-61	-----	-----	-----	-----	-----	-----	-----	-----	0.888	0.097	0.99	Yes	0.802	0.192	1.00	Yes	1.00	**6.23**
		$U_{33} - L_{33}$			-----	-848.48	-141	143	-422	453	-171	-40	-137	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.081	0.94	Yes	0.793	0.200	1.00	Yes	1.00	**5.74**
		$U_{34} - L_{34}$			-----	-852.23	-95	117	-393	459	-205	-19	-166	44	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.083	0.93	Yes	0.797	0.202	1.00	Yes	1.00	**6.47**
		$U_{35} - L_{35}$			-----	-734.72	-86	111	-403	481	-180	62	239	189	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.074	0.9	Yes	0.787	0.204	1.00	Yes	1.00	**6.01**
		$U_{36} - L_{36}$			-----	-498.38	-38	52	-295	316	-134	79	-110	91	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.087	0.81	Yes	0.718	0.276	1.00	Yes	1.00	**4.63**
		$U_{37} - L_{37}$			-----	-363.43	-145	176	-118	131	-94	15	-154	7	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.116	0.94	Yes	0.769	0.226	1.00	Yes	1.00	**4.72**
		$U_{38} - L_{38}$			357.24	-----	-233	240	132	-127	-111	-140	-131	-155	0.643	0.352	1.00	Yes	0.353	0.194	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.83**
		$U_{39} - L_{39}$			229.49	-331.13	-179	165	207	-227	-107	-62	-102	-146	0.413	0.332	0.75	Yes	0.227	0.183	0.41	Yes	0.748	0.147	0.9	Yes	0.701	0.290	1.00	Yes	1.00	**6.10**
		$U_{40} - L_{40}$			-----	-339.77	-56	30	214	-216	-73	-35	6	-81	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.109	0.88	Yes	0.719	0.276	1.00	Yes	1.00	**4.69**
		$U_{41} - L_{41}$			-----	-489.80	34	-53	235	-252	-33	12	-68	-64	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.091	0.93	Yes	0.768	0.229	1.00	Yes	1.00	**4.70**
		$U_{42} - L_{42}$			-----	-586.85	109	-119	479	-488	-85	-47	66	-58	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.079	0.87	Yes	0.748	0.250	1.00	Yes	1.00	**4.77**
		$U_{43} - L_{43}$			-----	-708.72	143	-160	537	-556	-35	-13	590	53	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.147	0.96	Yes	0.760	0.236	1.00	Yes	1.00	**4.89**
		$U_{44} - L_{44}$			-----	-672.68	195	-242	466	-580	-26	-5	570	97	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.188	1	Yes	0.721	0.246	0.97	Yes	1.00	**3.82**
	Structure 3	$U_0 - L_0$			-----	-553.19	-106	170	-365	440	-249	-33	-998	-131	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.267	1	Yes	0.644	0.204	0.85	Yes	1.00	**3.17**
		$U_1 - L_1$			-----	-648.51	-114	122	-408	438	-2	-78	-688	-37	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.182	1	Yes	0.755	0.203	0.96	Yes	1.00	**4.79**
		$U_2 - L_2$			-----	-572.95	-94	100	-315	358	81	30	-223	28	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.098	0.94	Yes	0.797	0.203	1.00	Yes	1.00	**4.42**
		$U_3 - L_3$			-----	-472.48	-29	47	-144	181	-103	68	121	148	-----	-----	-----	-----	-----	-----	-----	-----	0.884	0.108	1	Yes	0.815	0.184	1.00	Yes	1.00	**4.05**
		$U_4 - L_4$			-----	-352.64	30	-18	-175	192	-166	82	-154	129	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.088	0.89	Yes	0.746	0.245	1.00	Yes	1.00	**4.52**
		$U_5 - L_5$			194.04	-348.76	128	-127	-173	198	-151	67	107	143	0.349	0.297	0.65	Yes	0.192	0.163	0.36	Yes	0.782	0.116	0.9	Yes	0.738	0.253	1.00	Yes	1.00	**5.59**
		$U_6 - L_6$			-----	-354.50	173	-190	37	-40	-186	-41	-152	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.122	0.92	Yes	0.750	0.243	1.00	Yes	1.00	**4.91**
		$U_7 - L_7$			-----	-367.53	-25	12	240	-255	-172	-113	-191	-171	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.146	0.89	Yes	0.704	0.291	1.00	Yes	1.00	**3.98**
		$U_8 - L_8$			-----	-513.83	31	-30	340	-340	-150	-125	-32	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.112	0.86	Yes	0.705	0.290	1.00	Yes	1.00	**5.00**
		$U_9 - L_9$			-----	-665.61	50	-107	371	-484	-110	-58	-167	-113	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.101	0.9	Yes	0.775	0.225	1.00	Yes	1.00	**5.65**
		$U_{10} - L_{10}$			-----	-785.88	94	-99	386	-423	-12	50	-49	39	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.069	0.89	Yes	0.775	0.219	1.00	Yes	1.00	**5.80**
		$U_{11} - L_{11}$			-----	-644.84	182	-211	420	-474	-48	63	75	118	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.100	0.87	Yes	0.728	0.263	1.00	Yes	1.00	**3.52**
		$U_{12} - L_{12}$			-----	-1360.52	46	-72	-47	13	-108	11	-115	10	-----	-----	-----	-----	-----	-----	-----	-----	0.982	0.014	1	Yes	0.943	0.013	0.96	Yes	1.00	**6.16**
		$U_{13} - L_{13}$			-----	-464.96	-105	115	-259	282	-116	-92	-161	-104	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.139	0.92	Yes	0.717	0.277	1.00	Yes	1.00	**2.83**
		$U_{14} - L_{14}$			-----	-554.70	-47	48	-193	233	-208	-168	-293	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.135	0.98	Yes	0.795	0.204	1.00	Yes	1.00	**4.19**
		$U_{15} - L_{15}$			-----	-460.61	-25	33	-155	196	-167	-56	49	41	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.105	0.94	Yes	0.795	0.199	1.00	Yes	1.00	**4.10**
		$U_{16} - L_{16}$			-----	-338.15	-217	212	-109	113	-135	-12	78	7	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.103	0.85	Yes	0.715	0.278	1.00	Yes	1.00	**4.31**
		$U_{17} - L_{17}$			296.77	-----	-318	326	196	-210	-118	-27	-56	-149	0.534	0.460	1.00	Yes	0.294	0.253	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.82**
		$U_{18} - L_{18}$			113.09	-299.58	-113	122	239	-280	-98	-45	-43	-105	0.203	0.388	0.60	Yes	0.112	0.213	0.33	Yes	0.655	0.137	0.8	Yes	0.634	0.358	1.00	Yes	1.00	**6.44**
		$U_{19} - L_{19}$			-----	-327.56	-27	15	226	-234	-164	-86	176	14	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.139	0.86	Yes	0.693	0.300	1.00	Yes	1.00	**4.37**
		$U_{20} - L_{20}$			-----	-393.52	49	-57	62	-118	-175	-56	-8	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.879	0.116	1	Yes	0.833	0.151	0.99	Yes	1.00	**2.02**

Axial AB Operating

Operating Loads - 3F1

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

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression																Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield													
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass										
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																										
Center Truss - Diagonals	Structure 1	$U_0 - L_1$	668.97	-----	-48	26	4	-8	-196	-251	-46	-16	0.878	0.119	1.00	Yes	0.530	0.066	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.43**
		$U_1 - L_2$	463.58	-71.16	-89	11	12	-13	-58	-163	12	7	0.834	0.160	1.00	Yes	0.459	0.088	0.55	Yes	0.163	0.139	0.31	Yes	0.151	0.113	0.27	Yes											1.00	**5.42**
		$U_2 - L_3$	412.97	-347.50	-85	-20	4	-69	-215	-285	-286	-145	0.743	0.191	0.94	Yes	0.409	0.105	0.52	Yes	0.800	0.200	1	Yes	0.735	0.109	0.85	Yes											1.00	**6.46**
		$U_3 - L_4$	-----	-381.36	-29	-43	25	-56	-244	-171	-131	-122	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.123	1	Yes	0.807	0.071	0.88	Yes											1.00	**3.74**
		$U_4 - L_4$	593.68	-----	-90	42	-41	-11	-57	-163	-9	-83	0.871	0.129	1.00	Yes	0.479	0.071	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.16**
		$U_4 - L_5$	724.21	-----	-190	222	-95	42	62	-67	80	25	0.856	0.141	1.00	Yes	0.471	0.078	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.30**
		$U_5 - L_6$	605.60	-----	-255	222	-133	101	341	153	761	266	0.716	0.283	1.00	Yes	0.394	0.156	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**3.75**
		$U_6 - L_7$	645.83	-----	-109	299	-8	115	309	207	243	175	0.764	0.227	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**4.15**
		$U_8 - L_9$	1018.09	-----	-118	343	3	136	235	188	82	104	0.814	0.183	1.00	Yes	0.504	0.102	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.53**
		$U_9 - L_{10}$	1029.34	-----	-327	207	-77	92	206	202	84	104	0.823	0.172	1.00	Yes	0.510	0.096	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**6.07**
		$U_{10} - L_{11}$	1013.45	-----	-256	163	-74	31	-81	-140	18	-54	0.856	0.137	1.00	Yes	0.530	0.076	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**6.38**
		$U_{11} - L_{12}$	835.78	-----	-261	75	-104	-34	-272	-281	-295	-233	0.827	0.165	1.00	Yes	0.455	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.32**
		$U_{12} - L_{13}$	624.97	-----	-191	117	-58	0	-364	-257	-257	-271	0.762	0.238	1.00	Yes	0.479	0.135	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**4.46**
		$U_{13} - L_{14}$	443.09	-----	-88	33	-7	-29	-280	-310	-225	-290	0.797	0.202	1.00	Yes	0.438	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**3.87**
		$U_{15} - L_{14}$	233.37	-341.22	-56	-6	1	-73	-206	-301	-185	-274	0.420	0.180	0.61	Yes	0.231	0.099	0.34	Yes	0.799	0.193	1	Yes	0.722	0.093	0.82	Yes											1.00	**4.31**
		$U_{16} - L_{15}$	413.71	-245.47	-121	85	-25	-42	-197	-271	-349	-164	0.744	0.256	1.00	Yes	0.409	0.141	0.55	Yes	0.582	0.218	0.8	Yes	0.519	0.155	0.68	Yes											1.00	**5.27**
		$U_{17} - L_{16}$	546.19	-----	-143	108	-35	-17	-121	-215	-153	-146	0.801	0.195	1.00	Yes	0.441	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**4.66**
		$U_{18} - L_{17}$	646.60	-----	-322	254	-175	74	-129	-144	-245	-91	0.764	0.227	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**4.74**
		$U_{19} - L_{18}$	731.50	-----	-355	264	-106	68	-52	-154	48	7	0.792	0.207	1.00	Yes	0.436	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**4.87**
		$U_{20} - L_{19}$	738.86	-----	-338	311	-126	105	-51	-150	1	34	0.800	0.198	1.00	Yes	0.440	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.01**
	Structure 2	$U_0 - L_1$	802.40	-----	-327	335	-67	76	-208	-327	-121	49	0.794	0.204	1.00	Yes	0.437	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.64**
		$U_1 - L_2$	794.77	-----	-418	293	-88	59	-52	-100	41	10	0.786	0.209	1.00	Yes	0.432	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.72**
		$U_2 - L_3$	653.85	-----	-327	252	-69	53	-208	-228	-78	-177	0.773	0.227	1.00	Yes	0.425	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**4.74**
		$U_3 - L_4$	574.90	-----	-182	115	-42	-6	-311	-270	-320	-219	0.766	0.233	1.00	Yes	0.421	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**4.53**
		$U_4 - L_5$	409.72	-----	-127	77	15	-46	-321	-208	-214	-220	0.737	0.255	1.00	Yes	0.405	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**4.82**
		$U_5 - L_6$	388.99	-315.40	-108	53	73	-107	-403	-276	-283	-241	0.700	0.255	0.96	Yes	0.385	0.140	0.53	Yes	0.745	0.254	1	Yes	0.667	0.138	0.81	Yes											1.00	**6.07**
		$U_6 - L_7$	-----	-371.01	-44	-14	54	-93	-324	-223	-283	-250	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.196	1	Yes	0.711	0.106	0.82	Yes											1.00	**3.57**
		$U_8 - L_7$	610.95	-----	-176	123	-72	-7	-93	-285	-310	-206	0.779	0.220	1.00	Yes	0.490	0.125	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.24**
		$U_8 - L_9$	738.53	-----	-323	263	-136	16	-85	-187	-135	-161	0.800	0.196	1.00	Yes	0.440	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.36**
		$U_{10} - L_9$	835.68	-----	-309	238	-148	54	-55	-143	-187	-76	0.827	0.172	1.00	Yes	0.455	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.33**
		$U_{11} - L_{10}$	909.49	-----	-352	294	-141	88	113	-33	70	17	0.828	0.165	1.00	Yes	0.456	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.44**
		$U_{12} - L_{11}$	894.99	-----	-364	350	-168	147	207	63	166	111	0.815	0.183	1.00	Yes	0.448	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.34**
		$U_{13} - L_{12}$	760.69	-----	-425	374	-182	174	280	137	264	148	0.753	0.239	1.00	Yes	0.414	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**4.04**
		$U_{14} - L_{13}$	705.68	-----	-252	404	-62	229	279	130	757	176	0.698	0.301	1.00	Yes	0.384	0.165	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**4.11**
		$U_{14} - L_{15}$	642.53	-----	-220	361	-4	105	153	83	55	39	0.760	0.232	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**4.88**
		$U_{15} - L_{16}$	644.11	-----	-383	330	-101	106	116	83	52	69	0.762	0.238	1.00	Yes	0.419	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**4.31**
		$U_{16} - L_{17}$	737.18	-----	-352	335	-81	104	-24	49	97	28	0.798	0.196	1.00	Yes	0.439	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.15**
		$U_{17} - L_{18}$	684.61	-----	-303	278	-74	72	-76	-69	-20	-26	0.809	0.185	1.00	Yes	0.445	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**4.96**
		$U_{18} - L_{19}$	676.05	-----	-290	235	-54	31	-147	-143	-161	-109	0.799	0.194	1.00	Yes	0.440	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.01**
		$U_{19} - L_{20}$	602.81	-----	-201	149	-21	-6	-229	-134	-131	-140	0.769	0.226	1.00	Yes	0.423	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.19**
		$U_{20} - L_{21}$	437.74	-----	-117	96	4	-19	-205	-167	-154	-144	0.787	0.209	1.00	Yes	0.433	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**4.40**
		$U_{21} - L_{22}$	426.31	-277.20	-111	42	29	-70	-283	-192	-254	-230	0.767	0.224	1.00	Yes	0.422	0.123	0.55	Yes	0.655	0.198	0.86	Yes	0.587	0.142	0.73	Yes											1.00	**5.82**
		$U_{23} - L_{22}$	408.89	-347.53	-98	45	-13	-57	-68	-220	-278	-172	0.735	0.205	0.95	Yes	0.404	0.113	0.52	Yes	0.828	0.169	1	Yes	0.735	0.125	0.87	Yes											1.00	**6.16**
		$U_{24} - L_{23}$	449.00	-----	-117	107	-3	-31	-30	-127	-68	-83	0.808	0.186	1.00	Yes	0.444	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.35**
		$U_{25} - L_{24}$	624.15	-----	-197	177	-66	3	12	-92	-23	-59	0.796	0.195	1.00	Yes	0.438	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.59**
		$U_{26} - L_{25}$	690.17	-----	-287	265	-58	26	109	-30	45	12	0.816	0.182	1.00	Yes	0.449	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.36**
		$U_{27} - L_{26}$	677.86	-----	-290	287	-126	92	187	44	109	59	0.801	0.198	1.00	Yes	0.441	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.08**
		$U_{28} - L_{27}$	727.70	-----	-337	350	-164	151	180	95	143	112	0.788	0.209	1.00	Yes	0.434	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**4.89**
		$U_{29} - L_{28}$	633.23	-----	-358	331	-126	120	266	110	218	111	0.749	0.251	1.00	Yes	0.412	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**3.96**
		$U_{30} - L_{29}$	594.82	-----	-197	338	-8	155	233	108	533	88	0.703	0.288	1.00	Yes	0.387	0.158	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**4.34**
		$U_{30} - L_{31}$	781.06	-----	-293	440	-26	136	113	60	63	40	0.773	0.221	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.37**
		$U_{31} - L_{32}$	777.54	-----	-456	375	-131	131	50	92	36	48	0.769	0.225	1.00	Yes	0.423	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**4.97**
		$U_{32} - L_{33}$	903.30	-----	-369	333	-96	109	-126	-103	4	-30	0.823	0.174	1.00	Yes	0.453	0.096	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.59**
		$U_{33} - L_{34}$	887.35	-----	-356	251	-120	73	-249	-213	-258	-163	0.808	0.186	1.00	Yes	0.445	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.58**
		$U_{34} - L_{35}$	813.57	-----	-308	205	-96	38	-304	-226	-192	-236	0.805	0.188	1.00	Yes	0.443	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.34**
		$U_{35} - L_{36}$	713.36	-----	-314	228	-92	19	-367	-291	-301	-258	0.773	0.221	1.00	Yes	0.425	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**4.92**
		$U_{36} - L_{37}$	598.97	-----	-186	122	-29	-16	-329	-279	-323	-313	0.764	0.234	1.00	Yes	0.481	0.132	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**4.93**
		$U_{38} - L_{37}$	-----	-390.02	-26	-17	28	-77	-121	-243	-220	-194	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.148	1	Yes	0.747	0.087	0.84	Yes											1.00	**3.40**
		$U_{39} - L_{38}$	276.51	-348.05	-74	42	50	-97	-142	-218	-142	-179	0.497	0.188	0.69	Yes	0.274	0.103	0.38	Yes	0.829	0.165	1	Yes	0.736	0.124	0.87	Yes											1.00	**5.22**
		$U_{40} - L_{39}$	428.82	-221.97	-126	91	7	-52	-119	-178	-224	-102	0.771	0.225	1.00	Yes	0.424	0.124	0.55	Yes	0.531	0.160	0.7	Yes	0.470	0.160	0.64	Yes											1.00	**5.42**
		$U_{41} - L_{40}$	584.90	-----	-175	131	-71	0	-58	-134	-274	-78	0.780	0.217	1.00	Yes	0.429	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**4.89**
		$U_{42} - L_{41}$	647.04	-----	-334	264	-131	62	-95	-83	-223	-33	0.765	0.230	1.00	Yes	0.421	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.09**
		$U_{43} - L_{42}$	803.69	-----	-392	313	-97	66	-8	-121	-5	-28	0.795	0.200	1.00	Yes	0.437	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.52**
		$U_{44} - L_{43}$	811.02	-----	-358	364	-140	123	-20	-180	34	7	0.802	0.196	1.00	Yes	0.441	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.15**
	Structure 3	$U_0 - L_1$	737.81	-----	-306	285	-68	71	-159	-256	-131	45	0.799	0.198	1.00	Yes	0.440	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.34**
		$U_1 - L_2$	719.82	-----	-371	243	-92	58	-107	-163	36	13	0.780	0.217	1.00	Yes	0.429	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.02**
		$U_2 - L_3$	644.15	-----	-335	226	-105	46	-239	-201	-208	-191	0.762	0.233	1.00	Yes	0.419	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**4.91**
		$U_3 - L_4$	527.61	-----	-143	91	-18	-15	-316	-292	-256	-221	0.774	0.219	1.00	Yes	0.426	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**4.23**
		$U_4 - L_5$	405.25	-185.26	-119	76	12	-52	-396	-251	-340	-235	0.729	0.267	1.00	Yes	0.401	0.147	0.55	Yes	0.439	0.220	0.66	Yes	0.392	0.152	0.55	Yes											1.00	**4.76**
		$U_5 - L_6$	272.13	-317.44	-63	0	42	-94	-387	-340	-284	-310	0.489	0.232	0.73	Yes	0.269	0.128	0.40	Yes	0.744	0.253	1	Yes	0.672	0.120	0.80	Yes											1.00	**4.78**
		$U_7 - L_6$	447.47	-----	-86	32	-20	-31	-110	-264	-106	-246	0.805	0.186	1.00	Yes	0.443	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**4.48**
		$U_8 - L_7$	640.28	-----	-186	150	-72	-9	-153	-218	-290	-167	0.780	0.219	1.00	Yes	0.491	0.124	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**4.93**
		$U_8 - L_9$	860.82	-----	-261	136	-107	-43	-12	-174	-53	-113	0.852	0.147	1.00	Yes	0.468	0.081	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**6.02**
		$U_{10} - L_9$	1013.96	-----	-265	173	-130	24	100	-24	69	16	0.856	0.135	1.00	Yes	0.530	0.075	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**6.77**
		$U_{11} - L_{10}$	931.50	-----	-285	228	-135	86	401	240	959	461	0.745	0.249	1.00	Yes	0.461	0.142	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.24**
		$U_{12} - L_{11}$	900.32	-----	-95	332	19	192	397	257	1017	377	0.720	0.277	1.00	Yes	0.446	0.158	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**4.80**
		$U_{12} - L_{13}$	671.29	-----	-113	289	10	113	186	118	95	94	0.794	0.198	1.00	Yes	0.436	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**4.23**
		$U_{13} - L_{14}$	669.09	-----	-303	217	-125	87	149	103	93	141	0.791	0.200	1.00	Yes	0.435	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**4.33**
		$U_{14} - L_{15}$	726.53	-----	-211	173	-15	22	-109	-75	49	-17	0.859	0.140	1.00	Yes	0.472	0.077	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.27**
		$U_{15} - L_{16}$	586.81	-----	-86	30	-15	-8	-203	-188	-85	-87	0.861	0.134	1.00	Yes	0.473	0.074	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**4.67**
		$U_{17} - L_{16}$	-----	-403.82	-13	-24	-5	-44	-45	-147	-28	-99	-----	-----	-----	-----	-----	-----	-----	-----	0.923	0.067	1	Yes	0.854	0.057	0.92	Yes											1.00	**3.42**
		$U_{18} - L_{17}$	271.19	-365.02	-57	10	-31	-65	-67	-199	-307	-81	0.488	0.173	0.67	Yes	0.268	0.095	0.37	Yes	0.840	0.153	1	Yes	0.772	0.084	0.86	Yes											1.00	**5.24**
		$U_{19} - L_{18}$	440.40	-106.91	-88	22	-21	-31	-13	-152	-313	-112	0.792	0.203	1.00	Yes	0.436	0.112	0.55	Yes	0.245	0.114	0.36	Yes	0.226	0.112	0.34	Yes											1.00	**5.51**
		$U_{20} - L_{19}$	650.74	-----	-78	58	-22	3	-141	-202	29	-7	0.854	0.142	1.00	Yes	0.516	0.078	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----											1.00	**5.31**

Axial AB Operating

Operating Loads - 3F1

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			-----	-555.07	-96	59	478	-1040	-48	115	-28	-774	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.166	0.93	Yes	0.749	0.247	1.00	Yes	1.00	**7.73**
		U_1 - U_2			-----	-510.85	-107	71	-251	-744	-151	110	-214	-421	-----	-----	-----	-----	-----	-----	-----	-----	0.695	0.298	1	Yes	0.689	0.177	0.87	Yes	1.00	**3.98**
		U_2 - U_3			-----	-572.75	-99	286	-532	-485	-114	110	-41	-541	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.219	1	Yes	0.772	0.126	0.90	Yes	1.00	**4.96**
		U_3 - U_4			473.39	-615.94	138	399	-579	-656	-219	-10	138	-309	0.543	0.208	0.76	Yes	0.372	0.143	0.52	Yes	0.838	0.161	1	Yes	0.831	0.156	0.99	Yes	1.00	**7.43**
		U_4 - U_5			457.00	-575.89	177	375	-919	-140	-90	-23	-333	-143	0.524	0.275	0.80	Yes	0.359	0.188	0.55	Yes	0.784	0.200	0.99	Yes	0.777	0.218	1.00	Yes	1.00	**7.07**
		U_5 - U_6			689.33	-----	278	497	-591	342	98	136	-226	-360	0.790	0.201	1.00	Yes	0.533	0.132	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.55**
		U_6 - U_7			883.95	-----	410	222	-302	-44	318	280	-423	111	0.845	0.145	1.00	Yes	0.591	0.100	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.23**
		U_7 - U_8			1014.01	-----	-122	1433	-563	1301	556	741	31	295	0.703	0.292	1.00	Yes	0.490	0.200	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.73**
		U_8 - U_9			858.63	-----	1331	-301	1239	-797	386	547	274	-399	0.704	0.290	1.00	Yes	0.481	0.198	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.80**
		U_9 - U_{10}			622.73	-----	240	250	34	-842	-2	303	278	-831	0.675	0.322	1.00	Yes	0.457	0.216	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.64**
		U_{10} - U_{11}			-----	-613.19	247	-176	163	-928	48	105	-176	-516	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.188	0.98	Yes	0.782	0.208	1.00	Yes	1.00	**4.87**
		U_{11} - U_{12}			-----	-901.33	152	-210	-8	-842	13	101	3	-230	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.141	1	Yes	0.846	0.140	0.99	Yes	1.00	**3.66**
		U_{12} - U_{13}			-----	-1239.96	-52	-270	-352	-853	82	6	98	-496	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.157	1	Yes	0.828	0.118	0.95	Yes	1.00	**4.19**
		U_{13} - U_{14}			-----	-1379.52	-195	-505	-467	-1453	-42	-8	-107	-198	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.199	1	Yes	0.791	0.160	0.96	Yes	1.00	**4.08**
		U_{14} - U_{15}			-----	-1363.46	-408	-292	-1354	-724	42	-278	-99	-203	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.204	1	Yes	0.782	0.149	0.94	Yes	1.00	**3.98**
		U_{15} - U_{16}			-----	-1428.59	-201	-468	-944	-835	-116	-433	-333	-285	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.170	1	Yes	0.819	0.104	0.93	Yes	1.00	**4.48**
		U_{16} - U_{17}			-----	-1370.31	-417	-226	-1319	-473	-296	-378	-202	-249	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.200	1	Yes	0.786	0.146	0.94	Yes	1.00	**5.05**
		U_{17} - U_{18}			-----	-1080.95	-253	-61	-822	26	-118	72	-139	-181	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.138	1	Yes	0.846	0.134	0.98	Yes	1.00	**5.42**
		U_{18} - U_{19}			-----	-699.53	-254	15	-648	92	371	-138	359	-281	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.199	1	Yes	0.787	0.130	0.92	Yes	1.00	**3.88**
		U_{19} - U_{20}			-----	-596.43	-240	-60	-1113	272	-27	-116	-111	-212	-----	-----	-----	-----	-----	-----	-----	-----	0.677	0.319	1	Yes	0.671	0.224	0.90	Yes	1.00	**10.59**
	Structure 2	U_0 - U_1			-----	-581.27	682	-452	670	-1831	334	-64	178	-903	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.206	0.9	Yes	0.686	0.311	1.00	Yes	1.00	**9.95**
		U_1 - U_2			-----	-817.06	-150	-322	-176	-1086	-18	18	-68	-356	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.202	1	Yes	0.789	0.165	0.96	Yes	1.00	**4.97**
		U_2 - U_3			-----	-1129.59	-131	-436	-131	-1475	-33	-62	-220	-660	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.191	1	Yes	0.802	0.150	0.96	Yes	1.00	**4.51**
		U_3 - U_4			-----	-1328.68	-536	-553	-908	-1674	-112	-41	-225	-477	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.233	1	Yes	0.757	0.149	0.91	Yes	1.00	**3.84**
		U_4 - U_5			-----	-1465.41	-588	-568	-1229	-1767	-118	-90	-129	-669	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.237	1	Yes	0.752	0.146	0.90	Yes	1.00	**4.13**
		U_5 - U_6			-----	-1571.47	-576	-10	-1316	-1308	-194	-48	-379	-655	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.184	1	Yes	0.807	0.109	0.92	Yes	1.00	**4.83**
		U_6 - U_7			-----	-1373.49	-326	-214	-1179	-1466	-168	-97	-58	-299	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.212	1	Yes	0.782	0.131	0.92	Yes	1.00	**4.75**
		U_7 - U_8			-----	-1375.99	-350	-208	-1623	-901	-82	-180	-262	-279	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.211	1	Yes	0.784	0.145	0.93	Yes	1.00	**4.80**
		U_8 - U_9			-----	-1183.41	-363	202	-1534	-316	-17	-196	-411	-353	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.190	1	Yes	0.803	0.163	0.97	Yes	1.00	**5.40**
		U_9 - U_{10}			-----	-935.04	-78	544	-1473	16	-119	-227	-507	-580	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.187	1	Yes	0.807	0.179	0.99	Yes	1.00	**7.21**
		U_{10} - U_{11}			777.75	-616.44	304	580	-1483	-214	-184	-107	-1044	-346	0.657	0.337	1.00	Yes	0.447	0.221	0.67	Yes	0.616	0.275	0.9	Yes	0.613	0.209	0.83	Yes	1.00	**9.57**
		U_{11} - U_{12}			910.84	-----	180	641	-1133	411	29	28	-549	-558	0.769	0.228	1.00	Yes	0.517	0.152	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.93**
		U_{12} - U_{13}			1316.95	-----	473	84	-23	-125	348	439	-91	21	0.889	0.101	1.00	Yes	0.634	0.070	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.05**
		U_{13} - U_{14}			1334.30	-----	-353	2944	-422	2024	669	1018	304	587	0.656	0.342	1.00	Yes	0.465	0.225	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		U_{14} - U_{15}			1380.83	-----	2866	-195	1955	-241	713	777	512	417	0.679	0.318	1.00	Yes	0.481	0.209	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.11**
		U_{15} - U_{16}			1351.75	-----	99	285	-256	-1210	216	475	-31	-463	0.817	0.178	1.00	Yes	0.581	0.120	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.97**
		U_{16} - U_{17}			1022.75	-----	653	201	265	-1193	-28	309	101	-903	0.754	0.245	1.00	Yes	0.501	0.161	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.84**
		U_{17} - U_{18}			711.80	-----	468	237	333	-1208	-57	276	-289	-513	0.715	0.280	1.00	Yes	0.476	0.185	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.18**
		U_{18} - U_{19}			505.37	-638.97	540	125	124	-1208	5	144	-130	-801	0.507	0.322	0.83	Yes	0.333	0.207	0.54	Yes	0.759	0.233	1	Yes	0.755	0.205	0.96	Yes	1.00	**7.38**
		U_{19} - U_{20}			-----	-736.61	314	151	-343	-1081	-48	150	73	-431	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.177	1	Yes	0.813	0.173	0.99	Yes	1.00	**5.70**
		U_{20} - U_{21}			-----	-844.88	151	-91	-429	-940	3	22	-27	-603	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.218	1	Yes	0.771	0.136	0.91	Yes	1.00	**5.57**
		U_{21} - U_{22}			-----	-799.95	-77	-33	-547	-1268	-182	-97	-281	-211	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.263	1	Yes	0.730	0.184	0.92	Yes	1.00	**4.88**
		U_{22} - U_{23}			-----	-799.97	-81	-98	-1292	-689	-105	-159	-155	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.261	1	Yes	0.730	0.187	0.92	Yes	1.00	**4.89**
		U_{23} - U_{24}			-----	-832.94	-90	194	-1069	-404	5	-61	-544	-208	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.229	1	Yes	0.760	0.155	0.92	Yes	1.00	**6.01**
		U_{24} - U_{25}			408.08	-700.17	218	356	-1139	-331	19	-60	-481	-89	0.383	0.247	0.63	Yes	0.254	0.162	0.42	Yes	0.777	0.213	1	Yes	0.773	0.182	0.96	Yes	1.00	**6.68**
		U_{25} - U_{26}			651.91	-----	194	634	-1373	116	17	-42	-733	-348	0.654	0.340	1.00	Yes	0.429	0.218	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.90**
		U_{26} - U_{27}			719.13	-----	256	452	-920	203	-42	5	-785	-174	0.722	0.271	1.00	Yes	0.481	0.179	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.35**
		U_{27} - U_{28}			1053.48	-----	195	683	-1181	433	237	253	-633	-336	0.776	0.215	1.00	Yes	0.516	0.141	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.77**
		U_{28} - U_{29}			1411.36	-----	342	40	-757	-449	540	571	-664	261	0.853	0.142	1.00	Yes	0.607	0.097	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.61**
		U_{29} - U_{30}			1320.97	-----	-201	2938	-204	1925	801	1068	497	702	0.650	0.345	1.00	Yes	0.460	0.227	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.53**
		U_{30} - U_{31}			1361.25	-----	2910	-414	2072	-495	793	731	651	381	0.669	0.324	1.00	Yes	0.474	0.213	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.02**
		U_{31} - U_{32}			1173.04	-----	80	343	-556	-1032	203	378	222	-735	0.792	0.200	1.00	Yes	0.565	0.137	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.98**
		U_{32} - U_{33}			812.49	-----	577	126	418	-1304	11	215	-268	-1002	0.686	0.306	1.00	Yes	0.461	0.204	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.69**
		U_{33} - U_{34}			551.69	-786.51	445	123	-84	-1492	-23	203	-110	-652	0.466	0.290	0.76	Yes	0.317	0.189	0.51	Yes	0.786	0.208	1	Yes	0.782	0.210	1.00	Yes	1.00	**7.93**
		U_{34} - U_{35}			-----	-958.54	365	-211	-167	-1343	43	36	150	-538	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.156	0.99	Yes	0.827	0.163	1.00	Yes	1.00	**5.33**
		U_{35} - U_{36}			-----	-1193.54	76	-478	-227	-1447	-18	80	-223	-361	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.185	1	Yes	0.810	0.154	0.97	Yes	1.00	**4.28**
		U_{36} - U_{37}			-----	-1390.91	-307	-328	-804	-1531	-23	-124	-80	-291	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.201	1	Yes	0.792	0.136	0.93	Yes	1.00	**4.14**
		U_{37} - U_{38}			-----	-1394.33	-217	-439	-1450	-1216	-96	-201	-194	-198	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.196	1	Yes	0.794	0.129	0.93	Yes	1.00	**4.15**
		U_{38} - U_{39}			-----	-1576.10	-173	-636	-1378	-1376	7	-213	-492	-353	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.177	1	Yes	0.809	0.114	0.93	Yes	1.00	**4.52**
		U_{39} - U_{40}			-----	-1533.40	-612	-566	-1699	-933	13	-86	-243	-132	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.198	1	Yes	0.787	0.141	0.93	Yes	1.00	**4.62**
		U_{40} - U_{41}			-----	-1442.44	-532	-519	-1309	-791	171	-152	165	-144	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.168	1	Yes	0.821	0.117	0.94	Yes	1.00	**5.11**
		U_{41} - U_{42}			-----	-1215.41	-423	-126	-1179	41	57	-29	7	-296	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.131	1	Yes	0.863	0.120	0.99	Yes	1.00	**6.15**
		U_{42} - U_{43}			-----	-884.55	-314	-43	-891	44	167	-214	-56	-414	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.137	1	Yes	0.854	0.135	0.99	Yes	1.00	**7.18**
		U_{43} - U_{44}			-----	-584.10	-247	-150	-1247	337	-116	-127	-196	-185	-----	-----	-----	-----	-----	-----	-----	-----	0.694	0.299	1	Yes	0.690	0.212	0.91	Yes	1.00	**9.70**
	Structure 3	U_0 - U_1			-----	-583.22	634	-356	1011	-1684	278	-39	39	-1157	-----	-----	-----	-----	-----	-----	-----	-----	0.662	0.255	0.92	Yes	0.656	0.339	1.00	Yes	1.00	**10.79**
		U_1 - U_2			-----	-701.00	-82	-229	-80	-800	-20	4	16	-391	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.200	1	Yes	0.789	0.161	0.95	Yes	1.00	**4.36**
		U_2 - U_3			-----	-1034.03	-54	-241	70	-812	-33	-59	-192	-683	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.175	1	Yes	0.809	0.132	0.95	Yes	1.00	**4.48**
		U_3 - U_4			-----	-1345.27	-222	-374	-404	-1381	-108	-37	-367	-569	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.220	1	Yes	0.771	0.152	0.93	Yes	1.00	**4.63**
		U_4 - U_5			-----	-1407.45	-443	-135	-780	-905	-92	-60	-246	-755	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.182	1	Yes	0.807	0.100	0.91	Yes	1.00	**4.46**
		U_5 - U_6			-----	-1349.75	-257	-380	-763	-1352	-186	-150	57	-266	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.210	1	Yes	0.774	0.149	0.93	Yes	1.00	**4.39**
		U_6 - U_7			-----	-1357.00	-500	-155	-1504	-472	-120	-298	-212	-395	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.213	1	Yes	0.778	0.166	0.95	Yes	1.00	**4.46**
		U_7 - U_8			-----	-1208.67	-254	-4	-740	-182	-122	-323	-314	-532	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.179	1	Yes	0.807	0.102	0.91	Yes	1.00	**3.77**
		U_8 - U_9			-----	-825.68	-176	201	-759	22	-212	-202	-382	-264	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.212	1	Yes	0.775	0.126	0.91	Yes	1.00	**3.40**
		U_9 - U_{10}			-----	-537.66	-145	296	-906	216	-7	-52	-138	-367	-----	-----	-----	-----	-----	-----	-----	-----	0.692	0.299	1	Yes	0.686	0.203	0.89	Yes	1.00	**4.92**
		U_{10} - U_{11}			685.47	-----	292	250	-539	17	131	135	-791	37	0.744	0.248	1.00	Yes	0.504	0.166	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.61**
		U_{11} - U_{12}			856.20	-----	-316	1373	-649	1097	239	497	-314	193	0.702	0.291	1.00	Yes	0.480	0.198	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.92**
		U_{12} - U_{13}			997.52	-----	1392	-144	1652	-855	172	527	-38	-494	0.691	0.304	1.00	Yes	0.482	0.207	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.05**
		U_{13} - U_{14}			848.33	-----	225	362	-8	-533	-59	414	-67	-485	0.811	0.180	1.00	Yes	0.567	0.124	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.07**
		U_{14} - U_{15}			580.79	-----	427	200	100	-773	-56	241	182	-863	0.666	0.330	1.00	Yes	0.449	0.218	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.43**
		U_{15} - U_{16}			279.24	-592.14	254	107	-151	-839	-75	190	138	132	0.320	0.232	0.56	Yes	0.220	0.159	0.38	Yes	0.806	0.170	0.98	Yes	0.798	0.199	1.00	Yes	1.00	**5.75**
		U_{16} - U_{17}			281.79	-611.99	307	28	-630	-516	172	-74	182	45	0.323	0.180	0.51	Yes	0.222	0.124	0.35	Yes	0.833	0.165	1	Yes	0.825	0.150	0.98	Yes	1.00	**5.89**
		U_{17} - U_{18}			-----	-603.84	196	-180	-540	-514	66	35	-70	-213	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.174	1	Yes	0.814	0.128	0.95	Yes	1.00	**4.69**
		U_{18} - U_{19}			-----	-573.65	-5	-72	-772	-181	214	-198	-17	-197	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.213	1	Yes	0.774	0.183	0.96	Yes	1.00	**4.97**
		U_{19} - U_{20}			-----	-599.51	46	-274	-632	-182	-145	-109	-112	-141	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.181	1	Yes	0.808	0.150	0.96	Yes	1.00	**7.70**

Operating Loads - 3F1

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	309.56	-239.88	180	-244	776	-822	225	829	-344	-1264	0.474	0.518	1.00	Yes	0.279	0.309	0.59	Yes	0.436	0.394	0.83	Yes	0.432	0.247	0.68	Yes	1.00	**27.42**
		L_1 - L_2	371.82	-----	-59	-671	4	-26	-1028	282	321	-143	0.569	0.422	1.00	Yes	0.347	0.273	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.78**
		L_2 - L_3	617.80	-----	-726	-569	-54	37	-70	-677	-183	122	0.711	0.284	1.00	Yes	0.411	0.168	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.89**
		L_3 - L_4	585.43	-----	-635	-359	-12	257	-1017	-32	262	-220	0.674	0.317	1.00	Yes	0.400	0.197	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.97**
		L_4 - L_5	-----	-553.86	-581	265	99	465	73	-310	-70	197	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.136	0.99	Yes	0.844	0.154	1.00	Yes	1.00	**4.65**
		L_5 - L_6	-----	-747.88	-188	205	124	589	-179	-119	157	-245	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.120	1	Yes	0.863	0.130	1.00	Yes	1.00	**4.54**
		L_6 - L_7	-----	-1184.79	-263	-58	150	-19	-176	-406	-262	483	-----	-----	-----	-----	-----	-----	-----	-----	0.964	0.033	1	Yes	0.954	0.041	1.00	Yes	1.00	**5.16**
		L_7 - L_8	-----	-1247.52	-33	669	-65	1264	356	200	435	464	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.197	1	Yes	0.790	0.167	0.96	Yes	1.00	**4.05**
		L_8 - L_9	-----	-1153.56	676	-40	1123	-72	196	349	405	412	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.259	1	Yes	0.731	0.149	0.88	Yes	1.00	**2.96**
		L_9 - L_{10}	-----	-1055.26	335	-225	546	-397	538	-42	396	-147	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.133	1	Yes	0.849	0.086	0.94	Yes	1.00	**6.98**
		L_{10} - L_{11}	-----	-528.33	18	-522	510	-170	-184	-677	-342	179	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.180	1	Yes	0.805	0.138	0.95	Yes	1.00	**6.10**
		L_{11} - L_{12}	482.82	-----	148	-689	331	-253	-1075	185	125	-80	0.625	0.371	1.00	Yes	0.375	0.234	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.52**
		L_{12} - L_{13}	1017.18	-----	-462	-627	52	-158	-197	-688	-158	121	0.803	0.191	1.00	Yes	0.513	0.117	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.25**
		L_{13} - L_{14}	1221.91	-----	-226	-1264	178	-533	-1180	2	145	25	0.719	0.272	1.00	Yes	0.466	0.169	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.70**
		L_{14} - L_{15}	1535.37	-----	-1469	-760	-569	-153	-295	-955	-152	159	0.750	0.244	1.00	Yes	0.487	0.150	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.76**
		L_{15} - L_{16}	1588.72	-----	-1075	-1321	-308	-377	-905	-97	97	-143	0.776	0.223	1.00	Yes	0.498	0.133	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.49**
		L_{16} - L_{17}	1189.47	-----	-1321	-60	-426	56	66	-530	-127	165	0.752	0.241	1.00	Yes	0.488	0.149	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.33**
		L_{17} - L_{18}	1014.36	-----	-394	-31	-223	37	-91	-304	117	-90	0.883	0.115	1.00	Yes	0.565	0.070	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.01**
		L_{18} - L_{19}	508.80	-----	-482	238	-402	301	-143	297	-349	270	0.779	0.217	1.00	Yes	0.527	0.138	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.93**
		L_{19} - L_{20}	419.21	-346.79	-366	111	-934	616	362	81	47	11	0.642	0.356	1.00	Yes	0.391	0.237	0.63	Yes	0.630	0.360	0.99	Yes	0.624	0.280	0.91	Yes	1.00	**11.73**
	Structure 2	L_0 - L_1	-----	-495.32	117	-388	488	-1434	130	450	15	53	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.261	0.98	Yes	0.708	0.292	1.00	Yes	1.00	**19.97**
		L_1 - L_2	444.89	-----	196	-1117	244	-400	-1409	407	118	36	0.540	0.459	1.00	Yes	0.321	0.285	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.14**
		L_2 - L_3	957.52	-----	-155	-1020	-41	-278	-204	-861	-74	155	0.755	0.239	1.00	Yes	0.495	0.147	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.85**
		L_3 - L_4	1236.94	-----	-251	-1526	-8	-519	-1129	223	178	3	0.727	0.269	1.00	Yes	0.489	0.170	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.65**
		L_4 - L_5	1718.36	-----	-1528	-1488	-440	-404	210	-725	-79	163	0.801	0.193	1.00	Yes	0.530	0.117	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.50**
		L_5 - L_6	1753.84	-----	-1212	-1886	-225	-514	-1192	-50	187	-88	0.753	0.242	1.00	Yes	0.505	0.151	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.03**
		L_6 - L_7	1801.49	-----	-2189	-1355	-582	-222	104	-641	-160	217	0.762	0.232	1.00	Yes	0.507	0.138	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.12**
		L_7 - L_8	1326.34	-----	-1443	-670	-312	366	-890	74	210	-139	0.760	0.232	1.00	Yes	0.500	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.27**
		L_8 - L_9	1041.88	-----	-1330	228	-113	581	133	-920	-87	179	0.729	0.266	1.00	Yes	0.491	0.169	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.38**
		L_9 - L_{10}	641.30	-766.24	-1037	-141	-126	839	-1158	-184	146	-141	0.572	0.305	0.88	Yes	0.333	0.185	0.52	Yes	0.810	0.189	1	Yes	0.805	0.166	0.98	Yes	1.00	**8.87**
		L_{10} - L_{11}	-----	-738.52	-707	399	7	569	24	-432	-75	72	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.083	0.96	Yes	0.867	0.124	1.00	Yes	1.00	**5.32**
		L_{11} - L_{12}	-----	-1021.56	-280	703	-162	1121	153	-231	127	-432	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.115	0.96	Yes	0.838	0.153	1.00	Yes	1.00	**4.14**
		L_{12} - L_{13}	-----	-1481.33	-250	-357	42	-688	-125	133	-337	238	-----	-----	-----	-----	-----	-----	-----	-----	0.893	0.101	1	Yes	0.886	0.068	0.96	Yes	1.00	**5.67**
		L_{13} - L_{14}	-----	-1541.99	-623	1739	-877	2481	182	142	351	468	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.174	0.96	Yes	0.776	0.217	1.00	Yes	1.00	**4.67**
		L_{14} - L_{15}	-----	-1373.58	1739	-647	2295	-743	170	180	382	308	-----	-----	-----	-----	-----	-----	-----	-----	0.697	0.299	1	Yes	0.691	0.200	0.90	Yes	1.00	**2.84**
		L_{15} - L_{16}	-----	-1533.56	-521	-123	-435	-117	114	-141	295	-192	-----	-----	-----	-----	-----	-----	-----	-----	0.925	0.071	1	Yes	0.917	0.052	0.97	Yes	1.00	**6.01**
		L_{16} - L_{17}	-----	-1051.29	556	-351	1121	-78	119	-129	-386	91	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.222	1	Yes	0.766	0.138	0.91	Yes	1.00	**4.70**
		L_{17} - L_{18}	-----	-769.86	276	-445	527	48	-596	52	195	-189	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.179	1	Yes	0.808	0.084	0.90	Yes	1.00	**4.22**
		L_{18} - L_{19}	-----	-645.14	-179	-607	722	36	454	-327	-212	60	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.112	0.98	Yes	0.860	0.139	1.00	Yes	1.00	**7.50**
		L_{19} - L_{20}	517.39	-394.21	-49	-1019	466	77	-1400	296	147	-162	0.586	0.411	1.00	Yes	0.347	0.253	0.60	Yes	0.529	0.174	0.71	Yes	0.525	0.197	0.73	Yes	1.00	**6.87**
		L_{20} - L_{21}	949.96	-----	-981	-1096	376	-90	95	-754	-181	71	0.758	0.241	1.00	Yes	0.497	0.147	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.01**
		L_{21} - L_{22}	842.94	-----	-719	-1454	97	-301	-1067	59	135	-101	0.672	0.327	1.00	Yes	0.450	0.208	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.92**
		L_{22} - L_{23}	851.20	-----	-1570	-707	-357	70	-107	-805	-59	206	0.679	0.316	1.00	Yes	0.454	0.200	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.36**
		L_{23} - L_{24}	930.62	-----	-1099	-1013	-53	467	-840	89	167	-142	0.742	0.251	1.00	Yes	0.487	0.154	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.56**
		L_{24} - L_{25}	-----	-573.95	-1187	-167	215	538	247	-1465	-104	150	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.208	0.98	Yes	0.765	0.229	1.00	Yes	1.00	**10.29**
		L_{25} - L_{26}	-----	-641.11	-267	188	29	728	-10	-72	102	-165	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.101	0.97	Yes	0.854	0.141	1.00	Yes	1.00	**7.37**
		L_{26} - L_{27}	-----	-863.58	-271	423	101	544	-55	74	-113	296	-----	-----	-----	-----	-----	-----	-----	-----	0.913	0.072	0.99	Yes	0.907	0.087	1.00	Yes	1.00	**5.35**
		L_{27} - L_{28}	-----	-1141.72	-224	744	-65	1305	62	-185	294	-167	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.146	0.99	Yes	0.832	0.161	1.00	Yes	1.00	**5.85**
		L_{28} - L_{29}	-----	-1553.60	-263	-510	58	-465	-155	-12	-103	401	-----	-----	-----	-----	-----	-----	-----	-----	0.937	0.059	1	Yes	0.929	0.051	0.99	Yes	1.00	**7.54**
		L_{29} - L_{30}	-----	-1548.75	-716	1903	-818	2479	82	65	418	368	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.166	0.96	Yes	0.779	0.216	1.00	Yes	1.00	**5.29**
		L_{30} - L_{31}	-----	-1386.72	1772	-551	2207	-668	377	303	273	265	-----	-----	-----	-----	-----	-----	-----	-----	0.704	0.288	1	Yes	0.698	0.193	0.90	Yes	1.00	**1.89**
		L_{31} - L_{32}	-----	-1548.76	-179	-284	-284	-355	256	-392	241	-14	-----	-----	-----	-----	-----	-----	-----	-----	0.934	0.057	1	Yes	0.926	0.035	0.97	Yes	1.00	**5.29**
		L_{32} - L_{33}	-----	-967.12	640	-285	973	-188	-396	124	-300	119	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.196	1	Yes	0.793	0.133	0.93	Yes	1.00	**3.67**
		L_{33} - L_{34}	-----	-755.59	452	-407	589	6	224	4	101	-140	-----	-----	-----	-----	-----	-----	-----	-----	0.894	0.073	0.97	Yes	0.888	0.103	1.00	Yes	1.00	**6.38**
		L_{34} - L_{35}	673.15	-692.50	-197	-1293	793	-124	64	-1524	-207	102	0.601	0.390	1.00	Yes	0.350	0.236	0.59	Yes	0.732	0.169	0.91	Yes	0.727	0.207	0.94	Yes	1.00	**9.94**
		L_{35} - L_{36}	922.42	-----	-60	-1232	540	-200	-1965	146	161	-113	0.645	0.351	1.00	Yes	0.435	0.227	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.28**
		L_{36} - L_{37}	1300.86	-----	-738	-1584	260	-287	-64	-945	-198	157	0.746	0.252	1.00	Yes	0.490	0.152	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.38**
		L_{37} - L_{38}	1700.53	-----	-1457	-2262	-342	-668	-1212	154	104	-169	0.720	0.274	1.00	Yes	0.478	0.165	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.54**
		L_{38} - L_{39}	1767.50	-----	-2292	-1022	-622	-226	205	-493	-100	171	0.758	0.234	1.00	Yes	0.509	0.143	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.16**
		L_{39} - L_{40}	1674.88	-----	-1773	-1064	-453	-333	-648	368	122	-131	0.781	0.211	1.00	Yes	0.517	0.127	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.05**
		L_{40} - L_{41}	1298.78	-----	-1694	24	-473	28	485	40	-49	267	0.763	0.237	1.00	Yes	0.514	0.147	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.02**
		L_{41} - L_{42}	977.61	-----	-1186	127	-270	50	-503	65	259	73	0.770	0.225	1.00	Yes	0.505	0.136	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.34**
		L_{42} - L_{43}	507.41	-----	-1287	528	-289	216	733	366	107	334	0.616	0.382	1.00	Yes	0.367	0.242	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.81**
		L_{43} - L_{44}	-----	-461.42	-771	193	-705	242	-161	-47	1327	387	-----	-----	-----	-----	-----	-----	-----	-----	0.663	0.333	1	Yes	0.659	0.157	0.82	Yes	1.00	**30.59**
	Structure 3	L_0 - L_1	-----	-470.46	73	-242	286	-484	49	222	44	202	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.117	0.98	Yes	0.847	0.145	1.00	Yes	1.00	**6.54**
		L_1 - L_2	497.24	-----	226	-440	472	-573	304	-187	297	144	0.761	0.235	1.00	Yes	0.515	0.149	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.53**
		L_2 - L_3	845.61	-----	-164	-753	45	-233	-89	-857	-24	165	0.736	0.255	1.00	Yes	0.471	0.156	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.66**
		L_3 - L_4	1124.22	-----	-219	-1214	48	-433	-1238	310	145	58	0.711	0.288	1.00	Yes	0.461	0.180	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.72**
		L_4 - L_5	1567.07	-----	-1319	-1089	-378	-260	-78	-980	-31	224	0.766	0.228	1.00	Yes	0.491	0.136	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.16**
		L_5 - L_6	1515.90	-----	-765	-1515	-142	-463	-1078	158	247	-38	0.741	0.258	1.00	Yes	0.481	0.159	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.05**
		L_6 - L_7	1243.38	-----	-1553	24	-501	240	-18	-615	-54	250	0.731	0.265	1.00	Yes	0.474	0.163	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.82**
		L_7 - L_8	997.83	-----	-645	-442	-107	155	-793	-163	135	-167	0.787	0.207	1.00	Yes	0.504	0.127	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.01**
		L_8 - L_9	529.82	-----	-736	152	-184	416	134	-639	-105	165	0.686	0.307	1.00	Yes	0.412	0.197	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.76**
		L_9 - L_{10}	-----	-562.96	-401	79	-65	517	-290	-108	140	-159	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.074	0.94	Yes	0.858	0.137	1.00	Yes	1.00	**6.88**
		L_{10} - L_{11}	-----	-1175.97	-266	288	-3	120	-258	107	-320	171	-----	-----	-----	-----	-----	-----	-----	-----	0.957	0.029	0.99	Yes	0.947	0.045	1.00	Yes	1.00	**7.98**
		L_{11} - L_{12}	-----	-1275.73	-34	655	-68	1279	316	33	277	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.175	1	Yes	0.808	0.169	0.98	Yes	1.00	**5.26**
		L_{12} - L_{13}	-----	-1128.30	723	-27	1311	-62	-70	178	0	145	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.270	1	Yes	0.715	0.174	0.89	Yes	1.00	**3.61**
		L_{13} - L_{14}	-----	-1015.36	33	-412	94	78	-912	-148	319	-281	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.169	1	Yes	0.817	0.065	0.89	Yes	1.00	**4.92**
		L_{14} - L_{15}	-----	-656.26	137	-272	521	79	-186	-512	-216	83	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.228	1	Yes	0.757	0.115	0.88	Yes	1.00	**3.57**
		L_{15} - L_{16}	-----	-443.80	135	-463	425	59	-849	156	210	-184	-----	-----	-----	-----	-----	-----	-----	-----	0.682	0.313	1	Yes	0.676	0.123	0.80	Yes	1.00	**3.63**
		L_{16} - L_{17}	630.63	-----	-394	-697	284	-59	-35	-653	-168	161	0.726	0.273	1.00	Yes	0.431	0.172	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.06**
		L_{17} - L_{18}	645.35	-----	-748	-507	36	-98	-448	183	92	-104	0.742	0.253	1.00	Yes	0.430	0.150	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.88**
		L_{18} - L_{19}	440.07	-----	-796	77	-14	-18	395	290	-79	211	0.674	0.324	1.00	Yes	0.411	0.215	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.71**
		L_{19} - L_{20}	298.94	-170.16	-633	383	-283	73	636	173	1639	445	0.458	0.542	1.00	Yes	0.269	0.321	0.59	Yes	0.309	0.485	0.8	Yes	0.306	0.190	0.50	Yes	1.00	**43.39**

Axial AB Operating

Operating Loads - 3F1 | 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	$U_0 - L_0$			-271.93	-13	54	-107	152	196	63	-1094	-351	-----	-----	-----	-----	-----	-----	-----	-----	0.607	0.387	1	Yes	0.575	0.194	0.77	Yes	1.00	**2.02**
		$U_1 - L_1$			-275.81	9	-4	-165	171	568	220	-1217	-428	-----	-----	-----	-----	-----	-----	-----	-----	0.603	0.388	1	Yes	0.584	0.219	0.81	Yes	1.00	**4.10**
		$U_2 - L_2$		56.98	-167.97	57	-61	-55	91	699	234	-2289	-691	0.102	0.779	0.89	Yes	0.056	0.428	0.49	Yes	0.367	0.626	1	Yes	0.355	0.116	0.48	Yes	1.00	**4.48**
		$U_3 - L_3$		118.80	-----	123	-124	38	-18	-85	-128	-2147	-575	0.214	0.781	1.00	Yes	0.118	0.429	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.55**
		$U_4 - L_4$			-202.15	77	-79	121	-123	986	490	-1822	-542	-----	-----	-----	-----	-----	-----	-----	-----	0.444	0.548	1	Yes	0.428	0.157	0.59	Yes	1.00	**4.86**
		$U_5 - L_5$			-388.87	75	-86	202	-225	890	386	162	255	-----	-----	-----	-----	-----	-----	-----	-----	0.704	0.291	1	Yes	0.671	0.228	0.90	Yes	1.00	**4.75**
		$U_6 - L_6$			-365.98	86	-78	178	-182	1364	624	1120	545	-----	-----	-----	-----	-----	-----	-----	-----	0.554	0.437	1	Yes	0.525	0.159	0.69	Yes	1.00	**2.56**
		$U_7 - L_7$			-321.61	124	-139	221	-241	975	235	568	179	-----	-----	-----	-----	-----	-----	-----	-----	0.538	0.458	1	Yes	0.496	0.237	0.74	Yes	1.00	**1.97**
		$U_8 - L_8$			-1096.85	-106	120	-156	183	1083	223	-2095	-498	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.207	1	Yes	0.760	0.034	0.80	Yes	1.00	**4.41**
		$U_9 - L_9$			-564.68	-232	263	-350	392	552	222	-33	76	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.321	1	Yes	0.638	0.218	0.86	Yes	1.00	**2.04**
		$U_{10} - L_{10}$			-658.45	-159	158	-275	311	621	300	-1528	-506	-----	-----	-----	-----	-----	-----	-----	-----	0.682	0.311	1	Yes	0.650	0.161	0.82	Yes	1.00	**4.34**
		$U_{11} - L_{11}$			-554.66	-167	219	-259	371	625	369	-1678	-383	-----	-----	-----	-----	-----	-----	-----	-----	0.665	0.332	1	Yes	0.646	0.172	0.82	Yes	1.00	**3.95**
		$U_{12} - L_{12}$			-479.19	-126	134	-270	284	382	296	-1096	-259	-----	-----	-----	-----	-----	-----	-----	-----	0.692	0.305	1	Yes	0.657	0.242	0.90	Yes	1.00	**4.92**
		$U_{13} - L_{13}$			-324.70	-70	89	-167	193	293	170	-948	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.656	0.338	1	Yes	0.622	0.221	0.85	Yes	1.00	**3.81**
		$U_{14} - L_{14}$			-196.90	-55	64	-79	87	464	70	-2051	-255	-----	-----	-----	-----	-----	-----	-----	-----	0.439	0.560	1	Yes	0.417	0.111	0.53	Yes	1.00	**4.54**
		$U_{15} - L_{15}$			-264.28	-50	41	187	-206	334	-262	-1329	-233	-----	-----	-----	-----	-----	-----	-----	-----	0.592	0.403	1	Yes	0.559	0.263	0.83	Yes	1.00	**7.30**
		$U_{16} - L_{16}$			-322.81	40	-55	234	-245	616	-214	-642	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.253	0.99	Yes	0.683	0.313	1.00	Yes	1.00	**6.05**
		$U_{17} - L_{17}$			-416.71	80	-94	203	-222	504	200	-18	74	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.212	1	Yes	0.719	0.225	0.95	Yes	1.00	**4.10**
		$U_{18} - L_{18}$			-430.73	190	-196	353	-363	691	180	694	170	-----	-----	-----	-----	-----	-----	-----	-----	0.631	0.365	1	Yes	0.599	0.206	0.81	Yes	1.00	**2.78**
		$U_{19} - L_{19}$			-524.17	198	-210	388	-405	603	117	681	129	-----	-----	-----	-----	-----	-----	-----	-----	0.654	0.339	1	Yes	0.610	0.188	0.80	Yes	1.00	**3.33**
		$U_{20} - L_{20}$			-479.48	246	-297	372	-441	460	60	434	57	-----	-----	-----	-----	-----	-----	-----	-----	0.634	0.359	1	Yes	0.558	0.205	0.77	Yes	1.00	**2.33**
	Structure 2	$U_0 - L_0$			-587.08	-163	271	-316	435	32	5	-1445	-245	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.296	1	Yes	0.629	0.185	0.82	Yes	1.00	**2.66**
		$U_1 - L_1$			-686.27	-214	220	-501	512	627	163	-1129	-117	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.211	1	Yes	0.735	0.217	0.96	Yes	1.00	**4.88**
		$U_2 - L_2$			-535.99	-166	182	-360	391	620	293	-1251	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.280	1	Yes	0.683	0.200	0.89	Yes	1.00	**3.85**
		$U_3 - L_3$			-405.09	-84	95	-165	188	540	271	-954	42	-----	-----	-----	-----	-----	-----	-----	-----	0.690	0.303	1	Yes	0.635	0.171	0.81	Yes	1.00	**3.01**
		$U_4 - L_4$			-299.04	-26	37	-166	178	553	238	-778	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.678	0.319	1	Yes	0.633	0.227	0.87	Yes	1.00	**4.61**
		$U_5 - L_5$			-205.91	48	-34	-88	115	256	84	-1641	-55	-----	-----	-----	-----	-----	-----	-----	-----	0.465	0.531	1	Yes	0.436	0.147	0.59	Yes	1.00	**5.41**
		$U_6 - L_6$		198.76	-----	108	-111	2	4	105	-39	-1707	-171	0.357	0.636	1.00	Yes	0.197	0.350	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.60**
		$U_7 - L_7$			-213.21	78	-90	97	-112	652	80	-1839	-76	-----	-----	-----	-----	-----	-----	-----	-----	0.482	0.517	1	Yes	0.451	0.143	0.60	Yes	1.00	**4.95**
		$U_8 - L_8$			-472.61	152	-170	337	-358	436	109	-573	-130	-----	-----	-----	-----	-----	-----	-----	-----	0.685	0.182	0.87	Yes	0.681	0.313	1.00	Yes	1.00	**5.07**
		$U_9 - L_9$			-693.74	270	-277	580	-594	791	373	-543	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.168	0.95	Yes	0.743	0.252	1.00	Yes	1.00	**6.54**
		$U_{10} - L_{10}$			-752.01	233	-234	512	-534	1168	683	-19	220	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.254	1	Yes	0.703	0.236	0.94	Yes	1.00	**6.65**
		$U_{11} - L_{11}$			-735.26	227	-221	450	-458	1164	653	-54	373	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.255	1	Yes	0.687	0.202	0.89	Yes	1.00	**5.42**
		$U_{12} - L_{12}$			-728.25	186	-169	421	-416	1459	635	676	429	-----	-----	-----	-----	-----	-----	-----	-----	0.699	0.301	1	Yes	0.631	0.180	0.82	Yes	1.00	**5.46**
		$U_{13} - L_{13}$			-503.40	272	-270	405	-398	1014	235	800	215	-----	-----	-----	-----	-----	-----	-----	-----	0.561	0.430	1	Yes	0.485	0.194	0.68	Yes	1.00	**2.27**
		$U_{14} - L_{14}$			-1137.00	-26	20	-182	163	1224	-74	-1562	-196	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.162	1	Yes	0.754	0.032	0.79	Yes	1.00	**5.47**
		$U_{15} - L_{15}$			-576.44	-274	278	-473	469	623	89	-1656	14	-----	-----	-----	-----	-----	-----	-----	-----	0.643	0.356	1	Yes	0.556	0.226	0.79	Yes	1.00	**4.22**
		$U_{16} - L_{16}$			-673.57	-192	179	-466	461	672	191	-1119	-86	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.214	1	Yes	0.722	0.197	0.92	Yes	1.00	**5.04**
		$U_{17} - L_{17}$			-582.65	-206	206	-440	454	595	196	-1431	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.719	0.276	1	Yes	0.678	0.211	0.89	Yes	1.00	**4.42**
		$U_{18} - L_{18}$			-497.01	-174	180	-346	384	619	220	-1717	-199	-----	-----	-----	-----	-----	-----	-----	-----	0.662	0.330	1	Yes	0.633	0.196	0.83	Yes	1.00	**3.83**
		$U_{19} - L_{19}$			-480.77	-90	91	-273	277	518	196	-1037	-28	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.271	1	Yes	0.718	0.266	0.99	Yes	1.00	**5.05**
		$U_{20} - L_{20}$			-310.03	-52	57	-145	160	518	189	-1135	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.636	0.363	1	Yes	0.594	0.183	0.78	Yes	1.00	**3.87**
		$U_{21} - L_{21}$			-226.92	-6	15	-117	135	216	4	-1543	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.513	0.482	1	Yes	0.480	0.173	0.66	Yes	1.00	**4.37**
		$U_{22} - L_{22}$			-214.00	-1	2	1	-2	710	157	-1887	-258	-----	-----	-----	-----	-----	-----	-----	-----	0.482	0.510	1	Yes	0.453	0.002	0.46	Yes	1.00	**4.68**
		$U_{23} - L_{23}$			-320.11	20	-26	226	-242	210	-28	-633	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.274	1	Yes	0.677	0.309	0.99	Yes	1.00	**6.16**
		$U_{24} - L_{24}$			-370.92	55	-59	224	-233	584	204	-157	17	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.237	1	Yes	0.711	0.266	0.98	Yes	1.00	**5.02**
		$U_{25} - L_{25}$			-472.18	101	-102	299	-296	588	224	56	156	-----	-----	-----	-----	-----	-----	-----	-----	0.710	0.183	0.9	Yes	0.705	0.287	1.00	Yes	1.00	**5.06**
		$U_{26} - L_{26}$			-575.87	170	-178	489	-518	707	301	-446	117	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.190	0.96	Yes	0.734	0.265	1.00	Yes	1.00	**5.78**
		$U_{27} - L_{27}$			-598.55	222	-218	522	-527	1165	540	177	368	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.254	1	Yes	0.697	0.245	0.95	Yes	1.00	**5.64**
		$U_{28} - L_{28}$			-617.97	157	-132	471	-454	1610	537	888	406	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.285	1	Yes	0.662	0.200	0.87	Yes	1.00	**6.01**
		$U_{29} - L_{29}$			-582.98	174	-177	536	-527	1498	205	-260	99	-----	-----	-----	-----	-----	-----	-----	-----	0.650	0.343	1	Yes	0.562	0.256	0.82	Yes	1.00	**7.13**
		$U_{30} - L_{30}$			-1102.76	-143	118	-219	180	906	-226	-1817	-189	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.188	1	Yes	0.731	0.039	0.77	Yes	1.00	**4.71**
		$U_{31} - L_{31}$			-682.97	-309	302	-509	494	509	96	-739	8	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.232	1	Yes	0.658	0.244	0.91	Yes	1.00	**4.11**
		$U_{32} - L_{32}$			-754.23	-228	212	-385	391	475	177	-1280	-94	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.268	1	Yes	0.654	0.168	0.83	Yes	1.00	**4.08**
		$U_{33} - L_{33}$			-683.39	-249	240	-373	387	466	230	-1543	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.687	0.304	1	Yes	0.639	0.171	0.81	Yes	1.00	**3.77**
		$U_{34} - L_{34}$			-719.41	-238	250	-443	470	552	331	-1410	-230	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.286	1	Yes	0.673	0.207	0.89	Yes	1.00	**5.32**
		$U_{35} - L_{35}$			-600.08	-257	271	-434	471	631	372	-1969	-361	-----	-----	-----	-----	-----	-----	-----	-----	0.668	0.329	1	Yes	0.643	0.200	0.85	Yes	1.00	**4.65**
		$U_{36} - L_{36}$			-414.70	-138	160	-240	269	276	162	-1699	-195	-----	-----	-----	-----	-----	-----	-----	-----	0.601	0.394	1	Yes	0.597	0.235	0.84	Yes	1.00	**3.84**
		$U_{37} - L_{37}$			-203.65	-77	92	-99	115	566	108	-1841	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.460	0.533	1	Yes	0.431	0.147	0.58	Yes	1.00	**4.34**
		$U_{38} - L_{38}$		234.42	-----	-150	149	111	-115	-196	-530	-1315	-307	0.422	0.572	1.00	Yes	0.232	0.315	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.93**
		$U_{39} - L_{39}$			-309.06	-54	42	207	-230	333	-135	-735	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.698	0.301	1	Yes	0.654	0.294	0.95	Yes	1.00	**7.90**
		$U_{40} - L_{40}$			-325.92	37	-45	217	-220	595	172	23	29	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.257	1	Yes	0.690	0.281	0.98	Yes	1.00	**5.39**
		$U_{41} - L_{41}$			-460.99	88	-97	230	-244	578	193	-188	35	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.211	1	Yes	0.723	0.222	0.95	Yes	1.00	**4.53**
		$U_{42} - L_{42}$			-580.27	172	-181	494	-501	670	173	-33	32	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.173	0.96	Yes	0.739	0.256	1.00	Yes	1.00	**6.03**
		$U_{43} - L_{43}$			-707.93	189	-207	535	-556	622	187	146	127	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.154	0.97	Yes	0.759	0.236	1.00	Yes	1.00	**7.44**
		$U_{44} - L_{44}$			-617.42	262	-325	442	-560	566	96	757	128	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.258	1	Yes	0.662	0.237	0.90	Yes	1.00	**3.77**
	Structure 3	$U_0 - L_0$			-540.95	-153	250	-299	402	351	46	-1065	-140	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.277	1	Yes	0.630	0.187	0.82	Yes	1.00	**2.73**
		$U_1 - L_1$			-567.91	-216	214	-388	401	615	147	-1516	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.282	1	Yes	0.661	0.186	0.85	Yes	1.00	**3.75**
		$U_2 - L_2$			-517.88	-161	173	-358	382	655	308	-894	43	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.235	1	Yes	0.720	0.216	0.94	Yes	1.00	**4.03**
		$U_3 - L_3$			-381.92	-72	88	-153	178	555	272	-775	110	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.281	1	Yes	0.659	0.180	0.84	Yes	1.00	**2.94**
		$U_4 - L_4$			-235.26	-47	53	-126	142	572	228	-1405	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.530	0.466	1	Yes	0.498	0.181	0.68	Yes	1.00	**3.40**
		$U_5 - L_5$			-226.69	45	-36	-148	169	111	14	-1469	-73	-----	-----	-----	-----	-----	-----	-----	-----	0.508	0.492	1	Yes	0.480	0.216	0.70	Yes	1.00	**6.30**
		$U_6 - L_6$			-195.90	53	-59	85	-90	682	135	-2023	-375	-----	-----	-----	-----	-----	-----	-----	-----	0.437	0.556	1	Yes	0.415	0.115	0.53	Yes	1.00	**5.16**
		$U_7 - L_7$			-366.37	77	-94	235	-258	430	23	-207	-21	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.197	0.94	Yes	0.702	0.295	1.00	Yes	1.00	**4.71**
		$U_8 - L_8$			-510.95	129	-131	331	-333	856	314	-74	36	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.252	1	Yes	0.701	0.285	0.99	Yes	1.00	**6.02**
		$U_9 - L_9$			-638.60	171	-223	380	-483	982	506	538	491	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.231	1	Yes	0.743	0.224	0.97	Yes	1.00	**4.74**
		$U_{10} - L_{10}$			-554.59	161	-154	274	-283	1545	811	1167	684	-----	-----	-----	-----	-----	-----	-----	-----	0.574	0.419	1	Yes	0.547	0.147	0.70	Yes	1.00	**2.87**
		$U_{11} - L_{11}$			-486.67	216	-250	323	-370	1184	537	976	500	-----	-----	-----	-----	-----	-----	-----	-----	0.580	0.412	1	Yes	0.550	0.205	0.76	Yes	1.00	**1.99**
		$U_{12} - L_{12}$			-1122.96	-18	0	-121	98	1269	330	-1799	-352	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.180	1	Yes	0.779	0.022	0.81	Yes	1.00	**4.65**
		$U_{13} - L_{13}$			-411.85	-155	169	-244	264	634	119	-1020	-87	-----	-----	-----	-----	-----	-----	-----	-----	0.688	0.303	1	Yes	0.635	0.260	0.90	Yes	1.00	**2.52**
		$U_{14} - L_{14}$			-473.53	-98	96	-207	225	606	246	-1074	-349	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.278	1	Yes	0.679	0.197	0.88	Yes	1.00	**3.87**
		$U_{15} - L_{15}$			-368.70	-80	89	-152	180	521	246	-1104	-252	-----	-----	-----	-----	-----	-----	-----	-----	0.667	0.328	1	Yes	0.636	0.183	0.82	Yes	1.00	**3.52**
		$U_{16} - L_{16}$			-203.98	-83	84	-124	127	874	337	-1866	-582	-----	-----	-----	-----	-----	-----	-----	-----	0.448	0.545	1	Yes	0.432	0.162	0.60	Yes	1.00	**4.16**
		$U_{17} - L_{17}$		159.16	-----	-176	179	111	-131	756	-44	-1673	-594	0.286	0.713	1.00	Yes	0.157	0.392	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.09**
		$U_{18} - L_{18}$		86.31	-286.75	-92	99	231	-273	488	155	-972	-500	0.155	0.630	0.79	Yes	0.085	0.347	0.44	Yes	0.627	0.366	1	Yes	0.607	0.349	0.96	Yes	1.00	**9.34**
		$U_{19} - L_{19}$			-291.42	-1	-14	192	-205	450	227	512	255	-----	-----	-----	-----	-----	-----	-----	-----	0.637	0.359	1	Yes	0.617	0.262	0.88	Yes	1.00	**4.35**
		$U_{20} - L_{20}$			-319.26	72	-83	192	-237	642	206	246	79	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.281	1	Yes	0.676	0.303	0.98	Yes	1.00	**3.91**

Axial AB Operating

Operating Loads - 3F1

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	$U_0 - L_1$			627.06	-----	-27	32	2	-11	-380	-524	58	131	0.823	0.169	1.00	Yes	0.497	0.093	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.33**
		$U_1 - L_2$			402.01	-----	-91	0	11	-15	-419	-536	362	193	0.723	0.272	1.00	Yes	0.398	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.94**
		$U_2 - L_3$			-----	-234.81	-73	-6	-22	-64	-235	-408	-1553	-249	-----	-----	-----	-----	-----	-----	-----	-----	0.540	0.457	1	Yes	0.497	0.094	0.60	Yes	1.00	**9.17**
		$U_3 - L_4$			-----	-316.09	-11	-41	9	-62	136	-48	-727	-187	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.271	1	Yes	0.669	0.079	0.75	Yes	1.00	**4.68**
		$U_4 - L_4$			494.39	-----	-76	43	-51	19	-191	-8	820	236	0.725	0.268	1.00	Yes	0.399	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.98**
		$U_5 - L_5$			669.89	-----	-177	224	-37	85	-412	222	442	80	0.792	0.208	1.00	Yes	0.436	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.89**
		$U_7 - L_6$			589.19	-----	-262	234	-41	85	-313	80	-823	-170	0.697	0.298	1.00	Yes	0.383	0.164	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.42**
		$U_8 - L_7$			621.96	-----	-74	311	22	97	-357	7	-451	-271	0.735	0.259	1.00	Yes	0.404	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.77**
		$U_9 - L_9$			945.70	-----	-91	357	12	185	-165	-420	594	286	0.756	0.235	1.00	Yes	0.468	0.132	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.76**
		$U_9 - L_{10}$			977.27	-----	-304	231	-114	127	-353	-578	580	249	0.781	0.209	1.00	Yes	0.484	0.118	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.37**
		$U_{10} - L_{11}$			904.14	-----	-244	149	-83	95	-248	-898	174	-19	0.764	0.231	1.00	Yes	0.473	0.132	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.19**
		$U_{11} - L_{12}$			792.52	-----	-254	93	-94	48	-563	-592	173	-18	0.784	0.206	1.00	Yes	0.431	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.14**
		$U_{12} - L_{13}$			566.18	-----	-194	126	-102	41	-274	-711	-708	-312	0.690	0.308	1.00	Yes	0.434	0.176	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.50**
		$U_{13} - L_{14}$			378.64	-----	-86	13	-35	-22	-134	-605	-707	-288	0.681	0.315	1.00	Yes	0.375	0.173	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.78**
		$U_{15} - L_{14}$			316.42	-255.29	-89	-13	15	-101	-276	-126	751	-215	0.569	0.347	0.92	Yes	0.313	0.191	0.51	Yes	0.598	0.395	1	Yes	0.540	0.129	0.67	Yes	1.00	**9.29**
		$U_{16} - L_{15}$			348.59	-----	-122	80	-44	-8	-332	34	720	-256	0.627	0.364	1.00	Yes	0.345	0.200	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.35**
		$U_{17} - L_{16}$			523.19	-----	-144	97	-47	23	-360	-70	-302	-103	0.767	0.230	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.96**
		$U_{18} - L_{17}$			610.92	-----	-317	249	-132	90	-498	-36	-399	-109	0.722	0.270	1.00	Yes	0.397	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.59**
		$U_{19} - L_{18}$			692.98	-----	-333	253	-132	96	-461	-166	-456	-203	0.751	0.246	1.00	Yes	0.413	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.41**
		$U_{20} - L_{19}$			684.78	-----	-377	317	-179	145	-343	-183	-260	-141	0.742	0.249	1.00	Yes	0.408	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.86**
	Structure 2	$U_0 - L_1$			763.45	-----	-253	312	-101	128	-622	-496	-154	6	0.755	0.238	1.00	Yes	0.415	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.20**
		$U_1 - L_2$			723.95	-----	-384	284	-165	118	-355	-686	141	-33	0.716	0.281	1.00	Yes	0.394	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.64**
		$U_2 - L_3$			576.19	-----	-310	235	-120	90	-260	-767	121	-31	0.681	0.314	1.00	Yes	0.375	0.173	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.28**
		$U_3 - L_4$			553.00	-----	-174	118	-51	24	-342	-472	171	10	0.737	0.258	1.00	Yes	0.405	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.97**
		$U_4 - L_5$			349.61	-----	-127	74	0	-15	-199	-708	226	29	0.629	0.367	1.00	Yes	0.346	0.202	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.55**
		$U_5 - L_6$			280.12	-239.49	-84	29	48	-106	-394	-306	-1239	-181	0.504	0.494	1.00	Yes	0.277	0.272	0.55	Yes	0.566	0.281	0.85	Yes	0.507	0.135	0.65	Yes	1.00	**8.76**
		$U_6 - L_7$			-----	-369.73	-6	-40	44	-99	38	-147	-581	-26	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.205	1	Yes	0.708	0.112	0.83	Yes	1.00	**4.36**
		$U_8 - L_7$			528.22	-----	-165	130	-104	50	-331	-25	832	-215	0.674	0.317	1.00	Yes	0.424	0.183	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.87**
		$U_8 - L_8$			722.07	-----	-332	247	-175	122	-194	26	-276	-139	0.782	0.215	1.00	Yes	0.430	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.17**
		$U_{10} - L_9$			827.29	-----	-311	252	-150	128	-154	176	-213	-19	0.818	0.176	1.00	Yes	0.450	0.097	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.87**
		$U_{11} - L_{10}$			874.90	-----	-335	302	-137	164	-322	143	-398	121	0.797	0.197	1.00	Yes	0.438	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.93**
		$U_{12} - L_{11}$			849.95	-----	-337	344	-133	175	-578	296	-539	51	0.774	0.225	1.00	Yes	0.426	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.77**
		$U_{13} - L_{12}$			736.92	-----	-414	379	-161	163	-506	78	-526	1	0.729	0.271	1.00	Yes	0.401	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.07**
		$U_{14} - L_{13}$			737.39	-----	-251	426	-35	151	-182	-52	-432	-271	0.730	0.262	1.00	Yes	0.401	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.64**
		$U_{14} - L_{15}$			579.51	-----	-190	332	-7	164	198	-550	691	252	0.685	0.313	1.00	Yes	0.377	0.172	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.24**
		$U_{15} - L_{16}$			579.18	-----	-340	313	-166	163	187	-158	631	200	0.685	0.307	1.00	Yes	0.377	0.169	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.87**
		$U_{16} - L_{17}$			678.78	-----	-329	339	-128	155	93	-523	373	109	0.735	0.259	1.00	Yes	0.404	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.05**
		$U_{17} - L_{18}$			623.63	-----	-282	260	-112	129	-51	-539	356	86	0.737	0.257	1.00	Yes	0.406	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**
		$U_{18} - L_{19}$			629.18	-----	-279	252	-82	96	-148	-516	290	77	0.744	0.251	1.00	Yes	0.409	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.67**
		$U_{19} - L_{20}$			554.37	-----	-187	144	-43	48	-244	-578	288	78	0.707	0.286	1.00	Yes	0.389	0.163	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.73**
		$U_{20} - L_{21}$			364.91	-----	-111	94	-31	3	-133	-269	-680	-73	0.656	0.339	1.00	Yes	0.361	0.186	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.64**
		$U_{21} - L_{22}$			342.52	-----	-100	25	14	-79	-181	-465	-869	-112	0.616	0.379	1.00	Yes	0.339	0.209	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.70**
		$U_{23} - L_{22}$			320.34	-----	-88	42	-28	-30	-259	-103	1041	-140	0.576	0.414	1.00	Yes	0.317	0.228	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.22**
		$U_{24} - L_{23}$			423.01	-----	-122	104	-20	19	-195	129	-254	-63	0.761	0.230	1.00	Yes	0.418	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.57**
		$U_{25} - L_{24}$			599.27	-----	-192	176	-43	51	-190	55	-298	-80	0.764	0.233	1.00	Yes	0.420	0.131	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.03**
		$U_{26} - L_{25}$			668.92	-----	-280	275	-80	98	-127	176	-252	-56	0.791	0.204	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.27**
		$U_{27} - L_{26}$			650.35	-----	-285	288	-107	127	-298	219	-339	-6	0.769	0.224	1.00	Yes	0.423	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.39**
		$U_{28} - L_{27}$			674.20	-----	-301	340	-97	149	-526	212	-528	35	0.730	0.261	1.00	Yes	0.402	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.67**
		$U_{29} - L_{28}$			592.46	-----	-339	329	-95	108	-447	40	-550	-42	0.700	0.292	1.00	Yes	0.385	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.37**
		$U_{30} - L_{29}$			632.38	-----	-196	363	30	72	-140	226	-249	-200	0.748	0.251	1.00	Yes	0.411	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.44**
		$U_{30} - L_{31}$			726.58	-----	-256	430	-58	224	2	-364	491	214	0.719	0.273	1.00	Yes	0.395	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.65**
		$U_{31} - L_{32}$			736.67	-----	-425	370	-233	217	32	-397	450	118	0.729	0.265	1.00	Yes	0.401	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		$U_{32} - L_{33}$			818.03	-----	-339	319	-161	192	-152	-774	277	55	0.745	0.250	1.00	Yes	0.410	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.76**
		$U_{33} - L_{34}$			859.04	-----	-330	277	-145	164	-408	-539	241	42	0.783	0.214	1.00	Yes	0.430	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.40**
		$U_{34} - L_{35}$			760.95	-----	-295	218	-154	123	-306	-730	11	-135	0.753	0.246	1.00	Yes	0.414	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.09**
		$U_{35} - L_{36}$			659.72	-----	-308	201	-179	99	-374	-742	-442	-252	0.715	0.280	1.00	Yes	0.393	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.66**
		$U_{36} - L_{37}$			527.19	-----	-175	122	-81	24	-128	-696	-792	-258	0.672	0.318	1.00	Yes	0.423	0.183	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.77**
		$U_{38} - L_{37}$			-----	-323.20	-16	-33	23	-79	-339	-144	648	-333	-----	-----	-----	-----	-----	-----	-----	-----	0.698	0.297	1	Yes	0.619	0.090	0.71	Yes	1.00	**4.01**
		$U_{39} - L_{38}$			399.41	-217.72	-119	46	50	-102	-112	251	442	-80	0.718	0.280	1.00	Yes	0.395	0.154	0.55	Yes	0.519	0.255	0.78	Yes	0.461	0.152	0.62	Yes	1.00	**10.16**
		$U_{40} - L_{39}$			396.66	-----	-130	90	-28	-11	-331	73	396	-162	0.713	0.281	1.00	Yes	0.392	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.63**
		$U_{41} - L_{40}$			561.36	-----	-174	127	-57	31	-391	-111	-411	-178	0.748	0.245	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.24**
		$U_{42} - L_{41}$			617.39	-----	-319	258	-123	93	-447	26	-402	-167	0.730	0.262	1.00	Yes	0.401	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.24**
		$U_{43} - L_{42}$			766.02	-----	-375	306	-137	104	-403	-73	-376	-193	0.758	0.234	1.00	Yes	0.417	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.71**
		$U_{44} - L_{43}$			793.13	-----	-382	375	-176	157	-83	67	-211	-87	0.785	0.209	1.00	Yes	0.432	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.64**
	Structure 3	$U_0 - L_1$			684.84	-----	-257	258	-78	102	-476	-723	-148	5	0.742	0.251	1.00	Yes	0.408	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.91**
		$U_1 - L_2$			668.62	-----	-347	249	-158	108	-361	-540	165	-39	0.724	0.266	1.00	Yes	0.398	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.63**
		$U_2 - L_3$			578.39	-----	-309	232	-125	86	-315	-773	128	-30	0.684	0.315	1.00	Yes	0.376	0.173	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.64**
		$U_3 - L_4$			478.96	-----	-136	79	-43	20	-373	-647	148	-28	0.702	0.289	1.00	Yes	0.386	0.159	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.24**
		$U_4 - L_5$			340.22	-----	-122	77	-29	-20	-304	-562	-777	-184	0.612	0.381	1.00	Yes	0.337	0.209	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.63**
		$U_5 - L_6$			-----	-312.34	-91	-33	32	-122	-418	-835	-943	-255	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.266	1	Yes	0.661	0.156	0.82	Yes	1.00	**9.94**
		$U_7 - L_6$			455.74	-----	-94	30	-31	-17	-191	2	182	-106	0.820	0.176	1.00	Yes	0.451	0.097	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.62**
		$U_8 - L_7$			595.04	-----	-192	150	-103	49	-212	35	531	-66	0.725	0.271	1.00	Yes	0.456	0.155	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.47**
		$U_8 - L_8$			851.05	-----	-272	117	-103	23	-164	111	-143	64	0.842	0.151	1.00	Yes	0.463	0.083	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.30**
		$U_{10} - L_9$			971.17	-----	-228	200	-81	85	-520	205	284	167	0.820	0.174	1.00	Yes	0.508	0.098	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.94**
		$U_{11} - L_{10}$			988.61	-----	-294	280	-84	108	-579	2	-515	-20	0.790	0.205	1.00	Yes	0.490	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.49**
		$U_{12} - L_{11}$			940.82	-----	-56	375	18	132	-314	116	-598	-224	0.752	0.243	1.00	Yes	0.466	0.137	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.86**
		$U_{13} - L_{12}$			614.46	-----	-93	282	6	156	105	-524	586	302	0.726	0.267	1.00	Yes	0.400	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.79**
		$U_{13} - L_{14}$			609.92	-----	-270	227	-100	124	-78	-184	670	265	0.721	0.275	1.00	Yes	0.397	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.43**
		$U_{14} - L_{15}$			653.38	-----	-197	190	-53	97	-91	-601	305	96	0.772	0.221	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.95**
		$U_{15} - L_{16}$			501.61	-----	-86	18	-46	2	-165	-468	-754	-389	0.736	0.263	1.00	Yes	0.405	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.21**
		$U_{17} - L_{16}$			-----	-310.21	-18	-41	-13	-54	-383	-347	694	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.285	1	Yes	0.656	0.070	0.73	Yes	1.00	**4.88**
		$U_{18} - L_{17}$			-----	-228.01	-96	-6	-32	-46	-562	-141	1228	-141	-----	-----	-----	-----	-----	-----	-----	-----	0.525	0.471	1	Yes	0.482	0.123	0.61	Yes	1.00	**9.60**
		$U_{19} - L_{18}$			436.04	-----	-85	14	15	-19	-349	-330	-210	-120	0.784	0.210	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.63**
		$U_{20} - L_{19}$			648.80	-----	-111	74	-30	4	-71	-2	-60	12	0.851	0.147	1.00	Yes	0.514	0.081	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.56**

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: 3F1 — 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 - Upper Chord	Structure 1	U_1 - U_2	-71.64	-59.12	-40.24			0.90	1.24	-44.80	-65.82	0.00	0.00	Vehicle	Vehicle	-----	-178.69	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	**7.50**	**7.50**
		U_2 - U_3	-90.83	-2.56	-80.23			0.90	1.24	-2.85	-89.32	0.00	0.00	Vehicle	Vehicle	-----	-234.20	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	**5.31**	**5.31**
		U_3 - U_4	-61.13	37.63	-102.96			0.90	1.24	41.92	-114.62	0.00	0.00	Vehicle	Vehicle	-----	-228.48	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	**4.40**	**4.40**
		U_4 - U_5	10.71	49.95	-92.14			0.90	1.24	55.61	-102.58	0.00	0.00	Vehicle	Vehicle	86.21	-119.44	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	**11.88**	**11.88**	**5.62**	**5.62**
		U_5 - U_6	12.86	50.22	-117.77			0.90	1.24	55.91	-131.11	0.00	0.00	Vehicle	Vehicle	89.40	-153.73	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	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	**11.77**	**11.77**	**4.41**	**4.41**
		U_6 - U_7	121.37	58.12	-92.65			0.90	1.24	64.70	-103.14	0.00	0.00	Vehicle	Vehicle	241.90	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	**8.50**	**8.50**	-----	-----
		U_7 - U_8	249.49	64.28	-56.12			0.90	1.24	71.57	-62.48	0.00	0.00	Vehicle	Vehicle	417.38	-----	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	-----	-----	**7.75**	**7.75**	-----	-----
		U_8 - U_9	376.92	62.67	-18.82			0.90	1.24	69.76	-20.95	0.00	0.00	Vehicle	Vehicle	580.69	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	**10.51**	**10.51**	-----	-----
		U_9 - U_{10}	319.74	-14.35	0.58			0.90	1.20	0.62	-15.47	0.00	0.00	Vehicle	Vehicle	416.47	-----	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	-----	-----	**991.71**	**991.71**	-----	-----
		U_{10} - U_{11}	128.77	-3.57	-28.34			0.90	1.20	-3.84	-30.56	0.00	0.00	Vehicle	Vehicle	162.40	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U_{11} - U_{12}	-70.90	59.22	-72.20			0.90	1.20	63.85	-77.85	0.00	0.00	Vehicle	Vehicle	-----	-193.37	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	-----	-----	**6.76**	**6.76**
		U_{12} - U_{13}	-252.96	52.48	-99.11			0.90	1.20	56.58	-106.86	0.00	0.00	Vehicle	Vehicle	-----	-467.77	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	-----	-----	**5.24**	**5.24**
		U_{13} - U_{14}	-391.95	45.01	-117.70			0.90	1.20	48.53	-126.91	0.00	0.00	Vehicle	Vehicle	-----	-674.51	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	-----	-----	**5.88**	**5.88**
		U_{14} - U_{15}	-482.99	37.50	-157.17			0.90	1.20	40.43	-169.47	0.00	0.00	Vehicle	Vehicle	-----	-848.19	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	-----	-----	**4.98**	**4.98**
		U_{15} - U_{16}	-454.44	37.36	-172.99			0.90	1.20	40.28	-186.52	0.00	0.00	Vehicle	Vehicle	-----	-872.25	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	-----	-----	**4.52**	**4.52**
		U_{16} - U_{17}	-502.02	28.69	-171.39			0.90	1.20	30.93	-184.79	0.00	0.00	Vehicle	Vehicle	-----	-892.86	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	-----	-----	**4.47**	**4.47**
		U_{17} - U_{18}	-467.99	13.81	-155.66			0.90	1.20	14.89	-167.83	0.00	0.00	Vehicle	Vehicle	-----	-826.56	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	-----	-----	**5.12**	**5.12**
		U_{18} - U_{19}	-368.86	12.89	-123.91			0.90	1.20	13.89	-133.60	0.00	0.00	Vehicle	Vehicle	-----	-653.20	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	-----	-----	**4.51**	**4.51**
		U_{19} - U_{20}	-251.56	6.44	-83.04			0.90	1.20	6.94	-89.54	0.00	0.00	Vehicle	Vehicle	-----	-443.43	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	**4.76**	**4.76**
		U_{20} - U_{21}	-117.89	1.41	-31.32			0.90	1.20	1.52	-33.77	0.00	0.00	Vehicle	Vehicle	-----	-197.15	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	**16.57**	**16.57**
	Structure 2	U_1 - U_1	-118.23	-42.64	-18.75			0.90	1.18	-19.96	-45.40	0.00	0.00	Vehicle	Vehicle	-----	-212.72	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	**Fail**	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**11.66**	**11.66**
		U_1 - U_2	-239.56	-80.06	-62.46			0.90	1.18	-66.50	-85.24	0.00	0.00	Vehicle	Vehicle	-----	-422.25	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**6.47**	**6.47**
		U_2 - U_3	-350.44	-104.76	-100.27			0.90	1.18	-106.76	-111.54	0.00	0.00	Vehicle	Vehicle	-----	-600.57	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	-----	-----	**6.52**	**6.52**
		U_3 - U_4	-449.15	17.24	-129.08			0.90	1.18	18.35	-137.43	0.00	0.00	Vehicle	Vehicle	-----	-762.55	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	**6.49**	**6.49**
		U_4 - U_5	-483.26	22.76	-142.59			0.90	1.18	22.18	-151.82	0.00	0.00	Vehicle	Vehicle	-----	-825.61	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	-----	-----	**5.61**	**5.61**
		U_5 - U_6	-485.85	47.46	-172.38			0.90	1.18	50.53	-183.54	0.00	0.00	Vehicle	Vehicle	-----	-870.21	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	-----	-----	**5.46**	**5.46**
		U_6 - U_7	-428.85	56.22	-162.91			0.90	1.18	59.86	-173.45	0.00	0.00	Vehicle	Vehicle	-----	-782.99	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	-----	-----	**5.26**	**5.26**
		U_7 - U_8	-428.37	56.35	-168.26			0.90	1.18	60.00	-179.15	0.00	0.00	Vehicle	Vehicle	-----	-789.77	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	-----	-----	**5.10**	**5.10**
		U_8 - U_9	-335.42	64.61	-159.29			0.90	1.18	68.79	-169.60	0.00	0.00	Vehicle	Vehicle	-----	-656.52	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	**4.66**	**4.66**
		U_9 - U_{10}	-200.29	69.89	-133.95			0.90	1.18	74.42	-142.62	0.00	0.00	Vehicle	Vehicle	-----	-445.78	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	**4.81**	**4.81**
		U_{10} - U_{11}	-52.14	74.17	-100.58			0.90	1.18	78.97	-107.09	0.00	0.00	Vehicle	Vehicle	34.88	-207.00	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	**12.19**	**12.19**	**6.70**	**6.70**
		U_{11} - U_{12}	107.02	74.01	-66.75			0.90	1.18	78.80	-71.06	0.00	0.00	Vehicle	Vehicle	241.55	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	**10.20**	**10.20**	-----	-----
		U_{12} - U_{13}	259.33	73.30	-39.36			0.90	1.18	78.04	-41.91	0.00	0.00	Vehicle	Vehicle	438.57	-----	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	-----	-----	**11.27**	**11.27**	-----	-----
		U_{13} - U_{14}	391.98	65.69	-9.76			0.90	1.18	69.93	-10.40	0.00	0.00	Vehicle	Vehicle	600.49	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	**16.76**	**16.76**	-----	-----
		U_{14} - U_{15}	439.40	-1.06	0.68			0.90	1.17	0.71	-1.12	0.00	0.00	Vehicle	Vehicle	572.15	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	**1584.03**	**1584.03**	-----	-----
		U_{15} - U_{16}	369.66	38.32	-20.99			0.90	1.17	40.31	-22.08	0.00	0.00	Vehicle	Vehicle	532.97	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	**22.39**	**22.39**	-----	-----
		U_{16} - U_{17}	271.39	-14.86	-34.77			0.90	1.17	-15.63	-36.58	0.00	0.00	Vehicle	Vehicle	332.49	-----	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	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{17} - U_{18}	171.75	-34.07	-65.41			0.90	1.17	-35.85	-68.82	0.00	0.00	Vehicle	Vehicle	176.68	-----	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	-63.45	-83.61			0.90	1.17	-66.75	-87.97	0.00	0.00	Vehicle	Vehicle	7.84	-19.74	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	45.00	**Fail**	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**8.19**	**8.19**
		U_{19} - U_{20}	-8.11	51.04	-96.72			0.90	1.17	53.70	-101.76	0.00	0.00	Vehicle	Vehicle	59.27	-142.83	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	**15.43**	**15.43**	**6.73**	**6.73**
		U_{20} - U_{21}	-60.13	43.14	-126.61			0.90	1.17	45.39	-133.20	0.00	0.00	Vehicle	Vehicle	-----	-251.33	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	-----	-----	**5.83**	**5.83**
		U_{21} - U_{22}	-82.18	34.13	-129.69			0.90	1.17	35.91	-136.45	0.00	0.00	Vehicle	Vehicle	-----	-284.22	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	-----	-----	**5.53**	**5.53**
		U_{22} - U_{23}	-82.40	34.18	-142.64			0.90	1.17	35.96	-150.07	0.00	0.00	Vehicle	Vehicle	-----	-302.22	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	-----	-----	**5.03**	**5.03**
		U_{23} - U_{24}	-65.94	24.30	-142.45			0.90	1.17	25.56	-149.87	0.00	0.00	Vehicle	Vehicle	-----	-280.56	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	-----	-----	**5.14**	**5.14**
		U_{24} - U_{25}	61.51	51.53	-93.07			0.90	1.17	53.18	-132.24	0.00	0.00	Vehicle	Vehicle	45.78	-204.22	5.25	32.31	26.8125	1066.31	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	**15.76**	**15.76**	**4.85**	**4.85**
		U_{25} - U_{26}	55.02	57.42	-107.01			0.90	1.17	60.41	-112.58	0.00	0.00	Vehicle	Vehicle	150.06	-74.83	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	**11.77**	**11.77**	**6.24**	**6.24**
		U_{26} - U_{27}	136.02	63.12	-84.02			0.90	1.17	66.41	-88.40	0.00	0.00	Vehicle	Vehicle	263.15	-----	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	-----	-----	**9.49**	**9.49**	-----	-----
		U_{27} - U_{28}	216.87	65.81	-59.16			0.90	1.17	69.24	-62.24	0.00	0.00	Vehicle	Vehicle	371.94	-----	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	-----	-----	**11.94**	**11.94**	-----	-----
		U_{28} - U_{29}	293.76	67.34	-31.61			0.90	1.17	70.85	-33.25	0.00	0.00	Vehicle	Vehicle	473.99	-----	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	-----	-----	**13.81**	**13.81**	-----	-----
		U_{29} - U_{30}	358.11	64.90	-9.97			0.90	1.17	68.28	-10.48	0.00	0.00	Vehicle	Vehicle	554.31	-----	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	-----	-----	**17.67**	**17.67**	-----	-----
		U_{30} - U_{31}	339.33	-6.20	-18.97			0.90	1.18	-6.60	-20.20	0.00	0.00	Vehicle	Vehicle	432.54	-----	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	-----	-----	-----	-----	-----	-----
		U_{31} - U_{32}	251.17	33.82	-26.38			0.90	1.18	36.01	-28.09	0.00	0.00	Vehicle	Vehicle	373.33	-----	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

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: 3F1 — 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
Structure 1		L_0 - L_1	4.85	-0.08	-1.37			0.90	1.24	-0.09	-1.53	0.00	0.00	Vehicle	Vehicle	6.19	-----	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	-----	-----	5.23	-----	-----	5.23	-----	-----	-----	-----	-----	-----
		L_1 - L_2	74.27	51.11	37.10			0.90	1.24	56.90	41.30	0.00	0.00	Vehicle	Vehicle	170.52	-----	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	-----	-----	**7.53**	**7.53**	-----	-----
		L_2 - L_3	97.77	-27.46	108.28			0.90	1.24	120.55	-30.57	0.00	0.00	Vehicle	Vehicle	283.82	-----	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	-----	-----	**4.74**	**4.74**	-----	-----
		L_3 - L_4	66.93	-39.68	120.25			0.90	1.24	133.88	-44.17	0.00	0.00	Vehicle	Vehicle	261.05	-----	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**4.49**	**4.49**	-----	-----
		L_4 - L_5	-108.46	-59.66	78.07			0.90	1.24	86.92	-66.42	0.00	0.00	Vehicle	Vehicle	-----	-227.34	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	-----	-----	**5.90**	**5.90**
		L_5 - L_6	-237.28	-65.95	40.90			0.90	1.24	45.53	-73.43	0.00	0.00	Vehicle	Vehicle	-----	-403.92	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	-----	-----	**5.75**	**5.75**
		L_6 - L_7	-362.27	-68.53	10.50			0.90	1.24	11.69	-76.30	0.00	0.00	Vehicle	Vehicle	-----	-570.13	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	-----	-----	**7.64**	**7.64**
		L_7 - L_8	-478.66	-63.43	-23.01			0.90	1.24	-25.62	-70.62	0.00	0.00	Vehicle	Vehicle	-----	-714.06	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**10.21**	**10.21**
		L_8 - L_9	-477.02	-54.02	-0.50			0.90	1.20	-0.54	-58.24	0.00	0.00	Vehicle	Vehicle	-----	-695.84	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**12.40**	**12.40**
		L_9 - L_{10}	-301.43	-21.84	2.49			0.90	1.20	2.69	-23.54	0.00	0.00	Vehicle	Vehicle	-----	-422.46	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	-----	-----	**27.35**	**27.35**
		L_{10} - L_{11}	-104.46	-57.95	36.73			0.90	1.20	39.60	-62.48	0.00	0.00	Vehicle	Vehicle	-----	-217.02	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	-----	-----	**6.34**	**6.34**
		L_{11} - L_{12}	97.11	46.91	60.42			0.90	1.20	65.15	50.58	0.00	0.00	Vehicle	Vehicle	210.93	-----	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	-----	-----	**7.63**	**7.63**	-----	-----
		L_{12} - L_{13}	268.74	-44.01	102.41			0.90	1.20	110.42	-47.45	0.00	0.00	Vehicle	Vehicle	492.91	-----	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	-----	-----	**6.39**	**6.39**	-----	-----
		L_{13} - L_{14}	405.66	91.34	123.18			0.90	1.20	132.82	98.48	0.00	0.00	Vehicle	Vehicle	700.02	-----	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	-----	-----	**6.79**	**6.79**	-----	-----
		L_{14} - L_{15}	502.77	-20.66	129.97			0.90	1.20	140.13	-22.28	0.00	0.00	Vehicle	Vehicle	835.77	-----	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	-----	-----	**7.65**	**7.65**	-----	-----
		L_{15} - L_{16}	469.25	-12.76	126.86			0.90	1.20	136.78	-13.75	0.00	0.00	Vehicle	Vehicle	787.84	-----	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	-----	-----	**8.08**	**8.08**	-----	-----
		L_{16} - L_{17}	365.43	-10.42	89.05			0.90	1.20	96.02	-11.23	0.00	0.00	Vehicle	Vehicle	599.88	-----	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	-----	-----	**8.86**	**8.86**	-----	-----
		L_{17} - L_{18}	248.67	2.61	54.25			0.90	1.20	58.49	2.82	0.00	0.00	Vehicle	Vehicle	399.31	-----	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	-----	-----	**10.85**	**10.85**	-----	-----
		L_{18} - L_{19}	112.99	-1.55	11.65			0.90	1.20	12.56	-1.67	0.00	0.00	Vehicle	Vehicle	163.21	-----	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	-----	-----	**31.02**	**31.02**	-----	-----
		L_{19} - L_{20}	-14.26	12.09	-11.24			0.90	1.20	13.04	-12.11	0.00	0.00	Vehicle	Vehicle	-----	-34.28	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	-----	-----	**33.78**	**33.78**
Structure 2		L_0 - L_1	15.26	-4.04	0.56			0.90	1.18	0.59	-4.30	0.00	0.00	Vehicle	Vehicle	20.61	-----	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	-----	-----	**1042.24**	**1042.24**	-----	-----
		L_1 - L_2	136.12	32.81	16.94			0.90	1.18	34.94	18.04	0.00	0.00	Vehicle	Vehicle	222.37	-----	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	-----	-----	**14.23**	**14.23**	-----	-----
		L_2 - L_3	262.92	58.72	55.01			0.90	1.18	62.52	58.56	0.00	0.00	Vehicle	Vehicle	423.06	-----	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	-----	-----	**11.41**	**11.41**	-----	-----
		L_3 - L_4	373.32	92.53	89.54			0.90	1.18	98.52	95.33	0.00	0.00	Vehicle	Vehicle	613.39	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**9.50**	**9.50**	-----	-----
		L_4 - L_5	456.60	62.16	136.34			0.90	1.18	145.16	66.18	0.00	0.00	Vehicle	Vehicle	782.55	-----	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	-----	-----	**8.22**	**8.22**	-----	-----
		L_5 - L_6	489.63	-35.63	150.91			0.90	1.18	160.67	-37.93	0.00	0.00	Vehicle	Vehicle	845.38	-----	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	-----	-----	**8.11**	**8.11**	-----	-----
		L_6 - L_7	479.27	-45.21	171.56			0.90	1.18	182.66	-48.14	0.00	0.00	Vehicle	Vehicle	860.51	-----	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	-----	-----	**7.33**	**7.33**	-----	-----
		L_7 - L_8	330.30	-62.01	144.21			0.90	1.18	153.54	-66.02	0.00	0.00	Vehicle	Vehicle	628.99	-----	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	-----	-----	**6.59**	**6.59**	-----	-----
		L_8 - L_9	189.19	-67.05	112.28			0.90	1.18	119.54	-71.39	0.00	0.00	Vehicle	Vehicle	401.35	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	**7.62**	**7.62**	-----	-----
		L_9 - L_{10}	39.95	-71.42	78.99			0.90	1.18	84.10	-76.04	0.00	0.00	Vehicle	Vehicle	161.27	-46.91	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	**9.77**	**9.77**	**10.09**	**10.09**
		L_{10} - L_{11}	-127.23	-71.98	50.98			0.90	1.18	54.28	-76.64	0.00	0.00	Vehicle	Vehicle	-----	-265.03	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	-----	-----	**6.83**	**6.83**
		L_{11} - L_{12}	-282.51	-71.36	20.50			0.90	1.18	21.82	-75.97	0.00	0.00	Vehicle	Vehicle	-----	-466.03	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	-----	-----	**8.53**	**8.53**
		L_{12} - L_{13}	-426.62	-68.30	-8.05			0.90	1.18	-8.57	-72.72	0.00	0.00	Vehicle	Vehicle	-----	-649.14	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	-----	-----	**11.67**	**11.67**
		L_{13} - L_{14}	-536.34	-44.71	-15.54			0.90	1.18	-16.54	-47.60	0.00	0.00	Vehicle	Vehicle	-----	-759.12	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	-----	-----	**20.56**	**20.56**
		L_{14} - L_{15}	-537.64	-36.51	-0.69			0.90	1.17	-0.72	-38.41	0.00	0.00	Vehicle	Vehicle	-----	-748.87	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	-----	-----	**25.45**	**25.45**
		L_{15} - L_{16}	-475.53	-63.75	-11.99			0.90	1.17	-12.62	-67.07	0.00	0.00	Vehicle	Vehicle	-----	-705.38	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	-----	-----	**11.93**	**11.93**
		L_{16} - L_{17}	-384.21	-30.60	15.99			0.90	1.17	16.82	-32.20	0.00	0.00	Vehicle	Vehicle	-----	-541.33	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**20.60**	**20.60**
		L_{17} - L_{18}	-281.70	3.22	37.88			0.90	1.17	39.85	3.39	0.00	0.00	Vehicle	Vehicle	-----	-361.81	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	-----	-----
		L_{18} - L_{19}	-174.99	-59.60	53.59			0.90	1.17	56.38	-62.71	0.00	0.00	Vehicle	Vehicle	-----	-309.00	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_{19} - L_{20}	-76.34	58.62	69.73			0.90	1.17	73.36	61.68	0.00	0.00	Vehicle	Vehicle	-----	-19.07	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	-----	-----	-----	-----
		L_0 - L_{21}	4.59	-45.96	94.66			0.90	1.17	99.60	-48.36	0.00	0.00	Vehicle	Vehicle	135.45	-56.89	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	**9.64**	**9.64**	**16.93**	**16.93**
		L_{21} - L_{22}	56.15	-38.00	117.70			0.90	1.17	123.83	-39.98	0.00	0.00	Vehicle	Vehicle	233.97	-----	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	-----	-----	**7.34**	**7.34**	-----	-----
		L_{22} - L_{23}	63.16	-17.62	91.42			0.90	1.17	96.18	-18.54	0.00	0.00	Vehicle	Vehicle	207.14	-----	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	-----	-----	**9.37**	**9.37**	-----	-----
		L_{23} - L_{24}	15.68	-32.39	90.91			0.90	1.17	95.65	-34.07	0.00	0.00	Vehicle	Vehicle	144.72	-23.91	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	**9.92**	**9.92**	**24.36**	**24.36**
		L_{24} - L_{25}	-55.90	-36.67	58.81			0.90	1.17	61.87	-38.58	0.00	0.00	Vehicle	Vehicle	7.76	-122.83	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**11.88**	**11.88**	**13.42**	**13.42**
		L_{25} - L_{26}	-136.32	-42.37	44.82			0.90	1.17	47.15	-44.58	0.00	0.00	Vehicle	Vehicle	-----	-235.17	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	-----	-----	**9.81**	**9.81**
		L_{26} - L_{27}	-217.71	-43.07	13.87			0.90	1.17	14.59	-45.31	0.00	0.00	Vehicle	Vehicle	-----	-341.93	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**11.25**	**11.25**
		L_{27} - L_{28}	-296.28	-44.67	-8.17			0.90	1.17	-8.60	-47.00	0.00	0.00	Vehicle	Vehicle	-----	-446.26	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	-----	-----	**15.99**	**15.99**
		L_{28} - L_{29}	-364.24	-41.30	-11.79			0.90	1.17	-12.40	-43.45	0.00	0.00	Vehicle	Vehicle	-----	-530.00	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**20.97**	**20.97**
		L_{29} - L_{30}	-418.31	-16.48	-23.12			0.90	1.17	-17.34	-24.32	0.00	0.00	Vehicle	Vehicle	-----	-575.41	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	-----	-----	**45.10**	**45.10**
		L_{30} - L_{31}	-350.66	-23.99	15.67			0.90	1.18	16.69	-25.54	0.00	0.00	Vehicle	Vehicle	-----	-489.06	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	-----	-----	**45.58**	**45.58**
		L_{31} - L_{32}	-275.63	-66.65	-15.14			0.90	1.18	-16.12	-70.96	0.00	0.00	Vehicle	Vehicle	-----	-450.57	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	-----	-----	**14.08**

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: 3F1 — 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
Structure 1	U_0 - L_0	-77.20	11.31	-74.18			0.90	1.24	12.59	-82.58	0.00	0.00	Vehicle	Vehicle	-----	-207.72	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	3.24	3.24
	U_1 - L_1	-33.88	10.26	-50.19			0.90	1.24	11.42	-55.88	0.00	0.00	Vehicle	Vehicle	-----	-116.68	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	-----	-----	-----	-----	-----	5.69	5.69
	U_1 - L_2	10.41	9.66	-30.89			0.90	1.24	10.76	-34.39	0.00	0.00	Vehicle	Vehicle	27.51	-31.18	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	-----	-----	-----	38.79	38.79	10.54	10.54
	U_2 - L_2	44.37	9.46	-23.03			0.90	1.24	10.53	-25.64	0.00	0.00	Vehicle	Vehicle	71.37	-----	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	-----	-----	-----	-----	-----	36.40	36.40	-----	-----
	U_2 - L_3	-16.71	-16.70	4.95			0.90	1.24	-11.08	-18.59	0.00	0.00	Vehicle	Vehicle	-----	-45.89	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	-----	-----	-----	-----	-----	17.92	17.92
	U_3 - L_3	-109.52	-61.47	4.20			0.90	1.24	4.67	-68.44	0.00	0.00	Vehicle	Vehicle	-----	-231.34	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	-----	-----	-----	-----	-----	4.61	4.61
	U_4 - L_4	-143.61	-75.22	-3.67			0.90	1.24	-4.09	-83.74	0.00	0.00	Vehicle	Vehicle	-----	-295.55	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	-----	-----	-----	-----	-----	4.35	4.35
	U_5 - L_5	-142.76	-76.98	2.05			0.90	1.24	2.28	-85.70	0.00	0.00	Vehicle	Vehicle	-----	-297.00	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	-----	-----	-----	-----	-----	3.70	3.70
	U_6 - L_6	-391.96	-81.44	-68.79			0.90	1.24	-76.58	-90.67	0.00	0.00	Vehicle	Vehicle	-----	-627.42	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	-----	-----	-----	-----	-----	7.43	7.43
	U_7 - L_7	-223.26	7.32	-64.87			0.90	1.20	7.89	-69.94	0.00	0.00	Vehicle	Vehicle	-----	-381.16	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	-----	-----	-----	-----	-----	6.03	6.03
	U_8 - L_8	-225.85	2.51	-66.01			0.90	1.20	2.71	-71.18	0.00	0.00	Vehicle	Vehicle	-----	-386.14	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	7.26	7.26
	U_9 - L_9	-198.80	-2.57	-58.87			0.90	1.20	-2.77	-63.47	0.00	0.00	Vehicle	Vehicle	-----	-340.95	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	-----	-----	-----	-----	-----	6.97	6.97
	U_{10} - L_{10}	-225.85	2.51	-66.01			0.90	1.20	2.71	-71.18	0.00	0.00	Vehicle	Vehicle	-----	-386.14	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	7.26	7.26
	U_{11} - L_{11}	-198.80	-2.57	-58.87			0.90	1.20	-2.77	-63.47	0.00	0.00	Vehicle	Vehicle	-----	-340.95	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	-----	-----	-----	-----	-----	6.97	6.97
	U_{12} - L_{12}	-154.81	7.36	-53.96			0.90	1.20	7.93	-58.18	0.00	0.00	Vehicle	Vehicle	-----	-276.89	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	6.49	6.49
	U_{13} - L_{13}	-109.06	15.26	-49.32			0.90	1.20	16.45	-53.17	0.00	0.00	Vehicle	Vehicle	-----	-210.90	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	-----	-----	-----	-----	-----	5.10	5.10
	U_{14} - L_{14}	-12.31	-10.58	0.08			0.90	1.20	0.08	-11.41	0.00	0.00	Vehicle	Vehicle	-----	-30.83	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	-----	-----	-----	29.14	29.14	29.14	29.14
	U_{15} - L_{15}	-5.62	-43.18	21.58			0.90	1.20	23.27	-46.55	0.00	0.00	Vehicle	Vehicle	22.95	-67.82	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	-----	-----	-----	18.62	18.62	7.25	7.25
	U_{16} - L_{16}	-51.73	-50.27	13.50			0.90	1.20	14.56	-54.20	0.00	0.00	Vehicle	Vehicle	-----	-137.72	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	-----	-----	-----	-----	-----	5.34	5.34
	U_{17} - L_{17}	-127.32	-64.47	8.57			0.90	1.20	9.24	-69.51	0.00	0.00	Vehicle	Vehicle	-----	-255.87	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	-----	-----	-----	-----	-----	4.09	4.09
	U_{18} - L_{18}	-159.94	-77.23	7.90			0.90	1.20	8.52	-83.27	0.00	0.00	Vehicle	Vehicle	-----	-316.17	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	-----	-----	-----	-----	-----	4.39	4.39
	U_{19} - L_{19}	-191.17	-79.41	6.68			0.90	1.20	7.20	-85.62	0.00	0.00	Vehicle	Vehicle	-----	-359.82	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	4.97	4.97
	U_{20} - L_{20}	-212.33	-79.07	6.60			0.90	1.20	7.11	-85.26	0.00	0.00	Vehicle	Vehicle	-----	-386.86	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	-----	-----	-----	-----	-----	4.34	4.34
Structure 2	U_0 - L_0	-206.69	8.40	-77.44			0.90	1.18	8.95	-82.45	0.00	0.00	Vehicle	Vehicle	-----	-375.89	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	5.29	5.29
	U_1 - L_1	-188.76	8.63	-67.37			0.90	1.18	9.18	-71.73	0.00	0.00	Vehicle	Vehicle	-----	-338.64	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	6.74	6.74
	U_1 - L_2	-155.92	9.10	-65.23			0.90	1.18	9.69	-69.45	0.00	0.00	Vehicle	Vehicle	-----	-292.99	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	-----	-----	-----	-----	-----	6.02	6.02
	U_2 - L_2	-134.58	10.31	-56.81			0.90	1.18	10.98	-60.48	0.00	0.00	Vehicle	Vehicle	-----	-253.58	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	-----	-----	-----	-----	-----	5.25	5.25
	U_3 - L_3	-64.49	12.80	-47.14			0.90	1.18	13.62	-50.19	0.00	0.00	Vehicle	Vehicle	-----	-149.09	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	-----	-----	-----	-----	-----	5.47	5.47
	U_4 - L_4	-19.94	21.69	-43.31			0.90	1.18	23.09	-46.11	0.00	0.00	Vehicle	Vehicle	4.09	-85.86	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	19.39	19.39	6.95	6.95
	U_5 - L_5	40.08	25.43	-27.35			0.90	1.18	27.07	-29.12	0.00	0.00	Vehicle	Vehicle	87.30	-----	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	-----	-----	-----	-----	-----	14.32	14.32	-----	-----
	U_6 - L_6	-26.04	-5.21	-5.10			0.90	1.18	-5.43	-5.54	0.00	0.00	Vehicle	Vehicle	-----	-41.06	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	-----	-----	-----	-----	-----	56.73	56.73
	U_7 - L_7	-125.25	-53.71	14.91			0.90	1.18	15.87	-57.19	0.00	0.00	Vehicle	Vehicle	-----	-237.17	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	7.09	7.09
	U_8 - L_8	-174.53	-64.75	6.60			0.90	1.18	7.03	-68.94	0.00	0.00	Vehicle	Vehicle	-----	-316.52	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	-----	-----	-----	-----	-----	7.49	7.49
	U_9 - L_9	-202.66	-75.49	2.09			0.90	1.18	2.23	-80.38	0.00	0.00	Vehicle	Vehicle	-----	-367.95	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	-----	-----	-----	-----	-----	7.17	7.17
	U_{10} - L_{10}	-229.53	-80.90	1.87			0.90	1.18	1.99	-86.14	0.00	0.00	Vehicle	Vehicle	-----	-410.36	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	-----	-----	-----	-----	-----	6.21	6.21
	U_{11} - L_{12}	-250.85	-81.97	1.92			0.90	1.18	2.05	-87.27	0.00	0.00	Vehicle	Vehicle	-----	-439.55	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.31	6.31
	U_{12} - L_{13}	-223.32	-83.31	8.45			0.90	1.18	8.99	-88.70	0.00	0.00	Vehicle	Vehicle	-----	-405.63	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	-----	-----	-----	-----	-----	5.26	5.26
	U_{13} - L_{14}	-343.31	-72.74	-67.73			0.90	1.18	-72.11	-77.45	0.00	0.00	Vehicle	Vehicle	-----	-546.99	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	-----	-----	-----	-----	-----	9.15	9.15
	U_{14} - L_{15}	-123.14	8.30	-59.23			0.90	1.17	8.73	-62.31	0.00	0.00	Vehicle	Vehicle	-----	-241.09	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	-----	-----	-----	-----	-----	9.10	9.10
	U_{15} - L_{16}	-156.70	6.52	-65.39			0.90	1.17	6.86	-68.79	0.00	0.00	Vehicle	Vehicle	-----	-293.14	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	-----	-----	-----	-----	-----	7.40	7.40
	U_{16} - L_{17}	-147.91	6.27	-68.25			0.90	1.17	6.60	-71.80	0.00	0.00	Vehicle	Vehicle	-----	-285.63	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	-----	-----	-----	-----	-----	6.62	6.62
	U_{17} - L_{18}	-142.22	7.88	-60.09			0.90	1.17	8.29	-63.22	0.00	0.00	Vehicle	Vehicle	-----	-267.07	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	-----	-----	-----	-----	-----	6.88	6.88
	U_{18} - L_{19}	-111.48	8.81	-59.32			0.90	1.17	9.27	-62.41	0.00	0.00	Vehicle	Vehicle	-----	-226.07	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	-----	-----	-----	-----	-----	6.41	6.41
	U_{19} - L_{20}	-76.55	15.69	-52.18			0.90	1.17	16.50	-54.90	0.00	0.00	Vehicle	Vehicle	-----	-170.88	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	5.44	5.44
	U_{21} - L_{21}	-44.31	19.22	-40.49			0.90	1.17	20.23	-42.59	0.00	0.00	Vehicle	Vehicle	-----	-112.98	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	-----	-----	-----	-----	-----	6.95	6.95
	U_{22} - L_{22}	-21.25	-4.27	-4.31			0.90	1.17	-4.49	-4.54	0.00	0.00	Vehicle	Vehicle	-----	-33.52	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	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	70.68	70.68
	U_{23} - L_{23}	-39.07	-42.97	21.81			0.90	1.17	22.94	-45.20	0.00	0.00	Vehicle	Vehicle	-----	-109.55	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	-----	-----	-----	-----	-----	6.67	6.67
	U_{24} - L_{24}	-74.84	-50.38	16.58			0.90	1.17	17.45	-53.00	0.00	0.00	Vehicle	Vehicle	-----	-166.20	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	-----	-----	-----	-----	-----	5.67	5.67
	U_{25} - L_{25}	-103.27	-66.19	10.78			0.90	1.17	11.34	-69.64	0.00	0.00	Vehicle	Vehicle	-----	-224.78	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	5.86	5.86
	U_{26} - L_{26}	-120.22	-70.13	10.17			0.90	1.17	10.70	-73.78	0.00	0.00	Vehicle	Vehicle	-----	-252.20	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	-----	-----	-----	-----	-----	6.19	6.19
	U_{27} - L_{27}	-123.93	-72.96	8.40			0.90	1.17	8.84	-76.76	0.00	0.00	Vehicle	Vehicle	-----	-260.90	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	-----	-----	-----	-----	-----	6.51	6.51
	U_{28} - L_{28}	-135.60	-82.22	7.64			0.90	1.17	8.04	-86.51	0.00	0.00	Vehicle	Vehicle	-----	-288.73	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	6.13	6.13
	U_{29} - L_{29}	-116.87	-77.01	4.47			0.90	1.17	4.70	-81.03	0.00	0.00	Vehicle	Vehicle	-----	-257.27	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.07	7.07
	U_{30} - L_{30}	-262.02	-72.88	-62.81			0.90	1.18	-66.88	-77.60	0.00	0.00	Vehicle	Vehicle	-----	-441.50	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	10.18	10.18
	U_{31} - L_{31}	-156.38	10.46	-64.06		

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: 3F1 **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+I max (kips)	LL+I 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
North Truss - Diagonals	Structure 1	U_0 - L_1	87.33	-14.81	67.86			0.90	1.24	75.55	-16.49	0.00	0.00	Vehicle	Vehicle	211.73	-----	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	-----	-----	-----	-----	-----	**6.61**	**6.61**	-----	-----
		U_1 - L_2	23.35	-15.99	38.66			0.90	1.24	43.04	-17.80	0.00	0.00	Vehicle	Vehicle	86.30	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**9.40**	**9.40**	-----	-----
		U_2 - L_3	-37.85	-15.55	25.73			0.90	1.24	28.65	-17.32	0.00	0.00	Vehicle	Vehicle	-----	-71.72	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**17.11**	**17.11**
		U_3 - L_4	-92.19	-15.05	-14.61			0.90	1.24	-16.26	-16.76	0.00	0.00	Vehicle	Vehicle	-----	-141.64	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	-----	-----	-----	-----	-----	**14.57**	**14.57**
		U_4 - L_4	143.37	9.87	48.79			0.90	1.24	54.32	10.99	0.00	0.00	Vehicle	Vehicle	256.99	-----	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	-----	-----	-----	-----	-----	**7.02**	**7.02**	-----	-----
		U_5 - L_5	177.90	8.13	67.36			0.90	1.24	74.99	9.05	0.00	0.00	Vehicle	Vehicle	328.75	-----	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	-----	-----	-----	-----	-----	**6.30**	**6.30**	-----	-----
		U_6 - L_6	184.42	0.67	82.62			0.90	1.24	91.98	0.74	0.00	0.00	Vehicle	Vehicle	359.32	-----	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	-----	-----	-----	-----	-----	**5.07**	**5.07**	-----	-----
		U_7 - L_7	180.02	-0.93	81.14			0.90	1.24	90.33	-1.03	0.00	0.00	Vehicle	Vehicle	351.45	-----	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	-----	-----	-----	-----	-----	**5.21**	**5.21**	-----	-----
		U_8 - L_8	268.98	0.21	81.60			0.90	1.20	87.98	0.22	0.00	0.00	Vehicle	Vehicle	464.04	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**7.88**	**7.88**	-----	-----
		U_9 - L_{10}	278.85	-7.88	84.44			0.90	1.20	91.05	-8.50	0.00	0.00	Vehicle	Vehicle	480.87	-----	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	-----	-----	-----	-----	-----	**7.51**	**7.51**	-----	-----
		U_{10} - L_{11}	285.04	8.67	77.74			0.90	1.20	83.82	9.34	0.00	0.00	Vehicle	Vehicle	479.52	-----	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	-----	-----	-----	-----	-----	**7.46**	**7.46**	-----	-----
		U_{11} - L_{12}	250.60	-1.80	57.49			0.90	1.20	61.99	-1.95	0.00	0.00	Vehicle	Vehicle	406.36	-----	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	-----	-----	-----	-----	-----	**8.50**	**8.50**	-----	-----
		U_{12} - L_{13}	189.65	-10.37	73.27			0.90	1.20	79.00	-11.19	0.00	0.00	Vehicle	Vehicle	349.24	-----	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	-----	-----	-----	-----	-----	**5.59**	**5.59**	-----	-----
		U_{13} - L_{14}	123.32	-21.28	51.49			0.90	1.20	55.52	-22.94	0.00	0.00	Vehicle	Vehicle	232.49	-----	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	-----	-----	-----	-----	-----	**5.48**	**5.48**	-----	-----
		U_{14} - L_{15}	-24.41	-38.23	22.23			0.90	1.20	23.96	-41.22	0.00	0.00	Vehicle	Vehicle	-----	-85.32	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	-----	-----	-----	-----	-----	**7.37**	**7.37**
		U_{15} - L_{15}	48.53	-26.13	59.16			0.90	1.20	63.79	-28.17	0.00	0.00	Vehicle	Vehicle	146.02	-----	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	-----	-----	-----	-----	-----	**5.94**	**5.94**	-----	-----
		U_{16} - L_{16}	146.59	-11.72	70.33			0.90	1.20	75.83	-12.64	0.00	0.00	Vehicle	Vehicle	289.14	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**4.98**	**4.98**	-----	-----
		U_{17} - L_{17}	182.46	-10.09	64.00			0.90	1.20	69.00	-10.88	0.00	0.00	Vehicle	Vehicle	326.90	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.78**	**6.78**	-----	-----
		U_{18} - L_{18}	223.82	-8.43	76.86			0.90	1.20	82.87	-9.09	0.00	0.00	Vehicle	Vehicle	398.71	-----	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	-----	-----	-----	-----	-----	**5.87**	**5.87**	-----	-----
		U_{20} - L_{19}	232.72	-3.71	62.01			0.90	1.20	66.86	-4.00	0.00	0.00	Vehicle	Vehicle	389.46	-----	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	-----	-----	-----	-----	-----	**7.14**	**7.14**	-----	-----
	Structure 2	U_0 - L_1	213.54	-8.90	65.95			0.90	1.18	70.21	-9.47	0.00	0.00	Vehicle	Vehicle	368.88	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.03**	**8.03**	-----	-----
		U_1 - L_2	200.48	-10.53	77.06			0.90	1.18	82.04	-11.21	0.00	0.00	Vehicle	Vehicle	367.28	-----	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	-----	-----	-----	-----	-----	**7.03**	**7.03**	-----	-----
		U_2 - L_3	172.81	-11.78	67.14			0.90	1.18	71.48	-12.54	0.00	0.00	Vehicle	Vehicle	317.58	-----	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	-----	-----	-----	-----	-----	**6.68**	**6.68**	-----	-----
		U_3 - L_4	147.16	-13.85	72.93			0.90	1.18	77.65	-14.75	0.00	0.00	Vehicle	Vehicle	292.25	-----	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	-----	-----	-----	-----	-----	**5.54**	**5.54**	-----	-----
		U_4 - L_5	49.10	-20.29	56.56			0.90	1.18	60.22	-21.80	0.00	0.00	Vehicle	Vehicle	142.12	-----	0.00	16.85	16.8486	556.00	131.71	13.3994	1.9682	61.01	28.23	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**6.29**	**6.29**	-----	-----
		U_5 - L_6	2.96	-28.00	51.47			0.90	1.18	54.80	-29.82	0.00	0.00	Vehicle	Vehicle	75.09	-34.91	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	-----	-----	-----	-----	-----	**7.75**	**7.75**	**11.02**	**11.02**
		U_6 - L_7	-85.74	-48.72	33.20			0.90	1.18	35.35	-51.87	0.00	0.00	Vehicle	Vehicle	-----	-178.89	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	-----	-----	-----	-----	-----	**5.27**	**5.27**
		U_7 - L_7	140.30	-21.43	46.89			0.90	1.18	49.92	-22.81	0.00	0.00	Vehicle	Vehicle	247.29	-----	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	-----	-----	-----	-----	-----	**9.27**	**9.27**	-----	-----
		U_8 - L_8	204.22	-10.33	71.19			0.90	1.18	75.80	-11.00	0.00	0.00	Vehicle	Vehicle	364.02	-----	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	-----	-----	-----	-----	-----	**6.68**	**6.68**	-----	-----
		U_9 - L_9	234.87	6.34	64.66			0.90	1.18	68.84	6.75	0.00	0.00	Vehicle	Vehicle	394.82	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.88**	**7.88**	-----	-----
		U_{11} - L_{10}	263.10	-0.47	79.47			0.90	1.18	84.61	-0.50	0.00	0.00	Vehicle	Vehicle	452.02	-----	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	-----	-----	-----	-----	-----	**6.87**	**6.87**	-----	-----
		U_{11} - L_{11}	274.02	-1.57	83.27			0.90	1.18	88.66	-1.67	0.00	0.00	Vehicle	Vehicle	471.49	-----	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	-----	-----	-----	-----	-----	**6.43**	**6.43**	-----	-----
		U_{12} - L_{12}	254.94	-9.02	86.49			0.90	1.18	92.09	-9.61	0.00	0.00	Vehicle	Vehicle	451.14	-----	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	-----	-----	-----	-----	-----	**5.67**	**5.67**	-----	-----
		U_{13} - L_{13}	217.71	-8.84	78.87			0.90	1.18	83.98	-9.41	0.00	0.00	Vehicle	Vehicle	392.19	-----	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	-----	-----	-----	-----	-----	**6.67**	**6.67**	-----	-----
		U_{14} - L_{15}	110.05	-7.15	62.80			0.90	1.17	66.07	-7.52	0.00	0.00	Vehicle	Vehicle	228.95	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.18**	**8.18**	-----	-----
		U_{15} - L_{16}	132.30	-9.32	70.38			0.90	1.17	74.05	-9.80	0.00	0.00	Vehicle	Vehicle	268.25	-----	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	-----	-----	-----	-----	-----	**7.00**	**7.00**	-----	-----
		U_{16} - L_{17}	172.89	-5.45	76.09			0.90	1.17	80.06	-5.73	0.00	0.00	Vehicle	Vehicle	328.83	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.71**	**6.71**	-----	-----
		U_{17} - L_{18}	160.19	-5.09	69.72			0.90	1.17	73.35	-5.35	0.00	0.00	Vehicle	Vehicle	303.60	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.69**	**6.69**	-----	-----
		U_{18} - L_{19}	152.35	-10.26	77.77			0.90	1.17	81.82	-10.80	0.00	0.00	Vehicle	Vehicle	304.41	-----	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	-----	-----	-----	-----	-----	**6.09**	**6.09**	-----	-----
		U_{19} - L_{20}	120.69	-11.74	71.67			0.90	1.17	75.40	-12.35	0.00	0.00	Vehicle	Vehicle	254.91	-----	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	-----	-----	-----	-----	-----	**6.40**	**6.40**	-----	-----
		U_{20} - L_{21}	76.08	-18.83	52.39			0.90	1.17	55.12	-19.81	0.00	0.00	Vehicle	Vehicle	170.57	-----	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	-----	-----	-----	-----	-----	**6.38**	**6.38**	-----	-----
		U_{21} - L_{22}	31.46	-26.30	51.83			0.90	1.17	54.53	-27.67	0.00	0.00	Vehicle	Vehicle	111.78	-----	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	-----	-----	-----	-----	-----	**7.27**	**7.27**	-----	-----
		U_{22} - L_{23}	24.30	-32.04	33.81			0.90	1.17	35.57	-33.71	0.00	0.00	Vehicle	Vehicle	77.83	-12.23	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	-----	-----	-----	-----	-----	**11.34**	**11.34**	**10.30**	**10.30**
		U_{23} - L_{23}	72.26	-23.38	51.80			0.90	1.17	54.49	-24.59	0.00	0.00	Vehicle	Vehicle	164.78	-----	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	-----	-----	-----	-----	-----	**6.52**	**6.52**	-----	-----
		U_{24} - L_{24}	112.13	-14.37	71.41			0.90	1.17	75.13	-15.12	0.00	0.00	Vehicle	Vehicle	243.44	-----	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	-----	-----	-----	-----	-----	**6.54**	**6.54**	-----	-----
		U_{25} - L_{25}	127.84	-12.99	67.36			0.90	1.17	70.87	-13.66	0.00	0.00	Vehicle	Vehicle	258.33	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.38**	**7.38**	-----	-----
		U_{26} - L_{26}	132.67	-10.52	76.94			0.90	1.17	80.94	-11.07	0.00	0.00	Vehicle	Vehicle	277.69	-----	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	-----	-----	-----	-----	-----	**6.40**	**6.40**	-----	-----
		U_{27} - L_{27}	137.94	-9.06	82.58			0.90	1.17	86.88	-9.53	0.00	0.00	Vehicle	Vehicle	292.27	-----	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	-----	-----	-----	-----	-----	**6.59**	**6.59**	-----	-----
		U_{28} - L_{29}	102.75	-5.82	72.53			0.90	1.17	76.31	-6.12	0.00	0.00	Vehicle	Vehicle	232.78	-----	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	-----	-----	-----	-----	-----	**7.18**	**7.18**	-----	-----
		U_{30} - L_{31}	140.07	-8.32	66.80			0.90	1.18	71.13	-8.86	0.00	0.00	Vehicle	Vehicle	274.55	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.96**	**8.96**	-----	-----
		U_{31} - L_{32}	167.39	-11.92	72.12			0.90	1.18	76.78	-12.69	0.00	0.00	Vehicle	Vehicle	317.43	-----	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	-----	-----	-----	-----	-----	**7.95**	**7.95**	-----	-----
		U_{32} - L_{33}	202.10	-7.02	73.40			0.90	1.18	78.15	-7.47	0.00	0.00	Vehicle	Vehicle	364.33	-----	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	-----	-----	-----	-----	-----	**8.22**	**8.22**	-----	-----
		U_{33} - L_{34}	201.91	-7.10	84.74			0.90	1.18	90.23	-7.56	0.00	0.00	Vehicle	Vehicle	379.78	-----	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	-----	-----	-----	-----	-----	**7.12**	**7.12**	-----	-----
		U_{34} - L_{35}	180.76	-1.83	80.91			0.90	1.18	86.14	-1.95	0.00	0.00	Vehicle	Vehicle	346.98	-----	0.00	30.63	30.6305	1010.81	131.71	13.7604	2.8427	43.57	31.19	-812.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.93**	**6.93**	-----	-----
		U_{35} - L_{36}	162.94	-1.04	70.27			0.90	1.18	74.81	-1.11	0.00	0.00	Vehicle	Vehicle	309.08	-----	0.00	27.98	27.9777	923.26	131.71	13.3125	2.8289	42.35	31.29	-744.20	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.32**	**7.

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: 3F1 **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
Center Truss - Upper Chord	Structure 1	U_0 - U_1	-52.64	-55.30	-40.40			0.75	1.24	-37.48	-51.30	0.00	0.00	Vehicle	Vehicle	-----	-135.12	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	-----	-----	9.99	9.99
		U_1 - U_2	-61.57	-4.30	-80.20			0.75	1.24	-3.99	-74.41	0.00	0.00	Vehicle	Vehicle	-----	-176.77	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	-----	-----	6.77	6.77
		U_2 - U_3	-26.99	-70.70	-93.40			0.75	1.24	-65.59	-86.65	0.00	0.00	Vehicle	Vehicle	-----	-147.73	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	6.21	6.21
		U_3 - U_4	32.92	40.10	-92.80			0.75	1.24	37.20	-86.10	0.00	0.00	Vehicle	Vehicle	91.16	-69.13	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	17.15	17.15	6.95	6.95
		U_4 - U_5	34.77	42.50	-104.60			0.75	1.24	39.43	-97.04	0.00	0.00	Vehicle	Vehicle	96.46	-80.95	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	16.14	16.14	6.18	6.18
		U_5 - U_6	124.13	50.40	-90.50			0.75	1.24	46.76	-83.96	0.00	0.00	Vehicle	Vehicle	222.16	-----	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	-----	-----	11.70	11.70	-----	-----
		U_6 - U_7	223.19	-0.20	-60.20			0.75	1.24	-0.19	-55.85	0.00	0.00	Vehicle	Vehicle	289.90	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	-----	-----	-----	-----
		U_7 - U_8	331.76	54.50	-26.20			0.75	1.24	50.56	-24.31	0.00	0.00	Vehicle	Vehicle	497.02	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	15.40	15.40	-----	-----
		U_8 - U_9	267.61	-23.40	2.80			0.75	1.20	2.52	-21.02	0.00	0.00	Vehicle	Vehicle	351.17	-----	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	-----	-----	266.80	266.80	-----	-----
		U_9 - U_{10}	89.12	-16.90	-49.10			0.75	1.20	-15.18	-44.12	0.00	0.00	Vehicle	Vehicle	96.11	-----	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	-----	-----	-----	-----	-----	-----
		U_{10} - U_{11}	-76.81	-48.20	-73.30			0.75	1.20	-43.31	-65.86	0.00	0.00	Vehicle	Vehicle	-----	-185.47	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.90	7.90
		U_{11} - U_{12}	-230.69	-82.30	-94.40			0.75	1.20	-73.95	-84.82	0.00	0.00	Vehicle	Vehicle	-----	-410.15	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	6.86	6.86
		U_{12} - U_{13}	-341.88	-112.30	-128.40			0.75	1.20	-100.90	-115.37	0.00	0.00	Vehicle	Vehicle	-----	-594.42	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	-----	-----	6.90	6.90
		U_{13} - U_{14}	-421.62	26.00	-135.10			0.75	1.20	23.36	-121.39	0.00	0.00	Vehicle	Vehicle	-----	-705.91	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	7.46	7.46
		U_{14} - U_{15}	-422.51	-116.40	-155.40			0.75	1.20	-104.59	-139.63	0.00	0.00	Vehicle	Vehicle	-----	-730.77	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	-----	-----	6.48	6.48
		U_{15} - U_{16}	-439.94	-118.90	-159.10			0.75	1.20	-106.83	-142.95	0.00	0.00	Vehicle	Vehicle	-----	-757.76	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.21	6.21
		U_{16} - U_{17}	-422.43	14.40	-149.30			0.75	1.20	12.94	-134.15	0.00	0.00	Vehicle	Vehicle	-----	-723.54	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	-----	-----	6.75	6.75
		U_{17} - U_{18}	-340.94	10.20	-126.10			0.75	1.20	9.16	-113.30	0.00	0.00	Vehicle	Vehicle	-----	-590.51	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	5.56	5.56
		U_{18} - U_{19}	-247.15	-7.90	-74.90			0.75	1.20	-7.10	-67.30	0.00	0.00	Vehicle	Vehicle	-----	-408.78	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	-----	-----	6.40	6.40
		U_{19} - U_{20}	-131.71	-8.30	-33.10			0.75	1.20	-7.46	-29.74	0.00	0.00	Vehicle	Vehicle	-----	-209.88	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	18.35	18.35
	Structure 2	U_0 - U_1	-131.51	-36.80	-28.70			0.75	1.18	-25.46	-32.65	0.00	0.00	Vehicle	Vehicle	-----	-213.41	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	15.80	15.80
		U_1 - U_2	-247.03	-78.50	-63.60			0.75	1.18	-56.43	-69.65	0.00	0.00	Vehicle	Vehicle	-----	-411.68	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	-----	-----	7.81	7.81
		U_2 - U_3	-347.15	-100.00	-98.80			0.75	1.18	-87.66	-88.73	0.00	0.00	Vehicle	Vehicle	-----	-566.64	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	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	8.23	8.23
		U_3 - U_4	-437.07	30.00	-122.00			0.75	1.18	26.62	-108.24	0.00	0.00	Vehicle	Vehicle	-----	-708.90	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	-----	-----	8.35	8.35
		U_4 - U_5	-468.70	-105.40	-150.40			0.75	1.18	-93.52	-133.44	0.00	0.00	Vehicle	Vehicle	-----	-782.79	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	-----	-----	7.63	7.63
		U_5 - U_6	-471.03	44.80	-148.90			0.75	1.18	39.75	-132.11	0.00	0.00	Vehicle	Vehicle	-----	-784.08	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	-----	-----	7.69	7.69
		U_6 - U_7	-414.41	51.00	-138.80			0.75	1.18	45.25	-123.15	0.00	0.00	Vehicle	Vehicle	-----	-698.83	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	-----	-----	7.53	7.53
		U_7 - U_8	-413.45	51.30	-151.10			0.75	1.18	45.52	-134.06	0.00	0.00	Vehicle	Vehicle	-----	-711.77	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	-----	-----	6.92	6.92
		U_8 - U_9	-321.98	54.30	-139.00			0.75	1.18	48.18	-123.33	0.00	0.00	Vehicle	Vehicle	-----	-578.90	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	6.52	6.52
		U_9 - U_{10}	-182.11	59.20	-121.70			0.75	1.18	52.53	-107.98	0.00	0.00	Vehicle	Vehicle	-----	-377.11	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	-----	-----	6.52	6.52
		U_{10} - U_{11}	-32.58	62.10	-91.30			0.75	1.18	55.10	-81.01	0.00	0.00	Vehicle	Vehicle	29.28	-147.66	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	17.12	17.12	9.10	9.10
		U_{11} - U_{12}	133.59	62.70	-68.30			0.75	1.18	55.63	-60.60	0.00	0.00	Vehicle	Vehicle	245.99	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	13.97	13.97	-----	-----
		U_{12} - U_{13}	289.99	-15.60	-43.60			0.75	1.18	-13.84	-38.68	0.00	0.00	Vehicle	Vehicle	358.99	-----	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	-----	-----	-----	-----	-----	-----
		U_{13} - U_{14}	434.76	59.10	-14.90			0.75	1.18	52.44	-13.22	0.00	0.00	Vehicle	Vehicle	633.36	-----	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	-----	-----	21.54	21.54	-----	-----
		U_{14} - U_{15}	474.45	-8.00	-14.00			0.75	1.17	-7.01	-12.27	0.00	0.00	Vehicle	Vehicle	607.66	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{15} - U_{16}	383.28	35.10	-26.80			0.75	1.17	30.77	-23.50	0.00	0.00	Vehicle	Vehicle	538.27	-----	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	-----	-----	28.89	28.89	-----	-----
		U_{16} - U_{17}	279.57	-29.30	-51.20			0.75	1.17	-25.69	-44.89	0.00	0.00	Vehicle	Vehicle	330.05	-----	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	-41.20	-65.90			0.75	1.17	-36.12	-57.78	0.00	0.00	Vehicle	Vehicle	177.46	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U_{18} - U_{19}	74.36	-60.20	-79.80			0.75	1.17	-52.78	-69.96	0.00	0.00	Vehicle	Vehicle	28.06	-----	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	-----	-----	-----	-----	-----	-----
		U_{19} - U_{20}	-10.01	37.70	-100.90			0.75	1.17	33.05	-88.46	0.00	0.00	Vehicle	Vehicle	29.95	-128.02	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	25.12	25.12	7.72	7.72
	Structure 3	U_0 - U_{21}	-62.06	-84.20	-108.20			0.75	1.17	-73.82	-94.86	0.00	0.00	Vehicle	Vehicle	-----	-204.00	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	8.17	8.17
		U_{21} - U_{22}	-88.74	27.40	-107.80			0.75	1.17	24.02	-94.51	0.00	0.00	Vehicle	Vehicle	-----	-238.22	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.91	7.91
		U_{22} - U_{23}	-88.92	-90.60	-123.00			0.75	1.17	-79.43	-107.84	0.00	0.00	Vehicle	Vehicle	-----	-255.78	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.93	6.93
		U_{23} - U_{24}	-76.67	-79.60	-125.00			0.75	1.17	-69.79	-109.59	0.00	0.00	Vehicle	Vehicle	-----	-242.14	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	-----	-----	6.94	6.94
		U_{24} - U_{25}	-37.64	38.80	-116.90			0.75	1.17	34.02	-102.49	0.00	0.00	Vehicle	Vehicle	-----	-182.18	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.39	6.39
		U_{25} - U_{26}	37.23	44.40	-98.30			0.75	1.17	38.93	-86.18	0.00	0.00	Vehicle	Vehicle	99.00	-63.64	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	18.73	18.73	7.94	7.94
		U_{26} - U_{27}	128.02	49.00	-79.60			0.75	1.17	42.96	-69.79	0.00	0.00	Vehicle	Vehicle	222.27	-----	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	-----	-----	14.86	14.86	-----	-----
		U_{27} - U_{28}	233.68	51.00	-60.70			0.75	1.17	44.71	-53.22	0.00	0.00	Vehicle	Vehicle	361.91	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	18.12	18.12	-----	-----
		U_{28} - U_{29}	337.65	-0.50	-36.90			0.75	1.17	-0.44	-32.35	0.00	0.00	Vehicle	Vehicle	438.38	-----	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	-----	-----	-----	-----	-----	-----
		U_{29} - U_{30}	437.10	50.50	-14.20			0.75	1.17	44.28	-12.45	0.00	0.00	Vehicle	Vehicle	625.78	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	25.46	25.46	-----	-----
		U_{30} - U_{31}	420.53	-16.10	29.50			0.75	1.18	26.17	-14.28	0.00	0.00	Vehicle	Vehicle	580.71	-----	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	-----	-----	43.70	43.70	-----	-----
		U_{31} - U_{32}	300.69	47.00	-33.80			0.75	1.18	41.70	-29.99	0.00	0.00	Vehicle	Vehicle	445.11	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	20.11	20.11	-----	-----
		U_{32} - U_{33}	161.60	-38.10	-55.00			0.75	1.18	-33.80	-48.80	0.00

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 3F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

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

E = 29000.0 ksi

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Lower Chord	Structure 1	L$_0$- L$_1$	8.49	5.80	-2.20			0.75	1.24	5.38	-2.04	0.00	0.00	Vehicle	Vehicle	18.03	-----	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	-----	-----	**91.83**	**91.83**	-----	-----
		L$_1$ - L$_2$	50.81	45.70	67.20			0.75	1.24	62.34	42.40	0.00	0.00	Vehicle	Vehicle	147.10	-----	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	-----	-----	**7.25**	**7.25**	-----	-----
		L$_2$ - L$_3$	61.22	-18.70	99.60			0.75	1.24	92.40	-17.35	0.00	0.00	Vehicle	Vehicle	199.71	-----	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	-----	-----	**6.57**	**6.57**	-----	-----
		L$_3$ - L$_4$	25.70	63.90	105.30			0.75	1.24	97.69	59.28	0.00	0.00	Vehicle	Vehicle	160.41	-----	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	-----	-----	**6.58**	**6.58**	-----	-----
		L$_4$ - L$_5$	-118.45	-48.00	60.80			0.75	1.24	56.41	-44.53	0.00	0.00	Vehicle	Vehicle	-----	-211.88	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	-----	-----	**8.58**	**8.58**
		L$_5$ - L$_6$	-217.80	-57.10	34.90			0.75	1.24	32.38	-52.97	0.00	0.00	Vehicle	Vehicle	-----	-352.01	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	-----	-----	**8.34**	**8.34**
		L$_6$ - L$_7$	-320.36	-59.10	12.40			0.75	1.24	11.50	-54.83	0.00	0.00	Vehicle	Vehicle	-----	-487.74	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	-----	-----	**11.39**	**11.39**
		L$_7$ - L$_8$	-417.18	-31.10	-22.90			0.75	1.24	-21.25	-28.85	0.00	0.00	Vehicle	Vehicle	-----	-579.85	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	-----	-----	**27.11**	**27.11**
		L$_8$ - L$_9$	-410.79	-49.70	-2.00			0.75	1.20	-1.80	-44.66	0.00	0.00	Vehicle	Vehicle	-----	-592.08	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**17.66**	**17.66**
		L$_9$ - L$_{10}$	-247.75	-13.40	7.10			0.75	1.20	6.38	-12.04	0.00	0.00	Vehicle	Vehicle	-----	-337.73	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	-----	-----	**57.94**	**57.94**
		L$_{10}$ - L$_{11}$	-65.21	-47.40	44.60			0.75	1.20	40.07	-42.59	0.00	0.00	Vehicle	Vehicle	-----	-140.14	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	-----	-----	**10.22**	**10.22**
		L$_{11}$ - L$_{12}$	101.88	50.50	64.70			0.75	1.20	58.13	45.37	0.00	0.00	Vehicle	Vehicle	208.02	-----	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$_{13}$	264.09	51.20	105.60			0.75	1.20	94.88	46.00	0.00	0.00	Vehicle	Vehicle	466.66	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**7.49**	**7.49**	-----	-----
		L$_{13}$ - L$_{14}$	373.73	86.40	117.80			0.75	1.20	105.84	77.63	0.00	0.00	Vehicle	Vehicle	623.45	-----	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	-----	-----	**8.83**	**8.83**	-----	-----
		L$_{14}$ - L$_{15}$	476.34	-19.10	129.30			0.75	1.20	116.18	-17.16	0.00	0.00	Vehicle	Vehicle	770.27	-----	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	-----	-----	**9.45**	**9.45**	-----	-----
		L$_{15}$ - L$_{16}$	459.97	-14.20	125.70			0.75	1.20	112.94	-12.76	0.00	0.00	Vehicle	Vehicle	744.78	-----	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	-----	-----	**9.87**	**9.87**	-----	-----
		L$_{16}$ - L$_{17}$	381.37	-9.40	103.10			0.75	1.20	92.64	-8.45	0.00	0.00	Vehicle	Vehicle	616.21	-----	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	-----	-----	**9.02**	**9.02**	-----	-----
		L$_{17}$ - L$_{18}$	288.98	-5.40	69.40			0.75	1.20	62.36	-4.85	0.00	0.00	Vehicle	Vehicle	456.73	-----	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	-----	-----	**9.53**	**9.53**	-----	-----
		L$_{18}$ - L$_{19}$	176.20	-2.10	28.80			0.75	1.20	25.88	-1.89	0.00	0.00	Vehicle	Vehicle	262.70	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**12.61**	**12.61**	-----	-----
		L$_{19}$ - L$_{20}$	69.74	0.30	-7.80			0.75	1.20	0.27	-7.01	0.00	0.00	Vehicle	Vehicle	91.02	-----	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	-----	-----	**1605.90**	**1605.90**	-----	-----
	Structure 2	L$_0$- L$_1$	24.59	2.50	-1.00			0.75	1.18	2.22	-0.89	0.00	0.00	Vehicle	Vehicle	34.85	-----	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	-----	-----	**274.45**	**274.45**	-----	-----
		L$_1$ - L$_2$	138.59	33.30	13.90			0.75	1.18	29.55	12.33	0.00	0.00	Vehicle	Vehicle	218.57	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**16.75**	**16.75**	-----	-----
		L$_2$ - L$_3$	252.83	59.00	89.30			0.75	1.18	79.23	52.35	0.00	0.00	Vehicle	Vehicle	431.68	-----	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	-----	-----	**9.13**	**9.13**	-----	-----
		L$_3$ - L$_4$	352.30	90.60	91.60			0.75	1.18	81.27	80.38	0.00	0.00	Vehicle	Vehicle	563.65	-----	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	-----	-----	**11.77**	**11.77**	-----	-----
		L$_4$ - L$_5$	447.17	106.10	130.20			0.75	1.18	115.52	94.14	0.00	0.00	Vehicle	Vehicle	731.49	-----	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	-----	-----	**10.41**	**10.41**	-----	-----
		L$_5$ - L$_6$	477.93	108.30	154.10			0.75	1.18	136.73	96.09	0.00	0.00	Vehicle	Vehicle	799.06	-----	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	-----	-----	**9.62**	**9.62**	-----	-----
		L$_6$ - L$_7$	482.68	-46.30	154.40			0.75	1.18	136.99	-41.08	0.00	0.00	Vehicle	Vehicle	805.57	-----	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	-----	-----	**9.74**	**9.74**	-----	-----
		L$_7$ - L$_8$	336.61	-56.60	123.00			0.75	1.18	109.13	-50.22	0.00	0.00	Vehicle	Vehicle	579.47	-----	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	-----	-----	**9.21**	**9.21**	-----	-----
		L$_8$ - L$_9$	196.05	-59.40	102.40			0.75	1.18	90.85	-52.70	0.00	0.00	Vehicle	Vehicle	372.97	-----	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	-----	-----	**9.95**	**9.95**	-----	-----
		L$_9$ - L$_{10}$	45.60	-61.60	72.60			0.75	1.18	64.41	-54.65	0.00	0.00	Vehicle	Vehicle	143.01	-11.78	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	**12.67**	**12.67**	**14.15**	**14.15**
		L$_{10}$ - L$_{11}$	-126.26	-63.50	48.50			0.75	1.18	43.03	-56.34	0.00	0.00	Vehicle	Vehicle	-----	-237.38	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**9.31**	**9.31**
		L$_{11}$ - L$_{12}$	-284.87	-63.30	20.10			0.75	1.18	17.83	-56.16	0.00	0.00	Vehicle	Vehicle	-----	-443.34	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	-----	-----	**11.50**	**11.50**
		L$_{12}$ - L$_{13}$	-433.79	-58.70	0.30			0.75	1.18	0.27	-52.08	0.00	0.00	Vehicle	Vehicle	-----	-631.63	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	-----	-----	**16.16**	**16.16**
		L$_{13}$ - L$_{14}$	-552.65	-22.30	-17.90			0.75	1.18	-15.88	-19.79	0.00	0.00	Vehicle	Vehicle	-----	-744.16	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	-----	-----	**48.65**	**48.65**
		L$_{14}$ - L$_{15}$	-573.48	-40.20	18.10			0.75	1.17	15.87	-35.25	0.00	0.00	Vehicle	Vehicle	-----	-791.34	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	-----	-----	**26.72**	**26.72**
		L$_{15}$ - L$_{16}$	-492.94	-52.50	2.50			0.75	1.17	2.19	-46.03	0.00	0.00	Vehicle	Vehicle	-----	-700.66	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	-----	-----	**17.00**	**17.00**
		L$_{16}$ - L$_{17}$	-395.30	-4.50	21.80			0.75	1.17	19.11	-3.95	0.00	0.00	Vehicle	Vehicle	-----	-519.02	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	-----	-----	**165.29**	**165.29**
		L$_{17}$ - L$_{18}$	-288.04	8.70	43.50			0.75	1.17	38.14	7.63	0.00	0.00	Vehicle	Vehicle	-----	-364.54	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	-----	-----
		L$_{18}$ - L$_{19}$	-175.85	26.80	58.10			0.75	1.17	50.94	23.50	0.00	0.00	Vehicle	Vehicle	-----	-198.05	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	56.20	70.20			0.75	1.17	61.55	49.27	0.00	0.00	Vehicle	Vehicle	-----	-37.44	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	-----	-----	-----	-----
		L$_{20}$ - L$_{21}$	7.55	56.60	93.80			0.75	1.17	82.24	49.62	0.00	0.00	Vehicle	Vehicle	116.73	-----	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	-----	-----	6.40	-----	-----	6.40	-----	-----	**11.64**	**11.64**	-----	-----
		L$_{21}$ - L$_{22}$	59.07	74.10	117.10			0.75	1.17	102.67	64.97	0.00	0.00	Vehicle	Vehicle	210.25	-----	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	-----	-----	**8.82**	**8.82**	-----	-----
		L$_{22}$ - L$_{23}$	71.98	-17.80	108.60			0.75	1.17	95.22	-15.61	0.00	0.00	Vehicle	Vehicle	217.36	-----	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	-----	-----	**9.37**	**9.37**	-----	-----
		L$_{23}$ - L$_{24}$	33.55	-39.30	97.30			0.75	1.17	85.31	-34.46	0.00	0.00	Vehicle	Vehicle	154.51	-1.18	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	**10.91**	**10.91**	**24.61**	**24.61**
		L$_{24}$ - L$_{25}$	-45.09	-44.60	73.80			0.75	1.17	64.70	-39.10	0.00	0.00	Vehicle	Vehicle	25.50	-109.44	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**11.19**	**11.19**	**13.52**	**13.52**
		L$_{25}$ - L$_{26}$	-134.94	-48.90	53.20			0.75	1.17	46.64	-42.87	0.00	0.00	Vehicle	Vehicle	-----	-231.15	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	-----	-----	**10.23**	**10.23**
		L$_{26}$ - L$_{27}$	-245.90	-50.10	32.00			0.75	1.17	28.06	-43.93	0.00	0.00	Vehicle	Vehicle	-----	-376.77	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	-----	-----	**10.97**	**10.97**
		L$_{27}$ - L$_{28}$	-351.78	-51.80	7.20			0.75	1.17	6.31	-45.42	0.00	0.00	Vehicle	Vehicle	-----	-516.35	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	-----	-----	**15.32**	**15.32**
		L$_{28}$ - L$_{29}$	-458.29	-51.20	-5.50			0.75	1.17	-4.82	-44.89	0.00	0.00	Vehicle	Vehicle	-----	-654.14	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	-----	-----	**18.20**	**18.20**
		L$_{29}$ - L$_{30}$	-542.18	-21.40	-21.20			0.75	1.17	-18.59	-18.76	0.00	0.00	Vehicle	Vehicle	-----	-729.22	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**51.86**	**51.86**
		L$_{30}$ - L$_{31}$	-514.03	-39.10	-36.60			0.75	1.18	-32.47	-34.69	0.00	0.00	Vehicle	Vehicle	-----	-713.34	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	-----	-----	**28.85**	**28.85**
		L$_{31}$ - L$_{32}$	-411.21	-45.60	-0.50			0.75	1.18	-0.44	-40.46	0.00	0.00	Vehicle	Vehicle	-----	-587.17	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	-----	-----	**21.35**	**21.

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: 3F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

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

E = 29000.0 ksi

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Verticals	Structure 1	U_0 - L_0	-67.60	9.39	-114.86			0.75	1.24	8.71	-106.56	0.00	0.00	Vehicle	Vehicle	-----	-226.40	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	2.60	2.60
		U_1 - L_1	-24.06	9.07	-48.79			0.75	1.24	8.41	-45.26	0.00	0.00	Vehicle	Vehicle	-----	-90.12	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	-----	-----	-----	-----	-----	7.25	7.25
		U_2 - L_2	12.88	-4.80	-31.66			0.75	1.24	-4.45	-29.38	0.00	0.00	Vehicle	Vehicle	10.95	-21.45	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	12.42	12.42
		U_3 - L_3	37.35	18.47	-24.45			0.75	1.24	17.14	-22.68	0.00	0.00	Vehicle	Vehicle	70.83	-----	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	-----	-----	-----	-----	-----	22.78	22.78	-----	-----
		U_4 - L_4	-15.53	-15.21	-4.28			0.75	1.24	-3.97	-14.11	0.00	0.00	Vehicle	Vehicle	-----	-38.54	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	-----	-----	-----	-----	-----	23.69	23.69
		U_5 - L_5	-92.52	-63.78	16.42			0.75	1.24	15.24	-59.17	0.00	0.00	Vehicle	Vehicle	-----	-197.19	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	-----	-----	-----	-----	-----	5.62	5.62
		U_6 - L_6	-117.01	-74.33	3.89			0.75	1.24	3.61	-68.96	0.00	0.00	Vehicle	Vehicle	-----	-241.76	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	5.67	5.67
		U_7 - L_7	-127.49	-79.89	0.24			0.75	1.24	0.22	-74.12	0.00	0.00	Vehicle	Vehicle	-----	-262.09	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	-----	-----	-----	-----	-----	4.49	4.49
		U_8 - L_8	-368.60	-96.95	-98.02			0.75	1.24	-89.94	-90.94	0.00	0.00	Vehicle	Vehicle	-----	-597.40	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	-----	-----	-----	-----	-----	7.66	7.66
		U_9 - L_9	-214.45	4.52	-81.58			0.75	1.20	4.06	-73.30	0.00	0.00	Vehicle	Vehicle	-----	-374.08	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	-----	-----	-----	-----	-----	5.88	5.88
		U_{10} - L_{10}	-198.57	-12.33	-71.29			0.75	1.20	-11.08	-64.05	0.00	0.00	Vehicle	Vehicle	-----	-341.41	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	-----	-----	-----	-----	-----	8.49	8.49
		U_{11} - L_{11}	-171.30	1.40	-62.26			0.75	1.20	1.25	-55.94	0.00	0.00	Vehicle	Vehicle	-----	-295.41	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	-----	-----	-----	-----	-----	8.40	8.40
		U_{12} - L_{12}	-128.27	3.50	-54.70			0.75	1.20	3.14	-49.15	0.00	0.00	Vehicle	Vehicle	-----	-230.65	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	8.22	8.22
		U_{13} - L_{13}	-96.55	13.33	-51.15			0.75	1.20	11.98	-45.96	0.00	0.00	Vehicle	Vehicle	-----	-185.26	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	-----	-----	-----	-----	-----	6.18	6.18
		U_{14} - L_{14}	-11.04	-1.82	5.57			0.75	1.20	5.00	-1.63	0.00	0.00	Vehicle	Vehicle	-----	-16.48	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	-----	-----	-----	-----	-----	204.63	204.63
		U_{15} - L_{15}	-2.54	-44.33	33.23			0.75	1.20	29.85	-39.83	0.00	0.00	Vehicle	Vehicle	35.51	-55.09	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	-----	-----	-----	-----	-----	14.41	14.41	8.55	8.55
		U_{16} - L_{16}	-31.31	-50.29	19.29			0.75	1.20	17.33	-45.19	0.00	0.00	Vehicle	Vehicle	-----	-99.45	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	-----	-----	-----	-----	-----	6.86	6.86
		U_{17} - L_{17}	-105.02	-69.37	13.57			0.75	1.20	12.19	-62.33	0.00	0.00	Vehicle	Vehicle	-----	-217.54	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	-----	-----	-----	-----	-----	4.91	4.91
		U_{18} - L_{18}	-126.66	-76.75	2.35			0.75	1.20	2.11	-68.96	0.00	0.00	Vehicle	Vehicle	-----	-254.30	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	5.78	5.78
		U_{19} - L_{19}	-166.54	-78.93	-11.89			0.75	1.20	-10.68	-70.92	0.00	0.00	Vehicle	Vehicle	-----	-308.69	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.34	6.34
		U_{20} - L_{20}	-184.30	-92.55	-5.11			0.75	1.20	-4.59	-83.15	0.00	0.00	Vehicle	Vehicle	-----	-347.69	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	-----	-----	-----	-----	-----	4.78	4.78
	Structure 2	U_0 - L_0	-203.39	10.10	-78.34			0.75	1.18	8.96	-69.51	0.00	0.00	Vehicle	Vehicle	-----	-354.77	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	-----	-----	-----	-----	-----	6.32	6.32
		U_1 - L_1	-176.11	11.03	-76.80			0.75	1.18	9.79	-68.14	0.00	0.00	Vehicle	Vehicle	-----	-317.52	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	-----	-----	-----	-----	-----	7.28	7.28
		U_2 - L_2	-137.45	10.45	-67.14			0.75	1.18	9.27	-59.57	0.00	0.00	Vehicle	Vehicle	-----	-256.13	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	-----	-----	-----	-----	-----	7.33	7.33
		U_3 - L_3	-117.61	10.86	-59.84			0.75	1.18	9.63	-53.09	0.00	0.00	Vehicle	Vehicle	-----	-221.91	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	-----	-----	-----	-----	-----	6.30	6.30
		U_4 - L_4	-50.97	24.25	-47.96			0.75	1.18	21.52	-42.56	0.00	0.00	Vehicle	Vehicle	-----	-121.58	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	-----	-----	-----	-----	-----	6.77	6.77
		U_5 - L_5	-13.79	30.16	-44.35			0.75	1.18	26.76	-39.35	0.00	0.00	Vehicle	Vehicle	16.87	-69.08	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	-----	-----	-----	-----	-----	16.50	16.50	8.30	8.30
		U_6 - L_6	45.46	36.50	-31.61			0.75	1.18	32.39	-28.04	0.00	0.00	Vehicle	Vehicle	101.20	-----	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	11.80	11.80	-----	-----
		U_7 - L_7	-22.33	-19.09	-0.75			0.75	1.18	-0.66	-16.94	0.00	0.00	Vehicle	Vehicle	-----	-51.05	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	-----	-----	-----	-----	-----	18.79	18.79
		U_8 - L_8	-120.06	-55.91	25.86			0.75	1.18	22.94	-49.60	0.00	0.00	Vehicle	Vehicle	-----	-220.56	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	8.28	8.28
		U_9 - L_9	-177.00	-70.40	17.94			0.75	1.18	15.92	-62.46	0.00	0.00	Vehicle	Vehicle	-----	-311.30	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	8.23	8.23
		U_{10} - L_{10}	-205.85	-72.06	12.97			0.75	1.18	11.51	-63.93	0.00	0.00	Vehicle	Vehicle	-----	-350.72	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	-----	-----	-----	-----	-----	8.96	8.96
		U_{11} - L_{11}	-239.21	-78.50	9.12			0.75	1.18	8.09	-69.65	0.00	0.00	Vehicle	Vehicle	-----	-401.52	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	-----	-----	-----	-----	-----	7.55	7.55
		U_{12} - L_{12}	-257.92	-86.06	0.93			0.75	1.18	0.82	-76.36	0.00	0.00	Vehicle	Vehicle	-----	-434.57	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	-----	-----	-----	-----	-----	7.12	7.12
		U_{13} - L_{13}	-243.80	-89.59	5.26			0.75	1.18	4.67	-79.48	0.00	0.00	Vehicle	Vehicle	-----	-420.27	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	5.62	5.62
		U_{14} - L_{14}	-420.84	-95.70	-80.60			0.75	1.18	-71.51	-84.91	0.00	0.00	Vehicle	Vehicle	-----	-657.48	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	-----	-----	-----	-----	-----	7.43	7.43
		U_{15} - L_{15}	-158.85	8.57	-74.70			0.75	1.17	7.52	-65.49	0.00	0.00	Vehicle	Vehicle	-----	-291.64	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	-----	-----	-----	-----	-----	8.11	8.11
		U_{16} - L_{16}	-174.03	6.70	-77.62			0.75	1.17	5.87	-68.06	0.00	0.00	Vehicle	Vehicle	-----	-314.71	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	-----	-----	-----	-----	-----	7.23	7.23
		U_{17} - L_{17}	-156.46	9.55	-70.78			0.75	1.17	8.37	-62.05	0.00	0.00	Vehicle	Vehicle	-----	-284.07	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	-----	-----	-----	-----	-----	7.52	7.52
		U_{18} - L_{18}	-142.20	9.53	-63.11			0.75	1.17	8.35	-55.33	0.00	0.00	Vehicle	Vehicle	-----	-256.80	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.86	7.86
		U_{19} - L_{19}	-113.66	19.16	-57.63			0.75	1.17	16.80	-50.53	0.00	0.00	Vehicle	Vehicle	-----	-213.44	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	-----	-----	-----	-----	-----	7.87	7.87
		U_{20} - L_{20}	-76.52	24.44	-52.97			0.75	1.17	21.42	-46.44	0.00	0.00	Vehicle	Vehicle	-----	-159.84	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	-----	-----	-----	-----	-----	6.43	6.43
		U_{21} - L_{21}	-45.78	24.06	-42.00			0.75	1.17	21.10	-36.82	0.00	0.00	Vehicle	Vehicle	-----	-107.38	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	-----	-----	-----	-----	-----	8.00	8.00
		U_{22} - L_{22}	-17.71	-15.40	2.10			0.75	1.17	1.84	-13.50	0.00	0.00	Vehicle	Vehicle	-----	-40.58	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	-----	-----	-----	-----	-----	24.01	24.01
		U_{23} - L_{23}	-30.66	-45.27	30.06			0.75	1.17	26.36	-39.69	0.00	0.00	Vehicle	Vehicle	-----	-91.46	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	-----	-----	-----	-----	-----	7.81	7.81
		U_{24} - L_{24}	-62.03	-57.63	25.60			0.75	1.17	22.45	-50.53	0.00	0.00	Vehicle	Vehicle	-----	-146.32	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	-----	-----	-----	-----	-----	6.20	6.20
		U_{25} - L_{25}	-103.10	-67.60	17.38			0.75	1.17	15.24	-59.27	0.00	0.00	Vehicle	Vehicle	-----	-211.07	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	-----	-----	-----	-----	-----	6.89	6.89
		U_{26} - L_{26}	-134.31	-69.53	15.06			0.75	1.17	13.20	-60.96	0.00	0.00	Vehicle	Vehicle	-----	-253.84	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.27	7.27
		U_{27} - L_{27}	-155.93	-79.69	7.27			0.75	1.17	6.37	-69.87	0.00	0.00	Vehicle	Vehicle	-----	-293.54	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	-----	-----	-----	-----	-----	6.69	6.69
		U_{28} - L_{28}	-179.28	-85.97	3.74			0.75	1.17	3.28	-75.37	0.00	0.00	Vehicle	Vehicle	-----	-331.05	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	6.46	6.46
		U_{29} - L_{29}	-171.45	-83.03	4.08			0.75	1.17	3.57	-72.80	0.00	0.00	Vehicle	Vehicle	-----	-317.51	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.12	7.12
		U_{30} - L_{30}	-392.76	-88.04	-87.04			0.75	1.18	-77.23	-78.11	0.00	0.00	Vehicle	Vehicle	-----	-612.13	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	-----	-----	-----	-----	-----	8.44	8.44
		U_{31} - L_{31}	-203.21	8.55	-81.45			0.75	1.18	7.59	-72.26	0.00	0.00	Vehicle	Vehicle	-----	-358.12	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	6.74	6.74
		U_{32} - L_{32}	-222.46	2.44	-78.46			0.75	1.18	2.17	-69.61	0.00	0.00	Vehicle	Vehicle	-----	-379.68	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

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: 3F1 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

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	-13.70	36.31			0.75	1.24	33.69	-12.71	0.00	0.00	Vehicle	Vehicle	113.02	-----	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	-----	-----	-----	-----	-----	**15.82**	**15.82**	-----	-----
		U_1 - L_2	10.78	-13.03	52.35			0.75	1.24	48.57	-12.08	0.00	0.00	Vehicle	Vehicle	77.15	-1.70	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	-----	-----	-----	**8.58**	**8.58**	**28.64**	**28.64**
		U_2 - L_3	-44.02	-11.66	8.67			0.75	1.24	8.04	-10.82	0.00	0.00	Vehicle	Vehicle	-----	-71.29	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	-----	-----	-----	-----	-----	**26.83**	**26.83**
		U_3 - L_4	-76.72	-33.65	-36.21			0.75	1.24	-31.22	-33.59	0.00	0.00	Vehicle	Vehicle	-----	-143.40	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**7.73**	**7.73**
		U_4 - L_4	118.39	-21.31	51.11			0.75	1.24	47.42	-19.77	0.00	0.00	Vehicle	Vehicle	215.55	-----	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	-----	-----	-----	-----	-----	**8.57**	**8.57**	-----	-----
		U_5 - L_5	137.53	-8.61	65.26			0.75	1.24	60.54	-7.99	0.00	0.00	Vehicle	Vehicle	257.49	-----	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	-----	-----	-----	-----	-----	**8.48**	**8.48**	-----	-----
		U_6 - L_6	157.34	2.13	80.55			0.75	1.24	74.73	1.97	0.00	0.00	Vehicle	Vehicle	301.69	-----	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	-----	-----	-----	-----	-----	**6.60**	**6.60**	-----	-----
		U_7 - L_7	149.30	3.89	88.85			0.75	1.24	82.43	3.61	0.00	0.00	Vehicle	Vehicle	301.25	-----	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	-----	-----	-----	-----	-----	**6.08**	**6.08**	-----	-----
		U_8 - L_8	249.09	1.82	107.50			0.75	1.20	96.59	1.63	0.00	0.00	Vehicle	Vehicle	449.38	-----	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	-----	-----	-----	-----	-----	**7.38**	**7.38**	-----	-----
		U_9 - L_{10}	260.26	-3.31	94.15			0.75	1.20	84.59	-2.97	0.00	0.00	Vehicle	Vehicle	448.30	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**8.30**	**8.30**	-----	-----
		U_{10} - L_{11}	236.30	6.02	73.20			0.75	1.20	65.77	5.41	0.00	0.00	Vehicle	Vehicle	392.70	-----	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	-----	-----	-----	-----	-----	**10.25**	**10.25**	-----	-----
		U_{11} - L_{12}	211.92	4.51	90.15			0.75	1.20	81.00	4.05	0.00	0.00	Vehicle	Vehicle	380.80	-----	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	-----	-----	-----	-----	-----	**6.98**	**6.98**	-----	-----
		U_{12} - L_{13}	151.66	-20.89	82.16			0.75	1.20	73.82	-18.77	0.00	0.00	Vehicle	Vehicle	293.12	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**6.49**	**6.49**	-----	-----
		U_{13} - L_{14}	108.60	-28.31	57.86			0.75	1.20	51.98	-25.43	0.00	0.00	Vehicle	Vehicle	208.76	-----	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	-----	-----	-----	-----	-----	**6.14**	**6.14**	-----	-----
		U_{14} - L_{14}	-24.45	-47.85	32.16			0.75	1.20	28.90	-42.99	0.00	0.00	Vehicle	Vehicle	5.78	-87.67	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**15.65**	**15.65**	**7.07**	**7.07**
		U_{15} - L_{15}	23.99	-36.52	52.07			0.75	1.20	46.79	-32.82	0.00	0.00	Vehicle	Vehicle	92.01	-11.47	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	-----	-----	-----	**8.63**	**8.63**	**10.62**	**10.62**
		U_{17} - L_{16}	120.03	-17.21	66.08			0.75	1.20	59.37	-15.46	0.00	0.00	Vehicle	Vehicle	233.23	-----	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	-----	-----	-----	-----	-----	**6.81**	**6.81**	-----	-----
		U_{18} - L_{17}	144.79	-6.32	62.53			0.75	1.20	56.19	-5.68	0.00	0.00	Vehicle	Vehicle	261.28	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**9.00**	**9.00**	-----	-----
		U_{19} - L_{18}	193.05	1.62	74.03			0.75	1.20	66.52	1.45	0.00	0.00	Vehicle	Vehicle	337.44	-----	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	-----	-----	-----	-----	-----	**7.77**	**7.77**	-----	-----
		U_{20} - L_{19}	193.51	4.25	61.52			0.75	1.20	55.27	3.82	0.00	0.00	Vehicle	Vehicle	323.42	-----	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	-----	-----	-----	-----	-----	**9.35**	**9.35**	-----	-----
		U_0 - L_1	202.41	-11.37	40.26			0.75	1.18	35.72	-10.09	0.00	0.00	Vehicle	Vehicle	309.58	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**16.10**	**16.10**	-----	-----
		U_1 - L_2	190.86	-12.88	79.98			0.75	1.18	70.96	-11.43	0.00	0.00	Vehicle	Vehicle	340.37	-----	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	-----	-----	-----	-----	-----	**8.27**	**8.27**	-----	-----
		U_2 - L_3	155.85	-12.54	82.45			0.75	1.18	73.16	-11.12	0.00	0.00	Vehicle	Vehicle	297.70	-----	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	-----	-----	-----	-----	-----	**6.76**	**6.76**	-----	-----
		U_3 - L_4	134.05	-13.60	76.67			0.75	1.18	68.02	-12.06	0.00	0.00	Vehicle	Vehicle	262.70	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**6.51**	**6.51**	-----	-----
		U_4 - L_5	46.02	-35.22	62.89			0.75	1.18	55.80	-31.25	0.00	0.00	Vehicle	Vehicle	132.36	-----	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	-----	-----	-----	-----	-----	**6.84**	**6.84**	-----	-----
		U_5 - L_6	3.45	-44.04	54.92			0.75	1.18	48.73	-39.07	0.00	0.00	Vehicle	Vehicle	67.83	-46.31	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	-----	-----	-----	**8.71**	**8.71**	**8.43**	**8.43**
		U_6 - L_7	-84.29	-52.18	41.77			0.75	1.18	37.06	-46.30	0.00	0.00	Vehicle	Vehicle	-----	-169.76	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	-----	-----	-----	-----	-----	**5.94**	**5.94**
		U_7 - L_7	137.30	-28.65	50.52			0.75	1.18	44.82	-25.42	0.00	0.00	Vehicle	Vehicle	236.75	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**10.40**	**10.40**	-----	-----
		U_8 - L_8	210.89	-24.12	51.66			0.75	1.18	45.84	-21.40	0.00	0.00	Vehicle	Vehicle	333.74	-----	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	-----	-----	-----	-----	-----	**10.89**	**10.89**	-----	-----
		U_{10} - L_9	236.36	-16.21	61.60			0.75	1.18	54.66	-14.38	0.00	0.00	Vehicle	Vehicle	378.32	-----	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	-----	-----	-----	-----	-----	**9.90**	**9.90**	-----	-----
		U_{11} - L_{10}	274.62	-11.02	73.36			0.75	1.18	65.09	-9.78	0.00	0.00	Vehicle	Vehicle	441.62	-----	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	-----	-----	-----	-----	-----	**8.75**	**8.75**	-----	-----
		U_{12} - L_{11}	281.06	-5.57	81.87			0.75	1.18	72.64	-4.94	0.00	0.00	Vehicle	Vehicle	459.81	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.76**	**7.76**	-----	-----
		U_{13} - L_{12}	278.12	-5.60	70.53			0.75	1.18	62.58	-4.97	0.00	0.00	Vehicle	Vehicle	442.90	-----	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	-----	-----	-----	-----	-----	**7.98**	**7.98**	-----	-----
		U_{14} - L_{13}	235.45	-6.45	84.26			0.75	1.18	74.76	-5.72	0.00	0.00	Vehicle	Vehicle	403.26	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.25**	**7.25**	-----	-----
		U_{15} - L_{15}	143.03	-4.78	82.07			0.75	1.17	71.95	-4.19	0.00	0.00	Vehicle	Vehicle	279.47	-----	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	-----	-----	-----	-----	-----	**7.06**	**7.06**	-----	-----
		U_{16} - L_{16}	171.91	-8.44	85.69			0.75	1.17	75.13	-7.40	0.00	0.00	Vehicle	Vehicle	321.15	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.37**	**6.37**	-----	-----
		U_{17} - L_{17}	181.04	-8.14	80.97			0.75	1.17	70.99	-7.14	0.00	0.00	Vehicle	Vehicle	327.64	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.45**	**7.45**	-----	-----
		U_{18} - L_{18}	171.16	-9.58	72.69			0.75	1.17	63.73	-8.40	0.00	0.00	Vehicle	Vehicle	305.35	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.52**	**7.52**	-----	-----
		U_{19} - L_{19}	150.64	-11.82	84.17			0.75	1.17	73.80	-10.36	0.00	0.00	Vehicle	Vehicle	291.77	-----	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	-----	-----	-----	-----	-----	**6.78**	**6.78**	-----	-----
		U_{20} - L_{20}	125.86	-21.06	74.23			0.75	1.17	65.08	-18.46	0.00	0.00	Vehicle	Vehicle	248.23	-----	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	-----	-----	-----	-----	-----	**7.34**	**7.34**	-----	-----
		U_{21} - L_{21}	76.05	-23.81	67.51			0.75	1.17	59.19	-20.87	0.00	0.00	Vehicle	Vehicle	175.81	-----	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	-----	-----	-----	-----	-----	**5.94**	**5.94**	-----	-----
		U_{22} - L_{22}	38.34	-38.43	55.72			0.75	1.17	48.85	-33.69	0.00	0.00	Vehicle	Vehicle	113.36	-----	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**7.97**	**7.97**	-----	-----
		U_{23} - L_{23}	18.02	-38.27	35.06			0.75	1.17	30.74	-33.55	0.00	0.00	Vehicle	Vehicle	63.39	-20.19	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	-----	-----	-----	**13.33**	**13.33**	**10.16**	**10.16**
		U_{24} - L_{24}	58.54	-30.27	61.11			0.75	1.17	53.58	-26.53	0.00	0.00	Vehicle	Vehicle	145.76	-----	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	-----	-----	-----	-----	-----	**6.89**	**6.89**	-----	-----
		U_{25} - L_{24}	114.92	-24.76	57.60			0.75	1.17	50.50	-21.71	0.00	0.00	Vehicle	Vehicle	215.04	-----	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	-----	-----	-----	-----	-----	**9.67**	**9.67**	-----	-----
		U_{26} - L_{25}	142.93	-14.70	67.99			0.75	1.17	59.61	-12.89	0.00	0.00	Vehicle	Vehicle	263.31	-----	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	-----	-----	-----	-----	-----	**8.52**	**8.52**	-----	-----
		U_{27} - L_{26}	173.71	-11.78	60.17			0.75	1.17	52.75	-10.32	0.00	0.00	Vehicle	Vehicle	294.40	-----	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	-----	-----	-----	-----	-----	**9.04**	**9.04**	-----	-----
		U_{28} - L_{27}	186.49	-4.19	68.64			0.75	1.17	60.18	-3.68	0.00	0.00	Vehicle	Vehicle	320.66	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**8.70**	**8.70**	-----	-----
		U_{29} - L_{28}	190.57	-4.94	74.78			0.75	1.17	65.57	-4.33	0.00	0.00	Vehicle	Vehicle	332.98	-----	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	-----	-----	-----	-----	-----	**7.02**	**7.02**	-----	-----
		U_{30} - L_{29}	161.74	-6.42	75.55			0.75	1.17	66.24	-5.63	0.00	0.00	Vehicle	Vehicle	296.37	-----	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	-----	-----	-----	-----	-----	**7.38**	**7.38**	-----	-----
		U_{31} - L_{31}	191.49	-5.93	85.84			0.75	1.18	76.16	-5.26	0.00	0.00	Vehicle	Vehicle	347.95	-----	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	-----	-----	-----	-----	-----	**7.69**	**7.69**	-----	-----
		U_{32} - L_{32}	226.17	-9.36	81.66			0.75	1.18	72.45	-8.30	0.00	0.00	Vehicle	Vehicle	388.21	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.61**	**7.61**	-----	-----
		U_{33} - L_{33}	243.26	-2.15	91.02			0.75	1.18	80.76	-1.90	0.00	0.00	Vehicle	Vehicle	421.22	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.44**	**7.44**	-----	-----
		U_{34} - L_{34}	238.98	-1.86	89.53			0.75	1.18	79.44	-1.65	0.00	0.00	Vehicle	Vehicle	413.94	-----	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	-----	-----	-----	-----	-----	**7.62**	**7.62**	-----	-----
		U_{35} - L_{35}	222.10	-12.35	78.73			0.75	1.18	69.85	-10.96	0.00	0.00	Vehicle	Vehicle	379.54	-----	0.00	30.63	30.6305	1010.81	131.71	13.7604	2.8427	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: 3F1 **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 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$_1$	-66.77	-34.05	-24.68	-8.83	2.20	0.90	1.24	-27.47	-37.90	2.20	-8.83	Vehicle	Vehicle	-----	-136.07	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	13.15	13.15
		U$_1$ - U$_2$	-86.66	-4.27	-63.53	6.00	-16.34	0.90	1.24	-4.75	-70.72	6.00	-16.34	Vehicle	Vehicle	-----	-204.60	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	6.77	6.77
		U$_2$ - U$_3$	-48.28	30.44	-67.11	9.44	-19.05	0.90	1.24	33.88	-74.72	9.44	-19.05	Vehicle	Vehicle	-----	-159.89	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	6.92	6.92
		U$_3$ - U$_4$	36.43	39.59	-56.93	12.72	-17.47	0.90	1.24	44.08	-63.38	12.72	-17.47	Vehicle	Vehicle	104.66	-35.04	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	14.40	14.40	9.49	9.49
		U$_4$ - U$_5$	38.78	39.12	-59.25	12.78	-17.37	0.90	1.24	43.55	-65.96	12.78	-17.37	Vehicle	Vehicle	107.04	-35.33	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	14.52	14.52	9.16	9.16
		U$_5$ - U$_6$	154.43	44.72	-35.63	15.13	-12.03	0.90	1.24	49.78	-39.66	15.13	-12.03	Vehicle	Vehicle	265.47	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	10.38	10.38	-----	-----
		U$_6$ - U$_7$	288.19	48.70	-19.67	17.11	-4.31	0.90	1.24	54.22	-21.90	17.11	-4.31	Vehicle	Vehicle	445.14	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	9.52	9.52	-----	-----
		U$_7$ - U$_8$	410.75	6.54	-4.39	18.24	4.35	0.90	1.24	7.28	-4.88	18.24	4.35	Pedestrian	Vehicle	567.14	-----	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	-----	-----	27.41	27.41	-----	-----
		U$_8$ - U$_9$	311.35	9.65	-2.57	19.05	0.00	0.90	1.20	10.40	-2.77	19.05	0.00	Pedestrian	Vehicle	443.03	-----	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	-----	-----	21.31	21.31	-----	-----
		U$_9$ - U$_{10}$	78.25	-9.53	-27.22	5.45	0.00	0.90	1.20	-10.28	-29.34	5.45	0.00	Vehicle	Vehicle	88.36	-----	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	36.32	-46.99	-7.34	0.00	0.90	1.20	39.15	-50.66	0.00	-7.34	Vehicle	Vehicle	-----	-250.13	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	-----	-----	8.99	8.99
		U$_{11}$ - U$_{12}$	-338.40	33.43	-81.07	9.77	-27.96	0.90	1.20	36.04	-87.41	9.77	-27.96	Vehicle	Vehicle	-----	-553.55	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	-----	-----	5.43	5.43
		U$_{12}$ - U$_{13}$	-480.50	29.25	-96.39	8.23	-34.35	0.90	1.20	31.53	-103.92	8.23	-34.35	Vehicle	Vehicle	-----	-759.74	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	-----	-----	6.32	6.32
		U$_{13}$ - U$_{14}$	-571.10	24.82	-103.00	6.68	-37.24	0.90	1.20	26.76	-111.06	6.68	-37.24	Vehicle	Pedestrian	-----	-935.21	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.10	5.10
		U$_{14}$ - U$_{15}$	-571.52	24.70	-110.40	6.65	-37.25	0.90	1.20	26.63	-119.03	6.65	-37.25	Vehicle	Vehicle	-----	-897.71	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	-----	-----	6.35	6.35
		U$_{15}$ - U$_{16}$	-582.34	19.26	-104.08	4.98	-36.14	0.90	1.20	20.77	-112.22	4.98	-36.14	Vehicle	Vehicle	-----	-902.93	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.64	6.64
		U$_{16}$ - U$_{17}$	-539.92	8.46	-89.51	3.53	-31.87	0.90	1.20	9.12	-96.50	3.53	-31.87	Pedestrian	Vehicle	-----	-827.35	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$_{18}$	-422.72	9.30	-55.69	2.26	-25.07	0.90	1.20	10.03	-60.04	2.26	-25.07	Vehicle	Pedestrian	-----	-660.18	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	-----	-----	6.44	6.44
		U$_{18}$ - U$_{19}$	-286.53	5.25	-32.18	1.28	-16.97	0.90	1.20	5.66	-34.70	1.28	-16.97	Vehicle	Pedestrian	-----	-439.66	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	-----	-----	7.57	7.57
		U$_{19}$ - U$_{20}$	-140.97	1.42	-19.78	0.55	-8.68	0.90	1.20	1.53	-21.32	0.55	-8.68	Pedestrian	Pedestrian	-----	-222.27	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	-----	-----	17.88	17.88
	Structure 2	U$_0$ - U$_1$	-147.48	-18.99	-18.45	-4.88	0.36	0.90	1.18	-19.64	-20.21	0.36	-4.88	Vehicle	Vehicle	-----	-218.01	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	-----	-----	24.73	24.73
		U$_1$ - U$_2$	-319.09	-4.11	-43.31	1.96	-13.36	0.90	1.18	-4.37	-46.11	1.96	-13.36	Vehicle	Vehicle	-----	-474.76	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	10.24	10.24
		U$_2$ - U$_3$	-460.93	-71.00	-64.56	-20.95	3.77	0.90	1.18	-68.73	-75.59	3.77	-20.95	Vehicle	Vehicle	-----	-697.47	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	-----	-----	8.16	8.16
		U$_3$ - U$_4$	-580.02	25.32	-99.34	5.92	-27.68	0.90	1.18	26.96	-105.76	5.92	-27.68	Vehicle	Vehicle	-----	-891.52	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	-----	-----	7.20	7.20
		U$_4$ - U$_5$	-616.47	32.81	-108.98	7.86	-31.35	0.90	1.18	34.93	-116.03	7.86	-31.35	Vehicle	Vehicle	-----	-952.26	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	-----	-----	7.50	7.50
		U$_5$ - U$_6$	-604.69	40.34	-110.08	9.87	-32.88	0.90	1.18	42.95	-117.20	9.87	-32.88	Vehicle	Vehicle	-----	-938.46	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	-----	-----	7.53	7.53
		U$_6$ - U$_7$	-514.75	46.62	-105.35	11.56	-31.23	0.90	1.18	49.64	-112.17	11.56	-31.23	Vehicle	Vehicle	-----	-815.00	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	-----	-----	7.37	7.37
		U$_7$ - U$_8$	-512.80	46.67	-106.06	11.57	-31.18	0.90	1.18	49.68	-112.92	11.57	-31.18	Vehicle	Vehicle	-----	-813.43	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	-----	-----	7.34	7.34
		U$_8$ - U$_9$	-373.48	50.99	-92.15	13.16	-27.41	0.90	1.18	54.29	-98.11	13.16	-27.41	Vehicle	Vehicle	-----	-613.07	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	-----	-----	7.67	7.67
		U$_9$ - U$_{10}$	-181.02	54.31	-66.38	14.25	-21.42	0.90	1.18	57.83	-70.67	14.25	-21.42	Vehicle	Vehicle	-----	-327.19	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	-----	-----	9.98	9.98
		U$_{10}$ - U$_{11}$	26.21	55.65	-47.32	15.21	-14.40	0.90	1.18	59.25	-50.38	15.21	-14.40	Vehicle	Vehicle	111.10	-31.42	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	14.93	14.93	15.79	15.79
		U$_{11}$ - U$_{12}$	237.41	54.84	-27.50	15.56	-6.85	0.90	1.18	58.38	-29.28	15.56	-6.85	Vehicle	Vehicle	384.53	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	11.53	11.53	-----	-----
		U$_{12}$ - U$_{13}$	435.92	52.85	-11.94	15.82	0.56	0.90	1.18	56.27	-12.71	15.82	0.56	Vehicle	Vehicle	639.85	-----	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	-----	-----	12.50	12.50	-----	-----
		U$_{13}$ - U$_{14}$	595.85	3.48	-2.34	15.74	6.92	0.90	1.18	3.70	-2.49	15.74	6.92	Pedestrian	Pedestrian	799.88	-----	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	-----	-----	49.81	49.81	-----	-----
		U$_{14}$ - U$_{15}$	615.52	-2.43	0.49	24.37	0.00	0.90	1.17	0.51	-2.55	24.37	0.00	Pedestrian	Vehicle	832.53	-----	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	-----	-----	38.13	38.13	-----	-----
		U$_{15}$ - U$_{16}$	486.12	23.80	-16.97	14.17	3.09	0.90	1.17	25.04	-17.85	14.17	3.09	Pedestrian	Vehicle	682.94	-----	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	-----	-----	20.05	20.05	-----	-----
		U$_{16}$ - U$_{17}$	339.23	0.98	-31.06	11.57	0.00	0.90	1.17	1.03	-32.68	11.57	0.00	Pedestrian	Vehicle	457.38	-----	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	-----	-----	55.93	55.93	-----	-----
		U$_{17}$ - U$_{18}$	192.06	47.07	-45.30	4.46	0.00	0.90	1.17	49.52	-47.66	4.46	0.00	Vehicle	Vehicle	314.06	-----	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	-----	-----	11.60	11.60	-----	-----
		U$_{18}$ - U$_{19}$	53.73	43.13	-65.26	-2.79	-12.78	0.90	1.17	45.38	-68.66	-2.79	-12.78	Vehicle	Vehicle	128.84	-19.41	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	15.70	15.70	10.21	10.21
		U$_{19}$ - U$_{20}$	-59.08	38.25	-78.12	15.07	-15.68	0.90	1.17	40.24	-82.19	15.07	-15.68	Pedestrian	Vehicle	-----	-183.66	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	-----	-----	7.71	7.71
	Structure 3	U$_0$ - U$_1$	-125.50	31.90	-81.66	14.76	-16.53	0.90	1.17	33.56	-85.92	14.76	-16.53	Pedestrian	Vehicle	-----	-274.84	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	8.28	8.28
		U$_1$ - U$_2$	-146.93	26.35	-88.03	14.37	-22.74	0.90	1.17	27.73	-92.62	14.37	-22.74	Pedestrian	Vehicle	-----	-311.41	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.45	7.45
		U$_2$ - U$_3$	-146.70	24.61	-91.15	14.36	-22.72	0.90	1.17	25.89	-95.90	14.36	-22.72	Pedestrian	Vehicle	-----	-315.39	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.20	7.20
		U$_3$ - U$_4$	-112.76	17.02	-83.54	13.87	-21.04	0.90	1.17	17.91	-87.89	13.87	-21.04	Pedestrian	Vehicle	-----	-260.85	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	8.24	8.24
		U$_4$ - U$_5$	-36.27	36.96	-70.06	13.40	-15.02	0.90	1.17	38.88	-73.71	13.40	-15.02	Pedestrian	Vehicle	20.81	-142.97	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	16.38	16.38	8.91	8.91
		U$_5$ - U$_6$	80.70	40.06	-54.38	12.92	-12.15	0.90	1.17	42.14	-57.22	12.92	-12.15	Vehicle	Vehicle	159.69	-----	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	-----	-----	42.67	-----	-----	10.67	-----	-----	16.27	16.27	-----	-----
		U$_6$ - U$_7$	220.59	42.44	-37.66	12.57	-5.86	0.90	1.17	44.65	-39.62	12.57	-5.86	Vehicle	Vehicle	344.82	-----	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	-----	-----	12.22	12.22	-----	-----
		U$_7$ - U$_8$	363.31	42.60	-21.73	12.37	0.18	0.90	1.17	44.82	-22.86	12.37	0.18	Vehicle	Vehicle	530.57	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	15.19	15.19	-----	-----
		U$_8$ - U$_9$	503.82	5.54	-11.55	12.23	3.11	0.90	1.17	5.83	-12.15	12.23	3.11	Pedestrian	Vehicle	678.45	-----	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	-----	-----	42.55	42.55	-----	-----
		U$_9$ - U$_{10}$	616.57	-1.17	-2.58	0.00	7.42	0.90	1.17	-1.23	-2.72	7.42	0.00	Pedestrian	Vehicle	809.59	-----	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	-----	-----	-----	-----	-----	-----
		U$_{10}$

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: 3F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

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

E = 29000.0 ksi

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Lower Chord	Structure 1	L_0- L_1	-2.01	2.47	0.94	-2.06	0.36	0.90	1.24	2.75	1.05	0.36	-2.06	Vehicle	Vehicle	0.97	-1.25	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	183.21	183.21	-----	-----
		L_1 - L_2	67.91	33.28	34.49	0.00	5.87	0.90	1.24	38.39	37.05	5.87	0.00	Vehicle	Vehicle	138.19	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	11.32	11.32	-----	-----
		L_2 - L_3	78.84	-24.73	72.77	-7.39	15.48	0.90	1.24	81.01	-27.53	15.48	-7.39	Vehicle	Vehicle	207.81	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	7.28	7.28	-----	-----
		L_3 - L_4	39.14	-34.44	74.09	-10.83	18.09	0.90	1.24	82.48	-38.34	18.09	-10.83	Vehicle	Vehicle	158.11	-----	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	7.63	7.63	-----	-----
		L_4 - L_5	-166.38	-49.13	40.91	-16.90	10.96	0.90	1.24	45.55	-54.69	10.96	-16.90	Vehicle	Vehicle	-----	-287.40	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	6.11	6.11
		L_5 - L_6	-301.23	-54.24	19.12	-18.93	3.23	0.90	1.24	21.29	-60.39	3.23	-18.93	Vehicle	Vehicle	-----	-470.10	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	-----	-----	5.93	5.93
		L_6 - L_7	-438.94	-58.44	2.78	-21.52	-4.99	0.90	1.24	3.09	-65.06	-4.99	-21.52	Vehicle	Vehicle	-----	-655.19	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	-----	-----	7.78	7.78
		L_7 - L_8	-551.65	1.34	-14.14	0.00	-35.55	0.90	1.24	1.49	-15.75	0.00	-35.55	Vehicle	Pedestrian	-----	-783.82	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	12.63	12.63
		L_8 - L_9	-570.53	-54.21	7.16	-37.48	0.00	0.90	1.20	7.71	-58.45	0.00	-37.48	Vehicle	Pedestrian	-----	-866.40	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	6.56	6.56
		L_9 - L_{10}	-355.48	-19.89	-3.40	-13.03	-11.67	0.90	1.20	-3.66	-21.45	-11.67	-13.03	Pedestrian	Pedestrian	-----	-506.94	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	17.11	17.11
		L_{10} - L_{11}	-118.48	-32.23	31.62	-12.43	0.00	0.90	1.20	34.09	-34.75	0.00	-12.43	Vehicle	Pedestrian	-----	-215.36	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	-----	-----	8.09	8.09
		L_{11} - L_{12}	103.45	34.47	49.04	0.49	0.00	0.90	1.20	52.88	37.17	0.49	0.00	Vehicle	Vehicle	203.23	-----	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	-----	-----	9.28	9.28	-----	-----
		L_{12} - L_{13}	300.60	-27.72	85.20	-8.14	17.83	0.90	1.20	91.86	-29.89	17.83	-8.14	Vehicle	Vehicle	510.20	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	7.34	7.34	-----	-----
		L_{13} - L_{14}	441.19	78.29	91.06	-6.61	24.15	0.90	1.20	98.18	84.41	24.15	-6.61	Vehicle	Vehicle	701.18	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	8.83	8.83	-----	-----
		L_{14} - L_{15}	547.00	-14.80	99.99	-3.49	24.57	0.90	1.20	107.80	-15.96	24.57	-3.49	Vehicle	Vehicle	851.25	-----	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	-----	-----	9.53	9.53	-----	-----
		L_{15} - L_{16}	506.09	-9.90	84.85	-2.03	20.32	0.90	1.20	91.48	-10.68	20.32	-2.03	Vehicle	Vehicle	776.84	-----	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	-----	-----	11.68	11.68	-----	-----
		L_{16} - L_{17}	398.75	-12.70	65.29	-0.83	12.72	0.90	1.20	70.40	-13.69	12.72	-0.83	Vehicle	Vehicle	609.89	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	11.62	11.62	-----	-----
		L_{17} - L_{18}	263.81	-1.85	30.52	0.15	4.66	0.90	1.20	32.90	-1.99	4.66	0.15	Vehicle	Vehicle	385.72	-----	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	-----	-----	18.83	18.83	-----	-----
		L_{18} - L_{19}	118.75	-8.11	13.95	0.71	-3.38	0.90	1.20	15.04	-8.74	0.71	-3.38	Vehicle	Pedestrian	173.93	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	25.52	25.52	-----	-----
		L_{19} - L_{20}	-23.36	2.84	-4.89	1.28	-12.08	0.90	1.20	3.06	-5.27	1.28	-12.08	Pedestrian	Pedestrian	-----	-52.93	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	-----	-----	23.05	23.05
		L_0- L_1	-36.12	2.66	3.22	-5.14	1.19	0.90	1.18	3.43	2.84	1.19	-5.14	Pedestrian	Vehicle	-----	-43.27	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	45.00	Pass	6.32	12.00	Pass	6.32	12.00	Pass	-----	-----	-----	-----
		L_1 - L_2	132.64	22.10	13.90	2.93	-0.06	0.90	1.18	23.53	14.80	2.93	-0.06	Vehicle	Vehicle	203.02	-----	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	-----	-----	21.28	21.28	-----	-----
		L_2 - L_3	303.94	39.27	46.33	10.52	-1.79	0.90	1.18	49.33	41.81	10.52	-1.79	Vehicle	Vehicle	459.24	-----	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	-----	-----	13.63	13.63	-----	-----
		L_3 - L_4	445.73	67.55	73.00	0.00	13.17	0.90	1.18	77.72	71.92	13.17	0.00	Vehicle	Vehicle	680.49	-----	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	-----	-----	11.11	11.11	-----	-----
		L_4 - L_5	567.64	-22.04	101.37	-6.10	24.81	0.90	1.18	107.93	-23.47	24.81	-6.10	Vehicle	Vehicle	878.24	-----	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	-----	-----	10.03	10.03	-----	-----
		L_5 - L_6	603.43	-34.40	116.11	-8.06	28.47	0.90	1.18	123.62	-36.62	28.47	-8.06	Vehicle	Vehicle	945.17	-----	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	-----	-----	9.62	9.62	-----	-----
		L_6 - L_7	599.28	-43.51	120.39	-10.41	30.25	0.90	1.18	128.18	-46.33	30.25	-10.41	Vehicle	Vehicle	945.70	-----	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	-----	-----	9.50	9.50	-----	-----
		L_7 - L_8	373.73	-54.85	94.23	-13.66	24.92	0.90	1.18	100.33	-58.40	24.92	-13.66	Vehicle	Vehicle	616.27	-----	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	-----	-----	9.65	9.65	-----	-----
		L_8 - L_9	195.51	-58.88	77.11	-15.12	19.51	0.90	1.18	82.10	-62.69	19.51	-15.12	Vehicle	Vehicle	360.89	-----	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	-----	-----	11.01	11.01	-----	-----
		L_9 - L_{10}	-13.41	-60.71	52.91	-16.11	12.45	0.90	1.18	56.33	-64.63	12.45	-16.11	Vehicle	Vehicle	55.79	-101.46	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	15.54	15.54	11.05	11.05
		L_{10} - L_{11}	-217.51	-61.72	29.40	-17.02	5.50	0.90	1.18	31.30	-65.71	5.50	-17.02	Vehicle	Vehicle	-----	-368.18	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	-----	-----	6.59	6.59
		L_{11} - L_{12}	-420.12	-60.64	8.89	-17.31	-2.05	0.90	1.18	9.46	-64.56	-2.05	-17.31	Vehicle	Vehicle	-----	-630.09	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	-----	-----	7.91	7.91
		L_{12} - L_{13}	-591.61	-61.19	0.59	-18.75	-7.10	0.90	1.18	0.63	-65.14	-7.10	-18.75	Pedestrian	Vehicle	-----	-853.78	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	-----	-----	10.50	10.50
		L_{13} - L_{14}	-724.42	1.53	-9.16	0.00	-35.12	0.90	1.18	1.62	-9.75	0.00	-35.12	Vehicle	Pedestrian	-----	-1000.07	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	-----	-----	17.62	17.62
		L_{14} - L_{15}	-747.19	-35.90	11.60	-36.29	0.00	0.90	1.17	12.20	-37.77	0.00	-36.29	Vehicle	Pedestrian	-----	-1067.62	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	10.37	10.37
		L_{15} - L_{16}	-632.29	10.23	0.24	0.00	-31.22	0.90	1.17	10.76	0.25	0.00	-31.22	Vehicle	Pedestrian	-----	-862.23	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	-----	-----	-----	-----
		L_{16} - L_{17}	-488.73	-33.95	16.51	-25.40	0.00	0.90	1.17	17.37	-35.72	0.00	-25.40	Vehicle	Pedestrian	-----	-714.80	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	-----	-----	9.14	9.14
		L_{17} - L_{18}	-337.06	9.91	28.54	-18.13	0.00	0.90	1.17	30.02	10.43	0.00	-18.13	Vehicle	Vehicle	-----	-424.62	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	-----	-----	-----	-----
		L_{18} - L_{19}	-183.64	-39.62	47.68	-11.34	4.48	0.90	1.17	50.16	-41.68	4.48	-11.34	Vehicle	Vehicle	-----	-292.91	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	-----	-----	9.36	9.36
		L_{19} - L_{20}	-45.76	-35.64	58.79	-9.58	8.92	0.90	1.17	61.85	-37.50	8.92	-9.58	Vehicle	Vehicle	20.92	-108.23	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	11.72	11.72	14.08	14.08
	Structure 2	L_{20} - L_{21}	68.06	-31.67	78.61	-9.12	11.57	0.90	1.17	82.70	-33.31	11.57	-9.12	Vehicle	Vehicle	196.00	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	10.84	10.84	-----	-----
		L_{21} - L_{22}	134.01	-25.32	81.92	-8.81	13.61	0.90	1.17	86.18	-26.63	13.61	-8.81	Vehicle	Vehicle	286.25	-----	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	-----	-----	9.64	9.64	-----	-----
		L_{22} - L_{23}	122.68	-11.94	76.89	-7.57	11.79	0.90	1.17	80.89	-12.57	11.79	-7.57	Pedestrian	Vehicle	264.65	-----	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	-----	-----	10.41	10.41	-----	-----
		L_{23} - L_{24}	46.89	-31.08	66.05	-7.09	8.09	0.90	1.17	69.49	-32.70	8.09	-7.09	Vehicle	Vehicle	151.29	-----	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	-----	-----	13.21	13.21	-----	-----
		L_{24} - L_{25}	-66.54	-34.63	49.86	-6.23	2.64	0.90	1.17	52.46	-36.44	2.64	-6.23	Vehicle	Vehicle	-----	-133.87	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	-----	-----	13.92	13.92
		L_{25} - L_{26}	-205.63	-37.09	30.20	-5.87	-3.61	0.90	1.17	31.77	-39.02	-3.61	-5.87	Vehicle	Vehicle	-----	-318.05	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	-----	-----	9.43	9.43
		L_{26} - L_{27}	-350.43	-37.81	11.50	-5.25	-6.72	0.90	1.17	12.10	-39.78	-5.25	-6.72	Vehicle	Vehicle	-----	-507.27	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	9.48	9.48
		L_{27} - L_{28}	-494.65	-37.72	1.42	-5.10	-12.12	0.90	1.17	1.49	-39.68	-5.10	-12.12	Pedestrian	Vehicle	-----	-694.63	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	13.94	13.94
		L_{28} - L_{29}	-620.83	-22.97	-7.35	-31.78	-17.19	0.90	1.17	-7.73	-24.17	-17.19	-31.78	Pedestrian	Pedestrian	-----	-879.81	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	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	11.70	11.70
		L_{29} - L_{30}	-716.91	-9.67	-12.32	0.00	-36.29	0.90	1.17	-10.18	-12.96	0.00	-36.29	Vehicle	Pedestrian	-----	-996.02	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	-----	-----	16.21	16.21
		L_{30} - L_{31}	-850.71	-33.79	27.96	-35.

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 3F1 — 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
South Truss - Verticals	Structure 1	U$_0$ - L$_0$	-93.72	3.41	-51.21	3.44	-12.32	0.90	1.24	3.80	-57.02	3.44	-12.32	Pedestrian	Vehicle	-----	-195.96	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	-----	-----	-----	-----	-----	4.40	4.40
		U$_1$ - L$_1$	-46.53	9.70	-30.56	2.93	-9.05	0.90	1.24	10.80	-34.02	2.93	-9.05	Vehicle	Vehicle	-----	-104.72	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	-----	-----	-----	-----	-----	8.98	8.98
		U$_2$ - L$_2$	-0.10	8.80	-20.52	2.84	-5.68	0.90	1.24	9.80	-22.85	2.84	-5.68	Vehicle	Vehicle	12.61	-29.83	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	43.66	43.66	15.40	15.40
		U$_3$ - L$_3$	39.60	7.25	-9.34	2.69	-2.12	0.90	1.24	8.07	-10.40	2.69	-2.12	Vehicle	Vehicle	61.97	-----	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	-----	-----	-----	-----	-----	48.07	48.07	-----	-----
		U$_4$ - L$_4$	-30.20	-11.25	-0.28	-3.46	0.00	0.90	1.24	-0.32	-12.52	0.00	-3.46	Vehicle	Vehicle	-----	-55.54	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	25.53	25.53
		U$_5$ - L$_5$	-130.49	-31.86	0.18	-10.23	0.00	0.90	1.24	0.20	-35.47	0.00	-10.23	Vehicle	Vehicle	-----	-215.74	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	-----	-----	8.31	8.31
		U$_6$ - L$_6$	-158.18	-31.60	5.01	-13.06	0.00	0.90	1.24	5.58	-35.18	0.00	-13.06	Vehicle	Pedestrian	-----	-268.34	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	-----	-----	7.25	7.25
		U$_7$ - L$_7$	-152.32	-31.44	9.97	-13.24	0.00	0.90	1.24	11.10	-35.00	0.00	-13.24	Vehicle	Pedestrian	-----	-260.73	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	-----	-----	6.38	6.38
		U$_8$ - L$_8$	-455.55	-29.14	-49.23	-12.74	-18.97	0.90	1.24	-32.45	-54.81	-12.74	-18.97	Pedestrian	Pedestrian	-----	-688.12	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	-----	-----	8.27	8.27
		U$_9$ - L$_9$	-287.55	2.66	-47.40	0.00	-18.20	0.90	1.20	2.87	-51.11	0.00	-18.20	Vehicle	Pedestrian	-----	-463.92	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	-----	-----	5.16	5.16
		U$_{10}$ - L$_{10}$	-276.32	1.26	-46.93	0.00	-17.54	0.90	1.20	1.36	-50.60	0.00	-17.54	Vehicle	Pedestrian	-----	-447.81	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	-----	-----	6.84	6.84
		U$_{11}$ - L$_{11}$	-232.59	-3.18	-42.90	0.00	-14.41	0.90	1.20	-3.43	-46.26	0.00	-14.41	Vehicle	Vehicle	-----	-362.50	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	8.84	8.84
		U$_{12}$ - L$_{12}$	-178.43	1.08	-32.66	0.00	-11.20	0.90	1.20	1.16	-35.22	0.00	-11.20	Vehicle	Vehicle	-----	-277.74	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	-----	-----	10.05	10.05
		U$_{13}$ - L$_{13}$	-127.74	2.57	-26.60	0.00	-7.88	0.90	1.20	2.77	-28.68	0.00	-7.88	Vehicle	Vehicle	-----	-203.35	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	-----	-----	8.81	8.81
		U$_{14}$ - L$_{14}$	-30.39	-2.75	-5.89	0.00	-3.03	0.90	1.20	-2.96	-6.35	0.00	-3.03	Vehicle	Pedestrian	-----	-51.72	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	-----	-----	33.49	33.49
		U$_{15}$ - L$_{15}$	-28.94	-22.00	9.12	-4.54	1.55	0.90	1.20	9.83	-23.72	1.55	-4.54	Vehicle	Vehicle	-----	-68.46	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	13.25	13.25
		U$_{16}$ - L$_{16}$	-76.03	-24.74	7.00	-7.08	1.39	0.90	1.20	7.55	-26.67	1.39	-7.08	Vehicle	Vehicle	-----	-133.52	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	-----	-----	9.95	9.95
		U$_{17}$ - L$_{17}$	-161.89	-35.88	5.34	-10.66	1.30	0.90	1.20	5.75	-38.68	1.30	-10.66	Vehicle	Vehicle	-----	-260.74	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	-----	-----	6.45	6.45
		U$_{18}$ - L$_{18}$	-190.28	-35.33	4.58	-12.71	1.12	0.90	1.20	4.93	-38.09	1.12	-12.71	Vehicle	Pedestrian	-----	-313.40	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	-----	-----	6.60	6.60
		U$_{19}$ - L$_{19}$	-228.17	-34.88	3.92	-14.98	0.97	0.90	1.20	4.23	-37.61	0.97	-14.98	Vehicle	Pedestrian	-----	-364.98	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	-----	-----	7.38	7.38
		U$_{20}$ - L$_{20}$	-242.83	-35.75	3.56	-15.63	0.95	0.90	1.20	3.84	-38.54	0.95	-15.63	Vehicle	Pedestrian	-----	-386.10	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	-----	-----	6.26	6.26
	Structure 2	U$_0$ - L$_0$	-303.03	2.01	-52.50	2.22	-15.08	0.90	1.18	2.14	-55.89	2.22	-15.08	Pedestrian	Vehicle	-----	-466.60	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	-----	-----	6.07	6.07
		U$_1$ - L$_1$	-268.78	8.75	-47.24	2.12	-13.67	0.90	1.18	9.32	-50.30	2.12	-13.67	Vehicle	Vehicle	-----	-414.80	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	-----	-----	8.03	8.03
		U$_2$ - L$_2$	-220.87	9.45	-44.14	2.34	-12.32	0.90	1.18	10.06	-47.00	2.34	-12.32	Vehicle	Vehicle	-----	-348.23	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	-----	-----	7.52	7.52
		U$_3$ - L$_3$	-175.23	10.12	-40.92	2.49	-10.35	0.90	1.18	10.78	-43.57	2.49	-10.35	Vehicle	Vehicle	-----	-284.43	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	-----	-----	6.35	6.35
		U$_4$ - L$_4$	-82.08	8.78	-27.80	2.21	-6.62	0.90	1.18	9.35	-29.59	2.21	-6.62	Vehicle	Vehicle	-----	-145.17	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	-----	-----	8.69	8.69
		U$_5$ - L$_5$	-19.89	8.50	-21.93	2.23	-4.16	0.90	1.18	9.05	-23.35	2.23	-4.16	Vehicle	Vehicle	-----	-56.22	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	-----	-----	13.73	13.73
		U$_6$ - L$_6$	60.32	18.92	-12.50	1.75	-0.47	0.90	1.18	20.14	-13.31	1.75	-0.47	Vehicle	Vehicle	104.60	-----	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	-----	-----	-----	-----	-----	18.24	18.24	-----	-----
		U$_7$ - L$_7$	-41.77	-5.90	-1.81	-2.49	0.00	0.90	1.18	-1.92	-6.28	0.00	-2.49	Vehicle	Pedestrian	-----	-65.71	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	34.06	34.06
		U$_8$ - L$_8$	-189.01	-32.33	3.52	-8.38	0.00	0.90	1.18	3.74	-34.42	0.00	-8.38	Vehicle	Vehicle	-----	-290.46	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	-----	-----	9.92	9.92
		U$_9$ - L$_9$	-253.99	-40.19	0.98	-10.55	0.00	0.90	1.18	1.04	-42.79	0.00	-10.55	Vehicle	Vehicle	-----	-385.82	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	-----	-----	10.22	10.22
		U$_{10}$ - L$_{10}$	-290.02	-40.75	3.04	-12.18	0.00	0.90	1.18	3.23	-43.39	0.00	-12.18	Vehicle	Vehicle	-----	-433.42	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	11.26	11.26
		U$_{11}$ - L$_{11}$	-312.18	-42.62	6.49	-12.59	0.00	0.90	1.18	6.91	-45.38	0.00	-12.59	Vehicle	Vehicle	-----	-464.82	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	-----	-----	9.98	9.98
		U$_{12}$ - L$_{12}$	-327.28	-40.04	9.33	-13.01	-0.93	0.90	1.18	9.94	-42.63	-0.93	-13.01	Vehicle	Vehicle	-----	-480.87	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	11.13	11.13
		U$_{13}$ - L$_{13}$	-277.21	-33.93	12.49	-11.39	0.00	0.90	1.18	13.29	-36.13	0.00	-11.39	Vehicle	Vehicle	-----	-407.34	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	-----	-----	11.43	11.43
		U$_{14}$ - L$_{14}$	-505.44	-26.89	-39.83	-9.95	-11.34	0.90	1.18	-28.62	-42.41	-9.95	-11.34	Pedestrian	Vehicle	-----	-712.20	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	-----	-----	12.88	12.88
		U$_{15}$ - L$_{15}$	-232.94	1.92	-46.07	1.67	-11.17	0.90	1.17	2.02	-48.47	1.67	-11.17	Pedestrian	Vehicle	-----	-365.83	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	-----	-----	9.43	9.43
		U$_{16}$ - L$_{16}$	-260.12	5.14	-46.20	0.83	-12.63	0.90	1.17	5.41	-48.60	0.83	-12.63	Vehicle	Vehicle	-----	-401.34	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	-----	-----	8.35	8.35
		U$_{17}$ - L$_{17}$	-228.24	5.80	-44.79	0.66	-11.76	0.90	1.17	6.10	-47.12	0.66	-11.76	Vehicle	Vehicle	-----	-357.96	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	-----	-----	8.38	8.38
		U$_{18}$ - L$_{18}$	-209.27	6.98	-41.51	-0.03	-11.28	0.90	1.17	7.34	-43.68	-0.03	-11.28	Vehicle	Vehicle	-----	-328.83	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	-----	-----	8.42	8.42
		U$_{19}$ - L$_{19}$	-166.55	7.47	-35.64	-0.07	-9.53	0.90	1.17	7.86	-37.49	-0.07	-9.53	Vehicle	Vehicle	-----	-265.26	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	-----	-----	9.20	9.20
		U$_{20}$ - L$_{20}$	-113.95	7.51	-28.31	-0.43	-7.50	0.90	1.17	7.90	-29.78	-0.43	-7.50	Vehicle	Vehicle	-----	-186.85	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	-----	-----	8.77	8.77
		U$_{21}$ - L$_{21}$	-62.76	11.11	-22.96	0.00	-5.22	0.90	1.17	11.69	-24.15	0.00	-5.22	Vehicle	Vehicle	-----	-112.99	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	11.50	11.50
		U$_{22}$ - L$_{22}$	-38.94	-5.96	-2.68	-2.04	-2.15	0.90	1.17	-2.82	-6.27	-2.04	-2.15	Pedestrian	Pedestrian	-----	-61.56	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	36.00	36.00
		U$_{23}$ - L$_{23}$	-74.43	-26.51	7.87	-6.10	0.48	0.90	1.17	8.28	-27.89	0.48	-6.10	Vehicle	Vehicle	-----	-133.02	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	9.54	9.54
		U$_{24}$ - L$_{24}$	-121.36	-31.07	7.79	-8.17	0.37	0.90	1.17	8.20	-32.69	0.37	-8.17	Vehicle	Vehicle	-----	-200.27	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	7.76	7.76
		U$_{25}$ - L$_{25}$	-169.12	-36.45	7.49	-9.94	0.43	0.90	1.17	7.88	-38.35	0.43	-9.94	Vehicle	Vehicle	-----	-269.72	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	-----	-----	8.92	8.92
		U$_{26}$ - L$_{26}$	-207.97	-37.07	6.77	-11.42	0.14	0.90	1.17	7.13	-39.01	0.14	-11.42	Vehicle	Vehicle	-----	-321.07	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	-----	-----	9.47	9.47
		U$_{27}$ - L$_{27}$	-219.96	-40.50	5.57	-11.49	0.16	0.90	1.17	5.86	-42.61	0.16	-11.49	Vehicle	Vehicle	-----	-341.34	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	9.47	9.47
		U$_{28}$ - L$_{28}$	-240.91	-37.08	8.02	-12.60	-0.25	0.90	1.17	8.43	-39.02	-0.25	-12.60	Vehicle	Vehicle	-----	-363.90	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	10.90	10.90
		U$_{29}$ - L$_{29}$	-202.73	-32.76	12.20	-10.35	0.00	0.90	1.17	12.84	-34.47	0.00	-10.35	Vehicle	Vehicle	-----	-308.35	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	-----	-----	14.14	14.14
		U$_{30}$ - L$_{30}$	-518.05	-27.48	-40.19	-8.23	-13.79	0.90	1.18	-29.26	-42.79	-8.23	-13.79	Vehicle	Vehicle	-----	-729.08	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	-----	-----	12.48	12.48
		U$_{31}$ - L$_{31}$	-318.43	5.69	-45.01	0.00	-12.95	0.90	1.18	6.06	-47.92	0.00	-12.95	Vehicle	Vehicle	-----	-476.26	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	-----	-----	7.76	7.76
		U$_{32}$ - L$_{32}$	-358.67	1.84	-49.10	-0.26	-14.65	0.90	1.18	1.96	-52.28	-0.26	-14.65	Vehicle	Vehicle	-----	-534.24	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	-----	-----	8.48	8.48
		U$_{33}$ - L$_{33}$

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 3F1 **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	-6.39	27.15	14.00	-4.60	0.90	1.24	30.22	-7.11	14.00	-4.60	Pedestrian	Pedestrian	171.44	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**11.28**	**11.28**	-----	-----
		U_1 - L_2	23.90	-14.93	43.14	-4.71	9.20	0.90	1.24	48.02	-16.62	9.20	-4.71	Vehicle	Vehicle	93.50	-----	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	-----	-----	-----	-----	-----	**8.41**	**8.41**	-----	-----
		U_2 - L_3	-49.02	-12.56	14.01	-4.32	3.33	0.90	1.24	15.59	-13.98	3.33	-4.32	Vehicle	Vehicle	-----	-81.90	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**20.39**	**20.39**
		U_3 - L_4	-108.88	-11.49	2.95	-4.20	-2.10	0.90	1.24	3.29	-12.79	-2.10	-4.20	Vehicle	Vehicle	-----	-158.17	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	-----	-----	-----	-----	-----	**17.79**	**17.79**
		U_4 - L_4	153.12	5.13	37.11	3.11	7.00	0.90	1.24	41.31	5.72	7.00	3.11	Vehicle	Pedestrian	252.76	-----	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	-----	-----	-----	-----	-----	**8.99**	**8.99**	-----	-----
		U_5 - L_5	186.35	-2.55	40.91	2.78	10.66	0.90	1.24	45.55	-2.83	10.66	2.78	Vehicle	Vehicle	301.47	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**10.19**	**10.19**	-----	-----
		U_6 - L_6	177.52	-8.72	31.55	1.59	12.54	0.90	1.24	35.12	-9.70	12.54	1.59	Pedestrian	Vehicle	292.74	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**9.93**	**9.93**	-----	-----
		U_7 - L_7	173.18	-1.82	35.06	0.41	13.46	0.90	1.24	39.03	-2.03	13.46	0.41	Pedestrian	Vehicle	293.36	-----	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	-----	-----	-----	-----	-----	**9.10**	**9.10**	-----	-----
		U_8 - L_8	328.11	-1.02	51.69	-0.13	19.45	0.90	1.20	55.73	-1.09	19.45	-0.13	Pedestrian	Vehicle	524.27	-----	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	-----	-----	-----	-----	-----	**8.44**	**8.44**	-----	-----
		U_9 - L_{10}	339.70	-0.77	50.46	0.85	18.90	0.90	1.20	54.40	-0.82	18.90	0.85	Pedestrian	Vehicle	536.90	-----	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	-----	-----	-----	-----	-----	**8.49**	**8.49**	-----	-----
		U_{10} - L_{11}	313.22	3.23	57.26	1.69	16.46	0.90	1.20	61.73	3.48	16.46	1.69	Vehicle	Pedestrian	487.43	-----	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	-----	-----	-----	-----	-----	**9.68**	**9.68**	-----	-----
		U_{11} - L_{12}	270.68	3.91	49.75	1.81	13.03	0.90	1.20	53.64	4.22	13.03	1.81	Vehicle	Pedestrian	421.61	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**9.45**	**9.45**	-----	-----
		U_{12} - L_{13}	194.17	-0.95	40.71	0.00	10.79	0.90	1.20	43.90	-1.03	10.79	0.00	Vehicle	Vehicle	309.48	-----	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	-----	-----	-----	-----	-----	**9.95**	**9.95**	-----	-----
		U_{13} - L_{14}	123.57	-7.73	32.57	0.00	5.96	0.90	1.20	35.12	-8.33	5.96	0.00	Vehicle	Vehicle	206.29	-----	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	-----	-----	-----	-----	-----	**8.66**	**8.66**	-----	-----
		U_{14} - L_{15}	-16.32	-15.39	22.27	-2.35	1.48	0.90	1.20	24.01	-16.59	1.48	-2.35	Vehicle	Vehicle	10.00	-42.79	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	-----	-----	-----	**18.49**	**18.49**	**18.81**	**18.81**
		U_{15} - L_{15}	59.12	-10.11	30.24	-2.09	6.08	0.90	1.20	32.60	-10.90	6.08	-2.09	Vehicle	Vehicle	119.24	-----	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	-----	-----	6.56	-----	-----	-----	-----	-----	**11.31**	**11.31**	-----	-----
		U_{17} - L_{16}	172.14	-7.45	43.05	-1.86	9.93	0.90	1.20	46.42	-8.03	9.93	-1.86	Vehicle	Vehicle	284.13	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**7.59**	**7.59**	-----	-----
		U_{18} - L_{17}	210.78	-6.31	39.99	-1.53	12.51	0.90	1.20	43.12	-6.80	12.51	-1.53	Vehicle	Vehicle	330.06	-----	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	-----	-----	-----	-----	-----	**10.20**	**10.20**	-----	-----
		U_{19} - L_{18}	242.64	-5.04	42.02	-1.21	13.73	0.90	1.20	45.31	-5.43	13.73	-1.21	Vehicle	Vehicle	374.32	-----	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	-----	-----	-----	-----	-----	**10.32**	**10.32**	-----	-----
		U_{20} - L_{19}	257.76	-4.14	34.00	-1.03	15.70	0.90	1.20	36.66	-4.46	15.70	-1.03	Pedestrian	Vehicle	403.16	-----	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	-----	-----	-----	-----	-----	**8.64**	**8.64**	-----	-----
		U_0 - L_1	298.99	-3.50	27.48	-2.21	14.21	0.90	1.18	29.26	-3.73	14.21	-2.21	Pedestrian	Pedestrian	445.19	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**11.01**	**11.01**	-----	-----
		U_1 - L_2	284.21	-10.88	55.16	-2.66	14.05	0.90	1.18	58.72	-11.58	14.05	-2.66	Vehicle	Vehicle	445.81	-----	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	-----	-----	-----	-----	-----	**8.40**	**8.40**	-----	-----
		U_2 - L_3	221.42	-11.61	48.73	-2.85	11.83	0.90	1.18	51.88	-12.36	11.83	-2.85	Vehicle	Vehicle	355.30	-----	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	-----	-----	-----	-----	-----	**8.27**	**8.27**	-----	-----
		U_3 - L_4	178.30	-13.12	43.46	-3.23	10.08	0.90	1.18	46.27	-13.96	10.08	-3.23	Vehicle	Vehicle	291.94	-----	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	-----	-----	-----	-----	-----	**8.62**	**8.62**	-----	-----
		U_4 - L_5	53.50	-11.24	30.87	-2.87	5.37	0.90	1.18	32.87	-11.97	5.37	-2.87	Vehicle	Vehicle	112.27	-----	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	-----	-----	-----	-----	-----	**11.39**	**11.39**	-----	-----
		U_5 - L_6	-16.51	-16.61	24.70	-2.92	2.23	0.90	1.18	26.30	-17.69	2.23	-2.92	Vehicle	Vehicle	12.72	-44.46	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	-----	-----	-----	**16.89**	**16.89**	**17.48**	**17.48**
		U_6 - L_7	-133.21	-29.77	5.29	-2.50	-2.48	0.90	1.18	5.63	-31.70	-2.48	-2.50	Vehicle	Vehicle	-----	-214.37	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	-----	-----	-----	-----	-----	**7.13**	**7.13**
		U_7 - L_7	208.77	-8.47	27.63	0.00	8.33	0.90	1.18	29.41	-9.02	8.33	0.00	Vehicle	Vehicle	309.64	-----	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	-----	-----	-----	-----	-----	**13.41**	**13.41**	-----	-----
		U_8 - L_8	289.58	-0.27	48.33	0.00	8.99	0.90	1.18	51.46	-0.29	8.99	0.00	Vehicle	Vehicle	443.35	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**8.17**	**8.17**	-----	-----
		U_{10} - L_9	327.97	0.10	45.91	1.53	11.09	0.90	1.18	48.88	0.10	11.09	1.53	Vehicle	Pedestrian	489.90	-----	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	-----	-----	-----	-----	-----	**9.20**	**9.20**	-----	-----
		U_{11} - L_{10}	349.25	-2.84	50.76	0.55	12.45	0.90	1.18	54.04	-3.02	12.45	0.55	Vehicle	Vehicle	524.28	-----	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	-----	-----	-----	-----	-----	**9.16**	**9.16**	-----	-----
		U_{12} - L_{11}	358.20	-7.15	48.15	0.48	13.32	0.90	1.18	51.26	-7.62	13.32	0.48	Vehicle	Vehicle	532.29	-----	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	-----	-----	-----	-----	-----	**9.49**	**9.49**	-----	-----
		U_{13} - L_{12}	307.75	-13.82	40.10	-0.24	12.26	0.90	1.18	42.69	-14.71	12.26	-0.24	Vehicle	Vehicle	455.58	-----	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	-----	-----	-----	-----	-----	**11.00**	**11.00**	-----	-----
		U_{14} - L_{13}	260.20	-8.64	32.39	-1.50	11.72	0.90	1.18	34.48	-9.20	11.72	-1.50	Pedestrian	Vehicle	398.33	-----	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	-----	-----	-----	-----	-----	**11.20**	**11.20**	-----	-----
		U_{15} - L_{14}	208.42	-5.85	43.02	-2.51	11.04	0.90	1.17	45.26	-6.16	11.04	-2.51	Vehicle	Pedestrian	329.78	-----	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	-----	-----	-----	-----	-----	**9.77**	**9.77**	-----	-----
		U_{16} - L_{15}	243.55	-4.10	47.20	-1.48	11.54	0.90	1.17	49.66	-4.32	11.54	-1.48	Vehicle	Pedestrian	381.17	-----	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	-----	-----	-----	-----	-----	**8.20**	**8.20**	-----	-----
		U_{17} - L_{16}	255.86	-6.11	50.13	-0.85	11.67	0.90	1.17	52.74	-6.43	11.67	-0.85	Vehicle	Vehicle	401.18	-----	0.00	27.98	27.9777	923.26	131.71	18.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**8.62**	**8.62**	-----	-----
		U_{18} - L_{17}	235.29	-7.16	50.93	-0.75	10.45	0.90	1.17	53.58	-7.53	10.45	-0.75	Vehicle	Vehicle	375.53	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.75**	**7.75**	-----	-----
		U_{19} - L_{18}	212.11	-8.75	41.99	0.01	8.95	0.90	1.17	44.18	-9.20	8.95	0.01	Vehicle	Vehicle	333.18	-----	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	-----	-----	-----	-----	-----	**9.93**	**9.93**	-----	-----
		U_{20} - L_{20}	168.24	-9.69	42.85	0.06	9.14	0.90	1.17	45.08	-10.19	9.14	0.06	Vehicle	Vehicle	277.31	-----	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	-----	-----	-----	-----	-----	**9.65**	**9.65**	-----	-----
		U_{26} - L_{21}	97.26	-9.45	30.74	0.46	6.66	0.90	1.17	32.34	-9.94	6.66	0.46	Vehicle	Vehicle	168.48	-----	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	-----	-----	-----	-----	-----	**10.22**	**10.22**	-----	-----
		U_{21} - L_{22}	30.60	-18.21	20.77	0.58	3.66	0.90	1.17	21.85	-19.15	3.66	0.58	Vehicle	Vehicle	68.19	-----	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	-----	-----	-----	-----	-----	**18.17**	**18.17**	-----	-----
		U_{23} - L_{22}	49.78	-14.91	20.72	-0.72	5.11	0.90	1.17	21.80	-15.68	5.11	-0.72	Vehicle	Vehicle	93.05	-----	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	-----	-----	-----	-----	-----	**17.34**	**17.34**	-----	-----
		U_{24} - L_{23}	115.07	-10.57	35.87	-0.72	8.00	0.90	1.17	37.74	-11.12	8.00	-0.72	Vehicle	Vehicle	198.66	-----	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	-----	-----	-----	-----	-----	**8.28**	**8.28**	-----	-----
		U_{25} - L_{24}	179.22	-10.27	41.51	-0.73	10.10	0.90	1.17	43.67	-10.81	10.10	-0.73	Vehicle	Vehicle	289.75	-----	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	-----	-----	-----	-----	-----	**9.71**	**9.71**	-----	-----
		U_{26} - L_{25}	220.97	-9.01	44.23	-0.57	11.89	0.90	1.17	46.53	-9.48	11.89	-0.57	Vehicle	Vehicle	347.76	-----	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	-----	-----	-----	-----	-----	**9.23**	**9.23**	-----	-----
		U_{27} - L_{26}	234.87	-5.95	42.28	-0.35	11.45	0.90	1.17	44.49	-6.26	11.45	-0.35	Vehicle	Vehicle	363.16	-----	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	-----	-----	-----	-----	-----	**9.35**	**9.35**	-----	-----
		U_{28} - L_{27}	253.15	-6.42	41.40	-0.28	12.25	0.90	1.17	43.56	-6.75	12.25	-0.28	Vehicle	Vehicle	385.72	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**10.49**	**10.49**	-----	-----
		U_{29} - L_{28}	215.91	-13.71	35.51	0.00	10.20	0.90	1.17	37.36	-14.42	10.20	0.00	Vehicle	Vehicle	329.25	-----	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	-----	-----	-----	-----	-----	**11.64**	**11.64**	-----	-----
		U_{30} - L_{29}	180.73	-6.84	30.78	-0.90	8.90	0.90	1.17	32.38	-7.19	8.90	-0.90	Vehicle	Vehicle	277.04	-----	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	-----	-----	-----	-----	-----	**14.51**	**14.51**	-----	-----
		U_{31} - L_{31}	294.99	-6.43	43.89	-1.64	12.90	0.90	1.18	46.73	-6.85	12.90	-1.64	Vehicle	Vehicle	444.24	-----	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	-----	-----	-----	-----	-----	**10.33**	**10.33**	-----	-----
		U_{32} - L_{32}	342.70	-6.02	51.43	-0.55	13.70	0.90	1.18	54.76	-6.40	13.70	-0.55	Vehicle	Vehicle	516.70	-----	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	-----	-----	-----	-----	-----	**7.94**	**7.94**	-----	-----
		U_{33} - L_{33}	363.39	-2.19	52.47	0.37	13.78	0.90	1.18	55.86	-2.33	13.78	0.37	Vehicle	Vehicle	545.03	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64

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: 3F1
Condition: As-Built

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

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

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

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

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Min) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0-L_1	-129.89	-23.02	2.83	-5.51	-8.61	-5.14	37.61	-73.65	-113.70	-68.60
	U_1-L_1	-54.81	-51.14	0.87	-0.34	-7.27	-7.61	11.96	-4.53	-87.16	-101.67
	U_1-L_2	-27.43	56.97	2.02	3.89	-11.42	-5.10	11.28	38.62	-152.62	-78.76
	U_2-L_2	-52.27	61.68	1.81	2.90	-10.46	-3.55	24.11	38.73	-139.70	-47.40
	U_2-L_3	-27.43	50.17	2.02	3.89	-11.42	-5.10	27.01	37.41	-210.09	-68.13
	U_3-L_3	1.19	145.97	2.36	2.64	-12.70	-1.01	42.53	235.63	-218.99	-12.72
	U_3-L_4	34.54	53.23	2.62	1.61	-8.75	-1.52	33.69	21.46	-150.32	-25.62
	U_4-L_4	-70.13	598.66	1.55	3.08	-14.29	11.58	20.68	41.17	-190.91	148.04
	U_4-L_5	528.73	-128.77	8.65	-10.07	-0.40	0.57	111.97	-130.26	-5.23	7.43
	U_5-L_5	69.10	44.97	1.17	-1.63	-3.38	-4.78	25.44	-21.12	-43.78	29.27
	U_5-L_6	101.46	-177.08	2.58	2.05	-3.22	-6.14	33.38	26.68	-41.66	-79.43
	U_6-L_6	528.73	-128.77	8.65	-10.07	-0.40	0.57	111.97	-130.26	-5.23	7.43
	U_6-L_7	-56.63	-218.18	2.30	0.78	-8.50	-5.63	29.73	13.12	-110.03	-72.82
	U_7-L_7	-173.99	344.21	1.51	1.24	-12.67	-14.06	39.96	153.96	-163.97	-181.94
	U_7-L_8	-287.88	-237.50	1.98	1.14	-25.02	-9.42	25.67	14.75	-323.72	-121.91
	U_8-L_8	-196.26	-337.79	1.94	0.11	-15.86	-9.94	25.10	1.46	-209.25	-89.76
	U_8-L_9	-290.52	-164.89	0.83	0.15	-22.41	-8.06	13.67	1.95	-290.00	-104.27
	U_9-L_9	-190.08	-29.82	0.63	-0.60	-15.36	-0.62	8.19	-7.75	-198.75	-8.03
	U_9-L_{10}	-179.81	-40.24	0.56	-0.31	-13.27	-1.04	7.66	-8.26	-184.50	-13.43
	U_{10}-L_{10}	-290.19	260.74	0.55	1.41	-13.63	2.26	7.05	-18.28	-149.12	29.27
	U_{10}-L_{11}	-27.02	-172.57	5.15	-10.48	-6.30	4.47	65.80	-133.90	-80.53	67.08
	U_{11}-L_{11}	-25.34	194.81	5.15	-10.48	-6.30	4.47	65.80	-133.90	-80.53	67.08
	U_{11}-L_{12}	-52.13	-282.61	2.99	-4.06	-9.99	-12.59	38.14	-51.91	-127.57	-160.88
	U_{12}-L_{12}	-39.12	-94.59	2.99	-4.06	-9.99	-12.59	38.14	-51.91	-127.57	-160.88
	U_{12}-L_{13}	-360.75	-390.17	6.62	1.23	-18.68	-11.63	7.93	15.70	-238.61	-146.55
	U_{13}-L_{13}	-403.61	-397.92	1.59	4.07	-22.04	-17.56	7.93	15.70	-238.61	-146.55
	U_{13}-L_{14}	-349.76	-208.76	2.95	2.91	-21.47	-14.65	37.74	37.22	-274.32	-187.21
	U_{14}-L_{14}	-253.89	-280.84	2.29	3.17	-27.90	-12.68	29.27	40.51	-356.50	-161.98
	U_{14}-L_{15}	-330.50	-237.13	2.29	3.17	-27.90	-12.68	29.27	40.51	-356.50	-161.98
	U_{15}-L_{15}	-237.12	39.43	3.30	4.17	-21.08	-5.67	42.15	53.24	-269.26	-72.45
	U_{15}-L_{16}	-152.27	32.70	3.30	3.60	-14.28	-3.52	52.05	41.74	-169.47	-108.39
	U_{16}-L_{16}	-116.81	170.72	3.52	2.83	-15.15	-2.91	45.01	36.16	-193.61	-37.19
	U_{16}-L_{17}	-59.53	-197.47	2.30	0.78	-8.50	-5.63	29.28	13.12	-110.03	-72.82
	U_{17}-L_{17}	-48.21	-31.51	2.42	-0.01	-18.90	-8.53	30.60	-3.90	-238.62	-107.69
	U_{17}-L_{18}	-39.13	33.13	2.47	2.01	-18.90	-8.53	30.60	-3.90	-238.62	-107.69
	U_{18}-L_{18}	10.71	137.69	2.06	3.07	-14.00	-5.99	26.06	38.77	-183.00	-12.04
	U_{18}-L_{19}	57.19	122.84	2.62	2.31	-16.10	-2.90	57.19	122.84	2.62	2.31
	U_{19}-L_{19}	85.58	3.84	2.50	1.07	-14.61	-4.49	31.54	13.56	-184.42	-56.65
	U_{19}-L_{20}	14.12	816.02	1.19	2.82	-11.82	-0.79	20.68	41.17	-190.91	148.04
	U_{20}-L_{20}	823.61	100.42	18.14	-16.91	-1.63	-0.45	231.80	-216.09	-13.17	-5.69
	U_{20}-L_{21}	39.75	-14.09	3.42	1.72	-8.06	-4.53	47.44	-65.80	-69.90	-43.04
	U_{21}-L_{21}	190.29	-52.92	3.71	-5.15	-5.47	-6.53	47.44	-65.80	-69.90	-43.04
	U_{21}-L_{22}	17.33	-89.79	3.17	3.32	-7.68	-6.45	40.44	42.37	-98.08	-82.45
	U_{22}-L_{22}	39.75	-14.09	3.42	1.72	-8.06	-4.53	47.44	-65.80	-69.90	-43.04
	U_{22}-L_{23}	-75.26	-230.76	3.33	2.04	-11.56	-10.56	42.53	26.00	-147.68	-134.96
	U_{23}-L_{23}	-138.80	-311.98	2.81	1.65	-10.60	-7.45	26.57	3.63	-147.68	-134.96
	U_{23}-L_{24}	-84.35	-278.75	3.29	2.84	-26.00	-11.01	42.01	36.32	-332.21	-140.69
	U_{24}-L_{24}	-138.80	-311.98	2.81	1.65	-10.60	-7.45	26.57	3.63	-147.68	-134.96
	U_{24}-L_{25}	-275.08	-274.62	2.29	3.29	-32.83	-14.01	26.54	3.67	-419.42	-179.00
	U_{25}-L_{25}	-257.08	-269.15	2.29	0.19	-26.36	-15.55	15.91	2.41	-336.76	-186.66
	U_{25}-L_{26}	-275.08	-274.62	2.29	3.29	-32.83	-14.01	26.54	3.67	-419.42	-179.00
	U_{26}-L_{26}	-154.97	-331.13	0.83	-0.20	-17.08	-4.22	10.66	-2.54	-218.27	-53.94
	U_{26}-L_{27}	-138.80	-311.98	2.81	1.65	-10.60	-7.45	26.57	3.63	-147.68	-134.96
	U_{27}-L_{27}	40.07	-167.86	4.81	-7.45	-4.28	-4.84	62.17	-96.34	-55.42	-82.57
	U_{27}-L_{28}	-10.53	-132.37	2.02	-10.96	-3.35	-3.80	26.16	-141.74	-43.38	-49.20
	U_{28}-L_{28}	5.31	-165.29	2.90	-10.96	-3.35	-3.80	3.15	-170.29	-15.13	-49.20
	U_{28}-L_{29}	-140.16	-260.93	0.32	-1.11	-11.58	-10.61	4.11	-14.32	-149.77	-139.90
	U_{29}-L_{29}	-187.10	-276.08	1.08	-1.51	-14.26	-16.69	14.03	19.52	-184.50	-215.99
	U_{29}-L_{30}	-322.62	-140.33	1.08	-1.51	-14.26	-16.69	14.03	19.52	-184.50	-215.99
	U_{30}-L_{30}	-162.95	-104.84	0.82	2.39	-16.50	-4.29	10.57	30.87	-213.44	-55.49
	U_{31}-L_{31}	-147.84	-26.72	1.80	2.84	-13.84	-4.61	23.31	36.72	-179.02	-59.68
	U_{31}-L_{32}	-136.13	-185.29	2.90	-10.96	-3.35	-3.80	3.15	-170.29	-15.13	-49.20
	U_{32}-L_{32}	10.77	46.02	2.57	1.50	-9.71	-1.05	33.30	19.34	-125.66	-13.62
	U_{33}-L_{33}	426.23	9.05	12.67	-10.16	-6.60	6.83	169.28	-135.67	-8.06	11.02
	U_{34}-L_{34}	5.31	144.44	2.90	-10.96	-3.35	-3.80	3.15	-170.29	-15.13	-49.20
	U_{35}-L_{35}	128.06	54.04	2.88	4.92	-2.95	-7.10	38.52	-65.77	-39.42	-64.80
	U_{36}-L_{36}	70.10	43.63	3.00	2.18	-7.52	-5.10	45.08	29.12	-100.41	-108.24
	U_{37}-L_{37}	14.16	13.92	2.89	3.41	-7.68	-7.73	42.46	11.04	-157.01	-119.27
	U_{38}-L_{38}	-8.36	-30.51	1.85	-2.65	-15.96	3.62	24.70	-35.42	-213.22	48.34

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)	Z_x (in^3)	I (in^4)	I_{DL} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F'$_y$/S_{top}	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_m/(α_{ult})	Equivalent Mom. Factor b
Structure 1	U_0-L_1	-116.68	-125.68	-316.62	-118.19	90.2	90.24	72.24	127.46	2147	1328.6	f.	4206	0.99880041	2974.3	0.375	0.75	0.75
	U_1-L_1	-66.23	-72.37	-197.57	-198.65	90.2	90.24	72.24	127.46	2147	1328.6	f.	4206	0.99880041	2974.3	0.995	1.00	1.00
	U_1-L_2	-166.48	-139.09	-339.76	-44.50	90.2	90.24	76.71	127.46	2147	1328.6	f.	4206	0.99880041	2974.3	0.211	0.67	0.63
	U_2-L_2	-36.61	-130.53	-249.57	18.56	90.2	90.24	72.24	127.46	2147	1328.6	f.	4206	0.99880041	2974.3	-0.074	0.57	0.57
	U_2-L_3	-0.54	-219.14	-204.08	23.35	90.2	90.24	72.24	127.46	2147	1328.6	f.	4206	0.99880041	2974.3	-0.107	0.63	0.63
	U_3-L_3	42.53	235.63	-218.99	172.22	90.2	90.24	76.71	127.46	2147	1328.6	f.	4206	0.99880041	2974.3	0.181	0.67	0.67
	U_3-L_4	167.22	97.06	-150.32	33.69	90.2	90.24	72.24	127.46	2147	1328.6	f.	4206	0.99880041	2974.3	0.161	0.67	0.67
	U_4-L_4	831.79	-339.35	970.21	138.2	138.17	111.77	198.97	3642	2139.7	1.45	6099	0.998945	4564.8	-0.350	0.46	0.46
	U_4-L_5	680.55	-157.75	130.3	130.26	105.11	180.77	2955	1795.3	1.39	5965	0.998952	4264.8	-0.404	0.44	0.44
	U_5-L_5	32.95	35.61	96.61	79.12	139.23	2132	1367.9	1.40	4465	0.99873139	3194.1	-0.223	0.70	0.70
	U_5-L_6	966.47	-183.06	333.46	96.4	96.61	83.55	130.29	2174	1387.9	1.40	4465	0.99873139	3194.1	-0.223	0.51	0.51
	U_6-L_6	680.55	-157.75	130.3	130.26	105.11	180.77	2955	1795.3	1.39	5965	0.998952	4264.8	-0.404	0.44	0.44
	U_6-L_7	-79.29	-195.52	77.74	-333.46	96.4	96.61	83.55	130.29	2174	1387.9	1.40	4465	0.99873139	3194.1	-0.223	0.51	0.51
	U_7-L_7	-167.66	-179.39	-31.21	-327.16	96.4	96.61	83.55	130.29	2174	1387.9	1.40	4465	0.99873139	3194.1	-0.223	0.51	0.51
	U_7-L_8	-455.06	-486.81	-779.17	-703.34	251.7	251.73	219.41	365.62	7161	3870.6	1.45	12066	0.9991911	8298.1	0.899	0.96	0.96
	U_8-L_8	-498.36	-186.52	-363.16	-1260.1	251.7	251.73	219.41	365.62	7161	3870.6	1.45	12066	0.9991911	8298.1	0.899	0.96	0.96
	U_8-L_9	-405.63	-223.00	-831.31	-514.76	232.2	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885935	7670.6	0.634	0.85	0.85
	U_9-L_9	-292.00	-312.42	-703.50	-575.66	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885935	7670.6	0.725	0.89	0.89
	U_9-L_{10}	-388.70	-274.48	-705.13	-592.21	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885935	7670.6	0.555	0.81	0.81
	U_{10}-L_{10}	-253.47	-120.47	-658.30	-92.93	181.9	181.87	147.20	249.02	3787	2047.9	1.37	6944	0.99847791	5992.6	0.065	0.63	0.63
	U_{10}-L_{11}	-132.22	-55.12	-448.33	-173.69	156.6	156.62	127.50	214.68	3470	1668.9	1.37	6016	0.99847791	5165.9	0.229	0.61	0.61
	U_{11}-L_{11}	-53.33	268.94	463.04	173.69	156.6	156.80	128.72	214.81	3285	1852.3	1.37	7089	0.99885442	5166.9	-0.430	0.43	0.43
	U_{11}-L_{12}	-43.11	118.85	330.57	173.69	156.6	156.80	128.72	214.81	3285	1852.3	1.37	7089	0.99885442	5166.9	-0.430	0.43	0.43
	U_{12}-L_{12}	-8.20	-434.87	-233.62	-576.53	212.6	212.59	170.43	297.57	4967	2491.6	1.40	9320	0.99857737	7005.5	0.405	0.76	0.76
	U_{12}-L_{13}	-403.11	-403.11	-1123.23	-1123.23	251.7	251.73	219.41	365.62	7161	3870.6	1.45	12066	0.9991911	8298.1	0.899	0.96	0.96
	U_{13}-L_{13}	-458.66	-486.81	-779.17	-703.34	251.7	251.73	219.41	365.62	7161	3870.6	1.45	12066	0.9991911	8298.1	0.899	0.96	0.96
	U_{13}-L_{14}	-498.36	-186.52	-363.16	-1260.1	251.7	251.73	219.41	365.62	7161	3870.6	1.45	12066	0.9991911	8298.1	0.899	0.96	0.96
	U_{14}-L_{14}	-405.63	-223.00	-831.31	-514.76	232.2	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885935	7670.6	0.634	0.85	0.85
	U_{14}-L_{15}	-292.00	-312.42	-703.50	-575.66	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885935	7670.6	0.725	0.89	0.89
	U_{15}-L_{15}	-388.70	-274.48	-705.13	-592.21	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885935	7670.6	0.555	0.81	0.81
	U_{15}-L_{16}	-253.47	-120.47	-658.30	-92.93	181.9	181.87	147.20	249.02	3787	2047.9	1.37	6944	0.99847791	5992.6	0.065	0.63	0.63
	U_{16}-L_{16}	-132.22	-55.12	-448.33	-173.69	156.6	156.62	127.50	214.68	3470	1668.9	1.37	6016	0.99847791	5165.9	0.229	0.61	0.61
	U_{16}-L_{17}	-53.33	268.94	463.04	173.69	156.6	156.80	128.72	214.81	3285	1852.3	1.37	7089	0.99885442	5166.9	-0.430	0.43	0.43
	U_{17}-L_{17}	-43.11	118.85	330.57	173.69	156.6	156.80	128.72	214.81	3285	1852.3	1.37	7089	0.99885442	5166.9	-0.430	0.43	0.43
	U_{17}-L_{18}	-22.88	-46.03	-372.87	-180.96	144.8	144.84	120.49	209.19	3613	2101.0	1.44	6903	0.99886774	4774.4	0.485	0.79	0.79
	U_{18}-L_{18}	-43.11	118.85	330.57	173.69	156.6	156.80	128.72	214.81	3285	1852.3	1.37	7089	0.99885442	5166.9	-0.430	0.43	0.43
	U_{18}-L_{19}	-8.79	479.22	-223.99	163.34	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861312	4212.3	0.208	0.68	0.68
	U_{19}-L_{19}	-8.79	479.22	-223.99	163.34	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861312	4212.3	0.208	0.68	0.68
	U_{19}-L_{20}	-117.37	197.58	-188.86	112.16	127.8	127.83	105.84	178.51	2762	1538.8	1.40	5891	0.99861312	4212.3	0.594	0.84	0.84
	U_{20}-L_{20}	-152.25	22.62	-128.49	-68.65	185.7	185.70	154.12	268.55	4767	2721.4	1.44	8796	0.99880804	6121.2	0.149	0.66	0.66
	U_{20}-L_{21}	-37.24	1.63	-68.61	-68.17	185.7	185.70	154.12	268.55	4767	2721.4	1.44	8796	0.99880804	6121.2	0.149	0.66	0.66
	U_{21}-L_{21}	-37.24	1.63	-68.61	-68.17	185.7	185.70	154.12	268.55	4767	2721.4	1.44	8796	0.99880804	6121.2	0.149	0.66	0.66
	U_{21}-L_{22}	-22.90	-28.03	-81.68	-68.17	185.7	185.70	154.12	268.55	4767	2721.4	1.44	8796	0.99880804	6121.2	0.149	0.66	0.66
	U_{22}-L_{22}	-37.24	1.63	-68.61	-68.17	185.7	185.70	154.12	268.55	4767	2721.4	1.44	8796	0.99880804	6121.2	0.149	0.66	0.66
	U_{22}-L_{23}	-75.26	-230.76	-333.33	-204.23	185.7	185.70	154.12	268.55	4767	2721.4	1.44	8796	0.99880804	6121.2	0.149	0.66	0.66
	U_{23}-L_{23}	-138.80	-311.98	-333.33	-204.23	185.7	185.70	154.12	268.55	4767	2721.4	1.44	8796	0.99880804	6121.2	0.149	0.66	0.66
	U_{23}-L_{24}	-84.35	-278.75	-329.24	-140.69	232.2	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885935	7670.6	0.393	0.99	0.99
	U_{24}-L_{24}	-138.80	-311.98	-333.33	-204.23	185.7	185.70	154.12	268.55	4767	2721.4	1.44	8796	0.99880804	6121.2	0.149	0.66	0.66
	U_{24}-L_{25}	-275.08	-274.62	-329.24	-32.83	232.2	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885935	7670.6	0.393	0.99	0.99
	U_{25}-L_{25}	-257.08	-269.15	-329.19	-26.36	-15.55	15.91	2.41	-336.76	-186.66	30.10	6520	3217.6	1.46	11223	0.99885935	7670.6	0.393	0.99
	U_{25}-L_{26}	-275.08	-274.62	-329.24	-32.83	-14.01	26.54	3.67	-419.42	-179.00	30.10	6520	3217.6	1.46	11223	0.99885935	7670.6	0.393	0.99
	U_{26}-L_{26}	-154.97	-331.13	0.83	-0.20	-17.08	-4.22	10.66	-2.54	-218.27	-53.94	1668	0.00	0.99885935	4553.8	0.223	0.69	0.69
	U_{26}-L_{27}	-138.80	-311.98	2.81	1.65	-10.60	-7.45	26.57	3.63	-147.68	-134.96	1668	0.00	0.99885935	4553.8	0.229	0.69	0.69
	U_{27}-L_{27}	40.07	-167.86	4.81	-7.45	-4.28	-4.84	62.17	-96.34	-55.42	-82.57	1668	0.00	0.99885935	4553.8	0.223	0.69	0.69
	U_{27}-L_{28}	-10.53	-132.37	2.02	-10.96	-3.35	-3.80	26.16	-141.74	-43.38	-49.20	1668	0.00	0.99885935	4553.8	0.223	0.69	0.69
	U_{28}-L_{28}	5.31	-165.29	2.90	-10.96	-3.35	-3.80	3.15	-170.29	-15.13	-49.20	1668	0.00	0.99885935	4553.8	0.223	0.69	0.69
	U_{28}-L_{29}	-140.16	-260.93	0.32	-1.11	-11.58	-10.61	4.11	-14.32	-149.77	-139.90	1668	0.00	0.99885935	4553.8	0.223	0.69	0.69
	U_{29}-L_{29}	-176.86	-357.83	-376.92	-521.08	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99885935	6214.6	0.723	0.85	0.89
	U_{30}-L_{30}	-187.10	-276.08	1.08	-1.51	-14.26	-16.69	14.03	19.52	-184.50	-215.99	1668	0.00	0.99885935	4553.8	0.223	0.69	0.69
	U_{30}-L_{30}	-322.62	-140.33	1.08	-1.51	-14.26	-16.69	14.03	19.52	-184.50	-215.99	1668	0.00	0.99885935	4553.8	0.223	0.69	0.69
	U_{30}-L_{31}	-162.95	-104.84	0.82	2.39	-16.50	-4.29	10.57	30.87	-213.44	-55.49	1668	0.00	0.99885935	4553.8	0.223	0.69	0.69
	U_{31}-L_{31}	-147.84	-26.72	1.80	2.84	-13.84	-4.61	23.31	36.72	-179.02	-59.68	1668	0.00	0.99885935	4553.8	0.223	0.69	0.69
	U_{31}-L_{32}	-136.13	-185.29	2.90	-10.96	-3.35	-3.80	3.15	-170.29	-15.13	-49.20	1668	0.00	0.99885935	4553.8	0.223	0.69	0.69
	U_{32}-L_{32}	10.77	46.02	2.57	1.50	-9.71	-1.05	33.30	19.34	-125.66	-13.62	1668	0.00	0.99885935	4553.8	0.223	0.69	0.69
	U_{33}-L_{33}	426.23	9.05	12.67	-10.16	-6.60	6.83	169.28	-135.67	-8.06	11.02	1668	0.00	0.99885935	4553.8	0.223	0.69	0.69
	U_{34}-L_{34}	5.31	144.44	2.90	-10.96	-3.35	-3.80	3.15	-170.29	-15.13	-49.20	1668	0.00	0.99885935	4553.8	0.223	0.69	0.69
	U_{35}-L_{35}	128.06	54.04	2.88	4.92	-2.95	-7.10	38.52	-65.77	-39.42	-64.80	1668	0.00	0.99885935	4553.8	0.223	0.69	0.69
	U_{36}-L_{36}	70.10	43.63	3.00	2.18	-7.52	-5.10	45.08	29.12	-100.41	-108.24	1668	0.00	0.99885935	4553.8	0.223	0.69	0.69
	U_{37}-L_{37}	14.16	13.92	2.89	3.41	-7.68	-7.73	42.46	11.04	-157.01	-119.27	1668	0.00	0.99885935	4553.8	0.223	0.69	0.69
	U_{38}-L_{38}	-8.36	-30.51	1.85	-2.65	-15.96	3.62	24.70	-35.42	-213.22	48.34	1668	0.00	0.99885935	4553.8	0.223	0.69	0.69

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) Start (k-ft)	Pedestrian Load (Min) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0-L_1	4.07	-17.93	-0.86	0.72	0.96	-0.46	-11.42	-9.62	-79.68	-86.29
	U_1-L_1	1.00	-1.00	0.00	0.00	0.00	0.00	-67.51	-21.70	-70.58	10.57
	U_1-L_2	2.10	-2.28	-0.21	0.83	0.43	3.43	-2.01	-2.81	-53.83	32.73
	U_2-L_2	-10.77	-2.78	10.61	-0.36	0.00	0.00	51.38	45.89	81.17	49.03
	U_2-L_3	-0.54	-2.91	-1.94	-11.68	0.00	0.00	62.63	38.34	-3.77	-2.14
	U_3-L_3	-14.95	-4.02	90.22	12.18	0.00	0.00	44.86	35.57	53.24	-14.50
	U_3-L_4	-28.61	-2.24	85.01	0.28	0.00	0.00	-118.43	-98.82	22.77	-95.54
	U_4-L_4	-29.54	17.03	-73.83	0.79	0.00	0.00	-279.13	-93.76	-144.75	-114.90
	U_4-L_5	-4.88	33.74	-28.22	2.07	0.00	0.00	-243.11	-76.58	-273.45	-216.12
	U_5-$L

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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

Maximum Axial with Moment Interaction Check

M_z Information

Location	Member	ZZ Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{bot} (in^3)	S_{top} (in^3)	Z_z (in^3)	I_{zz} (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_{mx}	Equivalent Mom. Factor C_{mx}	Pass
Structure 1	L_0-L_1	-44.17	-99.07	3.94	-5.60	-0.63	0.65					10.97	-225.98	88.35	-117.54	83.6	83.58	74.65	100.97	2577	1626.3	1.21	3332	0.99909394	2705.4	-0.049	0.58	0.58	—	—	—	—
	L_1-L_2	-131.02	-112.64	1.84	-7.53	-5.03	-3.73					202.31	-277.16	83.05	-211.25	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99909394	2705.4	-0.730	0.31	0.31	—	—	—	—
	L_2-L_3	-137.65	-79.95	2.93	-1.84	-11.51	-8.75					10.90	24.64	-153.72	-118.60	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99909394	2705.4	-0.730	0.31	0.31	—	—	—	—
	L_3-L_4	18.36	16.12	8.89	3.33	-12.42	-6.74					11.93	44.47	-165.97	-89.98	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	-68.34	210.22	2.62	-0.26	-3.91	-2.12					34.99	-35.12	-191.46	8.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_5-L_6	8.36	229.14	2.02	3.93	-8.52	-5.87					26.95	52.48	-113.86	-11.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_6-L_7	61.83	171.52	2.72	-0.24	-4.14	-2.72					40.92	-4.49	-118.79	-11.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_7-L_8	1.61	409.47	0.76	3.27	-6.15	7.89					10.18	43.74	-82.16	106.43	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	-439.88	-25.12	7.57	-5.23	-5.28	0.14					97.97	-2.94	-3.60	1.75	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}	-264.03	-117.02	3.87	-4.76	-6.43	-1.41					30.07	-61.52	-57.33	-18.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{10}-L_{11}	168.12	-117.13	3.54	1.68	-3.04	-2.92					45.84	21.75	-39.32	-37.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{11}-L_{12}	23.72	212.27	2.98	4.07	-3.51	2.67					38.50	-38.64	-44.31	26.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{12}-L_{13}	-19.73	-128.50	2.22	1.07	-5.61	-5.26					28.66	-13.96	-86.25	-81.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{13}-L_{14}	-175.78	-425.21	4.47	-11.92	-7.55	-9.90					57.80	-154.20	-87.68	-125.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{14}-L_{15}	-408.28	-20.79	7.24	-4.23	-5.20	-0.09					94.80	-2.86	-279.79	24.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{15}-L_{16}	-209.39	-318.68	0.83	0.10	-12.87	-10.55					10.71	1.24	-166.50	-136.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{16}-L_{17}	-374.86	83.64	0.50	-2.63	-13.54	-6.31					8.42	-2.94	-176.15	-72.74	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}	-171.07	19.86	0.32	-0.55	-6.67	0.93					4.18	-7.05	-104.40	12.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{18}-L_{19}	-208.33	253.78	0.42	-0.21	-3.39	2.42					3.41	-3.33	-134.79	43.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{19}-L_{20}	-84.78	1.02	0.31	-3.03	-7.07	3.11					4.00	-4.26	-97.69	40.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{20}-L_{21}	10.35	-213.29	2.68	-7.95	-0.33	0.72					34.20	-101.57	-4.19	9.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{21}-L_{22}	56.16	-247.73	3.16	-9.34	-0.36	-3.15					48.36	-117.28	-28.64	46.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{22}-L_{23}	-0.36	-194.33	2.78	-6.13	-4.55	-5.00					35.53	-78.52	-58.42	-83.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{23}-L_{24}	-19.89	-91.90	2.32	-3.61	-5.37	-5.12					34.84	-57.28	-51.89	-57.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{24}-L_{25}	-287.80	-299.08	1.00	-3.47	-15.05	-11.48					12.79	-44.32	-152.32	-146.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{25}-L_{26}	-143.71	-63.22	1.64	-1.64	-20.51	-13.80					1.60	-5.82	-200.51	-113.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{26}-L_{27}	-467.54	-273.29	1.93	2.92	-23.01	-16.21					24.71	-37.24	-294.02	-208.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{27}-L_{28}	-310.55	-45.89	2.38	4.38	-20.32	8.33					30.34	55.90	-299.65	-106.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{28}-L_{29}	-409.28	-20.79	2.70	4.23	-20.59	4.23					36.31	33.81	-280.45	-6.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{29}-L_{30}	-261.97	188.33	2.11	4.31	-11.98	-1.10					26.51	55.58	-153.10	-14.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{30}-L_{31}	-171.20	283.94	2.64	2.67	-11.13	-2.47					14.13	31.44	-152.23	-20.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{31}-L_{32}	-131.48	389.15	2.41	4.30	-10.31	-0.16					30.84	54.99	-131.76	-2.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{32}-L_{33}	-164.35	-140.48	3.80	-1.13	-12.79	-2.66					48.52	-14.49	-163.45	-34.27	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_{33}-L_{34}	-267.47	594.41	2.63	5.30	-13.57	0.99					33.16	69.59	-169.99	14.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{34}-L_{35}	-912.03	-326.86	15.04	-6.79	-0.67	-0.01					189.83	-85.74	8.43	-0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{35}-L_{36}	-289.13	419.90	3.53	5.36	-1.91	-1.48					36.55	70.49	-140.48	-19.71	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}	-515.59	-35.24	6.20	-3.42	-4.18	-1.86					78.30	-43.23	-52.72	-23.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{37}-L_{38}	-318.61	-28.58	4.26	1.77	-4.51	-3.66					51.31	-22.33	-62.87	-27.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{38}-L_{39}	-252.02	-29.09	4.09	1.77	-4.51	-3.66					51.31	-22.33	-62.87	-27.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{39}-L_{40}	-230.55	-46.37	2.89	-11.15	-6.34	-4.91					36.44	-140.78	-79.98	-92.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{40}-L_{41}	-41.53	-186.96	1.97	1.77	-13.60	-17.72					24.92	22.28	-171.74	-223.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{41}-L_{42}	-197.37	-29.09	2.73	1.77	-4.51	-3.66					51.31	-22.33	-62.87	-27.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{42}-L_{43}	-108.55	-10.73	1.21	3.28	-15.68	-6.06					15.28	41.36	-197.94	-76.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{43}-L_{44}	-54.07	313.17	2.32	3.28	-15.68	-6.06					15.28	41.36	-197.94	-76.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{44}-L_{45}	-65.47	170.47	1.55	3.61	-9.65	-3.38					19.61	45.53	-121.91	-42.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{45}-L_{46}	-30.98	151.24	2.80	1.43	-12.89	1.88					35.39	18.00	-162.70	23.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{46}-L_{47}	-23.07	313.17	2.47	3.61	-9.65	-3.38					19.61	45.53	-121.91	-42.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{47}-L_{48}	-19.38	-193.41	2.41	-1.67	-11.91	-6.71					30.36	-21.08	-150.40	-84.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{48}-L_{49}	-273.03	-178.20	1.53	1.76	-5.59	-3.36					8.79	-16.58	-83.36	-46.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{49}-L_{50}	-740.88	-268.17	15.20	-8.40	-0.90	0.07					195.20	-107.37	-11.47	0.88	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_{50}-L_{51}	-140.43	-76.07	2.30	-0.25	-11.00	-9.76					29.36	-3.19	-140.51	-9.74	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_{51}-L_{52}	-277.39	-114.86	1.54	1.76	-5.59	-3.36					8.79	-16.58	-83.36	-46.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{52}-L_{53}	-147.94	-145.21	4.49	-8.48	-3.57	-3.40					57.37	-108.29	-45.56	-43.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{53}-L_{54}	-140.43	-76.07	2.30	-0.25	-11.00	-9.76					46.46	-3.19	-140.51	-9.74	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_{54}-L_{55}	-95.37	-212.64	3.69	-6.71	-6.11	-7.31					47.08	-85.73	-78.06	-83.43	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_{55}-L_{56}	-182.93	-415.63	3.34	1.80	-20.39	-11.59					42.71	-22.98	-260.50	-148.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{56}-L_{57}	-370.36	-165.17	2.26	0.55	-23.27	9.48					28.84	7.00	-297.33	-121.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{57}-L_{58}	-224.72	-278.52	1.85	-18.01	-0.76	-13.41					14.22	-23.94	-239.54	-10.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{58}-L_{59}	-304.19	-21.34	0.93	-0.22	-17.11	-3.79					11.87	-2.77	-218.62	-48.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{59}-L_{60}	-200.77	149.87	1.36	2.18	-8.47	-4.82					10.21	31.23	-120.34	-50.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{60}-L_{61}	-227.31	59.39	0.71	-0.57	-11.75	2.45					9.11	-7.32	-150.15	31.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{61}-L_{62}	-179.11	63.98	0.66	-0.57	-11.75	2.45					9.11	-7.32	-150.15	31.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{62}-L_{63}	-43.83	-117.87	3.51	-6.13	-0.30	0.30					45.37	-79.25	-3.82	0.88	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_{63}-L_{64}	-152.35	-177.82	3.71	-6.57	-0.74	-1.43					47.99	-84.98	-9.63	-18.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{64}-L_{65}	-55.48	-320.34	2.72	-2.61	-5.39	-6.91					35.15	-60.36	-69.79	-89.37	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_{65}-L_{66}	-64.07	-371.05	2.84	-20.31	-11.05	-12.84					10.88	-262.82	-143.10	-166.17	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_{66}-L_{67}	-370.76	82.43	1.85	-18.01	-0.76	-13.41					14.22	-23.94	-239.54	-10.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{67}-L_{68}	-200.77	149.87	1.36	2.18	-8.47	-4.82					17.54	28.19	-109.58	-10.64	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_{68}-L_{69}	-131.78	166.76	2.56	-0.18	-8.46	2.39					33.12	-2.35	-109.42	30.90	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_{69}-L_{70}	-31.10	59.39	0.71	-0.57	-11.75	2.45					9.11	-7.32	-150.15	31.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{70}-L_{71}	-361.88	-172.92	1.70	-0.28	-0.27	0.10					116.26	-30.49	-3.63	1.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{71}-L_{72}	-91.92	-21.64	0.51	-4.75	-2.45	-0.76					60.59	-80.28	-43.48	-32.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{72}-L_{73}	-189.90	5.62	3.57	-8.43	-4.55	-5.76					47.64	-112.59	-57.42	-125.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{73}-L_{74}	-38.98	-56.51	2.05	-0.94	-11.49	-8.80					27.37	-12.54	-153.49	-118.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{74}-L_{75}	-66.52	-25.78	0.58	-0.57	-7.42	3.36					7.70	-7.59	-99.17	44.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

M_y Information

Location	Member	YY Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{bot} (in^3)	S_{top} (in^3)	Z_y (in^3)	I_{yy} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F'c/S_{bot}	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor C_{mx}	Pass
Structure 1	L_0-L_1	-7.53	-27.68	-0.49	-1.83	0.00	0.00	0.00	0.00	0.00	0.00	-12.61	-46.29	-3.46	-12.68	128.3	128.29	121.83	141.18	626.8	1.10	4659	—	0.99905042	4225.3	0.272	0.71	0.71	—
	L_1-L_2	-37.69	-34.11	114.14	-12.64	0.00	0.00	0.00	0.00	0.00	0.00	-91.91	-46.46	105.48	-18.57	128.3	128.29	115.05	141.18	626.8	1.10	4659	—	0.99905042	4225.3	-0.175	0.53	0.53	—
	L_2-L_3	-2.31	7.53	-29.23	12.00	0.00	0.00	0.00	0.00	0.00	0.00	-24.01	-5.80	-52.51	1.21	128.3	128.29	115.05	141.18	626.8	1.10	4659	—	0.99905042	4225.3	-0.633	0.35	0.35	—
	L_3-L_4	13.24	1.68	49.79	16.00	0.00	0.00	0.00	0.00	0.00	0.00	9.67	63.13	57.19	81.75	171.6	171.62	158.81	188.47	749.5	1.10	6220	—	0.99919516	5651.9	0.700	0.88	0.88	—
	L_4-L_5	10.87	3.91	-34.45	46.29	0.00	0.00	0.00	0.00	0.00	0.00	7.76	25.80	5.81	27.23	128.3	128.29	115.05	141.18	626.8	1.10	4659	—	0.99905042	4225.3	0.272	0.71	0.71	—
	L_5-L_6	46.55	121.12	99.65	113.58	0.00	0.00	0.00	0.00	0.00	0.00	28.81	91.29	0.50	-14.24	128.3	128.29	115.05	141.18	626.8	1.10	4659	—	0.99905042	4225.3	0.272	0.71	0.71	—
	L_6-L_7	5.77	-2.56	-11.49	72.74	0.00	0.00	0.00	0.00	0.00	0.00	81.29	-42.07	58.69	17.57	288.5	288.46	246.91	296.71	1053.1	1.13	13312	—	0.99917326	11896.3	-0.161	0.20	0.20	—
	L_7-L_8	-48.73	-38.48	10.42	-66.38	305.4	305.44	352.52	403.40	1093.1	1.13	13312	—	0.99917326	11896.3	-0.157	0.54	0.54	—	—	—	—
	L_8-L_9	-6.74	14.44	-3.22	-4.71	0.00	0.00	0.00	0.00	0.00	0.00	-126.91	-226.36	-151.81	355.4	355.44	304.93	403.40	1093.1	1.13	13312	—	0.99918864	11896.5	0.832	0.93	0.93	—
	L_9-L_{10}	-17.98	-18.01	60.24	-14.03	0.00	0.00	0.00	0.00	0.00	0.00	-122.22	3.00	-14.03	65.93	288.5	288.46	246.71	327.99	1086.4	1.12	13626	—	0.99919549	9459.8	0.029	0.59	0.59	—
	L_{10}-L_{11}	3.79	12.36	-14.65	-1.75	0.00	0.00	0.00	0.00	0.00	0.00	116.87	-20.48	92.50	-38.81	158.2	158.16	151.51	173.24	694.3	1.10	5717	—	0.99917970	5208.8	-0.175	0.53	0.53	—
	L_{11}-L_{12}	-35.45	-3.43	-2.42	1.58	0.19	0.19	0.00	0.00	0.00	0.00	4.55	5.43	-2.79	32.68	158.2	158.16	143.32	172.24	694.3	1.10	5717	—	0.99917850	5208.8	0.830	0.93	0.93	—
	L_{12}-L_{13}	-10.91	-3.51	-2.27	30.92	0.00	0.00	0.00	0.00	0.00	0.00	-77.66	56.95	107.83	101.70	233.3	233.26	201.34	259.94	975.8	1.11	8759	—	0.99916956	7679.8	0.946	0.98	0.98	—
	L_{13}-L_{14}	-24.05	-47.48	59.29	10.70	0.00	0.00	0.00	0.00	0.00	0.00	-15.83	39.34	87.31	36.30	321.7	321.70	275.89	363.71	1221.7	1.13	12002	—	0.99914170	10568.7	0.416	0.77	0.77	—
	L_{14}-L_{15}	-2.11	-5.62	-0.45	2.63	0.00	0.00	0.00	0.00	0.00	0.00	-128.44	6.26	-8.97	36.80	321.7	321.70	275.89	363.71	1221.7	1.13	14237	—	0.99914170	12556.7	0.558	0.82	0.82	—
	L_{15}-L_{16}	-105.50	-76.20	-69.19	-125.16	375.5	375.47	322.87	431.42	1347.7	1.15	14237	—	0.99912772	12556.7	0.553	0.82	0.82	—
	L_{16}-L_{17}	-134.30	-31.41	-102.21	8.82	302.9	302.95	259.42	342.

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
Condition: As-Built

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

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

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

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

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Min) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	L_0-L_1	-56.29	86.22	0.45	-0.60	3.59	3.95	0.00	0.00	0.00	0.00
	L_1-L_2	-14.44	23.27	0.60	-0.60	-3.16	3.08	0.00	0.00	0.00	0.00
	L_2-L_3	1.68	-5.55	0.72	0.18	-10.87	-34.24	38.90	0.00	0.00	0.00
	L_3-L_4	36.84	-39.22	1.76	-1.54	-2.20	-2.35	0.00	0.00	0.00	0.00
	L_4-L_5	49.77	-49.19	2.52	-2.21	-0.73	-0.78	0.00	0.00	0.00	0.00
	L_5-L_6	57.71	-69.80	2.70	-3.02	-0.24	0.08	0.00	0.00	0.00	0.00
	L_6-L_7	63.32	-87.29	3.24	-3.93	0.45	0.92	0.00	0.00	0.00	0.00
	L_7-L_8	106.28	-118.16	4.17	-4.29	-0.11	0.10	0.00	0.00	0.00	0.00
	L_8-L_9	-10.96	6.72	4.80	-5.74	-3.52	4.23	0.00	0.00	0.00	0.00
	L_9-L_{10}	-144.91	167.70	0.28	-0.28	-3.53	3.68	0.00	0.00	0.00	0.00
	L_{10}-L_{11}	-102.02	95.66	0.18	-0.17	-2.80	3.05	0.00	0.00	0.00	0.00
	L_{11}-L_{12}	-111.13	106.65	0.39	-0.38	-3.15	3.52	0.00	0.00	0.00	0.00
	L_{12}-L_{13}	-96.42	93.90	0.55	-0.41	-3.15	3.15	0.00	0.00	0.00	0.00
	L_{13}-L_{14}	-90.91	75.94	0.77	-0.76	-2.93	3.05	0.00	0.00	0.00	0.00
	L_{14}-L_{15}	-33.93	39.66	0.77	-0.77	-2.56	2.80	0.00	0.00	0.00	0.00
	L_{15}-L_{16}	8.32	-15.87	2.79	-2.90	-1.50	1.61	0.00	0.00	0.00	0.00
	L_{16}-L_{17}	47.73	-50.39	2.50	-2.68	-0.69	0.89	0.00	0.00	0.00	0.00
	L_{17}-L_{18}	61.55	-72.81	2.85	-2.93	0.40	0.40	0.00	0.00	0.00	0.00
	L_{18}-L_{19}	133.11	-138.23	4.80	-5.04	0.00	1.06	0.00	0.00	0.00	0.00
	L_{19}-L_{20}	157.87	-153.88	5.52	-5.38	-0.57	0.51	0.00	0.00	0.00	0.00
	L_{20}-L_{21}	131.38	-213.66	3.97	-5.09	-0.25	0.41	0.00	0.00	0.00	0.00
	L_{21}-L_{22}	-147.13	191.00	0.43	-0.50	-3.53	3.94	0.00	0.00	0.00	0.00
	L_{22}-L_{23}	-122.87	130.77	0.52	-0.53	-4.44	4.39	0.00	0.00	0.00	0.00
	L_{23}-L_{24}	-117.67	129.56	0.64	-0.62	-5.80	57.21	0.00	0.00	0.00	0.00
	L_{24}-L_{25}	-62.46	69.03	0.41	-0.42	-2.49	2.50	0.00	0.00	0.00	0.00
	L_{25}-L_{26}	-37.86	-43.29	0.67	-0.67	-2.17	2.17	0.00	0.00	0.00	0.00
	L_{26}-L_{27}	-9.11	15.69	1.26	-1.21	-2.42	2.60	0.00	0.00	0.00	0.00
	L_{27}-L_{28}	14.84	-14.93	1.48	-1.46	-2.12	2.18	0.00	0.00	0.00	0.00
	L_{28}-L_{29}	39.69	-45.43	1.63	-1.60	-2.11	2.11	0.00	0.00	0.00	0.00
	L_{29}-L_{30}	88.81	-97.92	3.56	-3.61	-0.78	0.69	0.00	0.00	0.00	0.00
	L_{30}-L_{31}	133.08	-133.02	4.66	-4.64	-0.90	1.20	0.00	0.00	0.00	0.00
	L_{31}-L_{32}	140.09	-147.00	4.23	-4.47	-0.21	-0.57	0.00	0.00	0.00	0.00
	L_{32}-L_{33}	148.96	-153.44	4.20	-4.34	-0.10	0.15	0.00	0.00	0.00	0.00
	L_{33}-L_{34}	143.67	-139.95	4.23	-4.29	0.00	0.00	0.00	0.00	0.00	0.00
	L_{34}-L_{35}	185.41	-182.32	5.05	-4.83	-0.46	0.45	0.00	0.00	0.00	0.00
	L_{35}-L_{36}	72.60	-71.13	2.61	-2.49	-0.60	0.59	0.00	0.00	0.00	0.00
	L_{36}-L_{37}	-128.28	129.98	0.47	-0.42	-4.32	3.98	0.00	0.00	0.00	0.00
	L_{37}-L_{38}	-76.82	76.82	0.45	-0.45	-2.61	2.61	0.00	0.00	0.00	0.00
	L_{38}-L_{39}	-125.94	122.64	0.48	-0.45	-4.81	4.80	0.00	0.00	0.00	0.00
	L_{39}-L_{40}	-109.69	106.91	0.63	-0.62	-4.71	4.63	0.00	0.00	0.00	0.00
	L_{40}-L_{41}	-53.25	53.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Structure 2	L_{41}-L_{42}	-43.25	43.74	0.72	-0.63	-2.65	2.74	0.00	0.00	0.00	0.00
	L_{42}-L_{43}	-29.76	34.99	0.72	-0.72	-2.64	2.64	0.00	0.00	0.00	0.00
	L_{43}-L_{44}	-1.28	1.60	1.39	-1.51	-1.68	1.73	0.00	0.00	0.00	0.00
	L_{44}-L_{45}	28.83	-28.83	2.77	-2.77	-2.64	2.64	0.00	0.00	0.00	0.00
	L_{45}-L_{46}	46.57	-51.18	2.65	-2.76	-0.88	0.73	0.00	0.00	0.00	0.00
	L_{46}-L_{47}	62.68	-61.36	3.63	-3.39	-0.63	0.61	0.00	0.00	0.00	0.00
	L_{47}-L_{48}	106.60	-101.54	5.49	-5.34	-0.38	0.25	0.00	0.00	0.00	0.00
	L_{48}-L_{49}	106.60	-105.79	5.49	-5.56	-0.67	0.65	0.00	0.00	0.00	0.00
	L_{49}-L_{50}	111.13	-111.13	5.66	-5.66	-0.65	0.65	0.00	0.00	0.00	0.00
	L_{50}-L_{51}	114.56	-114.55	5.53	-5.24	-0.33	0.27	0.00	0.00	0.00	0.00
	L_{51}-L_{52}	-13.74	5.73	5.62	-5.62	-0.66	0.66	0.00	0.00	0.00	0.00
	L_{52}-L_{53}	-121.12	118.67	0.51	-0.47	-4.01	3.72	0.00	0.00	0.00	0.00
	L_{53}-L_{54}	-92.37	86.40	0.51	-0.46	-3.60	3.61	0.00	0.00	0.00	0.00
	L_{54}-L_{55}	-73.59	67.39	0.56	-0.54	-3.15	3.15	0.00	0.00	0.00	0.00
	L_{55}-L_{56}	-96.77	103.11	0.22	-0.14	-4.03	4.06	0.00	0.00	0.00	0.00
	L_{56}-L_{57}	-51.92	51.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{57}-L_{58}	-63.45	70.59	0.54	-0.47	-3.51	3.59	0.00	0.00	0.00	0.00
	L_{58}-L_{59}	-32.66	38.67	0.70	-0.76	-1.98	2.17	0.00	0.00	0.00	0.00
	L_{59}-L_{60}	-16.10	17.75	1.50	-1.50	-2.00	2.00	0.00	0.00	0.00	0.00
	L_{60}-L_{61}	4.46	-6.40	2.22	-2.39	-1.62	1.48	0.00	0.00	0.00	0.00
	L_{61}-L_{62}	33.37	-34.26	2.63	-2.63	-0.88	0.88	0.00	0.00	0.00	0.00
	L_{62}-L_{63}	47.22	-50.55	2.81	-2.91	-0.50	0.50	0.00	0.00	0.00	0.00
	L_{63}-L_{64}	62.89	-62.89	3.63	-3.63	-0.63	0.63	0.00	0.00	0.00	0.00
	L_{64}-L_{65}	104.86	-112.00	5.57	-5.50	-0.71	0.67	0.00	0.00	0.00	0.00
	L_{65}-L_{66}	108.12	-102.78	4.05	-5.42	-0.36	0.59	0.00	0.00	0.00	0.00
	L_{66}-L_{67}	-124.18	124.18	0.55	-0.55	-4.28	4.28	0.00	0.00	0.00	0.00
	L_{67}-L_{68}	-109.22	116.95	0.38	-0.35	-4.30	4.23	0.00	0.00	0.00	0.00
	L_{68}-L_{69}	-68.65	68.79	0.51	-0.32	-2.67	2.65	0.00	0.00	0.00	0.00
	L_{69}-L_{70}	-16.10	17.75	1.50	-1.50	-2.00	2.00	0.00	0.00	0.00	0.00
	L_{70}-L_{71}	-5.41	11.55	1.98	-2.06	-1.90	3.00	0.00	0.00	0.00	0.00
	L_{71}-L_{72}	27.86	-30.67	1.73	-1.76	-1.45	1.57	0.00	0.00	0.00	0.00
	L_{72}-L_{73}	59.56	-62.79	2.67	-2.67	-0.89	0.89	0.00	0.00	0.00	0.00
	L_{73}-L_{74}	85.75	-83.03	3.18	-3.29	-0.66	0.46	0.00	0.00	0.00	0.00
	L_{74}-L_{75}	133.50	-131.63	3.50	-3.50	-0.75	0.75	0.00	0.00	0.00	0.00
Structure 3	L_{75}-L_{76}	95.00	-87.91	3.24	-3.65	-0.13	-0.15	0.00	0.00	0.00	0.00
	L_{76}-L_{77}	139.46	-154.10	4.47	-4.86	-0.15	0.14	0.00	0.00	0.00	0.00
	L_{77}-L_{78}	52.77	-74.32	3.93	-5.02	-4.23	4.77	0.00	0.00	0.00	0.00
	L_{78}-L_{79}	-62.87	69.94	0.24	-0.24	-3.18	3.18	0.00	0.00	0.00	0.00
	L_{79}-L_{80}	-41.65	35.38	0.16	-0.05	-2.80	2.97	0.00	0.00	0.00	0.00
	L_{80}-L_{81}	-36.85	40.05	0.22	-0.16	-2.06	2.80	0.00	0.00	0.00	0.00
	L_{81}-L_{82}	-39.84	39.91	0.63	-0.51	-2.39	2.34	0.00	0.00	0.00	0.00
	L_{82}-L_{83}	-38.87	40.30	1.97	-2.14	-2.20	2.23	0.00	0.00	0.00	0.00
	L_{83}-L_{84}	-13.42	14.14	2.66	-3.12	-0.96	0.76	0.00	0.00	0.00	0.00
	L_{84}-L_{85}	5.87	-8.62	3.82	-3.61	-0.91	0.80	0.00	0.00	0.00	0.00
	L_{85}-L_{86}	20.15	-40.81	2.67	-4.00	-1.23	-0.38	0.00	0.00	0.00	0.00

ZZ Max. Neg. Mom.

Member	Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)
L_0-L_1	-65.33	101.69	-135.47	180.63	15.4	15.42	15.42	23.71	2	751.9
L_1-L_2	-8.33	19.82	-73.58	83.69	15.4	15.42	15.42	23.71	2	751.9
L_2-L_3	20.80	-31.30	30.17	43.35	15.4	15.42	15.42	23.71	2	751.9
L_3-L_4	78.49	-72.55	9.72	-4.94	15.4	15.42	15.42	23.71	2	751.9
L_4-L_5	104.96	-101.26	30.17	-23.58	15.4	15.42	15.42	23.71	2	751.9
L_5-L_6	121.82	-143.20	70.85	-89.31	19.4	19.37	19.31	29.87	3	907.0
L_6-L_7	143.44	-157.63	80.47	-94.28	20.80	20.67	34.66	46.71	4	1076.0
L_7-L_8	210.92	-228.15	136.28	-151.92	18.9	18.45	18.36	30.78	7	1020.9
L_8-L_9	69.14	-90.91	-75.36	82.26	107.1	107.13	107.11	162.71	26	2056.9
L_9-L_{10}	-183.63	213.35	-247.75	279.82	33.1	33.05	32.91	54.51	14	1408.8
L_{10}-L_{11}	-129.63	121.46	-178.63	175.73	35.5	35.52	35.44	58.46	14	1309.7
L_{11}-L_{12}	-137.95	205.04	-187.46	282.14	42.74	42.74	42.74	65.30	8	1389.6
L_{12}-L_{13}	-116.11	115.24	-178.35	174.99	21.1	21.09	21.09	35.46	10	1137.6
L_{13}-L_{14}	-66.18	96.02	-128.53	149.93	17.2	17.24	17.24	26.54	2	824.7
L_{14}-L_{15}	-27.03	29.46	-77.38	78.48	15.4	15.42	15.42	23.71	2	751.9
L_{15}-L_{16}	-37.97	49.35	-14.34	3.05	15.4	15.42	15.42	23.71	2	751.9
L_{16}-L_{17}	-37.97	53.63	-5.69	-15.60	15.4	15.42	15.42	23.71	2	751.9
L_{17}-L_{18}	-36.84	-37.92	-5.18	-53.30	15.4	15.42	15.42	23.71	2	751.9
L_{18}-L_{19}	-63.31	-68.26	-17.71	-7.21	0.00	0.00	0.00	0.00	0.00	0.00
L_{19}-L_{20}	-71.42	-69.62	-7.34	6.56	0.00	0.00	0.00	0.00	0.00	0.00
L_{20}-L_{21}	-51.33	-65.79	-3.18	9.30	0.00	0.00	0.00	0.00	0.00	0.00
L_{21}-L_{22}	-147.13	191.00	-194.15	239.12	-62.66	-62.66	-62.66	-62.66	0.00	0.00
L_{22}-L_{23}	-151.16	161.22	-233.44	242.85	46.7	46.71	46.71	71.43	10	1711.0
L_{23}-L_{24}	-117.67	129.56	-180.84	199.12	34.63	34.63	34.63	53.00	10	1622.1
L_{24}-L_{25}	-74.46	82.80	-122.51	131.18	21.5	21.54	21.54	33.27	5	987.9
L_{25}-L_{26}	-38.09	-43.29	-87.14	-83.14	15.4	15.42	15.42	23.71	2	751.9
L_{26}-L_{27}	16.07	-15.45	-30.96	33.15	0.00	0.00	0.00	0.00	0.00	0.00
L_{27}-L_{28}	18.86	-18.69	-27.06	27.84	15.4	15.42	15.42	23.71	2	751.9
L_{28}-L_{29}	25.78	-23.58	-12.32	12.94	15.4	15.42	15.42	23.71	2	751.9
L_{29}-L_{30}	45.51	-46.17	-9.97	8.84	20.80	20.67	34.64	51.03	5	1037.5
L_{30}-L_{31}	73.38	-73.38	-2.48	2.48	20.80	20.67	34.64	51.03	5	1037.5
L_{31}-L_{32}	54.06	-57.06	-2.71	-0.84	0.00	0.00	0.00	0.00	0.00	0.00
L_{32}-L_{33}	53.61	-55.40	-1.29	1.93	0.00	0.00	0.00	0.00	0.00	0.00
L_{33}-L_{34}	54.67	-54.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L_{34}-L_{35}	64.53	-61.71	-5.86	5.74	0.00	0.00	0.00	0.00	0.00	0.00
L_{35}-L_{36}	27.60	-27.60	-2.61	2.61	0.00	0.00	0.00	0.00	0.00	0.00
L_{36}-L_{37}	5.92	-5.24	-54.54	50.25	0.00	0.00	0.00	0.00	0.00	0.00
L_{37}-L_{38}	29.82	-29.82	-2.61	2.61	0.00	0.00	0.00	0.00	0.00	0.00
L_{38}-L_{39}	6.00	-5.64	-60.70	60.93	0.00	0.00	0.00	0.00	0.00	0.00
L_{39}-L_{40}	7.90	-7.76	-59.45	61.03	0.00	0.00	0.00	0.00	0.00	0.00
L_{40}-L_{41}	26.63	-26.63	-26.63	26.63	0.00	0.00	0.00	0.00	0.00	0.00
L_{41}-L_{42}	9.08	-7.98	-33.48	33.75	101.90	17.2	17.24	26.54	2	824.7
L_{42}-L_{43}	11.78	-14.90	-34.92	34.92	101.90	17.2	17.24	26.54	2	824.7
L_{43}-L_{44}	17.52	-19.04	-21.22	21.83	0.00	0.00	0.00	0.00	0.00	0.00
L_{44}-L_{45}	28.83	-28.83	-2.77	-2.77	15.4	15.42	15.42	23.71	2	751.9
L_{45}-L_{46}	33.47	-34.80	-11.08	9.20	0.00	0.00	0.00	0.00	0.00	0.00
L_{46}-L_{47}	45.80	-46.30	-7.95	7.69	0.00	0.00	0.00	0.00	0.00	0.00
L_{47}-L_{48}	69.34	-70.25	-8.48	8.23	0.00	0.00	0.00	0.00	0.00	0.00
L_{48}-L_{49}	69.64	-69.64	-8.23	8.23	0.00	0.00	0.00	0.00	0.00	0.00
L_{49}-L_{50}	69.80	-66.09	-4.13	3.43	0.00	0.00	0.00	0.00	0.00	0.00
L_{50}-L_{51}	73.79	-73.79	-5.62	5.62	0.00	0.00	0.00	0.00	0.00	0.00
L_{51}-L_{52}	6.46	-6.03	-51.77	-47.49	0.00	0.00	0.00	0.00	0.00	0.00
L_{52}-L_{53}	5.17	-7.14	-45.97	-46.07	0.00	0.00	0.00	0.00	0.00	0.00
L_{53}-L_{54}	11.39	-11.39	-39.97	-39.97	0.00	0.00	0.00	0.00	0.00	0.00
L_{54}-L_{55}	2.77	-1.74	-51.45	-51.82	0.00	0.00	0.00	0.00	0.00	0.00
L_{55}-L_{56}	6.46	-6.03	-51.77	-47.49	0.00	0.00	0.00	0.00	0.00	0.00
L_{56}-L_{57}	6.85	-5.98	-44.90	-40.34	0.00	0.00	0.00	0.00	0.00	0.00
L_{57}-L_{58}	8.90	-9.76	-25.35	-27.66	0.00	0.00	0.00	0.00	0.00	0.00
L_{58}-L_{59}	2.90	-2.90	-29.35	-34.52	0.00	0.00	0.00	0.00	0.00	0.00
L_{59}-L_{60}	28.31	-30.55	-20.63	-18.86	0.00	0.00	0.00	0.00	0.00	0.00
L_{60}-L_{61}	33.37	-34.26	-2.63	-2.63	0.00	0.00	0.00	0.00	0.00	0.00
L_{61}-L_{62}	35.89	-37.20	-6.34	6.40	0.00	0.00	0.00	0.00	0.00	0.00
L_{62}-L_{63}	62.89	-62.89	-3.63	3.63	0.00	0.00	0.00	0.00	0.00	0.00
L_{63}-L_{64}	71.14	-70.27	-6.07	6.07	0.00	0.00	0.00	0.00	0.00	0.00
L_{64}-L_{65}	51.73	-69.25	-4.57	7.47	0.00	0.00	0.00	0.00	0.00	0.00
L_{65}-L_{66}	4.24	-4.24	-54.56	52.92	0.00	0.00	0.00	0.00	0.00	0.00
L_{66}-L_{67}	4.65	-4.58	-55.66	54.66	0.00	0.00	0.00	0.00	0.00	0.00
L_{67}-L_{68}	30.09	-30.09	-37.42	-37.73	0.00	0.00	0.00	0.00	0.00	0.00
L_{68}-L_{69}	4.02	-4.08	-33.90	34.27	0.00	0.00	0.00	0.00	0.00	0.00
L_{69}-L_{70}	28.31	-30.55	-20.63	-18.86	0.00	0.00	0.00	0.00	0.00	0.00
L_{70}-L_{71}	13.74	-13.77	-37.53	38.78	0.00	0.00	0.00	0.00	0.00	0.00
L_{71}-L_{72}	22.37	-22.77	-18.76	20.30	0.00	0.00	0.00	0.00	0.00	0.00
L_{72}-L_{73}	59.56	-62.79	-2.67	-2.67	0.00	0.00	0.00	0.00	0.00	0.00
L_{73}-L_{74}	41.13	-42.58	-8.53	8.96	0.00	0.00	0.00	0.00	0.00	0.00
L_{74}-L_{75}	44.17	-49.28	-12.25	12.25	0.00	0.00	0.00	0.00	0.00	0.00
L_{75}-L_{76}	41.95	-47.24	-1.62	-1.92	0.00	0.00	0.00	0.00	0.00	0.00
L_{76}-L_{77}	57.19	-62.93	-7.76	7.76	0.00	0.00	0.00	0.00	0.00	0.00
L_{77}-L_{78}	35.62	-53.37	-16.49	-5.68	0.00	0.00	0.00	0.00	0.00	0.00

ZZ Max. Pos. Mom.

Member	Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)	S_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	I_z (in^4)	I_{xy} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_{bot}	M_z (k-in)
L_0-L_1	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
L_1-L_2	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
L_2-L_3	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
L_3-L_4	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
L_4-L_5	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
L_5-L_6	0.00	0.00	0.00	0.00	0.00	0.00	19.4	19.37	29.87	3	907.0	1.54	986	1.5	958.8
L_6-L_7	0.00	0.00	0.00	0.00	0.00	0.00	20.80	20.67	34.64	5	1037.5	1.67	1733	1.5	1729.6
L_7-L_8	0.00	0.00	0.00	0.00	0.00	0.00	18.9	18.45	18.36	30.78	7	1020.9	1.67	1018	1.5
L_8-L_9	0.00	0.00	0.00	0.00	0.00	0.00	107.1	107.13	107.11	162.71	26	2056.9	1.52	3269	1.5
L_9-L_{10}	0.00	0.00	0.00	0.00	0.00	0.00	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5
L_{10}-L_{11}	0.00	0.00	0.00	0.00	0.00	0.00	35.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5
L_{11}-L_{12}	0.00	0.00	0.00	0.00	0.00	0.00	42.74	42.74	42.74	65.30	8	1389.6	1.53	2193	1.5
L_{12}-L_{13}	0.00	0.00	0.00	0.00	0.00	0.00	21.1	21.09	21.09	35.46	10	1137.6	1.68	1170	1.5
L_{13}-L_{14}	0.00	0.00	0.00	0.00	0.00	0.00	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5
L_{14}-L_{15}	0.00	0.00	0.00	0.00	0.00	0.00	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
L_{15}-L_{16}	0.00	0.00	0.00	0.00	0.00	0.00	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
L_{16}-L_{17}	0.00	0.00	0.00	0.00	0.00	0.00	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
L_{17}-L_{18}	0.00	0.00	0.00	0.00	0.00	0.00	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
L_{18}-L_{19}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0

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: 3F1
Condition: As-Built

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

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

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

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

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-L_1	-23.44	-7.53	0.18	-0.14	-1.71	0.80	2.42	-1.86	-22.78	10.73
	U_1-L_1	-3.41	-8.42	0.24	-0.10	-1.17	-0.33	3.23	-1.28	-15.58	-0.37
	U_1-L_2	-7.93	-9.72	0.33	-0.16	-1.39	-0.30	4.40	-1.74	-13.64	-4.40
	U_2-L_2	-7.93	-13.37	0.27	0.07	-0.85	-0.75	3.63	0.91	-11.34	-9.97
	U_2-L_3	-14.61	-18.52	0.12	0.43	-1.36	0.46	1.98	5.71	-18.22	-6.13
	U_3-L_3	-37.44	-76.90	0.28	0.67	-2.61	0.95	-43.85	111.68	-63.92	116.44
	U_3-L_4	-37.19	-73.14	0.27	0.53	-2.61	0.27	-37.84	107.19	-62.92	29.66
	L_0-U_1	-8.75	101.59	0.59	0.91	-1.54	2.68	7.88	6.80	-20.61	39.83
	L_1-U_1	-5.11	118.70	1.21	0.69	-1.02	2.02	13.72	165.95	-23.84	188.35
	L_1-U_2	-43.88	73.22	0.33	0.73	-2.02	0.62	4.28	9.41	-26.17	7.98
	L_2-U_2	-43.88	73.22	0.33	0.73	-2.02	0.62	4.28	9.41	-26.17	7.98
	L_2-U_3	-65.20	48.77	0.16	0.34	-1.85	1.01	2.03	-4.35	-23.88	13.12
	L_3-U_3	-24.90	8.63	0.29	0.54	-1.11	0.08	3.73	-6.97	-14.40	1.00
	L_3-U_4	-0.81	-2.23	0.29	0.54	-1.11	0.08	3.73	-6.97	-14.40	1.00
	L_4-U_4	-25.30	9.99	0.35	0.68	-1.35	1.08	4.50	-8.73	-17.52	14.02
	L_4-U_5	-37.21	20.01	0.26	0.24	-1.79	1.17	3.39	-3.07	-23.10	15.15
	L_5-U_5	-101.94	74.32	0.36	0.36	-3.29	1.97	4.70	-4.66	-42.62	25.51
	L_5-U_6	-115.87	80.00	0.33	0.49	-3.29	2.26	4.26	-4.74	-39.75	30.35
	L_6-U_6	-75.88	78.94	0.14	0.13	-2.93	2.40	1.82	-7.89	-37.84	31.00
	L_6-U_7	-109.41	98.91	0.33	-0.34	-3.32	2.83	4.19	-4.37	-42.37	36.21
	L_7-U_7	-89.79	78.55	0.24	-0.35	-2.55	2.39	3.35	-4.25	-32.93	29.68
	L_7-U_8	-90.87	71.82	0.48	-0.42	-3.16	2.11	6.15	-5.30	-40.39	26.98
	L_8-U_8	-47.27	39.54	0.25	-0.21	-1.67	1.11	4.32	-3.46	-21.30	13.62
	L_8-U_9	-20.35	9.86	0.37	-0.54	-1.60	0.97	4.68	-6.91	-19.19	12.37
	L_9-U_9	-1.86	-11.28	0.47	-0.62	-1.60	0.97	4.68	-6.91	-19.19	12.37
	L_9-U_{10}	8.85	-23.87	0.68	-1.05	-1.60	0.19	20.20	-48.49	-7.72	-27.84
	L_{10}-U_{10}	-44.41	35.31	0.31	-0.76	-1.75	0.52	4.01	-9.71	-22.31	38.74
	L_{10}-U_{11}	-96.57	69.69	0.27	-0.37	-2.97	0.23	2.19	-10.46	-37.01	52.47
	L_{11}-U_{11}	-85.40	67.30	0.23	-0.47	-2.68	1.15	2.91	-5.94	-36.77	15.04
	L_{11}-U_{12}	-12.15	34.14	0.38	0.40	-1.79	1.17	-12.15	34.14	-46.18	52.37
	L_{12}-U_{12}	-109.84	116.34	0.40	0.16	-3.34	2.63	5.06	2.02	-42.61	33.65
	L_{12}-U_{13}	-141.98	130.02	0.54	0.26	-4.22	3.50	6.97	-3.35	-53.85	44.74
	L_{13}-U_{13}	-72.27	73.44	0.29	0.12	-2.17	1.82	4.31	-2.66	-40.41	34.66
	L_{13}-U_{14}	-11.96	79.20	0.88	0.24	-2.15	2.68	11.07	3.02	-27.11	33.79
	L_{14}-U_{14}	-77.27	73.44	0.29	0.12	-2.17	1.82	4.31	-2.66	-43.42	37.35
	L_{14}-U_{15}	-66.19	89.97	0.34	-0.21	-3.28	2.75	4.31	-2.66	-40.41	34.66
	L_{15}-U_{15}	-42.72	39.54	0.25	-0.21	-1.67	1.11	4.32	-3.46	-21.30	13.62
	L_{15}-U_{16}	-56.07	72.69	0.31	-0.34	-2.96	2.15	3.86	-4.33	-37.35	27.17
	L_{16}-U_{16}	-31.84	37.89	0.30	-0.31	-2.16	1.29	3.81	-3.89	-27.31	16.29
	L_{16}-U_{17}	-10.03	37.89	0.30	-0.31	-2.16	1.29	3.81	-3.89	-27.31	16.29
	L_{17}-U_{17}	-10.03	37.77	0.42	0.70	-1.19	0.33	5.34	-8.88	-15.67	4.13
	L_{17}-U_{18}	-8.79	2.44	0.27	0.63	-1.19	0.33	6.77	-10.64	-5.34	-3.23
	L_{18}-U_{18}	-19.43	19.57	0.45	-0.68	-1.36	0.94	5.66	-8.53	-17.12	11.80
	L_{18}-U_{19}	-42.14	38.29	0.37	-0.52	-2.91	2.04	4.71	-7.26	-28.63	19.44
	L_{19}-U_{19}	-46.55	38.29	0.37	-0.52	-2.91	2.04	5.20	-5.75	-38.63	34.51
	L_{19}-U_{20}	-54.32	68.37	0.34	-0.42	-3.16	2.45	4.28	-5.29	-39.88	30.96
	L_{20}-U_{20}	-54.32	68.37	0.34	-0.42	-3.16	2.45	3.88	-5.29	-39.88	30.96
	L_{20}-U_{21}	-69.49	72.12	0.24	-0.15	-4.00	3.20	3.04	-1.85	-50.45	40.40
	L_{21}-U_{21}	-67.99	70.53	0.23	-0.14	-3.91	3.13	3.03	-1.81	-49.34	39.51
	L_{21}-U_{22}	-35.84	33.55	1.10	0.24	-2.38	2.89	14.05	3.04	-30.34	36.86
	L_{22}-U_{22}	-26.26	25.69	0.43	-0.17	-2.91	2.15	5.47	-2.22	-37.18	27.41
	L_{23}-U_{23}	-78.38	71.14	0.39	-0.02	-2.87	1.94	4.56	-0.31	-36.62	24.72
	L_{24}-U_{24}	-75.64	75.13	0.38	0.01	-2.87	1.94	4.56	-0.31	-36.62	24.72
	L_{24}-U_{25}	-76.64	55.13	0.16	0.14	-2.53	1.55	2.07	1.80	-37.42	19.85
	L_{25}-U_{25}	-76.26	33.90	0.26	0.05	-2.53	1.55	2.07	1.80	-37.42	19.85
	L_{25}-U_{26}	-26.26	-17.63	0.88	1.23	-0.86	-0.07	11.23	-15.73	-10.95	-0.93
	L_{26}-U_{26}	-13.29	-9.85	0.87	1.06	-1.05	0.72	11.15	-13.59	-13.47	9.16
	L_{26}-U_{27}	-33.71	19.61	0.36	-0.32	-1.91	1.50	4.59	-4.06	-24.45	19.22
	L_{27}-U_{27}	-33.71	19.61	0.36	-0.32	-1.91	1.50	4.59	-4.06	-24.45	19.22
	L_{27}-U_{28}	-78.83	60.14	0.48	-0.43	-3.85	3.00	6.16	-6.53	-49.16	38.29
	L_{28}-U_{28}	-68.12	63.30	0.20	0.19	-3.44	2.69	2.60	-2.50	-44.52	34.74
	L_{29}-U_{29}	-90.42	64.48	0.24	-0.22	-3.09	2.18	3.12	-2.86	-39.98	28.17
	L_{30}-U_{30}	-53.53	18.27	0.23	-0.21	-1.70	0.93	2.92	-2.70	-21.94	12.01
	L_{31}-U_{31}	-53.53	18.27	0.23	-0.21	-1.70	0.93	2.92	-2.70	-21.94	12.01
	L_{31}-U_{32}	-1.49	-18.99	0.44	-0.79	-1.13	0.03	5.63	-10.25	-10.56	1.00
	L_{32}-U_{32}	-1.49	-18.99	0.44	-0.79	-1.13	0.03	5.63	-10.25	-10.56	1.00
	L_{33}-U_{33}	-53.89	37.99	0.13	-0.53	-1.78	1.25	1.73	-6.82	-23.07	16.13
	L_{34}-U_{34}	-61.82	22.38	0.22	0.64	-2.48	0.35	2.90	8.24	-32.06	4.57
	L_{35}-U_{35}	-53.70	52.24	0.35	0.52	-2.48	0.35	4.48	8.03	-31.72	4.38
	L_{36}-U_{36}	-73.27	65.81	0.25	0.46	-2.67	1.26	3.22	6.00	-37.16	16.60
	L_{37}-U_{37}	-73.27	65.81	0.25	0.46	-2.67	1.26	3.22	6.00	-37.16	16.60
	L_{38}-U_{38}	-5.27	64.91	0.68	0.67	-1.38	2.12	9.03	8.92	-18.38	38.02
	L_{39}-U_{39}	-38.99	50.41	0.32	-0.11	-3.14	1.65	4.06	-1.16	-41.92	22.08
	L_{40}-U_{40}	-7.78	19.68	0.14	0.46	-1.29	-0.22	1.82	6.08	-17.29	-2.90
	L_{41}-U_{41}	-7.78	19.68	0.14	0.46	-1.29	-0.22	1.82	6.08	-17.29	-2.90
	L_{42}-U_{42}	-2.61	-8.77	0.37	-0.13	-0.99	-0.20	4.89	-1.72	-13.24	-2.66
	L_{43}-U_{43}	-2.61	-8.77	0.37	-0.13	-0.99	-0.20	4.89	-1.72	-13.24	-2.66
	L_{44}-U_{44}	-5.74	-0.35	0.32	0.08	-0.97	0.43	12.25	-1.04	-12.93	5.69

ZZ 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_x (in^3)	I (in^4)	I_{DL} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_x	M_2 (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(x)}$	Equivalent Mom. Factor $C_{m(y)}$
Structure 1	U_0-L_1	-27.33	7.37	80.08	23.73	15.6	19.63	15.58	25.56	5	804.0	1.66	857	1.5	773.7
	U_1-L_1	-5.67	8.95	12.42	24.68	11.43	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_1-L_2	-20.93	-18.35	15.74	24.68	14.28	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_2-L_2	15.05	16.20	4.44	30.34	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_2-L_3	-16.95	11.32	15.74	24.68	14.28	15.4	15.37	23.87	2	756.8	1.54	786	1.5	766.8
	U_3-L_3	-43.85	111.68	63.92	116.44	35.1	35.09	35.09	52.13	4	1183.7	1.51	1753	1.5	1737.0
	U_3-L_4	-67.84	105.19	58.22	116.44	35.1	35.09	35.09	52.13	4	1183.7	1.51	1753	1.5	1737.0
	L_0-U_1	-43.81	25.46	105.82	39.83	35.1	35.09	35.09	52.13	4	1183.7	1.51	1753	1.5	1737.0
	L_1-U_1	-12.58	8.12	68.87	188.35	35.1	35.09	35.09	52.13	4	1183.7	1.51	1753	1.5	1737.0
	L_1-U_2	9.07	-9.30	27.04	46.29	35.1	35.09	35.09	52.13	4	1183.7	1.51	1753	1.5	1737.0
	L_2-U_2	5.99	3.33	18.42	52.22	35.1	35.09	35.09	52.13	4	1183.7	1.51	1753	1.5	1737.0
	L_2-U_3	14.35	6.37	8.98	31.41	35.1	35.09	35.09	52.13	4	1183.7	1.51	1753	1.5	1737.0
	L_3-U_3	-65.82	41.96	128.94	40.05	42.7	42.74	42.74	63.30	4	1389.6	1.53	2135	1.5	2115.6
	L_3-U_4	-82.12	57.75	115.81	80.46	20.8	20.80	20.67	34.66	2	1029.6	1.695	1332	1.5	1322.1
	L_4-U_4	-27.53	2.15	51.09	12.51	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_4-U_5	-9.73	46.13	19.02	73.66	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_5-U_5	-140.12	98.52	212.77	143.45	38.4	38.83	38.83	59.23	4	1294.6	1.53	1943	1.5	1922.1
	L_5-U_6	-147.82	142.92	38.8	38.83	38.83	59.23	4	1294.6	1.53	1943	1.5	1922.1	0.967	0.21
	L_6-U_6	-170.64	128.44	165.95	23.81	42.7	42.74	42.74	65.30	4	1389.6	1.53	2155	1.5	2115.6
	L_6-U_7	-197.31	175.65	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.890	0.24
	L_7-U_7	-197.31	175.65	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.890	0.24
	L_7-U_8	-170.64	128.44	165.95	23.81	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_8-U_8	-147.82	142.92	38.8	38.83	38.83	59.23	4	1294.6	1.53	1943	1.5	1922.1	0.967	0.21
	L_8-U_9	-136.76	122.90	-197.31	175.65	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_9-U_9	-136.76	122.90	-197.31	175.65	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_9-U_{10}	-20.37	3.83	-51.28	28.89	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{10}-U_{10}	-52.52	33.27	-86.74	54.47	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2
	L_{10}-U_{11}	-127.73	104.29	-179.52	119.12	38.5	38.83	38.83	59.23	4	1294.6	1.53	1943	1.5	1922.1
	L_{11}-U_{11}	-107.23	95.22	-158.82	107.04	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_{11}-U_{12}	-121.10	124.29	-179.52	119.12	38.5	38.83	38.83	59.23	4	1294.6	1.53	1943	1.5	1922.1
	L_{12}-U_{12}	-131.02	153.87	-192.99	194.99	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1
	L_{13}-U_{13}	-170.63	165.45	-254.58	227.97	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_{13}-U_{14}	-64.46	176.39	-125.25	227.97	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_{14}-U_{14}	-1.15	106.88	-50.79	146.88	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	L_{14}-U_{15}	-93.02	55.18	-137.76	106.88	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	L_{15}-U_{15}	-60.43	113.50	-139.86	162.01	38.8	38.83	38.83	59.23	4	1294.6	1.53	1955	1.5	1922.1
	L_{16}-U_{16}	-87.86	88.74	-121.43	129.69	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	L_{16}-U_{17}	-87.86	88.74	-121.43	129.69	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	L_{17}-U_{17}	-36.44	43.81	-76.89	70.04	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2
	L_{17}-U_{18}	-12.73	34.29	-23.92	70.04	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2
	L_{18}-U_{18}	5.34	-8.88	-15.67	4.13	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{18}-U_{19}	6.77	-10.64	-5.34	-3.23	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{19}-U_{19}	5.66	-8.53	-17.12	11.80	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2
	L_{19}-U_{20}	4.71	-7.26	-28.63	19.44	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2
	L_{20}-U_{20}	5.20	-5.75	-38.63	34.51	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	L_{20}-U_{21}	4.28	-5.29	-39.88	30.96	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	L_{21}-U_{21}	3.88	-5.29	-39.88	30.96	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	L_{21}-U_{22}	3.04	-1.85	-50.45	40.40	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_{22}-U_{22}	3.03	-1.81	-49.34	39.51	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_{23}-U_{23}	14.05	3.04	-30.34	36.86	20.8	20.80	20.67	34.66	2	1029.6	1.695	1332	1.5	1322.1
	L_{24}-U_{24}	5.47	-2.22	-37.18	27.41	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{25}-U_{25}	4.56	-0.31	-36.62	24.72	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{26}-U_{26}	4.56	-0.31	-36.62	24.72	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{27}-U_{27}	2.07	1.80	-37.42	19.85	20.8	20.80	20.67	34.66	2	1029.6	1.695	1332	1.5	1322.1
	L_{28}-U_{28}	2.07	1.80	-37.42	19.85	20.8	20.80	20.67	34.66	2	1029.6	1.695	1332	1.5	1322.1
	L_{29}-U_{29}	6.16	-6.53	-49.16	38.29	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_{30}-U_{30}	3.88	-2.50	-44.52	34.74	20.8	20.80	20.67	34.66	2	1029.6	1.695	1332	1.5	1322.1
	L_{31}-U_{31}	3.12	-2.86	-39.98	28.17	20.8	20.80	20.67	34.66	2	1029.6	1.695	1332	1.5	1322.1
	L_{32}-U_{32}	2.92	-2.70	-21.94	12.01	20.8	20.80	20.67	34.66	2	1029.6	1.695	1332	1.5	1322.1
	L_{33}-U_{33}	5.63	-10.25	-10.56	1.00	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{34}-U_{34}	5.38	-38.01	-20.86	-24.27	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{35}-U_{35}	4.48	-38.01	-29.12	-24.27	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{36}-U_{36}	3.22	-37.16	-14.69	16.60	20.8	20.80	20.67	34.66	2	1029.6	1.695	1332	1.5	1322.1
	L_{37}-U_{37}	3.22	-37.16	-14.69	16.60	20.8	20.80	20.67	34.66	2	1029.6	1.695	1332	1.5	1322.1
	L_{38}-U_{38}	9.03	8.92	-18.38	38.02	20.8	20.80	20.67	34.66	2	1029.6	1.695	1332	1.5	1322.1
	L_{39}-U_{39}	4.06	-1.16	-41.92	22.08	20.8	20.80	20.67	34.66	2	1029.6	1.695	1332	1.5	1322.1
	L_{40}-U_{40}	1.82	6.08	-17.29	-2.90	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{41}-U_{41}	1.82	6.08	-17.29	-2.90	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{42}-U_{42}	4.89	-1.72	-13.24	-2.66	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{43}-U_{43}	4.89	-1.72	-13.24	-2.66	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{44}-U_{44}	12.25	-1.04	-12.93	5.69	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3

M_2 Information

YY Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (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	-28.15	30.90	0.39	0.65	-7.81	-1.05	5.18	8.63	-104.31	-13.97
	U_1-L_1	-44.15	-40.74	0.55	0.40	-7.19	-3.42	7.29	5.37	-96.00	-45.98
	U_1-L_2	-52.17	-20.78	0.74	0.63	-7.31	-1.27	-2.06	0.73	-84.20	84.00
	U_2-L_2	-33.39	-37.29	0.98	1.04	1.97	-1.66	13.11	13.92	26.25	-22.15
	U_2-L_3	-12.98	11.32	-12.08	0.62	0.00	0.00	12.98	11.32	-12.08	0.62
	U_3-L_3	30.74	19.30	-90.62	-64.59	0.00	0.00	30.74	19.30	-90.62	-64.59
	U_3-L_4	-43.81	25.46	-105.82	-39.83	0.00	0.00	-43.81	25.46	-105.82	-39.83
	L_0-U_1	-12.58	8.12	-68.87	-58.34	0.00	0.00	-12.58	8.12	-68.87	-58.34
	L_1-U_1	9.07	-9.30	27.04	46.29	0.00	0.00	9.07	-9.30	27.04	46.29
	L_1-U_2	5.99	3.33	18.42	52.22	0.00	0.00	5.99	3.33	18.42	52.22
	L_2-U_2	14.35	6.37	8.98	31.41	0.00	0.00	14.35	6.37	8.98	31.41
	L_2-U_3	-65.82	41.96	-128.94	40.05	0.00	0.00	-65.82	41.96	-128.94	40.05
	L_3-U_3	-82.12	57.75	-115.81	80.46	20.8	20.80	20.67	34.66	2	1029.6
	L_3-U_4	-27.53	2.15	-51.09	12.51	15.4	15.42	15.42	23.71	2	751.9
	L_4-U_4	-9.73	46.13	-19.02	73.66	15.4	15.42	15.42	23.71	2	751.9
	L_4-U_5	-140.12	98.52	-212.77	143.45	38.4	38.83	38.83	59.23	4	1294.6
	L_5-U_5	-147.82	142.92	38.8	38.83	38.83	59.23	4	1294.6	1.53	1943
	L_5-U_6	-170.64	128.44	165.95	23.81	42.7	42.74	42.74	65.30	8	1389.6
	L_6-U_6	-197.31	175.65	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155
	L_6-U_7	-197.31	175.65	42.7	42.74

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
Condition: As-Built

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

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

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

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

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-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	6.80	-15.10	-2.80		75.70	-94.63	-168.11	-31.17
	U_1 - U_2	-46.81	-20.16	3.30	-7.70	-1.50		3.34	-7.75	-107.56	-27.93
	U_2 - U_3	-112.19	86.51	1.00	-1.80	-11.80	-5.60	11.13	-20.04	-131.37	-82.34
	U_3 - U_4	-15.68	66.14	1.50	-2.10	-12.10	-6.40	16.70	-23.38	-140.28	-82.33
	U_4 - U_5	-9.16	61.58	1.50	-2.20	-16.30	-5.90	16.70	-24.49	-181.47	-55.67
	U_5 - U_6	-42.76	120.09	1.70	-2.20	-14.20	-1.10	18.93	-24.49	-158.09	-12.25
	U_6 - U_7	-93.72	43.54	1.70	-2.20	-12.10	-5.40	21.15	-24.50	-123.56	-81.21
	U_7 - U_8	-47.40	525.96	0.90	2.90	-18.30	13.80	10.02	32.29	-203.73	153.64
	U_8 - U_9	474.61	-124.27	11.50	-10.30	-6.10	0.20	123.99	-164.96	-1.08	2.16
	U_9 - U_{10}	46.76	20.63	2.10	-1.90	-5.20	-4.30	22.64	-20.49	-56.07	-46.36
	U_{10} - U_{11}	64.51	-138.68	1.90	-2.10	-4.40	-6.40	26.13	-24.49	-57.44	-66.85
	U_{11} - U_{12}	27.83	-140.42	2.50	-2.00	-7.80	-6.90	26.96	-21.56	-84.10	-74.40
	U_{12} - U_{13}	-106.18	-154.99	3.00	-1.30	-10.30	-8.90	32.35	-14.02	-111.05	-95.90
	U_{13} - U_{14}	-137.97	-202.69	3.10	-1.60	-11.60	-9.80	32.35	-11.08	-128.21	-108.56
	U_{14} - U_{15}	-245.66	-182.98	3.00	-17.50	-26.40	-9.80	32.35	-188.69	-284.64	-105.66
	U_{15} - U_{16}	-233.52	-326.70	3.50	-18.90	-22.40	-10.20	30.68	-177.91	-269.22	-341.52
	U_{16} - U_{17}	-269.82	-144.98	5.60	0.00	-24.60	-9.40	5.39	0.00	-265.24	-101.35
	U_{17} - U_{18}	-170.36	-47.25	2.60	-3.30	-13.20	-1.50	6.47	-24.23	-182.32	-17.25
	U_{18} - U_{19}	-170.36	-20.48	0.60	-3.20	-13.20	-1.60	6.47	-24.80	-182.32	-17.25
	U_{19} - U_{20}	-186.12	24.46	1.40	-15.00	-10.60	-1.80	15.09	-161.73	-114.29	-19.41
	U_{20} - U_{21}	-70.88	119.67	2.00	-1.80	-5.80	-3.80	15.09	-24.80	-114.29	-40.46
	U_{21} - U_{22}	-70.88	-181.00	1.40	-5.20	-7.80	-8.10	14.91	-55.36	-83.55	-86.24
	U_{22} - U_{23}	-327.18	-325.33	0.90	-1.90	-21.90	-13.90	9.58	-20.23	-233.17	-147.99
	U_{23} - U_{24}	-327.18	-367.26	1.60	-1.60	-21.90	-13.90	9.58	-20.23	-233.17	-147.99
	U_{24} - U_{25}	-338.53	-367.26	1.60	-1.60	-21.90	-13.90	17.04	-20.23	-241.30	-153.57
	U_{25} - U_{26}	-396.09	-197.74	1.90	3.60	-30.70	-7.90	20.23	38.33	-326.86	-84.11
	U_{26} - U_{27}	-344.15	-179.39	2.80	-2.40	-22.20	-16.10	29.81	25.55	-236.36	-171.42
	U_{27} - U_{28}	-224.10	-291.71	2.20	-2.80	-22.20	-20.60	29.81	-24.23	-236.36	-171.42
	U_{28} - U_{29}	-350.17	-90.75	2.40	3.00	-22.50	-9.00	25.55	31.94	-239.56	-95.82
	U_{29} - U_{30}	-227.28	-313.63	2.10	-2.80	-22.20	-20.60	29.81	-24.23	-236.36	-171.42
	U_{30} - U_{31}	-167.07	39.82	3.10	3.00	-17.10	-6.60	33.01	31.94	-182.06	-70.27
	U_{31} - U_{32}	-109.77	170.72	2.70	2.40	-17.60	-2.90	28.75	25.53	-187.39	-30.86
	U_{32} - U_{33}	-261.00	1265.93	1.50	2.50	-24.40	17.70	20.23	26.62	-209.79	188.45
	U_{33} - U_{34}	-1192.75	-92.80	25.20	-2.70	-1.90	-1.30	265.13	-24.23	-10.78	7.35
	U_{34} - U_{35}	-25.30	11.62	2.00	-2.00	-17.60	-5.00	25.55	-24.23	-185.17	-52.61
	U_{35} - U_{36}	-345.15	-96.49	2.60	3.00	-30.70	-7.90	20.23	38.33	-326.86	-84.11
	U_{36} - U_{37}	-150.58	33.05	3.40	2.90	-10.70	-6.30	35.77	-30.51	-112.57	-66.28
	U_{37} - U_{38}	-147.30	4.36	4.10	-2.80	-9.90	-8.60	43.14	-29.46	-104.16	-90.48
	U_{38} - U_{39}	-31.67	-34.01	2.80	-1.20	-16.00	-8.40	29.46	-12.63	-168.34	-88.38
	U_{39} - U_{40}	-98.04	-71.70	1.40	-1.40	-14.70	-10.50	29.46	-12.63	-154.14	-110.32
	U_{40} - U_{41}	-60.95	-86.97	1.80	-17.80	-25.40	-10.40	18.94	-187.27	-267.23	-109.42
	U_{41} - U_{42}	-32.99	-28.66	2.00	-2.50	-21.40	-7.40	21.04	-26.30	-225.15	-77.86
	U_{42} - U_{43}	-32.99	-28.66	2.00	-2.60	-21.40	-7.40	21.04	-26.30	-225.15	-77.86
	U_{43} - U_{44}	-15.12	113.76	2.00	-2.60	-19.80	-4.20	7.69	183.44	-290.47	90.43
	U_{44} - U_{45}	-15.12	113.76	2.00	-2.60	-19.80	-4.20	22.69	183.44	-290.47	90.43
	U_{45} - U_{46}	-2.69	209.81	1.60	1.80	-19.40	-2.20	16.83	18.94	-204.11	-23.15
	U_{46} - U_{47}	-2.69	209.81	1.60	1.80	-19.40	-2.20	16.83	18.94	-204.11	-23.15
	U_{47} - U_{48}	-122.28	1156.50	1.30	4.00	-26.60	19.90	-141.16	1558.16	-632.78	209.37
	U_{48} - U_{49}	-1153.78	-196.80	23.50	-25.70	-1.00	2.10	250.20	-273.63	-10.65	22.36
	U_{49} - U_{50}	-87.61	62.60	1.80	-1.80	-14.70	-6.30	31.50	-31.50	-168.34	-67.33
	U_{50} - U_{51}	-178.87	-59.61	3.80	-5.20	-7.50	-7.10	40.46	-55.36	-79.85	-75.59
	U_{51} - U_{52}	-178.87	-59.61	3.80	-5.20	-7.50	-7.10	31.50	-55.36	-79.85	-75.59
	U_{52} - U_{53}	68.77	-178.57	3.30	2.60	-11.00	-11.80	35.14	27.88	-117.12	-125.63
	U_{53} - U_{54}	-236.40	-153.09	2.50	1.90	-16.90	-19.60	26.62	20.23	-179.93	-208.68
	U_{54} - U_{55}	-236.40	-153.09	2.50	1.90	-16.90	-19.60	27.68	25.55	-179.93	-208.68
	U_{55} - U_{56}	-109.47	-262.96	1.50	1.50	-20.00	-20.80	27.68	25.55	-284.36	-130.56
	U_{56} - U_{57}	-350.27	-286.72	1.90	0.50	-37.60	-13.50	20.23	5.32	-400.33	-143.73
	U_{57} - U_{58}	-350.27	-286.72	1.90	0.50	-37.60	-13.50	20.23	5.32	-400.33	-143.73
	U_{58} - U_{59}	-278.82	-117.63	1.30	-0.30	-28.70	-7.00	13.84	-3.19	-305.57	-74.53
	U_{59} - U_{60}	-278.82	-117.63	1.30	-0.30	-28.70	-7.00	13.84	-3.19	-305.57	-74.53
	U_{60} - U_{61}	-186.12	-74.10	2.50	-14.70	-13.10	-0.60	26.62	-156.51	-139.44	-6.39
	U_{61} - U_{62}	-139.59	-187.78	7.60	-6.70	-13.80	-4.00	81.94	-72.24	-148.79	-43.13
	U_{62} - U_{63}	-47.42	-115.54	5.10	-4.50	-6.60	-3.60	42.05	-47.44	-71.15	-52.73
	U_{63} - U_{64}	-52.50	-128.95	3.90	-4.40	-6.60	-8.60	42.05	-47.44	-71.15	-52.73
	U_{64} - U_{65}	-277.57	-111.68	1.60	-1.20	-17.80	-5.60	17.25	-12.94	-191.92	-60.38
	U_{65} - U_{66}	-119.47	-262.96	1.50	1.50	-20.00	-20.80	27.68	25.55	-284.36	-130.56
	U_{66} - U_{67}	-166.87	-240.33	1.80	1.40	-18.00	-12.50	10.78	15.09	-194.08	-134.78
	U_{67} - U_{68}	-287.50	-127.73	1.40	0.40	-27.00	-6.30	13.84	-3.19	-305.57	-74.53
	U_{68} - U_{69}	-141.30	-113.93	0.90	1.60	-19.80	-3.60	9.70	17.25	-213.48	-38.82
	U_{69} - U_{70}	-145.41	-22.73	1.30	2.00	-15.80	-4.00	14.02	21.56	-170.36	-43.13
	U_{70} - U_{71}	-141.54	56.98	1.40	1.60	-14.20	-1.10	15.09	21.56	-153.10	-11.86
	U_{71} - U_{72}	3.07	40.55	1.80	1.40	-10.80	-1.70	19.41	15.09	-116.45	-18.33
	U_{72} - U_{73}	-136.80	470.88	0.80	2.90	-14.10	8.70	8.63	31.27	-152.03	93.80
	U_{73} - U_{74}	497.19	-34.44	16.70	-16.40	0.00	0.00	185.92	-182.58	0.00	0.00
	U_{74} - U_{75}	41.01	105.92	1.70	-1.10	-8.90	-2.30	18.93	-12.25	-99.08	-25.61
	U_{75} - U_{76}	113.01	44.44	3.70	-3.60	-5.00	-4.70	41.19	-40.08	-55.67	-74.09
	U_{76} - U_{77}	59.30	15.07	2.30	1.40	-8.00	-6.80	25.61	15.59	-100.20	-75.70
	U_{77} - U_{78}	86.04	-19.79	4.90	-11.20	-14.30	-5.90	54.55	24.69	-159.20	-65.68
	U_{78} - U_{79}	80.24	-119.59	2.30	0.50	-16.60	-7.40	25.61	5.57	-184.81	-82.38
	U_{79} - U_{80}	-24.67	-27.08	1.70	-6.40	-18.00	-5.50	18.93	-71.25	-260.39	-61.23
	U_{80} - U_{81}	29.36	-160.66	1.00	-1.40	-15.80	-3.20	11.13	-15.59	-173.67	-39.63

ZZ Axis Moments from STAAD

Location	Member	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)	S_{bb} (in^3)	Z_z (in^3)	I_{zz} (in^4)	Shape Factor f	M_p (k-in)	Formula f_b ≤ Fy * F_y/S_xx	M_u k-in	Equivalent Mom. Factor a	$C_{m/a}$	$C_{bb/a}$
Structure 1	U_0 - U_1	7.26	-123.92	-309.70	-41.43	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99850004	2974.3	0.134	0.65	0.63
	U_1 - U_2	-56.50	-38.34	-203.23	-127.02	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99850004	2974.3	0.023	0.65	0.63
	U_2 - U_3	-131.37	86.41	-316.62	31.41	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99850004	2974.3	-0.099	0.56	0.56
	U_3 - U_4	-148.56	14.32	-329.89	31.41	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99850004	2974.3	-0.099	0.56	0.56
	U_4 - U_5	-48.59	725.72	-326.47	863.48	138.2	138.17	111.77	199.97	3642	2197.7	1.45	6599	0.99896545	4354.8	-0.370	0.45	0.45
	U_5 - U_6	778.44	-376.01	615.85	-158.75	130.3	130.26	105.11	180.77	2960	1799.3	1.39	5995	0.99850004	4292.8	-0.403	0.41	0.41
	U_6 - U_7	90.22	6.18	-12.10	-33.46	96.6	96.61	79.12	135.29	2174	1387.9	1.40	4465	0.99873164	3184.1	0.002	0.60	0.60
	U_7 - U_8	12.71	-230.36	-351.17	-248.18	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99873133	2184.1	-0.053	0.53	0.53
	U_8 - U_9	26.96	-21.56	-84.10	-74.40	0.00	0.00	71.22	-210.57	-73.15	-279.25	128.7	128.69	105.26	182.66	3153	1864.4	1.42	6028	0.99872695	4241.5	0.065	0.63	0.63
	U_9 - U_{10}	32.35	-14.02	-111.05	-95.90	0.00	0.00	66.98	-219.71	-282.40	-326.24	151.8	151.76	130.54	219.77	4535	2632.6	1.45	7252	0.99905082	5003.4	0.866	0.95	0.95
	U_{10} - U_{11}	32.35	-11.08	-128.21	-108.56	0.00	0.00	66.98	-219.71	-282.40	-326.24	151.8	151.76	130.54	219.77	4535	2632.6	1.45	7252	0.99905082	5003.4	0.866	0.95	0.95
	U_{11} - U_{12}	32.35	-188.69	-284.64	-105.66	0.00	0.00	277.31	-485.16	-689.40	-375.23	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99859944	6214.6	0.444	0.82	0.82
	U_{12} - U_{13}	30.68	-177.91	-269.22	-341.52	-109.98	0.00	0.00	111.51	-689.22	-414.54	-567.67	188.5	188.51	164.41	274.68	5476	3413.6	1.46	9064	0.99859944	6214.6	0.461	0.78
	U_{13} - U_{14}	5.39	0.00	-265.24	-101.35	0.00	0.00	343.50	-188.47	-695.32	-320.22	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99859944	6214.6	0.461	0.78
	U_{14} - U_{15}	6.47	-24.23	-182.32	-17.25	0.00	0.00	213.09	-88.66	-406.48	-69.05	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99886042	3452.6	0.121	0.65
	U_{15} - U_{16}	15.09	-161.73	-114.29	-19.41	0.00	0.00	222.34	-178.45	-390.54	6.57	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99886042	3452.6	-0.017	0.59
	U_{16} - U_{17}	15.09	-24.80	-114.29	-40.46	0.00	0.00	222.34	-290.84	-390.54	-220.33	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99886042	3452.6	-0.017	0.59
	U_{17} - U_{18}	14.91	-55.36	-83.55	-86.24	0.00	0.00	72.76	-307.28	-200.10	-347.42	138.2	138.15	119.05	199.70	3434	1990.9	1.45	6099	0.99886081	4553.8	0.576	0.83
	U_{18} - U_{19}	9.58	-20.23	-233.17	-147.99	0.00	0.00	72.76	-307.28	-200.10	-347.42	138.2	138.15	119.05	199.70	3434	1990.9	1.45	6099	0.99886081	4553.8	0.576	0.83
	U_{19} - U_{20}	9.58	-20.23	-233.17	-147.99	0.00	0.00	432.87	-396.63	-728.45	-615.32	232.7	232.70	198.86	340.10	6520	3217.6	1.46	11223	0.99885836	7670.6	0.845	0.94
	U_{20} - U_{21}	17.04	-20.23	-241.30	-153.57	-79.90	0.00	0.00	415.34	-653.57	-790.43	-623.77	232.7	232.70	198.86	340.10	6520	3217.6	1.46	11223	0.99885836	7670.6	0.804	0.94
	U_{21} - U_{22}	20.23	38.33	-326.86	-84.11	0.00	0.00	488.62	-207.23	-939.84	-366.41	251.7	251.73	219.41	365.62	7161	3870.6	1.45	12065	0.99891931	8298.1	0.390	0.76
	U_{22} - U_{23}	29.81	25.55	-236.36	-171.42	0.00	0.00	408.64	-199.99	-754.67	-656.05	232.7	232.70	199.45	340.10	6520	3217.6	1.46	11223	0.99891931	7670.6	0.604	0.84
	U_{23} - U_{24}	29.81	25.55	-236.36	-171.42	0.00	0.00	264.86	-143.57	-536.40	-513.37	179.5	179.50	153.27	259.97	4944	2674.3	1.45	9064	0.99891931	6214.6	0.444	0.82
	U_{24} - U_{25}	25.55	31.94	-239.56	-95.82	0.00	0.00	288.68	-169.65	-553.35	-316.73	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99891931	6214.6	0.444	0.82
	U_{25} - U_{26}	29.81	-24.23	-236.36	-171.42	0.00	0.00	408.64	-199.99	-754.67	-656.05	232.7	232.70	199.45	340.10	6520	3217.6	1.46	11223	0.99891931	7670.6	0.604	0.84
	U_{26} - U_{27}	33.01	31.94	-182.06	-70.27	0.00	0.00	174.28	32.29	-453.87	-39.68	156.8	156.80	134.92	214.81	3285	1852.3	1.37	7089	0.99854451	5168.9	0.087	0.62
	U_{27} - U_{28}	28.75	25.53	-187.39	-30.86	0.00	0.00	199.32	258.15	-396.30	-181.80	156.8	156.80	128.72	214.81	3285	1852.3	1.37	7089	0.99854451	5168.9	0.087	0.62
	U_{28} - U_{29}	29.81	-24.23	-236.36	-171.42	0.00	0.00	408.64	-199.99	-754.67	-656.05	232.7	232.70	199.45	340.10	6520	3217.6	1.46	11223	0.99891931	7670.6	0.604	0.84
	U_{29} - U_{30}	20.23	26.62	-209.79	188.45	0.00	0.00	-313.00	1680.31	-677.02	1890.69	221.8	221.77	196.91	327.26	6244	3427.0	1.48	10799	0.99893092	7310.6	-0.358	0.46
	U_{30} - U_{31}	33.01	31.94	-182.06	-70.27	0.00	0.00	174.28	32.29	-453.87	-39.68	156.8	156.80	134.92	214.81	3285	1852.3	1.37	7089	0.99854451	5168.9	0.087	0.62
	U_{31} - U_{32}	28.75	25.53	-187.39	-30.86	0.00	0.00	-115.32	255.15	-396.30	-181.80	156.8	156.80	128.72	214.81	3285	1852.3	1.37	7089	0.99854451	5168.9	0.087	0.62
	U_{32} - U_{33}	29.81	-24.23	-219.29	1265.93	0.00	0.00	-313.00	1680.31	-677.02	1890.69	221.8	221.77	196.91	327.26	6244	3427.0	1.48	10799	0.99893092	7310.6	-0.358	0.46
	U_{33} - U_{34}	265.13	-10.78	-51.78	7.35	0.00	0.00	1899.24	-41.24	-52.62	-40.24	221.8	221.77	196.91	327.26	6244	3427.0	1.48	10799	0.99893092	7310.6	-0.358	0.46
	U_{34} - U_{35}	25.30	11.62	-185.17	-52.61	0.00	0.00	29.81	25.55	-185.70	154.12	266.55	266.55	226.57	372.01	4144	1796.8	1.39	5995	0.99893092	4292.8	-0.403	0.41
	U_{35} - U_{36}	345.15	96.49	-326.86	-84.11	0.00	0.00	488.62	-207.23	-939.84	-366.41	251.7	251.73	219.41	365.62	7161	3870.6	1.45	12065	0.99891931	8298.1	0.390	0.76
	U_{36} - U_{37}	150.58	33.05	-112.57	-66.28	0.00	0.00	242.26	3.30	-49.41	-43.20	127.8	127.83	110.84	178.51	2762	1538.8	1.40	5891	0.99861372	4212.5	0.014	0.61
	U_{37} - U_{38}	147.30	4.36	4.10	-2.80	-9.90	-8.60	247.57	-32.63	-56.09	-11.96	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861372	4212.5	-0.132	0.55
	U_{38} - U_{39}	31.67	34.01	2.80	1.20	-16.00	-8.40	29.46	-12.63	-168.34	-88.38	0.00	0.00	-2.88	-80.62	-260.01	-159.10	144.8	144.84	125.49	209.19	3613	2101.0	1.44	6903	0.99886772	4774.4	0.612
	U_{39} - U_{40}	98.04	71.70	1.40	1.40	-14.70	-10.50	29.46	-12.63	-154.14	-110.32	0.00	0.00	-5.32	-58.98	-231.78	-141.12	144.8	144.84	125.49	209.19	3613	2101.0	1.44	6903	0.99886772	4774.4	0.612
	U_{40} - U_{41}	60.95	86.97	1.80	17.80	25.40	10.40	18.94	-187.27	-267.23	-109.42	0.00	0.00	-5.61	-356.52	-426.63	-255.30	144.8	144.84	100.31	209.19	3613	2101.0	1.44	6903	0.99886772	4774.4	0.598
	U_{41} - U_{42}	32.99	28.66	2.00	2.50	21.40	7.40	27.41	-26.30	-223.23	-76.96	0.00	0.00	-15.54	-71.45	-335.58	-63.96	134.9	134.91	112.76	189.26	3012	1689.0	1.40	6245	0.99866251	4446.1	0.191
	U_{42} - U_{43}	32.99	28.66	2.00	2.60	21.40	7.40	21.04	26.30	-225.15	-77.86	0.00	0.00	-15.54	-71.45	-335.58	-63.96	134.9	134.91	112.76	189.26	3012	1689.0	1.40	6245	0.99866251	4446.1	0.191
	U_{43} - U_{44}	15.12	113.76	2.00	2.60	19.80	4.20	7.69	183.44	-290.47	90.43	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861372	4212.5	-0.311	0.48
	U_{44} - U_{45}	15.12	113.76	2.00	2.60	19.80	4.20	22.69	183.44	-290.47	90.43	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861372	4212.5	-0.311	0.48
	U_{45} - U_{46}	2.69	209.81	1.60	1.80	19.40	2.20	16.83	18.94	-204.11	-23.15	0.00	0.00	18.39	297.38	-268.83	242.67	173.0	173.03	144.25	241.17	3969	2180.7	1.39	7959	0.99862258	5702.3	0.062
	U_{46} - U_{47}	2.69	209.81	1.60	1.80	19.40	2.20	16.83	18.94	-204.11	-23.15	0.00	0.00	18.39	297.38	-268.83	242.67	173.0	173.03	144.25	241.17	3969	2180.7	1.39	7959	0.99862258	5702.3	0.062
	U_{47} - U_{48}	122.28	1156.50	1.30	4.00	26.60	19.90	141.16	1558.16	-632.78	1775.77	156.8	156.80	128.72	214.81	3285	1852.3	1.37	7089	0.99854451	5168.9	-0.294	0.48
	U_{48} - U_{49}	1153.78	196.80	23.50	25.70	1.00	2.10	926.18	4111.55	1486.08	-226.77	221.8	221.77	196.91	327.26	6244	3427.0	1.48	10799	0.99893092	7310.6	-0.335	0.47
	U_{49} - U_{50}	87.61	62.60	1.80	1.80	14.70	6.30	31.50	31.50	-168.34	-67.33	0.00	0.00	-64.38	-289.75	-533.81	-256.34	169.3	169.34	139.93	234.84	4144	2674.3	1.45	9064	0.99891931	6214.6	0.444
	U_{50} - U_{51}	178.87	59.61	3.80	5.20	7.50	7.10	40.46	55.36	79.85	75.59	0.00	0.00	-28.53	-149.47	-128.72	-175.77	156.8	156.80	128.72	214.81	3285	1852.3	1.37	7089	0.99854451	5168.9	-0.324
	U_{51} - U_{52}	178.87	59.61	3.80	5.20	7.50	7.10	31.50	55.36	79.85	75.59	0.00	0.00	-28.53	-149.47	-128.72	-175.77	156.8	156.80	128.72	214.81	3285	1852.3	1.37	7089	0.99854451	5168.9	-0.324
	U_{52} - U_{53}	68.77	178.57	3.30	2.60	11.00	11.80	35.14	27.88	117.12	125.63	0.00	0.00	-135.07	-196.15	-62.86	-395.46	181.9	181.87	147.20	249.02	3767	2047.9	1.37	8218	0.99847795	5992.6	0.159
	U_{53} - U_{54}	236.40	153.09	2.50	1.90	16.90	19.60	26.62	20.23	179.93	208.68	0.00	0.00	-272.72	-172.68	-641.24	-476.25	232.7	232.70	199.

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: 3F1
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
In accordance with Specification for Strength Design of Truss Bridges (LDF) 1985 rev 1996

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

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

M_z Information

Location	Member	ZZ Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F$_y$/S_{top}	M_r (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor C_{mx}	Pass
Structure 1	L_0-L_1	-15.54	-73.33	6.10	-5.80	-0.70	0.70					39.14	-179.28	30.33	85.20	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99500394	2755.4	-0.218	0.51	0.51
	L_1-L_2	39.76	-87.96	3.00	-8.50	-6.90	7.90					95.11	-237.37	-48.17	-228.69	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99500394	2755.4	-0.401	0.44	0.44
	L_2-L_3	33.09	-42.20	1.20	-11.10	-7.50	10.00					-89.52	-77.30	-278.78	-163.41	99.5	99.53	81.00	125.49	3409	1372.0	1.26	4141	0.99991186	3294.8	0.290	0.72	0.72
	L_3-L_4	-11.34	11.55	1.80	-13.50	-13.70	-5.30					11.31	-180.36	-213.02	-61.69	99.9	99.93	84.14	125.49	3409	1372.0	1.26	4141	0.99991186	3294.8	0.290	0.72	0.72
	L_4-L_5	-49.11	208.03	1.50	-21.40	-13.00	17.81					-36.35	-82.79	243.04	52.6	52.58	76.68	114.47	3280	1504.8	1.26	3777	0.99991360	3052.4	-0.129	0.55	0.55
	L_5-L_6	-0.46	181.07	1.50	-8.50	-8.30	4.30					16.70	38.97	-103.54	-3.34	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99992345	3448.5	0.074	0.63	0.63
	L_6-L_7	41.44	78.72	1.90	-2.60	-10.50	-2.20					-26.38	-125.23	-139.12	-23.31	108.5	108.53	96.44	143.49	4249	1766.0	1.31	4764	0.99991458	4176.0	-0.549	0.22	0.22
	L_7-L_8	-25.11	448.74	0.70	1.70	-8.20	9.40					7.79	18.93	-81.29	104.65	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_8-L_9	425.89	-36.02	9.00	-5.60	-5.10	5.10					97.04	-60.38	-1.08	1.08	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_9-L_{10}	150.02	-126.53	4.10	-7.30	-5.80	2.20					44.21	-78.71	-82.54	-23.72	104.6	104.58	94.19	144.85	4249	1766.0	1.31	4764	0.99991458	4176.0	-0.549	0.22	0.22
	L_{10}-L_{11}	120.44	-115.99	2.90	1.10	-3.80	-3.30					31.27	-11.86	-60.97	-35.58	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{11}-L_{12}	108.58	-108.12	2.90	1.10	-3.80	-3.30					39.89	-76.42	-84.59	-27.00	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{12}-L_{13}	-45.24	-121.26	2.10	-6.30	-7.20	-7.20					22.64	-3.23	-87.63	77.63	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{13}-L_{14}	96.32	-264.98	6.30	-13.50	-9.90	6.10					67.93	-145.58	-106.74	-65.77	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{14}-L_{15}	-352.24	66.09	3.20	-1.30	-2.30	2.30					14.02	-2.35	-45.97	-2.40	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{15}-L_{16}	-191.89	-319.35	6.60	0.30	-16.70	-8.20					241.04	-0.69	-455.83	-683.53	-528.79	179.7	179.69	170.68	2514	4363	0.99507121	5524.6	0.914	0.57	0.57
	L_{16}-L_{17}	339.58	44.88	3.30	-0.30	-14.60	-1.90					5.39	-2.16	-157.42	-10.79	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{17}-L_{18}	-154.50	-31.26	3.00	-6.20	-8.30	6.80					3.23	-2.16	-100.27	8.63	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{18}-L_{19}	-215.80	145.70	4.40	-4.00	-2.90	2.90					4.31	-2.33	-31.27	31.27	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{19}-L_{20}	-136.32	49.67	0.30	-0.20	-7.60	3.90					3.23	-2.16	-81.94	-42.09	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{20}-L_{21}	-2.68	-185.02	3.00	-7.70	-0.50	0.50					31.94	-81.98	-5.32	9.58	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{21}-L_{22}	3.78	249.23	1.50	-8.30	-4.10	-2.40					42.58	-103.28	-41.52	-26.62	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{22}-L_{23}	-4.23	-180.72	4.10	-8.30	-6.00	7.40					51.25	-349.81	48.55	337.36	162.3	162.31	151.98	209.67	4946	2152.2	1.29	6919	0.99904267	5357.7	-0.146	0.54	0.54
	L_{23}-L_{24}	-0.46	181.07	1.50	-8.50	-8.30	4.30					16.70	38.97	-103.54	-3.34	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99992345	3448.5	0.074	0.63	0.63
	L_{24}-L_{25}	-252.89	-295.03	3.40	-16.30	-16.80	-10.30					36.20	-173.59	-178.87	-109.66	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{25}-L_{26}	-11.71	11.73	1.80	-13.50	-13.70	-5.30					-11.71	-180.29	-214.00	-59.75	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{26}-L_{27}	-475.08	-292.18	2.40	-22.40	-17.20	-5.00					25.55	-25.55	-439.48	-183.13	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{27}-L_{28}	-280.47	-64.51	2.00	3.50	-24.60	-3.40					21.29	37.26	-261.92	36.20	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{28}-L_{29}	-292.36	219.74	2.00	3.50	-24.60	-3.40					26.42	22.36	-171.76	8.52	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{29}-L_{30}	-225.83	141.30	1.70	3.30	-12.60	-0.40					18.10	35.14	-134.15	-4.26	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{30}-L_{31}	-201.50	229.74	2.80	1.80	-12.20	0.90					29.87	31.16	-127.42	-10.79	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{31}-L_{32}	-160.03	387.16	3.80	1.70	-11.60	1.30					19.16	39.39	-122.44	-13.84	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{32}-L_{33}	-202.71	204.45	2.90	-0.20	-14.10	-4.90					30.68	-2.13	-192.12	-47.91	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{33}-L_{34}	-379.79	103.33	1.50	-8.30	-6.00	7.40					51.25	-349.81	48.55	337.36	162.3	162.31	151.98	209.67	4946	2152.2	1.29	6919	0.99904267	5357.7	-0.146	0.54	0.54
	L_{34}-L_{35}	1072.48	-412.35	20.10	-12.40	-1.20	-5.10					211.47	-130.48	-12.63	-1.05	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{35}-L_{36}	337.46	47.31	1.90	-2.60	-10.50	-2.20					19.99	-23.16	-159.92	-49.45	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{36}-L_{37}	475.57	-49.03	7.40	-10.50	-5.60	-2.30					77.88	-112.47	-58.92	-24.20	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{37}-L_{38}	150.02	-126.53	4.10	-7.30	-5.80	2.20					44.21	-78.71	-82.54	-23.72	104.6	104.58	94.19	144.85	4249	1766.0	1.31	4764	0.99991458	4176.0	-0.549	0.22	0.22
	L_{38}-L_{39}	226.51	-41.81	4.60	-7.90	-7.80	-2.70					46.29	-83.12	-82.06	-28.41	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{39}-L_{40}	214.45	-56.43	3.70	-10.90	-8.20	-3.80					38.93	-114.68	-86.27	-39.98	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{40}-L_{41}	44.16	-64.39	2.30	-4.00	-3.20	0.80					34.72	-0.26	-92.03	-0.26	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{41}-L_{42}	49.27	-202.49	2.90	-18.80	-16.50	-13.20					30.51	-197.79	-173.60	-138.88	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{42}-L_{43}	-197.12	29.79	1.10	-3.70	-2.70	2.70					4.10	-2.33	-29.76	29.76	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{43}-L_{44}	-111.92	0.86	1.30	-2.80	-18.00	-5.00					13.68	29.46	-189.38	-52.61	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{44}-L_{45}	-111.92	0.86	1.30	-2.80	-18.00	-5.00					13.68	29.46	-189.38	-52.61	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{45}-L_{46}	-60.78	179.81	1.60	3.20	-11.70	-1.30					14.73	33.67	-123.10	-13.68	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{46}-L_{47}	-81.80	265.54	2.40	-13.60	0.90					25.25	14.73	-143.09	9.47	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{47}-L_{48}	-99.81	411.39	2.40	-13.60	0.90					25.25	14.73	-143.09	9.47	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{48}-L_{49}	-99.81	-279.28	2.10	-1.20	-14.40	-7.10					22.09	-12.63	-151.50	-74.70	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{49}-L_{50}	231.96	1024.43	2.10	-1.20	-14.40	-7.10					22.09	-12.63	-151.50	-74.70	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{50}-L_{51}	1026.29	-362.30	19.10	-14.30	-1.20	-1.20					203.36	-152.25	-12.79	12.78	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{51}-L_{52}	-226.76	-125.35	1.30	-5.70	-14.40	-4.10					13.64	-7.45	-153.32	-43.65	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{52}-L_{53}	278.05	-132.91	4.70	-10.40	-5.40	-2.60					50.04	-110.73	-57.49	-27.68	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{53}-L_{54}	178.39	-39.76	3.70	-6.20	-4.10	-1.90					39.28	-79.86	-60.02	-27.01	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{54}-L_{55}	222.98	-243.21	4.40	-7.70	-8.70	-5.70					46.85	-81.98	-82.63	-60.09	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{55}-L_{56}	187.98	-470.72	3.40	-8.50	-24.10	-13.70					36.20	-90.50	-256.59	-145.86	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{56}-L_{57}	-445.06	-93.48	2.10	-6.40	-23.70	-10.00					22.36	-4.26	-252.33	-106.47	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{57}-L_{58}	-291.78	-319.50	1.30	-5.70	-14.40	-4.10					13.64	-7.45	-153.32	-43.65	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{58}-L_{59}	-392.27	38.30	1.00	-0.30	-17.90	-2.40					4.06	-11.19	-69.64	-717.70	16.57	176.7	176.70	168.45	2688	6704	0.99991458	5526.4	-0.022	0.59	0.59
	L_{59}-L_{60}	-297.04	199.10	0.80	-0.30	-12.00	2.00					8.52	-3.19	-127.76	21.29	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{60}-L_{61}	24.53	26.81	2.70	-0.30	-0.40	0.40					45.28	-78.71	-23.23	4.31	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{61}-L_{62}	24.53	-109.42	4.20	-7.30	-0.30	0.40					90.76	-244.96	21.68	-136.64	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99500394	2755.4	-0.684	0.33	0.33
	L_{62}-L_{63}	-139.90	-177.77	4.00	-7.80	-1.60	-1.40					43.13	-84.10	-17.25	-15.09	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{63}-L_{64}	39.39	-38.61	4.40	-7.70	-1.60	-1.40					39.39	-78.78	-46.33	-46.33	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{64}-L_{65}	47.96	-293.64	3.70	-8.10	-7.30	-6.20					36.20	-89.53	-89.73	-66.85	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{65}-L_{66}	12.94	-58.78	2.30	-4.00	-3.20	0.80					12.94	-0.26	-92.03	-0.26	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{66}-L_{67}	-47.68	-343.07	2.40	-20.10	-13.70	-11.50					25.88	-216.72	-147.71	-123.99	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{67}-L_{68}	-341.10	86.20	1.30	-5.80	-19.10	-1.20					12.94	8.63	-205.94	12.94	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{68}-L_{69}	-201.09	152.50	1.30	-5.80	-19.10	-1.20					12.94	8.63	-205.94	12.94	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{69}-L_{70}	-148.24	148.96	1.80	0.20	-9.40	1.80					19.41	2.16	-101.35	19.41	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{70}-L_{71}	-428.31	-26.46	11.10	-4.90	-0.90	0.00					123.08	-54.56	0.00	-0.00	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{71}-L_{72}	70.66	-27.55	4.60	-6.40	-6.80	-2.70					51.21	-77.25	-75.70	-30.06	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{72}-L_{73}	194.48	-25.11	3.50	-10.20	-6.00	-3.90					59.00	-113.56	-66.80	-43.42	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{73}-L_{74}	79.61	-58.78	2.30	-4.00	-3.20	0.80					12.94	-0.26	-92.03	-0.26	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{74}-L_{75}	-45.48	-80.88	1.30	-6.40	-13.20	-6.10					14.47	-4.45	-146.96	-67.91	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{75}-L_{76}	-74.64	-5.53	0.50	-0.40	-8.80	4.30					5.57	-4.45	-97.97	-47.87	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00

M_z Information

Location	Member	ZZ Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F$_y$/S_{top}	M_r (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor C_{mx}	Pass
Structure 2	L_0-L_1	-15.54	-73.33	6.10	-5.80	-0.70	0.70					39.14	-179.28	30.33	85.20	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99500394	2755.4	-0.218	0.51	0.51
	L_1-L_2	39.76	-87.96	3.00	-8.50	-6.90	7.90					95.11	-237.37	-48.17	-228.69	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99500394	2755.4	-0.401	0.44	0.44
	L_2-L_3	33.09	-42.20	1.20	-11.10	-7.50	10.00					-89.52	-77.30	-278.78	-163.41	99.5	99.53	81.00	125.49	3409	1372.0	1.26	4141	0.99991186	3294.8	0.290	0.72	0.72
	L_3-L_4	-11.34	11.55	1.80	-13.50	-13.70	-5.30					11.31	-180.36	-213.02	-61.69	99.9	99.93	84.14	125.49	3409	1372.0	1.26	4141	0.99991186	3294.8	0.290	0.72	0.72
	L_4-L_5	-49.11	208.03	1.50	-21.40	-13.00	17.81					-36.35	-82.79	243.04	52.6	52.58	76.68	114.47	3280	1504.8	1.26	3777	0.99991360	3052.4	-0.129	0.55	0.55
	L_5-L_6	-0.46	181.07	1.50	-8.50	-8.30	4.30					16.70	38.97	-103.54	-3.34	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99992345	3448.5	0.074	0.63	0.63
	L_6-L_7	41.44	78.72	1.90	-2.60	-10.50	-2.20					-26.38	-125.23	-139.12	-23.31	108.5	108.53	96.44	143.49	4249	1766.0	1.31	4764	0.99991458	4176.0	-0.549	0.22	0.22
	L_7-L_8	-25.11	448.74	0.70	1.70	-8.20	9.40					7.79	18.93	-81.29	104.65	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_8-L_9	425.89	-36.02	9.00	-5.60	-5.10	5.10					97.04	-60.38	-1.08	1.08	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_9-L_{10}	150.02	-126.53	4.10	-7.30	-5.80	2.20					44.21	-78.71	-82.54	-23.72	104.6	104.58	94.19	144.85	4249	1766.0	1.31	4764	0.99991458	4176.0	-0.549	0.22	0.22
	L_{10}-L_{11}	120.44	-115.99	2.90	1.10	-3.80	-3.30					31.27	-11.86	-60.97	-35.58	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{11}-L_{12}	108.58	-108.12	2.90	1.10	-3.80	-3.30					39.89	-76.42	-84.59	-27.00	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{12}-L_{13}	-45.24	-121.26	2.10	-6.30	-7.20	-7.20					22.64	-3.23	-87.63	77.63	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{13}-L_{14}	96.32	-264.98	6.30	-13.50	-9.90	6.10					67.93	-145.58	-106.74	-65.77	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0.00	0.00
	L_{14}-L_{15}	-352.24	66.09	3.20	-1.30	-2.30	2.30					14.02	-2.35	-45.97	-2.40	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.00000000	0.0	0.000	0

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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 6.6.2.1-4, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

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

M_z Information — ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Min) 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_{bot} (in^3)	Z_z (in^3)	I_z (in^4)	I_{xy} (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 $C_{b(x)}$	Equivalent Mom. Factor $C_{b(m)}$
Structure 1	U_1~L_1	-29.84	-69.00	0.56	-0.60	4.04	4.23					-30.76	54.98	87.24	124.90	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.779	0.29	0.29
	U_1~L_2	-9.06	15.16	0.47	-0.51	-3.42	3.15					5.27	-5.67	-38.07	35.05	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.939	0.22	0.22
	L_1~L_2	20.78	46.16	0.09	-0.09	-0.62	0.72					24.03	-29.33	49.82	39.84	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.960	0.21	0.21
	L_1~U_2	33.43	-34.38	2.25	-2.11	-2.72	2.80					76.06	-75.28	4.03	-4.12	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.990	0.20	0.20
	L_2~U_2	41.60	-42.42	2.51	-2.25	-14.52	12.28					90.44	81.07	-34.55	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.990	0.20	0.20
	U_2~L_2	45.52	-51.05	2.53	-3.18	-5.77	0.60					101.62	-112.36	48.00	-57.68	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5	958.8	-0.964	0.24	0.24
	L_2~U_3	53.57	-55.55	3.29	-3.05	-1.08	1.26					36.63	40.35	-41.43	2.25	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.973	0.21	0.21
	U_3~L_3	91.21	-101.85	4.30	-4.45	-0.02	0.02					47.92	-49.58	-0.22	23.18	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5	958.8	-0.976	0.25	0.25
	L_3~U_3	-20.53	21.18	5.25	-4.25	-4.55	5.46					58.46	-69.54	-50.64	60.75	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5	958.8	-0.977	0.24	0.24
	U_3~L_4	-135.19	155.81	0.20	-0.26	-4.28	4.59					172.96	198.87	-230.78	266.89	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5	958.8	-0.977	0.24	0.24
	L_3~L_4	-88.41	88.14	0.31	0.37	-3.08	3.26					3.30	3.95	-33.24	35.12	0.00	0.00	0.00	0.00	0	1309.7	1.65	1929	1.5	1758.2	-0.987	0.21	0.21
	L_4~U_4	-91.02	93.39	0.74	-0.72	-0.20	-3.57	4.02				7.99	-7.15	-46.18	49.49	0.00	0.00	0.00	0.00	0	1309.7	1.65	1929	1.5	1758.2	-0.987	0.21	0.21
	U_4~L_4	-79.50	78.32	0.97	-0.81	-3.41	3.30					10.42	-6.53	-36.73	35.55	0.00	0.00	0.00	0.00	0	1309.7	1.65	1929	1.5	1758.2	-0.987	0.21	0.21
	L_4~U_5	-49.20	60.09	1.18	-1.06	-3.19	3.24					12.70	-11.38	-34.34	34.93	0.00	0.00	0.00	0.00	0	824.7	1.54	870	1.5	853.4	-0.979	0.25	0.25
	U_5~L_5	-29.72	34.60	1.63	-1.72	-2.97	2.66					7.12	-5.63	-27.78	28.50	0.00	0.00	0.00	0.00	0	824.7	1.54	870	1.5	853.4	-0.979	0.25	0.25
	L_5~U_5	-1.46	-2.70	3.01	-3.09	-2.22	2.15					32.45	-33.27	-23.88	23.14	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.962	0.26	0.26
	L_5~L_6	34.16	-36.07	2.56	-2.35	-2.68	1.36					31.75	32.15	-31.71	31.72	0.00	0.00	0.00	0.00	0	824.7	1.54	870	1.5	853.4	-0.979	0.25	0.25
	U_5~L_6	46.21	-55.82	2.84	-2.96	-0.65	0.40					30.64	-31.94	-7.04	4.36	0.00	0.00	0.00	0.00	0	907.0	1.54	986	1.5	958.8	-0.976	0.25	0.25
	L_6~U_6	110.34	-114.53	4.95	-5.04	-0.02	0.02					53.37	-54.21	1.14	2.23	0.00	0.00	0.00	0.00	0	1157.1	1.59	1166	1.5	1137.2	-0.970	0.25	0.25
	L_6~L_7	-121.24	-131.08	5.22	-5.21	-0.34	-0.47					96.27	-96.19	-3.70	-5.04	0.00	0.00	0.00	0.00	0	2307.7	2.43	1452	1.5	2115.6	-0.948	0.22	0.22
	U_6~L_7	-134.20	-173.18	5.20	-5.66	-0.40	0.05					56.04	-61.53	-4.26	0.58	0.00	0.00	0.00	0.00	0	247.32	-304.46	168.92	-224.37
	L_7~U_7	-114.26	168.30	5.20	-5.66	-0.74	0.18	5.25				56.04	-61.53	-4.26	0.58	0.00	0.00	0.00	0.00	0	-139.58	208.63	-229.19	303.44
	L_7~L_8	-124.38	133.15	0.62	-0.66	-5.02	4.93					6.58	-7.02	-45.03	52.00	0.00	0.00	0.00	0.00	0	-153.13	163.98	-231.14	241.35
	U_7~L_8	-127.17	127.17	0.72	-0.72	-5.12	5.12					8.67	-8.67	-49.64	49.64	0.00	0.00	0.00	0.00	0	-127.17	127.17	-236.93	236.93
	L_8~U_8	-56.00	62.15	0.41	-0.44	-2.77	2.71					4.41	-4.65	-29.51	28.89	0.00	0.00	0.00	0.00	0	-67.67	74.75	-111.17	118.35
	U_8~L_9	-34.04	39.78	0.26	-0.28	-1.76	1.72					2.80	-2.95	-18.74	18.36	0.00	0.00	0.00	0.00	0	-39.11	45.74	-64.53	70.96
	L_9~U_9	-7.05	12.30	3.69	1.66	-2.56	2.69					17.94	-17.68	-27.28	28.68	0.00	0.00	0.00	0.00	0	14.16	7.00	-44.62	53.28
	L_9~L_{10}	15.85	-15.58	2.00	-2.07	-2.60	2.57					21.25	-22.08	-27.71	27.37	0.00	0.00	0.00	0.00	0	48.23	-48.97	-15.43	15.33
	U_{10}~L_{10}	38.85	-44.03	1.86	-1.95	-1.80	1.35					19.80	-20.84	-13.80	11.98	0.00	0.00	0.00	0.00	0	76.24	-80.50	-32.66	32.66
	L_{10}~L_{11}	86.89	-96.05	3.85	-3.79	-1.45	1.35					41.03	-40.39	-15.44	14.39	0.00	0.00	0.00	0.00	0	166.31	-177.37	52.89	-106.15
	U_{11}~L_{11}	155.08	-164.45	1.65	-1.65	-4.77	1.90					81.68	-89.34	-25.28	32.00	0.00	0.00	0.00	0.00	0	265.36	-272.22	153.99	-160.85
	L_{11}~L_{12}	141.21	-149.39	4.20	-4.29	-0.56	0.51					44.67	-45.66	-10.21	5.43	0.00	0.00	0.00	0.00	0	241.65	-253.57	170.29	-187.15
	U_{12}~L_{12}	192.53	-192.81	4.06	-4.16	-0.52	0.26					43.21	-44.28	-10.52	2.71	0.00	0.00	0.00	0.00	0	251.85	-253.02	188.52	-192.52
	L_{12}~L_{13}	147.39	-146.79	3.24	-3.26	-0.27	0.27					22.64	-22.56	-2.57	2.57	0.00	0.00	0.00	0.00	0	252.72	-252.72	201.85	-201.85
	U_{13}~L_{13}	203.50	-203.15	5.33	-5.14	-0.34	0.36					56.78	-54.67	-3.63	3.88	0.00	0.00	0.00	0.00	0	338.36	-335.17	259.83	-259.06
	L_{13}~L_{14}	93.02	-89.94	5.33	-5.14	-0.34	0.36					56.78	-54.67	-3.63	3.88	0.00	0.00	0.00	0.00	0	197.37	-192.94	172.12	-172.60
	U_{14}~L_{14}	-159.87	162.82	0.55	-0.58	-5.55	5.17					5.79	-6.09	-58.42	54.37	0.00	0.00	0.00	0.00	0	200.31	203.74	-263.78	262.35
	L_{14}~L_{15}	-113.84	113.84	0.43	-0.43	-4.45	4.45					5.79	-5.79	-58.42	58.42	0.00	0.00	0.00	0.00	0	142.14	142.14	-209.02	209.02
	U_{15}~L_{15}	-130.37	127.18	0.55	-0.41	-5.66	5.53					5.79	-4.36	-53.18	52.88	0.00	0.00	0.00	0.00	0	181.96	169.67	-238.62	234.08
	L_{15}~L_{16}	-113.07	114.60	0.87	-0.60	-5.14	5.15					9.13	-6.26	-54.12	54.20	0.00	0.00	0.00	0.00	0	135.12	140.84	-217.35	219.44
	U_{16}~L_{16}	-73.00	67.44	0.83	-0.73	-3.77	3.66					11.54	-10.92	-29.26	29.66	0.00	0.00	0.00	0.00	0	83.20	77.61	-124.77	120.94
	L_{16}~L_{17}	-44.77	46.58	1.10	-1.04	-2.78	2.62					11.54	-10.92	-29.26	29.66	0.00	0.00	0.00	0.00	0	43.20	46.36	-66.24	69.11
	U_{17}~L_{17}	-30.30	34.39	1.10	-1.04	-2.78	2.62					18.31	-18.17	-21.44	21.73	0.00	0.00	0.00	0.00	0	18.99	-17.95	-32.68	33.88
	L_{17}~L_{18}	-3.79	4.34	1.74	-1.73	-2.04	2.07					18.31	-18.17	-21.44	21.73	0.00	0.00	0.00	0.00	0	18.99	-17.95	-32.68	33.88
	U_{18}~L_{18}	22.64	-26.16	2.87	-2.87	-1.44	1.26					29.24	-30.21	-15.11	14.04	0.00	0.00	0.00	0.00	0	89.80	84.03	-32.15	37.99
	L_{18}~L_{19}	38.56	-47.48	3.52	-3.46	-1.09	0.80					36.98	-36.44	-11.44	8.40	0.00	0.00	0.00	0.00	0	134.59	-135.10	71.85	-76.81
	U_{19}~L_{19}	113.84	-113.84	3.43	-3.43	-0.27	0.27					58.46	-58.46	-2.57	2.57	0.00	0.00	0.00	0.00	0	222.95	-234.54	139.47	-146.75
	L_{19}~L_{20}	138.22	-138.56	5.55	-5.67	-0.74	0.25					58.36	-59.60	-7.76	2.58	0.00	0.00	0.00	0.00	0	255.55	-258.14	169.59	-177.30
	U_{20}~L_{20}	132.45	-132.04	5.55	-5.67	-0.74	0.25					60.12	-61.36	-7.76	2.58	0.00	0.00	0.00	0.00	0	247.32	-247.32	167.37	-167.37
	L_{20}~L_{21}	173.80	-176.15	5.51	-5.63	-0.28	0.24					62.16	-59.20	-2.90	2.54	0.00	0.00	0.00	0.00	0	305.75	-305.89	222.17	-225.64
	U_{21}~L_{21}	-2.18	2.18	5.51	-5.63	-0.28	0.24					62.16	-59.20	-2.90	2.54	0.00	0.00	0.00	0.00	0	2.18	2.18	-39.39	39.39
	L_{21}~L_{22}	-167.09	167.27	5.50	-5.55	-4.94	4.67					5.29	-5.85	-52.63	49.70	0.00	0.00	0.00	0.00	0	210.28	209.80	-285.58	282.06
	U_{22}~L_{22}	-116.04	109.89	0.37	-0.33	-4.00	3.97					3.97	-3.47	-42.53	42.31	0.00	0.00	0.00	0.00	0	145.68	138.34	-206.14	197.86
	L_{22}~L_{23}	-124.53	127.04	0.25	-0.25	-4.00	4.00					7.23	-5.30	-42.53	42.31	0.00	0.00	0.00	0.00	0	145.68	154.81	-213.14	218.03
	U_{23}~L_{23}	-119.83	124.38	0.68	-0.50	-4.14	4.07					7.23	-5.30	-44.12	43.33	0.00	0.00	0.00	0.00	0	146.38	154.81	-213.14	218.03
	L_{23}~L_{24}	-78.36	74.14	0.49	-0.40	-3.47	3.41					11.59	-10.40	-42.89	41.21	0.00	0.00	0.00	0.00	0	88.29	82.09	-102.11	98.10
	U_{24}~L_{24}	-79.51	88.86	1.09	-0.98	-4.03	3.87					11.59	-10.40	-42.89	41.21	0.00	0.00	0.00	0.00	0	88.29	102.00	-111.81	125.52
	L_{24}~L_{25}	-43.96	51.93	1.11	-1.24	-2.11	2.26					11.64	-13.18	-22.50	24.10	0.00	0.00	0.00	0.00	0	41.62	50.38	-86.29	98.65
	U_{25}~L_{25}	-29.31	31.03	2.45	-2.46	-2.05	2.05					26.46	-26.46	-20.25	20.25	0.00	0.00	0.00	0.00	0	4.95	7.71	-75.15	77.91
	L_{25}~L_{26}	-5.57	1.81	2.54	-2.72	-2.13	1.95					26.99	-28.93	-22.66	20.76	0.00	0.00	0.00	0.00	0	27.84	-35.26	-36.70	29.34
	U_{26}~L_{26}	-24.53	27.04	2.72	-2.72	-2.13	1.95					26.99	-28.93	-22.66	20.76	0.00	0.00	0.00	0.00	0	27.84	-35.26	-36.70	29.34
	L_{26}~L_{27}	55.25	-61.09	2.71	-2.77	-0.58	0.41					28.85	-29.44	-6.21	4.38	0.00	0.00	0.00	0.00	0	109.34	-117.68	-63.76	-73.72
	U_{27}~L_{27}	115.80	-122.73	4.96	-5.02	-0.34	0.36					58.45	-59.64	-3.63	3.88	0.00	0.00	0.00	0.00	0	214.42	-228.42	147.31	-156.83
	L_{27}~L_{28}	-137.13	-150.74	5.30	-5.32	-0.53	0.50					56.41	-56.62	-6.61	5.69	0.00	0.00	0.00	0.00	0	251.59	-269.56	170.97	-188.57
	U_{28}~L_{28}	-165.72	-206.83	4.92	-5.40	-0.39	0.52					52.40	-57.99	-4.11	5.50	0.00	0.00	0.00	0.00	0	-283.56	-344.27	210.09	-261.72
	L_{28}~L_{29}	-109.81	116.74	0.60	-0.64	-4.38	4.49					3.81	-4.05	-53.80	51.87	0.00	0.00	0.00	0.00	0	132.61	141.49	-207.50	214.19
	U_{29}~L_{29}	-112.89	112.89	0.35	-0.35	-4.38	4.49					4.14	-4.14	-53.80	53.80	0.00	0.00	0.00	0.00	0	132.61	132.61	-214.19	214.19
	L_{29}~L_{30}	-38.40	-68.11	0.37	-0.27	-2.76	2.77					3.98	-2.94	-29.73	29.91	0.00	0.00	0.00	0.00	0	44.75	58.72	-88.57	101.43
	U_{30}~L_{30}	-34.74	34.74	1.12	-1.09	-2.77	2.77					18.15	-18.97	-32.62	33.01	0.00	0.00	0.00	0.00	0	19.98	-13.75	-49.36	53.82
	L_{30}~L_{31}	-2.78	8.39	1.68	-1.76	-3.02	3.06					18.15	-18.97	-32.62	33.01	0.00	0.00	0.00	0.00	0	19.98	-13.75	-49.36	53.82
	U_{31}~L_{31}	25.87	-28.68	2.17	-2.29	-1.89	1.95					23.41	-24.69	-20.37	21.04	0.00	0.00	0.00	0.00	0	64.06	-69.38	7.15	-9.83
	L_{31}~L_{32}	15.85	-15.85	2.27	-2.27	-1.89	1.95					23.41	-24.69	-20.37	21.04	0.00	0.00	0.00	0.00	0	64.06	-69.38	7.15	-9.83
	U_{32}~L_{32}	82.27	-85.87	3.27	-3.87	-0.49	0.06					36.38	-36.84	-13.55	11.78	0.00	0.00	0.00	0.00	0	150.44	-147.94	85.53	-84.73
	L_{32}~L_{33}	142.63	-166.19	4.76	-5.23	-0.07	0.09					51.25	-56.35	-0.78	0.99	0.00	0.00	0.00	0.00	0	252.10	-289.18	184.41	-214.64
	U_{33}~L_{33}	36.53	-44.70	4.76	-5.23	-0.07	0.09					51.25	-56.35	-0.78	0.99	0.00	0.00	0.00	0.00	0	252.10	-289.18	184.41	-214.64
	L_{33}~L_{34}	94.22	-125.87	3.39	-4.15	-0.92	0.71					36.53	-44.70	-9.91	7.67	0.00	0.00	0.00	0.00	0	169.97	-221.74	109.60	-153.66
	U_{34}~L_{34}	92.27	-95.87	3.27	-3.67	-0.49	0.08					36.26	-39.98	-5.29	0.89	0.00	0.00	0.00	0.00	0	165.76	-178.09	113.06	-123.46
	L_{34}~L_{35}	-53.89	53.89	3.80	-5.04	-0.37	-0.12					62.28	-56.07	-4.06	1.35	0.00	0.00	0.00	0.00	0	113.21	-142.94	52.95	-71.80
	U_{35}~L_{35}	44.79	-53.89	3.80	-5.04	-0.37	-0.12					62.28	-56.07	-4.06	1.35	0.00	0.00	0.00	0.00	0	113.21	-142.94	52.95	-71.80

M_z Information — YY Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Min) 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_{bot} (in^3)	Z_z (in^3)	I_z (in^4)	I_{xy} (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 $C_{b(x)}$	Equivalent Mom. Factor $C_{b(m)}$
Structure 1	U_1~L_1	94.22	-125.87	3.39	-4.15	-0.92	0.71					36.53	-44.70	-9.91	7.67	0.00	0.00	0.00	0.00	0	169.97	-221.74	109.60	-153.66	42.7	42.74	42.74	65.30	8	1389.6	1.53	2135	1.5	2115.6	-0.767	0.29	0.29
	U_1~L_2	92.27	-95.87	3.27	-3.67	-0.49	0.08					36.26	-39.98	-5.29	0.89	0.00	0.00	0.00	0.00	0	165.76	-178.09	113.06	-123.46	36.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2	-0.941	0.22	0.22
	L_1~L_2	-53.89	53.89	3.80	-5.04	-0.37	-0.12					62.28	-56.07	-4.06	1.35	0.00	0.00	0.00	0.00	0	113.21	-142.94	52.95	-71.80	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.973	0.21	0.21
	L_1~U_2	44.79	-53.89	3.80	-5.04	-0.37	-0.12					62.28	-56.07	-4.06	1.35	0.00	0.00	0.00	0.00	0	113.21	-142.94	52.95	-71.80	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.982	0.28	0.28
	L_2~U_2	143.57	-146.79	4.15	-4.29	-0.92	0.71					36.53	-44.70	-9.91	7.67	0.00	0.00	0.00	0.00	0	169.97	-221.74	109.60	-153.66	42.7	42.74	42.74	65.30	8	1389.6	1.53	2135	1.5	2115.6	-0.767	0.29	0.29
	U_2~L_2	147.39	-146.79	3.24	-3.26	-0.27	0.27					22.64	-22.56	-2.57	2.57	0.00	0.00	0.00	0.00	0	252.72	-252.72	201.85	-201.85	36.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2	-0.941	0.22	0.22
	L_2~U_3	93.02	-89.94	5.33	-5.14	-0.34	0.36					56.78	-54.67	-3.63	3.88	0.00	0.00	0.00	0.00	0	197.37	-192.94	172.12	-172.60	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.973	0.21	0.21
	U_3~L_3	91.21	-101.85	4.30	-4.45	-0.02	0.02					47.92	-49.58	-0.22	23.18	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5	958.8	-0.976	0.25	0.25
	L_3~U_3	-20.53	21.18	5.25	-4.25	-4.55	5.46					58.46	-69.54	-50.64	60.75	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5	958.8	-0.977	0.24	0.24
	U_3~L_4	-135.19	155.81	0.20	-0.26	-4.28	4.59					172.96	198.87	-230.78	266.89	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5	958.8	-0.977	0.24	0.24
	L_3~L_4	-88.41	88.14	0.31	0.37	-3.08	3.26					3.30	3.95	-33.24	35.12	0.00	0.00	0.00	0.00	0	-110.65	119.72	-158.15	160.24
	L_4~U_4	-91.02	93.39	0.74	-0.72	-0.20	-3.57	4.02				7.99	-7.15	-46.18	49.49	0.00	0.00	0.00	0.00	0	-107.97	108.33	-166.38	217.51
	U_4~L_4	-79.50	78.32	0.97	-0.81	-3.41	3.30					10.42	-6.53	-36.73	35.55	0.00	0.00	0.00	0.00	0	-89.82	92.32	-151.11	148.02
	L_4~U_5	-49.20	60.09	1.18	-1.06	-3.19	3.24					12.70	-11.38	-34.34	34.93	0.00	0.00	0.00	0.00	0	-47.45	63.33	-108.60	123.53
	U_5~L_5	-29.72	34.60	1.63	-1.72	-2.97	2.66					7.12	-5.63	-27.78	28.50	0.00	0.00	0.00	0.00	0	-15.86	20.75	-33.66	38.59
	L_5~U_5	-1.46	-2.70	3.01	-3.09	-2.22	2.15					32.45	-33.27	-23.88	23.14	0.00	0.00	0.00	0.00	0	40.29	-49.76	-32.94	26.58
	L_5~L_6	34.16	-36.07	2.56	-2.35	-2.68	1.36					31.75	32.15	-31.71	31.72	0.00	0.00	0.00	0.00	0	85.68	89.34	25.28	-32.30
	U_5~L_6	46.21	-55.82	2.84	-2.96	-0.65	0.40					30.64	-31.94	-7.04	4.36	0.00	0.00	0.00	0.00	0	99.91	-114.09	50.92	-66.91
	L_6~U_6	110.34	-114.53	4.95	-5.04	-0.02	0.02					53.37	-54.21	1.14	2.23	0.00	0.00	0.00	0.00	0	212.82	-219.40	138.34	-148.58
	L_6~L_7	-121.24	-131.08	5.22	-5.21	-0.34	-0.47					96.27	-96.19	-3.70	-5.04	0.00	0.00	0.00	0.00	0	230.77	-243.46	152.81	-176.96
	U_6~L_7	-134.20	-173.18	5.20	-5.66	-0.40	0.05					56.04	-61.53	-4.26	0.58	0.00	0.00	0.00	0.00	0	247.32	-304.46	168.92	-224.37
	L_7~

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: 3F1
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 (k-in)	Live Load (Max) (k-in)	Live Load (Min) (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	-12.55	3.37	0.27	-0.15	-2.41	1.01		3.02	-1.71
	L_1-L_2	-1.68	-7.06	0.18	-0.05	-1.25	-0.06		2.05	-0.56
	L_2-L_3	-0.09	8.37	0.07	-0.04	-0.40	0.00		1.38	-0.77
	L_3-L_4	9.78	-11.75	0.33	-0.47	-0.94	-0.62		3.69	-5.27
	L_4-U_4	-10.32	17.59	0.22	-0.48	-1.26	0.00		6.30	-8.74
	U_4-L_4	-26.82	-58.45	0.54	-0.55	-2.65	0.73		13.25	9.24
	L_4-L_5	-74.77	114.62	0.27	-0.15	-2.88	1.39		2.87	1.77
	L_5-L_6	-56.82	54.75	0.28	0.48	-2.23	0.51		3.00	5.18
	L_6-U_6	-56.82	52.22	0.28	0.48	-2.23	0.51		3.00	5.18
	U_6-L_6	-55.23	39.04	0.38	0.63	-1.91	1.06		4.13	6.81
	L_6-L_7	-20.96	7.36	0.44	-0.58	-1.23	0.19		4.69	-6.29
	L_7-L_8	-1.59	-20.25	0.08	-0.04	-0.61	0.00		1.56	-0.93
	L_8-U_8	-19.01	4.12	0.68	-0.94	-1.33	0.80		7.33	-10.12
	U_8-L_8	-58.43	13.81	0.61	-0.81	-1.75	1.12		12.12	-12.96
	L_8-L_9	-89.28	58.13	0.25	-0.21	-3.35	1.75		2.67	-2.30
	L_9-L_{10}	-89.28	61.33	0.44	-0.21	-3.41	2.20		4.75	-4.38
	L_{10}-U_{10}	-105.04	88.64	0.30	-0.05	-4.24	3.02		3.20	-0.53
	U_{10}-L_{10}	-82.69	87.74	0.53	-0.48	-4.30	2.52		5.60	-5.13
	L_{10}-L_{11}	-82.69	87.97	0.79	-0.48	-4.30	2.52		5.33	-4.66
	L_{11}-L_{12}	-81.28	63.04	0.55	-0.45	-3.37	2.55		5.87	-4.77
	L_{12}-U_{12}	-81.28	63.04	0.55	-0.45	-3.37	2.55		3.60	-3.47
	U_{12}-L_{12}	-17.30	7.21	0.61	-0.84	-1.67	1.01		6.44	-8.52
	L_{12}-L_{13}	-20.62	-11.45	0.90	-1.00	-1.67	1.09		7.42	-10.66
	L_{13}-L_{14}	-7.42	-23.91	0.92	-1.13	-1.20	0.25		9.81	-12.00
	L_{14}-U_{14}	-44.31	35.87	0.68	-0.95	-1.82	0.53		7.26	-10.11
	U_{14}-L_{14}	-66.38	68.64	0.74	-0.92	-2.42	1.07		7.84	-12.50
	L_{14}-L_{15}	-88.54	73.82	0.42	-0.80	-2.61	1.03		4.49	-8.49
	L_{15}-L_{16}	-88.54	73.82	0.42	-0.80	-2.61	1.03		4.49	-8.49
	L_{16}-U_{16}	-108.36	116.66	0.67	-0.40	-3.26	2.51		6.49	-4.26
	U_{16}-L_{16}	-154.28	139.69	0.34	-0.13	-4.09	3.03		3.60	-1.34
	L_{16}-L_{17}	-86.62	148.30	0.22	-0.24	-2.70	3.38		8.84	-4.15
	L_{17}-U_{17}	-24.74	100.99	0.84	0.39	-2.81	3.44		8.84	4.15
	U_{17}-L_{17}	-98.29	139.79	0.29	-0.27	-4.33	3.74		4.79	-4.43
	L_{17}-L_{18}	-74.15	95.51	0.30	-0.35	-3.69	2.93		3.17	-3.63
	L_{18}-L_{19}	-55.49	68.85	0.37	-0.47	-3.19	2.13		3.81	-4.63
	L_{19}-U_{19}	-55.49	68.85	0.37	-0.47	-3.19	2.13		4.44	-6.02
	U_{19}-L_{19}	-32.97	39.97	0.49	-0.71	-2.22	1.31		5.10	-7.50
	L_{19}-L_{20}	-10.33	4.39	0.60	-0.83	-1.34	0.35		6.30	-8.74
	L_{20}-U_{20}	-10.33	4.39	0.60	-0.83	-1.34	0.35		6.30	-8.74
	U_{20}-L_{20}	-17.07	16.15	0.73	-0.88	-1.37	1.10		7.63	-9.23
	L_{20}-L_{21}	-55.66	65.11	0.61	-0.46	-3.09	1.85		6.46	-7.22
	L_{21}-U_{21}	-55.66	65.11	0.64	-0.82	-3.09	1.85		6.70	-8.57
	U_{21}-L_{21}	-49.18	80.37	0.59	-0.66	-3.22	1.92		6.23	-6.90
	L_{21}-L_{22}	-106.02	102.50	0.22	-0.24	-4.25	3.32		2.30	-2.57
	L_{22}-U_{22}	-106.02	102.50	0.22	-0.24	-4.25	3.32		2.30	-2.57
	U_{22}-L_{22}	-47.57	127.97	1.07	0.41	-3.10	3.68		11.40	4.32
	L_{22}-L_{23}	-89.45	99.26	0.56	-0.36	-3.27	2.64		3.76	-0.19
	L_{23}-U_{23}	-89.45	99.26	0.56	-0.36	-3.27	2.64		3.76	-0.19
	U_{23}-L_{23}	-86.48	82.53	0.33	0.25	-3.15	1.85		3.50	2.63
	L_{23}-L_{24}	-50.13	57.65	0.52	-0.85	-2.51	1.54		5.54	-9.06
	L_{24}-U_{24}	-50.13	57.65	0.52	-0.85	-2.51	1.54		5.54	-9.06
	U_{24}-L_{24}	-12.59	26.40	1.19	-1.18	-1.07	0.10		11.69	-12.53
	L_{24}-L_{25}	-6.51	17.79	1.14	-1.22	-1.21	0.61		12.12	-12.96
	L_{25}-U_{25}	-11.88	0.88	0.68	-0.88	-1.20	0.00		7.36	-8.51
	U_{25}-L_{25}	-38.91	20.55	0.41	-0.34	-1.84	1.04		4.32	-5.71
	L_{25}-L_{26}	-68.49	71.54	0.40	-0.34	-3.66	2.08		4.86	-5.21
	L_{26}-U_{26}	-68.49	71.54	0.40	-0.34	-3.66	2.08		4.30	-3.64
	U_{26}-L_{26}	-70.17	69.10	0.31	-0.25	-3.24	3.15		3.39	-2.74
	L_{26}-L_{27}	-86.86	56.37	0.29	-0.22	-3.67	2.41		3.17	-2.38
	L_{27}-U_{27}	-86.86	52.05	0.34	-0.22	-3.67	2.41		3.03	-2.29
	U_{27}-L_{27}	-26.09	12.79	0.27	-0.53	-1.84	1.26		2.64	-5.70
	L_{27}-L_{28}	-9.08	-18.28	0.68	-0.88	-1.20	0.00		7.36	-8.51
	L_{28}-U_{28}	-9.08	-18.28	0.68	-0.88	-1.20	0.00		9.47	-12.16
	U_{28}-L_{28}	-50.46	39.07	0.48	-0.83	-1.75	1.52		5.63	-8.86
	L_{28}-L_{29}	-59.57	20.60	0.22	0.26	-2.46	0.43		2.36	2.82
	L_{29}-U_{29}	-59.57	20.60	0.22	0.26	-2.46	0.43		2.36	2.82
	U_{29}-L_{29}	-77.37	57.15	0.13	0.24	-3.12	1.25		3.33	2.82
	L_{29}-L_{30}	-86.86	58.47	0.37	0.24	-3.67	2.41		3.17	-2.38
	L_{30}-U_{30}	-86.86	56.37	0.29	-0.22	-3.67	2.41		3.17	-2.38
	U_{30}-L_{30}	-84.94	58.66	0.18	-0.27	-3.76	1.74		2.02	2.98
	L_{30}-L_{31}	-54.59	58.66	0.18	-0.27	-3.76	1.74		2.02	2.98
	L_{31}-U_{31}	-54.59	58.66	0.18	-0.27	-3.76	1.74		2.02	2.98
	U_{31}-L_{31}	-9.16	17.57	0.10	-0.29	-1.32	0.28		1.09	-3.27
	L_{31}-L_{32}	-9.16	17.57	0.10	-0.29	-1.32	0.28		1.09	-3.27
	L_{32}-U_{32}	-9.16	17.57	0.10	-0.29	-1.32	0.28		1.09	-3.27
	U_{32}-L_{32}	-9.12	-8.77	0.26	-0.27	-0.95	-0.22		2.69	-3.02
	L_{32}-L_{33}	-23.22	7.61	0.40	-0.07	-1.67	0.50		3.77	-1.68
	L_{33}-U_{33}	-23.22	7.61	0.40	-0.07	-1.67	0.50		3.77	-1.68

ZZ Axis Moments from STAAD (cont.)

