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: 2F1
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)

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 (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	-71.64	8.32	-45.52			0.90	1.24	9.27	-50.68	0.00	0.00	Vehicle	Vehicle	-----	-159.01	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	9.74	9.74
	U_2 - U_3	-90.83	16.79	-79.32			0.90	1.24	18.69	-88.31	0.00	0.00	Vehicle	Vehicle	-----	-232.88	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	5.37	5.37
	U_3 - U_4	-61.13	24.93	-86.55			0.90	1.24	27.76	-96.35	0.00	0.00	Vehicle	Vehicle	-----	-204.73	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	-----	-----	5.23	5.23
	U_4 - U_5	10.71	32.65	-76.88			0.90	1.24	36.35	-85.59	0.00	0.00	Vehicle	Vehicle	61.17	-97.35	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	18.17	18.17	6.73	6.73
	U_5 - U_6	12.86	32.83	-76.44			0.90	1.24	36.54	-85.10	0.00	0.00	Vehicle	Vehicle	64.23	-93.91	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	18.01	18.01	6.79	6.79
	U_6 - U_7	121.37	37.97	-61.00			0.90	1.24	42.27	-67.91	0.00	0.00	Vehicle	Vehicle	212.74	-----	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	-----	-----	13.00	-----	-----	-----
	U_7 - U_8	249.49	41.99	-38.99			0.90	1.24	46.74	-43.41	0.00	0.00	Vehicle	Vehicle	385.10	-----	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	-----	-----	11.87	11.87	-----	-----
	U_8 - U_9	376.92	42.76	-11.83			0.90	1.24	47.60	-13.17	0.00	0.00	Vehicle	Vehicle	551.88	-----	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_9 - U_{10}	319.74	45.68	-14.12			0.90	1.20	49.26	-15.22	0.00	0.00	Vehicle	Vehicle	479.69	-----	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	-----	-----	12.57	12.57	-----	-----
	U_{10} - U_{11}	128.77	42.53	-33.24			0.90	1.20	45.86	-35.84	0.00	0.00	Vehicle	Vehicle	227.01	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	12.66	12.66	-----	-----
	U_{10} - U_{11}	-70.90	38.40	-59.79			0.90	1.20	41.41	-64.46	0.00	0.00	Vehicle	Vehicle	-----	-175.97	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	8.17	8.17
	U_{11} - U_{12}	-252.96	34.09	-82.33			0.90	1.20	36.76	-88.77	0.00	0.00	Vehicle	Vehicle	-----	-444.25	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	-----	-----	6.30	6.30
	U_{12} - U_{13}	-391.95	29.33	-98.30			0.90	1.20	31.63	-105.99	0.00	0.00	Vehicle	Vehicle	-----	-647.31	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	-----	-----	7.03	7.03
	U_{13} - U_{14}	-482.99	24.62	-114.00			0.90	1.20	26.54	-122.92	0.00	0.00	Vehicle	Vehicle	-----	-787.68	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.87	6.87
	U_{14} - U_{15}	-484.44	24.53	-114.17			0.90	1.20	26.44	-123.09	0.00	0.00	Vehicle	Vehicle	-----	-789.80	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	-----	-----	6.85	6.85
	U_{15} - U_{16}	-502.02	18.84	-114.36			0.90	1.20	20.32	-123.30	0.00	0.00	Vehicle	Vehicle	-----	-812.92	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.70	6.70
	U_{16} - U_{17}	-467.99	13.70	-103.76			0.90	1.20	14.77	-111.87	0.00	0.00	Vehicle	Vehicle	-----	-753.81	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	-----	-----	7.68	7.68
	U_{17} - U_{18}	-368.86	8.47	-81.43			0.90	1.20	9.13	-87.80	0.00	0.00	Vehicle	Vehicle	-----	-593.66	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	-----	-----	6.86	6.86
	U_{18} - U_{19}	-251.56	4.23	-56.03			0.90	1.20	4.56	-60.41	0.00	0.00	Vehicle	Vehicle	-----	-405.57	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	-----	-----	7.05	7.05
	U_{19} - U_{20}	-117.89	1.06	-25.36			0.90	1.20	1.14	-27.35	0.00	0.00	Vehicle	Vehicle	-----	-188.81	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	-----	-----	20.47	20.47
Structure 2	U_1 - U_1	-118.23	3.22	-26.88			0.90	1.18	3.43	-28.62	0.00	0.00	Vehicle	Vehicle	-----	-190.90	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	-----	-----	18.49	18.49
	U_1 - U_2	-239.56	7.38	-56.25			0.90	1.18	7.86	-59.89	0.00	0.00	Vehicle	Vehicle	-----	-389.29	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	-----	-----	9.21	9.21
	U_2 - U_3	-350.44	12.31	-83.77			0.90	1.18	13.11	-89.19	0.00	0.00	Vehicle	Vehicle	-----	-571.52	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	-----	-----	8.15	8.15
	U_3 - U_4	-449.15	18.35	-101.67			0.90	1.18	19.54	-108.24	0.00	0.00	Vehicle	Vehicle	-----	-724.61	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	-----	-----	8.24	8.24
	U_4 - U_5	-483.26	24.62	-112.47			0.90	1.18	26.03	-119.74	0.00	0.00	Vehicle	Vehicle	-----	-783.91	15.19	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	8.38	8.38
	U_5 - U_6	-485.85	30.92	-122.90			0.90	1.18	32.92	-130.85	0.00	0.00	Vehicle	Vehicle	-----	-801.71	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	-----	-----	7.65	7.65