Location	Member	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_z (in^3)	I (in^4)	$I_{t/n}$ (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F/S_{bc}	M_u (k-in)	Equivalent Mom. Factor a	$C_{m/n}$	$C_{b/n}$
Structure 1	U_0-L_1	0.00	0.00	-12.42	2.15	-51.24	19.04	15.6	15.63	15.58	25.56	5	804.0	1.66	857	1.5	773.7	-0.372	0.45
	L_1-L_2	0.00	0.00	0.48	6.90	-20.21	-9.97	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.493	0.80
	L_2-L_3	0.00	0.00	3.89	9.11	-6.27	-18.97	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.731	0.91
	L_3-L_4	0.00	0.00	-11.90	-8.92	-22.25	-23.26	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_4-U_4	0.00	0.00	-12.43	-12.18	-25.66	-22.56	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	U_4-L_4	0.00	0.00	-7.11	-3.35	-25.51	-26.44	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_4-L_5	0.00	0.00	5.56	6.32	-1.09	-4.28	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	U_4-L_5	0.00	0.00	8.91	10.23	7.68	-3.17	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_5-L_6	0.00	0.00	22.50	15.01	12.88	7.44	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_6-U_6	0.00	0.00	-0.06	0.65	14.03	5.08	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	U_6-L_6	0.00	0.00	-12.93	-8.87	-23.22	-10.66	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_6-L_7	0.00	0.00	-9.98	-13.79	-13.41	-13.15	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_7-L_8	0.00	0.00	-18.63	-18.63	-24.49	-25.13	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	U_8-L_8	0.00	0.00	-19.91	-8.39	-22.25	-17.78	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_8-L_9	0.00	0.00	-13.79	-2.26	-22.44	-17.42	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_9-L_{10}	0.00	0.00	-2.04	-1.16	-45.90	-23.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	U_{10}-L_{10}	0.00	0.00	-63.51	3.97	-33.54	-30.54	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_{10}-L_{11}	0.00	0.00	-7.21	18.08	-113.84	-21.68	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_{11}-L_{12}	0.00	0.00	1.68	2.57	-149.07	-22.98	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	U_{12}-L_{12}	0.00	0.00	6.58	6.58	-32.79	-32.79	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_{12}-L_{13}	0.00	0.00	2.67	-2.11	-18.40	-10.46	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_{13}-L_{14}	0.00	0.00	1.43	-3.81	-16.42	-10.66	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_{14}-U_{14}	0.00	0.00	-14.94	-10.41	-21.16	-17.71	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	U_{14}-L_{14}	0.00	0.00	-14.05	-14.66	-19.20	-25.34	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_{14}-L_{15}	0.00	0.00	-16.56	-10.79	-22.34	-16.60	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_{15}-L_{16}	0.00	0.00	-12.20	-5.46	-18.46	-21.68	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	U_{16}-L_{16}	0.00	0.00	10.53	4.09	-22.90	-14.55	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_{16}-L_{17}	0.00	0.00	2.42	-14.55	-32.49	-13.20	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	U_{17}-L_{17}	0.00	0.00	8.46	7.27	-7.58	2.17	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_{17}-L_{18}	0.00	0.00	10.46	7.41	-7.58	2.17	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_{18}-L_{19}	0.00	0.00	-4.81	-3.42	-9.19	-6.79	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	U_{19}-L_{19}	0.00	0.00	-3.52	-2.82	-4.50	-5.28	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_{19}-L_{20}	0.00	0.00	-5.77	-3.62	-5.11	-12.88	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	U_{20}-L_{20}	0.00	0.00	-12.95	-7.85	-13.67	-9.74	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_{20}-L_{21}	0.00	0.00	-12.00	-8.45	-16.79	-9.74	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	U_{21}-L_{21}	0.00	0.00	-20.38	-9.78	-25.53	-16.60	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_{21}-L_{22}	0.00	0.00	-14.87	-10.95	-17.30	-16.85	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	U_{22}-L_{22}	0.00	0.00	-12.91	-7.46	-15.91	-15.91	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_{22}-L_{23}	0.00	0.00	-13.94	-9.18	-15.58	-14.54	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_{23}-L_{24}	0.00	0.00	-16.89	-9.77	-13.57	-13.57	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	U_{24}-L_{24}	0.00	0.00	-9.57	-5.41	-14.48	-18.20	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_{24}-L_{25}	0.00	0.00	-8.97	-5.41	-14.48	-18.20	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	U_{25}-L_{25}	0.00	0.00	-7.27	-1.19	-8.87	-8.07	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_{25}-L_{26}	0.00	0.00	-4.31	2.19	-14.63	-5.08	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	U_{26}-L_{26}	0.00	0.00	-1.75	-2.04	-3.68	-5.79	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_{26}-L_{27}	0.00	0.00	3.56	5.62	-10.46	-8.33	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	U_{27}-L_{27}	0.00	0.00	-9.45	-4.96	-13.09	-20.31	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_{27}-L_{28}	0.00	0.00	-14.66	-15.34	-24.80	-23.36	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_{28}-U_{28}	0.00	0.00	-14.53	-10.55	-22.12	-16.38	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	U_{28}-L_{28}	0.00	0.00	-4.45	-7.61	-10.06	-14.42	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_{28}-L_{29}	0.00	0.00	-44.97	-19.29	-75.22	-1.41	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_{29}-U_{29}	0.00	0.00	-12.91	-7.46	-15.91	-15.91	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	U_{29}-L_{29}	0.00	0.00	-13.94	-9.18	-15.58	-14.54	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_{29}-L_{30}	0.00	0.00	-16.89	-9.77	-13.57	-13.57	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	U_{30}-L_{30}	0.00	0.00	-9.57	-5.41	-14.48	-18.20	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_{30}-L_{31}	0.00	0.00	-8.97	-5.41	-14.48	-18.20	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	U_{31}-L_{31}	0.00	0.00	-7.27	-1.19	-8.87	-8.07	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_{31}-L_{32}	0.00	0.00	-4.31	2.19	-14.63	-5.08	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	U_{32}-L_{32}	0.00	0.00	-1.75	-2.04	-3.68	-5.79	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	L_{32}-L_{33}	0.00	0.00	3.56	5.62	-10.46	-8.33	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00
	U_{33}-L_{33}	0.00	0.00	-9.45	-4.96	-13.09	-20.31	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.0	0.00	0.000	0.00

YY Axis Moments from STAAD

Location	Member	Dead Load (k-in)	Live Load (Max) (k-in)	Live Load (Min) (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	3.04	-1.31	-0.63	-19.07	0.00	0.00	0.00	-64.67	23.43
	L_1-L_2	3.44	1.66	-0.01	-23.19	0.00	0.00	0.00	-31.25	-30.52
	L_2-L_3	9.89	9.11	-0.27	-19.97	0.00	0.00	0.00	-67.93	-71.33
	L_3-L_4	-11.90	-8.92	-22.25	-23.26	0.00	0.00	0.00	-132.09	-60.14
	L_4-U_4	-12.43	-12.18	-25.66	-22.56	0.00	0.00	0.00	-85.30	-15.26
	U_4-L_4	-7.11	-3.35	-25.51	-26.44	0.00	0.00	0.00	-179.67	91.65
	L_4-L_5	5.56	6.32	-1.09	-4.28	0.00	0.00	0.00	-303.93	178.91
	L_5-L_6	8.91	10.23	7.68	-3.17	0.00	0.00	0.00	-254.17	188.19
	L_6-U_6	22.50	15.01	12.88	7.44	0.00	0.00	0.00	-171.76	154.43
	U_6-L_6	-0.06	0.65	14.03	5.08	0.00	0.00	0.00	-89.15	104.91
	L_6-L_7	-12.93	-8.87	-23.22	-10.66	0.00	0.00	0.00	-246.29	-206.96
	L_7-L_8	-9.98	-13.79	-13.41	-13.15	0.00	0.00	0.00	-222.50	-225.08
	L_8-U_8	-18.63	-18.63	-24.49	-25.13	0.00	0.00	0.00	-67.68	-126.49
	U_8-L_8	-19.91	-8.39	-22.25	-17.78	0.00	0.00	0.00	-98.93	-127.25
	L_8-L_9	-13.79	-2.26	-22.44	-17.42	0.00	0.00	0.00	-98.93	-131.97
	L_9-L_{10}	-2.04	-1.16	-45.90	-23.00	0.00	0.00	0.00	-18.68	-51.79
	U_{10}-L_{10}	-63.51	3.97	-33.54	-30.54	0.00	0.00	0.00	-16.51	-38.94
	L_{10}-L_{11}	-7.21	18.08	-113.84	-21.68	0.00	0.00	0.00	-17.53	75.86
	L_{11}-L_{12}	1.68	2.57	-149.07	-22.98	0.00	0.00	0.00	-131.57	36.57
	U_{12}-L_{12}	6.58	6.58	-32.79	-32.79	0.00	0.00	0.00	0.42	0.85
	L_{12}-L_{13}	2.67	-2.11	-18.40	-10.46	0.00	0.00	0.00	-91.25	-168.30
	L_{13}-L_{14}	1.43	-3.81	-16.42	-10.66	0.00	0.00	0.00	-91.25	-168.30
	L_{14}-U_{14}	-14.94	-10.41	-21.16	-17.71	0.00	0.00	0.00	-233.62	-199.89
	U_{14}-L_{14}	-14.05	-14.66	-19.20	-25.34	0.00	0.00	0.00	-43.86	-132.32
	L_{14}-L_{15}	-16.56	-10.79	-22.34	-16.60	0.00	0.00	0.00	-4.65	-62.12
	$L_{15}

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
Condition: As-Built

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

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

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

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

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

M_z Information

Location	Member	ZZ Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Start (k-in)	Impact Pedestrian Load End (k-in)	ZZ Axis Moment Properties: Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	S_{bb} (in^3)	S_{tt} (in^3)	S_{zz} (in^3)	I (in^4)	I_{xx} (in^4)	Shape Factor f	M_p (k-in)	Formula I & Form ? F-Sq.	M_z k-in	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(x)}$	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_{tt} (in^3)	S_{zz} (in^3)	I (in^4)	I_{yy} (in^4)	Shape Factor r	M_p (k-in)	P_{allow} (kip)	Formula I & Form ? F-Sq.	M_z k-in	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(y)}$	Pass
Structure 1	U_0–U_1	89.33	-98.19	4.03	-3.51	-8.27	-1.74	2.38	-2.03	-6.65	6.45	53.89	-66.98	-110.52	-23.21	28.60	-24.37	-7.80	5.35	16.19	-188.58	-27.55	-157.81	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880004	2974.3	-0.987	0.21	21.23	-73.03	-4.68	2.21	-3.69	5.26	-5.39	1.16	0.06	-0.43	2.24	-5.61	1.93	38.70	-70.10	186.83	-99.75	158.6	158.64	128.68	179.40	778.9	1.13	9920	—	0.99724250	5220.7	-0.534	0.39	1.16	0.183	0.040	0.23	Yes
	U_1–U_{1a}	150.58	-142.82	0.61	-1.04	-6.49	-3.56	-7.80	-6.15	-18.76	15.07	-8.54	-62.73	-101.52	1.52	15.81	-23.43	-17.88	-121.97	-189.32	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880004	2974.3	-0.987	0.21	21.23	-47.32	17.53	10.77	-8.67	12.84	-0.47	0.75	-0.12	0.77	-1.64	-58.51	21.63	44.30	-81.29	158.6	158.64	128.68	179.40	778.9	1.13	9920	—	0.99724250	5220.7	0.354	0.67	0.87	0.183	0.040	0.23	Yes
	U_{1a}–U_2	-130.88	58.71	0.86	2.41	-5.74	-3.99	2.20	0.80	-9.00	-1.35	11.48	32.13	-90.53	-53.22	2.40	9.54	-10.84	-16.28	-155.23	-118.09	-287.18	7.13	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880004	2974.3	-0.025	0.59	0.59	-73.71	3.14	-0.26	1.33	4.51	-6.35	0.07	0.22	-0.69	0.29	-3.41	17.75	60.31	-84.86	1.05	3.28	-10.26	4.28	-100.25	27.16	-17.42	-106.24	158.6	158.64	128.76	179.40	778.9	1.13	9920	—	0.99724250	5220.7	0.164	0.67	0.67	0.218	0.071	0.29	Yes
	U_2–U_3	-46.29	76.63	1.54	2.32	-3.93	-2.34	-0.72	-1.15	-7.66	-0.35	-29.51	-43.27	-5.68	8.58	-11.81	-3.45	-33.46	-19.82	-59.32	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880004	2974.3	-0.095	0.49	0.49	-153.23	-68.34	-6.15	0.81	6.15	-76.52	-27.31	1.30	3.83	-17.74	-38.14	12.68	0.70	-1.17	-0.10	-2.08	8.15	19.72	-27.31	-284.36	158.6	158.64	128.68	179.40	778.9	1.13	9920	—	0.99724250	5220.7	0.386	0.76	0.76	0.120	0.073	0.20	Yes
	U_3–U_4	-26.07	74.96	1.74	2.40	-2.08	0.47	0.77	-1.36	-0.71	-23.63	52.89	-29.59	-88.89	-27.22	5.68	9.18	-16.32	-8.51	-3.70	-135.79	-29.92	-142.64	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880004	2974.3	0.219	0.65	0.65	-60.76	-87.30	0.16	0.69	-1.52	-0.44	0.18	0.21	-0.14	-0.98	3.14	19.48	-115.21	-101.55	-144.32	158.6	158.64	128.68	179.40	778.9	1.13	9920	—	0.99724250	5220.7	0.734	0.89	0.89	0.123	0.063	0.19	Yes
	U_4–U_5	19.43	176.86	1.93	2.01	-0.49	-0.42	0.62	0.72	-1.37	0.17	25.17	26.70	-73.37	-5.72	7.44	8.60	-15.23	2.03	58.76	268.64	-75.12	226.39	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880004	2974.3	0.279	0.69	0.69	32.23	-29.57	0.43	1.33	-3.40	-1.54	-0.04	0.39	0.47	-0.60	5.72	17.77	-45.42	-20.60	-0.65	5.25	7.04	-9.71	49.34	-15.34	-17.15	-65.22	158.6	158.64	128.76	179.40	778.9	1.13	9920	—	0.99724271	5220.7	0.263	0.71	0.71	0.304	0.075	0.38	Yes
	U_5–U_6	131.01	62.39	0.41	0.40	-2.01	-1.07	0.25	0.41	-3.80	-0.77	23.56	14.96	-51.19	-17.66	2.56	5.00	-10.62	-5.94	28.18	142.56	23.66	104.51	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4204	0.99907361	3021.5	0.494	0.51	0.51	86.19	42.24	0.91	0.96	-0.94	0.87	0.06	0.47	0.02	-0.89	2.78	22.51	-79.42	-40.91	8.33	1.21	2.01	-13.27	140.60	72.38	87.11	295.42	158.6	158.64	128.76	179.40	778.9	1.13	9274	—	0.99724271	5220.7	0.263	0.71	0.71	0.304	0.075	0.38	Yes
	U_6–U_7	-71.37	606.06	1.69	-1.82	-5.84	5.17	2.04	1.55	-1.57	2.45	22.69	-24.27	-77.97	69.12	2.86	18.55	-18.89	29.34	-59.70	848.03	-164.14	945.33	138.2	138.17	111.77	199.97	3642	2197.7	1.45	6099	0.99885945	4554.8	-0.205	0.52	0.52	248.43	327.74	4.81	3.28	-5.18	-0.26	0.77	0.34	0.45	1.13	64.29	49.61	-69.16	-27.48	11.36	5.08	6.71	67.77	58.27	499.61	233.04	295.40	259.97	298.48	1150.4	1.15	9850	—	0.99725135	8571.6	0.892	0.94	0.94	0.393	0.193	0.59	Yes
	U_7–U_8	624.62	-195.24	6.07	-3.01	3.57	-1.52	0.00	0.00	0.00	0.00	78.58	-49.53	-10.32	1.41	42.86	-18.24	0.00	0.00	0.00	861.96	341.91	798.58	-251.97	130.3	130.26	111.77	199.97	3642	2197.7	1.45	6099	0.99885945	4554.8	-0.353	0.46	0.46	232.07	205.61	2.17	-2.36	0.50	1.70	0.15	0.00	0.00	360.29	248.45	315.12	296.51	212.6	212.76	173.24	246.38	1118.1	1.16	8131	—	0.99725135	7002.2	0.631	0.85	0.85	0.304	0.207	0.57	Yes
	U_8–U_9	71.38	-13.83	1.26	-2.12	-1.75	-2.86	0.51	-0.48	0.00	0.00	16.29	-27.36	-22.62	-37.00	6.11	-5.76	0.00	0.00	0.00	113.98	-53.55	63.40	-66.08	96.6	96.61	79.12	139.29	2174	1387.9	1.40	4465	0.99873196	3184.1	-0.470	0.41	0.41	47.17	110.44	1.10	-1.84	7.63	-5.22	-0.30	0.73	0.00	0.00	14.18	-23.74	98.66	-67.53	-4.31	10.51	0.00	0.00	79.76	112.70	189.57	55.78	165.8	165.79	136.31	188.45	825.4	1.14	6219	—	0.99717172	5455.6	0.294	0.72	0.72	0.096	0.056	0.16	Yes
	U_9–U_{10}	97.28	223.12	1.48	1.39	-3.58	0.75	-1.42	0.00	0.00	0.00	19.08	-18.66	-23.38	-47.66	6.00	-17.02	0.00	0.00	0.00	151.27	-266.61	94.20	-351.69	96.6	96.61	79.12	139.29	2174	1387.9	1.40	4465	0.99873196	3184.1	-0.470	0.41	0.41	47.17	110.44	1.10	-1.84	7.63	-5.22	-0.30	0.73	0.00	0.00	14.18	-23.74	98.66	-67.53	-4.31	10.51	0.00	0.00	79.76	112.70	189.57	55.78	165.8	165.79	136.31	188.45	825.4	1.14	6219	—	0.99717172	5455.6	0.294	0.72	0.72	0.096	0.056	0.16	Yes
	U_{10}–U_{11}	35.32	221.77	1.72	1.28	-3.48	-6.25	0.56	0.33	0.24	-1.72	22.25	16.51	-45.00	-80.92	10.65	-29.52	-20.68	74.84	-266.83	-12.59	-393.49	128.7	128.69	105.26	182.66	3153	1864.4	1.42	6028	0.99875285	4241.5	0.697	0.88	0.88	-161.86	-180.19	-0.12	0.46	-4.59	1.05	0.16	0.19	0.31	-0.99	-1.53	5.94	-59.43	13.62	2.24	2.73	4.41	-13.70	-212.41	-226.53	-281.94	-210.52	219.3	219.34	180.69	253.75	1122.8	1.16	8324	—	0.99727421	7218.5	0.747	0.90	0.90	—	—	—	—	—	—	—	—	0.474	0.123	0.6	Yes	0.470	0.069	0.54	Yes
	U_{11}–U_{12}	-120.58	-238.24	1.49	0.57	-5.73	-4.97	0.44	0.14	-0.62	-1.62	19.23	7.34	-74.12	-64.30	5.30	-1.66	-7.49	-19.49	-131.77	-300.18	-253.13	393.31	151.8	151.76	130.54	219.77	4535	2632.6	1.45	7252	0.99905082	5003.4	0.644	0.86	0.86	99.91	-21.31	0.05	0.48	8.16	-5.35	0.23	0.13	-0.94	0.01	0.67	6.17	105.63	-69.17	3.26	1.85	-13.53	0.14	78.76	-19.68	215.20	-117.63	330.4	330.43	268.63	381.70	1177.4	1.16	12096	—	0.99676235	10868.9	-0.547	0.38	0.38	—	—	—	—	—	—	—	—	0.514	0.077	0.6	Yes	0.507	0.054	0.57	Yes
	U_{12}–U_{13}	-201.64	-422.96	1.36	0.15	-5.11	-4.71	0.32	0.20	-1.36	-2.11	16.17	1.14	-98.97	-93.63	3.88	-2.41	-28.50	-29.45	-248.59	-392.21	-369.46	393.31	151.8	151.76	130.54	219.77	4535	2632.6	1.45	7252	0.99905082	5003.4	0.644	0.86	0.86	-23.82	-25.24	0.07	0.48	8.12	-2.33	0.07	0.13	-0.94	0.01	0.67	6.17	105.63	-69.17	3.26	1.85	-13.53	0.14	78.76	-19.68	215.20	-117.63	330.4	330.43	268.63	381.70	1177.4	1.16	12096	—	0.99676235	10868.9	-0.547	0.38	0.38	—	—	—	—	—	—	—	—	0.514	0.077	0.6	Yes	0.507	0.054	0.57	Yes
	U_{13}–U_{14}	-380.63	263.81	1.30	0.76	-13.91	-5.71	0.32	0.20	-2.38	-1.60	16.87	9.77	-180.02	-73.63	3.88	-2.41	-28.54	-19.14	-372.48	-330.26	-728.88	-439.07	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99895921	6214.6	0.602	0.84	0.84	21.23	-230.93	0.21	0.33	-2.08	1.99	0.28	0.04	-1.33	-0.36	2.74	42.39	-26.92	25.70	3.91	381.94	310.11	444.82	1541.3	1.16	14879	—	0.99696905	12565.8	0.836	0.93	0.93	0.514	0.155	0.80	Yes
	U_{14}–U_{15}	-227.35	-387.00	1.24	0.32	-7.13	-7.70	0.10	0.06	-1.48	0.22	15.02	14.80	-99.20	-113.23	3.21	-1.01	-7.98	-15.60	-268.71	-387.47	-327.31	-438.61	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99895921	6214.6	0.602	0.84	0.84	-109.94	-380.38	0.26	0.65	-2.79	-0.19	-0.15	0.00	-0.13	0.76	1.65	23.50	-16.94	-146.80	-2.61	2.23	16.93	-10.94	-148.20	-75.62	-175.46	-141.17	288.7	289.69	232.57	331.18	1593.1	1.12	15797	—	0.99695226	9429.2	0.832	0.92	0.92	0.514	0.155	0.80	Yes
	U_{15}–U_{16}	-214.14	19.61	0.38	-0.16	-5.26	0.40	0.09	-0.06	-1.42	0.34	4.88	-2.01	-66.11	5.12	1.07	-0.74	-17.08	-4.04	-272.04	22.88	-389.12	-266.44	104.5	104.75	86.43	150.63	2509	1554.3	1.44	4971	0.99885945	3452.6	0.885	0.89	0.89	0.87	0.00	0.01	2.24	-1.23	-2.38	-0.12	-0.38	0.31	0.22	0.58	0.07	32.16	-17.73	379.48	-137.92	374.87	389.80	284.2	184.21	152.93	211.16	925.0	1.15	6968	—	0.99727410	6062.4	0.209	0.68	0.68	—	—	—	—	—	—	—	—	0.496	0.078	0.6	Yes	0.496	0.078	0.59	Yes
	U_{16}–U_{17}	-232.24	7.36	0.46	-0.40	-3.30	1.42	0.06	-0.04	-1.35	0.05	5.98	-5.14	-42.70	18.40	0.74	-0.49	-16.24	0.62	-293.18	2.25	-378.53	-277.19	104.8	104.75	86.43	150.63	2509	1554.3	1.44	4971	0.99885945	3452.6	0.732	0.89	0.89	-0.16	-0.26	-0.04	-0.81	-0.83	-1.63	0.47	-0.98	4.84	-0.01	-0.17	-5.52	-11.98	-23.77	-113.69	-30.09	-30.91	184.2	184.21	152.93	211.16	925.0	1.15	6968	—	0.99727410	6062.4	0.209	0.68	0.68	—	—	—	—	—	—	—	—	0.252	0.112	0.37	Yes	0.250	0.076	0.33	Yes
	U_{17}–U_{18}	420.39	-27.72	0.35	-0.55	7.76	-2.18	-0.55	0.37	-1.26	-0.55	0.00	0.00	0.00	0.00	0.00	-26.25	-6.59	0.46	639.77	-57.75	39.31	-57.75	104.8	104.75	86.43	150.63	2509	1554.3	1.44	4971	0.99885945	3452.6	0.732	0.89	0.89	189.57	13.33	-0.07	-0.16	-0.38	0.11	-0.36	0.06	0.14	0.35	-0.04	0.91	290.89	15.30	318.14	-0.23	154.30	290.97	1307.3	1.13	6827	—	0.99716270	6050.3	-0.086	0.57	0.57	0.259	0.070	0.33	Yes
	U_{18}–U_{19}	-113.13	-299.08	0.89	-0.51	-3.46	-5.46	0.00	0.18	-0.92	-1.31	-11.37	-6.57	-44.17	-69.77	0.04	2.10	-6.01	-15.71	-132.28	-238.12	-337.34	-304.48	479.50	138.2	138.15	119.05	199.70	3434	1990.9	1.45	6099	0.99885945	4553.8	0.426	0.77	0.77	16.41	-25.72	0.81	0.90	7.62	-3.02	-0.10	0.27	-0.40	0.72	10.29	11.54	-30.74	-18.44	147.83	-83.66	232.9	232.94	182.20	259.61	1365.3	1.11	8567	—	0.99716478	7669.7	-0.566	0.37	0.37	0.462	0.090	0.56	Yes
	U_{19}–U_{20}	-274.14	-637.73	1.41	0.41	-5.74	-4.07	0.31	0.14	-0.61	-1.19	-5.99	-3.77	-98.52	-96.16	2.22	-0.89	-16.01	-12.62	-242.62	-533.89	-462.64	-533.89	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99895921	6214.6	0.602	0.84	0.84	-137.37	-181.65	-0.24	-0.45	-3.49	0.65	0.40	0.49	-0.37	0.45	6.42	29.10	-40.53	-23.94	11.38	3.66	-9.57	29.01	-29.47	-11.58	-0.63	-19.65	158.6	158.64	128.68	179.40	778.9	1.13	9920	—	0.99724250	5220.7	0.354	0.67	0.67	0.183	0.040	0.23	Yes
	U_{20}–U_{21}	-433.72	-494.87	0.45	-1.42	-10.69	-11.25	0.08	0.31	-1.29	-2.64	5.77	-18.16	-139.26	-143.73	0.96	-3.68	-15.44	-24.50	-556.33	-619.73	-739.68	-830.19	232.7	232.70	195.86	340.10	6520	3217.6	1.46	11223	0.99885936	7670.6	0.726	0.89	0.89	-68.73	-53.84	-0.38	0.43	6.65	-5.35	-0.01	0.21	-0.97	-0.79	4.57	84.91	-68.37	-0.10	3.04	-13.78	-2.30	-95.57	-62.88	21.04	-158.87	375.8	375.78	293.35	432.67	2339.5	1.15	14285	—	0.99679055	12374.8	-0.132	0.55	0.55	—	—	—	—	—	—	—	—	0.511	0.112	0.63	Yes	0.508	0.074	0.59	Yes
	U_{21}–U_{22}	-485.37	-542.49	0.65	-2.01	-12.10	-12.77	0.12	0.43	-1.82	-3.73	-14.36	-29.50	-174.36	-129.00	3.34	-9.62	-19.18	-25.65	-620.13	-677.96	-812.64	-908.13	232.7	232.70	195.86	340.10	6520	3217.6	1.46	11223	0.99885936	7670.6	0.726	0.89	0.89	-75.21	-58.93	-0.42	0.47	7.28	-5.85	-0.01	0.23	-1.07	-0.87	5.00	92.90	-74.82	-0.11	3.32	-15.08	-2.52	-104.58	-68.83	23.02	-173.86	375.8	375.78	293.35	432.67	2339.5	1.15	14285	—	0.99679055	12374.8	-0.132	0.55	0.55	—	—	—	—	—	—	—	—	0.511	0.112	0.63	Yes	0.508	0.074	0.59	Yes
	U_{22}–U_{23}	-543.26	-229.94	1.63	3.56	-13.27	-6.01	0.37	0.87	-2.15	-1.73	20.83	45.50	-194.59	-77.54	4.00	10.49	-25.74	-20.81	-679.17	-238.78	-926.61	-245.08	104.8	104.75	86.43	150.63	2509	1554.3	1.44	4971	0.99885945	3452.6	0.431	0.77	0.77	-133.71	-78.02	-0.26	0.63	4.54	-4.58	0.05	0.30	-1.04	-0.37	-1.93	63.16	-178.15	-90.97	-88.49	-177.44	-436.1	436.13	359.64	502.36	2459.2	1.15	15078	—	0.99716485	14358.2	-0.431	0.48	0.48	—	—	—	—	—	—	—	—	0.485	0.098	0.59	Yes	0.485	0.098	0.59	Yes
	U_{23}–U_{24}	-414.57	-309.81	2.70	2.33	-12.66	-8.82	0.64	0.58	-1.77	-2.26	34.47	29.78	-161.69	-112.71	7.69	7.01	-21.25	-27.12	-494.13	-398.83	-749.13	-544.08	232.7	232.70	195.45	340.10	6520	3217.6	1.46	11223	0.99885936	7670.6	0.726	0.89	0.89	-228.14	-122.71	-0.08	0.79	5.27	-1.85	0.17	0.25	-1.04	-0.60	-1.07	10.08	67.31	-23.67	2.46	3.52	-19.08	-8.46	-162.96	-146.42	-74.06	-190.30	375.8	375.78	290.45	432.67	2339.5	1.15	14285	—	0.99679045	12374.8	0.389	0.76	0.76	—	—	—	—	—	—	—	—	0.467	0.100	0.57	Yes	0.464	0.067	0.54	Yes
	U_{24}–U_{25}	-388.32	-324.71	1.94	2.72	-12.63	-8.43	0.64	0.64	-2.44	-2.44	24.80	34.70	-171.71	-118.77	8.29	5.52	-17.53	-23.52	-18.58	-373.63	-764.67	-553.33	232.7	232.70	195.45	340.10	6520	3217.6	1.46	11223	0.99885936	7670.6	0.726	0.89	0.89	-182.61	-102.65	-0.46	0.46	4.23	-1.48	0.14	0.20	-0.84	-0.48	-0.86	8.07	53.85	-18.94	-6.77	2.82	-15.26	-6.77	-130.37	-117.25	-59.25	-152.24	375.8	375.78	290.45	432.67	2339.5	1.15	14285	—	0.99679045	12374.8	0.389	0.76	0.76	—	—	—	—	—	—	—	—	0.467	0.100	0.57	Yes	0.464	0.067	0.54	Yes
	U_{25}–U_{26}	-443.90	-59.15	2.41	3.03	-10.97	-3.24	0.49	0.82	-2.01	-0.82	30.82	18.97	-180.31	-140.11	-41.45	-53.93	9.86	-24.13	-9.85	-537.01	-26.56	-759.21	-130.77	198.9	198.88	169.65	289.08	5137	2713.1	1.43	9408	0.99885931	5168.9	-0.203	0.65	0.65	-53.21	-212.68	0.51	0.81	-5.33	-0.54	0.39	0.32	-0.44	-1.03	6.45	10.36	-68.05	-6.89	5.49	4.60	-6.25	-14.65	-60.79	-263.02	-169.30	-183.36	183.7	183.74	154.32	206.87	1955.3	1.14	12065	—	0.99719195	10588.3	0.552	0.82	0.82	—	—	—	—	—	—	—	—	0.419	0.101	0.52	Yes	0.416	0.081	0.50	Yes
	U_{26}–U_{27}	-165.92	101.76	2.81	3.27	-3.79	-2.29	0.39	0.49	-0.78	-0.55	19.89	21.81	-69.84	-48.64	-16.05	-20.88	3.82	-9.34	-3.81	-207.92	-10.29	-293.87	-50.64	198.9	198.88	169.65	289.08	5137	2713.1	1.43	9408	0.99885931	5168.9	-0.203	0.65	0.65	-20.59	-82.33	0.20	0.31	-2.06	-0.21	0.15	0.12	-0.17	-0.40	2.50	4.01	-26.34	-2.67	2.13	1.78	-2.42	-5.67	-23.53	-101.82	-65.52	-70.98	183.7	183.74	154.32	206.87	1955.3	1.14	12065	—	0.99719195	10588.3	0.552	0.82	0.82	—	—	—	—	—	—	—	—	0.264	0.093	0.38	Yes	0.264	0.093	0.38	Yes
	U_{27}–U_{28}	-165.92	101.76	2.79	-8.22	-2.61	0.77	0.79	1.44	-0.29	41.77	35.66	-105.05	-105.02	33.33	9.23	9.48	-17.24	-3.44	-161.40	-178.64	-352.22	88.95	156.8	156.80	134.92	214.81	3285	1852.3	1.37	7089	0.99854451	5168.9	-0.203	0.50	0.50	-230.67	-216.17	0.66	1.06	-5.97	0.07	0.32	0.35	-0.78	0.38	13.50	-76.21	9.93	4.47	3.51	-0.81	-11.12	-288.98	-263.47	-398.95	-279.81	219.5	219.53	175.69	248.50	1660.7	1.13	8201	—	0.99778	7228.4	0.701	0.88	0.88	0.094	0.088	0.20	Yes
	U_{28}–U_{29}	-149.71	264.88	2.87	2.05	-7.13	0.73	0.60	-0.58	0.39	36.69	26.10	-91.04	-96.04	8.72	7.21	-18.96	4.63	-14.50	-162.84	-64.39	-312.98	375.47	156.8	156.80	134.92	214.81	3285	1852.3	1.37	7089	0.99854451	5168.9	-0.363	0.45	0.45	-66.56	-161.00	0.87	1.76	-3.51	-2.65	0.11	0.39	0.36	-0.78	11.06	22.54	-44.85	-29.53	5.19	11.04	-12.14	-180.00	-144.82	-253.33	219.5	219.53	182.71	248.50	1660.7	1.12	8201	—	0.99777	7228.4	0.672	0.87	0.87	0.094	0.088	0.20	Yes
	U_{29}–U_{30}	80.78	-291.45	3.03	-3.33	6.45	0.30	2.41	-1.79	2.99	31.95	-42.56	-105.15	82.34	3.60	28.96	-21.47	35.92	-332.67	2014.75	-543.49	-225.15	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99853092	7310.6	-0.165	0.53	0.53	258.08	458.05	5.47	5.68	-4.22	0.20	0.70	0.82	0.43	0.79	69.89	72.53	-53.97	2.58	9.97	8.76	6.03	11.20	439.27	701.14	273.15	353.38	388.9	388.88	314.88	444.22	2202.2	1.14	14699	—	0.99767151	12803.2	0.627	0.85	0.85	0.383	0.234	0.63	Yes
	U_{30}–U_{31}	-1538.34	-183.83	2.21	-0.20	-19.10	0.00	-4.59	0.00	-5.71	0.00	-1338.55	36.17	-1338.55	36.17	0.00	0.00	0.00	0.00	0.00	10799	0.00	10799	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99853092	7310.6	-0.165	0.53	0.53	388.33	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: 3F1
Condition: As-Built

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

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

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

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

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-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	-91.71	2.46	-3.15	-0.45	0.48	0.30	-0.64	-0.11	0.13
	L_1-L_2	30.33	-116.64	1.56	-6.71	-3.17	-3.81	0.00	0.00	-0.22	-0.91
	L_2-L_3	30.33	-78.07	2.33	-1.64	-6.58	-5.50	0.31	0.50	-1.04	-7.27
	L_3-L_4	-65.05	14.64	0.86	2.73	-6.45	-4.94	0.23	0.86	-1.19	-1.34
	L_4-L_5	-60.77	234.10	2.21	4.92	-1.39	-0.72	0.48	0.00	-0.24	-0.41
	L_5-L_6	-2.22	269.06	1.61	3.04	-3.58	-0.42	0.53	0.12	-0.84	0.05
	L_6-L_7	-2.28	53.33	1.96	0.89	-4.60	-2.39	0.35	0.26	-0.12	-11.50
	L_7-L_8	-38.40	570.96	0.53	-1.33	-2.41	3.75	0.00	0.00	-0.35	0.65
	L_8-L_9	555.48	-39.07	5.26	-0.53	0.23	3.40	-0.27	0.00	0.00	0.00
	L_9-L_{10}	186.35	-153.68	2.65	-3.27	-1.70	-3.51	-0.79	-0.36	-0.65	-0.36
	L_{10}-L_{11}	-164.35	-164.49	1.96	-1.10	-1.91	-3.01	1.00	-0.73	0.00	0.00
	L_{11}-L_{12}	-178.34	-251.25	1.44	-0.77	-1.44	-2.39	0.58	-1.00	0.00	0.00
	L_{12}-L_{13}	-57.28	-170.48	1.43	0.72	-4.39	-4.59	0.43	0.20	-0.57	-0.97
	L_{13}-L_{14}	70.09	-469.84	2.27	-10.11	-4.41	-5.42	0.35	0.23	-0.45	-2.28
	L_{14}-L_{15}	-488.80	187.67	0.00	-2.55	-0.19	-0.19	0.00	0.00	0.00	0.00
	L_{15}-L_{16}	-272.90	-394.23	0.53	0.15	-7.19	-4.85	0.13	-0.03	-1.43	-1.04
	L_{16}-L_{17}	-389.96	-47.21	0.00	-0.66	-0.49	-0.09	0.00	-0.07	-1.26	-0.12
	L_{17}-L_{18}	-202.42	20.75	0.23	-0.26	-3.75	-0.03	0.06	-0.07	-0.96	0.07
	L_{18}-L_{19}	-240.36	179.73	0.36	-0.33	-3.47	1.18	0.09	-0.06	-1.10	0.57
	L_{19}-L_{20}	-190.79	100.10	0.24	-0.19	-2.69	1.74	0.06	-0.06	-1.21	0.50
	L_{20}-L_{21}	26.57	-260.07	1.76	-5.20	-0.27	0.58	0.35	-1.06	-0.06	0.13
	L_{21}-L_{22}	26.57	-347.02	2.29	-6.93	-0.27	0.58	0.35	-1.06	-0.06	0.13
	L_{22}-L_{23}	7.20	-277.30	1.28	-3.59	-2.63	0.23	-0.18	-0.13	0.17	16.37
	L_{23}-L_{24}	186.10	-479.17	0.00	-4.65	-1.63	-0.01	0.00	0.00	0.00	0.00
	L_{24}-L_{25}	-367.44	-421.31	0.41	-1.04	-10.35	-5.46	0.04	0.32	-1.24	-1.72
	L_{25}-L_{26}	-419.34	-257.07	0.00	-2.37	-13.85	-6.14	0.47	0.59	-2.41	-2.01
	L_{26}-L_{27}	-419.34	-397.03	2.00	2.37	-13.85	-6.14	0.47	0.59	-2.41	-2.01
	L_{27}-L_{28}	-394.51	-7.27	1.93	-11.17	-3.64	0.46	0.90	-1.94	-0.96	24.71
	L_{28}-L_{29}	-324.22	260.75	1.37	-7.34	-2.49	-5.28	0.42	0.64	-0.29	-1.04
	L_{29}-L_{30}	-295.55	262.64	1.75	3.35	-5.98	-1.09	0.41	0.52	-1.43	-0.05
	L_{30}-L_{31}	-188.54	244.82	2.97	3.92	-3.40	-1.45	0.74	0.98	-0.36	0.34
	L_{31}-L_{32}	-188.92	585.38	1.78	3.55	-4.40	1.50	0.44	1.14	-1.12	0.55
	L_{32}-L_{33}	-132.48	-278.64	2.48	-3.11	-4.83	2.31	0.55	1.25	-0.98	0.94
	L_{33}-L_{34}	-474.12	1260.86	1.69	-4.00	-2.63	1.49	0.42	1.00	-0.85	0.44
	L_{34}-L_{35}	1356.39	-488.30	10.45	-2.65	-2.93	1.96	5.06	-1.83	0.00	0.00
	L_{35}-L_{36}	336.67	-68.03	2.22	-0.50	-2.22	0.00	0.00	0.00	0.00	0.00
	L_{36}-L_{37}	579.91	-109.27	3.70	-2.01	-2.56	-2.71	2.03	-0.54	0.00	0.00
	L_{37}-L_{38}	579.91	-641.98	1.04	-1.24	-2.56	-2.71	2.03	-0.54	0.00	0.00
	L_{38}-L_{39}	275.71	-101.81	2.95	-1.37	-4.97	-3.86	1.05	-0.58	-0.11	-0.89
	L_{39}-L_{40}	209.90	-114.91	1.72	2.01	-3.49	-5.28	0.42	0.64	-0.29	-1.04
	L_{40}-L_{41}	-33.76	-318.83	1.46	-1.17	-7.44	-8.45	0.43	0.76	-0.99	-2.03
	L_{41}-L_{42}	-329.05	-28.99	0.61	-0.31	-3.61	-1.74	0.00	0.00	-0.13	-0.13
	L_{42}-L_{43}	-183.34	53.25	1.18	2.57	-7.52	-5.19	0.42	0.44	-1.14	-0.56
	L_{43}-L_{44}	-183.34	1260.86	1.69	-4.00	-2.63	1.49	0.42	1.00	-0.85	0.44
	L_{44}-L_{45}	-100.88	310.38	1.32	2.69	-5.34	-0.83	0.38	0.41	-0.87	0.56
	L_{45}-L_{46}	-92.99	309.46	2.27	0.80	-6.23	2.08	0.46	0.11	-0.75	0.35
	L_{46}-L_{47}	26.57	641.98	1.04	-1.24	-2.56	-2.71	2.03	-0.54	0.00	0.00
	L_{47}-L_{48}	-16.76	-420.70	2.65	0.43	-4.81	-1.89	0.04	-1.43	0.34	-0.53
	L_{48}-L_{49}	-532.10	-331.99	0.00	-2.22	0.00	0.00	0.00	0.00	0.00	0.00
	L_{49}-L_{50}	1421.72	-463.08	9.79	-3.61	-2.60	1.91	5.23	-1.81	0.00	0.00
	L_{50}-L_{51}	-236.11	-179.35	1.81	-0.65	-4.62	-1.89	0.00	0.00	-0.15	-0.40
	L_{51}-L_{52}	-236.11	-198.24	0.00	-0.72	-4.62	-1.89	0.00	0.00	-0.15	-0.40
	L_{52}-L_{53}	350.83	-204.00	2.54	-5.02	-1.46	-3.76	0.84	-0.46	0.00	0.00
	L_{53}-L_{54}	243.13	-341.87	1.97	-6.88	-3.56	-4.51	0.92	0.46	-0.15	-1.37
	L_{54}-L_{55}	-365.13	-645.03	2.54	1.52	-12.11	-10.20	0.68	0.27	-2.07	-3.23
	L_{55}-L_{56}	-620.56	-212.20	1.83	0.36	-12.49	-6.27	0.38	0.06	-2.14	-1.36
	L_{56}-L_{57}	-434.76	-330.50	1.83	0.36	-12.49	-6.27	0.38	0.06	-2.14	-1.36
	L_{57}-L_{58}	-460.63	26.73	0.94	-0.05	-8.68	-0.37	0.11	-0.10	-1.52	-0.27
	L_{58}-L_{59}	-460.63	26.73	0.94	-0.05	-8.68	-0.37	0.11	-0.10	-1.52	-0.27
	L_{59}-L_{60}	-332.59	186.71	0.13	-0.13	-4.36	1.46	0.10	-0.10	-1.17	0.34
	L_{60}-L_{61}	-298.56	63.28	0.13	-0.13	-4.36	1.46	0.10	-0.10	-1.17	0.34
	L_{61}-L_{62}	61.32	-104.62	2.39	-0.28	-0.23	0.23	0.37	-0.56	-0.06	0.04
	L_{62}-L_{63}	196.04	-240.64	2.31	-4.07	-0.82	-1.33	0.67	-1.12	-0.10	0.04
	L_{63}-L_{64}	23.89	-198.53	2.31	-3.31	-0.82	-1.33	0.67	-1.12	-0.10	0.04
	L_{64}-L_{65}	40.44	-374.13	1.49	-6.61	-2.78	-4.40	0.00	0.00	-0.11	-1.35
	L_{65}-L_{66}	40.44	-374.13	1.49	-6.61	-2.78	-4.40	0.00	0.00	-0.11	-1.35
	L_{66}-L_{67}	-121.41	-479.36	0.19	-1.34	-6.04	-6.78	0.00	0.00	-1.04	-1.54
	L_{67}-L_{68}	-476.65	99.74	1.12	-10.08	1.01	0.19	0.38	-2.32	-0.38	0.62
	L_{68}-L_{69}	-241.33	-199.01	1.14	-1.38	-4.50	0.49	0.23	0.47	-1.20	-0.19
	L_{69}-L_{70}	-241.33	-199.01	1.14	-1.38	-4.50	0.49	0.23	0.47	-1.20	-0.19
	L_{70}-L_{71}	-127.20	-162.45	1.58	-0.97	-3.23	0.60	0.45	-0.34	-0.83	0.45
	L_{71}-L_{72}	-127.20	-162.45	1.58	-0.97	-3.23	0.60	0.45	-0.34	-0.83	0.45
	L_{72}-L_{73}	696.99	-34.77	0.12	-0.03	-1.66	0.29	3.63	-0.30	0.00	0.00
	L_{73}-L_{74}	696.99	-34.77	0.12	-0.03	-1.66	0.29	3.63	-0.30	0.00	0.00
	L_{74}-L_{75}	88.27	-47.34	2.56	-3.54	-2.00	-0.94	0.43	-0.47	0.00	0.00
	L_{75}-L_{76}	88.27	-47.34	2.56	-3.54	-2.00	-0.94	0.43	-0.47	0.00	0.00
	L_{76}-L_{77}	217.39	-55.08	1.83	-6.97	-2.60	-3.55	0.67	0.69	-0.05	-1.53
	L_{77}-L_{78}	217.39	-55.08	1.83	-6.97	-2.60	-3.55	0.67	0.69	-0.05	-1.53
	L_{78}-L_{79}	-112.38	-133.88	1.34	-0.44	-1.22	-1.38	1.22	17.52	7.37	-49.49
	L_{79}-L_{80}	-120.58	38.04	0.46	-0.46	-2.02	1.31	0.19	-0.18	0.88	0.72

ZZ Axis Moments from STAAD

Location	Member	Live Load (Min) Start (k-in)	Live Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Start (k-in)	Impact Pedestrian Load End (k-in)
Structure 2	L_0-L_1	-173.88	33.19	-110.97	83.6	83.58	74.65
	L_1-L_2	-116.64	-71.61	-15.61	217.5	83.58	67.49
	L_2-L_3	-78.07	-23.12	-15.23	-116.54	-73.13	-25.04
	L_3-L_4	-66.42	-166.59	-66.72	99.9	99.93	84.14
	L_4-L_5	-234.10	-221.41	-52.41	14.95	17.75	8.68
	L_5-L_6	-269.06	-61.84	25.52	40.56	47.81	5.37
	L_6-L_7	-53.33	-25.36	24.12	-11.93	-48.13	-8.58
	L_7-L_8	-570.96	53.3	-3.41	-43.81	-40.77	719.12
	L_8-L_9	39.07	5.26	-0.53	-3.4	0.00	0.00
	L_9-L_{10}	153.68	2.65	-3.27	-1.7	-3.51	-0.79
	L_{10}-L_{11}	164.49	1.96	-1.1	-1.91	-3.01	1.00
	L_{11}-L_{12}	251.25	1.44	-0.77	-1.44	-2.39	0.58
	L_{12}-L_{13}	170.48	1.43	0.72	-4.39	-4.59	0.43
	L_{13}-L_{14}	469.84	2.27	-10.11	-4.41	-5.42	0.35
	L_{14}-L_{15}	-187.67	0.00	-2.55	-0.19	-0.19	0.00
	L_{15}-L_{16}	394.23	0.53	0.15	-7.19	-4.85	0.13
	L_{16}-L_{17}	47.21	0.00	-0.66	-0.49	-0.09	0.00
	L_{17}-L_{18}	-20.75	0.23	-0.26	-3.75	-0.03	0.06
	L_{18}-L_{19}	-179.73	0.36	-0.33	-3.47	1.18	0.09
	L_{19}-L_{20}	-100.10	0.24	-0.19	-2.69	1.74	0.06
	L_{20}-L_{21}	260.07	1.76	-5.20	-0.27	0.58	0.35
	L_{21}-L_{22}	347.02	2.29	-6.93	-0.27	0.58	0.35
	L_{22}-L_{23}	277.30	1.28	-3.59	-2.63	0.23	-0.18
	L_{23}-L_{24}	479.17	0.00	-4.65	-1.63	-0.01	0.00
	L_{24}-L_{25}	421.31	0.41	-1.04	-10.35	-5.46	0.04
	L_{25}-L_{26}	257.07	0.00	-2.37	-13.85	-6.14	0.47
	L_{26}-L_{27}	397.03	2.00	2.37	-13.85	-6.14	0.47
	L_{27}-L_{28}	7.27	1.93	-11.17	-3.64	0.46	0.90
	L_{28}-L_{29}	-260.75	1.37	-7.34	-2.49	-5.28	0.42
	L_{29}-L_{30}	-262.64	1.75	3.35	-5.98	-1.09	0.41
	L_{30}-L_{31}	-244.82	2.97	3.92	-3.40	-1.45	0.74
	L_{31}-L_{32}	-585.38	1.78	3.55	-4.40	1.50	0.44
	L_{32}-L_{33}	278.64	2.48	-3.11	-4.83	2.31	0.55
	L_{33}-L_{34}	-1260.86	1.69	-4.00	-2.63	1.49	0.42
	L_{34}-L_{35}	488.30	10.45	-2.65	-2.93	1.96	5.06
	L_{35}-L_{36}	68.03	2.22	-0.50	-2.22	0.00	0.00
	L_{36}-L_{37}	109.27	3.70	-2.01	-2.56	-2.71	2.03
	L_{37}-L_{38}	641.98	1.04	-1.24	-2.56	-2.71	2.03
	L_{38}-L_{39}	101.81	2.95	-1.37	-4.97	-3.86	1.05
	L_{39}-L_{40}	114.91	1.72	2.01	-3.49	-5.28	0.42
	L_{40}-L_{41}	318.83	1.46	-1.17	-7.44	-8.45	0.43
	L_{41}-L_{42}	28.99	0.61	-0.31	-3.61	-1.74	0.00
	L_{42}-L_{43}	-53.25	1.18	2.57	-7.52	-5.19	0.42
	L_{43}-L_{44}	-1260.86	1.69	-4.00	-2.63	1.49	0.42
	L_{44}-L_{45}	-310.38	1.32	2.69	-5.34	-0.83	0.38
	L_{45}-L_{46}	-309.46	2.27	0.80	-6.23	2.08	0.46
	L_{46}-L_{47}	-641.98	1.04	-1.24	-2.56	-2.71	2.03
	L_{47}-L_{48}	420.70	2.65	0.43	-4.81	-1.89	0.04
	L_{48}-L_{49}	331.99	0.00	-2.22	0.00	0.00	0.00
	L_{49}-L_{50}	463.08	9.79	-3.61	-2.60	1.91	5.23
	L_{50}-L_{51}	179.35	1.81	-0.65	-4.62	-1.89	0.00
	L_{51}-L_{52}	198.24	0.00	-0.72	-4.62	-1.89	0.00
	L_{52}-L_{53}	204.00	2.54	-5.02	-1.46	-3.76	0.84
	L_{53}-L_{54}	341.87	1.97	-6.88	-3.56	-4.51	0.92
	L_{54}-L_{55}	645.03	2.54	1.52	-12.11	-10.20	0.68
	L_{55}-L_{56}	212.20	1.83	0.36	-12.49	-6.27	0.38
	L_{56}-L_{57}	330.50	1.83	0.36	-12.49	-6.27	0.38
	L_{57}-L_{58}	-26.73	0.94	-0.05	-8.68	-0.37	0.11
	L_{58}-L_{59}	-26.73	0.94	-0.05	-8.68	-0.37	0.11
	L_{59}-L_{60}	-186.71	0.13	-0.13	-4.36	1.46	0.10
	L_{60}-L_{61}	-63.28	0.13	-0.13	-4.36	1.46	0.10
	L_{61}-L_{62}	104.62	2.39	-0.28	-0.23	0.23	0.37
	L_{62}-L_{63}	240.64	2.31	-4.07	-0.82	-1.33	0.67
	L_{63}-L_{64}	198.53	2.31	-3.31	-0.82	-1.33	0.67
	L_{64}-L_{65}	374.13	1.49	-6.61	-2.78	-4.40	0.00
	L_{65}-L_{66}	374.13	1.49	-6.61	-2.78	-4.40	0.00
	L_{66}-L_{67}	479.36	0.19	-1.34	-6.04	-6.78	0.00
	L_{67}-L_{68}	99.74	1.12	-10.08	1.01	0.19	0.38
	L_{68}-L_{69}	199.01	1.14	-1.38	-4.50	0.49	0.23
	L_{69}-L_{70}	199.01	1.14	-1.38	-4.50	0.49	0.23
	L_{70}-L_{71}	162.45	1.58	-0.97	-3.23	0.60	0.45
	L_{71}-L_{72}	162.45	1.58	-0.97	-3.23	0.60	0.45
	L_{72}-L_{73}	34.77	0.12	-0.03	-1.66	0.29	3.63
	L_{73}-L_{74}	34.77	0.12	-0.03	-1.66	0.29	3.63
	L_{74}-L_{75}	47.34	2.56	-3.54	-2.00	-0.94	0.43
	L_{75}-L_{76}	47.34	2.56	-3.54	-2.00	-0.94	0.43
	L_{76}-L_{77}	55.08	1.83	-6.97	-2.60	-3.55	0.67
	L_{77}-L_{78}	55.08	1.83	-6.97	-2.60	-3.55	0.67
	L_{78}-L_{79}	133.88	1.34	-0.44	-1.22	-1.38	1.22
	L_{79}-L_{80}	-38.04	0.46	-0.46	-2.02	1.31	0.19

YY Axis Moments from STAAD

Location	Member	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Start (k-in)	Impact Pedestrian Load End (k-in)
Structure 1	L_0-L_1	3.09	-11.35	0.06	0.20	0.46	1.68
	L_1-L_2	-4.84	4.78	-15.71	3.80	0.00	2.11
	L_2-L_3	-15.35	122.04	0.00	0.00	-0.54	-26.18
	L_3-L_4	-2.48	-15.16	0.84	0.04	0.09	1.71
	L_4-L_5	24.94	-0.48	-1.68	-8.01	-29.39	46.57
	L_5-L_6	2.70	6.78	24.94	-0.48	-1.68	-8.01
	L_6-L_7	-11.01	-41.25	-151.67	0.73	2.70	6.78
	L_7-L_8	0.00	0.00	0.00	0.00	0.00	0.00
	L_8-L_9	0.00	0.00	0.00	0.00	0.00	0.00
	L_9-L_{10}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{10}-L_{11}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{11}-L_{12}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{12}-L_{13}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{13}-L_{14}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{14}-L_{15}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{15}-L_{16}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{16}-L_{17}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{17}-L_{18}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{18}-L_{19}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{19}-L_{20}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{20}-L_{21}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{21}-L_{22}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{22}-L_{23}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{23}-L_{24}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{24}-L_{25}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{25}-L_{26}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{26}-L_{27}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{27}-L_{28}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{28}-L_{29}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{29}-L_{30}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{30}-L_{31}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{31}-L_{32}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{32}-L_{33}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{33}-L_{34}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{34}-L_{35}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{35}-L_{36}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{36}-L_{37}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{37}-L_{38}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{38}-L_{39}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{39}-L_{40}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{40}-L_{41}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{41}-L_{42}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{42}-L_{43}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{43}-L_{44}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{44}-L_{45}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{45}-L_{46}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{46}-L_{47}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{47}-L_{48}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{48}-L_{49}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{49}-L_{50}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{50}-L_{51}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{51}-L_{52}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{52}-L_{53}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{53}-L_{54}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{54}-L_{55}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{55}-L_{56}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{56}-L_{57}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{57}-L_{58}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{58}-L_{59}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{59}-L_{60}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{60}-L_{61}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{61}-L_{62}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{62}-L_{63}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{63}-L_{64}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{64}-L_{65}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{65}-L_{66}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{66}-L_{67}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{67}-L_{68}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{68}-L_{69}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{69}-L_{70}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{70}-L_{71}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{71}-L_{72}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{72}-L_{73}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{73}-L_{74}	0.00	0.00	0.00	0.00	0.00	0.00
	L_{74}-L_{75}	0.00	0.00	0.00	0.00	0.00	0.00

Moment (Start) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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_2 Information | M_7 Information

ZZ Axis Moments from STAAD | ZZ Axis Moment Properties | YY Axis Moments from STAAD | YY Axis Moment Properties

| 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 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_{tt} (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_xx | M_r (k-in) | Dead Load a | Dead Load C_{comb} | Live Load (Max) a | Live Load (Max) C_{comb} | Live Load (Min) a | Live Load (Min) C_{comb} | Pedestrian Load (Max) a | Pedestrian Load (Max) C_{comb} | Pedestrian Load (Min) a | Pedestrian Load (Min) C_{comb} | Lane Reduction & Impact Live Load Max a | Lane Reduction & Impact Live Load Max C_{comb} | Lane Reduction & Impact Live Load Min a | Lane Reduction & Impact Live Load Min C_{comb} | Impact Pedestrian Load Max a | Impact Pedestrian Load Max C_{comb} | Impact Pedestrian Load Min a | Impact Pedestrian Load Min C_{comb} | Pass | Start (k-in) | End (k-in) | S_{bb} (in^3) | S_{tt} (in^3) | Z_z (in^3) | I_{yy} (in^4) | Shape Factor f | M_p (k-in) | I_{xx} (in^4) | Formula 1.8 Term * F_y/S_xx | M_r (k-in) | Dead Load a | Dead Load C_{comb} | Live Load (Max) a | Live Load (Max) C_{comb} | Live Load (Min) a | Live Load (Min) C_{comb} | Pedestrian Load (Max) a | Pedestrian Load (Max) C_{comb} | Pedestrian Load (Min) a | Pedestrian Load (Min) C_{comb} | Lane Reduction & Impact Live Load Max a | Lane Reduction & Impact Live Load Max C_{comb} | Lane Reduction & Impact Live Load Min a | Lane Reduction & Impact Live Load Min C_{comb} | Impact Pedestrian Load Max a | Impact Pedestrian Load Max C_{comb} | Impact Pedestrian Load Min a | Impact Pedestrian Load Min C_{comb} | Pass | Yield Axial Axial | Yield Moment Portion | Yield Total | Pass | Tension Axial Axial | Tension Fracture Moment Portion | Tension Fracture Total | Pass | Buckle Axial Axial | Buckle Moment Portion | Buckle Total | Pass | Compression Axial Axial | Compression Yield Moment Portion | Compression Yield Total | Pass |
|---|---|---|---

Moment (Start) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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) | End (k-in) | Live Load (Max) Start (k-in) | End (k-in) | Live Load (Min) Start (k-in) | End (k-in) | Pedestrian Load (Max) (k-in) | Pedestrian Load (Min) (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. Proc. Mom. Start (k-in) | End (k-in) | S_{req} (in^3) | S_x (in^3) | Z_x (in^3) | I (in^4) | $I_{x/c}$ (in^4) | Shape Factor | M_p (k-in) | Formula 1.8 Term * F_y/S_x | M_u (k-in) | Equivalent Mom. Factor a | $C_{m/c}$ | $C_{m/t}$ | 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. Proc. Mom. Start (k-in) | End (k-in) | S_{req} (in^3) | S_x (in^3) | S_y (in^3) | Z_y (in^3) | $I_{y/c}$ (in^4) | Shape Factor | M_p (k-in) | σ_{bx} (ksi) | Formula 1.8 Term * F_y/S_x | M_u (k-in) | Equivalent Mom. Factor a | $C_{m/c}$ | $C_{m/t}$ | Pass |
|---|---|---|---

Moment (Start) AB Operating

Operating Loads - 3F1

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	$U_0 - U_1$	-----	-528.76	81	-517	-921	-484	-70	-87	533	-594	-----	-----	-----	-----	-----	-----	-----	-----	0.719	0.271	1.00	Yes	0.713	0.219	0.94	Yes	1.00	**5.09**
		$U_1 - U_2$	-----	-546.78	-16	-88	-538	-554	-282	28	-345	-25	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.249	1.00	Yes	0.737	0.132	0.87	Yes	1.00	**3.69**
		$U_2 - U_3$	101.65	-574.76	-133	225	-841	-283	6	26	-97	234	0.117	0.239	0.36	Yes	0.079	0.156	0.24	Yes	0.782	0.210	1.00	Yes	0.775	0.200	0.98	Yes	1.00	**3.32**
		$U_3 - U_4$	336.42	-581.02	72	305	-878	-195	5	33	129	47	0.386	0.231	0.62	Yes	0.265	0.158	0.43	Yes	0.791	0.195	0.99	Yes	0.784	0.209	1.00	Yes	1.00	**4.46**
		$U_4 - U_5$	264.77	-565.01	84	230	-968	-237	25	-26	41	-64	0.303	0.241	0.55	Yes	0.208	0.165	0.38	Yes	0.769	0.215	0.99	Yes	0.762	0.230	1.00	Yes	1.00	**3.41**
		$U_5 - U_6$	580.54	-516.16	208	420	-1107	102	-123	-57	370	49	0.665	0.326	1.00	Yes	0.449	0.213	0.67	Yes	0.702	0.292	1.00	Yes	0.696	0.263	0.96	Yes	1.00	**5.03**
		$U_6 - U_7$	805.85	-96.03	350	214	-753	-103	-274	-111	457	-94	0.771	0.223	1.00	Yes	0.539	0.153	0.70	Yes	0.109	0.263	0.38	Yes	0.108	0.160	0.27	Yes	1.00	**5.18**
		$U_7 - U_8$	978.29	-----	54	1066	-1427	1814	-447	3	276	-110	0.678	0.320	1.00	Yes	0.473	0.219	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.38**
		$U_8 - U_9$	429.56	-----	3182	-3070	571	-2	-345	632	-865	-73	0.352	0.640	1.00	Yes	0.241	0.435	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.14**
		$U_9 - U_{10}$	78.12	-542.13	680	-432	-927	-505	-32	750	-852	1141	0.085	0.391	0.48	Yes	0.057	0.262	0.32	Yes	0.698	0.301	1.00	Yes	0.692	0.208	0.90	Yes	1.00	**17.86**
		$U_{10} - U_{11}$	354.11	-636.29	365	-44	-159	-785	3	95	128	234	0.384	0.214	0.60	Yes	0.256	0.137	0.40	Yes	0.819	0.172	1.00	Yes	0.812	0.176	0.99	Yes	1.00	**5.38**
		$U_{11} - U_{12}$	-----	-865.30	250	-97	-365	-667	89	401	79	715	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.180	1.00	Yes	0.812	0.111	0.93	Yes	1.00	**3.86**
		$U_{12} - U_{13}$	-----	-1208.91	38	-228	-732	-685	322	210	527	425	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.178	1.00	Yes	0.807	0.101	0.91	Yes	1.00	**4.24**
		$U_{13} - U_{14}$	-----	-1338.19	-144	-381	-913	-1211	220	177	293	573	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.217	1.00	Yes	0.767	0.134	0.91	Yes	1.00	**3.22**
		$U_{14} - U_{15}$	-----	-1297.04	-282	-256	-1532	-745	218	32	592	185	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.247	1.00	Yes	0.744	0.169	0.92	Yes	1.00	**2.75**
		$U_{15} - U_{16}$	-----	-1371.85	-157	-433	-1054	-789	89	37	463	195	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.199	1.00	Yes	0.786	0.116	0.91	Yes	1.00	**2.99**
		$U_{16} - U_{17}$	-----	-1306.43	-340	-193	-1591	-635	157	-50	625	78	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.235	1.00	Yes	0.749	0.176	0.93	Yes	1.00	**3.20**
		$U_{17} - U_{18}$	-----	-1014.71	-214	-70	-1043	-71	1	-62	416	15	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.188	1.00	Yes	0.794	0.170	0.97	Yes	1.00	**3.08**
		$U_{18} - U_{19}$	-----	-710.51	-202	-69	-858	-110	28	-121	398	-159	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.187	1.00	Yes	0.799	0.173	0.98	Yes	1.00	**3.29**
		$U_{19} - U_{20}$	-----	-528.11	-247	136	-1981	664	-112	-31	528	-552	-----	-----	-----	-----	-----	-----	-----	-----	0.600	0.240	0.84	Yes	0.594	0.398	1.00	Yes	1.00	**8.54**
	Structure 2	$U_0 - U_1$	-----	-617.34	637	-1592	-858	-807	-30	150	603	-363	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.244	0.98	Yes	0.729	0.270	1.00	Yes	1.00	**7.86**
		$U_1 - U_2$	-----	-829.20	66	-714	-401	-934	-138	-390	-319	-186	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.187	1.00	Yes	0.800	0.142	0.95	Yes	1.00	**4.67**
		$U_2 - U_3$	-----	-1144.98	168	-688	-856	-1362	-51	90	-291	567	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.182	1.00	Yes	0.813	0.139	0.96	Yes	1.00	**4.75**
		$U_3 - U_4$	-----	-1279.96	-411	-405	-1656	-1326	339	511	375	686	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.261	1.00	Yes	0.729	0.148	0.88	Yes	1.00	**3.90**
		$U_4 - U_5$	-----	-1470.41	-425	-420	-1793	-1331	438	152	440	264	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.236	1.00	Yes	0.755	0.149	0.91	Yes	1.00	**4.27**
		$U_5 - U_6$	-----	-1487.29	-430	-15	-2093	-916	187	-208	224	442	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.224	1.00	Yes	0.764	0.174	0.94	Yes	1.00	**3.59**
		$U_6 - U_7$	-----	-1365.80	-279	-98	-1733	-1144	-138	-187	267	180	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.215	1.00	Yes	0.778	0.154	0.94	Yes	1.00	**3.58**
		$U_7 - U_8$	-----	-1329.13	-204	-190	-1867	-1063	-101	-179	169	15	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.233	1.00	Yes	0.757	0.166	0.93	Yes	1.00	**3.32**
		$U_8 - U_9$	-----	-1155.55	-296	86	-1615	-575	-84	-193	387	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.210	1.00	Yes	0.784	0.172	0.96	Yes	1.00	**3.26**
		$U_9 - U_{10}$	86.06	-924.34	-112	299	-1562	-286	-126	-145	249	8	0.063	0.217	0.29	Yes	0.043	0.147	0.19	Yes	0.802	0.193	1.00	Yes	0.798	0.190	0.99	Yes	1.00	**3.58**
		$U_{10} - U_{11}$	449.68	-769.49	143	344	-1460	-250	-165	-159	455	-9	0.380	0.261	0.65	Yes	0.258	0.170	0.43	Yes	0.769	0.226	1.00	Yes	0.765	0.206	0.98	Yes	1.00	**5.04**
		$U_{11} - U_{12}$	793.64	-451.19	222	522	-1760	-87	-337	-122	608	75	0.670	0.322	1.00	Yes	0.450	0.215	0.67	Yes	0.451	0.216	0.67	Yes	0.448	0.248	0.70	Yes	1.00	**6.39**
		$U_{12} - U_{13}$	1061.17	-51.72	424	132	-1677	-832	-395	-367	696	-174	0.717	0.278	1.00	Yes	0.511	0.189	0.70	Yes	0.041	0.333	0.38	Yes	0.041	0.211	0.26	Yes	1.00	**7.14**
		$U_{13} - U_{14}$	1203.69	-----	61	1777	-2542	3740	-783	-406	110	-711	0.592	0.400	1.00	Yes	0.419	0.262	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.63**
		$U_{14} - U_{15}$	587.10	-----	6567	-3496	1039	251	-1200	-62	-1507	-413	0.289	0.711	1.00	Yes	0.204	0.467	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.19**
		$U_{15} - U_{16}$	1066.72	-----	453	267	-2466	-502	-438	335	-574	838	0.645	0.351	1.00	Yes	0.459	0.236	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.18**
		$U_{16} - U_{17}$	-----	-754.64	2241	-1661	-1697	-1587	612	157	925	829	-----	-----	-----	-----	-----	-----	-----	-----	0.658	0.337	1.00	Yes	0.654	0.282	0.94	Yes	1.00	**23.29**
		$U_{17} - U_{18}$	-----	-608.26	647	-584	-1029	-1013	119	718	-20	1101	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.275	1.00	Yes	0.718	0.175	0.90	Yes	1.00	**9.29**
		$U_{18} - U_{19}$	-----	-690.89	589	-551	-739	-882	303	234	339	487	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.174	1.00	Yes	0.816	0.150	0.97	Yes	1.00	**6.87**
		$U_{19} - U_{20}$	353.90	-701.11	346	242	-851	-666	11	3	137	489	0.332	0.202	0.54	Yes	0.220	0.133	0.36	Yes	0.778	0.221	1.00	Yes	0.774	0.136	0.91	Yes	1.00	**5.22**
		$U_{20} - U_{21}$	179.83	-835.38	174	-26	-1018	-659	-19	-57	252	303	0.140	0.181	0.33	Yes	0.098	0.117	0.22	Yes	0.768	0.226	1.00	Yes	0.762	0.148	0.91	Yes	1.00	**4.37**
		$U_{21} - U_{22}$	77.37	-806.75	-35	8	-1134	-883	-5	65	96	400	0.060	0.208	0.27	Yes	0.043	0.140	0.19	Yes	0.742	0.257	1.00	Yes	0.736	0.164	0.91	Yes	1.00	**3.95**
		$U_{22} - U_{23}$	55.99	-787.91	55	-47	-1274	-588	62	-3	445	132	0.043	0.233	0.28	Yes	0.031	0.157	0.19	Yes	0.724	0.268	1.00	Yes	0.719	0.184	0.91	Yes	1.00	**3.49**
		$U_{23} - U_{24}$	39.76	-821.39	88	-60	-1234	-570	-34	1	358	112	0.031	0.218	0.25	Yes	0.022	0.141	0.17	Yes	0.755	0.238	1.00	Yes	0.750	0.179	0.93	Yes	1.00	**3.78**
		$U_{24} - U_{25}$	238.95	-709.62	157	248	-1263	-312	-49	-85	431	-54	0.224	0.260	0.49	Yes	0.149	0.171	0.32	Yes	0.788	0.208	1.00	Yes	0.783	0.202	0.99	Yes	1.00	**3.79**
		$U_{25} - U_{26}$	454.29	-641.83	179	425	-1146	103	-150	-76	313	-17	0.456	0.240	0.70	Yes	0.299	0.153	0.46	Yes	0.763	0.237	1.00	Yes	0.758	0.194	0.96	Yes	1.00	**4.87**
		$U_{26} - U_{27}$	673.55	-484.38	322	378	-1446	-114	-224	-71	502	-91	0.676	0.319	1.00	Yes	0.450	0.211	0.67	Yes	0.576	0.369	0.95	Yes	0.572	0.245	0.82	Yes	1.00	**5.75**
		$U_{27} - U_{28}$	945.56	-314.59	288	526	-1934	98	-340	-14	529	105	0.697	0.299	1.00	Yes	0.464	0.197	0.67	Yes	0.274	0.286	0.57	Yes	0.273	0.243	0.52	Yes	1.00	**7.37**
		$U_{28} - U_{29}$	1182.33	-----	468	158	-1972	-635	-367	-257	644	-122	0.715	0.279	1.00	Yes	0.509	0.187	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.69**
		$U_{29} - U_{30}$	1275.52	-----	214	1725	-3097	3467	-717	-371	324	-332	0.627	0.370	1.00	Yes	0.444	0.243	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.13**
		$U_{30} - U_{31}$	220.19	-234.62	8825	-7359	630	-321	-1080	744	-22	165	0.108	0.891	1.00	Yes	0.077	0.583	0.66	Yes	0.137	0.648	0.79	Yes	0.136	0.817	0.96	Yes	1.00	**25.73**
		$U_{31} - U_{32}$	916.98	-134.05	318	137	-2067	-1124	-267	447	-255	1247	0.619	0.379	1.00	Yes	0.441	0.259	0.71	Yes	0.107	0.256	0.37	Yes	0.106	0.260	0.37	Yes	1.00	**12.61**
		$U_{32} - U_{33}$	-----	-752.99	1094	-1316	-1129	-1649	595	325	519	881	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.238	1.00	Yes	0.748	0.233	0.99	Yes	1.00	**14.58**
		$U_{33} - U_{34}$	805.03	-723.81	433	315	-974	-953	-14	229	153	1074	0.680	0.268	0.95	Yes	0.463	0.178	0.65	Yes	0.724	0.267	1.00	Yes	0.719	0.137	0.86	Yes	1.00	**7.82**
		$U_{34} - U_{35}$	485.30	-931.06	431	134	-781	-980	155	143	543	608	0.356	0.185	0.55	Yes	0.241	0.125	0.37	Yes	0.808	0.188	1.00	Yes	0.803	0.119	0.93	Yes	1.00	**6.54**
		$U_{35} - U_{36}$	140.40	-1149.77	166	-139	-1015	-1138	105	91	240	638	0.081	0.174	0.26	Yes	0.057	0.115	0.18	Yes	0.785	0.209	1.00	Yes	0.780	0.121	0.91	Yes	1.00	**4.78**
		$U_{36} - U_{37}$	-----	-1362.38	-47	49	-1548	-1515	81	-3	332	371	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.218	1.00	Yes	0.776	0.138	0.92	Yes	1.00	**4.82**
		$U_{37} - U_{38}$	-----	-1269.26	92	-177	-1821	-1081	51	18	383	304	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.267	1.00	Yes	0.723	0.162	0.89	Yes	1.00	**3.93**
		$U_{38} - U_{39}$	-----	-1445.36	72	-310	-1837	-1646	135	-35	750	247	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.245	1.00	Yes	0.742	0.152	0.90	Yes	1.00	**3.99**
		$U_{39} - U_{40}$	-----	-1387.60	-228	-339	-2408	-1232	34	-34	468	214	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.276	1.00	Yes	0.712	0.200	0.92	Yes	1.00	**3.76**
		$U_{40} - U_{41}$	-----	-1259.91	-252	-337	-2073	-1376	46	-117	576	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.269	1.00	Yes	0.717	0.185	0.91	Yes	1.00	**3.97**
		$U_{41} - U_{42}$	-----	-1059.82	-158	-126	-1941	-487	-68	-105	423	3	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.236	1.00	Yes	0.752	0.198	0.95	Yes	1.00	**4.21**
		$U_{42} - U_{43}$	-----	-765.00	-141	-57	-1438	-349	-43	-100	392	-142	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.248	1.00	Yes	0.738	0.218	0.96	Yes	1.00	**4.36**
		$U_{43} - U_{44}$	-----	-549.09	-17	-208	-2041	819	-70	32	339	-339	-----	-----	-----	-----	-----	-----	-----	-----	0.652	0.283	0.94	Yes	0.648	0.346	1.00	Yes	1.00	**7.90**
	Structure 3	$U_0 - U_1$	-----	-641.47	786	-1355	-602	-957	-72	-37	612	-238	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.211	0.94	Yes	0.722	0.273	1.00	Yes	1.00	**9.08**
		$U_1 - U_2$	-----	-715.65	111	-850	-221	-407	-42	-346	32	-343	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.187	1.00	Yes	0.805	0.171	0.98	Yes	1.00	**3.68**
		$U_2 - U_3$	-----	-1100.37	168	-601	-352	-541	-57	235	-171	515	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.119	1.00	Yes	0.861	0.098	0.96	Yes	1.00	**4.37**
		$U_3 - U_4$	-----	-1350.50	-159	-419	-1013	-1116	288	395	347	729	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.215	1.00	Yes	0.774	0.123	0.90	Yes	1.00	**4.27**
		$U_4 - U_5$	-----	-1364.72	-372	-135	-1337	-526	511	155	453	267	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.201	1.00	Yes	0.782	0.148	0.93	Yes	1.00	**3.75**
		$U_5 - U_6$	-----	-1347.48	-183	-275	-1034	-1285	140	-151	188	369	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.214	1.00	Yes	0.772	0.142	0.92	Yes	1.00	**3.30**
		$U_6 - U_7$	-----	-1310.44	-381	-108	-1709	-566	-87	-185	379	49	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.235	1.00	Yes	0.751	0.189	0.94	Yes	1.00	**3.04**
		$U_7 - U_8$	-----	-1187.97	-169	-12	-1070	-359	-56	-173	306	3	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.192	1.00	Yes	0.793	0.148	0.95	Yes	1.00	**3.09**
		$U_8 - U_9$	-----	-889.95	-98	183	-917	-207	-34	-156	324	-160	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.155	1.00	Yes	0.835	0.152	0.99	Yes	1.00	**3.11**
		$U_9 - U_{10}$	142.94	-611.03	-80	223	-928	-8	-97	-103	258	-50	0.155	0.249	0.41	Yes	0.103	0.160	0.27	Yes	0.787	0.205	1.00	Yes	0.780	0.208	0.99	Yes	1.00	**3.44**
		$U_{10} - U_{11}$	625.03	-466.10	284	217	-1005	-51	-220	-134	560	-162	0.678	0.315	1.00	Yes	0.459	0.211	0.68	Yes	0.600	0.201	0.81	Yes	0.595	0.225	0.82	Yes	1.00	**6.24**
		$U_{11} - U_{12}$	835.46	-----	-15	894	-1325	1529	-419	-102	248	-330	0.685	0.308	1.00	Yes	0.468	0.210	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.41**
		$U_{12} - U_{13}$	521.23	-----	3653	-2472	407	214	-616	278	-815	-205	0.361	0.636	1.00	Yes	0.252	0.434	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.08**
		$U_{13} - U_{14}$	858.43	-----	232	433	-600	-20	-336	-220	-347	363	0.821	0.178	1.00	Yes	0.574	0.122	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.86**
		$U_{14} - U_{15}$	-----	-588.31	546	-577	-222	-863	272	-11	207	152	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.190	1.00	Yes	0.793	0.205	1.00	Yes	1.00	**7.58**
		$U_{15} - U_{16}$	431.05	-554.18	336	235	-523	-606	-69	130	-35	486	0.494	0.226	0.73	Yes	0.339	0.155	0.50	Yes	0.754	0.239	1.00	Yes	0.747	0.144	0.90	Yes	1.00	**4.71**
		$U_{16} - U_{17}$	376.18	-562.21	368	112	-751	-454	83	74	408	214	0.431	0.247	0.68	Yes	0.296	0.169	0.47	Yes	0.765	0.229	1.00	Yes	0.758	0.179	0.94	Yes	1.00	**4.02**
		$U_{17} - U_{18}$	185.86	-564.21	293	-76	-620	-644	-41	71	297	212	0.213	0.203	0.42	Yes	0.144	0.133	0.28	Yes	0.768	0.225	1.00	Yes	0.761	0.153	0.92	Yes	1.00	**3.35**
		$U_{18} - U_{19}$	60.42	-506.39	131	-45	-835	-414	-10	25	462	10	0.069	0.276	0.35	Yes	0.048	0.189	0.24	Yes	0.689	0.306	1.00	Yes	0.683	0.198	0.89	Yes	1.00	**2.95**
		$U_{19} - U_{20}$	25.99	-494.19	147	-267	-1378	270	-102	91	391	-185	0.030	0.394	0.43	Yes	0.020	0.270	0.30	Yes	0.672	0.286	0.96	Yes	0.666	0.328	1.00	Yes	1.00	**4.93**

Moment (Start) AB Operating

Operating Loads - 3F1

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	3.33	-44.76	1699	-2625	-338	160	-254	-934	-19	-71	0.005	0.988	1.00	Yes	0.003	0.601	0.61	Yes	0.081	0.712	0.80	Yes	0.081	0.788	0.87	Yes	1.00	**25.68**
		L_1 - L_2	421.32	-----	311	-720	-213	-431	-258	-197	609	-74	0.645	0.347	1.00	Yes	0.393	0.227	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.39**
		L_2 - L_3	678.99	-12.83	-25	9	-779	-639	-32	19	-132	44	0.781	0.209	1.00	Yes	0.452	0.126	0.58	Yes	0.018	0.244	0.27	Yes	0.017	0.188	0.21	Yes	1.00	**3.52**
		L_3 - L_4	681.59	-109.17	77	218	-713	-379	51	68	214	132	0.784	0.207	1.00	Yes	0.466	0.133	0.60	Yes	0.149	0.208	0.36	Yes	0.148	0.172	0.32	Yes	1.00	**3.42**
		L_4 - L_5	294.71	-473.93	87	579	-1049	446	50	38	-178	276	0.382	0.327	0.71	Yes	0.229	0.214	0.45	Yes	0.729	0.220	0.95	Yes	0.722	0.278	1.00	Yes	1.00	**3.86**
		L_5 - L_6	-----	-716.34	161	589	-622	233	74	129	303	97	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.156	1.00	Yes	0.826	0.138	0.97	Yes	1.00	**4.27**
		L_6 - L_7	-----	-1044.72	193	189	-959	133	117	-106	-14	470	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.061	0.92	Yes	0.841	0.151	1.00	Yes	1.00	**5.78**
		L_7 - L_8	-----	-1236.17	91	977	-712	1514	40	167	436	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.199	1.00	Yes	0.783	0.200	0.99	Yes	1.00	**6.69**
		L_8 - L_9	-----	-1213.30	1570	-63	535	-15	-191	1	-155	-194	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.213	1.00	Yes	0.768	0.208	0.98	Yes	1.00	**7.83**
		L_9 - L_{10}	-----	-929.69	1409	-1558	-1044	-568	-510	-385	1391	361	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.197	0.96	Yes	0.748	0.245	1.00	Yes	1.00	**17.57**
		L_{10} - L_{11}	132.54	-559.20	529	-5	-48	-408	138	47	13	-48	0.172	0.164	0.34	Yes	0.100	0.099	0.20	Yes	0.860	0.090	0.95	Yes	0.852	0.140	1.00	Yes	1.00	**5.21**
		L_{11} - L_{12}	561.98	-----	564	-855	-13	-525	-231	-202	144	23	0.728	0.267	1.00	Yes	0.437	0.175	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.14**
		L_{12} - L_{13}	1068.06	-----	161	-77	-574	-696	21	39	170	263	0.843	0.154	1.00	Yes	0.539	0.093	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.01**
		L_{13} - L_{14}	1301.10	-----	565	-1451	-341	-1281	-125	-254	338	85	0.765	0.228	1.00	Yes	0.496	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.48**
		L_{14} - L_{15}	1481.28	-----	-373	-27	-2130	-350	-119	-63	-169	148	0.724	0.269	1.00	Yes	0.470	0.162	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.54**
		L_{15} - L_{16}	1614.66	-----	-194	-405	-1495	-1416	-88	-41	118	-318	0.789	0.203	1.00	Yes	0.506	0.119	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.65**
		L_{16} - L_{17}	1123.55	-----	-430	89	-1670	82	-91	-54	-464	181	0.710	0.287	1.00	Yes	0.461	0.177	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.20**
		L_{17} - L_{18}	854.58	-----	-184	-38	-1171	136	-57	9	206	-130	0.744	0.252	1.00	Yes	0.476	0.151	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.99**
		L_{18} - L_{19}	283.18	-----	-212	293	-1396	805	-28	-33	-687	108	0.433	0.561	1.00	Yes	0.293	0.355	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.35**
		L_{19} - L_{20}	199.22	-220.87	-56	-70	-1651	673	-18	-4	951	213	0.305	0.693	1.00	Yes	0.186	0.459	0.65	Yes	0.401	0.463	0.87	Yes	0.398	0.496	0.90	Yes	1.00	**12.85**
	Structure 2	L_0 - L_1	38.88	-118.22	1115	-3539	-121	19	-404	-1402	-19	-64	0.047	0.950	1.00	Yes	0.028	0.605	0.64	Yes	0.170	0.662	0.84	Yes	0.169	0.720	0.89	Yes	1.00	**24.70**
		L_1 - L_2	513.57	-----	641	-1452	-62	-711	-178	-221	454	-50	0.624	0.370	1.00	Yes	0.371	0.236	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.41**
		L_2 - L_3	1040.34	-----	397	-1128	-650	-966	-150	-112	-100	73	0.820	0.179	1.00	Yes	0.538	0.106	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.60**
		L_3 - L_4	1323.77	-----	354	-1614	-792	-1356	-302	-187	352	168	0.778	0.217	1.00	Yes	0.524	0.135	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.55**
		L_4 - L_5	1735.43	-----	-274	-737	-1887	-1542	59	-49	19	181	0.809	0.190	1.00	Yes	0.536	0.112	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.05**
		L_5 - L_6	1878.28	-----	-144	-372	-1737	-1955	115	-16	258	32	0.806	0.189	1.00	Yes	0.541	0.116	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.95**
		L_6 - L_7	1758.15	-----	-454	-124	-2435	-1642	-161	46	21	535	0.744	0.247	1.00	Yes	0.495	0.146	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.78**
		L_7 - L_8	1342.35	-----	-223	273	-1948	-692	-131	8	165	-105	0.770	0.229	1.00	Yes	0.506	0.134	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
		L_8 - L_9	1059.84	-240.09	-107	520	-1583	249	-28	14	-242	375	0.741	0.249	1.00	Yes	0.499	0.156	0.66	Yes	0.199	0.128	0.33	Yes	0.198	0.214	0.42	Yes	1.00	**5.24**
		L_9 - L_{10}	769.69	-597.01	-111	715	-1647	124	15	91	369	-175	0.687	0.308	1.00	Yes	0.400	0.191	0.60	Yes	0.631	0.169	0.81	Yes	0.627	0.264	0.90	Yes	1.00	**6.57**
		L_{10} - L_{11}	194.04	-672.92	85	528	-1164	349	55	1	-321	307	0.194	0.247	0.45	Yes	0.114	0.155	0.27	Yes	0.796	0.076	0.88	Yes	0.790	0.204	1.00	Yes	1.00	**5.09**
		L_{11} - L_{12}	-----	-999.79	86	964	-1268	489	80	236	340	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.147	0.98	Yes	0.820	0.173	1.00	Yes	1.00	**6.40**
		L_{12} - L_{13}	-----	-1291.88	278	-330	-1871	-530	176	-144	-347	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.217	1.00	Yes	0.773	0.186	0.96	Yes	1.00	**7.80**
		L_{13} - L_{14}	-----	-1353.90	-217	1273	-2693	3644	-81	-45	586	180	-----	-----	-----	-----	-----	-----	-----	-----	0.687	0.237	0.93	Yes	0.681	0.318	1.00	Yes	1.00	**10.61**
		L_{14} - L_{15}	-----	-1276.73	4041	-1715	1059	-426	-414	-268	-414	-301	-----	-----	-----	-----	-----	-----	-----	-----	0.648	0.252	0.90	Yes	0.642	0.353	1.00	Yes	1.00	**11.57**
		L_{15} - L_{16}	-----	-1348.07	26	220	-1905	-149	-426	-289	190	179	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.173	0.99	Yes	0.806	0.189	1.00	Yes	1.00	**8.37**
		L_{16} - L_{17}	-----	-1030.22	1961	-758	-199	-433	-94	-823	-92	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.216	0.98	Yes	0.750	0.242	1.00	Yes	1.00	**12.68**
		L_{17} - L_{18}	568.48	-286.69	1896	-2276	-973	-1609	-995	-701	643	217	0.507	0.484	1.00	Yes	0.295	0.298	0.60	Yes	0.303	0.331	0.64	Yes	0.301	0.364	0.67	Yes	1.00	**18.04**
		L_{18} - L_{19}	151.37	-648.81	672	118	-225	-343	-6	33	92	104	0.171	0.146	0.32	Yes	0.099	0.087	0.19	Yes	0.870	0.113	0.99	Yes	0.865	0.130	1.00	Yes	1.00	**5.17**
		L_{19} - L_{20}	593.99	-----	644	-1390	-456	-646	-15	-263	382	18	0.673	0.327	1.00	Yes	0.398	0.207	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.27**
		L_{20} - L_{21}	990.15	-471.87	568	53	-1257	-1110	-100	-103	-85	178	0.790	0.203	1.00	Yes	0.518	0.120	0.64	Yes	0.446	0.186	0.64	Yes	0.443	0.183	0.63	Yes	1.00	**7.60**
		L_{21} - L_{22}	880.62	-187.78	217	-98	-1066	-1702	-87	-27	425	99	0.702	0.294	1.00	Yes	0.470	0.185	0.66	Yes	0.177	0.264	0.45	Yes	0.176	0.248	0.43	Yes	1.00	**5.02**
		L_{22} - L_{23}	793.83	-55.08	-2	49	-2310	-251	1	-22	-170	192	0.633	0.358	1.00	Yes	0.423	0.224	0.65	Yes	0.052	0.272	0.33	Yes	0.052	0.337	0.39	Yes	1.00	**5.69**
		L_{23} - L_{24}	859.86	-278.67	-4	349	-1876	-686	9	74	370	-66	0.686	0.314	1.00	Yes	0.450	0.187	0.64	Yes	0.263	0.285	0.55	Yes	0.261	0.274	0.54	Yes	1.00	**6.75**
		L_{24} - L_{25}	525.49	-445.66	249	366	-1771	167	64	0	-380	392	0.595	0.402	1.00	Yes	0.352	0.256	0.61	Yes	0.598	0.198	0.80	Yes	0.594	0.342	0.94	Yes	1.00	**7.44**
		L_{25} - L_{26}	247.06	-578.33	91	635	-1181	-158	34	115	277	-220	0.280	0.270	0.56	Yes	0.161	0.161	0.33	Yes	0.776	0.175	0.96	Yes	0.771	0.228	1.00	Yes	1.00	**6.92**
		L_{26} - L_{27}	-----	-709.87	293	366	-1573	420	154	55	-421	252	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.098	0.85	Yes	0.745	0.252	1.00	Yes	1.00	**7.25**
		L_{27} - L_{28}	-----	-1019.98	185	1038	-2022	909	252	517	405	-410	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.232	0.99	Yes	0.743	0.249	1.00	Yes	1.00	**10.39**
		L_{28} - L_{29}	-----	-1161.72	456	-585	-2407	-1592	450	-156	-480	400	-----	-----	-----	-----	-----	-----	-----	-----	0.701	0.298	1.00	Yes	0.695	0.239	0.94	Yes	1.00	**12.18**
		L_{29} - L_{30}	-----	-1088.70	-225	1306	-4499	5123	-462	-971	1160	750	-----	-----	-----	-----	-----	-----	-----	-----	0.553	0.317	0.88	Yes	0.548	0.447	1.00	Yes	1.00	**17.24**
		L_{30} - L_{31}	-----	-1041.54	5440	-2811	700	-328	671	727	-75	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.529	0.342	0.88	Yes	0.524	0.475	1.00	Yes	1.00	**17.64**
		L_{31} - L_{32}	-----	-1290.20	197	-141	-2034	-227	-348	89	274	105	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.216	1.00	Yes	0.772	0.202	0.98	Yes	1.00	**10.10**
		L_{32} - L_{33}	51.37	-958.04	1531	-900	-540	-985	484	-446	224	281	0.036	0.254	0.29	Yes	0.024	0.153	0.18	Yes	0.792	0.141	0.94	Yes	0.786	0.209	1.00	Yes	1.00	**13.72**
		L_{33} - L_{34}	536.75	-----	1215	-2120	-620	-963	-467	-513	676	135	0.536	0.462	1.00	Yes	0.314	0.289	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.72**
		L_{34} - L_{35}	904.16	-815.13	793	119	-900	-744	-75	55	39	121	0.807	0.158	0.97	Yes	0.470	0.099	0.57	Yes	0.862	0.119	0.99	Yes	0.856	0.144	1.00	Yes	1.00	**11.18**
		L_{35} - L_{36}	1109.98	-----	549	-1051	-581	-1121	-25	-218	687	124	0.776	0.216	1.00	Yes	0.523	0.137	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.95**
		L_{36} - L_{37}	1450.49	-116.15	312	53	-1360	-1271	-112	6	-211	145	0.832	0.167	1.00	Yes	0.546	0.098	0.65	Yes	0.079	0.183	0.27	Yes	0.078	0.150	0.23	Yes	1.00	**6.85**
		L_{37} - L_{38}	1791.65	-----	126	-345	-2456	-1801	4	-46	323	-93	0.758	0.236	1.00	Yes	0.504	0.138	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.55**
		L_{38} - L_{39}	1731.48	-----	-267	-163	-2695	-1116	-57	5	-172	237	0.743	0.254	1.00	Yes	0.499	0.154	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.73**
		L_{39} - L_{40}	1648.32	-----	-147	-383	-2135	-1019	-25	-40	188	-308	0.768	0.223	1.00	Yes	0.509	0.132	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.98**
		L_{40} - L_{41}	1259.42	-----	-311	-47	-1950	-372	-60	-10	-373	334	0.740	0.258	1.00	Yes	0.498	0.160	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.47**
		L_{41} - L_{42}	965.91	-----	-135	-119	-1421	-154	-32	-31	277	-51	0.761	0.235	1.00	Yes	0.499	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.20**
		L_{42} - L_{43}	491.80	-----	-217	14	-1596	349	-63	-65	-430	253	0.597	0.395	1.00	Yes	0.355	0.253	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.66**
		L_{43} - L_{44}	224.26	-128.22	-67	-14	-2730	760	-159	-47	1001	292	0.272	0.720	1.00	Yes	0.162	0.459	0.63	Yes	0.184	0.454	0.64	Yes	0.183	0.555	0.74	Yes	1.00	**16.39**
	Structure 3	L_0 - L_1	176.87	-293.81	855	-1547	-10	-85	-150	-679	-8	-38	0.271	0.605	0.88	Yes	0.165	0.403	0.57	Yes	0.534	0.348	0.89	Yes	0.529	0.464	1.00	Yes	1.00	**13.53**
		L_1 - L_2	352.10	-----	839	-1367	69	-478	-206	-131	-70	204	0.539	0.453	1.00	Yes	0.364	0.282	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.28**
		L_2 - L_3	866.52	-----	347	-603	-351	-702	-9	-110	535	835	0.755	0.242	1.00	Yes	0.483	0.149	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.13**
		L_3 - L_4	1240.67	-----	383	-1129	-546	-1208	-260	-157	416	193	0.784	0.214	1.00	Yes	0.509	0.132	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.81**
		L_4 - L_5	1599.38	-----	-333	-220	-1526	-1213	82	123	192	361	0.781	0.209	1.00	Yes	0.502	0.123	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.77**
		L_5 - L_6	1483.41	-----	-20	-2007	-913	-1446	-108	-84	339	162	0.725	0.266	1.00	Yes	0.471	0.161	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.46**
		L_6 - L_7	1240.18	-----	-406	235	-1762	53	-185	17	-82	332	0.729	0.270	1.00	Yes	0.473	0.166	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.11**
		L_7 - L_8	1013.79	-----	-86	113	-914	-288	-29	39	252	35	0.800	0.192	1.00	Yes	0.512	0.115	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.52**
		L_8 - L_9	554.92	-114.64	-174	334	-802	142	-17	45	-191	371	0.719	0.277	1.00	Yes	0.431	0.180	0.62	Yes	0.176	0.136	0.32	Yes	0.175	0.212	0.39	Yes	1.00	**3.80**
		L_9 - L_{10}	236.36	-502.68	-7	469	-881	41	69	137	394	100	0.306	0.302	0.61	Yes	0.178	0.181	0.36	Yes	0.773	0.182	0.96	Yes	0.766	0.233	1.00	Yes	1.00	**5.81**
		L_{10} - L_{11}	-----	-964.41	200	190	-1397	563	126	-175	-353	244	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.100	0.89	Yes	0.776	0.219	1.00	Yes	1.00	**8.61**
		L_{11} - L_{12}	-----	-1213.18	127	1043	-875	1493	-112	-39	636	-18	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.219	1.00	Yes	0.768	0.198	0.97	Yes	1.00	**10.00**
		L_{12} - L_{13}	-----	-1142.65	2017	-429	422	-6	-265	-150	-192	-241	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.266	1.00	Yes	0.724	0.267	1.00	Yes	1.00	**10.24**
		L_{13} - L_{14}	-----	-790.21	1837	-2300	-1761	-923	-1022	-1096	1452	407	-----	-----	-----	-----	-----	-----	-----	-----	0.643	0.312	0.96	Yes	0.636	0.361	1.00	Yes	1.00	**22.31**
		L_{14} - L_{15}	-----	-747.29	571	167	-24	-290	146	-6	56	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.121	1.00	Yes	0.862	0.126	0.99	Yes	1.00	**4.23**
		L_{15} - L_{16}	509.46	-----	668	-988	-261	-673	-390	-337	130	42	0.660	0.331	1.00	Yes	0.396	0.216	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.80**
		L_{16} - L_{17}	655.63	-262.03	355	38	-854	-412	90	-36	160	212	0.754	0.240	1.00	Yes	0.448	0.155	0.61	Yes	0.358	0.177	0.54	Yes	0.355	0.206	0.57	Yes	1.00	**4.33**
		L_{17} - L_{18}	661.66	-113.00	88	-10	-828	-673	6	8	233	-31	0.761	0.237	1.00	Yes	0.440	0.142	0.59	Yes	0.154	0.269	0.43	Yes	0.153	0.200	0.36	Yes	1.00	**3.90**
		L_{18} - L_{19}	423.52	-17.60	40	4	-903	7	20	-101	-140	364	0.648	0.349	1.00	Yes	0.395	0.232	0.63	Yes	0.032	0.210	0.25	Yes	0.032	0.271	0.31	Yes	1.00	**3.82**
		L_{19} - L_{20}	48.77	-84.62	61	-179	-1991	829	-16	-4	1513	412	0.075	0.922	1.00	Yes	0.044	0.556	0.60	Yes	0.154	0.657	0.82	Yes	0.152	0.597	0.75	Yes	1.00	**14.77**

Moment (Start) AB Operating

Operating Loads - 3F1

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	$U_0 - L_0$			-----	-317.38	-57	91	-199	251	-32	-10	-621	-199	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.291	1.00	Yes	0.672	0.320	1.00	Yes	1.00	**2.02**
		$U_1 - L_1$			14.00	-327.97	22	-11	-233	239	-3	-2	19	52	0.025	0.321	0.35	Yes	0.014	0.176	0.20	Yes	0.717	0.096	0.82	Yes	0.694	0.306	1.00	Yes	1.00	**3.91**
		$U_2 - L_2$			104.48	-277.22	89	-99	-281	322	71	31	-442	-66	0.188	0.539	0.73	Yes	0.103	0.297	0.40	Yes	0.606	0.224	0.84	Yes	0.587	0.411	1.00	Yes	1.00	**6.50**
		$U_3 - L_3$			188.51	-260.89	340	-302	-317	345	282	239	-300	-53	0.339	0.527	0.87	Yes	0.186	0.290	0.48	Yes	0.572	0.185	0.76	Yes	0.552	0.440	1.00	Yes	1.00	**9.56**
		$U_4 - L_4$			-----	-225.85	405	-387	-42	20	-219	-28	31	155	-----	-----	-----	-----	-----	-----	-----	-----	0.497	0.191	0.69	Yes	0.478	0.517	1.00	Yes	1.00	**8.45**
		$U_5 - L_5$			-----	-425.04	224	-257	62	-86	182	-41	-25	16	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.108	0.88	Yes	0.733	0.261	1.00	Yes	1.00	**3.18**
		$U_6 - L_6$			-----	-519.25	262	-283	79	-96	361	63	96	107	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.130	0.92	Yes	0.745	0.248	1.00	Yes	1.00	**3.05**
		$U_7 - L_7$			-----	-438.57	302	-323	134	-150	236	33	-154	15	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.144	0.88	Yes	0.677	0.318	1.00	Yes	1.00	**2.27**
		$U_8 - L_8$			-----	-1176.32	457	-555	-360	425	979	291	25	64	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.143	1.00	Yes	0.816	0.103	0.92	Yes	1.00	**5.66**
		$U_9 - L_9$			-----	-651.03	-170	200	-424	463	-456	-169	-594	-338	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.186	0.97	Yes	0.735	0.258	1.00	Yes	1.00	**3.97**
		$U_{10} - L_{10}$			-----	-750.56	-118	110	-365	378	-649	-346	-866	-594	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.217	1.00	Yes	0.741	0.196	0.94	Yes	1.00	**4.94**
		$U_{11} - L_{11}$			-----	-657.18	-113	210	-401	506	-480	-265	-752	-530	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.212	1.00	Yes	0.765	0.235	1.00	Yes	1.00	**4.83**
		$U_{12} - L_{12}$			-----	-510.93	-88	94	-342	339	-348	-201	-309	-228	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.162	0.90	Yes	0.701	0.293	1.00	Yes	1.00	**4.09**
		$U_{13} - L_{13}$			-----	-364.50	-37	58	-238	264	-176	12	-3	-26	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.129	0.87	Yes	0.698	0.301	1.00	Yes	1.00	**3.22**
		$U_{14} - L_{14}$			-----	-189.39	205	-207	-433	466	184	84	-75	208	-----	-----	-----	-----	-----	-----	-----	-----	0.423	0.206	0.63	Yes	0.401	0.595	1.00	Yes	1.00	**11.69**
		$U_{15} - L_{15}$			143.68	-309.33	245	-264	-115	98	406	-69	33	127	0.258	0.455	0.72	Yes	0.142	0.250	0.40	Yes	0.693	0.172	0.87	Yes	0.655	0.337	1.00	Yes	1.00	**4.99**
		$U_{16} - L_{16}$			0.71	-320.29	237	-245	21	-30	287	-144	48	-80	0.001	0.397	0.40	Yes	0.001	0.218	0.22	Yes	0.722	0.139	0.87	Yes	0.678	0.314	1.00	Yes	1.00	**3.59**
		$U_{17} - L_{17}$			-----	-435.66	223	-242	60	-74	105	-173	-120	-113	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.125	0.94	Yes	0.752	0.246	1.00	Yes	1.00	**2.99**
		$U_{18} - L_{18}$			-----	-534.70	421	-436	145	-151	324	-150	-132	-122	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.105	0.89	Yes	0.744	0.247	1.00	Yes	1.00	**3.02**
		$U_{19} - L_{19}$			-----	-640.44	532	-519	172	-170	253	-101	-116	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.113	0.92	Yes	0.745	0.247	1.00	Yes	1.00	**3.52**
		$U_{20} - L_{20}$			-----	-576.14	351	-509	160	-259	636	83	32	4	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.234	1.00	Yes	0.671	0.236	0.91	Yes	1.00	**2.71**
	Structure 2	$U_0 - L_0$			-----	-658.14	-165	215	-451	554	-40	-7	-739	-125	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.209	1.00	Yes	0.705	0.235	0.95	Yes	1.00	**3.63**
		$U_1 - L_1$			-----	-719.05	-116	125	-534	540	-106	-6	-72	63	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.075	0.90	Yes	0.771	0.229	1.00	Yes	1.00	**5.08**
		$U_2 - L_2$			-----	-588.62	-108	118	-474	481	-108	-38	-87	-13	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.081	0.87	Yes	0.750	0.246	1.00	Yes	1.00	**4.27**
		$U_3 - L_3$			-----	-484.87	-54	62	-244	253	78	-46	-180	-76	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.118	0.95	Yes	0.760	0.230	1.00	Yes	1.00	**3.94**
		$U_4 - L_4$			-----	-337.14	-6	23	-223	222	-71	49	-119	-21	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.119	0.89	Yes	0.713	0.285	1.00	Yes	1.00	**3.88**
		$U_5 - L_5$			124.20	-325.72	93	-80	-213	236	-120	103	91	-13	0.223	0.337	0.56	Yes	0.123	0.185	0.31	Yes	0.736	0.144	0.88	Yes	0.689	0.302	1.00	Yes	1.00	**5.00**
		$U_6 - L_6$			331.46	-248.32	214	-212	-260	268	206	195	-63	-14	0.596	0.402	1.00	Yes	0.328	0.221	0.55	Yes	0.559	0.160	0.72	Yes	0.525	0.342	0.87	Yes	1.00	**7.94**
		$U_7 - L_7$			-----	-145.80	471	-535	-197	202	54	94	-76	370	-----	-----	-----	-----	-----	-----	-----	-----	0.329	0.288	0.62	Yes	0.309	0.684	1.00	Yes	1.00	**15.53**
		$U_8 - L_8$			-----	-465.84	357	-372	63	-80	199	-124	-22	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.675	0.112	0.79	Yes	0.671	0.325	1.00	Yes	1.00	**4.08**
		$U_9 - L_9$			-----	-690.97	584	-598	142	-176	197	-156	-34	50	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.085	0.86	Yes	0.741	0.254	1.00	Yes	1.00	**5.18**
		$U_{10} - L_{10}$			-----	-795.95	540	-569	164	-197	559	-70	-124	-282	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.167	0.96	Yes	0.744	0.251	1.00	Yes	1.00	**5.10**
		$U_{11} - L_{11}$			-----	-817.33	517	-533	186	-188	252	-136	-176	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.113	0.94	Yes	0.764	0.235	1.00	Yes	1.00	**4.63**
		$U_{12} - L_{12}$			-----	-884.29	530	-539	156	-136	221	-51	-162	1	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.107	0.96	Yes	0.766	0.231	1.00	Yes	1.00	**4.92**
		$U_{13} - L_{13}$			-----	-742.67	570	-552	211	-208	458	48	-163	21	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.165	1.00	Yes	0.716	0.273	0.99	Yes	1.00	**3.92**
		$U_{14} - L_{14}$			-----	-1214.51	788	-752	-537	496	588	285	555	335	-----	-----	-----	-----	-----	-----	-----	-----	0.888	0.105	1.00	Yes	0.805	0.139	0.95	Yes	1.00	**7.63**
		$U_{15} - L_{15}$			-----	-691.08	-116	124	-631	597	-295	12	-652	-115	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.225	1.00	Yes	0.666	0.302	0.97	Yes	1.00	**6.55**
		$U_{16} - L_{16}$			-----	-669.16	-91	65	-528	501	-798	-259	-1049	-430	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.224	1.00	Yes	0.717	0.224	0.95	Yes	1.00	**5.20**
		$U_{17} - L_{17}$			-----	-636.89	-127	124	-540	537	-274	-185	-427	-395	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.149	0.94	Yes	0.741	0.250	1.00	Yes	1.00	**4.76**
		$U_{18} - L_{18}$			-----	-571.32	-94	94	-506	515	-114	-127	-423	-332	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.154	0.92	Yes	0.728	0.263	1.00	Yes	1.00	**4.70**
		$U_{19} - L_{19}$			-----	-468.46	-57	60	-307	301	-66	-33	-180	-159	-----	-----	-----	-----	-----	-----	-----	-----	0.705	0.111	0.82	Yes	0.700	0.295	1.00	Yes	1.00	**3.99**
		$U_{20} - L_{20}$			-----	-378.89	-10	16	-227	233	-176	-30	26	-62	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.117	0.90	Yes	0.726	0.266	1.00	Yes	1.00	**3.91**
		$U_{21} - L_{21}$			64.22	-314.15	32	-27	-247	261	-91	56	-105	-50	0.115	0.364	0.48	Yes	0.064	0.200	0.27	Yes	0.710	0.124	0.84	Yes	0.665	0.334	1.00	Yes	1.00	**4.63**
		$U_{22} - L_{22}$			-----	-140.50	434	-472	-529	545	152	170	139	454	-----	-----	-----	-----	-----	-----	-----	-----	0.316	0.261	0.58	Yes	0.297	0.697	1.00	Yes	1.00	**19.14**
		$U_{23} - L_{23}$			83.05	-314.47	242	-255	-50	44	218	-56	59	81	0.149	0.389	0.54	Yes	0.082	0.214	0.30	Yes	0.710	0.134	0.85	Yes	0.665	0.326	1.00	Yes	1.00	**4.49**
		$U_{24} - L_{24}$			-----	-373.67	235	-248	3	-19	235	-56	73	45	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.108	0.88	Yes	0.716	0.283	1.00	Yes	1.00	**4.01**
		$U_{25} - L_{25}$			-----	-470.49	303	-298	43	-43	404	-35	-84	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.708	0.110	0.82	Yes	0.703	0.291	1.00	Yes	1.00	**3.71**
		$U_{26} - L_{26}$			-----	-570.50	507	-533	71	-74	417	-31	-119	-23	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.139	0.90	Yes	0.727	0.273	1.00	Yes	1.00	**4.32**
		$U_{27} - L_{27}$			-----	-631.59	564	-568	87	-87	312	-54	-135	2	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.107	0.89	Yes	0.735	0.264	1.00	Yes	1.00	**4.71**
		$U_{28} - L_{28}$			-----	-709.01	546	-548	79	-75	641	33	-151	16	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.135	0.96	Yes	0.760	0.233	1.00	Yes	1.00	**4.74**
		$U_{29} - L_{29}$			-----	-714.40	633	-608	120	-125	511	21	-114	28	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.172	0.97	Yes	0.689	0.303	1.00	Yes	1.00	**5.34**
		$U_{30} - L_{30}$			-----	-1198.74	776	-762	-705	637	942	41	39	330	-----	-----	-----	-----	-----	-----	-----	-----	0.877	0.114	1.00	Yes	0.795	0.137	0.94	Yes	1.00	**8.51**
		$U_{31} - L_{31}$			-----	-724.03	-108	108	-548	517	-306	-30	-462	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.192	1.00	Yes	0.698	0.262	0.97	Yes	1.00	**5.87**
		$U_{32} - L_{32}$			-----	-832.88	-80	57	-475	468	-672	-273	-703	-388	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.197	1.00	Yes	0.722	0.204	0.93	Yes	1.00	**5.93**
		$U_{33} - L_{33}$			-----	-795.29	-118	107	-492	486	-452	-343	-643	-492	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.193	1.00	Yes	0.744	0.217	0.97	Yes	1.00	**5.84**
		$U_{34} - L_{34}$			-----	-800.63	-103	120	-544	555	-306	-202	-310	-333	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.117	0.91	Yes	0.749	0.245	1.00	Yes	1.00	**6.25**
		$U_{35} - L_{35}$			-----	-703.22	-96	120	-554	566	-210	11	80	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.082	0.87	Yes	0.754	0.240	1.00	Yes	1.00	**5.53**
		$U_{36} - L_{36}$			-----	-471.40	-42	56	-348	360	-75	61	-63	-18	-----	-----	-----	-----	-----	-----	-----	-----	0.683	0.097	0.79	Yes	0.679	0.315	1.00	Yes	1.00	**4.55**
		$U_{37} - L_{37}$			-----	-150.65	112	-118	-479	526	-147	125	-144	283	-----	-----	-----	-----	-----	-----	-----	-----	0.340	0.285	0.63	Yes	0.319	0.673	1.00	Yes	1.00	**13.24**
		$U_{38} - L_{38}$			321.06	-219.37	198	-200	-252	248	331	-66	278	187	0.577	0.418	1.00	Yes	0.318	0.230	0.55	Yes	0.494	0.131	0.63	Yes	0.464	0.322	0.79	Yes	1.00	**7.06**
		$U_{39} - L_{39}$			166.64	-323.98	217	-239	-148	130	217	-99	19	114	0.300	0.368	0.67	Yes	0.165	0.202	0.37	Yes	0.732	0.118	0.85	Yes	0.686	0.305	1.00	Yes	1.00	**5.73**
		$U_{40} - L_{40}$			11.37	-345.23	209	-210	-19	-3	338	-72	52	21	0.020	0.367	0.39	Yes	0.011	0.202	0.22	Yes	0.783	0.114	0.90	Yes	0.730	0.269	1.00	Yes	1.00	**3.95**
		$U_{41} - L_{41}$			-----	-487.56	243	-254	29	-33	217	-124	7	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.098	0.93	Yes	0.765	0.232	1.00	Yes	1.00	**3.90**
		$U_{42} - L_{42}$			-----	-584.27	481	-491	62	-71	214	-162	11	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.085	0.87	Yes	0.745	0.251	1.00	Yes	1.00	**4.37**
		$U_{43} - L_{43}$			-----	-707.36	550	-554	84	-96	581	22	-48	-49	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.123	0.94	Yes	0.758	0.235	1.00	Yes	1.00	**4.47**
		$U_{44} - L_{44}$			-----	-619.39	389	-506	119	-137	1106	188	-125	-21	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.250	1.00	Yes	0.664	0.215	0.88	Yes	1.00	**3.70**
	Structure 3	$U_0 - L_0$			-----	-613.63	-142	190	-424	515	-57	-7	-429	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.184	1.00	Yes	0.714	0.239	0.96	Yes	1.00	**3.70**
		$U_1 - L_1$			-----	-655.38	-111	123	-496	499	-123	-2	-139	112	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.081	0.90	Yes	0.763	0.232	1.00	Yes	1.00	**4.89**
		$U_2 - L_2$			-----	-537.97	-109	116	-437	442	-148	-45	-228	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.102	0.90	Yes	0.748	0.250	1.00	Yes	1.00	**4.03**
		$U_3 - L_3$			-----	-445.67	-46	59	-207	225	44	-64	26	-62	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.086	0.92	Yes	0.769	0.228	1.00	Yes	1.00	**3.32**
		$U_4 - L_4$			-----	-317.28	-8	24	-245	250	-38	68	-187	-14	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.141	0.86	Yes	0.671	0.319	1.00	Yes	1.00	**4.12**
		$U_5 - L_5$			114.80	-304.38	84	-76	-256	272	-106	122	-64	-13	0.206	0.383	0.59	Yes	0.114	0.211	0.33	Yes	0.682	0.153	0.84	Yes	0.644	0.348	1.00	Yes	1.00	**5.10**
		$U_6 - L_6$			-----	-242.73	366	-376	-241	260	186	79	-207	71	-----	-----	-----	-----	-----	-----	-----	-----	0.542	0.186	0.73	Yes	0.514	0.481	1.00	Yes	1.00	**11.35**
		$U_7 - L_7$			-----	-360.74	240	-264	2	-17	19	-149	-51	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.122	0.86	Yes	0.691	0.302	1.00	Yes	1.00	**3.81**
		$U_8 - L_8$			-----	-514.42	334	-338	65	-76	379	-41	59	-59	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.149	0.90	Yes	0.706	0.289	1.00	Yes	1.00	**4.16**
		$U_9 - L_9$			-----	-650.83	395	-502	107	-167	155	-161	-32	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.100	0.89	Yes	0.758	0.233	1.00	Yes	1.00	**4.52**
		$U_{10} - L_{10}$			-----	-778.30	398	-436	113	-140	217	-48	103	97	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.102	0.91	Yes	0.768	0.226	1.00	Yes	1.00	**5.03**
		$U_{11} - L_{11}$			-----	-649.53	427	-473	168	-193	472	111	-157	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.156	0.94	Yes	0.734	0.263	1.00	Yes	1.00	**3.34**
		$U_{12} - L_{12}$			-----	-1175.87	528	-684	-427	462	756	333	801	297	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.142	1.00	Yes	0.815	0.127	0.95	Yes	1.00	**6.74**
		$U_{13} - L_{13}$			-----	-448.69	-65	74	-299	308	-361	-28	-536	-160	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.216	0.97	Yes	0.692	0.303	1.00	Yes	1.00	**3.94**
		$U_{14} - L_{14}$			-----	-482.29	-43	42	-255	259	-515	-214	-891	-477	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.262	1.00	Yes	0.692	0.226	0.92	Yes	1.00	**4.13**
		$U_{15} - L_{15}$			-----	-433.46	-33	41	-221	241	-484	-235	-424	-326	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.199	0.99	Yes	0.748	0.245	1.00	Yes	1.00	**3.89**
		$U_{16} - L_{16}$			-----	-146.16	76	-53	-539	529	-793	-383	-688	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.321	0.393	0.72	Yes	0.309	0.689	1.00	Yes	1.00	**11.75**
		$U_{17} - L_{17}$			289.90	-253.14	207	-228	-339	345	56	-102	-120	107	0.521	0.476	1.00	Yes	0.287	0.262	0.55	Yes	0.555	0.130	0.69	Yes	0.536	0.441	0.98	Yes	1.00	**7.55**
		$U_{18} - L_{18}$			16.91	-296.60	243	-288	-112	93	197	-62	416	105	0.030	0.489	0.52	Yes	0.017	0.269	0.29	Yes	0.648	0.244	0.90	Yes	0.628	0.369	1.00	Yes	1.00	**5.65**
		$U_{19} - L_{19}$			37.80	-324.93	240	-232	-47	36	307	56	-83	-9	0.068	0.396	0.47	Yes	0.037	0.218	0.26	Yes	0.710	0.156	0.87	Yes	0.688	0.307	1.00	Yes	1.00	**3.50**
		$U_{20} - L_{20}$			-----	-310.36	114	-185	-14	-66	707	227	-593	-190	-----	-----	-----	-----	-----	-----	-----	-----	0.693	0.302	1.00	Yes	0.657	0.236	0.90	Yes	1.00	**1.90**

Moment (Start) AB Operating

Operating Loads - 3F1

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	$U_0 - L_1$			510.88	-----	-18	0	-150	66	-9	5	-585	-114	0.670	0.323	1.00	Yes	0.405	0.178	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.05**
		$U_1 - L_2$			347.29	-100.75	19	-20	-119	-14	-4	-13	-764	-389	0.625	0.374	1.00	Yes	0.344	0.205	0.55	Yes	0.231	0.366	0.60	Yes	0.213	0.152	0.37	Yes	1.00	**5.66**
		$U_2 - L_3$			324.23	-274.92	53	-31	-179	-70	34	26	-290	-17	0.583	0.312	0.90	Yes	0.321	0.172	0.50	Yes	0.633	0.361	1.00	Yes	0.582	0.228	0.82	Yes	1.00	**10.03**
		$U_3 - L_4$			-----	-328.38	56	-6	-131	-141	120	125	283	-324	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.244	1.00	Yes	0.695	0.181	0.88	Yes	1.00	**9.57**
		$U_4 - L_4$			512.18	-----	-10	59	-128	-13	37	-10	-470	-450	0.751	0.240	1.00	Yes	0.413	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.61**
		$U_5 - L_5$			649.45	-----	-28	150	-243	171	203	75	-472	-393	0.768	0.224	1.00	Yes	0.422	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.29**
		$U_1 - L_6$			641.29	-----	-77	118	-315	229	343	158	-314	-262	0.758	0.242	1.00	Yes	0.417	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.36**
		$U_6 - L_7$			659.16	-----	26	164	-108	301	229	141	-154	-176	0.779	0.213	1.00	Yes	0.429	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.62**
		$U_5 - L_8$			988.37	-----	107	219	-103	344	152	-2	282	402	0.790	0.205	1.00	Yes	0.489	0.115	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.58**
		$U_9 - L_{10}$			989.13	-----	-77	86	-311	209	85	133	171	486	0.791	0.201	1.00	Yes	0.490	0.113	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.29**
		$U_{10} - L_{11}$			969.13	-----	-52	162	-270	152	136	192	-31	371	0.819	0.173	1.00	Yes	0.507	0.098	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.49**
		$U_{11} - L_{12}$			804.96	-----	-65	59	-315	53	25	131	224	352	0.796	0.199	1.00	Yes	0.438	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.95**
		$U_{12} - L_{13}$			641.92	-----	-75	42	-204	129	-145	-94	-107	148	0.782	0.208	1.00	Yes	0.492	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
		$U_{13} - L_{14}$			447.12	-----	-13	-25	-107	16	-189	-194	-24	30	0.804	0.193	1.00	Yes	0.442	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.97**
		$U_{15} - L_{14}$			119.58	-292.03	51	-110	-88	-45	-271	-133	-505	-351	0.215	0.286	0.51	Yes	0.118	0.158	0.28	Yes	0.684	0.313	1.00	Yes	0.618	0.140	0.76	Yes	1.00	**4.86**
		$U_{16} - L_{15}$			398.67	-85.12	-9	-33	-125	87	-409	-142	-329	-311	0.717	0.278	1.00	Yes	0.394	0.153	0.55	Yes	0.202	0.195	0.40	Yes	0.180	0.160	0.34	Yes	1.00	**4.05**
		$U_{17} - L_{16}$			504.67	-----	-34	13	-144	89	-110	-130	-482	-395	0.740	0.258	1.00	Yes	0.407	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.19**
		$U_{18} - L_{17}$			572.15	-----	-110	74	-339	220	-106	-114	-677	-562	0.676	0.315	1.00	Yes	0.372	0.173	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		$U_{19} - L_{18}$			656.31	-----	-132	87	-361	238	-65	-106	-585	-515	0.711	0.281	1.00	Yes	0.391	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.39**
		$U_{20} - L_{19}$			642.11	-----	-89	94	-291	260	-150	-72	-942	-253	0.695	0.304	1.00	Yes	0.383	0.167	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.91**
	Structure 2	$U_0 - L_1$			721.60	-----	-116	101	-410	358	-60	-50	-600	-19	0.714	0.280	1.00	Yes	0.393	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.86**
		$U_1 - L_2$			786.53	-----	-95	72	-402	292	-99	-29	-182	101	0.778	0.214	1.00	Yes	0.428	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.93**
		$U_2 - L_3$			639.98	-----	-82	63	-353	250	-22	91	-126	215	0.757	0.239	1.00	Yes	0.416	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.47**
		$U_3 - L_4$			595.04	-----	-39	17	-185	124	102	59	-164	58	0.793	0.203	1.00	Yes	0.436	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.00**
		$U_4 - L_5$			416.49	-62.68	1	-28	-138	85	-139	-144	-237	114	0.749	0.245	1.00	Yes	0.412	0.135	0.55	Yes	0.155	0.131	0.29	Yes	0.133	0.177	0.31	Yes	1.00	**4.50**
		$U_5 - L_6$			420.68	-222.94	64	-94	-119	62	-309	-191	-176	40	0.757	0.241	1.00	Yes	0.416	0.133	0.55	Yes	0.526	0.205	0.74	Yes	0.472	0.152	0.63	Yes	1.00	**5.85**
		$U_6 - L_7$			71.40	-379.77	54	-100	-57	-18	-64	-300	-191	-54	0.116	0.193	0.31	Yes	0.064	0.106	0.17	Yes	0.813	0.178	1.00	Yes	0.728	0.115	0.85	Yes	1.00	**3.98**
		$U_8 - L_7$			545.33	-----	-29	-25	-220	94	-260	-200	-427	-525	0.695	0.304	1.00	Yes	0.438	0.173	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.59**
		$U_8 - L_8$			684.54	-----	-114	33	-330	213	-308	-226	-511	-459	0.741	0.253	1.00	Yes	0.408	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		$U_{10} - L_9$			752.32	-----	-92	126	-350	185	9	-57	-607	-585	0.744	0.253	1.00	Yes	0.409	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.99**
		$U_{11} - L_{10}$			829.74	-----	-100	147	-359	247	160	25	-612	-583	0.756	0.236	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.43**
		$U_{12} - L_{11}$			853.07	-----	-109	163	-376	340	289	119	-416	-428	0.777	0.218	1.00	Yes	0.427	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		$U_{13} - L_{12}$			750.93	-----	-153	155	-430	374	328	125	-172	-194	0.743	0.248	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.50**
		$U_{14} - L_{13}$			751.33	-----	-11	186	-275	422	343	110	-180	-169	0.743	0.247	1.00	Yes	0.409	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.29**
		$U_{14} - L_{15}$			643.46	-----	68	126	-221	359	154	-62	127	133	0.761	0.231	1.00	Yes	0.418	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.83**
		$U_{15} - L_{16}$			626.50	-----	-65	72	-368	331	-53	17	-178	238	0.741	0.252	1.00	Yes	0.407	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.72**
		$U_{16} - L_{17}$			709.27	-----	-60	101	-337	327	-166	112	-304	357	0.768	0.231	1.00	Yes	0.423	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.66**
		$U_{17} - L_{18}$			635.71	-----	-66	97	-310	259	-34	175	14	387	0.752	0.246	1.00	Yes	0.413	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.48**
		$U_{18} - L_{19}$			659.83	-----	-51	70	-284	248	37	22	17	279	0.780	0.211	1.00	Yes	0.429	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**
		$U_{19} - L_{20}$			595.17	-----	-19	26	-200	144	-30	-29	26	267	0.759	0.233	1.00	Yes	0.417	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.47**
		$U_{20} - L_{21}$			429.80	-20.03	-1	-13	-135	93	-121	-83	19	167	0.773	0.221	1.00	Yes	0.425	0.121	0.55	Yes	0.048	0.102	0.15	Yes	0.042	0.172	0.22	Yes	1.00	**4.62**
		$U_{21} - L_{22}$			436.49	-159.82	26	-59	-122	35	-159	-190	-62	139	0.785	0.212	1.00	Yes	0.432	0.116	0.55	Yes	0.378	0.164	0.55	Yes	0.338	0.156	0.50	Yes	1.00	**5.58**
		$U_{23} - L_{22}$			350.55	-270.68	49	-90	-141	15	-186	-14	-470	-383	0.630	0.316	0.95	Yes	0.347	0.174	0.53	Yes	0.645	0.349	1.00	Yes	0.573	0.180	0.76	Yes	1.00	**6.90**
		$U_{24} - L_{23}$			411.74	-49.48	8	-24	-125	94	-180	-63	-328	-267	0.741	0.255	1.00	Yes	0.407	0.140	0.55	Yes	0.118	0.156	0.28	Yes	0.105	0.160	0.27	Yes	1.00	**4.49**
		$U_{25} - L_{24}$			580.82	-----	-15	29	-196	169	64	2	-389	-347	0.741	0.254	1.00	Yes	0.407	0.144	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.45**
		$U_{26} - L_{25}$			622.50	-----	-27	38	-309	234	118	45	-467	-441	0.736	0.260	1.00	Yes	0.405	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.95**
		$U_{27} - L_{26}$			644.51	-----	-46	58	-303	269	176	68	-358	-328	0.762	0.237	1.00	Yes	0.419	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		$U_{28} - L_{27}$			706.82	-----	-49	68	-344	350	199	110	-230	-294	0.766	0.227	1.00	Yes	0.421	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.67**
		$U_{29} - L_{28}$			612.87	-----	-72	83	-387	332	265	131	-284	-240	0.725	0.271	1.00	Yes	0.399	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.53**
		$U_{30} - L_{29}$			648.44	-----	42	109	-226	358	154	119	-122	-147	0.767	0.231	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		$U_{30} - L_{31}$			764.44	-----	68	147	-295	423	212	3	124	289	0.756	0.240	1.00	Yes	0.416	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.30**
		$U_{31} - L_{32}$			750.96	-----	-74	78	-446	371	-27	43	-141	318	0.743	0.254	1.00	Yes	0.409	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.34**
		$U_{32} - L_{33}$			849.60	-----	-58	94	-378	316	-144	136	-209	425	0.774	0.219	1.00	Yes	0.426	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.78**
		$U_{33} - L_{34}$			872.54	-----	-68	90	-349	260	27	200	-72	405	0.795	0.204	1.00	Yes	0.437	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.20**
		$U_{34} - L_{35}$			807.82	-----	-64	79	-321	210	79	85	4	301	0.799	0.194	1.00	Yes	0.440	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.12**
		$U_{35} - L_{36}$			719.24	-----	-86	84	-353	206	-16	0	89	237	0.779	0.220	1.00	Yes	0.428	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.22**
		$U_{36} - L_{37}$			606.37	-----	-28	-3	-201	125	-183	-214	-154	117	0.773	0.224	1.00	Yes	0.487	0.126	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.93**
		$U_{38} - L_{37}$			-----	-378.75	59	-94	-42	-27	-280	-73	-266	-240	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.175	1.00	Yes	0.726	0.108	0.84	Yes	1.00	**3.50**
		$U_{39} - L_{38}$			397.89	-316.77	95	-127	-111	64	-220	-112	-310	-289	0.716	0.252	0.97	Yes	0.394	0.138	0.54	Yes	0.755	0.237	1.00	Yes	0.670	0.162	0.84	Yes	1.00	**6.45**
		$U_{40} - L_{39}$			402.27	-132.33	21	-48	-135	93	-288	-130	-330	-334	0.724	0.269	1.00	Yes	0.398	0.148	0.55	Yes	0.317	0.200	0.52	Yes	0.280	0.172	0.46	Yes	1.00	**4.97**
		$U_{41} - L_{40}$			568.01	-----	-20	4	-172	126	-98	-84	-370	-360	0.757	0.234	1.00	Yes	0.416	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.02**
		$U_{42} - L_{41}$			609.62	-----	-49	32	-331	254	-68	-65	-504	-477	0.721	0.279	1.00	Yes	0.396	0.153	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.35**
		$U_{43} - L_{42}$			753.03	-----	-66	46	-391	303	-7	-48	-468	-464	0.745	0.251	1.00	Yes	0.410	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.51**
		$U_{44} - L_{43}$			721.01	-----	-85	107	-329	328	227	-40	-892	-417	0.713	0.286	1.00	Yes	0.392	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.71**
	Structure 3	$U_0 - L_1$			686.51	-----	-113	94	-384	309	-62	-53	-324	-159	0.744	0.250	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.44**
		$U_1 - L_2$			711.85	-----	-100	68	-343	243	-125	-44	-308	0	0.771	0.226	1.00	Yes	0.424	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**
		$U_2 - L_3$			640.18	-----	-97	63	-341	235	-48	79	-240	189	0.757	0.237	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.13**
		$U_3 - L_4$			549.36	-----	-27	9	-166	91	76	50	-40	89	0.806	0.189	1.00	Yes	0.443	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.30**
		$U_4 - L_5$			420.91	-86.03	-7	-29	-131	82	-95	-170	-242	62	0.757	0.238	1.00	Yes	0.416	0.131	0.55	Yes	0.204	0.126	0.33	Yes	0.182	0.168	0.35	Yes	1.00	**4.31**
		$U_5 - L_6$			409.06	-316.82	46	-113	-127	-22	-315	-340	-217	48	0.736	0.261	1.00	Yes	0.405	0.143	0.55	Yes	0.742	0.245	0.99	Yes	0.670	0.162	0.84	Yes	1.00	**6.61**
		$U_7 - L_6$			365.69	-101.93	13	-64	-130	-13	-250	-199	-591	-479	0.658	0.338	1.00	Yes	0.362	0.186	0.55	Yes	0.237	0.316	0.56	Yes	0.216	0.166	0.39	Yes	1.00	**6.25**
		$U_8 - L_7$			606.51	-----	-61	12	-196	138	-163	-182	-406	-428	0.739	0.255	1.00	Yes	0.465	0.145	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.21**
		$U_8 - L_8$			765.68	-----	-62	81	-282	58	-95	-141	-700	-657	0.757	0.235	1.00	Yes	0.417	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.83**
		$U_{10} - L_9$			878.09	-----	-39	141	-312	103	121	16	-864	-773	0.742	0.258	1.00	Yes	0.459	0.146	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.24**
		$U_{11} - L_{10}$			931.31	-----	-73	126	-347	198	360	190	-766	-662	0.745	0.252	1.00	Yes	0.461	0.143	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.21**
		$U_{12} - L_{11}$			979.47	-----	83	180	-127	342	289	182	-480	-410	0.783	0.214	1.00	Yes	0.485	0.120	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.74**
		$U_{12} - L_{13}$			661.01	-----	69	145	-119	278	53	-86	289	266	0.781	0.211	1.00	Yes	0.430	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.25**
		$U_{13} - L_{14}$			602.19	-----	-20	54	-369	233	-93	38	424	320	0.712	0.287	1.00	Yes	0.392	0.158	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.84**
		$U_{14} - L_{15}$			701.35	-----	-2	127	-208	176	-31	106	-214	246	0.829	0.163	1.00	Yes	0.456	0.090	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.67**
		$U_{15} - L_{16}$			561.29	-----	1	61	-112	9	105	181	-10	231	0.823	0.167	1.00	Yes	0.453	0.092	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.52**
		$U_{17} - L_{16}$			-----	-396.59	38	-67	-54	-63	-84	30	-175	-152	-----	-----	-----	-----	-----	-----	-----	-----	0.907	0.089	1.00	Yes	0.839	0.085	0.93	Yes	1.00	**4.59**
		$U_{18} - L_{17}$			348.40	-262.68	55	-30	-137	-40	261	173	-501	-388	0.627	0.320	0.95	Yes	0.345	0.176	0.53	Yes	0.605	0.390	1.00	Yes	0.556	0.175	0.74	Yes	1.00	**8.17**
		$U_{19} - L_{18}$			363.85	-136.68	27	-20	-120	-15	168	130	-646	-480	0.654	0.340	1.00	Yes	0.360	0.187	0.55	Yes	0.314	0.348	0.67	Yes	0.289	0.153	0.45	Yes	1.00	**4.90**
		$U_{20} - L_{19}$			336.69	-----	176	-15	-201	86	1271	54	-1191	-546	0.442	0.555	1.00	Yes	0.267	0.306	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.53**

Moment (Start) AB Operating

Operating Loads - 3F1

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.	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			-----	-458.85	485	-721	-1370	-238	-109	-401	492	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.624	0.372	1	Yes	0.619	0.326	0.95	Yes	1.00	**5.85**
		U_1 - U_2			-----	-549.79	-40	-75	-743	-518	186	21	-25	7	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.250	1	Yes	0.741	0.177	0.92	Yes	1.00	**4.86**
		U_2 - U_3			-----	-571.55	-77	-12	-959	-274	330	-249	102	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.200	0.98	Yes	0.771	0.228	1.00	Yes	1.00	**4.76**
		U_3 - U_4			303.35	-560.17	97	250	-1003	-280	-91	-86	19	-86	0.348	0.254	0.61	Yes	0.239	0.174	0.42	Yes	0.762	0.208	0.98	Yes	0.755	0.238	1.00	Yes	1.00	**5.39**
		U_4 - U_5			284.12	-542.80	89	228	-1111	-257	-156	-30	-183	-145	0.326	0.295	0.63	Yes	0.223	0.203	0.43	Yes	0.739	0.259	1	Yes	0.732	0.264	1.00	Yes	1.00	**4.66**
		U_5 - U_6			514.99	-473.61	199	341	-1140	64	-317	-38	-82	-274	0.590	0.325	0.92	Yes	0.398	0.212	0.61	Yes	0.644	0.348	1	Yes	0.639	0.271	0.91	Yes	1.00	**5.82**
		U_6 - U_7			287.37	-543.90	437	-758	-1724	-708	-584	408	-633	-257	0.275	0.454	0.73	Yes	0.192	0.311	0.51	Yes	0.618	0.377	1	Yes	0.612	0.367	0.98	Yes	1.00	**11.49**
		U_7 - U_8			910.70	-----	33	990	-1993	2140	-168	437	-358	121	0.631	0.369	1.00	Yes	0.440	0.251	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.29**
		U_8 - U_9			401.09	-96.65	3239	-3650	594	-116	100	412	9	139	0.329	0.662	1.00	Yes	0.225	0.451	0.68	Yes	0.094	0.387	0.49	Yes	0.093	0.612	0.71	Yes	1.00	**16.26**
		U_9 - U_{10}			-----	-590.38	423	-301	-837	-715	244	474	192	422	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.234	1	Yes	0.753	0.187	0.95	Yes	1.00	**12.31**
		U_{10} - U_{11}			-----	-635.42	321	-619	-302	-724	357	-24	348	90	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.178	1	Yes	0.811	0.162	0.98	Yes	1.00	**6.26**
		U_{11} - U_{12}			-----	-898.65	226	-335	-558	-708	236	-187	259	171	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.149	1	Yes	0.843	0.117	0.97	Yes	1.00	**5.43**
		U_{12} - U_{13}			-----	-1192.64	72	-292	-858	-824	222	-300	390	22	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.188	1	Yes	0.797	0.118	0.92	Yes	1.00	**4.99**
		U_{13} - U_{14}			-----	-1372.11	-99	-350	-1270	-1242	145	73	270	117	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.201	1	Yes	0.787	0.140	0.93	Yes	1.00	**5.22**
		U_{14} - U_{15}			-----	-1281.35	-150	-1227	-1812	-792	114	-164	176	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.252	1	Yes	0.735	0.200	0.94	Yes	1.00	**4.03**
		U_{15} - U_{16}			-----	-1384.63	54	-1577	-1534	-1050	-107	-443	64	-186	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.196	1	Yes	0.794	0.174	0.97	Yes	1.00	**4.37**
		U_{16} - U_{17}			-----	-1290.61	-321	-188	-1817	-749	57	-185	-128	-286	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.250	1	Yes	0.740	0.200	0.95	Yes	1.00	**4.25**
		U_{17} - U_{18}			-----	-978.71	-170	-103	-1143	-143	-157	-236	-61	-211	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.217	1	Yes	0.766	0.186	0.96	Yes	1.00	**3.64**
		U_{18} - U_{19}			-----	-674.37	-188	-157	-968	-117	-266	-169	-45	-214	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.227	1	Yes	0.759	0.195	0.96	Yes	1.00	**4.04**
		U_{19} - U_{20}			-----	-499.49	-75	-1753	-1503	-182	-22	-806	466	-187	-----	-----	-----	-----	-----	-----	-----	-----	0.567	0.424	1	Yes	0.562	0.353	0.92	Yes	1.00	**8.49**
	Structure 2	U_0 - U_1			-----	-572.28	1197	-1397	-1891	-769	5	-195	842	15	-----	-----	-----	-----	-----	-----	-----	-----	0.680	0.287	0.97	Yes	0.676	0.321	1.00	Yes	1.00	**9.45**
		U_1 - U_2			-----	-814.84	14	-628	-681	-847	153	-50	418	282	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.207	1	Yes	0.786	0.128	0.92	Yes	1.00	**5.45**
		U_2 - U_3			-----	-1113.87	297	-476	-1078	-1438	538	-17	403	39	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.200	1	Yes	0.790	0.146	0.94	Yes	1.00	**5.74**
		U_3 - U_4			-----	-1290.38	-361	-288	-1981	-1410	123	-313	250	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.256	1	Yes	0.735	0.177	0.92	Yes	1.00	**5.13**
		U_4 - U_5			-----	-1402.72	-336	-826	-2052	-1642	-2	-519	163	-184	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.266	1	Yes	0.720	0.170	0.90	Yes	1.00	**4.57**
		U_5 - U_6			-----	-1436.02	-389	-18	-2553	-781	-104	-291	102	-232	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.251	1	Yes	0.737	0.212	0.95	Yes	1.00	**4.80**
		U_6 - U_7			-----	-1333.50	-255	-68	-1973	-1339	-87	-265	-107	-224	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.235	1	Yes	0.759	0.176	0.94	Yes	1.00	**4.96**
		U_7 - U_8			-----	-1232.06	-178	-230	-2434	-886	-169	-210	-196	-199	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.288	1	Yes	0.702	0.217	0.92	Yes	1.00	**3.99**
		U_8 - U_9			-----	-1131.75	-307	67	-1841	-672	-202	-183	-110	-239	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.226	1	Yes	0.768	0.196	0.97	Yes	1.00	**4.45**
		U_9 - U_{10}			81.93	-891.84	-115	255	-1794	-326	-254	-122	-132	-167	0.060	0.246	0.31	Yes	0.041	0.167	0.21	Yes	0.774	0.218	1	Yes	0.770	0.218	0.99	Yes	1.00	**4.67**
		U_{10} - U_{11}			436.18	-745.88	69	329	-1798	-559	-136	-67	-191	-197	0.368	0.278	0.65	Yes	0.251	0.179	0.43	Yes	0.746	0.249	1	Yes	0.741	0.254	1.00	Yes	1.00	**6.68**
		U_{11} - U_{12}			757.31	-462.11	159	490	-2109	-102	-315	-150	-259	-451	0.640	0.352	1.00	Yes	0.430	0.236	0.67	Yes	0.462	0.229	0.7	Yes	0.459	0.297	0.76	Yes	1.00	**8.07**
		U_{12} - U_{13}			33.66	-582.57	728	-4223	-4078	-2322	-919	-244	-813	-720	0.023	0.620	0.65	Yes	0.016	0.419	0.44	Yes	0.466	0.516	0.99	Yes	0.463	0.532	1.00	Yes	1.00	**19.08**
		U_{13} - U_{14}			1207.21	-----	-92	1972	-3520	3953	-223	392	-470	-77	0.594	0.398	1.00	Yes	0.420	0.261	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.42**
		U_{14} - U_{15}			452.87	-----	7746	-5456	1182	-96	-47	807	-317	118	0.223	0.772	1.00	Yes	0.158	0.505	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.98**
		U_{15} - U_{16}			979.00	-----	296	126	-2926	-729	575	823	295	889	0.592	0.408	1.00	Yes	0.421	0.274	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.02**
		U_{16} - U_{17}			-----	-782.18	1769	-1657	-2313	-2248	725	103	886	317	-----	-----	-----	-----	-----	-----	-----	-----	0.682	0.312	1	Yes	0.678	0.291	0.97	Yes	1.00	**19.63**
		U_{17} - U_{18}			-----	-624.75	721	-405	-1459	-931	151	-7	244	256	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.251	1	Yes	0.738	0.248	0.99	Yes	1.00	**11.31**
		U_{18} - U_{19}			-----	-693.19	678	-327	-984	-1016	72	-277	132	68	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.156	0.99	Yes	0.819	0.172	1.00	Yes	1.00	**8.68**
		U_{19} - U_{20}			231.88	-668.45	277	138	-1072	-805	14	142	154	95	0.217	0.192	0.41	Yes	0.144	0.126	0.28	Yes	0.742	0.256	1	Yes	0.738	0.172	0.91	Yes	1.00	**5.70**
		U_{20} - U_{21}			-----	-805.63	184	-141	-1328	-720	131	-312	260	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.255	1	Yes	0.735	0.192	0.93	Yes	1.00	**5.88**
		U_{21} - U_{22}			55.06	-785.83	-7	19	-1433	-884	-19	-53	33	-45	0.043	0.213	0.26	Yes	0.030	0.142	0.18	Yes	0.722	0.269	1	Yes	0.717	0.208	0.93	Yes	1.00	**5.46**
		U_{22} - U_{23}			-----	-743.50	31	-1203	-1635	-750	-66	-228	19	-81	-----	-----	-----	-----	-----	-----	-----	-----	0.684	0.310	1	Yes	0.679	0.237	0.92	Yes	1.00	**4.48**
		U_{23} - U_{24}			-----	-760.04	118	-941	-1473	-605	-173	-244	-59	-187	-----	-----	-----	-----	-----	-----	-----	-----	0.699	0.292	1	Yes	0.694	0.213	0.91	Yes	1.00	**4.64**
		U_{24} - U_{25}			158.10	-672.72	85	197	-1413	-437	-214	-39	-143	-129	0.148	0.255	0.41	Yes	0.098	0.168	0.27	Yes	0.747	0.246	1	Yes	0.742	0.226	0.97	Yes	1.00	**4.68**
		U_{25} - U_{26}			345.23	-608.79	141	356	-1608	-189	-252	31	-172	-81	0.347	0.310	0.66	Yes	0.227	0.197	0.43	Yes	0.723	0.210	0.94	Yes	0.719	0.273	1.00	Yes	1.00	**5.87**
		U_{26} - U_{27}			616.66	-565.00	221	411	-1918	-217	-174	31	-185	-135	0.619	0.353	0.98	Yes	0.412	0.234	0.65	Yes	0.671	0.214	0.89	Yes	0.667	0.326	1.00	Yes	1.00	**8.06**
		U_{27} - U_{28}			848.58	-344.63	202	503	-2490	-9	-551	-203	-192	-446	0.625	0.371	1.00	Yes	0.416	0.244	0.67	Yes	0.301	0.327	0.63	Yes	0.299	0.313	0.62	Yes	1.00	**9.37**
		U_{28} - U_{29}			428.45	-335.56	768	-2692	-4572	-2516	-1114	457	-1038	-626	0.259	0.614	0.88	Yes	0.184	0.412	0.60	Yes	0.240	0.755	1	Yes	0.239	0.520	0.76	Yes	1.00	**18.42**
		U_{29} - U_{30}			1141.60	-----	18	2048	-3783	4215	-24	623	-392	132	0.561	0.433	1.00	Yes	0.397	0.284	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.96**
		U_{30} - U_{31}			946.54	-----	5322	-4436	1337	86	231	561	-435	-171	0.465	0.531	1.00	Yes	0.330	0.348	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.75**
		U_{31} - U_{32}			940.14	-4.09	151	460	-2276	-606	-68	191	409	752	0.635	0.358	1.00	Yes	0.453	0.243	0.70	Yes	0.003	0.305	0.31	Yes	0.003	0.287	0.29	Yes	1.00	**10.13**
		U_{32} - U_{33}			-----	-773.98	1048	-1194	-1378	-1602	706	116	770	180	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.203	0.98	Yes	0.769	0.226	1.00	Yes	1.00	**15.51**
		U_{33} - U_{34}			701.41	-798.35	459	246	-1202	-1023	114	200	179	200	0.592	0.194	0.79	Yes	0.403	0.125	0.53	Yes	0.798	0.193	1	Yes	0.793	0.170	0.97	Yes	1.00	**9.45**
		U_{34} - U_{35}			224.95	-967.15	383	-1	-890	-1283	81	-69	250	-25	0.165	0.183	0.35	Yes	0.112	0.124	0.24	Yes	0.840	0.158	1	Yes	0.835	0.156	1.00	Yes	1.00	**6.44**
		U_{35} - U_{36}			17.58	-1184.62	167	-244	-1307	-1120	98	97	327	97	0.010	0.166	0.18	Yes	0.007	0.109	0.12	Yes	0.809	0.188	1	Yes	0.803	0.139	0.95	Yes	1.00	**5.92**
		U_{36} - U_{37}			-----	-1339.32	-113	-51	-1620	-1721	134	-76	235	94	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.226	1	Yes	0.763	0.153	0.92	Yes	1.00	**5.61**
		U_{37} - U_{38}			-----	-1226.39	24	-266	-2245	-1128	15	1	126	7	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.293	1	Yes	0.698	0.200	0.90	Yes	1.00	**4.24**
		U_{38} - U_{39}			-----	-1548.44	223	-2159	-2183	-1969	55	-368	193	-201	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.191	1	Yes	0.795	0.181	0.98	Yes	1.00	**5.27**
		U_{39} - U_{40}			-----	-1350.99	-349	-475	-2567	-1261	-117	-147	-101	-293	-----	-----	-----	-----	-----	-----	-----	-----	0.699	0.296	1	Yes	0.694	0.213	0.91	Yes	1.00	**4.06**
		U_{40} - U_{41}			-----	-1228.29	-409	-434	-2295	-1293	-86	-141	-180	-268	-----	-----	-----	-----	-----	-----	-----	-----	0.704	0.289	1	Yes	0.699	0.205	0.91	Yes	1.00	**4.01**
		U_{41} - U_{42}			-----	-1068.95	-284	-171	-2100	-577	-103	19	-55	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.232	1	Yes	0.759	0.214	0.98	Yes	1.00	**4.37**
		U_{42} - U_{43}			-----	-784.54	-279	-55	-1462	-299	84	-71	243	-132	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.236	1	Yes	0.757	0.222	0.98	Yes	1.00	**4.41**
		U_{43} - U_{44}			-----	-525.63	9	-1574	-1558	-157	-100	-682	322	-99	-----	-----	-----	-----	-----	-----	-----	-----	0.625	0.371	1	Yes	0.621	0.267	0.89	Yes	1.00	**7.26**
	Structure 3	U_0 - U_1			-----	-555.19	1293	-1224	-1837	-829	99	-119	830	-134	-----	-----	-----	-----	-----	-----	-----	-----	0.630	0.271	0.91	Yes	0.625	0.370	1.00	Yes	1.00	**10.44**
		U_1 - U_2			-----	-693.63	37	-819	-345	-404	194	318	361	365	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.210	1	Yes	0.780	0.165	0.95	Yes	1.00	**4.12**
		U_2 - U_3			-----	-1008.40	202	-473	-526	-764	612	-86	411	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.197	1	Yes	0.789	0.124	0.92	Yes	1.00	**4.95**
		U_3 - U_4			-----	-1335.95	-77	-258	-1307	-1070	200	-466	279	70	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.220	1	Yes	0.766	0.144	0.92	Yes	1.00	**5.63**
		U_4 - U_5			-----	-1326.10	-249	-229	-1609	-538	-18	-639	151	-204	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.230	1	Yes	0.760	0.178	0.94	Yes	1.00	**5.00**
		U_5 - U_6			-----	-1305.69	-151	-224	-1405	-1142	-54	-216	12	-117	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.240	1	Yes	0.749	0.155	0.91	Yes	1.00	**4.71**
		U_6 - U_7			-----	-1269.72	-199	-947	-1977	-533	-60	-342	-7	-167	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.258	1	Yes	0.728	0.218	0.95	Yes	1.00	**4.16**
		U_7 - U_8			-----	-1125.46	-132	-56	-1323	-355	-200	-204	-68	-238	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.231	1	Yes	0.752	0.182	0.94	Yes	1.00	**4.11**
		U_8 - U_9			-----	-848.95	-116	142	-1077	-195	-182	-125	-143	-198	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.186	1	Yes	0.796	0.179	0.98	Yes	1.00	**4.01**
		U_9 - U_{10}			68.12	-592.78	-98	173	-1060	6	-256	-139	-206	-206	0.074	0.279	0.36	Yes	0.049	0.179	0.23	Yes	0.763	0.228	1	Yes	0.756	0.238	1.00	Yes	1.00	**4.40**
		U_{10} - U_{11}			605.79	-532.05	220	221	-1291	-151	-310	-53	-274	-185	0.657	0.339	1.00	Yes	0.445	0.228	0.68	Yes	0.685	0.262	0.95	Yes	0.679	0.289	0.97	Yes	1.00	**8.55**
		U_{11} - U_{12}			799.33	-----	-86	946	-1799	1612	-238	181	-318	9	0.655	0.341	1.00	Yes	0.448	0.232	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.20**
		U_{12} - U_{13}			407.95	-----	4359	-3691	646	-45	-81	500	-147	55	0.283	0.711	1.00	Yes	0.197	0.484	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.36**
		U_{13} - U_{14}			349.21	-404.64	400	-86	-1760	-331	313	547	171	588	0.334	0.455	0.79	Yes	0.233	0.312	0.55	Yes	0.460	0.538	1	Yes	0.455	0.374	0.83	Yes	1.00	**14.08**
		U_{14} - U_{15}			-----	-573.86	581	-364	-439	-727	343	-183	449	87	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.216	1	Yes	0.774	0.173	0.95	Yes	1.00	**8.10**
		U_{15} - U_{16}			332.65	-571.14	275	140	-698	-566	-5	140	193	244	0.381	0.207	0.59	Yes	0.262	0.142	0.41	Yes	0.777	0.222	1	Yes	0.770	0.166	0.94	Yes	1.00	**5.95**
		U_{16} - U_{17}			-----	-578.53	455	-811	-890	-439	0	-120	154	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.083	0.88	Yes	0.780	0.212	1.00	Yes	1.00	**4.84**
		U_{17} - U_{18}			99.56	-563.89	228	-129	-788	-553	-68	140	-35	-37	0.114	0.211	0.33	Yes	0.077	0.137	0.22	Yes	0.767	0.226	1	Yes	0.760	0.187	0.95	Yes	1.00	**3.71**
		U_{18} - U_{19}			-----	-537.49	53	-354	-930	-310	33	200	148	35	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.264	1	Yes	0.725	0.221	0.95	Yes	1.00	**3.45**
		U_{19} - U_{20}			-----	-463.84	106	-306	-1047	-431	-65	19	359	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.631	0.366	1	Yes	0.625	0.249	0.88	Yes	1.00	**4.80**

Operating Loads - 3F1

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	122.56	-31.26	926	-1434	-182	66	-467	-1750	18	73	0.188	0.806	1.00	Yes	0.110	0.482	0.60	Yes	0.057	0.561	0.62	Yes	0.056	0.430	0.49	Yes	1.00	**15.94**
		L_1 - L_2	445.77	-----	255	-691	-416	-650	0	-18	-501	64	0.682	0.315	1.00	Yes	0.416	0.207	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.69**
		L_2 - L_3	661.31	-29.63	-39	29	-937	-581	9	5	-26	-16	0.761	0.230	1.00	Yes	0.440	0.139	0.58	Yes	0.040	0.242	0.29	Yes	0.040	0.226	0.27	Yes	1.00	**4.84**
		L_3 - L_4	637.09	-----	109	-914	-957	-350	-155	4	44	197	0.733	0.263	1.00	Yes	0.435	0.170	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.75**
		L_4 - L_5	227.04	-454.80	79	436	-1139	391	123	-121	-102	-9	0.294	0.324	0.62	Yes	0.176	0.213	0.39	Yes	0.699	0.220	0.92	Yes	0.693	0.302	1.00	Yes	1.00	**5.20**
		L_5 - L_6	-----	-706.81	133	547	-829	209	14	71	68	125	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.168	1	Yes	0.815	0.183	1.00	Yes	1.00	**6.15**
		L_6 - L_7	-----	-986.52	166	125	-1292	79	163	39	24	-88	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.124	0.93	Yes	0.794	0.203	1.00	Yes	1.00	**8.00**
		L_7 - L_8	-----	-1062.39	108	924	-1678	2470	-200	-89	242	112	-----	-----	-----	-----	-----	-----	-----	-----	0.681	0.293	0.98	Yes	0.673	0.327	1.00	Yes	1.00	**13.86**
		L_8 - L_9	-----	-1165.91	1927	-901	538	-32	-54	-60	53	1	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.221	0.97	Yes	0.738	0.255	1.00	Yes	1.00	**10.88**
		L_9 - L_{10}	-----	-709.23	1617	-2695	-1816	-927	-114	-580	406	9	-----	-----	-----	-----	-----	-----	-----	-----	0.577	0.171	0.75	Yes	0.571	0.424	1.00	Yes	1.00	**24.74**
		L_{10} - L_{11}	362.90	-560.56	506	-18	-301	-548	76	6	-20	66	0.470	0.158	0.63	Yes	0.274	0.096	0.37	Yes	0.862	0.071	0.94	Yes	0.854	0.145	1.00	Yes	1.00	**8.59**
		L_{11} - L_{12}	562.16	-----	502	-879	-200	-409	-102	28	-46	180	0.728	0.264	1.00	Yes	0.437	0.173	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.69**
		L_{12} - L_{13}	1061.89	-----	113	-182	-647	-746	-178	-108	-31	113	0.838	0.153	1.00	Yes	0.536	0.091	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.83**
		L_{13} - L_{14}	1283.16	-----	637	-1558	-679	-957	-281	15	-94	283	0.755	0.238	1.00	Yes	0.489	0.146	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.79**
		L_{14} - L_{15}	1486.66	-----	-353	-83	-2164	-446	-64	-47	-153	163	0.726	0.272	1.00	Yes	0.472	0.164	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.74**
		L_{15} - L_{16}	1576.23	-----	-193	-386	-1809	-1180	-76	15	-132	15	0.770	0.227	1.00	Yes	0.494	0.132	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.66**
		L_{16} - L_{17}	1178.01	-----	-402	42	-1601	-21	-37	-60	-164	51	0.745	0.250	1.00	Yes	0.483	0.153	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.67**
		L_{17} - L_{18}	898.68	-----	-174	-59	-1042	32	-77	-12	77	24	0.783	0.211	1.00	Yes	0.501	0.126	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.45**
		L_{18} - L_{19}	433.47	-----	-246	172	-987	436	-3	-38	-190	55	0.663	0.336	1.00	Yes	0.449	0.209	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.08**
		L_{19} - L_{20}	96.60	-63.46	-106	17	-1979	989	-28	-1	1205	260	0.148	0.844	1.00	Yes	0.090	0.558	0.65	Yes	0.115	0.501	0.62	Yes	0.114	0.594	0.71	Yes	1.00	**16.92**
	Structure 2	L_0 - L_1	97.66	-----	942	-2669	-161	43	-573	-2036	26	45	0.119	0.877	1.00	Yes	0.071	0.551	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**22.78**
		L_1 - L_2	536.49	-----	713	-1564	-301	-640	61	88	86	140	0.652	0.341	1.00	Yes	0.388	0.220	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.28**
		L_2 - L_3	1039.59	-----	386	-1028	-579	-942	-8	36	231	-155	0.819	0.173	1.00	Yes	0.537	0.104	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.90**
		L_3 - L_4	1291.07	-----	477	-1814	-1029	-1203	-76	137	-21	301	0.759	0.236	1.00	Yes	0.511	0.146	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.89**
		L_4 - L_5	1699.25	-----	22	-2063	-2060	-1445	-172	-28	188	148	0.792	0.208	1.00	Yes	0.524	0.123	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.44**
		L_5 - L_6	1779.20	-----	-7	-1814	-1918	-2373	-311	-40	-176	131	0.763	0.230	1.00	Yes	0.512	0.140	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.51**
		L_6 - L_7	1770.23	-----	-404	-115	-2607	-1855	55	-3	11	254	0.749	0.245	1.00	Yes	0.498	0.143	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.42**
		L_7 - L_8	1254.66	-----	-205	195	-2326	-355	-69	79	-196	103	0.719	0.273	1.00	Yes	0.473	0.159	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.76**
		L_8 - L_9	1069.37	-217.62	-141	486	-1735	209	46	-120	-107	138	0.748	0.247	1.00	Yes	0.504	0.153	0.66	Yes	0.180	0.136	0.32	Yes	0.179	0.234	0.42	Yes	1.00	**6.90**
		L_9 - L_{10}	781.71	-553.70	-91	578	-1798	136	-46	31	97	43	0.698	0.299	1.00	Yes	0.406	0.187	0.60	Yes	0.585	0.171	0.76	Yes	0.581	0.288	0.87	Yes	1.00	**8.63**
		L_{10} - L_{11}	204.75	-647.11	-6	549	-1357	430	118	-59	-83	-41	0.204	0.253	0.46	Yes	0.120	0.160	0.28	Yes	0.765	0.076	0.85	Yes	0.760	0.237	1.00	Yes	1.00	**6.59**
		L_{11} - L_{12}	-----	-964.34	-5	920	-1503	650	8	53	-26	110	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.138	0.94	Yes	0.791	0.205	1.00	Yes	1.00	**8.14**
		L_{12} - L_{13}	-----	-1207.69	118	-292	-2119	-858	90	32	-134	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.262	1	Yes	0.722	0.211	0.94	Yes	1.00	**9.51**
		L_{13} - L_{14}	-----	-1101.69	-220	1372	-4324	5002	-532	-502	-99	-28	-----	-----	-----	-----	-----	-----	-----	-----	0.559	0.296	0.86	Yes	0.554	0.437	1.00	Yes	1.00	**14.90**
		L_{14} - L_{15}	-----	-1229.44	4298	-2327	1221	-551	-272	-152	-272	-181	-----	-----	-----	-----	-----	-----	-----	-----	0.624	0.248	0.88	Yes	0.619	0.375	1.00	Yes	1.00	**10.56**
		L_{15} - L_{16}	-----	-1240.64	-170	124	-2515	-698	113	74	-38	47	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.240	0.99	Yes	0.742	0.250	1.00	Yes	1.00	**10.02**
		L_{16} - L_{17}	199.76	-661.20	3519	-4189	-1588	-967	-646	-4	375	310	0.124	0.571	0.70	Yes	0.082	0.338	0.42	Yes	0.486	0.388	0.88	Yes	0.482	0.517	1.00	Yes	1.00	**28.72**
		L_{17} - L_{18}	601.60	-179.25	1969	-2551	-1477	-1124	-238	1	85	405	0.537	0.457	1.00	Yes	0.313	0.284	0.60	Yes	0.190	0.266	0.46	Yes	0.188	0.408	0.60	Yes	1.00	**19.69**
		L_{18} - L_{19}	603.47	-----	1051	-1412	-1046	-518	-236	-67	279	156	0.684	0.315	1.00	Yes	0.394	0.188	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.56**
		L_{19} - L_{20}	607.76	-----	727	-1397	-715	-537	-251	-66	76	213	0.688	0.308	1.00	Yes	0.407	0.196	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.86**
		L_{20} - L_{21}	969.38	-----	465	-886	-1364	-886	-216	-111	140	134	0.773	0.222	1.00	Yes	0.507	0.132	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.98**
		L_{21} - L_{22}	881.73	-----	303	-1814	-1297	-1352	-235	-35	-86	229	0.703	0.290	1.00	Yes	0.470	0.182	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.03**
		L_{22} - L_{23}	840.24	-28.81	-99	40	-2170	-562	-5	-45	-96	54	0.670	0.327	1.00	Yes	0.448	0.204	0.66	Yes	0.027	0.273	0.3	Yes	0.027	0.317	0.35	Yes	1.00	**6.03**
		L_{23} - L_{24}	872.18	-291.05	-13	287	-1985	-510	-9	70	52	101	0.696	0.301	1.00	Yes	0.456	0.178	0.64	Yes	0.275	0.257	0.54	Yes	0.273	0.290	0.57	Yes	1.00	**7.47**
		L_{24} - L_{25}	586.23	-448.31	103	450	-1648	220	93	-94	-75	94	0.664	0.332	1.00	Yes	0.393	0.213	0.61	Yes	0.601	0.119	0.73	Yes	0.597	0.318	0.92	Yes	1.00	**7.67**
		L_{25} - L_{26}	254.23	-570.34	57	544	-1213	108	6	81	-33	71	0.288	0.246	0.54	Yes	0.166	0.147	0.32	Yes	0.765	0.158	0.93	Yes	0.760	0.234	1.00	Yes	1.00	**7.09**
		L_{26} - L_{27}	-----	-727.28	128	482	-1434	433	121	-20	-74	48	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.162	0.94	Yes	0.764	0.229	1.00	Yes	1.00	**7.14**
		L_{27} - L_{28}	-----	-1044.41	65	997	-1907	956	84	150	125	41	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.189	0.96	Yes	0.761	0.235	1.00	Yes	1.00	**9.94**
		L_{28} - L_{29}	-----	-1194.10	165	-531	-2149	-1359	205	156	-160	-68	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.273	1	Yes	0.714	0.214	0.93	Yes	1.00	**10.25**
		L_{29} - L_{30}	-----	-1084.86	-164	1178	-4618	5142	-406	-520	170	184	-----	-----	-----	-----	-----	-----	-----	-----	0.551	0.293	0.85	Yes	0.546	0.449	1.00	Yes	1.00	**15.58**
		L_{30} - L_{31}	-----	-1201.92	4463	-2813	1138	-274	-202	-34	-350	-247	-----	-----	-----	-----	-----	-----	-----	-----	0.610	0.264	0.88	Yes	0.605	0.390	1.00	Yes	1.00	**11.83**
		L_{31} - L_{32}	-----	-1158.13	-81	-278	-2658	-836	120	64	219	179	-----	-----	-----	-----	-----	-----	-----	-----	0.699	0.301	1	Yes	0.693	0.264	0.96	Yes	1.00	**11.86**
		L_{32} - L_{33}	429.12	-622.05	2856	-3537	-1757	-1455	-241	-55	902	476	0.299	0.566	0.87	Yes	0.199	0.339	0.54	Yes	0.514	0.359	0.88	Yes	0.510	0.482	1.00	Yes	1.00	**29.49**
		L_{33} - L_{34}	533.72	-----	1349	-2358	-773	-719	-93	166	138	376	0.533	0.463	1.00	Yes	0.312	0.292	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.18**
		L_{34} - L_{35}	835.56	-----	831	-1453	-884	-644	-147	-93	128	165	0.746	0.252	1.00	Yes	0.434	0.157	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.69**
		L_{35} - L_{36}	1142.41	-----	823	-1250	-765	-1007	-272	16	-90	295	0.799	0.196	1.00	Yes	0.538	0.123	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.76**
		L_{36} - L_{37}	1321.46	-----	487	-1961	-1261	-944	-164	106	222	289	0.758	0.240	1.00	Yes	0.498	0.141	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.34**
		L_{37} - L_{38}	1765.62	-----	115	-1445	-2580	-1954	-334	-125	-187	160	0.747	0.247	1.00	Yes	0.497	0.145	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.08**
		L_{38} - L_{39}	1711.22	-----	-384	-84	-2777	-1049	8	-60	-20	191	0.734	0.258	1.00	Yes	0.493	0.157	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.70**
		L_{39} - L_{40}	1640.30	-----	-252	-386	-2408	-825	-57	5	50	34	0.765	0.231	1.00	Yes	0.506	0.136	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.05**
		L_{40} - L_{41}	1259.38	-----	-423	24	-2058	-158	-7	-13	-120	30	0.740	0.250	1.00	Yes	0.498	0.154	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.25**
		L_{41} - L_{42}	974.26	-----	-193	-91	-1451	-154	11	63	146	90	0.768	0.225	1.00	Yes	0.503	0.133	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.49**
		L_{42} - L_{43}	530.74	-----	-312	179	-1496	392	55	10	-93	269	0.645	0.349	1.00	Yes	0.383	0.224	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.68**
		L_{43} - L_{44}	25.50	-9.94	-58	-63	-3527	951	-20	4	1485	429	0.031	0.961	1.00	Yes	0.018	0.611	0.63	Yes	0.014	0.658	0.68	Yes	0.014	0.718	0.74	Yes	1.00	**23.64**
	Structure 3	L_0 - L_1	28.54	-187.89	1192	-2159	-51	-32	-340	-1474	-8	-10	0.044	0.954	1.00	Yes	0.027	0.629	0.66	Yes	0.341	0.593	0.94	Yes	0.338	0.648	0.99	Yes	1.00	**19.71**
		L_1 - L_2	396.16	-----	612	-1079	3	-383	60	209	-321	285	0.606	0.390	1.00	Yes	0.410	0.245	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.76**
		L_2 - L_3	873.41	-----	293	-834	-370	-479	17	125	577	209	0.761	0.235	1.00	Yes	0.487	0.143	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.66**
		L_3 - L_4	1242.98	-----	466	-1264	-733	-1057	-82	136	-27	299	0.786	0.212	1.00	Yes	0.510	0.131	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.77**
		L_4 - L_5	1604.14	-----	-226	-311	-1616	-1295	-169	-131	130	245	0.784	0.212	1.00	Yes	0.503	0.124	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.88**
		L_5 - L_6	1478.69	-----	134	-2024	-1130	-1349	-248	112	58	340	0.722	0.268	1.00	Yes	0.469	0.162	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.60**
		L_6 - L_7	1229.44	-----	-350	174	-1927	205	-8	-33	-32	122	0.723	0.276	1.00	Yes	0.468	0.168	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.54**
		L_7 - L_8	990.83	-----	-92	41	-1063	-232	-24	62	81	174	0.782	0.209	1.00	Yes	0.500	0.124	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.72**
		L_8 - L_9	572.91	-72.49	-191	289	-879	198	45	-103	-11	-26	0.742	0.251	1.00	Yes	0.445	0.165	0.62	Yes	0.111	0.123	0.24	Yes	0.110	0.233	0.35	Yes	1.00	**5.00**
		L_9 - L_{10}	239.58	-485.65	-39	446	-965	113	-27	29	25	164	0.310	0.284	0.60	Yes	0.181	0.172	0.36	Yes	0.747	0.148	0.9	Yes	0.740	0.256	1.00	Yes	1.00	**7.43**
		L_{10} - L_{11}	-----	-931.25	67	223	-1550	453	88	-84	30	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.114	0.88	Yes	0.750	0.243	1.00	Yes	1.00	**10.30**
		L_{11} - L_{12}	-----	-1218.30	65	1152	-1111	1695	36	83	-54	-37	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.192	0.98	Yes	0.772	0.224	1.00	Yes	1.00	**10.76**
		L_{12} - L_{13}	-----	-1119.00	2185	-753	557	-34	-188	-138	-129	-138	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.272	0.99	Yes	0.709	0.289	1.00	Yes	1.00	**10.13**
		L_{13} - L_{14}	-----	-835.37	1543	-2055	-2053	-888	-119	-359	-119	-12	-----	-----	-----	-----	-----	-----	-----	-----	0.680	0.161	0.85	Yes	0.672	0.323	1.00	Yes	1.00	**21.80**
		L_{14} - L_{15}	672.12	-457.55	997	-370	-801	-1155	-222	-65	-118	-582	0.659	0.334	1.00	Yes	0.426	0.204	0.64	Yes	0.534	0.248	0.79	Yes	0.528	0.256	0.79	Yes	1.00	**14.28**
		L_{15} - L_{16}	471.86	-----	856	-1193	-430	-476	-187	103	6	376	0.611	0.383	1.00	Yes	0.367	0.250	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.86**
		L_{16} - L_{17}	633.22	-154.51	259	6	-1018	-382	31	-71	-18	139	0.728	0.268	1.00	Yes	0.433	0.174	0.61	Yes	0.211	0.275	0.49	Yes	0.209	0.246	0.46	Yes	1.00	**5.58**
		L_{17} - L_{18}	622.35	-22.56	33	-77	-994	-537	13	104	20	246	0.716	0.279	1.00	Yes	0.414	0.167	0.59	Yes	0.031	0.299	0.33	Yes	0.031	0.240	0.28	Yes	1.00	**4.89**
		L_{18} - L_{19}	435.37	-----	-34	34	-925	-25	50	-76	24	236	0.666	0.328	1.00	Yes	0.407	0.220	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		L_{19} - L_{20}	8.05	-----	28	-107	-2300	1069	-111	-42	1366	359	0.012	0.983	1.00	Yes	0.007	0.595	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.30**

Moment (Start) AB Operating

Operating Loads - 3F1

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			-----	-321.64	-25	49	-137	167	-101	-33	-729	-234	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.281	1	Yes	0.681	0.213	0.90	Yes	1.00	**1.69**
		U_1 - L_1			22.05	-318.25	22	-16	-253	242	44	18	168	128	0.040	0.372	0.42	Yes	0.022	0.205	0.23	Yes	0.695	0.137	0.84	Yes	0.673	0.324	1.00	Yes	1.00	**4.88**
		U_2 - L_2			-----	-262.01	130	-96	-311	343	-273	-87	13	86	-----	-----	-----	-----	-----	-----	-----	-----	0.573	0.183	0.76	Yes	0.554	0.438	1.00	Yes	1.00	**7.30**
		U_3 - L_3			260.29	-231.70	353	-335	-331	341	-83	17	126	270	0.468	0.530	1.00	Yes	0.257	0.291	0.55	Yes	0.508	0.159	0.67	Yes	0.490	0.452	0.95	Yes	1.00	**9.50**
		U_4 - L_4			-----	-210.24	431	-408	-141	110	137	36	111	154	-----	-----	-----	-----	-----	-----	-----	-----	0.462	0.166	0.63	Yes	0.445	0.551	1.00	Yes	1.00	**10.36**
		U_5 - L_5			-----	-428.65	229	-251	14	-32	-115	-89	-126	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.102	0.88	Yes	0.740	0.254	1.00	Yes	1.00	**4.01**
		U_6 - L_6			-----	-518.83	267	-288	38	-60	97	74	-61	66	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.087	0.88	Yes	0.744	0.252	1.00	Yes	1.00	**4.09**
		U_7 - L_7			-----	-444.56	299	-319	118	-132	-45	69	-129	45	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.122	0.87	Yes	0.686	0.314	1.00	Yes	1.00	**2.89**
		U_8 - L_8			-----	-1279.79	488	-585	-473	562	-102	-47	-190	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.924	0.050	0.98	Yes	0.887	0.109	1.00	Yes	1.00	**6.77**
		U_9 - L_9			-----	-658.53	-165	188	-415	459	-221	-156	-245	-196	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.129	0.92	Yes	0.744	0.255	1.00	Yes	1.00	**3.99**
		U_{10} - L_{10}			-----	-790.67	-88	147	-391	407	-176	-119	-120	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.090	0.91	Yes	0.780	0.211	1.00	Yes	1.00	**6.40**
		U_{11} - L_{11}			-----	-657.22	-56	144	-417	498	-95	22	-90	30	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.087	0.88	Yes	0.765	0.231	1.00	Yes	1.00	**5.98**
		U_{12} - L_{12}			-----	-505.65	-32	57	-357	347	-167	23	-11	137	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.108	0.84	Yes	0.694	0.305	1.00	Yes	1.00	**5.30**
		U_{13} - L_{13}			-----	-364.60	2	19	-243	260	-87	81	-6	131	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.107	0.85	Yes	0.698	0.297	1.00	Yes	1.00	**4.00**
		U_{14} - L_{14}			86.71	-47.31	315	-331	-599	621	-148	-47	-20	47	0.156	0.836	1.00	Yes	0.086	0.460	0.55	Yes	0.106	0.233	0.34	Yes	0.100	0.793	0.90	Yes	1.00	**15.54**
		U_{15} - L_{15}			228.69	-312.84	250	-262	-187	176	-111	-181	-120	-83	0.411	0.387	0.80	Yes	0.226	0.213	0.44	Yes	0.701	0.166	0.87	Yes	0.662	0.335	1.00	Yes	1.00	**5.98**
		U_{16} - L_{16}			66.92	-321.36	242	-247	-47	25	-5	-145	-28	-73	0.120	0.358	0.48	Yes	0.066	0.197	0.27	Yes	0.724	0.139	0.87	Yes	0.680	0.316	1.00	Yes	1.00	**4.78**
		U_{17} - L_{17}			-----	-442.94	211	-230	25	-51	-122	-119	-86	-49	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.118	0.95	Yes	0.764	0.233	1.00	Yes	1.00	**3.78**
		U_{18} - L_{18}			-----	-533.45	429	-439	125	-148	170	-41	-64	127	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.090	0.88	Yes	0.742	0.249	1.00	Yes	1.00	**4.11**
		U_{19} - L_{19}			-----	-647.57	500	-512	135	-201	273	-30	270	388	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.125	0.94	Yes	0.754	0.238	1.00	Yes	1.00	**4.68**
		U_{20} - L_{20}			-----	-582.75	406	-477	157	-223	761	100	181	24	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.229	1	Yes	0.678	0.221	0.90	Yes	1.00	**3.17**
	Structure 2	U_0 - L_0			-----	-588.69	-116	182	-406	480	-265	-45	-1394	-236	-----	-----	-----	-----	-----	-----	-----	-----	0.705	0.287	1	Yes	0.631	0.204	0.84	Yes	1.00	**3.59**
		U_1 - L_1			-----	-713.92	-115	123	-542	547	34	-67	-111	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.079	0.9	Yes	0.765	0.232	1.00	Yes	1.00	**5.47**
		U_2 - L_2			-----	-585.87	-86	95	-487	486	91	41	-7	83	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.081	0.87	Yes	0.747	0.249	1.00	Yes	1.00	**5.26**
		U_3 - L_3			-----	-483.65	-45	52	-257	261	17	127	-28	119	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.096	0.92	Yes	0.758	0.237	1.00	Yes	1.00	**4.79**
		U_4 - L_4			66.46	-328.71	28	-11	-234	229	-107	62	-22	147	0.120	0.342	0.47	Yes	0.066	0.188	0.26	Yes	0.745	0.104	0.85	Yes	0.696	0.300	1.00	Yes	1.00	**4.74**
		U_5 - L_5			191.59	-325.99	131	-122	-223	241	-113	102	-27	139	0.345	0.348	0.70	Yes	0.190	0.191	0.39	Yes	0.736	0.120	0.86	Yes	0.690	0.307	1.00	Yes	1.00	**6.02**
		U_6 - L_6			363.55	-204.53	220	-228	-240	237	-130	85	-103	113	0.654	0.344	1.00	Yes	0.360	0.189	0.55	Yes	0.460	0.094	0.56	Yes	0.433	0.307	0.74	Yes	1.00	**7.23**
		U_7 - L_7			-----	-261.80	323	-345	-139	140	-103	-69	-105	72	-----	-----	-----	-----	-----	-----	-----	-----	0.591	0.156	0.75	Yes	0.554	0.441	1.00	Yes	1.00	**10.57**
		U_8 - L_8			-----	-461.97	366	-374	18	-36	-72	-134	-145	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.115	0.79	Yes	0.665	0.327	1.00	Yes	1.00	**4.74**
		U_9 - L_9			-----	-695.52	567	-585	78	-125	-171	-169	-139	-113	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.085	0.86	Yes	0.745	0.248	1.00	Yes	1.00	**5.73**
		U_{10} - L_{10}			-----	-792.64	550	-569	100	-150	-157	-122	-23	26	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.095	0.88	Yes	0.741	0.251	1.00	Yes	1.00	**6.32**
		U_{11} - L_{11}			-----	-816.89	510	-518	156	-176	18	-1	-42	30	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.068	0.89	Yes	0.764	0.228	1.00	Yes	1.00	**5.59**
		U_{12} - L_{12}			-----	-882.22	515	-527	147	-184	33	66	31	84	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.076	0.93	Yes	0.765	0.226	1.00	Yes	1.00	**5.51**
		U_{13} - L_{13}			-----	-745.83	571	-559	245	-243	81	76	-82	44	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.109	0.95	Yes	0.719	0.273	1.00	Yes	1.00	**4.15**
		U_{14} - L_{14}			-----	-1309.01	626	-596	-535	497	59	23	-106	132	-----	-----	-----	-----	-----	-----	-----	-----	0.957	0.042	1	Yes	0.868	0.111	0.98	Yes	1.00	**6.90**
		U_{15} - L_{15}			-----	-710.32	-163	165	-657	630	-79	-43	-144	-99	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.145	0.94	Yes	0.685	0.315	1.00	Yes	1.00	**5.92**
		U_{16} - L_{16}			-----	-708.21	-116	105	-545	525	-157	-92	-256	-144	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.112	0.94	Yes	0.759	0.231	1.00	Yes	1.00	**5.45**
		U_{17} - L_{17}			-----	-637.03	-129	135	-541	535	-186	-59	-43	-18	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.095	0.89	Yes	0.741	0.251	1.00	Yes	1.00	**5.38**
		U_{18} - L_{18}			-----	-569.27	-84	105	-523	526	-186	-50	-104	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.093	0.86	Yes	0.725	0.269	1.00	Yes	1.00	**5.34**
		U_{19} - L_{19}			-----	-465.55	-27	35	-311	297	-162	-10	-74	50	-----	-----	-----	-----	-----	-----	-----	-----	0.700	0.099	0.8	Yes	0.695	0.299	1.00	Yes	1.00	**4.84**
		U_{20} - L_{20}			28.01	-375.82	10	-4	-232	237	-154	18	-59	62	0.046	0.311	0.36	Yes	0.025	0.171	0.20	Yes	0.771	0.109	0.88	Yes	0.720	0.271	1.00	Yes	1.00	**4.58**
		U_{21} - L_{21}			83.78	-309.64	61	-53	-256	262	-138	29	-119	59	0.151	0.375	0.53	Yes	0.083	0.207	0.29	Yes	0.699	0.125	0.83	Yes	0.655	0.335	1.00	Yes	1.00	**5.23**
		U_{22} - L_{22}			7.68	-247.77	300	-297	-362	367	-156	-71	-23	114	0.014	0.515	0.53	Yes	0.008	0.283	0.30	Yes	0.558	0.162	0.72	Yes	0.524	0.470	1.00	Yes	1.00	**12.81**
		U_{23} - L_{23}			145.48	-318.99	242	-251	-101	93	-7	-89	-105	-79	0.262	0.351	0.62	Yes	0.144	0.193	0.34	Yes	0.721	0.124	0.85	Yes	0.675	0.321	1.00	Yes	1.00	**5.41**
		U_{24} - L_{24}			52.89	-381.19	226	-234	-38	24	-98	-86	-81	-62	0.086	0.293	0.38	Yes	0.047	0.161	0.21	Yes	0.782	0.103	0.89	Yes	0.730	0.268	1.00	Yes	1.00	**4.58**
		U_{25} - L_{25}			-----	-472.77	298	-296	21	-40	24	-28	-75	10	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.079	0.8	Yes	0.706	0.287	1.00	Yes	1.00	**4.40**
		U_{26} - L_{26}			-----	-567.58	507	-531	73	-102	-8	-5	-78	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.081	0.84	Yes	0.723	0.272	1.00	Yes	1.00	**4.96**
		U_{27} - L_{27}			-----	-635.83	541	-550	132	-165	-102	5	-59	42	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.076	0.87	Yes	0.740	0.255	1.00	Yes	1.00	**4.77**
		U_{28} - L_{28}			-----	-707.60	547	-548	125	-133	152	87	-21	-82	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.079	0.9	Yes	0.758	0.232	1.00	Yes	1.00	**4.84**
		U_{29} - L_{29}			-----	-710.09	642	-625	207	-212	37	58	-114	26	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.121	0.92	Yes	0.685	0.307	1.00	Yes	1.00	**5.15**
		U_{30} - L_{30}			-----	-1278.25	646	-640	-668	598	0	-95	-153	88	-----	-----	-----	-----	-----	-----	-----	-----	0.935	0.058	1	Yes	0.848	0.118	0.97	Yes	1.00	**7.56**
		U_{31} - L_{31}			-----	-749.89	-182	178	-571	552	-119	-60	-177	-93	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.143	0.98	Yes	0.723	0.273	1.00	Yes	1.00	**5.17**
		U_{32} - L_{32}			-----	-888.87	-117	113	-517	507	-250	-110	-178	-93	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.123	0.98	Yes	0.770	0.222	1.00	Yes	1.00	**6.63**
		U_{33} - L_{33}			-----	-817.86	-139	141	-522	510	-179	-42	-115	4	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.092	0.92	Yes	0.765	0.231	1.00	Yes	1.00	**6.46**
		U_{34} - L_{34}			-----	-793.10	-88	112	-569	567	-216	-24	-22	126	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.091	0.88	Yes	0.742	0.251	1.00	Yes	1.00	**7.20**
		U_{35} - L_{35}			-----	-696.83	-80	106	-567	575	-184	63	23	158	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.074	0.85	Yes	0.747	0.244	1.00	Yes	1.00	**6.36**
		U_{36} - L_{36}			-----	-458.66	-30	49	-376	378	-139	73	-65	113	-----	-----	-----	-----	-----	-----	-----	-----	0.665	0.097	0.77	Yes	0.661	0.331	1.00	Yes	1.00	**4.90**
		U_{37} - L_{37}			50.01	-72.49	231	-253	-605	655	-157	-33	-36	217	0.090	0.899	0.99	Yes	0.049	0.495	0.55	Yes	0.164	0.272	0.44	Yes	0.153	0.837	1.00	Yes	1.00	**18.73**
		U_{38} - L_{38}			359.16	-151.22	154	-151	-235	242	-15	-134	-111	-141	0.646	0.350	1.00	Yes	0.355	0.192	0.55	Yes	0.340	0.123	0.47	Yes	0.320	0.309	0.63	Yes	1.00	**5.87**
		U_{39} - L_{39}			226.02	-331.36	207	-227	-187	167	-102	-146	-118	-108	0.407	0.332	0.74	Yes	0.224	0.183	0.41	Yes	0.749	0.151	0.9	Yes	0.701	0.290	1.00	Yes	1.00	**6.10**
		U_{40} - L_{40}			94.76	-334.32	223	-222	-58	32	-125	-125	-72	-34	0.170	0.321	0.50	Yes	0.094	0.176	0.28	Yes	0.758	0.128	0.89	Yes	0.707	0.284	1.00	Yes	1.00	**4.81**
		U_{41} - L_{41}			-----	-483.43	245	-256	35	-53	15	-44	-34	11	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.084	0.91	Yes	0.758	0.233	1.00	Yes	1.00	**4.62**
		U_{42} - L_{42}			-----	-587.56	480	-489	109	-118	66	-58	-85	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.079	0.87	Yes	0.749	0.250	1.00	Yes	1.00	**4.78**
		U_{43} - L_{43}			-----	-705.41	534	-554	143	-160	585	53	-35	-13	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.146	0.96	Yes	0.756	0.235	1.00	Yes	1.00	**4.86**
		U_{44} - L_{44}			-----	-623.18	460	-540	196	-243	1064	180	-23	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.246	1	Yes	0.668	0.229	0.90	Yes	1.00	**3.59**
	Structure 3	U_0 - L_0			-----	-529.67	-105	170	-380	424	-248	-33	-1251	-164	-----	-----	-----	-----	-----	-----	-----	-----	0.700	0.299	1	Yes	0.616	0.197	0.82	Yes	1.00	**3.28**
		U_1 - L_1			-----	-649.23	-111	119	-512	508	2	-76	-8	22	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.077	0.89	Yes	0.756	0.238	1.00	Yes	1.00	**5.35**
		U_2 - L_2			-----	-536.09	-93	99	-428	433	82	30	-114	52	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.083	0.87	Yes	0.746	0.245	1.00	Yes	1.00	**4.68**
		U_3 - L_3			-----	-442.63	-28	46	-215	229	-108	65	33	162	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.114	0.95	Yes	0.764	0.232	1.00	Yes	1.00	**4.28**
		U_4 - L_4			79.76	-315.82	39	-26	-256	257	-177	80	-117	155	0.143	0.379	0.53	Yes	0.079	0.208	0.29	Yes	0.712	0.104	0.82	Yes	0.668	0.328	1.00	Yes	1.00	**5.09**
		U_5 - L_5			220.28	-299.78	145	-145	-271	282	-158	69	-82	149	0.396	0.406	0.81	Yes	0.218	0.223	0.45	Yes	0.672	0.136	0.81	Yes	0.634	0.360	1.00	Yes	1.00	**6.31**
		U_6 - L_6			101.75	-122.54	546	-578	-412	423	-266	-103	-164	-3	0.183	0.816	1.00	Yes	0.101	0.449	0.55	Yes	0.273	0.252	0.53	Yes	0.259	0.739	1.00	Yes	1.00	**16.85**
		U_7 - L_7			5.82	-368.29	240	-255	-28	13	-191	-171	-188	-144	0.009	0.341	0.36	Yes	0.005	0.188	0.20	Yes	0.745	0.146	0.9	Yes	0.706	0.291	1.00	Yes	1.00	**3.99**
		U_8 - L_8			-----	-515.80	341	-341	14	-23	-32	-111	-114	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.105	0.85	Yes	0.708	0.291	1.00	Yes	1.00	**5.03**
		U_9 - L_9			-----	-654.93	390	-491	50	-107	-43	-61	-110	-58	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.092	0.88	Yes	0.762	0.228	1.00	Yes	1.00	**5.64**
		U_{10} - L_{10}			-----	-788.31	387	-424	80	-118	-49	39	10	69	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.071	0.89	Yes	0.778	0.220	1.00	Yes	1.00	**5.82**
		U_{11} - L_{11}			-----	-646.66	421	-475	182	-211	75	118	-48	63	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.101	0.88	Yes	0.730	0.264	1.00	Yes	1.00	**3.54**
		U_{12} - L_{12}			-----	-1287.63	441	-574	-464	504	55	42	-46	42	-----	-----	-----	-----	-----	-----	-----	-----	0.930	0.043	0.98	Yes	0.893	0.107	1.00	Yes	1.00	**6.46**
		U_{13} - L_{13}			-----	-446.18	-104	116	-298	312	-141	-96	-143	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.139	0.89	Yes	0.688	0.307	1.00	Yes	1.00	**3.42**
		U_{14} - L_{14}			-----	-524.61	-43	85	-273	281	-147	-91	-242	-146	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.127	0.93	Yes	0.752	0.246	1.00	Yes	1.00	**4.65**
		U_{15} - L_{15}			-----	-430.11	-23	30	-235	250	-170	-56	-76	26	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.111	0.89	Yes	0.742	0.253	1.00	Yes	1.00	**4.54**
		U_{16} - L_{16}			10.80	-234.91	87	-52	-393	377	-257	-158	-153	-16	0.019	0.576	0.60	Yes	0.011	0.317	0.33	Yes	0.517	0.189	0.71	Yes	0.497	0.502	1.00	Yes	1.00	**8.28**
		U_{17} - L_{17}			297.50	-214.96	196	-210	-318	327	-56	-149	-118	-26	0.535	0.461	1.00	Yes	0.294	0.253	0.55	Yes	0.471	0.137	0.61	Yes	0.455	0.417	0.88	Yes	1.00	**6.84**
		U_{18} - L_{18}			77.06	-287.40	267	-305	-150	143	37	-73	119	34	0.139	0.424	0.57	Yes	0.076	0.233	0.31	Yes	0.628	0.122	0.76	Yes	0.608	0.390	1.00	Yes	1.00	**6.85**
		U_{19} - L_{19}			11.59	-326.27	241	-241	-27	15	-27	-82	-164	-86	0.021	0.356	0.38	Yes	0.011	0.196	0.21	Yes	0.713	0.133	0.85	Yes	0.690	0.309	1.00	Yes	1.00	**4.37**
		U_{20} - L_{20}			-----	-333.83	178	-229	47	-74	272	87	-110	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.177	0.93	Yes	0.706	0.292	1.00	Yes	1.00	**2.17**

Moment (Start) AB Operating

Operating Loads - 3F1

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	Yield Axial Portion	Yield Moment Portion	Yield Total	Pass	Fracture Axial Portion	Fracture Moment Portion	Fracture Total	Pass	Buckle Axial Portion	Buckle Moment Portion	Buckle Total	Pass	Yield Axial Portion	Yield Moment Portion	Yield 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	$U_0 - L_1$	365.68	-42.58	10	-11	-253	104	-42	-14	-868	-193	0.480	0.514	1.00	Yes	0.290	0.283	0.58	Yes	0.073	0.353	0.43	Yes	0.066	0.295	0.37	Yes	1.00	**6.77**
		$U_1 - L_2$	420.53	-87.15	15	-14	-118	-14	21	15	-292	-233	0.756	0.236	1.00	Yes	0.416	0.130	0.55	Yes	0.200	0.231	0.44	Yes	0.184	0.151	0.34	Yes	1.00	**6.44**
		$U_2 - L_3$	78.22	-239.42	50	-24	-177	-92	106	70	-500	-403	0.141	0.371	0.52	Yes	0.077	0.204	0.29	Yes	0.551	0.448	1	Yes	0.507	0.226	0.74	Yes	1.00	**12.96**
		$U_3 - L_4$	-----	-359.87	41	-56	-68	-69	-209	-118	-289	-229	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.175	1	Yes	0.761	0.088	0.85	Yes	1.00	**5.96**
		$U_4 - L_4$	552.92	-12.47	8	-22	-143	-15	6	-81	-105	-169	0.811	0.185	1.00	Yes	0.446	0.102	0.55	Yes	0.023	0.089	0.12	Yes	0.022	0.145	0.17	Yes	1.00	**6.47**
		$U_4 - L_5$	689.58	-----	16	24	-274	144	129	68	-26	-127	0.815	0.180	1.00	Yes	0.448	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.49**
		$U_5 - L_6$	633.02	-----	-72	100	-329	222	330	208	290	123	0.748	0.247	1.00	Yes	0.412	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.41**
		$U_6 - L_7$	655.55	-----	35	168	-115	297	291	232	286	157	0.775	0.222	1.00	Yes	0.426	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		$U_8 - L_9$	1003.90	-----	81	207	-116	338	301	241	233	187	0.803	0.189	1.00	Yes	0.497	0.106	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.42**
		$U_9 - L_{10}$	1015.81	-----	-74	99	-346	205	89	109	202	144	0.812	0.180	1.00	Yes	0.503	0.101	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.16**
		$U_{10} - L_{11}$	978.56	-----	-43	124	-319	127	20	13	-107	-162	0.827	0.169	1.00	Yes	0.512	0.094	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.85**
		$U_{11} - L_{12}$	839.61	-----	-65	57	-263	75	-136	-104	-273	-282	0.831	0.164	1.00	Yes	0.457	0.090	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.36**
		$U_{12} - L_{13}$	624.97	-----	-48	11	-191	117	-304	-247	-364	-257	0.762	0.238	1.00	Yes	0.479	0.135	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.46**
		$U_{13} - L_{14}$	433.60	-1.89	-1	-26	-102	21	-266	-285	-285	-281	0.780	0.212	1.00	Yes	0.429	0.117	0.55	Yes	0.004	0.162	0.17	Yes	0.004	0.130	0.14	Yes	1.00	**4.33**
		$U_{15} - L_{14}$	172.61	-335.87	72	-109	-88	-27	-207	-310	-258	-312	0.310	0.230	0.55	Yes	0.171	0.127	0.30	Yes	0.787	0.212	1	Yes	0.711	0.140	0.86	Yes	1.00	**5.44**
		$U_{16} - L_{15}$	409.56	-234.20	35	-77	-141	78	-234	-184	-253	-260	0.737	0.256	1.00	Yes	0.405	0.141	0.55	Yes	0.555	0.206	0.77	Yes	0.496	0.180	0.68	Yes	1.00	**6.22**
		$U_{17} - L_{16}$	532.89	-----	-5	-25	-157	93	-121	-130	-176	-226	0.781	0.211	1.00	Yes	0.430	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.88**
		$U_{18} - L_{17}$	609.85	-----	-96	58	-387	217	5	-45	-324	-226	0.721	0.278	1.00	Yes	0.397	0.153	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.77**
		$U_{19} - L_{18}$	687.55	-----	-90	64	-377	235	-353	-39	-303	-207	0.745	0.251	1.00	Yes	0.410	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.05**
		$U_{20} - L_{19}$	603.53	-----	-116	112	-428	323	-54	167	-771	-86	0.654	0.346	1.00	Yes	0.360	0.190	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.90**
	Structure 2	$U_0 - L_1$	564.50	-----	-60	71	-494	376	-120	55	-1391	-161	0.558	0.437	1.00	Yes	0.307	0.240	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.49**
		$U_1 - L_2$	777.90	-----	-88	59	-426	289	41	10	-186	-188	0.770	0.226	1.00	Yes	0.423	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.74**
		$U_2 - L_3$	653.85	-----	-69	53	-327	252	-78	-177	-208	-228	0.773	0.227	1.00	Yes	0.425	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.74**
		$U_3 - L_4$	571.91	-----	-35	17	-181	114	-236	-213	-311	-269	0.762	0.230	1.00	Yes	0.419	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.50**
		$U_4 - L_5$	408.97	-135.72	18	-47	-127	77	-278	-205	-321	-208	0.736	0.255	1.00	Yes	0.405	0.140	0.55	Yes	0.335	0.198	0.54	Yes	0.287	0.162	0.45	Yes	1.00	**4.81**
		$U_5 - L_6$	398.72	-311.63	77	-108	-111	55	-352	-236	-408	-279	0.717	0.260	0.98	Yes	0.394	0.143	0.54	Yes	0.736	0.256	1	Yes	0.659	0.142	0.81	Yes	1.00	**6.22**
		$U_6 - L_7$	98.46	-369.43	65	-98	-62	-16	-298	-257	-333	-270	0.160	0.199	0.36	Yes	0.088	0.109	0.20	Yes	0.791	0.204	1	Yes	0.708	0.112	0.83	Yes	1.00	**4.32**
		$U_8 - L_7$	568.44	-42.64	6	-41	-226	95	-148	-241	-193	-334	0.725	0.270	1.00	Yes	0.456	0.152	0.61	Yes	0.071	0.141	0.22	Yes	0.064	0.202	0.27	Yes	1.00	**6.69**
		$U_8 - L_9$	697.09	-----	-53	-26	-404	185	-139	-169	-194	-216	0.755	0.242	1.00	Yes	0.415	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.10**
		$U_{10} - L_9$	795.40	-----	-75	20	-382	194	-63	-68	-119	-213	0.787	0.209	1.00	Yes	0.433	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.87**
		$U_{11} - L_{10}$	874.74	-----	-100	86	-393	262	228	67	0	-97	0.797	0.198	1.00	Yes	0.438	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.12**
		$U_{12} - L_{11}$	879.22	-----	-95	120	-387	339	211	140	141	22	0.801	0.193	1.00	Yes	0.441	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		$U_{13} - L_{12}$	735.15	-----	-179	174	-479	374	270	152	204	87	0.727	0.263	1.00	Yes	0.400	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.59**
		$U_{14} - L_{13}$	762.96	-----	-9	220	-276	435	279	186	287	128	0.755	0.245	1.00	Yes	0.415	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.70**
		$U_{14} - L_{15}$	641.13	-----	24	157	-219	360	171	117	153	83	0.758	0.235	1.00	Yes	0.417	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.87**
		$U_{15} - L_{16}$	644.11	-----	-101	106	-383	330	52	69	116	83	0.762	0.238	1.00	Yes	0.419	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		$U_{16} - L_{17}$	739.82	-----	-74	98	-372	343	9	5	0	-12	0.801	0.193	1.00	Yes	0.441	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.47**
		$U_{17} - L_{18}$	675.50	-----	-61	74	-329	273	-50	-8	-81	-33	0.799	0.201	1.00	Yes	0.439	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.47**
		$U_{18} - L_{19}$	679.48	-----	-43	50	-292	236	-112	-83	-147	-144	0.803	0.192	1.00	Yes	0.442	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.04**
		$U_{19} - L_{20}$	602.88	-----	-8	1	-201	149	-200	-125	-229	-134	0.769	0.226	1.00	Yes	0.423	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		$U_{20} - L_{21}$	437.74	-20.64	5	-13	-117	96	-181	-131	-205	-167	0.787	0.209	1.00	Yes	0.433	0.115	0.55	Yes	0.049	0.103	0.16	Yes	0.044	0.149	0.20	Yes	1.00	**4.40**
		$U_{21} - L_{22}$	422.39	-207.09	35	-61	-121	34	-255	-219	-274	-226	0.760	0.234	1.00	Yes	0.418	0.129	0.55	Yes	0.489	0.194	0.69	Yes	0.438	0.154	0.60	Yes	1.00	**5.87**
		$U_{23} - L_{22}$	339.74	-321.79	75	-97	-143	22	-108	-211	-197	-271	0.611	0.262	0.88	Yes	0.336	0.144	0.48	Yes	0.766	0.232	1	Yes	0.681	0.183	0.87	Yes	1.00	**7.92**
		$U_{24} - L_{23}$	446.69	-107.43	31	-43	-122	101	-51	-80	-62	-117	0.803	0.190	1.00	Yes	0.442	0.104	0.55	Yes	0.257	0.058	0.32	Yes	0.227	0.156	0.39	Yes	1.00	**5.32**
		$U_{25} - L_{24}$	598.10	-43.52	19	-39	-234	145	-48	-66	-19	-103	0.763	0.231	1.00	Yes	0.419	0.128	0.55	Yes	0.073	0.074	0.15	Yes	0.065	0.210	0.28	Yes	1.00	**6.84**
		$U_{26} - L_{25}$	667.72	-----	-18	15	-335	242	60	20	20	-84	0.789	0.205	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.22**
		$U_{27} - L_{26}$	649.69	-----	-40	49	-362	265	126	72	114	17	0.768	0.228	1.00	Yes	0.422	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.18**
		$U_{28} - L_{27}$	706.10	-----	-60	99	-397	340	167	137	93	16	0.765	0.231	1.00	Yes	0.421	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.93**
		$U_{29} - L_{28}$	622.05	-----	-125	119	-393	333	217	110	207	83	0.735	0.262	1.00	Yes	0.404	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.39**
		$U_{30} - L_{29}$	637.86	-----	20	161	-224	362	217	147	203	77	0.754	0.244	1.00	Yes	0.415	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.97**
		$U_{30} - L_{31}$	775.00	-----	17	196	-290	437	177	124	113	60	0.767	0.229	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.31**
		$U_{31} - L_{32}$	777.08	-----	-130	131	-477	384	36	47	51	34	0.769	0.229	1.00	Yes	0.423	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.13**
		$U_{32} - L_{33}$	898.50	-----	-89	133	-367	332	-24	-2	-125	-102	0.818	0.173	1.00	Yes	0.450	0.095	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.55**
		$U_{33} - L_{34}$	887.35	-----	-87	126	-356	251	-83	-47	-249	-213	0.808	0.185	1.00	Yes	0.445	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.58**
		$U_{34} - L_{35}$	811.75	-----	-78	46	-327	203	-261	-214	-285	-285	0.803	0.194	1.00	Yes	0.442	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.76**
		$U_{35} - L_{36}$	701.87	-----	-77	23	-339	206	-352	-256	-372	-246	0.760	0.235	1.00	Yes	0.418	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.52**
		$U_{36} - L_{37}$	587.94	-----	-23	-7	-195	110	-315	-300	-301	-323	0.750	0.241	1.00	Yes	0.472	0.136	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.87**
		$U_{38} - L_{37}$	-----	-385.34	81	-103	-46	-29	-133	-220	-188	-264	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.164	1	Yes	0.738	0.118	0.86	Yes	1.00	**4.23**
		$U_{39} - L_{38}$	326.21	-342.96	106	-128	-95	46	-138	-183	-199	-230	0.587	0.230	0.82	Yes	0.323	0.126	0.45	Yes	0.817	0.179	1	Yes	0.726	0.163	0.89	Yes	1.00	**6.20**
		$U_{40} - L_{39}$	433.15	-172.92	44	-68	-127	92	-99	-106	-120	-179	0.779	0.214	1.00	Yes	0.428	0.118	0.55	Yes	0.414	0.137	0.56	Yes	0.366	0.162	0.53	Yes	1.00	**5.48**
		$U_{41} - L_{40}$	578.53	-----	-16	-19	-209	116	-73	-56	-162	-179	0.771	0.228	1.00	Yes	0.424	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.21**
		$U_{42} - L_{41}$	647.64	-----	-75	50	-352	260	-1	-4	-148	-124	0.766	0.226	1.00	Yes	0.421	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.41**
		$U_{43} - L_{42}$	730.41	-----	-95	65	-425	261	-6	-30	-508	-233	0.723	0.273	1.00	Yes	0.397	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.86**
		$U_{44} - L_{43}$	653.73	-----	-138	121	-453	371	35	4	-935	-15	0.647	0.350	1.00	Yes	0.356	0.192	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.64**
	Structure 3	$U_0 - L_1$	509.67	-----	-68	71	-481	324	-132	49	-1198	-172	0.552	0.443	1.00	Yes	0.304	0.244	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.31**
		$U_1 - L_2$	719.82	-----	-92	58	-371	243	36	13	-107	-163	0.780	0.217	1.00	Yes	0.429	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.02**
		$U_2 - L_3$	631.91	-----	-78	48	-350	225	-73	-167	-281	-263	0.747	0.249	1.00	Yes	0.411	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.10**
		$U_3 - L_4$	529.07	-----	-18	-15	-144	91	-256	-221	-316	-293	0.776	0.219	1.00	Yes	0.427	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.24**
		$U_4 - L_5$	404.45	-189.95	13	-53	-124	71	-343	-236	-375	-287	0.727	0.268	1.00	Yes	0.400	0.147	0.55	Yes	0.450	0.222	0.68	Yes	0.402	0.159	0.57	Yes	1.00	**4.86**
		$U_5 - L_6$	280.58	-303.97	59	-100	-103	-24	-372	-325	-456	-362	0.505	0.264	0.77	Yes	0.278	0.145	0.43	Yes	0.712	0.283	1	Yes	0.643	0.132	0.78	Yes	1.00	**6.15**
		$U_7 - L_6$	412.51	-150.34	27	-59	-130	7	-123	-283	-155	-298	0.742	0.253	1.00	Yes	0.408	0.139	0.55	Yes	0.349	0.185	0.54	Yes	0.318	0.167	0.49	Yes	1.00	**6.40**
		$U_8 - L_7$	648.10	-----	-32	-13	-188	152	-157	-159	-155	-220	0.790	0.208	1.00	Yes	0.497	0.117	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.01**
		$U_8 - L_9$	826.44	-----	-56	52	-314	68	235	118	-102	-229	0.818	0.181	1.00	Yes	0.450	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.86**
		$U_{10} - L_9$	947.51	-----	-45	56	-323	109	364	213	84	-36	0.800	0.197	1.00	Yes	0.495	0.111	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.58**
		$U_{11} - L_{10}$	975.98	-----	-89	109	-386	202	319	212	296	136	0.780	0.213	1.00	Yes	0.483	0.119	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.51**
		$U_{12} - L_{11}$	990.89	-----	100	207	-124	352	379	320	329	194	0.792	0.205	1.00	Yes	0.491	0.115	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.08**
		$U_{12} - L_{13}$	670.87	-----	32	163	-113	288	197	165	186	118	0.793	0.200	1.00	Yes	0.436	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.23**
		$U_{13} - L_{14}$	589.96	-----	-52	104	-466	259	141	178	130	91	0.697	0.298	1.00	Yes	0.384	0.164	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.25**
		$U_{14} - L_{15}$	713.92	-----	-13	55	-229	165	51	28	-96	-129	0.844	0.154	1.00	Yes	0.464	0.085	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.53**
		$U_{15} - L_{16}$	536.48	-----	-2	-6	-143	-5	-107	-77	-279	-234	0.787	0.210	1.00	Yes	0.433	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.86**
		$U_{17} - L_{16}$	-----	-399.48	50	-63	-55	-59	-72	-119	-165	-214	-----	-----	-----	-----	-----	-----	-----	-----	0.913	0.082	1	Yes	0.845	0.080	0.93	Yes	1.00	**5.02**
		$U_{18} - L_{17}$	399.88	-209.91	37	-50	-136	-43	-103	-7	-304	-357	0.719	0.278	1.00	Yes	0.396	0.153	0.55	Yes	0.483	0.195	0.68	Yes	0.444	0.174	0.62	Yes	1.00	**9.95**
		$U_{19} - L_{18}$	429.18	-27.30	32	-41	-119	-26	254	-15	-238	-207	0.772	0.226	1.00	Yes	0.425	0.124	0.55	Yes	0.063	0.188	0.26	Yes	0.058	0.153	0.22	Yes	1.00	**6.50**
		$U_{20} - L_{19}$	387.80	-----	14	3	-230	109	-47	49	-853	-157	0.509	0.484	1.00	Yes	0.307	0.267	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.38**

Moment (Start) AB Operating

Operating Loads - 3F1

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

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

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

Operating Loads - 3F1

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	53.15	-----	640	-972	-148	9	-790	-2903	60	222	0.081	0.915	1.00	Yes	0.048	0.540	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.57**
		L_1 - L_2	341.65	-----	177	-743	-240	-487	-207	329	-1166	243	0.523	0.473	1.00	Yes	0.319	0.305	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.08**
		L_2 - L_3	616.66	-72.23	-54	37	-724	-568	-183	122	-70	-676	0.709	0.284	1.00	Yes	0.410	0.168	0.58	Yes	0.099	0.245	0.35	Yes	0.098	0.175	0.28	Yes	1.00	**4.88**
		L_3 - L_4	570.53	-190.70	-12	249	-627	-397	274	-228	-1184	-117	0.656	0.342	1.00	Yes	0.390	0.212	0.61	Yes	0.261	0.184	0.45	Yes	0.258	0.151	0.41	Yes	1.00	**4.85**
		L_4 - L_5	57.45	-545.02	98	457	-634	394	-79	210	121	-44	0.074	0.205	0.28	Yes	0.045	0.134	0.18	Yes	0.838	0.137	0.98	Yes	0.830	0.168	1.00	Yes	1.00	**4.62**
		L_5 - L_6	-----	-748.74	124	590	-286	317	157	-245	-253	3	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.121	1	Yes	0.864	0.130	1.00	Yes	1.00	**4.55**
		L_6 - L_7	-----	-1153.29	231	-35	-437	126	-198	383	81	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.939	0.045	0.99	Yes	0.928	0.069	1.00	Yes	1.00	**6.89**
		L_7 - L_8	-----	-1173.58	13	584	-373	1578	610	240	-336	105	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.244	1	Yes	0.743	0.209	0.96	Yes	1.00	**6.85**
		L_8 - L_9	-----	-1278.15	1103	-90	655	-35	438	393	186	380	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.173	1	Yes	0.809	0.146	0.96	Yes	1.00	**4.30**
		L_9 - L_{10}	-----	-1014.28	925	-1163	-179	-218	738	1143	-429	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.129	0.96	Yes	0.816	0.183	1.00	Yes	1.00	**12.32**
		L_{10} - L_{11}	124.78	-539.90	421	-97	12	-532	-253	57	-184	-701	0.162	0.263	0.43	Yes	0.094	0.156	0.26	Yes	0.830	0.167	1	Yes	0.823	0.141	0.97	Yes	1.00	**6.29**
		L_{11} - L_{12}	502.40	-----	363	-695	63	-598	-137	412	-918	262	0.651	0.345	1.00	Yes	0.390	0.219	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.35**
		L_{12} - L_{13}	1018.51	-----	52	-158	-462	-628	-158	121	-198	-689	0.804	0.192	1.00	Yes	0.514	0.117	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.26**
		L_{13} - L_{14}	1227.97	-----	287	-1482	-289	-1079	-119	205	-802	281	0.722	0.271	1.00	Yes	0.468	0.167	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.13**
		L_{14} - L_{15}	1504.07	-----	-506	-171	-1767	-468	-181	91	-306	-633	0.735	0.257	1.00	Yes	0.478	0.157	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.66**
		L_{15} - L_{16}	1571.43	-----	-286	-441	-1283	-1087	-6	-187	-1062	-49	0.768	0.229	1.00	Yes	0.493	0.137	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.68**
		L_{16} - L_{17}	1190.68	-----	-425	55	-1322	-61	-128	166	66	-531	0.753	0.241	1.00	Yes	0.488	0.149	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.35**
		L_{17} - L_{18}	785.26	-----	-223	-19	-915	22	84	-112	-1037	-86	0.684	0.309	1.00	Yes	0.438	0.189	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.34**
		L_{18} - L_{19}	384.44	-30.92	-243	227	-1201	572	-161	109	227	59	0.588	0.408	1.00	Yes	0.398	0.254	0.66	Yes	0.056	0.437	0.5	Yes	0.056	0.361	0.42	Yes	1.00	**11.76**
		L_{19} - L_{20}	46.35	-337.51	-179	74	-1122	720	142	32	69	16	0.071	0.366	0.44	Yes	0.043	0.247	0.30	Yes	0.613	0.382	1	Yes	0.608	0.337	0.95	Yes	1.00	**13.61**
	Structure 2	L_0 - L_1	65.86	-----	684	-2275	-50	-158	-787	-2734	37	127	0.080	0.912	1.00	Yes	0.048	0.568	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**18.78**
		L_1 - L_2	460.59	-----	621	-1373	-2	-800	-48	796	-957	421	0.559	0.436	1.00	Yes	0.333	0.275	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.42**
		L_2 - L_3	974.20	-----	201	-793	-469	-755	-44	165	1031	242	0.768	0.224	1.00	Yes	0.503	0.139	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.03**
		L_3 - L_4	1289.60	-----	140	-1324	-433	-1414	50	710	-946	400	0.758	0.241	1.00	Yes	0.510	0.152	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.03**
		L_4 - L_5	1674.17	-----	-432	-432	-1625	-1153	-57	176	884	131	0.781	0.213	1.00	Yes	0.517	0.129	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.67**
		L_5 - L_6	1753.84	-----	-224	-514	-1212	-1886	190	-90	-1192	-50	0.753	0.242	1.00	Yes	0.505	0.151	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.03**
		L_6 - L_7	1831.72	-----	-574	-216	-2258	-1108	-162	222	329	-332	0.775	0.219	1.00	Yes	0.515	0.128	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.32**
		L_7 - L_8	1279.38	-----	-317	355	-1642	-377	208	-139	-978	107	0.734	0.261	1.00	Yes	0.482	0.158	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.08**
		L_8 - L_9	1041.88	-347.35	-113	578	-1330	228	-89	180	133	-920	0.729	0.266	1.00	Yes	0.491	0.169	0.66	Yes	0.288	0.113	0.41	Yes	0.286	0.179	0.47	Yes	1.00	**7.38**
		L_9 - L_{10}	624.48	-754.01	-129	830	-1255	183	144	-151	-1119	-11	0.557	0.335	0.90	Yes	0.325	0.204	0.53	Yes	0.797	0.157	0.96	Yes	0.792	0.201	1.00	Yes	1.00	**8.77**
		L_{10} - L_{11}	-----	-726.61	4	562	-783	544	-80	80	180	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.082	0.95	Yes	0.854	0.137	1.00	Yes	1.00	**5.20**
		L_{11} - L_{12}	-----	-1030.52	-75	1101	-668	908	57	-375	-42	6	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.119	0.98	Yes	0.845	0.150	1.00	Yes	1.00	**5.77**
		L_{12} - L_{13}	-----	-1491.23	254	-827	-854	-666	-425	141	149	-147	-----	-----	-----	-----	-----	-----	-----	-----	0.899	0.093	1	Yes	0.892	0.085	0.98	Yes	1.00	**8.53**
		L_{13} - L_{14}	-----	-1412.88	-403	1327	-1720	3237	783	614	-694	-238	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.240	0.96	Yes	0.711	0.283	1.00	Yes	1.00	**8.08**
		L_{14} - L_{15}	-----	-1505.93	2716	-877	1497	-457	279	226	393	355	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.183	0.95	Yes	0.758	0.237	1.00	Yes	1.00	**5.55**
		L_{15} - L_{16}	-----	-1277.48	-50	-33	-1622	-521	568	-324	-703	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.225	1	Yes	0.764	0.161	0.93	Yes	1.00	**11.32**
		L_{16} - L_{17}	-----	-1168.57	1161	-363	472	-441	-359	-54	279	-204	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.132	1	Yes	0.851	0.143	1.00	Yes	1.00	**6.71**
		L_{17} - L_{18}	324.45	-173.36	1460	-2424	-277	-1217	-126	2127	-2612	630	0.290	0.702	1.00	Yes	0.169	0.426	0.60	Yes	0.183	0.435	0.62	Yes	0.182	0.388	0.57	Yes	1.00	**19.54**
		L_{18} - L_{19}	250.35	-645.14	722	36	-179	-607	-212	60	454	-327	0.284	0.209	0.50	Yes	0.164	0.123	0.29	Yes	0.865	0.112	0.98	Yes	0.860	0.139	1.00	Yes	1.00	**7.50**
		L_{19} - L_{20}	577.86	-445.89	496	112	-182	-836	149	-171	-1144	476	0.655	0.336	1.00	Yes	0.387	0.207	0.60	Yes	0.598	0.143	0.75	Yes	0.594	0.161	0.76	Yes	1.00	**7.93**
		L_{20} - L_{21}	949.96	-258.54	376	-90	-981	-1096	-181	71	95	-754	0.758	0.241	1.00	Yes	0.497	0.147	0.65	Yes	0.244	0.183	0.43	Yes	0.243	0.160	0.41	Yes	1.00	**8.01**
		L_{21} - L_{22}	870.93	-41.11	104	-295	-803	-1277	136	-102	-1046	130	0.695	0.299	1.00	Yes	0.464	0.191	0.66	Yes	0.039	0.214	0.26	Yes	0.039	0.186	0.23	Yes	1.00	**6.22**
		L_{22} - L_{23}	820.81	-5.13	-231	-41	-2047	-465	-114	161	-143	-364	0.655	0.338	1.00	Yes	0.438	0.212	0.65	Yes	0.005	0.360	0.37	Yes	0.005	0.299	0.31	Yes	1.00	**6.29**
		L_{23} - L_{24}	864.81	-317.37	-66	444	-1337	-689	160	-138	-994	93	0.690	0.302	1.00	Yes	0.452	0.185	0.64	Yes	0.300	0.183	0.49	Yes	0.298	0.195	0.50	Yes	1.00	**8.90**
		L_{24} - L_{25}	544.89	-525.02	181	513	-1332	224	-105	148	373	-801	0.617	0.380	1.00	Yes	0.365	0.238	0.61	Yes	0.704	0.194	0.9	Yes	0.700	0.257	0.96	Yes	1.00	**9.26**
		L_{25} - L_{26}	30.96	-633.69	26	722	-764	305	101	-166	-700	6	0.035	0.254	0.29	Yes	0.020	0.149	0.17	Yes	0.850	0.145	1	Yes	0.845	0.147	1.00	Yes	1.00	**7.22**
		L_{26} - L_{27}	-----	-824.19	186	496	-808	646	-50	220	395	75	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.096	0.97	Yes	0.865	0.129	1.00	Yes	1.00	**7.13**
		L_{27} - L_{28}	-----	-1134.07	86	1354	-880	991	237	0	-682	251	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.149	0.99	Yes	0.826	0.167	1.00	Yes	1.00	**9.52**
		L_{28} - L_{29}	-----	-1489.51	393	-690	-813	-856	-97	787	107	132	-----	-----	-----	-----	-----	-----	-----	-----	0.898	0.101	1	Yes	0.891	0.085	0.98	Yes	1.00	**9.38**
		L_{29} - L_{30}	-----	-1427.40	-528	1365	-1778	3158	742	725	-684	-283	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.225	0.96	Yes	0.718	0.276	1.00	Yes	1.00	**7.74**
		L_{30} - L_{31}	-----	-1527.40	2581	-859	1661	-476	236	161	574	469	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.191	0.97	Yes	0.769	0.225	1.00	Yes	1.00	**4.51**
		L_{31} - L_{32}	-----	-1311.32	31	-354	-1411	-656	687	-352	-405	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.205	1	Yes	0.784	0.140	0.93	Yes	1.00	**11.27**
		L_{32} - L_{33}	-----	-1049.73	975	-454	480	-438	-119	45	278	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.105	0.98	Yes	0.861	0.133	1.00	Yes	1.00	**5.34**
		L_{33} - L_{34}	340.29	-587.25	1195	-1723	33	-1356	63	2025	-2376	879	0.340	0.621	0.97	Yes	0.199	0.378	0.58	Yes	0.694	0.296	1	Yes	0.690	0.301	1.00	Yes	1.00	**17.49**
		L_{34} - L_{35}	727.97	-785.58	861	-87	-369	-1040	-223	93	1154	-209	0.650	0.305	0.96	Yes	0.378	0.185	0.57	Yes	0.830	0.131	0.97	Yes	0.825	0.166	1.00	Yes	1.00	**11.37**
		L_{35} - L_{36}	948.66	-----	584	-1381	-168	-1058	-223	748	-1492	334	0.664	0.327	1.00	Yes	0.447	0.209	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.19**
		L_{36} - L_{37}	1379.90	-----	301	-259	-943	-1421	-205	152	622	-227	0.791	0.208	1.00	Yes	0.520	0.125	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.20**
		L_{37} - L_{38}	1726.38	-----	-181	-663	-1872	-2016	66	-189	-1461	221	0.731	0.267	1.00	Yes	0.486	0.162	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.95**
		L_{38} - L_{39}	1767.50	-----	-589	-233	-2292	-1022	-117	181	205	-493	0.758	0.234	1.00	Yes	0.509	0.143	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.16**
		L_{39} - L_{40}	1640.42	-----	-414	-430	-1831	-1129	114	-164	-874	334	0.765	0.232	1.00	Yes	0.506	0.140	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.06**
		L_{40} - L_{41}	1295.69	-----	-467	28	-1815	-17	-46	271	292	-283	0.761	0.236	1.00	Yes	0.513	0.146	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.44**
		L_{41} - L_{42}	933.04	-----	-255	-57	-1230	83	142	-71	-816	41	0.735	0.265	1.00	Yes	0.482	0.162	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.78**
		L_{42} - L_{43}	506.65	-----	-289	216	-1285	528	106	334	731	365	0.615	0.382	1.00	Yes	0.366	0.241	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.79**
		L_{43} - L_{44}	-----	-305.22	-213	22	-1782	720	453	132	868	253	-----	-----	-----	-----	-----	-----	-----	-----	0.439	0.560	1	Yes	0.436	0.363	0.80	Yes	1.00	**19.50**
	Structure 3	L_0 - L_1	29.54	-279.33	644	-1197	26	-141	-292	-1323	25	115	0.045	0.634	0.68	Yes	0.028	0.413	0.45	Yes	0.507	0.490	1	Yes	0.503	0.359	0.87	Yes	1.00	**11.50**
		L_1 - L_2	320.27	-----	668	-1042	109	-551	56	945	-818	404	0.490	0.509	1.00	Yes	0.332	0.326	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.64**
		L_2 - L_3	863.06	-----	231	-522	-267	-598	84	109	984	157	0.752	0.241	1.00	Yes	0.481	0.149	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.07**
		L_3 - L_4	1144.03	-----	244	-1338	-305	-1053	-56	824	-901	488	0.723	0.277	1.00	Yes	0.469	0.172	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.65**
		L_4 - L_5	1601.06	-----	-372	-258	-1406	-891	-33	230	680	-170	0.782	0.217	1.00	Yes	0.502	0.129	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.63**
		L_5 - L_6	1467.15	-----	-140	-494	-738	-1563	250	-54	-1290	-17	0.717	0.279	1.00	Yes	0.466	0.172	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.71**
		L_6 - L_7	1255.48	-----	-489	242	-1681	230	-53	268	151	-331	0.738	0.259	1.00	Yes	0.478	0.159	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.27**
		L_7 - L_8	950.86	-----	-111	149	-775	-269	133	-167	-928	-120	0.750	0.246	1.00	Yes	0.480	0.150	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.77**
		L_8 - L_9	545.11	-301.73	-167	436	-891	322	-105	162	301	-253	0.706	0.289	1.00	Yes	0.424	0.188	0.62	Yes	0.464	0.119	0.59	Yes	0.460	0.236	0.70	Yes	1.00	**7.63**
		L_9 - L_{10}	-----	-555.53	-68	512	-566	309	140	-159	-134	42	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.074	0.93	Yes	0.846	0.150	1.00	Yes	1.00	**6.75**
		L_{10} - L_{11}	-----	-1089.23	201	-25	-757	335	-330	-70	595	-120	-----	-----	-----	-----	-----	-----	-----	-----	0.887	0.052	0.94	Yes	0.877	0.119	1.00	Yes	1.00	**10.91**
		L_{11} - L_{12}	-----	-1171.56	33	770	-493	1464	770	167	-1030	-367	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.239	1	Yes	0.742	0.194	0.94	Yes	1.00	**9.37**
		L_{12} - L_{13}	-----	-1265.31	1356	-94	691	-19	209	60	-70	228	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.180	1	Yes	0.801	0.180	0.99	Yes	1.00	**5.33**
		L_{13} - L_{14}	-----	-1059.39	657	-888	-337	-127	343	775	-540	7	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.090	0.96	Yes	0.853	0.139	1.00	Yes	1.00	**10.78**
		L_{14} - L_{15}	-----	-722.84	568	108	24	-430	-262	85	-191	-927	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.156	1	Yes	0.834	0.126	0.96	Yes	1.00	**5.98**
		L_{15} - L_{16}	372.63	-----	522	-1024	-58	-576	-275	439	-1337	569	0.483	0.509	1.00	Yes	0.290	0.323	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.55**
		L_{16} - L_{17}	666.42	-197.80	240	-72	-810	-588	-170	194	22	88	0.767	0.227	1.00	Yes	0.455	0.146	0.61	Yes	0.270	0.221	0.5	Yes	0.268	0.196	0.47	Yes	1.00	**5.61**
		L_{17} - L_{18}	614.85	-69.04	-10	-118	-892	-629	115	-114	-464	58	0.707	0.290	1.00	Yes	0.409	0.173	0.59	Yes	0.094	0.308	0.41	Yes	0.093	0.216	0.31	Yes	1.00	**5.86**
		L_{18} - L_{19}	407.62	-6.50	-72	-10	-876	43	-109	216	218	505	0.624	0.371	1.00	Yes	0.381	0.245	0.63	Yes	0.012	0.318	0.33	Yes	0.012	0.263	0.28	Yes	1.00	**6.04**
		L_{19} - L_{20}	-----	-72.09	161	-268	-1578	1038	257	70	-2282	-621	-----	-----	-----	-----	-----	-----	-----	-----	0.131	0.867	1	Yes	0.130	0.474	0.61	Yes	1.00	**29.19**

Moment (Start) AB Operating

Operating Loads - 3F1

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	$U_0 - L_0$			-----	-271.93	-9	56	-107	152	173	55	-1094	-351	-----	-----	-----	-----	-----	-----	-----	-----	0.607	0.387	1	Yes	0.575	0.194	0.77	Yes	1.00	**2.02**
		$U_1 - L_1$			20.85	-316.80	28	-21	-254	240	568	205	-351	-91	0.037	0.489	0.53	Yes	0.021	0.269	0.29	Yes	0.692	0.232	0.93	Yes	0.670	0.325	1.00	Yes	1.00	**5.80**
		$U_2 - L_2$			106.94	-249.79	98	-108	-188	232	777	226	-1238	-427	0.192	0.656	0.85	Yes	0.106	0.361	0.47	Yes	0.546	0.450	1	Yes	0.529	0.297	0.83	Yes	1.00	**8.41**
		$U_3 - L_3$			159.93	-88.22	215	-206	-89	104	-1493	-758	24	76	0.288	0.708	1.00	Yes	0.158	0.389	0.55	Yes	0.193	0.441	0.64	Yes	0.187	0.275	0.47	Yes	1.00	**10.33**
		$U_4 - L_4$			-----	-205.09	286	-280	14	-27	-1696	-798	796	61	-----	-----	-----	-----	-----	-----	-----	-----	0.451	0.547	1	Yes	0.434	0.366	0.80	Yes	1.00	**10.19**
		$U_5 - L_5$			-----	-415.08	216	-240	73	-92	97	239	704	174	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.248	1	Yes	0.716	0.244	0.96	Yes	1.00	**5.32**
		$U_6 - L_6$			-----	-407.95	176	-180	82	-74	862	436	1299	637	-----	-----	-----	-----	-----	-----	-----	-----	0.618	0.380	1	Yes	0.585	0.158	0.75	Yes	1.00	**3.23**
		$U_7 - L_7$			-----	-365.07	217	-236	118	-132	322	131	1086	262	-----	-----	-----	-----	-----	-----	-----	-----	0.610	0.388	1	Yes	0.563	0.232	0.80	Yes	1.00	**2.66**
		$U_8 - L_8$			-----	-1187.71	232	-285	-381	452	645	80	-940	-467	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.135	1	Yes	0.823	0.084	0.91	Yes	1.00	**6.21**
		$U_9 - L_9$			-----	-563.41	-232	263	-354	395	554	222	327	172	-----	-----	-----	-----	-----	-----	-----	-----	0.672	0.323	1	Yes	0.636	0.220	0.86	Yes	1.00	**2.10**
		$U_{10} - L_{10}$			-----	-681.49	-159	158	-318	335	609	295	399	230	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.287	1	Yes	0.672	0.174	0.85	Yes	1.00	**3.64**
		$U_{11} - L_{11}$			-----	-665.05	-164	241	-374	485	209	131	-623	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.179	0.98	Yes	0.774	0.225	1.00	Yes	1.00	**6.03**
		$U_{12} - L_{12}$			-----	-522.53	-123	132	-315	324	305	270	-193	73	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.143	0.9	Yes	0.717	0.277	1.00	Yes	1.00	**6.35**
		$U_{13} - L_{13}$			-----	-366.73	-62	84	-233	258	-33	3	-20	165	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.140	0.89	Yes	0.703	0.294	1.00	Yes	1.00	**5.38**
		$U_{14} - L_{14}$			-----	-191.84	102	-106	-267	285	-710	-490	214	-318	-----	-----	-----	-----	-----	-----	-----	-----	0.428	0.562	1	Yes	0.406	0.364	0.78	Yes	1.00	**12.48**
		$U_{15} - L_{15}$			75.11	-309.71	240	-262	-65	55	-635	-123	317	-332	0.135	0.519	0.66	Yes	0.074	0.285	0.36	Yes	0.694	0.265	0.96	Yes	0.655	0.335	1.00	Yes	1.00	**8.82**
		$U_{16} - L_{16}$			-----	-318.89	243	-251	38	-54	23	-10	625	-229	-----	-----	-----	-----	-----	-----	-----	-----	0.719	0.249	0.97	Yes	0.675	0.321	1.00	Yes	1.00	**6.35**
		$U_{17} - L_{17}$			-----	-420.08	205	-223	80	-93	-27	72	504	200	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.213	1	Yes	0.725	0.227	0.96	Yes	1.00	**4.17**
		$U_{18} - L_{18}$			-----	-523.64	374	-384	176	-183	292	66	683	177	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.224	1	Yes	0.728	0.217	0.95	Yes	1.00	**4.18**
		$U_{19} - L_{19}$			-----	-647.29	410	-426	183	-197	310	58	598	118	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.192	1	Yes	0.753	0.198	0.96	Yes	1.00	**5.13**
		$U_{20} - L_{20}$			-----	-591.99	388	-462	237	-285	186	24	462	61	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.215	1	Yes	0.689	0.214	0.91	Yes	1.00	**3.92**
	Structure 2	$U_0 - L_0$			-----	-585.48	-158	276	-314	434	-9	-1	-1433	-243	-----	-----	-----	-----	-----	-----	-----	-----	0.701	0.294	1	Yes	0.627	0.184	0.82	Yes	1.00	**2.64**
		$U_1 - L_1$			-----	-707.62	-208	215	-546	547	628	161	-127	22	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.147	0.96	Yes	0.758	0.232	1.00	Yes	1.00	**5.48**
		$U_2 - L_2$			-----	-590.56	-155	170	-456	471	622	285	-92	179	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.178	0.97	Yes	0.753	0.241	1.00	Yes	1.00	**4.97**
		$U_3 - L_3$			-----	-459.97	-76	87	-215	232	544	265	-218	173	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.214	1	Yes	0.721	0.211	0.94	Yes	1.00	**4.10**
		$U_4 - L_4$			-----	-322.74	-19	29	-200	207	561	234	-80	138	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.263	1	Yes	0.683	0.265	0.95	Yes	1.00	**5.62**
		$U_5 - L_5$			83.17	-307.10	93	-70	-202	228	-288	-225	-607	33	0.150	0.468	0.62	Yes	0.082	0.257	0.34	Yes	0.694	0.300	1	Yes	0.650	0.292	0.95	Yes	1.00	**9.27**
		$U_6 - L_6$			293.92	-64.01	165	-169	-89	94	-211	-228	-859	-94	0.529	0.465	1.00	Yes	0.291	0.256	0.55	Yes	0.144	0.269	0.42	Yes	0.135	0.217	0.36	Yes	1.00	**8.23**
		$U_7 - L_7$			-----	-211.87	315	-356	1	-7	-1022	-522	-178	-540	-----	-----	-----	-----	-----	-----	-----	-----	0.479	0.519	1	Yes	0.448	0.455	0.91	Yes	1.00	**13.82**
		$U_8 - L_8$			-----	-472.06	336	-357	148	-173	-570	-129	327	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.684	0.177	0.87	Yes	0.680	0.313	1.00	Yes	1.00	**5.06**
		$U_9 - L_9$			-----	-690.96	578	-592	267	-284	-533	-32	596	89	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.139	0.91	Yes	0.740	0.251	1.00	Yes	1.00	**6.49**
		$U_{10} - L_{10}$			-----	-752.01	512	-534	233	-234	-19	220	1168	683	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.254	1	Yes	0.703	0.236	0.94	Yes	1.00	**6.65**
		$U_{11} - L_{11}$			-----	-731.41	457	-461	226	-220	593	509	1171	657	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.256	1	Yes	0.684	0.203	0.89	Yes	1.00	**5.52**
		$U_{12} - L_{12}$			-----	-720.74	416	-411	187	-170	683	428	1459	637	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.299	1	Yes	0.625	0.178	0.81	Yes	1.00	**5.33**
		$U_{13} - L_{13}$			-----	-624.01	496	-483	226	-224	511	196	1148	307	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.296	1	Yes	0.602	0.237	0.84	Yes	1.00	**5.61**
		$U_{14} - L_{14}$			-----	-1200.89	551	-529	-563	521	958	57	-846	-396	-----	-----	-----	-----	-----	-----	-----	-----	0.878	0.115	1	Yes	0.796	0.100	0.90	Yes	1.00	**9.86**
		$U_{15} - L_{15}$			-----	-689.79	-259	258	-607	586	659	60	-666	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.225	1	Yes	0.665	0.290	0.96	Yes	1.00	**6.14**
		$U_{16} - L_{16}$			-----	-720.83	-186	174	-528	514	671	192	-95	23	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.162	1	Yes	0.773	0.224	1.00	Yes	1.00	**6.06**
		$U_{17} - L_{17}$			-----	-640.42	-198	198	-536	537	594	194	-200	110	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.157	0.95	Yes	0.745	0.249	1.00	Yes	1.00	**5.61**
		$U_{18} - L_{18}$			-----	-581.45	-160	166	-470	498	621	215	-606	-25	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.168	0.95	Yes	0.741	0.255	1.00	Yes	1.00	**5.45**
		$U_{19} - L_{19}$			-----	-480.52	-87	89	-292	290	520	195	-166	120	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.169	0.9	Yes	0.718	0.281	1.00	Yes	1.00	**5.42**
		$U_{20} - L_{20}$			-----	-377.66	-39	43	-220	232	522	182	-243	5	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.224	1	Yes	0.723	0.265	0.99	Yes	1.00	**5.93**
	Structure 3	$U_{21} - L_{21}$			28.91	-309.96	23	-13	-221	237	32	-112	-706	0	0.052	0.508	0.56	Yes	0.029	0.279	0.31	Yes	0.700	0.298	1	Yes	0.656	0.303	0.96	Yes	1.00	**7.27**
		$U_{22} - L_{22}$			-----	-260.55	319	-344	-244	264	-181	-425	664	-471	-----	-----	-----	-----	-----	-----	-----	-----	0.586	0.371	0.96	Yes	0.551	0.440	1.00	Yes	1.00	**19.19**
		$U_{23} - L_{23}$			-----	-321.88	227	-243	12	-26	-642	-52	169	-325	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.267	1	Yes	0.681	0.311	1.00	Yes	1.00	**6.21**
		$U_{24} - L_{24}$			-----	-370.48	224	-233	55	-59	-155	18	584	204	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.237	1	Yes	0.710	0.266	0.98	Yes	1.00	**5.01**
		$U_{25} - L_{25}$			-----	-472.18	299	-296	101	-102	56	156	588	224	-----	-----	-----	-----	-----	-----	-----	-----	0.710	0.183	0.9	Yes	0.705	0.287	1.00	Yes	1.00	**5.06**
		$U_{26} - L_{26}$			-----	-570.84	497	-521	169	-176	312	293	707	301	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.189	0.96	Yes	0.727	0.267	1.00	Yes	1.00	**5.93**
		$U_{27} - L_{27}$			-----	-632.96	552	-558	203	-206	110	372	770	315	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.193	0.98	Yes	0.737	0.259	1.00	Yes	1.00	**6.26**
		$U_{28} - L_{28}$			-----	-616.24	469	-452	157	-132	888	406	1619	545	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.286	1	Yes	0.660	0.199	0.86	Yes	1.00	**5.97**
		$U_{29} - L_{29}$			-----	-624.32	570	-560	156	-160	-376	99	1178	195	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.302	1	Yes	0.602	0.273	0.88	Yes	1.00	**8.05**
		$U_{30} - L_{30}$			-----	-1222.79	316	-329	-598	533	243	-216	-637	-261	-----	-----	-----	-----	-----	-----	-----	-----	0.894	0.096	1	Yes	0.811	0.106	0.92	Yes	1.00	**9.88**
		$U_{31} - L_{31}$			-----	-712.02	-305	297	-545	523	512	95	-97	25	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.198	1	Yes	0.686	0.261	0.95	Yes	1.00	**4.78**
		$U_{32} - L_{32}$			-----	-855.86	-218	192	-479	473	621	192	-265	15	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.176	1	Yes	0.742	0.205	0.95	Yes	1.00	**5.73**
		$U_{33} - L_{33}$			-----	-809.58	-247	235	-487	489	449	209	-696	50	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.181	1	Yes	0.757	0.216	0.98	Yes	1.00	**5.76**
		$U_{34} - L_{34}$			-----	-805.76	-237	251	-531	551	553	337	-473	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.158	0.96	Yes	0.753	0.243	1.00	Yes	1.00	**7.07**
		$U_{35} - L_{35}$			-----	-692.72	-254	281	-571	589	231	145	-527	32	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.137	0.91	Yes	0.742	0.250	1.00	Yes	1.00	**6.64**
		$U_{36} - L_{36}$			-----	-475.77	-132	157	-329	352	161	121	-601	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.690	0.199	0.89	Yes	0.685	0.308	1.00	Yes	1.00	**5.40**
		$U_{37} - L_{37}$			-----	-164.18	26	-26	-360	411	-387	-284	341	-388	-----	-----	-----	-----	-----	-----	-----	-----	0.371	0.620	1	Yes	0.347	0.526	0.88	Yes	1.00	**15.05**
		$U_{38} - L_{38}$			234.42	-107.64	111	-115	-150	149	-1315	-307	-196	-530	0.422	0.572	1.00	Yes	0.232	0.315	0.55	Yes	0.242	0.336	0.58	Yes	0.228	0.191	0.42	Yes	1.00	**7.93**
		$U_{39} - L_{39}$			54.18	-307.66	206	-229	-53	41	-729	-71	334	-133	0.097	0.504	0.61	Yes	0.054	0.277	0.34	Yes	0.695	0.298	1	Yes	0.651	0.293	0.95	Yes	1.00	**7.86**
		$U_{40} - L_{40}$			-----	-325.92	217	-220	37	-45	23	29	595	172	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.257	1	Yes	0.690	0.281	0.98	Yes	1.00	**5.39**
		$U_{41} - L_{41}$			-----	-459.47	235	-247	87	-96	278	125	578	193	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.211	1	Yes	0.721	0.225	0.95	Yes	1.00	**4.70**
		$U_{42} - L_{42}$			-----	-580.27	494	-501	172	-181	-33	32	670	173	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.173	0.96	Yes	0.739	0.256	1.00	Yes	1.00	**6.03**
		$U_{43} - L_{43}$			-----	-730.19	481	-498	188	-207	704	257	616	171	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.160	1	Yes	0.783	0.211	1.00	Yes	1.00	**6.00**
		$U_{44} - L_{44}$			-----	-632.85	408	-515	254	-321	506	86	661	112	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.235	1	Yes	0.678	0.218	0.90	Yes	1.00	**4.00**
	Structure 4	$U_0 - L_0$			-----	-540.95	-135	238	-299	402	108	14	-1065	-140	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.277	1	Yes	0.630	0.187	0.82	Yes	1.00	**2.73**
		$U_1 - L_1$			-----	-652.14	-207	206	-504	499	619	142	-603	36	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.161	0.98	Yes	0.759	0.234	1.00	Yes	1.00	**5.12**
		$U_2 - L_2$			-----	-542.38	-157	168	-404	421	660	305	-31	197	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.195	0.99	Yes	0.754	0.238	1.00	Yes	1.00	**4.79**
		$U_3 - L_3$			-----	-408.28	-69	84	-191	210	562	270	-61	204	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.233	1	Yes	0.704	0.213	0.92	Yes	1.00	**3.70**
		$U_4 - L_4$			-----	-308.85	-34	41	-208	220	600	224	-727	48	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.303	1	Yes	0.654	0.281	0.94	Yes	1.00	**5.50**
		$U_5 - L_5$			112.83	-306.55	82	-75	-246	269	-141	-108	-589	16	0.203	0.515	0.72	Yes	0.112	0.283	0.40	Yes	0.687	0.296	0.99	Yes	0.649	0.344	1.00	Yes	1.00	**10.28**
		$U_6 - L_6$			-----	-171.36	296	-322	-104	103	-1437	-737	-885	-820	-----	-----	-----	-----	-----	-----	-----	-----	0.382	0.613	1	Yes	0.363	0.411	0.78	Yes	1.00	**14.14**
		$U_7 - L_7$			-----	-366.88	235	-259	77	-93	-209	-22	429	22	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.197	0.94	Yes	0.703	0.296	1.00	Yes	1.00	**4.72**
		$U_8 - L_8$			-----	-510.95	331	-333	129	-131	-74	36	856	314	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.252	1	Yes	0.701	0.285	0.99	Yes	1.00	**6.02**
		$U_9 - L_9$			-----	-618.49	326	-410	163	-226	633	466	1008	352	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.251	1	Yes	0.720	0.190	0.92	Yes	1.00	**4.62**
		$U_{10} - L_{10}$			-----	-616.84	271	-279	157	-148	1226	695	1506	832	-----	-----	-----	-----	-----	-----	-----	-----	0.639	0.352	1	Yes	0.609	0.145	0.76	Yes	1.00	**3.85**
		$U_{11} - L_{11}$			-----	-559.62	326	-370	205	-238	761	417	1288	561	-----	-----	-----	-----	-----	-----	-----	-----	0.667	0.325	1	Yes	0.632	0.206	0.84	Yes	1.00	**3.04**
		$U_{12} - L_{12}$			-----	-1147.29	362	-485	-392	418	1340	413	-1452	-586	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.171	1	Yes	0.795	0.090	0.89	Yes	1.00	**8.15**
		$U_{13} - L_{13}$			-----	-448.00	-154	168	-286	303	662	121	-381	-28	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.241	1	Yes	0.691	0.298	0.99	Yes	1.00	**3.18**
		$U_{14} - L_{14}$			-----	-512.97	-96	89	-246	260	735	228	-207	-85	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.215	1	Yes	0.736	0.227	0.97	Yes	1.00	**5.21**
		$U_{15} - L_{15}$			-----	-435.05	-78	88	-220	244	526	242	-184	55	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.206	1	Yes	0.751	0.248	1.00	Yes	1.00	**5.79**
		$U_{16} - L_{16}$			-----	-175.79	-30	44	-271	271	-870	-441	438	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.387	0.604	1	Yes	0.372	0.347	0.72	Yes	1.00	**7.85**
		$U_{17} - L_{17}$			123.52	-192.64	170	-202	-214	197	301	93	-1727	-858	0.222	0.773	1.00	Yes	0.122	0.425	0.55	Yes	0.422	0.513	0.94	Yes	0.408	0.273	0.69	Yes	1.00	**12.33**
		$U_{18} - L_{18}$			86.85	-288.39	232	-274	-93	100	-981	-504	488	155	0.156	0.635	0.80	Yes	0.086	0.349	0.44	Yes	0.630	0.369	1	Yes	0.610	0.351	0.97	Yes	1.00	**9.40**
		$U_{19} - L_{19}$			-----	-347.87	191	-201	-24	9	114	68	446	240	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.238	1	Yes	0.736	0.257	1.00	Yes	1.00	**5.52**
		$U_{20} - L_{20}$			-----	-306.57	220	-268	82	-96	438	141	605	194	-----	-----	-----	-----	-----	-----	-----	-----	0.685	0.281	0.97	Yes	0.649	0.342	1.00	Yes	1.00	**3.69**

Moment (Start) AB Operating

Operating Loads - 3F1

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	$U_0 - L_1$	433.04	-----	31	-8	-134	58	-232	-84	-1055	-340	0.568	0.422	1.00	Yes	0.343	0.233	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.55**
		$U_1 - L_2$	401.12	-97.02	11	-15	-91	0	362	193	-417	-535	0.721	0.272	1.00	Yes	0.397	0.149	0.55	Yes	0.223	0.223	0.45	Yes	0.205	0.117	0.33	Yes					1.00	**5.93**
		$U_2 - L_3$	121.66	-229.96	44	-28	-91	-43	470	245	-1177	-660	0.219	0.457	0.68	Yes	0.120	0.252	0.38	Yes	0.529	0.467	1	Yes	0.487	0.117	0.61	Yes					1.00	**9.15**
		$U_3 - L_4$	-----	-287.57	47	-10	-48	-81	503	286	-834	-604	-----	-----	-----	-----	-----	-----	-----	-----	0.658	0.338	1	Yes	0.608	0.103	0.72	Yes					1.00	**8.78**
		$U_4 - L_4$	553.74	-----	-7	68	-122	26	-156	95	-238	157	0.812	0.180	1.00	Yes	0.447	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.60**
		$U_4 - L_5$	682.20	-----	-13	108	-200	208	-393	130	-372	365	0.807	0.190	1.00	Yes	0.444	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.43**
		$U_5 - L_6$	589.70	-----	-43	98	-247	196	-892	-84	115	302	0.697	0.303	1.00	Yes	0.383	0.166	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.79**
		$U_6 - L_7$	687.79	-----	63	194	-78	274	-52	-147	-148	137	0.813	0.183	1.00	Yes	0.447	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.78**
		$U_8 - L_8$	973.28	-----	49	216	-82	308	593	261	-182	-609	0.778	0.215	1.00	Yes	0.482	0.121	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.59**
		$U_8 - L_{10}$	947.30	-----	-111	145	-278	191	657	312	-923	-797	0.757	0.241	1.00	Yes	0.469	0.137	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.31**
		$U_{10} - L_{11}$	889.11	-----	-70	130	-274	168	296	34	-92	-870	0.751	0.241	1.00	Yes	0.465	0.137	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.00**
		$U_{11} - L_{12}$	738.10	-----	-90	77	-291	69	200	-24	-515	-865	0.730	0.264	1.00	Yes	0.402	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.54**
		$U_{12} - L_{13}$	566.50	-----	-85	62	-194	126	102	-35	-274	-712	0.691	0.308	1.00	Yes	0.435	0.176	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.50**
		$U_{13} - L_{14}$	390.04	-----	-30	-14	-89	13	-176	-187	-145	-632	0.702	0.296	1.00	Yes	0.386	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.02**
		$U_{15} - L_{14}$	404.08	-315.04	46	-125	-140	-25	-91	-229	63	176	0.727	0.246	0.98	Yes	0.400	0.135	0.54	Yes	0.738	0.253	1	Yes	0.667	0.179	0.85	Yes					1.00	**13.62**
		$U_{16} - L_{15}$	405.06	-32.87	-16	-23	-143	89	-216	-120	-302	140	0.729	0.271	1.00	Yes	0.401	0.149	0.55	Yes	0.078	0.159	0.24	Yes	0.070	0.183	0.26	Yes					1.00	**7.74**
		$U_{17} - L_{16}$	523.19	-----	-47	23	-144	97	-302	-103	-360	-70	0.767	0.230	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.96**
		$U_{18} - L_{17}$	618.51	-----	-130	88	-338	246	-400	-112	-372	189	0.731	0.264	1.00	Yes	0.402	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.15**
		$U_{19} - L_{18}$	692.98	-----	-132	96	-333	253	-456	-203	-461	-166	0.751	0.246	1.00	Yes	0.413	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.41**
		$U_{20} - L_{19}$	711.30	-----	-174	140	-346	286	-262	-139	-186	21	0.770	0.220	1.00	Yes	0.424	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.53**
	Structure 2	$U_0 - L_1$	623.26	-----	-92	135	-306	307	-281	-66	-1559	-315	0.617	0.376	1.00	Yes	0.339	0.207	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.15**
		$U_1 - L_2$	723.95	-----	-165	118	-384	284	141	-33	-355	-686	0.716	0.281	1.00	Yes	0.394	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.64**
		$U_2 - L_3$	576.19	-----	-120	90	-310	235	121	-31	-260	-767	0.681	0.314	1.00	Yes	0.375	0.173	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.28**
		$U_3 - L_4$	516.83	-----	-53	26	-172	102	166	7	-547	-715	0.689	0.307	1.00	Yes	0.379	0.169	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.74**
		$U_4 - L_5$	349.61	-32.41	0	-15	-127	74	226	29	-199	-708	0.629	0.367	1.00	Yes	0.346	0.202	0.55	Yes	0.080	0.180	0.27	Yes	0.069	0.162	0.24	Yes					1.00	**6.55**
		$U_5 - L_6$	313.02	-246.46	59	-110	-99	12	-632	-160	-461	-1012	0.563	0.434	1.00	Yes	0.310	0.239	0.55	Yes	0.582	0.226	0.81	Yes	0.521	0.141	0.67	Yes					1.00	**9.78**
		$U_6 - L_7$	-----	-401.52	55	-110	-26	-56	-276	-83	-215	-548	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.139	1	Yes	0.769	0.125	0.90	Yes					1.00	**5.54**
		$U_8 - L_7$	557.42	-----	-78	26	-217	117	117	-115	218	435	0.711	0.282	1.00	Yes	0.447	0.160	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.48**
		$U_8 - L_8$	715.49	-----	-162	151	-329	245	-307	-96	-196	23	0.775	0.219	1.00	Yes	0.426	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.07**
		$U_{10} - L_9$	798.14	-----	-125	155	-353	258	-185	21	-220	298	0.790	0.208	1.00	Yes	0.434	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.85**
		$U_{11} - L_{10}$	885.92	-----	-130	193	-348	298	-253	58	-195	288	0.807	0.187	1.00	Yes	0.444	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.15**
		$U_{12} - L_{11}$	844.20	-----	-133	176	-335	341	-570	57	-575	291	0.769	0.224	1.00	Yes	0.423	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.68**
		$U_{13} - L_{12}$	733.89	-----	-161	164	-412	378	-525	1	-505	77	0.726	0.270	1.00	Yes	0.399	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.01**
		$U_{14} - L_{13}$	784.25	-----	36	219	-222	392	263	-78	-148	26	0.776	0.221	1.00	Yes	0.427	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.42**
		$U_{14} - L_{15}$	581.63	-----	-20	168	-221	374	515	233	177	-518	0.688	0.305	1.00	Yes	0.378	0.168	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.28**
		$U_{15} - L_{16}$	568.71	-----	-171	168	-382	339	585	176	100	-369	0.672	0.322	1.00	Yes	0.370	0.177	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.91**
		$U_{16} - L_{17}$	678.78	-----	-128	155	-329	339	373	109	93	-523	0.735	0.259	1.00	Yes	0.404	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.05**
		$U_{17} - L_{18}$	623.63	-----	-112	129	-282	260	356	86	-51	-539	0.737	0.257	1.00	Yes	0.406	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.56**
		$U_{18} - L_{19}$	589.96	-----	-83	97	-280	228	288	75	-313	-746	0.697	0.294	1.00	Yes	0.384	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.47**
		$U_{19} - L_{20}$	554.37	-----	-43	48	-187	144	288	78	-244	-578	0.707	0.286	1.00	Yes	0.389	0.163	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.73**
		$U_{20} - L_{21}$	368.17	-----	-17	16	-117	83	229	61	-70	-632	0.662	0.333	1.00	Yes	0.364	0.183	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.75**
		$U_{21} - L_{22}$	312.47	-199.22	21	-79	-119	1	-371	-52	-673	-956	0.562	0.429	1.00	Yes	0.309	0.236	0.55	Yes	0.471	0.392	0.87	Yes	0.422	0.153	0.58	Yes					1.00	**9.60**
		$U_{23} - L_{22}$	362.81	-149.71	16	-71	-146	22	270	-95	552	485	0.653	0.346	1.00	Yes	0.359	0.190	0.55	Yes	0.357	0.282	0.64	Yes	0.317	0.186	0.51	Yes					1.00	**10.52**
		$U_{24} - L_{23}$	423.13	-----	-20	19	-122	104	-254	-63	-195	129	0.761	0.230	1.00	Yes	0.419	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.58**
		$U_{25} - L_{24}$	594.85	-----	-41	49	-202	164	-300	-81	30	271	0.758	0.241	1.00	Yes	0.417	0.136	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.37**
		$U_{26} - L_{25}$	657.89	-----	-81	99	-286	268	-251	-56	-67	310	0.778	0.218	1.00	Yes	0.428	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.13**
		$U_{27} - L_{26}$	630.14	-----	-102	143	-293	274	-394	112	-42	440	0.745	0.246	1.00	Yes	0.410	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.62**
		$U_{28} - L_{27}$	675.04	-----	-94	147	-315	337	-551	44	-412	407	0.731	0.263	1.00	Yes	0.402	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.11**
		$U_{29} - L_{28}$	588.29	-----	-96	109	-346	326	-549	-42	-328	157	0.696	0.295	1.00	Yes	0.383	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.33**
		$U_{30} - L_{29}$	624.56	-----	47	161	-193	359	301	-104	-141	219	0.738	0.258	1.00	Yes	0.406	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**9.26**
		$U_{30} - L_{31}$	731.47	-----	-56	231	-258	433	464	201	-1	-371	0.724	0.270	1.00	Yes	0.398	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.73**
		$U_{31} - L_{32}$	735.01	-----	-233	219	-424	369	495	137	33	-394	0.727	0.271	1.00	Yes	0.400	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.07**
		$U_{32} - L_{33}$	818.53	-----	-159	199	-339	320	412	109	-152	-776	0.746	0.250	1.00	Yes	0.410	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.77**
		$U_{33} - L_{34}$	808.94	-----	-146	175	-325	249	336	72	-685	-880	0.737	0.258	1.00	Yes	0.405	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.02**
		$U_{34} - L_{35}$	751.90	-----	-134	138	-321	233	129	-22	-191	-705	0.744	0.254	1.00	Yes	0.409	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.95**
		$U_{35} - L_{36}$	659.72	-----	-158	133	-308	201	144	7	-374	-742	0.715	0.280	1.00	Yes	0.393	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.66**
		$U_{36} - L_{37}$	494.56	-----	-76	26	-189	101	-379	-242	-433	-973	0.631	0.368	1.00	Yes	0.397	0.212	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.04**
		$U_{38} - L_{37}$	-----	-379.67	53	-103	-36	-50	55	-222	85	93	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.178	1	Yes	0.727	0.118	0.85	Yes					1.00	**5.86**
		$U_{39} - L_{38}$	398.31	-218.14	50	-102	-121	52	443	-80	-188	55	0.716	0.283	1.00	Yes	0.394	0.155	0.55	Yes	0.520	0.262	0.79	Yes	0.462	0.154	0.62	Yes					1.00	**10.18**
		$U_{40} - L_{39}$	397.99	-2.49	-8	-7	-132	90	-376	-103	-329	176	0.716	0.277	1.00	Yes	0.394	0.153	0.55	Yes	0.006	0.160	0.17	Yes	0.005	0.169	0.18	Yes					1.00	**6.77**
		$U_{41} - L_{40}$	558.13	-----	-57	31	-177	122	-411	-178	-318	-9	0.744	0.247	1.00	Yes	0.409	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.23**
		$U_{42} - L_{41}$	621.98	-----	-123	92	-322	260	-402	-168	-448	28	0.735	0.263	1.00	Yes	0.404	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.31**
		$U_{43} - L_{42}$	766.87	-----	-137	104	-375	306	-376	-193	-403	-73	0.759	0.234	1.00	Yes	0.417	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.73**
		$U_{44} - L_{43}$	797.06	-----	-162	154	-384	377	-174	6	-81	69	0.789	0.204	1.00	Yes	0.434	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.72**
	Structure 3	$U_0 - L_1$	591.69	-----	-73	106	-289	262	-219	-47	-1256	-357	0.641	0.354	1.00	Yes	0.352	0.195	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.80**
		$U_1 - L_2$	638.57	-----	-159	108	-345	232	162	-42	-624	-776	0.692	0.304	1.00	Yes	0.380	0.167	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.45**
		$U_2 - L_3$	576.63	-----	-125	86	-308	231	128	-30	-313	-769	0.682	0.314	1.00	Yes	0.375	0.173	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.61**
		$U_3 - L_4$	478.96	-----	-43	20	-136	79	148	-28	-373	-647	0.702	0.289	1.00	Yes	0.386	0.159	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.24**
		$U_4 - L_5$	322.54	-13.66	-13	-5	-131	65	195	8	-630	-850	0.580	0.414	1.00	Yes	0.319	0.228	0.55	Yes	0.032	0.266	0.3	Yes	0.029	0.168	0.20	Yes					1.00	**7.17**
		$U_5 - L_6$	284.18	-312.35	32	-122	-91	-33	-943	-255	-418	-835	0.511	0.429	0.95	Yes	0.281	0.236	0.52	Yes	0.732	0.266	1	Yes	0.661	0.156	0.82	Yes					1.00	**9.94**
		$U_7 - L_6$	450.20	-----	-27	-15	-108	23	-158	-157	24	142	0.810	0.184	1.00	Yes	0.445	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.51**
		$U_8 - L_7$	620.82	-----	-83	73	-209	144	-305	-108	-134	248	0.757	0.242	1.00	Yes	0.476	0.136	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.36**
		$U_8 - L_8$	789.16	-----	-71	98	-333	90	-212	10	-86	376	0.781	0.211	1.00	Yes	0.429	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.66**
		$U_{10} - L_9$	970.46	-----	-51	159	-258	172	-102	87	-455	362	0.820	0.179	1.00	Yes	0.507	0.101	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.77**
		$U_{11} - L_{10}$	954.61	-----	-76	118	-255	211	-928	-150	-68	281	0.763	0.232	1.00	Yes	0.473	0.132	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.67**
		$U_{12} - L_{11}$	1000.86	-----	120	235	-68	312	450	53	38	349	0.800	0.196	1.00	Yes	0.496	0.111	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.84**
		$U_{13} - L_{12}$	609.05	-----	15	165	-92	280	637	317	110	-513	0.720	0.275	1.00	Yes	0.396	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.72**
		$U_{13} - L_{14}$	596.41	-----	-99	130	-283	215	687	281	-354	-422	0.705	0.286	1.00	Yes	0.388	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.34**
		$U_{14} - L_{15}$	591.33	-----	-31	149	-254	192	575	255	-848	-732	0.699	0.298	1.00	Yes	0.385	0.164	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.54**
		$U_{15} - L_{16}$	428.32	-----	-12	68	-110	7	401	191	-1077	-648	0.628	0.362	1.00	Yes	0.345	0.199	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.54**
		$U_{17} - L_{16}$	-----	-337.92	55	-8	-93	-113	-235	6	338	165	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.218	1	Yes	0.715	0.145	0.87	Yes					1.00	**12.85**
		$U_{18} - L_{17}$	297.46	-281.03	52	-36	-144	-47	-194	-71	-427	72	0.535	0.308	0.85	Yes	0.294	0.169	0.47	Yes	0.647	0.346	1	Yes	0.595	0.184	0.78	Yes					1.00	**13.78**
		$U_{19} - L_{18}$	436.04	-84.30	15	-19	-85	14	-210	-120	-349	-330	0.784	0.210	1.00	Yes	0.431	0.116	0.55	Yes	0.193	0.193	0.39	Yes	0.178	0.109	0.29	Yes					1.00	**7.63**
		$U_{20} - L_{19}$	551.27	-----	-19	4	-134	77	198	56	-445	-80	0.723	0.269	1.00	Yes	0.437	0.148	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.64**

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: 3F1 **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
Structure 1	U$_1$ - U$_2$	-71.64	12.73	-66.40			0.90	1.24	14.17	-73.92	0.00	0.00	Vehicle	Vehicle	-----	-189.23	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	-----	-----	**6.68**	**6.68**
	U$_2$ - U$_3$	-90.83	25.68	-114.57			0.90	1.24	28.59	-127.56	0.00	0.00	Vehicle	Vehicle	-----	-283.90	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	-----	-----	**3.72**	**3.72**
	U$_3$ - U$_4$	-61.13	38.14	-122.65			0.90	1.24	42.46	-136.55	0.00	0.00	Vehicle	Vehicle	-----	-256.99	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	**3.69**	**3.69**
	U$_4$ - U$_5$	10.71	49.95	-117.98			0.90	1.24	55.61	-131.34	0.00	0.00	Vehicle	86.21	-156.83	-----	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	**11.88**	**11.88**	**4.39**	**4.39**
	U$_5$ - U$_6$	12.86	50.22	-90.36			0.90	1.24	55.91	-100.60	0.00	0.00	Vehicle	89.40	-114.06	-----	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	**11.77**	**11.77**	**5.75**	**5.75**
	U$_6$ - U$_7$	121.37	-59.89	-73.13			0.90	1.24	-66.67	-81.42	0.00	0.00	Vehicle	71.11	-----	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	-----	-----	-----	-----
	U$_7$ - U$_2$	249.49	63.25	-24.34			0.90	1.24	70.41	-27.09	0.00	0.00	Vehicle	Vehicle	415.87	-----	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	-----	-----	**7.88**	**7.88**	-----	-----
	U$_2$ - U$_8$	376.92	0.93	-0.75			0.90	1.24	1.04	-0.83	0.00	0.00	Vehicle	Vehicle	491.35	-----	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	-----	-----	**705.18**	**705.18**	-----	-----
	U$_8$ - U$_9$	319.74	1.87	-14.35			0.90	1.20	2.02	-15.47	0.00	0.00	Vehicle	Vehicle	418.28	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	**306.40**	**306.40**	-----	-----
	U$_9$ - U$_{10}$	128.77	65.70	-53.19			0.90	1.20	70.84	-57.35	0.00	0.00	Vehicle	Vehicle	259.48	-----	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	-----	-----	**8.19**	**8.19**	-----	-----
	U$_{10}$ - U$_{11}$	-70.90	58.15	-89.23			0.90	1.20	62.70	-96.21	0.00	0.00	Vehicle	-----	-----	-217.24	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	-----	-----	**5.47**	**5.47**
	U$_{11}$ - U$_{12}$	-252.96	51.88	-120.23			0.90	1.20	55.93	-129.63	0.00	0.00	Vehicle	-----	-----	-497.38	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	**4.32**	**4.32**
	U$_{12}$ - U$_{13}$	-391.95	43.70	-155.23			0.90	1.20	47.12	-167.36	0.00	0.00	Vehicle	-----	-----	-727.10	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	-----	-----	**4.45**	**4.45**
	U$_{13}$ - U$_{14}$	-482.99	36.77	-172.89			0.90	1.20	39.65	-186.41	0.00	0.00	Vehicle	-----	-----	-870.23	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	-----	-----	**4.53**	**4.53**
	U$_{14}$ - U$_{15}$	-484.44	37.36	-157.84			0.90	1.20	40.28	-170.19	0.00	0.00	Vehicle	-----	-----	-851.02	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	-----	-----	**4.95**	**4.95**
	U$_{15}$ - U$_{16}$	-502.02	16.09	-136.25			0.90	1.20	17.35	-146.91	0.00	0.00	Vehicle	-----	-----	-843.61	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	-----	-----	**5.62**	**5.62**
	U$_{16}$ - U$_{17}$	-467.99	-52.62	-125.00			0.90	1.20	-56.73	-134.78	0.00	0.00	Vehicle	-----	-----	-783.59	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	-----	-----	**6.38**	**6.38**
	U$_{17}$ - U$_{18}$	-368.86	-107.34	-64.67			0.90	1.20	-69.73	-115.73	0.00	0.00	Vehicle	-----	-----	-629.97	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	-----	-----	**5.20**	**5.20**
	U$_{18}$ - U$_{19}$	-251.56	-69.77	-35.25			0.90	1.20	-38.00	-75.23	0.00	0.00	Vehicle	-----	-----	-424.82	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	-----	-----	**5.66**	**5.66**
	U$_{19}$ - U$_{20}$	-117.89	-36.79	-8.76			0.90	1.20	-9.44	-39.66	0.00	0.00	Vehicle	-----	-----	-204.82	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	-----	-----	**14.11**	**14.11**
Structure 2	U$_1$ - U$_1$	-118.23	4.94	-38.92			0.90	1.18	5.26	-41.44	0.00	0.00	Vehicle	-----	-----	-207.56	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	**Fail**	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**12.77**	**12.77**
	U$_1$ - U$_2$	-239.56	11.32	-85.69			0.90	1.18	12.05	-91.23	0.00	0.00	Vehicle	-----	-----	-430.03	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**6.05**	**6.05**
	U$_2$ - U$_3$	-350.44	18.88	-123.46			0.90	1.18	20.11	-131.45	0.00	0.00	Vehicle	-----	-----	-626.46	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	4.00	0.69	16.00	99.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	**5.53**	**5.53**
	U$_3$ - U$_4$	-449.15	17.24	-150.21			0.90	1.18	18.35	-159.93	0.00	0.00	Vehicle	-----	-----	-791.81	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	-----	-----	**5.58**	**5.58**
	U$_4$ - U$_5$	-483.26	37.24	-175.45			0.90	1.18	39.94	-186.80	0.00	0.00	Vehicle	-----	-----	-871.07	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	-----	-----	**5.37**	**5.37**
	U$_5$ - U$_6$	-485.85	47.46	-186.05			0.90	1.18	50.53	-198.09	0.00	0.00	Vehicle	-----	-----	-889.13	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	-----	-----	**5.05**	**5.05**
	U$_6$ - U$_7$	-428.85	56.22	-168.31			0.90	1.18	59.86	-179.20	0.00	0.00	Vehicle	-----	-----	-790.47	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	**5.09**	**5.09**
	U$_7$ - U$_8$	-428.37	56.35	-142.93			0.90	1.18	60.00	-152.17	0.00	0.00	Vehicle	-----	-----	-754.70	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	-----	-----	**6.00**	**6.00**
	U$_8$ - U$_9$	-335.42	64.61	-134.14			0.90	1.18	68.79	-142.82	0.00	0.00	Vehicle	-----	-----	-621.71	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	-----	-----	**5.54**	**5.54**
	U$_9$ - U$_{10}$	-200.29	69.89	-115.57			0.90	1.18	74.42	-123.04	0.00	0.00	Vehicle	-----	-----	-420.33	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	**5.57**	**5.57**
	U$_{10}$ - U$_{11}$	-52.14	74.17	-70.93			0.90	1.18	78.97	-75.52	0.00	0.00	Vehicle	34.88	-165.96	-----	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	**12.19**	**12.19**	**9.50**	**9.50**
	U$_{11}$ - U$_{12}$	107.02	-24.54	-48.73			0.90	1.18	-26.13	-51.88	0.00	0.00	Vehicle	105.16	-----	-----	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	70.25	-28.59			0.90	1.18	74.79	-30.44	0.00	0.00	Vehicle	434.36	-----	-----	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	-----	-----	**11.76**	**11.76**	-----	-----
	U$_{13}$ - U$_{14}$	391.98	-1.27	-1.79			0.90	1.18	-1.35	-1.91	0.00	0.00	Vehicle	507.81	-----	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	-----	-----	-----	-----
	U$_{14}$ - U$_{15}$	439.40	9.46	-11.10			0.90	1.17	9.95	-11.68	0.00	0.00	Vehicle	584.16	-----	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	**113.04**	**113.04**	-----	-----
	U$_{15}$ - U$_{16}$	369.66	67.37	-23.47			0.90	1.17	70.88	-24.69	0.00	0.00	Vehicle	572.71	-----	-----	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	-----	-----	**12.74**	**12.74**	-----	-----
	U$_{16}$ - U$_{17}$	271.39	65.94	-49.23			0.90	1.17	69.38	-51.80	0.00	0.00	Vehicle	443.00	-----	-----	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	-----	-----	**11.14**	**11.14**	-----	-----
	U$_{17}$ - U$_{18}$	171.75	62.11	-75.03			0.90	1.17	65.35	-78.94	0.00	0.00	Vehicle	308.23	-----	-----	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	-----	-----	**9.10**	**9.10**	-----	-----
	U$_{18}$ - U$_{19}$	72.78	57.29	-94.50			0.90	1.17	60.27	-99.42	0.00	0.00	Vehicle	172.97	-34.63	-----	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	**11.51**	**11.51**	**7.24**	**7.24**
	U$_{19}$ - U$_{20}$	-8.11	51.04	-122.88			0.90	1.17	53.70	-129.29	0.00	0.00	Vehicle	59.27	-178.61	-----	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	**15.43**	**15.43**	**5.30**	**5.30**
	U$_{20}$ - U$_{21}$	-60.13	23.88	-139.96			0.90	1.17	25.12	-147.25	0.00	0.00	Vehicle	-----	-----	-269.60	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**5.27**	**5.27**
	U$_{21}$ - U$_{22}$	-82.18	33.14	-142.78			0.90	1.17	34.87	-150.22	0.00	0.00	Vehicle	-----	-----	-302.13	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	-----	-----	**5.02**	**5.02**
	U$_{22}$ - U$_{23}$	-82.40	34.18	-117.42			0.90	1.17	35.96	-123.54	0.00	0.00	Vehicle	-----	-----	-267.73	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	-----	-----	**6.11**	**6.11**
	U$_{23}$ - U$_{24}$	-65.94	42.39	-120.73			0.90	1.17	44.59	-127.02	0.00	0.00	Vehicle	-----	-----	-250.85	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**6.07**	**6.07**
	U$_{24}$ - U$_{25}$	-17.96	50.54	-92.06			0.90	1.17	53.18	-96.85	0.00	0.00	Vehicle	45.78	-149.25	-----	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	**15.76**	**15.76**	**6.97**	**6.97**
	U$_{25}$ - U$_{26}$	55.02	-57.52	-80.58			0.90	1.17	-60.52	-84.78	0.00	0.00	Vehicle	-----	-38.68	-----	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	-----	-----	**8.29**	**8.29**
	U$_{26}$ - U$_{27}$	136.02	-45.03	-66.27			0.90	1.17	-47.37	-69.72	0.00	0.00	Vehicle	115.23	-----	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
	U$_{27}$ - U$_{28}$	216.87	-14.66	-31.68			0.90	1.17	-15.43	-33.33	0.00	0.00	Vehicle	261.87	-----	-----	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	38.32	-15.55			0.90	1.17	40.32	-16.36	0.00	0.00	Vehicle	434.30	-----	-----	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	-----	-----	**24.27**	**24.27**	-----	-----
	U$_{29}$ - U$_{30}$	358.11	6.49	-16.63			0.90	1.17	6.82	-17.49	0.00	0.00	Vehicle	474.42	-----	-----	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	-----	-----	**176.79**	**176.79**	-----	-----
	U$_{30}$ - U$_{31}$	339.33	14.26	-6.20			0.90	1.18	15.18	-6.60	0.00	0.00	Vehicle	460.86	-----	-----	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	-----	-----	**80.71**	**80.71**	-----	-----
	U$_{31}$ - U$_{32}$	251.17	73.91	-29.40			0.90	1.18	78.69	-31.30	0.00	0.00	Vehicle	428.81	-----	-----	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	-----	-----	**11.28**	**11.28**	-----	-----
	U$_{32}$ - U$_{33}$	136.17	74.48	-55.56			0.90	1.18	79.30	-59.15	0.00	0.00	Vehicle	280.11	-----	----

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 3F1 — 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
Structure 1	L_0- L_1	4.85	-1.74	-3.15			0.90	1.24	-1.94	-3.50	0.00	0.00	Vehicle	Vehicle	3.78	-----	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	-14.34	60.59			0.90	1.24	67.45	-15.96	0.00	0.00	Vehicle	Vehicle	184.23	-----	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	-----	-----	**6.35**	**6.35**	-----	-----
	L_2 - L_3	97.77	-27.21	100.37			0.90	1.24	111.74	-30.29	0.00	0.00	Vehicle	Vehicle	272.36	-----	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	-----	-----	**5.11**	**5.11**	-----	-----
	L_3 - L_4	66.93	-39.60	91.74			0.90	1.24	102.13	-44.08	0.00	0.00	Vehicle	Vehicle	219.78	-----	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**5.89**	**5.89**	-----	-----
	L_4 - L_5	-108.46	34.98	89.45			0.90	1.24	99.58	38.94	0.00	0.00	Vehicle	Vehicle	-----	-90.37	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	-----	-----
	L_5 - L_6	-237.28	-65.95	47.52			0.90	1.24	52.90	-73.43	0.00	0.00	Vehicle	Vehicle	-----	-403.92	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	-----	-----	**5.75**	**5.75**
	L_6 - L_7	-362.27	-24.01	16.70			0.90	1.24	18.59	-26.73	0.00	0.00	Vehicle	Vehicle	-----	-505.70	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	-----	-----	**21.80**	**21.80**
	L_7 - L_8	-478.66	-59.64	-0.03			0.90	1.24	-0.03	-66.40	0.00	0.00	Vehicle	Vehicle	-----	-708.57	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	-----	-----	**10.86**	**10.86**
	L_8 - L_9	-477.02	-58.18	-26.80			0.90	1.20	-28.90	-62.72	0.00	0.00	Vehicle	Vehicle	-----	-701.66	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	-----	-----	**11.52**	**11.52**
	L_9 - L_{10}	-301.43	-65.49	8.64			0.90	1.20	9.31	-70.61	0.00	0.00	Vehicle	Vehicle	-----	-483.65	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	-----	-----	**9.12**	**9.12**
	L_{10} - L_{11}	-104.46	-57.95	21.59			0.90	1.20	23.28	-62.48	0.00	0.00	Vehicle	Vehicle	-----	-217.02	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	-----	-----	**6.34**	**6.34**
	L_{11} - L_{12}	97.11	-51.34	64.49			0.90	1.20	69.53	-55.35	0.00	0.00	Vehicle	Vehicle	216.63	-----	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	-----	-----	**7.15**	**7.15**	-----	-----
	L_{12} - L_{13}	268.74	-44.43	101.95			0.90	1.20	109.92	-47.90	0.00	0.00	Vehicle	Vehicle	492.26	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**6.42**	**6.42**	-----	-----
	L_{13} - L_{14}	405.66	-37.32	113.42			0.90	1.20	122.29	-40.24	0.00	0.00	Vehicle	Vehicle	686.33	-----	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	-----	-----	**7.38**	**7.38**	-----	-----
	L_{14} - L_{15}	502.77	76.09	135.24			0.90	1.20	145.82	82.04	0.00	0.00	Vehicle	Vehicle	843.16	-----	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	-----	-----	**7.35**	**7.35**	-----	-----
	L_{15} - L_{16}	469.25	-16.44	128.05			0.90	1.20	138.06	-17.73	0.00	0.00	Vehicle	Vehicle	789.50	-----	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	-----	-----	**8.01**	**8.01**	-----	-----
	L_{16} - L_{17}	365.43	56.60	95.32			0.90	1.20	102.78	61.03	0.00	0.00	Vehicle	Vehicle	608.67	-----	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	-----	-----	**8.28**	**8.28**	-----	-----
	L_{17} - L_{18}	248.67	24.78	51.07			0.90	1.20	55.06	26.72	0.00	0.00	Vehicle	Vehicle	394.86	-----	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	-----	-----	**11.53**	**11.53**	-----	-----
	L_{18} - L_{19}	112.99	-1.76	22.70			0.90	1.20	24.48	-1.90	0.00	0.00	Vehicle	Vehicle	178.71	-----	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	-----	-----	**15.92**	**15.92**	-----	-----
	L_{19} - L_{20}	-14.26	-25.96	12.61			0.90	1.20	13.59	-27.99	0.00	0.00	Vehicle	Vehicle	-----	-54.92	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	-----	-----	**14.62**	**14.62**
Structure 2	L_0- L_1	15.26	0.56	-4.04			0.90	1.18	0.59	-4.30	0.00	0.00	Vehicle	Vehicle	20.61	-----	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	-----	-----	**1042.24**	**1042.24**	-----	-----
	L_1 - L_2	136.12	-4.56	32.81			0.90	1.18	34.94	-4.86	0.00	0.00	Vehicle	Vehicle	222.37	-----	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	-----	-----	**14.23**	**14.23**	-----	-----
	L_2 - L_3	262.92	-9.76	68.40			0.90	1.18	72.82	-10.39	0.00	0.00	Vehicle	Vehicle	436.46	-----	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	-----	-----	**9.79**	**9.79**	-----	-----
	L_3 - L_4	373.32	-12.90	106.17			0.90	1.18	113.04	-13.74	0.00	0.00	Vehicle	Vehicle	632.27	-----	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	-----	-----	**8.28**	**8.28**	-----	-----
	L_4 - L_5	456.80	-26.24	139.92			0.90	1.18	148.98	-27.94	0.00	0.00	Vehicle	Vehicle	787.51	-----	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	-----	-----	**8.01**	**8.01**	-----	-----
	L_5 - L_6	489.63	-35.63	161.82			0.90	1.18	172.29	-37.93	0.00	0.00	Vehicle	Vehicle	860.49	-----	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	-----	-----	**7.56**	**7.56**	-----	-----
	L_6 - L_7	479.27	-45.21	156.75			0.90	1.18	166.89	-48.14	0.00	0.00	Vehicle	Vehicle	840.01	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**8.02**	**8.02**	-----	-----
	L_7 - L_8	330.30	-62.01	146.22			0.90	1.18	155.68	-66.02	0.00	0.00	Vehicle	Vehicle	631.77	-----	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	-----	-----	**6.50**	**6.50**	-----	-----
	L_8 - L_9	189.19	77.20	119.83			0.90	1.18	127.58	82.19	0.00	0.00	Vehicle	Vehicle	411.80	-----	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	-----	-----	**7.14**	**7.14**	-----	-----
	L_9 - L_{10}	39.95	-71.42	83.31			0.90	1.18	88.70	-76.04	0.00	0.00	Vehicle	Vehicle	167.25	-46.91	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	**9.27**	**9.27**	**10.09**	**10.09**
	L_{10} - L_{11}	-127.23	21.20	56.55			0.90	1.18	60.20	22.57	0.00	0.00	Vehicle	Vehicle	-----	-136.05	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	-32.97	31.85			0.90	1.18	33.91	-35.10	0.00	0.00	Vehicle	Vehicle	-----	-412.89	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	-----	-----	**18.47**	**18.47**
	L_{12} - L_{13}	-426.62	-65.40	5.23			0.90	1.18	5.57	-69.64	0.00	0.00	Vehicle	Vehicle	-----	-645.13	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	-----	-----	**12.19**	**12.19**
	L_{13} - L_{14}	-536.34	-46.57	8.75			0.90	1.18	9.32	-49.58	0.00	0.00	Vehicle	Vehicle	-----	-761.70	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	-----	-----	**19.74**	**19.74**
	L_{14} - L_{15}	-537.64	-59.96	-23.22			0.90	1.17	-24.43	-63.09	0.00	0.00	Vehicle	Vehicle	-----	-780.95	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	-----	-----	**15.50**	**15.50**
	L_{15} - L_{16}	-475.53	-77.88	-4.33			0.90	1.17	-4.56	-76.68	0.00	0.00	Vehicle	Vehicle	-----	-717.86	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	-----	-----	**10.43**	**10.43**
	L_{16} - L_{17}	-384.21	-68.01	-4.87			0.90	1.17	-5.12	-71.55	0.00	0.00	Vehicle	Vehicle	-----	-592.49	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	-----	-----	**9.27**	**9.27**
	L_{17} - L_{18}	-281.70	-65.32	20.83			0.90	1.17	21.92	-68.72	0.00	0.00	Vehicle	Vehicle	-----	-455.56	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	-----	-----	**6.49**	**6.49**
	L_{18} - L_{19}	-174.99	-59.60	47.70			0.90	1.17	50.18	-62.71	0.00	0.00	Vehicle	Vehicle	-----	-309.00	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_{19} - L_{20}	-76.34	-53.99	79.01			0.90	1.17	83.13	-56.80	0.00	0.00	Vehicle	Vehicle	8.82	-173.08	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	**9.09**	**9.09**	**8.76**	**8.76**
	L_{20} - L_{21}	4.59	-45.88	82.10			0.90	1.17	86.38	-48.27	0.00	0.00	Vehicle	Vehicle	118.26	-56.79	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	**11.11**	**11.11**	**16.96**	**16.96**
	L_{21} - L_{22}	56.15	-9.01	102.72			0.90	1.17	108.07	-9.48	0.00	0.00	Vehicle	Vehicle	213.49	-----	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	-----	-----	**8.41**	**8.41**	-----	-----
	L_{22} - L_{23}	63.16	-24.25	110.42			0.90	1.17	116.17	-25.52	0.00	0.00	Vehicle	Vehicle	233.13	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**7.76**	**7.76**	-----	-----
	L_{23} - L_{24}	15.68	-32.39	99.94			0.90	1.17	105.14	-34.07	0.00	0.00	Vehicle	Vehicle	157.07	-23.91	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	**9.03**	**9.03**	**24.36**	**24.36**
	L_{24} - L_{25}	-55.90	22.42	68.45			0.90	1.17	72.02	23.59	0.00	0.00	Vehicle	Vehicle	20.95	-42.01	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	**10.20**	**10.20**	-----	-----
	L_{25} - L_{26}	-136.32	-25.25	54.26			0.90	1.17	57.08	-26.56	0.00	0.00	Vehicle	Vehicle	-----	-211.74	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	-----	-----	**16.46**	**16.46**
	L_{26} - L_{27}	-217.71	-27.23	30.68			0.90	1.17	32.27	-28.64	0.00	0.00	Vehicle	Vehicle	-----	-320.26	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	-----	-----	**17.80**	**17.80**
	L_{27} - L_{28}	-296.28	-77.84	16.69			0.90	1.17	17.56	-81.90	0.00	0.00	Vehicle	Vehicle	-----	-491.62	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	-----	-----	**9.17**	**9.17**
	L_{28} - L_{29}	-364.24	-108.90	2.68			0.90	1.17	2.81	-114.57	0.00	0.00	Vehicle	Vehicle	-----	-622.45	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**7.95**	**7.95**
	L_{29} - L_{30}	-418.31	-68.27	31.74			0.90	1.17	33.40	-71.83	0.00	0.00	Vehicle	Vehicle	-----	-637.18	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**15.27**	**15.27**
	L_{30} - L_{31}	-350.66	-55.25	-12.23			0.90	1.18	-13.02	-58.83	0.00	0.00	Vehicle	Vehicle	-----	-532.34	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	-----	-----	**19.79**	**19.79**
	L_{31} - L_{32}	-275.63	-32.71	-6.48			0.90	1.18	-6.90	-34.83	0.00	0.00	Vehicle	Vehicle	-----	-403.60	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	-----	-----	**28.70**	**28.70**
	L_{32} - L_{33}	-178.96	-59.14	-2.22			0.90

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: 3F1 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
North Truss - Verticals																																															
Structure 1	U$_1$ - L$_0$	-77.20	-74.18	11.39			0.90	1.24	12.68	-82.58	0.00	0.00	Vehicle	Vehicle	-----	-207.72	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	3.24	3.24
	U$_1$ - L$_1$	-33.88	-50.19	10.26			0.90	1.24	11.42	-55.88	0.00	0.00	Vehicle	Vehicle	-----	-116.68	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	-----	-----	-----	-----	-----	5.69	5.69
	U$_2$ - L$_2$	10.41	-30.89	9.66			0.90	1.24	10.76	-34.39	0.00	0.00	Vehicle	Vehicle	27.51	-31.18	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	-----	-----	-----	38.79	38.79	10.54	10.54
	U$_3$ - L$_3$	44.37	-23.03	9.46			0.90	1.24	10.53	-25.64	0.00	0.00	Vehicle	Vehicle	71.37	-----	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	-----	-----	-----	-----	-----	36.40	36.40	-----	-----
	U$_4$ - L$_4$	-16.71	0.19	-16.70			0.90	1.24	0.21	-18.59	0.00	0.00	Vehicle	Vehicle	-----	-45.89	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	-----	-----	-----	-----	-----	17.92	17.92
	U$_5$ - L$_5$	-109.52	4.20	-61.47			0.90	1.24	4.67	-68.44	0.00	0.00	Vehicle	Vehicle	-----	-231.34	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	-----	-----	-----	-----	-----	4.61	4.61
	U$_6$ - L$_6$	-143.61	-0.68	-75.22			0.90	1.24	-0.76	-83.74	0.00	0.00	Vehicle	Vehicle	-----	-295.55	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	-----	-----	-----	-----	-----	4.35	4.35
	U$_7$ - L$_7$	-142.76	2.05	-76.98			0.90	1.24	2.28	-85.70	0.00	0.00	Vehicle	Vehicle	-----	-297.00	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	-----	-----	-----	-----	-----	3.70	3.70
	U$_8$ - L$_8$	-391.96	-68.79	-81.44			0.90	1.24	-76.58	-90.67	0.00	0.00	Vehicle	Vehicle	-----	-627.42	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	-----	-----	-----	-----	-----	7.43	7.43
	U$_9$ - L$_9$	-223.26	-64.87	7.32			0.90	1.20	7.89	-69.94	0.00	0.00	Vehicle	Vehicle	-----	-381.16	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	-----	-----	-----	-----	-----	6.03	6.03
	U$_{10}$ - L$_{10}$	-225.85	-66.01	-0.82			0.90	1.20	-0.88	-71.18	0.00	0.00	Vehicle	Vehicle	-----	-386.14	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	7.26	7.26
	U$_{11}$ - L$_{11}$	-198.80	-58.87	5.98			0.90	1.20	6.45	-63.47	0.00	0.00	Vehicle	Vehicle	-----	-340.95	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	-----	-----	-----	-----	-----	6.97	6.97
	U$_{12}$ - L$_{12}$	-154.81	-53.96	7.36			0.90	1.20	7.93	-58.18	0.00	0.00	Vehicle	Vehicle	-----	-276.89	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	6.49	6.49
	U$_{13}$ - L$_{13}$	-109.06	-49.32	15.26			0.90	1.20	16.45	-53.17	0.00	0.00	Vehicle	Vehicle	-----	-210.90	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	-----	-----	-----	-----	-----	5.10	5.10
	U$_{14}$ - L$_{14}$	-12.31	0.08	-10.58			0.90	1.20	0.08	-11.41	0.00	0.00	Vehicle	Vehicle	-----	-30.83	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	-----	-----	-----	-----	-----	29.14	29.14
	U$_{15}$ - L$_{15}$	-5.62	21.58	-43.18			0.90	1.20	23.27	-46.55	0.00	0.00	Vehicle	Vehicle	22.95	-67.82	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	-----	-----	-----	18.62	18.62	7.25	7.25
	U$_{16}$ - L$_{16}$	-51.73	13.50	-50.27			0.90	1.20	14.56	-54.20	0.00	0.00	Vehicle	Vehicle	-----	-137.72	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	-----	-----	-----	-----	-----	5.34	5.34
	U$_{17}$ - L$_{17}$	-127.32	8.57	-64.47			0.90	1.20	9.24	-69.51	0.00	0.00	Vehicle	Vehicle	-----	-255.87	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	-----	-----	-----	-----	-----	4.09	4.09
	U$_{18}$ - L$_{18}$	-159.94	7.90	-77.23			0.90	1.20	8.52	-83.27	0.00	0.00	Vehicle	Vehicle	-----	-316.17	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	-----	-----	-----	-----	-----	4.39	4.39
	U$_{19}$ - L$_{19}$	-191.17	6.68	-79.41			0.90	1.20	7.20	-85.62	0.00	0.00	Vehicle	Vehicle	-----	-359.82	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	4.97	4.97
	U$_{20}$ - L$_{20}$	-212.33	6.70	-79.07			0.90	1.20	7.22	-85.26	0.00	0.00	Vehicle	Vehicle	-----	-386.86	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	-----	-----	-----	-----	-----	4.34	4.34
Structure 2	U$_1$ - L$_0$	-206.69	-77.44	8.40			0.90	1.18	8.95	-82.45	0.00	0.00	Vehicle	Vehicle	-----	-375.89	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	5.29	5.29
	U$_1$ - L$_1$	-188.76	-67.37	8.63			0.90	1.18	9.18	-71.73	0.00	0.00	Vehicle	Vehicle	-----	-338.64	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	6.74	6.74
	U$_2$ - L$_2$	-155.92	-65.23	9.10			0.90	1.18	9.69	-69.45	0.00	0.00	Vehicle	Vehicle	-----	-292.99	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	-----	-----	-----	-----	-----	6.02	6.02
	U$_3$ - L$_3$	-134.58	-56.81	10.31			0.90	1.18	10.98	-60.48	0.00	0.00	Vehicle	Vehicle	-----	-253.58	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.59	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	45.00	Pass	4.91	12.00	Pass	-----	-----	-----	-----	-----	5.25	5.25
	U$_4$ - L$_4$	-64.49	-47.14	12.80			0.90	1.18	13.62	-50.19	0.00	0.00	Vehicle	Vehicle	-----	-149.09	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	-----	-----	-----	-----	-----	5.47	5.47
	U$_5$ - L$_5$	-19.94	-43.31	21.69			0.90	1.18	23.09	-46.11	0.00	0.00	Vehicle	Vehicle	4.09	-85.86	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	19.39	19.39	6.95	6.95
	U$_6$ - L$_6$	40.08	-27.35	30.60			0.90	1.18	32.58	-29.12	0.00	0.00	Vehicle	Vehicle	94.46	-----	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	-----	-----	-----	-----	-----	11.90	11.90	-----	-----
	U$_7$ - L$_7$	-26.04	-5.10	-5.21			0.90	1.18	-5.43	-5.54	0.00	0.00	Vehicle	Vehicle	-----	-41.06	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	-----	-----	-----	-----	-----	56.73	56.73
	U$_8$ - L$_8$	-125.25	14.91	-53.71			0.90	1.18	15.87	-57.19	0.00	0.00	Vehicle	Vehicle	-----	-237.17	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	7.09	7.09
	U$_9$ - L$_9$	-174.53	6.84	-64.75			0.90	1.18	7.28	-68.94	0.00	0.00	Vehicle	Vehicle	-----	-316.52	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	-----	-----	-----	-----	-----	7.49	7.49
	U$_{10}$ - L$_{10}$	-202.66	-0.47	-75.49			0.90	1.18	-0.50	-80.38	0.00	0.00	Vehicle	Vehicle	-----	-367.95	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	-----	-----	-----	-----	-----	7.17	7.17
	U$_{11}$ - L$_{11}$	-229.53	2.01	-80.90			0.90	1.18	2.14	-86.14	0.00	0.00	Vehicle	Vehicle	-----	-410.36	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	-----	-----	-----	-----	-----	6.21	6.21
	U$_{12}$ - L$_{12}$	-250.85	1.51	-81.97			0.90	1.18	1.61	-87.27	0.00	0.00	Vehicle	Vehicle	-----	-439.55	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	-----	-----	-----	-----	-----	6.31	6.31
	U$_{13}$ - L$_{13}$	-223.32	8.05	-83.31			0.90	1.18	8.57	-88.70	0.00	0.00	Vehicle	Vehicle	-----	-405.63	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	-----	-----	-----	-----	-----	5.26	5.26
	U$_{14}$ - L$_{14}$	-343.31	-67.73	-72.74			0.90	1.18	-72.11	-77.45	0.00	0.00	Vehicle	Vehicle	-----	-546.99	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	-----	-----	-----	-----	-----	9.15	9.15
	U$_{15}$ - L$_{15}$	-123.14	-68.57	8.30			0.90	1.17	8.73	-72.15	0.00	0.00	Vehicle	Vehicle	-----	-253.87	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	-----	-----	-----	-----	-----	7.86	7.86
	U$_{16}$ - L$_{16}$	-156.70	-65.39	6.33			0.90	1.17	6.66	-68.79	0.00	0.00	Vehicle	Vehicle	-----	-293.14	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	-----	-----	-----	-----	-----	7.40	7.40
	U$_{17}$ - L$_{17}$	-147.91	-68.25	6.27			0.90	1.17	6.60	-71.80	0.00	0.00	Vehicle	Vehicle	-----	-285.63	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	-----	-----	-----	-----	-----	6.62	6.62
	U$_{18}$ - L$_{18}$	-142.22	-60.09	7.88			0.90	1.17	8.29	-63.22	0.00	0.00	Vehicle	Vehicle	-----	-267.07	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	-----	-----	-----	-----	-----	6.88	6.88
	U$_{19}$ - L$_{19}$	-111.48	-59.32	8.81			0.90	1.17	9.27	-62.41	0.00	0.00	Vehicle	Vehicle	-----	-226.07	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	-----	-----	-----	-----	-----	6.41	6.41
	U$_{20}$ - L$_{20}$	-76.55	-52.18	15.69			0.90	1.17	16.50	-54.90	0.00	0.00	Vehicle	Vehicle	-----	-170.88	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	5.44	5.44
	U$_{21}$ - L$_{21}$	-44.31	-40.49	19.22			0.90	1.17	20.23	-42.59	0.00	0.00	Vehicle	Vehicle	-----	-112.98	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	-----	-----	-----	-----	-----	6.95	6.95
	U$_{22}$ - L$_{22}$	-21.25	-4.31	-4.27			0.90	1.17	-4.49	-4.54	0.00	0.00	Vehicle	Vehicle	-----	-33.52	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	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	70.68	70.68
	U$_{23}$ - L$_{23}$	-39.07	21.81	-42.97			0.90	1.17	22.94	-45.20	0.00	0.00	Vehicle	Vehicle	-----	-109.55	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	-----	-----	-----	-----	-----	6.67	6.67
	U$_{24}$ - L$_{24}$	-74.84	16.58	-50.38			0.90	1.17	17.45	-53.00	0.00	0.00	Vehicle	Vehicle	-----	-166.20	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	-----	-----	-----	-----	-----	5.67	5.67
	U$_{25}$ - L$_{25}$	-103.27	10.78	-66.19			0.90	1.17	11.34	-69.64	0.00	0.00	Vehicle	Vehicle	-----	-224.78	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	5.86	5.86
	U$_{26}$ - L$_{26}$	-120.22	10.17	-70.13			0.90	1.17	10.70	-73.78	0.00	0.00	Vehicle	Vehicle	-----	-252.20	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	-----	-----	-----	-----	-----	6.19	6.19
	U$_{27}$ - L$_{27}$	-123.93	8.40	-72.96			0.90	1.17	8.84	-76.76	0.00	0.00	Vehicle	Vehicle	-----	-260.90	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	-----	-----	-----	-----	-----	6.51	6.51
	U$_{28}$ - L$_{28}$	-135.60	7.64	-82.22			0.90	1.17	8.04	-86.51	0.00	0.00	Vehicle	Vehicle	-----	-288.73	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	6.13	6.13
	U$_{29}$ - L$_{29}$	-116.87	4.47	-77.01			0.90	1.17	4.70	-81.03	0.00	0.00	Vehicle	Vehicle	-----	-257.27	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.07	7.07
	U$_{30}$ - L$_{30}$	-262.02	-62.81	-65.41			0.90	1.18	-66.88	-69.65	0.00	0.00	Vehicle	Vehicle	-----	-431.16	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	11.34	11.34
	U$_{31}$ - L$_{31}$	-156.38	-64.06	10.52			0.90	1.18	11.20	-68.21	0.00	0.00	Vehicle	Vehicle	-----	-291.96	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	-----	-----	-----	-----	-----	7.83	7.83
	U$_{32}$ - L$_{32}$	-185.51	-72.05	7.38			0.90	1.18	7.86	-76.71	0.00	0.00	Vehicle	Vehicle	-----	-340.88	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: 3F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

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

E = 29000.0 ksi

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

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

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

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Diagonals	Structure 1																																													
	U$_1$ - L$_1$	87.33	67.86	-15.57			0.90	1.24	75.55	-17.33	0.00	0.00	Vehicle	Vehicle	211.73	-----	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	-----	-----	-----	-----	-----	**6.61**	**6.61**	-----	-----
	U$_1$ - L$_2$	23.35	52.04	0.47			0.90	1.24	57.94	0.53	0.00	0.00	Vehicle	Vehicle	105.67	-----	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	-----	-----	-----	-----	-----	**6.98**	**6.98**	-----	-----
	U$_3$ - L$_3$	-37.85	38.91	-15.88			0.90	1.24	43.32	-17.68	0.00	0.00	Vehicle	Vehicle	7.10	-72.20	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**10.75**	**10.75**	**16.76**	**16.76**
	U$_4$ - L$_4$	-92.19	-15.05	-44.52			0.90	1.24	-16.76	-49.56	0.00	0.00	Vehicle	Vehicle	-----	-184.28	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	-----	-----	-----	**-----**	**-----**	**4.93**	**4.93**
	U$_5$ - L$_4$	143.37	50.70	-12.50			0.90	1.24	56.44	-13.92	0.00	0.00	Vehicle	Vehicle	259.76	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**6.75**	**6.75**	-----	-----
	U$_5$ - L$_5$	177.90	75.97	-1.97			0.90	1.24	84.58	-2.19	0.00	0.00	Vehicle	Vehicle	341.21	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.59**	**5.59**	-----	-----
	U$_6$ - L$_6$	184.42	93.36	0.00			0.90	1.24	103.93	0.00	0.00	0.00	Vehicle	Vehicle	374.86	-----	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	-----	-----	-----	-----	-----	**4.49**	**4.49**	-----	-----
	U$_7$ - L$_7$	180.02	85.92	-1.27			0.90	1.24	95.65	-1.42	0.00	0.00	Vehicle	Vehicle	358.37	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.92**	**4.92**	-----	-----
	U$_8$ - L$_8$	268.98	72.12	-8.60			0.90	1.20	77.76	-9.28	0.00	0.00	Vehicle	Vehicle	450.75	-----	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	-----	-----	-----	-----	-----	**8.92**	**8.92**	-----	-----
	U$_9$ - L$_{10}$	278.85	73.96	-7.42			0.90	1.20	79.75	-8.00	0.00	0.00	Vehicle	Vehicle	466.18	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**8.57**	**8.57**	-----	-----
	U$_{10}$ - L$_{11}$	285.04	75.17	-7.47			0.90	1.20	81.05	-8.06	0.00	0.00	Vehicle	Vehicle	475.92	-----	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	-----	-----	-----	-----	-----	**7.72**	**7.72**	-----	-----
	U$_{11}$ - L$_{12}$	250.60	74.48	-8.13			0.90	1.20	80.31	-8.77	0.00	0.00	Vehicle	Vehicle	430.18	-----	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	-----	-----	-----	-----	-----	**6.56**	**6.56**	-----	-----
	U$_{12}$ - L$_{13}$	189.65	69.94	-20.98			0.90	1.20	75.41	-22.62	0.00	0.00	Vehicle	Vehicle	344.58	-----	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	-----	-----	-----	-----	-----	**5.85**	**5.85**	-----	-----
	U$_{13}$ - L$_{14}$	123.32	52.72	-27.79			0.90	1.20	56.84	-29.96	0.00	0.00	Vehicle	Vehicle	234.21	-----	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	-----	-----	-----	-----	-----	**5.36**	**5.36**	-----	-----
	U$_{14}$ - L$_{14}$	-24.41	33.16	-38.23			0.90	1.20	35.76	-41.22	0.00	0.00	Vehicle	Vehicle	14.75	-85.32	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	-----	-----	-----	**12.64**	**12.64**	**7.37**	**7.37**
	U$_{15}$ - L$_{15}$	48.53	59.16	-26.13			0.90	1.20	63.79	-28.17	0.00	0.00	Vehicle	Vehicle	146.02	-----	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	-----	-----	-----	-----	-----	**5.94**	**5.94**	-----	-----
	U$_{16}$ - L$_{16}$	146.59	75.18	-5.75			0.90	1.20	81.06	-6.20	0.00	0.00	Vehicle	Vehicle	295.95	-----	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	-----	-----	-----	-----	-----	**4.66**	**4.66**	-----	-----
	U$_{17}$ - L$_{17}$	182.46	80.03	-10.09			0.90	1.20	86.28	-10.88	0.00	0.00	Vehicle	Vehicle	349.36	-----	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	-----	-----	-----	-----	-----	**5.43**	**5.43**	-----	-----
	U$_{18}$ - L$_{18}$	223.82	88.50	-8.43			0.90	1.20	95.42	-9.09	0.00	0.00	Vehicle	Vehicle	415.02	-----	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	-----	-----	-----	-----	-----	**5.10**	**5.10**	-----	-----
	U$_{20}$ - L$_{19}$	232.72	77.69	-7.05			0.90	1.20	83.76	-7.60	0.00	0.00	Vehicle	Vehicle	411.43	-----	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	-----	-----	-----	-----	-----	**5.70**	**5.70**	-----	-----
	Structure 2																																												
	U$_1$ - L$_1$	213.54	65.95	-8.97			0.90	1.18	70.21	-9.55	0.00	0.00	Vehicle	Vehicle	368.88	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.03**	**8.03**	-----	-----
	U$_1$ - L$_2$	200.48	74.73	-10.53			0.90	1.18	79.56	-11.21	0.00	0.00	Vehicle	Vehicle	364.06	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.25**	**7.25**	-----	-----
	U$_3$ - L$_3$	172.81	73.85	-11.78			0.90	1.18	78.62	-12.54	0.00	0.00	Vehicle	Vehicle	326.86	-----	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	-----	-----	-----	-----	-----	**6.08**	**6.08**	-----	-----
	U$_3$ - L$_4$	147.16	67.73	-10.52			0.90	1.18	72.12	-11.20	0.00	0.00	Vehicle	Vehicle	285.06	-----	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	-----	-----	-----	-----	-----	**5.96**	**5.96**	-----	-----
	U$_5$ - L$_5$	49.10	57.08	-26.05			0.90	1.18	60.77	-27.73	0.00	0.00	Vehicle	Vehicle	147.84	-----	0.00	16.85	16.8486	556.00	131.71	13.3992	1.9682	61.02	29.46	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**6.23**	**6.23**	-----	-----
	U$_5$ - L$_6$	2.96	46.22	-33.57			0.90	1.18	49.21	-35.74	0.00	0.00	Vehicle	Vehicle	67.83	-42.61	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	-----	-----	-----	**8.63**	**8.63**	**9.20**	**9.20**
	U$_7$ - L$_7$	-85.74	27.51	-48.72			0.90	1.18	29.29	-51.87	0.00	0.00	Vehicle	Vehicle	-----	-178.89	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	-----	-----	-----	**-----**	**-----**	**5.27**	**5.27**
	U$_7$ - L$_7$	140.30	58.05	-26.24			0.90	1.18	61.81	-27.94	0.00	0.00	Vehicle	Vehicle	262.74	-----	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	-----	-----	-----	-----	-----	**7.49**	**7.49**	-----	-----
	U$_8$ - L$_8$	204.22	77.30	-10.33			0.90	1.18	82.31	-11.00	0.00	0.00	Vehicle	Vehicle	372.48	-----	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	-----	-----	-----	-----	-----	**6.15**	**6.15**	-----	-----
	U$_{10}$ - L$_9$	234.87	79.09	-6.19			0.90	1.18	84.20	-6.59	0.00	0.00	Vehicle	Vehicle	414.79	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.44**	**6.44**	-----	-----
	U$_{11}$ - L$_{10}$	263.10	92.53	1.18			0.90	1.18	98.52	1.25	0.00	0.00	Vehicle	Vehicle	470.10	-----	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	-----	-----	-----	-----	-----	**5.90**	**5.90**	-----	-----
	U$_{11}$ - L$_{11}$	274.02	88.76	1.41			0.90	1.18	94.50	1.50	0.00	0.00	Vehicle	Vehicle	479.08	-----	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	-----	-----	-----	-----	-----	**6.04**	**6.04**	-----	-----
	U$_{13}$ - L$_{12}$	254.94	86.49	-8.78			0.90	1.18	92.09	-9.35	0.00	0.00	Vehicle	Vehicle	451.14	-----	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	-----	-----	-----	-----	-----	**5.67**	**5.67**	-----	-----
	U$_{13}$ - L$_{13}$	217.71	78.87	-9.28			0.90	1.18	83.98	-9.86	0.00	0.00	Vehicle	Vehicle	392.19	-----	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	-----	-----	-----	-----	-----	**6.67**	**6.67**	-----	-----
	U$_{15}$ - L$_{15}$	110.05	62.80	-8.80			0.90	1.17	66.07	-9.26	0.00	0.00	Vehicle	Vehicle	228.95	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.18**	**8.18**	-----	-----
	U$_{15}$ - L$_{16}$	132.30	70.39	-9.31			0.90	1.17	74.05	-9.79	0.00	0.00	Vehicle	Vehicle	268.25	-----	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	-----	-----	-----	-----	-----	**7.00**	**7.00**	-----	-----
	U$_{17}$ - L$_{17}$	172.89	73.05	-6.58			0.90	1.17	76.86	-6.92	0.00	0.00	Vehicle	Vehicle	324.67	-----	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	-----	-----	-----	-----	-----	**6.99**	**6.99**	-----	-----
	U$_{17}$ - L$_{18}$	160.19	75.67	-7.84			0.90	1.17	79.62	-8.25	0.00	0.00	Vehicle	Vehicle	311.75	-----	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	-----	-----	-----	-----	-----	**6.16**	**6.16**	-----	-----
	U$_{19}$ - L$_{19}$	152.35	70.93	-9.35			0.90	1.17	74.62	-9.83	0.00	0.00	Vehicle	Vehicle	295.06	-----	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	-----	-----	-----	-----	-----	**6.68**	**6.68**	-----	-----
	U$_{20}$ - L$_{20}$	120.69	69.92	-16.30			0.90	1.17	73.56	-17.15	0.00	0.00	Vehicle	Vehicle	252.52	-----	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	-----	-----	-----	-----	-----	**6.56**	**6.56**	-----	-----
	U$_{20}$ - L$_{21}$	76.08	54.61	-23.61			0.90	1.17	57.45	-24.83	0.00	0.00	Vehicle	Vehicle	173.59	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**6.12**	**6.12**	-----	-----
	U$_{21}$ - L$_{22}$	31.46	40.68	-32.18			0.90	1.17	42.80	-33.85	0.00	0.00	Vehicle	Vehicle	96.54	-3.12	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	-----	-----	-----	**9.26**	**9.26**	**10.55**	**10.55**
	U$_{23}$ - L$_{22}$	24.30	43.48	-38.05			0.90	1.17	45.75	-40.03	0.00	0.00	Vehicle	Vehicle	91.06	-20.45	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**8.82**	**8.82**	**8.68**	**8.68**
	U$_{23}$ - L$_{23}$	72.26	58.48	-23.38			0.90	1.17	61.53	-24.59	0.00	0.00	Vehicle	Vehicle	173.93	-----	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	-----	-----	-----	-----	-----	**5.78**	**5.78**	-----	-----
	U$_{24}$ - L$_{24}$	112.13	68.86	-14.98			0.90	1.17	72.45	-15.76	0.00	0.00	Vehicle	Vehicle	239.95	-----	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	-----	-----	-----	-----	-----	**6.78**	**6.78**	-----	-----
	U$_{25}$ - L$_{25}$	127.84	81.09	-9.38			0.90	1.17	85.30	-9.87	0.00	0.00	Vehicle	Vehicle	277.09	-----	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	-----	-----	-----	-----	-----	**6.13**	**6.13**	-----	-----
	U$_{26}$ - L$_{26}$	132.67	81.34	-10.52			0.90	1.17	85.58	-11.07	0.00	0.00	Vehicle	Vehicle	283.72	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.05**	**6.05**	-----	-----
	U$_{27}$ - L$_{27}$	137.94	82.58	-9.06			0.90	1.17	86.88	-9.53	0.00	0.00	Vehicle	Vehicle	292.27	-----	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	-----	-----	-----	-----	-----	**6.59**	**6.59**	-----	-----
	U$_{29}$ - L$_{28}$	122.80	83.13	-5.35			0.90	1.17	87.46	-5.62	0.00	0.00	Vehicle	Vehicle	273.33	-----	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	-----	-----	-----	-----	-----	**6.04**	**6.04**	-----	-----
	U$_{29}$ - L$_{29}$	102.75	72.53	-4.19			0.90	1.17	76.31	-4.41	0.00	0.00	Vehicle	Vehicle	232.78	-----	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	-----	-----	-----	-----	-----	**7.18**	**7.18**	-----	-----
	U$_{31}$ - L$_{31}$	140.07	66.80	-10.85			0.90	1.18	71.13	-11.55	0.00	0.00	Vehicle	Vehicle	274.55	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.96**	**8.96**	-----	-----
	U$_{31}$ - L$_{32}$	167.39	71.06	-11.94			0.90	1.18	75.65	-12.71	0.00	0.00	Vehicle	Vehicle	315.96	-----	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	-----	-----	-----	-----	-----	**8.07**	**8.07**	-----	-----
	U$_{33}$ - L$_{33}$	202.10	80.14	-6.97			0.90	1.18	85.32	-7.42	0.00	0.00	Vehicle	Vehicle	373.65	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.53**	**7.53**	-----	-----
	U$_{33}$ - L$_{34}$	201.91	77.99	-4.68			0.90	1.18	83.04	-4.98	0.00	0.00	Vehicle	Vehicle	370.43	-----	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	-----	-----	-----	-----	-----	**7.74**	**7.74**	-----	-----
	U$_{35}$ - L$_{35}$	180.76	79.26	-8.48			0.90	1.18	84.38	-9.03	0.00	0.00	Vehicle	Vehicle	344.69	-----	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: 3F1 **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 Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Upper Chord	Structure 1	U_0 - U_1	-52.64	9.50	-70.90			0.75	1.24	8.81	-65.78	0.00	0.00	Vehicle	Vehicle	-----	-153.94	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	-----	-----	7.79	7.79
		U_1 - U_2	-61.57	23.70	-110.10			0.75	1.24	21.99	-102.15	0.00	0.00	Vehicle	Vehicle	-----	-212.83	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	-----	-----	4.93	4.93
		U_2 - U_3	-26.99	33.10	-119.80			0.75	1.24	30.71	-111.14	0.00	0.00	Vehicle	Vehicle	4.84	-179.57	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	22.73	22.73	4.84	4.84
		U_3 - U_4	32.92	-44.90	-104.60			0.75	1.24	-41.66	-97.04	0.00	0.00	Vehicle	Vehicle	-----	-83.36	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	6.16	6.16
		U_4 - U_5	34.77	39.60	-72.90			0.75	1.24	36.74	-67.63	0.00	0.00	Vehicle	Vehicle	92.97	-42.72	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	17.32	17.32	8.87	8.87
		U_5 - U_6	124.13	-47.60	-45.80			0.75	1.24	-42.49	-44.16	0.00	0.00	Vehicle	Vehicle	106.13	-----	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	223.19	9.50	-23.90			0.75	1.24	8.81	-22.17	0.00	0.00	Vehicle	Vehicle	301.60	-----	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	-----	-----	65.94	65.94	-----	-----
		U_7 - U_8	331.76	-4.80	1.40			0.75	1.24	1.30	-4.45	0.00	0.00	Vehicle	Vehicle	432.98	-----	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	-----	-----	599.31	599.31	-----	-----
		U_8 - U_9	267.61	33.40	-23.40			0.75	1.20	30.01	-21.02	0.00	0.00	Vehicle	Vehicle	386.91	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	22.37	22.37	-----	-----
		U_9 - U_{10}	89.12	42.20	-56.90			0.75	1.20	37.92	-51.12	0.00	0.00	Vehicle	Vehicle	165.14	-----	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	-----	-----	16.35	16.35	-----	-----
		U_{10} - U_{11}	-76.81	38.00	-91.00			0.75	1.20	34.14	-81.76	0.00	0.00	Vehicle	Vehicle	-----	-206.14	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	-----	-----	6.37	6.37
		U_{11} - U_{12}	-230.69	33.30	-122.20			0.75	1.20	29.92	-109.80	0.00	0.00	Vehicle	Vehicle	-----	-442.63	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	-----	-----	5.30	5.30
		U_{12} - U_{13}	-341.88	24.20	-142.50			0.75	1.20	21.74	-128.04	0.00	0.00	Vehicle	Vehicle	-----	-610.89	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	-----	-----	6.21	6.21
		U_{13} - U_{14}	-421.62	-78.00	-155.30			0.75	1.20	-70.08	-139.54	0.00	0.00	Vehicle	Vehicle	-----	-729.50	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	-----	-----	6.49	6.49
		U_{14} - U_{15}	-422.51	25.20	-116.40			0.75	1.20	22.64	-104.59	0.00	0.00	Vehicle	Vehicle	-----	-685.22	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	-----	-----	8.65	8.65
		U_{15} - U_{16}	-439.94	-97.00	-118.90			0.75	1.20	-87.15	-106.83	0.00	0.00	Vehicle	Vehicle	-----	-710.81	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	-----	-----	8.31	8.31
		U_{16} - U_{17}	-422.43	-87.80	-114.40			0.75	1.20	-78.89	-102.79	0.00	0.00	Vehicle	Vehicle	-----	-682.78	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	-----	-----	8.81	8.81
		U_{17} - U_{18}	-340.94	-115.00	-65.40			0.75	1.20	-58.76	-103.33	0.00	0.00	Vehicle	Vehicle	-----	-577.54	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	-----	-----	6.10	6.10
		U_{18} - U_{19}	-247.15	-9.20	-30.20			0.75	1.20	-8.27	-27.13	0.00	0.00	Vehicle	Vehicle	-----	-356.57	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	-----	-----	15.86	15.86
		U_{19} - U_{20}	-131.71	-24.10	-8.30			0.75	1.20	-7.46	-21.65	0.00	0.00	Vehicle	Vehicle	-----	-199.37	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	-----	-----	25.21	25.21
	Structure 2	U_0 - U_1	-131.51	6.40	-45.00			0.75	1.18	5.68	-39.93	0.00	0.00	Vehicle	Vehicle	-----	-222.86	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	12.92	12.92
		U_1 - U_2	-247.03	14.60	-90.90			0.75	1.18	12.95	-80.65	0.00	0.00	Vehicle	Vehicle	-----	-425.98	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.75	6.75
		U_2 - U_3	-347.15	22.30	-122.00			0.75	1.18	19.79	-108.24	0.00	0.00	Vehicle	Vehicle	-----	-592.01	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.50	4.00	0.50	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	6.75	6.75
		U_3 - U_4	-437.07	-116.50	-151.50			0.75	1.18	-103.36	-134.42	0.00	0.00	Vehicle	Vehicle	-----	-742.93	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	-----	-----	6.73	6.73
		U_4 - U_5	-468.70	38.90	-165.40			0.75	1.18	34.51	-146.75	0.00	0.00	Vehicle	Vehicle	-----	-800.09	15.14	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.94	6.94
		U_5 - U_6	-471.03	-97.50	-163.50			0.75	1.18	-86.51	-145.07	0.00	0.00	Vehicle	Vehicle	-----	-800.92	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	-----	-----	7.00	7.00
		U_6 - U_7	-414.41	51.20	-151.30			0.75	1.18	45.43	-134.24	0.00	0.00	Vehicle	Vehicle	-----	-713.24	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	-----	-----	6.91	6.91
		U_7 - U_8	-413.45	51.30	-113.90			0.75	1.18	45.52	-101.06	0.00	0.00	Vehicle	Vehicle	-----	-668.86	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	-----	-----	9.18	9.18
		U_8 - U_9	-321.98	52.80	-109.70			0.75	1.18	46.85	-97.33	0.00	0.00	Vehicle	Vehicle	-----	-545.11	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	-----	-----	8.26	8.26
		U_9 - U_{10}	-182.11	56.80	-78.60			0.75	1.18	50.40	-69.74	0.00	0.00	Vehicle	Vehicle	-----	-327.40	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	-----	-----	10.10	10.10
		U_{10} - U_{11}	-32.58	62.60	-65.50			0.75	1.18	55.54	-58.11	0.00	0.00	Vehicle	Vehicle	29.86	-117.90	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	16.98	16.98	12.68	12.68
		U_{11} - U_{12}	133.59	-23.10	-46.30			0.75	1.18	-20.50	-41.08	0.00	0.00	Vehicle	Vehicle	147.02	-----	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	23.40	-15.60			0.75	1.18	20.76	-13.84	0.00	0.00	Vehicle	Vehicle	403.97	-----	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	-----	-----	40.90	40.90	-----	-----
		U_{13} - U_{14}	434.76	-6.60	-17.40			0.75	1.18	-5.86	-15.44	0.00	0.00	Vehicle	Vehicle	557.58	-----	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	-----	-----	-----	-----	-----	-----
		U_{14} - U_{15}	474.45	36.60	-15.00			0.75	1.17	32.09	-13.15	0.00	0.00	Vehicle	Vehicle	658.50	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	33.96	33.96	-----	-----
		U_{15} - U_{16}	383.28	44.00	-34.50			0.75	1.17	38.58	-30.25	0.00	0.00	Vehicle	Vehicle	548.41	-----	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	-----	-----	23.05	23.05	-----	-----
		U_{16} - U_{17}	279.57	44.00	-54.00			0.75	1.17	38.58	-47.34	0.00	0.00	Vehicle	Vehicle	413.60	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	19.81	19.81	-----	-----
		U_{17} - U_{18}	172.63	42.90	-74.90			0.75	1.17	37.61	-65.67	0.00	0.00	Vehicle	Vehicle	273.31	-----	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	-----	-----	15.78	15.78	-----	-----
		U_{18} - U_{19}	74.36	40.60	-96.10			0.75	1.17	35.60	-84.26	0.00	0.00	Vehicle	Vehicle	142.95	-12.86	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	19.44	19.44	8.57	8.57
		U_{19} - U_{20}	-10.01	35.00	-114.50			0.75	1.17	30.69	-100.39	0.00	0.00	Vehicle	Vehicle	26.88	-143.52	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	27.06	27.06	6.80	6.80
		U_{20} - U_{21}	-62.06	19.90	-123.70			0.75	1.17	17.45	-108.45	0.00	0.00	Vehicle	Vehicle	-----	-221.66	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	-----	-----	7.14	7.14
		U_{21} - U_{22}	-88.74	27.10	-122.90			0.75	1.17	23.76	-107.75	0.00	0.00	Vehicle	Vehicle	-----	-255.43	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	-----	-----	6.94	6.94
		U_{22} - U_{23}	-88.92	27.20	-97.50			0.75	1.17	23.85	-85.48	0.00	0.00	Vehicle	Vehicle	-----	-226.72	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	-----	-----	8.75	8.75
		U_{23} - U_{24}	-76.67	-88.30	-98.30			0.75	1.17	-77.42	-86.18	0.00	0.00	Vehicle	Vehicle	-----	-211.70	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	-----	-----	8.82	8.82
		U_{24} - U_{25}	-37.64	39.60	-77.40			0.75	1.17	34.72	-67.86	0.00	0.00	Vehicle	Vehicle	-----	-137.15	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	-----	-----	9.66	9.66
		U_{25} - U_{26}	37.23	-75.10	-67.70			0.75	1.17	-59.36	-65.84	0.00	0.00	Vehicle	Vehicle	-----	-37.20	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	10.40	10.40
		U_{26} - U_{27}	128.02	-54.60	-58.70			0.75	1.17	-47.87	-51.47	0.00	0.00	Vehicle	Vehicle	104.19	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U_{27} - U_{28}	233.68	-19.10	-33.10			0.75	1.17	-16.75	-29.02	0.00	0.00	Vehicle	Vehicle	282.01	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{28} - U_{29}	337.65	37.10	-19.50			0.75	1.17	32.53	-17.10	0.00	0.00	Vehicle	Vehicle	481.23	-----	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	-----	-----	28.74	28.74	-----	-----
		U_{29} - U_{30}	437.10	4.50	-13.30			0.75	1.17	3.95	-11.66	0.00	0.00	Vehicle	Vehicle	573.35	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	285.71	285.71	-----	-----
		U_{30} - U_{31}	420.53	45.10	-16.10			0.75	1.18	40.01	-14.28	0.00	0.00	Vehicle	Vehicle	598.71	-----	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	-----	-----	28.58	28.58	-----	-----
		U_{31} - U_{32}	300.69	50.00	-39.30			0.75	1.18	44.36	-34.87	0.00	0.00	Vehicle	Vehicle	448.57	-----	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	-----	-----	18.90	18.90	-----	-----
		U_{32} - U_{33}	161.60	51.30	-66.50			0.75	1.18	45.

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 3F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

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

E = 29000.0 ksi

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capacity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Lower Chord	Structure 1	L_0- L_1	8.49	-2.30	-4.50			0.75	1.24	-2.13	-4.17	0.00	0.00	Vehicle	Vehicle	8.26	-----	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	-----	-----	-----	-----
		L_1 - L_2	50.81	-13.40	54.20			0.75	1.24	50.28	-12.43	0.00	0.00	Vehicle	Vehicle	131.42	-----	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	-----	-----	**8.99**	**8.99**	-----	-----
		L_2 - L_3	61.22	-23.20	80.80			0.75	1.24	74.96	-21.52	0.00	0.00	Vehicle	Vehicle	177.04	-----	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	-----	-----	**8.10**	**8.10**	-----	-----
		L_3 - L_4	25.70	-32.50	73.60			0.75	1.24	68.28	-30.15	0.00	0.00	Vehicle	Vehicle	122.18	-5.79	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	45.00	Pass	5.57	12.00	Pass	5.57	12.00	Pass	**9.42**	**9.42**	**19.52**	**19.52**
		L_4 - L_5	-118.45	16.60	81.90			0.75	1.24	75.98	15.40	0.00	0.00	Vehicle	Vehicle	-----	-133.97	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	-16.60	53.30			0.75	1.24	49.45	-15.40	0.00	0.00	Vehicle	Vehicle	-----	-303.16	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	-----	-----	**28.68**	**28.68**
		L_6 - L_7	-320.36	-20.90	23.00			0.75	1.24	21.34	-19.39	0.00	0.00	Vehicle	Vehicle	-----	-441.67	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	-----	-----	**32.21**	**32.21**
		L_7 - L_8	-417.18	-55.90	-0.40			0.75	1.24	-0.37	-51.86	0.00	0.00	Vehicle	Vehicle	-----	-609.76	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	-----	-----	**15.08**	**15.08**
		L_8 - L_9	-410.79	-34.30	-32.90			0.75	1.20	-29.56	-30.82	0.00	0.00	Vehicle	Vehicle	-----	-574.09	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	-----	-----	**25.59**	**25.59**
		L_9 - L_{10}	-247.75	-44.40	-7.40			0.75	1.20	-6.65	-39.89	0.00	0.00	Vehicle	Vehicle	-----	-373.94	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**17.49**	**17.49**
		L_{10} - L_{11}	-65.21	-43.90	31.30			0.75	1.20	28.12	-39.44	0.00	0.00	Vehicle	Vehicle	-----	-136.05	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	-----	-----	**11.03**	**11.03**
		L_{11} - L_{12}	101.88	-39.60	50.50			0.75	1.20	45.37	-35.58	0.00	0.00	Vehicle	Vehicle	191.43	-----	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	-----	-----	**10.85**	**10.85**	-----	-----
		L_{12} - L_{13}	264.09	-34.60	100.70			0.75	1.20	90.48	-31.09	0.00	0.00	Vehicle	Vehicle	460.94	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**7.85**	**7.85**	-----	-----
		L_{13} - L_{14}	373.73	-29.40	104.30			0.75	1.20	93.71	-26.42	0.00	0.00	Vehicle	Vehicle	607.68	-----	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	-----	-----	**9.97**	**9.97**	-----	-----
		L_{14} - L_{15}	476.34	88.40	143.60			0.75	1.20	129.02	79.43	0.00	0.00	Vehicle	Vehicle	786.97	-----	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	-----	-----	**8.51**	**8.51**	-----	-----
		L_{15} - L_{16}	459.97	55.40	133.60			0.75	1.20	120.04	49.78	0.00	0.00	Vehicle	Vehicle	754.01	-----	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	-----	-----	**9.28**	**9.28**	-----	-----
		L_{16} - L_{17}	381.37	67.00	109.50			0.75	1.20	98.39	60.20	0.00	0.00	Vehicle	Vehicle	623.68	-----	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	-----	-----	**8.49**	**8.49**	-----	-----
		L_{17} - L_{18}	288.98	45.00	64.10			0.75	1.20	57.59	40.43	0.00	0.00	Vehicle	Vehicle	450.54	-----	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	-----	-----	**10.32**	**10.32**	-----	-----
		L_{18} - L_{19}	176.20	19.50	28.40			0.75	1.20	25.52	17.52	0.00	0.00	Vehicle	Vehicle	262.23	-----	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	-----	-----	**12.79**	**12.79**	-----	-----
		L_{19} - L_{20}	69.74	-9.00	9.70			0.75	1.20	8.72	-8.09	0.00	0.00	Vehicle	Vehicle	102.00	-----	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	-----	-----	**49.67**	**49.67**	-----	-----
		L_0- L_1	24.59	-1.00	-5.20			0.75	1.18	-0.89	-4.61	0.00	0.00	Vehicle	Vehicle	30.81	-----	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	-----	-----	-----	-----
		L_1 - L_2	138.59	-7.30	47.60			0.75	1.18	42.23	-6.48	0.00	0.00	Vehicle	Vehicle	235.07	-----	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	-----	-----	**11.71**	**11.71**	-----	-----
		L_2 - L_3	252.83	-15.60	75.30			0.75	1.18	66.81	-13.84	0.00	0.00	Vehicle	Vehicle	415.53	-----	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	-----	-----	**10.82**	**10.82**	-----	-----
		L_3 - L_4	352.30	-23.00	111.90			0.75	1.18	99.28	-20.41	0.00	0.00	Vehicle	Vehicle	587.06	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**9.64**	**9.64**	-----	-----
		L_4 - L_5	447.17	-32.20	116.80			0.75	1.18	103.63	-28.57	0.00	0.00	Vehicle	Vehicle	716.04	-----	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	-----	-----	**11.61**	**11.61**	-----	-----
		L_5 - L_6	477.93	-39.50	135.30			0.75	1.18	120.04	-35.05	0.00	0.00	Vehicle	Vehicle	777.37	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	**10.95**	**10.95**	-----	-----
		L_6 - L_7	482.68	-46.30	114.60			0.75	1.18	101.68	-41.08	0.00	0.00	Vehicle	Vehicle	759.66	-----	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	-----	-----	**13.13**	**13.13**	-----	-----
		L_7 - L_8	336.61	82.80	130.10			0.75	1.18	115.43	73.46	0.00	0.00	Vehicle	Vehicle	587.66	-----	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	62.50	111.40			0.75	1.18	98.84	55.45	0.00	0.00	Vehicle	Vehicle	383.35	-----	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	-----	-----	**9.14**	**9.14**	-----	-----
		L_9 - L_{10}	45.60	43.90	81.30			0.75	1.18	72.13	38.95	0.00	0.00	Vehicle	Vehicle	153.05	-----	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	-----	-----	6.72	-----	-----	6.72	-----	-----	**11.32**	**11.32**	-----	-----
		L_{10} - L_{11}	-126.26	21.10	59.40			0.75	1.18	52.70	18.72	0.00	0.00	Vehicle	Vehicle	-----	-139.80	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	-13.60	37.10			0.75	1.18	32.92	-12.07	0.00	0.00	Vehicle	Vehicle	-----	-386.01	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	-----	-----	**53.52**	**53.52**
		L_{12} - L_{13}	-433.79	-26.10	11.90			0.75	1.18	10.56	-23.16	0.00	0.00	Vehicle	Vehicle	-----	-594.03	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	-----	-----	**36.34**	**36.34**
		L_{13} - L_{14}	-552.65	-40.90	15.30			0.75	1.18	13.57	-36.29	0.00	0.00	Vehicle	Vehicle	-----	-765.61	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	-----	-----	**26.53**	**26.53**
		L_{14} - L_{15}	-573.48	-39.90	-24.40			0.75	1.17	-21.39	-34.98	0.00	0.00	Vehicle	Vehicle	-----	-790.99	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**26.92**	**26.92**
		L_{15} - L_{16}	-492.94	-38.70	2.20			0.75	1.17	1.93	-33.93	0.00	0.00	Vehicle	Vehicle	-----	-684.93	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**23.06**	**23.06**
		L_{16} - L_{17}	-395.30	-45.20	2.50			0.75	1.17	2.19	-39.63	0.00	0.00	Vehicle	Vehicle	-----	-565.41	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	-----	-----	**16.46**	**16.46**
		L_{17} - L_{18}	-288.04	-49.70	30.80			0.75	1.17	27.00	-43.57	0.00	0.00	Vehicle	Vehicle	-----	-431.10	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	-----	-----	**10.08**	**10.08**
		L_{18} - L_{19}	-175.85	-45.80	48.20			0.75	1.17	42.26	-40.16	0.00	0.00	Vehicle	Vehicle	-----	-280.80	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	-----	-----	**9.91**	**9.91**
		L_{19} - L_{20}	-78.08	-41.80	88.20			0.75	1.17	77.33	-36.65	0.00	0.00	Vehicle	Vehicle	-----	-149.14	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	-----	-----	**13.52**	**13.52**
	Structure 2	L_{20} - L_{21}	7.55	-36.20	89.60			0.75	1.17	78.56	-31.74	0.00	0.00	Vehicle	Vehicle	111.94	-31.44	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	**12.18**	**12.18**	**25.89**	**25.89**
		L_{21} - L_{22}	59.07	-20.20	81.80			0.75	1.17	71.72	-17.71	0.00	0.00	Vehicle	Vehicle	170.02	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**12.63**	**12.63**	-----	-----
		L_{22} - L_{23}	71.98	67.90	116.70			0.75	1.17	102.32	59.53	0.00	0.00	Vehicle	Vehicle	226.59	-----	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	-----	-----	**8.72**	**8.72**	-----	-----
		L_{23} - L_{24}	33.55	47.40	107.20			0.75	1.17	93.99	41.56	0.00	0.00	Vehicle	Vehicle	165.79	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**9.91**	**9.91**	-----	-----
		L_{24} - L_{25}	-45.09	46.50	84.20			0.75	1.17	73.82	40.77	0.00	0.00	Vehicle	Vehicle	37.36	-5.61	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	**9.81**	**9.81**	-----	-----
		L_{25} - L_{26}	-134.94	21.80	66.30			0.75	1.17	58.13	19.11	0.00	0.00	Vehicle	Vehicle	-----	-150.57	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	-4.60	39.60			0.75	1.17	34.72	-4.03	0.00	0.00	Vehicle	Vehicle	-----	-324.91	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	-----	-----	**119.43**	**119.43**
		L_{27} - L_{28}	-351.78	-21.70	26.00			0.75	1.17	22.80	-19.03	0.00	0.00	Vehicle	Vehicle	-----	-482.04	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	-----	-----	**36.57**	**36.57**
		L_{28} - L_{29}	-458.29	-23.30	8.80			0.75	1.17	7.72	-20.43	0.00	0.00	Vehicle	Vehicle	-----	-622.34	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	-----	-----	**40.00**	**40.00**
		L_{29} - L_{30}	-542.18	-43.80	14.90			0.75	1.17	13.06	-38.40	0.00	0.00	Vehicle	Vehicle	-----	-754.75	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	-----	-----	**25.34**	**25.34**
		L_{30} - L_{31}	-514.03	-41.00	-13.80			0.75	1.18	-12.24	-36.38	0.00	0.00	Vehicle	Vehicle	-----	-715.53	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	-----	-----	**27.51**	**27.51**
		L_{31} - L_{32}	-411.21	-55.60	5.30			0.75	1.18	4.70	-49.33	0.00	0.00	Vehicle	Vehicle	-----	-598.71	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	-----	-----	**17.51**	**17.51**
		$

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 3F1 — 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
Center Truss - Verticals	Structure 1	U_0 - L_0	-67.60	-92.71	9.31			0.75	1.24	8.64	-86.01	0.00	0.00	Vehicle	Vehicle	-----	-199.69	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	-----	-----	-----	-----	-----	3.22	3.22
		U_1 - L_1	-24.06	-55.01	9.07			0.75	1.24	8.41	-51.03	0.00	0.00	Vehicle	Vehicle	-----	-97.62	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	-----	-----	-----	-----	-----	6.43	6.43
		U_2 - L_2	12.88	-31.66	-4.80			0.75	1.24	-4.45	-29.38	0.00	0.00	Vehicle	Vehicle	10.95	-21.45	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	12.42	12.42
		U_3 - L_3	37.35	-24.45	18.47			0.75	1.24	17.14	-22.68	0.00	0.00	Vehicle	Vehicle	70.83	-----	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	-----	-----	-----	-----	-----	22.78	22.78	-----	-----
		U_4 - L_4	-15.53	-4.28	-15.21			0.75	1.24	-3.97	-14.11	0.00	0.00	Vehicle	Vehicle	-----	-38.54	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	-----	-----	-----	-----	-----	23.69	23.69
		U_5 - L_5	-92.52	16.42	-63.78			0.75	1.24	15.24	-59.17	0.00	0.00	Vehicle	Vehicle	-----	-197.19	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	-----	-----	-----	-----	-----	5.62	5.62
		U_6 - L_6	-117.01	4.26	-74.33			0.75	1.24	3.95	-68.96	0.00	0.00	Vehicle	Vehicle	-----	-241.76	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	5.67	5.67
		U_7 - L_7	-127.49	0.23	-79.89			0.75	1.24	0.21	-74.12	0.00	0.00	Vehicle	Vehicle	-----	-262.09	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	-----	-----	-----	-----	-----	4.49	4.49
		U_8 - L_8	-368.60	-98.02	-96.95			0.75	1.24	-89.94	-90.94	0.00	0.00	Vehicle	Vehicle	-----	-597.40	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	-----	-----	-----	-----	-----	7.66	7.66
		U_9 - L_9	-214.45	-81.58	4.52			0.75	1.20	4.06	-73.30	0.00	0.00	Vehicle	Vehicle	-----	-374.08	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	-----	-----	-----	-----	-----	5.88	5.88
		U_{10} - L_{10}	-198.57	-78.30	-2.19			0.75	1.20	-1.97	-70.35	0.00	0.00	Vehicle	Vehicle	-----	-349.59	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	7.73	7.73
		U_{11} - L_{11}	-171.30	-62.26	10.70			0.75	1.20	9.61	-55.94	0.00	0.00	Vehicle	Vehicle	-----	-295.41	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	-----	-----	-----	-----	-----	8.40	8.40
		U_{12} - L_{12}	-128.27	-54.70	18.57			0.75	1.20	16.68	-49.15	0.00	0.00	Vehicle	Vehicle	-----	-230.65	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	8.22	8.22
		U_{13} - L_{13}	-96.55	-51.15	22.94			0.75	1.20	20.62	-45.96	0.00	0.00	Vehicle	Vehicle	-----	-185.26	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	-----	-----	-----	-----	-----	6.18	6.18
		U_{14} - L_{14}	-11.04	5.57	-1.82			0.75	1.20	5.00	-1.63	0.00	0.00	Vehicle	Vehicle	-----	-16.48	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	-----	-----	-----	-----	-----	204.63	204.63
		U_{15} - L_{15}	-2.54	33.23	-44.33			0.75	1.20	29.85	-39.83	0.00	0.00	Vehicle	Vehicle	35.51	-55.09	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	-----	-----	-----	-----	-----	14.41	14.41	8.55	8.55
		U_{16} - L_{16}	-31.31	25.22	-50.29			0.75	1.20	22.66	-45.19	0.00	0.00	Vehicle	Vehicle	-----	-99.45	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	-----	-----	-----	-----	-----	6.86	6.86
		U_{17} - L_{17}	-105.02	13.57	-69.37			0.75	1.20	12.19	-62.33	0.00	0.00	Vehicle	Vehicle	-----	-217.54	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	-----	-----	-----	-----	-----	4.91	4.91
		U_{18} - L_{18}	-126.66	4.39	-76.75			0.75	1.20	3.95	-68.96	0.00	0.00	Vehicle	Vehicle	-----	-254.30	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	5.78	5.78
		U_{19} - L_{19}	-166.54	4.11	-78.93			0.75	1.20	3.70	-70.92	0.00	0.00	Vehicle	Vehicle	-----	-308.69	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.34	6.34
		U_{20} - L_{20}	-184.30	3.82	-92.55			0.75	1.20	3.43	-83.15	0.00	0.00	Vehicle	Vehicle	-----	-347.69	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	-----	-----	-----	-----	-----	4.78	4.78
		U_0 - L_0	-203.39	-94.22	10.20			0.75	1.18	9.05	-83.60	0.00	0.00	Vehicle	Vehicle	-----	-373.08	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	5.25	5.25
		U_1 - L_1	-176.11	-76.80	11.03			0.75	1.18	9.79	-68.14	0.00	0.00	Vehicle	Vehicle	-----	-317.52	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	-----	-----	-----	-----	-----	7.28	7.28
		U_2 - L_2	-137.45	-67.14	10.45			0.75	1.18	9.27	-59.57	0.00	0.00	Vehicle	Vehicle	-----	-256.13	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	-----	-----	-----	-----	-----	7.33	7.33
		U_3 - L_3	-117.61	-59.84	10.86			0.75	1.18	9.63	-53.09	0.00	0.00	Vehicle	Vehicle	-----	-221.91	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	-----	-----	-----	-----	-----	6.30	6.30
		U_4 - L_4	-50.97	-47.96	24.25			0.75	1.18	21.52	-42.56	0.00	0.00	Vehicle	Vehicle	-----	-121.58	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	-----	-----	-----	-----	-----	6.77	6.77
		U_5 - L_5	-13.79	-44.35	30.16			0.75	1.18	26.76	-39.35	0.00	0.00	Vehicle	Vehicle	16.87	-69.08	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	-----	-----	-----	-----	-----	16.50	16.50	8.30	8.30
		U_6 - L_6	45.46	-31.61	36.50			0.75	1.18	32.39	-28.04	0.00	0.00	Vehicle	Vehicle	101.20	-----	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	11.80	11.80	-----	-----
		U_7 - L_7	-22.33	-0.75	3.48			0.75	1.18	3.09	-0.66	0.00	0.00	Vehicle	Vehicle	-----	-29.89	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	-----	-----	-----	-----	-----	480.08	480.08
		U_8 - L_8	-120.06	25.86	-55.91			0.75	1.18	22.94	-49.60	0.00	0.00	Vehicle	Vehicle	-----	-220.56	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	8.28	8.28
		U_9 - L_9	-177.00	18.29	-70.40			0.75	1.18	16.23	-62.46	0.00	0.00	Vehicle	Vehicle	-----	-311.30	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	8.23	8.23
		U_{10} - L_{10}	-205.85	13.98	-75.66			0.75	1.18	12.40	-67.13	0.00	0.00	Vehicle	Vehicle	-----	-354.88	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	-----	-----	-----	-----	-----	8.53	8.53
		U_{11} - L_{11}	-239.21	7.56	-78.50			0.75	1.18	6.71	-69.65	0.00	0.00	Vehicle	Vehicle	-----	-401.52	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	-----	-----	-----	-----	-----	7.55	7.55
		U_{12} - L_{12}	-257.92	1.00	-86.06			0.75	1.18	0.89	-76.36	0.00	0.00	Vehicle	Vehicle	-----	-434.57	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	-----	-----	-----	-----	-----	7.12	7.12
		U_{13} - L_{13}	-243.80	5.26	-89.59			0.75	1.18	4.67	-79.48	0.00	0.00	Vehicle	Vehicle	-----	-420.27	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	5.62	5.62
		U_{14} - L_{14}	-420.84	-80.60	-81.20			0.75	1.18	-71.51	-72.04	0.00	0.00	Vehicle	Vehicle	-----	-640.75	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	-----	-----	-----	-----	-----	8.76	8.76
		U_{15} - L_{15}	-158.85	-74.70	8.57			0.75	1.17	7.52	-65.49	0.00	0.00	Vehicle	Vehicle	-----	-291.64	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	-----	-----	-----	-----	-----	8.11	8.11
		U_{16} - L_{16}	-174.03	-77.62	2.63			0.75	1.17	2.30	-68.06	0.00	0.00	Vehicle	Vehicle	-----	-314.71	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	-----	-----	-----	-----	-----	7.23	7.23
		U_{17} - L_{17}	-156.46	-77.57	7.69			0.75	1.17	6.74	-68.01	0.00	0.00	Vehicle	Vehicle	-----	-291.81	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.86	6.86
		U_{18} - L_{18}	-142.20	-63.11	13.73			0.75	1.17	12.03	-55.33	0.00	0.00	Vehicle	Vehicle	-----	-256.80	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.86	7.86
		U_{19} - L_{19}	-113.66	-62.12	19.16			0.75	1.17	16.80	-54.46	0.00	0.00	Vehicle	Vehicle	-----	-218.56	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	7.30	7.30
	Structure 2	U_{20} - L_{20}	-76.52	-52.97	24.44			0.75	1.17	21.42	-46.44	0.00	0.00	Vehicle	Vehicle	-----	-159.84	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	-----	-----	-----	-----	-----	6.43	6.43
		U_{21} - L_{21}	-45.78	-42.00	24.06			0.75	1.17	21.10	-36.82	0.00	0.00	Vehicle	Vehicle	-----	-107.38	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	-----	-----	-----	-----	-----	8.00	8.00
		U_{22} - L_{22}	-17.71	2.10	6.55			0.75	1.17	5.74	1.84	0.00	0.00	Vehicle	Vehicle	-----	-20.63	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	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----
		U_{23} - L_{23}	-30.66	30.06	-45.27			0.75	1.17	26.36	-39.69	0.00	0.00	Vehicle	Vehicle	-----	-91.46	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	-----	-----	-----	-----	-----	7.81	7.81
		U_{24} - L_{24}	-62.03	25.60	-57.63			0.75	1.17	22.45	-50.53	0.00	0.00	Vehicle	Vehicle	-----	-146.32	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	-----	-----	-----	-----	-----	6.20	6.20
		U_{25} - L_{25}	-103.10	17.38	-67.60			0.75	1.17	15.24	-59.27	0.00	0.00	Vehicle	Vehicle	-----	-211.07	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	-----	-----	-----	-----	-----	6.89	6.89
		U_{26} - L_{26}	-134.31	15.06	-69.53			0.75	1.17	13.20	-60.96	0.00	0.00	Vehicle	Vehicle	-----	-253.84	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.27	7.27
		U_{27} - L_{27}	-155.93	6.71	-79.69			0.75	1.17	5.88	-69.87	0.00	0.00	Vehicle	Vehicle	-----	-293.54	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	-----	-----	-----	-----	-----	6.69	6.69
		U_{28} - L_{28}	-179.28	3.74	-85.97			0.75	1.17	3.28	-75.37	0.00	0.00	Vehicle	Vehicle	-----	-331.05	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	6.46	6.46
		U_{29} - L_{29}	-171.45	4.04	-83.03			0.75	1.17	3.54	-72.80	0.00	0.00	Vehicle	Vehicle	-----	-317.51	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.12	7.12
		U_{30} - L_{30}	-392.76	-87.04	-88.04			0.75	1.18	-77.23	-78.11	0.00	0.00	Vehicle	Vehicle	-----	-612.13	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	-----	-----	-----	-----	-----	8.44	8.44
		U_{31} - L_{31}	-203.21	-81.45	8.55			0.75	1.18	7.59	-72.26	0.00	0.00	Vehicle	Vehicle	-----	-358.12	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	6.74	6.74
		U_{32} - L_{32}	-222.46	-85.83	-0.59			0.75	1.18	-0.52	-76.15	0.00	0.00	Vehicle	Vehicle	-----	-388.19	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

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: 3F1 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 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	45.28	-14.07			0.75	1.24	42.01	-13.06	0.00	0.00	Vehicle	Vehicle	123.84	-----	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	-----	-----	-----	-----	-----	**12.69**	**12.69**	-----	-----
		U_1 - L_2	10.78	49.82	-5.51			0.75	1.24	46.22	-5.11	0.00	0.00	Vehicle	Vehicle	74.09	-----	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	-----	-----	-----	-----	-----	**9.02**	**9.02**	-----	-----
		U_2 - L_3	-44.02	41.60	-30.17			0.75	1.24	38.60	-27.99	0.00	0.00	Vehicle	Vehicle	-----	-93.61	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	-----	-----	-----	-----	-----	**10.37**	**10.37**
		U_3 - L_4	-76.72	15.64	-57.97			0.75	1.24	14.51	-53.78	0.00	0.00	Vehicle	Vehicle	-----	-169.65	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	-----	-----	-----	-----	-----	**4.83**	**4.83**
		U_4 - L_4	118.39	47.01	41.08			0.75	1.24	43.61	38.11	0.00	0.00	Vehicle	Vehicle	210.60	-----	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	-----	-----	-----	-----	-----	**9.31**	**9.31**	-----	-----
		U_5 - L_5	137.53	85.40	-11.87			0.75	1.24	79.23	-11.01	0.00	0.00	Vehicle	Vehicle	281.78	-----	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	-----	-----	-----	-----	-----	**6.48**	**6.48**	-----	-----
		U_6 - L_6	157.34	88.61	1.38			0.75	1.24	82.21	1.28	0.00	0.00	Vehicle	Vehicle	311.41	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.00**	**6.00**	-----	-----
		U_7 - L_7	149.30	90.23	-0.26			0.75	1.24	83.71	-0.24	0.00	0.00	Vehicle	Vehicle	302.92	-----	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	-----	-----	-----	-----	-----	**5.99**	**5.99**	-----	-----
		U_8 - L_8	249.09	90.07	-4.59			0.75	1.20	80.92	-4.12	0.00	0.00	Vehicle	Vehicle	429.02	-----	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	-----	-----	-----	-----	-----	**8.81**	**8.81**	-----	-----
		U_9 - L_{10}	260.26	82.65	0.08			0.75	1.20	74.26	0.07	0.00	0.00	Vehicle	Vehicle	434.88	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**9.45**	**9.45**	-----	-----
		U_{10} - L_{11}	236.30	79.83	-7.06			0.75	1.20	71.73	-6.34	0.00	0.00	Vehicle	Vehicle	400.44	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**9.40**	**9.40**	-----	-----
		U_{11} - L_{12}	211.92	71.91	-24.96			0.75	1.20	64.61	-22.43	0.00	0.00	Vehicle	Vehicle	359.50	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.75**	**8.75**	-----	-----
		U_{12} - L_{13}	151.66	72.76	-31.04			0.75	1.20	65.37	-27.89	0.00	0.00	Vehicle	Vehicle	282.14	-----	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	-----	-----	-----	-----	-----	**7.33**	**7.33**	-----	-----
		U_{13} - L_{14}	108.60	58.63	-37.32			0.75	1.20	52.68	-33.53	0.00	0.00	Vehicle	Vehicle	209.67	-----	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	-----	-----	-----	-----	-----	**6.06**	**6.06**	-----	-----
		U_{15} - L_{14}	-24.45	43.34	-47.85			0.75	1.20	38.94	-42.99	0.00	0.00	Vehicle	Vehicle	18.84	-87.67	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	-----	-----	-----	-----	-----	**11.61**	**11.61**	**7.07**	**7.07**
		U_{16} - L_{15}	23.99	60.98	-36.52			0.75	1.20	54.79	-32.82	0.00	0.00	Vehicle	Vehicle	102.41	-11.47	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	-----	-----	-----	-----	-----	**7.37**	**7.37**	**10.62**	**10.62**
		U_{17} - L_{16}	120.03	71.67	-17.21			0.75	1.20	64.39	-15.46	0.00	0.00	Vehicle	Vehicle	239.75	-----	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	-----	-----	-----	-----	-----	**6.28**	**6.28**	-----	-----
		U_{18} - L_{17}	144.79	82.80	-6.98			0.75	1.20	74.40	-6.27	0.00	0.00	Vehicle	Vehicle	284.95	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.80**	**6.80**	-----	-----
		U_{19} - L_{18}	193.05	84.42	1.62			0.75	1.20	75.85	1.45	0.00	0.00	Vehicle	Vehicle	349.57	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.82**	**6.82**	-----	-----
		U_{20} - L_{19}	193.51	61.52	-4.34			0.75	1.20	55.27	-3.90	0.00	0.00	Vehicle	Vehicle	323.42	-----	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	-----	-----	-----	-----	-----	**9.35**	**9.35**	-----	-----
	Structure 2	U_0 - L_1	202.41	63.43	-11.50			0.75	1.18	56.28	-10.20	0.00	0.00	Vehicle	Vehicle	336.30	-----	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	-----	-----	-----	-----	-----	**10.22**	**10.22**	-----	-----
		U_1 - L_2	190.86	81.01	-12.88			0.75	1.18	71.88	-11.43	0.00	0.00	Vehicle	Vehicle	341.56	-----	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	-----	-----	-----	-----	-----	**8.16**	**8.16**	-----	-----
		U_2 - L_3	155.85	82.45	-12.54			0.75	1.18	73.16	-11.12	0.00	0.00	Vehicle	Vehicle	297.70	-----	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	-----	-----	-----	-----	-----	**6.76**	**6.76**	-----	-----
		U_3 - L_4	134.05	70.13	-25.78			0.75	1.18	62.22	-22.87	0.00	0.00	Vehicle	Vehicle	255.16	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**7.12**	**7.12**	-----	-----
		U_4 - L_5	46.02	58.29	-35.22			0.75	1.18	51.72	-31.25	0.00	0.00	Vehicle	Vehicle	127.05	-----	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	-----	-----	-----	-----	-----	**7.38**	**7.38**	-----	-----
		U_5 - L_6	3.45	48.01	-45.69			0.75	1.18	42.60	-40.54	0.00	0.00	Vehicle	Vehicle	59.85	-48.22	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**9.96**	**9.96**	**8.12**	**8.12**
		U_6 - L_7	-84.29	40.49	-63.55			0.75	1.18	35.92	-56.38	0.00	0.00	Vehicle	Vehicle	-----	-182.87	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	-----	-----	-----	-----	-----	**4.88**	**4.88**
		U_7 - L_7	137.30	60.36	-34.86			0.75	1.18	53.56	-30.93	0.00	0.00	Vehicle	Vehicle	248.11	-----	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	-----	-----	-----	-----	-----	**8.70**	**8.70**	-----	-----
		U_8 - L_8	210.89	71.95	-24.12			0.75	1.18	63.84	-21.40	0.00	0.00	Vehicle	Vehicle	357.14	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.82**	**7.82**	-----	-----
		U_{10} - L_9	236.36	85.88	-18.60			0.75	1.18	76.19	-16.50	0.00	0.00	Vehicle	Vehicle	406.32	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.10**	**7.10**	-----	-----
		U_{11} - L_{10}	274.62	88.07	-12.22			0.75	1.18	78.14	-10.84	0.00	0.00	Vehicle	Vehicle	458.58	-----	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	-----	-----	-----	-----	-----	**7.29**	**7.29**	-----	-----
		U_{12} - L_{11}	281.06	85.98	-5.57			0.75	1.18	76.28	-4.94	0.00	0.00	Vehicle	Vehicle	464.55	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.39**	**7.39**	-----	-----
		U_{13} - L_{12}	278.12	84.56	-0.36			0.75	1.18	75.02	-0.32	0.00	0.00	Vehicle	Vehicle	459.08	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.66**	**6.66**	-----	-----
		U_{14} - L_{13}	235.45	84.26	-5.29			0.75	1.18	74.76	-4.69	0.00	0.00	Vehicle	Vehicle	403.26	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.25**	**7.25**	-----	-----
		U_{15} - L_{15}	143.03	82.07	-8.33			0.75	1.17	71.95	-7.30	0.00	0.00	Vehicle	Vehicle	279.47	-----	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	-----	-----	-----	-----	-----	**7.06**	**7.06**	-----	-----
		U_{16} - L_{16}	171.91	85.69	-5.73			0.75	1.17	75.13	-5.02	0.00	0.00	Vehicle	Vehicle	321.15	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.37**	**6.37**	-----	-----
		U_{17} - L_{17}	181.04	82.22	-8.14			0.75	1.17	72.09	-7.14	0.00	0.00	Vehicle	Vehicle	329.07	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.34**	**7.34**	-----	-----
		U_{18} - L_{18}	171.16	68.84	-15.65			0.75	1.17	60.35	-13.72	0.00	0.00	Vehicle	Vehicle	300.97	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.94**	**7.94**	-----	-----
		U_{19} - L_{19}	150.64	74.09	-21.99			0.75	1.17	64.96	-19.28	0.00	0.00	Vehicle	Vehicle	280.28	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.70**	**7.70**	-----	-----
		U_{20} - L_{20}	125.86	66.99	-28.94			0.75	1.17	58.73	-25.37	0.00	0.00	Vehicle	Vehicle	239.98	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**8.13**	**8.13**	-----	-----
		U_{20} - L_{21}	76.05	57.14	-32.29			0.75	1.17	50.10	-28.31	0.00	0.00	Vehicle	Vehicle	163.99	-----	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	-----	-----	-----	-----	-----	**7.02**	**7.02**	-----	-----
		U_{21} - L_{22}	38.34	50.16	-49.26			0.75	1.17	43.98	-43.19	0.00	0.00	Vehicle	Vehicle	107.02	-6.30	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**8.85**	**8.85**	**8.43**	**8.43**
		U_{23} - L_{22}	18.02	43.21	-45.81			0.75	1.17	37.89	-40.16	0.00	0.00	Vehicle	Vehicle	72.68	-28.78	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	-----	-----	-----	-----	-----	**10.81**	**10.81**	**8.49**	**8.49**
		U_{24} - L_{23}	58.54	61.21	-30.27			0.75	1.17	53.66	-26.53	0.00	0.00	Vehicle	Vehicle	145.87	-----	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	-----	-----	-----	-----	-----	**6.88**	**6.88**	-----	-----
		U_{25} - L_{24}	114.92	74.48	-24.76			0.75	1.17	65.30	-21.71	0.00	0.00	Vehicle	Vehicle	234.29	-----	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	-----	-----	-----	-----	-----	**7.48**	**7.48**	-----	-----
		U_{26} - L_{25}	142.93	82.57	-18.27			0.75	1.17	72.40	-16.02	0.00	0.00	Vehicle	Vehicle	279.93	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.01**	**7.01**	-----	-----
		U_{27} - L_{26}	173.71	78.01	-11.78			0.75	1.17	68.39	-10.32	0.00	0.00	Vehicle	Vehicle	314.73	-----	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	-----	-----	-----	-----	-----	**6.97**	**6.97**	-----	-----
		U_{28} - L_{27}	186.49	87.02	-4.19			0.75	1.17	76.29	-3.68	0.00	0.00	Vehicle	Vehicle	341.61	-----	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	-----	-----	-----	-----	-----	**6.86**	**6.86**	-----	-----
		U_{29} - L_{28}	190.57	85.38	-4.94			0.75	1.17	74.86	-4.33	0.00	0.00	Vehicle	Vehicle	345.05	-----	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	-----	-----	-----	-----	-----	**6.15**	**6.15**	-----	-----
		U_{30} - L_{29}	161.74	77.76	-3.90			0.75	1.17	68.18	-3.42	0.00	0.00	Vehicle	Vehicle	298.90	-----	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	-----	-----	-----	-----	-----	**7.17**	**7.17**	-----	-----
		U_{30} - L_{31}	191.49	85.84	-8.38			0.75	1.18	76.16	-7.43	0.00	0.00	Vehicle	Vehicle	347.95	-----	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	-----	-----	-----	-----	-----	**7.69**	**7.69**	-----	-----
		U_{31} - L_{32}	226.17	82.37	-9.27			0.75	1.18	73.08	-8.22	0.00	0.00	Vehicle	Vehicle	389.02	-----	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	-----	-----	-----	-----	-----	**7.54**	**7.54**	-----	-----
		U_{32} - L_{33}	243.26	91.02	-7.55			0.75	1.18	80.76	-6.70	0.00	0.00	Vehicle	Vehicle	421.22	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.44**	**7.44**	-----	-----
		U_{33} - L_{34}	238.98	79.84	-14.78			0.75	1.18	70.84	-13.11	0.00	0.00	Vehicle	Vehicle	402.77	-----	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	-----	-----	-----	-----	-----	**8.55**	**8.55**	-----	-----
		U_{34} - L_{35}	222.10	76.96	-20.27			0.75	1.18	68.28	-17.98	0.00	0.00	Vehicle	Vehicle	377.50	-----	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: 3F1 **Condition:** As-Built

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

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

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

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Upper Chord	Structure 1	U_0 - U_1	-66.77	8.58	-41.84	2.20	-8.83	0.90	1.24	9.55	-46.58	2.20	-8.83	Vehicle	Vehicle	-----	-147.36	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	10.70	10.70
		U_1 - U_2	-86.66	20.69	-69.13	6.00	-16.34	0.90	1.24	23.04	-76.97	6.00	-16.34	Vehicle	Vehicle	-----	-212.71	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	6.22	6.22
		U_2 - U_3	-48.28	30.64	-70.90	9.44	-19.05	0.90	1.24	34.11	-78.93	9.44	-19.05	Vehicle	Vehicle	-----	-165.37	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	6.55	6.55
		U_3 - U_4	36.43	39.59	-59.59	12.72	-17.47	0.90	1.24	44.08	-66.34	12.72	-17.47	Vehicle	Vehicle	104.66	-38.88	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	14.40	14.40	9.07	9.07
		U_4 - U_5	38.78	39.73	-32.12	12.78	-17.37	0.90	1.24	44.23	-35.76	12.78	-17.37	Vehicle	Pedestrian	107.91	-18.65	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	14.30	14.30	11.37	11.37
		U_5 - U_6	154.43	44.72	-19.87	3.10	0.00	0.90	1.24	49.78	-22.12	3.10	0.00	Vehicle	Vehicle	265.47	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	10.38	10.38	-----	-----
		U_6 - U_7	288.19	47.69	-9.24	17.11	-4.31	0.90	1.24	53.09	-10.29	17.11	-4.31	Vehicle	Pedestrian	443.67	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	9.72	9.72	-----	-----
		U_7 - U_8	410.75	1.44	6.54	22.59	0.00	0.90	1.24	7.28	1.60	22.59	0.00	Pedestrian	Vehicle	572.80	-----	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	-----	-----	23.42	23.42	-----	-----
		U_8 - U_9	311.35	36.69	-8.06	12.90	6.15	0.90	1.20	39.56	-8.69	12.90	6.15	Vehicle	Vehicle	456.18	-----	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	-----	-----	15.86	15.86	-----	-----
		U_9 - U_{10}	78.25	38.54	-34.31	12.28	-6.83	0.90	1.20	41.55	-36.99	12.28	-6.83	Vehicle	Vehicle	155.74	-----	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	-----	-----	15.18	15.18	-----	-----
		U_{10} - U_{11}	-141.75	36.32	-62.82	11.11	-18.45	0.90	1.20	39.15	-67.74	11.11	-18.45	Vehicle	Vehicle	-----	-272.33	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	-----	-----	6.73	6.73
		U_{11} - U_{12}	-338.40	33.43	-90.07	9.77	-27.96	0.90	1.20	36.04	-97.11	9.77	-27.96	Vehicle	Vehicle	-----	-566.16	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	-----	-----	4.88	4.88
		U_{12} - U_{13}	-480.50	29.25	-104.88	8.23	-34.35	0.90	1.20	31.53	-113.08	8.23	-34.35	Vehicle	Vehicle	-----	-771.65	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	-----	-----	5.81	5.81
		U_{13} - U_{14}	-571.10	24.82	-110.31	6.68	-37.24	0.90	1.20	26.76	-118.93	6.68	-37.24	Vehicle	Vehicle	-----	-897.04	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	-----	-----	6.36	6.36
		U_{14} - U_{15}	-571.52	24.70	-93.84	6.65	-37.25	0.90	1.20	26.63	-101.17	6.65	-37.25	Vehicle	Pedestrian	-----	-922.93	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	-----	-----	5.46	5.46
		U_{15} - U_{16}	-582.34	8.96	-88.15	0.00	-31.16	0.90	1.20	9.66	-95.04	0.00	-31.16	Vehicle	Vehicle	-----	-880.59	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	7.84	7.84
		U_{16} - U_{17}	-539.92	8.12	-53.07	0.00	-28.35	0.90	1.20	8.75	-57.22	0.00	-28.35	Vehicle	Pedestrian	-----	-813.13	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	-----	-----	9.20	9.20
		U_{17} - U_{18}	-422.72	-68.26	-32.89	-25.07	2.26	0.90	1.20	-35.46	-73.59	2.26	-25.07	Vehicle	Pedestrian	-----	-677.80	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	-41.39	-10.99	-16.97	1.28	0.90	1.20	-11.85	-44.63	1.28	-16.97	Vehicle	Pedestrian	-----	-452.57	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	-----	-----	6.35	6.35
		U_{19} - U_{20}	-140.97	-17.42	-5.12	-8.68	0.55	0.90	1.20	-5.52	-18.78	0.55	-8.68	Vehicle	Pedestrian	-----	-218.96	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	-----	-----	19.54	19.54
	Structure 2	U_0 - U_1	-147.48	2.74	-28.27	0.36	-4.88	0.90	1.18	2.92	-30.10	0.36	-4.88	Vehicle	Vehicle	-----	-230.86	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	-----	-----	16.61	16.61
		U_1 - U_2	-319.09	9.33	-55.34	1.96	-13.36	0.90	1.18	9.93	-58.92	1.96	-13.36	Vehicle	Vehicle	-----	-491.41	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	-----	-----	8.01	8.01
		U_2 - U_3	-460.93	16.68	-85.05	3.77	-20.95	0.90	1.18	17.76	-90.55	3.77	-20.95	Vehicle	Vehicle	-----	-716.92	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	-----	-----	6.81	6.81
		U_3 - U_4	-580.02	25.32	-107.98	5.92	-27.68	0.90	1.18	26.96	-114.97	5.92	-27.68	Vehicle	Vehicle	-----	-903.49	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	-----	-----	6.62	6.62
		U_4 - U_5	-616.47	32.98	-116.22	7.86	-31.35	0.90	1.18	35.11	-123.74	7.86	-31.35	Vehicle	Vehicle	-----	-962.28	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	-----	-----	7.04	7.04
		U_5 - U_6	-604.69	40.73	-116.85	9.87	-32.88	0.90	1.18	43.37	-124.41	9.87	-32.88	Vehicle	Vehicle	-----	-947.82	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	-----	-----	7.09	7.09
		U_6 - U_7	-514.75	46.62	-106.22	11.56	-31.23	0.90	1.18	49.64	-113.10	11.56	-31.23	Vehicle	Vehicle	-----	-816.20	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	7.31	7.31
		U_7 - U_8	-512.80	46.49	-94.26	11.57	-31.18	0.90	1.18	49.50	-100.36	11.57	-31.18	Vehicle	Vehicle	-----	-797.10	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	8.26	8.26
		U_8 - U_9	-373.48	51.89	-67.32	13.16	-27.41	0.90	1.18	55.25	-71.68	13.16	-27.41	Vehicle	Pedestrian	-----	-614.33	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	-----	-----	7.60	7.60
		U_9 - U_{10}	-181.02	54.31	-51.16	14.25	-21.42	0.90	1.18	57.83	-54.47	14.25	-21.42	Vehicle	Pedestrian	-----	-333.98	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	-----	-----	9.29	9.29
		U_{10} - U_{11}	26.21	55.95	-36.11	15.21	-14.40	0.90	1.18	59.56	-38.45	15.21	-14.40	Vehicle	Pedestrian	111.51	-34.63	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	14.85	14.85	15.05	15.05
		U_{11} - U_{12}	237.41	-9.98	-11.49	10.86	0.00	0.90	1.18	-10.63	-12.23	10.86	0.00	Vehicle	Vehicle	294.82	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{12} - U_{13}	435.92	9.46	-3.32	15.82	0.56	0.90	1.18	10.07	-3.53	15.82	0.56	Pedestrian	Vehicle	600.34	-----	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	-----	-----	27.17	27.17	-----	-----
		U_{13} - U_{14}	595.85	9.20	5.03	24.32	0.00	0.90	1.18	9.79	5.36	24.32	0.00	Pedestrian	Vehicle	818.95	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	28.39	28.39	-----	-----
		U_{14} - U_{15}	615.52	45.71	-2.43	13.42	8.77	0.90	1.17	48.09	-2.55	13.42	8.77	Vehicle	Pedestrian	862.69	-----	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	-----	-----	19.73	19.73	-----	-----
		U_{15} - U_{16}	486.12	48.38	-19.04	14.17	3.09	0.90	1.17	50.90	-20.03	14.17	3.09	Vehicle	Vehicle	698.13	-----	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	-----	-----	15.45	15.45	-----	-----
		U_{16} - U_{17}	339.23	48.13	-34.72	14.66	-2.95	0.90	1.17	50.63	-36.53	14.66	-2.95	Vehicle	Vehicle	506.82	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	13.92	13.92	-----	-----
		U_{17} - U_{18}	192.06	47.07	-52.89	15.12	-9.49	0.90	1.17	49.52	-55.65	15.12	-9.49	Vehicle	Vehicle	314.06	-----	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	-----	-----	11.60	11.60	-----	-----
		U_{18} - U_{19}	53.73	43.13	-70.20	15.12	-15.34	0.90	1.17	45.38	-73.86	15.12	-15.34	Vehicle	Vehicle	128.84	-26.17	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	15.70	15.70	9.49	9.49
		U_{19} - U_{20}	-59.08	38.25	-84.61	15.07	-19.84	0.90	1.17	40.24	-89.02	15.07	-19.84	Pedestrian	Vehicle	-----	-192.53	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	-----	-----	7.12	7.12
	Structure 3	U_0 - U_1	-125.50	19.59	-89.50	14.76	-22.39	0.90	1.17	20.61	-94.16	14.76	-22.39	Pedestrian	Vehicle	-----	-285.55	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	-----	-----	7.55	7.55
		U_1 - U_2	-146.93	26.35	-91.22	14.37	-22.74	0.90	1.17	27.73	-95.97	14.37	-22.74	Pedestrian	Vehicle	-----	-315.77	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.19	7.19
		U_2 - U_3	-146.70	24.61	-81.21	14.36	-22.72	0.90	1.17	25.89	-85.44	14.36	-22.72	Pedestrian	Vehicle	-----	-301.79	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	-----	-----	8.08	8.08
		U_3 - U_4	-112.76	32.11	-63.85	13.87	-16.66	0.90	1.17	33.78	-67.17	13.87	-16.66	Pedestrian	Vehicle	-----	-233.92	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	-----	-----	10.78	10.78
		U_4 - U_5	-36.27	36.96	-56.36	13.40	-15.02	0.90	1.17	38.88	-59.30	13.40	-15.02	Pedestrian	Vehicle	20.81	-124.24	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	16.38	16.38	11.07	11.07
		U_5 - U_6	80.70	40.06	-44.90	0.37	0.00	0.90	1.17	42.14	-47.24	0.37	0.00	Vehicle	Vehicle	159.69	-----	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	-----	-----	42.67	-----	-----	10.67	-----	-----	16.27	16.27	-----	-----
		U_6 - U_7	220.59	-8.16	-22.56	7.92	0.00	0.90	1.17	-8.58	-23.74	7.92	0.00	Vehicle	Vehicle	275.61	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U_7 - U_8	363.31	4.01	-13.39	14.90	0.00	0.90	1.17	4.22	-14.09	14.90	0.00	Pedestrian	Vehicle	497.15	-----	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	-----	-----	35.61	35.61	-----	-----
		U_8 - U_9	503.82	30.86	-6.55	21.74	3.11	0.90	1.17	32.47	-6.90	21.74	3.11	Pedestrian	Vehicle	725.44	-----	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	-----	-----	14.18	14.18	-----	-----
		U_9 - U_{10}	616.57	5.44	-2.68	27.08	0.00	0.90	1.17	5.72	-2.82	27.08	0.00	Pedestrian	Vehicle	844.17	-----	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	-----	-----	28.90	28.90	-----	-----
		U_{10}

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: 3F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

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

E = 29000.0 ksi

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Lower Chord	Structure 1	L$_0$- L$_1$	-2.01	0.94	-1.01	0.36	-2.06	0.90	1.24	1.05	-1.13	0.36	-2.06	Pedestrian	Pedestrian	-----	-6.75	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	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	-----	-----	**132.27**	**132.27**
		L$_1$ - L$_2$	67.91	-11.39	33.28	-3.36	9.23	0.90	1.24	37.05	-12.68	9.23	-3.36	Vehicle	Vehicle	136.44	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**11.73**	**11.73**	-----	-----
		L$_2$ - L$_3$	78.84	-24.73	58.32	-7.39	15.48	0.90	1.24	64.93	-27.53	15.48	-7.39	Vehicle	Vehicle	186.90	-----	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	-----	-----	**9.08**	**9.08**	-----	-----
		L$_3$ - L$_4$	39.14	-34.54	59.82	-10.83	18.09	0.90	1.24	66.59	-38.45	18.09	-10.83	Vehicle	Vehicle	137.45	-----	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	-----	-----	**9.45**	**9.45**	-----	-----
		L$_4$ - L$_5$	-166.38	-50.11	37.64	-16.90	10.96	0.90	1.24	41.90	-55.79	10.96	-16.90	Vehicle	Vehicle	-----	-288.82	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	-----	-----	**5.99**	**5.99**
		L$_5$ - L$_6$	-301.23	-54.24	19.14	-15.70	0.00	0.90	1.24	21.30	-60.39	0.00	-15.70	Vehicle	Vehicle	-----	-470.10	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	-----	-----	**5.93**	**5.93**
		L$_6$ - L$_7$	-438.94	-9.01	-4.12	-4.99	-21.52	0.90	1.24	-4.59	-10.03	-4.99	-21.52	Pedestrian	Pedestrian	-----	-611.63	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**16.04**	**16.04**
		L$_7$ - L$_8$	-551.65	-50.69	2.82	-35.55	0.00	0.90	1.24	3.14	-56.43	0.00	-35.55	Vehicle	Pedestrian	-----	-836.71	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	-----	-----	**7.04**	**7.04**
		L$_8$ - L$_9$	-570.53	-28.40	-30.33	-11.71	-25.77	0.90	1.20	-30.62	-32.71	-11.71	-25.77	Pedestrian	Pedestrian	-----	-817.71	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	-----	-----	**10.75**	**10.75**
		L$_9$ - L$_{10}$	-355.48	-31.28	-8.05	-11.67	-13.03	0.90	1.20	-8.68	-33.73	-11.67	-13.03	Pedestrian	Pedestrian	-----	-522.91	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	-----	-----	**12.61**	**12.61**
		L$_{10}$ - L$_{11}$	-118.48	-32.23	14.50	-10.69	-1.74	0.90	1.20	15.64	-34.75	-1.74	-10.69	Vehicle	Vehicle	-----	-199.20	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	-----	-----	**10.99**	**10.99**
		L$_{11}$ - L$_{12}$	103.45	-29.91	44.11	-9.47	9.96	0.90	1.20	47.56	-32.24	9.96	-9.47	Vehicle	Vehicle	196.31	-----	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	-----	-----	**10.32**	**10.32**	-----	-----
		L$_{12}$ - L$_{13}$	300.60	-27.72	78.10	-8.14	17.83	0.90	1.20	84.21	-29.89	17.83	-8.14	Vehicle	Vehicle	500.26	-----	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	-----	-----	**8.01**	**8.01**	-----	-----
		L$_{13}$ - L$_{14}$	441.19	-23.58	78.29	-6.61	24.15	0.90	1.20	84.41	-25.42	24.15	-6.61	Vehicle	Vehicle	683.29	-----	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	-----	-----	**10.27**	**10.27**	-----	-----
		L$_{14}$ - L$_{15}$	547.00	-14.95	97.85	0.00	21.08	0.90	1.20	105.50	-16.12	21.08	0.00	Vehicle	Vehicle	848.25	-----	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	-----	-----	**9.74**	**9.74**	-----	-----
		L$_{15}$ - L$_{16}$	506.09	-14.15	81.56	0.00	18.29	0.90	1.20	87.94	-15.25	18.29	0.00	Vehicle	Vehicle	772.23	-----	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	-----	-----	**12.15**	**12.15**	-----	-----
		L$_{16}$ - L$_{17}$	398.75	57.98	46.37	0.00	11.88	0.90	1.20	62.52	50.00	11.88	0.00	Vehicle	Vehicle	599.65	-----	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	-----	-----	**13.08**	**13.08**	-----	-----
		L$_{17}$ - L$_{18}$	263.81	37.14	23.38	4.66	0.15	0.90	1.20	40.04	25.21	4.66	0.15	Vehicle	Vehicle	395.01	-----	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	-----	-----	**15.47**	**15.47**	-----	-----
		L$_{18}$ - L$_{19}$	118.75	16.19	1.32	-3.38	0.71	0.90	1.20	17.45	1.42	0.71	-3.38	Vehicle	Pedestrian	177.07	-----	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	-----	-----	**21.99**	**21.99**	-----	-----
		L$_{19}$ - L$_{20}$	-23.36	-4.89	2.84	-12.08	1.28	0.90	1.20	3.06	-5.27	1.28	-12.08	Pedestrian	Pedestrian	-----	-52.93	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	-----	-----	**23.05**	**23.05**
		L$_0$- L$_1$	-36.12	3.27	-0.35	1.19	-5.14	0.90	1.18	3.48	-0.37	1.19	-5.14	Pedestrian	Pedestrian	-----	-54.12	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	-----	-----	**90.46**	**90.46**
		L$_1$ - L$_2$	132.64	-1.94	26.27	-0.06	2.93	0.90	1.18	27.96	-2.07	2.93	-0.06	Vehicle	Vehicle	208.79	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**17.91**	**17.91**	-----	-----
		L$_2$ - L$_3$	303.94	-9.22	59.32	-1.79	10.52	0.90	1.18	63.16	-9.82	10.52	-1.79	Vehicle	Vehicle	477.23	-----	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	-----	-----	**10.64**	**10.64**	-----	-----
		L$_3$ - L$_4$	445.73	-16.77	84.01	-3.63	18.15	0.90	1.18	89.44	-17.86	18.15	-3.63	Vehicle	Vehicle	695.73	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**9.65**	**9.65**	-----	-----
		L$_4$ - L$_5$	567.64	-26.86	102.37	-6.10	24.81	0.90	1.18	108.99	-28.60	24.81	-6.10	Vehicle	Vehicle	879.63	-----	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	-----	-----	**9.93**	**9.93**	-----	-----
		L$_5$ - L$_6$	603.43	-34.64	112.14	-8.06	28.47	0.90	1.18	119.40	-36.88	28.47	-8.06	Vehicle	Vehicle	939.68	-----	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	-----	-----	**9.96**	**9.96**	-----	-----
		L$_6$ - L$_7$	599.28	-43.79	105.70	-10.41	30.25	0.90	1.18	112.54	-46.62	30.25	-10.41	Vehicle	Vehicle	925.36	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**10.83**	**10.83**	-----	-----
		L$_7$ - L$_8$	373.73	-54.85	85.35	-13.66	24.92	0.90	1.18	90.87	-58.40	24.92	-13.66	Vehicle	Vehicle	603.97	-----	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	-----	-----	**10.65**	**10.65**	-----	-----
		L$_8$ - L$_9$	195.51	-58.69	70.50	-15.12	19.51	0.90	1.18	75.07	-62.49	19.51	-15.12	Vehicle	Vehicle	351.75	-----	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	-----	-----	**12.05**	**12.05**	-----	-----
		L$_9$ - L$_{10}$	-13.41	-60.97	49.56	-7.61	12.45	0.90	1.18	52.76	-64.91	12.45	-7.61	Vehicle	Vehicle	51.15	-101.82	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	**16.59**	**16.59**	**11.00**	**11.00**
		L$_{10}$ - L$_{11}$	-217.51	18.33	22.26	-15.65	0.00	0.90	1.18	23.70	19.52	0.00	-15.65	Vehicle	Vehicle	-----	-257.39	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	-----	-----	**11.48**	**11.48**	-----	-----
		L$_{11}$ - L$_{12}$	-420.12	-60.64	10.28	-23.35	0.00	0.90	1.18	10.95	-64.56	0.00	-23.35	Vehicle	Pedestrian	-----	-660.43	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	-----	-----	**5.81**	**5.81**
		L$_{12}$ - L$_{13}$	-591.61	-25.08	-6.27	-7.10	-18.75	0.90	1.18	-6.68	-26.71	-7.10	-18.75	Pedestrian	Pedestrian	-----	-828.18	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**15.04**	**15.04**
		L$_{13}$ - L$_{14}$	-724.42	-24.29	-0.13	-35.12	0.00	0.90	1.18	-0.14	-25.86	0.00	-35.12	Vehicle	Pedestrian	-----	-1021.02	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	-----	-----	**12.97**	**12.97**
		L$_{14}$ - L$_{15}$	-747.19	11.05	-12.71	0.00	-36.29	0.90	1.17	11.63	-13.37	0.00	-36.29	Vehicle	Pedestrian	-----	-1035.91	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**15.46**	**15.46**
		L$_{15}$ - L$_{16}$	-632.29	-37.54	-2.11	-9.38	-12.11	0.90	1.17	-2.22	-39.49	-9.38	-12.11	Pedestrian	Vehicle	-----	-873.31	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**16.28**	**16.28**
		L$_{16}$ - L$_{17}$	-488.73	-40.58	5.89	-9.25	-11.44	0.90	1.17	6.20	-42.69	-9.25	-11.44	Vehicle	Vehicle	-----	-690.84	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	-----	-----	**13.09**	**13.09**
		L$_{17}$ - L$_{18}$	-337.06	-40.24	9.91	-9.73	-4.53	0.90	1.17	10.43	-42.34	-4.53	-9.73	Vehicle	Vehicle	-----	-493.22	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	-----	-----	**9.22**	**9.22**
		L$_{18}$ - L$_{19}$	-183.64	-39.62	34.13	-9.59	1.37	0.90	1.17	35.91	-41.68	1.37	-9.59	Vehicle	Vehicle	-----	-292.91	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	-----	-----	**9.36**	**9.36**
		L$_{19}$ - L$_{20}$	-45.76	-35.64	52.39	-9.58	7.21	0.90	1.17	55.12	-37.50	7.21	-9.58	Vehicle	Vehicle	12.17	-108.23	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	**13.15**	**13.15**	**14.08**	**14.08**
	Structure 2	L$_{20}$ - L$_{21}$	68.06	-31.67	74.25	-9.12	11.07	0.90	1.17	78.12	-33.31	11.07	-9.12	Vehicle	Vehicle	190.03	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**11.48**	**11.48**	-----	-----
		L$_{21}$ - L$_{22}$	134.01	-13.44	69.11	-8.81	13.61	0.90	1.17	72.71	-14.14	13.61	-8.81	Vehicle	Pedestrian	268.74	-----	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	-----	-----	**11.42**	**11.42**	-----	-----
		L$_{22}$ - L$_{23}$	122.68	-26.18	72.31	-7.57	8.54	0.90	1.17	76.07	-27.55	8.54	-7.57	Vehicle	Vehicle	258.38	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**11.07**	**11.07**	-----	-----
		L$_{23}$ - L$_{24}$	46.89	-31.08	63.56	-7.09	6.92	0.90	1.17	66.87	-32.70	6.92	-7.09	Vehicle	Vehicle	147.90	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**13.72**	**13.72**	-----	-----
		L$_{24}$ - L$_{25}$	-66.54	-33.65	50.32	-4.27	3.32	0.90	1.17	52.94	-35.40	3.32	-4.27	Vehicle	Vehicle	-----	-132.52	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	-----	-----	**14.33**	**14.33**
		L$_{25}$ - L$_{26}$	-205.63	-37.09	27.43	-11.77	0.00	0.90	1.17	28.86	-39.02	0.00	-11.77	Vehicle	Vehicle	-----	-318.05	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	-----	-----	**9.43**	**9.43**
		L$_{26}$ - L$_{27}$	-350.43	2.28	16.24	-18.87	0.00	0.90	1.17	17.08	2.40	0.00	-18.87	Vehicle	Pedestrian	-----	-476.96	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	-----	-----	-----	-----
		L$_{27}$ - L$_{28}$	-494.65	-26.24	4.93	-25.89	0.00	0.90	1.17	5.18	-27.61	0.00	-25.89	Vehicle	Pedestrian	-----	-712.58	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	-----	-----	**10.34**	**10.34**
		L$_{28}$ - L$_{29}$	-620.83	-42.22	-6.34	-21.97	-5.03	0.90	1.17	-6.67	-44.42	-5.03	-21.97	Pedestrian	Pedestrian	-----	-893.38	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	-----	-----	**9.86**	**9.86**
		L$_{29}$ - L$_{30}$	-716.91	-23.80	-16.87	-36.29	0.00	0.90	1.17	-17.74	-25.04	0.00	-36.29	Vehicle	Pedestrian	-----	-1011.71	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**13.02**	**13.02**
		L$_{30}$ - L$_{31}$	-850

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 3F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

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

E = 29000.0 ksi

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Verticals	Structure 1	U_0 - L_0	-93.72	-49.18	11.31	-12.32	3.44	0.90	1.24	12.59	-54.75	3.44	-12.32	Vehicle	Vehicle	-----	-193.01	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	-----	-----	-----	-----	-----	4.58	4.58
		U_1 - L_1	-46.53	-30.56	9.70	-9.05	2.93	0.90	1.24	10.80	-34.02	2.93	-9.05	Vehicle	Vehicle	-----	-104.72	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	-----	-----	-----	-----	-----	8.98	8.98
		U_2 - L_2	-0.10	-20.52	8.80	-5.68	2.84	0.90	1.24	9.80	-22.85	2.84	-5.68	Vehicle	Vehicle	12.61	-29.83	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	43.66	43.66	15.40	15.40
		U_3 - L_3	39.60	-12.91	7.25	-2.12	2.69	0.90	1.24	8.07	-14.37	2.69	-2.12	Vehicle	Vehicle	61.97	-----	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	-----	-----	-----	-----	-----	48.07	48.07	-----	-----
		U_4 - L_4	-30.20	-0.28	-11.25	0.00	-3.46	0.90	1.24	-0.32	-12.52	0.00	-3.46	Vehicle	Vehicle	-----	-55.54	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	25.53	25.53
		U_5 - L_5	-130.49	1.88	-31.86	0.00	-10.23	0.90	1.24	2.09	-35.47	0.00	-10.23	Vehicle	Vehicle	-----	-215.74	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	-----	-----	-----	-----	-----	8.31	8.31
		U_6 - L_6	-158.18	5.01	-31.60	0.00	-13.06	0.90	1.24	5.58	-35.18	0.00	-13.06	Vehicle	Pedestrian	-----	-268.34	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	-----	-----	-----	-----	-----	7.25	7.25
		U_7 - L_7	-152.32	9.97	-31.44	0.00	-13.24	0.90	1.24	11.10	-35.00	0.00	-13.24	Vehicle	Pedestrian	-----	-260.73	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	-----	-----	-----	-----	-----	6.38	6.38
		U_8 - L_8	-455.55	-49.23	-29.14	-18.97	-12.74	0.90	1.24	-32.45	-54.81	-12.74	-18.97	Pedestrian	Pedestrian	-----	-688.12	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	-----	-----	-----	-----	-----	8.27	8.27
		U_9 - L_9	-287.55	-49.71	0.05	-18.20	0.00	0.90	1.20	0.05	-53.59	0.00	-18.20	Vehicle	Pedestrian	-----	-467.15	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	-----	-----	-----	-----	-----	4.98	4.98
		U_{10} - L_{10}	-276.32	-46.93	-1.87	-16.17	-1.37	0.90	1.20	-2.01	-50.60	-1.37	-16.17	Pedestrian	Vehicle	-----	-425.00	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	9.22	9.22
		U_{11} - L_{11}	-232.59	-42.90	1.34	-14.41	0.00	0.90	1.20	1.44	-46.26	0.00	-14.41	Vehicle	Vehicle	-----	-362.50	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	8.84	8.84
		U_{12} - L_{12}	-178.43	-35.86	1.08	-11.20	0.00	0.90	1.20	1.16	-38.66	0.00	-11.20	Vehicle	Vehicle	-----	-282.22	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	-----	-----	-----	-----	-----	9.16	9.16
		U_{13} - L_{13}	-127.74	-26.60	4.18	-7.88	0.00	0.90	1.20	4.51	-28.68	0.00	-7.88	Vehicle	Vehicle	-----	-203.35	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	-----	-----	-----	-----	-----	8.81	8.81
		U_{14} - L_{14}	-30.39	-5.89	-2.75	-3.03	0.00	0.90	1.20	-2.96	-6.35	0.00	-3.03	Vehicle	Pedestrian	-----	-51.72	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	-----	-----	-----	-----	-----	33.49	33.49
		U_{15} - L_{15}	-28.94	9.12	-22.00	1.55	-4.54	0.90	1.20	9.83	-23.72	1.55	-4.54	Vehicle	Vehicle	-----	-68.46	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	13.25	13.25
		U_{16} - L_{16}	-76.03	4.98	-26.40	1.39	-7.08	0.90	1.20	5.37	-28.47	1.39	-7.08	Vehicle	Vehicle	-----	-135.85	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	-----	-----	-----	-----	-----	9.32	9.32
		U_{17} - L_{17}	-161.89	5.34	-35.88	1.30	-10.66	0.90	1.20	5.75	-38.68	1.30	-10.66	Vehicle	Vehicle	-----	-260.74	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	-----	-----	-----	-----	-----	6.45	6.45
		U_{18} - L_{18}	-190.28	4.58	-35.33	1.12	-12.71	0.90	1.20	4.93	-38.09	1.12	-12.71	Vehicle	Pedestrian	-----	-313.40	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	-----	-----	-----	-----	-----	6.60	6.60
		U_{19} - L_{19}	-228.17	3.92	-34.88	0.97	-14.98	0.90	1.20	4.23	-37.61	0.97	-14.98	Vehicle	Pedestrian	-----	-364.98	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	-----	-----	-----	-----	-----	7.38	7.38
		U_{20} - L_{20}	-242.83	3.56	-35.75	0.95	-15.63	0.90	1.20	3.84	-38.54	0.95	-15.63	Vehicle	Pedestrian	-----	-386.10	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	-----	-----	-----	-----	-----	6.26	6.26
	Structure 2	U_0 - L_0	-303.03	-52.05	8.54	-15.08	2.22	0.90	1.18	9.09	-55.41	2.22	-15.08	Vehicle	Vehicle	-----	-465.97	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	-----	-----	-----	-----	-----	6.13	6.13
		U_1 - L_1	-268.78	-47.24	8.75	-13.67	2.12	0.90	1.18	9.32	-50.30	2.12	-13.67	Vehicle	Vehicle	-----	-414.80	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	-----	-----	-----	-----	-----	8.03	8.03
		U_2 - L_2	-220.87	-44.14	9.45	-12.32	2.34	0.90	1.18	10.06	-47.00	2.34	-12.32	Vehicle	Vehicle	-----	-348.23	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	-----	-----	-----	-----	-----	7.52	7.52
		U_3 - L_3	-175.23	-40.92	10.12	-10.35	2.49	0.90	1.18	10.78	-43.57	2.49	-10.35	Vehicle	Vehicle	-----	-284.43	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	-----	-----	-----	-----	-----	6.35	6.35
		U_4 - L_4	-82.08	-27.80	8.78	-6.62	2.21	0.90	1.18	9.35	-29.59	2.21	-6.62	Vehicle	Vehicle	-----	-145.17	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	-----	-----	-----	-----	-----	8.69	8.69
		U_5 - L_5	-19.89	-21.93	8.50	-4.16	2.23	0.90	1.18	9.05	-23.35	2.23	-4.16	Vehicle	Vehicle	-----	-56.22	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	-----	-----	-----	-----	-----	13.73	13.73
		U_6 - L_6	60.32	-12.50	18.92	-0.47	1.75	0.90	1.18	20.14	-13.31	1.75	-0.47	Vehicle	Vehicle	104.60	-----	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	-----	-----	-----	-----	-----	18.24	18.24	-----	-----
		U_7 - L_7	-41.77	-1.81	-1.64	0.00	-2.49	0.90	1.18	-1.75	-1.92	0.00	-2.49	Vehicle	Pedestrian	-----	-60.04	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	-----	-----	-----	-----	-----	67.73	67.73
		U_8 - L_8	-189.01	4.15	-32.33	0.00	-8.38	0.90	1.18	4.42	-34.42	0.00	-8.38	Vehicle	Vehicle	-----	-290.46	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	-----	-----	-----	-----	-----	9.92	9.92
		U_9 - L_9	-253.99	1.68	-40.19	0.00	-10.55	0.90	1.18	1.78	-42.79	0.00	-10.55	Vehicle	Vehicle	-----	-385.82	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	-----	-----	-----	-----	-----	10.22	10.22
		U_{10} - L_{10}	-290.02	3.04	-40.75	0.00	-12.18	0.90	1.18	3.23	-43.39	0.00	-12.18	Vehicle	Vehicle	-----	-433.42	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	11.26	11.26
		U_{11} - L_{11}	-312.18	6.49	-43.89	0.00	-12.59	0.90	1.18	6.91	-46.73	0.00	-12.59	Vehicle	Vehicle	-----	-466.57	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	-----	-----	-----	-----	-----	9.69	9.69
		U_{12} - L_{12}	-327.28	9.33	-40.04	-0.93	-13.01	0.90	1.18	9.94	-42.63	-0.93	-13.01	Vehicle	Vehicle	-----	-480.87	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	11.13	11.13
		U_{13} - L_{13}	-277.21	12.49	-33.93	0.00	-11.39	0.90	1.18	13.29	-36.13	0.00	-11.39	Vehicle	Vehicle	-----	-407.34	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	-----	-----	-----	-----	-----	11.43	11.43
		U_{14} - L_{14}	-505.44	-39.83	-26.89	-11.34	-9.95	0.90	1.18	-28.62	-42.41	-9.95	-11.34	Pedestrian	Vehicle	-----	-712.20	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	-----	-----	-----	-----	-----	12.88	12.88
		U_{15} - L_{15}	-232.94	-46.07	2.73	-11.17	0.00	0.90	1.17	2.87	-48.47	0.00	-11.17	Vehicle	Vehicle	-----	-365.83	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	-----	-----	-----	-----	-----	9.43	9.43
		U_{16} - L_{16}	-260.12	-46.20	0.35	-12.63	0.83	0.90	1.17	0.37	-48.60	0.83	-12.63	Pedestrian	Vehicle	-----	-401.34	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	-----	-----	-----	-----	-----	8.35	8.35
		U_{17} - L_{17}	-228.24	-44.79	5.80	-11.76	0.66	0.90	1.17	6.10	-47.12	0.66	-11.76	Vehicle	Vehicle	-----	-357.96	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	-----	-----	-----	-----	-----	8.38	8.38
		U_{18} - L_{18}	-209.27	-41.51	6.98	-11.28	-0.03	0.90	1.17	7.34	-43.68	-0.03	-11.28	Vehicle	Vehicle	-----	-328.83	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	-----	-----	-----	-----	-----	8.42	8.42
		U_{19} - L_{19}	-166.55	-35.64	7.47	-9.53	-0.07	0.90	1.17	7.86	-37.49	-0.07	-9.53	Vehicle	Vehicle	-----	-265.26	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	-----	-----	-----	-----	-----	9.20	9.20
		U_{20} - L_{20}	-113.95	-28.31	7.51	-7.50	-0.43	0.90	1.17	7.90	-29.78	-0.43	-7.50	Vehicle	Vehicle	-----	-186.85	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	-----	-----	-----	-----	-----	8.77	8.77
		U_{21} - L_{21}	-62.76	-22.96	11.11	-5.22	-0.44	0.90	1.17	11.69	-24.15	-0.44	-5.22	Vehicle	Vehicle	-----	-112.99	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	11.50	11.50
		U_{22} - L_{22}	-38.94	-2.68	-5.96	-2.15	-2.04	0.90	1.17	-2.82	-6.27	-2.04	-2.15	Pedestrian	Pedestrian	-----	-61.56	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	36.00	36.00
		U_{23} - L_{23}	-74.43	7.95	-26.51	0.48	-6.10	0.90	1.17	8.37	-27.89	0.48	-6.10	Vehicle	Vehicle	-----	-133.02	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	9.54	9.54
		U_{24} - L_{24}	-121.36	7.79	-31.07	0.37	-8.17	0.90	1.17	8.20	-32.69	0.37	-8.17	Vehicle	Vehicle	-----	-200.27	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	7.76	7.76
		U_{25} - L_{25}	-169.12	7.49	-36.45	0.43	-9.94	0.90	1.17	7.88	-38.35	0.43	-9.94	Vehicle	Vehicle	-----	-269.72	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	-----	-----	-----	-----	-----	8.92	8.92
		U_{26} - L_{26}	-207.97	6.77	-38.64	0.14	-11.42	0.90	1.17	7.13	-40.66	0.14	-11.42	Vehicle	Vehicle	-----	-323.22	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	-----	-----	-----	-----	-----	9.08	9.08
		U_{27} - L_{27}	-219.96	5.57	-40.50	0.16	-11.49	0.90	1.17	5.86	-42.61	0.16	-11.49	Vehicle	Vehicle	-----	-341.34	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	9.47	9.47
		U_{28} - L_{28}	-240.91	8.02	-37.08	-0.25	-11.17	0.90	1.17	8.43	-39.02	-0.25	-11.17	Vehicle	Vehicle	-----	-363.90	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	10.90	10.90
		U_{29} - L_{29}	-202.73	11.92	-32.76	0.00	-10.35	0.90	1.17	12.54	-34.47	0.00	-10.35	Vehicle	Vehicle	-----	-308.35	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	-----	-----	-----	-----	-----	14.14	14.14
		U_{30} - L_{30}	-518.05	-40.19	-27.48	-13.79	-8.23	0.90	1.18	-29.26	-42.79	-8.23	-13.79	Vehicle	Vehicle	-----	-729.08	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	-----	-----	-----	-----	-----	12.48	12.48
		$U_{31

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 3F1 **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	27.15	-11.97	14.00	-4.60	0.90	1.24	30.22	-13.32	14.00	-4.60	Pedestrian	Pedestrian	171.44	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**11.28**	**11.28**	-----	-----
		U_1 - L_2	23.90	35.91	2.69	9.20	-4.71	0.90	1.24	39.98	2.99	9.20	-4.71	Vehicle	Vehicle	83.04	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**10.10**	**10.10**	-----	-----
		U_2 - L_3	-49.02	15.70	-11.38	0.00	-1.00	0.90	1.24	17.48	-12.66	0.00	-1.00	Vehicle	Vehicle	-----	-80.19	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	-----	-----	-----	-----	-----	**22.52**	**22.52**
		U_3 - L_4	-108.88	-3.25	-25.76	-4.20	-2.10	0.90	1.24	-3.62	-28.68	-2.10	-4.20	Pedestrian	Vehicle	-----	-178.82	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**7.93**	**7.93**
		U_4 - L_4	153.12	6.64	15.84	3.11	7.00	0.90	1.24	17.63	7.40	7.00	3.11	Pedestrian	Pedestrian	231.08	-----	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	-----	-----	-----	-----	-----	**15.08**	**15.08**	-----	-----
		U_5 - L_5	186.35	42.87	-3.82	13.44	0.00	0.90	1.24	47.73	-4.26	13.44	0.00	Vehicle	Vehicle	304.30	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**9.73**	**9.73**	-----	-----
		U_6 - L_6	177.52	38.24	-9.56	14.13	0.00	0.90	1.24	42.57	-10.64	14.13	0.00	Vehicle	Vehicle	286.13	-----	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	-----	-----	-----	-----	-----	**11.11**	**11.11**	-----	-----
		U_7 - L_7	173.18	35.06	-11.02	13.87	0.00	0.90	1.24	39.03	-12.27	13.87	0.00	Pedestrian	Vehicle	293.89	-----	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	-----	-----	-----	-----	-----	**9.03**	**9.03**	-----	-----
		U_8 - L_8	328.11	52.42	0.47	19.31	0.00	0.90	1.20	56.51	0.51	19.31	0.00	Pedestrian	Vehicle	525.12	-----	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	-----	-----	-----	-----	-----	**8.36**	**8.36**	-----	-----
		U_9 - L_{10}	339.70	57.15	-1.96	19.74	0.00	0.90	1.20	61.61	-2.11	19.74	0.00	Vehicle	Vehicle	521.71	-----	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	-----	-----	-----	-----	-----	**10.10**	**10.10**	-----	-----
		U_{10} - L_{11}	313.22	54.73	4.11	18.15	0.00	0.90	1.20	59.01	4.44	18.15	0.00	Vehicle	Vehicle	483.90	-----	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	-----	-----	-----	-----	-----	**10.12**	**10.12**	-----	-----
		U_{11} - L_{12}	270.68	46.42	3.58	14.84	0.00	0.90	1.20	50.05	3.85	14.84	0.00	Vehicle	Vehicle	416.95	-----	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	-----	-----	-----	-----	-----	**10.13**	**10.13**	-----	-----
		U_{12} - L_{13}	194.17	37.92	-5.80	10.79	0.00	0.90	1.20	40.89	-6.26	10.79	0.00	Vehicle	Vehicle	305.57	-----	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	-----	-----	-----	-----	-----	**10.68**	**10.68**	-----	-----
		U_{13} - L_{14}	123.57	25.54	-11.19	2.11	3.86	0.90	1.20	27.54	-12.07	3.86	2.11	Vehicle	Vehicle	196.44	-----	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	-----	-----	-----	-----	-----	**11.04**	**11.04**	-----	-----
		U_{15} - L_{14}	-16.32	21.92	-17.97	0.00	-0.87	0.90	1.20	23.63	-19.37	0.00	-0.87	Vehicle	Vehicle	9.50	-46.41	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	-----	-----	-----	**18.79**	**18.79**	**16.10**	**16.10**
		U_{16} - L_{15}	59.12	30.48	-10.11	6.08	-2.09	0.90	1.20	32.87	-10.90	6.08	-2.09	Vehicle	Vehicle	119.59	-----	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	-----	-----	-----	-----	-----	**11.21**	**11.21**	-----	-----
		U_{17} - L_{16}	172.14	43.05	-4.81	9.93	-1.86	0.90	1.20	46.42	-5.19	9.93	-1.86	Vehicle	Pedestrian	284.13	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**7.59**	**7.59**	-----	-----
		U_{18} - L_{17}	210.78	42.98	-6.31	12.51	-1.53	0.90	1.20	46.34	-6.80	12.51	-1.53	Vehicle	Vehicle	334.26	-----	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	-----	-----	-----	-----	-----	**9.49**	**9.49**	-----	-----
		U_{19} - L_{18}	242.64	42.02	-5.04	13.73	-1.21	0.90	1.20	45.31	-5.43	13.73	-1.21	Vehicle	Vehicle	374.32	-----	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	-----	-----	-----	-----	-----	**10.32**	**10.32**	-----	-----
		U_{20} - L_{19}	257.76	34.00	-4.14	15.70	-1.03	0.90	1.20	36.66	-4.46	15.70	-1.03	Pedestrian	Vehicle	403.16	-----	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	-----	-----	-----	-----	-----	**8.64**	**8.64**	-----	-----
		U_0 - L_1	298.99	27.48	-9.08	14.21	-2.21	0.90	1.18	29.26	-9.67	14.21	-2.21	Pedestrian	Vehicle	445.19	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**11.01**	**11.01**	-----	-----
		U_1 - L_2	284.21	52.61	-10.88	14.05	-2.66	0.90	1.18	56.02	-11.58	14.05	-2.66	Vehicle	Vehicle	442.29	-----	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	-----	-----	-----	-----	-----	**8.81**	**8.81**	-----	-----
		U_2 - L_3	221.42	47.74	-11.61	11.83	-2.85	0.90	1.18	50.83	-12.36	11.83	-2.85	Vehicle	Vehicle	353.93	-----	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	-----	-----	-----	-----	-----	**8.44**	**8.44**	-----	-----
		U_3 - L_4	178.30	43.25	-13.12	10.08	-3.23	0.90	1.18	46.05	-13.96	10.08	-3.23	Vehicle	Vehicle	291.65	-----	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	-----	-----	-----	-----	-----	**8.66**	**8.66**	-----	-----
		U_4 - L_5	53.50	29.54	-10.97	5.37	-2.87	0.90	1.18	31.45	-11.68	5.37	-2.87	Vehicle	Vehicle	110.43	-----	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	-----	-----	-----	-----	-----	**11.90**	**11.90**	-----	-----
		U_5 - L_6	-16.51	24.87	-17.98	2.23	-1.22	0.90	1.18	26.48	-19.14	2.23	-1.22	Vehicle	Vehicle	12.95	-46.35	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	-----	-----	-----	**16.78**	**16.78**	**16.15**	**16.15**
		U_6 - L_7	-133.21	10.11	-32.53	0.00	-5.36	0.90	1.18	10.77	-34.63	0.00	-5.36	Vehicle	Vehicle	-----	-218.19	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	**6.53**	**6.53**
		U_7 - L_7	208.77	35.56	-8.47	8.33	0.00	0.90	1.18	37.86	-9.02	8.33	0.00	Vehicle	Vehicle	320.61	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**10.42**	**10.42**	-----	-----
		U_8 - L_8	289.58	45.59	-1.33	10.70	0.00	0.90	1.18	48.54	-1.41	10.70	0.00	Vehicle	Vehicle	439.56	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**8.67**	**8.67**	-----	-----
		U_{10} - L_9	327.97	49.31	-1.72	12.66	0.00	0.90	1.18	52.50	-1.83	12.66	0.00	Vehicle	Vehicle	494.62	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.56**	**8.56**	-----	-----
		U_{11} - L_{10}	349.25	51.30	-2.15	12.70	0.00	0.90	1.18	54.62	-2.29	12.70	0.00	Vehicle	Vehicle	525.03	-----	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	-----	-----	-----	-----	-----	**9.07**	**9.07**	-----	-----
		U_{12} - L_{11}	358.20	48.15	-7.28	13.52	0.00	0.90	1.18	51.26	-7.75	13.52	0.00	Vehicle	Vehicle	532.29	-----	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	-----	-----	-----	-----	-----	**9.49**	**9.49**	-----	-----
		U_{13} - L_{12}	307.75	40.10	-13.82	12.26	-0.24	0.90	1.18	42.69	-14.71	12.26	-0.24	Vehicle	Vehicle	455.58	-----	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	-----	-----	-----	-----	-----	**11.00**	**11.00**	-----	-----
		U_{14} - L_{13}	260.20	32.39	-11.68	9.65	0.00	0.90	1.18	34.48	-12.44	9.65	0.00	Vehicle	Vehicle	383.09	-----	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	-----	-----	-----	-----	-----	**15.00**	**15.00**	-----	-----
		U_{15} - L_{15}	208.42	42.85	-1.33	11.04	-2.51	0.90	1.17	45.08	-1.40	11.04	-2.51	Vehicle	Pedestrian	329.55	-----	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	-----	-----	-----	-----	-----	**9.81**	**9.81**	-----	-----
		U_{16} - L_{15}	243.55	49.54	-3.72	11.54	-1.48	0.90	1.17	52.13	-3.91	11.54	-1.48	Vehicle	Pedestrian	384.38	-----	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	-----	-----	-----	-----	-----	**7.81**	**7.81**	-----	-----
		U_{16} - L_{16}	255.86	48.15	-6.11	12.23	0.00	0.90	1.17	50.66	-6.43	12.23	0.00	Vehicle	Vehicle	398.48	-----	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	-----	-----	-----	-----	-----	**8.97**	**8.97**	-----	-----
		U_{17} - L_{18}	235.29	49.28	-7.16	11.35	0.00	0.90	1.17	51.84	-7.53	11.35	0.00	Vehicle	Vehicle	373.28	-----	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	-----	-----	-----	-----	-----	**8.01**	**8.01**	-----	-----
		U_{18} - L_{19}	212.11	45.56	-8.75	11.09	0.00	0.90	1.17	47.93	-9.20	11.09	0.00	Vehicle	Vehicle	338.05	-----	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	-----	-----	-----	-----	-----	**9.15**	**9.15**	-----	-----
	Structure 2	U_{19} - L_{20}	168.24	40.20	-5.60	9.14	0.00	0.90	1.17	42.29	-5.89	9.14	0.00	Vehicle	Vehicle	273.69	-----	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	-----	-----	-----	-----	-----	**10.29**	**10.29**	-----	-----
		U_{20} - L_{21}	97.26	30.89	-12.72	6.66	0.00	0.90	1.17	32.50	-13.39	6.66	0.00	Vehicle	Vehicle	168.68	-----	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	-----	-----	-----	-----	-----	**10.17**	**10.17**	-----	-----
		U_{21} - L_{22}	30.60	19.79	-20.61	0.58	-2.18	0.90	1.17	20.82	-21.68	0.58	-2.18	Vehicle	Vehicle	66.84	-----	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**19.08**	**19.08**	-----	-----
		U_{23} - L_{22}	49.78	26.76	-14.91	5.11	-0.95	0.90	1.17	28.15	-15.68	5.11	-0.95	Vehicle	Vehicle	101.31	-----	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**13.42**	**13.42**	-----	-----
		U_{24} - L_{23}	115.07	33.75	-9.91	8.00	-0.72	0.90	1.17	35.51	-10.42	8.00	-0.72	Vehicle	Vehicle	195.76	-----	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	-----	-----	-----	-----	-----	**8.80**	**8.80**	-----	-----
		U_{25} - L_{24}	179.22	44.44	-10.27	10.10	0.00	0.90	1.17	46.76	-10.81	10.10	0.00	Vehicle	Vehicle	293.77	-----	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	-----	-----	-----	-----	-----	**9.07**	**9.07**	-----	-----
		U_{26} - L_{25}	220.97	44.53	-9.01	11.89	0.00	0.90	1.17	46.85	-9.48	11.89	0.00	Vehicle	Vehicle	348.17	-----	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	-----	-----	-----	-----	-----	**9.17**	**9.17**	-----	-----
		U_{27} - L_{26}	234.87	46.83	-7.16	11.45	0.00	0.90	1.17	49.27	-7.53	11.45	0.00	Vehicle	Vehicle	369.38	-----	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	-----	-----	-----	-----	-----	**8.44**	**8.44**	-----	-----
		U_{28} - L_{27}	253.15	44.50	-6.42	12.25	0.00	0.90	1.17	46.82	-6.75	12.25	0.00	Vehicle	Vehicle	389.95	-----	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	-----	-----	-----	-----	-----	**9.76**	**9.76**	-----	-----
		U_{29} - L_{28}	215.91	35.77	-13.70	10.20	0.61	0.90	1.17	37.64	-14.41	10.20	0.61	Vehicle	Vehicle	329.62	-----	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	-----	-----	-----	-----	-----	**11.55**	**11.55**	-----	-----
		U_{30} - L_{29}	180.73	30.78	-11.65	8.49	0.00	0.90	1.17	32.38	-12.26	8.49	0.00	Vehicle	Vehicle	277.04	-----	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	-----	-----	-----	-----	-----	**14.51**	**14.51**	-----	-----
		U_{31} - L_{31}	294.99	43.89	-6.60	12.90	0.00	0.90	1.18	46.73	-7.03	12.90	0.00	Vehicle	Vehicle	444.24	-----	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	-----	-----	-----	-----	-----	**10.33**	**10.33**	-----	-----
		U_{31} - L_{32}	342.70	49.05	-6.14	13.70	-0.55	0.90	1.18	52.22	-6.54	13.70	-0.55	Vehicle	Vehicle	513.41	-----	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	-----	-----	-----	-----	-----	**8.33**	**8.33**	-----	-----
		U_{32} - L_{33}	363.39	51.74	-3.08	14.16	0.00	0.90	1.18	55.08	-3.28	14.16	0.00	Vehicle	Vehicle	544.02	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64

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: 3F1
Condition: As-Built

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

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

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

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

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Min) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0-U_1	-129.89	-23.02	-0.15	1.16	0.11	-12.07	0.00	0.00	0.00	0.00
	U_1-U_2	-54.81	-51.14	0.18	1.98	-2.60	-16.26	0.00	0.00	0.00	0.00
	U_2-U_3	-39.79	44.50	0.53	2.60	-2.77	-12.43	0.00	0.00	0.00	0.00
	U_3-U_4	-52.27	61.68	1.81	2.90	-3.39	-15.01	0.00	0.00	0.00	0.00
	U_4-U_5	-27.43	50.17	2.02	2.72	-3.77	-6.55	0.00	0.00	0.00	0.00
	U_5-U_6	-1.19	145.97	-9.95	32.80	-6.65	-3.83	-79.48	37.37	-88.83	51.55
	U_6-U_7	34.94	53.23	2.50	13.85	-5.08	-9.29	-33.42	21.74	-5.08	-9.29
	U_7-U_8	-70.13	598.66	9.42	15.22	0.05	-0.14	-125.78	203.31	0.71	-1.82
	U_8-U_9	528.73	-128.77	-0.33	0.78	8.65	-10.07	-4.28	10.14	111.97	-130.26
	U_9-U_{10}	69.10	44.97	1.58	2.41	0.05	-8.76	-22.39	34.16	8.46	-113.37
	U_{10}-U_{11}	101.46	-177.08	2.53	2.07	0.25	-12.03	32.79	26.81	3.20	-155.60
	U_{11}-U_{12}	84.48	-160.13	2.91	1.74	0.27	-12.02	37.64	23.25	3.65	-150.61
	U_{12}-U_{13}	-56.63	-218.18	2.23	0.60	0.20	-14.94	28.87	12.49	2.56	-193.25
	U_{13}-U_{14}	-173.99	-340.41	1.48	1.26	0.17	-25.16	29.52	14.91	1.42	-325.52
	U_{14}-U_{15}	-287.88	-237.50	1.98	1.14	-12.45	-13.82	25.67	14.75	-101.04	-178.81
	U_{15}-U_{16}	-196.26	-337.79	0.99	0.47	0.84	-16.76	12.61	6.04	10.80	-216.81
	U_{16}-U_{17}	-295.92	-154.89	1.53	0.47	-7.40	-11.62	29.52	14.89	-42.03	-130.38
	U_{17}-U_{18}	-190.08	-29.82	-0.21	3.60	-1.14	-4.75	-80.37	46.51	-14.69	-61.47
	U_{18}-U_{19}	-179.81	-40.24	6.48	1.54	-0.71	-5.50	-83.67	31.94	-15.73	-61.03
	U_{19}-U_{20}	-290.19	260.74	9.08	10.43	0.12	-6.80	-177.51	134.93	1.53	-87.96
	U_0-U_1	-27.02	-172.57	-0.39	0.94	3.28	-11.30	-5.03	11.97	41.89	-144.95
	U_1-U_2	-25.34	-194.81	-0.18	0.63	3.11	-15.64	-4.36	16.34	38.38	-169.31
	U_2-U_3	-52.13	-282.61	0.43	1.28	-1.90	-22.61	-5.64	16.30	-24.31	-288.93
	U_3-U_4	-329.11	-54.65	0.13	1.63	-2.08	-22.79	-5.80	18.30	-24.31	-288.93
	U_4-U_5	-360.75	-390.17	0.12	2.12	-4.37	-31.40	1.58	27.14	-55.78	-401.17
	U_5-U_6	-403.61	-387.59	1.89	4.07	-1.08	-32.64	-11.77	28.24	-101.77	-359.24
	U_6-U_7	-349.78	-208.78	2.95	2.91	-6.20	-27.41	37.74	37.22	-79.24	-300.15
	U_7-U_8	-253.89	-280.84	2.29	3.17	-6.80	-17.65	29.27	40.51	-86.64	-225.44
	U_8-U_9	-330.50	-67.14	0.27	2.37	-1.13	-23.77	29.27	40.51	-86.64	-225.44
	U_9-U_{10}	-237.12	39.43	3.30	4.17	-12.28	-9.33	42.15	53.24	-156.91	-119.17
	U_{10}-U_{11}	-152.22	-20.04	3.55	3.89	-7.85	-6.35	42.15	53.24	-156.91	-119.17
	U_{11}-U_{12}	-116.81	170.72	-6.22	3.19	-4.04	-6.27	-79.41	40.78	-51.64	-80.10
	U_{12}-U_{13}	-58.53	197.42	2.39	1.61	-4.36	-6.27	-45.36	22.45	-51.64	-80.10
	U_{13}-U_{14}	-48.21	-31.51	0.69	2.89	-3.47	-15.67	1.14	33.97	-43.62	-197.85
	U_{14}-U_{15}	10.71	137.69	1.25	17.44	-20.03		4.05	15.74	220.15	-252.91
	U_{15}-U_{16}	9.84	136.26	2.28	6.34	-12.92		11.63	18.35	4.25	-163.10
	U_{16}-U_{17}	37.73	25.12	2.42	2.27	-3.29	-16.10	30.53	29.68	41.49	-203.29
	U_{17}-U_{18}	30.53	29.68	2.42	2.27	-3.29	-15.20	30.53	29.68	41.49	-203.29
	U_{18}-U_{19}	196.48	-8.75	3.32	2.64	2.27	-14.24	41.96	32.06	28.61	-179.74
	U_{19}-U_{20}	48.44	11.25	2.61	2.65	-1.93	-17.89	41.73	33.51	-24.39	-225.89
	U_0-U_1	-92.46	-65.91	1.24	1.74	-10.22	-20.71	15.67	21.98	-128.98	-261.49
	U_1-U_2	-59.53	-197.43	2.39	1.61	-4.36	-22.61	-45.36	22.45	-51.64	-80.10
	U_2-U_3	-48.21	-31.51	0.69	2.89	-3.47	-15.67	1.14	33.97	-43.62	-197.85
	U_3-U_4	10.71	137.69	1.25	17.44	-20.03		4.05	15.74	220.15	-252.91
	U_4-U_5	10.71	137.69	-4.65	3.70	-2.85	-8.41	-58.72	46.65	-35.99	-118.77
	U_5-U_6	57.19	122.94	-6.88	3.90	-4.40	-8.36	-74.17	49.19	-55.60	-105.51
	U_6-U_7	86.58	3.84	-8.80	2.50	2.22	-13.79	-10.14	31.53	2.76	-174.15
	U_7-U_8	14.12	810.62	-12.67	2.22	-1.62	-22.00	-132.21	224.29	0.49	-1.82
	U_8-U_9	823.61	100.42	0.07	1.85	18.14	-16.91	0.91	23.59	231.80	-216.09
	U_9-U_{10}	39.75	14.09	1.76	2.60	0.60	-8.76	7.64	10.07	8.46	-113.37
	U_{10}-U_{11}	150.29	-52.92	2.39	2.96	0.42	-14.51	30.97	37.78	5.30	-169.79
	U_{11}-U_{12}	17.33	-89.79	3.17	3.32	-0.36	-13.11	40.44	42.37	-4.55	-167.43
	U_{12}-U_{13}	39.75	-14.09	1.76	2.60	0.60	-8.76	7.64	10.07	8.46	-113.37
	U_{13}-U_{14}	-75.26	-230.76	3.30	2.05	-3.33	-18.74	42.15	26.30	-42.51	-239.39
	U_{14}-U_{15}	-58.29	-237.61	3.30	2.05	-3.33	-18.74	35.77	26.30	-42.51	-239.39
	U_{15}-U_{16}	-84.35	-278.75	3.29	2.84	-1.62	-20.52	42.01	36.32	-20.66	-262.22
	U_{16}-U_{17}	-84.35	-278.75	3.29	2.84	-1.62	-20.52	42.01	36.32	-20.66	-262.22
	U_{17}-U_{18}	-275.08	-274.62	1.65	-18.39	-21.86		18.82	8.28	-234.95	-279.14
	U_{18}-U_{19}	-257.08	-269.15	1.15	0.44	-7.03	-19.04	14.67	5.62	-79.71	-234.24
	U_{19}-U_{20}	-184.75	-69.94	1.33	0.73	-2.39	-13.27	14.67	5.62	-79.71	-234.24
	U_0-U_1	-154.97	-33.11	-1.31	1.02	-8.67	-6.83	-16.78	13.03	-110.77	-87.28
	U_1-U_2	-134.91	-71.10	0.11	1.08	-8.67	-6.64	-16.78	13.03	-110.77	-87.28
	U_2-U_3	40.07	-167.66	-0.38	0.39	1.04	-8.94	-4.96	5.03	13.46	-116.67
	U_3-U_4	-10.53	-132.37	-0.29	0.48	2.02	-10.96	-3.78	6.22	26.16	-147.74
	U_4-U_5	-26.15	-132.37	-0.29	0.48	2.02	-10.96	-3.78	6.22	26.16	-147.74
	U_5-U_6	-140.16	-260.93	0.22	0.66	-4.83	-19.47	2.78	8.49	-62.49	-251.88
	U_6-U_7	-187.19	-276.08	1.08	1.51	-4.97	-25.84	14.03	19.52	-64.27	-334.30
	U_7-U_8	-322.62	-140.31	1.43	1.51	-4.97	-25.84	14.03	19.52	-64.27	-334.30
	U_8-U_9	-162.95	-104.84	0.82	2.39	-1.40	-10.40	10.97	30.87	-18.05	-134.52
	U_9-U_{10}	-147.84	-26.72	1.80	2.84	-4.01	-7.55	23.31	36.72	-51.84	-87.63
	U_{10}-U_{11}	-136.15	-26.72	1.80	2.84	-4.01	-7.55	23.31	36.72	-51.84	-87.63
	U_{11}-U_{12}	-10.77	46.02	-3.09	2.15	0.07	-3.53	-46.47	27.87	8.88	-45.66
	U_{12}-U_{13}	-10.77	46.02	-3.09	2.15	0.07	-3.53	-46.47	27.87	8.88	-45.66
	U_{13}-U_{14}	426.33	9.05	0.00	1.67	11.66	-13.70	60.05	14.29	155.79	-182.97
	U_{14}-U_{15}	426.33	9.05	0.00	1.67	11.66	-13.70	60.05	14.29	155.79	-182.97
	U_{15}-U_{16}	128.06	64.04	2.79	2.43	1.74	-11.65	37.31	32.45	-23.55	-165.00
	U_{16}-U_{17}	70.10	43.63	3.00	2.18	-3.13	-14.52	40.08	29.12	-41.78	-193.99
	U_{17}-U_{18}	-8.36	-30.51	-8.47	9.53	-0.81	-5.96	-113.13	127.30	-10.79	-22.47
	U_{18}-U_{19}	-8.36	-30.51	-8.47	9.53	-0.81	-5.96	-113.13	127.30	-10.79	-22.47

ZZ Axis Moment Properties

Location	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_{DL} (in^4)	Shape Factor	M_p (k-in)	Formula f_b Term * F_y/S_top	M_u (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(x)}$
Structure 1	U_0-U_1	-171.45	-9.85	-166.97	-229.05	90.2	90.24	72.24	1.27246	1247	1328.6	1.41	4206	0.99880041
	U_1-U_2	-168.58	-32.02	-116.33	-348.86	90.2	90.24	72.24	1.27246	1247	1328.6	1.41	4206	0.99880041
	U_2-U_3	-228.48	-168.52	-229.48	-348.86	90.2	90.24	72.24	1.27246	1247	1328.6	1.41	4206	0.99880041
	U_3-U_4	-180.44	-168.52	-126.90	-180.44	90.2	90.24	72.24	1.27246	1247	1328.6	1.41	4206	0.99880041
	U_4-U_5	-76.01	-90.2	-76.01	-90.2	90.24	72.24	72.24	1.27246	1247	1328.6	1.41	4206	0.99880041
	U_5-U_6	-111.77	-238.34	-113.93	-123.26	90.2	90.24	75.71	1.27246	1247	1328.6	1.41	4206	0.99880041
	U_6-U_7	-168.84	-201.5	-168.84	-201.5	90.2	90.24	75.71	1.27246	1247	1328.6	1.41	4206	0.99880041
	U_7-U_8	-125.78	-203.31	0.71	-1.82	0.00	0.00	-254.68	1042.56	-90.25	775.90	138.2	138.17	111.77
	U_8-U_9	-4.28	10.14	111.97	-130.26	0.00	0.00	681.78	-154.22	832.90	-336.75	130.3	130.26	105.11
	U_9-U_{10}	-22.39	34.16	8.46	-113.37	0.00	0.00	116.33	98.90	102.62	-88.92	95.6	96.61	79.12
	U_{10}-U_{11}	32.79	26.81	3.20	-155.60	0.00	0.00	174.52	-195.35	136.05	-432.48	96.6	96.61	83.55
	U_{11}-U_{12}	37.64	23.25	3.65	-150.61	0.00	0.00	157.27	-178.96	121.72	-413.98	96.6	96.61	83.55
	U_{12}-U_{13}	28.87	12.49	2.56	-193.25	0.00	0.00	68.09	-269.99	-122.29	-534.85	151.8	151.78	130.94
	U_{13}-U_{14}	29.52	14.91	1.42	-325.52	0.00	0.00	-201.26	-421.61	-340.53	-534.85	151.8	151.78	130.94
	U_{14}-U_{15}	25.67	14.75	-101.04	-178.81	0.00	0.00	-340.87	-289.53	-583.60	-541.21	188.5	188.53	157.55
	U_{15}-U_{16}	12.61	6.04	10.80	-216.81	0.00	0.00	-238.48	-431.27	-241.09	-720.97	188.5	188.53	164.41
	U_{16}-U_{17}	29.52	14.89	-42.03	-130.38	0.00	0.00	-412.03	-130.38	-559.22	-403.15	188.5	188.53	157.55
	U_{17}-U_{18}	-80.37	46.51	-14.69	-61.47	0.00	0.00	-351.57	21.70	-266.17	-118.68	127.3	127.32	110.40
	U_{18}-U_{19}	-83.67	31.94	-15.73	-61.03	0.00	0.00	-342.31	-28.40	-245.45	-144.81	104.5	104.75	86.43
	U_{19}-U_{20}	-177.51	134.93	1.53	-87.96	0.00	0.00	-478.00	514.38	-322.26	224.62	104.8	104.75	86.43
	U_0-U_1	-5.03	11.97	41.89	-144.95	0.00	0.00	-41.67	-208.77	18.33	-412.77	127.8	127.83	111.16
	U_1-U_2	-4.36	16.34	38.38	-169.31	0.00	0.00	-35.98	-239.39	11.87	-481.24	127.8	127.83	111.16
	U_2-U_3	-5.64	16.30	-24.31	-288.93	0.00	0.00	-74.85	-346.20	-89.38	-742.99	212.6	212.59	170.43
	U_3-U_4	-5.80	18.30	-24.31	-288.93	0.00	0.00	-74.85	-346.20	-89.38	-742.99	212.6	212.59	170.43
	U_4-U_5	1.58	27.14	-55.78	-401.17	0.00	0.00	-466.91	-471.94	-641.49	-1028.14	251.7	251.73	209.41
	U_5-U_6	-11.77	28.24	-101.77	-359.24	0.00	0.00	-498.36	-188.52	-722.18	-1026.56	251.7	251.73	209.41
	U_6-U_7	37.74	37.22	-79.24	-300.15	0.00	0.00	-405.63	-223.00	-521.98	-754.32	232.7	232.70	189.45
	U_7-U_8	29.27	40.51	-86.64	-225.44	0.00	0.00	-292.00	-312.42	-442.94	-658.16	232.7	232.70	189.45
	U_8-U_9	29.27	40.51	-86.64	-225.44	0.00	0.00	-388.70	-68.23	-525.33	-348.56	198.8	198.85	169.65
	U_9-U_{10}	42.15	53.24	-156.91	-119.17	0.00	0.00	-253.47	-120.47	-512.24	-323.65	181.9	181.87	147.20
	U_{10}-U_{11}	42.15	53.24	-156.91	-119.17	0.00	0.00	-130.22	-20.12	-239.13	-347.63	181.9	181.87	147.20
	U_{11}-U_{12}	-79.41	40.78	-51.64	-80.10	0.00	0.00	-255.07	274.96	-218.98	117.82	156.8	156.80	126.72
	U_{12}-U_{13}	-45.36	22.45	-51.64	-80.10	0.00	0.00	-38.98	-238.39	-31.18	-418.32	156.8	156.80	126.72
	U_{13}-U_{14}	-5.64	33.97	-43.62	-197.85	0.00	0.00	-494.35	1600.39	-276.67	1451.12	221.8	221.77	186.91
	U_{14}-U_{15}	4.05	15.74	220.15	-252.91	0.00	0.00	-1342.80	-14.32	1623.70	-363.57	221.8	221.77	186.91
	U_{15}-U_{16}	11.63	18.35	4.25	-163.10	0.00	0.00	27.99	324.04	-14.31	1262.74	221.8	221.77	186.91
	U_{16}-U_{17}	30.53	29.68	41.49	-203.29	0.00	0.00	-392.44	-89.95	408.68	-231.62	173.0	173.03	144.25
	U_{17}-U_{18}	30.53	29.68	41.49	-203.29	0.00	0.00	-392.44	-89.95	408.68	-231.62	173.0	173.03	144.25
	U_{18}-U_{19}	41.96	32.06	28.61	-179.74	0.00	0.00	-257.94	30.33	240.61	-245.05	127.8	127.83	111.16
	U_{19}-U_{20}	41.73	33.51	-24.39	-225.89	0.00	0.00	-117.22	58.18	31.27	-293.74	127.8	127.83	111.16
	U_0-U_1	15.67	21.98	-128.98	-261.49	0.00	0.00	-99.83	-57.10	-287.87	-425.62	144.8	144.84	120.31
	U_1-U_2	-45.36	22.45	-51.64	-80.10	0.00	0.00	-38.98	-238.39	-31.18	-418.32	156.8	156.80	126.72
	U_2-U_3	1.14	33.97	-43.62	-197.85	0.00	0.00	-61.19	1.21	-119.64	-298.16	144.8	144.84	120.49
	U_3-U_4	4.05	15.74	220.15	-252.91	0.00	0.00	-43.11	-118.85	13.80	-298.16	144.8	144.84	120.49
	U_4-U_5	-58.72	46.65	-35.99	-118.77	0.00	0.00	-62.42	239.64	-32.87	24.80	127.8	127.83	111.16
	U_5-U_6	-74.17	49.19	-55.60	-105.51	0.00	0.00	-22.09	223.64	2.05	23.53	127.8	127.83	105.84
	U_6-U_7	-10.14	31.53	2.76	-174.15	0.00	0.00	-46.16	47.29	-29.49	-252.31	127.8	127.83	111.16
	U_7-U_8	98.07	45.98	114.89	-221.40	185.7	185.70	154.12	268.55	4767	2721.4	144	8796	0.99880041
	U_8-U_9	0.91	23.59	231.80	-216.09	0.00	0.00	1077.87	99.69	1372.04	-411.46	221.8	221.77	186.91
	U_9-U_{10}	7.64	10.07	8.46	-113.37	0.00	0.00	116.33	98.90	102.62	-88.92	95.6	96.61	79.12
	U_{10}-U_{11}	30.97	37.78	5.30	-169.79	0.00	0.00	235.12	19.68	202.33	-309.85	156.8	156.80	126.72
	U_{11}-U_{12}	40.44	42.37	-4.55	-167.43	0.00	0.00	75.09	40.34	16.61	333.99	156.8	156.80	134.92
	U_{12}-U_{13}	7.64	10.07	8.46	-113.37	0.00	0.00	116.33	98.90	102.62	-88.92	95.6	96.61	79.12
	U_{13}-U_{14}	42.15	26.30	-42.51	-239.39	0.00	0.00	-43.04	-265.73	-153.09	-611.20	198.9	198.88	169.65
	U_{14}-U_{15}	35.77	26.30	-42.51	-239.39	0.00	0.00	-224.27	-265.73	-153.09	-611.20	198.9	198.88	169.65
	U_{15}-U_{16}	42.01	36.32	-20.66	-262.22	0.00	0.00	-68.05	-315.16	-149.52	-703.27	232.7	232.70	189.45
	U_{16}-U_{17}	42.01	36.32	-20.66	-262.22	0.00	0.00	-68.05	-315.16	-149.52	-703.27	232.7	232.70	189.45
	U_{17}-U_{18}	18.82	8.28	-234.95	-279.14	0.00	0.00	-333.14	-348.24	-663.03	-719.88	251.7	251.73	209.41
	U_{18}-U_{19}	14.67	5.62	-79.71	-234.24	0.00	0.00	-315.14	-342.59	-592.88	-666.11	232.7	232.70	198.86
	U_{19}-U_{20}	14.67	5.62	-79.71	-234.24	0.00	0.00	-198.09	-66.16	-239.30	-311.17	151.8	151.78	130.94
	U_0-U_1	-16.78	13.03	-110.77	-87.28	0.00	0.00	-223.26	-26.11	-345.46	-156.51	138.2	138.15	119.05
	U_1-U_2	-16.78	13.03	-110.77	-87.28	0.00	0.00	-223.26	-26.11	-345.46	-156.51	138.2	138.15	119.05
	U_2-U_3	-4.96	5.03	13.46	-116.67	0.00	0.00	-45.66	-211.67	69.58	-368.08	104.8	104.75	86.43
	U_3-U_4	-3.78	6.22	26.16	-147.74	0.00	0.00	-18.60	-164.00	26.32	-356.35	104.8	104.75	86.43
	U_4-U_5	-3.78	6.22	26.16	-147.74	0.00	0.00	-62.94	-164.00	26.32	-356.35	104.8	104.75	86.43
	U_5-U_6	2.78	8.49	-62.49	-251.88	0.00	0.00	-178.60	-328.17	-263.45	-666.66	188.5	188.53	157.55
	U_6-U_7	14.03	19.52	-64.27	-334.30	0.00	0.00	-225.00	-333.52	-326.78	-793.50	188.5	188.53	157.55
	U_7-U_8	14.03	19.52	-64.27	-334.30	0.00	0.00	-225.00	-333.52	-326.78	-793.50	188.5	188.53	157.55
	U_8-U_9	10.97	30.87	-18.05	-134.52	0.00	0.00	-198.09	-66.16	-239.30	-311.17	151.8	151.78	130.94
	U_9-U_{10}	23.31	36.72	-51.84	-87.63	0.00	0.00	-161.88	82.47	-259.99	82.18	128.7	128.69	105.26
	U_{10}-U_{11}	23.31	36.72	-51.84	-87.63	0.00	0.00	-161.88	82.47	-259.99	82.18	128.7	128.69	105.26
	U_{11}-U_{12}	-46.47	27.87	8.88	-45.66	0.00	0.00	-46.41	56.06	15.15	0.47	96.6	96.61	79.12
	U_{12}-U_{13}	-46.47	27.87	8.88	-45.66	0.00	0.00	-46.41	56.06	15.15	0.47	96.6	96.61	79.12
	U_{13}-U_{14}	60.05	14.29	155.79	-182.97	0.00	0.00	632.16	30.34	756.62	-229.10	138.2	138.17	111.77
	U_{14}-U_{15}	60.05	14.29	155.79	-182.97	0.00	0.00	632.16	30.34	756.62	-229.10	138.2	138.17	111.77
	U_{15}-U_{16}	37.31	32.45	-23.55	-165.00	0.00	0.00	214.98	112.44	196.66	-132.10	90.2	90.24	76.71
	U_{16}-U_{17}	40.08	29.12	-41.78	-193.99	0.00	0.00	143.24	94.58	36.83	-195.48	90.2	90.24	72.24
	U_{17}-U_{18}	-113.13	127.30	-10.79	-22.47	0.00	0.00	-157.94	125.83	-24.89	-142.88	90.2	90.24	72.24
	U_{18}-U_{19}	-113.13	127.30	-10.79	-22.47	0.00	0.00	-157.94	125.83	-24.89	-142.88	90.2	90.24	72.24

M_y Information

YY Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Min) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0-U_1	4.07	-17.93	0.04	0.17	0.23	-4.00	0.52	2.28	3.06	-53.41
	U_1-U_2	-0.33	10.09	-11.90	-18.38	0.00	0.00	0.00	0.00	0.00	0.00
	U_2-U_3	-2.01	27.83	-23.82	-36.76	0.00	0.00	0.00	0.00	0.00	0.00
	U_3-U_4	-10.77	-2.78	22.18	-4.01	0.00	0.00	53.38	45.89	96.21	44.29
	U_4-U_5	-5.54	-2.91	-2.48	-36.57	0.00	0.00	38.34	-7.77	-2.03	-11.41
	U_5-U_6	27.72	3.21	-24.39	-17.17	0.00	0.00	10.61	-26.17	32.54	-52.66
	U_6-U_7	-28.00	-1.46	27.54	-17.87	0.00	0.00	-42.92	-7.77	-2.03	-11.41
	U_7-U_8	46.13	-37.93	-12.58	-18.16	0.00	0.00	-180.76	-168.13	-257.09	-139.53
	U_8-U_9	-45.65	3.92	-4.88	33.74	0.00	0.00	-182.13	-81.88	3.53	-38.30
	U_9-U_{10}	-15.81	-17.64	22.49	-54.83	0.00	0.00	-63.34	-105.53	-13.78	214.03
	U_{10}-U_{11}	-16.26	1.53	36.24	29.41	0.00	0.00	97.35	86.34	165.61	122.58
	U_{11}-U_{12}	-13.28	4.62	32.40	32.40	0.00	0.00	142.50	125.25	171.68	122.02
	U_{12}-U_{13}	-14.17	-4.17	46.73	48.56	0.00	0.00	390.41	219.67	469.58

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: 3F1
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
(Does Lumpsteel vs 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	L_0-L_1	-44.17	-99.07	0.62	0.65	3.41	-6.00				
	L_1-L_2	-131.02	-112.64	-0.29	1.09	1.47	-10.88				
	L_2-L_3	-79.50	-79.90	3.81	1.86	-5.41	-10.83				
	L_3-L_4	18.36	16.12	8.89	3.37	-0.87	-13.54				
	L_4-L_5	-68.34	210.23	7.47	3.36	-6.08	-5.21				
	L_5-L_6	8.36	229.14	2.02	3.63	-3.23	-5.27				
	L_6-L_7	54.60	214.52	0.74	4.46	-5.02	-5.30				
	L_7-L_8	1.61	459.41	-1.44	10.87	0.09	-0.19				
	L_8-L_9	439.88	-25.12	6.41	0.72	5.81	-4.38				
	L_9-L_{10}	224.03	-117.02	-0.98	2.34	-0.15	-6.33				
	L_{10}-L_{11}	168.12	-117.13	3.54	1.68	0.94	-6.10				
	L_{11}-L_{12}	239.72	-27.23	2.95	1.50	1.40	-7.26				
	L_{12}-L_{13}	-19.73	-128.50	2.00	1.48	4.42	-7.78				
	L_{13}-L_{14}	175.78	-425.21	1.72	1.47	3.70	-17.81				
	L_{14}-L_{15}	-409.28	-20.70	1.78	1.48	7.68	-13.86				
	L_{15}-L_{16}	-209.39	-318.68	6.49	0.53	-7.15	-14.57				
	L_{16}-L_{17}	374.86	83.54	-6.36	2.30	-10.05	4.36				
	L_{17}-L_{18}	-171.07	198.86	-3.18	3.09	-3.50	-3.71				
	L_{18}-L_{19}	-209.33	253.78	-6.27	3.47	-3.83	-1.84				
	L_{19}-L_{20}	-84.78	1.02	6.19	3.62	0.30	-0.33				
	L_0-U_1	10.35	-213.29	-0.33	0.72	2.68	-7.95				
	L_1-U_2	184.56	-247.73	0.36	0.47	4.46	-8.15				
	L_2-U_3	-0.36	-194.33	-0.42	0.78	1.48	-9.75				
	L_3-U_4	-68.23	-68.23	-3.83	1.78	-2.22	-9.11				
	L_4-U_5	-287.80	-299.08	-0.16	1.34	-10.07	-15.16				
	L_5-U_6	-287.80	-299.08	-0.16	1.34	-10.07	-15.16				
	L_6-U_7	-468.54	-273.29	1.93	2.52	-14.15	-21.57				
	L_7-U_8	-310.55	-45.89	2.38	4.38	-11.59	-15.72				
	L_8-U_9	-261.97	272.22	-23.36	3.14	-11.21	-10.73				
	L_9-U_{10}	-261.97	188.33	2.11	4.31	-5.08	-8.08				
	L_{10}-U_{11}	-131.48	23.74	-8.32	4.31	-2.78	-4.83				
	L_{11}-U_{12}	-131.48	389.15	-4.29	4.55	-6.48	-6.11				
	L_{12}-U_{13}	-164.35	-140.48	-2.78	1.39	-6.13	-11.42				
	L_{13}-U_{14}	-164.35	-140.48	-2.78	1.39	-6.13	-11.42				
	L_{14}-U_{15}	912.03	-326.89	1.42	1.16	14.70	-12.24				
	L_{15}-U_{16}	289.13	61.56	1.42	1.16	4.46	-7.39				
	L_{16}-U_{17}	515.59	-35.24	4.64	1.43	5.92	-8.85				
	L_{17}-U_{18}	252.02	-26.09	4.64	1.43	1.97	-8.85				
	L_{18}-U_{19}	252.02	-26.09	4.66	1.37	-0.99	-8.89				
	L_{19}-U_{20}	230.55	-96.37	2.39	2.71	-3.05	-11.63				
	L_{20}-U_{21}	230.55	-96.37	2.39	2.71	-3.05	-11.63				
	L_0-L_1	41.53	-186.96	-0.06	2.07	-5.21	-22.48				
	L_1-L_2	-197.37	32.63	1.14	1.74	14.10	-17.41				
	L_2-L_3	-108.55	-10.73	1.21	3.28	-15.46	-13.77				
	L_3-L_4	-108.55	-10.73	1.21	3.28	-15.46	-13.77				
	L_4-L_5	-65.47	170.47	2.89	4.12	-5.73	-8.60				
	L_5-L_6	-30.98	151.24	-7.31	5.82	-8.34	-5.14				
	L_6-L_7	-30.98	151.24	-7.31	5.82	-8.34	-5.14				
	L_7-L_8	-19.38	-193.41	0.19	2.05	-7.73	-12.67				
	L_8-L_9	273.03	178.23	1.42	1.16	3.32	-7.26				
	L_9-L_{10}	740.88	-268.17	2.89	0.35	11.77	-11.56				
	L_{10}-L_{11}	-140.43	-76.07	1.99	2.32	-5.54	-9.33				
	L_{11}-L_{12}	277.39	-114.86	3.81	1.68	1.11	-6.10				
	L_{12}-L_{13}	147.94	-145.21	1.71	2.94	1.59	-9.47				
	L_{13}-L_{14}	147.94	-145.21	1.71	2.94	1.59	-9.47				
	L_{14}-L_{15}	95.37	-212.64	2.35	2.41	2.85	-11.11				
	L_{15}-L_{16}	95.37	-212.64	2.35	2.41	2.85	-11.11				
	L_{16}-L_{17}	-182.93	-415.63	2.00	1.93	-7.60	-26.06				
	L_{17}-L_{18}	-370.36	-165.17	2.26	0.55	-17.70	-20.30				
	L_{18}-L_{19}	-370.36	-165.17	2.26	0.55	-17.70	-20.30				
	L_{19}-L_{20}	-304.19	-21.34	-8.25	2.47	-12.41	-9.98				
	L_{20}-L_{21}	-227.31	59.39	-6.67	3.62	-4.33	-3.95				
	L_{21}-L_{22}	-227.31	59.39	-6.67	3.62	-4.33	-3.95				
	L_{22}-L_{23}	-43.83	-117.87	0.29	0.31	3.51	-6.13				
	L_{23}-L_{24}	-152.35	-177.62	-0.35	0.33	3.71	-6.57				
	L_{24}-L_{25}	16.58	-153.31	0.29	0.31	4.87	-6.13				
	L_{25}-L_{26}	55.48	-320.94	-0.11	0.53	-4.02	-10.61				
	L_{26}-L_{27}	55.48	-320.94	-0.11	0.53	-4.02	-10.61				
	L_{27}-L_{28}	-64.07	-371.05	0.50	1.64	0.84	-20.31				
	L_{28}-L_{29}	-370.76	82.43	10.74	3.96	-11.65	-9.97				
	L_{29}-L_{30}	-200.77	-149.87	6.19	2.85	-4.81	-5.12				
	L_{30}-L_{31}	-200.77	-149.87	6.19	2.85	-4.81	-5.12				
	L_{31}-L_{32}	-131.78	166.76	-4.33	4.13	-5.40	-5.64				
	L_{32}-L_{33}	361.88	-172.92	4.79	0.72	7.98	-4.32				
	L_{33}-L_{34}	361.88	-172.92	4.79	0.72	7.98	-4.32				
	L_{34}-L_{35}	61.93	21.65	0.93	2.53	0.60	-7.21				
	L_{35}-L_{36}	189.90	5.62	2.88	2.85	2.97	-12.77				
	L_{36}-L_{37}	189.90	5.62	2.88	2.85	2.97	-12.77				
	L_{37}-L_{38}	-38.98	-56.51	2.04	0.96	-6.06	-13.39				
	L_{38}-L_{39}	-38.98	-56.51	2.04	0.96	-6.06	-13.39				
	L_{39}-L_{40}	-66.62	-76.78	0.77	3.63	0.58	-0.53				

YY Axis Moments from STAAD

Location	Member	Max. Neg. Mom. Start (k-ft)	Max. Neg. Mom. End (k-ft)	Start	End	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F'$_y$/S_{top}	M_u (k-in)	Equivalent Mem. Factor a	Equivalent Mem. Factor C_{mx}	Equivalent Mem. Factor C_{mm}
Structure 1	L_0-L_1	-68.25	-117.51	1.87	-233.02	83.6	83.58	74.65	100.97	2577	1.21	3332	0.99000394	2755.4	-0.008	0.60	0.600
	L_1-L_2	165.29	-118.77	195.92	-335.41	83.6	83.58	67.49	100.97	2577	1.21	3332	0.99000394	2755.4	-0.584	0.37	0.370
	L_2-L_3	-67.21	-77.72	-188.05	-291.45	99.5	99.53	91.00	125.49	3409	1.26	4141	0.99991886	3294.8	-0.041	0.58	0.580
	L_3-L_4	39.24	79.47	8.79	-214.23	99.9	99.93	84.14	125.49	3409	1.26	4141	0.99991886	3294.8	-0.041	0.58	0.580
	L_4-L_5	-218.96	461.72	256.32	52.6	92.58	76.68	114.47	3186	3186	1.24	3777	0.99991351	3052.5	-0.473	0.41	0.410
	L_5-L_6	6.90	386.11	-40.30	206.43	104.6	104.58	95.61	136.57	4040	1.26	4761	0.99991351	3848.5	0.125	0.65	0.650
	L_6-L_7	61.83	370.12	-50.39	171.02	104.53	104.51	95.56	136.57	4040	1.26	4761	0.99991351	3848.5	0.088	0.64	0.640
	L_7-L_8	-22.86	785.93	3.64	593.92	145.8	145.75	130.44	228.84	6500	1.24	7552	0.99992915	4806.3	-0.029	0.59	0.590
	L_8-L_9	646.04	-20.54	593.92	145.8	145.75	130.44	228.84	6500	2932.4	1.57	7552	0.99992915	4806.4	-0.159	0.54	0.540
	L_9-L_{10}	249.72	-112.77	262.68	-254.55	144.9	144.85	129.09	192.84	5010	1.24	6364	0.99991886	4178.1	-0.984	0.21	0.210
	L_{10}-L_{11}	-278.15	-123.99	234.38	-254.82	92.6	92.58	83.65	114.47	3295	1.24	3777	0.99991387	3052.5	-0.446	0.42	0.420
	L_{11}-L_{12}	343.64	-239.00	317.42	-414.73	92.6	92.58	76.68	114.47	3295	1.24	3777	0.99991387	3052.5	-0.356	0.45	0.450
	L_{12}-L_{13}	-19.73	-128.50	2.00	1.48	4.42	-7.78										
	L_{13}-L_{14}	175.78	-425.21	1.72	1.47	3.70	-17.81										
	L_{14}-L_{15}	-409.28	-20.70	1.78	1.48	7.68	-13.86										
	L_{15}-L_{16}	-209.39	-318.68	6.49	0.53	-7.15	-14.57										
	L_{16}-L_{17}	374.86	83.54	-6.36	2.30	-10.05	4.36										
	L_{17}-L_{18}	-171.07	198.86	-3.18	3.09	-3.50	-3.71										
	L_{18}-L_{19}	-209.33	253.78	-6.27	3.47	-3.83	-1.84										
	L_{19}-L_{20}	-84.78	1.02	6.19	3.62	0.30	-0.33										
	L_0-U_1	10.35	-213.29	-0.33	0.72	2.68	-7.95										
	L_1-U_2	184.56	-247.73	0.36	0.47	4.46	-8.15										
	L_2-U_3	-0.36	-194.33	-0.42	0.78	1.48	-9.75										
	L_3-U_4	-68.23	-68.23	-3.83	1.78	-2.22	-9.11										
	L_4-U_5	-287.80	-299.08	-0.16	1.34	-10.07	-15.16										
	L_5-U_6	-287.80	-299.08	-0.16	1.34	-10.07	-15.16										
	L_6-U_7	-468.54	-273.29	1.93	2.52	-14.15	-21.57										
	L_7-U_8	-310.55	-45.89	2.38	4.38	-11.59	-15.72										
	L_8-U_9	-261.97	272.22	-23.36	3.14	-11.21	-10.73										
	L_9-U_{10}	-261.97	188.33	2.11	4.31	-5.08	-8.08										
	L_{10}-U_{11}	-131.48	23.74	-8.32	4.31	-2.78	-4.83										
	L_{11}-U_{12}	-131.48	389.15	-4.29	4.55	-6.48	-6.11										
	L_{12}-U_{13}	-164.35	-140.48	-2.78	1.39	-6.13	-11.42										
	L_{13}-U_{14}	-164.35	-140.48	-2.78	1.39	-6.13	-11.42										
	L_{14}-U_{15}	912.03	-326.89	1.42	1.16	14.70	-12.24										
	L_{15}-U_{16}	289.13	61.56	1.42	1.16	4.46	-7.39										
	L_{16}-U_{17}	515.59	-35.24	4.64	1.43	5.92	-8.85										
	L_{17}-U_{18}	252.02	-26.09	4.64	1.43	1.97	-8.85										
	L_{18}-U_{19}	252.02	-26.09	4.66	1.37	-0.99	-8.89										
	L_{19}-U_{20}	230.55	-96.37	2.39	2.71	-3.05	-11.63										
	L_{20}-U_{21}	230.55	-96.37	2.39	2.71	-3.05	-11.63										
	L_0-L_1	41.53	-186.96	-0.06	2.07	-5.21	-22.48										
	L_1-L_2	-197.37	32.63	1.14	1.74	14.10	-17.41										
	L_2-L_3	-108.55	-10.73	1.21	3.28	-15.46	-13.77										
	L_3-L_4	-108.55	-10.73	1.21	3.28	-15.46	-13.77										
	L_4-L_5	-65.47	170.47	2.89	4.12	-5.73	-8.60										
	L_5-L_6	-30.98	151.24	-7.31	5.82	-8.34	-5.14										
	L_6-L_7	-30.98	151.24	-7.31	5.82	-8.34	-5.14										
	L_7-L_8	-19.38	-193.41	0.19	2.05	-7.73	-12.67										
	L_8-L_9	273.03	178.23	1.42	1.16	3.32	-7.26										
	L_9-L_{10}	740.88	-268.17	2.89	0.35	11.77	-11.56										
	L_{10}-L_{11}	-140.43	-76.07	1.99	2.32	-5.54	-9.33										
	L_{11}-L_{12}	277.39	-114.86	3.81	1.68	1.11	-6.10										
	L_{12}-L_{13}	147.94	-145.21	1.71	2.94	1.59	-9.47										
	L_{13}-L_{14}	147.94	-145.21	1.71	2.94	1.59	-9.47										
	L_{14}-L_{15}	95.37	-212.64	2.35	2.41	2.85	-11.11										
	L_{15}-L_{16}	95.37	-212.64	2.35	2.41	2.85	-11.11										
	L_{16}-L_{17}	-182.93	-415.63	2.00	1.93	-7.60	-26.06										
	L_{17}-L_{18}	-370.36	-165.17	2.26	0.55	-17.70	-20.30										
	L_{18}-L_{19}	-370.36	-165.17	2.26	0.55	-17.70	-20.30										
	L_{19}-L_{20}	-304.19	-21.34	-8.25	2.47	-12.41	-9.98										
	L_{20}-L_{21}	-227.31	59.39	-6.67	3.62	-4.33	-3.95										
	L_{21}-L_{22}	-227.31	59.39	-6.67	3.62	-4.33	-3.95										
	L_{22}-L_{23}	-43.83	-117.87	0.29	0.31	3.51	-6.13										
	L_{23}-L_{24}	-152.35	-177.62	-0.35	0.33	3.71	-6.57										
	L_{24}-L_{25}	16.58	-153.31	0.29	0.31	4.87	-6.13										
	L_{25}-L_{26}	55.48	-320.94	-0.11	0.53	-4.02	-10.61										
	L_{26}-L_{27}	55.48	-320.94	-0.11	0.53	-4.02	-10.61										
	L_{27}-L_{28}	-64.07	-371.05	0.50	1.64	0.84	-20.31										
	L_{28}-L_{29}	-370.76	82.43	10.74	3.96	-11.65	-9.97										
	L_{29}-L_{30}	-200.77	-149.87	6.19	2.85	-4.81	-5.12										
	L_{30}-L_{31}	-200.77	-149.87	6.19	2.85	-4.81	-5.12										
	L_{31}-L_{32}	-131.78	166.76	-4.33	4.13	-5.40	-5.64										
	L_{32}-L_{33}	361.88	-172.92	4.79	0.72	7.98	-4.32										
	L_{33}-L_{34}	361.88	-172.92	4.79	0.72	7.98	-4.32										
	L_{34}-L_{35}	61.93	21.65	0.93	2.53	0.60	-7.21										
	L_{35}-L_{36}	189.90	5.62	2.88	2.85	2.97	-12.77										
	L_{36}-L_{37}	189.90	5.62	2.88	2.85	2.97	-12.77										
	L_{37}-L_{38}	-38.98	-56.51	2.04	0.96	-6.06	-13.39										
	L_{38}-L_{39}	-38.98	-56.51	2.04	0.96	-6.06	-13.39										
	L_{39}-L_{40}	-66.62	-76.78	0.77	3.63	0.58	-0.53										

M_u 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	L_0-L_1	-0.68	-2.52	7.95	29.26	0.00	0.00	0.00	0.00	0.00	0.00
	L_1-L_2	2.93	-5.30	-20.56	-31.96	0.00	0.00	0.00	0.00	0.00	0.00
	L_2-L_3	-2.08	7.57	-29.99	19.14	0.00	0.00	0.00	0.00	0.00	0.00
	L_3-L_4	13.11	1.66	-40.12	-27.09	0.00	0.00	0.00	0.00	0.00	0.00
	L_4-L_5	-51.01	-20.15	41.21	52.52	0.00	0.00	0.00	0.00	0.00	0.00
	L_5-L_6	28.81	91.29	0.50	0.14	1.14	-1.65	0.00	0.00	0.00	0.00
	L_6-L_7	-37.46	7.57	7.27	104.33	0.00	0.00	0.00	0.00	0.00	0.00
	L_7-L_8	6.12	-13.07	-10.02	-3.13	0.00	0.00	0.00	0.00	0.00	0.00
	L_8-L_9	-49.31	-57.39	0.00	-0.98	-0.75	-0.23	0.00	0.00	0.00	0.00
	L_9-L_{10}	-0.49	6.77	14.72	51.53	0.00	0.00	0.00	0.00	0.00	0.00
	L_{10}-L_{11}	14.36	11.50	-49.48	-9.96	0.00	3.82	-3.51	0.00	0.00	0.00
	L_{11}-L_{12}	86.11	-28.11	0.29	0.95	-1.61	-0.04	0.00	0.00	0.00	0.00
	L_{12}-L_{13}	4.55	5.43	1.91	-17.48	0.00	-0.43	-0.15	-1.35	0.00	0.00
	L_{13}-L_{14}	-10.09	-4.17	10.30	44.60	0.00	0.00	0.00	0.00	0.00	0.00
	L_{14}-L_{15}	-0.28	-4.31	0.12	-20.53	0.00	0.00	0.00	0.00	0.00	0.00
	L_{15}-L_{16}	-34.56	-0.05	-40.40	-2.07	-1.32	-0.68	4.19	-1.35	0.00	0.00
	L_{16}-L_{17}	-0.54	2.45	0.00	107.07	-38.97	0.00	0.00	0.00	0.00	0.00
	L_{17}-L_{18}	-42.32	-2.59	-50.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{18}-L_{19}	-10.74	-13.47	-0.41	-35.07	0.00	0.00	0.00	0.00	0.00	0.00
	L_{19}-L_{20}	-55.66	6.75	-21.88	-64.92	0.00	0.00	0.00	0.00	0.00	0.00
	L_0-U_1	66.28	14.86	0.93	0.21	0.00	0.00	0.00	0.00	0.00	0.00
	L_1-U_2	-0.56	-1.93	-12.56	-43.61	0.00	0.00	0.00	0.00	0.00	0.00
	L_2-U_3	-1.58	-0.36	-29.19	-2.52	0.00	0.00	0.00	0.00	0.00	0.00
	L_3-U_4	60.81	64.32	-0.01	0.19	-1.43	1.14	0.00	0.00	0.00	0.00
	L_4-U_5	-11.04	-3.58	-60.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_5-U_6	0.08	7.49	-2.03	17.55	0.00	0.00	0.00	0.00	0.00	0.00
	L_6-U_7	0.44	-3.20	36.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_7-U_8	-5.49	-0.70	7.56	68.78	0.00	0.00	0.00	0.00	0.00	0.00
	L_8-U_9	3.89	2.07	27.60	-22.58	0.00	0.00	0.00	0.00	0.00	0.00
	L_9-U_{10}	-32.35	3.55	-40.40	-2.07	-1.32	-0.68	4.19	-1.35	0.00	0.00
	L_{10}-U_{11}	8.29	10.11	10.63	-31.65	0.00	0.00	0.00	0.00	0.00	0.00
	L_{11}-U_{12}	-58.12	-3.69	-47.22	-0.53	0.00	0.00	0.00	0.00	0.00	0.00
	L_{12}-U_{13}	-3.89	3.96	30.24	-30.52	0.00	0.00	0.00	0.00	0.00	0.00
	L_{13}-U_{14}	-3.67	-2.47	6.12	53.85	0.00	0.00	0.00	0.00	0.00	0.00
	L_{14}-U_{15}	4.83	4.09	-47.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{15}-U_{16}	11.86	-5.83	13.21	34.97	0.00	0.00	0.00	0.00	0.00	0.00
	L_{16}-U_{17}	15.33	-31.12	-9.90	-39.97	0.00	0.00	0.00	0.00	0.00	0.00
	L_{17}-U_{18}	29.48	-26.30	26.40	-12.57	0.00	0.00	0.00	0.00	0.00	0.00
	L_{18}-U_{19}	17.47	-3.55	0.00	-0.29	0.00	0.00	0.00	0.00	0.00	0.00
	L_{19}-U_{20}	-14.43	-2.76	-10.55	31.10	0.00	0.00	0.00	0.00	0.00	0.00
	L_{20}-U_{21}	0.66	-5.53	48.48	6.03	0.00	0.00	0.00	0.00	0.00	0.00
	L_0-L_1	-2.41	4.91	29.48	9.03	0.00	0.00	0.00	0.00	0.00	0.00
	L_1-L_2	-23.28	18.91	0.17	0.45	2.55	-0.93	0.00	0.00	0.00	0.00
	L_2-L_3	2.10	5.66	32.21	-11.75	0.00	0.00	0.00	0.00	0.00	0.00
	L_3-L_4	-27.19	16.37	-33.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_4-L_5	-7.08	25.67	-0.29	-1.06	1.72	-2.51	0.00	0.00	0.00	0.00
	L_5-L_6	48.91	-6.69	-23.33	66.13	0.00	0.00	0.00	0.00	0.00	0.00
	L_6-L_7	-14.53	6.69	20.33	-147.04	0.00	0.00	0.00	0.00	0.00	0.00
	L_7-L_8	-22.58	5.49	-33.86	57.09	0.00	0.00	0.00	0.00	0.00	0.00
	L_8-L_9	13.18	-2.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_9-L_{10}	-15.33	-13.45	92.88	75.61	0.00	0.00	0.00	0.00	0.00	0.00
	L_{10}-L_{11}	-19.98	0.86	30.14	16.23	0.00	0.00	0.00	0.00	0.00	0.00
	L_{11}-L_{12}	-19.54	0.86	30.14	16.23	0.00	0.00	0.00	0.00	0.00	0.00

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
Condition: As-Built

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

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

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

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

M_2 Information — ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-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_{bb} (in^3)	S_b (in^3)	S_t (in^3)	Z_z (in^3)	I_z (in^4)	I_{zz} (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 $C_{b(cal)}$	$C_{b(use)}$
Structure 1	U_0–L_1	-56.29	86.22	3.99	3.56	0.45	-0.61	-47.92	52.73	6.00	-8.11	0.00	0.00	0.00	-135.47	180.63	65.38	101.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.700	0.30	0.30
	U_1–L_1	-14.44	23.27	-3.16	3.08	0.60	-0.60	-42.16	41.11	8.03	-8.03	0.00	0.00	0.00	-73.98	83.69	33.20	50.80	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.879	0.25	0.25
	U_1–$L_{1.5}$	34.38	-5.53	-4.96	3.08	0.56	-10.87	-34.26	30.56	9.00	-21.36	0.00	0.00	0.00	20.80	-21.36	15.4	15.42	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-1.000	0.20	0.20
	L_1–L_1	36.84	-39.22	-2.20	2.35	1.76	-1.54	-29.36	31.42	23.54	-20.59	0.00	0.00	0.00	9.72	-4.94	78.49	-72.55	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.924	0.23	0.23
	L_1–U_1	49.77	-69.19	-0.62	1.66	1.27	-1.11	-53.97	53.91	20.46	-17.50	0.00	0.00	0.00	30.97	-29.46	0.00	-52.03	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.974	0.21	0.21
	$L_{1.5}$–U_1	57.71	-69.80	-0.24	0.68	2.70	-3.02	-3.21	1.10	36.00	-40.36	0.00	0.00	0.00	70.85	-69.31	121.82	-143.20	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5	958.8	-0.951	0.26	0.26
	L_2–U_1	63.32	-47.29	-0.24	0.24	1.27	-1.42	-7.36	1.27	43.50	-49.35	0.00	0.00	0.00	82.49	-80.64	119.68	-113.00	15.4	15.42	20.80	29.67	3	1078.0	1.67	1164	1.5	1029.6	-0.959	0.22	0.22
	U_1–L_2	106.28	-118.16	0.11	0.10	4.17	-4.29	-1.46	1.30	55.64	-57.34	0.00	0.00	0.00	136.28	-131.92	210.50	-228.15	19.5	19.45	18.36	30.78	3	1020.9	1.67	1016	1.5	913.3	-0.923	0.23	0.23
	U_1–$L_{1.5}$	-10.96	6.72	-3.52	4.23	4.80	-5.74	-47.01	56.56	64.14	-76.64	0.00	0.00	0.00	-75.36	82.26	69.14	-90.91	107.1	107.13	107.11	162.71	26	2056.8	1.52	5369	1.5	5302.3	-0.761	0.30	0.30
	U_2–$L_{1.5}$	-144.91	167.70	-3.53	3.68	0.28	-0.28	-44.67	47.55	3.55	-3.58	0.00	0.00	0.00	-247.75	279.42	183.63	213.35	33.1	33.05	32.91	54.51	14	1458.8	1.65	1799	1.5	1708.2	-0.985	0.25	0.25
	$U_{1.5}$–$L_{1.5}$	-102.02	95.66	-2.80	3.05	0.04	-0.29	-36.19	39.51	0.49	-3.64	0.00	0.00	0.00	-179.63	175.73	-131.98	119.63	35.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2	-0.978	0.21	0.21
	$U_{1.5}$–L_2	-111.13	166.05	-3.15	3.72	0.33	-0.27	-54.77	48.58	4.14	-2.90	0.00	0.00	0.00	-197.44	268.14	-139.06	239.07	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.792	0.30	0.30
	U_2–L_2	-96.42	93.90	-3.15	3.15	0.56	-0.41	-40.77	40.70	7.10	-5.25	0.00	0.00	0.00	-178.35	174.99	-116.11	115.24	21.1	21.09	21.09	35.46	10	1137.6	1.68	1170	1.5	1044.0	-0.981	0.21	0.21
	U_2–L_3	-90.91	75.94	-2.93	3.05	0.77	-0.76	-37.96	39.40	10.00	-9.77	0.00	0.00	0.00	-128.52	149.93	-66.18	86.02	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.857	0.26	0.26
	U_3–L_3	-33.93	39.16	-2.11	2.11	1.47	-1.21	-27.39	26.97	12.77	-12.77	0.00	0.00	0.00	-77.39	86.97	-32.77	52.66	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.974	0.21	0.21
	L_3–U_3	8.32	-15.87	-1.50	1.41	2.79	-2.90	-19.34	18.22	36.07	-37.47	0.00	0.00	0.00	-14.34	3.05	57.70	-69.35	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.822	0.27	0.27
	L_3–U_4	47.73	-60.39	-0.69	0.69	2.92	-3.58	-8.69	7.59	37.57	-38.53	0.00	0.00	0.00	-92.49	-50.64	119.89	-113.00	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.903	0.22	0.22
	L_3–L_4	61.55	-72.81	-0.40	0.40	2.85	-2.93	-5.16	5.21	36.84	-37.92	0.00	0.00	0.00	73.30	-87.67	127.90	-143.95	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8	-0.888	0.24	0.24
	U_4–L_4	143.11	-138.25	-0.55	0.56	4.91	-5.04	-7.17	6.33	61.30	-65.26	0.00	0.00	0.00	163.72	-170.29	250.34	-264.50	33.1	33.09	33.09	53.74	4	1157.1	1.65	1766	1.5	1737.0	-0.969	0.21	0.21
	U_4–L_5	157.87	-153.86	-0.57	0.51	5.92	-5.39	-7.34	6.56	71.42	-69.63	0.00	0.00	0.00	195.70	-197.49	298.08	-290.54	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.975	0.21	0.21
	L_4–U_4	131.38	-213.66	-0.25	0.41	3.97	-5.09	-3.17	5.33	51.33	-65.79	0.00	0.00	0.00	166.65	-270.82	237.49	-363.28	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.604	0.34	0.34
	L_4–L_5	-147.13	191.00	-4.30	5.07	0.43	-0.55	-262.66	332.95	5.56	-7.04	0.00	0.00	0.00	-262.66	332.95	0.00	0.00	0.00	0.00	0.00	0.00	0	1711.0	1.53	2357	1.5	2312.1	-0.781	0.32	0.32
	L_5–U_5	-122.87	130.77	-4.44	4.39	0.52	-0.53	-56.70	56.04	6.59	-6.76	0.00	0.00	0.00	-233.44	242.85	-151.56	161.22	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.961	0.22	0.22
	L_5–L_6	-73.12	73.12	-4.27	4.27	0.54	-0.54	-57.65	57.65	6.13	-6.13	0.00	0.00	0.00	-130.77	130.77	-87.65	87.65	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.961	0.22	0.22
	L_5–U_6	-62.46	69.03	-2.49	2.60	0.41	-0.42	-31.77	31.88	5.23	-6.34	0.00	0.00	0.00	-122.51	131.18	-74.43	82.80	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5	1066.2	-0.934	0.23	0.23
	U_6–L_6	-37.86	43.29	-2.33	2.57	0.47	-0.47	-30.96	33.15	6.86	-6.57	0.00	0.00	0.00	-94.00	97.73	-68.82	73.39	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.822	0.27	0.27
	L_6–U_6	-9.11	15.69	-2.42	2.60	1.26	-1.21	-30.96	33.15	16.07	-15.45	0.00	0.00	0.00	-52.09	63.92	9.05	0.52	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.820	0.27	0.27
	L_6–U_7	14.84	-14.93	-2.12	2.18	1.47	-1.56	-27.06	27.84	18.82	-19.56	0.00	0.00	0.00	-15.89	16.79	43.75	-45.35	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.965	0.21	0.21
	L_6–L_7	39.69	-45.43	-0.96	0.96	1.27	-1.27	-27.06	27.84	19.71	-23.56	0.00	0.00	0.00	35.58	-42.25	78.58	-89.71	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.965	0.21	0.21
	L_7–U_7	88.81	-97.92	-0.78	0.69	3.56	-3.61	-9.97	8.84	65.51	-66.17	0.00	0.00	0.00	135.36	-153.08	174.61	-187.32	20.8	20.80	20.67	34.64	5	1037.5	1.67	1143	1.5	1029.6	-0.932	0.23	0.23
	L_7–L_8	133.08	-133.02	-0.96	0.97	4.66	-4.66	-9.97	8.84	87.17	-89.32	0.00	0.00	0.00	195.36	-193.08	251.28	-249.10	20.8	20.80	20.67	34.64	5	1037.5	1.67	1143	1.5	1029.6	-0.932	0.23	0.23
	L_8–U_8	140.09	-147.06	-0.01	0.07	4.23	-4.47	-0.08	0.93	64.06	-67.56	0.00	0.00	0.00	182.02	-189.89	252.39	-265.28	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0	-0.951	0.22	0.22
	L_8–L_9	148.96	-153.44	-0.10	0.17	4.20	-4.34	-1.21	2.18	53.61	-55.40	0.00	0.00	0.00	192.07	-196.63	263.34	-271.43	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0	-0.970	0.21	0.21
	L_9–U_9	143.67	-139.99	-0.34	0.34	4.68	-4.68	-3.83	4.08	51.33	-51.33	0.00	0.00	0.00	186.78	-178.28	257.05	-243.33	43.0	43.24	43.16	70.66	16	1515.6	2.00	2350	1.5	2322.1	-0.960	0.22	0.22
	L_9–L_{10}	185.41	-182.32	-0.46	0.46	5.05	-4.83	-5.83	5.84	64.53	-61.91	0.00	0.00	0.00	233.46	-229.69	324.92	-317.50	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.977	0.21	0.21
	L_{10}–U_{10}	72.60	-71.13	-4.49	4.49	0.53	-0.53	-63.89	63.89	6.97	-6.97	0.00	0.00	0.00	11.84	-10.38	136.33	-134.87	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.965	0.21	0.21
	L_{10}–L_{11}	-128.28	129.98	-4.28	4.11	0.47	-0.42	-54.04	51.88	5.52	-5.24	0.00	0.00	0.00	-236.98	236.41	-159.04	162.16	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.998	0.20	0.20
	L_{11}–U_{11}	-125.94	122.64	-4.81	4.83	0.48	-0.48	-60.70	60.93	6.00	-6.64	0.00	0.00	0.00	-242.64	238.63	-150.93	152.09	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.984	0.21	0.21
	L_{11}–L_{12}	-109.68	106.91	-4.71	4.83	0.63	-0.62	-59.45	61.03	7.90	-7.78	0.00	0.00	0.00	-219.88	220.92	-132.52	135.80	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.960	0.21	0.21
	L_{12}–L_{13}	-93.38	90.29	-3.32	3.41	0.63	-0.63	-43.63	43.95	7.90	-8.01	0.00	0.00	0.00	-183.53	183.96	-115.00	118.28	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.964	0.21	0.21
	L_{13}–U_{13}	-43.25	43.74	-2.65	2.74	0.72	-0.63	-33.48	34.64	9.08	-7.98	0.00	0.00	0.00	-99.75	101.90	-44.43	46.49	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.979	0.21	0.21
	L_{13}–L_{14}	-29.76	34.19	-2.64	2.64	0.72	-0.72	-33.48	34.64	9.08	-11.68	0.00	0.00	0.00	-85.36	93.01	-30.44	38.01	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.979	0.21	0.21
	L_{14}–U_{14}	-1.28	1.60	-1.68	1.73	1.39	-1.51	-21.20	21.83	12.72	-19.04	0.00	0.00	0.00	-29.22	30.46	21.12	-22.67	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.959	0.22	0.22
	L_{14}–L_{15}	38.61	-37.34	-1.19	1.19	1.48	-1.48	-21.20	21.83	35.01	-34.80	0.00	0.00	0.00	46.12	-54.57	104.04	-111.77	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.931	0.23	0.23
	L_{15}–U_{15}	-11.68	-9.25	-0.88	0.73	2.65	-2.76	-11.08	9.25	33.47	-34.80	0.00	0.00	0.00	46.12	-54.57	104.04	-111.77	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.931	0.23	0.23
	L_{15}–L_{16}	62.68	-61.36	-0.63	0.61	3.63	-3.59	-7.95	7.69	45.80	-45.30	0.00	0.00	0.00	71.14	-69.77	141.02	-138.65	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_{16}–U_{16}	106.60	-105.79	-0.67	0.65	5.49	-5.56	-8.45	8.23	69.34	-70.25	0.00	0.00	0.00	127.55	-126.83	228.72	-228.85	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.999	0.20	0.20
	L_{16}–L_{17}	-6.30	6.30	-0.89	0.89	1.42	-1.42	-6.30	6.30	69.87	-69.87	0.00	0.00	0.00	11.84	-11.84	59.23	-59.23	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.965	0.21	0.21
	L_{16}–L_{17}	-114.56	114.55	-0.33	0.27	5.53	-5.24	-4.13	3.43	69.80	-66.09	0.00	0.00	0.00	-143.56	-144.45	239.67	-244.83	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.960	0.21	0.21
	L_{17}–L_{18}	-13.74	5.73	-4.66	4.66	0.63	-0.63	-13.74	5.73	69.71	-69.71	0.00	0.00	0.00	-185.53	184.43	33.39	-33.29	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.965	0.21	0.21
	L_{18}–U_{18}	-121.12	118.67	-4.01	3.72	0.50	-0.47	-51.17	47.49	6.44	-6.03	0.00	0.00	0.00	-223.97	216.01	-149.08	146.43	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.964	0.21	0.21
	L_{18}–L_{19}	-92.37	86.40	-3.60	3.61	0.41	-0.36	-45.97	46.07	5.17	-4.74	0.00	0.00	0.00	-179.84	172.21	-113.35	103.04	43.2	43.24	43.16	70.66	16	1515.6	1.63	2350	1.5	2140.4	-0.958	0.22	0.22
	L_{19}–U_{19}	-53.04	53.01	-3.32	3.32	0.63	-0.63	-33.17	33.17	7.90	-7.90	0.00	0.00	0.00	-135.53	135.53	-84.43	84.43	43.2	43.24	43.16	70.66	16	1515.6	1.63	2350	1.5	2129.3	-0.963	0.22	0.22
	L_{19}–L_{20}	-96.77	103.11	-4.03	4.06	0.05	-0.20	-51.45	51.82	0.69	-2.49	0.00	0.00	0.00	-192.69	201.41	-124.91	130.61	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0	-0.957	0.22	0.22
	L_{20}–U_{20}	-51.56	52.17	-3.78	3.78	0.67	-0.67	-32.57	32.57	7.90	-8.08	0.00	0.00	0.00	-134.01	134.01	-83.55	83.55	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0	-0.957	0.22	0.22
	L_{20}–L_{21}	-43.45	70.59	-3.51	3.55	0.54	-0.47	-44.90	45.34	6.85	-6.08	0.00	0.00	0.00	-148.65	192.71	-73.59	83.99	20.8	20.80	20.67	34.64	5	1037.5	1.67	1143	1.5	1029.6	-0.935	0.23	0.23
	L_{21}–U_{21}	-32.66	38.67	-1.98	2.17	0.70	-0.76	-25.35	27.66	8.96	-9.76	0.00	0.00	0.00	-75.41	86.23	-30.62	37.58	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.975	0.25	0.25
	L_{21}–L_{22}	-16.10	17.75	-1.91	1.91	2.77	-2.77	-24.35	24.35	12.77	-12.77	0.00	0.00	0.00	-53.51	57.33	-12.33	15.55	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.965	0.21	0.21
	L_{22}–U_{22}	4.46	-6.40	-1.62	1.48	2.22	-2.39	-20.63	19.86	28.31	-30.55	0.00	0.00	0.00	-23.13	13.09	42.60	-50.64	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.841	0.26	0.26
	L_{22}–L_{23}	24.39	-29.09	-1.32	1.32	1.79	-1.79	-20.63	19.86	33.97	-33.44	0.00	0.00	0.00	24.39	-29.09	82.12	-82.12	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.965	0.21	0.21
	L_{23}–U_{23}	47.22	-50.55	-0.50	0.50	2.81	-2.91	-6.34	6.40	35.89	-37.20	0.00	0.00	0.00	53.15	-57.39	103.04	-114.07	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5	1066.2	-0.947	0.22	0.22
	L_{23}–L_{24}	62.68	-61.36	-0.63	0.61	3.63	-3.59	-10.13	9.89	63.74	-63.97	0.00	0.00	0.00	71.14	-69.77	141.02	-138.65	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_{24}–U_{24}	104.86	-112.00	-0.71	0.67	5.57	-5.50	-9.07	8.53	71.14	-70.27	0.00	0.00	0.00	124.92	-134.51	228.80	-236.96	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.966	0.21	0.21
	L_{24}–L_{25}	108.12	-102.78	-0.36	0.59	4.65	-5.42	-4.57	7.47	51.73	-69.25	0.00	0.00	0.00	-134.61	-162.91	207.81	-262.64	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.781	0.28	0.28
	L_{25}–U_{25}	-124.19	124.19	-4.86	4.86	0.31	-0.31	-54.66	54.66	3.89	-4.68	0.00	0.00	0.00	-242.48	242.48	-156.27	156.27	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.961	0.22	0.22
	L_{25}–L_{26}	-109.22	116.95	-4.30	4.23	0.38	-0.36	-55.66	54.66	4.85	-4.59	0.00	0.00	0.00	-214.35	223.10	-139.69	146.07	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.961	0.22	0.22
	L_{26}–U_{26}	-48.65	58.79	-2.57	2.65	0.31	-0.32	-33.30	34.27	4.02	-4.08	0.00	0.00	0.00	-106.54	120.99	-58.01	71.13	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8	-0.891	0.25	0.25
	L_{26}–L_{27}	-16.10	17.75	-1.91	1.91	2.77	-2.77	-24.35	24.35	12.77	-12.77	0.00	0.00	0.00	-53.51	57.33	-12.33	15.55	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.965	0.21	0.21
	L_{27}–U_{27}	-5.41	11.55	-2.90	3.06	1.06	-1.06	-37.93	38.76	13.74	-13.77	0.00	0.00	0.00	-55.83	65.42	16.83	-2.88	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.826	0.26	0.26
	L_{27}–L_{28}	27.86	-30.67	-1.45	1.57	1.66	-1.82	-18.76	20.30	21.53	-23.53	0.00	0.00	0.00	11.82	-13.48	64.20	-70.47	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.911	0.24	0.24
	L_{28}–U_{28}	55.70	-63.03	-0.58	0.47	3.18	-3.29	-7.49	6.62	43.13	-42.98	0.00	0.00	0.00	101.74	-100.32	164.95	-163.30	21.1	21.09	21.09	35.46	10	1137.6	1.68	1170	1.5	1044.0	-0.995	0.20	0.20
	L_{28}–L_{29}	83.05	-83.03	-0.58	0.47	3.18	-3.29	-7.49	6.62	43.13	-42.98	0.00	0.00	0.00	101.74	-100.32	164.95	-163.30	21.1	21.09	21.09	35.46	10	1137.6	1.68	1170	1.5	1044.0	-0.995	0.20	0.20
	L_{29}–U_{29}	77.35	-77.35	-0.19	0.19	3.07	-3.07	-15.38	15.38	45.33	-45.33	0.00	0.00	0.00	124.49	-123.68	178.03	-188.69	35.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2	-0.944	0.22	0.22
	U_{29}–L_{29}	0.76	2.77	4.95	4.95	0.06	-0.06	0.76	2.77	4.95	4.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.992	0.20	0.20

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_t (in^3)	Z_z (in^3)	I_z (in^4)	I_{zz} (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 $C_{b(cal)}$	$C_{b(use)}$
Structure 2	U_0–L_1	-2.45	0.92	49.31	-56.41	0.00	0.00	0.00	-125.66	-169.75	187.74	-244.28	42.7	42.74	42.74	65.30
	U_1–L_1	3.76	2.77	41.95	-47.24	0.00	0.00

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: 3F1
Condition: As-Built

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

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

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	S_{top} (in^3)	S_b (in^3)	Z_c (in^3)	I (in^4)	$I_{t/n}$ (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_xx	M_u (k-in)	Equivalent Mom. Factor a	$C_{m/n}$	C_{min}	Min. Neg. Mom. Start k-in	End k-in	S_{top} (in^3)	S_b (in^3)	Z_c (in^3)	$I_{t/n}$ (in^4)	Shape Factor	M_p (k-in)	ϕ_{xx} (ksi)	Formula 1.8 Term * F_y/S_xx	M_u (k-in)	Equivalent Mom. Factor a	$C_{m/n}$	C_{min}	Pass
Structure 1	U_0-L_1	-23.44	7.53	-1.71	0.80	0.18	-0.14					-22.78	10.73	-2.39	-1.91	0.00	0.00	0.00	0.00	-60.08	23.73	27.36	7.30	15.6	15.63	15.58	25.96	5	804.0	1.66	857	1.5	773.7	-0.355	0.44	0.44	-28.15	30.50	-7.81	-1.05	0.34	0.59	-104.31	-13.97	6.57	7.84	0.00	0.00	0.00	0.00	-172.21	-58.34	-30.66	-29.97	100.5	100.60	100.48	126.29	66.1	1.20	3970	144	0.9425776	3126.1	0.339	0.74	0.74	0.278	0.114	0.40	Yes	0.168	0.063	0.24	Yes
	U_1-L_2	-3.41	-8.42	-0.81	0.42	-0.22	-0.27					-10.78	5.57	-2.47	-3.75	0.00	0.00	0.00	0.00	-18.45	-3.70	-16.55	-15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.021	0.68	0.68	-44.15	-40.74	-1.36	-1.78	8.34	2.19	-18.20	-23.81	111.35	29.22	0.00	0.00	0.00	0.00	-81.05	-83.91	87.37	-14.98	94.0	93.99	93.99	93.99	104.66	65.3	1.11	3454	166	0.9557157	2947.1	-0.171	0.53	0.53	0.190	0.049	0.24	Yes	0.105	0.027	0.14	Yes
	U_2-L_3	-7.93	-13.37	0.27	0.07	-0.27	-0.82					-9.70	4.13	-4.47	-7.75	0.00	0.00	0.00	0.00	-16.06	-7.29	-11.88	-22.71	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.022	0.81	0.81	-52.17	-20.78	-1.58	-0.81	0.06	-0.04	-16.99	-13.09	-9.78	-4.72	93.99	93.99	93.99	104.66	65.3	1.11	3454	160	0.9429297	2947.3	0.083	0.25	0.25	0.093	0.024	0.12	Yes	0.051	0.022	0.22	Yes
	U_3-L_4	-7.93	-13.37	0.27	0.07	-0.27	-0.82					3.63	0.91	-3.57	-10.98	0.00	0.00	0.00	0.00	15.05	-16.20	5.67	-31.66	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.179	0.53	0.53	-33.39	-37.29	0.98	1.04	3.13	-1.04	-13.11	13.92	41.78	-13.92	0.00	0.00	0.00	0.00	-26.37	-30.38	-10.61	-66.57	94.0	93.99	93.99	104.66	65.3	1.11	3454	171	0.9518078	2952.4	-0.164	0.53	0.53	—	—	—	—	0.421	0.238	0.46	Yes	0.390	0.040	0.44	Yes
	U_4-L_5	-14.61	18.52	-6.63	0.63	-0.49	-0.31					-8.40	6.07	-4.49	-6.31	0.00	0.00	0.00	0.00	-29.92	7.29	-23.46	15.6	15.42	15.42	19.37	29.87	5	907.0	1.54	1182	1.5	958.8	-0.330	0.23	0.23	-29.31	-28.94	-6.62	-11.65	3.45	-1.96	-8.32	-14.60	27.13	-5.24	0.00	0.00	0.00	0.00	-130.67	-111.39	113.4	113.37	113.37	130.15	82.8	1.11	4581	181	0.9613734	3508.3	0.854	0.94	0.94	0.381	0.063	0.45	Yes	—	—	—	—
	U_5-L_6	-37.44	76.90	1.97	1.88	0.18	-0.34					-26.26	25.06	2.36	4.52	0.00	0.00	0.00	0.00	-82.82	132.56	-45.63	94.10	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.225	0.35	0.35	24.42	-25.04	-3.64	-3.63	-3.70	-1.32	-52.69	-48.51	-49.44	-17.62	0.00	0.00	0.00	0.00	-36.76	-95.62	-32.54	-59.46	148.0	147.96	147.96	167.25	201.8	1.13	5519	262	0.9564852	4728.8	0.304	0.75	0.75	0.403	0.093	0.50	Yes	0.222	0.051	0.28	Yes
	U_6-L_7	-21.19	54.66	-1.63	-1.53	0.14	0.55					-14.96	14.69	-1.93	-3.68	0.00	0.00	0.00	0.00	-153.16	145.55	-102.23	76.61	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.092	0.22	0.22	-32.13	-36.38	-5.43	-4.27	-0.55	0.89	-72.53	-30.74	10.93	-42.24	0.00	0.00	0.00	0.00	-57.95	-25.18	-132.24	-47.30	148.0	147.96	147.96	167.25	201.8	1.13	5519	272	0.9462978	4718.1	0.317	0.72	0.72	0.443	0.115	0.56	Yes	0.244	0.063	0.31	Yes
	U_7-L_8	-8.75	101.93	-1.53	2.56	0.05	-0.03					-20.43	39.46	0.63	-0.41	0.00	0.00	0.00	0.00	-37.94	183.37	-10.56	131.53	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.207	0.52	0.52	-30.81	75.61	-4.47	-3.79	1.04	-0.34	-59.68	-50.59	13.88	4.50	0.00	0.00	0.00	0.00	-52.47	-32.53	188.10	104.15	148.0	147.96	147.96	167.25	201.8	1.13	5519	205	0.9599547	4689.9	-0.554	0.82	0.82	0.424	0.139	0.57	Yes	0.233	0.076	0.31	Yes
	U_8-L_9	-5.11	118.70	-0.81	2.11	0.27	-0.17					-11.47	27.25	3.52	2.20	0.00	0.00	0.00	0.00	-20.25	189.23	2.07	151.45	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2314.7	-0.107	0.56	0.56	66.10	50.77	2.86	2.10	2.15	0.42	36.98	27.21	27.77	5.37	0.00	0.00	0.00	0.00	134.01	101.37	122.03	72.98	200.9	200.90	200.90	232.56	256.9	1.18	7872	228	0.963845	6452.3	0.756	0.90	0.90	0.719	0.196	0.92	Yes	0.391	0.107	0.50	Yes
	U_9-L_{10}	-7.69	73.54	-1.79	1.63	0.28	-0.11					-23.13	21.12	3.42	-3.38	0.00	0.00	0.00	0.00	-131.66	123.05	-96.55	93.80	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2314.7	-0.039	0.22	0.22	34.09	97.62	1.75	2.53	0.06	-0.29	22.60	32.68	1.01	-22.73	0.00	0.00	0.00	0.00	73.58	169.39	45.51	122.73	200.9	200.90	200.90	232.56	256.9	1.18	7872	281	0.9181417	6457.7	0.434	0.77	0.77	0.373	0.080	0.45	Yes	0.206	0.049	0.25	Yes
	U_{10}-L_{11}	-43.88	73.22	-1.43	1.17	-0.07	-0.31					-18.54	15.10	-0.93	-4.06	0.00	0.00	0.00	0.00	-107.15	114.88	-84.28	89.90	39.8	39.77	39.56	65.61	21	1610.3	1.65	2165	1.5	1968.6	-0.933	0.23	0.23	25.85	112.77	0.55	1.67	2.58	0.33	42.87	174.64	76.53	152.13	197.4	197.41	184.99	230.30	248.6	1.17	7600	299	0.9183126	6306.9	0.245	0.70	0.70	0.402	0.076	0.48	Yes	0.249	0.043	0.30	Yes
	U_{11}-L_{12}	-7.22	22.29	-1.29	-0.77	0.23	0.13					-23.69	13.72	0.15	-6.44	0.00	0.00	0.00	0.00	-122.06	39.05	-103.56	41.84	27.64	27.64	42.74	63.30	8	1389.6	1.53	2155	1.5	2115.6	-0.484	0.41	0.41	32.31	19.77	0.25	0.45	1.83	0.41	-3.84	5.87	23.65	5.30	0.00	0.00	0.00	0.00	37.00	11.34	72.75	17.80	183.7	183.70	173.70	202.71	247.5	1.17	6890	277	0.9152526	5901.6	0.332	0.73	0.73	0.426	0.073	0.50	Yes	0.234	0.040	0.28	Yes
	U_{12}-L_{13}	-65.20	48.77	-1.67	1.51	-0.01	-0.58					-21.54	19.59	-0.14	-7.56	0.00	0.00	0.00	0.00	-112.77	88.87	-84.95	53.98	20.8	20.80	20.67	34.66	1	1076.0	1.67	1344	1.5	1229.6	0.788	0.28	0.28	-9.67	-26.00	0.15	1.27	1.56	-0.99	1.91	16.38	20.18	-12.80	0.00	0.00	0.00	0.00	-10.08	-12.50	13.67	-50.43	133.5	133.45	123.27	155.40	188.8	1.16	5128	176	0.9303181	4196.9	-0.271	0.49	0.49	0.420	0.108	0.53	Yes	0.264	0.060	0.33	Yes
	U_{13}-L_{14}	-24.90	8.63	-0.78	0.56	0.20	-0.63					-10.03	7.21	-2.61	-8.16	0.00	0.00	0.00	0.00	-45.41	20.58	-28.97	0.60	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.453	0.42	0.42	-50.00	-66.36	0.34	0.21	0.68	-1.00	4.40	2.73	8.84	-12.89	0.00	0.00	0.00	0.00	-59.28	-108.72	-53.01	-129.02	94.0	93.99	93.99	104.66	65.3	1.11	3454	145	0.9423755	2925.7	0.415	0.77	0.77	0.421	0.095	0.52	Yes	0.229	0.052	0.29	Yes
	U_{14}-L_{15}	-6.81	3.24	-2.03	0.33	-0.36	-0.36					-12.65	5.64	-5.57	-10.46	0.00	0.00	0.00	0.00	-20.67	5.57	-20.41	9.72	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.001	0.68	0.68	-39.44	-53.50	-1.04	-0.62	-1.74	0.02	-14.91	-8.27	-0.05	-14.65	0.00	0.00	0.00	0.00	-148.65	-124.82	104.66	65.3	1.11	3454	160	0.9539995	2913.5	0.088	0.24	0.24	0.357	0.056	0.41	Yes	0.200	0.098	0.29	Yes
	U_{15}-L_{16}	-25.30	9.99	-1.35	1.08	0.35	-0.68					-55.67	31.22	-27.04	-8.73	0.00	0.00	0.00	0.00	-55.67	31.22	-27.04	1.63	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.561	0.38	0.38	-117.56	-96.42	-2.93	-8.73	0.00	0.00	-196.38	-171.28	-216.08	-129.53	94.0	93.99	93.99	104.66	65.3	1.11	3454	123	0.9337227	2894.2	0.599	0.84	0.84	0.283	0.134	0.40	Yes	0.144	0.074	0.22	Yes
	U_{16}-L_{17}	-37.01	20.01	-1.72	1.40	0.15	-1.03					-22.19	18.56	-1.93	-4.48	0.00	0.00	0.00	0.00	-76.96	69.49	-53.09	46.20	15.4	15.42	19.37	29.87	5	907.0	1.54	986	1.5	958.8	-0.643	0.34	0.34	-130.16	-130.89	-4.42	-3.41	-2.65	-0.89	-67.21	-44.12	-32.95	-11.52	113.4	113.37	113.37	130.15	82.8	1.11	4299	131	0.9319966	3555.8	0.554	0.91	0.91	0.357	0.092	0.45	Yes	0.229	0.074	0.32	Yes
	U_{17}-L_{18}	-101.94	74.52	-3.25	2.74	0.26	-0.36					-42.05	30.49	4.70	-4.66	0.00	0.00	0.00	0.00	-187.18	142.75	-126.41	90.55	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.763	0.25	0.25	-138.27	-130.44	-5.94	-5.40	1.17	0.89	-96.83	-69.92	15.14	11.45	0.00	0.00	0.00	0.00	-279.63	-260.47	-160.07	-154.69	148.0	147.96	147.96	167.25	201.8	1.13	5519	207	0.9601995	4688.3	0.931	0.97	0.97	0.413	0.157	0.57	Yes	0.227	0.086	0.32	Yes
	U_{18}-L_{19}	-115.87	80.00	-3.63	2.81	-0.33	-0.30					-46.05	34.34	-5.04	-3.51	0.00	0.00	0.00	0.00	-214.67	151.24	-145.33	98.92	35.1	35.09	35.09	53.23	4	1264.6	1.53	1885	1.5	1822.1	-0.775	0.31	0.31	-97.75	-119.66	-5.53	-4.26	-1.08	-0.88	-71.89	-48.98	-41.15	-11.35	0.00	0.00	0.00	0.00	-205.55	-244.92	-108.03	-181.77	148.0	147.96	147.96	167.25	201.8	1.13	5519	193	0.9572364	5072.2	0.858	0.96	0.96	0.394	0.148	0.60	Yes	0.247	0.082	0.33	Yes
	U_{19}-L_{20}	-75.88	78.94	2.92	2.67	0.07	-0.18					-37.74	34.52	0.94	-2.33	0.00	0.00	0.00	0.00	-147.68	147.50	-87.39	99.60	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.599	0.20	0.20	-120.64	-57.62	-5.12	-5.63	0.91	0.60	-117.96	-78.06	-76.06	-11.76	7.72	0.00	0.00	0.00	-310.18	-176.38	-141.34	-64.86	160.8	160.87	160.87	180.57	184.25	223.9	1.15	6080	156	0.9471776	5078.9	0.883	0.83	0.83	0.446	0.127	0.58	Yes
	U_{20}-L_{21}	-109.41	98.91	-3.32	2.83	0.33	-0.34					-42.37	36.21	4.19	-4.40	0.00	0.00	0.00	0.00	-197.31	175.65	-136.79	122.86	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.890	0.24	0.24	-42.36	-43.81	-6.74	0.48	-0.06	0.08	-86.10	6.07	-9.07	-55.65	173.7	173.70	173.70	202.71	247.5	1.17	6890	180	0.9541562	5469.3	0.294	0.72	0.72	0.365	0.117	0.49	Yes	0.201	0.064	0.27	Yes
	U_{21}-L_{22}	-89.79	75.76	-3.08	2.65	-0.37	-0.35					-38.05	33.45	3.35	-4.75	0.00	0.00	0.00	0.00	-179.19	149.40	-122.97	102.64	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.813	0.23	0.23	-27.73	-33.75	-6.17	0.01	0.12	0.14	-16.81	6.14	-8.24	-12.29	173.7	173.70	173.70	202.71	247.5	1.17	6890	209	0.9555625	5505.3	0.411	0.76	0.76	0.360	0.101	0.47	Yes	0.198	0.056	0.26	Yes
	U_{22}-L_{23}	-90.87	71.82	-3.07	2.50	0.48	-0.42					-39.17	31.89	6.15	-5.30	0.00	0.00	0.00	0.00	-189.06	134.62	-110.10	86.47	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.797	0.28	0.28	-31.05	-69.37	-2.07	0.32	0.24	0.36	-26.42	4.13	3.09	4.56	0.00	0.00	0.00	0.00	-74.71	-69.54	-36.35	70.11	148.0	147.96	147.96	167.25	201.8	1.13	5519	217	0.9618976	4696.6	-0.931	0.23	0.23	0.386	0.109	0.50	Yes	0.213	0.060	0.28	Yes
	U_{23}-L_{24}	-77.69	73.54	-1.79	1.63	0.28	-0.11					-20.66	18.85	3.05	-3.02	0.00	0.00	0.00	0.00	-117.50	109.80	-86.13	83.67	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.039	0.22	0.22	-30.34	-31.87	-5.93	-4.06	1.17	0.89	-46.79	-18.53	9.74	-38.02	0.00	0.00	0.00	0.00	-54.54	-23.52	-118.03	-42.19	148.0	147.96	147.96	167.25	201.8	1.13	5519	244	0.9564852	4728.8	0.304	0.75	0.75	0.403	0.093	0.50	Yes	0.222	0.051	0.28	Yes
	U_{24}-L_{25}	-20.35	5.86	-1.39	1.19	0.32	-0.61					-17.75	15.14	4.10	-7.82	0.00	0.00	0.00	0.00	-49.52	32.50	-21.12	2.60	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.656	0.34	0.34	-32.73	-33.21	-1.99	-14.07	0.00	0.00	-13.53	-66.95	26.48	-102.41	94.0	93.99	93.99	104.66	65.3	1.11	3454	96	0.9139827	2834.9	-0.259	0.50	0.50	0.257	0.053	0.35	Yes	0.141	0.051	0.20	Yes
	U_{25}-L_{26}	-1.38	-11.28	-1.08	-0.68	0.68	0.63					-13.84	11.16	6.10	-11.69	0.00	0.00	0.00	0.00	-13.84	11.16	6.10	-11.69	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.004	0.68	0.68	-42.37	-40.74	-1.36	-1.78	8.34	2.19	-7.45	-7.59	27.13	-5.24	0.00	0.00	0.00	0.00	-64.76	-62.62	87.37	-14.98	94.0	93.99	93.99	104.66	65.3	1.11	3454	126	0.9419702	2939.2	0.084	0.24	0.24	0.097	0.024	0.12	Yes	0.053	0.022	0.22	Yes
	U_{26}-L_{27}	-8.85	-23.87	-0.61	0.39	0.68	-1.05					-7.82	-4.98	6.89	-13.43	0.00	0.00	0.00	0.00	-1.26	-24.55	29.25	-48.49	17.2	17.24	17.24	26.54	2	824.7	1.54	878	1.5	853.4	-0.416	0.43	0.43	-81.96	-150.45	26.63	-0.65	-0.65	-1.48	3.33	8.04	8.24	-18.92	0.00	0.00	0.00	0.00	-102.21	-191.64	-83.93	-226.68	103.1	103.08	103.08	116.41	73.3	1.13	3841	126	0.9345487	3779.0	0.423	0.77	0.77	0.343	0.055	0.40	Yes
	U_{27}-L_{28}	-44.41	35.31	-1.42	1.17	0.28	-0.87					-18.09	15.00	3.53	-11.15	0.00	0.00	0.00	0.00	-81.25	65.40	-53.15	31.40	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2	-0.805	0.26	0.26	-109.53	-164.85	-1.41	-2.31	-3.49	0.16	-17.95	-29.46	-44.60	2.02	0.00	0.00	0.00	0.00	-165.72	-252.60	-200.37	-211.68	128.2	128.15	118.23	148.43	106.4	1.16	4898	160	0.9489536	4011.5	0.656	0.86	0.86	0.335	0.124	0.46	Yes	0.211	0.071	0.29	Yes
	U_{28}-L_{29}	-96.57	69.89	-2.22	-0.83	0.28	-0.46					-36.28	29.07	-2.16	-10.46	0.00	0.00	0.00	0.00	-172.73	127.09	-122.73	79.39	38.8	38.83	38.83	59.23	3	1284.6	1.53	1885	1.5	1822.1	-0.762	0.25	0.25	-43.30	-53.95	-1.74	-0.82	-0.76	-0.09	-14.91	-8.27	-0.05	-14.65	0.00	0.00	0.00	0.00	-214.40	-227.59	-108.03	-181.77	160.8	160.87	160.87	180.57	184.25	223.9	1.15	6080	164	0.9547516	5330.1	0.877	0.95	0.95	0.410	0.102	0.52	Yes
	U_{29}-L_{30}	-85.40	67.30	-2.09	1.89	-0.10	-0.51					-33.03	24.19	-1.23	-6.45	0.00	0.00	0.00	0.00	-153.95	118.94	-112.61	79.11	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.773	0.29	0.29	-64.33	-107.60	-4.35	-4.05	-2.25	-0.63	-51.60	-31.90	-42.06	-13.10	0.00	0.00	0.00	0.00	-181.81	-207.34	-164.30	-156.99	173.7	173.70	173.70	202.71	247.5	1.17	6890	234	0.9547516	5330.1	0.877	0.95	0.95	0.410	0.102	0.52	Yes
	U_{30}-L_{31}	-39.40	30.58	-2.08	2.01	-0.47	-0.38					-39.40	30.58	-2.08	-2.84	0.00	0.00	0.00	0.00	-175.05	135.98	-132.39	93.80	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.838	0.23	0.23	-64.67	-108.51	-4.38	-3.73	-2.46	-0.60	-174.77	-137.55	-138.77	-93.80	173.7	173.70	173.70	202.71	247.5	1.17	6890	204	0.9547516	5330.1	0.877	0.95	0.95	0.410	0.102	0.52	Yes
	U_{31}-L_{32}	-109.84	116.34	-3.23	2.86	0.19	-0.09					-41.27	36.58	1.92	-5.00	0.00	0.00	0.00	0.00	-191.24	198.80	-130.10	149.95	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.962	0.22	0.22	42.24	-14.43	-5.20	-4.94	-2.75	-0.95	-66.48	-63.12	-34.84	-12.09	0.00	0.00	0.00	0.00	-31.51	-100.81	9.61	-34.47	201.3	201.30	201.30	221.31	271.6	1.10	7303	171	0.9518448	6323.0	0.313	0.73	0.73	0.436	0.098	0.54	Yes	0.240	0.054	0.30	Yes
	U_{32}-L_{33}	-141.98	130.02	-4.22	3.50	0.53	-0.26					-53.85	44.74	6.75	-4.75	0.00	0.00	0.00	0.00	-254.58	227.91	-175.82	160.45	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.894	0.24	0.24	95.48	23.61	-5.09	-3.86	3.54	1.65	-66.14	-49.34	42.24	21.13	0.00	0.00	0.00	0.00	-74.71	-69.54	-36.35	70.11	148.0	147.96	147.96	167.25	201.8	1.13	5519	217	0.9618976	4696.6	-0.931	0.23	0.23	0.386	0.109	0.50	Yes
	U_{33}-L_{34}	-40.13	133.41	-2.73	3.65	-0.25	-0.35					-20.66	18.85	3.05	-3.02	0.00	0.00	0.00	0.00	-125.20	220.35	-75.44	154.84	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.039	0.22	0.22	34.09	97.62	1.75	2.53	0.06	-0.29	-49.19	32.68	1.01	-22.73	0.00	0.00	0.00	0.00	-54.54	-23.52	-118.03	-42.19	148.0	147.96	147.96	167.25	201.8	1.13	5519	244	0.9564852	4728.8	0.304	0.75	0.75	0.403	0.093	0.50	Yes
	U_{34}-L_{35}	-11.96	79.20	-2.15	2.68	0.42	-0.33					-27.11	33.79	5.26	-4.17	0.00	0.00	0.00	0.00	-50.79	148.88	-8.71	97.54	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.346	0.46	0.46	36.93	-29.02	0.83	1.79	1.84	-0.05	15.44	22.56	23.22	-0.68	0.00	0.00	0.00	0.00	61.58	-8.40	78.19	-38.61	148.0	147.96	147.96	167.25	201.8	1.13	5519	114	0.9274995	4328.7	-0.494	0.40	0.40	0.271	0.057	0.37	Yes
	U_{35}-L_{36}	-77.27	73.44	-1.79	1.63	0.28	-0.11					-43.62	37.59	5.68	-3.87	0.00	0.00	0.00	0.00	-157.16	139.72	-102.19	92.47	35.1	35.09	35.09	53.51

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Min) Start (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0 - U_1	-75.12	-0.70	-0.70	1.00	4.60	-15.60	-7.79	11.13	51.21	-173.67
	U_1 - L_1	46.81	-20.16	-0.70	1.00	-3.00	-16.40	2.23	10.76	-33.62	-184.81
	L_1 - U_2	-112.19	86.51	0.90	2.40	-0.50	-17.10	10.02	26.72	-10.02	-190.37
	U_2 - L_2	-15.68	66.14	0.20	2.40	-3.00	-16.40	-69.02	15.17	-15.59	-179.24
	L_2 - U_3	-9.16	61.58	1.20	2.30	-2.20	-9.10	13.26	25.61	-24.49	-151.31
	U_3 - L_3	42.76	120.09	4.90	3.60	-0.10	-5.80	-54.55	40.08	-1.11	-64.57
	L_3 - U_4	93.72	43.54	3.90	1.90	0.30	-6.40	-3.34	18.93	-20.04	-104.65
	U_4 - L_4	-47.40	525.96	10.20	15.90	0.10	-1.10	-113.66	127.50	1.11	-1.11
	L_4 - U_5	474.61	-124.72	15.90	10.20	-1.10	-15.30	11.86	14.02	123.99	-164.96
	U_5 - L_5	46.76	20.63	1.30	1.90	0.90	-10.40	14.62	20.49	9.70	-112.13
	L_5 - U_6	64.51	-138.68	1.90	1.30	0.90	-13.90	20.49	11.53	5.39	-148.67
	U_6 - L_6	27.83	-140.42	2.10	1.20	1.00	-15.50	22.64	12.94	10.78	-167.12
	L_6 - U_7	-106.18	-154.99	1.50	0.60	1.70	-17.60	16.17	6.47	18.33	-189.76
	U_7 - L_7	-137.97	-302.66	0.60	0.20	2.80	-26.80	6.47	-26.47	-36.94	-314.41
	L_7 - U_8	-245.66	-182.98	1.00	0.80	3.50	-17.50	10.78	8.63	32.35	-188.69
	U_8 - L_8	-123.52	-326.70	0.40	1.40	3.50	-37.74	-222.24	-405.08	-111.51	-688.22
	L_8 - U_9	-269.82	-144.58	-1.50	1.00	4.80	-14.30	-16.17	10.78	-51.75	-154.18
	U_9 - L_9	-139.47	-67.25	-8.60	4.10	4.80	-8.10	-82.73	-43.04	-87.03	-87.03
	L_9 - U_{10}	-170.30	-20.48	1.10	2.30	0.00	-4.90	-11.86	24.80	0.00	-52.83
	U_{10} - L_{10}	-186.12	24.46	-5.30	7.30	1.40	-15.00	-57.14	78.71	15.09	-167.73
	L_{10} - U_{11}	-70.88	110.67	-29.50	3.70	2.30	-15.80	3.78	129.71	-74.87	-168.22
	U_{11} - L_{11}	-70.88	-181.00	-5.20	1.40	-1.30	-17.90	-2.13	14.91	-13.84	-190.58
	L_{11} - U_{12}	-53.59	-252.21	-5.20	1.40	-1.30	-17.90	-2.13	14.91	-13.84	-190.58
	U_{12} - L_{12}	-327.18	-325.33	0.90	2.70	-4.20	-29.60	9.58	-28.75	-44.72	-315.15
	L_{12} - U_{13}	-338.53	-361.26	1.10	2.50	-4.20	-29.60	11.71	-31.91	-41.75	-306.74
	U_{13} - L_{13}	-396.09	-197.74	-0.30	4.00	-10.30	-24.40	-99.02	-42.59	-109.66	-269.79
	L_{13} - U_{14}	-344.15	-179.39	2.80	2.50	-2.70	-38.10	29.81	26.62	-28.75	-405.65
	U_{14} - L_{14}	-229.10	-291.71	2.10	2.80	-2.70	-38.10	22.64	39.01	-37.26	-397.79
	L_{14} - U_{15}	-350.17	-90.75	1.80	3.20	-3.50	-15.50	19.16	34.57	-37.26	-165.53
	U_{15} - L_{15}	-229.10	-291.71	2.80	2.10	-1.80	-21.10	22.64	26.62	-28.75	-321.38
	L_{15} - U_{16}	-167.07	-39.82	3.00	3.10	-2.90	-8.80	31.94	33.01	-30.88	-104.34
	U_{16} - L_{16}	-57.49	-39.30	3.70	3.00	-3.00	-7.40	31.94	39.37	-39.74	-79.79
	L_{16} - U_{17}	-57.49	-39.30	3.70	3.00	-3.00	-7.40	31.94	39.37	-39.74	-79.79
	U_{17} - L_{17}	-261.00	-395.93	-15.50	23.80	-0.50	-1.00	-165.03	253.40	-5.32	-10.65
	L_{17} - U_{18}	-1192.75	-92.80	0.30	4.30	-1.00	-1.00	1.11	274.32	-238.83	-277.44
	U_{18} - L_{18}	-25.30	71.62	1.70	2.90	-0.60	-19.50	17.89	30.51	-6.31	-205.19
	L_{18} - U_{19}	-25.30	71.62	1.70	2.90	-0.60	-19.50	23.15	19.91	-6.31	-205.19
	U_{19} - L_{19}	-150.58	33.05	2.00	2.30	0.10	-16.70	21.64	24.20	-1.05	-175.70
	L_{19} - U_{20}	-147.30	4.36	2.80	1.80	-2.60	-19.40	29.46	19.99	27.35	-204.11
	U_{20} - L_{20}	-147.30	4.36	2.80	1.80	-2.60	-19.40	29.46	19.99	27.35	-204.11
	L_{20} - U_{21}	-31.67	-34.01	0.10	2.10	-1.80	-21.10	1.03	22.09	-18.94	-221.99
	U_{21} - L_{21}	-86.04	-77.79	1.30	2.10	-1.80	-21.10	13.68	15.79	-18.94	-221.99
	L_{21} - U_{22}	-60.95	-86.97	0.90	1.20	-2.00	-18.10	9.47	12.63	-21.04	-190.43
	U_{22} - L_{22}	-31.67	-65.18	1.70	2.10	-1.80	-21.10	21.05	15.79	-18.94	-178.80
	L_{22} - U_{23}	-32.99	-28.66	2.00	2.60	-1.10	-15.40	21.04	27.35	-11.57	-162.02
	U_{23} - L_{23}	-15.12	113.75	-8.20	4.10	-1.30	-11.10	-86.27	43.14	-13.68	-116.78
	L_{23} - U_{24}	-15.12	113.75	-8.20	4.10	-1.30	-11.10	-86.27	43.14	-13.68	-116.78
	U_{24} - L_{24}	-2.69	209.81	-4.30	5.60	0.70	-10.00	-66.28	58.92	7.36	-105.21
	L_{24} - U_{25}	-122.28	1156.58	-12.10	24.50	0.10	-1.30	-127.00	257.76	1.05	-13.68
	U_{25} - U_{26}	1153.78	196.80	0.00	2.60	23.50	-25.70	0.00	27.68	293.20	-273.63
	L_{25} - U_{26}	-119.47	262.34	-0.40	2.60	23.50	-25.70	0.00	27.68	293.20	-273.63
	U_{26} - L_{26}	178.87	-59.61	2.20	2.80	0.30	-17.40	23.42	29.91	3.19	-185.26
	L_{26} - U_{27}	178.87	-59.61	2.20	2.80	0.30	-17.40	29.81	23.42	3.19	-185.26
	U_{27} - L_{27}	68.77	-178.57	3.10	2.60	-0.40	-22.80	33.01	27.68	-4.26	-242.75
	L_{27} - U_{28}	-68.57	-236.40	2.40	2.20	-0.90	-36.10	25.55	23.42	-9.68	-384.36
	U_{28} - L_{28}	-236.40	-153.06	2.40	2.20	-0.90	-36.10	25.55	23.42	-9.68	-384.36
	L_{28} - U_{29}	-98.63	-313.14	1.50	3.50	-3.70	-21.80	15.97	37.26	-39.39	-232.10
	U_{29} - L_{29}	-98.63	-313.14	1.50	3.50	-3.70	-21.80	15.97	37.26	-39.39	-232.10
	L_{29} - U_{30}	-350.27	-386.72	-0.10	1.60	-1.20	-26.00	-54.30	17.04	-12.78	-276.82
	U_{30} - L_{30}	-350.27	-386.72	-0.10	1.60	-1.20	-26.00	-54.30	17.04	-12.78	-276.82
	L_{30} - U_{31}	-278.82	-117.63	-8.20	4.20	-7.00	-13.00	-87.31	44.72	-73.43	-138.41
	U_{31} - L_{31}	-282.26	-37.53	-8.20	4.20	-7.00	-13.00	-87.31	44.72	-73.43	-138.41
	L_{31} - U_{32}	-186.18	-74.10	-6.30	7.90	2.50	-14.70	-67.08	84.11	-26.62	-156.51
	U_{32} - L_{32}	-139.59	-187.78	-7.70	6.80	0.90	-12.00	-83.02	8.63	74.40	-129.38
	L_{32} - U_{33}	-47.42	-115.54	-6.30	7.90	2.50	-14.70	-67.08	84.11	-26.62	-156.51
	U_{33} - L_{33}	-52.50	-226.55	-5.10	0.80	1.60	-17.90	-1.08	8.63	12.75	-193.00
	L_{33} - U_{34}	-277.57	-111.69	-8.20	2.90	-1.60	-21.50	-88.41	24.80	-10.78	-231.61
	U_{34} - U_{35}	-166.87	-243.33	1.60	1.40	-5.30	-27.70	10.78	15.09	-59.30	-298.66
	L_{34} - U_{35}	-287.50	-127.73	2.50	1.60	-3.20	-16.00	9.70	13.94	-34.30	-172.13
	U_{35} - L_{35}	-141.30	-113.93	-5.70	3.00	-5.70	-12.20	-61.46	32.35	-7.55	-131.56
	L_{35} - U_{36}	-145.41	22.73	1.10	2.40	-1.30	-9.00	-173.61	63.18	-207.25	-96.60
	U_{36} - L_{36}	-141.54	56.98	-0.70	2.70	-3.30	-4.80	-263.90	111.92	-230.26	8.79
	L_{36} - U_{37}	-119.47	262.34	-0.40	2.60	23.50	-25.70	0.00	27.68	293.20	-273.63
	U_{37} - U_{38}	11.86	-25.88	-14.02	-97.04	0.00	0.00	0.00	0.00	0.00	0.00
	L_{37} - U_{38}	41.46	29.11	-35.58	-51.75	0.00	0.00	0.00	0.00	0.00	0.00
	U_{38} - L_{38}	-22.64	22.64	5.39	-59.30	0.00	0.00	0.00	0.00	0.00	0.00
	L_{38} - U_{39}	-108.90	128.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{39} - U_{40}	17.81	14.47	168.11	-207.51	0.00	0.00	0.00	0.00	0.00	0.00
	U_{40} - U_{41}	15.59	21.15	3.34	-131.37	0.00	0.00	0.00	0.00	0.00	0.00
	U_{41} - U_{42}	113.01	44.44	2.20	1.60	1.20	-13.60	24.48	17.81	13.36	-157.41
	U_{42} - U_{43}	59.30	15.07	2.20	1.40	-2.30	-16.00	24.49	15.59	-25.61	-178.13
	U_{43} - U_{44}	80.84	-19.79	2.20	1.20	4.40	-13.10	24.49	13.36	48.99	-163.84
	U_{44} - U_{45}	80.24	-119.59	-3.10	1.00	1.00	-13.00	-34.01	11.13	11.13	-144.73
	U_{45} - U_{46}	24.67	-27.08	-0.70	1.30	-3.10	-9.50	-7.79	14.47	-34.51	-105.76
	U_{46} - U_{47}	29.36	-160.66	-5.50	7.30	1.80	-11.50	41.23	81.27	11.13	-129.03

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_{bot} (in^3)	S_{av} (in^3)	Z_z (in^3)	I_{zz} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term = F_y*S_av	M_n k-in	Equivalent Mom. Factor a	C_{mx}	C_{bmx}
Structure 1	U_0 - U_1	-101.29	-13.57	-24.08	-226.68	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	0.108	0.64	0.64
	U_1 - L_1	-57.86	43.70	-10.28	-265.44	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	0.000	0.94	0.94
	L_1 - U_2	-132.82	147.20	-158.87	-135.03	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	0.850	0.94	0.94
	U_2 - L_2	-110.11	127.53	-44.54	-147.05	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	0.048	0.62	0.62
	L_2 - U_3	-5.46	-113.34	-43.75	-51.65	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	0.048	0.62	0.62
	U_3 - L_3	-15.32	208.22	54.15	72.18	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	-0.014	0.57	0.57
	L_3 - U_4	116.77	-20.04	-104.65	-3.34	78.18	90.24	84.21	142.56	2586	1598.1	1.40	4704	0.99907136	3201.5	0.445	0.78	0.78
	U_4 - L_4	-209.24	913.87	-60.17	682.31	138.2	138.17	111.77	199.97	3642	2197.7	1.45	6599	0.9989545	4354.8	-0.229	0.51	0.51
	L_4 - U_5	832.67	-143.33	778.44	-376.01	130.3	130.26	105.11	180.77	2960	1799.3	1.39	5995	0.99880039	4292.8	-0.483	0.41	0.41
	U_5 - L_5	79.01	53.44	72.40	-118.96	90.6	90.61	79.12	139.29	2174	1387.9	1.40	4465	0.99873164	3184.1	-0.617	0.35	0.35
	L_5 - U_6	110.49	-139.26	61.92	-370.11	90.6	90.61	83.55	139.29	2174	1387.9	1.40	4465	0.99873164	3184.1	-0.617	0.35	0.35
	U_6 - L_6	65.62	-165.72	90.20	-399.80	128.7	128.69	105.26	182.66	3153	1864.4	1.42	6628	0.99872695	4241.5	-0.126	0.55	0.55
	L_6 - U_7	117.06	-193.08	114.20	-448.10	151.8	151.76	130.54	219.77	4535	2932.6	1.45	7252	0.99905092	5003.4	0.255	0.70	0.70
	L_7 - U_8	264.47	-380.84	213.41	-647.15	151.8	151.76	130.54	219.77	4535	2932.6	1.45	7252	0.99905092	5003.4	0.255	0.70	0.70
	U_8 - L_8	309.34	-226.66	-277.31	-483.16	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899941	6214.6	0.574	0.83	0.83
	L_8 - U_9	-222.24	-405.08	-111.51	-688.22	188.5	188.51	164.41	274.68	5476	3413.6	1.46	9064	0.99899941	6214.6	0.574	0.83	0.83
	U_9 - L_9	-371.53	-174.45	-417.79	-368.90	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899941	6214.6	0.531	0.97	0.97
	L_9 - U_{10}	-326.95	-29.56	-197.61	-270.58	127.3	127.33	110.40	199.33	3668	2526.5	1.46	6146	0.99907136	4197.7	0.093	0.64	0.64
	U_{10} - L_{10}	236.88	5.62	-221.46	-66.30	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99880042	3452.4	-0.024	0.59	0.59
	L_{10} - U_{11}	-316.25	134.12	-222.34	-178.45	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99880042	3452.4	-0.424	0.43	0.43
	U_{11} - L_{11}	154.26	-206.74	135.35	-301.06	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99880042	3452.4	-0.424	0.43	0.43
	U_{11} - L_{12}	84.91	-215.33	-113.13	-483.06	138.2	138.15	119.05	199.70	3434	1990.9	1.45	6599	0.99880081	4553.8	0.228	0.65	0.65
	L_{12} - U_{13}	1.11	-73.73	-79.12	-507.37	138.2	138.17	119.05	199.70	3434	1990.9	1.45	6599	0.99880081	4553.8	0.228	0.65	0.65
	U_{13} - L_{13}	-432.87	-385.56	-483.46	-632.62	232.7	232.70	186.86	340.10	6520	3217.6	1.46	11223	0.99885838	7670.6	0.581	0.83	0.83
	L_{13} - U_{14}	-422.29	-445.91	-511.79	-675.79	232.7	232.70	186.86	340.10	6520	3217.6	1.46	11223	0.99885838	7670.6	0.581	0.83	0.83
	U_{14} - L_{14}	-446.47	-481.18	-511.79	-675.79	232.7	232.70	186.86	340.10	6520	3217.6	1.46	11223	0.99885838	7670.6	0.581	0.83	0.83
	L_{14} - U_{15}	-643.64	-201.70	-657.49	-584.78	251.7	251.73	219.41	365.62	7161	3870.6	1.45	12665	0.99891031	8298.1	0.905	0.96	0.96
	U_{15} - L_{15}	-408.64	-198.61	-484.77	-760.56	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885838	7670.6	0.637	0.85	0.85
	U_{15} - U_{16}	-264.86	-345.67	-342.33	-426.53	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885838	7670.6	0.538	0.82	0.82
	U_{16} - U_{17}	-430.31	-73.68	-503.66	-332.51	198.9	198.88	169.65	285.08	5137	2713.1	1.43	9408	0.99885931	6555.5	0.660	0.85	0.85
	U_{17} - U_{18}	-1273.23	-1.11	-1273.23	-1.11	198.9	198.88	169.65	285.08	5137	2713.1	1.43	9408	0.99885931	6555.5	0.660	0.85	0.85
	U_{18} - U_{19}	-53.37	274.32	-238.83	-277.44	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885838	7670.6	0.637	0.85	0.85
	U_{19} - U_{20}	-1196.75	-92.80	-1196.75	-92.80	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885838	7670.6	0.637	0.85	0.85
	U_{20} - U_{21}	-1273.23	-1.11	-1273.23	-1.11	198.9	198.88	169.65	285.08	5137	2713.1	1.43	9408	0.99885931	6555.5	0.660	0.85	0.85
	U_{21} - L_{21}	-408.64	-198.61	-484.77	-760.56	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885838	7670.6	0.637	0.85	0.85
	L_{21} - U_{22}	-643.64	-201.70	-657.49	-584.78	251.7	251.73	219.41	365.62	7161	3870.6	1.45	12665	0.99891031	8298.1	0.905	0.96	0.96
	U_{22} - L_{22}	-422.29	-445.91	-511.79	-675.79	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885838	7670.6	0.637	0.85	0.85
	L_{22} - U_{23}	-446.47	-481.18	-511.79	-675.79	232.7	232.70	186.86	340.10	6520	3217.6	1.46	11223	0.99885838	7670.6	0.581	0.83	0.83
	U_{23} - L_{23}	-264.86	-345.67	-342.33	-426.53	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885838	7670.6	0.538	0.82	0.82
	U_{23} - L_{24}	-430.31	-73.68	-503.66	-332.51	198.9	198.88	169.65	285.08	5137	2713.1	1.43	9408	0.99885931	6555.5	0.660	0.85	0.85
	L_{24} - U_{25}	-1273.23	-1.11	-1273.23	-1.11	198.9	198.88	169.65	285.08	5137	2713.1	1.43	9408	0.99885931	6555.5	0.660	0.85	0.85
	U_{25} - U_{26}	-175.66	94.68	-257.33	-83.87	156.8	156.80	134.92	214.81	3285	1852.3	1.37	7089	0.99854451	5168.9	0.326	0.73	0.73
	L_{25} - U_{26}	217.44	273.15	-184.22	-119.31	156.8	156.80	128.72	214.81	3285	1852.3	1.37	7089	0.99854451	5168.9	-0.796	0.28	0.28
	U_{26} - U_{27}	-1.11	-82.60	-27.68	-58.39	156.8	156.80	134.92	214.81	3285	1852.3	1.37	7089	0.99854451	5168.9	0.326	0.73	0.73
	U_{27} - U_{28}	-565.33	1975.12	-346.22	1431.86	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99893350	7310.6	-0.280	0.49	0.49
	U_{28} - U_{29}	-1.11	-82.60	-27.68	-58.39	156.8	156.80	134.92	214.81	3285	1852.3	1.37	7089	0.99854451	5168.9	0.326	0.73	0.73
	U_{29} - U_{30}	-1273.23	-1.11	-1273.23	-1.11	198.9	198.88	169.65	285.08	5137	2713.1	1.43	9408	0.99885931	6555.5	0.660	0.85	0.85
	U_{30} - U_{31}	-408.64	-198.61	-484.77	-760.56	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885838	7670.6	0.637	0.85	0.85
	U_{31} - L_{31}	-643.64	-201.70	-657.49	-584.78	251.7	251.73	219.41	365.62	7161	3870.6	1.45	12665	0.99891031	8298.1	0.905	0.96	0.96
	L_{31} - U_{32}	-422.29	-445.91	-511.79	-675.79	232.7	232.70	186.86	340.10	6520	3217.6	1.46	11223	0.99885838	7670.6	0.581	0.83	0.83
	U_{32} - U_{33}	-446.47	-481.18	-511.79	-675.79	232.7	232.70	186.86	340.10	6520	3217.6	1.46	11223	0.99885838	7670.6	0.581	0.83	0.83
	U_{33} - U_{34}	-264.86	-345.67	-342.33	-426.53	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885838	7670.6	0.538	0.82	0.82
	U_{34} - U_{35}	-430.31	-73.68	-503.66	-332.51	198.9	198.88	169.65	285.08	5137	2713.1	1.43	9408	0.99885931	6555.5	0.660	0.85	0.85
	U_{35} - U_{36}	-1273.23	-1.11	-1273.23	-1.11	198.9	198.88	169.65	285.08	5137	2713.1	1.43	9408	0.99885931	6555.5	0.660	0.85	0.85
	U_{36} - U_{37}	-1.11	-82.60	-27.68	-58.39	156.8	156.80	134.92	214.81	3285	1852.3	1.37	7089	0.99854451	5168.9	0.326	0.73	0.73
	U_{37} - U_{38}	-565.33	1975.12	-346.22	1431.86	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99893350	7310.6	-0.280	0.49	0.49
	L_{37} - U_{38}	217.44	273.15	-184.22	-119.31	156.8	156.80	128.72	214.81	3285	1852.3	1.37	7089	0.99854451	5168.9	-0.796	0.28	0.28
	U_{38} - U_{39}	-1.11	-82.60	-27.68	-58.39	156.8	156.80	134.92	214.81	3285	1852.3	1.37	7089	0.99854451	5168.9	0.326	0.73	0.73
	U_{39} - U_{40}	-565.33	1975.12	-346.22	1431.86	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99893350	7310.6	-0.280	0.49	0.49
	U_{40} - U_{41}	-1192.75	-92.80	0.30	4.30	-1.00	-1.00	1.11	274.32	-238.83	-277.44	1.42	6028	0.99872695	4241.5	0.466	0.79	0.79
	U_{41} - U_{42}	-25.30	71.62	1.70	2.90	-0.60	-19.50	17.89	30.51	-6.31	-205.19	1.40	4465	0.99873164	3184.1	-0.227	0.65	0.65
	U_{42} - U_{43}	-25.30	71.62	1.70	2.90	-0.60	-19.50	23.15	19.91	-6.31	-205.19	1.40	4465	0.99873164	3184.1	-0.227	0.65	0.65
	U_{43} - U_{44}	-150.58	33.05	2.00	2.30	0.10	-16.70	21.64	24.20	-1.05	-175.70	1.40	4465	0.99873164	3184.1	-0.227	0.65	0.65
	U_{44} - U_{45}	-147.30	4.36	2.80	1.80	-2.60	-19.40	29.46	19.99	27.35	-204.11	1.40	4465	0.99873164	3184.1	-0.227	0.65	0.65
	U_{45} - U_{46}	-147.30	4.36	2.80	1.80	-2.60	-19.40	29.46	19.99	27.35	-204.11	1.40	4465	0.99873164	3184.1	-0.227	0.65	0.65
	U_{46} - U_{47}	-31.67	-34.01	0.10	2.10	-1.80	-21.10	1.03	22.09	-18.94	-221.99	1.40	4465	0.99873164	3184.1	-0

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: 3F1
Condition: As-Built

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

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

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

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

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-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	L_0-L_1	-15.54	-73.33	-0.60	0.70	3.50	-7.30
	L_1-L_2	39.76	-67.96	-1.10	1.50	2.10	-10.90
	L_2-L_3	79.39	-42.20	-0.90	1.50	1.60	-11.10
	L_3-L_4	-11.34	11.55	0.80	2.60	-0.30	-13.60
	L_4-L_5	-49.11	208.03	-5.70	4.10	-10.14	-52.40
	L_5-L_6	-0.46	181.07	-1.60	3.80	-3.70	-7.20
	L_6-L_7	41.44	78.72	0.00	4.00	-4.40	-37.97
	L_7-L_8	-25.11	448.74	-2.00	11.40	0.10	-0.10
	L_8-L_9	425.89	-36.02	1.20	0.90	7.70	-5.90
	L_9-L_{10}	150.02	126.13	0.70	2.00	3.60	-6.90
	L_{10}-L_{11}	120.44	-115.99	2.40	1.20	0.20	-6.90
	L_{11}-L_{12}	39.08	-39.08	3.70	3.70	7.80	-7.80
	L_{12}-L_{13}	-45.24	-121.26	1.60	0.80	-4.10	-9.00
	L_{13}-L_{14}	96.32	-264.98	1.30	0.90	5.00	-17.80
	L_{14}-L_{15}	-352.24	66.08	0.70	0.40	-4.80	-18.60
	L_{15}-L_{16}	-191.89	-319.35	1.00	1.20	-6.80	-15.90
	L_{16}-L_{17}	58.98	-68.39	1.70	1.80	-2.00	-10.10
	L_{17}-L_{18}	-154.59	-31.26	-3.90	3.40	-4.50	-5.00
	L_{18}-L_{19}	-215.80	145.76	-5.90	1.30	-2.40	-23.60
	L_{19}-L_{20}	-136.32	49.67	7.50	4.00	-0.20	-0.20
	L_0-L_{20}	-2.68	-185.02	-0.40	0.90	2.60	-9.50
	L_{20}-L_{21}	5.78	243.21	-0.40	1.00	0.80	-10.50
	L_{21}-L_{22}	-4.23	-160.72	-0.10	1.00	-0.30	-11.30
	L_{22}-L_{23}	3.84	-244.42	-0.40	1.00	-0.80	-14.70
	L_{23}-L_{24}	-252.80	-295.03	0.80	1.60	0.90	-17.70
	L_{24}-L_{25}	81.34	-249.60	0.70	1.60	0.80	-17.60
	L_{25}-L_{26}	-475.08	-292.76	2.40	2.20	-4.20	-24.80
	L_{26}-L_{27}	-280.47	-64.51	-13.40	4.60	-10.20	-16.30
	L_{27}-L_{28}	-292.36	219.14	-4.30	2.30	-6.40	-12.60
	L_{28}-L_{29}	-225.83	141.30	-8.00	3.90	-5.20	-9.30
	L_{29}-L_{30}	-261.50	255.61	-7.20	4.30	-4.10	-7.00
	L_{30}-L_{31}	-160.03	387.16	-9.30	5.20	-6.50	-7.40
	L_{31}-L_{32}	-202.71	204.45	-1.20	2.40	-8.40	-16.00
	L_{32}-L_{33}	-1072.48	412.35	0.60	1.10	18.60	-16.60
	L_{33}-L_{34}	-331.46	410.41	0.40	1.20	4.21	-12.60
	L_{34}-L_{35}	475.57	-69.03	2.80	1.50	5.90	-11.40
	L_{35}-L_{36}	226.51	-41.81	3.00	1.40	5.30	-9.60
	L_{36}-L_{37}	226.51	-41.81	3.00	1.40	-6.10	-8.90
	L_{37}-L_{38}	214.45	-56.43	1.80	2.00	-6.30	-12.00
	L_{38}-L_{39}	28.43	-49.39	2.30	2.30	-6.20	-14.70
	L_{39}-L_{40}	49.27	-202.49	3.00	2.00	2.80	-22.70
	L_{40}-L_{41}	-197.10	-24.94	-24.90	1.30	-14.70	-24.90
	L_{41}-L_{42}	-111.92	0.86	-3.60	3.30	-10.70	-14.60
	L_{42}-L_{43}	-60.78	-179.81	-6.20	4.40	-6.60	-10.00
	L_{43}-L_{44}	-81.80	265.56	-6.40	5.50	-4.10	-8.10
	L_{44}-L_{45}	-99.81	-279.28	1.60	2.30	-8.60	-17.30
	L_{45}-L_{46}	371.46	1004.43	-4.10	2.30	-5.70	-7.80
	L_{46}-L_{47}	1026.29	362.30	-1.20	1.30	15.40	-15.50
	L_{47}-L_{48}	-226.76	-125.36	0.70	3.30	-9.90	-12.20
	L_{48}-L_{49}	278.05	-132.91	1.40	2.90	1.40	-10.40
	L_{49}-L_{50}	278.05	-132.91	1.40	2.90	1.40	-10.40
	L_{50}-L_{51}	222.98	-243.21	2.00	2.30	0.20	-11.60
	L_{51}-L_{52}	187.58	-470.72	2.20	1.80	-6.60	-26.20
	L_{52}-L_{53}	-445.06	-93.48	2.00	5.00	-16.20	-24.10
	L_{53}-L_{54}	-291.79	-319.50	-6.70	4.30	-10.70	-14.30
	L_{54}-L_{55}	-392.27	-38.30	-6.90	3.00	-11.40	-13.00
	L_{55}-L_{56}	-297.04	-199.10	-6.70	3.50	-9.60	-13.00
Structure 2	L_{56}-L_{57}	-297.04	199.10	-6.70	3.50	-4.40	-4.90
	L_{57}-L_{58}	-211.00	287.68	-6.10	3.70	-4.40	-4.90
	L_{58}-L_{59}	24.53	-109.42	-0.30	0.40	4.20	-7.30
	L_{59}-L_{60}	-139.90	-177.77	-0.30	0.80	3.10	-8.00
	L_{60}-L_{61}	47.96	-293.64	-0.20	0.90	-5.20	-11.90
	L_{61}-L_{62}	47.96	-293.64	-0.20	0.90	-5.20	-11.90
	L_{62}-L_{63}	-47.68	-343.07	0.20	1.60	0.30	-21.20
	L_{63}-L_{64}	-341.10	86.20	-9.00	5.30	-4.80	-13.30
	L_{64}-L_{65}	-201.09	-294.79	-6.30	3.70	-4.80	-13.30
	L_{65}-L_{66}	-201.09	152.50	-4.90	3.10	-3.70	-4.80
	L_{66}-L_{67}	-148.24	148.96	-5.00	3.90	-4.80	-6.70
	L_{67}-L_{68}	-148.24	148.96	-5.00	3.90	-4.80	-6.70
	L_{68}-L_{69}	-428.31	-26.46	-1.80	0.80	10.30	-6.70
	L_{69}-L_{70}	70.66	-27.56	2.40	2.10	-2.00	-9.10
	L_{70}-L_{71}	70.66	-27.56	2.40	2.10	-2.00	-9.10
	L_{71}-L_{72}	194.48	-25.11	2.30	1.90	4.00	-13.20
	L_{72}-L_{73}	194.48	-25.11	2.30	1.90	4.00	-13.20
	L_{73}-L_{74}	-45.48	-80.88	6.40	1.30	-5.30	-14.20
	L_{74}-L_{75}	-45.48	-80.88	6.40	1.30	-5.30	-14.20
	L_{75}-L_{76}	-74.64	-5.53	-8.80	4.30	0.50	-0.50

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_{bot} (in^3)	Z_x (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F'c/S_{bot}	M_r (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mod}	Equivalent Mom. Factor C_{axial}
Structure 1	L_0-L_1	-28.89	85.20	30.45	-200.99	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99500394	2755.4	-0.152	0.54	0.54
	L_1-L_2	50.24	-92.64	82.08	-272.11	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99500394	2755.4	-0.302	0.48	0.48
	L_2-L_3	89.32	-37.73	108.78	-215.51	99.5	99.53	81.00	125.40	3409	1372.0	1.26	4141	0.99991188	3294.8	0.105	0.64	0.64
	L_3-L_4	-3.16	52.65	-19.08	-181.81	99.9	99.93	84.14	125.49	3409	1372.0	1.26	4141	0.99991188	3294.8	0.105	0.64	0.64
	L_4-L_5	-145.34	328.33	-76.74	150.72	52.6	52.58	76.68	114.47	3186	1282.0	1.21	3777	0.99991393	3052.4	-0.446	0.42	0.42
	L_5-L_6	-23.75	290.39	-54.15	131.19	104.6	104.58	95.61	136.57	4040	1678.1	1.31	4520	0.99992345	3448.5	-0.082	0.57	0.57
	L_6-L_7	-126.24	100.22	-137.82	-0.69	104.6	104.58	95.61	136.57	4040	1678.1	1.31	4520	0.99992345	4776.0	-0.788	0.28	0.28
	L_7-L_8	-61.89	768.36	-31.25	581.91	145.8	145.75	130.44	228.84	6500	2932.4	1.57	7552	0.99992915	4806.3	-0.082	0.57	0.57
	L_8-L_9	12.94	9.75	83.02	-83.61	145.8	145.75	136.74	228.84	6500	2932.4	1.57	7552	0.99992161	4806.4	-0.196	0.52	0.52
	L_9-L_{10}	150.02	126.13	70.30	36.96	89.26	89.25	77.00	114.47	3186	1282.0	1.21	3777	0.99991393	3052.5	-0.644	0.34	0.34
	L_{10}-L_{11}	120.44	-115.99	2.40	1.20	0.20	-6.90	190.21	-133.96	159.38	-247.50	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.99991387	3052.5	-0.644	0.34	0.34
	L_{11}-L_{12}	39.08	-39.08	3.70	3.70	7.80	-7.80	18.33	12.78	28.88	-86.19	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.99991387	3052.5	-0.644	0.34	0.34
	L_{12}-L_{13}	17.25	8.63	-44.21	-87.04	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
	L_{13}-L_{14}	14.02	9.70	53.91	-191.52	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_{14}-L_{15}	-147.17	6.53	-69.97	-205.55	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_{15}-L_{16}	-10.78	12.94	-73.32	-171.43	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_{16}-L_{17}	58.98	-68.39	-42.05	-31.27	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}	-42.05	36.07	-188.90	84.88	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}	-154.59	-31.26	-3.90	3.40	-4.50	-5.00	-255.52	7.02	-263.53	-110.72	121.1	121.08	112.11	157.22	3591	1640.0	1.30	5188	0.99994048	3891.8	0.420	0.77	0.77
	L_{19}-L_{20}	-215.80	145.76	-5.90	1.30	-2.40	-23.60	-243.61	88.50	-329.39	100.85	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99500394	2755.5	-0.664	0.33	0.33
	L_0-L_{20}	-136.32	49.67	7.50	4.00	-0.20	-0.20	-80.87	43.13	-2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{20}-L_{21}	-2.68	-185.02	-0.40	0.90	2.60	-9.50	-4.26	9.18	27.68	-101.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{21}-L_{22}	5.78	243.21	-0.40	1.00	0.80	-10.50	-4.26	14.78	27.68	-101.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{22}-L_{23}	-4.23	-160.72	-0.10	1.00	-0.30	-11.30	-1.06	10.65	3.19	-120.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{23}-L_{24}	3.84	-244.42	-0.40	1.00	-0.80	-14.70	-2.13	13.57	14.90	-176.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{24}-L_{25}	-252.80	-295.03	0.80	1.60	0.90	-17.70	8.52	17.04	3.98	-188.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{25}-L_{26}	81.34	-249.60	0.70	1.60	0.80	-17.60	7.45	20.79	3.98	-214.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{26}-L_{27}	-475.08	-292.76	2.40	2.20	-4.20	-24.80	-584.39	-294.58	-648.05	-268.29	218.3	216.33	205.74	394.78	7625	3425.8	1.99	11178	0.99991114	7132.6	0.970	0.99	0.99
	L_{27}-L_{28}	-280.47	-64.51	-13.40	4.60	-10.20	-16.30	-142.67	48.98	-108.60	-173.55	205.7	205.71	195.15	274.47	5445	2642.2	1.33	9057	0.99995457	6781.3	0.037	0.61	0.61
	L_{28}-L_{29}	-292.36	219.14	-4.30	2.30	-6.40	-12.60	-42.09	37.26	-60.05	-148.54	168.5	168.54	149.99	225.12	4364	2102.4	1.25	5716	0.99995202	5524.6	0.541	0.82	0.82
	L_{29}-L_{30}	-225.83	141.30	-8.00	3.90	-5.20	-9.30	-45.18	41.52	-55.36	-99.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{30}-L_{31}	-261.50	255.61	-7.20	4.30	-4.10	-7.00	-76.68	76.68	-74.53	-74.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{31}-L_{32}	-160.03	387.16	-9.30	5.20	-6.50	-7.40	-56.43	55.36	-89.21	-78.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{32}-L_{33}	-202.71	204.45	-1.20	2.40	-8.40	-16.00	-12.78	25.55	-89.43	-170.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{33}-L_{34}	-1072.48	412.35	0.60	1.10	18.60	-16.60	-613.06	613.06	-1708.09	-1708.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{34}-L_{35}	-331.46	410.41	0.40	1.20	4.21	-12.60	-6.31	11.57	-89.66	-176.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{35}-L_{36}	475.57	-69.03	2.80	1.50	5.90	-11.40	29.46	15.78	62.07	-119.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{36}-L_{37}	226.51	-41.81	3.00	1.40	5.30	-9.60	33.67	14.73	-11.65	-104.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{37}-L_{38}	226.51	-41.81	3.00	1.40	-6.10	-8.90	33.67	14.73	-11.65	-104.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{38}-L_{39}	214.45	-56.43	1.80	2.00	-6.30	-12.00	18.94	21.04	-86.28	-126.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{39}-L_{40}	28.43	-49.39	2.30	2.30	-6.20	-14.70	26.43	23.05	-86.44	-160.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{40}-L_{41}	49.27	-202.49	3.00	2.00	2.80	-22.70	3.19	21.04	29.46	-238.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{41}-L_{42}	-197.10	-24.94	-24.90	1.30	-14.70	-24.90	-68.16	-235.88	102.39	-573.71	161.2	161.18	142.40	207.64	4974	2128.2	1.29	6852	0.99995372	5313.3	-0.178	0.53	0.53
	L_{42}-L_{43}	-111.92	0.86	-3.60	3.30	-10.70	-14.60	-37.69	34.72	-112.57	-153.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{43}-L_{44}	-60.78	-179.81	-6.20	4.40	-6.60	-10.00	-65.23	46.29	-58.92	-178.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{44}-L_{45}	-81.80	265.56	-6.40	5.50	-4.10	-8.10	-67.33	57.87	-43.14	-85.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{45}-L_{46}	-99.81	-279.28	1.60	2.30	-8.60	-17.30	16.83	24.20	-92.58	-182.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{46}-L_{47}	371.46	1004.43	-4.10	2.30	-5.70	-7.80	18.33	12.78	28.88	-86.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{47}-L_{48}	1026.29	362.30	-1.20	1.30	15.40	-15.50	-12.78	13.84	163.96	-166.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{48}-L_{49}	-226.76	-125.36	0.70	3.30	-9.90	-12.20	7.45	35.14	-109.41	-129.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{49}-L_{50}	278.05	-132.91	1.40	2.90	1.40	-10.40	14.91	30.88	31.48	-110.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{50}-L_{51}	278.05	-132.91	1.40	2.90	1.40	-10.40	14.91	30.88	31.48	-110.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{51}-L_{52}	222.98	-243.21	2.00	2.30	0.20	-11.60	21.29	24.49	2.13	-123.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{52}-L_{53}	187.58	-470.72	2.20	1.80	-6.60	-26.20	23.42	19.16	-63.88	-278.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{53}-L_{54}	-445.06	-93.48	2.00	5.00	-16.20	-24.10	21.29	5.32	-172.48	-256.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{54}-L_{55}	-291.79	-319.50	-6.70	4.30	-10.70	-14.30	-84.16	76.72	-104.34	-207.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{55}-L_{56}	-392.27	-38.30	-6.90	3.00	-11.40	-13.00	-62.82	31.94	-121.38	-138.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{56}-L_{57}	-297.04	-199.10	-6.70	3.50	-9.60	-13.00	-53.24	42.09	-81.98	-182.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{57}-L_{58}	-297.04	199.10	-6.70	3.50	-4.40	-4.90	-71.33	37.26	-46.85	-52.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{58}-L_{59}	-211.00	287.68	-6.10	3.70	-4.40	-4.90	-50.09	41.39	-3.19	-3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{59}-L_{60}	24.53	-109.42	-0.30	0.40	4.20	-7.30	27.68	-136.64	99.76	-244.56	83.6	83.58	67.49	100.97	2740	1098.2	1.21	3332	0.99500394	2755.5	-0.371	0.45	0.45
	L_{60}-L_{61}	-139.90	-177.77	-0.30	0.80	3.10	-8.00	-3.23	6.47	-33.42	-82.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{61}-L_{62}	47.96	-293.64	-0.20	0.90	-5.20	-11.90	-2.16	9.70	-26.88	-153.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{62}-L_{63}	47.96	-293.64	-0.20	0.90	-5.20	-11.90	-2.16	9.70	-26.88	-153.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{63}-L_{64}	-47.68	-343.07	0.20	1.60	0.30	-21.20	2.16	17.25	3.23	-226.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{64}-L_{65}	-341.10	86.20	-9.00	5.30	-4.80	-13.30	-97.04	57.14	-51.75	-143.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{65}-L_{66}	-201.09	-294.79	-6.30	3.70	-4.80	-13.30	-52.83	33.42	-39.89	-73.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{66}-L_{67}	-201.09	152.50	-4.90	3.10	-3.70	-4.80	-52.83	33.42	-39.89	-73.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{67}-L_{68}	-148.24	148.96	-5.00	3.90	-4.80	-6.70	-53.91	42.05	-51.75	-72.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{68}-L_{69}	-428.31	-26.46	-1.80	0.80	10.30	-6.70	-21.15	8.91	-114.67	-74.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{69}-L_{70}	70.66	-27.56	2.40	2.10	-2.00	-9.10	4.49	23.38	-22.27	-107.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{70}-L_{71}	70.66	-27.56	2.40	2.10	-2.00	-9.10	4.49	23.38	-22.27	-107.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{71}-L_{72}	194.48	-25.11	2.30	1.90	4.00	-13.20	25.61	21.15	44.53	-146.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{72}-L_{73}	194.48	-25.11	2.30	1.90	4.00	-13.20	25.61	21.15	44.53	-146.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{73}-L_{74}	-45.48	-80.88	6.40	1.30	-5.30	-14.20	-4.43	14.47	-69.00	-158.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{74}-L_{75}	-45.48	-80.88	6.40	1.30	-5.30	-14.20	-4.43	14.47	-69.00	-158.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{75}-L_{76}	-74.64	-5.53	-8.80	4.30	0.50	-0.50	-67.97	47.87	5.57	-137.50	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99500394	2755.4	-0.246	0.51	0.51

M_1 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	L_0-L_1	-15.54	-73.33	-0.60	0.70	3.50	-7.30
	L_1-L_2	39.76	-67.96	-1.10	1.50	2.10	-10.90
	L_2-L_3	79.39	-42.20	-0.90	1.50	1.60	-11.10
	L_3-L_4	-11.34	11.55	0.80	2.60	-0.30	-13.60
	L_4-L_5	-49.11	208.03	-5.70	4.10	-10.14	-52.40
	L_5-L_6	-0.46	181.07	-1.60	3.80	-3.70	-7.20
	L_6-L_7	41.44	78.72	0.00	4.00	-4.40	-37.97
	L_7-L_8	-25.11	448.74	-2.00	11.40	0.10	-0.10
	L_8-L_9	425.89	-36.02	1.20	0.90	7.70	-5.90
	L_9-L_{10}	150.02	126.13	0.70	2.00	3.60	-6.90
	L_{10}-L_{11}	120.44	-115.99	2.40	1.20	0.20	-6.90
	L_{11}-L_{12}	39.08	-39.08	3.70	3.70	7.80	-7.80
	L_{12}-L_{13}	-45.

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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
Refer to 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

Owner 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)
Structure 1	U_1–L_1	-29.84	-69.00	-2.75	-6.27	0.55	-0.60	0.00	0.00	0.00	0.00
	U_1–L_2	-9.06	15.16	-3.28	3.17	0.47	-0.51	0.00	0.00	0.00	0.00
	U_1–U_2	34.10	9.71	7.77	2.36	1.10	-0.79	0.00	0.00	0.00	0.00
	U_1–L_3	33.43	-34.38	-2.72	2.80	2.25	-2.11	0.00	0.00	0.00	0.00
	U_2–L_2	41.60	-62.42	-7.30	-14.52	1.28	-2.97	0.00	0.00	0.00	0.00
	U_2–L_3	45.52	-51.05	-0.77	0.60	2.93	-3.18	0.00	0.00	0.00	0.00
	U_2–U_3	34.15	36.07	3.30	3.48	3.63	-4.08	0.00	0.00	0.00	0.00
	U_3–L_3	91.21	-101.85	-0.02	0.02	4.80	-4.45	0.00	0.00	0.00	0.00
	U_3–L_4	-20.53	21.18	-4.55	5.46	5.25	-6.25	0.00	0.00	0.00	0.00
	U_3–U_4	-135.19	155.81	-4.29	4.59	6.20	-6.26	0.00	0.00	0.00	0.00
	U_4–L_4	-88.41	88.14	-2.91	3.32	0.02	-0.25	0.00	0.00	0.00	0.00
	U_4–L_5	-91.03	109.96	-2.57	4.02	0.06	-0.46	0.00	0.00	0.00	0.00
	U_4–U_5	-79.50	78.32	-3.41	3.30	0.96	-0.88	0.00	0.00	0.00	0.00
	U_5–L_5	-49.20	60.09	-3.19	3.24	1.17	-1.18	0.00	0.00	0.00	0.00
	U_5–L_6	-34.34	34.93	-2.63	2.64	1.48	-1.35	0.00	0.00	0.00	0.00
	U_5–U_6	-1.46	-2.70	-2.22	2.15	3.01	-3.09	0.00	0.00	0.00	0.00
	U_6–L_6	34.15	36.07	3.30	3.48	2.90	-2.98	0.00	0.00	0.00	0.00
	U_6–L_7	46.21	-55.82	-0.65	0.40	2.84	-2.96	0.00	0.00	0.00	0.00
	U_6–U_7	110.34	114.53	-0.32	0.32	4.80	-5.04	0.00	0.00	0.00	0.00
	U_7–L_7	-121.24	-131.09	-0.28	0.28	5.22	-5.21	0.00	0.00	0.00	0.00
	U_7–L_8	-134.20	-173.18	-0.18	0.24	5.20	-5.66	0.00	0.00	0.00	0.00
	U_7–U_8	-114.26	168.30	-0.10	0.10	5.79	-5.64	0.00	0.00	0.00	0.00
	U_8–L_8	-124.38	133.15	-0.02	4.93	0.62	-0.66	0.00	0.00	0.00	0.00
	U_8–L_9	-113.27	133.15	-0.02	4.93	0.62	-0.66	0.00	0.00	0.00	0.00
	U_8–U_9	-56.00	62.15	-0.77	2.71	0.41	-0.44	0.00	0.00	0.00	0.00
	U_9–L_9	-34.04	39.78	-0.77	2.71	0.41	-0.44	0.00	0.00	0.00	0.00
	U_9–L_{10}	-7.05	12.30	2.56	2.69	1.69	-1.66	0.00	0.00	0.00	0.00
	U_9–U_{10}	15.85	15.58	-2.60	2.57	2.00	-2.07	0.00	0.00	0.00	0.00
	U_{10}–L_{10}	38.85	44.93	-1.30	1.30	2.31	-2.39	0.00	0.00	0.00	0.00
	U_{10}–L_{11}	86.89	66.05	-1.45	1.35	3.85	-3.79	0.00	0.00	0.00	0.00
	U_{10}–U_{11}	155.08	137.44	-1.35	1.35	4.81	-4.77	0.00	0.00	0.00	0.00
	U_{11}–L_{11}	141.21	-149.39	-0.76	0.82	4.19	-4.39	0.00	0.00	0.00	0.00
	U_{11}–L_{12}	192.53	-192.81	-0.29	0.31	4.06	-4.16	0.00	0.00	0.00	0.00
	U_{11}–U_{12}	147.39	-146.79	-2.23	2.23	4.06	-4.16	0.00	0.00	0.00	0.00
	U_{12}–L_{12}	203.50	-203.15	-0.34	0.36	5.33	-5.14	0.00	0.00	0.00	0.00
	U_{12}–L_{13}	83.02	-39.84	-0.34	0.36	5.33	-5.14	0.00	0.00	0.00	0.00
	U_{12}–U_{13}	-159.87	162.82	-5.55	5.17	0.55	-0.58	0.00	0.00	0.00	0.00
	U_{13}–L_{13}	-113.84	162.82	-5.55	5.17	0.55	-0.58	0.00	0.00	0.00	0.00
	U_{13}–L_{14}	-130.37	-127.18	-4.89	5.04	0.52	-0.51	0.00	0.00	0.00	0.00
	U_{13}–U_{14}	-54.12	54.20	-9.04	5.15	0.86	-0.79	0.00	0.00	0.00	0.00
	U_{14}–L_{14}	-44.77	47.67	-8.46	5.04	0.80	-0.74	0.00	0.00	0.00	0.00
	U_{14}–L_{15}	-44.77	66.58	-2.78	2.82	1.10	-1.04	0.00	0.00	0.00	0.00
	U_{14}–U_{15}	-30.50	34.39	-3.24	3.05	1.10	-1.04	0.00	0.00	0.00	0.00
	U_{15}–L_{15}	-3.70	4.34	-2.04	2.07	1.67	-1.83	0.00	0.00	0.00	0.00
	U_{15}–L_{16}	22.64	25.76	-1.76	1.72	1.79	-1.98	0.00	0.00	0.00	0.00
	U_{15}–U_{16}	39.94	42.12	-1.44	1.26	2.78	-2.87	0.00	0.00	0.00	0.00
	U_{16}–L_{16}	66.55	67.48	-1.09	0.80	3.52	-3.46	0.00	0.00	0.00	0.00
	U_{16}–L_{17}	138.22	-138.56	-0.49	0.48	5.55	-5.67	0.00	0.00	0.00	0.00
	U_{16}–U_{17}	124.45	-124.64	-0.49	0.48	6.81	-6.71	0.00	0.00	0.00	0.00
	U_{17}–L_{17}	173.80	-176.10	-0.28	0.24	5.91	-5.63	0.00	0.00	0.00	0.00
	U_{17}–L_{18}	124.63	127.51	-0.24	0.24	5.91	-5.63	0.00	0.00	0.00	0.00
	U_{17}–U_{18}	-167.09	167.27	-4.94	4.67	0.50	-0.55	0.00	0.00	0.00	0.00
	U_{18}–L_{18}	-116.04	109.89	-3.88	4.04	0.23	-0.44	0.00	0.00	0.00	0.00
	U_{18}–L_{19}	-124.63	127.51	-4.04	4.05	2.75	-2.75	0.00	0.00	0.00	0.00
	U_{18}–U_{19}	-119.83	124.38	-4.13	4.16	0.68	-0.90	0.00	0.00	0.00	0.00
	U_{19}–L_{19}	-78.38	82.47	-2.67	2.84	0.68	-0.90	0.00	0.00	0.00	0.00
	U_{19}–L_{20}	-79.51	88.86	-4.03	3.87	1.02	-0.99	0.00	0.00	0.00	0.00
	U_{19}–U_{20}	-43.96	51.93	-2.11	2.26	1.11	-1.24	0.00	0.00	0.00	0.00
	U_{20}–L_{20}	-28.91	31.03	-2.45	2.58	0.00	-0.00	0.00	0.00	0.00	0.00
	U_{20}–L_{21}	-5.57	1.81	-2.13	1.95	2.54	-2.72	0.00	0.00	0.00	0.00
	U_{20}–U_{21}	16.45	16.49	-1.78	1.64	2.58	-2.79	0.00	0.00	0.00	0.00
	U_{21}–L_{21}	55.25	61.09	-0.58	0.41	2.71	-2.77	0.00	0.00	0.00	0.00
	U_{21}–L_{22}	111.85	122.73	-0.63	0.63	4.70	-4.72	0.00	0.00	0.00	0.00
	U_{21}–U_{22}	137.13	150.74	-0.53	0.53	5.30	-5.32	0.00	0.00	0.00	0.00
	U_{22}–L_{22}	165.72	206.83	-0.39	0.52	4.74	-5.89	0.00	0.00	0.00	0.00
Structure 2	U_1–L_1	94.22	125.87	-0.92	0.71	3.39	-4.15	0.00	0.00	0.00	0.00
	U_1–L_2	92.27	85.87	-0.32	0.32	3.27	-3.87	0.00	0.00	0.00	0.00
	U_1–L_3	142.63	166.19	-0.07	0.09	4.76	-5.23	0.00	0.00	0.00	0.00
	U_2–L_2	37.52	58.80	-5.49	6.21	4.19	-5.32	0.00	0.00	0.00	0.00
	U_2–L_3	-81.19	89.90	-3.73	4.02	0.92	-0.03	0.00	0.00	0.00	0.00
	U_3–L_3	-48.49	45.44	-3.11	3.30	0.27	-0.19	0.00	0.00	0.00	0.00
	U_3–L_4	-38.99	42.96	-2.80	2.95	0.43	-0.39	0.00	0.00	0.00	0.00
	U_3–L_5	-39.90	40.31	-2.84	2.71	1.06	-0.96	0.00	0.00	0.00	0.00
	U_4–L_5	-37.48	38.73	-2.72	2.79	2.47	-2.63	0.00	0.00	0.00	0.00
	U_4–L_6	-10.29	11.13	-1.38	1.30	2.83	-3.22	0.00	0.00	0.00	0.00
	U_5–L_6	3.53	-11.97	-0.49	0.48	3.74	-3.50	0.00	0.00	0.00	0.00
	U_5–L_7	44.79	-53.89	-0.34	0.47	3.80	-5.04	0.00	0.00	0.00	0.00
Structure 3	U_1–L_1	-9.91	7.67	36.53	-44.70	0.00	0.00	0.00	0.00	0.00	0.00
	U_1–L_2	-3.40	1.46	35.26	-39.99	0.00	0.00	0.00	0.00	0.00	0.00
	U_1–L_3	-0.78	0.99	51.29	-56.35	0.00	0.00	0.00	0.00	0.00	0.00
	U_2–L_2	-61.19	69.10	46.66	-59.18	0.00	0.00	0.00	0.00	0.00	0.00
	U_2–L_3	-47.64	44.74	0.17	-0.38	0.00	0.00	0.00	0.00	0.00	0.00
	U_3–L_3	-34.67	36.71	2.95	-2.37	0.00	0.00	0.00	0.00	0.00	0.00
	U_3–L_4	-31.22	32.84	4.73	-4.33	0.00	0.00	0.00	0.00	0.00	0.00
	U_3–L_5	-31.64	30.19	11.76	-10.68	0.00	0.00	0.00	0.00	0.00	0.00
	U_4–L_5	-30.32	31.00	27.54	-29.30	0.00	0.00	0.00	0.00	0.00	0.00
	U_4–L_6	-15.39	14.43	31.48	-35.85	0.00	0.00	0.00	0.00	0.00	0.00
	U_5–L_6	-5.50	5.32	41.64	-39.57	0.00	0.00	0.00	0.00	0.00	0.00
	U_5–L_7	-3.82	5.19	42.29	-56.07	0.00	0.00	0.00	0.00	0.00	0.00

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_{xy} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term * F/S_{bc}	M_n (k-in)	Equivalent Mom. Factor a	$C_{b(x)}$	$C_{b(m)}$
Structure 1	U_1–L_1	-78.63	125.51	30.81	54.97	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_1–L_2	-59.22	65.54	-4.96	12.34	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_1–U_2	-37.23	36.54	-29.23	-24.55	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_1–L_3	4.03	4.12	76.06	-75.28	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_2–L_2	35.21	-59.18	1.89	-4.14	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_2–L_3	48.00	-57.61	101.62	-112.36	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5	958.8
	U_2–U_3	68.29	67.58	19.86	19.47	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_3–L_3	119.29	-132.07	180.87	-196.85	18.5	18.45	18.36	30.78	4	1020.9	1.67	1016	1.5	913.3
	U_3–L_4	-52.52	106.51	49.31	-42.87	107.1	107.13	107.11	162.71	26	2056.9	1.52	5369	1.5	5302.9
	U_3–U_4	-235.76	266.89	-172.96	188.87	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0
	U_4–L_4	-155.15	161.06	-114.60	111.12	39.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
	U_4–L_5	-168.36	217.51	-150.88	154.31	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_4–U_5	-239.76	266.89	-172.96	188.87	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0
	U_5–L_5	-155.15	161.06	-114.60	111.12	39.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
	U_5–L_6	-168.36	217.51	-150.88	154.31	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_5–U_6	-239.76	266.89	-172.96	188.87	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0
	U_6–L_6	-155.15	161.06	-114.60	111.12	39.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
	U_6–L_7	-168.36	217.51	-150.88	154.31	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_6–U_7	-239.76	266.89	-172.96	188.87	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0
	U_7–L_7	-155.15	161.06	-114.60	111.12	39.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
	U_7–L_8	-168.36	217.51	-150.88	154.31	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_7–U_8	-239.76	266.89	-172.96	188.87	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0
	U_8–L_8	-155.15	161.06	-114.60	111.12	39.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
	U_8–L_9	-168.36	217.51	-150.88	154.31	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_8–U_9	-239.76	266.89	-172.96	188.87	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0
	U_9–L_9	-155.15	161.06	-114.60	111.12	39.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
	U_9–L_{10}	-168.36	217.51	-150.88	154.31	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_9–U_{10}	-239.76	266.89	-172.96	188.87	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0
	U_{10}–L_{10}	-155.15	161.06	-114.60	111.12	39.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
	U_{10}–L_{11}	-168.36	217.51	-150.88	154.31	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{10}–U_{11}	-239.76	266.89	-172.96	188.87	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0
	U_{11}–L_{11}	-155.15	161.06	-114.60	111.12	39.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
	U_{11}–L_{12}	-168.36	217.51	-150.88	154.31	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{11}–U_{12}	-239.76	266.89	-172.96	188.87	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0
	U_{12}–L_{12}	-155.15	161.06	-114.60	111.12	39.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
	U_{12}–L_{13}	-168.36	217.51	-150.88	154.31	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{12}–U_{13}	-239.76	266.89	-172.96	188.87	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0
	U_{13}–L_{13}	-155.15	161.06	-114.60	111.12	39.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
	U_{13}–L_{14}	-168.36	217.51	-150.88	154.31	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{13}–U_{14}	-239.76	266.89	-172.96	188.87	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0
	U_{14}–L_{14}	-155.15	161.06	-114.60	111.12	39.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
	U_{14}–L_{15}	-168.36	217.51	-150.88	154.31	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{14}–U_{15}	-239.76	266.89	-172.96	188.87	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0
	U_{15}–L_{15}	-155.15	161.06	-114.60	111.12	39.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
	U_{15}–L_{16}	-168.36	217.51	-150.88	154.31	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{15}–U_{16}	-239.76	266.89	-172.96	188.87	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0
	U_{16}–L_{16}	-155.15	161.06	-114.60	111.12	39.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
	U_{16}–L_{17}	-168.36	217.51	-150.88	154.31	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{16}–U_{17}	-239.76	266.89	-172.96	188.87	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0
	U_{17}–L_{17}	-155.15	161.06	-114.60	111.12	39.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
	U_{17}–L_{18}	-168.36	217.51	-150.88	154.31	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{17}–U_{18}	-239.76	266.89	-172.96	188.87	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0
	U_{18}–L_{18}	-155.15	161.06	-114.60	111.12	39.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
	U_{18}–L_{19}	-168.36	217.51	-150.88	154.31	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{18}–U_{19}	-239.76	266.89	-172.96	188.87	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0
	U_{19}–L_{19}	-155.15	161.06	-114.60	111.12	39.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
	U_{19}–L_{20}	-168.36	217.51	-150.88	154.31	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{19}–U_{20}	-239.76	266.89	-172.96	188.87	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0
	U_{20}–L_{20}	-155.15	161.06	-114.60	111.12	39.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
	U_{20}–L_{21}	-168.36	217.51	-150.88	154.31	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{20}–U_{21}	-239.76	266.89	-172.96	188.87	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0
	U_{21}–L_{21}	-155.15	161.06	-114.60	111.12	39.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
	U_{21}–L_{22}	-168.36	217.51	-150.88	154.31	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{21}–U_{22}	-239.76	266.89	-172.96	188.87	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0
	U_{22}–L_{22}	-155.15	161.06	-114.60	111.12	39.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
Structure 2	U_1–L_1	-29.84	49.00	-2.75	4.27	0.55	-0.60	0.00	0.00	0.00	0.00
	U_1–L_2	-9.06	15.16	-3.28	3.17	0.47	-0.51	0.00	0.00	0.00	0.00
	U_1–U_2	34.10	9.71	7.77	2.36	1.10	-0.79	0.00	0.00	0.00	0.00
	U_1–L_3	33.43	-34.38	-2.72	2.80	2.25	-2.11	0.00	0.00	0.00	0.00
	U_2–L_2	41.60	-62.42	-7.30	-14.52	1.28	-2.97	0.00	0.00	0.00	0.00
	U_2–L_3	45.52	-51.05	-0.77	0.60	2.93	-3.18	0.00	0.00	0.00	0.00
	U_2–U_3	34.15	36.07	3.30	3.48	3.63	-4.08	0.00	0.00	0.00	0.00
	U_3–L_3	91.21	-101.85	-0.02	0.02	4.80	-4.45	0.00	0.00	0.00	0.00
	U_3–L_4	-20.53	21.18	-4.55	5.46	5.25	-6.25	0.00	0.00	0.00	0.00
	U_3–U_4	-135.19	155.81	-4.29	4.59	6.20	-6.26	0.00	0.00	0.00	0.00
	U_4–L_4	-88.41	88.14	-2.91	3.32	0.02	-0.25	0.00	0.00	0.00	0.00
	U_4–L_5	-91.03	109.96	-2.57	4.02	0.06	-0.46	0.00	0.00	0.00	0.00
	U_4–U_5	-79.50	78.32	-3.41	3.30	0.96	-0.88	0.00	0.00	0.00	0.00
	U_5–L_5	-49.20	60.09	-3.19	3.24	1.17	-1.18	0.00	0.00	0.00	0.00
	U_5–L_6	-34.34	34.93	-2.63	2.64	1.48	-1.35	0.00	0.00	0.00	0.00
	U_5–U_6	-1.46	-2.70	-2.22	2.15	3.01	-3.09	0.00	0.00	0.00	0.00
	U_6–L_6	34.15	36.07	3.30	3.48	2.90	-2.98	0.00	0.00	0.00	0.00
	U_6–L_7	46.21	-55.82	-0.65	0.40	2.84	-2.96	0.00	0.00	0.00	0.00
	U_6–U_7	110.34	114.53	-0.32	0.32	4.80	-5.04	0.00	0.00	0.00	0.00
	U_7–L_7	-121.24	-131.09	-0

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: 3F1
Condition: As-Built

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

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

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

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

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0-L_1	-12.55	3.37	2.25	1.05	0.27	-0.16	-25.02	11.71	3.02	-1.73
	L_1-L_2	-1.68	-7.06	-0.81	0.04	0.09	-0.40	-9.04	7.09	0.87	-4.46
	L_2-L_3	-0.06	-8.37	-0.34	0.57	-0.58	-0.66	-5.96	5.18	0.40	-7.37
	L_3-L_4	9.78	-11.75	-0.19	0.10	-0.21	-0.79	-2.08	1.11	-2.37	-8.67
	L_4-L_5	-10.32	17.59	-0.47	0.68	-0.43	-1.49	-2.27	6.45	-14.78	-5.69
	L_5-L_6	-26.82	58.45	-2.03	1.91	0.44	-0.60	-64.17	102.63	-21.26	4.84
	L_6-L_7	-59.76	86.83	-2.27	2.50	-0.18	-0.29	-96.43	89.10	-5.98	6.29
	L_7-L_8	-18.71	34.00	-0.66	3.06	-0.10	-0.01	-18.71	34.00	-0.66	3.06
	L_8-L_9	-9.60	109.51	-0.98	2.65	0.14	-0.10	-9.60	109.51	-0.98	2.65
	L_9-L_{10}	-74.77	141.58	-2.91	1.92	-0.31	-0.04	-74.77	141.58	-2.91	1.92
	L_{10}-L_{11}	-56.82	54.75	-1.44	1.34	-0.40	-0.50	-15.49	14.42	-4.35	-5.38
	L_{11}-L_{12}	-56.82	54.75	-1.44	1.34	-0.40	-0.50	-15.49	14.42	-4.35	-5.38
	L_{12}-L_{13}	-55.23	39.04	-1.59	1.63	0.30	-0.82	-17.74	17.69	-3.28	-8.84
	L_{13}-L_{14}	-20.96	7.36	-0.77	0.73	0.16	-0.71	-8.29	7.87	-1.75	-7.63
	L_{14}-L_{15}	1.76	-29.76	-0.25	0.03	0.03	-0.71	-13.60	12.11	-2.03	-7.03
	L_{15}-L_{16}	-19.01	4.12	1.26	1.12	0.68	-0.94	-13.60	12.11	-7.33	-10.12
	L_{16}-L_{17}	-26.53	13.01	1.92	1.90	0.57	-0.54	-17.47	14.97	1.97	-6.54
	L_{17}-L_{18}	-69.28	58.13	-3.10	2.69	0.13	-0.34	-33.40	28.99	-1.40	-3.61
	L_{18}-L_{19}	-69.28	61.35	-3.42	3.07	0.13	-0.34	-36.92	32.57	-1.40	-3.61
	L_{19}-L_{20}	-105.04	88.94	-4.24	3.02	0.10	-0.14	-45.70	32.56	-1.56	-1.55
	L_{20}-L_{21}	-82.69	87.74	-4.02	3.20	0.02	-0.48	-42.77	34.06	5.57	-5.14
	L_{21}-L_{22}	-82.69	87.91	-4.02	3.20	0.02	-0.48	-42.77	34.06	5.57	-5.14
	L_{22}-L_{23}	-81.28	63.04	-3.37	2.99	0.55	-0.45	-35.91	27.52	5.87	-4.77
	L_{23}-L_{24}	-81.28	63.04	-3.37	2.99	0.55	-0.45	-35.91	27.52	5.87	-4.77
	L_{24}-L_{25}	-17.30	7.21	-1.34	1.21	0.61	-0.84	-14.24	12.84	-6.44	-8.52
	L_{25}-L_{26}	-17.30	7.21	-1.34	1.21	0.61	-0.84	-14.24	12.84	-6.44	-8.52
	L_{26}-L_{27}	7.42	-1.45	-1.07	-1.07	0.10	-0.10	-7.18	5.22	-0.49	-1.06
	L_{27}-L_{28}	7.42	-23.91	0.67	0.49	0.89	-1.25	-7.18	5.22	-0.49	-13.30
	L_{28}-L_{29}	-44.31	35.87	-1.26	1.34	0.63	-1.05	-13.39	14.29	6.74	-11.19
	L_{29}-L_{30}	-66.38	68.64	-2.73	2.75	0.64	-1.05	-32.09	28.84	6.74	-11.19
	L_{30}-L_{31}	-88.54	73.82	-2.63	1.93	0.33	-0.80	-28.02	20.51	3.48	-8.52
	L_{31}-L_{32}	-88.54	73.82	-2.63	1.93	0.33	-0.80	-28.02	20.51	3.48	-8.52
	L_{32}-L_{33}	-108.36	116.66	-3.01	2.70	0.61	-0.40	-32.09	28.78	6.49	-4.26
	L_{33}-L_{34}	-154.28	139.69	-4.18	3.47	0.11	-0.29	-44.55	36.90	-1.16	-3.08
	L_{34}-L_{35}	-154.28	139.69	-4.18	3.47	0.11	-0.29	-44.55	36.90	-1.16	-3.08
	L_{35}-L_{36}	-24.74	100.39	-2.81	3.44	0.40	-0.39	-29.60	36.22	4.24	-4.06
	L_{36}-L_{37}	-98.29	139.79	-4.29	3.45	0.33	-0.39	-44.53	37.16	-1.29	-2.97
	L_{37}-L_{38}	-74.15	95.51	-3.32	3.13	0.30	-0.35	-34.91	32.93	3.17	-3.63
	L_{38}-L_{39}	-74.15	95.51	-3.32	3.13	0.30	-0.35	-34.91	32.93	3.17	-3.63
	L_{39}-L_{40}	-55.45	68.85	-2.50	2.32	0.26	-0.85	-26.28	24.39	2.78	-9.83
	L_{40}-L_{41}	-32.97	39.97	-1.86	1.77	0.38	-0.83	-19.02	18.57	4.03	-8.69
	L_{41}-L_{42}	-10.33	4.39	-0.82	0.72	0.53	-0.95	-8.66	7.53	5.54	-10.03
	L_{42}-L_{43}	-10.33	4.39	-0.82	0.72	0.53	-0.95	-8.66	7.53	5.54	-10.03
	L_{43}-L_{44}	-17.07	16.15	-1.30	1.18	0.73	-0.88	-17.07	16.15	-1.30	1.18
	L_{44}-L_{45}	-55.66	65.11	-2.62	2.46	0.50	-0.90	-21.85	21.77	3.80	-9.43
	L_{45}-L_{46}	-55.66	65.11	-2.62	2.46	0.50	-0.90	-30.74	25.83	5.26	-9.43
	L_{46}-L_{47}	-69.18	80.37	-2.88	2.63	0.59	-0.66	-30.31	27.66	6.23	-6.90
	L_{47}-L_{48}	-69.18	80.37	-2.88	2.63	0.59	-0.66	-36.86	31.52	6.23	-6.90
	L_{48}-L_{49}	-106.02	102.50	-4.06	3.65	0.22	-0.24	-42.67	38.42	2.30	-2.57
	L_{49}-L_{50}	-106.02	102.50	-4.06	3.65	0.22	-0.24	-42.67	38.42	2.30	-2.57
	L_{50}-L_{51}	-47.57	127.97	-3.10	3.68	0.45	-0.42	-33.03	39.18	4.80	-4.50
	L_{51}-L_{52}	-47.57	127.97	-3.10	3.68	0.45	-0.42	-33.03	39.18	4.80	-4.50
	L_{52}-L_{53}	-89.45	99.26	-3.27	2.64	0.27	-0.26	-34.79	28.10	2.82	-2.78
	L_{53}-L_{54}	-89.48	92.53	-2.54	2.22	0.10	-0.45	-27.02	23.59	1.10	-4.75
	L_{54}-L_{55}	-89.48	92.53	-2.54	2.22	0.10	-0.45	-27.02	23.59	1.10	-4.75
	L_{55}-L_{56}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{56}-L_{57}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{57}-L_{58}	-12.59	26.40	-0.61	0.48	1.09	-1.27	-6.53	5.14	11.65	-13.53
	L_{58}-L_{59}	-12.59	26.40	-0.61	0.48	1.09	-1.27	-6.53	5.14	11.65	-13.53
	L_{59}-L_{60}	-88.68	88.68	-3.53	3.53	0.26	-0.26	-34.79	28.10	2.82	-2.78
	L_{60}-L_{61}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{61}-L_{62}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{62}-L_{63}	-89.45	99.26	-3.27	2.64	0.27	-0.26	-34.79	28.10	2.82	-2.78
	L_{63}-L_{64}	-89.48	92.53	-2.54	2.22	0.10	-0.45	-27.02	23.59	1.10	-4.75
	L_{64}-L_{65}	-89.48	92.53	-2.54	2.22	0.10	-0.45	-27.02	23.59	1.10	-4.75
	L_{65}-L_{66}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{66}-L_{67}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{67}-L_{68}	-12.59	26.40	-0.61	0.48	1.09	-1.27	-6.53	5.14	11.65	-13.53
	L_{68}-L_{69}	-12.59	26.40	-0.61	0.48	1.09	-1.27	-6.53	5.14	11.65	-13.53
	L_{69}-L_{70}	-88.68	88.68	-3.53	3.53	0.26	-0.26	-34.79	28.10	2.82	-2.78
	L_{70}-L_{71}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{71}-L_{72}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{72}-L_{73}	-89.45	99.26	-3.27	2.64	0.27	-0.26	-34.79	28.10	2.82	-2.78
	L_{73}-L_{74}	-89.48	92.53	-2.54	2.22	0.10	-0.45	-27.02	23.59	1.10	-4.75
	L_{74}-L_{75}	-89.48	92.53	-2.54	2.22	0.10	-0.45	-27.02	23.59	1.10	-4.75
	L_{75}-L_{76}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{76}-L_{77}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{77}-L_{78}	-12.59	26.40	-0.61	0.48	1.09	-1.27	-6.53	5.14	11.65	-13.53
	L_{78}-L_{79}	-12.59	26.40	-0.61	0.48	1.09	-1.27	-6.53	5.14	11.65	-13.53
	L_{79}-L_{80}	-88.68	88.68	-3.53	3.53	0.26	-0.26	-34.79	28.10	2.82	-2.78
	L_{80}-L_{81}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{81}-L_{82}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{82}-L_{83}	-89.45	99.26	-3.27	2.64	0.27	-0.26	-34.79	28.10	2.82	-2.78
	L_{83}-L_{84}	-89.48	92.53	-2.54	2.22	0.10	-0.45	-27.02	23.59	1.10	-4.75
	L_{84}-L_{85}	-89.48	92.53	-2.54	2.22	0.10	-0.45	-27.02	23.59	1.10	-4.75
	L_{85}-L_{86}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{86}-L_{87}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{87}-L_{88}	-12.59	26.40	-0.61	0.48	1.09	-1.27	-6.53	5.14	11.65	-13.53
	L_{88}-L_{89}	-12.59	26.40	-0.61	0.48	1.09	-1.27	-6.53	5.14	11.65	-13.53
	L_{89}-L_{90}	-88.68	88.68	-3.53	3.53	0.26	-0.26	-34.79	28.10	2.82	-2.78
	L_{90}-L_{91}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{91}-L_{92}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{92}-L_{93}	-89.45	99.26	-3.27	2.64	0.27	-0.26	-34.79	28.10	2.82	-2.78
	L_{93}-L_{94}	-89.48	92.53	-2.54	2.22	0.10	-0.45	-27.02	23.59	1.10	-4.75
	L_{94}-L_{95}	-89.48	92.53	-2.54	2.22	0.10	-0.45	-27.02	23.59	1.10	-4.75
	L_{95}-L_{96}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{96}-L_{97}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{97}-L_{98}	-12.59	26.40	-0.61	0.48	1.09	-1.27	-6.53	5.14	11.65	-13.53
	L_{98}-L_{99}	-12.59	26.40	-0.61	0.48	1.09	-1.27	-6.53	5.14	11.65	-13.53
	L_{99}-L_{100}	-88.68	88.68	-3.53	3.53	0.26	-0.26	-34.79	28.10	2.82	-2.78
	L_{100}-L_{101}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{101}-L_{102}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{102}-L_{103}	-89.45	99.26	-3.27	2.64	0.27	-0.26	-34.79	28.10	2.82	-2.78
	L_{103}-L_{104}	-89.48	92.53	-2.54	2.22	0.10	-0.45	-27.02	23.59	1.10	-4.75
	L_{104}-L_{105}	-89.48	92.53	-2.54	2.22	0.10	-0.45	-27.02	23.59	1.10	-4.75
	L_{105}-L_{106}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{106}-L_{107}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{107}-L_{108}	-12.59	26.40	-0.61	0.48	1.09	-1.27	-6.53	5.14	11.65	-13.53
	L_{108}-L_{109}	-12.59	26.40	-0.61	0.48	1.09	-1.27	-6.53	5.14	11.65	-13.53
	L_{109}-L_{110}	-88.68	88.68	-3.53	3.53	0.26	-0.26	-34.79	28.10	2.82	-2.78
	L_{110}-L_{111}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{111}-L_{112}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{112}-L_{113}	-89.45	99.26	-3.27	2.64	0.27	-0.26	-34.79	28.10	2.82	-2.78
	L_{113}-L_{114}	-89.48	92.53	-2.54	2.22	0.10	-0.45	-27.02	23.59	1.10	-4.75
	L_{114}-L_{115}	-89.48	92.53	-2.54	2.22	0.10	-0.45	-27.02	23.59	1.10	-4.75
	L_{115}-L_{116}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{116}-L_{117}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{117}-L_{118}	-12.59	26.40	-0.61	0.48	1.09	-1.27	-6.53	5.14	11.65	-13.53
	L_{118}-L_{119}	-12.59	26.40	-0.61	0.48	1.09	-1.27	-6.53	5.14	11.65	-13.53
	L_{119}-L_{120}	-88.68	88.68	-3.53	3.53	0.26	-0.26	-34.79	28.10	2.82	-2.78
	L_{120}-L_{121}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{121}-L_{122}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{122}-L_{123}	-89.45	99.26	-3.27	2.64	0.27	-0.26	-34.79	28.10	2.82	-2.78
	L_{123}-L_{124}	-89.48	92.53	-2.54	2.22	0.10	-0.45	-27.02	23.59	1.10	-4.75
	L_{124}-L_{125}	-89.48	92.53	-2.54	2.22	0.10	-0.45	-27.02	23.59	1.10	-4.75
	L_{125}-L_{126}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{126}-L_{127}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{127}-L_{128}	-12.59	26.40	-0.61	0.48	1.09	-1.27	-6.53	5.14	11.65	-13.53
	L_{128}-L_{129}	-12.59	26.40	-0.61	0.48	1.09	-1.27	-6.53	5.14	11.65	-13.53
	L_{129}-L_{130}	-88.68	88.68	-3.53	3.53	0.26	-0.26	-34.79	28.10	2.82	-2.78
	L_{130}-L_{131}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{131}-L_{132}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{132}-L_{133}	-89.45	99.26	-3.27	2.64	0.27	-0.26	-34.79	28.10	2.82	-2.78
	L_{133}-L_{134}	-89.48	92.53	-2.54	2.22	0.10	-0.45	-27.02	23.59	1.10	-4.75
	L_{134}-L_{135}	-89.48	92.53	-2.54	2.22	0.10	-0.45	-27.02	23.59	1.10	-4.75
	L_{135}-L_{136}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{136}-L_{137}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{137}-L_{138}	-12.59	26.40	-0.61	0.48	1.09	-1.27	-6.53	5.14	11.65	-13.53
	L_{138}-L_{139}	-12.59	26.40	-0.61	0.48	1.09	-1.27	-6.53	5.14	11.65	-13.53
	L_{139}-L_{140}	-88.68	88.68	-3.53	3.53	0.26	-0.26	-34.79	28.10	2.82	-2.78
	L_{140}-L_{141}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{141}-L_{142}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{142}-L_{143}	-89.45	99.26	-3.27	2.64	0.27	-0.26	-34.79	28.10	2.82	-2.78
	L_{143}-L_{144}	-89.48	92.53	-2.54	2.22	0.10	-0.45	-27.02	23.59	1.10	-4.75
	L_{144}-L_{145}	-89.48	92.53	-2.54	2.22	0.10	-0.45	-27.02	23.59	1.10	-4.75
	L_{145}-L_{146}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{146}-L_{147}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{147}-L_{148}	-12.59	26.40	-0.61	0.48	1.09	-1.27	-6.53	5.14	11.65	-13.53
	L_{148}-L_{149}	-12.59	26.40	-0.61	0.48	1.09	-1.27	-6.53	5.14	11.65	-13.53
	L_{149}-L_{150}	-88.68	88.68	-3.53	3.53	0.26	-0.26	-34.79	28.10	2.82	-2.78
	L_{150}-L_{151}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{151}-L_{152}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{152}-L_{153}	-89.45	99.26	-3.27	2.64	0.27	-0.26	-34.79	28.10	2.82	-2.78
	L_{153}-L_{154}	-89.48	92.53	-2.54	2.22	0.10	-0.45	-27.02	23.59	1.10	-4.75
	L_{154}-L_{155}	-89.48	92.53	-2.54	2.22	0.10	-0.45	-27.02	23.59	1.10	-4.75
	L_{155}-L_{156}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{156}-L_{157}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{157}-L_{158}	-12.59	26.40	-0.61	0.48	1.09	-1.27	-6.53	5.14	11.65	-13.53
	L_{158}-L_{159}	-12.59	26.40	-0.61	0.48	1.09	-1.27	-6.53	5.14	11.65	-13.53
	L_{159}-L_{160}	-88.68	88.68	-3.53	3.53	0.26	-0.26	-34.79	28.10	2.82	-2.78
	L_{160}-L_{161}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{161}-L_{162}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{162}-L_{163}	-89.45	99.26	-3.27	2.64	0.27	-0.26	-34.79	28.10	2.82	-2.78
	L_{163}-L_{164}	-89.48	92.53	-2.54	2.22	0.10	-0.45	-27.02	23.59	1.10	-4.75
	L_{164}-L_{165}	-89.48	92.53	-2.54	2.22	0.10	-0.45	-27.02	23.59	1.10	-4.75
	L_{165}-L_{166}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{166}-L_{167}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{167}-L_{168}	-12.59	26.40	-0.61	0.48	1.09	-1.27	-6.53	5.14	11.65	-13.53
	L_{168}-L_{169}	-12.59	26.40	-0.61	0.48	1.09	-1.27	-6.53	5.14	11.65	-13.53
	L_{169}-L_{170}	-88.68	88.68	-3.53	3.53	0.26	-0.26	-34.79	28.10	2.82	-2.78
	L_{170}-L_{171}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{171}-L_{172}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{172}-L_{173}	-89.45	99.26	-3.27	2.64	0.27	-0.26	-34.79	28.10	2.82	-2.78
	L_{173}-L_{174}	-89.48	92.53	-2.54	2.22	0.10	-0.45	-27.02	23.59	1.10	-4.75
	L_{174}-L_{175}	-89.48	92.53	-2.54	2.22	0.10	-0.45	-27.02	23.59	1.10	-4.75
	L_{175}-L_{176}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{176}-L_{177}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{177}-L_{178}	-12.59	26.40	-0.61	0.48	1.09	-1.27	-6.53	5.14	11.65	-13.53
	L_{178}-L_{179}	-12.59	26.40	-0.61	0.48	1.09	-1.27	-6.53	5.14	11.65	-13.53
	L_{179}-L_{180}	-88.68	88.68	-3.53	3.53	0.26	-0.26	-34.79	28.10	2.82	-2.78
	L_{180}-L_{181}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{181}-L_{182}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{182}-L_{183}	-89.45	99.26	-3.27	2.64	0.27	-0.26	-34.79	28.10	2.82	-2.78
	L_{183}-L_{184}	-89.48	92.53	-2.54	2.22	0.10	-0.45	-27.02	23.59	1.10	-4.75
	L_{184}-L_{185}	-89.48	92.53	-2.54	2.22	0.10	-0.45	-27.02	23.59	1.10	-4.75
	L_{185}-L_{186}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{186}-L_{187}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{187}-L_{188}	-12.59	26.40	-0.61	0.48	1.09	-1.27	-6.53	5.14	11.65	-13.53
	L_{188}-L_{189}	-12.59	26.40	-0.61	0.48	1.09	-1.27	-6.53	5.14	11.65	-13.53
	L_{189}-L_{190}	-88.68	88.68	-3.53	3.53	0.26	-0.26	-34.79	28.10	2.82	-2.78
	L_{190}-L_{191}	-50.13	67.65	-2.23	2.19	0.23	-0.56	-24.05	25.83	3.88	-10.83
	L_{191}-L_{192}	-50.13	67.65

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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) 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, 17th Edition, 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 | | |

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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) (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_b (in^3)	Z_z (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F$_y$/S$_{top}$	M_u (k-in)	Equivalent Mom. Factor a	C_{m2}	C_{m3}	YY Axis Moments from STAAD: Dead Load (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) (k-in)	Pedestrian Load Impact Live Load Start (k-in)	Pedestrian Load Impact Live Load End (k-in)	Impact Pedestrian Load (Max) Start (k-in)	Impact Pedestrian Load (Max) End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_y (in^3)	I_{yy} (in^4)	Shape Factor	M_p (k-in)	P_{crit} (kip)	Formula 1.8 Term * F$_y$/S$_{top}$	M_u (k-in)	Equivalent Mom. Factor a	C_{m2}	C_{m3}	Pass
Structure 1	L_0-L_1	-19.48	-91.71	0.45	0.48	2.43	-3.80	-0.11	0.13	0.30	-0.64	-6.05	0.35	0.61	-1.37	1.50	3.54	-7.68	-34.96	-109.02	21.49	-101.35	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	0.321	0.73	0.73	39.69	129.06	0.06	0.20	-3.47	-12.74	-0.03	-0.11	0.46	1.68	6.73	2.70	-6.30	-170.23	-7.46	-1.68	6.78	24.94	48.97	189.11	-5.76	-143.26	128.3	128.29	121.63	141.18	626.8	1.10	4659	----	0.99805042	4225.3	0.272	0.71	0.71	Yes
	L_1-L_2	30.33	-116.64	-0.42	1.52	1.56	-6.71	-0.15	-0.42	0.43	0.25	20.27	20.67	-89.66	-1.85	5.12	-18.82	-15.98	32.10	-125.30	66.56	-268.18	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.246	0.50	0.50	169.01	-70.76	1.22	-0.61	-4.64	4.78	0.15	-0.12	1.96	-2.87	16.27	-8.16	-64.71	63.81	2.29	-1.71	29.02	-42.49	0.43	0.209	0.132	0.35	Yes	0.527	0.087	0.22	Yes	0.443	0.090	0.53	Yes
	L_2-L_3	-31.01	-78.07	-1.33	1.64	-3.02	-5.89	0.23	0.30	-1.04	-7.27	-12.57	21.84	-40.30	-19.65	5.51	-19.48	-12.47	-15.23	-116.54	-19.35	-263.23	99.5	99.53	91.00	120.96	3086	1230.1	1.26	4141	0.99981186	3294.8	0.710	0.88	0.88	138.73	-144.72	0.99	-0.36	-7.59	0.89	0.04	0.09	1.79	-1.01	13.25	-4.86	-101.43	11.88	6.02	1.38	26.53	-15.02	193.67	-194.46	44.59	-172.70	171.6	171.62	158.81	188.47	749.3	1.10	6220	----	0.99781915	5651.9	-0.996	0.20	0.20	0.158	0.063	0.23	Yes	0.004	0.039	0.14	Yes
	L_3-L_4	-60.77	-124.10	-2.44	-2.98	0.66	-11.03	-0.29	-0.36	-2.01	-25.38	-21.56	-35.20	-39.54	-7.75	8.68	-31.47	-20.16	-40.81	-208.18	-33.66	-470.41	99.5	99.53	91.00	120.96	3086	1230.1	1.26	4141	0.99981186	3294.8	0.710	0.88	0.88	252.52	92.6	52.09	16.68	29.74	10.29	3.56	1.14	-0.39	-2.30	-1.19	-34.44	-18.47	0.05	0.00	177.50	-255.84	123.64	-152.24	306.05	126.18	226.15	784.3	1.10	7464	----	0.99778986	6800.4	-0.862	0.26	0.26	Yes
	L_4-L_5	-2.22	-269.06	1.61	3.04	-1.75	-2.18	-0.31	1.16	0.00	0.00	21.52	40.56	-129.38	-0.65	2.72	-3.72	13.93	0.00	0.00	25.10	-402.31	-33.27	311.89	104.6	104.58	95.61	136.37	6040	1678.1	1.31	4520	0.99952345	3448.5	0.062	0.62	0.62	140.99	-140.80	-0.03	-0.64	-3.43	4.14	0.57	1.24	0.00	0.00	117.20	-255.84	123.64	-152.24	306.05	126.18	226.15	784.3	1.10	7464	----	0.99778986	6800.4	-0.862	0.26	0.26	Yes
	L_5-L_6	-2.28	-53.33	1.62	2.61	-0.48	-3.26	0.00	0.35	0.62	-0.48	-27.18	-21.76	-81.35	-45.15	113.12	-4.59	0.00	-14.54	-2.27	0.00	-79.77	84.4	84.42	77.12	102.62	2444	1026.3	1.21	3332	0.99000394	2755.4	0.292	0.44	0.44	27.27	240.39	2.39	0.00	-4.45	-8.34	-45.88	1.92	14.34	-18.47	0.05	0.00	137.50	-255.84	123.64	-152.24	306.05	126.18	226.15	784.3	1.10	7464	----	0.99778986	6800.4	-0.862	0.26	0.26	Yes
	L_6-L_7	-38.40	-70.96	-0.28	4.34	0.35	-1.34	-0.35	3.65	0.00	0.00	0.00	-3.69	57.97	4.70	17.85	-4.16	43.81	0.00	0.00	0.00	-54.72	817.61	-43.81	-73.13	145.8	145.75	130.44	228.84	6550	2932.4	1.57	7552	0.99952915	4806.3	-0.067	0.57	0.57	217.09	154.07	0.15	2.33	1.64	-0.29	2.77	-0.09	0.00	0.00	2.03	31.34	21.88	-3.91	11.40	-1.34	0.00	0.00	284.86	294.81	310.66	277.13	355.4	355.44	352.52	403.40	1093.1	1.13	13312	----	0.99711701	11898.3	0.892	0.96	0.96	Yes
	L_7-L_8	555.48	-39.57	1.91	0.64	4.47	-2.29	1.31	0.05	2.09	-0.32	24.74	8.23	57.79	29.56	15.71	0.55	25.12	-3.78	-174.70	-74.70	-20.47	145.8	145.75	130.74	228.84	6550	2932.4	1.57	7552	0.99952915	4806.3	0.818	0.93	0.93	1.35	159.87	215.72	0.12	0.64	-0.10	-42.72	-0.42	-0.18	0.82	1.36	19.36	28.32	287.90	231.51	130.01	355.4	355.44	304.33	403.40	1093.1	1.13	13312	----	0.99711701	11898.3	0.892	0.96	0.96	Yes
	L_8-L_9	188.35	-153.68	-0.19	1.60	1.69	-4.44	-0.36	0.40	0.70	-0.56	-2.48	23.14	-71.86	-37.50	-6.36	5.52	9.39	-11.44	233.36	-165.13	-291.93	152.64	144.9	134.95	129.09	192.84	5210	2376.9	1.33	6364	0.99949164	4178.1	0.542	0.82	0.82	189.43	-92.23	0.55	-0.60	12.72	-0.54	-9.08	-0.53	2.68	-2.36	20.24	-9.64	256.07	-18.79	312.75	288.5	288.45	246.71	327.09	1086.4	1.12	10626	----	0.99754387	9436.7	0.207	0.77	0.77	Yes
	L_9-L_{10}	-164.35	-164.49	1.96	1.10	0.71	-4.00	0.70	0.32	0.30	-1.05	-25.37	14.28	9.15	-31.78	8.40	3.86	3.59	-12.60	246.64	-195.26	225.55	-281.15	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.99913872	3252.5	-0.802	0.26	0.26	139.35	67.91	-0.72	-0.29	1.81	-6.32	-0.03	-0.13	-0.77	1.20	-9.35	-3.79	23.37	-81.73	-0.40	-1.91	-11.07	17.18	-188.89	82.84	-146.35	-18.45	158.2	158.16	151.51	173.24	694.3	1.10	5717	----	0.99578832	5208.8	-0.439	0.42	0.42	Yes
	L_{10}-L_{11}	-179.34	-251.25	1.29	-0.52	0.42	0.26	0.16	-1.05	-16.63	12.96	15.86	-68.67	5.55	3.13	1.33	-15.12	254.75	-310.34	193.77	-418.20	92.58	92.6	83.65	114.47	3295	1304.9	1.24	3777	0.99913872	3252.5	-0.802	0.26	0.26	74.10	-52.73	0.07	-0.49	-4.71	5.19	-0.05	-0.04	0.61	-0.64	4.74	-2.24	-6.39	-40.97	67.14	-0.73	-0.92	-22.07	-11.47	152.58	-50.87	17.72	0.45	233.2	233.16	144.53	172.24	694.3	1.10	5717	----	0.99578832	5208.8	-0.439	0.42	0.42	Yes
	L_{11}-L_{12}	-57.28	-170.48	1.43	0.72	2.73	-4.74	0.43	0.20	-0.57	-0.97	18.50	9.26	-35.35	-61.37	5.15	2.41	-6.79	-11.66	-0.41	-209.58	-120.41	-301.40	130.38	121.10	110.72	3885	1793.2	1.31	5634	0.99952915	4288.6	0.400	0.76	0.76	-96.77	102.89	-0.37	-0.16	0.72	-8.41	0.00	-0.04	-1.11	1.63	-4.74	-2.04	2.26	-108.86	-0.04	-0.59	-15.88	14.84	-131.96	132.40	-113.76	-6.46	233.3	233.26	201.34	239.84	975.8	1.11	8859	----	0.99716998	7679.8	0.491	0.74	0.74	Yes
	L_{12}-L_{13}	70.09	-469.84	1.10	0.98	2.27	-10.11	0.35	2.02	-0.45	-2.28	14.28	12.69	29.32	-130.77	4.16	2.75	-5.44	-27.35	109.69	-594.29	129.23	-780.79	162.9	162.89	147.19	219.93	6887	2613.8	1.35	7258	0.99910306	5310.6	-0.166	0.53	0.53	106.42	40.42	0.09	-0.35	-2.99	1.77	-0.05	0.04	1.76	-1.93	1.19	-4.58	-38.63	22.94	-0.68	1.19	25.56	-15.04	139.84	46.59	88.12	82.37	321.7	321.70	275.89	363.71	1221.7	1.13	12002	----	0.99741170	10568.7	0.333	0.73	0.73	0.402	0.119	0.52	Yes	0.200	0.072	0.34	Yes
	L_{13}-L_{14}	-488.80	-187.61	0.96	-0.99	0.00	-0.72	0.49	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	0.00	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
	L_{14}-L_{15}	-272.90	-364.23	0.36	0.57	-7.15	-7.05	0.00	0.00	-1.30	-1.07	4.71	8.63	-66.83	31.23	0.00	0.00	-15.59	-12.86	-348.65	-449.28	-441.64	-579.09	179.7	179.69	161.68	251.43	7453	3050.7	1.40	8297	0.99913252	5924.6	0.763	0.91	0.91	51.00	-11.57	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	0.00	0.00	0.00	0.00

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: 3F1
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 (Min) 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_x (in^3)	I_x (in^4)	I_{xx} (in^4)	Shape Factor f	M_p (k-in)	Formula f & Terms F-S_{bc}	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{bb}	C_{bbb}
Structure 1	U_0–L_1	-15.70	54.51	2.08	2.57	0.20	-0.48	-0.04	0.43	0.03	-0.13	-27.75	34.31	2.63	-8.41	-0.48	5.10	0.34	-1.55	-56.48	110.47	16.99	62.53	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.489	0.40	0.40
	U_1–L_1	-27.61	29.28	-2.17	2.00	0.64	-0.59	-0.57	0.52	0.20	-0.18	-28.95	26.77	8.54	-7.52	-6.82	6.19	2.40	-2.14	-53.73	125.60	-8.51	-31.07	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.511	0.31	0.40
	L_1–U_2	5.61	-5.24	0.23	-0.25	-0.23	-18.22	21.86	7.52	0.24	-0.31	4.29	2.36	-2.70	-12.49	21.65	21.56	-18.93	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.577	0.37	0.40
	L_1–U_1	40.61	-41.50	-0.79	0.91	0.91	-0.85	-0.06	0.10	0.17	-0.21	-10.49	12.21	12.10	-11.30	-0.70	1.25	1.99	-2.46	39.16	-38.07	68.53	-68.64	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.998	0.20	0.20
	U_1–L_2	56.81	-57.80	-0.34	0.27	1.20	-0.14	-0.12	0.14	0.32	-0.34	-5.43	4.44	3.42	-16.03	-15.46	0.00	0.00	0.00	67.94	-67.53	45.43	-45.43	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.597	0.39	0.40
	L_2–U_2	64.44	-72.22	-0.08	0.12	1.43	-1.58	0.00	0.00	0.42	-0.47	-1.92	1.60	19.08	-21.16	0.00	0.00	0.00	0.00	6.02	-5.65	82.45	-81.98	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.636	0.24	0.24
	U_2–L_3	72.27	-79.14	-0.03	0.03	1.40	-1.50	-0.09	0.09	0.39	-0.45	-19.50	21.36	0.00	0.00	0.00	0.00	0.00	0.00	5.81	-5.45	90.34	-90.43	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.673	0.19	0.20
	L_2–U_3	109.00	-121.35	-0.51	0.56	1.64	-1.69	0.00	0.00	0.74	-0.81	-8.87	7.41	21.88	-22.62	0.00	0.00	0.00	0.00	8.90	-8.76	132.78	-148.12	181.73	99.62	18.5	18.45	18.36	30.78	3	1020.9	1.67	1016	1.5	913.3	0.548	0.82	0.82
	U_3–L_3	-42.62	47.12	-2.33	2.79	1.97	-2.38	-0.77	0.93	0.77	-0.53	-31.06	37.26	26.37	-31.74	-9.29	11.14	9.24	-11.11	-107.86	124.20	-25.31	-8.11	111.11	107.13	107.11	162.71	26	2058.9	1.52	3,069	1.5	5302.3	-0.606	0.36	0.36
	L_3–U_4	-181.51	205.10	-4.24	4.90	1.08	0.00	0.00	0.00	1.29	-1.42	-4.24	4.90	1.08	0.00	0.00	0.00	0.00	0.00	276.54	311.25	-234.77	-238.37	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1638.0	0.666	0.87	0.87
	U_3–L_4	-123.92	126.16	-1.97	2.18	-0.04	-0.19	-0.61	0.71	-0.04	-0.05	-25.44	28.26	-0.56	-0.46	-7.30	8.52	-0.44	-0.58	-203.64	211.81	-161.81	160.81	35.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2	-0.961	0.22	0.22
	U_4–L_4	24.90	-49.24	-3.00	3.41	1.63	-2.07	-0.77	0.86	0.79	-1.01	-40.08	43.54	21.72	-27.44	-8.24	10.38	5.43	-12.11	-31.74	8.65	80.61	-99.95	107.1	107.13	107.11	162.71	26	2058.9	1.52	3,069	1.5	5302.3	-0.606	0.36	0.36
	U_4–L_5	-121.66	132.24	-2.31	2.37	0.05	-0.08	-0.72	0.78	0.00	0.00	-30.87	31.60	0.68	-1.11	-8.66	9.37	0.00	0.00	-189.29	212.98	-157.27	170.47	18.5	18.45	18.36	30.78	7	1020.9	1.67	1018	1.5	913.3	-0.931	0.23	0.23
	U_5–L_5	-77.50	76.02	-1.58	1.89	0.01	-0.13	-0.43	0.51	-0.04	-0.03	-21.11	25.08	0.12	-1.75	-5.17	6.14	-0.50	-0.32	-134.92	139.42	-102.60	96.55	20.8	20.80	20.67	34.66	9	1076.0	1.67	1144	1.5	1029.6	-0.968	0.21	0.21
	U_5–L_6	-42.60	70.37	-1.38	1.52	0.02	-0.06	-0.40	0.43	0.00	0.00	-18.46	20.31	0.27	-0.75	-4.79	5.40	0.00	0.00	-105.39	117.88	-81.04	90.51	19.4	19.37	19.31	29.87	3	907.2	1.54	986	1.5	958.8	-0.894	0.24	0.24
	U_6–L_6	-57.67	58.82	-1.16	1.13	0.32	-0.27	-0.32	0.33	0.00	0.00	-15.44	15.10	4.32	-3.63	-3.79	3.92	0.00	0.00	-95.04	96.09	-69.36	-79.69	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.989	0.20	0.20
	U_7–L_6	-41.96	42.31	-0.70	0.71	1.02	-1.15	-0.17	0.20	0.03	-0.05	-5.30	9.45	13.87	-15.32	-2.04	2.41	0.32	-0.72	-68.62	67.28	-36.76	35.08	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.990	0.20	0.20
	U_8–L_6	-9.20	-2.43	-0.57	0.63	1.43	-1.66	-0.19	0.21	0.28	-0.35	-7.57	8.43	19.05	-22.20	-2.30	2.53	3.39	-4.16	-10.10	7.79	24.51	-32.03	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.765	0.29	0.29
	U_8–L_7	28.05	-38.34	-0.49	0.47	1.62	-1.58	-0.15	0.16	0.50	-0.53	-6.59	6.29	21.58	-21.11	-1.84	1.87	5.94	-6.32	27.95	-41.66	72.30	0.89	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.012	0.60	0.60
	U_9–L_8	78.23	-95.55	-0.31	0.45	1.24	-1.66	-0.15	0.17	0.56	-0.71	-4.11	5.99	16.54	-22.20	-1.75	2.06	6.67	-8.56	94.08	-113.75	131.88	61.72	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.468	0.79	0.79

M_2 Information

ZZ Axis Moment Properties

Location	Member	Shape Factor f	M_p (k-in)	Formula f & Terms F-S_{bc}	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{bb}	C_{bbb}
Structure 1	U_0–L_1	1.54	782	1.5	763.3	-0.489	0.40	0.40
	U_1–L_1	1.54	782	1.5	763.3	-0.511	0.31	0.40
	L_1–U_2	1.54	782	1.5	763.3	-0.577	0.37	0.40
	L_1–U_1	1.54	782	1.5	763.3	-0.998	0.20	0.20
	U_1–L_2	1.54	782	1.5	763.3	-0.597	0.39	0.40
	L_2–U_2	1.54	782	1.5	763.3	-0.636	0.24	0.24
	U_2–L_3	1.54	782	1.5	763.3	-0.673	0.19	0.20
	L_2–U_3	1.67	1016	1.5	913.3	0.548	0.82	0.82
	U_3–L_3	1.52	3,069	1.5	5302.3	-0.606	0.36	0.36
	L_3–U_4	1.65	1929	1.5	1758.2	-0.961	0.22	0.22
	U_3–L_4	1.52	3,069	1.5	5302.3	-0.606	0.36	0.36
	U_4–L_4	1.65	1799	1.5	1638.0	0.666	0.87	0.87
	U_4–L_5	1.67	1018	1.5	913.3	0.548	0.82	0.82
	U_5–L_5	1.67	1144	1.5	1029.6	-0.968	0.21	0.21
	U_5–L_6	1.54	986	1.5	958.8	-0.894	0.24	0.24
	U_6–L_6	1.54	782	1.5	763.3	-0.989	0.20	0.20
	U_7–L_6	1.54	782	1.5	763.3	-0.990	0.20	0.20
	U_8–L_6	1.54	782	1.5	763.3	-0.765	0.29	0.29
	U_8–L_7	1.54	782	1.5	763.3	0.012	0.60	0.60
	U_9–L_8	1.54	782	1.5	763.3	0.468	0.79	0.79

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 (Min) 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_y (in^3)	I_{yy} (in^4)	I_{yy} (in^4)	Shape Factor f	M_p (k-in)	Formula f & Terms F-S_{bc}	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{bb}	C_{bbb}
Structure 1	U_0–L_1	140.58	-181.45	-0.14	0.16	1.80	-2.27	0.00	0.00	0.72	-0.89	-1.85	2.06	23.29	-29.33	0.00	0.00	8.68	-10.73	180.34	-233.22	224.30	130.67	42.7	42.74	42.74	65.30	8	1389.6	1.53	2135	1.5	2115.6	-0.773	0.29	0.29
	U_1–L_1	129.25	-129.19	-0.18	0.30	1.58	-1.75	0.05	0.02	0.62	-0.71	-2.30	3.89	20.44	-22.66	0.00	0.23	7.48	-8.52	165.03	-162.88	204.32	127.92	36.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2	0.624	0.85	0.85
	L_1–U_2	5.61	-5.24	0.23	-0.25	-0.23	-18.22	21.86	7.52	0.24	-0.31	4.29	2.36	-2.70	-12.49	21.65	21.56	-18.93	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.577	0.37	0.40
	L_1–U_1	40.61	-41.50	-0.79	0.91	0.91	-0.85	-0.06	0.10	0.17	-0.21	-10.49	12.21	12.10	-11.30	-0.70	1.25	1.99	-2.46	39.16	-38.07	68.53	-68.64	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.998	0.20	0.20
	U_1–L_2	56.81	-57.80	-0.34	0.27	1.20	-0.14	-0.12	0.14	0.32	-0.34	-5.43	4.44	3.42	-16.03	-15.46	0.00	0.00	0.00	67.94	-67.53	45.43	-45.43	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.597	0.39	0.40
	L_2–U_2	64.44	-72.22	-0.08	0.12	1.43	-1.58	0.00	0.00	0.42	-0.47	-1.92	1.60	19.08	-21.16	0.00	0.00	0.00	0.00	6.02	-5.65	82.45	-81.98	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.636	0.24	0.24
	U_2–L_3	72.27	-79.14	-0.03	0.03	1.40	-1.50	-0.09	0.09	0.39	-0.45	-19.50	21.36	0.00	0.00	0.00	0.00	0.00	0.00	5.81	-5.45	90.34	-90.43	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.673	0.19	0.20
	L_2–U_3	109.00	-121.35	-0.51	0.56	1.64	-1.69	0.00	0.00	0.74	-0.81	-8.87	7.41	21.88	-22.62	0.00	0.00	0.00	0.00	8.90	-8.76	132.78	-148.12	181.73	99.62	18.5	18.45	18.36	30.78	3	1020.9	1.67	1016	1.5	913.3	0.548	0.82	0.82
	U_3–L_3	-42.62	47.12	-2.33	2.79	1.97	-2.38	-0.77	0.93	0.77	-0.53	-31.06	37.26	26.37	-31.74	-9.29	11.14	9.24	-11.11	-107.86	124.20	-25.31	-8.11	111.11	107.13	107.11	162.71	26	2058.9	1.52	3,069	1.5	5302.3	-0.606	0.36	0.36
	L_3–U_4	-181.51	205.10	-4.24	4.90	1.08	0.00	0.00	0.00	1.29	-1.42	-4.24	4.90	1.08	0.00	0.00	0.00	0.00	0.00	276.54	311.25	-234.77	-238.37	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1638.0	0.666	0.87	0.87
	U_3–L_4	-123.92	126.16	-1.97	2.18	-0.04	-0.19	-0.61	0.71	-0.04	-0.05	-25.44	28.26	-0.56	-0.46	-7.30	8.52	-0.44	-0.58	-203.64	211.81	-161.81	160.81	35.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2	-0.961	0.22	0.22
	U_4–L_4	24.90	-49.24	-3.00	3.41	1.63	-2.07	-0.77	0.86	0.79	-1.01	-40.08	43.54	21.72	-27.44	-8.24	10.38	5.43	-12.11	-31.74	8.65	80.61	-99.95	107.1	107.13	107.11	162.71	26	2058.9	1.52	3,069	1.5	5302.3	-0.606	0.36	0.36
	U_4–L_5	-121.66	132.24	-2.31	2.37	0.05	-0.08	-0.72	0.78	0.00	0.00	-30.87	31.60	0.68	-1.11	-8.66	9.37	0.00	0.00	-189.29	212.98	-157.27	170.47	18.5	18.45	18.36	30.78	7	1020.9	1.67	1018	1.5	913.3	-0.931	0.23	0.23
	U_5–L_5	-77.50	76.02	-1.58	1.89	0.01	-0.13	-0.43	0.51	-0.04	-0.03	-21.11	25.08	0.12	-1.75	-5.17	6.14	-0.50	-0.32	-134.92	139.42	-102.60	96.55	20.8	20.80	20.67	34.66	9	1076.0	1.67	1144	1.5	1029.6	-0.968	0.21	0.21
	U_5–L_6	-42.60	70.37	-1.38	1.52	0.02	-0.06	-0.40	0.43	0.00	0.00	-18.46	20.31	0.27	-0.75	-4.79	5.40	0.00	0.00	-105.39	117.88	-81.04	90.51	19.4	19.37	19.31	29.87	3	907.2	1.54	986	1.5	958.8	-0.894	0.24	0.24
	U_6–L_6	-57.67	58.82	-1.16	1.13	0.32	-0.27	-0.32	0.33	0.00	0.00	-15.44	15.10	4.32	-3.63	-3.79	3.92	0.00	0.00	-95.04	96.09	-69.36	-79.69	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.989	0.20	0.20
	U_7–L_6	-41.96	42.31	-0.70	0.71	1.02	-1.15	-0.17	0.20	0.03	-0.05	-5.30	9.45	13.87	-15.32	-2.04	2.41	0.32	-0.72	-68.62	67.28	-36.76	35.08	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.990	0.20	0.20
	U_8–L_6	-9.20	-2.43	-0.57	0.63	1.43	-1.66	-0.19	0.21	0.28	-0.35	-7.57	8.43	19.05	-22.20	-2.30	2.53	3.39	-4.16	-10.10	7.79	24.51	-32.03	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.765	0.29	0.29
	U_8–L_7	28.05	-38.34	-0.49	0.47	1.62	-1.58	-0.15	0.16	0.50	-0.53	-6.59	6.29	21.58	-21.11	-1.84	1.87	5.94	-6.32	27.95	-41.66	72.30	0.89	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.012	0.60	0.60
	U_9–L_8	78.23	-95.55	-0.31	0.45	1.24	-1.66	-0.15	0.17	0.56	-0.71	-4.11	5.99	16.54	-22.20	-1.75	2.06	6.67	-8.56	94.08	-113.75	131.88	61.72	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.468	0.79	0.79

M_3 Information

YY Axis Moment Properties

Location	Member	Shape Factor f	M_p (k-in)	Formula f & Terms F-S_{bc}	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{bb}	C_{bbb}
Structure 1	U_0–L_1	1.53	2135	1.5	2115.6	-0.773	0.29	0.29
	U_1–L_1	1.65	1929	1.5	1758.2	0.624	0.85	0.85
	L_1–U_2	1.54	782	1.5	763.3	-0.511	0.31	0.40
	L_1–U_1	1.54	782	1.5	763.3	-0.998	0.20	0.20
	U_1–L_2	1.54	782	1.5	763.3	-0.597	0.39	0.40
	L_2–U_2	1.54	782	1.5	763.3	-0.636	0.24	0.24
	U_2–L_3	1.54	782	1.5	763.3	-0.673	0.19	0.20
	L_2–U_3	1.65	1929	1.5	1758.2	-0.961	0.22	0.22
	U_3–L_3	1.52	3,069	1.5	5302.3	-0.606	0.36	0.36
	L_3–U_4	1.65	1799	1.5	1638.0	0.666	0.87	0.87
	U_3–L_4	1.52	3,069	1.5	5302.3	-0.606	0.36	0.36
	U_4–L_4	1.67	1018	1.5	913.3	-0.931	0.23	0.23
	U_4–L_5	1.67	1018	1.5	913.3	-0.931	0.23	0.23
	U_5–L_5	1.67	1144	1.5	1029.6	-0.968	0.21	0.21
	U_5–L_6	1.54	986	1.5	958.8	-0.894	0.24	0.24
	U_6–L_6	1.54	782	1.5	763.3	-0.989	0.20	0.20
	U_7–L_6	1.54	782	1.5	763.3	-0.990	0.20	0.20
	U_8–L_6	1.54	782	1.5	763.3	-0.765	0.29	0.29
	U_8–L_7	1.54	782	1.5	763.3	0.012	0.60	0.60
	U_9–L_8	1.54	782	1.5	763.3	0.468	0.79	0.79

Tension

Location	Member	Yield Start (k-ft)	Yield Moment Portion	Yield Total	Pass	Fracture Axial Portion	Fracture Moment Portion	Fracture Total	Pass
Structure 1	U_0–L_1	—	—	—	—	—	—	—	—
	U_1–L_1	—	—	—	—	—	—	—	—
	L_1–U_2	—	—	—	—	—	—	—	—
	L_1–U_1	—	—	—	—	—	—	—	—
	U_1–L_2	—	—	—	—	—	—	—	—
	L_2–U_2	—	—	—	—	—	—	—	—
	U_2–L_3	—	—	—	—	—	—	—	—
	L_2–U_3	—	—	—	—	—	—	—	—
	U_3–L_3	—	—	—	—	—	—	—	—
	L_3–U_4	—	—	—	—	—	—	—	—
	U_3–L_4	—	—	—	—	—	—	—	—
	U_4–L_4	—	—	—	—	—	—	—	—
	U_4–L_5	—	—	—	—	—	—	—	—
	U_5–L_5	—	—	—	—	—	—	—	—
	U_5–L_6	—	—	—	—	—	—	—	—
	U_6–L_6	—	—	—	—	—	—	—	—
	U_7–L_6	—	—	—	—	—	—	—	—
	U_8–L_6	—	—	—	—	—	—	—	—
	U_8–L_7	—	—	—	—	—	—	—	—
	U_9–L_8	—	—	—	—	—	—	—	—

Compression

Location	Member	Yield Start (k-ft)	Yield Moment Portion	Yield Total	Pass	Buckle Axial Portion	Buckle Moment Portion	Buckle Total	Pass
Structure 1	U_0–L_1	—	—	—	—	0.447	0.165	0.62	Yes
	U_1–L_1	—	—	—	—	0.431	0.298	0.73	Yes
	L_1–U_2	—	—	—	—	0.433	0.108	0.55	Yes
	L_1–U_1	—	—	—	—	0.229	0.166	0.39	Yes
	U_1–L_2	—	—	—	—	0.433	0.108	0.55	Yes
	L_2–U_2	—	—	—	—	0.122	0.226	0.33	Yes
	U_2–L_3	—	—	—	—	0.118	0.122	0.24	Yes
	L_2–U_3	—	—	—	—	0.372	0.153	0.52	Yes
	U_3–L_3	—	—	—	—	0.477	0.023	0.51	Yes
	L_3–U_4	—	—	—	—	0.436	0.301	0.79	Yes
	U_3–L_4	—	—	—	—	0.440	0.131	0.58	Yes
	U_4–L_4	—	—	—	—	0.436	0.301	0.79	Yes
	U_4–L_5	—	—	—	—	0.457	0.068	0.57	Yes
	U_5–L_5	—	—	—	—	0.457	0.068	0.57	Yes
	U_5–L_6	—	—	—	—	0.436	0.148	0.62	Yes
	U_6–L_6	—	—	—	—	0.436	0.148	0.62	Yes
	U_7–L_6	—	—	—	—	0.436	0.148	0.62	Yes
	U_8–L_6	—	—	—	—	0.488	0.166	0.66	Yes
	U_8–L_7	—	—	—	—	0.488	0.166	0.66	Yes
	U_9–L_8	—	—	—	—	0.450	0.140	0.59	Yes
	U_0–L_1	—	—	—	—	0.433	0.108	0.55	Yes
	U_1–L_1	—	—	—	—	0.431	0.298	0.73	Yes
	L_1–U_2	—	—	—	—	0.433	0.108	0.55	Yes
	L_1–U_1	—	—	—	—	0.229	0.166	0.39	Yes
	U_1–L_2	—	—	—	—	0.433	0.108	0.55	Yes
	L_2–U_2	—	—	—	—	0.122	0.226	0.33	Yes
	U_2–L_3	—	—	—	—	0.118	0.122	0.24	Yes
	L_2–U_3	—	—	—	—	0.372	0.153	0.52	Yes
	U_3–L_3	—	—	—	—	0.477	0.023	0.51	Yes
	L_3–U_4	—	—	—	—	0.436	0.301	0.79	Yes
	U_3–L_4	—	—	—	—	0.440	0.131	0.58	Yes
	U_4–L_4	—	—	—	—	0.436	0.301	0.79	Yes
	U_4–L_5	—	—	—	—	0.457	0.068	0.57	Yes
	U_5–L_5	—	—	—	—	0.457	0.068	0.57	Yes
	U_5–L_6	—	—	—	—	0.436	0.148	0.62	Yes
	U_6–L_6	—	—	—	—	0.436	0.148	0.62	Yes
	U_7–L_6	—	—	—	—	0.436	0.148	0.62	Yes
	U_8–L_6	—	—	—	—	0.488	0.166	0.66	Yes
	U_8–L_7	—	—	—	—	0.488	0.166	0.66	Yes
	U_9–L_8	—	—	—	—	0.450	0.140	0.59	Yes

Location	Member	Yield Start (k-ft)	Yield Moment Portion	Yield Total	Pass	Buckle Axial Portion	Buckle Moment Portion	Buckle Total	Pass
Structure 2	U_0–L_1	140.58	-181.45	-0.14	0.16	1.80	-2.27	0.00	0.00
	U_1–L_1	129.25	-129.19	-0.18	0.30	1.58	-1.75	0.05	0.02
	L_1–U_2	5.61	-5.24	0.23	-0.25	-0.23	-18.22	21.86	7.52
	L_1–U_1	40.61	-41.50	-0.79	0.91	0.91	-0.85	-0.06	0.10
	U_1–L_2	56.81	-57.80	-0.34	0.27	1.20

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: 3F1
Condition: As-Built

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

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

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

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

M_2 Information — ZZ Axis Moments from STAAD

Location		Member	Dead Load Start (k-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 Min 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)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_{bot} (in^3)	Z_x (in^3)	I (in^4)	I_{xx} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_x	M_u (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_m/(1-C_m)	C_{com}	C_{ten}
Structure 1	U_0-L_1		3.65	-1.42	-1.42	0.64	0.05	-0.08	0.15	0.01	-0.03	-0.02	-18.90	8.58	0.61	-1.12	1.75	0.12	-0.34	-0.23	-17.55	9.47	5.11	2.99	15.6	15.63	15.58	25.56	5	804.0	1.66	857	1.5	773.7	-0.539	0.38	0.38
	L_1-U_1		-11.48	-3.33	-0.32	0.23	-0.03	-0.21	0.25	0.07	0.08	-0.04	-8.28	3.03	-0.39	0.04	-0.10	-0.25	-0.34	-0.16	-15.42	-7.97	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.315	0.61	0.61
	U_1-L_2		-3.51	-11.78	-0.33	0.12	-0.32	-0.35	0.00	0.00	-0.04	-0.06	-4.46	7.60	-0.29	0.28	-0.47	-0.74	-0.57	-13.29	-5.73	-21.80	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.415	0.43	0.43
	L_2-U_2		9.81	-15.01	0.09	0.07	-0.05	-0.52	0.08	0.01	-0.08	-0.12	1.10	0.98	-0.68	-6.99	0.90	0.13	-0.94	-1.40	15.42	-18.07	11.87	-28.59	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.415	0.43	0.43
	U_2-L_3		-16.21	25.06	0.12	0.06	0.03	0.12	-0.17	-0.01	0.01	-0.01	1.60	4.52	-1.99	2.40	-2.74	-0.24	0.36	0.14	-18.52	30.07	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.460	0.42	0.42
	L_3-U_3		-34.06	79.08	0.11	1.01	0.06	-0.10	-0.28	0.44	0.00	0.00	-14.80	13.59	0.83	-1.95	-3.32	5.24	0.00	0.00	-63.52	120.42	43.20	100.27	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.527	0.39	0.39
	U_3-L_4		-46.66	77.26	1.00	1.37	0.17	-0.06	-0.38	0.60	0.00	0.00	-19.32	15.64	1.16	-2.75	-4.55	7.39	0.00	0.00	-116.24	120.42	44.44	104.13	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.508	0.39	0.39
	L_4-U_4		-1.39	102.62	0.64	1.18	0.23	-0.39	0.65	0.00	0.00	-8.60	15.78	3.13	-0.59	-1.07	7.76	0.00	0.00	0.00	-14.37	165.31	2.26	128.29	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.097	0.57	0.57
	U_4-L_5		-12.27	139.07	-0.98	1.57	-0.15	-0.08	0.01	0.01	0.00	0.00	-7.45	20.33	-10.90	15.04	8.51	0.00	0.00	0.00	-25.46	218.27	-18.43	179.53	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.353	0.43	0.43
	L_5-U_5		-10.92	90.29	-1.44	1.22	-0.07	-0.01	-0.50	0.51	0.00	0.00	-18.63	15.72	0.94	-0.16	-0.05	0.00	0.00	0.00	-153.42	137.91	-129.97	117.17	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2014.7	-0.117	0.55	0.55
	U_5-L_6		-73.43	69.78	-1.22	0.77	-0.26	-0.10	-0.31	0.35	0.00	0.00	-15.73	9.90	-9.71	-1.13	-3.77	4.25	0.00	0.00	-115.91	103.58	-101.58	88.56	39.8	39.77	39.56	65.61	21	1610.3	1.65	2165	1.5	1968.6	-0.894	0.24	0.24
	L_6-U_6		-73.43	69.78	-1.22	0.77	-0.26	-0.10	-0.31	0.35	0.00	0.00	-15.73	9.90	-9.71	-1.13	-3.77	4.25	0.00	0.00	-115.91	103.58	-101.58	88.56	39.8	39.77	39.56	65.61	21	1610.3	1.65	2165	1.5	1968.6	-0.894	0.24	0.24
	U_6-L_7		-12.27	139.07	-0.98	1.57	-0.15	-0.08	0.01	0.01	0.00	0.00	-7.45	20.33	-10.90	15.04	8.51	0.00	0.00	0.00	-25.46	218.27	-18.43	179.53	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.353	0.43	0.43
	L_7-U_7		-10.92	90.29	-1.44	1.22	-0.07	-0.01	-0.50	0.51	0.00	0.00	-18.63	15.72	0.94	-0.16	-0.05	0.00	0.00	0.00	-153.42	137.91	-129.97	117.17	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2014.7	-0.117	0.55	0.55
	U_7-L_8		-34.06	79.08	0.11	1.01	0.06	-0.10	-0.28	0.44	0.00	0.00	-14.80	13.59	0.83	-1.95	-3.32	5.24	0.00	0.00	-63.52	120.42	43.20	100.27	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.527	0.39	0.39
	L_8-U_8		-16.21	25.06	0.12	0.06	0.03	0.12	-0.17	-0.01	0.01	-0.01	1.60	4.52	-1.99	2.40	-2.74	-0.24	0.36	0.14	-18.52	30.07	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.460	0.42	0.42
	U_8-L_9		9.81	-15.01	0.09	0.07	-0.05	-0.52	0.08	0.01	-0.08	-0.12	1.10	0.98	-0.68	-6.99	0.90	0.13	-0.94	-1.40	15.42	-18.07	11.87	-28.59	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.415	0.43	0.43
	L_9-U_9		-11.48	-3.33	-0.32	0.23	-0.03	-0.21	0.25	0.07	0.08	-0.04	-8.28	3.03	-0.39	0.04	-0.10	-0.25	-0.34	-0.16	-15.42	-7.97	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.315	0.61	0.61
	U_9-L_{10}		-3.51	-11.78	-0.33	0.12	-0.32	-0.35	0.00	0.00	-0.04	-0.06	-4.46	7.60	-0.29	0.28	-0.47	-0.74	-0.57	-13.29	-5.73	-21.80	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.415	0.43	0.43
	L_{10}-U_{10}		3.65	-1.42	-1.42	0.64	0.05	-0.08	0.15	0.01	-0.03	-0.02	-18.90	8.58	0.61	-1.12	1.75	0.12	-0.34	-0.23	-17.55	9.47	5.11	2.99	15.6	15.63	15.58	25.56	5	804.0	1.66	857	1.5	773.7	-0.539	0.38	0.38
	U_1-U_2		-14.27	13.37	-0.67	0.67	-0.46	0.04	-0.04	0.04	-2.20	-0.63	0.47	0.32	-0.46	0.46	-11.64	135.85	-150.35	131.28	38.4	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.824	0.22	0.22
	U_2-U_3		-146.00	120.10	-1.68	1.40	0.13	-0.14	-0.77	0.62	0.04	0.04	-21.67	18.10	1.67	-1.75	-9.29	7.49	0.40	0.40	-230.44	189.46	-187.63	153.92	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.824	0.22	0.22
	U_3-U_4		-86.84	116.71	-2.69	1.90	0.15	-0.28	-0.13	0.38	0.01	-0.06	-34.36	24.29	1.88	-3.53	-1.51	4.57	0.14	-0.70	-159.52	189.24	-110.45	147.14	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.843	0.26	0.26
	U_4-U_5		-154.13	114.46	-2.69	1.90	0.15	-0.28	-0.13	0.38	0.01	-0.06	-34.36	24.29	1.88	-3.53	-1.51	4.57	0.14	-0.70	-238.79	179.30	-182.71	142.75	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.799	0.26	0.26
	U_5-U_6		-118.22	92.25	-2.03	1.75	0.48	-0.42	-0.52	0.43	0.11	0.00	-25.87	22.29	6.07	0.37	-6.28	5.11	1.37	-1.25	-187.32	148.91	-143.79	112.95	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.795	0.28	0.28
	U_6-U_7		-118.22	92.25	-2.03	1.75	0.48	-0.42	-0.52	0.43	0.11	0.00	-25.87	22.29	6.07	0.37	-6.28	5.11	1.37	-1.25	-187.32	148.91	-143.79	112.95	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.795	0.28	0.28
	U_7-U_8		-86.84	116.71	-2.69	1.90	0.15	-0.28	-0.13	0.38	0.01	-0.06	-34.36	24.29	1.88	-3.53	-1.51	4.57	0.14	-0.70	-159.52	189.24	-110.45	147.14	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.843	0.26	0.26
	U_8-U_9		-154.13	114.46	-2.69	1.90	0.15	-0.28	-0.13	0.38	0.01	-0.06	-34.36	24.29	1.88	-3.53	-1.51	4.57	0.14	-0.70	-238.79	179.30	-182.71	142.75	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.799	0.26	0.26
	U_9-U_{10}		-14.27	13.37	-0.67	0.67	-0.46	0.04	-0.04	0.04	-2.20	-0.63	0.47	0.32	-0.46	0.46	-11.64	135.85	-150.35	131.28	38.4	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.824	0.22	0.22
	L_1-L_2		13.33	-37.03	0.28	0.14	0.40	-0.70	-0.20	0.00	0.04	0.00	-3.60	1.76	5.09	-8.93	0.00	0.00	0.00	0.00	-50.14	12.65	-63.95	23.94	-59.75	17.72	17.24	26.54	8	824.7	1.54	876	1.5	853.4	-0.401	0.44	0.44
	L_2-L_3		-66.01	54.01	-0.91	0.76	0.06	-0.35	-0.23	0.17	0.00	0.00	-11.60	9.76	0.62	-0.84	-4.50	2.80	0.04	0.00	0.00	-100.90	82.91	-84.75	64.37	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2	-0.822	0.27	0.27
	L_3-L_4		-13.76	104.35	-1.75	1.54	0.41	-0.23	-0.42	0.51	0.00	0.00	-22.72	14.85	-1.99	-1.85	-6.07	5.40	0.00	0.00	-202.89	170.02	-176.48	139.76	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2014.7	-0.117	0.55	0.55
	L_4-L_5		-116.16	105.67	-1.64	1.17	-0.52	-0.17	-0.36	0.36	0.00	0.00	-20.31	14.97	-0.24	-0.15	-4.27	4.31	0.00	0.00	-178.20	156.84	-151.32	134.58	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.880	0.25	0.25
	L_5-L_6		-138.98	104.35	-1.75	1.54	0.41	-0.23	-0.42	0.51	0.00	0.00	-23.71	13.64	-1.99	-1.85	-6.07	5.40	0.00	0.00	-195.71	157.79	-152.28	126.17	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2014.7	-0.117	0.55	0.55
	L_6-L_7		-131.93	101.23	-1.73	1.54	0.41	-0.23	-0.42	0.51	0.00	0.00	-22.10	19.65	-1.21	-2.89	-6.03	6.11	0.00	0.00	-200.24	221.89	-164.73	182.69	46.7	46.71	46.71	73.43	10	1711.0	1.53	2357	1.5	2312.1	-0.902	0.24	0.24
	L_7-L_8		-179.29	162.92	-1.86	1.66	0.67	-0.48	-0.54	0.56	0.04	0.02	-23.61	21.23	8.53	0.43	-6.58	6.14	1.64	-1.50	-242.70	239.41	-216.78	203.79	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.928	0.23	0.23
	L_8-L_9		-44.32	88.61	-0.80	0.84	0.10	-0.28	-0.18	0.11	0.07	-0.06	-10.18	8.22	1.23	-3.59	-2.14	1.27	0.86	-0.72	-44.86	21.88	-30.02	6.52	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.487	0.41	0.41
	L_9-L_{10}		-13.33	-37.03	0.28	0.14	0.40	-0.70	-0.20	0.00	0.04	0.00	-3.60	1.76	5.09	-8.93	0.00	0.00	0.00	-1.54	-50.14	12.65	-63.95	23.94	-59.75	17.72	17.24	26.54	8	824.7	1.54	876	1.5	853.4	-0.401	0.44	0.44
	L_{10}-L_{11}		-66.01	54.01	-0.91	0.76	0.06	-0.35	-0.23	0.17	0.00	0.00	-11.60	9.76	0.62	-0.84	-4.50	2.80	0.04	0.00	-100.90	82.91	-84.75	64.37	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2	-0.822	0.27	0.27
	L_{11}-L_{12}		-13.76	104.35	-1.75	1.54	0.41	-0.23	-0.42	0.51	0.00	0.00	-22.72	14.85	-1.99	-1.85	-6.07	5.40	0.00	0.00	-202.89	170.02	-176.48	139.76	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2014.7	-0.117	0.55	0.55
	L_{12}-L_{13}		-116.16	105.67	-1.64	1.17	-0.52	-0.17	-0.36	0.36	0.00	0.00	-20.31	14.97	-0.24	-0.15	-4.27	4.31	0.00	0.00	-178.20	156.84	-151.32	134.58	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.880	0.25	0.25
	L_{13}-L_{14}		-138.98	104.35	-1.75	1.54	0.41	-0.23	-0.42	0.51	0.00	0.00	-23.71	13.64	-1.99	-1.85	-6.07	5.40	0.00	0.00	-195.71	157.79	-152.28	126.17	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2014.7	-0.117	0.55	0.55
	L_{14}-L_{15}		-131.93	101.23	-1.73	1.54	0.41	-0.23	-0.42	0.51	0.00	0.00	-22.10	19.65	-1.21	-2.89	-6.03	6.11	0.00	0.00	-200.24	221.89	-164.73	182.69	46.7	46.71	46.71	73.43	10	1711.0	1.53	2357	1.5	2312.1	-0.902	0.24	0.24
	L_{15}-L_{16}		-179.29	162.92	-1.86	1.66	0.67	-0.48	-0.54	0.56	0.04	0.02	-23.61	21.23	8.53	0.43	-6.58	6.14	1.64	-1.50	-242.70	239.41	-216.78	203.79	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.928	0.23	0.23
	L_{16}-L_{17}		-44.32	88.61	-0.80	0.84	0.10	-0.28	-0.18	0.11	0.07	-0.06	-10.18	8.22	1.23	-3.59	-2.14	1.27	0.86	-0.72	-44.86	21.88	-30.02	6.52	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.487	0.41	0.41
	L_{17}-L_{18}		-45.28	135.72	-1.48	1.90	-0.03	-0.15	-0.36	0.49	0.18	-0.02	-18.69	24.04	-0.40	-1.83	-4.34	5.82	2.17	-2.28	-83.16	297.08	-56.57	411.61	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.400	0.44	0.44
	L_{18}-L_{19}		-143.91	198.10	-1.96	1.96	0.20	-0.11	-0.49	0.49	0.17	-0.02	-18.69	24.04	-0.40	-1.83	-4.34	5.82	2.17	-2.28	-226.98	297.08	-154.67	411.61	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.400	0.44	0.44
	L_{19}-L_{20}		-112.49	130.84	-2.03	2.01	0.21	-0.29	-0.48	0.55	0.00	0.00	-25.68	23.40	2.70	-3.24	-5.76	6.59	0.00	0.00	-179.60	229.62	-142.71	172.38	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.857	0.25	0.25
	L_{20}-L_{21}		-83.68	112.83	-1.86	1.83	-0.03	-0.29	-0.37	0.40	0.00	0.00	-23.04	17.46	-3.61	-3.70	-4.79	4.89	0.00	0.00	-138.73	145.78	-104.09	118.28	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.952	0.22	0.22
	L_{21}-L_{22}		-51.76	54.22	-1.15	0.93	-0.02	-0.33	-0.27	0.25	0.00	0.00	-14.54	11.69	-0.27	-0.12	-3.26	3.01	0.00	0.00	-86.20	86.69	-67.64	65.14	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2	-0.994	0.20	0.20
	L_{22}-L_{23}		-13.38	104.35	-1.75	1.54	0.41	-0.23	-0.42	0.51	0.00	0.00	-23.71	13.64	-1.99	-1.85	-6.07	5.40	0.00	0.00	-195.71	157.79	-152.28	126.17	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2014.7	-0.117	0.55	0.55
	L_{23}-L_{24}		-14.01	1.02	-0.42	0.27	0.23	-0.56	0.00	0.04	-0.01	-0.08	-5.34	3.42	2.84	-7.08	0.02	0.53	-0.16	-0.98	-25.16	5.75	-14.52	-7.88	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.228	0.51	0.51
	L_{24}-L_{25}		18.16	5.24	-0.54	0.34	0.29	-0.72	0.00	0.05	-0.01	-0.10	-6.85	4.39	3.64	-9.08	0.03	0.68	-0.20	-1.26	-32.62	7.38	-18.65	-10.12	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.179	0.56	0.56
	L_{25}-L_{26}		-32.82	30.90	-0.81	0.70	0.10	-0.28	-0.22	0.20	0.00	0.00	-10.25	8.88	1.22	-3.56	-2.36	2.08	0.40	0.00	-64.00	66.13	-47.08	50.04	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2	-0.754	0.22	0.22
	L_{26}-L_{27}		-14.01	1.02	-0.42	0.27	0.23	-0.56	0.00	0.04	-0.01	-0.08	-5.34	3.42	2.84	-7.08	0.02	0.53	-0.16	-0.98	-25.16	5.75	-14.52	-7.88	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.228	0.51	0.51
	L_{27}-L_{28}		18.16	5.24	-0.54	0.34	0.29	-0.72	0.00	0.05	-0.01	-0.10	-6.85	4.39	3.64	-9.08	0.03	0.68	-0.20	-1.26	-32.62	7.38	-18.65	-10.12	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.179	0.56	0.56
	L_{28}-L_{29}		-32.82	30.90	-0.81	0.70	0.10	-0.28	-0.22	0.20	0.00	0.00	-10.25	8.88	1.22	-3.56	-2.36	2.08	0.40	0.00	-64.00	66.13	-47.08	50.04	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2	-0.754	0.22	0.22
	L_{29}-L_{30}		-83.99	100.03	-1.66	1.41	0.28	-0.31	-0.39	0.44	0.00	0.00	-20.95	17.80	3.99	-3.95	-4.67	5.27	0.00	0.00	-136.31	153.19	-104.42	124.91	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.890	0.24	0.24
	L_{30}-L_{31}		-98.58	117.15	-1.77	1.53	0.24	-0.29	-0.42	0.49	0.00	0.00	-22.37	19.37	3.02	-3.65	-5.02	5.86	0.00	0.00	-157.23	177.47	-124.23	147.55	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.886	0.25	0.25
	L_{31}-L_{32}		-126.11	124.51	-1.67	1.61	0.66	-0.51	-0.52	0.49	0.01	-0.01	-21.13	20.26	8.27	0.43	-6.23	5.92	-0.10	-0.07	-191.50	187.74	-153.27	153.04	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.980	0.21	0.21
	L_{32}-L_{33}		-29.24	123.88	-1.30	1.83	0.20	-0.11	-0.38	0.38	0.00	0.00	-20.24	25.64	2.38	-3.20	-5.09	6.52	0.00	0.00	-206.98	244.61	-167.61	202.49	46.7	46.71	46.71	73.43	10	1711.0	1.53	2357	1.5	2312.1	-0.944	0.23	0.23
	L_{33}-L_{34}		-82.40	185.99	-1.58	2.01	0.42	-0.23	-0.44	0.60	0.00	0.00	-20.24	25.64	2.38	-3.20	-5.32	7.21	0.00	0.00	-133.43	275.13	-100.13	238.62	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.485	0.41	0.41
	L_{34}-L_{35}		-98.48	207.01	-1.58	2.03	0.42	-0.23	-0.44	0.60	0.00	0.00	-23.88	21.58	2.84	-3.65	-5.42	6.29	0.00	0.00	-210.99	233.47	-176.26	194.70	46.7	46.71	46.71	73.43	10	1711.0	1.53	2357	1.5	2312.1	-0.935	0.23	0.23
	L_{35}-L_{36}		-128.98	123.04	-1.84	1.35	-0.07	-0.07	-0.40	0.44	0.00	0.00	-20.97	17.22	-0.95	-0.93	-4.85	5.30	0.00	0.00	-194.92	182.34	-168.90	158.73	46.7	46.71	46.71	73.43	10	1711.0	1.53	2357	1.5	2312.1	-0.935	0.23	0.23
	L_{36}-L_{37}		-98.48	207.01	-1.58	2.03	0.42	-0.23	-0.44	0.60	0.00	0.00	-23.88	21.58	2.84	-3.65	-5.42	6.29	0.00	0.00	-210.99	233.47	-176.26	194.70	46.7	46.71	46.71	73.43	10	1711.0	1.53	2357	1.5	2312.1	-0.944	0.23	0.23
	L_{37}-L_{38}		-128.98	123.04	-1.84	1.35	-0.07	-0.07	-0.40	0.44	0.00	0.00	-20.97	17.22	-0.95	-0.93	-4.85	5.30	0.00	0.00	-194.92	182.34	-168.90	158.73	46.7	46.71	46.71	73.43	10	1711.0	1.53	2357	1.5	2312.1	-0.935	0.23	0.23
	L_{38}-L_{39}		-82.40	185.99	-1.58	2.01	0.42	-0.23	-0.44	0.60	0.00	0.00	-20.24	25.64	2.38	-3.20	-5.32	7.21	0.00	0

Moment (End) AB Operating

Operating Loads - 3F1

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																		
North Truss - Upper Chord	Structure 1	$U_0 - U_1$	-----	-502.32	-180	56	-161	-923	8	-11	22	-319	-----	-----	-----	-----	-----	-----	-----	-----	0.683	0.314	1.00	Yes	0.677	0.219	0.90	Yes	1.00	**4.26**
		$U_1 - U_2$	-----	-562.40	-63	26	-192	-823	-7	-41	-47	-140	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.228	1.00	Yes	0.758	0.196	0.96	Yes	1.00	**2.68**
		$U_2 - U_3$	78.50	-587.53	-140	203	-319	-560	5	27	67	163	0.090	0.161	0.26	Yes	0.061	0.105	0.17	Yes	0.799	0.192	1.00	Yes	0.792	0.133	0.93	Yes	1.00	**2.86**
		$U_3 - U_4$	250.12	-543.98	34	245	-261	-771	22	38	162	32	0.287	0.211	0.50	Yes	0.197	0.145	0.35	Yes	0.740	0.260	1.00	Yes	0.734	0.183	0.92	Yes	1.00	**3.27**
		$U_4 - U_5$	354.99	-591.95	128	290	-436	-596	16	-30	35	-234	0.407	0.181	0.59	Yes	0.279	0.124	0.41	Yes	0.805	0.189	1.00	Yes	0.798	0.142	0.95	Yes	1.00	**4.65**
		$U_5 - U_6$	-----	-594.66	-733	535	-819	-283	231	-1	387	-189	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.149	0.96	Yes	0.802	0.195	1.00	Yes	1.00	**7.11**
		$U_6 - U_7$	839.36	-----	368	228	161	-626	-286	-107	122	-446	0.803	0.194	1.00	Yes	0.561	0.134	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.63**
		$U_7 - U_8$	505.44	-----	-1960	3799	-81	751	445	-678	-428	-386	0.350	0.645	1.00	Yes	0.244	0.439	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.43**
		$U_8 - U_9$	455.17	-----	604	31	2877	-2715	-1129	-43	-332	540	0.373	0.621	1.00	Yes	0.255	0.423	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.04**
		$U_9 - U_{10}$	672.16	-241.29	235	280	150	-749	-156	23	117	612	0.729	0.266	1.00	Yes	0.494	0.179	0.68	Yes	0.311	0.289	0.60	Yes	0.308	0.168	0.48	Yes	1.00	**5.48**
		$U_{10} - U_{11}$	234.80	-593.91	303	-90	149	-1042	34	92	307	238	0.255	0.283	0.54	Yes	0.170	0.181	0.36	Yes	0.765	0.211	0.98	Yes	0.758	0.233	1.00	Yes	1.00	**4.01**
		$U_{11} - U_{12}$	-----	-848.85	209	-118	-82	-833	106	409	196	679	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.190	1.00	Yes	0.796	0.138	0.94	Yes	1.00	**3.09**
		$U_{12} - U_{13}$	-----	-1176.94	-11	-242	-115	-1054	352	208	595	419	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.200	1.00	Yes	0.786	0.145	0.94	Yes	1.00	**3.07**
		$U_{13} - U_{14}$	-----	-1304.36	-157	-390	-403	-1630	226	181	397	526	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.241	1.00	Yes	0.748	0.180	0.93	Yes	1.00	**2.79**
		$U_{14} - U_{15}$	-----	-1365.38	-263	-245	-1070	-1082	209	30	572	99	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.206	1.00	Yes	0.783	0.119	0.91	Yes	1.00	**3.32**
		$U_{15} - U_{16}$	-----	-1365.28	-193	-410	-203	-1491	75	47	360	62	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.202	1.00	Yes	0.783	0.164	0.95	Yes	1.00	**3.73**
		$U_{16} - U_{17}$	-----	-1391.97	-507	-166	-942	-1090	299	-78	588	-99	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.190	1.00	Yes	0.798	0.120	0.92	Yes	1.00	**4.47**
		$U_{17} - U_{18}$	-----	-1102.99	-680	212	-326	-370	431	19	272	-170	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.119	1.00	Yes	0.863	0.111	0.98	Yes	1.00	**4.14**
		$U_{18} - U_{19}$	-----	-736.24	-690	56	-284	-439	384	-182	215	-362	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.156	1.00	Yes	0.828	0.139	0.97	Yes	1.00	**4.18**
		$U_{19} - U_{20}$	-----	-571.19	-1563	1761	-309	-588	250	-621	154	-736	-----	-----	-----	-----	-----	-----	-----	-----	0.648	0.206	0.86	Yes	0.643	0.354	1.00	Yes	1.00	**8.11**
	Structure 2	$U_0 - U_1$	-----	-593.27	-89	-97	409	-1762	3	-71	-63	-362	-----	-----	-----	-----	-----	-----	-----	-----	0.705	0.286	1.00	Yes	0.701	0.299	1.00	Yes	1.00	**8.16**
		$U_1 - U_2$	-----	-806.53	-46	-195	-25	-1338	-70	-221	-61	-269	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.213	1.00	Yes	0.778	0.203	0.99	Yes	1.00	**4.17**
		$U_2 - U_3$	-----	-1108.48	-95	-286	-189	-1802	-29	362	-2	538	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.204	1.00	Yes	0.787	0.184	0.98	Yes	1.00	**3.82**
		$U_3 - U_4$	-----	-1288.25	-415	-414	-1119	-1727	356	544	406	641	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.252	1.00	Yes	0.734	0.154	0.89	Yes	1.00	**3.39**
		$U_4 - U_5$	-----	-1423.05	-462	-392	-706	-2214	760	301	451	324	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.262	1.00	Yes	0.731	0.184	0.92	Yes	1.00	**3.27**
		$U_5 - U_6$	-----	-1511.21	-435	-27	-1199	-1613	188	-203	370	491	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.216	1.00	Yes	0.776	0.134	0.91	Yes	1.00	**3.42**
		$U_6 - U_7$	-----	-1322.87	-293	-112	-793	-1767	-130	-182	331	120	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.235	1.00	Yes	0.753	0.157	0.92	Yes	1.00	**3.29**
		$U_7 - U_8$	-----	-1384.98	-171	-145	-803	-1592	-116	-194	181	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.197	1.00	Yes	0.789	0.142	0.94	Yes	1.00	**4.19**
		$U_8 - U_9$	-----	-1225.12	-256	148	-950	-1085	-107	-205	332	-285	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.159	1.00	Yes	0.831	0.115	0.95	Yes	1.00	**4.25**
		$U_9 - U_{10}$	157.09	-950.64	-72	350	-1188	-617	-141	-153	254	-114	0.115	0.172	0.29	Yes	0.078	0.117	0.20	Yes	0.825	0.165	1.00	Yes	0.820	0.145	0.97	Yes	1.00	**4.32**
		$U_{10} - U_{11}$	720.80	-821.90	322	501	-668	-987	-237	-180	324	-388	0.609	0.187	0.80	Yes	0.414	0.121	0.54	Yes	0.822	0.174	1.00	Yes	0.817	0.139	0.96	Yes	1.00	**7.68**
		$U_{11} - U_{12}$	-----	-779.84	-1558	944	-1067	-1197	630	-108	740	-355	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.158	0.94	Yes	0.775	0.220	1.00	Yes	1.00	**13.62**
		$U_{12} - U_{13}$	1127.43	-----	470	171	-830	-1489	-419	-365	481	-370	0.761	0.233	1.00	Yes	0.543	0.158	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.13**
		$U_{13} - U_{14}$	481.61	-----	-3771	7214	-309	1342	259	-1369	-916	-1124	0.237	0.761	1.00	Yes	0.168	0.499	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.90**
		$U_{14} - U_{15}$	769.10	-----	1418	278	5715	-5063	-1252	-918	-787	276	0.378	0.615	1.00	Yes	0.268	0.403	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.29**
		$U_{15} - U_{16}$	1242.22	-----	138	472	58	-1563	-620	-390	-78	798	0.751	0.245	1.00	Yes	0.534	0.166	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.27**
		$U_{16} - U_{17}$	973.77	-110.80	626	289	724	-1787	-190	-20	539	440	0.718	0.281	1.00	Yes	0.477	0.185	0.67	Yes	0.097	0.180	0.28	Yes	0.096	0.225	0.33	Yes	1.00	**6.89**
		$U_{17} - U_{18}$	663.16	-308.08	424	297	167	-1223	13	262	249	842	0.666	0.331	1.00	Yes	0.443	0.219	0.67	Yes	0.366	0.334	0.70	Yes	0.364	0.208	0.58	Yes	1.00	**5.18**
		$U_{18} - U_{19}$	522.38	-611.00	501	216	406	-1287	111	119	476	421	0.524	0.288	0.82	Yes	0.344	0.184	0.53	Yes	0.726	0.272	1.00	Yes	0.722	0.218	0.95	Yes	1.00	**5.46**
		$U_{19} - U_{20}$	274.00	-695.59	284	192	-66	-1182	31	23	246	516	0.257	0.259	0.52	Yes	0.170	0.170	0.35	Yes	0.772	0.221	1.00	Yes	0.767	0.189	0.96	Yes	1.00	**4.08**
		$U_{20} - U_{21}$	51.88	-840.48	-62	87	-256	-1245	77	-10	337	318	0.040	0.217	0.26	Yes	0.028	0.140	0.17	Yes	0.773	0.220	1.00	Yes	0.767	0.180	0.95	Yes	1.00	**3.98**
		$U_{21} - U_{22}$	50.80	-785.95	-49	14	-703	-1268	43	63	162	391	0.039	0.226	0.27	Yes	0.028	0.152	0.18	Yes	0.723	0.275	1.00	Yes	0.717	0.184	0.91	Yes	1.00	**3.48**
		$U_{22} - U_{23}$	105.07	-836.19	94	-21	-334	-1276	50	-1	373	-47	0.082	0.226	0.31	Yes	0.058	0.151	0.21	Yes	0.769	0.228	1.00	Yes	0.763	0.185	0.95	Yes	1.00	**4.54**
		$U_{23} - U_{24}$	181.95	-848.15	-56	163	-326	-1229	-29	-58	272	-22	0.141	0.208	0.35	Yes	0.099	0.134	0.24	Yes	0.780	0.215	1.00	Yes	0.774	0.178	0.96	Yes	1.00	**4.62**
		$U_{24} - U_{25}$	369.27	-738.42	233	335	-361	-953	-83	-87	302	-240	0.346	0.193	0.54	Yes	0.230	0.127	0.36	Yes	0.820	0.180	1.00	Yes	0.815	0.153	0.97	Yes	1.00	**5.68**
		$U_{25} - U_{26}$	-----	-709.74	-527	609	-318	-916	206	-207	248	-285	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.145	0.99	Yes	0.838	0.155	1.00	Yes	1.00	**7.09**
		$U_{26} - U_{27}$	-----	-665.98	-822	754	-598	-1116	329	-251	462	-433	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.204	1.00	Yes	0.787	0.189	0.98	Yes	1.00	**9.30**
		$U_{27} - U_{28}$	-----	-770.67	-1847	2374	-53	-2253	855	-500	700	-478	-----	-----	-----	-----	-----	-----	-----	-----	0.672	0.319	1.00	Yes	0.668	0.298	0.97	Yes	1.00	**24.30**
		$U_{28} - U_{29}$	1030.25	-----	-52	512	156	-2796	94	-611	232	-570	0.623	0.370	1.00	Yes	0.443	0.247	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.37**
		$U_{29} - U_{30}$	603.84	-----	-2698	6814	-70	639	172	-979	-253	48	0.297	0.698	1.00	Yes	0.210	0.457	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.59**
		$U_{30} - U_{31}$	756.00	-----	1090	359	5879	-4613	-1111	-577	-789	388	0.372	0.620	1.00	Yes	0.263	0.407	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.96**
		$U_{31} - U_{32}$	1084.46	-----	32	414	-200	-1424	-379	-178	142	925	0.732	0.267	1.00	Yes	0.522	0.183	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.41**
		$U_{32} - U_{33}$	827.53	-308.24	446	241	239	-1590	-68	18	606	598	0.699	0.298	1.00	Yes	0.470	0.199	0.67	Yes	0.308	0.188	0.50	Yes	0.306	0.224	0.54	Yes	1.00	**6.31**
		$U_{33} - U_{34}$	663.67	-702.97	360	238	-15	-1513	29	267	562	1016	0.561	0.337	0.90	Yes	0.381	0.222	0.61	Yes	0.703	0.289	1.00	Yes	0.699	0.213	0.92	Yes	1.00	**6.42**
		$U_{34} - U_{35}$	298.06	-871.58	316	38	-14	-1674	214	173	669	573	0.219	0.276	0.50	Yes	0.148	0.187	0.34	Yes	0.757	0.240	1.00	Yes	0.752	0.204	0.96	Yes	1.00	**4.58**
		$U_{35} - U_{36}$	77.45	-1120.01	127	-159	-325	-1580	121	96	441	629	0.045	0.220	0.27	Yes	0.031	0.145	0.18	Yes	0.765	0.232	1.00	Yes	0.760	0.168	0.93	Yes	1.00	**4.11**
		$U_{36} - U_{37}$	-----	-1288.04	-84	13	-915	-1939	93	3	381	332	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.253	1.00	Yes	0.733	0.173	0.91	Yes	1.00	**4.02**
		$U_{37} - U_{38}$	4.67	-1366.48	150	-127	-257	-2063	43	18	290	234	0.002	0.204	0.21	Yes	0.002	0.139	0.15	Yes	0.784	0.207	1.00	Yes	0.778	0.184	0.97	Yes	1.00	**4.99**
		$U_{38} - U_{39}$	-----	-1453.38	107	-295	-520	-2434	132	-34	586	34	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.239	1.00	Yes	0.746	0.202	0.95	Yes	1.00	**4.55**
		$U_{39} - U_{40}$	-----	-1431.47	-250	-310	-1700	-1952	51	-8	480	180	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.252	1.00	Yes	0.735	0.162	0.90	Yes	1.00	**4.39**
		$U_{40} - U_{41}$	-----	-1306.74	-233	-311	-954	-2030	49	-85	502	-178	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.247	1.00	Yes	0.744	0.181	0.93	Yes	1.00	**5.31**
		$U_{41} - U_{42}$	-----	-1170.10	-834	228	-995	-1099	352	-48	390	-238	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.163	1.00	Yes	0.830	0.112	0.95	Yes	1.00	**5.71**
		$U_{42} - U_{43}$	-----	-782.65	-345	68	-1147	-788	-115	-240	389	-364	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.231	1.00	Yes	0.755	0.174	0.93	Yes	1.00	**6.57**
		$U_{43} - U_{44}$	-----	-591.14	-1642	1766	-82	-1032	150	-658	81	-666	-----	-----	-----	-----	-----	-----	-----	-----	0.702	0.252	0.96	Yes	0.698	0.300	1.00	Yes	1.00	**9.25**
	Structure 3	$U_0 - U_1$	-----	-615.52	-3	-162	202	-1505	-2	-51	282	76	-----	-----	-----	-----	-----	-----	-----	-----	0.699	0.263	0.97	Yes	0.693	0.303	1.00	Yes	1.00	**8.56**
		$U_1 - U_2$	-----	-714.10	-32	-142	111	-847	-63	-232	-43	-345	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.186	1.00	Yes	0.803	0.170	0.98	Yes	1.00	**3.66**
		$U_2 - U_3$	-----	-1012.58	-71	-168	72	-1052	-52	335	-4	480	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.189	1.00	Yes	0.792	0.171	0.97	Yes	1.00	**3.42**
		$U_3 - U_4$	-----	-1303.92	-169	-300	-468	-1490	381	604	460	692	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.236	1.00	Yes	0.748	0.164	0.92	Yes	1.00	**3.52**
		$U_4 - U_5$	-----	-1342.44	-399	-70	-466	-1069	686	229	476	281	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.214	1.00	Yes	0.770	0.118	0.89	Yes	1.00	**3.25**
		$U_5 - U_6$	-----	-1312.57	-188	-282	-497	-1682	141	-147	317	319	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.231	1.00	Yes	0.752	0.186	0.94	Yes	1.00	**3.04**
		$U_6 - U_7$	-----	-1398.66	-369	-86	-948	-1098	-102	-195	398	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.188	1.00	Yes	0.802	0.121	0.93	Yes	1.00	**3.95**
		$U_7 - U_8$	-----	-1190.41	-149	48	-320	-940	-74	-193	236	-197	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.188	1.00	Yes	0.795	0.130	0.93	Yes	1.00	**4.59**
		$U_8 - U_9$	0.70	-926.29	-56	250	-496	-537	-61	-164	312	-378	0.001	0.134	0.14	Yes	0.000	0.090	0.10	Yes	0.877	0.119	1.00	Yes	0.869	0.089	0.96	Yes	1.00	**4.50**
		$U_9 - U_{10}$	293.09	-660.52	-16	299	-602	-260	-128	-111	284	-272	0.318	0.180	0.50	Yes	0.212	0.116	0.33	Yes	0.850	0.141	1.00	Yes	0.843	0.135	0.98	Yes	1.00	**5.29**
		$U_{10} - U_{11}$	-----	-554.93	-1110	734	35	-1045	684	-560	485	-1166	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.280	1.00	Yes	0.708	0.249	0.96	Yes	1.00	**18.61**
		$U_{11} - U_{12}$	330.81	-----	-2696	3617	-124	524	531	-980	-465	-425	0.271	0.727	1.00	Yes	0.185	0.495	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**16.78**
		$U_{12} - U_{13}$	962.32	-----	1037	127	1807	-1460	-535	-492	-260	177	0.667	0.328	1.00	Yes	0.465	0.224	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.19**
		$U_{13} - U_{14}$	825.00	-40.78	216	418	142	-632	-325	-204	12	487	0.789	0.201	1.00	Yes	0.551	0.138	0.69	Yes	0.046	0.203	0.25	Yes	0.046	0.134	0.19	Yes	1.00	**5.40**
		$U_{14} - U_{15}$	625.87	-405.81	413	285	320	-960	-122	-40	322	145	0.717	0.283	1.00	Yes	0.484	0.184	0.67	Yes	0.552	0.304	0.86	Yes	0.547	0.228	0.78	Yes	1.00	**5.09**
		$U_{15} - U_{16}$	381.94	-562.53	302	210	-129	-964	-57	137	117	440	0.438	0.304	0.75	Yes	0.300	0.208	0.51	Yes	0.765	0.233	1.00	Yes	0.759	0.229	0.99	Yes	1.00	**4.05**
		$U_{16} - U_{17}$	507.69	-515.69	465	170	344	-1088	54	68	374	72	0.582	0.322	0.91	Yes	0.399	0.220	0.62	Yes	0.702	0.293	1.00	Yes	0.695	0.259	0.96	Yes	1.00	**5.79**
		$U_{17} - U_{18}$	257.01	-550.64	364	-55	22	-1081	-72	71	266	76	0.295	0.302	0.60	Yes	0.199	0.197	0.40	Yes	0.749	0.234	0.99	Yes	0.743	0.257	1.00	Yes	1.00	**4.67**
		$U_{18} - U_{19}$	-----	-529.26	-87	9	-387	-911	76	-49	475	-191	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.271	1.00	Yes	0.714	0.217	0.94	Yes	1.00	**5.02**
		$U_{19} - U_{20}$	-----	-554.51	-957	1025	-101	-704	342	-449	368	-291	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.138	0.90	Yes	0.748	0.244	1.00	Yes	1.00	**6.43**

Moment (End) AB Operating

Operating Loads - 3F1

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	-----	-105.39	-323	148	1398	-2686	-25	-91	251	923	-----	-----	-----	-----	-----	-----	-----	-----	0.191	0.741	0.94	Yes	0.190	0.806	1.00	Yes	1.00	**24.54**
		L_1 - L_2	448.47	-----	150	-35	273	-905	-28	-30	-150	-169	0.686	0.308	1.00	Yes	0.419	0.207	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.01**
		L_2 - L_3	669.55	-19.95	-23	17	-491	-806	-31	21	-167	77	0.770	0.221	1.00	Yes	0.446	0.133	0.58	Yes	0.027	0.225	0.26	Yes	0.027	0.195	0.23	Yes	1.00	**3.73**
		L_3 - L_4	634.17	-149.17	87	262	-38	-948	63	70	-222	-84	0.730	0.265	1.00	Yes	0.433	0.171	0.61	Yes	0.204	0.195	0.40	Yes	0.202	0.229	0.44	Yes	1.00	**4.12**
		L_4 - L_5	513.96	-----	-745	699	-798	-143	-340	-99	-276	642	0.666	0.326	1.00	Yes	0.399	0.209	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.06**
		L_5 - L_6	0.14	-736.81	168	604	-241	-113	76	130	127	-10	0.000	0.151	0.16	Yes	0.000	0.092	0.10	Yes	0.859	0.133	1.00	Yes	0.850	0.134	0.99	Yes	1.00	**4.49**
		L_6 - L_7	-----	-908.02	-1334	1204	-1220	-1086	-539	47	193	1629	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.261	1.00	Yes	0.731	0.210	0.95	Yes	1.00	**12.58**
		L_7 - L_8	-----	-1177.84	-159	1812	12	576	-8	-184	-148	-101	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.244	1.00	Yes	0.746	0.240	0.99	Yes	1.00	**6.44**
		L_8 - L_9	-----	-1252.78	1147	61	1329	-604	-178	-77	26	374	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.187	1.00	Yes	0.793	0.176	0.97	Yes	1.00	**7.76**
		L_9 - L_{10}	-----	-1060.20	145	134	246	-927	37	136	369	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.057	0.93	Yes	0.853	0.146	1.00	Yes	1.00	**7.28**
		L_{10} - L_{11}	14.59	-539.47	515	-12	297	-662	136	43	-23	-40	0.019	0.199	0.22	Yes	0.011	0.120	0.14	Yes	0.829	0.109	0.94	Yes	0.822	0.175	1.00	Yes	1.00	**4.97**
		L_{11} - L_{12}	568.99	-226.22	489	-168	360	-892	92	-30	-6	-104	0.737	0.254	1.00	Yes	0.442	0.168	0.61	Yes	0.348	0.097	0.45	Yes	0.345	0.236	0.59	Yes	1.00	**4.90**
		L_{12} - L_{13}	1036.35	-----	152	-80	-383	-796	29	35	212	340	0.818	0.181	1.00	Yes	0.523	0.109	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.81**
		L_{13} - L_{14}	1231.09	-----	357	-443	504	-1879	14	-2	16	-98	0.724	0.267	1.00	Yes	0.469	0.163	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.43**
		L_{14} - L_{15}	1632.50	-----	-1415	30	-1198	-1161	-366	-168	-191	311	0.798	0.196	1.00	Yes	0.518	0.119	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.16**
		L_{15} - L_{16}	1559.44	-----	-229	-368	-909	-1711	-113	-67	-40	-352	0.762	0.231	1.00	Yes	0.489	0.135	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.29**
		L_{16} - L_{17}	1183.81	-----	-965	368	-1384	-458	-488	-49	-340	472	0.749	0.247	1.00	Yes	0.486	0.152	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.30**
		L_{17} - L_{18}	921.08	-----	-670	458	-715	-495	-191	-159	-79	-437	0.802	0.194	1.00	Yes	0.513	0.118	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.35**
		L_{18} - L_{19}	370.14	-----	-1011	821	-722	112	-573	-90	-354	601	0.566	0.428	1.00	Yes	0.383	0.272	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.02**
		L_{19} - L_{20}	150.14	-365.78	-1117	583	-75	-52	788	177	-23	-5	0.230	0.499	0.73	Yes	0.140	0.329	0.47	Yes	0.664	0.330	1.00	Yes	0.659	0.335	1.00	Yes	1.00	**9.54**
	Structure 2	L_0 - L_1	38.73	-117.16	-120	16	1106	-3514	-18	-63	-401	-1391	0.047	0.944	1.00	Yes	0.028	0.600	0.63	Yes	0.168	0.657	0.83	Yes	0.167	0.715	0.89	Yes	1.00	**24.51**
		L_1 - L_2	531.45	-----	165	-222	664	-1512	-35	41	-186	-236	0.645	0.346	1.00	Yes	0.384	0.223	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.81**
		L_2 - L_3	987.66	-----	-47	-164	168	-1358	78	79	-83	186	0.778	0.216	1.00	Yes	0.510	0.128	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.82**
		L_3 - L_4	1324.00	-----	41	-427	-74	-1818	33	56	98	10	0.778	0.221	1.00	Yes	0.524	0.136	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.71**
		L_4 - L_5	1715.41	-----	-390	-260	-1343	-1847	94	198	78	274	0.800	0.193	1.00	Yes	0.529	0.114	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.79**
		L_5 - L_6	1788.35	-----	-149	-405	-1517	-2315	109	-16	307	34	0.767	0.224	1.00	Yes	0.515	0.137	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.14**
		L_6 - L_7	1792.62	-----	-435	-94	-1875	-2286	-165	45	-73	532	0.759	0.234	1.00	Yes	0.504	0.138	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.39**
		L_7 - L_8	1442.54	-0.29	-206	304	-1368	-1366	-131	9	44	-151	0.827	0.163	1.00	Yes	0.543	0.096	0.64	Yes	0.000	0.173	0.18	Yes	0.000	0.151	0.16	Yes	1.00	**5.01**
		L_8 - L_9	1089.55	-----	-892	556	-1239	-396	-272	23	-116	720	0.762	0.235	1.00	Yes	0.513	0.149	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.09**
		L_9 - L_{10}	899.53	-674.68	-83	771	-961	-742	23	101	55	-298	0.803	0.190	1.00	Yes	0.467	0.117	0.59	Yes	0.713	0.117	0.83	Yes	0.708	0.154	0.87	Yes	1.00	**7.35**
		L_{10} - L_{11}	593.23	-----	-1562	1063	-1315	-405	-783	-27	-302	954	0.592	0.402	1.00	Yes	0.347	0.249	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.69**
		L_{11} - L_{12}	198.11	-952.38	-1084	1475	-1551	-794	-7	268	558	-306	0.138	0.264	0.41	Yes	0.092	0.159	0.26	Yes	0.787	0.167	0.96	Yes	0.781	0.211	1.00	Yes	1.00	**12.82**
		L_{12} - L_{13}	-----	-1267.99	-577	-1	-1016	-1678	83	-82	58	444	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.225	1.00	Yes	0.758	0.167	0.93	Yes	1.00	**7.88**
		L_{13} - L_{14}	-----	-1285.53	-1425	3998	-348	1181	-137	-286	-180	-285	-----	-----	-----	-----	-----	-----	-----	-----	0.653	0.255	0.91	Yes	0.647	0.349	1.00	Yes	1.00	**9.13**
		L_{14} - L_{15}	-----	-1409.64	1388	-260	3277	-2166	-214	-318	-221	142	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.192	0.91	Yes	0.709	0.286	1.00	Yes	1.00	**8.67**
		L_{15} - L_{16}	-----	-1452.28	-880	349	-858	-1261	-13	377	-109	-85	-----	-----	-----	-----	-----	-----	-----	-----	0.876	0.107	0.99	Yes	0.869	0.125	1.00	Yes	1.00	**8.37**
		L_{16} - L_{17}	-----	-1139.36	1194	116	1339	-1045	396	184	-193	-164	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.137	0.98	Yes	0.830	0.165	1.00	Yes	1.00	**6.88**
		L_{17} - L_{18}	-----	-805.99	467	221	679	-916	97	-54	-199	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.101	0.96	Yes	0.846	0.147	1.00	Yes	1.00	**4.92**
		L_{18} - L_{19}	94.63	-629.96	657	111	248	-753	-1	34	159	251	0.107	0.184	0.30	Yes	0.062	0.109	0.18	Yes	0.845	0.150	1.00	Yes	0.840	0.145	0.99	Yes	1.00	**4.94**
		L_{19} - L_{20}	575.80	-560.46	545	217	-13	-1273	57	-42	421	-62	0.652	0.310	0.97	Yes	0.386	0.196	0.59	Yes	0.752	0.221	0.98	Yes	0.747	0.246	1.00	Yes	1.00	**6.25**
		L_{20} - L_{21}	875.81	-480.18	575	57	-68	-1775	-98	-106	-66	308	0.698	0.292	1.00	Yes	0.458	0.174	0.64	Yes	0.454	0.199	0.66	Yes	0.450	0.259	0.71	Yes	1.00	**7.75**
		L_{21} - L_{22}	821.75	-----	49	-62	-402	-2209	-37	41	152	-56	0.655	0.339	1.00	Yes	0.438	0.212	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.33**
		L_{22} - L_{23}	897.69	-97.04	-158	199	-1226	-1500	-21	3	-79	541	0.716	0.277	1.00	Yes	0.479	0.175	0.66	Yes	0.092	0.260	0.36	Yes	0.091	0.219	0.31	Yes	1.00	**5.40**
		L_{23} - L_{24}	931.39	-274.85	-6	344	-1283	-1520	9	74	270	-77	0.743	0.251	1.00	Yes	0.487	0.150	0.64	Yes	0.260	0.285	0.55	Yes	0.258	0.222	0.48	Yes	1.00	**6.67**
		L_{24} - L_{25}	632.27	-----	-625	413	-928	-863	-276	161	-272	666	0.716	0.281	1.00	Yes	0.424	0.176	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.53**
		L_{25} - L_{26}	616.22	-546.41	-592	948	-1091	-1283	-53	-153	293	-338	0.698	0.299	1.00	Yes	0.403	0.178	0.59	Yes	0.733	0.163	0.90	Yes	0.728	0.248	0.98	Yes	1.00	**10.69**
		L_{26} - L_{27}	192.50	-705.06	-1400	1280	-1591	-759	-691	-77	-299	996	0.172	0.374	0.55	Yes	0.100	0.229	0.33	Yes	0.745	0.207	0.96	Yes	0.740	0.254	1.00	Yes	1.00	**11.33**
		L_{27} - L_{28}	-----	-1156.91	-393	1271	-601	-306	-61	-37	101	-290	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.133	0.99	Yes	0.843	0.157	1.00	Yes	1.00	**7.25**
		L_{28} - L_{29}	-----	-1355.24	-7	-53	-776	-1482	-39	5	55	402	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.173	1.00	Yes	0.811	0.147	0.96	Yes	1.00	**5.92**
		L_{29} - L_{30}	-----	-1352.99	-1212	3566	-380	757	57	131	-56	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.687	0.209	0.90	Yes	0.681	0.311	1.00	Yes	1.00	**8.67**
		L_{30} - L_{31}	-----	-1390.21	1550	-277	3352	-2694	-458	-369	626	1046	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.239	0.95	Yes	0.700	0.293	1.00	Yes	1.00	**12.22**
		L_{31} - L_{32}	-----	-1067.57	-472	504	-1578	-2527	-514	34	507	363	-----	-----	-----	-----	-----	-----	-----	-----	0.644	0.356	1.00	Yes	0.639	0.251	0.89	Yes	1.00	**15.67**
		L_{32} - L_{33}	-----	-980.27	939	131	901	-1423	-121	-63	79	134	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.138	0.95	Yes	0.804	0.194	1.00	Yes	1.00	**9.13**
		L_{33} - L_{34}	211.63	-651.88	396	161	381	-1314	11	-92	119	-101	0.211	0.246	0.46	Yes	0.124	0.155	0.28	Yes	0.771	0.111	0.89	Yes	0.766	0.230	1.00	Yes	1.00	**7.15**
		L_{34} - L_{35}	711.64	-673.32	687	64	551	-1788	-46	65	126	489	0.635	0.345	0.98	Yes	0.370	0.214	0.59	Yes	0.712	0.217	0.93	Yes	0.707	0.286	1.00	Yes	1.00	**9.40**
		L_{35} - L_{36}	1088.20	-299.22	404	10	463	-1600	101	-52	152	-153	0.761	0.230	1.00	Yes	0.513	0.143	0.66	Yes	0.248	0.140	0.39	Yes	0.246	0.216	0.47	Yes	1.00	**7.17**
		L_{36} - L_{37}	1283.85	-24.69	232	-6	-417	-2019	-103	15	-32	418	0.736	0.257	1.00	Yes	0.484	0.152	0.64	Yes	0.017	0.228	0.25	Yes	0.017	0.223	0.24	Yes	1.00	**5.52**
		L_{37} - L_{38}	1736.16	-----	-62	-370	-907	-2835	-44	-11	168	-93	0.735	0.260	1.00	Yes	0.488	0.151	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.30**
		L_{38} - L_{39}	1801.83	-----	-268	-163	-2157	-2141	-57	5	-43	540	0.773	0.225	1.00	Yes	0.519	0.138	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.70**
		L_{39} - L_{40}	1611.07	-----	-208	-309	-1126	-2239	-52	-37	-80	-442	0.751	0.241	1.00	Yes	0.497	0.144	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.85**
		L_{40} - L_{41}	1289.87	-----	-1186	209	-1584	-984	-473	-28	-254	601	0.758	0.233	1.00	Yes	0.510	0.146	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.77**
		L_{41} - L_{42}	1035.56	-----	-847	319	-1095	-781	-78	-8	208	-112	0.816	0.180	1.00	Yes	0.535	0.108	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.78**
		L_{42} - L_{43}	477.15	-----	-1328	638	-967	-534	-370	84	-338	855	0.580	0.411	1.00	Yes	0.345	0.259	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.33**
		L_{43} - L_{44}	270.01	-315.43	-2679	1043	-22	-38	462	135	-193	-56	0.328	0.621	0.95	Yes	0.195	0.399	0.60	Yes	0.454	0.369	0.83	Yes	0.451	0.545	1.00	Yes	1.00	**20.45**
	Structure 3	L_0 - L_1	171.16	-295.39	-10	-83	859	-1554	-8	-38	-150	-682	0.262	0.608	0.87	Yes	0.160	0.404	0.57	Yes	0.536	0.350	0.89	Yes	0.532	0.466	1.00	Yes	1.00	**13.59**
		L_1 - L_2	353.92	-----	137	-173	846	-1379	-54	18	-208	-133	0.542	0.457	1.00	Yes	0.366	0.284	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.39**
		L_2 - L_3	881.62	-----	-31	-165	-119	-958	38	23	183	362	0.768	0.231	1.00	Yes	0.491	0.139	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.67**
		L_3 - L_4	1191.62	-----	62	-369	-289	-1389	49	54	459	215	0.753	0.245	1.00	Yes	0.489	0.151	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.34**
		L_4 - L_5	1617.87	-----	-380	-179	-1107	-1483	116	224	109	336	0.790	0.202	1.00	Yes	0.507	0.119	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.31**
		L_5 - L_6	1455.56	-----	-83	-340	-10	-2245	144	78	-143	-107	0.711	0.281	1.00	Yes	0.462	0.169	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.16**
		L_6 - L_7	1311.62	-----	-1237	386	-1301	-593	-266	3	-92	553	0.771	0.225	1.00	Yes	0.500	0.139	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.18**
		L_7 - L_8	1079.76	-----	-81	123	-562	-734	-28	40	48	-97	0.852	0.142	1.00	Yes	0.545	0.084	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.79**
		L_8 - L_9	565.67	-----	-645	373	-561	-125	-217	119	-149	536	0.733	0.265	1.00	Yes	0.440	0.170	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.71**
		L_9 - L_{10}	369.90	-536.91	6	495	-667	-299	73	140	350	140	0.479	0.238	0.72	Yes	0.279	0.143	0.43	Yes	0.825	0.157	0.99	Yes	0.818	0.177	1.00	Yes	1.00	**6.27**
		L_{10} - L_{11}	-----	-1030.06	-1072	1077	-899	-748	-392	-125	151	1431	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.155	1.00	Yes	0.829	0.169	1.00	Yes	1.00	**12.37**
		L_{11} - L_{12}	-----	-1208.26	-362	1621	-29	456	-157	-423	-261	-228	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.225	1.00	Yes	0.765	0.215	0.98	Yes	1.00	**7.78**
		L_{12} - L_{13}	-----	-1211.47	1196	86	1679	-768	-149	-298	-176	238	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.215	1.00	Yes	0.767	0.222	0.99	Yes	1.00	**8.73**
		L_{13} - L_{14}	-----	-1103.90	-13	284	167	-706	-249	124	3	-60	-----	-----	-----	-----	-----	-----	-----	-----	0.899	0.048	0.95	Yes	0.889	0.111	1.00	Yes	1.00	**5.84**
		L_{14} - L_{15}	-----	-747.52	571	167	420	-453	146	-6	-34	-101	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.121	1.00	Yes	0.862	0.126	0.99	Yes	1.00	**4.23**
		L_{15} - L_{16}	134.87	-516.35	411	182	428	-772	11	-55	-137	-70	0.175	0.229	0.41	Yes	0.105	0.150	0.26	Yes	0.794	0.102	0.90	Yes	0.787	0.204	1.00	Yes	1.00	**3.51**
		L_{16} - L_{17}	614.55	-221.79	312	28	-63	-934	96	-35	65	362	0.707	0.284	1.00	Yes	0.420	0.182	0.61	Yes	0.303	0.217	0.53	Yes	0.300	0.225	0.53	Yes	1.00	**3.69**
		L_{17} - L_{18}	645.66	-111.56	86	-9	-455	-964	3	11	113	-66	0.743	0.251	1.00	Yes	0.430	0.151	0.59	Yes	0.152	0.247	0.40	Yes	0.151	0.233	0.39	Yes	1.00	**3.84**
		L_{18} - L_{19}	440.10	-----	-591	230	-574	-492	-151	100	-161	691	0.674	0.326	1.00	Yes	0.411	0.212	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.24**
		L_{19} - L_{20}	55.48	-103.44	-1661	956	70	-189	1912	520	-6	-2	0.085	0.909	1.00	Yes	0.050	0.545	0.60	Yes	0.188	0.648	0.84	Yes	0.186	0.499	0.69	Yes	1.00	**15.72**

Moment (End) AB Operating

Operating Loads - 3F1

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

DL Factor: 1.300 Vehicle 1.300 Pedestrian
LL Factor: 1.300 1.300

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Verticals	Structure 1	U_0 - L_0	-----	-316.79	-199	250	-57	91	-619	-199	-27	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.708	0.290	1.00	Yes	0.670	0.320	1.00	Yes	1.00	**2.02**
		U_1 - L_1	13.85	-327.24	-232	239	22	-10	19	52	-3	-2	0.025	0.320	0.35	Yes	0.014	0.176	0.19	Yes	0.715	0.095	0.82	Yes	0.692	0.305	1.00	Yes	1.00	**3.90**
		U_2 - L_2	104.39	-276.93	-281	321	89	-99	-442	-66	71	31	0.188	0.539	0.73	Yes	0.103	0.296	0.40	Yes	0.605	0.224	0.83	Yes	0.586	0.411	1.00	Yes	1.00	**6.50**
		U_3 - L_3	188.51	-260.89	-317	345	340	-302	-300	-53	282	239	0.339	0.527	0.87	Yes	0.186	0.290	0.48	Yes	0.572	0.185	0.76	Yes	0.552	0.440	1.00	Yes	1.00	**9.56**
		U_4 - L_4	-----	-226.08	-26	21	405	-388	-152	35	-219	-28	-----	-----	-----	-----	-----	-----	-----	-----	0.497	0.191	0.69	Yes	0.478	0.518	1.00	Yes	1.00	**8.45**
		U_5 - L_5	-----	-425.12	62	-86	224	-257	-25	16	182	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.108	0.88	Yes	0.733	0.261	1.00	Yes	1.00	**3.18**
		U_6 - L_6	-----	-519.94	87	-81	262	-284	-208	-57	362	63	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.144	0.94	Yes	0.746	0.248	1.00	Yes	1.00	**3.06**
		U_7 - L_7	-----	-437.25	134	-150	302	-322	-154	15	235	33	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.144	0.88	Yes	0.675	0.317	1.00	Yes	1.00	**2.26**
		U_8 - L_8	-----	-1182.79	-363	429	462	-560	26	65	990	294	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.145	1.00	Yes	0.820	0.104	0.93	Yes	1.00	**5.71**
		U_9 - L_9	-----	-649.90	-423	463	-170	200	-594	-338	-456	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.186	0.97	Yes	0.734	0.257	1.00	Yes	1.00	**3.96**
		U_{10} - L_{10}	-----	-748.38	-364	377	-129	101	-864	-593	-465	-267	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.216	1.00	Yes	0.738	0.195	0.94	Yes	1.00	**4.91**
		U_{11} - L_{11}	-----	-653.32	-398	503	-119	186	-748	-527	-563	-315	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.210	1.00	Yes	0.760	0.233	1.00	Yes	1.00	**4.79**
		U_{12} - L_{12}	-----	-513.58	-344	341	-87	94	-310	-229	-350	-202	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.163	0.91	Yes	0.705	0.294	1.00	Yes	1.00	**4.13**
		U_{13} - L_{13}	-----	-362.42	-237	262	-38	58	-3	-26	-175	12	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.128	0.87	Yes	0.694	0.299	1.00	Yes	1.00	**3.19**
		U_{14} - L_{14}	-----	-189.95	-434	467	206	-208	-75	209	185	84	-----	-----	-----	-----	-----	-----	-----	-----	0.424	0.206	0.64	Yes	0.402	0.597	1.00	Yes	1.00	**11.73**
		U_{15} - L_{15}	144.06	-310.10	-115	98	245	-264	33	128	407	-69	0.259	0.456	0.72	Yes	0.143	0.251	0.40	Yes	0.695	0.173	0.87	Yes	0.656	0.338	1.00	Yes	1.00	**5.00**
		U_{16} - L_{16}	0.78	-320.56	21	-30	238	-246	49	-80	287	-144	0.001	0.397	0.40	Yes	0.001	0.218	0.22	Yes	0.722	0.139	0.87	Yes	0.678	0.314	1.00	Yes	1.00	**3.59**
		U_{17} - L_{17}	-----	-435.82	60	-74	223	-242	-120	-113	105	-173	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.125	0.94	Yes	0.752	0.246	1.00	Yes	1.00	**2.99**
		U_{18} - L_{18}	-----	-537.01	145	-151	423	-438	-132	-122	327	-150	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.106	0.90	Yes	0.747	0.248	1.00	Yes	1.00	**3.04**
		U_{19} - L_{19}	-----	-644.25	171	-170	535	-522	-116	-45	257	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.114	0.92	Yes	0.750	0.248	1.00	Yes	1.00	**3.56**
		U_{20} - L_{20}	-----	-577.93	160	-259	353	-511	31	4	639	84	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.235	1.00	Yes	0.673	0.237	0.91	Yes	1.00	**2.72**
	Structure 2	U_0 - L_0	-----	-656.73	-450	553	-165	215	-737	-125	-40	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.208	1.00	Yes	0.704	0.235	0.94	Yes	1.00	**3.62**
		U_1 - L_1	-----	-715.55	-531	537	-117	126	-72	63	-106	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.074	0.90	Yes	0.767	0.228	1.00	Yes	1.00	**5.04**
		U_2 - L_2	-----	-587.42	-473	480	-108	118	-87	-13	-108	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.081	0.87	Yes	0.749	0.246	1.00	Yes	1.00	**4.26**
		U_3 - L_3	-----	-486.88	-245	254	-54	62	-182	-76	79	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.119	0.95	Yes	0.764	0.231	1.00	Yes	1.00	**3.97**
		U_4 - L_4	-----	-336.10	-222	221	-6	23	-118	-21	-70	49	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.118	0.89	Yes	0.711	0.284	1.00	Yes	1.00	**3.87**
		U_5 - L_5	124.38	-326.10	-213	236	93	-80	91	-14	-121	103	0.224	0.337	0.57	Yes	0.123	0.185	0.31	Yes	0.737	0.144	0.89	Yes	0.690	0.302	1.00	Yes	1.00	**5.01**
		U_6 - L_6	362.56	-225.34	-239	246	199	-210	-48	-3	-69	104	0.652	0.344	1.00	Yes	0.359	0.189	0.55	Yes	0.507	0.114	0.63	Yes	0.477	0.314	0.80	Yes	1.00	**7.33**
		U_7 - L_7	-----	-145.83	-197	202	471	-535	-76	370	54	94	-----	-----	-----	-----	-----	-----	-----	-----	0.329	0.288	0.62	Yes	0.309	0.684	1.00	Yes	1.00	**15.54**
		U_8 - L_8	-----	-465.98	63	-80	357	-372	-22	-65	199	-124	-----	-----	-----	-----	-----	-----	-----	-----	0.676	0.112	0.79	Yes	0.671	0.325	1.00	Yes	1.00	**4.08**
		U_9 - L_9	-----	-688.38	149	-169	582	-596	-13	-230	195	-155	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.093	0.86	Yes	0.738	0.253	1.00	Yes	1.00	**5.15**
		U_{10} - L_{10}	-----	-797.26	182	-185	541	-570	-147	-100	560	-70	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.179	0.97	Yes	0.745	0.252	1.00	Yes	1.00	**5.11**
		U_{11} - L_{11}	-----	-811.02	186	-186	513	-529	-184	-69	247	-136	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.111	0.93	Yes	0.758	0.234	1.00	Yes	1.00	**4.58**
		U_{12} - L_{12}	-----	-884.51	157	-135	530	-539	-147	8	222	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.107	0.96	Yes	0.767	0.231	1.00	Yes	1.00	**4.92**
		U_{13} - L_{13}	-----	-741.47	211	-208	569	-551	-156	20	457	48	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.164	1.00	Yes	0.715	0.272	0.99	Yes	1.00	**3.91**
		U_{14} - L_{14}	-----	-1218.60	-540	500	791	-756	558	335	591	285	-----	-----	-----	-----	-----	-----	-----	-----	0.891	0.106	1.00	Yes	0.808	0.140	0.95	Yes	1.00	**7.67**
		U_{15} - L_{15}	-----	-735.48	-598	583	-120	127	109	-80	-292	11	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.154	0.98	Yes	0.709	0.286	1.00	Yes	1.00	**6.14**
		U_{16} - L_{16}	-----	-668.34	-527	500	-91	65	-1048	-430	-780	-254	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.224	1.00	Yes	0.716	0.224	0.94	Yes	1.00	**5.20**
		U_{17} - L_{17}	-----	-640.31	-542	540	-126	124	-428	-397	-274	-185	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.149	0.94	Yes	0.745	0.252	1.00	Yes	1.00	**4.80**
		U_{18} - L_{18}	-----	-573.64	-508	517	-94	94	-425	-333	-114	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.155	0.92	Yes	0.731	0.264	1.00	Yes	1.00	**4.73**
		U_{19} - L_{19}	-----	-470.97	-308	302	-56	60	-181	-160	-66	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.111	0.82	Yes	0.703	0.297	1.00	Yes	1.00	**4.02**
		U_{20} - L_{20}	-----	-381.36	-228	235	-10	16	27	-62	-177	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.118	0.90	Yes	0.731	0.268	1.00	Yes	1.00	**3.95**
		U_{21} - L_{21}	63.62	-312.90	-246	260	32	-27	-105	-50	-90	56	0.114	0.363	0.48	Yes	0.063	0.199	0.27	Yes	0.707	0.123	0.84	Yes	0.662	0.332	1.00	Yes	1.00	**4.61**
		U_{22} - L_{22}	-----	-140.92	-531	547	436	-474	139	456	153	170	-----	-----	-----	-----	-----	-----	-----	-----	0.317	0.262	0.58	Yes	0.298	0.700	1.00	Yes	1.00	**19.22**
		U_{23} - L_{23}	83.70	-315.76	-50	45	243	-256	59	82	219	-56	0.151	0.391	0.55	Yes	0.083	0.215	0.30	Yes	0.713	0.135	0.85	Yes	0.668	0.327	1.00	Yes	1.00	**4.51**
		U_{24} - L_{24}	-----	-371.95	3	-19	234	-247	72	44	233	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.107	0.87	Yes	0.713	0.282	1.00	Yes	1.00	**3.99**
		U_{25} - L_{25}	-----	-472.59	43	-42	304	-300	-84	-30	407	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.111	0.83	Yes	0.706	0.293	1.00	Yes	1.00	**3.74**
		U_{26} - L_{26}	-----	-566.33	72	-75	503	-529	-119	-23	412	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.138	0.90	Yes	0.722	0.271	1.00	Yes	1.00	**4.28**
		U_{27} - L_{27}	-----	-629.98	87	-87	562	-567	-134	2	311	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.107	0.89	Yes	0.733	0.263	1.00	Yes	1.00	**4.70**
		U_{28} - L_{28}	-----	-709.95	78	-75	547	-549	-151	16	643	33	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.135	0.96	Yes	0.761	0.233	1.00	Yes	1.00	**4.75**
		U_{29} - L_{29}	-----	-715.61	120	-125	635	-609	-114	28	512	21	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.173	0.98	Yes	0.690	0.304	1.00	Yes	1.00	**5.35**
		U_{30} - L_{30}	-----	-1219.63	-802	726	886	-872	56	360	660	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.892	0.104	1.00	Yes	0.809	0.157	0.97	Yes	1.00	**9.71**
		U_{31} - L_{31}	-----	-723.02	-547	516	-108	108	-461	-116	-318	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.192	1.00	Yes	0.697	0.262	0.96	Yes	1.00	**5.86**
		U_{32} - L_{32}	-----	-831.97	-474	467	-80	57	-703	-387	-671	-273	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.196	1.00	Yes	0.721	0.203	0.93	Yes	1.00	**5.92**
		U_{33} - L_{33}	-----	-797.53	-494	488	-118	106	-645	-493	-454	-344	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.194	1.00	Yes	0.746	0.218	0.97	Yes	1.00	**5.86**
		U_{34} - L_{34}	-----	-804.74	-547	558	-120	114	-312	-334	-304	-292	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.117	0.92	Yes	0.752	0.246	1.00	Yes	1.00	**6.30**
		U_{35} - L_{35}	-----	-701.56	-552	565	-96	120	80	-91	-209	11	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.082	0.87	Yes	0.752	0.240	1.00	Yes	1.00	**5.51**
		U_{36} - L_{36}	-----	-470.18	-347	359	-42	57	-62	-18	-75	61	-----	-----	-----	-----	-----	-----	-----	-----	0.682	0.097	0.78	Yes	0.677	0.314	1.00	Yes	1.00	**4.54**
		U_{37} - L_{37}	-----	-150.98	-480	528	112	-118	-145	283	-148	125	-----	-----	-----	-----	-----	-----	-----	-----	0.341	0.286	0.63	Yes	0.319	0.674	1.00	Yes	1.00	**13.28**
		U_{38} - L_{38}	339.39	-183.69	-219	232	168	-169	74	62	293	-62	0.610	0.381	1.00	Yes	0.336	0.210	0.55	Yes	0.413	0.122	0.54	Yes	0.389	0.296	0.69	Yes	1.00	**6.09**
		U_{39} - L_{39}	168.49	-327.01	-149	131	219	-241	19	116	219	-100	0.303	0.371	0.68	Yes	0.167	0.204	0.38	Yes	0.739	0.119	0.86	Yes	0.692	0.308	1.00	Yes	1.00	**5.79**
		U_{40} - L_{40}	-----	-344.26	-5	-1	208	-210	15	-38	337	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.114	0.90	Yes	0.728	0.268	1.00	Yes	1.00	**3.94**
		U_{41} - L_{41}	-----	-487.76	29	-33	244	-255	7	-33	217	-124	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.098	0.93	Yes	0.765	0.232	1.00	Yes	1.00	**3.90**
		U_{42} - L_{42}	-----	-582.45	62	-71	480	-489	11	-36	213	-162	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.085	0.87	Yes	0.742	0.250	1.00	Yes	1.00	**4.35**
		U_{43} - L_{43}	-----	-708.20	83	-96	551	-555	-48	-49	582	22	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.123	0.94	Yes	0.759	0.235	1.00	Yes	1.00	**4.48**
		U_{44} - L_{44}	-----	-620.33	119	-137	390	-507	-125	-21	1109	188	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.251	1.00	Yes	0.665	0.215	0.88	Yes	1.00	**3.71**
	Structure 3	U_0 - L_0	-----	-613.87	-424	515	-142	190	-429	-56	-57	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.184	1.00	Yes	0.714	0.239	0.96	Yes	1.00	**3.70**
		U_1 - L_1	-----	-655.16	-495	499	-111	123	-139	112	-121	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.081	0.90	Yes	0.763	0.232	1.00	Yes	1.00	**4.88**
		U_2 - L_2	-----	-538.56	-438	442	-109	116	-228	-11	-148	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.102	0.90	Yes	0.749	0.250	1.00	Yes	1.00	**4.04**
		U_3 - L_3	-----	-446.04	-207	225	-46	59	26	-62	44	-64	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.086	0.93	Yes	0.770	0.228	1.00	Yes	1.00	**3.33**
		U_4 - L_4	9.88	-317.94	-246	250	-10	19	-187	-14	-85	33	0.018	0.374	0.40	Yes	0.010	0.206	0.22	Yes	0.716	0.140	0.86	Yes	0.673	0.320	1.00	Yes	1.00	**4.13**
		U_5 - L_5	114.66	-304.08	-255	272	84	-76	-63	-13	-106	122	0.206	0.383	0.59	Yes	0.113	0.210	0.33	Yes	0.682	0.153	0.84	Yes	0.643	0.347	1.00	Yes	1.00	**5.09**
		U_6 - L_6	14.95	-23.36	-380	411	514	-562	-355	84	-851	-135	0.027	0.965	1.00	Yes	0.015	0.531	0.55	Yes	0.052	0.438	0.49	Yes	0.049	0.719	0.77	Yes	1.00	**17.07**
		U_7 - L_7	-----	-362.18	1	-17	241	-265	-51	-7	19	-149	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.123	0.86	Yes	0.694	0.303	1.00	Yes	1.00	**3.83**
		U_8 - L_8	-----	-513.69	71	-75	333	-338	-154	-235	378	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.159	0.91	Yes	0.705	0.289	1.00	Yes	1.00	**4.15**
		U_9 - L_9	-----	-652.86	114	-166	396	-504	-21	-152	156	-161	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.100	0.89	Yes	0.760	0.234	1.00	Yes	1.00	**4.54**
		U_{10} - L_{10}	-----	-775.49	128	-109	397	-435	-1	16	215	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.107	0.91	Yes	0.765	0.225	1.00	Yes	1.00	**5.01**
		U_{11} - L_{11}	-----	-650.00	168	-193	427	-474	-157	-31	473	111	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.156	0.94	Yes	0.734	0.263	1.00	Yes	1.00	**3.34**
		U_{12} - L_{12}	-----	-1175.70	-427	462	528	-684	800	297	756	333	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.142	1.00	Yes	0.815	0.127	0.95	Yes	1.00	**6.74**
		U_{13} - L_{13}	-----	-459.60	-269	286	-67	76	-19	-75	-344	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.165	0.94	Yes	0.709	0.281	1.00	Yes	1.00	**3.42**
		U_{14} - L_{14}	-----	-483.35	-256	259	-45	29	-892	-478	-646	-312	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.263	1.00	Yes	0.693	0.227	0.92	Yes	1.00	**4.14**
		U_{15} - L_{15}	-----	-433.07	-221	241	-33	41	-424	-326	-483	-235	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.199	0.99	Yes	0.747	0.245	1.00	Yes	1.00	**3.89**
		U_{16} - L_{16}	-----	-145.75	-538	527	76	-53	-687	-169	-791	-382	-----	-----	-----	-----	-----	-----	-----	-----	0.320	0.392	0.72	Yes	0.308	0.687	1.00	Yes	1.00	**11.72**
		U_{17} - L_{17}	289.90	-253.14	-339	345	207	-228	-120	107	56	-102	0.521	0.476	1.00	Yes	0.287	0.262	0.55	Yes	0.555	0.130	0.69	Yes	0.536	0.441	0.98	Yes	1.00	**7.55**
		U_{18} - L_{18}	109.34	-296.22	-102	114	243	-288	-105	11	196	-62	0.197	0.425	0.63	Yes	0.108	0.234	0.35	Yes	0.647	0.167	0.82	Yes	0.627	0.368	1.00	Yes	1.00	**5.65**
		U_{19} - L_{19}	37.88	-325.33	-48	36	241	-233	-83	-9	307	56	0.068	0.396	0.47	Yes	0.037	0.218	0.26	Yes	0.711	0.157	0.87	Yes	0.688	0.307	1.00	Yes	1.00	**3.51**
		U_{20} - L_{20}	-----	-327.51	19	-30	122	-211	-45	-15	493	158	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.263	1.00	Yes	0.693	0.270	0.97	Yes	1.00	**2.17**

Moment (End) AB Operating

Operating Loads - 3F1

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. Tension	Max. Comp.	Max. Pos. Mom. Start	Max. Pos. Mom. End	Max. Neg. Mom. Start	Max. Neg. Mom. End	Max. Pos. Mom. Start	Max. Pos. Mom. End	Max. Neg. Mom. Start	Max. Neg. Mom. End	Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
														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	$U_0 - L_1$		510.88	-----	-150	66	-18	0	-585	-114	-13	1	0.670	0.323	1.00	Yes	0.405	0.178	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.05**
		$U_1 - L_2$		396.41	-----	-73	24	-23	-33	-172	-203	646	132	0.713	0.280	1.00	Yes	0.392	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.86**
		$U_2 - L_3$		434.61	-246.72	-112	33	-76	-99	-258	-173	-188	-33	0.782	0.217	1.00	Yes	0.430	0.120	0.55	Yes	0.568	0.226	0.80	Yes	0.522	0.143	0.67	Yes	1.00	**8.59**
		$U_3 - L_4$		-----	-385.54	30	-13	-9	-76	27	26	181	-123	-----	-----	-----	-----	-----	-----	-----	-----	0.882	0.113	1.00	Yes	0.816	0.097	0.92	Yes	1.00	**4.12**
		$U_4 - L_4$		548.54	-----	-73	63	-49	-16	-92	-171	-496	-246	0.804	0.189	1.00	Yes	0.442	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.94**
		$U_4 - L_5$		686.89	-----	-190	235	-36	76	-252	-294	-235	-127	0.812	0.187	1.00	Yes	0.447	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.14**
		$U_5 - L_6$		674.32	-----	-287	247	-93	100	-151	-186	152	47	0.797	0.198	1.00	Yes	0.438	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.22**
		$U_6 - L_7$		661.13	-----	-103	308	-9	130	-96	-128	232	118	0.782	0.218	1.00	Yes	0.430	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.43**
		$U_8 - L_8$		973.89	-----	-91	373	22	137	383	284	309	109	0.779	0.215	1.00	Yes	0.482	0.121	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.18**
		$U_9 - L_{10}$		1014.86	-----	-290	268	-73	84	229	394	52	101	0.811	0.180	1.00	Yes	0.503	0.101	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.29**
		$U_{10} - L_{11}$		1003.32	-----	-228	213	-90	63	89	315	294	180	0.847	0.147	1.00	Yes	0.525	0.082	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.01**
		$U_{11} - L_{12}$		859.22	-----	-249	143	-145	-17	16	143	199	139	0.850	0.145	1.00	Yes	0.468	0.080	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.11**
		$U_{12} - L_{13}$		658.13	-----	-202	170	-86	22	-2	56	98	-104	0.802	0.197	1.00	Yes	0.505	0.110	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.20**
		$U_{13} - L_{14}$		462.22	-----	-86	49	-18	-32	-42	-98	-18	-181	0.831	0.162	1.00	Yes	0.457	0.089	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		$U_{15} - L_{14}$		220.91	-323.00	-54	4	58	-119	-235	-218	-288	-132	0.397	0.236	0.64	Yes	0.219	0.130	0.35	Yes	0.757	0.236	1.00	Yes	0.683	0.152	0.84	Yes	1.00	**5.44**
		$U_{16} - L_{15}$		396.60	-84.20	-124	86	-9	-33	-328	-310	-407	-142	0.713	0.277	1.00	Yes	0.392	0.152	0.55	Yes	0.200	0.194	0.40	Yes	0.178	0.159	0.34	Yes	1.00	**4.02**
		$U_{17} - L_{16}$		521.00	-----	-139	100	-40	8	-402	-350	-304	-217	0.764	0.234	1.00	Yes	0.420	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.14**
		$U_{18} - L_{17}$		612.40	-----	-315	251	-112	76	-514	-474	-114	-120	0.724	0.272	1.00	Yes	0.398	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.35**
		$U_{19} - L_{18}$		685.91	-----	-345	254	-133	88	-425	-437	-69	-109	0.743	0.248	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.18**
		$U_{20} - L_{19}$		684.41	-----	-271	260	-94	92	-695	-431	-103	-40	0.741	0.253	1.00	Yes	0.408	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.51**
	Structure 2	$U_0 - L_1$		721.60	-----	-410	358	-116	101	-600	-19	-60	-51	0.714	0.280	1.00	Yes	0.393	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.86**
		$U_1 - L_2$		791.93	-----	-384	325	-94	70	-213	-100	-99	-28	0.783	0.210	1.00	Yes	0.431	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.14**
		$U_2 - L_3$		652.45	-----	-331	267	-85	65	-184	87	-24	89	0.771	0.221	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
		$U_3 - L_4$		599.80	-----	-179	144	-55	13	-139	-86	56	-41	0.800	0.192	1.00	Yes	0.440	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.36**
		$U_4 - L_5$		432.74	-104.50	-134	105	-2	-35	-170	-4	17	-170	0.778	0.221	1.00	Yes	0.428	0.121	0.55	Yes	0.258	0.102	0.36	Yes	0.221	0.172	0.40	Yes	1.00	**4.67**
		$U_5 - L_6$		436.88	-310.63	-124	84	69	-117	-121	-74	-76	-190	0.786	0.213	1.00	Yes	0.432	0.117	0.55	Yes	0.734	0.176	0.91	Yes	0.657	0.158	0.82	Yes	1.00	**6.77**
		$U_6 - L_7$		40.39	-380.35	-32	-5	54	-101	-89	-160	-64	-300	0.066	0.193	0.26	Yes	0.036	0.106	0.15	Yes	0.814	0.178	1.00	Yes	0.729	0.115	0.85	Yes	1.00	**3.99**
		$U_8 - L_7$		584.89	-----	-176	144	-35	-27	-259	-406	-433	-201	0.746	0.245	1.00	Yes	0.469	0.139	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.01**
		$U_8 - L_9$		705.68	-----	-320	241	-114	35	-390	-379	-303	-224	0.764	0.228	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.11**
		$U_{10} - L_9$		794.05	-----	-303	228	-118	50	-432	-441	-354	-216	0.786	0.206	1.00	Yes	0.432	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.46**
		$U_{11} - L_{10}$		866.31	-----	-337	275	-148	103	-375	-434	-437	-241	0.789	0.203	1.00	Yes	0.434	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		$U_{12} - L_{11}$		872.27	-----	-363	351	-127	146	-308	-363	-135	-85	0.795	0.204	1.00	Yes	0.437	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.20**
		$U_{13} - L_{12}$		754.48	-----	-432	375	-154	154	-174	-196	332	128	0.746	0.250	1.00	Yes	0.411	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.53**
		$U_{14} - L_{13}$		755.79	-----	-277	424	-38	149	-183	-171	357	179	0.748	0.250	1.00	Yes	0.411	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.33**
		$U_{14} - L_{15}$		635.46	-----	-218	355	24	72	126	130	221	-43	0.751	0.241	1.00	Yes	0.413	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.73**
		$U_{15} - L_{16}$		626.50	-----	-368	331	-66	72	-178	238	-35	19	0.741	0.252	1.00	Yes	0.407	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.72**
		$U_{16} - L_{17}$		717.47	-----	-323	352	-68	95	-232	222	-151	61	0.777	0.218	1.00	Yes	0.427	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.93**
		$U_{17} - L_{18}$		654.88	-----	-291	277	-67	80	-67	291	-23	104	0.774	0.217	1.00	Yes	0.426	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.32**
		$U_{18} - L_{19}$		676.83	-----	-274	280	-69	57	132	183	87	1	0.800	0.192	1.00	Yes	0.440	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.94**
		$U_{19} - L_{20}$		617.81	-----	-196	182	-39	3	59	128	176	-8	0.788	0.211	1.00	Yes	0.433	0.118	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.82**
		$U_{20} - L_{21}$		451.43	-53.48	-124	122	-5	-18	59	41	65	-95	0.812	0.186	1.00	Yes	0.447	0.102	0.55	Yes	0.127	0.060	0.19	Yes	0.113	0.159	0.28	Yes	1.00	**4.72**
		$U_{21} - L_{22}$		431.98	-268.44	-105	75	9	-89	28	10	295	-159	0.777	0.220	1.00	Yes	0.427	0.121	0.55	Yes	0.634	0.160	0.80	Yes	0.568	0.135	0.71	Yes	1.00	**7.03**
		$U_{23} - L_{22}$		418.94	-307.38	-104	61	45	-98	-242	-238	-373	-44	0.753	0.241	1.00	Yes	0.414	0.133	0.55	Yes	0.732	0.232	0.97	Yes	0.650	0.133	0.79	Yes	1.00	**6.51**
		$U_{24} - L_{23}$		426.86	-39.13	-118	105	5	-21	-249	-228	-171	-63	0.768	0.223	1.00	Yes	0.422	0.122	0.55	Yes	0.094	0.122	0.22	Yes	0.083	0.151	0.24	Yes	1.00	**4.16**
		$U_{25} - L_{24}$		588.48	-----	-190	182	-19	2	-369	-318	-263	-127	0.750	0.245	1.00	Yes	0.413	0.139	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.70**
		$U_{26} - L_{25}$		653.23	-----	-277	257	-59	36	-288	-356	-356	-97	0.772	0.221	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.39**
		$U_{27} - L_{26}$		661.56	-----	-286	282	-46	59	-245	-273	175	67	0.782	0.212	1.00	Yes	0.430	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.40**
		$U_{28} - L_{27}$		709.24	-----	-345	351	-49	68	-231	-296	199	110	0.768	0.228	1.00	Yes	0.423	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.69**
		$U_{29} - L_{28}$		635.59	-----	-362	339	-74	74	-96	-164	206	100	0.751	0.243	1.00	Yes	0.413	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
		$U_{30} - L_{29}$		642.32	-----	-223	355	-15	78	-119	-144	188	105	0.759	0.235	1.00	Yes	0.418	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.13**
		$U_{30} - L_{31}$		765.13	-----	-295	424	11	75	124	289	277	-4	0.757	0.240	1.00	Yes	0.416	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.31**
		$U_{31} - L_{32}$		768.22	-----	-445	389	-72	76	-160	-178	20	50	0.760	0.233	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.60**
		$U_{32} - L_{33}$		874.95	-----	-356	337	-61	94	-310	303	-140	141	0.797	0.193	1.00	Yes	0.438	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.52**
		$U_{33} - L_{34}$		903.10	-----	-344	310	-111	73	-24	220	82	126	0.823	0.176	1.00	Yes	0.452	0.097	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.93**
		$U_{34} - L_{35}$		821.15	-----	-301	246	-107	38	86	183	302	-6	0.812	0.185	1.00	Yes	0.447	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.34**
		$U_{35} - L_{36}$		752.32	-----	-328	280	-106	16	41	7	100	-96	0.815	0.184	1.00	Yes	0.448	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.43**
		$U_{36} - L_{37}$		615.95	-14.68	-182	181	-30	-22	-22	-6	-25	-246	0.785	0.213	1.00	Yes	0.494	0.120	0.62	Yes	0.024	0.086	0.12	Yes	0.022	0.163	0.19	Yes	1.00	**5.91**
		$U_{38} - L_{37}$		28.70	-379.26	-26	-7	59	-95	-177	-208	-280	-73	0.047	0.181	0.23	Yes	0.026	0.099	0.13	Yes	0.819	0.175	1.00	Yes	0.727	0.108	0.84	Yes	1.00	**3.50**
		$U_{38} - L_{39}$		337.97	-318.33	-99	66	95	-127	-311	-211	-220	-112	0.608	0.253	0.87	Yes	0.334	0.139	0.48	Yes	0.758	0.234	1.00	Yes	0.674	0.163	0.84	Yes	1.00	**6.48**
		$U_{40} - L_{39}$		406.83	-138.69	-130	99	22	-50	-321	-292	-294	-130	0.732	0.259	1.00	Yes	0.402	0.142	0.55	Yes	0.332	0.189	0.53	Yes	0.293	0.166	0.46	Yes	1.00	**5.16**
		$U_{41} - L_{40}$		558.73	-----	-169	124	-41	-2	-365	-355	-438	-202	0.745	0.246	1.00	Yes	0.410	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**
		$U_{42} - L_{41}$		623.38	-----	-316	264	-51	33	-407	-415	-69	-66	0.737	0.254	1.00	Yes	0.405	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.21**
		$U_{43} - L_{42}$		752.14	-----	-390	302	-66	46	-467	-463	-7	-48	0.744	0.251	1.00	Yes	0.409	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.50**
		$U_{44} - L_{43}$		719.81	-----	-329	328	-94	80	-890	-416	55	-22	0.712	0.286	1.00	Yes	0.392	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.70**
	Structure 3	$U_0 - L_1$		686.51	-----	-384	309	-113	94	-324	-159	-62	-53	0.744	0.250	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.44**
		$U_1 - L_2$		721.37	-----	-338	274	-97	65	-271	-182	-126	-45	0.781	0.217	1.00	Yes	0.430	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.97**
		$U_2 - L_3$		654.51	-----	-325	268	-95	61	-201	15	-48	80	0.774	0.220	1.00	Yes	0.426	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.46**
		$U_3 - L_4$		554.16	-----	-147	120	-36	-2	-125	-96	95	-36	0.813	0.178	1.00	Yes	0.447	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**
		$U_4 - L_5$		430.30	-106.06	-130	106	-4	-35	-161	-52	-115	-181	0.774	0.219	1.00	Yes	0.426	0.120	0.55	Yes	0.251	0.107	0.36	Yes	0.224	0.167	0.40	Yes	1.00	**4.95**
		$U_5 - L_6$		301.90	-333.28	-69	18	34	-113	-135	-194	-38	-300	0.543	0.231	0.78	Yes	0.299	0.127	0.43	Yes	0.781	0.213	1.00	Yes	0.705	0.144	0.85	Yes	1.00	**5.76**
		$U_7 - L_6$		448.69	-54.22	-84	46	5	-50	-224	-267	-229	-199	0.807	0.185	1.00	Yes	0.444	0.102	0.55	Yes	0.126	0.138	0.27	Yes	0.115	0.108	0.23	Yes	1.00	**4.96**
		$U_8 - L_7$		608.10	-----	-196	155	-60	1	-416	-387	-425	-230	0.741	0.254	1.00	Yes	0.466	0.144	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		$U_8 - L_9$		792.84	-----	-243	116	-117	-31	-548	-519	-661	-414	0.784	0.212	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.98**
		$U_{10} - L_9$		912.36	-----	-226	181	-125	41	-582	-565	-881	-377	0.771	0.220	1.00	Yes	0.477	0.126	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.39**
		$U_{11} - L_{10}$		998.70	-----	-301	256	-107	84	-464	-415	-275	-138	0.798	0.193	1.00	Yes	0.495	0.109	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		$U_{12} - L_{11}$		1001.24	-----	-116	358	-14	129	-311	-307	231	101	0.800	0.200	1.00	Yes	0.496	0.112	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		$U_{12} - L_{13}$		664.64	-----	-110	290	20	72	144	171	248	-35	0.786	0.210	1.00	Yes	0.432	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.89**
		$U_{13} - L_{14}$		685.58	-----	-283	273	-23	54	-76	124	-91	18	0.811	0.184	1.00	Yes	0.446	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.45**
		$U_{14} - L_{15}$		705.07	-----	-182	229	-21	35	-128	190	132	58	0.834	0.165	1.00	Yes	0.458	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.02**
		$U_{15} - L_{16}$		602.94	-----	-79	81	-61	-19	-50	12	132	113	0.884	0.113	1.00	Yes	0.486	0.062	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.62**
		$U_{17} - L_{16}$		-----	-333.93	23	-3	-43	-74	235	148	-407	-109	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.229	1.00	Yes	0.707	0.094	0.81	Yes	1.00	**4.96**
		$U_{18} - L_{17}$		186.87	-318.15	-54	12	-39	-69	-200	-144	-728	-54	0.336	0.298	0.64	Yes	0.185	0.164	0.35	Yes	0.732	0.266	1.00	Yes	0.673	0.088	0.77	Yes	1.00	**5.05**
		$U_{19} - L_{18}$		342.86	-----	-76	32	-83	-20	-348	-291	-957	-287	0.617	0.383	1.00	Yes	0.339	0.211	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.74**
		$U_{20} - L_{19}$		574.70	-----	-63	41	56	-7	-678	-377	455	-1	0.754	0.244	1.00	Yes	0.455	0.135	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.28**

Moment (End) AB Operating

Operating Loads - 3F1

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	$U_0 - U_1$	-----	-512.91	-144	74	255	-1174	21	-8	-47	-414	-----	-----	-----	-----	-----	-----	-----	-----	0.698	0.296	1	Yes	0.692	0.279	0.98	Yes	1.00	**5.20**
		$U_1 - U_2$	22.70	-557.31	-50	73	-217	-890	7	48	-50	6	0.026	0.220	0.25	Yes	0.018	0.151	0.17	Yes	0.758	0.241	1	Yes	0.752	0.212	0.97	Yes	1.00	**3.59**
		$U_2 - U_3$	105.27	-543.09	-100	235	-192	-758	15	-90	173	-167	0.121	0.209	0.33	Yes	0.081	0.136	0.22	Yes	0.739	0.255	1	Yes	0.732	0.180	0.92	Yes	1.00	**3.52**
		$U_3 - U_4$	-----	-534.58	-431	271	-113	-980	89	-35	-17	-254	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.271	1	Yes	0.721	0.233	0.96	Yes	1.00	**4.58**
		$U_4 - U_5$	373.35	-558.88	107	309	-231	-825	-95	39	-284	-299	0.428	0.247	0.68	Yes	0.294	0.169	0.47	Yes	0.760	0.235	1	Yes	0.754	0.196	0.95	Yes	1.00	**6.87**
		$U_5 - U_6$	-----	-540.77	-812	793	38	-871	65	-399	-306	-541	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.261	1	Yes	0.729	0.207	0.94	Yes	1.00	**12.23**
		$U_6 - U_7$	473.61	-171.43	52	451	538	-2122	-645	-395	-575	-372	0.453	0.540	1.00	Yes	0.317	0.370	0.69	Yes	0.195	0.324	0.52	Yes	0.193	0.451	0.65	Yes	1.00	**16.01**
		$U_7 - U_8$	455.91	-----	-2214	4039	-41	663	-685	152	-242	152	0.316	0.682	1.00	Yes	0.220	0.465	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.58**
		$U_8 - U_9$	716.70	-----	763	11	2141	-2189	-141	39	71	317	0.587	0.406	1.00	Yes	0.402	0.276	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.45**
		$U_9 - U_{10}$	565.46	-490.37	227	270	176	-1303	68	301	234	583	0.613	0.386	1.00	Yes	0.415	0.259	0.68	Yes	0.631	0.235	0.87	Yes	0.626	0.292	0.92	Yes	1.00	**9.12**
		$U_{10} - U_{11}$	104.51	-589.22	206	-83	116	-1077	211	55	321	158	0.113	0.293	0.41	Yes	0.076	0.188	0.27	Yes	0.759	0.218	0.98	Yes	0.752	0.241	1.00	Yes	1.00	**4.60**
		$U_{11} - U_{12}$	-----	-876.72	155	-115	93	-1061	155	59	223	64	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.165	1	Yes	0.823	0.176	1.00	Yes	1.00	**4.04**
		$U_{12} - U_{13}$	-----	-1182.71	-45	-164	-32	-1296	181	-76	224	-64	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.199	1	Yes	0.790	0.179	0.97	Yes	1.00	**4.44**
		$U_{13} - U_{14}$	-----	-1298.97	-527	-341	-324	-1948	288	20	91	-49	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.245	1	Yes	0.745	0.215	0.96	Yes	1.00	**4.14**
		$U_{14} - U_{15}$	-----	-1313.48	-241	-175	-83	-1617	176	-56	89	-198	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.230	1	Yes	0.753	0.178	0.94	Yes	1.00	**5.62**
		$U_{15} - U_{16}$	-----	-1325.31	-495	-318	106	-1854	314	-81	-143	-530	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.230	1	Yes	0.760	0.205	0.97	Yes	1.00	**5.42**
		$U_{16} - U_{17}$	-----	-1306.96	-470	-109	-732	-1325	172	-281	-281	-392	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.233	1	Yes	0.749	0.146	0.90	Yes	1.00	**5.67**
		$U_{17} - U_{18}$	-----	-1073.11	-766	182	-187	-620	-73	-281	-197	-235	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.146	1	Yes	0.840	0.125	0.97	Yes	1.00	**4.69**
		$U_{18} - U_{19}$	-----	-672.02	-375	294	-221	-709	-160	-348	-7	-668	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.231	1	Yes	0.756	0.143	0.90	Yes	1.00	**9.94**
		$U_{19} - U_{20}$	-----	-480.16	-1057	1155	-27	-2276	-284	-132	23	-1039	-----	-----	-----	-----	-----	-----	-----	-----	0.545	0.402	0.95	Yes	0.540	0.458	1.00	Yes	1.00	**10.97**
	Structure 2	$U_0 - U_1$	-----	-565.48	182	-156	718	-1934	96	193	-61	-386	-----	-----	-----	-----	-----	-----	-----	-----	0.672	0.248	0.92	Yes	0.668	0.328	1.00	Yes	1.00	**7.60**
		$U_1 - U_2$	-----	-752.80	-104	-156	-166	-1255	338	628	224	275	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.264	1	Yes	0.727	0.190	0.92	Yes	1.00	**4.12**
		$U_2 - U_3$	-----	-1082.92	-77	-235	-139	-1950	614	4	515	91	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.225	1	Yes	0.769	0.199	0.97	Yes	1.00	**4.49**
		$U_3 - U_4$	-----	-1302.82	-373	-266	-670	-2145	183	-368	212	-159	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.247	1	Yes	0.742	0.191	0.94	Yes	1.00	**4.20**
		$U_4 - U_5$	-----	-1399.03	-374	-346	-770	-2580	-50	-341	76	-284	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.271	1	Yes	0.718	0.214	0.94	Yes	1.00	**4.14**
		$U_5 - U_6$	-----	-1470.47	-1101	-5	-1164	-1794	128	-231	-99	-382	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.230	1	Yes	0.755	0.149	0.91	Yes	1.00	**4.55**
		$U_6 - U_7$	-----	-1233.74	-293	-95	-596	-2333	-72	-255	-50	-381	-----	-----	-----	-----	-----	-----	-----	-----	0.708	0.284	1	Yes	0.703	0.208	0.92	Yes	1.00	**3.98**
		$U_7 - U_8$	-----	-1313.30	-122	-156	-580	-1872	-211	-237	-326	-498	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.237	1	Yes	0.748	0.167	0.92	Yes	1.00	**5.91**
		$U_8 - U_9$	-----	-1147.47	-312	137	-734	-1354	-134	-97	-230	-447	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.216	1	Yes	0.778	0.144	0.93	Yes	1.00	**5.76**
		$U_9 - U_{10}$	269.12	-936.74	-18	412	-477	-1170	-183	-28	-226	-306	0.197	0.176	0.38	Yes	0.134	0.119	0.26	Yes	0.813	0.185	1	Yes	0.808	0.142	0.96	Yes	1.00	**7.72**
		$U_{10} - U_{11}$	658.70	-775.87	186	468	-607	-1265	-197	-56	-304	-231	0.556	0.216	0.78	Yes	0.379	0.140	0.52	Yes	0.776	0.220	1	Yes	0.771	0.178	0.95	Yes	1.00	**9.71**
		$U_{11} - U_{12}$	-----	-774.41	-1470	1131	-880	-1596	-243	-654	-391	-826	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.204	0.98	Yes	0.770	0.225	1.00	Yes	1.00	**17.75**
		$U_{12} - U_{13}$	751.35	-----	161	185	526	-3098	-789	-1020	-789	-252	0.507	0.487	1.00	Yes	0.362	0.331	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.87**
		$U_{13} - U_{14}$	426.16	-----	-4257	7662	-466	1393	-1115	-252	-609	-278	0.210	0.785	1.00	Yes	0.148	0.515	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**18.26**
		$U_{14} - U_{15}$	1044.99	-----	1508	202	4738	-3743	-542	-180	-106	634	0.514	0.482	1.00	Yes	0.364	0.316	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.27**
		$U_{15} - U_{16}$	1019.16	-----	209	505	-118	-2677	-104	284	478	880	0.616	0.379	1.00	Yes	0.438	0.255	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.39**
		$U_{16} - U_{17}$	836.91	-217.63	603	280	848	-2496	194	54	582	338	0.617	0.375	1.00	Yes	0.410	0.247	0.66	Yes	0.190	0.211	0.41	Yes	0.189	0.314	0.51	Yes	1.00	**9.44**
		$U_{17} - U_{18}$	644.11	-508.33	431	313	207	-1918	-33	-12	155	129	0.647	0.348	1.00	Yes	0.430	0.231	0.67	Yes	0.604	0.361	0.97	Yes	0.600	0.326	0.93	Yes	1.00	**8.58**
		$U_{18} - U_{19}$	391.04	-600.10	435	171	418	-1682	-49	-48	99	-74	0.393	0.300	0.70	Yes	0.258	0.190	0.45	Yes	0.713	0.108	0.83	Yes	0.709	0.286	1.00	Yes	1.00	**6.36**
		$U_{19} - U_{20}$	196.19	-697.43	253	134	-148	-1408	-26	70	82	41	0.184	0.236	0.43	Yes	0.122	0.156	0.28	Yes	0.774	0.190	0.97	Yes	0.769	0.225	1.00	Yes	1.00	**5.24**
		$U_{20} - U_{21}$	40.38	-833.16	-34	109	-173	-1584	71	-94	100	-101	0.031	0.241	0.28	Yes	0.022	0.153	0.18	Yes	0.766	0.234	1	Yes	0.760	0.230	0.99	Yes	1.00	**5.34**
		$U_{21} - U_{22}$	32.17	-784.37	-27	5	-301	-1739	-5	-49	-12	-95	0.025	0.262	0.29	Yes	0.018	0.174	0.20	Yes	0.721	0.278	1	Yes	0.716	0.252	0.97	Yes	1.00	**4.78**
		$U_{22} - U_{23}$	73.49	-793.37	-4	-13	-246	-1623	-83	-102	-33	-202	0.057	0.257	0.32	Yes	0.040	0.171	0.22	Yes	0.729	0.263	1	Yes	0.724	0.235	0.96	Yes	1.00	**6.10**
		$U_{23} - U_{24}$	-----	-791.28	-677	143	-213	-1520	67	-134	-211	-371	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.263	1	Yes	0.722	0.220	0.95	Yes	1.00	**6.17**
		$U_{24} - U_{25}$	260.68	-654.10	145	281	-146	-1408	-267	-24	-183	-230	0.244	0.261	0.51	Yes	0.162	0.172	0.34	Yes	0.726	0.270	1	Yes	0.722	0.225	0.95	Yes	1.00	**6.86**
		$U_{25} - U_{26}$	-----	-678.41	-972	624	-171	-1141	-58	-32	-221	-322	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.134	0.94	Yes	0.801	0.194	1.00	Yes	1.00	**8.49**
		$U_{26} - U_{27}$	-----	-615.10	-1305	744	-346	-1573	-208	-121	-336	-297	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.192	0.93	Yes	0.726	0.267	1.00	Yes	1.00	**11.68**
		$U_{27} - U_{28}$	-----	-672.67	-2234	2255	244	-3267	-385	-657	-668	-940	-----	-----	-----	-----	-----	-----	-----	-----	0.587	0.385	0.98	Yes	0.583	0.411	1.00	Yes	1.00	**25.88**
		$U_{28} - U_{29}$	963.82	-----	-4	275	-4	-3120	-681	-453	-698	-216	0.583	0.414	1.00	Yes	0.415	0.277	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.41**
		$U_{29} - U_{30}$	646.29	-----	-2678	6604	-138	1233	-943	187	-89	353	0.318	0.676	1.00	Yes	0.225	0.443	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.22**
		$U_{30} - U_{31}$	1063.08	-----	1500	101	4729	-3787	-418	-189	214	526	0.523	0.474	1.00	Yes	0.370	0.310	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.93**
		$U_{31} - U_{32}$	961.70	-57.75	145	465	-280	-2056	-59	184	584	897	0.649	0.344	1.00	Yes	0.463	0.235	0.70	Yes	0.046	0.421	0.47	Yes	0.046	0.259	0.31	Yes	1.00	**9.90**
		$U_{32} - U_{33}$	725.12	-457.56	498	260	269	-2174	191	29	613	234	0.612	0.381	1.00	Yes	0.411	0.255	0.67	Yes	0.457	0.193	0.66	Yes	0.455	0.307	0.77	Yes	1.00	**8.70**
		$U_{33} - U_{34}$	455.39	-746.93	340	192	-51	-1809	85	33	222	43	0.385	0.282	0.67	Yes	0.262	0.182	0.45	Yes	0.747	0.216	0.97	Yes	0.742	0.255	1.00	Yes	1.00	**7.05**
		$U_{34} - U_{35}$	133.35	-880.31	316	-42	60	-1896	94	-81	174	-38	0.098	0.250	0.35	Yes	0.066	0.169	0.24	Yes	0.764	0.182	0.95	Yes	0.760	0.231	1.00	Yes	1.00	**5.27**
		$U_{35} - U_{36}$	-----	-1183.85	123	-224	-303	-1725	124	-177	124	-26	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.190	1	Yes	0.803	0.183	0.99	Yes	1.00	**5.21**
		$U_{36} - U_{37}$	-----	-1278.26	-156	-61	-364	-2468	159	-59	166	-78	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.262	1	Yes	0.728	0.220	0.95	Yes	1.00	**4.54**
		$U_{37} - U_{38}$	-----	-1361.20	-4	-116	-436	-2219	46	-197	4	-64	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.215	1	Yes	0.775	0.198	0.98	Yes	1.00	**6.01**
		$U_{38} - U_{39}$	-----	-1437.35	40	-395	-192	-2848	85	-109	23	-411	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.256	1	Yes	0.738	0.236	0.98	Yes	1.00	**5.59**
		$U_{39} - U_{40}$	-----	-1376.09	-867	-374	-552	-2602	109	-178	-239	-428	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.288	1	Yes	0.707	0.216	0.93	Yes	1.00	**5.83**
		$U_{40} - U_{41}$	-----	-1249.41	-429	-394	-929	-2125	11	-252	-288	-342	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.276	1	Yes	0.711	0.189	0.91	Yes	1.00	**5.39**
		$U_{41} - U_{42}$	-----	-1192.91	-1073	211	-969	-1279	-99	-165	-142	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.141	1	Yes	0.847	0.130	0.98	Yes	1.00	**6.26**
		$U_{42} - U_{43}$	-----	-796.44	-613	463	-309	-1262	56	-227	208	-606	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.223	1	Yes	0.769	0.192	0.97	Yes	1.00	**13.70**
		$U_{43} - U_{44}$	-----	-488.83	-1136	1025	113	-2183	-225	-118	-83	-956	-----	-----	-----	-----	-----	-----	-----	-----	0.581	0.415	1	Yes	0.577	0.371	0.95	Yes	1.00	**10.26**
	Structure 3	$U_0 - U_1$	-----	-587.80	-738	-149	1006	-1678	380	156	-26	-417	-----	-----	-----	-----	-----	-----	-----	-----	0.667	0.227	0.9	Yes	0.661	0.338	1.00	Yes	1.00	**8.52**
		$U_1 - U_2$	-----	-667.94	-67	-120	4	-840	263	538	198	272	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.236	1	Yes	0.751	0.169	0.93	Yes	1.00	**3.59**
		$U_2 - U_3$	-----	-978.31	-74	-124	19	-1141	516	8	462	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.217	1	Yes	0.765	0.186	0.96	Yes	1.00	**3.88**
		$U_3 - U_4$	-----	-1320.88	-144	-207	-469	-1767	142	-251	195	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.228	1	Yes	0.757	0.195	0.96	Yes	1.00	**4.73**
		$U_4 - U_5$	-----	-1372.59	-885	2	-425	-1520	326	-172	51	-454	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.196	1	Yes	0.787	0.168	0.96	Yes	1.00	**4.56**
		$U_5 - U_6$	-----	-1269.67	-159	-235	-537	-1926	-46	-208	-69	-237	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.257	1	Yes	0.728	0.212	0.95	Yes	1.00	**4.15**
		$U_6 - U_7$	-----	-1293.58	-304	-73	-621	-1404	-98	-236	-160	-399	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.248	1	Yes	0.742	0.155	0.90	Yes	1.00	**5.52**
		$U_7 - U_8$	-----	-1168.03	-582	61	-233	-1000	66	-162	-234	-393	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.207	1	Yes	0.780	0.138	0.92	Yes	1.00	**4.98**
		$U_8 - U_9$	-----	-854.47	-91	244	-305	-774	-100	-85	-234	-379	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.191	1	Yes	0.802	0.128	0.94	Yes	1.00	**6.37**
		$U_9 - U_{10}$	-----	-644.17	-773	353	-525	-422	-190	-258	-169	-341	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.170	1	Yes	0.822	0.173	1.00	Yes	1.00	**7.37**
		$U_{10} - U_{11}$	-----	-497.41	-625	681	154	-1594	-645	-323	-436	-113	-----	-----	-----	-----	-----	-----	-----	-----	0.640	0.341	0.99	Yes	0.635	0.357	1.00	Yes	1.00	**21.36**
		$U_{11} - U_{12}$	320.23	-----	-2954	3883	-178	612	-653	9	-295	9	0.262	0.731	1.00	Yes	0.179	0.498	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**19.61**
		$U_{12} - U_{13}$	844.89	-----	834	107	2414	-2163	-440	-86	-89	441	0.585	0.411	1.00	Yes	0.408	0.280	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.09**
		$U_{13} - U_{14}$	723.08	-233.35	199	336	85	-1093	-138	272	133	492	0.691	0.300	1.00	Yes	0.483	0.206	0.69	Yes	0.265	0.317	0.59	Yes	0.263	0.232	0.50	Yes	1.00	**7.21**
		$U_{14} - U_{15}$	469.55	-483.38	336	195	250	-1112	38	66	287	5	0.538	0.313	0.86	Yes	0.363	0.204	0.57	Yes	0.658	0.337	1	Yes	0.652	0.264	0.92	Yes	1.00	**5.94**
		$U_{15} - U_{16}$	265.47	-553.47	226	114	-79	-1064	1	127	68	93	0.304	0.274	0.58	Yes	0.209	0.188	0.40	Yes	0.753	0.210	0.97	Yes	0.746	0.253	1.00	Yes	1.00	**4.68**
		$U_{16} - U_{17}$	373.38	-497.97	336	97	561	-1363	26	81	6	-103	0.428	0.341	0.77	Yes	0.294	0.234	0.53	Yes	0.678	0.142	0.82	Yes	0.672	0.324	1.00	Yes	1.00	**7.06**
		$U_{17} - U_{18}$	-----	-521.02	-153	-73	187	-1233	56	-266	-101	-75	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.223	0.94	Yes	0.703	0.293	1.00	Yes	1.00	**5.73**
		$U_{18} - U_{19}$	-----	-542.97	-96	83	-314	-900	-34	193	148	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.256	1	Yes	0.732	0.214	0.95	Yes	1.00	**6.29**
		$U_{19} - U_{20}$	-----	-422.16	-588	621	151	-1516	71	-43	-9	-713	-----	-----	-----	-----	-----	-----	-----	-----	0.574	0.418	1	Yes	0.569	0.360	0.93	Yes	1.00	**7.85**

Moment (End) AB Operating

Operating Loads - 3F1

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			-----	-117.92	-227	145	1183	-2606	29	118	-349	-1223	-----	-----	-----	-----	-----	-----	-----	-----	0.214	0.721	0.94	Yes	0.212	0.782	1.00	Yes	1.00	**23.76**
		L_1 - L_2			442.16	-26.93	43	11	227	-1022	28	20	-46	-72	0.677	0.322	1.00	Yes	0.413	0.218	0.64	Yes	0.049	0.187	0.24	Yes	0.048	0.307	0.36	Yes	1.00	**5.75**
		L_2 - L_3			635.56	-80.05	-28	77	-458	-971	6	-3	-200	55	0.731	0.267	1.00	Yes	0.423	0.160	0.59	Yes	0.109	0.292	0.41	Yes	0.108	0.235	0.35	Yes	1.00	**5.71**
		L_3 - L_4			587.80	-211.39	58	250	-42	-1214	-23	37	-185	37	0.676	0.323	1.00	Yes	0.402	0.209	0.62	Yes	0.289	0.248	0.54	Yes	0.286	0.293	0.58	Yes	1.00	**6.25**
		L_4 - L_5			577.20	-5.79	-675	699	-739	-619	-56	5	-313	134	0.747	0.251	1.00	Yes	0.448	0.163	0.62	Yes	0.009	0.130	0.14	Yes	0.009	0.196	0.21	Yes	1.00	**7.40**
		L_5 - L_6			676.03	-581.87	-346	1056	-800	-1319	43	274	-194	-71	0.663	0.329	1.00	Yes	0.429	0.199	0.63	Yes	0.679	0.245	0.93	Yes	0.671	0.292	0.97	Yes	1.00	**14.92**
		L_6 - L_7			48.76	-839.21	-1268	1073	-1462	-2034	-4	-188	117	419	0.033	0.359	0.40	Yes	0.022	0.223	0.25	Yes	0.683	0.150	0.84	Yes	0.676	0.320	1.00	Yes	1.00	**16.77**
		L_7 - L_8			-----	-1140.60	-290	2047	-20	571	41	84	28	72	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.257	0.99	Yes	0.722	0.271	1.00	Yes	1.00	**8.87**
		L_8 - L_9			-----	-1121.05	800	138	2135	-1259	-4	-34	-24	150	-----	-----	-----	-----	-----	-----	-----	-----	0.719	0.246	0.97	Yes	0.710	0.283	1.00	Yes	1.00	**14.65**
		L_9 - L_{10}			-----	-938.34	245	169	761	-1497	41	42	41	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.088	0.86	Yes	0.755	0.235	1.00	Yes	1.00	**11.88**
		L_{10} - L_{11}			206.55	-493.37	425	-17	179	-921	86	18	-82	-38	0.267	0.259	0.53	Yes	0.156	0.157	0.32	Yes	0.758	0.119	0.88	Yes	0.752	0.244	1.00	Yes	1.00	**7.97**
		L_{11} - L_{12}			543.63	-189.99	373	-160	568	-1020	-19	11	-117	21	0.704	0.290	1.00	Yes	0.422	0.192	0.62	Yes	0.292	0.113	0.41	Yes	0.289	0.270	0.56	Yes	1.00	**6.97**
		L_{12} - L_{13}			1040.34	-----	74	-91	-399	-905	-23	-35	-89	82	0.821	0.171	1.00	Yes	0.525	0.102	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.93**
		L_{13} - L_{14}			1198.68	-----	232	-388	535	-1921	-102	63	-258	30	0.705	0.286	1.00	Yes	0.457	0.175	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.85**
		L_{14} - L_{15}			1602.66	-----	-1584	106	-984	-1612	-31	150	-302	-72	0.783	0.216	1.00	Yes	0.509	0.131	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.86**
		L_{15} - L_{16}			1559.34	-----	-336	-310	-837	-1787	54	181	-196	-165	0.762	0.229	1.00	Yes	0.489	0.134	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.16**
		L_{16} - L_{17}			1258.48	-----	-767	301	-1286	-677	-62	-9	-162	125	0.796	0.203	1.00	Yes	0.516	0.125	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.96**
		L_{17} - L_{18}			945.38	-----	-617	322	-681	-574	-19	68	-168	-295	0.823	0.169	1.00	Yes	0.527	0.102	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.61**
		L_{18} - L_{19}			425.50	-----	-770	497	-546	-10	-127	-63	-185	551	0.651	0.345	1.00	Yes	0.440	0.220	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.92**
		L_{19} - L_{20}			235.33	-43.55	-1519	780	-213	29	873	196	-4	-1	0.360	0.637	1.00	Yes	0.220	0.422	0.65	Yes	0.079	0.375	0.46	Yes	0.078	0.456	0.54	Yes	1.00	**12.77**
	Structure 2	L_0 - L_1			-----	-136.17	-159	109	1005	-3926	34	60	-316	-1065	-----	-----	-----	-----	-----	-----	-----	-----	0.196	0.693	0.89	Yes	0.195	0.799	1.00	Yes	1.00	**28.03**
		L_1 - L_2			548.12	-----	163	-207	348	-1293	85	105	-388	300	0.666	0.327	1.00	Yes	0.396	0.209	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.70**
		L_2 - L_3			976.89	-----	-16	-132	25	-1402	125	172	-19	7	0.770	0.221	1.00	Yes	0.505	0.131	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.46**
		L_3 - L_4			1293.69	-----	56	-326	-339	-1841	51	124	-56	205	0.760	0.232	1.00	Yes	0.512	0.143	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.47**
		L_4 - L_5			1654.04	-----	-241	-207	-230	-2334	23	-7	-98	-51	0.771	0.227	1.00	Yes	0.511	0.134	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.96**
		L_5 - L_6			1748.97	-----	-36	-337	-846	-2607	-95	59	-285	29	0.750	0.249	1.00	Yes	0.504	0.152	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.23**
		L_6 - L_7			1694.15	-----	-350	-60	-863	-3075	58	-12	-166	-12	0.717	0.281	1.00	Yes	0.477	0.163	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.07**
		L_7 - L_8			1393.39	-----	-1546	322	-1264	-1521	-48	177	-259	-70	0.799	0.192	1.00	Yes	0.525	0.113	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.37**
		L_8 - L_9			1147.43	-----	-765	622	-1284	-724	17	53	-137	197	0.803	0.192	1.00	Yes	0.541	0.120	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.95**
		L_9 - L_{10}			861.15	-----	-1240	645	-909	-917	37	197	-176	-99	0.769	0.222	1.00	Yes	0.448	0.138	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.55**
		L_{10} - L_{11}			698.40	-----	-1517	1134	-1255	-835	-104	-25	-226	184	0.697	0.296	1.00	Yes	0.409	0.186	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.59**
		L_{11} - L_{12}			766.62	-787.11	-2157	2416	-2598	-2218	206	506	59	-413	0.534	0.401	0.94	Yes	0.355	0.239	0.60	Yes	0.651	0.227	0.88	Yes	0.645	0.354	1.00	Yes	1.00	**26.57**
		L_{12} - L_{13}			-----	-956.10	-47	167	-1778	-3151	-549	-506	-117	-146	-----	-----	-----	-----	-----	-----	-----	-----	0.577	0.417	1	Yes	0.572	0.313	0.89	Yes	1.00	**13.03**
		L_{13} - L_{14}			-----	-1222.08	-1818	4360	-474	1316	-63	-7	-196	-258	-----	-----	-----	-----	-----	-----	-----	-----	0.620	0.263	0.89	Yes	0.615	0.381	1.00	Yes	1.00	**10.68**
		L_{14} - L_{15}			-----	-1248.49	1485	-370	4208	-3047	236	209	-233	-124	-----	-----	-----	-----	-----	-----	-----	-----	0.634	0.232	0.87	Yes	0.628	0.367	1.00	Yes	1.00	**11.06**
		L_{15} - L_{16}			-----	-1222.64	-359	505	-1982	-2327	-47	145	-29	145	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.254	1	Yes	0.731	0.231	0.97	Yes	1.00	**13.19**
		L_{16} - L_{17}			-----	-1069.97	1025	158	1483	-1747	199	55	-185	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.154	0.95	Yes	0.779	0.215	1.00	Yes	1.00	**10.79**
		L_{17} - L_{18}			-----	-769.50	478	201	545	-1172	13	-39	-63	95	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.100	0.92	Yes	0.808	0.188	1.00	Yes	1.00	**6.97**
		L_{18} - L_{19}			161.31	-599.10	605	82	285	-1015	-46	-74	-66	52	0.183	0.207	0.40	Yes	0.105	0.124	0.23	Yes	0.803	0.143	0.95	Yes	0.798	0.196	1.00	Yes	1.00	**7.10**
		L_{19} - L_{20}			640.59	-453.19	461	126	-357	-1288	-77	-19	-138	142	0.726	0.270	1.00	Yes	0.429	0.173	0.61	Yes	0.608	0.175	0.79	Yes	0.604	0.248	0.86	Yes	1.00	**7.38**
		L_{20} - L_{21}			894.44	-347.58	379	5	-272	-1867	5	-49	-125	-49	0.713	0.286	1.00	Yes	0.468	0.169	0.64	Yes	0.328	0.207	0.54	Yes	0.326	0.272	0.60	Yes	1.00	**8.66**
		L_{21} - L_{22}			754.55	-90.59	94	-64	342	-2520	-52	64	-240	34	0.602	0.394	1.00	Yes	0.402	0.246	0.65	Yes	0.086	0.260	0.35	Yes	0.085	0.368	0.46	Yes	1.00	**7.27**
		L_{22} - L_{23}			899.60	-----	-1491	222	-878	-1725	-38	55	-204	88	0.717	0.274	1.00	Yes	0.480	0.171	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.06**
		L_{23} - L_{24}			945.15	-----	-509	334	-1225	-1472	72	211	-60	-11	0.754	0.238	1.00	Yes	0.494	0.141	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.38**
		L_{24} - L_{25}			696.78	-----	-666	542	-892	-944	105	77	-153	-42	0.789	0.206	1.00	Yes	0.467	0.131	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.87**
		L_{25} - L_{26}			638.03	-----	-992	882	-903	-1239	104	199	-43	-125	0.723	0.269	1.00	Yes	0.417	0.161	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.76**
		L_{26} - L_{27}			689.60	-436.91	-2064	2027	-1360	-2132	62	123	-335	-214	0.616	0.381	1.00	Yes	0.358	0.237	0.60	Yes	0.462	0.203	0.67	Yes	0.459	0.341	0.80	Yes	1.00	**22.36**
		L_{27} - L_{28}			106.36	-927.76	-1867	2564	-1607	-1546	212	473	-309	-515	0.066	0.359	0.43	Yes	0.044	0.213	0.26	Yes	0.681	0.247	0.93	Yes	0.676	0.316	1.00	Yes	1.00	**19.02**
		L_{28} - L_{29}			-----	-971.86	180	82	-1834	-3714	-150	-274	-131	113	-----	-----	-----	-----	-----	-----	-----	-----	0.586	0.405	1	Yes	0.581	0.369	0.96	Yes	1.00	**14.16**
		L_{29} - L_{30}			-----	-1236.29	-2012	4276	-498	1160	50	202	108	144	-----	-----	-----	-----	-----	-----	-----	-----	0.628	0.248	0.88	Yes	0.622	0.373	1.00	Yes	1.00	**10.65**
		L_{30} - L_{31}			-----	-1272.39	1122	-241	4057	-3212	-395	-283	100	230	-----	-----	-----	-----	-----	-----	-----	-----	0.646	0.241	0.89	Yes	0.640	0.354	1.00	Yes	1.00	**12.78**
		L_{31} - L_{32}			-----	-1211.15	-193	319	-1740	-1944	-155	-43	93	293	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.260	1	Yes	0.724	0.193	0.92	Yes	1.00	**10.55**
		L_{32} - L_{33}			-----	-984.94	912	87	752	-1398	20	-35	58	64	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.141	0.96	Yes	0.808	0.190	1.00	Yes	1.00	**8.94**
		L_{33} - L_{34}			121.02	-669.90	498	109	498	-1184	-17	14	21	111	0.121	0.222	0.35	Yes	0.071	0.140	0.22	Yes	0.792	0.133	0.93	Yes	0.787	0.207	1.00	Yes	1.00	**7.03**
		L_{34} - L_{35}			689.89	-669.85	676	-4	565	-1820	-10	-66	-66	-38	0.616	0.299	0.92	Yes	0.359	0.187	0.55	Yes	0.708	0.131	0.84	Yes	0.703	0.291	1.00	Yes	1.00	**10.02**
		L_{35} - L_{36}			1075.58	-321.20	512	-61	312	-1605	-79	20	-235	109	0.752	0.239	1.00	Yes	0.507	0.149	0.66	Yes	0.266	0.112	0.38	Yes	0.264	0.217	0.49	Yes	1.00	**8.03**
		L_{36} - L_{37}			1263.91	-19.39	307	-67	-131	-2307	11	-1	-64	223	0.725	0.273	1.00	Yes	0.476	0.160	0.64	Yes	0.013	0.224	0.24	Yes	0.013	0.255	0.27	Yes	1.00	**6.74**
		L_{37} - L_{38}			1716.51	-----	-26	-454	-744	-2908	-75	53	-233	-17	0.726	0.270	1.00	Yes	0.483	0.157	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.33**
		L_{38} - L_{39}			1799.63	-----	-392	-75	-2092	-2372	-2	-51	-86	183	0.772	0.222	1.00	Yes	0.518	0.135	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.75**
		L_{39} - L_{40}			1617.42	-----	-1206	-71	-1290	-2367	73	192	-196	-134	0.754	0.237	1.00	Yes	0.499	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.72**
		L_{40} - L_{41}			1360.22	-----	-1058	329	-1570	-1159	-63	17	-156	184	0.799	0.198	1.00	Yes	0.538	0.123	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.72**
		L_{41} - L_{42}			1046.59	-----	-747	329	-1061	-820	74	155	25	-110	0.825	0.170	1.00	Yes	0.541	0.101	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.09**
		L_{42} - L_{43}			507.01	-----	-1198	631	-919	-387	40	1	-154	837	0.616	0.381	1.00	Yes	0.366	0.240	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.75**
		L_{43} - L_{44}			21.10	-49.38	-3044	1006	-99	-59	2111	630	-19	4	0.026	0.966	1.00	Yes	0.015	0.608	0.63	Yes	0.071	0.672	0.75	Yes	0.071	0.619	0.69	Yes	1.00	**22.63**
	Structure 3	L_0 - L_1			28.53	-187.95	-51	-32	1193	-2160	-8	-10	-340	-1475	0.044	0.954	1.00	Yes	0.027	0.629	0.66	Yes	0.341	0.593	0.94	Yes	0.338	0.648	0.99	Yes	1.00	**19.72**
		L_1 - L_2			439.12	-----	153	-184	422	-864	35	60	-91	329	0.672	0.327	1.00	Yes	0.455	0.206	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.64**
		L_2 - L_3			916.21	-----	-15	-143	-243	-931	91	134	63	30	0.798	0.197	1.00	Yes	0.511	0.118	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.77**
		L_3 - L_4			1210.68	-----	45	-303	-395	-1428	36	123	107	255	0.766	0.232	1.00	Yes	0.497	0.143	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.27**
		L_4 - L_5			1602.07	-----	-266	-127	-1032	-1649	24	14	-20	156	0.783	0.210	1.00	Yes	0.502	0.122	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.81**
		L_5 - L_6			1423.86	-----	-36	-302	-27	-2350	-68	135	-247	179	0.696	0.301	1.00	Yes	0.452	0.182	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.41**
		L_6 - L_7			1371.76	-----	-1257	591	-877	-1090	3	117	-232	-28	0.807	0.193	1.00	Yes	0.523	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.45**
		L_7 - L_8			1052.54	-----	-164	105	-604	-807	64	221	-112	46	0.831	0.169	1.00	Yes	0.531	0.101	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.70**
		L_8 - L_9			634.10	-----	-606	416	-522	-280	24	-33	-81	94	0.821	0.177	1.00	Yes	0.493	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.01**
		L_9 - L_{10}			508.17	-533.53	-31	495	-705	-492	-27	14	93	110	0.658	0.206	0.87	Yes	0.383	0.125	0.51	Yes	0.820	0.128	0.95	Yes	0.813	0.187	1.00	Yes	1.00	**8.58**
		L_{10} - L_{11}			253.02	-887.86	-1681	1354	-1621	-1800	401	-128	14	-128	0.173	0.321	0.50	Yes	0.113	0.199	0.32	Yes	0.723	0.100	0.83	Yes	0.715	0.283	1.00	Yes	1.00	**21.23**
		L_{11} - L_{12}			-----	-1190.13	-468	1853	-55	534	-16	-43	-84	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.225	0.99	Yes	0.754	0.245	1.00	Yes	1.00	**9.80**
		L_{12} - L_{13}			-----	-1123.47	853	90	2162	-1078	-316	-262	-192	-13	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.273	1	Yes	0.712	0.286	1.00	Yes	1.00	**10.76**
		L_{13} - L_{14}			-----	-978.98	148	258	-188	-1308	-129	-61	-45	9	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.141	0.94	Yes	0.788	0.206	1.00	Yes	1.00	**9.66**
		L_{14} - L_{15}			-----	-703.37	538	150	454	-832	48	-45	-110	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.165	0.99	Yes	0.812	0.184	1.00	Yes	1.00	**7.29**
		L_{15} - L_{16}			152.53	-467.00	434	117	569	-1074	4	-64	-107	101	0.198	0.303	0.51	Yes	0.119	0.200	0.32	Yes	0.718	0.119	0.84	Yes	0.711	0.284	1.00	Yes	1.00	**5.45**
		L_{16} - L_{17}			607.16	-----	-534	63	-30	-1137	64	15	-140	-43	0.699	0.297	1.00	Yes	0.415	0.193	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.41**
		L_{17} - L_{18}			607.82	-----	-34	-23	-395	-1004	123	306	-16	40	0.699	0.292	1.00	Yes	0.405	0.175	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.37**
		L_{18} - L_{19}			455.15	-----	-476	193	-518	-632	58	-90	-33	526	0.697	0.302	1.00	Yes	0.425	0.198	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.83**
		L_{19} - L_{20}			10.27	-----	-2280	1059	27	-131	1353	355	-111	-41	0.016	0.975	1.00	Yes	0.009	0.590	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.14**

Moment (End) AB Operating

Operating Loads - 3F1

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																		
Center Truss - Verticals	Structure 1	$U_0 - L_0$		-----	-343.94	-130	205	-21	44	-264	-85	-95	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.187	0.96	Yes	0.728	0.262	1.00	Yes	1.00	**2.29**
		$U_1 - L_1$		18.53	-333.45	-228	228	19	-14	-96	23	40	16	0.033	0.320	0.36	Yes	0.018	0.176	0.20	Yes	0.729	0.101	0.83	Yes	0.706	0.292	1.00	Yes	1.00	**4.55**
		$U_2 - L_2$		-----	-262.01	-311	343	130	-96	13	86	-273	-87	-----	-----	-----	-----	-----	-----	-----	-----	0.573	0.183	0.76	Yes	0.554	0.438	1.00	Yes	1.00	**7.30**
		$U_3 - L_3$		260.29	-231.70	-331	341	353	-335	126	270	-83	17	0.468	0.530	1.00	Yes	0.257	0.291	0.55	Yes	0.508	0.159	0.67	Yes	0.490	0.452	0.95	Yes	1.00	**9.50**
		$U_4 - L_4$		-----	-210.24	-141	110	431	-408	111	154	137	36	-----	-----	-----	-----	-----	-----	-----	-----	0.462	0.166	0.63	Yes	0.445	0.551	1.00	Yes	1.00	**10.36**
		$U_5 - L_5$		-----	-428.65	14	-32	229	-251	-126	-52	-115	-89	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.102	0.88	Yes	0.740	0.254	1.00	Yes	1.00	**4.01**
		$U_6 - L_6$		-----	-516.96	48	-55	266	-287	-97	-22	96	74	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.088	0.88	Yes	0.741	0.251	1.00	Yes	1.00	**4.07**
		$U_7 - L_7$		-----	-442.79	118	-131	298	-318	-129	46	-46	69	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.121	0.87	Yes	0.683	0.313	1.00	Yes	1.00	**2.88**
		$U_8 - L_8$		-----	-1279.79	-473	562	488	-585	-190	-38	-102	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.924	0.050	0.98	Yes	0.887	0.109	1.00	Yes	1.00	**6.77**
		$U_9 - L_9$		-----	-659.12	-415	459	-165	188	-245	-196	-221	-156	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.129	0.92	Yes	0.744	0.255	1.00	Yes	1.00	**3.99**
		$U_{10} - L_{10}$		-----	-804.25	-359	392	-113	94	-237	-174	-258	-216	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.108	0.95	Yes	0.794	0.203	1.00	Yes	1.00	**5.97**
		$U_{11} - L_{11}$		-----	-655.57	-416	496	-72	122	-90	30	-179	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.099	0.89	Yes	0.763	0.230	1.00	Yes	1.00	**5.95**
		$U_{12} - L_{12}$		-----	-505.65	-357	347	-32	36	-11	137	-176	6	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.109	0.84	Yes	0.694	0.305	1.00	Yes	1.00	**5.30**
		$U_{13} - L_{13}$		-----	-364.60	-243	260	2	12	-6	131	-85	94	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.106	0.85	Yes	0.698	0.297	1.00	Yes	1.00	**4.00**
		$U_{14} - L_{14}$		86.71	-47.31	-599	621	315	-331	-20	47	-148	-47	0.156	0.836	1.00	Yes	0.086	0.460	0.55	Yes	0.106	0.233	0.34	Yes	0.100	0.793	0.90	Yes	1.00	**15.54**
		$U_{15} - L_{15}$		228.69	-312.84	-187	176	250	-262	-120	-83	-111	-181	0.411	0.387	0.80	Yes	0.226	0.213	0.44	Yes	0.701	0.166	0.87	Yes	0.662	0.335	1.00	Yes	1.00	**5.98**
		$U_{16} - L_{16}$		100.05	-321.36	-45	32	242	-247	-89	-116	-5	-145	0.180	0.358	0.54	Yes	0.099	0.197	0.30	Yes	0.724	0.139	0.87	Yes	0.680	0.316	1.00	Yes	1.00	**4.78**
		$U_{17} - L_{17}$		-----	-442.94	25	-51	211	-230	-86	-49	-122	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.118	0.95	Yes	0.764	0.233	1.00	Yes	1.00	**3.78**
		$U_{18} - L_{18}$		-----	-533.45	125	-130	429	-439	-164	-61	170	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.094	0.88	Yes	0.742	0.249	1.00	Yes	1.00	**4.11**
		$U_{19} - L_{19}$		-----	-648.58	139	-152	500	-513	-66	12	274	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.093	0.91	Yes	0.755	0.238	1.00	Yes	1.00	**4.69**
		$U_{20} - L_{20}$		-----	-578.92	167	-215	403	-474	33	4	754	99	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.226	1	Yes	0.674	0.220	0.90	Yes	1.00	**3.14**
	Structure 2	$U_0 - L_0$		-----	-612.99	-375	476	-120	186	-1150	-195	-264	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.257	1	Yes	0.657	0.202	0.86	Yes	1.00	**3.21**
		$U_1 - L_1$		-----	-713.92	-542	547	-115	123	-111	-2	34	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.079	0.9	Yes	0.765	0.232	1.00	Yes	1.00	**5.47**
		$U_2 - L_2$		-----	-585.87	-487	486	-86	95	-7	83	91	41	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.081	0.87	Yes	0.747	0.249	1.00	Yes	1.00	**5.26**
		$U_3 - L_3$		-----	-483.65	-257	261	-45	52	-28	119	17	127	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.096	0.92	Yes	0.758	0.237	1.00	Yes	1.00	**4.79**
		$U_4 - L_4$		66.46	-328.71	-234	229	28	-11	-22	147	-107	62	0.120	0.342	0.47	Yes	0.066	0.188	0.26	Yes	0.745	0.104	0.85	Yes	0.696	0.300	1.00	Yes	1.00	**4.74**
		$U_5 - L_5$		191.59	-325.99	-223	241	131	-122	-27	139	-113	102	0.345	0.348	0.70	Yes	0.190	0.191	0.39	Yes	0.736	0.120	0.86	Yes	0.690	0.307	1.00	Yes	1.00	**6.02**
		$U_6 - L_6$		363.04	-204.09	-239	237	220	-227	-103	113	-130	84	0.653	0.344	1.00	Yes	0.359	0.189	0.55	Yes	0.459	0.094	0.56	Yes	0.432	0.306	0.74	Yes	1.00	**7.22**
		$U_7 - L_7$		53.70	-46.77	-319	327	575	-659	-83	171	-176	-109	0.097	0.894	1.00	Yes	0.053	0.492	0.55	Yes	0.106	0.268	0.38	Yes	0.099	0.843	0.95	Yes	1.00	**20.59**
		$U_8 - L_8$		-----	-461.97	18	-36	366	-374	-145	-139	-72	-134	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.115	0.79	Yes	0.665	0.327	1.00	Yes	1.00	**4.74**
		$U_9 - L_9$		-----	-695.52	89	-124	567	-585	-123	-56	-171	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.085	0.86	Yes	0.745	0.248	1.00	Yes	1.00	**5.73**
		$U_{10} - L_{10}$		-----	-798.62	120	-142	536	-560	-74	-40	69	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.081	0.87	Yes	0.747	0.247	1.00	Yes	1.00	**6.08**
		$U_{11} - L_{11}$		-----	-816.89	174	-172	510	-518	-83	-25	18	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.075	0.9	Yes	0.764	0.228	1.00	Yes	1.00	**5.59**
		$U_{12} - L_{12}$		-----	-882.22	174	-155	515	-527	-24	130	33	66	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.079	0.93	Yes	0.765	0.226	1.00	Yes	1.00	**5.51**
		$U_{13} - L_{13}$		-----	-745.65	245	-243	571	-559	-82	44	81	76	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.109	0.95	Yes	0.719	0.273	1.00	Yes	1.00	**4.15**
		$U_{14} - L_{14}$		-----	-1294.70	-631	587	711	-680	-107	144	-58	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.947	0.047	1	Yes	0.859	0.126	0.99	Yes	1.00	**7.98**
		$U_{15} - L_{15}$		-----	-710.32	-657	630	-163	165	-144	-99	-79	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.145	0.94	Yes	0.685	0.315	1.00	Yes	1.00	**5.92**
		$U_{16} - L_{16}$		-----	-712.93	-549	529	-128	102	-256	-144	-166	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.113	0.94	Yes	0.764	0.233	1.00	Yes	1.00	**5.50**
		$U_{17} - L_{17}$		-----	-652.02	-509	515	-133	130	-148	-43	-101	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.084	0.89	Yes	0.759	0.239	1.00	Yes	1.00	**5.07**
		$U_{18} - L_{18}$		-----	-569.27	-523	526	-84	92	-104	-1	-167	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.090	0.85	Yes	0.725	0.269	1.00	Yes	1.00	**5.34**
		$U_{19} - L_{19}$		-----	-474.93	-300	291	-29	37	-124	27	-160	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.095	0.81	Yes	0.709	0.289	1.00	Yes	1.00	**4.62**
		$U_{20} - L_{20}$		28.01	-375.82	-232	237	10	-4	-59	62	-154	18	0.046	0.311	0.36	Yes	0.025	0.171	0.20	Yes	0.771	0.109	0.88	Yes	0.720	0.271	1.00	Yes	1.00	**4.58**
		$U_{21} - L_{21}$		83.78	-309.64	-256	262	61	-53	-119	59	-138	29	0.151	0.375	0.53	Yes	0.083	0.207	0.29	Yes	0.699	0.125	0.83	Yes	0.655	0.335	1.00	Yes	1.00	**5.23**
		$U_{22} - L_{22}$		122.80	-----	-549	557	441	-482	34	199	-226	-83	0.221	0.778	1.00	Yes	0.121	0.428	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**19.53**
		$U_{23} - L_{23}$		145.48	-318.99	-101	93	242	-251	-105	-79	-7	-89	0.262	0.351	0.62	Yes	0.144	0.193	0.34	Yes	0.721	0.124	0.85	Yes	0.675	0.321	1.00	Yes	1.00	**5.41**
		$U_{24} - L_{24}$		52.89	-381.19	-38	24	226	-234	-81	-62	-98	-86	0.086	0.293	0.38	Yes	0.047	0.161	0.21	Yes	0.782	0.103	0.89	Yes	0.730	0.268	1.00	Yes	1.00	**4.58**
		$U_{25} - L_{25}$		-----	-472.77	21	-40	298	-296	-75	10	24	-28	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.079	0.8	Yes	0.706	0.287	1.00	Yes	1.00	**4.40**
		$U_{26} - L_{26}$		-----	-567.58	73	-102	507	-531	-78	-6	-8	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.081	0.84	Yes	0.723	0.272	1.00	Yes	1.00	**4.96**
		$U_{27} - L_{27}$		-----	-635.83	148	-149	541	-550	-148	2	-102	5	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.082	0.87	Yes	0.740	0.255	1.00	Yes	1.00	**4.77**
		$U_{28} - L_{28}$		-----	-707.60	125	-133	547	-548	-21	-82	152	87	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.079	0.9	Yes	0.758	0.232	1.00	Yes	1.00	**4.84**
		$U_{29} - L_{29}$		-----	-713.02	206	-212	644	-628	-114	26	38	58	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.122	0.92	Yes	0.687	0.308	1.00	Yes	1.00	**5.18**
		$U_{30} - L_{30}$		-----	-1278.25	-668	598	646	-640	-153	88	0	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.935	0.058	1	Yes	0.848	0.118	0.97	Yes	1.00	**7.56**
		$U_{31} - L_{31}$		-----	-747.18	-569	550	-182	178	-177	-93	-120	-60	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.142	0.98	Yes	0.720	0.272	1.00	Yes	1.00	**5.14**
		$U_{32} - L_{32}$		-----	-907.44	-486	492	-131	105	-280	-117	-210	-143	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.124	1	Yes	0.787	0.211	1.00	Yes	1.00	**6.25**
		$U_{33} - L_{33}$		-----	-820.75	-524	512	-139	141	-115	4	-179	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.092	0.92	Yes	0.767	0.231	1.00	Yes	1.00	**6.50**
		$U_{34} - L_{34}$		-----	-801.57	-542	551	-92	115	-104	66	-209	-21	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.089	0.89	Yes	0.749	0.243	1.00	Yes	1.00	**6.76**
		$U_{35} - L_{35}$		-----	-696.83	-567	575	-80	106	23	158	-184	63	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.074	0.85	Yes	0.747	0.244	1.00	Yes	1.00	**6.36**
		$U_{36} - L_{36}$		-----	-458.66	-376	378	-34	48	-65	113	-136	81	-----	-----	-----	-----	-----	-----	-----	-----	0.665	0.097	0.77	Yes	0.661	0.331	1.00	Yes	1.00	**4.90**
		$U_{37} - L_{37}$		50.61	-72.83	-609	659	234	-256	-36	219	-157	-33	0.091	0.906	1.00	Yes	0.050	0.498	0.55	Yes	0.165	0.274	0.44	Yes	0.154	0.842	1.00	Yes	1.00	**18.88**
		$U_{38} - L_{38}$		357.72	-141.14	-234	241	149	-150	-111	-140	-137	-161	0.643	0.354	1.00	Yes	0.354	0.195	0.55	Yes	0.318	0.129	0.45	Yes	0.299	0.308	0.61	Yes	1.00	**5.84**
		$U_{39} - L_{39}$		226.02	-331.36	-187	167	207	-227	-118	-108	-102	-146	0.407	0.332	0.74	Yes	0.224	0.183	0.41	Yes	0.749	0.151	0.9	Yes	0.701	0.290	1.00	Yes	1.00	**6.10**
		$U_{40} - L_{40}$		94.76	-334.32	-58	32	223	-222	-72	-34	-125	-125	0.170	0.321	0.50	Yes	0.094	0.176	0.28	Yes	0.758	0.128	0.89	Yes	0.707	0.284	1.00	Yes	1.00	**4.81**
		$U_{41} - L_{41}$		-----	-485.85	34	-53	246	-258	-34	11	16	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.084	0.92	Yes	0.762	0.235	1.00	Yes	1.00	**4.65**
		$U_{42} - L_{42}$		-----	-587.56	109	-118	480	-489	-85	-47	66	-58	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.079	0.87	Yes	0.749	0.250	1.00	Yes	1.00	**4.78**
		$U_{43} - L_{43}$		-----	-705.41	143	-160	534	-554	-35	-13	585	53	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.146	0.96	Yes	0.756	0.235	1.00	Yes	1.00	**4.86**
		$U_{44} - L_{44}$		-----	-674.13	195	-241	467	-581	-27	-5	572	97	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.188	1	Yes	0.722	0.246	0.97	Yes	1.00	**3.83**
	Structure 3	$U_0 - L_0$		-----	-554.10	-366	441	-105	170	-1000	-131	-249	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.267	1	Yes	0.645	0.205	0.85	Yes	1.00	**3.18**
		$U_1 - L_1$		-----	-649.23	-512	508	-111	119	-8	22	2	-76	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.077	0.89	Yes	0.756	0.238	1.00	Yes	1.00	**5.35**
		$U_2 - L_2$		-----	-536.09	-428	433	-93	99	-114	52	82	30	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.083	0.87	Yes	0.746	0.245	1.00	Yes	1.00	**4.68**
		$U_3 - L_3$		-----	-440.26	-214	228	-35	46	33	162	0	120	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.113	0.94	Yes	0.760	0.231	1.00	Yes	1.00	**4.25**
		$U_4 - L_4$		79.76	-315.82	-256	257	39	-26	-117	155	-177	80	0.143	0.379	0.53	Yes	0.079	0.208	0.29	Yes	0.712	0.104	0.82	Yes	0.668	0.328	1.00	Yes	1.00	**5.09**
		$U_5 - L_5$		207.29	-307.35	-255	267	137	-136	-150	125	-154	68	0.373	0.386	0.76	Yes	0.205	0.212	0.42	Yes	0.689	0.131	0.82	Yes	0.650	0.342	1.00	Yes	1.00	**5.95**
		$U_6 - L_6$		101.75	-122.54	-412	423	546	-578	-164	-3	-266	-103	0.183	0.816	1.00	Yes	0.101	0.449	0.55	Yes	0.273	0.252	0.53	Yes	0.259	0.739	1.00	Yes	1.00	**16.85**
		$U_7 - L_7$		5.82	-368.29	-28	13	240	-255	-188	-144	-191	-171	0.009	0.341	0.36	Yes	0.005	0.188	0.20	Yes	0.745	0.146	0.9	Yes	0.706	0.291	1.00	Yes	1.00	**3.99**
		$U_8 - L_8$		-----	-515.80	14	-23	341	-341	-114	-95	-32	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.105	0.85	Yes	0.708	0.291	1.00	Yes	1.00	**5.03**
		$U_9 - L_9$		-----	-654.93	50	-107	390	-491	-110	-58	-43	-61	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.092	0.88	Yes	0.762	0.228	1.00	Yes	1.00	**5.64**
		$U_{10} - L_{10}$		-----	-788.31	94	-98	387	-424	-12	50	-49	39	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.069	0.89	Yes	0.778	0.220	1.00	Yes	1.00	**5.82**
		$U_{11} - L_{11}$		-----	-648.35	182	-211	422	-476	-48	63	76	119	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.101	0.88	Yes	0.732	0.265	1.00	Yes	1.00	**3.55**
		$U_{12} - L_{12}$		-----	-1287.63	-464	504	441	-574	-46	42	55	42	-----	-----	-----	-----	-----	-----	-----	-----	0.930	0.043	0.98	Yes	0.893	0.107	1.00	Yes	1.00	**6.46**
		$U_{13} - L_{13}$		-----	-464.33	-258	281	-105	115	-161	-104	-116	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.138	0.92	Yes	0.716	0.277	1.00	Yes	1.00	**2.83**
		$U_{14} - L_{14}$		-----	-522.65	-272	280	-45	47	-242	-146	-212	-172	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.127	0.92	Yes	0.750	0.245	1.00	Yes	1.00	**4.63**
		$U_{15} - L_{15}$		-----	-429.19	-234	249	-23	30	-77	25	-170	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.111	0.89	Yes	0.740	0.253	1.00	Yes	1.00	**4.53**
		$U_{16} - L_{16}$		33.35	-1.65	-655	628	172	-151	-147	37	-346	-205	0.060	0.937	1.00	Yes	0.033	0.515	0.55	Yes	0.004	0.270	0.28	Yes	0.003	0.837	0.85	Yes	1.00	**14.66**
		$U_{17} - L_{17}$		297.50	-214.96	-318	327	196	-210	-118	-26	-56	-149	0.535	0.461	1.00	Yes	0.294	0.253	0.55	Yes	0.471	0.137	0.61	Yes	0.455	0.417	0.88	Yes	1.00	**6.84**
		$U_{18} - L_{18}$		77.06	-287.40	-150	143	267	-305	119	34	37	-73	0.139	0.424	0.57	Yes	0.076	0.233	0.31	Yes	0.628	0.122	0.76	Yes	0.608	0.390	1.00	Yes	1.00	**6.85**
		$U_{19} - L_{19}$		11.59	-326.27	-27	15	241	-241	-164	-86	-27	-82	0.021	0.356	0.38	Yes	0.011	0.196	0.21	Yes	0.713	0.133	0.85	Yes	0.690	0.309	1.00	Yes	1.00	**4.37**
		$U_{20} - L_{20}$		-----	-331.45	48	-56	177	-227	-171	-55	268	86	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.175	0.92	Yes	0.701	0.290	1.00	Yes	1.00	**2.15**

Moment (End) AB Operating

Operating Loads - 3F1

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	$U_0 - L_1$	393.55	-31.56	-209	95	7	-9	-943	-196	-46	-20	0.516	0.482	1.00	Yes	0.312	0.266	0.58	Yes	0.054	0.336	0.4	Yes	0.049	0.245	0.30	Yes	1.00	**5.94**
		$U_1 - L_2$	387.19	-27.29	-75	48	5	-45	-26	-133	-686	-318	0.696	0.295	1.00	Yes	0.383	0.162	0.55	Yes	0.063	0.260	0.33	Yes	0.058	0.096	0.16	Yes	1.00	**6.21**
		$U_2 - L_3$	314.45	-326.73	-57	39	-62	-82	-142	-351	-383	-203	0.566	0.216	0.79	Yes	0.311	0.119	0.43	Yes	0.752	0.246	1	Yes	0.691	0.105	0.80	Yes	1.00	**7.41**
		$U_3 - L_4$	-----	-379.20	2	-9	0	-60	-168	-138	-215	-154	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.125	1	Yes	0.802	0.077	0.88	Yes	1.00	**4.00**
		$U_4 - L_4$	538.84	-----	-60	80	-144	-29	-27	-162	-210	-248	0.790	0.203	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.79**
		$U_5 - L_5$	711.85	-----	-187	219	-2	31	65	-63	144	73	0.842	0.151	1.00	Yes	0.463	0.083	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.18**
		$U_7 - L_6$	641.71	-----	-271	234	-77	83	345	151	473	298	0.759	0.241	1.00	Yes	0.417	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		$U_8 - L_7$	645.83	-----	-109	299	-8	115	309	207	240	172	0.764	0.227	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.15**
		$U_9 - L_9$	993.29	-----	-100	379	0	133	273	231	87	106	0.794	0.204	1.00	Yes	0.492	0.114	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.36**
		$U_9 - L_{10}$	1050.23	-----	-306	270	-150	81	175	135	144	186	0.840	0.160	1.00	Yes	0.520	0.089	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.37**
		$U_{10} - L_{11}$	1031.83	-----	-230	217	-118	17	-94	-155	-125	-107	0.872	0.127	1.00	Yes	0.540	0.071	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.77**
		$U_{11} - L_{12}$	838.21	-----	-234	164	-110	-51	-367	-388	-322	-251	0.829	0.166	1.00	Yes	0.456	0.092	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.70**
		$U_{12} - L_{13}$	626.00	-----	-184	166	-50	-7	-378	-332	-344	-276	0.763	0.235	1.00	Yes	0.480	0.133	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.05**
		$U_{13} - L_{14}$	446.57	-53.20	-75	55	-17	-35	-281	-329	-288	-317	0.803	0.191	1.00	Yes	0.442	0.105	0.55	Yes	0.124	0.156	0.28	Yes	0.113	0.096	0.21	Yes	1.00	**4.46**
		$U_{15} - L_{14}$	241.71	-333.68	-53	12	71	-109	-204	-330	-206	-309	0.435	0.234	0.67	Yes	0.239	0.129	0.37	Yes	0.782	0.214	1	Yes	0.706	0.139	0.85	Yes	1.00	**5.40**
		$U_{16} - L_{15}$	423.05	-203.52	-122	92	28	-67	-223	-257	-215	-176	0.761	0.230	1.00	Yes	0.418	0.127	0.55	Yes	0.482	0.175	0.66	Yes	0.431	0.156	0.59	Yes	1.00	**5.50**
		$U_{17} - L_{16}$	544.41	-----	-143	107	-7	-23	-120	-215	-116	-129	0.798	0.195	1.00	Yes	0.439	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.64**
		$U_{18} - L_{17}$	660.85	-----	-328	260	-107	53	-133	-147	-181	-74	0.781	0.219	1.00	Yes	0.430	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.89**
		$U_{19} - L_{18}$	704.66	-----	-342	254	-93	65	-45	-144	-316	-33	0.763	0.227	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.60**
		$U_{20} - L_{19}$	603.53	-----	-428	323	-127	106	-771	-86	1	34	0.654	0.346	1.00	Yes	0.360	0.190	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.90**
	Structure 2	$U_0 - L_1$	657.41	-----	-407	353	-68	78	-1072	-24	-122	48	0.650	0.349	1.00	Yes	0.358	0.192	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.39**
		$U_1 - L_2$	798.91	-----	-402	322	-86	58	-61	-154	42	10	0.790	0.209	1.00	Yes	0.435	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.89**
		$U_2 - L_3$	648.46	-----	-325	250	-70	53	-207	-227	-78	-176	0.767	0.225	1.00	Yes	0.422	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.69**
		$U_3 - L_4$	576.13	-----	-170	140	-40	-10	-312	-284	-329	-221	0.768	0.224	1.00	Yes	0.422	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.97**
		$U_4 - L_5$	412.09	-153.05	-119	97	21	-52	-340	-273	-283	-209	0.741	0.251	1.00	Yes	0.408	0.138	0.55	Yes	0.378	0.200	0.58	Yes	0.324	0.153	0.48	Yes	1.00	**5.24**
		$U_5 - L_6$	343.96	-318.60	-91	70	74	-108	-381	-289	-284	-242	0.619	0.248	0.87	Yes	0.340	0.136	0.48	Yes	0.752	0.247	1	Yes	0.674	0.138	0.82	Yes	1.00	**6.13**
		$U_6 - L_7$	58.07	-372.70	-24	-7	54	-93	-310	-255	-283	-250	0.095	0.187	0.29	Yes	0.052	0.103	0.16	Yes	0.798	0.194	1	Yes	0.714	0.106	0.83	Yes	1.00	**3.59**
		$U_8 - L_7$	620.70	-76.92	-168	165	-2	-46	-136	-275	-212	-249	0.791	0.206	1.00	Yes	0.498	0.117	0.62	Yes	0.128	0.096	0.23	Yes	0.115	0.150	0.27	Yes	1.00	**6.35**
		$U_8 - L_8$	733.74	-----	-324	270	-69	-1	-115	-196	-105	-147	0.795	0.198	1.00	Yes	0.437	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.54**
		$U_{10} - L_9$	837.23	-----	-310	239	-91	37	-55	-144	-26	-66	0.828	0.165	1.00	Yes	0.456	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.35**
		$U_{11} - L_{10}$	907.99	-----	-351	294	-120	83	113	-33	19	19	0.827	0.164	1.00	Yes	0.455	0.090	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.42**
		$U_{12} - L_{11}$	896.15	-----	-364	351	-96	121	207	63	211	140	0.816	0.183	1.00	Yes	0.449	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.35**
		$U_{13} - L_{12}$	744.91	-----	-428	370	-195	166	276	123	391	230	0.737	0.257	1.00	Yes	0.405	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		$U_{14} - L_{13}$	759.38	-----	-275	433	-68	177	286	128	230	137	0.751	0.244	1.00	Yes	0.413	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.66**
		$U_{14} - L_{15}$	642.53	-----	-220	361	-5	105	153	83	56	40	0.760	0.232	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.88**
		$U_{15} - L_{16}$	644.11	-----	-383	330	-112	105	116	83	63	71	0.762	0.238	1.00	Yes	0.419	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		$U_{16} - L_{17}$	747.98	-----	-345	358	-74	98	16	-3	9	5	0.810	0.186	1.00	Yes	0.446	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.47**
		$U_{17} - L_{18}$	679.61	-----	-289	309	-72	66	-76	-70	-17	-28	0.803	0.189	1.00	Yes	0.442	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.83**
		$U_{18} - L_{19}$	685.87	-----	-270	273	-51	22	-154	-149	-175	-117	0.811	0.187	1.00	Yes	0.446	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.80**
		$U_{19} - L_{20}$	604.37	-26.79	-189	191	-13	-13	-254	-211	-231	-146	0.771	0.223	1.00	Yes	0.424	0.125	0.55	Yes	0.044	0.102	0.15	Yes	0.040	0.171	0.22	Yes	1.00	**5.77**
		$U_{20} - L_{21}$	435.10	-91.16	-112	116	9	-27	-209	-185	-162	-154	0.783	0.209	1.00	Yes	0.430	0.115	0.55	Yes	0.216	0.107	0.33	Yes	0.193	0.149	0.35	Yes	1.00	**5.16**
		$U_{21} - L_{22}$	443.79	-337.05	-91	73	36	-84	-280	-277	-275	-254	0.798	0.197	1.00	Yes	0.439	0.108	0.55	Yes	0.796	0.184	0.98	Yes	0.713	0.116	0.83	Yes	1.00	**6.89**
		$U_{22} - L_{22}$	383.36	-358.12	-85	70	66	-99	-73	-230	-165	-223	0.689	0.192	0.89	Yes	0.379	0.106	0.49	Yes	0.853	0.141	1	Yes	0.758	0.126	0.89	Yes	1.00	**7.31**
		$U_{24} - L_{23}$	451.69	-109.61	-118	108	31	-44	-30	-127	-52	-81	0.812	0.188	1.00	Yes	0.447	0.103	0.55	Yes	0.262	0.052	0.32	Yes	0.232	0.151	0.39	Yes	1.00	**5.38**
		$U_{25} - L_{24}$	628.49	-9.89	-199	178	9	-24	11	-93	-21	-51	0.801	0.197	1.00	Yes	0.441	0.110	0.56	Yes	0.016	0.055	0.08	Yes	0.015	0.178	0.20	Yes	1.00	**5.64**
		$U_{26} - L_{25}$	688.22	-----	-286	264	-36	19	109	-29	7	19	0.814	0.182	1.00	Yes	0.448	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.34**
		$U_{27} - L_{26}$	677.58	-----	-290	287	-49	59	187	44	137	74	0.801	0.198	1.00	Yes	0.441	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.08**
		$U_{28} - L_{27}$	725.17	-----	-336	349	-67	104	180	95	173	134	0.785	0.208	1.00	Yes	0.432	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.87**
		$U_{29} - L_{28}$	633.23	-----	-358	331	-126	120	266	110	218	111	0.749	0.251	1.00	Yes	0.412	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.96**
		$U_{30} - L_{29}$	633.90	-----	-212	359	-38	128	238	108	178	103	0.749	0.246	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.78**
		$U_{30} - L_{31}$	781.06	-----	-293	440	-28	135	113	60	64	39	0.773	0.221	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.37**
		$U_{31} - L_{32}$	790.93	-----	-449	393	-130	130	56	40	35	46	0.782	0.217	1.00	Yes	0.430	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.23**
		$U_{32} - L_{33}$	903.30	-----	-369	333	-96	109	-126	-103	4	-30	0.823	0.174	1.00	Yes	0.453	0.096	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.59**
		$U_{33} - L_{34}$	893.70	-----	-335	301	-121	68	-244	-216	-272	-167	0.814	0.179	1.00	Yes	0.448	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.33**
		$U_{34} - L_{35}$	821.33	-----	-286	244	-96	32	-341	-310	-192	-244	0.813	0.184	1.00	Yes	0.447	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.00**
		$U_{35} - L_{36}$	718.71	-----	-300	280	-88	8	-372	-311	-310	-269	0.778	0.215	1.00	Yes	0.428	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.71**
		$U_{36} - L_{37}$	610.68	-43.98	-158	159	-26	-24	-348	-343	-335	-325	0.779	0.213	1.00	Yes	0.490	0.121	0.62	Yes	0.073	0.122	0.2	Yes	0.066	0.142	0.21	Yes	1.00	**5.49**
		$U_{38} - L_{37}$	18.60	-391.69	-15	-9	73	-100	-120	-222	-158	-219	0.030	0.172	0.21	Yes	0.017	0.095	0.12	Yes	0.846	0.146	1	Yes	0.750	0.114	0.87	Yes	1.00	**3.74**
		$U_{39} - L_{38}$	320.81	-342.57	-89	58	106	-127	-174	-232	-138	-183	0.577	0.230	0.81	Yes	0.317	0.127	0.45	Yes	0.816	0.178	1	Yes	0.725	0.163	0.89	Yes	1.00	**6.20**
		$U_{40} - L_{39}$	433.93	-173.31	-127	92	44	-68	-120	-179	-99	-106	0.780	0.214	1.00	Yes	0.429	0.118	0.55	Yes	0.415	0.138	0.56	Yes	0.367	0.162	0.53	Yes	1.00	**5.49**
		$U_{41} - L_{40}$	604.78	-----	-181	135	-23	-20	-61	-138	-129	-65	0.806	0.194	1.00	Yes	0.443	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.11**
		$U_{42} - L_{41}$	670.43	-----	-334	276	-75	51	-72	-96	-1	-4	0.793	0.207	1.00	Yes	0.436	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.37**
		$U_{43} - L_{42}$	804.56	-----	-392	314	-97	66	-8	-121	-5	-28	0.796	0.200	1.00	Yes	0.438	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.53**
		$U_{44} - L_{43}$	731.79	-----	-413	366	-140	124	-528	-266	33	7	0.724	0.271	1.00	Yes	0.398	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.03**
	Structure 3	$U_0 - L_1$	588.98	-----	-397	300	-71	73	-929	-108	-132	45	0.638	0.356	1.00	Yes	0.351	0.196	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.59**
		$U_1 - L_2$	730.06	-----	-359	283	-89	55	-66	-147	39	13	0.791	0.208	1.00	Yes	0.435	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.86**
		$U_2 - L_3$	649.03	-----	-319	251	-105	46	-233	-263	-213	-192	0.767	0.228	1.00	Yes	0.422	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.10**
		$U_3 - L_4$	527.70	-----	-136	118	-26	-23	-331	-328	-352	-242	0.774	0.220	1.00	Yes	0.426	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.16**
		$U_4 - L_5$	408.08	-216.36	-116	97	17	-60	-384	-316	-355	-243	0.734	0.259	1.00	Yes	0.404	0.143	0.55	Yes	0.513	0.218	0.74	Yes	0.458	0.148	0.61	Yes	1.00	**5.42**
		$U_5 - L_6$	219.45	-319.56	-42	14	42	-95	-358	-341	-285	-311	0.395	0.224	0.62	Yes	0.217	0.123	0.35	Yes	0.749	0.243	1	Yes	0.676	0.121	0.80	Yes	1.00	**4.81**
		$U_7 - L_6$	453.78	-121.21	-79	58	22	-52	-86	-272	-112	-268	0.816	0.179	1.00	Yes	0.449	0.099	0.55	Yes	0.282	0.117	0.4	Yes	0.256	0.100	0.36	Yes	1.00	**5.72**
		$U_8 - L_7$	636.33	-30.62	-192	173	-31	-26	-164	-238	-155	-176	0.776	0.215	1.00	Yes	0.488	0.121	0.61	Yes	0.048	0.101	0.15	Yes	0.044	0.168	0.22	Yes	1.00	**5.92**
		$U_8 - L_9$	858.51	-----	-258	142	-83	-48	-53	-199	-123	-125	0.849	0.149	1.00	Yes	0.467	0.082	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.32**
		$U_{10} - L_9$	1019.38	-----	-249	187	-105	23	152	-15	-54	20	0.861	0.135	1.00	Yes	0.533	0.075	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.96**
		$U_{11} - L_{10}$	977.25	-----	-299	239	-93	80	409	243	608	442	0.781	0.211	1.00	Yes	0.484	0.119	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.65**
		$U_{12} - L_{11}$	977.14	-----	-106	357	-12	141	411	262	275	207	0.781	0.212	1.00	Yes	0.484	0.119	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.45**
		$U_{12} - L_{13}$	673.55	-----	-114	289	-3	106	187	118	114	92	0.796	0.199	1.00	Yes	0.438	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		$U_{13} - L_{14}$	687.07	-----	-284	263	-70	76	130	90	97	122	0.812	0.185	1.00	Yes	0.447	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.39**
		$U_{14} - L_{15}$	703.28	-----	-170	236	-13	16	-130	-161	51	-21	0.831	0.164	1.00	Yes	0.457	0.090	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.89**
		$U_{15} - L_{16}$	577.42	-37.76	-64	87	-34	-27	-221	-243	-199	-160	0.847	0.145	1.00	Yes	0.466	0.080	0.55	Yes	0.071	0.096	0.17	Yes	0.065	0.089	0.16	Yes	1.00	**5.98**
		$U_{17} - L_{16}$	-----	-417.77	5	-8	42	-61	17	-79	-39	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.955	0.043	1	Yes	0.884	0.078	0.97	Yes	1.00	**4.68**
		$U_{18} - L_{17}$	195.84	-371.09	-44	26	-46	-77	-8	-199	-212	-104	0.352	0.159	0.52	Yes	0.194	0.088	0.29	Yes	0.854	0.137	1	Yes	0.785	0.098	0.89	Yes	1.00	**6.23**
		$U_{19} - L_{18}$	438.36	-82.78	-82	37	3	-43	66	-127	-350	-143	0.788	0.207	1.00	Yes	0.434	0.114	0.55	Yes	0.190	0.101	0.3	Yes	0.175	0.105	0.29	Yes	1.00	**6.72**
		$U_{20} - L_{19}$	197.48	-89.01	-308	174	-12	-6	-1478	31	46	-12	0.259	0.732	1.00	Yes	0.156	0.403	0.56	Yes	0.152	0.458	0.61	Yes	0.137	0.360	0.50	Yes	1.00	**11.01**

Moment (End) AB Operating

Operating Loads - 3F1

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	$U_0 - U_1$			8.95	-553.93	-107	60	477	-1038	-51	107	-28	-772	0.010	0.377	0.39	Yes	0.007	0.258	0.27	Yes	0.754	0.166	0.92	Yes	0.747	0.247	1.00	Yes	1.00	**7.71**
		$U_1 - U_2$			6.68	-511.39	-107	71	-251	-745	-151	110	-214	-422	0.008	0.248	0.26	Yes	0.005	0.170	0.18	Yes	0.696	0.299	1	Yes	0.690	0.177	0.87	Yes	1.00	**3.99**
		$U_2 - U_3$			153.28	-562.73	-100	283	-440	-539	-114	108	-323	-562	0.176	0.223	0.40	Yes	0.119	0.147	0.27	Yes	0.766	0.230	1	Yes	0.759	0.128	0.89	Yes	1.00	**4.87**
		$U_3 - U_4$			480.97	-605.25	142	404	-506	-731	-220	-9	-110	-294	0.551	0.223	0.78	Yes	0.378	0.153	0.54	Yes	0.824	0.171	1	Yes	0.816	0.174	0.99	Yes	1.00	**7.57**
		$U_4 - U_5$			581.79	-587.94	242	460	-388	-569	-82	5	-583	517	0.667	0.234	0.91	Yes	0.458	0.160	0.62	Yes	0.800	0.198	1	Yes	0.793	0.135	0.93	Yes	1.00	**9.24**
		$U_5 - U_6$			698.45	-20.42	283	502	-109	3	99	139	-131	429	0.801	0.192	1.00	Yes	0.540	0.126	0.67	Yes	0.028	0.155	0.19	Yes	0.028	0.119	0.15	Yes	1.00	**7.69**
		$U_6 - U_7$			864.61	-----	399	221	4	-286	323	271	-337	619	0.827	0.170	1.00	Yes	0.578	0.117	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.10**
		$U_7 - U_8$			832.40	-----	-799	2143	133	613	359	664	965	864	0.577	0.423	1.00	Yes	0.402	0.289	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.69**
		$U_8 - U_9$			796.27	-----	1035	-132	1502	-1086	253	479	52	-731	0.652	0.342	1.00	Yes	0.446	0.232	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.61**
		$U_9 - U_{10}$			620.28	-359.88	240	248	34	-838	-2	303	277	-827	0.673	0.321	1.00	Yes	0.456	0.215	0.68	Yes	0.463	0.284	0.75	Yes	0.459	0.188	0.65	Yes	1.00	**9.60**
		$U_{10} - U_{11}$			63.74	-613.32	247	-176	163	-928	48	105	-176	-516	0.069	0.291	0.36	Yes	0.046	0.188	0.24	Yes	0.790	0.188	0.98	Yes	0.783	0.208	1.00	Yes	1.00	**4.87**
		$U_{11} - U_{12}$			-----	-901.33	152	-210	-8	-842	13	101	3	-230	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.141	1	Yes	0.846	0.140	0.99	Yes	1.00	**3.66**
		$U_{12} - U_{13}$			-----	-1239.96	-52	-270	-352	-853	82	6	98	-496	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.157	1	Yes	0.828	0.118	0.95	Yes	1.00	**4.19**
		$U_{13} - U_{14}$			-----	-1358.54	-197	-506	-395	-1515	-42	-8	-335	-228	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.213	1	Yes	0.779	0.167	0.95	Yes	1.00	**3.98**
		$U_{14} - U_{15}$			-----	-1429.62	-411	-295	-941	-939	41	-279	-356	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.169	1	Yes	0.820	0.104	0.93	Yes	1.00	**3.82**
		$U_{15} - U_{16}$			-----	-1401.19	-256	-426	-593	-1171	-35	-253	-392	159	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.185	1	Yes	0.803	0.129	0.94	Yes	1.00	**5.21**
		$U_{16} - U_{17}$			-----	-1424.64	-373	-189	-801	-888	-5	-224	-143	376	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.172	1	Yes	0.817	0.098	0.92	Yes	1.00	**6.50**
		$U_{17} - U_{18}$			-----	-1092.55	-573	70	-373	-240	-65	-144	-348	541	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.128	1	Yes	0.855	0.093	0.95	Yes	1.00	**4.23**
		$U_{18} - U_{19}$			-----	-713.44	-544	94	-357	-34	276	-242	558	-136	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.181	1	Yes	0.803	0.110	0.92	Yes	1.00	**4.26**
		$U_{19} - U_{20}$			-----	-694.85	-1035	488	-370	-226	-242	-121	150	3	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.200	0.99	Yes	0.782	0.208	1.00	Yes	1.00	**14.33**
	Structure 2	$U_0 - U_1$			-----	-582.47	269	-310	670	-1835	74	48	178	-906	-----	-----	-----	-----	-----	-----	-----	-----	0.692	0.186	0.88	Yes	0.688	0.311	1.00	Yes	1.00	**9.99**
		$U_1 - U_2$			-----	-805.89	-150	-320	-316	-1134	-19	19	197	-405	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.208	1	Yes	0.778	0.172	0.95	Yes	1.00	**5.11**
		$U_2 - U_3$			-----	-1129.59	-130	-436	-131	-1475	-33	-63	-220	-660	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.191	1	Yes	0.802	0.150	0.96	Yes	1.00	**4.51**
		$U_3 - U_4$			-----	-1328.71	-535	-553	-908	-1674	-113	-43	-225	-477	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.233	1	Yes	0.757	0.149	0.91	Yes	1.00	**3.85**
		$U_4 - U_5$			-----	-1465.41	-587	-567	-1229	-1767	-119	-91	-129	-669	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.237	1	Yes	0.752	0.146	0.90	Yes	1.00	**4.13**
		$U_5 - U_6$			-----	-1550.93	-579	-16	-1182	-1393	-193	-49	-631	-713	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.196	1	Yes	0.796	0.115	0.92	Yes	1.00	**4.73**
		$U_6 - U_7$			-----	-1332.71	-337	-223	-1029	-1529	-168	-100	-336	-379	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.234	1	Yes	0.759	0.136	0.90	Yes	1.00	**4.51**
		$U_7 - U_8$			-----	-1390.15	-326	-174	-1320	-1250	-78	-173	-434	101	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.196	1	Yes	0.792	0.118	0.91	Yes	1.00	**5.55**
		$U_8 - U_9$			-----	-1175.65	-365	199	-1034	-738	-18	-196	-523	135	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.193	1	Yes	0.797	0.110	0.91	Yes	1.00	**5.36**
		$U_9 - U_{10}$			254.94	-878.69	-110	507	-1016	-410	-124	-240	-603	31	0.187	0.189	0.38	Yes	0.127	0.128	0.26	Yes	0.763	0.233	1	Yes	0.758	0.124	0.89	Yes	1.00	**6.52**
		$U_{10} - U_{11}$			816.60	-660.20	325	606	-1133	-511	-169	-93	-1038	365	0.690	0.286	0.98	Yes	0.469	0.189	0.66	Yes	0.660	0.339	1	Yes	0.656	0.160	0.82	Yes	1.00	**10.11**
		$U_{11} - U_{12}$			-----	-422.67	-3194	1952	-230	-1422	-952	-1463	-970	3253	-----	-----	-----	-----	-----	-----	-----	-----	0.423	0.568	1	Yes	0.420	0.451	0.88	Yes	1.00	**46.00**
		$U_{12} - U_{13}$			1026.85	-----	602	258	189	-1262	464	744	-655	1524	0.693	0.304	1.00	Yes	0.494	0.210	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.68**
		$U_{13} - U_{14}$			1142.42	-----	-1173	3928	-109	1527	520	1039	653	955	0.562	0.435	1.00	Yes	0.398	0.285	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.30**
		$U_{14} - U_{15}$			1230.27	-----	2346	-69	3736	-1638	529	639	560	-193	0.605	0.390	1.00	Yes	0.428	0.255	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.88**
		$U_{15} - U_{16}$			1275.72	-----	129	381	-305	-1484	176	406	-68	-613	0.771	0.221	1.00	Yes	0.549	0.149	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.73**
		$U_{16} - U_{17}$			1023.28	-----	654	201	264	-1194	-28	309	101	-904	0.754	0.245	1.00	Yes	0.502	0.161	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.85**
		$U_{17} - U_{18}$			710.75	-268.42	468	236	332	-1205	-57	275	-288	-512	0.713	0.279	1.00	Yes	0.475	0.185	0.66	Yes	0.319	0.219	0.54	Yes	0.317	0.205	0.53	Yes	1.00	**7.16**
		$U_{18} - U_{19}$			505.49	-639.18	540	125	124	-1209	5	144	-130	-801	0.507	0.323	0.83	Yes	0.333	0.207	0.54	Yes	0.759	0.233	1	Yes	0.755	0.205	0.97	Yes	1.00	**7.38**
		$U_{19} - U_{20}$			333.18	-736.61	314	151	-343	-1081	-48	150	73	-431	0.312	0.231	0.55	Yes	0.207	0.152	0.36	Yes	0.818	0.177	1	Yes	0.813	0.173	0.99	Yes	1.00	**5.70**
		$U_{20} - U_{21}$			84.72	-823.04	-57	48	-293	-1008	-75	-11	-300	-663	0.066	0.218	0.29	Yes	0.046	0.144	0.19	Yes	0.757	0.236	1	Yes	0.751	0.146	0.90	Yes	1.00	**5.39**
		$U_{21} - U_{22}$			76.00	-799.74	-77	-33	-547	-1268	-182	-97	-281	-211	0.059	0.214	0.28	Yes	0.042	0.143	0.19	Yes	0.735	0.263	1	Yes	0.730	0.184	0.92	Yes	1.00	**4.88**
		$U_{22} - U_{23}$			111.25	-831.68	0	-70	-929	-952	-34	-152	-252	196	0.086	0.165	0.26	Yes	0.061	0.111	0.18	Yes	0.765	0.227	1	Yes	0.759	0.138	0.90	Yes	1.00	**5.77**
		$U_{23} - U_{24}$			317.53	-800.78	-64	259	-292	-1049	11	-49	-496	350	0.246	0.206	0.46	Yes	0.172	0.135	0.31	Yes	0.736	0.260	1	Yes	0.731	0.152	0.89	Yes	1.00	**7.49**
		$U_{24} - U_{25}$			550.12	-724.58	311	448	-672	-835	24	-35	-563	581	0.516	0.212	0.73	Yes	0.342	0.139	0.49	Yes	0.804	0.190	1	Yes	0.799	0.134	0.94	Yes	1.00	**8.79**
		$U_{25} - U_{26}$			715.62	-579.63	236	680	-884	-412	21	-36	-845	347	0.718	0.274	1.00	Yes	0.471	0.176	0.65	Yes	0.689	0.209	0.9	Yes	0.685	0.150	0.84	Yes	1.00	**11.15**
		$U_{26} - U_{27}$			6.08	-489.40	-1110	1072	-256	-1309	-727	-351	-1403	2143	0.006	0.536	0.55	Yes	0.004	0.353	0.36	Yes	0.582	0.412	1	Yes	0.578	0.222	0.81	Yes	1.00	**25.15**
		$U_{27} - U_{28}$			919.42	-----	-1005	1764	-328	-450	-114	-458	-457	914	0.677	0.318	1.00	Yes	0.451	0.209	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.99**
		$U_{28} - U_{29}$			1339.65	-----	117	226	-126	-897	-2	260	-447	968	0.810	0.184	1.00	Yes	0.576	0.126	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.72**
		$U_{29} - U_{30}$			1134.62	-----	-945	3884	62	1560	567	1057	903	1200	0.558	0.442	1.00	Yes	0.395	0.290	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.81**
		$U_{30} - U_{31}$			1283.43	-----	2371	-206	3469	-1816	591	623	582	-515	0.631	0.364	1.00	Yes	0.447	0.238	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.01**
		$U_{31} - U_{32}$			1178.32	-----	81	345	-560	-1040	203	380	223	-742	0.796	0.202	1.00	Yes	0.567	0.138	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.05**
		$U_{32} - U_{33}$			815.16	-232.03	578	127	418	-1309	10	216	-269	-1007	0.689	0.307	1.00	Yes	0.463	0.205	0.67	Yes	0.232	0.185	0.42	Yes	0.231	0.185	0.42	Yes	1.00	**7.73**
		$U_{33} - U_{34}$			552.19	-787.09	445	123	-84	-1493	-23	203	-111	-653	0.466	0.290	0.76	Yes	0.317	0.189	0.51	Yes	0.787	0.208	1	Yes	0.782	0.211	1.00	Yes	1.00	**7.94**
		$U_{34} - U_{35}$			61.75	-960.04	366	-210	-167	-1345	43	36	150	-539	0.045	0.222	0.27	Yes	0.031	0.150	0.19	Yes	0.833	0.156	0.99	Yes	0.828	0.164	1.00	Yes	1.00	**5.34**
		$U_{35} - U_{36}$			-----	-1187.98	74	-479	-226	-1439	-18	80	-221	-358	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.183	1	Yes	0.806	0.153	0.96	Yes	1.00	**4.24**
		$U_{36} - U_{37}$			-----	-1383.40	-309	-330	-800	-1518	-23	-124	-80	-290	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.199	1	Yes	0.788	0.135	0.93	Yes	1.00	**4.09**
		$U_{37} - U_{38}$			-----	-1399.86	-199	-424	-951	-1469	-95	-198	-324	29	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.190	1	Yes	0.797	0.131	0.93	Yes	1.00	**4.56**
		$U_{38} - U_{39}$			-----	-1554.20	-193	-644	-652	-1757	5	-216	-376	36	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.190	1	Yes	0.798	0.146	0.95	Yes	1.00	**4.16**
		$U_{39} - U_{40}$			-----	-1489.32	-623	-514	-1217	-1683	24	-109	-313	445	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.224	1	Yes	0.765	0.139	0.91	Yes	1.00	**5.63**
		$U_{40} - U_{41}$			-----	-1390.91	-497	-488	-1497	-1330	118	-147	-68	251	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.202	1	Yes	0.792	0.133	0.93	Yes	1.00	**5.50**
		$U_{41} - U_{42}$			-----	-1220.85	-1052	58	-756	-501	110	-152	-162	554	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.119	1	Yes	0.866	0.107	0.98	Yes	1.00	**5.40**
		$U_{42} - U_{43}$			-----	-867.80	-902	56	-482	-203	57	-366	-231	854	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.149	1	Yes	0.838	0.137	0.98	Yes	1.00	**7.46**
		$U_{43} - U_{44}$			-----	-618.72	-1105	483	-926	-319	-275	-145	639	30	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.258	1	Yes	0.731	0.188	0.92	Yes	1.00	**11.23**
	Structure 3	$U_0 - U_1$			-----	-583.13	386	-308	1011	-1684	105	68	39	-1157	-----	-----	-----	-----	-----	-----	-----	-----	0.662	0.259	0.93	Yes	0.656	0.339	1.00	Yes	1.00	**10.78**
		$U_1 - U_2$			-----	-698.59	-81	-229	-80	-796	-20	4	16	-389	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.199	1	Yes	0.786	0.160	0.95	Yes	1.00	**4.33**
		$U_2 - U_3$			-----	-1035.23	-53	-239	-82	-826	-33	-57	149	-687	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.175	1	Yes	0.810	0.134	0.95	Yes	1.00	**4.57**
		$U_3 - U_4$			-----	-1334.95	-220	-372	-401	-1367	-107	-37	-363	-561	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.218	1	Yes	0.765	0.151	0.92	Yes	1.00	**4.56**
		$U_4 - U_5$			-----	-1403.44	-443	-136	-778	-901	-92	-60	-245	-752	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.182	1	Yes	0.805	0.099	0.91	Yes	1.00	**4.43**
		$U_5 - U_6$			-----	-1336.66	-258	-380	-727	-1388	-186	-152	-111	-300	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.217	1	Yes	0.766	0.153	0.92	Yes	1.00	**4.33**
		$U_6 - U_7$			-----	-1384.04	-501	-156	-984	-837	-120	-299	-491	-80	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.191	1	Yes	0.793	0.109	0.91	Yes	1.00	**4.38**
		$U_7 - U_8$			-----	-1232.36	-239	28	-635	-565	-112	-316	-467	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.163	1	Yes	0.823	0.088	0.92	Yes	1.00	**4.91**
		$U_8 - U_9$			-----	-827.88	-153	230	-671	-119	-212	-194	-505	53	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.212	1	Yes	0.777	0.111	0.89	Yes	1.00	**4.31**
		$U_9 - U_{10}$			654.52	-515.22	132	563	-392	-216	32	117	-376	998	0.710	0.287	1.00	Yes	0.473	0.188	0.67	Yes	0.663	0.199	0.87	Yes	0.657	0.126	0.79	Yes	1.00	**15.05**
		$U_{10} - U_{11}$			385.54	-98.85	-485	728	12	-544	-369	-460	-1325	2596	0.418	0.581	1.00	Yes	0.283	0.389	0.68	Yes	0.127	0.307	0.44	Yes	0.126	0.163	0.29	Yes	1.00	**20.91**
		$U_{11} - U_{12}$			731.12	-----	-844	1845	-58	647	224	455	701	602	0.599	0.395	1.00	Yes	0.410	0.269	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.93**
		$U_{12} - U_{13}$			981.78	-----	1192	-2	1714	-916	26	494	-56	-557	0.680	0.316	1.00	Yes	0.475	0.216	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.48**
		$U_{13} - U_{14}$			852.81	-----	225	365	-8	-540	-54	418	-67	-492	0.816	0.182	1.00	Yes	0.570	0.126	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.13**
		$U_{14} - U_{15}$			580.79	-447.44	427	200	100	-773	-56	241	182	-863	0.666	0.330	1.00	Yes	0.449	0.218	0.67	Yes	0.609	0.263	0.88	Yes	0.603	0.184	0.79	Yes	1.00	**7.43**
		$U_{15} - U_{16}$			288.29	-581.30	260	112	-89	-881	-75	194	-123	202	0.330	0.244	0.58	Yes	0.227	0.167	0.40	Yes	0.791	0.171	0.97	Yes	0.784	0.209	1.00	Yes	1.00	**5.92**
		$U_{16} - U_{17}$			286.27	-587.55	311	29	-124	-833	173	-73	75	324	0.328	0.253	0.59	Yes	0.225	0.173	0.40	Yes	0.799	0.143	0.95	Yes	0.792	0.198	1.00	Yes	1.00	**5.98**
		$U_{17} - U_{18}$			90.60	-582.39	225	-172	-388	-710	71	35	-252	11	0.104	0.211	0.32	Yes	0.070	0.138	0.21	Yes	0.792	0.207	1	Yes	0.785	0.169	0.96	Yes	1.00	**5.50**
		$U_{18} - U_{19}$			-----	-504.79	-78	-63	-504	-321	-340	827	-230	901	-----	-----	-----	-----	-----	-----	-----	-----	0.687	0.305	1	Yes	0.681	0.120	0.81	Yes	1.00	**7.19**
		$U_{19} - U_{20}$			-----	-536.04	-397	-57	-608	-557	-173	-88	671	-207	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.266	1	Yes	0.723	0.144	0.87	Yes	1.00	**8.04**