	U_6 - U_7	-428.85	36.61	-115.53			0.90	1.18	38.98	-123.00	0.00	0.00	Vehicle	Vehicle	-----	-717.41	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	-----	-----	7.42	7.42
	U_7 - U_8	-428.37	36.70	-115.35			0.90	1.18	39.07	-122.81	0.00	0.00	Vehicle	Vehicle	-----	-716.53	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	7.43	7.43
	U_8 - U_9	-335.42	42.06	-104.89			0.90	1.18	44.78	-111.68	0.00	0.00	Vehicle	Vehicle	-----	-581.22	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	-----	-----	7.08	7.08
	U_9 - U_{10}	-200.29	45.48	-87.89			0.90	1.18	48.42	-93.57	0.00	0.00	Vehicle	Vehicle	-----	-382.02	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	-----	-----	7.33	7.33
	U_{10} - U_{11}	-52.14	48.29	-67.07			0.90	1.18	51.42	-71.41	0.00	0.00	Vehicle	Vehicle	-----	-160.61	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	-----	-----	10.04	10.04
	U_{11} - U_{12}	107.02	48.25	-43.57			0.90	1.18	51.38	-46.39	0.00	0.00	Vehicle	Vehicle	205.91	-----	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	-----	-----	15.64	15.64	-----	-----
	U_{12} - U_{13}	259.33	47.85	-26.61			0.90	1.18	50.94	-28.33	0.00	0.00	Vehicle	Vehicle	403.35	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	17.27	17.27	-----	-----
	U_{13} - U_{14}	391.98	45.14	-9.10			0.90	1.18	48.06	-9.69	0.00	0.00	Vehicle	Vehicle	572.05	-----	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	-----	-----	24.39	24.39	-----	-----
	U_{14} - U_{15}	439.40	45.38	-7.96			0.90	1.17	47.75	-8.38	0.00	0.00	Vehicle	Vehicle	633.29	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	23.56	23.56	-----	-----
	U_{15} - U_{16}	369.66	44.65	-19.53			0.90	1.17	46.97	-20.55	0.00	0.00	Vehicle	Vehicle	541.63	-----	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	-----	-----	19.22	19.22	-----	-----
	U_{16} - U_{17}	271.39	43.03	-32.18			0.90	1.17	45.27	-33.86	0.00	0.00	Vehicle	Vehicle	411.66	-----	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	-----	-----	17.06	17.06	-----	-----
	U_{17} - U_{18}	171.75	41.01	-49.94			0.90	1.17	43.14	-52.55	0.00	0.00	Vehicle	Vehicle	279.36	-----	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	-----	-----	13.78	13.78	-----	-----
	U_{18} - U_{19}	72.78	37.40	-65.25			0.90	1.17	39.35	-68.65	0.00	0.00	Vehicle	Vehicle	145.77	-----	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	17.62	17.62	-----	-----
	U_{19} - U_{20}	-8.11	33.33	-78.37			0.90	1.17	35.07	-82.45	0.00	0.00	Vehicle	Vehicle	35.05	-117.73	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	23.62	23.62	8.30	8.30
	U_{20} - U_{21}	-60.13	28.18	-92.83			0.90	1.17	29.64	-97.66	0.00	0.00	Vehicle	Vehicle	-----	-205.13	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.95	7.95
	U_{21} - U_{22}	-82.18	22.41	-95.47			0.90	1.17	23.58	-100.44	0.00	0.00	Vehicle	Vehicle	-----	-237.41	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	-----	-----	7.51	7.51
	U_{22} - U_{23}	-82.40	22.33	-95.43			0.90	1.17	23.49	-100.40	0.00	0.00	Vehicle	Vehicle	-----	-237.64	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.51	7.51
	U_{23} - U_{24}	-65.94	27.71	-92.28			0.90	1.17	29.15	-97.09	0.00	0.00	Vehicle	Vehicle	-----	-211.94	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	-----	-----	7.94	7.94
	U_{24} - U_{25}	61.51	33.04	-87.18			0.90	1.17	34.76	-91.73	0.00	0.00	Vehicle	Vehicle	21.85	-142.59	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	24.11	24.11	7.36	7.36
	U_{25} - U_{26}	55.02	37.53	-71.76			0.90	1.17	39.49	-75.50	0.00	0.00	Vehicle	Vehicle	122.86	-26.62	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	18.01	18.01	9.30	9.30
	U_{26} - U_{27}	136.02	41.25	-53.85			0.90	1.17	43.40	-56.66	0.00	0.00	Vehicle	Vehicle	233.24	-----	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	-----	-----	14.52	14.52	-----	-----
	U_{27} - U_{28}	216.87	43.00	-39.88			0.90	1.17	45.24	-41.96	0.00	0.00	Vehicle	Vehicle	340.74	-----	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	-----	-----	18.28	18.28	-----	-----
	U_{28} - U_{29}	293.76	43.99	-22.61			0.90	1.17	46.28	-23.79	0.00	0.00	Vehicle	Vehicle	442.05	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	21.14	21.14	-----	-----
	U_{29} - U_{30}	358.11	43.41	-10.85			0.90	1.17	45.67	-11.42	0.00	0.00	Vehicle	Vehicle	524.92	-----	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	-----	-----	26.41	26.41	-----	-----
	U_{30} - U_{31}	339.33	49.75	-12.39			0.90	1.18	52.97	-13.19	0.00	0.00	Vehicle	Vehicle	509.98	-----	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	-----	-----	23.13	23.13	-----	-----
	U_{31} - U_{32}	251.17	49.62	-19.20			0.90	1.18	52.83	-20.44	0.00	0.00	Vehicle	Vehicle	395.20	-----	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	-----	-----	16.81	16.81	-----	-----
	U_{32} - U_{33}	136.17	48.88	-37.29			0.90	1.18	52.04	-39.70	0.00	0.00	Vehicle	Vehicle	244.67	-----	6.