Moment (End) AB Operating

Operating Loads - 3F1

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 Axial Bending				YY Axial 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			25.04	-65.23	-171	35	682	-1268	51	188	-731	-2686	0.038	0.957	1.00	Yes	0.023	0.568	0.60	Yes	0.118	0.789	0.91	Yes	0.117	0.381	0.50	Yes	1.00	**15.11**
		L_1 - L_2			406.50	-20.68	-9	22	219	-922	359	-162	-336	456	0.622	0.375	1.00	Yes	0.380	0.248	0.63	Yes	0.038	0.214	0.26	Yes	0.037	0.277	0.32	Yes	1.00	**6.61**
		L_2 - L_3			615.60	-115.06	-35	71	-452	-723	-187	130	255	-722	0.708	0.291	1.00	Yes	0.410	0.172	0.59	Yes	0.157	0.260	0.42	Yes	0.156	0.175	0.34	Yes	1.00	**6.08**
		L_3 - L_4			619.58	-277.51	11	333	-394	-719	290	-230	-690	-87	0.713	0.285	1.00	Yes	0.423	0.179	0.61	Yes	0.379	0.221	0.6	Yes	0.376	0.174	0.55	Yes	1.00	**6.57**
		L_4 - L_5			37.72	-554.51	99	465	-292	65	-70	197	-32	-672	0.049	0.243	0.30	Yes	0.029	0.154	0.19	Yes	0.853	0.147	1	Yes	0.845	0.123	0.97	Yes	1.00	**4.66**
		L_5 - L_6			-----	-747.48	124	589	-141	178	157	-245	-87	-183	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.120	1	Yes	0.862	0.130	1.00	Yes	1.00	**4.53**
		L_6 - L_7			-----	-1036.06	-482	562	-67	-616	584	1208	-694	-1558	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.156	1	Yes	0.834	0.097	0.94	Yes	1.00	**11.35**
		L_7 - L_8			-----	-1277.66	-72	1096	-21	633	295	405	416	190	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.172	1	Yes	0.809	0.145	0.96	Yes	1.00	**4.69**
		L_8 - L_9			-----	-1116.74	982	5	1254	-265	171	317	286	-153	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.276	1	Yes	0.707	0.166	0.88	Yes	1.00	**4.93**
		L_9 - L_{10}			-----	-968.81	168	89	570	-947	366	-261	-178	478	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.212	1	Yes	0.780	0.149	0.93	Yes	1.00	**8.34**
		L_{10} - L_{11}			11.99	-522.99	483	-62	311	-764	-276	48	71	-780	0.016	0.339	0.36	Yes	0.009	0.201	0.22	Yes	0.804	0.137	0.95	Yes	0.797	0.202	1.00	Yes	1.00	**8.17**
		L_{11} - L_{12}			520.28	-127.11	368	-225	362	-885	135	-94	-398	502	0.674	0.322	1.00	Yes	0.404	0.209	0.62	Yes	0.195	0.143	0.34	Yes	0.194	0.234	0.43	Yes	1.00	**6.24**
		L_{12} - L_{13}			1015.06	-----	63	-153	-337	-677	-161	120	-57	-672	0.801	0.198	1.00	Yes	0.512	0.121	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.70**
		L_{13} - L_{14}			1262.55	-----	208	-507	330	-1678	148	15	-177	240	0.743	0.251	1.00	Yes	0.481	0.154	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.28**
		L_{14} - L_{15}			1514.56	-----	-571	-152	-1344	-861	-149	161	-378	-1263	0.740	0.251	1.00	Yes	0.481	0.155	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.86**
		L_{15} - L_{16}			1568.67	-----	-306	-371	-1047	-1405	105	-140	-891	-193	0.766	0.232	1.00	Yes	0.492	0.138	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.97**
		L_{16} - L_{17}			1139.28	-----	-1064	235	-1010	-356	574	464	-438	-1338	0.720	0.275	1.00	Yes	0.467	0.172	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.64**
		L_{17} - L_{18}			885.95	-----	-618	216	-646	-241	122	-75	-790	-309	0.771	0.226	1.00	Yes	0.494	0.138	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.43**
		L_{18} - L_{19}			425.11	-----	-940	569	-335	140	180	292	-151	-181	0.651	0.343	1.00	Yes	0.440	0.215	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.93**
		L_{19} - L_{20}			51.36	-357.57	-1179	758	-175	70	65	15	142	32	0.079	0.383	0.47	Yes	0.048	0.259	0.31	Yes	0.649	0.198	0.85	Yes	0.644	0.354	1.00	Yes	1.00	**14.50**
	Structure 2	L_0 - L_1			73.27	-188.79	-72	-108	713	-2450	37	130	-707	-2456	0.089	0.902	1.00	Yes	0.053	0.564	0.62	Yes	0.271	0.666	0.94	Yes	0.270	0.499	0.77	Yes	1.00	**19.78**
		L_1 - L_2			486.25	-----	194	-343	456	-1385	154	-58	-742	703	0.591	0.404	1.00	Yes	0.351	0.256	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.63**
		L_2 - L_3			957.52	-----	-42	-278	-155	-1020	-74	155	-204	-861	0.755	0.239	1.00	Yes	0.495	0.147	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.85**
		L_3 - L_4			1236.94	-----	-8	-519	-251	-1526	179	4	-1129	223	0.727	0.269	1.00	Yes	0.489	0.170	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.65**
		L_4 - L_5			1705.10	-----	-439	-397	-1076	-1595	-81	162	337	-696	0.795	0.198	1.00	Yes	0.526	0.119	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.83**
		L_5 - L_6			1753.51	-----	-223	-505	-977	-2062	188	-89	-928	57	0.752	0.241	1.00	Yes	0.505	0.149	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.24**
		L_6 - L_7			1820.07	-----	-547	-181	-1712	-1830	-160	217	203	-967	0.770	0.221	1.00	Yes	0.512	0.133	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.12**
		L_7 - L_8			1434.70	-124.02	-255	472	-1197	-1049	235	-135	-451	279	0.823	0.169	1.00	Yes	0.540	0.101	0.65	Yes	0.084	0.132	0.22	Yes	0.084	0.132	0.22	Yes	1.00	**8.03**
		L_8 - L_9			967.06	-339.30	-121	579	-1037	-150	-85	174	-356	-1861	0.676	0.315	1.00	Yes	0.456	0.204	0.66	Yes	0.281	0.260	0.55	Yes	0.279	0.140	0.42	Yes	1.00	**7.31**
		L_9 - L_{10}			603.29	-781.07	-121	849	-931	-241	147	-139	-1042	-365	0.538	0.274	0.82	Yes	0.314	0.166	0.48	Yes	0.826	0.165	1	Yes	0.820	0.149	0.97	Yes	1.00	**9.05**
		L_{10} - L_{11}			357.59	-----	-1689	1274	-974	-200	1183	814	-421	-2521	0.357	0.635	1.00	Yes	0.209	0.386	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**20.79**
		L_{11} - L_{12}			-----	-1045.76	-116	1018	-368	574	77	-348	-156	-192	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.110	0.98	Yes	0.858	0.139	1.00	Yes	1.00	**4.37**
		L_{12} - L_{13}			-----	-1284.17	-394	-105	-230	-1403	-70	443	-427	-843	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.221	1	Yes	0.768	0.139	0.91	Yes	1.00	**8.72**
		L_{13} - L_{14}			-----	-1506.81	-1154	2720	-455	1346	118	311	632	555	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.198	0.97	Yes	0.758	0.237	1.00	Yes	1.00	**7.13**
		L_{14} - L_{15}			-----	-1276.60	1539	-475	2755	-1236	417	415	-168	-389	-----	-----	-----	-----	-----	-----	-----	-----	0.648	0.348	1	Yes	0.642	0.241	0.89	Yes	1.00	**4.73**
		L_{15} - L_{16}			-----	-1389.75	-942	395	-1130	-1241	211	-344	-1242	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.154	1	Yes	0.831	0.123	0.96	Yes	1.00	**11.06**
		L_{16} - L_{17}			-----	-1129.99	1169	53	912	-973	-406	-5	-11	-1057	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.163	1	Yes	0.823	0.144	0.97	Yes	1.00	**8.91**
		L_{17} - L_{18}			-----	-807.84	517	170	765	-898	127	-193	28	668	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.095	0.95	Yes	0.848	0.144	1.00	Yes	1.00	**6.72**
		L_{18} - L_{19}			100.94	-633.07	711	31	341	-798	-210	61	267	-533	0.114	0.236	0.35	Yes	0.066	0.139	0.21	Yes	0.849	0.126	0.98	Yes	0.844	0.154	1.00	Yes	1.00	**7.28**
		L_{19} - L_{20}			549.88	-474.03	513	131	247	-1274	150	-176	-846	564	0.623	0.375	1.00	Yes	0.369	0.235	0.61	Yes	0.636	0.177	0.82	Yes	0.632	0.246	0.88	Yes	1.00	**8.50**
		L_{20} - L_{21}			886.44	-251.83	369	-93	-676	-1209	-181	71	-164	-1043	0.707	0.289	1.00	Yes	0.464	0.178	0.65	Yes	0.238	0.200	0.44	Yes	0.236	0.176	0.42	Yes	1.00	**7.86**
		L_{21} - L_{22}			826.64	-31.69	-26	-201	-307	-2173	136	-151	-192	128	0.659	0.338	1.00	Yes	0.441	0.211	0.66	Yes	0.030	0.282	0.32	Yes	0.030	0.317	0.35	Yes	1.00	**6.90**
		L_{22} - L_{23}			885.56	-103.43	-280	141	-1140	-968	-50	211	-204	-1127	0.706	0.288	1.00	Yes	0.472	0.184	0.66	Yes	0.098	0.212	0.31	Yes	0.097	0.166	0.27	Yes	1.00	**7.34**
		L_{23} - L_{24}			927.39	-362.75	-45	489	-1023	-1172	165	-140	-763	0	0.740	0.253	1.00	Yes	0.485	0.155	0.64	Yes	0.343	0.169	0.52	Yes	0.340	0.171	0.52	Yes	1.00	**9.97**
		L_{24} - L_{25}			508.49	-484.31	155	499	-894	-213	-101	143	38	-1615	0.576	0.420	1.00	Yes	0.341	0.257	0.60	Yes	0.649	0.180	0.83	Yes	0.645	0.173	0.82	Yes	1.00	**8.64**
		L_{25} - L_{26}			9.33	-641.42	29	728	-393	-43	102	-165	-314	-47	0.011	0.189	0.20	Yes	0.006	0.112	0.12	Yes	0.860	0.112	0.98	Yes	0.855	0.141	1.00	Yes	1.00	**7.37**
		L_{26} - L_{27}			-----	-691.35	-928	986	-597	-65	770	588	-413	-1640	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.267	1	Yes	0.726	0.158	0.89	Yes	1.00	**11.01**
		L_{27} - L_{28}			-----	-1139.64	-304	1300	-428	576	333	-206	-354	-137	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.129	0.97	Yes	0.830	0.160	1.00	Yes	1.00	**7.14**
		L_{28} - L_{29}			-----	-1398.31	31	-316	-215	-1453	-114	414	-344	-728	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.151	1	Yes	0.836	0.144	0.99	Yes	1.00	**6.85**
		L_{29} - L_{30}			-----	-1519.22	-1036	2657	-569	1354	411	426	706	816	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.203	0.98	Yes	0.764	0.232	1.00	Yes	1.00	**7.37**
		L_{30} - L_{31}			-----	-1321.92	1733	-516	2516	-951	479	427	159	14	-----	-----	-----	-----	-----	-----	-----	-----	0.671	0.325	1	Yes	0.665	0.220	0.89	Yes	1.00	**2.89**
		L_{31} - L_{32}			-----	-1399.75	-479	75	-419	-994	236	-256	20	404	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.151	1	Yes	0.837	0.099	0.94	Yes	1.00	**6.24**
		L_{32} - L_{33}			-----	-1028.29	1088	-38	930	-804	-391	-8	180	-372	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.118	0.97	Yes	0.843	0.148	1.00	Yes	1.00	**6.39**
		L_{33} - L_{34}			-----	-717.25	577	-19	666	-893	100	-130	-94	686	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.103	0.96	Yes	0.843	0.156	1.00	Yes	1.00	**5.78**
		L_{34} - L_{35}			584.88	-720.34	813	-113	203	-1476	-212	99	329	-1508	0.522	0.418	0.94	Yes	0.304	0.253	0.56	Yes	0.762	0.174	0.94	Yes	0.756	0.236	1.00	Yes	1.00	**10.37**
		L_{35} - L_{36}			929.11	-244.42	553	-185	179	-1386	163	-117	-1635	284	0.650	0.341	1.00	Yes	0.438	0.219	0.66	Yes	0.203	0.174	0.38	Yes	0.201	0.187	0.39	Yes	1.00	**7.71**
		L_{36} - L_{37}			1268.91	-----	292	-265	-262	-1777	-203	153	319	-855	0.728	0.266	1.00	Yes	0.478	0.160	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.02**
		L_{37} - L_{38}			1691.89	-----	-342	-669	-1347	-2357	104	-169	-1194	-1	0.716	0.281	1.00	Yes	0.476	0.169	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.51**
		L_{38} - L_{39}			1732.34	-----	-614	-224	-1900	-1503	-101	172	-348	-1411	0.743	0.257	1.00	Yes	0.499	0.161	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.44**
		L_{39} - L_{40}			1666.59	-----	-444	-324	-1456	-1837	124	-126	-682	71	0.777	0.220	1.00	Yes	0.514	0.132	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.80**
		L_{40} - L_{41}			1277.01	-----	-1216	211	-1239	-577	522	504	-300	-1200	0.750	0.241	1.00	Yes	0.505	0.153	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.21**
		L_{41} - L_{42}			989.87	-----	-910	316	-844	-499	413	1	-746	-201	0.780	0.211	1.00	Yes	0.512	0.129	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.27**
		L_{42} - L_{43}			498.17	-----	-1147	576	-714	42	504	528	24	-968	0.605	0.392	1.00	Yes	0.360	0.246	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.64**
		L_{43} - L_{44}			108.21	-293.17	-2837	1202	-37	-85	1372	400	-66	-19	0.131	0.803	0.94	Yes	0.078	0.509	0.59	Yes	0.422	0.535	0.96	Yes	0.419	0.577	1.00	Yes	1.00	**34.27**
	Structure 3	L_0 - L_1			31.87	-298.28	21	-134	705	-1305	25	115	-326	-1479	0.049	0.698	0.75	Yes	0.030	0.455	0.49	Yes	0.542	0.452	1	Yes	0.537	0.392	0.93	Yes	1.00	**12.73**
		L_1 - L_2			285.43	-----	217	-249	686	-1252	151	-30	-19	892	0.437	0.561	1.00	Yes	0.295	0.358	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.34**
		L_2 - L_3			825.83	-----	-9	-216	47	-831	-59	168	-27	-874	0.719	0.272	1.00	Yes	0.460	0.167	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.45**
		L_3 - L_4			1114.22	-----	31	-412	-52	-1324	189	8	-1049	370	0.705	0.288	1.00	Yes	0.457	0.179	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.82**
		L_4 - L_5			1582.76	-----	-387	-231	-966	-1259	-49	212	295	-934	0.773	0.217	1.00	Yes	0.496	0.130	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.43**
		L_5 - L_6			1470.84	-----	-141	-450	-433	-1862	251	-41	-710	183	0.719	0.274	1.00	Yes	0.467	0.167	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.51**
		L_6 - L_7			1179.83	-----	-1419	356	-1153	-355	585	321	-267	-1298	0.694	0.304	1.00	Yes	0.450	0.188	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.72**
		L_7 - L_8			1005.97	-36.84	-98	173	-624	-534	142	-166	-764	-265	0.794	0.200	1.00	Yes	0.508	0.122	0.63	Yes	0.035	0.177	0.22	Yes	0.034	0.111	0.15	Yes	1.00	**7.67**
		L_8 - L_9			467.82	-----	-769	481	-516	-35	386	355	-102	-1054	0.606	0.388	1.00	Yes	0.364	0.246	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.41**
		L_9 - L_{10}			-----	-562.61	-65	517	-340	59	140	-159	-173	-157	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.069	0.94	Yes	0.857	0.137	1.00	Yes	1.00	**6.87**
		L_{10} - L_{11}			-----	-975.88	-600	794	-143	-383	250	851	-574	-1670	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.200	1	Yes	0.786	0.125	0.92	Yes	1.00	**12.07**
		L_{11} - L_{12}			-----	-1255.03	-106	1183	-14	614	286	527	460	89	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.189	1	Yes	0.795	0.157	0.96	Yes	1.00	**6.35**
		L_{12} - L_{13}			-----	-1108.09	920	-14	1271	-214	-124	63	-226	-437	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.285	1	Yes	0.702	0.168	0.88	Yes	1.00	**3.75**
		L_{13} - L_{14}			-----	-1076.83	48	200	379	-675	214	-250	-55	275	-----	-----	-----	-----	-----	-----	-----	-----	0.877	0.117	1	Yes	0.867	0.106	0.98	Yes	1.00	**6.00**
		L_{14} - L_{15}			-----	-723.11	495	68	243	-408	-240	89	-168	-505	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.150	1	Yes	0.834	0.109	0.95	Yes	1.00	**4.34**
		L_{15} - L_{16}			117.07	-517.82	414	54	366	-785	234	-186	-310	165	0.152	0.263	0.42	Yes	0.091	0.171	0.27	Yes	0.796	0.178	0.98	Yes	0.789	0.208	1.00	Yes	1.00	**4.55**
		L_{16} - L_{17}			585.19	-----	-20	-74	-375	-864	-92	413	-204	-703	0.673	0.322	1.00	Yes	0.400	0.204	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.05**
		L_{17} - L_{18}			642.31	-73.85	-7	-117	-782	-812	115	-114	-369	19	0.739	0.255	1.00	Yes	0.428	0.152	0.58	Yes	0.101	0.295	0.4	Yes	0.100	0.196	0.30	Yes	1.00	**5.98**
		L_{18} - L_{19}			391.67	-----	-651	126	-285	-220	423	581	76	-935	0.599	0.396	1.00	Yes	0.366	0.256	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.47**
		L_{19} - L_{20}			-----	-136.62	-2503	2405	463	-570	963	262	294	80	-----	-----	-----	-----	-----	-----	-----	-----	0.248	0.545	0.8	Yes	0.246	0.751	1.00	Yes	1.00	**56.93**

Moment (End) AB Operating

Operating Loads - 3F1

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	$U_0 - L_0$			-----	-292.98	-107	178	-12	51	-828	-266	203	65	-----	-----	-----	-----	-----	-----	-----	-----	0.654	0.340	1	Yes	0.620	0.228	0.85	Yes	1.00	**2.40**
		$U_1 - L_1$			21.00	-317.29	-254	240	29	-21	-353	-92	568	205	0.038	0.490	0.53	Yes	0.021	0.269	0.30	Yes	0.693	0.232	0.93	Yes	0.671	0.325	1.00	Yes	1.00	**5.81**
		$U_2 - L_2$			106.94	-249.79	-188	232	98	-108	-1238	-427	777	226	0.192	0.656	0.85	Yes	0.106	0.361	0.47	Yes	0.546	0.450	1	Yes	0.529	0.297	0.83	Yes	1.00	**8.41**
		$U_3 - L_3$			150.73	-125.17	-76	96	202	-193	-1599	-387	-1320	-676	0.271	0.721	1.00	Yes	0.149	0.396	0.55	Yes	0.274	0.455	0.73	Yes	0.265	0.258	0.53	Yes	1.00	**9.46**
		$U_4 - L_4$			-----	-205.36	14	-27	286	-280	796	61	-1700	-800	-----	-----	-----	-----	-----	-----	-----	-----	0.452	0.548	1	Yes	0.435	0.366	0.81	Yes	1.00	**10.20**
		$U_5 - L_5$			-----	-370.51	78	-85	192	-214	1016	572	207	266	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.322	1	Yes	0.639	0.217	0.86	Yes	1.00	**4.36**
		$U_6 - L_6$			-----	-378.69	84	-76	185	-189	1243	607	1137	555	-----	-----	-----	-----	-----	-----	-----	-----	0.573	0.422	1	Yes	0.543	0.165	0.71	Yes	1.00	**2.76**
		$U_7 - L_7$			-----	-321.27	124	-139	220	-240	974	234	568	178	-----	-----	-----	-----	-----	-----	-----	-----	0.537	0.458	1	Yes	0.496	0.237	0.74	Yes	1.00	**1.97**
		$U_8 - L_8$			-----	-1184.24	-379	450	230	-283	-932	-464	644	80	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.144	1	Yes	0.821	0.084	0.91	Yes	1.00	**6.17**
		$U_9 - L_9$			-----	-663.00	-363	405	-232	259	-554	-105	643	307	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.208	1	Yes	0.749	0.225	0.98	Yes	1.00	**3.10**
		$U_{10} - L_{10}$			-----	-765.78	-424	459	-166	144	305	212	707	314	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.191	0.99	Yes	0.756	0.238	1.00	Yes	1.00	**6.18**
		$U_{11} - L_{11}$			-----	-661.02	-372	482	-167	217	-609	2	632	361	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.179	0.98	Yes	0.769	0.224	1.00	Yes	1.00	**5.96**
		$U_{12} - L_{12}$			-----	-479.25	-270	284	-126	134	-1096	-259	382	296	-----	-----	-----	-----	-----	-----	-----	-----	0.692	0.305	1	Yes	0.658	0.242	0.90	Yes	1.00	**4.92**
		$U_{13} - L_{13}$			-----	-365.49	-232	257	-64	83	-17	165	206	132	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.150	0.89	Yes	0.700	0.293	1.00	Yes	1.00	**5.35**
		$U_{14} - L_{14}$			-----	-196.58	-248	263	107	-111	-1317	-800	-749	-510	-----	-----	-----	-----	-----	-----	-----	-----	0.439	0.554	1	Yes	0.416	0.336	0.76	Yes	1.00	**12.87**
		$U_{15} - L_{15}$			75.11	-309.71	-65	55	240	-262	317	-332	-635	-123	0.135	0.519	0.66	Yes	0.074	0.285	0.36	Yes	0.694	0.265	0.96	Yes	0.655	0.335	1.00	Yes	1.00	**8.82**
		$U_{16} - L_{16}$			-----	-321.63	45	-50	233	-244	471	106	-637	-118	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.263	0.99	Yes	0.681	0.312	1.00	Yes	1.00	**6.02**
		$U_{17} - L_{17}$			-----	-420.08	80	-93	205	-223	504	200	-27	72	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.213	1	Yes	0.725	0.227	0.96	Yes	1.00	**4.17**
		$U_{18} - L_{18}$			-----	-430.73	190	-196	353	-363	691	180	694	170	-----	-----	-----	-----	-----	-----	-----	-----	0.631	0.365	1	Yes	0.599	0.206	0.81	Yes	1.00	**2.78**
		$U_{19} - L_{19}$			-----	-523.19	198	-211	388	-405	603	117	681	129	-----	-----	-----	-----	-----	-----	-----	-----	0.653	0.339	1	Yes	0.609	0.188	0.80	Yes	1.00	**3.31**
		$U_{20} - L_{20}$			-----	-479.54	246	-297	372	-441	460	60	434	57	-----	-----	-----	-----	-----	-----	-----	-----	0.634	0.359	1	Yes	0.558	0.205	0.77	Yes	1.00	**2.33**
	Structure 2	$U_0 - L_0$			-----	-643.00	-328	486	-159	265	-827	-140	43	7	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.228	1	Yes	0.689	0.206	0.90	Yes	1.00	**3.46**
		$U_1 - L_1$			-----	-713.82	-551	552	-207	214	-140	19	628	161	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.147	0.97	Yes	0.765	0.234	1.00	Yes	1.00	**5.57**
		$U_2 - L_2$			-----	-590.56	-456	471	-155	170	-92	179	622	285	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.178	0.97	Yes	0.753	0.241	1.00	Yes	1.00	**4.97**
		$U_3 - L_3$			-----	-459.97	-215	232	-76	87	-218	173	544	265	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.214	1	Yes	0.721	0.211	0.94	Yes	1.00	**4.10**
		$U_4 - L_4$			-----	-323.74	-201	208	-18	29	-83	138	562	234	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.264	1	Yes	0.685	0.266	0.96	Yes	1.00	**5.64**
		$U_5 - L_5$			83.16	-307.07	-202	228	93	-70	-607	33	-288	-225	0.150	0.468	0.62	Yes	0.082	0.257	0.34	Yes	0.694	0.300	1	Yes	0.650	0.292	0.95	Yes	1.00	**9.26**
		$U_6 - L_6$			293.92	-64.01	-89	94	165	-169	-859	-94	-211	-228	0.529	0.465	1.00	Yes	0.291	0.256	0.55	Yes	0.144	0.269	0.42	Yes	0.135	0.217	0.36	Yes	1.00	**8.23**
		$U_7 - L_7$			-----	-134.55	0	-6	357	-412	-188	-548	591	-168	-----	-----	-----	-----	-----	-----	-----	-----	0.304	0.690	1	Yes	0.285	0.526	0.82	Yes	1.00	**13.99**
		$U_8 - L_8$			-----	-472.61	152	-170	337	-358	436	109	-573	-130	-----	-----	-----	-----	-----	-----	-----	-----	0.685	0.182	0.87	Yes	0.681	0.313	1.00	Yes	1.00	**5.07**
		$U_9 - L_9$			-----	-693.74	270	-277	580	-594	791	373	-543	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.168	0.95	Yes	0.743	0.252	1.00	Yes	1.00	**6.54**
		$U_{10} - L_{10}$			-----	-752.01	233	-234	512	-534	1168	683	-19	220	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.254	1	Yes	0.703	0.236	0.94	Yes	1.00	**6.65**
		$U_{11} - L_{11}$			-----	-735.26	227	-221	450	-458	1164	653	-54	373	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.255	1	Yes	0.687	0.202	0.89	Yes	1.00	**5.42**
		$U_{12} - L_{12}$			-----	-720.74	187	-170	416	-411	1459	637	683	428	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.299	1	Yes	0.625	0.178	0.81	Yes	1.00	**5.33**
		$U_{13} - L_{13}$			-----	-626.11	225	-223	497	-485	1151	308	509	196	-----	-----	-----	-----	-----	-----	-----	-----	0.698	0.297	1	Yes	0.604	0.238	0.85	Yes	1.00	**5.66**
		$U_{14} - L_{14}$			-----	-1224.73	-725	673	426	-410	-714	-431	591	-73	-----	-----	-----	-----	-----	-----	-----	-----	0.896	0.102	1	Yes	0.812	0.128	0.95	Yes	1.00	**10.30**
		$U_{15} - L_{15}$			-----	-657.34	-580	561	-262	256	-567	-11	951	47	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.265	1	Yes	0.634	0.277	0.92	Yes	1.00	**5.63**
		$U_{16} - L_{16}$			-----	-698.31	-576	563	-202	171	359	188	818	179	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.186	1	Yes	0.748	0.245	1.00	Yes	1.00	**5.70**
		$U_{17} - L_{17}$			-----	-640.42	-536	537	-198	198	-200	110	594	194	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.157	0.95	Yes	0.745	0.249	1.00	Yes	1.00	**5.61**
		$U_{18} - L_{18}$			-----	-581.45	-470	498	-160	166	-606	-25	621	215	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.168	0.95	Yes	0.741	0.255	1.00	Yes	1.00	**5.45**
		$U_{19} - L_{19}$			-----	-478.41	-291	289	-88	89	-160	121	519	195	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.169	0.89	Yes	0.714	0.280	1.00	Yes	1.00	**5.37**
		$U_{20} - L_{20}$			-----	-377.66	-220	232	-39	43	-243	5	522	182	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.224	1	Yes	0.723	0.265	0.99	Yes	1.00	**5.93**
		$U_{21} - L_{21}$			28.94	-310.03	-221	237	23	-13	-706	0	32	-112	0.052	0.508	0.56	Yes	0.029	0.279	0.31	Yes	0.700	0.298	1	Yes	0.656	0.303	0.96	Yes	1.00	**7.28**
		$U_{22} - L_{22}$			-----	-260.70	-244	264	319	-344	664	-471	-181	-425	-----	-----	-----	-----	-----	-----	-----	-----	0.587	0.383	0.98	Yes	0.552	0.440	1.00	Yes	1.00	**19.21**
		$U_{23} - L_{23}$			-----	-318.78	16	-19	225	-241	526	166	-626	-49	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.274	1	Yes	0.675	0.308	0.99	Yes	1.00	**6.12**
		$U_{24} - L_{24}$			-----	-370.48	55	-59	224	-233	584	204	-155	18	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.237	1	Yes	0.710	0.266	0.98	Yes	1.00	**5.01**
		$U_{25} - L_{25}$			-----	-472.18	101	-102	299	-296	588	224	56	156	-----	-----	-----	-----	-----	-----	-----	-----	0.710	0.183	0.9	Yes	0.705	0.287	1.00	Yes	1.00	**5.06**
		$U_{26} - L_{26}$			-----	-575.87	170	-178	489	-518	707	301	-446	117	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.190	0.96	Yes	0.734	0.265	1.00	Yes	1.00	**5.78**
		$U_{27} - L_{27}$			-----	-632.96	203	-206	552	-558	770	315	110	372	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.193	0.98	Yes	0.737	0.259	1.00	Yes	1.00	**6.26**
		$U_{28} - L_{28}$			-----	-616.24	157	-132	469	-452	1619	545	888	406	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.286	1	Yes	0.660	0.199	0.86	Yes	1.00	**5.97**
		$U_{29} - L_{29}$			-----	-628.82	155	-158	574	-564	1126	200	-389	99	-----	-----	-----	-----	-----	-----	-----	-----	0.701	0.295	1	Yes	0.606	0.275	0.89	Yes	1.00	**8.15**
		$U_{30} - L_{30}$			-----	-1222.79	-598	533	316	-329	-637	-261	243	-216	-----	-----	-----	-----	-----	-----	-----	-----	0.894	0.096	1	Yes	0.811	0.106	0.92	Yes	1.00	**9.88**
		$U_{31} - L_{31}$			-----	-715.69	-548	526	-304	297	-103	24	513	94	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.200	1	Yes	0.690	0.262	0.96	Yes	1.00	**4.84**
		$U_{32} - L_{32}$			-----	-851.56	-476	470	-219	192	-256	17	614	189	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.174	1	Yes	0.738	0.204	0.95	Yes	1.00	**5.67**
		$U_{33} - L_{33}$			-----	-809.23	-487	489	-248	232	-695	50	547	240	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.181	1	Yes	0.757	0.216	0.98	Yes	1.00	**5.75**
		$U_{34} - L_{34}$			-----	-804.24	-530	550	-243	240	-469	-1	490	221	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.147	0.95	Yes	0.752	0.243	1.00	Yes	1.00	**7.04**
		$U_{35} - L_{35}$			-----	-692.72	-571	589	-255	269	-527	32	630	376	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.152	0.93	Yes	0.742	0.250	1.00	Yes	1.00	**6.64**
		$U_{36} - L_{36}$			-----	-475.77	-329	352	-134	156	-601	-7	276	190	-----	-----	-----	-----	-----	-----	-----	-----	0.690	0.199	0.89	Yes	0.685	0.308	1.00	Yes	1.00	**5.40**
		$U_{37} - L_{37}$			-----	-192.18	-382	435	51	-54	-1084	-846	-612	-393	-----	-----	-----	-----	-----	-----	-----	-----	0.434	0.560	1	Yes	0.407	0.556	0.97	Yes	1.00	**19.02**
		$U_{38} - L_{38}$			296.45	-148.95	-194	192	156	-168	-419	-754	-662	-232	0.533	0.466	1.00	Yes	0.293	0.256	0.55	Yes	0.335	0.229	0.57	Yes	0.315	0.248	0.57	Yes	1.00	**10.72**
		$U_{39} - L_{39}$			54.18	-307.66	-53	41	206	-229	334	-133	-729	-71	0.097	0.504	0.61	Yes	0.054	0.277	0.34	Yes	0.695	0.298	1	Yes	0.651	0.293	0.95	Yes	1.00	**7.86**
		$U_{40} - L_{40}$			-----	-325.92	37	-45	217	-220	595	172	23	29	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.257	1	Yes	0.690	0.281	0.98	Yes	1.00	**5.39**
		$U_{41} - L_{41}$			-----	-460.99	88	-97	230	-244	578	193	-188	35	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.211	1	Yes	0.723	0.222	0.95	Yes	1.00	**4.53**
		$U_{42} - L_{42}$			-----	-580.27	172	-181	494	-501	670	173	-33	32	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.173	0.96	Yes	0.739	0.256	1.00	Yes	1.00	**6.03**
		$U_{43} - L_{43}$			-----	-707.93	189	-207	535	-556	622	187	146	127	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.154	0.97	Yes	0.759	0.236	1.00	Yes	1.00	**7.44**
		$U_{44} - L_{44}$			-----	-617.42	262	-325	442	-560	569	97	757	128	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.258	1	Yes	0.662	0.237	0.90	Yes	1.00	**3.77**
	Structure 3	$U_0 - L_0$			-----	-540.95	-299	402	-135	238	-1065	-140	108	14	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.277	1	Yes	0.630	0.187	0.82	Yes	1.00	**2.73**
		$U_1 - L_1$			-----	-652.14	-504	499	-207	206	-603	36	619	142	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.161	0.98	Yes	0.759	0.234	1.00	Yes	1.00	**5.12**
		$U_2 - L_2$			-----	-544.17	-405	423	-156	168	-35	196	660	305	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.196	1	Yes	0.757	0.239	1.00	Yes	1.00	**4.82**
		$U_3 - L_3$			-----	-408.28	-191	210	-69	84	-61	204	562	270	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.233	1	Yes	0.704	0.213	0.92	Yes	1.00	**3.70**
		$U_4 - L_4$			-----	-308.85	-208	220	-34	41	-727	48	600	224	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.303	1	Yes	0.654	0.281	0.94	Yes	1.00	**5.50**
		$U_5 - L_5$			112.83	-306.55	-246	269	82	-75	-589	16	-141	-108	0.203	0.515	0.72	Yes	0.112	0.283	0.40	Yes	0.687	0.296	0.99	Yes	0.649	0.344	1.00	Yes	1.00	**10.28**
		$U_6 - L_6$			-----	-157.32	-94	92	312	-340	-786	-753	702	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.351	0.645	1	Yes	0.333	0.435	0.77	Yes	1.00	**13.21**
		$U_7 - L_7$			-----	-366.88	77	-93	235	-259	429	22	-209	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.197	0.94	Yes	0.703	0.296	1.00	Yes	1.00	**4.72**
		$U_8 - L_8$			-----	-510.95	129	-131	331	-333	856	314	-74	36	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.252	1	Yes	0.701	0.285	0.99	Yes	1.00	**6.02**
		$U_9 - L_9$			-----	-636.55	171	-223	379	-481	981	506	540	491	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.230	1	Yes	0.741	0.223	0.97	Yes	1.00	**4.71**
		$U_{10} - L_{10}$			-----	-570.30	158	-152	284	-298	1421	785	1227	724	-----	-----	-----	-----	-----	-----	-----	-----	0.591	0.408	1	Yes	0.563	0.154	0.72	Yes	1.00	**3.20**
		$U_{11} - L_{11}$			-----	-490.44	215	-250	325	-372	1138	508	980	503	-----	-----	-----	-----	-----	-----	-----	-----	0.585	0.407	1	Yes	0.554	0.207	0.77	Yes	1.00	**2.04**
		$U_{12} - L_{12}$			-----	-1166.85	-509	550	271	-367	-1175	-501	899	248	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.151	1	Yes	0.809	0.102	0.92	Yes	1.00	**8.44**
		$U_{13} - L_{13}$			-----	-450.36	-287	304	-155	167	-391	-29	659	187	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.245	1	Yes	0.695	0.299	1.00	Yes	1.00	**3.22**
		$U_{14} - L_{14}$			-----	-501.39	-249	274	-100	89	-797	-189	771	278	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.234	1	Yes	0.719	0.240	0.96	Yes	1.00	**4.32**
		$U_{15} - L_{15}$			-----	-414.48	-209	232	-80	86	-126	71	703	253	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.243	1	Yes	0.715	0.235	0.96	Yes	1.00	**5.31**
		$U_{16} - L_{16}$			-----	-233.11	-339	335	-1	14	-1106	-818	-909	-570	-----	-----	-----	-----	-----	-----	-----	-----	0.513	0.479	1	Yes	0.493	0.434	0.93	Yes	1.00	**13.17**
		$U_{17} - L_{17}$			209.89	-235.36	-230	234	204	-235	870	-146	-1082	-442	0.377	0.614	1.00	Yes	0.208	0.337	0.55	Yes	0.516	0.345	0.87	Yes	0.498	0.300	0.80	Yes	1.00	**14.55**
		$U_{18} - L_{18}$			86.85	-288.39	-93	100	232	-274	488	155	-981	-504	0.156	0.635	0.80	Yes	0.086	0.349	0.44	Yes	0.630	0.369	1	Yes	0.610	0.351	0.97	Yes	1.00	**9.40**
		$U_{19} - L_{19}$			-----	-291.42	-1	-14	192	-205	450	227	512	255	-----	-----	-----	-----	-----	-----	-----	-----	0.637	0.359	1	Yes	0.617	0.262	0.88	Yes	1.00	**4.35**
		$U_{20} - L_{20}$			-----	-232.13	88	-105	156	-197	623	200	697	224	-----	-----	-----	-----	-----	-----	-----	-----	0.518	0.481	1	Yes	0.491	0.251	0.75	Yes	1.00	**1.81**

Moment (End) AB Operating

Operating Loads - 3F1

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

DL Factor: 1.300 LL Factor: 1.300 Vehicle 1.300 Pedestrian 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	$U_0 - L_1$	424.97	-12.08	-116	59	7	-11	-1202	-443	48	120	0.558	0.438	1.00	Yes	0.337	0.241	0.58	Yes	0.021	0.346	0.37	Yes	0.019	0.135	0.16	Yes	1.00	**5.41**
		$U_1 - L_2$	324.07	-----	-76	18	-18	-25	-360	-162	-1101	-385	0.583	0.415	1.00	Yes	0.321	0.229	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.64**
		$U_2 - L_3$	115.96	-193.91	-46	1	-44	-63	-182	-148	-1782	-336	0.209	0.597	0.81	Yes	0.115	0.328	0.45	Yes	0.446	0.544	1	Yes	0.410	0.081	0.50	Yes	1.00	**7.91**
		$U_3 - L_4$	-----	-313.25	25	-13	9	-61	462	260	-711	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.281	1	Yes	0.663	0.078	0.75	Yes	1.00	**4.61**
		$U_4 - L_4$	476.36	-----	1	99	-134	4	-57	174	700	591	0.699	0.299	1.00	Yes	0.384	0.164	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.66**
		$U_5 - L_5$	664.49	-----	-175	223	-37	86	-410	219	434	79	0.786	0.206	1.00	Yes	0.432	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.81**
		$U_7 - L_6$	591.53	-----	-248	240	-40	84	-468	-19	-830	-171	0.699	0.292	1.00	Yes	0.385	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.52**
		$U_8 - L_7$	622.39	-----	-74	312	22	96	-357	8	-452	-272	0.736	0.260	1.00	Yes	0.405	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.78**
		$U_9 - L_9$	941.26	-----	-66	377	-29	174	76	-68	572	155	0.752	0.241	1.00	Yes	0.466	0.136	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.22**
		$U_9 - L_{10}$	1015.09	-----	-305	264	-122	116	-387	-179	369	151	0.811	0.185	1.00	Yes	0.503	0.104	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.16**
		$U_{10} - L_{11}$	878.08	-----	-221	170	-133	80	-471	-601	-1130	-514	0.742	0.251	1.00	Yes	0.459	0.144	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.14**
		$U_{11} - L_{12}$	705.87	-----	-219	94	-156	11	-462	-388	-1284	-677	0.698	0.294	1.00	Yes	0.384	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		$U_{12} - L_{13}$	560.72	-----	-188	145	-103	40	-400	-388	-747	-323	0.684	0.310	1.00	Yes	0.430	0.178	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.80**
		$U_{13} - L_{14}$	341.15	-----	-71	29	-38	-24	-98	-176	-993	-340	0.614	0.378	1.00	Yes	0.337	0.208	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.04**
		$U_{15} - L_{14}$	261.50	-252.99	-73	-2	14	-100	-293	-405	741	-216	0.470	0.343	0.82	Yes	0.259	0.189	0.45	Yes	0.593	0.401	1	Yes	0.535	0.128	0.67	Yes	1.00	**9.20**
		$U_{16} - L_{15}$	402.74	-31.21	-137	93	-16	-22	-339	-24	-217	-120	0.724	0.273	1.00	Yes	0.398	0.150	0.55	Yes	0.074	0.167	0.25	Yes	0.066	0.175	0.25	Yes	1.00	**7.63**
		$U_{17} - L_{16}$	524.51	-----	-144	97	-50	17	-360	-70	-75	-91	0.769	0.230	1.00	Yes	0.423	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.98**
		$U_{18} - L_{17}$	610.92	-----	-317	249	-132	90	-498	-36	-399	-109	0.722	0.270	1.00	Yes	0.397	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.59**
		$U_{19} - L_{18}$	692.98	-----	-333	253	-132	96	-461	-166	-456	-203	0.751	0.246	1.00	Yes	0.413	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.41**
		$U_{20} - L_{19}$	676.55	-----	-392	323	-179	145	-359	-90	-260	-141	0.733	0.259	1.00	Yes	0.403	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.02**
	Structure 2	$U_0 - L_1$	623.26	-----	-306	307	-103	133	-1559	-315	-176	-5	0.617	0.376	1.00	Yes	0.339	0.207	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.15**
		$U_1 - L_2$	756.80	-----	-394	312	-160	114	-428	-376	153	-22	0.749	0.247	1.00	Yes	0.412	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.32**
		$U_2 - L_3$	615.71	-----	-321	264	-115	85	-389	-494	134	-20	0.728	0.271	1.00	Yes	0.400	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.96**
		$U_3 - L_4$	568.16	-----	-176	128	-48	22	-387	-311	183	20	0.757	0.242	1.00	Yes	0.417	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.62**
		$U_4 - L_5$	367.22	-41.02	-128	89	-20	-23	-399	-342	-604	-157	0.660	0.338	1.00	Yes	0.363	0.186	0.55	Yes	0.101	0.159	0.26	Yes	0.087	0.164	0.26	Yes	1.00	**7.28**
		$U_5 - L_6$	279.57	-239.09	-84	29	48	-106	-393	-306	-1237	-181	0.503	0.493	1.00	Yes	0.277	0.271	0.55	Yes	0.565	0.280	0.85	Yes	0.506	0.135	0.65	Yes	1.00	**8.75**
		$U_6 - L_7$	-----	-380.30	-4	-38	48	-102	14	-87	-427	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.182	1	Yes	0.729	0.116	0.85	Yes	1.00	**4.60**
		$U_8 - L_7$	608.73	-----	-189	157	-79	30	-229	-54	81	-120	0.776	0.216	1.00	Yes	0.489	0.121	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.85**
		$U_8 - L_8$	726.51	-----	-335	257	-188	108	-209	-96	241	6	0.787	0.211	1.00	Yes	0.433	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.55**
		$U_{10} - L_9$	828.61	-----	-311	252	-153	121	-153	176	-65	26	0.820	0.171	1.00	Yes	0.451	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.89**
		$U_{11} - L_{10}$	885.45	-----	-339	306	-159	155	-322	146	-218	103	0.807	0.188	1.00	Yes	0.444	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.08**
		$U_{12} - L_{11}$	848.90	-----	-337	343	-133	175	-577	295	-557	58	0.773	0.225	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.75**
		$U_{13} - L_{12}$	736.92	-----	-414	379	-161	163	-506	78	-526	1	0.729	0.271	1.00	Yes	0.401	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.07**
		$U_{14} - L_{13}$	770.20	-----	-264	444	-15	121	-141	66	-194	-116	0.762	0.235	1.00	Yes	0.419	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.64**
		$U_{14} - L_{15}$	563.87	-----	-180	333	-47	163	91	-98	770	361	0.667	0.328	1.00	Yes	0.367	0.180	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.00**
		$U_{15} - L_{16}$	600.60	-----	-353	324	-170	159	167	-179	479	129	0.710	0.286	1.00	Yes	0.391	0.158	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
		$U_{16} - L_{17}$	691.40	-----	-328	356	-127	154	-44	-203	373	110	0.749	0.244	1.00	Yes	0.412	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.45**
		$U_{17} - L_{18}$	647.14	-----	-285	284	-110	126	-75	-199	358	88	0.765	0.226	1.00	Yes	0.421	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.06**
		$U_{18} - L_{19}$	629.18	-----	-279	252	-82	96	-148	-516	290	77	0.744	0.251	1.00	Yes	0.409	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.67**
		$U_{19} - L_{20}$	569.90	-----	-188	168	-69	36	-312	-205	-501	-149	0.727	0.270	1.00	Yes	0.400	0.154	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.39**
		$U_{20} - L_{21}$	411.80	-----	-125	106	-23	-3	-193	-324	-341	-85	0.741	0.259	1.00	Yes	0.407	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.75**
		$U_{21} - L_{22}$	317.02	-249.00	-89	47	20	-93	-133	-150	-1061	-140	0.570	0.426	1.00	Yes	0.314	0.234	0.55	Yes	0.588	0.393	0.99	Yes	0.527	0.119	0.65	Yes	1.00	**10.24**
		$U_{23} - L_{22}$	433.67	-140.79	-114	67	14	-68	-219	-171	247	-96	0.780	0.218	1.00	Yes	0.429	0.120	0.55	Yes	0.335	0.149	0.49	Yes	0.298	0.146	0.45	Yes	1.00	**10.08**
		$U_{24} - L_{23}$	427.39	-----	-123	110	-33	12	-162	28	247	-59	0.769	0.228	1.00	Yes	0.423	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.02**
		$U_{25} - L_{24}$	599.47	-----	-192	176	-43	51	-190	55	-298	-80	0.764	0.233	1.00	Yes	0.420	0.131	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.03**
		$U_{26} - L_{25}$	668.92	-----	-280	275	-80	98	-127	176	-252	-56	0.791	0.204	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.27**
		$U_{27} - L_{26}$	654.05	-----	-286	289	-107	126	-298	221	-339	-6	0.773	0.225	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		$U_{28} - L_{27}$	678.83	-----	-304	342	-96	149	-528	216	-541	41	0.735	0.264	1.00	Yes	0.404	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.75**
		$U_{29} - L_{28}$	598.05	-----	-342	332	-94	107	-449	42	-535	-41	0.707	0.291	1.00	Yes	0.389	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.49**
		$U_{30} - L_{29}$	632.38	-----	-196	363	30	72	-140	226	-249	-200	0.748	0.251	1.00	Yes	0.411	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.44**
		$U_{30} - L_{31}$	738.58	-----	-261	437	-66	220	-7	-380	422	185	0.731	0.266	1.00	Yes	0.402	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.84**
		$U_{31} - L_{32}$	741.00	-----	-423	380	-232	216	-30	-98	463	123	0.733	0.266	1.00	Yes	0.403	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.35**
		$U_{32} - L_{33}$	864.57	-----	-350	349	-160	192	-296	-462	283	58	0.788	0.212	1.00	Yes	0.433	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.48**
		$U_{33} - L_{34}$	870.71	-----	-328	292	-175	153	-448	-347	94	-94	0.793	0.201	1.00	Yes	0.436	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.89**
		$U_{34} - L_{35}$	775.45	-----	-290	237	-176	117	-484	-466	-637	-313	0.767	0.230	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.55**
		$U_{35} - L_{36}$	694.20	-----	-314	235	-180	96	-395	-374	-510	-276	0.752	0.245	1.00	Yes	0.414	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.30**
		$U_{36} - L_{37}$	526.61	-----	-166	136	-81	22	-173	-442	-841	-268	0.671	0.320	1.00	Yes	0.423	0.185	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.09**
		$U_{38} - L_{37}$	-----	-370.67	-21	-28	51	-101	-286	-216	40	-221	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.194	1	Yes	0.710	0.115	0.83	Yes	1.00	**5.63**
		$U_{39} - L_{38}$	388.68	-230.00	-120	61	53	-107	-197	-163	485	-78	0.699	0.293	1.00	Yes	0.384	0.161	0.55	Yes	0.548	0.283	0.84	Yes	0.487	0.153	0.64	Yes	1.00	**10.73**
		$U_{40} - L_{39}$	407.52	-----	-133	93	-17	-12	-331	79	-296	-95	0.733	0.266	1.00	Yes	0.403	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.87**
		$U_{41} - L_{40}$	561.36	-----	-174	127	-57	31	-391	-111	-411	-178	0.748	0.245	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.24**
		$U_{42} - L_{41}$	617.39	-----	-319	258	-123	93	-447	26	-402	-167	0.730	0.262	1.00	Yes	0.401	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.24**
		$U_{43} - L_{42}$	766.02	-----	-375	306	-137	104	-403	-73	-376	-193	0.758	0.234	1.00	Yes	0.417	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.71**
		$U_{44} - L_{43}$	798.70	-----	-385	377	-162	154	-81	69	-173	6	0.790	0.204	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.75**
	Structure 3	$U_0 - L_1$	591.55	-----	-289	261	-79	105	-1256	-357	-162	-4	0.641	0.354	1.00	Yes	0.352	0.195	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.80**
		$U_1 - L_2$	672.40	-----	-349	250	-158	107	-366	-545	166	-38	0.728	0.268	1.00	Yes	0.401	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.68**
		$U_2 - L_3$	609.24	-----	-314	260	-121	82	-511	-517	142	-19	0.720	0.272	1.00	Yes	0.396	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.49**
		$U_3 - L_4$	514.45	-----	-142	98	-40	18	-417	-367	163	-19	0.754	0.241	1.00	Yes	0.415	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.04**
		$U_4 - L_5$	332.41	-64.68	-118	84	-28	-24	-388	-304	-859	-196	0.598	0.399	1.00	Yes	0.329	0.219	0.55	Yes	0.153	0.233	0.39	Yes	0.137	0.150	0.29	Yes	1.00	**7.27**
		$U_5 - L_6$	154.63	-264.30	-48	-9	14	-110	-174	-102	-1371	-320	0.278	0.537	0.82	Yes	0.153	0.295	0.45	Yes	0.619	0.377	1	Yes	0.559	0.140	0.70	Yes	1.00	**8.21**
		$U_7 - L_6$	452.92	-----	-92	42	-31	-20	-218	-224	224	-101	0.815	0.183	1.00	Yes	0.448	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.12**
		$U_8 - L_7$	647.44	-----	-211	172	-85	43	-69	-4	-119	-77	0.789	0.208	1.00	Yes	0.497	0.116	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.93**
		$U_8 - L_8$	750.27	-----	-228	113	-146	28	-244	7	989	266	0.742	0.254	1.00	Yes	0.408	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.82**
		$U_{10} - L_9$	985.86	-----	-226	211	-81	84	-407	169	315	175	0.833	0.158	1.00	Yes	0.515	0.089	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.32**
		$U_{11} - L_{10}$	953.49	-----	-278	280	-81	107	-506	12	-862	-117	0.762	0.234	1.00	Yes	0.472	0.133	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.34**
		$U_{12} - L_{11}$	937.78	-----	-56	373	18	132	-313	115	-595	-223	0.750	0.242	1.00	Yes	0.464	0.137	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.83**
		$U_{12} - L_{13}$	606.93	-----	-88	295	-20	144	5	-185	581	157	0.718	0.274	1.00	Yes	0.395	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.81**
		$U_{13} - L_{14}$	637.59	-----	-283	236	-113	115	-120	-210	442	155	0.754	0.241	1.00	Yes	0.415	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.80**
		$U_{14} - L_{15}$	586.39	-----	-161	203	-94	92	-168	-263	-1006	-327	0.693	0.298	1.00	Yes	0.381	0.164	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.83**
		$U_{15} - L_{16}$	357.60	-----	-8	84	-61	-14	469	245	-1642	-762	0.524	0.468	1.00	Yes	0.288	0.257	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.61**
		$U_{17} - L_{16}$	-----	-313.76	62	-7	-79	-105	-163	57	574	452	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.279	1	Yes	0.664	0.134	0.80	Yes	1.00	**11.28**
		$U_{18} - L_{17}$	284.48	-135.67	-96	13	-87	-69	-346	-279	1261	13	0.512	0.488	1.00	Yes	0.281	0.268	0.55	Yes	0.312	0.466	0.78	Yes	0.287	0.122	0.41	Yes	1.00	**12.61**
		$U_{19} - L_{18}$	385.66	-----	-76	16	-47	-25	-293	-294	708	432	0.694	0.303	1.00	Yes	0.381	0.166	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.77**
		$U_{20} - L_{19}$	617.31	-----	-123	76	-34	8	-162	-58	-62	7	0.810	0.184	1.00	Yes	0.489	0.102	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.54**

Maximum Axial with Moment Interaction Check

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

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

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 3F1 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 - Upper Chord

Location	Member	Member Forces from STAAD: D (kips)	LL+ (kips)	LL- (kips)	Pedestrian Load+	Pedestrian Load-	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL+	Lane Reduction and Impact LL-	Impact & Pedestrian Load+	Impact & Pedestrian Load-	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A_deduct (in²) **	A_gross (in²)	A_net (in²)	C_Nominal (kips)	Member Capacity in Compression: C_c	L (feet)	r_min (in)	KL/r_min ***	F_crit **** (ksi)	C_nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	U_1 - U_2	-71.60	12.73	-71.99			0.90	1.24	14.17	-80.14	0.00	0.00	Vehicle	Vehicle	-----	-197.27	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	6.16	6.16
	U_2 - U_3	-90.76	25.68	-114.55			0.90	1.24	28.59	-127.53	0.00	0.00	Vehicle	Vehicle	-----	-283.77	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	-----	-----	3.72	3.72
	U_3 - U_5	-61.05	38.14	-126.50			0.90	1.24	42.46	-140.83	0.00	0.00	Vehicle	Vehicle	-----	-262.44	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	-----	-----	3.58	3.58
	U_4 - U_6	10.82	49.96	-117.96			0.90	1.24	55.61	-131.32	0.00	0.00	Vehicle	86.36	-156.66	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	11.87	11.87	4.39	4.39
	U_5 - U_6	12.98	50.22	-117.75			0.90	1.24	55.91	-131.09	0.00	0.00	Vehicle	89.56	-153.54	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	11.77	11.77	4.41	4.41
	U_6 - U_8	121.44	58.12	-92.64			0.90	1.24	64.71	-103.13	0.00	0.00	Vehicle	Vehicle	242.00	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	8.49	8.49	-----	-----
	U_7 - U_7	249.52	64.29	-56.13			0.90	1.24	71.58	-62.49	0.00	0.00	Vehicle	Vehicle	417.43	-----	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	-----	-----	7.75	7.75	-----	-----
	U_8 - U_9	376.85	65.54	-18.83			0.90	1.24	72.97	-20.97	0.00	0.00	Vehicle	Vehicle	584.76	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	10.05	10.05	-----	-----
	U_9 - U_9	319.70	70.58	-18.10			0.90	1.20	76.10	-19.52	0.00	0.00	Vehicle	Vehicle	514.54	-----	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	-----	-----	8.14	8.14	-----	-----
	U_9 - U_{10}	128.80	65.67	-53.19			0.90	1.20	70.80	-57.35	0.00	0.00	Vehicle	Vehicle	259.48	-----	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	-----	-----	8.20	8.20	-----	-----
	U_{10} - U_{11}	-70.81	59.20	-89.22			0.90	1.20	63.83	-96.19	0.00	0.00	Vehicle	Vehicle	-----	-217.11	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	-----	-----	5.47	5.47
	U_{11} - U_{12}	-252.85	52.47	-120.92			0.90	1.20	56.57	-130.37	0.00	0.00	Vehicle	Vehicle	-----	-498.18	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	-----	-----	4.29	4.29
	U_{12} - U_{13}	-391.81	45.01	-155.21			0.90	1.20	48.53	-167.34	0.00	0.00	Vehicle	Vehicle	-----	-726.89	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	-----	-----	4.46	4.46
	U_{13} - U_{14}	-482.83	37.51	-172.88			0.90	1.20	40.45	-186.40	0.00	0.00	Vehicle	Vehicle	-----	-870.00	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	4.53	4.53
	U_{14} - U_{15}	-484.28	37.37	-172.98			0.90	1.20	40.29	-186.51	0.00	0.00	Vehicle	Vehicle	-----	-872.03	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	-----	-----	4.52	4.52
	U_{15} - U_{16}	-501.86	28.69	-171.38			0.90	1.20	30.93	-184.78	0.00	0.00	Vehicle	Vehicle	-----	-892.62	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	4.47	4.47
	U_{16} - U_{17}	-467.82	20.84	-155.65			0.90	1.20	22.47	-167.82	0.00	0.00	Vehicle	Vehicle	-----	-826.33	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	-----	-----	5.12	5.12
	U_{17} - U_{18}	-368.70	12.89	-123.90			0.90	1.20	13.90	-133.59	0.00	0.00	Vehicle	Vehicle	-----	-652.98	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	-----	-----	4.51	4.51
	U_{18} - U_{19}	-251.42	6.44	-83.03			0.90	1.20	6.94	-89.53	0.00	0.00	Vehicle	Vehicle	-----	-443.23	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	4.76	4.76
	U_{19} - U_{20}	-117.77	1.60	-37.38			0.90	1.20	1.73	-40.30	0.00	0.00	Vehicle	Vehicle	-----	-205.49	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	13.89	13.89
Structure 2	U_1 - U_1	-118.16	4.94	-42.62			0.90	1.18	5.26	-45.38	0.00	0.00	Vehicle	Vehicle	-----	-212.60	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	-----	-----	11.66	11.66
	U_1 - U_2	-239.45	11.32	-85.66			0.90	1.18	12.05	-91.21	0.00	0.00	Vehicle	Vehicle	-----	-429.85	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.05	6.05
	U_2 - U_3	-350.29	18.88	-123.43			0.90	1.18	20.10	-131.42	0.00	0.00	Vehicle	Vehicle	-----	-626.22	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	4.00	0.69	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.53	5.53
	U_3 - U_4	-448.96	28.16	-153.68			0.90	1.18	29.98	-163.62	0.00	0.00	Vehicle	Vehicle	-----	-796.36	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	-----	-----	5.45	5.45
	U_4 - U_5	-483.05	37.26	-174.41			0.90	1.18	39.95	-186.76	0.00	0.00	Vehicle	Vehicle	-----	-870.75	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	-----	-----	5.38	5.38
	U_5 - U_6	-485.65	47.46	-186.03			0.90	1.18	50.53	-198.06	0.00	0.00	Vehicle	Vehicle	-----	-888.82	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	-----	-----	5.06	5.06
	U_6 - U_7	-428.66	56.23	-174.15			0.90	1.18	59.86	-185.42	0.00	0.00	Vehicle	Vehicle	-----	-798.30	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	-----	-----	4.92	4.92
	U_7 - U_8	-428.18	56.36	-173.83			0.90	1.18	60.01	-185.08	0.00	0.00	Vehicle	Vehicle	-----	-797.23	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	4.93	4.93
	U_8 - U_9	-335.25	64.62	-159.28			0.90	1.18	68.80	-169.59	0.00	0.00	Vehicle	Vehicle	-----	-656.29	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	4.66	4.66
	U_8 - U_{10}	-200.15	69.90	-133.95			0.90	1.18	74.42	-142.62	0.00	0.00	Vehicle	Vehicle	-----	-445.60	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	4.81	4.81
	U_{10} - U_{11}	-52.03	74.18	-100.58			0.90	1.18	78.98	-107.09	0.00	0.00	Vehicle	35.04	-206.86	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	12.19	12.19	6.70	6.70
	U_{11} - U_{12}	107.09	74.02	-66.75			0.90	1.18	78.80	-71.07	0.00	0.00	Vehicle	241.66	-----	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	-----	-----	10.20	10.20	-----	-----
	U_{12} - U_{13}	259.37	73.30	-39.36			0.90	1.18	78.04	-41.91	0.00	0.00	Vehicle	438.64	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	11.27	11.27	-----	-----
	U_{13} - U_{14}	391.99	68.96	-13.91			0.90	1.18	73.42	-14.81	0.00	0.00	Vehicle	605.03	-----	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	-----	-----	15.97	15.97	-----	-----
	U_{14} - U_{15}	439.60	69.55	-12.07			0.90	1.17	73.17	-12.70	0.00	0.00	Vehicle	668.34	-----	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	-----	-----	15.37	15.37	-----	-----
	U_{15} - U_{16}	369.68	68.43	-27.99			0.90	1.17	71.99	-29.44	0.00	0.00	Vehicle	574.18	-----	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	-----	-----	12.54	12.54	-----	-----
	U_{16} - U_{17}	271.42	65.93	-49.22			0.90	1.17	69.36	-51.79	0.00	0.00	Vehicle	443.02	-----	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	-----	-----	11.14	11.14	-----	-----
	U_{17} - U_{18}	171.80	62.81	-75.01			0.90	1.17	66.08	-78.91	0.00	0.00	Vehicle	309.24	-----	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	-----	-----	9.00	9.00	-----	-----
	U_{18} - U_{19}	72.84	57.27	-96.33			0.90	1.17	60.25	-101.35	0.00	0.00	Vehicle	173.01	-37.06	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	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	11.51	11.51	7.11	7.11
	U_{19} - U_{20}	-8.04	51.02	-122.82			0.90	1.17	53.67	-129.21	0.00	0.00	Vehicle	59.32	-178.43	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	15.43	15.43	5.30	5.30
	U_{20} - U_{21}	-60.07	43.11	-139.90			0.90	1.17	45.36	-147.18	0.00	0.00	Vehicle	-----	-269.43	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	-----	-----	5.28	5.28
	U_{21} - U_{22}	-82.15	34.28	-142.72			0.90	1.17	36.06	-150.16	0.00	0.00	Vehicle	-----	-302.01	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	-----	-----	5.03	5.03
	U_{22} - U_{23}	-82.37	34.15	-142.58			0.90	1.17	35.93	-150.01	0.00	0.00	Vehicle	-----	-302.10	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	-----	-----	5.03	5.03
	U_{23} - U_{24}	-65.94	42.36	-142.39			0.90	1.17	44.57	-149.81	0.00	0.00	Vehicle	-----	-280.47	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	-----	-----	5.15	5.15
	U_{24} - U_{25}	-11.38	50.52	-132.19			0.90	1.17	53.15	-139.07	0.00	0.00	Vehicle	45.72	-204.17	6.50	32.31	26.8125	1066.31	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	15.77	15.77	4.85	4.85
	U_{25} - U_{26}	54.95	57.39	-106.97			0.90	1.17	60.38	-112.54	0.00	0.00	Vehicle	149.92	-74.87	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	11.78	11.78	6.24	6.24
	U_{26} - U_{27}	135.89	63.09	-84.01			0.90	1.17	66.38	-88.39	0.00	0.00	Vehicle	262.95	-----	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	-----	-----	9.50	9.50	-----	-----
	U_{27} - U_{28}	216.69	65.78	-59.16			0.90	1.17	69.21	-62.24	0.00	0.00	Vehicle	371.67	-----	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	-----	-----	11.95	11.95	-----	-----
	U_{28} - U_{29}	293.53	67.31	-31.61			0.90	1.17	70.82	-33.26	0.00	0.00	Vehicle	473.66	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	13.82	13.82	-----	-----
	U_{29} - U_{30}	357.86	66.47	-16.63			0.90	1.17	69.93	-17.49	0.00	0.00	Vehicle	556.13	-----	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	-----	-----	17.25	17.25	-----	-----
	U_{30} - U_{31}	339.12	75.81	-18.97			0.90	1.18	80.71	-20.20	0.00	0.00	Vehicle	545.79	-----	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	-----	-----	15.18	15.18	-----	-----
	U_{31} - U_{32}	251.34	75.62	-29.33			0.90	1.18	80.51	-31.22	0.00	0.00	Vehicle	431.41	-----	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	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	11.03	11.03	-----	-----
	U_{32} - U_{33}	136.30	74.49	-55.53			0.90	1.18	79.31	-59.12	0.00	0.00	Vehicle	280.29	-----	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	-----	-----

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: 3F1 Fy = 33.0 ksi
Condition: As-Inspected Fu = 60.0 ksi
E = 29000.0 ksi

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

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

Axial Force Rating

Location	Member	Member Forces from STAAD: D (kips)	LL+max (kips)	LL+min (kips)	Pedestrian Load+MAX	Pedestrian Load+MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL+MAX	Lane Reduction and Impact LL+MIN	Impact & Pedestrian Load+MAX	Impact & Pedestrian Load+MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A+deduct (in²) **	A+gross (in²)	A+net (in²)	C+Nominal (kips)	Member Capacity in Compression: C+c	L (feet)	r+min (in)	KL/r+min ***	F+crit **** (ksi)	C+nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Lower Chord																																														
Structure 1	L_0 - L_1	4.73	4.92	-3.50			0.90	1.24	5.48	-3.90	0.00	0.00	Vehicle	Vehicle	13.27	-----	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**90.86**	**90.86**	-----	-----
	L_1 - L_2	74.19	69.44	-14.55			0.90	1.24	77.30	-16.20	0.00	0.00	Vehicle	Vehicle	196.94	-----	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	-----	-----	**5.54**	**5.54**	-----	-----
	L_2 - L_3	97.64	108.24	-27.44			0.90	1.24	120.50	-30.55	0.00	0.00	Vehicle	Vehicle	283.58	-----	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	-----	-----	**4.74**	**4.74**	-----	-----
	L_3 - L_4	66.79	120.21	-39.67			0.90	1.24	133.83	-44.16	0.00	0.00	Vehicle	Vehicle	260.80	-----	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**4.50**	**4.50**	-----	-----
	L_4 - L_5	-108.59	89.42	-59.65			0.90	1.24	99.55	-66.41	0.00	0.00	Vehicle	Vehicle	-----	-227.50	1.95	23.40	21.4500	772.20	131.71	10.7181	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	-----	-----	**5.90**	**5.90**
	L_5 - L_6	-237.42	53.50	-65.95			0.90	1.24	59.56	-73.42	0.00	0.00	Vehicle	Vehicle	-----	-404.09	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	-----	-----	**5.75**	**5.75**
	L_6 - L_7	-362.38	16.68	-69.00			0.90	1.24	18.56	-76.81	0.00	0.00	Vehicle	Vehicle	-----	-570.95	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	-----	-----	**7.58**	**7.58**
	L_7 - L_8	-478.62	1.59	-75.95			0.90	1.24	1.77	-84.56	0.00	0.00	Vehicle	Vehicle	-----	-732.13	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**8.52**	**8.52**
	L_8 - L_9	-476.97	0.18	-76.06			0.90	1.20	0.19	-82.01	0.00	0.00	Vehicle	Vehicle	-----	-726.67	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	-----	-----	**8.81**	**8.81**
	L_9 - L_{10}	-301.47	13.91	-65.49			0.90	1.20	15.00	-70.61	0.00	0.00	Vehicle	Vehicle	-----	-483.69	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	-----	-----	**9.12**	**9.12**
	L_{10} - L_{11}	-104.56	42.07	-57.95			0.90	1.20	45.36	-62.49	0.00	0.00	Vehicle	Vehicle	-----	-217.16	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	-----	-----	**6.33**	**6.33**
	L_{11} - L_{12}	96.98	76.37	-51.35			0.90	1.20	82.35	-55.36	0.00	0.00	Vehicle	Vehicle	233.12	-----	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	-----	-----	**6.04**	**6.04**	-----	-----
	L_{12} - L_{13}	268.60	102.42	-44.45			0.90	1.20	110.43	-47.92	0.00	0.00	Vehicle	Vehicle	492.75	-----	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	-----	-----	**6.39**	**6.39**	-----	-----
	L_{13} - L_{14}	405.49	134.61	-37.34			0.90	1.20	145.14	-40.26	0.00	0.00	Vehicle	Vehicle	715.82	-----	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}	502.59	143.06	-20.83			0.90	1.20	154.25	-22.46	0.00	0.00	Vehicle	Vehicle	853.89	-----	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	-----	-----	**6.95**	**6.95**	-----	-----
	L_{15} - L_{16}	469.06	128.10	-16.91			0.90	1.20	138.11	-18.23	0.00	0.00	Vehicle	Vehicle	789.33	-----	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	-----	-----	**8.00**	**8.00**	-----	-----
	L_{16} - L_{17}	365.26	95.37	-11.53			0.90	1.20	102.83	-12.43	0.00	0.00	Vehicle	Vehicle	608.51	-----	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	-----	-----	**8.28**	**8.28**	-----	-----
	L_{17} - L_{18}	248.52	60.66	-8.79			0.90	1.20	65.40	-9.48	0.00	0.00	Vehicle	Vehicle	408.09	-----	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	-----	-----	**9.71**	**9.71**	-----	-----
	L_{18} - L_{19}	112.87	29.61	-24.59			0.90	1.20	31.93	-26.51	0.00	0.00	Vehicle	Vehicle	188.24	-----	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	-----	-----	**12.21**	**12.21**	-----	-----
	L_{19} - L_{20}	-14.36	23.48	-48.87			0.90	1.20	25.32	-52.69	0.00	0.00	Vehicle	Vehicle	14.25	-87.17	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	**20.42**	**20.42**	**7.76**	**7.76**
Structure 2	L_0 - L_1	15.25	7.46	-7.76			0.90	1.18	7.94	-8.26	0.00	0.00	Vehicle	Vehicle	30.15	-----	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	-----	-----	**77.84**	**77.84**	-----	-----
	L_1 - L_2	136.09	37.79	-4.99			0.90	1.18	40.24	-5.31	0.00	0.00	Vehicle	Vehicle	229.22	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**12.36**	**12.36**	-----	-----
	L_2 - L_3	262.77	75.33	-10.02			0.90	1.18	80.20	-10.67	0.00	0.00	Vehicle	Vehicle	445.86	-----	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	-----	-----	**8.74**	**8.74**	-----	-----
	L_3 - L_4	373.14	111.52	-17.45			0.90	1.18	118.74	-18.58	0.00	0.00	Vehicle	Vehicle	639.45	-----	9.45	51.08	41.6250	1685.48	131.71	10.7370	5.7282	16.87	32.73	-1420.90	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**7.78**	**7.78**	-----	-----
	L_4 - L_5	456.57	139.88	-26.26			0.90	1.18	148.93	-27.96	0.00	0.00	Vehicle	Vehicle	787.16	-----	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	-----	-----	**8.01**	**8.01**	-----	-----
	L_5 - L_6	489.37	161.78	-35.64			0.90	1.18	172.25	-37.95	0.00	0.00	Vehicle	Vehicle	860.10	-----	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	-----	-----	**7.57**	**7.57**	-----	-----
	L_6 - L_7	479.01	171.53	-45.24			0.90	1.18	182.63	-48.16	0.00	0.00	Vehicle	Vehicle	860.13	-----	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	146.22	-62.04			0.90	1.18	155.68	-66.05	0.00	0.00	Vehicle	Vehicle	631.47	-----	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	-----	-----	**6.50**	**6.50**	-----	-----
	L_8 - L_9	188.98	119.83	-67.08			0.90	1.18	127.58	-71.42	0.00	0.00	Vehicle	Vehicle	411.53	-----	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	-----	-----	**7.14**	**7.14**	-----	-----
	L_9 - L_{10}	39.77	88.09	-71.45			0.90	1.18	93.79	-76.07	0.00	0.00	Vehicle	Vehicle	173.63	-47.19	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**8.77**	**8.77**	**10.09**	**10.09**
	L_{10} - L_{11}	-127.39	56.55	-72.02			0.90	1.18	60.21	-76.68	0.00	0.00	Vehicle	Vehicle	-----	-265.29	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	-----	-----	**6.82**	**6.82**
	L_{11} - L_{12}	-282.64	31.86	-71.39			0.90	1.18	33.92	-76.01	0.00	0.00	Vehicle	Vehicle	-----	-466.25	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	-----	-----	**8.53**	**8.53**
	L_{12} - L_{13}	-426.73	16.91	-68.98			0.90	1.18	18.00	-73.44	0.00	0.00	Vehicle	Vehicle	-----	-650.22	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**11.56**	**11.56**
	L_{13} - L_{14}	-536.42	15.72	-88.29			0.90	1.18	16.74	-94.00	0.00	0.00	Vehicle	Vehicle	-----	-819.55	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	-----	-----	**10.41**	**10.41**
	L_{14} - L_{15}	-537.75	18.73	-76.46			0.90	1.17	19.77	-80.45	0.00	0.00	Vehicle	Vehicle	-----	-803.66	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**12.15**	**12.15**
	L_{15} - L_{16}	-475.65	17.36	-75.13			0.90	1.17	18.26	-79.05	0.00	0.00	Vehicle	Vehicle	-----	-721.10	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**10.12**	**10.12**
	L_{16} - L_{17}	-384.35	21.28	-67.98			0.90	1.17	22.39	-71.52	0.00	0.00	Vehicle	Vehicle	-----	-592.63	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**9.27**	**9.27**
	L_{17} - L_{18}	-281.86	40.03	-65.29			0.90	1.17	42.11	-68.69	0.00	0.00	Vehicle	Vehicle	-----	-455.71	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	-----	-----	**6.49**	**6.49**
	L_{18} - L_{19}	-175.17	61.76	-59.56			0.90	1.17	64.98	-62.66	0.00	0.00	Vehicle	Vehicle	-----	-309.17	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_{19} - L_{20}	-76.53	81.46	-53.94			0.90	1.17	85.71	-56.75	0.00	0.00	Vehicle	Vehicle	11.93	-173.27	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**8.82**	**8.82**	**8.76**	**8.76**
	L_{20} - L_{21}	4.38	101.52	-45.90			0.90	1.17	106.81	-48.30	0.00	0.00	Vehicle	Vehicle	144.54	-57.09	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	**8.87**	**8.87**	**16.73**	**16.73**
	L_{21} - L_{22}	55.94	117.54	-37.98			0.90	1.17	123.66	-39.96	0.00	0.00	Vehicle	Vehicle	233.48	-----	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	-----	-----	**7.25**	**7.25**	-----	-----
	L_{22} - L_{23}	62.99	110.26	-24.23			0.90	1.17	116.01	-25.49	0.00	0.00	Vehicle	Vehicle	232.69	-----	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	-----	-----	**7.66**	**7.66**	-----	-----
	L_{23} - L_{24}	15.54	99.79	-32.35			0.90	1.17	104.99	-34.04	0.00	0.00	Vehicle	Vehicle	156.69	-24.05	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	**8.92**	**8.92**	**24.06**	**24.06**
	L_{24} - L_{25}	-56.00	70.27	-36.64			0.90	1.17	73.93	-38.55	0.00	0.00	Vehicle	Vehicle	23.30	-122.92	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	**9.94**	**9.94**	**13.43**	**13.43**
	L_{25} - L_{26}	-136.37	54.21	-42.34			0.90	1.17	57.03	-44.55	0.00	0.00	Vehicle	Vehicle	-----	-235.19	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	-----	-----	**9.82**	**9.82**
	L_{26} - L_{27}	-217.73	30.64	-58.41			0.90	1.17	32.24	-61.46	0.00	0.00	Vehicle	Vehicle	-----	-362.94	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**8.30**	**8.30**
	L_{27} - L_{28}	-296.25	24.68	-82.54			0.90	1.17	25.96	-86.84	0.00	0.00	Vehicle	Vehicle	-----	-498.02	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**8.65**	**8.65**
	L_{28} - L_{29}	-364.18	29.72	-108.99			0.90	1.17	31.27	-114.67	0.00	0.00	Vehicle	Vehicle	-----	-622.51	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	-----	-----	**7.95**	**7.95**
	L_{29} - L_{30}	-418.23	31.77	-126.73			0.90	1.17	33.43	-133.34	0.00	0.00	Vehicle	Vehicle	-----	-717.03	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	-----	-----	**8.23**	**8.23**
	L_{30} - L_{31}	-350.38	15.72	-82.88			0.90	1.18	16.74	-88.24	0.00	0.00	Vehicle	Vehicle	-----	-570.21	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	-----	-----	**13.19**	**13.19**
	L_{31} - L_{32}	-275.46	16.12	-67.24			0.90	1.18	17.16	-71.59	0.00	0.00	Vehicle	Vehicle	-----	-451.16	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	-----	-----	**13.81**	**13.81**
	L_{32} - L_{33}	-179.08	17.59	-59.15			0.90	1.18	18.72

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: 3F1 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$_2$ - L$_0$	-77.19	11.38	-81.37			0.90	1.24	12.67	-90.58	0.00	0.00	Vehicle	Vehicle	------	-218.10	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	------	------	------	------	------	2.58	2.58
	U$_3$ - L$_1$	-33.88	10.26	-57.63			0.90	1.24	11.42	-64.16	0.00	0.00	Vehicle	Vehicle	------	-127.45	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	------	------	------	------	------	4.96	4.96
	U$_4$ - L$_2$	10.43	9.67	-40.48			0.90	1.24	10.76	-45.07	0.00	0.00	Vehicle	Vehicle	27.55	-45.02	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	------	------	------	------	------	38.78	38.78	8.04	8.04
	U$_5$ - L$_3$	44.39	15.73	-31.98			0.90	1.24	17.51	-35.60	0.00	0.00	Vehicle	Vehicle	80.46	------	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	------	------	------	------	------	------	21.89	21.89	------	------
	U$_6$ - L$_4$	-16.67	1.18	-52.00			0.90	1.24	1.31	-57.89	0.00	0.00	Vehicle	Vehicle	------	-96.93	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	------	------	------	------	------	------	------	5.76	5.76
	U$_7$ - L$_5$	-109.51	4.20	-61.47			0.90	1.24	4.68	-68.44	0.00	0.00	Vehicle	Vehicle	------	-231.32	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	------	------	------	------	------	------	------	4.61	4.61
	U$_8$ - L$_6$	-143.60	0.43	-75.20			0.90	1.24	0.48	-83.72	0.00	0.00	Vehicle	Vehicle	------	-295.52	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	------	------	------	------	------	------	------	4.03	4.03
	U$_9$ - L$_7$	-142.61	2.22	-76.89			0.90	1.24	2.47	-85.60	0.00	0.00	Vehicle	Vehicle	------	-296.68	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	------	------	------	------	------	------	------	3.39	3.39
	U$_{10}$ - L$_8$	-391.97	2.83	-89.68			0.90	1.24	3.15	-99.84	0.00	0.00	Vehicle	Vehicle	------	-639.35	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	------	------	15.25	------	------	18.60	45.00	Pass	5.96	12.00	Pass	------	------	------	------	------	------	------	6.75	6.75
	U$_{11}$ - L$_9$	-223.13	7.38	-74.68			0.90	1.20	7.96	-80.52	0.00	0.00	Vehicle	Vehicle	------	-394.75	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	------	------	------	------	------	------	------	5.04	5.04
	U$_{12}$ - L$_{10}$	-225.77	5.07	-71.36			0.90	1.20	5.46	-76.94	0.00	0.00	Vehicle	Vehicle	------	-393.53	2.76	34.69	31.9300	1144.77	131.71	10.7083	2.3304	41.36	31.37	-925.09	16.16	0.83	11.50	0.80	------	------	16.16	------	------	19.50	45.00	Pass	7.23	12.00	Pass	------	------	------	------	------	------	------	6.31	6.31
	U$_{13}$ - L$_{11}$	-198.79	5.98	-65.80			0.90	1.20	6.45	-70.95	0.00	0.00	Vehicle	Vehicle	------	-350.65	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	------	------	------	------	------	------	------	6.24	6.24
	U$_{14}$ - L$_{12}$	-154.77	9.30	-60.59			0.90	1.20	10.03	-65.33	0.00	0.00	Vehicle	Vehicle	------	-286.13	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	------	------	------	------	------	------	------	5.78	5.78
	U$_{15}$ - L$_{13}$	-109.04	15.25	-54.93			0.90	1.20	16.45	-59.23	0.00	0.00	Vehicle	Vehicle	------	-218.75	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	------	------	------	------	------	------	------	4.58	4.58
	U$_{16}$ - L$_{14}$	-12.30	1.53	-49.61			0.90	1.20	1.65	-53.49	0.00	0.00	Vehicle	Vehicle	------	-85.54	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	------	------	------	------	------	6.21	6.21
	U$_{17}$ - L$_{15}$	-5.62	21.59	-43.17			0.90	1.20	23.28	-46.55	0.00	0.00	Vehicle	Vehicle	22.95	-67.82	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	------	------	------	------	------	18.62	18.62	7.25	7.25
	U$_{18}$ - L$_{16}$	-51.74	13.51	-50.27			0.90	1.20	14.57	-54.20	0.00	0.00	Vehicle	Vehicle	------	-137.71	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	------	------	------	------	------	------	------	5.34	5.34
	U$_{17}$ - L$_{17}$	-127.31	8.57	-67.06			0.90	1.20	9.24	-72.30	0.00	0.00	Vehicle	Vehicle	------	-259.49	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	------	------	------	------	------	------	------	3.93	3.93
	U$_{18}$ - L$_{18}$	-159.89	7.91	-77.22			0.90	1.20	8.52	-83.26	0.00	0.00	Vehicle	Vehicle	------	-316.09	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	------	------	------	------	------	------	------	4.39	4.39
	U$_{19}$ - L$_{19}$	-191.17	6.68	-79.42			0.90	1.20	7.20	-85.63	0.00	0.00	Vehicle	Vehicle	------	-359.84	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	------	------	4.96	4.96
	U$_{20}$ - L$_{20}$	-211.94	6.69	-84.34			0.90	1.20	7.22	-90.93	0.00	0.00	Vehicle	Vehicle	------	-393.74	0.00	29.13	29.1305	961.31	131.71	20.3229	2.8884	63.32	29.19	-722.67	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	------	------	3.78	3.78
	Structure 2																																												
	U$_1$ - L$_0$	-206.53	8.40	-77.39			0.90	1.18	8.94	-82.40	0.00	0.00	Vehicle	Vehicle	------	-375.61	0.00	31.81	31.8100	1049.73	131.71	19.1510	2.8323	60.85	29.48	-797.03	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	------	------	4.93	4.93
	U$_1$ - L$_1$	-188.72	8.63	-73.80			0.90	1.18	9.19	-78.57	0.00	0.00	Vehicle	Vehicle	------	-347.48	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	------	------	------	------	------	------	------	6.16	6.16
	U$_2$ - L$_2$	-155.84	9.10	-69.07			0.90	1.18	9.69	-73.54	0.00	0.00	Vehicle	Vehicle	------	-298.20	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	------	------	------	------	------	------	------	5.69	5.69
	U$_3$ - L$_3$	-134.53	10.31	-64.02			0.90	1.18	10.98	-68.16	0.00	0.00	Vehicle	Vehicle	------	-263.49	0.00	22.75	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	------	------	16.32	------	------	30.85	45.00	Pass	4.91	12.00	Pass	------	------	------	------	------	------	------	4.66	4.66
	U$_4$ - L$_4$	-64.47	12.81	-52.83			0.90	1.18	13.64	-56.25	0.00	0.00	Vehicle	Vehicle	------	-156.93	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	------	------	------	------	------	------	------	4.88	4.88
	U$_5$ - L$_5$	-19.94	21.69	-45.83			0.90	1.18	23.09	-48.80	0.00	0.00	Vehicle	Vehicle	4.10	-89.35	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	------	------	------	------	------	19.39	19.39	6.57	6.57
	U$_6$ - L$_6$	40.07	30.60	-32.23			0.90	1.18	32.58	-34.32	0.00	0.00	Vehicle	Vehicle	94.45	------	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	------	------	6.56	------	------	------	------	------	------	11.90	11.90	------	------
	U$_7$ - L$_7$	-26.03	0.35	-42.80			0.90	1.18	0.37	-45.57	0.00	0.00	Vehicle	Vehicle	------	-93.09	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	------	------	------	------	------	------	------	6.90	6.90
	U$_8$ - L$_8$	-125.22	14.91	-53.71			0.90	1.18	15.87	-57.19	0.00	0.00	Vehicle	Vehicle	------	-237.13	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	------	------	15.75	------	------	36.00	45.00	Pass	8.89	12.00	Pass	------	------	------	------	------	------	------	7.09	7.09
	U$_9$ - L$_9$	-174.50	6.84	-66.25			0.90	1.18	7.28	-70.54	0.00	0.00	Vehicle	Vehicle	------	-318.54	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	------	------	------	------	------	------	------	7.33	7.33
	U$_{10}$ - L$_{10}$	-202.62	2.87	-75.49			0.90	1.18	3.06	-80.38	0.00	0.00	Vehicle	Vehicle	------	-367.90	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	------	------	------	------	------	------	------	7.17	7.17
	U$_{11}$ - L$_{11}$	-229.48	2.01	-80.90			0.90	1.18	2.14	-86.14	0.00	0.00	Vehicle	Vehicle	------	-410.30	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	------	------	------	------	------	------	------	6.21	6.21
	U$_{12}$ - L$_{12}$	-250.80	2.85	-83.30			0.90	1.18	3.04	-88.69	0.00	0.00	Vehicle	Vehicle	------	-441.34	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	------	------	------	------	------	------	------	6.21	6.21
	U$_{13}$ - L$_{13}$	-223.27	8.68	-83.31			0.90	1.18	9.24	-88.70	0.00	0.00	Vehicle	Vehicle	------	-405.57	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	------	------	------	------	------	------	------	5.26	5.26
	U$_{14}$ - L$_{14}$	-343.24	1.87	-82.17			0.90	1.18	1.99	-87.49	0.00	0.00	Vehicle	Vehicle	------	-559.95	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	------	------	15.38	------	------	18.31	45.00	Pass	5.68	12.00	Pass	------	------	------	------	------	------	------	8.10	8.10
	U$_{15}$ - L$_{15}$	-123.12	8.38	-68.57			0.90	1.17	8.82	-72.14	0.00	0.00	Vehicle	Vehicle	------	-253.84	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	------	------	7.86	7.86
	U$_{16}$ - L$_{16}$	-156.68	6.51	-73.03			0.90	1.17	6.85	-76.83	0.00	0.00	Vehicle	Vehicle	------	-303.56	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	------	------	------	------	------	------	------	6.63	6.63
	U$_{17}$ - L$_{17}$	-147.89	6.27	-72.91			0.90	1.17	6.59	-76.70	0.00	0.00	Vehicle	Vehicle	------	-291.98	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	7.87	-66.92			0.90	1.17	8.28	-70.41	0.00	0.00	Vehicle	Vehicle	------	-276.40	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	------	------	------	------	------	------	------	6.18	6.18
	U$_{19}$ - L$_{19}$	-111.47	8.80	-66.38			0.90	1.17	9.26	-69.84	0.00	0.00	Vehicle	Vehicle	------	-235.70	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	------	------	15.75	------	------	31.50	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	------	------	5.73	5.73
	U$_{20}$ - L$_{20}$	-76.56	15.69	-55.28			0.90	1.17	16.51	-58.16	0.00	0.00	Vehicle	Vehicle	------	-175.14	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	------	------	------	------	5.13	5.13
	U$_{21}$ - L$_{21}$	-44.33	19.23	-46.93			0.90	1.17	20.23	-49.38	0.00	0.00	Vehicle	Vehicle	------	-121.83	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	------	------	------	------	------	------	------	6.00	6.00
	U$_{22}$ - L$_{22}$	-21.25	1.14	-42.91			0.90	1.17	1.20	-45.15	0.00	0.00	Vehicle	Vehicle	------	-86.31	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	------	------	------	------	------	------	------	7.10	7.10
	U$_{23}$ - L$_{23}$	-39.04	21.81	-42.98			0.90	1.17	22.95	-45.22	0.00	0.00	Vehicle	Vehicle	------	-109.53	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	------	------	------	------	------	------	------	6.67	6.67
	U$_{24}$ - L$_{24}$	-74.80	16.59	-51.70			0.90	1.17	17.45	-54.39	0.00	0.00	Vehicle	Vehicle	------	-167.94	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	------	------	------	------	------	------	------	5.52	5.52
	U$_{25}$ - L$_{25}$	-103.21	10.78	-66.19			0.90	1.17	11.34	-69.64	0.00	0.00	Vehicle	Vehicle	------	-224.70	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	------	------	15.75	------	------	31.50	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	------	------	5.86	5.86
	U$_{26}$ - L$_{26}$	-120.15	10.17	-70.12			0.90	1.17	10.70	-73.77	0.00	0.00	Vehicle	Vehicle	------	-252.10	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$_{27}$	-123.87	8.40	-75.51			0.90	1.17	8.83	-79.45	0.00	0.00	Vehicle	Vehicle	------	-264.30	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	------	------	6.29	6.29
	U$_{28}$ - L$_{28}$	-135.49	7.64	-82.21			0.90	1.17	8.04	-86.49	0.00	0.00	Vehicle	Vehicle	------	-288.58	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	------	------	6.13	6.13
	U$_{29}$ - L$_{29}$	-116.90	4.47	-77.03			0.90	1.17	4.70	-81.04	0.00	0.00	Vehicle	Vehicle	------	-257.31	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	------	------	------	------	------	------	------	7.07	7.07
	U$_{30}$ - L$_{30}$	-261.40	3.23	-83.23			0.90	1.18	3.43	-88.61	0.00	0.00	Vehicle	Vehicle	------	-455.01	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	------	------	------	------	------	------	------	8.71	8.71
	U$_{31}$ - L$_{31}$	-156.06	10.51	-73.39			0.90	1.18	11.19	-78.14	0.00	0.00	Vehicle	Vehicle	------	-304.

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: 3F1 **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
North Truss - Diagonals Structure 1	U_0 - L_1	87.39	88.69	-16.02			0.90	1.24	98.74	-17.84	0.00	0.00	Vehicle	Vehicle	241.96	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**5.05**	**5.05**	-----	-----
	U_1 - L_2	23.29	64.79	-15.99			0.90	1.24	72.13	-17.81	0.00	0.00	Vehicle	Vehicle	124.05	-----	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	-----	-----	-----	-----	-----	**5.61**	**5.61**	-----	-----
	U_2 - L_3	-37.87	48.92	-24.76			0.90	1.24	54.46	-27.57	0.00	0.00	Vehicle	Vehicle	21.57	-85.07	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	-----	-----	-----	**8.55**	**8.55**	**10.75**	**10.75**
	U_3 - L_4	-92.23	30.15	-53.23			0.90	1.24	33.56	-59.26	0.00	0.00	Vehicle	Vehicle	-----	-196.93	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	-----	-----	-----	**-----**	**-----**	**4.12**	**4.12**
	U_4 - L_4	143.29	69.25	-12.50			0.90	1.24	77.09	-13.92	0.00	0.00	Vehicle	Vehicle	286.50	-----	0.00	20.48	20.4800	675.84	131.71	11.6953	2.0102	52.36	30.39	-529.06	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**4.88**	**4.88**	-----	-----
	U_5 - L_5	177.89	82.49	-4.98			0.90	1.24	91.84	-5.55	0.00	0.00	Vehicle	Vehicle	350.64	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.15**	**5.15**	-----	-----
	U_6 - L_6	184.40	93.36	-1.95			0.90	1.24	103.93	-2.17	0.00	0.00	Vehicle	Vehicle	374.84	-----	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	-----	-----	-----	-----	-----	**4.49**	**4.49**	-----	-----
	U_7 - L_7	179.98	85.89	-3.11			0.90	1.24	95.63	-3.46	0.00	0.00	Vehicle	Vehicle	358.29	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.92**	**4.92**	-----	-----
	U_8 - L_8	268.90	81.58	-8.60			0.90	1.20	87.96	-9.27	0.00	0.00	Vehicle	Vehicle	463.91	-----	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	-----	-----	-----	-----	-----	**7.88**	**7.88**	-----	-----
	U_9 - L_{10}	278.76	84.42	-8.21			0.90	1.20	91.02	-8.85	0.00	0.00	Vehicle	Vehicle	480.71	-----	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	-----	-----	-----	-----	-----	**7.51**	**7.51**	-----	-----
	U_{10} - L_{11}	284.98	83.34	-7.48			0.90	1.20	89.86	-8.06	0.00	0.00	Vehicle	Vehicle	487.29	-----	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	-----	-----	-----	-----	-----	**6.96**	**6.96**	-----	-----
	U_{11} - L_{12}	250.55	82.13	-11.37			0.90	1.20	88.56	-12.26	0.00	0.00	Vehicle	Vehicle	440.84	-----	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	-----	-----	-----	-----	-----	**5.95**	**5.95**	-----	-----
	U_{12} - L_{13}	189.62	73.28	-20.98			0.90	1.20	79.01	-22.62	0.00	0.00	Vehicle	Vehicle	349.21	-----	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	-----	-----	-----	-----	-----	**5.59**	**5.59**	-----	-----
	U_{13} - L_{14}	123.30	59.42	-27.78			0.90	1.20	64.07	-29.95	0.00	0.00	Vehicle	Vehicle	243.58	-----	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	-----	-----	-----	-----	-----	**4.75**	**4.75**	-----	-----
	U_{14} - L_{14}	-24.40	41.83	-43.95			0.90	1.20	45.10	-47.39	0.00	0.00	Vehicle	Vehicle	26.90	-93.33	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**10.02**	**10.02**	**6.41**	**6.41**
	U_{14} - L_{15}	48.54	59.16	-28.96			0.90	1.20	63.78	-31.23	0.00	0.00	Vehicle	Vehicle	146.02	-----	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	-----	-----	-----	-----	-----	**5.94**	**5.94**	-----	-----
	U_{15} - L_{16}	146.57	75.18	-11.73			0.90	1.20	81.06	-12.64	0.00	0.00	Vehicle	Vehicle	295.92	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**4.66**	**4.66**	-----	-----
	U_{16} - L_{17}	182.43	80.02	-10.09			0.90	1.20	86.28	-10.88	0.00	0.00	Vehicle	Vehicle	349.33	-----	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	-----	-----	-----	-----	-----	**5.43**	**5.43**	-----	-----
	U_{17} - L_{18}	223.79	88.51	-8.44			0.90	1.20	95.43	-9.10	0.00	0.00	Vehicle	Vehicle	414.99	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**5.10**	**5.10**	-----	-----
	U_{20} - L_{19}	232.63	83.89	-7.06			0.90	1.20	90.45	-7.61	0.00	0.00	Vehicle	Vehicle	420.01	-----	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	-----	-----	-----	-----	-----	**5.28**	**5.28**	-----	-----
Structure 2	U_0 - L_1	213.47	76.73	-8.97			0.90	1.18	81.69	-9.55	0.00	0.00	Vehicle	Vehicle	383.71	-----	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	-----	-----	-----	-----	-----	**6.90**	**6.90**	-----	-----
	U_1 - L_2	200.39	77.04	-10.53			0.90	1.18	82.03	-11.21	0.00	0.00	Vehicle	Vehicle	367.15	-----	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	-----	-----	-----	-----	-----	**7.04**	**7.04**	-----	-----
	U_2 - L_3	172.76	73.84	-11.78			0.90	1.18	78.62	-12.54	0.00	0.00	Vehicle	Vehicle	326.79	-----	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	-----	-----	-----	-----	-----	**6.08**	**6.08**	-----	-----
	U_3 - L_4	147.11	72.92	-13.86			0.90	1.18	77.64	-14.75	0.00	0.00	Vehicle	Vehicle	292.18	-----	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	-----	-----	-----	-----	-----	**5.54**	**5.54**	-----	-----
	U_4 - L_5	49.07	57.08	-26.06			0.90	1.18	60.77	-27.75	0.00	0.00	Vehicle	Vehicle	142.79	-----	0.00	16.85	16.8486	556.00	131.71	13.3994	1.9682	61.02	29.23	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**6.23**	**6.23**	-----	-----
	U_5 - L_6	2.97	51.47	-33.57			0.90	1.18	54.80	-35.74	0.00	0.00	Vehicle	Vehicle	75.10	-42.60	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	-----	-----	-----	**7.75**	**7.75**	**9.20**	**9.20**
	U_6 - L_7	-85.72	33.26	-50.55			0.90	1.18	35.41	-53.82	0.00	0.00	Vehicle	Vehicle	-----	-181.39	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	-----	-----	-----	**-----**	**-----**	**5.08**	**5.08**
	U_7 - L_7	140.27	64.23	-26.24			0.90	1.18	68.39	-27.94	0.00	0.00	Vehicle	Vehicle	271.25	-----	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	-----	-----	-----	-----	-----	**6.77**	**6.77**	-----	-----
	U_8 - L_8	204.17	77.30	-12.65			0.90	1.18	82.30	-13.46	0.00	0.00	Vehicle	Vehicle	372.41	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.15**	**6.15**	-----	-----
	U_9 - L_9	234.82	81.09	-7.75			0.90	1.18	86.33	-8.25	0.00	0.00	Vehicle	Vehicle	417.51	-----	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	-----	-----	-----	-----	-----	**6.29**	**6.29**	-----	-----
	U_{10} - L_{10}	263.04	92.53	-2.07			0.90	1.18	98.52	-2.20	0.00	0.00	Vehicle	Vehicle	470.02	-----	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	-----	-----	-----	-----	-----	**5.90**	**5.90**	-----	-----
	U_{11} - L_{11}	273.97	88.76	-2.52			0.90	1.18	94.50	-2.69	0.00	0.00	Vehicle	Vehicle	479.01	-----	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	-----	-----	-----	-----	-----	**6.04**	**6.04**	-----	-----
	U_{12} - L_{12}	254.88	86.50	-9.03			0.90	1.18	92.09	-9.62	0.00	0.00	Vehicle	Vehicle	451.06	-----	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	-----	-----	-----	-----	-----	**5.68**	**5.68**	-----	-----
	U_{13} - L_{13}	217.66	78.88	-10.37			0.90	1.18	83.98	-11.04	0.00	0.00	Vehicle	Vehicle	392.13	-----	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	-----	-----	-----	-----	-----	**6.67**	**6.67**	-----	-----
	U_{14} - L_{15}	110.03	62.79	-8.80			0.90	1.17	66.07	-9.26	0.00	0.00	Vehicle	Vehicle	228.92	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.18**	**8.18**	-----	-----
	U_{15} - L_{16}	132.26	70.36	-9.34			0.90	1.17	74.05	-9.82	0.00	0.00	Vehicle	Vehicle	268.20	-----	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	-----	-----	-----	-----	-----	**7.00**	**7.00**	-----	-----
	U_{16} - L_{17}	172.87	76.09	-6.58			0.90	1.17	80.05	-6.92	0.00	0.00	Vehicle	Vehicle	328.79	-----	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	-----	-----	-----	-----	-----	**6.71**	**6.71**	-----	-----
	U_{17} - L_{18}	160.16	75.66	-7.83			0.90	1.17	79.60	-8.24	0.00	0.00	Vehicle	Vehicle	311.69	-----	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	-----	-----	-----	-----	-----	**6.16**	**6.16**	-----	-----
	U_{18} - L_{19}	152.33	77.75	-10.26			0.90	1.17	81.80	-10.79	0.00	0.00	Vehicle	Vehicle	304.37	-----	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	-----	-----	-----	-----	-----	**6.09**	**6.09**	-----	-----
	U_{19} - L_{20}	120.67	71.65	-16.30			0.90	1.17	75.39	-17.15	0.00	0.00	Vehicle	Vehicle	254.87	-----	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	-----	-----	-----	-----	-----	**6.40**	**6.40**	-----	-----
	U_{20} - L_{21}	76.10	61.10	-23.60			0.90	1.17	64.28	-24.83	0.00	0.00	Vehicle	Vehicle	182.49	-----	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	-----	-----	-----	-----	-----	**5.47**	**5.47**	-----	-----
	U_{21} - L_{22}	31.50	51.85	-32.18			0.90	1.17	54.56	-33.86	0.00	0.00	Vehicle	Vehicle	111.87	-3.07	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	-----	-----	-----	**7.26**	**7.26**	**10.55**	**10.55**
	U_{22} - L_{22}	24.27	49.95	-38.55			0.90	1.17	52.55	-40.56	0.00	0.00	Vehicle	Vehicle	99.86	-21.18	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**	**8.56**	**8.56**
	U_{23} - L_{23}	72.21	58.48	-27.82			0.90	1.17	61.53	-29.27	0.00	0.00	Vehicle	Vehicle	173.86	-----	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	-----	-----	-----	-----	-----	**5.78**	**5.78**	-----	-----
	U_{24} - L_{24}	112.05	71.39	-17.24			0.90	1.17	75.11	-18.14	0.00	0.00	Vehicle	Vehicle	243.32	-----	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	-----	-----	-----	-----	-----	**6.54**	**6.54**	-----	-----
	U_{25} - L_{25}	127.76	81.06	-12.98			0.90	1.17	85.28	-13.66	0.00	0.00	Vehicle	Vehicle	276.96	-----	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	-----	-----	-----	-----	-----	**6.13**	**6.13**	-----	-----
	U_{26} - L_{26}	132.58	81.33	-10.51			0.90	1.17	85.56	-11.06	0.00	0.00	Vehicle	Vehicle	283.59	-----	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_{27} - L_{27}	137.86	82.57	-9.05			0.90	1.17	86.87	-9.53	0.00	0.00	Vehicle	Vehicle	292.14	-----	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	-----	-----	-----	-----	-----	**6.59**	**6.59**	-----	-----
	U_{28} - L_{28}	122.74	83.13	-5.34			0.90	1.17	87.46	-5.62	0.00	0.00	Vehicle	Vehicle	273.26	-----	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	-----	-----	-----	-----	-----	**6.04**	**6.04**	-----	-----
	U_{29} - L_{29}	102.60	72.49	-6.66			0.90	1.17	76.27	-7.01	0.00	0.00	Vehicle	Vehicle	232.53	-----	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	-----	-----	-----	-----	-----	**7.19**	**7.19**	-----	-----
	U_{30} - L_{31}	139.84	66.79	-10.86			0.90	1.18	71.11	-11.56	0.00	0.00	Vehicle	Vehicle	274.23	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.97**	**8.97**	-----	-----
	U_{31} - L_{32}	166.63	71.88	-11.91			0.90	1.18	76.53	-12.68	0.00	0.00	Vehicle	Vehicle	316.10	-----	0.00	29.18	29.1800	962.94	131.71	17.8750	2.8156	57.14	29.89	-741.48	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.50**	**7.50**	-----	-----
	U_{32} - L_{33}	202.12	80.18	-7.03			0.90	1.18	85.37	-7.49	0.00	0.00	Vehicle	Vehicle	373.74	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.52**	**7.52**	-----	-----
	U_{33} - L_{34}	201.72	84.71	-7.10			0.90	1.18	90.19	-7.56	0.00	0.00	Vehicle	Vehicle	379.48	-----	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	-----	-----	-----	-----	-----	**7.13**	**7.13**	-----	-----
	U_{34} - L_{35}	180.72	80.91	-8.48			0.90	1.18	86.15	-9.03	0.00	0.00	Vehicle	Vehicle	346.92	-----	0.00	30.63	30.6305	1010.81	131.71	13.7604	2.8427	43.57	31.19	-812.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 3F1 — 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 (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 (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capicity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Upper Chord	Structure 1	U_0 - U_1	-52.70	13.33	-72.08			0.75	1.24	12.37	-66.87	0.00	0.00	Vehicle	Vehicle	-----	-155.45	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	-----	-----	7.67	7.67
		U_1 - U_2	-61.66	23.83	-110.08			0.75	1.24	22.10	-102.13	0.00	0.00	Vehicle	Vehicle	-----	-212.92	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	-----	-----	4.93	4.93
		U_2 - U_3	-27.05	33.14	-119.84			0.75	1.24	30.74	-111.18	0.00	0.00	Vehicle	Vehicle	4.80	-179.70	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	22.71	22.71	4.84	4.84
		U_3 - U_4	32.90	42.35	-106.95			0.75	1.24	39.29	-99.22	0.00	0.00	Vehicle	Vehicle	93.85	-86.21	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	16.25	16.25	6.03	6.03
		U_4 - U_5	34.76	42.54	-106.70			0.75	1.24	39.47	-98.99	0.00	0.00	Vehicle	Vehicle	96.50	-83.50	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	16.12	16.12	6.06	6.06
		U_5 - U_6	124.19	50.40	-90.55			0.75	1.24	46.76	-84.00	0.00	0.00	Vehicle	Vehicle	222.23	-----	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	-----	-----	11.70	11.70	-----	-----
		U_6 - U_7	223.31	59.83	-60.54			0.75	1.24	55.51	-56.17	0.00	0.00	Vehicle	Vehicle	362.46	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	10.47	10.47	-----	-----
		U_7 - U_8	331.92	67.78	-26.14			0.75	1.24	62.88	-24.25	0.00	0.00	Vehicle	Vehicle	513.24	-----	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	-----	-----	12.38	12.38	-----	-----
		U_8 - U_9	267.71	59.09	-23.37			0.75	1.20	53.09	-20.99	0.00	0.00	Vehicle	Vehicle	417.04	-----	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	-----	-----	12.64	12.64	-----	-----
		U_9 - U_{10}	89.12	51.89	-60.82			0.75	1.20	46.62	-54.65	0.00	0.00	Vehicle	Vehicle	176.47	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	13.30	13.30	-----	-----
		U_{10} - U_{11}	-76.89	44.22	-91.55			0.75	1.20	39.73	-82.26	0.00	0.00	Vehicle	Vehicle	-----	-206.89	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	-----	-----	6.33	6.33
		U_{11} - U_{12}	-230.86	37.04	-122.26			0.75	1.20	33.28	-109.85	0.00	0.00	Vehicle	Vehicle	-----	-442.92	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	-----	-----	5.30	5.30
		U_{12} - U_{13}	-342.15	31.31	-146.15			0.75	1.20	28.13	-131.31	0.00	0.00	Vehicle	Vehicle	-----	-615.50	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	-----	-----	6.06	6.06
		U_{13} - U_{14}	-421.98	26.14	-155.34			0.75	1.20	23.49	-139.57	0.00	0.00	Vehicle	Vehicle	-----	-730.02	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	-----	-----	6.49	6.49
		U_{14} - U_{15}	-422.87	26.03	-155.46			0.75	1.20	23.39	-139.68	0.00	0.00	Vehicle	Vehicle	-----	-731.31	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.48	6.48
		U_{15} - U_{16}	-440.39	20.33	-159.27			0.75	1.20	18.27	-143.11	0.00	0.00	Vehicle	Vehicle	-----	-758.55	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.20	6.20
		U_{16} - U_{17}	-422.93	15.46	-150.17			0.75	1.20	13.89	-134.93	0.00	0.00	Vehicle	Vehicle	-----	-725.22	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	-----	-----	6.70	6.70
		U_{17} - U_{18}	-341.45	10.38	-126.14			0.75	1.20	9.32	-113.34	0.00	0.00	Vehicle	Vehicle	-----	-591.22	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	8.00	12.00	Pass	-----	-----	5.55	5.55
		U_{18} - U_{19}	-247.63	6.31	-87.33			0.75	1.20	5.67	-78.46	0.00	0.00	Vehicle	Vehicle	-----	-423.91	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	-----	-----	5.48	5.48
		U_{19} - U_{20}	-132.06	3.13	-42.70			0.75	1.20	2.81	-38.36	0.00	0.00	Vehicle	Vehicle	-----	-221.55	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	-----	-----	14.22	14.22
	Structure 2	U_0 - U_1	-131.63	6.85	-47.47			0.75	1.18	6.08	-42.12	0.00	0.00	Vehicle	Vehicle	-----	-225.88	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	12.25	12.25
		U_1 - U_2	-247.12	14.65	-90.95			0.75	1.18	13.00	-80.69	0.00	0.00	Vehicle	Vehicle	-----	-426.15	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.74	6.74
		U_2 - U_3	-347.28	22.71	-123.32			0.75	1.18	20.15	-109.41	0.00	0.00	Vehicle	Vehicle	-----	-593.70	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.50	4.00	0.50	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	6.67	6.67
		U_3 - U_4	-437.20	31.81	-151.52			0.75	1.18	28.22	-134.44	0.00	0.00	Vehicle	Vehicle	-----	-743.13	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	-----	-----	6.73	6.73
		U_4 - U_5	-468.83	38.97	-165.40			0.75	1.18	34.58	-146.75	0.00	0.00	Vehicle	Vehicle	-----	-800.26	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	-----	-----	6.94	6.94
		U_5 - U_6	-471.14	46.03	-163.51			0.75	1.18	40.84	-145.08	0.00	0.00	Vehicle	Vehicle	-----	-801.08	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	-----	-----	7.00	7.00
		U_6 - U_7	-414.50	51.25	-151.35			0.75	1.18	45.47	-134.29	0.00	0.00	Vehicle	Vehicle	-----	-713.43	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	-----	-----	6.90	6.90
		U_7 - U_8	-413.54	51.32	-151.16			0.75	1.18	45.53	-134.11	0.00	0.00	Vehicle	Vehicle	-----	-711.95	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	6.92	6.92
		U_8 - U_9	-322.06	56.09	-141.01			0.75	1.18	49.77	-125.11	0.00	0.00	Vehicle	Vehicle	-----	-581.32	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	-----	-----	6.43	6.43
		U_9 - U_{10}	-182.16	59.27	-121.68			0.75	1.18	52.59	-107.96	0.00	0.00	Vehicle	Vehicle	-----	-377.15	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	-----	-----	6.52	6.52
		U_{10} - U_{11}	-32.61	62.66	-93.16			0.75	1.18	55.59	-82.66	0.00	0.00	Vehicle	Vehicle	29.87	-149.85	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	16.97	16.97	8.91	8.91
		U_{11} - U_{12}	133.57	64.71	-68.34			0.75	1.18	57.41	-60.64	0.00	0.00	Vehicle	Vehicle	248.28	-----	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	-----	-----	13.53	13.53	-----	-----
		U_{12} - U_{13}	289.98	67.00	-43.57			0.75	1.18	59.44	-38.65	0.00	0.00	Vehicle	Vehicle	454.25	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	14.28	14.28	-----	-----
		U_{13} - U_{14}	434.77	68.41	-17.37			0.75	1.18	60.70	-15.41	0.00	0.00	Vehicle	Vehicle	644.11	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	18.61	18.61	-----	-----
		U_{14} - U_{15}	474.48	57.99	-15.04			0.75	1.17	50.84	-13.18	0.00	0.00	Vehicle	Vehicle	682.91	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	21.44	21.44	-----	-----
		U_{15} - U_{16}	383.31	55.86	-34.54			0.75	1.17	48.98	-30.28	0.00	0.00	Vehicle	Vehicle	561.98	-----	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	-----	-----	18.15	18.15	-----	-----
		U_{16} - U_{17}	279.61	52.43	-58.53			0.75	1.17	45.97	-51.32	0.00	0.00	Vehicle	Vehicle	423.25	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	16.63	16.63	-----	-----
		U_{17} - U_{18}	172.67	48.63	-75.75			0.75	1.17	42.64	-66.42	0.00	0.00	Vehicle	Vehicle	279.90	-----	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	-----	-----	13.92	13.92	-----	-----
		U_{18} - U_{19}	74.40	43.36	-96.15			0.75	1.17	38.02	-84.30	0.00	0.00	Vehicle	Vehicle	146.14	-12.87	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	18.20	18.20	8.56	8.56
		U_{19} - U_{20}	-9.98	37.92	-114.51			0.75	1.17	33.25	-100.39	0.00	0.00	Vehicle	Vehicle	30.25	-143.48	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	24.97	24.97	6.80	6.80
	Structure 3	U_0 - U_1	-62.02	31.80	-123.67			0.75	1.17	27.88	-108.43	0.00	0.00	Vehicle	Vehicle	-----	-221.58	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.14	7.14
		U_1 - U_2	-88.69	27.53	-122.90			0.75	1.17	24.14	-107.75	0.00	0.00	Vehicle	Vehicle	-----	-255.36	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	-----	-----	6.94	6.94
		U_2 - U_3	-88.87	27.65	-122.98			0.75	1.17	24.25	-107.82	0.00	0.00	Vehicle	Vehicle	-----	-255.69	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	-----	-----	6.94	6.94
		U_3 - U_4	-76.60	33.92	-126.29			0.75	1.17	29.74	-110.73	0.00	0.00	Vehicle	Vehicle	-----	-243.52	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	-----	-----	6.87	6.87
		U_4 - U_5	-37.55	39.56	-116.92			0.75	1.17	34.68	-102.51	0.00	0.00	Vehicle	Vehicle	-----	-182.07	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.39	6.39
		U_5 - U_6	37.36	44.56	-98.30			0.75	1.17	39.07	-86.19	0.00	0.00	Vehicle	Vehicle	99.35	-63.48	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	18.66	18.66	7.94	7.94
		U_6 - U_7	128.18	49.61	-79.72			0.75	1.17	43.49	-69.89	0.00	0.00	Vehicle	Vehicle	223.17	-----	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	-----	-----	14.67	14.67	-----	-----
		U_7 - U_8	233.91	53.13	-60.68			0.75	1.17	46.59	-53.20	0.00	0.00	Vehicle	Vehicle	364.65	-----	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	-----	-----	17.39	17.39	-----	-----
		U_8 - U_9	337.95	56.08	-36.86			0.75	1.17	49.16	-32.32	0.00	0.00	Vehicle	Vehicle	503.24	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	19.01	19.01	-----	-----
		U_9 - U_{10}	437.48	58.04	-14.24			0.75	1.17	50.89	-12.49	0.00	0.00	Vehicle	Vehicle	634.88	-----	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	-----	-----	22.14	22.14	-----	-----
		U_{10} - U_{11}	420.86	69.06	-16.14			0.75	1.18	61.27	-14.32	0.00	0.00	Vehicle	Vehicle	626.77	-----	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	-----	-----	18.66	18.66	-----	-----
		U_{11} - U_{12}	300.88	67.80	-42.36			0.75	1.18	60.15	-37.58	0.00	0.00	Vehicle	Vehicle	469.34	-----	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	-----	-----	13.94	13.94	-----	-----
		U_{12} - U_{13}	161.69	65.24	-66.51			0.75	1

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: 3F1 **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
Center Truss - Lower Chord	Structure 1	L$_0$ - L$_1$	8.48	11.35	-8.34			0.75	1.24	10.53	-7.73	0.00	0.00	Vehicle	Vehicle	24.72	-----	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	-----	-----	**46.92**	**46.92**	-----	-----
		L$_1$ - L$_2$	50.83	70.26	-13.86			0.75	1.24	65.19	-12.85	0.00	0.00	Vehicle	Vehicle	150.83	-----	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	-----	-----	**6.93**	**6.93**	-----	-----
		L$_2$ - L$_3$	61.27	100.55	-23.64			0.75	1.24	93.28	-21.93	0.00	0.00	Vehicle	Vehicle	200.92	-----	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	-----	-----	**6.51**	**6.51**	-----	-----
		L$_3$ - L$_4$	25.72	110.12	-32.68			0.75	1.24	102.16	-30.32	0.00	0.00	Vehicle	Vehicle	166.25	-5.98	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	**6.29**	**6.29**	**19.42**	**19.42**
		L$_4$ - L$_5$	-118.55	81.93	-48.14			0.75	1.24	76.01	-44.66	0.00	0.00	Vehicle	Vehicle	-----	-212.18	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	-----	-----	**8.55**	**8.55**
		L$_5$ - L$_6$	-217.97	53.28	-57.70			0.75	1.24	49.43	-53.53	0.00	0.00	Vehicle	Vehicle	-----	-352.94	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	-----	-----	**8.25**	**8.25**
		L$_6$ - L$_7$	-320.57	23.78	-66.24			0.75	1.24	22.06	-61.45	0.00	0.00	Vehicle	Vehicle	-----	-496.62	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	-----	-----	**10.16**	**10.16**
		L$_7$ - L$_8$	-417.42	0.21	-71.59			0.75	1.24	0.19	-66.41	0.00	0.00	Vehicle	Vehicle	-----	-628.98	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	-----	-----	**11.78**	**11.78**
		L$_8$ - L$_9$	-411.08	0.00	-76.42			0.75	1.20	0.00	-68.67	0.00	0.00	Vehicle	Vehicle	-----	-623.67	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	-----	-----	**11.48**	**11.48**
		L$_9$ - L$_{10}$	-247.97	20.58	-55.71			0.75	1.20	18.49	-50.06	0.00	0.00	Vehicle	Vehicle	-----	-387.43	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**13.93**	**13.93**
		L$_{10}$ - L$_{11}$	-65.37	53.26	-48.06			0.75	1.20	47.86	-43.19	0.00	0.00	Vehicle	Vehicle	-----	-141.12	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	-----	-----	**10.07**	**10.07**
		L$_{11}$ - L$_{12}$	101.81	82.82	-40.93			0.75	1.20	74.42	-36.77	0.00	0.00	Vehicle	Vehicle	229.10	-----	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	-----	-----	**6.61**	**6.61**	-----	-----
		L$_{12}$ - L$_{13}$	264.06	112.66	-35.13			0.75	1.20	101.23	-31.56	0.00	0.00	Vehicle	Vehicle	474.88	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**7.02**	**7.02**	-----	-----
		L$_{13}$ - L$_{14}$	373.80	136.63	-29.54			0.75	1.20	122.76	-26.54	0.00	0.00	Vehicle	Vehicle	645.53	-----	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	-----	-----	**7.61**	**7.61**	-----	-----
		L$_{14}$ - L$_{15}$	476.54	145.84	-19.28			0.75	1.20	131.04	-17.32	0.00	0.00	Vehicle	Vehicle	789.86	-----	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	-----	-----	**8.38**	**8.38**	-----	-----
		L$_{15}$ - L$_{16}$	460.23	133.70	-14.41			0.75	1.20	120.13	-12.94	0.00	0.00	Vehicle	Vehicle	754.47	-----	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	-----	-----	**9.28**	**9.28**	-----	-----
		L$_{16}$ - L$_{17}$	381.61	109.55	-9.58			0.75	1.20	98.43	-8.60	0.00	0.00	Vehicle	Vehicle	624.05	-----	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	-----	-----	**8.48**	**8.48**	-----	-----
		L$_{17}$ - L$_{18}$	289.18	74.35	-6.55			0.75	1.20	66.80	-5.88	0.00	0.00	Vehicle	Vehicle	462.78	-----	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$_{19}$	176.31	31.85	-5.55			0.75	1.20	28.62	-4.98	0.00	0.00	Vehicle	Vehicle	266.41	-----	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	-----	-----	**11.40**	**11.40**	-----	-----
		L$_{19}$ - L$_{20}$	69.72	11.93	-19.19			0.75	1.20	10.72	-17.24	0.00	0.00	Vehicle	Vehicle	104.57	-----	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	-----	-----	**40.40**	**40.40**	-----	-----
		L$_0$ - L$_1$	24.42	7.27	-8.57			0.75	1.18	6.45	-7.61	0.00	0.00	Vehicle	Vehicle	40.13	-----	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	-----	-----	**75.22**	**75.22**	-----	-----
		L$_1$ - L$_2$	138.42	48.32	-7.57			0.75	1.18	42.87	-6.72	0.00	0.00	Vehicle	Vehicle	235.68	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**11.55**	**11.55**	-----	-----
		L$_2$ - L$_3$	252.76	93.16	-15.83			0.75	1.18	82.65	-14.04	0.00	0.00	Vehicle	Vehicle	436.04	-----	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	-----	-----	**8.75**	**8.75**	-----	-----
		L$_3$ - L$_4$	352.26	123.65	-23.90			0.75	1.18	109.71	-21.21	0.00	0.00	Vehicle	Vehicle	600.56	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**8.72**	**8.72**	-----	-----
		L$_4$ - L$_5$	447.15	144.84	-33.06			0.75	1.18	128.51	-29.33	0.00	0.00	Vehicle	Vehicle	748.36	-----	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	-----	-----	**9.36**	**9.36**	-----	-----
		L$_5$ - L$_6$	477.91	154.11	-40.21			0.75	1.18	136.74	-35.68	0.00	0.00	Vehicle	Vehicle	799.05	-----	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	-----	-----	**9.62**	**9.62**	-----	-----
		L$_6$ - L$_7$	482.67	154.46	-47.30			0.75	1.18	137.04	-41.97	0.00	0.00	Vehicle	Vehicle	805.63	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**9.74**	**9.74**	-----	-----
		L$_7$ - L$_8$	336.57	132.01	-57.13			0.75	1.18	117.13	-50.69	0.00	0.00	Vehicle	Vehicle	589.80	-----	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	-----	-----	**8.58**	**8.58**	-----	-----
		L$_8$ - L$_9$	196.00	111.38	-59.51			0.75	1.18	98.82	-52.80	0.00	0.00	Vehicle	Vehicle	383.27	-----	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	-----	-----	**9.15**	**9.15**	-----	-----
		L$_9$ - L$_{10}$	45.53	83.36	-62.65			0.75	1.18	73.96	-55.58	0.00	0.00	Vehicle	Vehicle	155.34	-13.07	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**11.04**	**11.04**	**13.91**	**13.91**
		L$_{10}$ - L$_{11}$	-126.32	59.42	-64.04			0.75	1.18	52.72	-56.82	0.00	0.00	Vehicle	Vehicle	-----	-238.09	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**9.23**	**9.23**
		L$_{11}$ - L$_{12}$	-284.95	37.09	-66.13			0.75	1.18	32.91	-58.67	0.00	0.00	Vehicle	Vehicle	-----	-446.71	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	-----	-----	**11.01**	**11.01**
		L$_{12}$ - L$_{13}$	-433.89	18.71	-71.26			0.75	1.18	16.60	-63.23	0.00	0.00	Vehicle	Vehicle	-----	-646.26	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**13.31**	**13.31**
		L$_{13}$ - L$_{14}$	-552.76	18.22	-72.49			0.75	1.18	16.17	-64.32	0.00	0.00	Vehicle	Vehicle	-----	-802.20	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	-----	-----	**14.96**	**14.96**
		L$_{14}$ - L$_{15}$	-573.53	18.11	-76.78			0.75	1.17	15.88	-67.32	0.00	0.00	Vehicle	Vehicle	-----	-833.10	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	-----	-----	**13.99**	**13.99**
		L$_{15}$ - L$_{16}$	-493.00	15.81	-60.77			0.75	1.17	13.86	-53.28	0.00	0.00	Vehicle	Vehicle	-----	-710.16	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**14.68**	**14.68**
		L$_{16}$ - L$_{17}$	-395.34	31.47	-56.59			0.75	1.17	27.59	-49.61	0.00	0.00	Vehicle	Vehicle	-----	-578.44	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	-----	-----	**13.14**	**13.14**
		L$_{17}$ - L$_{18}$	-288.08	50.34	-53.10			0.75	1.17	44.14	-46.56	0.00	0.00	Vehicle	Vehicle	-----	-435.03	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	-----	-----	**9.44**	**9.44**
		L$_{18}$ - L$_{19}$	-175.85	67.62	-49.11			0.75	1.17	59.29	-43.05	0.00	0.00	Vehicle	Vehicle	-----	-284.57	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	-----	-----	**9.24**	**9.24**
		L$_{19}$ - L$_{20}$	-78.08	88.28	-43.89			0.75	1.17	77.40	-38.48	0.00	0.00	Vehicle	Vehicle	-----	-151.53	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	-----	-----	**12.88**	**12.88**
	Structure 2	L$_{20}$ - L$_{21}$	7.59	108.12	-38.63			0.75	1.17	94.79	-33.87	0.00	0.00	Vehicle	Vehicle	133.10	-34.16	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	**10.10**	**10.10**	**24.27**	**24.27**
		L$_{21}$ - L$_{22}$	59.10	119.33	-32.49			0.75	1.17	104.62	-28.48	0.00	0.00	Vehicle	Vehicle	212.83	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**8.66**	**8.66**	-----	-----
		L$_{22}$ - L$_{23}$	72.03	119.37	-34.64			0.75	1.17	104.66	-30.37	0.00	0.00	Vehicle	Vehicle	229.69	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**8.53**	**8.53**	-----	-----
		L$_{23}$ - L$_{24}$	33.57	107.19	-40.16			0.75	1.17	93.98	-35.21	0.00	0.00	Vehicle	Vehicle	165.81	-2.13	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**9.91**	**9.91**	**24.08**	**24.08**
		L$_{24}$ - L$_{25}$	-45.06	84.86	-44.62			0.75	1.17	74.40	-39.12	0.00	0.00	Vehicle	Vehicle	38.14	-109.43	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	**9.73**	**9.73**	**13.51**	**13.51**
		L$_{25}$ - L$_{26}$	-134.95	66.36	-48.96			0.75	1.17	58.18	-42.92	0.00	0.00	Vehicle	Vehicle	-----	-231.23	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	-----	-----	**10.22**	**10.22**
		L$_{26}$ - L$_{27}$	-245.92	46.30	-51.56			0.75	1.17	40.60	-45.20	0.00	0.00	Vehicle	Vehicle	-----	-378.47	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	-----	-----	**10.65**	**10.65**
		L$_{27}$ - L$_{28}$	-351.86	26.00	-54.38			0.75	1.17	22.79	-47.68	0.00	0.00	Vehicle	Vehicle	-----	-519.41	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	-----	-----	**14.59**	**14.59**
		L$_{28}$ - L$_{29}$	-458.41	13.05	-63.63			0.75	1.17	11.44	-55.79	0.00	0.00	Vehicle	Vehicle	-----	-668.46	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	-----	-----	**14.64**	**14.64**
		L$_{29}$ - L$_{30}$	-542.36	14.94	-81.24			0.75	1.17	13.10	-71.23	0.00	0.00	Vehicle	Vehicle	-----	-797.67	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	-----	-----	**13.66**	**13.66**
		L$_{30}$ - L$_{31}$	-514.21	17.79	-70.76			0.75	1.18	15.78	-62.78	0.00	0.00	Vehicle	Vehicle	-----	-750.10	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	-----	-----	**15.94**	**15.94**
		L$_{31}$ - L$_{32}$	-411.27	18.40	-66.06			0.75	1.18	16.33	-58.61	0.00	0.00	Vehicle	Vehicle	-----	-610.84	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

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: 3F1 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	9.40	-131.87			0.75	1.24	8.72	-122.34	0.00	0.00	Vehicle	Vehicle	-----	-247.03	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	-----	-----	-----	-----	-----	2.26	2.26
	U_1 - L_1	-24.09	9.07	-60.78			0.75	1.24	8.42	-56.39	0.00	0.00	Vehicle	Vehicle	-----	-104.61	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	-----	-----	-----	-----	-----	5.82	5.82
	U_2 - L_2	12.87	7.62	-46.31			0.75	1.24	7.07	-42.97	0.00	0.00	Vehicle	Vehicle	25.92	-39.12	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	-----	-----	-----	58.69	58.69	8.49	8.49
	U_3 - L_3	37.37	23.89	-41.12			0.75	1.24	22.16	-38.15	0.00	0.00	Vehicle	Vehicle	77.39	-1.01	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	17.61	17.61	10.18	10.18
	U_4 - L_4	-15.55	6.96	-60.62			0.75	1.24	6.46	-56.24	0.00	0.00	Vehicle	Vehicle	-----	-93.33	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	5.94	5.94
	U_5 - L_5	-92.59	16.41	-63.84			0.75	1.24	15.22	-59.23	0.00	0.00	Vehicle	Vehicle	-----	-197.36	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	-----	-----	-----	-----	-----	5.61	5.61
	U_6 - L_6	-117.07	4.25	-74.36			0.75	1.24	3.94	-68.99	0.00	0.00	Vehicle	Vehicle	-----	-241.87	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	-----	-----	-----	-----	-----	5.67	5.67
	U_7 - L_7	-127.52	0.25	-81.63			0.75	1.24	0.23	-75.73	0.00	0.00	Vehicle	Vehicle	-----	-264.22	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	-----	-----	-----	-----	-----	4.39	4.39
	U_8 - L_8	-368.71	3.19	-119.28			0.75	1.24	2.96	-110.66	0.00	0.00	Vehicle	Vehicle	-----	-623.18	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	-----	-----	-----	6.30	6.30
	U_9 - L_9	-214.56	4.52	-99.30			0.75	1.20	4.06	-89.22	0.00	0.00	Vehicle	Vehicle	-----	-394.92	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	-----	-----	-----	-----	-----	4.83	4.83
	U_{10} - L_{10}	-198.68	2.64	-83.77			0.75	1.20	2.37	-75.27	0.00	0.00	Vehicle	Vehicle	-----	-356.13	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	7.23	7.23
	U_{11} - L_{11}	-171.40	10.70	-75.47			0.75	1.20	9.61	-67.81	0.00	0.00	Vehicle	Vehicle	-----	-310.98	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	-----	-----	-----	-----	-----	6.93	6.93
	U_{12} - L_{12}	-128.37	18.56	-70.42			0.75	1.20	16.68	-63.27	0.00	0.00	Vehicle	Vehicle	-----	-249.13	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	-----	-----	-----	-----	-----	6.39	6.39
	U_{13} - L_{13}	-96.65	22.94	-62.26			0.75	1.20	20.61	-55.94	0.00	0.00	Vehicle	Vehicle	-----	-198.36	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	-----	-----	-----	-----	-----	5.07	5.07
	U_{14} - L_{14}	-11.04	6.73	-58.18			0.75	1.20	6.04	-52.27	0.00	0.00	Vehicle	Vehicle	-----	-82.31	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	-----	-----	-----	-----	-----	6.38	6.38
	U_{15} - L_{15}	-2.47	33.24	-45.62			0.75	1.20	29.86	-40.99	0.00	0.00	Vehicle	Vehicle	35.61	-56.50	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	14.40	14.40	8.31	8.31
	U_{16} - L_{16}	-31.27	25.23	-50.29			0.75	1.20	22.67	-45.18	0.00	0.00	Vehicle	Vehicle	-----	-99.39	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	-----	-----	-----	-----	-----	6.86	6.86
	U_{17} - L_{17}	-105.05	13.57	-69.37			0.75	1.20	12.19	-62.33	0.00	0.00	Vehicle	Vehicle	-----	-217.60	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	4.91	4.91
	U_{18} - L_{18}	-126.74	4.40	-76.77			0.75	1.20	3.95	-68.98	0.00	0.00	Vehicle	Vehicle	-----	-254.44	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	5.78	5.78
	U_{19} - L_{19}	-166.77	4.12	-78.97			0.75	1.20	3.70	-70.95	0.00	0.00	Vehicle	Vehicle	-----	-309.04	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.34	6.34
	U_{20} - L_{20}	-184.59	3.82	-93.37			0.75	1.20	3.44	-83.90	0.00	0.00	Vehicle	Vehicle	-----	-349.03	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	-----	-----	-----	-----	-----	4.74	4.74
Structure 2	U_0 - L_0	-203.59	10.22	-94.29			0.75	1.18	9.07	-83.66	0.00	0.00	Vehicle	Vehicle	-----	-373.42	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	5.25	5.25
	U_1 - L_1	-176.11	11.04	-80.59			0.75	1.18	9.80	-71.50	0.00	0.00	Vehicle	Vehicle	-----	-321.89	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	-----	-----	-----	-----	-----	6.94	6.94
	U_2 - L_2	-137.55	10.46	-77.52			0.75	1.18	9.28	-68.78	0.00	0.00	Vehicle	Vehicle	-----	-268.23	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	-----	-----	-----	-----	-----	6.35	6.35
	U_3 - L_3	-117.62	10.86	-72.40			0.75	1.18	9.64	-64.24	0.00	0.00	Vehicle	Vehicle	-----	-236.41	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	-----	-----	-----	-----	-----	5.20	5.20
	U_4 - L_4	-50.97	24.26	-59.80			0.75	1.18	21.53	-53.06	0.00	0.00	Vehicle	Vehicle	-----	-135.24	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	-----	-----	-----	-----	-----	5.43	5.43
	U_5 - L_5	-13.78	30.17	-51.94			0.75	1.18	26.77	-46.09	0.00	0.00	Vehicle	Vehicle	16.89	-77.82	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	16.49	16.49	7.09	7.09
	U_6 - L_6	45.47	36.86	-40.60			0.75	1.18	32.70	-36.02	0.00	0.00	Vehicle	Vehicle	101.63	-----	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	-----	-----	-----	-----	-----	11.69	11.69	-----	-----
	U_7 - L_7	-22.33	3.64	-60.79			0.75	1.18	3.23	-53.93	0.00	0.00	Vehicle	Vehicle	-----	-99.15	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	5.90	5.90
	U_8 - L_8	-120.08	25.86	-56.05			0.75	1.18	22.94	-49.73	0.00	0.00	Vehicle	Vehicle	-----	-220.75	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	8.25	8.25
	U_9 - L_9	-177.03	18.29	-70.40			0.75	1.18	16.23	-62.46	0.00	0.00	Vehicle	Vehicle	-----	-311.33	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	8.23	8.23
	U_{10} - L_{10}	-205.88	13.98	-75.66			0.75	1.18	12.40	-67.13	0.00	0.00	Vehicle	Vehicle	-----	-354.91	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	-----	-----	-----	-----	-----	8.53	8.53
	U_{11} - L_{11}	-239.23	9.12	-78.50			0.75	1.18	8.09	-69.65	0.00	0.00	Vehicle	Vehicle	-----	-401.55	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	-----	-----	-----	-----	-----	7.55	7.55
	U_{12} - L_{12}	-257.95	3.95	-86.06			0.75	1.18	3.50	-76.36	0.00	0.00	Vehicle	Vehicle	-----	-434.61	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	7.12	7.12
	U_{13} - L_{13}	-243.82	5.26	-89.59			0.75	1.18	4.67	-79.48	0.00	0.00	Vehicle	Vehicle	-----	-420.30	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	-----	-----	-----	-----	-----	5.61	5.61
	U_{14} - L_{14}	-420.85	5.23	-111.41			0.75	1.18	4.64	-98.85	0.00	0.00	Vehicle	Vehicle	-----	-675.61	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	-----	-----	-----	-----	-----	6.38	6.38
	U_{15} - L_{15}	-158.83	8.60	-91.16			0.75	1.17	7.54	-79.92	0.00	0.00	Vehicle	Vehicle	-----	-310.38	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	-----	-----	-----	-----	-----	6.65	6.65
	U_{16} - L_{16}	-174.02	6.70	-89.20			0.75	1.17	5.87	-78.20	0.00	0.00	Vehicle	Vehicle	-----	-327.89	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	-----	-----	-----	-----	-----	6.29	6.29
	U_{17} - L_{17}	-156.46	9.55	-82.35			0.75	1.17	8.37	-72.20	0.00	0.00	Vehicle	Vehicle	-----	-297.26	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	-----	-----	-----	-----	-----	6.47	6.47
	U_{18} - L_{18}	-142.21	13.72	-75.73			0.75	1.17	12.03	-66.40	0.00	0.00	Vehicle	Vehicle	-----	-271.18	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	-----	-----	-----	-----	-----	6.55	6.55
	U_{19} - L_{19}	-113.66	19.16	-72.71			0.75	1.17	16.80	-63.75	0.00	0.00	Vehicle	Vehicle	-----	-230.63	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	-----	-----	-----	-----	-----	6.24	6.24
	U_{20} - L_{20}	-76.51	24.44	-61.78			0.75	1.17	21.42	-54.16	0.00	0.00	Vehicle	Vehicle	-----	-169.88	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	5.51	5.51
	U_{21} - L_{21}	-45.77	25.81	-53.78			0.75	1.17	22.63	-47.15	0.00	0.00	Vehicle	Vehicle	-----	-120.80	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	6.25	6.25
	U_{22} - L_{22}	-17.72	6.55	-59.47			0.75	1.17	5.74	-52.14	0.00	0.00	Vehicle	Vehicle	-----	-90.82	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	-----	-----	-----	-----	-----	6.22	6.22
	U_{23} - L_{23}	-30.69	30.06	-45.93			0.75	1.17	26.35	-40.27	0.00	0.00	Vehicle	Vehicle	-----	-92.24	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	7.69	7.69
	U_{24} - L_{24}	-62.06	25.60	-57.63			0.75	1.17	22.45	-50.53	0.00	0.00	Vehicle	Vehicle	-----	-146.37	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	-----	-----	-----	-----	-----	6.20	6.20
	U_{25} - L_{25}	-103.15	17.73	-67.60			0.75	1.17	15.54	-59.27	0.00	0.00	Vehicle	Vehicle	-----	-211.14	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	-----	-----	-----	-----	-----	6.89	6.89
	U_{26} - L_{26}	-134.38	15.06	-69.53			0.75	1.17	13.20	-60.96	0.00	0.00	Vehicle	Vehicle	-----	-253.93	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.26	7.26
	U_{27} - L_{27}	-156.03	7.27	-79.69			0.75	1.17	6.37	-69.87	0.00	0.00	Vehicle	Vehicle	-----	-293.67	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	-----	-----	-----	-----	-----	6.69	6.69
	U_{28} - L_{28}	-179.40	5.77	-85.98			0.75	1.17	5.06	-75.38	0.00	0.00	Vehicle	Vehicle	-----	-331.22	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	6.46	6.46
	U_{29} - L_{29}	-171.60	4.08	-83.71			0.75	1.17	3.57	-73.40	0.00	0.00	Vehicle	Vehicle	-----	-318.50	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.06	7.06
	U_{30} - L_{30}	-393.29	7.60	-109.68			0.75	1.18	6.74	-97.31	0.00	0.00	Vehicle	Vehicle	-----	-637.78	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	6.77	6.77
	U_{31} - L_{31}	-203.49	8.69	-95.52			0.75	1.18	7.71	-84.75	0.00	0.00	Vehicle	Vehicle	-----	-374.71	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	-----	-----	-----	-----	-----	5.74	5.74
	U_{32} - L_{32}	-222.61	3.50	-88.61			0.75	1.18	3.11	-78.62	0.00	0.00	Vehicle	Vehicle	-----	-391.60	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	-----	-----	-----	-----	-----	7.37	7.37
	$U_{

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: 3F1 **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	91.67	-14.12			0.75	1.24	85.05	-13.10	0.00	0.00	Vehicle	Vehicle	179.84	-----	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	-----	-----	-----	-----	-----	6.27	6.27	-----	-----
		U_1 - L_2	10.80	68.78	-13.03			0.75	1.24	63.81	-12.09	0.00	0.00	Vehicle	Vehicle	97.00	-1.68	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	-----	-----	-----	6.53	6.53	28.63	28.63
		U_2 - L_3	-44.05	60.40	-37.27			0.75	1.24	56.04	-34.58	0.00	0.00	Vehicle	Vehicle	15.58	-102.22	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	-----	-----	-----	8.42	8.42	8.39	8.39
		U_3 - L_4	-76.77	42.77	-62.37			0.75	1.24	39.68	-57.86	0.00	0.00	Vehicle	Vehicle	-----	-175.03	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	-----	-----	-----	-----	-----	4.49	4.49
		U_4 - L_4	118.48	70.68	-32.71			0.75	1.24	65.58	-30.35	0.00	0.00	Vehicle	Vehicle	239.28	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	6.19	6.19	-----	-----
		U_5 - L_5	137.62	85.49	-21.20			0.75	1.24	79.31	-19.67	0.00	0.00	Vehicle	Vehicle	282.01	-----	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	-----	-----	-----	-----	-----	6.47	6.47	-----	-----
		U_6 - L_6	157.39	88.65	-5.25			0.75	1.24	82.24	-4.87	0.00	0.00	Vehicle	Vehicle	311.51	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	6.00	6.00	-----	-----
		U_7 - L_7	149.33	90.25	-0.29			0.75	1.24	83.73	-0.27	0.00	0.00	Vehicle	Vehicle	302.97	-----	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	-----	-----	-----	-----	-----	5.99	5.99	-----	-----
		U_8 - L_8	249.21	107.51	-5.16			0.75	1.20	96.60	-4.63	0.00	0.00	Vehicle	Vehicle	449.55	-----	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	-----	-----	-----	-----	-----	7.38	7.38	-----	-----
		U_9 - L_{10}	260.39	97.52	-4.11			0.75	1.20	87.62	-3.69	0.00	0.00	Vehicle	Vehicle	452.41	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	8.01	8.01	-----	-----
		U_{10} - L_{11}	236.43	94.77	-13.42			0.75	1.20	85.15	-12.06	0.00	0.00	Vehicle	Vehicle	418.05	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	7.92	7.92	-----	-----
		U_{11} - L_{12}	212.05	90.16	-24.96			0.75	1.20	81.01	-22.42	0.00	0.00	Vehicle	Vehicle	380.98	-----	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	-----	-----	-----	-----	-----	6.98	6.98	-----	-----
		U_{12} - L_{13}	151.78	82.17	-31.80			0.75	1.20	73.83	-28.57	0.00	0.00	Vehicle	Vehicle	293.30	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	6.49	6.49	-----	-----
		U_{13} - L_{14}	108.73	66.80	-39.40			0.75	1.20	60.02	-35.40	0.00	0.00	Vehicle	Vehicle	219.37	-----	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	-----	-----	-----	-----	-----	5.31	5.31	-----	-----
		U_{14} - L_{14}	-24.56	52.60	-61.41			0.75	1.20	47.26	-55.18	0.00	0.00	Vehicle	Vehicle	29.51	-103.66	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	-----	-----	-----	9.57	9.57	5.51	5.51
		U_{15} - L_{15}	23.90	62.10	-44.94			0.75	1.20	55.80	-40.37	0.00	0.00	Vehicle	Vehicle	103.61	-21.41	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	-----	-----	-----	7.24	7.24	8.63	8.63
		U_{17} - L_{16}	120.04	71.67	-26.86			0.75	1.20	64.39	-24.13	0.00	0.00	Vehicle	Vehicle	239.75	-----	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	-----	-----	-----	-----	-----	6.28	6.28	-----	-----
		U_{18} - L_{17}	144.84	82.81	-16.23			0.75	1.20	74.40	-14.58	0.00	0.00	Vehicle	Vehicle	285.02	-----	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	-----	-----	-----	-----	-----	6.80	6.80	-----	-----
		U_{19} - L_{18}	193.27	84.46	-5.32			0.75	1.20	75.89	-4.78	0.00	0.00	Vehicle	Vehicle	349.91	-----	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	-----	-----	-----	-----	-----	6.81	6.81	-----	-----
		U_{20} - L_{19}	193.75	83.36	-4.35			0.75	1.20	74.90	-3.91	0.00	0.00	Vehicle	Vehicle	349.25	-----	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	-----	-----	-----	-----	-----	6.89	6.89	-----	-----
		U_0 - L_1	202.60	82.97	-11.52			0.75	1.18	73.61	-10.22	0.00	0.00	Vehicle	Vehicle	359.07	-----	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	-----	-----	-----	-----	-----	7.81	7.81	-----	-----
		U_1 - L_2	190.84	82.78	-12.89			0.75	1.18	73.45	-11.43	0.00	0.00	Vehicle	Vehicle	343.57	-----	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	-----	-----	-----	-----	-----	7.99	7.99	-----	-----
		U_2 - L_3	155.90	82.45	-12.54			0.75	1.18	73.16	-11.13	0.00	0.00	Vehicle	Vehicle	297.77	-----	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	-----	-----	-----	-----	-----	6.76	6.76	-----	-----
		U_3 - L_4	134.06	76.66	-25.79			0.75	1.18	68.02	-22.88	0.00	0.00	Vehicle	Vehicle	262.70	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	6.51	6.51	-----	-----
		U_4 - L_5	46.01	62.89	-36.96			0.75	1.18	55.80	-32.79	0.00	0.00	Vehicle	Vehicle	132.34	-----	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	-----	-----	-----	-----	-----	6.84	6.84	-----	-----
		U_5 - L_6	3.43	54.92	-45.70			0.75	1.18	48.73	-40.54	0.00	0.00	Vehicle	Vehicle	67.80	-48.25	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	8.71	8.71	8.12	8.12
		U_6 - L_7	-84.31	44.01	-63.55			0.75	1.18	39.05	-56.39	0.00	0.00	Vehicle	Vehicle	-----	-182.91	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	4.88	4.88
		U_7 - L_7	137.33	71.50	-39.23			0.75	1.18	63.43	-34.81	0.00	0.00	Vehicle	Vehicle	260.99	-----	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	-----	-----	-----	-----	-----	7.35	7.35	-----	-----
		U_8 - L_8	210.92	75.08	-31.52			0.75	1.18	66.62	-27.96	0.00	0.00	Vehicle	Vehicle	360.79	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	7.49	7.49	-----	-----
		U_{10} - L_9	236.39	85.88	-21.80			0.75	1.18	76.19	-19.34	0.00	0.00	Vehicle	Vehicle	406.36	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	7.10	7.10	-----	-----
		U_{11} - L_{10}	274.65	88.07	-15.54			0.75	1.18	78.14	-13.78	0.00	0.00	Vehicle	Vehicle	458.62	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	7.29	7.29	-----	-----
		U_{12} - L_{11}	281.09	85.98	-9.71			0.75	1.18	76.28	-8.61	0.00	0.00	Vehicle	Vehicle	464.59	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	7.38	7.38	-----	-----
		U_{13} - L_{12}	278.14	85.70	-5.75			0.75	1.18	76.03	-5.10	0.00	0.00	Vehicle	Vehicle	460.43	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	6.57	6.57	-----	-----
		U_{14} - L_{13}	235.47	84.26	-7.04			0.75	1.18	74.76	-6.25	0.00	0.00	Vehicle	Vehicle	403.30	-----	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	-----	-----	-----	-----	-----	7.25	7.25	-----	-----
		U_{15} - L_{14}	143.01	82.07	-8.47			0.75	1.17	71.95	-7.42	0.00	0.00	Vehicle	Vehicle	279.46	-----	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	-----	-----	-----	-----	-----	7.06	7.06	-----	-----
		U_{16} - L_{15}	171.90	85.70	-8.50			0.75	1.17	75.13	-7.45	0.00	0.00	Vehicle	Vehicle	321.14	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	6.37	6.37	-----	-----
		U_{16} - L_{17}	181.04	85.48	-9.94			0.75	1.17	74.94	-8.71	0.00	0.00	Vehicle	Vehicle	332.77	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	7.06	7.06	-----	-----
		U_{17} - L_{18}	171.16	81.70	-15.65			0.75	1.17	71.63	-13.72	0.00	0.00	Vehicle	Vehicle	315.63	-----	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	-----	-----	-----	-----	-----	6.69	6.69	-----	-----
		U_{18} - L_{19}	150.64	84.18	-21.99			0.75	1.17	73.80	-19.28	0.00	0.00	Vehicle	Vehicle	291.78	-----	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	-----	-----	-----	-----	-----	6.77	6.77	-----	-----
	Structure 2	U_{19} - L_{20}	125.86	74.24	-30.74			0.75	1.17	65.09	-26.95	0.00	0.00	Vehicle	Vehicle	248.24	-----	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	-----	-----	-----	-----	-----	7.33	7.33	-----	-----
		U_{20} - L_{21}	76.04	67.51	-32.30			0.75	1.17	59.19	-28.31	0.00	0.00	Vehicle	Vehicle	175.80	-----	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	-----	-----	-----	-----	-----	5.94	5.94	-----	-----
		U_{21} - L_{22}	38.33	56.71	-49.27			0.75	1.17	49.72	-43.19	0.00	0.00	Vehicle	Vehicle	114.46	-6.32	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	-----	-----	-----	7.83	7.83	8.43	8.43
		U_{23} - L_{22}	18.05	54.92	-52.85			0.75	1.17	48.15	-46.33	0.00	0.00	Vehicle	Vehicle	86.07	-36.76	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	8.51	8.51	7.36	7.36
		U_{24} - L_{23}	58.57	61.21	-39.21			0.75	1.17	53.67	-34.38	0.00	0.00	Vehicle	Vehicle	145.92	-----	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	-----	-----	-----	-----	-----	6.88	6.88	-----	-----
		U_{25} - L_{24}	114.98	74.49	-33.43			0.75	1.17	65.31	-29.31	0.00	0.00	Vehicle	Vehicle	234.37	-----	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	-----	-----	-----	-----	-----	7.48	7.48	-----	-----
		U_{26} - L_{25}	143.00	82.57	-20.95			0.75	1.17	72.40	-18.37	0.00	0.00	Vehicle	Vehicle	280.01	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	7.01	7.01	-----	-----
		U_{27} - L_{26}	173.82	78.01	-17.67			0.75	1.17	68.39	-15.49	0.00	0.00	Vehicle	Vehicle	314.87	-----	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	-----	-----	-----	-----	-----	6.97	6.97	-----	-----
		U_{28} - L_{27}	186.60	87.02	-8.12			0.75	1.17	76.29	-7.12	0.00	0.00	Vehicle	Vehicle	341.75	-----	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	-----	-----	-----	-----	-----	6.86	6.86	-----	-----
		U_{29} - L_{28}	190.75	85.39	-4.94			0.75	1.17	74.87	-4.33	0.00	0.00	Vehicle	Vehicle	345.30	-----	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	-----	-----	-----	-----	-----	6.14	6.14	-----	-----
		U_{30} - L_{29}	161.86	77.78	-6.73			0.75	1.17	68.20	-5.90	0.00	0.00	Vehicle	Vehicle	299.08	-----	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	-----	-----	-----	-----	-----	7.17	7.17	-----	-----
		U_{31} - L_{31}	191.72	85.88	-8.52			0.75	1.18	76.20	-7.56	0.00	0.00	Vehicle	Vehicle	348.30	-----	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	-----	-----	-----	-----	-----	7.69	7.69	-----	-----
		U_{32} - L_{32}	226.45	84.41	-9.35			0.75	1.18	74.89	-8.30	0.00	0.00	Vehicle	Vehicle	391.74	-----	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	-----	-----	-----	-----	-----	7.36	7.36	-----	-----
		U_{33} - L_{33}	243.42	91.04	-7.54			0.75	1.18	80.77	-6.69	0.00	0.00	Vehicle	Vehicle	421.45	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	7.44	7.44	-----	-----
		U_{34} - L_{34}	239.13	89.54	-14.77			0.75	1.18	79.44	-13.11	0.00	0.00	Vehicle	Vehicle	414.14	-----	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	-----	-----	-----	-----	-----	7.62	7.62	-----	-----
		U_{35} - L_{35}	222.16	85.23	-20.26			0.75	1.18	75.62	-17.98	0.00	0.00	Vehicle	Vehicle	387.11	-----	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	-----	-----

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: 3F1 **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
South Truss - Upper Chord	Structure 1	U$_0$ - U$_1$	-66.70	8.72	-41.84	2.21	-8.83	0.90	1.24	9.71	-46.58	2.21	-8.83	Vehicle	Vehicle	-----	-147.28	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	-----	-----	10.70	10.70
		U$_1$ - U$_2$	-86.55	20.69	-69.13	6.01	-16.34	0.90	1.24	23.04	-76.96	6.01	-16.34	Vehicle	Vehicle	-----	-212.56	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	-----	-----	6.22	6.22
		U$_2$ - U$_3$	-48.14	30.64	-71.09	9.46	-19.05	0.90	1.24	34.11	-79.15	9.46	-19.05	Vehicle	Vehicle	-----	-165.48	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	6.53	6.53
		U$_3$ - U$_4$	36.58	39.60	-61.65	12.74	-17.47	0.90	1.24	44.08	-68.63	12.74	-17.47	Vehicle	Vehicle	104.87	-41.66	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	14.39	14.39	8.77	8.77
		U$_4$ - U$_5$	38.93	39.73	-61.20	12.80	-17.38	0.90	1.24	44.23	-68.13	12.80	-17.38	Vehicle	Vehicle	108.12	-37.96	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	14.29	14.29	8.87	8.87
		U$_5$ - U$_6$	154.60	44.72	-38.99	15.16	-12.03	0.90	1.24	49.79	-43.40	15.16	-12.03	Vehicle	Vehicle	265.70	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	10.37	10.37	-----	-----
		U$_6$ - U$_7$	288.38	48.71	-20.39	17.14	-4.31	0.90	1.24	54.23	-22.70	17.14	-4.31	Vehicle	Vehicle	445.38	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	9.52	9.52	-----	-----
		U$_7$ - U$_8$	410.94	49.91	-4.76	22.63	0.00	0.90	1.24	55.56	-5.29	22.63	0.00	Pedestrian	Vehicle	635.86	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	8.94	8.94	-----	-----
		U$_8$ - U$_9$	311.57	38.20	-8.17	19.08	0.00	0.90	1.20	41.18	-8.81	19.08	0.00	Pedestrian	Vehicle	483.39	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	10.41	10.41	-----	-----
		U$_9$ - U$_{10}$	78.52	38.53	-34.31	12.28	-6.79	0.90	1.20	41.54	-36.99	12.28	-6.79	Vehicle	Vehicle	156.08	-----	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	-----	-----	15.18	15.18	-----	-----
		U$_{10}$ - U$_{11}$	-141.43	36.30	-62.82	11.10	-18.41	0.90	1.20	39.14	-67.73	11.10	-18.41	Vehicle	Vehicle	-----	-271.91	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	-----	-----	6.73	6.73
		U$_{11}$ - U$_{12}$	-338.03	33.42	-90.05	9.77	-27.93	0.90	1.20	36.03	-97.09	9.77	-27.93	Vehicle	Vehicle	-----	-565.66	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	-----	-----	4.89	4.89
		U$_{12}$ - U$_{13}$	-480.08	29.24	-104.86	8.23	-34.32	0.90	1.20	31.52	-113.06	8.23	-34.32	Vehicle	Vehicle	-----	-771.08	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	-----	-----	5.82	5.82
		U$_{13}$ - U$_{14}$	-570.65	24.81	-111.30	6.68	-37.21	0.90	1.20	26.75	-120.01	6.68	-37.21	Vehicle	Vehicle	-----	-897.85	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.31	6.31
		U$_{14}$ - U$_{15}$	-571.07	24.69	-111.33	6.65	-37.22	0.90	1.20	26.62	-120.03	6.65	-37.22	Vehicle	Vehicle	-----	-898.43	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.30	6.30
		U$_{15}$ - U$_{16}$	-581.88	19.26	-106.91	4.98	-36.12	0.90	1.20	20.76	-115.27	4.98	-36.12	Vehicle	Vehicle	-----	-906.29	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.47	6.47
		U$_{16}$ - U$_{17}$	-539.46	14.37	-94.43	3.52	-31.85	0.90	1.20	15.49	-101.81	3.52	-31.85	Vehicle	Vehicle	-----	-833.66	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	7.74	7.74
		U$_{17}$ - U$_{18}$	-422.33	9.29	-69.96	2.26	-25.05	0.90	1.20	10.02	-75.43	2.26	-25.05	Vehicle	Vehicle	-----	-647.08	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	-----	-----	7.27	7.27
		U$_{18}$ - U$_{19}$	-286.19	5.24	-44.31	1.28	-16.96	0.90	1.20	5.65	-47.78	1.28	-16.96	Vehicle	Pedestrian	-----	-456.20	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	6.05	6.05
		U$_{19}$ - U$_{20}$	-140.84	2.22	-19.76	0.55	-8.68	0.90	1.20	2.40	-21.31	0.55	-8.68	Vehicle	Pedestrian	-----	-222.07	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	-----	-----	17.90	17.90
	Structure 2	U$_0$ - U$_1$	-147.44	4.40	-28.28	0.45	-4.88	0.90	1.18	4.68	-30.10	0.45	-4.88	Vehicle	Vehicle	-----	-230.81	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	-----	-----	16.61	16.61
		U$_1$ - U$_2$	-319.06	9.33	-58.48	1.96	-13.36	0.90	1.18	9.93	-62.26	1.96	-13.36	Vehicle	Vehicle	-----	-495.71	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	-----	-----	7.59	7.59
		U$_2$ - U$_3$	-460.91	16.69	-85.05	3.77	-20.95	0.90	1.18	17.77	-90.55	3.77	-20.95	Vehicle	Vehicle	-----	-716.91	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	-----	-----	6.81	6.81
		U$_3$ - U$_4$	-580.03	25.43	-107.99	5.92	-27.68	0.90	1.18	27.07	-114.97	5.92	-27.68	Vehicle	Vehicle	-----	-903.50	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	6.62	6.62
		U$_4$ - U$_5$	-616.49	33.04	-116.23	7.86	-31.35	0.90	1.18	35.18	-123.75	7.86	-31.35	Vehicle	Vehicle	-----	-962.31	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	-----	-----	7.04	7.04
		U$_5$ - U$_6$	-604.71	40.73	-117.37	9.87	-32.88	0.90	1.18	43.37	-124.96	9.87	-32.88	Vehicle	Vehicle	-----	-948.57	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	-----	-----	7.06	7.06
		U$_6$ - U$_7$	-514.78	46.62	-107.09	11.56	-31.23	0.90	1.18	49.64	-114.01	11.56	-31.23	Vehicle	Vehicle	-----	-817.43	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	-----	-----	7.25	7.25
		U$_7$ - U$_8$	-512.83	46.67	-106.87	11.57	-31.18	0.90	1.18	49.69	-113.78	11.57	-31.18	Vehicle	Vehicle	-----	-814.59	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	7.28	7.28
		U$_8$ - U$_9$	-373.51	51.90	-93.31	13.16	-27.41	0.90	1.18	55.25	-99.35	13.16	-27.41	Vehicle	Vehicle	-----	-614.71	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	-----	-----	7.58	7.58
		U$_9$ - U$_{10}$	-181.05	54.32	-70.09	14.25	-21.42	0.90	1.18	57.83	-74.62	14.25	-21.42	Vehicle	Vehicle	-----	-332.37	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	-----	-----	9.45	9.45
		U$_{10}$ - U$_{11}$	26.18	56.16	-49.12	15.21	-14.40	0.90	1.18	59.79	-52.30	15.21	-14.40	Vehicle	Vehicle	111.76	-33.95	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	14.79	14.79	15.21	15.21
		U$_{11}$ - U$_{12}$	237.39	54.88	-27.50	15.56	-6.85	0.90	1.18	58.43	-29.28	15.56	-6.85	Vehicle	Vehicle	384.56	-----	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	-----	-----	11.52	11.52	-----	-----
		U$_{12}$ - U$_{13}$	435.89	53.92	-14.25	18.37	0.00	0.90	1.18	57.40	-15.18	18.37	0.00	Vehicle	Vehicle	641.29	-----	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	-----	-----	12.25	12.25	-----	-----
		U$_{13}$ - U$_{14}$	595.84	51.44	-13.32	24.32	0.00	0.90	1.18	54.77	-14.18	24.32	0.00	Pedestrian	Vehicle	877.40	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	12.25	12.25	-----	-----
		U$_{14}$ - U$_{15}$	615.53	46.35	-11.54	24.37	0.00	0.90	1.17	48.76	-12.15	24.37	0.00	Pedestrian	Vehicle	895.27	-----	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	-----	-----	12.97	12.97	-----	-----
		U$_{15}$ - U$_{16}$	486.15	48.38	-19.04	18.61	0.00	0.90	1.17	50.90	-20.03	18.61	0.00	Pedestrian	Vehicle	722.35	-----	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	-----	-----	11.31	11.31	-----	-----
		U$_{16}$ - U$_{17}$	339.27	48.12	-34.72	14.66	-2.95	0.90	1.17	50.63	-36.53	14.66	-2.95	Vehicle	Vehicle	506.87	-----	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	-----	-----	13.92	13.92	-----	-----
		U$_{17}$ - U$_{18}$	192.13	47.07	-52.89	15.12	-9.49	0.90	1.17	49.52	-55.65	15.12	-9.49	Vehicle	Vehicle	314.15	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	11.59	11.59	-----	-----
		U$_{18}$ - U$_{19}$	53.83	43.13	-70.20	15.12	-15.34	0.90	1.17	45.38	-73.86	15.12	-15.34	Vehicle	Vehicle	128.97	-26.03	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	15.70	15.70	9.49	9.49
		U$_{19}$ - U$_{20}$	-58.94	38.25	-84.61	15.07	-19.84	0.90	1.17	40.24	-89.02	15.07	-19.84	Pedestrian	Vehicle	-----	-192.35	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	-----	-----	7.12	7.12
	Structure 3	U$_0$ - U$_1$	-120.93	2.27	-28.16	0.28	-5.10	0.90	1.20	2.44	-30.36	0.28	-5.10	Vehicle	Vehicle	-----	-196.68	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	18.33	18.33
		U$_1$ - U$_2$	-276.62	5.33	-55.83	1.13	-14.58	0.90	1.20	5.74	-60.20	1.13	-14.58	Vehicle	Vehicle	-----	-437.86	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	-----	-----	6.66	6.66
		U$_2$ - U$_3$	-409.97	10.43	-79.75	2.28	-23.49	0.90	1.20	11.24	-85.99	2.28	-23.49	Vehicle	Vehicle	-----	-644.75	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	-----	-----	6.52	6.52
		U$_3$ - U$_4$	-521.37	16.61	-102.87	3.72	-31.20	0.90	1.20	17.91	-110.91	3.72	-31.20	Vehicle	Vehicle	-----	-821.97	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	-----	-----	7.27	7.27
		U$_4$ - U$_5$	-556.38	22.07	-109.40	5.28	-35.33	0.90	1.20	23.80	-117.95	5.28	-35.33	Vehicle	Vehicle	-----	-876.62	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.54	6.54
		U$_5$ - U$_6$	-535.38	27.89	-106.31	7.07	-36.15	0.90	1.20	30.08	-114.62	7.07	-36.15	Vehicle	Vehicle	-----	-845.00	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	-----	-----	6.91	6.91
		U$_6$ - U$_7$	-533.59	27.96	-106.00	7.10	-36.10	0.90	1.20	30.15	-114.28	7.10	-36.10	Vehicle	Vehicle	-----	-842.24	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.95	6.95
		U$_7$ - U$_8$	-436.11	31.63	-90.80	8.76	-32.90	0.90	1.20	34.10	-97.90	8.76	-32.90	Vehicle	Pedestrian	-----	-736.98	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	5.36	5.36
		U$_8$ - U$_9$	-286.48	34.90	-70.61	10.46	-26.28	0.90	1.20	37.63	-76.13	10.46	-26.28	Vehicle	Pedestrian	-----	-505.55	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	-----	-----	5.14	5.14
		U$_9$ - U$_{10}$	-88.11	36.47	-45.46	12.15	-17.18	0.90	1.20	39.32	-49.01	12.15	-17.18	Vehicle	Pedestrian	-----	-200.59	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	-----	-----	7

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: 3F1 **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 (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	Top Flange Component Length (in)	Top Flange Component Thickness	Bot. Flange Component Length (in)	Bot. Flange Component Thickness	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	7.89	-5.98	0.37	-2.06	0.90	1.24	8.78	-6.65	0.37	-2.06	Vehicle	Vehicle	8.89	-11.17	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	**57.48**	**57.48**	**63.40**	**63.40**
		L_1 - L_2	67.93	40.97	-11.40	9.23	-3.35	0.90	1.24	45.61	-12.69	9.23	-3.35	Vehicle	Vehicle	147.60	-----	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	-----	-----	**9.53**	**9.53**	-----	-----
		L_2 - L_3	78.83	72.76	-24.73	15.48	-7.39	0.90	1.24	81.00	-27.53	15.48	-7.39	Vehicle	Vehicle	207.78	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**7.28**	**7.28**	-----	-----
		L_3 - L_4	39.11	74.26	-34.55	18.09	-10.83	0.90	1.24	82.67	-38.46	18.09	-10.83	Vehicle	Vehicle	158.32	-----	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	-----	-----	**7.61**	**7.61**	-----	-----
		L_4 - L_5	-166.44	46.12	-50.12	10.96	-16.91	0.90	1.24	51.34	-55.80	10.96	-16.91	Vehicle	Vehicle	-----	-288.91	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**5.98**	**5.98**
		L_5 - L_6	-301.30	22.96	-54.25	3.24	-18.94	0.90	1.24	25.56	-60.40	3.24	-18.94	Vehicle	Vehicle	-----	-470.20	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	-----	-----	**5.93**	**5.93**
		L_6 - L_7	-439.01	6.63	-58.44	0.00	-26.52	0.90	1.24	7.38	-65.07	0.00	-26.52	Vehicle	Pedestrian	-----	-689.76	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	-----	-----	**5.52**	**5.52**
		L_7 - L_8	-551.71	3.18	-58.60	0.00	-35.56	0.90	1.24	3.54	-65.23	0.00	-35.56	Vehicle	Pedestrian	-----	-848.25	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	-----	-----	**6.43**	**6.43**
		L_8 - L_9	-570.55	7.15	-64.44	0.00	-37.48	0.90	1.20	7.71	-69.48	0.00	-37.48	Vehicle	Pedestrian	-----	-880.76	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	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**5.88**	**5.88**
		L_9 - L_{10}	-355.55	8.01	-37.76	0.00	-24.70	0.90	1.20	8.64	-40.71	0.00	-24.70	Vehicle	Pedestrian	-----	-547.24	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	-----	-----	**9.02**	**9.02**
		L_{10} - L_{11}	-118.56	31.60	-32.24	0.00	-12.42	0.90	1.20	34.07	-34.76	0.00	-12.42	Vehicle	Pedestrian	-----	-215.45	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	-----	-----	**8.09**	**8.09**
		L_{11} - L_{12}	103.33	54.94	-29.91	9.97	-9.47	0.90	1.20	59.24	-32.25	9.97	-9.47	Vehicle	Vehicle	211.33	-----	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	-----	-----	**8.28**	**8.28**	-----	-----
		L_{12} - L_{13}	300.47	85.18	-27.73	17.86	-8.15	0.90	1.20	91.84	-29.90	17.86	-8.15	Vehicle	Vehicle	509.99	-----	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	-----	-----	**7.34**	**7.34**	-----	-----
		L_{13} - L_{14}	441.01	98.42	-23.59	24.18	-6.62	0.90	1.20	106.12	-25.43	24.18	-6.62	Vehicle	Vehicle	711.27	-----	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	-----	-----	**8.17**	**8.17**	-----	-----
		L_{14} - L_{15}	546.80	102.12	-15.06	24.61	-3.50	0.90	1.20	110.11	-16.24	24.61	-3.50	Vehicle	Vehicle	853.97	-----	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	-----	-----	**9.33**	**9.33**	-----	-----
		L_{15} - L_{16}	505.90	88.68	-14.14	20.37	-2.04	0.90	1.20	95.62	-15.25	20.37	-2.04	Vehicle	Vehicle	781.97	-----	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	-----	-----	**11.18**	**11.18**	-----	-----
		L_{16} - L_{17}	398.64	65.28	-12.71	12.78	-0.84	0.90	1.20	70.38	-13.70	12.78	-0.84	Vehicle	Vehicle	609.73	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	**11.62**	**11.62**	-----	-----
		L_{17} - L_{18}	263.76	39.68	-10.49	4.87	0.00	0.90	1.20	42.79	-11.31	4.87	0.00	Vehicle	Vehicle	398.50	-----	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	-----	-----	**14.48**	**14.48**	-----	-----
		L_{18} - L_{19}	118.86	31.68	-8.25	0.70	-3.28	0.90	1.20	34.15	-8.90	0.70	-3.28	Vehicle	Pedestrian	198.91	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**11.24**	**11.24**	-----	-----
		L_{19} - L_{20}	-23.25	27.13	-7.98	1.27	-12.00	0.90	1.20	29.25	-8.61	1.27	-12.00	Vehicle	Pedestrian	7.80	-57.01	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	**16.35**	**16.35**	**17.48**	**17.48**
		L_0- L_1	-35.95	16.91	-11.39	1.33	-5.13	0.90	1.18	18.00	-12.12	1.33	-5.13	Vehicle	Pedestrian	-----	-69.16	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	-----	-----	**28.92**	**28.92**
		L_1 - L_2	132.83	27.53	-4.43	2.94	-0.07	0.90	1.18	29.31	-4.71	2.94	-0.07	Vehicle	Vehicle	210.77	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**17.08**	**17.08**	-----	-----
		L_2 - L_3	304.11	59.32	-9.37	10.53	-1.80	0.90	1.18	63.16	-9.97	10.53	-1.80	Vehicle	Vehicle	477.44	-----	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	-----	-----	**10.64**	**10.64**	-----	-----
		L_3 - L_4	445.92	84.01	-16.84	18.16	-3.63	0.90	1.18	89.44	-17.93	18.16	-3.63	Vehicle	Vehicle	695.97	-----	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	-----	-----	**9.65**	**9.65**	-----	-----
		L_4 - L_5	567.84	109.06	-27.01	24.82	-6.10	0.90	1.18	116.12	-28.76	24.82	-6.10	Vehicle	Vehicle	889.14	-----	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	-----	-----	**9.32**	**9.32**	-----	-----
		L_5 - L_6	603.64	116.12	-34.64	28.47	-8.06	0.90	1.18	123.63	-36.88	28.47	-8.06	Vehicle	Vehicle	945.45	-----	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	-----	-----	**9.62**	**9.62**	-----	-----
		L_6 - L_7	599.48	120.69	-43.89	30.26	-10.41	0.90	1.18	128.50	-46.73	30.26	-10.41	Vehicle	Vehicle	946.37	-----	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	-----	-----	**9.48**	**9.48**	-----	-----
		L_7 - L_8	373.94	96.89	-54.85	24.93	-13.66	0.90	1.18	103.15	-58.40	24.93	-13.66	Vehicle	Vehicle	620.22	-----	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	-----	-----	**9.38**	**9.38**	-----	-----
		L_8 - L_9	195.71	77.12	-59.01	19.52	-15.12	0.90	1.18	82.11	-62.83	19.52	-15.12	Vehicle	Vehicle	361.16	-----	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	-----	-----	**11.01**	**11.01**	-----	-----
		L_9 - L_{10}	-13.21	53.64	-60.96	12.45	-16.11	0.90	1.18	57.11	-64.91	12.45	-16.11	Vehicle	Vehicle	57.07	-101.56	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**15.32**	**15.32**	**11.01**	**11.01**
		L_{10} - L_{11}	-217.32	32.89	-61.86	5.50	-17.02	0.90	1.18	35.02	-65.87	5.50	-17.02	Vehicle	Vehicle	-----	-368.14	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	-----	-----	**6.58**	**6.58**
		L_{11} - L_{12}	-419.93	16.77	-61.01	0.00	-23.34	0.90	1.18	17.86	-64.96	0.00	-23.34	Vehicle	Pedestrian	-----	-660.70	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	-----	-----	**5.78**	**5.78**
		L_{12} - L_{13}	-591.41	16.84	-62.43	0.00	-30.09	0.90	1.18	17.93	-66.47	0.00	-30.09	Vehicle	Pedestrian	-----	-894.35	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	-----	-----	**6.97**	**6.97**
		L_{13} - L_{14}	-724.23	15.78	-59.89	0.00	-35.12	0.90	1.18	16.80	-63.77	0.00	-35.12	Vehicle	Pedestrian	-----	-1070.05	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}	-747.05	18.18	-69.07	0.00	-36.29	0.90	1.17	19.13	-72.67	0.00	-36.29	Vehicle	Pedestrian	-----	-1112.80	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	-----	-----	**7.05**	**7.05**
		L_{15} - L_{16}	-632.15	16.68	-56.82	0.00	-31.21	0.90	1.17	17.55	-59.78	0.00	-31.21	Vehicle	Pedestrian	-----	-940.08	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	-----	-----	**7.07**	**7.07**
		L_{16} - L_{17}	-488.62	16.52	-40.58	0.00	-25.39	0.90	1.17	17.38	-42.69	0.00	-25.39	Vehicle	Pedestrian	-----	-723.72	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	-----	-----	**8.21**	**8.21**
		L_{17} - L_{18}	-336.98	29.68	-40.24	0.00	-18.12	0.90	1.17	31.23	-42.34	0.00	-18.12	Vehicle	Pedestrian	-----	-516.68	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	-----	-----	**6.46**	**6.46**
		L_{18} - L_{19}	-183.61	47.69	-39.62	4.48	-11.34	0.90	1.17	50.17	-41.68	4.48	-11.34	Vehicle	Vehicle	-----	-292.88	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	-----	-----	**9.36**	**9.36**
		L_{19} - L_{20}	-45.77	61.43	-35.64	8.92	-9.58	0.90	1.17	64.63	-37.50	8.92	-9.58	Vehicle	Vehicle	24.53	-108.24	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**11.21**	**11.21**	**14.08**	**14.08**
	Structure 2	L_{20} - L_{21}	68.00	78.62	-31.67	11.57	-9.12	0.90	1.17	82.72	-33.32	11.57	-9.12	Vehicle	Vehicle	195.92	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**10.84**	**10.84**	-----	-----
		L_{21} - L_{22}	133.90	82.55	-25.32	13.61	-8.82	0.90	1.17	86.85	-26.64	13.61	-8.82	Vehicle	Vehicle	286.98	-----	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	-----	-----	**9.56**	**9.56**	-----	-----
		L_{22} - L_{23}	122.50	79.58	-27.87	11.79	-7.58	0.90	1.17	83.73	-29.32	11.79	-7.58	Vehicle	Vehicle	268.09	-----	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	-----	-----	**10.06**	**10.06**	-----	-----
		L_{23} - L_{24}	46.70	66.49	-31.12	8.09	-7.09	0.90	1.17	69.95	-32.74	8.09	-7.09	Vehicle	Vehicle	151.64	-----	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	-----	-----	**13.12**	**13.12**	-----	-----
		L_{24} - L_{25}	-66.76	52.64	-34.66	3.32	-6.24	0.90	1.17	55.39	-36.46	3.32	-6.24	Vehicle	Vehicle	-----	-134.18	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**13.90**	**13.90**
		L_{25} - L_{26}	-205.83	35.82	-37.12	0.00	-11.78	0.90	1.17	37.68	-39.05	0.00	-11.78	Vehicle	Vehicle	-----	-318.34	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	-----	-----	**9.42**	**9.42**
		L_{26} - L_{27}	-350.61	33.51	-37.84	0.00	-18.88	0.90	1.17	35.25	-39.81	0.00	-18.88	Vehicle	Pedestrian	-----	-532.08	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	-----	-----	**6.42**	**6.42**
		L_{27} - L_{28}	-494.76	28.13	-37.73	0.00	-25.89	0.90	1.17	29.59	-39.70	0.00	-25.89	Vehicle	Pedestrian	-----	-728.46	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	-----	-----	**8.43**	**8.43**
		L_{28} - L_{29}	-620.88	24.17	-42.21	0.00	-31.79	0.90	1.17	25.43	-44.41	0.00	-31.79	Vehicle	Pedestrian	-----	-906.20	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	-----	-----	**8.59**	**8.59**
		L_{29} - L_{30}	-716.82	19.01	-50.73	0.00	-36.30	0.90	1.17	20.00	-53.37	0.00	-36.30	Vehicle	Pedestrian	-----	-1048.43	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	-----	-----	**8.90**	**8.90**
		L_{30} - L_{31}	-850.86	28.38	-73.75	0.00	-35.98	0.90	1.18	30.22	-78.52	0.00	-35.98	Vehicle	Pedestrian	-----	-1254.97	11.98	70.85	58.8700	2338.05	131.71	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: 3F1 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 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	11.31	-51.21	3.44	-12.32	0.90	1.24	12.59	-57.01	3.44	-12.32	Vehicle	Vehicle	-----	-195.83	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	-----	-----	-----	-----	-----	4.40	4.40
		U_1 - L_1	-46.50	9.73	-36.29	2.93	-9.05	0.90	1.24	10.83	-40.40	2.93	-9.05	Vehicle	Vehicle	-----	-112.97	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	-----	-----	-----	-----	-----	7.56	7.56
		U_2 - L_2	-0.07	8.80	-25.86	2.84	-5.68	0.90	1.24	9.80	-28.79	2.84	-5.68	Vehicle	Vehicle	12.65	-37.52	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	-----	-----	-----	-----	-----	43.65	43.65	12.22	12.22
		U_3 - L_3	39.61	8.39	-13.55	2.70	-2.12	0.90	1.24	9.34	-15.08	2.70	-2.12	Vehicle	Vehicle	63.64	-----	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	-----	-----	41.56	41.56	-----	-----
		U_4 - L_4	-30.21	1.33	-23.15	0.00	-3.47	0.90	1.24	1.48	-25.77	0.00	-3.47	Vehicle	Vehicle	-----	-72.77	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	-----	-----	-----	-----	-----	12.40	12.40
		U_5 - L_5	-130.50	2.95	-31.85	0.00	-10.24	0.90	1.24	3.29	-35.46	0.00	-10.24	Vehicle	Vehicle	-----	-215.76	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	-----	-----	-----	-----	-----	8.31	8.31
		U_6 - L_6	-158.19	5.80	-31.60	0.00	-13.06	0.90	1.24	6.46	-35.17	0.00	-13.06	Vehicle	Pedestrian	-----	-268.35	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	-----	-----	-----	-----	-----	7.25	7.25
		U_7 - L_7	-152.33	9.99	-31.44	0.00	-13.25	0.90	1.24	11.12	-35.00	0.00	-13.25	Vehicle	Pedestrian	-----	-260.75	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	-----	-----	-----	-----	-----	6.38	6.38
		U_8 - L_8	-455.44	11.95	-50.51	0.00	-31.72	0.90	1.24	13.30	-56.23	0.00	-31.72	Vehicle	Pedestrian	-----	-706.41	3.28	51.23	47.9548	1690.75	131.71	16.6563	4.0434	37.07	31.69	-1380.20	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	-----	-----	-----	6.89	6.89
		U_9 - L_9	-287.50	2.66	-49.70	0.00	-18.21	0.90	1.20	2.87	-53.59	0.00	-18.21	Vehicle	Pedestrian	-----	-467.09	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	-----	-----	-----	-----	-----	4.98	4.98
		U_{10} - L_{10}	-276.27	1.28	-49.17	0.00	-17.55	0.90	1.20	1.38	-53.01	0.00	-17.55	Vehicle	Vehicle	-----	-428.06	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	-----	-----	-----	-----	-----	8.80	8.80
		U_{11} - L_{11}	-232.54	1.34	-45.52	0.00	-14.42	0.90	1.20	1.44	-49.08	0.00	-14.42	Vehicle	Vehicle	-----	-366.10	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	-----	-----	-----	-----	-----	8.33	8.33
		U_{12} - L_{12}	-178.38	1.08	-35.86	0.00	-11.20	0.90	1.20	1.17	-38.66	0.00	-11.20	Vehicle	Vehicle	-----	-282.15	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	-----	-----	-----	-----	-----	9.16	9.16
		U_{13} - L_{13}	-127.70	4.19	-29.72	0.00	-7.88	0.90	1.20	4.51	-32.05	0.00	-7.88	Vehicle	Vehicle	-----	-207.67	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	-----	-----	-----	-----	-----	7.89	7.89
		U_{14} - L_{14}	-30.38	0.76	-24.74	0.00	-3.03	0.90	1.20	0.82	-26.68	0.00	-3.03	Vehicle	Vehicle	-----	-74.18	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	-----	-----	-----	-----	-----	11.78	11.78
		U_{15} - L_{15}	-28.93	9.12	-22.16	1.55	-4.53	0.90	1.20	9.83	-23.89	1.55	-4.53	Vehicle	Vehicle	-----	-68.66	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	13.16	13.16
		U_{16} - L_{16}	-75.99	7.01	-26.40	1.39	-7.07	0.90	1.20	7.56	-28.46	1.39	-7.07	Vehicle	Vehicle	-----	-135.79	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	-----	-----	-----	-----	-----	9.32	9.32
		U_{17} - L_{17}	-161.81	5.33	-35.87	1.30	-10.66	0.90	1.20	5.75	-38.67	1.30	-10.66	Vehicle	Vehicle	-----	-260.63	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	-----	-----	-----	-----	-----	6.45	6.45
		U_{18} - L_{18}	-190.09	4.57	-35.31	1.12	-12.69	0.90	1.20	4.93	-38.07	1.12	-12.69	Vehicle	Pedestrian	-----	-313.11	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	-----	-----	-----	-----	-----	6.60	6.60
		U_{19} - L_{19}	-228.09	3.92	-34.85	0.97	-14.99	0.90	1.20	4.22	-37.58	0.97	-14.99	Vehicle	Pedestrian	-----	-364.85	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	-----	-----	-----	-----	-----	7.39	7.39
		U_{20} - L_{20}	-242.54	3.55	-35.70	0.95	-15.62	0.90	1.20	3.83	-38.49	0.95	-15.62	Vehicle	Pedestrian	-----	-385.64	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	-----	-----	-----	-----	-----	5.25	5.25
	Structure 2	U_0 - L_0	-302.99	8.63	-52.49	2.22	-15.08	0.90	1.18	9.19	-55.89	2.22	-15.08	Vehicle	Vehicle	-----	-466.55	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	-----	-----	-----	-----	-----	6.07	6.07
		U_1 - L_1	-268.80	8.75	-49.90	2.12	-13.67	0.90	1.18	9.32	-53.13	2.12	-13.67	Vehicle	Vehicle	-----	-418.51	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	-----	-----	-----	-----	-----	7.60	7.60
		U_2 - L_2	-220.88	9.45	-46.72	2.34	-12.32	0.90	1.18	10.06	-49.75	2.34	-12.32	Vehicle	Vehicle	-----	-351.82	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	-----	-----	-----	-----	-----	7.11	7.11
		U_3 - L_3	-175.24	10.12	-42.57	2.49	-10.35	0.90	1.18	10.78	-45.32	2.49	-10.35	Vehicle	Vehicle	-----	-286.74	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	-----	-----	-----	-----	-----	6.10	6.10
		U_4 - L_4	-82.09	8.79	-30.16	2.21	-6.62	0.90	1.18	9.35	-32.11	2.21	-6.62	Vehicle	Vehicle	-----	-148.45	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	-----	-----	-----	-----	-----	8.01	8.01
		U_5 - L_5	-19.91	9.37	-24.03	2.23	-4.16	0.90	1.18	9.98	-25.59	2.23	-4.16	Vehicle	Vehicle	-----	-59.14	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	12.53	12.53
		U_6 - L_6	60.32	18.92	-13.34	1.75	-0.47	0.90	1.18	20.14	-14.20	1.75	-0.47	Vehicle	Vehicle	104.60	-----	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	-----	-----	-----	-----	-----	-----	-----	18.24	18.24	-----	-----
		U_7 - L_7	-41.78	1.38	-23.18	0.00	-2.50	0.90	1.18	1.47	-24.68	0.00	-2.50	Vehicle	Vehicle	-----	-86.39	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	-----	-----	-----	-----	-----	12.10	12.10
		U_8 - L_8	-189.01	4.15	-32.33	0.00	-8.38	0.90	1.18	4.42	-34.42	0.00	-8.38	Vehicle	Vehicle	-----	-290.45	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	-----	-----	-----	-----	-----	9.92	9.92
		U_9 - L_9	-254.00	1.67	-40.19	0.00	-10.55	0.90	1.18	1.78	-42.79	0.00	-10.55	Vehicle	Vehicle	-----	-385.82	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	-----	-----	-----	-----	-----	10.22	10.22
		U_{10} - L_{10}	-290.02	3.04	-40.75	0.00	-12.18	0.90	1.18	3.23	-43.39	0.00	-12.18	Vehicle	Vehicle	-----	-433.42	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	11.26	11.26
		U_{11} - L_{11}	-312.19	6.49	-43.89	0.00	-12.59	0.90	1.18	6.91	-46.73	0.00	-12.59	Vehicle	Vehicle	-----	-466.59	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	-----	-----	-----	-----	-----	9.69	9.69
		U_{12} - L_{12}	-327.27	9.39	-40.04	0.00	-13.75	0.90	1.18	10.00	-42.63	0.00	-13.75	Vehicle	Vehicle	-----	-480.86	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	-----	-----	-----	-----	-----	11.13	11.13
		U_{13} - L_{13}	-277.23	12.79	-33.93	0.45	-12.38	0.90	1.18	13.62	-36.13	0.45	-12.38	Vehicle	Pedestrian	-----	-423.47	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	-----	-----	-----	-----	-----	8.51	8.51
		U_{14} - L_{14}	-505.47	16.15	-43.24	0.00	-21.42	0.90	1.18	17.20	-46.04	0.00	-21.42	Vehicle	Pedestrian	-----	-744.80	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	8.10	8.10
		U_{15} - L_{15}	-232.92	4.52	-47.40	1.67	-12.16	0.90	1.17	4.76	-49.87	1.67	-12.16	Pedestrian	Vehicle	-----	-367.62	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	-----	-----	-----	-----	-----	9.17	9.17
		U_{16} - L_{16}	-260.09	5.15	-48.62	0.83	-13.04	0.90	1.17	5.42	-51.15	0.83	-13.04	Vehicle	Vehicle	-----	-404.61	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	-----	-----	-----	-----	-----	7.94	7.94
		U_{17} - L_{17}	-228.20	5.80	-47.31	0.66	-11.76	0.90	1.17	6.11	-49.77	0.66	-11.76	Vehicle	Vehicle	-----	-361.37	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	7.94	7.94
		U_{18} - L_{18}	-209.23	6.98	-42.92	0.00	-11.28	0.90	1.17	7.35	-45.15	0.00	-11.28	Vehicle	Vehicle	-----	-330.70	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	-----	-----	-----	-----	-----	8.15	8.15
		U_{19} - L_{19}	-166.51	7.48	-38.29	0.00	-9.53	0.90	1.17	7.87	-40.28	0.00	-9.53	Vehicle	Vehicle	-----	-268.83	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	-----	-----	-----	-----	-----	8.56	8.56
		U_{20} - L_{20}	-113.91	7.51	-30.60	0.00	-7.50	0.90	1.17	7.91	-32.20	0.00	-7.50	Vehicle	Vehicle	-----	-189.94	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	-----	-----	-----	-----	-----	8.11	8.11
		U_{21} - L_{21}	-62.73	11.11	-24.32	0.00	-5.22	0.90	1.17	11.69	-25.58	0.00	-5.22	Vehicle	Vehicle	-----	-114.80	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	10.86	10.86
		U_{22} - L_{22}	-38.93	1.30	-25.54	0.00	-2.15	0.90	1.17	1.37	-26.87	0.00	-2.15	Vehicle	Vehicle	-----	-85.55	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	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	11.27	11.27
		U_{23} - L_{23}	-74.45	7.95	-26.51	0.48	-6.10	0.90	1.17	8.37	-27.89	0.48	-6.10	Vehicle	Vehicle	-----	-133.04	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	-----	-----	-----	-----	-----	9.54	9.54
		U_{24} - L_{24}	-121.37	7.79	-31.07	0.37	-8.17	0.90	1.17	8.20	-32.69	0.37	-8.17	Vehicle	Vehicle	-----	-200.28	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	7.76	7.76
		U_{25} - L_{25}	-169.10	7.49	-36.46	0.43	-9.94	0.90	1.17	7.88	-38.35	0.43	-9.94	Vehicle	Vehicle	-----	-269.69	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	-----	-----	-----	-----	-----	8.92	8.92
		U_{26} - L_{26}	-207.93	6.78	-38.64	0.14	-11.42	0.90	1.17	7.13	-40.66	0.14	-11.42	Vehicle	Vehicle	-----	-323.16	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	-----	-----	-----	-----	-----	9.08	9.08
		U_{27} - L_{27}	-219.90	5.57	-40.50	0.16	-11.49	0.90	1.17	5.86	-42.61	0.16	-11.49	Vehicle	Vehicle	-----	-341.26	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	-----	-----	-----	-----	-----	9.47	9.47
		U_{28} - L_{28}	-240.66	8.05	-37.08	0.00	-12.59	0.90	1.17	8.47	-39.01	0.00	-12.59	Vehicle	Vehicle	-----	-363.57	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	-----	-----	-----	-----	-----	10.91	10.91
		U_{29} - L_{29}	-202.76	12.40	-32.77	0.00	-10.35	0.90	1.17	13.05	-34.48	0.00	-10.35	Vehicle	Vehicle	-----	-308.40	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	-----	-----	-----	-----	-----	14.13	14.13
		U_{30} - L_{30}	-516.45	13.04	-44.92	0.00	-22.02	0.90	1.18	13.88	-47.83	0.00	-22.02	Vehicle	Pedestrian	-----	-762.19	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	-----	-----	----

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 3F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

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

E = 29000.0 ksi

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Diagonals	Structure 1	U_0 - L_1	87.61	56.02	-15.25	14.00	-4.60	0.90	1.24	62.37	-16.98	14.00	-4.60	Vehicle	Vehicle	194.97	-----	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	-----	-----	-----	-----	-----	**8.00**	**8.00**	-----	-----
		U_1 - L_2	23.84	43.13	-14.93	9.20	-4.72	0.90	1.24	48.02	-16.62	9.20	-4.72	Vehicle	Vehicle	93.42	-----	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	-----	-----	-----	-----	-----	**8.41**	**8.41**	-----	-----
		U_2 - L_3	-49.05	20.82	-12.90	3.33	-4.33	0.90	1.24	23.18	-14.36	3.33	-4.33	Vehicle	Vehicle	-----	-82.42	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	-----	-----	-----	-----	-----	**19.86**	**19.86**
		U_3 - L_4	-108.90	12.10	-25.76	0.00	-6.31	0.90	1.24	13.47	-28.68	0.00	-6.31	Vehicle	Vehicle	-----	-178.84	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**7.93**	**7.93**
		U_4 - L_5	153.14	41.01	-5.14	10.12	0.00	0.90	1.24	45.66	-5.72	10.12	0.00	Vehicle	Vehicle	258.44	-----	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	-----	-----	-----	-----	-----	**8.14**	**8.14**	-----	-----
		U_5 - L_5	186.37	42.87	-3.82	13.44	0.00	0.90	1.24	47.72	-4.26	13.44	0.00	Vehicle	Vehicle	304.32	-----	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	-----	-----	-----	-----	-----	**9.73**	**9.73**	-----	-----
		U_6 - L_6	177.53	38.55	-9.58	14.14	0.00	0.90	1.24	42.92	-10.66	14.14	0.00	Vehicle	Vehicle	286.59	-----	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	-----	-----	-----	-----	-----	**11.02**	**11.02**	-----	-----
		U_7 - L_7	173.15	35.05	-11.04	13.87	0.00	0.90	1.24	39.03	-12.29	13.87	0.00	Pedestrian	Vehicle	293.86	-----	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	-----	-----	-----	-----	-----	**9.03**	**9.03**	-----	-----
		U_8 - L_8	328.03	54.78	-3.40	19.45	-0.14	0.90	1.20	59.06	-3.66	19.45	-0.14	Vehicle	Vehicle	503.21	-----	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	-----	-----	-----	-----	-----	**10.74**	**10.74**	-----	-----
		U_9 - L_{10}	339.64	60.02	-2.39	19.75	0.00	0.90	1.20	64.71	-2.58	19.75	0.00	Vehicle	Vehicle	525.65	-----	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	-----	-----	-----	-----	-----	**9.62**	**9.62**	-----	-----
		U_{10} - L_{11}	313.15	57.25	-1.76	18.15	0.00	0.90	1.20	61.73	-1.90	18.15	0.00	Vehicle	Vehicle	487.34	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**9.68**	**9.68**	-----	-----
		U_{11} - L_{12}	270.62	51.20	-1.77	14.84	0.00	0.90	1.20	55.20	-1.91	14.84	0.00	Vehicle	Vehicle	423.56	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**9.18**	**9.18**	-----	-----
		U_{12} - L_{13}	194.11	40.71	-5.81	10.79	0.00	0.90	1.20	43.89	-6.26	10.79	0.00	Vehicle	Vehicle	309.40	-----	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	-----	-----	-----	-----	-----	**9.95**	**9.95**	-----	-----
		U_{13} - L_{14}	123.52	32.57	-11.64	5.97	0.00	0.90	1.20	35.11	-12.55	5.97	0.00	Vehicle	Vehicle	206.22	-----	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	-----	-----	-----	-----	-----	**8.66**	**8.66**	-----	-----
		U_{14} - L_{15}	-16.31	25.92	-17.97	1.47	-2.35	0.90	1.20	27.95	-19.37	1.47	-2.35	Vehicle	Vehicle	15.13	-46.39	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**15.89**	**15.89**	**16.11**	**16.11**
		U_{15} - L_{15}	59.11	30.55	-12.06	6.08	-2.09	0.90	1.20	32.94	-13.00	6.08	-2.09	Vehicle	Vehicle	119.66	-----	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	-----	-----	-----	-----	-----	**11.19**	**11.19**	-----	-----
		U_{17} - L_{16}	172.05	43.04	-7.44	9.93	-1.86	0.90	1.20	46.41	-8.03	9.93	-1.86	Vehicle	Vehicle	284.00	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**7.60**	**7.60**	-----	-----
		U_{18} - L_{17}	210.69	42.97	-6.30	12.50	-1.53	0.90	1.20	46.33	-6.80	12.50	-1.53	Vehicle	Vehicle	334.13	-----	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	-----	-----	-----	-----	-----	**9.50**	**9.50**	-----	-----
		U_{19} - L_{18}	242.30	41.99	-5.03	13.72	-1.21	0.90	1.20	45.27	-5.43	13.72	-1.21	Vehicle	Vehicle	373.85	-----	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	-----	-----	-----	-----	-----	**10.33**	**10.33**	-----	-----
		U_{20} - L_{19}	257.77	36.80	-4.14	15.71	-1.03	0.90	1.20	39.68	-4.46	15.71	-1.03	Pedestrian	Vehicle	407.11	-----	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	-----	-----	-----	-----	-----	**8.17**	**8.17**	-----	-----
		U_0 - L_1	299.01	52.04	-9.14	14.21	-2.21	0.90	1.18	55.40	-9.73	14.21	-2.21	Vehicle	Vehicle	460.73	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.64**	**8.64**	-----	-----
		U_1 - L_2	284.23	55.16	-10.88	14.05	-2.66	0.90	1.18	58.73	-11.58	14.05	-2.66	Vehicle	Vehicle	445.84	-----	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	-----	-----	-----	-----	-----	**8.40**	**8.40**	-----	-----
		U_2 - L_3	221.45	48.73	-11.61	11.83	-2.85	0.90	1.18	51.88	-12.36	11.83	-2.85	Vehicle	Vehicle	355.33	-----	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	-----	-----	-----	-----	-----	**8.27**	**8.27**	-----	-----
		U_3 - L_4	178.33	46.68	-13.12	10.08	-3.23	0.90	1.18	49.70	-13.97	10.08	-3.23	Vehicle	Vehicle	296.43	-----	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	-----	-----	-----	-----	-----	**8.02**	**8.02**	-----	-----
		U_4 - L_5	53.52	30.87	-11.24	5.38	-2.87	0.90	1.18	32.87	-11.97	5.38	-2.87	Vehicle	Vehicle	112.30	-----	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	-----	-----	-----	-----	-----	**11.38**	**11.38**	-----	-----
		U_5 - L_6	-16.50	24.87	-17.98	2.23	-2.92	0.90	1.18	26.48	-19.14	2.23	-2.92	Vehicle	Vehicle	12.97	-46.33	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	-----	-----	-----	**16.78**	**16.78**	**16.16**	**16.16**
		U_6 - L_7	-133.20	11.91	-32.55	0.00	-5.36	0.90	1.18	12.68	-34.65	0.00	-5.36	Vehicle	Vehicle	-----	-218.21	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	-----	-----	-----	-----	-----	**6.52**	**6.52**
		U_7 - L_7	208.77	38.14	-8.96	8.33	0.00	0.90	1.18	40.60	-9.54	8.33	0.00	Vehicle	Vehicle	324.18	-----	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	-----	-----	-----	-----	-----	**9.72**	**9.72**	-----	-----
		U_8 - L_8	289.58	48.33	-2.03	10.70	0.00	0.90	1.18	51.46	-2.16	10.70	0.00	Vehicle	Vehicle	443.35	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**8.17**	**8.17**	-----	-----
		U_{10} - L_9	327.97	49.31	-2.01	12.66	0.00	0.90	1.18	52.50	-2.14	12.66	0.00	Vehicle	Vehicle	494.62	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.56**	**8.56**	-----	-----
		U_{11} - L_{10}	349.27	51.30	-6.89	12.70	0.00	0.90	1.18	54.62	-7.33	12.70	0.00	Vehicle	Vehicle	525.05	-----	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	-----	-----	-----	-----	-----	**9.07**	**9.07**	-----	-----
		U_{12} - L_{11}	358.20	48.15	-7.30	13.52	0.00	0.90	1.18	51.26	-7.78	13.52	0.00	Vehicle	Vehicle	532.30	-----	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	-----	-----	-----	-----	-----	**9.49**	**9.49**	-----	-----
		U_{13} - L_{12}	307.76	40.10	-13.82	12.26	-0.24	0.90	1.18	42.70	-14.71	12.26	-0.24	Vehicle	Vehicle	455.59	-----	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	-----	-----	-----	-----	-----	**11.00**	**11.00**	-----	-----
		U_{14} - L_{13}	260.25	32.39	-11.87	11.73	-1.50	0.90	1.18	34.48	-12.64	11.73	-1.50	Pedestrian	Vehicle	398.40	-----	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	-----	-----	-----	-----	-----	**11.19**	**11.19**	-----	-----
		U_{15} - L_{15}	208.41	43.02	-5.92	11.04	-2.52	0.90	1.17	45.26	-6.23	11.04	-2.52	Vehicle	Pedestrian	329.77	-----	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	-----	-----	-----	-----	-----	**9.77**	**9.77**	-----	-----
		U_{16} - L_{16}	243.53	49.55	-4.10	11.54	-1.48	0.90	1.17	52.13	-4.32	11.54	-1.48	Vehicle	Pedestrian	384.36	-----	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	-----	-----	-----	-----	-----	**7.81**	**7.81**	-----	-----
		U_{16} - L_{17}	255.83	50.13	-6.11	12.23	-0.85	0.90	1.17	52.74	-6.43	12.23	-0.85	Vehicle	Vehicle	401.13	-----	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	-----	-----	-----	-----	-----	**8.62**	**8.62**	-----	-----
		U_{17} - L_{18}	235.25	50.93	-7.16	11.35	-0.75	0.90	1.17	53.58	-7.53	11.35	-0.75	Vehicle	Vehicle	375.48	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.75**	**7.75**	-----	-----
		U_{18} - L_{19}	212.06	45.56	-8.75	11.09	0.00	0.90	1.17	47.93	-9.21	11.09	0.00	Vehicle	Vehicle	337.99	-----	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	-----	-----	-----	-----	-----	**9.15**	**9.15**	-----	-----
		U_{19} - L_{20}	168.18	42.85	-9.69	9.14	0.00	0.90	1.17	45.08	-10.20	9.14	0.00	Vehicle	Vehicle	277.24	-----	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	-----	-----	-----	-----	-----	**9.65**	**9.65**	-----	-----
		U_{20} - L_{21}	97.21	30.89	-13.57	6.66	0.00	0.90	1.17	32.50	-14.28	6.66	0.00	Vehicle	Vehicle	168.62	-----	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	-----	-----	-----	-----	-----	**10.17**	**10.17**	-----	-----
		U_{21} - L_{22}	30.55	25.43	-20.61	3.66	-2.18	0.90	1.17	26.76	-21.68	3.66	-2.18	Vehicle	Vehicle	74.51	-----	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	-----	-----	-----	-----	-----	**14.84**	**14.84**	-----	-----
		U_{23} - L_{22}	49.81	30.03	-15.65	5.11	-0.95	0.90	1.17	31.59	-16.47	5.11	-0.95	Vehicle	Vehicle	105.83	-----	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**11.96**	**11.96**	-----	-----
		U_{24} - L_{23}	115.09	35.87	-10.57	8.00	-0.72	0.90	1.17	37.74	-11.12	8.00	-0.72	Vehicle	Vehicle	198.69	-----	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	-----	-----	-----	-----	-----	**8.28**	**8.28**	-----	-----
		U_{25} - L_{24}	179.20	44.44	-10.28	10.10	-0.73	0.90	1.17	46.76	-10.81	10.10	-0.73	Vehicle	Vehicle	293.75	-----	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	-----	-----	-----	-----	-----	**9.07**	**9.07**	-----	-----
		U_{26} - L_{25}	220.95	44.53	-9.01	11.89	-0.57	0.90	1.17	46.85	-9.48	11.89	-0.57	Vehicle	Vehicle	348.14	-----	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	-----	-----	-----	-----	-----	**9.17**	**9.17**	-----	-----
		U_{27} - L_{26}	234.79	46.83	-7.16	11.44	-0.35	0.90	1.17	49.27	-7.53	11.44	-0.35	Vehicle	Vehicle	369.27	-----	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	-----	-----	-----	-----	-----	**8.44**	**8.44**	-----	-----
		U_{28} - L_{27}	253.01	44.50	-6.45	12.25	-0.28	0.90	1.17	46.82	-6.78	12.25	-0.28	Vehicle	Vehicle	389.78	-----	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	-----	-----	-----	-----	-----	**9.77**	**9.77**	-----	-----
		U_{29} - L_{28}	215.83	35.78	-13.73	10.20	0.00	0.90	1.17	37.64	-14.45	10.20	0.00	Vehicle	Vehicle	329.51	-----	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	-----	-----	-----	-----	-----	**11.55**	**11.55**	-----	-----
		U_{30} - L_{29}	179.92	30.75	-11.66	8.89	-0.93	0.90	1.17	32.35	-12.27	8.89	-0.93	Vehicle	Vehicle	275.95	-----	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	-----	-----	-----	-----	-----	**14.55**	**14.55**	-----	-----
		U_{30} - L_{31}	294.37	43.85	-7.01	12.88	-1.65	0.90	1.18	46.69	-7.46	12.88	-1.65	Vehicle	Vehicle	443.37	-----	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	-----	-----	-----	-----	-----	**10.35**	**10.35**	-----	-----
		U_{31} - L_{32}	342.78	51.43	-6.22	13.71	-0.55	0.90	1.18	54.76	-6.62	13.71	-0.55	Vehicle	Vehicle	516.81	-----	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	-----	-----	-----	-----	-----	**7.94**	**7.94**	-----	-----
		U_{32} - L_{33}	363.31	52.46	-3.21	14.15	0.00	0.90	1.18	55.86	-3.42	14.15	0.00	Vehicle	Vehicle	544.91	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Segment
Loading: 3F1
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_z Information

| Location | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Min) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | Max. Pos. Mom. Start (k-in) | Max. Pos. Mom. End (k-in) | S_{bb} (in^3) | S_{tb} (in^3) | Z_z (in^3) | I_z (in^4) | I_{eff} | Shape Factor | M_p (k-in) | Formula (LB Term / F$_y$*S_{bb}) | M_u (k-in) | 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) 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_{bb} (in^3) | S_{tb} (in^3) | Z_y (in^3) | I_{yy} (in^4) | Shape Factor | M_p (k-in) | P_{crit} (kip) | Formula (LB Term / F$_y$*S_{bb}) | M_u (k-in) | Equivalent Mom. Factor a | $C_{m(x)}$ | $C_{m(y)}$ | Yield: Axial Axial Factor | Yield: Moment Factors | Yield: Total | Yield: Pass | Tension: Fracture: Axial Axial Factor | Tension: Fracture: Moment Factors | Tension: Fracture: Total | Tension: Fracture: Pass | Compression: Buckle: Axial Axial Factor | Compression: Buckle: Moment Factors | Compression: Buckle: Total | Compression: Buckle: Pass | Compression: Yield: Axial Axial Factor | Compression: Yield: Moment Factors | Compression: Yield: Total | Compression: Yield: Pass |
|---|---|---

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss System
Loading: 3F1
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
(c) 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)

Maximum Axial with Moment Interaction Check

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 (Max) End-In	Lane Reduction & Impact Live Load Start-In	Lane Reduction & Impact Live Load End-In	Impact Pedestrian Load Max Start-In	Impact Pedestrian Load Max End-In	Max. Pos. Mom. Start	Max. Pos. Mom. End	Max. Neg. Mom.	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_{bc}	M_z (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Pass
Structure 1	L_0-L_1	-49.04	-101.19	0.38	-0.64	3.08	-3.12	—	—	—	—	-57.22	-142.64	-19.31	-185.75	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99500394	2755.4	0.055	0.82	0.62	1.00
	L_1-L_2	-33.39	-126.53	-2.52	-9.42	-0.26	1.55	—	—	—	—	-126.81	-309.92	169.64	-118.81	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99500394	2755.4	0.409	0.44	0.44	1.00
	L_2-L_3	-24.77	-74.72	-0.53	-2.61	1.85	-153.05	-116.80	-3.91	34.66	0.00	-214.77	-255.10	451.97	-71.25	99.5	99.53	91.00	120.49	3439	1372.0	1.26	4141	0.99991186	3294.8	0.505	0.80	0.80	1.00
	L_3-L_4	18.53	15.80	-12.42	-6.75	0.89	3.33	—	—	—	—	-165.90	-90.20	11.94	44.45	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	-68.87	-310.26	-8.07	-33.41	-34.94	35.03	—	—	—	—	-107.66	-53.34	34.94	35.03	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	7.25	-228.45	-6.49	-4.68	2.02	3.94	25.52	52.60	0.00	0.00	-96.20	-72.50	25.52	52.60	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	62.67	-177.71	-11.50	-8.56	3.58	5.59	8.68	17.71	0.00	0.00	-173.64	-120.34	8.68	17.71	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	7.98	461.19	0.01	-0.13	0.47	6.98	—	—	—	—	10.62	597.22	18.46	755.44	145.8	145.75	130.44	228.84	6500	2932.4	1.57	7552	0.99529151	4806.3	0.024	0.61	0.61	1.00
	L_8-L_9	439.37	-23.36	0.15	0.01	5.45	0.13	—	—	—	—	1.89	0.14	70.51	1.64	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}	204.91	-116.77	-3.00	-4.52	-0.98	2.34	—	—	—	—	57.63	-3.10	88.62	28.45	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}	168.38	-118.38	-2.72	-5.13	3.55	1.65	—	—	—	—	-35.13	-66.39	45.89	21.70	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}	24.53	227.13	2.71	0.19	1.96	2.21	—	—	—	—	-41.25	-67.86	23.57	17.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{12}-L_{13}	-19.53	-128.46	-6.51	-6.28	2.20	1.08	—	—	—	—	-84.22	-81.27	28.50	13.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{13}-L_{14}	175.75	-425.17	-0.75	-14.97	1.72	1.47	—	—	—	—	-74.33	-193.67	22.29	19.02	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}	408.18	-20.07	0.00	-0.01	0.00	0.00	—	—	—	—	-178.98	-52.26	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_{15}-L_{16}	-209.34	-318.54	-7.15	-14.57	0.61	0.49	—	—	—	—	-392.47	-699.22	-291.96	-405.94	179.7	179.69	170.68	251.43	6743	3050.7	1.40	8297	0.99112257	5924.6	0.595	0.84	0.84	1.00
	L_{16}-L_{17}	-374.78	83.83	-10.05	-0.36	0.61	0.15	—	—	—	—	-406.32	2.05	-416.92	-106.12	103.9	103.89	138.16	156.43	4192	2460.7	1.34	6612	0.99911	5237.9	0.133	0.61	0.61	1.00
	L_{17}-L_{18}	-170.99	20.48	-2.48	-2.48	-0.53	1.11	—	—	—	—	-83.54	-32.02	-6.81	14.30	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}	-207.92	250.73	-1.69	-3.07	-1.98	2.05	—	—	—	—	-21.83	-13.74	-24.32	26.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{19}-L_{20}	-69.23	0.16	1.22	0.55	-3.09	2.32	—	—	—	—	-15.72	7.06	-33.08	20.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{20}-L_{21}	5.36	-218.26	0.37	-1.11	2.19	4.99	—	—	—	—	4.78	-14.14	27.93	-63.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{21}-L_{22}	16.18	247.31	0.76	0.45	-3.39	3.38	—	—	—	—	18.55	-112.47	3.39	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{22}-L_{23}	1.07	-191.80	-3.90	-9.01	-0.36	0.74	—	—	—	—	-49.79	-115.08	-4.59	9.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{23}-L_{24}	-0.37	-0.01	0.00	-0.01	-0.01	0.00	—	—	—	—	-80.42	-11.63	-3.91	3.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{24}-L_{25}	-286.08	-298.86	-10.03	-15.16	-0.13	1.32	—	—	—	—	-128.19	-193.64	-1.70	16.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{25}-L_{26}	294.38	42.03	0.67	-0.57	-0.55	0.55	—	—	—	—	-198.98	-54.84	0.80	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{26}-L_{27}	-467.27	-273.20	-23.01	-16.21	-1.93	2.50	—	—	—	—	-589.65	-624.35	-575.33	-306.75	218.3	216.33	205.74	344.78	7625	3425.8	1.59	11778	0.99911	7132.6	0.631	0.85	0.85	1.00
	L_{27}-L_{28}	-310.47	-45.78	-11.59	-13.72	2.39	4.36	—	—	—	—	-148.12	-200.78	30.34	55.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{28}-L_{29}	210.10	223.07	-12.78	-9.42	3.24	1.60	—	—	—	—	-133.88	-103.72	36.32	22.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{29}-L_{30}	-261.82	188.40	-9.13	-5.93	2.11	4.31	—	—	—	—	-116.58	-75.73	26.92	50.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{30}-L_{31}	-171.20	33.97	-6.78	-5.81	-0.36	0.61	—	—	—	—	-205.26	28.21	199.24	-330.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{31}-L_{32}	-131.41	389.19	-6.48	-6.11	2.42	3.01	—	—	—	—	-82.80	-78.01	30.86	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{32}-L_{33}	-164.24	-140.43	-0.93	-0.01	3.79	-1.31	—	—	—	—	-11.87	-0.05	48.37	-17.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{33}-L_{34}	207.98	669.22	-0.31	-0.01	2.37	0.29	—	—	—	—	-29.74	0.00	29.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{34}-L_{35}	911.85	-326.76	-0.42	-0.32	5.35	0.45	—	—	—	—	-5.25	-3.99	57.52	5.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{35}-L_{36}	289.04	42.03	0.67	-0.57	-0.55	0.55	—	—	—	—	-8.40	-4.83	56.52	26.60	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}	515.61	35.20	-3.96	-6.03	4.64	1.43	—	—	—	—	-49.95	-76.10	58.58	18.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{37}-L_{38}	1,015.51	1,015.51	-2.54	-2.54	4.48	4.48	—	—	—	—	-49.95	-49.95	28.39	28.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{38}-L_{39}	252.11	-256.04	-6.14	-7.68	4.06	1.77	—	—	—	—	-77.53	-96.90	51.28	27.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{39}-L_{40}	230.58	-66.22	-0.05	-9.33	2.39	2.70	—	—	—	—	-76.33	-117.81	30.16	34.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{40}-L_{41}	43.89	-183.34	-2.52	-0.17	1.94	1.74	—	—	—	—	-42.09	-22.70	38.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{41}-L_{42}	43.89	-183.34	-13.36	-17.47	1.94	1.74	—	—	—	—	-168.72	-220.58	24.46	31.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{42}-L_{43}	119.07	38.61	-10.29	-13.66	1.18	3.26	—	—	—	—	-129.96	-172.43	14.95	41.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{43}-L_{44}	7.63	313.89	0.07	-0.01	0.13	0.00	—	—	—	—	-72.38	-108.51	19.82	65.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{44}-L_{45}	65.51	172.40	-5.73	-8.60	1.56	3.60	—	—	—	—	-72.38	-108.51	19.82	65.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{45}-L_{46}	-30.91	151.01	-8.33	-5.14	-0.81	3.51	—	—	—	—	-105.19	-64.89	-10.16	44.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{46}-L_{47}	27.03	313.89	0.07	-0.01	0.13	0.00	—	—	—	—	-72.38	-108.51	19.82	65.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{47}-L_{48}	-19.86	-197.53	-0.71	-0.63	0.19	2.00	—	—	—	—	-8.91	-7.99	3.29	25.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{48}-L_{49}	277.47	-128.66	-0.15	-0.01	-1.25	0.38	—	—	—	—	-5.70	-3.77	51.81	17.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{49}-L_{50}	747.52	-264.15	-9.89	0.07	7.42	-0.36	—	—	—	—	-11.40	0.95	94.80	-4.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{50}-L_{51}	-140.80	-80.21	0.18	-0.72	2.38	0.12	—	—	—	—	2.24	-9.19	30.45	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{51}-L_{52}	39.87	1.85	1.85	1.85	0.06	0.06	—	—	—	—	2.24	-9.19	30.45	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{52}-L_{53}	-182.72	415.40	-7.60	-26.05	2.00	1.90	—	—	—	—	-97.13	-332.88	49.28	24.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{53}-L_{54}	-370.16	-165.14	-17.70	-20.35	1.91	0.42	—	—	—	—	-226.17	-259.96	24.44	5.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{54}-L_{55}	-204.39	-217.17	-11.71	-3.81	0.93	-0.21	—	—	—	—	-542.65	-622.14	-176.72	-164.71	38.0	38.00	38.00	55.21	1230	1026.3	1.21	3332	0.99500394	2755.4	0.055	0.82	0.62	1.00
	L_{55}-L_{56}	-304.14	-22.17	-17.71	-3.81	0.93	-0.21	—	—	—	—	-219.63	-66.68	-11.55	1.86	-2.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{56}-L_{57}	-222.88	99.03	-11.52	2.48	-0.76	0.74	—	—	—	—	-147.17	31.74	-9.71	9.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{57}-L_{58}	-11.76	53.85	1.24	0.61	-0.27	0.27	—	—	—	—	-15.03	27.84	-20.31	21.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{58}-L_{59}	42.77	-120.03	0.22	0.93	2.67	-3.72	—	—	—	—	2.79	-12.06	34.98	-48.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{59}-L_{60}	192.98	-177.52	0.34	-1.64	1.17	1.37	—	—	—	—	4.40	-21.27	15.15	-17.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{60}-L_{61}	51.91	-53.23	1.16	-0.76	0.45	0.16	—	—	—	—	-15.03	27.84	-20.31	21.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{61}-L_{62}	55.38	-320.81	-4.02	-10.82	-0.11	0.53	—	—	—	—	-52.04	-139.53	-1.36	6.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{62}-L_{63}	-64.00	-370.85	-19.59	-18.18	0.00	1.64	—	—	—	—	-111.13	-235.16	-0.03	-21.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{63}-L_{64}	-370.60	82.40	-11.65	-9.97	1.91	1.91	—	—	—	—	-192.76	-128.58	14.21	23.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{64}-L_{65}	-204.39	-217.17	-11.71	-3.81	0.93	-0.21	—	—	—	—	-219.63	-66.68	-11.55	1.86	-2.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{65}-L_{66}	-200.72	149.84	-4.81	-5.12	1.36	2.19	—	—	—	—	-62.18	-66.23	17.54	28.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{66}-L_{67}	112.46	181.74	-3.50	-4.64	1.60	3.35	—	—	—	—	-49.23	-60.02	-20.65	43.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{67}-L_{68}	-37.28	0.00	0.00	0.00	0.00	0.00	—	—	—	—	-49.23	-60.02	-20.65	43.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{68}-L_{69}	361.79	-17.90	-0.19	0.09	6.57	0.06	—	—	—	—	-2.58	-1.20	87.83	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{69}-L_{70}	61.95	21.70	3.60	-4.25	1.20	2.50	—	—	—	—	-48.04	-83.54	-17.74	33.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{70}-L_{71}	189.89	5.64	-3.36	-10.13	2.68	2.86	—	—	—	—	-44.85	-135.35	35.82	38.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{71}-L_{72}	28.87	-113.99	-3.86	-6.04	1.36	2.68	—	—	—	—	-105.78	-132.97	-3.24	4.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{72}-L_{73}	-38.98	-56.51	-11.49	-8.85	2.04	0.96	—	—	—	—	-153.49	-118.29	-27.29	12.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{73}-L_{74}	-66.65	-259.78	-0.76	0.73	3.09	2.69	—	—	—	—	-10.14	9.73	-41.27	35.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—

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 (Max) End-In	Lane Reduction & Impact Live Load Start-In	Lane Reduction & Impact Live Load End-In	Impact Pedestrian Load Max Start-In	Impact Pedestrian Load Max End-In	Max. Pos. Mom. Start	Max. Pos. Mom. End	Max. Neg. Mom.	S_{top} (in^3)	S_b (in^3)	Z_y (in^3)	I_{yy} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term * F_y/S_{bc}	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{my}	Pass
Structure 1	L_0-L_1	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	0.00	0.00	0.00	—
	L_1-L_2	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	0.00	0.00	0.00	—
	L_2-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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_3-L_4	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	0.00	0.00	0.00	—
	L_4-L_5	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	0.00	0.00	0.00	—
	L_5-L_6	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	0.00	0.00	0.00	—
	L_6-L_7	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	0.00	0.00	0.00	—
	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_8-L_9	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	0.00	0.00	0.00	—
	L_9-L_{10}	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	0.00	0.00	0.00	—
	L_{10}-L_{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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{11}-L_{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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{12}-L_{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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{13}-L_{14}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{14}-L_{15}	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	0.00	0.00	0.00	—
	L_{15}-L_{16}	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	0.00	0.00	0.00	—
	L_{16}-L_{17}	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	0.00	0.00	0.00	—
	L_{17}-L_{18}	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	0.00	0.00	0.00	—
	L_{18}-L_{19}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss System
Loading: 3F1
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
(Does Lumpsteel vs 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-I (k-ft)	Dead Load End-I (k-ft)	Live Load (Max) Start-I (k-ft)	Live Load (Max) End-I (k-ft)	Pedestrian Load (Max) Start-I (k-ft)	Pedestrian Load (Min) End-I (k-ft)	Lane Reduction & Impact Live Load Start-I (k-ft)	Lane Reduction & Impact Live Load End-I (k-ft)	Impact Pedestrian Load Max Start-I (k-ft)	Impact Pedestrian Load Max End-I (k-ft)
Structure 1	U_0–L_1	-55.75	82.39	0.44	-0.58	-3.17	3.39	5.89	-7.80	-42.34	40.34
	U_1–L_1	-14.37	23.26	0.60	-0.60	-2.67	2.83	8.04	-8.04	-35.72	37.81
	U_1–L_2	41.53	-5.37	0.72	-0.91	-1.10	1.72	20.62	-21.39	-10.82	22.65
	U_1–L_3	36.81	-39.20	1.37	-1.37	-1.28	1.66	18.32	-18.25	-17.11	22.16
	U_2–L_3	49.94	-49.31	1.71	-1.71	-1.23	2.01	15.64	-15.50	-3.07	4.09
	U_3–L_3	57.83	-70.07	-0.24	0.08	2.70	-3.03	3.21	1.07	-35.04	40.48
	U_3–L_4	67.02	-68.38	0.03	0.03	2.31	-2.62	-8.90	7.81	-42.94	48.44
	U_4–L_4	102.14	-112.44	-0.10	0.08	4.00	-4.10	-1.31	1.10	53.38	54.73
	U_4–L_5	-10.55	7.04	0.10	-0.12	-0.31	0.43	1.27	-1.55	-4.09	5.76
	U_5–L_5	-144.53	166.25	0.27	-0.26	-3.09	3.56	1.30	-1.30	-60.22	60.01
	U_5–L_6	-101.27	95.46	0.13	-0.25	-1.75	2.55	1.72	-3.25	-22.67	32.99
	U_6–L_6	-111.05	108.51	0.32	-0.22	-2.75	3.67	1.14	-2.96	-35.37	47.42
	U_6–L_7	-96.41	93.86	0.45	-0.40	-2.21	2.53	5.77	-5.20	-28.61	32.70
	U_7–L_7	-90.90	75.93	0.77	-0.76	-1.75	2.04	10.00	-9.77	-22.67	26.39
	U_7–L_8	-33.93	29.96	0.60	-0.60	-0.76	0.91	10.00	-10.00	-9.46	11.50
	U_8–L_8	8.32	-15.89	1.50	-1.61	2.79	-2.90	-19.36	18.23	36.07	-37.46
	U_8–L_9	47.73	-50.39	-0.31	0.31	2.50	-2.98	-8.90	7.81	-37.56	38.53
	U_9–L_9	61.54	-72.81	-0.40	0.40	2.74	-2.91	-5.16	5.21	35.44	-37.69
	U_9–L_{10}	133.07	-138.05	-0.55	0.56	4.89	-5.04	-7.17	7.13	63.29	65.21
	U_{10}–L_{10}	158.01	-154.56	-0.57	0.51	5.53	-5.41	-7.34	6.60	71.51	69.94
	U_{10}–L_{11}	-131.43	-213.61	-0.25	0.41	3.89	-4.91	-3.18	5.36	50.36	-63.50
	U_{11}–L_{11}	-144.68	167.26	0.42	-0.54	-4.24	4.95	6.00	-7.51	-185.10	234.42
	U_{11}–L_{12}	-122.98	131.23	0.52	-0.53	-4.09	4.27	6.59	-6.78	-52.26	54.53
	U_{12}–L_{12}	117.72	125.54	0.64	-0.64	-4.07	4.24	6.00	-6.00	-53.76	53.24
	U_{12}–L_{13}	-62.37	-68.86	0.41	-0.42	-2.25	2.41	5.23	-5.33	-28.72	30.82
	U_{13}–L_{13}	-37.80	-43.18	0.67	-0.67	-1.52	1.62	10.00	-10.00	-19.07	20.60
	U_{13}–L_{14}	-9.72	-15.71	1.26	-1.21	-1.39	1.73	16.00	-15.43	-7.75	-2.66
	U_{14}–L_{14}	14.83	-14.93	1.47	-1.36	-1.84	1.92	18.82	-19.94	-23.56	24.56
	U_{14}–L_{15}	39.68	-43.44	1.50	-1.50	-2.29	2.29	14.96	-17.77	8.70	-8.24
	U_{15}–L_{15}	88.70	-97.90	-0.78	0.69	3.56	-3.61	-9.97	8.84	-56.43	56.51
	U_{15}–L_{16}	133.02	-133.05	-0.58	0.39	3.21	-3.62	-7.40	5.61	-58.56	58.22
	U_{16}–L_{16}	140.07	-146.97	-0.12	0.05	4.23	-4.47	-1.53	0.61	64.06	-67.06
	U_{16}–L_{17}	148.94	-153.41	-0.10	0.17	4.20	-4.34	-1.21	2.18	53.61	-55.40
	U_{17}–L_{17}	189.33	-194.91	-0.27	0.30	5.37	-5.53	-2.14	3.84	68.14	-70.36
	U_{17}–L_{18}	185.37	-182.48	-0.44	0.42	5.05	-4.83	-5.66	5.37	64.53	-61.72
	U_{18}–L_{18}	72.78	-71.71	-0.29	0.29	2.03	-1.99	-3.63	3.63	25.82	-24.80
	U_{18}–L_{19}	-128.23	129.55	0.46	-0.41	-4.28	4.11	5.89	-5.19	-54.04	51.88
	U_{19}–L_{19}	-125.93	122.62	0.46	-0.45	-3.61	4.06	6.00	-5.64	-45.53	51.26
	U_{19}–L_{20}	-109.68	106.90	0.63	-0.62	-4.26	4.69	7.90	-7.76	-53.80	59.22
	U_{20}–L_{20}	-88.03	84.63	0.79	-0.79	-3.56	3.61	10.00	-9.84	-44.68	50.00
	U_{20}–L_{21}	-43.26	43.75	0.72	-0.63	-1.53	1.85	9.08	-7.97	-19.37	23.39
	U_{21}–L_{21}	-29.76	-30.24	0.77	-0.77	-0.98	1.19	11.82	-11.82	-14.97	16.09
	U_{21}–L_{22}	-1.29	1.62	-1.20	1.40	0.27	-0.23	-15.15	17.62	33.39	-2.94
	U_{22}–L_{22}	28.80	-31.19	-1.19	1.19	0.92	-0.92	-23.57	23.57	35.00	36.42
	U_{22}–L_{23}	46.56	-51.19	-0.88	0.73	2.44	-2.59	-11.08	9.18	30.78	-34.09
	U_{23}–L_{23}	62.64	-61.32	-0.63	0.61	3.63	-3.59	-7.95	7.68	45.80	-45.29
	U_{23}–L_{24}	108.55	-109.76	-0.67	0.65	5.29	-5.49	-8.45	8.22	66.79	-69.30
	U_{24}–L_{24}	108.55	-105.78	-0.67	0.65	5.29	-5.49	-8.45	8.22	66.79	-69.30
	U_{24}–L_{25}	114.59	-114.85	-0.33	0.37	5.60	-5.64	-4.12	3.43	69.84	-66.19
	U_{25}–L_{25}	112.83	-111.89	-0.36	0.36	5.51	-5.55	-3.96	3.96	71.88	-68.11
	U_{25}–L_{26}	-122.25	119.98	0.51	-0.48	-3.64	3.60	6.53	-6.15	-46.44	46.93
	U_{26}–L_{26}	-93.65	87.71	0.41	-0.36	-2.67	3.13	5.24	-7.15	-34.09	39.95
	U_{26}–L_{27}	-66.03	60.03	0.77	-0.77	-1.78	2.04	10.00	-9.77	-22.67	26.39
	U_{27}–L_{27}	-96.77	103.24	0.22	-0.13	-3.01	3.48	2.75	-1.71	-38.44	44.40
	U_{27}–L_{28}	-51.52	47.02	0.22	-0.22	-1.52	1.72	10.00	-10.00	-19.07	20.60
	U_{28}–L_{28}	-83.45	70.58	0.54	-0.47	-3.26	3.33	6.89	-5.96	-41.69	43.02
	U_{28}–L_{29}	-32.67	38.68	0.46	-0.55	-0.30	0.37	5.90	-6.96	-3.79	4.74
	U_{29}–L_{29}	-4.43	8.37	1.62	-1.48	1.97	-2.19	-20.63	18.86	25.12	-27.98
	U_{29}–L_{30}	4.43	-8.37	1.62	-1.48	1.97	-2.19	-20.63	18.86	25.12	-27.98
	U_{30}–L_{30}	47.21	-50.58	-0.50	0.50	2.81	-2.91	-6.34	6.40	35.89	-37.22
	U_{30}–L_{31}	97.75	-97.49	-0.75	0.75	5.13	-5.13	-9.08	8.52	70.64	-70.64
	U_{31}–L_{31}	104.42	-111.67	-0.71	0.67	5.56	-5.50	-9.08	8.52	70.64	-70.23
	U_{31}–L_{32}	108.14	-102.78	-0.36	0.59	3.76	-5.42	-4.57	7.49	-48.00	-69.01
	U_{32}–L_{32}	-123.31	120.61	0.51	-0.48	-3.64	3.60	-1.99	1.99	155.16	205.62
	U_{33}–L_{33}	-109.30	107.29	0.38	-0.36	-4.16	4.22	4.66	-4.61	-53.64	54.57
	U_{34}–L_{34}	-101.39	98.63	0.45	-0.45	-3.61	4.06	6.00	-5.64	-45.53	51.26
	U_{35}–L_{35}	-48.62	58.77	0.31	-0.32	-1.65	2.03	4.02	-4.08	-21.34	26.30
	U_{36}–L_{36}	13.03	-42.86	-0.68	0.68	-2.21	2.21	13.74	-13.77	-27.98	30.63
	U_{37}–L_{37}	-5.41	11.54	1.06	-1.06	2.13	-2.37	13.74	-13.77	-27.98	30.63
	U_{38}–L_{38}	27.84	-30.65	1.29	-1.45	-0.31	0.34	16.73	-18.71	-4.05	0.46
	U_{39}–L_{39}	94.97	-87.87	-0.05	0.14	3.06	-3.62	-0.70	1.77	39.53	-46.88
	U_{40}–L_{40}	75.72	-83.00	-0.47	0.43	3.18	-3.29	-6.13	5.56	-51.12	47.49
	U_{41}–L_{41}	76.76	-77.43	-0.28	0.28	3.06	-3.62	-0.70	1.77	39.53	-46.88
	U_{42}–L_{42}	139.42	-154.57	-0.15	0.14	4.47	-4.86	-1.95	1.76	57.78	-62.91
	U_{43}–L_{43}	52.76	-74.30	0.05	-0.06	2.27	-2.50	0.68	-0.75	30.37	-28.13
	U_{44}–L_{44}	-62.86	69.82	0.23	-0.23	-3.15	3.29	3.13	-3.05	-42.02	43.91
	U_{45}–L_{45}	-41.64	35.38	0.11	-0.19	-2.15	2.69	1.48	-2.55	-28.71	35.94
	U_{46}–L_{46}	-36.85	40.05	0.22	-0.16	-1.69	2.25	2.87	-2.14	-22.58	30.10
	U_{47}–L_{47}	-39.84	39.91	0.54	-0.49	-0.52	0.99	7.17	-6.57	-12.33	13.24
	U_{48}–L_{48}	-38.88	40.30	-2.20	2.23	1.97	-2.14	-29.40	29.78	25.25	-28.55
	U_{49}–L_{49}	-13.42	14.14	-0.86	0.98	2.08	-2.62	-11.53	13.04	27.79	34.98
	U_{50}–L_{50}	5.87	-8.62	-0.91	0.80	3.82	-3.67	-12.09	10.74	51.07	-48.28
	U_{51}–L_{51}	20.18	-40.81	-0.19	0.42	0.23	-1.23	-2.30	8.22	3.07	-16.42
Structure 2	L_0–L_1	99.06	-131.45	-0.28	0.06	3.50	-4.36	-3.67	0.75	45.31	-56.41
	L_1–L_2	94.97	-87.87	-0.05	0.14	3.06	-3.62	-6.70	1.77	39.53	-46.88
	L_2–L_3	139.42	-154.57	-0.15	0.14	4.47	-4.86	-1.95	1.76	57.78	-62.91
	L_3–L_4	52.76	-74.30	0.05	-0.06	2.27	-2.50	0.68	-0.75	30.37	-28.13
	L_4–L_5	-62.86	69.82	0.23	-0.23	-3.15	3.29	3.13	-3.05	-42.02	43.91
	L_5–L_6	-41.64	35.38	0.11	-0.19	-2.15	2.69	1.48	-2.55	-28.71	35.94
	L_6–L_7	-36.85	40.05	0.22	-0.16	-1.69	2.25	2.87	-2.14	-22.58	30.10
	L_7–L_8	-39.84	39.91	0.54	-0.49	-0.52	0.99	7.17	-6.57	-12.33	13.24
	L_8–L_9	-38.88	40.30	-2.20	2.23	1.97	-2.14	-29.40	29.78	25.25	-28.55
	L_9–L_{10}	-13.42	14.14	-0.86	0.98	2.08	-2.62	-11.53	13.04	27.79	34.98
	L_{10}–L_{11}	5.87	-8.62	-0.91	0.80	3.82	-3.67	-12.09	10.74	51.07	-48.28
	L_{11}–L_{12}	20.18	-40.81	-0.19	0.42	0.23	-1.23	-2.30	8.22	3.07	-16.42
Structure 3											

ZZ Axis Moments from STAAD

Location	Member	Max. Neg. Mom. Start-I (k-ft)	Max. Neg. Mom. End-I (k-ft)	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 1 F_y*S_bot	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(x)}$
Structure 1	U_0–L_1	-64.81	86.97	127.51	166.06	13.2	13.18	15.42	20.35	2	615.4	1.54	672
	U_1–L_1	-8.23	19.78	-55.72	79.38	15.4	15.42	15.42	23.71	2	751.9	1.54	782
	U_1–L_2	20.62	-21.39	-10.82	22.65	15.4	15.42	15.42	23.71	2	751.9	1.54	782
	U_1–L_3	71.67	-69.49	25.61	-16.95	15.4	15.42	15.42	23.71	2	751.9	1.54	782
	U_2–L_3	85.26	-84.79	64.31	53.83	15.4	15.42	15.42	23.71	2	751.9	1.54	782
	U_3–L_3	71.01	-89.70	122.04	-143.71	19.4	19.37	19.31	29.87	3	907.0	1.54	986
	U_3–L_4	83.81	-85.12	140.52	-149.27	19.4	19.37	15.53	29.87	3	907.0	1.54	986
	U_4–L_4	131.08	-144.75	252.18	-217.33	19.2	18.16	18.36	27.38	3	928.7	1.69	934
	U_4–L_5	-12.07	7.14	-19.03	16.64	107.1	107.13	107.11	162.71	26	5302.9	1.52	5369
	U_5–L_5	-183.61	211.83	-240.04	275.94	31.4	32.07	34	1356.6	1.65	1718
	U_5–L_6	-129.42	119.88	-161.12	166.99	32.8	32.76	33.44	54.32	14	1238.0	1.66	1793
	U_6–L_6	-138.96	200.23	-146.60	356.42	42.74	42.74	42.74	65.36	8	1389.6	1.53	2155
	U_6–L_7	-117.83	115.26	-162.52	164.52	21.1	21.09	21.09	36.48	10	1137.6	1.68	1170
	U_7–L_7	-66.17	86.01	-158.64	133.02	17.2	17.24	17.24	26.54	2	824.7	1.54	876
	U_7–L_8	-65.89	78.70	-64.31	53.83	15.4	15.42	15.42	23.71	2	751.9	1.54	782
	U_8–L_8	-14.35	3.06	57.71	-69.34	15.4	15.42	15.42	23.71	2	751.9	1.54	782
	U_8–L_9	-82.12	101.82	-112.97	115.08	15.4	15.42	15.42	23.71	2	751.9	1.54	782
	U_9–L_9	-73.29	-87.88	126.07	-143.65	19.4	19.37	19.37	29.87	3	907.0	1.54	986
	U_9–L_{10}	-153.68	170.11	255.28	-264.24	19.3	19.09	19.09	32.51	4	1157.0	1.66	1166
	U_{10}–L_{10}	-195.67	-192.35	298.37	-291.88	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155
	U_{10}–L_{11}	-166.75	-270.98	236.35	-360.57	42.0	41.97	42.74	63.05	8	1376.0	1.50	2080
	U_{11}–L_{11}	-183.10	234.42	-238.63	327.72	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155
	U_{11}–L_{12}	-151.27	161.78	-227.07	241.49	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357
	U_{12}–L_{12}	-142.42	142.42	-214.63	214.63	46.7	46.71	38.83	71.43	10	1711.0	1.53	2357
	U_{12}–L_{13}	-74.28	82.72	-118.41	129.71	21.5	21.54	21.54	33.27	5	987.9	1.54	1098
	U_{13}–L_{13}	-37.98	47.77	-85.43	99.79	14.9	14.91	15.42	15.42	2	751.9	1.54	782
	U_{14}–L_{14}	0.04	0.35	-34.92	49.20	15.4	15.42	15.42	23.71	2	751.9	1.54	782
	U_{14}–L_{15}	43.75	-45.33	-11.35	12.52	15.4	15.42	15.42	23.71	2	751.9	1.54	782
	U_{15}–L_{15}	-71.03	-82.17	62.11	-69.78	15.4	15.42	15.42	23.71	2	751.9	1.54	782
	U_{15}–L_{16}	-102.48	-115.78	174.59	-187.30	20.6	20.80	20.67	34.64	5	1037.5	1.67	1143
	U_{16}–L_{16}	-173.02	-153.00	221.10	-214.58	19.3	19.09	19.09	32.51	4	1157.0	1.66	1166
	U_{16}–L_{17}	-180.09	-190.27	252.36	-265.24	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266
	U_{17}–L_{17}	-192.04	-196.59	263.31	-271.45	43.0	43.01	43.24	68.76	16	1479.6	1.60	2266
	U_{17}–L_{18}	-179.84	-175.34	251.79	-245.54	43.0	43.01	43.24	68.76	16	1479.6	1.60	2266
	U_{18}–L_{18}	-233.62	-230.25	324.87	-317.46	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090
	U_{18}–L_{19}	-172.72	-172.72	-172.72	-172.72	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090
	U_{19}–L_{19}	-159.09	162.13	-236.95	236.37	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090
	U_{19}–L_{20}	-155.91	152.07	-222.89	226.04	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155
	U_{20}–L_{20}	-132.31	131.48	-212.52	218.56	39.8	38.83	38.83	59.23	6	1264.6	1.53	1953
	U_{20}–L_{21}	-173.22	-153.00	221.10	-214.58	19.3	19.09	19.09	32.51	4	1157.0	1.66	1166
	U_{21}–L_{21}	-44.44	46.52	-61.42	87.29	17.2	17.24	17.24	26.54	2	824.7	1.54	876
	U_{21}–L_{22}	-23.57	23.57	-23.57	23.57	15.4	15.42	15.42	23.71	2	751.9	1.54	782
	U_{22}–L_{22}	-21.37	25.02	2.67	-1.72	15.4	15.42	15.42	23.71	2	751.9	1.54	782
	U_{22}–L_{23}	-23.57	23.57	23.57	-23.57	15.4	15.42	15.42	23.71	2	751.9	1.54	782
	U_{23}–L_{23}	-46.11	54.42	100.54	-109.11	17.2	17.24	17.24	26.54	2	824.7	1.54	876
	U_{23}–L_{24}	-71.09	-69.73	140.98	-138.59	18.7	18.71	18.61	31.48	8	970.0	1.68	1039
	U_{24}–L_{24}	-71.09	-69.73	140.98	-138.59	18.7	18.71	18.61	31.48	8	970.0	1.68	1039
	U_{24}–L_{25}	-114.59	114.85	-233.92	233.70	15.4	15.42	15.42	23.71	2	751.9	1.54	782
	U_{25}–L_{25}	-112.83	111.89	-230.34	227.39	15.4	15.42	15.42	23.71	2	751.9	1.54	782
	U_{25}–L_{26}	-143.62	-144.83	239.76	-235.35	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090
	U_{26}–L_{26}	-120.69	-117.58	197.32	-192.71	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090
	U_{27}–L_{27}	-150.43	-148.03	-219.29	215.68	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090
	U_{27}–L_{28}	-105.06	-104.73	-168.06	166.95	43.2	43.24	43.16	70.66	19	1515.6	1.63	2332
	U_{28}–L_{28}	-130.69	-128.58	-209.20	204.24	43.2	43.24	42.96	70.66	19	1515.6	1.63	2332
	U_{29}–L_{29}	-122.21	131.98	-175.78	191.93	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266
	U_{29}–L_{30}	-122.21	131.98	-175.78	191.93	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266
	U_{30}–L_{30}	-53.54	57.36	103.12	-110.43	18.7	18.71	18.61	31.48	8	970.0	1.68	1039
	U_{31}–L_{31}	-63.64	68.26	113.63	-122.17	18.7	18.71	18.61	31.48	8	970.0	1.68	1039
	U_{31}–L_{32}	-114.77	-114.77	-114.77	-114.77	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357
	U_{32}–L_{32}	-114.77	-114.77	-114.77	-114.77	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357
	U_{33}–L_{33}	-114.77	-114.77	-114.77	-114.77	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357
	U_{34}–L_{34}	-114.77	-114.77	-114.77	-114.77	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357
	U_{35}–L_{35}	-114.77	-114.77	-114.77	-114.77	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357
	U_{36}–L_{36}	-114.77	-114.77	-114.77	-114.77	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357
	U_{37}–L_{37}	-114.77	-114.77	-114.77	-114.77	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357
	U_{38}–L_{38}	-114.77	-114.77	-114.77	-114.77	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357
	U_{39}–L_{39}	-114.77	-114.77	-114.77	-114.77	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357
	U_{40}–L_{40}	-114.77	-114.77	-114.77	-114.77	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357
	U_{41}–L_{41}	-114.77	-114.77	-114.77	-114.77	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357
	U_{42}–L_{42}	-114.77	-114.77	-114.77	-114.77	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357
	U_{43}–L_{43}	-114.77	-114.77	-114.77	-114.77	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357
	U_{44}–L_{44}	-114.77	-114.77	-114.77	-114.77	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357
	U_{45}–L_{45}	-114.77	-114.77	-114.77	-114.77	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357
	U_{46}–L_{46}	-114.77	-114.77	-114.77	-114.77	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357
	U_{47}–L_{47}	-114.77	-114.77	-114.77	-114.77	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357
	U_{48}–L_{48}	-114.77	-114.77	-114.77	-114.77	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357
	U_{49}–L_{49}	-114.77	-114.77	-114.77	-114.77	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357
	U_{50}–L_{50}	-114.77	-114.77	-114.77	-114.77	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357
	U_{51}–L_{51}	-114.77	-114.77	-114.77	-114.77	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357
Structure 2	L_0–L_1	-124.01	-169.91	187.69	-244.22	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155
	L_1–L_2	-122.56	-124.93	174.84	-168.17	36.5	35.92	35.44	58.46	14	1309.7	1.65	1929
	L_2–L_3	-122.21	131.98	-175.78	191.93	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266
	L_3–L_4	-53.54	57.36	103.12	-110.43	18.7	18.71	18.61	31.48	8	970.0	1.68	1039
	L_4–L_5	-63.64	68.26	113.63	-122.17	18.7	18.71	18.61	31.48	8	970.0	1.68	1039
	L_5–L_6	-114.77	-114.77	-114.77	-114.77	46.7	46.71	46.71	71.43

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
Condition: As-inspected

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

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

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

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

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_1-L_1	-23.63	-7.60	-8.69	0.49	0.17	-0.14	-9.28	-6.56	-2.26	-1.91
	U_1-L_2	-3.36	-8.44	-1.00	0.28	0.24	-0.10	-13.31	-3.77	-3.22	-1.00
	U_1-L_3	-7.94	-13.41	-0.75	-0.67	0.09	-0.80	-12.56	-0.20	-1.99	-7.31
	U_1-L_4	-14.57	-18.47	-2.94	-3.32	-0.62	-1.26	-10.01	-8.99	-1.24	-10.63
	U_2-L_2	-37.80	-17.38	-2.35	1.83	-0.74	-0.22	-31.45	-24.47	-9.90	-2.89
	U_2-L_3	-73.38	-37.48	-2.53	1.66	-0.74	-0.22	-47.07	-36.04	-2.27	-2.44
	U_2-L_4	-9.33	-102.64	-1.56	3.00	0.22	0.04	-20.83	-40.08	-2.98	0.57
	U_3-L_3	-5.01	-118.90	-1.03	2.04	0.28	-0.17	-13.33	-26.33	-1.60	-2.80
	U_3-L_4	-78.62	-114.40	-1.23	1.79	0.25	-0.10	-30.97	-16.73	-3.27	-2.29
	U_4-L_4	-64.28	-73.58	-1.78	1.03	-0.07	-0.31	-22.97	-13.38	-0.91	-4.06
	U_4-L_5	-39.06	-73.58	-2.60	1.22	0.09	-0.31	-28.83	-9.35	-2.57	-6.79
	L_1-L_2	-65.20	-48.77	-1.85	1.01	-0.01	-0.58	-23.88	-13.12	-0.14	-7.56
	L_2-L_3	-24.89	-8.62	-0.96	0.39	0.20	-0.63	-12.45	-5.08	-2.81	-6.16
	L_3-L_4	-0.81	-24.89	-0.23	0.01	0.20	-0.63	-16.44	-7.29	-5.53	-0.64
	L_4-L_5	-25.30	-9.99	-1.35	1.08	-0.24	-0.39	-13.72	-14.03	-3.09	-5.06
	L_5-L_6	-37.00	-20.00	-1.72	1.40	-0.24	-0.39	-22.19	-18.56	-3.39	-3.07
	L_6-L_7	-101.98	-74.35	-3.25	2.74	0.26	-0.36	-42.05	-35.50	-4.79	-4.66
	L_7-L_8	-115.65	-79.79	-3.63	2.80	-0.30	-0.46	-46.00	-38.24	-5.31	-5.01
	L_8-L_9	-76.53	-79.74	-2.19	2.55	0.08	-0.18	-28.34	-32.93	-3.97	-2.35
	L_9-L_{10}	-109.78	-99.44	-2.53	2.70	0.33	-0.35	-32.36	-34.47	-4.20	-4.42
	L_{10}-L_{11}	-89.86	-84.41	-2.33	2.37	0.25	-0.35	-30.06	-34.47	-4.20	-4.74
	L_{11}-L_{12}	-90.94	-71.81	-3.07	2.50	0.48	-0.41	-39.21	-31.92	-5.15	-5.29
	L_{12}-L_{13}	-84.78	-74.38	-2.43	2.50	0.48	-0.41	-23.67	-19.62	-3.10	-3.85
	L_{13}-L_{14}	-20.34	-9.87	-1.39	1.19	0.32	-0.61	-17.75	-15.14	-4.10	-7.82
	L_{14}-L_{15}	-1.38	-11.20	-1.21	0.11	0.32	-0.61	-15.41	-7.82	-5.10	-11.69
	L_{15}-L_{16}	-8.85	-23.86	-0.86	0.29	0.50	-1.05	-5.30	-26.17	-17.12	-48.39
	L_{16}-L_{17}	-44.40	-35.30	-1.63	0.57	0.28	-0.87	-20.79	-12.38	-3.53	-11.15
	L_{17}-L_{18}	-66.54	-59.68	-2.22	0.84	0.28	-0.87	-36.28	-29.08	-4.29	-9.56
	L_{18}-L_{19}	-85.37	-67.30	-2.62	1.83	-0.45	-0.39	-35.99	-23.38	-5.53	-4.80
	L_{19}-L_{20}	-80.17	-59.97	-2.08	2.21	0.00	-0.45	-39.40	-23.38	-5.53	-2.18
	L_{20}-L_{21}	-109.81	-116.32	-3.23	2.86	0.28	0.03	-41.27	-36.58	-5.04	0.42
	L_{21}-L_{22}	-141.94	-130.59	-4.22	3.50	0.54	-0.26	-53.85	-44.74	-6.81	-3.66
	L_{22}-L_{23}	-80.17	-133.36	-2.23	3.50	0.54	-0.26	-27.11	-33.79	-5.26	-4.17
	L_{23}-L_{24}	-11.95	-79.18	-2.15	2.68	0.42	-0.33	-27.11	-33.79	-5.26	-4.17
	L_{24}-L_{25}	-77.25	-11.95	-2.15	2.68	0.42	-0.33	-43.62	-27.11	-5.66	-3.87
	L_{25}-L_{26}	-66.17	-89.96	-3.28	2.75	0.22	-0.27	-41.29	-34.66	-7.24	-3.42
	L_{26}-L_{27}	-66.17	-89.96	-3.28	2.75	0.22	-0.27	-38.02	-34.66	-7.24	-3.86
	L_{27}-L_{28}	-56.05	-72.68	-2.96	2.15	0.31	-0.34	-37.32	-27.16	-3.86	-4.03
	L_{28}-L_{29}	-37.83	-37.59	-2.16	1.29	0.03	-0.57	-27.32	-16.34	-3.04	-7.25
	L_{29}-L_{30}	-10.04	-37.83	-0.78	-0.20	0.03	-0.57	-15.09	-4.14	-2.35	-10.31
	L_{30}-L_{31}	-19.42	-10.04	-1.26	1.19	0.21	-0.61	-17.11	-14.66	-2.60	-7.73
	L_{31}-L_{32}	-46.48	-19.42	-1.26	1.19	0.21	-0.61	-38.49	-17.11	-2.60	-7.73
	L_{32}-L_{33}	-46.48	-58.24	-3.00	2.51	0.41	-0.46	-37.86	-31.69	-5.20	-4.79
	L_{33}-L_{34}	-54.27	-68.32	-2.99	2.68	0.34	-0.42	-39.13	-32.86	-5.28	-5.28
	L_{34}-L_{35}	-69.31	-54.27	-2.99	2.68	0.34	-0.42	-44.72	-32.86	-5.28	-6.00
	L_{35}-L_{36}	-69.31	-71.94	-3.96	3.56	0.23	-0.28	-49.55	-44.95	-7.84	-3.54
	L_{36}-L_{37}	-38.18	-69.31	-2.39	2.91	0.55	-0.45	-30.47	-39.55	-7.07	-2.22
	L_{37}-L_{38}	-38.18	-54.54	-2.39	2.91	0.55	-0.45	-30.47	-39.55	-7.07	-1.88
	L_{38}-L_{39}	-76.62	-38.18	-2.83	2.84	0.43	-0.17	-36.09	-31.63	-5.53	-2.22
	L_{39}-L_{40}	-76.62	-76.62	-2.84	2.84	0.43	-0.17	-36.28	-27.70	-8.44	-7.93
	L_{40}-L_{41}	-78.35	-71.28	-2.87	1.94	0.39	-0.03	-36.64	-24.79	-4.96	-6.32
	L_{41}-L_{42}	-78.35	-78.35	-2.87	1.94	0.39	-0.03	-36.28	-24.79	-4.96	-7.93
	L_{42}-L_{43}	-76.62	-55.14	-2.84	2.17	-0.07	-0.62	-36.28	-27.70	-8.44	-7.93
	L_{43}-L_{44}	-8.79	-76.62	-2.23	2.17	-0.07	-0.62	-40.86	-36.28	-5.46	-3.53
	L_{44}-L_{45}	-6.27	-17.63	-0.75	0.17	0.18	-0.91	-9.63	-2.21	-2.27	-11.60
	L_{45}-L_{46}	-1.05	-9.86	-1.05	0.76	0.62	-1.03	-13.47	-9.16	-1.92	-3.66
	L_{46}-L_{47}	-8.79	-2.24	-0.23	0.76	0.62	-1.03	-40.86	-25.46	-3.53	-3.66
	L_{47}-L_{48}	-33.68	-19.58	-1.91	1.50	0.36	-0.32	-24.45	-19.22	-4.59	-4.05
	L_{48}-L_{49}	-33.68	-33.68	-2.91	1.50	0.36	-0.32	-24.45	-19.22	-4.59	-5.01
	L_{49}-L_{50}	-78.90	-59.78	-3.85	2.98	0.48	-0.43	-49.16	-38.10	-6.15	-5.01
	L_{50}-L_{51}	-78.90	-78.90	-3.85	2.98	0.48	-0.43	-49.16	-38.10	-6.15	-6.01
	L_{51}-L_{52}	-58.22	-83.59	-2.67	2.46	0.20	-0.19	-34.52	-31.88	-6.60	-2.50
	L_{52}-L_{53}	-60.31	-64.36	-3.09	2.18	0.24	-0.22	-39.97	-28.14	-3.12	-2.86
	L_{53}-L_{54}	-58.86	-63.71	-2.96	2.28	0.24	-0.22	-41.46	-28.14	-3.12	-2.86
	L_{54}-L_{55}	-33.50	-58.26	-1.68	1.26	0.10	-0.35	-21.67	-16.32	-1.26	-4.52
	L_{55}-L_{56}	-33.50	-33.50	-1.68	1.26	0.10	-0.35	-21.67	-16.32	-1.26	-4.52
	L_{56}-L_{57}	-1.49	-18.98	-0.85	0.35	0.37	-0.91	-11.09	-4.48	-4.74	-11.72
	L_{57}-L_{58}	-33.83	-1.49	-0.85	0.35	0.37	-0.91	-11.09	-4.48	-4.74	-11.72
	L_{58}-L_{59}	-33.83	-37.97	-1.78	1.25	-0.39	-0.56	-23.07	-16.13	-7.06	-2.77
	L_{59}-L_{60}	-61.79	-22.37	-2.29	1.02	-0.44	-0.71	-29.63	-13.20	-5.63	-10.77
	L_{60}-L_{61}	-61.79	-61.79	-2.29	1.02	-0.44	-0.71	-29.63	-13.20	-5.63	-10.77
	L_{61}-L_{62}	-75.25	-65.79	-2.66	1.84	0.15	0.04	-34.44	-23.75	-1.89	0.48
	L_{62}-L_{63}	-75.25	-75.25	-2.66	1.84	0.15	0.04	-34.44	-23.75	-1.89	0.48
	L_{63}-L_{64}	-5.27	-64.89	-1.33	1.38	0.42	0.21	-18.38	-32.36	-2.85	-1.91
	L_{64}-L_{65}	-5.27	-5.27	-0.68	0.13	0.42	0.21	-18.38	-32.36	-2.85	-1.91
	L_{65}-L_{66}	-38.98	-50.40	-2.08	0.28	-0.05	-0.51	-41.20	-27.46	-3.73	-1.24
	L_{66}-L_{67}	-38.98	-38.98	-2.08	0.28	-0.05	-0.51	-41.20	-27.46	-3.73	-1.24
	L_{67}-L_{68}	-7.78	-19.68	-1.03	0.23	-0.17	-0.37	-13.76	-3.51	-2.20	-4.98
	L_{68}-L_{69}	-7.78	-7.78	-1.03	0.23	-0.17	-0.37	-13.76	-3.51	-2.20	-4.98
	L_{69}-L_{70}	-2.61	-8.77	-0.85	0.19	-0.49	-0.65	-11.33	-2.40	-6.53	-8.71
	L_{70}-L_{71}	-2.61	-2.61	-0.85	0.19	-0.49	-0.65	-11.33	-2.40	-6.53	-8.71
	L_{71}-L_{72}	-5.73	-5.73	-0.85	0.43	0.69	-0.90	-0.69	-5.80	-1.20	-1.18

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_{bot} (in^3)	Z_z (in^3)	I (in^4)	$I_{t/n}$ (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_x	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m/2EI}$	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	42.75	18.41	27.78	7.40	15.6	15.63	15.58	25.96	5	800.0	1.66	857	1.5	773.7	-0.431	0.43	0.43	-28.39	-30.83	1.24	-0.53	0.25	0.48		
	U_1-L_2	13.31	37.77	3.22	0.16	15.6	15.62	15.64	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.280	0.71	0.71	-44.17	-40.74	-1.98	-1.68	0.55	0.40		
	U_1-L_3	12.56	0.20	1.99	7.31	15.6	15.62	15.64	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.273	0.71	0.71	-62.20	-20.75	-3.53	-1.56	-0.60	-0.60		
	U_1-L_4	10.01	8.99	1.24	10.63	0.00	0.00	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5	763.3	-0.382	0.45	0.45	-33.43	-37.32	-2.72	-1.33	0.17	-2.70		
	U_2-L_2	35.30	23.89	9.90	2.89	15.6	15.64	15.64	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.358	0.46	0.46	-13.76	-22.32	-11.19	-26.10	0.00	0.00		
	U_2-L_3	47.07	36.04	2.27	2.44	0.00	0.00	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5	763.3	-0.680	0.33	0.33	-62.32	-66.50	-13.02	-24.33	0.00	0.00		
	U_2-L_4	20.83	40.08	2.98	0.57	0.00	0.00	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5	763.3	-0.362	0.45	0.45	-22.71	-56.59	-2.53	-4.24	2.41	-1.32		
	U_3-L_3	13.33	26.33	1.60	2.80	0.00	0.00	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5	763.3	-0.360	0.46	0.46	-60.13	-61.77	-11.77	-31.56	20.00	0.00		
	U_3-L_4	30.97	16.73	3.27	2.29	0.00	0.00	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5	763.3	-0.362	0.45	0.45	-33.43	-37.32	-2.72	-1.33	0.17	-2.70		
	U_4-L_4	22.97	13.38	-0.91	-4.06	0.00	0.00	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5	763.3	-0.382	0.45	0.45	-30.36	-17.78	2.30	-36.04	0.00	0.00		
	U_4-L_5	28.83	9.35	2.57	-6.79	0.00	0.00	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5	763.3	-0.358	0.46	0.46	-13.76	-22.32	-11.19	-26.10	0.00	0.00		
	L_1-L_2	23.88	13.12	-0.14	-7.56	0.00	0.00	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5	763.3	-0.361	0.46	0.46	-62.32	-66.50	-13.02	-24.33	0.00	0.00		
	L_2-L_3	12.45	5.08	2.81	-6.16	0.00	0.00	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5	763.3	-0.367	0.45	0.45	-60.11	-66.40	-0.13	-1.07	0.66	-1.00		
	L_3-L_4	16.44	7.29	5.53	0.64	0.00	0.00	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5	763.3	-0.362	0.45	0.45	-89.44	-103.50	-2.81	-1.03	-6.72	-2.04		
	L_4-L_5	13.72	14.03	-3.09	-5.06	0.00	0.00	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5	763.3	-0.361	0.46	0.46	-117.51	-96.41	-2.59	-2.73	-9.63	0.47		
	L_5-L_6	22.19	18.56	3.39	-3.07	0.00	0.00	0.00	0.00	0.00	23.71	2	907.0	1.54	986	1.5	958.8	-0.543	0.34	0.34	-130.05	-130.86	-4.62	-4.24	2.41	-1.32		
	L_6-L_7	42.05	35.50	4.79	-4.66	0.00	0.00	0.00	0.00	0.00	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.763	0.25	0.29	-138.18	-130.46	-5.94	-5.40	1.17	0.89		
	L_7-L_8	46.00	38.24	5.31	-5.01	0.00	0.00	0.00	0.00	0.00	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.763	0.25	0.29	-279.54	-260.49	-159.91	-154.69	148.0	147.96		
	L_8-L_9	28.34	32.93	3.97	-2.35	0.00	0.00	0.00	0.00	0.00	38.83	58.23	4	1284.6	1.53	1955	1.5	1922.1	-0.931	0.23	0.23	-138.93	-127.79	-9.29	-4.17	0.91	0.60		
	L_9-L_{10}	32.36	34.47	4.20	-4.42	0.00	0.00	0.00	0.00	0.00	38.83	58.23	4	1284.6	1.53	1955	1.5	1922.1	-0.931	0.23	0.23	-42.76	-43.55	0.82	-2.02	-0.06	0.08		
	L_{10}-L_{11}	30.06	34.47	4.20	-4.74	0.00	0.00	0.00	0.00	0.00	38.83	58.23	4	1284.6	1.53	1955	1.5	1922.1	-0.931	0.23	0.23	-42.76	-43.55	0.82	-2.02	-0.06	0.08		
	L_{11}-L_{12}	39.21	31.92	5.15	-5.29	0.00	0.00	0.00	0.00	0.00	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.797	0.26	0.28	-26.49	-4.05	3.12	4.09	0.00	0.00		
	L_{12}-L_{13}	23.67	19.62	3.10	-3.85	0.00	0.00	0.00	0.00	0.00	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.797	0.26	0.28	-26.49	-4.05	3.12	4.09	0.00	0.00		
	L_{13}-L_{14}	17.75	15.14	4.10	-7.82	0.00	0.00	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5	763.3	-0.657	0.34	0.34	-32.84	-13.19	-2.08	-14.09	0.00	0.00		
	L_{14}-L_{15}	15.41	7.82	5.10	-11.69	0.00	0.00	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5	763.3	-0.657	0.34	0.34	-15.97	-2.82	0.76	-14.09	0.00	0.00		
	L_{15}-L_{16}	5.30	26.17	17.12	48.39	17.2	17.24	17.24	26.54	8.24	853.4	1.54	856	1.5	853.4	-0.394	0.46	0.46	-62.15	-100.57	0.17	-15.37	-3.55	-1.55		
	L_{16}-L_{17}	20.79	12.38	3.53	11.15	0.00	0.00	0.00	0.00	0.00	20.40	33.89	8	1012.2	1.65	1118	1.5	1010.2	-0.731	0.31	0.31	-109.57	-164.91	-0.76	-3.35	-3.49	0.16		
	L_{17}-L_{18}	36.28	29.08	4.29	9.56	0.00	0.00	0.00	0.00	0.00	20.40	33.89	8	1012.2	1.65	1118	1.5	1010.2	-0.731	0.31	0.31	-172.69	-127.16	-31.04	-5.29	-4.66	2.27		
	L_{18}-L_{19}	35.99	23.38	5.53	4.80	0.00	0.00	0.00	0.00	0.00	20.40	33.89	8	1012.2	1.65	1118	1.5	1010.2	-0.731	0.31	0.31	-157.77	-117.88	-118.68	81.24	42.7	42.74		
	L_{19}-L_{20}	39.40	23.38	5.53	2.18	0.00	0.00	0.00	0.00	0.00	20.40	33.89	8	1012.2	1.65	1118	1.5	1010.2	-0.731	0.31	0.31	-172.62	-133.97	-122.58	84.01	42.7	42.74		
	L_{20}-L_{21}	191.26	198.77	-132.95	151.77	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.962	0.22	0.22	-64.69	-83.57	42.26	-14.44	-5.20	-4.96	23.25	-1.34		
	L_{21}-L_{22}	254.53	237.94	-175.58	165.40	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.747	0.30	0.30	-66.49	-69.34	44.69	-13.64	-5.09	-3.86	3.50	1.62		
	L_{22}-L_{23}	126.17	233.32	-87.84	39.06	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.747	0.30	0.30	-49.16	-42.70	32.32	-10.08	-3.82	-2.90	2.63	1.21		
	L_{23}-L_{24}	50.78	146.85	-8.70	97.52	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.346	0.46	0.46	36.90	-29.01	0.83	1.79	1.84	-0.05		
	L_{24}-L_{25}	115.74	35.34	-53.07	45.15	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.346	0.46	0.46	-62.87	19.67	-15.74	-5.37	-2.52	-2.52	14.63	5.97		
	L_{25}-L_{26}	32.36	43.35	-6.74	-5.19	0.00	0.00	0.00	0.00	0.00	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.936	0.23	0.23	-82.85	72.74	-2.56	3.43	-0.53	-0.41		
	L_{26}-L_{27}	14.99	43.35	-6.74	-5.19	0.00	0.00	0.00	0.00	0.00	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.936	0.23	0.23	-12.89	-12.54	-0.64	0.85	-0.13	-0.10		
	L_{27}-L_{28}	10.78	40.92	-2.37	-4.61	0.00	0.00	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5	763.3	-0.603	0.36	0.36	-0.85	3.24	-0.56	-0.37				
	L_{28}-L_{29}	3.42	46.08	-26.99	-1.00	0.00	0.00	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5	763.3	-0.412	0.44	0.44	5.34	-1.22	0.27	3.68	2.14	-0.08		
	L_{29}-L_{30}	4.86	48.60	-44.64	-2.29	0.00	0.00	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5	763.3	-0.412	0.44	0.44	-31.02	-27.74	-5.05	-4.49	2.24	-1.37		
	L_{30}-L_{31}	1.16	27.49	-39.85	-10.64	0.00	0.00	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5	763.3	-0.375	0.47	0.47	-68.47	-25.60	-18.16	-75.16	94.0	93.99		
	L_{31}-L_{32}	3.42	46.08	-26.99	-1.00	0.00	0.00	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5	763.3	-0.412	0.44	0.44	-31.02	-27.74	-5.05	-4.49	2.24	-1.37		
	L_{32}-L_{33}	45.78	40.20	-27.77	-2.57	-5.61	6.16	6.16	9.20	2	751.9	1.54	782	1.5	763.3	-0.937	0.23	0.23	-65.78	-40.20	-27.77	-2.57	-5.61	6.16		
	L_{33}-L_{34}	41.54	48.60	-44.64	-2.29	0.00	0.00	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5	763.3	-0.412	0.44	0.44	-31.02	-27.74	-5.05	-4.49	2.24	-1.37		
	L_{34}-L_{35}	14.64	22.36	-23.22	-0.68	0.00	0.00	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5	763.3	-0.375	0.47	0.47	-68.47	-25.60	-18.16	-75.16	94.0	93.99		
	L_{35}-L_{36}	61.54	-8.39	78.15	-38.60	148.0	147.96	147.96	221.94	31	1737.0	1.53	2357	1.5	2312.1	-0.962	0.22	0.22	-42.76	-43.55	0.82	-2.02	-0.06	0.08		
	L_{36}-L_{37}	36.90	-29.01	0.83	1.79	1.84	-0.05	61.54	-8.39	78.15	-38.60	148.0	147.96		
	L_{37}-L_{38}	15.74	35.34	-7.39	6.74	0.00	0.00	0.00	0.00	0.00	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.346	0.46	0.46	-62.87	19.67	-15.74	-5.37	-2.52	-2.52		
	L_{38}-L_{39}	32.36	43.35	-6.74	-5.19	0.00	0.00	0.00	0.00	0.00	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.936	0.23	0.23	-82.85	72.74	-2.56	3.43	-0.53	-0.41		
	L_{39}-L_{40}	14.99	43.35	-6.74	-5.19	0.00	0.00	0.00	0.00	0.00	35.09	53.51	4	1183.7

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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, 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		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	
		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)
Structure 1	U_0–U_1	-79.17	-0.72	0.79	0.92	0.43	-11.27	8.84	10.22	4.74	-125.40	0.00	0.00	0.00	0.00	-79.73	-12.34	-85.05	-164.02
	U_1–U_2	-46.82	-29.29	0.17	0.85	-2.38	-16.64	5.22	30.92	-13.21	-264.32	0.00	0.00	0.00	0.00	-47.11	-26.01	-50.27	-267.11
	U_2–L_2	-112.29	86.52	0.89	2.39	-0.87	-17.08	9.93	26.50	-9.73	-190.11	0.00	0.00	0.00	0.00	-133.06	146.92	-158.62	-134.67
	L_2–L_1	-15.71	66.12	1.50	2.61	-3.03	-16.49	16.71	23.64	-23.44	-272.48	0.00	0.00	0.00	0.00	1.30	-17.86	-5.61	-139.38
	L_1–U_1	-9.25	61.62	1.48	2.23	-16.31	-4.47	16.61	24.86	-181.60	-49.72	0.00	0.00	0.00	0.00	9.44	112.43	-248.11	15.47
	U_1–L_1	42.76	-120.21	1.66	2.41	-14.18	-1.06	18.46	26.86	-157.91	-11.80	0.00	0.00	0.00	0.00	79.58	191.19	-149.70	140.93
	L_1–U_2	93.19	-42.60	1.54	2.52	-14.34	-2.52	18.14	25.92	-138.16	-19.57	0.00	0.00	0.00	0.00	143.45	56.39	-113.10	-22.02
	L_2–U_3	-47.38	526.15	0.23	5.73	-18.31	13.76	2.61	63.76	203.86	153.44	0.00	0.00	0.00	0.00	-58.21	766.88	-326.61	883.46
	U_3–L_3	475.03	-124.35	3.28	1.06	124.29	165.39	56.93	1.66	124.29	165.39	0.00	0.00	0.00	0.00	691.50	-159.51	779.12	-376.62
	L_3–U_4	46.82	20.99	1.40	1.67	-0.08	-10.43	15.12	18.05	-0.86	-112.40	0.00	0.00	0.00	0.00	80.51	90.23	59.74	-119.39
	U_4–L_4	64.59	-138.73	2.13	1.32	-0.87	-12.77	22.93	14.23	-9.33	-137.69	0.00	0.00	0.00	0.00	113.78	-161.97	71.84	-316.40
	L_4–U_5	27.91	-140.51	2.26	0.98	1.00	-15.54	24.41	10.52	10.77	-167.53	0.00	0.00	0.00	0.00	68.01	-168.98	90.28	-400.45
	U_5–L_5	-106.12	-155.13	1.65	0.59	-0.14	-17.51	17.77	6.34	-1.48	-188.80	0.00	0.00	0.00	0.00	-114.86	-193.43	-139.88	-447.12
	L_5–U_6	-138.04	-262.90	1.16	0.46	-1.48	-25.70	11.78	5.24	-2.26	-288.51	0.00	0.00	0.00	0.00	-164.13	-366.57	-214.19	-687.39
	U_6–L_6	-245.82	-183.07	1.13	0.84	-26.39	-8.83	12.22	9.06	-264.58	-106.93	0.00	0.00	0.00	0.00	-303.66	-226.22	-699.50	-375.70
	L_6–U_7	-123.51	-327.01	1.38	0.21	-19.16	-5.42	9.62	2.24	-206.63	-89.18	0.00	0.00	0.00	0.00	-141.17	-422.20	-428.18	-513.04
	U_7–L_7	-269.97	-145.19	0.54	0.07	-24.02	-8.50	5.82	0.73	-258.96	-91.69	0.00	0.00	0.00	0.00	-343.40	-187.79	-687.62	-307.94
	L_7–U_8	-134.36	-67.40	0.56	0.25	-13.49	-1.13	6.04	2.98	-100.32	-22.22	0.00	0.00	0.00	0.00	-192.82	-91.23	-409.78	-93.62
	U_8–L_8	-170.82	-20.32	0.44	-0.05	-12.35	-0.79	4.72	-0.56	-133.15	-8.49	0.00	0.00	0.00	0.00	-215.92	-27.15	-398.15	-107.44
	L_8–U_9	-186.22	23.42	0.47	-0.38	-8.51	6.60	5.10	-4.04	-91.74	71.19	0.00	0.00	0.00	0.00	-235.40	25.19	-381.36	123.00
	U_9–L_9	114.62	-29.17	0.79	0.17	-15.32	-1.49	11.79	-3.87	-155.86	-13.13	0.00	0.00	0.00	0.00	151.59	-35.86	-382.16	-124.06
	L_9–U_{10}	-71.24	-180.99	-0.18	1.35	-1.32	-17.92	-1.50	14.42	-150.74	-190.76	0.00	0.00	0.00	0.00	-95.07	-216.54	-110.88	-483.27
	U_{10}–L_{10}	-58.09	-253.73	-0.60	1.80	-0.63	-22.03	-3.83	19.12	-211.39	-267.47	0.00	0.00	0.00	0.00	-76.92	-303.11	-89.70	-538.38
	L_{10}–U_{11}	-327.34	-325.40	0.90	1.92	-4.22	-29.59	9.57	20.46	-44.95	-315.04	0.00	0.00	0.00	0.00	-413.10	-396.42	-483.98	-632.68
	U_{11}–L_{11}	-338.58	-397.08	1.01	2.29	-6.79	-41.96	13.61	20.47	-61.96	-366.30	0.00	0.00	0.00	0.00	-422.06	-445.76	-511.07	-684.77
	L_{11}–U_{12}	-396.14	-197.74	1.89	3.65	-10.29	-24.35	20.14	38.84	-109.58	-209.28	0.00	0.00	0.00	0.00	-488.80	-206.57	-657.44	-584.12
	U_{12}–L_{12}	-344.18	-179.44	2.82	2.45	-2.67	-38.11	30.01	26.12	-28.43	-405.74	0.00	0.00	0.00	0.00	-408.41	-199.31	-484.39	-760.72
	L_{12}–U_{13}	-226.16	-299.72	2.66	1.66	-0.07	-29.34	29.59	17.66	-0.89	-373.24	0.00	0.00	0.00	0.00	-265.50	-343.58	-312.37	-813.59
	U_{13}–L_{13}	-350.21	-90.73	2.29	3.15	-21.67	-7.75	24.42	33.53	-230.68	-82.50	0.00	0.00	0.00	0.00	-423.52	-74.36	-755.16	-225.20
	L_{13}–U_{14}	-227.36	29.51	2.76	3.24	-29.17	-9.39	24.23	34.27	-319.28	-87.74	0.00	0.00	0.00	0.00	-274.20	34.07	-755.28	-198.88
	U_{14}–L_{14}	-167.09	39.84	3.02	3.05	-15.35	-3.93	32.19	32.49	-163.39	-41.81	0.00	0.00	0.00	0.00	-175.37	54.04	-429.62	-2.96
	L_{14}–U_{15}	-109.78	170.74	2.62	2.44	-17.61	-2.98	27.90	25.96	-187.47	-30.67	0.00	0.00	0.00	0.00	-106.40	255.73	-396.43	-102.98
	U_{15}–L_{15}	-8.75	79.50	2.27	1.66	-14.53	-1.72	24.16	17.24	-150.53	-20.74	0.00	0.00	0.00	0.00	-20.03	88.72	-224.68	-48.76
	L_{15}–U_{16}	-261.01	1266.00	0.22	9.72	-0.49	-0.96	2.37	103.50	-5.19	-10.24	0.00	0.00	0.00	0.00	-339.23	1780.34	-346.06	1632.48
	U_{16}–L_{16}	1192.78	1.29	9.76	0.00	9.76	0.00	95.64	0.00	95.64	0.00	0.00	0.00	0.00	0.00	1192.78	1.29	1221.11	1.29
	L_{16}–U_{17}	-25.29	11.66	0.63	1.54	-0.60	-19.47	6.62	16.20	-6.33	-204.86	0.00	0.00	0.00	0.00	-24.27	114.22	-41.10	-173.17
	U_{17}–L_{17}	-19.63	11.66	0.63	1.54	-0.60	-19.47	6.62	16.20	-6.33	-204.86	0.00	0.00	0.00	0.00	-24.27	114.22	-41.10	-173.17
	L_{17}–U_{18}	-150.60	33.06	2.31	1.97	-3.34	-14.57	24.31	20.74	-35.10	-163.24	0.00	0.00	0.00	0.00	-227.39	89.94	-150.15	-156.23
	U_{18}–L_{18}	-147.31	4.37	2.68	1.90	-2.58	-19.42	28.01	20.01	-27.15	-204.32	0.00	0.00	0.00	0.00	-227.91	31.70	-226.81	-259.93
	L_{18}–U_{19}	-220.38	26.51	2.76	2.24	-3.29	-20.53	29.59	23.76	-26.63	-206.51	0.00	0.00	0.00	0.00	-301.70	82.15	-226.81	-262.47
	U_{19}–L_{19}	-31.69	-33.99	2.18	0.42	-1.76	-21.07	22.96	4.39	-18.56	-227.68	0.00	0.00	0.00	0.00	-11.35	-38.48	-65.33	-332.36
	L_{19}–U_{20}	-86.03	-71.79	1.39	0.61	-1.90	-25.25	14.10	6.39	-24.03	-277.03	0.00	0.00	0.00	0.00	-83.01	-83.61	-144.44	-404.31
	U_{20}–L_{20}	-60.96	-60.96	0.87	1.19	-25.40	-10.44	9.15	12.53	-267.28	-109.81	0.00	0.00	0.00	0.00	-67.35	-56.78	-426.71	-255.82
	L_{20}–U_{21}	-51.15	-51.15	0.58	0.58	-15.53	-14.28	6.01	6.01	-175.52	-74.26	0.00	0.00	0.00	0.00	-56.49	-47.63	-281.23	-172.23
	U_{21}–L_{21}	-33.01	-28.69	1.99	2.58	-21.35	-7.40	20.88	27.10	-224.64	-77.90	0.00	0.00	0.00	0.00	-15.76	72.53	-334.94	-63.97
	L_{21}–U_{22}	-15.13	113.78	1.88	2.73	-19.81	-4.17	19.77	28.61	-208.44	-43.87	0.00	0.00	0.00	0.00	6.38	185.18	-290.64	90.88
	U_{22}–L_{22}	-21.26	113.78	1.88	2.73	-19.81	-4.17	19.77	28.61	-208.44	-43.87	0.00	0.00	0.00	0.00	6.38	185.18	-290.64	90.88
	L_{22}–U_{23}	-2.74	209.64	1.53	2.04	-19.39	-2.16	16.11	21.49	-203.99	-22.76	0.00	0.00	0.00	0.00	17.38	300.23	-268.75	243.21
	U_{23}–L_{23}	-11.64	209.64	1.53	2.04	-19.39	-2.16	16.11	21.49	-203.99	-22.76	0.00	0.00	0.00	0.00	17.64	300.23	-268.75	243.21
	L_{23}–U_{24}	-122.51	1157.56	0.19	9.93	-26.68	19.91	1.95	104.47	-279.64	209.49	0.00	0.00	0.00	0.00	-156.73	1640.65	-742.29	1777.18
	U_{24}–L_{24}	1154.91	-197.36	8.42	0.76	-0.75	-5.49	89.68	8.11	-8.02	-5.54	0.00	0.00	0.00	0.00	-1617.97	-246.02	-1490.96	-264.29
	L_{24}–U_{25}	-1154.91	-197.36	8.42	0.76	-0.75	-5.49	89.68	8.11	-8.02	-5.54	0.00	0.00	0.00	0.00	-1617.97	-246.02	-1490.96	-264.29
	L_{25}–U_{26}	178.89	-59.81	2.43	2.56	0.31	-17.38	25.63	27.25	-3.28	-195.08	0.00	0.00	0.00	0.00	-266.13	-42.33	-236.81	-316.35
	U_{26}–L_{26}	68.66	-178.68	3.26	2.60	-2.16	-22.68	34.75	27.70	-22.98	-241.44	0.00	0.00	0.00	0.00	-134.44	-196.27	-59.39	-546.16
	L_{26}–U_{27}	-236.51	-153.10	2.48	2.18	-0.93	-36.14	36.35	23.19	-8.87	-384.81	0.00	0.00	0.00	0.00	-273.21	-188.88	-320.29	-699.29
	U_{27}–L_{27}	-98.60	-313.27	2.63	2.46	-36.09	-12.29	28.00	26.16	-384.23	-130.66	0.00	0.00	0.00	0.00	-91.85	-373.17	-627.75	-577.30
	L_{27}–U_{28}	-183.04	-183.04	2.37	1.89	-21.21	-21.21	26.35	26.35	-384.52	-384.52	0.00	0.00	0.00	0.00	-162.08	-490.41	-378.79	-778.79
	U_{28}–U_{29}	-350.37	-386.86	1.95	0.53	-37.61	-13.46	20.73	5.65	-400.47	-143.28	0.00	0.00	0.00	0.00	-428.53	-495.56	-978.09	-689.17
	U_{29}–L_{29}	-279.98	-117.76	1.31	-0.35	-28.28	-5.72	13.99	-3.68	-301.08	-60.85	0.00	0.00	0.00	0.00	-344.49	-157.88	-754.07	-232.19
	L_{29}–U_{30}	-282.51	-181.61	0.82	-0.67	-30.61	-8.83	10.29	-5.91	-312.52	-92.93	0.00	0.00	0.00	0.00	-228.94	-124.12	-388.55	-190.37
	U_{30}–L_{30}	-196.32	-74.12	0.97	-0.56	-10.07	-6.85	10.29	-5.91	-312.52	-92.93	0.00	0.00	0.00	0.00	-228.94	-124.12	-388.55	-190.37
	L_{30}–U_{31}	-139.08	-187.57	-0.07	0.61	-1.78	-11.79	-0.75	6.54	-19.20	-127.08	0.00	0.00	0.00	0.00	-179.83	-235.85	-205.77	-409.56
	U_{31}–L_{31}	-47.38	-119.85	-0.11	0.11	-1.48	-13.59	-1.14	1.42	-14.23	-140.58	0.00	0.00	0.00	0.00	-63.08	-145.58	-63.68	-423.46
	U_{31}–L_{31}	-52.58	-125.17	-0.15	0.78	1.64	-17.53	-1.60	8.36	-17.69	-193.31	0.00	0.00	0.00	0.00	-70.42	-157.05	-65.35	-419.22
	L_{31}–U_{32}	-277.84	-111.68	0.59	1.50	-1.04	-21.46	6.39	16.14	-11.26	-231.38	0.00	0.00	0.00	0.00	-352.89	-124.17	-376.83	-445.95
	U_{32}–U_{33}	-166.98	-243.52	1.03	1.42	-5.52	-27.67	11.12	15.26	-59.48	-298.32	0.00	0.00	0.00	0.00	-202.63	-296.74	-264.41	-704.91
	U_{33}–L_{33}	-287.74	-127.82	1.33	1.06	-3.26	-32.48	13.46	13.06	-296.32	-68.07	0.00	0.00	0.00	0.00	-359.57	-149.19	-739.28	-354.05
	L_{33}–U_{34}	-141.43	-113.94	0.86	1.39	-19.80	-3.59	9.32	17.11	-213.46	-38.69	0.00	0.00	0.00	0.00	-171.75	-125.88	-461.36	-198.41
	U_{34}–L_{34}	-141.43	-113.94	0.86	1.39	-19.80	-3.59	9.32	17.11	-213.46	-38.69	0.00	0.00	0.00	0.00	-171.75	-125.88	-461.36	-198.41
	L_{34}–U_{35}	-141.64	-96.96	1.41	2.16	-14.21	-1.12	15.19	23.28	-153.24	-12.04	0.00	0.00	0.00	0.00	-164.39	-104.31	-383.35	-58.39
	U_{35}–L_{35}	-136.67	-67.04	0.97	0.70	-5.70	-14.15	8.66	11.16	-90.61	-12.82	0.00	0.00	0.00	0.00	-176.65	-92.25	-376.02	-734.03
	L_{35}–U_{36}	-497.26	-34.44	1.64	0.25	15.66	-18.13	62.82	2.83	167.67	-201.86	0.00	0.00	0.00	0.00	-728.11	-41.09	864.41	-307.19
	U_{36}–L_{36}	-139.08	-187.57	-0.07	0.61	-1.78	-11.79	-0.75	6.54	-19.20	-127.08	0.00	0.00	0.00	0.00	-179.83	-235.85	-205.77	-409.56
	U_{36}–L_{36}	-47.38	-119.85	-0.11	0.11	-1.48	-13.59	-1.14	1.42	-14.23	-140.58	0.00	0.00	0.00	0.00	-63.08	-145.58	-63.68	-423.46
	U_{36}–L_{36}	-52.58	-125.17	-0.15	0.78	1.64	-17.53	-1.60	8.36	-17.69	-193.31	0.00	0.00	0.00	0.00	-70.42	-157.05	-65.35	-419.22
	L_{36}–U_{37}	-277.84	-111.68	0.59	1.50	-1.04	-21.46	6.39	16.14	-11.26	-231.38	0.00	0.00	0.00	0.00	-352.89	-124.17	-376.83	-445.95
	U_{37}–U_{38}	-166.98	-243.52	1.03	1.42	-5.52	-27.67	11.12	15.26	-59.48	-298.32	0.00	0.00	0.00	0.00	-202.63	-296.74	-264.41	-704.91
	U_{38}–L_{38}	-287.74	-127.82	1.33	1.06	-3.26	-32.48	13.46	13.06	-296.32	-68.07	0.00	0.00	0.00	0.00	-359.57	-149.19	-739.28	-354.05
	L_{38}–U_{39}	-141.43	-113.94	0.86	1.39	-19.80	-3.59	9.32	17.11	-213.46	-38.69	0.00	0.00	0.00	0.00	-171.75	-125.88	-461.36	-198.41
Structure 2	U_{39}–U_{40}	-140.52	-22.75	1.06	2.39	-13.07	-1.43	11.44	25.70	-140.96	-15.40	0.00	0.00	0.00	0.00	-174.31	63.06	-372.43	9.56
	U_{40}–L_{40}	-141.64	56.96	1.41	2.16	-14.21	-1.12	15.19	23.28	-153.24	-12.04	0.00	0.00	0.00	0.00	-164.39	104.31	-383.35	58.39
	L_{40}–U_{41}	2.97	40.71	1.69	1.40	-10.76	-1.72	18.24	15.06	-116.05	-18.52	0.00	0.00	0.00	0.00	27.57	72.51	-147.00	28.85
	U_{41}–L_{41}	-136.67	67.04	0.97	0.70	-14.15	8.66	11.16	2.79	61.46	-152.58	0.00	0.00	0.00	0.00	-176.65	92.25	-376.02	734.03
	U_{41}–L_{41}	497.26	-34.44	1.64	0.25	15.66	-18.13	62.82	2.83	167.67	-201.86	0.00	0.00	0.00	0.00	728.11	41.09	864.41	307.19
	U_{41}–U_{42}	41.03	109.94	1.32	1.64	0.31	-11.77	14.68	18.20	3.46	-130.98	0.00	0.00	0.00	0.00	72.43	161.38	57.84	-32.56
	U_{42}–L_{42}	113.94	44.48	2.37	1.89	1.21	-13.58	26.35	17.70	13.45	-151.34	0.00	0.00	0.00	0.00	181.21	80.84	164.43	-138.92
	U_{42}–L_{42}	59.35	15.11	2.26	1.38	-2.27	-16.00	25.12	15.41	-25.28	-178.17	0.00	0.00	0.00	0.00	109.81	39.67	44.29	-211.98
	U_{42}–L_{42}	80.39	-19.75	2.25	1.22	-14.32	-5.89	25.18	13.56	-159.40	-65.55	0.00	0.00	0.00	0.00	144.65	-8.04	-99.31	-110.89
	U_{42}–L_{42}	80.30	-119.58	2.25	0.46	-16.57	-7.39	25.06	5.14	-184.44	-81.86	0.00	0.00	0.00	0.00	136.97	-148.75	-135.39	-261.65
	U_{42}–U_{43}	-24.63	-27.07	1.39	0.12	-17.99	-5.47	15.46	1.38	-199.85	-60.85	0.00	0.00	0.00	0.00	-11.92	-33.40	-291.62	-114.50
	U_{43}–L_{43}	29.38	-160.66	0.97	-0.29	8.29	-3.63	10.75	-3.27	-153.44	-42.67	0.00	0.00	0.00	0.00	50.87	-213.11	-87.58	-153.38

Location	Member	Start	End	S_{xx} (in^3)	S_{fc} (in^3)	S_{ft} (in^3)	J (in^4)	I_{xx} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term * F_y/S_xx	M_z k-in-in	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(xx)}$	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 (Max) Start (k-in)	Lane Reduction & Impact Live Load (Max) End (k-in)	Lane Reduction & Impact Live Load (Min) Start (k-in)	Lane Reduction & Impact Live Load (Min) End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)	Impact Pedestrian Load Min Start (k-in)	Impact Pedestrian Load Min End (k-in)
	U_0–U_1	3.25	-6.41	-11.16	-16.13	0.00	0.00	0.00	0.00	38.96	14.25	28.69	1.61	158.6	158.64	128.68	179.40	778.9	1.13	5920	—	0.9972425	5220.7	0.366	0.75	0.75	—	0.212	0.050	0.237	Yes
	U_1–U_2	-11.66	-3.81	-2.01	-12.74	0.00	0.00	0.00	0.00	64.44	58.42	26.93	46.86	158.6	158.64	128.68	179.40	778.9	1.13	5920	—	0.9972425	5220.7	0.366	0.75	0.75	—	0.281	0.066	0.36	Yes
	U_2–L_2	-10.28	0.12	24.15	-16.19	0.00	0.00	0.00	0.00	47.34	-50.16	92.09	-111.36	158.6	158.64	128.76	179.40	778.9	1.13	5920	—	0.9972425	5220.7	-0.827	0.27	0.27	0.006	0.057	0.07	Yes	0.004	0.037	0.05	Yes	0.240	0.056	0.31	Yes	0.242	0.038	0.29	Yes
	L_2–L_1	-12.97	-4.09	-2.63	-24.89	0.00	0.00	0.00	0.00	62.74	57.46	26.93	-45.98	158.6	158.64	128.68	179.40	778.9	1.13	5920	—	0.9972425	5220.7	0.005	0.84	0.84	0.006	0.048	0.06	Yes	0.004	0.037	0.05	Yes	0.117	0.047	0.17	Yes
	L_1–U_1	-10.63	3.74	-13.69	-7.79	0.00	0.00	0.00	0.00	-76.47	-45.52	-72.69	-60.51	158.6	158.64	128.68	179.40	778.9	1.13	5920	—	0.9972464	5220.7	0.595	0.84	0.84	0.011	0.072	0.19	Yes	0.076	0.049	0.13	Yes	0.114	0.060	0.18	Yes
	U_1–L_1	-10.01	8.41	13.34	-25.15	0.00	0.00	0.00	0.00	-195.60	-69.97	-169.25	-113.58	158.6	158.64	128.76	179.40	778.9	1.12	5920	—	0.9972471	5220.7	0.358	0.74	0.74	0.255	0.078	0.34	Yes	0.172	0.052	0.23	Yes								
	L_1–U_2	-10.10	12.48	-18.01	-17.61	0.00	0.00	0.00	0.00	-264.49	-151.11	-275.09	-47.39	158.6	158.64	128.76	179.40	778.9	1.12	5920	—	0.9971456	5479.5	0.172	0.67	0.67	0.347	0.099	0.42	Yes	0.242	0.048	0.29	Yes								
	U_2–L_3	-1.44	22.49	-12.49	-5.09	0.00	0.00	0.00	0.00	-244.49	203.03	-258.86	157.18	260.5	260.46	209.97	298.48	1150.4	1.15	9850	—	0.9972513	8571.6	-0.646	0.34	0.34	0.356	0.160	0.52	Yes	0.248	0.109	0.36	Yes								
	L_3–U_4	-15.69	1.55	2.99	10.66	0.00	0.00	0.00	0.00	11.46	191.89	70.52	2.18	182.0	182.04	147.00	209.16	1116.1	1.16	8131	—	0.9972216	7002.2	0.150	0.67	0.67	0.342	0.155	0.50	Yes	0.234	0.106	0.34	Yes								
	U_4–L_4	-4.63	8.84	4.59	14.20	0.00	0.00	0.00	0.00	151.65	312.98	163.64	319.99	165.8	165.79	136.31	188.45	825.4	1.14	6219	—	0.9971172	5456.6	0.511	0.80	0.80	0.189	0.078	0.27	Yes	0.130	0.052	0.19	Yes								
	L_4–U_5	-2.29	5.35	3.90	4.32	0.00	0.00	0.00	0.00	229.44	61.95	246.02	68.43	184.2	184.25	152.89	211.13	1219.3	1.15	6279	—	0.9971176	5456.6	0.237	0.68	0.68	—	0.097156	0.043	0.14	Yes								
	U_5–L_5	-6.26	-7.42	3.28	-0.37	0.00	0.00	0.00	0.00	197.37	73.74	209.77	63.62	219.3	219.34	180.69	253.75	1122.8	1.15	8374	—	0.9972742	7218.5	0.438	0.78	0.78	—	0.097156	0.043	0.14	Yes								
	L_5–U_6	-3.34	6.88	0.88	-4.26	0.00	0.00	0.00	0.00	238.67	87.33	244.17	-81.81	330.4	330.43	268.63	381.70	1177.4	1.16	12096	—	0.9967639	10868.9	-0.333	0.47	0.47	—	0.416	0.077	0.5	Yes								
	U_6–L_6	-1.52	1.52	-1.19	-8.20	0.00	0.00	0.00	0.00	158.20	22.04	159.78	-28.89	286.3	286.31	232.57	327.18	1193.1	1.14	10797	—	0.9966526	9429.2	0.334	0.64	0.64	—	0.363	0.095	0.53	Yes								
	L_6–U_7	1.60	4.87

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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)

Maximum Axial with Moment Interaction Check

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

M_z Information

Location	Member	ZZ Axis Moments from STAAD: Dead Load Start-End (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_{bb} (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_{bb}	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	C_{mx}	DL Start-(k-ft)	DL End-(k-ft)	LL Start-(k-ft)	LL End-(k-ft)	Ped. Load Start-(k-ft)	Ped. Load 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_{bb} (in^3)	S_b (in^3)	Z_z (in^3)	I (in^4)	Shape Factor	M_p (k-in)	F_{crit} (ksi)	Formula 1.8 Term * F$_y$/S_{bb}	M_y (k-in)	a	C_{mx}	C_{mx}	Pass
Structure 1	L_0-L_1	-15.50	-19.38	3.73	-5.55	2.69	-2.54					0.00	0.00	33.87	-175.74	18.83	-132.18	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.193	0.52	0.52		-4.03	-14.79	-3.56	-7.16	0.26	0.97					0.00	0.00	-33.41	-122.63	-1.43	-5.17	128.3	128.29	121.63	141.18	626.8	1.10	4659		0.99805042	4225.3	0.272	0.71	0.71		0.038	0.079	0.12	Yes	0.022	0.048	0.08	Yes																								
	L_1-L_2	39.75	-88.06	-3.67	-30.04	-0.08	1.50					0.00	0.00	-1.45	-245.31	50.53	-62.16	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	0.006	0.50	0.50		-89.35	19.20	35.79	3.28	0.23	0.00					0.00	0.00	-142.42	61.35	-5.79	32.57	128.3	128.29	115.05	141.18	626.8	1.10	4659		0.99805042	4225.3	-0.430	0.43	0.43		0.231	0.104	0.34	Yes	0.141	0.069	0.21	Yes																								
	L_2-L_3	-29.50	-42.24	-10.79	-8.12	0.56	1.57					0.00	0.00	-159.66	-172.45	-89.15	-32.17	99.5	99.53	91.00	125.40	3493	1390.7	1.22	4141	0.99991186	3294.8	-0.228	0.51	0.51		-24.29	-47.69	-1.95	-9.61	0.17	-0.17					0.00	0.00	-124.39	-47.69	-1.95	-9.61	128.3	128.29	121.63	141.18	626.8	1.10	4659		0.99805042	4225.3	0.272	0.71	0.71		0.089	0.134	0.043	No	0.054	0.083	0.14	Yes												
	L_3-L_4	-11.39	11.52	-13.40	-8.65	0.81	2.60					0.00	0.00	-248.70	-110.25	-3.02	92.64	99.9	99.93	84.14	125.49	3469	1373.0	1.26	4141	0.99991186	3294.8	0.528	0.81	0.81		-45.12	56.05	-0.95	1.09	0.37	-0.51					0.00	0.00	-72.47	88.65	-53.31	65.48	171.6	171.62	158.81	188.47	749.3	1.10	6220		0.99781916	5651.9	-0.817	0.27	0.27		0.191	0.065	0.26	Yes	0.114	0.041	0.16	Yes												
	L_4-L_5	-49.18	-208.14	-6.27	-6.51	1.70	2.42					0.00	0.00	-154.64	-56.27	-18.40	18.93	25.82	92.58	76.68	114.47	3186	1277.1	1.23	3777	0.99991860	3052.4	-0.125	0.50	0.50		-36.57	-24.60	-15.43	-3.18	0.00	-0.29					0.00	0.00	-30.99	-72.36	-6.27	-19.77	133.9	133.91	141.99	172.51	694.3	1.10	5757		0.99779756	5114.9	-0.631	0.27	0.27		0.026	0.062	0.09	Yes	0.016	0.039	0.06	Yes												
	L_5-L_6	-0.43	187.22	-3.71	-7.19	1.45	3.53					0.00	0.00	-41.25	-80.04	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99992345	3448.5	0.071	0.63	0.63		-15.55	61.63	-0.81	-0.66	0.62	0.00					0.00	0.00	-33.30	70.67	-15.41	80.93	150.3	150.31	125.18	784.3	1.10	7464		0.99778986	6850.4	-0.190	0.52	0.52		0.412	0.060	0.48	Yes	0.407	0.063	0.49	Yes												
	L_6-L_7	41.36	19.74	-5.73	-7.51	1.01	2.71					0.00	0.00	-0.06	-137.26	36.63	-74.24	104.6	104.58	85.61	136.37	4040	1678.1	1.31	4520	0.99992345	3448.5	0.071	0.63	0.63		-0.06	-7.26	-1.12	-7.15	0.54	0.00					0.00	0.00	-107.36	-43.32	-126.28	-39.39	288.5	288.45	246.11	329.98	1384.4	1.10	7464		0.99753296	6850.4	-0.280	0.49	0.49		0.404	0.027	0.44	Yes	0.402	0.027	0.44	Yes												
	L_7-L_8	-25.09	448.92	0.01	-0.02	0.06	6.25					0.00	0.00	-32.49	583.33	-31.82	674.01	145.8	145.75	130.44	228.84	6500	2932.4	1.37	7552	0.99952915	4806.3	-0.047	0.58	0.58		31.76	53.36	0.00	0.01	1.09	1.37					0.00	0.00	41.23	72.11	57.03	91.72	355.4	355.44	352.52	403.40	1093.1	1.13	13312		0.99717976	11898.3	-0.622	0.85	0.85		0.403	0.090	0.5	Yes	0.398	0.089	0.49	Yes												
	L_8-L_9	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

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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

Owner Truss Vertical

| 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. 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) | $I_{t/n}$ (in^4/ft) | Shape Factor f | M_p (k-in) | Formula 1.8 Term * F$_y$/S_{bc} | M_u (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor $C_{b(x)}$ | Equivalent Mom. Factor $C_{b(m)}$ | YY Axis Moments from STAAD: Dead Load (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Min) Start (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{top} (in^3) | S_b (in^3) | Z_y (in^3) | $I_{y/n}$ (in^4/ft) | Shape Factor f | M_p (k-in) | σ_{cm} (ksi) | Formula 1.8 Term * F$_y$/S_{bc} | M_u (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor $C_{b(x)}$ | Equivalent Mom. Factor $C_{b(m)}$ | Yield Axial Factor | Yield Moment Factor | Yield Total | Pass | Fracture Axial Factor | Fracture Moment Factor | Fracture Total | Pass | Buckle Axial Factor | Buckle Moment Factor | Buckle Total | Pass | Compression Yield Axial Factor | Compression Yield Moment Factor | Compression Yield Total | Pass |
|---|---|---|---

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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 (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	-12.57	3.38	0.40	0.27	0.27	-0.15	-4.50	3.02	2.95	-1.71
	L_1-U_1	-1.68	-7.06	-1.10	0.26	0.18	-0.05	-12.28	7.04	2.05	-0.56
	U_1-L_2	-0.08	8.78	-0.91	-0.10	-0.04	-0.62	-10.71	10.91	0.49	-0.45
	L_2-U_2	9.78	-11.76	-0.77	-0.52	0.23	-0.74	-8.62	-5.79	2.52	-6.27
	U_2-L_3	-10.33	17.60	-1.03	0.26	0.37	-0.46	-11.41	2.87	-4.16	-5.11
	L_3-U_3	-26.83	58.49	-2.03	1.91	-0.79	-0.45	-26.83	58.49	-2.03	1.91
	U_3-L_4	-39.79	79.58	-2.23	1.91	-1.24	0.37	-36.44	29.11	-11.24	3.37
	L_4-U_4	-6.35	88.66	-1.68	3.06	0.01	-2.01	-18.73	34.01	0.09	-0.09
	U_4-L_5	-9.60	109.55	-1.37	2.58	0.20	-0.29	-14.73	27.86	0.21	-0.92
	L_5-U_5	-74.80	111.68	-2.74	1.64	0.24	-0.09	-29.10	15.48	2.60	0.94
	U_5-L_6	-58.84	54.78	-2.04	1.02	-0.01	-0.45	-21.96	11.03	-0.06	-4.81
	L_6-U_6	-60.50	2.23	-2.40	1.01	-0.64	-0.54	-26.44	5.36	-3.64	-9.19
	U_6-L_7	-55.25	39.07	-1.91	1.06	0.22	-0.82	-20.55	11.46	2.37	-8.79
	L_7-U_7	-20.99	7.38	-1.11	0.43	0.38	-0.77	-11.99	4.68	4.04	-7.60
	U_7-L_8	-1.18	32.79	-0.29	0.00	0.00	0.00	-11.74	-12.19	-2.53	1.62
	L_8-U_8	-19.00	4.09	-1.30	1.08	0.00	-0.64	-14.06	11.69	0.02	-6.93
	U_8-L_9	-26.64	12.99	-1.92	1.50	0.00	-0.64	-17.47	14.67	0.42	-6.53
	L_9-U_9	-89.35	58.15	-3.10	2.69	-0.89	-0.03	-33.41	28.99	-9.57	-0.32
	U_9-L_{10}	-90.27	61.38	-3.43	2.70	-0.89	-0.03	-36.54	23.26	-9.91	-1.81
	L_{10}-U_{10}	-50.39	89.05	2.87	2.78	0.10	-0.14	-30.99	29.66	1.57	-1.55
	U_{10}-L_{11}	-82.31	86.26	-2.80	2.77	0.52	-0.48	-29.78	29.53	5.57	-4.10
	L_{11}-U_{11}	-81.24	62.98	-3.37	2.58	0.55	-0.45	-35.90	27.51	5.87	-4.77
	U_{11}-L_{12}	-81.24	62.98	-3.37	2.58	0.55	-0.45	-35.90	27.51	5.87	-4.77
	L_{12}-U_{12}	-17.36	7.00	-1.57	1.61	0.56	-0.83	-16.66	10.89	5.99	-8.83
	U_{12}-L_{13}	-0.61	-11.46	-1.28	0.00	0.00	0.00	-13.60	7.51	3.19	-11.66
	L_{13}-U_{13}	7.43	-23.92	-1.09	0.34	0.89	-1.25	-11.59	3.60	9.49	-13.30
	U_{13}-L_{14}	-44.32	35.88	-1.63	1.05	-0.19	-0.74	-17.32	11.21	-2.07	-7.85
	L_{14}-U_{14}	-66.39	68.66	-2.73	1.62	-0.74	-0.31	-28.21	24.96	-7.34	-10.55
	U_{14}-L_{15}	-88.55	73.83	-2.63	1.93	-0.45	-0.57	-28.02	20.51	-4.75	-6.08
	L_{15}-U_{15}	-101.40	58.04	-2.92	2.28	-0.12	-0.46	-31.12	17.36	-0.35	-4.86
	U_{15}-L_{16}	-108.38	116.68	-3.01	2.70	-0.37	-0.09	-32.09	28.78	-3.96	-0.52
	L_{16}-U_{16}	-154.28	139.71	-4.02	3.44	0.54	-0.14	-42.81	36.65	3.58	-1.50
	U_{16}-L_{17}	-86.63	98.73	-2.39	2.36	0.85	-0.23	-29.60	36.23	4.46	-4.04
	L_{17}-U_{17}	-24.73	100.38	-2.81	3.44	0.42	-0.38	-29.60	36.23	4.46	-4.04
	U_{17}-L_{18}	-98.28	13.79	-3.29	0.53	0.00	-0.28	-45.53	5.73	4.78	-2.52
	L_{18}-U_{18}	-74.14	95.51	-3.63	2.99	0.22	-0.28	-38.16	31.43	2.30	-2.98
	U_{18}-L_{19}	-55.49	68.85	-3.03	3.16	0.23	-0.26	-33.56	22.42	2.77	-3.32
	L_{19}-U_{19}	-55.49	68.85	-3.03	3.16	0.23	-0.26	-33.56	22.42	2.77	-3.32
	U_{19}-L_{20}	-32.97	39.97	-2.22	1.37	0.31	-0.82	-23.38	14.40	3.27	-8.59
	L_{20}-U_{20}	-15.40	58.62	-1.52	1.35	0.00	0.00	-15.40	15.54	6.58	-8.19
	U_{20}-L_{21}	-10.32	4.39	-1.23	0.46	0.53	-0.95	-12.90	4.83	5.64	-10.03
	L_{21}-U_{21}	-6.27	2.67	-0.75	0.28	0.32	-0.58	-7.84	2.96	3.45	-7.12
	U_{21}-L_{22}	-17.68	16.16	-1.30	1.18	0.26	-0.71	-17.68	16.16	-1.30	1.18
	L_{22}-U_{22}	-13.67	13.22	-1.02	0.92	0.20	-0.55	-13.67	13.22	-1.02	0.92
	U_{22}-L_{23}	-55.69	65.14	-2.92	2.46	0.20	-0.80	-30.74	25.83	2.13	-8.37
	L_{23}-U_{23}	-69.22	80.41	-2.88	2.63	-0.52	-0.17	-30.31	27.66	-5.47	-1.82
	U_{23}-L_{24}	-36.46	34.04	-2.04	1.69	0.00	0.00	-36.46	34.04	-2.04	1.69
	L_{24}-U_{24}	-106.11	102.67	-3.06	3.65	0.22	-0.24	-42.67	38.42	2.30	-2.57
	U_{24}-L_{25}	-26.11	10.56	-1.29	0.00	0.00	0.00	-26.84	10.56	-1.29	3.03
	L_{25}-U_{25}	-47.87	128.15	-3.10	3.68	0.48	-0.41	-33.05	39.29	5.11	-4.41
	U_{25}-L_{26}	-89.53	99.33	-3.27	2.64	0.27	-0.26	-34.81	28.11	-2.82	0.27
	L_{26}-U_{26}	-86.54	82.57	-3.15	1.85	-0.10	-0.45	-33.55	19.74	-1.10	-4.75
	U_{26}-L_{27}	-60.17	67.66	-2.89	2.05	0.36	-1.02	-30.76	21.83	3.88	-10.83
	L_{27}-U_{27}	-45.52	12.59	-2.40	0.37	0.25	-0.96	-9.60	3.91	2.62	-9.68
	U_{27}-L_{28}	12.59	-26.40	-0.91	0.37	0.25	-0.96	-9.60	3.91	2.62	-9.68
	L_{28}-U_{28}	6.51	-17.79	-1.15	0.91	0.57	-1.03	-12.21	9.66	5.07	-9.03
	U_{28}-L_{29}	-11.68	8.87	-1.30	0.00	0.00	0.00	-11.19	8.87	-1.30	7.12
	L_{29}-U_{29}	-38.92	20.55	-1.84	1.54	-0.31	-0.40	-19.60	16.35	-3.29	-4.28
	U_{29}-L_{30}	-88.53	71.15	-3.45	2.89	0.40	-0.34	-33.37	27.80	-2.63	-3.60
	L_{30}-U_{30}	-73.32	111.68	-3.29	3.32	0.64	-0.35	-36.72	30.76	4.30	-3.64
	U_{30}-L_{31}	-30.91	28.19	-2.37	2.07	0.00	0.00	-30.91	28.19	-2.37	2.07
	L_{31}-U_{31}	-70.40	69.24	-2.87	2.62	0.31	-0.26	-31.70	26.67	4.47	-3.77
	U_{31}-L_{32}	-86.92	56.40	-3.67	2.42	0.30	-0.22	-39.61	26.04	3.18	-2.29
	L_{32}-U_{32}	-132.02	111.68	-3.93	3.32	0.50	-0.30	-56.00	24.56	-3.00	-2.28
	U_{32}-L_{33}	-26.11	12.70	-1.84	1.26	0.27	-0.53	-19.87	-13.57	2.95	-5.70
	L_{33}-U_{33}	-13.25	7.76	-1.20	0.77	0.17	-0.33	-13.25	7.76	-1.20	0.77
	U_{33}-L_{34}	-5.07	-1.80	-0.93	0.56	0.63	-1.09	-10.07	3.90	6.75	-11.33
	L_{34}-U_{34}	-16.86	16.36	-1.04	-1.04	0.00	0.00	-16.86	16.36	-1.04	8.51
	U_{34}-L_{35}	-50.49	35.10	-1.75	1.52	-0.10	-0.79	-23.45	13.95	-3.83	-8.57
	L_{35}-U_{35}	-59.60	20.61	-2.19	1.29	-0.36	-0.83	-23.45	13.95	-3.83	-8.57
	U_{35}-L_{36}	-72.20	52.02	-2.41	1.92	-0.47	-0.32	-27.03	20.70	-5.10	-0.26
	L_{36}-U_{36}	-77.34	67.11	-2.51	1.92	-0.47	-0.32	-27.03	20.70	-5.10	-0.26
	U_{36}-L_{37}	-84.80	74.88	-2.77	2.09	-0.47	-0.32	-29.61	23.00	-5.10	-0.26
	L_{37}-U_{37}	-2.84	82.10	-1.78	2.97	0.23	0.11	-19.86	33.04	2.52	1.18
	U_{37}-L_{38}	-54.59	58.66	-2.71	2.24	-0.86	0.12	-41.24	29.46	9.57	-8.51
	L_{38}-U_{38}	-9.15	17.58	-1.09	0.10	-0.04	-0.46	-12.16	1.12	-0.43	-5.13
	U_{38}-L_{39}	-13.13	8.77	-0.76	0.00	0.00	0.00	-13.13	8.77	-0.76	0.00
	L_{39}-U_{39}	-0.13	-8.77	-0.76	0.28	-0.41	-0.71	-8.46	3.09	-4.54	-7.94
	U_{39}-L_{40}	-23.22	7.61	-0.62	0.63	0.11	-0.09	-6.67	6.96	1.18	-1.04

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_{req} (in^3)	S_x (in^3)	Z_x (in^3)	I (in^4)	I_{req} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_x	M_n (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor C_{mx}/a
Structure 1	U_0-L_1	-0.82	0.22	-18.00	-31.96	3.26	1.34	0.00	0.00	0.00	1.00	0.00	0.00	-92.04	-88.63	-64.40	-23.34	100.5	100.60
	L_1-U_1	-0.82	0.22	-25.19	-27.34	-17.00	-13.49	0.00	0.00	0.00	1.00	0.00	0.00	-87.44	-84.23	-59.00	-113.4	113.37	113.37
	U_1-L_2	-0.82	0.22	-18.87	-23.89	-15.90	-10.30	0.00	0.00	0.00	1.00	0.00	0.00	-164.22	-64.78	-148.82	-82.46	148.0	148.00
	L_2-U_2	-0.82	0.22	-12.25	-5.89	-31.12	-8.13	0.00	0.00	0.00	1.00	0.00	0.00	-308.21	-165.48	-223.30	-154.0	147.96	147.96
	U_2-L_3	-0.82	0.22	-12.26	-5.89	-31.12	-8.13	0.00	0.00	0.00	1.00	0.00	0.00	-308.21	-165.48	-223.30	-154.0	147.96	147.96
	U_3-L_4	-6.35	88.66	-1.68	3.06	0.01	-2.01	-18.73	34.01	0.09	-0.09	0.00	0.00	-32.60	159.73	-8.14	115.40	35.1	35.09
	L_4-U_4	-9.60	109.55	-1.37	2.58	0.20	-0.29	-14.73	27.86	0.21	-0.92	0.00	0.00	-31.63	178.63	-8.63	141.22	40.7	40.70
	L_5-U_5	-74.80	111.68	-2.74	1.64	0.24	-0.09	-29.10	15.48	2.60	0.94	0.00	0.00	-135.07	104.87	-63.88	85.96	40.7	40.70
	U_5-L_6	-58.84	54.78	-2.04	1.02	-0.01	-0.45	-21.96	11.03	-0.06	-4.81	0.00	0.00	-102.45	85.55	-73.98	64.96	39.8	39.77
	L_6-U_6	-60.50	2.23	-2.40	1.01	-0.64	-0.54	-26.44	5.36	-3.64	-9.19	0.00	0.00	-113.06	37.64	-83.45	57.15	42.7	42.74
	U_6-L_7	-55.25	39.07	-1.91	1.06	0.22	-0.82	-20.55	11.46	2.37	-8.79	0.00	0.00	-88.54	60.69	-68.74	39.37	20.8	20.80
	L_7-U_7	-20.99	7.38	-1.11	0.43	0.38	-0.77	-11.99	4.68	4.04	-7.60	0.00	0.00	-42.87	15.68	-22.02	-2.29	15.4	15.42
	U_7-L_8	-1.18	32.79	-0.29	0.00	0.00	0.00	-11.74	-12.19	-2.53	1.62	0.00	0.00	-42.86	20.51	-24.67	-2.53	15.4	15.42
	L_8-U_8	-19.00	4.09	-1.30	1.08	0.00	-0.64	-14.06	11.69	0.02	-6.93	0.00	0.00	-42.98	30.51	-24.67	-3.70	15.4	15.42
	U_8-L_9	-26.64	12.99	-1.92	1.50	0.00	-0.64	-17.47	14.67	0.42	-6.53	0.00	0.00	-59.93	36.35	-34.69	9.70	19.4	19.37
	L_9-U_9	-89.35	58.15	-3.10	2.69	-0.89	-0.03	-33.41	28.99	-9.57	-0.32	0.00	0.00	-199.59	113.28	-128.60	75.17	35.1	35.09
	U_9-L_{10}	-90.27	61.38	-3.43	2.70	-0.89	-0.03	-36.54	23.26	-9.91	-1.81	0.00	0.00	-199.27	117.59	-118.18	77.44	35.8	35.83
	L_{10}-U_{10}	-50.39	89.05	2.87	2.78	0.10	-0.14	-30.99	29.66	1.57	-1.55	0.00	0.00	-177.29	154.74	-134.96	113.74	38.8	38.83
	U_{10}-L_{11}	-82.31	86.26	-2.80	2.77	0.52	-0.48	-29.78	29.53	5.57	-4.10	0.00	0.00	-145.71	150.56	-99.76	105.54	42.7	42.74
	L_{11}-U_{11}	-81.24	62.98	-3.37	2.58	0.55	-0.45	-35.90	27.51	5.87	-4.77	0.00	0.00	-152.29	117.63	-97.99	75.67	35.1	35.09
	U_{11}-L_{12}	-81.24	62.98	-3.37	2.58	0.55	-0.45	-35.90	27.51	5.87	-4.77	0.00	0.00	-152.29	117.63	-97.99	75.67	35.1	35.09
	L_{12}-U_{12}	-17.36	7.00	-1.57	1.61	0.56	-0.83	-16.66	10.89	5.99	-8.83	0.00	0.00	-44.15	23.14	-14.69	-2.37	15.4	15.42
	U_{12}-L_{13}	-0.61	-11.46	-1.28	0.00	0.00	0.00	-13.60	7.51	3.19	-11.66	0.00	0.00	-42.14	23.71	-14.69	-2.37	15.4	15.42
	L_{13}-U_{13}	7.43	-23.92	-1.09	0.34	0.89	-1.25	-11.59	3.60	9.49	-13.30	0.00	0.00	-42.42	26.42	-21.99	48.38	17.2	17.24
	U_{13}-L_{14}	-44.32	35.88	-1.63	1.05	-0.19	-0.74	-17.32	11.21	-2.07	-7.85	0.00	0.00	-80.13	61.21	-60.30	36.44	20.5	20.51
	L_{14}-U_{14}	-66.39	68.66	-2.73	1.62	-0.74	-0.31	-28.21	24.96	-7.34	-10.55	0.00	0.00	-142.71	121.68	-127.31	75.32	38.5	38.53
	U_{14}-L_{15}	-88.55	73.83	-2.63	1.93	-0.45	-0.57	-28.02	20.51	-4.75	-6.08	0.00	0.00	-155.55	122.63	-121.29	88.07	42.7	42.74
	L_{15}-U_{15}	-101.40	58.04	-2.92	2.28	-0.12	-0.46	-31.12	17.36	-0.35	-4.86	0.00	0.00	-172.35	104.22	-123.92	75.32	38.5	38.53
	U_{15}-L_{16}	-108.38	116.68	-3.01	2.70	-0.37	-0.09	-32.09	28.78	-3.96	-0.52	0.00	0.00	-182.60	187.79	-146.04	149.70	46.7	46.71
	L_{16}-U_{16}	-154.28	139.71	-4.02	3.44	0.54	-0.14	-42.81	36.65	3.58	-1.50	0.00	0.00	-256.21	229.26	-190.91	179.67	42.7	42.74
	U_{16}-L_{17}	-86.63	98.73	-2.39	2.36	0.85	-0.23	-29.60	36.23	4.46	-4.04	0.00	0.00	-170.62	177.86	-126.35	125.50	35.1	35.09
	U_{17}-L_{18}	-24.73	100.38	-2.81	3.44	0.42	-0.38	-29.60	36.23	4.46	-4.04	0.00	0.00	-170.62	177.86	-26.35	125.50	35.1	35.09
	U_{17}-L_{18}	-98.28	13.79	-3.29	0.53	0.00	-0.28	-45.53	5.73	4.78	-2.52	0.00	0.00	-186.96	17.21	-127.01	12.16	35.1	35.09
	L_{18}-U_{18}	-74.14	95.51	-3.63	2.99	0.22	-0.28	-38.16	31.43	2.30	-2.98	0.00	0.00	-146.99	165.01	-93.39	120.29	38.8	38.83
	U_{18}-L_{19}	-55.49	68.85	-3.03	3.16	0.23	-0.26	-33.56	22.42	2.77	-3.32	0.00	0.00	-115.71	118.66	-68.49	77.80	35.1	35.09
	U_{19}-L_{20}	-55.49	68.85	-3.03	3.16	0.23	-0.26	-33.56	22.42	2.77	-3.32	0.00	0.00	-115.71	118.66	-68.49	77.80	35.1	35.09
	U_{20}-L_{21}	-32.97	39.97	-2.22	1.37	0.31	-0.82	-23.38	14.40	3.27	-8.59	0.00	0.00	-72.25	70.69	-38.60	40.80	20.5	20.51
	L_{20}-U_{20}	-15.40	58.62	-1.52	1.35	0.00	0.00	-15.40	15.54	6.58	-8.19	0.00	0.00	-72.25	104.22	-33.92	73.32	35.1	35.09
	U_{21}-L_{22}	-10.32	4.39	-1.23	0.46	0.53	-0.95	-12.90	4.83	5.64	-10.03	0.00	0.00	-30.19	11.98	-6.01	-7.33	15.4	15.42
	L_{21}-U_{21}	-6.27	2.67	-0.75	0.28	0.32	-0.58	-7.84	2.96	3.45	-7.12	0.00	0.00	-22.70	8.38	-4.51	-5.13	15.4	15.42
	U_{22}-L_{23}	-13.67	13.22	-1.02	0.92	0.20	-0.55	-13.67	13.22	-1.02	0.92	0.00	0.00	-39.97	37.09	-18.67	31.31	15.4	15.42
	U_{23}-L_{24}	-55.69	65.14	-2.92	2.46	0.20	-0.80	-30.74	25.83	2.13	-8.37	0.00	0.00	-112.36	118.26	-69.64	73.79	35.1	35.09
	U_{24}-L_{25}	-69.22	80.41	-2.88	2.63	-0.52	-0.17	-30.31	27.66	-5.47	-1.82	0.00	0.00	-139.53	140.30	-97.10	102.17	35.1	35.09
	U_{25}-L_{26}	-36.46	34.04	-2.04	1.69	0.00	0.00	-36.46	34.04	-2.04	1.69	0.00	0.00	-151.17	173.37	-113.83	139.51	38.8	38.83
	U_{26}-L_{27}	-106.11	102.67	-3.06	3.65	0.22	-0.24	-42.67	38.42	2.30	-2.57	0.00	0.00	-193.42	183.30	-134.56	130.01	35.1	35.09
	U_{27}-L_{28}	-26.11	10.56	-1.29	0.00	0.00	0.00	-26.84	10.56	-1.29	3.03	0.00	0.00	-47.87	128.15	-3.10	3.68	0.48	-0.41
	U_{28}-L_{29}	-47.87	128.15	-3.10	3.68	0.48	-0.41	-33.05	39.29	5.11	-4.41	0.00	0.00	-104.93	217.56	-55.32	160.86	42.7	42.74
	U_{29}-L_{30}	-89.53	99.33	-3.27	2.64	0.27	-0.26	-34.81	28.11	-2.82	0.27	0.00	0.00	-161.64	160.66	-112.73	125.53	46.7	46.71
	U_{30}-L_{31}	-86.54	82.57	-3.15	1.85	-0.10	-0.45	-33.55	19.74	-1.10	-4.75	0.00	0.00	-156.12	133.00	-113.93	101.17	46.7	46.71
	U_{31}-L_{32}	-60.17	67.66	-2.89	2.05	0.36	-1.02	-30.76	21.83	3.88	-10.83	0.00	0.00	-137.21	116.33	-112.18	73.88	38.8	38.83
	U_{32}-L_{33}	-45.52	12.59	-2.40	0.37	0.25	-0.96	-9.60	3.91	2.62	-9.68	0.00	0.00	-83.12	29.24	-19.77	19.83	15.4	15.42
	U_{33}-L_{34}	12.59	-26.40	-0.91	0.37	0.25	-0.96	-9.60	3.91	2.62	-9.68	0.00	0.00	-3.83	-29.24	19.77	48.72	17.2	17.24
	U_{34}-L_{35}	6.51	-17.79	-1.15	0.91	0.57	-1.03	-12.21	9.66	5.07	-9.03	0.00	0.00	-7.41	-10.58	16.36	-37.36	19.4	19.42
	U_{35}-L_{36}	-11.68	8.87	-1.30	0.00	0.00	0.00	-11.19	8.87	-1.30	7.12	0.00	0.00	-22.70	16.16	-1.30	1.18	0.26	-0.71
	U_{36}-L_{37}	-38.92	20.55	-1.84	1.54	-0.31	-0.40	-19.60	16.35	-3.29	-4.28	0.00	0.00	-76.08	47.97	-54.87	21.14	21.5	21.54
	U_{37}-L_{38}	-88.53	71.15	-3.45	2.89	0.40	-0.34	-33.37	27.80	-2.63	-3.60	0.00	0.00	-153.90	115.69	-113.10	84.99	38.8	38.83
	U_{38}-L_{39}	-73.32	111.68	-3.29	3.32	0.64	-0.35	-36.72	30.76	4.30	-3.64	0.00	0.00	-175.82	192.49	-135.00	148.03	46.7	46.71
	U_{39}-L_{40}	-30.91	28.19	-2.37	2.07	0.00	0.00	-30.91	28.19	-2.37	2.07	0.00	0.00	-70.40	69.24	-2.87	2.62	0.31	-0.26
	U_{40}-L_{41}	-86.92	56.40	-3.67	2.42	0.30	-0.22	-39.61	26.04	3.18	-2.29	0.00	0.00	-164.49	107.16	-108.86	70.21	38.8	38.83
	U_{41}-L_{42}	-132.02	111.68	-3.93	3.32	0.50	-0.30	-56.00	24.56	-3.00	-2.28	0.00	0.00	-240.57	198.43	-165.92	130.07	46.7	46.71
	U_{42}-L_{43}	-26.11	12.70	-1.84	1.26	0.27	-0.53	-19.87	-13.57	2.95	-5.70	0.00	0.00	-89.78	54.16	-60.98	35.78	23.9	23.94
	U_{43}-L_{44}	-13.25	7.76	-1.20	0.77	0.17	-0.33	-13.25	7.76	-1.20	0.77	0.00	0.00	-23.94	14.14	-1.20	1.01	0.26	-0.71
	U_{44}-L_{45}	-5.07	-1.80	-0.93	0.56	0.63	-1.09	-10.07	3.90	6.75	-11.33	0.00	0.00	-13.18	-18.72	8.69	-38.52	15.4	15.42
	U_{45}-L_{46}	-16.86	16.36	-1.04	-1.04	0.00	0.00	-16.86	16.36	-1.04	8.51	0.00	0.00	-33.72	32.72	-2.08	17.02	15.4	15.42
	U_{46}-L_{47}	-50.49	35.10	-1.75	1.52	-0.10	-0.79	-23.45	13.95	-3.83	-8.57	0.00	0.00	-97.96	44.93	-82.45	15.13	42.7	42.74
	U_{47}-L_{48}	-59.60	20.61	-2.19	1.29	-0.36	-0.83	-23.45	13.95	-3.83	-8.57	0.00	0.00	-107.96	44.93	-82.45	15.13	42.7	42.74
	U_{48}-L_{49}	-72.20	52.02	-2.41	1.92	-0.47	-0.32	-27.03	20.70	-5.10	-0.26	0.00	0.00	-124.80	107.16	-93.17	86.90	40.7	40.70
	U_{49}-L_{50}	-77.34	67.11	-2.51	1.92	-0.47	-0.32	-27.03	20.70	-5.10	-0.26	0.00	0.00	-135.68	114.15	-107.17	86.90	40.7	40.70
	U_{50}-L_{51}	-84.80	74.88	-2.77	2.09	-0.47	-0.32	-29.61	23.00

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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) 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 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–U_1	88.99	-88.04	-1.58	1.39	2.69	-6.80	-0.65	0.45	2.38	-2.03
	U_1–U_2	1.86	-1.81	-1.87	-0.84	0.13	0.51	-1.04	-0.49	0.42	1.86
	U_2–U_3	-130.85	58.79	0.82	2.44	-4.20	-6.52	2.20	0.80	-3.90	-1.36
	U_3–U_4	-80.24	76.71	1.54	2.32	-3.96	-5.72	-1.13	-1.04	2.05	0.33
	U_4–U_5	-26.00	75.03	1.72	2.26	-7.21	-1.94	0.47	0.77	-1.36	-0.71
	U_5–U_6	19.49	176.90	1.93	2.01	-4.70	0.63	0.62	0.72	-1.37	0.17
	U_6–U_7	39.00	62.51	1.90	1.95	-3.01	0.41	-0.80	-0.73	-0.53	-0.73
	U_7–U_8	-71.27	857.90	0.85	3.45	-5.73	5.43	-1.34	3.99	0.00	0.00
	U_8–U_9	624.45	-195.10	2.01	0.55	-4.38	-5.57	3.57	-1.52	0.00	0.00
	U_9–U_{10}	71.48	-13.72	0.91	1.65	-0.37	-5.09	0.28	0.49	0.23	-0.97
	U_{10}–U_{11}	97.31	-222.34	1.48	1.39	0.44	-2.73	0.49	0.39	0.26	1.31
	U_{11}–U_{12}	35.40	-221.08	1.72	1.28	-0.87	-8.93	0.56	0.33	0.24	-1.72
	U_{12}–U_{13}	-120.52	-238.11	1.49	0.57	-2.78	-7.72	0.44	0.14	-0.62	-1.62
	U_{13}–U_{14}	-201.52	-242.36	1.36	0.47	-2.61	-7.26	0.41	0.12	-0.58	-1.36
	U_{14}–U_{15}	-380.34	263.67	1.30	0.76	-12.85	-5.69	0.32	0.20	2.38	-1.60
	U_{15}–U_{16}	-227.22	-366.78	1.12	0.60	-4.75	0.36	-0.03	1.84	-0.24	-0.39
	U_{16}–U_{17}	-263.00	-172.61	0.50	-0.02	-10.13	-2.92	0.05	-0.04	-1.64	-0.73
	U_{17}–U_{18}	-227.07	-24.53	0.47	-0.78	0.63	0.10	-0.08	-1.48	0.22	2.53
	U_{18}–U_{19}	-214.18	21.72	0.38	-0.16	4.34	0.71	0.09	-0.06	1.43	0.48
	U_{19}–U_{20}	-229.66	-4.97	0.39	-0.39	-3.30	1.41	0.06	-0.04	-1.34	-0.03
	U_{20}–U_{21}	-419.98	-379.23	0.52	-0.25	-5.75	-8.05	0.08	-0.33	-1.90	-2.22
	U_{21}–U_{22}	-113.09	-299.12	-0.03	-0.81	-0.36	-8.45	0.00	-0.18	-1.31	-0.42
	U_{22}–U_{23}	-1.25	-0.45	-0.02	-0.01	-0.01	-0.12	0.00	0.00	-0.01	-0.01
	U_{23}–U_{24}	-433.77	-494.94	0.44	1.41	-5.39	-16.14	0.08	0.31	-1.29	-2.64
	U_{24}–U_{25}	-489.42	-543.93	0.63	2.01	-6.47	-17.97	0.11	0.44	-1.57	-3.62
	U_{25}–U_{26}	-543.33	-230.04	1.63	3.60	-7.59	-12.56	0.37	0.87	-2.15	-1.73
	U_{26}–U_{27}	-414.64	-306.81	2.70	2.33	-8.11	-13.53	0.64	0.58	-1.77	-2.26
	U_{27}–U_{28}	-389.32	-324.61	2.72	2.14	-7.94	-14.06	0.64	0.52	-1.63	-2.32
	U_{28}–U_{29}	-443.98	-59.22	2.38	3.11	-10.67	-2.67	0.49	0.82	-2.01	-0.82
	U_{29}–U_{30}	-186.00	2.81	2.21	2.21	-5.44	0.01	0.45	0.58	-1.03	0.00
	U_{30}–U_{31}	-186.00	101.73	3.27	2.82	-7.87	-2.18	0.77	0.79	-1.44	-0.29
	U_{31}–U_{32}	-149.75	284.71	2.85	2.06	-7.13	0.31	0.73	0.60	-1.58	0.29
	U_{32}–U_{33}	-60.65	60.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{33}–U_{34}	-290.99	1663.47	1.56	4.95	-0.48	-0.10	-1.34	5.47	0.00	0.00
	U_{34}–U_{35}	-1538.20	1538.20	4.93	4.93	-1.53	-1.53	5.47	5.47	0.00	0.00
	U_{35}–U_{36}	-27.64	20.42	1.03	2.22	-1.69	-9.46	-0.01	-0.26	0.00	0.00
	U_{36}–U_{37}	-301.84	301.84	1.02	1.02	-2.61	-2.61	0.00	0.00	0.00	0.00
	U_{37}–U_{38}	-186.19	-22.97	1.92	2.26	0.77	-10.00	0.46	0.70	0.18	-1.19
	U_{38}–U_{39}	-179.26	-73.23	2.53	1.82	-0.90	-9.19	0.59	0.66	0.03	-1.32
	U_{39}–U_{40}	-206.24	-67.07	2.53	1.82	-0.90	-9.19	0.59	0.66	0.03	-1.32
	U_{40}–U_{41}	-76.59	-111.03	2.20	0.17	-3.60	-8.70	0.37	0.05	0.45	-1.39
	U_{41}–U_{42}	-158.20	-180.94	1.82	-0.90	-6.98	-9.19	0.59	0.66	0.03	-1.32
	U_{42}–U_{43}	-164.13	-164.69	1.01	0.68	-13.45	-5.92	0.68	0.50	-1.67	-1.21
	U_{43}–U_{44}	-60.65	-60.65	0.00	0.00	-4.38	-5.57	0.00	0.00	0.00	0.00
	U_{44}–U_{45}	-44.00	54.78	2.05	2.19	-9.86	-3.66	0.49	0.43	0.96	-0.94
	U_{45}–U_{46}	-69.00	212.40	1.75	2.20	-7.89	-0.99	0.54	0.34	-1.17	0.41
	U_{46}–U_{47}	-86.00	86.00	1.75	1.75	-7.89	-7.89	0.54	0.54	-1.17	-1.17
	U_{47}–U_{48}	-40.57	345.28	1.55	1.46	-7.03	-0.11	-0.61	1.30	-0.46	0.63
	U_{48}–U_{49}	91.11	-205.00	1.46	0.93	-5.25	-7.41	0.30	-0.28	0.63	-1.27
	U_{49}–U_{50}	-146.81	1530.30	0.86	5.02	-0.11	-0.78	-0.97	5.60	0.00	0.00
	U_{50}–U_{51}	1613.34	-340.01	7.74	1.74	-0.97	-0.51	5.66	-1.52	0.00	0.00
	U_{51}–U_{52}	84.20	-327.18	2.89	2.43	-3.12	-10.37	0.74	0.68	-1.98	0.00
	U_{52}–U_{53}	307.33	-597.63	2.51	1.82	-0.90	-9.19	0.59	0.66	0.03	-1.32
	U_{53}–U_{54}	-358.50	-362.03	2.31	2.07	-4.92	-15.43	0.54	0.55	1.52	-2.40
	U_{54}–U_{55}	-300.96	-456.91	2.54	2.25	-15.37	-9.03	0.69	0.53	-1.72	32.40
	U_{55}–U_{56}	-307.33	-597.63	2.51	1.82	-0.90	-9.19	0.59	0.66	0.03	-1.32
	U_{56}–U_{57}	-669.38	-449.72	1.67	0.25	-12.50	-4.53	0.38	-0.04	-2.55	-1.21
	U_{57}–U_{58}	-407.37	-551.16	1.04	-0.54	-4.39	1.08	0.21	-0.18	1.89	-0.54
	U_{58}–U_{59}	-290.40	-12.26	0.81	0.83	3.85	1.56	0.20	-0.01	1.64	0.67
	U_{59}–U_{60}	-431.42	-311.55	0.38	0.27	2.33	-7.02	0.25	0.07	3.50	-2.01
	U_{60}–U_{61}	-354.47	-295.39	-0.41	-0.12	-2.52	-12.56	0.07	-0.03	0.00	0.00
	U_{61}–U_{62}	-21.98	-218.89	-0.35	0.58	1.30	-6.99	-0.12	0.40	-5.27	-0.54
	U_{62}–U_{63}	-361.39	-187.99	0.36	1.46	-4.13	-6.81	-0.02	0.37	1.24	-1.70
	U_{63}–U_{64}	-252.02	-374.51	0.96	1.46	-6.50	-11.73	0.20	0.27	-2.43	-1.36
	U_{64}–U_{65}	-444.47	-187.52	0.76	1.34	-6.43	-13.46	0.16	-0.49	-2.61	-0.78
	U_{65}–U_{66}	-186.98	640.79	0.48	3.23	-4.91	3.19	-1.47	3.55	0.00	0.00
	U_{66}–U_{67}	-290.40	-12.26	0.81	0.83	3.85	1.56	0.20	-0.01	1.64	0.67
	U_{67}–U_{68}	-431.42	-311.55	0.38	0.27	2.33	-7.02	0.25	0.07	3.50	-2.01
	U_{68}–U_{69}	-354.47	-295.39	-0.41	-0.12	-2.52	-12.56	0.07	-0.03	0.00	0.00
	U_{69}–U_{70}	-21.98	-218.89	-0.35	0.58	1.30	-6.99	-0.12	0.40	-5.27	-0.54
	U_{70}–U_{71}	-361.39	-187.99	0.36	1.46	-4.13	-6.81	-0.02	0.37	1.24	-1.70
	U_{71}–U_{72}	-252.02	-374.51	0.96	1.46	-6.50	-11.73	0.20	0.27	-2.43	-1.36
	U_{72}–U_{73}	-444.47	-187.52	0.76	1.34	-6.43	-13.46	0.16	-0.49	-2.61	-0.78
	U_{73}–U_{74}	-235.18	-84.59	0.81	1.68	-5.31	-6.67	0.14	0.46	-2.53	-0.50
	U_{74}–U_{75}	-307.33	-597.63	2.51	1.82	-0.90	-9.19	0.59	0.66	0.03	-1.32
	U_{75}–U_{76}	-214.86	128.23	1.62	1.57	-5.92	0.29	0.39	0.52	-1.79	0.34
	U_{76}–U_{77}	-186.98	640.79	0.48	3.23	-4.91	3.19	-1.47	3.55	0.00	0.00
	U_{77}–U_{78}	705.55	-109.11	1.86	1.18	8.97	-8.13	3.95	-1.35	0.00	0.00
	U_{78}–U_{79}	-120.52	-238.11	1.49	0.57	-2.78	-7.72	0.44	0.14	-0.62	-1.62
	U_{79}–U_{80}	-201.52	-242.36	1.36	0.47	-2.61	-7.26	0.41	0.12	-0.58	-1.36
	U_{80}–U_{81}	-380.34	263.67	1.30	0.76	-12.85	-5.69	0.32	0.20	2.38	-1.60
	U_{81}–U_{82}	-227.22	-366.78	1.12	0.60	-4.75	0.36	-0.03	1.84	-0.24	-0.39
	U_{82}–U_{83}	-263.00	-172.61	0.50	-0.02	-10.13	-2.92	0.05	-0.04	-1.64	-0.73
	U_{83}–U_{84}	-227.07	-24.53	0.47	-0.78	0.63	0.10	-0.08	-1.48	0.22	2.53
	U_{84}–U_{85}	-214.18	21.72	0.38	-0.16	4.34	0.71	0.09	-0.06	1.43	0.48
	U_{85}–U_{86}	-229.66	-4.97	0.39	-0.39	-3.30	1.41	0.06	-0.04	-1.34	-0.03
	U_{86}–U_{87}	-419.98	-379.23	0.52	-0.25	-5.75	-8.05	0.08	-0.33	-1.90	-2.22
	U_{87}–U_{88}	-113.09	-299.12	-0.03	-0.81	-0.36	-8.45	0.00	-0.18	-1.31	-0.42
	U_{88}–U_{89}	-1.25	-0.45	-0.02	-0.01	-0.01	-0.12	0.00	0.00	-0.01	-0.01
	U_{89}–U_{90}	-433.77	-494.94	0.44	1.41	-5.39	-16.14	0.08	0.31	-1.29	-2.64
	U_{90}–U_{91}	-489.42	-543.93	0.63	2.01	-6.47	-17.97	0.11	0.44	-1.57	-3.62
	U_{91}–U_{92}	-543.33	-230.04	1.63	3.60	-7.59	-12.56	0.37	0.87	-2.15	-1.73
	U_{92}–U_{93}	-414.64	-306.81	2.70	2.33	-8.11	-13.53	0.64	0.58	-1.77	-2.26
	U_{93}–U_{94}	-389.32	-324.61	2.72	2.14	-7.94	-14.06	0.64	0.52	-1.63	-2.32
	U_{94}–U_{95}	-443.98	-59.22	2.38	3.11	-10.67	-2.67	0.49	0.82	-2.01	-0.82
	U_{95}–U_{96}	-186.00	2.81	2.21	2.21	-5.44	0.01	0.45	0.58	-1.03	0.00
	U_{96}–U_{97}	-186.00	101.73	3.27	2.82	-7.87	-2.18	0.77	0.79	-1.44	-0.29
	U_{97}–U_{98}	-149.75	284.71	2.85	2.06	-7.13	0.31	0.73	0.60	-1.58	0.29
	U_{98}–U_{99}	-60.65	60.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{99}–U_{100}	-290.99	1663.47	1.56	4.95	-0.48	-0.10	-1.34	5.47	0.00	0.00
	U_{100}–U_{101}	-1538.20	1538.20	4.93	4.93	-1.53	-1.53	5.47	5.47	0.00	0.00
	U_{101}–U_{102}	-27.64	20.42	1.03	2.22	-1.69	-9.46	-0.01	-0.26	0.00	0.00
	U_{102}–U_{103}	-301.84	301.84	1.02	1.02	-2.61	-2.61	0.00	0.00	0.00	0.00
	U_{103}–U_{104}	-186.19	-22.97	1.92	2.26	0.77	-10.00	0.46	0.70	0.18	-1.19
	U_{104}–U_{105}	-179.26	-73.23	2.53	1.82	-0.90	-9.19	0.59	0.66	0.03	-1.32
	U_{105}–U_{106}	-206.24	-67.07	2.53	1.82	-0.90	-9.19	0.59	0.66	0.03	-1.32
	U_{106}–U_{107}	-76.59	-111.03	2.20	0.17	-3.60	-8.70	0.37	0.05	0.45	-1.39
	U_{107}–U_{108}	-158.20	-180.94	1.82	-0.90	-6.98	-9.19	0.59	0.66	0.03	-1.32
	U_{108}–U_{109}	-164.13	-164.69	1.01	0.68	-13.45	-5.92	0.68	0.50	-1.67	-1.21
	U_{109}–U_{110}	-60.65	-60.65	0.00	0.00	-4.38	-5.57	0.00	0.00	0.00	0.00
	U_{110}–U_{111}	-44.00	54.78	2.05	2.19	-9.86	-3.66	0.49	0.43	0.96	-0.94
	U_{111}–U_{112}	-69.00	212.40	1.75	2.20	-7.89	-0.99	0.54	0.34	-1.17	0.41
	U_{112}–U_{113}	-86.00	86.00	1.75	1.75	-7.89	-7.89	0.54	0.54	-1.17	-1.17
	U_{113}–U_{114}	-40.57	345.28	1.55	1.46	-7.03	-0.11	-0.61	1.30	-0.46	0.63
	U_{114}–U_{115}	91.11	-205.00	1.46	0.93	-5.25	-7.41	0.30	-0.28	0.63	-1.27
	U_{115}–U_{116}	-146.81	1530.30	0.86	5.02	-0.11	-0.78	-0.97	5.60	0.00	0.00
	U_{116}–U_{117}	1613.34	-340.01	7.74	1.74	-0.97	-0.51	5.66	-1.52	0.00	0.00
	U_{117}–U_{118}	84.20	-327.18	2.89	2.43	-3.12	-10.37	0.74	0.68	-1.98	0.00
	U_{118}–U_{119}	307.33	-597.63	2.51	1.82	-0.90	-9.19	0.59	0.66	0.03	-1.32
	U_{119}–U_{120}	-358.50	-362.03	2.31	2.07	-4.92	-15.43	0.54	0.55	1.52	-2.40
	U_{120}–U_{121}	-300.96	-456.91	2.54	2.25	-15.37	-9.03	0.69	0.53	-1.72	32.40
	U_{121}–U_{122}	-307.33	-597.63	2.51	1.82	-0.90	-9.19	0.59	0.66	0.03	-1.32
	U_{122}–U_{123}	-669.38	-449.72	1.67	0.25	-12.50	-4.53	0.38	-0.04	-2.55	-1.21
	U_{123}–U_{124}	-407.37	-551.16	1.04	-0.54	-4.39	1.08	0.21	-0.18	1.89	-0.54
	U_{124}–U_{125}	-290.40	-12.26	0.81	0.83	3.85	1.56	0.20	-0.01	1.64	0.67
	U_{125}–U_{126}	-431.42	-311.55	0.38	0.27	2.33	-7.02	0.25	0.07	3.50	-2.01
	U_{126}–U_{127}	-354.47	-295.39	-0.41	-0.12	-2.52	-12.56	0.07	-0.03	0.00	0.00
	U_{127}–U_{128}	-21.98	-218.89	-0.35	0.58	1.30	-6.99	-0.12	0.40	-5.27	-0.54
	U_{128}–U_{129}	-361.39	-187.99	0.36	1.46	-4.13	-6.81	-0.02	0.37	1.24	-1.70
	U_{129}–U_{130}	-252.02	-374.51	0.96	1.46	-6.50	-11.73	0.20	0.27	-2.43	-1.36
	U_{130}–U_{131}	-444.47	-187.52	0.76	1.34	-6.43	-13.46	0.16	-0.49	-2.61	-0.78
	U_{131}–U_{132}	-235.18	-84.59	0.81	1.68	-5.31	-6.67	0.14	0.46	-2.53	-0.50
	U_{132}–U_{133}	-307.33	-597.63	2.51	1.82	-0.90	-9.19	0.59	0.66	0.03	-1.32
	U_{133}–U_{134}	-214.86	128.23	1.62	1.57	-5.92	0.29	0.39	0.52	-1.79	0.34
	U_{134}–U_{135}	-186.98	640.79	0.48	3.23	-4.91	3.19	-1.47	3.55	0.00	0.00
	U_{135}–U_{136}	705.55	-109.11	1.86	1.18	8.97	-8.13	3.95	-1.35	0.00	0.00
	U_{136}–U_{137}	53.54	85.06	1.11	1.82	-0.73	-6.11	0.40	0.66	-0.20	-0.87
	U_{137}–U_{138}	156.64	-12.62	1.75	1.67	-0.81	-5.86	0.70	0.62	0.15	-1.34
	U_{138}–U_{139}	46.75	-46.31	1.93	1.68	-2.13	-7.80	0.74	0.52	-0.74	-1.39
	U_{139}–U_{140}	57.88	-78.76	2.27	1.27	-6.89	-4.04	0.74	0.46	-1.03	-1.25
	U_{140}–U_{141}	20.58	-172.42	2.08	0.54	-6.96	-3.56	0.76	0.23	-1.42	-1.15
	U_{141}–U_{142}	-101.33	-63.03	1.46	0.12	-7.41	-1.15	0.53	0.02	-1.79	-0.65
	U_{142}–U_{143}	-55.81	-170.19	0.88	-0.40	-2.82	0.43	0.26	0.12	-1.52	-0.15

ZZ Axis Moment Properties

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	S_{bf} (in^3)	I (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term = F_y*S_bf	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(x)}$	Equivalent Mom. Factor $C_{b(m)}$
Structure 1	U_0–U_1	88.99	-88.04	1.53	1.91	-7.18	-1.07	0.30	0.99	-1.62	-0.15
	U_1–U_2	1.86	-1.81	1.57	-0.92	0.29	0.39	0.52	-1.79	0.34	2.01
	U_2–U_3	-130.85	58.79	0.82	2.44	-4.20	-6.52	2.20	0.80	-3.90	-1.36
	U_3–U_4	-80.24	76.71	1.54	2.32	-3.96	-5.72	-1.13	-1.04	2.05	0.33
	U_4–U_5	-26.00	75.03	1.72	2.26	-7.21	-1.94	0.47	0.77	-1.36	-0.71
	U_5–U_6	19.49	176.90	1.93	2.01	-4.70	0.63	0.62	0.72	-1.37	0.17
	U_6–U_7	39.00	62.51	1.90	1.95	-3.01	0.41	-0.80	-0.73	-0.53	-0.73
	U_7–U_8	-71.27	857.90	0.85	3.45	-5.73	5.43	-1.34	3.99	0.00	0.00
	U_8–U_9	624.45	-195.10	2.01	0.55	-4.38	-5.57	3.57	-1.52	0.00	0.00
	U_9–U_{10}	71.48	-13.72	0.91	1.65	-0.37	-5.09	0.28	0.49	0.23	-0.97
	U_{10}–U_{11}	97.31	-222.34	1.48	1.39	0.44	-2.73	0.49	0.39	0.26	1.31
	U_{11}–U_{12}	35.40	-221.08	1.72	1.28	-0.87	-8.93	0.56	0.33	0.24	-1.72
	U_{12}–U_{13}	-120.52	-238.11	1.49	0.57	-2.78	-7.72	0.44	0.14	-0.62	-1.62
	U_{13}–U_{14}	-201.52	-242.36	1.36	0.47	-2.61	-7.26	0.41	0.12	-0.58	-1.36
	U_{14}–U_{15}	-380.34	263.67	1.30	0.76	-12.85	-5.69	0.32	0.20	2.38	-1.60
	U_{15}–U_{16}	-227.22	-366.78	1.12	0.60	-4.75	0.36	-0.03	1.84	-0.24	-0.39
	U_{16}–U_{17}	-263.00	-172.61	0.50	-0.02	-10.13	-2.92	0.05	-0.04	-1.64	-0.73
	U_{17}–U_{18}	-227.07	-24.53	0.47	-0.78	0.63	0.10	-0.08	-1.48	0.22	2.53
	U_{18}–U_{19}	-214.18	21.72	0.38	-0.16	4.34	0.71	0.09	-0.06	1.43	0.48
	U_{19}–U_{20}	-229.66	-4.97	0.39	-0.39	-3.30	1.41	0.06	-0.04	-1.34	-0.03
	U_{20}–U_{21}	-419.98	-379.23	0.52	-0.25	-5.75	-8.05	0.08	-0.33	-1.90	-2.22
	U_{21}–U_{22}	-113.09	-299.12	-0.03	-0.81	-0.36	-8.45	0.00	-0.18	-1.31	-0.42
	U_{22}–U_{23}	-1.25	-0.45	-0.02	-0.01	-0.01	-0.12	0.00	0.00	-0.01	-0.01
	U_{23}–U_{24}	-433.77	-494.94	0.44	1.41	-5.39	-16.14	0.08	0.31	-1.29	-2.64
	U_{24}–U_{25}	-489.42	-543.93	0.63	2.01	-6.47	-17.97	0.11	0.44	-1.57	-3.62
	U_{25}–U_{26}	-543.33	-230.04	1.63	3.60	-7.59	-12.56	0.37	0.87	-2.15	-1.73
	U_{26}–U_{27}	-414.64	-306.81	2.70	2.33	-8.11	-13.53	0.64	0.58	-1.77	-2.26
	U_{27}–U_{28}	-389.32	-324.61	2.72	2.14	-7.94	-14.06	0.64	0.52	-1.63	-2.32
	U_{28}–U_{29}	-443.98	-59.22	2.38	3.11	-10.67	-2.67	0.49	0.82	-2.01	-0.82
	U_{29}–U_{30}	-186.00	2.81	2.21	2.21	-5.44	0.01	0.45	0.58	-1.03	0.00
	U_{30}–U_{31}	-186.00	101.73	3.27	2.82	-7.87	-2.18	0.77	0.79	-1.44	-0.29
	U_{31}–U_{32}	-149.75	284.71	2.85	2.06	-7.13	0.31	0.73	0.60	-1.58	0.29
	U_{32}–U_{33}	-60.65	60.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{33}–U_{34}	-290.99	1663.47	1.56	4.95	-0.48	-0.10	-1.34	5.47	0.00	0.00
	U_{34}–U_{35}	-1538.20	1538.20	4.93	4.93	-1.53	-1.53	5.47	5.47	0.00	0.00
	U_{35}–U_{36}	-27.64	20.42	1.03	2.22	-1.69	-9.46	-0.01	-0.26	0.00	0.00
	U_{36}–U_{37}	-301.84	301.84	1.02	1.02	-2.61	-2.61	0.00	0.00	0.00	0.00
	U_{37}–U_{38}	-186.19	-22.97	1.92	2.26	0.77	-10.00	0.46	0.70	0.18	-1.19
	U_{38}–U_{39}	-179.26	-73.23	2.53	1.82	-0.90	-9.19	0.59	0.66	0.03	-1.32
	U_{39}–U_{40}	-206.24	-67.07	2.53	1.82	-0.90	-9.19	0.59	0.66	0.03	-1.32
	U_{40}–U_{41}	-76.59	-111.03	2.20	0.17	-3.60	-8.70	0.37	0.05	0.45	-1.39
	U_{41}–U_{42}	-158.20	-180.94	1.82	-0.90	-6.98	-9.19	0.59	0.66	0.03	-1.32
	U_{42}–U_{43}	-164.13	-164.69	1.01	0.68	-13.45	-5.92	0.68	0.50	-1.67	-1.21
	U_{43}–U_{44}	-60.65	-60.65	0.00	0.00	-4.38	-5.57	0.00	0.00	0.00	0.00
	U_{44}–U_{45}	-44.00	54.78	2.05	2.19	-9.86	-3.66	0.49	0.43	0.96	-0.94
	U_{45}–U_{46}	-

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: 3F1
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
Gusset Plate Checked 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 Yes/Controls/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 (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_b (in^3)	Z_z (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula I.8 Terms * F_y/S_top	M_u (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor C_{mm}	Pass
Structure 1	L_0-L_1	-19.48	-91.69	0.43	-0.26	1.68	-1.48	-0.11	0.13	0.00	-0.64	5.77	-3.47	22.48	19.72	-3.37	1.50	3.54	-7.68	-17.82	-123.71	3.91	-144.83	83.6	83.58	74.65	100.97	2577	1626.3	1.21	3332	0.99000094	2755.4	-0.027	0.59	0.59	Y
	L_1-L_2	30.30	-116.56	-1.19	-0.25	-0.42	1.52	-0.07	-1.33	0.16	-1.43	15.84	-83.55	-5.64	20.25	-8.82	-15.98	-1.86	5.14	-18.79	-260.15	32.06	-125.20	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99000094	2755.4	-0.027	0.57	0.57	Y
	L_2-L_3	32.97	-78.01	0.50	1.66	-1.04	-1.27	-0.21	0.25	-1.35	-73.45	12.37	21.85	-12.47	15.23	2.57	5.99	-23.77	-166.96	-115.68	-73.51	99.15	99.10	91.00	93.45	84.14	129.49	3409	1372.0	1.26	4141	0.99991188	3294.8	0.292	0.72	0.72	Y
	L_3-L_4	-65.02	14.74	-6.37	-4.38	0.64	2.75	-1.19	-1.34	0.23	0.86	-85.06	-98.50	11.17	36.77	-14.24	-16.13	2.75	10.34	-195.11	-66.89	-70.01	66.95	99.9	99.93	84.14	129.49	3409	1372.0	1.26	4141	0.99991188	3294.8	0.292	0.72	0.72	Y
	L_4-L_5	-50.69	-234.13	-0.62	-0.42	-0.09	0.63	0.72	-0.03	-0.12	-0.32	29.39	-26.56	17.81	-1.08	2.19	1.84	-184.84	-266.87	-267.87	-267.87	-267.87	-267.87	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	0.00	0.00	Y
	L_5-L_6	-2.17	269.23	-2.35	-1.84	1.61	3.94	-0.84	0.05	0.53	1.12	-31.42	-24.60	21.52	40.57	-10.07	0.55	6.36	13.39	-43.67	318.03	25.16	402.74	104.6	104.58	95.61	136.57	4090	1678.1	1.31	4520	0.99952345	3948.5	0.062	0.62	0.62	Y
	L_6-L_7	-4.79	54.79	-2.31	-1.40	1.46	1.61	-0.82	-0.02	-0.29	-0.14	-38.62	-31.43	21.52	40.57	-10.07	0.55	6.36	13.39	-43.67	-45.93	26.64	29.74	104.6	104.58	95.61	136.57	4090	1678.1	1.31	4520	0.99952345	4776.0	-0.892	0.59	0.59	Y
	L_7-L_8	-38.81	57.46	0.24	-1.04	0.09	-4.14	0.00	0.00	0.35	3.66	3.18	-13.95	1.19	59.31	0.00	0.00	-4.19	43.86	-46.32	724.76	-54.35	78.47	145.8	145.75	130.44	228.84	6500	2932.4	1.57	7552	0.99952915	4806.3	-0.664	0.57	0.57	Y
	L_8-L_9	555.91	-39.94	-0.94	0.23	4.90	-0.16	0.00	0.00	-0.41	-0.27	-12.11	0.03	63.40	-2.07	0.00	0.00	-40.87	-3.26	504.90	-50.41	-203.31	285.03	713.74	145.8	130.44	228.84	6500	2932.4	1.57	7552	0.99952915	4806.3	0.834	0.93	0.93	Y
	L_9-L_{10}	185.62	-153.59	0.79	-0.22	2.28	-1.22	0.00	0.00	-0.13	-0.05	-12.26	2.71	26.43	-15.84	0.00	0.00	-13.63	-1.09	154.80	-53.39	213.29	144.9	144.85	129.09	192.84	5210	2376.8	1.51	6364	0.99949164	4776.1	0.748	0.90	0.90	Y
	L_{10}-L_{11}	164.49	-164.37	-1.91	-3.01	1.96	1.10	0.00	0.00	1.00	-0.73	-24.03	-38.89	25.37	14.28	0.00	0.00	0.00	11.59	-8.74	181.79	-264.22	262.40	221.05	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.99913812	3252.5	-0.688	0.32	0.32	Y
	L_{11}-L_{12}	78.56	-201.18	1.13	-4.77	2.29	0.16	-1.26	0.42	0.25	-0.26	-14.06	-61.75	16.65	12.56	0.00	0.00	-13.25	2.05	-214.25	-408.72	294.82	344.32	243.17	92.58	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.99913812	3252.5	-0.021	0.59	0.59	Y
	L_{12}-L_{13}	-57.21	170.41	-4.39	-4.59	1.43	0.72	-0.57	-0.97	0.43	0.20	-56.76	-59.40	18.50	25.68	-5.76	1.18	-11.64	5.16	2.41	-148.16	-288.75	-50.31	-209.48	130.1	130.08	121.10	170.72	3885	1793.2	1.31	5634	0.99952915	4288.6	0.486	0.80	0.80	Y
	L_{13}-L_{14}	70.10	-469.56	-4.01	-6.26	1.10	0.98	-0.45	-0.28	0.35	0.23	-51.93	-106.68	14.28	12.69	-5.44	-27.34	4.18	2.75	23.62	-749.41	109.70	-593.96	162.9	162.89	147.19	219.93	6087	2613.8	1.35	7258	0.99991006	5316.6	-0.032	0.59	0.59	Y
	L_{14}-L_{15}	-489.53	131.76	-5.04	-2.54	0.98	1.09	-0.34	-0.56	0.21	0.26	-30.53	-64.37	11.52	27.50	-3.51	6.79	-544.69	-324.66	-323.33	-276.36	-261.57	-237.58	-343.08	-344.19	-344.19	-344.19	-344.19	-344.19	-344.19	-344.19	-344.19	-344.19	-344.19	-344.19	-344.19	-344.19	-344.19	Y
	L_{15}-L_{16}	-272.75	-394.04	-5.72	-6.83	0.37	0.66	-1.43	-1.04	0.13	-0.03	-74.02	-88.40	4.80	8.56	-1.85	8.14	-17.14	-12.53	1.55	-35.05	-570.17	-348.34	-449.10	179.7	179.69	170.68	241.43	5743	3050.7	1.40	8297	0.99912332	5924.6	0.784	0.91	0.91	Y
	L_{16}-L_{17}	-38.88	139.98	2.41	0.37	-1.26	-0.12	0.05	0.07	-0.03	-0.01	-25.75	-12.76	8.46	-0.60	-15.16	-1.42	6.61	-0.86	-257.49	-44.56	-495.51	60.79	153.89	153.89	138.16	206.43	5502	2460.7	1.34	6972	0.99914147	5073.3	0.422	0.70	0.70	Y
	L_{17}-L_{18}	-202.30	201.51	-0.65	-0.28	0.20	0.05	-0.91	0.20	0.00	0.00	-6.66	-16.86	2.29	0.00	0.00	0.00	-273.87	21.84	-259.69	27.52	121.1	121.08	112.11	157.22	3591	1640.0	1.30	5188	0.99904448	3891.8	-0.080	0.57	0.57	Y
	L_{18}-L_{19}	-240.68	180.28	-1.26	-0.33	0.00	0.06	-0.06	-1.10	0.07	-0.28	-6.48	-0.32	0.00	0.00	-0.07	-13.22	0.84	-334.04	-234.56	-324.12	-324.43	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99000094	2755.4	-0.313	0.32	0.32	Y
	L_{19}-L_{20}	-192.40	90.95	-0.61	-0.11	0.04	-2.29	1.52	0.06	-0.06	-0.23	2.86	-7.83	-1.41	-30.96	19.64	0.76	-0.67	-14.80	10.28	-260.29	116.40	-309.60	-211.21	74.2	74.23	67.49	92.84	2740	972.0	1.25	3094	0.99912332	2447.4	0.682	0.87	0.87	Y
	L_{20}-L_{21}	26.60	-260.09	0.25	-0.15	1.04	-2.29	-0.05	0.10	0.35	-1.08	3.19	-1.93	13.30	-29.31	-9.56	-1.20	4.18	-12.92	38.73	-340.82	57.29	-20.33	122.0	122.01	103.28	148.52	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.114	0.55	0.55	Y
	L_{21}-L_{22}	201.84	-347.07	-0.96	-0.45	1.27	-0.12	-0.17	-0.14	0.11	-0.04	-5.88	-5.08	-0.25	-1.48	1.86	-253.08	-344.39	-318.56	-318.56	-318.56	-318.56	-318.56	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	Y
	L_{22}-L_{23}	7.16	-277.32	-1.44	-5.79	-0.45	0.73	-0.23	-1.18	-0.13	0.17	-18.41	-24.03	-5.71	-3.01	2.78	-14.17	-1.60	2.04	-14.62	-496.75	1.89	-348.41	162.3	162.3	141.58	209.67	4946	2152.2	1.29	6919	0.99904248	5357.2	0.032	0.61	0.61	Y
	L_{23}-L_{24}	16.19	-473.24	2.40	-1.67	0.39	-0.28	-0.39	-1.26	0.29	-0.42	-13.62	-2.83	13.30	-29.31	-9.56	-1.20	4.18	-12.92	38.73	-340.82	57.29	-20.33	122.0	122.01	103.28	148.52	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.114	0.55	0.55	Y
	L_{24}-L_{25}	-367.51	-421.35	-9.73	-8.72	0.35	1.33	-1.24	-1.72	0.04	0.02	-124.37	-111.38	-4.46	16.97	-14.87	-20.62	0.43	3.78	-639.44	-692.55	-471.97	-525.69	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10583	0.99952244	5746.8	0.523	0.97	0.97	Y
	L_{25}-L_{26}	-215.09	-584.41	-9.30	-7.07	0.32	1.42	-1.24	-1.72	0.04	0.02	-118.85	-134.52	-7.03	16.97	-14.87	-26.02	0.43	3.78	-639.44	-643.39	-471.97	-577.15	-343.08	-344.19	-344.19	-344.19	-344.19	-344.19	-344.19	-344.19	-344.19	-344.19	-344.19	-344.19	-344.19	-344.19	-344.19	Y
	L_{26}-L_{27}	-619.43	-397.04	-13.62	-8.76	2.19	2.39	-2.41	-2.51	0.47	0.59	-173.95	-111.93	-28.33	0.26	-28.40	-24.11	5.63	7.06	-1031.75	-401.49	-1007.61	-768.82	-424.56	216.3	216.33	205.74	344.19	7625	3425.8	1.99	13778	0.99912332	5924.6	0.784	0.91	0.91	Y
	L_{27}-L_{28}	-394.52	-7.37	-8.94	-6.34	1.94	3.61	-1.56	-0.96	0.46	0.60	-155.45	-114.18	-21.32	5.60	10.76	-681.31	-114.95	-480.73	50.33	255.7	205.71	195.15	274.47	5445	2642.2	1.33	9057	0.99895427	6781.3	0.174	0.67	0.67	Y
	L_{28}-L_{29}	-324.29	260.70	-7.41	-5.03	1.43	2.57	-1.11	-0.69	0.33	0.43	-64.37	-71.55	-21.32	27.50	-3.51	6.79	-544.69	-324.66	-323.33	-276.36	-261.57	-237.58	-343.08	-344.19	-344.19	-344.19	-344.19	-344.19	-344.19	-344.19	-344.19	-344.19	-344.19	-344.19	-344.19	-344.19	-344.19	Y
	L_{29}-L_{30}	-295.59	262.58	-4.43	-3.28	1.75	3.35	-1.43	-0.05	0.41	0.92	-56.05	-41.88	22.38	-33.16	-17.12	-2.60	4.53	10.98	-457.58	-286.95	-355.16	397.46	149.0	149.01	130.61	189.42	4703	1908.4	1.27	6251	0.99912332	4912.7	-0.027	0.35	0.35	Y
	L_{30}-L_{31}	-139.88	264.11	-3.15	-1.90	1.37	1.24	-0.52	-0.75	0.27	0.31	-37.48	-17.18	3.96	7.09	6.95	-537.62	528.69	-203.30	37.47	138.21	107.19	123.22	4264	1707.4	1.25	5756	0.99952345	6335.2	-0.432	0.30	0.30	Y
	L_{31}-L_{32}	-188.97	586.21	-0.51	-0.84	1.76	3.46	0.00	-0.58	1.89	-6.45	-10.74	22.51	44.22	0.00	0.00	0.00	-6.97	22.61	-254.04	748.10	-229.45	-158.78	165.6	165.55	155.01	222.43	5842	2444.6	1.34	7340	0.99916217	5408.6	-0.340	0.46	0.46	Y
	L_{32}-L_{33}	-139.46	-276.11	-0.85	0.06	2.47	-2.29	0.00	0.00	0.00	-0.23	-12.00	10.87	0.00	0.00	0.00	-2.70	-14.68	-181.14	-358.01	-129.60	-224.10	220.12	220.12	220.12	220.12	220.12	220.12	220.12	220.12	220.12	220.12	220.12	220.12	220.12	220.12	220.12	220.12	Y
	L_{33}-L_{34}	473.29	1361.66	-0.86	-0.25	2.47	-2.29	0.00	0.00	0.00	-0.23	-12.00	10.87	0.00	0.00	0.00	-2.70	-14.68	-181.14	-358.01	-129.60	-224.10	220.12	249.40	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99900008	8222.2	0.884	0.95	0.95	Y
	L_{34}-L_{35}	1356.12	-488.32	-0.51	-0.26	0.60	-0.59	0.00	0.00	0.00	-1.83	-6.48	-3.27	83.34	-7.39	0.00	0.00	0.00	60.66	-21.96	1754.54	-639.07	1950.16	1724.81	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99900008	8222.2	0.884	0.95	0.95	Y
	L_{35}-L_{36}	396.66	-69.16	-0.30	-0.13	0.21	0.21	0.00	0.00	0.00	-0.53	-2.21	-1.01	29.53	-2.62	0.00	0.00	0.00	21.13	-7.56	616.19	-224.46	685.12	605.74	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99900008	8222.2	0.884	0.95	0.95	Y
	L_{36}-L_{37}	579.83	-109.25	-2.56	-2.71	2.84	1.33	0.00	0.00	0.00	0.00	-2.03	-0.54	-32.35	-34.21	35.84	16.84	0.00	0.00	0.00	24.30	-6.43	-471.21	-128.60	-831.97	767.31	180.3	180.26	169.70	243.07	6400	2721.8	1.36	9717	0.99912332	5924.6	0.784	0.91	0.91	Y
	L_{37}-L_{38}	1.27	-0.01	-0.01	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	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	0.00	Y
	L_{38}-L_{39}	275.68	-101.76	-4.37	-3.86	2.96	1.33	-0.11	-0.89	1.05	-0.58	-55.12	-48.70	37.26	37.28	-1.28	-10.63	12.56	-6.94	-286.72	-195.60	-406.81	-109.82	127.4	127.41	117.62	167.52	3868	1501.0	1.23	5182	0.99898888	4200.3	-0.279	0.45	0.49	Y
	L_{39}-L_{40}	209.89	-114.91	-2.86	-1.72	1.72	2.01	-0.29	-1.04	0.42	0.64	-36.07	-47.42	21.69	-35.28	-3.53	-12.42	5.68	7.72	-275.36	-276.02	301.05	-316.39	127.4	127.41	117.62	167.52	3868	1501.0	1.23	5182	0.99898888	4200.3	-0.387	0.40	0.45	Y
	L_{40}-L_{41}	-121.67	68.47	-1.67	-1.00	0.79	1.16	-0.17	-0.51	0.24	0.37	-21.04	-27.38	12.64	-20.56	-2.06	-7.24	3.31	4.50	-160.49	-113.72	175.49	-184.55	74.3	74.26	68.55	97.66	2255	875.2	1.23	3021	0.99912332	2876.4	-0.387	0.40	0.45	Y
	L_{41}-L_{42}	-33.73	318.64	-6.94	-10.69	1.45	1.17	-0.99	-2.03	0.43	0.76	-87.64	-134.59	18.26	14.78	-11.90	-24.31	5.11	9.08	-157.78	-589.72	-28.01	-355.02	161.2	161.16	142.40	207.64	4974	2128.2	1.29	6852	0.99905738	5313.3	0.268	0.71	0.71	Y
	L_{42}-L_{43}	326.90	-284.41	-5.92	-4.50	1.45	1.17	-0.99	-2.03	0.43	0.76	-87.64	-134.59	18.26	14.78	-11.90	-24.31	5.11	9.08	-157.78	-589.72	-28.01	-355.02	161.2	161.16	142.40	207.64	4974	2128.2	1.29	6852	0.99905738	5313.3	0.268	0.71	0.71	Y
	L_{43}-L_{44}	-183.23	53.46	-5.48	-6.90	1.18	2.54	-1.14	-0.36	0.42	0.44	-69.20	-87.60	14.90	32.00	-13.72	-4.37	4.99	5.29	-328.15	-43.67	-218.83	111.10	161.2	161.16	142.40	207.64	4974	2128.2	1.29	6852	0.99905738	5313.3	0.133	0.65	0.65	Y
	L_{44}-L_{45}	-68.17	29.87	-6.30	-7.07	1.18	2.54	-1.14	-0.36	0.42	0.44	-69.20	-87.60	14.90	32.00	-13.72	-4.37	4.99	5.29	-328.15	-43.67	-218.83	111.10	161.2	161.16	142.40	207.64	4974	2128.2	1.29	6852	0.99905738	5313.3	0.133	0.65	0.65	Y
	L_{45}-L_{46}	-100.74	310.70	-1.13	-1.78	1.32	2.69	0.00	-0.56	1.26	-14.23	-22.49	16.70	33.92	0.00	0.00	0.00	-6.77	15.17	-149.49	374.68	-109.25	448.01	127.4	127.41	117.62	167.52	3868	1501.0	1.23	5182	0.99898888	4200.3	-0.244	0.50	0.50	Y
	L_{46}-L_{47}	-69.72	308.73	-2.19	0.24	2.27	0.80	0.00	0.00	-0.22	0.85	-27.64	3.03	26.65	10.07	0.00	0.00	-2.65	10.24	-114.86	605.29	-45.14	532.53	149.0	149.01	130.61	189.42	4703	1908.4	1.27	6251	0.99912332	4912.7	-0.283	0.49	0.49	Y
	L_{47}-L_{48}	29.05	84.64	-0.78	-0.39	0.00	0.00	0.00	0.00	0.00	0.00	-0.22	0.85	-27.64	3.03	26.65	10.07	0.00	0.00	0.00	2.65	10.24	-114.86	605.29	-45.14	532.53	149.0	149.01	130.61	189.42	4703	1908.4	1.27	6251	0.99912332	4912.7	-0.283	0.49	0.49	Y
	L_{48}-L_{49}	-18.47	438.87	-1.95	0.28	0.61	2.00	0.00	0.00	0.00	-1.50	-24.67	3.52	7.64	25.30	0.00	0.00	0.00	0.40	-17.56	-56.05	-565.96	-13.56	-14.47	226.0	225.96	215.39	304.84	7460	3191.4	1.35	10060	0.99897781	7449.1	-0.059	0.64	0.64	Y
	L_{49}-L_{50}	0.01	0.47	-1.98	-1.25	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	-0.01	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Y
	L_{50}-L_{51}	1437.37	-471.51	-2.49	1.27	6.60	-0.89	0.00	0.00	0.00	0.29	-7.88	-31.80	16.19	84.27	-11.32	0.00	0.00	0.00	63.50	-22.36	1827.24	-691.91	2060.69	1824.53	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99900008	8222.2	0.884	0.95	0.95	Y
	L_{51}-L_{52}	-253.75	-181.16	1.50	-0.57	1.27	-1.02	0.00	0.00	0.00	-0.40	-19.19	-7.32	16.21	-10.01	-2.63	-3.87	0.00	0.00	-14.52	-4.84	-304.93	-245.03	-327.68	-353.15	226.0	225.96	215.39	304.84	7460	3191.4	1.35	10060	0.99897781	7449.1	0.559	0.64	0.64	Y
	L_{52}-L_{53}	0.01	0.47	-1.98	-1.25	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	-0.01	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Y
	L_{53}-L_{54}	350.20	-203.85	-0.04	-1.34	1.25	2.56	0.00	0.00	0.00	0.00	-75.47	-20.32	0.00	0.00	0.00	0.00	10.04	-5.56	-554.42	-232.47	-476.10	-222.47	138.2	138.21	119.70	173.22	4364	1707.4	1.25	5756	0.99904145	4598.4	-0.407	0.41	0.41	Y
	L_{54}-L_{55}	0.01	0.47	-1.98	-1.25	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	-0.01	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Y
	L_{55}-L_{56}	-620.48	-212.54	-12.49	-6.27	1.56	0.42	-2.14	-1.36	0.38	0.07	-159.55	-80.13	19.88	54.42	-23.69	-16.28	4.58	7.18	-1014.04	-380.48	-760.78	-269.26	197.7	197.72	175.89	341.80	7583	3368.5	1.73	11279	0.99917356	6519.3	0.375	0.75	0.75	Y
	L_{56}-L_{57}	-434.07	-326.96	-9.24	-6.15	1.56	0.42	-2.14	-1.36	0.38	0.07	-159.55	-80.13	19.88	54.42	-23.69	-16.28	4.58	7.18	-1014.04	-380.48	-760.78	-269.26	197.7	197.72	175.89	341.80	7583	3368.5	1.73	11279	0.99917356	6519.3	0.375	0.75	0.75	Y
	L_{57}-L_{58}	497.52	30.07	-8.18	-6.04	0.94	-0.05	-1.31	-0.26	0.11	-0.10	-104.47	-0.52	12.01	-0.68	-13.77	-3.06	1.28	-1.16	-706.36	-39.06	-579.13	38.86	184.0	184.00	168.45	254.86	6704	2811.8	1.38	9410	0.99904248	5357.2	0.032	0.61	0.61	Y
	L_{58}-L_{59}	1.27	-0.01	-0.01	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	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	0.00	Y
	L_{59}-L_{60}	-332.43	186.70	-4.36	1.45	0.73	-0.13	-1.04	0.21	0.00	0.00	-50.65	-18.58	9.35	-1.71	-12.50	2.52	0.00	0.00	-504.51	266.86	-420.00	240.48	122.0	122.01	103.28	148.52	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.529	0.35	0.35	Y
	L_{60}-L_{61}	1.27	-0.01	-0.01	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	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	0.00	Y
	L_{61}-L_{62}	53.61	-162.26	-0.06	-0.36	1.28	-1.78	-0.06	0.04	0.13	0.09	-0.79	-4.59	16.57	22.98	-0.67	0.50	6.41	-11.82	68.72	19.61	99.57	24.46	83.6	83.58	67.49	100.97	2740	1098.2	1.21	3332	0.99950592	2755.5	-0.750	0.30	0.30	Y
	L_{62}-L_{63}	-192.76	-240.13	-0.22	-1.01	1.07	-1.01	0.10	0.04	0.65	-1.12	-2.89	-13.03	13.90	-13.08	-1.14	4.49	7.85	-13.45	-246.84	-329.11	-218.85	216.09	83.6	83.58	74.62	100.97	2740	1098.2	1.21	3332	0.99950592	2755.5	-0.750	0.30	0.30	Y
	L_{63}-L_{64}	1.27	-0.01	-0.01	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.