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 2F1 — Fy = 33.0 ksi — Vehicle Load Factors: DL Factor: 1.30, LL Factor: 1.30 — Pedestrian Load Factors: DL Factor: 1.30, LL Factor: 1.30

Condition: As-Built — Fu = 60.0 ksi

E = 29000.0 ksi

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

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

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

North Truss - Lower Chord

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	(No Impact) Pedestrian Load$_{MAX}$	(No Impact) Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	L_0- L_1	4.85	3.17	-2.27			0.90	1.24	3.53	-2.52	0.00	0.00	Vehicle	Vehicle	10.89	-----	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	-----	-----	141.13	141.13	-----	-----
	L_1 - L_2	74.27	44.09	-9.49			0.90	1.24	49.08	-10.56	0.00	0.00	Vehicle	Vehicle	160.35	-----	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	-----	-----	8.73	8.73	-----	-----
	L_2 - L_3	97.77	75.20	-17.89			0.90	1.24	83.72	-19.91	0.00	0.00	Vehicle	Vehicle	235.94	-----	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	-----	-----	6.82	6.82	-----	-----
	L_3 - L_4	66.93	82.87	-25.99			0.90	1.24	92.26	-28.93	0.00	0.00	Vehicle	Vehicle	206.95	-----	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	-----	-----	6.52	6.52	-----	-----
	L_4 - L_5	-108.46	58.74	-39.10			0.90	1.24	65.39	-43.53	0.00	0.00	Vehicle	Vehicle	-----	-197.59	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	-----	-----	9.00	9.00
	L_5 - L_6	-237.28	37.32	-43.20			0.90	1.24	41.55	-48.09	0.00	0.00	Vehicle	Vehicle	-----	-370.99	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	-----	-----	8.78	8.78
	L_6 - L_7	-362.27	10.02	-45.18			0.90	1.24	11.16	-50.29	0.00	0.00	Vehicle	Vehicle	-----	-536.33	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	-----	-----	11.59	11.59
	L_7 - L_8	-478.66	1.06	-49.29			0.90	1.24	1.18	-54.87	0.00	0.00	Vehicle	Vehicle	-----	-693.59	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	13.14	13.14
	L_8 - L_9	-477.02	0.38	-49.82			0.90	1.20	0.41	-53.71	0.00	0.00	Vehicle	Vehicle	-----	-689.95	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	-----	-----	13.45	13.45
	L_9 - L_{10}	-301.43	11.17	-42.59			0.90	1.20	12.04	-45.92	0.00	0.00	Vehicle	Vehicle	-----	-451.56	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	14.02	14.02
	L_{10} - L_{11}	-104.46	26.93	-37.74			0.90	1.20	29.04	-40.69	0.00	0.00	Vehicle	Vehicle	-----	-188.69	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	9.73	9.73
	L_{11} - L_{12}	97.11	51.24	-33.69			0.90	1.20	55.25	-36.32	0.00	0.00	Vehicle	Vehicle	198.06	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	8.99	8.99	-----	-----
	L_{12} - L_{13}	268.74	70.45	-29.19			0.90	1.20	75.96	-31.47	0.00	0.00	Vehicle	Vehicle	448.11	-----	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	-----	-----	9.30	9.30	-----	-----
	L_{13} - L_{14}	405.66	84.94	-24.56			0.90	1.20	91.58	-26.48	0.00	0.00	Vehicle	Vehicle	646.41	-----	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	-----	-----	9.85	9.85	-----	-----
	L_{14} - L_{15}	502.77	95.53	-13.76			0.90	1.20	103.00	-14.84	0.00	0.00	Vehicle	Vehicle	787.50	-----	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	-----	-----	10.41	10.41	-----	-----
	L_{15} - L_{16}	469.25	85.21	-11.22			0.90	1.20	91.87	-12.09	0.00	0.00	Vehicle	Vehicle	729.45	-----	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	-----	-----	12.03	12.03	-----	-----
	L_{16} - L_{17}	365.43	61.92	-7.61			0.90	1.20	66.76	-8.20	0.00	0.00	Vehicle	Vehicle	561.85	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	12.75	12.75	-----	-----
	L_{17} - L_{18}	248.67	40.71	-5.78			0.90	1.20	43.89	-6.24	0.00	0.00	Vehicle	Vehicle	380.34	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	14.46	14.46	-----	-----
	L_{18} - L_{19}	112.99	19.40	-16.06			0.90	1.20	20.92	-17.31	0.00	0.00	Vehicle	Vehicle	174.08	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	18.62	18.62	-----	-----
	L_{19} - L_{20}	-14.26	15.60	-31.93			0.90	1.20	16.81	-34.43	0.00	0.00	Vehicle	Vehicle	3.32	-63.29	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	30.74	30.74	11.89	11.89
Structure 2	L_0- L_1	15.26	4.90	-5.09			0.90	1.18	5.21	-5.42	0.00	0.00	Vehicle	Vehicle	26.61	-----	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	-----	-----	118.60	118.60	-----	-----
	L_1 - L_2	136.12	24.12	-3.25			0.90	1.18	25.68	-3.46	0.00	0.00	Vehicle	Vehicle	210.34	-----	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	-----	-----	19.36	19.36	-----	-----
	L_2 - L_3	262.92	49.18	-6.56			0.90	1.18	52.36	-6.98	0.00	0.00	Vehicle	Vehicle	409.85	-----	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	-----	-----	13.62	13.62	-----	-----
	L_3 - L_4	373.32	75.84	-11.38			0.90	1.18	80.75	-12.12	0.00	0.00	Vehicle	Vehicle	590.29	-----	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	-----	-----	11.59	11.59	-----	-----
	L_4 - L_5	456.80	92.57	-17.18			0.90	1.18	98.56	-18.29	0.00	0.00	Vehicle	Vehicle	721.97	-----	11.08	65.05	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	12.11	12.11	-----	-----
	L_5 - L_6	489.63	103.75	-23.29			0.90	1.18	110.47	-24.80	0.00	0.00	Vehicle	Vehicle	780.12	-----	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	-----	-----	11.80	11.80	-----	-----
	L_6 - L_7	479.27	113.59	-29.54			0.90	1.18	120.94	-31.45	0.00	0.00	Vehicle	Vehicle	780.27	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	11.07	11.07	-----	-----
	L_7 - L_8	330.30	96.45	-40.46			0.90	1.18	102.69	-43.07	0.00	0.00	Vehicle	Vehicle	562.89	-----	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	-----	-----	9.85	9.85	-----	-----
	L_8 - L_9	189.19	78.70	-43.73			0.90	1.18	83.79	-46.56	0.00	0.00	Vehicle	Vehicle	354.87	-----	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	-----	-----	10.87	10.87	-----	-----
	L_9 - L_{10}	39.95	59.14	-46.55			0.90	1.18	62.97	-49.57	0.00	0.00	Vehicle	Vehicle	133.80	-12.50	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	13.05	13.05	15.49	15.49
	L_{10} - L_{11}	-127.23	35.87	-46.91			0.90	1.18	38.19	-49.94	0.00	0.00	Vehicle	Vehicle	-----	-230.32	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	-----	-----	10.48	10.48
	L_{11} - L_{12}	-282.51	22.23	-46.47			0.90	1.18	23.67	-49.48	0.00	0.00	Vehicle	Vehicle	-----	-431.59	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	13.10	13.10
	L_{12} - L_{13}	-426.62	11.06	-44.87			0.90	1.18	11.78	-47.77	0.00	0.00	Vehicle	Vehicle	-----	-616.71	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	-----	-----	17.77	17.77
	L_{13} - L_{14}	-536.34	10.29	-57.57			0.90	1.18	10.96	-61.30	0.00	0.00	Vehicle	Vehicle	-----	-776.93	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	-----	-----	15.97	15.97
	L_{14} - L_{15}	-537.64	12.28	-49.76			0.90	1.17	12.92	-52.36	0.00	0.00	Vehicle	Vehicle	-----	-767.00	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	18.67	18.67
	L_{15} - L_{16}	-475.53	11.35	-49.03			0.90	1.17	11.94	-51.59	0.00	0.00	Vehicle	Vehicle	-----	-685.25	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	15.51	15.51
	L_{16} - L_{17}	-384.21	14.86	-44.38			0.90	1.17	15.63	-46.69	0.00	0.00	Vehicle	Vehicle	-----	-560.17	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	-----	-----	14.21	14.21
	L_{17} - L_{18}	-281.70	26.73	-42.63			0.90	1.17	28.12	-44.85	0.00	0.00	Vehicle	Vehicle	-----	-424.52	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	-----	-----	9.94	9.94
	L_{18} - L_{19}	-174.99	41.09	-38.91			0.90	1.17	43.23	-40.93	0.00	0.00	Vehicle	Vehicle	-----	-280.69	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	-----	-----	9.74	9.74
	L_{19} - L_{20}	-76.34	55.45	-35.25			0.90	1.17	58.34	-37.08	0.00	0.00	Vehicle	Vehicle	-----	-147.46	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	13.41	13.41
	L_0 - L_{21}	4.59	65.02	-30.01			0.90	1.17	68.41	-31.58	0.00	0.00	Vehicle	Vehicle	94.90	-35.08	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	14.03	14.03	25.93	25.93
	L_{21} - L_{22}	56.15	78.22	-24.86			0.90	1.17	82.30	-26.15	0.00	0.00	Vehicle	Vehicle	179.98	-----	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	-----	-----	11.04	11.04	-----	-----
	L_{22} - L_{23}	63.16	72.27	-15.91			0.90	1.17	76.04	-16.73	0.00	0.00	Vehicle	Vehicle	180.96	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	11.86	11.86	-----	-----
	L_{23} - L_{24}	15.68	65.99	-21.22			0.90	1.17	69.42	-22.33	0.00	0.00	Vehicle	Vehicle	110.64	-8.64	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	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	13.67	13.67	37.17	37.17
	L_{24} - L_{25}	-55.90	48.10	-24.03			0.90	1.17	50.60	-25.28	0.00	0.00	Vehicle	Vehicle	-----	-105.54	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	-----	-----	20.48	20.48
	L_{25} - L_{26}	-136.32	33.95	-27.75			0.90	1.17	35.72	-29.19	0.00	0.00	Vehicle	Vehicle	-----	-215.17	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	-----	-----	14.98	14.98
	L_{26} - L_{27}	-217.71	22.41	-38.47			0.90	1.17	23.58	-40.48	0.00	0.00	Vehicle	Vehicle	-----	-335.64	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	12.60	12.60
	L_{27} - L_{28}	-296.28	16.10	-53.87			0.90	1.17	16.94	-56.67	0.00	0.00	Vehicle	Vehicle	-----	-458.84	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	-----	-----	13.26	13.26
	L_{28} - L_{29}	-364.24	19.40	-71.31			0.90	1.17	20.41	-75.02	0.00	0.00	Vehicle	Vehicle	-----	-571.04	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	-----	-----	12.15	12.15
	L_{29} - L_{30}	-418.31	20.74	-82.98			0.90	1.17	21.82	-87.30	0.00	0.00	Vehicle	Vehicle	-----	-657.29	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	12.56	12.56
	L_{30} - L_{31}	-350.66	10.27	-54.15			0.90	1.18	10.94	-57.65	0.00	0.00	Vehicle	Vehicle	-----	-530.81	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	-----	-----	20.19	20.19
	L_{31} - L_{32}	-275.63	10.53	-44.05			0.90	1.18	11.21	-46.90	0.00	0.00	Vehicle	Vehicle	-----	-419.29	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	-----	-----	21.31	21.31
	L_{32} - L_{33}	-178.96