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

Loading:	3F1
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 (Min) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Start (k-ft)	Impact Pedestrian Load End (k-ft)	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)	$I_{t/t}$ (in^4)	Shape Factor f	M_p (k-in)	Formula f & Terms F_y/S_x	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(a)}$	Equivalent Mom. Factor $C_{m(b)}$	Pass
Structure 1	U_0~L_1	-15.73	54.50	0.00	-0.48	2.45	2.31	0.03	-0.13	-0.04	0.43	2.63	-6.41	-32.77	30.63	0.34	-1.55	-0.48	5.10	-17.03	62.51	83.05	110.93	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.568	0.37	0.37	529.29	39.52	1.06	0.34	-35.62	-11.43	0.12	0.04	1.77	0.57	14.89	4.53	-675.91	-152.65	1.81	0.58	26.29	8.43	178.59	57.26	-458.41	-147.07	94.0	93.99	93.97	104.66	65.3	1.11	3454	237	0.9832467	2993.9	0.321	0.73	0.73	—	—	—

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: 3F1
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

M_7 Information

| Location | | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Max) End (k-in) | Lane Reduction & Impact Live Load 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) | $I_{x/c}$ (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 $C_{m(x)}$ | $C_{m(x)}$ | 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. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{req} (in^3) | S_y (in^3) | Z_y (in^3) | $I_{y/c}$ (in^4) | Shape Factor | M_p (k-in) | P_{crit} (k) | Formula 1.8 Term * F_y/S_y | M_n (k-in) | Tension: Equivalent Mom. Factor a | Equivalent Mom. Factor $C_{m(y)}$ | $C_{m(y)}$ | Pass | Compression: Yield: Axial Stress (ksi) | Yield: Moment Stress (ksi) | Yield: Total (ksi) | Pass | Buckle: Axial Portion | Buckle: Moment Portion | Buckle: Total | Pass | Fracture: Axial Stress (ksi) | Fracture: Moment Stress (ksi) | Fracture: Total (ksi) | Pass |
|---|---|---

Operating Loads - 3F1

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			-----	-542.79	-182	57	-1	-850	9	-10	-35	103	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.256	1.00	Yes	0.732	0.202	0.94	Yes	1.00	**4.32**
		U_1 - U_2			-----	-563.99	-62	26	-192	-826	-7	-41	-47	-140	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.228	1.00	Yes	0.761	0.196	0.96	Yes	1.00	**2.69**
		U_2 - U_3			-----	-597.13	-140	202	-533	-551	5	27	5	225	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.180	1.00	Yes	0.805	0.131	0.94	Yes	1.00	**2.83**
		U_3 - U_4			248.72	-540.03	34	243	-259	-768	22	38	161	32	0.285	0.210	0.50	Yes	0.196	0.144	0.34	Yes	0.735	0.258	1.00	Yes	0.728	0.183	0.92	Yes	1.00	**3.25**
		U_4 - U_5			264.71	-564.18	83	232	-970	-234	25	-26	41	-64	0.303	0.241	0.55	Yes	0.208	0.166	0.38	Yes	0.768	0.215	0.99	Yes	0.761	0.231	1.00	Yes	1.00	**3.41**
		U_5 - U_6			582.22	-----	210	420	-1109	95	-124	-56	371	50	0.667	0.326	1.00	Yes	0.450	0.213	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.04**
		U_6 - U_7			804.66	-----	349	208	-752	-123	-273	-111	459	-91	0.770	0.223	1.00	Yes	0.538	0.153	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.16**
		U_7 - U_8			981.95	-----	42	1115	-1387	1795	-450	-13	264	-110	0.680	0.318	1.00	Yes	0.475	0.217	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		U_8 - U_9			906.64	-----	1185	-117	1224	-966	-379	-211	-276	157	0.743	0.252	1.00	Yes	0.508	0.171	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.96**
		U_9 - U_{10}			671.29	-----	233	279	149	-753	-156	23	118	612	0.728	0.267	1.00	Yes	0.493	0.179	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.47**
		U_{10} - U_{11}			-----	-596.17	305	-90	145	-1045	33	92	311	238	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.213	0.99	Yes	0.761	0.234	1.00	Yes	1.00	**4.03**
		U_{11} - U_{12}			-----	-871.71	218	-116	97	-831	102	406	247	620	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.174	1.00	Yes	0.818	0.138	0.96	Yes	1.00	**3.20**
		U_{12} - U_{13}			-----	-1181.88	-6	-243	-115	-1060	346	214	597	420	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.201	1.00	Yes	0.789	0.146	0.94	Yes	1.00	**3.09**
		U_{13} - U_{14}			-----	-1304.58	-156	-392	-403	-1631	225	181	398	526	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.241	1.00	Yes	0.748	0.180	0.93	Yes	1.00	**2.79**
		U_{14} - U_{15}			-----	-1296.78	-284	-256	-1532	-745	219	33	592	185	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.247	1.00	Yes	0.743	0.169	0.92	Yes	1.00	**2.75**
		U_{15} - U_{16}			-----	-1370.44	-158	-433	-1053	-788	89	37	462	195	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.199	1.00	Yes	0.786	0.116	0.91	Yes	1.00	**2.99**
		U_{16} - U_{17}			-----	-1309.76	-346	-209	-1597	-637	141	-52	627	79	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.236	1.00	Yes	0.751	0.176	0.93	Yes	1.00	**3.22**
		U_{17} - U_{18}			-----	-1021.14	-214	-70	-1053	-72	1	-61	421	17	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.190	1.00	Yes	0.799	0.171	0.98	Yes	1.00	**3.12**
		U_{18} - U_{19}			-----	-712.37	-202	-69	-862	-108	28	-121	401	-158	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.188	1.00	Yes	0.801	0.173	0.98	Yes	1.00	**3.31**
		U_{19} - U_{20}			-----	-570.82	-269	305	-1745	1342	-67	-130	352	-520	-----	-----	-----	-----	-----	-----	-----	-----	0.648	0.178	0.83	Yes	0.642	0.351	1.00	Yes	1.00	**7.97**
	Structure 2	U_0 - U_1			-----	-615.24	-88	-102	626	-1584	3	-70	-27	152	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.227	0.96	Yes	0.727	0.269	1.00	Yes	1.00	**7.83**
		U_1 - U_2			-----	-803.64	-45	-196	-24	-1334	-70	-220	-59	-266	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.212	1.00	Yes	0.776	0.202	0.98	Yes	1.00	**4.15**
		U_2 - U_3			-----	-1105.28	-96	-287	-190	-1799	-28	362	0	536	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.204	1.00	Yes	0.784	0.183	0.97	Yes	1.00	**3.80**
		U_3 - U_4			-----	-1304.78	-426	-423	-657	-1667	524	892	399	503	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.249	1.00	Yes	0.743	0.149	0.90	Yes	1.00	**3.39**
		U_4 - U_5			-----	-1422.19	-462	-392	-706	-2213	760	301	451	323	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.262	1.00	Yes	0.730	0.183	0.92	Yes	1.00	**3.27**
		U_5 - U_6			-----	-1509.97	-435	-27	-1198	-1611	188	-204	370	490	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.216	1.00	Yes	0.775	0.134	0.91	Yes	1.00	**3.41**
		U_6 - U_7			-----	-1315.64	-300	-119	-1201	-1681	-126	-180	284	133	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.239	1.00	Yes	0.749	0.150	0.90	Yes	1.00	**3.15**
		U_7 - U_8			-----	-1353.68	-204	-190	-1824	-825	-102	-180	216	74	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.222	1.00	Yes	0.771	0.162	0.94	Yes	1.00	**3.31**
		U_8 - U_9			-----	-1153.95	-296	85	-1613	-574	-84	-193	386	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.209	1.00	Yes	0.783	0.171	0.96	Yes	1.00	**3.26**
		U_9 - U_{10}			-----	-925.82	-111	300	-1565	-287	-126	-145	249	8	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.193	1.00	Yes	0.799	0.190	0.99	Yes	1.00	**3.59**
		U_{10} - U_{11}			452.91	-773.44	146	346	-1468	-251	-166	-159	457	-8	0.383	0.263	0.65	Yes	0.260	0.171	0.44	Yes	0.773	0.227	1.00	Yes	0.769	0.207	0.98	Yes	1.00	**5.07**
		U_{11} - U_{12}			793.81	-----	222	522	-1760	-87	-337	-122	608	75	0.671	0.322	1.00	Yes	0.450	0.215	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.39**
		U_{12} - U_{13}			1058.43	-----	423	132	-1671	-829	-394	-367	692	-174	0.715	0.276	1.00	Yes	0.509	0.188	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.11**
		U_{13} - U_{14}			1488.30	-----	164	2100	-339	1388	-940	-439	-414	-492	0.732	0.259	1.00	Yes	0.518	0.170	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.25**
		U_{14} - U_{15}			1369.84	-----	2709	121	1230	-27	-1020	-802	-554	-486	0.674	0.320	1.00	Yes	0.477	0.211	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.40**
		U_{15} - U_{16}			1266.62	-----	139	476	-942	-1373	-629	-408	-211	859	0.766	0.229	1.00	Yes	0.545	0.155	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.40**
		U_{16} - U_{17}			971.16	-----	625	288	723	-1779	-188	-19	537	438	0.716	0.280	1.00	Yes	0.476	0.184	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.86**
		U_{17} - U_{18}			664.01	-----	425	294	167	-1211	12	258	248	838	0.667	0.328	1.00	Yes	0.444	0.217	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.13**
		U_{18} - U_{19}			516.37	-614.61	497	213	-74	-1223	113	120	422	474	0.518	0.277	0.80	Yes	0.340	0.177	0.52	Yes	0.730	0.264	1.00	Yes	0.726	0.208	0.94	Yes	1.00	**5.38**
		U_{19} - U_{20}			273.28	-693.49	284	192	-65	-1180	31	23	245	515	0.256	0.258	0.52	Yes	0.170	0.170	0.34	Yes	0.770	0.220	1.00	Yes	0.765	0.189	0.96	Yes	1.00	**4.07**
	Structure 3	U_{20} - U_{21}			-----	-840.00	156	-28	-256	-1247	-10	-53	337	318	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.220	1.00	Yes	0.767	0.181	0.95	Yes	1.00	**3.98**
		U_{21} - U_{22}			-----	-785.59	-45	-3	-704	-1267	0	67	162	391	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.275	1.00	Yes	0.717	0.184	0.91	Yes	1.00	**3.48**
		U_{22} - U_{23}			-----	-787.59	54	-47	-1273	-589	62	-3	446	132	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.269	1.00	Yes	0.719	0.184	0.91	Yes	1.00	**3.49**
		U_{23} - U_{24}			-----	-823.41	-57	127	-1240	-572	-22	-53	360	113	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.240	1.00	Yes	0.751	0.180	0.94	Yes	1.00	**3.79**
		U_{24} - U_{25}			237.80	-706.80	156	247	-1259	-310	-49	-85	430	-54	0.223	0.260	0.49	Yes	0.148	0.170	0.32	Yes	0.785	0.208	1.00	Yes	0.780	0.202	0.99	Yes	1.00	**3.78**
		U_{25} - U_{26}			451.49	-636.99	178	423	-1137	103	-150	-75	310	-17	0.453	0.239	0.70	Yes	0.297	0.152	0.45	Yes	0.757	0.235	1.00	Yes	0.752	0.193	0.95	Yes	1.00	**4.84**
		U_{26} - U_{27}			675.61	-----	323	379	-1453	-115	-225	-71	505	-91	0.678	0.321	1.00	Yes	0.452	0.212	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.78**
		U_{27} - U_{28}			942.34	-----	287	524	-1926	98	-339	-14	526	105	0.694	0.297	1.00	Yes	0.462	0.196	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.34**
		U_{28} - U_{29}			1186.26	-----	469	162	-1985	-635	-368	-258	649	-121	0.717	0.281	1.00	Yes	0.510	0.189	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.74**
		U_{29} - U_{30}			1510.72	-----	264	2096	-56	743	-859	-465	-268	-19	0.743	0.253	1.00	Yes	0.526	0.166	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.50**
		U_{30} - U_{31}			1467.36	-----	2429	38	901	-188	-704	-599	-203	-58	0.722	0.273	1.00	Yes	0.511	0.179	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.78**
		U_{31} - U_{32}			1076.57	-----	56	390	-164	-1424	-376	-189	133	904	0.727	0.265	1.00	Yes	0.518	0.182	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.16**
		U_{32} - U_{33}			828.49	-----	440	242	217	-1590	-68	17	611	599	0.700	0.299	1.00	Yes	0.470	0.199	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.32**
		U_{33} - U_{34}			652.43	-695.38	354	232	-445	-1396	33	270	406	1070	0.551	0.327	0.88	Yes	0.375	0.216	0.60	Yes	0.695	0.302	1.00	Yes	0.691	0.197	0.89	Yes	1.00	**6.30**
		U_{34} - U_{35}			-----	-869.76	316	38	-13	-1671	215	172	670	572	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.239	1.00	Yes	0.751	0.203	0.96	Yes	1.00	**4.57**
		U_{35} - U_{36}			-----	-1119.62	130	-160	-325	-1579	119	96	441	628	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.232	1.00	Yes	0.759	0.168	0.93	Yes	1.00	**4.11**
		U_{36} - U_{37}			-----	-1291.29	-83	14	-917	-1946	92	2	382	332	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.254	1.00	Yes	0.735	0.173	0.91	Yes	1.00	**4.04**
		U_{37} - U_{38}			-----	-1266.11	92	-177	-1815	-1079	51	17	381	303	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.266	1.00	Yes	0.721	0.162	0.89	Yes	1.00	**3.92**
		U_{38} - U_{39}			-----	-1444.64	72	-309	-1836	-1646	135	-36	750	246	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.245	1.00	Yes	0.742	0.152	0.90	Yes	1.00	**3.99**
		U_{39} - U_{40}			-----	-1387.64	-228	-340	-2409	-1233	36	-34	469	214	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.276	1.00	Yes	0.712	0.200	0.92	Yes	1.00	**3.76**
		U_{40} - U_{41}			-----	-1299.61	-255	-339	-1950	-972	48	-117	581	50	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.245	1.00	Yes	0.740	0.174	0.92	Yes	1.00	**3.88**
		U_{41} - U_{42}			-----	-1145.47	-151	-130	-1431	-102	-67	-101	392	23	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.172	1.00	Yes	0.813	0.146	0.96	Yes	1.00	**4.54**
		U_{42} - U_{43}			-----	-838.54	-133	-62	-1039	-96	-39	-95	349	-130	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.178	1.00	Yes	0.809	0.158	0.97	Yes	1.00	**4.86**
		U_{43} - U_{44}			-----	-596.52	-18	-211	-1711	1476	-70	33	202	-426	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.213	0.93	Yes	0.704	0.290	1.00	Yes	1.00	**8.00**
	Structure 4	U_0 - U_1			-----	-613.19	-1	-165	197	-1498	8	-78	286	79	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.262	0.96	Yes	0.690	0.301	1.00	Yes	1.00	**8.52**
		U_1 - U_2			-----	-712.85	-31	-142	111	-845	-62	-232	-41	-344	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.185	1.00	Yes	0.802	0.170	0.98	Yes	1.00	**3.66**
		U_2 - U_3			-----	-1015.40	-71	-168	73	-1056	-51	335	-2	481	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.190	1.00	Yes	0.795	0.172	0.97	Yes	1.00	**3.44**
		U_3 - U_4			-----	-1290.90	-189	-314	-463	-1471	491	823	461	694	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.242	1.00	Yes	0.740	0.162	0.91	Yes	1.00	**3.46**
		U_4 - U_5			-----	-1345.86	-399	-69	-466	-1073	686	227	475	280	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.215	1.00	Yes	0.772	0.118	0.89	Yes	1.00	**3.27**
		U_5 - U_6			-----	-1311.63	-188	-281	-497	-1680	140	-148	316	318	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.231	1.00	Yes	0.752	0.185	0.94	Yes	1.00	**3.04**
		U_6 - U_7			-----	-1314.64	-380	-107	-1716	-568	-88	-186	381	50	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.236	1.00	Yes	0.754	0.189	0.95	Yes	1.00	**3.06**
		U_7 - U_8			-----	-1183.08	-169	-13	-1065	-358	-57	-173	303	2	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.191	1.00	Yes	0.790	0.147	0.94	Yes	1.00	**3.07**
		U_8 - U_9			-----	-900.20	-102	176	-851	-42	-31	-155	308	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.148	1.00	Yes	0.845	0.141	0.99	Yes	1.00	**2.97**
		U_9 - U_{10}			-----	-610.87	-80	223	-928	-8	-96	-105	258	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.205	1.00	Yes	0.780	0.208	0.99	Yes	1.00	**3.44**
		U_{10} - U_{11}			625.08	-464.46	281	220	-1002	-50	-220	-134	558	-162	0.678	0.314	1.00	Yes	0.459	0.211	0.67	Yes	0.598	0.200	0.80	Yes	0.593	0.224	0.82	Yes	1.00	**6.22**
		U_{11} - U_{12}			849.80	-----	-27	948	-1266	1480	-417	-106	224	-323	0.696	0.300	1.00	Yes	0.476	0.204	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.09**
		U_{12} - U_{13}			989.61	-----	1122	106	1717	-1355	-514	-477	-261	145	0.686	0.312	1.00	Yes	0.478	0.213	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.74**
		U_{13} - U_{14}			862.67	-----	227	434	-277	-480	-338	-218	-143	519	0.825	0.173	1.00	Yes	0.577	0.119	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.78**
		U_{14} - U_{15}			623.80	-----	412	284	319	-955	-122	-40	320	144	0.715	0.281	1.00	Yes	0.482	0.184	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.07**
		U_{15} - U_{16}			382.17	-562.87	302	210	-129	-965	-57	137	117	440	0.438	0.304	0.75	Yes	0.301	0.208	0.51	Yes	0.766	0.233	1.00	Yes	0.759	0.229	0.99	Yes	1.00	**4.05**
		U_{16} - U_{17}			376.18	-562.05	368	112	-751	-454	83	74	408	214	0.431	0.247	0.68	Yes	0.296	0.169	0.47	Yes	0.765	0.229	1.00	Yes	0.758	0.178	0.94	Yes	1.00	**4.02**
		U_{17} - U_{18}			183.08	-572.80	291	-77	-598	-438	-40	71	290	212	0.210	0.191	0.41	Yes	0.142	0.125	0.27	Yes	0.779	0.219	1.00	Yes	0.772	0.142	0.92	Yes	1.00	**3.30**
		U_{18} - U_{19}			-----	-545.25	140	-43	-682	-266	-16	26	446	15	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.256	1.00	Yes	0.735	0.162	0.90	Yes	1.00	**3.19**
		U_{19} - U_{20}			-----	-554.33	159	-284	-1042	766	-108	100	330	-302	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.161	0.92	Yes	0.748	0.248	1.00	Yes	1.00	**5.30**

Axial AI Operating

Operating Loads - 3F1

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. Tension	Max. Comp.	Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield									
							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			243.85	-----	154	-502	1720	-1940	-48	-177	-52	-189	0.373	0.623	1.00	Yes	0.220	0.382	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**33.37**
		L_1 - L_2			440.37	-----	22	-706	155	-52	-507	-166	-31	-28	0.674	0.321	1.00	Yes	0.411	0.211	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.42**
		L_2 - L_3			684.72	-----	-786	-644	-25	11	-133	44	-32	19	0.788	0.211	1.00	Yes	0.456	0.127	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.56**
		L_3 - L_4			682.33	-----	-714	-381	77	218	214	132	51	68	0.785	0.207	1.00	Yes	0.466	0.133	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.42**
		L_4 - L_5			-----	-526.85	-716	-82	113	607	-245	570	58	39	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.187	1.00	Yes	0.803	0.190	1.00	Yes					1.00	**4.47**
		L_5 - L_6			-----	-724.76	-479	-57	162	595	272	87	75	130	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.147	1.00	Yes	0.836	0.132	0.97	Yes					1.00	**4.36**
		L_6 - L_7			-----	-1101.36	-663	-425	214	152	133	768	122	-120	-----	-----	-----	-----	-----	-----	-----	-----	0.897	0.095	1.00	Yes	0.887	0.104	1.00	Yes					1.00	**6.31**
		L_7 - L_8			-----	-1226.52	12	587	55	1457	-105	-102	-86	-178	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.206	1.00	Yes	0.777	0.193	0.97	Yes					1.00	**5.50**
		L_8 - L_9			-----	-1308.33	587	-29	1163	-17	-166	-169	-1	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.160	1.00	Yes	0.829	0.154	0.99	Yes					1.00	**6.46**
		L_9 - L_{10}			-----	-1093.43	-120	-732	141	149	715	188	45	142	-----	-----	-----	-----	-----	-----	-----	-----	0.890	0.096	0.99	Yes	0.880	0.115	1.00	Yes					1.00	**7.64**
		L_{10} - L_{11}			-----	-547.83	-13	-591	521	-11	143	112	137	44	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.100	0.95	Yes	0.835	0.157	1.00	Yes					1.00	**5.07**
		L_{11} - L_{12}			584.88	-----	76	-713	465	-182	260	28	80	-25	0.757	0.234	1.00	Yes	0.454	0.153	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.29**
		L_{12} - L_{13}			1065.40	-----	-572	-694	159	-76	171	263	27	35	0.841	0.154	1.00	Yes	0.538	0.092	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.99**
		L_{13} - L_{14}			1270.39	-----	-152	-1544	343	-455	383	93	14	0	0.747	0.245	1.00	Yes	0.484	0.150	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.94**
		L_{14} - L_{15}			1575.66	-----	-1673	-937	-416	-15	-141	348	-85	-88	0.770	0.226	1.00	Yes	0.500	0.137	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.60**
		L_{15} - L_{16}			1567.41	-----	-914	-1721	-218	-370	-38	-352	-118	-56	0.766	0.232	1.00	Yes	0.492	0.136	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.33**
		L_{16} - L_{17}			1180.83	-----	-1380	-456	-433	96	-338	467	-104	-46	0.747	0.244	1.00	Yes	0.484	0.151	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.28**
		L_{17} - L_{18}			903.79	-----	-964	-258	-283	154	144	-192	-130	-66	0.787	0.210	1.00	Yes	0.504	0.126	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.83**
		L_{18} - L_{19}			482.93	-----	-500	335	-526	605	-88	284	-337	-28	0.739	0.251	1.00	Yes	0.500	0.159	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**8.10**
		L_{19} - L_{20}			198.95	-471.55	-264	61	-472	259	220	49	-70	-15	0.304	0.187	0.50	Yes	0.186	0.125	0.32	Yes	0.857	0.126	0.99	Yes	0.849	0.142	1.00	Yes					1.00	**6.61**
	Structure 2	L_0 - L_1			310.60	-----	182	-802	1030	-2617	28	98	-144	-502	0.377	0.615	1.00	Yes	0.224	0.395	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**28.17**
		L_1 - L_2			517.28	-----	367	-1273	182	-251	-636	-197	-42	22	0.628	0.363	1.00	Yes	0.374	0.230	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.51**
		L_2 - L_3			981.58	-----	-396	-1168	-35	-174	98	325	70	71	0.784	0.207	1.00	Yes	0.515	0.120	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.14**
		L_3 - L_4			1275.45	-----	-541	-1666	35	-438	459	199	152	81	0.757	0.235	1.00	Yes	0.511	0.151	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.12**
		L_4 - L_5			1715.60	-----	-1338	-1847	-385	-261	80	275	92	196	0.800	0.193	1.00	Yes	0.530	0.115	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.80**
		L_5 - L_6			1798.71	-----	-1530	-2331	-149	-402	310	34	109	-16	0.772	0.226	1.00	Yes	0.518	0.138	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.19**
		L_6 - L_7			1770.29	-----	-2455	-1656	-452	-121	22	541	-161	46	0.749	0.249	1.00	Yes	0.498	0.147	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.83**
		L_7 - L_8			1448.12	-----	-1373	-1374	-205	306	44	-152	-131	9	0.830	0.164	1.00	Yes	0.545	0.096	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.04**
		L_8 - L_9			1091.66	-----	-1242	-398	-113	514	-116	722	-29	14	0.764	0.236	1.00	Yes	0.514	0.149	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.10**
		L_9 - L_{10}			836.43	-584.82	-1316	-389	-115	706	288	-170	13	90	0.747	0.245	1.00	Yes	0.435	0.152	0.59	Yes	0.618	0.148	0.77	Yes	0.614	0.211	0.83	Yes					1.00	**6.44**
		L_{10} - L_{11}			-----	-718.48	-847	-74	113	542	-189	554	63	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.115	0.97	Yes	0.844	0.148	1.00	Yes					1.00	**5.55**
		L_{11} - L_{12}			-----	-1045.74	-910	-190	105	997	324	-70	82	238	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.120	0.99	Yes	0.858	0.136	1.00	Yes					1.00	**6.86**
		L_{12} - L_{13}			-----	-1554.85	-375	-184	445	-422	120	-163	200	-145	-----	-----	-----	-----	-----	-----	-----	-----	0.938	0.061	1.00	Yes	0.930	0.044	0.98	Yes					1.00	**10.48**
		L_{13} - L_{14}			-----	-1520.37	-367	1230	-595	2593	-262	-455	-247	-546	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.191	0.97	Yes	0.765	0.226	1.00	Yes					1.00	**6.73**
		L_{14} - L_{15}			-----	-1642.22	1124	-472	1977	-359	-521	-321	-316	-456	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.148	0.99	Yes	0.826	0.173	1.00	Yes					1.00	**9.02**
		L_{15} - L_{16}			-----	-1491.65	-469	-15	-1000	349	-214	96	12	399	-----	-----	-----	-----	-----	-----	-----	-----	0.900	0.088	0.99	Yes	0.892	0.099	1.00	Yes					1.00	**8.50**
		L_{16} - L_{17}			-----	-1153.03	214	-741	1205	120	96	94	402	189	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.144	1.00	Yes	0.840	0.149	0.99	Yes					1.00	**7.03**
		L_{17} - L_{18}			-----	-824.11	136	-835	472	231	211	54	102	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.128	1.00	Yes	0.865	0.134	1.00	Yes					1.00	**5.13**
		L_{18} - L_{19}			-----	-630.93	-171	-656	658	111	231	326	-2	34	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.149	1.00	Yes	0.841	0.127	0.97	Yes					1.00	**4.95**
		L_{19} - L_{20}			625.32	-579.40	-346	-1056	555	228	525	6	57	-43	0.708	0.284	1.00	Yes	0.419	0.179	0.60	Yes	0.777	0.204	0.99	Yes	0.772	0.204	0.98	Yes					1.00	**6.51**
		L_{20} - L_{21}			908.57	-402.57	-935	-1429	502	25	140	420	-87	-92	0.734	0.259	1.00	Yes	0.483	0.151	0.64	Yes	0.385	0.229	0.62	Yes	0.383	0.213	0.60	Yes					1.00	**6.50**
		L_{21} - L_{22}			872.56	-----	-1034	-1665	215	-96	420	98	-88	-26	0.705	0.294	1.00	Yes	0.473	0.179	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.98**
		L_{22} - L_{23}			894.10	-----	-1201	-1468	-155	199	-79	538	-21	3	0.723	0.277	1.00	Yes	0.485	0.170	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.39**
		L_{23} - L_{24}			917.57	-270.74	-1246	-1486	-8	339	266	-75	8	72	0.741	0.250	1.00	Yes	0.487	0.144	0.64	Yes	0.259	0.289	0.55	Yes	0.257	0.221	0.48	Yes					1.00	**6.57**
		L_{24} - L_{25}			568.28	-407.12	-1330	-448	219	340	-288	610	56	0	0.644	0.350	1.00	Yes	0.381	0.220	0.61	Yes	0.546	0.218	0.77	Yes	0.543	0.257	0.80	Yes					1.00	**6.67**
		L_{25} - L_{26}			-----	-622.22	-808	-858	111	680	208	-233	39	124	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.131	0.97	Yes	0.829	0.166	1.00	Yes					1.00	**7.68**
		L_{26} - L_{27}			-----	-800.08	-925	-350	-126	569	-158	578	-188	7	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.147	1.00	Yes	0.840	0.148	0.99	Yes					1.00	**6.47**
		L_{27} - L_{28}			-----	-1166.79	-67	217	-238	1156	88	197	-40	-15	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.119	0.98	Yes	0.850	0.143	1.00	Yes					1.00	**6.92**
		L_{28} - L_{29}			-----	-1583.79	-112	-334	-3	-12	171	-20	-85	15	-----	-----	-----	-----	-----	-----	-----	-----	0.955	0.037	1.00	Yes	0.947	0.033	0.99	Yes					1.00	**7.45**
		L_{29} - L_{30}			-----	-1637.38	-378	808	-473	2014	-66	-130	-10	-58	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.124	0.96	Yes	0.824	0.176	1.00	Yes					1.00	**6.31**
		L_{30} - L_{31}			-----	-1589.38	825	-331	2189	-402	-133	-117	-602	-483	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.168	0.98	Yes	0.800	0.191	1.00	Yes					1.00	**9.88**
		L_{31} - L_{32}			-----	-1543.00	-146	-256	321	-67	-60	74	-376	126	-----	-----	-----	-----	-----	-----	-----	-----	0.939	0.054	1.00	Yes	0.931	0.032	0.97	Yes					1.00	**12.73**
		L_{32} - L_{33}			-----	-1054.78	361	-372	988	160	150	9	-143	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.098	0.98	Yes	0.865	0.135	1.00	Yes					1.00	**10.04**
		L_{33} - L_{34}			-----	-676.26	-115	-1157	407	175	557	130	9	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.163	0.97	Yes	0.794	0.202	1.00	Yes					1.00	**7.45**
		L_{34} - L_{35}			841.70	-589.82	-621	-1124	623	31	314	550	-28	71	0.751	0.246	1.00	Yes	0.437	0.151	0.59	Yes	0.624	0.198	0.83	Yes	0.619	0.180	0.80	Yes					1.00	**8.34**
		L_{35} - L_{36}			1063.33	-----	-310	-1349	355	-40	738	131	101	-41	0.744	0.252	1.00	Yes	0.501	0.159	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.91**
		L_{36} - L_{37}			1335.86	-----	-1056	-1702	220	-16	62	464	-98	13	0.766	0.226	1.00	Yes	0.503	0.134	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.35**
		L_{37} - L_{38}			1744.90	-----	-912	-2852	-61	-369	170	-94	-44	-10	0.738	0.261	1.00	Yes	0.491	0.152	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.34**
		L_{38} - L_{39}			1790.38	-----	-2143	-2125	-302	-176	-43	535	-26	-15	0.768	0.223	1.00	Yes	0.516	0.137	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.65**
		L_{39} - L_{40}			1704.69	-----	-1781	-1906	-201	-308	125	-340	-51	-35	0.795	0.203	1.00	Yes	0.526	0.121	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.94**
		L_{40} - L_{41}			1258.97	-----	-1950	-375	-311	-48	-373	335	-60	-10	0.740	0.258	1.00	Yes	0.498	0.160	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.47**
		L_{41} - L_{42}			1038.16	-----	-1098	-763	-161	-61	211	-110	-28	11	0.818	0.181	1.00	Yes	0.537	0.108	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.81**
		L_{42} - L_{43}			468.56	-----	-1479	333	-368	154	-400	236	-28	28	0.599	0.391	1.00	Yes	0.358	0.227	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.22**
		L_{43} - L_{44}			414.31	-----	-756	310	-1808	787	742	217	303	88	0.503	0.490	1.00	Yes	0.299	0.311	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**24.66**
	Structure 3	L_0 - L_1			419.84	-----	103	-362	647	-979	-31	-142	-1	-4	0.668	0.327	1.00	Yes	0.409	0.219	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**13.16**
		L_1 - L_2			538.53	-----	249	-484	377	-441	-69	41	49	126	0.824	0.171	1.00	Yes	0.557	0.107	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**9.16**
		L_2 - L_3			881.31	-----	-117	-957	7	-178	180	360	20	5	0.767	0.231	1.00	Yes	0.491	0.139	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.66**
		L_3 - L_4			1185.18	-----	-286	-1380	63	-370	456	214	48	54	0.749	0.243	1.00	Yes	0.486	0.150	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.30**
		L_4 - L_5			1606.22	-----	-1534	-1219	-333	-219	192	362	82	124	0.785	0.210	1.00	Yes	0.504	0.123	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.81**
		L_5 - L_6			1531.68	-----	-755	-1904	-83	-354	304	127	141	77	0.748	0.251	1.00	Yes	0.486	0.152	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.65**
		L_6 - L_7			1314.10	-----	-1303	-595	-404	237	-91	555	-185	17	0.773	0.226	1.00	Yes	0.501	0.139	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.19**
		L_7 - L_8			1048.55	-----	-789	-549	-89	106	195	10	-30	39	0.827	0.163	1.00	Yes	0.529	0.097	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.34**
		L_8 - L_9			575.44	-----	-568	-132	-174	334	-151	548	-17	45	0.745	0.246	1.00	Yes	0.447	0.157	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.80**
		L_9 - L_{10}			-----	-538.35	-668	-300	7	496	351	140	73	140	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.169	1.00	Yes	0.820	0.177	1.00	Yes					1.00	**6.29**
		L_{10} - L_{11}			-----	-1084.02	-744	-544	-433	765	126	1103	-55	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.882	0.115	1.00	Yes	0.873	0.120	1.00	Yes					1.00	**9.75**
		L_{11} - L_{12}			-----	-1255.39	-40	463	-75	1204	-173	-181	-345	-535	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.191	1.00	Yes	0.795	0.159	0.96	Yes					1.00	**5.70**
		L_{12} - L_{13}			-----	-1253.18	450	-14	1169	-17	-241	-274	-560	-296	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.194	1.00	Yes	0.794	0.155	0.95	Yes					1.00	**6.12**
		L_{13} - L_{14}			-----	-1103.75	-281	-601	-50	279	394	168	-222	120	-----	-----	-----	-----	-----	-----	-----	-----	0.899	0.091	1.00	Yes	0.888	0.094	0.99	Yes					1.00	**5.79**
		L_{14} - L_{15}			-----	-747.79	-25	-290	571	167	56	-48	146	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.121	1.00	Yes	0.863	0.126	0.99	Yes					1.00	**4.23**
		L_{15} - L_{16}			-----	-532.48	32	-641	418	190	149	21	14	-57	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.173	1.00	Yes	0.811	0.170	0.99	Yes					1.00	**3.68**
		L_{16} - L_{17}			654.39	-226.57	-439	-775	319	29	126	358	92	-31	0.753	0.245	1.00	Yes	0.447	0.157	0.61	Yes	0.310	0.230	0.54	Yes	0.307	0.187	0.50	Yes					1.00	**3.76**
		L_{17} - L_{18}			658.51	-----	-824	-670	87	-9	232	-31	3	11	0.758	0.236	1.00	Yes	0.438	0.142	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.88**
		L_{18} - L_{19}			424.21	-----	-905	7	38	5	-140	365	22	-99	0.649	0.350	1.00	Yes	0.396	0.233	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.83**
		L_{19} - L_{20}			191.07	-313.01	-366	234	-1223	954	1027	280	281	77	0.292	0.587	0.88	Yes	0.172	0.354	0.53	Yes	0.568	0.430	1.00	Yes	0.564	0.367	0.94	Yes					1.00	**21.18**

Operating Loads - 3F1

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	$U_0 - L_0$			-----	-295.29	-60	90	-164	205	-24	-8	-374	-120	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.251	0.99	Yes	0.690	0.305	1.00	Yes	1.00	**1.66**
		$U_1 - L_1$			-----	-342.49	19	-7	-185	206	-5	-1	-620	-233	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.245	1.00	Yes	0.725	0.263	0.99	Yes	1.00	**3.58**
		$U_2 - L_2$			91.52	-312.96	78	-86	-99	159	50	25	680	278	0.165	0.401	0.57	Yes	0.091	0.220	0.32	Yes	0.684	0.310	1.00	Yes	0.662	0.204	0.87	Yes	1.00	**5.57**
		$U_3 - L_3$			235.44	-----	234	-231	-126	179	-115	38	946	259	0.423	0.573	1.00	Yes	0.233	0.315	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.81**
		$U_4 - L_4$			-----	-340.03	151	-152	82	-87	-308	-137	792	225	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.244	1.00	Yes	0.719	0.194	0.92	Yes	1.00	**4.23**
		$U_5 - L_5$			-----	-423.74	62	-87	223	-258	-26	16	180	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.108	0.88	Yes	0.731	0.261	1.00	Yes	1.00	**3.16**
		$U_6 - L_6$			-----	-492.09	86	-83	244	-263	-171	-64	315	49	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.151	0.94	Yes	0.743	0.255	1.00	Yes	1.00	**2.81**
		$U_7 - L_7$			-----	-412.29	129	-143	274	-291	-160	14	196	27	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.147	0.89	Yes	0.672	0.322	1.00	Yes	1.00	**2.04**
		$U_8 - L_8$			-----	-1144.69	-6	-1	-40	46	-240	-29	1724	400	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.164	1.00	Yes	0.794	0.009	0.81	Yes	1.00	**4.89**
		$U_9 - L_9$			-----	-645.41	-173	202	-365	419	-392	-175	102	-113	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.153	0.95	Yes	0.747	0.244	1.00	Yes	1.00	**3.39**
		$U_{10} - L_{10}$			-----	-735.21	-122	105	-262	314	-720	-411	61	-245	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.200	1.00	Yes	0.756	0.175	0.94	Yes	1.00	**4.42**
		$U_{11} - L_{11}$			-----	-663.63	-121	187	-348	475	-543	-310	-298	-354	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.171	0.97	Yes	0.772	0.220	1.00	Yes	1.00	**4.39**
		$U_{12} - L_{12}$			-----	-540.64	-95	95	-274	292	-382	-214	358	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.158	0.94	Yes	0.742	0.249	1.00	Yes	1.00	**4.00**
		$U_{13} - L_{13}$			-----	-391.88	-37	57	-175	210	-178	12	472	68	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.196	0.99	Yes	0.751	0.240	1.00	Yes	1.00	**3.25**
		$U_{14} - L_{14}$			-----	-323.74	-140	163	-89	97	-29	-21	871	99	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.275	1.00	Yes	0.685	0.208	0.90	Yes	1.00	**4.43**
		$U_{15} - L_{15}$			144.42	-310.71	-115	98	246	-265	33	128	408	-69	0.260	0.457	0.72	Yes	0.143	0.251	0.40	Yes	0.696	0.173	0.87	Yes	0.657	0.338	1.00	Yes	1.00	**5.01**
		$U_{16} - L_{16}$			-----	-321.29	20	-30	238	-246	49	-79	288	-144	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.140	0.87	Yes	0.680	0.315	1.00	Yes	1.00	**3.61**
		$U_{17} - L_{17}$			-----	-438.55	61	-75	214	-237	-120	-113	270	-130	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.133	0.96	Yes	0.757	0.240	1.00	Yes	1.00	**2.91**
		$U_{18} - L_{18}$			-----	-535.49	145	-151	422	-436	-133	-122	324	-152	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.106	0.89	Yes	0.745	0.247	1.00	Yes	1.00	**3.03**
		$U_{19} - L_{19}$			-----	-643.25	172	-171	535	-523	-117	-47	253	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.113	0.92	Yes	0.749	0.248	1.00	Yes	1.00	**3.55**
		$U_{20} - L_{20}$			-----	-551.93	161	-262	324	-471	29	4	639	84	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.234	1.00	Yes	0.675	0.226	0.91	Yes	1.00	**2.34**
	Structure 2	$U_0 - L_0$			-----	-622.11	-165	214	-420	517	-39	-7	-662	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.211	1.00	Yes	0.697	0.233	0.94	Yes	1.00	**3.30**
		$U_1 - L_1$			-----	-712.52	-121	130	-471	495	-106	-6	-992	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.182	1.00	Yes	0.764	0.210	0.98	Yes	1.00	**4.57**
		$U_2 - L_2$			-----	-617.42	-107	117	-360	407	-108	-38	643	106	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.165	1.00	Yes	0.787	0.208	1.00	Yes	1.00	**4.34**
		$U_3 - L_3$			-----	-497.47	-56	64	-217	236	74	-46	205	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.094	0.95	Yes	0.780	0.214	1.00	Yes	1.00	**3.64**
		$U_4 - L_4$			-----	-354.61	-8	24	-166	179	-61	49	402	69	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.189	1.00	Yes	0.750	0.229	0.98	Yes	1.00	**3.70**
		$U_5 - L_5$			109.21	-311.48	82	-70	-116	150	-93	104	703	68	0.196	0.395	0.60	Yes	0.108	0.217	0.33	Yes	0.704	0.288	1.00	Yes	0.659	0.192	0.86	Yes	1.00	**4.50**
		$U_6 - L_6$			321.52	-----	175	-184	-176	184	-44	107	617	95	0.578	0.414	1.00	Yes	0.318	0.228	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.36**
		$U_7 - L_7$			-----	-322.44	146	-172	103	-111	-30	-27	770	56	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.268	1.00	Yes	0.682	0.219	0.91	Yes	1.00	**4.87**
		$U_8 - L_8$			-----	-467.52	62	-80	358	-373	-22	-65	201	-124	-----	-----	-----	-----	-----	-----	-----	-----	0.678	0.113	0.80	Yes	0.673	0.327	1.00	Yes	1.00	**4.10**
		$U_9 - L_9$			-----	-696.03	149	-169	563	-586	-13	-229	674	9	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.158	0.94	Yes	0.746	0.249	1.00	Yes	1.00	**5.12**
		$U_{10} - L_{10}$			-----	-795.14	172	-187	540	-569	-38	-128	558	-70	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.168	0.96	Yes	0.743	0.251	1.00	Yes	1.00	**5.09**
		$U_{11} - L_{11}$			-----	-811.56	186	-186	513	-530	-184	-69	248	-136	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.111	0.93	Yes	0.759	0.234	1.00	Yes	1.00	**4.58**
		$U_{12} - L_{12}$			-----	-872.51	163	-151	501	-521	-219	-34	567	32	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.162	1.00	Yes	0.756	0.224	0.98	Yes	1.00	**4.74**
		$U_{13} - L_{13}$			-----	-743.36	212	-210	571	-553	-166	22	459	48	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.165	1.00	Yes	0.717	0.273	0.99	Yes	1.00	**3.93**
		$U_{14} - L_{14}$			-----	-1111.95	125	-121	369	-354	-2	239	1195	309	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.182	1.00	Yes	0.737	0.065	0.81	Yes	1.00	**5.85**
		$U_{15} - L_{15}$			-----	-738.21	-120	127	-600	585	-311	15	111	-80	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.158	0.99	Yes	0.712	0.287	1.00	Yes	1.00	**6.16**
		$U_{16} - L_{16}$			-----	-709.40	-92	66	-447	455	-790	-257	-97	-314	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.175	1.00	Yes	0.760	0.193	0.96	Yes	1.00	**5.06**
		$U_{17} - L_{17}$			-----	-667.66	-127	124	-446	477	-274	-185	367	-288	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.128	0.96	Yes	0.777	0.221	1.00	Yes	1.00	**4.77**
		$U_{18} - L_{18}$			-----	-590.54	-97	97	-453	483	-113	-128	106	-230	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.099	0.89	Yes	0.752	0.247	1.00	Yes	1.00	**4.43**
		$U_{19} - L_{19}$			-----	-493.28	-58	62	-251	265	-66	-33	354	-70	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.142	0.89	Yes	0.737	0.255	1.00	Yes	1.00	**3.84**
		$U_{20} - L_{20}$			-----	-392.10	-11	17	-154	175	-175	-30	588	42	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.189	1.00	Yes	0.751	0.199	0.96	Yes	1.00	**3.87**
		$U_{21} - L_{21}$			-----	-330.27	27	-21	-215	232	-88	52	271	2	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.147	0.90	Yes	0.699	0.297	1.00	Yes	1.00	**4.25**
		$U_{22} - L_{22}$			-----	-329.81	-103	120	21	-18	-49	-55	815	117	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.251	1.00	Yes	0.698	0.153	0.86	Yes	1.00	**5.15**
		$U_{23} - L_{23}$			-----	-316.54	-51	45	243	-257	59	82	220	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.135	0.86	Yes	0.670	0.328	1.00	Yes	1.00	**4.52**
		$U_{24} - L_{24}$			-----	-379.11	3	-19	220	-236	72	44	508	19	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.172	0.95	Yes	0.726	0.270	1.00	Yes	1.00	**3.99**
		$U_{25} - L_{25}$			-----	-473.27	43	-42	304	-300	-84	-30	408	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.111	0.83	Yes	0.707	0.293	1.00	Yes	1.00	**3.75**
		$U_{26} - L_{26}$			-----	-569.27	71	-75	506	-532	-119	-23	416	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.139	0.90	Yes	0.725	0.272	1.00	Yes	1.00	**4.31**
		$U_{27} - L_{27}$			-----	-634.71	88	-88	537	-551	-134	2	639	15	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.151	0.94	Yes	0.739	0.256	1.00	Yes	1.00	**4.59**
		$U_{28} - L_{28}$			-----	-711.34	78	-75	548	-550	-152	16	644	33	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.136	0.96	Yes	0.762	0.233	1.00	Yes	1.00	**4.76**
		$U_{29} - L_{29}$			-----	-716.89	120	-125	636	-611	-114	27	512	21	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.173	0.98	Yes	0.691	0.304	1.00	Yes	1.00	**5.36**
		$U_{30} - L_{30}$			-----	-1040.82	-53	43	-47	28	-162	74	1610	207	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.219	1.00	Yes	0.703	0.010	0.72	Yes	1.00	**6.09**
		$U_{31} - L_{31}$			-----	-736.36	-114	114	-476	470	-311	-34	445	-59	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.173	1.00	Yes	0.710	0.228	0.94	Yes	1.00	**5.25**
		$U_{32} - L_{32}$			-----	-849.19	-82	60	-380	417	-694	-277	296	-221	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.181	1.00	Yes	0.736	0.179	0.92	Yes	1.00	**5.84**
		$U_{33} - L_{33}$			-----	-828.86	-118	107	-446	464	-441	-336	-7	-368	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.152	1.00	Yes	0.781	0.208	0.99	Yes	1.00	**5.61**
		$U_{34} - L_{34}$			-----	-838.27	-104	121	-430	485	-299	-200	816	-77	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.120	0.95	Yes	0.784	0.214	1.00	Yes	1.00	**6.08**
		$U_{35} - L_{35}$			-----	-725.00	-96	119	-410	482	-211	11	1133	212	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.193	1.00	Yes	0.777	0.204	0.99	Yes	1.00	**5.52**
		$U_{36} - L_{36}$			-----	-489.22	-44	58	-317	333	-68	61	426	78	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.156	0.87	Yes	0.705	0.292	1.00	Yes	1.00	**4.32**
		$U_{37} - L_{37}$			-----	-336.65	-3	3	-68	82	-44	11	709	72	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.232	1.00	Yes	0.712	0.105	0.82	Yes	1.00	**5.16**
		$U_{38} - L_{38}$			340.52	-----	-220	232	169	-170	74	62	294	-62	0.612	0.382	1.00	Yes	0.337	0.210	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.11**
		$U_{39} - L_{39}$			169.04	-336.48	-150	131	195	-222	19	117	568	-36	0.304	0.448	0.76	Yes	0.167	0.246	0.42	Yes	0.760	0.200	0.96	Yes	0.712	0.284	1.00	Yes	1.00	**5.80**
		$U_{40} - L_{40}$			-----	-345.17	-13	-2	209	-210	-54	-186	338	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.167	0.96	Yes	0.730	0.269	1.00	Yes	1.00	**3.95**
		$U_{41} - L_{41}$			-----	-486.81	29	-33	243	-254	7	-33	217	-123	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.098	0.93	Yes	0.763	0.232	1.00	Yes	1.00	**3.89**
		$U_{42} - L_{42}$			-----	-588.76	63	-72	453	-470	10	-37	581	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.117	0.91	Yes	0.750	0.241	1.00	Yes	1.00	**4.26**
		$U_{43} - L_{43}$			-----	-710.49	83	-95	551	-556	-49	-49	583	22	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.124	0.94	Yes	0.761	0.236	1.00	Yes	1.00	**4.50**
		$U_{44} - L_{44}$			-----	-672.82	117	-134	386	-526	-131	-22	626	106	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.191	1.00	Yes	0.721	0.223	0.95	Yes	1.00	**3.94**
	Structure 3	$U_0 - L_0$			-----	-596.41	-142	190	-410	500	-57	-7	-408	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.181	1.00	Yes	0.716	0.240	0.96	Yes	1.00	**3.53**
		$U_1 - L_1$			-----	-666.83	-113	125	-464	478	-122	-3	-744	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.166	1.00	Yes	0.776	0.222	1.00	Yes	1.00	**4.59**
		$U_2 - L_2$			-----	-562.10	-111	117	-351	382	-149	-46	437	79	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.138	0.97	Yes	0.782	0.216	1.00	Yes	1.00	**3.77**
		$U_3 - L_3$			-----	-447.86	-47	60	-150	184	42	-64	484	-16	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.154	1.00	Yes	0.773	0.186	0.96	Yes	1.00	**3.13**
		$U_4 - L_4$			-----	-339.96	-13	22	-205	219	-69	33	263	32	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.151	0.92	Yes	0.719	0.280	1.00	Yes	1.00	**3.86**
		$U_5 - L_5$			100.12	-323.29	74	-66	-169	195	-78	123	614	70	0.180	0.427	0.61	Yes	0.099	0.235	0.34	Yes	0.725	0.274	1.00	Yes	0.684	0.250	0.94	Yes	1.00	**4.53**
		$U_6 - L_6$			-----	-318.10	129	-144	14	-16	-123	-24	889	96	-----	-----	-----	-----	-----	-----	-----	-----	0.710	0.288	1.00	Yes	0.673	0.184	0.86	Yes	1.00	**4.28**
		$U_7 - L_7$			-----	-371.32	4	-19	233	-252	-50	-10	272	-85	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.112	0.87	Yes	0.711	0.288	1.00	Yes	1.00	**3.69**
		$U_8 - L_8$			-----	-514.61	78	-78	334	-338	5	-109	380	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.152	0.90	Yes	0.706	0.289	1.00	Yes	1.00	**4.16**
		$U_9 - L_9$			-----	-653.24	107	-166	397	-504	-31	-41	157	-161	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.100	0.89	Yes	0.760	0.234	1.00	Yes	1.00	**4.55**
		$U_{10} - L_{10}$			-----	-779.74	119	-116	373	-423	-220	-106	661	148	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.191	1.00	Yes	0.769	0.219	0.99	Yes	1.00	**4.86**
		$U_{11} - L_{11}$			-----	-646.69	168	-193	425	-471	-156	-31	469	111	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.155	0.93	Yes	0.730	0.262	1.00	Yes	1.00	**3.31**
		$U_{12} - L_{12}$			-----	-1123.02	74	-102	292	-384	-222	12	1472	444	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.181	1.00	Yes	0.779	0.072	0.86	Yes	1.00	**5.65**
		$U_{13} - L_{13}$			-----	-462.23	-68	77	-270	287	-341	-56	-18	-76	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.167	0.94	Yes	0.713	0.283	1.00	Yes	1.00	**3.45**
		$U_{14} - L_{14}$			-----	-516.58	-47	33	-199	227	-730	-344	-159	-247	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.215	1.00	Yes	0.741	0.198	0.94	Yes	1.00	**3.87**
		$U_{15} - L_{15}$			-----	-444.74	-34	42	-155	195	-469	-231	88	-145	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.190	1.00	Yes	0.767	0.198	0.97	Yes	1.00	**3.65**
		$U_{16} - L_{16}$			-----	-352.55	-10	13	-124	129	-489	-243	552	53	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.217	1.00	Yes	0.746	0.165	0.92	Yes	1.00	**4.50**
		$U_{17} - L_{17}$			288.33	-----	-337	343	206	-226	-120	106	55	-101	0.519	0.473	1.00	Yes	0.285	0.260	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.50**
		$U_{18} - L_{18}$			113.28	-321.15	-106	118	195	-249	-106	13	718	118	0.204	0.527	0.74	Yes	0.112	0.290	0.41	Yes	0.702	0.277	0.98	Yes	0.680	0.319	1.00	Yes	1.00	**5.89**
		$U_{19} - L_{19}$			-----	-323.76	-47	36	239	-232	-83	-9	305	56	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.156	0.87	Yes	0.685	0.306	1.00	Yes	1.00	**3.49**
		$U_{20} - L_{20}$			-----	-393.21	18	-27	36	-104	-49	-16	141	45	-----	-----	-----	-----	-----	-----	-----	-----	0.878	0.114	1.00	Yes	0.832	0.133	0.97	Yes	1.00	**2.40**

Operating Loads - 3F1

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	$U_0 - L_1$	671.25	-----	-83	47	-18	-1	57	-80	-18	-4	0.881	0.117	1.00	Yes	0.532	0.065	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**
		$U_1 - L_2$	459.06	-----	-83	11	15	-19	-215	-186	-14	-21	0.826	0.169	1.00	Yes	0.454	0.093	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
		$U_2 - L_3$	410.05	-281.72	-109	-14	-20	-74	-408	-13	49	-95	0.737	0.258	1.00	Yes	0.406	0.142	0.55	Yes	0.648	0.243	0.90	Yes	0.596	0.140	0.74	Yes	1.00	**6.49**
		$U_3 - L_4$	-----	-382.39	-34	-57	16	-65	-205	-127	-33	-208	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.121	1.00	Yes	0.809	0.083	0.90	Yes	1.00	**3.41**
		$U_4 - L_4$	558.05	-----	-80	45	-41	-6	-104	-185	-381	-204	0.826	0.170	1.00	Yes	0.454	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.71**
		$U_5 - L_5$	650.56	-----	-193	212	-94	87	-252	-291	-575	-144	0.769	0.225	1.00	Yes	0.423	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.51**
		$U_5 - L_6$	658.58	-----	-288	247	-86	104	-140	-180	283	119	0.779	0.215	1.00	Yes	0.428	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.10**
		$U_6 - L_7$	647.77	-----	-102	307	1	136	-90	-125	306	185	0.766	0.231	1.00	Yes	0.421	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.33**
		$U_8 - L_8$	988.02	-----	-103	346	19	138	283	402	286	101	0.790	0.205	1.00	Yes	0.489	0.115	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.58**
		$U_9 - L_{10}$	992.12	-----	-316	213	-80	88	170	487	263	200	0.793	0.203	1.00	Yes	0.491	0.114	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.32**
		$U_{10} - L_{11}$	998.03	-----	-244	189	-90	67	-36	322	263	176	0.843	0.155	1.00	Yes	0.522	0.087	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.37**
		$U_{11} - L_{12}$	850.98	-----	-262	94	-106	-2	-54	238	5	62	0.842	0.157	1.00	Yes	0.463	0.087	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**
		$U_{12} - L_{13}$	642.48	-----	-204	129	-85	26	-108	149	88	-98	0.783	0.208	1.00	Yes	0.493	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.86**
		$U_{13} - L_{14}$	459.26	-----	-90	35	-20	-27	-73	-48	-24	-173	0.826	0.166	1.00	Yes	0.454	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.59**
		$U_{15} - L_{14}$	215.81	-291.85	-66	-20	6	-87	-284	-272	-607	-117	0.388	0.287	0.68	Yes	0.213	0.158	0.38	Yes	0.684	0.312	1.00	Yes	0.618	0.111	0.73	Yes	1.00	**4.22**
		$U_{16} - L_{15}$	355.29	-----	-113	77	-47	-10	-306	-287	-723	-97	0.639	0.354	1.00	Yes	0.351	0.195	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.52**
		$U_{17} - L_{16}$	520.02	-----	-138	99	-34	14	-402	-349	-111	-131	0.763	0.234	1.00	Yes	0.419	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.13**
		$U_{18} - L_{17}$	610.05	-----	-314	250	-112	77	-512	-472	-114	-120	0.721	0.271	1.00	Yes	0.397	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.32**
		$U_{19} - L_{18}$	687.23	-----	-345	254	-133	88	-425	-440	-68	-109	0.744	0.249	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.19**
		$U_{20} - L_{19}$	722.78	-----	-231	257	-95	93	-473	-326	-100	-39	0.783	0.209	1.00	Yes	0.431	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.57**
	Structure 2	$U_0 - L_1$	807.81	-----	-353	353	-115	101	13	-224	-61	-50	0.799	0.197	1.00	Yes	0.440	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.99**
		$U_1 - L_2$	791.50	-----	-405	294	-95	71	-183	102	-99	-28	0.783	0.215	1.00	Yes	0.431	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.98**
		$U_2 - L_3$	650.88	-----	-331	266	-85	65	-184	86	-24	89	0.770	0.221	1.00	Yes	0.423	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.17**
		$U_3 - L_4$	591.87	-----	-184	123	-39	17	-163	57	102	59	0.789	0.202	1.00	Yes	0.434	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.97**
		$U_4 - L_5$	428.96	-----	-133	104	-2	-34	-169	-5	16	-169	0.772	0.219	1.00	Yes	0.424	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.62**
		$U_5 - L_6$	437.62	-279.01	-124	65	62	-107	-182	47	-74	-185	0.787	0.212	1.00	Yes	0.433	0.116	0.55	Yes	0.659	0.168	0.83	Yes	0.590	0.158	0.75	Yes	1.00	**6.09**
		$U_6 - L_7$	-----	-379.00	-45	-12	40	-97	-96	-302	107	-301	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.182	1.00	Yes	0.726	0.111	0.84	Yes	1.00	**3.82**
		$U_8 - L_7$	583.49	-----	-180	119	-37	-20	-199	-466	-404	-203	0.744	0.256	1.00	Yes	0.468	0.146	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.51**
		$U_8 - L_8$	675.24	-----	-306	230	-147	43	-374	-365	-621	-263	0.731	0.259	1.00	Yes	0.402	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.83**
		$U_{10} - L_9$	790.05	-----	-313	219	-144	61	-431	-475	153	-210	0.782	0.216	1.00	Yes	0.430	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.32**
		$U_{11} - L_{10}$	873.44	-----	-340	277	-109	129	-380	-439	123	-11	0.796	0.204	1.00	Yes	0.438	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.15**
		$U_{12} - L_{11}$	867.13	-----	-361	349	-118	154	-305	-360	217	74	0.790	0.202	1.00	Yes	0.434	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.16**
		$U_{13} - L_{12}$	754.85	-----	-432	376	-153	154	-175	-196	330	126	0.747	0.250	1.00	Yes	0.411	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.54**
		$U_{14} - L_{13}$	754.57	-----	-277	424	-25	155	-182	-170	378	186	0.747	0.253	1.00	Yes	0.411	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.32**
		$U_{14} - L_{15}$	637.78	-----	-219	356	24	72	126	131	222	-43	0.754	0.242	1.00	Yes	0.415	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.76**
		$U_{15} - L_{16}$	627.67	-----	-369	331	-66	71	-179	239	-13	22	0.742	0.252	1.00	Yes	0.408	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.73**
		$U_{16} - L_{17}$	708.98	-----	-336	327	-69	96	-303	357	-148	63	0.768	0.231	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.65**
		$U_{17} - L_{18}$	654.43	-----	-290	277	-67	80	-67	291	-23	104	0.774	0.217	1.00	Yes	0.426	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		$U_{18} - L_{19}$	663.52	-----	-285	249	-51	70	17	281	37	22	0.784	0.212	1.00	Yes	0.431	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.38**
		$U_{19} - L_{20}$	595.04	-----	-200	144	-39	7	27	266	164	-7	0.759	0.233	1.00	Yes	0.417	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.47**
		$U_{20} - L_{21}$	446.58	-----	-124	108	-7	-12	-14	101	52	-88	0.803	0.188	1.00	Yes	0.442	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.16**
		$U_{21} - L_{22}$	431.67	-201.56	-121	35	4	-69	-62	136	215	-138	0.776	0.217	1.00	Yes	0.427	0.119	0.55	Yes	0.476	0.154	0.64	Yes	0.426	0.155	0.59	Yes	1.00	**5.51**
		$U_{23} - L_{22}$	368.19	-228.26	-95	35	-24	-50	-187	-253	-741	-49	0.662	0.336	1.00	Yes	0.364	0.185	0.55	Yes	0.544	0.310	0.86	Yes	0.483	0.121	0.61	Yes	1.00	**4.93**
		$U_{24} - L_{23}$	407.42	-----	-112	100	-12	-14	-238	-217	-420	-42	0.733	0.265	1.00	Yes	0.403	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.92**
		$U_{25} - L_{24}$	544.57	-----	-183	160	-66	26	-359	-324	-681	-146	0.694	0.303	1.00	Yes	0.382	0.173	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		$U_{26} - L_{25}$	654.80	-----	-277	257	-31	43	-289	-357	107	37	0.774	0.222	1.00	Yes	0.426	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.41**
		$U_{27} - L_{26}$	665.46	-----	-288	284	-46	58	-248	-275	176	68	0.787	0.213	1.00	Yes	0.433	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.43**
		$U_{28} - L_{27}$	705.94	-----	-343	349	-49	68	-229	-294	199	110	0.765	0.227	1.00	Yes	0.421	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.66**
		$U_{29} - L_{28}$	636.42	-----	-362	339	-74	74	-96	-165	206	99	0.752	0.243	1.00	Yes	0.414	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
		$U_{30} - L_{29}$	631.20	-----	-220	351	36	105	-113	-139	291	142	0.746	0.252	1.00	Yes	0.410	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.02**
		$U_{30} - L_{31}$	762.24	-----	-296	426	11	76	122	289	275	-5	0.754	0.241	1.00	Yes	0.415	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.28**
		$U_{31} - L_{32}$	716.63	-----	-418	352	-76	79	-136	296	-11	44	0.744	0.255	1.00	Yes	0.409	0.131	0.54	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.03**
		$U_{32} - L_{33}$	874.86	-----	-359	338	-61	95	-313	301	-142	133	0.797	0.195	1.00	Yes	0.438	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.52**
		$U_{33} - L_{34}$	865.14	-----	-347	258	-69	91	-74	401	26	199	0.788	0.202	1.00	Yes	0.433	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.14**
		$U_{34} - L_{35}$	812.58	-----	-323	211	-106	39	2	303	292	-6	0.804	0.195	1.00	Yes	0.442	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.16**
		$U_{35} - L_{36}$	746.96	-----	-331	248	-105	21	-10	105	88	-93	0.809	0.186	1.00	Yes	0.445	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.90**
		$U_{36} - L_{37}$	602.19	-----	-200	125	-33	-10	-154	114	-30	-223	0.768	0.224	1.00	Yes	0.483	0.126	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.89**
		$U_{38} - L_{37}$	-----	-348.32	-30	-14	17	-69	-143	-240	-550	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.240	1.00	Yes	0.667	0.079	0.75	Yes	1.00	**3.06**
		$U_{39} - L_{38}$	318.99	-293.90	-89	49	55	-101	-278	-256	-547	-97	0.574	0.288	0.87	Yes	0.316	0.158	0.48	Yes	0.700	0.292	1.00	Yes	0.622	0.130	0.76	Yes	1.00	**5.19**
		$U_{40} - L_{39}$	359.38	-139.30	-121	83	-16	-27	-306	-307	-672	-82	0.646	0.349	1.00	Yes	0.355	0.192	0.55	Yes	0.333	0.271	0.61	Yes	0.295	0.154	0.45	Yes	1.00	**4.39**
		$U_{41} - L_{40}$	569.92	-----	-172	126	-20	4	-371	-361	-98	-83	0.760	0.235	1.00	Yes	0.418	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.04**
		$U_{42} - L_{41}$	622.82	-----	-316	264	-50	33	-406	-415	-69	-66	0.736	0.254	1.00	Yes	0.405	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.21**
		$U_{43} - L_{42}$	752.35	-----	-390	301	-67	45	-468	-462	-7	-47	0.744	0.251	1.00	Yes	0.409	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.50**
		$U_{44} - L_{43}$	787.16	-----	-279	325	-94	81	-450	-336	54	-22	0.779	0.218	1.00	Yes	0.428	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.65**
	Structure 3	$U_0 - L_1$	722.41	-----	-341	306	-112	93	-16	-247	-63	-53	0.782	0.215	1.00	Yes	0.430	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.75**
		$U_1 - L_2$	706.92	-----	-341	241	-100	68	-307	0	-125	-45	0.766	0.225	1.00	Yes	0.421	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.29**
		$U_2 - L_3$	639.50	-----	-341	235	-97	63	-241	189	-49	79	0.756	0.236	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.13**
		$U_3 - L_4$	550.86	-----	-150	104	-37	2	-139	7	91	-25	0.808	0.184	1.00	Yes	0.444	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.77**
		$U_4 - L_5$	421.46	-----	-131	82	-18	-29	-244	62	38	-179	0.758	0.239	1.00	Yes	0.417	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		$U_5 - L_6$	366.31	-332.88	-85	9	33	-112	-194	-153	-39	-300	0.659	0.231	0.89	Yes	0.362	0.127	0.49	Yes	0.780	0.213	1.00	Yes	0.704	0.144	0.85	Yes	1.00	**5.76**
		$U_7 - L_6$	420.32	-----	-81	30	-20	-35	-208	-292	-468	-197	0.756	0.238	1.00	Yes	0.416	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.82**
		$U_8 - L_7$	562.78	-----	-183	128	-95	14	-384	-402	-779	-227	0.686	0.312	1.00	Yes	0.432	0.179	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.76**
		$U_9 - L_8$	798.66	-----	-250	105	-113	-24	-497	-514	-604	-389	0.790	0.206	1.00	Yes	0.435	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.41**
		$U_{10} - L_9$	917.83	-----	-237	167	-120	43	-495	-558	-801	-353	0.775	0.215	1.00	Yes	0.480	0.122	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.84**
		$U_{11} - L_{10}$	992.39	-----	-314	237	-83	89	-472	-434	228	82	0.793	0.200	1.00	Yes	0.491	0.113	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.89**
		$U_{12} - L_{11}$	997.87	-----	-115	357	2	132	-309	-305	313	178	0.798	0.199	1.00	Yes	0.494	0.112	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.16**
		$U_{12} - L_{13}$	673.23	-----	-112	293	25	72	146	175	152	-21	0.796	0.199	1.00	Yes	0.438	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.97**
		$U_{13} - L_{14}$	662.34	-----	-289	225	-29	58	-93	241	43	76	0.783	0.209	1.00	Yes	0.431	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.46**
		$U_{14} - L_{15}$	700.67	-----	-208	176	-21	37	-214	245	119	59	0.828	0.163	1.00	Yes	0.456	0.090	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.66**
		$U_{15} - L_{16}$	600.79	-----	-90	43	-23	-3	-89	115	-34	40	0.881	0.119	1.00	Yes	0.485	0.065	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		$U_{17} - L_{16}$	-----	-393.52	-19	-33	-1	-51	-3	-7	-294	14	-----	-----	-----	-----	-----	-----	-----	-----	0.900	0.091	1.00	Yes	0.833	0.065	0.90	Yes	1.00	**3.31**
		$U_{18} - L_{17}$	268.34	-315.47	-70	4	-39	-68	-197	-200	-720	-53	0.483	0.298	0.79	Yes	0.265	0.164	0.43	Yes	0.726	0.265	1.00	Yes	0.668	0.090	0.76	Yes	1.00	**5.00**
		$U_{19} - L_{18}$	411.74	-117.78	-101	17	23	-18	-444	-341	143	110	0.741	0.258	1.00	Yes	0.407	0.142	0.55	Yes	0.270	0.242	0.52	Yes	0.249	0.129	0.38	Yes	1.00	**4.23**
		$U_{20} - L_{19}$	643.18	-----	-11	32	-14	-6	-440	-365	88	101	0.844	0.149	1.00	Yes	0.510	0.082	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.23**

Operating Loads - 3F1

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			-----	-542.49	-29	71	-58	-890	20	-23	-36	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.262	1	Yes	0.732	0.212	0.95	Yes	1.00	**5.45**
		U_1 - U_2			-----	-554.43	-52	71	-215	-886	5	46	-50	4	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.240	1	Yes	0.748	0.211	0.96	Yes	1.00	**3.57**
		U_2 - U_3			105.58	-544.15	-101	234	-191	-758	14	-90	171	-164	0.121	0.209	0.34	Yes	0.082	0.136	0.22	Yes	0.740	0.255	1	Yes	0.734	0.180	0.92	Yes	1.00	**3.52**
		U_3 - U_4			269.53	-529.91	76	228	-215	-910	-72	-79	-12	-199	0.309	0.250	0.56	Yes	0.212	0.171	0.39	Yes	0.721	0.270	1	Yes	0.715	0.216	0.94	Yes	1.00	**4.44**
		U_4 - U_5			279.92	-543.51	86	228	-1092	-216	-154	-28	-136	-97	0.321	0.286	0.61	Yes	0.220	0.196	0.42	Yes	0.740	0.242	0.99	Yes	0.733	0.260	1.00	Yes	1.00	**4.57**
		U_5 - U_6			558.49	-----	212	384	-1285	56	-268	-10	-69	-294	0.640	0.355	1.00	Yes	0.432	0.231	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.53**
		U_6 - U_7			777.02	-----	285	189	-905	-189	-340	85	-415	-177	0.743	0.249	1.00	Yes	0.519	0.171	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.74**
		U_7 - U_8			953.24	-----	-40	1213	-1753	1957	-255	360	-346	132	0.660	0.333	1.00	Yes	0.461	0.227	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.38**
		U_8 - U_9			818.55	-----	1122	-147	1719	-1627	-107	232	58	279	0.671	0.323	1.00	Yes	0.459	0.220	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.82**
		U_9 - U_{10}			610.18	-----	221	218	52	-1165	109	395	206	452	0.662	0.334	1.00	Yes	0.448	0.224	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.16**
		U_{10} - U_{11}			-----	-598.68	223	-94	27	-1015	225	87	303	81	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.210	0.99	Yes	0.764	0.227	1.00	Yes	1.00	**4.66**
		U_{11} - U_{12}			-----	-869.66	163	-128	92	-1051	173	103	223	62	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.163	0.99	Yes	0.816	0.174	1.00	Yes	1.00	**3.99**
		U_{12} - U_{13}			-----	-1175.76	-39	-166	-146	-1253	224	-38	248	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.200	1	Yes	0.785	0.173	0.96	Yes	1.00	**4.28**
		U_{13} - U_{14}			-----	-1301.17	-116	-356	-324	-1951	152	62	89	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.239	1	Yes	0.746	0.215	0.97	Yes	1.00	**4.15**
		U_{14} - U_{15}			-----	-1282.04	-255	-191	-1812	-793	184	-54	178	-49	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.253	1	Yes	0.735	0.200	0.94	Yes	1.00	**4.03**
		U_{15} - U_{16}			-----	-1362.43	-78	-413	-1301	-807	25	-63	188	-195	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.207	1	Yes	0.781	0.144	0.93	Yes	1.00	**4.25**
		U_{16} - U_{17}			-----	-1294.97	-319	-185	-1781	-695	56	-177	-76	-259	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.242	1	Yes	0.742	0.196	0.94	Yes	1.00	**4.25**
		U_{17} - U_{18}			-----	-985.06	-172	-101	-1152	-146	-159	-242	-59	-210	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.219	1	Yes	0.771	0.188	0.96	Yes	1.00	**3.67**
		U_{18} - U_{19}			-----	-699.80	-199	-29	-863	-67	-203	-177	-10	-179	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.196	1	Yes	0.787	0.174	0.97	Yes	1.00	**3.70**
		U_{19} - U_{20}			-----	-642.54	-179	-19	-1368	904	-126	4	141	-27	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.203	0.94	Yes	0.723	0.275	1.00	Yes	1.00	**9.44**
	Structure 2	U_0 - U_1			-----	-628.74	169	-142	437	-1468	95	183	27	4	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.175	0.93	Yes	0.743	0.249	1.00	Yes	1.00	**8.36**
		U_1 - U_2			-----	-751.99	-103	-158	-168	-1254	336	629	223	278	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.264	1	Yes	0.726	0.190	0.92	Yes	1.00	**4.11**
		U_2 - U_3			-----	-1103.52	-79	-232	-156	-1739	600	4	117	-49	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.206	1	Yes	0.783	0.177	0.97	Yes	1.00	**4.58**
		U_3 - U_4			-----	-1301.72	-373	-311	-671	-2142	126	-284	210	-160	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.245	1	Yes	0.741	0.191	0.94	Yes	1.00	**4.20**
		U_4 - U_5			-----	-1392.99	-374	-347	-766	-2561	-50	-343	74	-283	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.270	1	Yes	0.715	0.212	0.93	Yes	1.00	**4.11**
		U_5 - U_6			-----	-1476.59	-395	-26	-1168	-1801	-101	-290	-103	-383	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.231	1	Yes	0.758	0.149	0.91	Yes	1.00	**4.58**
		U_6 - U_7			-----	-1234.11	-292	-98	-595	-2334	-73	-257	-48	-380	-----	-----	-----	-----	-----	-----	-----	-----	0.708	0.284	1	Yes	0.703	0.208	0.92	Yes	1.00	**3.98**
		U_7 - U_8			-----	-1232.43	-180	-231	-2435	-887	-168	-208	-199	-198	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.288	1	Yes	0.702	0.217	0.92	Yes	1.00	**3.99**
		U_8 - U_9			-----	-1142.33	-314	76	-1790	-595	-199	-180	-91	-190	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.215	1	Yes	0.775	0.190	0.97	Yes	1.00	**4.45**
		U_9 - U_{10}			-----	-894.88	-116	259	-1799	-331	-254	-125	-134	-168	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.219	1	Yes	0.772	0.219	1.00	Yes	1.00	**4.69**
		U_{10} - U_{11}			447.03	-770.15	66	338	-1656	-316	-167	-85	-132	-206	0.378	0.259	0.64	Yes	0.257	0.167	0.43	Yes	0.770	0.221	1	Yes	0.765	0.234	1.00	Yes	1.00	**6.77**
		U_{11} - U_{12}			766.18	-----	145	490	-2077	-95	-377	-187	-254	-448	0.647	0.348	1.00	Yes	0.435	0.232	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.94**
		U_{12} - U_{13}			1040.30	-----	258	22	-1841	-1096	-506	-123	-605	-473	0.702	0.290	1.00	Yes	0.501	0.197	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.58**
		U_{13} - U_{14}			1361.42	-----	-308	3003	-407	1511	-687	286	-536	-171	0.669	0.325	1.00	Yes	0.474	0.213	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.09**
		U_{14} - U_{15}			1172.28	-----	2595	-56	4155	-3090	-418	277	-110	557	0.576	0.423	1.00	Yes	0.408	0.277	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.40**
		U_{15} - U_{16}			1085.57	-----	46	287	-109	-2363	82	711	448	845	0.656	0.340	1.00	Yes	0.467	0.229	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.22**
		U_{16} - U_{17}			881.62	-----	570	220	548	-2276	337	329	550	213	0.650	0.344	1.00	Yes	0.432	0.226	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.67**
		U_{17} - U_{18}			690.85	-----	462	270	-188	-1633	45	158	183	146	0.693	0.304	1.00	Yes	0.462	0.202	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.41**
		U_{18} - U_{19}			410.40	-598.78	423	171	416	-1680	21	36	99	-76	0.412	0.300	0.72	Yes	0.270	0.190	0.47	Yes	0.711	0.108	0.82	Yes	0.707	0.285	1.00	Yes	1.00	**6.35**
		U_{19} - U_{20}			214.76	-700.58	260	132	-146	-1416	19	136	85	39	0.201	0.245	0.45	Yes	0.133	0.161	0.30	Yes	0.778	0.199	0.98	Yes	0.773	0.227	1.00	Yes	1.00	**5.27**
		U_{20} - U_{21}			-----	-831.15	118	-14	-170	-1579	105	-17	102	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.234	1	Yes	0.759	0.229	0.99	Yes	1.00	**5.32**
		U_{21} - U_{22}			-----	-778.71	-25	3	-300	-1729	-8	-47	-11	-94	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.276	1	Yes	0.711	0.250	0.97	Yes	1.00	**4.74**
		U_{22} - U_{23}			-----	-749.92	-25	-39	-1652	-759	-54	-100	19	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.689	0.303	1	Yes	0.684	0.239	0.93	Yes	1.00	**4.53**
		U_{23} - U_{24}			-----	-779.74	10	61	-1499	-541	-193	-102	-98	-140	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.282	1	Yes	0.712	0.217	0.93	Yes	1.00	**4.73**
		U_{24} - U_{25}			-----	-675.17	85	203	-1416	-439	-211	-39	-145	-130	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.246	1	Yes	0.745	0.227	0.98	Yes	1.00	**4.70**
		U_{25} - U_{26}			346.48	-608.71	131	367	-1609	-187	-203	41	-173	-81	0.348	0.303	0.66	Yes	0.228	0.192	0.43	Yes	0.723	0.205	0.93	Yes	0.719	0.273	1.00	Yes	1.00	**5.87**
		U_{26} - U_{27}			631.21	-----	216	418	-1949	-303	-197	20	-166	-173	0.634	0.360	1.00	Yes	0.422	0.239	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.22**
		U_{27} - U_{28}			866.21	-----	191	532	-2465	-2	-338	-58	-193	-440	0.638	0.356	1.00	Yes	0.425	0.235	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.28**
		U_{28} - U_{29}			1083.56	-----	243	58	-2497	-1394	-409	62	-712	-384	0.655	0.344	1.00	Yes	0.466	0.231	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.08**
		U_{29} - U_{30}			1181.94	-----	-136	2764	-3529	4029	-528	485	-375	142	0.581	0.409	1.00	Yes	0.411	0.268	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.27**
		U_{30} - U_{31}			1440.79	-----	2809	-138	1384	-343	-206	437	284	405	0.708	0.290	1.00	Yes	0.502	0.190	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.22**
		U_{31} - U_{32}			1050.69	-----	0	317	-529	-1727	205	645	531	753	0.710	0.289	1.00	Yes	0.506	0.197	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.43**
		U_{32} - U_{33}			780.95	-----	487	191	265	-1903	338	278	586	219	0.660	0.340	1.00	Yes	0.443	0.227	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.59**
		U_{33} - U_{34}			527.96	-747.56	360	158	-54	-1815	133	163	223	39	0.446	0.283	0.73	Yes	0.303	0.182	0.49	Yes	0.747	0.217	0.97	Yes	0.743	0.256	1.00	Yes	1.00	**7.06**
		U_{34} - U_{35}			-----	-890.87	321	-48	-64	-1841	119	-19	174	-71	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.182	0.96	Yes	0.769	0.224	1.00	Yes	1.00	**5.12**
		U_{35} - U_{36}			-----	-1181.58	138	-254	-300	-1720	101	82	127	-27	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.189	1	Yes	0.801	0.183	0.99	Yes	1.00	**5.20**
		U_{36} - U_{37}			-----	-1278.25	-152	-62	-366	-2471	163	-55	163	-77	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.262	1	Yes	0.728	0.220	0.95	Yes	1.00	**4.54**
		U_{37} - U_{38}			-----	-1226.43	26	-263	-2244	-1128	19	1	126	4	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.293	1	Yes	0.698	0.200	0.90	Yes	1.00	**4.24**
		U_{38} - U_{39}			-----	-1477.20	10	-412	-1992	-1771	80	-116	210	-132	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.226	1	Yes	0.758	0.165	0.93	Yes	1.00	**4.81**
		U_{39} - U_{40}			-----	-1356.57	-345	-473	-2583	-1264	-117	-147	-100	-295	-----	-----	-----	-----	-----	-----	-----	-----	0.702	0.298	1	Yes	0.696	0.214	0.92	Yes	1.00	**4.09**
		U_{40} - U_{41}			-----	-1291.46	-407	-433	-2005	-1038	-90	-138	-163	-273	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.254	1	Yes	0.735	0.179	0.92	Yes	1.00	**4.23**
		U_{41} - U_{42}			-----	-1077.25	-283	-174	-2070	-498	-100	24	-136	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.229	1	Yes	0.765	0.211	0.98	Yes	1.00	**4.36**
		U_{42} - U_{43}			-----	-862.04	-270	-55	-1001	-30	109	-59	226	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.162	1	Yes	0.832	0.152	0.99	Yes	1.00	**5.14**
		U_{43} - U_{44}			-----	-633.76	-130	-162	-1476	703	-66	2	164	29	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.233	0.99	Yes	0.748	0.251	1.00	Yes	1.00	**8.43**
	Structure 3	U_0 - U_1			-----	-600.53	173	-175	383	-1586	62	132	-28	-207	-----	-----	-----	-----	-----	-----	-----	-----	0.682	0.216	0.9	Yes	0.676	0.319	1.00	Yes	1.00	**8.12**
		U_1 - U_2			-----	-670.63	-67	-119	5	-843	253	509	200	270	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.233	1	Yes	0.755	0.170	0.93	Yes	1.00	**3.61**
		U_2 - U_3			-----	-978.96	-76	-126	21	-1143	518	9	459	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.217	1	Yes	0.766	0.186	0.96	Yes	1.00	**3.88**
		U_3 - U_4			-----	-1325.98	-144	-208	-474	-1778	133	-236	197	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.229	1	Yes	0.760	0.196	0.96	Yes	1.00	**4.76**
		U_4 - U_5			-----	-1305.84	-326	-57	-423	-1408	-9	-310	50	-438	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.239	1	Yes	0.749	0.155	0.91	Yes	1.00	**4.20**
		U_5 - U_6			-----	-1276.34	-157	-234	-540	-1938	-45	-203	-67	-239	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.259	1	Yes	0.732	0.214	0.95	Yes	1.00	**4.18**
		U_6 - U_7			-----	-1273.92	-314	-95	-1984	-536	-78	-228	-6	-165	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.254	1	Yes	0.730	0.219	0.95	Yes	1.00	**4.18**
		U_7 - U_8			-----	-1129.69	-134	-56	-1330	-356	-198	-202	-66	-239	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.232	1	Yes	0.755	0.183	0.94	Yes	1.00	**4.13**
		U_8 - U_9			-----	-883.58	-127	170	-958	-54	-100	-110	-90	-203	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.160	1	Yes	0.829	0.159	0.99	Yes	1.00	**4.19**
		U_9 - U_{10}			-----	-593.23	-97	207	-1062	5	-205	-127	-205	-207	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.222	0.99	Yes	0.757	0.238	1.00	Yes	1.00	**4.41**
		U_{10} - U_{11}			606.63	-----	205	219	-1273	-151	-313	-59	-278	-181	0.658	0.336	1.00	Yes	0.446	0.225	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.47**
		U_{11} - U_{12}			828.82	-----	-170	1196	-1626	1501	-342	131	-314	5	0.679	0.315	1.00	Yes	0.465	0.214	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.30**
		U_{12} - U_{13}			935.78	-----	1173	-21	2052	-1737	-357	80	-103	367	0.648	0.348	1.00	Yes	0.452	0.237	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.45**
		U_{13} - U_{14}			750.91	-----	179	293	83	-979	-89	363	124	471	0.718	0.273	1.00	Yes	0.502	0.187	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.56**
		U_{14} - U_{15}			561.31	-----	377	212	264	-1261	62	136	307	0	0.643	0.352	1.00	Yes	0.434	0.229	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.70**
		U_{15} - U_{16}			271.29	-552.67	230	113	-77	-1063	5	127	71	92	0.311	0.274	0.59	Yes	0.213	0.188	0.41	Yes	0.752	0.210	0.97	Yes	0.745	0.253	1.00	Yes	1.00	**4.68**
		U_{16} - U_{17}			275.44	-578.67	270	60	-892	-438	44	55	155	1	0.316	0.238	0.56	Yes	0.217	0.163	0.38	Yes	0.787	0.196	0.99	Yes	0.780	0.212	1.00	Yes	1.00	**4.84**
		U_{17} - U_{18}			99.70	-564.02	225	-131	-787	-551	-67	139	-37	-35	0.114	0.210	0.33	Yes	0.077	0.137	0.22	Yes	0.767	0.226	1	Yes	0.761	0.187	0.95	Yes	1.00	**3.72**
		U_{18} - U_{19}			-----	-538.46	37	-29	-929	-308	141	15	145	36	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.258	1	Yes	0.726	0.221	0.95	Yes	1.00	**3.45**
		U_{19} - U_{20}			-----	-594.37	124	-235	-804	138	-59	19	287	16	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.175	0.99	Yes	0.802	0.191	1.00	Yes	1.00	**6.25**

Operating Loads - 3F1

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	203.58	-----	740	-1225	528	-613	-402	-1476	48	178	0.312	0.685	1.00	Yes	0.183	0.410	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**14.06**
		L_1 - L_2	436.97	-----	-181	-687	47	-19	-579	146	19	22	0.669	0.330	1.00	Yes	0.408	0.217	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.38**
		L_2 - L_3	646.68	-----	-832	-604	-39	51	-64	-285	11	-6	0.744	0.247	1.00	Yes	0.430	0.147	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.68**
		L_3 - L_4	651.62	-150.03	-917	-568	40	190	-123	146	-34	39	0.750	0.245	1.00	Yes	0.445	0.159	0.61	Yes	0.205	0.235	0.44	Yes	0.203	0.222	0.43	Yes					1.00	**4.65**
		L_4 - L_5	-----	-536.06	-661	-520	98	500	-272	114	172	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.141	0.97	Yes	0.817	0.175	1.00	Yes					1.00	**6.58**
		L_5 - L_6	-----	-750.42	-361	-463	140	579	-101	16	19	86	-----	-----	-----	-----	-----	-----	-----	-----	0.875	0.118	1	Yes	0.866	0.128	1.00	Yes					1.00	**6.71**
		L_6 - L_7	-----	-1065.85	-846	-831	135	12	39	-53	192	12	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.127	1	Yes	0.858	0.133	1.00	Yes					1.00	**8.13**
		L_7 - L_8	-----	-1267.09	-32	581	-26	1342	41	73	173	238	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.187	1	Yes	0.802	0.178	0.99	Yes					1.00	**8.39**
		L_8 - L_9	-----	-1283.71	554	-47	1365	-90	38	-14	151	39	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.175	1	Yes	0.813	0.181	1.00	Yes					1.00	**8.39**
		L_9 - L_{10}	-----	-981.81	-168	-1275	121	65	46	13	-2	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.106	0.91	Yes	0.790	0.200	1.00	Yes					1.00	**10.13**
		L_{10} - L_{11}	-----	-520.59	-260	-762	475	-24	-21	-6	73	10	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.118	0.92	Yes	0.793	0.202	1.00	Yes					1.00	**7.76**
		L_{11} - L_{12}	574.37	-----	22	-660	325	-201	-420	140	-16	21	0.744	0.248	1.00	Yes	0.446	0.160	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.57**
		L_{12} - L_{13}	1064.07	-----	-564	-845	63	-101	-70	5	-20	-33	0.840	0.158	1.00	Yes	0.537	0.094	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.48**
		L_{13} - L_{14}	1317.27	-----	-519	-1473	217	-396	-178	189	-107	65	0.775	0.219	1.00	Yes	0.502	0.134	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.21**
		L_{14} - L_{15}	1632.13	-----	-1545	-1311	-352	-81	-232	139	-66	-49	0.797	0.203	1.00	Yes	0.518	0.123	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.94**
		L_{15} - L_{16}	1575.51	-----	-1005	-1772	-198	-391	-223	-123	-75	16	0.770	0.229	1.00	Yes	0.494	0.134	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.26**
		L_{16} - L_{17}	1252.44	-----	-1275	-669	-400	39	-164	123	-34	-65	0.792	0.202	1.00	Yes	0.514	0.124	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.91**
		L_{17} - L_{18}	941.40	-----	-850	-352	-187	-51	-2	-119	-42	0	0.820	0.179	1.00	Yes	0.525	0.107	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.51**
		L_{18} - L_{19}	444.29	-----	-863	231	-264	190	-205	269	3	-15	0.680	0.315	1.00	Yes	0.460	0.198	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.78**
		L_{19} - L_{20}	361.13	-----	-355	53	-1333	874	-7	-2	-211	-47	0.553	0.444	1.00	Yes	0.337	0.299	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**19.42**
	Structure 2	L_0 - L_1	157.21	-----	579	-1785	547	-1211	-447	-1553	34	117	0.237	0.760	1.00	Yes	0.144	0.372	0.52	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**14.96**
		L_1 - L_2	535.07	-----	79	-1109	168	-214	-729	290	75	103	0.650	0.345	1.00	Yes	0.387	0.218	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.37**
		L_2 - L_3	1010.07	-----	-320	-1083	-18	-149	-45	-359	124	161	0.796	0.195	1.00	Yes	0.522	0.117	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.34**
		L_3 - L_4	1293.03	-----	-431	-1634	59	-337	-501	170	43	123	0.760	0.231	1.00	Yes	0.512	0.144	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.86**
		L_4 - L_5	1737.33	-----	-1775	-1657	-242	-232	183	-216	17	-10	0.810	0.182	1.00	Yes	0.536	0.108	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.92**
		L_5 - L_6	1790.76	-----	-1939	-2393	-37	-359	-179	133	-93	58	0.768	0.223	1.00	Yes	0.516	0.136	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.58**
		L_6 - L_7	1766.22	-----	-2598	-1849	-401	-111	15	254	52	-10	0.748	0.244	1.00	Yes	0.497	0.142	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.39**
		L_7 - L_8	1406.56	-----	-1499	-1417	-189	226	-289	-11	-70	77	0.806	0.189	1.00	Yes	0.530	0.112	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.36**
		L_8 - L_9	1149.04	-----	-1284	-729	-139	480	-138	199	41	-121	0.804	0.192	1.00	Yes	0.541	0.120	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.96**
		L_9 - L_{10}	870.20	-550.29	-1331	-561	-98	581	-9	-61	-37	35	0.777	0.220	1.00	Yes	0.452	0.138	0.60	Yes	0.582	0.142	0.73	Yes	0.578	0.213	0.80	Yes					1.00	**8.43**
		L_{10} - L_{11}	-----	-723.21	-856	-350	24	575	-121	87	127	-59	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.079	0.94	Yes	0.850	0.150	1.00	Yes					1.00	**7.57**
		L_{11} - L_{12}	-----	-1047.62	-1010	-402	-26	976	12	-92	122	274	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.106	0.98	Yes	0.859	0.138	1.00	Yes					1.00	**8.88**
		L_{12} - L_{13}	-----	-1447.54	-381	-240	-52	-874	-21	-178	421	205	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.123	1	Yes	0.866	0.087	0.96	Yes					1.00	**10.75**
		L_{13} - L_{14}	-----	-1516.83	-477	1322	-972	2676	-192	-259	217	226	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.171	0.95	Yes	0.763	0.234	1.00	Yes					1.00	**9.55**
		L_{14} - L_{15}	-----	-1492.27	1258	-546	2759	-822	-239	-166	20	-159	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.172	0.93	Yes	0.751	0.241	1.00	Yes					1.00	**8.53**
		L_{15} - L_{16}	-----	-1470.02	-509	-92	-1095	195	-112	10	-192	-135	-----	-----	-----	-----	-----	-----	-----	-----	0.887	0.108	1	Yes	0.879	0.109	0.99	Yes					1.00	**11.97**
		L_{16} - L_{17}	-----	-1157.68	24	-1198	1154	73	-62	-519	8	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.143	1	Yes	0.843	0.148	1.00	Yes					1.00	**9.98**
		L_{17} - L_{18}	-----	-794.60	-129	-1004	485	165	-25	153	16	-37	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.134	0.98	Yes	0.834	0.161	1.00	Yes					1.00	**6.94**
		L_{18} - L_{19}	-----	-627.10	-259	-823	610	75	70	-284	-8	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.130	0.98	Yes	0.836	0.159	1.00	Yes					1.00	**7.12**
		L_{19} - L_{20}	-----	-532.28	-467	-1492	504	158	-151	164	-29	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.203	0.92	Yes	0.709	0.288	1.00	Yes					1.00	**8.61**
		L_{20} - L_{21}	957.63	-328.78	-1160	-1561	348	-5	-2	48	1	-36	0.764	0.233	1.00	Yes	0.501	0.137	0.64	Yes	0.311	0.217	0.53	Yes	0.308	0.228	0.54	Yes					1.00	**7.69**
		L_{21} - L_{22}	918.70	-----	-1281	-1671	196	-160	27	214	-55	25	0.733	0.267	1.00	Yes	0.490	0.167	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.19**
		L_{22} - L_{23}	915.44	-----	-1108	-1661	-154	171	-195	-35	20	-40	0.730	0.263	1.00	Yes	0.488	0.165	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.04**
		L_{23} - L_{24}	967.68	-302.56	-1253	-1504	-13	290	-65	-16	-7	67	0.772	0.227	1.00	Yes	0.506	0.134	0.64	Yes	0.286	0.252	0.54	Yes	0.284	0.220	0.51	Yes					1.00	**7.56**
		L_{24} - L_{25}	648.17	-430.16	-1260	-478	90	439	-122	131	93	-88	0.734	0.263	1.00	Yes	0.434	0.168	0.61	Yes	0.577	0.150	0.73	Yes	0.573	0.243	0.82	Yes					1.00	**7.31**
		L_{25} - L_{26}	-----	-620.15	-684	-858	70	581	-37	-83	12	80	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.114	0.95	Yes	0.826	0.166	1.00	Yes					1.00	**7.97**
		L_{26} - L_{27}	-----	-796.47	-965	-527	142	490	-77	117	143	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.112	0.96	Yes	0.836	0.154	1.00	Yes					1.00	**8.11**
		L_{27} - L_{28}	-----	-1174.33	-1018	-734	56	1149	-174	-263	91	199	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.126	0.99	Yes	0.855	0.142	1.00	Yes					1.00	**11.57**
		L_{28} - L_{29}	-----	-1549.57	-176	-448	-204	-149	141	99	338	52	-----	-----	-----	-----	-----	-----	-----	-----	0.935	0.064	1	Yes	0.927	0.045	0.98	Yes					1.00	**13.15**
		L_{29} - L_{30}	-----	-1502.65	-498	1196	-758	2755	91	120	55	-26	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.166	0.93	Yes	0.756	0.241	1.00	Yes					1.00	**8.61**
		L_{30} - L_{31}	-----	-1460.05	1247	-470	2986	-885	123	69	153	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.177	0.92	Yes	0.735	0.261	1.00	Yes					1.00	**9.70**
		L_{31} - L_{32}	-----	-1488.66	-279	-306	-804	203	87	57	-154	-168	-----	-----	-----	-----	-----	-----	-----	-----	0.898	0.096	1	Yes	0.890	0.080	0.98	Yes					1.00	**12.52**
		L_{32} - L_{33}	-----	-1044.62	-43	-884	1012	51	259	-222	-25	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.114	0.98	Yes	0.857	0.138	1.00	Yes					1.00	**9.02**
		L_{33} - L_{34}	-----	-691.16	171	-1049	530	85	-411	227	18	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.134	0.96	Yes	0.812	0.184	1.00	Yes					1.00	**7.01**
		L_{34} - L_{35}	849.04	-598.42	-477	-1180	643	-36	84	-425	-4	-57	0.758	0.240	1.00	Yes	0.441	0.148	0.59	Yes	0.633	0.120	0.76	Yes	0.628	0.189	0.82	Yes					1.00	**8.74**
		L_{35} - L_{36}	1117.43	-----	-458	-1443	495	-87	-169	198	-81	18	0.782	0.213	1.00	Yes	0.526	0.133	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.21**
		L_{36} - L_{37}	1328.38	-----	-955	-1861	293	-90	54	299	36	-3	0.762	0.230	1.00	Yes	0.500	0.135	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.30**
		L_{37} - L_{38}	1714.31	-----	-1034	-2861	-10	-457	-267	35	-74	53	0.726	0.268	1.00	Yes	0.482	0.156	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.26**
		L_{38} - L_{39}	1803.99	-----	-2093	-2378	-386	-81	-88	180	11	-58	0.774	0.222	1.00	Yes	0.520	0.135	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.77**
		L_{39} - L_{40}	1729.84	-----	-1935	-1956	-262	-389	-66	-96	-57	6	0.806	0.191	1.00	Yes	0.534	0.113	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.11**
		L_{40} - L_{41}	1288.91	-----	-1949	-407	-431	23	-150	125	-1	-19	0.757	0.240	1.00	Yes	0.510	0.148	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.13**
		L_{41} - L_{42}	1051.94	-----	-1063	-827	-198	-97	22	-114	24	114	0.829	0.166	1.00	Yes	0.544	0.098	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.14**
		L_{42} - L_{43}	533.73	-----	-1506	389	-330	179	-94	272	133	56	0.648	0.351	1.00	Yes	0.386	0.226	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.73**
		L_{43} - L_{44}	238.76	-----	-637	71	-2978	1339	-598	-175	-136	-39	0.290	0.704	1.00	Yes	0.172	0.452	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**38.83**
	Structure 3	L_0 - L_1	275.64	-----	545	-1133	744	-1147	-240	-1090	41	188	0.422	0.570	1.00	Yes	0.257	0.373	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**16.48**
		L_1 - L_2	454.54	-----	198	-706	158	-190	-432	257	36	62	0.696	0.301	1.00	Yes	0.471	0.191	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.91**
		L_2 - L_3	950.38	-----	-307	-730	-21	-146	111	-221	92	133	0.828	0.169	1.00	Yes	0.530	0.102	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.23**
		L_3 - L_4	1210.95	-----	-184	-1325	46	-310	-405	178	30	118	0.766	0.231	1.00	Yes	0.497	0.142	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.97**
		L_4 - L_5	1630.72	-----	-1459	-1186	-278	-139	21	-261	26	12	0.797	0.194	1.00	Yes	0.511	0.114	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.91**
		L_5 - L_6	1555.05	-----	-1117	-1798	-34	-319	-143	285	-64	134	0.760	0.237	1.00	Yes	0.494	0.143	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.81**
		L_6 - L_7	1379.44	-----	-1209	-928	-346	203	-151	195	1	-30	0.811	0.183	1.00	Yes	0.526	0.112	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.77**
		L_7 - L_8	1053.77	-----	-863	-603	-93	45	1	91	-25	66	0.832	0.164	1.00	Yes	0.532	0.097	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.55**
		L_8 - L_9	635.58	-----	-585	-239	-202	334	-70	-44	59	-90	0.823	0.171	1.00	Yes	0.494	0.112	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.99**
		L_9 - L_{10}	490.48	-537.18	-685	-466	-28	484	85	103	-16	32	0.635	0.199	0.84	Yes	0.370	0.121	0.50	Yes	0.826	0.124	0.95	Yes	0.818	0.181	1.00	Yes					1.00	**8.31**
		L_{10} - L_{11}	-----	-1037.42	-954	-871	62	69	47	-125	117	-125	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.099	0.95	Yes	0.840	0.151	1.00	Yes					1.00	**11.41**
		L_{11} - L_{12}	-----	-1247.09	-57	533	-126	1451	-91	-107	-125	-187	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.192	1	Yes	0.790	0.192	0.99	Yes					1.00	**8.38**
		L_{12} - L_{13}	-----	-1246.38	555	-35	1393	-62	-135	-141	-269	-256	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.198	1	Yes	0.789	0.184	0.98	Yes					1.00	**8.19**
		L_{13} - L_{14}	-----	-1047.70	-518	-957	17	156	156	50	-157	-172	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.135	0.99	Yes	0.843	0.150	1.00	Yes					1.00	**7.93**
		L_{14} - L_{15}	-----	-737.54	-250	-537	566	134	-57	-284	-4	-66	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.134	1	Yes	0.851	0.125	0.98	Yes					1.00	**6.69**
		L_{15} - L_{16}	-----	-503.78	-249	-875	452	133	-73	288	6	-74	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.200	0.98	Yes	0.768	0.232	1.00	Yes					1.00	**6.09**
		L_{16} - L_{17}	604.62	-----	-32	-1130	209	2	-141	-40	27	-71	0.696	0.296	1.00	Yes	0.413	0.192	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.39**
		L_{17} - L_{18}	636.43	-----	-496	-1014	28	-75	-25	113	11	103	0.732	0.263	1.00	Yes	0.424	0.158	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.51**
		L_{18} - L_{19}	433.35	-----	-923	-25	-37	32	25	234	50	-75	0.663	0.327	1.00	Yes	0.405	0.219	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.47**
		L_{19} - L_{20}	162.46	-----	-2019	1084	-2059	1592	583	158	194	53	0.249	0.743	1.00	Yes	0.146	0.453	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**31.71**

Operating Loads - 3F1

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	$U_0 - L_0$			-----	-368.64	-25	48	-54	110	-100	-32	-348	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.168	1	Yes	0.780	0.141	0.93	Yes	1.00	**1.76**
		$U_1 - L_1$			-----	-357.76	19	-13	-155	185	39	15	-290	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.152	0.94	Yes	0.757	0.236	1.00	Yes	1.00	**4.45**
		$U_2 - L_2$			74.02	-331.55	65	-72	-173	226	33	8	-165	29	0.133	0.337	0.48	Yes	0.073	0.185	0.26	Yes	0.725	0.140	0.87	Yes	0.702	0.289	1.00	Yes	1.00	**6.24**
		$U_3 - L_3$			265.54	-324.87	230	-240	-75	128	-204	-47	0	143	0.478	0.366	0.85	Yes	0.263	0.201	0.47	Yes	0.712	0.121	0.84	Yes	0.687	0.306	1.00	Yes	1.00	**7.53**
		$U_4 - L_4$			-----	-360.62	182	-184	70	-76	-185	-110	-99	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.111	0.91	Yes	0.763	0.235	1.00	Yes	1.00	**4.66**
		$U_5 - L_5$			-----	-430.37	14	-32	230	-252	-127	-52	-116	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.102	0.89	Yes	0.742	0.255	1.00	Yes	1.00	**4.03**
		$U_6 - L_6$			-----	-518.17	48	-55	267	-288	-96	-22	98	74	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.088	0.88	Yes	0.743	0.251	1.00	Yes	1.00	**4.08**
		$U_7 - L_7$			-----	-446.64	118	-132	293	-315	-130	47	-119	57	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.122	0.87	Yes	0.689	0.310	1.00	Yes	1.00	**2.85**
		$U_8 - L_8$			-----	-1352.99	0	-6	39	-42	-194	-69	-202	-63	-----	-----	-----	-----	-----	-----	-----	-----	0.977	0.021	1	Yes	0.938	0.008	0.95	Yes	1.00	**6.07**
		$U_9 - L_9$			-----	-675.50	-166	190	-352	419	-224	-158	-244	-180	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.125	0.94	Yes	0.763	0.233	1.00	Yes	1.00	**3.42**
		$U_{10} - L_{10}$			-----	-825.18	-94	98	-270	347	-272	-198	88	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.109	0.97	Yes	0.814	0.180	1.00	Yes	1.00	**5.79**
		$U_{11} - L_{11}$			-----	-686.12	-78	126	-298	432	-174	-39	-133	7	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.094	0.92	Yes	0.799	0.201	1.00	Yes	1.00	**5.26**
		$U_{12} - L_{12}$			-----	-565.42	-38	42	-230	261	-171	6	-148	48	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.090	0.91	Yes	0.776	0.223	1.00	Yes	1.00	**4.85**
		$U_{13} - L_{13}$			-----	-404.41	-1	15	-159	190	-86	92	120	139	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.090	0.91	Yes	0.775	0.217	1.00	Yes	1.00	**3.83**
		$U_{14} - L_{14}$			-----	-355.50	-165	190	-94	100	-96	-24	151	21	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.119	0.92	Yes	0.752	0.243	1.00	Yes	1.00	**5.02**
		$U_{15} - L_{15}$			226.95	-319.13	-186	175	241	-252	-121	-83	68	-150	0.408	0.365	0.78	Yes	0.224	0.201	0.43	Yes	0.715	0.151	0.87	Yes	0.675	0.322	1.00	Yes	1.00	**5.93**
		$U_{16} - L_{16}$			-----	-320.18	-45	32	241	-246	-89	-116	-5	-146	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.139	0.87	Yes	0.677	0.315	1.00	Yes	1.00	**4.76**
		$U_{17} - L_{17}$			-----	-443.36	25	-51	211	-230	-87	-50	-122	-120	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.118	0.95	Yes	0.765	0.233	1.00	Yes	1.00	**3.79**
		$U_{18} - L_{18}$			-----	-536.05	125	-130	431	-441	-165	-62	169	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.094	0.88	Yes	0.746	0.250	1.00	Yes	1.00	**4.14**
		$U_{19} - L_{19}$			-----	-651.53	139	-152	503	-515	-66	12	276	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.093	0.91	Yes	0.758	0.239	1.00	Yes	1.00	**4.71**
		$U_{20} - L_{20}$			-----	-578.05	167	-215	398	-471	34	4	764	100	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.227	1	Yes	0.673	0.219	0.90	Yes	1.00	**3.10**
	Structure 2	$U_0 - L_0$			-----	-615.07	-120	187	-376	477	-265	-45	-1156	-196	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.258	1	Yes	0.659	0.202	0.87	Yes	1.00	**3.22**
		$U_1 - L_1$			-----	-688.59	-119	126	-404	449	28	-68	-1061	-149	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.209	1	Yes	0.738	0.190	0.93	Yes	1.00	**4.95**
		$U_2 - L_2$			-----	-621.43	-89	98	-340	392	88	40	50	85	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.074	0.91	Yes	0.792	0.200	1.00	Yes	1.00	**4.95**
		$U_3 - L_3$			-----	-504.63	-49	55	-197	220	13	124	-72	98	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.090	0.95	Yes	0.791	0.200	1.00	Yes	1.00	**4.21**
		$U_4 - L_4$			-----	-372.14	23	-7	-145	165	-105	63	-95	100	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.080	0.93	Yes	0.787	0.210	1.00	Yes	1.00	**4.43**
		$U_5 - L_5$			188.62	-373.49	129	-121	-125	161	-112	102	164	143	0.339	0.254	0.60	Yes	0.187	0.140	0.33	Yes	0.844	0.107	0.96	Yes	0.790	0.206	1.00	Yes	1.00	**5.94**
		$U_6 - L_6$			376.53	-----	209	-222	-162	171	-132	103	-92	105	0.677	0.322	1.00	Yes	0.372	0.177	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.47**
		$U_7 - L_7$			-----	-420.91	-24	29	28	-35	-96	-9	-99	-28	-----	-----	-----	-----	-----	-----	-----	-----	0.951	0.046	1	Yes	0.891	0.045	0.94	Yes	1.00	**5.59**
		$U_8 - L_8$			-----	-467.12	16	-35	359	-364	-145	-139	-169	-162	-----	-----	-----	-----	-----	-----	-----	-----	0.677	0.118	0.8	Yes	0.673	0.319	1.00	Yes	1.00	**4.81**
		$U_9 - L_9$			-----	-698.00	88	-123	569	-587	-123	-56	-171	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.085	0.87	Yes	0.748	0.249	1.00	Yes	1.00	**5.76**
		$U_{10} - L_{10}$			-----	-799.59	120	-142	537	-561	-74	-40	69	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.081	0.88	Yes	0.748	0.248	1.00	Yes	1.00	**6.10**
		$U_{11} - L_{11}$			-----	-820.88	155	-176	512	-520	-41	30	19	0	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.069	0.9	Yes	0.767	0.230	1.00	Yes	1.00	**5.63**
		$U_{12} - L_{12}$			-----	-885.69	157	-158	517	-529	6	5	33	66	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.075	0.93	Yes	0.768	0.227	1.00	Yes	1.00	**5.54**
		$U_{13} - L_{13}$			-----	-747.95	245	-243	572	-561	-82	44	81	76	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.110	0.95	Yes	0.721	0.274	1.00	Yes	1.00	**4.17**
		$U_{14} - L_{14}$			-----	-1344.53	151	-146	-46	33	-60	127	-105	68	-----	-----	-----	-----	-----	-----	-----	-----	0.983	0.016	1	Yes	0.892	0.027	0.92	Yes	1.00	**6.21**
		$U_{15} - L_{15}$			-----	-744.68	-169	171	-576	576	-82	-47	-150	-87	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.138	0.97	Yes	0.718	0.275	1.00	Yes	1.00	**5.18**
		$U_{16} - L_{16}$			-----	-748.75	-118	106	-435	459	-158	-94	-308	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.108	0.98	Yes	0.802	0.195	1.00	Yes	1.00	**5.14**
		$U_{17} - L_{17}$			-----	-672.18	-132	137	-430	463	-181	-59	121	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.085	0.92	Yes	0.782	0.215	1.00	Yes	1.00	**4.99**
		$U_{18} - L_{18}$			-----	-598.55	-91	97	-410	453	-161	-33	-151	-12	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.085	0.89	Yes	0.763	0.232	1.00	Yes	1.00	**4.79**
		$U_{19} - L_{19}$			-----	-508.24	-33	40	-222	241	-157	-11	-153	17	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.083	0.85	Yes	0.759	0.232	1.00	Yes	1.00	**4.35**
		$U_{20} - L_{20}$			-----	-414.67	9	-3	-151	173	-153	18	68	70	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.096	0.95	Yes	0.794	0.198	1.00	Yes	1.00	**4.48**
	Structure 3	$U_0 - L_0$			-----	-345.83	43	-41	-185	203	-134	37	-132	45	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.110	0.9	Yes	0.732	0.260	1.00	Yes	1.00	**4.67**
		$U_1 - L_1$			-----	-391.45	119	-130	-62	62	-158	-56	-129	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.881	0.097	0.98	Yes	0.828	0.166	1.00	Yes	1.00	**5.43**
		$U_2 - L_2$			-----	-326.31	-102	95	231	-239	-105	-79	-103	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.121	0.86	Yes	0.690	0.306	1.00	Yes	1.00	**5.47**
		$U_3 - L_3$			-----	-379.25	-37	23	225	-233	-81	-62	-98	-86	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.103	0.89	Yes	0.727	0.266	1.00	Yes	1.00	**4.55**
		$U_4 - L_4$			-----	-473.17	33	-40	298	-296	-82	-27	24	-28	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.081	0.8	Yes	0.707	0.287	1.00	Yes	1.00	**4.40**
		$U_5 - L_5$			-----	-565.01	74	-102	504	-529	-79	-6	-9	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.081	0.84	Yes	0.720	0.271	1.00	Yes	1.00	**4.93**
		$U_6 - L_6$			-----	-634.93	132	-165	541	-549	-60	42	-102	5	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.076	0.87	Yes	0.739	0.255	1.00	Yes	1.00	**4.76**
		$U_7 - L_7$			-----	-707.81	143	-139	547	-548	-116	25	151	87	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.077	0.9	Yes	0.759	0.233	1.00	Yes	1.00	**4.84**
		$U_8 - L_8$			-----	-716.52	207	-212	627	-619	-114	26	-68	47	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.119	0.92	Yes	0.691	0.300	1.00	Yes	1.00	**5.17**
		$U_9 - L_9$			-----	-1315.26	48	-60	-80	54	-94	106	236	33	-----	-----	-----	-----	-----	-----	-----	-----	0.962	0.034	1	Yes	0.872	0.014	0.89	Yes	1.00	**6.36**
		$U_{10} - L_{10}$			-----	-773.18	-186	183	-496	502	-121	-62	-167	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.130	1	Yes	0.745	0.240	0.99	Yes	1.00	**4.62**
		$U_{11} - L_{11}$			-----	-925.95	-130	109	-407	447	-185	-96	31	-61	-----	-----	-----	-----	-----	-----	-----	-----	0.888	0.097	0.99	Yes	0.803	0.192	1.00	Yes	1.00	**6.23**
		$U_{12} - L_{12}$			-----	-848.75	-142	143	-422	453	-170	-39	-136	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.081	0.94	Yes	0.794	0.200	1.00	Yes	1.00	**5.74**
		$U_{13} - L_{13}$			-----	-845.34	-96	118	-390	455	-203	-19	-165	44	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.082	0.92	Yes	0.790	0.201	1.00	Yes	1.00	**6.39**
		$U_{14} - L_{14}$			-----	-734.79	-86	111	-403	481	-180	62	239	189	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.074	0.9	Yes	0.787	0.204	1.00	Yes	1.00	**6.01**
		$U_{15} - L_{15}$			-----	-498.41	-38	52	-295	316	-134	79	-110	91	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.087	0.81	Yes	0.718	0.276	1.00	Yes	1.00	**4.63**
		$U_{16} - L_{16}$			-----	-362.74	-145	176	-118	131	-95	15	-154	7	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.116	0.94	Yes	0.768	0.225	1.00	Yes	1.00	**4.71**
		$U_{17} - L_{17}$			357.55	-----	-233	241	133	-127	-111	-140	-131	-155	0.643	0.353	1.00	Yes	0.354	0.194	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.83**
		$U_{18} - L_{18}$			229.54	-331.11	-179	165	207	-227	-107	-62	-102	-146	0.413	0.332	0.75	Yes	0.227	0.183	0.41	Yes	0.748	0.147	0.9	Yes	0.701	0.290	1.00	Yes	1.00	**6.10**
		$U_{19} - L_{19}$			-----	-341.05	-56	30	215	-216	-73	-35	7	-81	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.109	0.89	Yes	0.722	0.277	1.00	Yes	1.00	**4.71**
		$U_{20} - L_{20}$			-----	-489.93	34	-53	236	-252	-33	12	-68	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.091	0.93	Yes	0.768	0.229	1.00	Yes	1.00	**4.70**
		$U_{21} - L_{21}$			-----	-586.93	109	-119	479	-488	-86	-47	65	-58	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.079	0.87	Yes	0.748	0.250	1.00	Yes	1.00	**4.77**
		$U_{22} - L_{22}$			-----	-708.83	143	-160	537	-556	-35	-13	590	53	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.147	0.96	Yes	0.760	0.236	1.00	Yes	1.00	**4.89**
		$U_{23} - L_{23}$			-----	-672.75	195	-242	466	-580	-26	-4	570	97	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.188	1	Yes	0.721	0.246	0.97	Yes	1.00	**3.82**
	Structure 4	$U_0 - L_0$			-----	-553.24	-106	170	-365	440	-248	-33	-996	-131	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.266	1	Yes	0.644	0.204	0.85	Yes	1.00	**3.16**
		$U_1 - L_1$			-----	-650.55	-114	122	-409	439	-1	-77	-690	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.182	1	Yes	0.757	0.204	0.97	Yes	1.00	**4.81**
		$U_2 - L_2$			-----	-568.60	-95	100	-314	355	82	30	-215	29	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.096	0.93	Yes	0.791	0.201	1.00	Yes	1.00	**4.38**
		$U_3 - L_3$			-----	-472.64	-29	47	-144	181	-102	68	122	149	-----	-----	-----	-----	-----	-----	-----	-----	0.884	0.108	1	Yes	0.815	0.184	1.00	Yes	1.00	**4.05**
		$U_4 - L_4$			-----	-352.62	30	-18	-175	192	-166	82	-154	129	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.088	0.89	Yes	0.746	0.245	1.00	Yes	1.00	**4.52**
		$U_5 - L_5$			194.14	-348.68	128	-127	-173	198	-151	67	107	143	0.349	0.297	0.65	Yes	0.192	0.163	0.36	Yes	0.782	0.116	0.9	Yes	0.738	0.253	1.00	Yes	1.00	**5.59**
		$U_6 - L_6$			-----	-355.39	173	-191	37	-40	-186	-41	-152	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.122	0.92	Yes	0.752	0.244	1.00	Yes	1.00	**4.93**
		$U_7 - L_7$			-----	-365.93	-24	11	239	-254	-172	-113	-191	-171	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.146	0.89	Yes	0.701	0.289	1.00	Yes	1.00	**3.96**
		$U_8 - L_8$			-----	-512.80	31	-31	339	-339	-150	-125	-33	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.112	0.86	Yes	0.704	0.290	1.00	Yes	1.00	**4.99**
		$U_9 - L_9$			-----	-662.28	50	-108	370	-482	-110	-58	-167	-113	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.101	0.9	Yes	0.771	0.224	1.00	Yes	1.00	**5.61**
		$U_{10} - L_{10}$			-----	-786.11	94	-98	386	-423	-12	50	-49	39	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.069	0.89	Yes	0.776	0.219	1.00	Yes	1.00	**5.80**
		$U_{11} - L_{11}$			-----	-644.98	182	-212	420	-474	-48	63	75	118	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.100	0.87	Yes	0.729	0.263	1.00	Yes	1.00	**3.52**
		$U_{12} - L_{12}$			-----	-1360.57	46	-72	-47	13	-108	11	-114	10	-----	-----	-----	-----	-----	-----	-----	-----	0.982	0.014	1	Yes	0.943	0.013	0.96	Yes	1.00	**6.16**
		$U_{13} - L_{13}$			-----	-465.34	-105	115	-259	282	-116	-92	-161	-104	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.139	0.92	Yes	0.718	0.277	1.00	Yes	1.00	**2.84**
		$U_{14} - L_{14}$			-----	-554.71	-47	48	-193	233	-208	-168	-293	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.135	0.98	Yes	0.795	0.204	1.00	Yes	1.00	**4.19**
		$U_{15} - L_{15}$			-----	-460.60	-25	33	-155	196	-167	-56	49	41	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.105	0.94	Yes	0.795	0.199	1.00	Yes	1.00	**4.10**
		$U_{16} - L_{16}$			-----	-339.99	-218	213	-110	113	-134	-12	80	8	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.104	0.86	Yes	0.719	0.279	1.00	Yes	1.00	**4.33**
		$U_{17} - L_{17}$			296.80	-----	-318	326	196	-210	-118	-27	-56	-149	0.534	0.460	1.00	Yes	0.294	0.253	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.82**
		$U_{18} - L_{18}$			113.60	-301.27	-113	123	240	-281	-97	-44	-42	-105	0.204	0.390	0.60	Yes	0.112	0.215	0.33	Yes	0.658	0.138	0.8	Yes	0.637	0.360	1.00	Yes	1.00	**6.47**
		$U_{19} - L_{19}$			-----	-327.54	-27	15	226	-234	-164	-86	176	14	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.139	0.86	Yes	0.693	0.299	1.00	Yes	1.00	**4.37**
		$U_{20} - L_{20}$			-----	-393.50	49	-57	62	-118	-175	-56	-8	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.879	0.116	1	Yes	0.833	0.151	0.99	Yes	1.00	**2.02**

Operating Loads - 3F1

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

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
Center Truss - Diagonals	Structure 1	$U_0 - L_1$	667.16	-----	-48	26	4	-8	-195	-250	-46	-16	0.875	0.119	1.00	Yes	0.529	0.066	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.41**
		$U_1 - L_2$	465.52	-71.50	-89	11	12	-13	-59	-163	12	7	0.837	0.161	1.00	Yes	0.460	0.089	0.55	Yes	0.164	0.140	0.31	Yes	0.151	0.114	0.27	Yes	1.00	**5.44**
		$U_2 - L_3$	413.08	-347.53	-85	-20	4	-69	-215	-284	-286	-145	0.743	0.191	0.94	Yes	0.409	0.105	0.52	Yes	0.800	0.200	1	Yes	0.735	0.109	0.85	Yes	1.00	**6.46**
		$U_3 - L_4$	-----	-381.42	-29	-43	25	-56	-243	-171	-130	-122	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.123	1	Yes	0.807	0.071	0.88	Yes	1.00	**3.74**
		$U_4 - L_4$	588.69	-----	-89	42	-41	-11	-56	-160	-8	-82	0.863	0.128	1.00	Yes	0.475	0.070	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.10**
		$U_5 - L_5$	722.10	-----	-189	222	-95	42	60	-68	80	25	0.854	0.141	1.00	Yes	0.470	0.078	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.27**
		$U_5 - L_6$	605.81	-----	-255	222	-133	101	340	152	761	266	0.716	0.284	1.00	Yes	0.394	0.156	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.75**
		$U_6 - L_7$	650.47	-----	-110	301	-8	115	310	207	243	175	0.769	0.228	1.00	Yes	0.423	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
		$U_8 - L_9$	1021.35	-----	-119	344	3	136	236	189	82	104	0.816	0.183	1.00	Yes	0.506	0.102	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.55**
		$U_9 - L_{10}$	1029.62	-----	-327	207	-77	92	207	203	85	104	0.823	0.172	1.00	Yes	0.510	0.096	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.07**
		$U_{10} - L_{11}$	1013.69	-----	-256	163	-74	31	-80	-140	18	-54	0.856	0.137	1.00	Yes	0.530	0.076	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.38**
		$U_{11} - L_{12}$	837.75	-----	-262	75	-104	-35	-272	-281	-295	-233	0.829	0.166	1.00	Yes	0.456	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.34**
		$U_{12} - L_{13}$	619.61	-----	-189	116	-58	1	-362	-256	-256	-270	0.755	0.236	1.00	Yes	0.475	0.134	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.40**
		$U_{13} - L_{14}$	443.33	-----	-88	33	-7	-29	-280	-310	-225	-290	0.797	0.202	1.00	Yes	0.439	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.87**
		$U_{15} - L_{14}$	232.96	-341.19	-56	-6	1	-73	-206	-301	-185	-274	0.419	0.180	0.60	Yes	0.230	0.099	0.33	Yes	0.799	0.193	1	Yes	0.722	0.093	0.82	Yes	1.00	**4.31**
		$U_{16} - L_{15}$	413.70	-245.79	-121	85	-25	-42	-197	-271	-349	-164	0.744	0.256	1.00	Yes	0.409	0.141	0.55	Yes	0.583	0.218	0.81	Yes	0.520	0.155	0.68	Yes	1.00	**5.27**
		$U_{17} - L_{16}$	547.97	-----	-144	108	-35	-17	-121	-216	-154	-146	0.804	0.196	1.00	Yes	0.442	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.68**
		$U_{18} - L_{17}$	646.69	-----	-322	254	-175	74	-128	-145	-243	-91	0.765	0.226	1.00	Yes	0.421	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.74**
		$U_{19} - L_{18}$	727.13	-----	-353	262	-106	68	-52	-153	48	7	0.788	0.206	1.00	Yes	0.433	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.82**
		$U_{20} - L_{19}$	736.85	-----	-338	310	-127	106	-53	-149	0	34	0.798	0.197	1.00	Yes	0.439	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.98**
	Structure 2	$U_0 - L_1$	804.88	-----	-326	329	-66	75	-206	-331	-121	49	0.796	0.202	1.00	Yes	0.438	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.66**
		$U_1 - L_2$	794.59	-----	-419	294	-88	60	-53	-100	41	10	0.786	0.209	1.00	Yes	0.432	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.72**
		$U_2 - L_3$	653.91	-----	-327	252	-69	52	-208	-228	-78	-177	0.773	0.227	1.00	Yes	0.425	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.74**
		$U_3 - L_4$	573.96	-----	-182	115	-42	-6	-311	-270	-320	-220	0.765	0.233	1.00	Yes	0.421	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.52**
		$U_4 - L_5$	409.76	-----	-127	77	15	-46	-322	-208	-214	-220	0.737	0.255	1.00	Yes	0.405	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.82**
		$U_5 - L_6$	388.95	-315.47	-108	53	73	-107	-403	-276	-283	-241	0.700	0.255	0.96	Yes	0.385	0.140	0.53	Yes	0.745	0.254	1	Yes	0.668	0.138	0.81	Yes	1.00	**6.07**
		$U_6 - L_7$	-----	-371.07	-44	-14	54	-93	-324	-223	-283	-250	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.196	1	Yes	0.711	0.106	0.82	Yes	1.00	**3.57**
		$U_8 - L_7$	605.24	-----	-174	122	-72	-6	-92	-283	-306	-205	0.772	0.218	1.00	Yes	0.486	0.123	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.17**
		$U_8 - L_9$	734.30	-----	-321	262	-136	16	-84	-186	-134	-160	0.795	0.195	1.00	Yes	0.437	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.31**
		$U_{10} - L_9$	835.72	-----	-309	238	-148	54	-55	-143	-188	-76	0.827	0.172	1.00	Yes	0.455	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.33**
		$U_{11} - L_{10}$	909.66	-----	-352	294	-141	88	113	-33	70	17	0.829	0.165	1.00	Yes	0.456	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		$U_{12} - L_{11}$	895.03	-----	-364	350	-168	147	207	63	167	111	0.815	0.183	1.00	Yes	0.448	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.34**
		$U_{13} - L_{12}$	760.73	-----	-425	374	-182	174	280	137	264	148	0.753	0.239	1.00	Yes	0.414	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.04**
		$U_{14} - L_{13}$	705.72	-----	-252	404	-62	229	279	130	757	176	0.698	0.301	1.00	Yes	0.384	0.165	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.11**
		$U_{14} - L_{15}$	642.53	-----	-220	361	-4	105	153	83	55	39	0.760	0.232	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.88**
		$U_{15} - L_{16}$	644.12	-----	-383	330	-101	106	115	83	52	69	0.762	0.238	1.00	Yes	0.419	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		$U_{16} - L_{17}$	737.22	-----	-352	335	-81	104	-24	49	97	28	0.798	0.196	1.00	Yes	0.439	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.15**
		$U_{17} - L_{18}$	683.34	-----	-302	278	-74	73	-76	-69	-20	-26	0.808	0.185	1.00	Yes	0.444	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.95**
		$U_{18} - L_{19}$	676.10	-----	-290	235	-54	31	-147	-143	-161	-109	0.799	0.194	1.00	Yes	0.440	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.01**
		$U_{19} - L_{20}$	602.85	-----	-201	149	-21	-6	-229	-134	-131	-140	0.769	0.226	1.00	Yes	0.423	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		$U_{20} - L_{21}$	437.75	-----	-117	96	4	-19	-205	-167	-154	-144	0.787	0.209	1.00	Yes	0.433	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.40**
		$U_{21} - L_{22}$	426.30	-277.23	-111	42	29	-70	-283	-192	-254	-230	0.767	0.224	1.00	Yes	0.422	0.123	0.55	Yes	0.655	0.198	0.86	Yes	0.587	0.142	0.73	Yes	1.00	**5.82**
		$U_{23} - L_{22}$	408.13	-346.64	-98	44	-13	-57	-68	-220	-278	-172	0.734	0.205	0.94	Yes	0.404	0.113	0.52	Yes	0.826	0.168	1	Yes	0.733	0.125	0.86	Yes	1.00	**6.14**
		$U_{24} - L_{23}$	449.08	-----	-117	107	-3	-31	-30	-127	-68	-83	0.808	0.186	1.00	Yes	0.444	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.35**
		$U_{25} - L_{24}$	624.25	-----	-197	177	-66	3	12	-92	-23	-59	0.796	0.195	1.00	Yes	0.438	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.59**
		$U_{26} - L_{25}$	688.99	-----	-286	264	-58	26	109	-30	45	12	0.815	0.182	1.00	Yes	0.448	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.35**
		$U_{27} - L_{26}$	678.00	-----	-290	287	-126	93	187	44	109	59	0.802	0.198	1.00	Yes	0.441	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.08**
		$U_{28} - L_{27}$	723.30	-----	-335	348	-164	151	181	95	144	112	0.783	0.208	1.00	Yes	0.431	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.85**
		$U_{29} - L_{28}$	632.48	-----	-357	331	-126	120	266	110	218	112	0.748	0.250	1.00	Yes	0.411	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.95**
		$U_{30} - L_{29}$	595.07	-----	-197	339	-8	156	233	108	533	88	0.704	0.288	1.00	Yes	0.387	0.159	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**
		$U_{30} - L_{31}$	781.61	-----	-293	440	-26	136	113	60	63	40	0.773	0.221	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.37**
		$U_{31} - L_{32}$	780.47	-----	-458	377	-131	131	50	93	37	48	0.772	0.226	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.99**
		$U_{32} - L_{33}$	903.60	-----	-369	333	-96	109	-125	-103	5	-31	0.823	0.174	1.00	Yes	0.453	0.096	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.59**
		$U_{33} - L_{34}$	887.59	-----	-356	251	-120	73	-249	-214	-258	-163	0.809	0.186	1.00	Yes	0.445	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.58**
		$U_{34} - L_{35}$	814.48	-----	-309	205	-96	38	-304	-226	-192	-236	0.806	0.189	1.00	Yes	0.443	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.35**
		$U_{35} - L_{36}$	713.42	-----	-314	228	-92	19	-367	-291	-301	-258	0.773	0.221	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.92**
		$U_{36} - L_{37}$	599.01	-----	-186	122	-29	-16	-329	-279	-323	-313	0.764	0.234	1.00	Yes	0.481	0.132	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.93**
		$U_{38} - L_{37}$	-----	-390.06	-26	-17	28	-77	-121	-243	-220	-194	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.148	1	Yes	0.747	0.088	0.84	Yes	1.00	**3.40**
		$U_{39} - L_{38}$	275.77	-347.34	-74	42	50	-97	-142	-217	-142	-178	0.496	0.187	0.69	Yes	0.273	0.103	0.38	Yes	0.828	0.164	1	Yes	0.735	0.124	0.86	Yes	1.00	**5.21**
		$U_{40} - L_{39}$	427.80	-221.38	-125	91	7	-52	-118	-177	-223	-102	0.769	0.225	1.00	Yes	0.423	0.124	0.55	Yes	0.530	0.160	0.69	Yes	0.468	0.160	0.63	Yes	1.00	**5.41**
		$U_{41} - L_{40}$	584.94	-----	-175	131	-71	0	-57	-134	-273	-78	0.780	0.217	1.00	Yes	0.429	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.89**
		$U_{42} - L_{41}$	647.10	-----	-334	264	-131	62	-95	-83	-223	-33	0.765	0.230	1.00	Yes	0.421	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.09**
		$U_{43} - L_{42}$	803.85	-----	-392	313	-97	66	-8	-121	-5	-28	0.795	0.200	1.00	Yes	0.437	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.52**
		$U_{44} - L_{43}$	810.02	-----	-357	363	-140	123	-20	-180	34	7	0.801	0.195	1.00	Yes	0.441	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.14**
	Structure 3	$U_0 - L_1$	733.24	-----	-304	284	-68	71	-159	-253	-131	45	0.794	0.197	1.00	Yes	0.437	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.29**
		$U_1 - L_2$	717.52	-----	-370	242	-92	58	-107	-161	36	13	0.777	0.216	1.00	Yes	0.427	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.99**
		$U_2 - L_3$	644.34	-----	-335	227	-105	47	-237	-201	-207	-191	0.762	0.233	1.00	Yes	0.419	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.91**
		$U_3 - L_4$	527.71	-----	-143	91	-18	-15	-315	-293	-255	-221	0.774	0.219	1.00	Yes	0.426	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.23**
		$U_4 - L_5$	405.15	-185.39	-119	76	12	-52	-396	-251	-340	-235	0.729	0.267	1.00	Yes	0.401	0.147	0.55	Yes	0.439	0.220	0.66	Yes	0.392	0.152	0.55	Yes	1.00	**4.76**
		$U_5 - L_6$	272.01	-317.61	-63	0	42	-94	-387	-339	-284	-310	0.489	0.232	0.73	Yes	0.269	0.128	0.40	Yes	0.744	0.253	1	Yes	0.672	0.120	0.80	Yes	1.00	**4.78**
		$U_7 - L_6$	448.28	-----	-86	32	-20	-31	-110	-264	-106	-246	0.806	0.186	1.00	Yes	0.443	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		$U_8 - L_7$	637.08	-----	-186	150	-72	-8	-152	-217	-287	-166	0.777	0.218	1.00	Yes	0.489	0.123	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.89**
		$U_8 - L_9$	861.03	-----	-261	136	-107	-43	-11	-174	-53	-112	0.852	0.147	1.00	Yes	0.469	0.081	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.02**
		$U_{10} - L_9$	1014.14	-----	-265	173	-130	24	100	-23	69	16	0.857	0.135	1.00	Yes	0.530	0.075	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.77**
		$U_{11} - L_{10}$	929.18	-----	-284	228	-135	85	401	240	957	460	0.743	0.248	1.00	Yes	0.460	0.141	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.22**
		$U_{12} - L_{11}$	900.48	-----	-95	332	19	192	398	257	1017	377	0.720	0.277	1.00	Yes	0.446	0.158	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.80**
		$U_{12} - L_{13}$	671.52	-----	-113	289	10	113	186	118	95	94	0.794	0.198	1.00	Yes	0.437	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.24**
		$U_{13} - L_{14}$	675.08	-----	-306	218	-125	87	149	103	93	141	0.798	0.202	1.00	Yes	0.439	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.38**
		$U_{14} - L_{15}$	723.03	-----	-210	173	-15	22	-108	-74	49	-17	0.855	0.139	1.00	Yes	0.470	0.077	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.24**
		$U_{15} - L_{16}$	586.81	-----	-86	30	-15	-8	-203	-188	-85	-87	0.861	0.134	1.00	Yes	0.473	0.074	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.67**
		$U_{17} - L_{16}$	-----	-407.37	-13	-24	-5	-45	-46	-148	-29	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.932	0.068	1	Yes	0.862	0.057	0.92	Yes	1.00	**3.46**
		$U_{18} - L_{17}$	271.93	-365.73	-58	10	-31	-66	-67	-200	-308	-81	0.489	0.173	0.67	Yes	0.269	0.095	0.37	Yes	0.842	0.154	1	Yes	0.774	0.084	0.86	Yes	1.00	**5.25**
		$U_{19} - L_{18}$	440.38	-106.94	-88	22	-21	-31	-13	-152	-313	-112	0.792	0.203	1.00	Yes	0.436	0.112	0.55	Yes	0.245	0.114	0.36	Yes	0.226	0.112	0.34	Yes	1.00	**5.51**
		$U_{20} - L_{19}$	652.02	-----	-78	58	-22	3	-141	-203	29	-7	0.855	0.142	1.00	Yes	0.517	0.078	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.32**

Operating Loads - 3F1

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	-----	-554.99	-96	59	477	-1040	-48	115	-28	-774	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.166	0.93	Yes	0.748	0.247	1.00	Yes	1.00	**7.73**
		U_1 - U_2	-----	-511.11	-107	72	-251	-745	-151	111	-214	-421	-----	-----	-----	-----	-----	-----	-----	-----	0.695	0.298	1	Yes	0.689	0.177	0.87	Yes	1.00	**3.98**
		U_2 - U_3	-----	-567.91	-100	284	-528	-479	-114	109	-41	-534	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.217	1	Yes	0.766	0.126	0.90	Yes	1.00	**4.91**
		U_3 - U_4	473.65	-615.78	138	399	-579	-656	-220	-10	140	-310	0.543	0.208	0.76	Yes	0.373	0.143	0.52	Yes	0.838	0.161	1	Yes	0.830	0.156	0.99	Yes	1.00	**7.43**
		U_4 - U_5	457.26	-575.73	177	375	-919	-140	-91	-23	-334	-144	0.524	0.275	0.80	Yes	0.360	0.188	0.55	Yes	0.783	0.200	0.99	Yes	0.776	0.218	1.00	Yes	1.00	**7.07**
		U_5 - U_6	689.62	-----	278	497	-591	342	98	136	-228	-361	0.790	0.201	1.00	Yes	0.533	0.132	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.55**
		U_6 - U_7	884.25	-----	410	222	-302	-44	319	280	-423	111	0.846	0.145	1.00	Yes	0.591	0.100	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.23**
		U_7 - U_8	1015.29	-----	-121	1433	-564	1302	557	741	31	295	0.703	0.292	1.00	Yes	0.491	0.200	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.73**
		U_8 - U_9	863.32	-----	1336	-301	1243	-802	387	550	274	-405	0.707	0.291	1.00	Yes	0.484	0.198	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.85**
		U_9 - U_{10}	622.77	-----	241	250	34	-842	-2	303	278	-831	0.676	0.322	1.00	Yes	0.457	0.216	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.64**
		U_{10} - U_{11}	-----	-616.77	248	-175	163	-934	48	106	-179	-521	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.190	0.99	Yes	0.787	0.209	1.00	Yes	1.00	**4.92**
		U_{11} - U_{12}	-----	-900.78	152	-210	-8	-842	13	101	3	-230	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.141	1	Yes	0.845	0.140	0.99	Yes	1.00	**3.66**
		U_{12} - U_{13}	-----	-1239.27	-52	-270	-352	-853	82	6	98	-496	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.157	1	Yes	0.828	0.118	0.95	Yes	1.00	**4.19**
		U_{13} - U_{14}	-----	-1375.01	-195	-505	-466	-1447	-42	-7	-106	-196	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.198	1	Yes	0.788	0.160	0.95	Yes	1.00	**4.06**
		U_{14} - U_{15}	-----	-1363.81	-407	-292	-1355	-724	42	-277	-98	-202	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.204	1	Yes	0.782	0.149	0.94	Yes	1.00	**3.98**
		U_{15} - U_{16}	-----	-1427.73	-201	-468	-943	-835	-114	-433	-331	-285	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.170	1	Yes	0.818	0.104	0.93	Yes	1.00	**4.48**
		U_{16} - U_{17}	-----	-1371.29	-416	-226	-1321	-473	-296	-379	-200	-250	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.200	1	Yes	0.786	0.146	0.94	Yes	1.00	**5.06**
		U_{17} - U_{18}	-----	-1079.34	-253	-61	-821	25	-118	71	-139	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.138	1	Yes	0.845	0.134	0.98	Yes	1.00	**5.41**
		U_{18} - U_{19}	-----	-703.76	-253	18	-654	97	370	-142	358	-289	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.200	1	Yes	0.792	0.132	0.93	Yes	1.00	**3.94**
		U_{19} - U_{20}	-----	-595.90	-236	-74	-1107	241	-29	-123	-119	-227	-----	-----	-----	-----	-----	-----	-----	-----	0.677	0.320	1	Yes	0.670	0.223	0.90	Yes	1.00	**10.59**
	Structure 2	U_0 - U_1	-----	-581.23	682	-452	669	-1831	334	-64	178	-903	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.207	0.9	Yes	0.686	0.311	1.00	Yes	1.00	**9.95**
		U_1 - U_2	-----	-814.06	-150	-322	-176	-1081	-18	17	-67	-354	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.201	1	Yes	0.786	0.164	0.95	Yes	1.00	**4.93**
		U_2 - U_3	-----	-1130.33	-131	-436	-131	-1476	-33	-63	-221	-661	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.191	1	Yes	0.802	0.150	0.96	Yes	1.00	**4.51**
		U_3 - U_4	-----	-1328.70	-536	-553	-908	-1674	-113	-41	-225	-477	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.233	1	Yes	0.757	0.149	0.91	Yes	1.00	**3.84**
		U_4 - U_5	-----	-1466.25	-588	-567	-1229	-1768	-119	-90	-129	-670	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.237	1	Yes	0.753	0.147	0.90	Yes	1.00	**4.13**
		U_5 - U_6	-----	-1566.87	-577	-12	-1312	-1302	-194	-49	-378	-652	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.183	1	Yes	0.804	0.109	0.92	Yes	1.00	**4.81**
		U_6 - U_7	-----	-1371.73	-327	-214	-1178	-1463	-168	-98	-59	-298	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.211	1	Yes	0.781	0.130	0.92	Yes	1.00	**4.74**
		U_7 - U_8	-----	-1374.96	-350	-208	-1622	-901	-83	-180	-262	-279	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.210	1	Yes	0.783	0.144	0.93	Yes	1.00	**4.79**
		U_8 - U_9	-----	-1180.75	-364	201	-1531	-315	-18	-196	-410	-353	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.190	1	Yes	0.801	0.163	0.97	Yes	1.00	**5.38**
		U_9 - U_{10}	-----	-935.16	-78	544	-1474	16	-119	-227	-507	-580	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.187	1	Yes	0.807	0.179	0.99	Yes	1.00	**7.21**
		U_{10} - U_{11}	777.74	-616.52	304	580	-1483	-214	-184	-107	-1044	-346	0.657	0.337	1.00	Yes	0.447	0.221	0.67	Yes	0.616	0.275	0.9	Yes	0.613	0.209	0.83	Yes	1.00	**9.57**
		U_{11} - U_{12}	905.66	-----	177	639	-1125	410	28	26	-545	-555	0.765	0.226	1.00	Yes	0.514	0.151	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.86**
		U_{12} - U_{13}	1316.94	-----	473	86	-23	-125	347	439	-91	21	0.889	0.101	1.00	Yes	0.634	0.070	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.05**
		U_{13} - U_{14}	1334.05	-----	-351	2944	-422	2024	669	1018	304	587	0.656	0.342	1.00	Yes	0.464	0.225	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		U_{14} - U_{15}	1379.29	-----	2863	-195	1955	-241	713	776	512	418	0.678	0.318	1.00	Yes	0.480	0.209	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.09**
		U_{15} - U_{16}	1351.59	-----	98	285	-256	-1210	215	475	-31	-463	0.817	0.178	1.00	Yes	0.581	0.120	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.96**
		U_{16} - U_{17}	1023.01	-----	653	201	264	-1193	-29	309	101	-903	0.754	0.245	1.00	Yes	0.502	0.161	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.84**
		U_{17} - U_{18}	709.10	-----	467	235	332	-1201	-57	275	-287	-509	0.712	0.278	1.00	Yes	0.474	0.184	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.13**
		U_{18} - U_{19}	506.79	-640.97	540	126	123	-1212	5	144	-130	-803	0.509	0.323	0.84	Yes	0.334	0.207	0.55	Yes	0.762	0.234	1	Yes	0.757	0.206	0.97	Yes	1.00	**7.40**
		U_{19} - U_{20}	-----	-740.36	315	153	-345	-1087	-48	151	74	-433	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.178	1	Yes	0.817	0.174	1.00	Yes	1.00	**5.74**
		U_{20} - U_{21}	-----	-840.92	150	-91	-427	-935	3	22	-27	-599	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.217	1	Yes	0.767	0.136	0.91	Yes	1.00	**5.54**
		U_{21} - U_{22}	-----	-799.71	-77	-33	-547	-1268	-182	-96	-280	-211	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.263	1	Yes	0.730	0.184	0.92	Yes	1.00	**4.88**
		U_{22} - U_{23}	-----	-799.73	-81	-98	-1292	-689	-105	-159	-155	-94	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.261	1	Yes	0.730	0.187	0.92	Yes	1.00	**4.89**
		U_{23} - U_{24}	-----	-833.47	-90	195	-1070	-404	5	-61	-545	-208	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.229	1	Yes	0.761	0.155	0.92	Yes	1.00	**6.01**
		U_{24} - U_{25}	413.31	-706.61	222	359	-1150	-335	20	-59	-485	-88	0.388	0.250	0.64	Yes	0.257	0.164	0.43	Yes	0.785	0.215	1	Yes	0.780	0.184	0.97	Yes	1.00	**6.75**
		U_{25} - U_{26}	652.44	-----	194	634	-1372	116	17	-43	-733	-349	0.655	0.340	1.00	Yes	0.430	0.218	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.90**
		U_{26} - U_{27}	719.56	-----	257	452	-920	204	-42	5	-785	-174	0.722	0.271	1.00	Yes	0.481	0.179	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.35**
		U_{27} - U_{28}	1053.84	-----	195	682	-1181	431	237	253	-633	-338	0.777	0.215	1.00	Yes	0.517	0.141	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.77**
		U_{28} - U_{29}	1413.00	-----	342	46	-759	-444	542	572	-666	261	0.854	0.143	1.00	Yes	0.608	0.097	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.62**
		U_{29} - U_{30}	1319.74	-----	-197	2926	-201	1918	803	1067	499	702	0.649	0.344	1.00	Yes	0.459	0.226	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.52**
		U_{30} - U_{31}	1360.84	-----	2901	-411	2063	-493	793	732	651	381	0.669	0.323	1.00	Yes	0.474	0.212	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.02**
		U_{31} - U_{32}	1172.73	-----	83	342	-550	-1033	203	378	222	-735	0.792	0.200	1.00	Yes	0.564	0.137	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.97**
		U_{32} - U_{33}	813.22	-----	576	126	417	-1305	10	215	-269	-1004	0.687	0.306	1.00	Yes	0.461	0.204	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.70**
		U_{33} - U_{34}	551.27	-785.88	445	123	-83	-1491	-23	203	-111	-652	0.466	0.290	0.76	Yes	0.317	0.189	0.51	Yes	0.786	0.208	1	Yes	0.781	0.210	1.00	Yes	1.00	**7.93**
		U_{34} - U_{35}	-----	-960.61	366	-210	-167	-1346	43	36	150	-540	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.156	1	Yes	0.829	0.164	1.00	Yes	1.00	**5.34**
		U_{35} - U_{36}	-----	-1193.48	76	-478	-227	-1447	-19	80	-223	-361	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.185	1	Yes	0.809	0.154	0.97	Yes	1.00	**4.28**
		U_{36} - U_{37}	-----	-1389.08	-308	-329	-803	-1528	-23	-123	-80	-291	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.200	1	Yes	0.791	0.136	0.93	Yes	1.00	**4.12**
		U_{37} - U_{38}	-----	-1391.45	-217	-440	-1445	-1213	-96	-201	-194	-198	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.196	1	Yes	0.792	0.129	0.93	Yes	1.00	**4.13**
		U_{38} - U_{39}	-----	-1578.12	-173	-636	-1381	-1377	7	-212	-493	-352	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.178	1	Yes	0.810	0.114	0.93	Yes	1.00	**4.53**
		U_{39} - U_{40}	-----	-1533.24	-612	-566	-1698	-932	13	-86	-243	-133	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.198	1	Yes	0.787	0.141	0.93	Yes	1.00	**4.62**
		U_{40} - U_{41}	-----	-1439.47	-532	-520	-1306	-792	170	-153	164	-145	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.167	1	Yes	0.820	0.116	0.94	Yes	1.00	**5.09**
		U_{41} - U_{42}	-----	-1212.97	-424	-127	-1179	38	57	-29	6	-295	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.131	1	Yes	0.861	0.120	0.99	Yes	1.00	**6.12**
		U_{42} - U_{43}	-----	-884.45	-314	-43	-892	44	167	-214	-56	-414	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.138	1	Yes	0.854	0.135	0.99	Yes	1.00	**7.18**
		U_{43} - U_{44}	-----	-587.58	-246	-151	-1255	341	-116	-127	-197	-185	-----	-----	-----	-----	-----	-----	-----	-----	0.698	0.301	1	Yes	0.694	0.213	0.91	Yes	1.00	**9.79**
	Structure 3	U_0 - U_1	-----	-584.35	630	-355	984	-1683	276	-39	42	-1161	-----	-----	-----	-----	-----	-----	-----	-----	0.663	0.254	0.92	Yes	0.657	0.339	1.00	Yes	1.00	**10.82**
		U_1 - U_2	-----	-702.48	-81	-229	-77	-803	-21	4	15	-394	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.200	1	Yes	0.790	0.162	0.96	Yes	1.00	**4.38**
		U_2 - U_3	-----	-1033.13	-55	-241	69	-811	-34	-60	-193	-683	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.175	1	Yes	0.808	0.132	0.95	Yes	1.00	**4.47**
		U_3 - U_4	-----	-1343.00	-222	-374	-403	-1378	-108	-37	-367	-567	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.220	1	Yes	0.770	0.152	0.93	Yes	1.00	**4.61**
		U_4 - U_5	-----	-1405.41	-443	-135	-779	-904	-92	-60	-246	-754	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.182	1	Yes	0.806	0.100	0.91	Yes	1.00	**4.45**
		U_5 - U_6	-----	-1349.51	-257	-379	-763	-1352	-186	-150	57	-266	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.210	1	Yes	0.774	0.149	0.93	Yes	1.00	**4.39**
		U_6 - U_7	-----	-1356.76	-500	-155	-1504	-472	-120	-298	-212	-395	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.213	1	Yes	0.778	0.166	0.95	Yes	1.00	**4.46**
		U_7 - U_8	-----	-1208.42	-254	-4	-740	-182	-122	-323	-314	-532	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.179	1	Yes	0.807	0.102	0.91	Yes	1.00	**3.77**
		U_8 - U_9	-----	-825.49	-176	201	-759	22	-212	-202	-382	-264	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.212	1	Yes	0.774	0.126	0.91	Yes	1.00	**3.40**
		U_9 - U_{10}	-----	-542.49	-143	298	-913	217	-6	-51	-139	-370	-----	-----	-----	-----	-----	-----	-----	-----	0.698	0.301	1	Yes	0.692	0.205	0.90	Yes	1.00	**4.97**
		U_{10} - U_{11}	686.00	-----	293	250	-539	17	131	135	-792	37	0.744	0.248	1.00	Yes	0.504	0.166	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.61**
		U_{11} - U_{12}	861.37	-----	-317	1380	-654	1100	241	500	-320	192	0.706	0.293	1.00	Yes	0.483	0.199	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.99**
		U_{12} - U_{13}	997.49	-----	1392	-145	1652	-855	171	528	-38	-494	0.691	0.304	1.00	Yes	0.482	0.207	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.05**
		U_{13} - U_{14}	848.31	-----	225	365	-7	-533	-59	415	-67	-484	0.811	0.180	1.00	Yes	0.567	0.124	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.07**
		U_{14} - U_{15}	582.45	-----	430	200	99	-776	-56	242	183	-867	0.668	0.331	1.00	Yes	0.450	0.219	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.46**
		U_{15} - U_{16}	279.21	-592.13	254	107	-152	-839	-75	190	138	132	0.320	0.232	0.56	Yes	0.220	0.159	0.38	Yes	0.806	0.170	0.98	Yes	0.798	0.199	1.00	Yes	1.00	**5.75**
		U_{16} - U_{17}	281.37	-611.20	307	27	-629	-515	171	-74	181	45	0.323	0.180	0.51	Yes	0.221	0.123	0.35	Yes	0.832	0.164	1	Yes	0.824	0.149	0.98	Yes	1.00	**5.89**
		U_{17} - U_{18}	-----	-602.93	196	-180	-539	-513	66	35	-70	-212	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.174	1	Yes	0.813	0.128	0.95	Yes	1.00	**4.68**
		U_{18} - U_{19}	-----	-572.28	-6	-72	-770	-181	214	-198	-16	-197	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.212	1	Yes	0.772	0.183	0.96	Yes	1.00	**4.96**
		U_{19} - U_{20}	-----	-599.50	46	-274	-632	-182	-145	-109	-112	-141	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.181	1	Yes	0.808	0.150	0.96	Yes	1.00	**7.70**

Operating Loads - 3F1

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	310.49	-239.71	180	-243	776	-822	226	833	-344	-1265	0.475	0.518	1.00	Yes	0.280	0.309	0.59	Yes	0.435	0.394	0.83	Yes	0.432	0.247	0.68	Yes	1.00	**27.43**
		L_1 - L_2	371.57	-----	-59	-670	4	-26	-1027	281	321	-143	0.569	0.422	1.00	Yes	0.347	0.272	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.78**
		L_2 - L_3	616.40	-----	-724	-568	-54	37	-70	-675	-183	122	0.709	0.283	1.00	Yes	0.410	0.168	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.88**
		L_3 - L_4	588.03	-----	-637	-361	-12	258	-1022	-31	262	-220	0.677	0.318	1.00	Yes	0.402	0.198	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.00**
		L_4 - L_5	-----	-552.19	-579	265	98	464	72	-307	-70	198	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.136	0.99	Yes	0.841	0.153	1.00	Yes	1.00	**4.63**
		L_5 - L_6	-----	-748.47	-188	205	124	590	-180	-119	157	-245	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.121	1	Yes	0.864	0.130	1.00	Yes	1.00	**4.54**
		L_6 - L_7	-----	-1183.26	-263	-59	149	-20	-176	-404	-261	483	-----	-----	-----	-----	-----	-----	-----	-----	0.963	0.033	1	Yes	0.952	0.041	1.00	Yes	1.00	**5.15**
		L_7 - L_8	-----	-1247.21	-34	670	-66	1264	357	201	436	464	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.197	1	Yes	0.790	0.167	0.96	Yes	1.00	**4.04**
		L_8 - L_9	-----	-1147.99	677	-40	1119	-72	197	349	402	411	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.257	1	Yes	0.727	0.148	0.88	Yes	1.00	**2.92**
		L_9 - L_{10}	-----	-1058.26	335	-225	546	-398	540	-42	397	-147	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.133	1	Yes	0.852	0.086	0.94	Yes	1.00	**7.01**
		L_{10} - L_{11}	-----	-529.07	18	-523	511	-170	-184	-679	-342	179	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.180	1	Yes	0.806	0.138	0.95	Yes	1.00	**6.11**
		L_{11} - L_{12}	482.33	-----	148	-689	331	-253	-1074	185	125	-80	0.625	0.370	1.00	Yes	0.375	0.234	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.52**
		L_{12} - L_{13}	1018.51	-----	-462	-628	52	-158	-198	-690	-158	121	0.804	0.192	1.00	Yes	0.514	0.117	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.26**
		L_{13} - L_{14}	1226.01	-----	-228	-1268	179	-532	-1188	1	146	24	0.721	0.274	1.00	Yes	0.467	0.170	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.73**
		L_{14} - L_{15}	1537.21	-----	-1471	-762	-569	-153	-295	-957	-152	160	0.751	0.244	1.00	Yes	0.488	0.150	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.77**
		L_{15} - L_{16}	1577.55	-----	-1067	-1311	-308	-378	-894	-97	97	-143	0.771	0.221	1.00	Yes	0.495	0.132	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.40**
		L_{16} - L_{17}	1190.65	-----	-1322	-61	-426	56	66	-532	-127	165	0.753	0.241	1.00	Yes	0.488	0.149	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.35**
		L_{17} - L_{18}	1011.07	-----	-394	-30	-223	37	-95	-311	116	-92	0.880	0.116	1.00	Yes	0.564	0.071	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.01**
		L_{18} - L_{19}	507.49	-----	-481	239	-402	302	-150	298	-353	273	0.777	0.218	1.00	Yes	0.525	0.139	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.95**
		L_{19} - L_{20}	363.59	-307.62	-356	99	-866	521	342	77	64	14	0.615	0.362	0.98	Yes	0.379	0.214	0.60	Yes	0.617	0.377	1	Yes	0.612	0.283	0.90	Yes	1.00	**10.36**
	Structure 2	L_0 - L_1	-----	-491.66	117	-388	485	-1427	129	450	16	55	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.259	0.97	Yes	0.703	0.290	1.00	Yes	1.00	**19.84**
		L_1 - L_2	442.28	-----	197	-1111	244	-401	-1395	403	119	36	0.537	0.455	1.00	Yes	0.320	0.283	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.08**
		L_2 - L_3	954.93	-----	-154	-1016	-41	-278	-203	-855	-74	156	0.753	0.238	1.00	Yes	0.494	0.146	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.82**
		L_3 - L_4	1240.93	-----	-252	-1531	-8	-519	-1137	224	178	3	0.729	0.270	1.00	Yes	0.491	0.171	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.69**
		L_4 - L_5	1725.62	-----	-1535	-1495	-440	-403	212	-731	-79	163	0.804	0.194	1.00	Yes	0.533	0.118	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.54**
		L_5 - L_6	1761.13	-----	-1219	-1895	-224	-512	-1202	-50	188	-88	0.756	0.243	1.00	Yes	0.507	0.152	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.08**
		L_6 - L_7	1808.38	-----	-2198	-1361	-581	-220	106	-646	-160	217	0.765	0.233	1.00	Yes	0.509	0.138	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.16**
		L_7 - L_8	1335.09	-----	-1453	-677	-309	370	-900	76	211	-139	0.766	0.234	1.00	Yes	0.503	0.142	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.33**
		L_8 - L_9	1045.37	-----	-1334	228	-112	582	134	-924	-87	180	0.731	0.267	1.00	Yes	0.493	0.170	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.41**
		L_9 - L_{10}	637.25	-760.94	-1032	-138	-128	836	-1150	-185	145	-142	0.569	0.303	0.88	Yes	0.331	0.184	0.52	Yes	0.804	0.188	1	Yes	0.799	0.165	0.97	Yes	1.00	**8.81**
		L_{10} - L_{11}	-----	-738.36	-707	398	7	569	24	-432	-75	73	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.083	0.96	Yes	0.867	0.124	1.00	Yes	1.00	**5.32**
		L_{11} - L_{12}	-----	-1026.62	-281	704	-161	1126	153	-230	127	-433	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.116	0.97	Yes	0.842	0.153	1.00	Yes	1.00	**4.19**
		L_{12} - L_{13}	-----	-1471.31	-246	-354	42	-678	-125	133	-334	237	-----	-----	-----	-----	-----	-----	-----	-----	0.895	0.102	1	Yes	0.888	0.068	0.96	Yes	1.00	**5.60**
		L_{13} - L_{14}	-----	-1553.91	-620	1739	-879	2497	181	141	354	473	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.176	0.97	Yes	0.782	0.218	1.00	Yes	1.00	**4.76**
		L_{14} - L_{15}	-----	-1374.50	1739	-647	2296	-743	170	180	383	308	-----	-----	-----	-----	-----	-----	-----	-----	0.698	0.299	1	Yes	0.692	0.200	0.90	Yes	1.00	**2.85**
		L_{15} - L_{16}	-----	-1532.41	-521	-123	-435	-117	114	-141	294	-192	-----	-----	-----	-----	-----	-----	-----	-----	0.924	0.071	1	Yes	0.917	0.052	0.97	Yes	1.00	**6.01**
		L_{16} - L_{17}	-----	-1056.67	554	-354	1126	-78	124	-131	-388	91	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.223	1	Yes	0.770	0.139	0.91	Yes	1.00	**4.76**
		L_{17} - L_{18}	-----	-767.99	276	-443	527	47	-593	51	195	-188	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.179	1	Yes	0.806	0.084	0.90	Yes	1.00	**4.20**
		L_{18} - L_{19}	-----	-639.83	-172	-601	717	34	446	-321	-211	60	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.111	0.97	Yes	0.853	0.138	1.00	Yes	1.00	**7.40**
		L_{19} - L_{20}	515.39	-393.01	-48	-1016	466	76	-1394	295	147	-162	0.584	0.409	1.00	Yes	0.345	0.252	0.60	Yes	0.527	0.174	0.71	Yes	0.524	0.196	0.72	Yes	1.00	**6.84**
		L_{20} - L_{21}	949.47	-----	-981	-1096	375	-90	95	-753	-182	71	0.757	0.241	1.00	Yes	0.497	0.147	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.01**
		L_{21} - L_{22}	841.36	-----	-717	-1451	96	-301	-1064	59	135	-101	0.671	0.326	1.00	Yes	0.449	0.208	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.91**
		L_{22} - L_{23}	853.68	-----	-1574	-709	-357	71	-107	-809	-59	207	0.681	0.317	1.00	Yes	0.455	0.201	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.38**
		L_{23} - L_{24}	930.10	-----	-1098	-1012	-53	467	-840	89	167	-142	0.742	0.251	1.00	Yes	0.486	0.154	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.56**
		L_{24} - L_{25}	-----	-574.85	-1188	-167	216	539	248	-1465	-104	150	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.209	0.98	Yes	0.766	0.229	1.00	Yes	1.00	**10.30**
		L_{25} - L_{26}	-----	-641.31	-267	189	29	729	-10	-72	102	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.101	0.97	Yes	0.855	0.141	1.00	Yes	1.00	**7.36**
		L_{26} - L_{27}	-----	-865.89	-272	423	103	543	-55	73	-113	297	-----	-----	-----	-----	-----	-----	-----	-----	0.915	0.072	0.99	Yes	0.909	0.087	1.00	Yes	1.00	**5.38**
		L_{27} - L_{28}	-----	-1142.95	-224	749	-64	1314	61	-187	294	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.147	0.99	Yes	0.832	0.162	1.00	Yes	1.00	**5.86**
		L_{28} - L_{29}	-----	-1540.82	-262	-537	53	-500	-155	-7	-104	399	-----	-----	-----	-----	-----	-----	-----	-----	0.929	0.061	1	Yes	0.922	0.053	0.98	Yes	1.00	**7.41**
		L_{29} - L_{30}	-----	-1543.90	-741	1923	-848	2500	85	68	420	370	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.166	0.96	Yes	0.777	0.218	1.00	Yes	1.00	**5.25**
		L_{30} - L_{31}	-----	-1380.11	1792	-574	2222	-694	375	303	273	266	-----	-----	-----	-----	-----	-----	-----	-----	0.701	0.289	1	Yes	0.694	0.194	0.89	Yes	1.00	**1.84**
		L_{31} - L_{32}	-----	-1548.21	-198	-286	-318	-358	257	-390	243	-13	-----	-----	-----	-----	-----	-----	-----	-----	0.934	0.058	1	Yes	0.926	0.036	0.97	Yes	1.00	**5.28**
		L_{32} - L_{33}	-----	-961.60	645	-285	974	-189	-392	124	-297	119	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.196	1	Yes	0.789	0.133	0.93	Yes	1.00	**3.61**
		L_{33} - L_{34}	-----	-763.13	451	-409	591	11	227	4	101	-143	-----	-----	-----	-----	-----	-----	-----	-----	0.902	0.073	0.98	Yes	0.896	0.103	1.00	Yes	1.00	**6.50**
		L_{34} - L_{35}	676.01	-695.81	-199	-1296	795	-123	64	-1532	-208	101	0.603	0.392	1.00	Yes	0.351	0.237	0.59	Yes	0.736	0.169	0.91	Yes	0.731	0.207	0.94	Yes	1.00	**9.98**
		L_{35} - L_{36}	922.73	-----	-61	-1233	540	-199	-1967	146	161	-113	0.645	0.352	1.00	Yes	0.435	0.227	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.29**
		L_{36} - L_{37}	1301.87	-----	-739	-1586	261	-286	-64	-947	-198	157	0.746	0.253	1.00	Yes	0.490	0.153	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.39**
		L_{37} - L_{38}	1698.16	-----	-1455	-2258	-201	-673	-1209	154	67	-185	0.719	0.273	1.00	Yes	0.478	0.164	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.53**
		L_{38} - L_{39}	1772.64	-----	-2300	-1026	-621	-226	207	-497	-100	171	0.761	0.235	1.00	Yes	0.510	0.144	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.20**
		L_{39} - L_{40}	1674.41	-----	-1772	-1059	-453	-331	-650	364	121	-132	0.781	0.211	1.00	Yes	0.517	0.127	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.05**
		L_{40} - L_{41}	1280.08	-----	-1658	34	-473	33	468	43	-52	264	0.759	0.235	1.00	Yes	0.513	0.151	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.83**
		L_{41} - L_{42}	965.77	-----	-1159	129	-268	51	-489	65	256	69	0.771	0.224	1.00	Yes	0.507	0.131	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.15**
		L_{42} - L_{43}	504.71	-----	-1281	526	-290	217	731	366	105	333	0.613	0.381	1.00	Yes	0.365	0.241	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.73**
		L_{43} - L_{44}	-----	-461.11	-770	192	-704	241	-158	-46	1325	386	-----	-----	-----	-----	-----	-----	-----	-----	0.663	0.332	1	Yes	0.659	0.157	0.82	Yes	1.00	**30.55**
	Structure 3	L_0 - L_1	-----	-470.01	63	-250	265	-506	50	225	45	206	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.126	0.98	Yes	0.846	0.152	1.00	Yes	1.00	**6.53**
		L_1 - L_2	497.26	-----	222	-440	463	-572	306	-187	300	146	0.761	0.235	1.00	Yes	0.515	0.149	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.53**
		L_2 - L_3	846.98	-----	-162	-754	46	-233	-89	-860	-24	165	0.738	0.256	1.00	Yes	0.472	0.157	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.68**
		L_3 - L_4	1123.32	-----	-219	-1214	48	-433	-1237	309	145	58	0.710	0.288	1.00	Yes	0.461	0.180	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.72**
		L_4 - L_5	1569.94	-----	-1321	-1092	-377	-260	-79	-985	-31	224	0.767	0.228	1.00	Yes	0.492	0.136	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.18**
		L_5 - L_6	1511.46	-----	-762	-1510	-142	-463	-1072	157	247	-38	0.738	0.257	1.00	Yes	0.480	0.158	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.02**
		L_6 - L_7	1241.16	-----	-1550	25	-501	240	-19	-612	-54	249	0.730	0.265	1.00	Yes	0.473	0.163	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.80**
		L_7 - L_8	997.77	-----	-645	-442	-107	155	-793	-163	135	-167	0.787	0.207	1.00	Yes	0.504	0.127	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.01**
		L_8 - L_9	531.23	-----	-738	152	-184	416	135	-641	-105	165	0.688	0.307	1.00	Yes	0.413	0.197	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.79**
		L_9 - L_{10}	-----	-562.82	-401	79	-65	517	-289	-108	140	-159	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.075	0.94	Yes	0.857	0.137	1.00	Yes	1.00	**6.88**
		L_{10} - L_{11}	-----	-1174.89	-266	288	-3	120	-257	107	-320	170	-----	-----	-----	-----	-----	-----	-----	-----	0.956	0.029	0.99	Yes	0.946	0.045	1.00	Yes	1.00	**7.97**
		L_{11} - L_{12}	-----	-1274.09	-34	655	-68	1277	315	32	276	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.175	1	Yes	0.807	0.169	0.98	Yes	1.00	**5.24**
		L_{12} - L_{13}	-----	-1130.04	722	-27	1314	-62	-70	179	0	146	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.271	1	Yes	0.716	0.174	0.89	Yes	1.00	**3.63**
		L_{13} - L_{14}	-----	-1013.72	34	-411	94	76	-909	-149	319	-280	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.168	1	Yes	0.816	0.065	0.89	Yes	1.00	**4.90**
		L_{14} - L_{15}	-----	-645.60	144	-262	512	73	-183	-489	-213	84	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.230	1	Yes	0.757	0.116	0.88	Yes	1.00	**3.45**
		L_{15} - L_{16}	-----	-444.09	136	-463	424	60	-849	157	210	-184	-----	-----	-----	-----	-----	-----	-----	-----	0.683	0.314	1	Yes	0.677	0.123	0.80	Yes	1.00	**3.63**
		L_{16} - L_{17}	629.59	-----	-394	-695	284	-59	-35	-652	-169	161	0.724	0.273	1.00	Yes	0.430	0.172	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.05**
		L_{17} - L_{18}	645.40	-----	-748	-507	35	-98	-448	183	92	-104	0.743	0.253	1.00	Yes	0.430	0.150	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.88**
		L_{18} - L_{19}	438.47	-----	-793	77	-15	-18	393	290	-80	212	0.671	0.322	1.00	Yes	0.409	0.214	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.68**
		L_{19} - L_{20}	296.99	-168.49	-630	381	-284	73	634	172	1629	442	0.455	0.539	1.00	Yes	0.268	0.319	0.59	Yes	0.306	0.482	0.79	Yes	0.303	0.189	0.50	Yes	1.00	**43.13**

Operating Loads - 3F1

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			-----	-271.71	-14	54	-107	152	197	63	-1092	-350	-----	-----	-----	-----	-----	-----	-----	-----	0.607	0.387	1	Yes	0.575	0.194	0.77	Yes	1.00	**2.02**
		U_1 - L_1			-----	-276.83	10	-4	-166	172	569	220	-1225	-431	-----	-----	-----	-----	-----	-----	-----	-----	0.605	0.390	1	Yes	0.586	0.220	0.81	Yes	1.00	**4.12**
		U_2 - L_2			57.06	-168.00	57	-61	-55	91	700	234	-2290	-691	0.103	0.779	0.89	Yes	0.056	0.428	0.49	Yes	0.367	0.626	1	Yes	0.355	0.116	0.48	Yes	1.00	**4.49**
		U_3 - L_3			119.00	-----	123	-125	38	-18	-86	-129	-2153	-577	0.214	0.783	1.00	Yes	0.118	0.431	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.56**
		U_4 - L_4			-----	-202.85	77	-79	122	-123	988	491	-1833	-545	-----	-----	-----	-----	-----	-----	-----	-----	0.446	0.552	1	Yes	0.429	0.158	0.59	Yes	1.00	**4.88**
		U_5 - L_5			-----	-388.66	75	-86	202	-225	890	386	162	255	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.291	1	Yes	0.671	0.228	0.90	Yes	1.00	**4.75**
		U_6 - L_6			-----	-368.64	86	-78	180	-183	1372	628	1124	547	-----	-----	-----	-----	-----	-----	-----	-----	0.558	0.441	1	Yes	0.529	0.160	0.69	Yes	1.00	**2.60**
		U_7 - L_7			-----	-321.63	124	-139	221	-241	976	235	568	179	-----	-----	-----	-----	-----	-----	-----	-----	0.538	0.458	1	Yes	0.496	0.237	0.74	Yes	1.00	**1.97**
		U_8 - L_8			-----	-1093.93	-105	120	-155	182	1079	222	-2077	-494	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.203	1	Yes	0.761	0.034	0.80	Yes	1.00	**4.39**
		U_9 - L_9			-----	-565.15	-232	263	-350	393	552	222	-34	75	-----	-----	-----	-----	-----	-----	-----	-----	0.674	0.321	1	Yes	0.638	0.218	0.86	Yes	1.00	**2.05**
		U_{10} - L_{10}			-----	-659.27	-159	157	-276	311	622	300	-1535	-509	-----	-----	-----	-----	-----	-----	-----	-----	0.683	0.312	1	Yes	0.650	0.161	0.82	Yes	1.00	**4.35**
		U_{11} - L_{11}			-----	-552.54	-167	219	-258	370	625	369	-1660	-377	-----	-----	-----	-----	-----	-----	-----	-----	0.663	0.329	1	Yes	0.643	0.172	0.82	Yes	1.00	**3.92**
		U_{12} - L_{12}			-----	-479.08	-126	134	-270	283	383	296	-1096	-259	-----	-----	-----	-----	-----	-----	-----	-----	0.692	0.305	1	Yes	0.657	0.242	0.90	Yes	1.00	**4.92**
		U_{13} - L_{13}			-----	-324.07	-70	89	-166	193	294	171	-943	-21	-----	-----	-----	-----	-----	-----	-----	-----	0.655	0.336	1	Yes	0.621	0.220	0.85	Yes	1.00	**3.79**
		U_{14} - L_{14}			-----	-196.89	-55	64	-79	87	465	70	-2051	-255	-----	-----	-----	-----	-----	-----	-----	-----	0.439	0.560	1	Yes	0.417	0.111	0.53	Yes	1.00	**4.54**
		U_{15} - L_{15}			-----	-264.39	-50	41	187	-206	335	-262	-1329	-233	-----	-----	-----	-----	-----	-----	-----	-----	0.593	0.403	1	Yes	0.559	0.263	0.83	Yes	1.00	**7.30**
		U_{16} - L_{16}			-----	-323.73	40	-55	235	-245	619	-215	-646	-120	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.254	0.99	Yes	0.685	0.314	1.00	Yes	1.00	**6.08**
		U_{17} - L_{17}			-----	-416.98	80	-93	203	-222	505	201	-18	74	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.212	1	Yes	0.719	0.225	0.95	Yes	1.00	**4.11**
		U_{18} - L_{18}			-----	-432.03	190	-196	354	-365	692	180	697	170	-----	-----	-----	-----	-----	-----	-----	-----	0.633	0.366	1	Yes	0.601	0.207	0.81	Yes	1.00	**2.80**
		U_{19} - L_{19}			-----	-523.39	197	-210	386	-404	605	122	686	136	-----	-----	-----	-----	-----	-----	-----	-----	0.653	0.339	1	Yes	0.609	0.187	0.80	Yes	1.00	**3.32**
		U_{20} - L_{20}			-----	-424.07	239	-288	319	-380	440	58	426	56	-----	-----	-----	-----	-----	-----	-----	-----	0.620	0.378	1	Yes	0.543	0.201	0.75	Yes	1.00	**1.55**
	Structure 2	U_0 - L_0			-----	-586.45	-163	271	-315	435	33	6	-1439	-244	-----	-----	-----	-----	-----	-----	-----	-----	0.702	0.295	1	Yes	0.628	0.184	0.82	Yes	1.00	**2.65**
		U_1 - L_1			-----	-685.91	-214	220	-500	512	628	163	-1126	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.211	1	Yes	0.735	0.217	0.96	Yes	1.00	**4.87**
		U_2 - L_2			-----	-536.49	-166	182	-361	391	620	294	-1254	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.719	0.281	1	Yes	0.684	0.200	0.89	Yes	1.00	**3.86**
		U_3 - L_3			-----	-405.93	-83	95	-166	188	540	271	-961	41	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.305	1	Yes	0.637	0.171	0.81	Yes	1.00	**3.02**
		U_4 - L_4			-----	-297.87	-26	37	-165	177	553	238	-770	1	-----	-----	-----	-----	-----	-----	-----	-----	0.676	0.316	1	Yes	0.630	0.227	0.86	Yes	1.00	**4.58**
		U_5 - L_5			-----	-205.79	48	-34	-88	115	256	85	-1639	-55	-----	-----	-----	-----	-----	-----	-----	-----	0.465	0.530	1	Yes	0.435	0.146	0.59	Yes	1.00	**5.41**
		U_6 - L_6			198.65	-----	108	-111	2	4	105	-39	-1705	-171	0.357	0.635	1.00	Yes	0.197	0.349	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.59**
		U_7 - L_7			-----	-212.01	78	-90	97	-112	652	81	-1820	-74	-----	-----	-----	-----	-----	-----	-----	-----	0.479	0.512	1	Yes	0.449	0.143	0.60	Yes	1.00	**4.91**
		U_8 - L_8			-----	-472.25	152	-170	336	-358	437	110	-571	-130	-----	-----	-----	-----	-----	-----	-----	-----	0.685	0.181	0.87	Yes	0.680	0.313	1.00	Yes	1.00	**5.06**
		U_9 - L_9			-----	-694.13	270	-277	581	-595	791	373	-544	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.168	0.95	Yes	0.744	0.252	1.00	Yes	1.00	**6.54**
		U_{10} - L_{10}			-----	-750.34	233	-234	511	-533	1166	681	-15	221	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.253	1	Yes	0.702	0.235	0.94	Yes	1.00	**6.62**
		U_{11} - L_{11}			-----	-735.28	227	-221	450	-458	1164	653	-54	373	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.255	1	Yes	0.687	0.202	0.89	Yes	1.00	**5.42**
		U_{12} - L_{12}			-----	-728.62	186	-169	421	-416	1460	635	675	429	-----	-----	-----	-----	-----	-----	-----	-----	0.699	0.301	1	Yes	0.632	0.181	0.82	Yes	1.00	**5.47**
		U_{13} - L_{13}			-----	-506.65	272	-270	408	-400	1020	237	802	216	-----	-----	-----	-----	-----	-----	-----	-----	0.565	0.433	1	Yes	0.488	0.195	0.69	Yes	1.00	**2.32**
		U_{14} - L_{14}			-----	-1140.38	-27	20	-184	164	1229	-74	-1576	-197	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.164	1	Yes	0.756	0.033	0.79	Yes	1.00	**5.51**
		U_{15} - L_{15}			-----	-576.31	-274	278	-473	469	623	89	-1655	14	-----	-----	-----	-----	-----	-----	-----	-----	0.642	0.356	1	Yes	0.556	0.226	0.79	Yes	1.00	**4.22**
		U_{16} - L_{16}			-----	-673.12	-192	179	-465	460	672	191	-1117	-86	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.214	1	Yes	0.721	0.197	0.92	Yes	1.00	**5.04**
		U_{17} - L_{17}			-----	-582.33	-206	206	-440	454	596	196	-1429	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.719	0.276	1	Yes	0.678	0.211	0.89	Yes	1.00	**4.41**
		U_{18} - L_{18}			-----	-497.50	-174	180	-347	384	620	220	-1722	-200	-----	-----	-----	-----	-----	-----	-----	-----	0.663	0.331	1	Yes	0.634	0.197	0.84	Yes	1.00	**3.84**
		U_{19} - L_{19}			-----	-481.71	-90	91	-273	277	519	196	-1042	-28	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.272	1	Yes	0.719	0.267	0.99	Yes	1.00	**5.07**
		U_{20} - L_{20}			-----	-310.12	-52	57	-145	160	518	189	-1137	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.636	0.363	1	Yes	0.594	0.183	0.78	Yes	1.00	**3.87**
		U_{21} - L_{21}			-----	-226.90	-6	15	-117	135	216	4	-1543	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.513	0.482	1	Yes	0.480	0.173	0.66	Yes	1.00	**4.37**
		U_{22} - L_{22}			-----	-213.97	-1	2	1	-2	710	157	-1886	-257	-----	-----	-----	-----	-----	-----	-----	-----	0.482	0.510	1	Yes	0.453	0.002	0.46	Yes	1.00	**4.68**
		U_{23} - L_{23}			-----	-319.96	20	-26	226	-242	211	-28	-632	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.273	1	Yes	0.677	0.309	0.99	Yes	1.00	**6.16**
		U_{24} - L_{24}			-----	-370.75	55	-59	224	-233	584	205	-156	17	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.237	1	Yes	0.710	0.266	0.98	Yes	1.00	**5.01**
		U_{25} - L_{25}			-----	-472.16	101	-102	299	-296	589	224	56	156	-----	-----	-----	-----	-----	-----	-----	-----	0.710	0.183	0.9	Yes	0.705	0.287	1.00	Yes	1.00	**5.06**
		U_{26} - L_{26}			-----	-572.48	171	-178	486	-515	708	302	-432	119	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.189	0.96	Yes	0.729	0.263	1.00	Yes	1.00	**5.72**
		U_{27} - L_{27}			-----	-598.48	222	-218	522	-527	1167	541	179	369	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.255	1	Yes	0.697	0.245	0.95	Yes	1.00	**5.64**
		U_{28} - L_{28}			-----	-617.66	157	-131	470	-453	1614	538	890	407	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.286	1	Yes	0.662	0.199	0.87	Yes	1.00	**6.01**
		U_{29} - L_{29}			-----	-583.13	174	-179	536	-530	1503	207	-257	100	-----	-----	-----	-----	-----	-----	-----	-----	0.650	0.344	1	Yes	0.562	0.257	0.82	Yes	1.00	**7.13**
		U_{30} - L_{30}			-----	-1073.44	-137	112	-206	169	860	-219	-1630	-170	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.181	1	Yes	0.739	0.038	0.78	Yes	1.00	**4.43**
		U_{31} - L_{31}			-----	-683.32	-309	304	-510	496	510	98	-737	9	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.231	1	Yes	0.659	0.244	0.91	Yes	1.00	**4.11**
		U_{32} - L_{32}			-----	-753.70	-228	211	-385	390	476	178	-1277	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.268	1	Yes	0.653	0.167	0.83	Yes	1.00	**4.08**
		U_{33} - L_{33}			-----	-683.22	-249	240	-372	387	467	231	-1542	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.687	0.303	1	Yes	0.639	0.171	0.81	Yes	1.00	**3.77**
		U_{34} - L_{34}			-----	-716.45	-238	250	-441	468	552	331	-1393	-225	-----	-----	-----	-----	-----	-----	-----	-----	0.708	0.283	1	Yes	0.670	0.207	0.88	Yes	1.00	**5.27**
		U_{35} - L_{35}			-----	-599.00	-257	271	-434	470	631	372	-1959	-359	-----	-----	-----	-----	-----	-----	-----	-----	0.667	0.327	1	Yes	0.642	0.200	0.85	Yes	1.00	**4.63**
		U_{36} - L_{36}			-----	-415.68	-138	160	-241	270	274	162	-1712	-197	-----	-----	-----	-----	-----	-----	-----	-----	0.603	0.397	1	Yes	0.599	0.236	0.84	Yes	1.00	**3.86**
		U_{37} - L_{37}			-----	-203.65	-77	92	-99	115	566	108	-1841	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.460	0.533	1	Yes	0.431	0.147	0.58	Yes	1.00	**4.34**
		U_{38} - L_{38}			234.23	-----	-150	149	111	-115	-195	-530	-1313	-306	0.421	0.572	1.00	Yes	0.232	0.314	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.92**
		U_{39} - L_{39}			-----	-307.60	-53	41	206	-229	334	-133	-728	-71	-----	-----	-----	-----	-----	-----	-----	-----	0.695	0.298	1	Yes	0.651	0.292	0.95	Yes	1.00	**7.86**
		U_{40} - L_{40}			-----	-324.33	37	-46	215	-219	594	172	28	30	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.256	1	Yes	0.686	0.280	0.97	Yes	1.00	**5.35**
		U_{41} - L_{41}			-----	-460.93	88	-97	230	-244	578	193	-188	35	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.211	1	Yes	0.723	0.222	0.95	Yes	1.00	**4.53**
		U_{42} - L_{42}			-----	-580.79	171	-181	494	-501	670	173	-34	31	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.173	0.96	Yes	0.740	0.256	1.00	Yes	1.00	**6.04**
		U_{43} - L_{43}			-----	-708.38	189	-207	535	-557	622	187	145	127	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.154	0.97	Yes	0.759	0.236	1.00	Yes	1.00	**7.45**
		U_{44} - L_{44}			-----	-614.81	262	-325	441	-558	570	97	755	128	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.257	1	Yes	0.659	0.237	0.90	Yes	1.00	**3.73**
	Structure 3	U_0 - L_0			-----	-511.40	-148	242	-270	369	300	39	-837	-110	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.268	1	Yes	0.641	0.189	0.84	Yes	1.00	**2.33**
		U_1 - L_1			-----	-568.77	-217	216	-389	404	617	149	-1518	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.710	0.284	1	Yes	0.662	0.187	0.85	Yes	1.00	**3.76**
		U_2 - L_2			-----	-519.26	-161	173	-359	382	656	308	-902	42	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.237	1	Yes	0.722	0.217	0.94	Yes	1.00	**4.06**
		U_3 - L_3			-----	-382.51	-72	87	-153	178	556	272	-780	110	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.282	1	Yes	0.660	0.181	0.85	Yes	1.00	**2.95**
		U_4 - L_4			-----	-235.12	-47	53	-126	141	572	228	-1404	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.530	0.465	1	Yes	0.498	0.181	0.68	Yes	1.00	**3.39**
		U_5 - L_5			-----	-226.37	45	-36	-148	169	111	14	-1466	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.507	0.491	1	Yes	0.479	0.215	0.70	Yes	1.00	**6.29**
		U_6 - L_6			-----	-196.00	53	-59	85	-90	682	135	-2025	-375	-----	-----	-----	-----	-----	-----	-----	-----	0.437	0.557	1	Yes	0.415	0.115	0.53	Yes	1.00	**5.17**
		U_7 - L_7			-----	-365.97	77	-94	234	-258	430	23	-205	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.197	0.94	Yes	0.701	0.295	1.00	Yes	1.00	**4.70**
		U_8 - L_8			-----	-511.82	129	-131	331	-334	857	314	-76	35	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.252	1	Yes	0.702	0.285	0.99	Yes	1.00	**6.04**
		U_9 - L_9			-----	-638.57	171	-223	380	-483	983	506	538	491	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.231	1	Yes	0.743	0.224	0.97	Yes	1.00	**4.74**
		U_{10} - L_{10}			-----	-555.15	161	-154	274	-283	1547	812	1168	685	-----	-----	-----	-----	-----	-----	-----	-----	0.575	0.419	1	Yes	0.548	0.147	0.70	Yes	1.00	**2.88**
		U_{11} - L_{11}			-----	-487.17	216	-250	323	-370	1186	538	977	501	-----	-----	-----	-----	-----	-----	-----	-----	0.581	0.413	1	Yes	0.550	0.206	0.76	Yes	1.00	**1.99**
		U_{12} - L_{12}			-----	-1123.37	-18	0	-121	99	1270	330	-1802	-352	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.180	1	Yes	0.779	0.023	0.81	Yes	1.00	**4.65**
		U_{13} - L_{13}			-----	-413.82	-155	169	-245	266	635	119	-1038	-89	-----	-----	-----	-----	-----	-----	-----	-----	0.692	0.307	1	Yes	0.638	0.261	0.90	Yes	1.00	**2.55**
		U_{14} - L_{14}			-----	-473.96	-98	96	-207	225	606	246	-1077	-350	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.279	1	Yes	0.680	0.197	0.88	Yes	1.00	**3.88**
		U_{15} - L_{15}			-----	-369.71	-80	89	-153	181	521	246	-1113	-254	-----	-----	-----	-----	-----	-----	-----	-----	0.669	0.330	1	Yes	0.638	0.183	0.83	Yes	1.00	**3.54**
		U_{16} - L_{16}			-----	-203.87	-83	84	-124	127	874	337	-1864	-581	-----	-----	-----	-----	-----	-----	-----	-----	0.448	0.545	1	Yes	0.431	0.162	0.60	Yes	1.00	**4.15**
		U_{17} - L_{17}			159.16	-----	-176	179	111	-131	756	-44	-1673	-595	0.286	0.713	1.00	Yes	0.157	0.392	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.09**
		U_{18} - L_{18}			86.78	-288.20	-93	100	232	-274	488	155	-980	-503	0.156	0.634	0.80	Yes	0.086	0.349	0.44	Yes	0.630	0.369	1	Yes	0.610	0.350	0.97	Yes	1.00	**9.39**
		U_{19} - L_{19}			-----	-291.20	-1	-14	192	-205	450	227	512	254	-----	-----	-----	-----	-----	-----	-----	-----	0.636	0.358	1	Yes	0.616	0.262	0.88	Yes	1.00	**4.34**
		U_{20} - L_{20}			-----	-320.01	72	-83	192	-237	642	206	245	78	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.281	1	Yes	0.677	0.303	0.99	Yes	1.00	**3.93**

Operating Loads - 3F1

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	$U_0 - L_1$	627.25	-----	-27	32	2	-11	-379	-524	59	131	0.823	0.169	1.00	Yes	0.497	0.093	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.33**
		$U_1 - L_2$	400.25	-----	-91	0	11	-15	-416	-533	361	193	0.720	0.271	1.00	Yes	0.396	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.92**
		$U_2 - L_3$	-----	-234.02	-73	-6	-21	-64	-232	-405	-1544	-247	-----	-----	-----	-----	-----	-----	-----	-----	0.539	0.454	1	Yes	0.495	0.093	0.59	Yes	1.00	**9.12**
		$U_3 - L_4$	-----	-317.39	-11	-41	9	-62	135	-49	-734	-190	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.274	1	Yes	0.672	0.080	0.76	Yes	1.00	**4.72**
		$U_4 - L_4$	494.38	-----	-76	43	-51	19	-191	-8	821	236	0.725	0.268	1.00	Yes	0.399	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.98**
		$U_5 - L_5$	667.91	-----	-176	224	-37	85	-411	221	439	80	0.790	0.207	1.00	Yes	0.434	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.86**
		$U_7 - L_6$	588.61	-----	-261	234	-41	85	-313	80	-824	-170	0.696	0.298	1.00	Yes	0.383	0.164	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.41**
		$U_8 - L_7$	621.69	-----	-74	312	22	97	-357	8	-452	-272	0.735	0.260	1.00	Yes	0.404	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.77**
		$U_9 - L_9$	945.75	-----	-91	358	12	185	-166	-420	595	286	0.756	0.235	1.00	Yes	0.468	0.133	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.76**
		$U_9 - L_{10}$	982.86	-----	-306	232	-113	127	-359	-585	583	251	0.786	0.211	1.00	Yes	0.487	0.119	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.43**
		$U_{10} - L_{11}$	901.99	-----	-243	149	-83	95	-247	-895	174	-19	0.762	0.230	1.00	Yes	0.472	0.131	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.17**
		$U_{11} - L_{12}$	793.24	-----	-254	93	-94	48	-564	-593	173	-18	0.785	0.207	1.00	Yes	0.432	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.15**
		$U_{12} - L_{13}$	564.92	-----	-193	125	-102	41	-273	-709	-705	-312	0.689	0.307	1.00	Yes	0.433	0.176	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.48**
		$U_{13} - L_{14}$	378.53	-----	-86	13	-35	-22	-134	-606	-707	-288	0.681	0.315	1.00	Yes	0.374	0.173	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.78**
		$U_{15} - L_{14}$	317.07	-255.67	-90	-13	15	-101	-277	-126	752	-216	0.570	0.347	0.92	Yes	0.314	0.191	0.51	Yes	0.599	0.396	1	Yes	0.541	0.129	0.68	Yes	1.00	**9.31**
		$U_{16} - L_{15}$	349.82	-----	-122	80	-44	-8	-334	35	723	-257	0.629	0.366	1.00	Yes	0.346	0.201	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.38**
		$U_{17} - L_{16}$	523.56	-----	-144	97	-47	23	-362	-71	-303	-104	0.768	0.230	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.97**
		$U_{18} - L_{17}$	610.73	-----	-317	249	-132	90	-501	-37	-401	-110	0.722	0.271	1.00	Yes	0.397	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.59**
		$U_{19} - L_{18}$	692.27	-----	-332	253	-132	96	-465	-167	-459	-204	0.750	0.246	1.00	Yes	0.412	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.41**
		$U_{20} - L_{19}$	684.09	-----	-381	318	-182	146	-363	-181	-274	-140	0.741	0.254	1.00	Yes	0.408	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.85**
	Structure 2	$U_0 - L_1$	762.38	-----	-253	312	-101	128	-621	-495	-154	6	0.754	0.237	1.00	Yes	0.415	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		$U_1 - L_2$	724.88	-----	-385	285	-165	118	-356	-688	141	-33	0.717	0.281	1.00	Yes	0.394	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.66**
		$U_2 - L_3$	576.23	-----	-310	235	-120	90	-260	-768	121	-31	0.681	0.314	1.00	Yes	0.375	0.173	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.28**
		$U_3 - L_4$	552.50	-----	-174	118	-52	25	-342	-471	171	10	0.736	0.257	1.00	Yes	0.405	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.96**
		$U_4 - L_5$	348.07	-----	-126	74	-1	-14	-197	-704	225	29	0.626	0.365	1.00	Yes	0.344	0.201	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.52**
		$U_5 - L_6$	279.17	-238.75	-84	29	47	-106	-392	-306	-1235	-180	0.502	0.493	1.00	Yes	0.276	0.271	0.55	Yes	0.564	0.280	0.85	Yes	0.505	0.135	0.65	Yes	1.00	**8.73**
		$U_6 - L_7$	-----	-369.46	-6	-40	44	-98	38	-147	-580	-26	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.205	1	Yes	0.708	0.112	0.83	Yes	1.00	**4.36**
		$U_8 - L_7$	529.40	-----	-165	131	-104	50	-331	-24	837	-215	0.675	0.319	1.00	Yes	0.425	0.184	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.89**
		$U_8 - L_8$	721.70	-----	-332	246	-175	122	-195	26	-276	-139	0.782	0.215	1.00	Yes	0.430	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.16**
		$U_{10} - L_9$	827.30	-----	-311	252	-150	129	-154	176	-213	-19	0.818	0.176	1.00	Yes	0.450	0.097	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.87**
		$U_{11} - L_{10}$	874.66	-----	-335	302	-137	164	-322	143	-398	121	0.797	0.197	1.00	Yes	0.438	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.92**
		$U_{12} - L_{11}$	849.95	-----	-337	344	-133	175	-578	296	-539	51	0.774	0.225	1.00	Yes	0.426	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.77**
		$U_{13} - L_{12}$	733.03	-----	-412	377	-161	164	-504	77	-524	1	0.725	0.269	1.00	Yes	0.399	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.00**
		$U_{14} - L_{13}$	737.58	-----	-251	426	-35	151	-182	-52	-432	-271	0.730	0.262	1.00	Yes	0.401	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.65**
		$U_{14} - L_{15}$	579.50	-----	-190	332	-7	164	198	-550	691	252	0.685	0.313	1.00	Yes	0.377	0.172	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.24**
		$U_{15} - L_{16}$	580.94	-----	-341	314	-166	163	185	-160	632	200	0.687	0.308	1.00	Yes	0.378	0.169	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.90**
		$U_{16} - L_{17}$	680.29	-----	-330	340	-128	155	92	-525	373	109	0.737	0.260	1.00	Yes	0.405	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.07**
		$U_{17} - L_{18}$	624.25	-----	-282	260	-112	129	-51	-540	356	86	0.738	0.258	1.00	Yes	0.406	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
		$U_{18} - L_{19}$	631.35	-----	-280	253	-82	96	-150	-520	290	77	0.746	0.253	1.00	Yes	0.411	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.71**
		$U_{19} - L_{20}$	557.11	-----	-188	145	-43	48	-248	-583	288	79	0.710	0.288	1.00	Yes	0.391	0.164	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.78**
		$U_{20} - L_{21}$	365.16	-----	-111	95	-31	3	-133	-269	-681	-73	0.657	0.339	1.00	Yes	0.361	0.186	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.65**
		$U_{21} - L_{22}$	343.37	-----	-100	26	14	-79	-182	-467	-872	-112	0.618	0.381	1.00	Yes	0.340	0.209	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.73**
		$U_{23} - L_{22}$	321.33	-----	-88	42	-28	-30	-259	-103	1046	-140	0.578	0.416	1.00	Yes	0.318	0.229	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.25**
		$U_{24} - L_{23}$	423.05	-----	-122	104	-20	19	-195	129	-254	-63	0.761	0.230	1.00	Yes	0.418	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.57**
		$U_{25} - L_{24}$	599.27	-----	-192	176	-43	51	-190	55	-299	-81	0.764	0.233	1.00	Yes	0.420	0.131	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.03**
		$U_{26} - L_{25}$	669.15	-----	-280	275	-80	98	-128	176	-252	-56	0.791	0.204	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.27**
		$U_{27} - L_{26}$	650.26	-----	-285	288	-107	127	-299	219	-340	-6	0.769	0.225	1.00	Yes	0.423	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.39**
		$U_{28} - L_{27}$	674.02	-----	-302	340	-97	150	-527	212	-530	35	0.730	0.261	1.00	Yes	0.402	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.67**
		$U_{29} - L_{28}$	592.39	-----	-338	328	-95	107	-449	40	-553	-42	0.700	0.292	1.00	Yes	0.385	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.37**
		$U_{30} - L_{29}$	626.97	-----	-197	364	28	75	-144	222	-254	-200	0.741	0.252	1.00	Yes	0.408	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.35**
		$U_{30} - L_{31}$	728.01	-----	-259	435	-60	227	2	-367	497	215	0.720	0.276	1.00	Yes	0.396	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.69**
		$U_{31} - L_{32}$	738.40	-----	-425	370	-232	216	31	-399	451	118	0.731	0.265	1.00	Yes	0.402	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.11**
		$U_{32} - L_{33}$	818.55	-----	-340	320	-161	193	-152	-776	278	56	0.746	0.250	1.00	Yes	0.410	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.77**
		$U_{33} - L_{34}$	858.62	-----	-329	277	-145	164	-407	-539	242	42	0.782	0.214	1.00	Yes	0.430	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.40**
		$U_{34} - L_{35}$	760.22	-----	-294	218	-153	123	-305	-728	11	-135	0.752	0.245	1.00	Yes	0.414	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.08**
		$U_{35} - L_{36}$	659.74	-----	-308	201	-179	99	-374	-742	-442	-252	0.715	0.280	1.00	Yes	0.393	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.67**
		$U_{36} - L_{37}$	529.23	-----	-176	123	-81	24	-129	-700	-799	-259	0.675	0.320	1.00	Yes	0.425	0.184	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.81**
		$U_{38} - L_{37}$	-----	-322.38	-16	-33	23	-78	-339	-144	643	-333	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.295	1	Yes	0.618	0.089	0.71	Yes	1.00	**3.99**
		$U_{39} - L_{38}$	398.81	-217.31	-119	46	50	-102	-113	250	440	-80	0.717	0.279	1.00	Yes	0.395	0.154	0.55	Yes	0.518	0.255	0.78	Yes	0.460	0.152	0.62	Yes	1.00	**10.15**
		$U_{40} - L_{39}$	397.90	-----	-130	91	-28	-11	-331	73	399	-163	0.716	0.282	1.00	Yes	0.394	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.66**
		$U_{41} - L_{40}$	561.35	-----	-174	126	-57	31	-391	-111	-411	-178	0.748	0.245	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.24**
		$U_{42} - L_{41}$	617.42	-----	-320	258	-123	93	-447	26	-401	-167	0.730	0.262	1.00	Yes	0.401	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.24**
		$U_{43} - L_{42}$	765.88	-----	-375	306	-137	104	-403	-74	-376	-193	0.758	0.234	1.00	Yes	0.417	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.71**
		$U_{44} - L_{43}$	795.17	-----	-383	376	-176	157	-82	68	-211	-87	0.787	0.209	1.00	Yes	0.433	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.68**
	Structure 3	$U_0 - L_1$	684.12	-----	-260	261	-79	103	-476	-722	-145	5	0.741	0.252	1.00	Yes	0.408	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.90**
		$U_1 - L_2$	670.79	-----	-347	249	-157	107	-363	-543	166	-39	0.727	0.267	1.00	Yes	0.400	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.66**
		$U_2 - L_3$	578.32	-----	-309	232	-125	86	-314	-772	128	-30	0.684	0.315	1.00	Yes	0.376	0.173	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.64**
		$U_3 - L_4$	479.34	-----	-136	79	-43	20	-373	-648	149	-28	0.703	0.289	1.00	Yes	0.387	0.159	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		$U_4 - L_5$	340.20	-----	-122	77	-29	-20	-303	-562	-776	-184	0.612	0.380	1.00	Yes	0.337	0.209	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.63**
		$U_5 - L_6$	-----	-311.37	-91	-33	32	-122	-415	-831	-939	-254	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.264	1	Yes	0.659	0.156	0.82	Yes	1.00	**9.91**
		$U_7 - L_6$	456.78	-----	-95	30	-31	-17	-191	3	184	-106	0.822	0.176	1.00	Yes	0.452	0.097	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.64**
		$U_8 - L_7$	591.69	-----	-191	149	-103	49	-212	34	523	-66	0.721	0.269	1.00	Yes	0.454	0.153	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.41**
		$U_8 - L_8$	853.95	-----	-273	118	-103	23	-164	112	-142	64	0.845	0.151	1.00	Yes	0.465	0.083	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.35**
		$U_{10} - L_9$	971.10	-----	-228	200	-81	85	-520	206	284	168	0.820	0.174	1.00	Yes	0.508	0.098	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.94**
		$U_{11} - L_{10}$	992.77	-----	-295	281	-83	107	-582	2	-517	-20	0.794	0.206	1.00	Yes	0.492	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.54**
		$U_{12} - L_{11}$	940.71	-----	-56	374	18	132	-314	116	-598	-224	0.752	0.243	1.00	Yes	0.466	0.137	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.86**
		$U_{13} - L_{12}$	615.04	-----	-93	282	6	156	105	-525	587	303	0.727	0.267	1.00	Yes	0.400	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.80**
		$U_{13} - L_{14}$	609.30	-----	-270	227	-100	124	-77	-182	669	265	0.720	0.275	1.00	Yes	0.396	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.42**
		$U_{14} - L_{15}$	653.96	-----	-197	190	-52	97	-91	-602	305	96	0.773	0.221	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.96**
		$U_{15} - L_{16}$	501.32	-----	-86	18	-46	2	-165	-467	-753	-389	0.735	0.262	1.00	Yes	0.404	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.20**
		$U_{17} - L_{16}$	-----	-309.85	-18	-41	-13	-54	-383	-347	692	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.284	1	Yes	0.656	0.070	0.73	Yes	1.00	**4.87**
		$U_{18} - L_{17}$	-----	-227.28	-96	-6	-32	-46	-561	-141	1222	-141	-----	-----	-----	-----	-----	-----	-----	-----	0.523	0.468	1	Yes	0.481	0.123	0.61	Yes	1.00	**9.56**
		$U_{19} - L_{18}$	435.60	-----	-85	14	15	-19	-349	-330	-211	-120	0.783	0.210	1.00	Yes	0.431	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.62**
		$U_{20} - L_{19}$	643.41	-----	-110	74	-30	5	-71	-2	-61	11	0.844	0.146	1.00	Yes	0.510	0.081	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.47**

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

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

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 3F1 **Condition:** As-Inspected

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

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

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

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

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	U$_1$ - U$_1$	-71.60	-59.10	-40.21			0.90	1.24	-44.76	-65.80	0.00	0.00	Vehicle	Vehicle	-----	-178.62	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	-----	-----	7.50	7.50
	U$_1$ - U$_2$	-90.76	-2.54	-80.20			0.90	1.24	-2.83	-89.29	0.00	0.00	Vehicle	Vehicle	-----	-234.06	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	-----	-----	5.32	5.32
	U$_1$ - U$_3$	-61.05	37.66	-102.92			0.90	1.24	41.92	-114.59	0.00	0.00	Vehicle	Vehicle	-----	-228.32	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	-----	-----	4.40	4.40
	U$_1$ - U$_4$	10.82	49.96	-92.11			0.90	1.24	55.61	-102.55	0.00	0.00	Vehicle	Vehicle	86.36	-119.25	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	11.87	11.87	5.62	5.62
	U$_1$ - U$_5$	12.98	50.22	-117.75			0.90	1.24	55.91	-131.09	0.00	0.00	Vehicle	Vehicle	89.56	-153.54	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	11.77	11.77	4.41	4.41
	U$_1$ - U$_6$	121.44	58.12	-92.64			0.90	1.24	64.71	-103.13	0.00	0.00	Vehicle	Vehicle	242.00	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	8.49	8.49	-----	-----
	U$_1$ - U$_7$	249.52	64.29	-56.13			0.90	1.24	71.58	-62.49	0.00	0.00	Vehicle	Vehicle	417.43	-----	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	-----	-----	7.75	7.75	-----	-----
	U$_1$ - U$_8$	376.85	62.68	-18.83			0.90	1.24	69.78	-20.97	0.00	0.00	Vehicle	Vehicle	580.62	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	10.51	10.51	-----	-----
	U$_1$ - U$_9$	319.70	-14.36	0.58			0.90	1.20	0.63	-15.48	0.00	0.00	Vehicle	Vehicle	416.42	-----	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	-----	-----	986.65	986.65	-----	-----
	U$_9$ - U$_{10}$	128.80	-3.55	-28.34			0.90	1.20	-3.82	-30.55	0.00	0.00	Vehicle	Vehicle	162.46	-----	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	59.20	-72.19			0.90	1.20	63.83	-77.83	0.00	0.00	Vehicle	Vehicle	-----	-193.24	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	-----	-----	6.77	6.77
	U$_{11}$ - U$_{12}$	-252.85	52.47	-99.10			0.90	1.20	56.57	-106.85	0.00	0.00	Vehicle	Vehicle	-----	-467.60	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	-----	-----	5.24	5.24
	U$_{12}$ - U$_{13}$	-391.81	45.01	-117.69			0.90	1.20	48.53	-126.69	0.00	0.00	Vehicle	Vehicle	-----	-674.31	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	-----	-----	5.88	5.88
	U$_{13}$ - U$_{14}$	-482.83	37.50	-157.16			0.90	1.20	40.43	-169.45	0.00	0.00	Vehicle	Vehicle	-----	-847.97	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	-----	-----	4.98	4.98
	U$_{14}$ - U$_{15}$	-484.28	37.36	-172.98			0.90	1.20	40.28	-186.51	0.00	0.00	Vehicle	Vehicle	-----	-872.03	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	-----	-----	4.52	4.52
	U$_{15}$ - U$_{16}$	-501.86	28.69	-171.38			0.90	1.20	30.93	-184.78	0.00	0.00	Vehicle	Vehicle	-----	-892.62	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	4.47	4.47
	U$_{16}$ - U$_{17}$	-467.82	13.81	-155.65			0.90	1.20	14.89	-167.82	0.00	0.00	Vehicle	Vehicle	-----	-826.33	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	-----	-----	5.12	5.12
	U$_{17}$ - U$_{18}$	-368.70	12.89	-123.90			0.90	1.20	13.90	-133.59	0.00	0.00	Vehicle	Vehicle	-----	-652.98	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	-----	-----	4.51	4.51
	U$_{18}$ - U$_{19}$	-251.42	6.44	-83.03			0.90	1.20	6.94	-89.53	0.00	0.00	Vehicle	Vehicle	-----	-443.23	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	4.76	4.76
	U$_{19}$ - U$_{20}$	-117.77	1.40	-31.30			0.90	1.20	1.51	-33.75	0.00	0.00	Vehicle	Vehicle	-----	-196.97	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	16.59	16.59
Structure 2	U$_1$ - U$_1$	-118.16	-42.62	-18.73			0.90	1.18	-19.94	-45.38	0.00	0.00	Vehicle	Vehicle	-----	-212.60	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	-----	-----	11.66	11.66
	U$_1$ - U$_2$	-239.45	-80.04	-62.43			0.90	1.18	-66.47	-85.22	0.00	0.00	Vehicle	Vehicle	-----	-422.06	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.48	6.48
	U$_1$ - U$_3$	-350.29	-104.73	-100.25			0.90	1.18	-106.73	-111.50	0.00	0.00	Vehicle	Vehicle	-----	-600.33	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	-----	-----	6.52	6.52
	U$_1$ - U$_4$	-448.96	17.23	-129.03			0.90	1.18	18.35	-137.38	0.00	0.00	Vehicle	Vehicle	-----	-762.24	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	-----	-----	6.50	6.50
	U$_1$ - U$_5$	-483.05	20.83	-142.55			0.90	1.18	22.15	-151.77	0.00	0.00	Vehicle	Vehicle	-----	-825.27	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	-----	-----	5.62	5.62
	U$_1$ - U$_6$	-485.65	47.46	-172.35			0.90	1.18	50.53	-183.50	0.00	0.00	Vehicle	Vehicle	-----	-869.89	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	-----	-----	5.46	5.46
	U$_1$ - U$_7$	-428.66	56.23	-162.89			0.90	1.18	59.86	-173.43	0.00	0.00	Vehicle	Vehicle	-----	-782.71	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	-----	-----	5.26	5.26
	U$_1$ - U$_8$	-428.18	56.36	-168.25			0.90	1.18	60.01	-179.14	0.00	0.00	Vehicle	Vehicle	-----	-789.51	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	-----	-----	5.10	5.10
	U$_1$ - U$_9$	-335.25	64.62	-159.28			0.90	1.18	68.80	-169.59	0.00	0.00	Vehicle	Vehicle	-----	-656.29	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	4.66	4.66
	U$_9$ - U$_{10}$	-200.15	69.90	-133.95			0.90	1.18	74.42	-142.62	0.00	0.00	Vehicle	Vehicle	-----	-445.60	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	4.81	4.81
	U$_{10}$ - U$_{11}$	-52.03	74.18	-100.58			0.90	1.18	78.98	-107.09	0.00	0.00	Vehicle	Vehicle	35.04	-206.86	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	12.19	12.19	6.70	6.70
	U$_{11}$ - U$_{12}$	107.09	74.02	-66.75			0.90	1.18	78.80	-71.07	0.00	0.00	Vehicle	Vehicle	241.66	-----	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	-----	-----	10.20	10.20	-----	-----
	U$_{12}$ - U$_{13}$	259.37	73.30	-39.36			0.90	1.18	78.04	-41.91	0.00	0.00	Vehicle	Vehicle	438.64	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	11.27	11.27	-----	-----
	U$_{13}$ - U$_{14}$	391.99	65.69	-9.77			0.90	1.18	69.93	-10.40	0.00	0.00	Vehicle	Vehicle	600.50	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	16.76	16.76	-----	-----
	U$_{14}$ - U$_{15}$	439.40	-1.06	0.68			0.90	1.17	0.71	-1.12	0.00	0.00	Vehicle	Vehicle	572.14	-----	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	-----	-----	8.00	-----	-----	1584.03	1584.03	-----	-----
	U$_{15}$ - U$_{16}$	369.68	38.34	-20.99			0.90	1.17	40.34	-22.08	0.00	0.00	Vehicle	Vehicle	533.02	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	22.38	22.38	-----	-----
	U$_{16}$ - U$_{17}$	271.42	-14.84	-34.76			0.90	1.17	-15.61	-36.58	0.00	0.00	Vehicle	Vehicle	332.55	-----	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	-34.03	-65.40			0.90	1.17	-35.80	-68.81	0.00	0.00	Vehicle	Vehicle	176.80	-----	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$_{18}$ - U$_{19}$	72.84	-63.39	-83.59			0.90	1.17	-66.69	-87.94	0.00	0.00	Vehicle	Vehicle	7.99	-19.64	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	-----	-----	8.19	8.19
	U$_{19}$ - U$_{20}$	-8.04	51.02	-96.68			0.90	1.17	53.67	-101.71	0.00	0.00	Vehicle	Vehicle	59.32	-142.68	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	15.43	15.43	6.73	6.73
	U$_{20}$ - U$_{21}$	-60.07	43.11	-126.55			0.90	1.17	45.36	-133.14	0.00	0.00	Vehicle	Vehicle	-----	-251.18	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	-----	-----	5.83	5.83
	U$_{21}$ - U$_{22}$	-82.15	34.11	-129.63			0.90	1.17	35.89	-136.38	0.00	0.00	Vehicle	Vehicle	-----	-284.10	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	-----	-----	5.53	5.53
	U$_{22}$ - U$_{23}$	-82.37	34.15	-142.58			0.90	1.17	35.93	-150.01	0.00	0.00	Vehicle	Vehicle	-----	-302.10	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	-----	-----	5.03	5.03
	U$_{23}$ - U$_{24}$	-65.94	24.27	-142.39			0.90	1.17	25.54	-149.81	0.00	0.00	Vehicle	Vehicle	-----	-280.47	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	-----	-----	5.15	5.15
	U$_{24}$ - U$_{25}$	-11.98	50.52	-192.19			0.90	1.17	53.15	-199.07	0.00	0.00	Vehicle	Vehicle	45.72	-204.17	6.50	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	15.77	15.77	4.85	4.85
	U$_{25}$ - U$_{26}$	54.95	51.39	-106.97			0.90	1.17	54.06	-112.54	0.00	0.00	Vehicle	Vehicle	149.92	-74.87	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	11.78	11.78	6.24	6.24
	U$_{26}$ - U$_{27}$	135.89	63.09	-84.01			0.90	1.17	66.38	-88.39	0.00	0.00	Vehicle	Vehicle	262.95	-----	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	-----	-----	9.50	9.50	-----	-----
	U$_{27}$ - U$_{28}$	216.69	65.78	-59.16			0.90	1.17	69.21	-62.24	0.00	0.00	Vehicle	Vehicle	371.67	-----	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	-----	-----	11.95	11.95	-----	-----
	U$_{28}$ - U$_{29}$	293.53	67.31	-31.61			0.90	1.17	70.82	-33.26	0.00	0.00	Vehicle	Vehicle	473.66	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	13.82	13.82	-----	-----
	U$_{29}$ - U$_{30}$	357.86	64.87	-9.97			0.90	1.17	68.25	-10.49	0.00	0.00	Vehicle	Vehicle	553.95	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	17.68	17.68	-----	-----
	U$_{30}$ - U$_{31}$	339.12	-6.22	-18.97			0.90	1.18	-6.63	-20.20	0.00	0.00	Vehicle	Vehicle	432.25	-----	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	-----	-----	-----	-----	-----	-----
	U$_{31}$ - U$_{32}$	251.34	32.72	-26.34			0.90	1.18	34.84	-28.04	0.00	0.00	Vehicle	Vehicle	372.03	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	25.48	25.48	-----

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: 3F1 — 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

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

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

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

North Truss - Lower Chord

Location	Member	Member Forces from STAAD D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in*2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	L_0- L_1	4.73	-0.15	-1.36			0.90	1.24	-0.17	-1.51	0.00	0.00	Vehicle	Vehicle	5.92	-----	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	51.08	37.09			0.90	1.24	56.87	41.29	0.00	0.00	Vehicle	Vehicle	170.37	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**7.53**	**7.53**	-----	-----
	L_2 - L_3	97.64	-27.44	108.24			0.90	1.24	120.50	-30.55	0.00	0.00	Vehicle	Vehicle	283.58	-----	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	-----	-----	**4.74**	**4.74**	-----	-----
	L_3 - L_4	66.79	-39.67	120.21			0.90	1.24	133.83	-44.16	0.00	0.00	Vehicle	Vehicle	260.80	-----	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**4.50**	**4.50**	-----	-----
	L_4 - L_5	-108.59	-59.65	78.05			0.90	1.24	86.89	-66.41	0.00	0.00	Vehicle	Vehicle	-----	-227.50	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	-----	-----	**5.90**	**5.90**
	L_5 - L_6	-237.42	-65.95	40.87			0.90	1.24	45.50	-73.42	0.00	0.00	Vehicle	Vehicle	-----	-404.09	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	-----	-----	**5.75**	**5.75**
	L_6 - L_7	-362.38	-68.52	10.48			0.90	1.24	11.66	-76.29	0.00	0.00	Vehicle	Vehicle	-----	-570.27	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	-----	-----	**7.64**	**7.64**
	L_7 - L_8	-478.62	-63.43	-22.98			0.90	1.24	-25.59	-70.61	0.00	0.00	Vehicle	Vehicle	-----	-714.01	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**10.21**	**10.21**
	L_8 - L_9	-476.97	-53.98	-0.50			0.90	1.20	-0.54	-58.20	0.00	0.00	Vehicle	Vehicle	-----	-695.73	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**12.41**	**12.41**
	L_9 - L_{10}	-301.47	-21.82	2.49			0.90	1.20	2.69	-23.53	0.00	0.00	Vehicle	Vehicle	-----	-422.49	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	-----	-----	**27.37**	**27.37**
	L_{10} - L_{11}	-104.56	-57.95	36.73			0.90	1.20	39.60	-62.49	0.00	0.00	Vehicle	Vehicle	-----	-217.16	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	-----	-----	**6.33**	**6.33**
	L_{11} - L_{12}	96.98	46.92	60.42			0.90	1.20	65.15	50.59	0.00	0.00	Vehicle	Vehicle	210.77	-----	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	-----	-----	**7.63**	**7.63**	-----	-----
	L_{12} - L_{13}	268.60	-44.02	102.42			0.90	1.20	110.43	-47.47	0.00	0.00	Vehicle	Vehicle	492.75	-----	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	-----	-----	**6.39**	**6.39**	-----	-----
	L_{13} - L_{14}	405.49	91.37	123.21			0.90	1.20	132.84	98.51	0.00	0.00	Vehicle	Vehicle	699.84	-----	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	-----	-----	**6.79**	**6.79**	-----	-----
	L_{14} - L_{15}	502.59	-20.69	130.01			0.90	1.20	140.18	-22.31	0.00	0.00	Vehicle	Vehicle	835.61	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**7.65**	**7.65**	-----	-----
	L_{15} - L_{16}	469.06	-12.79	126.92			0.90	1.20	136.84	-13.79	0.00	0.00	Vehicle	Vehicle	787.67	-----	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	-----	-----	**8.08**	**8.08**	-----	-----
	L_{16} - L_{17}	365.26	-10.42	89.10			0.90	1.20	96.07	-11.23	0.00	0.00	Vehicle	Vehicle	599.73	-----	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	-----	-----	**8.86**	**8.86**	-----	-----
	L_{17} - L_{18}	248.52	2.59	54.30			0.90	1.20	58.54	2.79	0.00	0.00	Vehicle	Vehicle	399.18	-----	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	-----	-----	**10.84**	**10.84**	-----	-----
	L_{18} - L_{19}	112.87	-1.55	11.67			0.90	1.20	12.59	-1.67	0.00	0.00	Vehicle	Vehicle	163.09	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**30.96**	**30.96**	-----	-----
	L_{19} - L_{20}	-14.36	12.07	-11.24			0.90	1.20	13.02	-12.11	0.00	0.00	Vehicle	Vehicle	-----	-34.42	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	-----	-----	**33.77**	**33.77**
Structure 2	L_0- L_1	15.25	-4.04	0.55			0.90	1.18	0.58	-4.30	0.00	0.00	Vehicle	Vehicle	20.58	-----	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	-----	-----	6.32	-----	-----	6.32	-----	-----	**1057.45**	**1057.45**	-----	-----
	L_1 - L_2	136.09	32.82	16.94			0.90	1.18	34.94	18.04	0.00	0.00	Vehicle	Vehicle	222.34	-----	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	-----	-----	**14.23**	**14.23**	-----	-----
	L_2 - L_3	262.77	58.69	54.99			0.90	1.18	62.48	58.54	0.00	0.00	Vehicle	Vehicle	422.83	-----	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	-----	-----	**11.21**	**11.21**	-----	-----
	L_3 - L_4	373.14	92.49	89.51			0.90	1.18	98.47	95.30	0.00	0.00	Vehicle	Vehicle	613.10	-----	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	-----	-----	**9.38**	**9.38**	-----	-----
	L_4 - L_5	456.57	62.15	136.30			0.90	1.18	145.11	66.17	0.00	0.00	Vehicle	Vehicle	782.19	-----	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	-----	-----	**8.22**	**8.22**	-----	-----
	L_5 - L_6	489.37	-35.64	150.86			0.90	1.18	160.62	-37.95	0.00	0.00	Vehicle	Vehicle	844.99	-----	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	-----	-----	**8.11**	**8.11**	-----	-----
	L_6 - L_7	479.01	-45.24	171.53			0.90	1.18	182.63	-48.16	0.00	0.00	Vehicle	Vehicle	860.13	-----	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	-62.04	144.20			0.90	1.18	153.53	-66.05	0.00	0.00	Vehicle	Vehicle	628.68	-----	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	-----	-----	**6.59**	**6.59**	-----	-----
	L_8 - L_9	188.98	-67.08	112.28			0.90	1.18	119.54	-71.42	0.00	0.00	Vehicle	Vehicle	401.07	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	**7.62**	**7.62**	-----	-----
	L_9 - L_{10}	39.77	-71.45	78.99			0.90	1.18	84.10	-76.07	0.00	0.00	Vehicle	Vehicle	161.04	-47.19	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	**9.77**	**9.77**	**10.09**	**10.09**
	L_{10} - L_{11}	-127.39	-72.02	50.99			0.90	1.18	54.29	-76.68	0.00	0.00	Vehicle	Vehicle	-----	-265.29	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	-----	-----	**6.82**	**6.82**
	L_{11} - L_{12}	-282.64	-71.39	20.51			0.90	1.18	21.83	-76.01	0.00	0.00	Vehicle	Vehicle	-----	-466.25	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	-----	-----	**8.53**	**8.53**
	L_{12} - L_{13}	-426.73	-68.34	-8.04			0.90	1.18	-8.56	-72.76	0.00	0.00	Vehicle	Vehicle	-----	-649.34	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	-----	-----	**11.66**	**11.66**
	L_{13} - L_{14}	-536.42	-44.73	-15.53			0.90	1.18	-16.54	-47.62	0.00	0.00	Vehicle	Vehicle	-----	-759.26	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	-----	-----	**20.55**	**20.55**
	L_{14} - L_{15}	-537.75	-36.51	-0.68			0.90	1.17	-0.72	-38.42	0.00	0.00	Vehicle	Vehicle	-----	-749.02	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	-----	-----	**25.44**	**25.44**
	L_{15} - L_{16}	-475.65	-63.82	-11.99			0.90	1.17	-12.61	-67.14	0.00	0.00	Vehicle	Vehicle	-----	-705.63	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	-----	-----	**11.91**	**11.91**
	L_{16} - L_{17}	-384.35	-30.66	15.99			0.90	1.17	16.82	-32.25	0.00	0.00	Vehicle	Vehicle	-----	-541.58	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**20.56**	**20.56**
	L_{17} - L_{18}	-281.86	3.16	37.87			0.90	1.17	39.84	3.33	0.00	0.00	Vehicle	Vehicle	-----	-362.09	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	-----	-----	-----	-----
	L_{18} - L_{19}	-175.17	-59.56	53.56			0.90	1.17	56.35	-62.66	0.00	0.00	Vehicle	Vehicle	-----	-309.17	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_{19} - L_{20}	-76.53	58.49	69.67			0.90	1.17	73.30	61.54	0.00	0.00	Vehicle	Vehicle	-----	-19.50	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	-----	-----	-----	-----
	L_{20} - L_{21}	4.38	-45.90	94.54			0.90	1.17	99.47	-48.30	0.00	0.00	Vehicle	Vehicle	135.00	-57.09	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	**9.53**	**9.53**	**16.73**	**16.73**
	L_{21} - L_{22}	55.94	-37.95	117.54			0.90	1.17	123.66	-39.92	0.00	0.00	Vehicle	Vehicle	233.48	-----	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	-----	-----	**7.25**	**7.25**	-----	-----
	L_{22} - L_{23}	62.99	-17.57	91.24			0.90	1.17	96.00	-18.48	0.00	0.00	Vehicle	Vehicle	206.68	-----	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	-----	-----	6.40	-----	-----	6.40	-----	-----	**9.26**	**9.26**	-----	-----
	L_{23} - L_{24}	15.54	-32.35	90.74			0.90	1.17	95.47	-34.04	0.00	0.00	Vehicle	Vehicle	144.31	-24.05	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	**9.81**	**9.81**	**24.06**	**24.06**
	L_{24} - L_{25}	-56.00	-36.64	58.67			0.90	1.17	61.73	-38.55	0.00	0.00	Vehicle	Vehicle	7.44	-122.92	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**11.91**	**11.91**	**13.43**	**13.43**
	L_{25} - L_{26}	-96.37	-42.34	44.75			0.90	1.17	47.08	-44.55	0.00	0.00	Vehicle	Vehicle	-----	-235.19	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	-----	-----	**9.82**	**9.82**
	L_{26} - L_{27}	-217.73	-43.04	13.82			0.90	1.17	14.54	-45.29	0.00	0.00	Vehicle	Vehicle	-----	-341.92	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	-----	-----	**11.26**	**11.26**
	L_{27} - L_{28}	-296.25	-44.64	-8.20			0.90	1.17	-8.63	-46.97	0.00	0.00	Vehicle	Vehicle	-----	-446.19	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**16.00**	**16.00**
	L_{28} - L_{29}	-364.18	-41.28	-11.81			0.90	1.17	-12.42	-43.43	0.00	0.00	Vehicle	Vehicle	-----	-529.89	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	-----	-----	**20.98**	**20.98**
	L_{29} - L_{30}	-418.23	-16.53	-23.13			0.90	1.17	-17.39	-24.33	0.00	0.00	Vehicle	Vehicle	-----	-575.33	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	-----	-----	**45.08**	**45.08**
	L_{30} - L_{31}	-350.38	-23.98	15.67			0.90	1.18	16.68	-25.53	0.00	0.00	Vehicle	Vehicle	-----	-488.68	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	-----	-----	**45.60**	**45.60**
	L_{31} - L_{32}	-275.46	-66.63	-15.14			0.90	1.18	-16.12	-70.94	0.00	0.00	Vehicle	Vehicle	-----	-450.31	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	-----	-----	**13.94**	**13.94**
	L_{32} - L_{33}	-179.08	-38.24	14.91

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: 3F1 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	U_0 - L_0	-77.19	11.30	-74.15			0.90	1.24	12.58	-82.55	0.00	0.00	Vehicle	Vehicle	------	-207.66	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	------	------	------	------	------	2.83	2.83
	U_0 - L_1	-33.88	10.26	-50.19			0.90	1.24	11.42	-55.88	0.00	0.00	Vehicle	Vehicle	------	-116.68	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	------	------	------	------	------	5.69	5.69
	U_1 - L_2	10.43	9.67	-30.89			0.90	1.24	10.76	-34.39	0.00	0.00	Vehicle	Vehicle	27.55	-31.14	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	------	------	------	38.78	38.78	10.54	10.54
	U_2 - L_2	44.39	9.47	-23.03			0.90	1.24	10.54	-25.64	0.00	0.00	Vehicle	Vehicle	71.40	------	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	------	------	------	------	------	36.37	36.37	------	------
	U_2 - L_3	-16.67	-16.68	4.95			0.90	1.24	-11.07	-18.57	0.00	0.00	Vehicle	Vehicle	------	-45.81	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	17.94	17.94
	U_3 - L_3	-109.51	-61.47	4.20			0.90	1.24	4.68	-68.44	0.00	0.00	Vehicle	Vehicle	------	-231.32	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	------	------	------	------	------	4.61	4.61
	U_3 - L_4	-143.60	-75.20	-3.70			0.90	1.24	-4.12	-83.72	0.00	0.00	Vehicle	Vehicle	------	-295.52	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	------	------	------	------	------	4.03	4.03
	U_4 - L_4	-142.61	-76.89	2.04			0.90	1.24	2.27	-85.60	0.00	0.00	Vehicle	Vehicle	------	-296.68	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	------	------	------	------	------	3.39	3.39
	U_4 - L_5	-391.97	-81.47	-68.79			0.90	1.24	-76.58	-90.70	0.00	0.00	Vehicle	Vehicle	------	-627.46	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	------	------	------	------	------	7.43	7.43
	U_5 - L_6	-223.13	7.31	-64.84			0.90	1.20	7.88	-69.91	0.00	0.00	Vehicle	Vehicle	------	-380.96	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	------	------	------	------	------	5.80	5.80
	U_6 - L_7	-225.77	2.51	-65.99			0.90	1.20	2.70	-71.15	0.00	0.00	Vehicle	Vehicle	------	-386.00	2.76	34.69	31.9300	1144.77	131.71	10.7083	2.3304	41.36	31.37	-925.09	16.16	0.83	11.50	0.80	------	------	16.16	------	------	19.50	45.00	Pass	7.23	12.00	Pass	------	------	------	------	------	6.83	6.83
	U_7 - L_8	-198.79	-2.57	-58.87			0.90	1.20	-2.77	-63.48	0.00	0.00	Vehicle	Vehicle	------	-340.94	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	------	------	------	------	------	6.97	6.97
	U_8 - L_{12}	-154.77	7.36	-53.96			0.90	1.20	7.94	-58.18	0.00	0.00	Vehicle	Vehicle	------	-276.84	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	------	------	------	------	------	6.49	6.49
	U_{12} - L_{13}	-109.04	15.25	-49.33			0.90	1.20	16.45	-53.18	0.00	0.00	Vehicle	Vehicle	------	-210.89	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	------	------	5.10	5.10
	U_{13} - L_{14}	-12.30	-10.58	0.08			0.90	1.20	0.08	-11.41	0.00	0.00	Vehicle	Vehicle	------	-30.83	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	------	------	------	------	------	29.14	29.14
	U_{14} - L_{15}	-5.62	-43.17	21.59			0.90	1.20	23.28	-46.55	0.00	0.00	Vehicle	Vehicle	22.95	-67.82	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	------	------	------	18.62	18.62	7.25	7.25
	U_{15} - L_{16}	-51.74	-50.27	13.51			0.90	1.20	14.57	-54.20	0.00	0.00	Vehicle	Vehicle	------	-137.71	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	------	------	------	------	------	5.34	5.34
	U_{17} - L_{17}	-127.31	-64.47	8.57			0.90	1.20	9.24	-69.51	0.00	0.00	Vehicle	Vehicle	------	-255.86	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	------	------	------	------	------	4.09	4.09
	U_{18} - L_{18}	-159.89	-77.22	7.91			0.90	1.20	8.52	-83.26	0.00	0.00	Vehicle	Vehicle	------	-316.09	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	------	------	------	------	------	4.39	4.39
	U_{19} - L_{19}	-191.17	-79.42	6.68			0.90	1.20	7.20	-85.63	0.00	0.00	Vehicle	Vehicle	------	-359.84	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	4.96	4.96
	U_{20} - L_{20}	-211.94	-78.97	6.59			0.90	1.20	7.11	-85.15	0.00	0.00	Vehicle	Vehicle	------	-386.22	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	------	------	------	------	------	4.04	4.04
Structure 2	U_0 - L_9	-206.53	8.40	-77.39			0.90	1.18	8.94	-82.40	0.00	0.00	Vehicle	Vehicle	------	-375.61	0.00	31.81	31.8100	1049.73	131.71	19.1510	2.8323	60.85	29.48	-797.03	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	4.93	4.93
	U_1 - L_1	-188.72	8.63	-67.37			0.90	1.18	9.19	-71.73	0.00	0.00	Vehicle	Vehicle	------	-338.58	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	6.74	6.74
	U_1 - L_2	-155.84	9.10	-65.22			0.90	1.18	9.69	-69.44	0.00	0.00	Vehicle	Vehicle	------	-292.87	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	------	------	------	------	------	6.03	6.03
	U_2 - L_3	-134.53	10.31	-56.80			0.90	1.18	10.98	-60.48	0.00	0.00	Vehicle	Vehicle	------	-253.50	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	------	------	------	------	------	5.25	5.25
	U_3 - L_4	-64.47	12.81	-47.14			0.90	1.18	13.64	-50.19	0.00	0.00	Vehicle	Vehicle	------	-149.05	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9662	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	------	------	------	------	------	5.47	5.47
	U_4 - L_5	-19.94	21.69	-43.31			0.90	1.18	23.09	-46.11	0.00	0.00	Vehicle	Vehicle	4.10	-85.86	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	19.39	19.39	6.95	6.95
	U_5 - L_6	40.07	25.43	-27.35			0.90	1.18	27.07	-29.12	0.00	0.00	Vehicle	Vehicle	87.28	------	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	------	------	------	14.32	14.32	------	------
	U_6 - L_7	-26.03	-5.21	-5.10			0.90	1.18	-5.43	-5.54	0.00	0.00	Vehicle	Vehicle	------	-41.05	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	------	------	------	------	------	56.73	56.73
	U_7 - L_8	-125.22	-53.71	14.91			0.90	1.18	15.87	-57.19	0.00	0.00	Vehicle	Vehicle	------	-237.13	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	------	------	15.75	------	------	36.00	45.00	Pass	8.89	12.00	Pass	------	------	------	------	------	7.09	7.09
	U_8 - L_9	-174.50	-64.75	6.60			0.90	1.18	7.03	-68.94	0.00	0.00	Vehicle	Vehicle	------	-316.46	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	7.50	7.50
	U_9 - L_{10}	-202.62	-75.49	2.09			0.90	1.18	2.23	-80.38	0.00	0.00	Vehicle	Vehicle	------	-367.90	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	------	------	------	------	------	7.17	7.17
	U_{11} - L_{11}	-229.48	-80.90	1.87			0.90	1.18	1.99	-86.14	0.00	0.00	Vehicle	Vehicle	------	-410.30	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	------	------	------	------	------	6.21	6.21
	U_{12} - L_{12}	-250.80	-81.97	1.92			0.90	1.18	2.05	-87.27	0.00	0.00	Vehicle	Vehicle	------	-439.49	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	------	------	16.48	------	------	18.26	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	6.31	6.31
	U_{13} - L_{13}	-223.27	-83.31	8.45			0.90	1.18	9.00	-88.70	0.00	0.00	Vehicle	Vehicle	------	-405.57	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	------	------	------	------	------	5.26	5.26
	U_{14} - L_{14}	-343.24	-72.75	-67.73			0.90	1.18	-72.11	-77.45	0.00	0.00	Vehicle	Vehicle	------	-546.90	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	------	------	------	------	------	9.15	9.15
	U_{15} - L_{15}	-123.12	8.29	-59.22			0.90	1.17	8.73	-62.31	0.00	0.00	Vehicle	Vehicle	------	-241.05	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	------	------	------	------	------	9.10	9.10
	U_{16} - L_{16}	-156.68	6.51	-65.38			0.90	1.17	6.85	-68.79	0.00	0.00	Vehicle	Vehicle	------	-293.11	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	------	------	------	------	------	7.41	7.41
	U_{17} - L_{17}	-147.89	6.27	-68.24			0.90	1.17	6.59	-71.79	0.00	0.00	Vehicle	Vehicle	------	-285.59	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	6.62	6.62
	U_{18} - L_{18}	-142.21	7.87	-60.07			0.90	1.17	8.28	-63.20	0.00	0.00	Vehicle	Vehicle	------	-267.04	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	------	------	------	------	------	6.88	6.88
	U_{19} - L_{19}	-111.47	8.80	-59.32			0.90	1.17	9.26	-62.41	0.00	0.00	Vehicle	Vehicle	------	-226.04	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	------	------	15.75	------	------	31.50	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	6.41	6.41
	U_{20} - L_{20}	-76.56	15.69	-52.19			0.90	1.17	16.51	-54.91	0.00	0.00	Vehicle	Vehicle	------	-170.91	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	------	------	------	------	------	5.44	5.44
	U_{21} - L_{21}	-44.33	19.23	-40.50			0.90	1.17	20.23	-42.61	0.00	0.00	Vehicle	Vehicle	------	-113.02	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	6.95	6.95
	U_{22} - L_{22}	-21.25	-4.28	-4.32			0.90	1.17	-4.50	-4.54	0.00	0.00	Vehicle	Vehicle	------	-33.53	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	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	70.60	70.60
	U_{23} - L_{23}	-39.04	-42.98	21.81			0.90	1.17	22.95	-45.22	0.00	0.00	Vehicle	Vehicle	------	-109.53	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	------	------	------	------	------	6.67	6.67
	U_{24} - L_{24}	-74.80	-50.39	16.59			0.90	1.17	17.45	-53.01	0.00	0.00	Vehicle	Vehicle	------	-166.16	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	------	------	------	------	------	5.67	5.67
	U_{25} - L_{25}	-103.21	-66.19	10.78			0.90	1.17	11.34	-69.64	0.00	0.00	Vehicle	Vehicle	------	-224.70	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	------	------	15.75	------	------	31.50	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	5.86	5.86
	U_{26} - L_{26}	-120.15	-70.12	10.17			0.90	1.17	10.70	-73.77	0.00	0.00	Vehicle	Vehicle	------	-252.10	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}	-123.87	-72.95	8.40			0.90	1.17	8.83	-76.75	0.00	0.00	Vehicle	Vehicle	------	-260.81	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	6.51	6.51
	U_{28} - L_{28}	-135.49	-82.21	7.64			0.90	1.17	8.04	-86.49	0.00	0.00	Vehicle	Vehicle	------	-288.58	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	6.13	6.13
	U_{29} - L_{29}	-116.90	-77.03	4.47			0.90	1.17	4.70	-81.04	0.00	0.00	Vehicle	Vehicle	------	-257.31	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	------	------	------	------	------	7.07	7.07
	U_{30} - L_{30}	-261.40	-72.77	-62.72			0.90	1.18	-66.78	-77.48	0.00	0.00	Vehicle	Vehicle	------	-440.54	11.02	52.76	41.7400	1741.08	131.71	25.6094	4.0676	56.66	29.95	-1342.96	15.38	0.84	15.66	1.38	------	------	15.38	------	------	18.31	45.00	Pass	5.68	12.00	Pass	------	------	------	------	------	9.96	9.96
	U_{31} - L_{31}	-156.06	10.45	-64.00			0.90	1.18	11.13	-68.14	0.00	0.00	Vehicle	Vehicle	------	-291.45	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	------	------	16.32	------	------	20.13	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	7.84	7.84
	U_{32} - L_{32}	-185.16	7.37	-71.96			0.90	1.18	7.85	-76.62	0.00	0.00	Vehicle	Vehicle	------	-340.31	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	------	------	------	------	------	8.05	8.05
	U_{33} - L_{33}	-186.07	6.27	-68.44			0.90	1.18	6.68

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: 3F1
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
North Truss - Diagonals	Structure 1																																													
	U_1 - L_1	87.39	-14.82	67.94			0.90	1.24	75.63	-16.49	0.00	0.00	Vehicle	Vehicle	211.93	-----	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	-----	-----	-----	-----	-----	**6.60**	**6.60**	-----	-----
	U_1 - L_2	23.29	-15.99	38.64			0.90	1.24	43.02	-17.81	0.00	0.00	Vehicle	Vehicle	86.20	-----	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	-----	-----	-----	-----	-----	**9.40**	**9.40**	-----	-----
	U_2 - L_3	-37.87	-15.56	25.73			0.90	1.24	28.64	-17.32	0.00	0.00	Vehicle	Vehicle	-----	-71.74	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**17.11**	**17.11**
	U_3 - L_4	-92.23	-15.06	-14.62			0.90	1.24	-16.28	-16.76	0.00	0.00	Vehicle	Vehicle	-----	-141.69	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	-----	-----	-----	-----	-----	**14.57**	**14.57**
	U_3 - L_4	143.29	9.87	48.76			0.90	1.24	54.29	10.98	0.00	0.00	Vehicle	Vehicle	256.85	-----	0.00	20.48	20.4800	675.84	131.71	11.6953	2.0102	52.36	30.39	-529.06	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**6.94**	**6.94**	-----	-----
	U_4 - L_5	177.89	8.13	67.35			0.90	1.24	74.98	9.05	0.00	0.00	Vehicle	Vehicle	328.73	-----	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	-----	-----	-----	-----	-----	**6.30**	**6.30**	-----	-----
	U_4 - L_6	184.40	0.67	82.61			0.90	1.24	91.97	0.74	0.00	0.00	Vehicle	Vehicle	359.29	-----	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	-----	-----	-----	-----	-----	**5.07**	**5.07**	-----	-----
	U_5 - L_7	179.98	-0.93	81.11			0.90	1.24	90.30	-1.03	0.00	0.00	Vehicle	Vehicle	351.36	-----	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	-----	-----	-----	-----	-----	**5.21**	**5.21**	-----	-----
	U_6 - L_9	268.90	0.19	81.58			0.90	1.20	87.96	0.21	0.00	0.00	Vehicle	Vehicle	463.91	-----	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	-----	-----	-----	-----	-----	**7.88**	**7.88**	-----	-----
	U_6 - L_{10}	278.76	-7.88	84.42			0.90	1.20	91.02	-8.49	0.00	0.00	Vehicle	Vehicle	480.71	-----	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	-----	-----	-----	-----	-----	**7.51**	**7.51**	-----	-----
	U_{10} - L_{11}	284.98	8.65	77.73			0.90	1.20	83.81	9.33	0.00	0.00	Vehicle	Vehicle	479.43	-----	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	-----	-----	-----	-----	-----	**7.47**	**7.47**	-----	-----
	U_{11} - L_{12}	250.55	-1.81	57.49			0.90	1.20	61.99	-1.95	0.00	0.00	Vehicle	Vehicle	406.30	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.50**	**8.50**	-----	-----
	U_{12} - L_{13}	189.62	-10.37	73.28			0.90	1.20	79.01	-11.19	0.00	0.00	Vehicle	Vehicle	349.21	-----	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	-----	-----	-----	-----	-----	**5.59**	**5.59**	-----	-----
	U_{13} - L_{14}	123.30	-21.27	51.50			0.90	1.20	55.53	-22.93	0.00	0.00	Vehicle	Vehicle	232.47	-----	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	-----	-----	-----	-----	-----	**5.48**	**5.48**	-----	-----
	U_{14} - L_{14}	-24.40	-38.24	22.22			0.90	1.20	23.96	-41.23	0.00	0.00	Vehicle	Vehicle	-----	-85.33	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	-----	-----	-----	-----	-----	**7.37**	**7.37**
	U_{15} - L_{15}	48.54	-26.14	59.16			0.90	1.20	63.78	-28.18	0.00	0.00	Vehicle	Vehicle	146.02	-----	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	-----	-----	-----	-----	-----	**5.94**	**5.94**	-----	-----
	U_{15} - L_{16}	146.57	-11.73	70.33			0.90	1.20	75.83	-12.64	0.00	0.00	Vehicle	Vehicle	289.12	-----	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	-----	-----	-----	-----	-----	**4.98**	**4.98**	-----	-----
	U_{16} - L_{17}	182.43	-10.09	64.00			0.90	1.20	69.00	-10.88	0.00	0.00	Vehicle	Vehicle	326.87	-----	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	-----	-----	-----	-----	-----	**6.79**	**6.79**	-----	-----
	U_{19} - L_{18}	223.79	-8.44	76.87			0.90	1.20	82.88	-9.10	0.00	0.00	Vehicle	Vehicle	398.68	-----	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	-----	-----	-----	-----	-----	**5.87**	**5.87**	-----	-----
	U_{20} - L_{19}	232.63	-3.71	61.99			0.90	1.20	66.84	-4.00	0.00	0.00	Vehicle	Vehicle	389.31	-----	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	-----	-----	-----	-----	-----	**7.14**	**7.14**	-----	-----
	Structure 2																																													
	U_1 - L_1	213.47	-8.90	65.93			0.90	1.18	70.20	-9.47	0.00	0.00	Vehicle	Vehicle	368.76	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.04**	**8.04**	-----	-----
	U_1 - L_2	200.39	-10.53	77.04			0.90	1.18	82.03	-11.21	0.00	0.00	Vehicle	Vehicle	367.15	-----	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	-----	-----	-----	-----	-----	**7.04**	**7.04**	-----	-----
	U_2 - L_3	172.76	-11.78	67.14			0.90	1.18	71.48	-12.54	0.00	0.00	Vehicle	Vehicle	317.51	-----	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	-----	-----	-----	-----	-----	**6.69**	**6.69**	-----	-----
	U_3 - L_4	147.11	-13.86	72.92			0.90	1.18	77.64	-14.75	0.00	0.00	Vehicle	Vehicle	292.18	-----	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	-----	-----	-----	-----	-----	**5.54**	**5.54**	-----	-----
	U_3 - L_5	49.07	-20.30	56.56			0.90	1.18	60.22	-21.62	0.00	0.00	Vehicle	Vehicle	142.08	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	59.11	29.68	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**6.29**	**6.29**	-----	-----
	U_4 - L_6	2.97	-28.00	51.47			0.90	1.18	54.80	-29.82	0.00	0.00	Vehicle	Vehicle	75.10	-34.90	0.00	16.85	16.8486	556.00	131.71	13.1356	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**7.75**	**7.75**	**11.02**	**11.02**
	U_4 - L_7	-85.72	-48.71	33.21			0.90	1.18	35.35	-51.86	0.00	0.00	Vehicle	Vehicle	-----	-178.85	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	-----	-----	-----	-----	-----	**5.27**	**5.27**
	U_5 - L_7	140.27	-21.43	46.88			0.90	1.18	49.92	-22.81	0.00	0.00	Vehicle	Vehicle	247.24	-----	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	-----	-----	-----	-----	-----	**9.28**	**9.28**	-----	-----
	U_5 - L_8	204.17	-10.33	71.19			0.90	1.18	75.80	-11.00	0.00	0.00	Vehicle	Vehicle	363.96	-----	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	-----	-----	-----	-----	-----	**6.68**	**6.68**	-----	-----
	U_{19} - L_9	234.82	6.34	64.65			0.90	1.18	68.84	6.75	0.00	0.00	Vehicle	Vehicle	394.76	-----	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	-----	-----	-----	-----	-----	**7.88**	**7.88**	-----	-----
	U_{11} - L_{10}	263.04	-0.47	79.47			0.90	1.18	84.61	-0.50	0.00	0.00	Vehicle	Vehicle	451.95	-----	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	-----	-----	-----	-----	-----	**6.87**	**6.87**	-----	-----
	U_{11} - L_{11}	273.97	-1.57	83.27			0.90	1.18	88.66	-1.67	0.00	0.00	Vehicle	Vehicle	471.42	-----	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	-----	-----	-----	-----	-----	**6.43**	**6.43**	-----	-----
	U_{12} - L_{12}	254.88	-9.03	86.50			0.90	1.18	92.09	-9.62	0.00	0.00	Vehicle	Vehicle	451.06	-----	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	-----	-----	-----	-----	-----	**5.68**	**5.68**	-----	-----
	U_{13} - L_{13}	217.66	-8.84	78.88			0.90	1.18	83.98	-9.41	0.00	0.00	Vehicle	Vehicle	392.13	-----	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	-----	-----	-----	-----	-----	**6.67**	**6.67**	-----	-----
	U_{13} - L_{15}	110.03	-7.15	62.79			0.90	1.17	66.07	-7.52	0.00	0.00	Vehicle	Vehicle	228.92	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.18**	**8.18**	-----	-----
	U_{15} - L_{16}	132.26	-9.31	70.38			0.90	1.17	74.05	-9.80	0.00	0.00	Vehicle	Vehicle	268.20	-----	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	-----	-----	-----	-----	-----	**7.00**	**7.00**	-----	-----
	U_{17} - L_{17}	172.87	-5.44	76.09			0.90	1.17	80.05	-5.72	0.00	0.00	Vehicle	Vehicle	328.79	-----	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	-----	-----	-----	-----	-----	**6.71**	**6.71**	-----	-----
	U_{17} - L_{18}	160.16	-5.08	69.71			0.90	1.17	73.34	-5.35	0.00	0.00	Vehicle	Vehicle	303.55	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.69**	**6.69**	-----	-----
	U_{19} - L_{19}	152.33	-10.26	77.75			0.90	1.17	81.80	-10.79	0.00	0.00	Vehicle	Vehicle	304.37	-----	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	-----	-----	-----	-----	-----	**6.09**	**6.09**	-----	-----
	U_{19} - L_{20}	120.67	-11.74	71.65			0.90	1.17	75.39	-12.35	0.00	0.00	Vehicle	Vehicle	254.87	-----	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	-----	-----	-----	-----	-----	**6.40**	**6.40**	-----	-----
	U_{20} - L_{21}	76.10	-18.83	52.41			0.90	1.17	55.14	-19.81	0.00	0.00	Vehicle	Vehicle	170.61	-----	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	-----	-----	-----	-----	-----	**6.38**	**6.38**	-----	-----
	U_{21} - L_{22}	31.50	-26.30	51.85			0.90	1.17	54.56	-27.66	0.00	0.00	Vehicle	Vehicle	111.87	-----	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	-----	-----	-----	-----	-----	**7.26**	**7.26**	-----	-----
	U_{22} - L_{23}	24.27	-32.04	33.83			0.90	1.17	35.59	-33.71	0.00	0.00	Vehicle	Vehicle	77.82	-12.28	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	-----	-----	-----	-----	-----	**11.33**	**11.33**	**10.30**	**10.30**
	U_{22} - L_{23}	72.21	-23.37	51.81			0.90	1.17	54.51	-24.59	0.00	0.00	Vehicle	Vehicle	164.73	-----	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	-----	-----	-----	-----	-----	**6.52**	**6.52**	-----	-----
	U_{23} - L_{24}	112.05	-14.36	71.39			0.90	1.17	75.11	-15.11	0.00	0.00	Vehicle	Vehicle	243.32	-----	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	-----	-----	-----	-----	-----	**6.54**	**6.54**	-----	-----
	U_{23} - L_{25}	127.76	-12.98	67.35			0.90	1.17	70.86	-13.66	0.00	0.00	Vehicle	Vehicle	258.21	-----	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	-----	-----	-----	-----	-----	**6.54**	**6.54**	-----	-----
	U_{25} - L_{26}	132.58	-10.51	76.92			0.90	1.17	80.93	-11.06	0.00	0.00	Vehicle	Vehicle	277.57	-----	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	-----	-----	-----	-----	-----	**6.40**	**6.40**	-----	-----
	U_{26} - L_{27}	137.86	-9.05	82.57			0.90	1.17	86.87	-9.53	0.00	0.00	Vehicle	Vehicle	292.14	-----	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	-----	-----	-----	-----	-----	**6.59**	**6.59**	-----	-----
	U_{26} - L_{28}	102.60	-5.85	72.49			0.90	1.17	76.27	-6.15	0.00	0.00	Vehicle	Vehicle	232.53	-----	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	-----	-----	-----	-----	-----	**7.19**	**7.19**	-----	-----
	U_{29} - L_{29}	139.84	-8.37	66.79			0.90	1.18	71.11	-8.91	0.00	0.00	Vehicle	Vehicle	274.23	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.97**	**8.97**	-----	-----
	U_{31} - L_{32}	166.63	-11.88	71.88			0.90	1.18	76.53	-12.65	0.00	0.00	Vehicle	Vehicle	316.10	-----	0.00	29.18	29.1800	962.94	131.71	17.8750	2.8156	57.14	29.89	-741.48	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.50**	**7.50**	-----	-----
	U_{32} - L_{33}	202.12	-7.03	73.45			0.90	1.18	78.20	-7.49	0.00	0.00	Vehicle	Vehicle	364.43	-----	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	-----	-----	-----	-----	-----	**8.21**	**8.21**	-----	-----
	U_{33} - L_{34}	201.72	-7.10	84.71			0.90	1.18	90.19	-7.56	0.00	0.00	Vehicle	Vehicle	379.48	-----	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	-----	-----	-----	-----	-----	**7.13**	**7.13**	-----	-----
	U_{35} - L_{35}	180.72	-1.84	80.91			0.90	1.18	86.15	-1.95	0.00	0.00	Vehicle	Vehicle	346.92	-----	0.00	30.63	30.6305	1010.81	131.71	13.7604	2.8427	43.57	31.19	-812.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.93**	**6.93**	-----	-----
	U_{36} - L_{36}	162.90	-1.04	76.25			0.90	1.18	74.81	-1.11	0.00	0.00	Vehicle	Vehicle	309.02	-----	0.00	27.98

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: 3F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30
Condition: As-Inspected — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30
E = 29000.0 ksi

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (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	-55.36	-40.47			0.75	1.24	-37.55	-51.36	0.00	0.00	Vehicle	Vehicle	-----	-135.28	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	-----	-----	9.98	9.98
		U$_1$ - U$_2$	-61.66	-4.39	-80.20			0.75	1.24	-4.07	-74.41	0.00	0.00	Vehicle	Vehicle	-----	-176.88	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	6.77	6.77
		U$_2$ - U$_3$	-27.05	-70.74	-93.43			0.75	1.24	-65.63	-86.68	0.00	0.00	Vehicle	Vehicle	-----	-147.85	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	6.21	6.21
		U$_3$ - U$_4$	32.90	41.78	-92.91			0.75	1.24	38.76	-86.20	0.00	0.00	Vehicle	Vehicle	93.16	-69.28	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	16.47	16.47	6.94	6.94
		U$_4$ - U$_5$	34.76	41.96	-106.70			0.75	1.24	38.93	-98.99	0.00	0.00	Vehicle	Vehicle	95.79	-83.50	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	16.35	16.35	6.06	6.06
		U$_5$ - U$_6$	124.19	49.13	-90.55			0.75	1.24	45.58	-84.00	0.00	0.00	Vehicle	Vehicle	220.70	-----	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	-----	-----	12.00	12.00	-----	-----
		U$_6$ - U$_7$	223.31	-0.18	-60.16			0.75	1.24	-0.17	-55.81	0.00	0.00	Vehicle	Vehicle	290.08	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	-----	-----	-----	-----
		U$_7$ - U$_8$	331.92	48.04	-26.14			0.75	1.24	44.57	-24.25	0.00	0.00	Vehicle	Vehicle	489.44	-----	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	-----	-----	17.46	17.46	-----	-----
		U$_8$ - U$_9$	267.71	-23.37	5.14			0.75	1.20	4.62	-20.99	0.00	0.00	Vehicle	Vehicle	354.03	-----	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	-----	-----	145.32	145.32	-----	-----
		U$_9$ - U$_{10}$	89.12	-16.94	-49.08			0.75	1.20	-15.22	-44.10	0.00	0.00	Vehicle	Vehicle	96.07	-----	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	-56.69	-73.27			0.75	1.20	-50.93	-65.84	0.00	0.00	Vehicle	Vehicle	-----	-185.54	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.91	7.91
		U$_{11}$ - U$_{12}$	-230.86	-82.29	-94.40			0.75	1.20	-73.94	-84.82	0.00	0.00	Vehicle	Vehicle	-----	-410.38	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	6.86	6.86
		U$_{12}$ - U$_{13}$	-342.15	-112.35	-128.42			0.75	1.20	-100.95	-115.39	0.00	0.00	Vehicle	Vehicle	-----	-594.80	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	-----	-----	6.89	6.89
		U$_{13}$ - U$_{14}$	-421.98	26.14	-135.13			0.75	1.20	23.49	-121.41	0.00	0.00	Vehicle	Vehicle	-----	-706.41	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	-----	-----	7.46	7.46
		U$_{14}$ - U$_{15}$	-422.87	-116.40	-155.46			0.75	1.20	-104.58	-139.68	0.00	0.00	Vehicle	Vehicle	-----	-731.31	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.48	6.48
		U$_{15}$ - U$_{16}$	-440.39	-118.92	-159.13			0.75	1.20	-106.85	-142.97	0.00	0.00	Vehicle	Vehicle	-----	-758.38	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.20	6.20
		U$_{16}$ - U$_{17}$	-422.93	15.46	-149.32			0.75	1.20	13.89	-134.17	0.00	0.00	Vehicle	Vehicle	-----	-724.23	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	-----	-----	6.74	6.74
		U$_{17}$ - U$_{18}$	-341.45	10.38	-126.14			0.75	1.20	9.32	-113.34	0.00	0.00	Vehicle	Vehicle	-----	-591.22	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	8.00	12.00	Pass	-----	-----	5.55	5.55
		U$_{18}$ - U$_{19}$	-247.63	-7.92	-75.00			0.75	1.20	-7.11	-67.38	0.00	0.00	Vehicle	Vehicle	-----	-409.51	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	6.38	6.38
		U$_{19}$ - U$_{20}$	-132.06	-8.35	-33.14			0.75	1.20	-7.50	-29.77	0.00	0.00	Vehicle	Vehicle	-----	-210.38	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	18.32	18.32
		U$_0$ - U$_1$	-131.63	-36.88	-28.72			0.75	1.18	-25.48	-32.72	0.00	0.00	Vehicle	Vehicle	-----	-213.66	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	15.76	15.76
		U$_1$ - U$_2$	-247.12	-68.74	-63.60			0.75	1.18	-56.43	-60.99	0.00	0.00	Vehicle	Vehicle	-----	-400.54	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	8.92	8.92
		U$_2$ - U$_3$	-347.28	-100.03	-98.82			0.75	1.18	-87.68	-88.75	0.00	0.00	Vehicle	Vehicle	-----	-566.84	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.50	4.00	0.50	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	8.23	8.23
		U$_3$ - U$_4$	-437.20	-116.47	-121.98			0.75	1.18	-103.34	-108.23	0.00	0.00	Vehicle	Vehicle	-----	-709.05	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	-----	-----	8.35	8.35
		U$_4$ - U$_5$	-468.83	-115.85	-150.37			0.75	1.18	-102.79	-133.41	0.00	0.00	Vehicle	Vehicle	-----	-782.92	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	-----	-----	7.63	7.63
		U$_5$ - U$_6$	-471.14	46.03	-148.95			0.75	1.18	40.84	-132.15	0.00	0.00	Vehicle	Vehicle	-----	-784.28	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	-----	-----	7.69	7.69
		U$_6$ - U$_7$	-414.50	51.25	-138.83			0.75	1.18	45.47	-123.18	0.00	0.00	Vehicle	Vehicle	-----	-698.98	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	-----	-----	7.52	7.52
		U$_7$ - U$_8$	-413.54	51.32	-151.16			0.75	1.18	45.53	-134.11	0.00	0.00	Vehicle	Vehicle	-----	-711.95	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	6.92	6.92
		U$_8$ - U$_9$	-322.06	56.04	-138.99			0.75	1.18	49.72	-123.32	0.00	0.00	Vehicle	Vehicle	-----	-578.99	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	6.52	6.52
		U$_9$ - U$_{10}$	-182.16	58.72	-121.68			0.75	1.18	52.10	-107.96	0.00	0.00	Vehicle	Vehicle	-----	-377.15	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	-----	-----	6.52	6.52
		U$_{10}$ - U$_{11}$	-32.61	61.01	-91.35			0.75	1.18	54.13	-81.05	0.00	0.00	Vehicle	Vehicle	27.97	-147.76	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	17.43	17.43	9.09	9.09
		U$_{11}$ - U$_{12}$	133.57	64.00	-68.34			0.75	1.18	56.79	-60.64	0.00	0.00	Vehicle	Vehicle	247.46	-----	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	-----	-----	13.68	13.68	-----	-----
		U$_{12}$ - U$_{13}$	289.98	-15.60	-43.57			0.75	1.18	-13.84	-38.65	0.00	0.00	Vehicle	Vehicle	358.99	-----	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	-----	-----	-----	-----	-----	-----
		U$_{13}$ - U$_{14}$	434.77	54.87	-14.88			0.75	1.18	48.68	-13.20	0.00	0.00	Vehicle	Vehicle	628.49	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	23.20	23.20	-----	-----
		U$_{14}$ - U$_{15}$	474.48	-7.97	-14.63			0.75	1.17	-6.99	-12.83	0.00	0.00	Vehicle	Vehicle	607.73	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U$_{15}$ - U$_{16}$	383.31	35.09	-26.76			0.75	1.17	30.77	-23.46	0.00	0.00	Vehicle	Vehicle	538.30	-----	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	-----	-----	28.90	28.90	-----	-----
		U$_{16}$ - U$_{17}$	279.61	-29.26	-51.18			0.75	1.17	-25.66	-44.87	0.00	0.00	Vehicle	Vehicle	330.14	-----	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	-41.17	-65.94			0.75	1.17	-36.09	-57.82	0.00	0.00	Vehicle	Vehicle	177.54	-----	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	-60.21	-79.85			0.75	1.17	-52.79	-70.01	0.00	0.00	Vehicle	Vehicle	28.09	-----	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	-----	-----	-----	-----	-----	-----
		U$_{19}$ - U$_{20}$	-9.98	37.61	-100.90			0.75	1.17	32.97	-88.47	0.00	0.00	Vehicle	Vehicle	29.90	-127.98	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	25.18	25.18	7.72	7.72
	Structure 2	U$_{20}$ - U$_{21}$	-62.02	-84.23	-108.18			0.75	1.17	-73.85	-94.84	0.00	0.00	Vehicle	Vehicle	-----	-203.92	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	-----	-----	8.17	8.17
		U$_{21}$ - U$_{22}$	-88.69	27.39	-107.76			0.75	1.17	24.01	-94.48	0.00	0.00	Vehicle	Vehicle	-----	-238.11	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.92	7.92
		U$_{22}$ - U$_{23}$	-88.87	-73.66	-122.98			0.75	1.17	-64.58	-107.82	0.00	0.00	Vehicle	Vehicle	-----	-255.69	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	-----	-----	6.94	6.94
		U$_{23}$ - U$_{24}$	-76.60	-79.63	-125.03			0.75	1.17	-69.81	-109.62	0.00	0.00	Vehicle	Vehicle	-----	-242.07	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	-----	-----	6.93	6.93
		U$_{24}$ - U$_{25}$	-37.55	39.19	-116.92			0.75	1.17	34.36	-102.51	0.00	0.00	Vehicle	Vehicle	-----	-182.07	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.39	6.39
		U$_{25}$ - U$_{26}$	37.36	43.73	-98.30			0.75	1.17	38.34	-86.19	0.00	0.00	Vehicle	Vehicle	98.41	-63.48	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	19.01	19.01	7.94	7.94
		U$_{26}$ - U$_{27}$	128.18	48.01	-79.63			0.75	1.17	42.09	-69.81	0.00	0.00	Vehicle	Vehicle	221.35	-----	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	-----	-----	15.16	15.16	-----	-----
		U$_{27}$ - U$_{28}$	233.91	50.75	-60.68			0.75	1.17	44.49	-53.20	0.00	0.00	Vehicle	Vehicle	361.93	-----	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	-----	-----	18.21	18.21	-----	-----
		U$_{28}$ - U$_{29}$	337.95	-0.45	-36.86			0.75	1.17	-0.39	-32.32	0.00	0.00	Vehicle	Vehicle	438.82	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U$_{29}$ - U$_{30}$	437.48	41.06	-14.24			0.75	1.17	36.00	-12.49	0.00	0.00	Vehicle	Vehicle	615.53	-----	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	-----	-----	31.30	31.30	-----	-----
		U$_{30}$ - U$_{31}$	420.86	-16.12	29.54			0.75	1.18	26.21	-14.30	0.00	0.00	Vehicle	Vehicle	581.19	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	43.63	43.63	-----	-----
		U$_{31}$ - U$_{32}$	300.88	50.03	-33.82			0.75	1.18	44.39	-30.01	0.00	0.00	Vehicle	Vehicle	448.85	-----	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

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 3F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

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

E = 29000.0 ksi

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Lower Chord	Structure 1	L$_0$ - L$_1$	8.48	1.70	-2.15			0.75	1.24	1.58	-2.00	0.00	0.00	Vehicle	Vehicle	13.08	-----	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	-----	-----	**313.12**	**313.12**	-----	-----
		L$_1$ - L$_2$	50.83	45.71	67.18			0.75	1.24	62.32	42.41	0.00	0.00	Vehicle	Vehicle	147.10	-----	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	-----	-----	**7.25**	**7.25**	-----	-----
		L$_2$ - L$_3$	61.27	-23.64	99.64			0.75	1.24	92.44	-21.93	0.00	0.00	Vehicle	Vehicle	199.82	-----	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	-----	-----	**6.57**	**6.57**	-----	-----
		L$_3$ - L$_4$	25.72	63.97	105.35			0.75	1.24	97.73	59.35	0.00	0.00	Vehicle	Vehicle	160.49	-----	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	-----	-----	5.57	-----	-----	5.57	-----	-----	**6.58**	**6.58**	-----	-----
		L$_4$ - L$_5$	-118.55	-47.26	60.87			0.75	1.24	56.47	-43.85	0.00	0.00	Vehicle	Vehicle	-----	-211.12	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	-----	-----	**8.71**	**8.71**
		L$_5$ - L$_6$	-217.97	-57.13	34.95			0.75	1.24	32.43	-53.00	0.00	0.00	Vehicle	Vehicle	-----	-352.26	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	-----	-----	**8.33**	**8.33**
		L$_6$ - L$_7$	-320.57	-62.87	12.36			0.75	1.24	11.47	-58.33	0.00	0.00	Vehicle	Vehicle	-----	-492.56	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**10.70**	**10.70**
		L$_7$ - L$_8$	-417.42	-37.51	-22.86			0.75	1.24	-21.21	-34.80	0.00	0.00	Vehicle	Vehicle	-----	-587.88	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	-----	-----	**22.47**	**22.47**
		L$_8$ - L$_9$	-411.08	-66.45	-5.04			0.75	1.20	-4.53	-59.70	0.00	0.00	Vehicle	Vehicle	-----	-612.02	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	-----	-----	**13.21**	**13.21**
		L$_9$ - L$_{10}$	-247.97	-13.35	7.13			0.75	1.20	6.40	-12.00	0.00	0.00	Vehicle	Vehicle	-----	-337.95	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	-----	-----	**58.13**	**58.13**
		L$_{10}$ - L$_{11}$	-65.37	-48.06	53.26			0.75	1.20	47.86	-43.19	0.00	0.00	Vehicle	Vehicle	-----	-141.12	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	-----	-----	**10.07**	**10.07**
		L$_{11}$ - L$_{12}$	101.81	50.52	64.76			0.75	1.20	58.19	45.39	0.00	0.00	Vehicle	Vehicle	208.00	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**8.46**	**8.46**	-----	-----
		L$_{12}$ - L$_{13}$	264.06	51.27	105.65			0.75	1.20	94.92	46.07	0.00	0.00	Vehicle	Vehicle	466.68	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**7.49**	**7.49**	-----	-----
		L$_{13}$ - L$_{14}$	373.80	86.46	117.81			0.75	1.20	105.85	77.68	0.00	0.00	Vehicle	Vehicle	623.54	-----	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	-----	-----	**8.82**	**8.82**	-----	-----
		L$_{14}$ - L$_{15}$	476.54	-19.28	129.37			0.75	1.20	116.24	-17.32	0.00	0.00	Vehicle	Vehicle	770.62	-----	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	-----	-----	**9.45**	**9.45**	-----	-----
		L$_{15}$ - L$_{16}$	460.23	-14.41	125.80			0.75	1.20	113.03	-12.94	0.00	0.00	Vehicle	Vehicle	745.24	-----	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	-----	-----	**9.86**	**9.86**	-----	-----
		L$_{16}$ - L$_{17}$	381.61	-9.58	103.18			0.75	1.20	92.71	-8.60	0.00	0.00	Vehicle	Vehicle	616.61	-----	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	-----	-----	**9.01**	**9.01**	-----	-----
		L$_{17}$ - L$_{18}$	289.18	-5.51	69.46			0.75	1.20	62.41	-4.95	0.00	0.00	Vehicle	Vehicle	457.07	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**9.52**	**9.52**	-----	-----
		L$_{18}$ - L$_{19}$	176.31	-2.90	28.87			0.75	1.20	25.94	-2.61	0.00	0.00	Vehicle	Vehicle	262.92	-----	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	-----	-----	**12.58**	**12.58**	-----	-----
		L$_{19}$ - L$_{20}$	69.72	-0.50	-7.84			0.75	1.20	-0.45	-7.05	0.00	0.00	Vehicle	Vehicle	90.05	-----	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	-----	-----	-----	-----	-----	-----
		L$_0$ - L$_1$	24.42	2.49	-0.91			0.75	1.18	2.21	-0.81	0.00	0.00	Vehicle	Vehicle	34.61	-----	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	-----	-----	**220.02**	**220.02**	-----	-----
		L$_1$ - L$_2$	138.42	33.41	13.90			0.75	1.18	29.64	12.33	0.00	0.00	Vehicle	Vehicle	218.49	-----	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	-----	-----	**16.70**	**16.70**	-----	-----
		L$_2$ - L$_3$	252.76	59.06	89.38			0.75	1.18	79.30	52.40	0.00	0.00	Vehicle	Vehicle	431.68	-----	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	-----	-----	**9.12**	**9.12**	-----	-----
		L$_3$ - L$_4$	352.26	90.65	91.69			0.75	1.18	81.35	80.43	0.00	0.00	Vehicle	Vehicle	563.70	-----	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	-----	-----	**11.76**	**11.76**	-----	-----
		L$_4$ - L$_5$	447.15	106.16	130.23			0.75	1.18	115.54	94.19	0.00	0.00	Vehicle	Vehicle	731.51	-----	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	-----	-----	**10.41**	**10.41**	-----	-----
		L$_5$ - L$_6$	477.91	108.33	154.11			0.75	1.18	136.74	96.11	0.00	0.00	Vehicle	Vehicle	799.05	-----	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	-----	-----	**9.62**	**9.62**	-----	-----
		L$_6$ - L$_7$	482.67	-47.30	153.91			0.75	1.18	136.56	-41.97	0.00	0.00	Vehicle	Vehicle	804.99	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**9.78**	**9.78**	-----	-----
		L$_7$ - L$_8$	336.57	-57.13	122.97			0.75	1.18	109.11	-50.69	0.00	0.00	Vehicle	Vehicle	579.38	-----	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	-----	-----	**9.21**	**9.21**	-----	-----
		L$_8$ - L$_9$	196.00	-59.51	102.38			0.75	1.18	90.84	-52.80	0.00	0.00	Vehicle	Vehicle	372.89	-----	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	-----	-----	**9.95**	**9.95**	-----	-----
		L$_9$ - L$_{10}$	45.53	-62.20	72.61			0.75	1.18	64.42	-55.19	0.00	0.00	Vehicle	Vehicle	142.94	-12.55	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	**12.67**	**12.67**	**14.01**	**14.01**
		L$_{10}$ - L$_{11}$	-126.32	-63.53	48.49			0.75	1.18	43.02	-56.37	0.00	0.00	Vehicle	Vehicle	-----	-237.50	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**9.30**	**9.30**
		L$_{11}$ - L$_{12}$	-284.95	-63.45	20.12			0.75	1.18	17.85	-56.30	0.00	0.00	Vehicle	Vehicle	-----	-443.62	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	-----	-----	**11.47**	**11.47**
		L$_{12}$ - L$_{13}$	-433.89	-58.71	0.34			0.75	1.18	0.30	-52.09	0.00	0.00	Vehicle	Vehicle	-----	-631.77	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**16.16**	**16.16**
		L$_{13}$ - L$_{14}$	-552.76	-25.57	-17.86			0.75	1.18	-15.84	-22.69	0.00	0.00	Vehicle	Vehicle	-----	-748.08	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**42.42**	**42.42**
		L$_{14}$ - L$_{15}$	-573.53	-40.22	18.11			0.75	1.17	15.88	-35.26	0.00	0.00	Vehicle	Vehicle	-----	-791.43	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	-----	-----	**26.70**	**26.70**
		L$_{15}$ - L$_{16}$	-493.00	-49.16	2.51			0.75	1.17	2.20	-43.10	0.00	0.00	Vehicle	Vehicle	-----	-696.93	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**18.15**	**18.15**
		L$_{16}$ - L$_{17}$	-395.34	-4.52	21.82			0.75	1.17	19.13	-3.96	0.00	0.00	Vehicle	Vehicle	-----	-519.09	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	-----	-----	**164.62**	**164.62**
		L$_{17}$ - L$_{18}$	-288.08	8.74	43.55			0.75	1.17	38.18	7.66	0.00	0.00	Vehicle	Vehicle	-----	-364.54	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	-----	-----
		L$_{18}$ - L$_{19}$	-175.85	26.80	58.12			0.75	1.17	50.96	23.49	0.00	0.00	Vehicle	Vehicle	-----	-198.06	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	-----	-----
		L$_{19}$ - L$_{20}$	-78.08	56.22	70.26			0.75	1.17	61.60	49.29	0.00	0.00	Vehicle	Vehicle	-----	-37.42	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	-----	-----	-----	-----
	Structure 2	L$_{20}$ - L$_{21}$	7.59	56.64	93.83			0.75	1.17	82.27	49.66	0.00	0.00	Vehicle	Vehicle	116.82	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**11.63**	**11.63**	-----	-----
		L$_{21}$ - L$_{22}$	59.10	74.15	117.20			0.75	1.17	102.75	65.01	0.00	0.00	Vehicle	Vehicle	210.41	-----	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	-----	-----	**8.81**	**8.81**	-----	-----
		L$_{22}$ - L$_{23}$	72.03	-18.75	108.63			0.75	1.17	95.24	-16.44	0.00	0.00	Vehicle	Vehicle	217.44	-----	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	-----	-----	**9.37**	**9.37**	-----	-----
		L$_{23}$ - L$_{24}$	33.57	-40.16	97.31			0.75	1.17	85.32	-35.21	0.00	0.00	Vehicle	Vehicle	154.55	-2.13	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**10.91**	**10.91**	**24.08**	**24.08**
		L$_{24}$ - L$_{25}$	-45.06	-44.62	73.83			0.75	1.17	64.73	-39.12	0.00	0.00	Vehicle	Vehicle	25.57	-109.43	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	**11.19**	**11.19**	**13.51**	**13.51**
		L$_{25}$ - L$_{26}$	-134.95	-48.95	53.23			0.75	1.17	46.67	-42.92	0.00	0.00	Vehicle	Vehicle	-----	-231.23	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	-----	-----	**10.22**	**10.22**
		L$_{26}$ - L$_{27}$	-245.92	-50.14	31.97			0.75	1.17	28.03	-43.96	0.00	0.00	Vehicle	Vehicle	-----	-376.85	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	-----	-----	**10.96**	**10.96**
		L$_{27}$ - L$_{28}$	-351.86	-52.35	7.18			0.75	1.17	6.30	-45.90	0.00	0.00	Vehicle	Vehicle	-----	-517.09	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	-----	-----	**15.16**	**15.16**
		L$_{28}$ - L$_{29}$	-458.41	-48.47	-5.45			0.75	1.17	-4.78	-42.50	0.00	0.00	Vehicle	Vehicle	-----	-651.18	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**19.22**	**19.22**
		L$_{29}$ - L$_{26}$	-542.36	-21.37	-21.17			0.75	1.17	-18.56	-18.74	0.00	0.00	Vehicle	Vehicle	-----	-729.43	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	-----	-----	**51.92**	**51.92**
		L$_{30}$ - L$_{31}$	-514.21	-39.10	-36.59			0.75	1.18	-32.47	-34.69	0.00	0.00	Vehicle	Vehicle	-----	-713.57	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	-----	-----	**28.84**	**28.84**
		L$_{31}$ - L$_{32}$	-411.27	-43.92	-0.55			0.75	1.18	-0.49	-38.97	0.00	0.00	Vehicle	Vehicle	-----	-585.30	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	-----	-----	**22.17**	**22.

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: 3F1
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

Center Truss - Verticals

Location	Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capicity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	U_0 - L_0	-67.68	9.40	-114.87			0.75	1.24	8.72	-106.57	0.00	0.00	Vehicle	Vehicle	-----	-226.53	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	-----	-----	-----	-----	-----	2.60	2.60
	U_1 - L_1	-24.09	9.07	-48.80			0.75	1.24	8.42	-45.27	0.00	0.00	Vehicle	Vehicle	-----	-90.17	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	-----	-----	-----	-----	-----	7.24	7.24
	U_2 - L_2	12.87	-4.80	-31.68			0.75	1.24	-4.45	-29.39	0.00	0.00	Vehicle	Vehicle	10.94	-21.47	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	-----	-----	-----	-----	-----	12.42	12.42
	U_3 - L_3	37.37	18.47	-24.46			0.75	1.24	17.14	-22.70	0.00	0.00	Vehicle	Vehicle	70.86	-----	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	-----	-----	-----	-----	-----	22.78	22.78	-----	-----
	U_4 - L_4	-15.55	-15.24	-4.30			0.75	1.24	-3.98	-14.14	0.00	0.00	Vehicle	Vehicle	-----	-38.59	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	-----	-----	-----	-----	-----	23.65	23.65
	U_5 - L_5	-92.59	-63.84	16.41			0.75	1.24	15.22	-59.23	0.00	0.00	Vehicle	Vehicle	-----	-197.36	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	-----	-----	-----	-----	-----	5.61	5.61
	U_6 - L_6	-117.07	-74.36	3.88			0.75	1.24	3.60	-68.99	0.00	0.00	Vehicle	Vehicle	-----	-241.87	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	-----	-----	-----	-----	-----	5.67	5.67
	U_7 - L_7	-127.52	-79.91	0.23			0.75	1.24	0.21	-74.14	0.00	0.00	Vehicle	Vehicle	-----	-262.15	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	-----	-----	-----	-----	-----	4.49	4.49
	U_8 - L_8	-368.71	-96.96	-98.04			0.75	1.24	-89.95	-90.95	0.00	0.00	Vehicle	Vehicle	-----	-597.57	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	-----	-----	-----	-----	-----	7.66	7.66
	U_9 - L_9	-214.56	4.52	-81.60			0.75	1.20	4.06	-73.31	0.00	0.00	Vehicle	Vehicle	-----	-374.24	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	-----	-----	-----	-----	-----	5.87	5.87
	U_{10} - L_{10}	-198.68	-12.33	-71.30			0.75	1.20	-11.08	-64.06	0.00	0.00	Vehicle	Vehicle	-----	-341.56	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	-----	-----	-----	-----	-----	8.49	8.49
	U_{11} - L_{11}	-171.40	1.39	-62.27			0.75	1.20	1.25	-55.95	0.00	0.00	Vehicle	Vehicle	-----	-295.55	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	-----	-----	-----	-----	-----	8.40	8.40
	U_{12} - L_{12}	-128.37	3.50	-54.71			0.75	1.20	3.14	-49.16	0.00	0.00	Vehicle	Vehicle	-----	-230.78	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	8.22	8.22
	U_{13} - L_{13}	-96.65	13.33	-51.16			0.75	1.20	11.97	-45.96	0.00	0.00	Vehicle	Vehicle	-----	-185.39	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	-----	-----	-----	-----	-----	6.18	6.18
	U_{14} - L_{14}	-11.04	-1.82	5.57			0.75	1.20	5.00	-1.63	0.00	0.00	Vehicle	Vehicle	-----	-16.48	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	-----	-----	-----	-----	-----	204.63	204.63
	U_{15} - L_{15}	-2.47	-44.33	33.24			0.75	1.20	29.86	-39.83	0.00	0.00	Vehicle	Vehicle	35.61	-54.99	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	-----	-----	-----	-----	-----	14.40	14.40	8.56	8.56
	U_{16} - L_{16}	-31.27	-50.29	19.29			0.75	1.20	17.34	-45.18	0.00	0.00	Vehicle	Vehicle	-----	-99.39	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	-----	-----	-----	-----	-----	6.86	6.86
	U_{17} - L_{17}	-105.05	-69.37	13.57			0.75	1.20	12.19	-62.33	0.00	0.00	Vehicle	Vehicle	-----	-217.60	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	4.91	4.91
	U_{18} - L_{18}	-126.74	-76.77	2.34			0.75	1.20	2.10	-68.98	0.00	0.00	Vehicle	Vehicle	-----	-254.44	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	5.78	5.78
	U_{19} - L_{19}	-166.77	-78.97	-11.91			0.75	1.20	-10.70	-70.95	0.00	0.00	Vehicle	Vehicle	-----	-309.04	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.34	6.34
	U_{20} - L_{20}	-184.59	-92.63	-5.13			0.75	1.20	-4.61	-83.23	0.00	0.00	Vehicle	Vehicle	-----	-348.16	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	-----	-----	-----	-----	-----	4.78	4.78
	U_0 - L_0	-203.59	10.11	-78.42			0.75	1.18	8.97	-69.58	0.00	0.00	Vehicle	Vehicle	-----	-355.12	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	-----	-----	-----	-----	-----	6.31	6.31
	U_1 - L_1	-176.11	11.04	-76.78			0.75	1.18	9.80	-68.12	0.00	0.00	Vehicle	Vehicle	-----	-317.49	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	-----	-----	-----	-----	-----	7.29	7.29
	U_2 - L_2	-137.55	10.46	-67.14			0.75	1.18	9.28	-59.57	0.00	0.00	Vehicle	Vehicle	-----	-256.25	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	-----	-----	-----	-----	-----	7.33	7.33
	U_3 - L_3	-117.62	10.86	-59.83			0.75	1.18	9.64	-53.09	0.00	0.00	Vehicle	Vehicle	-----	-221.91	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	-----	-----	-----	-----	-----	6.30	6.30
	U_4 - L_4	-50.97	24.26	-47.96			0.75	1.18	21.53	-42.55	0.00	0.00	Vehicle	Vehicle	-----	-121.58	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	-----	-----	-----	-----	-----	6.77	6.77
	U_5 - L_5	-13.78	30.17	-44.35			0.75	1.18	26.77	-39.35	0.00	0.00	Vehicle	Vehicle	16.89	-69.06	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	-----	-----	-----	-----	-----	16.49	16.49	8.30	8.30
	U_6 - L_6	45.47	36.51	-31.61			0.75	1.18	32.39	-28.04	0.00	0.00	Vehicle	Vehicle	101.23	-----	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	-----	-----	6.56	-----	-----	-----	-----	-----	11.80	11.80	-----	-----
	U_7 - L_7	-22.33	-19.09	-0.75			0.75	1.18	-0.66	-16.94	0.00	0.00	Vehicle	Vehicle	-----	-51.05	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	-----	-----	-----	-----	-----	18.79	18.79
	U_8 - L_8	-120.08	-55.91	25.86			0.75	1.18	22.94	-49.60	0.00	0.00	Vehicle	Vehicle	-----	-220.59	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	8.27	8.27
	U_9 - L_9	-177.03	-70.40	17.94			0.75	1.18	15.92	-62.46	0.00	0.00	Vehicle	Vehicle	-----	-311.33	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	8.23	8.23
	U_{10} - L_{10}	-205.88	-72.06	12.97			0.75	1.18	11.51	-63.93	0.00	0.00	Vehicle	Vehicle	-----	-350.76	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	-----	-----	-----	-----	-----	8.96	8.96
	U_{11} - L_{11}	-239.23	-78.50	9.12			0.75	1.18	8.09	-69.65	0.00	0.00	Vehicle	Vehicle	-----	-401.55	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	-----	-----	-----	-----	-----	7.55	7.55
	U_{12} - L_{12}	-257.95	-86.06	0.93			0.75	1.18	0.82	-76.36	0.00	0.00	Vehicle	Vehicle	-----	-434.61	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	7.12	7.12
	U_{13} - L_{13}	-243.82	-89.59	5.26			0.75	1.18	4.67	-79.48	0.00	0.00	Vehicle	Vehicle	-----	-420.30	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	-----	-----	-----	-----	-----	5.61	5.61
	U_{14} - L_{14}	-420.85	-95.70	-80.60			0.75	1.18	-71.52	-84.91	0.00	0.00	Vehicle	Vehicle	-----	-657.49	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	-----	-----	-----	-----	-----	7.43	7.43
	U_{15} - L_{15}	-158.83	8.58	-74.70			0.75	1.17	7.52	-65.50	0.00	0.00	Vehicle	Vehicle	-----	-291.63	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	-----	-----	-----	-----	-----	8.11	8.11
	U_{16} - L_{16}	-174.02	6.70	-77.63			0.75	1.17	5.87	-68.06	0.00	0.00	Vehicle	Vehicle	-----	-314.71	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	-----	-----	-----	-----	-----	7.23	7.23
	U_{17} - L_{17}	-156.46	9.55	-70.79			0.75	1.17	8.37	-62.06	0.00	0.00	Vehicle	Vehicle	-----	-284.08	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	-----	-----	-----	-----	-----	7.52	7.52
	U_{18} - L_{18}	-142.21	9.52	-63.12			0.75	1.17	8.35	-55.34	0.00	0.00	Vehicle	Vehicle	-----	-256.81	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.86	7.86
	U_{19} - L_{19}	-113.66	19.16	-57.64			0.75	1.17	16.80	-50.53	0.00	0.00	Vehicle	Vehicle	-----	-213.45	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	7.87	7.87
Structure 2	U_{20} - L_{20}	-76.51	24.44	-52.98			0.75	1.17	21.42	-46.45	0.00	0.00	Vehicle	Vehicle	-----	-159.85	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	-----	-----	-----	-----	-----	6.43	6.43
	U_{21} - L_{21}	-45.77	24.06	-42.00			0.75	1.17	21.10	-36.83	0.00	0.00	Vehicle	Vehicle	-----	-107.38	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	-----	-----	-----	-----	-----	8.00	8.00
	U_{22} - L_{22}	-17.72	-15.40	2.10			0.75	1.17	1.84	-13.50	0.00	0.00	Vehicle	Vehicle	-----	-40.59	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	-----	-----	-----	-----	-----	24.00	24.00
	U_{23} - L_{23}	-30.69	-45.28	30.06			0.75	1.17	26.35	-39.70	0.00	0.00	Vehicle	Vehicle	-----	-91.50	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	-----	-----	-----	-----	-----	7.80	7.80
	U_{24} - L_{24}	-62.06	-57.63	25.60			0.75	1.17	22.45	-50.53	0.00	0.00	Vehicle	Vehicle	-----	-146.37	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	-----	-----	-----	-----	-----	6.20	6.20
	U_{25} - L_{25}	-103.15	-67.60	17.38			0.75	1.17	15.24	-59.27	0.00	0.00	Vehicle	Vehicle	-----	-211.14	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	-----	-----	-----	-----	-----	6.89	6.89
	U_{26} - L_{26}	-134.38	-69.53	15.06			0.75	1.17	13.20	-60.96	0.00	0.00	Vehicle	Vehicle	-----	-253.93	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.26	7.26
	U_{27} - L_{27}	-156.03	-79.69	7.27			0.75	1.17	6.37	-69.87	0.00	0.00	Vehicle	Vehicle	-----	-293.67	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	-----	-----	-----	-----	-----	6.69	6.69
	U_{28} - L_{28}	-179.40	-85.98	3.73			0.75	1.17	3.27	-75.38	0.00	0.00	Vehicle	Vehicle	-----	-331.22	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	6.46	6.46
	U_{29} - L_{29}	-171.60	-83.05	4.08			0.75	1.17	3.57	-72.81	0.00	0.00	Vehicle	Vehicle	-----	-317.74	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.12	7.12
	U_{30} - L_{30}	-393.29	-88.06	-87.10			0.75	1.18	-77.28	-78.13	0.00	0.00	Vehicle	Vehicle	-----	-612.85	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	8.43	8.43
	U_{31} - L_{31}	-203.49	8.55	-81.50			0.75	1.18	7.58	-72.31	0.00	0.00	Vehicle	Vehicle	-----	-358.53	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	6.73	6.73
	U_{32} - L_{32}	-222.61	2.43	-78.49			0.75	1.18	2.16	-69.64	0.00	0.00	Vehicle	Vehicle	-----	-379.92	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	8.32	8.32
	U_{33} - L_{33}	-211.72	7.28	-72.86			0.75	1.18	6.46	-64.64	0.00	0.00	Vehicle	Vehicle	-----	-359.26	2.42	38.13	35.7105	1258.31

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 3F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

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

E = 29000.0 ksi

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Diagonals	Structure 1	U_0 - L_1	53.29	-13.70	36.34			0.75	1.24	33.71	-12.71	0.00	0.00	Vehicle	Vehicle	113.10	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	7.23	-----	-----	-----	-----	-----	**15.81**	**15.81**	-----	-----
		U_1 - L_2	10.80	-13.03	52.36			0.75	1.24	48.58	-12.09	0.00	0.00	Vehicle	Vehicle	77.20	-1.68	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	-----	-----	-----	**8.58**	**8.58**	**28.63**	**28.63**
		U_2 - L_3	-44.05	-11.67	8.68			0.75	1.24	8.05	-10.82	0.00	0.00	Vehicle	Vehicle	-----	-71.34	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	-----	-----	-----	-----	-----	**26.81**	**26.81**
		U_3 - L_4	-76.77	-33.66	-36.19			0.75	1.24	-31.22	-33.58	0.00	0.00	Vehicle	Vehicle	-----	-143.46	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**7.73**	**7.73**
		U_4 - L_5	118.48	-21.31	51.14			0.75	1.24	47.45	-19.77	0.00	0.00	Vehicle	Vehicle	215.71	-----	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	-----	-----	-----	-----	-----	**8.56**	**8.56**	-----	-----
		U_5 - L_6	137.62	-8.60	65.32			0.75	1.24	60.60	-7.98	0.00	0.00	Vehicle	Vehicle	257.68	-----	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_7	157.39	2.13	80.57			0.75	1.24	74.75	1.98	0.00	0.00	Vehicle	Vehicle	301.77	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.60**	**6.60**	-----	-----
		U_7 - L_8	149.33	3.89	88.87			0.75	1.24	82.45	3.61	0.00	0.00	Vehicle	Vehicle	301.30	-----	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	-----	-----	-----	-----	-----	**6.08**	**6.08**	-----	-----
		U_8 - L_9	249.21	1.82	107.51			0.75	1.20	96.60	1.64	0.00	0.00	Vehicle	Vehicle	449.55	-----	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	-----	-----	-----	-----	-----	**7.38**	**7.38**	-----	-----
		U_9 - L_{10}	260.39	-3.30	94.16			0.75	1.20	84.61	-2.97	0.00	0.00	Vehicle	Vehicle	448.49	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**8.30**	**8.30**	-----	-----
		U_{10} - L_{11}	236.43	6.03	73.21			0.75	1.20	65.78	5.42	0.00	0.00	Vehicle	Vehicle	392.87	-----	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	-----	-----	-----	-----	-----	**10.25**	**10.25**	-----	-----
		U_{11} - L_{12}	212.05	4.52	90.16			0.75	1.20	81.01	4.06	0.00	0.00	Vehicle	Vehicle	380.98	-----	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	-----	-----	-----	-----	-----	**6.98**	**6.98**	-----	-----
		U_{12} - L_{13}	151.78	-20.89	82.17			0.75	1.20	73.83	-18.77	0.00	0.00	Vehicle	Vehicle	293.30	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**6.49**	**6.49**	-----	-----
		U_{13} - L_{14}	108.73	-28.30	57.87			0.75	1.20	52.00	-25.43	0.00	0.00	Vehicle	Vehicle	208.94	-----	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	-----	-----	-----	-----	-----	**6.13**	**6.13**	-----	-----
		U_{14} - L_{15}	-24.56	-47.86	32.15			0.75	1.20	28.89	-43.00	0.00	0.00	Vehicle	Vehicle	5.62	-87.83	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**15.66**	**15.66**	**7.06**	**7.06**
		U_{15} - L_{15}	23.90	-36.54	52.06			0.75	1.20	46.78	-32.83	0.00	0.00	Vehicle	Vehicle	91.88	-11.60	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	-----	-----	-----	**8.63**	**8.63**	**10.61**	**10.61**
		U_{17} - L_{16}	120.04	-17.22	66.08			0.75	1.20	59.37	-15.47	0.00	0.00	Vehicle	Vehicle	233.23	-----	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	-----	-----	-----	-----	-----	**6.81**	**6.81**	-----	-----
		U_{18} - L_{17}	144.84	-6.32	62.53			0.75	1.20	56.19	-5.68	0.00	0.00	Vehicle	Vehicle	261.34	-----	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	-----	-----	-----	-----	-----	**9.00**	**9.00**	-----	-----
		U_{19} - L_{18}	193.27	1.64	74.08			0.75	1.20	66.56	1.47	0.00	0.00	Vehicle	Vehicle	337.78	-----	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	-----	-----	-----	-----	-----	**7.77**	**7.77**	-----	-----
		U_{20} - L_{19}	193.75	4.26	61.56			0.75	1.20	55.31	3.83	0.00	0.00	Vehicle	Vehicle	323.78	-----	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	-----	-----	-----	-----	-----	**9.34**	**9.34**	-----	-----
		U_0 - L_1	202.60	-11.39	40.36			0.75	1.18	35.81	-10.10	0.00	0.00	Vehicle	Vehicle	309.93	-----	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	-----	-----	-----	-----	-----	**16.06**	**16.06**	-----	-----
		U_1 - L_2	190.84	-12.89	79.95			0.75	1.18	70.94	-11.43	0.00	0.00	Vehicle	Vehicle	340.31	-----	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	-----	-----	-----	-----	-----	**8.27**	**8.27**	-----	-----
		U_2 - L_3	155.90	-12.54	82.45			0.75	1.18	73.16	-11.13	0.00	0.00	Vehicle	Vehicle	297.77	-----	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	-----	-----	-----	-----	-----	**6.76**	**6.76**	-----	-----
		U_3 - L_4	134.06	-13.61	76.66			0.75	1.18	68.02	-12.07	0.00	0.00	Vehicle	Vehicle	262.70	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**6.51**	**6.51**	-----	-----
		U_4 - L_5	46.01	-35.23	62.89			0.75	1.18	55.80	-31.26	0.00	0.00	Vehicle	Vehicle	132.34	-----	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	-----	-----	-----	-----	-----	**6.84**	**6.84**	-----	-----
		U_5 - L_6	3.43	-44.04	54.92			0.75	1.18	48.73	-39.08	0.00	0.00	Vehicle	Vehicle	67.80	-46.35	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	-----	-----	-----	**8.71**	**8.71**	**8.42**	**8.42**
		U_6 - L_7	-84.31	-52.19	41.77			0.75	1.18	37.06	-46.30	0.00	0.00	Vehicle	Vehicle	-----	-169.80	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	**5.94**	**5.94**
		U_7 - L_7	137.33	-28.64	50.52			0.75	1.18	44.82	-25.41	0.00	0.00	Vehicle	Vehicle	236.79	-----	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	-----	-----	-----	-----	-----	**10.40**	**10.40**	-----	-----
		U_8 - L_8	210.92	-24.12	51.66			0.75	1.18	45.84	-21.40	0.00	0.00	Vehicle	Vehicle	333.78	-----	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	-----	-----	-----	-----	-----	**10.89**	**10.89**	-----	-----
		U_{10} - L_9	236.39	-16.21	61.61			0.75	1.18	54.66	-14.38	0.00	0.00	Vehicle	Vehicle	378.36	-----	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	-----	-----	-----	-----	-----	**9.90**	**9.90**	-----	-----
		U_{11} - L_{10}	274.65	-11.02	73.37			0.75	1.18	65.09	-9.78	0.00	0.00	Vehicle	Vehicle	441.66	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**8.75**	**8.75**	-----	-----
		U_{12} - L_{11}	281.09	-5.57	81.87			0.75	1.18	72.64	-4.94	0.00	0.00	Vehicle	Vehicle	459.85	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.76**	**7.76**	-----	-----
		U_{13} - L_{12}	278.14	-5.60	70.53			0.75	1.18	62.58	-4.96	0.00	0.00	Vehicle	Vehicle	442.94	-----	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	-----	-----	-----	-----	-----	**7.98**	**7.98**	-----	-----
		U_{14} - L_{13}	235.47	-6.45	84.26			0.75	1.18	74.76	-5.72	0.00	0.00	Vehicle	Vehicle	403.30	-----	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	-----	-----	-----	-----	-----	**7.25**	**7.25**	-----	-----
		U_{15} - L_{14}	143.01	-4.78	82.07			0.75	1.17	71.95	-4.19	0.00	0.00	Vehicle	Vehicle	279.46	-----	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	-----	-----	-----	-----	-----	**7.06**	**7.06**	-----	-----
		U_{16} - L_{15}	171.90	-8.45	85.70			0.75	1.17	75.13	-7.41	0.00	0.00	Vehicle	Vehicle	321.14	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.37**	**6.37**	-----	-----
		U_{17} - L_{16}	181.04	-8.15	80.98			0.75	1.17	71.00	-7.14	0.00	0.00	Vehicle	Vehicle	327.65	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.45**	**7.45**	-----	-----
		U_{18} - L_{17}	171.16	-9.58	72.70			0.75	1.17	63.74	-8.40	0.00	0.00	Vehicle	Vehicle	305.36	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.52**	**7.52**	-----	-----
		U_{19} - L_{18}	150.64	-11.82	84.18			0.75	1.17	73.80	-10.36	0.00	0.00	Vehicle	Vehicle	291.78	-----	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	-----	-----	-----	-----	-----	**6.77**	**6.77**	-----	-----
		U_{20} - L_{20}	125.86	-21.05	74.24			0.75	1.17	65.09	-18.46	0.00	0.00	Vehicle	Vehicle	248.24	-----	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	-----	-----	-----	-----	-----	**7.33**	**7.33**	-----	-----
	Structure 2	U_{26} - L_{21}	76.04	-23.81	67.51			0.75	1.17	59.19	-20.87	0.00	0.00	Vehicle	Vehicle	175.80	-----	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	-----	-----	-----	-----	-----	**5.94**	**5.94**	-----	-----
		U_{21} - L_{22}	38.33	-38.43	55.72			0.75	1.17	48.85	-33.70	0.00	0.00	Vehicle	Vehicle	113.34	-----	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	-----	-----	-----	-----	-----	**7.97**	**7.97**	-----	-----
		U_{23} - L_{22}	18.05	-38.26	35.07			0.75	1.17	30.75	-33.55	0.00	0.00	Vehicle	Vehicle	63.44	-20.14	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	-----	-----	-----	**13.32**	**13.32**	**10.17**	**10.17**
		U_{24} - L_{23}	58.57	-30.26	61.12			0.75	1.17	53.58	-26.53	0.00	0.00	Vehicle	Vehicle	145.80	-----	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	-----	-----	-----	-----	-----	**6.89**	**6.89**	-----	-----
		U_{25} - L_{24}	114.98	-24.76	57.60			0.75	1.17	50.50	-21.71	0.00	0.00	Vehicle	Vehicle	215.12	-----	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	-----	-----	-----	-----	-----	**9.67**	**9.67**	-----	-----
		U_{26} - L_{25}	143.00	-14.70	67.99			0.75	1.17	59.61	-12.89	0.00	0.00	Vehicle	Vehicle	263.39	-----	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	-----	-----	-----	-----	-----	**8.52**	**8.52**	-----	-----
		U_{27} - L_{26}	173.82	-11.78	60.17			0.75	1.17	52.75	-10.32	0.00	0.00	Vehicle	Vehicle	294.54	-----	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	-----	-----	-----	-----	-----	**9.04**	**9.04**	-----	-----
		U_{28} - L_{27}	186.60	-4.19	68.64			0.75	1.17	60.18	-3.67	0.00	0.00	Vehicle	Vehicle	320.80	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**8.70**	**8.70**	-----	-----
		U_{29} - L_{28}	190.75	-4.94	74.80			0.75	1.17	65.58	-4.33	0.00	0.00	Vehicle	Vehicle	333.22	-----	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	-----	-----	-----	-----	-----	**7.01**	**7.01**	-----	-----
		U_{30} - L_{29}	161.86	-6.42	75.57			0.75	1.17	66.26	-5.63	0.00	0.00	Vehicle	Vehicle	296.55	-----	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	-----	-----	-----	-----	-----	**7.38**	**7.38**	-----	-----
		U_{32} - L_{31}	191.72	-5.93	85.88			0.75	1.18	76.20	-5.26	0.00	0.00	Vehicle	Vehicle	348.30	-----	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	-----	-----	-----	-----	-----	**7.69**	**7.69**	-----	-----
		U_{31} - L_{32}	226.45	-9.35	81.71			0.75	1.18	72.50	-8.30	0.00	0.00	Vehicle	Vehicle	388.63	-----	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	-----	-----	-----	-----	-----	**7.60**	**7.60**	-----	-----
		U_{32} - L_{33}	243.42	-2.14	91.04			0.75	1.18	80.77	-1.90	0.00	0.00	Vehicle	Vehicle	421.45	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.44**	**7.44**	-----	-----
		U_{33} - L_{34}	239.13	-1.86	89.54			0.75	1.18	79.44	-1.65	0.00	0.00	Vehicle	Vehicle	414.14	-----	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	-----	-----	-----	-----	-----	**7.62**	**7.62**	-----	-----
		U_{34} - L_{35}	222.16	-12.35	78.73			0.75	1.18	69.85	-10.96	0.00	0.00	Vehicle	Vehicle	379.61	-----	0.00	30.63	30.6305	1010.81	131.71	13.

Maximum Axial with Moment Interaction Check

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

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(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: 3F1
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 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	Tension Member: Inventory RF	Tension Member: Operating RF	Comp. Member: Inventory RF	Comp. Member: Operating RF
									0.00																																									
South Truss - Upper Chord	Structure 1	U_0 - U_1	-66.70	-34.05	-24.68	-8.83	2.21	0.90	1.24	-27.47	-37.90	2.21	-8.83	Vehicle	Vehicle	-----	-135.99	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	-----	-----	13.16	13.16
		U_1 - U_2	-86.55	-4.25	-63.52	6.01	-16.34	0.90	1.24	-4.73	-70.72	6.01	-16.34	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	-----	-----	6.77	6.77
		U_2 - U_3	-48.14	30.44	-67.11	9.46	-19.05	0.90	1.24	33.89	-74.71	9.46	-19.05	Vehicle	Vehicle	-----	-159.71	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	6.92	6.92
		U_3 - U_4	36.58	39.60	-56.94	12.74	-17.47	0.90	1.24	44.08	-63.39	12.74	-17.47	Vehicle	Vehicle	104.87	-34.85	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	14.39	14.39	9.50	9.50
		U_4 - U_5	38.93	39.13	-59.25	12.80	-17.38	0.90	1.24	43.56	-65.96	12.80	-17.38	Vehicle	Vehicle	107.24	-35.14	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	14.51	14.51	9.16	9.16
		U_5 - U_6	154.60	44.72	-35.64	15.16	-12.03	0.90	1.24	49.79	-39.67	15.16	-12.03	Vehicle	Vehicle	265.70	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	10.37	10.37	-----	-----
		U_6 - U_7	288.38	48.71	-19.68	17.14	-4.31	0.90	1.24	54.23	-21.91	17.14	-4.31	Vehicle	Vehicle	445.38	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	9.52	9.52	-----	-----
		U_7 - U_8	410.94	6.51	-4.40	18.28	4.35	0.90	1.24	7.24	-4.89	18.28	4.35	Pedestrian	Vehicle	567.40	-----	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	-----	-----	27.40	27.40	-----	-----
		U_8 - U_9	311.57	9.64	-2.59	19.08	0.00	0.90	1.20	10.40	-2.80	19.08	0.00	Pedestrian	Vehicle	443.37	-----	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	-----	-----	21.28	21.28	-----	-----
		U_9 - U_{10}	78.52	-9.52	-27.22	5.48	0.00	0.90	1.20	-10.27	-29.35	5.48	0.00	Vehicle	Vehicle	88.73	-----	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	36.30	-46.99	-7.31	0.00	0.90	1.20	39.14	-50.66	0.00	-7.31	Vehicle	Vehicle	-----	-249.72	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	9.00	9.00
		U_{11} - U_{12}	-338.03	33.42	-81.05	9.77	-27.93	0.90	1.20	36.03	-87.39	9.77	-27.93	Vehicle	Vehicle	-----	-553.05	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	-----	-----	5.43	5.43
		U_{12} - U_{13}	-480.08	29.24	-96.36	8.23	-34.32	0.90	1.20	31.52	-103.90	8.23	-34.32	Vehicle	Vehicle	-----	-759.18	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	6.33	6.33
		U_{13} - U_{14}	-570.65	24.81	-102.97	6.68	-37.21	0.90	1.20	26.75	-111.02	6.68	-37.21	Vehicle	Pedestrian	-----	-934.55	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	-----	-----	5.11	5.11
		U_{14} - U_{15}	-571.07	24.69	-110.36	6.65	-37.22	0.90	1.20	26.62	-118.99	6.65	-37.22	Vehicle	Vehicle	-----	-897.07	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.36	6.36
		U_{15} - U_{16}	-581.88	19.26	-104.04	4.98	-36.12	0.90	1.20	20.76	-112.18	4.98	-36.12	Vehicle	Vehicle	-----	-902.27	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.65	6.65
		U_{16} - U_{17}	-539.46	8.46	-89.46	3.52	-31.85	0.90	1.20	9.12	-96.46	3.52	-31.85	Pedestrian	Vehicle	-----	-826.69	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	-----	-----	8.17	8.17
		U_{17} - U_{18}	-422.33	9.29	-55.65	2.26	-25.05	0.90	1.20	10.02	-60.01	2.26	-25.05	Vehicle	Pedestrian	-----	-659.60	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	8.00	12.00	Pass	-----	-----	6.45	6.45
		U_{18} - U_{19}	-286.19	5.24	-32.16	1.28	-16.96	0.90	1.20	5.65	-34.67	1.28	-16.96	Vehicle	Pedestrian	-----	-439.16	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	7.58	7.58
		U_{19} - U_{20}	-140.84	1.42	-19.76	0.55	-8.68	0.90	1.20	1.53	-21.31	0.55	-8.68	Pedestrian	Pedestrian	-----	-222.07	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	-----	-----	17.90	17.90
	Structure 2	U_0 - U_1	-147.44	-18.99	-18.45	-4.88	0.36	0.90	1.18	-19.65	-20.21	0.36	-4.88	Vehicle	Vehicle	-----	-217.95	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	-----	-----	24.73	24.73
		U_1 - U_2	-319.06	-4.10	-43.31	1.96	-13.36	0.90	1.18	-4.37	-46.12	1.96	-13.36	Vehicle	Vehicle	-----	-474.73	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	-----	-----	10.24	10.24
		U_2 - U_3	-460.91	-71.00	-64.56	-20.95	3.77	0.90	1.18	-68.74	-75.59	3.77	-20.95	Vehicle	Vehicle	-----	-697.46	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	4.00	0.69	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	8.16	8.16
		U_3 - U_4	-580.03	25.32	-99.34	5.92	-27.68	0.90	1.18	26.96	-105.77	5.92	-27.68	Vehicle	Vehicle	-----	-891.54	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	-----	-----	7.20	7.20
		U_4 - U_5	-616.49	32.81	-108.99	7.86	-31.35	0.90	1.18	34.93	-116.04	7.86	-31.35	Vehicle	Vehicle	-----	-952.28	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	-----	-----	7.50	7.50
		U_5 - U_6	-604.71	40.34	-110.09	9.87	-32.88	0.90	1.18	42.95	-117.21	9.87	-32.88	Vehicle	Vehicle	-----	-938.50	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	-----	-----	7.53	7.53
		U_6 - U_7	-514.78	46.62	-105.36	11.56	-31.23	0.90	1.18	49.64	-112.18	11.56	-31.23	Vehicle	Vehicle	-----	-815.04	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	-----	-----	7.37	7.37
		U_7 - U_8	-512.83	46.67	-106.07	11.57	-31.18	0.90	1.18	49.69	-112.93	11.57	-31.18	Vehicle	Vehicle	-----	-813.48	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	7.34	7.34
		U_8 - U_9	-373.51	50.99	-92.16	13.16	-27.41	0.90	1.18	54.29	-98.12	13.16	-27.41	Vehicle	Vehicle	-----	-613.12	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	7.67	7.67
		U_9 - U_{10}	-181.05	54.32	-66.38	14.25	-21.42	0.90	1.18	57.83	-70.67	14.25	-21.42	Vehicle	Vehicle	-----	-327.24	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	-----	-----	9.98	9.98
		U_{10} - U_{11}	26.18	55.66	-47.32	15.21	-14.40	0.90	1.18	59.26	-50.38	15.21	-14.40	Vehicle	Vehicle	111.07	-31.46	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	14.93	14.93	15.79	15.79
		U_{11} - U_{12}	237.39	54.84	-27.50	15.56	-6.85	0.90	1.18	58.38	-29.28	15.56	-6.85	Vehicle	Vehicle	384.50	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	11.53	11.53	-----	-----
		U_{12} - U_{13}	435.89	52.86	-11.94	15.82	0.56	0.90	1.18	56.27	-12.71	15.82	0.56	Vehicle	Vehicle	639.82	-----	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	-----	-----	12.50	12.50	-----	-----
		U_{13} - U_{14}	595.84	3.48	-2.34	15.74	6.91	0.90	1.18	3.70	-2.49	15.74	6.91	Pedestrian	Pedestrian	799.86	-----	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	-----	-----	49.81	49.81	-----	-----
		U_{14} - U_{15}	615.53	-2.42	0.50	24.37	0.00	0.90	1.17	0.52	-2.55	24.37	0.00	Pedestrian	Vehicle	832.56	-----	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	-----	-----	38.11	38.11	-----	-----
		U_{15} - U_{16}	486.15	23.80	-16.97	14.17	3.08	0.90	1.17	25.04	-17.85	14.17	3.08	Pedestrian	Vehicle	682.97	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	20.05	20.05	-----	-----
		U_{16} - U_{17}	339.27	0.98	-31.06	11.57	0.00	0.90	1.17	1.03	-32.68	11.57	0.00	Pedestrian	Vehicle	457.43	-----	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	-----	-----	55.92	55.92	-----	-----
		U_{17} - U_{18}	192.13	47.07	-45.30	4.46	0.00	0.90	1.17	49.52	-47.66	4.46	0.00	Vehicle	Vehicle	314.15	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	11.59	11.59	-----	-----
		U_{18} - U_{19}	53.83	43.13	-65.26	-2.79	-12.78	0.90	1.17	45.38	-68.66	-2.79	-12.78	Vehicle	Vehicle	128.97	-19.28	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	15.70	15.70	10.21	10.21
		U_{19} - U_{20}	-58.94	38.25	-78.12	15.07	-15.67	0.90	1.17	40.24	-82.19	15.07	-15.67	Pedestrian	Vehicle	-----	-183.47	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	-----	-----	7.71	7.71
		U_{20} - U_{21}	-125.32	31.90	-81.67	14.77	-16.52	0.90	1.17	33.56	-85.92	14.77	-16.52	Pedestrian	Vehicle	-----	-274.61	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	8.28	8.28
		U_{21} - U_{22}	-146.72	26.37	-88.04	14.37	-22.74	0.90	1.17	27.74	-92.62	14.37	-22.74	Pedestrian	Vehicle	-----	-311.15	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	-----	-----	7.45	7.45
		U_{22} - U_{23}	-146.49	24.61	-91.16	14.36	-22.72	0.90	1.17	25.89	-95.91	14.36	-22.72	Pedestrian	Vehicle	-----	-315.12	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	-----	-----	7.20	7.20
		U_{23} - U_{24}	-112.53	17.03	-83.54	13.88	-21.04	0.90	1.17	17.91	-87.89	13.88	-21.04	Pedestrian	Vehicle	-----	-260.55	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	8.24	8.24
		U_{24} - U_{25}	-36.03	36.98	-70.06	13.40	-15.01	0.90	1.17	38.90	-73.71	13.40	-15.01	Pedestrian	Vehicle	21.16	-142.65	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	16.37	16.37	8.91	8.91
		U_{25} - U_{26}	80.94	40.07	-54.38	12.93	-12.15	0.90	1.17	42.16	-57.21	12.93	-12.15	Vehicle	Vehicle	160.02	-----	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	-----	-----	42.67	-----	-----	10.67	-----	-----	16.26	16.26	-----	-----
		U_{26} - U_{27}	220.82	42.45	-37.66	12.57	-5.86	0.90	1.17	44.67	-39.62	12.57	-5.86	Vehicle	Vehicle	345.13	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	12.21	12.21	-----	-----
		U_{27} - U_{28}	363.48	42.61	-21.72	12.37	0.18	0.90	1.17	44.83	-22.85	12.37	0.18	Vehicle	Vehicle	530.81	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	15.18	15.18	-----	-----
		U_{28} - U_{29}	503.92	5.55	-11.55	12.24	3.11	0.90	1.17	5.83	-12.15	12.24	3.11	Pedestrian	Vehicle	678.58	-----	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	-----	-----	42.53	42.53	-----	-----
		U_{29} - U_{30}	616.62	-1.17	-2.58	0.00	7.42	0.90	1.17	-1.23	-2.71	7.42	0.00	Pedestrian	Vehicle	809.65	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.

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: 3F1 — 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	2.48	0.94	-2.06	0.37	0.90	1.24	2.76	1.05	0.37	-2.06	Vehicle	Vehicle	1.07	-1.16	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	182.89	182.89	-----	-----
		L$_1$ - L$_2$	67.93	33.28	34.49	0.00	5.88	0.90	1.24	38.39	37.05	5.88	0.00	Vehicle	Vehicle	138.22	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	11.32	11.32	-----	-----
		L$_2$ - L$_3$	78.83	-24.73	72.76	-7.39	15.48	0.90	1.24	81.00	-27.53	15.48	-7.39	Vehicle	Vehicle	207.78	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	7.28	7.28	-----	-----
		L$_3$ - L$_4$	39.11	-34.45	74.08	-10.83	18.09	0.90	1.24	82.47	-38.35	18.09	-10.83	Vehicle	Vehicle	158.05	-----	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	-----	-----	7.63	7.63	-----	-----
		L$_4$ - L$_5$	-166.44	-49.13	40.91	-16.91	10.96	0.90	1.24	45.54	-54.70	10.96	-16.91	Vehicle	Vehicle	-----	-287.48	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	6.10	6.10
		L$_5$ - L$_6$	-301.30	-54.25	19.12	-18.94	3.24	0.90	1.24	21.29	-60.40	3.24	-18.94	Vehicle	Vehicle	-----	-470.20	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	-----	-----	5.93	5.93
		L$_6$ - L$_7$	-439.01	-58.44	2.77	-21.52	-4.99	0.90	1.24	3.09	-65.07	-4.99	-21.52	Vehicle	Vehicle	-----	-655.29	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	-----	-----	7.78	7.78
		L$_7$ - L$_8$	-551.71	1.34	-14.14	0.00	-35.56	0.90	1.24	1.49	-15.75	0.00	-35.56	Vehicle	Pedestrian	-----	-783.91	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	12.63	12.63
		L$_8$ - L$_9$	-570.55	-54.22	7.15	-37.48	0.00	0.90	1.20	7.71	-58.46	0.00	-37.48	Vehicle	Pedestrian	-----	-866.43	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	6.56	6.56
		L$_9$ - L$_{10}$	-355.55	-19.90	-3.40	-13.03	-11.67	0.90	1.20	-3.67	-21.46	-11.67	-13.03	Pedestrian	Pedestrian	-----	-507.04	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	-----	-----	17.10	17.10
		L$_{10}$ - L$_{11}$	-118.56	-32.24	31.60	-12.42	0.00	0.90	1.20	34.07	-34.76	0.00	-12.42	Vehicle	Pedestrian	-----	-215.45	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	-----	-----	8.09	8.09
		L$_{11}$ - L$_{12}$	103.33	34.46	49.03	0.50	0.00	0.90	1.20	52.87	37.15	0.50	0.00	Vehicle	Vehicle	203.05	-----	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	-----	-----	9.28	9.28	-----	-----
		L$_{12}$ - L$_{13}$	300.47	-27.73	85.18	-8.15	17.86	0.90	1.20	91.84	-29.90	17.86	-8.15	Vehicle	Vehicle	509.99	-----	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	-----	-----	7.34	7.34	-----	-----
		L$_{13}$ - L$_{14}$	441.01	78.26	91.03	-6.62	24.18	0.90	1.20	98.15	84.38	24.18	-6.62	Vehicle	Vehicle	700.91	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	8.83	8.83	-----	-----
		L$_{14}$ - L$_{15}$	546.80	-14.81	99.96	-3.50	24.61	0.90	1.20	107.77	-15.97	24.61	-3.50	Vehicle	Vehicle	850.94	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	9.54	9.54	-----	-----
		L$_{15}$ - L$_{16}$	505.90	-9.92	84.82	-2.04	20.37	0.90	1.20	91.46	-10.69	20.37	-2.04	Vehicle	Vehicle	776.56	-----	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	-----	-----	11.68	11.68	-----	-----
		L$_{16}$ - L$_{17}$	398.64	-12.65	65.28	-0.84	12.78	0.90	1.20	70.38	-13.64	12.78	-0.84	Vehicle	Vehicle	609.73	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	11.62	11.62	-----	-----
		L$_{17}$ - L$_{18}$	263.76	-1.87	30.54	0.15	4.73	0.90	1.20	32.93	-2.01	4.73	0.15	Vehicle	Vehicle	385.69	-----	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	-----	-----	18.82	18.82	-----	-----
		L$_{18}$ - L$_{19}$	118.86	-8.25	13.97	0.70	-3.28	0.90	1.20	15.06	-8.90	0.70	-3.28	Vehicle	Pedestrian	174.09	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	25.48	25.48	-----	-----
		L$_{19}$ - L$_{20}$	-23.25	2.81	-4.86	1.27	-12.00	0.90	1.20	3.03	-5.24	1.27	-12.00	Pedestrian	Pedestrian	-----	-52.63	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	-----	-----	20.90	20.90
		L$_0$- L$_1$	-35.95	2.63	3.22	-5.13	1.19	0.90	1.18	3.43	2.80	1.19	-5.13	Pedestrian	Vehicle	-----	-43.09	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	45.00	Pass	6.32	12.00	Pass	6.32	12.00	Pass	-----	-----	-----	-----
		L$_1$ - L$_2$	132.83	22.08	13.88	2.94	-0.07	0.90	1.18	23.51	14.78	2.94	-0.07	Vehicle	Vehicle	203.24	-----	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	-----	-----	21.29	21.29	-----	-----
		L$_2$ - L$_3$	304.11	39.28	46.31	10.53	-1.80	0.90	1.18	49.31	41.82	10.53	-1.80	Vehicle	Vehicle	459.44	-----	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	-----	-----	13.63	13.63	-----	-----
		L$_3$ - L$_4$	445.92	67.56	72.99	0.00	13.17	0.90	1.18	77.71	71.93	13.17	0.00	Vehicle	Vehicle	680.71	-----	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	-----	-----	11.11	11.11	-----	-----
		L$_4$ - L$_5$	567.84	-22.04	101.37	-6.10	24.82	0.90	1.18	107.93	-23.47	24.82	-6.10	Vehicle	Vehicle	878.50	-----	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	-----	-----	10.03	10.03	-----	-----
		L$_5$ - L$_6$	603.64	-34.40	116.12	-8.06	28.47	0.90	1.18	123.63	-36.62	28.47	-8.06	Vehicle	Vehicle	945.45	-----	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	-----	-----	9.62	9.62	-----	-----
		L$_6$ - L$_7$	599.48	-43.51	120.41	-10.41	30.26	0.90	1.18	128.20	-46.33	30.26	-10.41	Vehicle	Vehicle	945.98	-----	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	-----	-----	9.50	9.50	-----	-----
		L$_7$ - L$_8$	373.94	-54.85	94.25	-13.66	24.93	0.90	1.18	100.34	-58.40	24.93	-13.66	Vehicle	Vehicle	616.56	-----	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	-----	-----	9.64	9.64	-----	-----
		L$_8$ - L$_9$	195.71	-58.88	77.12	-15.12	19.52	0.90	1.18	82.11	-62.69	19.52	-15.12	Vehicle	Vehicle	361.16	-----	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	-----	-----	11.01	11.01	-----	-----
		L$_9$ - L$_{10}$	-13.21	-60.71	52.91	-16.11	12.45	0.90	1.18	56.34	-64.63	12.45	-16.11	Vehicle	Vehicle	56.06	-101.20	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	15.53	15.53	11.05	11.05
		L$_{10}$ - L$_{11}$	-217.32	-61.71	29.41	-17.02	5.50	0.90	1.18	31.31	-65.70	5.50	-17.02	Vehicle	Vehicle	-----	-367.92	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	-----	-----	6.59	6.59
		L$_{11}$ - L$_{12}$	-419.93	-60.63	8.89	-17.31	-2.04	0.90	1.18	9.47	-64.55	-2.04	-17.31	Vehicle	Vehicle	-----	-629.83	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	-----	-----	7.91	7.91
		L$_{12}$ - L$_{13}$	-591.41	-61.17	0.59	-18.75	-7.09	0.90	1.18	0.63	-65.13	-7.09	-18.75	Pedestrian	Vehicle	-----	-853.50	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	-----	-----	10.34	10.34
		L$_{13}$ - L$_{14}$	-724.23	1.53	-9.16	0.00	-35.12	0.90	1.18	1.63	-9.75	0.00	-35.12	Vehicle	Pedestrian	-----	-999.82	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	-----	-----	17.63	17.63
		L$_{14}$ - L$_{15}$	-747.05	-35.89	11.61	-36.29	0.00	0.90	1.17	12.22	-37.76	0.00	-36.29	Vehicle	Pedestrian	-----	-1067.42	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	-----	-----	10.37	10.37
		L$_{15}$ - L$_{16}$	-632.15	10.24	0.25	0.00	-31.21	0.90	1.17	10.77	0.26	0.00	-31.21	Vehicle	Pedestrian	-----	-862.04	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	-----	-----	-----	-----
		L$_{16}$ - L$_{17}$	-714.64	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	-----	-----	9.15	9.15
		L$_{17}$ - L$_{18}$	-336.98	9.92	28.55	-18.12	0.00	0.90	1.17	30.03	10.44	0.00	-18.12	Vehicle	Vehicle	-----	-424.51	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	-----	-----
		L$_{18}$ - L$_{19}$	-183.61	-39.62	47.69	-11.34	4.48	0.90	1.17	50.17	-41.68	4.48	-11.34	Vehicle	Vehicle	-----	-292.88	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	-----	-----	9.36	9.36
		L$_{19}$ - L$_{20}$	-45.77	-35.64	58.80	-9.58	8.92	0.90	1.17	61.86	-37.50	8.92	-9.58	Vehicle	Vehicle	20.92	-108.24	1.88	26.75	24.8700	882.75	131.71	10.6380	5.6472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	11.72	11.72	14.08	14.08
		L$_{20}$ - L$_{21}$	68.00	-31.67	78.62	-9.12	11.57	0.90	1.17	82.72	-33.32	11.57	-9.12	Vehicle	Vehicle	195.92	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	10.84	10.84	-----	-----
		L$_{21}$ - L$_{22}$	133.90	-25.32	81.93	-8.82	13.61	0.90	1.17	86.20	-26.64	13.61	-8.82	Vehicle	Vehicle	286.13	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	9.64	9.64	-----	-----
		L$_{22}$ - L$_{23}$	122.50	-11.95	76.90	-7.58	11.79	0.90	1.17	80.91	-12.57	11.79	-7.58	Pedestrian	Vehicle	264.43	-----	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	-----	-----	10.41	10.41	-----	-----
		L$_{23}$ - L$_{24}$	46.70	-31.11	66.06	-7.09	8.09	0.90	1.17	69.50	-32.73	8.09	-7.09	Vehicle	Vehicle	151.05	-----	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	-----	-----	13.21	13.21	-----	-----
		L$_{24}$ - L$_{25}$	-66.76	-34.66	49.87	-6.24	2.64	0.90	1.17	52.47	-36.46	2.64	-6.24	Vehicle	Vehicle	-----	-134.18	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	13.90	13.90
		L$_{25}$ - L$_{26}$	-205.83	-37.12	30.20	-5.88	-3.61	0.90	1.17	31.78	-39.05	-3.61	-5.88	Vehicle	Vehicle	-----	-318.34	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	-----	-----	9.42	9.42
		L$_{26}$ - L$_{27}$	-350.61	-37.84	11.50	-5.26	-6.72	0.90	1.17	12.10	-39.81	-5.26	-6.72	Vehicle	Vehicle	-----	-507.54	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	-----	-----	9.47	9.47
		L$_{27}$ - L$_{28}$	-494.76	-37.73	1.42	-5.10	-12.12	0.90	1.17	1.49	-39.70	-5.10	-12.12	Pedestrian	Vehicle	-----	-694.80	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	13.93	13.93
		L$_{28}$ - L$_{29}$	-620.88	-22.97	-7.35	-31.79	-17.19	0.90	1.17	-7.73	-24.16	-17.19	-31.79	Pedestrian	Pedestrian	-----	-879.87	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	11.70	11.70
		L$_{29}$ - L$_{30}$	-716.82	-9.65	-12.32	0.00	-36.30	0.90	1.17	-10.15	-12.96	0.00	-36.30	Vehicle	Pedestrian	-----	-995.90	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	-----	-----	16.21	16.21
		L$_{30}$ - L$_{31}$	-850.86	-33.80	27.98	-35.98	0.00	0.90	1.18	29.79	-35.98	0.00	-35.98	Vehicle	Pedestrian	-----	-1199.67	11.98	70.85	58.8700

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: 3F1 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 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	3.40	-51.21	3.44	-12.32	0.90	1.24	3.79	-57.01	3.44	-12.32	Pedestrian	Vehicle	-----	-195.83	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	-----	-----	-----	-----	-----	4.40	4.40
		U_1 - L_1	-46.50	9.70	-30.56	2.93	-9.05	0.90	1.24	10.80	-34.02	2.93	-9.05	Vehicle	Vehicle	-----	-104.67	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	-----	-----	-----	-----	-----	8.98	8.98
		U_2 - L_2	-0.07	8.80	-20.52	2.84	-5.68	0.90	1.24	9.80	-22.84	2.84	-5.68	Vehicle	Vehicle	12.65	-29.79	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	43.65	43.65	15.40	15.40
		U_3 - L_3	39.61	7.25	-9.34	2.70	-2.12	0.90	1.24	8.07	-10.40	2.70	-2.12	Pedestrian	Vehicle	65.49	-----	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	-----	-----	-----	-----	-----	36.04	36.04	-----	-----
		U_4 - L_4	-30.21	-11.25	-0.28	-3.47	0.00	0.90	1.24	-0.32	-12.52	0.00	-3.47	Vehicle	Vehicle	-----	-55.55	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	25.53	25.53
		U_5 - L_5	-130.50	-31.85	0.18	-10.24	0.00	0.90	1.24	0.20	-35.46	0.00	-10.24	Vehicle	Vehicle	-----	-215.76	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	-----	-----	8.31	8.31
		U_6 - L_6	-158.19	-31.60	5.02	-13.06	0.00	0.90	1.24	5.59	-35.17	0.00	-13.06	Vehicle	Pedestrian	-----	-268.35	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	-----	-----	7.25	7.25
		U_7 - L_7	-152.33	-31.44	9.99	-13.25	0.00	0.90	1.24	11.12	-35.00	0.00	-13.25	Vehicle	Pedestrian	-----	-260.75	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	-----	-----	6.38	6.38
		U_8 - L_8	-455.44	-29.14	-49.21	-12.74	-18.98	0.90	1.24	-32.44	-54.79	-12.74	-18.98	Pedestrian	Pedestrian	-----	-687.97	3.28	51.23	47.9548	1690.75	131.71	16.6563	4.0434	37.07	31.69	-1380.20	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	8.22	8.22
		U_9 - L_9	-287.50	2.66	-47.40	0.00	-18.21	0.90	1.20	2.87	-51.10	0.00	-18.21	Vehicle	Pedestrian	-----	-463.85	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	-----	-----	5.16	5.16
		U_{10} - L_{10}	-276.27	1.26	-46.93	0.00	-17.55	0.90	1.20	1.36	-50.60	0.00	-17.55	Vehicle	Pedestrian	-----	-447.73	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	-----	-----	6.84	6.84
		U_{11} - L_{11}	-232.54	-3.18	-42.90	0.00	-14.42	0.90	1.20	-3.42	-46.25	0.00	-14.42	Vehicle	Vehicle	-----	-362.43	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	8.84	8.84
		U_{12} - L_{12}	-178.38	1.08	-32.66	0.00	-11.20	0.90	1.20	1.17	-35.21	0.00	-11.20	Vehicle	Vehicle	-----	-277.67	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	-----	-----	10.06	10.06
		U_{13} - L_{13}	-127.70	2.57	-26.60	0.00	-7.88	0.90	1.20	2.77	-28.68	0.00	-7.88	Vehicle	Vehicle	-----	-203.29	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	-----	-----	8.81	8.81
		U_{14} - L_{14}	-30.38	-2.75	-5.89	0.00	-3.03	0.90	1.20	-2.96	-6.35	0.00	-3.03	Vehicle	Pedestrian	-----	-51.70	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	-----	-----	33.49	33.49
		U_{15} - L_{15}	-28.93	-22.00	9.12	-4.53	1.55	0.90	1.20	9.83	-23.72	1.55	-4.53	Vehicle	Vehicle	-----	-68.45	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	13.25	13.25
		U_{16} - L_{16}	-75.99	-24.73	7.01	-7.07	1.39	0.90	1.20	7.56	-26.67	1.39	-7.07	Vehicle	Vehicle	-----	-133.46	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	-----	-----	9.95	9.95
		U_{17} - L_{17}	-161.81	-35.87	5.33	-10.66	1.30	0.90	1.20	5.75	-38.67	1.30	-10.66	Vehicle	Vehicle	-----	-260.63	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	-----	-----	6.45	6.45
		U_{18} - L_{18}	-190.09	-35.31	4.57	-12.69	1.12	0.90	1.20	4.93	-38.07	1.12	-12.69	Vehicle	Pedestrian	-----	-313.11	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	-----	-----	6.60	6.60
		U_{19} - L_{19}	-228.09	-34.85	3.92	-14.99	0.97	0.90	1.20	4.22	-37.58	0.97	-14.99	Vehicle	Pedestrian	-----	-364.85	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	-----	-----	7.39	7.39
		U_{20} - L_{20}	-242.54	-35.70	3.55	-15.62	0.95	0.90	1.20	3.83	-38.49	0.95	-15.62	Vehicle	Pedestrian	-----	-385.64	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	-----	-----	5.25	5.25
	Structure 2	U_0 - L_0	-302.99	2.00	-52.49	2.22	-15.08	0.90	1.18	2.13	-55.89	2.22	-15.08	Pedestrian	Vehicle	-----	-466.55	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	-----	-----	6.07	6.07
		U_1 - L_1	-268.80	8.75	-47.25	2.12	-13.67	0.90	1.18	9.32	-50.30	2.12	-13.67	Vehicle	Vehicle	-----	-414.83	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	-----	-----	8.02	8.02
		U_2 - L_2	-220.88	9.45	-44.15	2.34	-12.32	0.90	1.18	10.06	-47.00	2.34	-12.32	Vehicle	Vehicle	-----	-348.25	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	-----	-----	7.52	7.52
		U_3 - L_3	-175.24	10.12	-40.92	2.49	-10.35	0.90	1.18	10.78	-43.57	2.49	-10.35	Vehicle	Vehicle	-----	-284.46	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	-----	-----	6.35	6.35
		U_4 - L_4	-82.09	8.79	-27.80	2.21	-6.62	0.90	1.18	9.35	-29.60	2.21	-6.62	Vehicle	Vehicle	-----	-145.18	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	-----	-----	8.69	8.69
		U_5 - L_5	-19.91	8.50	-21.93	2.23	-4.16	0.90	1.18	9.05	-23.35	2.23	-4.16	Vehicle	Vehicle	-----	-56.23	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	-----	-----	13.73	13.73
		U_6 - L_6	60.32	18.92	-12.50	1.75	-0.47	0.90	1.18	20.14	-13.31	1.75	-0.47	Vehicle	Vehicle	104.60	-----	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	-----	-----	-----	-----	-----	18.24	18.24	-----	-----
		U_7 - L_7	-41.78	-5.90	-1.81	-2.49	0.00	0.90	1.18	-1.92	-6.28	0.00	-2.49	Vehicle	Pedestrian	-----	-65.71	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	34.06	34.06
		U_8 - L_8	-189.01	-32.33	3.52	-8.38	0.00	0.90	1.18	3.74	-34.42	0.00	-8.38	Vehicle	Vehicle	-----	-290.45	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	-----	-----	9.92	9.92
		U_9 - L_9	-254.00	-40.19	0.98	-10.55	0.00	0.90	1.18	1.04	-42.79	0.00	-10.55	Vehicle	Vehicle	-----	-385.82	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	-----	-----	10.22	10.22
		U_{10} - L_{10}	-290.02	-40.75	3.04	-12.18	0.00	0.90	1.18	3.23	-43.39	0.00	-12.18	Vehicle	Vehicle	-----	-433.42	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	11.26	11.26
		U_{11} - L_{11}	-312.19	-42.62	6.49	-12.59	0.00	0.90	1.18	6.91	-45.38	0.00	-12.59	Vehicle	Vehicle	-----	-464.84	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	-----	-----	9.97	9.97
		U_{12} - L_{12}	-327.27	-40.04	9.33	-13.01	-0.93	0.90	1.18	9.94	-42.63	-0.93	-13.01	Vehicle	Vehicle	-----	-480.86	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	-----	-----	11.13	11.13
		U_{13} - L_{13}	-277.23	-33.93	12.49	-11.39	0.00	0.90	1.18	13.29	-36.13	0.00	-11.39	Vehicle	Vehicle	-----	-407.37	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	-----	-----	11.43	11.43
		U_{14} - L_{14}	-505.47	-26.89	-39.83	-9.95	-11.35	0.90	1.18	-28.63	-42.41	-9.95	-11.35	Pedestrian	Vehicle	-----	-712.25	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	-----	-----	12.88	12.88
		U_{15} - L_{15}	-232.92	1.92	-46.07	1.67	-11.17	0.90	1.17	2.02	-48.47	1.67	-11.17	Pedestrian	Vehicle	-----	-365.81	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	-----	-----	9.43	9.43
		U_{16} - L_{16}	-260.09	5.15	-46.20	0.83	-12.63	0.90	1.17	5.42	-48.60	0.83	-12.63	Vehicle	Vehicle	-----	-401.30	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	-----	-----	8.35	8.35
		U_{17} - L_{17}	-228.20	5.80	-44.79	0.66	-11.76	0.90	1.17	6.11	-47.12	0.66	-11.76	Vehicle	Vehicle	-----	-357.92	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	8.38	8.38
		U_{18} - L_{18}	-209.23	6.98	-41.51	-0.02	-11.28	0.90	1.17	7.35	-43.68	-0.02	-11.28	Vehicle	Vehicle	-----	-328.78	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	-----	-----	8.43	8.43
		U_{19} - L_{19}	-166.51	7.48	-35.64	-0.07	-9.53	0.90	1.17	7.87	-37.49	-0.07	-9.53	Vehicle	Vehicle	-----	-265.20	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	9.20	9.20
		U_{20} - L_{20}	-113.91	7.51	-28.31	-0.43	-7.50	0.90	1.17	7.91	-29.79	-0.43	-7.50	Vehicle	Vehicle	-----	-186.80	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	-----	-----	8.77	8.77
		U_{21} - L_{21}	-62.73	11.11	-22.96	0.00	-5.22	0.90	1.17	11.69	-24.16	0.00	-5.22	Vehicle	Vehicle	-----	-112.95	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	-----	-----	11.50	11.50
		U_{22} - L_{22}	-38.93	-5.96	-2.68	-2.04	-2.15	0.90	1.17	-2.82	-6.27	-2.04	-2.15	Pedestrian	Pedestrian	-----	-61.55	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	45.00	Pass	6.56	12.00	Pass	-----	-----	36.00	36.00
		U_{23} - L_{23}	-74.45	-26.51	7.87	-6.10	0.48	0.90	1.17	8.28	-27.89	0.48	-6.10	Vehicle	Vehicle	-----	-133.04	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	-----	-----	9.54	9.54
		U_{24} - L_{24}	-121.37	-31.07	7.79	-8.17	0.37	0.90	1.17	8.20	-32.69	0.37	-8.17	Vehicle	Vehicle	-----	-200.28	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	7.76	7.76
		U_{25} - L_{25}	-169.10	-36.46	7.49	-9.94	0.43	0.90	1.17	7.88	-38.35	0.43	-9.94	Vehicle	Vehicle	-----	-269.69	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	-----	-----	8.92	8.92
		U_{26} - L_{26}	-207.93	-37.07	6.78	-11.42	0.14	0.90	1.17	7.13	-39.01	0.14	-11.42	Vehicle	Vehicle	-----	-321.01	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	-----	-----	9.47	9.47
		U_{27} - L_{27}	-219.90	-40.50	5.57	-11.49	0.16	0.90	1.17	5.86	-42.61	0.16	-11.49	Vehicle	Vehicle	-----	-341.26	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	-----	-----	9.47	9.47
		U_{28} - L_{28}	-240.66	-37.08	8.03	-12.59	-0.25	0.90	1.17	8.44	-39.01	-0.25	-12.59	Vehicle	Vehicle	-----	-363.57	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	-----	-----	10.91	10.91
		U_{29} - L_{29}	-202.76	-32.77	12.23	-10.35	0.00	0.90	1.17	12.87	-34.48	0.00	-10.35	Vehicle	Vehicle	-----	-308.40	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	-----	-----	14.13	14.13
		U_{30} - L_{30}	-516.45	-27.40	-40.06	-8.21	-13.75	0.90	1.18	-29.17	-42.65	-8.21	-13.75	Vehicle	Vehicle	-----	-726.83	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	-----	-----	11.64	11.64
		U_{31} - L_{31}	-318.62	5.98	-45.03	0.00	-12.96	0.90	1.18	6.37	-47.94	0.00	-12.96	Vehicle	Vehicle	-----	-476.53	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	-----	-----	7.75	7.75
		U_{32} - L_{32}	-358.52	1.85	-49.10	-0.25	-14.65	0.90	1.18	1.96	-52.27	-0.25	-14.65	Vehicle	Vehicle	-----	-534.02	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	-----	-----	8.48	8.48
		U_{33} - L_{33}

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: 3F1 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 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	U_0 - L_1	87.61	-6.39	27.14	14.00	-4.60	0.90	1.24	30.21	-7.11	14.00	-4.60	Pedestrian	Pedestrian	171.36	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**11.28**	**11.28**	-----	-----
	U_1 - L_2	23.84	-14.93	43.13	-4.72	9.20	0.90	1.24	48.02	-16.62	9.20	-4.72	Vehicle	Vehicle	93.42	-----	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	-----	-----	-----	-----	-----	**8.41**	**8.41**	-----	-----
	U_2 - L_3	-49.05	-12.56	14.01	-4.33	3.33	0.90	1.24	15.60	-13.99	3.33	-4.33	Vehicle	Vehicle	-----	-81.94	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**20.39**	**20.39**
	U_3 - L_4	-108.90	-11.49	2.96	-4.21	-2.10	0.90	1.24	3.29	-12.79	-2.10	-4.21	Vehicle	Vehicle	-----	-158.20	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**17.78**	**17.78**
	U_4 - L_4	153.14	5.13	37.10	3.12	7.00	0.90	1.24	41.30	5.72	7.00	3.12	Vehicle	Pedestrian	252.78	-----	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	-----	-----	-----	-----	-----	**8.99**	**8.99**	-----	-----
	U_5 - L_5	186.37	-2.55	40.91	2.79	10.66	0.90	1.24	45.54	-2.84	10.66	2.79	Vehicle	Vehicle	301.49	-----	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	-----	-----	-----	-----	-----	**10.19**	**10.19**	-----	-----
	U_6 - L_6	177.53	-8.73	31.55	1.60	12.54	0.90	1.24	35.12	-9.72	12.54	1.60	Pedestrian	Vehicle	292.75	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**9.93**	**9.93**	-----	-----
	U_7 - L_7	173.15	-1.83	35.05	0.41	13.46	0.90	1.24	39.03	-2.04	13.46	0.41	Pedestrian	Vehicle	293.33	-----	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	-----	-----	-----	-----	-----	**9.10**	**9.10**	-----	-----
	U_8 - L_8	328.03	-1.02	51.68	-0.14	19.45	0.90	1.20	55.72	-1.10	19.45	-0.14	Pedestrian	Vehicle	524.15	-----	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	-----	-----	-----	-----	-----	**8.44**	**8.44**	-----	-----
	U_9 - L_{10}	339.64	-0.77	50.45	0.85	18.90	0.90	1.20	54.40	-0.83	18.90	0.85	Pedestrian	Vehicle	536.81	-----	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	-----	-----	-----	-----	-----	**8.49**	**8.49**	-----	-----
	U_{10} - L_{11}	313.15	3.22	57.25	1.69	16.46	0.90	1.20	61.73	3.48	16.46	1.69	Vehicle	Pedestrian	487.34	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**9.68**	**9.68**	-----	-----
	U_{11} - L_{12}	270.62	3.91	49.74	1.81	13.03	0.90	1.20	53.63	4.22	13.03	1.81	Vehicle	Pedestrian	421.52	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**9.45**	**9.45**	-----	-----
	U_{12} - L_{13}	194.11	-0.95	40.71	0.00	10.79	0.90	1.20	43.89	-1.02	10.79	0.00	Vehicle	Vehicle	309.40	-----	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	-----	-----	-----	-----	-----	**9.95**	**9.95**	-----	-----
	U_{13} - L_{14}	123.52	-7.73	32.57	0.00	5.97	0.90	1.20	35.11	-8.34	5.97	0.00	Vehicle	Vehicle	206.22	-----	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	-----	-----	-----	-----	-----	**8.66**	**8.66**	-----	-----
	U_{14} - L_{15}	-16.31	-15.39	22.27	-2.35	1.47	0.90	1.20	24.01	-16.59	1.47	-2.35	Vehicle	Vehicle	10.01	-42.77	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	-----	-----	-----	**18.49**	**18.49**	**18.81**	**18.81**
	U_{15} - L_{15}	59.11	-10.11	30.24	-2.09	6.08	0.90	1.20	32.60	-10.90	6.08	-2.09	Vehicle	Vehicle	119.22	-----	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	-----	-----	-----	-----	-----	**11.31**	**11.31**	-----	-----
	U_{17} - L_{16}	172.05	-7.44	43.04	-1.86	9.93	0.90	1.20	46.41	-8.03	9.93	-1.86	Vehicle	Vehicle	284.00	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**7.60**	**7.60**	-----	-----
	U_{18} - L_{17}	210.69	-6.30	39.98	-1.53	12.50	0.90	1.20	43.10	-6.80	12.50	-1.53	Vehicle	Vehicle	329.93	-----	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	-----	-----	-----	-----	-----	**10.21**	**10.21**	-----	-----
	U_{19} - L_{18}	242.30	-5.03	41.99	-1.21	13.72	0.90	1.20	45.27	-5.43	13.72	-1.21	Vehicle	Vehicle	373.85	-----	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	-----	-----	-----	-----	-----	**10.33**	**10.33**	-----	-----
	U_{20} - L_{19}	257.77	-4.14	33.97	-1.03	15.71	0.90	1.20	36.63	-4.46	15.71	-1.03	Pedestrian	Vehicle	403.14	-----	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	-----	-----	-----	-----	-----	**8.64**	**8.64**	-----	-----
	U_0 - L_1	299.01	-3.50	27.49	-2.21	14.21	0.90	1.18	29.26	-3.73	14.21	-2.21	Pedestrian	Pedestrian	445.22	-----	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	-----	-----	-----	-----	-----	**11.01**	**11.01**	-----	-----
	U_1 - L_2	284.23	-10.88	55.16	-2.66	14.05	0.90	1.18	58.73	-11.58	14.05	-2.66	Vehicle	Vehicle	445.84	-----	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	-----	-----	-----	-----	-----	**8.40**	**8.40**	-----	-----
	U_2 - L_3	221.45	-11.61	48.73	-2.85	11.83	0.90	1.18	51.88	-12.36	11.83	-2.85	Vehicle	Vehicle	355.33	-----	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	-----	-----	-----	-----	-----	**8.27**	**8.27**	-----	-----
	U_3 - L_4	178.33	-13.12	43.46	-3.23	10.08	0.90	1.18	46.27	-13.97	10.08	-3.23	Vehicle	Vehicle	291.98	-----	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	-----	-----	-----	-----	-----	**8.62**	**8.62**	-----	-----
	U_4 - L_5	53.52	-11.24	30.87	-2.87	5.38	0.90	1.18	32.87	-11.97	5.38	-2.87	Vehicle	Vehicle	112.30	-----	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	-----	-----	-----	-----	-----	**11.38**	**11.38**	-----	-----
	U_5 - L_6	-16.50	-16.61	24.70	-2.92	2.23	0.90	1.18	26.30	-17.69	2.23	-2.92	Vehicle	Vehicle	12.74	-44.44	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	-----	-----	-----	**16.89**	**16.89**	**17.48**	**17.48**
	U_6 - L_7	-133.20	-29.77	5.29	-2.50	-2.48	0.90	1.18	5.64	-31.70	-2.48	-2.50	Vehicle	Vehicle	-----	-214.37	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	-----	-----	-----	-----	-----	**7.13**	**7.13**
	U_7 - L_7	208.77	-8.48	27.63	0.00	8.33	0.90	1.18	29.41	-9.02	8.33	0.00	Vehicle	Vehicle	309.63	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**13.41**	**13.41**	-----	-----
	U_8 - L_8	289.58	-0.27	48.33	0.00	8.99	0.90	1.18	51.46	-0.29	8.99	0.00	Vehicle	Vehicle	443.35	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**8.17**	**8.17**	-----	-----
	U_{10} - L_9	327.97	0.10	45.91	1.53	11.09	0.90	1.18	48.88	0.10	11.09	1.53	Vehicle	Pedestrian	489.91	-----	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	-----	-----	-----	-----	-----	**9.20**	**9.20**	-----	-----
	U_{11} - L_{10}	349.27	-2.84	50.76	0.55	12.45	0.90	1.18	54.04	-3.02	12.45	0.55	Vehicle	Vehicle	524.30	-----	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	-----	-----	-----	-----	-----	**9.16**	**9.16**	-----	-----
	U_{12} - L_{11}	358.20	-7.15	48.15	0.48	13.32	0.90	1.18	51.26	-7.62	13.32	0.48	Vehicle	Vehicle	532.30	-----	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	-----	-----	-----	-----	-----	**9.49**	**9.49**	-----	-----
	U_{13} - L_{12}	307.76	-13.82	40.10	-0.24	12.26	0.90	1.18	42.70	-14.71	12.26	-0.24	Vehicle	Vehicle	455.59	-----	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	-----	-----	-----	-----	-----	**11.00**	**11.00**	-----	-----
	U_{14} - L_{13}	260.25	-8.64	32.39	-1.50	11.73	0.90	1.18	34.48	-9.20	11.73	-1.50	Pedestrian	Vehicle	398.40	-----	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	-----	-----	-----	-----	-----	**11.19**	**11.19**	-----	-----
	U_{15} - L_{14}	208.41	-5.85	43.02	-2.52	11.04	0.90	1.17	45.26	-6.16	11.04	-2.52	Vehicle	Pedestrian	329.77	-----	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	-----	-----	-----	-----	-----	**9.77**	**9.77**	-----	-----
	U_{16} - L_{15}	243.53	-4.10	47.20	-1.48	11.54	0.90	1.17	49.66	-4.32	11.54	-1.48	Vehicle	Pedestrian	381.15	-----	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	-----	-----	-----	-----	-----	**8.20**	**8.20**	-----	-----
	U_{17} - L_{16}	255.83	-6.08	50.13	-0.85	11.67	0.90	1.17	52.74	-6.40	11.67	-0.85	Vehicle	Vehicle	401.13	-----	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	-----	-----	-----	-----	-----	**8.62**	**8.62**	-----	-----
	U_{18} - L_{17}	235.25	-7.13	50.93	-0.75	10.45	0.90	1.17	53.58	-7.50	10.45	-0.75	Vehicle	Vehicle	375.48	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.75**	**7.75**	-----	-----
	U_{19} - L_{18}	212.06	-8.75	41.99	0.01	8.95	0.90	1.17	44.18	-9.21	8.95	0.01	Vehicle	Vehicle	333.11	-----	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	-----	-----	-----	-----	-----	**9.93**	**9.93**	-----	-----
	U_{20} - L_{19}	168.18	-9.69	42.85	0.06	9.14	0.90	1.17	45.08	-10.20	9.14	0.06	Vehicle	Vehicle	277.24	-----	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	-----	-----	-----	-----	-----	**9.65**	**9.65**	-----	-----
Structure 2	U_{26} - L_{21}	97.21	-9.46	30.74	0.45	6.66	0.90	1.17	32.34	-9.95	6.66	0.45	Vehicle	Vehicle	168.42	-----	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	-----	-----	-----	-----	-----	**10.22**	**10.22**	-----	-----
	U_{21} - L_{22}	30.55	-18.20	20.77	0.58	3.66	0.90	1.17	21.86	-19.15	3.66	0.58	Vehicle	Vehicle	68.13	-----	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	-----	-----	-----	-----	-----	**18.17**	**18.17**	-----	-----
	U_{23} - L_{22}	49.81	-14.91	20.72	-0.72	5.11	0.90	1.17	21.80	-15.68	5.11	-0.72	Vehicle	Vehicle	93.10	-----	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	-----	-----	-----	-----	-----	**17.33**	**17.33**	-----	-----
	U_{24} - L_{23}	115.09	-10.57	35.87	-0.72	8.00	0.90	1.17	37.74	-11.12	8.00	-0.72	Vehicle	Vehicle	198.69	-----	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	-----	-----	-----	-----	-----	**8.28**	**8.28**	-----	-----
	U_{25} - L_{24}	179.20	-10.28	41.51	-0.73	10.10	0.90	1.17	43.67	-10.81	10.10	-0.73	Vehicle	Vehicle	289.74	-----	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	-----	-----	-----	-----	-----	**9.71**	**9.71**	-----	-----
	U_{26} - L_{25}	220.95	-9.01	44.23	-0.57	11.89	0.90	1.17	46.54	-9.48	11.89	-0.57	Vehicle	Vehicle	347.73	-----	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	-----	-----	-----	-----	-----	**9.23**	**9.23**	-----	-----
	U_{27} - L_{26}	234.79	-5.95	42.28	-0.35	11.44	0.90	1.17	44.49	-6.26	11.44	-0.35	Vehicle	Vehicle	363.05	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**9.35**	**9.35**	-----	-----
	U_{28} - L_{27}	253.01	-6.42	41.40	-0.28	12.25	0.90	1.17	43.56	-6.75	12.25	-0.28	Vehicle	Vehicle	385.54	-----	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	-----	-----	-----	-----	-----	**10.50**	**10.50**	-----	-----
	U_{29} - L_{28}	215.83	-13.73	35.51	0.00	10.20	0.90	1.17	37.36	-14.45	10.20	0.00	Vehicle	Vehicle	329.15	-----	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	-----	-----	-----	-----	-----	**11.64**	**11.64**	-----	-----
	U_{30} - L_{29}	179.92	-6.91	30.75	-0.93	8.89	0.90	1.17	32.35	-7.27	8.89	-0.93	Vehicle	Vehicle	275.95	-----	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	-----	-----	-----	-----	-----	**14.55**	**14.55**	-----	-----
	U_{32} - L_{31}	294.37	-6.46	43.85	-1.65	12.88	0.90	1.18	46.69	-6.88	12.88	-1.65	Vehicle	Vehicle	443.37	-----	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	-----	-----	-----	-----	-----	**10.35**	**10.35**	-----	-----
	U_{31} - L_{32}	342.78	-6.02	51.43	-0.55	13.71	0.90	1.18	54.76	-6.40	13.71	-0.55	Vehicle	Vehicle	516.81	-----	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	-----	-----	-----	-----	-----	**7.94**	**7.94**	-----	-----
	U_{32} - L_{33}	363.31	-2.19	52.46	0.37	13.77	0.90	1.18	55.86	-2.33	13.77	0.37	Vehicle	Vehicle	544.91	-----	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	-----

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: 3F1
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_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-U_1	-131.25	-22.60	2.78	-5.00	-8.72	-5.08	37.17	-73.46	-119.47	-67.84
	U_1-U_2	-54.49	-51.15	0.89	-5.35	-7.28	-7.61	11.94	-4.61	-87.00	-101.68
	U_2-U_3	-52.26	-44.72	0.64	-5.16	-7.61	-11.28	11.28	38.64	-152.63	-78.66
	U_3-U_4	-52.26	-41.06	1.80	2.90	-10.46	-3.57	24.10	38.68	-139.70	-47.73
	U_4-U_5	-28.29	-50.99	2.21	2.90	-10.46	-3.57	26.50	37.27	-210.40	-67.77
	U_5-U_6	31.60	35.23	2.64	-12.69	-1.06		31.60	35.23	-169.47	-14.21
	U_6-U_7	34.63	69.27	2.52	-13.01	-1.06		33.41	21.44	-134.02	-27.84
	U_7-U_8	-69.92	603.38	1.56	3.09	-14.39	11.22	20.79	41.29	-192.18	149.80
	U_8-U_9	531.73	-129.19	8.70	-10.09	-0.41	0.58	837.92	-337.73	694.44	-158.26
	U_9-U_{10}	68.54	43.95	1.97	-1.65	-3.41	-4.89	25.45	-21.40	-44.09	-24.30
	U_{10}-U_{11}	100.48	-176.70	2.58	2.05	-3.24	-6.13	33.34	26.69	-41.92	-79.34
	U_{11}-U_{12}	100.48	-160.14	2.60	2.05	-3.24	-6.13	38.12	27.10	-42.29	-80.28
	U_{12}-U_{13}	-56.66	-218.08	2.30	0.78	-8.51	-5.63	29.73	10.13	-110.04	-72.82
	U_{13}-U_{14}	-173.50	-344.00	1.51	1.24	-12.67	-14.06	19.00	18.57	-163.96	-181.94
	U_{14}-U_{15}	-287.80	-237.44	1.99	1.14	-25.02	-9.42	25.68	14.80	-323.72	-121.91
	U_{15}-U_{16}	-196.20	-337.71	1.94	0.11	-15.86	-4.94	25.10	1.47	-205.24	-89.81
	U_{16}-U_{17}	-295.83	-154.75	0.83	0.15	-20.42	-8.06	19.00	18.57	-290.03	-164.27
	U_{17}-U_{18}	-189.93	-29.96	0.63	-0.60	-15.36	-0.63	8.19	-7.74	-188.73	-8.11
	U_{18}-U_{19}	-179.63	-39.55	0.57	-0.31	-11.27	-1.02	7.31	-7.74	-177.83	-13.25
	U_{19}-U_{20}	-249.78	258.69	0.55	1.41	-11.52	2.20	7.06	-18.22	-148.99	28.44
	U_0-L_1	-28.62	-172.11	5.10	-10.47	-6.40	-4.40	65.21	-133.73	-81.77	-56.82
	L_1-L_2	24.91	-195.34	1.28	-6.51	-4.74	-6.70	53.77	-150.72	-11.09	-76.39
	L_2-L_3	-53.03	-283.30	2.97	-4.08	-10.01	-12.61	37.95	-52.10	-127.84	-161.10
	L_3-L_4	329.68	-329.68	3.10	3.10	-13.10	-13.10	5.83	-5.83	-162.53	-162.53
	L_4-L_5	360.49	-389.97	6.62	1.23	-18.67	-11.62	7.92	15.70	-238.55	-148.49
	L_5-L_6	-403.42	403.42	1.77	1.77	-4.07	-4.07	20.33	20.33	-248.11	-248.11
	L_6-L_7	-349.63	-208.07	2.95	2.91	-21.47	-14.65	37.74	37.22	-274.31	-187.20
	L_7-L_8	-253.78	-280.71	2.29	3.17	-27.90	-12.68	29.28	40.53	-356.49	-161.98
	L_8-L_9	-230.32	-318.64	2.37	3.17	-27.90	-12.68	29.28	40.53	-356.49	-161.98
	L_9-L_{10}	-237.02	39.91	3.30	4.17	-21.08	-3.67	42.16	53.25	-269.26	-72.45
	L_{10}-L_{11}	-152.09	23.39	3.30	3.67	-24.20	-3.52	52.08	53.25	-269.26	-72.45
	L_{11}-L_{12}	-116.69	170.75	3.52	2.83	-15.15	-2.91	46.02	36.17	-193.61	-37.19
	L_{12}-L_{13}	24.91	-195.34	1.28	-6.51	-4.74	-6.70	53.77	-150.72	-11.09	-76.39
	L_{13}-L_{14}	-211.04	1121.68	2.65	2.51	-17.88	18.00	33.81	32.07	-228.48	229.91
	L_{14}-L_{15}	1028.71	-26.69	18.53	-12.27	-1.06	1.01	233.96	-154.85	-13.37	12.75
	L_{15}-L_{16}	-403.42	403.42	1.77	1.77	-4.07	-4.07	20.33	20.33	-248.11	-248.11
	L_{16}-L_{17}	271.38	25.19	4.94	4.43	-5.35	-4.24	62.28	-55.90	-67.70	-53.51
	L_{17}-L_{18}	271.38	25.19	4.94	4.43	-5.35	-4.24	38.26	-55.90	-67.70	-53.51
	L_{18}-L_{19}	196.55	-8.67	3.42	-4.78	-8.36	-7.73	43.20	-60.36	-105.56	-87.44
	L_{19}-L_{20}	48.55	11.41	3.30	2.66	-10.66	-7.96	41.70	33.60	-134.62	-100.50
	L_{20}-L_0	-48.55	-41.60	2.66	3.30	-7.96	-10.66	33.60	41.70	-100.50	-134.62
Structure 2	U_0-U_1	-92.57	-65.85	1.33	1.45	-15.68	-12.30	16.78	18.27	-197.90	-155.30
	U_1-U_2	-59.44	-161.1	2.39	2.45	-20.84	-7.98	29.91	30.81	-249.61	-95.84
	U_2-U_3	-48.31	-31.52	2.43	-0.31	-18.93	-8.54	30.64	-3.90	-239.03	-107.86
	U_3-U_4	10.77	13.63	2.48	2.48	-3.07	-3.07	30.64	30.64	-107.86	-107.86
	U_4-U_5	10.77	137.63	2.48	3.07	-14.49	-0.99	26.02	38.76	-182.90	-12.01
	U_5-U_6	57.22	-122.85	2.92	2.31	-16.10	-2.89	33.08	29.14	-203.20	-36.54
	U_6-U_7	57.22	-122.85	2.92	2.31	-16.10	-2.89	33.08	29.14	-203.20	-36.54
	U_7-U_8	85.41	4.86	2.49	1.09	-14.61	4.47	31.49	13.70	-184.45	-56.45
	U_8-U_9	-13.52	806.37	1.39	1.39	-9.19	9.19	19.68	19.68	-129.71	129.71
	U_9-U_{10}	821.42	-89.58	18.10	-16.69	-1.63	-0.44	1368.50	-393.63	1092.75	-323.81
	U_{10}-U_{11}	-25.92	37.61	1.81	2.03	-10.53	-8.76	23.14	21.42	-169.39	-154.63
	U_{11}-U_{12}	145.61	-52.49	3.60	-5.21	-5.65	-6.50	46.02	-66.59	-72.16	-93.03
	U_{12}-U_{13}	17.52	-88.46	3.17	3.32	-7.67	-8.45	40.45	42.39	-97.96	-92.38
	U_{13}-U_{14}	-25.92	37.61	1.81	2.03	-10.53	-8.76	23.14	21.42	-169.39	-154.63
	U_{14}-U_{15}	-75.13	-230.47	3.33	2.04	-11.56	-10.56	42.53	26.03	-147.67	-134.93
	U_{15}-U_{16}	-208.03	-75.13	2.04	3.33	-10.56	-11.56	35.79	42.53	-134.93	-147.67
	U_{16}-U_{17}	-64.17	-278.54	3.29	2.84	-26.00	-11.01	42.02	36.34	-332.20	-140.68
	U_{17}-U_{18}	-138.59	-64.17	2.84	3.29	-11.01	-26.00	36.34	42.02	-140.68	-332.20
	U_{18}-U_{19}	-274.89	-274.55	2.09	3.29	-32.83	-14.01	26.55	3.68	-419.41	-179.00
	U_{19}-U_{20}	-296.96	-269.01	1.25	0.19	-26.36	-15.55	15.92	2.41	-336.76	-198.61
	U_0-L_1	-28.62	-172.11	5.10	-10.47	-6.40	-4.40	65.21	-133.73	-81.77	-56.82
	L_1-L_2	-154.35	-34.80	0.84	-0.20	-17.07	-4.27	10.67	-2.57	-218.07	-54.53
	L_2-L_3	-136.90	-40.05	0.61	-0.84	-16.11	-4.89	10.67	-2.57	-218.07	-54.53
	L_3-L_4	40.05	-167.61	4.81	-7.45	-4.32	-4.83	62.18	-96.36	-55.91	-82.47
	L_4-L_5	-10.43	-132.23	2.02	-10.95	-3.35	-3.80	26.14	-141.73	-43.28	-49.20
	L_5-L_6	-26.19	-145.13	2.04	-9.61	-3.35	-3.80	26.14	-141.73	-43.28	-49.20
	L_6-L_7	-140.08	-260.72	0.32	-1.11	-11.58	-10.61	4.16	-14.32	-149.79	-139.90
	L_7-L_8	-187.91	-275.87	1.08	-1.51	-14.26	-16.69	14.03	-19.52	-184.50	-215.98
	L_8-L_9	-187.91	-275.87	1.08	-1.51	-14.26	-16.69	14.03	-19.52	-184.50	-215.98
	L_9-L_{10}	-322.39	-140.93	1.43	0.12	-16.87	-7.98	19.57	-2.68	-313.03	-139.36
	L_{10}-L_{11}	-162.87	-104.84	0.82	2.39	-16.50	-4.29	10.57	30.87	-213.44	-55.49
	L_{11}-L_{12}	-147.74	26.71	1.80	2.84	-13.84	-4.61	23.31	36.72	-179.02	-59.68
	L_{12}-L_{13}	-136.90	-40.05	0.61	-0.84	-16.11	-4.89	10.67	-2.57	-218.07	-54.53
	L_{13}-L_{14}	10.81	46.01	2.57	1.50	-8.71	-1.05	33.30	19.34	-125.66	-13.62
	L_{14}-L_{15}	426.14	9.08	2.57	-10.16	-6.60	6.83	169.28	-135.67	-8.06	11.02
	L_{15}-L_{16}	426.14	9.08	2.57	-10.16	-6.60	6.83	169.28	-135.67	-8.06	11.02
	L_{16}-L_{17}	128.06	64.05	2.88	4.92	-2.95	-7.10	38.92	-65.77	-39.42	-64.80
	L_{17}-L_{18}	70.11	43.65	3.09	2.18	-7.52	-6.10	40.08	29.14	-100.41	-108.24
	L_{18}-L_{19}	70.11	43.65	3.09	2.18	-7.52	-6.10	40.08	29.14	-100.41	-108.24
	L_{19}-L_{20}	8.37	-30.47	1.85	-2.65	-15.96	3.62	24.70	-35.42	-213.22	-48.34
Structure 3	U_0-U_1	-92.57	-65.85	1.33	1.45	-15.68	-12.30	16.78	18.27	-197.90	-155.30
	U_1-U_2	-59.44	-161.1	2.39	2.45	-20.84	-7.98	29.91	30.81	-249.61	-95.84
	U_2-U_3	-48.31	-31.52	2.43	-0.31	-18.93	-8.54	30.64	-3.90	-239.03	-107.86
	U_3-U_4	10.77	13.63	2.48	2.48	-3.07	-3.07	30.64	30.64	-107.86	-107.86
	U_4-U_5	10.77	137.63	2.48	3.07	-14.49	-0.99	26.02	38.76	-182.90	-12.01
	U_5-U_6	57.22	-122.85	2.92	2.31	-16.10	-2.89	33.08	29.14	-203.20	-36.54
	U_6-U_7	57.22	-122.85	2.92	2.31	-16.10	-2.89	33.08	29.14	-203.20	-36.54
	U_7-U_8	85.41	4.86	2.49	1.09	-14.61	4.47	31.49	13.70	-184.45	-56.45
	U_8-U_9	-13.52	806.37	1.39	1.39	-9.19	9.19	19.68	19.68	-129.71	129.71
	U_9-U_{10}	821.42	-89.58	18.10	-16.69	-1.63	-0.44	1368.50	-393.63	1092.75	-323.81
	U_{10}-U_{11}	-25.92	37.61	1.81	2.03	-10.53	-8.76	23.14	21.42	-169.39	-154.63
	U_{11}-U_{12}	145.61	-52.49	3.60	-5.21	-5.65	-6.50	46.02	-66.59	-72.16	-93.03
	U_{12}-U_{13}	17.52	-88.46	3.17	3.32	-7.67	-8.45	40.45	42.39	-97.96	-92.38
	U_{13}-U_{14}	-25.92	37.61	1.81	2.03	-10.53	-8.76	23.14	21.42	-169.39	-154.63
	U_{14}-U_{15}	-75.13	-230.47	3.33	2.04	-11.56	-10.56	42.53	26.03	-147.67	-134.93
	U_{15}-U_{16}	-208.03	-75.13	2.04	3.33	-10.56	-11.56	35.79	42.53	-134.93	-147.67
	U_{16}-U_{17}	-64.17	-278.54	3.29	2.84	-26.00	-11.01	42.02	36.34	-332.20	-140.68
	U_{17}-U_{18}	-138.59	-64.17	2.84	3.29	-11.01	-26.00	36.34	42.02	-140.68	-332.20
	U_{18}-U_{19}	-274.89	-274.55	2.09	3.29	-32.83	-14.01	26.55	3.68	-419.41	-179.00
	U_{19}-U_{20}	-296.96	-269.01	1.25	0.19	-26.36	-15.55	15.92	2.41	-336.76	-198.61
	U_0-L_1	-28.62	-172.11	5.10	-10.47	-6.40	-4.40	65.21	-133.73	-81.77	-56.82
	L_1-L_2	-154.35	-34.80	0.84	-0.20	-17.07	-4.27	10.67	-2.57	-218.07	-54.53
	L_2-L_3	-136.90	-40.05	0.61	-0.84	-16.11	-4.89	10.67	-2.57	-218.07	-54.53
	L_3-L_4	40.05	-167.61	4.81	-7.45	-4.32	-4.83	62.18	-96.36	-55.91	-82.47
	L_4-L_5	-10.43	-132.23	2.02	-10.95	-3.35	-3.80	26.14	-141.73	-43.28	-49.20
	L_5-L_6	-26.19	-145.13	2.04	-9.61	-3.35	-3.80	26.14	-141.73	-43.28	-49.20
	L_6-L_7	-140.08	-260.72	0.32	-1.11	-11.58	-10.61	4.16	-14.32	-149.79	-139.90
	L_7-L_8	-187.91	-275.87	1.08	-1.51	-14.26	-16.69	14.03	-19.52	-184.50	-215.98
	L_8-L_9	-187.91	-275.87	1.08	-1.51	-14.26	-16.69	14.03	-19.52	-184.50	-215.98
	L_9-L_{10}	-322.39	-140.93	1.43	0.12	-16.87	-7.98	19.57	-2.68	-313.03	-139.36
	L_{10}-L_{11}	-162.87	-104.84	0.82	2.39	-16.50	-4.29	10.57	30.87	-213.44	-55.49
	L_{11}-L_{12}	-147.74	26.71	1.80	2.84	-13.84	-4.61	23.31	36.72	-179.02	-59.68
	L_{12}-L_{13}	-136.90	-40.05	0.61	-0.84	-16.11	-4.89	10.67	-2.57	-218.07	-54.53
	L_{13}-L_{14}	10.81	46.01	2.57	1.50	-8.71	-1.05	33.30	19.34	-125.66	-13.62
	L_{14}-L_{15}	426.14	9.08	2.57	-10.16	-6.60	6.83	169.28	-135.67	-8.06	11.02
	L_{15}-L_{16}	426.14	9.08	2.57	-10.16	-6.60	6.83	169.28	-135.67	-8.06	11.02
	L_{16}-L_{17}	128.06	64.05	2.88	4.92	-2.95	-7.10	38.92	-65.77	-39.42	-64.80
	L_{17}-L_{18}	70.11	43.65	3.09	2.18	-7.52	-6.10	40.08	29.14	-100.41	-108.24
	L_{18}-L_{19}	70.11	43.65	3.09	2.18	-7.52	-6.10	40.08	29.14	-100.41	-108.24
	L_{19}-L_{20}	8.37	-30.47	1.85	-2.65	-15.96	3.62	24.70	-35.42	-213.22	-48.34

ZZ Axis Moment Properties

Member	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)	S_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	I_z (in^4)	I_{xy} (in^4)	Shape Factor	M_p (k-in)	Formula (If Term = F/Sy)	M_y (k-in)
U_0-U_1	-122.30	-124.89	-322.03	-117.97	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880041
U_1-U_2	-65.16	-129.45	-322.03	-117.97	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880041
U_2-U_3	-55.31	-72.49	-196.94	-198.68	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880041
U_3-U_4	-55.66	-138.37	-370.34	-44.15	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880041
U_4-U_5	-36.61	-129.65	-249.59	17.32	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880041
U_5-U_6	-37.70	-210.44	-87.77	0.00	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880041
U_6-U_7	-43.83	-234.46	-257.65	-122.70	90.2	90.24	75.71	127.46	2147	1328.6	1.41	4206	0.99880041
U_7-U_8	-168.67	-81.62	-356.72	188.55	90.2	90.24	75.71	127.46	2147	1328.6	1.41	4206	0.99880041
U_8-U_9	-637.52	-337.73	694.44	-158.26	130.3	130.26	105.11	180.77	2955	1795.3	1.39	5955	0.99880041
U_9-U_{10}	-122.19	-29.32	-39.78	32.28	25.55	95.6	96.61	79.12	139.29	2172	1.307	4465	0.99873129
U_{10}-U_{11}	-173.97	-195.01	76.13	-332.84	96.6	96.61	83.55	130.29	2174	1387.9	1.40	4465	0.99873129
U_{11}-U_{12}	-168.38	-179.37	-342.87	-327.13	96.6	96.61	83.55	130.29	2174	1387.9	1.40	4465	0.99873129
U_{12}-U_{13}	-67.01	-270.33	-268.71	-378.15	151.6	151.76	130.94	219.77	4535	2532.6	1.45	7252	0.99905852
U_{13}-U_{14}	-200.72	-421.00	-49.56	-184.82	151.6	151.76	130.94	219.77	4535	2532.6	1.45	7252	0.99905852
U_{14}-U_{15}	-340.75	-289.43	-794.97	-467.15	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899921
U_{15}-U_{16}	-222.43	-437.11	-531.88	-555.77	188.5	188.51	164.41	274.68	5476	3413.6	1.46	9064	0.99899921
U_{16}-U_{17}	-316.68	-186.64	-767.51	-339.73	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899921
U_{17}-U_{18}	-236.26	-49.01	-505.26	-49.50	127.3	127.32	110.40	186.23	3668	2526.5	1.46	6146	0.99907156
U_{18}-U_{19}	-224.02	-66.57	-423.12	-63.63	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99880042
U_{19}-U_{20}	-315.52	312.61	-518.39	373.04	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99880042
U_0-L_1	-67.57	-397.60	-143.92	-297.61	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861321
L_1-L_2	-51.07	-352.72	-110.78	-252.46	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861321
L_2-L_3	-19.61	-436.02	-230.13	-577.71	212.6	212.59	170.43	297.57	4967	2491.6	1.40	9820	0.99857177
L_3-L_4	-583.13	-583.13	-1523.75	-1523.75	212.6	212.59	170.43	297.57	4967	2491.6	1.40	9820	0.99857177
L_4-L_5	-498.30	-486.54	-778.71	-699.99	251.7	251.73	219.41	365.62	7161	3870.6	1.45	12066	0.99859197
L_5-L_6	-1265.10	-1265.10	-2098.31	-2098.31	251.7	251.73	219.41	365.62	7161	3870.6	1.45	12066	0.99859197
L_6-L_7	-405.45	-222.89	-811.12	-514.64	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885935
L_7-L_8	-291.95	-312.23	-763.35	-575.49	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885935
L_8-L_9	-388.45	-88.13	-792.72	-263.55	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885935
L_9-L_{10}	-253.29	-120.59	-658.14	-42.63	181.9	181.87	147.20	249.02	3787	2047.6	1.37	8218	0.99847791
L_{10}-L_{11}	-130.01	-59.23	-448.27	-21.85	97.1	97.15	78.78	142.56	2586	1649.1	1.47	4704	0.99901381
L_{11}-L_{12}	-63.17	-269.00	-463.40	-173.63	156.6	156.80	128.72	214.81	3285	1852.3	1.37	7089	0.99854421
L_{12}-L_{13}	-19.61	-436.02	-230.13	-577.71	212.6	212.59	170.43	297.57	4967	2491.6	1.40	9820	0.99857177
L_{13}-L_{14}	-230.40	-1499.67	-571.38	-1757.07	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99859350
L_{14}-L_{15}	-1566.48	-236.00	-1319.94	-18.12	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99859350
L_{15}-L_{16}	-1265.10	-1265.10	-2098.31	-2098.31	251.7	251.73	219.41	365.62	7161	3870.6	1.45	12066	0.99859197
L_{16}-L_{17}	-433.98	-39.94	264.78	-36.62	173.0	173.03	144.25	241.17	3969	2180.7	1.39	7699	0.99852706
L_{17}-L_{18}	-433.98	-39.94	264.78	-36.62	173.0	173.03	144.25	241.17	3969	2180.7	1.39	7699	0.99852706
L_{18}-L_{19}	-259.67	-89.72	66.28	-137.94	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861321
L_{19}-L_{20}	-117.32	58.50	-111.90	-113.62	134.9	134.91	112.79	189.26	3072	1689.4	1.40	6240	0.99866072
L_0-L_1	-67.57	-397.60	-143.92	-297.61	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861321
L_1-L_2	-51.07	-352.72	-110.78	-252.46	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861321
L_2-L_3	-22.97	-46.04	-373.55	-181.18	144.8	144.84	120.49	209.19	3613	2101.0	1.44	6903	0.99868574
L_3-L_4	-39.54	-39.54	-181.25	-181.25	144.8	144.84	120.49	209.19	3613	2101.0	1.44	6903	0.99868574
L_4-L_5	-47.83	229.31	-223.77	163.31	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861321
L_5-L_6	-117.39	197.58	-189.77	112.20	127.8	127.83	105.84	178.51	2762	1538.8	1.40	5891	0.99861321
L_6-L_7	-151.96	24.12	-128.76	-67.07	185.7	185.70	154.12	268.55	4767	2721.4	1.44	8796	0.99880804
L_7-L_8	-151.96	24.12	-128.76	-67.07	185.7	185.70	154.12	268.55	4767	2721.4	1.44	8796	0.99880804
L_8-L_9	-366.50	-393.63	1092.75	-323.81	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99859350
L_9-L_{10}	-169.39	-154.63	1368.50	-393.63	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99859350
L_{10}-L_{11}	-23.14	-21.42	-169.39	-154.63	144.8	144.84	120.49	209.19	3613	2101.0	1.44	6903	0.99868574
L_{11}-L_{12}	-46.02	-66.59	-72.16	-93.03	156.6	156.80	128.72	214.81	3285	1852.3	1.37	7089	0.99854421
L_{12}-L_{13}	-40.45	42.39	-97.96	-92.38	156.6	156.80	134.92	214.81	3285	1852.3	1.37	7089	0.99854421
L_{13}-L_{14}	-23.14	-21.42	-169.39	-154.63	144.8	144.84	120.49	209.19	3613	2101.0	1.44	6903	0.99868574
L_{14}-L_{15}	-42.53	26.03	-147.67	-134.93	156.6	156.80	128.72	214.81	3285	1852.3	1.37	7089	0.99854421
L_{15}-L_{16}	-35.79	42.53	-134.93	-147.67	156.6	156.80	134.92	214.81	3285	1852.3	1.37	7089	0.99854421
L_{16}-L_{17}	-75.36	-69.88	-164.57	-222.09	156.8	156.80	134.92	214.81	3285	1852.3	1.37	7089	0.99854421
L_{17}-L_{18}	-103.63	-38.72	-79.53	-153.77	156.8	156.80	134.92	214.81	3285	1852.3	1.37	7089	0.99854421
L_{18}-$L

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: 3F1
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-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	L_0-L_1	-49.04	-101.19	3.78	-5.75	-0.60	0.87	50.46	-76.79	-7.96	8.95
	L_1-L_2	130.93	-112.57	1.81	-7.53	-5.10	3.73	201.66	-227.05	81.60	-21.09
	L_2-L_3	130.57	-79.42	2.93	-1.85	-11.50	-8.74	10.86	-24.65	-153.60	-118.62
	L_3-L_4	18.53	15.80	0.89	3.33	-12.42	-6.75	11.94	44.43	-165.90	-90.20
	L_4-L_5	-68.87	310.29	2.62	1.04	-0.35	0.23	34.34	35.03	-191.66	8.46
	L_5-L_6	7.25	228.45	2.02	3.84	-6.60	-0.91	26.92	52.60	-114.40	0.00
	L_6-L_7	62.67	177.71	2.72	-0.24	-17.74	-7.17	26.92	52.60	-114.40	0.00
	L_7-L_8	7.98	461.19	7.76	3.27	-5.97	7.95	10.21	43.70	-79.69	106.26
	L_8-L_9	439.37	-23.36	7.53	-5.22	-5.28	0.13	97.41	-2.82	-3.62	1.71
	L_9-L_{10}	204.91	-116.77	3.89	-6.74	-6.42	-1.42	97.41	-2.82	-3.62	1.71
	L_{10}-L_{11}	168.38	-118.38	3.55	1.68	-3.05	-2.93	45.89	21.70	-39.46	-37.95
	L_{11}-L_{12}	234.50	-217.73	2.86	1.02	-3.72	-2.67	38.21	-85.63	-48.28	-26.32
	L_{12}-L_{13}	-19.53	-128.46	2.22	1.07	-6.51	-6.28	28.66	-13.96	-84.22	-81.27
	L_{13}-L_{14}	179.75	-425.17	4.47	-11.92	-7.55	-9.90	57.80	-154.20	-97.75	-125.04
	L_{14}-L_{15}	405.18	-20.07	4.23	-0.56	-20.59	4.23	57.80	-154.20	-97.75	-125.04
	L_{15}-L_{16}	-209.34	318.54	0.83	0.10	-12.87	-10.56	10.71	1.27	-166.50	-136.46
	L_{16}-L_{17}	374.18	13.83	0.60	-0.23	-13.54	-2.31	8.42	-2.94	-175.19	-4.04
	L_{17}-L_{18}	-170.99	204.48	0.32	-0.55	-8.07	0.95	4.18	-7.06	-104.39	12.29
	L_{18}-L_{19}	-297.50	250.73	0.42	-0.65	-3.31	0.42	4.18	-7.06	-104.39	12.29
	L_{19}-L_{20}	-99.23	0.16	0.32	-0.33	-7.21	3.10	4.10	-4.24	-60.31	40.12
	L_{20}-L_{21}	5.36	-218.26	2.56	-8.12	-0.31	0.74	32.69	-103.68	-4.01	9.43
	L_{21}-L_{22}	16.36	-247.31	2.56	-8.12	-0.31	0.74	43.32	-116.59	-24.53	40.14
	L_{22}-L_{23}	1.07	-191.80	2.79	-6.88	-4.49	4.92	47.76	-97.62	-77.35	42.91
	L_{23}-L_{24}	42.96	-257.61	2.79	-10.14	-7.69	4.92	36.10	-116.55	-62.24	19.82
	L_{24}-L_{25}	-286.08	-268.86	1.01	-3.47	-15.00	-11.48	12.87	-44.31	-191.65	-146.61
	L_{25}-L_{26}	-289.04	-42.03	2.33	1.01	-7.13	-1.48	1.60	-52.55	-200.95	-173.85
	L_{26}-L_{27}	-467.27	-273.20	1.93	2.52	-23.01	-16.21	24.71	-37.24	-264.00	-197.02
	L_{27}-L_{28}	-310.47	-45.78	2.38	4.38	-20.32	8.33	30.34	-55.91	-209.65	-106.39
	L_{28}-L_{29}	-272.10	-223.07	2.84	1.23	-20.89	4.23	36.32	-33.82	-180.45	-8.04
	L_{29}-L_{30}	-261.82	188.40	2.11	4.31	-11.98	-1.10	26.92	-55.09	-153.10	-14.11
	L_{30}-L_{31}	-271.20	-33.97	2.64	2.07	-11.13	-2.47	36.32	-33.82	-180.45	-8.04
	L_{31}-L_{32}	-131.41	389.19	2.42	4.31	-10.31	-0.16	30.86	-55.09	-131.76	-2.03
	L_{32}-L_{33}	-164.24	-140.43	3.80	-1.13	-12.79	-2.66	48.55	-14.45	-163.45	-34.28
	L_{33}-L_{34}	-267.36	-99.24	3.80	-1.13	-12.79	-2.66	48.55	-14.45	-163.45	-34.28
	L_{34}-L_{35}	911.85	-326.76	15.04	-6.79	-0.67	-0.01	189.83	-85.74	8.43	-0.33
	L_{35}-L_{36}	1,089.04	42.03	2.33	1.01	-7.13	-1.48	36.58	-52.55	-140.49	-19.72
	L_{36}-L_{37}	515.61	35.20	6.20	-3.42	-4.18	-1.86	78.33	-43.22	-52.72	-23.51
	L_{37}-L_{38}	1,018.44	35.20	6.20	-3.42	-4.18	-1.86	78.33	-43.22	-52.72	-23.51
	L_{38}-L_{39}	252.11	-256.04	4.09	1.77	-4.61	-3.66	51.28	-22.33	-82.19	-67.08
	L_{39}-L_{40}	230.58	-46.22	2.88	-1.11	-6.34	-4.89	36.34	-140.24	-80.03	-61.79
	L_{40}-L_{41}	43.89	-183.34	1.94	1.73	-13.36	-17.47	24.53	-21.87	-168.72	-220.55
	L_{41}-L_{42}	43.89	-183.34	1.94	1.73	-13.36	-17.47	24.53	-21.87	-168.72	-220.55
	L_{42}-L_{43}	-104.37	-8.61	1.18	3.26	-15.46	-5.97	14.95	-41.10	-195.17	-75.41
	L_{43}-L_{44}	-104.37	-8.61	1.18	3.26	-15.46	-5.97	14.95	-41.10	-195.17	-75.41
	L_{44}-L_{45}	65.51	172.40	1.59	3.60	-9.65	-3.37	19.62	45.50	-121.85	-42.57
	L_{45}-L_{46}	-30.91	151.01	2.90	1.42	-12.88	1.87	35.36	17.98	-162.66	-23.65
	L_{46}-L_{47}	-19.86	-197.53	2.40	-1.70	-11.93	-6.81	30.30	-21.41	-150.56	-85.99
	L_{47}-L_{48}	747.52	-264.15	15.40	-6.48	-0.90	0.08	126.86	-484.21	956.18	-342.12
	L_{48}-L_{49}	-140.80	-80.21	2.42	-0.37	-11.06	-0.74	30.96	-4.65	-141.36	-9.47
	L_{49}-L_{50}	269.87	-113.99	3.64	-1.03	-9.84	-2.44	58.27	-108.59	-44.62	-43.47
	L_{50}-L_{51}	192.40	-145.70	4.56	-8.50	-3.49	-3.40	58.27	-108.59	-44.62	-43.47
	L_{51}-L_{52}	1,034.33	-1,039.04	2.47	-0.29	-0.29	0.30	46.10	-80.15	-3.80	3.93
	L_{52}-L_{53}	95.69	-212.39	3.69	-6.71	-6.10	7.31	47.16	-85.70	-77.95	-53.40
	L_{53}-L_{54}	29.86	-113.96	3.69	-6.71	-6.10	7.31	47.16	-85.70	-77.95	-53.40
	L_{54}-L_{55}	-182.72	415.40	3.34	1.80	-20.39	-11.59	42.72	-23.00	-260.49	-148.05
	L_{55}-L_{56}	-370.16	-165.14	2.26	0.55	-23.27	9.48	28.85	7.00	-297.32	-121.06
	L_{56}-L_{57}	-224.09	-218.61	2.26	0.55	-23.27	9.48	28.85	7.00	-297.32	-121.06
	L_{57}-L_{58}	-304.14	-22.17	0.93	-0.22	-17.11	-3.91	11.26	-2.75	-218.63	-48.68
	L_{58}-L_{59}	-304.14	-22.17	0.93	-0.22	-17.11	-3.91	10.21	-2.75	-218.63	-48.68
	L_{59}-L_{60}	-222.88	59.03	0.70	-0.57	-13.52	2.48	8.97	-7.27	-147.17	31.74
	L_{60}-L_{61}	-222.88	59.03	0.70	-0.57	-13.52	2.48	8.97	-7.27	-147.17	31.74
	L_{61}-L_{62}	42.72	-120.03	3.49	-6.20	-0.29	0.30	45.10	-80.15	-3.80	3.93
	L_{62}-L_{63}	192.98	-177.52	3.68	-6.56	-0.76	1.43	47.56	-84.93	-9.87	-18.45
	L_{63}-L_{64}	55.38	-320.81	2.72	-6.21	-5.40	-6.91	31.68	-183.34	-54.02	-79.77
	L_{64}-L_{65}	55.38	-320.81	2.72	-6.21	-5.40	-6.91	35.13	-183.34	-69.82	-89.38
	L_{65}-L_{66}	-64.00	-370.85	0.84	-20.31	-11.05	-12.84	10.88	-262.80	-143.10	-166.15
	L_{66}-L_{67}	-370.60	82.40	1.09	1.85	-18.01	-0.76	14.21	23.94	-239.54	-10.16
	L_{67}-L_{68}	-370.60	82.40	1.09	1.85	-18.01	-0.76	14.21	23.94	-239.54	-10.16
	L_{68}-L_{69}	-200.72	-149.84	1.36	2.18	-8.47	-4.82	17.54	28.19	-109.58	-10.64
	L_{69}-L_{70}	-200.72	-149.84	1.36	2.18	-8.47	-4.82	17.54	28.19	-109.58	-10.64
	L_{70}-L_{71}	-131.75	166.74	2.56	-0.18	-8.46	2.39	33.12	-2.35	-109.42	30.90
	L_{71}-L_{72}	-131.75	166.74	2.56	-0.18	-8.46	2.39	33.12	-2.35	-109.42	30.90
	L_{72}-L_{73}	361.79	-17.90	0.70	-0.28	-0.27	0.10	116.26	-30.49	-3.63	1.31
	L_{73}-L_{74}	97.95	21.79	4.54	-0.01	-4.75	-2.43	60.59	-80.28	-43.48	-32.76
	L_{74}-L_{75}	97.95	21.79	4.54	-0.01	-4.75	-2.43	60.59	-80.28	-43.48	-32.76
	L_{75}-L_{76}	189.89	5.64	3.57	-8.43	-4.30	-5.76	47.64	-112.59	-57.42	-50.95
	L_{76}-L_{77}	189.89	5.64	3.57	-8.43	-4.30	-5.76	47.64	-112.59	-57.42	-50.95
	L_{77}-L_{78}	-38.98	-56.51	2.05	-5.94	-11.49	-8.89	27.37	-12.54	-153.49	-118.29
	L_{78}-L_{79}	-38.98	-56.51	2.05	-5.94	-11.49	-8.89	27.37	-12.54	-153.49	-118.29
	L_{79}-L_{80}	-66.65	-75.29	0.58	-3.07	-7.42	-3.36	7.70	-7.59	-99.17	-64.91

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$_y$/S$_{top}$	M_2 (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{mx(+)}$	Equivalent Mom. Factor $C_{mx(-)}$
Structure 1	L_0-L_1	1,885	-231.37	-74.10	-119.81	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.008	0.60	0.600
	L_1-L_2	201.66	-277.05	81.60	-211.09	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.726	0.31	0.31
	L_2-L_3	10.86	-24.65	-153.60	-118.62	83.6	83.58	91.00	125.40	3469	1372.0	1.26	4141	0.99911881	3294.8	0.505	0.80	0.80
	L_3-L_4	39.61	78.33	-191.09	-96.72	99.9	99.93	84.14	125.49	3469	1372.0	1.26	4141	0.99911881	3294.8	0.505	0.80	0.80
	L_4-L_5	44.12	449.91	34.51	414.72	52.9	52.99	76.68	114.47	3186	1260.9	1.26	3777	0.99913135	3052.5	-0.083	0.46	0.46
	L_5-L_6	44.42	365.36	-139.89	284.16	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99923440	3448.5	0.122	0.65	0.65
	L_6-L_7	44.42	365.36	-139.89	-591.50	179.7	179.69	170.68	251.43	6743	3050.7	1.40	8297	0.99912322	5924.6	0.326	0.93	0.93
	L_7-L_8	476.26	115.15	103.72	103.9	153.89	138.16	298.43	597.2	24607	7134.2	1.29	20716	0.99952625	8330.7	0.140	0.54	0.54
	L_8-L_9	216.86	17.44	-357.99	42.60	121.1	121.08	112.11	157.22	3591	1640.0	1.30	5188	0.99904481	3891.8	-0.119	0.55	0.55
	L_9-L_{10}	263.26	321.67	-404.89	281.55	53.6	53.58	74.62	100.97	2740	1096.2	1.21	3332	0.99900547	2755.5	-0.342	0.31	0.31
	L_{10}-L_{11}	4.10	-4.24	-93.31	-292.30	52.9	52.97	83.6	83.58	67.49	100.97	2740	1098.2	1.21	3332	0.99900547	2755.5	-0.209
	L_{11}-L_{12}	-123.60	-3.31	-292.30	52.37	83.6	83.58	67.49	100.97	2740	1098.2	1.21	3332	0.99900547	2755.5	-0.209	0.52	0.52
	L_{12}-L_{13}	49.47	-418.52	1.75	-271.47	122.0	122.01	103.28	148.92	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.118	0.55	0.55
	L_{13}-L_{14}	266.71	-473.68	37.31	-221.13	122.0	122.01	103.28	148.92	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.118	0.55	0.55
	L_{14}-L_{15}	47.76	-350.24	-73.17	-331.13	157.0	157.00	151.98	208.63	4946	2118.1	1.31	6786	0.99906088	5176.2	-0.136	0.55	0.55
	L_{15}-L_{16}	47.76	-350.24	-73.17	-331.13	157.0	157.00	151.98	208.63	4946	2118.1	1.31	6786	0.99906088	5176.2	-0.136	0.55	0.55
	L_{16}-L_{17}	355.18	-446.12	621.05	-679.11	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10583	0.99952244	5746.8	0.932	0.97	0.97
	L_{17}-L_{18}	355.18	-446.12	621.05	-679.11	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10583	0.99952244	5746.8	0.932	0.97	0.97
	L_{18}-L_{19}	179.88	-419.92	448.14	-364.92	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10583	0.99952244	5746.8	0.932	0.97	0.97
	L_{19}-L_{20}	-579.33	-306.75	-989.65	-624.35	216.3	216.33	205.74	344.78	7625	3425.8	1.99	11719	0.99952625	8330.7	0.140	0.54	0.54
	L_{20}-L_{21}	364.17	13.17	-741.16	-197.81	255.7	255.71	195.15	274.47	5445	2642.2	1.33	9057	0.99895427	6781.3	0.267	0.71	0.71
	L_{21}-L_{22}	364.17	333.96	-588.36	-492.04	255.7	255.71	195.15	274.47	5445	2642.2	1.33	9057	0.99895427	6781.3	0.267	0.71	0.71
	L_{22}-L_{23}	355.37	316.54	-539.39	226.58	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251	0.99906087	4912.7	-0.420	0.43	0.43
	L_{23}-L_{24}	355.37	316.54	-539.39	226.58	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251	0.99906087	4912.7	-0.420	0.43	0.43
	L_{24}-L_{25}	249.40	238.21	-307.53	-307.42	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251	0.99906087	4912.7	-0.420	0.43	0.43
	L_{25}-L_{26}	249.40	238.21	-307.53	-307.42	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251	0.99906087	4912.7	-0.420	0.43	0.43
	L_{26}-L_{27}	130.70	577.45	-342.12	503.30	165.6	165.55	155.01	222.43	5842	2444.6	1.34	7340	0.99916215	5408.6	-0.226	0.51	0.51
	L_{27}-L_{28}	150.39	-221.34	-425.99	-227.12	226.0	225.96	215.39	304.84	6891	3199.4	1.35	10352	0.99916215	7449.1	0.531	0.81	0.81
	L_{28}-L_{29}	150.39	-325.29	-425.99	-227.12	226.0	225.96	215.39	304.84	6891	3199.4	1.35	10352	0.99916215	7449.1	0.531	0.81	0.81
	L_{29}-L_{30}	1432.19	-536.25	1174.44	-424.89	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99900039	8222.0	-0.374	0.45	0.45
	L_{30}-L_{31}	1432.19	-536.25	1174.44	-424.89	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99900039	8222.0	-0.374	0.45	0.45
	L_{31}-L_{32}	1,027.65	-397.16	1,000.10	-319.95	219.3	219.39	208.80	304.84	6891	3199.4	1.35	10352	0.99916215	7449.1	-0.531	0.81	0.81
	L_{32}-L_{33}	772.12	-101.94	601.76	-76.32	180.3	180.26	169.70	249.67	6400	2721.8	1.36	9701	0.99915724	6943.6	-0.132	0.55	0.55
	L_{33}-L_{34}	772.12	-101.94	601.76	-76.32	180.3	180.26	169.70	249.67	6400	2721.8	1.36	9701	0.99915724	6943.6	-0.132	0.55	0.55
	L_{34}-L_{35}	394.41	-3.47	220.89	-92.57	127.4	127.41	116.82	157.02	3868	1501.0	1.23	5182	0.99898898	4200.3	-0.009	0.60	0.60
	L_{35}-L_{36}	394.41	-3.47	220.89	-92.57	127.4	127.41	116.82	157.02	3868	1501.0	1.23	5182	0.99898898	4200.3	-0.009	0.60	0.60
	L_{36}-L_{37}	546.99	-242.40	199.71	-140.41	127.4	127.41	108.77	157.02	3868	1501.0	1.23	5182	0.99898898	4200.3	-0.699	0.32	0.32
	L_{37}-L_{38}	546.99	-242.40	199.71	-140.41	127.4	127.41	108.77	157.02	3868	1501.0	1.23	5182	0.99898898	4200.3	-0.699	0.32	0.32
	L_{38}-L_{39}	88.94	-209.92	-162.28	-525.06	155.6	155.64	142.40	203.60	4974	2094.1	1.31	6719	0.99908151	5131.4	0.309	0.72	0.72
	L_{39}-L_{40}	88.94	-209.92	-162.28	-525.06	155.6	155.64	142.40	203.60	4974	2094.1	1.31	6719	0.99908151	5131.4	0.309	0.72	0.72
	L_{40}-L_{41}	116.25	40.93	-389.41	-113.03	155.6	155.64	142.40	203.60	4974	2094.1	1.31	6719	0.99908151	5131.4	0.284	0.71	0.71
	L_{41}-L_{42}	116.25	40.93	-389.41	-113.03	155.6	155.64	142.40	203.60	4974	2094.1	1.31	6719	0.99908151	5131.4	0.284	0.71	0.71
	L_{42}-L_{43}	-69.68	284.57	-243.56	170.07	127.4	127.41	116.82	157.02	3868	1501.0	1.23	5182	0.99898898	4200.3	-0.210	0.52	0.52
	L_{43}-L_{44}	5.79	219.89	251.65	227.06	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251	0.99906087	4912.7	0.902	0.24	0.24
	L_{44}-L_{45}	5.79	219.89	251.65	227.06	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251	0.99906087	4912.7	0.902	0.24	0.24
	L_{45}-L_{46}	-49.97	668.81	-262.25	606.68	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.008	0.60	0.60
	L_{46}-L_{47}	1,034.33	-1,039.04	2.47	-0.29	-0.29	0.30	46.10	-80.15	-3.80	3.93	1.00	116	0.99966102	2755.5	-0.757	0.30	0.30
	L_{47}-L_{48}	747.52	-264.15	15.40	-6.48	-0.90	0.08	126.86	-484.21	956.18	-342.12	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452
	L_{48}-L_{49}	-140.80	-80.21	2.42	-0.37	-11.06	-0.74	30.96	-4.65	-141.36	-9.47	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332
	L_{49}-L_{50}	269.87	-113.99	3.64	-1.03	-9.84	-2.44	58.27	-108.59	-44.62	-43.47	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332
	L_{50}-L_{51}	192.40	-145.70	4.56	-8.50	-3.49	-3.40	58.27	-108.59	-44.62	-43.47	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332
	L_{51}-L_{52}	1,034.33	-1,039.04	2.47	-0.29	-0.29	0.30	46.10	-80.15	-3.80	3.93	1.00	116	0.99966102	2752.8	-0.439	0.42	0.42
	L_{52}-L_{53}	95.69	-212.39	3.69	-6.71	-6.10	7.31	47.16	-85.70	-77.95	-53.40	83.6	83.58	74.62	100.97	2740	1098.2	1.21	3332
	L_{53}-L_{54}	29.86	-113.96	3.69	-6.71	-6.10	7.31	47.16	-85.70	-77.95	-53.40	83.6	83.58	74.62	100.97	2740	1098.2	1.21	3332
	L_{54}-L_{55}	-182.72	415.40	3.34	1.80	-20.39	-11.59	42.72	-23.00	-260.49	-148.05	83.6	83.58	74.62	100.97	2740	1098.2	1.21	3332
	L_{55}-L_{56}	-370.16	-165.14	2.26	0.55	-23.27	9.48	28.85	7.00	-297.32	-121.06	83.6	83.58	74.62	100.97	2740	1098.2	1.21	3332
	L_{56}-L_{57}	-224.09	-218.61	2.26	0.55	-23.27	9.48	28.85	7.00	-297.32	-121.06	83.6	83.58	74.62	100.97	2740	1098.2	1.21	3332
	L_{57}-L_{58}	-304.14	-22.17	0.93	-0.22	-17.11	-3.91	11.26	-2.75	-218.63	-48.68	83.6	83.58	74.62	100.97	2740	1098.2	1.21	3332
	L_{58}-L_{59}	-304.14	-22.17	0.93	-0.22	-17.11	-3.91	10.21	-2.75	-218.63	-48.68	83.6	83.58	74.62	100.97	2740	1098.2	1.21	3332
	L_{59}-L_{60}	-222.88	59.03	0.70	-0.57	-13.52	2.48	8.97	-7.27	-147.17	31.74	83.6	83.58	74.62	100.97	2740	1098.2	1.21	3332
	L_{60}-L_{61}	-222.88	59.03	0.70	-0.57	-13.52	2.48	8.97	-7.27	-147.17	31.74	83.6	83.58	74.62	100.97	2740	1098.2	1.21	3332
	L_{61}-L_{62}	42.72	-120.03	3.49	-6.20	-0.29	0.30	45.10	-80.15	-3.80	3.93	1.00	116	0.99966102	2752.8	-0.439	0.42	0.42
	L_{62}-L_{63}	192.98	-177.52	3.68	-6.56	-0.76	1.43	47.56	-84.93	-9.87	-18.45	83.6	83.58	74.62	100.97	2740	1098.2	1.21	3332
	L_{63}-L_{64}	55.38	-320.81	2.72	-6.21	-5.40	-6.91	31.68	-183.34	-54.02	-79.77	83.6	83.58	74.62	100.97	2740	1098.2	1.21	3332
	L_{64}-L_{65}	55.38	-320.81	2.72	-6.21	-5.40	-6.91	35.13	-183.34	-69.82	-89.38	83.6	83.58	74.62	100.97	2740	1098.2	1.21	3332
	L_{65}-L_{66}	-64.00	-370.85	0.84	-20.31	-11.05	-12.84	10.88	-262.80	-143.10	-166.15	83.6	83.58	74.62	100.97	2740	1098.2	1.21	3332
	L_{66}-L_{67}	-370.60	82.40	1.09	1.85	-18.01	-0.76	14.21	23.94	-239.54	-10.16	83.6	83.58	74.62	100.97	2740	1098.2	1.21	3332
	L_{67}-L_{68}	-370.60	82.40	1.09	1.85	-18.01	-0.76	14.21	23.94	-239.54	-10.16	83.6	83.58	74.62	100.97	2740	1098.2	1.21	3332
	L_{68}-L_{69}	-200.72	-149.84	1.36	2.18	-8.47	-4.82	17.54	28.19	-109.58	-10.64	83.6	83.58	74.62	100.97

Moment (Start) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).

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

Load Rating Analysis - Truss Spans

Loading: HL-93

Condition: As-inspected

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

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

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

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

M_2 Information — ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-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)
North Truss Vehicle	Structure 1	U_0–L_1	-55.75	82.39	0.46	-0.58	-3.53	3.85	0.00	0.00	0.00	0.00
		U_1–L_1	-14.37	23.26	0.60	-0.60	-3.16	3.08	0.00	0.00	0.00	0.00
		U_1–L_2	-5.17	5.37	0.72	-0.91	-2.56	2.91	0.00	0.00	0.00	0.00
		U_2–L_2	36.81	-39.20	1.76	-1.54	-2.20	2.35	0.00	0.00	0.00	0.00
		U_2–L_3	49.94	-49.31	2.33	-2.21	-0.73	0.96	0.00	0.00	0.00	0.00
		U_3–L_3	57.83	-70.07	2.70	-3.03	-4.24	0.98	0.00	0.00	0.00	0.00
		U_3–L_4	67.62	-68.81	3.27	-3.01	-4.44	1.26	0.00	0.00	0.00	0.00
		U_4–L_4	102.14	-112.44	4.00	-4.10	-0.10	0.09	0.00	0.00	0.00	0.00
		U_4–L_5	-10.55	7.04	4.84	-5.73	-3.53	4.24	0.00	0.00	0.00	0.00
		U_5–L_5	-144.63	166.05	3.28	-0.28	-3.32	3.65	0.00	0.00	0.00	0.00
		U_5–L_6	-101.27	95.46	0.18	-0.17	-2.78	3.04	0.00	0.00	0.00	0.00
		U_6–L_6	-111.05	108.51	0.39	-0.39	-3.15	3.52	0.00	0.00	0.00	0.00
		U_6–L_7	-96.41	93.86	0.55	-0.61	-3.15	3.15	0.00	0.00	0.00	0.00
		U_7–L_7	-60.90	75.93	0.77	-0.76	-2.93	3.05	0.00	0.00	0.00	0.00
		U_7–L_8	-33.93	39.66	0.91	-0.92	-2.58	2.91	0.00	0.00	0.00	0.00
		U_8–L_8	8.32	-15.88	2.79	-2.90	-1.50	1.41	0.00	0.00	0.00	0.00
		U_8–L_9	47.73	-50.39	2.50	-2.98	-1.69	1.79	0.00	0.00	0.00	0.00
		U_9–L_9	61.54	-72.81	2.85	-2.93	-0.40	0.40	0.00	0.00	0.00	0.00
		U_9–L_{10}	133.07	-138.05	4.80	-5.04	-0.09	1.06	0.00	0.00	0.00	0.00
		U_{10}–L_{10}	158.01	-154.56	5.53	-5.41	-0.57	0.51	0.00	0.00	0.00	0.00
		U_{10}–L_{11}	131.43	-213.81	3.97	-5.11	-0.25	0.41	0.00	0.00	0.00	0.00
		U_{11}–L_{11}	144.68	187.26	0.42	-0.54	-4.26	4.95	0.00	0.00	0.00	0.00
		U_{11}–L_{12}	-122.98	131.23	0.52	-0.53	-4.44	4.40	0.00	0.00	0.00	0.00
		U_{12}–L_{12}	117.72	129.56	0.54	-0.64	-4.42	4.32	0.00	0.00	0.00	0.00
		U_{12}–L_{13}	-62.37	68.86	0.41	-0.42	-2.49	2.49	0.00	0.00	0.00	0.00
		U_{13}–L_{13}	57.80	-63.18	0.67	-0.67	-2.52	2.49	0.00	0.00	0.00	0.00
		U_{13}–L_{14}	-9.72	15.71	1.26	-1.21	-2.42	2.60	0.00	0.00	0.00	0.00
		U_{14}–L_{14}	14.83	-14.93	1.48	-1.46	-2.12	2.18	0.00	0.00	0.00	0.00
		U_{14}–L_{15}	39.68	-43.44	1.63	-1.60	-2.00	2.01	0.00	0.00	0.00	0.00
		U_{15}–L_{15}	88.70	-97.90	3.56	-3.61	-0.78	0.69	0.00	0.00	0.00	0.00
		U_{15}–L_{16}	133.02	-133.03	4.48	-4.64	-0.60	1.01	0.00	0.00	0.00	0.00
	Structure 2	U_0–L_1	140.07	-146.97	4.23	-4.47	-0.21	-0.57	0.00	0.00	0.00	0.00
		U_1–L_1	148.94	-153.41	4.20	-4.34	-0.10	0.15	0.00	0.00	0.00	0.00
		U_1–L_2	141.94	-139.91	4.23	-4.36	-0.13	0.06	0.00	0.00	0.00	0.00
		U_2–L_2	185.37	-182.48	5.05	-4.83	-0.46	0.45	0.00	0.00	0.00	0.00
		U_2–L_3	72.78	-71.71	2.01	-1.94	-0.49	0.39	0.00	0.00	0.00	0.00
		U_3–L_3	-128.23	-129.95	0.47	-0.41	-4.32	3.98	0.00	0.00	0.00	0.00
		U_3–L_4	39.82	39.82	0.45	-0.45	-1.81	1.81	0.00	0.00	0.00	0.00
		U_4–L_4	-125.93	122.62	0.48	-0.45	-4.81	4.80	0.00	0.00	0.00	0.00
		U_4–L_5	-109.68	106.90	0.63	-0.62	-4.71	4.63	0.00	0.00	0.00	0.00
		U_5–L_5	103.83	78.39	0.30	-0.30	-4.64	4.60	0.00	0.00	0.00	0.00
		U_5–L_6	-43.26	43.75	0.72	-0.63	-2.65	2.74	0.00	0.00	0.00	0.00
		U_6–L_6	29.76	-34.20	0.94	-0.94	-2.14	2.14	0.00	0.00	0.00	0.00
		U_6–L_7	-1.29	1.62	1.39	-1.51	-1.68	1.73	0.00	0.00	0.00	0.00
		U_7–L_7	28.80	28.80	2.77	-2.77	-1.39	1.39	0.00	0.00	0.00	0.00
		U_7–L_8	46.56	-51.19	2.65	-2.76	-0.88	0.73	0.00	0.00	0.00	0.00
		U_8–L_8	62.64	-61.32	3.63	-3.59	-0.63	0.61	0.00	0.00	0.00	0.00
		U_8–L_9	108.55	-109.74	5.49	-5.56	-0.67	0.65	0.00	0.00	0.00	0.00
		U_9–L_9	108.55	-105.74	5.49	-5.56	-0.67	0.65	0.00	0.00	0.00	0.00
		U_9–L_{10}	114.59	-114.85	5.53	-5.24	-0.33	0.27	0.00	0.00	0.00	0.00
		U_{10}–L_{10}	112.83	1.69	5.60	-5.60	-0.34	0.34	0.00	0.00	0.00	0.00
		U_{10}–L_{11}	-122.25	119.98	5.51	-5.48	-4.05	3.76	0.00	0.00	0.00	0.00
		U_{11}–L_{11}	-93.65	87.71	0.41	-0.57	-3.64	3.66	0.00	0.00	0.00	0.00
		U_{11}–L_{12}	102.08	102.08	0.47	-0.47	-3.51	3.51	0.00	0.00	0.00	0.00
		U_{12}–L_{12}	-96.77	103.24	0.22	-0.13	-4.03	4.06	0.00	0.00	0.00	0.00
		U_{12}–L_{13}	-51.52	51.52	0.54	-0.54	-2.47	2.47	0.00	0.00	0.00	0.00
		U_{13}–L_{13}	-63.45	70.58	0.54	-0.47	-3.51	3.55	0.00	0.00	0.00	0.00
		U_{13}–L_{14}	-32.67	38.68	0.70	-0.76	-1.98	2.17	0.00	0.00	0.00	0.00
		U_{14}–L_{14}	23.50	23.50	1.50	-1.50	-1.50	1.50	0.00	0.00	0.00	0.00
		U_{14}–L_{15}	4.43	-6.37	2.22	-2.39	-1.62	1.48	0.00	0.00	0.00	0.00
		U_{15}–L_{15}	28.31	-30.55	2.63	-2.63	-0.83	0.72	0.00	0.00	0.00	0.00
		U_{15}–L_{16}	47.21	-50.58	2.81	-2.91	-0.50	0.50	0.00	0.00	0.00	0.00
		U_{16}–L_{16}	91.75	-97.49	4.39	-4.79	-0.10	0.10	0.00	0.00	0.00	0.00
		U_{16}–L_{17}	104.42	-111.67	5.56	-5.50	-0.71	0.67	0.00	0.00	0.00	0.00
		U_{17}–L_{17}	108.14	-132.78	4.05	-5.42	-0.36	0.59	0.00	0.00	0.00	0.00
	Structure 3	U_0–L_1	-123.31	123.31	0.61	-0.61	-4.62	4.62	0.00	0.00	0.00	0.00
		U_1–L_1	-109.30	107.29	0.38	-0.36	-4.31	4.24	0.00	0.00	0.00	0.00
		U_1–L_2	-96.03	111.29	0.42	-0.42	-3.60	3.60	0.00	0.00	0.00	0.00
		U_2–L_2	-48.62	58.77	0.31	-0.32	-2.67	2.69	0.00	0.00	0.00	0.00
		U_2–L_3	-31.53	42.86	0.63	-0.46	-2.68	2.68	0.00	0.00	0.00	0.00
		U_3–L_3	-5.41	11.54	1.06	-1.06	-2.90	3.00	0.00	0.00	0.00	0.00
		U_3–L_4	27.84	30.65	1.73	-1.76	-1.45	1.57	0.00	0.00	0.00	0.00
		U_4–L_4	56.94	-62.69	2.67	-2.67	-0.46	0.46	0.00	0.00	0.00	0.00
		U_4–L_5	75.52	-83.00	3.18	-3.29	-0.66	0.46	0.00	0.00	0.00	0.00
		U_5–L_5	94.97	-97.43	3.60	-3.85	-0.13	-0.15	0.00	0.00	0.00	0.00
		U_5–L_6	139.42	-154.57	4.47	-4.86	-0.15	0.14	0.00	0.00	0.00	0.00
		U_6–L_6	99.06	-131.45	3.50	-4.36	-0.28	0.06	0.00	0.00	0.00	0.00
		U_6–L_7	94.97	-87.87	3.24	-3.65	-0.13	-0.15	0.00	0.00	0.00	0.00
		U_7–L_7	135.37	-139.53	3.05	-4.28	-0.32	3.65	0.00	0.00	0.00	0.00
		U_7–L_8	-101.27	95.46	0.18	-0.17	-2.78	3.04	0.00	0.00	0.00	0.00
		U_8–L_8	52.79	-74.30	3.93	-5.02	-4.23	4.77	0.00	0.00	0.00	0.00
		U_8–L_9	-62.86	69.92	0.24	-0.24	-3.18	3.18	0.00	0.00	0.00	0.00
		U_9–L_9	-41.64	35.38	0.16	-0.05	-2.80	2.97	0.00	0.00	0.00	0.00
		U_9–L_{10}	-36.85	40.05	0.22	-0.16	-2.06	2.80	0.00	0.00	0.00	0.00
		U_{10}–L_{10}	-39.84	39.91	0.63	-0.51	-2.39	2.34	0.00	0.00	0.00	0.00
		U_{10}–L_{11}	-38.88	40.30	1.97	-2.14	-2.20	2.23	0.00	0.00	0.00	0.00
		U_{11}–L_{11}	-13.42	14.14	2.66	-3.12	-0.96	0.76	0.00	0.00	0.00	0.00
		U_{11}–L_{12}	5.87	-9.62	3.82	-3.61	-0.91	0.80	0.00	0.00	0.00	0.00
		U_{12}–L_{12}	20.18	-40.81	2.67	-4.00	-1.23	-0.38	0.00	0.00	0.00	0.00

M_2 Information — Max. Pos. Mom. — Start

Member	Start k-in	Start a	Start C_{mx}	Start δ_{ns}	Start δ_s	Start P_{e2} (k)	Start I_{xx} (in^4)	Start Shape Factor	Start M_p (k-in)	Start Formula 1.8 Term F_y*S_{xx}	Start M_u (k-in)
U_0–L_1	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_1–L_1	-8.23	19.78	-72.51	83.80	15.4	15.42	15.42	23.71	2	751.9	1.54
U_1–L_2	20.82	-31.39	-30.14	43.31	15.4	15.42	15.42	23.71	2	751.9	1.54
U_2–L_2	78.46	-72.51	9.67	4.90	15.4	15.42	15.42	23.71	2	751.9	1.54
U_2–L_3	105.30	-102.31	30.14	-54.12	15.4	15.42	15.42	23.71	2	751.9	1.54
U_3–L_3	122.04	-143.71	71.01	-89.70	19.4	19.37	19.31	29.87	3	907.0	1.54
U_3–L_4	142.94	-149.27	94.06	-93.13	15.52	20.67	20.67	34.66	9	1076.0	1.67
U_4–L_4	202.18	-217.33	130.97	-144.06	16.2	16.18	16.38	27.38	9	928.7	1.69
U_4–L_5	70.36	-80.35	75.06	82.74	107.1	107.13	107.11	162.71	26	5302.9	1.52
U_5–L_5	-183.30	211.48	247.17	277.50	31.4	52.07	52.07	84.15	14	1356.6	1.60
U_5–L_6	-128.68	121.26	-178.47	175.15	32.8	32.76	33.44	54.32	14	1238.0	1.66
U_6–L_6	-137.61	205.43	197.34	256.37	42.74	42.74	42.74	65.30	8	1389.6	1.53
U_6–L_7	-116.10	115.17	-118.33	174.93	21.1	21.09	21.09	36.48	10	1137.6	1.68
U_7–L_7	-66.17	86.01	-128.52	149.92	17.2	17.24	17.24	26.54	2	824.7	1.54
U_7–L_8	-22.78	-27.49	-77.39	86.96	15.4	15.42	15.42	23.71	2	751.9	1.54
U_8–L_8	37.01	-89.34	-14.35	3.06	15.4	15.42	15.42	23.71	2	751.9	1.54
U_8–L_9	110.87	-115.59	92.47	-55.41	15.4	15.42	15.42	23.71	2	751.9	1.54
U_9–L_9	127.87	-143.95	73.29	-87.88	19.4	19.37	19.37	29.87	3	907.0	1.54
U_9–L_{10}	253.28	-264.24	163.68	-170.11	19.3	30.09	30.09	50.31	14	1157.0	1.60
U_{10}–L_{10}	298.37	-291.86	195.87	-192.35	42.7	42.74	42.74	65.30	8	1389.6	1.53
U_{10}–L_{11}	237.63	-363.88	166.73	-271.02	42.0	41.97	42.74	63.05	8	1376.0	1.50
U_{11}–L_{11}	181.10	244.22	120.63	163.39	35.09	35.09	35.09	53.71	4	1157.0	1.60
U_{11}–L_{12}	-151.27	161.78	-233.62	243.69	46.7	46.71	46.71	71.43	10	1711.0	1.53
U_{12}–L_{12}	142.42	173.96	94.82	116.24	38.63	38.63	38.63	59.23	10	1922.1	1.64
U_{12}–L_{13}	-74.28	82.72	-122.37	131.07	21.5	21.54	21.54	33.27	5	987.9	1.54
U_{13}–L_{13}	-37.98	-67.57	-53.64	72.38	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{13}–L_{14}	9.04	0.35	-52.10	63.53	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{14}–L_{14}	43.78	-43.70	-15.90	16.79	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{14}–L_{15}	78.57	-89.70	35.55	-42.24	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{15}–L_{15}	174.59	-187.30	102.48	-115.78	20.8	20.80	20.67	34.64	9	1037.5	1.67
U_{15}–L_{16}	273.25	-276.01	181.60	-179.59	30.7	30.74	30.74	47.85	13	1171.0	1.53
U_0–L_1	252.36	-264.24	163.68	-170.11	19.3	30.09	30.09	50.31	14	1157.0	1.60
U_1–L_1	-161.10	224.22	-238.63	301.39	42.74	42.74	42.74	65.30	8	1389.6	1.53
U_1–L_2	-151.27	161.78	-233.62	243.69	46.7	46.71	46.71	71.43	10	1711.0	1.53
U_2–L_2	-142.42	173.96	-220.64	269.59	38.63	38.63	38.63	59.23	10	1922.1	1.64
U_2–L_3	-74.28	82.72	-122.37	131.07	21.5	21.54	21.54	33.27	5	987.9	1.54
U_3–L_3	-37.98	-67.57	-53.64	72.38	15.4	15.42	15.42	23.71	2	751.9	1.54
U_3–L_4	9.04	0.35	-52.10	63.53	15.4	15.42	15.42	23.71	2	751.9	1.54
U_4–L_4	43.78	-43.70	-15.90	16.79	15.4	15.42	15.42	23.71	2	751.9	1.54
U_4–L_5	78.57	-89.70	35.55	-42.24	15.4	15.42	15.42	23.71	2	751.9	1.54
U_5–L_5	174.59	-187.30	102.48	-115.78	20.8	20.80	20.67	34.64	9	1037.5	1.67
U_5–L_6	273.25	-276.01	181.60	-179.59	30.7	30.74	30.74	47.85	13	1171.0	1.53
U_6–L_6	252.36	-264.24	178.57	-192.16	43.0	43.01	42.96	68.66	14	1479.6	1.60
U_6–L_7	263.31	-277.45	191.94	-199.92	43.0	43.01	43.24	43.76	15.66	1479.6	1.60
U_7–L_7	254.69	-254.69	182.49	-182.49	43.24	43.76	15.66	1479.6	1.60	2299.1	1.53
U_7–L_8	324.87	-317.46	233.35	-229.77	39.2	39.17	39.11	63.33	14	1392.6	1.62
U_8–L_8	185.45	-178.89	113.47	-109.76	39.2	39.17	39.17	112.02	12.62	2090	1.5
U_8–L_9	-159.02	162.13	-237.61	234.25	39.2	39.17	39.11	63.33	14	1392.6	1.62
U_9–L_9	117.72	129.56	94.82	116.24	38.63	38.63	38.63	59.23	10	1922.1	1.64
U_9–L_{10}	-155.91	152.07	-242.61	238.61	42.7	42.74	42.74	65.30	8	1389.6	1.53
U_{10}–L_{10}	7.90	-7.75	-95.45	87.03	20.0	20.00	20.00	32.39	9	1264.6	1.53
U_{10}–L_{11}	40.99	-40.99	-51.63	51.63	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{11}–L_{11}	9.08	-7.97	-33.47	34.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_{11}–L_{12}	29.94	-29.94	-29.94	29.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_{12}–L_{12}	17.52	-19.04	-21.22	21.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_{12}–L_{13}	14.96	-14.96	-14.96	14.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_{13}–L_{13}	33.46	-34.78	-11.08	9.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_{13}–L_{14}	45.80	-45.29	-7.95	7.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_{14}–L_{14}	50.24	-50.24	-5.76	5.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_{14}–L_{15}	69.32	-70.25	-8.48	8.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_{15}–L_{15}	69.32	-70.25	-8.48	8.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_{15}–L_{16}	69.84	-66.19	-4.13	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_{16}–L_{16}	71.48	-68.56	-4.13	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_{16}–L_{17}	6.54	-6.05	-51.72	48.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_{17}–L_{17}	5.28	-7.25	-46.56	46.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_0–L_1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_1–L_1	-14.88	104.59	-182.77	174.75	43.2	43.24	43.16	70.66	19	1516.6	1.63
U_1–L_2	-10.69	108.61	-128.58	134.57	42.1	42.16	42.16	68.94	19	2284.4	1.65
U_2–L_2	-122.21	131.98	-152.70	201.64	43.0	43.01	42.96	68.66	14	1479.6	1.60
U_2–L_3	-130.04	134.48	-238.63	243.69	46.7	46.71	46.71	71.43	10	1711.0	1.53
U_3–L_3	-73.58	-140.89	150.70	20.8	20.80	20.67	34.64	9	1037.5	1.67	1743
U_3–L_4	-30.93	57.59	-75.42	86.24	15.4	15.42	15.42	23.71	2	751.9	1.54
U_4–L_4	-30.93	57.59	-75.42	86.24	15.4	15.42	15.42	23.71	2	751.9	1.54
U_4–L_5	-73.58	-140.89	150.70	20.8	20.80	20.67	34.64	9	1037.5	1.67	1743
U_5–L_5	-130.04	134.48	-238.63	243.69	46.7	46.71	46.71	71.43	10	1711.0	1.53
U_5–L_6	-122.21	131.98	-152.70	201.64	43.0	43.01	42.96	68.66	14	1479.6	1.60
U_6–L_6	-10.69	108.61	-128.58	134.57	42.1	42.16	42.16	68.94	19	2284.4	1.65
U_6–L_7	-14.88	104.59	-182.77	174.75	43.2	43.24	43.16	70.66	19	1516.6	1.63
U_7–L_7	6.54	-6.05	-51.72	48.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_7–L_8	5.28	-7.25	-46.56	46.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_8–L_8	71.48	-68.56	-4.13	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_8–L_9	69.84	-66.19	-4.13	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_9–L_9	69.32	-70.25	-8.48	8.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_9–L_{10}	69.32	-70.25	-8.48	8.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_{10}–L_{10}	50.24	-50.24	-5.76	5.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_{10}–L_{11}	45.80	-45.29	-7.95	7.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_{11}–L_{11}	33.46	-34.78	-11.08	9.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_{11}–L_{12}	14.96	-14.96	-14.96	14.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_{12}–L_{12}	17.52	-19.04	-21.22	21.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_{12}–L_{13}	29.94	-29.94	-29.94	29.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_{13}–L_{13}	9.08	-7.97	-33.47	34.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_{13}–L_{14}	44.44	-44.44	-29.94	29.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_{14}–L_{14}	46.56	-51.19	-29.94	29.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_{14}–L_{15}	62.64	-61.32	3.63	-3.59	-0.63	0.61	0.00	0.00	0.00	0.00	0.00
U_{15}–L_{15}	108.55	-105.74	5.49	-5.56	-0.67	0.65	0.00	0.00	0.00	0.00	0.00
U_{15}–L_{16}	108.55	-109.74	5.49	-5.56	-0.67	0.65	0.00	0.00	0.00	0.00	0.00
U_{16}–L_{16}	114.59	-114.85	5.53	-5.24	-0.33	0.27	0.00	0.00	0.00	0.00	0.00
U_{16}–L_{17}	112.83	1.69	5.60	-5.60	-0.34	0.34	0.00	0.00	0.00	0.00	0.00
U_{17}–L_{17}	-122.25	119.98	5.51	-5.48

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: 3F1
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
& Gusset Checks 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 (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_1-L_1	-23.63	-7.60	0.18	-0.14	-1.74	0.83	2.40	-1.87	-23.29	11.02
	U_1-L_2	-3.36	-8.44	0.24	-0.10	-1.16	-0.03	3.22	-1.27	-15.52	-0.41
	U_1-U_2	-1.34	-1.34	0.00	-0.11	-0.31	-0.31	4.34	-1.35	-13.40	-4.38
	L_1-L_2	7.94	-13.41	0.27	0.07	-0.85	-0.75	3.63	0.91	-11.33	-9.99
	L_1-U_2	-14.57	-18.47	0.32	0.43	-1.36	0.46	1.58	5.71	-18.18	-6.15
	U_2-L_2	-37.80	-7.38	0.28	0.68	-2.62	0.96	3.69	8.03	-35.06	12.88
	U_2-L_3	-37.00	-20.06	0.25	0.38	-2.56	0.39	3.51	4.09	-32.52	32.59
	L_2-L_3	-9.33	102.64	0.59	0.51	-1.57	2.73	7.92	6.81	-21.21	36.42
	L_2-U_3	-5.01	118.90	1.23	0.69	-1.03	2.54	15.88	8.86	-10.33	26.33
	U_3-L_3	78.52	74.45	2.28	0.11	-2.39	1.29	15.00	1.36	-30.87	16.73
	U_3-L_4	-64.28	73.58	0.33	0.73	-2.03	0.63	4.27	9.42	-26.22	8.10
	L_3-L_4	-65.20	48.77	0.16	0.34	-1.85	1.01	2.60	-4.35	-23.88	13.12
	L_3-U_4	-24.89	8.62	0.29	0.54	-1.11	0.08	3.73	-6.97	-14.40	1.00
	U_4-L_4	-0.81	-22.83	0.28	-0.12	-0.40	0.37	8.23	-12.78	-9.00	-0.01
	U_4-L_5	-25.30	9.99	0.35	-0.68	-1.35	1.08	4.50	-8.75	-17.52	14.03
	U_4-U_5	-37.00	20.06	0.25	0.38	-2.56	0.39	3.39	-3.07	-22.02	15.15
	L_4-L_5	-101.98	74.35	0.36	-0.36	-3.29	1.97	4.70	-4.66	-42.53	25.53
	L_4-U_5	-115.65	79.79	0.33	-0.49	-3.09	2.34	4.20	-4.24	-47.73	30.28
	U_5-L_5	-76.53	79.74	0.14	-0.13	-2.99	2.43	1.84	-1.71	-38.18	31.39
	U_5-L_6	-109.78	99.44	0.33	-0.34	-3.34	2.86	4.20	-4.40	-42.66	36.50
	L_5-L_6	-89.86	78.41	0.30	-0.45	-3.05	2.32	3.35	-4.16	-42.72	29.65
	L_5-U_6	-90.94	71.81	0.48	-0.41	-3.16	2.12	5.19	-5.29	-40.42	27.02
	U_6-L_6	-33.38	33.38	0.49	-0.49	-2.12	2.12	4.32	-4.32	-26.96	26.96
	L_6-U_6	-20.34	9.87	0.37	-0.54	-1.60	0.97	4.68	-6.91	-19.19	12.37
	U_6-L_7	-1.38	-11.20	0.67	-0.42	-1.12	0.61	8.09	-10.61	-11.20	6.07
	L_6-L_7	6.85	-23.86	0.68	-1.05	-1.60	0.19	8.69	-13.48	-7.73	2.47
	L_7-U_7	-44.40	35.30	0.31	-0.76	-1.75	0.52	4.01	-9.71	-22.29	8.69
	U_7-L_7	-56.54	69.68	0.31	-0.74	-2.98	2.15	2.19	-10.46	-27.01	22.23
	L_7-L_8	-85.37	67.30	0.23	0.47	-2.68	1.18	2.91	5.55	-36.77	15.04
	U_7-L_8	-70.24	70.24	0.26	-0.24	-1.79	1.17	3.39	-3.07	-23.10	15.15
	L_8-U_8	-109.81	116.32	0.40	0.16	-3.34	2.63	5.06	2.02	-42.62	33.65
	U_8-L_8	-141.94	130.59	0.54	-0.26	-4.22	3.50	6.87	-3.36	-55.85	44.74
	L_8-L_9	-133.38	133.38	0.49	-0.49	-4.24	3.39	6.32	-6.32	-55.27	44.24
	U_8-L_9	-11.95	79.18	0.88	0.24	-2.15	2.68	11.07	3.02	-27.11	33.79
	L_9-U_9	-77.25	77.25	0.24	-0.24	-1.98	1.98	3.11	-3.11	-43.42	37.35
	U_9-L_9	-66.17	89.96	0.34	-0.21	-3.28	2.75	4.31	-2.66	-41.39	34.66
	L_9-L_{10}	-56.05	72.68	0.31	-0.34	-2.98	2.15	3.86	-4.33	-37.32	27.16
	U_9-L_{10}	-56.05	72.68	0.31	-0.34	-2.98	2.15	3.86	-4.33	-37.32	27.16
	L_{10}-U_{10}	-37.83	37.59	0.19	-0.30	-1.37	2.16	3.81	-3.89	-27.62	16.34
	U_{10}-L_{10}	-10.04	2.87	0.42	-0.70	-1.20	0.33	4.65	-3.89	-17.93	10.34
	L_{10}-L_{11}	-10.04	3.78	0.42	-0.70	-1.20	0.33	5.33	-8.85	-15.09	4.14
	U_{10}-L_{11}	-19.42	8.76	0.45	-0.68	-1.36	0.94	6.64	-8.55	-17.15	11.83
	L_{11}-U_{11}	-46.48	38.24	0.31	-0.37	-3.06	1.94	4.71	-7.25	-38.61	19.47
	U_{11}-L_{11}	-46.48	58.24	0.41	-0.46	-3.06	1.94	5.20	-5.75	-38.61	34.49
	L_{11}-L_{12}	-54.27	68.32	0.34	-0.42	-3.16	2.45	4.28	-5.28	-39.87	30.96
	U_{11}-L_{12}	-69.31	71.94	0.24	-0.15	-3.59	3.20	3.06	-1.85	-50.43	40.36
	L_{12}-U_{12}	-77.98	78.53	0.43	-0.17	-2.94	2.15	5.53	-2.22	-37.54	27.46
	U_{12}-L_{12}	-36.18	94.54	1.09	0.25	-2.39	2.91	4.96	-0.32	-36.64	24.76
	L_{12}-L_{13}	-77.98	77.98	0.43	-0.17	-2.94	2.15	5.53	-2.22	-37.54	27.46
	U_{12}-L_{13}	-76.62	55.14	0.16	0.14	-2.53	1.55	2.07	1.80	-37.40	19.85
	L_{13}-U_{13}	-78.35	71.28	0.39	-0.03	-2.87	1.94	4.96	-0.32	-36.64	24.76
	U_{13}-L_{13}	-76.62	55.14	0.16	0.14	-2.53	1.55	2.07	1.80	-37.40	19.85
	L_{13}-L_{14}	-29.96	3.91	0.25	-0.30	-1.29	0.33	3.19	-3.77	-18.97	12.67
	U_{13}-L_{14}	6.27	-17.63	0.88	-1.23	-0.86	-0.07	11.23	-15.73	-10.95	-0.93
	L_{14}-U_{14}	-1.05	-9.86	0.87	-1.06	-1.05	0.72	11.15	-13.59	-13.47	9.16
	U_{14}-L_{14}	-13.27	-8.62	0.60	-0.62	-1.26	0.48	8.38	-8.62	-2.86	-0.98
	L_{14}-L_{15}	-33.68	19.58	0.36	-0.32	-1.91	1.50	4.59	-4.06	-24.45	19.22
	U_{14}-L_{15}	-18.90	19.78	0.48	-0.43	-3.85	2.98	6.15	-5.51	-49.16	38.10
	L_{15}-U_{15}	-68.27	59.65	0.20	-0.19	-3.45	2.70	2.60	-2.50	-46.45	34.89
	U_{15}-L_{15}	-90.31	64.36	0.20	-0.22	-3.09	2.18	3.12	-2.86	-39.97	28.14
	L_{15}-L_{16}	-68.27	59.65	0.20	-0.19	-3.45	2.70	2.60	-2.50	-46.45	34.89
	U_{15}-L_{16}	-53.30	18.26	0.23	-0.21	-1.70	0.93	2.92	-2.70	-21.94	12.01
	L_{16}-U_{16}	-1.49	-18.98	0.44	-0.79	-1.13	0.03	5.63	-10.25	-14.56	0.32
	U_{16}-L_{16}	-53.83	37.97	0.13	-0.53	-1.78	1.25	1.73	-6.82	-23.07	16.13
	L_{16}-L_{17}	-61.79	22.37	0.22	0.64	-2.48	0.35	2.90	8.24	-32.06	4.57
	U_{16}-L_{17}	-75.25	52.23	0.25	0.45	-2.67	1.26	3.22	6.00	-37.16	16.60
	L_{17}-U_{17}	-61.79	100.30	0.35	1.05	-2.48	2.65	2.90	13.26	-32.06	43.57
	U_{17}-L_{17}	-75.25	69.79	0.25	0.45	-2.67	1.26	3.22	6.00	-37.16	16.60
	L_{17}-L_{18}	-38.98	50.40	0.32	-0.11	-3.14	1.65	4.06	-1.16	-41.92	22.08
	U_{17}-L_{18}	-7.78	19.68	0.14	0.46	-1.29	-0.22	1.82	6.08	-17.29	4.94
	L_{18}-U_{18}	-38.98	53.71	0.32	-0.11	-3.14	1.65	4.06	-1.16	-41.92	22.08
	U_{18}-L_{18}	-2.61	-8.77	0.37	-0.13	-0.99	-0.20	4.90	-7.72	-13.24	-2.66
	L_{18}-L_{19}	-5.73	-5.58	0.32	-0.08	-0.97	0.43	12.25	-1.04	-12.93	5.69

ZZ Axis Moments from STAAD

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I (in^4)	I_{DL} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_x	M_u (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(x)}$
Structure 1	U_1-L_1	-27.59	7.45	80.99	24.21	15.6	19.63	15.58	25.56	5	804.0	1.66	857	1.5
	U_1-L_2	-0.18	-12.62	-24.55	-11.51	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_1-U_2	2.19	-14.43	-20.84	-18.72	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	L_1-L_2	15.06	-16.26	-4.41	-30.43	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	L_1-U_2	-16.89	-18.74	-16.18	-16.15	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_2-L_2	44.35	112.34	-94.71	-117.34	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5
	U_2-L_3	35.51	69.12	-92.12	-92.59	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5
	L_2-L_3	7.92	6.81	-21.21	-36.42	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5
	L_2-U_3	15.88	8.86	-10.33	-26.33	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5
	U_3-L_3	87.85	56.01	-142.60	-118.53	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5
	L_3-L_4	-78.01	107.90	-117.77	-106.19	39.8	39.77	39.56	65.61	21	1616.3	1.65	2165	1.5
	U_4-L_4	-66.66	41.87	-128.73	-60.85	42.4	42.74	42.74	65.30	4	1389.6	1.53	2155	1.5
	L_4-L_5	-82.12	57.75	-115.81	-80.46	20.8	20.80	20.67	34.66	2	1076.0	1.67	1144	1.5
	U_4-L_5	-27.52	2.15	-51.08	12.91	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	L_5-L_6	9.73	-46.12	-19.99	-69.74	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_5-L_5	-27.04	1.62	-55.66	31.22	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	L_5-L_6	-43.79	22.02	-39.13	-45.70	19.4	19.37	19.37	29.87	2	907.0	1.54	986	1.5
	U_5-L_6	-126.49	90.60	-187.84	-129.84	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	L_6-L_7	-144.81	98.65	-212.39	-143.08	35.4	35.43	35.43	59.23	3	1284.6	1.53	1955	1.5
	U_6-L_6	-97.10	101.44	-149.13	-144.47	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5
	L_7-L_8	-103.26	103.26	-154.53	-154.53	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5
	U_7-L_7	-37.25	123.56	-168.19	-177.23	42.7	42.74	42.74	65.30	3	1389.6	1.53	2155	1.5
	L_8-U_8	-20.36	23.85	-51.27	28.91	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_8-L_8	-122.76	78.38	-187.84	-129.84	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	L_8-L_9	-110.23	86.47	-170.77	-128.48	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	U_8-L_9	-54.44	76.25	-84.03	-118.03	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	L_9-U_9	-77.25	77.25	-119.66	-119.66	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	U_9-L_9	-66.17	89.96	-102.51	-138.83	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	L_9-L_{10}	-56.05	72.68	-86.81	-112.58	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	U_9-L_{10}	-56.05	72.68	-86.81	-112.58	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	L_{10}-U_{10}	-37.83	37.59	-58.61	-58.24	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	U_{10}-L_{10}	-10.04	3.78	-15.56	5.86	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	L_{10}-L_{11}	-10.04	3.78	-15.56	5.86	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	U_{10}-L_{11}	-19.42	19.56	-30.08	30.33	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	L_{11}-U_{11}	-46.48	58.24	-71.41	-89.48	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	U_{11}-L_{11}	-46.48	58.24	-71.41	-89.48	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	L_{11}-L_{12}	-54.27	68.32	-83.34	-104.92	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	U_{11}-L_{12}	-69.31	71.94	-106.41	-110.47	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	L_{12}-U_{12}	-77.98	78.53	-119.66	-119.66	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	U_{12}-L_{12}	-36.18	94.54	-55.53	-145.09	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	L_{12}-L_{13}	-77.98	77.98	-119.66	-119.66	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	U_{12}-L_{13}	-76.62	55.14	-117.56	-84.62	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	L_{13}-U_{13}	-78.35	71.28	-120.31	-109.43	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	U_{13}-L_{13}	-76.62	55.14	-117.56	-84.62	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	L_{13}-L_{14}	-29.96	3.91	-46.00	6.00	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	U_{13}-L_{14}	6.27	-17.63	9.62	-27.06	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	L_{14}-U_{14}	-1.05	-9.86	1.61	-15.14	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	U_{14}-L_{14}	-13.27	-8.62	-20.39	-13.24	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	L_{14}-L_{15}	-33.68	19.58	-51.72	30.06	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	U_{14}-L_{15}	-18.90	19.78	-29.03	30.37	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	L_{15}-U_{15}	-68.27	59.65	-104.83	91.59	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	U_{15}-L_{15}	-90.31	64.36	-138.67	98.83	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	L_{15}-L_{16}	-68.27	59.65	-104.83	91.59	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	U_{15}-L_{16}	-53.30	18.26	-81.84	28.04	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	L_{16}-U_{16}	-1.49	-18.98	-2.29	-29.14	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	U_{16}-L_{16}	-53.83	37.97	-82.66	58.31	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	L_{16}-L_{17}	-61.79	22.37	-94.91	34.34	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	U_{16}-L_{17}	-75.25	52.23	-115.57	80.21	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	L_{17}-U_{17}	-61.79	100.30	-94.91	154.05	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	U_{17}-L_{17}	-75.25	69.79	-115.57	107.19	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	L_{17}-L_{18}	-38.98	50.40	-59.87	77.40	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	U_{17}-L_{18}	-7.78	19.68	-11.94	30.23	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	L_{18}-U_{18}	-38.98	53.71	-59.87	82.54	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	U_{18}-L_{18}	-2.61	-8.77	-4.01	-13.47	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	L_{18}-L_{19}	-5.73	-5.58	-8.80	-8.58	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5

M_3 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_u (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(x)}$
Structure 1	U_1-L_1	-30.35	-28.89	-175.94	-57.98	100.5	100.60	150.48	126.29	66.1	1.20	3970	144	0.94257
	U_1-L_2	-44.17	-40.74	0.55	0.40	-7.20	-3.43	-47.75	-45.99	-182.38	-112.44	93.99	93.99	104.66
	U_1-U_2	-42.20	-20.75	0.00	0.00	-5.31	-1.28	-2.06	-0.56	-47.57	-22.85	-90.01	-25.99	94.1
	L_1-L_2	-33.43	-37.32	0.98	1.04	1.96	-1.66	13.09	-13.92	26.22	-22.20	0.00	0.00	0.00
	L_1-U_2	-12.61	-11.24	-72.01	-61.99	0.00	0.00	0.00	0.00	-57.97	-21.85	-158.25	-114.79	113.37
	U_2-L_2	30.77	19.32	-90.70	-64.55	0.00	0.00	0.00	0.00	72.54	7.51	-85.37	-116.56	148.0
	U_2-L_3	43.95	21.40	-142.62	-107.42	-12.34	0.00	0.00	0.00	210.04	80.88	13.25	-66.98	154.7
	L_2-L_3	12.08	8.72	-69.36	-60.27	0.00	0.00	0.00	0.00	136.11	110.04	79.58	20.35	148.0
	L_2-U_3	97.09	51.91	120.62	-124.25	202.9	202.86	190.44	238.56	256.9	1.18	7872	228	0.96384
	U_3-L_3	50.27	122.27	66.45	197.02	202.9	202.86	190.44	238.56	256.9	1.18	7872	228	0.91814
	L_3-L_4	14.56	6.37	-9.35	31.39	0.00	0.00	0.00	0.00	49.53	154.65	18.45	-187.18	197.4
	U_4-L_4	-2.21	3.51	-28.32	32.14	0.00	0.00	0.00	0.00	38.57	107.98	71.89	-145.20	151.7
	L_4-L_5	-26.52	-12.15	-18.90	36.41	0.00	0.00	0.00	0.00	47.30	49.88	-37.40	-13.44	133.5
	U_4-L_5	-50.11	-66.40	-1.87	-1.22	0.61	0.13	-56.51	-132.79	-54.88	-76.52	94.0	93.99	93.99
	L_5-L_6	-22.50	-51.04	-153.50	-1.87	0.00	0.00	0.00	0.00	-158.52	-134.11	-207.39	-77.14	94.0
	U_5-L_5	-68.65	-3.18	-102.31	-35.32	0.00	0.00	0.00	0.00	-216.00	-129.48	-196.32	-171.26	94.0
	L_5-L_6	-14.22	8.69	-150.58	-132.15	0.00	0.00	0.00	0.00	-159.91	-154.69	-312.94	-274.70	148.0
	U_5-L_6	-130.95	-130.46	1.17	-0.89	-7.93	-6.25	-138.19	-130.46	1.17	-0.89	-7.93	-6.25	-138.19
	L_6-L_7	-144.81	-98.65	-212.39	-143.08	35.4	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5
	U_6-L_6	-97.10	-101.44	-149.13	-144.47	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5
	L_7-L_8	-103.26	-103.26	-154.53	-154.53	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5
	U_7-L_7	-37.25	-123.56	-168.19	-177.23	42.7	42.74	42.74	65.30	3	1389.6	1.53	2155	1.5
	L_8-U_8	-20.36	-23.85	-51.27	-28.91	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_8-L_8	-122.76	-78.38	-187.84	-129.84	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	L_8-L_9	-110.23	-86.47	-170.77	-128.48	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	U_8-L_9	-54.44	-76.25	-84.03	-118.03	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	L_9-U_9	-77.25	-77.25	-119.66	-119.66	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	U_9-L_9	-66.17	-89.96	-102.51	-138.83	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	L_9-L_{10}	-56.05	-72.68	-86.81	-112.58	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	U_9-L_{10}	-56.05	-72.68	-86.81	-112.58	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	L_{10}-U_{10}	-37.83	-37.59	-58.61	-58.24	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
	U_{10}-L_{10}	-10.04	-3.78	-15.56	5.86	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5
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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:	3F1
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, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

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

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load (k-in)	Dead Load End (k-in)	Live Load (Max) (k-in)	Live Load (Min) 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)
Structure 1	U_1-U_2	-75.17	-72.2	678	-8.48	-15.06	-2.77	75.46	-84.43	-167.70	-30.84
	U_2-U_3	46.62	-29.29	33.0	-0.75	-9.73	-5.86	3.62	-8.31	-108.34	-77.49
	U_3-U_4	-112.29	86.52	0.96	-1.82	-11.83	-5.55	10.71	-20.28	-131.73	-81.82
	U_4-U_5	-75.71	66.12	1.51	-2.27	-12.07	-6.46	16.80	-24.54	-140.34	-82.86
	U_5-L_0	-9.25	61.62	1.52	2.19	-16.31	-4.47	16.92	-24.41	-181.60	-49.72
	L_0-U_6	42.76	-120.21	1.70	2.15	-14.18	-1.06	18.95	23.88	-157.91	-11.80
	U_6-U_7	93.15	-93.15	1.70	1.70	-11.35	-4.58	20.56	-54.71	-123.95	-50.96
	U_7-U_8	-47.38	526.15	0.88	2.39	-18.31	13.78	9.82	26.59	-203.86	153.44
	U_8-L_1	475.03	-124.35	11.53	-10.34	-0.13	0.46	779.12	-376.62	610.76	-155.20
	L_1-U_9	46.82	20.99	2.10	-1.94	-5.15	-4.28	22.66	-20.94	-55.54	-46.19
	U_9-U_{10}	64.59	-138.73	1.74	-1.21	-4.82	-8.31	28.58	-32.16	-47.18	-66.79
	U_{10}-U_{11}	27.91	-140.51	2.50	-1.97	-7.82	-6.89	26.91	-21.24	-84.28	-73.89
	U_{11}-U_{12}	-106.12	-155.13	2.97	-1.33	-10.29	-8.87	31.98	-14.38	-112.99	-95.60
	U_{12}-U_{13}	-138.04	-282.92	3.19	-0.69	-12.76	-11.57	37.38	-7.51	-164.13	-144.57
	U_{13}-U_{14}	-245.80	-183.07	2.96	-17.52	-26.39	-8.83	31.90	-188.51	-284.58	-105.93
	U_{14}-U_{15}	-123.51	-327.11	3.50	-18.80	-22.40	-10.22	37.76	-202.66	-241.46	-110.18
	U_{15}-U_{16}	-269.97	-145.19	0.54	0.07	-24.60	-9.37	5.82	0.73	-265.24	-100.99
	U_{16}-L_2	-134.36	-67.40	0.56	-0.25	-13.49	-4.91	6.04	-2.68	-160.83	-43.29
	L_2-U_{17}	-170.82	-20.32	0.64	-2.26	-13.17	-1.64	6.88	-24.40	-141.87	-17.70
	U_{17}-U_{18}	-186.23	23.42	1.36	-14.96	-10.60	-1.80	14.71	-161.30	-114.33	-19.44
	U_{18}-U_{19}	14.62	-28.17	0.61	-3.35	-8.46	-1.67	6.60	-70.46	-59.65	-16.97
	U_{19}-U_{20}	-71.24	-180.99	1.39	-1.55	-7.61	-8.13	14.84	-20.79	-83.20	-86.52
	U_{20}-U_{21}	-253.13	-253.13	1.40	-1.40	-6.98	-6.98	14.03	-14.03	-169.88	-169.88
	U_{21}-U_{22}	-327.34	-325.40	0.83	2.66	-21.89	-13.87	9.88	-28.35	-233.04	-147.67
	U_{22}-L_3	-336.58	-367.31	1.60	-4.25	-23.51	-7.65	17.05	-47.66	-198.20	-49.61
	L_3-U_{23}	-396.14	-197.74	1.89	3.65	-30.69	-7.87	20.14	-38.84	-326.75	-83.78
	U_{23}-U_{24}	-344.18	-179.44	2.82	2.45	-22.17	-16.05	30.01	-26.12	-236.07	-170.98
	U_{24}-U_{25}	-226.16	-295.72	2.66	2.66	-20.77	-20.77	28.40	-28.40	-173.29	-213.49
	U_{25}-L_4	-350.21	-90.73	2.40	3.12	-22.46	-8.91	25.54	33.25	-239.08	-55.55
	L_4-U_{26}	-227.39	31.53	2.81	2.81	-23.29	-23.29	32.52	32.52	-167.07	-167.07
	U_{26}-U_{27}	-167.09	39.84	3.09	2.98	-17.08	-6.56	32.52	31.73	-181.81	-69.87
	U_{27}-U_{28}	-109.78	170.74	2.74	2.48	-17.61	-2.98	29.15	29.36	-187.47	-30.67
	U_{28}-L_5	-79.76	79.75	2.75	2.75	-12.61	-13.61	29.36	29.36	-132.53	-88.96
	L_5-U_{29}	-261.01	1266.00	1.95	1.61	-24.37	17.73	20.71	17.11	-209.47	188.72
	U_{29}-U_{30}	-1192.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{30}-U_{31}	-25.29	11.66	2.03	0.16	-17.65	-5.05	0.00	0.00	0.00	0.00
	U_{31}-L_6	-345.31	11.66	3.03	0.41	-26.52	-5.05	36.52	0.00	0.00	0.00
	L_6-U_{32}	-150.60	33.06	3.39	2.93	-10.72	-6.31	35.68	-30.86	-112.75	-66.43
	U_{32}-U_{33}	-147.31	4.37	4.08	2.84	-9.86	-8.60	42.96	-29.89	-103.63	-88.45
	U_{33}-U_{34}	-31.69	1.84	4.75	2.79	-6.29	-9.29	43.96	-29.89	-74.70	-98.45
	U_{34}-L_7	-31.69	-33.99	2.82	-1.20	-16.01	-8.37	29.63	-12.66	-168.44	-88.05
	L_7-U_{35}	-86.03	-77.76	1.36	-1.26	-14.27	-8.37	29.63	-12.66	-168.44	-88.05
	U_{35}-U_{36}	-66.96	-66.96	1.76	-7.43	-25.40	-10.44	18.46	-78.12	-267.28	-105.81
	U_{36}-U_{37}	-21.91	-21.91	1.76	-8.24	-25.40	-10.44	18.46	-78.12	-267.28	-105.81
	U_{37}-L_8	-33.01	-28.69	2.02	2.58	-21.35	-7.40	21.22	27.17	-224.64	-77.90
	L_8-U_{38}	-15.13	113.78	1.99	2.61	-19.81	-4.17	20.96	27.41	-208.44	-43.87
	U_{38}-U_{39}	-2.74	209.64	1.64	2.05	-19.39	-2.16	17.26	21.61	-203.99	-22.76
	U_{39}-U_{40}	-122.51	1157.56	1.32	2.24	-26.68	19.91	13.89	23.52	-279.64	209.49
	U_{40}-L_9	1154.91	-197.36	23.56	-25.68	-0.97	2.06	250.82	-273.40	-10.37	21.98
	L_9-U_{41}	64.52	-64.52	4.36	-4.36	-0.09	0.09	31.91	-31.91	-0.45	0.45
	U_{41}-U_{42}	178.89	-59.81	3.82	-5.24	-7.51	-7.06	40.65	-55.81	-79.95	-75.14
	U_{42}-U_{43}	68.66	-178.68	3.29	2.62	-10.98	-11.84	34.98	27.86	-116.94	-126.04
	U_{43}-L_{10}	68.66	-178.68	3.13	2.51	-10.98	-11.84	34.98	27.86	-116.94	-126.04
	L_{10}-U_{44}	-236.51	-153.10	2.54	1.95	-16.84	-19.57	27.02	20.72	-180.40	-208.32
	U_{44}-U_{45}	-99.60	-313.21	2.63	2.46	-36.09	-12.29	28.00	26.16	-384.23	-130.96
	U_{45}-U_{46}	-154.36	-67.40	1.96	-0.25	-13.49	-4.91	6.04	-2.68	-160.83	-43.29
	U_{46}-L_{11}	-390.37	-386.86	1.95	0.54	-37.61	-13.46	20.73	5.77	-400.47	-143.28
	L_{11}-U_{47}	-279.98	-117.76	1.31	-0.35	-28.74	-6.98	13.99	-3.68	-305.95	-74.32
	U_{47}-U_{48}	-282.51	-181.61	2.02	-16.62	-25.12	-8.63	19.24	-161.06	-291.62	-107.37
	U_{48}-L_{12}	-186.32	-74.12	2.47	-14.75	-13.12	-0.65	26.30	-157.91	-139.66	-8.88
	L_{12}-U_{49}	-139.08	-187.97	1.58	-6.71	-13.79	-3.99	81.71	-72.35	-148.69	-43.02
	U_{49}-L_{13}	-47.38	-119.85	1.74	-14.62	-42.89	-8.37	14.03	-161.06	-183.03	-107.37
	L_{13}-U_{50}	-52.58	-329.17	1.86	4.40	-6.58	-8.62	41.66	-47.41	-70.99	-92.91
	U_{50}-L_{14}	-277.84	-111.68	1.56	-1.20	-17.75	-5.55	16.82	-12.93	-191.43	-69.85
	L_{14}-U_{51}	-166.98	-243.52	1.03	1.42	-18.04	-12.49	11.12	15.26	-194.51	-134.69
	U_{51}-L_{15}	-287.74	-127.82	1.34	-14.68	-296.32	-68.07	13.01	-154.48	-205.34	-1,437.01
	L_{15}-U_{52}	-141.43	-113.94	0.96	1.59	-19.80	-3.59	9.32	17.11	-213.46	-38.69
	U_{52}-L_{16}	-141.64	-56.96	1.45	1.71	-14.21	-1.12	15.63	18.45	-153.24	-12.04
	L_{16}-U_{53}	-136.67	-671.04	0.81	1.91	-14.15	8.68	15.63	18.45	-153.24	-12.04
	U_{53}-L_{17}	-497.26	-34.44	16.67	-16.44	-0.64	0.08	185.96	-183.07	-0.46	0.85
	L_{17}-U_{54}	-139.08	-187.97	1.58	-6.71	-13.79	-3.99	81.71	-72.35	-148.69	-43.02
	U_{54}-L_{18}	-47.38	-119.85	1.74	-14.62	-42.89	-8.37	14.03	-161.06	-183.03	-107.37
	L_{18}-U_{55}	-52.58	-329.17	1.86	4.40	-6.58	-8.62	41.66	-47.41	-70.99	-92.91
	U_{55}-L_{19}	-277.84	-111.68	1.56	-1.20	-17.75	-5.55	16.82	-12.93	-191.43	-69.85
	L_{19}-U_{56}	-166.98	-243.52	1.03	1.42	-18.04	-12.49	11.12	15.26	-194.51	-134.69
	U_{56}-L_{20}	-287.74	-127.82	1.34	-14.68	-296.32	-68.07	13.01	-154.48	-205.34	-1,437.01
	L_{20}-U_{57}	-141.43	-113.94	0.96	1.59	-19.80	-3.59	9.32	17.11	-213.46	-38.69
	U_{57}-L_{21}	-141.64	-56.96	1.45	1.71	-14.21	-1.12	15.63	18.45	-153.24	-12.04
	L_{21}-U_{58}	-136.67	-671.04	0.81	1.91	-14.15	8.68	8.78	20.62	-152.58	93.60
	U_{58}-L_{22}	-497.26	-34.44	16.67	-16.44	-0.64	0.08	185.96	-183.07	-0.46	0.85
	L_{22}-U_{59}	-113.04	44.48	3.67	-3.55	-5.03	-6.65	40.81	-39.54	-56.02	-74.06
	U_{59}-L_{23}	-59.35	-15.11	2.26	1.42	-8.56	-6.79	25.17	15.84	-89.75	-75.49
	L_{23}-U_{60}	-287.74	-127.82	1.34	-14.68	-296.32	-68.07	13.01	-154.48	-205.34	-1,437.01
	U_{60}-L_{24}	-141.43	-113.94	0.96	1.59	-19.80	-3.59	9.32	17.11	-213.46	-38.69
	L_{24}-U_{61}	-141.64	-56.96	1.45	1.71	-14.21	-1.12	15.63	18.45	-153.24	-12.04
	U_{61}-L_{25}	-136.67	-671.04	0.81	1.91	-14.15	8.68	8.78	20.62	-152.58	93.60
	L_{25}-U_{62}	-497.26	-34.44	16.67	-16.44	-0.64	0.08	185.96	-183.07	-0.46	0.85
	U_{62}-L_{26}	-113.04	44.48	3.67	-3.55	-5.03	-6.65	40.81	-39.54	-56.02	-74.06
	L_{26}-U_{63}	-59.35	-15.11	2.26	1.42	-8.56	-6.79	25.17	15.84	-89.75	-75.49
	U_{63}-L_{27}	-287.74	-127.82	1.34	-14.68	-296.32	-68.07	13.01	-154.48	-205.34	-1,437.01
	L_{27}-U_{64}	-141.43	-113.94	0.96	1.59	-19.80	-3.59	9.32	17.11	-213.46	-38.69
	U_{64}-L_{28}	-141.64	-56.96	1.45	1.71	-14.21	-1.12	15.63	18.45	-153.24	-12.04
	L_{28}-U_{65}	-136.67	-671.04	0.81	1.91	-14.15	8.68	8.78	20.62	-152.58	93.60
	U_{65}-L_{29}	-497.26	-34.44	16.67	-16.44	-0.64	0.08	185.96	-183.07	-0.46	0.85
	L_{29}-U_{66}	-113.04	44.48	3.67	-3.55	-5.03	-6.65	40.81	-39.54	-56.02	-74.06
	U_{66}-L_{30}	-59.35	-15.11	2.26	1.42	-8.56	-6.79	25.17	15.84	-89.75	-75.49
	L_{30}-U_{67}	-287.74	-127.82	1.34	-14.68	-296.32	-68.07	13.01	-154.48	-205.34	-1,437.01
	U_{67}-L_{31}	-141.43	-113.94	0.96	1.59	-19.80	-3.59	9.32	17.11	-213.46	-38.69
	L_{31}-U_{68}	-141.64	-56.96	1.45	1.71	-14.21	-1.12	15.63	18.45	-153.24	-12.04
	U_{68}-L_{32}	-136.67	-671.04	0.81	1.91	-14.15	8.68	8.78	20.62	-152.58	93.60
Structure 2	U_1-U_2	-140.52	22.75	1.30	2.00	-15.76	-4.02	14.03	21.52	-169.88	-43.39
	U_2-U_3	-141.64	56.96	1.45	1.71	-14.21	-1.12	15.63	18.45	-153.24	-12.04
	U_3-U_4	2.97	40.71	1.83	1.36	-10.76	-1.72	19.71	14.69	-116.05	-18.52
	U_4-U_5	-136.67	671.04	0.81	1.91	-14.15	8.68	8.78	20.62	-152.58	93.60
	U_5-U_6	497.26	-34.44	16.67	-16.44	-0.64	0.08	185.96	-183.07	-0.46	0.85
	U_6-U_7	41.03	109.94	1.68	-1.15	-8.93	-2.34	18.70	-12.78	-99.42	-26.00
	U_7-U_8	113.94	44.48	3.67	-3.55	-5.03	-6.65	40.81	-39.54	-56.02	-74.06
	U_8-U_9	59.35	15.11	2.26	1.42	-8.56	-6.79	25.17	15.84	-89.75	-75.49
	U_9-U_{10}	86.09	-19.75	4.89	-11.19	-14.32	-5.89	54.41	-124.60	-159.40	-65.55
	U_{10}-U_{11}	80.30	-119.58	2.25	0.46	-16.57	-7.39	25.06	5.14	-184.44	-81.86
	U_{11}-U_{12}	-24.63	-27.07	1.68	-6.43	-17.95	-5.47	18.70	-71.53	-199.65	-60.86
	U_{12}-U_{13}	29.38	-160.66	0.99	-1.42	-15.64	-3.13	11.05	-15.81	-174.08	-39.51

ZZ Axis Moment Properties

Location	Member	Max. Pos. Moment Start (k-in)	Max. Pos. Moment End (k-in)	S_{tot} (in^3)	S_b (in^3)	S_{tb} (in^3)	Z_z (in^3)	I_{zz} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term = F_y*S_{tot}	M_y k-in	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(a)}$	Equivalent Mom. Factor $C_{m(b)}$
Structure 1	U_1-U_2	4.88	-123.70	339.23	41.03	90.2	90.24	72.24	1.27	4206	0.99880042	2974.3	0.133	0.65	0.65
	U_2-U_3	-56.17	-137.18	-201.51	-127.11	90.2	90.24	72.24	1.27	4206	0.99880042	2974.3	0.033	0.61	0.61
	U_3-U_4	-132.05	86.10	-317.02	32.11	90.2	90.24	76.71	1.27	4206	0.99880042	2974.3	-0.101	0.56	0.56
	U_4-U_5	1.42	-117.85	-203.10	-74.52	90.2	90.24	72.24	1.27	4206	0.99880042	2974.3	0.057	0.58	0.58
	U_5-L_0	5.97	-111.85	-248.11	15.67	90.2	90.24	72.24	1.27	4206	0.99880042	2974.3	-0.062	0.58	0.58
	L_0-U_6	80.22	187.31	-149.70	140.93	90.2	90.24	76.71	1.27	4206	0.99880042	2974.3	0.428	0.77	0.77
	U_6-U_7	18.95	23.88	-157.91	-11.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_7-U_8	20.56	-54.71	-123.95	-50.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_8-L_1	9.82	26.59	-203.86	153.44	138.2	138.17	111.77	1.27	6099	0.99880042	4354.8	-0.370	0.45	0.45
	L_1-U_9	779.12	-376.62	610.76	-155.20	130.3	130.26	105.11	1.27	5865	0.99880042	4208.9	-0.483	0.41	0.41
	U_9-U_{10}	90.32	-0.45	-11.34	-33.28	96.6	96.61	79.12	1.27	4485	0.99873190	3184.1	-0.005	0.60	0.60
	U_{10}-U_{11}	122.41	-203.42	2.74	-16.83	-267.23	98.85	83.55	1.27	4599	0.99873190	3184.1	-0.089	0.57	0.57
	U_{11}-U_{12}	71.26	-210.27	73.29	-278.72	128.7	128.69	105.26	1.27	6026	0.99873190	4241.5	0.263	0.71	0.71
	U_{12}-U_{13}	-96.38	-220.37	-282.24	-325.96	151.8	151.76	130.94	1.27	7252	0.99905092	5003.4	0.866	0.95	0.95
	U_{13}-U_{14}	-164.13	-364.57	-381.72	-446.35	151.8	151.76	130.94	1.27	7252	0.99905092	5003.4	0.866	0.95	0.95
	U_{14}-U_{15}	-278.07	-483.58	-689.92	-370.70	188.5	188.51	157.55	1.27	9004	0.99899937	6214.6	0.545	0.82	0.82
	U_{15}-U_{16}	-111.48	-688.97	-414.47	-568.30	188.5	188.51	164.41	1.27	9004	0.99899937	6214.6	0.460	0.78	0.78
	U_{16}-L_2	-343.40	-187.79	-695.77	-320.03	188.5	188.51	157.55	1.27	9004	0.99899937	6214.6	0.460	0.78	0.78
	U_{17}-U_{18}	-182.82	-81.23	-409.78	-33.62	127.3	127.33	110.40	1.27	6146	0.99907149	4197.7	0.205	0.69	0.69
	U_{18}-U_{19}	-213.12	-68.14	-606.62	-89.44	104.8	104.75	86.43	1.27	5053	0.99880042	3452.6	0.122	0.65	0.65
	U_{19}-U_{20}	-222.98	-179.24	-390.73	5.18	104.8	104.75	86.43	1.27	5053	0.99880042	3452.6	-0.013	0.59	0.59
	U_{20}-U_{21}	-259.65	-260.34	-427.57	-258.53	104.8	104.75	86.43	1.27	5053	0.99880042	3452.6	0.211	0.71	0.71
	U_{21}-U_{22}	-83.33	-718.56	-326.61	863.46	138.2	138.17	111.77	1.27	6699	0.99880042	4583.8	0.577	0.83	0.83
	U_{22}-L_3	-773.12	-376.62	615.76	-155.20	130.3	130.26	105.11	1.27	5865	0.99880042	4208.9	0.483	0.41	0.41
	U_{23}-U_{24}	-412.70	-386.17	-728.59	-615.00	232.7	232.70	188.86	1.27	10799	0.99880042	7455.3	0.471	0.80	0.80
	U_{24}-U_{25}	-413.39	-430.30	-786.64	-547.27	232.7	232.70	188.86	1.27	10799	0.99880042	7455.3	0.407	0.78	0.78
	U_{25}-L_4	-488.80	-206.57	-939.75	-363.98	251.7	251.73	209.41	1.27	11683	0.99880042	8066.1	0.389	0.76	0.76
	U_{26}-U_{27}	-408.41	-199.31	-754.32	-455.42	232.7	232.70	189.45	1.27	10799	0.99880042	7455.3	0.604	0.84	0.84
	U_{27}-U_{28}	-265.50	-143.98	-512.39	-231.02	232.7	232.70	189.45	1.27	10799	0.99880042	7455.3	0.434	0.79	0.79
	U_{28}-L_5	-422.07	-74.72	-766.08	-242.16	198.9	198.88	169.65	1.27	9234	0.99880042	6373.1	0.313	0.73	0.73
	U_{29}-U_{30}	-1192.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{30}-U_{31}	-174.94	92.04	-453.96	-39.03	156.8	156.80	134.92	1.27	7289	0.99880042	5168.9	0.086	0.62	0.62
	U_{31}-L_6	-104.81	256.23	-398.43	-182.98	156.8	156.80	128.72	1.27	7289	0.99880042	5168.9	-0.471	0.41	0.41
	U_{32}-U_{33}	-1192.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{33}-U_{34}	-312.40	1688.04	-676.63	1891.13	221.8	221.77	196.91	1.27	10799	0.99880042	7310.6	-0.358	0.46	0.46
	U_{34}-L_7	-1192.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{35}-U_{36}	-1192.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{36}-U_{37}	-1192.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{37}-L_8	-5.09	95.33	374.21	24.15	185.0	185.70	154.12	1.27	8696	0.99880042	6121.2	-0.089	0.56	0.56
	L_8-U_{38}	56.52	46.05	189.63	68.61	90.2	90.24	72.24	1.27	4206	0.99880042	2974.3	0.173	0.67	0.67
	U_{38}-U_{39}	35.68	-30.86	-112.75	-66.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{39}-U_{40}	42.96	-29.89	-103.63	-88.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{40}-L_9	1.84	-74.70	-98.45	-109.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	L_9-U_{41}	29.63	-12.66	-168.44	-88.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{41}-U_{42}	14.27	-12.66	-168.44	-88.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{42}-U_{43}	18.46	-78.12	-267.28	-105.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{43}-L_{10}	21.91	-78.12	-267.28	-105.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	L_{10}-U_{44}	21.22	27.17	-224.64	-77.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{44}-U_{45}	20.96	27.41	-208.44	-43.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{45}-U_{46}	17.26	21.61	-203.99	-22.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{46}-L_{11}	13.89	23.52	-279.64	209.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	L_{11}-U_{47}	250.82	-273.40	-10.37	21.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{47}-U_{48}	31.91	-31.91	-0.45	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{48}-L_{12}	40.65	-55.81	-79.95	-75.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{49}-L_{13}	34.98	27.86	-116.94	-126.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	L_{13}-U_{50}	34.98	27.86	-116.94	-126.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{50}-L_{14}	27.02	20.72	-180.40	-208.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	L_{14}-U_{51}	28.00	26.16	-384.23	-130.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{51}-U_{52}	-2.18	-67.40

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: 3F1
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) 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	L_0-L_1	-15.50	-73.38	4.14	-6.53	0.65	0.67	7.43	0.00	0.00	0.00
	L_1-L_2	39.75	-88.06	3.00	-8.51	-6.87	-7.85	33.37	-94.76	-76.49	-87.44
	L_2-L_3	70.00	-42.24	3.94	-1.57	-11.86	-7.54	10.42	-17.50	-131.98	-83.93
	L_3-L_4	-11.39	11.52	1.77	-13.50	-13.66	-5.30	19.65	-150.31	-152.10	-58.99
	L_4-L_5	-49.18	208.14	1.94	2.12	-14.29	1.55	21.00	-23.36	-159.99	17.26
	L_5-L_6	-6.43	187.22	1.46	3.61	-9.33	-0.33	16.23	39.04	-103.86	-3.62
	L_6-L_7	41.36	78.74	1.91	-0.62	-10.09	-0.13	21.21	-5.18	-112.07	-55.91
	L_7-L_8	-25.09	448.92	0.72	2.63	-8.24	9.41	7.99	29.26	-91.78	104.77
	L_8-L_9	426.08	-36.00	9.01	-1.66	-5.09	0.23	97.10	-17.91	-1.00	2.07
	L_9-L_{10}	155.12	-108.15	4.15	-7.27	-5.80	-2.18	60.11	-78.62	-62.54	-23.50
	L_{10}-L_{11}	120.53	-116.03	2.93	-1.17	-3.83	-5.62	31.56	-12.61	-41.31	-60.58
	L_{11}-L_{12}	39.16	-98.23	1.98	-0.22	-3.12	-7.26	40.40	-74.20	-41.56	-49.24
	L_{12}-L_{13}	-45.20	-121.29	2.10	-0.34	-7.18	-7.21	22.59	-3.70	-77.43	-77.74
	L_{13}-L_{14}	96.42	-200.16	6.29	-13.52	-9.68	-6.09	67.86	-145.78	-106.48	-65.63
	L_{14}-L_{15}	-352.7	-352.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{15}-L_{16}	-192.00	-318.69	0.59	0.27	-16.71	8.20	6.34	2.88	-180.16	-88.46
	L_{16}-L_{17}	339.87	44.80	5.01	6.47	-2.49	-157.50	11.49	5.02	-643.93	-43.70
	L_{17}-L_{18}	-154.69	-31.48	0.27	-0.16	-8.32	0.79	2.88	-1.75	-100.32	8.50
	L_{18}-L_{19}	-216.17	148.84	2.39	-2.39	-4.19	2.94	4.19	-13.30	-81.74	57.01
	L_{19}-L_{20}	-136.64	-69.93	3.00	-0.17	-7.63	3.93	3.21	-1.82	-82.25	42.41
	L_{20}-L_{21}	2.99	-170.85	3.12	-7.38	-0.47	0.89	33.18	-78.59	-4.95	9.92
	L_{21}-L_{22}	56.39	-245.54	4.44	-10.65	-0.83	1.31	58.16	-122.61	-10.39	18.40
	L_{22}-L_{23}	-6.26	-160.81	4.06	-8.28	-6.06	-7.45	48.01	-349.69	-91.94	-338.11
	L_{23}-L_{24}	-13.76	-103.15	1.30	-4.43	-4.86	-2.47	39.84	-133.37	-70.91	-42.43
	L_{24}-L_{25}	-253.03	-295.08	3.40	-16.26	-16.77	-10.29	36.22	-173.16	-178.58	-109.56
	L_{25}-L_{26}	-81.36	-446.11	3.06	-15.61	-10.29	-6.53	11.31	-142.26	-124.85	-216.03
	L_{26}-L_{27}	-475.14	-262.78	2.45	-22.45	-13.25	6.60	26.05	-26.07	-229.04	-141.10
	L_{27}-L_{28}	-280.52	-64.48	1.99	-3.51	-24.58	-3.42	21.23	-37.39	-261.71	-36.38
	L_{28}-L_{29}	-292.37	219.77	2.51	-2.02	-24.03	2.03	26.68	21.47	-230.75	43.49
	L_{29}-L_{30}	-225.88	141.33	1.72	3.35	-12.09	-0.36	18.30	35.62	-134.09	-3.83
	L_{30}-L_{31}	-203.56	285.61	2.76	7.22	-14.56	1.46	29.29	72.18	-167.02	11.49
	L_{31}-L_{32}	-160.09	387.78	3.83	-11.49	1.31	18.96	38.69	-122.38	13.94	-60.21
	L_{32}-L_{33}	-202.72	-204.41	2.90	-0.22	-14.14	-4.50	30.82	-2.35	-192.55	-48.22
	L_{33}-L_{34}	-108.15	-103.15	1.30	-0.72	-6.80	-2.18	14.75	-12.65	-92.00	-25.77
	L_{34}-L_{35}	1072.48	-412.36	20.12	-12.45	-1.17	-0.58	211.67	-130.97	-12.28	-0.85
	L_{35}-L_{36}	319.48	-41.33	1.94	-1.72	-4.68	-0.29	20.20	-16.51	-160.16	-49.24
	L_{36}-L_{37}	475.61	-89.01	1.38	-10.49	-5.61	-2.27	77.62	-112.40	-69.00	-23.85
	L_{37}-L_{38}	212.02	-30.63	1.38	-4.30	-2.67	-1.38	34.61	-41.58	-41.58	-14.88
	L_{38}-L_{39}	226.53	-41.80	1.41	-7.11	-7.77	-2.68	46.42	-83.22	-81.74	-28.14
	L_{39}-L_{40}	214.46	-56.44	3.68	-10.86	-8.16	-3.81	38.75	-114.21	-85.82	-40.12
	L_{40}-L_{41}	40.16	-64.27	2.34	-6.18	-4.32	-4.36	30.00	-98.23	-173.55	-38.82
	L_{41}-L_{42}	49.26	-202.49	2.85	-18.84	-16.50	-13.20	30.00	-198.23	-173.55	-138.82
	L_{42}-L_{43}	-197.12	-24.39	1.73	-2.19	-15.73	1.01	22.69	-29.99	-153.03	-20.00
	L_{43}-L_{44}	-111.93	0.87	1.28	2.79	-18.00	-5.00	13.01	29.37	-189.41	-52.59
	L_{44}-L_{45}	-75.16	-103.15	2.07	-1.86	-6.80	-2.18	14.75	-12.65	-92.00	-25.77
	L_{45}-L_{46}	-60.79	179.83	1.37	3.19	-11.73	-1.34	14.42	33.52	-123.47	-14.07
	L_{46}-L_{47}	-81.88	265.66	2.36	-1.38	-13.56	0.91	24.83	14.95	-142.62	9.60
	L_{47}-L_{48}	-100.08	411.52	3.20	-4.43	-13.56	1.91	24.83	14.95	-142.62	9.60
	L_{48}-L_{49}	-100.08	-279.84	2.14	-0.77	-14.37	-7.13	22.55	-8.13	-151.14	-75.05
	L_{49}-L_{50}	-75.20	1005.94	1.45	-4.15	-5.61	-1.45	14.75	29.37	-189.41	-52.59
	L_{50}-L_{51}	1027.57	362.88	19.06	-14.30	-1.24	1.21	202.97	-152.24	-14.33	-12.53
	L_{51}-L_{52}	-227.20	-125.85	1.34	-5.71	-14.39	-4.07	14.30	-7.96	-153.21	-43.31
	L_{52}-L_{53}	-225.70	-225.70	1.34	-5.71	-14.39	-4.07	14.30	-7.96	-153.21	-43.31
	L_{53}-L_{54}	-278.16	-133.13	4.75	-10.45	-5.36	-2.57	50.56	-111.28	-57.28	-27.35
	L_{54}-L_{55}	-179.13	-179.13	3.91	-8.61	-5.36	-2.57	39.25	-88.01	-57.28	-27.35
	L_{55}-L_{56}	-222.98	-243.33	4.43	-7.71	-8.72	-5.73	47.13	-82.09	-82.82	-61.01
	L_{56}-L_{57}	-201.76	-319.65	3.74	-6.04	-8.72	-5.73	47.13	-82.09	-82.82	-61.01
	L_{57}-L_{58}	-187.99	-470.86	3.37	-8.52	-24.11	-13.68	35.90	-90.70	-256.72	-145.67
	L_{58}-L_{59}	-445.18	-93.63	2.13	-5.52	-23.72	-10.02	22.68	-5.50	-252.54	-106.67
	L_{59}-L_{60}	-291.76	-319.65	3.74	-6.04	-8.72	-5.73	47.13	-82.09	-82.82	-61.01
	L_{60}-L_{61}	-392.42	-38.25	1.04	-0.28	-17.89	-2.40	11.07	-3.00	-190.49	-25.58
	L_{61}-L_{62}	-297.29	-297.29	1.04	-0.28	-17.89	-2.40	11.07	-3.00	-190.49	-25.58
	L_{62}-L_{63}	-297.29	-199.08	0.82	-0.34	-12.02	1.96	8.69	-3.43	-127.98	-20.86
	L_{63}-L_{64}	-24.12	-24.12	0.69	-0.19	-2.67	-0.33	7.37	-2.53	-45.09	-14.60
	L_{64}-L_{65}	24.89	-109.69	6.16	-7.28	-0.29	0.44	44.86	-78.46	-3.07	4.78
	L_{65}-L_{66}	-139.96	-178.06	4.09	-7.86	-1.65	-1.37	43.62	-84.71	-17.77	-14.72
	L_{66}-L_{67}	-139.96	-139.07	3.20	-5.92	-1.65	-1.37	43.62	-84.71	-17.77	-14.72
	L_{67}-L_{68}	47.96	-293.32	3.69	-15.15	-7.26	-6.22	33.76	-87.84	-78.54	-67.11
	L_{68}-L_{69}	-13.01	-13.01	0.30	-0.07	-3.26	-0.81	13.01	-4.53	-125.26	-34.66
	L_{69}-L_{70}	-41.79	-343.26	3.27	-20.05	-13.67	-11.50	29.54	-218.22	-147.36	-124.03
	L_{70}-L_{71}	-341.31	86.25	1.44	-1.12	-19.68	1.21	13.09	12.11	-205.47	13.09
	L_{71}-L_{72}	-201.18	-201.18	1.50	-4.81	-6.81	0.01	10.86	16.16	-94.36	9.09
	L_{72}-L_{73}	-148.72	-148.72	1.50	-4.81	-6.81	0.01	10.86	16.16	-94.36	9.09
	L_{73}-L_{74}	-428.40	-26.47	1.14	-4.88	-6.03	0.04	123.97	-54.32	-0.35	0.43
	L_{74}-L_{75}	-70.64	-27.55	1.63	-6.45	-6.98	-2.75	51.26	-71.61	-75.70	-30.58
	L_{75}-L_{76}	-194.51	-25.06	2.56	-10.19	-6.05	-3.88	58.52	-113.45	-67.31	-43.01
	L_{76}-L_{77}	-45.44	-80.85	1.43	-5.69	-13.19	-6.06	14.80	-5.55	-146.87	-67.44
	L_{77}-L_{78}	-74.43	-5.53	0.51	-0.47	-8.62	-4.30	5.67	-0.58	-98.16	-47.89

YY Axis Moments from STAAD

Location	Member	Start (k-in)	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_{bc}	M_2 k-in	a	C_{a1x}	C_{a2x}
Structure 1	L_0-L_1	-4.03	-14.79	1.12	-4.12	0.12	0.42	1.21	3332	0.99000394	2755.4	-0.210	0.52	0.52	—
	L_1-L_2	-10.21	27.86	0.19	-0.83	7.25	0.38	1.21	3332	0.99000394	2755.4	-0.400	0.44	0.44	—
	L_2-L_3	-17.56	3.85	0.41	-0.66	-2.27	-0.66	1.21	3332	0.99001186	3294.8	0.290	0.72	0.72	—
	L_3-L_4	-45.12	56.05	-1.36	-1.00	1.46	1.77	1.21	3332	0.99001186	3294.8	0.290	0.72	0.72	—
	L_4-L_5	-30.99	-72.36	1.13	-4.61	-21.33	12.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_5-L_6	-16.55	61.63	0.36	-0.08	0.98	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_6-L_7	61.56	-12.30	0.44	5.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_7-L_8	-4.92	6.11	-0.87	-2.78	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_8-L_9	-12.42	-9.16	11.67	2.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_9-L_{10}	-4.90	-3.96	0.25	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{10}-L_{11}	-4.16	-17.60	17.16	-2.07	1.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{11}-L_{12}	2.05	-0.81	-7.26	-2.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{12}-L_{13}	-29.59	44.27	-0.83	-5.61	-0.08	1.47	-9.53	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{13}-L_{14}	-24.09	-13.19	-4.20	15.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{14}-L_{15}	-22.21	-10.45	2.43	24.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{15}-L_{16}	-0.62	-2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{16}-L_{17}	-68.17	31.28	-76.89	30.75	375.47	322.87	431.42	1347.7	1.15	14237	0.99727272	12356.7	-0.256	0.50	0.50	—
	L_{17}-L_{18}	-36.31	-74.34	-58.47	54.52	302.9	300.95	260.42	1154.2	1.12	11294	0.99744542	9955.8	-0.248	0.49	0.49	—
	L_{18}-L_{19}	-100.55	-35.52	-77.13	-30.07	213.3	213.34	184.04	236.66	908.1	1.11	7813	0.99737381	7024.3	0.353	0.74	0.74
	L_{19}-L_{20}	-82.38	-37.30	-66.08	-22.11	137.66	137.66	140.13	626.51	1.10	4822	0.99810102	4303.9	0.314	0.67	0.67	—
	L_{20}-L_{21}	-29.39	-102.76	-4.19	-14.57	126.9	125.92	156.45	1154.2	1.10	8893	0.99660798	4149.8	0.288	0.72	0.72	0.052
	L_{21}-L_{22}	-49.92	-112.37	-23.53	-11.50	158.1	157.11	156.45	1154.2	1.10	8893	0.99660798	5531.9	0.403	0.78	0.78	0.072
	L_{22}-L_{23}	-104.88	-109.08	-82.66	8.65	158.2	158.2	156.45	1154.2	1.10	8893	0.99660798	6926.2	0.505	0.86	0.86	0.092
	L_{23}-L_{24}	-29.59	-102.76	-4.19	-14.57	126.9	125.92	156.45	1154.2	1.10	8893	0.99660798	4149.8	0.288	0.72	0.72	0.052
	L_{24}-L_{25}	-33.83	-13.33	-1.78	-6.17	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{25}-L_{26}	-32.28	-28.52	-1.12	-4.91	0.00	0.37	-27.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{26}-L_{27}	-15.68	-11.63	11.88	-32.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{27}-L_{28}	-10.57	-24.51	-0.27	-176.70	108.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{28}-L_{29}	-20.37	-1.92	17.35	16.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{29}-L_{30}	-25.84	-12.12	-2.82	8.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{30}-L_{31}	-8.35	-0.46	9.72	8.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{31}-L_{32}	-2.89	21.64	-0.66	-0.27	-1.26	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{32}-L_{33}	-17.36	54.60	0.35	0.07	-1.17	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{33}-L_{34}	3.84	-7.55	-12.92	-4.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{34}-L_{35}	-35.30	42.03	0.06	-0.22	-1.17	-1.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{35}-L_{36}	27.30	-40.74	0.64	0.07	-1.26	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{36}-L_{37}	-10.96	-69.72	0.23	-0.10	-0.06	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{37}-L_{38}	-49.09	-56.51	0.25	-1.58	-1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{38}-L_{39}	-150.08	-20.20	-0.42	-1.46	-0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{39}-L_{40}	-140.97	-112.23	-140.59	-115.31	444.9	444.92	369.61	507.36	2244.6	1.14	16743	0.99771121	14648.8	0.796	0.92	0.92
	L_{40}-L_{41}	-44.59	-2.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{41}-L_{42}	-54.92	-112.37	-23.53	-11.50	158.1	157.11	156.45	1154.2	1.10	8893	0.99660798	5531.9	0.403	0.78	0.78	0.072
	L_{42}-L_{43}	-3.44	34.52	7.15	0.27	42.64	37.24	270.63	362.39	1622.3	1.11	11959	0.99850165	10784.1	0.237	0.68	0.68
	L_{43}-L_{44}	-4.44	34.52	7.15	0.27	42.64	37.24	270.63	362.39	1622.3	1.11	11959	0.99850165	10784.1	0.237	0.68	0.68
	L_{44}-L_{45}	-19.71	41.89	-1.65	-18.60	180.6	180.57	174.56	198.17	1146.7	1.10	6540	0.99863604	5949.0	-0.040	0.58	0.58
	L_{45}-L_{46}	-19.71	41.89	-1.65	-18.60	180.6	180.57	174.56	198.17	1146.7	1.10	6540	0.99863604	5949.0	-0.040	0.58	0.58
	L_{46}-L_{47}	-59.20	25.75	41.52	52.57	160.6	160.57	198.20	198.17	1146.7	1.10	6540	0.99863604	5949.0	-0.264	0.49	0.49
	L_{47}-L_{48}	-59.20	25.75	41.52	52.57	160.6	160.57	198.20	198.17	1146.7	1.10	6540	0.99863604	5949.0	-0.264	0.49	0.49
	L_{48}-L_{49}	-90.11	47.63	-66.07	91.27	256.0	256.03	211.86	281.57	1450.4	1.10	9292	0.99818954	8433.7	-0.724	0.31	0.31
	L_{49}-L_{50}	-90.11	47.63	-66.07	91.27	256.0	256.03	211.86	281.57	1450.4	1.10	9292	0.99818954	8433.7	-0.724	0.31	0.31
	L_{50}-L_{51}	-26.25	52.63	-18.28	58.59	256.0	256.03	214.35	281.57	1450.4	1.10	9292	0.99818954	8433.7	-0.323	0.47	0.47
	L_{51}-L_{52}	-26.25	52.63	-18.28	58.59	256.0	256.03	214.35	281.57	1450.4	1.10	9292	0.99818954	8433.7	-0.323	0.47	0.47
	L_{52}-L_{53}	-47.62	-3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{53}-L_{54}	-10.39	55.13	-15.95	54.14	180.6	180.57	174.56	198.17	1146.7	1.10	6540	0.99863604	5949.0	-0.188	0.52	0.52
	L_{54}-L_{55}	-71.17	28.95	42.66	-19.44	229.6	229.58	217.57	251.95	1341.1	1.10	8314	0.99852588	7902.9	-0.407	0.44	0.44
	L_{55}-L_{56}	-52.84	-34.19	-39.26	-20.42	229.6	229.58	217.57	251.95	1341.1	1.10	8314	0.99852588	7902.9	-0.407	0.44	0.44
	L_{56}-L_{57}	-52.84	-34.19	-39.26	-20.42	229.6	229.58	217.57	251.95	1341.1	1.10	8314	0.99852588	7902.9	-0.407	0.44	0.44
	L_{57}-L_{58}	-71.17	28.95	42.66	-19.44	229.6	229.58	217.57	251.95	1341.1	1.10	8314	0.99852588	7902.9	-0.407	0.44	0.44
	L_{58}-L_{59}	-52.84	-34.19	-39.26	-20.42	229.6	229.58	217.57	251.95	1341.1	1.10	8314	0.99852588	7902.9	-0.407	0.44	0.44
	L_{59}-L_{60}	-52.84	-34.19	-39.26	-20.42	229.6	229.58	217.57	251.95	1341.1	1.10	8314	0.99852588	7902.9	-0.407	0.44	0.44
	L_{60}-L_{61}	-22.07	-12.89	-3.98	20.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{61}-L_{62}	-10.28	-28.08	-1.42	-5.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{62}-L_{63}	-26.29	52.63	-18.28	58.59	256.0	256.03	214.35	281.57	1450.4	1.10	9292	0.99818954	8433.7	-0.323	0.47	0.47
	L_{63}-L_{64}	-2.49	38.32	0.22	0.16	0.80	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{64}-L_{65}	-47.62	-3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{65}-L_{66}	-2.42	-2.70	1.86	1.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{66}-L_{67}	-10.39	55.13	-15.95	54.14	180.6	180.57	174.56	198.17	1146.7	1.10	6540	0.99863604	5949.0	-0.188	0.52	0.52
	L_{67}-L_{68}	-71.17	28.95	42.66	-19.44	229.6	229.58	217.57	251.95	1341.1	1.10	8314	0.99852588	7902.9	-0.407	0.44	0.44
	L_{68}-L_{69}	-52.84	-34.19	-39.26	-20.42	229.6	229.58	217.57	251.95	1341.1	1.10	8314	0.99852588	7902.9	-0.407	0.44	0.44
	L_{69}-L_{70}	-22.12	-19.23	-35.17	-14.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{70}-L_{71}	-48.44	-3.16	14.08	19.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_{71}-L_{72}	-11.07	23.72	28.58	30.51	256.0	256.03	214.35	281.57	1450.4	1.10	9292	0.99818954	8433.7	-0.724	0.31	0.31
	L_{72}-L_{73}	-11.07	23.72	28.58	30.51	256.0	256.03	214.35	281.57	1450.4	1.10	9292	0.99818954	8433.7	-0.724	0.31	0.31
	L_{73}-L_{74}	-148.54	35.82	-128.00	75.36	439.2	428.23	354.42	490.93	1947.0	1.15	15201	0.99727272	12356.7	-0.256	0.50	0.50
	L_{74}-L_{75}	-148.54	35.82	-128.00	75.36	439.2	428.23	354.42	490.93	1947.0	1.15	15201	0.99727272	12356.7	-0.256	0.50	0.50
	L_{75}-L_{76}	-84.46	49.94	-66.07	91.27	256.0	256.03	211.86	281.57	1450.4	1.10	9292	0.99818954	8433.7	-0.724	0.31	0.31
	L_{76}-L_{77}	-84.46	49.94	-66.07	91.27	256.0	256.03	211.86	281.57	1450.4	1.10	9292	0.99818954	8433.7	-0.724	0.31	0.31
	L_{77}-L_{78}	-64.83	17.63	21.18	5.78	128.3	128.29	121.63	141.18	626.8	1.10	4659	0.99805642	4225.3	0.272	0.71	0.71

M_3 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 3	L_0-L_1	-15.50	-73.38	4.14	-6.53	0.65	0.67	7.43	0.00	0.00	0.00
	L_1-L_2	39.75	-88.06	3.00	-8.51	-6.87

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: 3F1
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

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) (k-ft)	Pedestrian Load (Min) Start (k-ft)	Pedestrian Load 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	-29.87	49.03	0.56	0.60	4.04	4.23					
	U_1~L_2	-9.08	15.18	0.47	-0.51	-3.42	3.15					
	U_1~U_2	30.00	-9.70	1.10	-0.79	-3.38	3.39					
	U_2~L_2	33.45	-34.40	2.25	-2.11	-2.73	2.81					
	U_2~L_3	41.64	-42.40	2.51	-2.55	-2.21	2.26					
	U_2~U_3	45.56	-51.10	2.84	-3.18	-0.77	0.60					
	U_3~L_3	36.53	-38.55	2.59	-3.06	-0.81	0.63					
	U_3~L_4	91.24	-101.87	6.31	-8.45	-0.02	0.02					
	U_3~U_4	-29.57	21.23	5.25	-6.25	4.55	5.46					
	U_4~L_4	-88.47	88.21	0.31	0.37	-3.08	3.26					
	U_4~L_5	-91.10	91.53	0.74	-0.20	-3.57	4.00					
	U_4~U_5	-79.57	78.39	0.97	-0.61	-3.41	3.30					
	U_5~L_5	-49.26	60.16	1.18	-1.06	-3.19	3.24					
	U_5~L_6	-29.77	34.66	1.03	-1.70	-3.09	2.66					
	U_5~U_6	-1.50	-2.65	3.01	-3.09	-2.22	2.15					
	U_6~L_6	34.13	-36.55	2.56	-3.25	-2.98	-1.36					
	U_6~L_7	46.23	-55.85	2.84	-2.96	-0.65	0.40					
	U_6~U_7	110.44	-114.63	4.95	-5.04	-0.32	0.02					
	U_7~L_7	121.36	-131.24	5.22	-5.21	-0.34	-0.47					
	U_7~L_8	134.59	-173.50	5.20	-5.66	-0.39	0.05					
	U_7~U_8	114.23	168.91	0.65	-0.73	5.18	5.22					
	U_8~L_8	-123.79	131.39	0.62	-0.65	-5.00	4.85					
	U_8~L_9	105.48	113.43	0.71	-0.72	-4.61	4.51					
	U_8~U_9	-56.01	62.13	0.41	-0.44	-2.77	2.71					
	U_9~L_9	-34.55	39.79	1.10	-1.05	-2.90	2.84					
	U_9~L_{10}	-7.04	12.29	1.69	-1.66	-2.56	2.69					
	U_9~U_{10}	15.85	-15.59	2.00	-2.07	-2.60	2.57					
	U_{10}~L_{10}	38.66	-44.94	1.86	-1.35	-2.50	2.66					
	U_{10}~L_{11}	86.91	-96.07	3.85	-3.79	-1.45	1.35					
	U_{10}~U_{11}	135.08	-144.61	4.77	-4.77	-1.90	1.84					
	U_{11}~L_{11}	141.23	-149.40	4.20	-4.29	-0.96	0.51					
	U_{11}~L_{12}	192.55	-192.83	4.06	-4.16	-0.52	0.26					
	U_{11}~U_{12}	147.41	-148.81	3.24	-3.24	-0.40	0.20					
	U_{12}~L_{12}	203.52	-203.17	5.33	-5.14	-0.34	0.36					
	U_{12}~L_{13}	93.05	-93.11	2.70	-2.61	-0.42	0.61					
	U_{12}~U_{13}	-109.89	162.81	0.55	-0.58	-5.55	5.17					
	U_{13}~L_{13}	-113.84	120.43	0.53	-0.58	-5.45	5.07					
	U_{13}~U_{14}	-130.37	127.18	0.55	-0.61	-5.66	5.53					
	U_{14}~L_{14}	-113.07	114.60	0.87	-0.60	-5.15	5.15					
	U_{14}~L_{15}	73.60	82.44	0.63	-0.70	-3.79	3.79					
	U_{14}~U_{15}	-44.77	46.58	1.10	-1.04	-2.78	2.62					
	U_{15}~L_{15}	-30.30	34.39	1.10	-1.04	-2.78	2.62					
	U_{15}~L_{16}	-3.69	4.33	1.74	-1.73	-2.04	2.06					
	U_{15}~U_{16}	22.65	-25.72	2.87	-2.72	-1.44	1.36					
	U_{16}~L_{16}	29.24	-30.21	2.87	-2.87	-1.44	1.26					
	U_{16}~L_{17}	86.57	-87.50	3.52	-3.46	-1.09	0.80					
	U_{16}~U_{17}	143.94	-143.51	4.24	-4.24	-0.73	0.34					
	U_{17}~L_{17}	138.29	-139.04	5.55	-5.67	-0.74	0.25					
	U_{17}~L_{18}	124.54	-124.61	5.24	-5.27	-0.67	0.21					
	U_{17}~U_{18}	173.56	-176.28	5.51	-5.63	-0.28	0.24					
	U_{18}~L_{18}	111.29	-112.91	5.20	-5.25	-0.20	0.20					
	U_{18}~L_{19}	-167.25	167.49	0.50	-0.55	-4.95	4.67					
	U_{18}~U_{19}	-116.13	110.00	0.37	-0.33	-4.00	3.98					
	U_{19}~L_{19}	-124.39	121.09	0.25	-0.25	-4.33	4.28					
	U_{19}~L_{20}	-119.87	124.44	0.68	-0.50	-4.14	4.07					
	U_{19}~U_{20}	-89.40	142.47	0.68	-0.50	-4.14	4.07					
	U_{20}~L_{20}	-79.51	88.87	1.09	-0.98	-4.03	3.87					
	U_{20}~L_{21}	-43.86	51.94	1.11	-1.24	-2.11	2.26					
	U_{20}~U_{21}	-28.52	31.04	2.45	-2.46	-2.11	2.26					
	U_{21}~L_{21}	-5.58	1.82	2.74	-2.72	-2.13	1.95					
	U_{21}~L_{22}	16.24	-18.29	2.74	-2.72	-2.13	1.95					
	U_{21}~U_{22}	55.25	-61.09	2.71	-2.77	-0.58	0.41					
	U_{22}~L_{22}	61.08	-64.44	2.71	-2.77	-0.58	0.41					
	U_{22}~L_{23}	137.10	-150.77	5.30	-5.32	-0.53	0.53					
	U_{22}~U_{23}	165.74	-206.85	4.92	-5.40	-0.39	0.52					
	U_{23}~L_{23}	92.31	-96.87	3.27	-3.67	-0.49	0.09					
	U_{23}~L_{24}	142.75	-166.20	4.76	-5.23	-0.07	0.09					
	U_{23}~L_{24}	37.93	-58.82	4.19	-5.31	-5.49	6.21					
	U_{24}~L_{24}	-87.20	89.91	0.02	-0.03	-3.90	3.94					
	U_{24}~L_{25}	-48.49	45.44	0.29	0.39	-3.11	3.30					
	U_{25}~L_{25}	-38.99	42.97	0.43	-0.39	-2.80	2.55					
	U_{25}~L_{26}	-39.90	40.31	1.16	-0.87	-2.64	2.71					
	U_{26}~L_{26}	-37.48	38.74	2.47	-2.63	-2.72	2.79					
	U_{26}~L_{27}	-10.30	11.14	2.83	-3.22	-1.38	1.30					
	U_{26}~L_{28}	3.52	-11.96	3.74	-3.55	-0.69	0.48					
	U_{28}~L_{28}	44.79	-53.88	3.80	-5.04	-0.37	-0.12					

M_2 Information

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/S_{bc}	M_y (k-in)	Equivalent Mom. Factor a	$C_{b(U)}$	$C_{b(L)}$
U_1~L_1	-30.80	55.03	87.29	124.96	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_1~L_2	-4.96	12.37	-61.32	65.31	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_1~U_2	29.22	-28.03	-37.25	36.06	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_2~L_2	76.07	-75.31	4.04	-4.12	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_2~L_3	90.50	81.03	-39.37	35.4	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_2~U_3	161.70	-112.46	48.05	-57.75	19.4	19.37	19.31	29.87	3	998.8	1.54	924	1.5	763.3
U_3~L_3	113.92	-125.02	63.94	-69.33	23.4	20.80	20.67	34.66	3	1076.0	1.67	1144	1.5	1029.6
U_3~L_4	190.92	-196.90	118.32	-132.10	18.5	18.45	18.36	30.78	3	1020.9	1.67	1016	1.5	913.3
U_3~U_4	58.47	-69.55	-50.64	60.75	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_4~L_4	49.27	-62.82	-92.58	106.57	107.1	107.13	107.11	162.71	26	2056.8	1.52	5369	1.5	5302.3
U_4~L_5	-173.05	198.96	-235.84	201.56	33.1	33.05	32.91	54.51	14	1439.8	1.65	1799	1.5	1638.0
U_4~U_5	-110.72	119.80	-158.23	160.32	35.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
U_5~L_5	-108.56	132.44	-160.48	217.63	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
U_5~L_6	-89.90	93.41	-151.20	148.11	21.1	21.09	21.09	35.46	10	1137.6	1.68	1170	1.5	1044.0
U_5~U_6	-47.53	63.42	-108.70	123.63	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
U_6~L_6	-15.10	26.64	-34.74	114.86	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
U_6~L_7	40.24	-46.70	-33.01	26.65	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_6~U_7	85.65	-89.30	-52.25	45.4	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_7~L_7	99.93	-114.12	50.94	-66.94	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8
U_7~L_8	212.97	-219.66	139.09	-148.78	33.1	35.09	35.09	53.51	14	1157.0	1.53	1766	1.5	1737.0
U_7~U_8	230.96	-243.72	153.09	-177.22	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
U_8~L_8	247.87	-304.93	169.45	-224.79	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
U_8~L_9	-139.57	209.32	-133.03	183.74	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
U_8~U_9	-152.40	161.75	-230.19	238.50	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1
U_9~L_9	-127.34	132.64	-203.72	208.13	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1
U_9~L_{10}	-67.08	74.72	-111.18	118.30	21.5	21.54	21.54	33.27	3	987.9	1.54	1098	1.5	1066.2
U_9~U_{10}	-29.16	38.04	-28.39	28.70	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{10}~L_{10}	14.17	-7.02	-44.62	53.27	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{10}~L_{11}	48.25	-48.97	-15.42	15.32	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{10}~U_{11}	76.27	-80.53	-32.57	-39.70	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{11}~L_{11}	166.33	-177.40	52.92	-106.17	20.8	20.80	20.67	34.64	3	1037.5	1.67	1143	1.5	1029.6
U_{11}~L_{12}	255.40	-272.25	102.90	-145.74	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1
U_{11}~U_{12}	233.60	-263.60	170.33	-187.18	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0
U_{12}~L_{12}	251.88	-253.64	188.54	-192.55	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0
U_{12}~L_{13}	153.06	-153.66	113.63	-113.63	43.0	43.01	43.24	68.76	15.66	1479.6	1.60	2266	1.5	2129.0
U_{12}~U_{13}	338.39	-335.19	259.85	-259.08	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
U_{13}~L_{13}	317.41	-312.58	-13.14	13.14	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
U_{13}~U_{14}	-200.29	203.74	-283.77	282.34	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
U_{14}~L_{14}	-142.14	139.93	-202.13	200.13	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1
U_{14}~L_{15}	-181.96	169.68	-238.63	234.07	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
U_{14}~U_{15}	-135.12	140.84	-217.36	219.44	39.8	38.83	38.83	59.23	6	1264.6	1.53	1955	1.5	1922.1
U_{15}~L_{15}	-83.19	84.35	-131.74	131.74	38.8	38.83	38.83	59.23	6	1264.6	1.53	1955	1.5	1922.1
U_{15}~L_{16}	-43.19	46.35	-66.23	99.10	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
U_{15}~U_{16}	-20.20	23.54	-34.39	34.39	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{16}~L_{16}	19.00	-17.99	-32.67	33.86	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{16}~L_{17}	73.64	-73.64	4.36	-4.97	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{16}~U_{17}	89.82	-94.05	32.17	-37.62	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
U_{17}~L_{17}	-134.62	-135.13	71.68	-76.84	18.7	18.71	18.61	31.48	8	970.0	1.68	1239	1.5	926.1
U_{17}~L_{18}	-173.05	198.96	-235.84	201.56	33.1	33.05	32.91	54.51	14	1439.8	1.65	1799	1.5	1638.0
U_{17}~U_{18}	-255.64	-258.23	169.68	-177.40	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
U_{18}~L_{18}	-197.41	-202.98	-151.46	-154.49	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
U_{18}~L_{19}	-306.14	222.38	-225.87	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
U_{18}~U_{19}	-306.14	222.38	-225.87	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
U_{19}~L_{19}	-306.14	222.38	-225.87	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
U_{19}~L_{20}	-210.54	210.08	-280.88	282.40	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
U_{19}~U_{20}	-145.82	138.50	-208.28	198.03	43.2	43.24	43.16	70.66	15	1515.6	1.63	2182	1.5	2140.4
U_{20}~L_{20}	-145.82	138.50	-208.28	198.03	43.2	43.24	43.16	70.66	15	1515.6	1.63	2182	1.5	2140.4
U_{20}~L_{21}	-146.43	154.87	-213.19	218.10	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0
U_{20}~U_{21}	-146.43	154.87	-213.19	218.10	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0
U_{21}~L_{21}	-87.60	89.28	-131.74	131.74	38.8	38.83	38.83	59.23	6	1264.6	1.53	1955	1.5	1922.1
U_{21}~L_{22}	-88.30	102.01	-159.12	169.11	20.8	20.80	20.67	34.64	3	1037.5	1.67	1143	1.5	1029.6
U_{21}~U_{22}	-41.63	50.39	-86.27	98.66	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{22}~L_{22}	-41.63	50.39	-86.27	98.66	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{22}~L_{23}	-98.36	77.73	-118.98	118.98	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{22}~U_{23}	-98.36	77.73	-118.98	118.98	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{23}~L_{23}	-98.36	77.73	-118.98	118.98	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{23}~L_{24}	-64.10	69.44	7.19	-9.58	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{23}~U_{24}	-105.86	110.50	-158.43	158.43	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{24}~L_{24}	-105.86	110.50	-158.43	158.43	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
U_{24}~L_{25}	-155.52	148.00	85.59	-84.79	21.1	21.09	21.09	35.46	10	1137.6	1.68	1170	1.5	1044.0
U_{25}~L_{25}	-155.52	148.00	85.59	-84.79	21.1	21.09	21.09	35.46	10	1137.6	1.68	1170	1.5	1044.0
U_{25}~L_{26}	-165.85	176.08	113.12	-123.43	35.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
U_{26}~L_{26}	-252.25	-289.34	184.56	-214.78	33.1	33.05	32.91	54.51	14	1439.8	1.65	1799	1.5	1638.0
U_{26}~L_{27}	-150.52	148.00	85.59	-84.79	21.1	21.09	21.09	35.46	10	1137.6	1.68	1170	1.5	1044.0
U_{27}~L_{28}	-109.95	133.57	-207.60	214.41	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6

M_2 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) (k-ft)	Pedestrian Load (Min) Start (k-ft)	Pedestrian Load 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	-105.35	33.79	1.45	0.46	-24.20	-7.78					
U_1~L_2	9.51	4.51	28.97	21.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_1~U_2	-13.10	7.04	2.25	3.16	0.72	0.00	0.00	0.00	0.00	0.00	0.00
U_2~L_2	2.20	1.57	19.13	22.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_2~L_3	21.92	6.14	20.12	16.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_2~U_3	6.75	-8.23	4.56	-1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_3~L_3	43.82	13.97	14.09	11.44	1.55	-1.25	-1.12				
U_3~L_4	22.66	-6.18	0.46	-0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_3~U_4	-102.40	33.61	2.04	-0.58	-0.04	-0.41	-0.01				
U_4~L_4	-168.73	-52.55	1.20	0.22	-0.30	0.31					
U_4~L_5	-188.42	-131.91	0.43	0.27	-0.01	-0.43	0.03				
U_4~U_5	-156.08	-112.09	0.30	-0.31	0.93	0.39					
U_5~L_5	-107.72	-24.24	0.24	0.64	0.63	0.73					
U_5~L_6	-66.08	-4.08	-0.56	0.24	1.53	1.78					
U_5~U_6	-61.85	34.69	0.34	0.63	1.80	1.53					
U_6~L_6	-114.86	-89.27	0.04	0.09	4.80	4.64	0.00	0.00	0.00	0.00	0.00
U_6~L_7	-127.88	-89.96	0.66	-0.77	0.55	0.40					
U_6~U_7	-131.11	-101.42	2.47	-0.21	2.13	1.87					
U_7~L_7	-139.67	-87.50	1.11	-0.12	1.75	1.21					
U_7~L_8	-138.58	-44.74	6.02	0.28	1.98	3.20					
U_7~U_8	-54.16	-10.23	5.02	0.50	4.91	5.43					
U_8~L_8	-169.64	22.24	-28.74	3.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_8~L_9	-3.46	2.99	-22.53	-22.65	-3.81	0.00	0.00	0.00	0.00	0.00	0.00
U_8~U_9	9.81	1.74	-10.65	10.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_9~L_9	24.42	4.39	-9.91	9.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_9~L_{10}	-12.22	76.70	0.49	0.41	-0.18	0.30					
U_9~U_{10}	-53.20	27.19	0.25	0.25	0.72	1.07					
U_{10}~L_{10}	-37.21	6.28	7.69	10.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_{10}~L_{11}	-81.22	27.20	-0.25	0.49	0.03	0.78					
U_{10}~U_{11}	-88.04	-20.95	0.01	-0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_{11}~L_{11}	-127.87	-86.71	1.44	-0.32	-0.42						
U_{11}~L_{12}	-187.08	-84.77	0.49	-0.64	-0.63	0.64					
U_{11}~U_{12}	-124.75	-58.92	0.06	-0.52	1.59	1.18					
U_{12}~L_{12}	-93.98	-9.99	1.81	0.16	1.04	0.10					
U_{12}~L_{13}	-45.47	-0.99	1.50	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_{12}~U_{13}	-42.07	44.32	2.36	0.32	-0.47	-0.24					
U_{13}~L_{13}	-17.87	-3.74	3.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_{13}~U_{14}	5.53	4.33	2.95	-2.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_{14}~L_{14}	2.98	3.37	4.59	-4.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00
U_{14}~L_{15}	-81.62	-40.51	-0.91	-0.09	1.04	-0.47					
U_{14}~$U

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: 3F1
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
For Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1998

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

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

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-L_1	-12.57	3.38	0.27	-0.15	-2.41	1.01	3.02	-1.71	-26.80	11.28
	L_1-L_2	-1.68	-7.06	0.18	-0.05	-1.25	-0.06	2.05	-0.56	-13.98	-0.61
	L_2-L_3	-0.43	-11.60	0.12	-0.07	-0.95	-0.43	1.39	-0.77	-10.52	-4.68
	L_3-L_4	9.78	-11.76	0.33	-0.47	-0.94	-0.62	3.69	-5.28	-10.44	-6.91
	L_4-L_5	-10.33	-17.60	0.22	-0.44	-1.37	-0.42	2.49	-4.37	-15.40	-4.48
	L_5-L_6	-26.83	-58.49	0.54	-0.55	-2.65	0.73	6.01	-6.17	-68.28	8.12
	L_6-L_7	-8.64	-12.95	0.69	-0.66	-1.81	-0.12	2.62	-4.74	-14.76	-1.39
	L_7-L_8	-6.35	-88.89	0.69	-0.85	-1.72	2.91	7.67	9.46	-19.10	32.44
	L_8-L_9	-9.60	-109.55	1.23	-0.86	-1.37	2.58	13.25	9.24	-14.73	27.86
	L_9-L_{10}	-74.80	-111.68	1.22	-0.29	-1.28	1.39	2.67	1.77	-31.10	14.99
	L_{10}-L_{11}	-58.84	-54.78	0.28	0.48	-2.23	0.51	3.00	5.18	-24.02	5.49
	L_{11}-L_{12}	-58.84	-54.78	0.28	0.48	-2.23	0.51	3.00	5.18	-24.02	5.49
	L_{12}-L_{13}	-55.25	39.07	0.38	0.63	-1.91	1.06	4.12	-6.80	-20.55	11.46
	L_{13}-L_{14}	-20.99	7.38	0.44	-0.56	-1.23	0.19	4.69	-6.29	-13.22	2.06
	L_{14}-L_{15}	-8.74	1.18	-0.29	-0.29	-1.08	-0.01	3.93	-5.72	-12.67	-0.13
	U_0-U_1	-19.00	4.09	0.68	-0.94	-1.33	0.80	7.33	-10.14	-14.38	8.95
	U_1-U_2	-26.64	12.99	0.61	-0.66	-1.91	1.81	-30.64	8.37	-61.69	32.55
	U_2-U_3	-89.35	58.15	0.25	-0.21	-3.35	1.75	2.67	-2.30	-36.07	18.86
	U_3-U_4	-89.27	61.38	0.44	-0.23	-3.41	2.20	4.74	-2.25	-38.94	23.70
	U_4-U_5	-105.39	89.05	0.30	-0.05	-4.24	3.02	3.18	-0.52	-45.74	32.57
	U_5-U_6	-82.31	86.26	0.53	-0.48	-4.29	2.88	5.60	-5.09	-45.70	30.62
	U_6-U_7	-81.24	62.98	0.55	-0.45	-3.37	2.58	5.87	-4.77	-35.90	27.51
	U_7-U_8	-81.24	62.98	0.55	-0.45	-3.37	2.58	5.87	-4.77	-35.90	27.51
	U_8-U_9	-17.36	7.00	0.61	-0.84	-1.67	1.01	6.45	-8.93	-16.66	10.80
	U_9-U_{10}	-17.36	7.00	0.61	-0.84	-1.67	1.01	6.45	-8.93	-16.66	10.80
	U_{10}-U_{11}	-8.61	-11.46	0.90	-1.00	-1.08	-0.01	3.93	-5.72	-12.67	-0.13
	U_{11}-U_{12}	-7.43	-23.92	0.92	-1.13	-1.20	0.25	9.81	-12.00	-12.72	2.69
	U_{12}-U_{13}	-44.32	35.88	0.68	-0.95	-1.82	0.53	7.26	-10.11	-19.38	5.61
	U_{13}-U_{14}	-66.39	68.66	0.74	-0.74	-2.58	1.39	7.84	-12.50	-32.24	10.35
	U_{14}-U_{15}	-88.55	73.83	0.42	-0.80	-2.61	1.03	4.49	-8.49	-29.86	10.99
	U_{15}-U_{16}	-88.40	58.91	0.23	-0.28	-3.28	1.64	2.41	-3.63	-36.38	20.35
	U_{16}-U_{17}	-108.38	116.68	0.61	-0.40	-3.26	2.51	6.49	-4.26	-34.74	28.71
	U_{17}-U_{18}	-154.28	139.71	0.34	-0.13	-4.39	3.03	3.60	-1.34	-46.13	32.26
	U_{18}-U_{19}	-86.83	88.31	0.29	-0.37	-3.38	2.39	3.67	-3.94	-36.97	30.55
	U_{19}-U_{20}	-24.73	100.98	0.84	0.39	-2.81	3.44	8.84	4.15	-29.60	36.23
	U_{20}-U_{21}	-98.28	19.79	0.29	-0.27	-4.33	1.33	4.79	-1.19	-45.32	37.15
	U_{21}-U_{22}	-74.14	95.51	0.30	-0.35	-3.69	2.93	3.17	-3.63	-38.86	30.77
	U_{22}-U_{23}	-55.49	68.83	0.37	-0.32	-2.81	2.34	3.17	-3.63	-38.86	22.34
	U_{23}-U_{24}	-55.49	68.83	0.42	-0.32	-3.19	2.13	4.44	-6.02	-33.56	22.42
	U_{24}-U_{25}	-32.97	39.97	0.49	-0.71	-2.22	1.31	5.10	-7.50	-23.38	14.40
	U_{25}-U_{26}	-32.97	39.97	0.49	-0.71	-2.22	1.31	5.10	-7.50	-23.38	14.40
	U_{26}-U_{27}	-10.32	4.39	0.60	-0.83	-1.34	0.35	6.30	-8.74	-14.08	3.67
	U_{27}-U_{28}	-6.27	2.27	0.61	-0.82	-1.20	0.22	8.12	-10.82	-12.59	2.08
	U_{28}-U_{29}	-17.08	16.16	0.73	-0.88	-1.37	1.10	7.63	-9.23	-14.40	11.62
	U_{29}-U_{30}	-65.69	65.14	0.61	-0.62	-2.09	1.85	6.70	-8.57	-32.54	19.41
	U_{30}-U_{31}	-65.69	65.14	0.64	-0.62	-3.09	1.85	6.70	-8.57	-32.54	19.41
	U_{31}-U_{32}	-69.22	80.41	0.59	-0.66	-3.22	1.92	6.23	-6.90	-33.87	19.98
	U_{32}-U_{33}	-106.11	102.57	0.22	-0.24	-4.26	3.32	2.30	-2.57	-44.77	34.92
	U_{33}-U_{34}	-106.11	102.57	0.22	-0.24	-4.26	3.32	2.30	-2.57	-44.77	34.92
	U_{34}-U_{35}	-47.87	128.15	1.07	0.41	-3.10	3.68	11.40	4.32	-33.55	39.20
	U_{35}-U_{36}	-47.87	128.15	1.07	0.41	-3.10	3.68	11.40	4.32	-33.55	39.20
	U_{36}-U_{37}	-89.53	99.33	0.35	0.06	-3.27	2.64	3.76	-0.59	-34.81	28.11
	U_{37}-U_{38}	-86.54	82.57	0.33	0.25	-3.15	1.85	3.50	2.63	-33.55	19.74
	U_{38}-U_{39}	-86.54	82.57	0.33	0.25	-3.15	1.85	3.50	2.63	-33.55	19.74
	U_{39}-U_{40}	-50.17	67.66	0.52	-0.85	-2.91	1.54	5.54	-9.06	-30.97	16.44
	U_{40}-U_{41}	-50.17	67.66	0.52	-0.85	-2.91	1.54	5.54	-9.06	-30.97	16.44
	U_{41}-U_{42}	-12.59	-26.40	1.19	-1.18	-1.67	0.10	11.69	-12.53	-11.38	1.03
	U_{42}-U_{43}	-6.51	-17.79	1.14	-1.22	-1.21	0.61	12.12	-12.96	-12.86	6.82
	U_{43}-U_{44}	-17.08	9.67	0.73	-0.88	-1.37	1.10	7.63	-9.23	-14.40	11.62
	U_{44}-U_{45}	-89.35	58.15	0.25	-0.21	-3.35	1.75	2.67	-2.30	-36.07	18.86
	U_{45}-U_{46}	-105.39	89.05	0.30	-0.05	-4.24	3.02	3.18	-0.52	-45.74	32.57
	U_{46}-U_{47}	-82.31	86.26	0.53	-0.48	-4.29	2.88	5.60	-5.09	-45.70	30.62
	U_{47}-U_{48}	-81.24	62.98	0.55	-0.45	-3.37	2.58	5.87	-4.77	-35.90	27.51
	U_{48}-U_{49}	-81.24	62.98	0.55	-0.45	-3.37	2.58	5.87	-4.77	-35.90	27.51
	U_{49}-U_{50}	-17.36	7.00	0.61	-0.84	-1.67	1.01	6.45	-8.93	-16.66	10.80
	U_{50}-U_{51}	-17.36	7.00	0.61	-0.84	-1.67	1.01	6.45	-8.93	-16.66	10.80
	U_{51}-U_{52}	-8.61	-11.46	0.90	-1.00	-1.08	-0.01	3.93	-5.72	-12.67	-0.13
	U_{52}-U_{53}	-7.43	-23.92	0.92	-1.13	-1.20	0.25	9.81	-12.00	-12.72	2.69
	U_{53}-U_{54}	-44.32	35.88	0.68	-0.95	-1.82	0.53	7.26	-10.11	-19.38	5.61
	U_{54}-U_{55}	-66.39	68.66	0.74	-0.74	-2.58	1.39	7.84	-12.50	-32.24	10.35
	U_{55}-U_{56}	-88.55	73.83	0.42	-0.80	-2.61	1.03	4.49	-8.49	-29.86	10.99
	U_{56}-U_{57}	-88.40	58.91	0.23	-0.28	-3.28	1.64	2.41	-3.63	-36.38	20.35
	U_{57}-U_{58}	-108.38	116.68	0.61	-0.40	-3.26	2.51	6.49	-4.26	-34.74	28.71
	U_{58}-U_{59}	-154.28	139.71	0.34	-0.13	-4.39	3.03	3.60	-1.34	-46.13	32.26
	U_{59}-U_{60}	-86.83	88.31	0.29	-0.37	-3.38	2.39	3.67	-3.94	-36.97	30.55
	U_{60}-U_{61}	-24.73	100.98	0.84	0.39	-2.81	3.44	8.84	4.15	-29.60	36.23
	U_{61}-U_{62}	-98.28	19.79	0.29	-0.27	-4.33	1.33	4.79	-1.19	-45.32	37.15
	U_{62}-U_{63}	-74.14	95.51	0.30	-0.35	-3.69	2.93	3.17	-3.63	-38.86	30.77
	U_{63}-U_{64}	-55.49	68.83	0.37	-0.32	-2.81	2.34	3.17	-3.63	-38.86	22.34
	U_{64}-U_{65}	-55.49	68.83	0.42	-0.32	-3.19	2.13	4.44	-6.02	-33.56	22.42
	U_{65}-U_{66}	-32.97	39.97	0.49	-0.71	-2.22	1.31	5.10	-7.50	-23.38	14.40
	U_{66}-U_{67}	-32.97	39.97	0.49	-0.71	-2.22	1.31	5.10	-7.50	-23.38	14.40
	U_{67}-U_{68}	-10.32	4.39	0.60	-0.83	-1.34	0.35	6.30	-8.74	-14.08	3.67
	U_{68}-U_{69}	-6.27	2.27	0.61	-0.82	-1.20	0.22	8.12	-10.82	-12.59	2.08
	U_{69}-U_{70}	-17.08	16.16	0.73	-0.88	-1.37	1.10	7.63	-9.23	-14.40	11.62
	U_{70}-U_{71}	-65.69	65.14	0.61	-0.62	-2.09	1.85	6.70	-8.57	-32.54	19.41
	U_{71}-U_{72}	-65.69	65.14	0.64	-0.62	-3.09	1.85	6.70	-8.57	-32.54	19.41
	U_{72}-U_{73}	-69.22	80.41	0.59	-0.66	-3.22	1.92	6.23	-6.90	-33.87	19.98
	U_{73}-U_{74}	-106.11	102.57	0.22	-0.24	-4.26	3.32	2.30	-2.57	-44.77	34.92
	U_{74}-U_{75}	-106.11	102.57	0.22	-0.24	-4.26	3.32	2.30	-2.57	-44.77	34.92
	U_{75}-U_{76}	-47.87	128.15	1.07	0.41	-3.10	3.68	11.40	4.32	-33.55	39.20
	U_{76}-U_{77}	-47.87	128.15	1.07	0.41	-3.10	3.68	11.40	4.32	-33.55	39.20
	U_{77}-U_{78}	-89.53	99.33	0.35	0.06	-3.27	2.64	3.76	-0.59	-34.81	28.11
	U_{78}-U_{79}	-86.54	82.57	0.33	0.25	-3.15	1.85	3.50	2.63	-33.55	19.74
	U_{79}-U_{80}	-86.54	82.57	0.33	0.25	-3.15	1.85	3.50	2.63	-33.55	19.74
	U_{80}-U_{81}	-50.17	67.66	0.52	-0.85	-2.91	1.54	5.54	-9.06	-30.97	16.44
	U_{81}-U_{82}	-50.17	67.66	0.52	-0.85	-2.91	1.54	5.54	-9.06	-30.97	16.44
	U_{82}-U_{83}	-12.59	-26.40	1.19	-1.18	-1.67	0.10	11.69	-12.53	-11.38	1.03
	U_{83}-U_{84}	-6.51	-17.79	1.14	-1.22	-1.21	0.61	12.12	-12.96	-12.86	6.82
	U_{84}-U_{85}	-17.08	9.67	0.73	-0.88	-1.37	1.10	7.63	-9.23	-14.40	11.62
	U_{85}-U_{86}	-89.35	58.15	0.25	-0.21	-3.35	1.75	2.67	-2.30	-36.07	18.86
	U_{86}-U_{87}	-105.39	89.05	0.30	-0.05	-4.24	3.02	3.18	-0.52	-45.74	32.57
	U_{87}-U_{88}	-82.31	86.26	0.53	-0.48	-4.29	2.88	5.60	-5.09	-45.70	30.62
	U_{88}-U_{89}	-81.24	62.98	0.55	-0.45	-3.37	2.58	5.87	-4.77	-35.90	27.51
	U_{89}-U_{90}	-81.24	62.98	0.55	-0.45	-3.37	2.58	5.87	-4.77	-35.90	27.51
	U_{90}-U_{91}	-17.36	7.00	0.61	-0.84	-1.67	1.01	6.45	-8.93	-16.66	10.80
	U_{91}-U_{92}	-17.36	7.00	0.61	-0.84	-1.67	1.01	6.45	-8.93	-16.66	10.80
	U_{92}-U_{93}	-8.61	-11.46	0.90	-1.00	-1.08	-0.01	3.93	-5.72	-12.67	-0.13
	U_{93}-U_{94}	-7.43	-23.92	0.92	-1.13	-1.20	0.25	9.81	-12.00	-12.72	2.69
	U_{94}-U_{95}	-44.32	35.88	0.68	-0.95	-1.82	0.53	7.26	-10.11	-19.38	5.61
	U_{95}-U_{96}	-66.39	68.66	0.74	-0.74	-2.58	1.39	7.84	-12.50	-32.24	10.35
	U_{96}-U_{97}	-88.55	73.83	0.42	-0.80	-2.61	1.03	4.49	-8.49	-29.86	10.99
	U_{97}-U_{98}	-88.40	58.91	0.23	-0.28	-3.28	1.64	2.41	-3.63	-36.38	20.35
	U_{98}-U_{99}	-108.38	116.68	0.61	-0.40	-3.26	2.51	6.49	-4.26	-34.74	28.71
	U_{99}-U_{100}	-154.28	139.71	0.34	-0.13	-4.39	3.03	3.60	-1.34	-46.13	32.26
	U_{100}-U_{101}	-86.83	88.31	0.29	-0.37	-3.38	2.39	3.67	-3.94	-36.97	30.55
	U_{101}-U_{102}	-24.73	100.98	0.84	0.39	-2.81	3.44	8.84	4.15	-29.60	36.23
	U_{102}-U_{103}	-98.28	19.79	0.29	-0.27	-4.33	1.33	4.79	-1.19	-45.32	37.15
	U_{103}-U_{104}	-74.14	95.51	0.30	-0.35	-3.69	2.93	3.17	-3.63	-38.86	30.77
	U_{104}-U_{105}	-55.49	68.83	0.37	-0.32	-2.81	2.34	3.17	-3.63	-38.86	22.34
	U_{105}-U_{106}	-55.49	68.83	0.42	-0.32	-3.19	2.13	4.44	-6.02	-33.56	22.42
	U_{106}-U_{107}	-32.97	39.97	0.49	-0.71	-2.22	1.31	5.10	-7.50	-23.38	14.40
	U_{107}-U_{108}	-32.97	39.97	0.49	-0.71	-2.22	1.31	5.10	-7.50	-23.38	14.40
	U_{108}-U_{109}	-10.32	4.39	0.60	-0.83	-1.34	0.35	6.30	-8.74	-14.08	3.67
	U_{109}-U_{110}	-6.27	2.27	0.61	-0.82	-1.20	0.22	8.12	-10.82	-12.59	2.08
	U_{110}-U_{111}	-17.08	16.16	0.73	-0.88	-1.37	1.10	7.63	-9.23	-14.40	11.62
	U_{111}-U_{112}	-65.69	65.14	0.61	-0.62	-2.09	1.85	6.70	-8.57	-32.54	19.41
	U_{112}-U_{113}	-65.69	65.14	0.64	-0.62	-3.09	1.85	6.70	-8.57	-32.54	19.41
	U_{113}-U_{114}	-69.22	80.41	0.59	-0.66	-3.22	1.92	6.23	-6.90	-33.87	19.98
	U_{114}-U_{115}	-106.11	102.57	0.22	-0.24	-4.26	3.32	2.30	-2.57	-44.77	34.92
	U_{115}-U_{116}	-106.11	102.57	0.22	-0.24	-4.26	3.32	2.30	-2.57	-44.77	34.92
	U_{116}-U_{117}	-47.87	128.15	1.07	0.41	-3.10	3.68	11.40	4.32	-33.55	39.20
	U_{117}-U_{118}	-47.87	128.15	1.07	0.41	-3.10	3.68	11.40	4.32	-33.55	39.20
	U_{118}-U_{119}	-89.53	99.33	0.35	0.06	-3.27	2.64	3.76	-0.59	-34.81	28.11
	U_{119}-U_{120}	-86.54	82.57	0.33	0.25	-3.15	1.85	3.50	2.63	-33.55	19.74
	U_{120}-U_{121}	-86.54	82.57	0.33	0.25	-3.15	1.85	3.50	2.63	-33.55	19.74
	U_{121}-U_{122}	-50.17	67.66	0.52	-0.85	-2.91	1.54	5.54	-9.06	-30.97	16.44
	U_{122}-U_{123}	-50.17	67.66	0.52	-0.85	-2.91	1.54	5.54	-9.06	-30.97	16.44
	U_{123}-U_{124}	-12.59	-26.40	1.19	-1.18	-1.67	0.10	11.69	-12.53	-11.38	1.03
	U_{124}-U_{125}	-6.51	-17.79	1.14	-1.22	-1.21	0.61	12.12	-12.96	-12.86	6.82
	U_{125}-U_{126}	-17.08	9.67	0.73	-0.88	-1.37	1.10	7.63	-9.23	-14.40	11.62
	U_{126}-U_{127}	-89.35	58.15	0.25	-0.21	-3.35	1.75	2.67	-2.30	-36.07	18.86
	U_{127}-U_{128}	-105.39	89.05	0.30	-0.05	-4.24	3.02	3.18	-0.52	-45.74	32.57
	U_{128}-U_{129}	-82.31	86.26	0.53	-0.48	-4.29	2.88	5.60	-5.09	-45.70	30.62
	U_{129}-U_{130}	-81.24	62.98	0.55	-0.45	-3.37	2.58	5.87	-4.77	-35.90	27.51
	U_{130}-U_{131}	-81.24	62.98	0.55	-0.45	-3.37	2.58	5.87	-4.77	-35.90	27.51
	U_{131}-U_{132}	-17.36	7.00	0.61	-0.84	-1.67	1.01	6.45	-8.93	-16.66	10.80
	U_{132}-U_{133}	-17.36	7.00	0.61	-0.84	-1.67	1.01	6.45	-8.93	-16.66	10.80
	U_{133}-U_{134}	-8.61	-11.46	0.90	-1.00	-1.08	-0.01	3.93	-5.72	-12.67	-0.13
	U_{134}-U_{135}	-7.43	-23.92	0.92	-1.13	-1.20	0.25	9.81	-12.00	-12.72	2.69
	U_{135}-U_{136}	-44.32	35.88	0.68	-0.95	-1.82	0.53	7.26	-10.11	-19.38	5.61
	U_{136}-U_{137}	-66.39	68.66	0.74	-0.74	-2.58	1.39	7.84	-12.50	-32.24	10.35
	U_{137}-U_{138}	-88.55	73.83	0.42	-0.80	-2.61	1.03	4.49	-8.49	-29.86	10.99
	U_{138}-U_{139}	-88.40	58.91	0.23	-0.28	-3.28	1.64	2.41	-3.63	-36.38	20.35
	U_{139}-U_{140}	-108.38	116.68	0.61	-0.40	-3.26	2.51	6.49	-4.26	-34.74	28.71
	U_{140}-U_{141}	-154.28	139.71	0.34	-0.13	-4.39	3.03	3.60	-1.34	-46.13	32.26
	U_{141}-U_{142}	-86.83	88.31	0.29	-0.37	-3.38	2.39	3.67	-3.94	-36.97	30.55
	U_{142}-U_{143}	-24.73	100.98	0.84	0.39	-2.81	3.44	8.84	4.15	-29.60	36.23
	U_{143}-U_{144}	-98.28	19.79	0.29	-0.27	-4.33	1.33	4.79	-1.19	-45.32	37.15
	U_{144}-U_{145}	-74.14	95.51	0.30	-0.35	-3.69	2.93	3.17	-3.63	-38.86	30.77
	U_{145}-U_{146}	-55.49	68.83	0.37	-0.32	-2.81	2.34	3.17	-3.63	-38.86	22.34
	U_{146}-U_{147}	-55.49	68.83	0.42	-0.32	-3.19	2.13	4.44	-6.02	-33.56	22.42
	U_{147}-U_{148}	-32.97	39.97	0.49	-0.71	-2.22	1.31	5.10	-7.50	-23.38	14.40
	U_{148}-U_{149}	-32.97	39.97	0.49	-0.71	-2.22	1.31	5.10	-7.50	-23.38	14.40
	U_{149}-U_{150}	-10.32	4.39	0.60	-0.83	-1.34	0.35	6.30	-8.74	-14.08	3.67
	U_{150}-U_{151}	-6.27	2.27	0.61	-0.82	-1.20	0.22	8.12	-10.82	-12.59	2.08
	U_{151}-U_{152}	-17.08	16.16	0.73	-0.88	-1.37	1.10	7.63	-9.23	-14.40	11.62
	U_{152}-U_{153}	-65.69	65.14	0.61	-0.62	-2.09	1.85	6.70	-8.57	-32.54	19.41
	U_{153}-U_{154}	-65.69	65.14	0.64	-0.62	-3.09	1.85	6.70	-8.57	-32.54	19.41
	U_{154}-U_{155}	-69.22	80.41	0.59	-0.66	-3.22	1.92	6.23	-6.90	-33.87	19.98
	U_{155}-U_{156}	-106.11	102.57	0.22	-0.24	-4.26	3.32	2.30	-2.57	-44.77	34.92
	U_{156}-U_{157}	-106.11	102.57	0.22	-0.24	-4.26	3.32	2.30	-2.57	-44.77	34.92
	U_{157}-U_{158}	-47.87	128.15	1.07	0.41	-3.10	3.68	11.40	4.32	-33.55	39.20
	U_{158}-U_{159}	-47.87	128.15	1.07	0.41	-3.10	3.68	11.40	4.32	-33.55	39.20
	U_{159}-U_{160}	-89.53	99.33	0.35	0.06	-3.27	2.64	3.76	-0.59	-34.81	28.11
	U_{160}-U_{161}	-86.54	82.57	0.33	0.25	-3.15	1.85	3.50	2.63	-33.55	19.74
	U_{161}-U_{162}	-86.54	82.57	0.33	0.25	-3.15	1.85	3.50	2.63	-33.55	19.74
	U_{162}-U_{163}	-50.17	67.66	0.52	-0.85	-2.91	1.54	5.54	-9.06	-30.97	16.44
	U_{163}-U_{164}	-50.17	67.66	0.52	-0.85	-2.91	1.54	5.54	-9.06	-30.97	16.44
	U_{164}-U_{165}	-12.59	-26.40	1.19	-1.18	-1.67	0.10	11.69	-12.53	-11.38	1.03
	U_{165}-U_{166}	-6.51	-17.79	1.14	-1.22	-1.21	0.61	12.12	-12.96	-12.86	6.82
	U_{166}-U_{167}	-17.08	9.67	0.73	-0.88	-1.37	1.10	7.63	-9.23	-14.40	11.62
	U_{167}-U_{168}	-89.35	58.15	0.25	-0.21	-3.35	1.75	2.67	-2.30	-36.07	18.86
	U_{168}-U_{169}	-105.39	89.05	0.30	-0.05	-4.24	3.02	3.18	-0.52	-45.74	32.57
	U_{169}-U_{170}	-82.31	86.26	0.53	-0.48	-4.29	2.88	5.60	-5.09	-45.70	30.62
	U_{170}-U_{171}	-81.24	62.98	0.55	-0.45	-3.37	2.58	5.87	-4.77	-35.90	27.51
	U_{171}-U_{172}	-81.24	62.98	0.55	-0.45	-3.37	2.58	5.87	-4.77	-35.90	27.51
	U_{172}-U_{173}	-17.36	7.00	0.61	-0.84	-1.67	1.01	6.45	-8.93	-16.66	10.80
	U_{173}-U_{174}	-17.36	7.00	0.61	-0.84	-1.67	1.01	6.45	-8.93	-16.66	10.80
	U_{174}-U_{175}	-8.61	-11.46	0.90	-1.00	-1.08	-0.01	3.93	-5.72	-12.67	-0.13
	U_{175}-U_{176}	-7.43	-23.92	0.92	-1.13	-1.20	0.25	9.81	-12.00	-12.72	2.69
	U_{176}-U_{177}	-44.32	35.88	0.68	-0.95	-1.82	0.53	7.26	-10.11	-19.38	5.

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss System
Loading: 3F1
Condition: As-inspected

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

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

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

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

M_2 Information

M_1 Information

| Location | Member | ZZ Axis Moments from STAAD: Dead Load (k-in) | Live Load (Max) (k-in) | Live Load (Min) (k-in) | Pedestrian Load (Max) (k-in) | Pedestrian Load (Min) (k-in) | Lane Reduction & Impact Live Load Max (k-in) | Lane Reduction & Impact Live Load Min (k-in) | Impact Pedestrian Load (Max) (k-in) | Impact Pedestrian Load (Min) (k-in) | 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_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_n (k-in) | Equivalent Mem. Factor: a | $C_{b(a)}$ | $C_{b(min)}$ | 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) | YY Axis Moment Properties: Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{tb} (in^3) | S_t (in^3) | S_b (in^3) | Z_Y (in^3) | I_{yy} (in^4) | Shape Factor f | M_p (k-in) | P_{cr} (kip) | Formula I.8 Term = F_y*S_tb | M_n (k-in) | Equivalent Mem. Factor: a | $C_{b(a)}$ | $C_{b(min)}$ | 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 |
|---|---|---|---

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: 3F1
Condition: As-inspected

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

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

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

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

M_2 Information

| Location | Member | ZZ Axis Moments from STAAD: Dead Load (Max) | Dead Load (Min) | 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 Load | Max. Pos. Mom. End Load | Max. Neg. Mom. Start Load | Max. Neg. Mom. End Load | S_{req} (in^3) | S_x (in^3) | Z_x (in^3) | I (in^4) | I_{eff} (in^4) | Shape Factor | M_p (k-in) | Formula I.8 Term * F_y/S_eq | M_u (k-in) | Equivalent Mom. Factor | | | | YY Axis Moments from STAAD: Dead Load (Max) | Dead Load (Min) | 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 Load | Max. Pos. Mom. End Load | Max. Neg. Mom. Start Load | Max. Neg. Mom. End Load | 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) | P_{crit} (kip) | Formula I.8 Term * F_y/S_eq | M_{uy} (k-in) | Equivalent Mom. Factor | | | | 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 Segment
Loading: 3F1
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 | 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) 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. 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) | $I_{t/n}$ (in^4) | Shape Factor f | M_p (k-in) | Formula 1.8 Term * F_y/S_xx | M_y (k-in) | Equivalent Mom. Factor: a | b | C_{start} | C_{end} | 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. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{top} (in^3) | S_b (in^3) | Z_y (in^3) | $I_{y/n}$ (in^4) | Shape Factor f | M_p (k-in) | P_{crit} (k) | Formula 1.8 Term * F_y/S_xx | M_y (k-in) | Equivalent Mom. Factor: a | b | C_{start} | C_{end} | Yield: Axial Axial+ | Moment Positive | Total | Pass | Tension: Fracture: Axial Axial+ | Moment Positive | Total | Pass | Buckle: Axial Axial+ | Moment Positive | Total | Pass | Compression: Yield: Axial Axial+ | Moment Positive | Total | Pass |
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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: 3F1
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
& AASHTO Std. Specs. For Highway Bridges, Article 3.22.1

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(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 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_b (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_x	M_z (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m/n}$	C_{side}
Structure 1	U_0-L_1	3.62	-1.41	0.15	-0.08	-1.42	0.64	0.15	0.01	-0.03	-0.02	1.99	-1.03	-18.90	8.68	1.75	0.12	-0.35	-0.23	9.91	3.01	29.33	15.55	15.6	15.63	15.58	25.66	5	804.0	1.66	857	1.5	773.7	-0.765	0.29	0.29
	U_1-L_1	-11.46	-3.33	-0.16	-0.11	-0.74	0.04	0.08	-0.04	-0.25	0.07	3.41	-1.42	-5.91	0.56	0.37	0.05	0.14	0.05	3.60	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-1.030	0.55	0.55
	U_1-L_2	-10.86	-3.25	-0.16	-0.11	-0.74	0.04	0.08	-0.04	-0.25	0.07	3.41	-1.42	-5.91	0.56	0.37	0.05	0.14	0.05	3.60	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-1.030	0.55	0.55
	U_2-L_2	9.82	-15.00	0.22	0.06	-0.40	-0.40	0.08	0.01	-0.08	-0.12	2.99	0.81	-5.29	-0.36	0.90	0.13	-0.94	-1.40	16.65	-18.44	5.88	-26.46	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.222	0.51	0.51
	U_2-L_3	-16.21	27.07	0.20	-0.14	-1.08	0.49	0.12	-0.07	-0.37	-0.17	-5.75	2.20	-0.56	0.36	1.43	0.20	-0.35	-0.72	5.04	-27.07	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.482	0.41	0.41
	U_3-L_3	-34.06	79.11	0.25	-0.21	-1.62	0.26	0.21	-0.33	0.22	3.29	12.52	-5.62	-16.17	10.94	3.66	2.56	-4.00	2.69	-40.01	103.32	46.39	137.07	35.1	35.09	35.09	53.13	4	1182.7	1.51	1753	1.5	1737.0	-0.568	0.38	0.38
	U_3-L_4	-34.06	79.11	0.25	-0.21	-1.62	0.26	0.21	-0.33	0.22	3.29	12.52	-5.62	-16.17	10.94	3.66	2.56	-4.00	2.69	-40.01	103.32	46.39	137.07	35.1	35.09	35.09	53.13	4	1182.7	1.51	1753	1.5	1737.0	-0.568	0.38	0.38
	U_4-L_4	-1.45	103.74	0.42	0.34	-0.65	1.18	0.15	0.18	-0.24	0.47	5.54	4.38	-6.62	-2.78	1.76	2.16	-2.84	5.62	7.61	143.63	-13.09	155.39	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.084	0.57	0.57
	U_4-L_5	-1.45	103.74	0.42	0.34	-0.65	1.18	0.15	0.18	-0.24	0.47	5.54	4.38	-6.62	-2.78	1.76	2.16	-2.84	5.62	7.61	143.63	-13.09	155.39	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.084	0.57	0.57
	U_5-L_5	-49.68	47.84	0.06	0.00	-1.11	0.69	0.00	0.00	-0.31	0.21	0.82	-0.03	-14.29	8.89	0.00	0.00	-3.79	2.56	-9.78	29.78	62.16	-109.55	73.75	20.6	20.80	20.67	34.66	1	1076.0	1.67	1344	1.5	1329.6	-0.673	0.33	0.33
	U_5-L_6	-27.39	6.37	0.07	-0.26	-0.63	0.06	0.00	0.00	-0.15	0.03	0.80	-3.42	-8.14	0.72	0.00	0.00	-1.70	0.34	-34.49	3.84	-46.18	9.22	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.200	0.52	0.52
	U_6-L_6	-5.38	3.20	0.02	-0.01	-0.21	0.03	0.00	0.00	-0.03	-0.10	0.26	-0.88	-2.68	0.36	0.00	0.00	-0.56	0.17	-5.12	-0.37	-10.83	-1.16	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.012	0.49	0.49
	U_7-L_7	-31.03	12.71	0.19	-0.31	-0.79	0.56	0.05	-0.04	-0.19	0.11	2.46	-3.95	-10.23	0.18	0.56	-0.52	-2.29	1.32	-37.15	11.39	-53.65	25.85	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.482	0.41	0.41
	U_7-L_8	-34.06	79.11	0.25	-0.21	-1.62	0.26	0.21	-0.33	0.22	3.29	12.52	-5.62	-16.17	10.94	3.66	2.56	-4.00	2.69	-40.01	103.32	46.39	137.07	35.1	35.09	35.09	53.13	4	1182.7	1.51	1753	1.5	1737.0	-0.568	0.38	0.38
	U_8-L_8	-118.88	85.28	0.24	-0.22	-1.78	1.31	0.06	-0.05	-0.55	0.42	3.05	-2.82	-23.00	16.95	0.67	-0.62	-6.59	5.04	-190.31	197.20	-164.19	132.90	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.722	0.31	0.31
	U_8-L_9	-117.64	87.57	0.20	-0.18	-1.64	1.29	0.04	-0.04	-0.57	0.43	2.50	-2.41	-21.49	16.69	0.62	-0.60	-6.49	5.10	-145.61	115.98	-160.86	131.54	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.722	0.31	0.31
	U_9-L_9	-148.08	120.85	0.13	-0.14	-1.67	1.40	0.04	-0.04	-0.79	0.63	1.68	-1.76	-27.61	18.50	0.00	0.00	-6.46	5.47	-7.56	189.64	-164.23	220.57	180.84	38.83	38.83	59.23	4	1284.6	1.53	1955	1.5	1922.1	-0.819	0.22	0.27
	U_9-L_{10}	-86.91	116.74	0.29	-0.19	-2.69	1.90	0.01	-0.06	-0.13	-0.38	-3.45	-2.40	-34.36	24.30	0.14	-0.70	-1.51	4.57	-108.05	147.74	-159.61	-75.45	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	0.473	0.79	0.79
	U_{10}-L_{10}	-28.38	1.76	0.12	-0.10	-0.69	0.03	0.00	0.00	-0.14	-0.09	0.33	-0.81	-7.13	0.66	0.00	0.00	-1.50	0.15	-8.23	6.60	-192.71	183.17	-183.17	-183.17	-183.17	-183.17	5	804.0	1.66	857	1.5	773.7	-0.765	0.29	0.29
	U_{10}-L_{11}	-118.23	92.26	0.48	-0.42	-2.20	1.61	0.11	-0.10	-0.52	0.43	8.07	-5.37	-28.07	20.62	1.37	-1.25	-6.28	5.11	-145.81	-112.96	-150.19	146.75	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.722	0.29	0.29
	U_{11}-L_{11}	-34.33	8.61	0.29	-0.24	-0.87	0.58	0.07	-0.06	-0.18	0.11	3.65	-3.52	-11.14	1.42	0.46	-0.72	-2.14	1.27	-26.88	7.22	-46.11	20.84	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.452	0.42	0.42
	U_{11}-L_{12}	-34.33	8.61	0.29	-0.24	-0.87	0.58	0.07	-0.06	-0.18	0.11	3.65	-3.52	-11.14	1.42	0.46	-0.72	-2.14	1.27	-26.88	7.22	-46.11	20.84	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.452	0.42	0.42
	U_{12}-L_{12}	-1.47	13.42	0.35	-0.27	-0.83	0.82	0.09	-0.07	-0.23	0.14	4.57	-4.41	-7.53	2.80	0.58	-0.90	-1.52	1.59	-7.53	1.80	-7.53	2.56	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.312	0.46	0.46
	U_{12}-L_{13}	13.33	-37.03	0.41	-0.67	-0.47	-0.59	0.06	-0.04	-0.03	-0.09	0.58	-0.52	-5.59	0.53	-49.63	17.72	17.24	17.24	26.54	824.7	1.54	878	1.5	853.4	-0.406	0.44	0.44
	U_{13}-L_{13}	-66.01	54.01	0.06	-0.35	-1.05	0.38	0.00	0.00	-0.23	0.17	0.82	-4.50	-13.44	4.84	0.00	0.00	-2.80	2.04	-84.76	64.37	-103.26	76.61	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1016.2	-0.741	0.30	0.30
	U_{13}-L_{14}	-34.33	8.61	0.29	-0.24	-0.87	0.58	0.07	-0.06	-0.18	0.11	3.65	-3.52	-11.14	1.42	0.46	-0.72	-2.14	1.27	-26.88	7.22	-46.11	20.84	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.452	0.42	0.42
	U_{14}-L_{14}	-116.17	105.67	0.27	-0.18	-1.69	1.52	0.04	-0.04	-0.11	0.41	0.24	3.42	-25.25	-21.55	12.98	0.48	1.30	-4.96	2.84	-146.60	140.31	-155.49	-133.45	42.7	42.74	42.74	65.30	5	1389.6	1.53	2155	1.5	2115.6	0.703	0.88	0.88
	U_{14}-L_{15}	-139.98	104.34	0.14	-0.17	-1.91	1.26	0.07	-0.10	-0.47	0.34	4.73	-4.66	-31.46	21.13	1.73	-1.59	-8.03	4.06	-177.62	151.43	-173.26	-159.56	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.985	0.21	0.21
	U_{15}-L_{15}	-131.97	151.07	0.41	-0.22	-1.73	1.54	0.05	-0.08	-0.49	0.43	5.26	-4.25	-22.15	19.65	0.58	-0.94	-5.99	5.20	-164.73	192.77	-260.29	221.83	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.902	0.24	0.24
	U_{15}-L_{16}	-175.19	162.79	0.67	-0.48	-1.85	1.66	0.04	-0.02	-0.64	0.56	8.53	-6.15	-23.60	17.23	0.47	-0.52	-4.23	2.22	-7.64	6.66	-216.55	203.63	258.43	239.24	42.7	42.74	42.74	65.30	5	1389.6	1.53	2155	1.5	2115.6	-0.526	0.23	0.23
	U_{16}-L_{16}	-64.39	66.27	0.23	-0.17	-0.90	0.72	0.03	-0.03	-0.25	0.21	2.45	-2.03	-10.66	8.45	0.27	-0.25	-1.98	1.62	-30.45	25.45	-42.54	35.62	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.452	0.42	0.42
	U_{16}-L_{17}	-45.28	135.71	0.44	-0.10	-1.53	1.81	0.16	-0.02	-0.36	0.49	5.61	-1.25	-19.25	22.89	2.17	-0.28	-4.34	5.62	-51.58	174.80	-89.55	21.55	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.295	0.48	0.48
	U_{17}-L_{17}	-143.90	97.49	0.24	-0.20	-1.77	1.49	0.04	-0.04	-0.68	0.53	2.71	-2.77	-27.01	20.33	0.00	0.00	-6.04	5.09	-183.07	143.61	-183.07	-183.07	-183.07	-183.07	-183.07	-183.07	5	804.0	1.66	857	1.5	773.7	-0.765	0.29	0.29
	U_{17}-L_{18}	-112.48	136.83	0.21	-0.26	-2.20	1.96	0.07	-0.00	-0.50	0.49	7.70	-3.22	-27.81	24.73	0.83	0.01	-6.04	5.89	-142.68	172.37	-182.35	208.73	38.8	38.83	38.83	59.23	4	1284.6	1.53	1955	1.5	1922.1	-0.814	0.25	0.25
	U_{18}-L_{18}	-83.86	94.66	0.29	-0.29	-1.91	1.17	0.06	-0.05	-0.37	0.27	3.61	-3.70	-24.13	14.73	0.77	0.68	-4.49	3.26	-104.06	118.25	-140.12	142.21	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.985	0.21	0.21
	U_{19}-L_{19}	-51.74	54.21	0.26	-0.24	-1.28	0.79	0.03	-0.05	-0.27	0.25	3.28	-3.06	-16.12	9.94	0.34	0.56	-3.26	3.01	-63.00	66.50	-88.23	83.39	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1015.2	-0.945	0.22	0.22
	U_{19}-L_{20}	-139.98	104.34	0.14	-0.17	-1.91	1.26	0.07	-0.10	-0.47	0.34	4.73	-4.66	-31.46	21.13	1.73	-1.59	-8.03	4.06	-177.62	151.43	-173.26	-159.56	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.985	0.21	0.21
	U_{20}-L_{20}	-14.00	1.02	0.25	-0.51	-0.64	0.00	0.00	0.04	-0.11	0.03	3.18	-6.40	-8.11	0.00	0.02	0.53	-1.36	0.41	-14.06	-7.00	-28.74	1.32	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.046	0.58	0.58
	U_{20}-L_{21}	-18.17	5.29	0.23	-0.51	-0.64	0.00	0.00	0.02	-0.14	0.07	2.97	-6.40	-8.11	0.00	0.02	0.53	-1.36	0.41	-18.17	-9.04	-28.74	1.32	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.046	0.58	0.58
	U_{21}-L_{21}	-32.82	30.91	0.24	-0.23	-0.87	0.70	0.03	0.00	-0.20	0.17	3.08	-2.87	-10.96	8.81	0.40	0.04	-2.36	2.08	-38.67	36.45	-56.92	51.64	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.452	0.42	0.42
	U_{21}-L_{22}	-33.04	30.91	0.24	-0.23	-0.87	0.70	0.03	0.00	-0.20	0.17	3.08	-2.87	-10.96	8.81	0.40	0.04	-2.36	2.08	-38.67	36.45	-56.92	51.64	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.452	0.42	0.42
	U_{22}-L_{22}	-83.86	100.04	0.28	-0.31	-1.76	1.37	0.06	0.03	-0.39	0.44	3.59	-3.95	-22.26	17.27	0.73	0.32	-4.67	3.27	-104.39	124.92	-137.98	152.51	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.905	0.24	0.24
	U_{22}-L_{23}	-98.49	117.09	0.29	-0.10	-1.79	1.32	0.05	0.02	-0.42	0.49	3.64	-1.26	-22.60	16.72	0.55	0.28	-5.02	3.86	-123.31	150.36	-157.42	173.94	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.905	0.24	0.24
	U_{23}-L_{23}	-29.58	13.80	0.29	-0.27	-0.79	0.83	0.08	-0.06	-0.21	0.13	4.16	-4.01	-6.84	2.55	0.53	-0.82	-1.38	1.45	-6.84	1.64	-6.84	2.33	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.284	0.48	0.48
	U_{23}-L_{24}	-125.63	123.54	0.66	-0.51	-1.75	1.58	0.02	0.00	-0.52	0.49	8.29	-6.41	-22.04	19.91	0.00	0.00	-6.22	5.88	-152.56	152.27	-152.00	186.49	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.571	0.21	0.21
	U_{24}-L_{24}	-53.38	123.19	0.41	-0.27	-1.08	0.61	0.00	0.00	-0.28	0.37	0.82	-4.50	-13.44	4.84	0.00	0.00	-2.80	2.04	-84.76	64.37	-103.26	76.61	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1016.2	-0.741	0.30	0.30
	U_{24}-L_{25}	-83.58	187.86	0.54	-0.11	-1.69	2.02	0.17	0.01	-0.45	0.61	6.84	-1.38	-20.37	25.81	2.02	0.14	-5.36	7.26	-89.77	242.42	-135.13	277.77	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.486	0.41	0.41
	U_{25}-L_{25}	-118.56	150.45	0.27	-0.15	-2.02	1.57	0.04	0.06	-0.51	0.45	3.42	-0.57	-25.74	20.06	0.48	0.74	-6.08	5.42	-175.65	198.33	-213.57	221.66	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.964	0.21	0.21
	U_{26}-L_{26}	-128.90	122.99	0.26	-0.19	-1.88	1.57	0.04	0.03	-0.46	0.33	2.38	-2.45	-24.05	13.65	0.49	1.12	-5.51	3.92	-163.24	162.97	-168.83	172.62	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.893	0.24	0.24
	U_{27}-L_{27}	-128.46	96.46	0.32	-0.23	-2.20	1.41	0.05	-0.05	-0.75	0.56	3.62	-2.99	-26.49	18.20	0.00	0.00	-6.83	5.01	-174.56	121.50	-216.31	149.05	38.8	38.83	38.83	59.23	4	1284.6	1.53	1955	1.5	1922.1	-0.689	0.32	0.32
	U_{28}-L_{28}	-128.46	96.46	0.32	-0.23	-2.20	1.41	0.05	-0.05	-0.75	0.56	3.62	-2.99	-26.49	18.20	0.00	0.00	-6.83	5.01	-174.56	121.50	-216.31	149.05	38.8	38.83	38.83	59.23	4	1284.6	1.53	1955	1.5	1922.1	-0.689	0.32	0.32
	U_{29}-L_{29}	-66.35	89.44	0.18	-0.11	-3.13	1.99	0.01	-0.03	-0.72	0.38	2.34	-1.46	-40.55	25.72	0.08	-0.01	-8.31	-1.48	-8.51	-43.10	-13.92	-160.89	46.95	38.8	38.83	59.23	4	1284.6	1.53	1955	1.5	1922.1	-0.333	0.73	0.73
	U_{30}-L_{30}	-137.90	96.45	0.28	-0.23	-2.20	1.41	0.05	-0.05	-0.75	0.56	3.62	-2.99	-26.49	18.20	0.00	0.00	-6.83	5.01	-174.56	121.50	-216.31	149.05	38.8	38.83	38.83	59.23	4	1284.6	1.53	1955	1.5	1922.1	-0.689	0.32	0.32
	U_{31}-L_{31}	-43.89	24.72	0.20	-0.17	-1.11	0.65	0.05	-0.04	-0.30	0.20	2.57	-2.15	-14.39	8.45	0.55	-0.53	-3.54	2.40	-63.71	29.34	-75.76	43.12	19.4	19.37	19.37	29.87	2	907.0	1.54	986	1.5	958.8	-0.569	0.37	0.37
	U_{32}-L_{32}	-43.89	24.72	0.20	-0.17	-1.11	0.65	0.05	-0.04	-0.30	0.20	2.57	-2.15	-14.39	8.45	0.55	-0.53	-3.54	2.40	-63.71	29.34	-75.76	43.12	19.4	19.37	19.37	29.87	2	907.0	1.54	986	1.5	958.8	-0.569	0.37	0.37
	U_{33}-L_{33}	-18.99	22.49	0.10	0.31	-0.73	-0.23	0.04	0.11	-0.18	-0.01	3.34	4.07	-8.69	-6.02	-0.32	0.46	-1.32	1.36	-22.44	35.29	-40.09	-28.74	19.4	19.37	19.37	29.87	2	907.0	1.54	986	1.5	958.8	0.717	0.85	0.85
	U_{34}-L_{34}	-18.99	22.49	0.10	0.31	-0.73	-0.23	0.04	0.11	-0.18	-0.01	3.34	4.07	-8.69	-6.02	-0.32	0.46	-1.32	1.36	-22.44	35.29	-40.09	-28.74	19.4	19.37	19.37	29.87	2	907.0	1.54	986	1.5	958.8	0.717	0.85	0.85
	U_{35}-L_{35}	-89.32	90.65	0.24	-0.21	-1.29	1.25	0.05	0.08	-0.42	0.45	3.14	2.20	-29.55	17.22	0.65	0.67	-5.46	4.74	-141.12	112.04	-126.64	104.60	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.985	0.21	0.21
	U_{36}-L_{36}	-89.32	90.65	0.24	-0.21	-1.29	1.25	0.05	0.08	-0.42	0.45	3.14	2.20	-29.55	17.22	0.65	0.67	-5.46	4.74	-141.12	112.04	-126.64	104.60	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.985	0.21	0.21
	U_{37}-L_{37}	-77.40	53.68	0.09	0.03	-1.08	0.69	0.00	0.00	-0.32	0.23	1.19	0.41	-14.01	8.94	0.00	0.00	-3.80	2.80	-97.28	59.32	-103.61	83.41	20.8	20.80	20.67	34.66	1	1076.0	1.67	1344	1.5	1329.6	-0.733	0.31	0.31
	U_{38}-L_{38}	-81.43	41.31	0.27	0.34	-1.38	0.17	0.03	0.14	-0.42	0.12	3.45	-4.42	-17.75	2.20	0.38	1.64	-4.99	1.42	-101.36	59.46	-135.47	-101.15	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	0.747	0.90	0.90
	U_{39}-L_{39}	-28.98	13.47	0.29	-0.27	-0.79	0.83	0.08	-0.06	-0.21	0.13	4.16	-4.01	-6.84	2.55	0.53	-0.82	-1.38	1.45	-6.84	1.64	-6.84	2.33	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.284	0.48	0.48
	U_{40}-L_{40}	-94.90	94.90	0.40	-0.15	-1.18	0.75	0.02	0.11	-0.50	0.41	5.20	-1.95	-15.24	10.08	0.22	1.34	-5.98	4.94	-116.53	132.33	-143.19	136.48	40.7	40.70	40.70	62.04	8	1322.1	1.53	2052	1.5	2015.2	-0.522	0.43	0.43
	U_{41}-L_{41}	-10.14	116.78	0.34	0.17	-0.96	1.57	0.16	0.13	-0.26	0.63	4.96	2.25	-21.60	12.81	0.92	1.84	-3.12	6.32	-7.26	164.08	-29.84	179.03	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.187	0.63	0.63
	U_{42}-L_{42}	-89.32	90.65	0.24	-0.21	-1.29	1.25	0.05	0.08	-0.42	0.45	3.14	2.20	-29.55	17.22	0.65	0.67	-5.46	4.74	-141.12	112.04	-126.64	104.60	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.985	0.21	0.21
	U_{43}-L_{43}	-94.90	94.90	0.40	-0.15	-1.18	0.75	0.02	0.11	-0.50	0.41	5.20	-1.95	-15.24	10.08	0.22	1.34	-5.98	4.94	-116.53	132.33	-143.19	136.48	40.7	40.70	40.70	62.04	8	1322.1	1.53	2052	1.5	2015.2	-0.522	0.43	0.43
	U_{44}-L_{44}	-77.40	53.68	0.09	0.03	-1.08	0.69	0.00	0.00	-0.32	0.23	1.19	0.41	-14.01	8.94	0.00	0.00	-3.80	2.80	-97.28	59.32	-103.61	83.41	20.8	20.80	20.67	34.66	1	1076.0	1.67	1

Moment (Start) AI Operating

Operating Loads - 3F1

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

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

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

Operating Loads - 3F1

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	0.66	-42.91	1572	-2621	-322	159	-261	-960	-19	-70	0.001	0.993	1.00	Yes	0.001	0.604	0.61	Yes	0.078	0.731	0.81	Yes	0.077	0.787	0.87	Yes	1.00	**24.94**
		L_1 - L_2	421.38	-----	308	-721	-219	-431	-258	-197	608	-73	0.645	0.347	1.00	Yes	0.393	0.227	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.40**
		L_2 - L_3	682.26	-13.87	-25	10	-783	-642	-31	19	-133	44	0.785	0.210	1.00	Yes	0.454	0.126	0.59	Yes	0.019	0.245	0.27	Yes	0.019	0.189	0.21	Yes	1.00	**3.54**
		L_3 - L_4	684.05	-110.25	77	219	-716	-382	51	68	214	132	0.787	0.207	1.00	Yes	0.467	0.133	0.61	Yes	0.151	0.209	0.36	Yes	0.149	0.173	0.33	Yes	1.00	**3.43**
		L_4 - L_5	293.33	-473.22	85	579	-1048	446	49	38	-178	274	0.380	0.326	0.71	Yes	0.228	0.214	0.45	Yes	0.728	0.219	0.95	Yes	0.721	0.277	1.00	Yes	1.00	**3.85**
		L_5 - L_6	-----	-715.89	159	589	-628	229	74	129	303	98	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.157	1.00	Yes	0.826	0.139	0.97	Yes	1.00	**4.27**
		L_6 - L_7	-----	-1042.83	191	189	-964	140	117	-107	-20	459	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.061	0.92	Yes	0.839	0.151	1.00	Yes	1.00	**5.77**
		L_7 - L_8	-----	-1241.19	100	983	-688	1531	40	166	418	-26	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.203	1.00	Yes	0.786	0.203	0.99	Yes	1.00	**6.74**
		L_8 - L_9	-----	-1214.91	1567	-59	534	-13	-183	7	-154	-190	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.213	1.00	Yes	0.769	0.207	0.98	Yes	1.00	**7.86**
		L_9 - L_{10}	-----	-928.80	1414	-1552	-1039	-571	-497	-353	1394	369	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.195	0.96	Yes	0.748	0.244	1.00	Yes	1.00	**17.55**
		L_{10} - L_{11}	133.46	-561.01	531	-6	-50	-412	137	47	12	-49	0.173	0.165	0.34	Yes	0.101	0.099	0.21	Yes	0.862	0.090	0.96	Yes	0.855	0.141	1.00	Yes	1.00	**5.23**
		L_{11} - L_{12}	564.39	-----	563	-858	-18	-527	-234	-203	144	24	0.731	0.268	1.00	Yes	0.439	0.176	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.18**
		L_{12} - L_{13}	1064.59	-----	160	-77	-571	-693	21	39	171	262	0.840	0.154	1.00	Yes	0.537	0.092	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.98**
		L_{13} - L_{14}	1303.92	-----	566	-1454	-343	-1284	-125	-255	339	85	0.767	0.229	1.00	Yes	0.497	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.50**
		L_{14} - L_{15}	1486.38	-----	-372	-27	-2140	-352	-119	-63	-169	150	0.726	0.270	1.00	Yes	0.472	0.163	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
		L_{15} - L_{16}	1614.84	-----	-193	-405	-1495	-1416	-87	-41	119	-317	0.789	0.202	1.00	Yes	0.506	0.119	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.65**
		L_{16} - L_{17}	1124.49	-----	-430	89	-1672	82	-91	-54	-464	180	0.711	0.287	1.00	Yes	0.461	0.177	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.20**
		L_{17} - L_{18}	852.21	-----	-185	-37	-1166	138	-57	9	199	-140	0.742	0.250	1.00	Yes	0.475	0.150	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.95**
		L_{18} - L_{19}	282.60	-----	-212	291	-1388	788	-30	-35	-696	97	0.433	0.561	1.00	Yes	0.293	0.355	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.30**
		L_{19} - L_{20}	194.47	-217.01	-61	-69	-1657	657	-20	-5	941	211	0.298	0.692	1.00	Yes	0.182	0.459	0.65	Yes	0.394	0.465	0.86	Yes	0.391	0.497	0.89	Yes	1.00	**12.60**
	Structure 2	L_0 - L_1	38.13	-114.91	1031	-3531	-119	12	-400	-1390	-18	-63	0.046	0.947	1.00	Yes	0.028	0.602	0.63	Yes	0.165	0.668	0.84	Yes	0.164	0.718	0.89	Yes	1.00	**24.09**
		L_1 - L_2	513.20	-----	627	-1448	-75	-708	-179	-223	451	-49	0.623	0.369	1.00	Yes	0.371	0.235	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.40**
		L_2 - L_3	1024.25	-----	391	-1097	-625	-937	-145	-108	-96	73	0.818	0.177	1.00	Yes	0.538	0.102	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.40**
		L_3 - L_4	1309.84	-----	355	-1589	-762	-1332	-294	-180	347	167	0.777	0.217	1.00	Yes	0.524	0.140	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.44**
		L_4 - L_5	1721.70	-----	-272	-733	-1862	-1528	61	-47	21	181	0.803	0.188	1.00	Yes	0.531	0.111	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.98**
		L_5 - L_6	1885.14	-----	-144	-371	-1747	-1963	116	-16	259	32	0.809	0.190	1.00	Yes	0.543	0.116	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.98**
		L_6 - L_7	1770.36	-----	-452	-121	-2455	-1656	-161	46	22	541	0.749	0.249	1.00	Yes	0.498	0.147	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.83**
		L_7 - L_8	1339.37	-----	-224	272	-1943	-690	-131	8	164	-104	0.768	0.228	1.00	Yes	0.504	0.133	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**
		L_8 - L_9	1064.89	-243.79	-105	522	-1591	249	-28	14	-243	377	0.745	0.250	1.00	Yes	0.502	0.156	0.66	Yes	0.202	0.129	0.34	Yes	0.201	0.215	0.42	Yes	1.00	**5.27**
		L_9 - L_{10}	768.98	-597.08	-111	715	-1646	125	15	91	368	-175	0.686	0.308	1.00	Yes	0.400	0.191	0.60	Yes	0.631	0.169	0.81	Yes	0.627	0.263	0.90	Yes	1.00	**6.56**
		L_{10} - L_{11}	194.03	-673.56	86	528	-1165	349	55	0	-321	307	0.194	0.247	0.45	Yes	0.114	0.155	0.27	Yes	0.796	0.076	0.88	Yes	0.791	0.204	1.00	Yes	1.00	**5.10**
		L_{11} - L_{12}	-----	-999.26	86	963	-1266	489	80	235	340	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.147	0.98	Yes	0.819	0.172	1.00	Yes	1.00	**6.39**
		L_{12} - L_{13}	-----	-1291.11	278	-329	-1868	-529	176	-144	-346	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.216	1.00	Yes	0.772	0.186	0.96	Yes	1.00	**7.78**
		L_{13} - L_{14}	-----	-1350.21	-218	1272	-2678	3629	-82	-46	581	177	-----	-----	-----	-----	-----	-----	-----	-----	0.685	0.235	0.93	Yes	0.679	0.317	1.00	Yes	1.00	**10.55**
		L_{14} - L_{15}	-----	-1276.27	4038	-1713	1059	-426	-414	-268	-414	-301	-----	-----	-----	-----	-----	-----	-----	-----	0.648	0.252	0.90	Yes	0.642	0.353	1.00	Yes	1.00	**11.56**
		L_{15} - L_{16}	-----	-1346.27	25	220	-1899	-148	-425	-289	189	178	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.172	0.99	Yes	0.805	0.189	1.00	Yes	1.00	**8.34**
		L_{16} - L_{17}	-----	-1030.82	1960	-757	-198	-433	-95	-822	-92	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.215	0.98	Yes	0.751	0.242	1.00	Yes	1.00	**12.67**
		L_{17} - L_{18}	573.06	-287.99	1904	-2286	-980	-1617	-1001	-705	646	218	0.511	0.486	1.00	Yes	0.298	0.299	0.60	Yes	0.305	0.333	0.64	Yes	0.302	0.366	0.67	Yes	1.00	**18.14**
		L_{18} - L_{19}	151.59	-649.51	673	118	-226	-343	-6	33	92	104	0.172	0.146	0.32	Yes	0.099	0.087	0.19	Yes	0.871	0.113	0.99	Yes	0.866	0.130	1.00	Yes	1.00	**5.18**
		L_{19} - L_{20}	591.51	-----	642	-1382	-455	-643	-16	-265	381	18	0.670	0.325	1.00	Yes	0.396	0.206	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.25**
		L_{20} - L_{21}	980.94	-467.84	563	50	-1235	-1084	-98	-102	-86	175	0.793	0.203	1.00	Yes	0.521	0.117	0.64	Yes	0.448	0.188	0.64	Yes	0.445	0.184	0.63	Yes	1.00	**7.54**
		L_{21} - L_{22}	870.07	-184.70	215	-97	-1031	-1660	-86	-26	418	98	0.703	0.293	1.00	Yes	0.472	0.178	0.66	Yes	0.177	0.266	0.45	Yes	0.176	0.247	0.43	Yes	1.00	**4.96**
		L_{22} - L_{23}	788.32	-54.12	-2	51	-2269	-235	1	-22	-169	191	0.637	0.359	1.00	Yes	0.427	0.217	0.65	Yes	0.052	0.275	0.33	Yes	0.051	0.338	0.39	Yes	1.00	**5.66**
		L_{23} - L_{24}	844.01	-273.53	-7	342	-1820	-663	8	73	363	-65	0.682	0.310	1.00	Yes	0.448	0.180	0.63	Yes	0.262	0.286	0.55	Yes	0.260	0.271	0.54	Yes	1.00	**6.64**
		L_{24} - L_{25}	524.56	-445.86	249	367	-1765	166	64	0	-380	392	0.594	0.401	1.00	Yes	0.352	0.255	0.61	Yes	0.598	0.198	0.80	Yes	0.594	0.341	0.94	Yes	1.00	**7.44**
		L_{25} - L_{26}	243.00	-574.96	90	632	-1173	-155	34	114	275	-218	0.275	0.268	0.55	Yes	0.159	0.160	0.32	Yes	0.771	0.174	0.95	Yes	0.766	0.226	1.00	Yes	1.00	**6.87**
		L_{26} - L_{27}	-----	-707.81	292	365	-1566	418	154	55	-419	250	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.098	0.85	Yes	0.743	0.251	1.00	Yes	1.00	**7.21**
		L_{27} - L_{28}	-----	-1023.18	187	1043	-2033	916	253	519	407	-414	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.234	0.99	Yes	0.745	0.251	1.00	Yes	1.00	**10.45**
		L_{28} - L_{29}	-----	-1162.65	455	-597	-2415	-1622	450	-156	-483	401	-----	-----	-----	-----	-----	-----	-----	-----	0.701	0.298	1.00	Yes	0.695	0.240	0.94	Yes	1.00	**12.21**
		L_{29} - L_{30}	-----	-1087.18	-231	1309	-4524	5139	-459	-964	1159	754	-----	-----	-----	-----	-----	-----	-----	-----	0.552	0.317	0.87	Yes	0.547	0.449	1.00	Yes	1.00	**17.18**
		L_{30} - L_{31}	-----	-1037.98	5459	-2815	709	-321	671	725	-76	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.527	0.344	0.88	Yes	0.522	0.477	1.00	Yes	1.00	**17.55**
		L_{31} - L_{32}	-----	-1276.32	218	-165	-2013	-227	-342	91	271	106	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.220	1.00	Yes	0.770	0.203	0.98	Yes	1.00	**9.96**
		L_{32} - L_{33}	51.56	-962.33	1483	-897	-582	-987	489	-447	219	279	0.036	0.248	0.29	Yes	0.024	0.149	0.18	Yes	0.796	0.136	0.94	Yes	0.789	0.202	1.00	Yes	1.00	**13.78**
		L_{33} - L_{34}	536.04	-----	1236	-2128	-601	-966	-469	-514	674	136	0.535	0.463	1.00	Yes	0.314	0.289	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.74**
		L_{34} - L_{35}	896.07	-808.45	787	117	-898	-740	-73	56	41	120	0.800	0.158	0.96	Yes	0.466	0.098	0.57	Yes	0.855	0.119	0.98	Yes	0.849	0.144	1.00	Yes	1.00	**11.08**
		L_{35} - L_{36}	1112.74	-----	552	-1054	-583	-1124	-27	-219	688	124	0.778	0.216	1.00	Yes	0.524	0.137	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.98**
		L_{36} - L_{37}	1448.11	-116.02	312	53	-1358	-1270	-112	6	-210	145	0.830	0.167	1.00	Yes	0.545	0.098	0.65	Yes	0.079	0.183	0.27	Yes	0.078	0.150	0.23	Yes	1.00	**6.84**
		L_{37} - L_{38}	1791.13	-----	126	-344	-2455	-1800	4	-46	323	-93	0.758	0.236	1.00	Yes	0.504	0.138	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.55**
		L_{38} - L_{39}	1722.25	-----	-268	-163	-2679	-1110	-57	5	-172	235	0.739	0.252	1.00	Yes	0.496	0.153	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.69**
		L_{39} - L_{40}	1647.88	-----	-146	-382	-2135	-1018	-25	-41	188	-308	0.768	0.223	1.00	Yes	0.509	0.132	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.98**
		L_{40} - L_{41}	1258.97	-----	-311	-48	-1950	-375	-60	-10	-373	335	0.740	0.258	1.00	Yes	0.498	0.160	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.47**
		L_{41} - L_{42}	962.04	-----	-135	-116	-1414	-139	-31	-29	279	-46	0.758	0.234	1.00	Yes	0.497	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.17**
		L_{42} - L_{43}	468.56	-----	-217	18	-1479	333	-59	-61	-400	236	0.599	0.391	1.00	Yes	0.358	0.227	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.22**
		L_{43} - L_{44}	225.32	-130.92	-65	-15	-2735	767	-159	-46	1003	293	0.274	0.721	1.00	Yes	0.163	0.459	0.63	Yes	0.188	0.455	0.65	Yes	0.187	0.556	0.75	Yes	1.00	**16.50**
	Structure 3	L_0 - L_1	173.18	-284.92	830	-1531	-10	-89	-149	-677	-8	-39	0.275	0.613	0.89	Yes	0.169	0.399	0.57	Yes	0.538	0.358	0.90	Yes	0.533	0.462	1.00	Yes	1.00	**13.20**
		L_1 - L_2	353.99	-----	836	-1373	64	-479	-212	-138	-71	209	0.542	0.456	1.00	Yes	0.366	0.284	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.34**
		L_2 - L_3	865.39	-----	347	-602	-348	-701	-7	-108	527	828	0.754	0.241	1.00	Yes	0.482	0.148	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.11**
		L_3 - L_4	1237.48	-----	382	-1125	-543	-1205	-258	-156	414	193	0.782	0.214	1.00	Yes	0.508	0.132	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.78**
		L_4 - L_5	1605.14	-----	-333	-220	-1533	-1218	82	122	192	362	0.784	0.210	1.00	Yes	0.503	0.123	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.80**
		L_5 - L_6	1487.14	-----	-20	-2013	-917	-1450	-109	-84	339	162	0.727	0.266	1.00	Yes	0.472	0.161	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.48**
		L_6 - L_7	1234.99	-----	-406	234	-1753	53	-185	17	-82	330	0.726	0.269	1.00	Yes	0.471	0.165	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.08**
		L_7 - L_8	1013.62	-----	-86	113	-913	-288	-29	39	252	35	0.800	0.191	1.00	Yes	0.512	0.114	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.52**
		L_8 - L_9	555.67	-115.15	-174	334	-803	142	-17	45	-191	372	0.720	0.277	1.00	Yes	0.432	0.180	0.62	Yes	0.177	0.136	0.32	Yes	0.175	0.212	0.39	Yes	1.00	**3.80**
		L_9 - L_{10}	233.71	-498.91	-9	466	-875	42	68	137	390	100	0.303	0.300	0.61	Yes	0.176	0.180	0.36	Yes	0.767	0.180	0.95	Yes	0.760	0.232	1.00	Yes	1.00	**5.76**
		L_{10} - L_{11}	-----	-967.00	201	190	-1401	564	126	-176	-355	246	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.100	0.89	Yes	0.778	0.220	1.00	Yes	1.00	**8.65**
		L_{11} - L_{12}	-----	-1211.36	127	1042	-873	1490	-112	-39	634	-18	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.219	1.00	Yes	0.767	0.197	0.97	Yes	1.00	**9.97**
		L_{12} - L_{13}	-----	-1138.02	2006	-426	422	-6	-265	-151	-192	-241	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.265	1.00	Yes	0.721	0.266	0.99	Yes	1.00	**10.16**
		L_{13} - L_{14}	-----	-789.23	1833	-2294	-1756	-920	-1020	-1093	1448	406	-----	-----	-----	-----	-----	-----	-----	-----	0.642	0.311	0.96	Yes	0.635	0.360	1.00	Yes	1.00	**22.25**
		L_{14} - L_{15}	-----	-749.19	572	167	-25	-291	146	-6	56	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.121	1.00	Yes	0.864	0.127	1.00	Yes	1.00	**4.24**
		L_{15} - L_{16}	510.72	-----	669	-990	-262	-674	-391	-338	130	42	0.661	0.332	1.00	Yes	0.397	0.216	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.82**
		L_{16} - L_{17}	655.65	-262.04	355	38	-854	-412	90	-36	161	212	0.754	0.240	1.00	Yes	0.448	0.155	0.61	Yes	0.358	0.177	0.54	Yes	0.355	0.206	0.57	Yes	1.00	**4.33**
		L_{17} - L_{18}	661.28	-112.87	88	-10	-828	-672	6	8	233	-31	0.761	0.237	1.00	Yes	0.440	0.142	0.59	Yes	0.154	0.269	0.43	Yes	0.153	0.200	0.36	Yes	1.00	**3.90**
		L_{18} - L_{19}	423.55	-17.61	40	4	-903	7	20	-101	-140	364	0.648	0.349	1.00	Yes	0.395	0.233	0.63	Yes	0.032	0.210	0.25	Yes	0.032	0.271	0.31	Yes	1.00	**3.82**
		L_{19} - L_{20}	48.79	-84.48	61	-179	-1987	827	-16	-4	1510	411	0.075	0.921	1.00	Yes	0.044	0.555	0.60	Yes	0.153	0.656	0.81	Yes	0.152	0.597	0.75	Yes	1.00	**14.74**

Moment (Start) AI Operating

Operating Loads - 3F1

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	$U_0 - L_0$			-----	-279.13	-60	90	-175	219	-27	-9	-500	-160	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.303	1.00	Yes	0.652	0.325	0.98	Yes	1.00	**1.67**
		$U_1 - L_1$			13.83	-327.09	22	-11	-232	239	-3	-2	18	52	0.025	0.320	0.35	Yes	0.014	0.176	0.19	Yes	0.715	0.096	0.82	Yes	0.692	0.305	1.00	Yes	1.00	**3.90**
		$U_2 - L_2$			104.53	-277.15	89	-99	-281	322	71	31	-443	-67	0.188	0.539	0.73	Yes	0.103	0.297	0.41	Yes	0.606	0.225	0.84	Yes	0.586	0.411	1.00	Yes	1.00	**6.50**
		$U_3 - L_3$			188.65	-260.90	340	-301	-317	345	281	239	-300	-53	0.339	0.528	0.87	Yes	0.187	0.290	0.48	Yes	0.572	0.185	0.76	Yes	0.552	0.441	1.00	Yes	1.00	**9.56**
		$U_4 - L_4$			-----	-224.56	404	-387	-41	20	-220	-28	29	153	-----	-----	-----	-----	-----	-----	-----	-----	0.494	0.191	0.69	Yes	0.475	0.517	1.00	Yes	1.00	**8.40**
		$U_5 - L_5$			-----	-425.01	224	-258	62	-87	181	-41	-26	16	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.108	0.88	Yes	0.733	0.262	1.00	Yes	1.00	**3.18**
		$U_6 - L_6$			-----	-488.67	242	-261	79	-94	310	48	76	93	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.132	0.92	Yes	0.738	0.253	1.00	Yes	1.00	**2.77**
		$U_7 - L_7$			-----	-413.64	275	-292	129	-143	198	27	-144	17	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.147	0.89	Yes	0.675	0.323	1.00	Yes	1.00	**2.05**
		$U_8 - L_8$			-----	-1181.71	466	-558	-363	429	992	291	27	65	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.144	1.00	Yes	0.819	0.104	0.93	Yes	1.00	**5.70**
		$U_9 - L_9$			-----	-631.59	-170	199	-410	447	-447	-166	-576	-325	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.190	0.97	Yes	0.731	0.260	1.00	Yes	1.00	**3.76**
		$U_{10} - L_{10}$			-----	-709.08	-118	111	-342	353	-623	-333	-816	-556	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.226	1.00	Yes	0.729	0.197	0.93	Yes	1.00	**4.49**
		$U_{11} - L_{11}$			-----	-655.52	-113	211	-399	505	-480	-266	-752	-531	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.212	1.00	Yes	0.763	0.234	1.00	Yes	1.00	**4.81**
		$U_{12} - L_{12}$			-----	-511.02	-88	94	-342	339	-349	-202	-310	-228	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.162	0.91	Yes	0.701	0.293	1.00	Yes	1.00	**4.10**
		$U_{13} - L_{13}$			-----	-362.55	-38	58	-237	262	-176	12	-4	-26	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.128	0.87	Yes	0.695	0.299	1.00	Yes	1.00	**3.19**
		$U_{14} - L_{14}$			-----	-189.32	205	-207	-433	465	183	84	-76	208	-----	-----	-----	-----	-----	-----	-----	-----	0.422	0.205	0.63	Yes	0.401	0.595	1.00	Yes	1.00	**11.69**
		$U_{15} - L_{15}$			143.93	-309.73	245	-264	-115	98	407	-69	33	127	0.259	0.455	0.72	Yes	0.142	0.250	0.40	Yes	0.694	0.173	0.87	Yes	0.655	0.337	1.00	Yes	1.00	**5.00**
		$U_{16} - L_{16}$			0.70	-320.13	237	-245	21	-30	287	-144	48	-79	0.001	0.397	0.40	Yes	0.001	0.218	0.22	Yes	0.721	0.139	0.87	Yes	0.677	0.314	1.00	Yes	1.00	**3.59**
		$U_{17} - L_{17}$			-----	-433.86	222	-241	60	-75	104	-172	-120	-113	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.124	0.94	Yes	0.749	0.245	1.00	Yes	1.00	**2.97**
		$U_{18} - L_{18}$			-----	-537.58	424	-438	145	-151	327	-152	-133	-122	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.106	0.90	Yes	0.748	0.248	1.00	Yes	1.00	**3.05**
		$U_{19} - L_{19}$			-----	-640.75	533	-521	172	-171	250	-103	-117	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.112	0.92	Yes	0.746	0.247	1.00	Yes	1.00	**3.52**
		$U_{20} - L_{20}$			-----	-557.08	341	-497	160	-260	571	75	28	4	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.229	1.00	Yes	0.682	0.239	0.93	Yes	1.00	**2.54**
	Structure 2	$U_0 - L_0$			-----	-622.11	-165	214	-420	517	-39	-7	-662	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.211	1.00	Yes	0.697	0.233	0.94	Yes	1.00	**3.30**
		$U_1 - L_1$			-----	-716.61	-117	126	-533	540	-107	-7	-74	62	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.075	0.90	Yes	0.768	0.229	1.00	Yes	1.00	**5.05**
		$U_2 - L_2$			-----	-588.47	-108	118	-474	481	-108	-38	-88	-13	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.081	0.87	Yes	0.750	0.246	1.00	Yes	1.00	**4.27**
		$U_3 - L_3$			-----	-486.75	-54	62	-245	254	79	-46	-182	-76	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.119	0.95	Yes	0.763	0.231	1.00	Yes	1.00	**3.97**
		$U_4 - L_4$			-----	-337.31	-6	23	-223	222	-72	49	-120	-21	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.119	0.89	Yes	0.714	0.285	1.00	Yes	1.00	**3.89**
		$U_5 - L_5$			124.29	-325.88	93	-80	-213	236	-121	103	91	-14	0.224	0.337	0.57	Yes	0.123	0.185	0.31	Yes	0.736	0.144	0.89	Yes	0.690	0.302	1.00	Yes	1.00	**5.00**
		$U_6 - L_6$			331.66	-248.66	214	-212	-260	268	205	195	-63	-14	0.597	0.402	1.00	Yes	0.328	0.221	0.55	Yes	0.560	0.159	0.72	Yes	0.526	0.343	0.87	Yes	1.00	**7.94**
		$U_7 - L_7$			-----	-145.85	471	-535	-198	202	53	94	-76	370	-----	-----	-----	-----	-----	-----	-----	-----	0.329	0.288	0.62	Yes	0.309	0.684	1.00	Yes	1.00	**15.54**
		$U_8 - L_8$			-----	-465.85	357	-372	63	-80	199	-124	-22	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.675	0.112	0.79	Yes	0.671	0.325	1.00	Yes	1.00	**4.08**
		$U_9 - L_9$			-----	-689.40	583	-597	142	-176	196	-156	-34	50	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.085	0.86	Yes	0.739	0.253	1.00	Yes	1.00	**5.16**
		$U_{10} - L_{10}$			-----	-797.07	541	-570	164	-197	560	-70	-124	-283	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.168	0.96	Yes	0.745	0.252	1.00	Yes	1.00	**5.11**
		$U_{11} - L_{11}$			-----	-813.51	514	-531	186	-188	249	-136	-176	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.112	0.94	Yes	0.761	0.234	1.00	Yes	1.00	**4.60**
		$U_{12} - L_{12}$			-----	-884.34	530	-539	156	-136	221	-51	-162	1	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.107	0.96	Yes	0.767	0.231	1.00	Yes	1.00	**4.92**
		$U_{13} - L_{13}$			-----	-742.60	570	-552	211	-208	458	48	-163	21	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.165	1.00	Yes	0.716	0.273	0.99	Yes	1.00	**3.92**
		$U_{14} - L_{14}$			-----	-1215.26	788	-753	-538	497	588	285	555	335	-----	-----	-----	-----	-----	-----	-----	-----	0.889	0.105	1.00	Yes	0.806	0.140	0.95	Yes	1.00	**7.64**
		$U_{15} - L_{15}$			-----	-688.34	-117	125	-629	595	-295	12	-650	-115	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.224	1.00	Yes	0.664	0.301	0.97	Yes	1.00	**6.52**
		$U_{16} - L_{16}$			-----	-665.14	-91	65	-524	497	-796	-258	-1045	-428	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.223	1.00	Yes	0.713	0.222	0.94	Yes	1.00	**5.16**
		$U_{17} - L_{17}$			-----	-639.36	-126	124	-542	539	-274	-185	-427	-397	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.149	0.94	Yes	0.744	0.251	1.00	Yes	1.00	**4.79**
		$U_{18} - L_{18}$			-----	-575.59	-94	94	-510	519	-114	-127	-426	-334	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.156	0.93	Yes	0.733	0.265	1.00	Yes	1.00	**4.76**
		$U_{19} - L_{19}$			-----	-467.05	-57	60	-306	300	-66	-33	-179	-158	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.110	0.82	Yes	0.697	0.294	1.00	Yes	1.00	**3.97**
		$U_{20} - L_{20}$			-----	-381.63	-10	16	-228	235	-177	-30	27	-62	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.118	0.91	Yes	0.731	0.268	1.00	Yes	1.00	**3.95**
		$U_{21} - L_{21}$			64.07	-314.00	32	-27	-247	261	-91	56	-105	-50	0.115	0.364	0.48	Yes	0.063	0.200	0.27	Yes	0.709	0.124	0.84	Yes	0.664	0.333	1.00	Yes	1.00	**4.63**
		$U_{22} - L_{22}$			-----	-140.54	434	-471	-529	545	150	169	138	454	-----	-----	-----	-----	-----	-----	-----	-----	0.316	0.261	0.58	Yes	0.297	0.697	1.00	Yes	1.00	**19.13**
		$U_{23} - L_{23}$			83.00	-314.29	241	-255	-50	45	217	-56	59	81	0.149	0.389	0.54	Yes	0.082	0.214	0.30	Yes	0.710	0.134	0.85	Yes	0.665	0.326	1.00	Yes	1.00	**4.48**
		$U_{24} - L_{24}$			-----	-372.92	235	-247	3	-19	234	-56	72	44	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.108	0.88	Yes	0.714	0.282	1.00	Yes	1.00	**4.00**
		$U_{25} - L_{25}$			-----	-472.23	304	-300	43	-42	406	-35	-84	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.710	0.111	0.83	Yes	0.705	0.292	1.00	Yes	1.00	**3.73**
		$U_{26} - L_{26}$			-----	-568.86	505	-531	71	-75	416	-31	-119	-23	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.139	0.90	Yes	0.725	0.272	1.00	Yes	1.00	**4.30**
		$U_{27} - L_{27}$			-----	-626.97	559	-564	87	-88	308	-54	-135	2	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.106	0.88	Yes	0.730	0.262	1.00	Yes	1.00	**4.67**
		$U_{28} - L_{28}$			-----	-710.30	547	-549	78	-75	643	33	-151	16	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.135	0.96	Yes	0.761	0.233	1.00	Yes	1.00	**4.75**
		$U_{29} - L_{29}$			-----	-714.52	634	-609	120	-125	510	21	-114	28	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.172	0.97	Yes	0.689	0.303	1.00	Yes	1.00	**5.34**
		$U_{30} - L_{30}$			-----	-1180.59	759	-744	-685	619	908	39	33	325	-----	-----	-----	-----	-----	-----	-----	-----	0.879	0.112	1.00	Yes	0.798	0.137	0.94	Yes	1.00	**8.35**
		$U_{31} - L_{31}$			-----	-717.41	-110	110	-549	519	-306	-31	-460	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.191	1.00	Yes	0.692	0.263	0.96	Yes	1.00	**5.81**
		$U_{32} - L_{32}$			-----	-829.74	-81	58	-480	473	-673	-273	-709	-387	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.198	1.00	Yes	0.719	0.206	0.93	Yes	1.00	**5.91**
		$U_{33} - L_{33}$			-----	-793.14	-117	106	-489	483	-451	-342	-642	-490	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.193	1.00	Yes	0.748	0.219	0.97	Yes	1.00	**5.82**
		$U_{34} - L_{34}$			-----	-803.77	-103	120	-547	558	-310	-203	-314	-335	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.118	0.92	Yes	0.751	0.246	1.00	Yes	1.00	**6.29**
		$U_{35} - L_{35}$			-----	-701.32	-96	119	-552	565	-210	11	79	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.082	0.87	Yes	0.752	0.240	1.00	Yes	1.00	**5.51**
		$U_{36} - L_{36}$			-----	-473.27	-42	56	-350	362	-77	61	-64	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.686	0.098	0.79	Yes	0.682	0.316	1.00	Yes	1.00	**4.58**
		$U_{37} - L_{37}$			-----	-151.52	113	-119	-482	530	-150	126	-146	284	-----	-----	-----	-----	-----	-----	-----	-----	0.342	0.287	0.63	Yes	0.321	0.677	1.00	Yes	1.00	**13.34**
		$U_{38} - L_{38}$			320.92	-219.16	198	-200	-252	248	331	-66	278	187	0.577	0.418	1.00	Yes	0.317	0.230	0.55	Yes	0.493	0.130	0.63	Yes	0.464	0.322	0.79	Yes	1.00	**7.05**
		$U_{39} - L_{39}$			167.75	-325.69	218	-240	-149	130	218	-100	19	116	0.302	0.370	0.68	Yes	0.166	0.203	0.37	Yes	0.736	0.119	0.86	Yes	0.689	0.307	1.00	Yes	1.00	**5.76**
		$U_{40} - L_{40}$			11.33	-344.79	209	-210	-19	-3	337	-72	52	21	0.020	0.366	0.39	Yes	0.011	0.201	0.22	Yes	0.782	0.114	0.90	Yes	0.730	0.268	1.00	Yes	1.00	**3.95**
		$U_{41} - L_{41}$			-----	-487.51	243	-255	29	-33	217	-124	7	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.098	0.93	Yes	0.765	0.232	1.00	Yes	1.00	**3.90**
		$U_{42} - L_{42}$			-----	-584.53	481	-489	62	-70	215	-162	11	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.085	0.87	Yes	0.745	0.250	1.00	Yes	1.00	**4.37**
		$U_{43} - L_{43}$			-----	-710.67	551	-556	83	-95	583	22	-49	-49	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.124	0.94	Yes	0.762	0.236	1.00	Yes	1.00	**4.50**
		$U_{44} - L_{44}$			-----	-618.80	389	-505	119	-137	1106	187	-125	-21	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.250	1.00	Yes	0.663	0.214	0.88	Yes	1.00	**3.70**
	Structure 3	$U_0 - L_0$			-----	-596.41	-142	190	-410	500	-57	-7	-408	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.181	1.00	Yes	0.716	0.240	0.96	Yes	1.00	**3.53**
		$U_1 - L_1$			-----	-653.68	-111	123	-495	499	-122	-3	-142	112	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.082	0.90	Yes	0.761	0.232	1.00	Yes	1.00	**4.87**
		$U_2 - L_2$			-----	-537.81	-109	115	-437	441	-149	-45	-230	-12	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.103	0.90	Yes	0.748	0.250	1.00	Yes	1.00	**4.03**
		$U_3 - L_3$			-----	-444.55	-46	59	-207	224	43	-64	25	-62	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.086	0.92	Yes	0.767	0.227	1.00	Yes	1.00	**3.31**
		$U_4 - L_4$			-----	-320.22	-7	24	-247	252	-42	68	-192	-14	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.143	0.87	Yes	0.678	0.322	1.00	Yes	1.00	**4.17**
		$U_5 - L_5$			114.85	-304.35	84	-76	-256	272	-107	122	-64	-13	0.207	0.383	0.59	Yes	0.114	0.211	0.33	Yes	0.682	0.153	0.84	Yes	0.644	0.348	1.00	Yes	1.00	**5.10**
		$U_6 - L_6$			-----	-243.76	368	-378	-242	261	185	79	-209	71	-----	-----	-----	-----	-----	-----	-----	-----	0.544	0.187	0.74	Yes	0.516	0.483	1.00	Yes	1.00	**11.41**
		$U_7 - L_7$			-----	-360.89	240	-264	1	-17	19	-149	-51	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.122	0.86	Yes	0.691	0.302	1.00	Yes	1.00	**3.81**
		$U_8 - L_8$			-----	-513.77	333	-338	65	-76	379	-41	59	-59	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.148	0.90	Yes	0.705	0.289	1.00	Yes	1.00	**4.15**
		$U_9 - L_9$			-----	-652.72	396	-504	107	-166	156	-161	-31	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.100	0.89	Yes	0.760	0.234	1.00	Yes	1.00	**4.54**
		$U_{10} - L_{10}$			-----	-776.67	397	-435	113	-140	216	-48	103	97	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.101	0.91	Yes	0.766	0.226	1.00	Yes	1.00	**5.02**
		$U_{11} - L_{11}$			-----	-649.48	427	-473	168	-193	472	111	-157	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.156	0.93	Yes	0.734	0.263	1.00	Yes	1.00	**3.34**
		$U_{12} - L_{12}$			-----	-1177.25	529	-685	-428	463	758	334	802	297	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.142	1.00	Yes	0.816	0.128	0.95	Yes	1.00	**6.76**
		$U_{13} - L_{13}$			-----	-448.86	-65	74	-299	308	-362	-28	-537	-161	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.216	0.97	Yes	0.692	0.304	1.00	Yes	1.00	**3.94**
		$U_{14} - L_{14}$			-----	-482.03	-43	42	-255	258	-515	-215	-891	-477	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.262	1.00	Yes	0.691	0.226	0.92	Yes	1.00	**4.13**
		$U_{15} - L_{15}$			-----	-435.93	-33	41	-222	243	-486	-235	-426	-327	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.200	0.99	Yes	0.752	0.246	1.00	Yes	1.00	**3.92**
		$U_{16} - L_{16}$			-----	-146.38	77	-53	-540	530	-794	-384	-690	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.322	0.394	0.72	Yes	0.310	0.690	1.00	Yes	1.00	**11.78**
		$U_{17} - L_{17}$			289.92	-253.16	207	-228	-339	345	56	-102	-120	107	0.521	0.476	1.00	Yes	0.287	0.262	0.55	Yes	0.555	0.130	0.69	Yes	0.536	0.441	0.98	Yes	1.00	**7.55**
		$U_{18} - L_{18}$			16.91	-295.78	243	-288	-112	93	196	-62	415	105	0.030	0.488	0.52	Yes	0.017	0.268	0.29	Yes	0.646	0.243	0.89	Yes	0.626	0.368	1.00	Yes	1.00	**5.64**
		$U_{19} - L_{19}$			38.01	-325.96	241	-233	-48	37	308	57	-83	-9	0.068	0.397	0.47	Yes	0.038	0.219	0.26	Yes	0.712	0.157	0.87	Yes	0.690	0.308	1.00	Yes	1.00	**3.52**
		$U_{20} - L_{20}$			-----	-310.50	114	-185	-14	-66	708	227	-593	-190	-----	-----	-----	-----	-----	-----	-----	-----	0.693	0.302	1.00	Yes	0.657	0.236	0.90	Yes	1.00	**1.90**

Moment (Start) AI Operating

Operating Loads - 3F1

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	$U_0 - L_1$			509.86	-----	-18	0	-153	68	-10	5	-597	-112	0.669	0.329	1.00	Yes	0.404	0.181	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.03**
		$U_1 - L_2$			344.74	-99.88	19	-20	-118	-14	-4	-14	-760	-387	0.620	0.371	1.00	Yes	0.341	0.204	0.55	Yes	0.229	0.364	0.60	Yes	0.211	0.151	0.37	Yes	1.00	**5.62**
		$U_2 - L_3$			323.51	-274.59	53	-31	-179	-70	34	26	-290	-17	0.582	0.312	0.90	Yes	0.320	0.172	0.50	Yes	0.632	0.360	1.00	Yes	0.581	0.228	0.81	Yes	1.00	**10.01**
		$U_3 - L_4$			-----	-327.33	55	-6	-130	-141	119	124	281	-323	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.243	1.00	Yes	0.693	0.180	0.88	Yes	1.00	**9.52**
		$U_4 - L_4$			511.99	-----	-9	59	-128	-13	38	-10	-470	-450	0.758	0.240	1.00	Yes	0.417	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.62**
		$U_5 - L_5$			652.96	-----	-28	151	-246	173	206	76	-478	-396	0.772	0.227	1.00	Yes	0.425	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.33**
		$U_1 - L_6$			638.05	-----	-80	120	-321	234	343	158	-312	-265	0.754	0.245	1.00	Yes	0.415	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.33**
		$U_6 - L_7$			657.47	-----	25	165	-111	304	229	140	-156	-184	0.777	0.215	1.00	Yes	0.428	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.61**
		$U_5 - L_8$			987.84	-----	109	219	-103	346	151	-2	283	402	0.790	0.205	1.00	Yes	0.489	0.115	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.58**
		$U_8 - L_{10}$			987.17	-----	-78	87	-314	212	83	127	169	484	0.789	0.202	1.00	Yes	0.489	0.114	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.28**
		$U_{10} - L_{11}$			967.63	-----	-53	163	-271	153	134	192	-36	370	0.817	0.174	1.00	Yes	0.506	0.098	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.48**
		$U_{11} - L_{12}$			802.10	-----	-65	58	-313	52	24	130	221	350	0.794	0.198	1.00	Yes	0.436	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.91**
		$U_{12} - L_{13}$			642.48	-----	-75	42	-204	129	-146	-95	-108	149	0.783	0.208	1.00	Yes	0.493	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.86**
		$U_{13} - L_{14}$			446.91	-----	-13	-25	-107	16	-190	-194	-24	30	0.804	0.192	1.00	Yes	0.442	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.97**
		$U_{15} - L_{14}$			119.01	-291.18	51	-109	-88	-45	-271	-132	-504	-350	0.214	0.286	0.50	Yes	0.118	0.157	0.28	Yes	0.682	0.312	1.00	Yes	0.616	0.140	0.76	Yes	1.00	**4.84**
		$U_{16} - L_{15}$			398.88	-85.27	-9	-33	-125	87	-409	-142	-329	-311	0.717	0.278	1.00	Yes	0.395	0.153	0.55	Yes	0.202	0.195	0.40	Yes	0.180	0.160	0.35	Yes	1.00	**4.05**
		$U_{17} - L_{16}$			505.15	-----	-34	13	-144	89	-110	-130	-483	-396	0.741	0.258	1.00	Yes	0.407	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.19**
		$U_{18} - L_{17}$			572.11	-----	-110	74	-339	221	-106	-114	-677	-562	0.676	0.315	1.00	Yes	0.372	0.173	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		$U_{19} - L_{18}$			659.60	-----	-131	86	-363	238	-64	-105	-588	-519	0.714	0.282	1.00	Yes	0.393	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.42**
		$U_{20} - L_{19}$			637.31	-----	-90	95	-291	261	-148	-72	-934	-250	0.690	0.302	1.00	Yes	0.380	0.166	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
	Structure 2	$U_0 - L_1$			720.50	-----	-116	102	-412	360	-61	-50	-608	-17	0.713	0.282	1.00	Yes	0.392	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.85**
		$U_1 - L_2$			786.32	-----	-95	72	-402	292	-99	-29	-182	100	0.778	0.214	1.00	Yes	0.428	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.93**
		$U_2 - L_3$			639.79	-----	-83	63	-353	250	-23	91	-127	214	0.756	0.239	1.00	Yes	0.416	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.47**
		$U_3 - L_4$			591.87	-----	-39	17	-184	123	102	59	-163	57	0.789	0.202	1.00	Yes	0.434	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.97**
		$U_4 - L_5$			416.43	-62.79	1	-28	-138	85	-140	-144	-238	113	0.749	0.246	1.00	Yes	0.412	0.135	0.55	Yes	0.155	0.131	0.29	Yes	0.133	0.177	0.31	Yes	1.00	**4.50**
		$U_5 - L_6$			417.19	-221.02	63	-94	-118	61	-307	-191	-176	39	0.750	0.240	1.00	Yes	0.413	0.132	0.55	Yes	0.522	0.203	0.73	Yes	0.468	0.151	0.62	Yes	1.00	**5.80**
		$U_6 - L_7$			71.48	-379.76	54	-100	-57	-18	-64	-300	-192	-54	0.116	0.193	0.31	Yes	0.064	0.106	0.18	Yes	0.813	0.178	1.00	Yes	0.728	0.115	0.85	Yes	1.00	**3.98**
		$U_8 - L_7$			545.25	-----	-29	-25	-220	94	-260	-200	-427	-525	0.695	0.304	1.00	Yes	0.438	0.173	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.59**
		$U_8 - L_8$			684.95	-----	-114	33	-330	214	-308	-226	-512	-459	0.742	0.253	1.00	Yes	0.408	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**
		$U_{10} - L_9$			752.25	-----	-92	126	-350	185	9	-57	-607	-585	0.744	0.253	1.00	Yes	0.409	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.99**
		$U_{11} - L_{10}$			832.85	-----	-99	147	-360	247	161	26	-615	-587	0.759	0.237	1.00	Yes	0.417	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.46**
		$U_{12} - L_{11}$			852.91	-----	-109	163	-376	340	289	120	-416	-428	0.777	0.218	1.00	Yes	0.427	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		$U_{13} - L_{12}$			754.85	-----	-153	154	-432	376	330	126	-175	-196	0.747	0.250	1.00	Yes	0.411	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.54**
		$U_{14} - L_{13}$			757.55	-----	-10	186	-278	425	346	111	-184	-172	0.749	0.249	1.00	Yes	0.412	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.35**
		$U_{14} - L_{15}$			643.96	-----	68	126	-221	359	154	-62	127	133	0.761	0.231	1.00	Yes	0.419	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.83**
		$U_{15} - L_{16}$			625.89	-----	-65	72	-368	330	-53	17	-178	238	0.740	0.251	1.00	Yes	0.407	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.72**
		$U_{16} - L_{17}$			709.20	-----	-60	101	-336	327	-166	112	-304	357	0.768	0.231	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.66**
		$U_{17} - L_{18}$			632.92	-----	-67	97	-309	258	-34	174	15	385	0.748	0.245	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.45**
		$U_{18} - L_{19}$			661.73	-----	-51	70	-284	248	37	22	17	280	0.782	0.212	1.00	Yes	0.430	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.36**
		$U_{19} - L_{20}$			595.04	-----	-19	26	-200	144	-30	-29	27	266	0.759	0.233	1.00	Yes	0.417	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.47**
		$U_{20} - L_{21}$			429.93	-20.00	-1	-13	-135	94	-121	-83	18	167	0.773	0.221	1.00	Yes	0.425	0.121	0.55	Yes	0.047	0.102	0.15	Yes	0.042	0.173	0.22	Yes	1.00	**4.62**
		$U_{21} - L_{22}$			436.04	-159.41	26	-59	-122	35	-159	-190	-62	138	0.784	0.211	1.00	Yes	0.431	0.116	0.55	Yes	0.377	0.164	0.55	Yes	0.337	0.156	0.50	Yes	1.00	**5.57**
		$U_{23} - L_{22}$			350.73	-270.74	49	-90	-141	15	-186	-15	-470	-383	0.631	0.316	0.95	Yes	0.347	0.174	0.53	Yes	0.645	0.349	1.00	Yes	0.573	0.180	0.76	Yes	1.00	**6.90**
		$U_{24} - L_{23}$			411.09	-49.24	8	-24	-125	94	-179	-63	-327	-267	0.739	0.255	1.00	Yes	0.407	0.140	0.55	Yes	0.118	0.156	0.28	Yes	0.104	0.160	0.27	Yes	1.00	**4.48**
		$U_{25} - L_{24}$			580.61	-----	-15	30	-196	169	64	2	-389	-347	0.740	0.254	1.00	Yes	0.407	0.144	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.45**
		$U_{26} - L_{25}$			622.30	-----	-27	38	-309	233	118	45	-467	-441	0.736	0.260	1.00	Yes	0.405	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.95**
		$U_{27} - L_{26}$			644.60	-----	-46	58	-303	269	176	68	-358	-328	0.762	0.237	1.00	Yes	0.419	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		$U_{28} - L_{27}$			706.99	-----	-49	68	-344	350	199	110	-230	-294	0.766	0.227	1.00	Yes	0.421	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.67**
		$U_{29} - L_{28}$			612.14	-----	-72	83	-387	331	265	131	-283	-240	0.724	0.270	1.00	Yes	0.398	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.52**
		$U_{30} - L_{29}$			644.84	-----	41	110	-225	358	155	119	-120	-145	0.762	0.231	1.00	Yes	0.419	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.16**
		$U_{30} - L_{31}$			760.82	-----	67	149	-295	425	211	3	122	288	0.753	0.241	1.00	Yes	0.414	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.26**
		$U_{31} - L_{32}$			711.22	-----	-76	80	-415	349	-29	42	-135	293	0.739	0.253	1.00	Yes	0.406	0.130	0.54	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.97**
		$U_{32} - L_{33}$			847.70	-----	-59	94	-381	316	-145	134	-212	423	0.772	0.220	1.00	Yes	0.425	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.75**
		$U_{33} - L_{34}$			871.28	-----	-68	91	-349	260	26	200	-76	404	0.794	0.203	1.00	Yes	0.437	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		$U_{34} - L_{35}$			812.58	-----	-64	79	-323	211	78	86	2	303	0.804	0.195	1.00	Yes	0.442	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.16**
		$U_{35} - L_{36}$			718.41	-----	-86	84	-353	206	-17	-1	88	236	0.778	0.219	1.00	Yes	0.428	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.21**
		$U_{36} - L_{37}$			604.05	-----	-28	-3	-200	125	-184	-214	-154	115	0.770	0.223	1.00	Yes	0.485	0.125	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.91**
		$U_{38} - L_{37}$			-----	-378.58	59	-94	-42	-27	-280	-73	-266	-240	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.175	1.00	Yes	0.725	0.108	0.84	Yes	1.00	**3.50**
		$U_{39} - L_{38}$			397.87	-316.89	95	-127	-111	64	-220	-112	-310	-290	0.716	0.252	0.97	Yes	0.394	0.139	0.54	Yes	0.755	0.237	1.00	Yes	0.671	0.162	0.84	Yes	1.00	**6.45**
		$U_{40} - L_{39}$			402.61	-132.60	21	-48	-135	94	-288	-130	-330	-334	0.724	0.269	1.00	Yes	0.398	0.148	0.55	Yes	0.317	0.200	0.52	Yes	0.281	0.172	0.46	Yes	1.00	**4.98**
		$U_{41} - L_{40}$			567.92	-----	-20	4	-172	126	-98	-84	-370	-360	0.757	0.234	1.00	Yes	0.416	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.02**
		$U_{42} - L_{41}$			609.66	-----	-49	32	-331	254	-68	-65	-504	-477	0.721	0.279	1.00	Yes	0.396	0.153	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.35**
		$U_{43} - L_{42}$			753.24	-----	-67	45	-391	301	-6	-47	-468	-463	0.745	0.251	1.00	Yes	0.410	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.51**
		$U_{44} - L_{43}$			718.00	-----	-85	107	-328	327	225	-40	-888	-413	0.710	0.285	1.00	Yes	0.391	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.69**
	Structure 3	$U_0 - L_1$			683.60	-----	-113	94	-384	309	-63	-53	-327	-159	0.740	0.250	1.00	Yes	0.407	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.41**
		$U_1 - L_2$			711.34	-----	-100	68	-343	242	-125	-45	-308	1	0.770	0.226	1.00	Yes	0.424	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.33**
		$U_2 - L_3$			639.50	-----	-97	63	-341	235	-49	79	-241	189	0.756	0.236	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.13**
		$U_3 - L_4$			551.28	-----	-27	9	-167	91	75	49	-41	89	0.808	0.190	1.00	Yes	0.445	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.33**
		$U_4 - L_5$			421.46	-86.30	-7	-29	-131	82	-96	-170	-244	62	0.758	0.239	1.00	Yes	0.417	0.131	0.55	Yes	0.205	0.126	0.34	Yes	0.183	0.168	0.36	Yes	1.00	**4.31**
		$U_5 - L_6$			407.02	-315.46	46	-112	-126	-22	-315	-340	-217	47	0.732	0.260	1.00	Yes	0.403	0.143	0.55	Yes	0.739	0.244	0.99	Yes	0.667	0.162	0.83	Yes	1.00	**6.58**
		$U_7 - L_6$			365.66	-101.98	13	-64	-130	-13	-250	-199	-591	-478	0.658	0.337	1.00	Yes	0.362	0.186	0.55	Yes	0.237	0.316	0.56	Yes	0.216	0.166	0.39	Yes	1.00	**6.25**
		$U_8 - L_7$			604.42	-----	-61	12	-196	137	-163	-182	-405	-427	0.737	0.254	1.00	Yes	0.464	0.144	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
		$U_8 - L_8$			771.03	-----	-62	81	-284	58	-94	-140	-705	-661	0.763	0.237	1.00	Yes	0.420	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.88**
		$U_{10} - L_9$			878.01	-----	-39	141	-312	103	121	16	-864	-773	0.742	0.258	1.00	Yes	0.459	0.146	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.24**
		$U_{11} - L_{10}$			928.50	-----	-73	126	-346	198	359	190	-763	-659	0.742	0.251	1.00	Yes	0.460	0.142	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		$U_{12} - L_{11}$			977.54	-----	83	180	-127	341	288	182	-478	-409	0.781	0.213	1.00	Yes	0.484	0.120	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.73**
		$U_{12} - L_{13}$			661.08	-----	69	145	-119	278	53	-86	289	266	0.782	0.211	1.00	Yes	0.430	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.26**
		$U_{13} - L_{14}$			602.52	-----	-20	54	-369	233	-93	38	424	320	0.712	0.287	1.00	Yes	0.392	0.158	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.84**
		$U_{14} - L_{15}$			700.90	-----	-2	126	-208	176	-31	106	-214	246	0.829	0.163	1.00	Yes	0.456	0.090	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.66**
		$U_{15} - L_{16}$			563.38	-----	1	62	-112	8	105	181	-10	232	0.826	0.168	1.00	Yes	0.454	0.092	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.55**
		$U_{17} - L_{16}$			-----	-397.49	38	-67	-54	-64	-85	30	-176	-152	-----	-----	-----	-----	-----	-----	-----	-----	0.909	0.090	1.00	Yes	0.841	0.086	0.93	Yes	1.00	**4.61**
		$U_{18} - L_{17}$			346.94	-261.98	55	-30	-137	-40	260	173	-500	-387	0.624	0.319	0.95	Yes	0.343	0.176	0.52	Yes	0.603	0.388	1.00	Yes	0.554	0.175	0.73	Yes	1.00	**8.14**
		$U_{19} - L_{18}$			364.70	-137.02	27	-20	-120	-15	169	131	-647	-482	0.656	0.341	1.00	Yes	0.361	0.188	0.55	Yes	0.314	0.349	0.67	Yes	0.290	0.154	0.45	Yes	1.00	**4.91**
		$U_{20} - L_{19}$			336.69	-----	176	-15	-201	86	1271	54	-1191	-546	0.442	0.555	1.00	Yes	0.267	0.306	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.53**

Moment (Start) Al Operating

Operating Loads - 3F1

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

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

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

Operating Loads - 3F1

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			54.71	-44.25	1257	-2107	-222	110	-351	-1289	30	111	0.084	0.909	1.00	Yes	0.049	0.550	0.60	Yes	0.080	0.613	0.7	Yes	0.080	0.632	0.72	Yes	1.00	**21.30**
		L_1 - L_2			443.57	-----	254	-688	-412	-644	0	-19	-502	62	0.679	0.314	1.00	Yes	0.414	0.207	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.66**
		L_2 - L_3			667.48	-59.79	-36	56	-942	-589	10	-7	-24	-14	0.768	0.231	1.00	Yes	0.444	0.140	0.59	Yes	0.082	0.243	0.33	Yes	0.081	0.227	0.31	Yes	1.00	**4.89**
		L_3 - L_4			637.37	-----	107	-914	-955	-350	-152	4	42	195	0.733	0.262	1.00	Yes	0.436	0.169	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.75**
		L_4 - L_5			233.24	-454.88	84	432	-1155	389	126	-123	-106	-5	0.302	0.328	0.64	Yes	0.181	0.217	0.40	Yes	0.699	0.224	0.93	Yes	0.693	0.306	1.00	Yes	1.00	**5.28**
		L_5 - L_6			-----	-705.84	129	547	-828	207	10	73	66	123	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.167	1	Yes	0.814	0.183	1.00	Yes	1.00	**6.13**
		L_6 - L_7			-----	-994.51	156	101	-1229	86	166	19	33	-85	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.118	0.93	Yes	0.801	0.193	1.00	Yes	1.00	**7.62**
		L_7 - L_8			-----	-1098.90	95	1051	-1500	2258	-157	-74	228	112	-----	-----	-----	-----	-----	-----	-----	-----	0.705	0.269	0.98	Yes	0.696	0.299	1.00	Yes	1.00	**12.29**
		L_8 - L_9			-----	-1219.43	1668	-252	542	-18	-19	-59	63	8	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.204	0.99	Yes	0.772	0.221	1.00	Yes	1.00	**8.83**
		L_9 - L_{10}			-----	-709.56	1638	-2696	-1823	-923	-110	-566	398	3	-----	-----	-----	-----	-----	-----	-----	-----	0.577	0.169	0.75	Yes	0.571	0.424	1.00	Yes	1.00	**24.83**
		L_{10} - L_{11}			395.54	-518.61	474	-24	-258	-759	73	10	-21	-6	0.512	0.214	0.73	Yes	0.298	0.130	0.43	Yes	0.797	0.118	0.92	Yes	0.790	0.201	1.00	Yes	1.00	**7.72**
		L_{11} - L_{12}			562.48	-----	506	-881	-201	-409	-106	25	-45	177	0.728	0.264	1.00	Yes	0.437	0.173	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.69**
		L_{12} - L_{13}			1062.17	-----	112	-186	-645	-746	-181	-110	-30	109	0.838	0.154	1.00	Yes	0.536	0.092	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.83**
		L_{13} - L_{14}			1280.01	-----	634	-1555	-673	-954	-277	18	-92	281	0.753	0.238	1.00	Yes	0.488	0.145	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.77**
		L_{14} - L_{15}			1487.41	-----	-355	-81	-2168	-445	-66	-48	-149	162	0.727	0.273	1.00	Yes	0.472	0.165	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.74**
		L_{15} - L_{16}			1577.33	-----	-195	-389	-1810	-1180	-76	15	-134	11	0.771	0.228	1.00	Yes	0.495	0.132	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.66**
		L_{16} - L_{17}			1183.42	-----	-401	40	-1606	-25	-34	-65	-161	48	0.748	0.250	1.00	Yes	0.486	0.154	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.70**
		L_{17} - L_{18}			899.68	-----	-177	-56	-1045	30	-78	-15	74	20	0.783	0.211	1.00	Yes	0.501	0.126	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.46**
		L_{18} - L_{19}			431.05	-----	-248	174	-976	437	-4	-32	-188	51	0.660	0.332	1.00	Yes	0.446	0.207	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.99**
		L_{19} - L_{20}			80.44	-69.70	-105	23	-2049	1030	-33	-8	1251	280	0.123	0.874	1.00	Yes	0.075	0.578	0.66	Yes	0.127	0.520	0.65	Yes	0.125	0.615	0.75	Yes	1.00	**17.50**
	Structure 2	L_0 - L_1			86.07	-----	821	-2158	-118	12	-471	-1636	10	35	0.130	0.867	1.00	Yes	0.079	0.426	0.51	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**18.95**
		L_1 - L_2			536.40	-----	741	-1563	-250	-642	62	90	96	150	0.651	0.343	1.00	Yes	0.388	0.221	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.25**
		L_2 - L_3			1036.37	-----	377	-1022	-584	-943	-4	38	242	-150	0.817	0.173	1.00	Yes	0.536	0.104	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.87**
		L_3 - L_4			1286.98	-----	480	-1809	-1018	-1197	-74	141	-18	301	0.756	0.236	1.00	Yes	0.509	0.146	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.84**
		L_4 - L_5			1699.45	-----	22	-2059	-2057	-1444	-174	-26	191	150	0.792	0.207	1.00	Yes	0.525	0.122	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.44**
		L_5 - L_6			1779.28	-----	-10	-1811	-1921	-2376	-307	-43	-179	133	0.763	0.230	1.00	Yes	0.512	0.140	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.51**
		L_6 - L_7			1777.70	-----	-398	-108	-2631	-1516	52	-11	57	173	0.752	0.242	1.00	Yes	0.500	0.141	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.48**
		L_7 - L_8			1254.43	-----	-206	196	-2324	-356	-73	77	-194	102	0.719	0.273	1.00	Yes	0.472	0.159	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.76**
		L_8 - L_9			1069.18	-218.56	-141	478	-1731	210	40	-121	-103	141	0.748	0.247	1.00	Yes	0.504	0.153	0.66	Yes	0.181	0.136	0.32	Yes	0.180	0.234	0.42	Yes	1.00	**6.90**
		L_9 - L_{10}			781.72	-559.75	-88	583	-1797	141	-39	31	93	41	0.698	0.299	1.00	Yes	0.406	0.187	0.60	Yes	0.592	0.171	0.77	Yes	0.588	0.288	0.88	Yes	1.00	**8.63**
		L_{10} - L_{11}			202.46	-644.68	-12	549	-1349	429	116	-58	-79	-40	0.202	0.252	0.46	Yes	0.119	0.159	0.28	Yes	0.762	0.076	0.84	Yes	0.757	0.236	1.00	Yes	1.00	**6.56**
		L_{11} - L_{12}			-----	-966.34	-8	913	-1503	651	12	54	-21	110	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.138	0.94	Yes	0.792	0.205	1.00	Yes	1.00	**8.14**
		L_{12} - L_{13}			-----	-1215.14	122	-295	-2145	-868	97	35	-131	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.265	1	Yes	0.727	0.213	0.95	Yes	1.00	**9.62**
		L_{13} - L_{14}			-----	-1142.11	-231	1421	-4193	4870	-537	-507	-94	-25	-----	-----	-----	-----	-----	-----	-----	-----	0.580	0.289	0.87	Yes	0.575	0.425	1.00	Yes	1.00	**14.36**
		L_{14} - L_{15}			-----	-1229.10	4297	-2332	1226	-548	-269	-147	-265	-179	-----	-----	-----	-----	-----	-----	-----	-----	0.624	0.247	0.88	Yes	0.618	0.375	1.00	Yes	1.00	**10.55**
		L_{15} - L_{16}			-----	-1225.60	-157	175	-2604	-722	153	136	-30	46	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.251	1	Yes	0.733	0.259	1.00	Yes	1.00	**10.44**
		L_{16} - L_{17}			200.33	-661.84	3510	-4186	-1591	-954	-663	-21	385	312	0.124	0.572	0.70	Yes	0.082	0.339	0.43	Yes	0.486	0.389	0.88	Yes	0.482	0.516	1.00	Yes	1.00	**28.72**
		L_{17} - L_{18}			604.91	-177.99	1968	-2556	-1486	-1123	-245	-4	74	394	0.540	0.456	1.00	Yes	0.314	0.284	0.60	Yes	0.188	0.265	0.46	Yes	0.187	0.409	0.60	Yes	1.00	**19.73**
		L_{18} - L_{19}			603.81	-----	1053	-1414	-1041	-514	-232	-63	278	163	0.684	0.315	1.00	Yes	0.395	0.188	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.56**
		L_{19} - L_{20}			609.48	-----	726	-1394	-712	-539	-249	-63	80	219	0.690	0.307	1.00	Yes	0.408	0.196	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.88**
		L_{20} - L_{21}			969.78	-----	461	-884	-1366	-884	-217	-113	143	134	0.773	0.223	1.00	Yes	0.507	0.133	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.98**
		L_{21} - L_{22}			882.46	-----	299	-1817	-1297	-1352	-234	-37	-89	227	0.704	0.290	1.00	Yes	0.471	0.182	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.03**
		L_{22} - L_{23}			840.48	-35.25	-98	45	-2170	-561	-2	-45	-93	53	0.670	0.327	1.00	Yes	0.448	0.204	0.66	Yes	0.033	0.272	0.31	Yes	0.033	0.317	0.35	Yes	1.00	**6.03**
		L_{23} - L_{24}			872.31	-298.34	-14	286	-1985	-510	-7	66	53	100	0.696	0.301	1.00	Yes	0.456	0.178	0.64	Yes	0.282	0.257	0.54	Yes	0.280	0.290	0.57	Yes	1.00	**7.47**
		L_{24} - L_{25}			587.20	-448.83	101	449	-1651	223	95	-90	-71	98	0.665	0.334	1.00	Yes	0.394	0.214	0.61	Yes	0.602	0.119	0.73	Yes	0.598	0.319	0.92	Yes	1.00	**7.67**
		L_{25} - L_{26}			253.86	-570.26	54	542	-1214	104	9	76	-31	70	0.288	0.246	0.54	Yes	0.166	0.147	0.32	Yes	0.765	0.158	0.93	Yes	0.760	0.234	1.00	Yes	1.00	**7.08**
		L_{26} - L_{27}			-----	-730.97	126	481	-1441	435	125	-22	-80	46	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.163	0.94	Yes	0.768	0.230	1.00	Yes	1.00	**7.20**
		L_{27} - L_{28}			-----	-1047.37	64	999	-1894	958	76	142	124	46	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.187	0.96	Yes	0.763	0.234	1.00	Yes	1.00	**9.89**
		L_{28} - L_{29}			-----	-1182.09	181	-476	-2215	-1399	200	171	-176	-78	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.280	1	Yes	0.707	0.220	0.93	Yes	1.00	**10.61**
		L_{29} - L_{30}			-----	-1085.40	-174	1189	-4631	5147	-413	-511	179	191	-----	-----	-----	-----	-----	-----	-----	-----	0.551	0.292	0.85	Yes	0.546	0.449	1.00	Yes	1.00	**15.61**
		L_{30} - L_{31}			-----	-1203.26	4465	-2819	1133	-272	-197	-35	-352	-251	-----	-----	-----	-----	-----	-----	-----	-----	0.611	0.264	0.88	Yes	0.605	0.390	1.00	Yes	1.00	**11.86**
		L_{31} - L_{32}			-----	-1145.18	-71	-282	-2696	-842	76	-35	226	176	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.305	1	Yes	0.685	0.268	0.96	Yes	1.00	**12.05**
		L_{32} - L_{33}			439.75	-626.24	2875	-3566	-1800	-1482	-265	-64	915	467	0.307	0.571	0.88	Yes	0.204	0.342	0.55	Yes	0.518	0.363	0.89	Yes	0.514	0.486	1.00	Yes	1.00	**29.88**
		L_{33} - L_{34}			534.13	-----	1360	-2371	-766	-713	-89	172	143	379	0.533	0.466	1.00	Yes	0.313	0.293	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.20**
		L_{34} - L_{35}			857.57	-----	741	-1281	-716	-1010	-125	-85	181	122	0.765	0.227	1.00	Yes	0.446	0.141	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.98**
		L_{35} - L_{36}			1137.03	-----	823	-1245	-761	-1007	-271	17	-94	292	0.795	0.196	1.00	Yes	0.536	0.122	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.71**
		L_{36} - L_{37}			1323.21	-----	486	-1966	-1262	-950	-168	104	224	290	0.759	0.241	1.00	Yes	0.498	0.141	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.35**
		L_{37} - L_{38}			1766.60	-----	112	-1447	-2581	-1953	-331	-121	-185	159	0.748	0.247	1.00	Yes	0.497	0.145	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.08**
		L_{38} - L_{39}			1721.57	-----	-379	-73	-2798	-1059	-2	-55	-25	197	0.739	0.260	1.00	Yes	0.496	0.158	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.76**
		L_{39} - L_{40}			1641.04	-----	-252	-384	-2407	-828	-63	2	48	34	0.765	0.232	1.00	Yes	0.506	0.136	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.05**
		L_{40} - L_{41}			1259.37	-----	-420	25	-2056	-158	-8	-15	-124	28	0.740	0.250	1.00	Yes	0.498	0.154	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.24**
		L_{41} - L_{42}			979.55	-----	-190	-93	-1455	-152	8	60	143	95	0.772	0.226	1.00	Yes	0.506	0.134	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.53**
		L_{42} - L_{43}			529.37	-----	-311	175	-1491	387	45	9	-92	269	0.643	0.347	1.00	Yes	0.382	0.223	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.64**
		L_{43} - L_{44}			29.99	-9.59	-61	-62	-3520	961	-50	-14	1481	432	0.036	0.960	1.00	Yes	0.022	0.610	0.64	Yes	0.014	0.656	0.67	Yes	0.014	0.716	0.74	Yes	1.00	**23.68**
	Structure 3	L_0 - L_1			38.88	-183.65	1159	-2113	-45	-23	-321	-1455	0	0	0.060	0.936	1.00	Yes	0.036	0.617	0.66	Yes	0.334	0.582	0.92	Yes	0.331	0.634	0.97	Yes	1.00	**19.32**
		L_1 - L_2			396.26	-----	615	-1083	-2	-379	62	206	-324	286	0.606	0.392	1.00	Yes	0.410	0.246	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.73**
		L_2 - L_3			875.55	-----	291	-838	-372	-482	14	127	578	206	0.762	0.236	1.00	Yes	0.488	0.143	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.68**
		L_3 - L_4			1241.21	-----	463	-1267	-729	-1058	-76	135	-28	304	0.785	0.213	1.00	Yes	0.509	0.131	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.75**
		L_4 - L_5			1609.68	-----	-226	-317	-1624	-1305	-170	-130	132	245	0.786	0.213	1.00	Yes	0.505	0.124	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.91**
		L_5 - L_6			1484.67	-----	133	-2030	-1134	-1355	-249	108	58	345	0.725	0.269	1.00	Yes	0.471	0.163	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.64**
		L_6 - L_7			1229.97	-----	-349	199	-1924	206	0	-29	-31	124	0.723	0.275	1.00	Yes	0.469	0.168	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.54**
		L_7 - L_8			991.16	-----	-91	49	-1065	-231	-24	66	83	176	0.782	0.209	1.00	Yes	0.500	0.125	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.72**
		L_8 - L_9			575.82	-88.52	-190	304	-883	199	51	-106	-13	-22	0.746	0.252	1.00	Yes	0.447	0.166	0.62	Yes	0.136	0.124	0.27	Yes	0.135	0.234	0.37	Yes	1.00	**5.04**
		L_9 - L_{10}			239.59	-484.93	-42	444	-966	118	-22	27	23	166	0.310	0.285	0.60	Yes	0.181	0.172	0.36	Yes	0.745	0.147	0.9	Yes	0.739	0.256	1.00	Yes	1.00	**7.42**
		L_{10} - L_{11}			-----	-922.27	74	218	-1556	454	88	-117	31	-80	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.117	0.88	Yes	0.747	0.247	1.00	Yes	1.00	**10.37**
		L_{11} - L_{12}			-----	-1188.89	84	1029	-1209	1802	62	111	-46	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.206	0.97	Yes	0.753	0.239	1.00	Yes	1.00	**11.77**
		L_{12} - L_{13}			-----	-1117.65	2188	-749	552	-29	-188	-142	-126	-131	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.272	0.99	Yes	0.708	0.290	1.00	Yes	1.00	**10.12**
		L_{13} - L_{14}			-----	-833.10	1540	-2065	-2047	-900	-132	-344	-108	-16	-----	-----	-----	-----	-----	-----	-----	-----	0.678	0.159	0.84	Yes	0.671	0.324	1.00	Yes	1.00	**21.73**
		L_{14} - L_{15}			708.48	-358.04	1178	-967	-1037	-973	-298	-115	128	138	0.695	0.301	1.00	Yes	0.449	0.183	0.64	Yes	0.417	0.217	0.64	Yes	0.413	0.261	0.68	Yes	1.00	**17.56**
		L_{15} - L_{16}			473.11	-----	852	-1195	-437	-473	-188	103	3	372	0.613	0.382	1.00	Yes	0.368	0.250	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.88**
		L_{16} - L_{17}			631.65	-154.37	254	9	-1016	-384	33	-75	-19	136	0.727	0.267	1.00	Yes	0.432	0.173	0.61	Yes	0.211	0.274	0.49	Yes	0.209	0.245	0.46	Yes	1.00	**5.57**
		L_{17} - L_{18}			622.97	-28.85	35	-73	-994	-535	14	104	18	242	0.717	0.279	1.00	Yes	0.415	0.167	0.59	Yes	0.039	0.298	0.34	Yes	0.039	0.240	0.28	Yes	1.00	**4.90**
		L_{18} - L_{19}			435.58	-----	-36	32	-928	-26	50	-75	25	236	0.667	0.329	1.00	Yes	0.407	0.221	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.50**
		L_{19} - L_{20}			8.51	-----	31	-124	-2302	1069	-127	-34	1360	370	0.013	0.983	1.00	Yes	0.008	0.595	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.29**

Moment (Start) AI Operating

Operating Loads - 3F1

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	$U_0 - L_0$	-----	-321.49	-25	49	-137	167	-102	-33	-729	-234	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.281	1	Yes	0.680	0.213	0.90	Yes	1.00	**1.69**
		$U_1 - L_1$	21.68	-316.36	21	-16	-252	240	44	17	166	127	0.039	0.370	0.41	Yes	0.021	0.203	0.23	Yes	0.691	0.136	0.83	Yes	0.669	0.322	1.00	Yes	1.00	**4.84**
		$U_2 - L_2$	-----	-262.13	130	-96	-312	343	-273	-87	13	86	-----	-----	-----	-----	-----	-----	-----	-----	0.573	0.183	0.76	Yes	0.555	0.438	1.00	Yes	1.00	**7.30**
		$U_3 - L_3$	260.28	-231.82	353	-335	-331	341	-82	17	127	270	0.468	0.530	1.00	Yes	0.257	0.291	0.55	Yes	0.508	0.159	0.67	Yes	0.491	0.452	0.95	Yes	1.00	**9.50**
		$U_4 - L_4$	-----	-210.28	430	-408	-141	110	134	35	110	153	-----	-----	-----	-----	-----	-----	-----	-----	0.462	0.165	0.63	Yes	0.445	0.550	1.00	Yes	1.00	**10.34**
		$U_5 - L_5$	-----	-428.36	229	-251	15	-32	-116	-89	-127	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.102	0.88	Yes	0.739	0.254	1.00	Yes	1.00	**4.00**
		$U_6 - L_6$	-----	-518.29	267	-288	38	-60	98	74	-61	66	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.087	0.88	Yes	0.743	0.252	1.00	Yes	1.00	**4.08**
		$U_7 - L_7$	-----	-443.06	298	-318	118	-131	-46	69	-129	46	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.121	0.87	Yes	0.684	0.313	1.00	Yes	1.00	**2.88**
		$U_8 - L_8$	-----	-1279.69	488	-584	-472	562	-101	-47	-190	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.924	0.050	0.98	Yes	0.887	0.109	1.00	Yes	1.00	**6.77**
		$U_9 - L_9$	-----	-658.86	-165	188	-415	459	-221	-156	-245	-196	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.129	0.92	Yes	0.744	0.255	1.00	Yes	1.00	**3.99**
		$U_{10} - L_{10}$	-----	-790.90	-88	147	-391	407	-176	-119	-119	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.090	0.91	Yes	0.780	0.211	1.00	Yes	1.00	**6.40**
		$U_{11} - L_{11}$	-----	-657.42	-56	144	-417	498	-94	22	-90	30	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.087	0.88	Yes	0.765	0.231	1.00	Yes	1.00	**5.98**
		$U_{12} - L_{12}$	-----	-503.17	-32	57	-355	345	-166	23	-12	136	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.107	0.84	Yes	0.690	0.303	1.00	Yes	1.00	**5.26**
		$U_{13} - L_{13}$	-----	-364.76	2	19	-243	260	-87	81	-6	131	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.107	0.85	Yes	0.699	0.297	1.00	Yes	1.00	**4.00**
		$U_{14} - L_{14}$	86.70	-47.31	315	-331	-599	621	-148	-47	-20	47	0.156	0.837	1.00	Yes	0.086	0.460	0.55	Yes	0.106	0.233	0.34	Yes	0.100	0.794	0.90	Yes	1.00	**15.54**
		$U_{15} - L_{15}$	228.38	-312.08	250	-261	-187	176	-111	-181	-120	-83	0.411	0.387	0.80	Yes	0.226	0.213	0.44	Yes	0.699	0.165	0.87	Yes	0.660	0.334	1.00	Yes	1.00	**5.97**
		$U_{16} - L_{16}$	67.06	-321.38	242	-247	-47	25	-5	-146	-28	-74	0.121	0.358	0.48	Yes	0.066	0.197	0.27	Yes	0.724	0.139	0.87	Yes	0.680	0.316	1.00	Yes	1.00	**4.78**
		$U_{17} - L_{17}$	-----	-441.31	210	-229	26	-51	-123	-120	-87	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.118	0.95	Yes	0.761	0.232	1.00	Yes	1.00	**3.76**
		$U_{18} - L_{18}$	-----	-533.68	429	-440	125	-148	167	-42	-66	126	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.089	0.88	Yes	0.742	0.249	1.00	Yes	1.00	**4.11**
		$U_{19} - L_{19}$	-----	-648.11	500	-512	135	-201	273	-29	270	388	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.125	0.94	Yes	0.754	0.238	1.00	Yes	1.00	**4.68**
		$U_{20} - L_{20}$	-----	-583.29	406	-477	157	-223	763	100	182	24	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.229	1	Yes	0.679	0.222	0.91	Yes	1.00	**3.17**
	Structure 2	$U_0 - L_0$	-----	-590.31	-116	183	-406	480	-266	-45	-1401	-238	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.288	1	Yes	0.633	0.204	0.84	Yes	1.00	**3.60**
		$U_1 - L_1$	-----	-710.95	-115	122	-538	539	34	-67	-111	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.077	0.9	Yes	0.762	0.229	1.00	Yes	1.00	**5.44**
		$U_2 - L_2$	-----	-584.20	-86	95	-485	486	91	41	-7	83	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.081	0.87	Yes	0.744	0.248	1.00	Yes	1.00	**5.23**
		$U_3 - L_3$	-----	-482.07	-45	52	-256	260	17	127	-28	119	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.096	0.92	Yes	0.756	0.237	1.00	Yes	1.00	**4.77**
		$U_4 - L_4$	66.50	-328.70	28	-11	-234	229	-107	63	-22	147	0.120	0.342	0.47	Yes	0.066	0.188	0.26	Yes	0.745	0.104	0.85	Yes	0.696	0.300	1.00	Yes	1.00	**4.74**
		$U_5 - L_5$	191.66	-325.96	131	-123	-223	241	-112	103	-27	139	0.345	0.348	0.70	Yes	0.190	0.191	0.39	Yes	0.736	0.120	0.86	Yes	0.690	0.307	1.00	Yes	1.00	**6.02**
		$U_6 - L_6$	361.74	-202.86	219	-227	-238	235	-130	84	-103	112	0.651	0.342	1.00	Yes	0.358	0.188	0.55	Yes	0.457	0.093	0.55	Yes	0.429	0.305	0.74	Yes	1.00	**7.19**
		$U_7 - L_7$	-----	-262.12	323	-345	-139	140	-103	-69	-105	72	-----	-----	-----	-----	-----	-----	-----	-----	0.592	0.156	0.75	Yes	0.555	0.441	1.00	Yes	1.00	**10.59**
		$U_8 - L_8$	-----	-462.00	366	-374	18	-36	-71	-134	-145	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.115	0.79	Yes	0.665	0.327	1.00	Yes	1.00	**4.74**
		$U_9 - L_9$	-----	-695.56	567	-585	78	-125	-171	-169	-139	-113	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.085	0.86	Yes	0.745	0.248	1.00	Yes	1.00	**5.73**
		$U_{10} - L_{10}$	-----	-797.73	554	-573	99	-149	-157	-122	-22	27	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.096	0.89	Yes	0.746	0.253	1.00	Yes	1.00	**6.38**
		$U_{11} - L_{11}$	-----	-816.44	509	-517	156	-176	18	-1	-42	29	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.068	0.89	Yes	0.763	0.228	1.00	Yes	1.00	**5.58**
		$U_{12} - L_{12}$	-----	-882.26	515	-527	147	-184	33	66	31	84	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.076	0.93	Yes	0.765	0.226	1.00	Yes	1.00	**5.51**
		$U_{13} - L_{13}$	-----	-745.86	571	-559	245	-243	81	76	-82	44	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.109	0.95	Yes	0.719	0.273	1.00	Yes	1.00	**4.15**
		$U_{14} - L_{14}$	-----	-1308.73	626	-596	-535	497	59	23	-106	132	-----	-----	-----	-----	-----	-----	-----	-----	0.957	0.042	1	Yes	0.868	0.111	0.98	Yes	1.00	**6.90**
		$U_{15} - L_{15}$	-----	-704.54	-164	165	-652	625	-79	-44	-143	-99	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.143	0.93	Yes	0.679	0.312	1.00	Yes	1.00	**5.85**
		$U_{16} - L_{16}$	-----	-708.32	-116	105	-545	525	-157	-92	-256	-144	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.112	0.94	Yes	0.759	0.231	1.00	Yes	1.00	**5.45**
		$U_{17} - L_{17}$	-----	-637.09	-129	135	-541	535	-186	-59	-43	-18	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.095	0.89	Yes	0.742	0.251	1.00	Yes	1.00	**5.38**
		$U_{18} - L_{18}$	-----	-569.32	-84	105	-523	526	-186	-50	-105	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.093	0.86	Yes	0.725	0.269	1.00	Yes	1.00	**5.34**
		$U_{19} - L_{19}$	-----	-465.59	-27	35	-311	297	-162	-10	-75	50	-----	-----	-----	-----	-----	-----	-----	-----	0.700	0.099	0.8	Yes	0.695	0.299	1.00	Yes	1.00	**4.84**
		$U_{20} - L_{20}$	28.01	-375.84	10	-4	-232	237	-154	18	-59	62	0.046	0.311	0.36	Yes	0.025	0.171	0.20	Yes	0.771	0.109	0.88	Yes	0.720	0.271	1.00	Yes	1.00	**4.58**
		$U_{21} - L_{21}$	83.80	-309.65	61	-53	-256	262	-138	29	-119	59	0.151	0.376	0.53	Yes	0.083	0.207	0.29	Yes	0.700	0.125	0.83	Yes	0.655	0.335	1.00	Yes	1.00	**5.23**
		$U_{22} - L_{22}$	7.65	-247.81	300	-297	-362	367	-156	-71	-23	114	0.014	0.514	0.53	Yes	0.008	0.283	0.30	Yes	0.558	0.162	0.72	Yes	0.524	0.469	1.00	Yes	1.00	**12.81**
		$U_{23} - L_{23}$	145.00	-318.40	241	-250	-101	93	-7	-89	-105	-79	0.261	0.350	0.62	Yes	0.143	0.193	0.34	Yes	0.719	0.124	0.85	Yes	0.674	0.320	1.00	Yes	1.00	**5.40**
		$U_{24} - L_{24}$	52.84	-381.25	226	-234	-38	24	-98	-86	-81	-62	0.086	0.293	0.38	Yes	0.047	0.161	0.21	Yes	0.782	0.103	0.89	Yes	0.730	0.268	1.00	Yes	1.00	**4.58**
		$U_{25} - L_{25}$	-----	-472.83	298	-296	21	-40	24	-28	-75	10	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.079	0.8	Yes	0.706	0.287	1.00	Yes	1.00	**4.40**
		$U_{26} - L_{26}$	-----	-568.74	508	-532	73	-101	-8	-5	-78	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.081	0.84	Yes	0.725	0.272	1.00	Yes	1.00	**4.97**
		$U_{27} - L_{27}$	-----	-635.97	542	-550	132	-165	-102	5	-59	42	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.077	0.87	Yes	0.740	0.255	1.00	Yes	1.00	**4.77**
		$U_{28} - L_{28}$	-----	-707.81	547	-548	126	-133	151	87	-22	-82	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.079	0.9	Yes	0.759	0.233	1.00	Yes	1.00	**4.84**
		$U_{29} - L_{29}$	-----	-710.42	642	-625	207	-212	37	58	-114	27	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.121	0.92	Yes	0.685	0.307	1.00	Yes	1.00	**5.15**
		$U_{30} - L_{30}$	-----	-1286.45	652	-646	-675	604	1	-96	-154	88	-----	-----	-----	-----	-----	-----	-----	-----	0.941	0.059	1	Yes	0.853	0.119	0.98	Yes	1.00	**7.63**
		$U_{31} - L_{31}$	-----	-747.63	-182	178	-569	550	-119	-60	-177	-93	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.142	0.98	Yes	0.721	0.272	1.00	Yes	1.00	**5.14**
		$U_{32} - L_{32}$	-----	-892.76	-117	113	-520	510	-249	-110	-175	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.123	0.98	Yes	0.774	0.223	1.00	Yes	1.00	**6.66**
		$U_{33} - L_{33}$	-----	-817.46	-139	141	-522	510	-178	-41	-114	4	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.091	0.92	Yes	0.764	0.230	1.00	Yes	1.00	**6.45**
		$U_{34} - L_{34}$	-----	-792.44	-88	112	-568	567	-216	-23	-21	126	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.090	0.88	Yes	0.741	0.251	1.00	Yes	1.00	**7.19**
		$U_{35} - L_{35}$	-----	-696.90	-80	106	-567	575	-184	64	23	158	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.074	0.85	Yes	0.747	0.244	1.00	Yes	1.00	**6.36**
		$U_{36} - L_{36}$	-----	-458.69	-30	49	-376	378	-139	73	-65	113	-----	-----	-----	-----	-----	-----	-----	-----	0.665	0.097	0.77	Yes	0.661	0.331	1.00	Yes	1.00	**4.90**
		$U_{37} - L_{37}$	50.00	-72.47	231	-253	-605	655	-157	-33	-37	217	0.090	0.899	0.99	Yes	0.049	0.495	0.55	Yes	0.164	0.272	0.44	Yes	0.153	0.837	1.00	Yes	1.00	**18.73**
		$U_{38} - L_{38}$	357.78	-150.02	153	-150	-234	241	-15	-134	-111	-140	0.643	0.349	1.00	Yes	0.354	0.192	0.55	Yes	0.338	0.123	0.47	Yes	0.317	0.308	0.63	Yes	1.00	**5.84**
		$U_{39} - L_{39}$	226.06	-331.33	207	-227	-187	167	-102	-146	-118	-108	0.407	0.332	0.74	Yes	0.224	0.183	0.41	Yes	0.748	0.151	0.9	Yes	0.701	0.290	1.00	Yes	1.00	**6.10**
		$U_{40} - L_{40}$	94.80	-334.30	223	-222	-58	32	-125	-125	-72	-34	0.170	0.321	0.50	Yes	0.094	0.176	0.28	Yes	0.758	0.128	0.89	Yes	0.707	0.284	1.00	Yes	1.00	**4.81**
		$U_{41} - L_{41}$	-----	-483.48	245	-256	35	-53	15	-44	-35	11	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.084	0.91	Yes	0.758	0.233	1.00	Yes	1.00	**4.62**
		$U_{42} - L_{42}$	-----	-582.89	476	-485	109	-119	64	-58	-86	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.079	0.86	Yes	0.743	0.248	1.00	Yes	1.00	**4.73**
		$U_{43} - L_{43}$	-----	-706.32	535	-554	143	-160	587	53	-35	-13	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.146	0.96	Yes	0.757	0.235	1.00	Yes	1.00	**4.87**
		$U_{44} - L_{44}$	-----	-624.69	461	-541	196	-243	1068	181	-23	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.247	1	Yes	0.669	0.230	0.90	Yes	1.00	**3.61**
	Structure 3	$U_0 - L_0$	-----	-528.33	-105	170	-379	423	-248	-33	-1246	-163	-----	-----	-----	-----	-----	-----	-----	-----	0.698	0.297	1	Yes	0.615	0.196	0.82	Yes	1.00	**3.26**
		$U_1 - L_1$	-----	-652.88	-111	119	-515	511	3	-76	-7	23	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.078	0.9	Yes	0.760	0.239	1.00	Yes	1.00	**5.39**
		$U_2 - L_2$	-----	-536.38	-93	99	-428	433	83	31	-109	53	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.083	0.87	Yes	0.746	0.245	1.00	Yes	1.00	**4.68**
		$U_3 - L_3$	-----	-440.07	-28	46	-214	228	-107	66	33	163	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.113	0.94	Yes	0.759	0.231	1.00	Yes	1.00	**4.24**
		$U_4 - L_4$	79.85	-315.81	39	-26	-256	257	-177	80	-117	155	0.144	0.379	0.53	Yes	0.079	0.208	0.29	Yes	0.712	0.104	0.82	Yes	0.668	0.328	1.00	Yes	1.00	**5.09**
		$U_5 - L_5$	220.40	-299.70	145	-145	-271	282	-158	69	-82	149	0.396	0.406	0.81	Yes	0.218	0.223	0.45	Yes	0.672	0.136	0.81	Yes	0.634	0.360	1.00	Yes	1.00	**6.31**
		$U_6 - L_6$	101.77	-122.53	546	-578	-412	423	-266	-104	-164	-3	0.183	0.816	1.00	Yes	0.101	0.449	0.55	Yes	0.273	0.252	0.53	Yes	0.259	0.739	1.00	Yes	1.00	**16.85**
		$U_7 - L_7$	5.44	-367.79	240	-255	-28	12	-191	-171	-188	-144	0.009	0.341	0.35	Yes	0.005	0.187	0.20	Yes	0.744	0.146	0.89	Yes	0.705	0.291	1.00	Yes	1.00	**3.98**
		$U_8 - L_8$	-----	-515.94	341	-341	15	-23	-31	-110	-114	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.105	0.85	Yes	0.708	0.292	1.00	Yes	1.00	**5.03**
		$U_9 - L_9$	-----	-655.66	391	-492	50	-108	-43	-61	-110	-57	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.092	0.88	Yes	0.763	0.228	1.00	Yes	1.00	**5.65**
		$U_{10} - L_{10}$	-----	-788.60	387	-424	80	-118	-49	39	11	69	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.071	0.89	Yes	0.778	0.220	1.00	Yes	1.00	**5.82**
		$U_{11} - L_{11}$	-----	-646.80	421	-475	182	-212	75	119	-48	63	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.101	0.88	Yes	0.731	0.264	1.00	Yes	1.00	**3.54**
		$U_{12} - L_{12}$	-----	-1281.79	438	-570	-461	500	54	42	-46	42	-----	-----	-----	-----	-----	-----	-----	-----	0.925	0.043	0.97	Yes	0.889	0.106	1.00	Yes	1.00	**6.41**
		$U_{13} - L_{13}$	-----	-447.90	-104	116	-300	313	-141	-96	-143	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.140	0.89	Yes	0.691	0.308	1.00	Yes	1.00	**3.44**
		$U_{14} - L_{14}$	-----	-524.61	-43	85	-273	281	-147	-91	-242	-146	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.127	0.93	Yes	0.752	0.246	1.00	Yes	1.00	**4.65**
		$U_{15} - L_{15}$	-----	-430.10	-23	30	-235	250	-170	-56	-76	26	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.111	0.89	Yes	0.742	0.253	1.00	Yes	1.00	**4.54**
		$U_{16} - L_{16}$	10.57	-233.12	86	-51	-390	375	-256	-157	-153	-16	0.019	0.572	0.60	Yes	0.010	0.315	0.33	Yes	0.513	0.188	0.71	Yes	0.493	0.498	1.00	Yes	1.00	**8.21**
		$U_{17} - L_{17}$	296.25	-213.65	195	-209	-317	325	-56	-149	-119	-27	0.533	0.459	1.00	Yes	0.293	0.252	0.55	Yes	0.468	0.136	0.61	Yes	0.452	0.416	0.87	Yes	1.00	**6.81**
		$U_{18} - L_{18}$	77.15	-287.78	267	-305	-151	143	37	-73	120	34	0.139	0.425	0.57	Yes	0.076	0.234	0.32	Yes	0.629	0.122	0.76	Yes	0.609	0.390	1.00	Yes	1.00	**6.86**
		$U_{19} - L_{19}$	11.61	-326.25	241	-241	-27	15	-27	-82	-164	-86	0.021	0.356	0.38	Yes	0.011	0.196	0.21	Yes	0.713	0.133	0.85	Yes	0.690	0.309	1.00	Yes	1.00	**4.37**
		$U_{20} - L_{20}$	-----	-333.81	178	-229	47	-74	272	87	-110	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.177	0.93	Yes	0.706	0.292	1.00	Yes	1.00	**2.17**

Moment (Start) AI Operating

Operating Loads - 3F1

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	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	365.92	-42.57	10	-11	-253	104	-42	-14	-868	-193	0.480	0.514	1.00	Yes	0.290	0.283	0.58	Yes	0.073	0.353	0.43	Yes	0.066	0.295	0.37	Yes	1.00	**6.77**
		U_1 - L_2	421.47	-87.36	15	-14	-119	-14	21	15	-293	-234	0.758	0.236	1.00	Yes	0.417	0.130	0.55	Yes	0.200	0.231	0.44	Yes	0.185	0.152	0.34	Yes	1.00	**6.45**
		U_2 - L_3	77.77	-238.72	50	-24	-176	-92	104	69	-498	-401	0.140	0.370	0.51	Yes	0.077	0.203	0.29	Yes	0.549	0.446	1	Yes	0.505	0.226	0.74	Yes	1.00	**12.90**
		U_3 - L_4	-----	-360.39	41	-56	-68	-69	-209	-118	-289	-229	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.175	1	Yes	0.763	0.088	0.86	Yes	1.00	**5.97**
		U_4 - L_4	553.31	-12.32	8	-22	-143	-15	6	-81	-106	-168	0.811	0.185	1.00	Yes	0.446	0.102	0.55	Yes	0.023	0.089	0.12	Yes	0.021	0.146	0.17	Yes	1.00	**6.47**
		U_5 - L_5	690.20	-----	16	24	-274	145	129	68	-29	-128	0.816	0.180	1.00	Yes	0.449	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.49**
		U_7 - L_6	631.39	-----	-72	100	-327	221	330	208	290	123	0.746	0.247	1.00	Yes	0.411	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.39**
		U_6 - L_7	655.66	-----	35	168	-115	297	291	232	286	157	0.775	0.222	1.00	Yes	0.426	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		U_8 - L_9	1004.15	-----	81	207	-116	339	301	241	234	188	0.803	0.189	1.00	Yes	0.497	0.106	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.42**
		U_9 - L_{10}	1016.31	-----	-74	99	-346	205	89	109	202	145	0.812	0.180	1.00	Yes	0.503	0.101	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.16**
		U_{10} - L_{11}	978.80	-----	-43	124	-319	127	20	13	-107	-162	0.827	0.169	1.00	Yes	0.512	0.094	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.85**
		U_{11} - L_{12}	839.84	-----	-65	57	-263	75	-136	-104	-273	-282	0.831	0.164	1.00	Yes	0.457	0.090	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.36**
		U_{12} - L_{13}	619.61	-----	-48	12	-189	116	-303	-246	-362	-256	0.755	0.236	1.00	Yes	0.475	0.134	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.40**
		U_{13} - L_{14}	433.83	-1.69	-1	-26	-102	21	-266	-285	-285	-281	0.780	0.212	1.00	Yes	0.429	0.117	0.55	Yes	0.004	0.162	0.17	Yes	0.004	0.130	0.14	Yes	1.00	**4.33**
		U_{15} - L_{14}	170.65	-333.51	71	-109	-87	-27	-206	-309	-257	-311	0.307	0.229	0.54	Yes	0.169	0.126	0.30	Yes	0.781	0.210	1	Yes	0.706	0.139	0.85	Yes	1.00	**5.39**
		U_{16} - L_{15}	408.93	-234.12	35	-77	-141	78	-234	-184	-253	-260	0.735	0.255	1.00	Yes	0.405	0.140	0.55	Yes	0.555	0.206	0.77	Yes	0.495	0.180	0.68	Yes	1.00	**6.21**
		U_{17} - L_{16}	534.22	-----	-5	-25	-157	94	-121	-130	-176	-226	0.783	0.212	1.00	Yes	0.431	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.90**
		U_{18} - L_{17}	609.90	-----	-96	58	-387	217	6	-45	-322	-226	0.721	0.277	1.00	Yes	0.397	0.153	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.77**
		U_{19} - L_{18}	686.91	-----	-90	64	-376	235	-353	-39	-304	-206	0.744	0.251	1.00	Yes	0.409	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.03**
		U_{20} - L_{19}	598.61	-----	-117	113	-424	320	-54	166	-761	-84	0.648	0.342	1.00	Yes	0.357	0.188	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.82**
	Structure 2	U_0 - L_1	564.03	-----	-60	69	-491	369	-120	55	-1376	-170	0.558	0.433	1.00	Yes	0.307	0.238	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.46**
		U_1 - L_2	777.70	-----	-88	59	-426	290	41	10	-187	-188	0.769	0.226	1.00	Yes	0.423	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.74**
		U_2 - L_3	653.91	-----	-69	52	-327	252	-78	-177	-208	-228	0.773	0.227	1.00	Yes	0.425	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.74**
		U_3 - L_4	573.96	-----	-34	17	-182	115	-236	-214	-311	-270	0.765	0.231	1.00	Yes	0.421	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.52**
		U_4 - L_5	413.09	-138.12	18	-47	-128	77	-279	-206	-323	-208	0.743	0.257	1.00	Yes	0.409	0.141	0.55	Yes	0.341	0.200	0.55	Yes	0.292	0.164	0.46	Yes	1.00	**4.87**
		U_5 - L_6	401.22	-313.75	77	-109	-112	55	-353	-237	-409	-280	0.722	0.261	0.99	Yes	0.397	0.143	0.55	Yes	0.741	0.258	1	Yes	0.664	0.143	0.81	Yes	1.00	**6.26**
		U_6 - L_7	97.04	-367.78	64	-98	-61	-16	-298	-257	-332	-270	0.158	0.198	0.36	Yes	0.087	0.109	0.20	Yes	0.787	0.203	1	Yes	0.705	0.112	0.82	Yes	1.00	**4.29**
		U_8 - L_7	568.49	-42.59	6	-41	-226	95	-148	-241	-193	-334	0.725	0.270	1.00	Yes	0.456	0.152	0.61	Yes	0.071	0.141	0.22	Yes	0.064	0.202	0.27	Yes	1.00	**6.69**
		U_8 - L_8	697.80	-----	-53	-27	-405	185	-139	-169	-194	-217	0.756	0.243	1.00	Yes	0.416	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.11**
		U_{10} - L_9	795.44	-----	-75	20	-382	194	-63	-68	-119	-213	0.787	0.209	1.00	Yes	0.433	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.87**
		U_{11} - L_{10}	874.97	-----	-100	86	-393	262	229	67	0	-97	0.797	0.198	1.00	Yes	0.438	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.12**
		U_{12} - L_{11}	879.26	-----	-95	120	-387	339	211	140	141	22	0.801	0.193	1.00	Yes	0.441	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		U_{13} - L_{12}	735.19	-----	-179	174	-479	374	270	152	204	87	0.727	0.263	1.00	Yes	0.400	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.59**
		U_{14} - L_{13}	763.00	-----	-9	220	-276	435	279	186	287	128	0.755	0.245	1.00	Yes	0.415	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.70**
		U_{14} - L_{15}	641.13	-----	24	157	-219	360	171	117	153	83	0.758	0.235	1.00	Yes	0.417	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.87**
		U_{15} - L_{16}	644.12	-----	-101	106	-383	330	52	69	115	83	0.762	0.238	1.00	Yes	0.419	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		U_{16} - L_{17}	739.86	-----	-74	98	-373	343	9	5	0	-12	0.801	0.193	1.00	Yes	0.441	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.47**
		U_{17} - L_{18}	670.49	-----	-62	74	-326	271	-50	-8	-81	-33	0.793	0.199	1.00	Yes	0.436	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.41**
		U_{18} - L_{19}	679.53	-----	-43	50	-292	236	-112	-83	-147	-144	0.803	0.192	1.00	Yes	0.442	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.04**
		U_{19} - L_{20}	602.93	-----	-8	1	-201	149	-200	-125	-229	-134	0.769	0.226	1.00	Yes	0.423	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		U_{20} - L_{21}	437.75	-20.66	5	-13	-117	96	-181	-131	-205	-167	0.787	0.209	1.00	Yes	0.433	0.115	0.55	Yes	0.049	0.103	0.16	Yes	0.044	0.149	0.20	Yes	1.00	**4.40**
		U_{21} - L_{22}	422.38	-207.12	35	-61	-121	34	-256	-219	-274	-226	0.760	0.234	1.00	Yes	0.418	0.129	0.55	Yes	0.489	0.194	0.69	Yes	0.438	0.154	0.60	Yes	1.00	**5.87**
		U_{23} - L_{22}	338.22	-319.95	75	-97	-142	22	-107	-210	-196	-270	0.608	0.260	0.87	Yes	0.335	0.143	0.48	Yes	0.762	0.230	1	Yes	0.677	0.182	0.86	Yes	1.00	**7.87**
		U_{24} - L_{23}	446.76	-107.37	31	-43	-122	101	-51	-80	-62	-117	0.804	0.190	1.00	Yes	0.442	0.104	0.55	Yes	0.257	0.058	0.32	Yes	0.227	0.156	0.39	Yes	1.00	**5.32**
		U_{25} - L_{24}	598.20	-43.44	19	-39	-234	145	-48	-66	-19	-103	0.763	0.231	1.00	Yes	0.420	0.128	0.55	Yes	0.072	0.074	0.15	Yes	0.065	0.210	0.28	Yes	1.00	**6.84**
		U_{26} - L_{25}	667.80	-----	-18	15	-335	242	60	19	20	-84	0.790	0.205	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.22**
		U_{27} - L_{26}	647.23	-----	-40	49	-360	264	127	72	114	17	0.765	0.227	1.00	Yes	0.421	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.14**
		U_{28} - L_{27}	706.25	-----	-60	99	-397	340	168	137	93	16	0.765	0.231	1.00	Yes	0.421	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.93**
		U_{29} - L_{28}	621.76	-----	-125	119	-393	332	217	110	207	83	0.735	0.262	1.00	Yes	0.404	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.38**
		U_{30} - L_{29}	638.13	-----	20	161	-224	362	217	147	202	77	0.754	0.245	1.00	Yes	0.415	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.97**
		U_{30} - L_{31}	775.55	-----	17	196	-290	437	177	124	113	60	0.767	0.229	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.31**
		U_{31} - L_{32}	777.73	-----	-130	131	-478	384	36	47	50	34	0.769	0.229	1.00	Yes	0.423	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.13**
		U_{32} - L_{33}	898.79	-----	-89	133	-367	332	-24	-2	-125	-102	0.819	0.173	1.00	Yes	0.450	0.095	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.55**
		U_{33} - L_{34}	887.59	-----	-87	126	-356	251	-82	-47	-249	-214	0.809	0.185	1.00	Yes	0.445	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.58**
		U_{34} - L_{35}	811.84	-----	-78	46	-327	203	-261	-214	-285	-285	0.803	0.194	1.00	Yes	0.442	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.76**
		U_{35} - L_{36}	701.93	-----	-77	23	-339	206	-352	-256	-372	-246	0.760	0.235	1.00	Yes	0.418	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.52**
		U_{36} - L_{37}	587.98	-----	-23	-7	-195	110	-315	-300	-301	-323	0.750	0.241	1.00	Yes	0.472	0.136	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.87**
		U_{38} - L_{37}	-----	-385.39	81	-103	-46	-29	-132	-220	-188	-264	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.164	1	Yes	0.738	0.118	0.86	Yes	1.00	**4.23**
		U_{39} - L_{38}	324.93	-341.89	106	-127	-95	46	-137	-183	-198	-230	0.584	0.229	0.82	Yes	0.321	0.126	0.45	Yes	0.815	0.178	1	Yes	0.723	0.163	0.89	Yes	1.00	**6.18**
		U_{40} - L_{39}	433.37	-173.09	44	-68	-127	92	-99	-106	-120	-179	0.779	0.214	1.00	Yes	0.429	0.118	0.55	Yes	0.414	0.137	0.56	Yes	0.366	0.162	0.53	Yes	1.00	**5.49**
		U_{41} - L_{40}	578.56	-----	-16	-19	-209	116	-73	-56	-162	-179	0.771	0.228	1.00	Yes	0.424	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.21**
		U_{42} - L_{41}	647.71	-----	-75	51	-353	260	2	-3	-148	-125	0.766	0.226	1.00	Yes	0.421	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.41**
		U_{43} - L_{42}	730.55	-----	-95	65	-425	261	-6	-29	-508	-233	0.723	0.273	1.00	Yes	0.398	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.86**
		U_{44} - L_{43}	653.84	-----	-138	121	-453	371	35	4	-936	-15	0.647	0.350	1.00	Yes	0.356	0.192	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.64**
	Structure 3	U_0 - L_1	508.56	-----	-68	71	-479	324	-132	49	-1194	-171	0.551	0.442	1.00	Yes	0.303	0.243	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.29**
		U_1 - L_2	717.52	-----	-92	58	-370	242	36	13	-107	-161	0.777	0.216	1.00	Yes	0.427	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.99**
		U_2 - L_3	633.84	-----	-78	48	-351	226	-73	-168	-280	-263	0.749	0.250	1.00	Yes	0.412	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.12**
		U_3 - L_4	526.81	-----	-18	-15	-143	91	-255	-221	-315	-292	0.773	0.218	1.00	Yes	0.425	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.22**
		U_4 - L_5	404.36	-190.07	13	-53	-124	71	-342	-236	-375	-287	0.727	0.268	1.00	Yes	0.400	0.147	0.55	Yes	0.451	0.222	0.68	Yes	0.402	0.159	0.57	Yes	1.00	**4.86**
		U_5 - L_6	280.31	-304.05	59	-100	-103	-24	-372	-325	-456	-362	0.504	0.264	0.77	Yes	0.277	0.145	0.43	Yes	0.712	0.283	1	Yes	0.643	0.132	0.78	Yes	1.00	**6.15**
		U_7 - L_6	412.57	-150.03	27	-59	-130	7	-122	-283	-155	-297	0.742	0.253	1.00	Yes	0.408	0.139	0.55	Yes	0.349	0.185	0.54	Yes	0.317	0.167	0.49	Yes	1.00	**6.40**
		U_8 - L_7	648.29	-----	-32	-13	-188	152	-157	-158	-155	-220	0.790	0.208	1.00	Yes	0.497	0.117	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.01**
		U_8 - L_9	823.48	-----	-57	52	-313	68	235	118	-101	-228	0.815	0.180	1.00	Yes	0.448	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.82**
		U_{10} - L_9	942.33	-----	-45	56	-321	108	362	212	85	-35	0.796	0.196	1.00	Yes	0.493	0.110	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.51**
		U_{11} - L_{10}	976.18	-----	-89	109	-386	201	320	212	297	136	0.780	0.213	1.00	Yes	0.483	0.119	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.51**
		U_{12} - L_{11}	988.29	-----	100	207	-124	351	379	320	329	194	0.790	0.205	1.00	Yes	0.489	0.115	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.06**
		U_{12} - L_{13}	670.52	-----	32	163	-113	288	198	166	186	118	0.793	0.200	1.00	Yes	0.436	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.23**
		U_{13} - L_{14}	588.83	-----	-52	104	-465	259	141	178	130	91	0.696	0.297	1.00	Yes	0.383	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.23**
		U_{14} - L_{15}	711.12	-----	-13	55	-228	165	51	28	-95	-128	0.841	0.154	1.00	Yes	0.462	0.084	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.50**
		U_{15} - L_{16}	535.53	-----	-2	-6	-142	-5	-107	-77	-278	-234	0.785	0.209	1.00	Yes	0.432	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.84**
		U_{17} - L_{16}	-----	-398.33	50	-63	-55	-58	-71	-118	-164	-213	-----	-----	-----	-----	-----	-----	-----	-----	0.911	0.081	1	Yes	0.843	0.080	0.93	Yes	1.00	**5.00**
		U_{18} - L_{17}	399.89	-209.93	37	-50	-136	-43	-103	-7	-304	-357	0.719	0.278	1.00	Yes	0.396	0.153	0.55	Yes	0.483	0.195	0.68	Yes	0.444	0.174	0.62	Yes	1.00	**9.95**
		U_{19} - L_{18}	427.48	-27.17	32	-41	-119	-26	253	-15	-237	-206	0.769	0.225	1.00	Yes	0.423	0.124	0.55	Yes	0.062	0.188	0.26	Yes	0.057	0.152	0.21	Yes	1.00	**6.47**
		U_{20} - L_{19}	390.19	-----	14	2	-232	110	-47	49	-860	-158	0.512	0.487	1.00	Yes	0.309	0.269	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.44**

Moment (Start) Al Operating

Operating Loads - 3F1

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) AI Operating

Operating Loads - 3F1

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																		
South Truss - Lower Chord	Structure 1	L_0 - L_1			53.35	-----	640	-973	-148	9	-790	-2904	61	223	0.082	0.915	1.00	Yes	0.048	0.541	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.58**
		L_1 - L_2			341.14	-----	177	-742	-239	-486	-206	328	-1162	242	0.522	0.472	1.00	Yes	0.319	0.305	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.07**
		L_2 - L_3			619.40	-73.23	-54	38	-728	-570	-183	122	-70	-679	0.713	0.285	1.00	Yes	0.412	0.168	0.59	Yes	0.100	0.247	0.35	Yes	0.099	0.176	0.28	Yes	1.00	**4.91**
		L_3 - L_4			570.44	-190.78	-12	249	-627	-396	273	-228	-1183	-117	0.656	0.342	1.00	Yes	0.390	0.212	0.61	Yes	0.261	0.184	0.45	Yes	0.258	0.151	0.41	Yes	1.00	**4.85**
		L_4 - L_5			57.95	-545.84	99	457	-635	394	-80	210	121	-45	0.075	0.206	0.29	Yes	0.045	0.134	0.18	Yes	0.839	0.137	0.98	Yes	0.832	0.168	1.00	Yes	1.00	**4.63**
		L_5 - L_6			-----	-748.73	124	590	-285	317	157	-245	-253	3	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.121	1	Yes	0.864	0.131	1.00	Yes	1.00	**4.55**
		L_6 - L_7			-----	-1153.30	231	-36	-437	125	-198	384	82	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.939	0.045	0.99	Yes	0.928	0.069	1.00	Yes	1.00	**6.89**
		L_7 - L_8			-----	-1169.45	12	586	-371	1571	608	240	-330	106	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.242	1	Yes	0.741	0.208	0.95	Yes	1.00	**6.78**
		L_8 - L_9			-----	-1276.10	1102	-91	655	-35	437	393	187	380	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.173	1	Yes	0.808	0.146	0.96	Yes	1.00	**4.28**
		L_9 - L_{10}			-----	-1007.60	915	-1151	-175	-218	731	1128	-421	-13	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.127	0.95	Yes	0.811	0.181	1.00	Yes	1.00	**12.17**
		L_{10} - L_{11}			125.09	-540.67	422	-97	12	-532	-253	57	-184	-703	0.162	0.264	0.43	Yes	0.094	0.156	0.26	Yes	0.831	0.167	1	Yes	0.824	0.141	0.97	Yes	1.00	**6.30**
		L_{11} - L_{12}			504.27	-----	364	-697	62	-599	-139	415	-924	264	0.653	0.346	1.00	Yes	0.392	0.220	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.38**
		L_{12} - L_{13}			1017.08	-----	52	-158	-462	-627	-158	121	-197	-688	0.803	0.191	1.00	Yes	0.513	0.117	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.25**
		L_{13} - L_{14}			1228.99	-----	287	-1484	-290	-1080	-120	206	-804	282	0.723	0.271	1.00	Yes	0.468	0.167	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.14**
		L_{14} - L_{15}			1512.52	-----	-504	-170	-1779	-472	-181	92	-308	-640	0.739	0.259	1.00	Yes	0.480	0.158	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.72**
		L_{15} - L_{16}			1570.99	-----	-286	-441	-1283	-1087	-5	-187	-1061	-48	0.768	0.229	1.00	Yes	0.493	0.137	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.68**
		L_{16} - L_{17}			1194.71	-----	-424	55	-1327	-61	-128	167	68	-535	0.755	0.242	1.00	Yes	0.490	0.150	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.39**
		L_{17} - L_{18}			785.54	-----	-223	-19	-914	22	83	-115	-1038	-89	0.684	0.309	1.00	Yes	0.438	0.189	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.34**
		L_{18} - L_{19}			384.95	-31.84	-243	229	-1200	569	-163	112	224	62	0.589	0.407	1.00	Yes	0.398	0.254	0.66	Yes	0.058	0.436	0.5	Yes	0.057	0.360	0.42	Yes	1.00	**11.77**
		L_{19} - L_{20}			36.43	-297.50	-189	72	-1029	603	145	33	86	19	0.062	0.370	0.44	Yes	0.038	0.221	0.26	Yes	0.597	0.398	1	Yes	0.592	0.336	0.93	Yes	1.00	**11.93**
	Structure 2	L_0 - L_1			66.00	-----	685	-2277	-50	-158	-788	-2736	37	127	0.080	0.913	1.00	Yes	0.048	0.568	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**18.80**
		L_1 - L_2			459.35	-----	620	-1368	-1	-799	-46	792	-952	419	0.558	0.435	1.00	Yes	0.332	0.274	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.38**
		L_2 - L_3			975.86	-----	202	-794	-470	-757	-44	165	1034	242	0.769	0.225	1.00	Yes	0.504	0.140	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.06**
		L_3 - L_4			1287.35	-----	140	-1322	-431	-1412	50	708	-943	399	0.756	0.240	1.00	Yes	0.509	0.152	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.00**
		L_4 - L_5			1671.93	-----	-432	-433	-1622	-1151	-56	176	881	131	0.779	0.213	1.00	Yes	0.516	0.129	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.65**
		L_5 - L_6			1761.13	-----	-224	-513	-1219	-1895	190	-90	-1202	-50	0.756	0.243	1.00	Yes	0.507	0.152	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.08**
		L_6 - L_7			1832.93	-----	-574	-215	-2259	-1109	-162	222	329	-332	0.776	0.219	1.00	Yes	0.516	0.128	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.32**
		L_7 - L_8			1280.12	-----	-317	355	-1642	-378	208	-139	-979	107	0.734	0.262	1.00	Yes	0.482	0.158	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.09**
		L_8 - L_9			1045.37	-349.45	-112	579	-1334	228	-89	180	134	-924	0.731	0.267	1.00	Yes	0.493	0.170	0.67	Yes	0.290	0.113	0.41	Yes	0.288	0.180	0.47	Yes	1.00	**7.41**
		L_9 - L_{10}			624.48	-753.31	-129	829	-1255	183	144	-152	-1118	-11	0.557	0.335	0.90	Yes	0.325	0.204	0.53	Yes	0.796	0.157	0.96	Yes	0.791	0.201	1.00	Yes	1.00	**8.76**
		L_{10} - L_{11}			-----	-730.22	7	563	-788	544	-79	80	183	-85	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.082	0.95	Yes	0.858	0.138	1.00	Yes	1.00	**5.24**
		L_{11} - L_{12}			-----	-1035.41	-73	1105	-672	911	56	-375	-44	8	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.120	0.98	Yes	0.849	0.151	1.00	Yes	1.00	**5.83**
		L_{12} - L_{13}			-----	-1486.84	255	-820	-844	-658	-423	142	147	-146	-----	-----	-----	-----	-----	-----	-----	-----	0.904	0.094	1	Yes	0.897	0.085	0.99	Yes	1.00	**8.48**
		L_{13} - L_{14}			-----	-1414.78	-400	1326	-1718	3246	784	615	-697	-240	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.241	0.96	Yes	0.712	0.283	1.00	Yes	1.00	**8.11**
		L_{14} - L_{15}			-----	-1505.17	2715	-876	1497	-457	278	226	392	355	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.183	0.95	Yes	0.757	0.237	1.00	Yes	1.00	**5.55**
		L_{15} - L_{16}			-----	-1276.11	-51	-33	-1619	-520	567	-324	-701	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.225	1	Yes	0.763	0.161	0.93	Yes	1.00	**11.29**
		L_{16} - L_{17}			-----	-1168.89	1161	-363	471	-441	-359	-55	280	-204	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.132	1	Yes	0.851	0.143	1.00	Yes	1.00	**6.72**
		L_{17} - L_{18}			324.64	-172.99	1459	-2424	-277	-1216	-126	2127	-2611	630	0.290	0.702	1.00	Yes	0.169	0.426	0.60	Yes	0.183	0.435	0.62	Yes	0.182	0.388	0.57	Yes	1.00	**19.54**
		L_{18} - L_{19}			244.14	-639.83	717	34	-172	-601	-211	60	446	-321	0.277	0.207	0.49	Yes	0.160	0.122	0.29	Yes	0.858	0.111	0.97	Yes	0.853	0.138	1.00	Yes	1.00	**7.40**
		L_{19} - L_{20}			578.13	-446.01	496	112	-182	-836	149	-171	-1144	477	0.655	0.336	1.00	Yes	0.387	0.207	0.60	Yes	0.598	0.143	0.75	Yes	0.594	0.161	0.76	Yes	1.00	**7.93**
		L_{20} - L_{21}			949.47	-258.44	375	-90	-981	-1096	-182	71	95	-753	0.757	0.241	1.00	Yes	0.497	0.147	0.65	Yes	0.244	0.183	0.43	Yes	0.242	0.160	0.41	Yes	1.00	**8.01**
		L_{21} - L_{22}			869.30	-40.78	103	-295	-802	-1275	136	-102	-1043	130	0.693	0.298	1.00	Yes	0.464	0.190	0.66	Yes	0.039	0.214	0.26	Yes	0.038	0.186	0.23	Yes	1.00	**6.20**
		L_{22} - L_{23}			823.58	-6.21	-230	-41	-2054	-467	-114	161	-143	-366	0.657	0.339	1.00	Yes	0.439	0.213	0.66	Yes	0.006	0.361	0.37	Yes	0.006	0.300	0.31	Yes	1.00	**6.32**
		L_{23} - L_{24}			864.31	-317.76	-66	444	-1337	-688	160	-138	-993	93	0.689	0.302	1.00	Yes	0.452	0.185	0.64	Yes	0.300	0.183	0.49	Yes	0.298	0.195	0.50	Yes	1.00	**8.89**
		L_{24} - L_{25}			544.72	-525.63	182	513	-1331	224	-105	149	372	-801	0.617	0.379	1.00	Yes	0.365	0.238	0.61	Yes	0.705	0.194	0.9	Yes	0.701	0.257	0.96	Yes	1.00	**9.26**
		L_{25} - L_{26}			30.29	-633.63	26	722	-762	306	101	-166	-698	6	0.034	0.254	0.29	Yes	0.020	0.149	0.17	Yes	0.850	0.145	1	Yes	0.844	0.147	1.00	Yes	1.00	**7.21**
		L_{26} - L_{27}			-----	-823.53	186	494	-805	644	-50	221	393	75	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.096	0.97	Yes	0.865	0.129	1.00	Yes	1.00	**7.11**
		L_{27} - L_{28}			-----	-1133.45	86	1362	-878	998	238	-3	-680	248	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.150	0.99	Yes	0.825	0.168	1.00	Yes	1.00	**9.50**
		L_{28} - L_{29}			-----	-1482.65	387	-716	-809	-892	-98	783	103	132	-----	-----	-----	-----	-----	-----	-----	-----	0.894	0.104	1	Yes	0.887	0.089	0.98	Yes	1.00	**9.29**
		L_{29} - L_{30}			-----	-1423.26	-548	1384	-1814	3187	742	724	-685	-291	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.225	0.95	Yes	0.716	0.278	1.00	Yes	1.00	**7.67**
		L_{30} - L_{31}			-----	-1524.83	2603	-890	1679	-498	235	161	573	469	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.191	0.97	Yes	0.767	0.227	1.00	Yes	1.00	**4.48**
		L_{31} - L_{32}			-----	-1306.17	12	-354	-1451	-656	682	-347	-403	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.210	1	Yes	0.781	0.144	0.93	Yes	1.00	**11.11**
		L_{32} - L_{33}			-----	-1048.11	979	-453	487	-437	-118	46	278	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.105	0.98	Yes	0.859	0.133	1.00	Yes	1.00	**5.31**
		L_{33} - L_{34}			340.34	-587.99	1194	-1724	31	-1357	64	2026	-2376	879	0.340	0.621	0.97	Yes	0.199	0.378	0.58	Yes	0.695	0.297	1	Yes	0.691	0.302	1.00	Yes	1.00	**17.50**
		L_{34} - L_{35}			732.94	-791.12	865	-85	-373	-1044	-225	93	1162	-212	0.654	0.307	0.97	Yes	0.381	0.186	0.57	Yes	0.836	0.131	0.97	Yes	0.831	0.167	1.00	Yes	1.00	**11.45**
		L_{35} - L_{36}			952.65	-----	585	-1386	-171	-1062	-226	752	-1502	336	0.666	0.328	1.00	Yes	0.449	0.210	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.24**
		L_{36} - L_{37}			1373.20	-----	299	-260	-936	-1415	-204	152	617	-224	0.787	0.207	1.00	Yes	0.517	0.124	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.15**
		L_{37} - L_{38}			1725.97	-----	-181	-663	-1873	-2015	66	-189	-1461	222	0.730	0.267	1.00	Yes	0.486	0.162	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.95**
		L_{38} - L_{39}			1772.64	-----	-587	-233	-2300	-1026	-117	181	207	-497	0.761	0.235	1.00	Yes	0.510	0.144	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.20**
		L_{39} - L_{40}			1639.93	-----	-413	-427	-1830	-1124	114	-165	-876	331	0.765	0.232	1.00	Yes	0.506	0.141	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.06**
		L_{40} - L_{41}			1283.99	-----	-465	32	-1786	-5	-48	269	285	-276	0.762	0.235	1.00	Yes	0.514	0.151	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.31**
		L_{41} - L_{42}			915.13	-----	-254	-53	-1190	85	142	-71	-783	41	0.731	0.260	1.00	Yes	0.480	0.154	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.45**
		L_{42} - L_{43}			505.78	-----	-289	217	-1284	527	105	334	734	367	0.614	0.382	1.00	Yes	0.365	0.241	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.77**
		L_{43} - L_{44}			-----	-304.63	-213	22	-1778	719	451	132	868	253	-----	-----	-----	-----	-----	-----	-----	-----	0.438	0.559	1	Yes	0.435	0.362	0.80	Yes	1.00	**19.45**
	Structure 3	L_0 - L_1			25.79	-275.49	594	-1212	20	-150	-284	-1288	26	117	0.039	0.631	0.68	Yes	0.024	0.412	0.44	Yes	0.500	0.495	1	Yes	0.496	0.364	0.86	Yes	1.00	**11.18**
		L_1 - L_2			318.24	-----	653	-1035	98	-547	60	941	-810	405	0.487	0.506	1.00	Yes	0.329	0.324	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.57**
		L_2 - L_3			861.15	-----	232	-521	-264	-597	85	109	983	158	0.750	0.241	1.00	Yes	0.480	0.149	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.04**
		L_3 - L_4			1142.18	-----	243	-1336	-304	-1052	-55	822	-898	487	0.722	0.276	1.00	Yes	0.469	0.171	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.63**
		L_4 - L_5			1598.62	-----	-372	-258	-1403	-890	-33	230	678	-170	0.781	0.217	1.00	Yes	0.501	0.128	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.62**
		L_5 - L_6			1467.92	-----	-140	-494	-738	-1564	250	-54	-1292	-17	0.717	0.279	1.00	Yes	0.466	0.172	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.72**
		L_6 - L_7			1248.09	-----	-490	241	-1670	229	-53	267	148	-326	0.734	0.257	1.00	Yes	0.476	0.157	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.21**
		L_7 - L_8			946.96	-----	-111	148	-771	-267	132	-167	-922	-120	0.747	0.244	1.00	Yes	0.478	0.149	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.73**
		L_8 - L_9			546.93	-303.63	-167	437	-894	322	-105	162	302	-255	0.708	0.289	1.00	Yes	0.425	0.189	0.62	Yes	0.467	0.119	0.59	Yes	0.463	0.237	0.70	Yes	1.00	**7.66**
		L_9 - L_{10}			-----	-553.59	-69	511	-564	309	141	-159	-132	40	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.074	0.93	Yes	0.843	0.149	1.00	Yes	1.00	**6.71**
		L_{10} - L_{11}			-----	-1086.77	200	-25	-755	334	-330	-69	592	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.885	0.052	0.94	Yes	0.875	0.119	1.00	Yes	1.00	**10.86**
		L_{11} - L_{12}			-----	-1175.75	34	770	-497	1470	775	168	-1042	-371	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.241	1	Yes	0.745	0.195	0.94	Yes	1.00	**9.45**
		L_{12} - L_{13}			-----	-1274.67	1366	-95	689	-18	214	61	-70	231	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.181	1	Yes	0.807	0.181	0.99	Yes	1.00	**5.42**
		L_{13} - L_{14}			-----	-1066.19	663	-897	-343	-129	347	791	-549	7	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.092	0.96	Yes	0.858	0.141	1.00	Yes	1.00	**10.92**
		L_{14} - L_{15}			-----	-706.32	555	100	39	-410	-257	87	-186	-879	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.155	1	Yes	0.828	0.125	0.96	Yes	1.00	**5.72**
		L_{15} - L_{16}			376.08	-----	524	-1031	-58	-579	-278	443	-1345	575	0.487	0.512	1.00	Yes	0.292	0.325	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.61**
		L_{16} - L_{17}			666.44	-197.59	240	-72	-810	-588	-170	194	22	88	0.767	0.227	1.00	Yes	0.455	0.146	0.61	Yes	0.270	0.221	0.5	Yes	0.267	0.196	0.47	Yes	1.00	**5.61**
		L_{17} - L_{18}			615.16	-68.95	-10	-118	-893	-630	115	-114	-464	58	0.708	0.290	1.00	Yes	0.409	0.173	0.59	Yes	0.094	0.308	0.41	Yes	0.093	0.216	0.31	Yes	1.00	**5.86**
		L_{18} - L_{19}			407.26	-6.20	-72	-10	-875	43	-109	216	217	505	0.623	0.371	1.00	Yes	0.380	0.245	0.63	Yes	0.011	0.317	0.33	Yes	0.011	0.263	0.28	Yes	1.00	**6.03**
		L_{19} - L_{20}			-----	-71.68	161	-268	-1578	1038	257	70	-2282	-620	-----	-----	-----	-----	-----	-----	-----	-----	0.130	0.867	1	Yes	0.129	0.474	0.61	Yes	1.00	**29.19**

Operating Loads - 3F1

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	$U_0 - L_0$			-----	-271.71	-9	56	-107	152	174	56	-1092	-350	-----	-----	-----	-----	-----	-----	-----	-----	0.607	0.387	1	Yes	0.575	0.194	0.77	Yes	1.00	**2.02**
		$U_1 - L_1$			21.03	-317.12	29	-21	-254	240	568	205	-352	-91	0.038	0.490	0.53	Yes	0.021	0.269	0.30	Yes	0.693	0.232	0.93	Yes	0.671	0.325	1.00	Yes	1.00	**5.80**
		$U_2 - L_2$			107.27	-250.38	98	-108	-188	233	778	226	-1241	-429	0.193	0.657	0.85	Yes	0.106	0.361	0.47	Yes	0.547	0.451	1	Yes	0.530	0.298	0.83	Yes	1.00	**8.43**
		$U_3 - L_3$			180.59	-73.20	222	-219	-73	87	-1341	-691	81	90	0.325	0.672	1.00	Yes	0.179	0.370	0.55	Yes	0.160	0.403	0.57	Yes	0.155	0.284	0.44	Yes	1.00	**9.22**
		$U_4 - L_4$			-----	-204.10	285	-279	14	-27	-1682	-791	795	63	-----	-----	-----	-----	-----	-----	-----	-----	0.449	0.542	1	Yes	0.432	0.364	0.80	Yes	1.00	**10.13**
		$U_5 - L_5$			-----	-415.18	216	-240	73	-92	97	239	704	175	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.248	1	Yes	0.716	0.244	0.97	Yes	1.00	**5.33**
		$U_6 - L_6$			-----	-405.36	175	-179	82	-74	863	436	1295	635	-----	-----	-----	-----	-----	-----	-----	-----	0.614	0.379	1	Yes	0.581	0.157	0.74	Yes	1.00	**3.18**
		$U_7 - L_7$			-----	-362.27	216	-235	118	-133	329	132	1080	261	-----	-----	-----	-----	-----	-----	-----	-----	0.606	0.385	1	Yes	0.559	0.231	0.80	Yes	1.00	**2.62**
		$U_8 - L_8$			-----	-1187.90	232	-285	-381	452	645	80	-939	-467	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.134	1	Yes	0.827	0.084	0.92	Yes	1.00	**6.21**
		$U_9 - L_9$			-----	-561.70	-232	263	-353	394	553	222	328	172	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.322	1	Yes	0.634	0.219	0.86	Yes	1.00	**2.09**
		$U_{10} - L_{10}$			-----	-684.34	-159	158	-319	337	610	295	397	229	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.288	1	Yes	0.675	0.175	0.85	Yes	1.00	**3.67**
		$U_{11} - L_{11}$			-----	-662.33	-164	241	-373	483	212	133	-614	0	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.177	0.98	Yes	0.771	0.224	1.00	Yes	1.00	**5.99**
		$U_{12} - L_{12}$			-----	-521.23	-123	132	-314	323	307	271	-189	74	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.143	0.9	Yes	0.715	0.276	1.00	Yes	1.00	**6.32**
		$U_{13} - L_{13}$			-----	-365.80	-62	84	-232	257	-30	5	-18	165	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.140	0.88	Yes	0.701	0.293	1.00	Yes	1.00	**5.36**
		$U_{14} - L_{14}$			-----	-192.25	103	-107	-268	286	-714	-492	214	-319	-----	-----	-----	-----	-----	-----	-----	-----	0.429	0.564	1	Yes	0.407	0.365	0.78	Yes	1.00	**12.52**
		$U_{15} - L_{15}$			76.07	-311.93	242	-264	-66	56	-643	-125	318	-335	0.137	0.523	0.66	Yes	0.075	0.288	0.37	Yes	0.699	0.268	0.97	Yes	0.660	0.337	1.00	Yes	1.00	**8.89**
		$U_{16} - L_{16}$			-----	-319.21	243	-252	38	-54	24	-10	626	-230	-----	-----	-----	-----	-----	-----	-----	-----	0.719	0.250	0.97	Yes	0.675	0.322	1.00	Yes	1.00	**6.36**
		$U_{17} - L_{17}$			-----	-419.92	205	-223	80	-93	-25	72	505	201	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.213	1	Yes	0.724	0.227	0.96	Yes	1.00	**4.17**
		$U_{18} - L_{18}$			-----	-527.38	376	-386	176	-182	289	66	685	177	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.225	1	Yes	0.734	0.219	0.96	Yes	1.00	**4.25**
		$U_{19} - L_{19}$			-----	-644.60	407	-424	182	-196	316	64	600	123	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.192	1	Yes	0.750	0.197	0.95	Yes	1.00	**5.09**
		$U_{20} - L_{20}$			-----	-518.28	338	-403	232	-279	252	33	441	58	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.238	1	Yes	0.663	0.213	0.88	Yes	1.00	**2.89**
	Structure 2	$U_0 - L_0$			-----	-586.45	-158	275	-315	435	-8	-1	-1439	-244	-----	-----	-----	-----	-----	-----	-----	-----	0.702	0.295	1	Yes	0.628	0.184	0.82	Yes	1.00	**2.65**
		$U_1 - L_1$			-----	-707.67	-208	215	-546	547	628	161	-126	22	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.147	0.96	Yes	0.758	0.232	1.00	Yes	1.00	**5.48**
		$U_2 - L_2$			-----	-588.48	-155	171	-454	470	622	285	-87	181	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.178	0.97	Yes	0.750	0.240	1.00	Yes	1.00	**4.93**
		$U_3 - L_3$			-----	-458.26	-77	88	-214	231	544	265	-212	174	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.213	1	Yes	0.719	0.211	0.93	Yes	1.00	**4.07**
		$U_4 - L_4$			-----	-323.42	-18	29	-200	208	562	234	-82	138	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.264	1	Yes	0.684	0.266	0.95	Yes	1.00	**5.63**
		$U_5 - L_5$			83.27	-307.47	93	-70	-202	229	-289	-226	-609	33	0.150	0.468	0.62	Yes	0.082	0.258	0.34	Yes	0.695	0.300	1	Yes	0.651	0.292	0.95	Yes	1.00	**9.28**
		$U_6 - L_6$			293.74	-63.91	165	-169	-89	94	-210	-228	-858	-93	0.528	0.465	1.00	Yes	0.291	0.256	0.55	Yes	0.144	0.268	0.42	Yes	0.135	0.216	0.36	Yes	1.00	**8.22**
		$U_7 - L_7$			-----	-211.77	315	-356	1	-7	-1021	-522	-178	-539	-----	-----	-----	-----	-----	-----	-----	-----	0.478	0.519	1	Yes	0.448	0.455	0.91	Yes	1.00	**13.81**
		$U_8 - L_8$			-----	-472.42	336	-358	148	-173	-572	-130	327	-120	-----	-----	-----	-----	-----	-----	-----	-----	0.685	0.177	0.87	Yes	0.680	0.313	1.00	Yes	1.00	**5.07**
		$U_9 - L_9$			-----	-690.97	578	-592	267	-284	-533	-32	597	89	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.139	0.91	Yes	0.741	0.251	1.00	Yes	1.00	**6.49**
		$U_{10} - L_{10}$			-----	-751.99	512	-534	233	-234	-19	220	1168	683	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.254	1	Yes	0.703	0.236	0.94	Yes	1.00	**6.65**
		$U_{11} - L_{11}$			-----	-731.44	457	-461	226	-220	593	509	1171	657	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.256	1	Yes	0.684	0.203	0.89	Yes	1.00	**5.52**
		$U_{12} - L_{12}$			-----	-726.38	420	-414	187	-169	677	429	1468	642	-----	-----	-----	-----	-----	-----	-----	-----	0.697	0.302	1	Yes	0.630	0.180	0.81	Yes	1.00	**5.43**
		$U_{13} - L_{13}$			-----	-625.51	497	-485	225	-224	509	196	1150	308	-----	-----	-----	-----	-----	-----	-----	-----	0.697	0.297	1	Yes	0.603	0.238	0.85	Yes	1.00	**5.64**
		$U_{14} - L_{14}$			-----	-1201.22	551	-529	-563	522	958	58	-847	-396	-----	-----	-----	-----	-----	-----	-----	-----	0.878	0.115	1	Yes	0.797	0.100	0.90	Yes	1.00	**9.87**
		$U_{15} - L_{15}$			-----	-689.77	-259	258	-607	586	659	60	-666	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.225	1	Yes	0.665	0.290	0.96	Yes	1.00	**6.14**
		$U_{16} - L_{16}$			-----	-720.34	-186	174	-528	513	671	192	-94	23	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.162	1	Yes	0.772	0.224	1.00	Yes	1.00	**6.05**
		$U_{17} - L_{17}$			-----	-641.78	-197	198	-537	539	594	194	-203	110	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.157	0.95	Yes	0.747	0.250	1.00	Yes	1.00	**5.63**
		$U_{18} - L_{18}$			-----	-580.90	-160	166	-470	498	621	215	-604	-25	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.168	0.95	Yes	0.740	0.255	1.00	Yes	1.00	**5.44**
		$U_{19} - L_{19}$			-----	-477.53	-88	89	-290	288	519	195	-158	121	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.169	0.89	Yes	0.713	0.279	1.00	Yes	1.00	**5.36**
		$U_{20} - L_{20}$			-----	-378.03	-39	43	-221	232	522	182	-244	5	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.224	1	Yes	0.724	0.265	0.99	Yes	1.00	**5.94**
	Structure 3	$U_{21} - L_{21}$			29.09	-310.21	23	-13	-221	237	32	-113	-707	0	0.052	0.508	0.57	Yes	0.029	0.280	0.31	Yes	0.701	0.299	1	Yes	0.656	0.304	0.96	Yes	1.00	**7.28**
		$U_{22} - L_{22}$			-----	-260.43	318	-344	-244	264	-181	-424	664	-470	-----	-----	-----	-----	-----	-----	-----	-----	0.586	0.370	0.96	Yes	0.551	0.440	1.00	Yes	1.00	**19.18**
		$U_{23} - L_{23}$			-----	-321.62	227	-243	12	-26	-640	-51	170	-325	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.267	1	Yes	0.681	0.311	1.00	Yes	1.00	**6.20**
		$U_{24} - L_{24}$			-----	-371.68	224	-234	55	-59	-159	17	584	204	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.237	1	Yes	0.712	0.267	0.98	Yes	1.00	**5.03**
		$U_{25} - L_{25}$			-----	-472.16	299	-296	101	-102	56	156	589	224	-----	-----	-----	-----	-----	-----	-----	-----	0.710	0.183	0.9	Yes	0.705	0.287	1.00	Yes	1.00	**5.06**
		$U_{26} - L_{26}$			-----	-572.81	499	-523	168	-176	310	293	708	301	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.190	0.96	Yes	0.730	0.268	1.00	Yes	1.00	**5.97**
		$U_{27} - L_{27}$			-----	-633.44	553	-559	203	-206	110	372	772	315	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.194	0.98	Yes	0.737	0.259	1.00	Yes	1.00	**6.27**
		$U_{28} - L_{28}$			-----	-616.07	469	-452	157	-131	891	407	1623	547	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.287	1	Yes	0.660	0.199	0.86	Yes	1.00	**5.98**
		$U_{29} - L_{29}$			-----	-619.28	567	-559	158	-163	-359	100	1174	195	-----	-----	-----	-----	-----	-----	-----	-----	0.690	0.301	1	Yes	0.597	0.271	0.87	Yes	1.00	**7.94**
		$U_{30} - L_{30}$			-----	-1188.67	288	-300	-558	495	253	-206	-555	-243	-----	-----	-----	-----	-----	-----	-----	-----	0.903	0.092	1	Yes	0.818	0.103	0.93	Yes	1.00	**9.33**
		$U_{31} - L_{31}$			-----	-713.34	-305	299	-547	526	523	97	-96	26	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.201	1	Yes	0.688	0.262	0.95	Yes	1.00	**4.80**
		$U_{32} - L_{32}$			-----	-851.04	-218	192	-476	469	620	193	-255	18	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.176	1	Yes	0.738	0.204	0.95	Yes	1.00	**5.67**
		$U_{33} - L_{33}$			-----	-808.61	-247	235	-486	489	449	210	-693	51	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.181	1	Yes	0.756	0.216	0.98	Yes	1.00	**5.75**
		$U_{34} - L_{34}$			-----	-801.92	-237	251	-528	548	553	337	-464	0	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.158	0.96	Yes	0.750	0.242	1.00	Yes	1.00	**7.01**
		$U_{35} - L_{35}$			-----	-694.14	-254	281	-572	590	229	144	-531	30	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.138	0.92	Yes	0.744	0.250	1.00	Yes	1.00	**6.67**
		$U_{36} - L_{36}$			-----	-476.63	-132	157	-329	352	160	120	-606	-8	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.200	0.9	Yes	0.687	0.308	1.00	Yes	1.00	**5.42**
		$U_{37} - L_{37}$			-----	-164.43	26	-26	-360	412	-389	-285	340	-389	-----	-----	-----	-----	-----	-----	-----	-----	0.371	0.621	1	Yes	0.348	0.527	0.88	Yes	1.00	**15.08**
		$U_{38} - L_{38}$			234.23	-107.55	111	-115	-150	149	-1313	-306	-195	-530	0.421	0.572	1.00	Yes	0.232	0.314	0.55	Yes	0.242	0.336	0.58	Yes	0.228	0.191	0.42	Yes	1.00	**7.92**
		$U_{39} - L_{39}$			53.98	-307.22	206	-229	-53	41	-726	-71	334	-133	0.097	0.502	0.60	Yes	0.053	0.276	0.33	Yes	0.694	0.297	1	Yes	0.650	0.292	0.95	Yes	1.00	**7.85**
		$U_{40} - L_{40}$			-----	-324.33	215	-219	37	-46	28	30	594	172	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.256	1	Yes	0.686	0.280	0.97	Yes	1.00	**5.35**
		$U_{41} - L_{41}$			-----	-459.42	235	-247	87	-96	277	125	578	193	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.211	1	Yes	0.720	0.225	0.95	Yes	1.00	**4.70**
		$U_{42} - L_{42}$			-----	-580.79	494	-501	171	-181	-34	31	670	173	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.173	0.96	Yes	0.740	0.256	1.00	Yes	1.00	**6.04**
		$U_{43} - L_{43}$			-----	-730.00	481	-498	188	-207	704	257	616	171	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.160	1	Yes	0.782	0.211	1.00	Yes	1.00	**6.00**
		$U_{44} - L_{44}$			-----	-636.33	410	-517	254	-321	505	86	661	112	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.236	1	Yes	0.682	0.219	0.91	Yes	1.00	**4.06**
	Structure 4	$U_0 - L_0$			-----	-510.82	-134	232	-269	369	105	14	-834	-109	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.267	1	Yes	0.640	0.189	0.83	Yes	1.00	**2.32**
		$U_1 - L_1$			-----	-652.94	-207	207	-504	502	620	144	-602	37	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.161	0.98	Yes	0.760	0.234	1.00	Yes	1.00	**5.13**
		$U_2 - L_2$			-----	-544.66	-156	167	-406	423	661	305	-36	196	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.196	1	Yes	0.758	0.239	1.00	Yes	1.00	**4.83**
		$U_3 - L_3$			-----	-408.32	-69	84	-191	210	563	270	-61	204	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.233	1	Yes	0.704	0.213	0.92	Yes	1.00	**3.70**
		$U_4 - L_4$			-----	-307.16	-35	41	-207	219	600	224	-718	49	-----	-----	-----	-----	-----	-----	-----	-----	0.692	0.300	1	Yes	0.650	0.280	0.93	Yes	1.00	**5.46**
		$U_5 - L_5$			113.14	-307.09	83	-75	-247	270	-142	-109	-591	15	0.203	0.516	0.72	Yes	0.112	0.284	0.40	Yes	0.688	0.297	0.99	Yes	0.650	0.345	1.00	Yes	1.00	**10.30**
		$U_6 - L_6$			-----	-171.43	296	-322	-104	103	-1438	-738	-886	-820	-----	-----	-----	-----	-----	-----	-----	-----	0.383	0.613	1	Yes	0.363	0.411	0.78	Yes	1.00	**14.15**
		$U_7 - L_7$			-----	-366.24	235	-258	77	-94	-206	-21	430	23	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.197	0.94	Yes	0.702	0.295	1.00	Yes	1.00	**4.70**
		$U_8 - L_8$			-----	-511.82	331	-334	129	-131	-76	35	857	314	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.252	1	Yes	0.702	0.285	0.99	Yes	1.00	**6.04**
		$U_9 - L_9$			-----	-616.86	325	-409	163	-226	634	466	1007	353	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.250	1	Yes	0.718	0.190	0.91	Yes	1.00	**4.60**
		$U_{10} - L_{10}$			-----	-621.36	273	-281	156	-148	1230	698	1514	837	-----	-----	-----	-----	-----	-----	-----	-----	0.644	0.355	1	Yes	0.613	0.146	0.76	Yes	1.00	**3.91**
		$U_{11} - L_{11}$			-----	-559.55	326	-370	205	-238	761	417	1288	561	-----	-----	-----	-----	-----	-----	-----	-----	0.667	0.325	1	Yes	0.632	0.206	0.84	Yes	1.00	**3.04**
		$U_{12} - L_{12}$			-----	-1144.50	361	-483	-390	416	1337	413	-1441	-582	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.169	1	Yes	0.793	0.090	0.89	Yes	1.00	**8.10**
		$U_{13} - L_{13}$			-----	-450.31	-154	168	-287	304	663	121	-391	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.242	1	Yes	0.695	0.299	1.00	Yes	1.00	**3.22**
		$U_{14} - L_{14}$			-----	-513.42	-96	89	-247	260	735	228	-209	-86	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.215	1	Yes	0.736	0.228	0.97	Yes	1.00	**5.21**
		$U_{15} - L_{15}$			-----	-434.31	-79	88	-220	244	526	242	-182	56	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.205	1	Yes	0.749	0.247	1.00	Yes	1.00	**5.77**
		$U_{16} - L_{16}$			-----	-175.80	-30	44	-271	271	-870	-442	438	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.387	0.604	1	Yes	0.372	0.347	0.72	Yes	1.00	**7.86**
		$U_{17} - L_{17}$			123.30	-191.95	169	-202	-213	197	302	93	-1721	-855	0.222	0.771	1.00	Yes	0.122	0.424	0.55	Yes	0.421	0.511	0.94	Yes	0.406	0.273	0.68	Yes	1.00	**12.30**
		$U_{18} - L_{18}$			86.22	-286.51	231	-273	-92	99	-970	-499	489	156	0.155	0.629	0.79	Yes	0.085	0.346	0.44	Yes	0.626	0.365	1	Yes	0.606	0.348	0.96	Yes	1.00	**9.33**
		$U_{19} - L_{19}$			-----	-345.05	190	-200	-23	8	118	70	446	240	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.238	1	Yes	0.730	0.255	0.99	Yes	1.00	**5.46**
		$U_{20} - L_{20}$			-----	-306.55	220	-268	82	-96	438	141	605	194	-----	-----	-----	-----	-----	-----	-----	-----	0.685	0.281	0.97	Yes	0.649	0.342	1.00	Yes	1.00	**3.69**

Moment (Start) AI Operating

Operating Loads - 3F1

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	$U_0 - L_1$			433.96	-----	32	-8	-135	59	-232	-84	-1058	-341	0.569	0.424	1.00	Yes	0.344	0.233	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.57**
		$U_1 - L_2$			400.71	-97.01	11	-15	-91	0	362	193	-417	-534	0.721	0.271	1.00	Yes	0.396	0.149	0.55	Yes	0.223	0.223	0.45	Yes	0.205	0.117	0.33	Yes	1.00	**5.92**
		$U_2 - L_3$			121.73	-230.11	44	-28	-91	-43	470	245	-1176	-660	0.219	0.457	0.68	Yes	0.120	0.252	0.38	Yes	0.530	0.467	1	Yes	0.487	0.117	0.61	Yes	1.00	**9.15**
		$U_3 - L_4$			-----	-287.19	47	-10	-47	-80	502	286	-830	-602	-----	-----	-----	-----	-----	-----	-----	-----	0.657	0.336	1	Yes	0.608	0.103	0.72	Yes	1.00	**8.76**
		$U_4 - L_4$			553.45	-----	-7	68	-122	26	-156	95	-237	157	0.812	0.179	1.00	Yes	0.446	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.60**
		$U_4 - L_5$			681.41	-----	-13	108	-200	208	-393	131	-371	364	0.806	0.190	1.00	Yes	0.443	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.42**
		$U_5 - L_6$			589.71	-----	-43	98	-247	196	-893	-84	115	302	0.697	0.303	1.00	Yes	0.383	0.166	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.79**
		$U_6 - L_7$			685.38	-----	62	194	-77	273	-53	-147	-148	136	0.810	0.183	1.00	Yes	0.446	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.75**
		$U_8 - L_9$			974.37	-----	49	217	-82	308	594	262	-183	-611	0.779	0.215	1.00	Yes	0.483	0.122	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.61**
		$U_9 - L_{10}$			947.21	-----	-111	145	-278	191	658	312	-923	-797	0.757	0.241	1.00	Yes	0.469	0.137	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.31**
		$U_{10} - L_{11}$			889.69	-----	-70	130	-275	168	296	35	-93	-871	0.752	0.241	1.00	Yes	0.465	0.137	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.01**
		$U_{11} - L_{12}$			737.52	-----	-90	77	-290	69	200	-24	-515	-864	0.730	0.264	1.00	Yes	0.401	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.53**
		$U_{12} - L_{13}$			565.76	-----	-85	62	-194	126	102	-36	-274	-711	0.690	0.308	1.00	Yes	0.434	0.176	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.49**
		$U_{13} - L_{14}$			390.50	-----	-30	-14	-89	13	-176	-187	-145	-633	0.702	0.297	1.00	Yes	0.386	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.04**
		$U_{15} - L_{14}$			404.17	-315.05	46	-125	-140	-25	-93	-230	62	175	0.727	0.246	0.98	Yes	0.400	0.135	0.54	Yes	0.738	0.253	1	Yes	0.667	0.179	0.85	Yes	1.00	**13.63**
		$U_{16} - L_{15}$			404.77	-32.85	-16	-23	-143	89	-218	-121	-304	139	0.728	0.271	1.00	Yes	0.400	0.149	0.55	Yes	0.078	0.159	0.24	Yes	0.070	0.183	0.26	Yes	1.00	**7.74**
		$U_{17} - L_{16}$			523.56	-----	-47	23	-144	97	-303	-104	-362	-71	0.768	0.230	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.97**
		$U_{18} - L_{17}$			618.29	-----	-130	88	-338	246	-402	-112	-375	188	0.731	0.264	1.00	Yes	0.402	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.15**
		$U_{19} - L_{18}$			692.27	-----	-132	96	-332	253	-459	-204	-465	-167	0.750	0.246	1.00	Yes	0.412	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.41**
		$U_{20} - L_{19}$			713.73	-----	-177	141	-349	288	-276	-138	-192	23	0.773	0.224	1.00	Yes	0.425	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.56**
	Structure 2	$U_0 - L_1$			624.36	-----	-92	135	-307	308	-281	-67	-1564	-317	0.618	0.377	1.00	Yes	0.340	0.207	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.17**
		$U_1 - L_2$			724.88	-----	-165	118	-385	285	141	-33	-356	-688	0.717	0.281	1.00	Yes	0.394	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.66**
		$U_2 - L_3$			576.23	-----	-120	90	-310	235	121	-31	-260	-768	0.681	0.314	1.00	Yes	0.375	0.173	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.28**
		$U_3 - L_4$			516.38	-----	-53	26	-171	102	166	7	-546	-714	0.688	0.306	1.00	Yes	0.379	0.168	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.73**
		$U_4 - L_5$			348.07	-31.83	-1	-14	-126	74	225	29	-197	-704	0.626	0.365	1.00	Yes	0.344	0.201	0.55	Yes	0.079	0.179	0.26	Yes	0.067	0.161	0.23	Yes	1.00	**6.52**
		$U_5 - L_6$			313.85	-246.95	59	-110	-99	12	-634	-161	-462	-1014	0.564	0.435	1.00	Yes	0.310	0.239	0.55	Yes	0.583	0.227	0.81	Yes	0.523	0.141	0.67	Yes	1.00	**9.81**
		$U_6 - L_7$			-----	-398.92	54	-109	-25	-56	-271	-82	-210	-542	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.137	1	Yes	0.764	0.125	0.89	Yes	1.00	**5.48**
		$U_8 - L_7$			557.47	-----	-78	26	-217	117	117	-115	218	435	0.711	0.282	1.00	Yes	0.447	0.160	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.48**
		$U_8 - L_9$			714.90	-----	-162	151	-328	244	-307	-96	-197	23	0.774	0.219	1.00	Yes	0.426	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.06**
		$U_{10} - L_9$			798.14	-----	-125	155	-353	258	-185	21	-220	298	0.790	0.208	1.00	Yes	0.434	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.85**
		$U_{11} - L_{10}$			887.23	-----	-130	193	-349	299	-253	59	-194	289	0.808	0.188	1.00	Yes	0.445	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.17**
		$U_{12} - L_{11}$			844.20	-----	-133	176	-335	341	-570	57	-576	291	0.769	0.224	1.00	Yes	0.423	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.68**
		$U_{13} - L_{12}$			733.59	-----	-161	164	-412	378	-524	1	-505	77	0.726	0.270	1.00	Yes	0.399	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.01**
		$U_{14} - L_{13}$			782.93	-----	36	219	-222	391	262	-78	-148	25	0.775	0.221	1.00	Yes	0.426	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.40**
		$U_{14} - L_{15}$			581.62	-----	-20	168	-221	374	515	233	177	-518	0.688	0.305	1.00	Yes	0.378	0.168	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.28**
		$U_{15} - L_{16}$			568.42	-----	-171	168	-382	339	585	176	100	-368	0.672	0.322	1.00	Yes	0.370	0.177	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.90**
		$U_{16} - L_{17}$			680.29	-----	-128	155	-330	340	373	109	92	-525	0.737	0.260	1.00	Yes	0.405	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.07**
		$U_{17} - L_{18}$			624.25	-----	-112	129	-282	260	357	86	-51	-540	0.738	0.258	1.00	Yes	0.406	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
		$U_{18} - L_{19}$			590.78	-----	-83	97	-281	228	289	75	-314	-748	0.698	0.295	1.00	Yes	0.384	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.49**
		$U_{19} - L_{20}$			557.11	-----	-43	48	-188	145	288	79	-248	-583	0.710	0.288	1.00	Yes	0.391	0.164	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.78**
		$U_{20} - L_{21}$			367.73	-----	-17	16	-117	83	229	61	-69	-631	0.661	0.333	1.00	Yes	0.364	0.183	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.74**
		$U_{21} - L_{22}$			313.67	-200.35	22	-79	-120	1	-373	-52	-677	-961	0.564	0.431	1.00	Yes	0.310	0.237	0.55	Yes	0.473	0.394	0.87	Yes	0.424	0.153	0.58	Yes	1.00	**9.64**
		$U_{23} - L_{22}$			362.85	-149.67	16	-71	-146	22	270	-95	552	485	0.653	0.346	1.00	Yes	0.359	0.190	0.55	Yes	0.356	0.281	0.64	Yes	0.317	0.186	0.51	Yes	1.00	**10.52**
		$U_{24} - L_{23}$			426.74	-----	-20	19	-123	105	-255	-63	-195	132	0.768	0.231	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.65**
		$U_{25} - L_{24}$			594.53	-----	-41	49	-201	164	-300	-82	29	271	0.758	0.241	1.00	Yes	0.417	0.136	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.37**
		$U_{26} - L_{25}$			657.88	-----	-80	99	-286	268	-252	-56	-67	309	0.778	0.218	1.00	Yes	0.428	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.13**
		$U_{27} - L_{26}$			630.03	-----	-101	143	-293	274	-394	112	-43	440	0.745	0.246	1.00	Yes	0.410	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.62**
		$U_{28} - L_{27}$			674.84	-----	-94	147	-316	338	-553	45	-413	407	0.731	0.264	1.00	Yes	0.402	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.11**
		$U_{29} - L_{28}$			587.90	-----	-95	108	-345	324	-552	-42	-330	157	0.695	0.295	1.00	Yes	0.382	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.33**
		$U_{30} - L_{29}$			623.35	-----	45	164	-195	362	300	-105	-144	219	0.737	0.260	1.00	Yes	0.405	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.26**
		$U_{30} - L_{31}$			733.15	-----	-57	234	-262	438	470	202	-2	-374	0.725	0.274	1.00	Yes	0.399	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.77**
		$U_{31} - L_{32}$			729.50	-----	-233	218	-420	366	492	135	40	-386	0.722	0.269	1.00	Yes	0.397	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.99**
		$U_{32} - L_{33}$			818.40	-----	-159	199	-340	320	413	110	-152	-775	0.746	0.250	1.00	Yes	0.410	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.77**
		$U_{33} - L_{34}$			805.79	-----	-146	175	-323	248	335	72	-678	-873	0.734	0.257	1.00	Yes	0.404	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.98**
		$U_{34} - L_{35}$			752.23	-----	-134	138	-321	234	130	-21	-191	-705	0.744	0.254	1.00	Yes	0.409	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.96**
		$U_{35} - L_{36}$			660.43	-----	-158	133	-309	201	144	7	-375	-744	0.715	0.280	1.00	Yes	0.393	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.68**
		$U_{36} - L_{37}$			494.50	-----	-76	26	-189	101	-379	-242	-433	-973	0.631	0.368	1.00	Yes	0.397	0.212	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.04**
		$U_{38} - L_{37}$			-----	-378.35	53	-103	-36	-50	53	-222	83	92	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.177	1	Yes	0.725	0.118	0.85	Yes	1.00	**5.83**
		$U_{39} - L_{38}$			395.60	-216.54	50	-102	-120	51	437	-80	-189	54	0.712	0.280	1.00	Yes	0.391	0.154	0.55	Yes	0.516	0.259	0.78	Yes	0.458	0.153	0.62	Yes	1.00	**10.11**
		$U_{40} - L_{39}$			397.57	-2.42	-8	-7	-132	90	-376	-103	-329	176	0.715	0.277	1.00	Yes	0.393	0.153	0.55	Yes	0.006	0.160	0.17	Yes	0.005	0.169	0.18	Yes	1.00	**6.76**
		$U_{41} - L_{40}$			558.85	-----	-57	31	-177	122	-411	-178	-318	-9	0.745	0.248	1.00	Yes	0.410	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.24**
		$U_{42} - L_{41}$			622.01	-----	-123	92	-322	260	-402	-168	-448	28	0.735	0.263	1.00	Yes	0.404	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.31**
		$U_{43} - L_{42}$			766.73	-----	-137	104	-375	306	-376	-193	-403	-73	0.759	0.234	1.00	Yes	0.417	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.73**
		$U_{44} - L_{43}$			798.98	-----	-162	154	-385	377	-173	7	-81	70	0.790	0.204	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.76**
	Structure 3	$U_0 - L_1$			589.30	-----	-74	108	-292	264	-215	-47	-1253	-354	0.638	0.355	1.00	Yes	0.351	0.195	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.76**
		$U_1 - L_2$			640.63	-----	-158	108	-345	232	163	-41	-628	-780	0.694	0.305	1.00	Yes	0.382	0.168	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		$U_2 - L_3$			573.61	-----	-125	86	-307	230	127	-31	-309	-762	0.678	0.312	1.00	Yes	0.373	0.172	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
		$U_3 - L_4$			479.34	-----	-43	20	-136	79	149	-28	-373	-648	0.703	0.289	1.00	Yes	0.387	0.159	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		$U_4 - L_5$			323.40	-13.94	-13	-5	-132	65	196	8	-632	-853	0.582	0.415	1.00	Yes	0.320	0.228	0.55	Yes	0.033	0.267	0.3	Yes	0.029	0.168	0.20	Yes	1.00	**7.19**
		$U_5 - L_6$			284.34	-312.53	32	-122	-91	-33	-943	-255	-418	-835	0.511	0.429	0.95	Yes	0.281	0.236	0.52	Yes	0.732	0.265	1	Yes	0.661	0.156	0.82	Yes	1.00	**9.95**
		$U_7 - L_6$			451.46	-----	-27	-15	-108	23	-158	-157	26	144	0.812	0.184	1.00	Yes	0.447	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.54**
		$U_8 - L_7$			620.80	-----	-83	73	-209	144	-305	-108	-134	248	0.757	0.242	1.00	Yes	0.476	0.136	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.36**
		$U_8 - L_9$			788.49	-----	-72	98	-332	90	-212	10	-86	376	0.780	0.210	1.00	Yes	0.429	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.65**
		$U_{10} - L_9$			964.56	-----	-52	158	-257	172	-103	87	-453	359	0.815	0.178	1.00	Yes	0.504	0.100	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.70**
		$U_{11} - L_{10}$			958.86	-----	-76	118	-257	211	-934	-152	-67	283	0.767	0.233	1.00	Yes	0.475	0.133	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.72**
		$U_{12} - L_{11}$			998.84	-----	119	234	-68	311	449	53	37	348	0.798	0.196	1.00	Yes	0.495	0.110	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.81**
		$U_{13} - L_{12}$			605.91	-----	15	165	-91	279	635	316	112	-507	0.716	0.274	1.00	Yes	0.394	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.68**
		$U_{13} - L_{14}$			596.58	-----	-98	130	-283	215	688	282	-354	-422	0.705	0.286	1.00	Yes	0.388	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**
		$U_{14} - L_{15}$			592.23	-----	-31	149	-254	192	575	256	-850	-734	0.700	0.299	1.00	Yes	0.385	0.164	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.55**
		$U_{15} - L_{16}$			428.58	-----	-12	68	-110	7	401	191	-1079	-649	0.628	0.363	1.00	Yes	0.346	0.200	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.55**
		$U_{17} - L_{16}$			-----	-339.04	55	-8	-94	-114	-235	7	342	166	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.220	1	Yes	0.717	0.146	0.87	Yes	1.00	**12.92**
		$U_{18} - L_{17}$			297.46	-280.99	51	-36	-144	-47	-195	-71	-427	72	0.535	0.308	0.85	Yes	0.294	0.169	0.47	Yes	0.647	0.346	1	Yes	0.595	0.184	0.78	Yes	1.00	**13.78**
		$U_{19} - L_{18}$			435.60	-84.14	15	-19	-85	14	-211	-120	-349	-330	0.783	0.210	1.00	Yes	0.431	0.115	0.55	Yes	0.193	0.193	0.39	Yes	0.178	0.109	0.29	Yes	1.00	**7.62**
		$U_{20} - L_{19}$			554.28	-----	-19	4	-135	78	200	56	-448	-81	0.727	0.270	1.00	Yes	0.439	0.149	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.69**

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: 3F1 **Condition:** As-Inspected

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

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

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

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

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	U$_1$ - U$_2$	-71.60	12.73	-66.38			0.90	1.24	14.17	-73.90	0.00	0.00	Vehicle	Vehicle	-----	-189.15	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	6.68	6.68
	U$_2$ - U$_3$	-90.76	25.68	-114.55			0.90	1.24	28.59	-127.53	0.00	0.00	Vehicle	Vehicle	-----	-283.77	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	-----	-----	3.72	3.72
	U$_3$ - U$_4$	-61.05	38.14	-122.64			0.90	1.24	42.46	-136.53	0.00	0.00	Vehicle	Vehicle	-----	-256.85	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	3.69	3.69
	U$_4$ - U$_5$	10.82	49.96	-117.96			0.90	1.24	55.61	-131.32	0.00	0.00	Vehicle	Vehicle	86.36	-156.66	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	11.87	11.87	4.39	4.39
	U$_5$ - U$_6$	12.98	50.22	-90.35			0.90	1.24	55.91	-100.58	0.00	0.00	Vehicle	Vehicle	89.56	-113.88	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	11.77	11.77	5.75	5.75
	U$_6$ - U$_7$	121.44	-59.88	-73.12			0.90	1.24	-66.67	-81.41	0.00	0.00	Vehicle	Vehicle	71.21	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	-----	-----	-----	-----
	U$_7$ - U$_8$	249.52	63.26	-24.33			0.90	1.24	70.43	-27.09	0.00	0.00	Vehicle	Vehicle	415.93	-----	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	-----	-----	7.88	7.88	-----	-----
	U$_8$ - U$_9$	376.85	0.88	-0.75			0.90	1.24	0.98	-0.83	0.00	0.00	Vehicle	Vehicle	491.18	-----	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	-----	-----	746.83	746.83	-----	-----
	U$_9$ - U$_{10}$	319.70	1.88	-14.36			0.90	1.20	2.02	-15.48	0.00	0.00	Vehicle	Vehicle	418.24	-----	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	-----	-----	306.26	306.26	-----	-----
	U$_{10}$ - U$_{11}$	128.80	65.67	-53.19			0.90	1.20	70.80	-57.35	0.00	0.00	Vehicle	Vehicle	259.48	-----	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	-----	-----	8.20	8.20	-----	-----
	U$_{10}$ - U$_{11}$	-70.81	58.13	-89.22			0.90	1.20	62.68	-96.19	0.00	0.00	Vehicle	Vehicle	-----	-217.11	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	-----	-----	5.47	5.47
	U$_{11}$ - U$_{12}$	-252.85	51.87	-120.22			0.90	1.20	55.92	-129.62	0.00	0.00	Vehicle	Vehicle	-----	-497.20	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	4.32	4.32
	U$_{12}$ - U$_{13}$	-391.81	43.69	-155.21			0.90	1.20	47.11	-167.34	0.00	0.00	Vehicle	Vehicle	-----	-726.89	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	-----	-----	4.46	4.46
	U$_{13}$ - U$_{14}$	-482.83	36.77	-172.88			0.90	1.20	39.65	-186.40	0.00	0.00	Vehicle	Vehicle	-----	-870.00	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	4.53	4.53
	U$_{14}$ - U$_{15}$	-484.28	37.36	-157.83			0.90	1.20	40.28	-170.17	0.00	0.00	Vehicle	Vehicle	-----	-850.79	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	-----	-----	4.96	4.96
	U$_{15}$ - U$_{16}$	-501.86	16.09	-136.24			0.90	1.20	17.35	-146.89	0.00	0.00	Vehicle	Vehicle	-----	-843.37	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	-----	-----	5.62	5.62
	U$_{16}$ - U$_{17}$	-467.82	-52.61	-124.99			0.90	1.20	-56.73	-134.76	0.00	0.00	Vehicle	Vehicle	-----	-783.35	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	-----	-----	6.38	6.38
	U$_{17}$ - U$_{18}$	-368.70	-107.33	-64.65			0.90	1.20	-69.71	-115.73	0.00	0.00	Vehicle	Vehicle	-----	-629.76	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	-----	-----	5.20	5.20
	U$_{18}$ - U$_{19}$	-251.42	-69.76	-35.23			0.90	1.20	-37.99	-75.22	0.00	0.00	Vehicle	Vehicle	-----	-424.63	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	-----	-----	5.66	5.66
	U$_{19}$ - U$_{20}$	-117.77	-36.77	-8.75			0.90	1.20	-9.43	-39.64	0.00	0.00	Vehicle	Vehicle	-----	-204.63	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	-----	-----	14.12	14.12
Structure 2	U$_1$ - U$_2$	-118.16	4.94	-38.90			0.90	1.18	5.26	-41.42	0.00	0.00	Vehicle	Vehicle	-----	-207.45	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	12.78	12.78
	U$_1$ - U$_2$	-239.45	11.32	-85.66			0.90	1.18	12.05	-91.21	0.00	0.00	Vehicle	Vehicle	-----	-429.85	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.05	6.05
	U$_2$ - U$_3$	-350.29	18.88	-123.43			0.90	1.18	20.10	-131.42	0.00	0.00	Vehicle	Vehicle	-----	-626.22	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	4.00	0.69	16.00	99.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.53	5.53
	U$_3$ - U$_4$	-448.96	17.23	-150.18			0.90	1.18	18.35	-159.89	0.00	0.00	Vehicle	Vehicle	-----	-791.51	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.58	5.58
	U$_4$ - U$_5$	-483.05	37.22	-175.41			0.90	1.18	39.95	-186.76	0.00	0.00	Vehicle	Vehicle	-----	-870.75	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	-----	-----	5.38	5.38
	U$_5$ - U$_6$	-485.65	47.46	-186.03			0.90	1.18	50.53	-198.06	0.00	0.00	Vehicle	Vehicle	-----	-888.82	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	-----	-----	5.06	5.06
	U$_6$ - U$_7$	-428.66	56.23	-168.30			0.90	1.18	59.86	-179.19	0.00	0.00	Vehicle	Vehicle	-----	-790.20	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	-----	-----	5.09	5.09
	U$_7$ - U$_8$	-428.18	56.36	-142.92			0.90	1.18	60.01	-152.16	0.00	0.00	Vehicle	Vehicle	-----	-754.44	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	-----	-----	6.00	6.00
	U$_8$ - U$_9$	-335.25	64.62	-134.14			0.90	1.18	68.80	-142.81	0.00	0.00	Vehicle	Vehicle	-----	-621.48	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	-----	-----	5.54	5.54
	U$_9$ - U$_{10}$	-200.15	69.90	-115.57			0.90	1.18	74.42	-123.04	0.00	0.00	Vehicle	Vehicle	-----	-420.15	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	-----	-----	5.58	5.58
	U$_{10}$ - U$_{11}$	-52.03	74.18	-70.93			0.90	1.18	78.98	-75.52	0.00	0.00	Vehicle	Vehicle	35.04	-165.82	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	12.19	12.19	9.50	9.50
	U$_{11}$ - U$_{12}$	107.09	-24.54	-48.73			0.90	1.18	-26.12	-51.88	0.00	0.00	Vehicle	Vehicle	105.25	-----	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	70.25	-28.60			0.90	1.18	74.80	-30.45	0.00	0.00	Vehicle	Vehicle	434.42	-----	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	-----	-----	11.76	11.76	-----	-----
	U$_{13}$ - U$_{14}$	391.99	-1.27	-1.79			0.90	1.18	-1.35	-1.91	0.00	0.00	Vehicle	Vehicle	507.82	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	-----	-----	-----	-----
	U$_{14}$ - U$_{15}$	439.40	11.05	-11.10			0.90	1.17	11.62	-11.68	0.00	0.00	Vehicle	Vehicle	588.33	-----	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	-----	-----	96.78	96.78	-----	-----
	U$_{15}$ - U$_{16}$	369.68	67.36	-23.47			0.90	1.17	70.87	-24.69	0.00	0.00	Vehicle	Vehicle	572.72	-----	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	-----	-----	12.74	12.74	-----	-----
	U$_{16}$ - U$_{17}$	271.42	65.93	-49.22			0.90	1.17	69.36	-51.79	0.00	0.00	Vehicle	Vehicle	443.02	-----	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	-----	-----	11.14	11.14	-----	-----
	U$_{17}$ - U$_{18}$	171.80	62.10	-75.01			0.90	1.17	65.33	-78.91	0.00	0.00	Vehicle	Vehicle	308.27	-----	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	-----	-----	9.10	9.10	-----	-----
	U$_{18}$ - U$_{19}$	72.84	57.27	-94.45			0.90	1.17	60.25	-99.37	0.00	0.00	Vehicle	Vehicle	173.01	-34.49	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	11.51	11.51	7.25	7.25
	U$_{19}$ - U$_{20}$	-8.04	51.02	-122.82			0.90	1.17	53.67	-129.21	0.00	0.00	Vehicle	Vehicle	59.32	-178.43	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	15.43	15.43	5.30	5.30
	U$_{20}$ - U$_{21}$	-60.07	23.86	-139.90			0.90	1.17	25.10	-147.18	0.00	0.00	Vehicle	Vehicle	-----	-269.43	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	-----	-----	5.28	5.28
	U$_{21}$ - U$_{22}$	-82.15	33.12	-142.72			0.90	1.17	34.85	-150.16	0.00	0.00	Vehicle	Vehicle	-----	-302.01	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	-----	-----	5.03	5.03
	U$_{22}$ - U$_{23}$	-82.37	34.15	-117.36			0.90	1.17	35.93	-123.48	0.00	0.00	Vehicle	Vehicle	-----	-267.61	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	-----	-----	6.11	6.11
	U$_{23}$ - U$_{24}$	-65.94	42.36	-120.68			0.90	1.17	44.57	-126.97	0.00	0.00	Vehicle	Vehicle	-----	-250.77	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	-----	-----	6.07	6.07
	U$_{24}$ - U$_{25}$	-11.08	50.52	-102.03			0.90	1.17	53.15	-96.82	0.00	0.00	Vehicle	Vehicle	45.72	-149.24	6.50	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	15.77	15.77	6.97	6.97
	U$_{25}$ - U$_{26}$	54.95	-57.46	-80.56			0.90	1.17	-60.46	-84.76	0.00	0.00	Vehicle	Vehicle	-----	-38.75	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	-----	-----	8.29	8.29
	U$_{26}$ - U$_{27}$	135.89	-44.99	-66.27			0.90	1.17	-47.33	-69.72	0.00	0.00	Vehicle	Vehicle	115.13	-----	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	-----	-----	-----	-----	6.65	6.65
	U$_{27}$ - U$_{28}$	216.69	-14.64	-31.68			0.90	1.17	-15.40	-33.33	0.00	0.00	Vehicle	Vehicle	261.67	-----	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	-----	-----	-----	-----	7.96	7.96
	U$_{28}$ - U$_{29}$	293.53	38.34	-15.56			0.90	1.17	40.34	-16.37	0.00	0.00	Vehicle	Vehicle	434.04	-----	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	-----	-----	24.27	24.27	-----	-----
	U$_{29}$ - U$_{30}$	357.86	6.48	-16.63			0.90	1.17	6.82	-17.49	0.00	0.00	Vehicle	Vehicle	474.08	-----	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	-----	-----	176.91	176.91	-----	-----
	U$_{30}$ - U$_{31}$	339.12	16.14	-6.22			0.90	1.18	17.19	-6.63	0.00	0.00	Vehicle	Vehicle	463.20	-----	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	-----	-----	71.28	71.28	-----	-----
	U$_{31}$ - U$_{32}$	251.34	73.91	-29.33			0.90	1.18	78.69	-31.22	0.00	0.00	Vehicle	Vehicle	429.04	-----	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	-----	-----	11.28	11.28	-----	-----

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: 3F1 — 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
Structure 1	L_0- L_1	4.73	-1.73	-3.20			0.90	1.24	-1.92	-3.56	0.00	0.00	Vehicle	Vehicle	3.64	-----	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	-14.33	60.56			0.90	1.24	67.42	-15.95	0.00	0.00	Vehicle	Vehicle	184.09	-----	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	-----	-----	**6.35**	**6.35**	-----	-----
	L_2 - L_3	97.64	-27.20	100.33			0.90	1.24	111.70	-30.28	0.00	0.00	Vehicle	Vehicle	272.13	-----	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	-----	-----	**5.11**	**5.11**	-----	-----
	L_3 - L_4	66.79	-39.59	91.70			0.90	1.24	102.09	-44.07	0.00	0.00	Vehicle	Vehicle	219.54	-----	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**5.90**	**5.90**	-----	-----
	L_4 - L_5	-108.59	34.95	89.42			0.90	1.24	99.55	38.91	0.00	0.00	Vehicle	Vehicle	-----	-90.58	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	-----	-----
	L_5 - L_6	-237.42	-65.95	47.49			0.90	1.24	52.88	-73.42	0.00	0.00	Vehicle	Vehicle	-----	-404.09	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	-----	-----	**5.75**	**5.75**
	L_6 - L_7	-362.38	-24.03	16.68			0.90	1.24	18.56	-26.75	0.00	0.00	Vehicle	Vehicle	-----	-505.88	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	-----	-----	**21.77**	**21.77**
	L_7 - L_8	-478.62	-59.59	-0.03			0.90	1.24	-0.04	-66.35	0.00	0.00	Vehicle	Vehicle	-----	-708.46	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**10.87**	**10.87**
	L_8 - L_9	-476.97	-58.18	-26.78			0.90	1.20	-28.88	-62.73	0.00	0.00	Vehicle	Vehicle	-----	-701.61	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**11.52**	**11.52**
	L_9 - L_{10}	-301.47	-65.49	8.64			0.90	1.20	9.32	-70.61	0.00	0.00	Vehicle	Vehicle	-----	-483.69	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	-----	-----	**9.12**	**9.12**
	L_{10} - L_{11}	-104.56	-57.95	21.60			0.90	1.20	23.28	-62.49	0.00	0.00	Vehicle	Vehicle	-----	-217.16	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	-----	-----	**6.33**	**6.33**
	L_{11} - L_{12}	96.98	-51.35	64.50			0.90	1.20	69.54	-55.36	0.00	0.00	Vehicle	Vehicle	216.48	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**7.15**	**7.15**	-----	-----
	L_{12} - L_{13}	268.60	-44.45	101.96			0.90	1.20	109.94	-47.92	0.00	0.00	Vehicle	Vehicle	492.10	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**6.42**	**6.42**	-----	-----
	L_{13} - L_{14}	405.49	-37.34	113.45			0.90	1.20	122.32	-40.26	0.00	0.00	Vehicle	Vehicle	686.16	-----	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	-----	-----	**7.38**	**7.38**	-----	-----
	L_{14} - L_{15}	502.59	76.12	135.29			0.90	1.20	145.87	82.08	0.00	0.00	Vehicle	Vehicle	843.00	-----	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	-----	-----	**7.35**	**7.35**	-----	-----
	L_{15} - L_{16}	469.06	-16.44	128.10			0.90	1.20	138.11	-17.72	0.00	0.00	Vehicle	Vehicle	789.33	-----	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	-----	-----	**8.00**	**8.00**	-----	-----
	L_{16} - L_{17}	365.26	56.65	95.37			0.90	1.20	102.83	61.08	0.00	0.00	Vehicle	Vehicle	608.51	-----	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	-----	-----	**8.28**	**8.28**	-----	-----
	L_{17} - L_{18}	248.52	24.84	51.09			0.90	1.20	55.08	26.78	0.00	0.00	Vehicle	Vehicle	394.68	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**11.53**	**11.53**	-----	-----
	L_{18} - L_{19}	112.87	-1.73	22.71			0.90	1.20	24.48	-1.86	0.00	0.00	Vehicle	Vehicle	178.56	-----	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	-----	-----	**15.92**	**15.92**	-----	-----
	L_{19} - L_{20}	-14.36	-25.94	12.59			0.90	1.20	13.57	-27.97	0.00	0.00	Vehicle	Vehicle	-----	-55.03	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	-----	-----	**14.63**	**14.63**
Structure 2	L_0- L_1	15.25	0.55	-4.04			0.90	1.18	0.58	-4.30	0.00	0.00	Vehicle	Vehicle	20.58	-----	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	-----	-----	6.32	-----	-----	6.32	-----	-----	**1057.45**	**1057.45**	-----	-----
	L_1 - L_2	136.09	-4.57	32.82			0.90	1.18	34.94	-4.86	0.00	0.00	Vehicle	Vehicle	222.34	-----	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	-----	-----	**14.23**	**14.23**	-----	-----
	L_2 - L_3	262.77	-9.77	68.36			0.90	1.18	72.79	-10.40	0.00	0.00	Vehicle	Vehicle	436.23	-----	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	-----	-----	**9.62**	**9.62**	-----	-----
	L_3 - L_4	373.14	-12.91	106.13			0.90	1.18	113.00	-13.74	0.00	0.00	Vehicle	Vehicle	631.98	-----	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	-----	-----	**8.17**	**8.17**	-----	-----
	L_4 - L_5	456.57	-26.26	139.88			0.90	1.18	148.93	-27.95	0.00	0.00	Vehicle	Vehicle	787.16	-----	11.08	65.00	53.1000	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	-----	-----	**8.01**	**8.01**	-----	-----
	L_5 - L_6	489.37	-35.64	161.78			0.90	1.18	172.25	-37.95	0.00	0.00	Vehicle	Vehicle	860.10	-----	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	-----	-----	**7.57**	**7.57**	-----	-----
	L_6 - L_7	479.01	-45.24	156.73			0.90	1.18	166.87	-48.16	0.00	0.00	Vehicle	Vehicle	839.64	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**8.02**	**8.02**	-----	-----
	L_7 - L_8	330.07	-62.04	146.22			0.90	1.18	155.68	-66.05	0.00	0.00	Vehicle	Vehicle	631.47	-----	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	-----	-----	**6.50**	**6.50**	-----	-----
	L_8 - L_9	188.98	77.19	119.83			0.90	1.18	127.58	82.18	0.00	0.00	Vehicle	Vehicle	411.53	-----	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	-----	-----	**7.14**	**7.14**	-----	-----
	L_9 - L_{10}	39.77	-71.45	83.31			0.90	1.18	88.70	-76.07	0.00	0.00	Vehicle	Vehicle	167.02	-47.19	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	**9.27**	**9.27**	**10.09**	**10.09**
	L_{10} - L_{11}	-127.39	21.21	56.55			0.90	1.18	60.21	22.58	0.00	0.00	Vehicle	Vehicle	-----	-136.24	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	-32.96	31.86			0.90	1.18	33.92	-35.09	0.00	0.00	Vehicle	Vehicle	-----	-413.05	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**18.47**	**18.47**
	L_{12} - L_{13}	-426.73	-65.40	5.23			0.90	1.18	5.57	-69.63	0.00	0.00	Vehicle	Vehicle	-----	-645.26	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**12.19**	**12.19**
	L_{13} - L_{14}	-536.42	-46.56	8.75			0.90	1.18	9.32	-49.57	0.00	0.00	Vehicle	Vehicle	-----	-761.80	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	-----	-----	**19.74**	**19.74**
	L_{14} - L_{15}	-537.75	-60.01	-23.22			0.90	1.17	-24.43	-63.14	0.00	0.00	Vehicle	Vehicle	-----	-781.16	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	-----	-----	**15.48**	**15.48**
	L_{15} - L_{16}	-475.65	-72.98	-4.34			0.90	1.17	-4.56	-76.66	0.00	0.00	Vehicle	Vehicle	-----	-717.99	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	-----	-----	**10.43**	**10.43**
	L_{16} - L_{17}	-384.35	-67.98	-4.89			0.90	1.17	-5.15	-71.52	0.00	0.00	Vehicle	Vehicle	-----	-592.63	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**9.27**	**9.27**
	L_{17} - L_{18}	-281.86	-65.29	20.79			0.90	1.17	21.87	-68.69	0.00	0.00	Vehicle	Vehicle	-----	-455.71	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	-----	-----	**6.49**	**6.49**
	L_{18} - L_{19}	-175.17	-59.56	47.62			0.90	1.17	50.11	-62.66	0.00	0.00	Vehicle	Vehicle	-----	-309.17	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_{19} - L_{20}	-76.53	-53.94	78.91			0.90	1.17	83.02	-56.75	0.00	0.00	Vehicle	Vehicle	8.43	-173.27	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**9.10**	**9.10**	**8.76**	**8.76**
	L_{20} - L_{21}	4.38	-45.83	81.93			0.90	1.17	86.19	-48.21	0.00	0.00	Vehicle	Vehicle	117.74	-56.99	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	**10.99**	**10.99**	**16.76**	**16.76**
	L_{21} - L_{22}	55.94	-8.99	102.55			0.90	1.17	107.90	-9.46	0.00	0.00	Vehicle	Vehicle	212.99	-----	6.75	37.50	30.7500	1237.50	131.71	10.6224	6.1479	15.55	32.77	-1044.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**8.30**	**8.30**	-----	-----
	L_{22} - L_{23}	62.99	-24.23	110.26			0.90	1.17	116.01	-25.49	0.00	0.00	Vehicle	Vehicle	232.69	-----	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	-----	-----	**7.66**	**7.66**	-----	-----
	L_{23} - L_{24}	15.54	-32.35	99.79			0.90	1.17	104.99	-34.04	0.00	0.00	Vehicle	Vehicle	156.69	-24.05	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	**8.92**	**8.92**	**24.06**	**24.06**
	L_{24} - L_{25}	-56.00	-22.26	68.38			0.90	1.17	71.94	-23.42	0.00	0.00	Vehicle	Vehicle	20.72	-42.36	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	**10.22**	**10.22**	-----	-----
	L_{25} - L_{26}	-136.37	-25.39	54.21			0.90	1.17	57.03	-26.71	0.00	0.00	Vehicle	Vehicle	-----	-212.00	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	-----	-----	**16.37**	**16.37**
	L_{26} - L_{27}	-217.73	-27.32	30.64			0.90	1.17	32.24	-28.74	0.00	0.00	Vehicle	Vehicle	-----	-320.41	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**17.74**	**17.74**
	L_{27} - L_{28}	-296.25	-77.94	16.68			0.90	1.17	17.54	-82.00	0.00	0.00	Vehicle	Vehicle	-----	-491.74	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	-----	-----	**9.16**	**9.16**
	L_{28} - L_{29}	-364.18	-108.94	2.66			0.90	1.17	2.80	-114.62	0.00	0.00	Vehicle	Vehicle	-----	-622.44	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**7.95**	**7.95**
	L_{29} - L_{30}	-418.23	-68.29	31.77			0.90	1.17	33.43	-71.85	0.00	0.00	Vehicle	Vehicle	-----	-637.10	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	-----	-----	**15.27**	**15.27**
	L_{30} - L_{31}	-350.38	-63.83	-12.23			0.90	1.18	-13.03	-67.95	0.00	0.00	Vehicle	Vehicle	-----	-543.83	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	-----	-----	**17.13**	**17.13**
	L_{31} - L_{32}	-275.46	-32.70	-6.49			0.90	1.18	-6.91	-34.82	0.00	0.00	Vehicle	Vehicle	-----	-403.35	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	-----	-----	**28.40**	**28.40**
	L_{32} - L_{33}	-179.08	-59.15	-2.29			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: 3F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

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

E = 29000.0 ksi

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

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

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

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Verticals	Structure 1																																													
	U$_0$ - L$_0$	-77.19	-74.15	11.38			0.90	1.24	12.67	-82.55	0.00	0.00	Vehicle	Vehicle	------	-207.66	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	------	------	------	------	------	2.83	2.83
	U$_1$ - L$_1$	-33.88	-50.19	10.26			0.90	1.24	11.42	-55.88	0.00	0.00	Vehicle	Vehicle	------	-116.68	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	------	------	------	------	------	5.69	5.69
	U$_2$ - L$_2$	10.43	-30.89	9.67			0.90	1.24	10.76	-34.39	0.00	0.00	Vehicle	Vehicle	27.55	-31.14	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	------	------	------	38.78	38.78	10.54	10.54
	U$_3$ - L$_3$	44.39	-23.03	9.47			0.90	1.24	10.54	-25.64	0.00	0.00	Vehicle	Vehicle	71.40	------	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	------	------	------	------	------	36.37	36.37	------	------
	U$_4$ - L$_4$	-16.67	0.20	-16.68			0.90	1.24	0.22	-18.57	0.00	0.00	Vehicle	Vehicle	------	-45.81	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	17.94	17.94
	U$_5$ - L$_5$	-109.51	4.20	-61.47			0.90	1.24	4.68	-68.44	0.00	0.00	Vehicle	Vehicle	------	-231.32	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	------	------	------	------	------	4.61	4.61
	U$_6$ - L$_6$	-143.60	-0.68	-75.20			0.90	1.24	-0.76	-83.72	0.00	0.00	Vehicle	Vehicle	------	-295.52	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	------	------	------	------	------	4.03	4.03
	U$_7$ - L$_7$	-142.61	2.04	-76.89			0.90	1.24	2.27	-85.60	0.00	0.00	Vehicle	Vehicle	------	-296.68	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	------	------	------	------	------	3.39	3.39
	U$_8$ - L$_8$	-391.97	-68.79	-81.47			0.90	1.24	-76.58	-90.70	0.00	0.00	Vehicle	Vehicle	------	-627.46	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	------	------	------	------	------	7.43	7.43
	U$_9$ - L$_9$	-223.13	-64.84	7.31			0.90	1.20	7.88	-69.91	0.00	0.00	Vehicle	Vehicle	------	-380.96	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	------	------	------	------	------	5.80	5.80
	U$_{10}$ - L$_{10}$	-225.77	-65.99	-0.82			0.90	1.20	-0.88	-71.15	0.00	0.00	Vehicle	Vehicle	------	-386.00	2.76	34.69	31.9300	1144.77	131.71	10.7083	2.3304	41.36	31.37	-925.09	16.16	0.83	11.50	0.80	------	------	16.16	------	------	19.50	45.00	Pass	7.23	12.00	Pass	------	------	------	------	------	6.83	6.83
	U$_{11}$ - L$_{11}$	-198.79	-58.87	5.98			0.90	1.20	6.45	-63.48	0.00	0.00	Vehicle	Vehicle	------	-340.94	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	------	------	------	------	------	6.97	6.97
	U$_{12}$ - L$_{12}$	-154.77	-53.96	7.36			0.90	1.20	7.94	-58.18	0.00	0.00	Vehicle	Vehicle	------	-276.84	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	------	------	------	------	------	6.49	6.49
	U$_{13}$ - L$_{13}$	-109.04	-49.33	15.25			0.90	1.20	16.45	-53.18	0.00	0.00	Vehicle	Vehicle	------	-210.89	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	------	------	5.10	5.10
	U$_{14}$ - L$_{14}$	-12.30	0.08	-10.58			0.90	1.20	0.08	-11.41	0.00	0.00	Vehicle	Vehicle	------	-30.83	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	------	------	------	------	------	29.14	29.14
	U$_{15}$ - L$_{15}$	-5.62	21.59	-43.17			0.90	1.20	23.28	-46.55	0.00	0.00	Vehicle	Vehicle	22.95	-67.82	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	------	------	------	18.62	18.62	7.25	7.25
	U$_{16}$ - L$_{16}$	-51.74	13.51	-50.27			0.90	1.20	14.57	-54.20	0.00	0.00	Vehicle	Vehicle	------	-137.71	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	------	------	------	------	------	5.34	5.34
	U$_{17}$ - L$_{17}$	-127.31	8.57	-64.47			0.90	1.20	9.24	-69.51	0.00	0.00	Vehicle	Vehicle	------	-255.86	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	------	------	------	------	------	4.09	4.09
	U$_{18}$ - L$_{18}$	-159.89	7.91	-77.22			0.90	1.20	8.52	-83.26	0.00	0.00	Vehicle	Vehicle	------	-316.09	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	------	------	------	------	------	4.39	4.39
	U$_{19}$ - L$_{19}$	-191.17	6.68	-79.42			0.90	1.20	7.20	-85.63	0.00	0.00	Vehicle	Vehicle	------	-359.84	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	4.96	4.96
	U$_{20}$ - L$_{20}$	-211.94	6.69	-78.97			0.90	1.20	7.22	-85.15	0.00	0.00	Vehicle	Vehicle	------	-386.22	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	------	------	------	------	------	4.04	4.04
	Structure 2																																													
	U$_0$ - L$_0$	-206.53	-77.39	8.40			0.90	1.18	8.94	-82.40	0.00	0.00	Vehicle	Vehicle	------	-375.61	0.00	31.81	31.8100	1049.73	131.71	19.1510	2.8323	60.85	29.48	-797.03	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	4.93	4.93
	U$_1$ - L$_1$	-188.72	-67.37	8.63			0.90	1.18	9.19	-71.73	0.00	0.00	Vehicle	Vehicle	------	-338.58	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	6.74	6.74
	U$_2$ - L$_2$	-155.84	-65.22	9.10			0.90	1.18	9.69	-69.44	0.00	0.00	Vehicle	Vehicle	------	-292.87	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	------	------	------	------	------	6.03	6.03
	U$_3$ - L$_3$	-134.53	-56.80	10.31			0.90	1.18	10.98	-60.48	0.00	0.00	Vehicle	Vehicle	------	-253.50	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	------	------	------	------	------	5.25	5.25
	U$_4$ - L$_4$	-64.47	-47.14	12.81			0.90	1.18	13.64	-50.19	0.00	0.00	Vehicle	Vehicle	------	-149.05	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	------	------	------	------	------	5.47	5.47
	U$_5$ - L$_5$	-19.94	-43.31	21.69			0.90	1.18	23.09	-46.11	0.00	0.00	Vehicle	Vehicle	4.10	-85.86	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	19.39	19.39	6.95	6.95
	U$_6$ - L$_6$	40.07	-27.35	30.60			0.90	1.18	32.58	-29.12	0.00	0.00	Vehicle	Vehicle	94.45	------	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	------	------	6.56	------	------	------	------	------	11.90	11.90	------	------
	U$_7$ - L$_7$	-26.03	-5.10	-5.21			0.90	1.18	-5.43	-5.54	0.00	0.00	Vehicle	Vehicle	------	-41.05	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	------	------	------	------	------	56.73	56.73
	U$_8$ - L$_8$	-125.22	14.91	-53.71			0.90	1.18	15.87	-57.19	0.00	0.00	Vehicle	Vehicle	------	-237.13	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	------	------	15.75	------	------	36.00	45.00	Pass	8.89	12.00	Pass	------	------	------	------	------	7.09	7.09
	U$_9$ - L$_9$	-174.50	6.84	-64.75			0.90	1.18	7.28	-68.94	0.00	0.00	Vehicle	Vehicle	------	-316.46	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	7.50	7.50
	U$_{10}$ - L$_{10}$	-202.62	-0.47	-75.49			0.90	1.18	-0.50	-80.38	0.00	0.00	Vehicle	Vehicle	------	-367.90	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	------	------	------	------	------	7.17	7.17
	U$_{11}$ - L$_{11}$	-229.48	2.01	-80.90			0.90	1.18	2.14	-86.14	0.00	0.00	Vehicle	Vehicle	------	-410.30	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	------	------	------	------	------	6.21	6.21
	U$_{12}$ - L$_{12}$	-250.80	1.52	-81.97			0.90	1.18	1.61	-87.27	0.00	0.00	Vehicle	Vehicle	------	-439.49	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	------	------	16.48	------	------	18.26	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	6.31	6.31
	U$_{13}$ - L$_{13}$	-223.27	8.05	-83.31			0.90	1.18	8.57	-88.70	0.00	0.00	Vehicle	Vehicle	------	-405.57	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	------	------	------	------	------	5.26	5.26
	U$_{14}$ - L$_{14}$	-343.24	-67.73	-72.75			0.90	1.18	-72.11	-77.45	0.00	0.00	Vehicle	Vehicle	------	-546.90	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	------	------	------	------	------	9.15	9.15
	U$_{15}$ - L$_{15}$	-123.12	-68.57	8.29			0.90	1.17	8.73	-72.14	0.00	0.00	Vehicle	Vehicle	------	-253.84	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	7.86	7.86
	U$_{16}$ - L$_{16}$	-156.68	-65.38	6.33			0.90	1.17	6.66	-68.79	0.00	0.00	Vehicle	Vehicle	------	-293.11	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	------	------	------	------	------	7.41	7.41
	U$_{17}$ - L$_{17}$	-147.89	-68.24	6.27			0.90	1.17	6.59	-71.79	0.00	0.00	Vehicle	Vehicle	------	-285.59	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	6.62	6.62
	U$_{18}$ - L$_{18}$	-142.21	-60.07	7.87			0.90	1.17	8.28	-63.20	0.00	0.00	Vehicle	Vehicle	------	-267.04	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	------	------	------	------	------	6.88	6.88
	U$_{19}$ - L$_{19}$	-111.47	-59.32	8.80			0.90	1.17	9.26	-62.41	0.00	0.00	Vehicle	Vehicle	------	-226.04	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	------	------	15.75	------	------	31.50	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	6.41	6.41
	U$_{20}$ - L$_{20}$	-76.56	-52.19	15.69			0.90	1.17	16.51	-54.91	0.00	0.00	Vehicle	Vehicle	------	-170.91	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	------	------	------	------	------	5.44	5.44
	U$_{21}$ - L$_{21}$	-44.33	-40.50	19.23			0.90	1.17	20.23	-42.61	0.00	0.00	Vehicle	Vehicle	------	-113.02	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	6.95	6.95
	U$_{22}$ - L$_{22}$	-21.25	-4.32	-4.28			0.90	1.17	-4.50	-4.54	0.00	0.00	Vehicle	Vehicle	------	-33.53	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	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	70.60	70.60
	U$_{23}$ - L$_{23}$	-39.04	21.81	-42.98			0.90	1.17	22.95	-45.22	0.00	0.00	Vehicle	Vehicle	------	-109.53	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	------	------	------	------	------	6.67	6.67
	U$_{24}$ - L$_{24}$	-74.80	16.59	-50.39			0.90	1.17	17.45	-53.01	0.00	0.00	Vehicle	Vehicle	------	-166.16	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	------	------	------	------	------	5.67	5.67
	U$_{25}$ - L$_{25}$	-103.21	10.78	-66.19			0.90	1.17	11.34	-69.64	0.00	0.00	Vehicle	Vehicle	------	-224.70	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	------	------	15.75	------	------	31.50	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	5.86	5.86
	U$_{26}$ - L$_{26}$	-120.15	10.17	-70.12			0.90	1.17	10.70	-73.77	0.00	0.00	Vehicle	Vehicle	------	-252.10	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$_{27}$	-123.87	8.40	-72.95			0.90	1.17	8.83	-76.75	0.00	0.00	Vehicle	Vehicle	------	-260.81	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	6.51	6.51
	U$_{28}$ - L$_{28}$	-135.49	7.64	-82.21			0.90	1.17	8.04	-86.49	0.00	0.00	Vehicle	Vehicle	------	-288.58	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	6.13	6.13
	U$_{29}$ - L$_{29}$	-116.90	4.47	-77.03			0.90	1.17	4.70	-81.04	0.00	0.00	Vehicle	Vehicle	------	-257.31	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	------	------	------	------	------	7.07	7.07
	U$_{30}$ - L$_{30}$	-261.40	-62.72	-65.31			0.90	1.18	-66.78	-69.54	0.00	0.00	Vehicle	Vehicle	------	-430.22	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	------	------	------	------	------	11.10	11.10
	U$_{31}$ - L$_{31}$	-156.06	-64.00	10.51			0.90	1.18	11.19	-68.14	0.00	0.00	Vehicle	Vehicle	------	-291.45	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	------	------	16.32	------	------	20.13	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	7.84	7.84
	U$_{32}$ - L$_{32}$	-185.16	-71.96	7.37			0.90	1.18	7.85	-76.62	0.00	0.00	Vehicle	Vehicle	------	-340.31	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

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 3F1 — 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$_2$ - L$_1$	87.39	67.94	-15.57			0.90	1.24	75.63	-17.33	0.00	0.00	Vehicle	Vehicle	211.93	-----	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	-----	-----	-----	-----	-----	**6.60**	**6.60**	-----	-----
		U$_3$ - L$_2$	23.29	52.04	0.44			0.90	1.24	57.93	0.49	0.00	0.00	Vehicle	Vehicle	105.59	-----	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	-----	-----	-----	-----	-----	**6.98**	**6.98**	-----	-----
		U$_3$ - L$_3$	-37.87	38.91	-15.89			0.90	1.24	43.32	-17.69	0.00	0.00	Vehicle	Vehicle	7.08	-72.23	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	-----	-----	-----	**10.75**	**10.75**	**16.75**	**16.75**
		U$_4$ - L$_4$	-92.23	-15.06	-44.53			0.90	1.24	-16.76	-49.58	0.00	0.00	Vehicle	Vehicle	-----	-184.35	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	-----	-----	-----	-----	-----	**4.92**	**4.92**
		U$_4$ - L$_5$	143.29	50.68	-12.50			0.90	1.24	56.42	-13.92	0.00	0.00	Vehicle	Vehicle	259.62	-----	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	-----	-----	-----	-----	-----	**6.68**	**6.68**	-----	-----
		U$_5$ - L$_5$	177.89	75.97	-1.97			0.90	1.24	84.58	-2.19	0.00	0.00	Vehicle	Vehicle	341.21	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.59**	**5.59**	-----	-----
		U$_5$ - L$_6$	184.40	93.36	-0.92			0.90	1.24	103.93	-1.02	0.00	0.00	Vehicle	Vehicle	374.84	-----	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	-----	-----	-----	-----	-----	**4.49**	**4.49**	-----	-----
		U$_6$ - L$_7$	179.98	85.89	-1.27			0.90	1.24	95.63	-1.42	0.00	0.00	Vehicle	Vehicle	358.29	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.92**	**4.92**	-----	-----
		U$_8$ - L$_9$	268.90	72.10	-8.60			0.90	1.20	77.74	-9.27	0.00	0.00	Vehicle	Vehicle	450.63	-----	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	-----	-----	-----	-----	-----	**8.92**	**8.92**	-----	-----
		U$_9$ - L$_{10}$	278.76	77.87	-7.42			0.90	1.20	83.96	-8.00	0.00	0.00	Vehicle	Vehicle	471.53	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**8.14**	**8.14**	-----	-----
		U$_{10}$ - L$_{11}$	284.98	75.17	-7.48			0.90	1.20	81.05	-8.06	0.00	0.00	Vehicle	Vehicle	475.84	-----	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	-----	-----	-----	-----	-----	**7.72**	**7.72**	-----	-----
		U$_{11}$ - L$_{12}$	250.55	74.49	-8.13			0.90	1.20	80.31	-8.77	0.00	0.00	Vehicle	Vehicle	430.12	-----	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	-----	-----	-----	-----	-----	**6.56**	**6.56**	-----	-----
		U$_{12}$ - L$_{13}$	189.62	69.95	-20.98			0.90	1.20	75.42	-22.62	0.00	0.00	Vehicle	Vehicle	344.55	-----	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	-----	-----	-----	-----	-----	**5.85**	**5.85**	-----	-----
		U$_{13}$ - L$_{14}$	123.30	52.73	-27.78			0.90	1.20	56.85	-29.95	0.00	0.00	Vehicle	Vehicle	234.19	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.35**	**5.35**	-----	-----
		U$_{14}$ - L$_{14}$	-24.40	33.16	-38.24			0.90	1.20	35.75	-41.23	0.00	0.00	Vehicle	Vehicle	14.76	-85.33	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	-----	-----	-----	**12.64**	**12.64**	**7.37**	**7.37**
		U$_{15}$ - L$_{15}$	48.54	59.16	-26.14			0.90	1.20	63.78	-28.18	0.00	0.00	Vehicle	Vehicle	146.02	-----	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	-----	-----	-----	-----	-----	**5.94**	**5.94**	-----	-----
		U$_{15}$ - L$_{16}$	146.57	75.18	-5.76			0.90	1.20	81.06	-6.21	0.00	0.00	Vehicle	Vehicle	295.92	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**4.66**	**4.66**	-----	-----
		U$_{16}$ - L$_{17}$	182.43	80.02	-10.09			0.90	1.20	86.28	-10.88	0.00	0.00	Vehicle	Vehicle	349.33	-----	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	-----	-----	-----	-----	-----	**5.43**	**5.43**	-----	-----
		U$_{17}$ - L$_{18}$	223.79	88.51	-8.44			0.90	1.20	95.43	-9.10	0.00	0.00	Vehicle	Vehicle	414.99	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**5.10**	**5.10**	-----	-----
		U$_{20}$ - L$_{19}$	232.63	77.67	-7.06			0.90	1.20	83.75	-7.61	0.00	0.00	Vehicle	Vehicle	411.30	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**5.70**	**5.70**	-----	-----
	Structure 2	U$_2$ - L$_1$	213.47	65.93	-8.97			0.90	1.18	70.20	-9.55	0.00	0.00	Vehicle	Vehicle	368.76	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.04**	**8.04**	-----	-----
		U$_3$ - L$_2$	200.39	74.71	-10.53			0.90	1.18	79.54	-11.21	0.00	0.00	Vehicle	Vehicle	363.91	-----	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	-----	-----	-----	-----	-----	**7.26**	**7.26**	-----	-----
		U$_3$ - L$_3$	172.76	73.84	-11.78			0.90	1.18	78.62	-12.54	0.00	0.00	Vehicle	Vehicle	326.79	-----	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	-----	-----	-----	-----	-----	**6.08**	**6.08**	-----	-----
		U$_3$ - L$_4$	147.11	67.73	-10.54			0.90	1.18	72.11	-11.22	0.00	0.00	Vehicle	Vehicle	284.99	-----	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	-----	-----	-----	-----	-----	**5.96**	**5.96**	-----	-----
		U$_5$ - L$_5$	49.07	57.08	-26.06			0.90	1.18	60.77	-27.75	0.00	0.00	Vehicle	Vehicle	142.79	-----	0.00	16.85	16.8486	556.00	131.71	13.3994	1.9682	61.41	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**6.23**	**6.23**	-----	-----
		U$_5$ - L$_6$	2.97	46.22	-33.57			0.90	1.18	49.21	-35.74	0.00	0.00	Vehicle	Vehicle	67.83	-42.60	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	-----	-----	-----	**8.63**	**8.63**	**9.20**	**9.20**
		U$_6$ - L$_7$	-85.72	27.51	-48.71			0.90	1.18	29.29	-51.86	0.00	0.00	Vehicle	Vehicle	-----	-178.85	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	-----	-----	-----	-----	-----	**5.27**	**5.27**
		U$_7$ - L$_7$	140.27	58.05	-26.24			0.90	1.18	61.80	-27.94	0.00	0.00	Vehicle	Vehicle	262.69	-----	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	-----	-----	-----	-----	-----	**7.49**	**7.49**	-----	-----
		U$_8$ - L$_8$	204.17	77.30	-10.33			0.90	1.18	82.30	-11.00	0.00	0.00	Vehicle	Vehicle	372.41	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.15**	**6.15**	-----	-----
		U$_{10}$ - L$_9$	234.82	79.08	-6.19			0.90	1.18	84.20	-6.59	0.00	0.00	Vehicle	Vehicle	414.73	-----	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	-----	-----	-----	-----	-----	**6.45**	**6.45**	-----	-----
		U$_{11}$ - L$_{10}$	263.04	92.53	1.18			0.90	1.18	98.52	1.25	0.00	0.00	Vehicle	Vehicle	470.02	-----	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	-----	-----	-----	-----	-----	**5.90**	**5.90**	-----	-----
		U$_{11}$ - L$_{11}$	273.97	88.76	1.41			0.90	1.18	94.50	1.50	0.00	0.00	Vehicle	Vehicle	479.01	-----	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	-----	-----	-----	-----	-----	**6.04**	**6.04**	-----	-----
		U$_{12}$ - L$_{12}$	254.88	86.50	-8.79			0.90	1.18	92.09	-9.36	0.00	0.00	Vehicle	Vehicle	451.06	-----	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	-----	-----	-----	-----	-----	**5.68**	**5.68**	-----	-----
		U$_{13}$ - L$_{13}$	217.66	78.88	-9.28			0.90	1.18	83.98	-9.88	0.00	0.00	Vehicle	Vehicle	392.13	-----	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	-----	-----	-----	-----	-----	**6.67**	**6.67**	-----	-----
		U$_{13}$ - L$_{15}$	110.03	62.79	-8.80			0.90	1.17	66.07	-9.26	0.00	0.00	Vehicle	Vehicle	228.92	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.18**	**8.18**	-----	-----
		U$_{14}$ - L$_{16}$	132.26	70.36	-9.30			0.90	1.17	74.05	-9.79	0.00	0.00	Vehicle	Vehicle	268.20	-----	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	-----	-----	-----	-----	-----	**7.00**	**7.00**	-----	-----
		U$_{15}$ - L$_{17}$	172.87	73.04	-6.58			0.90	1.17	76.85	-6.92	0.00	0.00	Vehicle	Vehicle	324.63	-----	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	-----	-----	-----	-----	-----	**6.99**	**6.99**	-----	-----
		U$_{17}$ - L$_{18}$	160.16	75.66	-7.83			0.90	1.17	79.60	-8.24	0.00	0.00	Vehicle	Vehicle	311.69	-----	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	-----	-----	-----	-----	-----	**6.16**	**6.16**	-----	-----
		U$_{18}$ - L$_{19}$	152.33	70.91	-9.35			0.90	1.17	74.61	-9.84	0.00	0.00	Vehicle	Vehicle	295.01	-----	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	-----	-----	-----	-----	-----	**6.68**	**6.68**	-----	-----
		U$_{19}$ - L$_{20}$	120.67	69.90	-16.30			0.90	1.17	73.54	-17.15	0.00	0.00	Vehicle	Vehicle	252.47	-----	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	-----	-----	-----	-----	-----	**6.56**	**6.56**	-----	-----
		U$_{20}$ - L$_{21}$	76.10	54.60	-23.60			0.90	1.17	57.44	-24.83	0.00	0.00	Vehicle	Vehicle	173.60	-----	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	-----	-----	-----	-----	-----	**6.12**	**6.12**	-----	-----
		U$_{21}$ - L$_{22}$	31.50	40.68	-32.18			0.90	1.17	42.80	-33.86	0.00	0.00	Vehicle	Vehicle	96.59	-3.07	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	-----	-----	-----	**9.26**	**9.26**	**10.55**	**10.55**
		U$_{22}$ - L$_{22}$	24.27	43.49	-38.06			0.90	1.17	45.75	-40.04	0.00	0.00	Vehicle	Vehicle	91.02	-20.51	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**8.82**	**8.82**	**8.67**	**8.67**
		U$_{23}$ - L$_{23}$	72.21	58.48	-23.37			0.90	1.17	61.53	-24.59	0.00	0.00	Vehicle	Vehicle	173.86	-----	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	-----	-----	-----	-----	-----	**5.78**	**5.78**	-----	-----
		U$_{24}$ - L$_{24}$	112.05	68.84	-14.99			0.90	1.17	72.43	-15.77	0.00	0.00	Vehicle	Vehicle	239.82	-----	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	-----	-----	-----	-----	-----	**6.78**	**6.78**	-----	-----
		U$_{25}$ - L$_{25}$	127.76	81.05	-9.39			0.90	1.17	85.28	-9.88	0.00	0.00	Vehicle	Vehicle	276.96	-----	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	-----	-----	-----	-----	-----	**6.13**	**6.13**	-----	-----
		U$_{26}$ - L$_{26}$	132.58	81.33	-10.51			0.90	1.17	85.56	-11.06	0.00	0.00	Vehicle	Vehicle	283.59	-----	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$_{27}$ - L$_{27}$	137.86	82.57	-9.05			0.90	1.17	86.87	-9.53	0.00	0.00	Vehicle	Vehicle	292.14	-----	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	-----	-----	-----	-----	-----	**6.59**	**6.59**	-----	-----
		U$_{28}$ - L$_{28}$	102.60	72.49	-4.18			0.90	1.17	76.27	-4.40	0.00	0.00	Vehicle	Vehicle	232.53	-----	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	-----	-----	-----	-----	-----	**7.19**	**7.19**	-----	-----
		U$_{29}$ - L$_{31}$	139.84	66.79	-10.86			0.90	1.18	71.11	-11.56	0.00	0.00	Vehicle	Vehicle	274.23	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.97**	**8.97**	-----	-----
		U$_{31}$ - L$_{32}$	166.63	70.82	-11.90			0.90	1.18	75.40	-12.67	0.00	0.00	Vehicle	Vehicle	314.64	-----	0.00	29.18	29.1800	962.94	131.71	17.8750	2.8156	57.14	29.89	-741.48	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.61**	**7.61**	-----	-----
		U$_{32}$ - L$_{33}$	202.12	80.18	-6.98			0.90	1.18	85.37	-7.44	0.00	0.00	Vehicle	Vehicle	373.74	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.52**	**7.52**	-----	-----
		U$_{33}$ - L$_{34}$	201.72	77.97	-4.70			0.90	1.18	83.01	-5.00	0.00	0.00	Vehicle	Vehicle	370.14	-----	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	-----	-----	-----	-----	-----	**7.74**	**7.74**	-----	-----
		U$_{35}$ - L$_{35}$	180.72	79.26	-8.48			0.90	1.18	84.38	-9.03	0.00	0.00	Vehicle	Vehicle	344.63	-----	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	-----	-----	-----	-----	-----	**7.07**	**7.07**	-----	-----
		U$_{36}$ - L$_{36}$	162.90	71.94	-11.22			0.90	1.18	76.60	-11.95	0.00	0.00	Vehicle	Vehicle	311.34	-----	0.00	27.98	27.9777	923.26	131.71	13.3125	2.8289

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: 3F1 **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 10/28/2009
Checked: NRF 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	9.44	-70.94			0.75	1.24	8.76	-65.82	0.00	0.00	Vehicle	Vehicle	-----	-154.07	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	-----	-----	7.79	7.79
		U$_1$ - U$_2$	-61.66	23.75	-110.08			0.75	1.24	22.03	-102.13	0.00	0.00	Vehicle	Vehicle	-----	-212.92	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	-----	-----	4.93	4.93
		U$_2$ - U$_3$	-27.05	33.14	-119.84			0.75	1.24	30.74	-111.18	0.00	0.00	Vehicle	Vehicle	4.80	-179.70	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	22.71	22.71	4.84	4.84
		U$_3$ - U$_4$	32.90	-44.92	-104.67			0.75	1.24	-41.67	-97.10	0.00	0.00	Vehicle	Vehicle	-----	-83.46	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	-----	-----	6.16	6.16
		U$_4$ - U$_5$	34.76	40.41	-72.96			0.75	1.24	37.49	-67.68	0.00	0.00	Vehicle	Vehicle	93.92	-42.81	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	16.97	16.97	8.87	8.87
		U$_5$ - U$_6$	124.19	-67.37	-45.84			0.75	1.24	-42.53	-62.50	0.00	0.00	Vehicle	Vehicle	106.16	-----	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	-5.81	-23.87			0.75	1.24	-5.39	-22.14	0.00	0.00	Vehicle	Vehicle	283.29	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	-----	-----	-----	-----
		U$_7$ - U$_8$	331.92	-4.76	1.35			0.75	1.24	1.25	-4.41	0.00	0.00	Vehicle	Vehicle	433.12	-----	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	-----	-----	620.47	620.47	-----	-----
		U$_8$ - U$_9$	267.71	33.39	-23.37			0.75	1.20	30.00	-20.99	0.00	0.00	Vehicle	Vehicle	387.02	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	22.37	22.37	-----	-----
		U$_9$ - U$_{10}$	89.12	43.81	-60.82			0.75	1.20	39.36	-54.65	0.00	0.00	Vehicle	Vehicle	167.03	-----	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	-----	-----	15.75	15.75	-----	-----
		U$_{10}$ - U$_{11}$	-76.89	38.06	-91.02			0.75	1.20	34.20	-81.78	0.00	0.00	Vehicle	Vehicle	-----	-206.27	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	-----	-----	6.36	6.36
		U$_{11}$ - U$_{12}$	-230.86	33.32	-122.26			0.75	1.20	29.94	-109.85	0.00	0.00	Vehicle	Vehicle	-----	-442.92	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	-----	-----	5.30	5.30
		U$_{12}$ - U$_{13}$	-342.15	31.31	-142.48			0.75	1.20	28.13	-128.02	0.00	0.00	Vehicle	Vehicle	-----	-611.22	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	6.21	6.21
		U$_{13}$ - U$_{14}$	-421.98	-78.05	-155.34			0.75	1.20	-70.12	-139.57	0.00	0.00	Vehicle	Vehicle	-----	-730.02	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	-----	-----	6.49	6.49
		U$_{14}$ - U$_{15}$	-422.87	26.03	-116.40			0.75	1.20	23.39	-104.58	0.00	0.00	Vehicle	Vehicle	-----	-685.69	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	-----	-----	8.65	8.65
		U$_{15}$ - U$_{16}$	-440.39	-97.05	-118.92			0.75	1.20	-87.20	-106.85	0.00	0.00	Vehicle	Vehicle	-----	-711.41	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	-----	-----	8.30	8.30
		U$_{16}$ - U$_{17}$	-422.93	-87.84	-114.48			0.75	1.20	-78.93	-102.86	0.00	0.00	Vehicle	Vehicle	-----	-683.53	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	8.79	8.79
		U$_{17}$ - U$_{18}$	-341.45	-115.08	-65.45			0.75	1.20	-58.81	-103.40	0.00	0.00	Vehicle	Vehicle	-----	-578.30	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	8.00	12.00	Pass	-----	-----	6.09	6.09
		U$_{18}$ - U$_{19}$	-247.63	-9.19	-30.29			0.75	1.20	-8.26	-27.21	0.00	0.00	Vehicle	Vehicle	-----	-357.29	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	15.80	15.80
		U$_{19}$ - U$_{20}$	-132.06	-24.09	-8.35			0.75	1.20	-7.50	-21.64	0.00	0.00	Vehicle	Vehicle	-----	-199.81	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	-----	-----	25.20	25.20
	Structure 2	U$_0$ - U$_1$	-131.63	-1.04	-45.07			0.75	1.18	-0.92	-39.99	0.00	0.00	Vehicle	Vehicle	-----	-223.11	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	12.90	12.90
		U$_1$ - U$_2$	-247.12	14.65	-90.95			0.75	1.18	13.00	-80.69	0.00	0.00	Vehicle	Vehicle	-----	-426.15	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.74	6.74
		U$_2$ - U$_3$	-347.28	22.71	-121.98			0.75	1.18	20.15	-108.23	0.00	0.00	Vehicle	Vehicle	-----	-592.16	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.50	4.00	0.50	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	6.75	6.75
		U$_3$ - U$_4$	-437.20	-116.47	-151.52			0.75	1.18	-103.34	-134.44	0.00	0.00	Vehicle	Vehicle	-----	-743.13	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	-----	-----	6.73	6.73
		U$_4$ - U$_5$	-468.83	38.97	-165.40			0.75	1.18	34.58	-146.75	0.00	0.00	Vehicle	Vehicle	-----	-800.26	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	-----	-----	6.94	6.94
		U$_5$ - U$_6$	-471.14	-97.46	-163.51			0.75	1.18	-86.47	-145.08	0.00	0.00	Vehicle	Vehicle	-----	-801.08	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	-----	-----	7.00	7.00
		U$_6$ - U$_7$	-414.50	51.25	-151.35			0.75	1.18	45.47	-134.29	0.00	0.00	Vehicle	Vehicle	-----	-713.43	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	-----	-----	6.90	6.90
		U$_7$ - U$_8$	-413.54	51.32	-113.94			0.75	1.18	45.53	-101.09	0.00	0.00	Vehicle	Vehicle	-----	-669.02	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	-----	-----	9.18	9.18
		U$_8$ - U$_9$	-322.06	53.52	-109.70			0.75	1.18	47.48	-97.33	0.00	0.00	Vehicle	Vehicle	-----	-545.21	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	-----	-----	8.26	8.26
		U$_9$ - U$_{10}$	-182.16	57.71	-78.63			0.75	1.18	51.20	-69.76	0.00	0.00	Vehicle	Vehicle	-----	-327.50	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	10.09	10.09
		U$_{10}$ - U$_{11}$	-32.61	62.66	-65.52			0.75	1.18	55.59	-58.13	0.00	0.00	Vehicle	Vehicle	29.87	-117.96	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	16.97	16.97	12.67	12.67
		U$_{11}$ - U$_{12}$	133.57	-23.09	-46.35			0.75	1.18	-20.49	-41.12	0.00	0.00	Vehicle	Vehicle	147.00	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U$_{12}$ - U$_{13}$	289.98	22.58	-15.60			0.75	1.18	20.03	-13.84	0.00	0.00	Vehicle	Vehicle	403.02	-----	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	-----	-----	42.39	42.39	-----	-----
		U$_{13}$ - U$_{14}$	434.77	-6.57	-17.36			0.75	1.18	-5.83	-15.41	0.00	0.00	Vehicle	Vehicle	557.63	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U$_{14}$ - U$_{15}$	474.48	39.68	-15.04			0.75	1.17	34.79	-13.18	0.00	0.00	Vehicle	Vehicle	662.04	-----	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	-----	-----	31.33	31.33	-----	-----
		U$_{15}$ - U$_{16}$	383.31	43.97	-34.54			0.75	1.17	38.55	-30.28	0.00	0.00	Vehicle	Vehicle	548.42	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	23.06	23.06	-----	-----
		U$_{16}$ - U$_{17}$	279.61	46.91	-54.04			0.75	1.17	41.12	-47.38	0.00	0.00	Vehicle	Vehicle	416.95	-----	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	-----	-----	18.59	18.59	-----	-----
		U$_{17}$ - U$_{18}$	172.67	45.32	-74.88			0.75	1.17	39.74	-65.65	0.00	0.00	Vehicle	Vehicle	276.12	-----	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	-----	-----	14.94	14.94	-----	-----
		U$_{18}$ - U$_{19}$	74.40	43.29	-96.15			0.75	1.17	37.95	-84.30	0.00	0.00	Vehicle	Vehicle	146.05	-12.87	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	18.23	18.23	8.56	8.56
		U$_{19}$ - U$_{20}$	-9.98	37.92	-114.51			0.75	1.17	33.25	-100.39	0.00	0.00	Vehicle	Vehicle	30.25	-143.48	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	24.97	24.97	6.80	6.80
	Structure 3	U$_0$ - U$_1$	-62.02	20.02	-123.67			0.75	1.17	17.55	-108.43	0.00	0.00	Vehicle	Vehicle	-----	-221.58	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.14	7.14
		U$_1$ - U$_2$	-88.69	27.39	-122.90			0.75	1.17	24.01	-107.75	0.00	0.00	Vehicle	Vehicle	-----	-255.36	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	-----	-----	6.94	6.94
		U$_2$ - U$_3$	-88.87	27.51	-97.52			0.75	1.17	24.12	-85.50	0.00	0.00	Vehicle	Vehicle	-----	-226.68	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	-----	-----	8.75	8.75
		U$_3$ - U$_4$	-76.60	-88.30	-98.34			0.75	1.17	-77.41	-86.22	0.00	0.00	Vehicle	Vehicle	-----	-211.66	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	8.82	8.82
		U$_4$ - U$_5$	-37.55	39.19	-77.37			0.75	1.17	34.36	-67.83	0.00	0.00	Vehicle	Vehicle	-----	-137.00	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	-----	-----	9.66	9.66
		U$_5$ - U$_6$	37.36	-75.13	-67.65			0.75	1.17	-59.31	-65.87	0.00	0.00	Vehicle	Vehicle	-----	-37.07	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	10.40	10.40
		U$_6$ - U$_7$	128.18	-54.63	-58.75			0.75	1.17	-47.90	-51.51	0.00	0.00	Vehicle	Vehicle	104.36	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U$_7$ - U$_8$	233.91	-42.54	-33.08			0.75	1.17	-29.01	-37.30	0.00	0.00	Vehicle	Vehicle	266.38	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U$_8$ - U$_9$	337.95	31.41	-19.46			0.75	1.17	27.54	-17.06	0.00	0.00	Vehicle	Vehicle	475.13	-----	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	-----	-----	33.93	33.93	-----	-----
		U$_9$ - U$_{10}$	437.48	4.49	-13.32			0.75	1.17	3.94	-11.67	0.00	0.00	Vehicle	Vehicle	573.84	-----	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	-----	-----	286.25	286.25	-----	-----
		U$_{10}$ - U$_{11}$	420.86	45.11	-16.12			0.75	1.18	40.03	-14.30	0.00	0.00	Vehicle	Vehicle	599.15	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	28.57	28.57	-----	-----
		U$_{11}$ - U$_{12}$	300.88	55.44	-39.31			0.75	1.18	49.19	-34.88	0.00	0.00	Vehicle	Vehicle	455.08	-----	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	-----	-----	17.04	17.04

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: 3F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

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

E = 29000.0 ksi

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

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

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

Center Truss - Lower Chord

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1		L$_0$ - L$_1$	8.48	-2.47	-4.48			0.75	1.24	-2.29	-4.15	0.00	0.00	Vehicle	Vehicle	8.05	-----	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	-----	-----	-----	-----
		L$_1$ - L$_2$	50.83	-13.86	61.79			0.75	1.24	57.33	-12.85	0.00	0.00	Vehicle	Vehicle	140.61	-----	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	-----	-----	**7.88**	**7.88**	-----	-----
		L$_2$ - L$_3$	61.27	-23.62	80.84			0.75	1.24	75.00	-21.91	0.00	0.00	Vehicle	Vehicle	177.14	-----	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	-----	-----	**8.10**	**8.10**	-----	-----
		L$_3$ - L$_4$	25.72	-32.48	73.65			0.75	1.24	68.32	-30.13	0.00	0.00	Vehicle	Vehicle	122.26	-5.74	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	**9.41**	**9.41**	**19.54**	**19.54**
		L$_4$ - L$_5$	-118.55	16.63	81.93			0.75	1.24	76.01	15.43	0.00	0.00	Vehicle	Vehicle	-----	-134.06	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	-16.57	53.28			0.75	1.24	49.43	-15.37	0.00	0.00	Vehicle	Vehicle	-----	-303.34	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	-----	-----	**28.72**	**28.72**
		L$_6$ - L$_7$	-320.57	-20.95	23.00			0.75	1.24	21.34	-19.43	0.00	0.00	Vehicle	Vehicle	-----	-442.00	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	-----	-----	**32.13**	**32.13**
		L$_7$ - L$_8$	-417.42	-45.58	-0.42			0.75	1.24	-0.39	-42.28	0.00	0.00	Vehicle	Vehicle	-----	-597.61	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	-----	-----	**18.50**	**18.50**
		L$_8$ - L$_9$	-411.08	-39.99	-32.91			0.75	1.20	-29.57	-35.93	0.00	0.00	Vehicle	Vehicle	-----	-581.12	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	-----	-----	**21.94**	**21.94**
		L$_9$ - L$_{10}$	-247.97	-44.42	-7.43			0.75	1.20	-6.67	-39.91	0.00	0.00	Vehicle	Vehicle	-----	-374.24	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	-----	-----	**17.47**	**17.47**
		L$_{10}$ - L$_{11}$	-65.37	-44.59	31.36			0.75	1.20	28.17	-40.07	0.00	0.00	Vehicle	Vehicle	-----	-137.07	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	-----	-----	**10.86**	**10.86**
		L$_{11}$ - L$_{12}$	101.81	-39.61	50.52			0.75	1.20	45.39	-35.59	0.00	0.00	Vehicle	Vehicle	191.36	-----	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	-----	-----	**10.84**	**10.84**	-----	-----
		L$_{12}$ - L$_{13}$	264.06	-34.64	112.66			0.75	1.20	101.23	-31.12	0.00	0.00	Vehicle	Vehicle	474.88	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**7.02**	**7.02**	-----	-----
		L$_{13}$ - L$_{14}$	373.80	-29.54	104.33			0.75	1.20	93.74	-26.54	0.00	0.00	Vehicle	Vehicle	607.80	-----	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	-----	-----	**9.97**	**9.97**	-----	-----
		L$_{14}$ - L$_{15}$	476.54	88.49	143.66			0.75	1.20	129.08	79.50	0.00	0.00	Vehicle	Vehicle	787.31	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**8.51**	**8.51**	-----	-----
		L$_{15}$ - L$_{16}$	460.23	55.49	133.65			0.75	1.20	120.09	49.86	0.00	0.00	Vehicle	Vehicle	754.42	-----	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	-----	-----	**9.28**	**9.28**	-----	-----
		L$_{16}$ - L$_{17}$	381.67	67.06	109.55			0.75	1.20	98.43	60.25	0.00	0.00	Vehicle	Vehicle	624.05	-----	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	-----	-----	**8.48**	**8.48**	-----	-----
		L$_{17}$ - L$_{18}$	289.18	45.13	64.16			0.75	1.20	57.65	40.55	0.00	0.00	Vehicle	Vehicle	450.88	-----	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	-----	-----	**10.31**	**10.31**	-----	-----
		L$_{18}$ - L$_{19}$	176.31	19.51	28.35			0.75	1.20	25.47	17.53	0.00	0.00	Vehicle	Vehicle	262.31	-----	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	-----	-----	**12.81**	**12.81**	-----	-----
		L$_{19}$ - L$_{20}$	69.72	-9.00	10.91			0.75	1.20	9.81	-8.08	0.00	0.00	Vehicle	Vehicle	103.38	-----	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	-----	-----	**44.15**	**44.15**	-----	-----
		L$_0$' - L$_1$'	24.42	-1.00	-3.59			0.75	1.18	-0.89	-3.19	0.00	0.00	Vehicle	Vehicle	30.59	-----	1.88	20.08	18.2000	662.64	131.71	10.8828	6.9064	14.18	32.81	-559.98	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	-----	-----	-----	-----
		L$_1$' - L$_2$'	138.42	-7.57	37.80			0.75	1.18	33.54	-6.72	0.00	0.00	Vehicle	Vehicle	223.55	-----	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	-----	-----	**14.76**	**14.76**	-----	-----
		L$_2$' - L$_3$'	252.76	-15.83	75.36			0.75	1.18	66.86	-14.04	0.00	0.00	Vehicle	Vehicle	415.51	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	**10.82**	**10.82**	-----	-----
		L$_3$' - L$_4$'	352.26	-23.90	112.02			0.75	1.18	99.39	-21.21	0.00	0.00	Vehicle	Vehicle	587.15	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**9.63**	**9.63**	-----	-----
		L$_4$' - L$_5$'	447.15	-33.06	116.88			0.75	1.18	103.70	-29.33	0.00	0.00	Vehicle	Vehicle	716.11	-----	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	-----	-----	**11.60**	**11.60**	-----	-----
		L$_5$' - L$_6$'	477.91	-40.21	135.38			0.75	1.18	120.12	-35.68	0.00	0.00	Vehicle	Vehicle	777.44	-----	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	-----	-----	**10.95**	**10.95**	-----	-----
		L$_6$' - L$_7$'	482.67	-47.30	114.57			0.75	1.18	101.65	-41.97	0.00	0.00	Vehicle	Vehicle	759.61	-----	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	-----	-----	**13.13**	**13.13**	-----	-----
		L$_7$' - L$_8$'	336.57	82.77	130.10			0.75	1.18	115.43	73.44	0.00	0.00	Vehicle	Vehicle	587.60	-----	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	62.48	97.44			0.75	1.18	86.46	55.43	0.00	0.00	Vehicle	Vehicle	367.20	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	**10.45**	**10.45**	-----	-----
		L$_9$' - L$_{10}$'	45.53	43.93	81.29			0.75	1.18	72.12	38.98	0.00	0.00	Vehicle	Vehicle	152.95	-----	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	-----	-----	6.72	-----	-----	6.72	-----	-----	**11.32**	**11.32**	-----	-----
		L$_{10}$ - L$_{11}$	-126.32	21.09	59.42			0.75	1.18	52.72	18.71	0.00	0.00	Vehicle	Vehicle	-----	-139.89	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	-----	-----	-----	-----
		L$_{11}$ - L$_{12}$	-284.95	-13.63	37.09			0.75	1.18	32.91	-12.09	0.00	0.00	Vehicle	Vehicle	-----	-386.16	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	-----	-----	**53.40**	**53.40**
		L$_{12}$ - L$_{13}$	-433.89	-26.09	11.92			0.75	1.18	10.58	-23.15	0.00	0.00	Vehicle	Vehicle	-----	-594.15	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	-----	-----	**36.35**	**36.35**
		L$_{13}$ - L$_{14}$	-552.76	-40.95	18.22			0.75	1.18	16.17	-36.33	0.00	0.00	Vehicle	Vehicle	-----	-765.81	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	-----	-----	**26.49**	**26.49**
		L$_{14}$ - L$_{15}$	-573.53	-39.87	-24.39			0.75	1.17	-21.38	-34.95	0.00	0.00	Vehicle	Vehicle	-----	-791.02	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	-----	-----	**26.94**	**26.94**
		L$_{15}$ - L$_{16}$	-493.00	-41.04	2.24			0.75	1.17	1.96	-35.98	0.00	0.00	Vehicle	Vehicle	-----	-687.67	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	-----	-----	**21.74**	**21.74**
		L$_{16}$ - L$_{17}$	-395.34	-50.31	2.47			0.75	1.17	2.17	-44.11	0.00	0.00	Vehicle	Vehicle	-----	-571.28	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	-----	-----	**14.78**	**14.78**
		L$_{17}$ - L$_{18}$	-288.08	-49.69	30.85			0.75	1.17	27.05	-43.56	0.00	0.00	Vehicle	Vehicle	-----	-431.14	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	-----	-----	**10.09**	**10.09**
		L$_{18}$ - L$_{19}$	-175.85	-47.66	48.26			0.75	1.17	42.31	-41.79	0.00	0.00	Vehicle	Vehicle	-----	-282.93	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	-----	-----	**9.52**	**9.52**
		L$_{19}$ - L$_{20}$	-78.08	-43.87	88.28			0.75	1.17	77.40	-38.46	0.00	0.00	Vehicle	Vehicle	-----	-151.50	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**12.88**	**12.88**
Structure 2		L$_{20}$ - L$_{21}$	7.59	-38.63	89.69			0.75	1.17	78.63	-33.87	0.00	0.00	Vehicle	Vehicle	112.09	-34.16	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	**12.17**	**12.17**	**24.27**	**24.27**
		L$_{21}$ - L$_{22}$	59.10	-20.99	81.85			0.75	1.17	71.76	-18.40	0.00	0.00	Vehicle	Vehicle	170.12	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**12.62**	**12.62**	-----	-----
		L$_{22}$ - L$_{23}$	72.03	67.96	116.77			0.75	1.17	102.38	59.58	0.00	0.00	Vehicle	Vehicle	226.73	-----	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	-----	-----	**8.72**	**8.72**	-----	-----
		L$_{23}$ - L$_{24}$	33.57	47.43	107.19			0.75	1.17	93.98	41.59	0.00	0.00	Vehicle	Vehicle	165.81	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**9.91**	**9.91**	-----	-----
		L$_{24}$ - L$_{25}$	-45.06	46.56	84.18			0.75	1.17	73.80	40.82	0.00	0.00	Vehicle	Vehicle	37.37	-5.51	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	**9.81**	**9.81**	-----	-----
		L$_{25}$ - L$_{26}$	-134.95	21.82	66.36			0.75	1.17	58.18	19.13	0.00	0.00	Vehicle	Vehicle	-----	-150.57	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	-----	-----
		L$_{26}$ - L$_{27}$	-245.92	-4.56	39.58			0.75	1.17	34.70	-4.00	0.00	0.00	Vehicle	Vehicle	-----	-324.90	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	-----	-----	**120.47**	**120.47**
		L$_{27}$ - L$_{28}$	-351.86	-21.70	26.00			0.75	1.17	22.79	-19.02	0.00	0.00	Vehicle	Vehicle	-----	-482.16	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	-----	-----	**36.57**	**36.57**
		L$_{28}$ - L$_{29}$	-458.41	-32.05	8.75			0.75	1.17	7.67	-28.10	0.00	0.00	Vehicle	Vehicle	-----	-632.46	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	-----	-----	**29.08**	**29.08**
		L$_{29}$ - L$_{30}$	-542.36	-43.77	14.40			0.75	1.17	12.62	-38.38	0.00	0.00	Vehicle	Vehicle	-----	-754.96	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	-----	-----	**25.35**	**25.35**
		L$_{30}$ - L$_{31}$	-514.21	-45.21	-20.70			0.75	1.18	-18.37	-40.12	0.00	0.00	Vehicle	Vehicle	-----	-720.63	11.98	70.85	58.8700	2338.05	131.71	11.1432	5.6285	17.82	32.70	-1969.16	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**24.94**	**24.94**
		L$_{31}$ - L$_{32}$	-411.27	-55.62	5.32			0.75	1.18	4.72	-49.35	0.00	0.00	Vehicle	Vehicle	-----	-598.81	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	12.00	Pass	-----	-----	**17.50**	**17.50**
		L$_

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 3F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

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

E = 29000.0 ksi

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

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

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

Center Truss - Verticals

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member 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	U_0 - L_0	-67.68	-92.72	9.33			0.75	1.24	8.66	-86.02	0.00	0.00	Vehicle	Vehicle	-----	-199.82	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	-----	-----	-----	-----	-----	3.22	3.22
	U_1 - L_1	-24.09	-55.02	9.07			0.75	1.24	8.42	-51.04	0.00	0.00	Vehicle	Vehicle	-----	-97.67	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	-----	-----	-----	-----	-----	6.43	6.43
	U_2 - L_2	12.87	-31.68	-4.80			0.75	1.24	-4.45	-29.39	0.00	0.00	Vehicle	Vehicle	10.94	-21.47	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	-----	-----	-----	-----	-----	12.42	12.42
	U_3 - L_3	37.37	-24.46	18.47			0.75	1.24	17.14	-22.70	0.00	0.00	Vehicle	Vehicle	70.86	-----	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	-----	-----	-----	-----	-----	22.78	22.78	-----	-----
	U_4 - L_4	-15.55	-4.30	-15.24			0.75	1.24	-3.98	-14.14	0.00	0.00	Vehicle	Vehicle	-----	-38.59	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	-----	-----	-----	-----	-----	23.65	23.65
	U_5 - L_5	-92.59	16.41	-63.84			0.75	1.24	15.22	-59.23	0.00	0.00	Vehicle	Vehicle	-----	-197.36	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	-----	-----	-----	-----	-----	5.61	5.61
	U_6 - L_6	-117.07	4.25	-74.36			0.75	1.24	3.94	-68.99	0.00	0.00	Vehicle	Vehicle	-----	-241.87	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	-----	-----	-----	-----	-----	5.67	5.67
	U_7 - L_7	-127.52	0.23	-79.91			0.75	1.24	0.21	-74.14	0.00	0.00	Vehicle	Vehicle	-----	-262.15	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	-----	-----	-----	-----	-----	4.49	4.49
	U_8 - L_8	-368.71	-98.04	-96.96			0.75	1.24	-89.95	-90.95	0.00	0.00	Vehicle	Vehicle	-----	-597.57	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	-----	-----	-----	-----	-----	7.66	7.66
	U_9 - L_9	-214.56	-81.60	4.52			0.75	1.20	4.06	-73.31	0.00	0.00	Vehicle	Vehicle	-----	-374.24	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	-----	-----	-----	-----	-----	5.87	5.87
	U_{10} - L_{10}	-198.68	-78.31	-2.19			0.75	1.20	-1.97	-70.36	0.00	0.00	Vehicle	Vehicle	-----	-349.75	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	7.73	7.73
	U_{11} - L_{11}	-171.40	-62.27	10.70			0.75	1.20	9.61	-55.95	0.00	0.00	Vehicle	Vehicle	-----	-295.55	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	-----	-----	-----	-----	-----	8.40	8.40
	U_{12} - L_{12}	-128.37	-54.71	18.56			0.75	1.20	16.68	-49.16	0.00	0.00	Vehicle	Vehicle	-----	-230.78	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	8.22	8.22
	U_{13} - L_{13}	-96.65	-51.16	22.94			0.75	1.20	20.61	-45.96	0.00	0.00	Vehicle	Vehicle	-----	-185.39	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	-----	-----	-----	-----	-----	6.18	6.18
	U_{14} - L_{14}	-11.04	5.57	-1.82			0.75	1.20	5.00	-1.63	0.00	0.00	Vehicle	Vehicle	-----	-16.48	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	-----	-----	-----	-----	-----	204.63	204.63
	U_{15} - L_{15}	-2.47	33.24	-44.33			0.75	1.20	29.86	-39.83	0.00	0.00	Vehicle	Vehicle	35.61	-54.99	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	-----	-----	-----	-----	-----	14.40	14.40	8.56	8.56
	U_{16} - L_{16}	-31.27	25.23	-50.29			0.75	1.20	22.67	-45.18	0.00	0.00	Vehicle	Vehicle	-----	-99.39	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	-----	-----	-----	-----	-----	6.86	6.86
	U_{17} - L_{17}	-105.05	13.57	-69.37			0.75	1.20	12.19	-62.33	0.00	0.00	Vehicle	Vehicle	-----	-217.60	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	4.91	4.91
	U_{18} - L_{18}	-126.74	4.40	-76.77			0.75	1.20	3.95	-68.98	0.00	0.00	Vehicle	Vehicle	-----	-254.44	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	5.78	5.78
	U_{19} - L_{19}	-166.77	4.12	-78.97			0.75	1.20	3.70	-70.95	0.00	0.00	Vehicle	Vehicle	-----	-309.04	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.34	6.34
	U_{20} - L_{20}	-184.59	3.82	-92.63			0.75	1.20	3.44	-83.23	0.00	0.00	Vehicle	Vehicle	-----	-348.16	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	-----	-----	-----	-----	-----	4.78	4.78
	U_0 - L_0	-203.59	-94.29	10.22			0.75	1.18	9.07	-83.66	0.00	0.00	Vehicle	Vehicle	-----	-373.42	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	5.25	5.25
	U_1 - L_1	-176.11	-76.78	11.04			0.75	1.18	9.80	-68.12	0.00	0.00	Vehicle	Vehicle	-----	-317.49	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	-----	-----	-----	-----	-----	7.29	7.29
	U_2 - L_2	-137.55	-67.14	10.46			0.75	1.18	9.28	-59.57	0.00	0.00	Vehicle	Vehicle	-----	-256.25	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	-----	-----	-----	-----	-----	7.33	7.33
	U_3 - L_3	-117.62	-59.83	10.86			0.75	1.18	9.64	-53.09	0.00	0.00	Vehicle	Vehicle	-----	-221.91	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	-----	-----	-----	-----	-----	6.30	6.30
	U_4 - L_4	-50.97	-47.96	24.26			0.75	1.18	21.53	-42.55	0.00	0.00	Vehicle	Vehicle	-----	-121.58	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	-----	-----	-----	-----	-----	6.77	6.77
	U_5 - L_5	-13.78	-44.35	30.17			0.75	1.18	26.77	-39.35	0.00	0.00	Vehicle	Vehicle	16.89	-69.06	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	-----	-----	-----	-----	-----	16.49	16.49	8.30	8.30
	U_6 - L_6	45.47	-31.61	36.51			0.75	1.18	32.39	-28.04	0.00	0.00	Vehicle	Vehicle	101.23	-----	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	-----	-----	6.56	-----	-----	-----	-----	-----	11.80	11.80	-----	-----
	U_7 - L_7	-22.33	-0.75	3.48			0.75	1.18	3.09	-0.66	0.00	0.00	Vehicle	Vehicle	-----	-29.89	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	-----	-----	-----	-----	-----	480.73	480.73
	U_8 - L_8	-120.08	25.86	-55.91			0.75	1.18	22.94	-49.60	0.00	0.00	Vehicle	Vehicle	-----	-220.59	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	8.27	8.27
	U_9 - L_9	-177.03	18.29	-70.40			0.75	1.18	16.23	-62.46	0.00	0.00	Vehicle	Vehicle	-----	-311.33	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	8.23	8.23
	U_{10} - L_{10}	-205.88	13.98	-75.66			0.75	1.18	12.40	-67.13	0.00	0.00	Vehicle	Vehicle	-----	-354.91	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	-----	-----	-----	-----	-----	8.53	8.53
	U_{11} - L_{11}	-239.23	7.56	-78.50			0.75	1.18	6.71	-69.65	0.00	0.00	Vehicle	Vehicle	-----	-401.55	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	-----	-----	-----	-----	-----	7.55	7.55
	U_{12} - L_{12}	-257.95	1.00	-86.06			0.75	1.18	0.89	-76.36	0.00	0.00	Vehicle	Vehicle	-----	-434.61	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	7.12	7.12
	U_{13} - L_{13}	-243.82	5.26	-89.59			0.75	1.18	4.67	-79.48	0.00	0.00	Vehicle	Vehicle	-----	-420.30	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	-----	-----	-----	-----	-----	5.61	5.61
	U_{14} - L_{14}	-420.85	-80.60	-81.20			0.75	1.18	-71.52	-72.04	0.00	0.00	Vehicle	Vehicle	-----	-640.76	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	-----	-----	-----	-----	-----	8.76	8.76
	U_{15} - L_{15}	-158.83	-74.70	8.58			0.75	1.17	7.52	-65.50	0.00	0.00	Vehicle	Vehicle	-----	-291.63	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	-----	-----	-----	-----	-----	8.11	8.11
	U_{16} - L_{16}	-174.02	-77.63	2.63			0.75	1.17	2.31	-68.06	0.00	0.00	Vehicle	Vehicle	-----	-314.71	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	-----	-----	-----	-----	-----	7.23	7.23
	U_{17} - L_{17}	-156.46	-77.58	7.69			0.75	1.17	6.75	-68.02	0.00	0.00	Vehicle	Vehicle	-----	-291.82	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	-----	-----	-----	-----	-----	6.86	6.86
	U_{18} - L_{18}	-142.21	-63.12	13.72			0.75	1.17	12.03	-55.34	0.00	0.00	Vehicle	Vehicle	-----	-256.81	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.86	7.86
	U_{19} - L_{19}	-113.66	-62.13	19.16			0.75	1.17	16.80	-54.47	0.00	0.00	Vehicle	Vehicle	-----	-218.57	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	-----	-----	-----	-----	-----	7.30	7.30
Structure 2	U_{20} - L_{20}	-76.51	-52.98	24.44			0.75	1.17	21.42	-46.45	0.00	0.00	Vehicle	Vehicle	-----	-159.85	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	-----	-----	-----	-----	-----	6.43	6.43
	U_{21} - L_{21}	-45.77	-42.00	24.06			0.75	1.17	21.10	-36.83	0.00	0.00	Vehicle	Vehicle	-----	-107.38	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	-----	-----	-----	-----	-----	8.00	8.00
	U_{22} - L_{22}	-17.72	2.10	6.55			0.75	1.17	5.74	1.84	0.00	0.00	Vehicle	Vehicle	-----	-20.64	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----
	U_{23} - L_{23}	-30.69	30.06	-45.28			0.75	1.17	26.35	-39.70	0.00	0.00	Vehicle	Vehicle	-----	-91.50	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	-----	-----	-----	-----	-----	7.80	7.80
	U_{24} - L_{24}	-62.06	25.60	-57.63			0.75	1.17	22.45	-50.53	0.00	0.00	Vehicle	Vehicle	-----	-146.37	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	-----	-----	-----	-----	-----	6.20	6.20
	U_{25} - L_{25}	-103.15	17.38	-67.60			0.75	1.17	15.24	-59.27	0.00	0.00	Vehicle	Vehicle	-----	-211.14	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	-----	-----	-----	-----	-----	6.89	6.89
	U_{26} - L_{26}	-134.38	15.06	-69.53			0.75	1.17	13.20	-60.96	0.00	0.00	Vehicle	Vehicle	-----	-253.93	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.26	7.26
	U_{27} - L_{27}	-156.03	6.71	-79.69			0.75	1.17	5.88	-69.87	0.00	0.00	Vehicle	Vehicle	-----	-293.67	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	-----	-----	-----	-----	-----	6.69	6.69
	U_{28} - L_{28}	-179.40	3.73	-85.98			0.75	1.17	3.27	-75.38	0.00	0.00	Vehicle	Vehicle	-----	-331.22	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	6.46	6.46
	U_{29} - L_{29}	-171.60	4.04	-83.05			0.75	1.17	3.54	-72.81	0.00	0.00	Vehicle	Vehicle	-----	-317.74	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.12	7.12
	U_{30} - L_{30}	-393.29	-87.10	-88.06			0.75	1.18	-77.28	-78.13	0.00	0.00	Vehicle	Vehicle	-----	-612.85	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	8.43	8.43
	U_{31} - L_{31}	-203.49	-81.50	8.55			0.75	1.18	7.58	-72.31	0.00	0.00	Vehicle	Vehicle	-----	-358.53	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	6.73	6.73
	U_{32} - L_{32}	-222.61	-85.86	-0.60			0.75	1.18	-0.53	-76.18	0.00	0.00	Vehicle	Vehicle	-----	-388.43	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	-----	-----	-----	-----	-----	7.60	7.60

Maximum Axial with Moment Interaction Check

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

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

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 3F1 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
Center Truss - Diagonals	Structure 1	U$_0$ - L$_1$	53.29	45.29	-14.08			0.75	1.24	42.02	-13.06	0.00	0.00	Vehicle	Vehicle	123.91	-----	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	-----	-----	-----	-----	-----	**12.69**	**12.69**	-----	-----
		U$_1$ - L$_2$	10.80	49.84	-5.50			0.75	1.24	46.24	-5.10	0.00	0.00	Vehicle	Vehicle	74.15	-----	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	-----	-----	6.56	-----	-----	-----	-----	-----	**9.02**	**9.02**	-----	-----
		U$_2$ - L$_3$	-44.05	41.62	-30.16			0.75	1.24	38.62	-27.98	0.00	0.00	Vehicle	Vehicle	-----	-93.64	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	-----	-----	-----	-----	-----	**10.37**	**10.37**
		U$_3$ - L$_4$	-76.77	15.64	-57.96			0.75	1.24	14.51	-53.77	0.00	0.00	Vehicle	Vehicle	-----	-169.71	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	-----	-----	-----	-----	-----	**4.83**	**4.83**
		U$_4$ - L$_5$	118.48	47.02	41.11			0.75	1.24	43.63	38.14	0.00	0.00	Vehicle	Vehicle	210.74	-----	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	-----	-----	-----	-----	-----	**9.31**	**9.31**	-----	-----
		U$_5$ - L$_6$	137.62	85.49	-11.86			0.75	1.24	79.31	-11.00	0.00	0.00	Vehicle	Vehicle	282.01	-----	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	-----	-----	-----	-----	-----	**6.47**	**6.47**	-----	-----
		U$_6$ - L$_7$	157.39	88.65	1.39			0.75	1.24	82.24	1.29	0.00	0.00	Vehicle	Vehicle	311.51	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.00**	**6.00**	-----	-----
		U$_7$ - L$_8$	149.33	90.25	-0.26			0.75	1.24	83.73	-0.24	0.00	0.00	Vehicle	Vehicle	302.97	-----	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	-----	-----	-----	-----	-----	**5.99**	**5.99**	-----	-----
		U$_8$ - L$_9$	249.21	90.08	-4.59			0.75	1.20	80.94	-4.13	0.00	0.00	Vehicle	Vehicle	429.19	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**8.81**	**8.81**	-----	-----
		U$_9$ - L$_{10}$	260.39	82.67	0.08			0.75	1.20	74.28	0.08	0.00	0.00	Vehicle	Vehicle	435.07	-----	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	-----	-----	-----	-----	-----	**9.45**	**9.45**	-----	-----
		U$_{10}$ - L$_{11}$	236.43	79.84	-7.05			0.75	1.20	71.74	-6.34	0.00	0.00	Vehicle	Vehicle	400.61	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**9.40**	**9.40**	-----	-----
		U$_{11}$ - L$_{12}$	212.05	71.93	-24.96			0.75	1.20	64.62	-22.42	0.00	0.00	Vehicle	Vehicle	359.68	-----	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	-----	-----	-----	-----	-----	**8.75**	**8.75**	-----	-----
		U$_{12}$ - L$_{13}$	151.78	72.77	-31.04			0.75	1.20	65.38	-27.89	0.00	0.00	Vehicle	Vehicle	282.31	-----	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	-----	-----	-----	-----	-----	**7.33**	**7.33**	-----	-----
		U$_{13}$ - L$_{14}$	108.73	58.65	-37.31			0.75	1.20	52.70	-33.52	0.00	0.00	Vehicle	Vehicle	209.85	-----	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	-----	-----	-----	-----	-----	**6.05**	**6.05**	-----	-----
		U$_{14}$ - L$_{14}$	-24.56	43.34	-47.86			0.75	1.20	38.94	-43.00	0.00	0.00	Vehicle	Vehicle	18.69	-87.83	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	-----	-----	-----	-----	-----	**11.61**	**11.61**	**7.06**	**7.06**
		U$_{15}$ - L$_{15}$	23.90	60.97	-36.54			0.75	1.20	54.78	-32.83	0.00	0.00	Vehicle	Vehicle	102.29	-11.60	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	-----	-----	-----	-----	-----	**7.37**	**7.37**	**10.61**	**10.61**
		U$_{17}$ - L$_{16}$	120.04	71.67	-17.22			0.75	1.20	64.39	-15.47	0.00	0.00	Vehicle	Vehicle	239.75	-----	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	-----	-----	-----	-----	-----	**6.28**	**6.28**	-----	-----
		U$_{18}$ - L$_{17}$	144.84	82.81	-6.98			0.75	1.20	74.40	-6.27	0.00	0.00	Vehicle	Vehicle	285.02	-----	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	-----	-----	-----	-----	-----	**6.80**	**6.80**	-----	-----
		U$_{19}$ - L$_{18}$	193.27	84.46	1.64			0.75	1.20	75.89	1.47	0.00	0.00	Vehicle	Vehicle	349.91	-----	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	-----	-----	-----	-----	-----	**6.81**	**6.81**	-----	-----
		U$_{20}$ - L$_{19}$	193.75	61.56	-4.35			0.75	1.20	55.31	-3.91	0.00	0.00	Vehicle	Vehicle	323.78	-----	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	-----	-----	-----	-----	-----	**9.34**	**9.34**	-----	-----
	Structure 2	U$_0$ - L$_1$	202.60	63.51	-11.52			0.75	1.18	56.35	-10.22	0.00	0.00	Vehicle	Vehicle	336.63	-----	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	-----	-----	-----	-----	-----	**10.20**	**10.20**	-----	-----
		U$_1$ - L$_2$	190.84	81.00	-12.89			0.75	1.18	71.86	-11.43	0.00	0.00	Vehicle	Vehicle	341.51	-----	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	-----	-----	-----	-----	-----	**8.16**	**8.16**	-----	-----
		U$_2$ - L$_3$	155.90	82.45	-12.54			0.75	1.18	73.16	-11.13	0.00	0.00	Vehicle	Vehicle	297.77	-----	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	-----	-----	-----	-----	-----	**6.76**	**6.76**	-----	-----
		U$_3$ - L$_4$	134.06	70.13	-25.79			0.75	1.18	62.22	-22.88	0.00	0.00	Vehicle	Vehicle	255.16	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**7.12**	**7.12**	-----	-----
		U$_4$ - L$_5$	46.01	58.28	-35.23			0.75	1.18	51.71	-31.26	0.00	0.00	Vehicle	Vehicle	127.03	-----	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	-----	-----	-----	-----	-----	**7.38**	**7.38**	-----	-----
		U$_5$ - L$_6$	3.43	48.01	-45.70			0.75	1.18	42.59	-40.54	0.00	0.00	Vehicle	Vehicle	59.83	-48.25	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**9.96**	**9.96**	**8.12**	**8.12**
		U$_6$ - L$_7$	-84.31	40.48	-63.55			0.75	1.18	35.92	-56.39	0.00	0.00	Vehicle	Vehicle	-----	-182.91	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	**4.88**	**4.88**
		U$_7$ - L$_7$	137.33	60.37	-34.86			0.75	1.18	53.56	-30.93	0.00	0.00	Vehicle	Vehicle	248.15	-----	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	-----	-----	-----	-----	-----	**8.70**	**8.70**	-----	-----
		U$_8$ - L$_8$	210.92	71.95	-24.12			0.75	1.18	63.84	-21.40	0.00	0.00	Vehicle	Vehicle	357.18	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.82**	**7.82**	-----	-----
		U$_{10}$ - L$_9$	236.39	85.88	-18.60			0.75	1.18	76.19	-16.50	0.00	0.00	Vehicle	Vehicle	406.36	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.10**	**7.10**	-----	-----
		U$_{11}$ - L$_{10}$	274.65	88.07	-12.22			0.75	1.18	78.14	-10.84	0.00	0.00	Vehicle	Vehicle	458.62	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.29**	**7.29**	-----	-----
		U$_{12}$ - L$_{11}$	281.09	85.98	-5.57			0.75	1.18	76.28	-4.94	0.00	0.00	Vehicle	Vehicle	464.59	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.38**	**7.38**	-----	-----
		U$_{13}$ - L$_{12}$	278.14	84.56	-0.36			0.75	1.18	75.02	-0.32	0.00	0.00	Vehicle	Vehicle	459.12	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.66**	**6.66**	-----	-----
		U$_{14}$ - L$_{13}$	235.47	84.26	-5.28			0.75	1.18	74.76	-4.69	0.00	0.00	Vehicle	Vehicle	403.30	-----	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	-----	-----	-----	-----	-----	**7.25**	**7.25**	-----	-----
		U$_{15}$ - L$_{15}$	143.01	82.07	-8.33			0.75	1.17	71.95	-7.30	0.00	0.00	Vehicle	Vehicle	279.46	-----	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	-----	-----	-----	-----	-----	**7.06**	**7.06**	-----	-----
		U$_{16}$ - L$_{16}$	171.90	85.70	-5.73			0.75	1.17	75.13	-5.02	0.00	0.00	Vehicle	Vehicle	321.14	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.37**	**6.37**	-----	-----
		U$_{17}$ - L$_{17}$	181.04	82.23	-8.15			0.75	1.17	72.10	-7.14	0.00	0.00	Vehicle	Vehicle	329.07	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.34**	**7.34**	-----	-----
		U$_{18}$ - L$_{18}$	171.16	68.85	-15.65			0.75	1.17	60.37	-13.72	0.00	0.00	Vehicle	Vehicle	300.98	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.94**	**7.94**	-----	-----
		U$_{19}$ - L$_{19}$	150.64	74.10	-21.99			0.75	1.17	64.97	-19.28	0.00	0.00	Vehicle	Vehicle	280.30	-----	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	-----	-----	-----	-----	-----	**7.70**	**7.70**	-----	-----
		U$_{20}$ - L$_{20}$	125.86	67.00	-28.94			0.75	1.17	58.74	-25.37	0.00	0.00	Vehicle	Vehicle	239.99	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**8.13**	**8.13**	-----	-----
		U$_{20}$ - L$_{21}$	76.04	57.15	-32.30			0.75	1.17	50.10	-28.31	0.00	0.00	Vehicle	Vehicle	163.99	-----	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	-----	-----	-----	-----	-----	**7.02**	**7.02**	-----	-----
		U$_{21}$ - L$_{22}$	38.33	50.16	-49.27			0.75	1.17	43.98	-43.19	0.00	0.00	Vehicle	Vehicle	107.00	-6.32	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	-----	-----	-----	-----	-----	**8.85**	**8.85**	**8.43**	**8.43**
		U$_{23}$ - L$_{22}$	18.05	43.22	-45.80			0.75	1.17	37.89	-40.16	0.00	0.00	Vehicle	Vehicle	72.73	-28.74	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	-----	-----	-----	-----	-----	**10.81**	**10.81**	**8.49**	**8.49**
		U$_{24}$ - L$_{23}$	58.57	61.21	-30.26			0.75	1.17	53.67	-26.53	0.00	0.00	Vehicle	Vehicle	145.92	-----	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	-----	-----	-----	-----	-----	**6.88**	**6.88**	-----	-----
		U$_{25}$ - L$_{24}$	114.98	74.49	-24.76			0.75	1.17	65.31	-21.71	0.00	0.00	Vehicle	Vehicle	234.37	-----	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	-----	-----	-----	-----	-----	**7.48**	**7.48**	-----	-----
		U$_{26}$ - L$_{25}$	143.00	82.57	-18.27			0.75	1.17	72.40	-16.02	0.00	0.00	Vehicle	Vehicle	280.01	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.01**	**7.01**	-----	-----
		U$_{27}$ - L$_{26}$	173.82	78.01	-11.78			0.75	1.17	68.39	-10.32	0.00	0.00	Vehicle	Vehicle	314.87	-----	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	-----	-----	-----	-----	-----	**6.97**	**6.97**	-----	-----
		U$_{28}$ - L$_{27}$	186.60	87.02	-4.19			0.75	1.17	76.29	-3.67	0.00	0.00	Vehicle	Vehicle	341.75	-----	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	-----	-----	-----	-----	-----	**6.86**	**6.86**	-----	-----
		U$_{29}$ - L$_{28}$	190.75	85.39	-4.94			0.75	1.17	74.87	-4.33	0.00	0.00	Vehicle	Vehicle	345.30	-----	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	-----	-----	-----	-----	-----	**6.14**	**6.14**	-----	-----
		U$_{30}$ - L$_{29}$	161.86	77.56	-3.90			0.75	1.17	68.00	-3.42	0.00	0.00	Vehicle	Vehicle	298.82	-----	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	-----	-----	-----	-----	-----	**7.19**	**7.19**	-----	-----
		U$_{30}$ - L$_{31}$	191.72	85.88	-8.37			0.75	1.18	76.20	-7.43	0.00	0.00	Vehicle	Vehicle	348.30	-----	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	-----	-----	-----	-----	-----	**7.69**	**7.69**	-----	-----
		U$_{31}$ - L$_{32}$	226.45	82.41	-9.26			0.75	1.18	73.12	-8.22	0.00	0.00	Vehicle	Vehicle	389.43	-----	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	-----	-----	-----	-----	-----	**7.54**	**7.54**	-----	-----
		U$_{32}$ - L$_{33}$	243.42	91.04	-7.54			0.75	1.18	80.77	-6.69	0.00	0.00	Vehicle	Vehicle	421.45	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.44**	**7.44**	-----	-----
		U$_{33}$ - L$_{34}$	239.13	79.85	-14.77			0.75	1.18	70.85	-13.11	0.00	0.00	Vehicle	Vehicle	402.97	-----	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	-----	-----	-----	-----	-----	**8.54**	**8.54**	-----	-----
		U$_{34}$ - L$_{35}$	222.16	76.96	-20.26			0.75	1.18	68.28	-17.98	0.00	0.00	Vehicle	Vehicle	377.58	-----	0.00

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 3F1 — 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
South Truss - Upper Chord	Structure 1	U_0 - U_1	-66.70	8.58	-41.84	2.21	-8.83	0.90	1.24	9.55	-46.58	2.21	-8.83	Vehicle	Vehicle	-----	-147.28	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	-----	-----	10.70	10.70
		U_1 - U_2	-86.55	20.69	-69.13	6.01	-16.34	0.90	1.24	23.04	-76.96	6.01	-16.34	Vehicle	Vehicle	-----	-212.56	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	-----	-----	6.22	6.22
		U_2 - U_3	-48.14	30.64	-70.90	9.46	-19.05	0.90	1.24	34.11	-78.93	9.46	-19.05	Vehicle	Vehicle	-----	-165.19	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	6.55	6.55
		U_3 - U_4	36.58	39.60	-59.59	12.74	-17.47	0.90	1.24	44.08	-66.34	12.74	-17.47	Vehicle	Vehicle	104.87	-38.69	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	14.39	14.39	9.07	9.07
		U_4 - U_5	38.93	39.73	-32.13	12.80	-17.38	0.90	1.24	44.23	-35.77	12.80	-17.38	Vehicle	Pedestrian	108.12	-18.47	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	14.29	14.29	11.37	11.37
		U_5 - U_6	154.60	44.72	-19.88	3.13	0.00	0.90	1.24	49.79	-22.13	3.13	0.00	Vehicle	Vehicle	265.70	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	10.37	10.37	-----	-----
		U_6 - U_7	288.38	47.70	-9.25	17.14	-4.31	0.90	1.24	53.10	-10.30	17.14	-4.31	Vehicle	Pedestrian	443.92	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	9.72	9.72	-----	-----
		U_7 - U_8	410.94	1.43	6.51	22.63	0.00	0.90	1.24	7.24	1.59	22.63	0.00	Pedestrian	Vehicle	573.05	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	23.41	23.41	-----	-----
		U_8 - U_9	311.57	36.68	-8.08	12.90	6.19	0.90	1.20	39.55	-8.71	12.90	6.19	Vehicle	Vehicle	456.45	-----	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	-----	-----	15.86	15.86	-----	-----
		U_9 - U_{10}	78.52	38.53	-34.31	12.28	-6.79	0.90	1.20	41.54	-36.99	12.28	-6.79	Vehicle	Vehicle	156.08	-----	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	-----	Pass	10.67	-----	Pass	15.18	15.18	-----	-----
		U_{10} - U_{11}	-141.43	36.30	-62.82	11.10	-18.41	0.90	1.20	39.14	-67.73	11.10	-18.41	Vehicle	Vehicle	-----	-271.91	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	-----	-----	6.73	6.73
		U_{11} - U_{12}	-338.03	33.42	-90.05	9.77	-27.93	0.90	1.20	36.03	-97.09	9.77	-27.93	Vehicle	Vehicle	-----	-565.66	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	-----	-----	4.89	4.89
		U_{12} - U_{13}	-480.08	29.24	-104.86	8.23	-34.32	0.90	1.20	31.52	-113.06	8.23	-34.32	Vehicle	Vehicle	-----	-771.08	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	-----	-----	5.82	5.82
		U_{13} - U_{14}	-570.65	24.81	-110.27	6.68	-37.21	0.90	1.20	26.75	-118.89	6.68	-37.21	Vehicle	Vehicle	-----	-896.40	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	-----	-----	6.37	6.37
		U_{14} - U_{15}	-571.07	24.69	-93.80	6.65	-37.22	0.90	1.20	26.62	-101.13	6.65	-37.22	Vehicle	Pedestrian	-----	-922.25	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	-----	-----	5.47	5.47
		U_{15} - U_{16}	-581.88	8.96	-88.10	0.00	-31.14	0.90	1.20	9.66	-94.99	0.00	-31.14	Vehicle	Vehicle	-----	-879.93	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	-----	-----	7.85	7.85
		U_{16} - U_{17}	-539.46	8.11	-53.03	0.00	-28.33	0.90	1.20	8.75	-57.18	0.00	-28.33	Vehicle	Pedestrian	-----	-812.45	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	9.22	9.22
		U_{17} - U_{18}	-422.33	-68.22	-32.86	-25.05	2.26	0.90	1.20	-35.43	-73.55	2.26	-25.05	Vehicle	Vehicle	-----	-677.21	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	8.00	12.00	Pass	-----	-----	5.56	5.56
		U_{18} - U_{19}	-286.19	-41.37	-13.44	-16.96	1.28	0.90	1.20	-14.49	-44.60	1.28	-16.96	Vehicle	Pedestrian	-----	-452.07	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	-----	-----	6.36	6.36
		U_{19} - U_{20}	-140.84	-17.40	-5.12	0.00	-8.13	0.90	1.20	-5.52	-18.76	0.00	-8.13	Vehicle	Pedestrian	-----	-218.05	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	-----	-----	19.96	19.96
	Structure 2	U_0 - U_1	-147.44	2.75	-28.28	0.36	-4.88	0.90	1.18	2.92	-30.10	0.36	-4.88	Vehicle	Vehicle	-----	-230.81	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	-----	-----	16.61	16.61
		U_1 - U_2	-319.06	9.33	-55.35	1.96	-13.36	0.90	1.18	9.93	-58.93	1.96	-13.36	Vehicle	Vehicle	-----	-491.38	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	-----	-----	8.01	8.01
		U_2 - U_3	-460.91	16.68	-85.05	3.77	-20.95	0.90	1.18	17.76	-90.55	3.77	-20.95	Vehicle	Vehicle	-----	-716.91	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.50	4.00	0.50	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	6.81	6.81
		U_3 - U_4	-580.03	25.32	-107.99	5.92	-27.68	0.90	1.18	26.96	-114.97	5.92	-27.68	Vehicle	Vehicle	-----	-903.50	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	6.62	6.62
		U_4 - U_5	-616.49	32.98	-116.23	7.86	-31.35	0.90	1.18	35.11	-123.75	7.86	-31.35	Vehicle	Vehicle	-----	-962.31	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	-----	-----	7.04	7.04
		U_5 - U_6	-604.71	40.73	-116.85	9.87	-32.88	0.90	1.18	43.37	-124.41	9.87	-32.88	Vehicle	Vehicle	-----	-947.86	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	-----	-----	7.09	7.09
		U_6 - U_7	-514.78	46.62	-106.23	11.56	-31.23	0.90	1.18	49.64	-113.10	11.56	-31.23	Vehicle	Vehicle	-----	-816.25	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	7.31	7.31
		U_7 - U_8	-512.83	46.49	-94.26	11.57	-31.18	0.90	1.18	49.50	-100.36	11.57	-31.18	Vehicle	Vehicle	-----	-797.14	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	-----	-----	8.26	8.26
		U_8 - U_9	-373.51	51.90	-67.32	13.16	-27.41	0.90	1.18	55.25	-71.68	13.16	-27.41	Vehicle	Pedestrian	-----	-614.38	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	-----	-----	7.59	7.59
		U_9 - U_{10}	-181.05	54.32	-51.16	14.25	-21.42	0.90	1.18	57.83	-54.47	14.25	-21.42	Vehicle	Pedestrian	-----	-334.02	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	-----	-----	9.29	9.29
		U_{10} - U_{11}	26.18	55.95	-36.11	15.21	-14.40	0.90	1.18	59.57	-38.45	15.21	-14.40	Vehicle	Pedestrian	111.47	-34.67	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	14.85	14.85	15.05	15.05
		U_{11} - U_{12}	237.39	-9.99	-11.49	10.86	0.00	0.90	1.18	-10.63	-12.23	10.86	0.00	Vehicle	Vehicle	294.78	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{12} - U_{13}	435.89	9.46	-3.32	15.82	0.56	0.90	1.18	10.07	-3.53	15.82	0.56	Pedestrian	Vehicle	600.31	-----	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	-----	-----	27.17	27.17	-----	-----
		U_{13} - U_{14}	595.84	9.20	5.04	24.32	0.00	0.90	1.18	9.79	5.37	24.32	0.00	Pedestrian	Vehicle	818.92	-----	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	-----	-----	28.40	28.40	-----	-----
		U_{14} - U_{15}	615.53	45.71	-2.42	13.42	8.77	0.90	1.17	48.09	-2.55	13.42	8.77	Vehicle	Pedestrian	862.71	-----	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	-----	-----	19.73	19.73	-----	-----
		U_{15} - U_{16}	486.15	48.38	-19.04	14.17	3.08	0.90	1.17	50.90	-20.03	14.17	3.08	Vehicle	Vehicle	698.16	-----	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}	339.27	48.12	-34.72	14.66	-2.95	0.90	1.17	50.63	-36.53	14.66	-2.95	Vehicle	Vehicle	506.87	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	13.92	13.92	-----	-----
		U_{17} - U_{18}	192.13	47.07	-52.89	15.12	-9.49	0.90	1.17	49.52	-55.65	15.12	-9.49	Vehicle	Vehicle	314.15	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	11.59	11.59	-----	-----
		U_{18} - U_{19}	53.83	43.13	-70.20	15.12	-15.34	0.90	1.17	45.38	-73.86	15.12	-15.34	Vehicle	Vehicle	128.97	-26.03	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	15.70	15.70	9.49	9.49
		U_{19} - U_{20}	-58.94	38.25	-84.61	15.07	-19.84	0.90	1.17	40.24	-89.02	15.07	-19.84	Pedestrian	Vehicle	-----	-192.35	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	-----	-----	7.12	7.12
	Structure 3	U_0 - U_1	-125.32	19.60	-89.50	14.77	-22.39	0.90	1.17	20.62	-94.16	14.77	-22.39	Pedestrian	Vehicle	-----	-285.33	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	-----	-----	7.56	7.56
		U_1 - U_2	-146.72	26.37	-91.22	14.37	-22.74	0.90	1.17	27.74	-95.97	14.37	-22.74	Pedestrian	Vehicle	-----	-315.50	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.19	7.19
		U_2 - U_3	-146.49	24.61	-81.21	14.36	-22.72	0.90	1.17	25.89	-85.44	14.36	-22.72	Pedestrian	Vehicle	-----	-301.52	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	-----	-----	8.08	8.08
		U_3 - U_4	-112.53	32.13	-63.85	13.88	-16.65	0.90	1.17	33.80	-67.17	13.88	-16.65	Pedestrian	Vehicle	-----	-233.62	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	-----	-----	10.78	10.78
		U_4 - U_5	-36.03	36.98	-56.36	13.40	-15.01	0.90	1.17	38.90	-59.30	13.40	-15.01	Pedestrian	Vehicle	21.16	-123.92	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	16.37	16.37	11.08	11.08
		U_5 - U_6	80.94	40.07	-44.89	0.38	0.00	0.90	1.17	42.16	-47.23	0.38	0.00	Vehicle	Vehicle	160.02	-----	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	-----	-----	42.67	-----	-----	10.67	-----	-----	16.26	16.26	-----	-----
		U_6 - U_7	220.82	-8.16	-22.56	7.92	0.00	0.90	1.17	-8.58	-23.73	7.92	0.00	Vehicle	Vehicle	275.90	-----	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	363.48	4.01	-13.38	14.90	0.00	0.90	1.17	4.22	-14.08	14.90	0.00	Pedestrian	Vehicle	497.39	-----	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	-----	-----	35.59	35.59	-----	-----
		U_8 - U_9	503.92	28.72	-6.55	21.74	3.11	0.90	1.17	30.22	-6.89	21.74	3.11	Pedestrian	Vehicle	722.64	-----	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	-----	-----	14.79	14.79	-----	-----
		U_9 - U_{10}	616.62	5.44	-2.69	27.08	0.00	0.90	1.17	5.72	-2.83	27.08	0.00	Pedestrian	Vehicle	844.25	-----	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	-----	-----	28.89	28.89	-----	-----

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: 3F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