Maximum Axial with Moment Interaction Check

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

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

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 2F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

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

E = 29000.0 ksi

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

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

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	(No Impact) Pedestrian Load$_{MAX}$	(No Impact) Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Verticals																																														
Structure 1	U_0 - L_0	-77.20	7.46	-51.31			0.90	1.24	8.30	-57.13	0.00	0.00	Vehicle	Vehicle	------	-174.63	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	------	------	------	------	------	4.68	4.68
	U_1 - L_1	-33.88	6.71	-36.25			0.90	1.24	7.47	-40.36	0.00	0.00	Vehicle	Vehicle	------	-96.51	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	------	------	------	------	------	7.88	7.88
	U_2 - L_2	10.41	6.32	-30.78			0.90	1.24	7.03	-34.27	0.00	0.00	Vehicle	Vehicle	22.67	-31.02	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	------	------	------	------	------	59.33	59.33	10.58	10.58
	U_3 - L_3	44.37	11.50	-19.00			0.90	1.24	12.81	-21.16	0.00	0.00	Vehicle	Vehicle	74.33	------	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	------	------	------	------	------	29.93	29.93	------	------
	U_4 - L_4	-16.71	0.91	-30.73			0.90	1.24	1.01	-34.21	0.00	0.00	Vehicle	Vehicle	------	-56.20	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	------	------	------	------	------	------	------	9.74	9.74
	U_5 - L_5	-109.52	2.30	-41.15			0.90	1.24	2.56	-45.81	0.00	0.00	Vehicle	Vehicle	------	-201.93	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	------	------	16.16	------	------	33.25	45.00	Pass	5.37	12.00	Pass	------	------	------	------	------	------	------	6.89	6.89
	U_6 - L_6	-143.61	0.28	-50.99			0.90	1.24	0.32	-56.76	0.00	0.00	Vehicle	Vehicle	------	-260.48	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	------	------	------	------	------	------	------	6.42	6.42
	U_7 - L_7	-142.76	1.44	-52.03			0.90	1.24	1.60	-57.93	0.00	0.00	Vehicle	Vehicle	------	-260.89	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	------	------	------	------	------	------	------	5.48	5.48
	U_8 - L_8	-391.96	1.92	-58.32			0.90	1.24	2.14	-64.93	0.00	0.00	Vehicle	Vehicle	------	-593.95	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	------	------	------	------	------	------	------	10.37	10.37
	U_9 - L_9	-223.26	5.00	-46.79			0.90	1.20	5.39	-50.45	0.00	0.00	Vehicle	Vehicle	------	-355.82	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	------	------	------	------	------	------	------	8.36	8.36
	U_{10} - L_{10}	-225.85	3.37	-46.50			0.90	1.20	3.64	-50.14	0.00	0.00	Vehicle	Vehicle	------	-358.79	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	------	------	------	------	------	------	------	10.31	10.31
	U_{11} - L_{11}	-198.80	4.57	-46.36			0.90	1.20	4.93	-49.99	0.00	0.00	Vehicle	Vehicle	------	-323.42	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	------	------	------	------	------	------	------	8.85	8.85
	U_{12} - L_{12}	-154.81	6.81	-38.27			0.90	1.20	7.34	-41.26	0.00	0.00	Vehicle	Vehicle	------	-254.88	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	------	------	------	------	------	------	------	9.15	9.15
	U_{13} - L_{13}	-109.06	10.64	-35.66			0.90	1.20	11.47	-38.45	0.00	0.00	Vehicle	Vehicle	------	-191.75	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	------	------	------	------	------	------	------	7.06	7.06
	U_{14} - L_{14}	-12.31	0.91	-33.49			0.90	1.20	0.98	-36.11	0.00	0.00	Vehicle	Vehicle	------	-52.93	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	------	------	------	------	------	9.21	9.21
	U_{15} - L_{15}	-5.62	14.70	-29.57			0.90	1.20	15.85	-31.88	0.00	0.00	Vehicle	Vehicle	13.30	-48.75	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	------	------	------	27.34	27.34	10.59	10.59
	U_{16} - L_{16}	-51.73	10.55	-34.13			0.90	1.20	11.37	-36.80	0.00	0.00	Vehicle	Vehicle	------	-115.09	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	------	------	------	------	------	------	------	7.87	7.87
	U_{17} - L_{17}	-127.32	5.63	-44.30			0.90	1.20	6.07	-47.76	0.00	0.00	Vehicle	Vehicle	------	-227.60	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	------	------	------	------	------	------	------	5.95	5.95
	U_{18} - L_{18}	-159.94	5.20	-51.95			0.90	1.20	5.60	-56.01	0.00	0.00	Vehicle	Vehicle	------	-280.74	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	------	------	------	------	------	------	------	6.52	6.52
	U_{19} - L_{19}	-191.17	4.39	-53.45			0.90	1.20	4.74	-57.63	0.00	0.00	Vehicle	Vehicle	------	-323.43	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}	-212.33	4.40	-56.02			0.90	1.20	4.74	-60.40	0.00	0.00	Vehicle	Vehicle	------	-354.55	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	------	------	------	------	------	------	------	6.12	6.12
Structure 2	U_0 - L_0	-206.69	5.48	-54.77			0.90	1.18	5.83	-58.31	0.00	0.00	Vehicle	Vehicle	------	-344.50	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	------	------	------	------	------	------	------	7.47	7.47
	U_1 - L_1	-188.76	5.63	-46.54			0.90	1.18	5.99	-49.56	0.00	0.00	Vehicle	Vehicle	------	-309.81	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	------	------	------	------	------	------	------	9.76	9.76
	U_2 - L_2	-155.92	5.93	-46.12			0.90	1.18	6.32	-49.11	0.00	0.00	Vehicle	Vehicle	------	-266.54	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	------	------	------	------	------	------	------	8.52	8.52
	U_3 - L_3	-134.58	5.72	-45.32			0.90	1.18	7.16	-48.25	0.00	0.00	Vehicle	Vehicle	------	-237.67	0.00	22.73	22.7330	750.10	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	------	------	16.32	------	------	30.85	45.00	Pass	4.91	12.00	Pass	------	------	------	------	------	------	------	6.58	6.58