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

E = 29000.0 ksi

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Lower Chord	Structure 1	L_0- L_1	-1.94	0.94	-1.01	0.37	-2.06	0.90	1.24	1.05	-1.12	0.37	-2.06	Pedestrian	Pedestrian	-----	-6.66	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	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	-----	-----	**132.48**	**132.48**
		L_1 - L_2	67.93	-11.40	33.28	-3.35	9.23	0.90	1.24	37.05	-12.69	9.23	-3.35	Vehicle	Vehicle	136.47	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**11.73**	**11.73**	-----	-----
		L_2 - L_3	78.83	-24.73	58.32	-7.39	15.48	0.90	1.24	64.92	-27.53	15.48	-7.39	Vehicle	Vehicle	186.87	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**9.08**	**9.08**	-----	-----
		L_3 - L_4	39.11	-34.55	59.81	-10.83	18.09	0.90	1.24	66.59	-38.46	18.09	-10.83	Vehicle	Vehicle	137.40	-----	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	-----	-----	**9.45**	**9.45**	-----	-----
		L_4 - L_5	-166.44	-50.12	37.64	-16.91	10.96	0.90	1.24	41.90	-55.80	10.96	-16.91	Vehicle	Vehicle	-----	-288.91	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**5.98**	**5.98**
		L_5 - L_6	-301.30	-54.25	19.14	-15.71	0.00	0.90	1.24	21.31	-60.40	0.00	-15.71	Vehicle	Vehicle	-----	-470.20	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	-----	-----	**5.93**	**5.93**
		L_6 - L_7	-439.01	-9.00	-4.13	-4.99	-21.52	0.90	1.24	-4.59	-10.02	-4.99	-21.52	Pedestrian	Pedestrian	-----	-611.72	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**16.04**	**16.04**
		L_7 - L_8	-551.71	-50.69	2.83	-35.56	0.00	0.90	1.24	3.15	-56.43	0.00	-35.56	Vehicle	Pedestrian	-----	-836.81	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	-----	-----	**7.04**	**7.04**
		L_8 - L_9	-570.55	-28.40	-30.34	-11.71	-25.77	0.90	1.20	-30.62	-32.71	-11.71	-25.77	Pedestrian	Pedestrian	-----	-817.74	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	-----	-----	**10.75**	**10.75**
		L_9 - L_{10}	-355.55	-31.28	-8.06	-11.67	-13.03	0.90	1.20	-8.69	-33.73	-11.67	-13.03	Pedestrian	Pedestrian	-----	-522.99	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**12.61**	**12.61**
		L_{10} - L_{11}	-118.56	-32.24	14.49	-10.69	-1.73	0.90	1.20	15.63	-34.76	-1.73	-10.69	Vehicle	Vehicle	-----	-199.31	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	-----	-----	**10.99**	**10.99**
		L_{11} - L_{12}	103.33	-29.91	44.09	-9.47	9.97	0.90	1.20	47.54	-32.25	9.97	-9.47	Vehicle	Vehicle	196.13	-----	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	-----	-----	**10.32**	**10.32**	-----	-----
		L_{12} - L_{13}	300.47	-27.73	78.09	-8.15	17.86	0.90	1.20	84.19	-29.90	17.86	-8.15	Vehicle	Vehicle	500.05	-----	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	-----	-----	**8.01**	**8.01**	-----	-----
		L_{13} - L_{14}	441.01	-23.59	78.26	-6.62	24.18	0.90	1.20	84.38	-25.43	24.18	-6.62	Vehicle	Vehicle	683.02	-----	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	-----	-----	**10.27**	**10.27**	-----	-----
		L_{14} - L_{15}	546.80	-14.91	97.83	0.00	21.12	0.90	1.20	105.48	-16.07	21.12	0.00	Vehicle	Vehicle	847.96	-----	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	-----	-----	**9.74**	**9.74**	-----	-----
		L_{15} - L_{16}	505.90	-14.10	81.54	0.00	18.34	0.90	1.20	87.92	-15.20	18.34	0.00	Vehicle	Vehicle	771.96	-----	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	-----	-----	**12.15**	**12.15**	-----	-----
		L_{16} - L_{17}	398.64	57.97	46.39	0.00	11.94	0.90	1.20	62.50	50.02	11.94	0.00	Vehicle	Vehicle	599.48	-----	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	-----	-----	**13.09**	**13.09**	-----	-----
		L_{17} - L_{18}	263.76	37.13	23.40	4.73	0.15	0.90	1.20	40.03	25.23	4.73	0.15	Vehicle	Vehicle	394.92	-----	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	-----	-----	**15.48**	**15.48**	-----	-----
		L_{18} - L_{19}	118.86	16.20	1.32	-3.28	0.70	0.90	1.20	17.46	1.42	0.70	-3.28	Vehicle	Vehicle	177.21	-----	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	-----	-----	**21.98**	**21.98**	-----	-----
		L_{19} - L_{20}	-23.25	-4.86	2.81	-12.00	1.27	0.90	1.20	3.03	-5.24	1.27	-12.00	Pedestrian	Pedestrian	-----	-52.63	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	-----	-----	**20.90**	**20.90**
		L_0- L_1	-35.95	3.27	-0.38	1.19	-5.13	0.90	1.18	3.48	-0.40	1.19	-5.13	Pedestrian	Pedestrian	-----	-53.93	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	-----	-----	**90.16**	**90.16**
		L_1 - L_2	132.83	-1.92	26.25	-0.07	2.94	0.90	1.18	27.94	-2.05	2.94	-0.07	Vehicle	Vehicle	209.00	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**17.91**	**17.91**	-----	-----
		L_2 - L_3	304.11	-9.22	59.32	-1.80	10.53	0.90	1.18	63.16	-9.82	10.53	-1.80	Vehicle	Vehicle	477.44	-----	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	-----	-----	**10.64**	**10.64**	-----	-----
		L_3 - L_4	445.92	-16.78	84.01	-3.63	18.16	0.90	1.18	89.44	-17.86	18.16	-3.63	Vehicle	Vehicle	695.97	-----	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	-----	-----	**9.65**	**9.65**	-----	-----
		L_4 - L_5	567.84	-26.87	102.38	-6.10	24.82	0.90	1.18	109.00	-28.60	24.82	-6.10	Vehicle	Vehicle	879.89	-----	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	-----	-----	**9.93**	**9.93**	-----	-----
		L_5 - L_6	603.64	-34.64	112.15	-8.06	28.47	0.90	1.18	119.41	-36.88	28.47	-8.06	Vehicle	Vehicle	939.96	-----	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	-----	-----	**9.96**	**9.96**	-----	-----
		L_6 - L_7	599.48	-43.79	105.71	-10.41	30.26	0.90	1.18	112.55	-46.62	30.26	-10.41	Vehicle	Vehicle	925.64	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**10.82**	**10.82**	-----	-----
		L_7 - L_8	373.94	-54.85	85.36	-13.66	24.93	0.90	1.18	90.88	-58.40	24.93	-13.66	Vehicle	Vehicle	604.26	-----	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	-----	-----	**10.65**	**10.65**	-----	-----
		L_8 - L_9	195.71	-58.69	70.51	-15.12	19.52	0.90	1.18	75.08	-62.49	19.52	-15.12	Vehicle	Vehicle	352.02	-----	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	-----	-----	**12.04**	**12.04**	-----	-----
		L_9 - L_{10}	-13.21	-60.96	49.56	-7.60	12.45	0.90	1.18	52.77	-64.91	12.45	-7.60	Vehicle	Vehicle	51.43	-101.56	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**16.58**	**16.58**	**11.01**	**11.01**
		L_{10} - L_{11}	-217.32	18.34	22.26	-15.65	0.00	0.90	1.18	23.70	19.53	0.00	-15.65	Vehicle	Vehicle	-----	-257.13	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	-----	-----	**11.48**	**11.48**	-----	-----
		L_{11} - L_{12}	-419.93	-60.63	10.28	-23.34	0.00	0.90	1.18	10.95	-64.55	0.00	-23.34	Vehicle	Pedestrian	-----	-660.17	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.81**	**5.81**
		L_{12} - L_{13}	-591.41	-25.08	-6.27	-7.09	-18.75	0.90	1.18	-6.68	-26.70	-7.09	-18.75	Pedestrian	Pedestrian	-----	-827.91	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	-----	-----	**14.81**	**14.81**
		L_{13} - L_{14}	-724.23	-24.28	-0.13	-35.12	0.00	0.90	1.18	-0.13	-25.85	0.00	-35.12	Vehicle	Pedestrian	-----	-1020.76	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**12.97**	**12.97**
		L_{14} - L_{15}	-747.05	11.06	-12.71	0.00	-36.29	0.90	1.17	11.64	-13.37	0.00	-36.29	Vehicle	Pedestrian	-----	-1035.71	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**15.47**	**15.47**
		L_{15} - L_{16}	-632.15	-37.54	-2.11	-9.38	-12.11	0.90	1.17	-2.21	-39.49	-9.38	-12.11	Pedestrian	Vehicle	-----	-873.14	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**16.29**	**16.29**
		L_{16} - L_{17}	-488.62	-40.58	5.90	-9.25	-11.44	0.90	1.17	6.21	-42.69	-9.25	-11.44	Vehicle	Vehicle	-----	-690.71	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	-----	-----	**13.09**	**13.09**
		L_{17} - L_{18}	-336.98	-40.24	9.92	-9.73	-4.53	0.90	1.17	10.44	-42.34	-4.53	-9.73	Vehicle	Vehicle	-----	-493.12	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**9.22**	**9.22**
		L_{18} - L_{19}	-183.61	-39.62	34.14	-9.59	1.37	0.90	1.17	35.92	-41.68	1.37	-9.59	Vehicle	Vehicle	-----	-292.88	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	-----	-----	**9.36**	**9.36**
		L_{19} - L_{20}	-45.77	-35.64	52.40	-9.58	7.21	0.90	1.17	55.13	-37.50	7.21	-9.58	Vehicle	Vehicle	12.17	-108.24	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	**13.15**	**13.15**	**14.08**	**14.08**
	Structure 2	L_{20} - L_{21}	68.00	-31.67	74.26	-9.12	11.07	0.90	1.17	78.13	-33.32	11.07	-9.12	Vehicle	Vehicle	189.96	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**11.48**	**11.48**	-----	-----
		L_{21} - L_{22}	133.90	-13.45	69.12	-8.82	13.61	0.90	1.17	72.73	-14.15	13.61	-8.82	Vehicle	Pedestrian	268.62	-----	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	-----	-----	**11.42**	**11.42**	-----	-----
		L_{22} - L_{23}	122.50	-26.21	72.32	-7.58	8.54	0.90	1.17	76.09	-27.57	8.54	-7.58	Vehicle	Vehicle	258.16	-----	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	-----	-----	**11.07**	**11.07**	-----	-----
		L_{23} - L_{24}	46.70	-31.11	63.57	-7.09	6.92	0.90	1.17	66.88	-32.73	6.92	-7.09	Vehicle	Vehicle	147.65	-----	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	-----	-----	**13.72**	**13.72**	-----	-----
		L_{24} - L_{25}	-66.76	-33.67	50.33	-4.28	3.32	0.90	1.17	52.95	-35.42	3.32	-4.28	Vehicle	Vehicle	-----	-132.83	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	-----	-----	**14.31**	**14.31**
		L_{25} - L_{26}	-205.83	-37.12	27.43	-11.78	0.00	0.90	1.17	28.86	-39.05	0.00	-11.78	Vehicle	Vehicle	-----	-318.34	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	-----	-----	**9.42**	**9.42**
		L_{26} - L_{27}	-350.61	2.29	16.23	-18.88	0.00	0.90	1.17	17.08	2.41	0.00	-18.88	Vehicle	Pedestrian	-----	-477.20	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	-----	-----	-----	-----
		L_{27} - L_{28}	-494.76	-26.23	4.92	-25.89	0.00	0.90	1.17	5.18	-27.60	0.00	-25.89	Vehicle	Pedestrian	-----	-712.73	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	-----	-----	**10.34**	**10.34**
		L_{28} - L_{29}	-620.88	-42.21	-6.35	-21.97	-5.04	0.90	1.17	-6.68	-44.41	-5.04	-21.97	Pedestrian	Pedestrian	-----	-893.43	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**9.86**	**9.86**
		L_{29} - L_{30}	-716.82	-23.80	-16.85	-36.30	0.00	0.90	1.17	-17.73	-25.04	0.00	-36.30	Vehicle	Pedestrian	-----	-1011.59	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	-----	-----	**13.02**	**13.02**
		L_{30} - L_{31}

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 3F1 — 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
South Truss - Verticals	Structure 1	U$_0$ - L$_0$	-93.63	-49.17	11.31	-12.32	3.44	0.90	1.24	12.59	-54.74	3.44	-12.32	Vehicle	Vehicle	-----	-192.88	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	-----	-----	-----	-----	-----	4.58	4.58
		U$_1$ - L$_1$	-46.50	-30.56	9.70	-9.05	2.93	0.90	1.24	10.80	-34.02	2.93	-9.05	Vehicle	Vehicle	-----	-104.67	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	-----	-----	-----	-----	-----	8.98	8.98
		U$_2$ - L$_2$	-0.07	-20.52	8.80	-5.68	2.84	0.90	1.24	9.80	-22.84	2.84	-5.68	Vehicle	Vehicle	12.65	-29.79	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	43.65	43.65	15.40	15.40
		U$_3$ - L$_3$	39.61	-12.91	7.25	-2.12	2.70	0.90	1.24	8.07	-14.37	2.70	-2.12	Pedestrian	Vehicle	65.49	-----	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	-----	-----	-----	-----	-----	36.04	36.04	-----	-----
		U$_4$ - L$_4$	-30.21	-0.28	-11.25	0.00	-3.47	0.90	1.24	-0.32	-12.52	0.00	-3.47	Vehicle	Vehicle	-----	-55.55	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	25.53	25.53
		U$_5$ - L$_5$	-130.50	1.89	-31.85	0.00	-10.24	0.90	1.24	2.10	-35.46	0.00	-10.24	Vehicle	Vehicle	-----	-215.76	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	-----	-----	8.31	8.31
		U$_6$ - L$_6$	-158.19	5.02	-31.60	0.00	-13.06	0.90	1.24	5.59	-35.17	0.00	-13.06	Vehicle	Pedestrian	-----	-268.35	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	-----	-----	7.25	7.25
		U$_7$ - L$_7$	-152.33	9.99	-31.44	0.00	-13.25	0.90	1.24	11.12	-35.00	0.00	-13.25	Vehicle	Pedestrian	-----	-260.75	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	-----	-----	6.38	6.38
		U$_8$ - L$_8$	-455.44	-49.21	-29.14	-18.98	-12.74	0.90	1.24	-32.44	-54.79	-12.74	-18.98	Pedestrian	Pedestrian	-----	-687.97	3.28	51.23	47.9548	1690.75	131.71	16.6563	4.0434	37.07	31.69	-1380.20	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	8.22	8.22
		U$_9$ - L$_9$	-287.50	-49.70	0.06	-18.21	0.00	0.90	1.20	0.06	-53.59	0.00	-18.21	Vehicle	Pedestrian	-----	-467.09	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	-----	-----	4.98	4.98
		U$_{10}$ - L$_{10}$	-276.27	-46.93	-1.87	-16.18	-1.37	0.90	1.20	-2.01	-50.60	-1.37	-16.18	Pedestrian	Vehicle	-----	-424.92	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	-----	-----	9.22	9.22
		U$_{11}$ - L$_{11}$	-232.54	-42.90	1.34	-14.42	0.00	0.90	1.20	1.44	-46.25	0.00	-14.42	Vehicle	Vehicle	-----	-362.43	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	8.84	8.84
		U$_{12}$ - L$_{12}$	-178.38	-35.86	1.08	-11.20	0.00	0.90	1.20	1.17	-38.66	0.00	-11.20	Vehicle	Vehicle	-----	-282.15	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	-----	-----	9.16	9.16
		U$_{13}$ - L$_{13}$	-127.70	-26.60	4.19	-7.88	0.00	0.90	1.20	4.51	-28.68	0.00	-7.88	Vehicle	Vehicle	-----	-203.29	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	-----	-----	8.81	8.81
		U$_{14}$ - L$_{14}$	-30.38	-5.89	-2.75	-3.03	0.00	0.90	1.20	-2.96	-6.35	0.00	-3.03	Vehicle	Pedestrian	-----	-51.70	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	-----	-----	33.49	33.49
		U$_{15}$ - L$_{15}$	-28.93	9.12	-22.00	1.55	-4.53	0.90	1.20	9.83	-23.72	1.55	-4.53	Vehicle	Vehicle	-----	-68.45	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	13.25	13.25
		U$_{16}$ - L$_{16}$	-75.99	4.98	-26.40	1.39	-7.07	0.90	1.20	5.37	-28.46	1.39	-7.07	Vehicle	Vehicle	-----	-135.79	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	-----	-----	9.32	9.32
		U$_{17}$ - L$_{17}$	-161.81	5.33	-35.87	1.30	-10.66	0.90	1.20	5.75	-38.67	1.30	-10.66	Vehicle	Vehicle	-----	-260.63	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	-----	-----	6.45	6.45
		U$_{18}$ - L$_{18}$	-190.09	4.57	-35.31	1.12	-12.69	0.90	1.20	4.93	-38.07	1.12	-12.69	Vehicle	Pedestrian	-----	-313.11	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	-----	-----	6.60	6.60
		U$_{19}$ - L$_{19}$	-228.09	3.92	-34.85	0.97	-14.99	0.90	1.20	4.22	-37.58	0.97	-14.99	Vehicle	Pedestrian	-----	-364.85	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	-----	-----	7.39	7.39
		U$_{20}$ - L$_{20}$	-242.54	3.55	-35.70	0.95	-15.62	0.90	1.20	3.83	-38.49	0.95	-15.62	Vehicle	Pedestrian	-----	-385.64	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	-----	-----	5.25	5.25
	Structure 2	U$_0$ - L$_0$	-302.99	-52.04	8.54	-15.08	2.22	0.90	1.18	9.09	-55.41	2.22	-15.08	Vehicle	Vehicle	-----	-465.92	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	-----	-----	6.13	6.13
		U$_1$ - L$_1$	-268.80	-47.25	8.75	-13.67	2.12	0.90	1.18	9.32	-50.30	2.12	-13.67	Vehicle	Vehicle	-----	-414.83	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	-----	-----	8.02	8.02
		U$_2$ - L$_2$	-220.88	-44.15	9.45	-12.32	2.34	0.90	1.18	10.06	-47.00	2.34	-12.32	Vehicle	Vehicle	-----	-348.25	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	-----	-----	7.52	7.52
		U$_3$ - L$_3$	-175.24	-40.92	10.12	-10.35	2.49	0.90	1.18	10.78	-43.57	2.49	-10.35	Vehicle	Vehicle	-----	-284.46	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	-----	-----	6.35	6.35
		U$_4$ - L$_4$	-82.09	-27.80	8.79	-6.62	2.21	0.90	1.18	9.35	-29.60	2.21	-6.62	Vehicle	Vehicle	-----	-145.18	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	-----	-----	8.69	8.69
		U$_5$ - L$_5$	-19.91	-21.93	8.50	-4.16	2.23	0.90	1.18	9.05	-23.35	2.23	-4.16	Vehicle	Vehicle	-----	-56.23	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	-----	-----	13.73	13.73
		U$_6$ - L$_6$	60.32	-12.50	18.92	-0.47	1.75	0.90	1.18	20.14	-13.31	1.75	-0.47	Vehicle	Vehicle	104.60	-----	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	-----	-----	-----	-----	-----	18.24	18.24	-----	-----
		U$_7$ - L$_7$	-41.78	-1.81	-1.64	0.00	-2.49	0.90	1.18	-1.75	-1.92	0.00	-2.49	Vehicle	Pedestrian	-----	-60.04	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	-----	-----	67.73	67.73
		U$_8$ - L$_8$	-189.01	4.15	-32.33	0.00	-8.38	0.90	1.18	4.42	-34.42	0.00	-8.38	Vehicle	Vehicle	-----	-290.45	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	-----	-----	9.92	9.92
		U$_9$ - L$_9$	-254.00	1.67	-40.19	0.00	-10.55	0.90	1.18	1.78	-42.79	0.00	-10.55	Vehicle	Vehicle	-----	-385.82	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	-----	-----	10.22	10.22
		U$_{10}$ - L$_{10}$	-290.02	3.04	-40.75	0.00	-12.18	0.90	1.18	3.23	-43.39	0.00	-12.18	Vehicle	Vehicle	-----	-433.42	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	11.26	11.26
		U$_{11}$ - L$_{11}$	-312.19	6.49	-43.89	0.00	-12.59	0.90	1.18	6.91	-46.73	0.00	-12.59	Vehicle	Vehicle	-----	-466.59	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	-----	-----	9.69	9.69
		U$_{12}$ - L$_{12}$	-327.27	9.33	-40.04	-0.93	-13.01	0.90	1.18	9.94	-42.63	-0.93	-13.01	Vehicle	Vehicle	-----	-480.86	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	-----	-----	11.13	11.13
		U$_{13}$ - L$_{13}$	-277.23	12.49	-33.93	0.00	-11.39	0.90	1.18	13.29	-36.13	0.00	-11.39	Vehicle	Vehicle	-----	-407.37	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	-----	-----	11.43	11.43
		U$_{14}$ - L$_{14}$	-505.47	-39.83	-26.89	-11.35	-9.95	0.90	1.18	-28.63	-42.41	-9.95	-11.35	Pedestrian	Vehicle	-----	-712.25	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	-----	-----	12.88	12.88
		U$_{15}$ - L$_{15}$	-232.92	-46.07	2.73	-11.17	0.00	0.90	1.17	2.87	-48.47	0.00	-11.17	Vehicle	Vehicle	-----	-365.81	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	-----	-----	9.43	9.43
		U$_{16}$ - L$_{16}$	-260.09	-46.20	0.35	-12.63	0.83	0.90	1.17	0.37	-48.60	0.83	-12.63	Pedestrian	Vehicle	-----	-401.30	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	-----	-----	8.35	8.35
		U$_{17}$ - L$_{17}$	-228.20	-44.79	5.80	-11.76	0.66	0.90	1.17	6.11	-47.12	0.66	-11.76	Vehicle	Vehicle	-----	-357.92	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	8.38	8.38
		U$_{18}$ - L$_{18}$	-209.23	-41.51	6.98	-11.28	-0.02	0.90	1.17	7.35	-43.68	-0.02	-11.28	Vehicle	Vehicle	-----	-328.78	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	-----	-----	8.43	8.43
		U$_{19}$ - L$_{19}$	-166.51	-35.64	7.48	-9.53	-0.07	0.90	1.17	7.87	-37.49	-0.07	-9.53	Vehicle	Vehicle	-----	-265.20	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	9.20	9.20
		U$_{20}$ - L$_{20}$	-113.91	-28.31	7.51	-7.50	-0.43	0.90	1.17	7.91	-29.79	-0.43	-7.50	Vehicle	Vehicle	-----	-186.80	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	-----	-----	8.77	8.77
		U$_{21}$ - L$_{21}$	-62.73	-22.96	11.11	-5.22	-0.44	0.90	1.17	11.69	-24.16	-0.44	-5.22	Vehicle	Vehicle	-----	-112.95	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	-----	-----	11.50	11.50
		U$_{22}$ - L$_{22}$	-38.93	-2.68	-5.96	-2.15	-2.04	0.90	1.17	-2.82	-6.27	-2.04	-2.15	Pedestrian	Pedestrian	-----	-61.55	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	45.00	Pass	6.56	12.00	Pass	-----	-----	36.00	36.00
		U$_{23}$ - L$_{23}$	-74.45	7.95	-26.51	0.48	-6.10	0.90	1.17	8.37	-27.89	0.48	-6.10	Vehicle	Vehicle	-----	-133.04	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	-----	-----	9.54	9.54
		U$_{24}$ - L$_{24}$	-121.37	7.79	-31.07	0.37	-8.17	0.90	1.17	8.20	-32.69	0.37	-8.17	Vehicle	Vehicle	-----	-200.28	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	7.76	7.76
		U$_{25}$ - L$_{25}$	-169.10	7.49	-36.46	0.43	-9.94	0.90	1.17	7.88	-38.35	0.43	-9.94	Vehicle	Vehicle	-----	-269.69	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	-----	-----	8.92	8.92
		U$_{26}$ - L$_{26}$	-207.93	6.78	-38.64	0.14	-11.42	0.90	1.17	7.13	-40.66	0.14	-11.42	Vehicle	Vehicle	-----	-323.16	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	-----	-----	9.08	9.08
		U$_{27}$ - L$_{27}$	-219.90	5.57	-40.50	0.16	-11.49	0.90	1.17	5.86	-42.61	0.16	-11.49	Vehicle	Vehicle	-----	-341.26	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	-----	-----	9.47	9.47
		U$_{28}$ - L$_{28}$	-240.66	8.03	-37.08	-0.25	-11.17	0.90	1.17	8.44	-39.01	-0.25	-11.17	Vehicle	Vehicle	-----	-363.57	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	-----	-----	10.91	10.91
		U$_{29}$ - L$_{29}$	-202.76	11.95	-32.77	0.00	-10.35	0.90	1.17	12.57	-34.48	0.00	-10.35	Vehicle	Vehicle	-----	-308.40	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	-----	-----	14.13	14.13
		U$_{30}$ - L$_{30}$	-516.45	-40.06	-27.40	-13.75	-8.21	0.90	1.18	-29.17	-42.65	-8.21	-13.75	Vehicle	Vehicle	-----	-726.83	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	-----	-----	11.64	11.64
		U$_{31}$ - L$_{31}$	-318.62	45.03	5.70	-12.96	0.00	0.90	1.18	6.06	-47.94	0.00	-12.96	Vehicle	Vehicle	-----	-476.53	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	-----	-----	7.75	7.75
		U$_{32}$ - L$_{32}$	-358.52	-49.10	1.72	-14.65	-0.25	0.90	1.18	1.83	-52.27	-0.25	-14.65	Vehicle	Vehicle	-----	-534.02	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	-----	-----	8.48	8.48
		U$_{33}$ - 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: 3F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

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

E = 29000.0 ksi

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capicity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Diagonals	Structure 1	U_0 - L_1	87.61	27.14	-11.97	14.00	-4.60	0.90	1.24	30.21	-13.32	14.00	-4.60	Pedestrian	Pedestrian	171.36	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	11.28	11.28	-----	-----
		U_1 - L_2	23.84	35.90	2.68	9.20	-4.72	0.90	1.24	39.97	2.98	9.20	-4.72	Vehicle	Vehicle	82.96	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	10.10	10.10	-----	-----
		U_2 - L_3	-49.05	15.70	-11.38	0.00	-1.00	0.90	1.24	17.48	-12.66	0.00	-1.00	Vehicle	Vehicle	-----	-80.22	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	-----	-----	-----	-----	-----	22.52	22.52
		U_3 - L_4	-108.90	-3.32	-25.76	-4.21	-2.10	0.90	1.24	-3.70	-28.68	-2.10	-4.21	Pedestrian	Vehicle	-----	-178.84	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	7.93	7.93
		U_4 - L_4	153.14	6.64	15.84	3.12	7.00	0.90	1.24	17.63	7.40	7.00	3.12	Pedestrian	Pedestrian	231.11	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	15.08	15.08	-----	-----
		U_5 - L_5	186.37	42.87	-3.82	13.44	0.00	0.90	1.24	47.72	-4.26	13.44	0.00	Vehicle	Vehicle	304.32	-----	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	-----	-----	-----	-----	-----	9.73	9.73	-----	-----
		U_6 - L_6	177.53	38.24	-9.58	14.14	0.00	0.90	1.24	42.57	-10.66	14.14	0.00	Vehicle	Vehicle	286.13	-----	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	-----	-----	-----	-----	-----	11.11	11.11	-----	-----
		U_7 - L_7	173.15	35.05	-11.04	13.87	0.00	0.90	1.24	39.03	-12.29	13.87	0.00	Pedestrian	Vehicle	293.86	-----	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	-----	-----	-----	-----	-----	9.03	9.03	-----	-----
		U_8 - L_8	328.03	52.41	0.47	19.31	0.00	0.90	1.20	56.51	0.50	19.31	0.00	Pedestrian	Vehicle	525.00	-----	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	-----	-----	-----	-----	-----	8.36	8.36	-----	-----
		U_9 - L_{10}	339.64	57.14	-1.96	19.75	0.00	0.90	1.20	61.61	-2.11	19.75	0.00	Vehicle	Vehicle	521.62	-----	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	-----	-----	-----	-----	-----	10.11	10.11	-----	-----
		U_{10} - L_{11}	313.15	54.73	4.11	18.15	0.00	0.90	1.20	59.01	4.43	18.15	0.00	Vehicle	Vehicle	483.80	-----	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	-----	-----	-----	-----	-----	10.13	10.13	-----	-----
		U_{11} - L_{12}	270.62	46.41	3.57	14.84	0.00	0.90	1.20	50.04	3.85	14.84	0.00	Vehicle	Vehicle	416.86	-----	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	-----	-----	-----	-----	-----	10.13	10.13	-----	-----
		U_{12} - L_{13}	194.11	37.92	-5.81	10.79	0.00	0.90	1.20	40.88	-6.26	10.79	0.00	Vehicle	Vehicle	305.49	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	10.69	10.69	-----	-----
		U_{13} - L_{14}	123.52	25.54	-11.20	2.11	3.86	0.90	1.20	27.53	-12.07	3.86	2.11	Vehicle	Vehicle	196.36	-----	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	-----	-----	-----	-----	-----	11.05	11.05	-----	-----
		U_{15} - L_{14}	-16.31	21.92	-17.97	0.00	-0.88	0.90	1.20	23.64	-19.37	0.00	-0.88	Vehicle	Vehicle	9.52	-46.39	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	18.78	18.78	16.11	16.11
		U_{16} - L_{15}	59.11	30.48	-10.11	6.08	-2.09	0.90	1.20	32.87	-10.90	6.08	-2.09	Vehicle	Vehicle	119.57	-----	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	-----	-----	-----	-----	-----	11.21	11.21	-----	-----
		U_{17} - L_{16}	172.05	43.04	-4.82	9.93	-1.86	0.90	1.20	46.41	-5.20	9.93	-1.86	Vehicle	Pedestrian	284.00	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	7.60	7.60	-----	-----
		U_{18} - L_{17}	210.69	42.97	-6.30	12.50	-1.53	0.90	1.20	46.33	-6.80	12.50	-1.53	Vehicle	Vehicle	334.13	-----	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	-----	-----	-----	-----	-----	9.50	9.50	-----	-----
		U_{19} - L_{18}	242.30	41.99	-5.03	13.72	-1.21	0.90	1.20	45.27	-5.43	13.72	-1.21	Vehicle	Vehicle	373.85	-----	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	-----	-----	-----	-----	-----	10.33	10.33	-----	-----
		U_{20} - L_{19}	257.77	33.97	-4.14	15.71	-1.03	0.90	1.20	36.63	-4.46	15.71	-1.03	Pedestrian	Vehicle	403.14	-----	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	-----	-----	-----	-----	-----	8.64	8.64	-----	-----
		U_0 - L_1	299.01	27.49	-9.08	14.21	-2.21	0.90	1.18	29.26	-9.67	14.21	-2.21	Pedestrian	Vehicle	445.22	-----	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	-----	-----	-----	-----	-----	11.01	11.01	-----	-----
		U_1 - L_2	284.23	52.61	-10.88	14.05	-2.66	0.90	1.18	56.02	-11.58	14.05	-2.66	Vehicle	Vehicle	442.32	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	8.81	8.81	-----	-----
		U_2 - L_3	221.45	47.74	-11.61	11.83	-2.85	0.90	1.18	50.83	-12.36	11.83	-2.85	Vehicle	Vehicle	353.96	-----	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	-----	-----	-----	-----	-----	8.44	8.44	-----	-----
		U_3 - L_4	178.33	43.25	-13.12	10.08	-3.23	0.90	1.18	46.05	-13.97	10.08	-3.23	Vehicle	Vehicle	291.69	-----	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	-----	-----	-----	-----	-----	8.66	8.66	-----	-----
		U_4 - L_5	53.52	29.54	-10.97	5.38	-2.87	0.90	1.18	31.45	-11.68	5.38	-2.87	Vehicle	Vehicle	110.45	-----	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	-----	-----	-----	-----	-----	11.90	11.90	-----	-----
		U_5 - L_6	-16.50	24.87	-17.98	2.23	-1.22	0.90	1.18	26.48	-19.14	2.23	-1.22	Vehicle	Vehicle	12.97	-46.33	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	-----	-----	-----	16.78	16.78	16.16	16.16
		U_6 - L_7	-133.20	10.11	-32.53	0.00	-5.36	0.90	1.18	10.77	-34.63	0.00	-5.36	Vehicle	Vehicle	-----	-218.18	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	6.53	6.53
		U_7 - L_7	208.77	35.56	-8.48	8.33	0.00	0.90	1.18	37.86	-9.02	8.33	0.00	Vehicle	Vehicle	320.61	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	10.42	10.42	-----	-----
		U_8 - L_8	289.58	45.59	-1.33	10.70	0.00	0.90	1.18	48.54	-1.41	10.70	0.00	Vehicle	Vehicle	439.56	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	8.67	8.67	-----	-----
		U_{10} - L_9	327.97	49.31	-1.72	12.66	0.00	0.90	1.18	52.50	-1.83	12.66	0.00	Vehicle	Vehicle	494.62	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	8.56	8.56	-----	-----
		U_{11} - L_{10}	349.27	51.30	-2.15	12.70	0.00	0.90	1.18	54.62	-2.29	12.70	0.00	Vehicle	Vehicle	525.05	-----	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	-----	-----	-----	-----	-----	9.07	9.07	-----	-----
		U_{12} - L_{11}	358.20	48.15	-7.28	13.52	0.00	0.90	1.18	51.26	-7.75	13.52	0.00	Vehicle	Vehicle	532.30	-----	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	-----	-----	-----	-----	-----	9.49	9.49	-----	-----
		U_{13} - L_{12}	307.76	40.10	-13.82	12.26	-0.24	0.90	1.18	42.70	-14.71	12.26	-0.24	Vehicle	Vehicle	455.59	-----	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	-----	-----	-----	-----	-----	11.00	11.00	-----	-----
		U_{14} - L_{13}	260.25	32.39	-11.69	9.65	0.00	0.90	1.18	34.48	-12.44	9.65	0.00	Vehicle	Vehicle	383.16	-----	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	-----	-----	-----	-----	-----	15.00	15.00	-----	-----
		U_{15} - L_{15}	208.41	42.85	-1.33	11.04	-2.52	0.90	1.17	45.08	-1.40	11.04	-2.52	Vehicle	Pedestrian	329.53	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	9.81	9.81	-----	-----
		U_{16} - L_{16}	243.53	49.55	-3.72	11.54	-1.48	0.90	1.17	52.13	-3.92	11.54	-1.48	Vehicle	Pedestrian	384.36	-----	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	-----	-----	-----	-----	-----	7.81	7.81	-----	-----
		U_{17} - L_{17}	255.83	48.15	-6.11	12.23	0.00	0.90	1.17	50.66	-6.43	12.23	0.00	Vehicle	Vehicle	398.43	-----	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	-----	-----	-----	-----	-----	8.97	8.97	-----	-----
		U_{18} - L_{18}	235.25	49.28	-7.16	11.35	0.00	0.90	1.17	51.85	-7.53	11.35	0.00	Vehicle	Vehicle	373.23	-----	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	-----	-----	-----	-----	-----	8.01	8.01	-----	-----
		U_{19} - L_{19}	212.06	45.56	-8.75	11.09	0.00	0.90	1.17	47.93	-9.21	11.09	0.00	Vehicle	Vehicle	337.99	-----	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	-----	-----	-----	-----	-----	9.15	9.15	-----	-----
	Structure 2	U_0 - L_{20}	168.18	40.20	-5.59	9.14	0.00	0.90	1.17	42.29	-5.89	9.14	0.00	Vehicle	Vehicle	273.62	-----	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	-----	-----	-----	-----	-----	10.29	10.29	-----	-----
		U_{20} - L_{21}	97.21	30.89	-12.72	6.66	0.00	0.90	1.17	32.50	-13.38	6.66	0.00	Vehicle	Vehicle	168.62	-----	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	-----	-----	-----	-----	-----	10.17	10.17	-----	-----
		U_{21} - L_{22}	30.55	19.79	-20.61	0.58	-2.18	0.90	1.17	20.82	-21.68	0.58	-2.18	Vehicle	Vehicle	66.78	-----	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	-----	-----	-----	-----	-----	19.08	19.08	-----	-----
		U_{22} - L_{22}	49.81	26.76	-14.91	5.11	-0.95	0.90	1.17	28.15	-15.68	5.11	-0.95	Vehicle	Vehicle	101.36	-----	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	13.42	13.42	-----	-----
		U_{23} - L_{23}	115.09	33.75	-9.91	8.00	-0.72	0.90	1.17	35.51	-10.42	8.00	-0.72	Vehicle	Vehicle	195.79	-----	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	-----	-----	-----	-----	-----	8.80	8.80	-----	-----
		U_{24} - L_{24}	179.20	44.44	-10.28	10.10	0.00	0.90	1.17	46.76	-10.81	10.10	0.00	Vehicle	Vehicle	293.75	-----	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	-----	-----	-----	-----	-----	9.07	9.07	-----	-----
		U_{25} - L_{25}	220.95	44.53	-9.01	11.89	0.00	0.90	1.17	46.85	-9.48	11.89	0.00	Vehicle	Vehicle	348.14	-----	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	-----	-----	-----	-----	-----	9.17	9.17	-----	-----
		U_{27} - L_{26}	234.79	46.83	-7.16	11.44	0.00	0.90	1.17	49.27	-7.53	11.44	0.00	Vehicle	Vehicle	369.27	-----	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	-----	-----	-----	-----	-----	8.44	8.44	-----	-----
		U_{26} - L_{27}	253.01	44.50	-6.42	12.25	0.00	0.90	1.17	46.82	-6.75	12.25	0.00	Vehicle	Vehicle	389.78	-----	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	-----	-----	-----	-----	-----	9.77	9.77	-----	-----
		U_{28} - L_{28}	215.83	35.78	-13.72	10.20	0.61	0.90	1.17	37.64	-14.44	10.20	0.61	Vehicle	Vehicle	329.51	-----	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	-----	-----	-----	-----	-----	11.55	11.55	-----	-----
		U_{29} - L_{29}	179.92	30.75	-11.66	8.46	0.00	0.90	1.17	32.35	-12.27	8.46	0.00	Vehicle	Vehicle	275.95	-----	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	-----	-----	-----	-----	-----	14.55	14.55	-----	-----
		U_{30} - L_{31}	294.37	43.85	-6.62	12.88	0.00	0.90	1.18	46.69	-7.05	12.88	0.00	Vehicle	Vehicle	443.37	-----	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	-----	-----	-----	-----	-----	10.35	10.35	-----	-----
		U_{31} - L_{32}	342.78	49.06	-6.14	13.71	-0.55	0.90	1.18	52.23	-6.54	13.71	-0.55	Vehicle	Vehicle	513.52	-----	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	-----	-----	-----	-----	-----	8.32	8.32	-----	-----
		U_{32} - L_{33}	363.31	51.73	-3.08	14.15	0.00	0.90	1.18	55.08	-3.28	14.15	0.00	Vehicle	Vehicle	543.90	-----	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	-----	-----	-----	-----	-----	8.74	8.74	-----	-----
		$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 Spans

Loading:	3F1
Condition:	As-Inspected

Vehicle Load Factors — Pedestrian Load Factors

DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

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

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

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

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-L_1	-131.25	-22.60	-0.15	1.16	0.07	-12.06				
	L_1-U_1	-54.49	-51.15	0.18	1.98	-2.59	-16.26				
	U_1-L_2	-29.37	64.72	0.83	2.70	-2.17	-12.42				
	L_2-U_2	-52.26	61.06	1.80	2.90	-3.39	-15.03				
	U_2-L_3	-28.29	50.99	2.02	2.99	-2.93	-11.27				
	L_3-U_3	2.12	145.13	-9.91	2.75	-6.65	-3.85				
	U_3-L_4	29.92	143.40	-9.27	2.60	-7.43	-11.62				
	L_4-U_4	-69.92	603.38	-9.43	15.40	0.65	-0.14				
	U_4-L_5	-531.73	-129.19	-0.33	7.06	8.70	-10.09				
	L_5-U_5	68.54	43.95	1.57	2.04	-3.23	-12.08				
	U_5-L_6	100.48	-176.70	2.53	2.07	0.22	-12.02				
	L_6-U_6	29.25	-160.14	2.91	2.07	0.76	-12.02				
	U_6-L_7	-56.66	-218.08	2.23	1.80	0.20	-14.94				
	L_7-U_7	-173.90	-344.06	-1.48	1.35	2.77	-25.15				
	U_7-L_8	-287.80	-237.44	1.99	1.14	-12.45	-13.82				
	L_8-U_8	-196.20	-337.71	0.99	0.47	0.84	-16.76				
	U_8-L_9	-295.83	-154.75	1.63	0.40	-7.41	-11.62				
	L_9-U_9	-189.93	-29.96	-0.21	3.59	-1.13	-4.76				
	U_9-L_{10}	-179.63	-39.55	0.49	1.55	-0.42	-5.40				
	L_{10}-U_{10}	-249.78	258.69	9.08	10.40	0.13	-6.87				
	U_{10}-L_{11}	-28.62	-172.11	-0.39	0.94	3.26	-11.34				
	L_{11}-U_{11}	-24.91	-195.34	-0.18	0.84	3.26	-15.60				
	U_{11}-L_{12}	-53.03	-283.30	-0.42	1.28	-1.92	-22.64				
	L_{12}-U_{12}	-329.08	-387.93	-0.12	1.23	-2.18	-22.19				
	U_{12}-L_{13}	-360.46	-389.97	0.12	2.12	-4.36	-31.40				
	L_{13}-U_{13}	-403.42	-391.79	1.59	4.07	-3.08	-32.94				
	U_{13}-L_{14}	-349.63	-208.07	2.95	2.91	-6.20	-27.41				
	L_{14}-U_{14}	-253.78	-280.71	2.29	3.17	-6.80	-17.65				
	U_{14}-L_{15}	-330.32	-53.64	2.29	3.17	-6.80	-13.83				
	L_{15}-U_{15}	-237.02	39.91	3.30	4.17	-12.28	-9.33				
	U_{15}-L_{16}	-116.69	150.75	3.30	5.28	-12.28	-9.33				
	L_{16}-U_{16}	-116.69	170.75	-6.22	3.19	-4.04	-6.27				
	U_{16}-L_{17}	34.11	-50.84	2.40	2.41	-0.05	-6.27				
	L_{17}-U_{17}	-211.04	121.68	-13.24	21.79	-0.13	-0.44				
	U_{17}-L_{18}	1028.71	-26.69	0.51	1.25	17.44	-20.03				
	L_{18}-U_{18}	1.12	-54.24	0.51	1.25	17.44	-20.03				
	U_{18}-L_{19}	271.39	25.19	2.42	2.27	3.29	-16.10				
	L_{19}-U_{19}	30.53	-124.61	2.42	2.27	3.29	-15.20				
	U_{19}-L_{20}	156.55	-6.67	3.32	2.64	2.27	-14.23				
	L_{20}-U_{20}	48.55	11.41	3.30	2.66	-1.93	-17.91				
	U_{20}-L_{21}	-92.57	-65.85	1.24	1.74	-10.24	-20.71				
	L_{21}-U_{21}	-59.44	-151.51	1.24	1.74	-10.24	-20.71				
	U_{21}-L_{22}	-48.31	-31.52	0.10	2.70	-3.49	-15.69				
	L_{22}-U_{22}	10.77	137.63	0.10	2.48	-3.70	-8.41				
	U_{22}-L_{23}	10.77	-137.63	-4.64	3.70	-2.85	-8.41				
	L_{23}-U_{23}	57.22	122.85	-6.87	3.90	-4.40	-8.30				
	U_{23}-L_{24}	85.41	4.86	0.80	2.51	0.22	-13.78				
	L_{24}-U_{24}	85.41	-4.86	-0.80	2.51	0.22	-13.78				
	U_{24}-L_{25}	13.52	808.37	-0.49	0.42	-0.04	-1.62				
	L_{25}-U_{25}	821.42	-89.58	0.19	1.79	18.10	-16.69				
	U_{25}-L_{26}	2.64	2.64	0.61	0.61	0.61	0.61				
	L_{26}-U_{26}	145.61	-52.49	2.39	2.96	0.26	-14.50				
	U_{26}-L_{27}	17.52	-88.46	3.17	3.32	-0.36	-13.10				
	L_{27}-U_{27}	26.03	-75.13	3.17	3.32	-0.36	-13.10				
	U_{27}-L_{28}	-84.17	-278.54	3.29	2.84	-1.62	-20.52				
	L_{28}-U_{28}	-111.28	-317.21	3.80	1.46	-1.62	-20.52				
	U_{28}-L_{29}	-274.89	-274.55	1.67	0.65	-18.39	-21.86				
	L_{29}-U_{29}	-296.96	-269.01	1.15	0.44	-7.03	-19.03				
	U_{29}-L_{30}	-154.04	-154.35	0.46	0.23	-0.27	-12.33				
	L_{30}-U_{30}	-154.35	-34.80	-1.31	-1.01	-8.65	-6.87				
	U_{30}-L_{31}	-36.19	-36.19	-1.31	-1.31	-8.65	-6.87				
	L_{31}-U_{31}	40.05	-167.61	0.38	0.39	1.01	-8.94				
	U_{31}-L_{32}	-10.43	-132.23	-0.29	0.48	2.02	-10.95				
	L_{32}-U_{32}	-36.19	-36.19	-0.29	0.48	2.02	-10.95				
	U_{32}-L_{33}	-140.08	-260.72	0.22	0.66	-4.83	-19.47				
	L_{33}-U_{33}	-187.01	-275.87	1.08	1.51	-4.97	-25.84				
	U_{33}-L_{34}	-322.39	-140.13	1.08	1.51	-4.97	-25.84				
	L_{34}-U_{34}	-162.87	-104.84	0.82	2.39	-1.40	-10.40				
	U_{34}-L_{35}	-147.74	26.71	1.80	2.84	-4.01	-7.55				
	L_{35}-U_{35}	-153.72	61.91	2.07	2.84	-4.01	-7.55				
	U_{35}-L_{36}	10.81	46.01	-3.09	2.16	0.07	-3.53				
	L_{36}-U_{36}	10.81	46.01	-3.09	2.16	0.07	-3.53				
	U_{36}-L_{37}	426.14	9.08	0.50	1.07	11.66	-13.70				
	L_{37}-U_{37}	128.06	64.05	2.79	2.43	1.74	-11.65				
	U_{37}-L_{38}	70.11	43.65	3.00	2.18	-3.13	-14.52				
	L_{38}-U_{38}	70.11	43.65	3.00	2.18	-3.13	-14.52				
	U_{38}-L_{39}	-83.40	-50.48	3.15	0.85	-1.07	-11.72				
	L_{39}-U_{39}	-83.40	-50.48	3.15	0.85	-1.07	-11.72				
	U_{39}-L_{40}	-8.37	-50.47	-8.47	9.53	-0.81	-5.96				

ZZ Axis Moment Properties

Location	Member	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_{DG} (in^4)	Shape Factor f	M_p (k-in)	Formula (.8 Term * F'$_y$/S_{bb})	M_r (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}
Structure 1	U_0-L_1	-173.26	-9.29	-169.39	-238.87	90.2	90.24	72.24	1.27246	2147	1328.6	1.41	4206	0.99880041
	L_1-U_1	-67.57	-32.04	-113.79	-348.91	90.2	90.24	72.24	1.27246	2147	1328.6	1.41	4206	0.99880041
	U_1-L_2	-168.85	-168.84	-229.47	-157.08	90.2	90.24	76.71	1.27246	2147	1328.6	1.41	4206	0.99880041
	L_2-U_2	-36.61	129.65	-126.89	-181.61	90.2	90.24	72.24	1.27246	2147	1328.6	1.41	4206	0.99880041
	U_2-L_3	-1.74	129.65	-75.08	-90.2	90.24	72.24	1.27246	2147	1328.6	1.41	4206	0.99880041
	L_3-U_3	19.90	236.55	-112.78	-121.80	90.2	90.24	76.71	1.27246	2147	1328.6	1.41	4206	0.99880041
	U_3-L_4	121.80	90.2	90.24	76.71	1.27246	2147	1328.6	1.41	4206	0.99880041	2974.3	0.699	0.88
	L_4-U_4	-1.74	1.74	-0.75	-0.75	0.75	0.75	0.75	1.5	6699	0.99894545	4504.8	-0.242	0.50
	U_4-L_5	-55.97	337.73	130.3	130.26	105.11	180.77	2955	1795.3	139	5965	4292.8	-0.403	0.44
	L_5-U_5	-117.46	97.62	100.05	90.91	95.6	90.61	73.12	1.26.23	2172	1307.8	1.40	4465	0.99873128
	U_5-L_6	-173.19	-194.84	134.31	-431.83	96.6	96.61	83.55	130.29	2174	1387.9	1.40	4465	0.99873128
	L_6-U_6	-117.36	-178.53	134.31	-431.87	96.6	96.61	83.55	130.29	2174	1387.9	1.40	4465	0.99873128
	U_6-L_7	-68.14	-269.84	-322.28	-534.72	151.8	151.76	130.94	219.77	4535	2932.6	1.45	7252	0.99859205
	L_7-U_7	-201.13	-427.47	-384.15	-384.15	151.8	151.76	130.94	219.77	4535	2932.6	1.45	7252	0.99859205
	U_7-L_8	-340.75	-289.43	-583.48	-541.12	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99859937
	L_8-U_8	-238.41	-431.17	-241.02	-720.91	188.5	188.51	164.41	274.68	5476	3413.6	1.46	9064	0.99859937
	U_8-L_9	-411.93	-193.20	-328.13	-369.97	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99859937
	L_9-U_9	-351.39	21.45	-265.96	-118.97	127.3	127.32	110.40	186.23	3668	2526.5	1.46	6146	0.99907191
	U_9-L_{10}	-342.62	-25.32	-245.55	-143.37	104.8	104.75	86.43	150.53	2599	1554.3	1.44	4971	0.99880542
	L_{10}-U_{10}	-477.42	511.14	-322.49	225.74	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99880542
	U_{10}-L_{11}	-43.69	-208.20	16.95	-412.11	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861324
	L_{11}-U_{11}	-35.44	-248.09	16.95	-412.11	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861324
	U_{11}-L_{12}	-75.96	-347.04	-100.87	-244.27	212.0	212.03	179.43	297.57	4967	2491.8	1.40	9210	0.99851727
	L_{12}-U_{12}	-153.31	-484.53	-124.72	-284.43	212.0	212.03	179.43	297.57	4967	2491.8	1.40	9210	0.99851727
	U_{13}-L_{14}	-466.55	-471.68	-641.03	-1028.44	251.7	251.73	219.41	365.62	7161	3870.6	1.45	12066	0.99859197
	L_{14}-U_{14}	-498.11	-185.62	-722.23	-1028.44	251.7	251.73	219.41	365.62	7161	3870.6	1.45	12066	0.99859197
	U_{15}-L_{16}	-392.47	-70.01	-408.74	-231.52	173.0	173.03	144.25	241.17	3969	2180.7	1.39	7699	0.99862256
	L_{16}-U_{16}	-392.47	153.74	-408.74	-231.52	173.0	173.03	144.25	241.17	3969	2180.7	1.39	7699	0.99862256
	U_{17}-L_{18}	-258.02	30.37	-240.77	-244.80	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861324
	L_{18}-U_{18}	-388.45	-88.13	-557.77	-244.80	188.5	188.51	169.65	274.68	5476	3413.6	1.46	9064	0.99859937
	U_{19}-L_{20}	-253.29	130.93	-512.08	-103.96	181.9	181.87	147.20	249.02	3787	2047.06	1.37	8218	0.99847792
	L_{20}-U_{20}	-130.01	-29.23	-334.97	-344.64	181.9	181.87	147.20	249.02	3787	2047.06	1.37	8218	0.99847792
	U_{21}-L_{22}	-254.93	274.98	-218.84	-117.85	156.8	156.80	126.72	214.81	3285	1852.3	1.37	7089	0.99854421
	L_{22}-U_{22}	-58.74	81.82	-217.37	-169.39	156.8	156.80	126.72	214.81	3285	1852.3	1.37	7089	0.99854421
	U_{23}-L_{24}	-494.21	1620.12	-276.53	-1400.89	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99853592
	L_{24}-U_{24}	-1345.70	-14.25	1623.49	-363.48	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99853592
	U_{25}-L_{26}	27.93	224.11	-13.37	-1852.62	212.3	212.33	179.43	310.64	5956	3258.1	1.46	10356	0.99853592
	L_{26}-U_{26}	-498.11	-185.62	-722.23	-1028.44	251.7	251.73	219.41	365.62	7161	3870.6	1.45	12066	0.99859197
	U_{27}-L_{28}	-258.02	30.37	240.77	-244.80	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861324
	L_{28}-U_{28}	-388.45	-88.13	-557.77	-244.80	188.5	188.51	169.65	274.68	5476	3413.6	1.46	9064	0.99859937
	U_{29}-L_{30}	-117.32	58.50	31.50	-279.04	134.9	134.91	117.76	189.26	3017	1648.1	1.40	4704	0.99847792
	L_{30}-U_{30}	-60.32	-58.62	31.50	-279.04	134.9	134.91	117.76	189.26	3017	1648.1	1.40	4704	0.99847792
	U_{31}-L_{32}	-60.32	-58.62	31.50	-279.04	134.9	134.91	117.76	189.26	3017	1648.1	1.40	4704	0.99847792
	L_{32}-U_{32}	-117.32	58.50	31.50	-279.04	134.9	134.91	117.76	189.26	3017	1648.1	1.40	4704	0.99847792
	U_{33}-L_{34}	-223.91	-216.86	-249.28	-314.86	-149.28	-702.99	232.7	232.70	189.45	340.10	6520	3217.6	1.46
	L_{34}-U_{34}	-197.99	-96.16	-236.19	-311.18	151.8	151.76	130.94	219.77	4535	2932.6	1.45	7252	0.99859205
	U_{35}-L_{36}	-165.76	52.46	-259.46	-92.20	128.7	128.69	105.26	182.66	3153	1864.4	1.42	6028	0.99873981
	L_{36}-U_{36}	-164.86	-121.86	-278.81	-48.93	128.7	128.69	105.26	182.66	3153	1864.4	1.42	6028	0.99873981
	U_{37}-L_{38}	-46.46	27.88	0.88	-45.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{38}-U_{38}	-46.46	27.88	0.88	-45.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{39}-L_{40}	-113.13	127.30	-79.40	-24.89	-142.92	90.2	90.24	72.24	1.27246	2147	1328.6	1.41	4206

ZZ Axis Moment Properties

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 2	U_0-L_1	-173.26	-9.29	-169.39	-238.87	90.2	90.24	72.24	1.27246	2147	1328.6	1.41	4206	0.99880041
	L_1-U_1	-67.57	-32.04	-113.79	-348.91	90.2	90.24	72.24	1.27246	2147	1328.6	1.41	4206	0.99880041
	U_1-L_2	-168.85	-168.84	-229.47	-157.08	90.2	90.24	76.71	1.27246	2147	1328.6	1.41	4206	0.99880041
	L_2-U_2	-36.61	129.65	-126.89	-181.61	90.2	90.24	72.24	1.27246	2147	1328.6	1.41	4206	0.99880041
	U_2-L_3	-1.74	129.65	-75.08	-90.2	90.24	72.24	1.27246	2147	1328.6	1.41	4206	0.99880041
	L_3-U_3	19.90	236.55	-112.78	-121.80	90.2	90.24	76.71	1.27246	2147	1328.6	1.41	4206	0.99880041
	U_3-L_4	121.80	90.2	90.24	76.71	1.27246	2147	1328.6	1.41	4206	0.99880041	2974.3	0.699	0.88
	L_4-U_4	-1.74	1.74	-0.75	-0.75	0.75	0.75	0.75	1.5	6699	0.99894545	4504.8	-0.242	0.50
	U_4-L_5	-55.97	337.73	130.3	130.26	105.11	180.77	2955	1795.3	139	5965	4292.8	-0.403	0.44
	L_5-U_5	-117.46	97.62	100.05	90.91	95.6	90.61	73.12	1.26.23	2172	1307.8	1.40	4465	0.99873128
	U_5-L_6	-173.19	-194.84	134.31	-431.83	96.6	96.61	83.55	130.29	2174	1387.9	1.40	4465	0.99873128
	L_6-U_6	-117.36	-178.53	134.31	-431.87	96.6	96.61	83.55	130.29	2174	1387.9	1.40	4465	0.99873128
	U_6-L_7	-68.14	-269.84	-322.28	-534.72	151.8	151.76	130.94	219.77	4535	2932.6	1.45	7252	0.99859205
	L_7-U_7	-201.13	-427.47	-384.15	-384.15	151.8	151.76	130.94	219.77	4535	2932.6	1.45	7252	0.99859205
	U_7-L_8	-340.75	-289.43	-583.48	-541.12	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99859937
	L_8-U_8	-238.41	-431.17	-241.02	-720.91	188.5	188.51	164.41	274.68	5476	3413.6	1.46	9064	0.99859937
	U_8-L_9	-411.93	-193.20	-328.13	-369.97	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99859937
	L_9-U_9	-351.39	21.45	-265.96	-118.97	127.3	127.32	110.40	186.23	3668	2526.5	1.46	6146	0.99907191
	U_{10}-L_{11}	-28.62	-172.11	-0.39	0.94	3.26	-11.34				
	L_{11}-U_{11}	-24.91	-195.34	-0.18	0.84	3.26	-15.60				
	U_{11}-L_{12}	-53.03	-283.30	-0.42	1.28	-1.92	-22.64				
	L_{12}-U_{12}	-329.08	-387.93	-0.12	1.23	-2.18	-22.19				
	U_{13}-L_{14}	-360.46	-389.97	0.12	2.12	-4.36	-31.40				
	L_{14}-U_{14}	-403.42	-391.79	1.59	4.07	-3.08	-32.94				
	U_{15}-L_{16}	-349.63	-208.07	2.95	2.91	-6.20	-27.41				
	L_{16}-U_{16}	-253.78	-280.71	2.29	3.17	-6.80	-17.65				
	U_{17}-L_{18}	-330.32	-53.64	2.29	3.17	-6.80	-13.83				
	L_{18}-U_{18}	-237.02	39.91	3.30	4.17	-12.28	-9.33				
	U_{19}-L_{20}	-116.69	150.75	3.30	5.28	-12.28	-9.33				
	L_{20}-U_{20}	-116.69	170.75	-6.22	3.19	-4.04	-6.27				
	U_{21}-L_{22}	34.11	-50.84	2.40	2.41	-0.05	-6.27				
	L_{22}-U_{22}	-211.04	121.68	-13.24	21.79	-0.13	-0.44				
	U_{23}-L_{24}	1028.71	-26.69	0.51	1.25	17.44	-20.03				
	L_{24}-U_{24}	1.12	-54.24	0.51	1.25	17.44	-20.03				
	U_{25}-L_{26}	271.39	25.19	2.42	2.27	3.29	-16.10				
	L_{26}-U_{26}	30.53	-124.61	2.42	2.27	3.29	-15.20				
	U_{27}-L_{28}	156.55	-6.67	3.32	2.64	2.27	-14.23				
	L_{28}-U_{28}	48.55	11.41	3.30	2.66	-1.93	-17.91				
	U_{29}-L_{30}	-92.57	-65.85	1.24	1.74	-10.24	-20.71				
	L_{30}-U_{30}	-59.44	-151.51	1.24	1.74	-10.24	-20.71				
	U_{31}-L_{32}	-48.31	-31.52	0.10	2.70	-3.49	-15.69				
	L_{32}-U_{32}	10.77	137.63	0.10	2.48	-3.70	-8.41				
	U_{33}-L_{34}	10.77	-137.63	-4.64	3.70	-2.85	-8.41				
	L_{34}-U_{34}	57.22	122.85	-6.87	3.90	-4.40	-8.30				
	U_{35}-L_{36}	85.41	4.86	0.80	2.51	0.22	-13.78				
	L_{36}-U_{36}	85.41	-4.86	-0.80	2.51	0.22	-13.78				
	U_{37}-L_{38}	13.52	808.37	-0.49	0.42	-0.04	-1.62				
	L_{38}-U_{38}	821.42	-89.58	0.19	1.79	18.10	-16.69				
	U_{39}-L_{40}	2.64	2.64	0.61	0.61	0.61	0.61				

ZZ Axis Moments from STAAD

Location	Member	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)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Dead Load Start (k-in)	Dead Load End (k-in)
Structure 3	U_0-L_1	0.57	2.28	2.97	-53.36	0.00	0.00	0.00	0.00	4.32	-17.87
	L_1-U_1	4.45	-58.42	-0.03	0.76	-8.89	-1.37				
	L_1-U_2	-2.02	-27.84	-0.29	0.71	-3.26	-0.66				
	L_2-U_2	-13.77	-2.79	22.19	-4.05	0.00	0.00	0.00	0.00	53.44	45.89
	L_2-U_3	-5.57	-2.90	-2.28	-36.51	0.00	0.00	0.00	0.00	38.35	-8.80
	L_3-U_3	19.66	-22.91	2.93	-0.22	0.00	0.00	0.00	0.00	27.68	-3.34
	L_3-U_4	-27.68	-1.42	24.73	-17.27	0.00	0.00	0.00	0.00	-17.54	-87.68
	L_4-U_4	46.49	-38.13	-12.64	-18.18	0.00	0.00	0.00	0.00	-180.64	-195.99
	L_4-U_5	-45.71	3.88	-4.97	33.82	0.00	0.00	0.00	0.00	182.47	-92.09
	L_5-U_5	-15.79	-17.74	0.27	12.22	-1.37	1.75	0.53	0.53	-33.57	114.19
	L_5-U_6	-16.34	1.53	36.42	29.40	0.00	0.00	0.00	0.00	98.75	86.30
	L_6-U_6	-13.27	4.14	34.52	32.65	0.00	0.00	0.00	0.00	142.66	141.31
	L_6-U_7	-14.17	-4.20	46.80	48.57	0.00	0.00	0.00	0.00	390.59	219.53
	L_7-U_7	-10.23	-8.64	36.54	86.35	0.00	0.00	0.00	0.00	232.68	232.68
	L_7-U_8	-12.14	-2.86	71.86	13.00	0.00	0.00	0.00	0.00	245.95	39.92
	L_8-U_8	-10.92	4.05	47.78	7.14	0.00	0.00	0.00	0.00	113.65	32.81
	L_8-U_9	22.66	-2.54	37.42	-6.04	0.00	0.00	0.00	0.00	129.62	-16.78
	L_9-U_9	73.32	16.68	43.86	-18.29	0.

Moment (End) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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
(Does Lumpsteel vs Max. Tension/Compression Load)

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

M_2 Information — ZZ Axis Moments from STAAD

Location	Member	Dead Load (k-ft)	Live Load (Max) (k-ft)	Live Load (Min) (k-ft)	Pedestrian Load (Max) 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)	Max. Pos. Mom. Start (k-ft)	Max. Pos. Mom. End (k-ft)	Min. Pos. Mom. Start (k-ft)	Min. Pos. Mom. End (k-ft)
Structure 1	L_0-L_1	-49.04	-101.19	-9.59	0.67	3.21	-6.14				0.00	0.00	-73.99	-119.87
	L_1-L_2	-130.93	-112.57	-0.28	1.59	1.43	-10.88				0.00	0.00	-33.78	-21.28
	L_2-L_3	-139.47	-79.47	-29.42	1.86	6.40	-10.82				0.00	0.00	-67.13	-61.04
	L_3-L_4	18.53	15.80	0.89	3.37	-0.87	-13.50				0.00	0.00	39.45	79.02
	L_4-L_5	-68.87	310.29	-7.49	1.33	-0.12	-107.84				0.00	0.00	-219.66	-44.31
	L_5-L_6	7.25	228.45	2.02	3.94	-3.27	-5.32				0.00	0.00	26.92	52.60
	L_6-L_7	-82.67	177.71	0.74	4.51	-5.31	-5.52				0.00	0.00	-181.20	301.67
	L_7-L_8	7.98	461.19	-1.19	10.95	0.09	-0.19				0.00	0.00	-15.99	-146.27
	L_8-L_9	439.37	-23.36	4.39	0.73	5.82	-4.34				0.00	0.00	645.07	-18.17
	L_9-L_{10}	204.91	-116.77	-0.98	2.34	-0.12	-6.34				0.00	0.00	249.97	-112.49
	L_{10}-L_{11}	168.38	-118.38	3.55	1.68	0.94	-6.13				0.00	0.00	278.53	-125.66
	L_{11}-L_{12}	23.53	277.12	1.21	1.98	0.84	-7.26				0.00	0.00	362.55	-208.84
	L_{12}-L_{13}	-19.53	-128.46	2.00	1.48	-4.41	-7.78				0.00	0.00	11.66	-148.81
	L_{13}-L_{14}	179.75	-425.17	1.72	1.47	3.70	-17.81				0.00	0.00	257.46	-527.92
	L_{14}-L_{15}	405.18	-207.07	1.68	1.48	7.48	-13.06				0.00	0.00	507.16	-255.73
	L_{15}-L_{16}	-209.34	318.54	6.49	0.53	-7.15	-14.57				0.00	0.00	-263.88	405.27
	L_{16}-L_{17}	314.78	83.83	0.36	2.90	-10.05	-4.36				0.00	0.00	377.33	107.77
	L_{17}-L_{18}	-170.99	204.48	-3.18	3.09	-3.50	-3.69				0.00	0.00	-215.83	78.56
	L_{18}-L_{19}	-297.50	250.73	-6.27	4.29	-3.82	-1.50				0.00	0.00	-375.70	264.77
	L_{19}-L_{20}	-99.23	0.16	0.34	3.61	0.31	-0.33				0.00	0.00	-239.55	80.97
	L_{20}-L_{21}	5.36	-218.26	-0.31	0.74	2.56	-8.12				0.00	0.00	1.75	-217.47
	L_{21}-L_{22}	38.16	-247.31	0.77	1.39	0.15	-8.14				0.00	0.00	-4.68	-254.26
	L_{22}-L_{23}	1.07	-191.80	-0.42	0.78	1.52	-9.65				0.00	0.00	-5.52	-236.40
	L_{23}-L_{24}	-2.26	-13.76	0.31	0.31	-0.31	-13.76				0.00	0.00	-2.26	-13.76
	L_{24}-L_{25}	-286.08	-268.86	-0.16	1.34	-10.03	-15.16				0.00	0.00	-374.60	-366.26
	L_{25}-L_{26}	143.96	-63.50	0.44	1.60	0.79	-14.86				0.00	0.00	-179.85	-63.50
	L_{26}-L_{27}	-467.27	-273.20	1.93	2.92	-14.15	-21.57				0.00	0.00	-579.33	-306.75
	L_{27}-L_{28}	-310.47	-45.78	2.38	4.38	-11.59	-15.72				0.00	0.00	-364.17	13.17
	L_{28}-L_{29}	-408.18	-207.07	1.68	1.48	-7.48	-13.06				0.00	0.00	-507.16	-255.73
	L_{29}-L_{30}	271.10	223.07	4.30	0.53	6.72	-10.73				0.00	0.00	-409.44	342.36
	L_{30}-L_{31}	-261.82	188.40	2.11	4.31	-5.08	-8.08				0.00	0.00	-383.88	405.27
	L_{31}-L_{32}	217.22	-33.97	-6.32	4.31	-1.31	-8.78				0.00	0.00	-277.53	42.43
	L_{32}-L_{33}	-131.41	389.19	-4.29	4.55	-6.48	-6.11				0.00	0.00	-242.07	581.48
	L_{33}-L_{34}	-164.24	-140.43	-2.78	1.39	-6.13	-11.42				0.00	0.00	-35.02	-17.70
	L_{34}-L_{35}	-367.38	-99.20	-2.11	4.31	-5.08	-8.08				0.00	0.00	-383.88	-42.43
	L_{35}-L_{36}	911.85	-326.76	1.42	1.16	14.70	-12.24				0.00	0.00	1208.68	-405.71
	L_{36}-L_{37}	1,042.96	-326.76	1.42	1.16	14.70	-12.24				0.00	0.00	1208.68	-405.71
	L_{37}-L_{38}	515.61	-35.20	4.64	1.43	5.92	-8.85				0.00	0.00	746.43	-22.24
	L_{38}-L_{39}	252.11	-26.04	4.06	1.37	3.07	-8.89				0.00	0.00	384.41	-3.47
	L_{39}-L_{40}	230.58	-46.22	2.39	2.70	-3.06	-11.78				0.00	0.00	338.96	-10.62
	L_{40}-L_{41}	177.22	-33.97	-6.32	4.31	-1.31	-8.78				0.00	0.00	277.53	42.43
	L_{41}-L_{42}	43.89	-183.34	-0.07	2.05	-5.07	-22.20				0.00	0.00	55.94	-204.68
	L_{42}-L_{43}	-193.07	38.41	17.14	1.39	13.79	-12.63				0.00	0.00	-242.40	26.11
	L_{43}-L_{44}	-104.37	-9.61	1.18	3.26	-10.29	-13.66				0.00	0.00	-132.43	-29.03
	L_{44}-L_{45}	36.38	-58.78	-4.78	3.87	-2.72	-8.60				0.00	0.00	14.95	-41.10
	L_{45}-L_{46}	-65.51	170.40	-2.88	4.12	-5.73	-8.60				0.00	0.00	-132.43	293.09
	L_{46}-L_{47}	-36.38	52.05	-72.38	-108.51	0.00	0.00				0.00	0.00	-36.38	52.05
	L_{47}-L_{48}	-30.91	-151.01	-7.31	5.82	-8.33	-5.14				0.00	0.00	-92.23	-73.48
	L_{48}-L_{49}	20.53	3.19	0.97	2.92	-2.79	-5.14				0.00	0.00	-92.23	-73.48
	L_{49}-L_{50}	-19.86	-197.53	0.85	2.01	-7.74	-12.78				0.00	0.00	10.67	-25.37
	L_{50}-L_{51}	297.47	-128.66	3.38	2.73	2.13	-13.72				0.00	0.00	-77.33	-128.66
	L_{51}-L_{52}	747.52	-264.13	5.63	0.41	11.90	-11.66				0.00	0.00	45.05	-5.24
	L_{52}-L_{53}	-140.80	-80.21	-1.34	2.34	-5.22	-9.38				0.00	0.00	-14.54	-29.94
	L_{53}-L_{54}	284.87	-319.99	3.82	0.53	6.72	-10.73				0.00	0.00	-409.44	342.36
	L_{54}-L_{55}	150.40	-145.70	1.71	2.95	1.67	-9.49				0.00	0.00	21.86	-37.63
	L_{55}-L_{56}	95.69	-212.39	2.35	2.41	2.86	-11.11				0.00	0.00	30.00	-30.75
	L_{56}-L_{57}	276.72	-196.38	3.48	2.73	2.13	-13.72				0.00	0.00	-77.33	-128.66
	L_{57}-L_{58}	-182.72	-415.40	2.00	1.93	-7.60	-26.05				0.00	0.00	25.49	-24.67
	L_{58}-L_{59}	-370.16	-165.14	2.26	0.55	-17.70	-20.30				0.00	0.00	28.85	7.00
	L_{59}-L_{60}	-224.09	-278.72	-20.54	1.11	-11.73	-7.27				0.00	0.00	-443.76	-205.59
	L_{60}-L_{61}	-304.14	-22.17	-8.25	2.46	-12.41	-10.01				0.00	0.00	-105.43	31.39
	L_{61}-L_{62}	-31.08	-222.88	0.46	1.16	-4.56	-12.78				0.00	0.00	-71.46	-222.88
	L_{62}-L_{63}	-222.88	-99.03	-6.56	3.58	-4.20	-3.82				0.00	0.00	-83.75	-45.71
	L_{63}-L_{64}	-222.88	-99.03	-6.56	3.58	-4.20	-3.82				0.00	0.00	-83.75	-45.71
	L_{64}-L_{65}	42.77	-120.03	0.29	0.31	3.49	-6.20				0.00	0.00	50.69	-130.84
	L_{65}-L_{66}	192.98	-177.52	-0.35	0.33	3.68	-6.56				0.00	0.00	190.39	-225.16
	L_{66}-L_{67}	55.38	-320.81	1.16	1.16	1.16	-4.76				0.00	0.00	6.41	-194.09
	L_{67}-L_{68}	55.38	-320.81	-0.11	0.53	-4.02	-10.82				0.00	0.00	-4.45	-194.09
	L_{68}-L_{69}	192.98	-177.52	-0.35	0.33	3.68	-6.56				0.00	0.00	190.39	-225.16
	L_{69}-L_{70}	-64.00	-370.85	0.00	1.64	0.84	-20.31				0.00	0.00	-83.23	-454.59
	L_{70}-L_{71}	-370.60	82.40	10.74	3.98	-11.63	-9.97				0.00	0.00	-592.44	-113.99
	L_{71}-L_{72}	-304.14	-22.17	-8.25	2.46	-12.41	-10.01				0.00	0.00	-105.43	31.39
	L_{72}-L_{73}	-200.72	-149.84	0.14	2.85	-4.81	-5.12				0.00	0.00	-79.58	-36.84
	L_{73}-L_{74}	152.46	-170.31	1.71	2.95	1.67	-9.49				0.00	0.00	21.86	-37.63
	L_{74}-L_{75}	-131.79	166.74	-4.33	4.13	-3.50	-6.64				0.00	0.00	-55.37	53.47
	L_{75}-L_{76}	-37.08	46.25	2.46	2.46	2.46	-5.76				0.00	0.00	-37.08	46.25
	L_{76}-L_{77}	361.79	-17.90	4.79	0.72	7.98	-4.32				0.00	0.00	533.52	-32.73
	L_{77}-L_{78}	61.95	21.70	0.93	2.53	0.65	-7.21				0.00	0.00	-12.07	33.75
	L_{78}-L_{79}	189.89	5.64	2.86	2.97	2.86	-12.77				0.00	0.00	35.82	38.14
	L_{79}-L_{80}	61.95	21.70	0.93	2.53	0.65	-7.21				0.00	0.00	-12.07	33.75
	L_{80}-L_{81}	-38.98	-56.51	2.04	0.96	-6.06	-13.39				0.00	0.00	27.29	-12.84
	L_{81}-L_{82}	-31.08	-222.88	0.46	1.16	-4.56	-12.78				0.00	0.00	-71.46	-222.88
	L_{82}-L_{83}	-66.61	-75.29	-5.77	3.63	0.58	-0.53				0.00	0.00	-77.06	-48.44

M_2 Information — YY Axis Moments from STAAD

Location	Member	Dead Load (k-ft)	Live Load (Max) (k-ft)	Live Load (Min) (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Min) End (k-ft)	Lane Reduction & Impact Live Load Max Start (k-ft)	Lane Reduction & Impact Live Load Max End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)	Max. Pos. Mom. Start (k-ft)	Max. Pos. Mom. End (k-ft)	Min. Pos. Mom. Start (k-ft)	Min. Pos. Mom. End (k-ft)
Structure 1	L_0-L_1	-0.22	-0.14	-0.05	-0.19	0.60	2.19				0.00	0.00	-0.68	-2.54
	L_1-L_2	-33.06	-1.59	0.22	-0.40	-1.54	-2.39				0.00	0.00	-39.16	-8.94
	L_2-L_3	-16.08	-12.12	-0.06	-0.02	-0.23	-0.64				0.00	0.00	-22.59	-5.61
	L_3-L_4	-5.62	-46.88	0.98	0.12	-3.01	-2.03				0.00	0.00	9.40	-93.83
	L_4-L_5	-1.36	-25.25	-41.29	52.46	0.00	0.00				0.00	0.00	-51.09	-25.25
	L_5-L_6	6.67	1.96	15.82	21.51	0.00	0.00				0.00	0.00	45.57	121.11
	L_6-L_7	0.00	-39.32	-47.73	83.46	52.79	285.5				0.00	0.00	24.73	-67.73
	L_7-L_8	5.57	-13.11	-9.90	-3.10	0.00	0.00				0.00	0.00	-57.22	-92.31
	L_8-L_9	-53.92	-110.64	14.75	51.17	0.00	0.00				0.00	0.00	-128.80	-126.20
	L_9-L_{10}	14.31	11.28	-29.35	13.14	0.00	0.00				0.00	0.00	-23.59	-5.61
	L_{10}-L_{11}	3.87	-12.47	-21.00	-0.75	0.00	0.00				0.00	0.00	8.42	-29.31
	L_{11}-L_{12}	13.46	-5.87	-2.06	-17.42	0.00	0.00				0.00	0.00	-4.06	3.65
	L_{12}-L_{13}	-10.13	-4.19	10.43	44.64	0.00	0.00				0.00	0.00	71.03	67.47
	L_{13}-L_{14}	-0.32	-4.31	0.13	-20.93	0.00	0.00				0.00	0.00	-19.04	16.76
	L_{14}-L_{15}	-34.59	-2.07	0.13	-0.05	0.00	0.00				0.00	0.00	-176.62	-2.07
	L_{15}-L_{16}	-0.56	2.43	10.18	38.62	0.00	0.00				0.00	0.00	-109.82	80.09
	L_{16}-L_{17}	-2.27	-2.69	-7.77	39.79	0.00	0.00				0.00	0.00	-64.84	-24.34
	L_{17}-L_{18}	-11.00	-13.95	-0.49	-35.23	0.00	0.00				0.00	0.00	-89.51	-32.79
	L_{18}-L_{19}	-0.56	-7.75	0.78	69.65	0.00	0.00				0.00	0.00	-142.18	-2.38
	L_{19}-L_{20}	67.18	15.06	1.00	0.22	0.00	0.00				0.00	0.00	50.78	11.43
	L_{20}-L_{21}	-0.56	-1.94	-12.75	-44.31	0.00	0.00				0.00	0.00	-1.46	-5.01
	L_{21}-L_{22}	-1.58	-2.40	62.26	-40.88	0.00	0.00				0.00	0.00	-1.46	-5.01
	L_{22}-L_{23}	-0.13	2.35	-18.36	14.44	0.00	0.00				0.00	0.00	78.91	60.25
	L_{23}-L_{24}	-11.00	-13.95	-0.49	-35.23	0.00	0.00				0.00	0.00	-89.51	-32.79
	L_{24}-L_{25}	91.07	11.93	1.00	0.59	-0.14	1.38				0.00	0.00	90.52	151.32
	L_{25}-L_{26}	0.00	2.07	27.58	-22.58	0.00	0.00				0.00	0.00	-135.10	-1.72
	L_{26}-L_{27}	-32.33	3.09	11.27	15.74	0.00	0.00				0.00	0.00	-44.88	1.52
	L_{27}-L_{28}	8.29	10.12	11.61	-31.65	0.00	0.00				0.00	0.00	-45.35	18.06
	L_{28}-L_{29}	-29.58	-3.69	-0.49	-35.23	0.00	0.00				0.00	0.00	-115.32	51.67
	L_{29}-L_{30}	49.36	207.42	93.46	162.59	294.1	294.09				0.00	0.00	243.18	323.60
	L_{30}-L_{31}	-3.67	2.47	6.12	53.85	0.00	0.00				0.00	0.00	115.36	104.13
	L_{31}-L_{32}	4.82	4.08	4.07	0.00	0.00	0.00				0.00	0.00	4.82	4.08
	L_{32}-L_{33}	13.93	-5.81	13.21	34.97	0.00	0.00				0.00	0.00	-351.67	299.77
	L_{33}-L_{34}	13.33	37.16	9.30	5.99	0.00	0.00				0.00	0.00	-14.44	79.04
	L_{34}-L_{35}	29.49	26.32	36.42	-12.59	0.00	0.00				0.00	0.00	191.75	-39.67
	L_{35}-L_{36}	-11.23	2.17	14.77	0.00	0.00	0.00				0.00	0.00	-14.44	-2.76
	L_{36}-L_{37}	-14.44	-2.76	-10.57	31.10	0.00	0.00				0.00	0.00	-14.44	-2.76
	L_{37}-L_{38}	0.68	-5.47	-45.44	-8.16	0.00	0.00				0.00	0.00	52.57	-3.89
	L_{38}-L_{39}	-14.86	-2.53	-10.57	31.10	0.00	0.00				0.00	0.00	-14.44	-2.76
	L_{39}-L_{40}	0.68	-5.47	-45.44	-8.16	0.00	0.00				0.00	0.00	52.57	-3.89
	L_{40}-L_{41}	-29.58	-3.69	-0.49	-35.23	0.00	0.00				0.00	0.00	-115.32	51.67
	L_{41}-L_{42}	49.36	207.42	93.46	162.59	294.1	294.09				0.00	0.00	243.18	323.60
	L_{42}-L_{43}	41.65	155.58	-0.29	0.31	-2.37	-2.39				0.00	0.00	49.36	207.42
	L_{43}-L_{44}	3.67	2.47	6.12	53.85	0.00	0.00				0.00	0.00	115.36	104.13
	L_{44}-L_{45}	4.82	4.08	4.07	0.00	0.00	0.00				0.00	0.00	4.82	4.08
	L_{45}-L_{46}	13.93	-5.81	13.21	34.97	0.00	0.00				0.00	0.00	-351.67	299.77
	L_{46}-L_{47}	13.33	37.16	9.30	5.99	0.00	0.00				0.00	0.00	-14.44	79.04
	L_{47}-L_{48}	29.49	26.32	36.42	-12.59	0.00	0.00				0.00	0.00	191.75	-39.67
	L_{48}-L_{49}	-11.23	2.17	14.77	0.00	0.00	0.00				0.00	0.00	-14.44	-2.76
	L_{49}-L_{50}	-14.44	-2.76	-10.57	31.10	0.00	0.00				0.00	0.00	-14.44	-2.76
	L_{50}-L_{51}	0.68	-5.47	-45.44	-8.16	0.00	0.00				0.00	0.00	52.57	-3.89
	L_{51}-L_{52}	-14.86	-2.53	-10.57	31.10	0.00	0.00				0.00	0.00	-14.44	-2.76
	L_{52}-L_{53}	-29.58	-3.69	-0.49	-35.23	0.00	0.00				0.00	0.00	-115.32	51.67
	L_{53}-L_{54}	49.36	207.42	93.46	162.59	294.1	294.09				0.00	0.00	243.18	323.60
	L_{54}-L_{55}	41.65	155.58	-0.29	0.31	-2.37	-2.39				0.00	0.00	49.36	207.42
	L_{55}-L_{56}	3.67	2.47	6.12	53.85	0.00	0.00				0.00	0.00	115.36	104.13
	L_{56}-L_{57}	4.82	4.08	4.07	0.00	0.00	0.00				0.00	0.00	4.82	4.08
	L_{57}-L_{58}	13.93	-5.81	13.21	34.97	0.00	0.00				0.00	0.00	-351.67	299.77
	L_{58}-L_{59}	13.33	37.16	9.30	5.99	0.00	0.00				0.00	0.00	-14.44	79.04
	L_{59}-L_{60}	29.49	26.32	36.42	-12.59	0.00	0.00				0.00	0.00	191.75	-39.67
	L_{60}-L_{61}	-11.23	2.17	14.77	0.00	0.00	0.00				0.00	0.00	-14.44	-2.76
	L_{61}-L_{62}	-14.44	-2.76	-10.57	31.10	0.00	0.00				0.00	0.00	-14.44	-2.76
	L_{62}-L_{63}	0.68	-5.47	-45.44	-8.16	0.00	0.00				0.00	0.00	52.57	-3.89
	L_{63}-L_{64}	-14.86	-2.53	-10.57	31.10	0.00	0.00				0.00	0.00	-14.44	-2.76
	L_{64}-L_{65}	-29.58	-3.69	-0.49	-35.23	0.00	0.00				0.00	0.00	-115.32	51.67
	L_{65}-L_{66}	49.36	207.42	93.46	162.59	294.1	294.09				0.00	0.00	243.18	323.60
	L_{66}-L_{67}	41.65	155.58	-0.29	0.31	-2.37	-2.39				0.00	0.00	49.36	207.42
	L_{67}-L_{68}	3.67	2.47	6.12	53.85	0.00	0.00				0.00	0.00	115.36	104.13
	L_{68}-L_{69}	4.82	4.08	4.07	0.00	0.00	0.00				0.00	0.00	4.82	4.08
	L_{69}-L_{70}	13.93	-5.81	13.21	34.97	0.00	0.00				0.00	0.00	-351.67	299.77
	L_{70}-L_{71}	13.33	37.16	9.30	5.99	0.00	0.00				0.00	0.00	-14.44	79.04
	L_{71}-L_{72}	29.49	26.32	36.42	-12.59	0.00	0.00				0.00	0.00	191.75	-39.67
	L_{72}-L_{73}	-11.23	2.17	14.77	0.00	0.00	0.00				0.00	0.00	-14.44	-2.76
	L_{73}-L_{74}	-14.44	-2.76	-10.57	31.10	0.00	0.00				0.00	0.00	-14.44	-2.76
	L_{74}-L_{75}	0.68	-5.47	-45.44	-8.16	0.00	0.00				0.00	0.00	52.57	-3.89
	L_{75}-L_{76}	-14.86	-2.53	-10.57	31.10	0.00	0.00				0.00	0.00	-14.44	-2.76
	L_{76}-L_{77}	-29.58	-3.69	-0.49	-35.23	0.00	0.00				0.00	0.00	-115.32	51.67
	L_{77}-L_{78}	49.36	207.42	93.46	162.59	294.1	294.09				0.00	0.00	243.18	323.60
	L_{78}-L_{79}	41.65	155.58	-0.29	0.31	-2.37	-2.39				0.00	0.00	49.36	207.42
	L_{79}-L_{80}	3.67	2.47	6.12	53.85	0.00	0.00				0.00	0.00	115.36	104.13
	L_{80}-L_{81}	4.82	4.08	4.07	0.00	0.00	0.00				0.00	0.00	4.82	4.08
	L_{81}-L_{82}	13.93	-5.81	13.21	34.97	0.00	0.00				0.00	0.00	-351.67	299.77
	L_{82}-L_{83}	13.33	37.16	9.30	5.99	0.00	0.00				0.00	0.00	-14.44	79.04

Tension

Location	Member	Max. Neg. Mom. Start (k-ft)	Max. Neg. Mom. End (k-ft)	Axial (k)	Moment (k-ft)	Total (k)	Pass
Structure 1	L_0-L_1	-3.78	-13.89	7.44	27.45	128.3	128.29
	L_1-L_2	-0.16	-8.94	-69.75	-13.43	126.8	126.80
	L_2-L_3	-0.23	-59.59	-31.96	0.00	0.00	0.00
	L_3-L_4	-0.23	-59.59	-31.96	0.00	0.00	0.00
	L_4-L_5	-0.57	-32.31	-77.23	-79.37	305.4	305.44
	L_5-L_6	-0.57	-32.31	-77.23	-79.37	305.4	305.44
	L_6-L_7	-0.57	-13.11	-9.90	-3.10	0.00	0.00
	L_7-L_8	-0.57	-13.11	-9.90	-3.10	0.00	0.00
	L_8-L_9	-0.56	-6.53	-14.75	51.17	0.00	0.00
	L_9-L_{10}	-0.56	-6.53	-14.75	51.17	0.00	0.00
	L_{10}-L_{11}	-0.56	-3.87	-12.47	-21.00	-0.75	0.00
	L_{11}-L_{12}	-0.56	-3.87	-12.47	-21.00	-0.75	0.00
	L_{12}-L_{13}	-0.56	-13.46	-5.87	-2.06	-17.42	0.00
	L_{13}-L_{14}	-0.56	-13.46	-5.87	-2.06	-17.42	0.00
	L_{14}-L_{15}	-0.56	-10.13	-4.19	10.43	44.64	0.00
	L_{15}-L_{16}	-0.56	-0.32	-4.31	0.13	-20.93	0.00
	L_{16}-L_{17}	-0.56	-34.59	-2.07	0.13	-0.05	0.00
	L_{17}-L_{18}	-0.56	-0.56	2.43	10.18	38.62	0.00
	L_{18}-L_{19}	-0.56	-2.27	-2.69	-7.77	39.79	0.00
	L_{19}-L_{20}	-0.56	-11.00	-13.95	-0.49	-35.23	0.00
	$L_

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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

North/Truss Vehicle

| 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 Max Start (k-in) | Lane Reduction & Impact Live Load Max End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{bb} (in^3) | S_b (in^3) | Z_b (in^3) | Z (in^3) | I_{xx} (in^4) | Shape Factor f | M_p (k-in) | Formula 1.8 Term * F$_y$/S_{bb} | M_r (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor C_{mx} | C_{bbb} | M_2 Information: 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) | Max. Pos. Mom. Start (k-in) | Max. Pos. Mom. End (k-in) | S_{bb} (in^3) | S_b (in^3) | Z_b (in^3) | Z (in^3) | I_{yy} (in^4) | Shape Factor f | M_p (k-in) | Formula 1.8 Term * F$_y$/S_{bb} | M_r (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor C_{mx} | C_{bbb} | Yield: Axial (k) | Yield: Moment Positive | Yield: Total | Pass | Tension: Axial (k) | Fracture: Moment | Fracture: Total | Pass | Buckle: Axial (k) | Buckle: Moment | Buckle: Total | Pass | Compression: Axial (k) | Yield: Moment | Yield: Total | Pass |
|---|---|---

Moment (End) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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
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& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

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

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

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_1-L_1	-23.63	-7.60	-1.74	0.83	0.18	-0.14	-23.29	-11.02	-2.39	-1.92
	L_1-L_2	-3.36	-8.44	-0.81	0.42	-0.21	-2.27	-10.27	-3.56	-2.65	-2.23
	L_2-L_3	-78.52	74.40	-1.95	1.85	0.27	-0.11	-25.28	21.39	-3.84	3.42
	L_3-L_4	7.94	-13.41	0.27	0.07	-0.27	-0.82	3.63	0.91	-3.55	-11.01
	L_4-L_5	-14.57	18.47	-0.63	0.45	-4.66	-6.32	0.00	0.00	-26.80	-13.28
	U_1-U_2	-37.80	77.38	-1.98	1.89	0.19	-0.36	-26.47	25.29	-2.52	-4.62
	U_2-U_3	-73.28	78.40	-1.93	1.87	0.19	-0.36	-157.58	148.89	-84.18	-37.98
	U_3-U_4	-9.33	102.64	-1.56	3.00	0.05	-0.03	-20.83	40.08	0.64	-0.43
	U_4-U_5	-5.01	118.90	-0.82	2.11	0.28	-0.17	-10.04	37.36	0.50	-2.23
	L_1-U_2	-78.52	74.40	-1.95	1.85	0.27	-0.11	-25.28	21.39	-3.84	3.42
	L_2-U_3	-64.28	73.58	-1.44	1.18	-0.07	-0.31	-18.66	13.24	-0.91	-4.06
	L_3-U_4	-73.28	78.40	-1.93	1.87	0.19	-0.36	-22.66	31.71	0.50	-6.46
	L_4-U_5	-65.20	48.77	-1.67	1.32	-0.01	-0.58	-21.56	19.69	-0.14	-7.56
	U_1-L_2	-24.89	8.62	-0.78	0.56	0.20	-0.63	-10.04	7.21	2.61	-8.16
	U_2-L_3	-0.81	3.24	-0.21	0.15	0.01	-0.04	-3.71	2.53	0.96	-3.00
	U_3-L_4	-25.30	9.99	-1.35	1.08	0.35	-0.68	-17.52	14.53	4.50	-15.75
	U_4-L_5	-37.00	20.00	-1.72	1.40	0.10	-0.51	-22.19	18.56	1.93	-4.49
	L_1-L_3	-101.98	74.35	-3.25	2.74	0.26	-0.36	-42.06	35.50	0.79	-4.66
	L_2-L_4	-115.65	79.79	-3.63	2.80	0.13	-0.30	-46.90	34.24	0.91	-3.51
	L_3-L_5	-78.53	79.74	-2.94	2.70	0.08	-0.18	-38.04	34.87	0.97	-2.35
Structure 2	U_1-L_1	-109.78	99.44	-3.34	2.86	0.33	-0.35	-42.66	36.50	4.20	-4.42
	L_1-L_2	-89.86	79.41	-3.08	2.58	0.31	-0.37	-38.01	33.96	3.51	-4.74
	L_2-U_2	-90.94	71.81	-3.07	2.50	0.48	-0.41	-39.21	31.92	6.15	-5.29
	U_2-L_2	-89.86	79.41	-3.08	2.58	0.31	-0.37	-38.01	33.96	3.51	-4.74
	L_2-L_3	-20.34	9.87	-1.39	1.19	0.32	-0.61	-17.75	15.14	4.10	-7.82
	U_2-U_3	-1.38	11.20	-1.08	1.00	0.01	-0.08	-13.84	11.16	0.10	-11.68
	L_3-L_4	-8.85	-23.86	-0.61	0.39	0.68	-1.05	-7.92	-4.89	6.89	-13.43
	U_3-L_3	-44.40	35.30	-1.42	1.17	0.28	-0.87	-18.09	15.00	3.53	-11.15
	L_3-U_4	-96.54	69.68	-2.84	2.26	0.22	-0.46	-36.28	29.06	-2.16	-10.46
	U_4-L_4	-85.37	67.30	-2.68	1.89	-0.10	-0.51	-33.01	24.19	-1.23	-6.45
	L_4-U_5	-39.40	20.68	-2.08	2.01	-0.47	-0.38	-19.40	15.52	-2.84	-0.00
	U_4-L_5	-109.81	116.32	-3.23	2.86	0.19	-0.09	-41.27	36.58	-1.92	-5.00
	L_4-U_4	-141.94	130.59	-4.22	3.50	0.53	-0.26	-53.85	44.74	0.75	-6.84
	U_4-L_5	-80.17	103.38	-2.43	2.58	0.34	-0.25	-30.14	28.74	-4.32	-0.00
	L_4-U_5	-11.95	79.18	-2.15	2.68	0.42	-0.33	-27.11	33.79	5.26	-4.17
	U_5-L_5	-77.25	72.76	-2.43	2.37	0.47	-0.37	-29.04	27.47	5.68	-3.87
	L_5-U_6	-66.17	89.96	-2.03	2.91	0.22	-0.27	-36.94	36.74	2.74	-3.42
	U_5-L_6	-66.17	89.96	-2.03	2.91	0.22	-0.27	-36.94	36.74	2.74	-3.42
	L_5-L_6	-56.05	72.68	-2.49	2.29	0.05	-0.46	-31.39	28.96	0.64	-6.05
	U_6-L_6	-37.83	37.99	-1.96	1.69	0.03	-0.51	-24.71	21.27	0.34	-7.25
	L_6-U_7	-15.53	15.53	-1.15	1.03	0.01	-0.15	-10.15	7.73	0.11	-2.36
	U_6-L_7	-10.04	3.78	-0.80	0.61	0.19	-0.82	-10.10	7.73	2.35	-10.31
	L_6-L_7	-19.42	19.42	-1.36	1.16	0.49	-0.68	-17.11	14.68	5.64	-8.55
	U_7-L_7	-32.66	32.66	-1.84	1.56	0.45	-0.55	-24.20	21.00	5.04	-6.84
	L_7-U_8	-46.48	58.24	-3.00	2.51	0.92	-0.55	-37.86	31.69	6.24	-5.28
	U_7-L_8	-54.27	68.32	-2.99	2.68	0.34	-0.42	-44.72	37.53	8.28	-5.28
	L_7-L_8	-69.31	71.94	-3.96	3.56	0.23	-0.28	-49.55	44.95	2.83	-3.54
	U_8-L_8	-38.18	54.54	-2.39	2.91	0.55	-0.45	-30.47	37.15	7.07	-5.71
	L_8-U_9	-38.18	54.54	-2.39	2.91	0.55	-0.45	-30.47	37.15	7.07	-5.71
	L_8-L_9	-77.08	85.18	-2.83	2.48	0.43	-0.18	-36.09	31.63	5.44	-2.30
	U_9-L_9	-78.35	71.28	-2.46	2.21	-0.09	-0.20	-31.46	28.25	-1.01	-2.56
	L_9-U_{10}	-76.52	55.14	-2.53	2.51	-0.07	-0.52	-32.34	29.49	-0.84	-7.93
	U_{10}-L_{10}	-76.52	55.14	-2.53	2.51	-0.07	-0.52	-32.34	29.49	-0.84	-7.93
	L_{10}-U_{11}	-27.06	33.91	-1.32	1.40	0.04	-0.26	-17.47	17.46	2.49	-8.59
	U_{11}-L_{11}	-5.77	6.27	-0.59	0.28	0.88	-1.23	-7.59	3.98	13.23	-15.73
	L_{11}-U_{12}	-11.92	9.35	-1.15	0.73	0.87	-1.06	-11.92	9.35	11.15	-13.99
	U_{12}-L_{12}	-3.68	2.44	-0.93	0.73	0.87	-1.06	-3.68	2.44	11.15	-13.99
	L_{12}-U_{13}	-33.68	19.58	-1.91	1.50	0.05	-0.41	-24.45	19.22	0.64	-5.27
	U_{13}-L_{13}	-33.68	19.58	-1.91	1.50	0.05	-0.41	-24.45	19.22	0.64	-5.27
	L_{13}-U_{14}	-78.90	59.78	-3.85	2.98	0.48	-0.43	-49.16	38.10	6.15	-5.21
	U_{14}-L_{14}	-78.90	59.78	-3.85	2.98	0.48	-0.43	-49.16	38.10	6.15	-5.21
	L_{14}-U_{15}	-68.21	63.59	-3.45	2.70	0.20	-0.19	-44.65	34.89	2.60	-2.50
	U_{15}-L_{15}	-90.31	64.36	-2.64	2.28	0.24	-0.22	-34.12	29.50	3.12	-2.86
	L_{15}-U_{16}	-33.50	18.26	-1.42	1.31	0.10	-0.35	-18.31	17.00	-1.26	-4.52
	U_{16}-L_{16}	-33.50	18.26	-1.42	1.31	0.10	-0.35	-18.31	17.00	-1.26	-4.52
	L_{16}-U_{17}	-1.49	-18.98	-0.69	0.44	0.37	-1.91	-8.89	5.67	4.74	-11.72
	U_{17}-L_{17}	-53.83	37.97	-1.67	1.40	0.13	-0.64	-21.54	18.07	1.72	-6.47
Structure 3	U_1-L_1	-61.79	22.37	-1.94	1.04	-0.44	-2.71	-25.11	13.43	-5.63	-5.21
	L_1-L_2	-57.50	22.23	-1.86	1.04	-0.44	-2.71	-24.48	13.43	-5.63	-5.21
	L_2-U_2	-73.25	65.79	-2.35	1.95	-0.14	-0.02	-30.46	25.19	-1.76	-0.28
	U_2-L_2	-73.25	65.79	-2.35	1.95	-0.14	-0.02	-30.46	25.19	-1.76	-0.28
	L_2-L_3	-5.27	64.89	-1.38	2.42	0.16	-0.15	-18.38	32.36	2.10	-1.94
	U_2-L_3	-38.98	50.40	-2.45	2.19	0.29	-0.12	-32.78	29.32	3.86	-1.66
	L_3-U_3	-38.98	50.40	-2.45	2.19	0.29	-0.12	-32.78	29.32	3.86	-1.66
	U_3-L_3	-7.78	19.68	-0.70	0.57	-0.53	-0.46	-9.41	7.59	-7.01	-6.08
	L_3-U_4	-2.61	-8.77	-0.65	0.27	-0.49	-0.69	-8.67	3.59	-6.53	-8.71
	U_4-L_4	-2.61	-8.77	-0.65	0.27	-0.49	-0.69	-8.67	3.59	-6.53	-8.71
	L_4-U_5	-5.73	35.70	-0.56	0.80	-0.12	-0.17	-10.01	7.33	-11.34	-1.30
	U_5-L_5	-5.73	35.70	-0.56	0.80	-0.12	-0.17	-10.01	7.33	-11.34	-1.30

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	-106.94	-13.77	6.44	7.82	0.00	0.00	0.00	0.00	-175.94	-57.98
	L_1-L_2	-18.21	-23.81	111.34	29.00	0.00	0.00	0.00	0.00	-81.09	-53.91
	L_2-L_3	-16.59	-13.09	-10.87	-0.58	0.00	0.00	0.00	0.00	-89.95	-44.66
	L_3-L_4	13.09	13.92	41.72	-13.99	0.00	0.00	0.00	0.00	-26.44	-30.42
	L_4-L_5	-8.34	-14.63	-71.19	-26.10	0.00	0.00	0.00	0.00	-130.07	-111.60
	U_1-U_2	-52.52	-48.55	-49.62	-17.51	0.00	0.00	0.00	0.00	-35.73	-95.74
	U_2-U_3	-117.62	-36.90	-4.43	-4.24	-1.12	-0.16	0.00	0.00	-58.30	-25.60
	U_3-U_4	-60.13	-51.77	-13.91	4.81	0.00	0.00	0.00	0.00	-91.58	-31.40
	U_4-U_5	-37.02	-26.99	-27.62	5.19	0.00	0.00	0.00	0.00	-133.39	-98.67
	L_1-U_2	-13.43	-22.55	0.99	-3.07	-0.38	-0.10	0.00	0.00	-82.04	-101.83
	L_2-U_3	-23.54	-112.60	0.51	-1.67	-2.58	0.33	0.00	0.00	-39.20	-174.38
	L_3-U_4	-21.88	-19.55	-2.01	-0.45	-1.82	0.41	0.00	0.00	-36.31	-111.66
	L_4-U_5	-3.95	-5.64	-23.57	5.27	0.00	0.00	0.00	0.00	-26.04	-72.97
	L_1-L_3	1.88	-16.39	20.12	-12.81	0.00	0.00	0.00	0.00	-10.38	-12.58
	L_2-L_4	4.39	-2.76	9.81	-12.90	0.00	0.00	0.00	0.00	-59.44	-108.74
	L_3-L_5	-14.91	-9.65	-24.01	-4.02	-1.82	0.41	0.00	0.00	-148.64	-84.49
	U_1-L_2	-89.44	-163.90	-1.04	-0.80	-1.74	0.23	0.00	0.00	-148.64	-84.49
	U_2-L_3	-50.11	-66.40	0.34	0.21	0.68	-1.00	0.00	0.00	-59.44	-108.74
	U_3-L_4	-33.51	-36.41	-2.59	-2.73	-3.76	-0.25	0.00	0.00	-196.32	-171.26
	U_4-L_5	-150.05	-130.86	-4.42	-3.41	-2.54	-0.89	0.00	0.00	-227.24	-211.84
	L_1-L_4	-76.87	-69.92	15.15	11.46	0.00	0.00	0.00	0.00	-279.54	-260.49
	L_2-L_5	-71.77	-61.49	15.73	11.36	0.00	0.00	0.00	0.00	-279.54	-260.49
	U_1-U_3	-87.30	-120.07	-5.55	-4.29	-1.08	-0.88	0.00	0.00	-213.31	-189.89
	U_2-U_4	-118.97	-78.11	-11.76	7.74	0.00	0.00	0.00	0.00	-309.26	-176.66
	U_3-U_5	-98.64	-87.56	6.27	-0.79	1.02	0.00	0.00	0.00	-169.41	-48.46
	L_1-U_3	-16.84	-30.46	0.23	-0.75	-0.23	0.12	0.00	0.00	-122.45	-101.45
	L_2-U_4	-26.49	-4.05	3.12	4.89	0.00	0.00	0.00	0.00	-75.09	-69.21
	L_3-U_5	-30.39	-61.68	2.24	1.04	0.00	0.00	0.00	0.00	-123.5	-32.93
	L_1-L_5	-32.84	-13.19	-2.08	-14.09	0.00	0.00	0.00	0.00	-13.94	-67.17
	U_1-L_3	-7.47	-7.58	-2.57	-0.57	-0.16	-1.10	0.00	0.00	-48.56	-38.65
	L_2-U_3	3.32	8.04	8.20	-18.96	0.00	0.00	0.00	0.00	-102.47	-191.79
	U_2-L_4	-17.96	-29.46	-44.60	2.02	0.00	0.00	0.00	0.00	-165.79	-252.68
	U_3-L_5	-14.91	-9.65	-24.01	-4.02	-1.82	0.41	0.00	0.00	-148.64	-84.49
	U_1-L_4	-43.31	-54.61	-153.50	-1.31	-0.80	-1.74	0.23	0.00	-148.64	-84.49
	L_1-U_4	-55.54	-51.90	-42.06	-13.10	0.00	0.00	0.00	0.00	-181.87	-207.40
	U_2-L_5	-22.61	-41.33	-5.26	-4.66	-3.59	-1.99	0.00	0.00	-214.79	-227.33
	L_2-U_5	-66.48	-63.12	-34.84	-12.09	0.00	0.00	0.00	0.00	-31.48	-190.82
	U_1-L_5	-13.66	-19.34	45.24	21.13	0.00	0.00	0.00	0.00	-39.72	-33.45
	L_1-U_5	-49.14	-126.17	232.32	-15.52	0.00	0.00	0.00	0.00	-49.14	-126.17
Structure 2	U_1-L_1	15.44	-22.56	23.22	-0.68	0.00	0.00	0.00	0.00	61.54	-8.39
	L_1-L_2	-15.74	16.34	-6.24	-5.19	0.00	0.00	0.00	0.00	-132.92	120.44
	L_2-U_2	-19.39	-19.91	-6.74	-5.19	0.00	0.00	0.00	0.00	-132.92	120.44
	U_2-L_2	-14.98	28.17	7.15	1.43	-7.34	0.00	0.00	0.00	-89.12	75.49
	L_2-L_3	8.52	21.11	1.43	-7.34	0.00	0.00	0.00	0.00	-89.12	75.49
	U_2-U_3	8.31	20.65	26.99	-1.00	0.00	0.00	0.00	0.00	-17.74	25.26
	L_3-L_4	16.20	20.47	2.05	-2.85	0.00	0.00	0.00	0.00	-48.62	54.45
	U_3-L_3	10.73	-7.78	39.85	-10.64	0.00	0.00	0.00	0.00	-56.03	-51.22
	L_3-U_4	-22.47	-30.65	23.97	-0.17	0.00	0.00	0.00	0.00	-56.03	-51.22
	U_4-L_4	-35.02	-32.40	-25.58	-1.89	0.00	0.00	0.00	0.00	-105.04	-94.38
	L_4-U_5	-26.26	-19.13	-19.42	4.66	0.00	0.00	0.00	0.00	-104.29	-82.92
	U_4-L_5	-54.02	-37.41	-65.88	-12.06	0.00	0.00	0.00	0.00	-89.89	-102.43
	L_4-U_4	-60.05	-49.62	13.36	9.86	0.00	0.00	0.00	0.00	-20.48	-53.76
	U_4-L_5	-57.85	-39.24	-4.76	-3.93	1.06	0.78	0.00	0.00	-20.48	-53.76
	L_4-U_5	-69.62	-52.13	-62.27	-20.49	0.00	0.00	0.00	0.00	-94.91	-79.79
	U_5-L_5	-46.66	-43.35	8.93	5.13	0.00	0.00	0.00	0.00	-97.43	-15.36
	L_5-U_6	-38.12	-50.64	36.06	35.14	0.00	0.00	0.00	0.00	-82.57	-64.64
	U_5-L_6	-5.72	-35.58	-21.49	-6.43	0.00	0.00	0.00	0.00	-82.57	-64.64
	L_5-L_6	-14.87	-32.84	-14.01	-6.20	0.00	0.00	0.00	0.00	-82.43	-47.64
	U_6-L_6	-34.52	-26.55	-10.98	3.97	0.00	0.00	0.00	0.00	-110.69	-148.12
	L_6-U_7	-12.64	9.95	5.14	-2.27	0.00	0.00	0.00	0.00	-53.40	-104.29
	U_6-L_7	-5.88	8.42	14.07	-6.20	0.00	0.00	0.00	0.00	-53.40	-104.29
	L_6-L_7	-5.88	8.42	14.07	-6.20	0.00	0.00	0.00	0.00	6.40	-42.43
	U_7-L_7	-6.56	-31.27	4.10	-3.11	0.00	0.00	0.00	0.00	-48.27	-31.04
	L_7-U_8	-58.65	-150.67	-188.09	-12.41	0.00	0.00	0.00	0.00	-199.25	-185.96
	U_7-L_8	-58.65	-150.67	-188.09	-12.41	0.00	0.00	0.00	0.00	-199.25	-185.96
	L_7-L_8	-19.78	-11.28	-9.94	5.50	0.00	0.00	0.00	0.00	-170.69	-131.11
	U_8-L_8	-29.27	-74.47	-38.42	-24.38	0.00	0.00	0.00	0.00	-153.14	-128.29
	L_8-U_9	-29.27	-74.47	-38.42	-24.38	0.00	0.00	0.00	0.00	-153.14	-128.29
	L_8-L_9	-53.53	-64.24	-57.63	-14.32	0.00	0.00	0.00	0.00	-199.25	-185.96
	U_9-L_9	-54.41	-57.10	-113.00	-3.37	0.00	0.00	0.00	0.00	-54.41	-57.10
	L_9-U_{10}	-72.16	-69.45	6.62	5.44	0.00	0.00	0.00	0.00	-139.09	-164.36
	U_{10}-L_{10}	-142.92	-98.14	-113.14	-3.36	0.00	0.00	0.00	0.00	-139.09	-164.36
	L_{10}-U_{11}	-47.45	-18.97	-1.38	-0.47	0.00	0.00	0.00	0.00	-47.45	-18.97
	U_{11}-L_{11}	-24.00	-21.93	-1.47	-0.84	0.00	0.00	0.00	0.00	-148.10	-68.39
	L_{11}-U_{12}	-35.56	-31.91	3.55	-0.64	0.00	0.00	0.00	0.00	-148.10	-68.39
	U_{12}-L_{12}	-18.31	-17.00	-1.26	-4.52	0.00	0.00	0.00	0.00	-37.36	-49.84
	L_{12}-U_{13}	-15.71	-14.83	-1.40	-7.14	0.00	0.00	0.00	0.00	-37.01	-49.84
	U_{13}-L_{13}	-8.89	-5.67	4.74	-11.72	0.00	0.00	0.00	0.00	-37.01	-49.84
	L_{13}-U_{14}	-37.37	-34.78	-14.92	-2.84	0.00	0.00	0.00	0.00	-37.37	-34.78
	U_{14}-L_{14}	-58.64	-48.49	-76.05	-32.24	0.00	0.00	0.00	0.00	-244.81	-267.66
	L_{14}-U_{15}	-70.32	-58.52	-34.58	-11.13	-3.76	-0.78	0.00	0.00	-180.37	-227.23
	U_{15}-L_{15}	-76.69	-58.45	-48.69	-17.38	0.00	0.00	0.00	0.00	-180.37	-227.23
	L_{15}-U_{16}	-23.75	-23.75	-6.35	-4.06	0.00	0.00	0.00	0.00	-23.75	-23.75
	U_{16}-L_{16}	-23.75	-23.75	-6.35	-4.06	0.00	0.00	0.00	0.00	-23.75	-23.75
	L_{16}-U_{17}	-24.12	-3.25	45.53	-38.96	0.00	0.00	0.00	0.00	-148.76	-148.76
	U_{17}-L_{17}	-2.85	-14.99	36.01	-54.22	0.00	0.00	0.00	0.00	-148.76	-148.76
Structure 3	U_1-L_1	-37.37	-34.78	-14.92	-2.84	0.00	0.00	0.00	0.00	-37.37	-34.78
	L_1-L_2	-58.64	-48.49	-76.05	-32.24	0.00	0.00	0.00	0.00	-244.81	-267.66
	U_2-L_2	-70.32	-58.52	-34.58	-11.13	-3.76	-0.78	0.00	0.00	-180.37	-227.23
	L_2-U_3	-76.69	-58.45	-48.69	-17.38	0.00	0.00	0.00	0.00	-180.37	-227.23
	U_3-L_3	-23.75	-23.75	-6.35	-4.06	0.00	0.00	0.00	0.00	-23.75	-23.75
	L_3-U_4	-23.75	-23.75	-6.35	-4.06	0.00	0.00	0.00	0.00	-23.75	-23.75
	U_4-L_4	-24.12	-3.25	45.53	-38.96	0.00	0.00	0.00	0.00	-148.76	-148.76
	L_4-U_5	-2.85	-14.99	36.01	-54.22	0.00	0.00	0.00	0.00	-148.76	-148.76
	U_5-L_5	-37.37	-34.78	-14.92	-2.84	0.00	0.00	0.00	0.00	-37.37	-34.78

M_2 Information

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I (in^4)	I_{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 $C_{m(a)}$	Equivalent Mom. Factor $C_{m(b)}$
Structure 1	U_1-L_1	-60.99	24.21	27.61	7.38	15.66	15.63	15.58	25.96	5	804.0	1.66	857	1.5	773.7	-0.397	0.44
	L_1-L_2	-18.37	-3.76	-7.95	-15.71	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.205	0.68
	L_2-L_3	-11.56	-32.09	15.4	15.42	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.520	0.31
	L_3-L_4	13.09	13.92	41.72	-13.99	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.0	0.000	0.00
	L_4-L_5	-8.34	-14.63	-71.19	-26.10	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.0	0.000	0.00
	U_1-U_2	-52.52	-48.55	-49.62	-17.51	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.0	0.000	0.00
	U_2-U_3	-117.62	-36.90	-4.43	-4.24	-1.12	-0.16	0.00	0.00	0	0.0	0.00	0	0.0	0.0	0.000	0.00
	U_3-U_4	-60.13	-51.77	-13.91	4.81	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.0	0.000	0.00
	U_4-U_5	-37.02	-26.99	-27.62	5.19	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.0	0.000	0.00
	L_1-U_2	-13.43	-22.55	0.99	-3.07	-0.38	-0.10	0.00	0.00	0	0.0	0.00	0	0.0	0.0	0.000	0.00
	L_2-U_3	-23.54	-112.60	0.51	-1.67	-2.58	0.33	0.00	0.00	0	0.0	0.00	0	0.0	0.0	0.000	0.00
	L_3-U_4	-21.88	-19.55	-2.01	-0.45	-1.82	0.41	0.00	0.00	0	0.0	0.00	0	0.0	0.0	0.000	0.00
	L_4-U_5	-3.95	-5.64	-23.57	5.27	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.0

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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

ZZ Axis Moments from STAAD

Location	Member	Dead Load (k-in)	Dead Load End (k-in)	Live Load (Max) (k-in)	Live Load (Min) 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 Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0 - U_1	-79.17	-0.72	-0.74	0.86	4.64	-15.64	-8.21	10.90	191.89	13.23
	U_1 - U_2	-45.82	-20.29	0.10	1.85	-2.38	-16.64	-8.27	10.91	191.89	13.23
	U_2 - L_1	-112.29	86.52	0.89	2.38	-0.87	-17.08	9.93	26.50	-9.73	-190.11
	L_1 - U_3	-15.71	66.12	4.25	2.80	-1.28	-15.10	-19.65	15.16	-15.35	-178.23
	U_3 - L_2	-9.25	61.62	1.22	2.28	-2.24	-9.12	13.57	25.33	-24.96	-101.56
	L_2 - U_4	42.76	120.21	6.71	3.63	-0.06	-5.82	-74.66	40.46	-0.70	-64.82
	U_4 - L_3	93.19	93.19	4.03	4.03	1.72	-0.26	-18.61	19.17	-20.54	-20.54
	L_3 - U_5	-47.38	326.15	10.24	15.91	0.09	-0.05	-0.57	0.00	209.80	914.29
	U_5 - L_4	475.02	-124.36	11.52	1.26	11.53	-15.34	12.07	13.54	124.29	165.35
	L_4 - U_6	46.82	20.59	1.25	1.91	-0.08	-10.43	13.47	20.58	-0.86	-112.40
	U_6 - L_5	-136.67	471.04	-10.08	11.86	0.19	-1.04	20.40	108.57	5.37	-148.51
	L_5 - U_7	27.91	-140.51	2.12	1.17	1.00	-15.54	22.80	12.59	10.97	-187.53
	U_7 - L_6	-106.12	-155.13	1.65	0.59	1.71	-17.60	17.77	6.34	10.45	-189.78
	L_6 - U_8	-138.04	-32.90	0.97	0.58	1.48	-26.70	17.77	6.34	10.45	-189.78
	U_8 - L_7	-245.82	-183.07	1.13	0.84	2.96	-17.52	22.66	9.06	31.90	-188.91
	L_7 - U_9	-123.51	-327.01	4.41	1.43	3.50	-18.90	47.59	15.42	37.79	-202.66
	U_9 - L_8	-269.97	-145.19	-1.49	1.01	-4.78	-14.30	-16.08	10.90	-51.65	-154.13
	L_8 - U_{10}	-134.36	-67.49	0.62	0.08	1.16	-8.07	62.08	14.42	3.77	-86.97
	U_{10} - L_9	-172.91	-20.32	1.14	2.28	0.01	-4.87	-12.31	24.60	0.13	-52.48
	L_9 - U_{11}	-186.22	23.42	-5.27	7.30	1.36	-14.96	-56.81	78.72	14.71	-161.30
	U_{11} - L_{10}	114.62	-298.15	1.32	0.52	1.36	-15.77	16.48	76.48	-230.83	22.35
	L_{10} - U_{12}	-71.24	-180.99	-0.18	1.35	-1.32	-17.92	-1.50	14.42	-16.04	-110.88
	U_{12} - L_{11}	-179.50	-124.35	1.72	0.96	2.33	-16.53	-6.77	16.53	-27.23	-175.23
	L_{11} - U_{13}	-327.34	-325.40	0.93	2.66	-4.22	-29.59	9.88	-28.35	-44.95	-315.04
	U_{13} - L_{12}	-338.58	-367.31	1.12	2.29	-4.79	-30.64	-11.91	-61.96	-38.30	-234.42
	L_{12} - U_{14}	-396.14	-197.74	-0.30	3.99	-10.29	-24.36	-99.02	42.43	-109.58	-269.28
	U_{14} - L_{13}	-344.18	-179.44	2.82	2.45	-2.67	-38.11	30.01	26.12	-29.43	-405.74
	L_{13} - U_{15}	-295.16	-295.16	2.66	2.78	-3.55	-37.75	21.90	29.59	-37.75	-193.80
	U_{15} - L_{14}	-350.21	-90.73	1.88	3.20	-3.47	-15.50	20.06	34.10	-36.53	-165.57
	L_{14} - U_{16}	-222.39	-71.74	2.63	3.41	-2.70	-15.71	22.02	36.01	-38.53	-127.62
	U_{16} - L_{15}	-167.09	-39.84	3.02	3.05	-2.89	-8.78	32.19	32.49	-30.68	-105.61
	L_{15} - U_{17}	-109.78	170.74	0.43	3.66	-2.99	-7.38	-57.08	18.50	-37.85	-76.60
	U_{17} - L_{16}	-479.50	-124.36	1.12	1.26	1.53	-15.34	12.07	13.54	-124.29	-165.35
	L_{16} - U_{18}	-261.01	1266.00	-15.55	23.81	-0.48	-9.97	-165.54	253.54	-5.15	-10.32
	U_{18} - L_{17}	1192.78	-1.79	0.00	0.00	0.00	0.00	1.24	0.00	0.00	0.00
	L_{17} - U_{19}	-25.29	11.66	1.66	2.90	-0.60	-19.47	17.44	30.52	-6.33	-204.86
	U_{19} - L_{18}	-24.26	23.61	2.31	2.31	-0.60	-19.47	24.26	24.26	-6.33	-204.86
	L_{18} - U_{20}	150.60	33.06	2.11	0.97	-0.81	-16.69	22.65	24.27	-0.68	-176.63
	U_{20} - L_{19}	147.31	4.37	2.68	1.91	2.58	-16.42	28.03	29.11	-27.15	-204.32
	L_{19} - U_{21}	-229.16	-229.16	2.66	2.78	-3.55	-37.75	21.90	29.59	-37.75	-193.80
	U_{21} - L_{20}	-350.21	-90.73	1.88	3.20	-3.47	-15.50	20.06	34.10	-36.53	-165.57
	L_{20} - U_{22}	-222.39	-71.74	2.63	3.41	-2.70	-15.71	22.02	36.01	-38.53	-127.62
	U_{22} - L_{21}	-167.09	-39.84	3.02	3.05	-2.89	-8.78	32.19	32.49	-30.68	-105.61
	L_{21} - U_{23}	-109.78	170.74	0.43	3.66	-2.99	-7.38	-57.08	18.50	-37.85	-76.60
	U_{23} - L_{22}	-479.50	-124.36	1.12	1.26	1.53	-15.34	12.07	13.54	-124.29	-165.35
	L_{22} - U_{24}	-261.01	1266.00	-15.55	23.81	-0.48	-9.97	-165.54	253.54	-5.15	-10.32
	U_{24} - L_{23}	1192.78	-1.79	0.00	0.00	0.00	0.00	1.24	0.00	0.00	0.00
	L_{23} - U_{25}	-25.29	11.66	1.66	2.90	-0.60	-19.47	17.44	30.52	-6.33	-204.86
	U_{25} - L_{24}	-24.26	23.61	2.31	2.31	-0.60	-19.47	24.26	24.26	-6.33	-204.86
	L_{24} - U_{26}	150.60	33.06	2.11	0.97	-0.81	-16.69	22.65	24.27	-0.68	-176.63
	U_{26} - L_{25}	147.31	4.37	2.68	1.91	2.58	-16.42	28.03	29.11	-27.15	-204.32
	L_{25} - U_{27}	-229.16	-229.16	2.66	2.78	-3.55	-37.75	21.90	29.59	-37.75	-193.80
	U_{27} - L_{26}	-31.69	-33.99	0.07	2.13	-1.76	-21.07	0.73	22.39	-18.56	-227.68
	L_{26} - U_{28}	-86.03	-7.79	0.74	1.27	-1.49	-25.23	14.27	14.27	-14.90	-164.93
	U_{28} - L_{27}	-96.66	-66.98	0.89	1.22	-2.03	-18.06	9.34	12.79	-21.31	-190.03
	L_{27} - U_{29}	-21.51	-83.18	1.72	2.10	-1.72	-17.84	20.11	21.52	-23.22	-178.54
	U_{29} - L_{28}	-33.01	-28.69	2.02	2.58	-1.51	-15.44	21.22	27.10	-17.71	-162.49
	L_{28} - U_{30}	-15.13	112.78	-8.17	4.11	-1.27	-11.09	-85.95	43.23	-13.38	-116.71
	U_{30} - L_{29}	-4.29	129.54	-9.40	4.72	-0.99	-8.70	-85.21	46.22	-9.26	-100.53
	L_{29} - U_{31}	-2.74	209.84	-11.15	5.62	0.72	-8.99	-117.26	59.17	7.60	-105.10
	U_{31} - L_{30}	-1.38	209.84	-11.15	5.62	0.72	-8.99	-117.26	59.17	7.60	-105.10
	L_{30} - U_{32}	-122.51	1157.56	-12.07	24.55	0.10	-1.26	-127.60	268.33	1.03	-13.24
	U_{32} - L_{31}	1154.91	-197.36	0.03	2.56	23.56	-29.68	0.34	27.28	250.82	-273.40
	L_{31} - U_{33}	1154.91	-197.36	0.03	2.56	23.56	-29.68	0.34	27.28	250.82	-273.40
	U_{33} - L_{32}	178.89	-59.81	2.31	2.84	0.31	-17.38	24.62	30.23	3.28	-185.08
	L_{32} - U_{34}	178.89	-59.81	2.31	2.84	0.31	-17.38	24.62	30.23	3.28	-185.08
	U_{34} - L_{33}	68.66	-178.68	3.27	2.64	-0.26	-22.80	34.81	28.13	-3.79	-242.73
	L_{33} - U_{35}	68.66	-178.68	3.27	2.64	-0.26	-22.80	34.81	28.13	-3.79	-242.73
	U_{35} - L_{34}	-236.51	-153.10	2.49	2.18	-0.93	-36.14	26.35	23.19	-8.87	-384.81
	L_{34} - U_{36}	-98.60	-313.27	1.54	3.46	-3.67	-21.64	16.39	36.82	-39.09	-232.51
	U_{36} - L_{35}	-159.54	-360.07	2.28	3.29	-3.23	-22.44	23.00	34.73	-37.73	-161.95
	L_{35} - U_{37}	-350.37	-386.86	-3.09	1.64	-1.18	-25.99	-54.20	17.43	-12.52	-276.76
	U_{37} - L_{36}	-279.98	-117.76	-8.17	4.23	-7.04	-13.02	-86.95	45.06	-74.52	-136.65
	L_{36} - U_{38}	-282.51	-281.61	1.46	2.73	-2.82	-17.61	-62.72	18.51	-27.45	-181.06
	U_{38} - L_{37}	-186.32	-74.12	6.34	7.87	2.47	-14.75	-67.49	83.83	26.30	-157.01
	L_{37} - U_{39}	-139.08	-187.97	-7.67	0.82	6.91	-12.02	-82.72	8.79	74.46	-129.62
	U_{39} - L_{38}	-47.38	-119.55	-5.31	1.14	1.83	-14.42	-1.14	1.83	0.00	-146.52
	L_{38} - U_{40}	-52.58	-125.17	-0.15	0.78	1.64	-17.53	-1.60	8.36	-17.69	-193.31
	U_{40} - L_{39}	-277.84	-111.68	-8.22	2.07	-1.04	-21.46	-88.64	24.52	-11.26	-231.38
	L_{39} - U_{41}	-166.98	-243.52	1.03	1.42	-5.52	-27.67	11.15	15.26	-59.48	-298.32
	U_{41} - L_{40}	-287.74	-127.82	1.03	1.21	-3.21	-16.00	11.02	13.06	-34.57	-273.04
	L_{40} - U_{42}	-141.43	-113.94	-5.69	3.02	-5.72	-12.19	-61.38	32.55	-7.85	-131.44
	U_{42} - L_{41}	-240.50	-22.79	-3.63	2.42	-1.34	-8.99	-29.13	26.11	-14.43	-96.89
	L_{41} - U_{43}	-141.52	22.75	-3.63	2.42	-1.34	-8.99	-29.13	26.11	-14.43	-96.89
	U_{43} - L_{42}	-141.64	56.96	-5.22	2.70	-3.27	-4.77	-56.33	81.10	-35.25	-51.45
	L_{42} - U_{44}	2.97	40.71	-2.11	2.15	0.53	-5.49	-22.76	23.14	5.75	-59.19
	U_{44} - L_{43}	-136.67	471.04	-10.08	11.86	0.19	-1.04	-108.69	127.67	2.06	-5.40
	L_{43} - U_{45}	497.26	-34.44	1.89	1.31	15.06	-18.13	21.90	14.62	167.67	-201.86
	U_{45} - L_{44}	41.03	109.94	1.64	1.89	0.31	-11.77	16.08	20.97	3.46	-130.98
	L_{44} - U_{46}	113.04	44.48	2.34	1.63	1.21	-13.59	26.06	18.15	13.45	-151.34
	U_{46} - L_{45}	59.35	15.11	2.26	1.42	-2.27	-16.00	25.17	15.84	-25.28	-178.17
	L_{45} - U_{47}	86.09	-19.75	2.27	1.25	4.42	-13.11	25.32	13.87	49.19	-145.99
	U_{47} - L_{46}	80.30	-119.58	-3.08	0.97	-1.34	-12.99	-34.32	10.80	-14.90	-144.63
	L_{46} - U_{48}	-24.63	-27.07	-0.70	1.32	-3.09	-9.47	-7.80	14.72	-34.38	-105.47
	U_{48} - L_{47}	29.38	-160.66	-5.50	7.29	0.98	-11.52	41.25	81.10	10.94	-129.21

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^3)	I_{zz} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term * F_y/S_xx	M_z k-in	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor C_{bbm}
Structure 1	U_0 - U_1	-11.89	13.23	-24.04	-227.30	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	0.106	0.64	0.64
	U_1 - U_2	-11.89	13.23	-24.04	-267.14	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	0.000	0.64	0.64
	U_2 - L_1	-10.28	0.12	24.15	-16.19	0.00	0.00	0.00	47.34	-90.16	92.09	-111.36	158.6
	L_1 - U_3	-14.58	3.48	-3.38	-33.18	0.00	0.00	0.00	21.70	-50.51	271.81	-46.67	158.6
	U_3 - L_2	-6.27	9.02	-25.98	-26.99	0.00	0.00	0.00	-62.99	-38.66	-88.46	-168.51	158.6
	L_2 - U_4	18.76	-20.14	-7.27	-28.63	0.00	0.00	0.00	-158.20	-107.08	-192.04	-118.13	158.6
	U_4 - L_3	-19.48	-10.50	-5.60	-5.60	0.00	0.00	0.00	-276.66	-10.51	-271.81	-46.67	158.6
	L_3 - U_5	-23.10	-1.35	0.29	-1.01	0.00	0.00	0.00	-272.65	172.04	-243.00	260.5	260.46
	U_5 - L_4	-6.78	0.45	4.59	14.20	0.00	0.00	0.00	148.85	302.08	163.64	319.95	165.8
	L_4 - U_6	-14.07	0.31	1.81	1.76	0.00	0.00	0.00	213.54	8.94	-282.89	10.82	212.8
	U_6 - L_5	-3.30	-0.11	-12.66	-16.91	0.00	0.00	0.00	236.38	34.64	245.78	48.84	184.2
	L_5 - U_7	-9.42	-1.19	3.28	-0.37	0.00	0.00	0.00	193.26	62.65	209.77	63.62	219.3
	U_7 - L_6	-3.34	6.88	-2.84	1.91	0.00	0.00	0.00	238.67	67.33	239.33	-73.80	330.4
	L_6 - U_8	-9.42	-1.19	3.28	-0.37	0.00	0.00	0.00	193.26	62.65	209.77	63.62	219.3
	U_8 - L_7	1.60	4.87	-12.28	-16.36	0.00	0.00	0.00	178.09	73.06	160.06	-100.88	181.9
	L_7 - U_9	38.76	-0.13	-25.97	-2.41	0.00	0.00	0.00	90.75	80.88	6.59	-163.83	381.9
	U_9 - L_8	13.74	-9.38	-47.27	-25.06	0.00	0.00	0.00	87.84	-220.44	8.53	-240.82	381.9
	L_8 - U_{10}	-10.84	4.93	-10.74	-11.06	0.00	0.00	0.00	-154.57	-157.85	-76.54	-284.63	288.7
	U_{10} - L_9	8.25	-10.76	20.59	-35.81	0.00	0.00	0.00	-260.36	-223.17	-244.31	-250.73	184.2
	L_9 - U_{11}	-1.78	-9.12	13.65	-72.21	0.00	0.00	0.00	-187.04	-21.16	-159.17	-103.19	184.2
	U_{11} - L_{10}	39.40	-3.03	19.31	-32.32	0.00	0.00	0.00	-147.63	-115.96	-76.49	-84.87	184.2
	L_{10} - U_{12}	1.67	14.06	-19.09	-51.79	0.00	0.00	0.00	329.73	572.34	302.09	486.73	232.9
	U_{12} - L_{11}	9.10	-3.13	-0.35	-38.51	0.00	0.00	0.00	419.90	7.30	-15.63	207.0	291.6
	L_{11} - U_{13}	2.89	-31.38	8.16	7.42	0.00	0.00	0.00	168.78	-240.80	175.64	-190.36	375.8
	U_{13} - L_{12}	-2.89	-13.10	7.11	-1.76	0.00	0.00	0.00	27.42	-203.95	-14.82	-276.50	375.8
	L_{12} - U_{14}	21.90	-1.90	-16.45	-27.53	0.00	0.00	0.00	23.69	-221.14	-26.16	-254.40	436.1
	U_{14} - L_{13}	-17.22	-8.92	-12.45	-32.65	0.00	0.00	0.00	-9.94	-222.24	0.26	-253.09	375.8
	L_{13} - U_{15}	-16.83	-10.24	-11.46	-31.75	0.00	0.00	0.00	-10.42	-222.46	-0.39	-252.48	375.8
	U_{15} - L_{14}	-12.57	5.43	-22.91	-39.76	0.00	0.00	0.00	-71.03	-145.49	-84.41	-232.08	375.8
	U_{16} - L_{15}	-8.81	7.46	-10.73	-8.57	0.00	0.00	0.00	-100.81	-140.78	-111.37	-159.03	219.5
	L_{15} - U_{17}	1.80	-17.06	-4.39	-34.70	0.00	0.00	0.00	-230.31	-283.44	-298.35	-293.32	219.5
	U_{17} - L_{16}	-18.24	-0.46	-20.76	-0.68	0.00	0.00	0.00	-347.18	-282.62	-347.18	-282.62	219.5
	L_{16} - U_{18}	-27.47	-9.21	-6.03	-11.15	0.00	0.00	0.00	-483.14	-36.99	-465.26	-39.51	388.9
	U_{18} - L_{17}	-16.02	-13.10	7.11	-1.76	0.00	0.00	0.00	27.42	-203.95	-14.82	-276.50	375.8
	L_{17} - U_{19}	-20.78	-16.74	12.83	41.10	-173.17	185.0	185.70	154.12	266.55	4767	27214.4	1.44
	U_{19} - L_{18}	-12.01	-8.68	32.29	27.83	0.00	0.00	0.00	153.08	499.36	209.11	547.30	317.8
	L_{18} - U_{20}	1.48	-0.13	0.00	0.00	0.00	0.00	0.00	153.08	499.36	209.11	547.30	317.8
	U_{20} - L_{19}	-6.66	8.87	2.33	3.40	0.00	0.00	0.00	103.04	62.38	124.45	77.56	183.7
	L_{19} - U_{21}	-16.83	-10.24	-11.46	-31.75	0.00	0.00	0.00	-10.42	-222.46	-0.39	-252.48	375.8
	U_{21} - L_{20}	-12.57	5.43	-22.91	-39.76	0.00	0.00	0.00	-71.03	-145.49	-84.41	-232.08	375.8
	L_{20} - U_{22}	-8.81	7.46	-10.73	-8.57	0.00	0.00	0.00	-100.81	-140.78	-111.37	-159.03	219.5
	U_{22} - L_{21}	1.80	-17.06	-4.39	-34.70	0.00	0.00	0.00	-230.31	-283.44	-298.35	-293.32	219.5
	L_{21} - U_{23}	-18.24	-0.46	-20.76	-0.68	0.00	0.00	0.00	-347.18	-282.62	-347.18	-282.62	219.5
	U_{23} - L_{22}	-27.47	-9.21	-6.03	-11.15	0.00	0.00	0.00	-483.14	-36.99	-465.26	-39.51	388.9
	L_{22} - U_{24}	-16.02	-13.10	7.11	-1.76	0.00	0.00	0.00	27.42	-203.95	-14.82	-276.50	375.8
	U_{24} - L_{23}	-20.78	-16.74	12.83	41.10	-173.17	185.0	185.70	154.12	266.55	4767	27214.4	1.44
	L_{23} - U_{25}	-12.01	-8.68	32.29	27.83	0.00	0.00	0.00	153.08	499.36	209.11	547.30	317.8
	U_{25} - L_{24}	1.48	-0.13	0.00	0.00	0.00	0.00	0.00	153.08	499.36	209.11	547.30	317.8
	L_{24} - U_{26}	-6.66	8.87	2.33	3.40	0.00	0.00	0.00	103.04	62.38	124.45	77.56	183.7
	U_{26} - L_{25}	-16.83	-10.24	-11.46	-31.75	0.00	0.00	0.00	-10.42	-222.46	-0.39	-252.48	375.8
	L_{25} - U_{27}	-12.57	5.43	-22.91	-39.76	0.00	0.00	0.00	-71.03	-145.49	-84.41	-232.08	375.8
	U_{27} - L_{26}	-8.81	7.46	-10.73	-8.57	0.00	0.00	0.00	-100.81	-140.78	-111.37	-159.03	219.5
	L_{26} - U_{28}	1.80	-17.06	-4.39	-34.70	0.00	0.00	0.00	-230.31	-283.44	-298.35	-293.32	219.5
	U_{28} - L_{27}	-18.24	-0.46	-20.76	-0.68	0.00	0.00	0.00	-347.18	-282.62	-347.18	-282.62	219.5
	L_{27} - U_{29}	-27.47	-9.21	-6.03	-11.15	0.00	0.00	0.00	-483.14	-36.99	-465.26	-39.51	388.9
	U_{29} - L_{28}	-16.02	-13.10	7.11	-1.76	0.00	0.00	0.00	27.42	-203.95	-14.82	-276.50	375.8
	L_{28} - U_{30}	-20.78	-16.74	12.83	41.10	-173.17	185.0	185.70	154.12	266.55	4767	27214.4	1.44
	U_{30} - L_{29}	-12.01	-8.68	32.29	27.83	0.00	0.00	0.00	153.08	499.36	209.11	547.30	317.8
	L_{29} - U_{31}	1.48	-0.13	0.00	0.00	0.00	0.00	0.00	153.08	499.36	209.11	547.30	317.8
	U_{31} - L_{30}	-6.66	8.87	2.33	3.40	0.00	0.00	0.00	103.04	62.38	124.45	77.56	183.7
	L_{30} - U_{32}	-16.83	-10.24	-11.46	-31.75	0.00	0.00	0.00	-10.42	-222.46	-0.39	-252.48	375.8
	U_{32} - L_{31}	-12.57	5.43	-22.91	-39.76	0.00	0.00	0.00	-71.03	-145.49	-84.41	-232.08	375.8
	L_{31} - U_{33}	-8.81	7.46	-10.73	-8.57	0.00	0.00	0.00	-100.81	-140.78	-111.37	-159.03	219.5
	U_{33} - L_{32}	1.80	-17.06	-4.39	-34.70	0.00	0.00	0.00	-230.31	-283.44	-298.35	-293.32	219.5
	L_{32} - U_{34}	-18.24	-0.46	-20.76	-0.68	0.00	0.00	0.00	-347.18	-282.62	-347.18	-282.62	219.5
	U_{34} - L_{33}	-27.47	-9.21	-6.03	-11.15	0.00	0.00	0.00	-483.14	-36.99	-465.26	-39.51	388.9
	L_{33} - U_{35}	-16.02	-13.10	7.11	-1.76	0.00	0.00	0.00	27.42	-203.95	-14.82	-276.50	375.8
	U_{35} - L_{34}	-20.78	-16.74	12.83	41.10	-173.17	185.0	185.70	154.12	266.55	4767	27214.4	1.44
	L_{34} - U_{36}	-12.01	-8.68	32.29	27.83	0.00	0.00	0.00	153.08	499.36	209.11	547.30	317.8
	U_{36} - L_{35}	1.48	-0.13	0.00	0.00	0.00	0.00	0.00	153.08	499.36	209.11	547.30	317.8
	L_{35} - U_{37}	-6.66	8.87	2.33	3.40	0.00	0.00	0.00	103.04	62.38	124.45	77.56	183.7
	U_{37} - L_{36}	-16.83	-10.24	-11.46	-31.75	0.00	0.00	0.00	-10.42	-222.46	-0.39	-252.48	375.8
	L_{36} - U_{38}	-12.57	5.43	-22.91	-39.76	0.00	0.00	0.00	-71.03	-145.49	-84.41	-232.08	375.8
	U_{38} - L_{37}	-8.81	7.46	-10.73	-8.57	0.00	0.00	0.00	-100.81	-140.78	-111.37	-159.03	219.5
	L_{37} - U_{39}	1.80	-17.06	-4.39	-34.70	0.00	0.00	0.00	-230.31	-283.44	-298.35	-293.32	219.5
	U_{39} - L_{38}	-18.24	-0.46	-20.76	-0.68	0.00	0.00	0.00	-347.18	-282.62	-347.18	-282.62	219.5
	L_{38} - U_{40}	-27.47	-9.21	-6.03	-11.15	0.00	0.00	0.00	-483.14	-36.99	-465.26	-39.51	388.9
	U_{40} - L_{39}	-16.02	-13.10	7.11	-1.76	0.00	0.00	0.00	27.42	-203.95	-14.82	-276.50	375.8
	L_{39} - U_{41}	-20.78	-16.74	12.83	41.10	-173.17	185.0	185.70	154.12	266.55	4767	27214.4	1.44
	$U_{41}

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: 3F1
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

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	L_0-L_1	-15.50	-73.38	-0.65	0.68	3.52	-7.35				
	L_1-L_2	39.75	-88.06	-0.08	1.50	-0.11	-10.94				
	L_2-L_3	90.24	-42.24	-0.32	1.66	-4.28	-11.13				
	L_3-L_4	-11.39	11.52	0.78	2.62	-0.34	-13.58				
	L_4-L_5	-49.18	208.14	-5.71	3.66	-41.41	-69.77				
	L_5-L_6	-6.43	187.22	-1.63	3.76	-3.71	-7.19				
	L_6-L_7	41.36	78.74	-4.69	3.86	-4.82	-8.77				
	L_7-L_8	-25.09	448.92	-3.47	11.42	0.09	-0.06				
	L_8-L_9	426.08	-36.00	1.89	0.88	7.70	-5.88				
	L_9-L_{10}	150.12	-105.15	0.20	2.00	3.38	-8.02				
	L_{10}-L_{11}	120.53	-116.03	2.56	1.22	0.17	-6.91				
	L_{11}-L_{12}	103.16	-122.28	1.69	0.68	3.73	-7.82				
	L_{12}-L_{13}	-45.20	-121.29	1.58	0.76	-6.58	-8.96				
	L_{13}-L_{14}	96.42	-350.16	1.26	0.90	5.02	-17.84				
	L_{14}-L_{15}	-352.17	-64.24	1.40	0.82	-4.61	-18.62				
	L_{15}-L_{16}	-192.00	-318.69	-1.03	1.19	-6.81	-15.92				
	L_{16}-L_{17}	8.40	-33.46	-2.82	1.26	-2.83	-13.06				
	L_{17}-L_{18}	-154.69	-31.48	-3.01	3.39	-4.54	-5.00				
	L_{18}-L_{19}	-216.17	148.84	-3.92	3.66	-3.22	-2.40				
	L_{19}-L_{20}	-136.64	-69.93	-2.92	2.98	-1.96	0.00				
	L_{20}-L_{21}	2.99	-170.85	-0.47	0.90	3.08	-9.04				
	L_{21}-L_{22}	76.59	-245.54	-0.39	0.82	3.52	-10.53				
	L_{22}-L_{23}	-6.26	-180.81	-0.12	0.98	0.30	-11.33				
	L_{23}-L_{24}	153.12	-305.15	0.20	2.00	3.38	-8.02				
	L_{24}-L_{25}	-253.33	-295.08	0.90	1.58	0.86	-17.69				
	L_{25}-L_{26}	-475.19	-252.78	2.45	2.45	-2.17	-24.66				
	L_{26}-L_{27}	-280.52	-64.48	-13.44	4.60	-10.21	-16.27				
	L_{27}-L_{28}	-225.88	141.33	-8.03	3.88	-5.17	-9.33				
	L_{28}-L_{29}	261.56	-85.20	-7.17	4.30	-5.87	-7.57				
	L_{29}-L_{30}	-160.00	387.18	-3.31	5.24	-6.53	-7.37				
	L_{30}-L_{31}	-202.72	-204.41	1.24	2.39	-8.41	-16.04				
	L_{31}-L_{32}	150.12	-305.15	0.20	2.00	3.38	-8.02				
	L_{32}-L_{33}	1072.48	-412.36	0.59	1.05	18.61	-16.62				
	L_{33}-L_{34}	337.48	-413.52	0.91	1.03	5.82	-9.13				
	L_{34}-L_{35}	476.61	-69.01	3.28	1.51	5.95	-11.39				
	L_{35}-L_{36}	229.52	-185.25	3.31	1.29	3.77	-8.53				
	L_{36}-L_{37}	226.53	-41.80	3.01	1.39	4.10	-9.91				
	L_{37}-L_{38}	214.46	-56.44	1.90	0.63	-6.33	-12.02				
	L_{38}-L_{39}	26.84	-74.14	1.90	0.63	-6.75	-8.76				
	L_{39}-L_{40}	49.26	-202.49	0.32	1.98	2.82	-22.73				
	L_{40}-L_{41}	197.13	-24.93	0.32	1.98	2.82	-22.73				
	L_{41}-L_{42}	-111.93	0.87	-0.62	3.04	-10.70	-14.56				
	L_{42}-L_{43}	-60.79	179.83	-0.34	4.36	-5.55	-10.02				
	L_{43}-L_{44}	-81.88	265.66	-6.41	5.51	-4.11	-8.10				
	L_{44}-L_{45}	-100.08	-279.84	-1.31	2.34	-8.63	-17.34				
	L_{45}-L_{46}	1027.57	1000.64	0.46	1.00	16.35	-15.51				
	L_{46}-L_{47}	1027.57	362.88	-1.06	1.30	16.35	-15.51				
	L_{47}-L_{48}	-227.20	-125.85	0.65	3.31	-9.64	-12.21				
	L_{48}-L_{49}	276.16	-134.31	1.51	2.91	4.75	-10.45				
	L_{49}-L_{50}	222.98	-243.33	2.05	2.30	0.22	-11.57				
	L_{50}-L_{51}	276.16	-133.13	1.51	2.91	4.75	-10.45				
	L_{51}-L_{52}	-187.99	-470.88	2.56	1.84	-6.60	-26.19				
	L_{52}-L_{53}	-445.18	-83.63	2.13	5.52	-16.16	-24.09				
	L_{53}-L_{54}	-291.76	-319.65	4.30	5.52	-3.47	-24.09				
	L_{54}-L_{55}	-392.42	-38.25	5.92	3.05	-11.40	-13.04				
	L_{55}-L_{56}	-297.29	-199.08	6.68	3.55	-4.44	-4.86				
	L_{56}-L_{57}	-297.29	199.08	6.68	3.55	-4.44	-4.86				
	L_{57}-L_{58}	24.89	-109.63	0.29	0.44	4.16	-7.28				
	L_{58}-L_{59}	139.96	-178.06	-0.28	0.62	3.09	-7.99				
	L_{59}-L_{60}	71.70	-139.23	0.07	0.62	3.43	-7.99				
	L_{60}-L_{61}	47.96	-293.52	-0.19	0.86	-6.37	-11.91				
	L_{61}-L_{62}	24.89	-109.63	0.29	0.44	4.16	-7.28				
	L_{62}-L_{63}	-41.79	-343.26	0.25	1.66	0.28	-21.19				
	L_{63}-L_{64}	-341.31	86.25	-9.02	5.27	-4.82	-13.30				
	L_{64}-L_{65}	-201.18	152.50	-4.91	3.31	-3.72	-6.82				
	L_{65}-L_{66}	-201.18	152.50	-4.91	3.31	-3.72	-6.82				
	L_{66}-L_{67}	-147.72	-149.48	-3.92	4.92	-4.76	-6.96				
	L_{67}-L_{68}	428.40	-26.47	1.90	0.77	10.27	-6.70				
	L_{68}-L_{69}	70.64	-27.50	2.20	2.13	-2.04	-9.09				
	L_{69}-L_{70}	194.51	-25.06	2.27	1.88	4.05	-13.18				
	L_{70}-L_{71}	194.51	-25.06	2.27	1.88	4.05	-13.18				
	L_{71}-L_{72}	-45.44	-80.85	0.42	1.27	-5.25	-14.19				
	L_{72}-L_{73}	-74.43	-5.53	-8.82	4.30	0.50	-0.49				

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	L_0-L_1	-4.03	-14.79	0.13	0.48	-0.97	-3.55				
	L_1-L_2	-10.21	27.86	0.52	-0.23	-2.54	-0.40				
	L_2-L_3	-17.56	3.85	-0.03	0.51	-0.19	0.67				
	L_3-L_4	-45.12	56.05	0.40	-0.44	-1.45	-0.37				
	L_4-L_5	-10.53	10.10	-36.57	24.00	0.00	0.00				
	L_5-L_6	-5.45	7.79	-9.06	7.35	0.00	0.00				
	L_6-L_7	-5.21	-6.95	-3.50	0.00	0.00	0.00				
	L_7-L_8	31.76	53.36	0.10	0.54	-0.08	0.04				
	L_8-L_9	-2.79	-1.39	-3.77	8.10	0.00	0.00				
	L_9-L_{10}	0.87	2.66	0.80	-0.26	0.00	0.00				
	L_{10}-L_{11}	34.98	14.01	0.32	0.01	-1.16	-0.51				
	L_{11}-L_{12}	-2.84	-3.90	-10.15	2.07	0.00	0.00				
	L_{12}-L_{13}	1.46	-7.43	-0.26	-0.33	-0.94	0.19				
	L_{13}-L_{14}	64.89	-73.79	0.05	-0.43	-1.84	-0.79				
	L_{14}-L_{15}	-0.62	-2.30	-0.01	0.00	-2.75	-0.54				
	L_{15}-L_{16}	14.91	18.37	-10.54	-24.65	0.00	0.00				
	L_{16}-L_{17}	-2.74	8.19	-10.54	-24.65	0.00	0.00				
	L_{17}-L_{18}	-8.58	-30.17	0.78	-0.58	-2.38					
	L_{18}-L_{19}	-14.99	-3.07	-22.38	76.10	0.00	0.00				
	L_{19}-L_{20}	-3.14	-0.71	4.92	1.10	0.00	0.00				
	L_{20}-L_{21}	0.61	2.12	-14.87	-51.65	0.00	0.00				
	L_{21}-L_{22}	37.28	38.16	-0.50	-0.58	-0.65	0.00				
	L_{22}-L_{23}	-1.44	2.34	-13.72	-13.48	0.00	0.00				
	L_{23}-L_{24}	71.54	-73.79	0.05	-0.43	-1.84	-0.79				
	L_{24}-L_{25}	-0.65	-0.39	-11.29	-4.77	0.00	0.00				
	L_{25}-L_{26}	-0.74	-0.39	-11.29	-4.77	0.00	0.00				
	L_{26}-L_{27}	0.00	0.00	-0.01	-3.93	0.00	0.00				
	L_{27}-L_{28}	0.00	0.00	-0.01	-3.93	0.00	0.00				
	L_{28}-L_{29}	37.36	54.60	0.59	1.20	-1.75	-1.64				
	L_{29}-L_{30}	0.00	0.00	-0.01	-3.93	0.00	0.00				
	L_{30}-L_{31}	27.30	-42.03	0.69	1.22	-1.07	-1.31				
	L_{31}-L_{32}	71.54	-73.79	0.05	-0.43	-1.84	-0.79				
	L_{32}-L_{33}	29.75	83.62	0.22	0.49	-0.56	-1.39				
	L_{33}-L_{34}	11.83	4.06	-14.80	-6.34	0.00	0.00				
	L_{34}-L_{35}	2.99	2.64	-0.47	-1.16	-0.60	0.00				
	L_{35}-L_{36}	0.00	0.00	-0.01	-3.93	0.00	0.00				
	L_{36}-L_{37}	0.00	0.00	-0.01	-3.93	0.00	0.00				
	L_{37}-L_{38}	2.33	-0.47	-0.44	11.86	0.00	0.00				
	L_{38}-L_{39}	12.86	-0.26	-0.01	-0.01	0.00	0.00				
	L_{39}-L_{40}	1.06	-0.66	-18.99	-3.63	0.00	0.00				
	L_{40}-L_{41}	2.91	11.14	-0.03	-0.01	0.00	0.00				
	L_{41}-L_{42}	10.70	16.31	-3.64	-6.72	0.00	0.00				
	L_{42}-L_{43}	31.41	-0.09	-0.01	-0.01	0.00	0.00				
	L_{43}-L_{44}	8.04	10.65	-2.27	-13.02	0.00	0.00				
	L_{44}-L_{45}	0.14	5.56	-10.12	-6.42	0.00	0.00				
	L_{45}-L_{46}	6.98	5.56	-24.81	-10.77	0.00	0.00				
	L_{46}-L_{47}	-10.65	-11.82	-13.42	5.78	0.00	0.00				
	L_{47}-L_{48}	1.66	-0.54	-8.15	-4.81	0.00	0.00				
	L_{48}-L_{49}	-3.45	-7.97	5.10	4.52	0.00	0.00				
	L_{49}-L_{50}	-2.78	-6.85	-2.53	0.00	0.00	0.00				
	L_{50}-L_{51}	-3.45	-7.97	5.10	4.52	0.00	0.00				
	L_{51}-L_{52}	4.31	-1.95	-3.03	-10.90	23.02	0.00				
	L_{52}-L_{53}	-1.06	-3.65	-10.90	23.02	0.00	0.00				
	L_{53}-L_{54}	13.71	16.04	-0.01	-0.01	0.00	0.00				
	L_{54}-L_{55}	5.27	-5.65	-18.45	25.84	0.00	0.00				
	L_{55}-L_{56}	1.54	-0.04	-16.13	73.08	0.00	0.00				
	L_{56}-L_{57}	1.54	-0.04	-16.13	73.08	0.00	0.00				
	L_{57}-L_{58}	0.32	-1.48	-12.24	-56.43	0.00	0.00				
	L_{58}-L_{59}	1.06	-1.10	-16.19	35.33	0.00	0.00				
	L_{59}-L_{60}	0.25	0.50	-21.70	4.03	0.00	0.00				
	L_{60}-L_{61}	0.25	0.50	-21.70	4.03	0.00	0.00				
	L_{61}-L_{62}	0.32	-1.48	-12.24	-56.43	0.00	0.00				
	L_{62}-L_{63}	-47.22	141.76	-96.08	-148.61	0.00	0.00				
	L_{63}-L_{64}	3.43	15.36	-64.94	-2.51	0.00	0.00				
	L_{64}-L_{65}	12.46	22.06	-0.26	-0.28	0.00	0.00				
	L_{65}-L_{66}	12.46	22.06	-0.26	-0.28	0.00	0.00				
	L_{66}-L_{67}	-18.34	-1.69	0.32	1.42	-2.36	-0.23				
	L_{67}-L_{68}	24.34	0.49	-0.01	-0.01	0.00	0.00				
	L_{68}-L_{69}	18.39	-0.60	-2.40	-35.35	158.2	0.00				
	L_{69}-L_{70}	18.39	-0.60	-2.40	-35.35	158.2	0.00				
	L_{70}-L_{71}	0.00	0.00	-0.01	-3.93	0.00	0.00				
	L_{71}-L_{72}	0.00	0.00	-0.01	-3.93	0.00	0.00				
	L_{72}-L_{73}	0.00	0.00	-0.01	-3.93	0.00	0.00				

M_y 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)	Tension S_{nt} (in²)	Tension S_n (in²)	Tension Z_y (in³)	Tension I_{yy} (in⁴)	Compression Shape Factor	Compression M_p (k-in)	Compression P_{cm} (kip)	Compression Formula 1.8 Term * F'cu/P_{cm}	Compression M_{ny} (k-in)	Compression Equivalent Mom. Factor a	Compression Equivalent Mom. Factor C_{my}	Compression Equivalent Mom. Factor C_{min}	Yield Axial Stress (ksi)	Yield Moment Stress (ksi)	Yield Total Stress (ksi)	Yield Pass	Fracture Axial Stress (ksi)	Fracture Moment Stress (ksi)	Fracture Total Stress (ksi)	Fracture Pass	Buckle Axial Portion	Buckle Moment Portion	Buckle Total	Buckle Pass	Compression Axial Stress (ksi)	Compression Moment Stress (ksi)	Compression Total Stress (ksi)	Compression Pass
Structure 1	L_0-L_1	1.46	5.35	-10.75	-39.52	0.00	0.00	0.00	0.00	1.10	4659	—	—	0.99805042	4225.3	0.272	0.71	0.71	0.012	0.076	0.09	Yes	0.007	0.046	0.06	Yes	—	—	—	—	—	—	—	—
	L_1-L_2	1.66	5.30	-10.79	-39.52	0.00	0.00	0.00	0.00	1.10	4659	—	—	0.99805042	4225.3	0.272	0.71	0.71	0.012	0.076	0.09	Yes	0.007	0.046	0.06	Yes	—	—	—	—	—	—	—	—
	L_2-L_3	1.66	5.30	-10.79	-39.52	0.00	0.00	0.00	0.00	1.10	4659	—	—	0.99805042	4225.3	0.272	0.71	0.71	0.012	0.076	0.09	Yes	0.007	0.046	0.06	Yes	—	—	—	—	—	—	—	—
	L_3-L_4	3.34	12.26	-19.21	-70.60	128.3	128.29	121.63	141.18	626.8	1.10	4659	—	0.99805042	4225.3	0.272	0.71	0.71	0.012	0.076	0.09	Yes	0.007	0.046	0.06	Yes	—	—	—	—	—	—	—	—
	L_4-L_5	-52.92	66.45	-79.60	67.55	171.6	171.62	158.81	188.47	749.5	1.10	6220	—	0.99781915	5651.9	-0.849	0.26	0.26	0.141	0.057	0.20	Yes	0.094	0.036	0.12	Yes	—	—	—	—	—	—	—	—
	L_5-L_6	-10.53	10.10	-36.57	24.00	0.00	0.00	0.00	0.00	1.10	4659	—	—	0.99805042	4225.3	0.272	0.71	0.71	0.012	0.076	0.09	Yes	0.007	0.046	0.06	Yes	—	—	—	—	—	—	—	—
	L_6-L_7	-5.45	7.79	-9.06	7.35	0.00	0.00	0.00	0.00	1.10	4659	—	—	0.99805042	4225.3	0.272	0.71	0.71	0.012	0.076	0.09	Yes	0.007	0.046	0.06	Yes	—	—	—	—	—	—	—	—
	L_7-L_8	31.76	53.36	0.10	0.54	-0.08	0.04	0.00	0.00	1.10	4659	—	—	0.99805042	4225.3	0.272	0.71	0.71	0.012	0.076	0.09	Yes	0.007	0.046	0.06	Yes	—	—	—	—	—	—	—	—
	L_8-L_9	-2.79	-1.39	-3.77	8.10	0.00	0.00	0.00	0.00	1.10	4659	—	—	0.99805042	4225.3	0.272	0.71	0.71	0.012	0.076	0.09	Yes	0.007	0.046	0.06	Yes	—	—	—	—	—	—	—	—
	L_9-L_{10}	0.87	2.66	0.80	-0.26	0.00	0.00	0.00	0.00	1.10	4659	—	—	0.99805042	4225.3	0.272	0.71	0.71	0.012	0.076	0.09	Yes	0.007	0.046	0.06	Yes	—	—	—	—	—	—	—	—
	L_{10}-L_{11}	34.98	14.01	0.32	0.01	-1.16	-0.51	0.00	0.00	1.10	4659	—	—	0.99805042	4225.3	0.272	0.71	0.71	0.012	0.076	0.09	Yes	0.007	0.046	0.06	Yes	—	—	—	—	—	—	—	—
	L_{11}-L_{12}	58.43	18.37	35.73	11.05	158.2	158.16	151.51	173.24	694.3	1.10	5717	—	0.99798253	5208.8	0.325	0.73	0.73	0.248	0.107	0.36	Yes	0.149	0.070	0.22	Yes	—	—	—	—	—	—	—	—
	L_{12}-L_{13}	-28.09	-64.27	0.15	-0.01	-0.85	-0.45	0.00	0.00	1.10	4659	—	—	0.99805042	4225.3	0.272	0.71	0.71	0.012	0.076	0.09	Yes	0.007	0.046	0.06	Yes	—	—	—	—	—	—	—	—
	L_{13}-L_{14}	-36.31	52.05	45.77	-11.02	158.2	158.16	151.51	173.24	694.3	1.10	5717	—	0.99798253	5208.8	0.325	0.73	0.73	0.248	0.107	0.36	Yes	0.149	0.070	0.22	Yes	—	—	—	—	—	—	—	—
	L_{14}-L_{15}	-0.62	-2.30	-0.01	0.00	-2.75	-0.54	0.00	0.00	1.10	4659	—	—	0.99805042	4225.3	0.272	0.71	0.71	0.012	0.076	0.09	Yes	0.007	0.046	0.06	Yes	—	—	—	—	—	—	—	—
	L_{15}-L_{16}	-45.20	14.91	18.37	-10.54	-24.65	0.00	0.00	0.00	1.10	4659	—	—	0.99805042	4225.3	0.272	0.71	0.71	0.012	0.076	0.09	Yes	0.007	0.046	0.06	Yes	—	—	—	—	—	—	—	—
	L_{16}-L_{17}	-47.43	58.05	-87.15	2.15	375.5	375.47	322.87	431.42	1347.7	1.15	14237	—	0.99772272	12356.7	-0.642	0.30	0.30	0.034	0.027	0.06	Yes	0.020	0.016	0.04	Yes	—	—	—	—	—	—	—	—
	L_{17}-L_{18}	-8.58	-30.17	0.78	-0.58	-2.38																										
	L_{18}-L_{19}	-14.99	-3.07	-22.38	76.10	0.00	0.00	0.00	0.00	1.10	4659	—	—	0.99805042	4225.3	0.272	0.71	0.71	0.012	0.076	0.09	Yes	0.007	0.046	0.06	Yes	—	—	—	—	—	—	—	—
	L_{19}-L_{20}	-3.14	-0.71	4.92	1.10	0.00	0.00	0.00	0.00	1.10	4659	—	—	0.99805042	4225.3	0.272	0.71	0.71	0.012	0.076	0.09	Yes	0.007	0.046	0.06	Yes	—	—	—	—	—	—	—	—
	L_{20}-L_{21}	0.61	2.12	-14.87	-51.65	0.00	0.00	0.00	0.00	1.10	4659	—	—	0.99805042	4225.3	0.272	0.71	0.71	0.012	0.076	0.09	Yes	0.007	0.046	0.06	Yes	—	—	—	—	—	—	—	—
	L_{21}-L_{22}	37.28	38.16	-0.50	-0.58	-0.65	0.00	0.00	0.00	1.10	4659	—	—	0.99805042	4225.3	0.272	0.71	0.71	0.012	0.076	0.09	Yes	0.007	0.046	0.06	Yes	—	—	—	—	—	—	—	—
	L_{22}-L_{23}	-1.44	2.34	-13.72	-13.48	0.00	0.00	0.00	0.00	1.10	4659	—	—	0.99805042	4225.3	0.272	0.71	0.71	0.012	0.076	0.09	Yes	0.007	0.046	0.06	Yes	—	—	—	—	—	—	—	—
	L_{23}-L_{24}	71.54	-73.79	0.05	-0.43	-1.84	-0.79	0.00	0.00	1.10	4659	—	—	0.99805042	4225.3	0.272	0.71	0.71	0.012	0.076	0.09	Yes	0.007	0.046	0.06	Yes	—	—	—	—	—	—	—	—
	L_{24}-L_{25}	-0.65	-0.39	-11.29	-4.77	0.00	0.00	0.00	0.00	1.10	4659	—	—	0.99805042	4225.3	0.272	0.71	0.71	0.012	0.076	0.09	Yes	0.007	0.046	0.06	Yes	—	—	—	—	—	—	—	—
	L_{25}-L_{26}	-0.74	-0.39	-11.29	-4.77	0.00	0.00	0.00	0.00	1.10	4659	—	—	0.99805042	4225.3	0.272	0.71	0.71	0.012	0.076	0.09	Yes	0.007	0.046	0.06	Yes	—	—	—	—	—	—	—	—
	L_{26}-L_{27}	0.00	0.00	-0.01	-3.93	0.00	0.00	0.00	0.00	1.10	4659	—	—	0.99805042	4225.3	0.272	0.71	0.71	0.012	0.076	0.09	Yes	0.007	0.046	0.06	Yes	—	—	—	—	—	—	—	—
	L_{27}-L_{28}	0.00	0.00	-0.01	-3.93	0.00	0.00	0.00	0.00	1.10	4659	—	—	0.99805042	4225.3	0.272	0.71	0.71	0.012	0.076	0.09	Yes	0.007	0.046	0.06	Yes	—	—	—	—	—	—	—	—
	L_{28}-L_{29}	37.36	54.60	0.59	1.20	-1.75	-1.64	0.00	0.00	1.10	4659	—	—	0.99805042	4225.3	0.272	0.71	0.71	0.012	0.076	0.09	Yes	0.007	0.046	0.06	Yes	—	—	—	—	—	—	—	—
	L_{29}-L_{30}	0.00	0.00	-0.01	-3.93	0.00	0.00	0.00	0.00	1.10	4659	—	—	0.99805042	4225.3	0.272	0.71	0.71	0.012	0.076	0.09	Yes	0.007	0.046	0.06	Yes	—	—	—	—	—	—	—	—
	L_{30}-L_{31}	27.30	-42.03	0.69	1.22	-1.07	-1.31	0.00	0.00	1.10	4659	—	—	0.99805042	4225.3	0.272	0.71	0.71	0.012	0.076	0.09	Yes	0.007	0.046	0.06	Yes	—	—	—	—	—	—	—	—
	L_{31}-L_{32}	71.54	-73.79	0.05	-0.43	-1.84	-0.79	0.00	0.00	1.10	4659	—	—	0.99805042	4225.3	0.272	0.71	0.71	0.012	0.076	0.09	Yes	0.007	0.046	0.06	Yes	—	—	—	—	—	—	—	—
	L_{32}-L_{33}	29.75	83.62	0.22	0.49	-0.56	-1.39	0.00	0.00	1.10	4659	—	—	0.99805042	4225.3	0.272	0.71	0.71	0.012	0.076	0.09	Yes	0.007	0.046	0.06	Yes	—	—	—	—	—	—	—	—
	L_{33}-L_{34}	11.83	4.06	-14.80	-6.34	0.00	0.00	0

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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 — Max. Neg. Mom. — Max. Pos. Mom. — YY Axis Moments from STAAD — M_3 Information — Tension — Compression

| 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) | Start | End | 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_u (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor $C_{b(ZZ)}$ | 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) | Start | End | S_{top} (in^3) | S_{bot} (in^3) | Z_y (in^3) | I_{zz} (in^4) | Shape Factor | M_p (k-in) | F_{cm} (ksi) | Formula 1.8 Term * F_y/M_u | M_u (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor $C_{b(YY)}$ | Yield Axial Factor | Yield Moment Factor | Yield Total | Pass | Fracture Axial Factor | Fracture Moment Factor | Fracture Total | Pass | Buckle Axial Factor | Buckle Moment Factor | Buckle Total | Pass | Yield Axial Factor | Yield Moment Factor | Yield 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: 3F1
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

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** 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) | End (k-in) | Live Load (Max) Start (k-in) | End (k-in) | Live Load (Min) Start (k-in) | End (k-in) | Pedestrian Load (Max) Start (k-in) | End (k-in) | Pedestrian Load (Min) Start (k-in) | End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | End (k-in) | Lane Reduction & Impact Live Load Min Start (k-in) | End (k-in) | Impact Pedestrian Load Max Start (k-in) | End (k-in) | Impact Pedestrian Load Min Start (k-in) | End (k-in) | ZZ Axis Moments from STAAD: Max. Pos. Moment Start (k-in) | End (k-in) | S_{top} (in^3) | S_{bot} (in^3) | Z_z (in^3) | I (in^4) | $I_{t/n}$ (in^4) | Shape Factor | M_p (k-in) | Formula 1.8 Term * F_y/S_x | M_2 (k-in) | Equivalent Mom. Factor a | $C_{m/n}$ | C_{min} | 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) | YY Axis Moments from STAAD: Lane Reduction & Impact Live Load Start (k-in) | End (k-in) | Lane Reduction & Impact Live Load Min Start (k-in) | End (k-in) | Impact Pedestrian Load Max Start (k-in) | End (k-in) | Impact Pedestrian Load Min Start (k-in) | End (k-in) | Max. Neg. Mom. Start (k-in) | 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_x | M_{ny} (k-in) | Equivalent Mom. Factor a | $C_{m/n}$ | C_{min} | Pass | Axial Compression Portion | Moment Compression Portion | Total | Pass | Axial Tension Portion | Moment Tension Portion | Total | Pass | Fracture Axial Portion | Moment Portion | Total | Pass | Buckle Axial Portion | Moment Portion | Total | Pass | Yield Axial Portion | Moment Portion | Total | Pass |
|---|---|---|---

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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 Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | ZZ Axis Moment Properties: Max. Pos. Mom. Start (k-in) | Max. Pos. Mom. End (k-in) | Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{top} (in^3) | S_{bot} (in^3) | S_{min} (in^3) | I (in^4) | I_{eff} (in^4) | Shape Factor r | M_p (k-in) | Formula 1.8 Term / F_y/S_xx | M_u (k-in) | Equivalent Mem. 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 (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) | YY Axis Moment Properties: 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) | S_{min} (in^3) | Z_y (in^3) | I_{yy} (in^4) | Shape Factor r | M_p (k-in) | P_{crit} (kip) | Formula 1.8 Term / F_y/S_yy | M_u (k-in) | Equivalent Mem. Factor: a | $C_{m(x)}$ | $C_{m(y)}$ | Pass | Yield: Axial Action | Moment Portion | Total | Pass | Tension: Axial Action | Moment Portion | Total | Pass | Fracture: Axial Action | Moment Portion | Total | Pass | Buckle: Axial Action | Moment Portion | Total | Pass | Compression: Axial Action | Moment Portion | Total | Pass | Yield: Axial Action | Moment Portion | Total | Pass |
|---|---|---|---

Moment (End) - Al2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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 Mxx, 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	0.45	0.48	2.43	-3.80	-0.11	0.13	0.30	-0.64
	L_1-L_2	30.30	-116.56	-0.42	1.52	1.56	-6.71	-0.16	0.42	-0.07	-1.33
	L_2-L_3	39.07	-78.01	0.93	1.00	1.50	-5.89	0.23	0.30	-1.04	-1.27
	L_3-L_4	-65.02	14.74	0.84	2.75	-2.71	-6.47	0.23	0.86	-1.19	-1.34
	L_4-L_5	-60.69	-24.13	0.82	2.56	-2.53	-6.04	0.23	0.80	-1.11	-1.25
	L_5-L_6	-2.17	269.23	1.61	3.04	-1.75	-2.18	-0.31	1.16	0.00	0.00
	L_6-L_7	-2.17	269.23	1.61	3.04	-1.75	-2.18	-0.31	1.16	0.00	0.00
	L_7-L_8	-38.81	371.46	-0.28	4.34	0.35	-1.34	-0.35	3.66	0.00	0.00
	L_8-L_9	555.91	-39.94	1.91	0.63	4.47	-2.29	1.31	0.05	2.10	-0.32
	L_9-L_{10}	185.62	-153.59	-0.19	1.60	1.49	-4.44	-0.37	0.46	0.70	-0.95
	L_{10}-L_{11}	164.49	164.37	1.96	1.10	0.71	-4.00	0.70	0.32	0.30	-1.05
	L_{11}-L_{12}	78.56	-201.18	2.29	0.37	1.23	-3.42	0.42	0.26	0.16	-0.66
	L_{12}-L_{13}	-57.21	-170.41	1.43	0.72	2.73	-4.74	0.43	0.20	-0.57	-0.97
	L_{13}-L_{14}	70.10	-469.56	1.10	0.98	2.27	-10.11	0.35	0.22	-0.45	-2.28
	L_{14}-L_{15}	-488.53	191.76	0.78	1.76	0.99	-6.98	0.00	0.00	-1.20	-0.11
	L_{15}-L_{16}	-272.75	-354.04	0.36	0.57	-2.18	-7.05	0.00	0.00	-1.30	-1.71
	L_{16}-L_{17}	-202.30	47.38	-4.34	1.30	-3.25	-5.00	0.00	0.00	-1.20	-0.11
	L_{17}-L_{18}	-202.30	20.51	-2.02	1.08	-2.18	-1.52	-0.96	0.27	0.06	-0.07
	L_{18}-L_{19}	-240.68	180.28	-2.12	1.16	-2.42	-1.50	0.57	0.06	-0.06	-0.34
	L_{19}-L_{20}	-192.40	90.95	2.74	1.62	0.25	-0.18	-1.23	0.86	0.06	-0.36
	L_{20}-L_{21}	26.60	-260.09	-0.27	0.58	1.74	-5.42	-0.06	0.13	0.35	-1.08
	L_{21}-L_{22}	201.84	-347.07	-0.46	0.27	1.21	-4.55	0.00	0.00	0.00	-0.06
	L_{22}-L_{23}	7.16	-277.32	-0.45	0.73	1.43	-5.79	0.31	0.17	0.23	-1.18
	L_{23}-L_{24}	7.16	-473.24	1.07	0.61	1.43	-10.46	0.31	0.17	0.23	-1.18
	L_{24}-L_{25}	-367.51	-421.35	0.34	1.33	-5.27	-8.24	0.04	0.32	-1.24	-1.72
	L_{25}-L_{26}	-367.51	-421.35	0.34	1.33	-5.27	-8.24	0.04	0.32	-1.24	-1.72
	L_{26}-L_{27}	-419.43	-397.04	2.18	0.79	-11.56	-0.47	0.59	2.41	-2.01	-27.85
	L_{27}-L_{28}	-419.43	-397.04	2.18	0.79	-11.56	-0.47	0.59	2.41	-2.01	-27.85
	L_{28}-L_{29}	-394.52	-7.37	1.94	3.61	-5.13	-7.79	0.46	0.90	-1.94	-0.96
	L_{29}-L_{30}	-324.29	260.70	1.48	1.48	-4.16	-6.39	0.00	0.00	-1.20	-0.11
	L_{30}-L_{31}	-295.59	262.58	1.75	3.38	-3.64	-3.89	-0.92	1.06	1.43	0.05
	L_{31}-L_{32}	-295.59	262.58	1.75	3.38	-3.64	-3.89	-0.92	1.06	1.43	0.05
	L_{32}-L_{33}	-188.97	586.21	1.78	3.54	-1.68	-2.96	-0.38	1.88	0.00	0.00
	L_{33}-L_{34}	-129.46	-276.11	-0.63	1.14	-1.91	-5.97	0.04	0.55	-1.24	-8.09
	L_{34}-L_{35}	-129.46	1361.45	4.52	1.05	-1.91	-5.97	0.04	0.55	-1.24	-8.09
	L_{35}-L_{36}	1356.12	-488.32	-2.89	2.06	7.97	-4.01	0.00	0.00	0.00	-1.83
	L_{36}-L_{37}	306.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{37}-L_{38}	579.83	-109.25	2.84	1.33	1.08	-5.68	0.85	0.41	0.63	-0.52
	L_{38}-L_{39}	579.83	-109.25	2.84	1.33	1.08	-5.68	0.85	0.41	0.63	-0.52
	L_{39}-L_{40}	275.68	-101.76	2.95	1.37	-0.15	-5.57	0.70	0.49	0.12	-0.38
	L_{40}-L_{41}	209.89	-114.91	1.72	2.01	-0.19	-8.06	0.42	0.64	-0.18	-1.10
	L_{41}-L_{42}	-33.73	318.64	0.16	1.89	-1.38	-13.60	0.43	0.76	-0.99	-2.03
	L_{42}-L_{43}	-33.73	318.64	0.16	1.89	-1.38	-13.60	0.43	0.76	-0.99	-2.03
	L_{43}-L_{44}	328.90	-28.84	2.74	1.61	1.31	-4.52	0.70	0.49	0.12	-0.38
	L_{44}-L_{45}	-183.23	53.46	-1.18	2.57	4.80	-7.59	0.42	0.44	-0.58	-0.56
	L_{45}-L_{46}	-100.74	310.70	1.32	2.69	-2.16	-3.69	-0.56	1.26	0.00	0.00
	L_{46}-L_{47}	-100.74	310.70	1.32	2.69	-2.16	-3.69	-0.56	1.26	0.00	0.00
	L_{47}-L_{48}	-69.72	308.73	4.09	3.23	-2.86	-2.99	-0.22	0.85	0.00	0.00
	L_{48}-L_{49}	-18.47	643.54	1.40	0.00	-1.73	-6.65	-0.15	0.00	0.00	-0.59
	L_{49}-L_{50}	-18.47	438.87	0.61	2.00	-1.73	-6.65	-0.15	0.00	0.83	-1.82
	L_{50}-L_{51}	1437.37	-471.51	2.45	1.58	9.10	-5.96	0.00	0.00	0.29	-1.88
	L_{51}-L_{52}	-253.75	-181.16	0.74	2.50	-1.63	-6.35	-1.03	0.00	0.00	-1.88
	L_{52}-L_{53}	544.71	-198.25	2.96	2.19	-6.53	0.33	0.80	0.47	-1.24	-16.03
	L_{53}-L_{54}	390.20	-203.85	1.26	2.56	-2.19	-6.53	0.33	0.80	0.47	-1.24
	L_{54}-L_{55}	243.13	341.77	1.85	2.03	-1.07	-7.36	0.50	0.46	-0.15	-1.37
	L_{55}-L_{56}	243.13	341.77	1.85	2.03	-1.07	-7.36	0.50	0.46	-0.15	-1.37
	L_{56}-L_{57}	-365.08	644.79	1.23	1.57	-8.07	-14.04	0.68	0.27	-0.07	-2.23
	L_{57}-L_{58}	-620.48	-212.54	1.56	0.42	-8.85	-9.92	0.38	0.07	0.14	-0.96
	L_{58}-L_{59}	-434.07	-326.96	0.47	0.47	-6.31	-7.77	0.22	0.00	0.00	-0.59
	L_{59}-L_{60}	497.50	30.47	3.31	1.17	-4.15	-3.94	0.00	0.00	-0.17	-0.38
	L_{60}-L_{61}	497.50	30.47	3.31	1.17	-4.15	-3.94	0.00	0.00	-0.17	-0.38
	L_{61}-L_{62}	-332.43	186.70	-0.35	1.72	-1.46	-1.04	-1.17	0.34	0.10	-0.10
	L_{62}-L_{63}	-332.43	186.70	-0.35	1.72	-1.46	-1.04	-1.17	0.34	0.10	-0.10
	L_{63}-L_{64}	53.61	-162.26	2.01	0.29	2.29	-4.41	-0.06	0.04	0.53	-0.99
	L_{64}-L_{65}	-192.76	-240.13	0.23	0.41	2.07	-4.93	-0.15	0.00	0.83	-1.12
	L_{65}-L_{66}	-192.76	-240.13	0.23	0.41	2.07	-4.93	-0.15	0.00	0.83	-1.12
	L_{66}-L_{67}	88.37	-47.56	0.22	1.91	2.19	-5.00	-0.46	0.60	0.83	-0.72
	L_{67}-L_{68}	88.37	-47.56	0.22	1.91	2.19	-5.00	-0.46	0.60	0.83	-0.72
	L_{68}-L_{69}	40.28	-374.67	-0.19	0.65	-0.51	-7.31	-0.09	0.05	-0.04	-1.42
	L_{69}-L_{70}	40.28	-374.67	-0.19	0.65	-0.51	-7.31	-0.09	0.05	-0.04	-1.42
	L_{70}-L_{71}	-121.39	-479.27	0.18	0.21	-1.01	-11.31	0.00	0.00	-0.58	-1.42
	L_{71}-L_{72}	-476.75	99.76	2.87	1.49	-5.98	0.19	0.38	2.32	-0.38	-107.02
	L_{72}-L_{73}	-476.75	99.76	2.87	1.49	-5.98	0.19	0.38	2.32	-0.38	-107.02
	L_{73}-L_{74}	-241.27	199.03	3.21	1.57	-1.43	-2.07	-0.97	0.65	0.00	0.00
	L_{74}-L_{75}	-241.27	199.03	3.21	1.57	-1.43	-2.07	-0.97	0.65	0.00	0.00
	L_{75}-L_{76}	-127.13	162.45	-1.35	2.25	-0.31	-2.61	-0.65	0.67	0.45	-0.34
	L_{76}-L_{77}	-127.13	162.45	-1.35	2.25	-0.31	-2.61	-0.65	0.67	0.45	-0.34
	L_{77}-L_{78}	-606.98	-34.68	2.01	0.48	4.16	-2.32	0.00	0.00	-0.90	-0.30
	L_{78}-L_{79}	-606.98	-34.68	2.01	0.48	4.16	-2.32	0.00	0.00	-0.90	-0.30
	L_{79}-L_{80}	98.37	-47.56	0.22	1.91	2.19	-5.00	-0.46	0.60	0.83	-0.72
	L_{80}-L_{81}	98.37	-47.56	0.22	1.91	2.19	-5.00	-0.46	0.60	0.83	-0.72
	L_{81}-L_{82}	217.20	-69.09	0.69	2.04	1.01	-7.15	0.66	0.69	0.04	-1.53
	L_{82}-L_{83}	217.20	-69.09	0.69	2.04	1.01	-7.15	0.66	0.69	0.04	-1.53
	L_{83}-L_{84}	-112.39	-133.89	1.54	0.55	4.89	-5.04	0.49	0.22	-1.38	-22.12
	L_{84}-L_{85}	-120.88	38.04	-1.59	1.74	0.46	-0.48	-0.89	0.72	0.19	-0.18

YY Axis Moments from STAAD

Location	Member	Start (k-in)	End (k-in)	Max. Neg. Mom. (k-in)	S_{top} (in^3)	S_b (in^3)	Z_y (in^3)	I_y (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_xx	M_n	Equivalent Mom. Factor C_{mx}	C_{my}	$C_{b(0)}$
Structure 1	L_0-L_1	0.00	0.00	-109.27	-70.78	1.22	-0.61	-4.85	0.77	0.15	-0.11	1.96	-0.87	16.27	-8.15
	L_1-L_2	0.00	0.00	-128.95	-70.12	-0.74	-0.32	-2.47	4.89	0.13	-0.52	0.82	-0.60	-26.18	14.38
	L_2-L_3	0.00	0.00	-130.68	-144.75	0.99	-0.37	-7.59	0.89	0.04	0.09	1.79	-1.01	13.24	-4.89
	L_3-L_4	0.00	0.00	-66.40	-172.43	0.20	-0.42	-3.98	0.84	0.07	-0.30	1.14	1.94	2.67	-0.84
	L_4-L_5	0.00	0.00	-66.40	-172.43	0.20	-0.42	-3.98	0.84	0.07	-0.30	1.14	1.94	2.67	-0.84
	L_5-L_6	0.00	0.00	-95.01	-149.73	-0.03	-0.64	-3.44	0.14	0.57	1.24	0.00	0.00	-4.44	-8.34
	L_6-L_7	0.00	0.00	-95.01	-149.73	-0.03	-0.64	-3.44	0.14	0.57	1.24	0.00	0.00	-4.44	-8.34
	L_7-L_8	0.00	0.00	-217.28	-200.83	3.90	-0.33	-2.62	-8.39	-0.50	-1.27	-0.41	-0.10	53.39	-41.76
	L_8-L_9	0.00	0.00	-167.60	-214.89	0.13	-0.64	-3.44	0.14	0.57	1.24	0.00	0.00	-17.55	-205.74
	L_9-L_{10}	0.00	0.00	-144.82	-176.01	1.33	-0.84	-4.93	0.91	0.14	-0.10	0.35	-0.39	17.46	-14.32
	L_{10}-L_{11}	0.00	0.00	-84.52	-179.02	0.41	-0.50	-4.09	0.92	0.06	-0.24	0.90	1.37	2.41	-0.58
	L_{11}-L_{12}	0.00	0.00	-31.28	-191.66	-0.32	-0.37	-2.85	0.88	0.05	-0.19	0.72	1.27	0.41	-0.10
	L_{12}-L_{13}	0.00	0.00	-57.21	-170.41	1.43	0.72	2.73	-4.74	0.43	0.20	-0.57	-0.97	0.00	0.00
	L_{13}-L_{14}	0.00	0.00	-106.48	-62.44	0.09	-0.35	-2.99	1.77	-0.05	0.04	1.76	-1.00	1.16	-4.58
	L_{14}-L_{15}	0.00	0.00	-95.24	-68.42	0.09	-0.35	-2.99	1.77	-0.05	0.04	1.76	-1.00	1.16	-4.58
	L_{15}-L_{16}	0.00	0.00	-272.75	-354.04	0.36	0.57	-2.18	-7.05	0.00	0.00	-1.30	-1.71	0.00	0.00
	L_{16}-L_{17}	0.00	0.00	-202.30	-20.51	-2.02	1.08	-2.18	-1.52	-0.96	0.27	0.06	-0.07	0.00	0.00
	L_{17}-L_{18}	0.00	0.00	-240.68	-180.28	-2.12	1.16	-2.42	-1.50	0.57	0.06	-0.06	-0.34	0.00	0.00
	L_{18}-L_{19}	0.00	0.00	-192.40	-90.95	2.74	1.62	0.25	-0.18	-1.23	0.86	0.06	-0.36	0.00	0.00
	L_{19}-L_{20}	0.00	0.00	-26.60	-260.09	-0.27	0.58	1.74	-5.42	-0.06	0.13	0.35	-1.08	0.00	0.00
	L_{20}-L_{21}	0.00	0.00	-201.84	-347.07	-0.46	0.27	1.21	-4.55	0.00	0.00	0.00	-0.06	0.00	0.00
	L_{21}-L_{22}	0.00	0.00	-7.16	-277.32	-0.45	0.73	1.43	-5.79	0.31	0.17	0.23	-1.18	-34.83	-14.92
	L_{22}-L_{23}	0.00	0.00	-7.16	-473.24	1.07	0.61	1.43	-10.46	0.31	0.17	0.23	-1.18	-34.83	-14.92
	L_{23}-L_{24}	0.00	0.00	-367.51	-421.35	0.34	1.33	-5.27	-8.24	0.04	0.32	-1.24	-1.72	-4.31	-16.92
	L_{24}-L_{25}	0.00	0.00	-367.51	-421.35	0.34	1.33	-5.27	-8.24	0.04	0.32	-1.24	-1.72	-4.31	-16.92
	L_{25}-L_{26}	0.00	0.00	-419.43	-397.04	2.18	0.79	-11.56	-0.47	0.59	2.41	-2.01	-27.85	0.00	0.00
	L_{26}-L_{27}	0.00	0.00	-419.43	-397.04	2.18	0.79	-11.56	-0.47	0.59	2.41	-2.01	-27.85	0.00	0.00
	L_{27}-L_{28}	0.00	0.00	-394.52	-7.37	1.94	3.61	-5.13	-7.79	0.46	0.90	-1.94	-0.96	24.72	-46.08
	L_{28}-L_{29}	0.00	0.00	-324.29	260.70	1.48	1.48	-4.16	-6.39	0.00	0.00	-1.20	-0.11	0.00	0.00
	L_{29}-L_{30}	0.00	0.00	-295.59	262.58	1.75	3.38	-3.64	-3.89	-0.92	1.06	1.43	0.05	0.00	0.00
	L_{30}-L_{31}	0.00	0.00	-295.59	262.58	1.75	3.38	-3.64	-3.89	-0.92	1.06	1.43	0.05	0.00	0.00
	L_{31}-L_{32}	0.00	0.00	-188.97	586.21	1.78	3.54	-1.68	-2.96	-0.38	1.88	0.00	0.00	0.00	0.00
	L_{32}-L_{33}	0.00	0.00	-129.46	-276.11	-0.63	1.14	-1.91	-5.97	0.04	0.55	-1.24	-8.09	0.00	0.00
	L_{33}-L_{34}	0.00	0.00	-129.46	1361.45	4.52	1.05	-1.91	-5.97	0.04	0.55	-1.24	-8.09	0.00	0.00
	L_{34}-L_{35}	0.00	0.00	1356.12	-488.32	-2.89	2.06	7.97	-4.01	0.00	0.00	0.00	-1.83	-36.49	-29.54
	L_{35}-L_{36}	0.00	0.00	306.66	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}	0.00	0.00	579.83	-109.25	2.84	1.33	1.08	-5.68	0.85	0.41	0.63	-0.52	-35.84	16.84
	L_{37}-L_{38}	0.00	0.00	579.83	-109.25	2.84	1.33	1.08	-5.68	0.85	0.41	0.63	-0.52	-35.84	16.84
	L_{38}-L_{39}	0.00	0.00	275.68	-101.76	2.95	1.37	-0.15	-5.57	0.70	0.49	0.12	-0.38	-13.66	21.75
	L_{39}-L_{40}	0.00	0.00	209.89	-114.91	1.72	2.01	-0.19	-8.06	0.42	0.64	-0.18	-1.10	21.69	-25.38
	L_{40}-L_{41}	0.00	0.00	-33.73	318.64	0.16	1.89	-1.38	-13.60	0.43	0.76	-0.99	-2.03	2.01	-23.69
	L_{41}-L_{42}	0.00	0.00	-33.73	318.64	0.16	1.89	-1.38	-13.60	0.43	0.76	-0.99	-2.03	2.01	-23.69
	L_{42}-L_{43}	0.00	0.00	328.90	-28.84	2.74	1.61	1.31	-4.52	0.70	0.49	0.12	-0.38	-13.66	21.75
	L_{43}-L_{44}	0.00	0.00	-183.23	53.46	-1.18	2.57	4.80	-7.59	0.42	0.44	-0.58	-0.56	14.91	32.49
	L_{44}-L_{45}	0.00	0.00	-100.74	310.70	1.32	2.69	-2.16	-3.69	-0.56	1.26	0.00	0.00	0.00	0.00
	L_{45}-L_{46}	0.00	0.00	-100.74	310.70	1.32	2.69	-2.16	-3.69	-0.56	1.26	0.00	0.00	0.00	0.00
	L_{46}-L_{47}	0.00	0.00	-69.72	308.73	4.09	3.23	-2.86	-2.99	-0.22	0.85	0.00	0.00	0.00	0.00
	L_{47}-L_{48}	0.00	0.00	-18.47	643.54	1.40	0.00	-1.73	-6.65	-0.15	0.00	0.00	-0.59	-0.00	0.00
	L_{48}-L_{49}	0.00	0.00	-18.47	438.87	0.61	2.00	-1.73	-6.65	-0.15	0.00	0.83	-1.82	0.04	-0.10
	L_{49}-L_{50}	0.00	0.00	1437.37	-471.51	2.45	1.58	9.10	-5.96	0.00	0.00	0.29	-1.88	-0.00	0.00
	L_{50}-L_{51}	0.00	0.00	-253.75	-181.16	0.74	2.50	-1.63	-6.35	-1.03	0.00	0.00	-1.88	-0.00	0.00
	L_{51}-L_{52}	0.00	0.00	544.71	-198.25	2.96	2.19	-6.53	0.33	0.80	0.47	-1.24	-16.03	0.00	0.00
	L_{52}-L_{53}	0.00	0.00	390.20	-203.85	1.26	2.56	-2.19	-6.53	0.33	0.80	0.47	-1.24	-16.03	0.00
	L_{53}-L_{54}	0.00	0.00	243.13	341.77	1.85	2.03	-1.07	-7.36	0.50	0.46	-0.15	-1.37	0.00	0.00
	L_{54}-L_{55}	0.00	0.00	243.13	341.77	1.85	2.03	-1.07	-7.36	0.50	0.46	-0.15	-1.37	0.00	0.00
	L_{55}-L_{56}	0.00	0.00	-365.08	644.79	1.23	1.57	-8.07	-14.04	0.68	0.27	-0.07	-2.23	0.00	0.00
	L_{56}-L_{57}	0.00	0.00	-620.48	-212.54	1.56	0.42	-8.85	-9.92	0.38	0.07	0.14	-0.96	-17.16	-65.58
	L_{57}-L_{58}	0.00	0.00	-434.07	-326.96	0.47	0.47	-6.31	-7.77	0.22	0.00	0.00	-0.59	-12.27	-50.34
	L_{58}-L_{59}	0.00	0.00	497.50	30.47	3.31	1.17	-4.15	-3.94	0.00	0.00	-0.17	-0.38	-55.12	14.90
	L_{59}-L_{60}	0.00	0.00	497.50	30.47	3.31	1.17	-4.15	-3.94	0.00	0.00	-0.17	-0.38	-55.12	14.90
	L_{60}-L_{61}	0.00	0.00	-332.43	186.70	-0.35	1.72	-1.46	-1.04	-1.17	0.34	0.10	-0.10	-47.27	22.01
	L_{61}-L_{62}	0.00	0.00	-332.43	186.70	-0.35	1.72	-1.46	-1.04	-1.17	0.34	0.10	-0.10	-47.27	22.01
	L_{62}-L_{63}	0.00	0.00	53.61	-162.26	2.01	0.29	2.29	-4.41	-0.06	0.04	0.53	-0.99	-2.72	3.78
	L_{63}-L_{64}	0.00	0.00	-192.76	-240.13	0.23	0.41	2.07	-4.93	-0.15	0.00	0.83	-1.12	-3.03	5.27
	L_{64}-L_{65}	0.00	0.00	-192.76	-240.13	0.23	0.41	2.07	-4.93	-0.15	0.00	0.83	-1.12	-3.03	5.27
	L_{65}-L_{66}	0.00	0.00	88.37	-47.56	0.22	1.91	2.19	-5.00	-0.46	0.60	0.83	-0.72	-0.49	0.00
	L_{66}-L_{67}	0.00	0.00	88.37	-47.56	0.22	1.91	2.19	-5.00	-0.46	0.60	0.83	-0.72	-0.49	0.00
	L_{67}-L_{68}	0.00	0.00	40.28	-374.67	-0.19	0.65	-0.51	-7.31	-0.09	0.05	-0.04	-1.42	-0.44	0.00
	L_{68}-L_{69}	0.00	0.00	40.28	-374.67	-0.19	0.65	-0.51	-7.31	-0.09	0.05	-0.04	-1.42	-0.44	0.00
	L_{69}-L_{70}	0.00	0.00	-121.39	-479.27	0.18	0.21	-1.01	-11.31	0.00	0.00	-0.58	-1.42	-0.44	0.00
	L_{70}-L_{71}	0.00	0.00	-476.75	99.76	2.87	1.49	-5.98	0.19	0.38	2.32	-0.38	-107.02	31.15	-60.42
	L_{71}-L_{72}	0.00	0.00	-476.75	99.76	2.87	1.49	-5.98	0.19	0.38	2.32	-0.38	-107.02	31.15	-60.42
	L_{72}-L_{73}	0.00	0.00	-241.27	199.03	3.21	1.57	-1.43	-2.07	-0.97	0.65	0.00	0.00	0.00	0.00
	L_{73}-L_{74}	0.00	0.00	-241.27	199.03	3.21	1.57	-1.43	-2.07	-0.97	0.65	0.00	0.00	0.00	0.00
	L_{74}-L_{75}	0.00	0.00	-127.13	162.45	-1.35	2.25	-0.31	-2.61	-0.65	0.67	0.45	-0.34	-17.62	29.10
	L_{75}-L_{76}	0.00	0.00	-127.13	162.45	-1.35	2.25	-0.31	-2.61	-0.65	0.67	0.45	-0.34	-17.62	29.10
	L_{76}-L_{77}	0.00	0.00	-606.98	-34.68	2.01	0.48	4.16	-2.32	0.00	0.00	-0.90	-0.30	-0.00	0.00
	L_{77}-L_{78}	0.00	0.00	-606.98	-34.68	2.01	0.48	4.16	-2.32	0.00	0.00	-0.90	-0.30	-0.00	0.00
	L_{78}-L_{79}	0.00	0.00	98.37	-47.56	0.22	1.91	2.19	-5.00	-0.46	0.60	0.83	-0.72	-0.49	0.00
	L_{79}-L_{80}	0.00	0.00	98.37	-47.56	0.22	1.91	2.19	-5.00	-0.46	0.60	0.83	-0.72	-0.49	0.00
	$L

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 3F1

Condition: As-inspected

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

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

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

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

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (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)
Structure 1	U_1–L_1	-15.73	54.50	2.08	2.57	0.20	-0.48	-0.04	0.43	0.03	-0.13
	L_1–L_2	-27.56	29.23	-2.17	2.00	0.64	-0.59	-0.57	0.52	0.20	-0.18
	L_2–U_2	-40.63	5.27	-3.36	1.64	0.59	-0.69	-0.29	0.35	0.22	-0.23
	U_2–L_2	40.63	-41.52	-0.79	0.91	0.91	-0.85	-0.06	0.10	0.17	-0.21
	L_2–L_3	56.81	-57.81	-0.34	0.07	0.92	-0.92	-0.14	0.00	0.30	-0.30
	L_3–L_4	64.44	-72.23	-0.08	0.12	1.43	-1.58	0.00	0.00	0.42	-0.47
	L_4–L_5	64.44	-72.27	-0.79	0.12	1.42	-1.58	0.00	0.00	0.42	-0.47
	L_5–L_6	109.02	-121.41	0.51	0.56	1.64	-1.69	0.00	0.00	0.74	-0.81
	L_6–L_7	-42.58	47.68	-2.32	2.79	1.97	-2.38	-0.77	0.93	0.77	-0.93
	L_7–L_8	-101.49	205.17	-4.44	2.60	0.07	-0.14	-0.94	1.08	0.00	0.00
	L_8–L_9	-123.88	126.08	-1.97	2.18	-0.04	-0.19	-0.61	0.71	-0.04	-0.05
	L_9–L_{10}	-127.66	131.47	-2.05	2.25	-0.04	-0.20	-0.68	0.80	-0.05	-0.06
	L_{10}–L_{11}	-106.25	107.52	-1.60	1.74	0.15	-0.28	-0.35	0.42	0.55	0.00
	L_{11}–L_{12}	-66.44	79.85	-1.62	1.70	0.25	-0.23	-0.35	0.40	0.00	0.00
	L_{12}–L_{13}	-32.78	32.78	-1.62	1.70	0.25	-0.23	-0.35	0.40	0.00	0.00
	L_{13}–L_{14}	17.15	-23.67	-0.59	0.58	1.47	-1.56	-0.10	0.11	0.26	-0.30
	L_{14}–L_{15}	60.44	-64.12	-0.33	0.33	1.53	-1.58	-0.09	0.09	0.39	-0.44
	L_{15}–L_{16}	74.38	-85.04	-0.24	0.25	1.54	-1.61	-0.06	0.06	0.43	-0.46
	L_{16}–L_{17}	107.76	-162.61	-0.33	1.39	2.46	-2.68	-0.08	0.08	0.83	-0.87
	L_{17}–L_{18}	163.50	-173.08	0.29	0.28	2.27	-2.33	-0.07	0.07	0.91	-0.95
	L_{18}–L_{19}	187.90	-226.20	-0.19	0.24	1.94	-2.23	-0.06	0.07	0.74	-0.84
	L_{19}–L_{20}	213.50	-234.40	-0.21	0.26	2.12	-2.44	-0.07	0.07	0.81	-0.93
	L_{20}–L_{21}	-201.27	204.78	-3.13	3.09	0.59	-0.91	0.88	0.15	-0.14	-0.16
	L_{21}–L_{22}	-179.55	180.83	-3.02	3.02	0.63	-0.97	0.85	0.14	-0.13	-0.15
	L_{22}–L_{23}	-79.55	88.71	-1.64	1.71	0.40	-0.41	-0.37	0.41	0.10	-0.10
	L_{23}–L_{24}	-61.57	54.58	-1.45	1.48	0.47	-0.47	-0.31	0.34	0.11	-0.11
	L_{24}–L_{25}	-4.55	12.51	-1.27	1.38	0.64	-0.56	-0.17	0.21	0.13	-0.13
	L_{25}–L_{26}	27.52	-27.99	-0.92	0.95	0.95	-0.97	-0.04	0.05	0.10	-0.12
	L_{26}–L_{27}	59.94	-59.39	-0.34	0.33	0.97	-0.97	-0.14	0.00	0.27	-0.27
	L_{27}–L_{28}	130.30	-141.79	-0.20	0.18	1.98	-2.06	0.00	0.00	0.47	-0.50
	L_{28}–L_{29}	216.97	-221.44	0.75	0.71	1.62	-2.00	0.00	0.00	0.47	-0.49
	L_{29}–L_{30}	193.17	-200.16	0.16	0.24	2.37	-2.48	0.00	0.00	0.68	-0.68
	L_{30}–L_{31}	194.78	-194.56	0.36	0.36	2.19	-2.28	0.00	0.00	0.65	-0.65
	L_{31}–L_{32}	177.70	-189.90	0.46	0.48	2.16	-2.26	0.00	0.00	0.64	-0.64
	L_{32}–L_{33}	231.79	-230.81	0.81	0.82	2.09	-1.97	0.00	0.00	0.77	-0.77
	L_{33}–L_{34}	26.69	-26.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{34}–L_{35}	-225.27	219.21	-3.18	2.99	0.26	-0.31	-0.83	0.81	0.00	0.00
	L_{35}–L_{36}	-207.32	203.11	-3.07	2.93	0.26	-0.31	-0.80	0.78	0.00	0.00
	L_{36}–L_{37}	-182.72	181.55	-3.24	3.27	0.43	-0.42	-0.77	0.78	0.07	0.00
	L_{37}–L_{38}	-159.30	160.85	-2.94	3.19	0.53	-0.53	-0.74	0.76	0.09	0.09
	L_{38}–L_{39}	-96.47	94.67	-1.95	2.05	0.53	-0.53	-0.45	0.45	0.09	0.09
	L_{39}–L_{40}	-59.48	63.33	-1.47	1.54	0.40	-0.40	-0.34	0.35	0.00	0.00
	L_{40}–L_{41}	-37.60	37.60	-1.47	1.54	0.40	-0.40	-0.34	0.35	0.00	0.00
	L_{41}–L_{42}	4.58	-5.03	-0.72	0.79	0.87	-0.94	-0.07	0.09	0.13	-0.14
	L_{42}–L_{43}	28.81	-28.10	-0.48	0.48	0.96	-0.96	-0.11	0.11	0.20	-0.20
	L_{43}–L_{44}	70.77	-74.09	-0.45	0.45	0.60	-1.66	-0.05	0.05	0.40	-0.41
	L_{44}–L_{45}	104.64	-104.99	-0.43	0.41	1.96	-1.92	-0.06	0.06	0.52	-0.51
	L_{45}–L_{46}	147.67	-151.09	-0.29	0.27	1.94	-1.92	-0.06	0.06	0.52	-0.51
	L_{46}–L_{47}	189.52	-191.09	-0.43	0.41	2.97	-3.01	-0.06	0.05	0.80	-0.81
	L_{47}–L_{48}	207.45	-212.05	-0.86	0.87	2.28	-2.17	-0.05	0.05	0.82	-0.82
	L_{48}–L_{49}	251.63	-246.65	-2.75	2.58	0.28	-0.27	-0.82	0.81	0.00	0.00
	L_{49}–L_{50}	185.28	-177.57	2.50	2.53	0.24	-0.42	-0.66	0.69	0.00	0.00
	L_{50}–L_{51}	189.53	-187.67	2.50	2.50	0.24	-0.42	-0.66	0.69	0.00	0.00
	L_{51}–L_{52}	189.53	-192.23	-0.62	-0.08	-0.64	0.64	0.00	0.00	0.00	0.00
	L_{52}–L_{53}	207.36	-207.36	2.79	2.79	-0.88	0.88	0.00	0.00	0.00	0.00
	L_{53}–L_{54}	207.45	-212.05	-0.86	0.87	2.28	-2.17	-0.05	0.05	0.82	-0.82
	L_{54}–L_{55}	189.52	-187.67	-0.43	0.41	2.97	-3.01	-0.06	0.05	0.80	-0.81
	L_{55}–L_{56}	189.53	-192.15	-0.62	-0.08	-0.64	0.64	0.00	0.00	0.00	0.00
	L_{56}–L_{57}	185.28	-177.57	2.50	2.53	0.24	-0.42	-0.66	0.69	0.00	0.00
	L_{57}–L_{58}	251.63	-246.65	-2.75	2.58	0.28	-0.27	-0.82	0.81	0.00	0.00
	L_{58}–L_{59}	207.45	-212.05	-0.86	0.87	2.28	-2.17	-0.05	0.05	0.82	-0.82
	L_{59}–L_{60}	189.52	-187.67	-0.43	0.41	2.97	-3.01	-0.06	0.05	0.80	-0.81
	L_{60}–L_{61}	189.53	-192.23	-0.62	-0.08	-0.64	0.64	0.00	0.00	0.00	0.00
	L_{61}–L_{62}	207.36	-207.36	2.79	2.79	-0.88	0.88	0.00	0.00	0.00	0.00
	L_{62}–L_{63}	207.45	-212.05	-0.86	0.87	2.28	-2.17	-0.05	0.05	0.82	-0.82
	L_{63}–L_{64}	189.52	-187.67	-0.43	0.41	2.97	-3.01	-0.06	0.05	0.80	-0.81
	L_{64}–L_{65}	189.53	-192.15	-0.62	-0.08	-0.64	0.64	0.00	0.00	0.00	0.00
	L_{65}–L_{66}	185.28	-177.57	2.50	2.53	0.24	-0.42	-0.66	0.69	0.00	0.00
	L_{66}–L_{67}	251.63	-246.65	-2.75	2.58	0.28	-0.27	-0.82	0.81	0.00	0.00
	L_{67}–L_{68}	207.45	-212.05	-0.86	0.87	2.28	-2.17	-0.05	0.05	0.82	-0.82
	L_{68}–L_{69}	189.52	-187.67	-0.43	0.41	2.97	-3.01	-0.06	0.05	0.80	-0.81
	L_{69}–L_{70}	189.53	-192.23	-0.62	-0.08	-0.64	0.64	0.00	0.00	0.00	0.00
	L_{70}–L_{71}	207.36	-207.36	2.79	2.79	-0.88	0.88	0.00	0.00	0.00	0.00
	L_{71}–L_{72}	207.45	-212.05	-0.86	0.87	2.28	-2.17	-0.05	0.05	0.82	-0.82
	L_{72}–L_{73}	189.52	-187.67	-0.43	0.41	2.97	-3.01	-0.06	0.05	0.80	-0.81
	L_{73}–L_{74}	189.53	-192.15	-0.62	-0.08	-0.64	0.64	0.00	0.00	0.00	0.00
	L_{74}–L_{75}	185.28	-177.57	2.50	2.53	0.24	-0.42	-0.66	0.69	0.00	0.00
	L_{75}–L_{76}	251.63	-246.65	-2.75	2.58	0.28	-0.27	-0.82	0.81	0.00	0.00
	L_{76}–L_{77}	207.45	-212.05	-0.86	0.87	2.28	-2.17	-0.05	0.05	0.82	-0.82
	L_{77}–L_{78}	189.52	-187.67	-0.43	0.41	2.97	-3.01	-0.06	0.05	0.80	-0.81
	L_{78}–L_{79}	189.53	-192.23	-0.62	-0.08	-0.64	0.64	0.00	0.00	0.00	0.00
	L_{79}–L_{80}	207.36	-207.36	2.79	2.79	-0.88	0.88	0.00	0.00	0.00	0.00
	L_{80}–L_{81}	207.45	-212.05	-0.86	0.87	2.28	-2.17	-0.05	0.05	0.82	-0.82
	L_{81}–L_{82}	189.52	-187.67	-0.43	0.41	2.97	-3.01	-0.06	0.05	0.80	-0.81
	L_{82}–L_{83}	189.53	-192.23	-0.62	-0.08	-0.64	0.64	0.00	0.00	0.00	0.00
	L_{83}–L_{84}	185.28	-177.57	2.50	2.53	0.24	-0.42	-0.66	0.69	0.00	0.00
	L_{84}–L_{85}	251.63	-246.65	-2.75	2.58	0.28	-0.27	-0.82	0.81	0.00	0.00
	L_{85}–L_{86}	207.45	-212.05	-0.86	0.87	2.28	-2.17	-0.05	0.05	0.82	-0.82
	L_{86}–L_{87}	189.52	-187.67	-0.43	0.41	2.97	-3.01	-0.06	0.05	0.80	-0.81
	L_{87}–L_{88}	189.53	-192.23	-0.62	-0.08	-0.64	0.64	0.00	0.00	0.00	0.00
	L_{88}–L_{89}	214.86	-270.07	-0.28	0.42	1.93	-2.46	-0.06	0.10	0.72	-0.93
	L_{89}–L_{90}	187.65	-187.65	0.00	0.00	1.93	-2.46	-0.06	0.10	0.72	-0.93
Structure 2	L_{90}–L_{91}	-186.34	183.96	-3.04	3.05	0.41	-0.31	-0.10	1.04	0.10	-0.08
	L_{91}–L_{92}	-166.23	166.23	-2.94	2.94	0.41	-0.31	-0.10	1.04	0.10	-0.08
	L_{92}–L_{93}	-66.05	78.17	-1.69	1.74	0.28	-0.29	-0.44	0.48	0.07	-0.07
	L_{93}–L_{94}	-42.63	42.63	-1.69	1.74	0.28	-0.29	-0.44	0.48	0.07	-0.07
	L_{94}–L_{95}	-11.00	18.47	-1.34	1.42	0.56	-0.53	-0.22	0.26	0.10	-0.11
	L_{95}–L_{96}	39.39	-43.58	-0.65	0.67	1.03	-1.12	0.00	0.00	0.00	0.00
	L_{96}–L_{97}	119.88	-118.18	-2.27	2.22	1.73	-1.77	0.00	0.00	0.00	0.00
	L_{97}–L_{98}	119.88	-118.18	-2.27	2.22	1.73	-1.77	0.00	0.00	0.00	0.00
	L_{98}–L_{99}	129.24	-129.17	-0.18	0.30	1.98	-1.75	0.05	0.02	0.62	-0.71
	L_{99}–L_{100}	129.24	-129.17	-0.18	0.30	1.98	-1.75	0.05	0.02	0.62	-0.71
	L_{100}–L_{101}	180.45	-209.65	-0.58	0.67	1.78	-1.90	0.00	0.00	0.93	-1.09
	L_{101}–L_{102}	24.87	-49.22	-3.00	3.41	1.63	-2.07	-0.77	0.86	0.79	-1.01
	L_{102}–L_{103}	-121.63	132.23	-2.31	2.37	0.95	-0.98	-0.72	0.78	0.00	0.00
	L_{103}–L_{104}	-77.64	76.04	-1.58	1.89	0.91	-0.13	-0.43	0.51	-0.04	-0.03
	L_{104}–L_{105}	42.63	70.41	-1.38	1.52	0.02	-0.06	-0.40	0.40	0.00	0.00
	L_{105}–L_{106}	-57.66	58.81	-1.16	1.13	0.32	-0.27	-0.32	0.33	0.00	0.00
	L_{106}–L_{107}	-41.96	42.31	-0.70	0.71	1.02	-1.15	-0.17	0.20	0.03	-0.05
	L_{107}–L_{108}	-9.20	-2.43	-0.57	0.63	1.43	-1.66	-0.19	0.21	0.28	-0.35
	L_{108}–L_{109}	28.08	-38.33	-0.49	0.47	1.62	-1.58	-0.15	0.18	0.50	-0.53
	L_{109}–L_{110}	78.24	-95.55	-0.31	0.45	1.24	-1.66	-0.15	0.17	0.56	-0.71

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 (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)
Structure 1	U_1–L_1	140.57	-181.44	-0.14	0.16	1.80	-2.27	0.00	0.00	0.72	-0.89
	L_1–L_2	129.24	-129.17	-0.18	0.30	1.98	-1.75	0.05	0.02	0.62	-0.71
	L_2–L_3	180.45	-209.65	-0.58	0.67	1.78	-1.90	0.00	0.00	0.93	-1.09
	L_3–L_4	24.87	-49.22	-3.00	3.41	1.63	-2.07	-0.77	0.86	0.79	-1.01
	L_4–L_5	-121.63	132.23	-2.31	2.37	0.95	-0.98	-0.72	0.78	0.00	0.00
	L_5–L_6	-77.64	76.04	-1.58	1.89	0.91	-0.13	-0.43	0.51	-0.04	-0.03
	L_6–L_7	42.63	70.41	-1.38	1.52	0.02	-0.06	-0.40	0.40	0.00	0.00
	L_7–L_8	-57.66	58.81	-1.16	1.13	0.32	-0.27	-0.32	0.33	0.00	0.00
	L_8–L_9	-41.96	42.31	-0.70	0.71	1.02	-1.15	-0.17	0.20	0.03	-0.05
	L_9–L_{10}	-9.20	-2.43	-0.57	0.63	1.43	-1.66	-0.19	0.21	0.28	-0.35
	L_{10}–L_{11}	28.08	-38.33	-0.49	0.47	1.62	-1.58	-0.15	0.18	0.50	-0.53
	L_{11}–L_{12}	78.24	-95.55	-0.31	0.45	1.24	-1.66	-0.15	0.17	0.56	-0.71

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 f.S Term = F_y/S_{top}	M_n (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	C_{mx}
Structure 1	U_1–L_1	-67.03	115.46	17.03	62.51	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5
	L_1–L_2	-74.66	72.81	-24.73	26.77	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5
	L_2–L_3	-82.45	68.56	-25.70	25.70	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5
	L_3–L_4	-68.67	68.67	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5		
	L_4–L_5	-68.67	68.67	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5		
	L_5–L_6	-55.05	55.05	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5		
	L_6–L_7	-107.78	107.78	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5		
	L_7–L_8	-148.18	181.75	99.62	18.5	18.45	18.36	30.78	1020.9	1.67	1016	1.5		
	L_8–L_9	-148.18	181.75	99.62	18.5	18.45	18.36	30.78	1020.9	1.67	1016	1.5		
	L_9–L_{10}	-211.71	160.71	35.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5		
	L_{10}–L_{11}	-205.26	205.26	35.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5		
	L_{11}–L_{12}	-165.13	220.61	42.74	42.74	42.74	65.30	8	1399.6	1.53	2155	1.5		
	L_{12}–L_{13}	-130.67	138.61	21.1	21.09	21.09	39.40	10	1137.6	1.68	1710	1.5		
	L_{13}–L_{14}	-93.32	99.92	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5		
	L_{14}–L_{15}	-67.17	67.17	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5		
	L_{15}–L_{16}	-50.52	50.52	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5		
	L_{16}–L_{17}	-32.46	46.97	-56.96	15.4	15.42	23.71	2	751.9	1.54	782	1.5		
	L_{17}–L_{18}	-114.02	114.02	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5		
	L_{18}–L_{19}	-205.84	206.26	190.37	39.3	39.09	39.09	63.1	1982.1	1.52	2966	1.5		
	L_{19}–L_{20}	-206.26	206.26	190.37	39.3	39.09	39.09	63.1	1982.1	1.52	2966	1.5		
	L_{20}–L_{21}	-222.38	264.89	198.65	42.7	42.74	65.30	8	1399.6	1.53	2155	1.5		
	L_{21}–L_{22}	-157.24	170.46	18.5	18.45	18.36	30.78	7	1020.9	1.67	1016	1.5		
	L_{22}–L_{23}	-157.24	170.46	18.5	18.45	18.36	30.78	7	1020.9	1.67	1016	1.5		
	L_{23}–L_{24}	-251.79	256.83	98.67	107.1	107.13	107.11	162.77	26	2356.9	1.52	3269	1.5	
	L_{24}–L_{25}	-251.79	256.83	98.67	107.1	107.13	107.11	162.77	26	2356.9	1.52	3269	1.5	
	L_{25}–L_{26}	-206.26	206.26	190.37	39.3	39.09	39.09	63.1	1982.1	1.52	2966	1.5		
	L_{26}–L_{27}	-206.26	206.26	190.37	39.3	39.09	39.09	63.1	1982.1	1.52	2966	1.5		
	L_{27}–L_{28}	-222.38	264.89	198.65	42.7	42.74	65.30	8	1399.6	1.53	2155	1.5		
	L_{28}–L_{29}	-157.24	170.46	18.5	18.45	18.36	30.78	7	1020.9	1.67	1016	1.5		
	L_{29}–L_{30}	-157.24	170.46	18.5	18.45	18.36	30.78	7	1020.9	1.67	1016	1.5		
	L_{30}–L_{31}	-251.79	256.83	98.67	107.1	107.13	107.11	162.77	26	2356.9	1.52	3269	1.5	
	L_{31}–L_{32}	-251.79	256.83	98.67	107.1	107.13	107.11	162.77	26	2356.9	1.52	3269	1.5	
	L_{32}–L_{33}	-206.26	206.26	190.37	39.3	39.09	39.09	63.1	1982.1	1.52	2966	1.5		
	L_{33}–L_{34}	-206.26	206.26	190.37	39.3	39.09	39.09	63.1	1982.1	1.52	2966	1.5		
	L_{34}–L_{35}	-222.38	264.89	198.65	42.7	42.74	65.30	8	1399.6	1.53	2155	1.5		
	L_{35}–L_{36}	-157.24	170.46	18.5	18.45	18.36	30.78	7	1020.9	1.67	1016	1.5		
	L_{36}–L_{37}	-157.24	170.46	18.5	18.45	18.36	30.78	7	1020.9	1.67	1016	1.5		
	L_{37}–L_{38}	-251.79	256.83	98.67	107.1	107.13	107.11	162.77	26	2356.9	1.52	3269	1.5	
	L_{38}–L_{39}	-251.79	256.83	98.67	107.1	107.13	107.11	162.77	26	2356.9	1.52	3269	1.5	
	L_{39}–L_{40}	-206.26	206.26	190.37	39.3	39.09	39.09	63.1	1982.1	1.52	2966	1.5		
	L_{40}–L_{41}	-206.26	206.26	190.37	39.3	39.09	39.09	63.1	1982.1	1.52	2966	1.5		
	L_{41}–L_{42}	-222.38	264.89	198.65	42.7	42.74	65.30	8	1399.6	1.53	2155	1.5		
	L_{42}–L_{43}	-157.24	170.46	18.5	18.45	18.36	30.78	7	1020.9	1.67	1016	1.5		
	L_{43}–L_{44}	-157.24	170.46	18.5	18.45	18.36	30.78	7	1020.9	1.67	1016	1.5		
	L_{44}–L_{45}	-251.79	256.83	98.67	107.1	107.13	107.11	162.77	26	2356.9	1.52	3269	1.5	
	L_{45}–L_{46}	-251.79	256.83	98.67	107.1	107.13	107.11	162.77	26	2356.9	1.52	3269	1.5	
	L_{46}–L_{47}	-206.26	206.26	190.37	39.3	39.09	39.09	63.1	1982.1	1.52	2966	1.5		
	L_{47}–L_{48}	-206.26	206.26	190.37	39.3	39.09	39.09	63.1	1982.1	1.52	2966	1.5		
	L_{48}–L_{49}	-222.38	264.89	198.65	42.7	42.74	65.30	8	1399.6	1.53	2155	1.5		
	L_{49}–L_{50}	-157.24	170.46	18.5	18.45	18.36	30.78	7	1020.9	1.67	1016	1.5		
	L_{50}–L_{51}	-157.24	170.46	18.5	18.45	18.36	30.78	7	1020.9	1.67	1016	1.5		
	L_{51}–L_{52}	-251.79	256.83	98.67	107.1	107.13	107.11	162.77	26	2356.9	1.52	3269	1.5	
	L_{52}–L_{53}	-251.79	256.83	98.67	107.1	107.13	107.11	162.77	26	2356.9	1.52	3269	1.5	
	L_{53}–L_{54}	-206.26	206.26	190.37	39.3	39.09	39.09	63.1	1982.1	1.52	2966	1.5		
	L_{54}–L_{55}	-206.26	206.26	190.37	39.3	39.09	39.09	63.1	1982.1	1.52	2966	1.5		
	L_{55}–L_{56}	-222.38	264.89	198.65	42.7	42.74	65.30	8	1399.6	1.53	2155	1.5		
	L_{56}–L_{57}	-157.24	170.46	18.5	18.45	18.36	30.

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: 3F1
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 — ZZ Axis Moments from STAAD

Location		Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Max Start (k-in)	Lane Reduction & Impact Live Load Max End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_1-L_1		3.62	-1.41	-1.42	0.64	0.05	-0.08	0.15	0.01	-0.03	-0.02
	U_1-L_2		-11.46	-3.33	-6.02	0.23	-0.03	-0.21	0.25	0.07	0.08	-0.04
	U_2-L_2		-0.35	-11.79	-0.33	0.12	-0.02	-0.35	0.00	0.00	-0.04	-0.04
	U_2-L_3		9.82	-15.00	0.09	0.07	-0.05	-0.52	0.08	0.01	-0.08	-0.12
	U_3-L_3		-16.21	-16.07	0.22	0.14	-0.03	-0.12	-0.17	0.01	-0.01	-0.01
	U_3-L_4		-34.06	-79.11	-1.11	1.01	0.06	-0.13	-0.28	0.44	0.00	0.00
	U_4-L_4		-71.07	-84.66	-1.37	1.17	0.06	-0.13	-0.32	0.44	0.00	0.00
	U_4-L_5		-1.45	103.74	-0.65	1.18	0.23	-0.39	0.65	0.00	-0.09	-0.07
	U_5-L_5		-12.32	139.19	-0.38	1.57	-0.15	-0.08	0.01	0.71	0.04	0.02
	U_5-L_6		160.98	90.26	-1.44	1.22	0.07	-0.01	-0.50	0.51	0.00	0.00
	U_6-L_6		-73.41	-69.80	-1.22	0.77	-0.26	-0.10	-0.31	0.35	0.00	0.00
	U_6-L_7		-61.11	-61.11	-0.85	0.85	-0.23	-0.23	0.29	0.23	0.00	0.00
	U_7-L_7		-69.88	47.84	1.00	0.85	-0.13	-0.23	-0.31	0.21	0.00	0.00
	U_7-L_8		-27.39	6.37	-0.42	0.25	-0.03	-0.38	-0.03	0.05	-0.12	-0.02
	U_8-L_8		-5.38	3.21	-0.10	0.46	-0.02	-0.06	0.00	0.00	-0.06	0.00
	U_8-L_9		-31.03	12.71	-0.75	0.60	-0.19	-0.31	-0.19	0.11	0.00	-0.04
	U_9-L_9		-46.63	27.25	-0.97	0.75	-0.28	-0.19	-0.28	0.19	0.04	0.00
	U_9-L_{10}		-118.88	85.28	-1.73	1.47	-0.24	-0.22	-0.55	0.42	0.06	-0.05
	U_{10}-L_{10}		-117.64	87.57	-1.66	1.35	-0.24	-0.21	-0.57	0.45	0.04	-0.04
	U_{10}-L_{11}		-148.08	120.85	-1.67	1.40	-0.13	-0.14	-0.79	0.63	0.04	-0.01
	U_{11}-L_{11}		-86.91	116.74	-2.69	1.90	-0.15	-0.28	-0.13	0.38	0.01	-0.06
	U_{11}-L_{12}		-76.14	114.46	-2.69	1.90	-0.13	-0.28	-0.13	0.38	0.01	-0.06
	U_{12}-L_{12}		-118.23	92.26	-2.03	1.75	0.48	-0.42	-0.52	0.43	0.01	0.00
	U_{12}-L_{13}		-84.39	69.27	-1.13	1.12	0.47	-0.42	-0.52	0.43	0.01	0.00
	U_{13}-L_{13}		-24.33	8.61	-0.80	0.64	0.10	-0.28	-0.18	0.11	0.07	-0.06
	U_{13}-L_{14}		-1.47	-1.82	-0.59	0.39	0.06	-0.06	-0.04	0.01	-0.04	-0.01
	U_{14}-L_{14}		13.33	-37.03	0.28	0.14	0.40	-0.70	0.00	0.00	-0.14	-0.13
	U_{14}-L_{15}		-66.01	54.01	0.91	0.76	0.06	-0.35	-0.23	0.17	0.00	0.00
	U_{15}-L_{15}		-133.77	104.34	-1.75	1.47	0.06	-0.40	-0.42	0.30	0.00	0.00
	U_{15}-L_{16}		-116.17	105.67	-1.64	1.17	-0.52	-0.17	-0.36	0.36	0.00	0.00
	U_{16}-L_{16}		-139.88	104.34	-1.75	1.47	-0.24	-0.40	-0.45	0.30	0.00	0.00
	U_{16}-L_{17}		-131.97	151.07	-1.73	1.54	0.41	-0.23	-0.42	0.51	0.00	0.00
	U_{17}-L_{17}		-175.19	162.79	-1.86	1.66	0.67	-0.48	-0.54	0.56	0.04	0.02
	U_{17}-L_{18}		-44.39	169.27	-1.13	1.46	0.67	-0.42	-0.54	0.56	0.04	0.02
	U_{18}-L_{18}		-45.28	-135.71	-1.48	1.90	-0.03	-0.15	-0.36	0.49	0.18	-0.02
	U_{18}-L_{19}		-143.90	70.99	-1.20	1.20	0.20	-0.24	-0.37	0.20	-0.44	-0.02
	U_{19}-L_{19}		-112.49	136.83	-2.03	2.01	0.21	-0.29	-0.48	0.55	0.00	0.00
	U_{19}-L_{20}		-83.86	136.83	-1.38	2.01	0.21	-0.29	-0.48	0.55	0.00	0.00
	U_{20}-L_{20}		-83.86	94.66	-1.83	1.38	0.29	-0.29	-0.37	0.40	0.00	0.00
	U_{20}-L_{21}		-91.74	54.21	-1.15	0.93	-0.02	-0.33	-0.27	0.25	0.00	0.00
	U_{21}-L_{21}		-38.98	104.34	-0.75	1.47	-0.24	-0.40	-0.45	0.30	0.00	0.00
	U_{21}-L_{22}		-14.00	1.02	-0.42	0.27	0.23	-0.56	0.00	0.04	-0.01	-0.01
	U_{22}-L_{22}		19.17	5.25	-0.24	0.44	0.23	-0.56	0.00	0.04	-0.01	-0.01
	U_{22}-L_{23}		-32.82	30.91	-0.81	0.70	0.10	-0.28	-0.22	0.13	0.00	0.00
	U_{23}-L_{23}		-53.04	49.99	-1.24	1.04	0.14	-0.28	-0.22	0.13	0.00	0.00
	U_{23}-L_{24}		-83.88	100.04	-1.66	1.41	0.28	-0.27	-0.39	0.44	0.00	0.00
	U_{24}-L_{24}		-98.49	117.09	-1.77	1.53	0.24	-0.29	-0.42	0.49	0.00	0.00
	U_{24}-L_{25}		-98.08	102.26	-1.77	1.53	0.24	-0.29	-0.42	0.49	0.00	0.00
	U_{25}-L_{25}		-125.63	123.54	-1.67	1.60	0.65	-0.51	-0.52	0.49	-0.01	-0.01
	U_{25}-L_{26}		-30.08	128.88	-0.63	1.60	0.65	-0.51	-0.52	0.49	-0.01	-0.01
	U_{26}-L_{26}		-83.58	187.86	-1.59	2.02	0.42	-0.23	-0.45	0.61	0.00	0.00
	U_{26}-L_{27}		-83.58	187.86	-1.59	2.02	0.42	-0.23	-0.45	0.61	0.00	0.00
	U_{27}-L_{27}		-138.54	150.45	-1.87	1.89	0.22	-0.24	-0.45	0.53	0.00	0.00
	U_{27}-L_{28}		-128.90	122.99	-1.84	1.35	-0.08	-0.07	-0.40	0.44	0.00	0.00
	U_{28}-L_{28}		-128.90	96.46	-1.84	1.35	-0.08	-0.07	-0.40	0.44	0.00	0.00
	U_{28}-L_{29}		-128.40	95.00	-1.67	1.27	-0.15	-0.31	-0.41	0.35	0.00	0.00
	U_{29}-L_{29}		-113.99	82.81	-1.46	1.06	-0.15	-0.31	-0.41	0.35	0.00	0.00
	U_{29}-L_{30}		-43.89	24.72	-1.00	0.78	0.20	-0.17	-0.30	0.20	0.00	0.00
	U_{30}-L_{30}		-43.89	24.72	-1.00	0.78	0.20	-0.17	-0.30	0.20	0.00	0.00
	U_{30}-L_{31}		-2.65	-25.29	-0.32	0.17	0.12	-0.56	0.00	0.00	-0.05	-0.04
	U_{31}-L_{31}		19.17	5.25	-0.24	0.44	0.23	-0.56	0.00	0.04	-0.01	-0.01
	U_{31}-L_{32}		-71.40	53.68	1.02	0.88	0.07	-0.23	-0.32	0.23	0.00	0.00
	U_{32}-L_{32}		-81.43	41.31	-1.25	0.60	-0.41	-0.27	-0.36	0.25	0.00	0.00
	U_{32}-L_{33}		-113.99	82.81	-1.46	1.06	-0.15	-0.31	-0.41	0.35	0.00	0.00
	U_{33}-L_{33}		-66.35	89.44	-3.13	1.99	0.09	-0.16	-0.12	-0.38	0.01	0.00
	U_{33}-L_{34}		-137.90	96.45	-2.14	1.58	0.28	-0.23	-0.75	0.56	0.05	0.00
	U_{34}-L_{34}		-113.99	82.81	-1.46	1.06	-0.15	-0.31	-0.41	0.35	0.00	0.00
	U_{34}-L_{35}		-43.89	24.72	-1.00	0.78	0.20	-0.17	-0.30	0.20	0.00	0.00
	U_{35}-L_{35}		-2.65	-25.29	-0.32	0.17	0.12	-0.56	0.00	0.00	-0.05	-0.04
	U_{35}-L_{36}		-71.40	53.68	1.02	0.88	0.07	-0.23	-0.32	0.23	0.00	0.00
	U_{36}-L_{36}		-81.43	41.31	-1.25	0.60	-0.41	-0.27	-0.36	0.25	0.00	0.00
	U_{36}-L_{37}		-66.35	89.44	-3.13	1.99	0.09	-0.16	-0.12	-0.38	0.01	0.00
	U_{37}-L_{37}		-137.90	96.45	-2.14	1.58	0.28	-0.23	-0.75	0.56	0.05	0.00
	U_{38}-L_{38}		-113.99	82.81	-1.46	1.06	-0.15	-0.31	-0.41	0.35	0.00	0.00
	U_{39}-L_{39}		-43.89	24.72	-1.00	0.78	0.20	-0.17	-0.30	0.20	0.00	0.00
	U_{40}-L_{40}		-2.65	-25.29	-0.32	0.17	0.12	-0.56	0.00	0.00	-0.05	-0.04
	U_{41}-L_{41}		-71.40	53.68	1.02	0.88	0.07	-0.23	-0.32	0.23	0.00	0.00
	U_{42}-L_{42}		-81.43	41.31	-1.25	0.60	-0.41	-0.27	-0.36	0.25	0.00	0.00
	U_{43}-L_{43}		-66.35	89.44	-3.13	1.99	0.09	-0.16	-0.12	-0.38	0.01	0.00
	U_{44}-L_{44}		-137.90	96.45	-2.14	1.58	0.28	-0.23	-0.75	0.56	0.05	0.00
	U_{45}-L_{45}		-113.99	82.81	-1.46	1.06	-0.15	-0.31	-0.41	0.35	0.00	0.00
	U_{46}-L_{46}		-43.89	24.72	-1.00	0.78	0.20	-0.17	-0.30	0.20	0.00	0.00
	U_{47}-L_{47}		-2.65	-25.29	-0.32	0.17	0.12	-0.56	0.00	0.00	-0.05	-0.04
	U_{48}-L_{48}		-71.40	53.68	1.02	0.88	0.07	-0.23	-0.32	0.23	0.00	0.00
	U_{49}-L_{49}		-81.43	41.31	-1.25	0.60	-0.41	-0.27	-0.36	0.25	0.00	0.00
	U_{50}-L_{50}		-66.35	89.44	-3.13	1.99	0.09	-0.16	-0.12	-0.38	0.01	0.00
	U_{51}-L_{51}		-137.90	96.45	-2.14	1.58	0.28	-0.23	-0.75	0.56	0.05	0.00
	U_{52}-L_{52}		-113.99	82.81	-1.46	1.06	-0.15	-0.31	-0.41	0.35	0.00	0.00
	U_{53}-L_{53}		-43.89	24.72	-1.00	0.78	0.20	-0.17	-0.30	0.20	0.00	0.00
	U_{54}-L_{54}		-2.65	-25.29	-0.32	0.17	0.12	-0.56	0.00	0.00	-0.05	-0.04
	U_{55}-L_{55}		-71.40	53.68	1.02	0.88	0.07	-0.23	-0.32	0.23	0.00	0.00
	U_{56}-L_{56}		-81.43	41.31	-1.25	0.60	-0.41	-0.27	-0.36	0.25	0.00	0.00
	U_{57}-L_{57}		-66.35	89.44	-3.13	1.99	0.09	-0.16	-0.12	-0.38	0.01	0.00
	U_{58}-L_{58}		-137.90	96.45	-2.14	1.58	0.28	-0.23	-0.75	0.56	0.05	0.00
	U_{59}-L_{59}		-113.99	82.81	-1.46	1.06	-0.15	-0.31	-0.41	0.35	0.00	0.00
	U_{60}-L_{60}		-43.89	24.72	-1.00	0.78	0.20	-0.17	-0.30	0.20	0.00	0.00
	U_{61}-L_{61}		-2.65	-25.29	-0.32	0.17	0.12	-0.56	0.00	0.00	-0.05	-0.04
	U_{62}-L_{62}		-71.40	53.68	1.02	0.88	0.07	-0.23	-0.32	0.23	0.00	0.00
	U_{63}-L_{63}		-81.43	41.31	-1.25	0.60	-0.41	-0.27	-0.36	0.25	0.00	0.00
	U_{64}-L_{64}		-66.35	89.44	-3.13	1.99	0.09	-0.16	-0.12	-0.38	0.01	0.00
	U_{65}-L_{65}		-137.90	96.45	-2.14	1.58	0.28	-0.23	-0.75	0.56	0.05	0.00
	U_{66}-L_{66}		-113.99	82.81	-1.46	1.06	-0.15	-0.31	-0.41	0.35	0.00	0.00
	U_{67}-L_{67}		-43.89	24.72	-1.00	0.78	0.20	-0.17	-0.30	0.20	0.00	0.00
	U_{68}-L_{68}		-2.65	-25.29	-0.32	0.17	0.12	-0.56	0.00	0.00	-0.05	-0.04
	U_{69}-L_{69}		-71.40	53.68	1.02	0.88	0.07	-0.23	-0.32	0.23	0.00	0.00
	U_{70}-L_{70}		-81.43	41.31	-1.25	0.60	-0.41	-0.27	-0.36	0.25	0.00	0.00
	U_{71}-L_{71}		-66.35	89.44	-3.13	1.99	0.09	-0.16	-0.12	-0.38	0.01	0.00
	U_{72}-L_{72}		-137.90	96.45	-2.14	1.58	0.28	-0.23	-0.75	0.56	0.05	0.00
	U_{73}-L_{73}		-113.99	82.81	-1.46	1.06	-0.15	-0.31	-0.41	0.35	0.00	0.00
	U_{74}-L_{74}		-43.89	24.72	-1.00	0.78	0.20	-0.17	-0.30	0.20	0.00	0.00
	U_{75}-L_{75}		-2.65	-25.29	-0.32	0.17	0.12	-0.56	0.00	0.00	-0.05	-0.04
	U_{76}-L_{76}		-71.40	53.68	1.02	0.88	0.07	-0.23	-0.32	0.23	0.00	0.00
	U_{77}-L_{77}		-81.43	41.31	-1.25	0.60	-0.41	-0.27	-0.36	0.25	0.00	0.00
	U_{78}-L_{78}		-66.35	89.44	-3.13	1.99	0.09	-0.16	-0.12	-0.38	0.01	0.00
	U_{79}-L_{79}		-137.90	96.45	-2.14	1.58	0.28	-0.23	-0.75	0.56	0.05	0.00
	U_{80}-L_{80}		-113.99	82.81	-1.46	1.06	-0.15	-0.31	-0.41	0.35	0.00	0.00
	U_{81}-L_{81}		-43.89	24.72	-1.00	0.78	0.20	-0.17	-0.30	0.20	0.00	0.00
	U_{82}-L_{82}		-2.65	-25.29	-0.32	0.17	0.12	-0.56	0.00	0.00	-0.05	-0.04
	U_{83}-L_{83}		-71.40	53.68	1.02	0.88	0.07	-0.23	-0.32	0.23	0.00	0.00
	U_{84}-L_{84}		-81.43	41.31	-1.25	0.60	-0.41	-0.27	-0.36	0.25	0.00	0.00
	U_{85}-L_{85}		-66.35	89.44	-3.13	1.99	0.09	-0.16	-0.12	-0.38	0.01	0.00
	U_{86}-L_{86}		-137.90	96.45	-2.14	1.58	0.28	-0.23	-0.75	0.56	0.05	0.00
	U_{87}-L_{87}		-113.99	82.81	-1.46	1.06	-0.15	-0.31	-0.41	0.35	0.00	0.00
	U_{88}-L_{88}		-43.89	24.72	-1.00	0.78	0.20	-0.17	-0.30	0.20	0.00	0.00
	U_{89}-L_{89}		-2.65	-25.29	-0.32	0.17	0.12	-0.56	0.00	0.00	-0.05	-0.04
	U_{90}-L_{90}		-71.40	53.68	1.02	0.88	0.07	-0.23	-0.32	0.23	0.00	0.00
	U_{91}-L_{91}		-81.43	41.31	-1.25	0.60	-0.41	-0.27	-0.36	0.25	0.00	0.00
	U_{92}-L_{92}		-66.35	89.44	-3.13	1.99	0.09	-0.16	-0.12	-0.38	0.01	0.00
	U_{93}-L_{93}		-137.90	96.45	-2.14	1.58	0.28	-0.23	-0.75	0.56	0.05	0.00
	U_{94}-L_{94}		-113.99	82.81	-1.46	1.06	-0.15	-0.31	-0.41	0.35	0.00	0.00
	U_{95}-L_{95}		-43.89	24.72	-1.00	0.78	0.20	-0.17	-0.30	0.20	0.00	0.00
	U_{96}-L_{96}		-2.65	-25.29	-0.32	0.17	0.12	-0.56	0.00	0.00	-0.05	-0.04
	U_{97}-L_{97}		-71.40	53.68	1.02	0.88	0.07	-0.23	-0.32	0.23	0.00	0.00
	U_{98}-L_{98}		-81.43	41.31	-1.25	0.60	-0.41	-0.27	-0.36	0.25	0.00	0.00
	U_{99}-L_{99}		-66.35	89.44	-3.13	1.99	0.09	-0.16	-0.12	-0.38	0.01	0.00
	U_{100}-L_{100}		-137.90	96.45	-2.14	1.58	0.28	-0.23	-0.75	0.56	0.05	0.00
	U_{101}-L_{101}		-113.99	82.81	-1.46	1.06	-0.15	-0.31	-0.41	0.35	0.00	0.00
	U_{102}-L_{102}		-43.89	24.72	-1.00	0.78	0.20	-0.17	-0.30	0.20	0.00	0.00
	U_{103}-L_{103}		-2.65	-25.29	-0.32	0.17	0.12	-0.56	0.00	0.00	-0.05	-0.04
	U_{104}-L_{104}		-71.40	53.68	1.02	0.88	0.07	-0.23	-0.32	0.23	0.00	0.00
	U_{105}-L_{105}		-81.43	41.31	-1.25	0.60	-0.41	-0.27	-0.36	0.25	0.00	0.00
	U_{106}-L_{106}		-66.35	89.44	-3.13	1.99	0.09	-0.16	-0.12	-0.38	0.01	0.00
	U_{107}-L_{107}		-137.90	96.45	-2.14	1.58	0.28	-0.23	-0.75	0.56	0.05	0.00
	U_{108}-L_{108}		-113.99	82.81	-1.46	1.06	-0.15	-0.31	-0.41	0.35	0.00	0.00
	U_{109}-L_{109}		-43.89	24.72	-1.00	0.78	0.20	-0.17	-0.30	0.20	0.00	0.00
	U_{110}-L_{110}		-2.65	-25.29	-0.32	0.17	0.12	-0.56	0.00	0.00	-0.05	-0.04
	U_{111}-L_{111}		-71.40	53.68	1.02	0.88	0.07	-0.23	-0.32	0.23	0.00	0.00
	U_{112}-L_{112}		-81.43	41.31	-1.25	0.60	-0.41	-0.27	-0.36	0.25	0.00	0.00
	U_{113}-L_{113}		-66.35	89.44	-3.13	1.99	0.09	-0.16	-0.12	-0.38	0.01	0.00
	U_{114}-L_{114}		-137.90	96.45	-2.14	1.58	0.28	-0.23	-0.75	0.56	0.05	0.00
	U_{115}-L_{115}		-113.99	82.81	-1.46	1.06	-0.15	-0.31	-0.41	0.35	0.00	0.00
	U_{116}-L_{116}		-43.89	24.72	-1.00	0.78	0.20	-0.17	-0.30	0.20	0.00	0.00
	U_{117}-L_{117}		-2.65	-25.29	-0.32	0.17	0.12	-0.56	0.00	0.00	-0.05	-0.04
	U_{118}-L_{118}		-71.40	53.68	1.02	0.88	0.07	-0.23	-0.32	0.23	0.00	0.00
	U_{119}-L_{119}		-81.43	41.31	-1.25	0.60	-0.41	-0.27	-0.36	0.25	0.00	0.00
	U_{120}-L_{120}		-66.35	89.44	-3.13	1.99	0.09	-0.16	-0.12	-0.38	0.01	0.00
	U_{121}-L_{121}		-137.90	96.45	-2.14	1.58	0.28	-0.23	-0.75	0.56	0.05	0.00
	U_{122}-L_{122}		-113.99	82.81	-1.46	1.06	-0.15	-0.31	-0.41	0.35	0.00	0.00
	U_{123}-L_{123}		-43.89	24.72	-1.00	0.78	0.20	-0.17	-0.30	0.20	0.00	0.00
	U_{124}-L_{124}		-2.65	-25.29	-0.32	0.17	0.12	-0.56	0.00	0.00	-0.05	-0.04
	U_{125}-L_{125}		-71.40	53.68	1.02	0.88	0.07	-0.23	-0.32	0.23	0.00	0.00
	U_{126}-L_{126}		-81.43	41.31	-1.25	0.60	-0.41	-0.27	-0.36	0.25	0.00	0.00
	U_{127}-L_{127}		-66.35	89.44	-3.13	1.99	0.09	-0.16	-0.12	-0.38	0.01	0.00
	U_{128}-L_{128}		-137.90	96.45	-2.14	1.58	0.28	-0.23	-0.75	0.56	0.05	0.00
	U_{129}-L_{129}		-113.99	82.81	-1.46	1.06	-0.15	-0.31	-0.41	0.35	0.00	0.00
	U_{130}-L_{130}		-43.89	24.72	-1.00	0.78	0.20	-0.17	-0.30	0.20	0.00	0.00
	U_{131}-L_{131}		-2.65	-25.29	-0.32	0.17	0.12	-0.56	0.00	0.00	-0.05	-0.04
	U_{132}-L_{132}		-71.40	53.68	1.02	0.88	0.07	-0.23	-0.32	0.23	0.00	0.00
	U_{133}-L_{133}		-81.43	41.31	-1.25	0.60	-0.41	-0.27	-0.36	0.25	0.00	0.00
	U_{134}-L_{134}		-66.35	89.44	-3.13	1.99	0.09	-0.16	-0.12	-0.38	0.01	0.00
	U_{135}-L_{135}		-137.90	96.45	-2.14	1.58	0.28	-0.23	-0.75	0.56	0.05	0.00
	U_{136}-L_{136}		-113.99	82.81	-1.46	1.06	-0.15	-0.31	-0.41	0.35	0.00	0.00
	U_{137}-L_{137}		-43.89	24.72	-1.00	0.78	0.20	-0.17	-0.30	0.20	0.00	0.00
	U_{138}-L_{138}		-2.65	-25.29	-0.32	0.17	0.12	-0.56	0.00	0.00	-0.05	-0.04
	U_{139}-L_{139}		-71.40	53.68	1.02	0.88	0.07	-0.23	-0.32	0.23	0.00	0.00
	U_{140}-L_{140}		-81.43	41.31	-1.25	0.60	-0.41	-0.27	-0.36	0.25	0.00	0.00
	U_{141}-L_{141}		-66.35	89.44	-3.13	1.99	0.09	-0.16	-0.12	-0.38	0.01	0.00
	U_{142}-L_{142}		-137.90	96.45	-2.14	1.58	0.28	-0.23	-0.75	0.56	0.05	0.00
	U_{143}-L_{143}		-113.99	82.81	-1.46	1.06	-0.15	-0.31	-0.41	0.35	0.00	0.00
	U_{144}-L_{144}		-43.89	24.72	-1.00	0.78	0.20	-0.17	-0.30	0.20	0.00	0.00
	U_{145}-L_{145}		-2.65	-25.29	-0.32	0.17	0.12	-0.56	0.00	0.00	-0.05	-0.04
	U_{146}-L_{146}		-71.40	53.68	1.02	0.88	0.07	-0.23	-0.32	0.23	0.00	0.00
	U_{147}-L_{147}		-81.43	41.31	-1.25	0.60	-0.41	-0.27	-0.36	0.25	0.00	0.00
	U_{148}-L_{148}		-66.35	89.44	-3.13	1.99	0.09	-0.16	-0.12	-0.38	0.01	0.00
	U_{149}-L_{149}		-137.90	96.45	-2.14	1.58	0.28	-0.23	-0.75	0.56	0.05	0.00
	U_{150}-L_{150}		-113.99	82.81	-1.46	1.06	-0.15	-0.31	-0.41	0.35	0.00	0.00
	U_{151}-L_{151}		-43.89	24.72	-1.00	0.78	0.20	-0.17	-0.30	0.20	0.00	0.00
	U_{152}-L_{152}		-2.65	-25.29	-0.32	0.17	0.12	-0.56	0.00	0.00	-0.05	-0.04
	U_{153}-L_{153}		-71.40	53.68	1.02	0.88	0.07	-0.23	-0.32	0.23	0.00	0.00
	U_{154}-L_{154}		-81.43	41.31	-1.25	0.60	-0.41	-0.27	-0.36

Moment (End) AI Operating

Operating Loads - 3F1

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			-----	-502.14	-182	56	-165	-921	9	-11	22	-319	-----	-----	-----	-----	-----	-----	-----	-----	0.683	0.315	1.00	Yes	0.677	0.219	0.90	Yes	1.00	**4.26**
		U_1 - U_2			-----	-562.01	-62	26	-191	-823	-7	-41	-47	-140	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.227	1.00	Yes	0.758	0.196	0.96	Yes	1.00	**2.68**
		U_2 - U_3			78.75	-587.76	-140	203	-319	-560	5	27	67	164	0.090	0.161	0.26	Yes	0.061	0.105	0.17	Yes	0.800	0.192	1.00	Yes	0.793	0.133	0.93	Yes	1.00	**2.86**
		U_3 - U_4			250.29	-543.75	34	244	-261	-773	22	38	162	32	0.287	0.211	0.50	Yes	0.197	0.145	0.35	Yes	0.740	0.260	1.00	Yes	0.733	0.184	0.92	Yes	1.00	**3.27**
		U_4 - U_5			355.82	-592.85	127	292	-437	-595	16	-30	34	-234	0.408	0.181	0.59	Yes	0.280	0.124	0.41	Yes	0.807	0.188	1.00	Yes	0.799	0.142	0.95	Yes	1.00	**4.66**
		U_5 - U_6			-----	-595.56	-728	530	-819	-287	231	1	387	-190	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.149	0.96	Yes	0.803	0.195	1.00	Yes	1.00	**7.12**
		U_6 - U_7			835.69	-----	365	222	163	-640	-284	-106	122	-443	0.799	0.197	1.00	Yes	0.559	0.135	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.58**
		U_7 - U_8			504.29	-----	-1938	3799	-81	758	440	-675	-426	-383	0.349	0.644	1.00	Yes	0.244	0.439	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.27**
		U_8 - U_9			454.63	-----	609	28	2863	-2689	-1119	-45	-333	533	0.372	0.618	1.00	Yes	0.255	0.420	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.85**
		U_9 - U_{10}			672.46	-241.59	234	279	149	-755	-156	22	118	613	0.729	0.268	1.00	Yes	0.494	0.180	0.68	Yes	0.311	0.290	0.61	Yes	0.308	0.169	0.48	Yes	1.00	**5.49**
		U_{10} - U_{11}			234.81	-593.72	301	-90	145	-1041	35	92	310	238	0.255	0.283	0.54	Yes	0.170	0.182	0.36	Yes	0.764	0.212	0.98	Yes	0.758	0.233	1.00	Yes	1.00	**4.01**
		U_{11} - U_{12}			-----	-853.04	211	-117	-83	-838	106	409	197	681	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.191	1.00	Yes	0.800	0.139	0.94	Yes	1.00	**3.11**
		U_{12} - U_{13}			-----	-1175.83	-11	-242	-116	-1053	353	208	595	418	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.200	1.00	Yes	0.785	0.145	0.94	Yes	1.00	**3.06**
		U_{13} - U_{14}			-----	-1303.02	-157	-390	-403	-1628	226	181	397	526	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.241	1.00	Yes	0.747	0.180	0.93	Yes	1.00	**2.79**
		U_{14} - U_{15}			-----	-1364.23	-263	-245	-1069	-1081	209	30	572	99	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.206	1.00	Yes	0.782	0.119	0.91	Yes	1.00	**3.32**
		U_{15} - U_{16}			-----	-1364.97	-193	-410	-203	-1491	75	47	360	62	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.202	1.00	Yes	0.783	0.164	0.95	Yes	1.00	**3.73**
		U_{16} - U_{17}			-----	-1392.65	-507	-165	-942	-1091	299	-78	589	-99	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.190	1.00	Yes	0.798	0.120	0.92	Yes	1.00	**4.48**
		U_{17} - U_{18}			-----	-1102.59	-680	211	-326	-370	431	20	272	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.119	1.00	Yes	0.863	0.111	0.98	Yes	1.00	**4.14**
		U_{18} - U_{19}			-----	-740.17	-695	59	-284	-441	388	-182	217	-363	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.157	1.00	Yes	0.833	0.140	0.98	Yes	1.00	**4.23**
		U_{19} - U_{20}			-----	-572.37	-1567	1759	-307	-604	251	-621	155	-743	-----	-----	-----	-----	-----	-----	-----	-----	0.650	0.205	0.86	Yes	0.644	0.354	1.00	Yes	1.00	**8.14**
	Structure 2	U_0 - U_1			-----	-592.97	-90	-97	405	-1761	3	-70	-63	-360	-----	-----	-----	-----	-----	-----	-----	-----	0.705	0.287	1.00	Yes	0.700	0.299	1.00	Yes	1.00	**8.16**
		U_1 - U_2			-----	-806.24	-45	-196	-24	-1339	-70	-220	-59	-267	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.213	1.00	Yes	0.778	0.203	0.99	Yes	1.00	**4.17**
		U_2 - U_3			-----	-1108.14	-96	-287	-191	-1805	-28	363	0	537	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.205	1.00	Yes	0.786	0.184	0.98	Yes	1.00	**3.82**
		U_3 - U_4			-----	-1289.90	-416	-413	-1123	-1729	356	544	406	641	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.253	1.00	Yes	0.734	0.154	0.89	Yes	1.00	**3.40**
		U_4 - U_5			-----	-1422.63	-462	-391	-706	-2214	761	301	451	323	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.262	1.00	Yes	0.730	0.183	0.92	Yes	1.00	**3.27**
		U_5 - U_6			-----	-1510.82	-434	-26	-1198	-1612	188	-204	370	490	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.216	1.00	Yes	0.776	0.134	0.91	Yes	1.00	**3.42**
		U_6 - U_7			-----	-1322.56	-293	-112	-793	-1767	-130	-182	331	119	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.235	1.00	Yes	0.753	0.157	0.92	Yes	1.00	**3.29**
		U_7 - U_8			-----	-1384.69	-171	-144	-802	-1592	-116	-194	181	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.197	1.00	Yes	0.788	0.142	0.94	Yes	1.00	**4.19**
		U_8 - U_9			-----	-1224.88	-255	149	-949	-1085	-107	-206	332	-285	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.159	1.00	Yes	0.831	0.115	0.95	Yes	1.00	**4.25**
		U_9 - U_{10}			158.51	-952.42	-71	351	-1191	-619	-142	-153	255	-114	0.116	0.173	0.29	Yes	0.079	0.117	0.20	Yes	0.827	0.165	1.00	Yes	0.822	0.145	0.97	Yes	1.00	**4.33**
		U_{10} - U_{11}			721.04	-821.78	322	501	-668	-987	-237	-180	324	-388	0.609	0.187	0.80	Yes	0.414	0.122	0.54	Yes	0.822	0.174	1.00	Yes	0.817	0.139	0.96	Yes	1.00	**7.68**
		U_{11} - U_{12}			-----	-778.15	-1556	943	-1065	-1194	629	-108	738	-354	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.158	0.94	Yes	0.773	0.219	1.00	Yes	1.00	**13.60**
		U_{12} - U_{13}			1128.42	-----	471	171	-831	-1491	-419	-365	481	-370	0.762	0.234	1.00	Yes	0.543	0.159	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.14**
		U_{13} - U_{14}			481.59	-----	-3773	7217	-309	1342	259	-1370	-917	-1125	0.237	0.762	1.00	Yes	0.168	0.500	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.91**
		U_{14} - U_{15}			796.28	-----	1462	270	5600	-4932	-1176	-913	-781	258	0.392	0.599	1.00	Yes	0.277	0.393	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.89**
		U_{15} - U_{16}			1239.37	-----	137	471	58	-1556	-619	-389	-79	795	0.749	0.244	1.00	Yes	0.533	0.165	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.24**
		U_{16} - U_{17}			971.14	-108.76	625	288	723	-1779	-188	-19	537	438	0.716	0.280	1.00	Yes	0.476	0.184	0.67	Yes	0.095	0.179	0.28	Yes	0.094	0.224	0.32	Yes	1.00	**6.86**
		U_{17} - U_{18}			664.13	-309.11	424	297	167	-1226	13	261	249	843	0.667	0.332	1.00	Yes	0.444	0.219	0.67	Yes	0.367	0.334	0.71	Yes	0.365	0.208	0.58	Yes	1.00	**5.19**
		U_{18} - U_{19}			522.49	-610.87	501	216	407	-1287	111	119	475	421	0.524	0.288	0.82	Yes	0.344	0.184	0.53	Yes	0.726	0.272	1.00	Yes	0.721	0.218	0.94	Yes	1.00	**5.46**
		U_{19} - U_{20}			275.99	-700.02	286	194	-67	-1192	31	22	247	519	0.259	0.261	0.52	Yes	0.172	0.171	0.35	Yes	0.777	0.222	1.00	Yes	0.772	0.191	0.97	Yes	1.00	**4.11**
	Structure 3	U_0 - U_1			-----	-614.16	-2	-162	197	-1501	-1	-50	287	80	-----	-----	-----	-----	-----	-----	-----	-----	0.697	0.263	0.97	Yes	0.691	0.302	1.00	Yes	1.00	**8.54**
		U_1 - U_2			-----	-715.69	-32	-142	111	-850	-62	-232	-40	-345	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.186	1.00	Yes	0.805	0.171	0.98	Yes	1.00	**3.68**
		U_2 - U_3			-----	-1016.27	-71	-168	73	-1057	-51	335	-2	481	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.190	1.00	Yes	0.795	0.172	0.97	Yes	1.00	**3.45**
		U_3 - U_4			-----	-1303.94	-169	-300	-468	-1491	381	603	461	692	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.236	1.00	Yes	0.748	0.164	0.92	Yes	1.00	**3.52**
		U_4 - U_5			-----	-1342.06	-399	-70	-466	-1069	686	227	475	280	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.214	1.00	Yes	0.769	0.118	0.89	Yes	1.00	**3.25**
		U_5 - U_6			-----	-1312.18	-188	-281	-497	-1681	140	-148	316	318	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.231	1.00	Yes	0.752	0.185	0.94	Yes	1.00	**3.04**
		U_6 - U_7			-----	-1398.29	-369	-85	-947	-1098	-103	-196	397	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.188	1.00	Yes	0.802	0.121	0.93	Yes	1.00	**3.95**
		U_7 - U_8			-----	-1190.09	-149	48	-320	-940	-74	-193	236	-197	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.188	1.00	Yes	0.795	0.130	0.93	Yes	1.00	**4.59**
		U_8 - U_9			1.09	-926.50	-55	250	-496	-537	-62	-164	312	-378	0.001	0.134	0.14	Yes	0.001	0.090	0.10	Yes	0.877	0.119	1.00	Yes	0.869	0.089	0.96	Yes	1.00	**4.51**
		U_9 - U_{10}			292.75	-659.85	-16	299	-601	-260	-128	-111	283	-272	0.318	0.180	0.50	Yes	0.212	0.116	0.33	Yes	0.850	0.141	1.00	Yes	0.842	0.135	0.98	Yes	1.00	**5.28**
		U_{10} - U_{11}			-----	-555.42	-1112	735	35	-1047	685	-561	486	-1168	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.280	1.00	Yes	0.709	0.249	0.96	Yes	1.00	**18.64**
		U_{11} - U_{12}			330.56	-----	-2686	3606	-124	524	529	-976	-464	-424	0.271	0.725	1.00	Yes	0.185	0.493	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**16.72**
		U_{12} - U_{13}			963.67	-----	1038	127	1809	-1463	-535	-493	-260	178	0.668	0.329	1.00	Yes	0.466	0.224	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.20**
		U_{13} - U_{14}			825.13	-40.82	216	418	142	-632	-325	-204	12	487	0.789	0.201	1.00	Yes	0.551	0.138	0.69	Yes	0.046	0.203	0.25	Yes	0.046	0.134	0.19	Yes	1.00	**5.40**
		U_{14} - U_{15}			622.90	-401.75	412	284	319	-953	-121	-40	320	143	0.714	0.280	1.00	Yes	0.482	0.183	0.67	Yes	0.547	0.302	0.85	Yes	0.542	0.226	0.77	Yes	1.00	**5.06**
		U_{15} - U_{16}			381.77	-562.02	302	210	-129	-964	-57	137	117	440	0.438	0.303	0.75	Yes	0.300	0.208	0.51	Yes	0.765	0.232	1.00	Yes	0.758	0.229	0.99	Yes	1.00	**4.05**
		U_{16} - U_{17}			508.74	-517.02	466	170	344	-1090	54	68	375	72	0.583	0.322	0.91	Yes	0.400	0.221	0.63	Yes	0.703	0.294	1.00	Yes	0.697	0.259	0.96	Yes	1.00	**5.80**
		U_{17} - U_{18}			254.68	-545.55	362	-56	22	-1072	-71	71	264	76	0.292	0.299	0.60	Yes	0.197	0.195	0.40	Yes	0.742	0.232	0.98	Yes	0.736	0.255	1.00	Yes	1.00	**4.63**
		U_{18} - U_{19}			-----	-531.40	-87	9	-389	-915	76	-49	477	-191	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.272	1.00	Yes	0.717	0.218	0.94	Yes	1.00	**5.05**
		U_{19} - U_{20}			-----	-554.00	-956	1024	-101	-703	342	-449	367	-291	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.138	0.90	Yes	0.747	0.243	1.00	Yes	1.00	**6.43**

Moment (End) AI Operating

Operating Loads - 3F1

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

DL Factor: 1.300 Vehicle
LL Factor: 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																		
North Truss - Lower Chord	Structure 1	L_0 - L_1	-----	-105.09	-310	149	1275	-2694	-24	-90	246	904	-----	-----	-----	-----	-----	-----	-----	-----	0.191	0.756	0.95	Yes	0.189	0.809	1.00	Yes	1.00	**24.04**
		L_1 - L_2	447.26	-----	151	-36	270	-903	-28	-30	-150	-168	0.685	0.307	1.00	Yes	0.418	0.207	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.00**
		L_2 - L_3	673.13	-21.14	-23	18	-493	-810	-31	21	-167	78	0.774	0.223	1.00	Yes	0.448	0.134	0.59	Yes	0.029	0.227	0.26	Yes	0.029	0.196	0.23	Yes	1.00	**3.76**
		L_3 - L_4	633.05	-148.99	87	261	-38	-948	62	70	-222	-84	0.728	0.265	1.00	Yes	0.433	0.171	0.61	Yes	0.204	0.195	0.40	Yes	0.202	0.229	0.44	Yes	1.00	**4.12**
		L_4 - L_5	513.85	-----	-748	701	-799	-146	-341	-100	-277	642	0.665	0.326	1.00	Yes	0.399	0.209	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.06**
		L_5 - L_6	0.57	-738.01	167	605	-246	-119	76	130	129	-7	0.001	0.151	0.16	Yes	0.000	0.092	0.10	Yes	0.861	0.133	1.00	Yes	0.851	0.134	0.99	Yes	1.00	**4.50**
		L_6 - L_7	-----	-910.67	-1342	1214	-1246	-1075	-550	42	192	1615	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.258	1.00	Yes	0.733	0.211	0.95	Yes	1.00	**12.64**
		L_7 - L_8	-----	-1169.60	-121	1806	20	578	-18	-183	-146	-101	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.246	1.00	Yes	0.741	0.239	0.98	Yes	1.00	**6.35**
		L_8 - L_9	-----	-1254.71	1146	65	1332	-598	-178	-78	28	374	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.188	1.00	Yes	0.795	0.176	0.98	Yes	1.00	**7.78**
		L_9 - L_{10}	-----	-1053.71	148	132	251	-921	37	136	365	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.057	0.92	Yes	0.848	0.145	1.00	Yes	1.00	**7.21**
		L_{10} - L_{11}	14.36	-539.24	515	-14	298	-666	136	42	-24	-43	0.019	0.200	0.22	Yes	0.011	0.121	0.14	Yes	0.829	0.108	0.94	Yes	0.822	0.176	1.00	Yes	1.00	**4.97**
		L_{11} - L_{12}	571.83	-228.78	489	-167	358	-895	92	-30	-8	-104	0.741	0.255	1.00	Yes	0.444	0.168	0.62	Yes	0.352	0.098	0.45	Yes	0.349	0.237	0.59	Yes	1.00	**4.93**
		L_{12} - L_{13}	1034.20	-----	152	-80	-381	-794	29	36	213	340	0.816	0.181	1.00	Yes	0.522	0.108	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.79**
		L_{13} - L_{14}	1237.65	-----	358	-442	506	-1891	14	-3	16	-99	0.728	0.269	1.00	Yes	0.472	0.164	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.47**
		L_{14} - L_{15}	1642.44	-----	-1424	31	-1204	-1172	-368	-169	-192	315	0.802	0.198	1.00	Yes	0.521	0.120	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.22**
		L_{15} - L_{16}	1560.11	-----	-228	-367	-909	-1711	-113	-67	-39	-350	0.762	0.231	1.00	Yes	0.489	0.135	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.29**
		L_{16} - L_{17}	1181.83	-----	-964	367	-1382	-457	-486	-50	-339	468	0.747	0.246	1.00	Yes	0.485	0.152	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.29**
		L_{17} - L_{18}	921.37	-----	-670	461	-715	-491	-195	-166	-81	-441	0.802	0.194	1.00	Yes	0.514	0.118	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.36**
		L_{18} - L_{19}	369.79	-----	-1009	808	-720	99	-587	-101	-349	604	0.566	0.428	1.00	Yes	0.383	0.272	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.01**
		L_{19} - L_{20}	148.83	-363.89	-1141	577	-79	-52	793	178	-24	-5	0.228	0.507	0.74	Yes	0.139	0.334	0.48	Yes	0.661	0.338	1.00	Yes	0.655	0.342	1.00	Yes	1.00	**9.49**
	Structure 2	L_0 - L_1	38.15	-115.11	-119	12	1032	-3535	-18	-63	-401	-1392	0.046	0.948	1.00	Yes	0.028	0.603	0.64	Yes	0.166	0.669	0.84	Yes	0.164	0.719	0.89	Yes	1.00	**24.12**
		L_1 - L_2	535.34	-----	162	-221	655	-1522	-36	40	-189	-242	0.650	0.349	1.00	Yes	0.387	0.225	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.89**
		L_2 - L_3	973.86	-----	-45	-163	170	-1320	77	78	-81	183	0.778	0.214	1.00	Yes	0.511	0.123	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.68**
		L_3 - L_4	1308.34	-----	45	-425	-61	-1784	34	57	98	12	0.776	0.220	1.00	Yes	0.524	0.141	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.60**
		L_4 - L_5	1714.86	-----	-387	-260	-1337	-1846	94	198	80	275	0.799	0.193	1.00	Yes	0.529	0.114	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.79**
		L_5 - L_6	1787.06	-----	-150	-404	-1517	-2314	109	-16	307	34	0.767	0.224	1.00	Yes	0.515	0.137	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.14**
		L_6 - L_7	1792.23	-----	-434	-94	-1875	-2286	-165	45	-74	532	0.759	0.234	1.00	Yes	0.504	0.138	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.39**
		L_7 - L_8	1443.64	-1.38	-206	305	-1369	-1368	-131	9	44	-152	0.828	0.164	1.00	Yes	0.544	0.096	0.64	Yes	0.001	0.173	0.18	Yes	0.001	0.151	0.16	Yes	1.00	**5.01**
		L_8 - L_9	1091.97	-----	-893	557	-1242	-398	-273	23	-116	722	0.764	0.236	1.00	Yes	0.514	0.149	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.10**
		L_9 - L_{10}	900.40	-676.14	-83	772	-962	-743	23	102	55	-298	0.804	0.190	1.00	Yes	0.468	0.117	0.59	Yes	0.715	0.117	0.84	Yes	0.710	0.154	0.87	Yes	1.00	**7.36**
		L_{10} - L_{11}	596.01	-----	-1567	1065	-1319	-408	-786	-27	-303	957	0.595	0.403	1.00	Yes	0.349	0.249	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.73**
		L_{11} - L_{12}	197.87	-952.22	-1084	1474	-1551	-794	-7	268	558	-306	0.138	0.264	0.41	Yes	0.092	0.159	0.26	Yes	0.787	0.167	0.96	Yes	0.781	0.211	1.00	Yes	1.00	**12.82**
		L_{12} - L_{13}	-----	-1268.03	-577	-1	-1016	-1678	83	-82	57	444	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.225	1.00	Yes	0.758	0.167	0.93	Yes	1.00	**7.88**
		L_{13} - L_{14}	-----	-1284.58	-1423	3993	-348	1181	-137	-286	-180	-285	-----	-----	-----	-----	-----	-----	-----	-----	0.652	0.255	0.91	Yes	0.646	0.349	1.00	Yes	1.00	**9.11**
		L_{14} - L_{15}	-----	-1410.06	1387	-259	3276	-2165	-213	-318	-221	142	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.192	0.91	Yes	0.710	0.286	1.00	Yes	1.00	**8.66**
		L_{15} - L_{16}	-----	-1459.34	-884	351	-862	-1273	-12	380	-108	-86	-----	-----	-----	-----	-----	-----	-----	-----	0.880	0.108	0.99	Yes	0.873	0.127	1.00	Yes	1.00	**8.44**
		L_{16} - L_{17}	-----	-1140.90	1196	116	1340	-1047	397	184	-194	-164	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.137	0.98	Yes	0.831	0.165	1.00	Yes	1.00	**6.90**
		L_{17} - L_{18}	-----	-804.75	466	220	678	-913	97	-54	-199	-168	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.101	0.96	Yes	0.845	0.146	1.00	Yes	1.00	**4.91**
		L_{18} - L_{19}	94.23	-630.33	657	111	248	-754	-2	34	159	251	0.107	0.184	0.30	Yes	0.062	0.109	0.18	Yes	0.845	0.150	1.00	Yes	0.840	0.145	0.99	Yes	1.00	**4.94**
		L_{19} - L_{20}	576.89	-561.84	545	217	-15	-1272	57	-41	422	-63	0.654	0.310	0.97	Yes	0.387	0.196	0.59	Yes	0.753	0.221	0.98	Yes	0.749	0.246	1.00	Yes	1.00	**6.27**
		L_{20} - L_{21}	867.11	-476.16	570	54	-59	-1738	-96	-105	-68	303	0.701	0.292	1.00	Yes	0.461	0.168	0.63	Yes	0.456	0.200	0.66	Yes	0.453	0.259	0.72	Yes	1.00	**7.69**
		L_{21} - L_{22}	810.23	-----	51	-61	-380	-2154	-37	41	149	-54	0.655	0.337	1.00	Yes	0.439	0.203	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.26**
		L_{22} - L_{23}	888.94	-95.43	-156	198	-1195	-1459	-21	3	-79	535	0.718	0.276	1.00	Yes	0.482	0.169	0.66	Yes	0.091	0.261	0.36	Yes	0.091	0.217	0.31	Yes	1.00	**5.35**
		L_{23} - L_{24}	923.23	-272.58	-7	341	-1254	-1496	8	73	268	-76	0.746	0.252	1.00	Yes	0.491	0.145	0.64	Yes	0.261	0.291	0.56	Yes	0.259	0.223	0.49	Yes	1.00	**6.62**
		L_{24} - L_{25}	633.76	-----	-626	414	-928	-868	-276	162	-270	669	0.718	0.281	1.00	Yes	0.425	0.176	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.56**
		L_{25} - L_{26}	616.39	-548.98	-591	950	-1092	-1285	-53	-154	294	-338	0.698	0.300	1.00	Yes	0.403	0.178	0.59	Yes	0.736	0.164	0.90	Yes	0.732	0.248	0.98	Yes	1.00	**10.71**
		L_{26} - L_{27}	191.42	-706.00	-1398	1278	-1588	-759	-690	-77	-299	995	0.171	0.374	0.55	Yes	0.099	0.229	0.33	Yes	0.746	0.207	0.96	Yes	0.741	0.254	1.00	Yes	1.00	**11.32**
		L_{27} - L_{28}	-----	-1155.81	-391	1271	-599	-300	-61	-37	101	-289	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.133	0.99	Yes	0.842	0.157	1.00	Yes	1.00	**7.23**
		L_{28} - L_{29}	-----	-1359.99	57	-61	-782	-1505	-46	-20	53	404	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.175	1.00	Yes	0.813	0.150	0.97	Yes	1.00	**5.95**
		L_{29} - L_{30}	-----	-1351.95	-1231	3576	-385	760	57	131	-56	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.686	0.209	0.90	Yes	0.680	0.312	1.00	Yes	1.00	**8.65**
		L_{30} - L_{31}	-----	-1428.10	1616	-268	3146	-2473	-490	-396	550	934	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.222	0.95	Yes	0.719	0.275	1.00	Yes	1.00	**11.01**
		L_{31} - L_{32}	-----	-1039.42	-468	482	-1489	-2449	-496	34	491	357	-----	-----	-----	-----	-----	-----	-----	-----	0.632	0.359	1.00	Yes	0.627	0.247	0.88	Yes	1.00	**15.05**
		L_{32} - L_{33}	-----	-974.81	926	130	847	-1409	-118	-64	84	132	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.136	0.95	Yes	0.799	0.192	1.00	Yes	1.00	**9.06**
		L_{33} - L_{34}	210.24	-650.67	398	160	394	-1314	10	-91	117	-101	0.210	0.246	0.46	Yes	0.123	0.155	0.28	Yes	0.769	0.109	0.88	Yes	0.764	0.230	1.00	Yes	1.00	**7.14**
		L_{34} - L_{35}	709.86	-672.61	685	64	545	-1785	-45	65	126	487	0.634	0.344	0.98	Yes	0.369	0.213	0.59	Yes	0.711	0.217	0.93	Yes	0.706	0.286	1.00	Yes	1.00	**9.38**
		L_{35} - L_{36}	1087.93	-299.96	404	11	465	-1600	100	-52	151	-153	0.761	0.230	1.00	Yes	0.513	0.143	0.66	Yes	0.249	0.140	0.39	Yes	0.247	0.216	0.47	Yes	1.00	**7.18**
		L_{36} - L_{37}	1286.70	-26.65	233	-5	-418	-2025	-103	15	-32	419	0.738	0.258	1.00	Yes	0.485	0.152	0.64	Yes	0.018	0.228	0.25	Yes	0.018	0.224	0.25	Yes	1.00	**5.54**
		L_{37} - L_{38}	1737.25	-----	-62	-370	-908	-2837	-44	-10	168	-93	0.735	0.260	1.00	Yes	0.489	0.151	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.31**
		L_{38} - L_{39}	1792.11	-----	-269	-163	-2145	-2127	-57	5	-43	536	0.769	0.224	1.00	Yes	0.516	0.137	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.66**
		L_{39} - L_{40}	1612.81	-----	-203	-308	-1128	-2242	-51	-36	-80	-443	0.752	0.242	1.00	Yes	0.498	0.144	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.86**
		L_{40} - L_{41}	1294.02	-----	-1190	208	-1591	-993	-475	-28	-255	606	0.760	0.234	1.00	Yes	0.512	0.147	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.80**
		L_{41} - L_{42}	1030.07	-----	-843	328	-1089	-755	-77	-7	208	-109	0.812	0.180	1.00	Yes	0.532	0.107	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.73**
		L_{42} - L_{43}	455.74	-----	-1240	595	-899	-478	-344	80	-325	792	0.583	0.410	1.00	Yes	0.348	0.233	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.73**
		L_{43} - L_{44}	269.98	-317.68	-2682	1044	-21	-38	465	136	-191	-56	0.328	0.622	0.95	Yes	0.195	0.400	0.60	Yes	0.457	0.370	0.83	Yes	0.454	0.546	1.00	Yes	1.00	**20.47**
	Structure 3	L_0 - L_1	167.02	-284.94	-9	-87	830	-1531	-8	-38	-149	-677	0.266	0.613	0.88	Yes	0.163	0.399	0.57	Yes	0.538	0.359	0.90	Yes	0.533	0.462	1.00	Yes	1.00	**13.20**
		L_1 - L_2	354.06	-----	135	-173	836	-1373	-54	19	-212	-138	0.542	0.456	1.00	Yes	0.367	0.284	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.35**
		L_2 - L_3	881.17	-----	-30	-165	-117	-957	38	23	180	360	0.767	0.230	1.00	Yes	0.491	0.139	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.66**
		L_3 - L_4	1184.88	-----	62	-370	-286	-1380	49	55	455	213	0.749	0.243	1.00	Yes	0.486	0.150	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.29**
		L_4 - L_5	1616.32	-----	-380	-179	-1105	-1481	116	224	108	335	0.790	0.202	1.00	Yes	0.507	0.118	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.30**
		L_5 - L_6	1463.27	-----	-83	-339	-10	-2260	144	78	-146	-109	0.715	0.283	1.00	Yes	0.465	0.171	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.21**
		L_6 - L_7	1311.97	-----	-1237	387	-1301	-593	-266	3	-92	553	0.772	0.225	1.00	Yes	0.500	0.139	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.18**
		L_7 - L_8	1084.78	-----	-80	124	-564	-738	-28	40	48	-98	0.856	0.142	1.00	Yes	0.548	0.085	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.82**
		L_8 - L_9	565.27	-----	-644	372	-561	-124	-217	119	-149	536	0.732	0.264	1.00	Yes	0.439	0.170	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.71**
		L_9 - L_{10}	370.52	-537.51	6	495	-667	-299	73	140	350	140	0.480	0.238	0.72	Yes	0.279	0.143	0.43	Yes	0.826	0.157	0.99	Yes	0.819	0.177	1.00	Yes	1.00	**6.28**
		L_{10} - L_{11}	-----	-1031.24	-1073	1078	-900	-750	-393	-125	151	1434	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.156	1.00	Yes	0.830	0.169	1.00	Yes	1.00	**12.39**
		L_{11} - L_{12}	-----	-1205.57	-361	1616	-29	456	-157	-422	-260	-228	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.224	1.00	Yes	0.764	0.214	0.98	Yes	1.00	**7.75**
		L_{12} - L_{13}	-----	-1214.51	1199	87	1684	-772	-149	-299	-176	240	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.216	1.00	Yes	0.769	0.223	1.00	Yes	1.00	**8.76**
		L_{13} - L_{14}	-----	-1095.75	-12	281	166	-698	-249	122	1	-59	-----	-----	-----	-----	-----	-----	-----	-----	0.892	0.047	0.94	Yes	0.882	0.110	1.00	Yes	1.00	**5.77**
		L_{14} - L_{15}	-----	-746.20	570	166	420	-452	146	-7	-34	-101	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.121	1.00	Yes	0.861	0.126	0.99	Yes	1.00	**4.22**
		L_{15} - L_{16}	134.77	-516.27	410	182	428	-772	11	-55	-137	-70	0.175	0.229	0.41	Yes	0.105	0.150	0.26	Yes	0.794	0.102	0.90	Yes	0.787	0.204	1.00	Yes	1.00	**3.51**
		L_{16} - L_{17}	617.97	-223.09	313	29	-64	-939	96	-36	65	364	0.711	0.285	1.00	Yes	0.422	0.183	0.61	Yes	0.305	0.218	0.53	Yes	0.302	0.227	0.53	Yes	1.00	**3.71**
		L_{17} - L_{18}	647.68	-112.11	86	-9	-456	-967	3	11	113	-66	0.745	0.252	1.00	Yes	0.431	0.151	0.59	Yes	0.153	0.248	0.41	Yes	0.152	0.233	0.39	Yes	1.00	**3.85**
		L_{18} - L_{19}	437.48	-----	-587	229	-571	-489	-150	99	-160	687	0.670	0.324	1.00	Yes	0.408	0.210	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.21**
		L_{19} - L_{20}	55.79	-104.08	-1669	962	71	-189	1923	523	-6	-2	0.085	0.914	1.00	Yes	0.050	0.548	0.60	Yes	0.189	0.652	0.85	Yes	0.187	0.501	0.69	Yes	1.00	**15.80**

Moment (End) Al Operating

Operating Loads - 3F1

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 - Verticals	Structure 1	U_0 - L_0	-----	-279.90	-175	219	-60	90	-502	-161	-24	-8	-----	-----	-----	-----	-----	-----	-----	-----	0.693	0.304	1.00	Yes	0.654	0.326	0.99	Yes	1.00	**1.67**
		U_1 - L_1	13.86	-327.23	-232	239	22	-11	18	52	-3	-2	0.025	0.320	0.35	Yes	0.014	0.176	0.19	Yes	0.715	0.096	0.82	Yes	0.692	0.306	1.00	Yes	1.00	**3.90**
		U_2 - L_2	104.19	-276.05	-280	320	89	-99	-442	-67	71	31	0.187	0.537	0.73	Yes	0.103	0.296	0.40	Yes	0.603	0.224	0.83	Yes	0.584	0.409	1.00	Yes	1.00	**6.48**
		U_3 - L_3	188.65	-260.90	-317	345	340	-301	-300	-53	281	239	0.339	0.528	0.87	Yes	0.187	0.290	0.48	Yes	0.572	0.185	0.76	Yes	0.552	0.441	1.00	Yes	1.00	**9.56**
		U_4 - L_4	-----	-224.28	-25	20	404	-386	-153	34	-220	-28	-----	-----	-----	-----	-----	-----	-----	-----	0.493	0.191	0.69	Yes	0.475	0.516	1.00	Yes	1.00	**8.39**
		U_5 - L_5	-----	-425.45	62	-87	224	-259	-25	16	181	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.109	0.88	Yes	0.734	0.262	1.00	Yes	1.00	**3.18**
		U_6 - L_6	-----	-489.39	86	-81	242	-261	-194	-53	311	49	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.147	0.94	Yes	0.739	0.253	1.00	Yes	1.00	**2.78**
		U_7 - L_7	-----	-412.28	129	-143	274	-291	-143	17	196	27	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.147	0.89	Yes	0.672	0.322	1.00	Yes	1.00	**2.04**
		U_8 - L_8	-----	-1176.50	-361	425	462	-554	26	64	983	289	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.142	1.00	Yes	0.816	0.103	0.92	Yes	1.00	**5.66**
		U_9 - L_9	-----	-634.93	-412	449	-170	199	-578	-326	-448	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.191	0.97	Yes	0.735	0.261	1.00	Yes	1.00	**3.79**
		U_{10} - L_{10}	-----	-709.42	-342	354	-128	103	-816	-557	-459	-264	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.226	1.00	Yes	0.729	0.197	0.93	Yes	1.00	**4.50**
		U_{11} - L_{11}	-----	-651.18	-397	502	-119	186	-747	-528	-562	-316	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.210	1.00	Yes	0.758	0.233	1.00	Yes	1.00	**4.76**
		U_{12} - L_{12}	-----	-513.53	-344	341	-87	94	-311	-229	-351	-202	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.163	0.91	Yes	0.705	0.294	1.00	Yes	1.00	**4.13**
		U_{13} - L_{13}	-----	-363.01	-237	263	-38	58	-4	-26	-176	12	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.128	0.87	Yes	0.695	0.300	1.00	Yes	1.00	**3.20**
		U_{14} - L_{14}	-----	-190.20	-435	467	207	-208	-76	209	185	84	-----	-----	-----	-----	-----	-----	-----	-----	0.424	0.206	0.64	Yes	0.402	0.597	1.00	Yes	1.00	**11.75**
		U_{15} - L_{15}	143.94	-309.74	-115	98	245	-264	33	127	407	-69	0.259	0.455	0.72	Yes	0.142	0.250	0.40	Yes	0.694	0.173	0.87	Yes	0.655	0.337	1.00	Yes	1.00	**5.00**
		U_{16} - L_{16}	0.69	-320.08	21	-30	237	-245	48	-79	287	-144	0.001	0.396	0.40	Yes	0.001	0.218	0.22	Yes	0.721	0.139	0.87	Yes	0.677	0.313	1.00	Yes	1.00	**3.59**
		U_{17} - L_{17}	-----	-436.32	60	-74	223	-242	-120	-113	106	-173	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.125	0.95	Yes	0.753	0.246	1.00	Yes	1.00	**3.00**
		U_{18} - L_{18}	-----	-539.52	144	-151	425	-439	-133	-122	330	-152	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.107	0.90	Yes	0.750	0.249	1.00	Yes	1.00	**3.06**
		U_{19} - L_{19}	-----	-644.56	171	-170	536	-524	-117	-47	254	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.113	0.92	Yes	0.750	0.249	1.00	Yes	1.00	**3.56**
		U_{20} - L_{20}	-----	-555.94	160	-260	340	-496	27	4	569	75	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.228	1.00	Yes	0.680	0.238	0.92	Yes	1.00	**2.53**
	Structure 2	U_0 - L_0	-----	-621.71	-420	517	-165	214	-662	-112	-39	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.211	1.00	Yes	0.697	0.233	0.93	Yes	1.00	**3.30**
		U_1 - L_1	-----	-714.49	-531	538	-117	126	-74	61	-107	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.075	0.90	Yes	0.766	0.228	1.00	Yes	1.00	**5.03**
		U_2 - L_2	-----	-590.67	-476	483	-107	118	-87	-13	-108	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.081	0.88	Yes	0.753	0.247	1.00	Yes	1.00	**4.30**
		U_3 - L_3	-----	-486.68	-245	254	-54	62	-182	-76	79	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.119	0.95	Yes	0.763	0.231	1.00	Yes	1.00	**3.97**
		U_4 - L_4	-----	-336.02	-222	221	-6	23	-118	-21	-71	49	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.118	0.89	Yes	0.711	0.284	1.00	Yes	1.00	**3.87**
		U_5 - L_5	125.35	-327.99	-215	238	93	-81	90	-15	-123	103	0.225	0.339	0.57	Yes	0.124	0.187	0.32	Yes	0.741	0.145	0.89	Yes	0.694	0.304	1.00	Yes	1.00	**5.04**
		U_6 - L_6	362.94	-225.75	-239	246	199	-210	-49	-4	-70	104	0.653	0.345	1.00	Yes	0.359	0.190	0.55	Yes	0.508	0.114	0.63	Yes	0.478	0.315	0.80	Yes	1.00	**7.34**
		U_7 - L_7	-----	-146.43	-199	204	473	-538	-77	372	53	95	-----	-----	-----	-----	-----	-----	-----	-----	0.331	0.289	0.63	Yes	0.310	0.687	1.00	Yes	1.00	**15.62**
		U_8 - L_8	-----	-466.36	63	-80	357	-372	-22	-65	200	-124	-----	-----	-----	-----	-----	-----	-----	-----	0.676	0.113	0.79	Yes	0.672	0.326	1.00	Yes	1.00	**4.08**
		U_9 - L_9	-----	-693.09	148	-168	586	-600	-12	-231	198	-156	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.093	0.87	Yes	0.743	0.255	1.00	Yes	1.00	**5.20**
		U_{10} - L_{10}	-----	-796.35	182	-185	541	-569	-147	-100	559	-70	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.179	0.97	Yes	0.745	0.251	1.00	Yes	1.00	**5.10**
		U_{11} - L_{11}	-----	-816.38	186	-186	516	-533	-185	-69	251	-136	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.113	0.94	Yes	0.763	0.235	1.00	Yes	1.00	**4.63**
		U_{12} - L_{12}	-----	-883.24	157	-135	530	-538	-147	8	221	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.107	0.96	Yes	0.766	0.231	1.00	Yes	1.00	**4.91**
		U_{13} - L_{13}	-----	-741.41	211	-207	569	-551	-157	20	457	48	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.164	1.00	Yes	0.715	0.272	0.99	Yes	1.00	**3.91**
		U_{14} - L_{14}	-----	-1217.08	-539	498	790	-754	556	335	590	285	-----	-----	-----	-----	-----	-----	-----	-----	0.890	0.105	1.00	Yes	0.807	0.140	0.95	Yes	1.00	**7.66**
		U_{15} - L_{15}	-----	-738.91	-600	585	-119	127	111	-80	-292	11	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.155	0.98	Yes	0.712	0.287	1.00	Yes	1.00	**6.17**
		U_{16} - L_{16}	-----	-666.59	-526	499	-91	65	-1046	-429	-779	-254	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.224	1.00	Yes	0.714	0.223	0.94	Yes	1.00	**5.18**
		U_{17} - L_{17}	-----	-641.47	-543	541	-126	124	-428	-397	-274	-185	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.150	0.95	Yes	0.747	0.252	1.00	Yes	1.00	**4.81**
		U_{18} - L_{18}	-----	-572.93	-508	516	-94	94	-424	-333	-114	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.155	0.92	Yes	0.730	0.264	1.00	Yes	1.00	**4.72**
		U_{19} - L_{19}	-----	-466.91	-305	300	-57	60	-179	-158	-66	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.702	0.110	0.82	Yes	0.697	0.294	1.00	Yes	1.00	**3.97**
		U_{20} - L_{20}	-----	-380.50	-228	234	-10	16	26	-62	-177	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.118	0.90	Yes	0.729	0.267	1.00	Yes	1.00	**3.94**
		U_{21} - L_{21}	63.46	-312.71	-246	260	32	-27	-105	-50	-91	56	0.114	0.362	0.48	Yes	0.063	0.199	0.27	Yes	0.706	0.123	0.83	Yes	0.662	0.332	1.00	Yes	1.00	**4.61**
		U_{22} - L_{22}	-----	-140.59	-529	545	434	-472	138	454	151	169	-----	-----	-----	-----	-----	-----	-----	-----	0.316	0.261	0.58	Yes	0.297	0.697	1.00	Yes	1.00	**19.14**
		U_{23} - L_{23}	83.36	-314.98	-50	45	242	-255	59	81	218	-56	0.150	0.390	0.54	Yes	0.082	0.214	0.30	Yes	0.712	0.134	0.85	Yes	0.666	0.326	1.00	Yes	1.00	**4.50**
		U_{24} - L_{24}	-----	-373.80	3	-19	235	-248	73	44	235	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.108	0.88	Yes	0.716	0.283	1.00	Yes	1.00	**4.01**
		U_{25} - L_{25}	-----	-473.02	43	-42	304	-300	-84	-30	407	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.111	0.83	Yes	0.706	0.293	1.00	Yes	1.00	**3.74**
		U_{26} - L_{26}	-----	-569.28	71	-75	506	-532	-119	-23	416	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.139	0.90	Yes	0.725	0.272	1.00	Yes	1.00	**4.31**
		U_{27} - L_{27}	-----	-631.82	86	-87	564	-568	-135	2	313	-55	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.107	0.89	Yes	0.735	0.264	1.00	Yes	1.00	**4.72**
		U_{28} - L_{28}	-----	-708.82	78	-75	546	-548	-151	16	641	32	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.135	0.96	Yes	0.760	0.232	1.00	Yes	1.00	**4.74**
		U_{29} - L_{29}	-----	-715.73	120	-125	635	-610	-115	28	511	21	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.173	0.98	Yes	0.690	0.304	1.00	Yes	1.00	**5.35**
		U_{30} - L_{30}	-----	-1196.06	-776	701	862	-848	48	353	632	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.891	0.102	1.00	Yes	0.808	0.155	0.97	Yes	1.00	**9.47**
		U_{31} - L_{31}	-----	-721.14	-552	521	-109	110	-461	-117	-319	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.192	1.00	Yes	0.695	0.264	0.96	Yes	1.00	**5.85**
		U_{32} - L_{32}	-----	-830.90	-480	474	-81	58	-710	-388	-674	-273	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.198	1.00	Yes	0.720	0.206	0.93	Yes	1.00	**5.93**
		U_{33} - L_{33}	-----	-794.08	-490	483	-117	106	-643	-491	-451	-342	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.193	1.00	Yes	0.749	0.219	0.97	Yes	1.00	**5.83**
		U_{34} - L_{34}	-----	-804.62	-547	559	-120	114	-315	-336	-305	-293	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.118	0.92	Yes	0.752	0.247	1.00	Yes	1.00	**6.30**
		U_{35} - L_{35}	-----	-701.25	-552	565	-96	119	79	-91	-210	11	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.082	0.87	Yes	0.752	0.239	1.00	Yes	1.00	**5.51**
		U_{36} - L_{36}	-----	-470.86	-348	360	-42	56	-63	-18	-76	61	-----	-----	-----	-----	-----	-----	-----	-----	0.683	0.097	0.78	Yes	0.678	0.315	1.00	Yes	1.00	**4.55**
		U_{37} - L_{37}	-----	-150.97	-480	528	112	-118	-145	283	-149	125	-----	-----	-----	-----	-----	-----	-----	-----	0.341	0.286	0.63	Yes	0.319	0.674	1.00	Yes	1.00	**13.28**
		U_{38} - L_{38}	339.10	-183.41	-219	231	168	-169	74	61	293	-62	0.610	0.381	1.00	Yes	0.335	0.209	0.55	Yes	0.413	0.122	0.54	Yes	0.388	0.296	0.69	Yes	1.00	**6.08**
		U_{39} - L_{39}	167.52	-325.30	-149	130	218	-240	19	115	218	-99	0.301	0.369	0.68	Yes	0.166	0.203	0.37	Yes	0.735	0.118	0.86	Yes	0.688	0.306	1.00	Yes	1.00	**5.76**
		U_{40} - L_{40}	-----	-344.22	-5	-1	208	-210	15	-38	337	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.114	0.90	Yes	0.728	0.268	1.00	Yes	1.00	**3.94**
		U_{41} - L_{41}	-----	-487.70	29	-33	244	-255	7	-33	217	-124	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.098	0.93	Yes	0.765	0.232	1.00	Yes	1.00	**3.90**
		U_{42} - L_{42}	-----	-583.90	62	-70	480	-489	11	-36	214	-162	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.084	0.87	Yes	0.744	0.250	1.00	Yes	1.00	**4.36**
		U_{43} - L_{43}	-----	-709.97	83	-95	551	-556	-49	-49	582	22	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.124	0.94	Yes	0.761	0.236	1.00	Yes	1.00	**4.50**
		U_{44} - L_{44}	-----	-618.94	119	-137	389	-505	-125	-21	1106	187	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.250	1.00	Yes	0.663	0.214	0.88	Yes	1.00	**3.70**
	Structure 3	U_0 - L_0	-----	-594.79	-409	499	-142	190	-406	-53	-57	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.181	1.00	Yes	0.714	0.239	0.96	Yes	1.00	**3.52**
		U_1 - L_1	-----	-657.50	-498	502	-111	123	-142	113	-122	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.082	0.91	Yes	0.765	0.233	1.00	Yes	1.00	**4.91**
		U_2 - L_2	-----	-535.64	-435	440	-109	116	-229	-12	-149	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.102	0.89	Yes	0.745	0.249	1.00	Yes	1.00	**4.01**
		U_3 - L_3	-----	-445.14	-207	224	-46	59	25	-62	43	-64	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.086	0.92	Yes	0.768	0.228	1.00	Yes	1.00	**3.32**
		U_4 - L_4	10.60	-320.06	-247	252	-10	19	-192	-14	-88	33	0.019	0.377	0.40	Yes	0.010	0.208	0.22	Yes	0.721	0.142	0.87	Yes	0.677	0.322	1.00	Yes	1.00	**4.17**
		U_5 - L_5	114.70	-304.05	-255	272	84	-76	-64	-13	-107	122	0.206	0.383	0.59	Yes	0.113	0.210	0.33	Yes	0.681	0.153	0.84	Yes	0.643	0.347	1.00	Yes	1.00	**5.09**
		U_6 - L_6	15.09	-23.32	-381	412	515	-563	-356	84	-854	-135	0.027	0.967	1.00	Yes	0.015	0.532	0.55	Yes	0.052	0.440	0.50	Yes	0.049	0.720	0.77	Yes	1.00	**17.11**
		U_7 - L_7	-----	-362.07	1	-17	241	-265	-52	-7	19	-149	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.123	0.86	Yes	0.694	0.303	1.00	Yes	1.00	**3.83**
		U_8 - L_8	-----	-514.99	71	-75	334	-339	-154	-235	380	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.159	0.91	Yes	0.707	0.289	1.00	Yes	1.00	**4.17**
		U_9 - L_9	-----	-652.80	114	-165	396	-504	-21	-152	156	-161	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.100	0.89	Yes	0.760	0.234	1.00	Yes	1.00	**4.54**
		U_{10} - L_{10}	-----	-777.83	128	-109	398	-436	0	16	217	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.107	0.92	Yes	0.767	0.226	1.00	Yes	1.00	**5.03**
		U_{11} - L_{11}	-----	-649.94	168	-193	427	-474	-157	-31	473	112	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.156	0.94	Yes	0.734	0.263	1.00	Yes	1.00	**3.34**
		U_{12} - L_{12}	-----	-1185.27	-433	469	534	-691	810	299	766	337	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.144	1.00	Yes	0.822	0.129	0.96	Yes	1.00	**6.83**
		U_{13} - L_{13}	-----	-461.81	-270	287	-67	76	-18	-76	-345	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.166	0.94	Yes	0.712	0.283	1.00	Yes	1.00	**3.44**
		U_{14} - L_{14}	-----	-482.40	-255	259	-45	29	-892	-478	-645	-313	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.263	1.00	Yes	0.692	0.226	0.92	Yes	1.00	**4.13**
		U_{15} - L_{15}	-----	-433.76	-221	241	-33	41	-425	-326	-484	-235	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.199	0.99	Yes	0.748	0.245	1.00	Yes	1.00	**3.90**
		U_{16} - L_{16}	-----	-146.02	-539	528	76	-53	-688	-169	-792	-383	-----	-----	-----	-----	-----	-----	-----	-----	0.321	0.393	0.72	Yes	0.309	0.688	1.00	Yes	1.00	**11.74**
		U_{17} - L_{17}	289.89	-253.13	-339	345	207	-228	-120	107	56	-102	0.521	0.476	1.00	Yes	0.287	0.262	0.55	Yes	0.555	0.130	0.69	Yes	0.536	0.441	0.98	Yes	1.00	**7.55**
		U_{18} - L_{18}	109.32	-296.11	-102	114	243	-288	-105	11	196	-62	0.197	0.425	0.63	Yes	0.108	0.234	0.35	Yes	0.647	0.167	0.82	Yes	0.627	0.368	1.00	Yes	1.00	**5.64**
		U_{19} - L_{19}	37.91	-325.48	-48	37	241	-233	-83	-9	307	56	0.068	0.397	0.47	Yes	0.038	0.218	0.26	Yes	0.711	0.157	0.87	Yes	0.689	0.308	1.00	Yes	1.00	**3.51**
		U_{20} - L_{20}	-----	-327.11	19	-30	122	-211	-45	-15	492	158	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.262	1.00	Yes	0.692	0.270	0.97	Yes	1.00	**2.16**

Moment (End) AI Operating

Operating Loads - 3F1

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	$U_0 - L_1$			509.86	-----	-153	68	-18	0	-597	-112	-14	1	0.669	0.329	1.00	Yes	0.404	0.181	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.03**
		$U_1 - L_2$			396.28	-----	-72	24	-22	-34	-172	-203	644	130	0.713	0.279	1.00	Yes	0.392	0.153	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.86**
		$U_2 - L_3$			434.43	-246.78	-112	33	-76	-99	-258	-173	-189	-33	0.781	0.217	1.00	Yes	0.430	0.120	0.55	Yes	0.568	0.226	0.80	Yes	0.522	0.143	0.67	Yes	1.00	**8.59**
		$U_3 - L_4$			-----	-386.60	30	-13	-9	-77	27	26	181	-124	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.14**
		$U_4 - L_5$			545.83	-----	-72	63	-49	-16	-91	-171	-492	-244	0.808	0.188	1.00	Yes	0.444	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.90**
		$U_5 - L_6$			683.34	-----	-191	236	-36	76	-248	-292	-233	-126	0.808	0.187	1.00	Yes	0.444	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.11**
		$U_7 - L_6$			664.52	-----	-291	249	-92	102	-145	-183	214	57	0.786	0.205	1.00	Yes	0.432	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.14**
		$U_8 - L_7$			659.70	-----	-105	312	-9	132	-98	-132	232	120	0.780	0.220	1.00	Yes	0.429	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.42**
		$U_8 - L_9$			973.64	-----	-91	374	22	137	382	280	307	105	0.778	0.216	1.00	Yes	0.482	0.121	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.18**
		$U_9 - L_{10}$			1029.14	-----	-303	267	-75	85	149	302	50	93	0.823	0.174	1.00	Yes	0.510	0.097	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.11**
		$U_{10} - L_{11}$			1005.56	-----	-230	215	-91	64	82	315	292	180	0.849	0.148	1.00	Yes	0.526	0.083	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.03**
		$U_{11} - L_{12}$			859.83	-----	-248	143	-145	-18	15	142	198	138	0.851	0.145	1.00	Yes	0.468	0.080	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.12**
		$U_{12} - L_{13}$			657.35	-----	-202	170	-86	22	-3	55	97	-104	0.801	0.197	1.00	Yes	0.504	0.110	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
		$U_{13} - L_{14}$			462.26	-----	-86	49	-18	-32	-42	-98	-18	-181	0.831	0.162	1.00	Yes	0.457	0.089	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		$U_{15} - L_{14}$			220.70	-322.83	-54	4	58	-119	-234	-218	-288	-132	0.397	0.236	0.64	Yes	0.218	0.130	0.35	Yes	0.756	0.236	1.00	Yes	0.683	0.152	0.84	Yes	1.00	**5.43**
		$U_{16} - L_{15}$			396.56	-84.25	-124	86	-9	-33	-328	-310	-407	-142	0.713	0.277	1.00	Yes	0.392	0.152	0.55	Yes	0.200	0.194	0.40	Yes	0.178	0.159	0.34	Yes	1.00	**4.02**
		$U_{17} - L_{16}$			520.98	-----	-139	100	-40	8	-402	-350	-303	-217	0.764	0.234	1.00	Yes	0.420	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.14**
		$U_{18} - L_{17}$			612.36	-----	-315	251	-112	76	-514	-474	-114	-120	0.724	0.272	1.00	Yes	0.398	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.35**
		$U_{19} - L_{18}$			687.69	-----	-345	255	-133	87	-425	-440	-68	-109	0.745	0.249	1.00	Yes	0.410	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.20**
		$U_{20} - L_{19}$			681.66	-----	-272	262	-95	93	-693	-429	-101	-40	0.738	0.253	1.00	Yes	0.406	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.48**
	Structure 2	$U_0 - L_1$			720.50	-----	-412	360	-116	101	-608	-17	-61	-50	0.713	0.282	1.00	Yes	0.392	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.85**
		$U_1 - L_2$			790.66	-----	-383	324	-94	70	-213	-100	-99	-28	0.782	0.210	1.00	Yes	0.430	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.13**
		$U_2 - L_3$			650.88	-----	-331	266	-85	65	-184	86	-24	89	0.770	0.221	1.00	Yes	0.423	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.17**
		$U_3 - L_4$			602.05	-----	-179	144	-55	13	-141	-87	55	-42	0.803	0.193	1.00	Yes	0.441	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.38**
		$U_4 - L_5$			432.69	-104.63	-134	105	-2	-35	-171	-4	16	-170	0.778	0.221	1.00	Yes	0.428	0.121	0.55	Yes	0.258	0.102	0.37	Yes	0.221	0.171	0.40	Yes	1.00	**4.67**
		$U_5 - L_6$			433.29	-307.97	-123	83	69	-117	-121	-75	-76	-190	0.779	0.212	1.00	Yes	0.429	0.116	0.55	Yes	0.727	0.174	0.91	Yes	0.652	0.157	0.81	Yes	1.00	**6.71**
		$U_6 - L_7$			41.91	-382.90	-32	-5	54	-101	-89	-160	-64	-301	0.068	0.194	0.27	Yes	0.038	0.107	0.15	Yes	0.820	0.180	1.00	Yes	0.734	0.116	0.85	Yes	1.00	**4.03**
		$U_8 - L_7$			584.80	-----	-176	144	-35	-27	-259	-406	-433	-201	0.746	0.245	1.00	Yes	0.469	0.139	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.01**
		$U_8 - L_9$			705.59	-----	-320	241	-114	35	-390	-379	-303	-224	0.764	0.228	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.11**
		$U_{10} - L_9$			793.97	-----	-303	228	-118	50	-432	-441	-354	-216	0.785	0.206	1.00	Yes	0.432	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.46**
		$U_{11} - L_{10}$			866.22	-----	-337	275	-148	103	-375	-434	-437	-241	0.789	0.203	1.00	Yes	0.434	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		$U_{12} - L_{11}$			870.32	-----	-362	350	-127	146	-307	-362	-135	-85	0.793	0.203	1.00	Yes	0.436	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
		$U_{13} - L_{12}$			754.85	-----	-432	376	-153	154	-175	-196	332	128	0.747	0.250	1.00	Yes	0.411	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.54**
		$U_{14} - L_{13}$			754.46	-----	-277	424	-38	149	-182	-170	357	178	0.746	0.250	1.00	Yes	0.411	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.32**
		$U_{14} - L_{15}$			634.79	-----	-217	354	24	72	126	130	221	-43	0.750	0.241	1.00	Yes	0.413	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.73**
		$U_{15} - L_{16}$			625.89	-----	-368	330	-66	72	-178	238	-35	19	0.740	0.251	1.00	Yes	0.407	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.72**
		$U_{16} - L_{17}$			717.38	-----	-323	352	-68	95	-232	222	-151	61	0.777	0.218	1.00	Yes	0.427	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.93**
		$U_{17} - L_{18}$			656.76	-----	-291	278	-67	80	-68	292	-24	104	0.776	0.218	1.00	Yes	0.427	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.33**
		$U_{18} - L_{19}$			682.18	-----	-277	282	-69	57	133	185	87	0	0.807	0.193	1.00	Yes	0.444	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.99**
		$U_{19} - L_{20}$			614.19	-----	-195	181	-39	4	59	127	175	-8	0.783	0.210	1.00	Yes	0.431	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.78**
		$U_{20} - L_{21}$			448.40	-52.15	-123	121	-5	-17	58	40	64	-95	0.806	0.185	1.00	Yes	0.444	0.102	0.55	Yes	0.124	0.060	0.19	Yes	0.110	0.158	0.27	Yes	1.00	**4.68**
		$U_{21} - L_{22}$			430.57	-267.29	-105	75	8	-89	28	9	293	-158	0.774	0.219	1.00	Yes	0.426	0.120	0.55	Yes	0.631	0.159	0.80	Yes	0.566	0.134	0.70	Yes	1.00	**7.00**
		$U_{23} - L_{22}$			419.13	-307.66	-104	61	45	-98	-242	-238	-373	-45	0.754	0.241	1.00	Yes	0.415	0.133	0.55	Yes	0.733	0.232	0.97	Yes	0.651	0.133	0.79	Yes	1.00	**6.52**
		$U_{24} - L_{23}$			427.61	-39.51	-118	105	5	-21	-249	-228	-171	-63	0.769	0.223	1.00	Yes	0.423	0.123	0.55	Yes	0.095	0.123	0.22	Yes	0.084	0.151	0.24	Yes	1.00	**4.17**
		$U_{25} - L_{24}$			587.33	-----	-190	181	-20	2	-368	-317	-263	-127	0.749	0.245	1.00	Yes	0.412	0.139	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.69**
		$U_{26} - L_{25}$			655.62	-----	-278	258	-59	36	-290	-357	-358	-97	0.775	0.222	1.00	Yes	0.426	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.42**
		$U_{27} - L_{26}$			661.41	-----	-286	282	-46	59	-245	-273	175	67	0.782	0.212	1.00	Yes	0.430	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.40**
		$U_{28} - L_{27}$			705.75	-----	-343	349	-49	68	-229	-293	199	110	0.764	0.227	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.66**
		$U_{29} - L_{28}$			636.42	-----	-362	339	-74	74	-96	-165	207	100	0.752	0.243	1.00	Yes	0.414	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
		$U_{30} - L_{29}$			645.17	-----	-226	358	-15	78	-120	-145	189	106	0.763	0.237	1.00	Yes	0.420	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.16**
		$U_{30} - L_{31}$			763.48	-----	-296	427	11	76	122	290	276	-5	0.755	0.241	1.00	Yes	0.415	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.29**
		$U_{31} - L_{32}$			734.53	-----	-420	369	-74	77	-145	-160	14	48	0.763	0.234	1.00	Yes	0.420	0.120	0.54	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.28**
		$U_{32} - L_{33}$			874.86	-----	-359	338	-61	94	-313	301	-142	139	0.797	0.195	1.00	Yes	0.438	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.52**
		$U_{33} - L_{34}$			903.41	-----	-345	311	-110	73	-28	219	79	125	0.823	0.176	1.00	Yes	0.453	0.097	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.94**
		$U_{34} - L_{35}$			817.72	-----	-300	245	-107	38	85	182	299	-6	0.809	0.184	1.00	Yes	0.445	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.31**
		$U_{35} - L_{36}$			752.10	-----	-328	280	-106	16	40	6	98	-97	0.815	0.184	1.00	Yes	0.448	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.43**
		$U_{36} - L_{37}$			615.96	-14.62	-182	181	-30	-22	-22	-6	-26	-247	0.785	0.213	1.00	Yes	0.494	0.120	0.62	Yes	0.024	0.086	0.12	Yes	0.022	0.163	0.19	Yes	1.00	**5.91**
		$U_{38} - L_{37}$			28.69	-379.40	-26	-7	59	-95	-177	-208	-280	-73	0.047	0.181	0.23	Yes	0.026	0.099	0.13	Yes	0.820	0.175	1.00	Yes	0.727	0.108	0.84	Yes	1.00	**3.51**
		$U_{38} - L_{39}$			337.93	-318.45	-99	66	95	-127	-312	-211	-220	-112	0.608	0.253	0.87	Yes	0.334	0.139	0.48	Yes	0.759	0.234	1.00	Yes	0.674	0.163	0.84	Yes	1.00	**6.48**
		$U_{40} - L_{39}$			407.71	-139.23	-130	100	22	-51	-322	-292	-294	-130	0.733	0.259	1.00	Yes	0.403	0.143	0.55	Yes	0.333	0.189	0.53	Yes	0.295	0.166	0.47	Yes	1.00	**5.17**
		$U_{41} - L_{40}$			558.65	-----	-169	124	-41	-2	-365	-355	-438	-202	0.745	0.246	1.00	Yes	0.410	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**
		$U_{42} - L_{41}$			624.58	-----	-317	265	-50	33	-408	-416	-69	-66	0.738	0.255	1.00	Yes	0.406	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.22**
		$U_{43} - L_{42}$			752.35	-----	-390	301	-67	45	-468	-462	-7	-47	0.744	0.251	1.00	Yes	0.409	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.50**
		$U_{44} - L_{43}$			719.87	-----	-329	328	-94	80	-891	-415	54	-22	0.712	0.286	1.00	Yes	0.392	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.70**
	Structure 3	$U_0 - L_1$			683.60	-----	-384	309	-113	94	-327	-159	-63	-53	0.740	0.250	1.00	Yes	0.407	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.41**
		$U_1 - L_2$			717.40	-----	-336	273	-97	65	-271	-180	-126	-45	0.777	0.216	1.00	Yes	0.427	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.93**
		$U_2 - L_3$			656.37	-----	-326	268	-95	61	-203	14	-49	79	0.776	0.221	1.00	Yes	0.427	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.48**
		$U_3 - L_4$			554.46	-----	-147	120	-36	-2	-126	-97	94	-36	0.813	0.178	1.00	Yes	0.447	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.35**
		$U_4 - L_5$			431.60	-106.66	-131	106	-4	-35	-162	-52	-116	-181	0.776	0.220	1.00	Yes	0.427	0.121	0.55	Yes	0.253	0.108	0.37	Yes	0.226	0.167	0.40	Yes	1.00	**4.97**
		$U_5 - L_6$			300.85	-332.29	-68	18	33	-112	-135	-194	-39	-300	0.541	0.230	0.78	Yes	0.298	0.127	0.43	Yes	0.779	0.213	1.00	Yes	0.703	0.143	0.85	Yes	1.00	**5.74**
		$U_7 - L_6$			451.87	-56.12	-85	46	5	-50	-225	-268	-230	-198	0.813	0.186	1.00	Yes	0.447	0.102	0.55	Yes	0.130	0.139	0.27	Yes	0.119	0.108	0.23	Yes	1.00	**5.01**
		$U_8 - L_7$			606.89	-----	-195	155	-60	1	-415	-386	-424	-229	0.740	0.254	1.00	Yes	0.465	0.144	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.48**
		$U_8 - L_9$			792.94	-----	-243	116	-117	-31	-548	-519	-661	-413	0.784	0.212	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.98**
		$U_{10} - L_9$			920.41	-----	-228	183	-126	40	-588	-570	-892	-380	0.777	0.223	1.00	Yes	0.481	0.127	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.46**
		$U_{11} - L_{10}$			1002.28	-----	-302	257	-107	84	-467	-417	-277	-138	0.801	0.194	1.00	Yes	0.496	0.109	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.22**
		$U_{12} - L_{11}$			992.92	-----	-115	356	-14	129	-306	-303	230	101	0.794	0.198	1.00	Yes	0.492	0.111	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.12**
		$U_{12} - L_{13}$			662.51	-----	-110	289	20	72	143	170	248	-35	0.783	0.210	1.00	Yes	0.431	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.87**
		$U_{13} - L_{14}$			686.71	-----	-283	273	-23	54	-76	124	-91	18	0.812	0.184	1.00	Yes	0.447	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.46**
		$U_{14} - L_{15}$			699.54	-----	-180	228	-21	35	-127	189	130	58	0.827	0.164	1.00	Yes	0.455	0.090	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.97**
		$U_{15} - L_{16}$			602.33	-----	-79	81	-61	-19	-50	12	132	113	0.883	0.113	1.00	Yes	0.486	0.062	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.62**
		$U_{17} - L_{16}$			-----	-335.65	23	-3	-43	-74	237	149	-411	-110	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.231	1.00	Yes	0.710	0.095	0.81	Yes	1.00	**5.00**
		$U_{18} - L_{17}$			187.01	-318.29	-54	12	-40	-69	-200	-144	-728	-53	0.336	0.299	0.64	Yes	0.185	0.164	0.35	Yes	0.733	0.266	1.00	Yes	0.673	0.088	0.77	Yes	1.00	**5.05**
		$U_{19} - L_{18}$			340.28	-----	-75	32	-82	-20	-345	-289	-950	-285	0.612	0.380	1.00	Yes	0.337	0.209	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.71**
		$U_{20} - L_{19}$			574.19	-----	-63	41	56	-7	-677	-377	455	-2	0.753	0.244	1.00	Yes	0.455	0.134	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.28**

Operating Loads - 3F1

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

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

Center Truss - Upper Chord

			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																		
Structure 1	$U_0 - U_1$		-----	-514.52	-147	73	259	-1181	19	-9	-48	-417	-----	-----	-----	-----	-----	-----	-----	-----	0.700	0.297	1	Yes	0.694	0.281	0.98	Yes	1.00	**5.21**
	$U_1 - U_2$		22.15	-554.43	-52	71	-215	-886	6	49	-50	4	0.025	0.219	0.25	Yes	0.017	0.150	0.17	Yes	0.754	0.240	1	Yes	0.748	0.211	0.96	Yes	1.00	**3.57**
	$U_2 - U_3$		105.36	-543.35	-101	234	-190	-756	14	-90	171	-164	0.121	0.209	0.33	Yes	0.081	0.136	0.22	Yes	0.739	0.254	1	Yes	0.733	0.180	0.92	Yes	1.00	**3.52**
	$U_3 - U_4$		-----	-534.00	-434	271	-112	-979	90	-34	-17	-252	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.270	1	Yes	0.720	0.233	0.96	Yes	1.00	**4.57**
	$U_4 - U_5$		380.54	-560.28	109	307	-235	-828	-111	30	-287	-292	0.436	0.246	0.69	Yes	0.299	0.169	0.47	Yes	0.762	0.234	1	Yes	0.756	0.197	0.96	Yes	1.00	**6.88**
	$U_5 - U_6$		-----	-572.00	-821	631	47	-604	38	-317	-268	-417	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.217	1	Yes	0.771	0.195	0.97	Yes	1.00	**9.03**
	$U_6 - U_7$		137.61	-336.48	-406	599	703	-2896	-803	-478	-693	-503	0.132	0.726	0.86	Yes	0.092	0.497	0.59	Yes	0.383	0.439	0.83	Yes	0.379	0.616	1.00	Yes	1.00	**21.78**
	$U_7 - U_8$		455.05	-----	-2203	4011	-49	673	-676	148	-248	155	0.315	0.676	1.00	Yes	0.220	0.461	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.45**
	$U_8 - U_9$		716.32	-----	766	5	2143	-2192	-144	38	68	316	0.587	0.406	1.00	Yes	0.402	0.277	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.44**
	$U_9 - U_{10}$		577.86	-525.53	219	268	51	-1292	78	307	212	468	0.627	0.365	1.00	Yes	0.425	0.245	0.67	Yes	0.677	0.237	0.92	Yes	0.671	0.289	0.97	Yes	1.00	**9.03**
	$U_{10} - U_{11}$		104.74	-589.44	206	-85	116	-1075	212	54	319	156	0.114	0.292	0.41	Yes	0.076	0.187	0.27	Yes	0.759	0.218	0.98	Yes	0.752	0.241	1.00	Yes	1.00	**4.60**
	$U_{11} - U_{12}$		-----	-869.66	155	-117	92	-1051	157	58	223	62	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.163	0.99	Yes	0.816	0.174	1.00	Yes	1.00	**3.99**
	$U_{12} - U_{13}$		-----	-1182.96	-36	-165	-32	-1296	224	-37	227	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.199	1	Yes	0.790	0.179	0.97	Yes	1.00	**4.44**
	$U_{13} - U_{14}$		-----	-1300.06	-526	-343	-323	-1949	286	21	89	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.245	1	Yes	0.745	0.215	0.97	Yes	1.00	**4.14**
	$U_{14} - U_{15}$		-----	-1313.94	-230	-172	-86	-1618	188	-44	86	-199	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.230	1	Yes	0.753	0.179	0.94	Yes	1.00	**5.62**
	$U_{15} - U_{16}$		-----	-1320.53	-493	-317	104	-1844	312	-82	-141	-528	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.229	1	Yes	0.757	0.203	0.97	Yes	1.00	**5.39**
	$U_{16} - U_{17}$		-----	-1307.56	-469	-108	-730	-1324	171	-277	-278	-393	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.233	1	Yes	0.750	0.146	0.90	Yes	1.00	**5.67**
	$U_{17} - U_{18}$		-----	-1073.41	-767	180	-190	-617	-74	-277	-194	-235	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.146	1	Yes	0.840	0.125	0.97	Yes	1.00	**4.68**
	$U_{18} - U_{19}$		-----	-675.03	-382	293	-220	-707	-164	-349	-4	-674	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.232	1	Yes	0.759	0.142	0.91	Yes	1.00	**9.98**
	$U_{19} - U_{20}$		-----	-480.48	-1053	1154	-32	-2271	-288	-139	18	-1040	-----	-----	-----	-----	-----	-----	-----	-----	0.546	0.403	0.95	Yes	0.541	0.457	1.00	Yes	1.00	**10.97**
Structure 2	$U_0 - U_1$		-----	-566.25	-404	-154	709	-1930	486	202	-65	-385	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.271	0.95	Yes	0.669	0.328	1.00	Yes	1.00	**7.60**
	$U_1 - U_2$		-----	-751.99	-103	-158	-168	-1254	336	629	223	278	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.264	1	Yes	0.726	0.190	0.92	Yes	1.00	**4.11**
	$U_2 - U_3$		-----	-1082.99	-79	-234	-136	-1953	599	4	513	90	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.224	1	Yes	0.769	0.199	0.97	Yes	1.00	**4.49**
	$U_3 - U_4$		-----	-1306.21	-371	-267	-672	-2152	181	-372	210	-159	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.248	1	Yes	0.744	0.192	0.94	Yes	1.00	**4.22**
	$U_4 - U_5$		-----	-1398.15	-374	-346	-768	-2575	-50	-343	74	-283	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.271	1	Yes	0.718	0.213	0.94	Yes	1.00	**4.13**
	$U_5 - U_6$		-----	-1470.68	-1101	-6	-1163	-1791	125	-230	-102	-382	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.230	1	Yes	0.755	0.148	0.91	Yes	1.00	**4.55**
	$U_6 - U_7$		-----	-1234.11	-292	-98	-595	-2334	-73	-257	-48	-380	-----	-----	-----	-----	-----	-----	-----	-----	0.708	0.284	1	Yes	0.703	0.208	0.92	Yes	1.00	**3.98**
	$U_7 - U_8$		-----	-1313.67	-126	-157	-584	-1872	-210	-234	-327	-499	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.238	1	Yes	0.748	0.167	0.92	Yes	1.00	**5.91**
	$U_8 - U_9$		-----	-1141.57	-306	135	-730	-1344	-148	-112	-225	-448	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.214	1	Yes	0.774	0.143	0.92	Yes	1.00	**5.71**
	$U_9 - U_{10}$		277.11	-937.08	-15	413	-477	-1172	-181	-17	-225	-304	0.203	0.176	0.38	Yes	0.138	0.119	0.26	Yes	0.813	0.185	1	Yes	0.809	0.143	0.96	Yes	1.00	**7.72**
	$U_{10} - U_{11}$		659.27	-776.10	189	462	-605	-1263	-201	-56	-301	-233	0.557	0.215	0.78	Yes	0.379	0.139	0.52	Yes	0.776	0.219	1	Yes	0.771	0.178	0.95	Yes	1.00	**9.71**
	$U_{11} - U_{12}$		-----	-777.78	-1481	1123	-880	-1597	-251	-656	-394	-833	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.205	0.99	Yes	0.773	0.225	1.00	Yes	1.00	**17.80**
	$U_{12} - U_{13}$		743.75	-----	118	188	525	-3135	-777	-999	-788	-242	0.502	0.490	1.00	Yes	0.358	0.333	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.08**
	$U_{13} - U_{14}$		427.94	-----	-4240	7620	-461	1403	-1105	-242	-599	-288	0.210	0.781	1.00	Yes	0.149	0.512	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**18.12**
	$U_{14} - U_{15}$		1063.32	-----	1567	196	4611	-3609	-535	-168	-108	613	0.523	0.469	1.00	Yes	0.370	0.307	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.87**
	$U_{15} - U_{16}$		1018.83	-----	203	505	-118	-2673	-100	285	482	887	0.616	0.379	1.00	Yes	0.438	0.255	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.39**
	$U_{16} - U_{17}$		857.33	-205.43	610	278	837	-2445	205	76	581	329	0.632	0.368	1.00	Yes	0.420	0.243	0.67	Yes	0.179	0.207	0.39	Yes	0.178	0.307	0.49	Yes	1.00	**9.24**
	$U_{17} - U_{18}$		656.24	-488.92	442	307	203	-1865	-22	3	157	129	0.659	0.340	1.00	Yes	0.439	0.225	0.67	Yes	0.581	0.351	0.94	Yes	0.577	0.317	0.90	Yes	1.00	**8.36**
	$U_{18} - U_{19}$		411.64	-602.76	424	173	417	-1690	17	35	99	-76	0.413	0.301	0.72	Yes	0.271	0.191	0.47	Yes	0.716	0.109	0.83	Yes	0.712	0.287	1.00	Yes	1.00	**6.38**
	$U_{19} - U_{20}$		213.51	-696.89	259	133	-145	-1409	17	135	85	39	0.200	0.244	0.45	Yes	0.133	0.160	0.30	Yes	0.774	0.197	0.98	Yes	0.769	0.226	1.00	Yes	1.00	**5.24**
	$U_{20} - U_{21}$		40.32	-827.70	-36	110	-169	-1572	67	-93	102	-98	0.031	0.239	0.28	Yes	0.022	0.152	0.18	Yes	0.761	0.232	1	Yes	0.755	0.228	0.99	Yes	1.00	**5.30**
	$U_{21} - U_{22}$		32.56	-778.71	-24	3	-300	-1729	-10	-48	-11	-94	0.025	0.261	0.29	Yes	0.018	0.173	0.20	Yes	0.716	0.276	1	Yes	0.711	0.250	0.97	Yes	1.00	**4.74**
	$U_{22} - U_{23}$		75.69	-793.47	-5	-12	-248	-1620	-85	-103	-33	-199	0.059	0.256	0.32	Yes	0.042	0.171	0.22	Yes	0.729	0.263	1	Yes	0.724	0.235	0.96	Yes	1.00	**6.10**
	$U_{23} - U_{24}$		-----	-797.89	-685	146	-214	-1531	69	-134	-214	-375	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.266	1	Yes	0.728	0.222	0.95	Yes	1.00	**6.23**
	$U_{24} - U_{25}$		257.76	-654.04	146	280	-147	-1412	-265	-25	-179	-231	0.242	0.262	0.51	Yes	0.160	0.172	0.34	Yes	0.726	0.270	1	Yes	0.722	0.226	0.95	Yes	1.00	**6.86**
	$U_{25} - U_{26}$		-----	-680.54	-971	626	-168	-1144	-55	-31	-223	-320	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.134	0.95	Yes	0.804	0.194	1.00	Yes	1.00	**8.51**
	$U_{26} - U_{27}$		-----	-615.53	-1302	747	-349	-1573	-213	-118	-334	-295	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.192	0.93	Yes	0.727	0.267	1.00	Yes	1.00	**11.68**
	$U_{27} - U_{28}$		-----	-696.00	-3147	1859	200	-2545	-419	-597	-579	-783	-----	-----	-----	-----	-----	-----	-----	-----	0.607	0.316	0.93	Yes	0.603	0.395	1.00	Yes	1.00	**20.62**
	$U_{28} - U_{29}$		917.15	-----	-139	306	-14	-3359	-713	-435	-738	-217	0.554	0.444	1.00	Yes	0.394	0.298	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.35**
	$U_{29} - U_{30}$		645.98	-----	-2652	6575	-139	1245	-934	191	-101	354	0.318	0.673	1.00	Yes	0.225	0.441	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.10**
	$U_{30} - U_{31}$		1061.00	-----	1506	94	4722	-3767	-416	-180	214	521	0.522	0.473	1.00	Yes	0.369	0.309	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.88**
	$U_{31} - U_{32}$		990.73	-33.98	116	446	-275	-1950	-15	243	574	878	0.669	0.329	1.00	Yes	0.477	0.224	0.71	Yes	0.027	0.401	0.43	Yes	0.027	0.246	0.28	Yes	1.00	**9.38**
	$U_{32} - U_{33}$		738.17	-431.06	500	251	268	-2089	204	55	607	228	0.624	0.369	1.00	Yes	0.419	0.246	0.67	Yes	0.431	0.187	0.62	Yes	0.428	0.295	0.73	Yes	1.00	**8.36**
	$U_{33} - U_{34}$		467.51	-747.18	343	191	-54	-1814	85	39	223	39	0.395	0.283	0.68	Yes	0.269	0.182	0.46	Yes	0.747	0.216	0.97	Yes	0.743	0.256	1.00	Yes	1.00	**7.05**
	$U_{34} - U_{35}$		181.36	-880.43	328	-39	63	-1896	118	-15	171	-40	0.133	0.249	0.39	Yes	0.090	0.169	0.26	Yes	0.764	0.182	0.95	Yes	0.760	0.231	1.00	Yes	1.00	**5.27**
	$U_{35} - U_{36}$		-----	-1177.34	119	-223	-299	-1713	126	-173	127	-27	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.190	1	Yes	0.799	0.182	0.99	Yes	1.00	**5.17**
	$U_{36} - U_{37}$		-----	-1278.25	-152	-62	-366	-2471	163	-55	163	-77	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.262	1	Yes	0.728	0.220	0.95	Yes	1.00	**4.54**
	$U_{37} - U_{38}$		-----	-1357.41	-1	-121	-432	-2214	44	-200	7	-62	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.215	1	Yes	0.773	0.197	0.98	Yes	1.00	**5.98**
	$U_{38} - U_{39}$		-----	-1437.45	47	-395	-191	-2847	82	-105	25	-414	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.256	1	Yes	0.738	0.236	0.98	Yes	1.00	**5.59**
	$U_{39} - U_{40}$		-----	-1376.11	-867	-371	-550	-2602	106	-180	-238	-429	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.288	1	Yes	0.707	0.216	0.93	Yes	1.00	**5.83**
	$U_{40} - U_{41}$		-----	-1255.94	-426	-397	-934	-2143	13	-253	-287	-343	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.278	1	Yes	0.715	0.191	0.91	Yes	1.00	**5.44**
	$U_{41} - U_{42}$		-----	-1192.96	-1070	214	-972	-1281	-101	-163	-137	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.141	1	Yes	0.847	0.130	0.98	Yes	1.00	**6.26**
	$U_{42} - U_{43}$		-----	-796.67	-606	471	-313	-1267	51	-228	209	-615	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.224	1	Yes	0.769	0.192	0.97	Yes	1.00	**13.70**
	$U_{43} - U_{44}$		-----	-489.78	-1143	1023	109	-2192	-229	-119	-78	-958	-----	-----	-----	-----	-----	-----	-----	-----	0.582	0.417	1	Yes	0.578	0.372	0.96	Yes	1.00	**10.27**
Structure 3	$U_0 - U_1$		-----	-583.48	-725	-148	996	-1663	382	162	-29	-408	-----	-----	-----	-----	-----	-----	-----	-----	0.662	0.225	0.89	Yes	0.656	0.335	1.00	Yes	1.00	**8.42**
	$U_1 - U_2$		-----	-670.63	-67	-119	5	-843	253	509	200	270	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.233	1	Yes	0.755	0.170	0.93	Yes	1.00	**3.61**
	$U_2 - U_3$		-----	-979.28	-76	-126	21	-1143	518	9	459	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.217	1	Yes	0.766	0.186	0.96	Yes	1.00	**3.88**
	$U_3 - U_4$		-----	-1320.23	-144	-208	-472	-1767	133	-236	196	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.228	1	Yes	0.757	0.195	0.96	Yes	1.00	**4.73**
	$U_4 - U_5$		-----	-1372.14	-886	0	-428	-1515	323	-171	51	-452	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.196	1	Yes	0.787	0.167	0.96	Yes	1.00	**4.55**
	$U_5 - U_6$		-----	-1270.10	-157	-234	-538	-1924	-44	-203	-67	-239	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.257	1	Yes	0.728	0.212	0.95	Yes	1.00	**4.15**
	$U_6 - U_7$		-----	-1288.11	-295	-73	-620	-1398	-106	-240	-162	-397	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.247	1	Yes	0.738	0.154	0.90	Yes	1.00	**5.48**
	$U_7 - U_8$		-----	-1160.91	-577	61	-234	-991	64	-161	-234	-388	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.205	1	Yes	0.775	0.137	0.92	Yes	1.00	**4.93**
	$U_8 - U_9$		-----	-897.34	-538	263	-318	-835	89	-217	-243	-402	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.146	1	Yes	0.842	0.138	0.99	Yes	1.00	**6.86**
	$U_9 - U_{10}$		-----	-643.90	-724	353	-522	-419	-151	-287	-174	-343	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.164	1	Yes	0.822	0.162	0.99	Yes	1.00	**7.37**
	$U_{10} - U_{11}$		-----	-501.88	-632	699	164	-1601	-655	-324	-451	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.646	0.343	0.99	Yes	0.640	0.359	1.00	Yes	1.00	**21.49**
	$U_{11} - U_{12}$		386.07	-----	-2709	3591	-130	603	-623	16	-253	49	0.316	0.679	1.00	Yes	0.216	0.462	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.92**
	$U_{12} - U_{13}$		856.47	-----	859	103	2343	-2087	-421	-87	-94	431	0.593	0.399	1.00	Yes	0.414	0.272	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.78**
	$U_{13} - U_{14}$		723.24	-233.45	204	334	86	-1090	-141	273	135	491	0.692	0.299	1.00	Yes	0.483	0.205	0.69	Yes	0.265	0.317	0.59	Yes	0.263	0.232	0.50	Yes	1.00	**7.21**
	$U_{14} - U_{15}$		511.63	-483.02	348	198	251	-1111	67	129	288	5	0.586	0.313	0.90	Yes	0.396	0.204	0.60	Yes	0.657	0.337	1	Yes	0.651	0.264	0.92	Yes	1.00	**5.94**
	$U_{15} - U_{16}$		271.21	-552.67	230	116	-77	-1063	1	132	71	92	0.311	0.275	0.59	Yes	0.213	0.189	0.41	Yes	0.752	0.210	0.97	Yes	0.745	0.253	1.00	Yes	1.00	**4.68**
	$U_{16} - U_{17}$		381.90	-497.62	344	102	563	-1365	23	89	9	-105	0.438	0.342	0.78	Yes	0.300	0.235	0.54	Yes	0.677	0.142	0.82	Yes	0.671	0.324	1.00	Yes	1.00	**7.06**
	$U_{17} - U_{18}$		-----	-536.97	-129	-82	3	-1139	51	-238	-109	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.218	0.95	Yes	0.724	0.271	1.00	Yes	1.00	**5.23**
	$U_{18} - U_{19}$		-----	-542.68	-96	85	-313	-898	-36	198	144	-57	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.255	1	Yes	0.732	0.213	0.95	Yes	1.00	**6.29**
	$U_{19} - U_{20}$		-----	-422.78	-589	621	149	-1520	71	-42	-7	-719	-----	-----	-----	-----	-----	-----	-----	-----	0.575	0.419	1	Yes	0.570	0.361	0.94	Yes	1.00	**7.86**

Moment (End) AI Operating

Operating Loads - 3F1

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				-----	-117.39	-244	138	1193	-2625	40	146	-338	-1241	-----	-----	-----	-----	-----	-----	-----	-----	0.213	0.727	0.94	Yes	0.211	0.788	1.00	Yes	1.00	**23.79**
		L_1 - L_2				444.99	-18.88	46	-4	43	-919	25	19	-200	7	0.681	0.319	1.00	Yes	0.415	0.214	0.63	Yes	0.034	0.193	0.23	Yes	0.034	0.276	0.31	Yes	1.00	**5.08**
		L_2 - L_3				632.06	-81.77	-27	74	-454	-968	8	-10	-197	53	0.727	0.265	1.00	Yes	0.421	0.159	0.58	Yes	0.112	0.289	0.41	Yes	0.111	0.234	0.35	Yes	1.00	**5.67**
		L_3 - L_4				588.16	-211.21	56	251	-45	-1213	-23	33	-189	40	0.677	0.323	1.00	Yes	0.402	0.209	0.62	Yes	0.289	0.248	0.54	Yes	0.286	0.293	0.58	Yes	1.00	**6.25**
		L_4 - L_5				575.65	-5.97	-675	696	-734	-617	-61	5	-311	139	0.745	0.250	1.00	Yes	0.447	0.162	0.61	Yes	0.009	0.130	0.14	Yes	0.009	0.194	0.21	Yes	1.00	**7.39**
		L_5 - L_6				679.90	-582.90	-354	1050	-806	-1324	46	271	-198	-63	0.667	0.329	1.00	Yes	0.431	0.200	0.64	Yes	0.680	0.246	0.93	Yes	0.673	0.293	0.97	Yes	1.00	**14.99**
		L_6 - L_7				48.06	-840.06	-1263	1068	-1465	-2023	3	-191	106	416	0.033	0.357	0.39	Yes	0.021	0.221	0.25	Yes	0.684	0.149	0.84	Yes	0.676	0.318	1.00	Yes	1.00	**16.76**
		L_7 - L_8				-----	-1101.04	-542	2262	-19	575	55	152	29	77	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.282	0.99	Yes	0.697	0.300	1.00	Yes	1.00	**10.16**
		L_8 - L_9				-----	-1151.66	904	116	1980	-1135	-10	-37	-27	126	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.228	0.97	Yes	0.729	0.262	1.00	Yes	1.00	**13.21**
		L_9 - L_{10}				-----	-946.31	239	173	764	-1516	38	50	38	-85	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.089	0.86	Yes	0.762	0.238	1.00	Yes	1.00	**12.03**
		L_{10} - L_{11}				204.03	-495.98	440	-16	176	-915	87	19	-76	-38	0.264	0.257	0.53	Yes	0.154	0.156	0.32	Yes	0.762	0.118	0.89	Yes	0.756	0.242	1.00	Yes	1.00	**7.89**
		L_{11} - L_{12}				544.94	-191.13	372	-161	574	-1024	-23	10	-122	16	0.706	0.292	1.00	Yes	0.423	0.193	0.62	Yes	0.294	0.113	0.41	Yes	0.291	0.271	0.57	Yes	1.00	**6.99**
		L_{12} - L_{13}				1063.95	-----	63	-99	-564	-845	-18	-35	-70	5	0.840	0.158	1.00	Yes	0.537	0.094	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.48**
		L_{13} - L_{14}				1198.97	-----	229	-388	537	-1925	-106	61	-261	31	0.705	0.287	1.00	Yes	0.457	0.175	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.85**
		L_{14} - L_{15}				1601.55	-----	-1585	104	-987	-1611	-31	149	-298	-75	0.782	0.215	1.00	Yes	0.508	0.130	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.85**
		L_{15} - L_{16}				1566.24	-----	-339	-311	-841	-1798	53	182	-193	-164	0.765	0.230	1.00	Yes	0.491	0.134	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.20**
		L_{16} - L_{17}				1250.60	-----	-766	300	-1273	-667	-58	-10	-163	123	0.791	0.201	1.00	Yes	0.513	0.124	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.90**
		L_{17} - L_{18}				946.17	-----	-618	321	-685	-574	-22	63	-167	-293	0.824	0.170	1.00	Yes	0.527	0.102	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.61**
		L_{18} - L_{19}				425.73	-----	-773	494	-549	-14	-127	-62	-184	549	0.652	0.346	1.00	Yes	0.441	0.221	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.94**
		L_{19} - L_{20}				246.51	-37.84	-1467	747	-224	34	840	188	1	0	0.377	0.614	1.00	Yes	0.230	0.407	0.64	Yes	0.069	0.362	0.44	Yes	0.068	0.440	0.51	Yes	1.00	**12.23**
	Structure 2	L_0 - L_1				7.68	-54.30	-130	37	891	-2821	11	40	-407	-1413	0.012	0.980	1.00	Yes	0.007	0.489	0.50	Yes	0.097	0.722	0.82	Yes	0.096	0.680	0.78	Yes	1.00	**20.78**
		L_1 - L_2				540.59	-----	155	-183	614	-1526	82	99	-17	184	0.657	0.341	1.00	Yes	0.391	0.220	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.27**
		L_2 - L_3				985.67	-----	-20	-133	24	-1421	122	165	-18	9	0.777	0.223	1.00	Yes	0.509	0.132	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.56**
		L_3 - L_4				1295.26	-----	57	-324	-338	-1838	44	124	-57	207	0.761	0.232	1.00	Yes	0.512	0.143	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.48**
		L_4 - L_5				1654.72	-----	-229	-209	-235	-2333	16	-11	-94	-57	0.771	0.227	1.00	Yes	0.511	0.133	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.96**
		L_5 - L_6				1748.98	-----	-30	-335	-849	-2605	-93	58	-285	29	0.750	0.249	1.00	Yes	0.504	0.152	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.22**
		L_6 - L_7				1694.58	-----	-344	-54	-860	-3083	53	-21	-165	-9	0.717	0.281	1.00	Yes	0.477	0.163	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.08**
		L_7 - L_8				1393.31	-----	-1550	322	-1265	-1518	-48	177	-255	-73	0.799	0.192	1.00	Yes	0.525	0.113	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.37**
		L_8 - L_9				1184.36	-----	-838	691	-1068	-921	18	75	-203	-62	0.828	0.163	1.00	Yes	0.558	0.102	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.27**
		L_9 - L_{10}				860.95	-----	-1244	643	-905	-920	35	199	-173	-100	0.768	0.223	1.00	Yes	0.447	0.139	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.55**
		L_{10} - L_{11}				700.05	-----	-1513	1134	-1251	-840	-112	-24	-225	184	0.699	0.295	1.00	Yes	0.410	0.186	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.61**
		L_{11} - L_{12}				750.07	-782.17	-2134	2402	-2573	-2168	201	511	62	-398	0.523	0.398	0.93	Yes	0.347	0.238	0.59	Yes	0.646	0.225	0.88	Yes	0.641	0.351	1.00	Yes	1.00	**26.19**
		L_{12} - L_{13}				-----	-954.12	-40	162	-1773	-3143	-541	-502	-124	-147	-----	-----	-----	-----	-----	-----	-----	-----	0.575	0.415	1	Yes	0.571	0.312	0.89	Yes	1.00	**12.96**
		L_{13} - L_{14}				-----	-1222.78	-1823	4355	-476	1309	-61	-12	-206	-277	-----	-----	-----	-----	-----	-----	-----	-----	0.621	0.264	0.89	Yes	0.615	0.380	1.00	Yes	1.00	**10.68**
		L_{14} - L_{15}				-----	-1250.62	1483	-376	4224	-3063	244	209	-238	-122	-----	-----	-----	-----	-----	-----	-----	-----	0.635	0.234	0.87	Yes	0.629	0.369	1.00	Yes	1.00	**11.11**
		L_{15} - L_{16}				-----	-1245.60	-392	496	-1956	-2276	-48	149	-27	145	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.248	1	Yes	0.745	0.226	0.98	Yes	1.00	**12.93**
		L_{16} - L_{17}				-----	-1090.51	1062	144	1430	-1630	176	49	-172	-87	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.144	0.95	Yes	0.794	0.201	1.00	Yes	1.00	**10.05**
		L_{17} - L_{18}				-----	-766.65	478	198	544	-1165	15	-40	-62	92	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.099	0.92	Yes	0.805	0.186	1.00	Yes	1.00	**6.92**
		L_{18} - L_{19}				151.48	-604.01	607	77	285	-991	-42	-73	-60	48	0.172	0.203	0.38	Yes	0.099	0.121	0.23	Yes	0.810	0.139	0.95	Yes	0.805	0.191	1.00	Yes	1.00	**6.91**
		L_{19} - L_{20}				642.90	-471.39	471	126	-362	-1292	-35	-21	-138	145	0.728	0.272	1.00	Yes	0.431	0.174	0.61	Yes	0.632	0.176	0.81	Yes	0.628	0.249	0.88	Yes	1.00	**7.40**
		L_{20} - L_{21}				885.82	-367.43	381	9	-272	-1853	0	-39	-123	-44	0.706	0.284	1.00	Yes	0.463	0.168	0.64	Yes	0.347	0.211	0.56	Yes	0.345	0.270	0.62	Yes	1.00	**8.57**
		L_{21} - L_{22}				751.49	-96.17	95	-68	343	-2511	-51	58	-240	30	0.599	0.392	1.00	Yes	0.401	0.245	0.65	Yes	0.091	0.260	0.36	Yes	0.090	0.366	0.46	Yes	1.00	**7.23**
		L_{22} - L_{23}				900.17	-----	-1488	226	-878	-1722	-36	56	-202	90	0.718	0.273	1.00	Yes	0.480	0.171	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.06**
		L_{23} - L_{24}				945.09	-----	-511	339	-1226	-1468	73	206	-64	-15	0.754	0.236	1.00	Yes	0.494	0.141	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.38**
		L_{24} - L_{25}				696.67	-----	-667	540	-894	-949	101	81	-149	-39	0.789	0.206	1.00	Yes	0.467	0.131	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.87**
		L_{25} - L_{26}				638.74	-----	-998	876	-897	-1241	99	201	-45	-131	0.724	0.270	1.00	Yes	0.417	0.161	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.76**
		L_{26} - L_{27}				689.13	-435.92	-2068	2031	-1364	-2132	66	131	-342	-217	0.615	0.382	1.00	Yes	0.358	0.238	0.60	Yes	0.461	0.203	0.67	Yes	0.458	0.341	0.80	Yes	1.00	**22.36**
		L_{27} - L_{28}				107.54	-929.02	-1877	2562	-1615	-1558	202	476	-306	-504	0.067	0.358	0.43	Yes	0.044	0.213	0.26	Yes	0.682	0.246	0.93	Yes	0.677	0.316	1.00	Yes	1.00	**19.07**
		L_{28} - L_{29}				-----	-1052.98	93	36	-1641	-3331	-52	-176	-97	110	-----	-----	-----	-----	-----	-----	-----	-----	0.635	0.359	1	Yes	0.630	0.331	0.97	Yes	1.00	**12.51**
		L_{29} - L_{30}				-----	-1231.89	-1995	4253	-495	1167	43	201	95	129	-----	-----	-----	-----	-----	-----	-----	-----	0.625	0.246	0.88	Yes	0.620	0.371	1.00	Yes	1.00	**10.56**
		L_{30} - L_{31}				-----	-1280.82	1164	-260	3993	-2992	-369	-265	-109	-8	-----	-----	-----	-----	-----	-----	-----	-----	0.650	0.236	0.89	Yes	0.644	0.349	1.00	Yes	1.00	**11.74**
		L_{31} - L_{32}				-----	-1211.51	-200	319	-1747	-1946	-162	-42	89	288	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.260	1	Yes	0.725	0.193	0.92	Yes	1.00	**10.55**
		L_{32} - L_{33}				-----	-989.90	915	79	749	-1379	21	-36	61	61	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.139	0.96	Yes	0.812	0.188	1.00	Yes	1.00	**8.82**
		L_{33} - L_{34}				13.59	-672.71	505	103	813	-1166	-19	11	-34	123	0.014	0.220	0.24	Yes	0.008	0.139	0.15	Yes	0.796	0.091	0.89	Yes	0.790	0.204	1.00	Yes	1.00	**6.86**
		L_{34} - L_{35}				678.03	-673.84	690	-9	557	-1795	-7	-65	-66	-32	0.605	0.295	0.91	Yes	0.352	0.185	0.54	Yes	0.712	0.129	0.85	Yes	0.708	0.287	1.00	Yes	1.00	**9.84**
		L_{35} - L_{36}				1079.78	-332.82	519	-60	314	-1607	-80	12	-234	113	0.755	0.239	1.00	Yes	0.509	0.149	0.66	Yes	0.276	0.112	0.39	Yes	0.274	0.217	0.50	Yes	1.00	**8.06**
		L_{36} - L_{37}				1264.74	-25.82	312	-68	-133	-2308	17	-3	-64	226	0.725	0.273	1.00	Yes	0.476	0.160	0.64	Yes	0.018	0.224	0.25	Yes	0.017	0.255	0.28	Yes	1.00	**6.74**
		L_{37} - L_{38}				1717.45	-----	6	-451	-744	-2907	-83	46	-234	-15	0.727	0.270	1.00	Yes	0.483	0.157	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.33**
		L_{38} - L_{39}				1800.58	-----	-380	-73	-2088	-2371	-2	-55	-88	179	0.773	0.221	1.00	Yes	0.519	0.135	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.75**
		L_{39} - L_{40}				1630.65	-----	-1220	-64	-1302	-2392	73	194	-194	-134	0.760	0.239	1.00	Yes	0.503	0.141	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.80**
		L_{40} - L_{41}				1351.19	-----	-1054	329	-1557	-1148	-62	18	-158	184	0.794	0.197	1.00	Yes	0.535	0.122	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.64**
		L_{41} - L_{42}				1047.71	-----	-677	327	-1058	-822	29	125	21	-113	0.826	0.166	1.00	Yes	0.541	0.099	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.09**
		L_{42} - L_{43}				507.46	-----	-1194	636	-923	-380	45	1	-155	831	0.616	0.379	1.00	Yes	0.367	0.239	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.73**
		L_{43} - L_{44}				30.90	-46.73	-3003	994	-74	-56	2086	609	-46	-13	0.038	0.954	1.00	Yes	0.022	0.601	0.63	Yes	0.067	0.663	0.73	Yes	0.067	0.611	0.68	Yes	1.00	**22.24**
	Structure 3	L_0 - L_1				38.80	-184.50	-45	-22	1163	-2120	0	0	-322	-1460	0.059	0.939	1.00	Yes	0.036	0.619	0.66	Yes	0.335	0.584	0.92	Yes	0.332	0.636	0.97	Yes	1.00	**19.39**
		L_1 - L_2				437.55	-----	155	-183	420	-859	35	61	-91	325	0.670	0.325	1.00	Yes	0.453	0.205	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.61**
		L_2 - L_3				914.53	-----	-23	-142	-245	-924	87	126	66	36	0.796	0.194	1.00	Yes	0.510	0.116	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.75**
		L_3 - L_4				1210.91	-----	46	-309	-474	-1386	30	118	-36	253	0.766	0.226	1.00	Yes	0.497	0.139	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.01**
		L_4 - L_5				1602.99	-----	-270	-129	-1037	-1651	26	12	-21	157	0.783	0.210	1.00	Yes	0.503	0.122	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.81**
		L_5 - L_6				1418.02	-----	-32	-307	-30	-2335	-64	133	-247	177	0.693	0.299	1.00	Yes	0.450	0.181	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.36**
		L_6 - L_7				1362.49	-----	-1251	583	-875	-1078	5	118	-230	-31	0.801	0.191	1.00	Yes	0.519	0.117	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.38**
		L_7 - L_8				1044.41	-----	-389	102	-598	-795	60	236	-110	43	0.824	0.169	1.00	Yes	0.527	0.101	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.64**
		L_8 - L_9				634.52	-----	-606	417	-523	-281	22	-29	-80	95	0.822	0.177	1.00	Yes	0.493	0.117	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.01**
		L_9 - L_{10}				497.01	-529.74	-36	489	-691	-473	-22	27	87	103	0.644	0.201	0.85	Yes	0.375	0.122	0.50	Yes	0.814	0.125	0.94	Yes	0.807	0.183	1.00	Yes	1.00	**8.41**
		L_{10} - L_{11}				247.75	-884.38	-1660	1352	-1599	-1774	388	-126	25	-123	0.170	0.318	0.49	Yes	0.111	0.194	0.31	Yes	0.724	0.099	0.83	Yes	0.716	0.281	1.00	Yes	1.00	**21.08**
		L_{11} - L_{12}				-----	-1184.03	-470	1840	-39	532	-21	-42	-86	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.224	0.99	Yes	0.750	0.244	1.00	Yes	1.00	**9.71**
		L_{12} - L_{13}				-----	-1125.42	854	85	2162	-1081	-324	-261	-196	-13	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.274	1	Yes	0.713	0.286	1.00	Yes	1.00	**10.80**
		L_{13} - L_{14}				-----	-1000.18	118	243	-176	-1227	-116	-67	-51	4	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.132	0.95	Yes	0.805	0.193	1.00	Yes	1.00	**9.06**
		L_{14} - L_{15}				-----	-709.11	544	144	441	-794	49	-47	-102	-37	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.157	0.99	Yes	0.818	0.176	1.00	Yes	1.00	**6.98**
		L_{15} - L_{16}				150.43	-464.78	430	115	570	-1065	3	-61	-106	104	0.195	0.301	0.50	Yes	0.117	0.199	0.32	Yes	0.715	0.119	0.84	Yes	0.708	0.282	1.00	Yes	1.00	**5.41**
		L_{16} - L_{17}				607.26	-----	-535	65	-32	-1135	63	13	-142	-40	0.699	0.297	1.00	Yes	0.415	0.193	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.41**
		L_{17} - L_{18}				610.22	-----	-32	-25	-393	-1007	125	309	-16	38	0.702	0.293	1.00	Yes	0.406	0.175	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.39**
		L_{18} - L_{19}				453.23	-----	-476	196	-514	-630	55	-92	-30	523	0.694	0.301	1.00	Yes	0.423	0.197	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.81**
		L_{19} - L_{20}				11.66	-----	-2296	1066	27	-127	1356	369	-121	-33	0.018	0.980	1.00	Yes	0.011	0.593	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.23**

Moment (End) AI Operating

Operating Loads - 3F1

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

DL Factor: 1.300 LL Factor: 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Verticals	Structure 1	$U_0 - L_0$			-----	-346.40	-131	207	-20	44	-265	-85	-95	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.188	0.97	Yes	0.733	0.264	1.00	Yes	1.00	**2.31**
		$U_1 - L_1$			18.47	-333.26	-228	228	19	-14	-96	23	40	16	0.033	0.320	0.36	Yes	0.018	0.176	0.20	Yes	0.728	0.101	0.83	Yes	0.705	0.292	1.00	Yes	1.00	**4.55**
		$U_2 - L_2$			-----	-262.13	-312	343	130	-96	13	86	-273	-87	-----	-----	-----	-----	-----	-----	-----	-----	0.573	0.183	0.76	Yes	0.555	0.438	1.00	Yes	1.00	**7.30**
		$U_3 - L_3$			260.28	-231.82	-331	341	353	-335	127	270	-82	17	0.468	0.530	1.00	Yes	0.257	0.291	0.55	Yes	0.508	0.159	0.67	Yes	0.491	0.452	0.95	Yes	1.00	**9.50**
		$U_4 - L_4$			-----	-210.28	-141	110	430	-408	110	153	134	35	-----	-----	-----	-----	-----	-----	-----	-----	0.462	0.165	0.63	Yes	0.445	0.550	1.00	Yes	1.00	**10.34**
		$U_5 - L_5$			-----	-428.36	15	-32	229	-251	-127	-52	-116	-89	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.102	0.88	Yes	0.739	0.254	1.00	Yes	1.00	**4.00**
		$U_6 - L_6$			-----	-516.70	48	-55	266	-287	-96	-22	97	74	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.088	0.88	Yes	0.741	0.251	1.00	Yes	1.00	**4.06**
		$U_7 - L_7$			-----	-441.64	118	-131	297	-317	-129	46	-46	69	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.121	0.86	Yes	0.681	0.312	1.00	Yes	1.00	**2.86**
		$U_8 - L_8$			-----	-1279.69	-472	562	488	-584	-190	-38	-101	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.924	0.050	0.98	Yes	0.887	0.109	1.00	Yes	1.00	**6.77**
		$U_9 - L_9$			-----	-658.06	-415	459	-165	188	-245	-196	-221	-156	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.129	0.92	Yes	0.743	0.255	1.00	Yes	1.00	**3.98**
		$U_{10} - L_{10}$			-----	-804.47	-359	392	-113	94	-237	-174	-258	-216	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.108	0.95	Yes	0.794	0.203	1.00	Yes	1.00	**5.97**
		$U_{11} - L_{11}$			-----	-655.63	-416	497	-72	122	-90	30	-179	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.099	0.89	Yes	0.763	0.230	1.00	Yes	1.00	**5.95**
		$U_{12} - L_{12}$			-----	-503.17	-355	345	-32	37	-12	136	-175	6	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.109	0.84	Yes	0.690	0.303	1.00	Yes	1.00	**5.26**
		$U_{13} - L_{13}$			-----	-364.76	-243	260	2	12	-6	131	-85	94	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.106	0.85	Yes	0.699	0.297	1.00	Yes	1.00	**4.00**
		$U_{14} - L_{14}$			86.70	-47.31	-599	621	315	-331	-20	47	-148	-47	0.156	0.837	1.00	Yes	0.086	0.460	0.55	Yes	0.106	0.233	0.34	Yes	0.100	0.794	0.90	Yes	1.00	**15.54**
		$U_{15} - L_{15}$			228.38	-312.08	-187	176	250	-261	-120	-83	-111	-181	0.411	0.387	0.80	Yes	0.226	0.213	0.44	Yes	0.699	0.165	0.87	Yes	0.660	0.334	1.00	Yes	1.00	**5.97**
		$U_{16} - L_{16}$			100.21	-321.38	-45	33	242	-247	-89	-116	-5	-146	0.180	0.358	0.54	Yes	0.099	0.197	0.30	Yes	0.724	0.139	0.87	Yes	0.680	0.316	1.00	Yes	1.00	**4.78**
		$U_{17} - L_{17}$			-----	-441.31	26	-51	210	-229	-87	-50	-123	-120	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.118	0.95	Yes	0.761	0.232	1.00	Yes	1.00	**3.76**
		$U_{18} - L_{18}$			-----	-533.68	125	-130	429	-440	-165	-62	167	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.094	0.88	Yes	0.742	0.249	1.00	Yes	1.00	**4.11**
		$U_{19} - L_{19}$			-----	-649.12	139	-152	501	-513	-66	12	274	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.093	0.91	Yes	0.756	0.238	1.00	Yes	1.00	**4.69**
		$U_{20} - L_{20}$			-----	-579.09	167	-215	403	-474	34	4	754	99	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.226	1	Yes	0.674	0.220	0.90	Yes	1.00	**3.13**
	Structure 2	$U_0 - L_0$			-----	-617.30	-378	478	-120	187	-1162	-197	-265	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.260	1	Yes	0.662	0.203	0.87	Yes	1.00	**3.24**
		$U_1 - L_1$			-----	-710.95	-538	539	-115	122	-111	-3	34	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.077	0.9	Yes	0.762	0.229	1.00	Yes	1.00	**5.44**
		$U_2 - L_2$			-----	-584.20	-485	486	-86	95	-7	83	91	41	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.081	0.87	Yes	0.744	0.248	1.00	Yes	1.00	**5.23**
		$U_3 - L_3$			-----	-482.07	-256	260	-45	52	-28	119	17	127	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.096	0.92	Yes	0.756	0.237	1.00	Yes	1.00	**4.77**
		$U_4 - L_4$			66.50	-328.70	-234	229	28	-11	-22	147	-107	63	0.120	0.342	0.47	Yes	0.066	0.188	0.26	Yes	0.745	0.104	0.85	Yes	0.696	0.300	1.00	Yes	1.00	**4.74**
		$U_5 - L_5$			191.66	-325.96	-223	241	131	-123	-27	139	-112	103	0.345	0.348	0.70	Yes	0.190	0.191	0.39	Yes	0.736	0.120	0.86	Yes	0.690	0.307	1.00	Yes	1.00	**6.02**
		$U_6 - L_6$			363.11	-204.05	-239	237	220	-228	-103	113	-130	85	0.653	0.344	1.00	Yes	0.359	0.189	0.55	Yes	0.459	0.094	0.56	Yes	0.432	0.306	0.74	Yes	1.00	**7.22**
		$U_7 - L_7$			53.70	-46.75	-319	327	575	-659	-83	171	-176	-109	0.097	0.894	1.00	Yes	0.053	0.492	0.55	Yes	0.106	0.268	0.38	Yes	0.099	0.843	0.95	Yes	1.00	**20.59**
		$U_8 - L_8$			-----	-462.00	18	-36	366	-374	-145	-139	-71	-134	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.115	0.79	Yes	0.665	0.327	1.00	Yes	1.00	**4.74**
		$U_9 - L_9$			-----	-695.56	89	-124	567	-585	-123	-56	-171	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.085	0.86	Yes	0.745	0.248	1.00	Yes	1.00	**5.73**
		$U_{10} - L_{10}$			-----	-797.28	120	-142	535	-559	-75	-41	68	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.081	0.87	Yes	0.745	0.247	1.00	Yes	1.00	**6.07**
		$U_{11} - L_{11}$			-----	-816.44	174	-172	509	-517	-83	-25	18	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.075	0.9	Yes	0.763	0.228	1.00	Yes	1.00	**5.58**
		$U_{12} - L_{12}$			-----	-888.09	174	-154	519	-531	-23	131	34	66	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.079	0.94	Yes	0.770	0.228	1.00	Yes	1.00	**5.57**
		$U_{13} - L_{13}$			-----	-745.68	245	-243	571	-559	-82	44	81	76	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.109	0.95	Yes	0.719	0.273	1.00	Yes	1.00	**4.15**
		$U_{14} - L_{14}$			-----	-1301.50	-637	593	717	-686	-107	145	-58	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.952	0.048	1	Yes	0.863	0.127	0.99	Yes	1.00	**8.06**
		$U_{15} - L_{15}$			-----	-704.54	-652	625	-164	165	-143	-99	-79	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.143	0.93	Yes	0.679	0.312	1.00	Yes	1.00	**5.85**
		$U_{16} - L_{16}$			-----	-708.39	-545	525	-128	102	-256	-144	-166	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.112	0.94	Yes	0.759	0.231	1.00	Yes	1.00	**5.45**
		$U_{17} - L_{17}$			-----	-648.76	-506	512	-134	130	-148	-43	-101	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.084	0.89	Yes	0.755	0.238	1.00	Yes	1.00	**5.04**
		$U_{18} - L_{18}$			-----	-569.32	-523	526	-84	92	-105	-2	-167	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.090	0.85	Yes	0.725	0.269	1.00	Yes	1.00	**5.34**
		$U_{19} - L_{19}$			-----	-474.98	-300	291	-29	37	-124	27	-160	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.095	0.81	Yes	0.709	0.289	1.00	Yes	1.00	**4.62**
		$U_{20} - L_{20}$			28.01	-375.84	-232	237	10	-4	-59	62	-154	18	0.046	0.311	0.36	Yes	0.025	0.171	0.20	Yes	0.771	0.109	0.88	Yes	0.720	0.271	1.00	Yes	1.00	**4.58**
		$U_{21} - L_{21}$			83.80	-309.65	-256	262	61	-53	-119	59	-138	29	0.151	0.376	0.53	Yes	0.083	0.207	0.29	Yes	0.700	0.125	0.83	Yes	0.655	0.335	1.00	Yes	1.00	**5.23**
		$U_{22} - L_{22}$			122.77	-----	-549	557	441	-482	34	198	-227	-83	0.221	0.778	1.00	Yes	0.121	0.428	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**19.53**
		$U_{23} - L_{23}$			145.00	-318.40	-101	93	241	-250	-105	-79	-7	-89	0.261	0.350	0.62	Yes	0.143	0.193	0.34	Yes	0.719	0.124	0.85	Yes	0.674	0.320	1.00	Yes	1.00	**5.40**
		$U_{24} - L_{24}$			52.84	-381.25	-38	24	226	-234	-81	-62	-98	-86	0.086	0.293	0.38	Yes	0.047	0.161	0.21	Yes	0.782	0.103	0.89	Yes	0.730	0.268	1.00	Yes	1.00	**4.58**
		$U_{25} - L_{25}$			-----	-472.83	21	-40	298	-296	-75	10	24	-28	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.079	0.8	Yes	0.706	0.287	1.00	Yes	1.00	**4.40**
		$U_{26} - L_{26}$			-----	-568.74	73	-101	508	-532	-78	-6	-8	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.081	0.84	Yes	0.725	0.272	1.00	Yes	1.00	**4.97**
		$U_{27} - L_{27}$			-----	-635.97	148	-149	542	-550	-148	1	-102	5	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.082	0.87	Yes	0.740	0.255	1.00	Yes	1.00	**4.77**
		$U_{28} - L_{28}$			-----	-707.81	126	-133	547	-548	-22	-82	151	87	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.079	0.9	Yes	0.759	0.233	1.00	Yes	1.00	**4.84**
		$U_{29} - L_{29}$			-----	-713.35	207	-212	645	-628	-113	26	38	58	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.122	0.92	Yes	0.688	0.309	1.00	Yes	1.00	**5.18**
		$U_{30} - L_{30}$			-----	-1286.45	-675	604	652	-646	-154	88	1	-96	-----	-----	-----	-----	-----	-----	-----	-----	0.941	0.059	1	Yes	0.853	0.119	0.98	Yes	1.00	**7.63**
		$U_{31} - L_{31}$			-----	-747.47	-569	550	-182	178	-177	-93	-119	-60	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.142	0.98	Yes	0.721	0.272	1.00	Yes	1.00	**5.14**
		$U_{32} - L_{32}$			-----	-902.27	-483	489	-132	105	-277	-116	-208	-142	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.123	0.99	Yes	0.782	0.210	1.00	Yes	1.00	**6.19**
		$U_{33} - L_{33}$			-----	-821.03	-525	512	-139	141	-114	5	-179	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.092	0.92	Yes	0.768	0.232	1.00	Yes	1.00	**6.50**
		$U_{34} - L_{34}$			-----	-801.71	-542	551	-92	115	-104	66	-209	-21	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.089	0.89	Yes	0.750	0.243	1.00	Yes	1.00	**6.76**
		$U_{35} - L_{35}$			-----	-696.90	-567	575	-80	106	23	158	-184	64	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.074	0.85	Yes	0.747	0.244	1.00	Yes	1.00	**6.36**
		$U_{36} - L_{36}$			-----	-458.69	-376	378	-34	48	-65	113	-135	81	-----	-----	-----	-----	-----	-----	-----	-----	0.665	0.097	0.77	Yes	0.661	0.331	1.00	Yes	1.00	**4.90**
		$U_{37} - L_{37}$			50.60	-72.82	-609	659	234	-256	-36	219	-157	-33	0.091	0.906	1.00	Yes	0.050	0.498	0.55	Yes	0.164	0.274	0.44	Yes	0.154	0.842	1.00	Yes	1.00	**18.88**
		$U_{38} - L_{38}$			357.04	-140.52	-233	240	148	-150	-111	-140	-137	-161	0.642	0.354	1.00	Yes	0.353	0.195	0.55	Yes	0.316	0.129	0.45	Yes	0.297	0.307	0.61	Yes	1.00	**5.82**
		$U_{39} - L_{39}$			226.06	-331.33	-187	167	207	-227	-118	-108	-102	-146	0.407	0.332	0.74	Yes	0.224	0.183	0.41	Yes	0.748	0.151	0.9	Yes	0.701	0.290	1.00	Yes	1.00	**6.10**
		$U_{40} - L_{40}$			94.80	-334.30	-58	32	223	-222	-72	-34	-125	-125	0.170	0.321	0.50	Yes	0.094	0.176	0.28	Yes	0.758	0.128	0.89	Yes	0.707	0.284	1.00	Yes	1.00	**4.81**
		$U_{41} - L_{41}$			-----	-485.89	34	-53	246	-258	-34	11	16	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.084	0.92	Yes	0.762	0.235	1.00	Yes	1.00	**4.65**
		$U_{42} - L_{42}$			-----	-582.89	109	-119	476	-485	-86	-47	64	-58	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.079	0.86	Yes	0.743	0.248	1.00	Yes	1.00	**4.73**
		$U_{43} - L_{43}$			-----	-706.32	143	-160	535	-554	-35	-13	587	53	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.146	0.96	Yes	0.757	0.235	1.00	Yes	1.00	**4.87**
		$U_{44} - L_{44}$			-----	-671.35	195	-242	465	-579	-26	-4	568	96	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.187	1	Yes	0.719	0.246	0.97	Yes	1.00	**3.80**
	Structure 3	$U_0 - L_0$			-----	-552.98	-365	440	-106	170	-996	-131	-249	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.266	1	Yes	0.644	0.204	0.85	Yes	1.00	**3.16**
		$U_1 - L_1$			-----	-652.88	-515	511	-111	119	-7	23	3	-76	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.078	0.9	Yes	0.760	0.239	1.00	Yes	1.00	**5.39**
		$U_2 - L_2$			-----	-536.38	-428	433	-93	99	-109	53	83	31	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.083	0.87	Yes	0.746	0.245	1.00	Yes	1.00	**4.68**
		$U_3 - L_3$			-----	-441.03	-215	228	-35	46	34	163	1	120	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.113	0.94	Yes	0.761	0.231	1.00	Yes	1.00	**4.26**
		$U_4 - L_4$			79.85	-315.81	-256	257	39	-26	-117	155	-177	80	0.144	0.379	0.53	Yes	0.079	0.208	0.29	Yes	0.712	0.104	0.82	Yes	0.668	0.328	1.00	Yes	1.00	**5.09**
		$U_5 - L_5$			207.40	-307.27	-255	267	137	-136	-150	125	-155	68	0.373	0.386	0.76	Yes	0.205	0.212	0.42	Yes	0.689	0.131	0.82	Yes	0.650	0.342	1.00	Yes	1.00	**5.95**
		$U_6 - L_6$			101.77	-122.53	-412	423	546	-578	-164	-3	-266	-104	0.183	0.816	1.00	Yes	0.101	0.449	0.55	Yes	0.273	0.252	0.53	Yes	0.259	0.739	1.00	Yes	1.00	**16.85**
		$U_7 - L_7$			5.44	-367.79	-28	12	240	-255	-188	-144	-191	-171	0.009	0.341	0.35	Yes	0.005	0.187	0.20	Yes	0.744	0.146	0.89	Yes	0.705	0.291	1.00	Yes	1.00	**3.98**
		$U_8 - L_8$			-----	-515.94	15	-23	341	-341	-114	-95	-31	-110	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.105	0.85	Yes	0.708	0.292	1.00	Yes	1.00	**5.03**
		$U_9 - L_9$			-----	-655.66	50	-108	391	-492	-110	-57	-43	-61	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.092	0.88	Yes	0.763	0.228	1.00	Yes	1.00	**5.65**
		$U_{10} - L_{10}$			-----	-788.60	94	-98	387	-424	-11	51	-49	39	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.069	0.89	Yes	0.778	0.220	1.00	Yes	1.00	**5.82**
		$U_{11} - L_{11}$			-----	-648.49	182	-211	422	-476	-48	63	76	119	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.101	0.88	Yes	0.732	0.265	1.00	Yes	1.00	**3.55**
		$U_{12} - L_{12}$			-----	-1281.79	-461	500	438	-570	-46	42	54	42	-----	-----	-----	-----	-----	-----	-----	-----	0.925	0.043	0.97	Yes	0.889	0.106	1.00	Yes	1.00	**6.41**
		$U_{13} - L_{13}$			-----	-464.78	-258	282	-105	115	-161	-104	-116	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.139	0.92	Yes	0.717	0.277	1.00	Yes	1.00	**2.83**
		$U_{14} - L_{14}$			-----	-522.65	-272	280	-45	47	-242	-146	-212	-172	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.127	0.92	Yes	0.750	0.245	1.00	Yes	1.00	**4.63**
		$U_{15} - L_{15}$			-----	-429.19	-234	249	-23	30	-77	25	-170	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.111	0.89	Yes	0.740	0.253	1.00	Yes	1.00	**4.53**
		$U_{16} - L_{16}$			33.43	-1.60	-656	628	172	-151	-147	37	-347	-205	0.060	0.938	1.00	Yes	0.033	0.516	0.55	Yes	0.004	0.270	0.28	Yes	0.003	0.838	0.85	Yes	1.00	**14.68**
		$U_{17} - L_{17}$			296.25	-213.65	-317	325	195	-209	-119	-27	-56	-149	0.533	0.459	1.00	Yes	0.293	0.252	0.55	Yes	0.468	0.136	0.61	Yes	0.452	0.416	0.87	Yes	1.00	**6.81**
		$U_{18} - L_{18}$			77.15	-287.78	-151	143	267	-305	120	34	37	-73	0.139	0.425	0.57	Yes	0.076	0.234	0.32	Yes	0.629	0.122	0.76	Yes	0.609	0.390	1.00	Yes	1.00	**6.86**
		$U_{19} - L_{19}$			11.61	-326.25	-27	15	241	-241	-164	-86	-27	-82	0.021	0.356	0.38	Yes	0.011	0.196	0.21	Yes	0.713	0.133	0.85	Yes	0.690	0.309	1.00	Yes	1.00	**4.37**
		$U_{20} - L_{20}$			-----	-331.43	48	-56	177	-227	-171	-55	268	86	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.175	0.92	Yes	0.701	0.290	1.00	Yes	1.00	**2.15**

Operating Loads - 3F1

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:	1.300	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																		
Center Truss - Diagonals	Structure 1	$U_0 - L_1$	390.49	-30.56	-208	94	7	-9	-935	-194	-46	-20	0.512	0.478	1.00	Yes	0.309	0.263	0.58	Yes	0.052	0.333	0.39	Yes	0.047	0.242	0.29	Yes	1.00	**5.88**
		$U_1 - L_2$	387.39	-27.12	-75	48	5	-45	-26	-133	-687	-319	0.697	0.295	1.00	Yes	0.383	0.162	0.55	Yes	0.062	0.260	0.33	Yes	0.057	0.096	0.16	Yes	1.00	**6.21**
		$U_2 - L_3$	314.60	-326.72	-57	39	-62	-82	-142	-350	-383	-203	0.566	0.216	0.79	Yes	0.311	0.119	0.43	Yes	0.752	0.246	1	Yes	0.691	0.105	0.80	Yes	1.00	**7.41**
		$U_3 - L_4$	-----	-380.02	2	-9	0	-61	-168	-138	-215	-155	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.125	1	Yes	0.804	0.077	0.89	Yes	1.00	**4.01**
		$U_4 - L_4$	539.12	-----	-60	80	-144	-29	-28	-162	-211	-247	0.791	0.203	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.79**
		$U_4 - L_5$	711.59	-----	-186	219	-2	31	62	-65	144	73	0.841	0.151	1.00	Yes	0.463	0.083	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.17**
		$U_5 - L_6$	636.81	-----	-269	233	-77	84	344	150	471	296	0.753	0.239	1.00	Yes	0.414	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.04**
		$U_6 - L_7$	650.47	-----	-110	301	-8	115	310	207	240	172	0.769	0.228	1.00	Yes	0.423	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
		$U_8 - L_9$	990.87	-----	-99	378	0	134	273	231	87	106	0.792	0.203	1.00	Yes	0.491	0.114	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.34**
		$U_9 - L_{10}$	1044.48	-----	-304	269	-149	81	175	135	143	185	0.835	0.159	1.00	Yes	0.517	0.089	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.31**
		$U_{10} - L_{11}$	1032.10	-----	-231	217	-118	17	-94	-155	-125	-107	0.872	0.127	1.00	Yes	0.540	0.071	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.77**
		$U_{11} - L_{12}$	838.46	-----	-234	165	-110	-51	-367	-388	-322	-251	0.829	0.166	1.00	Yes	0.456	0.092	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.70**
		$U_{12} - L_{13}$	622.86	-----	-183	165	-50	-7	-377	-331	-343	-275	0.759	0.234	1.00	Yes	0.478	0.132	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.01**
		$U_{13} - L_{14}$	446.83	-52.99	-75	55	-17	-35	-281	-329	-288	-317	0.804	0.192	1.00	Yes	0.442	0.105	0.55	Yes	0.123	0.156	0.28	Yes	0.112	0.096	0.21	Yes	1.00	**4.46**
		$U_{15} - L_{16}$	241.43	-333.83	-53	12	71	-109	-204	-330	-206	-309	0.434	0.234	0.67	Yes	0.239	0.129	0.37	Yes	0.782	0.214	1	Yes	0.706	0.139	0.85	Yes	1.00	**5.40**
		$U_{16} - L_{15}$	423.70	-204.23	-122	92	28	-67	-223	-258	-216	-177	0.762	0.231	1.00	Yes	0.419	0.127	0.55	Yes	0.484	0.175	0.66	Yes	0.432	0.156	0.59	Yes	1.00	**5.51**
		$U_{17} - L_{18}$	546.14	-----	-143	108	-7	-23	-121	-216	-117	-129	0.801	0.195	1.00	Yes	0.440	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.66**
		$U_{18} - L_{17}$	657.24	-----	-327	258	-107	53	-131	-147	-179	-75	0.777	0.217	1.00	Yes	0.427	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.85**
		$U_{19} - L_{18}$	710.19	-----	-345	256	-93	65	-48	-146	-321	-34	0.769	0.229	1.00	Yes	0.423	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.65**
		$U_{20} - L_{19}$	598.61	-----	-424	320	-127	106	-761	-84	0	35	0.648	0.342	1.00	Yes	0.357	0.188	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.82**
	Structure 2	$U_0 - L_1$	658.11	-----	-406	347	-68	76	-1068	-29	-122	48	0.651	0.348	1.00	Yes	0.358	0.191	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.39**
		$U_1 - L_2$	798.75	-----	-402	323	-87	59	-61	-154	42	10	0.790	0.210	1.00	Yes	0.435	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.89**
		$U_2 - L_3$	648.52	-----	-324	250	-70	53	-207	-227	-78	-177	0.767	0.225	1.00	Yes	0.422	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.69**
		$U_3 - L_4$	576.24	-----	-170	140	-40	-10	-312	-284	-329	-221	0.768	0.224	1.00	Yes	0.422	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.97**
		$U_4 - L_5$	411.73	-152.93	-119	96	21	-52	-340	-273	-283	-209	0.741	0.251	1.00	Yes	0.407	0.138	0.55	Yes	0.378	0.200	0.58	Yes	0.324	0.153	0.48	Yes	1.00	**5.23**
		$U_5 - L_6$	343.92	-318.67	-91	70	74	-108	-381	-289	-284	-242	0.619	0.248	0.87	Yes	0.340	0.136	0.48	Yes	0.753	0.247	1	Yes	0.674	0.138	0.82	Yes	1.00	**6.13**
		$U_6 - L_7$	58.61	-373.67	-24	-7	54	-93	-310	-255	-283	-251	0.095	0.187	0.29	Yes	0.052	0.103	0.16	Yes	0.800	0.194	1	Yes	0.716	0.107	0.83	Yes	1.00	**3.60**
		$U_8 - L_7$	620.78	-76.89	-168	165	-2	-46	-136	-275	-212	-249	0.792	0.207	1.00	Yes	0.498	0.117	0.62	Yes	0.128	0.096	0.23	Yes	0.115	0.150	0.27	Yes	1.00	**6.35**
		$U_8 - L_9$	734.33	-----	-324	271	-69	-1	-116	-196	-105	-147	0.795	0.198	1.00	Yes	0.437	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.54**
		$U_{10} - L_9$	837.27	-----	-310	239	-91	37	-55	-144	-26	-66	0.828	0.165	1.00	Yes	0.456	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.35**
		$U_{11} - L_{10}$	913.43	-----	-353	296	-120	82	112	-34	18	19	0.832	0.165	1.00	Yes	0.458	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.48**
		$U_{12} - L_{11}$	896.19	-----	-364	351	-96	121	207	63	211	140	0.816	0.183	1.00	Yes	0.449	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.35**
		$U_{13} - L_{12}$	747.40	-----	-430	371	-195	166	276	123	392	231	0.739	0.258	1.00	Yes	0.407	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.96**
		$U_{14} - L_{13}$	761.57	-----	-276	434	-68	177	287	128	230	137	0.753	0.244	1.00	Yes	0.414	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.69**
		$U_{14} - L_{15}$	642.53	-----	-220	361	-5	105	153	83	56	40	0.760	0.232	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.88**
		$U_{15} - L_{16}$	644.12	-----	-383	330	-112	105	115	83	63	71	0.762	0.238	1.00	Yes	0.419	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		$U_{16} - L_{17}$	748.03	-----	-345	358	-74	98	16	-3	9	5	0.810	0.186	1.00	Yes	0.446	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.47**
		$U_{17} - L_{18}$	683.57	-----	-290	311	-72	66	-77	-71	-17	-28	0.808	0.190	1.00	Yes	0.444	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.88**
		$U_{18} - L_{19}$	685.94	-----	-270	273	-51	22	-154	-149	-175	-117	0.811	0.187	1.00	Yes	0.446	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.80**
		$U_{19} - L_{20}$	604.58	-26.83	-189	191	-13	-13	-254	-211	-231	-146	0.771	0.223	1.00	Yes	0.424	0.126	0.55	Yes	0.044	0.102	0.15	Yes	0.040	0.171	0.22	Yes	1.00	**5.77**
		$U_{20} - L_{21}$	435.11	-91.18	-112	116	9	-27	-209	-185	-162	-154	0.783	0.209	1.00	Yes	0.430	0.115	0.55	Yes	0.216	0.107	0.33	Yes	0.193	0.149	0.35	Yes	1.00	**5.16**
		$U_{21} - L_{22}$	445.87	-339.13	-91	74	37	-85	-280	-278	-275	-255	0.802	0.198	1.00	Yes	0.441	0.109	0.55	Yes	0.801	0.185	0.99	Yes	0.718	0.117	0.84	Yes	1.00	**6.93**
		$U_{23} - L_{22}$	384.22	-358.83	-85	70	66	-99	-74	-230	-166	-224	0.691	0.193	0.89	Yes	0.380	0.106	0.49	Yes	0.855	0.142	1	Yes	0.759	0.126	0.89	Yes	1.00	**7.32**
		$U_{24} - L_{23}$	447.67	-107.53	-117	107	31	-43	-30	-126	-51	-80	0.805	0.186	1.00	Yes	0.443	0.102	0.55	Yes	0.257	0.052	0.31	Yes	0.228	0.149	0.38	Yes	1.00	**5.33**
		$U_{25} - L_{24}$	628.59	-9.81	-199	178	9	-24	11	-93	-21	-51	0.801	0.197	1.00	Yes	0.441	0.110	0.56	Yes	0.016	0.056	0.08	Yes	0.015	0.178	0.20	Yes	1.00	**5.64**
		$U_{26} - L_{25}$	688.31	-----	-286	264	-36	19	109	-30	7	19	0.814	0.182	1.00	Yes	0.448	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.34**
		$U_{27} - L_{26}$	677.73	-----	-290	287	-49	59	187	44	137	74	0.801	0.198	1.00	Yes	0.441	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.08**
		$U_{28} - L_{27}$	725.32	-----	-336	349	-68	104	181	95	174	134	0.786	0.208	1.00	Yes	0.432	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.87**
		$U_{29} - L_{28}$	632.48	-----	-357	331	-126	120	266	110	218	112	0.748	0.250	1.00	Yes	0.411	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.95**
		$U_{30} - L_{29}$	634.78	-----	-217	360	-38	128	223	121	178	103	0.750	0.244	1.00	Yes	0.413	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.80**
		$U_{30} - L_{31}$	781.61	-----	-293	440	-28	135	113	60	64	39	0.773	0.221	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.37**
		$U_{31} - L_{32}$	791.55	-----	-449	393	-130	130	56	41	35	46	0.783	0.217	1.00	Yes	0.431	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.23**
		$U_{32} - L_{33}$	903.60	-----	-369	333	-96	109	-125	-103	5	-31	0.823	0.174	1.00	Yes	0.453	0.096	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.59**
		$U_{33} - L_{34}$	893.95	-----	-335	302	-122	68	-244	-217	-272	-167	0.814	0.179	1.00	Yes	0.448	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.33**
		$U_{34} - L_{35}$	821.13	-----	-286	244	-96	32	-341	-310	-192	-244	0.812	0.184	1.00	Yes	0.447	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.00**
		$U_{35} - L_{36}$	718.78	-----	-300	280	-88	8	-372	-311	-310	-269	0.779	0.215	1.00	Yes	0.428	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.71**
		$U_{36} - L_{37}$	611.74	-44.53	-159	159	-26	-24	-348	-343	-336	-325	0.780	0.213	1.00	Yes	0.491	0.121	0.62	Yes	0.074	0.122	0.2	Yes	0.067	0.142	0.21	Yes	1.00	**5.50**
		$U_{38} - L_{37}$	19.13	-392.66	-15	-9	73	-100	-120	-222	-159	-219	0.031	0.172	0.21	Yes	0.017	0.095	0.12	Yes	0.848	0.147	1	Yes	0.752	0.115	0.87	Yes	1.00	**3.75**
		$U_{39} - L_{38}$	320.42	-342.29	-89	57	106	-127	-173	-232	-137	-183	0.576	0.230	0.81	Yes	0.317	0.127	0.45	Yes	0.816	0.178	1	Yes	0.724	0.163	0.89	Yes	1.00	**6.19**
		$U_{40} - L_{39}$	433.91	-173.36	-127	92	44	-68	-120	-179	-99	-106	0.780	0.214	1.00	Yes	0.429	0.118	0.55	Yes	0.415	0.138	0.56	Yes	0.367	0.162	0.53	Yes	1.00	**5.49**
		$U_{41} - L_{40}$	604.82	-----	-181	135	-23	-20	-60	-138	-128	-65	0.806	0.194	1.00	Yes	0.443	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.11**
		$U_{42} - L_{41}$	665.28	-----	-332	274	-76	51	-71	-95	-1	-4	0.787	0.205	1.00	Yes	0.433	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.31**
		$U_{43} - L_{42}$	804.72	-----	-392	314	-97	66	-8	-121	-5	-28	0.796	0.200	1.00	Yes	0.438	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.53**
		$U_{44} - L_{43}$	731.91	-----	-413	366	-140	124	-528	-266	33	7	0.724	0.271	1.00	Yes	0.398	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.03**
	Structure 3	$U_0 - L_1$	587.77	-----	-396	299	-71	74	-926	-108	-132	45	0.637	0.355	1.00	Yes	0.350	0.195	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
		$U_1 - L_2$	727.70	-----	-358	282	-89	55	-67	-146	38	13	0.788	0.207	1.00	Yes	0.434	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.82**
		$U_2 - L_3$	651.05	-----	-320	251	-106	46	-232	-264	-212	-193	0.770	0.229	1.00	Yes	0.423	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.12**
		$U_3 - L_4$	527.80	-----	-136	118	-26	-23	-331	-328	-351	-242	0.774	0.220	1.00	Yes	0.426	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.16**
		$U_4 - L_5$	407.99	-216.49	-116	97	17	-60	-384	-316	-355	-243	0.734	0.259	1.00	Yes	0.404	0.143	0.55	Yes	0.513	0.218	0.74	Yes	0.458	0.148	0.61	Yes	1.00	**5.42**
		$U_5 - L_6$	219.00	-319.29	-42	14	42	-95	-357	-340	-284	-310	0.394	0.224	0.62	Yes	0.217	0.123	0.35	Yes	0.748	0.243	1	Yes	0.676	0.121	0.80	Yes	1.00	**4.80**
		$U_7 - L_6$	453.34	-120.54	-78	58	21	-52	-86	-271	-112	-268	0.815	0.179	1.00	Yes	0.448	0.098	0.55	Yes	0.280	0.117	0.4	Yes	0.255	0.100	0.36	Yes	1.00	**5.70**
		$U_8 - L_7$	636.55	-30.46	-192	174	-31	-26	-164	-238	-154	-176	0.776	0.215	1.00	Yes	0.488	0.121	0.61	Yes	0.048	0.101	0.15	Yes	0.044	0.168	0.22	Yes	1.00	**5.92**
		$U_8 - L_9$	857.47	-----	-257	142	-83	-47	-53	-198	-122	-124	0.848	0.149	1.00	Yes	0.467	0.082	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.31**
		$U_{10} - L_9$	1019.58	-----	-249	187	-105	23	152	-15	-53	21	0.861	0.135	1.00	Yes	0.533	0.075	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.96**
		$U_{11} - L_{10}$	977.44	-----	-299	239	-93	80	409	243	608	442	0.781	0.211	1.00	Yes	0.484	0.119	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.65**
		$U_{12} - L_{11}$	977.31	-----	-106	357	-12	141	412	262	275	208	0.781	0.212	1.00	Yes	0.484	0.119	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.45**
		$U_{13} - L_{13}$	671.28	-----	-113	289	-3	106	186	118	114	92	0.794	0.198	1.00	Yes	0.436	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.23**
		$U_{13} - L_{14}$	686.71	-----	-284	263	-70	76	130	90	97	122	0.812	0.185	1.00	Yes	0.447	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.39**
		$U_{14} - L_{15}$	703.28	-----	-170	236	-13	16	-130	-161	51	-21	0.831	0.164	1.00	Yes	0.457	0.090	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.89**
		$U_{15} - L_{16}$	577.40	-37.78	-64	87	-34	-27	-221	-243	-199	-160	0.847	0.145	1.00	Yes	0.466	0.080	0.55	Yes	0.071	0.096	0.17	Yes	0.065	0.089	0.16	Yes	1.00	**5.98**
		$U_{17} - L_{16}$	-----	-416.63	5	-8	42	-61	17	-79	-38	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.953	0.043	1	Yes	0.882	0.078	0.96	Yes	1.00	**4.67**
		$U_{18} - L_{17}$	195.84	-371.11	-44	26	-46	-77	-8	-199	-212	-104	0.352	0.159	0.52	Yes	0.194	0.088	0.29	Yes	0.854	0.137	1	Yes	0.785	0.098	0.89	Yes	1.00	**6.23**
		$U_{19} - L_{18}$	438.35	-82.81	-82	37	3	-43	66	-126	-350	-143	0.788	0.207	1.00	Yes	0.434	0.114	0.55	Yes	0.190	0.101	0.3	Yes	0.175	0.105	0.29	Yes	1.00	**6.72**
		$U_{20} - L_{19}$	198.60	-90.42	-311	176	-12	-6	-1491	32	46	-12	0.261	0.738	1.00	Yes	0.157	0.407	0.57	Yes	0.154	0.462	0.62	Yes	0.140	0.363	0.51	Yes	1.00	**11.10**

Moment (End) AI Operating

Operating Loads - 3F1

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 - Upper Chord	Structure 1	$U_0 - U_1$			9.42	-555.66	-108	61	477	-1041	-51	108	-29	-775	0.011	0.378	0.39	Yes	0.007	0.259	0.27	Yes	0.756	0.166	0.93	Yes	0.749	0.248	1.00	Yes	1.00	**7.74**
		$U_1 - U_2$			6.92	-511.48	-107	72	-251	-745	-151	111	-214	-422	0.008	0.248	0.26	Yes	0.005	0.170	0.18	Yes	0.696	0.299	1	Yes	0.690	0.177	0.87	Yes	1.00	**3.99**
		$U_2 - U_3$			153.49	-562.55	-100	283	-440	-539	-114	108	-323	-561	0.176	0.223	0.40	Yes	0.119	0.147	0.27	Yes	0.765	0.229	1	Yes	0.759	0.128	0.89	Yes	1.00	**4.87**
		$U_3 - U_4$			481.23	-605.10	142	404	-505	-730	-220	-9	-109	-294	0.552	0.223	0.78	Yes	0.379	0.153	0.54	Yes	0.823	0.171	1	Yes	0.816	0.174	0.99	Yes	1.00	**7.57**
		$U_4 - U_5$			579.98	-585.37	241	459	-386	-566	-82	4	-582	513	0.665	0.233	0.90	Yes	0.456	0.159	0.62	Yes	0.796	0.198	1	Yes	0.789	0.135	0.93	Yes	1.00	**9.21**
		$U_5 - U_6$			697.80	-19.87	282	501	-109	3	99	139	-132	428	0.800	0.191	1.00	Yes	0.539	0.126	0.67	Yes	0.027	0.155	0.19	Yes	0.027	0.119	0.15	Yes	1.00	**7.68**
		$U_6 - U_7$			864.94	-----	399	221	4	-286	324	272	-336	619	0.827	0.170	1.00	Yes	0.578	0.117	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.10**
		$U_7 - U_8$			831.45	-----	-796	2137	132	613	360	663	964	863	0.576	0.422	1.00	Yes	0.402	0.288	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.66**
		$U_8 - U_9$			798.17	-----	1036	-131	1504	-1089	253	480	51	-735	0.654	0.343	1.00	Yes	0.447	0.233	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.65**
		$U_9 - U_{10}$			622.77	-361.63	241	250	34	-842	-2	303	278	-831	0.676	0.322	1.00	Yes	0.457	0.216	0.68	Yes	0.466	0.285	0.76	Yes	0.461	0.188	0.65	Yes	1.00	**9.64**
		$U_{10} - U_{11}$			65.96	-616.12	248	-175	163	-933	48	106	-178	-520	0.072	0.293	0.37	Yes	0.048	0.189	0.24	Yes	0.793	0.189	0.99	Yes	0.786	0.209	1.00	Yes	1.00	**4.91**
		$U_{11} - U_{12}$			-----	-900.78	152	-210	-8	-842	13	101	3	-230	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.141	1	Yes	0.845	0.140	0.99	Yes	1.00	**3.66**
		$U_{12} - U_{13}$			-----	-1239.27	-52	-270	-352	-853	82	6	98	-496	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.157	1	Yes	0.828	0.118	0.95	Yes	1.00	**4.19**
		$U_{13} - U_{14}$			-----	-1355.35	-197	-506	-394	-1511	-42	-8	-333	-226	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.212	1	Yes	0.777	0.167	0.95	Yes	1.00	**3.97**
		$U_{14} - U_{15}$			-----	-1429.86	-411	-294	-941	-940	42	-278	-355	-8	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.169	1	Yes	0.820	0.104	0.93	Yes	1.00	**3.82**
		$U_{15} - U_{16}$			-----	-1399.48	-256	-426	-593	-1170	-33	-253	-390	158	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.185	1	Yes	0.802	0.129	0.94	Yes	1.00	**5.21**
		$U_{16} - U_{17}$			-----	-1423.07	-372	-189	-800	-887	-5	-225	-142	373	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.171	1	Yes	0.816	0.098	0.92	Yes	1.00	**6.49**
		$U_{17} - U_{18}$			-----	-1097.49	-576	70	-373	-243	-65	-148	-351	544	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.129	1	Yes	0.859	0.094	0.96	Yes	1.00	**4.28**
		$U_{18} - U_{19}$			-----	-740.93	-566	103	-388	-36	266	-255	112	426	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.155	1	Yes	0.834	0.114	0.95	Yes	1.00	**4.61**
		$U_{19} - U_{20}$			-----	-693.12	-1044	474	-674	-244	-251	-130	42	-236	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.208	1	Yes	0.780	0.210	0.99	Yes	1.00	**14.59**
	Structure 2	$U_0 - U_1$			-----	-582.79	268	-310	670	-1836	74	48	178	-906	-----	-----	-----	-----	-----	-----	-----	-----	0.692	0.186	0.88	Yes	0.688	0.312	1.00	Yes	1.00	**9.99**
		$U_1 - U_2$			-----	-808.21	-150	-320	-317	-1138	-19	19	198	-408	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.209	1	Yes	0.780	0.173	0.96	Yes	1.00	**5.14**
		$U_2 - U_3$			-----	-1130.33	-130	-436	-131	-1476	-33	-63	-221	-661	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.191	1	Yes	0.802	0.150	0.96	Yes	1.00	**4.51**
		$U_3 - U_4$			-----	-1328.74	-535	-553	-908	-1674	-113	-43	-225	-477	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.233	1	Yes	0.757	0.149	0.91	Yes	1.00	**3.85**
		$U_4 - U_5$			-----	-1466.25	-587	-567	-1229	-1768	-120	-91	-129	-670	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.237	1	Yes	0.753	0.147	0.90	Yes	1.00	**4.13**
		$U_5 - U_6$			-----	-1550.99	-579	-17	-1183	-1393	-194	-50	-631	-713	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.196	1	Yes	0.796	0.115	0.92	Yes	1.00	**4.73**
		$U_6 - U_7$			-----	-1328.39	-338	-224	-1026	-1522	-168	-101	-335	-377	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.233	1	Yes	0.756	0.136	0.90	Yes	1.00	**4.48**
		$U_7 - U_8$			-----	-1390.75	-326	-174	-1320	-1251	-78	-173	-435	101	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.196	1	Yes	0.792	0.118	0.91	Yes	1.00	**5.55**
		$U_8 - U_9$			-----	-1177.81	-364	200	-1036	-740	-18	-196	-525	137	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.193	1	Yes	0.799	0.110	0.91	Yes	1.00	**5.37**
		$U_9 - U_{10}$			254.93	-878.77	-110	507	-1016	-410	-124	-240	-603	31	0.187	0.189	0.38	Yes	0.127	0.128	0.26	Yes	0.763	0.233	1	Yes	0.758	0.124	0.89	Yes	1.00	**6.52**
		$U_{10} - U_{11}$			810.83	-655.13	321	602	-1126	-507	-170	-94	-1033	360	0.685	0.285	0.97	Yes	0.466	0.188	0.66	Yes	0.655	0.337	1	Yes	0.651	0.159	0.81	Yes	1.00	**10.03**
		$U_{11} - U_{12}$			-----	-422.63	-3195	1952	-230	-1422	-952	-1463	-970	3253	-----	-----	-----	-----	-----	-----	-----	-----	0.423	0.568	1	Yes	0.420	0.451	0.88	Yes	1.00	**46.00**
		$U_{12} - U_{13}$			1025.44	-----	600	258	188	-1258	463	742	-654	1519	0.692	0.303	1.00	Yes	0.494	0.209	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.63**
		$U_{13} - U_{14}$			1136.89	-----	-1160	3900	-113	1535	517	1032	648	949	0.559	0.432	1.00	Yes	0.396	0.283	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.17**
		$U_{14} - U_{15}$			1230.26	-----	2346	-69	3736	-1638	529	639	560	-193	0.605	0.390	1.00	Yes	0.428	0.255	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.88**
		$U_{15} - U_{16}$			1275.71	-----	129	381	-305	-1484	175	405	-68	-613	0.771	0.221	1.00	Yes	0.549	0.149	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.73**
		$U_{16} - U_{17}$			1024.06	-----	654	202	264	-1195	-29	310	101	-904	0.755	0.245	1.00	Yes	0.502	0.161	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.86**
		$U_{17} - U_{18}$			710.08	-267.49	467	235	332	-1203	-57	275	-288	-510	0.713	0.279	1.00	Yes	0.475	0.185	0.66	Yes	0.318	0.219	0.54	Yes	0.316	0.204	0.53	Yes	1.00	**7.15**
		$U_{18} - U_{19}$			506.71	-640.82	540	126	123	-1211	5	144	-130	-803	0.509	0.323	0.84	Yes	0.334	0.207	0.55	Yes	0.761	0.234	1	Yes	0.757	0.206	0.97	Yes	1.00	**7.40**
		$U_{19} - U_{20}$			335.82	-740.36	315	153	-345	-1087	-48	151	74	-433	0.315	0.233	0.55	Yes	0.209	0.153	0.37	Yes	0.822	0.178	1	Yes	0.817	0.174	1.00	Yes	1.00	**5.74**
		$U_{20} - U_{21}$			84.96	-822.56	-57	48	-293	-1007	-75	-10	-299	-662	0.066	0.218	0.29	Yes	0.046	0.144	0.19	Yes	0.756	0.236	1	Yes	0.751	0.146	0.90	Yes	1.00	**5.39**
		$U_{21} - U_{22}$			76.40	-799.49	-77	-33	-547	-1267	-182	-96	-280	-211	0.059	0.214	0.28	Yes	0.042	0.143	0.19	Yes	0.735	0.263	1	Yes	0.730	0.184	0.92	Yes	1.00	**4.88**
		$U_{22} - U_{23}$			111.57	-831.43	1	-70	-928	-952	-33	-152	-252	196	0.087	0.165	0.26	Yes	0.061	0.111	0.18	Yes	0.764	0.227	1	Yes	0.759	0.138	0.90	Yes	1.00	**5.77**
		$U_{23} - U_{24}$			320.10	-803.37	-63	261	-293	-1053	12	-48	-498	352	0.248	0.207	0.46	Yes	0.174	0.135	0.31	Yes	0.739	0.261	1	Yes	0.733	0.153	0.89	Yes	1.00	**7.52**
		$U_{24} - U_{25}$			550.71	-724.26	312	449	-672	-835	25	-35	-563	581	0.516	0.212	0.73	Yes	0.342	0.139	0.49	Yes	0.804	0.189	1	Yes	0.799	0.134	0.94	Yes	1.00	**8.79**
		$U_{25} - U_{26}$			721.02	-584.69	240	683	-890	-418	22	-36	-850	351	0.724	0.276	1.00	Yes	0.475	0.177	0.66	Yes	0.695	0.211	0.91	Yes	0.691	0.151	0.85	Yes	1.00	**11.24**
		$U_{26} - U_{27}$			6.46	-488.70	-1110	1073	-255	-1307	-727	-352	-1401	2142	0.006	0.536	0.55	Yes	0.004	0.353	0.36	Yes	0.581	0.412	1	Yes	0.577	0.222	0.80	Yes	1.00	**25.14**
		$U_{27} - U_{28}$			919.41	-----	-1003	1760	-327	-452	-115	-461	-457	911	0.677	0.317	1.00	Yes	0.451	0.208	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.98**
		$U_{28} - U_{29}$			1330.69	-----	72	240	-134	-917	5	290	-464	990	0.804	0.188	1.00	Yes	0.572	0.129	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.00**
		$U_{29} - U_{30}$			1130.85	-----	-931	3846	62	1559	567	1053	902	1195	0.556	0.438	1.00	Yes	0.394	0.288	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.72**
		$U_{30} - U_{31}$			1283.54	-----	2364	-204	3451	-1812	591	624	581	-515	0.631	0.362	1.00	Yes	0.447	0.237	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.01**
		$U_{31} - U_{32}$			1176.28	-----	84	344	-553	-1038	203	379	222	-740	0.794	0.201	1.00	Yes	0.566	0.138	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.02**
		$U_{32} - U_{33}$			815.69	-232.45	577	128	417	-1309	10	216	-270	-1008	0.689	0.308	1.00	Yes	0.463	0.205	0.67	Yes	0.232	0.185	0.42	Yes	0.231	0.185	0.42	Yes	1.00	**7.73**
		$U_{33} - U_{34}$			552.18	-786.96	446	123	-83	-1492	-23	203	-111	-653	0.466	0.290	0.76	Yes	0.317	0.189	0.51	Yes	0.787	0.208	1	Yes	0.782	0.211	1.00	Yes	1.00	**7.94**
		$U_{34} - U_{35}$			61.90	-960.03	366	-210	-167	-1345	43	36	150	-539	0.045	0.222	0.27	Yes	0.031	0.150	0.19	Yes	0.833	0.156	0.99	Yes	0.828	0.164	1.00	Yes	1.00	**5.34**
		$U_{35} - U_{36}$			-----	-1183.88	73	-480	-226	-1433	-19	79	-220	-355	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.183	1	Yes	0.803	0.152	0.96	Yes	1.00	**4.21**
		$U_{36} - U_{37}$			-----	-1383.30	-309	-330	-800	-1518	-23	-124	-80	-289	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.199	1	Yes	0.788	0.135	0.93	Yes	1.00	**4.09**
		$U_{37} - U_{38}$			-----	-1405.67	-197	-422	-956	-1476	-94	-198	-326	31	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.191	1	Yes	0.800	0.132	0.94	Yes	1.00	**4.60**
		$U_{38} - U_{39}$			-----	-1554.04	-193	-643	-652	-1756	5	-216	-376	36	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.190	1	Yes	0.798	0.146	0.95	Yes	1.00	**4.16**
		$U_{39} - U_{40}$			-----	-1489.14	-623	-513	-1217	-1683	24	-109	-312	445	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.224	1	Yes	0.765	0.139	0.91	Yes	1.00	**5.63**
		$U_{40} - U_{41}$			-----	-1381.81	-499	-490	-1484	-1320	106	-152	-67	243	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.200	1	Yes	0.787	0.132	0.92	Yes	1.00	**5.42**
		$U_{41} - U_{42}$			-----	-1226.23	-1058	57	-760	-506	111	-153	-163	559	-----	-----	-----	-----	-----	-----	-----	-----	0.875	0.120	1	Yes	0.870	0.108	0.98	Yes	1.00	**5.45**
		$U_{42} - U_{43}$			-----	-870.62	-906	57	-483	-204	56	-367	-235	861	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.150	1	Yes	0.840	0.138	0.98	Yes	1.00	**7.51**
		$U_{43} - U_{44}$			-----	-618.64	-1104	483	-925	-318	-274	-145	639	30	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.257	1	Yes	0.731	0.187	0.92	Yes	1.00	**11.23**
	Structure 3	$U_0 - U_1$			-----	-583.67	383	-307	984	-1681	103	68	42	-1159	-----	-----	-----	-----	-----	-----	-----	-----	0.663	0.258	0.93	Yes	0.657	0.338	1.00	Yes	1.00	**10.81**
		$U_1 - U_2$			-----	-698.11	-80	-229	-77	-796	-20	4	15	-389	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.199	1	Yes	0.785	0.160	0.95	Yes	1.00	**4.33**
		$U_2 - U_3$			-----	-1036.10	-54	-239	-83	-827	-33	-57	149	-688	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.175	1	Yes	0.811	0.134	0.95	Yes	1.00	**4.58**
		$U_3 - U_4$			-----	-1335.47	-220	-372	-401	-1368	-108	-37	-364	-562	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.218	1	Yes	0.766	0.151	0.92	Yes	1.00	**4.56**
		$U_4 - U_5$			-----	-1399.56	-443	-136	-776	-898	-92	-60	-245	-748	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.181	1	Yes	0.802	0.099	0.91	Yes	1.00	**4.41**
		$U_5 - U_6$			-----	-1335.58	-258	-380	-727	-1387	-186	-152	-112	-299	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.217	1	Yes	0.766	0.153	0.92	Yes	1.00	**4.32**
		$U_6 - U_7$			-----	-1383.81	-501	-156	-984	-837	-120	-299	-491	-80	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.191	1	Yes	0.793	0.109	0.91	Yes	1.00	**4.38**
		$U_7 - U_8$			-----	-1232.15	-239	28	-635	-565	-112	-316	-467	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.163	1	Yes	0.823	0.088	0.92	Yes	1.00	**4.91**
		$U_8 - U_9$			-----	-826.43	-153	230	-670	-118	-212	-194	-505	53	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.212	1	Yes	0.775	0.111	0.89	Yes	1.00	**4.30**
		$U_9 - U_{10}$			655.57	-515.63	132	564	-392	-216	33	118	-376	1000	0.711	0.287	1.00	Yes	0.474	0.188	0.67	Yes	0.664	0.200	0.87	Yes	0.658	0.126	0.79	Yes	1.00	**15.07**
		$U_{10} - U_{11}$			384.65	-97.16	-482	724	13	-540	-367	-458	-1317	2580	0.417	0.577	1.00	Yes	0.283	0.387	0.67	Yes	0.125	0.306	0.44	Yes	0.124	0.162	0.29	Yes	1.00	**20.79**
		$U_{11} - U_{12}$			732.81	-----	-847	1851	-56	646	225	456	704	605	0.600	0.397	1.00	Yes	0.411	0.270	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.98**
		$U_{12} - U_{13}$			982.66	-----	1192	-2	1716	-918	26	495	-57	-559	0.681	0.317	1.00	Yes	0.475	0.216	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.49**
		$U_{13} - U_{14}$			853.22	-----	225	368	-8	-541	-54	419	-67	-492	0.816	0.183	1.00	Yes	0.570	0.126	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.14**
		$U_{14} - U_{15}$			579.19	-445.20	428	198	100	-770	-55	241	181	-860	0.664	0.328	1.00	Yes	0.448	0.217	0.67	Yes	0.606	0.262	0.87	Yes	0.600	0.183	0.79	Yes	1.00	**7.40**
		$U_{15} - U_{16}$			290.24	-584.98	261	114	-90	-886	-75	194	-123	203	0.333	0.245	0.58	Yes	0.228	0.168	0.40	Yes	0.796	0.172	0.97	Yes	0.789	0.211	1.00	Yes	1.00	**5.96**
		$U_{16} - U_{17}$			286.33	-587.73	311	29	-124	-833	173	-73	75	324	0.328	0.253	0.59	Yes	0.225	0.173	0.40	Yes	0.800	0.143	0.95	Yes	0.793	0.198	1.00	Yes	1.00	**5.98**
		$U_{17} - U_{18}$			90.17	-581.52	225	-172	-388	-709	71	36	-252	11	0.103	0.211	0.32	Yes	0.070	0.138	0.21	Yes	0.791	0.207	1	Yes	0.784	0.169	0.96	Yes	1.00	**5.49**
		$U_{18} - U_{19}$			-----	-506.33	-78	-63	-505	-322	-343	831	-232	906	-----	-----	-----	-----	-----	-----	-----	-----	0.689	0.306	1	Yes	0.683	0.120	0.81	Yes	1.00	**7.23**
		$U_{19} - U_{20}$			-----	-535.48	-397	-57	-607	-556	-173	-88	670	-207	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.265	1	Yes	0.722	0.144	0.87	Yes	1.00	**8.03**