	U_4 - L_4	-64.49	8.75	-43.42			0.90	1.18	9.32	-45.58	0.00	0.00	Vehicle	Vehicle	------	-130.09	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	------	------	------	------	------	7.72	7.72
	U_5 - L_5	-19.94	14.93	-30.93			0.90	1.18	15.90	-32.93	0.00	0.00	Vehicle	Vehicle	------	-68.72	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	9.74	9.74
	U_6 - L_6	40.08	21.02	-23.52			0.90	1.18	22.37	-25.04	0.00	0.00	Vehicle	Vehicle	81.19	------	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	------	------	6.56	------	------	------	------	------	------	17.32	17.32	------	------
	U_7 - L_7	-26.04	0.24	-32.98			0.90	1.18	0.25	-35.11	0.00	0.00	Vehicle	Vehicle	------	-79.49	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	------	------	------	------	------	8.96	8.96
	U_8 - L_8	-125.25	10.89	-36.14			0.90	1.18	11.60	-38.48	0.00	0.00	Vehicle	Vehicle	------	-212.84	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	------	------	------	------	------	10.53	10.53
	U_9 - L_9	-174.53	4.24	-43.59			0.90	1.18	4.51	-46.41	0.00	0.00	Vehicle	Vehicle	------	-287.23	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	------	------	------	------	------	11.13	11.13
	U_{10} - L_{10}	-202.66	2.42	-50.44			0.90	1.18	2.57	-53.70	0.00	0.00	Vehicle	Vehicle	------	-333.26	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	------	------	------	------	------	10.73	10.73
	U_{11} - L_{11}	-229.53	1.31	-54.03			0.90	1.18	1.40	-57.53	0.00	0.00	Vehicle	Vehicle	------	-373.17	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	------	------	16.48	------	------	20.31	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	9.30	9.30
	U_{12} - L_{12}	-250.85	1.88	-54.65			0.90	1.18	2.00	-58.19	0.00	0.00	Vehicle	Vehicle	------	-401.74	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	------	------	16.48	------	------	18.26	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	9.47	9.47
	U_{13} - L_{13}	-223.32	5.66	-55.63			0.90	1.18	6.02	-59.23	0.00	0.00	Vehicle	Vehicle	------	-367.32	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	------	------	------	------	------	7.88	7.88
	U_{14} - L_{14}	-343.31	1.36	-54.51			0.90	1.18	1.44	-58.04	0.00	0.00	Vehicle	Vehicle	------	-521.75	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	------	------	------	------	------	12.21	12.21
	U_{15} - L_{15}	-123.14	5.49	-49.45			0.90	1.17	5.78	-52.03	0.00	0.00	Vehicle	Vehicle	------	-227.72	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	------	------	------	------	------	10.90	10.90
	U_{16} - L_{16}	-156.70	4.27	-46.23			0.90	1.17	4.49	-48.64	0.00	0.00	Vehicle	Vehicle	------	-266.93	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	------	------	------	------	------	10.47	10.47
	U_{17} - L_{17}	-147.91	4.11	-48.45			0.90	1.17	4.32	-50.97	0.00	0.00	Vehicle	Vehicle	------	-258.55	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	9.33	9.33
	U_{18} - L_{18}	-142.22	5.16	-46.96			0.90	1.17	5.42	-49.40	0.00	0.00	Vehicle	Vehicle	------	-249.12	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	8.80	8.80
	U_{19} - L_{19}	-111.48	5.87	-41.99			0.90	1.17	6.17	-44.17	0.00	0.00	Vehicle	Vehicle	------	-202.35	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	------	------	15.75	------	------	31.50	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	9.05	9.05
	U_{20} - L_{20}	-76.55	10.83	-37.08			0.90	1.17	11.40	-39.01	0.00	0.00	Vehicle	Vehicle	------	-150.23	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	------	------	7.65	7.65
	U_{21} - L_{21}	-44.31	13.29	-33.92			0.90	1.17	13.98	-35.68	0.00	0.00	Vehicle	Vehicle	------	-103.99	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	------	------	------	------	------	8.30	8.30
	U_{22} - L_{22}	-21.25	0.88	-33.41			0.90	1.17	0.93	-35.15	0.00	0.00	Vehicle	Vehicle	------	-73.32	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	9.12	9.12
	U_{23} - L_{23}	-39.07	15.62	-29.15			0.90	1.17	16.43	-30.67	0.00	0.00	Vehicle	Vehicle	------	-90.66	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	------	------	------	------	------	9.83	9.83
	U_{24} - L_{24}	-74.84	10.47	-34.09			0.90	1.17	11.02	-35.87	0.00	0.00	Vehicle	Vehicle	------	-143.92	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	------	------	------	------	------	8.37	8.37
	U_{25} - L_{25}	-103.27	7.04	-44.44			0.90	1.17	7.41	-46.75	0.00	0.00	Vehicle	Vehicle	------	-195.03	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	------	------	------	------	------	8.73	8.73
	U_{26} - L_{26}	-120.22	6.65	-46.95			0.90	1.17	6.99	-49.40	0.00	0.00	Vehicle	Vehicle	------	-220.50	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	------	------	------	------	------	9.25	9.25
	U_{27} - L_{27}	-123.93	5.49	-49.78			0.90	1.17	5.77	-52.38	0.00	0.00	Vehicle	Vehicle	------	-229.20	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	------	------	------	------	------	9.53	9.53
	U_{28} - L_{28}	-135.60	4.99	-54.94			0.90	1.17	5.25	-57.80	0.00	0.00	Vehicle	Vehicle	------	-251.42	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	9.18	9.18
	U_{29} - L_{29}	-116.87	2.92	-51.70			0.90	1.17	3.08	-54.40	0.00	0.00	Vehicle	Vehicle	------	-222.65	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	------	------	------	------	------	10.54	10.54
	U_{30} - L_{30}	-262.02	2.12	-54.70			0.90	1.18	2.25	-58.24	0.00	0.00	Vehicle	Vehicle	------	-416.34	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	------	------	15.38	------	------	18.31	45.00	Pass	5.68	12.00	Pass	------	------	------	------	------	13.56	13.56
	U_{31} - L_{31}	-156.38	6.90	-46.07			0.90	1.18	7.35	-49.05	0.00	0.00	Vehicle	Vehicle	------	-267.05	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	------	------	------	------	------	10.88	10.88
	U_{32} - L_{32}	-185.51	4.89	-50.28			0.90	1.18	5.20	-53.53	0.00	0.00	Vehic

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: 2F1
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	56.28	-10.48			0.90	1.24	62.65	-11.67	0.00	0.00	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	-----	-----	-----	-----	-----	**7.96**	**7.96**	-----	-----
	U$_1$ - L$_2$	23.35	48.06	-10.46			0.90	1.24	53.51	-11.64	0.00	0.00	Vehicle	Vehicle	99.91	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**7.56**	**7.56**	-----	-----
	U$_2$ - L$_3$	-37.85	30.15	-18.04			0.90	1.24	33.56	-20.09	0.00	0.00	Vehicle	-----	-----	-75.32	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**14.75**	**14.75**
	U$_3$ - L$_4$	-92.19	20.26	-38.39			0.90	1.24	22.55	-42.74	0.00	0.00	Vehicle	Vehicle	-----	-175.42	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**5.71**	**5.71**
	U$_3$ - L$_4$	143.37	48.47	-10.39			0.90	1.24	53.96	-11.57	0.00	0.00	Vehicle	Vehicle	256.53	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**7.06**	**7.06**	-----	-----
	U$_5$ - L$_5$	177.90	54.48	-2.72			0.90	1.24	60.66	-3.03	0.00	0.00	Vehicle	Vehicle	310.12	-----	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	-----	-----	-----	-----	-----	**7.79**	**7.79**	-----	-----
	U$_5$ - L$_6$	184.42	63.36	-1.28			0.90	1.24	70.54	-1.42	0.00	0.00	Vehicle	Vehicle	331.45	-----	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	-----	-----	-----	-----	-----	**6.61**	**6.61**	-----	-----
	U$_6$ - L$_7$	180.02	58.07	-2.02			0.90	1.24	64.65	-2.25	0.00	0.00	Vehicle	Vehicle	318.07	-----	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	-----	-----	-----	-----	-----	**7.28**	**7.28**	-----	-----
	U$_8$ - L$_8$	268.98	51.47	-5.80			0.90	1.20	55.50	-6.25	0.00	0.00	Vehicle	Vehicle	421.82	-----	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	-----	-----	-----	-----	-----	**12.49**	**12.49**	-----	-----
	U$_9$ - L$_{10}$	278.85	55.04	-5.43			0.90	1.20	59.35	-5.86	0.00	0.00	Vehicle	Vehicle	439.66	-----	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	-----	-----	-----	-----	-----	**11.51**	**11.51**	-----	-----
	U$_{10}$ - L$_{11}$	285.04	58.00	-5.68			0.90	1.20	62.54	-6.12	0.00	0.00	Vehicle	Vehicle	451.85	-----	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	-----	-----	-----	-----	-----	**10.00**	**10.00**	-----	-----
	U$_{11}$ - L$_{12}$	250.60	52.35	-8.24			0.90	1.20	56.44	-8.89	0.00	0.00	Vehicle	Vehicle	399.15	-----	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	-----	-----	-----	-----	-----	**9.34**	**9.34**	-----	-----
	U$_{12}$ - L$_{13}$	189.65	48.57	-14.65			0.90	1.20	52.37	-15.79	0.00	0.00	Vehicle	Vehicle	314.63	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**8.43**	**8.43**	-----	-----
	U$_{13}$ - L$_{14}$	123.32	40.84	-19.33			0.90	1.20	44.03	-20.84	0.00	0.00	Vehicle	Vehicle	217.55	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**6.91**	**6.91**	-----	-----
	U$_{13}$ - L$_{14}$	-24.41	28.80	-27.81			0.90	1.20	31.05	-29.99	0.00	0.00	Vehicle	Vehicle	8.63	-70.72	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**14.56**	**14.56**	**10.13**	**10.13**
	U$_{15}$ - L$_{15}$	48.53	40.07	-19.53			0.90	1.20	43.20	-21.06	0.00	0.00	Vehicle	Vehicle	119.26	-----	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**8.78**	**8.78**	-----	-----
	U$_{15}$ - L$_{16}$	146.59	51.22	-7.70			0.90	1.20	55.22	-8.31	0.00	0.00	Vehicle	Vehicle	262.35	-----	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	-----	-----	-----	-----	-----	**6.84**	**6.84**	-----	-----
	U$_{16}$ - L$_{17}$	182.46	52.31	-6.63			0.90	1.20	56.40	-7.15	0.00	0.00	Vehicle	Vehicle	310.52	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.30**	**8.30**	-----	-----
	U$_{19}$ - L$_{18}$	223.82	59.57	-5.55			0.90	1.20	64.23	-5.98	0.00	0.00	Vehicle	Vehicle	374.47	-----	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	-----	-----	-----	-----	-----	**7.57**	**7.57**	-----	-----
	U$_{20}$ - L$_{19}$	232.72	56.48	-4.64			0.90	1.20	60.90	-5.00	0.00	0.00	Vehicle	Vehicle	381.70	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.84**	**7.84**	-----	-----
Structure 2	U$_1$ - L$_1$	213.54	48.53	-5.85			0.90	1.18	51.67	-6.23	0.00	0.00	Vehicle	Vehicle	344.77	-----	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	-----	-----	-----	-----	-----	**10.92**	**10.92**	-----	-----
	U$_1$ - L$_2$	200.48	51.85	-6.87			0.90	1.18	55.21	-7.31	0.00	0.00	Vehicle	Vehicle	332.40	-----	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	-----	-----	-----	-----	-----	**10.45**	**10.45**	-----	-----