Moment (End) Al Operating

Operating Loads - 3F1

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

DL Factor: 1.300 LL Factor: 1.300 Pedestrian: 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 - Lower Chord	Structure 1	L_0 - L_1	25.31	-65.08	-171	35	682	-1269	51	188	-731	-2687	0.039	0.958	1.00	Yes	0.023	0.569	0.60	Yes	0.118	0.789	0.91	Yes	0.117	0.381	0.50	Yes	1.00	**15.12**
		L_1 - L_2	407.53	-21.02	-9	23	219	-924	360	-162	-338	457	0.624	0.376	1.00	Yes	0.381	0.249	0.63	Yes	0.038	0.215	0.26	Yes	0.038	0.277	0.32	Yes	1.00	**6.63**
		L_2 - L_3	614.85	-114.82	-35	71	-451	-722	-187	130	255	-720	0.707	0.290	1.00	Yes	0.409	0.171	0.59	Yes	0.157	0.260	0.42	Yes	0.155	0.174	0.33	Yes	1.00	**6.07**
		L_3 - L_4	619.18	-277.43	11	333	-393	-719	289	-230	-689	-86	0.712	0.284	1.00	Yes	0.423	0.179	0.61	Yes	0.379	0.220	0.6	Yes	0.375	0.174	0.55	Yes	1.00	**6.57**
		L_4 - L_5	36.51	-553.11	98	465	-291	66	-70	197	-33	-668	0.047	0.242	0.29	Yes	0.028	0.153	0.19	Yes	0.850	0.147	1	Yes	0.843	0.123	0.97	Yes	1.00	**4.64**
		L_5 - L_6	-----	-748.19	124	589	-141	178	157	-245	-88	-183	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.121	1	Yes	0.863	0.130	1.00	Yes	1.00	**4.54**
		L_6 - L_7	-----	-1028.65	-474	553	-66	-606	573	1194	-684	-1529	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.153	1	Yes	0.828	0.095	0.93	Yes	1.00	**11.17**
		L_7 - L_8	-----	-1284.45	-74	1101	-21	633	295	407	418	190	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.172	1	Yes	0.813	0.146	0.96	Yes	1.00	**4.74**
		L_8 - L_9	-----	-1124.50	987	5	1266	-271	171	319	286	-162	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.278	1	Yes	0.712	0.168	0.88	Yes	1.00	**5.03**
		L_9 - L_{10}	-----	-963.65	168	86	565	-939	365	-259	-174	472	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.209	1	Yes	0.776	0.148	0.93	Yes	1.00	**8.25**
		L_{10} - L_{11}	9.99	-519.16	480	-64	310	-757	-275	48	69	-770	0.013	0.335	0.35	Yes	0.008	0.199	0.21	Yes	0.798	0.136	0.94	Yes	0.791	0.201	1.00	Yes	1.00	**8.08**
		L_{11} - L_{12}	518.36	-126.20	368	-225	361	-883	135	-94	-396	500	0.671	0.321	1.00	Yes	0.403	0.208	0.62	Yes	0.194	0.142	0.34	Yes	0.192	0.234	0.43	Yes	1.00	**6.21**
		L_{12} - L_{13}	1010.94	-----	62	-153	-335	-674	-161	120	-58	-667	0.798	0.197	1.00	Yes	0.510	0.120	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.67**
		L_{13} - L_{14}	1261.67	-----	208	-507	330	-1677	148	15	-177	240	0.742	0.251	1.00	Yes	0.481	0.153	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.27**
		L_{14} - L_{15}	1519.43	-----	-571	-152	-1349	-865	-149	162	-379	-1271	0.742	0.252	1.00	Yes	0.482	0.155	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.90**
		L_{15} - L_{16}	1562.76	-----	-306	-372	-1042	-1399	105	-140	-885	-193	0.764	0.231	1.00	Yes	0.490	0.137	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.92**
		L_{16} - L_{17}	1138.80	-----	-1063	236	-1010	-356	574	463	-438	-1338	0.720	0.275	1.00	Yes	0.467	0.172	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.64**
		L_{17} - L_{18}	886.97	-----	-619	216	-647	-241	120	-80	-792	-310	0.772	0.226	1.00	Yes	0.494	0.139	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.46**
		L_{18} - L_{19}	425.61	-----	-939	567	-345	150	176	294	-159	-186	0.651	0.343	1.00	Yes	0.441	0.215	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.94**
		L_{19} - L_{20}	42.56	-322.11	-1101	648	-183	67	80	18	145	33	0.072	0.393	0.47	Yes	0.044	0.236	0.29	Yes	0.646	0.221	0.87	Yes	0.641	0.359	1.00	Yes	1.00	**13.03**
	Structure 2	L_0 - L_1	74.00	-189.96	-72	-107	717	-2463	37	130	-711	-2471	0.090	0.907	1.00	Yes	0.053	0.567	0.63	Yes	0.273	0.670	0.95	Yes	0.271	0.501	0.78	Yes	1.00	**19.91**
		L_1 - L_2	488.14	-----	193	-343	457	-1391	154	-60	-747	708	0.593	0.406	1.00	Yes	0.353	0.257	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.68**
		L_2 - L_3	954.93	-----	-42	-278	-154	-1016	-74	155	-203	-855	0.753	0.238	1.00	Yes	0.494	0.146	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.82**
		L_3 - L_4	1240.93	-----	-8	-518	-252	-1531	179	4	-1137	224	0.729	0.270	1.00	Yes	0.491	0.171	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.69**
		L_4 - L_5	1708.84	-----	-439	-397	-1078	-1599	-81	162	338	-699	0.797	0.198	1.00	Yes	0.527	0.120	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.85**
		L_5 - L_6	1759.12	-----	-222	-504	-981	-2069	189	-89	-934	58	0.755	0.242	1.00	Yes	0.507	0.150	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.28**
		L_6 - L_7	1829.51	-----	-545	-179	-1720	-1842	-161	217	206	-978	0.774	0.222	1.00	Yes	0.515	0.134	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.18**
		L_7 - L_8	1435.10	-123.74	-255	472	-1197	-1049	235	-135	-451	279	0.823	0.169	1.00	Yes	0.541	0.101	0.65	Yes	0.084	0.132	0.22	Yes	0.083	0.132	0.22	Yes	1.00	**8.03**
		L_8 - L_9	968.26	-339.72	-121	579	-1038	-151	-85	174	-356	-1864	0.677	0.316	1.00	Yes	0.456	0.204	0.67	Yes	0.282	0.260	0.55	Yes	0.280	0.140	0.42	Yes	1.00	**7.31**
		L_9 - L_{10}	607.20	-785.15	-119	852	-934	-245	148	-139	-1048	-366	0.542	0.276	0.82	Yes	0.316	0.167	0.49	Yes	0.830	0.166	1	Yes	0.824	0.149	0.98	Yes	1.00	**9.10**
		L_{10} - L_{11}	361.68	-----	-1698	1278	-979	-205	1190	818	-423	-2538	0.361	0.639	1.00	Yes	0.212	0.388	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**20.91**
		L_{11} - L_{12}	-----	-1046.97	-116	1020	-368	576	77	-348	-156	-192	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.111	0.98	Yes	0.859	0.139	1.00	Yes	1.00	**4.39**
		L_{12} - L_{13}	-----	-1268.77	-384	-109	-223	-1364	-73	435	-417	-812	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.219	1	Yes	0.765	0.137	0.91	Yes	1.00	**8.46**
		L_{13} - L_{14}	-----	-1509.32	-1151	2726	-452	1344	117	311	633	555	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.199	0.97	Yes	0.759	0.238	1.00	Yes	1.00	**7.16**
		L_{14} - L_{15}	-----	-1276.77	1538	-475	2755	-1237	417	415	-169	-390	-----	-----	-----	-----	-----	-----	-----	-----	0.648	0.348	1	Yes	0.642	0.241	0.89	Yes	1.00	**4.73**
		L_{15} - L_{16}	-----	-1388.24	-940	394	-1128	-1239	211	-343	-1239	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.154	1	Yes	0.830	0.123	0.96	Yes	1.00	**11.03**
		L_{16} - L_{17}	-----	-1135.01	1173	55	914	-982	-408	-6	-9	-1068	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.164	1	Yes	0.827	0.145	0.98	Yes	1.00	**9.01**
		L_{17} - L_{18}	-----	-811.17	518	173	768	-906	127	-194	27	675	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.096	0.96	Yes	0.852	0.145	1.00	Yes	1.00	**6.78**
		L_{18} - L_{19}	101.57	-633.60	711	31	341	-799	-210	61	268	-534	0.115	0.236	0.36	Yes	0.066	0.139	0.21	Yes	0.850	0.126	0.98	Yes	0.844	0.154	1.00	Yes	1.00	**7.29**
		L_{19} - L_{20}	548.73	-473.18	512	131	247	-1271	150	-176	-844	563	0.622	0.374	1.00	Yes	0.368	0.234	0.61	Yes	0.635	0.176	0.82	Yes	0.631	0.245	0.88	Yes	1.00	**8.49**
		L_{20} - L_{21}	890.45	-253.63	371	-92	-680	-1214	-181	71	-163	-1048	0.710	0.290	1.00	Yes	0.466	0.178	0.65	Yes	0.240	0.201	0.45	Yes	0.238	0.177	0.42	Yes	1.00	**7.90**
		L_{21} - L_{22}	825.55	-31.68	-26	-201	-307	-2170	136	-151	-191	128	0.658	0.337	1.00	Yes	0.440	0.211	0.66	Yes	0.030	0.281	0.32	Yes	0.030	0.317	0.35	Yes	1.00	**6.89**
		L_{22} - L_{23}	883.31	-103.14	-280	141	-1137	-966	-50	212	-203	-1123	0.704	0.287	1.00	Yes	0.471	0.184	0.66	Yes	0.097	0.212	0.31	Yes	0.097	0.166	0.27	Yes	1.00	**7.32**
		L_{23} - L_{24}	932.49	-365.91	-44	492	-1028	-1180	166	-140	-768	1	0.744	0.255	1.00	Yes	0.488	0.156	0.65	Yes	0.346	0.170	0.52	Yes	0.343	0.172	0.52	Yes	1.00	**10.03**
		L_{24} - L_{25}	506.51	-483.70	155	498	-892	-212	-101	143	38	-1609	0.574	0.418	1.00	Yes	0.339	0.256	0.60	Yes	0.649	0.180	0.83	Yes	0.645	0.172	0.82	Yes	1.00	**8.62**
		L_{25} - L_{26}	6.55	-638.54	28	726	-390	-39	102	-166	-310	-48	0.007	0.188	0.20	Yes	0.004	0.111	0.12	Yes	0.856	0.112	0.97	Yes	0.851	0.140	1.00	Yes	1.00	**7.31**
		L_{26} - L_{27}	-----	-689.75	-921	980	-592	-63	763	585	-411	-1625	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.265	1	Yes	0.724	0.157	0.89	Yes	1.00	**10.93**
		L_{27} - L_{28}	-----	-1139.15	-304	1306	-427	583	332	-208	-353	-138	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.130	0.97	Yes	0.830	0.161	1.00	Yes	1.00	**7.13**
		L_{28} - L_{29}	-----	-1394.60	27	-346	-218	-1489	-115	413	-343	-727	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.154	1	Yes	0.834	0.148	0.99	Yes	1.00	**6.81**
		L_{29} - L_{30}	-----	-1510.23	-1063	2670	-590	1376	408	422	701	808	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.202	0.97	Yes	0.760	0.233	1.00	Yes	1.00	**7.25**
		L_{30} - L_{31}	-----	-1314.91	1755	-540	2520	-971	473	423	161	22	-----	-----	-----	-----	-----	-----	-----	-----	0.668	0.325	1	Yes	0.662	0.220	0.89	Yes	1.00	**2.79**
		L_{31} - L_{32}	-----	-1401.34	-507	73	-457	-1000	239	-255	21	407	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.153	1	Yes	0.838	0.099	0.94	Yes	1.00	**6.26**
		L_{32} - L_{33}	-----	-1030.81	1096	-37	938	-807	-391	-8	183	-374	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.118	0.98	Yes	0.845	0.149	1.00	Yes	1.00	**6.42**
		L_{33} - L_{34}	-----	-714.59	575	-21	663	-887	100	-129	-92	680	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.102	0.95	Yes	0.839	0.155	1.00	Yes	1.00	**5.73**
		L_{34} - L_{35}	585.21	-721.48	814	-113	203	-1477	-212	99	329	-1510	0.522	0.418	0.95	Yes	0.304	0.254	0.56	Yes	0.763	0.174	0.94	Yes	0.758	0.236	1.00	Yes	1.00	**10.38**
		L_{35} - L_{36}	929.81	-245.58	553	-185	179	-1387	163	-117	-1638	284	0.650	0.341	1.00	Yes	0.438	0.219	0.66	Yes	0.204	0.174	0.38	Yes	0.202	0.187	0.39	Yes	1.00	**7.72**
		L_{36} - L_{37}	1275.27	-----	295	-263	-264	-1788	-204	152	323	-864	0.731	0.268	1.00	Yes	0.480	0.161	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.08**
		L_{37} - L_{38}	1695.49	-----	-342	-668	-1351	-2363	104	-169	-1199	0	0.718	0.282	1.00	Yes	0.477	0.169	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.54**
		L_{38} - L_{39}	1723.26	-----	-616	-224	-1890	-1493	-101	171	-346	-1398	0.739	0.255	1.00	Yes	0.496	0.160	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.37**
		L_{39} - L_{40}	1661.74	-----	-445	-322	-1452	-1823	123	-128	-680	68	0.775	0.218	1.00	Yes	0.513	0.131	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.76**
		L_{40} - L_{41}	1265.90	-----	-1239	214	-1215	-548	603	535	-293	-1165	0.751	0.241	1.00	Yes	0.507	0.156	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.99**
		L_{41} - L_{42}	985.09	-----	-899	315	-829	-490	409	0	-738	-197	0.787	0.212	1.00	Yes	0.517	0.127	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.19**
		L_{42} - L_{43}	496.86	-----	-1145	575	-713	43	505	528	22	-966	0.603	0.392	1.00	Yes	0.359	0.246	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.60**
		L_{43} - L_{44}	106.96	-292.03	-2818	1193	-40	-84	1367	398	-63	-18	0.130	0.798	0.93	Yes	0.077	0.506	0.59	Yes	0.420	0.532	0.96	Yes	0.417	0.573	1.00	Yes	1.00	**34.02**
	Structure 3	L_0 - L_1	27.56	-293.32	15	-142	649	-1316	26	117	-317	-1435	0.042	0.693	0.74	Yes	0.026	0.452	0.48	Yes	0.533	0.459	1	Yes	0.528	0.395	0.93	Yes	1.00	**12.34**
		L_1 - L_2	285.38	-----	214	-248	672	-1251	153	-29	-15	896	0.437	0.561	1.00	Yes	0.295	0.358	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.35**
		L_2 - L_3	829.87	-----	-8	-215	49	-836	-59	168	-26	-882	0.723	0.274	1.00	Yes	0.463	0.168	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.52**
		L_3 - L_4	1121.68	-----	30	-411	-54	-1334	189	8	-1063	374	0.709	0.291	1.00	Yes	0.460	0.181	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.90**
		L_4 - L_5	1596.12	-----	-387	-230	-973	-1273	-50	212	299	-950	0.780	0.220	1.00	Yes	0.501	0.132	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.55**
		L_5 - L_6	1476.77	-----	-141	-449	-435	-1872	251	-42	-717	183	0.721	0.276	1.00	Yes	0.469	0.168	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.56**
		L_6 - L_7	1179.38	-----	-1418	356	-1153	-354	585	321	-266	-1297	0.694	0.303	1.00	Yes	0.449	0.188	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.71**
		L_7 - L_8	1005.93	-37.05	-98	173	-624	-534	142	-166	-763	-265	0.794	0.200	1.00	Yes	0.508	0.122	0.63	Yes	0.035	0.177	0.22	Yes	0.034	0.111	0.15	Yes	1.00	**7.67**
		L_8 - L_9	466.22	-----	-767	480	-515	-33	383	354	-102	-1048	0.604	0.386	1.00	Yes	0.362	0.245	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.38**
		L_9 - L_{10}	-----	-565.98	-64	519	-341	57	140	-159	-176	-157	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.070	0.94	Yes	0.862	0.137	1.00	Yes	1.00	**6.93**
		L_{10} - L_{11}	-----	-976.99	-601	795	-143	-384	250	853	-575	-1674	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.200	1	Yes	0.786	0.125	0.92	Yes	1.00	**12.10**
		L_{11} - L_{12}	-----	-1252.77	-106	1181	-14	614	286	525	459	88	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.189	1	Yes	0.793	0.156	0.95	Yes	1.00	**6.32**
		L_{12} - L_{13}	-----	-1108.16	920	-14	1271	-214	-124	63	-226	-437	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.285	1	Yes	0.702	0.168	0.88	Yes	1.00	**3.75**
		L_{13} - L_{14}	-----	-1079.50	49	200	381	-677	215	-249	-55	280	-----	-----	-----	-----	-----	-----	-----	-----	0.879	0.118	1	Yes	0.869	0.106	0.98	Yes	1.00	**6.04**
		L_{14} - L_{15}	-----	-714.85	489	65	246	-398	-237	90	-165	-490	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.152	1	Yes	0.838	0.111	0.95	Yes	1.00	**4.24**
		L_{15} - L_{16}	116.81	-517.16	413	54	367	-784	234	-186	-309	165	0.151	0.263	0.42	Yes	0.091	0.171	0.27	Yes	0.795	0.177	0.98	Yes	0.788	0.208	1.00	Yes	1.00	**4.55**
		L_{16} - L_{17}	584.97	-----	-20	-74	-375	-864	-93	413	-204	-703	0.673	0.322	1.00	Yes	0.400	0.204	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.05**
		L_{17} - L_{18}	642.47	-73.68	-7	-117	-782	-812	115	-114	-369	19	0.739	0.255	1.00	Yes	0.428	0.152	0.58	Yes	0.101	0.295	0.4	Yes	0.100	0.196	0.30	Yes	1.00	**5.99**
		L_{18} - L_{19}	393.05	-----	-653	126	-286	-221	426	583	77	-941	0.602	0.398	1.00	Yes	0.367	0.257	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.50**
		L_{19} - L_{20}	-----	-135.86	-2503	2405	463	-570	963	263	293	80	-----	-----	-----	-----	-----	-----	-----	-----	0.247	0.545	0.8	Yes	0.245	0.751	1.00	Yes	1.00	**56.93**

Moment (End) AI Operating

Operating Loads - 3F1

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	$U_0 - L_0$			-----	-294.11	-108	179	-12	51	-834	-268	205	66	-----	-----	-----	-----	-----	-----	-----	-----	0.657	0.343	1	Yes	0.622	0.229	0.86	Yes	1.00	**2.42**
		$U_1 - L_1$			21.07	-317.24	-254	240	29	-21	-352	-92	568	205	0.038	0.490	0.53	Yes	0.021	0.269	0.30	Yes	0.693	0.232	0.93	Yes	0.671	0.325	1.00	Yes	1.00	**5.81**
		$U_2 - L_2$			107.27	-250.38	-188	233	98	-108	-1241	-429	778	226	0.193	0.657	0.85	Yes	0.106	0.361	0.47	Yes	0.547	0.451	1	Yes	0.530	0.298	0.83	Yes	1.00	**8.43**
		$U_3 - L_3$			187.00	-129.35	-88	115	205	-196	-691	-14	-1362	-696	0.336	0.657	1.00	Yes	0.185	0.361	0.55	Yes	0.283	0.419	0.71	Yes	0.274	0.262	0.54	Yes	1.00	**9.68**
		$U_4 - L_4$			-----	-204.81	14	-27	286	-279	796	62	-1692	-796	-----	-----	-----	-----	-----	-----	-----	-----	0.450	0.546	1	Yes	0.433	0.365	0.80	Yes	1.00	**10.17**
		$U_5 - L_5$			-----	-370.51	78	-85	192	-214	1017	573	207	266	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.322	1	Yes	0.639	0.217	0.86	Yes	1.00	**4.36**
		$U_6 - L_6$			-----	-379.49	84	-76	185	-189	1245	608	1137	555	-----	-----	-----	-----	-----	-----	-----	-----	0.575	0.423	1	Yes	0.544	0.166	0.71	Yes	1.00	**2.77**
		$U_7 - L_7$			-----	-321.23	124	-139	220	-241	975	235	568	179	-----	-----	-----	-----	-----	-----	-----	-----	0.537	0.458	1	Yes	0.496	0.237	0.74	Yes	1.00	**1.96**
		$U_8 - L_8$			-----	-1181.78	-378	448	229	-281	-924	-461	643	80	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.141	1	Yes	0.822	0.084	0.91	Yes	1.00	**6.15**
		$U_9 - L_9$			-----	-660.85	-362	404	-232	259	-546	-103	643	307	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.208	1	Yes	0.746	0.225	0.98	Yes	1.00	**3.08**
		$U_{10} - L_{10}$			-----	-766.01	-424	460	-166	144	305	212	707	314	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.192	0.99	Yes	0.756	0.238	1.00	Yes	1.00	**6.19**
		$U_{11} - L_{11}$			-----	-662.12	-373	483	-167	217	-613	0	632	361	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.179	0.98	Yes	0.771	0.224	1.00	Yes	1.00	**5.98**
		$U_{12} - L_{12}$			-----	-478.22	-270	283	-126	134	-1090	-257	383	296	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.304	1	Yes	0.656	0.242	0.90	Yes	1.00	**4.90**
		$U_{13} - L_{13}$			-----	-366.26	-233	257	-63	83	-19	165	205	132	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.150	0.9	Yes	0.702	0.294	1.00	Yes	1.00	**5.37**
		$U_{14} - L_{14}$			-----	-196.70	-248	263	107	-111	-1318	-801	-750	-511	-----	-----	-----	-----	-----	-----	-----	-----	0.439	0.555	1	Yes	0.416	0.336	0.76	Yes	1.00	**12.88**
		$U_{15} - L_{15}$			76.07	-311.93	-66	56	242	-264	318	-335	-643	-125	0.137	0.523	0.66	Yes	0.075	0.288	0.37	Yes	0.699	0.268	0.97	Yes	0.660	0.337	1.00	Yes	1.00	**8.89**
		$U_{16} - L_{16}$			-----	-321.95	45	-50	234	-244	472	107	-637	-118	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.264	0.99	Yes	0.681	0.312	1.00	Yes	1.00	**6.03**
		$U_{17} - L_{17}$			-----	-419.92	80	-93	205	-223	505	201	-25	72	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.213	1	Yes	0.724	0.227	0.96	Yes	1.00	**4.17**
		$U_{18} - L_{18}$			-----	-432.03	190	-196	354	-365	692	180	697	170	-----	-----	-----	-----	-----	-----	-----	-----	0.633	0.366	1	Yes	0.601	0.207	0.81	Yes	1.00	**2.80**
		$U_{19} - L_{19}$			-----	-523.84	197	-210	387	-404	605	122	686	136	-----	-----	-----	-----	-----	-----	-----	-----	0.654	0.340	1	Yes	0.610	0.188	0.80	Yes	1.00	**3.33**
		$U_{20} - L_{20}$			-----	-423.91	239	-288	319	-380	440	58	426	56	-----	-----	-----	-----	-----	-----	-----	-----	0.619	0.378	1	Yes	0.542	0.201	0.75	Yes	1.00	**1.54**
	Structure 2	$U_0 - L_0$			-----	-643.42	-328	487	-159	265	-828	-140	45	8	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.228	1	Yes	0.690	0.206	0.90	Yes	1.00	**3.46**
		$U_1 - L_1$			-----	-710.26	-548	549	-207	214	-131	21	628	161	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.147	0.96	Yes	0.761	0.233	1.00	Yes	1.00	**5.52**
		$U_2 - L_2$			-----	-588.48	-454	470	-155	171	-87	181	622	285	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.178	0.97	Yes	0.750	0.240	1.00	Yes	1.00	**4.93**
		$U_3 - L_3$			-----	-458.26	-214	231	-77	88	-212	174	544	265	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.213	1	Yes	0.719	0.211	0.93	Yes	1.00	**4.07**
		$U_4 - L_4$			-----	-321.53	-199	207	-19	29	-76	139	561	234	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.263	1	Yes	0.680	0.264	0.95	Yes	1.00	**5.58**
		$U_5 - L_5$			83.42	-307.85	-202	229	93	-71	-610	33	-290	-227	0.150	0.469	0.62	Yes	0.083	0.258	0.35	Yes	0.695	0.301	1	Yes	0.651	0.293	0.95	Yes	1.00	**9.29**
		$U_6 - L_6$			293.74	-63.91	-89	94	165	-169	-858	-93	-210	-228	0.528	0.465	1.00	Yes	0.291	0.256	0.55	Yes	0.144	0.268	0.42	Yes	0.135	0.216	0.36	Yes	1.00	**8.22**
		$U_7 - L_7$			-----	-134.94	-1	-6	358	-413	-191	-551	591	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.305	0.692	1	Yes	0.286	0.528	0.82	Yes	1.00	**14.06**
		$U_8 - L_8$			-----	-472.25	152	-170	336	-358	437	110	-571	-130	-----	-----	-----	-----	-----	-----	-----	-----	0.685	0.181	0.87	Yes	0.680	0.313	1.00	Yes	1.00	**5.06**
		$U_9 - L_9$			-----	-694.13	270	-277	581	-595	791	373	-544	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.168	0.95	Yes	0.744	0.252	1.00	Yes	1.00	**6.54**
		$U_{10} - L_{10}$			-----	-751.99	233	-234	512	-534	1168	683	-19	220	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.254	1	Yes	0.703	0.236	0.94	Yes	1.00	**6.65**
		$U_{11} - L_{11}$			-----	-735.28	227	-221	450	-458	1164	653	-54	373	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.255	1	Yes	0.687	0.202	0.89	Yes	1.00	**5.42**
		$U_{12} - L_{12}$			-----	-726.38	187	-169	420	-414	1468	642	677	429	-----	-----	-----	-----	-----	-----	-----	-----	0.697	0.302	1	Yes	0.630	0.180	0.81	Yes	1.00	**5.43**
		$U_{13} - L_{13}$			-----	-626.15	225	-223	498	-485	1151	309	509	196	-----	-----	-----	-----	-----	-----	-----	-----	0.698	0.297	1	Yes	0.604	0.238	0.85	Yes	1.00	**5.66**
		$U_{14} - L_{14}$			-----	-1220.35	-719	667	423	-407	-704	-428	590	-73	-----	-----	-----	-----	-----	-----	-----	-----	0.892	0.101	1	Yes	0.809	0.127	0.94	Yes	1.00	**10.22**
		$U_{15} - L_{15}$			-----	-657.32	-580	561	-262	256	-567	-11	951	46	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.265	1	Yes	0.634	0.277	0.92	Yes	1.00	**5.63**
		$U_{16} - L_{16}$			-----	-698.79	-577	563	-202	171	359	188	818	179	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.186	1	Yes	0.749	0.245	1.00	Yes	1.00	**5.71**
		$U_{17} - L_{17}$			-----	-641.78	-537	539	-197	198	-203	110	594	194	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.157	0.95	Yes	0.747	0.250	1.00	Yes	1.00	**5.63**
		$U_{18} - L_{18}$			-----	-580.90	-470	498	-160	166	-604	-25	621	215	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.168	0.95	Yes	0.740	0.255	1.00	Yes	1.00	**5.44**
		$U_{19} - L_{19}$			-----	-477.43	-290	288	-88	89	-158	121	519	195	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.169	0.89	Yes	0.713	0.279	1.00	Yes	1.00	**5.35**
		$U_{20} - L_{20}$			-----	-378.03	-221	232	-39	43	-244	5	522	182	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.224	1	Yes	0.724	0.265	0.99	Yes	1.00	**5.94**
		$U_{21} - L_{21}$			28.20	-308.37	-219	236	22	-13	-698	2	36	-110	0.051	0.504	0.56	Yes	0.028	0.277	0.31	Yes	0.697	0.295	1	Yes	0.652	0.302	0.96	Yes	1.00	**7.22**
		$U_{22} - L_{22}$			-----	-260.32	-244	264	318	-344	664	-470	-180	-424	-----	-----	-----	-----	-----	-----	-----	-----	0.586	0.383	0.97	Yes	0.551	0.439	1.00	Yes	1.00	**19.17**
		$U_{23} - L_{23}$			-----	-319.96	16	-19	226	-242	526	166	-632	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.277	1	Yes	0.677	0.309	0.99	Yes	1.00	**6.16**
		$U_{24} - L_{24}$			-----	-371.68	55	-59	224	-234	584	204	-159	17	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.237	1	Yes	0.712	0.267	0.98	Yes	1.00	**5.03**
		$U_{25} - L_{25}$			-----	-472.16	101	-102	299	-296	589	224	56	156	-----	-----	-----	-----	-----	-----	-----	-----	0.710	0.183	0.9	Yes	0.705	0.287	1.00	Yes	1.00	**5.06**
		$U_{26} - L_{26}$			-----	-572.48	171	-178	486	-515	708	302	-432	119	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.189	0.96	Yes	0.729	0.263	1.00	Yes	1.00	**5.72**
		$U_{27} - L_{27}$			-----	-633.44	203	-206	553	-559	772	315	110	372	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.194	0.98	Yes	0.737	0.259	1.00	Yes	1.00	**6.27**
		$U_{28} - L_{28}$			-----	-616.07	157	-131	469	-452	1623	547	891	407	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.287	1	Yes	0.660	0.199	0.86	Yes	1.00	**5.98**
		$U_{29} - L_{29}$			-----	-625.06	156	-161	571	-563	1125	201	-375	100	-----	-----	-----	-----	-----	-----	-----	-----	0.697	0.294	1	Yes	0.603	0.273	0.88	Yes	1.00	**8.06**
		$U_{30} - L_{30}$			-----	-1188.67	-558	495	288	-300	-555	-243	253	-206	-----	-----	-----	-----	-----	-----	-----	-----	0.903	0.092	1	Yes	0.818	0.103	0.93	Yes	1.00	**9.33**
		$U_{31} - L_{31}$			-----	-715.15	-548	528	-305	299	-99	26	514	96	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.199	1	Yes	0.689	0.262	0.96	Yes	1.00	**4.83**
		$U_{32} - L_{32}$			-----	-851.04	-476	469	-218	191	-255	18	615	190	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.175	1	Yes	0.738	0.204	0.95	Yes	1.00	**5.67**
		$U_{33} - L_{33}$			-----	-807.36	-486	488	-248	232	-689	52	547	241	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.179	1	Yes	0.755	0.215	0.98	Yes	1.00	**5.73**
		$U_{34} - L_{34}$			-----	-807.81	-532	553	-243	240	-478	-4	490	221	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.147	0.95	Yes	0.755	0.244	1.00	Yes	1.00	**7.11**
		$U_{35} - L_{35}$			-----	-694.14	-572	590	-254	269	-531	30	630	376	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.152	0.93	Yes	0.744	0.250	1.00	Yes	1.00	**6.67**
		$U_{36} - L_{36}$			-----	-476.45	-329	352	-134	156	-605	-8	275	189	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.200	0.9	Yes	0.686	0.308	1.00	Yes	1.00	**5.42**
		$U_{37} - L_{37}$			-----	-191.96	-382	434	51	-53	-1082	-845	-610	-393	-----	-----	-----	-----	-----	-----	-----	-----	0.434	0.559	1	Yes	0.406	0.555	0.97	Yes	1.00	**18.99**
		$U_{38} - L_{38}$			296.21	-148.83	-194	192	156	-168	-418	-753	-661	-232	0.533	0.466	1.00	Yes	0.293	0.256	0.55	Yes	0.335	0.229	0.57	Yes	0.315	0.247	0.57	Yes	1.00	**10.71**
		$U_{39} - L_{39}$			53.98	-307.22	-53	41	206	-229	334	-133	-726	-71	0.097	0.502	0.60	Yes	0.053	0.276	0.33	Yes	0.694	0.297	1	Yes	0.650	0.292	0.95	Yes	1.00	**7.85**
		$U_{40} - L_{40}$			-----	-324.33	37	-46	215	-219	594	172	28	30	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.256	1	Yes	0.686	0.280	0.97	Yes	1.00	**5.35**
		$U_{41} - L_{41}$			-----	-460.93	88	-97	230	-244	578	193	-188	35	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.211	1	Yes	0.723	0.222	0.95	Yes	1.00	**4.53**
		$U_{42} - L_{42}$			-----	-580.79	171	-181	494	-501	670	173	-34	31	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.173	0.96	Yes	0.740	0.256	1.00	Yes	1.00	**6.04**
		$U_{43} - L_{43}$			-----	-708.38	189	-207	535	-557	622	187	145	127	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.154	0.97	Yes	0.759	0.236	1.00	Yes	1.00	**7.45**
		$U_{44} - L_{44}$			-----	-614.81	262	-325	441	-558	570	97	755	128	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.257	1	Yes	0.659	0.237	0.90	Yes	1.00	**3.73**
	Structure 3	$U_0 - L_0$			-----	-510.82	-269	369	-134	232	-834	-109	105	14	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.267	1	Yes	0.640	0.189	0.83	Yes	1.00	**2.32**
		$U_1 - L_1$			-----	-652.94	-504	502	-207	207	-602	37	620	144	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.161	0.98	Yes	0.760	0.234	1.00	Yes	1.00	**5.13**
		$U_2 - L_2$			-----	-543.34	-405	422	-156	168	-33	197	660	305	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.196	1	Yes	0.756	0.239	1.00	Yes	1.00	**4.81**
		$U_3 - L_3$			-----	-408.32	-191	210	-69	84	-61	204	563	270	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.233	1	Yes	0.704	0.213	0.92	Yes	1.00	**3.70**
		$U_4 - L_4$			-----	-307.16	-207	219	-35	41	-718	49	600	224	-----	-----	-----	-----	-----	-----	-----	-----	0.692	0.300	1	Yes	0.650	0.280	0.93	Yes	1.00	**5.46**
		$U_5 - L_5$			113.14	-307.09	-247	270	83	-75	-591	15	-142	-109	0.203	0.516	0.72	Yes	0.112	0.284	0.40	Yes	0.688	0.297	0.99	Yes	0.650	0.345	1.00	Yes	1.00	**10.30**
		$U_6 - L_6$			-----	-157.62	-94	93	313	-341	-790	-756	703	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.352	0.647	1	Yes	0.334	0.436	0.77	Yes	1.00	**13.24**
		$U_7 - L_7$			-----	-366.24	77	-94	235	-258	430	23	-206	-21	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.197	0.94	Yes	0.702	0.295	1.00	Yes	1.00	**4.70**
		$U_8 - L_8$			-----	-511.82	129	-131	331	-334	857	314	-76	35	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.252	1	Yes	0.702	0.285	0.99	Yes	1.00	**6.04**
		$U_9 - L_9$			-----	-634.82	171	-223	378	-480	981	506	542	491	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.230	1	Yes	0.739	0.223	0.97	Yes	1.00	**4.69**
		$U_{10} - L_{10}$			-----	-570.41	158	-152	284	-298	1422	785	1227	725	-----	-----	-----	-----	-----	-----	-----	-----	0.591	0.408	1	Yes	0.563	0.154	0.72	Yes	1.00	**3.20**
		$U_{11} - L_{11}$			-----	-490.38	215	-250	325	-372	1139	508	980	503	-----	-----	-----	-----	-----	-----	-----	-----	0.585	0.407	1	Yes	0.554	0.207	0.77	Yes	1.00	**2.04**
		$U_{12} - L_{12}$			-----	-1167.25	-509	550	271	-368	-1177	-502	900	248	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.151	1	Yes	0.809	0.102	0.92	Yes	1.00	**8.45**
		$U_{13} - L_{13}$			-----	-449.13	-287	303	-155	167	-386	-29	658	187	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.244	1	Yes	0.693	0.299	1.00	Yes	1.00	**3.20**
		$U_{14} - L_{14}$			-----	-502.22	-249	275	-100	89	-801	-190	771	278	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.235	1	Yes	0.720	0.240	0.97	Yes	1.00	**4.34**
		$U_{15} - L_{15}$			-----	-414.62	-209	232	-80	86	-127	71	703	253	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.243	1	Yes	0.715	0.235	0.96	Yes	1.00	**5.31**
		$U_{16} - L_{16}$			-----	-233.10	-339	335	-1	14	-1106	-818	-909	-570	-----	-----	-----	-----	-----	-----	-----	-----	0.513	0.478	1	Yes	0.493	0.434	0.93	Yes	1.00	**13.17**
		$U_{17} - L_{17}$			210.24	-235.92	-231	234	205	-236	871	-146	-1086	-444	0.378	0.615	1.00	Yes	0.208	0.338	0.55	Yes	0.517	0.347	0.87	Yes	0.499	0.301	0.81	Yes	1.00	**14.59**
		$U_{18} - L_{18}$			86.22	-286.51	-92	99	231	-273	489	156	-970	-499	0.155	0.629	0.79	Yes	0.085	0.346	0.44	Yes	0.626	0.365	1	Yes	0.606	0.348	0.96	Yes	1.00	**9.33**
		$U_{19} - L_{19}$			-----	-290.64	-1	-14	191	-204	450	227	512	254	-----	-----	-----	-----	-----	-----	-----	-----	0.635	0.358	1	Yes	0.615	0.261	0.88	Yes	1.00	**4.33**
		$U_{20} - L_{20}$			-----	-232.20	88	-105	156	-197	623	200	697	224	-----	-----	-----	-----	-----	-----	-----	-----	0.519	0.481	1	Yes	0.491	0.252	0.75	Yes	1.00	**1.81**

Moment (End) AI Operating

Operating Loads - 3F1

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 - Diagonals	Structure 1	U_0 - L_1		425.13	-12.29	-116	59	7	-11	-1203	-444	49	120	0.558	0.438	1.00	Yes	0.337	0.241	0.58	Yes	0.021	0.346	0.37	Yes	0.019	0.135	0.16	Yes	1.00	**5.42**
		U_1 - L_2		324.58	-----	-76	18	-18	-25	-361	-162	-1103	-386	0.584	0.416	1.00	Yes	0.321	0.229	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.65**
		U_2 - L_3		116.13	-194.06	-46	1	-44	-63	-182	-148	-1784	-336	0.209	0.597	0.81	Yes	0.115	0.329	0.45	Yes	0.447	0.544	1	Yes	0.411	0.081	0.50	Yes	1.00	**7.91**
		U_3 - L_4		-----	-312.72	25	-13	9	-61	459	257	-707	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.280	1	Yes	0.662	0.078	0.74	Yes	1.00	**4.59**
		U_4 - L_4		474.31	-----	1	99	-133	4	-58	173	693	587	0.696	0.297	1.00	Yes	0.383	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.60**
		U_6 - L_5		668.96	-----	-177	224	-37	85	-412	221	441	80	0.791	0.208	1.00	Yes	0.435	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.88**
		U_7 - L_6		591.53	-----	-248	240	-40	84	-469	-19	-832	-172	0.699	0.292	1.00	Yes	0.385	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.52**
		U_8 - L_7		623.34	-----	-75	312	22	97	-358	8	-453	-272	0.737	0.260	1.00	Yes	0.405	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.79**
		U_9 - L_9		940.09	-----	-66	376	-29	174	76	-68	572	155	0.752	0.241	1.00	Yes	0.466	0.136	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.21**
		U_9 - L_{10}		1013.12	-----	-304	263	-122	116	-384	-178	369	150	0.810	0.184	1.00	Yes	0.502	0.104	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.14**
		U_{10} - L_{11}		877.96	-----	-221	170	-133	80	-471	-601	-1130	-514	0.742	0.251	1.00	Yes	0.459	0.144	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.14**
		U_{11} - L_{12}		708.97	-----	-220	95	-157	11	-466	-390	-1296	-682	0.701	0.296	1.00	Yes	0.386	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.49**
		U_{12} - L_{13}		560.60	-----	-188	145	-103	40	-400	-388	-747	-323	0.683	0.310	1.00	Yes	0.430	0.178	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.80**
		U_{13} - L_{14}		341.05	-----	-71	29	-38	-24	-98	-176	-993	-340	0.613	0.378	1.00	Yes	0.337	0.208	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.04**
		U_{15} - L_{14}		262.59	-253.81	-73	-1	14	-101	-294	-406	743	-216	0.472	0.344	0.82	Yes	0.260	0.189	0.45	Yes	0.595	0.402	1	Yes	0.537	0.129	0.67	Yes	1.00	**9.24**
		U_{16} - L_{15}		402.38	-31.17	-137	93	-16	-23	-340	-25	-218	-121	0.724	0.273	1.00	Yes	0.398	0.150	0.55	Yes	0.074	0.167	0.25	Yes	0.066	0.175	0.25	Yes	1.00	**7.62**
		U_{17} - L_{16}		524.17	-----	-144	97	-50	17	-362	-71	-76	-92	0.769	0.230	1.00	Yes	0.423	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.98**
		U_{18} - L_{17}		610.73	-----	-317	249	-132	90	-501	-37	-401	-110	0.722	0.271	1.00	Yes	0.397	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.59**
		U_{19} - L_{18}		692.27	-----	-332	253	-132	96	-465	-167	-459	-204	0.750	0.246	1.00	Yes	0.412	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.41**
		U_{20} - L_{19}		673.89	-----	-394	323	-182	146	-373	-89	-274	-140	0.730	0.263	1.00	Yes	0.401	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.98**
	Structure 2	U_0 - L_1		624.36	-----	-307	308	-103	133	-1564	-317	-175	-5	0.618	0.377	1.00	Yes	0.340	0.207	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.17**
		U_1 - L_2		758.96	-----	-395	313	-159	113	-431	-378	154	-22	0.751	0.248	1.00	Yes	0.413	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.35**
		U_2 - L_3		611.71	-----	-319	262	-115	86	-384	-489	133	-21	0.723	0.269	1.00	Yes	0.398	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.90**
		U_3 - L_4		564.88	-----	-175	127	-48	22	-383	-309	182	19	0.753	0.240	1.00	Yes	0.414	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.56**
		U_4 - L_5		364.60	-40.00	-127	88	-20	-22	-395	-339	-597	-156	0.656	0.336	1.00	Yes	0.361	0.185	0.55	Yes	0.099	0.157	0.26	Yes	0.085	0.163	0.25	Yes	1.00	**7.22**
		U_5 - L_6		279.95	-239.32	-84	29	48	-106	-393	-306	-1239	-181	0.504	0.494	1.00	Yes	0.277	0.272	0.55	Yes	0.565	0.281	0.85	Yes	0.506	0.135	0.65	Yes	1.00	**8.76**
		U_6 - L_7		-----	-378.92	-4	-38	48	-101	15	-86	-423	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.181	1	Yes	0.726	0.116	0.85	Yes	1.00	**4.57**
		U_8 - L_7		608.72	-----	-189	157	-79	30	-229	-54	81	-120	0.776	0.216	1.00	Yes	0.489	0.121	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.85**
		U_8 - L_9		722.75	-----	-333	256	-188	108	-210	-96	235	5	0.783	0.209	1.00	Yes	0.431	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.49**
		U_{10} - L_9		828.61	-----	-311	252	-153	121	-154	176	-65	26	0.820	0.171	1.00	Yes	0.451	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.89**
		U_{11} - L_{10}		885.49	-----	-339	306	-159	155	-322	146	-218	103	0.807	0.188	1.00	Yes	0.444	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.08**
		U_{12} - L_{11}		848.90	-----	-337	343	-133	175	-577	295	-557	58	0.773	0.225	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.75**
		U_{13} - L_{12}		733.03	-----	-412	377	-161	164	-504	77	-524	1	0.725	0.269	1.00	Yes	0.399	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.00**
		U_{14} - L_{13}		770.28	-----	-264	444	-15	121	-141	67	-193	-115	0.762	0.235	1.00	Yes	0.419	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.64**
		U_{14} - L_{15}		563.25	-----	-180	332	-47	163	92	-97	769	361	0.666	0.327	1.00	Yes	0.366	0.180	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.99**
		U_{15} - L_{16}		598.60	-----	-351	323	-170	159	169	-177	479	129	0.708	0.286	1.00	Yes	0.389	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.16**
		U_{16} - L_{17}		692.97	-----	-329	357	-127	153	-46	-204	373	110	0.751	0.244	1.00	Yes	0.413	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.47**
		U_{17} - L_{18}		648.26	-----	-286	284	-110	126	-76	-200	358	89	0.766	0.227	1.00	Yes	0.422	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.08**
		U_{18} - L_{19}		631.35	-----	-280	253	-82	96	-150	-520	290	77	0.746	0.253	1.00	Yes	0.411	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.71**
		U_{19} - L_{20}		566.37	-----	-187	167	-69	37	-307	-203	-494	-148	0.722	0.268	1.00	Yes	0.397	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.32**
		U_{20} - L_{21}		411.18	-----	-125	106	-23	-3	-192	-324	-340	-85	0.740	0.258	1.00	Yes	0.407	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.74**
		U_{21} - L_{22}		316.17	-248.20	-89	46	20	-93	-132	-149	-1058	-140	0.569	0.425	1.00	Yes	0.313	0.234	0.55	Yes	0.586	0.392	0.98	Yes	0.525	0.119	0.65	Yes	1.00	**10.22**
		U_{23} - L_{22}		433.71	-140.75	-114	67	14	-68	-219	-171	247	-96	0.780	0.218	1.00	Yes	0.429	0.120	0.55	Yes	0.335	0.149	0.49	Yes	0.298	0.146	0.45	Yes	1.00	**10.08**
		U_{24} - L_{23}		427.42	-----	-123	110	-33	12	-162	28	246	-59	0.769	0.229	1.00	Yes	0.423	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.02**
		U_{25} - L_{24}		599.47	-----	-192	176	-43	51	-190	55	-299	-81	0.764	0.233	1.00	Yes	0.420	0.131	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.03**
		U_{26} - L_{25}		669.15	-----	-280	275	-80	98	-128	176	-252	-56	0.791	0.204	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.27**
		U_{27} - L_{26}		653.95	-----	-286	289	-107	126	-299	221	-340	-6	0.773	0.225	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		U_{28} - L_{27}		678.88	-----	-304	342	-96	149	-529	215	-543	41	0.735	0.264	1.00	Yes	0.404	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.75**
		U_{29} - L_{28}		597.98	-----	-341	331	-94	106	-451	41	-538	-42	0.707	0.291	1.00	Yes	0.389	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.49**
		U_{30} - L_{29}		626.97	-----	-197	364	28	75	-144	222	-254	-200	0.741	0.252	1.00	Yes	0.408	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.35**
		U_{30} - L_{31}		736.10	-----	-263	440	-68	222	-4	-378	426	185	0.728	0.268	1.00	Yes	0.401	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.82**
		U_{31} - L_{32}		742.03	-----	-422	379	-231	215	-30	-99	465	123	0.734	0.266	1.00	Yes	0.404	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.37**
		U_{32} - L_{33}		862.81	-----	-349	349	-160	192	-293	-460	284	58	0.786	0.211	1.00	Yes	0.432	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.45**
		U_{33} - L_{34}		869.90	-----	-328	292	-175	153	-446	-346	94	-93	0.792	0.200	1.00	Yes	0.436	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.88**
		U_{34} - L_{35}		775.10	-----	-290	237	-176	117	-483	-465	-636	-312	0.767	0.230	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.54**
		U_{35} - L_{36}		691.35	-----	-313	234	-180	96	-391	-372	-505	-275	0.749	0.243	1.00	Yes	0.412	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.26**
		U_{36} - L_{37}		526.56	-----	-166	136	-81	22	-173	-442	-841	-268	0.671	0.320	1.00	Yes	0.423	0.185	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.09**
		U_{38} - L_{37}		-----	-369.92	-21	-28	51	-101	-286	-216	39	-221	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.193	1	Yes	0.709	0.115	0.83	Yes	1.00	**5.61**
		U_{39} - L_{38}		388.60	-229.87	-120	61	53	-107	-197	-163	485	-78	0.699	0.293	1.00	Yes	0.384	0.161	0.55	Yes	0.548	0.283	0.84	Yes	0.486	0.153	0.64	Yes	1.00	**10.72**
		U_{40} - L_{39}		404.44	-----	-132	92	-17	-12	-331	77	-296	-95	0.727	0.265	1.00	Yes	0.400	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.80**
		U_{41} - L_{40}		561.35	-----	-174	126	-57	31	-391	-111	-411	-178	0.748	0.245	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.24**
		U_{42} - L_{41}		617.42	-----	-320	258	-123	93	-447	26	-401	-167	0.730	0.262	1.00	Yes	0.401	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.24**
		U_{43} - L_{42}		765.88	-----	-375	306	-137	104	-403	-74	-376	-193	0.758	0.234	1.00	Yes	0.417	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.71**
		U_{44} - L_{43}		800.20	-----	-385	378	-161	154	-80	70	-173	7	0.792	0.205	1.00	Yes	0.435	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.78**
	Structure 3	U_0 - L_1		589.75	-----	-292	264	-80	106	-1255	-354	-159	-5	0.639	0.356	1.00	Yes	0.351	0.196	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.77**
		U_1 - L_2		674.11	-----	-349	250	-157	107	-367	-547	167	-38	0.730	0.268	1.00	Yes	0.402	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.71**
		U_2 - L_3		609.18	-----	-315	260	-121	82	-510	-517	143	-19	0.720	0.272	1.00	Yes	0.396	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.49**
		U_3 - L_4		514.01	-----	-142	98	-40	18	-416	-367	163	-19	0.754	0.241	1.00	Yes	0.415	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.04**
		U_4 - L_5		332.40	-64.72	-118	84	-28	-24	-388	-304	-858	-195	0.598	0.399	1.00	Yes	0.329	0.219	0.55	Yes	0.153	0.233	0.39	Yes	0.137	0.150	0.29	Yes	1.00	**7.27**
		U_5 - L_6		153.70	-263.23	-47	-10	14	-109	-173	-102	-1363	-318	0.276	0.534	0.82	Yes	0.152	0.294	0.45	Yes	0.617	0.375	1	Yes	0.557	0.140	0.70	Yes	1.00	**8.17**
		U_7 - L_6		452.35	-----	-92	42	-31	-20	-218	-224	223	-101	0.814	0.183	1.00	Yes	0.447	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.10**
		U_8 - L_7		645.59	-----	-211	172	-85	44	-70	-5	-120	-77	0.787	0.208	1.00	Yes	0.495	0.116	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.90**
		U_8 - L_9		750.23	-----	-228	113	-146	28	-244	7	989	267	0.742	0.254	1.00	Yes	0.408	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.82**
		U_{10} - L_9		994.95	-----	-228	213	-80	84	-410	171	323	177	0.840	0.159	1.00	Yes	0.520	0.090	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.42**
		U_{11} - L_{10}		953.38	-----	-278	280	-81	107	-506	12	-862	-117	0.762	0.234	1.00	Yes	0.472	0.133	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.34**
		U_{12} - L_{11}		945.18	-----	-56	376	18	131	-315	117	-602	-226	0.756	0.244	1.00	Yes	0.468	0.138	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.92**
		U_{12} - L_{13}		610.62	-----	-88	297	-20	143	1	-189	583	157	0.722	0.275	1.00	Yes	0.397	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.86**
		U_{13} - L_{14}		635.85	-----	-282	235	-113	115	-117	-208	442	155	0.752	0.241	1.00	Yes	0.413	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.77**
		U_{14} - L_{15}		589.15	-----	-162	203	-94	92	-172	-266	-1016	-330	0.697	0.300	1.00	Yes	0.383	0.165	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.88**
		U_{15} - L_{16}		357.39	-----	-8	84	-61	-14	469	244	-1639	-761	0.524	0.467	1.00	Yes	0.288	0.257	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.60**
		U_{17} - L_{16}		-----	-313.29	62	-7	-79	-105	-163	56	572	451	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.279	1	Yes	0.663	0.134	0.80	Yes	1.00	**11.25**
		U_{18} - L_{17}		282.31	-135.15	-95	13	-87	-69	-346	-278	1252	12	0.508	0.484	1.00	Yes	0.279	0.266	0.55	Yes	0.311	0.463	0.78	Yes	0.286	0.122	0.41	Yes	1.00	**12.53**
		U_{19} - L_{18}		383.49	-----	-76	16	-47	-25	-292	-293	702	428	0.690	0.300	1.00	Yes	0.379	0.165	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.72**
		U_{20} - L_{19}		617.83	-----	-123	77	-34	8	-162	-58	-62	7	0.811	0.184	1.00	Yes	0.489	0.102	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.54**

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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	2.26	2.26	-1.07	-1.07					1.24	0.90	4.03	2.51	-----	Vehicle	-7.05	-1.19	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	35.94	59.89	74.11	123.51
	U_1 - U_2	3.66	-3.76	2.04	2.04	-0.28	-0.28					1.24	0.90	3.66	2.27	-----	Vehicle	-3.76	-0.31	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	39.83	66.39	293.47	489.12
	U_2 - U_3	2.55	-7.28	1.49	1.49	-0.85	-0.85					1.24	0.90	2.55	1.66	-----	Vehicle	-7.28	-0.95	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	55.03	91.72	93.18	155.30
	U_3 - U_4	2.05	-4.84	1.71	1.71	-1.03	-1.03					1.24	0.90	2.05	1.90	-----	Vehicle	-4.84	-1.15	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	48.13	80.22	78.43	130.72
	U_4 - U_5	2.25	-4.26	0.50	0.50	-1.66	-1.66					1.24	0.90	2.25	0.56	-----	Vehicle	-4.26	-1.84	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	162.91	271.51	48.95	81.59
	U_5 - U_6	3.34	-7.20	0.33	0.33	-1.87	-1.87					1.24	0.90	3.34	0.37	-----	Vehicle	-7.20	-2.08	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	245.53	409.22	42.50	70.84
	U_6 - U_7	6.22	-5.16	1.14	1.14	-1.21	-1.21					1.24	0.90	6.22	1.27	-----	Vehicle	-5.16	-1.35	-----	Vehicle	14.00	0.75	2	9.33	5	73.85	92.32	1	401.94	401.9	142.73	237.88	135.30	225.50
	U_7 - U_8	-2.11	-14.70	0.06	0.06	-3.95	-3.95					1.24	0.90	-2.11	0.06	-----	Vehicle	-14.70	-4.40	-----	Vehicle	14.00	1.00	2	7.00	5	73.85	92.32	1	535.92	535.9	3987.71	6646.19	54.23	90.38
	U_8 - U_9	15.50	2.88	3.14	3.14	-0.19	-0.19					1.20	0.90	15.50	3.38	-----	Vehicle	2.88	-0.20	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	29.23	48.71	545.28	908.79
	U_9 - U_{10}	6.69	-6.01	1.59	1.59	-0.39	-0.39					1.20	0.90	6.69	1.71	-----	Vehicle	-6.01	-0.42	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	51.76	86.27	213.65	356.08
	U_{10} - U_{11}	9.67	-1.66	2.12	2.12	-0.11	-0.11					1.20	0.90	9.67	2.28	-----	Vehicle	-1.66	-0.12	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	38.10	63.49	773.68	1289.47
	U_{11} - U_{12}	7.40	-2.11	1.90	1.90	-0.31	-0.31					1.20	0.90	7.40	2.04	-----	Vehicle	-2.11	-0.33	-----	Vehicle	14.00	0.50	2	14.00	5	73.85	92.32	1	267.96	268.0	58.33	97.21	366.22	610.36
	U_{12} - U_{13}	9.24	-6.21	2.27	2.27	-0.76	-0.76					1.20	0.90	9.24	2.45	-----	Vehicle	-6.21	-0.82	-----	Vehicle	14.00	1.33	2	5.24	5	73.85	92.32	1	715.3575	715.4	132.69	221.15	400.48	667.47
	U_{13} - U_{14}	6.34	-2.26	3.06	3.06	-0.46	-0.46					1.20	0.90	6.34	3.30	-----	Vehicle	-2.26	-0.49	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	115.87	193.12	783.32	1305.53
	U_{14} - U_{15}	3.46	-4.65	1.27	1.27	-2.21	-2.21					1.20	0.90	3.46	1.37	-----	Vehicle	-4.65	-2.38	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	280.73	467.88	161.24	268.74
	U_{15} - U_{16}	9.23	-5.79	2.57	2.57	-1.30	-1.30					1.20	0.90	9.23	2.77	-----	Vehicle	-5.79	-1.40	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	137.74	229.57	273.04	455.07
	U_{16} - U_{17}	2.63	-6.22	0.68	0.68	-2.19	-2.19					1.20	0.90	2.63	0.73	-----	Vehicle	-6.22	-2.36	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	528.87	881.45	161.87	269.79
	U_{17} - U_{18}	5.96	-9.96	0.54	0.54	-2.21	-2.21					1.20	0.90	5.96	0.58	-----	Vehicle	-9.96	-2.38	-----	Vehicle	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	479.50	799.17	116.64	194.40
	U_{18} - U_{19}	3.04	-6.68	0.75	0.75	-1.60	-1.60					1.20	0.90	3.04	0.81	-----	Vehicle	-6.68	-1.73	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	131.56	219.27	60.29	100.49
	U_{19} - U_{20}	-1.83	-11.18	1.06	1.06	-2.98	-2.98					1.20	0.90	-1.83	1.14	-----	Vehicle	-11.18	-3.21	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	96.01	160.01	31.59	52.66
Structure 2	U_0 - U_1	10.02	-6.16	2.49	2.49	-0.52	-0.52					1.18	0.90	10.02	2.65	-----	Vehicle	-6.16	-0.55	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	40.18	66.97	197.14	328.57
	U_1 - U_2	9.17	-4.67	2.51	2.51	-0.18	-0.18					1.18	0.90	9.17	2.67	-----	Vehicle	-4.67	-0.19	-----	Vehicle	17.00	0.75	2	11.33	5	73.85	92.32	1	488.07	488.1	82.23	137.06	1180.46	1967.43
	U_2 - U_3	8.60	-2.60	3.24	3.24	-0.29	-0.29					1.18	0.90	8.60	3.45	-----	Vehicle	-2.60	-0.31	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	47.54	79.23	544.00	906.67
	U_3 - U_4	8.30	-7.59	2.57	2.57	-0.84	-0.84					1.18	0.90	8.30	2.74	-----	Vehicle	-7.59	-0.90	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	135.28	225.47	413.71	689.52
	U_4 - U_5	5.53	-4.81	3.95	3.95	-1.10	-1.10					1.18	0.90	5.53	4.21	-----	Vehicle	-4.81	-1.17	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	106.26	177.10	381.87	636.45
	U_5 - U_6	2.61	-7.66	1.77	1.77	-2.25	-2.25					1.18	0.90	2.61	1.88	-----	Vehicle	-7.66	-2.39	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	238.64	397.73	186.31	310.52
	U_6 - U_7	6.14	-9.62	3.14	3.14	-1.01	-1.01					1.18	0.90	6.14	3.34	-----	Vehicle	-9.62	-1.07	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	111.23	185.39	344.10	573.51
	U_7 - U_8	8.07	-7.40	1.64	1.64	-2.83	-2.83					1.18	0.90	8.07	1.74	-----	Vehicle	-7.40	-3.02	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	212.76	354.60	122.96	204.93
	U_8 - U_9	4.03	-10.39	1.01	1.01	-2.18	-2.18					1.18	0.90	4.03	1.08	-----	Vehicle	-10.39	-2.32	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	293.64	489.40	134.93	224.88
	U_9 - U_{10}	2.04	-9.48	0.90	0.90	-2.49	-2.49					1.18	0.90	2.04	0.96	-----	Vehicle	-9.48	-2.65	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	135.71	226.18	47.46	79.10
	U_{10} - U_{11}	4.39	-9.86	0.77	0.77	-2.02	-2.02					1.18	0.90	4.39	0.82	-----	Vehicle	-9.86	-2.15	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	156.87	261.44	58.29	97.15
	U_{11} - U_{12}	3.80	-11.57	0.36	0.36	-2.07	-2.07					1.18	0.90	3.80	0.38	-----	Vehicle	-11.57	-2.21	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	335.95	559.91	56.39	93.98
	U_{12} - U_{13}	9.58	-8.07	1.61	1.61	-1.18	-1.18					1.18	0.90	9.58	1.71	-----	Vehicle	-8.07	-1.25	-----	Vehicle	17.00	0.94	2	9.07	5	73.85	92.32	1	610.0875	610.1	161.31	268.86	221.02	368.37
	U_{13} - U_{14}	-8.42	-23.99	0.23	0.23	-5.23	-5.23					1.18	0.90	-8.42	0.25	-----	Vehicle	-23.99	-5.57	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	1623.36	2705.61	68.17	113.62
	U_{14} - U_{15}	20.62	5.04	5.47	5.47	-0.30	-0.30					1.17	0.90	20.62	5.75	-----	Vehicle	5.04	-0.32	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	66.41	110.68	1250.22	2083.69
	U_{15} - U_{16}	6.58	-9.91	1.95	1.95	-1.43	-1.43					1.17	0.90	6.58	2.05	-----	Vehicle	-9.91	-1.50	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	154.02	256.70	208.30	347.17
	U_{16} - U_{17}	8.97	-2.82	2.91	2.91	-0.17	-0.17					1.17	0.90	8.97	3.06	-----	Vehicle	-2.82	-0.18	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	53.48	89.13	940.67	1567.79
	U_{17} - U_{18}	8.01	-5.78	2.27	2.27	-0.33	-0.33					1.17	0.90	8.01	2.39	-----	Vehicle	-5.78	-0.34	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	45.17	75.28	319.26	532.10
	U_{18} - U_{19}	8.40	-4.13	2.55	2.55	-0.24	-0.24					1.17	0.90	8.40	2.69	-----	Vehicle	-4.13	-0.25	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	40.04	66.74	441.76	736.26
	U_{19} - U_{20}	5.53	-4.62	2.35	2.35	-0.51	-0.51					1.17	0.90	5.53	2.47	-----	Vehicle	-4.62	-0.54	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	51.78	86.31	239.73	399.56
	U_{20} - U_{21}	6.82	-6.42	2.18	2.18	-0.97	-0.97					1.17	0.90	6.82	2.29	-----	Vehicle	-6.42	-1.02	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	104.57	174.28	235.59	392.65
	U_{21} - U_{22}	6.17	-6.84	2.43	2.43	-0.50	-0.50					1.17	0.90	6.17	2.55	-----	Vehicle	-6.84	-0.53	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	94.20	157.00	455.19	758.65
	U_{22} - U_{23}	7.10	-6.07	1.76	1.76	-1.91	-1.91					1.17	0.90	7.10	1.86	-----	Vehicle	-6.07	-2.01	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	129.19	215.32	119.38	198.96
	U_{23} - U_{24}	6.42	-6.83	1.80	1.80	-1.53	-1.53					1.17	0.90	6.42	1.89	-----	Vehicle	-6.83	-1.61	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	127.04	211.73	149.35	248.92
	U_{24} - U_{25}	4.41	-5.74	1.05	1.05	-2.08	-2.08					1.17	0.90	4.41	1.10	-----	Vehicle	-5.74	-2.19	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	116.89	194.81	58.39	97.32
	U_{25} - U_{26}	4.63	-7.90	1.01	1.01	-2.10	-2.10					1.17	0.90	4.63	1.07	-----	Vehicle	-7.90	-2.20	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	102.97	171.62	48.95	81.58
	U_{26} - U_{27}	6.07	-7.72	0.60	0.60	-2.01	-2.01					1.17	0.90	6.07	0.63	-----	Vehicle	-7.72	-2.12	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	173.24	288.73	50.97	84.95
	U_{27} - U_{28}	3.92	-7.87	0.90	0.90	-2.26	-2.26					1.17	0.90	3.92	0.95	-----	Vehicle	-7.87	-2.38	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	175.16	291.93	68.95	114.91
	U_{28} - U_{29}	9.25	-7.25	2.06	2.06	-1.51	-1.51					1.17	0.90	9.25	2.16	-----	Vehicle	-7.25	-1.58	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	144.96	241.61	198.66	331.10
	U_{29} - U_{30}	-2.24	-17.81	0.21	0.21	-5.35	-5.35					1.17	0.90	-2.24	0.22	-----	Vehicle	-17.81	-5.63	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	1816.26	3027.10	68.17	113.62
	U_{30} - U_{31}	19.02	3.44	5.11	5.11	-0.33	-0.33					1.18	0.90	19.02	5.44	-----	Vehicle	3.44	-0.35	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	70.32	117.20	1117.70	1862.84
	U_{31} - U_{32}	7.21	-10.44	1.71	1.71	-1.16	-1.16					1.18	0.90	7.21	1.82	-----	Vehicle	-10.44	-1.24	-----	Vehicle	17.00	0.94	2	9.07	5	73.85	92.32	1	610.0875	610.1	152.73	254.55	222.15	370.26
	U_{32} - U_{33}	10.43	-4.94	2.42	2.42	-0.15	-0.15					1.18	0.90	10.43	2.58	-----	Vehicle	-4.94	-0.16	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	48.51	80.85	809.63	1349.38
	U_{33} - U_{34}	8.67	-5.58	2.23	2.23	-0.22	-0.22					1.18	0.90	8.67	2.38	-----	Vehicle	-5.58	-0.23	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	53.13	88.55	551.72	919.53
	U_{34} - U_{35}	8.17	-3.35	3.03	3.03	-0.34	-0.34					1.18	0.90	8.17	3.23	-----	Vehicle	-3.35	-0.36	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	39.17	65.29	362.77	604.62
	U_{35} - U_{36}	9.30	-5.12	2.48	2.48	-0.60	-0.60					1.18	0.90	9.30	2.64	-----	Vehicle	-5.12	-0.63	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	118.55	197.59	498.06	830.10
	U_{36} - U_{37}	6.76	-8.71	3.18	3.18	-0.27	-0.27					1.18	0.90	6.76	3.38	-----	Vehicle	-8.71	-0.29	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	109.86	183.11	1287.83	2146.38
	U_{37} - U_{38}	10.16	-5.61	2.80	2.80	-2.22	-2.22					1.18	0.90	10.16	2.98	-----	Vehicle	-5.61	-2.36	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	123.94	206.56	157.49	262.48
	U_{38} - U_{39}	7.26	-3.01	3.29	3.29	-0.92	-0.92					1.18	0.90	7.26	3.50	-----	Vehicle	-3.01	-0.98	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	127.45	212.42	456.12	760.19
	U_{39} - U_{40}	5.16	-5.17	2.53	2.53	-2.75	-2.75					1.18	0.90	5.16	2.70	-----	Vehicle	-5.17	-2.93	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	165.91	276.51	152.70	254.50
	U_{40} - U_{41}	8.09	-7.79	1.78	1.78	-2.29	-2.29					1.18	0.90	8.09	1.90	-----	Vehicle	-7.79	-2.44	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	195.10	325.17	152.13	253.55
	U_{41} - U_{42}	3.96	-7.24	0.44	0.44	-2.89	-2.89					1.18	0.90	3.96	0.47	-----	Vehicle	-7.24	-3.07	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	354.76	591.27	53.57	89.28
	U_{42} - U_{43}	5.30	-8.54	0.84	0.84	-2.05	-2.05					1.18	0.90	5.30	0.90	-----	Vehicle	-8.54	-2.18	-----	Vehicle	17.00	0.75	2	11.33	5	73.85	92.32	1	488.07	488.1	248.02	413.37	100.91	168.18
	U_{43} - U_{44}	6.34	-9.84	1.16	1.16	-3.61	-3.61					1.18	0.90	6.34	1.24	-----	Vehicle	-9.84	-3.84	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	87.81	146.36	27.78	46.30
Structure 3	U_0 - U_1	7.32	-2.03	1.87	1.87	-0.25	-0.25					1.20	0.90	7.32	2.02	-----	Vehicle	-2.03	-0.27	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	51.47	85.78	393.81	656.34
	U_1 - U_2	6.45	-3.27	2.03	2.03	-0.12	-0.12					1.20	0.90	6.45	2.19	-----	Vehicle	-3.27	-0.13	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	47.60	79.34	814.43	1357.39
	U_2 - U_3	9.46	-6.46	2.52	2.52	-0.24	-0.24					1.20	0.90	9.46	2.72	-----	Vehicle	-6.46	-0.26	-----	Vehicle	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	102.32	170.53	1077.22	1795.37
	U_3 - U_4	5.96	-2.88	2.24	2.24	-0.34	-0.34					1.20	0.90	5.96	2.41	-----	Vehicle	-2.88	-0.36	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	158.83	264.71	1058.89	1764.82
	U_4 - U_5	5.42	-9.60	2.20	2.20	-1.36	-1.36					1.20	0.90	5.42	2.38	-----	Vehicle	-9.60	-1.47	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	161.27	268.78	259.83	433.05
	U_5 - U_6	5.10	-3.00	2.95	2.95	-0.24	-0.24					1.20	0.90	5.10	3.18	-----	Vehicle	-3.00	-0.25	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	120.42	200.71	1518.21	2530.35
	U_6 - U_7	2.12	-6.47	1.00	1.00	-2.54	-2.54					1.20	0.90	2.12	1.08	-----	Vehicle	-6.47	-2.74	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	357.98	596.64	139.76	232.93
	U_7 - U_8	7.00	-8.45	1.35	1.35	-1.83	-1.83					1.20	0.90	7.00	1.45	-----	Vehicle	-8.45	-1.97	-----	Vehicle	14.00	1.33	2	5.24	5	73.85	92.32	1	715.3575	715.4	224.11	373.52	164.76	274.60
	U_8 - U_9	2.51	-7.01	0.55	0.55	-1.80	-1.80					1.20	0.90	2.51	0.59	-----	Vehicle	-7.01	-1.95	-----	Vehicle	14.00	0.50	2	14.00	5	73.85	92.32	1	267.96	268.0	206.77	344.61	61.42	102.37
	U_9 - U_{10}	2.56	-8.76	0.14	0.14	-1.99	-1.99					1.20	0.90	2.56	0.15	-----	Vehicle	-8.76	-2.14	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	595.79	992.98	40.84	68.07
	U_{10} - U_{11}	5.86	-6.85	0.61	0.61	-1.46	-1.46					1.20	0.90	5.86	0.66	-----	Vehicle	-6.85	-1.58	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	136.13	226.89	56.24	93.73
	U_{11} - U_{12}	-1.36	-13.98	0.05	0.05	-3.33	-3.33					1.20	0.90	-1.36	0.05	-----	Vehicle	-13.98	-3.59	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	2247.17	3745.29	27.83	46.38
	U_{12} - U_{13}	11.54	-1.05	3.83	3.83	-0.22	-0.22					1.24	0.90	11.54	4.26	-----	Vehicle	-1.05	-0.24	-----	Vehicle	14.00	1.00	2	7.00	5	73.85	92.32	1	535.92	535.9	56.46	94.10	1030.73	1717.89
	U_{13} - $U_{14}

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
Condition: As-Built

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

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

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

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

Location	Member	Member Forces from STAAD: D Start (kips)	D End (kips)	LL_{max} Start (kips)	LL_{max} End (kips)	LL_{min} Start (kips)	LL_{min} End (kips)	Pedestrian $Load_{max}$ Start (kips)	Pedestrian $Load_{max}$ End (kips)	Pedestrian $Load_{min}$ Start (kips)	Pedestrian $Load_{min}$ End (kips)	Impact (1+I)	Lane Reduction	Maximum Positive Shear: Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Minimum Negative Shear: Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Shear Force Rating: Positive Shear Member Inventory RF	Positive Shear Member Operating RF	Negative Shear Member Inventory RF	Negative Shear Member Operating RF
Structure 1	L_0 - L_1	8.29	-6.54	1.82	1.82	-0.24	-0.24					1.24	0.90	8.29	2.03	-----	Vehicle	-6.54	-0.27	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**49.84**	**83.06**	**375.79**	**626.32**
	L_1 - L_2	13.57	-7.41	1.87	1.87	-0.29	-0.29					1.24	0.90	13.57	2.08	-----	Vehicle	-7.41	-0.32	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**46.96**	**78.26**	**320.08**	**533.47**
	L_2 - L_3	8.55	-7.89	1.27	1.27	-0.68	-0.68					1.24	0.90	8.55	1.42	-----	Vehicle	-7.89	-0.76	-----	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	**111.86**	**186.43**	**208.86**	**348.10**
	L_3 - L_4	10.78	-10.72	1.91	1.91	-1.20	-1.20					1.24	0.90	10.78	2.13	-----	Vehicle	-10.72	-1.34	-----	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	**73.86**	**123.11**	**117.39**	**195.64**
	L_4 - L_5	8.11	-17.42	0.11	0.11	-2.21	-2.21					1.24	0.90	8.11	0.12	-----	Vehicle	-17.42	-2.46	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**1137.29**	**1895.48**	**51.76**	**86.27**
	L_5 - L_6	5.24	-12.36	0.39	0.39	-1.48	-1.48					1.24	0.90	5.24	0.44	-----	Vehicle	-12.36	-1.65	-----	Vehicle	15.00	0.77	2	9.74	5	73.85	92.32	1	442.134	442.1	**459.21**	**765.35**	**119.35**	**198.91**
	L_6 - L_7	8.00	-14.21	0.65	0.65	-1.84	-1.84					1.24	0.90	8.00	0.72	-----	Vehicle	-14.21	-2.05	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**441.41**	**735.68**	**153.40**	**255.67**
	L_7 - L_8	-2.07	-18.23	0.08	0.08	-3.74	-3.74					1.24	0.90	-2.07	0.08	-----	Vehicle	-18.23	-4.16	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**5143.94**	**8573.24**	**100.34**	**167.23**
	L_8 - L_9	18.91	4.31	3.05	3.05	-0.12	-0.12					1.20	0.90	18.91	3.29	-----	Vehicle	4.31	-0.13	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**126.70**	**211.16**	**3222.60**	**5370.99**
	L_9 - L_{10}	15.84	-6.96	1.69	1.69	-0.79	-0.79					1.20	0.90	15.84	1.82	-----	Vehicle	-6.96	-0.85	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**171.74**	**286.23**	**373.91**	**623.18**
	L_{10} - L_{11}	13.53	-2.36	1.65	1.65	-0.25	-0.25					1.20	0.90	13.53	1.78	-----	Vehicle	-2.36	-0.27	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**72.77**	**121.28**	**512.14**	**853.56**
	L_{11} - L_{12}	19.25	-6.84	1.58	1.58	-0.24	-0.24					1.20	0.90	19.25	1.70	-----	Vehicle	-6.84	-0.25	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**74.26**	**123.76**	**527.69**	**879.48**
	L_{12} - L_{13}	12.12	-8.55	1.45	1.45	-0.54	-0.54					1.20	0.90	12.12	1.56	-----	Vehicle	-8.55	-0.58	-----	Vehicle	15.00	1.02	2	7.35	5	73.85	92.32	1	585.684	585.7	**168.72**	**281.20**	**453.79**	**756.32**
	L_{13} - L_{14}	22.27	-6.22	3.45	3.45	-0.32	-0.32					1.20	0.90	22.27	3.72	-----	Vehicle	-6.22	-0.34	-----	Vehicle	15.00	1.46	2	5.15	5	73.85	92.32	1	836.8965	836.9	**100.31**	**167.18**	**1115.68**	**1859.47**
	L_{14} - L_{15}	10.80	-20.25	0.79	0.79	-2.44	-2.44					1.20	0.90	10.80	0.85	-----	Vehicle	-20.25	-2.64	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**556.88**	**928.13**	**177.17**	**295.28**
	L_{15} - L_{16}	11.52	-8.07	1.40	1.40	-1.24	-1.24					1.20	0.90	11.52	1.51	-----	Vehicle	-8.07	-1.34	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**312.09**	**520.15**	**354.09**	**590.15**
	L_{16} - L_{17}	4.39	-17.69	0.17	0.17	-2.30	-2.30					1.20	0.90	4.39	0.19	-----	Vehicle	-17.69	-2.48	-----	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	**1886.18**	**3143.63**	**138.53**	**230.89**
	L_{17} - L_{18}	6.80	-13.02	0.22	0.22	-1.76	-1.76					1.20	0.90	6.80	0.24	-----	Vehicle	-13.02	-1.90	-----	Vehicle	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	**970.66**	**1617.77**	**121.64**	**202.74**
	L_{18} - L_{19}	5.40	-17.11	0.14	0.14	-1.74	-1.74					1.20	0.90	5.40	0.15	-----	Vehicle	-17.11	-1.87	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**706.02**	**1176.69**	**51.18**	**85.30**
	L_{19} - L_{20}	8.88	-11.26	0.10	0.10	-1.52	-1.52					1.20	0.90	8.88	0.10	-----	Vehicle	-11.26	-1.64	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**982.89**	**1638.15**	**60.68**	**101.13**
Structure 2	L_0 - L_1	8.18	-2.11	1.73	1.73	-0.17	-0.17					1.18	0.90	8.18	1.84	-----	Vehicle	-2.11	-0.18	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**74.99**	**124.98**	**779.09**	**1298.48**
	L_1 - L_2	10.03	-0.24	1.80	1.80	-0.16	-0.16					1.18	0.90	10.03	1.92	-----	Vehicle	-0.24	-0.17	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**71.49**	**119.16**	**823.78**	**1372.96**
	L_2 - L_3	7.20	-1.56	1.96	1.96	-0.22	-0.22					1.18	0.90	7.20	2.09	-----	Vehicle	-1.56	-0.24	-----	Vehicle	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	**123.66**	**206.09**	**1106.05**	**1843.41**
	L_3 - L_4	11.38	-0.50	1.94	1.94	-0.16	-0.16					1.18	0.90	11.38	2.07	-----	Vehicle	-0.50	-0.17	-----	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	**179.76**	**299.59**	**2164.88**	**3608.14**
	L_4 - L_5	6.29	-6.01	2.13	2.13	-1.41	-1.41					1.18	0.90	6.29	2.27	-----	Vehicle	-6.01	-1.50	-----	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	**217.54**	**361.90**	**329.30**	**548.83**
	L_5 - L_6	10.14	-2.08	2.43	2.43	-0.57	-0.57					1.18	0.90	10.14	2.58	-----	Vehicle	-2.08	-0.60	-----	Vehicle	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	**209.26**	**348.77**	**906.56**	**1510.93**
	L_6 - L_7	3.45	-8.48	2.21	2.21	-2.08	-2.08					1.18	0.90	3.45	2.36	-----	Vehicle	-8.48	-2.21	-----	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	**234.65**	**391.09**	**248.89**	**414.81**
	L_7 - L_8	3.58	-10.31	0.80	0.80	-2.64	-2.64					1.18	0.90	3.58	0.85	-----	Vehicle	-10.31	-2.81	-----	Vehicle	18.00	1.23	2	7.35	5	73.85	92.32	1	844.074	844.1	**453.72**	**756.19**	**136.55**	**227.59**
	L_8 - L_9	0.48	-13.07	0.13	0.13	-2.08	-2.08					1.18	0.90	0.48	0.14	-----	Vehicle	-13.07	-2.22	-----	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	**2138.80**	**3564.67**	**134.18**	**223.64**
	L_9 - L_{10}	1.68	-14.60	0.52	0.52	-1.87	-1.87					1.18	0.90	1.68	0.55	-----	Vehicle	-14.60	-2.00	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**403.37**	**672.29**	**107.18**	**178.64**
	L_{10} - L_{11}	3.92	-15.22	0.26	0.26	-2.07	-2.07					1.18	0.90	3.92	0.28	-----	Vehicle	-15.22	-2.20	-----	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	**670.48**	**1117.47**	**82.55**	**137.59**
	L_{11} - L_{12}	1.30	-14.23	0.30	0.30	-1.65	-1.65					1.18	0.90	1.30	0.32	-----	Vehicle	-14.23	-1.75	-----	Vehicle	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	**961.14**	**1601.90**	**170.17**	**283.61**
	L_{12} - L_{13}	6.61	-7.28	1.50	1.50	-1.71	-1.71					1.18	0.90	6.61	1.60	-----	Vehicle	-7.28	-1.82	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**278.97**	**464.95**	**244.47**	**407.45**
	L_{13} - L_{14}	-16.93	-26.03	0.16	0.16	-5.82	-5.82					1.18	0.90	-16.93	0.17	-----	Vehicle	-26.03	-6.19	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**3300.53**	**5500.88**	**86.08**	**143.47**
	L_{14} - L_{15}	25.44	16.49	5.47	5.47	-0.16	-0.16					1.17	0.90	25.44	5.76	-----	Vehicle	16.49	-0.17	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**92.65**	**154.42**	**3317.63**	**5529.38**
	L_{15} - L_{16}	1.92	-10.98	1.41	1.41	-1.69	-1.69					1.17	0.90	1.92	1.49	-----	Vehicle	-10.98	-1.78	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**301.60**	**502.67**	**248.78**	**414.64**
	L_{16} - L_{17}	14.35	-0.89	2.17	2.17	-0.34	-0.34					1.17	0.90	14.35	2.28	-----	Vehicle	-0.89	-0.36	-----	Vehicle	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	**152.12**	**253.54**	**994.17**	**1656.96**
	L_{17} - L_{18}	10.22	-3.50	2.19	2.19	-0.26	-0.26					1.17	0.90	10.22	2.31	-----	Vehicle	-3.50	-0.27	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**93.78**	**156.30**	**809.24**	**1348.73**
	L_{18} - L_{19}	9.38	-1.77	1.78	1.78	-0.47	-0.47					1.17	0.90	9.38	1.87	-----	Vehicle	-1.77	-0.50	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**81.85**	**136.42**	**318.73**	**531.22**
	L_{19} - L_{20}	12.39	-6.31	1.85	1.85	-0.19	-0.19					1.17	0.90	12.39	1.95	-----	Vehicle	-6.31	-0.20	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**77.88**	**129.79**	**784.78**	**1307.96**
	L_{20} - L_{21}	8.96	-3.52	1.93	1.93	-0.88	-0.88					1.17	0.90	8.96	2.03	-----	Vehicle	-3.52	-0.93	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**124.54**	**207.56**	**275.86**	**459.77**
	L_{21} - L_{22}	9.68	-4.49	2.97	2.97	-0.48	-0.48					1.17	0.90	9.68	3.13	-----	Vehicle	-4.49	-0.50	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**80.72**	**134.54**	**509.51**	**849.18**
	L_{22} - L_{23}	4.66	-10.03	0.91	0.91	-2.63	-2.63					1.17	0.90	4.66	0.95	-----	Vehicle	-10.03	-2.77	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**268.44**	**447.40**	**91.10**	**151.84**
	L_{23} - L_{24}	3.70	-6.40	1.05	1.05	-1.63	-1.63					1.17	0.90	3.70	1.11	-----	Vehicle	-6.40	-1.71	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**231.23**	**385.38**	**148.71**	**247.84**
	L_{24} - L_{25}	-0.87	-1.56	0.17	0.17	-1.95	-1.95					1.17	0.90	-0.87	0.17	-----	Vehicle	-1.56	-2.05	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**918.99**	**1531.65**	**76.97**	**128.28**
	L_{25} - L_{26}	-3.04	-3.58	0.58	0.58	-1.66	-1.66					1.17	0.90	-3.04	0.61	-----	Vehicle	-3.58	-1.75	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**265.39**	**442.32**	**89.87**	**149.78**
	L_{26} - L_{27}	-1.83	-2.61	0.20	0.20	-2.16	-2.16					1.17	0.90	-1.83	0.21	-----	Vehicle	-2.61	-2.27	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**1057.88**	**1763.13**	**97.27**	**162.11**
	L_{27} - L_{28}	-4.05	-5.16	0.26	0.26	-2.14	-2.14					1.17	0.90	-4.05	0.27	-----	Vehicle	-5.16	-2.25	-----	Vehicle	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	**1307.10**	**2178.50**	**156.43**	**260.71**
	L_{28} - L_{29}	3.03	1.87	1.41	1.41	-1.47	-1.47					1.17	0.90	3.03	1.48	-----	Vehicle	1.87	-1.55	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**302.01**	**503.35**	**290.97**	**484.96**
	L_{29} - L_{30}	-16.84	-17.95	0.23	0.23	-6.20	-6.20					1.17	0.90	-16.84	0.24	-----	Vehicle	-17.95	-6.53	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**2360.09**	**3933.48**	**82.41**	**137.35**
	L_{30} - L_{31}	17.64	16.51	5.00	5.00	-0.20	-0.20					1.18	0.90	17.64	5.32	-----	Vehicle	16.51	-0.21	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**101.04**	**168.40**	**2676.27**	**4460.45**
	L_{31} - L_{32}	-0.36	-1.54	1.54	1.54	-1.70	-1.70					1.18	0.90	-0.36	1.64	-----	Vehicle	-1.54	-1.81	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**274.10**	**456.83**	**247.96**	**413.27**
	L_{32} - L_{33}	5.29	4.30	1.75	1.75	-0.22	-0.22					1.18	0.90	5.29	1.87	-----	Vehicle	4.30	-0.23	-----	Vehicle	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	**162.56**	**270.94**	**1326.65**	**2211.09**
	L_{33} - L_{34}	3.87	3.17	1.87	1.87	-0.26	-0.26					1.18	0.90	3.87	1.99	-----	Vehicle	3.17	-0.27	-----	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	**94.82**	**158.04**	**707.03**	**1178.39**
	L_{34} - L_{35}	4.21	3.54	2.17	2.17	-0.47	-0.47					1.18	0.90	4.21	2.31	-----	Vehicle	3.54	-0.50	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**95.26**	**158.77**	**451.02**	**751.71**
	L_{35} - L_{36}	4.37	3.40	2.11	2.11	-0.20	-0.20					1.18	0.90	4.37	2.25	-----	Vehicle	3.40	-0.21	-----	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	**134.66**	**224.44**	**1436.75**	**2394.58**
	L_{36} - L_{37}	2.06	0.88	2.73	2.73	-0.42	-0.42					1.18	0.90	2.06	2.90	-----	Vehicle	0.88	-0.44	-----	Vehicle	18.00	1.23	1	14.69	5	73.85	92.32	1	422.037	422.0	**66.71**	**111.19**	**440.97**	**734.96**
	L_{37} - L_{38}	3.79	2.22	2.86	2.86	-1.61	-1.61					1.18	0.90	3.79	3.04	-----	Vehicle	2.22	-1.72	-----	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	**181.84**	**303.07**	**324.07**	**540.11**
	L_{38} - L_{39}	-1.73	-3.35	0.75	0.75	-2.05	-2.05					1.18	0.90	-1.73	0.80	-----	Vehicle	-3.35	-2.18	-----	Vehicle	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	**685.81**	**1143.01**	**249.63**	**416.05**
	L_{39} - L_{40}	1.42	-0.10	1.57	1.57	-1.74	-1.74					1.18	0.90	1.42	1.67	-----	Vehicle	-0.10	-1.86	-----	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	**297.52**	**495.86**	**267.58**	**445.96**
	L_{40} - L_{41}	-3.01	-4.16	0.19	0.19	-2.27	-2.27					1.18	0.90	-3.01	0.20	-----	Vehicle	-4.16	-2.42	-----	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	**1909.18**	**3181.96**	**155.29**	**258.82**
	L_{41} - L_{42}	-1.55	-2.29	0.31	0.31	-1.88	-1.88					1.18	0.90	-1.55	0.33	-----	Vehicle	-2.29	-2.00	-----	Vehicle	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	**802.91**	**1338.18**	**130.32**	**217.20**
	L_{42} - L_{43}	-3.17	-3.75	0.27	0.27	-2.06	-2.06					1.18	0.90	-3.17	0.29	-----	Vehicle	-3.75	-2.19	-----	Vehicle	18.00	0.45	1	40.00	5	73.85	92.32	1	155.034	155.0	**256.48**	**427.47**	**31.63**	**52.71**
	L_{43} - L_{44}	-3.25	-3.76	0.17	0.17	-1.93	-1.93					1.18	0.90	-3.25	0.18	-----	Vehicle	-3.76	-2.05	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**806.17**	**1343.62**	**68.62**	**114.36**
Structure 3	L_0 - L_1	6.90	-2.96	1.41	1.41	-0.09	-0.09					1.20	0.90	6.90	1.52	-----	Vehicle	-2.96	-0.09	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**67.15**	**111.92**	**1111.16**	**1851.94**
	L_1 - L_2	10.33	-2.13	1.53	1.53	-0.10	-0.10					1.20	0.90	10.33	1.65	-----	Vehicle	-2.13	-0.11	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**60.42**	**100.70**	**952.28**	**1587.14**
	L_2 - L_3	8.48	-3.27	1.69	1.69	-0.14	-0.14					1.20	0.90	8.48	1.82	-----	Vehicle	-3.27	-0.15	-----	Vehicle	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	**128.33**	**213.88**	**1567.11**	**2611.85**
	L_3 - L_4	10.92	-0.17	2.09	2.09	-0.13	-0.13					1.20	0.90	10.92	2.25	-----	Vehicle	-0.17	-0.14	-----	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	**154.69**	**257.81**	**2587.84**	**4313.06**
	L_4 - L_5	3.28	-6.17	1.54	1.54	-1.15	-1.15					1.20	0.90	3.28	1.66	-----	Vehicle	-6.17	-1.24	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**287.49**	**479.15**	**384.01**	**640.01**
	L_5 - L_6	10.07	-2.62	3.08	3.08	-0.43	-0.43					1.20	0.90	10.07	3.32	-----	Vehicle	-2.62	-0.47	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**142.38**	**237.30**	**1022.67**	**1704.44**
	L_6 - L_7	-0.48	-11.65	0.51	0.51	-2.90	-2.90					1.20	0.90	-0.48	0.55	-----	Vehicle	-11.65	-3.12	-----	Vehicle	15.00	1.46	2	5.15	5	73.85	92.32	1	836.8965	836.9	**701.59**	**1169.32**	**121.51**	**202.51**
	L_7 - L_8	3.36	-6.18	0.69	0.69	-1.33	-1.33					1.20	0.90	3.36	0.75	-----	Vehicle	-6.18	-1.44	-----	Vehicle	15.00	1.02	2	7.35	5	73.85	92.32	1	585.684	585.7	**358.56**	**597.60**	**185.50**	**309.17**
	L_8 - L_9	1.47	-11.13	0.19	0.19	-1.60	-1.60					1.20	0.90	1.47	0.21	-----	Vehicle	-11.13	-1.72	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**664.89**	**1108.15**	**76.06**	**126.77**
	L_9 - L_{10}	-0.54	-9.03	0.25	0.25	-1.71	-1.71					1.20	0.90	-0.54	0.27	-----	Vehicle	-9.03	-1.84	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**514.52**	**857.54**	**71.76**	**119.60**
	L_{10} - L_{11}	2.22	-10.62	0.67	0.67	-1.83	-1.83					1.20	0.90	2.22	0.72	-----	Vehicle	-10.62	-1.97	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**443.59**	**739.32**	**160.19**	**266.98**
	L_{11} - L_{12}	-6.24	-14.06	0.07	0.07	-3.62	-3.62					1.20	0.90	-6.24	0.07	-----	Vehicle	-14.06	-3.91	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**5806.86**	**9678.10**	**107.44**	**179.07**
	L_{12} - L_{13}	12.41	3.95	3.33	3.33	-0.10	-0.10					1.24	0.90	12.41	3.71	-----	Vehicle	3.95	-0.11	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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)

North Truss - Verticals

Location	Member	Member Forces from STAAD: D Start (kips)	D End (kips)	LL_{max} Start (kips)	LL_{max} End (kips)	LL_{min} Start (kips)	LL_{min} End (kips)	Pedestrian $Load_{max}$ Start (kips)	Pedestrian $Load_{max}$ End (kips)	Pedestrian $Load_{min}$ Start (kips)	Pedestrian $Load_{min}$ End (kips)	Impact (1+I)	Lane Reduction	Maximum Positive Shear: Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Minimum Negative Shear: Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Shear Force Rating: Positive Shear Member Inventory RF	Positive Shear Member Operating RF	Negative Shear Member Inventory RF	Negative Shear Member Operating RF
Structure 1	$U_0 - L_0$	-3.17	-3.17	0.28	0.28	-2.01	-2.01					1.24	0.90	-3.17	0.31	-----	Vehicle	-3.17	-2.24	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**369.31**	**615.52**	**50.14**	**83.57**
	$U_0 - L_1$	-0.96	-0.96	0.37	0.37	-1.91	-1.91					1.24	0.90	-0.96	0.41	-----	Vehicle	-0.96	-2.13	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**279.02**	**465.03**	**53.31**	**88.84**
	$U_1 - L_2$	0.27	0.27	0.41	0.41	-1.46	-1.46					1.24	0.90	0.27	0.45	-----	Vehicle	0.27	-1.62	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**251.34**	**418.90**	**70.45**	**117.42**
	$U_2 - L_3$	1.48	1.48	0.82	0.82	-1.12	-1.12					1.24	0.90	1.48	0.91	-----	Vehicle	1.48	-1.25	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**124.71**	**207.85**	**91.93**	**153.22**
	$U_3 - L_4$	2.22	2.22	1.22	1.22	-0.35	-0.35					1.24	0.90	2.22	1.35	-----	Vehicle	2.22	-0.39	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**83.19**	**138.65**	**296.95**	**494.91**
	$U_4 - L_5$	2.71	2.71	1.46	1.46	-0.08	-0.08					1.24	0.90	2.71	1.62	-----	Vehicle	2.71	-0.09	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**84.60**	**141.00**	**1537.74**	**2562.90**
	$U_5 - L_6$	2.52	2.52	1.55	1.55	-0.04	-0.04					1.24	0.90	2.52	1.72	-----	Vehicle	2.52	-0.04	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**70.84**	**118.07**	**2883.18**	**4805.30**
	$U_6 - L_7$	2.77	2.77	1.25	1.25	-0.03	-0.03					1.24	0.90	2.77	1.39	-----	Vehicle	2.77	-0.03	-----	Vehicle	16.25	0.44	2	18.57	5	73.85	92.32	1	272.14688	272.1	**88.99**	**148.32**	**3687.57**	**6145.95**
	$U_7 - L_8$	-0.17	-0.17	1.19	1.19	-0.87	-0.87					1.24	0.90	-0.17	1.32	-----	Vehicle	-0.17	-0.97	-----	Vehicle	15.25	0.82	2	9.30	5	73.85	92.32	1	478.6914	478.7	**167.40**	**279.00**	**227.22**	**378.70**
	$U_8 - L_9$	-4.89	-4.89	0.11	0.11	-1.35	-1.35					1.20	0.90	-4.89	0.11	-----	Vehicle	-4.89	-1.46	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**1293.92**	**2156.54**	**96.39**	**160.65**
	$U_{10} - L_{10}$	-4.01	-4.01	0.09	0.09	-1.43	-1.43					1.20	0.90	-4.01	0.10	-----	Vehicle	-4.01	-1.54	-----	Vehicle	16.16	0.83	2	9.75	5	73.85	92.32	1	512.74682	512.7	**2358.75**	**3931.24**	**152.46**	**254.10**
	$U_{11} - L_{11}$	-5.48	-5.48	0.13	0.13	-1.69	-1.69					1.20	0.90	-5.48	0.14	-----	Vehicle	-5.48	-1.82	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1199.67**	**1999.44**	**91.73**	**152.88**
	$U_{12} - L_{12}$	-3.87	-3.87	0.23	0.23	-1.54	-1.54					1.20	0.90	-3.87	0.25	-----	Vehicle	-3.87	-1.66	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**580.66**	**967.77**	**85.16**	**141.94**
	$U_{13} - L_{13}$	-2.32	-2.32	0.31	0.31	-1.22	-1.22					1.20	0.90	-2.32	0.34	-----	Vehicle	-2.32	-1.31	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**377.62**	**629.36**	**94.22**	**157.03**
	$U_{14} - L_{14}$	-1.13	-1.13	0.47	0.47	-0.75	-0.75					1.20	0.90	-1.13	0.51	-----	Vehicle	-1.13	-0.81	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**224.47**	**374.12**	**140.38**	**233.97**
	$U_{15} - L_{15}$	0.33	0.33	0.94	0.94	-0.48	-0.48					1.20	0.90	0.33	1.01	-----	Vehicle	0.33	-0.52	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**112.81**	**188.01**	**221.67**	**369.45**
	$U_{16} - L_{16}$	1.29	1.29	0.93	0.93	-0.20	-0.20					1.20	0.90	1.29	1.00	-----	Vehicle	1.29	-0.22	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**113.08**	**188.47**	**529.81**	**883.02**
	$U_{17} - L_{17}$	1.86	1.86	0.96	0.96	-0.13	-0.13					1.20	0.90	1.86	1.03	-----	Vehicle	1.86	-0.14	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**133.26**	**222.10**	**975.39**	**1625.65**
	$U_{18} - L_{18}$	3.24	3.24	1.42	1.42	-0.16	-0.16					1.20	0.90	3.24	1.54	-----	Vehicle	3.24	-0.17	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**92.46**	**154.09**	**850.71**	**1417.86**
	$U_{19} - L_{19}$	2.88	2.88	1.21	1.21	-0.12	-0.12					1.20	0.90	2.88	1.30	-----	Vehicle	2.88	-0.13	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**129.01**	**215.02**	**1338.75**	**2231.25**
	$U_{20} - L_{20}$	2.24	2.24	0.71	0.71	-0.05	-0.05					1.20	0.90	2.24	0.76	-----	Vehicle	2.24	-0.05	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**221.93**	**369.88**	**3116.73**	**5194.55**
Structure 2	$U_0 - L_0$	-2.38	-2.38	0.08	0.08	-0.79	-0.79					1.18	0.90	-2.38	0.09	-----	Vehicle	-2.38	-0.84	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**2115.38**	**3525.64**	**218.30**	**363.83**
	$U_1 - L_1$	-2.50	-2.50	0.12	0.12	-1.04	-1.04					1.18	0.90	-2.50	0.13	-----	Vehicle	-2.50	-1.11	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1427.99**	**2379.99**	**165.70**	**276.17**
	$U_2 - L_2$	-2.86	-2.86	0.18	0.18	-1.27	-1.27					1.18	0.90	-2.86	0.19	-----	Vehicle	-2.86	-1.35	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**818.42**	**1364.03**	**113.08**	**188.47**
	$U_3 - L_3$	-1.82	-1.82	0.14	0.14	-0.83	-0.83					1.18	0.90	-1.82	0.15	-----	Vehicle	-1.82	-0.88	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**1053.19**	**1755.31**	**171.99**	**286.65**
	$U_4 - L_4$	-1.16	-1.16	0.20	0.20	-0.90	-0.90					1.18	0.90	-1.16	0.22	-----	Vehicle	-1.16	-0.96	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**533.49**	**889.16**	**118.43**	**197.38**
	$U_5 - L_5$	-0.32	-0.32	0.38	0.38	-0.77	-0.77					1.18	0.90	-0.32	0.40	-----	Vehicle	-0.32	-0.81	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**285.35**	**475.59**	**139.79**	**232.98**
	$U_6 - L_6$	0.40	0.40	0.48	0.48	-0.69	-0.69					1.18	0.90	0.40	0.52	-----	Vehicle	0.40	-0.73	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**220.85**	**368.08**	**156.70**	**261.16**
	$U_7 - L_7$	1.09	1.09	0.53	0.53	-0.30	-0.30					1.18	0.90	1.09	0.57	-----	Vehicle	1.09	-0.32	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**200.19**	**333.65**	**355.54**	**592.56**
	$U_8 - L_8$	2.68	2.68	1.24	1.24	-0.25	-0.25					1.18	0.90	2.68	1.32	-----	Vehicle	2.68	-0.27	-----	Vehicle	15.75	0.44	2	18.00	5	73.85	92.32	1	263.77313	263.8	**91.21**	**152.02**	**456.12**	**760.20**
	$U_9 - L_9$	4.62	4.62	1.65	1.65	-0.17	-0.17					1.18	0.90	4.62	1.76	-----	Vehicle	4.62	-0.18	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**103.89**	**173.16**	**1040.23**	**1733.71**
	$U_{10} - L_{10}$	4.05	4.05	1.47	1.47	-0.03	-0.03					1.18	0.90	4.05	1.57	-----	Vehicle	4.05	-0.03	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**149.12**	**248.53**	**7731.62**	**12886.04**
	$U_{11} - L_{11}$	3.61	3.61	1.22	1.22	-0.04	-0.04					1.18	0.90	3.61	1.30	-----	Vehicle	3.61	-0.04	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**180.10**	**300.17**	**5893.84**	**9823.06**
	$U_{12} - L_{12}$	2.81	2.81	1.03	1.03	-0.11	-0.11					1.18	0.90	2.81	1.09	-----	Vehicle	2.81	-0.12	-----	Vehicle	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	**238.56**	**397.61**	**2278.97**	**3798.28**
	$U_{13} - L_{13}$	2.75	2.75	0.89	0.89	-0.08	-0.08					1.18	0.90	2.75	0.94	-----	Vehicle	2.75	-0.09	-----	Vehicle	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	**246.34**	**410.57**	**2696.42**	**4494.04**
	$U_{14} - L_{14}$	0.70	0.70	0.62	0.62	-0.56	-0.56					1.18	0.90	0.70	0.66	-----	Vehicle	0.70	-0.60	-----	Vehicle	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	**342.93**	**571.55**	**381.49**	**635.81**
	$U_{15} - L_{15}$	-1.74	-1.74	0.07	0.07	-0.68	-0.68					1.17	0.90	-1.74	0.07	-----	Vehicle	-1.74	-0.71	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2079.08**	**3465.13**	**214.47**	**357.46**
	$U_{16} - L_{16}$	-1.62	-1.62	0.11	0.11	-0.97	-0.97					1.17	0.90	-1.62	0.11	-----	Vehicle	-1.62	-1.02	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1672.12**	**2786.87**	**181.76**	**302.93**
	$U_{17} - L_{17}$	-2.53	-2.53	0.11	0.11	-1.18	-1.18					1.17	0.90	-2.53	0.12	-----	Vehicle	-2.53	-1.24	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1443.04**	**2405.07**	**135.97**	**226.62**
	$U_{18} - L_{18}$	-2.65	-2.65	0.18	0.18	-1.39	-1.39					1.17	0.90	-2.65	0.19	-----	Vehicle	-2.65	-1.46	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**818.42**	**1364.04**	**104.39**	**173.99**
	$U_{19} - L_{19}$	-1.79	-1.79	0.15	0.15	-1.01	-1.01					1.17	0.90	-1.79	0.16	-----	Vehicle	-1.79	-1.06	-----	Vehicle	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	**888.42**	**1480.69**	**130.44**	**217.40**
	$U_{20} - L_{20}$	-1.24	-1.24	0.23	0.23	-0.93	-0.93					1.17	0.90	-1.24	0.24	-----	Vehicle	-1.24	-0.97	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**516.10**	**860.17**	**127.91**	**213.19**
	$U_{21} - L_{21}$	-0.83	-0.83	0.29	0.29	-0.87	-0.87					1.17	0.90	-0.83	0.31	-----	Vehicle	-0.83	-0.92	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**372.85**	**621.41**	**123.91**	**206.51**
	$U_{22} - L_{22}$	-0.04	-0.04	0.49	0.49	-0.57	-0.57					1.17	0.90	-0.04	0.51	-----	Vehicle	-0.04	-0.60	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**222.17**	**370.29**	**188.81**	**314.68**
	$U_{23} - L_{23}$	0.80	0.80	0.88	0.88	-0.37	-0.37					1.17	0.90	0.80	0.93	-----	Vehicle	0.80	-0.39	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**122.38**	**203.97**	**295.00**	**491.66**
	$U_{24} - L_{24}$	1.40	1.40	0.93	0.93	-0.28	-0.28					1.17	0.90	1.40	0.98	-----	Vehicle	1.40	-0.29	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**127.54**	**212.57**	**434.14**	**723.57**
	$U_{25} - L_{25}$	1.60	1.60	1.11	1.11	-0.19	-0.19					1.17	0.90	1.60	1.17	-----	Vehicle	1.60	-0.20	-----	Vehicle	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	**117.89**	**196.49**	**697.14**	**1161.89**
	$U_{26} - L_{26}$	2.43	2.43	1.60	1.60	-0.24	-0.24					1.17	0.90	2.43	1.69	-----	Vehicle	2.43	-0.25	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**90.66**	**151.10**	**627.15**	**1045.26**
	$U_{27} - L_{27}$	2.17	2.17	1.35	1.35	-0.16	-0.16					1.17	0.90	2.17	1.42	-----	Vehicle	2.17	-0.17	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**118.63**	**197.71**	**1005.27**	**1675.45**
	$U_{28} - L_{28}$	1.53	1.53	1.17	1.17	-0.10	-0.10					1.17	0.90	1.53	1.23	-----	Vehicle	1.53	-0.11	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**150.34**	**250.57**	**1771.93**	**2953.22**
	$U_{29} - L_{29}$	1.55	1.55	0.87	0.87	-0.05	-0.05					1.17	0.90	1.55	0.92	-----	Vehicle	1.55	-0.05	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**167.33**	**278.88**	**3072.96**	**5121.61**
	$U_{30} - L_{30}$	-0.10	-0.10	0.65	0.65	-0.55	-0.55					1.18	0.90	-0.10	0.69	-----	Vehicle	-0.10	-0.58	-----	Vehicle	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	**331.43**	**552.38**	**393.26**	**655.44**
	$U_{31} - L_{31}$	-1.79	-1.79	0.09	0.09	-0.69	-0.69					1.18	0.90	-1.79	0.09	-----	Vehicle	-1.79	-0.74	-----	Vehicle	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	**2535.26**	**4225.43**	**316.28**	**527.14**
	$U_{32} - L_{32}$	-1.78	-1.78	0.12	0.12	-0.86	-0.86					1.18	0.90	-1.78	0.12	-----	Vehicle	-1.78	-0.92	-----	Vehicle	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	**2155.03**	**3591.72**	**285.51**	**475.85**
	$U_{33} - L_{33}$	-2.46	-2.46	0.07	0.07	-1.05	-1.05					1.18	0.90	-2.46	0.07	-----	Vehicle	-2.46	-1.12	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**3435.70**	**5726.17**	**210.45**	**350.74**
	$U_{34} - L_{34}$	-2.82	-2.82	0.06	0.06	-1.37	-1.37					1.18	0.90	-2.82	0.06	-----	Vehicle	-2.82	-1.46	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**3725.39**	**6208.98**	**160.95**	**268.26**
	$U_{35} - L_{35}$	-3.37	-3.37	0.15	0.15	-1.64	-1.64					1.18	0.90	-3.37	0.16	-----	Vehicle	-3.37	-1.74	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1190.11**	**1983.51**	**105.34**	**175.56**
	$U_{36} - L_{36}$	-1.93	-1.93	0.17	0.17	-1.22	-1.22					1.18	0.90	-1.93	0.18	-----	Vehicle	-1.93	-1.30	-----	Vehicle	15.75	0.44	2	18.00	5	73.85	92.32	1	263.77313	263.8	**667.22**	**1112.03**	**93.06**	**155.11**
	$U_{37} - L_{37}$	-0.91	-0.91	0.23	0.23	-0.64	-0.64					1.18	0.90	-0.91	0.24	-----	Vehicle	-0.91	-0.68	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**478.35**	**797.25**	**167.61**	**279.35**
	$U_{38} - L_{38}$	-0.45	-0.45	0.60	0.60	-0.64	-0.64					1.18	0.90	-0.45	0.64	-----	Vehicle	-0.45	-0.68	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**178.35**	**297.26**	**166.45**	**277.42**
	$U_{39} - L_{39}$	0.16	0.16	0.70	0.70	-0.47	-0.47					1.18	0.90	0.16	0.75	-----	Vehicle	0.16	-0.50	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**152.45**	**254.09**	**227.62**	**379.36**
	$U_{40} - L_{40}$	0.80	0.80	0.90	0.90	-0.23	-0.23					1.18	0.90	0.80	0.96	-----	Vehicle	0.80	-0.25	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**118.39**	**197.31**	**461.65**	**769.41**
	$U_{41} - L_{41}$	1.35	1.35	0.95	0.95	-0.17	-0.17					1.18	0.90	1.35	1.01	-----	Vehicle	1.35	-0.18	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**150.00**	**250.00**	**872.87**	**1454.78**
	$U_{42} - L_{42}$	2.23	2.23	1.41	1.41	-0.22	-0.22					1.18	0.90	2.23	1.50	-----	Vehicle	2.23	-0.24	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**102.08**	**170.14**	**661.28**	**1102.13**
	$U_{43} - L_{43}$	2.14	2.14	1.31	1.31	-0.16	-0.16					1.18	0.90	2.14	1.39	-----	Vehicle	2.14	-0.17	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**132.19**	**220.31**	**1076.31**	**1793.86**
	$U_{44} - L_{44}$	1.70	1.70	0.80	0.80	-0.08	-0.08					1.18	0.90	1.70	0.85	-----	Vehicle	1.70	-0.09	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**216.60**	**361.00**	**2189.88**	**3649.81**
Structure 3	$U_0 - L_0$	-1.87	-1.87	0.05	0.05	-0.71	-0.71					1.20	0.90	-1.87	0.06	-----	Vehicle	-1.87	-0.76	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**3052.81**	**5088.02**	**221.28**	**368.80**
	$U_1 - L_1$	-2.09	-2.09	0.08	0.08	-0.95	-0.95					1.20	0.90	-2.09	0.09	-----	Vehicle	-2.09	-1.02	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1961.37**	**3268.95**	**165.48**	**275.80**
	$U_2 - L_2$	-2.61	-2.61	0.12	0.12	-1.26	-1.26					1.20	0.90	-2.61	0.13	-----	Vehicle	-2.61	-1.36	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1087.98**	**1813.31**	**105.02**	**175.03**
	$U_3 - L_3$	-1.48	-1.48	0.10	0.10	-0.87	-0.87					1.20	0.90	-1.48	0.11	-----	Vehicle	-1.48	-0.93	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**1245.38**	**2075.64**	**147.65**	**246.09**
	$U_4 - L_4$	-1.08	-1.08	0.18	0.18	-0.89	-0.89					1.20	0.90	-1.08	0.19	-----	Vehicle	-1.08	-0.95	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**607.85**	**1013.09**	**118.84**	**198.07**
	$U_5 - L_5$	-0.23	-0.23	0.35	0.35	-0.97	-0.97					1.20	0.90	-0.23	0.38	-----	Vehicle	-0.23	-1.05	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**302.58**	**504.30**	**108.80**	**181.33**
	$U_6 - L_6$	0.90	0.90	0.64	0.64	-0.55	-0.55					1.20	0.90	0.90	0.69	-----	Vehicle	0.90	-0.60	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**164.49**	**274.16**	**191.83**	**319.71**
	$U_7 - L_7$	1.97	1.97	1.13	1.13	-0.42	-0.42					1.20	0.90	1.97	1.21	-----	Vehicle	1.97	-0.45	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**102.18**	**170.30**	**279.81**	**466.35**
	$U_8 - L_8$	3.44	3.44	1.58	1.58	-0.27	-0.27					1.20	0.90	3.44	1.70	-----	Vehicle	3.44	-0.30	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**83.05**	**138.42**	**492.89**	**821.48**
	$U_9 - L_9$	4.72	4.72	1.93	1.93	-0.08	-0.08					1.20	0.90	4.72	2.08	-----	Vehicle	4.72	-0.09	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**80.35**	**133.92**	**1908.72**	**3181.20**
	$U_{10} - L_{10}$	3.92	3.92	1.68	1.68	-0.05	-0.05					1.20	0.90	3.92	1.81	-----	Vehicle	3.92	-0.05	-----	Vehicle	16.16	0.83	2	9.75	5	73.85	92.32	1	512.74682	512.7	**129.35**	**215.58**	**4523.84**	**7539.73**
	$U_{11} - L_{11}$	4.53	4.53	1.75	1.75	-0.05	-0.05					1.20	0.90	4.53	1.89	-----	Vehicle	4.53	-0.06	-----	Vehicle	16.25	0.50	2	16.25	5

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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)

North Truss - Diagonals

Location	Member	Member Forces from STAAD: D Start (kips)	D End (kips)	LL_{max} Start (kips)	LL_{max} End (kips)	LL_{min} Start (kips)	LL_{min} End (kips)	Pedestrian $Load_{max}$ Start (kips)	Pedestrian $Load_{max}$ End (kips)	Pedestrian $Load_{min}$ Start (kips)	Pedestrian $Load_{min}$ End (kips)	Impact (1+I)	Lane Reduction	Maximum Positive Shear: Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Minimum Negative Shear: Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches)	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Shear Force Rating: Positive Shear Member Inventory RF	Positive Shear Member Operating RF	Negative Shear Member Inventory RF	Negative Shear Member Operating RF
Structure 1	U_0 - L_1	-0.26	-0.76	0.06	0.06	-0.49	-0.49					1.24	0.90	-0.26	0.07	-----	Vehicle	-0.76	-0.55	-----	Vehicle	10.00	0.31	2	16.00	5	73.85	92.32	1	119.625	119.6	**789.37**	**1315.61**	**99.76**	**166.27**
	U_1 - L_2	0.21	-0.09	0.05	0.05	-0.19	-0.19					1.24	0.90	0.21	0.06	-----	Vehicle	-0.09	-0.22	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**2006.37**	**3343.94**	**527.80**	**879.66**
	U_2 - L_3	0.24	-0.07	0.06	0.06	-0.15	-0.15					1.24	0.90	0.24	0.07	-----	Vehicle	-0.07	-0.17	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1623.99**	**2706.65**	**678.17**	**1130.29**
	U_3 - L_4	0.40	0.09	0.12	0.12	-0.03	-0.03					1.24	0.90	0.40	0.14	-----	Vehicle	0.09	-0.03	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**831.07**	**1385.11**	**3660.27**	**6100.45**
	U_4 - L_4	-0.25	-0.59	0.05	0.05	-0.19	-0.19					1.24	0.90	-0.25	0.06	-----	Vehicle	-0.59	-0.22	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**2354.21**	**3923.69**	**640.81**	**1068.02**
	U_5 - L_5	-1.06	-1.52	0.07	0.07	-0.56	-0.56					1.24	0.90	-1.06	0.08	-----	Vehicle	-1.52	-0.63	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1854.66**	**3091.10**	**228.53**	**380.89**
	U_6 - L_6	-1.31	-1.77	0.02	0.02	-0.76	-0.76					1.24	0.90	-1.31	0.02	-----	Vehicle	-1.77	-0.85	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**7644.60**	**12740.99**	**167.93**	**279.88**
	U_7 - L_7	-0.76	-1.25	0.02	0.02	-0.49	-0.49					1.24	0.90	-0.76	0.02	-----	Vehicle	-1.25	-0.54	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**6824.19**	**11373.65**	**263.49**	**439.15**
	U_8 - L_9	-0.94	-1.86	0.07	0.07	-0.41	-0.41					1.20	0.90	-0.94	0.08	-----	Vehicle	-1.86	-0.45	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**2384.95**	**3974.91**	**400.46**	**667.43**
	U_9 - L_{10}	-1.58	-2.42	0.06	0.06	-0.58	-0.58					1.20	0.90	-1.58	0.06	-----	Vehicle	-2.42	-0.62	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**2835.61**	**4726.01**	**285.60**	**476.00**
	U_{10} - L_{11}	-1.35	-2.21	0.04	0.04	-0.44	-0.44					1.20	0.90	-1.35	0.04	-----	Vehicle	-2.21	-0.47	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**3523.47**	**5872.46**	**303.24**	**505.41**
	U_{11} - L_{12}	-1.02	-1.50	0.05	0.05	-0.46	-0.46					1.20	0.90	-1.02	0.05	-----	Vehicle	-1.50	-0.50	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**3230.11**	**5383.52**	**339.55**	**565.91**
	U_{12} - L_{13}	-0.89	-1.60	0.08	0.08	-0.42	-0.42					1.20	0.90	-0.89	0.09	-----	Vehicle	-1.60	-0.45	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**1404.85**	**2341.41**	**272.93**	**454.88**
	U_{13} - L_{14}	-0.18	-0.51	0.10	0.10	-0.17	-0.17					1.20	0.90	-0.18	0.11	-----	Vehicle	-0.51	-0.18	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1027.91**	**1713.18**	**627.91**	**1046.52**
	U_{14} - L_{15}	0.39	0.05	0.19	0.19	-0.13	-0.13					1.20	0.90	0.39	0.21	-----	Vehicle	0.05	-0.14	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**544.12**	**906.86**	**807.66**	**1346.10**
	U_{15} - L_{16}	-0.16	-0.50	0.11	0.11	-0.27	-0.27					1.20	0.90	-0.16	0.12	-----	Vehicle	-0.50	-0.29	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**928.60**	**1547.66**	**386.42**	**644.04**
	U_{16} - L_{17}	-0.37	-0.76	0.06	0.06	-0.37	-0.37					1.20	0.90	-0.37	0.06	-----	Vehicle	-0.76	-0.40	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**2148.35**	**3580.58**	**345.74**	**576.23**
	U_{17} - L_{18}	-1.43	-1.90	0.08	0.08	-0.68	-0.68					1.20	0.90	-1.43	0.09	-----	Vehicle	-1.90	-0.73	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1637.26**	**2728.76**	**194.71**	**324.51**
	U_{18} - L_{19}	-1.43	-1.96	0.07	0.07	-0.67	-0.67					1.20	0.90	-1.43	0.07	-----	Vehicle	-1.96	-0.72	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2179.82**	**3633.04**	**212.55**	**354.25**
	U_{19} - L_{19}	-0.81	-1.39	0.02	0.02	-0.48	-0.48					1.20	0.90	-0.81	0.02	-----	Vehicle	-1.39	-0.51	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**6240.04**	**10400.07**	**299.58**	**499.29**
Structure 2	U_0 - L_1	-1.46	-2.01	0.07	0.07	-0.62	-0.62					1.18	0.90	-1.46	0.07	-----	Vehicle	-2.01	-0.65	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2395.95**	**3993.25**	**257.84**	**429.73**
	U_1 - L_2	-1.39	-1.93	0.09	0.09	-0.65	-0.65					1.18	0.90	-1.39	0.09	-----	Vehicle	-1.93	-0.69	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1803.28**	**3005.46**	**245.92**	**409.86**
	U_2 - L_3	-1.30	-1.78	0.10	0.10	-0.63	-0.63					1.18	0.90	-1.30	0.11	-----	Vehicle	-1.78	-0.67	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1332.23**	**2220.38**	**212.26**	**353.77**
	U_3 - L_4	-0.57	-0.98	0.08	0.08	-0.39	-0.39					1.18	0.90	-0.57	0.08	-----	Vehicle	-0.98	-0.41	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**1817.51**	**3029.19**	**367.80**	**613.01**
	U_4 - L_5	-0.10	-0.45	0.10	0.10	-0.28	-0.28					1.18	0.90	-0.10	0.11	-----	Vehicle	-0.45	-0.30	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1050.70**	**1751.17**	**380.29**	**633.82**
	U_5 - L_6	0.26	-0.08	0.17	0.17	-0.22	-0.22					1.18	0.90	0.26	0.19	-----	Vehicle	-0.08	-0.24	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**614.75**	**1024.58**	**480.13**	**800.22**
	U_6 - L_7	0.47	0.08	0.19	0.19	-0.13	-0.13					1.18	0.90	0.47	0.20	-----	Vehicle	0.08	-0.14	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**634.34**	**1057.24**	**919.24**	**1532.07**
	U_7 - L_7	-0.31	-1.10	0.12	0.12	-0.27	-0.27					1.18	0.90	-0.31	0.13	-----	Vehicle	-1.10	-0.29	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**811.41**	**1352.36**	**355.44**	**592.40**
	U_8 - L_8	-1.36	-1.87	0.12	0.12	-0.59	-0.59					1.18	0.90	-1.36	0.12	-----	Vehicle	-1.87	-0.62	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1266.52**	**2110.87**	**245.03**	**408.38**
	U_{10} - L_9	-1.34	-1.84	0.05	0.05	-0.58	-0.58					1.18	0.90	-1.34	0.05	-----	Vehicle	-1.84	-0.62	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**3146.28**	**5243.81**	**273.10**	**455.16**
	U_{11} - L_{10}	-1.60	-2.16	0.01	0.01	-0.65	-0.65					1.18	0.90	-1.60	0.01	-----	Vehicle	-2.16	-0.69	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**14594.72**	**24324.53**	**268.25**	**447.08**
	U_{12} - L_{11}	-1.61	-2.20	0.03	0.03	-0.63	-0.63					1.18	0.90	-1.61	0.03	-----	Vehicle	-2.20	-0.67	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**6736.13**	**11226.89**	**275.91**	**459.84**
	U_{13} - L_{12}	-1.62	-2.23	0.07	0.07	-0.66	-0.66					1.18	0.90	-1.62	0.07	-----	Vehicle	-2.23	-0.70	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2362.07**	**3936.78**	**241.91**	**403.18**
	U_{14} - L_{13}	-0.88	-1.51	0.08	0.08	-0.46	-0.46					1.18	0.90	-0.88	0.08	-----	Vehicle	-1.51	-0.48	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2107.92**	**3513.20**	**349.14**	**581.89**
	U_{15} - L_{14}	-0.27	-0.82	0.05	0.05	-0.35	-0.35					1.17	0.90	-0.27	0.06	-----	Vehicle	-0.82	-0.36	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2583.46**	**4305.77**	**395.08**	**658.47**
	U_{16} - L_{15}	-0.82	-1.35	0.07	0.07	-0.54	-0.54					1.17	0.90	-0.82	0.07	-----	Vehicle	-1.35	-0.57	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1960.56**	**3267.61**	**252.32**	**420.53**
	U_{17} - L_{17}	-0.97	-1.52	0.05	0.05	-0.58	-0.58					1.17	0.90	-0.97	0.06	-----	Vehicle	-1.52	-0.61	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2776.92**	**4628.20**	**252.17**	**420.28**
	U_{18} - L_{18}	-1.04	-1.53	0.06	0.06	-0.57	-0.57					1.17	0.90	-1.04	0.06	-----	Vehicle	-1.53	-0.60	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2251.89**	**3753.15**	**238.00**	**396.66**
	U_{19} - L_{19}	-0.98	-1.46	0.07	0.07	-0.58	-0.58					1.17	0.90	-0.98	0.08	-----	Vehicle	-1.46	-0.61	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1855.80**	**3092.99**	**233.97**	**389.96**
	U_{19} - L_{20}	-0.28	-1.03	0.08	0.08	-0.41	-0.41					1.17	0.90	-0.28	0.08	-----	Vehicle	-1.03	-0.43	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**1273.62**	**2122.69**	**239.31**	**398.85**
	U_{20} - L_{21}	-0.23	-0.57	0.10	0.10	-0.29	-0.29					1.17	0.90	-0.23	0.11	-----	Vehicle	-0.57	-0.31	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1085.28**	**1808.81**	**372.67**	**621.11**
	U_{21} - L_{22}	0.04	-0.30	0.14	0.14	-0.18	-0.18					1.17	0.90	0.04	0.15	-----	Vehicle	-0.30	-0.18	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**779.70**	**1299.49**	**618.44**	**1030.73**
	U_{23} - L_{22}	0.07	-0.27	0.16	0.16	-0.16	-0.16					1.17	0.90	0.07	0.17	-----	Vehicle	-0.27	-0.17	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**668.88**	**1114.80**	**689.44**	**1149.07**
	U_{24} - L_{23}	-0.17	-0.52	0.12	0.12	-0.27	-0.27					1.17	0.90	-0.17	0.13	-----	Vehicle	-0.52	-0.28	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**911.73**	**1519.54**	**404.88**	**674.79**
	U_{25} - L_{24}	-0.29	-1.06	0.11	0.11	-0.39	-0.39					1.17	0.90	-0.29	0.11	-----	Vehicle	-1.06	-0.41	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**928.51**	**1547.51**	**252.76**	**421.27**
	U_{26} - L_{25}	-0.69	-1.19	0.09	0.09	-0.59	-0.59					1.17	0.90	-0.69	0.10	-----	Vehicle	-1.19	-0.62	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1459.21**	**2432.02**	**229.89**	**383.15**
	U_{27} - L_{26}	-0.78	-1.29	0.08	0.08	-0.57	-0.57					1.17	0.90	-0.78	0.08	-----	Vehicle	-1.29	-0.60	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1782.03**	**2970.06**	**237.00**	**395.00**
	U_{28} - L_{27}	-0.72	-1.28	0.06	0.06	-0.62	-0.62					1.17	0.90	-0.72	0.07	-----	Vehicle	-1.28	-0.65	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2297.35**	**3828.91**	**234.55**	**390.92**
	U_{29} - L_{28}	-0.68	-1.22	0.04	0.04	-0.60	-0.60					1.17	0.90	-0.68	0.04	-----	Vehicle	-1.22	-0.64	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**3345.27**	**5575.45**	**225.29**	**375.49**
	U_{30} - L_{29}	-0.22	-0.79	0.04	0.04	-0.38	-0.38					1.17	0.90	-0.22	0.04	-----	Vehicle	-0.79	-0.40	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**3338.99**	**5564.98**	**359.69**	**599.48**
	U_{30} - L_{31}	-0.49	-1.12	0.07	0.07	-0.39	-0.39					1.18	0.90	-0.49	0.08	-----	Vehicle	-1.12	-0.42	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2161.89**	**3603.15**	**406.84**	**678.07**
	U_{31} - L_{32}	-1.09	-1.69	0.09	0.09	-0.57	-0.57					1.18	0.90	-1.09	0.10	-----	Vehicle	-1.69	-0.61	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1723.90**	**2873.16**	**278.51**	**464.19**
	U_{32} - L_{33}	-1.17	-1.76	0.07	0.07	-0.57	-0.57					1.18	0.90	-1.17	0.07	-----	Vehicle	-1.76	-0.61	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**2649.94**	**4416.56**	**301.82**	**503.04**
	U_{33} - L_{34}	-1.34	-1.87	0.05	0.05	-0.62	-0.62					1.18	0.90	-1.34	0.06	-----	Vehicle	-1.87	-0.66	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**3301.70**	**5502.83**	**279.77**	**466.29**
	U_{34} - L_{35}	-1.13	-1.62	0.05	0.05	-0.58	-0.58					1.18	0.90	-1.13	0.05	-----	Vehicle	-1.62	-0.62	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**3485.74**	**5809.56**	**273.31**	**455.52**
	U_{35} - L_{36}	-1.11	-1.61	0.09	0.09	-0.62	-0.62					1.18	0.90	-1.11	0.09	-----	Vehicle	-1.61	-0.66	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1653.52**	**2755.87**	**232.60**	**387.67**
	U_{36} - L_{37}	-0.27	-1.04	0.10	0.10	-0.32	-0.32					1.18	0.90	-0.27	0.10	-----	Vehicle	-1.04	-0.34	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**1022.51**	**1704.19**	**305.39**	**508.99**
	U_{38} - L_{37}	0.40	0.00	0.22	0.22	-0.09	-0.09					1.18	0.90	0.40	0.23	-----	Vehicle	0.00	-0.10	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**546.01**	**910.02**	**1251.28**	**2085.47**
	U_{39} - L_{38}	0.27	-0.08	0.21	0.21	-0.19	-0.19					1.18	0.90	0.27	0.22	-----	Vehicle	-0.08	-0.20	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**519.23**	**865.39**	**566.51**	**944.18**
	U_{40} - L_{39}	0.01	-0.35	0.12	0.12	-0.25	-0.25					1.18	0.90	0.01	0.13	-----	Vehicle	-0.35	-0.27	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**900.09**	**1500.15**	**420.94**	**701.56**
	U_{41} - L_{40}	-0.30	-0.73	0.08	0.08	-0.40	-0.40					1.18	0.90	-0.30	0.08	-----	Vehicle	-0.73	-0.42	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**1838.88**	**3064.80**	**360.74**	**601.23**
	U_{42} - L_{41}	-0.81	-1.29	0.11	0.11	-0.66	-0.66					1.18	0.90	-0.81	0.11	-----	Vehicle	-1.29	-0.70	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1291.49**	**2152.48**	**204.29**	**340.49**
	U_{43} - L_{42}	-0.95	-1.50	0.10	0.10	-0.72	-0.72					1.18	0.90	-0.95	0.10	-----	Vehicle	-1.50	-0.77	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1651.95**	**2753.26**	**219.72**	**366.21**
	U_{44} - L_{43}	-1.00	-1.57	0.05	0.05	-0.54	-0.54					1.18	0.90	-1.00	0.05	-----	Vehicle	-1.57	-0.58	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**3561.57**	**5935.95**	**293.57**	**489.28**
Structure 3	U_0 - L_1	-1.06	-1.63	0.04	0.04	-0.55	-0.55					1.20	0.90	-1.06	0.04	-----	Vehicle	-1.63	-0.59	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**4104.69**	**6841.14**	**259.90**	**433.16**
	U_1 - L_2	-1.16	-1.67	0.05	0.05	-0.58	-0.58					1.20	0.90	-1.16	0.05	-----	Vehicle	-1.67	-0.62	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2817.99**	**4696.65**	**245.92**	**409.86**
	U_2 - L_3	-1.32	-1.78	0.07	0.07	-0.65	-0.65					1.20	0.90	-1.32	0.08	-----	Vehicle	-1.78	-0.70	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1890.05**	**3150.09**	**204.43**	**340.71**
	U_3 - L_4	-0.36	-0.74	0.06	0.06	-0.37	-0.37					1.20	0.90	-0.36	0.06	-----	Vehicle	-0.74	-0.40	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**2301.64**	**3836.07**	**345.78**	**576.30**
	U_4 - L_5	-0.13	-0.47	0.10	0.10	-0.28	-0.28					1.20	0.90	-0.13	0.11	-----	Vehicle	-0.47	-0.31	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1047.99**	**1746.65**	**372.83**	**621.38**
	U_5 - L_6	0.35	0.02	0.16	0.16	-0.15	-0.15					1.20	0.90	0.35	0.17	-----	Vehicle	0.02	-0.16	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**655.78**	**1092.97**	**695.96**	**1159.94**
	U_7 - L_6	-0.07	-0.41	0.12	0.12	-0.14	-0.14					1.20	0.90	-0.07	0.13	-----	Vehicle	-0.41	-0.16	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**867.33**	**1445.55**	**732.94**	**1221.57**
	U_8 - L_7	-0.58	-1.31	0.10	0.10	-0.38	-0.38					1.20	0.90	-0.58	0.10	-----	Vehicle	-1.31	-0.41	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**1198.18**	**1996.96**	**301.52**	**502.53**
	U_9 - L_8	-0.75	-1.24	0.04	0.04	-0.47	-0.47					1.20	0.90	-0.75	0.05	-----	Vehicle	-1.24	-0.51	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**3677.24**	**6128.74**	**334.79**	**557.98**
	U_{10} - L_9	-0.89	-1.77	0.03	0.03	-0.47	-0.47					1.20	0.90	-0.89	0.04	-----	Vehicle	-1.77	-0.50	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**4049.46**	**6749.10**	**283.59**	**472.64**
	U_{11} - L_{10}	-1.27	-2.15	0.02	0.02	-0.66	-0.66					1.20	0.90	-1.27	0.02	-----	Vehicle	-2.15	-0.71	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**10445.48**	**17409.14**	**249.59**	**415.98**
	U_{12} - L_{11}	-0.73	-1.69	0.07	0.07	-0.47	-0.47					1.20	0.90	-0.73	0.07	-----	Vehicle	-1.69	-0.51	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**2453.41**	**4089.01**	**349.86**	**583.10**
	U_{13} - L_{12}	-0.33	-0.81	0.04	0.04	-0.44	-0

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
Condition: As-Built

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

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

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

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

Location		Member	Member Forces from STAAD: D Start (kips)	D End (kips)	LL_{max} Start (kips)	LL_{max} End (kips)	LL_{min} Start (kips)	LL_{min} End (kips)	Pedestrian $Load_{max}$ Start (kips)	Pedestrian $Load_{max}$ End (kips)	Pedestrian $Load_{min}$ Start (kips)	Pedestrian $Load_{min}$ End (kips)	Impact (1+I)	Lane Reduction	Maximum Positive Shear: Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Minimum Negative Shear: Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Shear Force Rating: Positive Shear Member Inventory RF	Positive Shear Member Operating RF	Negative Shear Member Inventory RF	Negative Shear Member Operating RF
Center Truss - Upper Chord	Structure 1	U_0 - U_1	4.56	-6.52	3.40	3.40	-2.10	-2.10					1.24	0.75	4.56	3.15	-----	Vehicle	-6.52	-1.95	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**28.54**	**47.56**	**45.60**	**76.00**
		U_1 - U_2	3.38	-4.04	2.10	2.10	-0.40	-0.40					1.24	0.75	3.38	1.95	-----	Vehicle	-4.04	-0.37	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**46.57**	**77.61**	**243.41**	**405.69**
		U_2 - U_3	2.36	-7.47	2.50	2.50	-1.20	-1.20					1.24	0.75	2.36	2.32	-----	Vehicle	-7.47	-1.11	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**39.38**	**65.63**	**79.29**	**132.15**
		U_3 - U_4	2.44	-4.45	2.20	2.20	-1.40	-1.40					1.24	0.75	2.44	2.04	-----	Vehicle	-4.45	-1.30	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**44.73**	**74.55**	**69.36**	**115.60**
		U_4 - U_5	2.34	-4.17	1.10	1.10	-1.80	-1.80					1.24	0.75	2.34	1.02	-----	Vehicle	-4.17	-1.67	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**89.52**	**149.20**	**54.05**	**90.08**
		U_5 - U_6	4.24	-6.30	0.90	0.90	-2.10	-2.10					1.24	0.75	4.24	0.83	-----	Vehicle	-6.30	-1.95	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**108.04**	**180.07**	**45.67**	**76.11**
		U_6 - U_7	6.32	-5.06	1.70	1.70	-1.20	-1.20					1.24	0.75	6.32	1.58	-----	Vehicle	-5.06	-1.11	-----	Vehicle	14.00	0.75	2	9.33	5	73.85	92.32	1	401.94	401.9	**115.22**	**192.03**	**163.90**	**273.17**
		U_7 - U_8	-0.91	-13.50	0.00	0.00	-4.80	-4.80					1.24	0.75	-0.91	-----	-----	-----	-13.50	-4.45	-----	Vehicle	14.00	1.00	2	7.00	5	73.85	92.32	1	535.92	535.9	-----	-----	**53.72**	**89.54**
		U_8 - U_9	14.68	2.06	4.50	4.50	-0.10	-0.10					1.20	0.75	14.68	4.04	-----	Vehicle	2.06	-0.09	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**24.59**	**40.98**	**1218.14**	**2030.24**
		U_9 - U_{10}	6.72	-5.99	1.90	1.90	-0.50	-0.50					1.20	0.75	6.72	1.71	-----	Vehicle	-5.99	-0.45	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**51.97**	**86.62**	**198.47**	**330.79**
		U_{10} - U_{11}	8.58	-2.74	2.50	2.50	-0.20	-0.20					1.20	0.75	8.58	2.25	-----	Vehicle	-2.74	-0.18	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**39.00**	**65.00**	**507.01**	**845.02**
		U_{11} - U_{12}	6.93	-2.59	2.60	2.60	-0.70	-0.70					1.20	0.75	6.93	2.34	-----	Vehicle	-2.59	-0.63	-----	Vehicle	14.00	0.50	2	14.00	5	73.85	92.32	1	267.96	268.0	**51.16**	**85.27**	**194.17**	**323.61**
		U_{12} - U_{13}	8.34	-7.12	2.90	2.90	-1.00	-1.00					1.20	0.75	8.34	2.61	-----	Vehicle	-7.12	-0.90	-----	Vehicle	14.00	1.33	2	5.24	5	73.85	92.32	1	715.3575	715.4	**124.79**	**207.99**	**362.71**	**604.52**
		U_{13} - U_{14}	6.26	-2.33	3.50	3.50	-1.00	-1.00					1.20	0.75	6.26	3.14	-----	Vehicle	-2.33	-0.90	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**121.70**	**202.84**	**428.58**	**714.30**
		U_{14} - U_{15}	3.31	-4.79	2.90	2.90	-2.40	-2.40					1.20	0.75	3.31	2.61	-----	Vehicle	-4.79	-2.16	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**147.56**	**245.94**	**177.89**	**296.49**
		U_{15} - U_{16}	9.98	-5.04	3.30	3.30	-1.90	-1.90					1.20	0.75	9.98	2.97	-----	Vehicle	-5.04	-1.71	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**128.33**	**213.88**	**224.62**	**374.36**
		U_{16} - U_{17}	2.83	-6.01	1.50	1.50	-2.40	-2.40					1.20	0.75	2.83	1.35	-----	Vehicle	-6.01	-2.16	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**285.50**	**475.83**	**177.55**	**295.92**
		U_{17} - U_{18}	6.87	-9.04	1.20	1.20	-2.60	-2.60					1.20	0.75	6.87	1.08	-----	Vehicle	-9.04	-2.34	-----	Vehicle	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	**259.38**	**432.30**	**119.16**	**198.59**
		U_{18} - U_{19}	2.90	-6.82	0.80	0.80	-1.80	-1.80					1.20	0.75	2.90	0.72	-----	Vehicle	-6.82	-1.62	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**148.12**	**246.87**	**64.38**	**107.30**
		U_{19} - U_{20}	1.99	-7.35	2.50	2.50	-2.30	-2.30					1.20	0.75	1.99	2.25	-----	Vehicle	-7.35	-2.07	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**47.64**	**79.41**	**50.23**	**83.72**
	Structure 2	U_0 - U_1	12.40	-3.78	3.40	3.40	-1.90	-1.90					1.18	0.75	12.40	3.02	-----	Vehicle	-3.78	-1.69	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**34.87**	**58.12**	**65.47**	**109.11**
		U_1 - U_2	8.38	-5.46	2.80	2.80	-0.20	-0.20					1.18	0.75	8.38	2.48	-----	Vehicle	-5.46	-0.18	-----	Vehicle	17.00	0.75	2	11.33	5	73.85	92.32	1	488.07	488.1	**88.65**	**147.75**	**1250.98**	**2084.97**
		U_2 - U_3	8.24	-2.95	3.90	3.90	-0.50	-0.50					1.18	0.75	8.24	3.46	-----	Vehicle	-2.95	-0.44	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**47.40**	**78.99**	**376.84**	**628.07**
		U_3 - U_4	7.92	-7.97	3.80	3.80	-1.40	-1.40					1.18	0.75	7.92	3.37	-----	Vehicle	-7.97	-1.24	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**109.95**	**183.24**	**298.40**	**497.34**
		U_4 - U_5	5.54	-4.79	5.10	5.10	-1.50	-1.50					1.18	0.75	5.54	4.52	-----	Vehicle	-4.79	-1.33	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**98.83**	**164.72**	**336.36**	**560.60**
		U_5 - U_6	2.70	-7.57	2.10	2.10	-3.40	-3.40					1.18	0.75	2.70	1.86	-----	Vehicle	-7.57	-3.02	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**240.93**	**401.55**	**147.84**	**246.40**
		U_6 - U_7	5.85	-9.91	5.20	5.20	-1.10	-1.10					1.18	0.75	5.85	4.61	-----	Vehicle	-9.91	-0.98	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**80.61**	**134.36**	**378.59**	**630.98**
		U_7 - U_8	8.61	-6.86	2.20	2.20	-4.50	-4.50					1.18	0.75	8.61	1.95	-----	Vehicle	-6.86	-3.99	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**189.69**	**316.16**	**93.00**	**155.00**
		U_8 - U_9	3.73	-10.69	2.20	2.20	-2.20	-2.20					1.18	0.75	3.73	1.95	-----	Vehicle	-10.69	-1.95	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**162.34**	**270.57**	**160.20**	**267.00**
		U_9 - U_{10}	2.20	-9.32	1.60	1.60	-2.80	-2.80					1.18	0.75	2.20	1.42	-----	Vehicle	-9.32	-2.48	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**91.63**	**152.72**	**50.64**	**84.41**
		U_{10} - U_{11}	4.11	-10.14	1.50	1.50	-2.00	-2.00					1.18	0.75	4.11	1.33	-----	Vehicle	-10.14	-1.77	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**96.88**	**161.47**	**70.62**	**117.70**
		U_{11} - U_{12}	3.90	-11.48	0.80	0.80	-2.40	-2.40					1.18	0.75	3.90	0.71	-----	Vehicle	-11.48	-2.13	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**181.83**	**303.06**	**58.47**	**97.46**
		U_{12} - U_{13}	9.71	-7.93	2.80	2.80	-1.30	-1.30					1.18	0.75	9.71	2.48	-----	Vehicle	-7.93	-1.15	-----	Vehicle	17.00	0.94	2	9.07	5	73.85	92.32	1	610.0875	610.1	**111.00**	**185.00**	**240.00**	**400.00**
		U_{13} - U_{14}	-10.77	-26.35	0.30	0.30	-6.20	-6.20					1.18	0.75	-10.77	0.27	-----	Vehicle	-26.35	-5.50	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**1505.30**	**2508.83**	**68.79**	**114.65**
		U_{14} - U_{15}	23.41	7.84	7.10	7.10	-0.40	-0.40					1.17	0.75	23.41	6.22	-----	Vehicle	7.84	-0.35	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**61.07**	**101.79**	**1137.48**	**1895.80**
		U_{15} - U_{16}	7.06	-9.43	2.80	2.80	-1.80	-1.80					1.17	0.75	7.06	2.45	-----	Vehicle	-9.43	-1.58	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**128.27**	**213.78**	**198.63**	**331.04**
		U_{16} - U_{17}	8.63	-3.17	3.60	3.60	-0.40	-0.40					1.17	0.75	8.63	3.16	-----	Vehicle	-3.17	-0.35	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**51.89**	**86.48**	**476.33**	**793.88**
		U_{17} - U_{18}	8.38	-5.41	2.60	2.60	-0.70	-0.70					1.17	0.75	8.38	2.28	-----	Vehicle	-5.41	-0.61	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**47.20**	**78.67**	**178.23**	**297.05**
		U_{18} - U_{19}	8.11	-4.42	3.40	3.40	-0.60	-0.60					1.17	0.75	8.11	2.98	-----	Vehicle	-4.42	-0.53	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**36.15**	**60.25**	**209.07**	**348.44**
		U_{19} - U_{20}	5.79	-4.35	2.70	2.70	-1.00	-1.00					1.17	0.75	5.79	2.37	-----	Vehicle	-4.35	-0.88	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**54.04**	**90.07**	**146.90**	**244.83**
		U_{20} - U_{21}	6.65	-6.59	2.80	2.80	-1.10	-1.10					1.17	0.75	6.65	2.45	-----	Vehicle	-6.59	-0.96	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**97.78**	**162.97**	**248.94**	**414.89**
		U_{21} - U_{22}	6.33	-6.69	3.30	3.30	-1.20	-1.20					1.17	0.75	6.33	2.89	-----	Vehicle	-6.69	-1.05	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**83.03**	**138.39**	**228.14**	**380.23**
		U_{22} - U_{23}	6.91	-6.27	2.90	2.90	-2.20	-2.20					1.17	0.75	6.91	2.54	-----	Vehicle	-6.27	-1.93	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**94.35**	**157.25**	**124.57**	**207.62**
		U_{23} - U_{24}	7.16	-6.08	2.30	2.30	-2.30	-2.30					1.17	0.75	7.16	2.02	-----	Vehicle	-6.08	-2.02	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**118.89**	**198.14**	**119.21**	**198.68**
		U_{24} - U_{25}	4.32	-5.83	2.10	2.10	-2.10	-2.10					1.17	0.75	4.32	1.84	-----	Vehicle	-5.83	-1.84	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**69.96**	**116.61**	**69.47**	**115.78**
		U_{25} - U_{26}	4.60	-7.93	1.50	1.50	-2.50	-2.50					1.17	0.75	4.60	1.32	-----	Vehicle	-7.93	-2.19	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**83.54**	**139.24**	**49.22**	**82.03**
		U_{26} - U_{27}	5.15	-8.64	1.50	1.50	-2.10	-2.10					1.17	0.75	5.15	1.32	-----	Vehicle	-8.64	-1.84	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**83.29**	**138.82**	**58.36**	**97.27**
		U_{27} - U_{28}	3.24	-8.55	1.60	1.60	-2.70	-2.70					1.17	0.75	3.24	1.40	-----	Vehicle	-8.55	-2.37	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**119.05**	**198.42**	**69.20**	**115.34**
		U_{28} - U_{29}	8.81	-7.68	3.00	3.00	-1.60	-1.60					1.17	0.75	8.81	2.63	-----	Vehicle	-7.68	-1.40	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**119.32**	**198.86**	**224.20**	**373.67**
		U_{29} - U_{30}	-7.76	-23.33	0.20	0.20	-6.80	-6.80					1.17	0.75	-7.76	0.18	-----	Vehicle	-23.33	-5.96	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**2274.67**	**3791.12**	**63.77**	**106.29**
		U_{30} - U_{31}	24.20	8.63	7.20	7.20	-0.50	-0.50					1.18	0.75	24.20	6.39	-----	Vehicle	8.63	-0.44	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**59.44**	**99.06**	**900.28**	**1500.47**
		U_{31} - U_{32}	7.18	-10.46	2.10	2.10	-1.60	-1.60					1.18	0.75	7.18	1.86	-----	Vehicle	-10.46	-1.42	-----	Vehicle	17.00	0.94	2	9.07	5	73.85	92.32	1	610.0875	610.1	**148.81**	**248.02**	**193.93**	**323.22**
		U_{32} - U_{33}	10.91	-4.46	2.90	2.90	-0.10	-0.10					1.18	0.75	10.91	2.57	-----	Vehicle	-4.46	-0.09	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**48.53**	**80.88**	**1450.84**	**2418.06**
		U_{33} - U_{34}	9.22	-5.03	2.80	2.80	-0.70	-0.70					1.18	0.75	9.22	2.48	-----	Vehicle	-5.03	-0.62	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**50.67**	**84.45**	**206.71**	**344.52**
		U_{34} - U_{35}	9.09	-2.43	3.60	3.60	-0.60	-0.60					1.18	0.75	9.09	3.19	-----	Vehicle	-2.43	-0.53	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**39.43**	**65.72**	**244.10**	**406.83**
		U_{35} - U_{36}	10.27	-4.15	2.50	2.50	-1.10	-1.10					1.18	0.75	10.27	2.22	-----	Vehicle	-4.15	-0.98	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**141.09**	**235.15**	**324.43**	**540.72**
		U_{36} - U_{37}	6.69	-8.78	5.30	5.30	-0.70	-0.70					1.18	0.75	6.69	4.70	-----	Vehicle	-8.78	-0.62	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**78.99**	**131.64**	**596.01**	**993.35**
		U_{37} - U_{38}	10.53	-5.24	3.40	3.40	-3.50	-3.50					1.18	0.75	10.53	3.02	-----	Vehicle	-5.24	-3.11	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**122.36**	**203.94**	**119.89**	**199.81**
		U_{38} - U_{39}	8.00	-2.27	4.50	4.50	-1.20	-1.20					1.18	0.75	8.00	3.99	-----	Vehicle	-2.27	-1.06	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**111.64**	**186.06**	**421.87**	**703.11**
		U_{39} - U_{40}	5.61	-4.72	3.60	3.60	-3.50	-3.50					1.18	0.75	5.61	3.19	-----	Vehicle	-4.72	-3.11	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**140.00**	**233.33**	**144.17**	**240.28**
		U_{40} - U_{41}	7.75	-8.14	3.00	3.00	-2.60	-2.60					1.18	0.75	7.75	2.66	-----	Vehicle	-8.14	-2.31	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**139.30**	**232.17**	**160.63**	**267.72**
		U_{41} - U_{42}	3.50	-7.70	1.30	1.30	-3.50	-3.50					1.18	0.75	3.50	1.15	-----	Vehicle	-7.70	-3.11	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**144.65**	**241.09**	**52.92**	**88.20**
		U_{42} - U_{43}	4.07	-9.77	1.00	1.00	-2.30	-2.30					1.18	0.75	4.07	0.89	-----	Vehicle	-9.77	-2.04	-----	Vehicle	17.00	0.75	2	11.33	5	73.85	92.32	1	488.07	488.1	**251.14**	**418.56**	**107.51**	**179.19**
		U_{43} - U_{44}	6.60	-9.58	2.70	2.70	-2.80	-2.80					1.18	0.75	6.60	2.40	-----	Vehicle	-9.58	-2.48	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**45.36**	**75.61**	**43.02**	**71.71**
	Structure 3	U_0 - U_1	8.84	-0.50	2.90	2.90	-1.50	-1.50					1.20	0.75	8.84	2.61	-----	Vehicle	-0.50	-1.35	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**39.50**	**65.83**	**80.07**	**133.45**
		U_1 - U_2	5.80	-3.92	2.30	2.30	-0.10	-0.10					1.20	0.75	5.80	2.07	-----	Vehicle	-3.92	-0.09	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**50.68**	**84.47**	**1178.22**	**1963.70**
		U_2 - U_3	8.91	-7.00	3.10	3.10	-0.40	-0.40					1.20	0.75	8.91	2.79	-----	Vehicle	-7.00	-0.36	-----	Vehicle	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	**99.97**	**166.61**	**777.92**	**1296.54**
		U_3 - U_4	5.49	-3.35	2.70	2.70	-0.70	-0.70					1.20	0.75	5.49	2.43	-----	Vehicle	-3.35	-0.63	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**157.95**	**263.25**	**611.29**	**1018.82**
		U_4 - U_5	5.50	-9.53	3.00	3.00	-1.80	-1.80					1.20	0.75	5.50	2.70	-----	Vehicle	-9.53	-1.62	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**142.16**	**236.93**	**235.43**	**392.39**
		U_5 - U_6	4.95	-3.15	3.40	3.40	-0.90	-0.90					1.20	0.75	4.95	3.05	-----	Vehicle	-3.15	-0.81	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**125.54**	**209.23**	**475.60**	**792.66**
		U_6 - U_7	2.39	-6.20	2.30	2.30	-3.00	-3.00					1.20	0.75	2.39	2.07	-----	Vehicle	-6.20	-2.70	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**186.32**	**310.54**	**142.00**	**236.67**
		U_7 - U_8	7.38	-8.07	1.70	1.70	-2.40	-2.40					1.20	0.75	7.38	1.53	-----	Vehicle	-8.07	-2.16	-----	Vehicle	14.00	1.33	2	5.24	5	73.85	92.32	1	715.3575	715.4	**213.25**	**355.42**	**150.86**	**251.44**
		U_8 - U_9	2.59	-6.93	1.20	1.20	-1.80	-1.80					1.20	0.75	2.59	1.08	-----	Vehicle	-6.93	-1.62	-----	Vehicle	14.00	0.50	2	14.00	5	73.85	92.32	1	267.96	268.0	**113.26**	**188.77**	**73.90**	**123.17**
		U_9 - U_{10}	2.81	-8.52	0.60	0.60	-2.30	-2.30					1.20	0.75	2.81	0.54	-----	Vehicle	-8.52	-2.07	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**168.93**	**281.55**	**42.41**	**70.69**
		U_{10} - U_{11}	5.83	-6.88	1.00	1.00	-1.50	-1.50					1.20	0.75	5.83	0.90	-----	Vehicle	-6.88	-1.35	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**99.34**	**165.57**	**65.76**	**109.60**
		U_{11} - U_{12}	-2.18	-14.80	0.10	0.10	-3.90	-3.90					1.20	0.75	-2.18	0.09	-----	Vehicle	-14.80	-3.50	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**1218.95**	**2031.58**	**28.35**	**47.25**
		U_{12} - U_{13}	12.98	0.39	5.00	5.00	0.00	0.00					1.24	0.75	12.98	4.64	-----	Vehicle	0.39	-----	-----	-----	14.00	1.00	2	7.00	5	73.85	92.32

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
Condition: As-Built

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

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

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

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

Location	Member	Member Forces from STAAD: D Start (kips)	D End (kips)	LL_{max} Start (kips)	LL_{max} End (kips)	LL_{min} Start (kips)	LL_{min} End (kips)	Pedestrian $Load_{max}$ Start (kips)	Pedestrian $Load_{max}$ End (kips)	Pedestrian $Load_{min}$ Start (kips)	Pedestrian $Load_{min}$ End (kips)	Impact (1+I)	Lane Reduction	Maximum Positive Shear: Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Minimum Negative Shear: Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches)	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Shear Force Rating: Positive Shear Member Inventory RF	Positive Shear Member Operating RF	Negative Shear Member Inventory RF	Negative Shear Member Operating RF
Structure 1	L_0 - L_1	4.20	-2.36	2.10	2.10	-0.30	-0.30					1.24	0.75	4.20	1.95	-----	Vehicle	-2.36	-0.28	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**53.12**	**88.53**	**375.78**	**626.29**
	L_1 - L_2	5.75	-2.53	2.00	2.00	-0.80	-0.80					1.24	0.75	5.75	1.86	-----	Vehicle	-2.53	-0.74	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**55.27**	**92.12**	**140.78**	**234.64**
	L_2 - L_3	2.73	-3.85	2.10	2.10	-1.00	-1.00					1.24	0.75	2.73	1.95	-----	Vehicle	-3.85	-0.93	-----	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	**83.22**	**138.71**	**174.04**	**290.07**
	L_3 - L_4	3.90	-4.48	2.30	2.30	-1.60	-1.60					1.24	0.75	3.90	2.13	-----	Vehicle	-4.48	-1.48	-----	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	**75.66**	**126.09**	**108.52**	**180.87**
	L_4 - L_5	1.53	-7.85	0.70	0.70	-2.30	-2.30					1.24	0.75	1.53	0.65	-----	Vehicle	-7.85	-2.13	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**210.79**	**351.32**	**62.37**	**103.96**
	L_5 - L_6	1.34	-7.19	0.70	0.70	-1.80	-1.80					1.24	0.75	1.34	0.65	-----	Vehicle	-7.19	-1.67	-----	Vehicle	15.00	0.77	2	9.74	5	73.85	92.32	1	442.134	442.1	**312.98**	**521.64**	**119.61**	**199.36**
	L_6 - L_7	3.62	-6.82	0.80	0.80	-1.80	-1.80					1.24	0.75	3.62	0.74	-----	Vehicle	-6.82	-1.67	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**431.27**	**718.78**	**190.52**	**317.54**
	L_7 - L_8	-6.36	-14.66	0.10	0.10	-4.70	-4.70					1.24	0.75	-6.36	0.09	-----	Vehicle	-14.66	-4.36	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**4657.28**	**7762.13**	**96.20**	**160.33**
	L_8 - L_9	15.52	7.55	4.40	4.40	-0.10	-0.10					1.20	0.75	15.52	3.95	-----	Vehicle	7.55	-0.09	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**105.97**	**176.62**	**4816.86**	**8028.10**
	L_9 - L_{10}	10.29	-2.64	1.90	1.90	-0.80	-0.80					1.20	0.75	10.29	1.71	-----	Vehicle	-2.64	-0.72	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**185.15**	**308.59**	**446.13**	**743.55**
	L_{10} - L_{11}	8.89	0.36	1.90	1.90	-0.40	-0.40					1.20	0.75	8.89	1.71	-----	Vehicle	0.36	-0.36	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**77.60**	**129.33**	**384.04**	**640.07**
	L_{11} - L_{12}	11.21	-1.42	1.90	1.90	-0.50	-0.50					1.20	0.75	11.21	1.71	-----	Vehicle	-1.42	-0.45	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**76.78**	**127.97**	**304.85**	**508.08**
	L_{12} - L_{13}	6.02	-3.53	1.90	1.90	-0.60	-0.60					1.20	0.75	6.02	1.71	-----	Vehicle	-3.53	-0.54	-----	Vehicle	15.00	1.02	2	7.35	5	73.85	92.32	1	585.684	585.7	**156.23**	**260.38**	**497.49**	**829.16**
	L_{13} - L_{14}	11.62	0.44	3.70	3.70	-0.90	-0.90					1.20	0.75	11.62	3.32	-----	Vehicle	0.44	-0.81	-----	Vehicle	15.00	1.46	2	5.15	5	73.85	92.32	1	836.8965	836.9	**114.09**	**190.15**	**477.98**	**796.64**
	L_{14} - L_{15}	2.83	-9.85	1.80	1.80	-2.60	-2.60					1.20	0.75	2.83	1.62	-----	Vehicle	-9.85	-2.34	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**295.13**	**491.89**	**202.52**	**337.53**
	L_{15} - L_{16}	6.71	-2.72	1.70	1.70	-1.70	-1.70					1.20	0.75	6.71	1.53	-----	Vehicle	-2.72	-1.53	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**310.97**	**518.28**	**312.54**	**520.89**
	L_{16} - L_{17}	-0.07	-11.08	0.40	0.40	-2.40	-2.40					1.20	0.75	-0.07	0.36	-----	Vehicle	-11.08	-2.16	-----	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	**986.37**	**1643.95**	**161.29**	**268.82**
	L_{17} - L_{18}	3.82	-7.83	0.30	0.30	-2.00	-2.00					1.20	0.75	3.82	0.27	-----	Vehicle	-7.83	-1.80	-----	Vehicle	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	**876.36**	**1460.60**	**130.11**	**216.86**
	L_{18} - L_{19}	1.59	-10.77	0.10	0.10	-1.70	-1.70					1.20	0.75	1.59	0.09	-----	Vehicle	-10.77	-1.53	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**1169.17**	**1948.62**	**65.17**	**108.62**
	L_{19} - L_{20}	2.58	-7.20	0.10	0.10	-1.70	-1.70					1.20	0.75	2.58	0.09	-----	Vehicle	-7.20	-1.53	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**1162.59**	**1937.65**	**66.57**	**110.95**
Structure 2	L_0 - L_1	7.47	-2.52	2.00	2.00	-0.20	-0.20					1.18	0.75	7.47	1.77	-----	Vehicle	-2.52	-0.18	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**78.12**	**130.20**	**797.96**	**1329.93**
	L_1 - L_2	11.63	-2.16	2.00	2.00	-0.20	-0.20					1.18	0.75	11.63	1.77	-----	Vehicle	-2.16	-0.18	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**76.71**	**127.86**	**799.16**	**1331.94**
	L_2 - L_3	8.06	-2.93	2.30	2.30	-0.40	-0.40					1.18	0.75	8.06	2.04	-----	Vehicle	-2.93	-0.35	-----	Vehicle	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	**126.20**	**210.33**	**734.31**	**1223.85**
	L_3 - L_4	12.24	-1.94	2.40	2.40	-0.50	-0.50					1.18	0.75	12.24	2.13	-----	Vehicle	-1.94	-0.44	-----	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	**174.21**	**290.35**	**850.14**	**1416.90**
	L_4 - L_5	9.46	-8.43	2.90	2.90	-1.70	-1.70					1.18	0.75	9.46	2.57	-----	Vehicle	-8.43	-1.51	-----	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	**190.92**	**318.19**	**326.09**	**543.48**
	L_5 - L_6	11.40	-2.08	2.50	2.50	-1.20	-1.20					1.18	0.75	11.40	2.22	-----	Vehicle	-2.08	-1.06	-----	Vehicle	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	**243.34**	**405.56**	**512.21**	**853.68**
	L_6 - L_7	4.02	-9.79	3.50	3.50	-2.60	-2.60					1.18	0.75	4.02	3.11	-----	Vehicle	-9.79	-2.31	-----	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	**178.01**	**296.69**	**238.13**	**396.89**
	L_7 - L_8	4.78	-10.27	1.00	1.00	-3.40	-3.40					1.18	0.75	4.78	0.89	-----	Vehicle	-10.27	-3.02	-----	Vehicle	18.00	1.23	2	7.35	5	73.85	92.32	1	844.074	844.1	**435.85**	**726.41**	**127.10**	**211.83**
	L_8 - L_9	0.58	-13.59	0.70	0.70	-2.20	-2.20					1.18	0.75	0.58	0.62	-----	Vehicle	-13.59	-1.95	-----	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	**491.22**	**818.70**	**152.30**	**253.83**
	L_9 - L_{10}	-0.11	-10.43	0.80	0.80	-2.20	-2.20					1.18	0.75	-0.11	0.71	-----	Vehicle	-10.43	-1.95	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**313.72**	**522.87**	**110.84**	**184.74**
	L_{10} - L_{11}	-0.07	-12.28	0.40	0.40	-2.00	-2.00					1.18	0.75	-0.07	0.35	-----	Vehicle	-12.28	-1.77	-----	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	**537.76**	**896.26**	**103.38**	**172.30**
	L_{11} - L_{12}	1.07	-14.66	0.50	0.50	-1.90	-1.90					1.18	0.75	1.07	0.44	-----	Vehicle	-14.66	-1.69	-----	Vehicle	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	**690.03**	**1150.05**	**176.75**	**294.58**
	L_{12} - L_{13}	6.89	-6.84	2.00	2.00	-1.60	-1.60					1.18	0.75	6.89	1.77	-----	Vehicle	-6.84	-1.42	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**250.81**	**418.02**	**313.54**	**522.56**
	L_{13} - L_{14}	-19.00	-32.90	0.30	0.30	-7.60	-7.60					1.18	0.75	-19.00	0.27	-----	Vehicle	-32.90	-6.74	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**2103.82**	**3506.36**	**78.43**	**130.71**
	L_{14} - L_{15}	32.02	18.24	7.20	7.20	-0.40	-0.40					1.17	0.75	32.02	6.31	-----	Vehicle	18.24	-0.35	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**83.86**	**139.77**	**1595.45**	**2659.08**
	L_{15} - L_{16}	2.21	-10.14	1.80	1.80	-1.90	-1.90					1.17	0.75	2.21	1.58	-----	Vehicle	-10.14	-1.67	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**283.80**	**473.00**	**266.00**	**443.34**
	L_{16} - L_{17}	13.39	-0.69	2.60	2.60	-0.50	-0.50					1.17	0.75	13.39	2.28	-----	Vehicle	-0.69	-0.44	-----	Vehicle	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	**152.26**	**253.77**	**809.14**	**1348.57**
	L_{17} - L_{18}	9.56	-2.17	2.30	2.30	-0.60	-0.60					1.17	0.75	9.56	2.02	-----	Vehicle	-2.17	-0.53	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**107.55**	**179.25**	**420.70**	**701.17**
	L_{18} - L_{19}	8.70	-1.33	2.30	2.30	-0.80	-0.80					1.17	0.75	8.70	2.02	-----	Vehicle	-1.33	-0.70	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**76.26**	**127.11**	**225.56**	**375.94**
	L_{19} - L_{20}	9.27	-3.28	1.90	1.90	-0.60	-0.60					1.17	0.75	9.27	1.67	-----	Vehicle	-3.28	-0.53	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**92.11**	**153.52**	**298.53**	**497.56**
	L_{20} - L_{21}	7.20	-3.21	2.50	2.50	-1.00	-1.00					1.17	0.75	7.20	2.19	-----	Vehicle	-3.21	-0.88	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**115.91**	**193.19**	**292.52**	**487.53**
	L_{21} - L_{22}	8.50	-2.78	3.50	3.50	-1.50	-1.50					1.17	0.75	8.50	3.07	-----	Vehicle	-2.78	-1.32	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**82.54**	**137.57**	**195.21**	**325.34**
	L_{22} - L_{23}	2.93	-8.09	1.90	1.90	-2.60	-2.60					1.17	0.75	2.93	1.67	-----	Vehicle	-8.09	-2.28	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**154.06**	**256.76**	**111.22**	**185.37**
	L_{23} - L_{24}	3.61	-6.79	1.20	1.20	-2.40	-2.40					1.17	0.75	3.61	1.05	-----	Vehicle	-6.79	-2.10	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**243.54**	**405.89**	**120.86**	**201.44**
	L_{24} - L_{25}	3.13	-9.39	0.60	0.60	-1.90	-1.90					1.17	0.75	3.13	0.53	-----	Vehicle	-9.39	-1.67	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**298.70**	**497.83**	**92.07**	**153.45**
	L_{25} - L_{26}	1.67	-8.33	0.80	0.80	-1.90	-1.90					1.17	0.75	1.67	0.70	-----	Vehicle	-8.33	-1.67	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**225.28**	**375.46**	**92.45**	**154.09**
	L_{26} - L_{27}	1.60	-10.07	0.60	0.60	-2.30	-2.30					1.17	0.75	1.60	0.53	-----	Vehicle	-10.07	-2.02	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**421.36**	**702.26**	**107.40**	**179.00**
	L_{27} - L_{28}	0.95	-13.04	0.40	0.40	-2.40	-2.40					1.17	0.75	0.95	0.35	-----	Vehicle	-13.04	-2.10	-----	Vehicle	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	**1010.99**	**1684.98**	**165.05**	**275.08**
	L_{28} - L_{29}	8.62	-3.57	1.90	1.90	-1.40	-1.40					1.17	0.75	8.62	1.67	-----	Vehicle	-3.57	-1.23	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**266.55**	**444.25**	**364.22**	**607.03**
	L_{29} - L_{30}	-17.40	-30.90	0.50	0.50	-7.90	-7.90					1.17	0.75	-17.40	0.44	-----	Vehicle	-30.90	-6.93	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**1275.22**	**2125.36**	**76.53**	**127.54**
	L_{30} - L_{31}	30.59	16.41	6.80	6.80	-0.50	-0.50					1.18	0.75	30.59	6.03	-----	Vehicle	16.41	-0.44	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**87.88**	**146.47**	**1258.78**	**2097.97**
	L_{31} - L_{32}	5.57	-8.34	1.80	1.80	-2.00	-2.00					1.18	0.75	5.57	1.60	-----	Vehicle	-8.34	-1.77	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**279.18**	**465.30**	**250.32**	**417.20**
	L_{32} - L_{33}	14.28	-1.54	2.10	2.10	-0.40	-0.40					1.18	0.75	14.28	1.86	-----	Vehicle	-1.54	-0.35	-----	Vehicle	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	**160.04**	**266.73**	**861.73**	**1436.22**
	L_{33} - L_{34}	11.19	-1.33	2.20	2.20	-0.40	-0.40					1.18	0.75	11.19	1.95	-----	Vehicle	-1.33	-0.35	-----	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	**94.32**	**157.19**	**535.41**	**892.34**
	L_{34} - L_{35}	10.35	-0.01	2.50	2.50	-0.70	-0.70					1.18	0.75	10.35	2.22	-----	Vehicle	-0.01	-0.62	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**97.56**	**162.60**	**358.42**	**597.37**
	L_{35} - L_{36}	12.98	-1.23	2.10	2.10	-0.60	-0.60					1.18	0.75	12.98	1.86	-----	Vehicle	-1.23	-0.53	-----	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	**159.74**	**266.24**	**572.36**	**953.93**
	L_{36} - L_{37}	10.09	-4.97	4.00	4.00	-0.90	-0.90					1.18	0.75	10.09	3.55	-----	Vehicle	-4.97	-0.80	-----	Vehicle	18.00	1.23	1	14.69	5	73.85	92.32	1	422.037	422.0	**53.18**	**88.63**	**240.20**	**400.33**
	L_{37} - L_{38}	10.82	-3.01	3.10	3.10	-2.50	-2.50					1.18	0.75	10.82	2.75	-----	Vehicle	-3.01	-2.22	-----	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	**199.50**	**332.50**	**249.49**	**415.82**
	L_{38} - L_{39}	2.38	-11.08	1.70	1.70	-2.20	-2.20					1.18	0.75	2.38	1.51	-----	Vehicle	-11.08	-1.95	-----	Vehicle	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	**361.44**	**602.40**	**276.62**	**461.03**
	L_{39} - L_{40}	9.28	-8.60	1.70	1.70	-2.40	-2.40					1.18	0.75	9.28	1.51	-----	Vehicle	-8.60	-2.13	-----	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	**325.75**	**542.92**	**230.93**	**384.89**
	L_{40} - L_{41}	1.61	-12.52	0.50	0.50	-2.40	-2.40					1.18	0.75	1.61	0.44	-----	Vehicle	-12.52	-2.13	-----	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	**850.59**	**1417.66**	**174.13**	**290.22**
	L_{41} - L_{42}	3.29	-7.64	0.50	0.50	-2.30	-2.30					1.18	0.75	3.29	0.44	-----	Vehicle	-7.64	-2.04	-----	Vehicle	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	**586.97**	**978.28**	**126.32**	**210.54**
	L_{42} - L_{43}	1.35	-12.36	0.30	0.30	-2.00	-2.00					1.18	0.75	1.35	0.27	-----	Vehicle	-12.36	-1.77	-----	Vehicle	18.00	0.45	1	40.00	5	73.85	92.32	1	155.034	155.0	**265.79**	**442.98**	**36.14**	**60.24**
	L_{43} - L_{44}	1.52	-8.38	0.20	0.20	-2.10	-2.10					1.18	0.75	1.52	0.18	-----	Vehicle	-8.38	-1.86	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**801.33**	**1335.55**	**74.11**	**123.51**
Structure 3	L_0 - L_1	6.56	-3.30	1.70	1.70	-0.10	-0.10					1.20	0.75	6.56	1.53	-----	Vehicle	-3.30	-0.09	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**66.83**	**111.38**	**1157.80**	**1929.66**
	L_1 - L_2	10.13	-2.33	1.80	1.80	-0.10	-0.10					1.20	0.75	10.13	1.62	-----	Vehicle	-2.33	-0.09	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**61.79**	**102.98**	**1164.23**	**1940.38**
	L_2 - L_3	7.92	-3.84	2.00	2.00	-0.20	-0.20					1.20	0.75	7.92	1.80	-----	Vehicle	-3.84	-0.18	-----	Vehicle	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	**130.09**	**216.81**	**1314.47**	**2190.79**
	L_3 - L_4	10.42	-0.67	2.30	2.30	-0.30	-0.30					1.20	0.75	10.42	2.07	-----	Vehicle	-0.67	-0.27	-----	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	**168.50**	**280.83**	**1313.51**	**2189.19**
	L_4 - L_5	3.19	-6.26	2.20	2.20	-1.60	-1.60					1.20	0.75	3.19	1.98	-----	Vehicle	-6.26	-1.44	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**241.36**	**402.27**	**330.59**	**550.99**
	L_5 - L_6	10.01	-2.69	3.30	3.30	-1.10	-1.10					1.20	0.75	10.01	2.97	-----	Vehicle	-2.69	-0.99	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**159.53**	**265.88**	**483.03**	**805.05**
	L_6 - L_7	-0.14	-11.31	1.40	1.40	-3.30	-3.30					1.20	0.75	-0.14	1.26	-----	Vehicle	-11.31	-2.97	-----	Vehicle	15.00	1.46	2	5.15	5	73.85	92.32	1	836.8965	836.9	**307.13**	**511.89**	**127.98**	**213.30**
	L_7 - L_8	3.69	-5.85	0.80	0.80	-1.80	-1.80					1.20	0.75	3.69	0.72	-----	Vehicle	-5.85	-1.62	-----	Vehicle	15.00	1.02	2	7.35	5	73.85	92.32	1	585.684	585.7	**372.98**	**621.64**	**164.97**	**274.95**
	L_8 - L_9	1.43	-11.17	0.60	0.60	-1.50	-1.50					1.20	0.75	1.43	0.54	-----	Vehicle	-11.17	-1.35	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**254.03**	**423.39**	**97.28**	**162.13**
	L_9 - L_{10}	-0.27	-8.76	0.60	0.60	-1.80	-1.80					1.20	0.75	-0.27	0.54	-----	Vehicle	-8.76	-1.62	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**255.93**	**426.55**	**81.96**	**136.60**
	L_{10} - L_{11}	2.24	-10.60	0.80	0.80	-1.90	-1.90					1.20	0.75	2.24	0.72	-----	Vehicle	-10.60	-1.71	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**446.46**	**744.10**	**185.05**	**308.41**
	L_{11} - L_{12}	-7.73	-15.55	0.00	0.00	-4.50	-4.50					1.20	0.75	-7.73	-----	-----	-----	-15.55	-4.04	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	-----	-----	**103.61**	**172.69**
	L_{12} - L_{13}	14.02	5.56	4.40	4.40	0.00	0.00					1.24	0.75	14.02	4.08	-----	Vehicle	5.56	-----	-----	-----	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**102.85**	**171.42**	-----	-----
	L_{13} - $L

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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)

Center Truss - Verticals

Location	Member	Member Forces from STAAD: D Start (kips)	D End (kips)	LL_{max} Start (kips)	LL_{max} End (kips)	LL_{min} Start (kips)	LL_{min} End (kips)	Pedestrian $Load_{max}$ Start (kips)	Pedestrian $Load_{max}$ End (kips)	Pedestrian $Load_{min}$ Start (kips)	Pedestrian $Load_{min}$ End (kips)	Impact (1+I)	Lane Reduction	Maximum Positive Shear: Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Minimum Negative Shear: Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches)	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Shear Force Rating: Positive Shear Member Inventory RF	Positive Shear Member Operating RF	Negative Shear Member Inventory RF	Negative Shear Member Operating RF
Structure 1	U_0 - L_0	-1.75	-1.75	0.31	0.31	-2.21	-2.21					1.24	0.75	-1.75	0.29	-----	Vehicle	-1.75	-2.05	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**401.49**	**669.15**	**55.24**	**92.06**
	U_1 - L_1	-0.62	-0.62	0.30	0.30	-2.01	-2.01					1.24	0.75	-0.62	0.28	-----	Vehicle	-0.62	-1.87	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**409.72**	**682.87**	**60.84**	**101.40**
	U_2 - L_2	0.44	0.44	0.50	0.50	-1.71	-1.71					1.24	0.75	0.44	0.47	-----	Vehicle	0.44	-1.59	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**243.34**	**405.56**	**71.97**	**119.95**
	U_3 - L_3	1.39	1.39	1.08	1.08	-1.36	-1.36					1.24	0.75	1.39	1.00	-----	Vehicle	1.39	-1.27	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**113.20**	**188.66**	**90.78**	**151.31**
	U_4 - L_4	1.88	1.88	1.31	1.31	-0.65	-0.65					1.24	0.75	1.88	1.21	-----	Vehicle	1.88	-0.60	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**93.05**	**155.08**	**191.88**	**319.80**
	U_5 - L_5	2.05	2.05	1.56	1.56	-0.35	-0.35					1.24	0.75	2.05	1.44	-----	Vehicle	2.05	-0.32	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**95.27**	**158.78**	**432.35**	**720.58**
	U_6 - L_6	2.06	2.06	1.55	1.55	-0.17	-0.17					1.24	0.75	2.06	1.43	-----	Vehicle	2.06	-0.16	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**85.42**	**142.36**	**778.26**	**1297.10**
	U_7 - L_7	2.38	2.38	1.30	1.30	-0.01	-0.01					1.24	0.75	2.38	1.20	-----	Vehicle	2.38	-0.01	-----	Vehicle	16.25	0.44	2	18.57	5	73.85	92.32	1	272.14688	272.1	**103.36**	**172.26**	**22821.21**	**38035.35**
	U_8 - L_8	-0.39	-0.39	1.29	1.29	-1.13	-1.13					1.24	0.75	-0.39	1.20	-----	Vehicle	-0.39	-1.04	-----	Vehicle	15.25	0.82	2	9.30	5	73.85	92.32	1	478.6914	478.7	**184.23**	**307.05**	**211.27**	**352.11**
	U_9 - L_9	-4.56	-4.56	0.09	0.09	-1.67	-1.67					1.20	0.75	-4.56	0.08	-----	Vehicle	-4.56	-1.50	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**1871.36**	**3118.94**	**94.02**	**156.69**
	U_{10} - L_{10}	-3.59	-3.59	0.11	0.11	-1.55	-1.55					1.20	0.75	-3.59	0.10	-----	Vehicle	-3.59	-1.39	-----	Vehicle	16.16	0.83	2	9.75	5	73.85	92.32	1	512.74682	512.7	**2394.41**	**3990.69**	**168.93**	**281.54**
	U_{11} - L_{11}	-4.40	-4.40	0.25	0.25	-1.86	-1.86					1.20	0.75	-4.40	0.23	-----	Vehicle	-4.40	-1.67	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**759.63**	**1266.05**	**100.01**	**166.68**
	U_{12} - L_{12}	-3.21	-3.21	0.45	0.45	-1.64	-1.64					1.20	0.75	-3.21	0.41	-----	Vehicle	-3.21	-1.47	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**358.21**	**597.02**	**96.23**	**160.38**
	U_{13} - L_{13}	-1.86	-1.86	0.48	0.48	-1.31	-1.31					1.20	0.75	-1.86	0.43	-----	Vehicle	-1.86	-1.18	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**293.56**	**489.26**	**105.45**	**175.75**
	U_{14} - L_{14}	-0.98	-0.98	0.62	0.62	-0.96	-0.96					1.20	0.75	-0.98	0.55	-----	Vehicle	-0.98	-0.86	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**207.46**	**345.76**	**131.95**	**219.91**
	U_{15} - L_{15}	0.02	0.02	1.00	1.00	-0.72	-0.72					1.20	0.75	0.02	0.90	-----	Vehicle	0.02	-0.65	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**126.41**	**210.69**	**176.80**	**294.66**
	U_{16} - L_{16}	0.93	0.93	0.94	0.94	-0.40	-0.40					1.20	0.75	0.93	0.84	-----	Vehicle	0.93	-0.36	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**134.94**	**224.91**	**318.88**	**531.46**
	U_{17} - L_{17}	1.41	1.41	0.96	0.96	-0.18	-0.18					1.20	0.75	1.41	0.86	-----	Vehicle	1.41	-0.16	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**159.55**	**265.92**	**887.85**	**1479.76**
	U_{18} - L_{18}	2.69	2.69	1.43	1.43	-0.09	-0.09					1.20	0.75	2.69	1.29	-----	Vehicle	2.69	-0.08	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**110.66**	**184.44**	**1760.28**	**2933.79**
	U_{19} - L_{19}	2.33	2.33	1.16	1.16	-0.06	-0.06					1.20	0.75	2.33	1.04	-----	Vehicle	2.33	-0.06	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**162.08**	**270.13**	**3077.53**	**5129.22**
	U_{20} - L_{20}	2.00	2.00	0.85	0.85	-0.04	-0.04					1.20	0.75	2.00	0.76	-----	Vehicle	2.00	-0.03	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**222.12**	**370.20**	**5293.92**	**8823.20**
Structure 2	U_0 - L_0	-1.99	-1.99	0.12	0.12	-0.92	-0.92					1.18	0.75	-1.99	0.10	-----	Vehicle	-1.99	-0.82	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1798.53**	**2997.55**	**225.80**	**376.33**
	U_1 - L_1	-2.54	-2.54	0.15	0.15	-1.18	-1.18					1.18	0.75	-2.54	0.13	-----	Vehicle	-2.54	-1.04	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1396.01**	**2326.68**	**176.33**	**293.89**
	U_2 - L_2	-2.56	-2.56	0.20	0.20	-1.33	-1.33					1.18	0.75	-2.56	0.18	-----	Vehicle	-2.56	-1.18	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**877.98**	**1463.30**	**129.13**	**215.22**
	U_3 - L_3	-1.64	-1.64	0.14	0.14	-0.91	-0.91					1.18	0.75	-1.64	0.13	-----	Vehicle	-1.64	-0.81	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**1227.09**	**2045.15**	**187.49**	**312.49**
	U_4 - L_4	-1.05	-1.05	0.35	0.35	-0.96	-0.96					1.18	0.75	-1.05	0.31	-----	Vehicle	-1.05	-0.85	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**369.28**	**615.47**	**133.85**	**223.08**
	U_5 - L_5	-0.25	-0.25	0.51	0.51	-0.80	-0.80					1.18	0.75	-0.25	0.45	-----	Vehicle	-0.25	-0.71	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**252.36**	**420.60**	**160.26**	**267.11**
	U_6 - L_6	0.42	0.42	0.65	0.65	-0.83	-0.83					1.18	0.75	0.42	0.58	-----	Vehicle	0.42	-0.73	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**197.62**	**329.37**	**156.15**	**260.24**
	U_7 - L_7	1.07	1.07	0.61	0.61	-0.41	-0.41					1.18	0.75	1.07	0.54	-----	Vehicle	1.07	-0.36	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**210.91**	**351.52**	**318.38**	**530.63**
	U_8 - L_8	2.63	2.63	1.32	1.32	-0.48	-0.48					1.18	0.75	2.63	1.17	-----	Vehicle	2.63	-0.43	-----	Vehicle	15.75	0.44	2	18.00	5	73.85	92.32	1	263.77313	263.8	**102.76**	**171.26**	**287.76**	**479.60**
	U_9 - L_9	4.75	4.75	1.70	1.70	-0.47	-0.47					1.18	0.75	4.75	1.51	-----	Vehicle	4.75	-0.42	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**121.24**	**202.07**	**451.69**	**752.81**
	U_{10} - L_{10}	4.10	4.10	1.45	1.45	-0.25	-0.25					1.18	0.75	4.10	1.28	-----	Vehicle	4.10	-0.22	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**182.39**	**303.98**	**1080.70**	**1801.16**
	U_{11} - L_{11}	3.59	3.59	1.18	1.18	-0.11	-0.11					1.18	0.75	3.59	1.04	-----	Vehicle	3.59	-0.10	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**224.40**	**374.00**	**2421.18**	**4035.30**
	U_{12} - L_{12}	2.93	2.93	1.03	1.03	-0.11	-0.11					1.18	0.75	2.93	0.92	-----	Vehicle	2.93	-0.09	-----	Vehicle	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	**284.53**	**474.22**	**2839.74**	**4732.90**
	U_{13} - L_{13}	3.04	3.04	0.94	0.94	-0.06	-0.06					1.18	0.75	3.04	0.83	-----	Vehicle	3.04	-0.06	-----	Vehicle	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	**279.00**	**464.99**	**4214.66**	**7024.43**
	U_{14} - L_{14}	0.58	0.58	0.65	0.65	-0.73	-0.73					1.18	0.75	0.58	0.58	-----	Vehicle	0.58	-0.65	-----	Vehicle	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	**392.76**	**654.60**	**354.40**	**590.67**
	U_{15} - L_{15}	-2.18	-2.18	0.09	0.09	-0.87	-0.87					1.17	0.75	-2.18	0.08	-----	Vehicle	-2.18	-0.76	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1949.83**	**3249.72**	**200.99**	**334.98**
	U_{16} - L_{16}	-1.90	-1.90	0.09	0.09	-1.11	-1.11					1.17	0.75	-1.90	0.08	-----	Vehicle	-1.90	-0.97	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**2475.38**	**4125.63**	**189.96**	**316.61**
	U_{17} - L_{17}	-2.63	-2.63	0.13	0.13	-1.23	-1.23					1.17	0.75	-2.63	0.11	-----	Vehicle	-2.63	-1.08	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1553.49**	**2589.15**	**155.84**	**259.73**
	U_{18} - L_{18}	-2.76	-2.76	0.24	0.24	-1.50	-1.50					1.17	0.75	-2.76	0.21	-----	Vehicle	-2.76	-1.32	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**740.99**	**1234.98**	**116.04**	**193.39**
	U_{19} - L_{19}	-1.74	-1.74	0.27	0.27	-1.02	-1.02					1.17	0.75	-1.74	0.23	-----	Vehicle	-1.74	-0.89	-----	Vehicle	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	**601.06**	**1001.76**	**155.17**	**258.62**
	U_{20} - L_{20}	-1.31	-1.31	0.37	0.37	-0.96	-0.96					1.17	0.75	-1.31	0.32	-----	Vehicle	-1.31	-0.84	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**392.69**	**654.49**	**147.85**	**246.42**
	U_{21} - L_{21}	-0.84	-0.84	0.43	0.43	-0.95	-0.95					1.17	0.75	-0.84	0.38	-----	Vehicle	-0.84	-0.83	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**302.44**	**504.06**	**136.61**	**227.68**
	U_{22} - L_{22}	-0.11	-0.11	0.59	0.59	-0.69	-0.69					1.17	0.75	-0.11	0.52	-----	Vehicle	-0.11	-0.61	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**220.98**	**368.29**	**188.13**	**313.56**
	U_{23} - L_{23}	0.63	0.63	0.91	0.91	-0.54	-0.54					1.17	0.75	0.63	0.79	-----	Vehicle	0.63	-0.48	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**143.10**	**238.50**	**240.79**	**401.31**
	U_{24} - L_{24}	1.17	1.17	0.97	0.97	-0.46	-0.46					1.17	0.75	1.17	0.85	-----	Vehicle	1.17	-0.40	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**146.73**	**244.54**	**311.57**	**519.28**
	U_{25} - L_{25}	1.72	1.72	1.08	1.08	-0.29	-0.29					1.17	0.75	1.72	0.94	-----	Vehicle	1.72	-0.26	-----	Vehicle	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	**146.25**	**243.75**	**549.39**	**915.65**
	U_{26} - L_{26}	2.90	2.90	1.56	1.56	-0.29	-0.29					1.17	0.75	2.90	1.37	-----	Vehicle	2.90	-0.26	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**111.37**	**185.62**	**607.27**	**1012.12**
	U_{27} - L_{27}	2.83	2.83	1.37	1.37	-0.12	-0.12					1.17	0.75	2.83	1.20	-----	Vehicle	2.83	-0.11	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**140.05**	**233.42**	**1632.30**	**2720.50**
	U_{28} - L_{28}	2.23	2.23	1.21	1.21	-0.12	-0.12					1.17	0.75	2.23	1.06	-----	Vehicle	2.23	-0.10	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**174.18**	**290.30**	**1837.14**	**3061.90**
	U_{29} - L_{29}	2.36	2.36	0.93	0.93	-0.04	-0.04					1.17	0.75	2.36	0.82	-----	Vehicle	2.36	-0.04	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**186.65**	**311.08**	**4227.63**	**7046.05**
	U_{30} - L_{30}	0.03	0.03	0.71	0.71	-0.71	-0.71					1.18	0.75	0.03	0.63	-----	Vehicle	0.03	-0.63	-----	Vehicle	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	**360.28**	**600.46**	**361.35**	**602.24**
	U_{31} - L_{31}	-2.50	-2.50	0.09	0.09	-0.86	-0.86					1.18	0.75	-2.50	0.08	-----	Vehicle	-2.50	-0.76	-----	Vehicle	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	**2820.83**	**4701.39**	**304.05**	**506.74**
	U_{32} - L_{32}	-2.25	-2.25	0.08	0.08	-0.95	-0.95					1.18	0.75	-2.25	0.07	-----	Vehicle	-2.25	-0.85	-----	Vehicle	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	**3544.20**	**5907.00**	**309.20**	**515.33**
	U_{33} - L_{33}	-2.93	-2.93	0.06	0.06	-1.14	-1.14					1.18	0.75	-2.93	0.06	-----	Vehicle	-2.93	-1.01	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**4192.24**	**6987.06**	**231.67**	**386.12**
	U_{34} - L_{34}	-3.45	-3.45	0.20	0.20	-1.40	-1.40					1.18	0.75	-3.45	0.18	-----	Vehicle	-3.45	-1.24	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**1350.00**	**2250.01**	**188.16**	**313.60**
	U_{35} - L_{35}	-4.24	-4.24	0.37	0.37	-1.60	-1.60					1.18	0.75	-4.24	0.33	-----	Vehicle	-4.24	-1.42	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**574.39**	**957.32**	**128.88**	**214.81**
	U_{36} - L_{36}	-2.42	-2.42	0.36	0.36	-1.36	-1.36					1.18	0.75	-2.42	0.32	-----	Vehicle	-2.42	-1.21	-----	Vehicle	15.75	0.44	2	18.00	5	73.85	92.32	1	263.77313	263.8	**390.02**	**650.03**	**99.62**	**166.03**
	U_{37} - L_{37}	-1.22	-1.22	0.36	0.36	-0.67	-0.67					1.18	0.75	-1.22	0.32	-----	Vehicle	-1.22	-0.60	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**359.35**	**598.92**	**190.33**	**317.21**
	U_{38} - L_{38}	-0.80	-0.80	0.75	0.75	-0.78	-0.78					1.18	0.75	-0.80	0.67	-----	Vehicle	-0.80	-0.69	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**171.64**	**286.07**	**163.68**	**272.80**
	U_{39} - L_{39}	-0.09	-0.09	0.80	0.80	-0.62	-0.62					1.18	0.75	-0.09	0.71	-----	Vehicle	-0.09	-0.55	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**160.75**	**267.92**	**206.88**	**344.81**
	U_{40} - L_{40}	0.85	0.85	0.94	0.94	-0.43	-0.43					1.18	0.75	0.85	0.84	-----	Vehicle	0.85	-0.38	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**135.84**	**226.41**	**301.66**	**502.77**
	U_{41} - L_{41}	1.61	1.61	0.91	0.91	-0.17	-0.17					1.18	0.75	1.61	0.81	-----	Vehicle	1.61	-0.15	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**187.93**	**313.21**	**1048.50**	**1747.50**
	U_{42} - L_{42}	2.80	2.80	1.40	1.40	-0.18	-0.18					1.18	0.75	2.80	1.24	-----	Vehicle	2.80	-0.16	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**122.75**	**204.58**	**998.61**	**1664.35**
	U_{43} - L_{43}	2.84	2.84	1.26	1.26	-0.13	-0.13					1.18	0.75	2.84	1.11	-----	Vehicle	2.84	-0.11	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**165.07**	**275.12**	**1688.00**	**2813.33**
	U_{44} - L_{44}	2.62	2.62	0.91	0.91	-0.08	-0.08					1.18	0.75	2.62	0.81	-----	Vehicle	2.62	-0.07	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**228.06**	**380.10**	**2774.43**	**4624.04**
Structure 3	U_0 - L_0	-1.54	-1.54	0.06	0.06	-0.87	-0.87					1.20	0.75	-1.54	0.05	-----	Vehicle	-1.54	-0.78	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**3397.75**	**5662.91**	**215.60**	**359.34**
	U_1 - L_1	-2.02	-2.02	0.08	0.08	-1.09	-1.09					1.20	0.75	-2.02	0.07	-----	Vehicle	-2.02	-0.98	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2353.08**	**3921.79**	**172.70**	**287.83**
	U_2 - L_2	-2.23	-2.23	0.11	0.11	-1.35	-1.35					1.20	0.75	-2.23	0.10	-----	Vehicle	-2.23	-1.21	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1430.48**	**2384.13**	**117.35**	**195.59**
	U_3 - L_3	-1.20	-1.20	0.11	0.11	-0.92	-0.92					1.20	0.75	-1.20	0.10	-----	Vehicle	-1.20	-0.82	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**1464.44**	**2440.73**	**167.54**	**279.23**
	U_4 - L_4	-0.86	-0.86	0.33	0.33	-0.95	-0.95					1.20	0.75	-0.86	0.30	-----	Vehicle	-0.86	-0.85	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**381.75**	**636.25**	**133.71**	**222.84**
	U_5 - L_5	-0.15	-0.15	0.57	0.57	-1.00	-1.00					1.20	0.75	-0.15	0.51	-----	Vehicle	-0.15	-0.90	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**224.04**	**373.40**	**126.57**	**210.96**
	U_6 - L_6	0.83	0.83	0.82	0.82	-0.71	-0.71					1.20	0.75	0.83	0.74	-----	Vehicle	0.83	-0.63	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**154.30**	**257.17**	**180.83**	**301.38**
	U_7 - L_7	1.75	1.75	1.32	1.32	-0.64	-0.64					1.20	0.75	1.75	1.18	-----	Vehicle	1.75	-0.57	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**104.86**	**174.77**	**220.98**	**368.29**
	U_8 - L_8	3.18	3.18	1.66	1.66	-0.57	-0.57					1.20	0.75	3.18	1.49	-----	Vehicle	3.18	-0.52	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**95.02**	**158.37**	**282.04**	**470.07**
	U_9 - L_9	4.50	4.50	1.85	1.85	-0.40	-0.40					1.20	0.75	4.50	1.66	-----	Vehicle	4.50	-0.36	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**100.67**	**167.78**	**480.64**	**801.06**
	U_{10} - L_{10}	3.82	3.82	1.69	1.69	-0.16	-0.16					1.20	0.75	3.82	1.52	-----	Vehicle	3.82	-0.14	-----	Vehicle	16.16	0.83	2	9.75	5

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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	0.08	0.08	-0.67	-0.67					1.24	0.75	-0.01	0.08	-----	Vehicle	-0.51	-0.63	-----	Vehicle	10.00	0.31	2	16.00	5	73.85	92.32	1	119.625	119.6	**708.54**	**1180.89**	**87.80**	**146.34**
		U_1 - L_2	0.22	-0.08	0.07	0.07	-0.22	-0.22					1.24	0.75	0.22	0.07	-----	Vehicle	-0.08	-0.20	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1705.37**	**2842.28**	**561.07**	**935.12**
		U_2 - L_3	0.25	-0.05	0.10	0.10	-0.15	-0.15					1.24	0.75	0.25	0.09	-----	Vehicle	-0.05	-0.14	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1252.69**	**2087.81**	**830.37**	**1383.95**
		U_3 - L_4	0.41	0.09	0.14	0.14	-0.05	-0.05					1.24	0.75	0.41	0.13	-----	Vehicle	0.09	-0.04	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**869.96**	**1449.93**	**2673.61**	**4456.02**
		U_4 - L_4	-0.19	-0.52	0.11	0.11	-0.20	-0.20					1.24	0.75	-0.19	0.10	-----	Vehicle	-0.52	-0.18	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**1385.97**	**2309.95**	**761.35**	**1268.92**
		U_5 - L_5	-0.74	-1.19	0.15	0.15	-0.53	-0.53					1.24	0.75	-0.74	0.14	-----	Vehicle	-1.19	-0.49	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1051.21**	**1752.02**	**289.56**	**482.60**
		U_6 - L_6	-1.07	-1.54	0.01	0.01	-0.76	-0.76					1.24	0.75	-1.07	0.00	-----	Vehicle	-1.54	-0.70	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**31159.04**	**51931.73**	**203.04**	**338.41**
		U_7 - L_7	-0.62	-1.11	0.00	0.00	-0.52	-0.52					1.24	0.75	-0.62	0.00	-----	Vehicle	-1.11	-0.48	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**51834.29**	**86390.49**	**299.78**	**499.63**
		U_8 - L_9	-0.89	-1.81	0.05	0.05	-0.54	-0.54					1.20	0.75	-0.89	0.05	-----	Vehicle	-1.81	-0.48	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**3709.26**	**6182.10**	**370.34**	**617.23**
		U_9 - L_{10}	-1.43	-2.27	0.03	0.03	-0.68	-0.68					1.20	0.75	-1.43	0.02	-----	Vehicle	-2.27	-0.61	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**8026.46**	**13377.43**	**292.32**	**487.20**
		U_{10} - L_{11}	-1.02	-1.87	0.07	0.07	-0.48	-0.48					1.20	0.75	-1.02	0.06	-----	Vehicle	-1.87	-0.43	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**2325.35**	**3875.59**	**333.01**	**555.02**
		U_{11} - L_{12}	-0.81	-1.29	0.09	0.09	-0.49	-0.49					1.20	0.75	-0.81	0.08	-----	Vehicle	-1.29	-0.44	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2085.57**	**3475.95**	**388.43**	**647.39**
		U_{12} - L_{13}	-0.67	-1.39	0.15	0.15	-0.42	-0.42					1.20	0.75	-0.67	0.13	-----	Vehicle	-1.39	-0.38	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**939.41**	**1565.68**	**323.98**	**539.96**
		U_{13} - L_{14}	-0.13	-0.46	0.14	0.14	-0.19	-0.19					1.20	0.75	-0.13	0.12	-----	Vehicle	-0.46	-0.17	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**940.84**	**1568.07**	**652.69**	**1087.82**
		U_{14} - L_{15}	0.38	0.05	0.24	0.24	-0.15	-0.15					1.20	0.75	0.38	0.22	-----	Vehicle	0.05	-0.14	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**525.62**	**876.04**	**824.42**	**1374.03**
		U_{15} - L_{16}	-0.04	-0.39	0.18	0.18	-0.27	-0.27					1.20	0.75	-0.04	0.16	-----	Vehicle	-0.39	-0.24	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**701.41**	**1169.02**	**474.41**	**790.69**
		U_{16} - L_{17}	-0.22	-0.61	0.13	0.13	-0.37	-0.37					1.20	0.75	-0.22	0.12	-----	Vehicle	-0.61	-0.33	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**1198.29**	**1997.14**	**420.84**	**701.39**
		U_{17} - L_{18}	-1.16	-1.63	0.06	0.06	-0.66	-0.66					1.20	0.75	-1.16	0.05	-----	Vehicle	-1.63	-0.59	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2774.55**	**4624.25**	**241.74**	**402.90**
		U_{18} - L_{19}	-1.07	-1.60	0.07	0.07	-0.64	-0.64					1.20	0.75	-1.07	0.06	-----	Vehicle	-1.60	-0.57	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2462.91**	**4104.85**	**268.69**	**447.81**
		U_{19} - L_{19}	-1.08	-1.67	0.03	0.03	-0.62	-0.62					1.20	0.75	-1.08	0.03	-----	Vehicle	-1.67	-0.56	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**5945.18**	**9908.63**	**276.01**	**460.02**
		U_0 - L_1	-1.14	-1.70	0.10	0.10	-0.72	-0.72					1.18	0.75	-1.14	0.09	-----	Vehicle	-1.70	-0.64	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1905.16**	**3175.26**	**263.12**	**438.53**
		U_1 - L_2	-1.31	-1.85	0.10	0.10	-0.70	-0.70					1.18	0.75	-1.31	0.09	-----	Vehicle	-1.85	-0.62	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1869.24**	**3115.40**	**273.17**	**455.28**
		U_2 - L_3	-1.13	-1.60	0.11	0.11	-0.68	-0.68					1.18	0.75	-1.13	0.10	-----	Vehicle	-1.60	-0.60	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1442.01**	**2403.35**	**237.96**	**396.60**
		U_3 - L_4	-0.50	-0.90	0.10	0.10	-0.41	-0.41					1.18	0.75	-0.50	0.09	-----	Vehicle	-0.90	-0.36	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**1656.23**	**2760.39**	**420.89**	**701.48**
		U_4 - L_5	-0.05	-0.40	0.16	0.16	-0.28	-0.28					1.18	0.75	-0.05	0.14	-----	Vehicle	-0.40	-0.25	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**818.91**	**1364.85**	**453.25**	**755.42**
		U_5 - L_6	0.27	-0.07	0.22	0.22	-0.24	-0.24					1.18	0.75	0.27	0.20	-----	Vehicle	-0.07	-0.21	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**578.17**	**963.61**	**535.37**	**892.29**
		U_6 - L_7	0.48	0.08	0.23	0.23	-0.16	-0.16					1.18	0.75	0.48	0.20	-----	Vehicle	0.08	-0.14	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**614.94**	**1024.90**	**910.96**	**1518.27**
		U_7 - L_7	-0.31	-1.10	0.18	0.18	-0.29	-0.29					1.18	0.75	-0.31	0.16	-----	Vehicle	-1.10	-0.26	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**661.91**	**1103.18**	**405.79**	**676.31**
		U_8 - L_8	-1.34	-1.86	0.22	0.22	-0.58	-0.58					1.18	0.75	-1.34	0.20	-----	Vehicle	-1.86	-0.52	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**783.73**	**1306.22**	**296.57**	**494.29**
		U_{10} - L_9	-1.44	-1.94	0.15	0.15	-0.57	-0.57					1.18	0.75	-1.44	0.13	-----	Vehicle	-1.94	-0.51	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1267.24**	**2112.06**	**333.92**	**556.53**
		U_{11} - L_{10}	-1.67	-2.23	0.10	0.10	-0.62	-0.62					1.18	0.75	-1.67	0.09	-----	Vehicle	-2.23	-0.55	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**2123.37**	**3538.94**	**333.18**	**555.31**
		U_{12} - L_{11}	-1.62	-2.22	0.10	0.10	-0.60	-0.60					1.18	0.75	-1.62	0.09	-----	Vehicle	-2.22	-0.53	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**2020.94**	**3368.24**	**346.55**	**577.58**
		U_{13} - L_{12}	-1.77	-2.38	0.04	0.04	-0.65	-0.65					1.18	0.75	-1.77	0.04	-----	Vehicle	-2.38	-0.58	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**4821.17**	**8035.28**	**292.81**	**488.02**
		U_{14} - L_{13}	-1.00	-1.63	0.06	0.06	-0.49	-0.49					1.18	0.75	-1.00	0.05	-----	Vehicle	-1.63	-0.43	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**3374.08**	**5623.47**	**392.88**	**654.80**
		U_{15} - L_{14}	-0.47	-1.03	0.06	0.06	-0.45	-0.45					1.17	0.75	-0.47	0.05	-----	Vehicle	-1.03	-0.39	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2835.31**	**4725.51**	**364.79**	**607.98**
		U_{16} - L_{16}	-1.08	-1.61	0.06	0.06	-0.66	-0.66					1.17	0.75	-1.08	0.05	-----	Vehicle	-1.61	-0.58	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2702.68**	**4504.46**	**247.00**	**411.67**
		U_{17} - L_{17}	-1.08	-1.63	0.06	0.06	-0.64	-0.64					1.17	0.75	-1.08	0.05	-----	Vehicle	-1.63	-0.56	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2849.77**	**4749.62**	**275.32**	**458.87**
		U_{18} - L_{18}	-1.09	-1.58	0.09	0.09	-0.61	-0.61					1.17	0.75	-1.09	0.08	-----	Vehicle	-1.58	-0.53	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1917.11**	**3195.18**	**269.05**	**448.41**
		U_{19} - L_{19}	-0.94	-1.42	0.13	0.13	-0.61	-0.61					1.17	0.75	-0.94	0.11	-----	Vehicle	-1.42	-0.53	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1277.26**	**2128.77**	**269.68**	**449.46**
		U_{19} - L_{20}	-0.31	-1.06	0.14	0.14	-0.42	-0.42					1.17	0.75	-0.31	0.12	-----	Vehicle	-1.06	-0.37	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**870.31**	**1450.52**	**283.67**	**472.79**
		U_{20} - L_{21}	-0.23	-0.57	0.15	0.15	-0.29	-0.29					1.17	0.75	-0.23	0.13	-----	Vehicle	-0.57	-0.26	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**892.02**	**1486.71**	**444.13**	**740.22**
		U_{21} - L_{22}	0.03	-0.31	0.17	0.17	-0.19	-0.19					1.17	0.75	0.03	0.15	-----	Vehicle	-0.31	-0.17	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**760.58**	**1267.64**	**669.41**	**1115.69**
		U_{23} - L_{22}	0.11	-0.23	0.19	0.19	-0.18	-0.18					1.17	0.75	0.11	0.17	-----	Vehicle	-0.23	-0.15	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**687.84**	**1146.40**	**738.18**	**1230.30**
		U_{24} - L_{23}	-0.12	-0.47	0.17	0.17	-0.26	-0.26					1.17	0.75	-0.12	0.15	-----	Vehicle	-0.47	-0.23	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**765.64**	**1276.07**	**493.37**	**822.29**
		U_{25} - L_{24}	-0.19	-0.96	0.16	0.16	-0.41	-0.41					1.17	0.75	-0.19	0.14	-----	Vehicle	-0.96	-0.36	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**735.48**	**1225.80**	**290.11**	**483.52**
		U_{26} - L_{25}	-0.84	-1.33	0.16	0.16	-0.58	-0.58					1.17	0.75	-0.84	0.14	-----	Vehicle	-1.33	-0.51	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1055.75**	**1759.58**	**282.38**	**470.63**
		U_{27} - L_{26}	-1.01	-1.51	0.13	0.13	-0.57	-0.57					1.17	0.75	-1.01	0.11	-----	Vehicle	-1.51	-0.50	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1308.06**	**2180.10**	**284.13**	**473.55**
		U_{28} - L_{27}	-1.07	-1.63	0.08	0.08	-0.62	-0.62					1.17	0.75	-1.07	0.07	-----	Vehicle	-1.63	-0.55	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2154.61**	**3591.02**	**280.17**	**466.96**
		U_{29} - L_{28}	-1.12	-1.67	0.04	0.04	-0.62	-0.62					1.17	0.75	-1.12	0.03	-----	Vehicle	-1.67	-0.54	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**4456.59**	**7427.66**	**263.30**	**438.84**
		U_{30} - L_{29}	-0.53	-1.09	0.04	0.04	-0.41	-0.41					1.17	0.75	-0.53	0.04	-----	Vehicle	-1.09	-0.36	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**3825.29**	**6375.48**	**396.55**	**660.91**
		U_{30} - L_{31}	-0.77	-1.41	0.07	0.07	-0.51	-0.51					1.18	0.75	-0.77	0.06	-----	Vehicle	-1.41	-0.45	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2868.21**	**4780.35**	**377.62**	**629.36**
		U_{31} - L_{32}	-1.50	-2.10	0.07	0.07	-0.68	-0.68					1.18	0.75	-1.50	0.06	-----	Vehicle	-2.10	-0.60	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2713.57**	**4522.62**	**280.16**	**466.93**
		U_{32} - L_{33}	-1.42	-2.00	0.06	0.06	-0.64	-0.64					1.18	0.75	-1.42	0.05	-----	Vehicle	-2.00	-0.57	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**3684.96**	**6141.60**	**323.06**	**538.43**
		U_{33} - L_{34}	-1.55	-2.08	0.06	0.06	-0.65	-0.65					1.18	0.75	-1.55	0.05	-----	Vehicle	-2.08	-0.57	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**3444.76**	**5741.26**	**321.97**	**536.62**
		U_{34} - L_{35}	-1.39	-1.88	0.11	0.11	-0.58	-0.58					1.18	0.75	-1.39	0.10	-----	Vehicle	-1.88	-0.52	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1719.54**	**2865.90**	**327.67**	**546.12**
		U_{35} - L_{36}	-1.38	-1.88	0.17	0.17	-0.61	-0.61					1.18	0.75	-1.38	0.15	-----	Vehicle	-1.88	-0.54	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1022.18**	**1703.64**	**282.94**	**471.57**
		U_{36} - L_{37}	-0.43	-1.20	0.17	0.17	-0.32	-0.32					1.18	0.75	-0.43	0.15	-----	Vehicle	-1.20	-0.28	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**714.54**	**1190.90**	**369.62**	**616.03**
		U_{38} - L_{37}	0.53	0.13	0.24	0.24	-0.13	-0.13					1.18	0.75	0.53	0.21	-----	Vehicle	0.13	-0.12	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**584.17**	**973.61**	**1086.39**	**1810.65**
		U_{39} - L_{38}	0.39	0.04	0.25	0.25	-0.22	-0.22					1.18	0.75	0.39	0.22	-----	Vehicle	0.04	-0.20	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**511.05**	**851.75**	**581.74**	**969.57**
		U_{40} - L_{39}	0.07	-0.29	0.17	0.17	-0.28	-0.28					1.18	0.75	0.07	0.15	-----	Vehicle	-0.29	-0.24	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**738.45**	**1230.75**	**465.01**	**775.02**
		U_{41} - L_{40}	-0.36	-0.78	0.12	0.12	-0.39	-0.39					1.18	0.75	-0.36	0.11	-----	Vehicle	-0.78	-0.35	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**1411.14**	**2351.90**	**438.32**	**730.53**
		U_{42} - L_{41}	-1.06	-1.54	0.09	0.09	-0.62	-0.62					1.18	0.75	-1.06	0.08	-----	Vehicle	-1.54	-0.55	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1809.96**	**3016.60**	**258.24**	**430.40**
		U_{43} - L_{42}	-1.22	-1.77	0.08	0.08	-0.67	-0.67					1.18	0.75	-1.22	0.07	-----	Vehicle	-1.77	-0.60	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2436.33**	**4060.55**	**283.83**	**473.05**
		U_{44} - L_{43}	-1.57	-2.14	0.06	0.06	-0.65	-0.65					1.18	0.75	-1.57	0.05	-----	Vehicle	-2.14	-0.57	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**3441.24**	**5735.40**	**294.89**	**491.48**
	Structure 2	U_0 - L_1	-0.75	-1.32	0.05	0.05	-0.75	-0.75					1.20	0.75	-0.75	0.05	-----	Vehicle	-1.32	-0.67	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**3376.22**	**5627.03**	**228.35**	**380.58**
		U_1 - L_2	-1.05	-1.57	0.06	0.06	-0.67	-0.67					1.20	0.75	-1.05	0.05	-----	Vehicle	-1.57	-0.60	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**3024.38**	**5040.63**	**255.45**	**425.75**
		U_2 - L_3	-1.08	-1.54	0.07	0.07	-0.69	-0.69					1.20	0.75	-1.08	0.07	-----	Vehicle	-1.54	-0.62	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2203.74**	**3672.90**	**232.30**	**387.16**
		U_3 - L_4	-0.22	-0.60	0.10	0.10	-0.39	-0.39					1.20	0.75	-0.22	0.09	-----	Vehicle	-0.60	-0.35	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**1530.48**	**2550.81**	**392.94**	**654.90**
		U_4 - L_5	-0.08	-0.42	0.17	0.17	-0.29	-0.29					1.20	0.75	-0.08	0.15	-----	Vehicle	-0.42	-0.26	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**746.95**	**1244.92**	**442.83**	**738.04**
		U_5 - L_6	0.35	0.03	0.21	0.21	-0.16	-0.16					1.20	0.75	0.35	0.19	-----	Vehicle	0.03	-0.15	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**594.80**	**991.33**	**774.08**	**1290.13**
		U_7 - L_6	-0.05	-0.39	0.15	0.15	-0.17	-0.17					1.20	0.75	-0.05	0.13	-----	Vehicle	-0.39	-0.16	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**846.40**	**1410.67**	**732.20**	**1220.33**
		U_8 - L_7	-0.51	-1.25	0.16	0.16	-0.40	-0.40					1.20	0.75	-0.51	0.15	-----	Vehicle	-1.25	-0.36	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**851.77**	**1419.62**	**338.64**	**564.40**
		U_9 - L_8	-0.70	-1.19	0.12	0.12	-0.49	-0.49					1.20	0.75	-0.70	0.11	-----	Vehicle	-1.19	-0.44	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1580.95**	**2634.91**	**383.81**	**639.68**
		U_{10} - L_9	-0.88	-1.76	0.10	0.10	-0.45	-0.45					1.20	0.75	-0.88	0.09	-----	Vehicle	-1.76	-0.41	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**1670.32**	**2783.86**	**350.86**	**584.77**
	Structure 3	U_{11} - L_{10}	-1.33	-2.21	0.03	0.03	-0.67	-0.67					1.20	0.75	-1.33	0.03	-----	Vehicle	-2.21	-0.60	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**7164.19**	**11940.32**	**296.31**	**493.85**
		U_{12} - L_{11}	-0.81	-1.77	0.08	0.08	-0.51	-0.51					1.20	0.75	-0.81	0.07	-----	Vehicle	-1.77	-0.45	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**2567.33**	**4278.88**	**

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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
South Truss - Upper Chord	Structure 1	U_0 - U_1	8.19	-2.89	1.61	1.61	-1.11	-1.11	0.75	0.75	-0.19	-0.19	1.24	0.90	8.19	1.79	0.75	Pedestrian	-2.89	-1.23	-0.19	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	46.15	57.68	73.79	122.98
		U_1 - U_2	2.96	-4.47	1.24	1.24	-0.22	-0.22	0.07	0.07	-0.06	-0.06	1.24	0.90	2.96	1.38	0.07	Vehicle	-4.47	-0.24	-0.06	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	66.12	110.20	374.58	624.30
		U_2 - U_3	2.48	-7.36	0.63	0.63	-0.51	-0.51	0.07	0.07	-0.09	-0.09	1.24	0.90	2.48	0.70	0.07	Vehicle	-7.36	-0.56	-0.09	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	130.33	217.22	156.51	260.85
		U_3 - U_4	1.94	-4.95	0.54	0.54	-0.42	-0.42	0.00	0.00	-0.05	-0.05	1.24	0.90	1.94	0.60	-----	Vehicle	-4.95	-0.46	-0.05	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	153.21	255.35	194.33	323.89
		U_4 - U_5	1.94	-4.56	0.40	0.40	-0.83	-0.83	0.00	0.00	-0.15	-0.15	1.24	0.90	1.94	0.44	-----	Vehicle	-4.56	-0.92	-0.15	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	208.28	347.13	97.42	162.36
		U_5 - U_6	3.13	-7.41	0.12	0.12	-0.88	-0.88	0.00	0.00	-0.25	-0.25	1.24	0.90	3.13	0.13	-----	Vehicle	-7.41	-0.98	-0.25	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	709.81	1183.01	89.83	149.72
		U_6 - U_7	6.57	-4.82	0.46	0.46	-0.44	-0.44	0.03	0.03	-0.09	-0.09	1.24	0.90	6.57	0.51	0.03	Vehicle	-4.82	-0.49	-0.09	Vehicle	14.00	0.75	2	9.33	5	73.85	92.32	1	401.94	401.9	353.78	589.64	369.45	615.75
		U_7 - U_8	-2.87	-15.47	0.53	0.53	-1.68	-1.68	0.00	0.00	-0.80	-0.80	1.24	0.90	-2.87	0.59	-----	Vehicle	-15.47	-1.87	-0.80	Pedestrian	14.00	1.00	2	7.00	5	73.85	92.32	1	535.92	535.9	422.92	704.86	118.50	148.12
		U_8 - U_9	17.77	5.14	1.99	1.99	-0.17	-0.17	0.85	0.85	0.00	0.00	1.20	0.90	17.77	2.15	0.85	Pedestrian	5.14	-0.18	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	43.32	54.15	618.13	1030.22
		U_9 - U_{10}	7.55	-5.15	0.93	0.93	-0.13	-0.13	0.20	0.20	-0.04	-0.04	1.20	0.90	7.55	1.00	0.20	Vehicle	-5.15	-0.13	-0.04	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	88.27	147.12	665.28	1108.80
		U_{10} - U_{11}	10.27	-1.06	1.42	1.42	-0.04	-0.04	0.37	0.37	0.00	0.00	1.20	0.90	10.27	1.53	0.37	Vehicle	-1.06	-0.04	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	56.56	94.26	2309.18	3848.64
		U_{11} - U_{12}	8.07	-1.44	1.26	1.26	-0.03	-0.03	0.26	0.26	0.00	0.00	1.20	0.90	8.07	1.36	0.26	Vehicle	-1.44	-0.03	-----	Vehicle	14.00	0.50	2	14.00	5	73.85	92.32	1	267.96	268.0	87.54	145.90	4218.56	7030.93
		U_{12} - U_{13}	9.20	-6.26	0.81	0.81	-0.28	-0.28	0.20	0.20	0.00	0.00	1.20	0.90	9.20	0.87	0.20	Vehicle	-6.26	-0.30	-----	Vehicle	14.00	1.33	2	5.24	5	73.85	92.32	1	715.3575	715.4	374.04	623.40	1096.87	1828.12
		U_{13} - U_{14}	7.06	-1.54	1.75	1.75	-0.07	-0.07	0.17	0.17	0.00	0.00	1.20	0.90	7.06	1.89	0.17	Vehicle	-1.54	-0.08	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	202.47	337.45	4966.58	8277.64
		U_{14} - U_{15}	2.68	-5.43	0.43	0.43	-1.16	-1.16	0.02	0.02	-0.11	-0.11	1.20	0.90	2.68	0.47	0.02	Vehicle	-5.43	-1.25	-0.11	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	824.39	1373.99	306.40	510.67
		U_{15} - U_{16}	9.21	-5.82	0.87	0.87	-0.56	-0.56	0.06	0.06	-0.12	-0.12	1.20	0.90	9.21	0.94	0.06	Vehicle	-5.82	-0.61	-0.12	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	404.26	673.77	630.93	1051.55
		U_{16} - U_{17}	2.12	-6.72	0.57	0.57	-1.10	-1.10	0.01	0.01	-0.14	-0.14	1.20	0.90	2.12	0.61	0.01	Vehicle	-6.72	-1.19	-0.14	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	632.33	1053.89	322.17	536.95
		U_{17} - U_{18}	5.43	-10.49	0.25	0.25	-0.96	-0.96	0.03	0.03	-0.26	-0.26	1.20	0.90	5.43	0.27	0.03	Vehicle	-10.49	-1.04	-0.26	Vehicle	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	1036.59	1727.66	267.81	446.35
		U_{18} - U_{19}	1.81	-7.91	0.08	0.08	-0.89	-0.89	0.02	0.02	-0.28	-0.28	1.20	0.90	1.81	0.09	0.02	Vehicle	-7.91	-0.96	-0.28	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	1197.10	1995.17	108.19	180.31
		U_{19} - U_{20}	1.62	-7.72	0.13	0.13	-0.79	-0.79	0.02	0.02	-0.22	-0.22	1.20	0.90	1.62	0.14	0.02	Vehicle	-7.72	-0.85	-0.22	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	759.27	1265.44	122.38	203.97
	Structure 2	U_0 - U_1	18.71	2.53	1.75	1.75	-1.10	-1.10	0.86	0.86	-0.13	-0.13	1.18	0.90	18.71	1.87	0.86	Pedestrian	2.53	-1.17	-0.13	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	49.52	61.90	97.38	162.30
		U_1 - U_2	9.39	-4.45	1.29	1.29	-0.14	-0.14	0.13	0.13	-0.03	-0.03	1.18	0.90	9.39	1.37	0.13	Vehicle	-4.45	-0.14	-0.03	Vehicle	17.00	0.75	2	11.33	5	73.85	92.32	1	488.07	488.1	160.03	266.72	1548.63	2581.05
		U_2 - U_3	9.93	-1.26	1.90	1.90	-0.27	-0.27	0.32	0.32	-0.07	-0.07	1.18	0.90	9.93	2.03	0.32	Vehicle	-1.26	-0.28	-0.07	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	80.49	134.14	596.11	993.52
		U_3 - U_4	8.70	-7.19	1.60	1.60	-0.14	-0.14	0.11	0.11	-0.03	-0.03	1.18	0.90	8.70	1.70	0.11	Vehicle	-7.19	-0.15	-0.03	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	217.60	362.66	2420.65	4034.42
		U_4 - U_5	5.86	-4.47	1.44	1.44	-0.55	-0.55	0.14	0.14	-0.05	-0.05	1.18	0.90	5.86	1.54	0.14	Vehicle	-4.47	-0.58	-0.05	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	290.95	484.92	768.98	1281.63
		U_5 - U_6	1.29	-8.98	1.16	1.16	-1.09	-1.09	0.00	0.00	-0.15	-0.15	1.18	0.90	1.29	1.23	-----	Vehicle	-8.98	-1.16	-0.15	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	365.10	608.50	382.87	638.11
		U_6 - U_7	6.54	-9.22	1.27	1.27	-0.57	-0.57	0.09	0.09	0.00	0.00	1.18	0.90	6.54	1.35	0.09	Vehicle	-9.22	-0.60	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	275.41	459.01	612.74	1021.24
		U_7 - U_8	6.96	-8.51	0.68	0.68	-1.36	-1.36	0.00	0.00	-0.18	-0.18	1.18	0.90	6.96	0.72	-----	Vehicle	-8.51	-1.45	-0.18	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	515.07	858.44	255.19	425.32
		U_8 - U_9	2.04	-12.38	0.55	0.55	-1.29	-1.29	0.00	0.00	-0.25	-0.25	1.18	0.90	2.04	0.59	-----	Vehicle	-12.38	-1.37	-0.25	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	542.87	904.79	227.12	378.53
		U_9 - U_{10}	-0.19	-11.71	0.21	0.21	-1.23	-1.23	0.00	0.00	-0.31	-0.31	1.18	0.90	-0.19	0.23	-----	Vehicle	-11.71	-1.31	-0.31	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	579.93	966.54	94.67	157.78
		U_{10} - U_{11}	3.22	-11.03	0.31	0.31	-1.01	-1.01	0.00	0.00	-0.20	-0.20	1.18	0.90	3.22	0.33	-----	Vehicle	-11.03	-1.08	-0.20	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	397.39	662.32	115.58	192.64
		U_{11} - U_{12}	1.81	-13.56	0.37	0.37	-1.21	-1.21	0.02	0.02	-0.32	-0.32	1.18	0.90	1.81	0.40	0.02	Vehicle	-13.56	-1.28	-0.32	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	328.14	546.90	96.00	160.00
		U_{12} - U_{13}	10.30	-7.34	0.86	0.86	-0.47	-0.47	0.06	0.06	-0.06	-0.06	1.18	0.90	10.30	0.92	0.06	Vehicle	-7.34	-0.50	-0.06	Vehicle	17.00	0.94	2	9.07	5	73.85	92.32	1	610.0875	610.1	300.07	500.12	553.90	923.16
		U_{13} - U_{14}	-14.76	-30.33	0.85	0.85	-2.14	-2.14	0.00	0.00	-0.99	-0.99	1.18	0.90	-14.76	0.91	-----	Vehicle	-30.33	-2.28	-0.99	Pedestrian	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	444.85	741.42	153.20	191.50
		U_{14} - U_{15}	28.72	13.15	3.38	3.38	-0.54	-0.54	0.97	0.97	0.00	0.00	1.17	0.90	28.72	3.56	0.97	Vehicle	13.15	-0.57	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	106.01	176.68	705.14	1175.23
		U_{15} - U_{16}	7.66	-8.84	1.14	1.14	-0.33	-0.33	0.10	0.10	-0.07	-0.07	1.17	0.90	7.66	1.20	0.10	Vehicle	-8.84	-0.35	-0.07	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	262.01	436.68	898.44	1497.40
		U_{16} - U_{17}	10.20	-1.59	1.41	1.41	-0.13	-0.13	0.27	0.27	-0.02	-0.02	1.17	0.90	10.20	1.48	0.27	Vehicle	-1.59	-0.14	-0.02	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	109.69	182.81	1191.59	1985.98
		U_{17} - U_{18}	9.53	-4.26	1.63	1.63	-0.14	-0.14	0.21	0.21	-0.04	-0.04	1.17	0.90	9.53	1.71	0.21	Vehicle	-4.26	-0.15	-0.04	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	62.38	103.97	747.33	1245.56
		U_{18} - U_{19}	9.52	-3.01	1.28	1.28	-0.19	-0.19	0.25	0.25	-0.01	-0.01	1.17	0.90	9.52	1.35	0.25	Vehicle	-3.01	-0.20	-0.01	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	79.27	132.12	551.51	919.19
		U_{19} - U_{20}	6.34	-3.80	1.12	1.12	-0.09	-0.09	0.11	0.11	0.00	0.00	1.17	0.90	6.34	1.18	0.11	Vehicle	-3.80	-0.10	0.00	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	108.09	180.16	1348.65	2247.76
	Structure 3	U_0 - U_1	14.18	4.83	1.45	1.45	-1.01	-1.01	0.84	0.84	-0.05	-0.05	1.20	0.90	14.18	1.57	0.84	Pedestrian	4.83	-1.09	-0.05	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	55.24	69.05	101.73	169.55
		U_1 - U_2	6.82	-2.91	1.12	1.12	-0.10	-0.10	0.18	0.18	-0.02	-0.02	1.20	0.90	6.82	1.21	0.18	Vehicle	-2.91	-0.11	-0.02	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	86.15	143.58	968.13	1613.55
		U_2 - U_3	10.42	-5.49	1.24	1.24	-0.14	-0.14	0.29	0.29	-0.03	-0.03	1.20	0.90	10.42	1.34	0.29	Vehicle	-5.49	-0.15	-0.03	Vehicle	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	206.92	344.86	1858.20	3097.00
		U_3 - U_4	6.43	-2.41	1.52	1.52	-0.11	-0.11	0.16	0.16	-0.02	-0.02	1.20	0.90	6.43	1.63	0.16	Vehicle	-2.41	-0.12	-0.02	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	234.24	390.40	3337.48	5562.46
		U_4 - U_5	5.41	-9.62	0.68	0.68	-0.76	-0.76	0.07	0.07	-0.06	-0.06	1.20	0.90	5.41	0.74	0.07	Vehicle	-9.62	-0.82	-0.06	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	521.18	868.63	463.99	773.32
		U_5 - U_6	5.50	-2.61	1.26	1.26	-0.07	-0.07	0.11	0.11	-0.01	-0.01	1.20	0.90	5.50	1.36	0.11	Vehicle	-2.61	-0.08	-0.01	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	282.06	470.09	4890.40	8150.67
		U_6 - U_7	1.24	-7.36	0.51	0.51	-1.35	-1.35	0.00	0.00	-0.18	-0.18	1.20	0.90	1.24	0.55	-----	Vehicle	-7.36	-1.45	-0.18	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	704.26	1173.76	263.46	439.10
		U_7 - U_8	5.85	-9.61	0.39	0.39	-0.81	-0.81	0.00	0.00	-0.22	-0.22	1.20	0.90	5.85	0.42	-----	Vehicle	-9.61	-0.87	-0.22	Vehicle	14.00	1.33	2	5.24	5	73.85	92.32	1	715.3575	715.4	778.83	1298.06	373.29	622.15
		U_8 - U_9	1.25	-8.27	0.28	0.28	-0.95	-0.95	0.00	0.00	-0.27	-0.27	1.20	0.90	1.25	0.31	-----	Vehicle	-8.27	-1.02	-0.27	Vehicle	14.00	0.50	2	14.00	5	73.85	92.32	1	267.96	268.0	401.45	669.08	116.51	194.18
		U_9 - U_{10}	0.73	-10.60	0.18	0.18	-1.07	-1.07	0.00	0.00	-0.39	-0.39	1.20	0.90	0.73	0.20	-----	Vehicle	-10.60	-1.16	-0.39	Pedestrian	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	465.34	775.56	74.61	93.27
		U_{10} - U_{11}	5.50	-7.21	0.31	0.31	-0.58	-0.58	0.03	0.03	-0.19	-0.19	1.20	0.90	5.50	0.33	0.03	Vehicle	-7.21	-0.62	-0.19	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	272.03	453.38	141.90	236.50
		U_{11} - U_{12}	-5.26	-17.88	0.49	0.49	-1.36	-1.36	0.00	0.00	-0.84	-0.84	1.20	0.90	-5.26	0.53	-----	Vehicle	-17.88	-1.46	-0.84	Pedestrian	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	209.51	349.19	56.41	70.52
		U_{12} - U_{13}	16.54	3.94	2.49	2.49	-0.12	-0.12	0.80	0.80	0.00	0.00	1.24	0.90	16.54	2.77	0.80	Vehicle	3.94	-0.13	-----	Vehicle	14.00	1.00	2	7.00	5	73.85	92.32	1	535.92	535.9	85.68	142.80	1950.44	3250.74
		U_{13} - U_{14}	5.30	-6.08	0.82	0.82	-0.14	-0.14	0.10	0.10	-0.04	-0.04	1.24	0.90	5.30	0.91	0.10	Vehicle	-6.08	-0.15	-0.04	Vehicle	14.00	0.75	2	9.33	5	73.85	92.32	1	401.94	401.9	199.73	332.88	1210.03	2016.71
		U_{14} - U_{15}	7.52	-3.02	1.05	1.05	-0.03	-0.03	0.25	0.25	0.00	0.00	1.24	0.90	7.52	1.17	0.25	Vehicle	-3.02	-0.04	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	75.56	125.94	2402.58	4004.29
		U_{15} - U_{16}	4.46	-2.04	1.02	1.02	-0.06	-0.06	0.14	0.14	0.00	0.00	1.24	0.90	4.46	1.13	0.14	Vehicle	-2.04	-0.07	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	79.72	132.86	1304.99	2174.99
		U_{16} - U_{17}	5.12	-1.77	0.72	0.72	-0.45	-0.45	0.07	0.07	0.00	0.00	1.24	0.90	5.12	0.80	0.07	Vehicle	-1.77	-0.50	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	111.42	185.70	181.82	303.03
		U_{17} - U_{18}	7.40	-2.44	0.63	0.63	-0.53	-0.53	0.08	0.08	-0.04	-0.04	1.24	0.90	7.40	0.70	0.08	Vehicle	-2.44	-0.59	-0.04	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	126.12	210.20	153.85	256.42
		U_{18} - U_{19}	3.23	-4.19	0.20	0.20	-0.94	-0.94	0.08	0.08	-0.17	-0.17	1.24	0.90	3.23	0.22	0.08	Pedestrian	-4.19	-1.04	-0.17	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	402.59	503.23	86.60	144.34
		U_{19} - U_{20}	7.15	-3.92	0.32	0.32	-0.63	-0.63	0.02	0.02	-0.23	-0.23	1.24	0.90	7.15	0.35	0.02	Vehicle	-3.92	-0.70	-0.23	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	252.26	420.43	129.30	215.50

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
Condition: As-Built

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

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

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

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

Location	Member	Member Forces from STAAD: D Start (kips)	D End (kips)	LL_{max} Start (kips)	LL_{max} End (kips)	LL_{min} Start (kips)	LL_{min} End (kips)	Pedestrian $Load_{max}$ Start (kips)	Pedestrian $Load_{max}$ End (kips)	Pedestrian $Load_{min}$ Start (kips)	Pedestrian $Load_{min}$ End (kips)	Impact (1+I)	Lane Reduction	Maximum Positive Shear: Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Minimum Negative Shear: Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Shear Force Rating: Positive Shear Member Inventory RF	Positive Shear Member Operating RF	Negative Shear Member Inventory RF	Negative Shear Member Operating RF
Structure 1	L_0 - L_1	4.43	-2.13	1.19	1.19	-0.18	-0.18	0.18	0.18	-0.05	-0.05	1.24	0.90	4.43	1.33	0.18	Vehicle	-2.13	-0.20	-0.05	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**77.94**	**129.90**	**531.46**	**885.76**
	L_1 - L_2	6.00	-2.28	1.25	1.25	-0.29	-0.29	0.19	0.19	-0.09	-0.09	1.24	0.90	6.00	1.40	0.19	Vehicle	-2.28	-0.33	-0.09	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**73.35**	**122.26**	**319.69**	**532.81**
	L_2 - L_3	2.92	-3.66	0.53	0.53	-0.45	-0.45	0.04	0.04	-0.05	-0.05	1.24	0.90	2.92	0.58	0.04	Vehicle	-3.66	-0.50	-0.05	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	**277.21**	**462.02**	**325.43**	**542.38**
	L_3 - L_4	3.19	-5.19	0.70	0.70	-0.46	-0.46	0.02	0.02	-0.10	-0.10	1.24	0.90	3.19	0.78	0.02	Vehicle	-5.19	-0.51	-0.10	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	**207.41**	**345.68**	**314.41**	**524.01**
	L_4 - L_5	1.06	-8.32	0.13	0.13	-1.20	-1.20	0.00	0.00	-0.22	-0.22	1.24	0.90	1.06	0.14	-----	Vehicle	-8.32	-1.33	-0.22	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**977.87**	**1629.78**	**99.67**	**166.11**
	L_5 - L_6	-0.11	-8.64	0.13	0.13	-0.70	-0.70	0.00	0.00	-0.28	-0.28	1.24	0.90	-0.11	0.15	-----	Vehicle	-8.64	-0.78	-0.28	Pedestrian	15.00	0.77	2	9.74	5	73.85	92.32	1	442.134	442.1	**1399.65**	**2332.75**	**249.39**	**311.73**
	L_6 - L_7	4.46	-5.99	0.53	0.53	-0.71	-0.71	0.18	0.18	-0.20	-0.20	1.24	0.90	4.46	0.58	0.18	Vehicle	-5.99	-0.79	-0.20	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**546.78**	**911.31**	**404.86**	**674.76**
	L_7 - L_8	-9.36	-17.66	0.50	0.50	-1.64	-1.64	0.00	0.00	-1.06	-1.06	1.24	0.90	-9.36	0.55	-----	Vehicle	-17.66	-1.82	-1.06	Pedestrian	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**787.33**	**1312.21**	**192.93**	**241.16**
	L_8 - L_9	18.84	10.87	2.02	2.02	-0.35	-0.35	1.10	1.10	0.00	0.00	1.20	0.90	18.84	2.18	1.10	Pedestrian	10.87	-0.38	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**169.43**	**211.79**	**1152.16**	**1920.26**
	L_9 - L_{10}	11.17	-1.76	1.07	1.07	-0.33	-0.33	0.27	0.27	-0.14	-0.14	1.20	0.90	11.17	1.15	0.27	Vehicle	-1.76	-0.35	-0.14	Pedestrian	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**274.55**	**457.58**	**874.79**	**1093.49**
	L_{10} - L_{11}	10.70	2.17	1.11	1.11	-0.02	-0.02	0.41	0.41	0.00	0.00	1.20	0.90	10.70	1.19	0.41	Pedestrian	2.17	-0.02	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**109.59**	**136.99**	**5609.59**	**9349.32**
	L_{11} - L_{12}	12.21	-0.42	1.08	1.08	-0.03	-0.03	0.26	0.26	0.00	0.00	1.20	0.90	12.21	1.16	0.26	Vehicle	-0.42	-0.03	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**112.47**	**187.45**	**4399.31**	**7332.18**
	L_{12} - L_{13}	6.63	-2.92	0.49	0.49	-0.26	-0.26	0.13	0.13	0.00	0.00	1.20	0.90	6.63	0.53	0.13	Vehicle	-2.92	-0.28	-----	Vehicle	15.00	1.02	2	7.35	5	73.85	92.32	1	585.684	585.7	**501.05**	**835.09**	**943.51**	**1572.52**
	L_{13} - L_{14}	12.80	1.62	1.98	1.98	-0.07	-0.07	0.31	0.31	0.00	0.00	1.20	0.90	12.80	2.14	0.31	Vehicle	1.62	-0.07	-----	Vehicle	15.00	1.46	2	5.15	5	73.85	92.32	1	836.8965	836.9	**177.07**	**295.11**	**5441.62**	**9069.37**
	L_{14} - L_{15}	1.98	-10.69	0.20	0.20	-1.43	-1.43	0.05	0.05	-0.21	-0.21	1.20	0.90	1.98	0.21	0.05	Vehicle	-10.69	-1.54	-0.21	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**2238.23**	**3730.38**	**306.09**	**510.15**
	L_{15} - L_{16}	5.99	-3.43	0.69	0.69	-0.44	-0.44	0.03	0.03	-0.07	-0.07	1.20	0.90	5.99	0.74	0.03	Vehicle	-3.43	-0.48	-0.07	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**640.90**	**1068.16**	**1000.82**	**1668.04**
	L_{16} - L_{17}	-0.84	-11.84	0.13	0.13	-1.23	-1.23	0.02	0.02	-0.20	-0.20	1.20	0.90	-0.84	0.13	0.02	Vehicle	-11.84	-1.32	-0.20	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	**2633.72**	**4389.53**	**262.35**	**437.24**
	L_{17} - L_{18}	2.19	-9.46	0.10	0.10	-0.73	-0.73	0.03	0.03	-0.24	-0.24	1.20	0.90	2.19	0.10	0.03	Vehicle	-9.46	-0.78	-0.24	Vehicle	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	**2291.63**	**3819.38**	**297.04**	**495.07**
	L_{18} - L_{19}	0.84	-11.52	0.08	0.08	-0.76	-0.76	0.02	0.02	-0.26	-0.26	1.20	0.90	0.84	0.09	0.02	Vehicle	-11.52	-0.82	-0.26	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**1223.10**	**2038.50**	**120.93**	**201.55**
	L_{19} - L_{20}	1.28	-8.50	0.07	0.07	-0.66	-0.66	0.02	0.02	-0.32	-0.32	1.20	0.90	1.28	0.07	0.02	Vehicle	-8.50	-0.71	-0.32	Pedestrian	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**1501.66**	**2502.76**	**130.91**	**163.64**
Structure 2	L_0 - L_1	8.88	-1.10	1.17	1.17	-0.14	-0.14	0.23	0.23	-0.03	-0.03	1.18	0.90	8.88	1.24	0.23	Vehicle	-1.10	-0.15	-0.03	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**111.08**	**185.13**	**969.49**	**1615.82**
	L_1 - L_2	13.41	-0.38	1.17	1.17	-0.18	-0.18	0.25	0.25	-0.04	-0.04	1.18	0.90	13.41	1.24	0.25	Vehicle	-0.38	-0.19	-0.04	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**108.89**	**181.48**	**766.84**	**1278.06**
	L_2 - L_3	9.63	-1.36	1.14	1.14	-0.21	-0.21	0.25	0.25	-0.05	-0.05	1.18	0.90	9.63	1.22	0.25	Vehicle	-1.36	-0.22	-0.05	Vehicle	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	**211.03**	**351.71**	**1192.49**	**1987.49**
	L_3 - L_4	13.25	-0.94	1.46	1.46	-0.21	-0.21	0.21	0.21	-0.05	-0.05	1.18	0.90	13.25	1.55	0.21	Vehicle	-0.94	-0.22	-0.05	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	**238.42**	**397.37**	**1730.69**	**2884.49**
	L_4 - L_5	9.60	-8.29	0.72	0.72	-0.71	-0.71	0.07	0.07	-0.04	-0.04	1.18	0.90	9.60	0.77	0.07	Vehicle	-8.29	-0.76	-0.04	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	**641.58**	**1069.31**	**648.93**	**1081.55**
	L_5 - L_6	11.25	-2.22	1.45	1.45	-0.28	-0.28	0.12	0.12	-0.06	-0.06	1.18	0.90	11.25	1.54	0.12	Vehicle	-2.22	-0.29	-0.06	Vehicle	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	**349.44**	**582.40**	**1855.53**	**3092.55**
	L_6 - L_7	3.51	-10.30	0.60	0.60	-1.38	-1.38	0.00	0.00	-0.07	-0.07	1.18	0.90	3.51	0.64	-----	Vehicle	-10.30	-1.47	-0.07	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	**860.08**	**1433.47**	**372.59**	**620.98**
	L_7 - L_8	2.60	-12.44	0.41	0.41	-1.15	-1.15	0.00	0.00	-0.24	-0.24	1.18	0.90	2.60	0.43	-----	Vehicle	-12.44	-1.22	-0.24	Vehicle	18.00	1.23	2	7.35	5	73.85	92.32	1	844.074	844.1	**895.41**	**1492.35**	**312.62**	**521.03**
	L_8 - L_9	-0.35	-14.52	0.12	0.12	-1.25	-1.25	0.00	0.00	-0.19	-0.19	1.18	0.90	-0.35	0.13	0.00	Vehicle	-14.52	-1.33	-0.19	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	**2412.34**	**4020.56**	**223.85**	**373.08**
	L_9 - L_{10}	-2.85	-13.17	0.22	0.22	-0.98	-0.98	0.00	0.00	-0.34	-0.34	1.18	0.90	-2.85	0.23	-----	Vehicle	-13.17	-1.05	-0.34	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**957.69**	**1596.15**	**204.94**	**341.57**
	L_{10} - L_{11}	-0.58	-12.80	0.26	0.26	-1.12	-1.12	0.05	0.05	-0.23	-0.23	1.18	0.90	-0.58	0.27	0.05	Vehicle	-12.80	-1.19	-0.23	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	**695.90**	**1159.84**	**154.13**	**256.88**
	L_{11} - L_{12}	-1.75	-17.48	0.13	0.13	-0.88	-0.88	0.00	0.00	-0.37	-0.37	1.18	0.90	-1.75	0.14	-----	Vehicle	-17.48	-0.94	-0.37	Pedestrian	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	**2173.70**	**3622.83**	**301.96**	**377.45**
	L_{12} - L_{13}	8.95	-4.77	1.13	1.13	-0.71	-0.71	0.30	0.30	-0.17	-0.17	1.18	0.90	8.95	1.21	0.30	Vehicle	-4.77	-0.75	-0.17	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**367.60**	**612.67**	**594.63**	**991.05**
	L_{13} - L_{14}	-25.08	-38.97	1.03	1.03	-2.71	-2.71	0.00	0.00	-1.43	-1.43	1.18	0.90	-25.08	1.10	-----	Vehicle	-38.97	-2.89	-1.43	Pedestrian	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**513.46**	**855.76**	**162.15**	**202.69**
	L_{14} - L_{15}	38.11	24.33	3.21	3.21	-1.00	-1.00	1.40	1.40	0.00	0.00	1.17	0.90	38.11	3.37	1.40	Pedestrian	24.33	-1.06	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**146.95**	**183.69**	**533.16**	**888.60**
	L_{15} - L_{16}	2.20	-10.15	1.02	1.02	-0.70	-0.70	0.09	0.09	-0.29	-0.29	1.17	0.90	2.20	1.07	0.09	Vehicle	-10.15	-0.74	-0.29	Pedestrian	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**417.76**	**696.27**	**572.73**	**715.91**
	L_{16} - L_{17}	15.46	1.39	1.14	1.14	-0.15	-0.15	0.38	0.38	0.00	0.00	1.17	0.90	15.46	1.20	0.38	Vehicle	1.39	-0.16	-----	Vehicle	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	**289.11**	**481.85**	**2255.50**	**3759.17**
	L_{17} - L_{18}	10.48	-1.25	1.52	1.52	-0.20	-0.20	0.22	0.22	-0.08	-0.08	1.17	0.90	10.48	1.60	0.22	Vehicle	-1.25	-0.21	-0.08	Pedestrian	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**135.36**	**225.60**	**1014.90**	**1268.63**
	L_{18} - L_{19}	10.20	0.17	0.89	0.89	-0.28	-0.28	0.27	0.27	0.00	0.00	1.17	0.90	10.20	0.94	0.27	Vehicle	0.17	-0.29	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**162.55**	**270.91**	**547.94**	**913.23**
	L_{19} - L_{20}	9.84	-2.71	1.04	1.04	-0.11	-0.11	0.12	0.12	-0.03	-0.03	1.17	0.90	9.84	1.09	0.12	Vehicle	-2.71	-0.12	-0.03	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**140.33**	**233.88**	**1323.83**	**2206.38**
	L_{20} - L_{21}	7.95	-2.45	0.91	0.91	-0.57	-0.57	0.16	0.16	0.00	0.00	1.17	0.90	7.95	0.96	0.16	Vehicle	-2.45	-0.60	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**265.48**	**442.47**	**429.92**	**716.54**
	L_{21} - L_{22}	8.88	-2.40	1.67	1.67	-0.24	-0.24	0.16	0.16	-0.05	-0.05	1.17	0.90	8.88	1.75	0.16	Vehicle	-2.40	-0.25	-0.05	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**144.46**	**240.77**	**1034.85**	**1724.74**
	L_{22} - L_{23}	2.01	-9.01	0.27	0.27	-1.46	-1.46	0.06	0.06	-0.18	-0.18	1.17	0.90	2.01	0.29	0.06	Vehicle	-9.01	-1.53	-0.18	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**898.71**	**1497.85**	**165.15**	**275.25**
	L_{23} - L_{24}	1.86	-8.53	0.47	0.47	-0.87	-0.87	0.00	0.00	-0.20	-0.20	1.17	0.90	1.86	0.50	-----	Vehicle	-8.53	-0.91	-0.20	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**518.08**	**863.46**	**277.02**	**461.70**
	L_{24} - L_{25}	2.80	-9.72	0.10	0.10	-1.00	-1.00	0.03	0.03	-0.11	-0.11	1.17	0.90	2.80	0.11	0.03	Vehicle	-9.72	-1.06	-0.11	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**1480.57**	**2467.62**	**145.16**	**241.93**
	L_{25} - L_{26}	-0.70	-10.70	0.25	0.25	-0.82	-0.82	0.00	0.00	-0.30	-0.30	1.17	0.90	-0.70	0.27	-----	Vehicle	-10.70	-0.86	-0.30	Pedestrian	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**596.59**	**994.32**	**175.01**	**218.77**
	L_{26} - L_{27}	1.32	-10.35	0.26	0.26	-1.27	-1.27	0.05	0.05	-0.19	-0.19	1.17	0.90	1.32	0.27	0.05	Vehicle	-10.35	-1.33	-0.19	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**807.81**	**1346.35**	**162.21**	**270.36**
	L_{27} - L_{28}	-2.21	-16.20	0.16	0.16	-1.03	-1.03	0.00	0.00	-0.41	-0.41	1.17	0.90	-2.21	0.16	-----	Vehicle	-16.20	-1.08	-0.41	Pedestrian	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	**2171.77**	**3619.61**	**309.62**	**387.03**
	L_{28} - L_{29}	11.79	-0.40	1.06	1.06	-0.56	-0.56	0.27	0.27	-0.04	-0.04	1.17	0.90	11.79	1.11	0.27	Vehicle	-0.40	-0.59	-0.04	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**397.57**	**662.62**	**759.30**	**1265.50**
	L_{29} - L_{30}	-25.96	-39.46	0.88	0.88	-2.77	-2.77	0.00	0.00	-1.47	-1.47	1.17	0.90	-25.96	0.93	-----	Vehicle	-39.46	-2.91	-1.47	Pedestrian	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**607.96**	**1013.27**	**159.67**	**199.59**
	L_{30} - L_{31}	38.82	24.63	3.02	3.02	-0.82	-0.82	1.43	1.43	0.00	0.00	1.18	0.90	38.82	3.21	1.43	Pedestrian	24.63	-0.87	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**150.84**	**188.55**	**649.24**	**1082.06**
	L_{31} - L_{32}	6.18	-7.73	0.99	0.99	-0.70	-0.70	0.15	0.15	-0.25	-0.25	1.18	0.90	6.18	1.05	0.15	Vehicle	-7.73	-0.74	-0.25	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**422.65**	**704.41**	**599.06**	**998.44**
	L_{32} - L_{33}	16.95	1.13	1.07	1.07	-0.12	-0.12	0.34	0.34	0.00	0.00	1.18	0.90	16.95	1.14	0.34	Vehicle	1.13	-0.12	-----	Vehicle	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	**260.83**	**434.71**	**2489.21**	**4148.68**
	L_{33} - L_{34}	12.91	0.40	1.26	1.26	-0.19	-0.19	0.24	0.24	-0.04	-0.04	1.18	0.90	12.91	1.34	0.24	Vehicle	0.40	-0.20	-0.04	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	**136.89**	**228.16**	**954.47**	**1590.79**
	L_{34} - L_{35}	12.86	2.50	1.15	1.15	-0.14	-0.14	0.31	0.31	0.00	0.00	1.18	0.90	12.86	1.22	0.31	Vehicle	2.50	-0.15	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**176.13**	**293.54**	**1514.33**	**2523.89**
	L_{35} - L_{36}	14.48	0.27	1.34	1.34	-0.09	-0.09	0.19	0.19	0.00	0.00	1.18	0.90	14.48	1.43	0.19	Vehicle	0.27	-0.09	-----	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	**208.15**	**346.91**	**3376.74**	**5627.89**
	L_{36} - L_{37}	11.87	-3.19	1.40	1.40	-0.28	-0.28	0.19	0.19	0.00	0.00	1.18	0.90	11.87	1.49	0.19	Vehicle	-3.19	-0.29	-----	Vehicle	18.00	1.23	1	14.69	5	73.85	92.32	1	422.037	422.0	**126.35**	**210.59**	**656.34**	**1093.90**
	L_{37} - L_{38}	10.52	-3.30	1.51	1.51	-0.60	-0.60	0.10	0.10	0.00	0.00	1.18	0.90	10.52	1.61	0.10	Vehicle	-3.30	-0.64	-----	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	**341.42**	**569.03**	**864.57**	**1440.95**
	L_{38} - L_{39}	1.68	-11.78	0.22	0.22	-1.31	-1.31	0.05	0.05	-0.12	-0.12	1.18	0.90	1.68	0.23	0.05	Vehicle	-11.78	-1.40	-0.12	Vehicle	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	**2339.88**	**3899.80**	**386.53**	**644.21**
	L_{39} - L_{40}	7.67	-10.20	0.69	0.69	-0.68	-0.68	0.05	0.05	-0.12	-0.12	1.18	0.90	7.67	0.73	0.05	Vehicle	-10.20	-0.73	-0.12	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	**671.09**	**1118.49**	**674.90**	**1124.84**
	L_{40} - L_{41}	0.89	-13.24	0.17	0.17	-1.26	-1.26	0.03	0.03	-0.16	-0.16	1.18	0.90	0.89	0.18	0.03	Vehicle	-13.24	-1.34	-0.16	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	**2150.42**	**3584.03**	**275.42**	**459.04**
	L_{41} - L_{42}	1.02	-9.90	0.19	0.19	-0.95	-0.95	0.05	0.05	-0.24	-0.24	1.18	0.90	1.02	0.21	0.05	Vehicle	-9.90	-1.01	-0.24	Vehicle	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	**1267.24**	**2112.07**	**254.05**	**423.42**
	L_{42} - L_{43}	0.59	-13.12	0.13	0.13	-0.84	-0.84	0.03	0.03	-0.22	-0.22	1.18	0.90	0.59	0.14	0.03	Vehicle	-13.12	-0.90	-0.22	Vehicle	18.00	0.45	1	40.00	5	73.85	92.32	1	155.034	155.0	**514.43**	**857.39**	**71.03**	**118.39**
	L_{43} - L_{44}	-0.09	-9.99	0.13	0.13	-0.76	-0.76	0.03	0.03	-0.29	-0.29	1.18	0.90	-0.09	0.14	0.03	Vehicle	-9.99	-0.81	-0.29	Pedestrian	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**1058.76**	**1764.60**	**165.23**	**206.54**
Structure 3	L_0 - L_1	7.56	-2.30	0.97	0.97	-0.07	-0.07	0.22	0.22	-0.01	-0.01	1.20	0.90	7.56	1.05	0.22	Vehicle	-2.30	-0.08	-0.01	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**96.63**	**161.04**	**1329.29**	**2215.49**
	L_1 - L_2	11.66	-0.81	1.05	1.05	-0.11	-0.11	0.27	0.27	-0.02	-0.02	1.20	0.90	11.66	1.13	0.27	Vehicle	-0.81	-0.12	-0.02	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**87.29**	**145.49**	**881.70**	**1469.51**
	L_2 - L_3	9.44	-2.32	0.87	0.87	-0.12	-0.12	0.25	0.25	-0.03	-0.03	1.20	0.90	9.44	0.94	0.25	Vehicle	-2.32	-0.12	-0.03	Vehicle	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	**247.10**	**411.83**	**1912.41**	**3187.34**
	L_3 - L_4	11.46	0.38	1.39	1.39	-0.16	-0.16	0.24	0.24	-0.02	-0.02	1.20	0.90	11.46	1.50	0.24	Vehicle	0.38	-0.17	-0.02	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	**232.26**	**387.09**	**2095.28**	**3492.13**
	L_4 - L_5	3.42	-6.02	0.53	0.53	-0.71	-0.71	0.04	0.04	-0.03	-0.03	1.20	0.90	3.42	0

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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										Impact (1+I)	Lane Reduction	Maximum Positive Shear				Minimum Negative Shear				Depth of Web (inches)	Thickness of Web (inches	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Shear Force Rating			
		D		LL_{max}		LL_{min}		Pedestrian $Load_{max}$		Pedestrian $Load_{min}$				Dead	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Dead	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &											Positive Shear Member		Negative Shear Member	
Location	Member	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)			(kips)	(kips)			(kips)	(kips)			(inches)	(inches									Inventory RF	Operating RF	Inventory RF	Operating RF
Structure 1	U_0 - L_0	-1.56	-1.56	0.18	0.18	-1.27	-1.27	0.04	0.04	-0.12	-0.12	1.24	0.90	-1.56	0.20	0.04	Vehicle	-1.56	-1.41	-0.12	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**570.61**	**951.01**	**80.00**	**133.33**
	U_1 - L_1	-1.45	-1.45	0.38	0.38	-1.28	-1.28	0.12	0.12	-0.33	-0.33	1.24	0.90	-1.45	0.42	0.12	Vehicle	-1.45	-1.43	-0.33	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**274.53**	**457.55**	**79.42**	**132.36**
	U_2 - L_2	0.31	0.31	0.34	0.34	-0.80	-0.80	0.11	0.11	-0.16	-0.16	1.24	0.90	0.31	0.38	0.11	Vehicle	0.31	-0.89	-0.16	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**299.05**	**498.41**	**128.58**	**214.29**
	U_3 - L_3	1.69	1.69	0.43	0.43	-0.42	-0.42	0.09	0.09	-0.04	-0.04	1.24	0.90	1.69	0.48	0.09	Vehicle	1.69	-0.47	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**235.02**	**391.70**	**246.66**	**411.09**
	U_4 - L_4	2.57	2.57	0.63	0.63	-0.16	-0.16	0.16	0.16	0.00	0.00	1.24	0.90	2.57	0.71	0.16	Vehicle	2.57	-0.18	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**159.39**	**265.65**	**633.07**	**1055.11**
	U_5 - L_5	2.90	2.90	0.77	0.77	-0.05	-0.05	0.23	0.23	0.00	0.00	1.24	0.90	2.90	0.85	0.23	Vehicle	2.90	-0.06	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**160.46**	**267.43**	**2426.91**	**4044.85**
	U_6 - L_6	2.64	2.64	0.68	0.68	-0.11	-0.11	0.22	0.22	0.00	0.00	1.24	0.90	2.64	0.76	0.22	Vehicle	2.64	-0.13	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**160.80**	**268.00**	**995.65**	**1659.41**
	U_7 - L_7	2.84	2.84	0.49	0.49	-0.16	-0.16	0.23	0.23	0.00	0.00	1.24	0.90	2.84	0.55	0.23	Pedestrian	2.84	-0.18	-----	Vehicle	16.25	0.44	2	18.57	5	73.85	92.32	1	272.14688	272.1	**212.11**	**265.14**	**723.76**	**1206.26**
	U_8 - L_8	-0.84	-0.84	0.49	0.49	-0.58	-0.58	0.19	0.19	-0.19	-0.19	1.24	0.90	-0.84	0.55	0.19	Pedestrian	-0.84	-0.64	-0.19	Vehicle	15.25	0.82	2	9.30	5	73.85	92.32	1	478.6914	478.7	**400.88**	**501.10**	**343.74**	**572.91**
	U_9 - L_9	-6.05	-6.05	0.04	0.04	-0.96	-0.96	0.00	0.00	-0.38	-0.38	1.20	0.90	-6.05	0.05	-----	Vehicle	-6.05	-1.03	-0.38	Pedestrian	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**3250.17**	**5416.94**	**132.12**	**165.15**
	U_{10} - L_{10}	-5.08	-5.08	0.05	0.05	-1.01	-1.01	0.00	0.00	-0.32	-0.32	1.20	0.90	-5.08	0.05	0.00	Vehicle	-5.08	-1.09	-0.32	Vehicle	16.16	0.83	2	9.75	5	73.85	92.32	1	512.74682	512.7	**4940.32**	**8233.86**	**214.31**	**357.18**
	U_{11} - L_{11}	-6.10	-6.10	0.01	0.01	-1.14	-1.14	0.00	0.00	-0.38	-0.38	1.20	0.90	-6.10	0.01	-----	Vehicle	-6.10	-1.23	-0.38	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**16110.14**	**26850.23**	**135.01**	**225.01**
	U_{12} - L_{12}	-4.35	-4.35	0.05	0.05	-0.83	-0.83	0.00	0.00	-0.26	-0.26	1.20	0.90	-4.35	0.06	-----	Vehicle	-4.35	-0.89	-0.26	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**2510.39**	**4183.98**	**158.06**	**263.43**
	U_{13} - L_{13}	-2.49	-2.49	0.10	0.10	-0.68	-0.68	0.00	0.00	-0.15	-0.15	1.20	0.90	-2.49	0.11	-----	Vehicle	-2.49	-0.73	-0.15	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**1175.29**	**1958.82**	**169.52**	**282.53**
	U_{14} - L_{14}	-1.05	-1.05	0.26	0.26	-0.36	-0.36	0.00	0.00	-0.05	-0.05	1.20	0.90	-1.05	0.28	-----	Vehicle	-1.05	-0.39	-0.05	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**409.06**	**681.77**	**293.83**	**489.72**
	U_{15} - L_{15}	0.56	0.56	0.50	0.50	-0.19	-0.19	0.09	0.09	-0.04	-0.04	1.20	0.90	0.56	0.54	0.09	Vehicle	0.56	-0.21	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**211.77**	**352.95**	**552.53**	**920.89**
	U_{16} - L_{16}	1.64	1.64	0.49	0.49	-0.10	-0.10	0.13	0.13	-0.03	-0.03	1.20	0.90	1.64	0.53	0.13	Vehicle	1.64	-0.11	-0.03	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**213.13**	**355.22**	**1035.79**	**1726.32**
	U_{17} - L_{17}	2.21	2.21	0.52	0.52	-0.08	-0.08	0.15	0.15	-0.02	-0.02	1.20	0.90	2.21	0.56	0.15	Vehicle	2.21	-0.09	-0.02	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**243.72**	**406.20**	**1603.96**	**2673.27**
	U_{18} - L_{18}	3.83	3.83	0.69	0.69	-0.10	-0.10	0.24	0.24	-0.02	-0.02	1.20	0.90	3.83	0.75	0.24	Vehicle	3.83	-0.10	-0.02	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**189.24**	**315.40**	**1427.26**	**2378.76**
	U_{19} - L_{19}	3.13	3.13	0.51	0.51	-0.06	-0.06	0.21	0.21	-0.02	-0.02	1.20	0.90	3.13	0.55	0.21	Pedestrian	3.13	-0.07	-0.02	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**296.24**	**370.30**	**2571.73**	**4286.21**
	U_{20} - L_{20}	2.80	2.80	0.34	0.34	-0.03	-0.03	0.17	0.17	-0.01	-0.01	1.20	0.90	2.80	0.37	0.17	Pedestrian	2.80	-0.04	-0.01	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**413.61**	**517.01**	**4684.18**	**7806.97**
	U_0 - L_0	-2.52	-2.52	0.06	0.06	-0.55	-0.55	0.01	0.01	-0.09	-0.09	1.18	0.90	-2.52	0.06	0.01	Vehicle	-2.52	-0.58	-0.09	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**2879.59**	**4799.32**	**316.51**	**527.52**
	U_1 - L_1	-4.00	-4.00	0.14	0.14	-0.74	-0.74	0.03	0.03	-0.21	-0.21	1.18	0.90	-4.00	0.15	0.03	Vehicle	-4.00	-0.78	-0.21	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1288.25**	**2147.08**	**233.99**	**389.98**
	U_2 - L_2	-3.87	-3.87	0.18	0.18	-0.85	-0.85	0.04	0.04	-0.21	-0.21	1.18	0.90	-3.87	0.19	0.04	Vehicle	-3.87	-0.91	-0.21	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**830.88**	**1384.80**	**167.69**	**279.49**
	U_3 - L_3	-2.33	-2.33	0.13	0.13	-0.56	-0.56	0.03	0.03	-0.13	-0.13	1.18	0.90	-2.33	0.14	0.03	Vehicle	-2.33	-0.59	-0.13	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**1078.91**	**1798.18**	**255.30**	**425.51**
	U_4 - L_4	-1.45	-1.45	0.16	0.16	-0.50	-0.50	0.04	0.04	-0.11	-0.11	1.18	0.90	-1.45	0.17	0.04	Vehicle	-1.45	-0.54	-0.11	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**696.32**	**1160.54**	**210.91**	**351.52**
	U_5 - L_5	-0.22	-0.22	0.18	0.18	-0.40	-0.40	0.04	0.04	-0.06	-0.06	1.18	0.90	-0.22	0.20	0.04	Vehicle	-0.22	-0.43	-0.06	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**582.81**	**971.35**	**264.83**	**441.39**
	U_6 - L_6	0.74	0.74	0.31	0.31	-0.30	-0.30	0.04	0.04	-0.01	-0.01	1.18	0.90	0.74	0.33	0.04	Vehicle	0.74	-0.32	-0.01	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**348.69**	**581.15**	**360.84**	**601.40**
	U_7 - L_7	1.65	1.65	0.34	0.34	-0.11	-0.11	0.07	0.07	0.00	0.00	1.18	0.90	1.65	0.36	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	**316.02**	**526.70**	**1009.78**	**1682.97**
	U_8 - L_8	3.91	3.91	0.70	0.70	-0.07	-0.07	0.17	0.17	0.00	0.00	1.18	0.90	3.91	0.74	0.17	Vehicle	3.91	-0.07	-----	Vehicle	15.75	0.44	2	18.00	5	73.85	92.32	1	263.77313	263.8	**160.89**	**268.15**	**1739.49**	**2899.15**
	U_9 - L_9	6.62	6.62	1.01	1.01	-0.04	-0.04	0.26	0.26	0.00	0.00	1.18	0.90	6.62	1.07	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	**168.98**	**281.64**	**4563.19**	**7605.32**
	U_{10} - L_{10}	5.55	5.55	0.82	0.82	-0.07	-0.07	0.23	0.23	0.00	0.00	1.18	0.90	5.55	0.87	0.23	Vehicle	5.55	-0.07	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**266.51**	**444.19**	**3309.73**	**5516.21**
	U_{11} - L_{11}	4.64	4.64	0.64	0.64	-0.09	-0.09	0.19	0.19	0.00	0.00	1.18	0.90	4.64	0.68	0.19	Vehicle	4.64	-0.10	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**341.09**	**568.48**	**2388.83**	**3981.38**
	U_{12} - L_{12}	3.46	3.46	0.51	0.51	-0.13	-0.13	0.16	0.16	-0.01	-0.01	1.18	0.90	3.46	0.54	0.16	Vehicle	3.46	-0.14	-0.01	Vehicle	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	**482.99**	**804.98**	**1958.86**	**3264.76**
	U_{13} - L_{13}	3.45	3.45	0.36	0.36	-0.15	-0.15	0.14	0.14	0.00	0.00	1.18	0.90	3.45	0.39	0.14	Pedestrian	3.45	-0.16	-----	Vehicle	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	**590.13**	**737.67**	**1517.15**	**2528.58**
	U_{14} - L_{14}	0.27	0.27	0.26	0.26	-0.41	-0.41	0.11	0.11	-0.10	-0.10	1.18	0.90	0.27	0.28	0.11	Pedestrian	0.27	-0.44	-0.10	Vehicle	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	**794.28**	**992.85**	**519.46**	**865.76**
	U_{15} - L_{15}	-2.96	-2.96	0.05	0.05	-0.50	-0.50	0.00	0.00	-0.13	-0.13	1.17	0.90	-2.96	0.05	-----	Vehicle	-2.96	-0.52	-0.13	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**3224.16**	**5373.61**	**290.44**	**484.07**
	U_{16} - L_{16}	-2.84	-2.84	0.07	0.07	-0.65	-0.65	0.03	0.03	-0.16	-0.16	1.17	0.90	-2.84	0.07	0.03	Pedestrian	-2.84	-0.68	-0.16	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**2485.28**	**3106.60**	**268.36**	**447.26**
	U_{17} - L_{17}	-3.71	-3.71	0.10	0.10	-0.80	-0.80	0.02	0.02	-0.19	-0.19	1.17	0.90	-3.71	0.11	0.02	Vehicle	-3.71	-0.84	-0.19	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1574.39**	**2623.98**	**200.13**	**333.55**
	U_{18} - L_{18}	-3.92	-3.92	0.15	0.15	-0.89	-0.89	0.02	0.02	-0.22	-0.22	1.17	0.90	-3.92	0.16	0.02	Vehicle	-3.92	-0.94	-0.22	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**972.93**	**1621.56**	**161.68**	**269.47**
	U_{19} - L_{19}	-2.44	-2.44	0.12	0.12	-0.58	-0.58	0.01	0.01	-0.14	-0.14	1.17	0.90	-2.44	0.13	0.01	Vehicle	-2.44	-0.61	-0.14	Vehicle	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	**1095.36**	**1825.60**	**224.45**	**374.08**
	U_{20} - L_{20}	-1.76	-1.76	0.14	0.14	-0.52	-0.52	0.00	0.00	-0.12	-0.12	1.17	0.90	-1.76	0.14	0.00	Vehicle	-1.76	-0.54	-0.12	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**876.12**	**1460.20**	**229.18**	**381.96**
	U_{21} - L_{21}	-1.05	-1.05	0.19	0.19	-0.46	-0.46	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.05	0.19	-----	Vehicle	-1.05	-0.48	-0.09	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**589.18**	**981.97**	**234.34**	**390.57**
	U_{22} - L_{22}	0.13	0.13	0.30	0.30	-0.25	-0.25	0.05	0.05	-0.03	-0.03	1.17	0.90	0.13	0.32	0.05	Vehicle	0.13	-0.27	-0.03	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**356.32**	**593.87**	**428.75**	**714.59**
	U_{23} - L_{23}	1.36	1.36	0.51	0.51	-0.16	-0.16	0.11	0.11	-0.02	-0.02	1.17	0.90	1.36	0.54	0.11	Vehicle	1.36	-0.16	-0.02	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**210.20**	**350.34**	**704.33**	**1173.88**
	U_{24} - L_{24}	2.07	2.07	0.56	0.56	-0.16	-0.16	0.14	0.14	-0.02	-0.02	1.17	0.90	2.07	0.59	0.14	Vehicle	2.07	-0.16	-0.02	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**210.44**	**350.74**	**775.53**	**1292.55**
	U_{25} - L_{25}	2.70	2.70	0.60	0.60	-0.13	-0.13	0.16	0.16	-0.02	-0.02	1.17	0.90	2.70	0.63	0.16	Vehicle	2.70	-0.14	-0.02	Vehicle	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	**218.21**	**363.68**	**1037.06**	**1728.44**
	U_{26} - L_{26}	4.21	4.21	0.86	0.86	-0.16	-0.16	0.23	0.23	-0.03	-0.03	1.17	0.90	4.21	0.90	0.23	Vehicle	4.21	-0.17	-0.03	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**168.68**	**281.14**	**949.17**	**1581.95**
	U_{27} - L_{27}	3.88	3.88	0.73	0.73	-0.10	-0.10	0.20	0.20	-0.01	-0.01	1.17	0.90	3.88	0.77	0.20	Vehicle	3.88	-0.11	-0.01	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**217.77**	**362.95**	**1606.19**	**2676.98**
	U_{28} - L_{28}	2.75	2.75	0.55	0.55	-0.13	-0.13	0.14	0.14	-0.02	-0.02	1.17	0.90	2.75	0.58	0.14	Vehicle	2.75	-0.13	-0.02	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**319.48**	**532.47**	**1389.75**	**2316.24**
	U_{29} - L_{29}	2.82	2.82	0.36	0.36	-0.14	-0.14	0.13	0.13	0.00	0.00	1.17	0.90	2.82	0.38	0.13	Pedestrian	2.82	-0.15	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**399.07**	**498.83**	**1066.39**	**1777.31**
	U_{30} - L_{30}	-0.53	-0.53	0.28	0.28	-0.35	-0.35	0.09	0.09	-0.10	-0.10	1.18	0.90	-0.53	0.30	0.09	Vehicle	-0.53	-0.37	-0.10	Vehicle	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	**766.72**	**1277.87**	**608.19**	**1013.64**
	U_{31} - L_{31}	-3.70	-3.70	0.05	0.05	-0.48	-0.48	0.00	0.00	-0.15	-0.15	1.18	0.90	-3.70	0.05	-----	Vehicle	-3.70	-0.51	-0.15	Vehicle	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	**4523.40**	**7539.00**	**455.92**	**759.86**
	U_{32} - L_{32}	-3.62	-3.62	0.08	0.08	-0.60	-0.60	0.02	0.02	-0.16	-0.16	1.18	0.90	-3.62	0.08	0.02	Vehicle	-3.62	-0.64	-0.16	Vehicle	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	**3150.20**	**5250.34**	**407.30**	**678.83**
	U_{33} - L_{33}	-4.59	-4.59	0.03	0.03	-0.71	-0.71	0.00	0.00	-0.18	-0.18	1.18	0.90	-4.59	0.03	-----	Vehicle	-4.59	-0.76	-0.18	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**7483.97**	**12473.29**	**308.07**	**513.46**
	U_{34} - L_{34}	-5.33	-5.33	0.01	0.01	-0.85	-0.85	0.00	0.00	-0.22	-0.22	1.18	0.90	-5.33	0.01	-----	Vehicle	-5.33	-0.91	-0.22	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**20448.75**	**34081.24**	**256.96**	**428.27**
	U_{35} - L_{35}	-6.23	-6.23	0.02	0.02	-1.02	-1.02	0.00	0.00	-0.25	-0.25	1.18	0.90	-6.23	0.02	-----	Vehicle	-6.23	-1.09	-0.25	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**8079.46**	**13465.76**	**167.05**	**278.41**
	U_{36} - L_{36}	-3.53	-3.53	0.06	0.06	-0.69	-0.69	0.00	0.00	-0.15	-0.15	1.18	0.90	-3.53	0.06	-----	Vehicle	-3.53	-0.74	-0.15	Vehicle	15.75	0.44	2	18.00	5	73.85	92.32	1	263.77313	263.8	**1971.74**	**3286.23**	**162.13**	**270.21**
	U_{37} - L_{37}	-1.47	-1.47	0.12	0.12	-0.32	-0.32	0.00	0.00	-0.06	-0.06	1.18	0.90	-1.47	0.13	-----	Vehicle	-1.47	-0.34	-0.06	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**870.52**	**1450.87**	**328.04**	**546.73**
	U_{38} - L_{38}	-0.52	-0.52	0.34	0.34	-0.30	-0.30	0.03	0.03	-0.04	-0.04	1.18	0.90	-0.52	0.36	0.03	Vehicle	-0.52	-0.32	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**319.67**	**532.78**	**356.07**	**593.45**
	U_{39} - L_{39}	0.56	0.56	0.44	0.44	-0.18	-0.18	0.07	0.07	-0.04	-0.04	1.18	0.90	0.56	0.47	0.07	Vehicle	0.56	-0.19	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**242.72**	**404.53**	**603.56**	**1005.93**
	U_{40} - L_{40}	1.79	1.79	0.52	0.52	-0.15	-0.15	0.11	0.11	-0.04	-0.04	1.18	0.90	1.79	0.56	0.11	Vehicle	1.79	-0.16	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**203.27**	**338.79**	**702.09**	**1170.15**
	U_{41} - L_{41}	2.59	2.59	0.51	0.51	-0.13	-0.13	0.13	0.13	-0.03	-0.03	1.18	0.90	2.59	0.54	0.13	Vehicle	2.59	-0.14	-0.03	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**278.59**	**464.32**	**1130.62**	**1884.36**
	U_{42} - L_{42}	4.23	4.23	0.74	0.74	-0.16	-0.16	0.21	0.21	-0.04	-0.04	1.18	0.90	4.23	0.79	0.21	Vehicle	4.23	-0.17	-0.04	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**192.57**	**320.95**	**903.49**	**1505.82**
	U_{43} - L_{43}	3.86	3.86	0.56	0.56	-0.11	-0.11	0.19	0.19	-0.03	-0.03	1.18	0.90	3.86	0.59	0.19	Vehicle	3.86	-0.12	-0.03	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**308.90**	**514.84**	**1618.45**	**2697.41**
	U_{44} - L_{44}	3.42	3.42	0.37	0.37	-0.06	-0.06	0.14	0.14	-0.01	-0.01	1.18	0.90	3.42	0.40	0.14	Pedestrian	3.42	-0.06	-0.01	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**458.07**	**572.59**	**2985.75**	**4976.26**
Structure 3	U_0 - L_0	-1.97	-1.97	0.04	0.04	-0.52	-0.52	0.01	0.01	-0.09	-0.09	1.20	0.90	-1.97	0.04	0.01	Vehicle	-1.97	-0.56	-0.09	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**4411.20**	**7352.00**	**301.17**	**501.96**
	U_1 - L_1	-3.42	-3.42	0.09	0.09	-0.67	-0.67	0.02	0.02	-0.24	-0.24	1.20	0.90	-3.42	0.09	0.02	Vehicle	-3.42	-0.73	-0.24	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1855.90**	**3093.16**	**231.17**	**385.28**
	U_2 - L_2	-3.56	-3.56	0.11	0.11	-0.78	-0.78

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3F1
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
South Truss - Diagonals																																		
Structure 1	U_0 - L_1	0.34	-0.17	0.04	0.04	-0.41	-0.41	0.03	0.03	0.00	0.00	1.24	0.90	0.34	0.05	0.03	Pedestrian	-0.17	-0.45	0.00	Vehicle	10.00	0.31	2	16.00	5	73.85	92.32	1	119.625	119.6	**965.27**	**1206.59**	**122.23**	**203.71**
	U_1 - L_2	0.05	-0.25	0.05	0.05	-0.13	-0.13	0.02	0.02	-0.05	-0.05	1.24	0.90	0.05	0.06	0.02	Vehicle	-0.25	-0.14	-0.05	Pedestrian	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1896.56**	**3160.93**	**797.15**	**996.44**
	U_2 - L_3	0.29	-0.01	0.05	0.05	-0.08	-0.08	0.02	0.02	-0.01	-0.01	1.24	0.90	0.29	0.06	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	**1966.94**	**3278.24**	**1347.82**	**2246.36**
	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	0.07	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	**1525.37**	**2542.28**	**8542.46**	**14237.44**
	U_4 - L_4	-0.36	-0.70	0.02	0.02	-0.12	-0.12	0.00	0.00	-0.04	-0.04	1.24	0.90	-0.36	0.02	-----	Vehicle	-0.70	-0.13	-0.04	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**5674.07**	**9456.78**	**1071.22**	**1785.37**
	U_5 - L_5	-1.05	-1.50	0.04	0.04	-0.29	-0.29	0.00	0.00	-0.10	-0.10	1.24	0.90	-1.05	0.04	-----	Vehicle	-1.50	-0.32	-0.10	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**3416.28**	**5693.80**	**447.54**	**745.90**
	U_6 - L_6	-1.37	-1.84	0.08	0.08	-0.33	-0.33	0.00	0.00	-0.13	-0.13	1.24	0.90	-1.37	0.09	-----	Vehicle	-1.84	-0.37	-0.13	Pedestrian	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1566.16**	**2610.26**	**378.89**	**473.62**
	U_7 - L_7	-0.71	-1.20	0.07	0.07	-0.20	-0.20	0.00	0.00	-0.08	-0.08	1.24	0.90	-0.71	0.07	-----	Vehicle	-1.20	-0.22	-0.08	Pedestrian	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1934.83**	**3224.72**	**633.09**	**791.36**
	U_8 - L_8	-1.25	-2.17	0.04	0.04	-0.30	-0.30	0.01	0.01	-0.11	-0.11	1.20	0.90	-1.25	0.04	0.01	Vehicle	-2.17	-0.32	-0.11	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**4642.20**	**7737.01**	**550.72**	**917.86**
	U_9 - L_{10}	-2.11	-2.95	0.02	0.02	-0.43	-0.43	0.00	0.00	-0.16	-0.16	1.20	0.90	-2.11	0.02	-----	Vehicle	-2.95	-0.46	-0.16	Pedestrian	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**11172.97**	**18621.62**	**383.18**	**478.97**
	U_{10} - L_{11}	-1.43	-2.28	0.01	0.01	-0.31	-0.31	0.00	0.00	-0.10	-0.10	1.20	0.90	-1.43	0.01	-----	Vehicle	-2.28	-0.33	-0.10	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**11161.33**	**18602.22**	**426.76**	**711.26**
	U_{11} - L_{12}	-1.21	-1.69	0.01	0.01	-0.29	-0.29	0.00	0.00	-0.09	-0.09	1.20	0.90	-1.21	0.01	-----	Vehicle	-1.69	-0.31	-0.09	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**14398.25**	**23997.08**	**540.57**	**900.96**
	U_{12} - L_{13}	-0.93	-1.64	0.02	0.02	-0.24	-0.24	0.00	0.00	-0.07	-0.07	1.20	0.90	-0.93	0.02	-----	Vehicle	-1.64	-0.26	-0.07	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**7681.36**	**12802.27**	**470.20**	**783.67**
	U_{13} - L_{14}	-0.18	-0.52	0.05	0.05	-0.09	-0.09	0.00	0.00	-0.02	-0.02	1.20	0.90	-0.18	0.05	-----	Vehicle	-0.52	-0.09	-0.02	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**2117.51**	**3529.19**	**1198.72**	**1997.86**
	U_{14} - L_{15}	0.33	0.00	0.08	0.08	-0.08	-0.08	0.01	0.01	-0.01	-0.01	1.20	0.90	0.33	0.08	0.01	Vehicle	0.00	-0.08	-0.01	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1353.69**	**2256.15**	**1373.69**	**2289.49**
	U_{15} - L_{16}	-0.23	-0.58	0.06	0.06	-0.15	-0.15	0.01	0.01	-0.03	-0.03	1.20	0.90	-0.23	0.06	0.01	Vehicle	-0.58	-0.16	-0.03	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1925.53**	**3209.21**	**693.75**	**1156.25**
	U_{16} - L_{17}	-0.54	-0.93	0.04	0.04	-0.21	-0.21	0.01	0.01	-0.06	-0.06	1.20	0.90	-0.54	0.04	0.01	Vehicle	-0.93	-0.22	-0.06	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**3486.34**	**5810.56**	**622.22**	**1037.03**
	U_{17} - L_{18}	-1.69	-2.17	0.05	0.05	-0.36	-0.36	0.01	0.01	-0.11	-0.11	1.20	0.90	-1.69	0.06	0.01	Vehicle	-2.17	-0.39	-0.11	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2584.63**	**4307.72**	**364.34**	**607.23**
	U_{18} - L_{19}	-1.52	-2.05	0.04	0.04	-0.31	-0.31	0.01	0.01	-0.11	-0.11	1.20	0.90	-1.52	0.04	0.01	Vehicle	-2.05	-0.33	-0.11	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**3787.28**	**6312.13**	**462.32**	**770.54**
	U_{19} - L_{19}	-1.60	-2.18	0.02	0.02	-0.26	-0.26	0.01	0.01	-0.12	-0.12	1.20	0.90	-1.60	0.02	0.01	Vehicle	-2.18	-0.28	-0.12	Pedestrian	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**6543.64**	**10906.07**	**507.95**	**634.94**
	U_0 - L_1	-1.42	-1.97	0.05	0.05	-0.46	-0.46	0.01	0.01	-0.05	-0.05	1.18	0.90	-1.42	0.05	0.01	Vehicle	-1.97	-0.49	-0.05	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**3343.88**	**5573.13**	**345.52**	**575.87**
	U_1 - L_2	-2.23	-2.78	0.10	0.10	-0.46	-0.46	0.02	0.02	-0.14	-0.14	1.18	0.90	-2.23	0.10	0.02	Vehicle	-2.78	-0.49	-0.14	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1676.72**	**2794.54**	**341.56**	**569.27**
	U_2 - L_3	-1.76	-2.23	0.10	0.10	-0.43	-0.43	0.03	0.03	-0.11	-0.11	1.18	0.90	-1.76	0.11	0.03	Vehicle	-2.23	-0.46	-0.11	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1334.73**	**2224.55**	**309.23**	**515.38**
	U_3 - L_4	-0.78	-1.19	0.07	0.07	-0.25	-0.25	0.02	0.02	-0.06	-0.06	1.18	0.90	-0.78	0.08	0.02	Vehicle	-1.19	-0.27	-0.06	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**1995.83**	**3326.38**	**572.66**	**954.43**
	U_4 - L_5	-0.13	-0.47	0.06	0.06	-0.16	-0.16	0.01	0.01	-0.03	-0.03	1.18	0.90	-0.13	0.06	0.01	Vehicle	-0.47	-0.17	-0.03	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1880.45**	**3134.08**	**676.25**	**1127.09**
	U_5 - L_6	0.36	0.01	0.10	0.10	-0.11	-0.11	0.01	0.01	-0.01	-0.01	1.18	0.90	0.36	0.11	0.01	Vehicle	0.01	-0.11	-0.01	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1079.93**	**1799.89**	**1001.15**	**1668.58**
	U_6 - L_7	0.65	0.25	0.12	0.12	-0.05	-0.05	0.02	0.02	0.00	0.00	1.18	0.90	0.65	0.12	0.02	Vehicle	0.25	-0.05	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**1002.18**	**1670.30**	**2453.36**	**4088.93**
	U_7 - L_7	-0.66	-1.45	0.04	0.04	-0.18	-0.18	0.00	0.00	-0.04	-0.04	1.18	0.90	-0.66	0.05	-----	Vehicle	-1.45	-0.19	-0.04	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**2235.92**	**3726.54**	**536.97**	**894.95**
	U_8 - L_8	-2.06	-2.57	0.02	0.02	-0.36	-0.36	0.00	0.00	-0.09	-0.09	1.18	0.90	-2.06	0.03	-----	Vehicle	-2.57	-0.39	-0.09	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**6085.17**	**10141.95**	**394.06**	**656.76**
	U_9 - L_9	-2.06	-2.56	0.02	0.02	-0.35	-0.35	0.00	0.00	-0.09	-0.09	1.18	0.90	-2.06	0.03	-----	Vehicle	-2.56	-0.37	-0.09	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**6702.74**	**11171.23**	**450.89**	**751.48**
	U_{10} - L_{10}	-2.31	-2.86	0.04	0.04	-0.37	-0.37	0.00	0.00	-0.10	-0.10	1.18	0.90	-2.31	0.05	-----	Vehicle	-2.86	-0.39	-0.10	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**3989.41**	**6649.01**	**472.94**	**788.23**
	U_{11} - L_{11}	-2.13	-2.73	0.07	0.07	-0.34	-0.34	0.00	0.00	-0.10	-0.10	1.18	0.90	-2.13	0.07	-----	Vehicle	-2.73	-0.36	-0.10	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**2698.97**	**4498.28**	**513.99**	**856.64**
	U_{12} - L_{12}	-2.09	-2.70	0.10	0.10	-0.30	-0.30	0.01	0.01	-0.10	-0.10	1.18	0.90	-2.09	0.10	0.01	Vehicle	-2.70	-0.32	-0.10	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1641.65**	**2736.09**	**530.83**	**884.71**
	U_{13} - L_{13}	-1.09	-1.71	0.08	0.08	-0.19	-0.19	0.01	0.01	-0.07	-0.07	1.18	0.90	-1.09	0.08	0.01	Vehicle	-1.71	-0.20	-0.07	Pedestrian	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2137.57**	**3562.62**	**840.34**	**1050.42**
	U_{14} - L_{15}	-0.80	-1.36	0.04	0.04	-0.24	-0.24	0.02	0.02	-0.06	-0.06	1.17	0.90	-0.80	0.04	0.02	Pedestrian	-1.36	-0.25	-0.06	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**3372.31**	**4215.39**	**561.97**	**936.62**
	U_{15} - L_{16}	-1.69	-2.23	0.03	0.03	-0.38	-0.38	0.01	0.01	-0.10	-0.10	1.17	0.90	-1.69	0.03	0.01	Pedestrian	-2.23	-0.40	-0.10	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**3965.94**	**4957.43**	**354.72**	**591.19**
	U_{16} - L_{17}	-1.71	-2.26	0.05	0.05	-0.40	-0.40	0.01	0.01	-0.10	-0.10	1.17	0.90	-1.71	0.05	0.01	Vehicle	-2.26	-0.42	-0.10	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**3279.93**	**5466.55**	**364.24**	**607.07**
	U_{17} - L_{18}	-1.67	-2.16	0.06	0.06	-0.38	-0.38	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.67	0.06	0.00	Vehicle	-2.16	-0.39	-0.09	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2504.01**	**4173.36**	**361.44**	**602.40**
	U_{18} - L_{19}	-1.45	-1.93	0.07	0.07	-0.37	-0.37	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.45	0.07	0.00	Vehicle	-1.93	-0.38	-0.09	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2084.81**	**3474.69**	**371.70**	**619.50**
	U_{19} - L_{20}	-0.63	-1.37	0.06	0.06	-0.24	-0.24	0.00	0.00	-0.06	-0.06	1.17	0.90	-0.63	0.06	-----	Vehicle	-1.37	-0.25	-0.06	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**1746.30**	**2910.49**	**418.72**	**697.86**
	U_{20} - L_{21}	-0.36	-0.70	0.06	0.06	-0.16	-0.16	0.00	0.00	-0.04	-0.04	1.17	0.90	-0.36	0.06	-----	Vehicle	-0.70	-0.17	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1974.62**	**3291.04**	**679.23**	**1132.05**
	U_{21} - L_{22}	0.02	-0.31	0.09	0.09	-0.09	-0.09	0.01	0.01	-0.02	-0.02	1.17	0.90	0.02	0.09	0.01	Vehicle	-0.31	-0.09	-0.02	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1204.27**	**2007.12**	**1273.17**	**2121.96**
	U_{22} - L_{23}	-0.05	-0.39	0.08	0.08	-0.11	-0.11	0.00	0.00	-0.02	-0.02	1.17	0.90	-0.05	0.08	0.00	Vehicle	-0.39	-0.11	-0.02	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1445.70**	**2409.50**	**1020.50**	**1700.83**
	U_{23} - L_{24}	-0.39	-0.74	0.05	0.05	-0.17	-0.17	0.00	0.00	-0.04	-0.04	1.17	0.90	-0.39	0.05	0.00	Vehicle	-0.74	-0.17	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**2172.40**	**3620.67**	**650.46**	**1084.11**
	U_{24} - L_{25}	-0.62	-1.39	0.06	0.06	-0.24	-0.24	0.00	0.00	-0.06	-0.06	1.17	0.90	-0.62	0.06	0.00	Vehicle	-1.39	-0.25	-0.06	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**1746.26**	**2910.43**	**409.96**	**683.27**
	U_{25} - L_{25}	-1.40	-1.89	0.06	0.06	-0.34	-0.34	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.40	0.07	0.00	Vehicle	-1.89	-0.35	-0.09	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2149.53**	**3582.54**	**402.64**	**671.07**
	U_{27} - L_{26}	-1.57	-2.07	0.05	0.05	-0.33	-0.33	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.57	0.06	0.00	Vehicle	-2.07	-0.35	-0.09	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2597.43**	**4329.05**	**405.96**	**676.60**
	U_{28} - L_{27}	-1.53	-2.09	0.06	0.06	-0.32	-0.32	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.53	0.07	-----	Vehicle	-2.09	-0.34	-0.09	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2341.21**	**3902.01**	**448.85**	**748.08**
	U_{29} - L_{28}	-1.40	-1.95	0.09	0.09	-0.27	-0.27	0.00	0.00	-0.08	-0.08	1.17	0.90	-1.40	0.10	-----	Vehicle	-1.95	-0.28	-0.08	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1479.26**	**2465.43**	**508.10**	**846.83**
	U_{30} - L_{29}	-0.59	-1.15	0.07	0.07	-0.16	-0.16	0.00	0.00	-0.04	-0.04	1.17	0.90	-0.59	0.07	0.00	Vehicle	-1.15	-0.17	-0.04	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1987.04**	**3311.74**	**845.43**	**1409.06**
	U_{30} - L_{31}	-1.35	-1.98	0.05	0.05	-0.27	-0.27	0.01	0.01	-0.08	-0.08	1.18	0.90	-1.35	0.06	0.01	Vehicle	-1.98	-0.28	-0.08	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**3027.65**	**5046.09**	**593.97**	**989.95**
	U_{31} - L_{32}	-2.47	-3.07	0.05	0.05	-0.40	-0.40	0.01	0.01	-0.12	-0.12	1.18	0.90	-2.47	0.05	0.01	Vehicle	-3.07	-0.43	-0.12	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**3221.98**	**5369.97**	**394.94**	**658.23**
	U_{32} - L_{33}	-2.33	-2.91	0.03	0.03	-0.39	-0.39	0.00	0.00	-0.11	-0.11	1.18	0.90	-2.33	0.03	-----	Vehicle	-2.91	-0.42	-0.11	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**5851.58**	**9752.63**	**442.55**	**737.58**
	U_{33} - L_{34}	-2.44	-2.97	0.03	0.03	-0.40	-0.40	0.00	0.00	-0.11	-0.11	1.18	0.90	-2.44	0.03	-----	Vehicle	-2.97	-0.43	-0.11	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**6504.09**	**10840.16**	**430.32**	**717.20**
	U_{34} - L_{35}	-2.15	-2.63	0.01	0.01	-0.37	-0.37	0.00	0.00	-0.10	-0.10	1.18	0.90	-2.15	0.01	-----	Vehicle	-2.63	-0.39	-0.10	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**12378.14**	**20630.24**	**428.79**	**714.65**
	U_{35} - L_{36}	-2.05	-2.55	0.02	0.02	-0.36	-0.36	0.00	0.00	-0.09	-0.09	1.18	0.90	-2.05	0.02	-----	Vehicle	-2.55	-0.39	-0.09	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**6638.24**	**11063.73**	**395.17**	**658.62**
	U_{36} - L_{37}	-0.66	-1.43	0.05	0.05	-0.18	-0.18	0.00	0.00	-0.04	-0.04	1.18	0.90	-0.66	0.05	-----	Vehicle	-1.43	-0.19	-0.04	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**2007.72**	**3346.20**	**555.45**	**925.75**
	U_{38} - L_{37}	0.55	0.15	0.11	0.11	-0.06	-0.06	0.02	0.02	0.00	0.00	1.18	0.90	0.55	0.11	0.02	Vehicle	0.15	-0.06	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**1096.35**	**1827.25**	**2101.83**	**3503.05**
	U_{39} - L_{38}	0.25	-0.10	0.09	0.09	-0.12	-0.12	0.01	0.01	-0.01	-0.01	1.18	0.90	0.25	0.09	0.01	Vehicle	-0.10	-0.12	-0.01	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1201.94**	**2003.23**	**922.92**	**1538.21**
	U_{40} - L_{39}	-0.19	-0.54	0.05	0.05	-0.16	-0.16	0.01	0.01	-0.03	-0.03	1.18	0.90	-0.19	0.05	0.01	Vehicle	-0.54	-0.17	-0.03	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**2188.15**	**3646.91**	**684.68**	**1141.13**
	U_{41} - L_{40}	-0.79	-1.21	0.06	0.06	-0.22	-0.22	0.02	0.02	-0.05	-0.05	1.18	0.90	-0.79	0.07	0.02	Vehicle	-1.21	-0.23	-0.05	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**2317.84**	**3863.07**	**648.08**	**1080.14**
	U_{42} - L_{41}	-1.71	-2.19	0.08	0.08	-0.36	-0.36	0.02	0.02	-0.09	-0.09	1.18	0.90	-1.71	0.09	0.02	Vehicle	-2.19	-0.39	-0.09	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1639.94**	**2733.24**	**368.92**	**614.86**
	U_{43} - L_{42}	-1.87	-2.42	0.07	0.07	-0.35	-0.35	0.02	0.02	-0.11	-0.11	1.18	0.90	-1.87	0.08	0.02	Vehicle	-2.42	-0.37	-0.11	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2264.20**	**3773.66**	**458.96**	**764.93**
	U_{44} - L_{43}	-2.06	-2.63	0.05	0.05	-0.28	-0.28	0.01	0.01	-0.09	-0.09	1.18	0.90	-2.06	0.06	0.01	Vehicle	-2.63	-0.29	-0.09	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**3093.65**	**5156.08**	**571.20**	**952.00**
Structure 2	U_0 - L_1	-0.86	-1.43	0.03	0.03	-0.45	-0.45	0.00	0.00	-0.04	-0.04	1.20	0.90	-0.86	0.03	0.00	Vehicle	-1.43	-0.48	-0.04	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**5521.09**	**9201.81**	**316.88**	**528.13**
	U_1 - L_2	-1.89	-2.41	0.06	0.06	-0.41	-0.41	0.01	0.01	-0.14	-0.14	1.20	0.90	-1.89	0.06	0.01	Vehicle	-2.41	-0.44	-0.14	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2573.66**	**4289.43**	**346.54**	**577.56**
	U_2 - L_3	-1.74	-2.20	0.07	0.07	-0.44	-0.44	0.02	0.02	-0.12	-0.12	1.20	0.90	-1.74	0.07	0.02	Vehicle	-2.20	-0.47	-0.12	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1948.23**	**3247.06**	**300.53**	**500.89**
	U_3 - L_4	-0.53	-0.91	0.05	0.05	-0.23	-0.23	0.01	0.01	-0.06	-0.06	1.20	0.90	-0.53	0.05	0.01	Vehicle	-0.91	-0.24	-0.06	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1

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 3F1

Controlling As-Built Rating

	Operating
Maximum Axial Force	1.77
Maximum Moment (Start)	1.69
Maximum Moment (End)	1.81
	Operating
Maximum Shear Force	39.67

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	$U_0 - U_1$	4.32	5.45	7.73	5.09	5.85	8.97	4.28	5.20	7.71	153.29	59.89	2156
		$U_1 - U_2$	2.68	3.55	3.98	3.69	4.86	4.57	2.68	3.59	3.99	96.46	66.39	2390
		$U_2 - U_3$	2.83	3.51	4.96	3.32	4.76	5.15	2.86	3.52	4.87	101.95	91.72	3302
		$U_3 - U_4$	3.24	4.48	7.43	4.46	5.39	7.47	3.27	4.58	7.57	116.66	80.22	2888
		$U_4 - U_5$	3.44	4.57	7.07	3.41	4.66	7.25	4.65	6.87	9.24	122.87	81.59	2937
		$U_5 - U_6$	5.05	6.47	7.55	5.03	5.82	7.24	7.11	12.23	7.69	180.95	70.84	2550
		$U_6 - U_7$	5.16	6.76	7.23	5.18	11.49	6.94	5.63	16.01	7.10	185.82	225.50	8118
		$U_7 - U_8$	5.20	6.38	4.73	5.38	7.29	9.87	11.43	14.58	7.69	170.11	90.38	3254
		$U_8 - U_9$	5.01	6.82	5.80	17.14	16.26	7.54	15.04	9.45	7.61	180.53	48.71	1754
		$U_9 - U_{10}$	5.49	8.19	9.64	17.86	12.31	15.36	5.48	9.12	9.60	197.33	86.27	3106
		$U_{10} - U_{11}$	4.03	4.66	4.87	5.38	6.26	6.84	4.01	4.60	4.87	144.42	63.49	2286
		$U_{11} - U_{12}$	3.21	4.04	3.66	3.86	5.43	3.94	3.09	4.04	3.66	111.08	97.21	3500
		$U_{12} - U_{13}$	3.07	4.28	4.19	4.24	4.99	4.65	3.07	4.44	4.19	110.43	221.15	7961
		$U_{13} - U_{14}$	2.79	4.15	4.08	3.22	5.22	3.62	2.79	4.14	3.96	100.49	193.12	6952
		$U_{14} - U_{15}$	2.75	4.03	3.98	2.75	4.03	3.96	3.32	5.62	3.82	99.07	268.74	9675
		$U_{15} - U_{16}$	2.99	4.25	4.48	2.99	4.37	4.44	3.73	5.42	5.21	107.78	229.57	8265
		$U_{16} - U_{17}$	3.20	4.25	5.05	3.20	4.25	5.30	4.47	5.67	6.50	115.18	269.79	9712
		$U_{17} - U_{18}$	3.11	3.68	5.42	3.08	3.64	3.93	4.14	4.69	4.23	110.93	194.40	6999
		$U_{18} - U_{19}$	3.29	3.77	3.88	3.29	4.04	4.19	4.18	9.94	4.26	118.60	100.49	3618
		$U_{19} - U_{20}$	7.96	9.46	10.59	8.54	8.49	10.59	8.11	10.97	14.33	286.47	52.66	1896
	Structure 2	$U_0 - U_1$	7.83	8.36	9.95	7.86	9.45	14.45	8.16	7.60	9.99	273.63	66.97	2411
		$U_1 - U_2$	4.14	4.09	4.97	4.67	5.45	6.57	4.17	4.12	5.11	147.19	137.06	4934
		$U_2 - U_3$	3.83	4.58	4.51	4.75	5.74	5.94	3.82	4.49	4.51	137.55	79.23	2852
		$U_3 - U_4$	3.39	4.20	3.84	3.90	5.13	4.50	3.39	4.20	3.85	121.96	225.47	8117
		$U_4 - U_5$	3.27	4.11	4.13	4.27	4.57	4.51	3.27	4.14	4.13	117.77	177.10	6375
		$U_5 - U_6$	3.41	4.58	4.83	3.59	4.80	4.92	3.42	4.55	4.73	122.85	310.52	11179
		$U_6 - U_7$	3.14	4.12	4.75	3.58	4.96	4.89	3.29	3.98	4.51	113.09	185.39	6674
		$U_7 - U_8$	3.29	3.99	4.80	3.32	3.99	4.68	4.19	5.91	5.55	118.44	204.93	7377
		$U_8 - U_9$	3.25	4.45	5.40	3.26	4.45	5.26	4.25	5.76	5.36	117.04	224.88	8096
		$U_9 - U_{10}$	3.59	4.69	7.21	3.58	4.67	7.02	4.32	7.72	6.32	128.92	79.10	2847
		$U_{10} - U_{11}$	5.04	6.77	9.57	5.04	6.68	9.34	7.68	9.71	10.11	181.45	97.15	3497
		$U_{11} - U_{12}$	6.39	7.94	7.93	6.39	8.07	7.88	13.62	17.75	46.00	230.03	93.98	3383
		$U_{12} - U_{13}$	7.11	8.58	10.05	7.14	19.08	8.81	8.13	13.87	13.68	255.92	268.86	9679
		$U_{13} - U_{14}$	10.28	10.11	5.44	7.63	9.42	11.27	15.90	18.26	8.30	195.98	113.62	4090
		$U_{14} - U_{15}$	8.40	8.25	6.11	17.19	17.98	7.85	15.29	10.27	6.88	219.86	110.68	3985
		$U_{15} - U_{16}$	8.40	10.34	7.97	11.18	12.02	11.69	8.27	10.39	9.73	286.76	256.70	9241
		$U_{16} - U_{17}$	6.86	8.75	8.84	23.29	19.63	20.56	6.89	9.44	8.85	246.85	89.13	3209
		$U_{17} - U_{18}$	5.10	8.41	7.18	9.29	11.31	8.07	5.18	8.58	7.16	183.78	75.28	2710
		$U_{18} - U_{19}$	5.37	6.35	7.38	6.87	8.68	8.45	5.46	6.36	7.38	193.22	66.74	2403
		$U_{19} - U_{20}$	4.07	5.27	5.70	5.22	5.70	6.20	4.08	5.24	5.70	146.39	86.31	3107
		$U_{20} - U_{21}$	3.99	5.28	5.57	4.37	5.88	6.12	3.98	5.34	5.39	143.36	174.28	6274
		$U_{21} - U_{22}$	3.48	4.78	4.88	3.95	5.46	5.21	3.48	4.78	4.88	125.18	157.00	5652
		$U_{22} - U_{23}$	3.49	4.53	4.89	3.49	4.48	4.89	4.54	6.10	5.77	125.62	198.96	7163
		$U_{23} - U_{24}$	3.79	4.69	6.01	3.78	4.64	5.99	4.62	6.17	7.49	135.93	211.73	7622
		$U_{24} - U_{25}$	3.78	4.70	6.68	3.79	4.68	6.54	5.68	6.86	8.79	136.08	97.32	3503
		$U_{25} - U_{26}$	4.87	5.88	9.90	4.87	5.87	9.22	7.09	8.49	11.15	175.47	81.58	2937
		$U_{26} - U_{27}$	5.78	8.26	7.35	5.75	8.06	7.43	9.30	11.68	25.15	207.13	84.95	3058
		$U_{27} - U_{28}$	7.34	9.28	9.77	7.37	9.37	9.86	24.30	25.88	17.99	264.28	114.91	4137
		$U_{28} - U_{29}$	8.74	10.08	8.61	8.69	18.42	18.54	12.37	12.41	9.72	309.82	241.61	8698
		$U_{29} - U_{30}$	11.44	9.43	5.53	9.13	9.96	16.79	15.59	15.22	7.81	199.21	113.62	4090
		$U_{30} - U_{31}$	9.78	11.22	6.02	25.73	11.75	8.56	15.96	9.93	8.01	216.78	117.20	4219
		$U_{31} - U_{32}$	7.23	8.43	8.98	12.61	10.13	9.04	7.41	9.90	9.05	260.22	254.55	9164
		$U_{32} - U_{33}$	6.32	7.58	7.69	14.58	15.51	20.71	6.31	8.70	7.73	227.17	80.85	2911
		$U_{33} - U_{34}$	6.28	7.06	7.93	7.82	9.45	8.65	6.42	7.05	7.94	226.20	88.55	3188
		$U_{34} - U_{35}$	4.57	5.12	5.33	6.54	6.44	6.10	4.58	5.27	5.34	164.49	65.29	2350
		$U_{35} - U_{36}$	4.11	5.18	4.28	4.78	5.92	5.11	4.11	5.21	4.24	147.80	197.59	7113
		$U_{36} - U_{37}$	4.04	4.54	4.14	4.82	5.61	4.49	4.02	4.54	4.09	144.80	183.11	6592
		$U_{37} - U_{38}$	3.92	4.24	4.15	3.93	4.24	4.10	4.99	6.01	4.56	141.10	206.56	7436
		$U_{38} - U_{39}$	3.99	4.82	4.52	3.99	5.27	4.54	4.55	5.59	4.16	143.53	212.42	7647
		$U_{39} - U_{40}$	3.76	4.09	4.62	3.76	4.06	4.54	4.39	5.83	5.63	135.41	254.50	9162
		$U_{40} - U_{41}$	3.88	4.27	5.11	3.97	4.01	4.77	5.31	5.39	5.50	139.63	253.55	9128
		$U_{41} - U_{42}$	4.55	4.36	6.15	4.21	4.37	6.17	5.71	6.26	5.40	151.40	89.28	3214
		$U_{42} - U_{43}$	4.85	5.09	7.18	4.36	4.41	5.73	6.57	13.70	7.46	156.90	168.18	6055
		$U_{43} - U_{44}$	8.00	8.43	9.70	7.90	7.26	9.51	9.25	10.26	11.23	261.37	46.30	1667
	Structure 3	$U_0 - U_1$	8.52	8.12	10.79	9.08	10.44	16.07	8.56	8.52	10.78	292.30	85.76	3088
		$U_1 - U_2$	3.67	3.61	4.36	3.68	4.12	5.44	3.66	3.59	4.33	129.23	79.34	2856
		$U_2 - U_3$	3.44	3.88	4.48	4.37	4.95	5.35	3.42	3.88	4.57	123.24	170.53	6139
		$U_3 - U_4$	3.46	4.72	4.63	4.27	5.63	5.96	3.52	4.73	4.56	124.47	264.71	9530
		$U_4 - U_5$	3.26	4.20	4.46	3.75	5.00	4.56	3.25	4.56	4.43	117.06	268.78	9676
		$U_5 - U_6$	3.04	4.18	4.39	3.30	4.71	4.76	3.04	4.15	4.33	109.48	200.71	7225
		$U_6 - U_7$	3.03	4.18	4.46	3.04	4.16	4.44	3.95	5.52	4.38	109.14	232.93	8386
		$U_7 - U_8$	3.09	4.13	3.77	3.09	4.11	3.88	4.59	4.98	4.91	111.11	274.60	9886
		$U_8 - U_9$	2.94	4.19	3.40	3.11	4.01	3.44	4.50	6.37	4.31	105.74	102.37	3685
		$U_9 - U_{10}$	3.44	4.41	4.92	3.44	4.40	4.94	5.29	7.37	15.05	123.99	68.07	2450
		$U_{10} - U_{11}$	6.22	8.47	9.61	6.24	8.55	7.95	18.61	21.36	20.91	223.84	93.73	3374
		$U_{11} - U_{12}$	6.06	7.30	4.92	6.41	8.20	12.82	16.78	19.61	7.93	177.24	46.38	1670
		$U_{12} - U_{13}$	5.74	6.45	5.05	14.08	15.36	18.32	6.19	8.09	5.48	181.90	94.10	3388
		$U_{13} - U_{14}$	5.79	6.55	6.07	5.86	14.08	6.01	5.40	7.21	6.13	194.33	186.71	6721
		$U_{14} - U_{15}$	5.07	6.70	7.43	7.58	8.10	7.89	5.09	5.94	7.43	182.49	62.23	2240
		$U_{15} - U_{16}$	4.04	4.68	5.75	4.71	5.95	6.82	4.05	4.68	5.92	145.61	76.41	2751
		$U_{16} - U_{17}$	4.01	4.84	5.89	4.02	4.84	5.88	5.79	7.06	5.98	144.25	72.59	2613
		$U_{17} - U_{18}$	3.28	3.72	4.69	3.35	3.71	4.89	4.67	5.73	5.30	117.99	80.08	2883
		$U_{18} - U_{19}$	3.18	3.47	4.97	2.95	3.45	4.97	5.02	6.29	7.19	106.26	92.68	3337
		$U_{19} - U_{20}$	5.30	6.25	7.70	4.93	4.80	7.67	6.43	7.85	8.04	172.80	39.67	1428

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 3F1

Controlling As-Built Rating

	Operating
Maximum Axial Force	1.77
Maximum Moment (Start)	1.69
Maximum Moment (End)	1.81
	Operating
Maximum Shear Force	39.67

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	33.91	14.06	27.42	25.68	15.94	15.57	24.54	23.76	15.11	506.30	83.06	2990
		L_1 - L_2	3.44	4.38	4.78	4.39	4.69	5.08	4.01	5.75	6.61	123.67	78.26	2818
		L_2 - L_3	3.54	4.68	4.89	3.52	4.84	4.88	3.73	5.71	6.08	126.78	186.43	6711
		L_3 - L_4	3.44	4.65	4.97	3.42	4.75	4.85	4.12	6.25	6.57	122.99	123.11	4432
		L_4 - L_5	4.48	6.65	4.65	3.86	5.20	4.62	5.06	7.40	4.66	138.82	86.27	3106
		L_5 - L_6	4.38	6.77	4.54	4.27	6.15	4.55	4.49	14.92	4.53	153.83	198.91	7161
		L_6 - L_7	6.39	8.15	5.16	5.78	8.00	6.89	12.58	16.77	11.35	185.74	255.67	9204
		L_7 - L_8	5.53	8.39	4.05	6.69	13.86	6.85	6.44	8.87	4.69	145.74	167.23	6020
		L_8 - L_9	6.41	8.28	2.96	7.83	10.88	4.30	7.76	14.65	4.93	106.65	211.16	7602
		L_9 - L_{10}	7.64	10.21	6.98	17.57	24.74	12.32	7.28	11.88	8.34	251.15	286.23	10304
		L_{10} - L_{11}	5.08	7.73	6.10	5.21	8.59	6.29	4.97	7.97	8.17	178.91	121.26	4366
		L_{11} - L_{12}	4.31	4.56	4.52	5.14	5.69	5.35	4.90	6.97	6.24	154.99	123.76	4455
		L_{12} - L_{13}	5.01	5.47	5.25	5.01	5.83	5.26	4.81	5.93	5.70	173.08	281.20	10123
		L_{13} - L_{14}	3.93	5.21	4.70	4.48	5.79	5.13	4.43	5.85	6.28	141.60	167.18	6018
		L_{14} - L_{15}	4.63	5.89	5.76	4.54	5.74	5.66	5.16	5.86	5.86	163.56	295.28	10630
		L_{15} - L_{16}	5.28	6.19	7.49	5.65	6.66	7.68	5.29	6.16	7.97	189.98	520.15	18725
		L_{16} - L_{17}	5.27	5.91	7.33	5.20	5.67	7.35	5.30	5.96	7.64	187.03	230.89	8312
		L_{17} - L_{18}	6.84	6.51	12.01	6.99	6.45	10.34	8.35	7.61	10.43	232.27	202.74	7299
		L_{18} - L_{19}	8.11	5.79	7.93	8.35	6.08	11.76	7.02	5.92	11.93	208.50	85.30	3071
		L_{19} - L_{20}	6.89	19.73	11.73	12.85	16.52	13.61	9.54	12.77	14.50	240.73	101.13	3641
	Structure 2	L_2 - L_1	28.76	18.12	19.97	24.70	22.78	18.78	24.51	28.03	19.76	652.47	124.98	4499
		L_1 - L_2	6.49	6.34	7.14	7.41	9.28	9.42	7.81	6.70	8.63	228.32	119.16	4290
		L_2 - L_3	6.29	6.41	6.85	8.60	6.90	9.03	6.82	7.46	6.85	226.55	206.09	7419
		L_3 - L_4	5.20	5.90	5.65	6.55	7.89	7.03	5.71	6.47	5.65	187.25	299.59	10785
		L_4 - L_5	5.81	6.94	6.50	6.05	7.44	6.67	5.79	7.96	6.83	208.48	361.90	13029
		L_5 - L_6	5.18	6.60	6.03	5.95	6.51	6.03	5.14	7.23	6.24	185.14	348.77	12556
		L_6 - L_7	4.79	6.42	6.12	4.78	6.42	6.32	5.39	8.07	7.12	172.09	391.09	14079
		L_7 - L_8	5.02	6.36	6.27	4.57	5.76	6.08	5.01	6.37	8.03	164.66	227.59	8193
		L_8 - L_9	5.10	6.96	7.38	5.24	6.90	7.38	5.09	6.95	7.31	183.11	223.64	8051
		L_9 - L_{10}	6.49	8.43	8.87	6.57	8.63	8.77	7.35	8.55	9.05	233.65	176.64	6431
		L_{10} - L_{11}	5.57	7.57	5.32	5.09	6.59	5.20	9.69	12.59	20.79	183.38	137.59	4953
		L_{11} - L_{12}	6.87	8.90	4.14	6.40	8.14	5.77	12.82	26.57	4.37	149.07	283.61	10210
		L_{12} - L_{13}	10.38	10.74	5.67	7.80	9.51	8.53	7.88	13.03	8.72	204.23	407.45	14668
		L_{13} - L_{14}	6.73	9.55	4.67	10.61	14.90	8.08	9.13	10.68	7.13	168.07	143.47	5165
		L_{14} - L_{15}	9.03	8.53	2.84	11.57	10.56	5.55	8.67	11.06	4.73	102.22	154.42	5559
		L_{15} - L_{16}	8.50	11.97	6.01	8.37	10.02	11.32	8.37	13.19	11.06	216.53	414.64	14927
		L_{16} - L_{17}	7.10	9.98	4.70	12.68	28.72	6.71	6.88	10.79	8.91	169.16	253.54	9127
		L_{17} - L_{18}	5.06	6.91	4.22	18.04	19.69	19.54	4.92	6.97	6.72	151.91	156.30	5627
		L_{18} - L_{19}	4.92	7.12	7.50	5.17	12.56	7.50	4.94	7.10	7.28	177.27	136.42	4911
		L_{19} - L_{20}	6.51	8.61	6.87	7.27	8.86	7.93	6.25	7.38	8.50	224.87	129.79	4673
		L_{20} - L_{21}	6.60	7.69	8.01	7.60	8.98	8.01	7.75	8.66	7.86	237.60	207.56	7472
		L_{21} - L_{22}	4.99	6.19	5.92	5.02	6.03	6.22	5.33	7.27	6.90	179.76	134.54	4843
		L_{22} - L_{23}	5.40	6.08	6.36	5.69	6.03	6.29	5.40	6.06	7.34	194.24	151.84	5466
		L_{23} - L_{24}	6.68	7.56	9.56	6.75	7.47	8.90	6.67	7.38	9.97	239.94	247.84	8922
		L_{24} - L_{25}	6.64	7.31	10.29	7.44	7.67	9.26	7.53	7.87	8.64	238.88	128.28	4618
		L_{25} - L_{26}	7.68	8.00	7.37	6.92	7.09	7.22	10.69	10.76	7.37	249.18	149.78	5392
		L_{26} - L_{27}	6.47	8.13	5.35	7.25	7.14	7.13	11.33	22.36	11.01	192.65	162.11	5836
		L_{27} - L_{28}	6.94	11.60	5.85	10.39	9.94	9.52	7.25	19.02	7.14	210.62	260.71	9386
		L_{28} - L_{29}	7.48	13.15	7.54	12.18	10.25	9.38	5.92	14.16	6.85	213.12	484.96	17458
		L_{29} - L_{30}	6.27	8.56	5.29	17.24	15.58	7.74	8.67	10.65	7.37	190.46	137.35	4945
		L_{30} - L_{31}	9.97	9.69	1.89	17.64	11.83	4.51	12.22	12.78	2.89	67.92	168.40	6062
		L_{31} - L_{32}	13.01	12.84	5.29	10.10	11.86	11.27	15.67	10.55	6.24	190.30	413.27	14878
		L_{32} - L_{33}	9.96	8.98	3.67	13.72	29.49	5.34	9.13	8.94	6.39	132.21	270.94	9754
		L_{33} - L_{34}	7.41	7.01	6.38	13.72	15.18	17.49	7.15	7.03	5.78	208.12	158.04	5689
		L_{34} - L_{35}	8.32	8.74	9.94	11.18	11.69	11.37	9.40	10.02	10.37	299.49	158.77	5716
		L_{35} - L_{36}	5.88	7.21	7.28	6.95	8.76	8.19	7.17	8.03	7.71	211.57	224.44	8080
		L_{36} - L_{37}	5.37	6.30	6.38	6.85	7.34	7.20	5.52	6.74	7.02	193.39	111.19	4003
		L_{37} - L_{38}	5.32	6.31	6.54	6.55	7.08	6.95	5.30	6.33	6.51	190.86	303.07	10910
		L_{38} - L_{39}	5.66	6.77	7.16	5.73	6.70	7.16	5.70	6.75	7.44	203.73	416.05	14978
		L_{39} - L_{40}	5.90	7.07	8.05	5.98	7.05	8.06	5.85	6.72	8.80	210.62	445.96	16055
		L_{40} - L_{41}	5.47	6.15	8.02	5.47	6.25	8.44	5.77	6.72	9.21	196.86	258.82	9317
		L_{41} - L_{42}	6.75	7.15	10.34	6.20	6.49	10.78	6.78	7.09	12.27	223.13	217.20	7819
		L_{42} - L_{43}	6.66	6.73	11.81	6.66	6.68	11.79	9.33	8.75	11.64	239.90	52.71	1898
		L_{43} - L_{44}	24.75	39.23	30.59	16.39	23.64	19.50	20.45	22.63	34.27	589.87	114.36	4117
	Structure 3	L_2 - L_1	13.59	16.56	6.54	13.53	19.71	11.50	13.59	19.72	12.73	235.58	111.92	4029
		L_1 - L_2	9.18	4.89	7.53	10.28	7.76	10.64	10.39	5.64	9.34	176.17	100.70	3625
		L_2 - L_3	6.63	6.23	7.66	8.13	6.66	9.07	6.67	6.77	8.45	224.12	213.88	7700
		L_3 - L_4	5.31	5.92	6.72	6.81	7.77	7.65	5.34	6.27	6.82	191.19	257.81	9281
		L_4 - L_5	5.78	6.96	7.16	5.77	6.88	7.63	6.31	7.81	8.43	207.82	479.15	17249
		L_5 - L_6	4.63	5.84	6.05	4.46	5.60	5.71	5.16	6.41	6.51	160.62	237.30	8543
		L_6 - L_7	4.16	5.77	5.82	4.11	5.54	6.27	4.18	6.45	5.72	148.01	202.51	7290
		L_7 - L_8	4.34	5.55	7.01	4.52	5.72	6.77	4.79	5.70	7.67	156.12	309.17	11130
		L_8 - L_9	3.80	4.99	6.76	3.80	5.00	7.63	3.71	5.01	8.41	133.59	126.77	4564
		L_9 - L_{10}	6.26	8.28	6.88	5.81	7.43	6.75	6.27	8.58	6.87	209.03	119.60	4306
		L_{10} - L_{11}	9.72	11.53	7.98	8.61	10.30	10.91	12.37	21.23	12.07	287.28	266.98	9611
		L_{11} - L_{12}	5.69	8.38	5.26	10.00	10.76	9.37	7.78	9.80	6.35	189.19	179.07	6447
		L_{12} - L_{13}	6.09	8.19	3.61	10.24	10.13	5.33	8.73	10.76	3.75	129.95	189.19	6811
		L_{13} - L_{14}	5.85	7.92	4.92	22.31	21.80	10.78	5.84	9.66	6.00	177.10	288.36	10381
		L_{14} - L_{15}	4.25	6.70	3.57	4.23	14.28	5.98	4.23	7.29	4.34	128.48	182.95	6586
		L_{15} - L_{16}	3.69	6.04	3.63	6.80	7.86	7.55	3.51	5.45	4.55	126.53	86.91	3129
		L_{16} - L_{17}	3.76	4.41	5.06	4.33	5.58	5.61	3.69	4.41	5.05	132.74	134.34	4836
		L_{17} - L_{18}	3.88	4.53	5.88	3.90	4.89	5.86	3.84	4.37	5.96	138.26	181.94	6550
		L_{18} - L_{19}	3.82	4.48	6.71	3.82	4.49	6.04	4.24	4.83	6.47	137.62	86.71	3122
		L_{19} - L_{20}	21.11	18.62	43.39	14.77	17.30	29.19	15.72	17.14	56.93	531.73	75.32	2712

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 3F1

Controlling As-Built Rating

	Operating
Maximum Axial Force	1.77
Maximum Moment (Start)	1.69
Maximum Moment (End)	1.81
	Operating
Maximum Shear Force	39.67

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	$U_0 - L_0$	1.96	1.77	2.02	2.02	1.69	2.02	2.02	2.29	2.40	80.75	83.57	3008
	$U_1 - L_1$	3.58	4.47	4.10	3.91	4.88	5.80	3.90	4.55	5.81	128.81	88.84	3198
	$U_2 - L_2$	5.57	6.27	4.48	6.50	7.30	8.41	6.50	7.30	8.41	161.41	117.42	4227
	$U_3 - L_3$	7.79	7.53	5.55	9.56	9.50	10.33	9.56	9.50	9.46	199.67	153.22	5516
	$U_4 - L_4$	4.23	4.64	4.86	8.45	10.36	10.19	8.45	10.36	10.20	152.11	138.65	4991
	$U_5 - L_5$	3.17	4.00	4.75	3.18	4.01	5.32	3.18	4.01	4.36	114.13	141.00	5076
	$U_6 - L_6$	3.05	4.11	2.56	3.05	4.09	3.23	3.06	4.07	2.76	92.06	118.07	4250
	$U_7 - L_7$	2.26	2.82	1.97	2.27	2.89	2.66	2.26	2.88	1.97	70.75	148.32	5340
	$U_8 - L_8$	4.91	6.07	4.41	5.66	6.77	6.21	5.71	6.77	6.17	158.86	279.00	10044
	$U_9 - L_9$	3.60	3.43	2.04	3.97	3.99	2.10	3.96	3.99	3.10	73.61	160.65	5783
	$U_{10} - L_{10}$	4.85	5.79	4.34	4.94	6.40	3.64	4.91	5.97	6.18	130.96	254.10	9148
	$U_{11} - L_{11}$	4.39	5.19	3.95	4.83	5.98	6.03	4.79	5.95	5.96	142.35	152.88	5504
	$U_{12} - L_{12}$	4.00	4.86	4.92	4.09	5.30	6.35	4.13	5.30	4.92	144.01	141.94	5110
	$U_{13} - L_{13}$	3.29	3.85	3.81	3.22	4.00	5.38	3.19	4.00	5.35	114.91	157.03	5653
	$U_{14} - L_{14}$	4.44	5.02	4.54	11.69	15.54	12.48	11.73	15.54	12.87	159.67	233.97	8423
	$U_{15} - L_{15}$	5.02	5.92	7.30	4.99	5.98	8.82	5.00	5.98	8.82	179.67	188.01	6769
	$U_{16} - L_{16}$	3.62	4.77	6.05	3.59	4.78	6.35	3.59	4.78	6.02	129.28	188.47	6785
	$U_{17} - L_{17}$	2.90	3.79	4.10	2.99	3.78	4.17	2.99	3.78	4.17	104.58	222.10	7995
	$U_{18} - L_{18}$	3.02	4.12	2.78	3.02	4.11	4.18	3.04	4.11	2.78	99.96	154.09	5547
	$U_{19} - L_{19}$	3.55	4.67	3.33	3.52	4.68	5.13	3.56	4.69	3.31	119.31	215.02	7741
	$U_{20} - L_{20}$	2.49	3.11	2.33	2.71	3.17	3.92	2.72	3.14	2.33	83.74	369.88	13316
Structure 2	$U_0 - L_0$	3.63	3.23	2.66	3.63	3.59	2.64	3.62	3.21	3.46	94.90	363.83	13098
	$U_1 - L_1$	4.55	4.92	4.88	5.08	5.47	5.48	5.04	5.47	5.57	163.65	276.17	9942
	$U_2 - L_2$	4.34	5.00	3.85	4.27	5.26	4.97	4.26	5.26	4.97	138.53	188.47	6785
	$U_3 - L_3$	3.64	4.21	3.01	3.94	4.79	4.10	3.97	4.79	4.10	108.33	286.65	10319
	$U_4 - L_4$	3.72	4.44	4.61	3.88	4.74	5.62	3.87	4.74	5.64	133.84	197.38	7106
	$U_5 - L_5$	4.52	5.94	5.41	5.00	6.02	9.27	5.01	6.02	9.26	162.76	232.98	8387
	$U_6 - L_6$	6.36	7.44	4.60	7.94	7.23	8.23	7.33	7.22	8.23	165.47	261.16	9402
	$U_7 - L_7$	4.87	5.58	4.95	15.53	10.57	13.82	15.54	20.59	13.99	175.38	333.65	12011
	$U_8 - L_8$	4.06	4.81	5.07	4.08	4.74	5.06	4.08	4.74	5.07	146.28	152.02	5473
	$U_9 - L_9$	5.09	5.76	6.54	5.18	5.73	6.49	5.15	5.73	6.54	183.34	173.16	6234
	$U_{10} - L_{10}$	5.12	6.10	6.65	5.10	6.32	6.65	5.11	6.08	6.65	183.46	248.53	8947
	$U_{11} - L_{11}$	4.58	5.63	5.42	4.63	5.59	5.52	4.58	5.59	5.42	164.81	300.17	10806
	$U_{12} - L_{12}$	4.70	5.55	5.46	4.92	5.51	5.33	4.92	5.51	5.33	169.07	397.61	14314
	$U_{13} - L_{13}$	3.93	4.17	2.27	3.92	4.15	5.61	3.91	4.15	5.66	81.55	410.57	14780
	$U_{14} - L_{14}$	5.86	6.14	5.47	7.63	6.90	9.86	7.67	7.98	10.30	197.06	571.55	20576
	$U_{15} - L_{15}$	6.11	5.18	4.22	6.55	5.92	6.14	6.14	5.92	5.63	151.95	357.46	12868
	$U_{16} - L_{16}$	5.05	5.12	5.04	5.20	5.45	6.06	5.20	5.50	5.70	181.59	302.93	10906
	$U_{17} - L_{17}$	4.76	5.01	4.42	4.76	5.38	5.61	4.80	5.07	5.61	159.08	226.82	8158
	$U_{18} - L_{18}$	4.40	4.77	3.83	4.70	5.34	5.45	4.73	5.34	5.45	137.97	173.99	6264
	$U_{19} - L_{19}$	3.88	4.38	5.05	3.99	4.84	5.42	4.02	4.62	5.37	139.74	217.40	7826
	$U_{20} - L_{20}$	3.87	4.48	3.87	3.91	4.58	5.93	3.95	4.58	5.93	139.25	213.19	7675
	$U_{21} - L_{21}$	4.24	4.67	4.37	4.63	5.23	7.27	4.61	5.23	7.28	152.63	206.51	7434
	$U_{22} - L_{22}$	5.15	5.44	4.68	19.14	12.81	19.19	19.22	19.53	19.21	168.38	314.68	11328
	$U_{23} - L_{23}$	4.52	5.48	6.16	4.49	5.41	6.21	4.51	5.41	6.12	161.54	203.97	7343
	$U_{24} - L_{24}$	3.99	4.55	5.02	4.01	4.58	5.01	3.99	4.58	5.01	143.50	212.57	7653
	$U_{25} - L_{25}$	3.74	4.40	5.06	3.71	4.40	5.06	3.74	4.40	5.06	133.71	196.49	7074
	$U_{26} - L_{26}$	4.31	4.95	5.78	4.32	4.96	5.93	4.28	4.96	5.78	153.90	151.10	5439
	$U_{27} - L_{27}$	4.57	4.76	5.64	4.71	4.77	6.26	4.70	4.77	6.26	164.53	197.71	7118
	$U_{28} - L_{28}$	4.75	4.84	6.01	4.74	4.84	5.97	4.75	4.84	5.97	170.54	250.57	9021
	$U_{29} - L_{29}$	5.36	5.20	7.13	5.34	5.15	8.05	5.35	5.18	8.15	185.34	278.88	10040
	$U_{30} - L_{30}$	6.19	6.32	4.71	8.51	7.56	9.88	9.71	7.56	9.88	169.63	552.38	19886
	$U_{31} - L_{31}$	5.26	4.82	4.11	5.87	5.17	4.78	5.86	5.14	4.84	147.82	527.14	18977
	$U_{32} - L_{32}$	5.83	6.23	4.08	5.93	6.63	5.73	5.92	6.25	5.67	146.87	475.85	17130
	$U_{33} - L_{33}$	5.66	5.74	3.77	5.84	6.46	5.76	5.86	6.50	5.75	135.85	350.74	12627
	$U_{34} - L_{34}$	6.06	6.47	5.32	6.25	7.20	7.07	6.30	6.76	7.04	191.49	268.26	9657
	$U_{35} - L_{35}$	5.48	6.01	4.65	5.53	6.36	6.64	5.51	6.36	6.64	167.40	175.56	6320
	$U_{36} - L_{36}$	4.31	4.63	3.84	4.55	4.90	5.40	4.54	4.90	5.40	138.19	155.11	5584
	$U_{37} - L_{37}$	5.15	4.72	4.34	13.24	18.73	15.05	13.28	18.88	19.02	156.30	279.35	10057
	$U_{38} - L_{38}$	6.15	5.83	7.93	7.06	5.87	7.93	6.09	5.84	10.72	209.81	277.42	9987
	$U_{39} - L_{39}$	5.77	6.10	7.90	5.73	6.10	7.86	5.79	6.10	7.86	206.31	254.09	9147
	$U_{40} - L_{40}$	3.95	4.69	5.39	3.95	4.81	5.39	3.94	4.81	5.39	141.81	197.31	7103
	$U_{41} - L_{41}$	3.87	4.70	4.53	3.90	4.62	4.70	3.90	4.65	4.53	139.46	250.00	9000
	$U_{42} - L_{42}$	4.29	4.77	6.03	4.37	4.78	6.03	4.35	4.78	6.03	154.55	170.14	6125
	$U_{43} - L_{43}$	4.50	4.89	7.44	4.47	4.86	6.00	4.48	4.86	7.44	161.04	220.31	7931
	$U_{44} - L_{44}$	3.93	3.82	3.77	3.70	3.59	4.00	3.71	3.83	3.77	129.39	361.00	12996
Structure 3	$U_0 - L_0$	3.70	3.17	2.73	3.70	3.28	2.73	3.70	3.18	2.73	98.23	368.80	13277
	$U_1 - L_1$	4.55	4.79	3.75	4.89	5.35	5.12	4.88	5.35	5.12	135.12	275.80	9929
	$U_2 - L_2$	3.77	4.42	4.03	4.03	4.68	4.79	4.04	4.68	4.82	135.73	175.03	6301
	$U_3 - L_3$	3.17	4.05	2.94	3.32	4.28	3.70	3.33	4.25	3.70	105.71	246.09	8859
	$U_4 - L_4$	3.86	4.52	3.40	4.12	5.09	5.50	4.13	5.09	5.50	122.27	198.07	7130
	$U_5 - L_5$	4.50	5.59	6.30	5.10	6.31	10.28	5.09	5.95	10.28	162.05	181.33	6528
	$U_6 - L_6$	4.26	4.91	5.16	11.35	16.85	14.14	17.07	16.85	13.21	153.41	274.16	9870
	$U_7 - L_7$	3.64	3.98	4.71	3.81	3.99	4.72	3.83	3.99	4.72	131.15	170.30	6131
	$U_8 - L_8$	4.16	5.00	6.02	4.16	5.03	6.02	4.15	5.03	6.02	149.42	138.42	4983
	$U_9 - L_9$	4.55	5.65	4.74	4.52	5.64	4.62	4.54	5.64	4.71	162.71	133.92	4821
	$U_{10} - L_{10}$	4.86	5.80	2.87	5.03	5.82	3.85	5.01	5.82	3.20	103.30	215.58	7761
	$U_{11} - L_{11}$	3.31	3.52	1.99	3.34	3.54	3.04	3.34	3.55	2.04	71.49	124.25	4473
	$U_{12} - L_{12}$	5.66	6.16	4.65	6.74	6.46	8.15	6.74	6.46	8.44	167.43	327.56	11792
	$U_{13} - L_{13}$	3.44	2.83	2.52	3.94	3.42	3.18	3.42	2.83	3.22	90.62	195.98	7055
	$U_{14} - L_{14}$	3.86	4.19	3.87	4.13	4.65	5.21	4.14	4.63	4.32	139.14	143.19	5155
	$U_{15} - L_{15}$	3.65	4.10	3.52	3.89	4.54	5.79	3.89	4.53	5.31	126.70	151.22	5444
	$U_{16} - L_{16}$	4.50	4.31	4.16	11.75	8.28	7.85	11.72	14.66	13.17	149.65	133.17	4794
	$U_{17} - L_{17}$	7.55	6.82	10.09	7.55	6.84	12.33	7.55	6.84	14.55	245.59	154.87	5575
	$U_{18} - L_{18}$	5.89	6.44	9.34	5.65	6.85	9.40	5.65	6.85	9.40	203.28	111.44	4012
	$U_{19} - L_{19}$	3.49	4.37	4.35	3.50	4.37	5.52	3.51	4.37	4.35	125.72	74.69	2689
	$U_{20} - L_{20}$	2.40	2.02	3.91	1.90	2.17	3.69	2.17	2.15	1.81	65.27	94.23	3392

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

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Controlling As-Built Rating

	Operating
Maximum Axial Force	1.77
Maximum Moment (Start)	1.69
Maximum Moment (End)	1.81
	Operating
Maximum Shear Force	39.67

Location	Member	Axial Load Case			Moment (Start)			Moment (End)			Controlling Tonnages	Maximum Shear Force	
		North Truss	Center Truss	South Truss	North Truss	Center Truss	South Truss	North Truss	Center Truss	South Truss	Operating	Operating	
		Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Tonnage	Rating	Tonnage
Truss - Diagonals													
	$U_0 - L_1$	4.32	5.43	6.33	4.05	6.77	5.55	4.05	5.94	5.41	145.65	166.27	5986
	$U_1 - L_2$	4.56	5.42	5.94	5.66	6.44	5.93	4.86	6.21	5.64	164.26	879.66	31668
	$U_2 - L_3$	6.51	6.46	9.17	10.03	12.96	9.15	8.59	7.41	7.91	232.44	1130.29	40690
	$U_3 - L_4$	3.38	3.74	4.68	9.57	5.96	8.78	4.12	4.00	4.61	121.83	1385.11	49864
	$U_3 - L_4$	3.75	5.16	4.98	4.61	6.47	6.60	4.94	6.79	8.66	135.13	1068.02	38449
	$U_4 - L_5$	3.51	5.30	6.89	4.29	6.49	7.43	4.14	5.18	6.81	126.50	380.89	13712
	$U_5 - L_6$	3.12	3.75	6.42	3.36	4.41	5.79	3.22	4.09	6.52	112.20	279.88	10076
	$U_6 - L_7$	3.34	4.15	5.77	3.62	4.31	6.78	3.43	4.15	5.78	120.32	439.15	15809
	$U_6 - L_8$	5.56	5.53	6.76	5.58	5.42	5.59	6.18	6.36	5.22	187.98	667.43	24027
	$U_8 - L_{10}$	5.32	6.07	6.37	5.29	6.16	5.31	6.29	7.37	7.16	190.59	476.00	17136
	$U_{10} - L_{11}$	5.34	6.38	6.19	5.49	7.85	6.00	6.01	7.77	6.14	192.26	505.41	18195
	$U_{11} - L_{12}$	4.54	5.32	6.14	5.95	5.36	5.54	5.11	6.70	5.44	163.35	565.91	20373
	$U_{12} - L_{13}$	3.85	4.46	5.50	3.85	4.46	5.50	4.20	5.05	5.80	138.59	454.88	16376
	$U_{13} - L_{14}$	3.61	3.87	4.78	3.97	4.33	5.02	4.09	4.46	5.04	129.93	1046.52	37675
	$U_{15} - L_{14}$	4.21	4.31	9.29	4.86	5.44	13.62	5.44	5.40	9.20	151.72	906.86	32647
	$U_{16} - L_{15}$	3.55	5.27	6.35	4.05	6.22	7.74	4.02	5.50	7.63	127.87	644.04	23185
	$U_{17} - L_{16}$	3.14	4.66	4.96	3.19	4.88	4.96	3.14	4.64	4.98	112.88	576.23	20744
	$U_{18} - L_{17}$	3.32	4.74	5.59	3.73	5.77	6.15	3.35	4.89	5.59	119.68	324.51	11682
	$U_{19} - L_{18}$	3.21	4.87	6.41	3.39	5.05	6.41	3.18	4.60	6.41	114.61	354.26	12753
	$U_{20} - L_{19}$	3.82	5.01	4.86	3.91	4.90	5.53	3.51	4.90	5.02	126.25	499.29	17975
	$U_0 - L_1$	4.98	5.64	5.20	4.86	6.49	4.15	4.86	5.39	4.15	149.44	429.73	15470
	$U_1 - L_2$	4.92	5.72	4.64	4.93	5.74	4.64	5.14	5.89	5.32	167.16	409.86	14755
	$U_2 - L_3$	4.19	4.74	4.28	4.47	4.74	4.28	4.19	4.69	4.96	150.67	353.77	12736
	$U_3 - L_4$	4.00	4.53	4.97	4.00	4.50	4.74	4.36	4.97	5.62	143.99	613.01	22068
	$U_4 - L_5$	4.62	4.82	6.55	4.50	4.81	6.55	4.67	5.24	7.28	162.17	633.82	22817
	$U_5 - L_6$	6.08	6.07	8.76	5.85	6.22	9.78	6.77	6.13	8.75	210.64	800.22	28808
	$U_6 - L_7$	3.84	3.57	4.36	3.98	4.32	5.54	3.99	3.59	4.60	128.41	1057.24	38061
	$U_7 - L_7$	4.51	5.24	4.87	5.59	6.69	7.48	5.01	6.35	6.85	162.43	592.40	21326
	$U_8 - L_8$	3.83	5.36	5.17	4.25	7.10	5.07	4.11	5.54	5.55	137.89	408.38	14702
	$U_8 - L_9$	4.32	5.33	5.87	4.99	6.87	5.85	4.46	5.35	5.89	155.49	455.16	16386
	$U_{11} - L_{10}$	4.09	5.44	5.93	4.43	6.12	6.15	4.09	5.42	6.08	147.37	447.08	16095
	$U_{12} - L_{11}$	4.17	5.34	5.77	4.31	5.44	5.68	4.20	5.35	5.75	150.00	459.84	16554
	$U_{13} - L_{12}$	3.54	4.04	6.07	3.50	4.59	6.01	3.53	3.93	6.07	126.15	403.18	14514
	$U_{14} - L_{13}$	4.27	4.11	6.64	4.29	4.70	7.42	4.33	4.66	9.64	148.03	581.89	20948
	$U_{15} - L_{15}$	5.76	4.88	5.24	5.83	4.87	5.28	5.73	4.88	5.00	175.20	658.47	23705
	$U_{15} - L_{16}$	4.73	4.31	3.87	4.72	4.31	3.91	4.72	4.31	4.19	139.49	420.53	15139
	$U_{16} - L_{17}$	4.65	5.15	5.05	4.66	5.47	5.05	4.93	5.47	5.45	167.32	420.28	15130
	$U_{17} - L_{18}$	4.31	4.96	4.56	4.48	5.47	4.56	4.32	5.83	5.06	155.11	396.66	14280
	$U_{18} - L_{19}$	4.35	5.01	5.67	4.34	5.04	5.47	4.94	5.80	5.67	156.30	389.96	14038
	$U_{19} - L_{20}$	4.47	5.19	5.73	4.47	5.19	5.73	4.82	5.77	6.39	160.97	398.85	14359
	$U_{20} - L_{21}$	4.18	4.40	5.64	4.62	4.40	5.75	4.72	5.16	6.75	150.49	621.11	22360
	$U_{21} - L_{22}$	5.52	5.82	8.70	5.58	5.87	9.60	7.03	6.89	10.24	198.82	1030.73	37106
	$U_{23} - L_{22}$	4.93	6.16	6.22	6.90	7.92	10.52	6.51	7.31	10.08	177.40	1114.80	40133
	$U_{24} - L_{23}$	3.91	5.35	5.57	4.49	5.32	5.58	4.16	5.38	6.02	140.92	674.79	24293
	$U_{25} - L_{24}$	4.06	5.59	6.03	4.45	6.84	6.37	4.70	5.64	6.03	146.09	421.27	15166
	$U_{26} - L_{25}$	4.40	5.36	6.27	4.95	6.22	6.13	4.39	5.34	6.27	158.11	383.15	13793
	$U_{27} - L_{26}$	4.43	5.08	5.39	4.49	6.18	5.62	4.40	5.08	5.44	158.27	395.00	14220
	$U_{28} - L_{27}$	4.67	4.89	5.67	4.67	5.93	6.11	4.69	4.87	5.75	168.13	390.92	14073
	$U_{29} - L_{28}$	4.19	3.96	6.37	4.53	4.39	6.33	4.19	3.96	6.49	142.61	375.49	13517
	$U_{30} - L_{29}$	4.99	4.34	9.44	5.19	4.97	9.26	5.13	4.78	9.44	156.19	589.48	21581
	$U_{32} - L_{31}$	6.29	5.37	5.65	6.30	5.31	5.73	6.31	5.37	5.84	191.28	678.07	24411
	$U_{31} - L_{32}$	5.31	4.97	4.09	5.34	5.13	4.07	5.60	5.23	4.35	146.41	464.19	16711
	$U_{32} - L_{33}$	5.54	5.59	4.76	5.78	5.55	4.77	5.52	5.59	5.48	171.34	503.04	18109
	$U_{33} - L_{34}$	5.15	5.58	5.40	5.20	5.58	5.02	5.93	6.33	5.89	180.82	466.29	16786
	$U_{34} - L_{35}$	5.16	5.34	5.09	5.12	5.76	4.95	5.34	6.00	5.55	178.31	455.52	16399
	$U_{35} - L_{36}$	4.90	4.92	4.66	5.22	5.52	4.66	5.43	5.71	5.30	167.92	387.67	13956
	$U_{36} - L_{37}$	4.92	4.93	5.77	4.93	4.87	6.04	5.91	5.49	6.09	175.45	508.99	18324
	$U_{38} - L_{37}$	3.06	3.40	4.01	3.50	4.23	5.86	3.50	3.74	5.63	110.12	910.02	32761
	$U_{39} - L_{38}$	5.19	5.22	10.16	6.45	6.20	10.18	6.48	6.20	10.73	186.72	865.39	31154
	$U_{40} - L_{39}$	4.36	5.42	6.63	4.97	5.48	6.77	5.16	5.49	6.87	156.96	701.56	25256
	$U_{41} - L_{40}$	4.04	4.89	5.24	4.02	6.21	5.23	3.94	5.11	5.24	141.72	601.23	21644
	$U_{42} - L_{41}$	4.23	5.09	5.24	4.35	5.41	5.31	4.21	5.37	5.24	151.51	340.49	12258
	$U_{43} - L_{42}$	4.50	5.52	6.71	4.51	5.86	6.73	4.50	5.53	6.71	162.04	366.21	13183
	$U_{44} - L_{43}$	4.65	5.15	7.64	4.71	5.64	7.72	4.70	5.03	7.75	167.42	489.28	17614
	$U_0 - L_1$	4.72	5.34	4.91	4.44	5.31	3.80	4.44	4.59	3.80	136.65	433.16	15594
	$U_1 - L_2$	4.30	5.02	4.63	4.34	5.02	4.45	4.97	5.86	4.68	154.67	409.86	14755
	$U_2 - L_3$	4.13	4.91	4.64	4.13	5.10	4.61	4.46	5.10	5.49	148.85	340.71	12266
	$U_3 - L_4$	3.81	4.23	4.24	4.30	4.24	4.24	4.34	5.16	5.04	137.17	576.30	20747
	$U_4 - L_5$	4.31	4.76	6.63	4.31	4.86	7.17	4.95	5.42	7.27	155.07	621.38	22370
	$U_5 - L_6$	5.75	4.78	9.94	6.61	6.15	9.94	5.76	4.81	8.21	171.93	1092.97	39347
	$U_7 - L_8$	3.83	4.48	5.62	6.25	6.40	6.51	4.96	5.72	6.12	137.82	1221.57	43977
	$U_8 - L_7$	3.76	4.93	5.47	4.21	5.01	6.36	4.49	5.92	6.93	135.54	502.53	18091
	$U_8 - L_8$	4.39	6.02	7.30	4.83	6.86	7.66	4.98	6.32	5.82	158.14	557.98	20087
	$U_8 - L_9$	4.84	6.77	5.94	6.24	7.58	6.77	5.39	6.96	6.32	174.18	472.64	17015
	$U_{11} - L_{10}$	4.94	5.24	6.49	5.21	6.51	6.67	5.19	5.65	6.34	177.68	415.98	14975
	$U_{12} - L_{11}$	5.14	4.80	6.86	5.74	6.08	7.84	5.19	5.45	6.83	172.86	583.10	20992
	$U_{12} - L_{13}$	4.95	4.23	4.79	5.25	4.23	4.72	4.89	4.25	4.81	152.30	491.29	17686
	$U_{13} - L_{14}$	4.48	4.33	4.43	5.84	7.25	4.34	5.45	5.39	4.80	155.73	313.81	11297
	$U_{14} - L_{15}$	4.67	5.27	5.95	4.67	5.53	6.54	5.02	5.89	5.83	168.02	403.92	14541
	$U_{15} - L_{16}$	4.49	4.67	5.21	4.52	6.86	5.54	5.62	5.98	7.61	161.49	996.37	35869
	$U_{17} - L_{16}$	3.33	3.42	4.88	4.59	5.02	12.85	4.96	4.68	11.28	119.77	1262.33	45444
	$U_{18} - L_{17}$	5.00	5.24	9.60	8.17	9.95	13.78	5.05	6.23	12.61	179.85	1202.18	43278
	$U_{19} - L_{18}$	4.22	5.51	7.53	4.90	6.50	7.63	4.74	6.72	7.77	152.00	716.94	25810
	$U_{20} - L_{19}$	4.22	5.31	8.56	11.53	7.38	6.64	4.28	11.01	6.54	151.98	324.15	11669

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 3F1

Controlling As-Inspected F

	Operating
Maximum Axial Force	1.55
Maximum Moment (Start)	1.67
Maximum Moment (End)	1.54
	Operating
Maximum Shear Force	39.67

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	$U_0 - U_1$	4.32	5.45	7.73	5.08	5.88	9.00	4.28	5.21	7.74	153.29	59.89	2156
		$U_1 - U_2$	2.69	3.57	3.98	3.71	4.85	4.57	2.68	3.57	3.99	96.42	66.39	2390
		$U_2 - U_3$	2.83	3.52	4.91	3.32	4.72	5.16	2.86	3.52	4.87	101.81	91.72	3302
		$U_3 - U_4$	3.25	4.44	7.43	4.46	5.39	7.45	3.27	4.57	7.57	116.84	80.22	2888
		$U_4 - U_5$	3.41	4.57	7.07	3.41	4.57	7.25	4.66	6.88	9.21	122.74	81.59	2937
		$U_5 - U_6$	5.04	6.53	7.55	5.03	5.81	7.25	7.12	9.03	7.68	180.95	70.84	2550
		$U_6 - U_7$	5.16	6.74	7.23	5.16	11.49	6.92	5.58	21.78	7.10	185.82	225.50	8118
		$U_7 - U_8$	5.19	6.38	4.73	5.36	7.76	9.88	11.27	14.45	7.66	170.38	90.38	3254
		$U_8 - U_9$	4.96	6.82	5.85	17.27	15.46	7.53	14.85	9.44	7.65	178.68	48.71	1754
		$U_9 - U_{10}$	5.47	8.16	9.64	17.75	12.36	15.29	5.49	9.03	9.64	197.06	86.27	3106
		$U_{10} - U_{11}$	4.03	4.66	4.92	5.38	6.21	6.78	4.01	4.60	4.91	144.42	63.49	2286
		$U_{11} - U_{12}$	3.20	3.99	3.66	3.86	5.38	3.95	3.11	3.99	3.66	112.02	97.21	3500
		$U_{12} - U_{13}$	3.09	4.28	4.19	4.23	4.98	4.60	3.06	4.44	4.19	110.29	221.15	7961
		$U_{13} - U_{14}$	2.79	4.15	4.06	3.22	5.22	3.62	2.79	4.14	3.97	100.33	193.12	6952
		$U_{14} - U_{15}$	2.75	4.03	3.98	2.75	4.00	3.96	3.32	5.62	3.82	99.07	268.74	9675
		$U_{15} - U_{16}$	2.99	4.25	4.48	2.99	4.37	4.52	3.73	5.39	5.21	107.61	229.57	8265
		$U_{16} - U_{17}$	3.22	4.25	5.06	3.22	4.25	5.31	4.48	5.67	6.49	115.77	269.79	9712
		$U_{17} - U_{18}$	3.12	3.67	5.41	3.08	3.67	3.94	4.14	4.68	4.28	110.93	194.40	6999
		$U_{18} - U_{19}$	3.31	3.70	3.94	3.31	4.05	4.22	4.23	9.98	4.61	119.25	100.49	3618
		$U_{19} - U_{20}$	7.97	9.44	10.59	8.54	8.55	10.59	8.14	10.97	14.59	287.03	52.66	1896
	Structure 2	$U_0 - U_1$	7.83	8.36	9.95	7.85	9.43	14.50	8.16	7.60	9.99	273.63	66.97	2411
		$U_1 - U_2$	4.15	4.11	4.93	4.66	6.03	6.52	4.17	4.11	5.14	147.83	137.06	4934
		$U_2 - U_3$	3.80	4.58	4.51	4.73	5.78	5.96	3.82	4.49	4.51	136.95	79.23	2852
		$U_3 - U_4$	3.39	4.20	3.84	3.92	5.14	4.50	3.40	4.22	3.85	122.05	225.47	8117
		$U_4 - U_5$	3.27	4.11	4.13	4.29	4.64	4.49	3.27	4.13	4.13	117.77	177.10	6375
		$U_5 - U_6$	3.41	4.58	4.81	3.59	4.80	4.91	3.42	4.55	4.73	122.85	310.52	11179
		$U_6 - U_7$	3.15	3.98	4.74	3.56	4.96	4.88	3.29	3.98	4.48	113.26	185.39	6674
		$U_7 - U_8$	3.31	3.99	4.79	3.32	3.99	4.63	4.19	5.91	5.55	119.26	204.93	7377
		$U_8 - U_9$	3.26	4.45	5.38	3.27	4.44	5.31	4.25	5.71	5.37	117.26	224.88	8096
		$U_9 - U_{10}$	3.59	4.69	7.21	3.58	4.67	7.02	4.33	7.72	6.32	128.92	79.10	2847
		$U_{10} - U_{11}$	5.07	6.77	9.57	5.07	6.70	9.37	7.68	9.71	10.03	182.51	97.15	3497
		$U_{11} - U_{12}$	6.39	7.94	7.86	6.39	8.02	7.86	13.60	17.80	46.00	230.03	93.98	3383
		$U_{12} - U_{13}$	7.11	8.58	10.05	7.14	19.08	8.79	8.14	14.08	13.63	255.92	268.86	9679
		$U_{13} - U_{14}$	10.25	10.09	5.44	7.63	9.83	11.32	15.91	18.12	8.17	195.90	113.62	4090
		$U_{14} - U_{15}$	8.40	8.40	6.09	17.14	17.98	7.84	14.89	9.87	6.88	219.27	110.68	3985
		$U_{15} - U_{16}$	8.40	9.22	7.96	11.11	11.91	11.69	8.24	10.39	9.73	286.70	256.70	9241
		$U_{16} - U_{17}$	6.86	8.67	8.84	23.25	19.58	20.56	6.86	9.24	8.86	246.84	89.13	3209
		$U_{17} - U_{18}$	5.13	8.41	7.13	9.28	11.31	8.06	5.19	8.36	7.15	184.67	75.28	2710
		$U_{18} - U_{19}$	5.38	6.35	7.40	6.86	8.68	8.46	5.46	6.38	7.40	193.81	66.74	2403
		$U_{19} - U_{20}$	4.07	5.27	5.74	5.22	5.71	6.20	4.11	5.24	5.74	146.39	86.31	3107
		$U_{20} - U_{21}$	3.98	5.32	5.54	4.37	5.85	6.13	3.98	5.30	5.39	143.35	174.28	6274
		$U_{21} - U_{22}$	3.48	4.74	4.88	3.95	5.46	5.21	3.48	4.74	4.88	125.18	157.00	5652
		$U_{22} - U_{23}$	3.49	4.53	4.89	3.49	4.52	4.89	4.54	6.10	5.77	125.62	198.96	7163
		$U_{23} - U_{24}$	3.79	4.73	6.01	3.78	4.67	6.04	4.62	6.23	7.52	135.93	211.73	7622
		$U_{24} - U_{25}$	3.78	4.70	6.75	3.79	4.68	6.54	5.63	6.86	8.79	136.08	97.32	3503
		$U_{25} - U_{26}$	4.84	5.87	9.90	4.88	5.86	9.19	7.10	8.51	11.24	174.31	81.58	2937
		$U_{26} - U_{27}$	5.78	8.22	7.35	5.72	8.09	7.43	9.30	11.68	25.14	206.03	84.95	3058
		$U_{27} - U_{28}$	7.34	9.28	9.77	7.36	9.50	9.76	24.34	20.62	17.98	264.34	114.91	4137
		$U_{28} - U_{29}$	8.74	10.08	8.62	8.69	18.42	18.67	12.37	13.35	10.00	310.41	241.61	8698
		$U_{29} - U_{30}$	11.50	9.27	5.52	9.07	10.99	16.96	15.66	15.10	7.72	198.70	113.62	4090
		$U_{30} - U_{31}$	9.78	11.22	6.02	25.73	11.65	8.50	15.88	9.88	8.01	216.61	117.20	4219
		$U_{31} - U_{32}$	7.16	8.43	8.97	12.79	9.74	9.13	7.29	9.38	9.02	257.90	254.55	9164
		$U_{32} - U_{33}$	6.32	7.59	7.70	14.74	15.51	20.76	6.31	8.36	7.73	227.17	80.85	2911
		$U_{33} - U_{34}$	6.30	7.06	7.93	7.89	9.45	8.65	6.44	7.05	7.94	226.93	88.55	3188
		$U_{34} - U_{35}$	4.57	5.12	5.34	6.54	6.43	6.05	4.58	5.27	5.34	164.49	65.29	2350
		$U_{35} - U_{36}$	4.11	5.20	4.28	4.78	5.92	5.09	4.11	5.17	4.21	148.04	197.59	7113
		$U_{36} - U_{37}$	4.04	4.54	4.12	4.82	5.61	4.49	4.02	4.54	4.09	144.80	183.11	6592
		$U_{37} - U_{38}$	3.92	4.24	4.13	3.93	4.24	4.10	5.05	5.98	4.60	141.10	206.56	7436
		$U_{38} - U_{39}$	3.99	4.81	4.53	3.99	5.27	4.53	4.55	5.59	4.16	143.49	212.42	7647
		$U_{39} - U_{40}$	3.76	4.09	4.62	3.74	4.06	4.52	4.40	5.83	5.63	134.75	254.50	9162
		$U_{40} - U_{41}$	3.88	4.23	5.09	3.97	4.01	4.76	5.31	5.44	5.42	139.63	253.55	9128
		$U_{41} - U_{42}$	4.54	4.36	6.12	4.21	4.37	6.17	5.71	6.26	5.45	151.67	89.28	3214
		$U_{42} - U_{43}$	4.86	5.14	7.18	4.37	4.41	5.70	6.57	13.70	7.51	157.19	168.18	6055
		$U_{43} - U_{44}$	8.00	8.43	9.79	7.90	7.26	9.51	9.25	10.27	11.23	261.19	46.30	1667
	Structure 3	$U_0 - U_1$	8.52	8.12	10.82	9.08	10.39	14.59	8.54	8.42	10.81	292.30	85.76	3088
		$U_1 - U_2$	3.66	3.61	4.38	3.63	4.12	5.44	3.68	3.61	4.33	129.89	79.34	2856
		$U_2 - U_3$	3.44	3.88	4.47	4.43	4.95	5.35	3.45	3.88	4.58	123.89	170.53	6139
		$U_3 - U_4$	3.46	4.76	4.61	4.27	5.82	5.96	3.52	4.73	4.56	124.47	264.71	9530
		$U_4 - U_5$	3.27	4.20	4.45	3.76	4.98	4.56	3.25	4.55	4.41	117.06	268.78	9676
		$U_5 - U_6$	3.04	4.18	4.39	3.30	4.71	4.76	3.04	4.15	4.32	109.48	200.71	7225
		$U_6 - U_7$	3.06	4.18	4.46	3.04	4.16	4.44	3.95	5.48	4.38	109.37	232.93	8386
		$U_7 - U_8$	3.07	4.13	3.77	3.08	4.11	3.70	4.59	4.93	4.91	110.64	274.60	9886
		$U_8 - U_9$	2.97	4.19	3.40	3.11	4.01	3.44	4.51	6.86	4.30	106.89	102.37	3685
		$U_9 - U_{10}$	3.44	4.41	4.97	3.44	4.40	4.94	5.28	7.37	15.07	123.99	68.07	2450
		$U_{10} - U_{11}$	6.22	8.47	9.61	6.27	8.55	7.90	18.64	21.49	20.79	223.84	93.73	3374
		$U_{11} - U_{12}$	6.09	7.30	4.99	6.41	9.36	12.77	16.72	17.92	7.98	179.48	46.38	1670
		$U_{12} - U_{13}$	5.74	6.45	5.05	13.94	14.89	18.35	6.20	7.78	5.49	181.88	94.10	3388
		$U_{13} - U_{14}$	5.78	6.56	6.07	5.83	14.08	6.01	5.40	7.21	6.14	194.33	186.71	6721
		$U_{14} - U_{15}$	5.07	6.70	7.46	7.58	8.10	7.91	5.06	5.94	7.40	181.99	62.23	2240
		$U_{15} - U_{16}$	4.05	4.68	5.75	4.70	5.94	6.80	4.05	4.68	5.96	145.65	76.41	2751
		$U_{16} - U_{17}$	4.02	4.84	5.89	4.02	4.84	5.89	5.80	7.06	5.98	144.62	72.59	2613
		$U_{17} - U_{18}$	3.30	3.72	4.68	3.37	3.74	4.91	4.63	5.23	5.49	118.88	80.08	2883
		$U_{18} - U_{19}$	3.19	3.45	4.96	2.95	3.45	4.98	5.05	6.29	7.23	106.23	92.68	3337
		$U_{19} - U_{20}$	5.30	6.25	7.70	4.93	4.79	7.71	6.43	7.86	8.03	172.43	39.67	1428

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 3F1

Controlling As-Inspected F

	Operating
Maximum Axial Force	1.55
Maximum Moment (Start)	1.67
Maximum Moment (End)	1.54
	Operating
Maximum Shear Force	39.67

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	33.37	14.06	27.43	24.94	21.30	15.58	24.04	23.79	15.12	506.29	83.06	2990
		L_1 - L_2	3.42	4.38	4.78	4.40	4.66	5.07	4.00	5.08	6.63	123.20	78.26	2818
		L_2 - L_3	3.56	4.68	4.88	3.54	4.89	4.91	3.76	5.67	6.07	127.62	186.43	6711
		L_3 - L_4	3.42	4.65	5.00	3.43	4.75	4.85	4.12	6.25	6.57	123.22	123.11	4432
		L_4 - L_5	4.47	6.58	4.63	3.85	5.28	4.63	5.06	7.39	4.64	138.47	86.27	3106
		L_5 - L_6	4.36	6.71	4.54	4.27	6.13	4.55	4.50	14.99	4.54	153.61	198.91	7161
		L_6 - L_7	6.31	8.13	5.15	5.77	7.62	6.89	12.64	16.76	11.17	185.22	255.67	9204
		L_7 - L_8	5.50	8.39	4.04	6.74	12.29	6.78	8.35	10.16	4.74	145.61	167.23	6020
		L_8 - L_9	6.46	8.39	2.92	7.86	8.83	4.28	7.78	13.21	5.03	105.19	211.16	7602
		L_9 - L_{10}	7.64	10.13	7.01	17.55	24.83	12.17	7.21	12.03	8.25	252.35	286.23	10304
		L_{10} - L_{11}	5.07	7.76	6.11	5.23	7.72	6.30	4.97	7.89	8.08	178.74	121.26	4366
		L_{11} - L_{12}	4.29	4.57	4.52	5.18	5.69	5.38	4.93	6.99	6.21	154.29	123.76	4455
		L_{12} - L_{13}	4.99	5.48	5.26	4.98	5.83	5.25	4.79	5.48	5.67	172.55	281.20	10123
		L_{13} - L_{14}	3.94	5.21	4.73	4.50	5.77	5.14	4.47	5.85	6.27	141.81	167.18	6018
		L_{14} - L_{15}	4.60	5.94	5.77	4.57	5.74	5.72	5.22	5.85	5.90	164.56	295.28	10630
		L_{15} - L_{16}	5.33	6.26	7.40	5.65	6.66	7.88	5.29	6.20	7.92	190.55	520.15	18725
		L_{16} - L_{17}	5.28	5.91	7.35	5.20	5.70	7.39	5.29	5.90	7.64	187.26	230.89	8312
		L_{17} - L_{18}	6.83	6.51	12.01	6.95	6.46	10.34	8.36	7.61	10.46	232.39	202.74	7299
		L_{18} - L_{19}	8.10	5.78	7.95	8.30	5.99	11.77	7.01	5.94	11.94	208.12	85.30	3071
		L_{19} - L_{20}	6.61	19.42	10.36	12.60	17.50	11.93	9.49	12.23	13.03	238.00	101.13	3641
	Structure 2	L_2 - L_1	28.17	14.96	19.84	24.09	18.95	18.80	24.12	20.78	19.91	538.50	124.98	4499
		L_1 - L_2	6.51	6.37	7.08	7.40	9.25	9.38	7.89	8.27	8.68	229.40	119.16	4290
		L_2 - L_3	6.14	6.34	6.82	8.40	6.87	9.06	6.68	7.56	6.82	220.97	206.09	7419
		L_3 - L_4	5.12	5.86	5.69	6.44	7.84	7.00	5.60	6.48	5.69	184.33	299.59	10785
		L_4 - L_5	5.80	6.92	6.54	5.98	7.44	6.65	5.79	7.96	6.85	208.50	361.90	13029
		L_5 - L_6	5.19	6.58	6.08	5.98	6.51	6.08	5.14	7.22	6.28	185.03	348.77	12556
		L_6 - L_7	4.83	6.39	6.16	4.83	6.48	6.32	5.39	8.08	7.18	174.01	391.09	14079
		L_7 - L_8	5.04	6.36	6.33	4.56	5.76	6.09	5.01	6.37	8.03	164.19	227.59	8193
		L_8 - L_9	5.10	6.96	7.41	5.27	6.90	7.41	5.10	8.27	7.31	183.63	223.64	8051
		L_9 - L_{10}	6.44	8.43	8.81	6.56	8.63	8.76	7.36	8.55	9.10	231.71	178.64	6431
		L_{10} - L_{11}	5.55	7.57	5.32	5.10	6.56	5.24	9.73	12.61	20.91	183.44	137.59	4953
		L_{11} - L_{12}	6.86	8.88	4.19	6.39	8.14	5.83	12.82	26.19	4.39	150.75	283.61	10210
		L_{12} - L_{13}	10.48	10.75	5.60	7.78	9.62	8.48	7.88	12.96	8.46	201.48	407.45	14668
		L_{13} - L_{14}	6.73	9.55	4.76	10.55	14.36	8.11	9.11	10.68	7.16	171.51	143.47	5165
		L_{14} - L_{15}	9.02	8.53	2.85	11.36	10.55	5.55	8.66	11.11	4.73	162.31	154.42	5559
		L_{15} - L_{16}	8.50	11.97	6.01	8.34	10.44	11.29	8.44	12.93	11.03	216.27	414.64	14927
		L_{16} - L_{17}	7.03	9.98	4.76	12.67	28.72	6.72	6.90	10.05	9.01	171.42	253.54	9127
		L_{17} - L_{18}	5.13	6.94	4.20	18.14	19.73	19.54	4.91	6.92	6.78	151.10	156.30	5627
		L_{18} - L_{19}	4.95	7.12	7.40	5.18	12.56	7.40	4.94	6.91	7.29	177.93	136.42	4911
		L_{19} - L_{20}	6.51	8.61	6.84	7.25	8.88	7.93	6.27	7.40	8.49	225.62	129.79	4673
		L_{20} - L_{21}	6.50	7.69	8.01	7.54	8.98	8.01	7.69	8.57	7.90	234.09	207.56	7472
		L_{21} - L_{22}	4.98	6.19	5.91	4.96	6.03	6.20	5.26	7.23	6.89	178.56	134.54	4843
		L_{22} - L_{23}	5.39	6.04	6.38	5.66	6.03	6.32	5.35	6.06	7.32	192.65	151.84	5466
		L_{23} - L_{24}	6.57	7.56	9.56	6.64	7.47	8.89	6.62	7.38	10.03	236.69	247.84	8922
		L_{24} - L_{25}	6.67	7.31	10.30	7.44	7.67	9.26	7.56	7.87	8.62	240.14	128.28	4618
		L_{25} - L_{26}	7.68	7.97	7.36	6.87	7.08	7.21	10.71	10.76	7.31	247.22	149.78	5392
		L_{26} - L_{27}	6.47	8.11	5.38	7.21	7.20	7.11	11.32	22.36	10.93	193.51	162.11	5836
		L_{27} - L_{28}	6.92	11.57	5.86	10.45	9.89	9.50	7.23	19.07	7.13	210.99	260.71	9386
		L_{28} - L_{29}	7.45	13.15	7.41	12.21	10.61	9.29	5.95	12.51	6.81	214.20	484.96	17458
		L_{29} - L_{30}	6.31	8.61	5.25	17.18	15.61	7.67	8.65	10.56	7.25	189.02	137.35	4945
		L_{30} - L_{31}	9.88	9.70	1.84	17.55	11.86	4.48	11.01	11.74	2.79	66.27	168.40	6062
		L_{31} - L_{32}	12.73	12.52	5.28	9.96	12.05	11.11	15.05	10.55	6.26	190.05	413.27	14878
		L_{32} - L_{33}	10.04	9.02	3.61	13.78	29.88	5.31	9.06	8.82	6.42	129.92	270.94	9754
		L_{33} - L_{34}	7.45	7.01	6.50	13.74	15.20	17.50	7.14	6.86	5.73	206.38	158.04	5689
		L_{34} - L_{35}	8.34	8.74	9.98	11.08	9.98	11.45	9.38	9.84	10.38	300.37	158.77	5716
		L_{35} - L_{36}	5.91	7.21	7.29	6.98	8.71	8.24	7.18	8.06	7.72	212.87	224.44	8080
		L_{36} - L_{37}	5.35	6.30	6.39	6.84	7.35	7.15	5.54	6.74	7.08	192.77	111.19	4003
		L_{37} - L_{38}	5.34	6.26	6.53	6.55	7.08	6.95	5.31	6.33	6.54	191.11	303.07	10910
		L_{38} - L_{39}	5.65	6.77	7.20	5.69	6.76	7.20	5.66	6.75	7.37	203.45	416.05	14978
		L_{39} - L_{40}	5.94	7.11	8.05	5.98	7.05	8.06	5.86	6.80	8.76	211.05	445.96	16055
		L_{40} - L_{41}	5.47	6.13	7.83	5.47	6.24	8.31	5.80	6.64	8.99	196.90	258.82	9317
		L_{41} - L_{42}	6.81	7.14	10.15	6.17	6.53	10.45	6.73	7.09	12.19	222.04	217.20	7819
		L_{42} - L_{43}	6.22	6.73	11.73	6.22	6.64	11.77	8.73	8.73	11.60	223.84	52.71	1898
		L_{43} - L_{44}	24.66	38.83	30.55	16.50	23.68	19.45	20.47	22.24	34.02	594.10	114.36	4117
	Structure 3	L_2 - L_1	13.16	16.48	6.53	13.20	19.32	11.18	13.20	19.39	12.34	235.13	111.92	4029
		L_1 - L_2	9.16	4.91	7.53	10.34	7.73	10.57	10.35	5.61	9.35	176.83	100.70	3625
		L_2 - L_3	6.66	6.23	7.68	8.11	6.68	9.04	6.66	6.75	8.52	224.12	213.88	7700
		L_3 - L_4	5.30	5.97	6.72	6.78	7.75	7.63	5.29	6.01	6.90	190.54	257.81	9281
		L_4 - L_5	5.81	6.91	7.18	5.80	6.91	7.62	6.30	7.81	8.55	208.95	479.15	17249
		L_5 - L_6	4.65	5.81	6.02	4.48	5.64	5.72	5.21	6.36	6.56	161.29	237.30	8543
		L_6 - L_7	4.19	5.77	5.80	4.08	5.54	6.21	4.18	6.38	5.71	147.01	202.51	7290
		L_7 - L_8	4.34	5.55	7.01	4.52	5.72	6.73	4.82	5.64	7.67	156.07	309.17	11130
		L_8 - L_9	3.80	4.99	6.79	3.80	5.04	7.66	3.71	5.01	8.38	133.47	126.77	4564
		L_9 - L_{10}	6.29	8.31	6.88	5.76	7.42	6.71	6.28	8.41	6.93	207.19	119.60	4306
		L_{10} - L_{11}	9.75	11.41	7.97	8.65	10.37	10.86	12.39	21.08	12.10	286.78	266.98	9611
		L_{11} - L_{12}	5.70	8.38	5.24	9.97	11.77	9.45	7.75	9.71	6.32	188.66	179.07	6447
		L_{12} - L_{13}	6.12	8.19	3.63	10.16	10.12	5.42	8.76	10.80	3.75	130.52	189.19	6811
		L_{13} - L_{14}	5.79	7.93	4.90	22.25	21.73	10.92	5.77	9.06	6.04	176.55	288.36	10381
		L_{14} - L_{15}	4.23	6.69	3.45	4.24	17.56	5.72	4.22	6.98	4.24	124.16	182.95	6586
		L_{15} - L_{16}	3.68	6.09	3.63	6.82	7.88	7.61	3.51	5.41	4.55	126.50	86.91	3129
		L_{16} - L_{17}	3.76	4.39	5.05	4.33	5.57	5.61	3.71	4.41	5.05	133.49	134.34	4836
		L_{17} - L_{18}	3.88	4.51	5.88	3.90	4.90	5.86	3.85	4.39	5.99	138.73	181.94	6550
		L_{18} - L_{19}	3.83	4.47	6.68	3.82	4.50	6.03	4.21	4.81	6.50	137.64	86.71	3122
		L_{19} - L_{20}	21.18	31.71	43.13	14.74	17.29	29.19	15.80	17.23	56.93	530.82	75.32	2712

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Controlling As-Inspected F

	Operating
Maximum Axial Force	1.55
Maximum Moment (Start)	1.67
Maximum Moment (End)	1.54
	Operating
Maximum Shear Force	39.67

Location	Member	Axial Load Case			Moment (Start)			Moment (End)			Controlling Tonnages	Maximum Shear Force	
		North Truss	Center Truss	South Truss	North Truss	Center Truss	South Truss	North Truss	Center Truss	South Truss	Operating	Operating	
		Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Tonnage	Rating	Tonnage
Truss - Verticals													
Structure 1	U_0 - L_0	1.66	1.76	2.02	1.67	1.69	2.02	1.67	2.31	2.42	59.60	83.57	3008
	U_1 - L_1	3.58	4.45	4.12	3.90	4.84	5.80	3.90	4.55	5.81	128.81	88.84	3198
	U_2 - L_2	5.57	6.24	4.49	6.50	7.30	8.43	6.48	7.30	8.43	161.49	117.42	4227
	U_3 - L_3	7.81	7.53	5.56	9.56	9.50	9.22	9.56	9.50	9.88	200.21	153.22	5516
	U_4 - L_4	4.23	4.66	4.88	8.40	10.34	10.13	8.39	10.34	10.17	152.29	138.65	4991
	U_5 - L_5	3.16	4.03	4.75	3.18	4.00	5.33	3.18	4.00	4.36	113.86	141.00	5076
	U_6 - L_6	2.81	4.08	2.60	2.77	4.08	3.18	2.78	4.06	2.77	93.57	118.07	4250
	U_7 - L_7	2.04	2.85	1.97	2.05	2.88	2.62	2.04	2.86	1.96	70.72	148.32	5340
	U_8 - L_8	4.89	6.07	4.39	5.70	6.77	6.21	5.66	6.77	6.15	158.01	279.00	10044
	U_9 - L_9	3.39	3.42	2.05	3.76	3.99	2.09	3.79	3.98	3.08	73.82	160.65	5783
	U_{10} - L_{10}	4.42	5.79	4.35	4.49	6.40	3.67	4.50	5.97	6.19	132.15	254.10	9148
	U_{11} - L_{11}	4.39	5.26	3.92	4.81	5.98	5.99	4.76	5.95	5.98	141.20	152.88	5504
	U_{12} - L_{12}	4.00	4.85	4.92	4.10	5.26	6.32	4.13	5.26	4.90	143.88	141.94	5110
	U_{13} - L_{13}	3.25	3.83	3.79	3.19	4.00	5.36	3.20	4.00	5.37	114.97	157.03	5653
	U_{14} - L_{14}	4.43	5.02	4.54	11.69	15.54	12.52	11.75	15.54	12.88	159.31	233.97	8423
	U_{15} - L_{15}	5.01	5.93	7.30	5.00	5.97	8.89	5.00	5.97	8.89	179.93	188.01	6769
	U_{16} - L_{16}	3.61	4.76	6.08	3.59	4.78	6.36	3.59	4.78	6.03	129.19	188.47	6785
	U_{17} - L_{17}	2.91	3.79	4.11	2.97	3.76	4.17	3.00	3.76	4.17	104.59	222.10	7995
	U_{18} - L_{18}	3.03	4.14	2.80	3.05	4.11	4.25	3.06	4.11	2.80	100.88	154.09	5547
	U_{19} - L_{19}	3.55	4.71	3.32	3.52	4.68	5.09	3.56	4.69	3.33	119.52	215.02	7741
	U_{20} - L_{20}	2.34	3.10	1.55	2.54	3.17	2.89	2.53	3.13	1.54	55.59	369.88	13316
Structure 2	U_0 - L_0	3.30	3.22	2.65	3.30	3.60	2.65	3.30	3.24	3.46	95.41	363.83	13098
	U_1 - L_1	4.57	4.95	4.87	5.05	5.44	5.48	5.03	5.44	5.52	164.66	276.17	9942
	U_2 - L_2	4.34	4.95	3.86	4.27	5.23	4.93	4.30	5.23	4.93	138.80	188.47	6785
	U_3 - L_3	3.64	4.21	3.02	3.97	4.77	4.07	3.97	4.77	4.07	108.82	286.65	10319
	U_4 - L_4	3.70	4.43	4.58	3.89	4.74	5.63	3.87	4.74	5.58	133.32	197.38	7106
	U_5 - L_5	4.50	5.94	5.41	5.00	6.02	9.28	5.04	6.02	9.29	162.06	232.98	8387
	U_6 - L_6	6.36	7.47	4.59	7.94	7.19	8.22	7.34	7.22	8.22	165.32	261.16	9402
	U_7 - L_7	4.87	5.59	4.91	15.54	10.59	13.81	15.62	20.59	14.06	175.37	333.65	12011
	U_8 - L_8	4.10	4.81	5.06	4.08	4.74	5.07	4.08	4.74	5.06	146.76	152.02	5473
	U_9 - L_9	5.12	5.76	6.54	5.16	5.73	6.49	5.20	5.73	6.54	184.20	173.16	6234
	U_{10} - L_{10}	5.09	6.10	6.62	5.11	6.38	6.65	5.10	6.07	6.65	183.20	248.53	8947
	U_{11} - L_{11}	4.58	5.63	5.42	4.60	5.58	5.52	4.63	5.58	5.42	165.00	300.17	10806
	U_{12} - L_{12}	4.74	5.54	5.47	4.92	5.51	5.43	4.91	5.57	5.43	170.62	397.61	14314
	U_{13} - L_{13}	3.93	4.17	2.32	3.92	4.15	5.64	3.91	4.15	5.66	83.49	410.57	14780
	U_{14} - L_{14}	5.85	6.21	5.51	7.64	6.90	9.87	7.66	8.06	10.22	198.41	571.55	20576
	U_{15} - L_{15}	6.16	5.18	4.22	6.52	5.85	6.14	6.17	5.85	5.63	151.89	357.46	12868
	U_{16} - L_{16}	5.06	5.14	5.04	5.16	5.45	6.05	5.18	5.45	5.71	181.37	302.93	10906
	U_{17} - L_{17}	4.77	4.99	4.41	4.79	5.38	5.63	4.81	5.04	5.63	158.93	226.62	8158
	U_{18} - L_{18}	4.43	4.79	3.84	4.76	5.34	5.44	4.72	5.34	5.44	138.30	173.99	6264
	U_{19} - L_{19}	3.84	4.35	5.07	3.97	4.84	5.36	3.97	4.62	5.35	138.13	217.40	7826
	U_{20} - L_{20}	3.87	4.48	3.87	3.95	4.58	5.94	3.94	4.58	5.94	139.31	213.19	7675
	U_{21} - L_{21}	4.25	4.67	4.37	4.63	5.23	7.28	4.61	5.23	7.22	152.90	206.51	7434
	U_{22} - L_{22}	5.15	5.43	4.68	19.13	12.81	19.18	19.14	19.53	19.17	168.34	314.68	11328
	U_{23} - L_{23}	4.52	5.47	6.16	4.48	5.40	6.20	4.50	5.40	6.16	161.41	203.97	7343
	U_{24} - L_{24}	3.99	4.55	5.01	4.00	4.58	5.03	4.01	4.58	5.03	143.52	212.57	7653
	U_{25} - L_{25}	3.75	4.40	5.06	3.73	4.40	5.06	3.74	4.40	5.06	134.44	196.49	7074
	U_{26} - L_{26}	4.31	4.93	5.72	4.30	4.97	5.97	4.31	4.97	5.72	154.91	151.10	5439
	U_{27} - L_{27}	4.59	4.76	5.64	4.67	4.77	6.27	4.72	4.77	6.27	165.11	197.71	7118
	U_{28} - L_{28}	4.76	4.84	6.01	4.75	4.84	5.98	4.74	4.84	5.98	170.55	250.57	9021
	U_{29} - L_{29}	5.36	5.17	7.13	5.34	5.15	7.94	5.35	5.18	8.06	185.34	278.88	10040
	U_{30} - L_{30}	6.09	6.36	4.43	8.35	7.63	9.33	9.47	7.63	9.33	159.40	552.38	19886
	U_{31} - L_{31}	5.25	4.82	4.11	5.81	5.14	4.80	5.85	5.14	4.83	147.82	527.14	18977
	U_{32} - L_{32}	5.84	6.23	4.08	5.91	6.66	5.67	5.93	6.19	5.67	146.74	475.85	17130
	U_{33} - L_{33}	5.61	5.74	3.77	5.82	6.45	5.75	5.83	6.50	5.73	135.78	350.74	12627
	U_{34} - L_{34}	6.08	6.39	5.27	6.29	7.19	7.01	6.30	6.76	7.11	189.82	268.26	9657
	U_{35} - L_{35}	5.52	6.01	4.63	5.51	6.36	6.67	5.51	6.36	6.67	166.76	175.56	6320
	U_{36} - L_{36}	4.32	4.63	3.86	4.58	4.90	5.42	4.55	4.90	5.42	138.98	155.11	5584
	U_{37} - L_{37}	5.16	4.71	4.34	13.34	18.73	15.08	13.28	18.88	18.99	156.30	279.35	10057
	U_{38} - L_{38}	6.11	5.83	7.92	7.05	5.84	7.92	6.08	5.82	10.71	209.62	277.42	9987
	U_{39} - L_{39}	5.80	6.10	7.86	5.76	6.10	7.85	5.76	6.10	7.85	207.25	254.09	9147
	U_{40} - L_{40}	3.95	4.71	5.35	3.95	4.81	5.35	3.94	4.81	5.35	141.82	197.31	7103
	U_{41} - L_{41}	3.89	4.70	4.53	3.90	4.82	4.70	3.90	4.65	4.53	140.20	250.00	9000
	U_{42} - L_{42}	4.26	4.77	6.04	4.37	4.73	6.04	4.36	4.73	6.04	153.47	170.14	6125
	U_{43} - L_{43}	4.50	4.89	7.45	4.50	4.87	6.00	4.50	4.87	7.45	161.85	220.31	7931
	U_{44} - L_{44}	3.94	3.82	3.73	3.70	3.61	4.06	3.70	3.80	3.73	129.94	361.00	12996
Structure 3	U_0 - L_0	3.53	3.16	2.33	3.53	3.26	2.32	3.52	3.16	2.32	83.61	368.80	13277
	U_1 - L_1	4.59	4.81	3.76	4.87	5.39	5.13	4.91	5.39	5.13	135.49	275.80	9929
	U_2 - L_2	3.77	4.38	4.06	4.03	4.68	4.83	4.01	4.68	4.81	135.87	175.03	6301
	U_3 - L_3	3.13	4.05	2.95	3.31	4.24	3.70	3.32	4.26	3.70	106.08	246.09	8859
	U_4 - L_4	3.86	4.52	3.39	4.17	5.09	5.46	4.17	5.09	5.46	122.17	198.07	7130
	U_5 - L_5	4.53	5.59	6.29	5.10	6.31	10.30	5.09	5.95	10.30	163.07	181.33	6528
	U_6 - L_6	4.28	4.93	5.17	11.41	16.85	14.15	17.11	16.85	13.24	153.93	274.16	9870
	U_7 - L_7	3.69	3.96	4.70	3.81	3.98	4.70	3.83	3.98	4.70	132.76	170.30	6131
	U_8 - L_8	4.16	4.99	6.04	4.15	5.03	6.04	4.17	5.03	6.04	149.48	138.42	4983
	U_9 - L_9	4.55	5.61	4.74	4.54	5.65	4.60	4.54	5.65	4.89	163.44	133.92	4821
	U_{10} - L_{10}	4.86	5.80	2.88	5.02	5.82	3.91	5.03	5.82	3.20	103.61	215.58	7761
	U_{11} - L_{11}	3.31	3.52	1.99	3.34	3.54	3.04	3.34	3.55	2.04	71.78	124.25	4473
	U_{12} - L_{12}	5.65	6.16	4.65	6.76	6.41	8.10	6.83	6.41	8.45	167.58	327.56	11792
	U_{13} - L_{13}	3.45	2.84	2.55	3.94	3.44	3.22	3.44	2.83	3.20	91.66	195.98	7055
	U_{14} - L_{14}	3.87	4.19	3.88	4.13	4.65	5.21	4.13	4.63	4.34	139.37	143.19	5155
	U_{15} - L_{15}	3.68	4.10	3.54	3.92	4.54	5.77	3.90	4.53	5.31	127.41	151.22	5444
	U_{16} - L_{16}	4.50	4.33	4.15	11.78	8.21	7.86	11.74	14.68	13.17	149.54	133.17	4794
	U_{17} - L_{17}	7.50	6.82	10.09	7.55	6.81	12.30	7.55	6.81	14.59	245.07	154.87	5575
	U_{18} - L_{18}	5.89	6.47	9.39	5.64	6.86	9.33	5.64	6.86	9.33	202.98	111.44	4012
	U_{19} - L_{19}	3.49	4.37	4.34	3.52	4.37	5.46	3.51	4.37	4.33	125.64	74.69	2689
	U_{20} - L_{20}	2.40	2.02	3.93	1.90	2.17	3.69	2.16	2.15	1.81	65.31	94.23	3392

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 3F1

Controlling As-Inspected F

	Operating
Maximum Axial Force	1.55
Maximum Moment (Start)	1.67
Maximum Moment (End)	1.54
	Operating
Maximum Shear Force	39.67

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	$U_0 - L_1$	4.34	5.41	6.33	4.03	6.77	5.57	4.03	5.88	5.42	145.08	166.27	5986
	$U_1 - L_2$	4.57	5.44	5.92	5.62	6.45	5.92	4.86	6.21	5.65	164.62	879.66	31668
	$U_2 - L_3$	6.49	6.46	9.12	10.01	12.90	9.15	8.59	7.41	7.91	232.44	1130.29	40690
	$U_3 - L_4$	3.41	3.74	4.72	9.52	5.97	8.76	4.14	4.01	4.59	122.67	1385.11	49864
	$U_3 - L_4$	3.71	5.10	4.98	4.62	6.47	6.60	4.90	6.79	8.60	133.54	1068.02	38449
	$U_4 - L_5$	3.51	5.27	6.86	4.33	6.49	7.42	4.11	5.17	6.88	126.43	380.89	13712
	$U_7 - L_6$	3.10	3.75	6.41	3.33	4.39	5.79	3.14	4.04	6.52	111.60	279.88	10076
	$U_8 - L_7$	3.33	4.19	5.77	3.61	4.31	6.75	3.42	4.19	5.79	119.83	439.15	15809
	$U_8 - L_9$	5.58	5.55	6.76	5.58	5.42	5.61	6.18	6.34	5.21	187.61	667.43	24027
	$U_9 - L_{10}$	5.32	6.07	6.43	5.28	6.16	5.31	6.11	7.31	7.14	190.09	476.00	17136
	$U_{10} - L_{11}$	5.37	6.38	6.17	5.48	7.85	6.01	6.03	7.77	6.14	193.40	505.41	18195
	$U_{11} - L_{12}$	4.56	5.34	6.15	5.91	5.36	5.53	5.12	6.70	5.49	164.25	565.91	20373
	$U_{12} - L_{13}$	3.86	4.40	5.48	3.86	4.40	5.49	4.19	5.01	5.80	138.79	454.88	16376
	$U_{13} - L_{14}$	3.59	3.87	4.78	3.97	4.33	5.04	4.09	4.46	5.04	129.22	1046.52	37675
	$U_{15} - L_{14}$	4.22	4.31	9.31	4.84	5.39	13.63	5.43	5.40	9.24	152.00	906.86	32647
	$U_{16} - L_{15}$	3.52	5.27	6.38	4.05	6.21	7.74	4.02	5.51	7.62	126.86	644.04	23185
	$U_{17} - L_{16}$	3.13	4.68	4.97	3.19	4.90	4.97	3.14	4.66	4.98	112.55	576.23	20744
	$U_{18} - L_{17}$	3.32	4.74	5.59	3.73	5.77	6.15	3.35	4.85	5.59	119.68	324.51	11682
	$U_{19} - L_{18}$	3.19	4.82	6.41	3.42	5.03	6.41	3.20	4.65	6.41	115.00	354.26	12753
	$U_{20} - L_{19}$	3.57	4.98	4.85	3.85	4.82	5.56	3.48	4.82	4.98	125.40	499.29	17975
Structure 2	$U_0 - L_1$	4.99	5.66	5.19	4.85	6.46	4.17	4.85	5.39	4.17	150.11	429.73	15470
	$U_1 - L_2$	4.98	5.72	4.66	4.93	5.74	4.66	5.13	5.89	5.35	167.58	409.86	14755
	$U_2 - L_3$	4.17	4.74	4.28	4.47	4.74	4.28	4.17	4.69	4.90	150.16	353.77	12736
	$U_3 - L_4$	3.97	4.52	4.96	3.97	4.52	4.73	4.38	4.97	5.56	142.89	613.01	22068
	$U_4 - L_5$	4.62	4.82	6.52	4.50	4.87	6.52	4.67	5.23	7.22	162.17	633.82	22817
	$U_5 - L_6$	6.09	6.07	8.73	5.80	6.26	9.81	6.71	6.13	8.76	208.87	800.22	28808
	$U_6 - L_7$	3.82	3.57	4.36	3.98	4.29	5.48	4.03	3.60	4.57	128.41	1057.24	38061
	$U_7 - L_7$	4.51	5.17	4.89	5.59	6.69	7.48	5.01	6.35	6.85	162.43	592.40	21326
	$U_8 - L_8$	3.83	5.31	5.16	4.26	7.11	5.06	4.11	5.54	5.49	137.89	408.38	14702
	$U_8 - L_9$	4.32	5.33	5.87	4.99	6.87	5.85	4.46	5.35	5.89	155.49	455.16	16386
	$U_{11} - L_{10}$	4.15	5.44	5.92	4.46	6.12	6.17	4.09	5.48	6.08	147.37	447.08	16095
	$U_{12} - L_{11}$	4.16	5.34	5.77	4.31	5.44	5.68	4.19	5.35	5.75	149.73	459.84	16554
	$U_{13} - L_{12}$	3.54	4.04	6.00	3.54	4.59	6.01	3.54	3.96	6.00	127.35	403.18	14514
	$U_{14} - L_{13}$	4.32	4.11	6.65	4.35	4.70	7.40	4.32	4.69	9.64	148.03	581.89	20948
	$U_{15} - L_{15}$	5.76	4.88	5.24	5.83	4.87	5.28	5.73	4.88	4.99	175.20	658.47	23705
	$U_{15} - L_{16}$	4.73	4.31	3.90	4.72	4.31	3.90	4.72	4.31	4.16	140.44	420.53	15139
	$U_{16} - L_{17}$	4.65	5.15	5.07	4.66	5.47	5.07	4.93	5.47	5.47	167.52	420.28	15130
	$U_{17} - L_{18}$	4.31	4.95	4.57	4.45	5.41	4.57	4.33	5.88	5.08	155.23	396.66	14280
	$U_{18} - L_{19}$	4.38	5.01	5.71	4.36	5.04	5.49	4.99	5.80	5.71	156.98	389.96	14038
	$U_{19} - L_{20}$	4.47	5.19	5.78	4.47	5.19	5.78	4.78	5.77	6.32	160.96	398.85	14359
	$U_{20} - L_{21}$	4.16	4.40	5.65	4.62	4.40	5.74	4.68	5.16	6.74	149.77	621.11	22360
	$U_{21} - L_{22}$	5.51	5.82	8.73	5.57	5.87	9.64	7.00	6.93	10.22	198.33	1030.73	37106
	$U_{23} - L_{22}$	4.93	6.14	6.25	6.90	7.87	10.52	6.52	7.32	10.08	177.40	1114.80	40133
	$U_{24} - L_{23}$	3.92	5.35	5.57	4.48	5.32	5.65	4.17	5.33	6.02	141.12	674.79	24293
	$U_{25} - L_{24}$	4.09	5.59	6.03	4.45	6.84	6.37	4.69	5.64	6.03	147.06	421.27	15166
	$U_{26} - L_{25}$	4.41	5.35	6.27	4.95	6.22	6.13	4.42	5.34	6.27	158.69	383.15	13793
	$U_{27} - L_{26}$	4.43	5.08	5.39	4.49	6.14	5.62	4.40	5.08	5.44	158.28	395.00	14220
	$U_{28} - L_{27}$	4.66	4.85	5.67	4.67	5.93	6.11	4.66	4.87	5.75	167.85	390.92	14073
	$U_{29} - L_{28}$	4.19	3.95	6.37	4.52	4.38	6.33	4.19	3.95	6.49	142.22	375.49	13517
	$U_{30} - L_{29}$	5.02	4.34	9.35	5.16	4.97	9.26	5.16	4.80	9.35	156.19	599.48	21581
	$U_{32} - L_{31}$	6.28	5.37	5.69	6.26	5.31	5.77	6.29	5.37	5.82	191.28	678.07	24411
	$U_{31} - L_{32}$	5.03	4.99	4.11	4.97	5.13	3.99	5.28	5.23	4.37	143.56	464.19	16711
	$U_{32} - L_{33}$	5.52	5.59	4.77	5.75	5.55	4.77	5.52	5.59	5.45	171.59	503.04	18109
	$U_{33} - L_{34}$	5.14	5.58	5.40	5.19	5.58	4.98	5.94	6.33	5.88	179.25	466.29	16786
	$U_{34} - L_{35}$	5.16	5.35	5.08	5.16	5.76	4.96	5.31	6.00	5.54	178.51	455.52	16399
	$U_{35} - L_{36}$	4.90	4.92	4.67	5.21	5.52	4.68	5.43	5.71	5.26	167.97	387.67	13956
	$U_{36} - L_{37}$	4.89	4.93	5.81	4.91	4.87	6.04	5.91	5.50	6.09	175.45	508.99	18324
	$U_{38} - L_{37}$	3.06	3.40	3.99	3.50	4.23	5.83	3.51	3.75	5.61	110.25	910.02	32761
	$U_{39} - L_{38}$	5.19	5.21	10.15	6.45	6.18	10.11	6.48	6.19	10.72	186.71	865.39	31154
	$U_{40} - L_{39}$	4.39	5.41	6.66	4.98	5.49	6.76	5.17	5.49	6.80	157.88	701.56	25256
	$U_{41} - L_{40}$	4.04	4.89	5.24	4.02	6.21	5.24	3.94	5.11	5.24	141.72	601.23	21644
	$U_{42} - L_{41}$	4.21	5.09	5.24	4.35	5.41	5.31	4.22	5.31	5.24	151.40	340.49	12258
	$U_{43} - L_{42}$	4.50	5.52	6.71	4.51	5.86	6.73	4.50	5.53	6.71	162.04	366.21	13183
	$U_{44} - L_{43}$	4.65	5.14	7.68	4.69	5.64	7.76	4.70	5.03	7.78	167.42	489.28	17614
Structure 3	$U_0 - L_1$	4.75	5.29	4.90	4.41	5.29	3.76	4.41	4.57	3.77	135.37	433.16	15594
	$U_1 - L_2$	4.29	4.99	4.66	4.33	4.99	4.49	4.93	5.82	4.71	154.60	409.86	14755
	$U_2 - L_3$	4.13	4.91	4.64	4.13	5.12	4.57	4.48	5.12	5.49	148.66	340.71	12266
	$U_3 - L_4$	3.77	4.23	4.25	4.33	4.22	4.25	4.35	5.16	5.04	135.74	576.30	20747
	$U_4 - L_5$	4.31	4.76	6.63	4.31	4.86	7.19	4.97	5.42	7.27	155.31	621.38	22370
	$U_5 - L_6$	5.76	4.78	9.91	6.58	6.15	9.95	5.74	4.80	8.17	171.93	1092.97	39347
	$U_7 - L_6$	3.82	4.49	5.64	6.25	6.40	6.54	5.01	5.70	6.10	137.41	1221.57	43977
	$U_8 - L_7$	3.76	4.89	5.41	4.19	5.01	6.36	4.48	5.92	6.90	135.54	502.53	18091
	$U_8 - L_8$	4.41	6.02	7.35	4.88	6.82	7.65	4.98	6.31	5.82	158.61	557.98	20087
	$U_9 - L_9$	4.84	6.77	5.94	6.24	7.51	6.70	5.46	6.96	6.42	174.18	472.64	17015
	$U_{11} - L_{10}$	4.89	5.22	6.54	5.19	6.51	6.72	5.22	5.65	6.34	176.20	415.98	14975
	$U_{12} - L_{11}$	5.16	4.80	6.86	5.73	6.06	7.81	5.12	5.45	6.92	172.86	583.10	20992
	$U_{12} - L_{13}$	4.97	4.24	4.80	5.26	4.23	4.68	4.87	4.23	4.86	152.19	491.29	17686
	$U_{13} - L_{14}$	4.46	4.38	4.42	5.84	7.23	4.34	5.46	5.39	4.77	156.32	313.81	11297
	$U_{14} - L_{15}$	4.66	5.24	5.96	4.66	5.50	6.55	4.97	5.89	5.88	167.82	403.92	14541
	$U_{15} - L_{16}$	4.49	4.67	5.20	4.55	6.84	5.55	5.62	5.98	7.60	161.57	996.37	35869
	$U_{17} - L_{16}$	3.31	3.46	4.87	4.61	5.00	12.92	5.00	4.67	11.25	119.09	1262.33	45444
	$U_{18} - L_{17}$	5.00	5.25	9.56	8.14	9.95	13.78	5.05	6.23	12.53	179.85	1202.18	43278
	$U_{19} - L_{18}$	4.23	5.51	7.62	4.91	6.47	7.62	4.71	6.72	7.72	152.22	716.94	25810
	$U_{20} - L_{19}$	4.23	5.32	8.47	11.53	7.44	8.69	4.28	11.10	6.54	152.11	324.15	11669