	U$_3$ - L$_3$	172.81	51.36	-7.68			0.90	1.18	54.68	-8.18	0.00	0.00	Vehicle	Vehicle	295.74	-----	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	-----	-----	-----	-----	-----	**8.74**	**8.74**	-----	-----
	U$_3$ - L$_4$	147.16	46.95	-9.03			0.90	1.18	49.98	-9.61	0.00	0.00	Vehicle	Vehicle	256.29	-----	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	-----	-----	-----	-----	-----	**8.60**	**8.60**	-----	-----
	U$_5$ - L$_5$	99.10	38.96	-17.94			0.90	1.18	41.48	-19.10	0.00	0.00	Vehicle	Vehicle	117.76	-----	0.00	16.85	16.8486	556.00	131.71	13.3992	1.9682	61.02	28.23	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**9.13**	**9.13**	-----	-----
	U$_5$ - L$_6$	2.96	35.09	-22.88			0.90	1.18	37.36	-24.36	0.00	0.00	Vehicle	Vehicle	52.43	-27.81	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	-----	-----	-----	-----	-----	**11.37**	**11.37**	**13.49**	**13.49**
	U$_6$ - L$_7$	-85.74	21.99	-33.30			0.90	1.18	23.41	-35.45	0.00	0.00	Vehicle	-----	-----	-157.55	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	-----	-----	-----	-----	-----	**7.72**	**7.72**
	U$_6$ - L$_7$	140.30	42.81	-18.90			0.90	1.18	45.58	-20.12	0.00	0.00	Vehicle	Vehicle	241.64	-----	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	-----	-----	-----	-----	-----	**10.16**	**10.16**	-----	-----
	U$_8$ - L$_8$	204.22	52.15	-9.22			0.90	1.18	55.52	-9.82	0.00	0.00	Vehicle	Vehicle	337.66	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**9.11**	**9.11**	-----	-----
	U$_9$ - L$_9$	234.87	53.21	-4.79			0.90	1.18	56.65	-5.10	0.00	0.00	Vehicle	Vehicle	378.98	-----	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	-----	-----	-----	-----	-----	**9.58**	**9.58**	-----	-----
	U$_{11}$ - L$_{10}$	263.10	61.85	-1.35			0.90	1.18	65.85	-1.44	0.00	0.00	Vehicle	Vehicle	427.63	-----	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	-----	-----	-----	-----	-----	**8.83**	**8.83**	-----	-----
	U$_{12}$ - L$_{11}$	274.02	59.31	-1.65			0.90	1.18	63.15	-1.75	0.00	0.00	Vehicle	Vehicle	438.32	-----	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	-----	-----	-----	-----	-----	**9.03**	**9.03**	-----	-----
	U$_{13}$ - L$_{12}$	254.94	56.60	-5.92			0.90	1.18	60.26	-6.30	0.00	0.00	Vehicle	Vehicle	409.76	-----	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	-----	-----	-----	-----	-----	**8.67**	**8.67**	-----	-----
	U$_{13}$ - L$_{13}$	217.71	52.56	-6.78			0.90	1.18	55.96	-7.21	0.00	0.00	Vehicle	Vehicle	355.77	-----	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	-----	-----	-----	-----	-----	**10.00**	**10.00**	-----	-----
	U$_{15}$ - L$_{15}$	110.05	44.27	-5.76			0.90	1.17	46.58	-6.06	0.00	0.00	Vehicle	Vehicle	203.61	-----	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	-----	-----	-----	-----	-----	**11.61**	**11.61**	-----	-----
	U$_{15}$ - L$_{16}$	132.30	44.61	-6.13			0.90	1.17	46.93	-6.45	0.00	0.00	Vehicle	Vehicle	232.99	-----	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	-----	-----	-----	-----	-----	**11.05**	**11.05**	-----	-----
	U$_{17}$ - L$_{17}$	172.89	50.96	-4.31			0.90	1.17	53.62	-4.53	0.00	0.00	Vehicle	Vehicle	294.46	-----	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	-----	-----	-----	-----	-----	**10.02**	**10.02**	-----	-----
	U$_{17}$ - L$_{18}$	160.19	52.87	-5.13			0.90	1.17	55.63	-5.40	0.00	0.00	Vehicle	Vehicle	280.56	-----	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	-----	-----	-----	-----	-----	**8.82**	**8.82**	-----	-----
	U$_{19}$ - L$_{19}$	152.35	49.65	-6.72			0.90	1.17	52.24	-7.07	0.00	0.00	Vehicle	Vehicle	265.96	-----	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	-----	-----	-----	-----	-----	**9.54**	**9.54**	-----	-----
	U$_{20}$ - L$_{20}$	120.69	48.53	-11.19			0.90	1.17	51.05	-11.77	0.00	0.00	Vehicle	Vehicle	223.26	-----	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	-----	-----	-----	-----	-----	**9.45**	**9.45**	-----	-----
	U$_{20}$ - L$_{21}$	76.08	42.18	-16.29			0.90	1.17	44.38	-17.14	0.00	0.00	Vehicle	Vehicle	156.60	-----	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	-----	-----	-----	-----	-----	**7.92**	**7.92**	-----	-----
	U$_{21}$ - L$_{22}$	31.46	33.54	-22.09			0.90	1.17	35.29	-23.24	0.00	0.00	Vehicle	Vehicle	86.77	-----	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	-----	-----	-----	-----	-----	**11.23**	**11.23**	-----	-----
	U$_{23}$ - L$_{23}$	24.30	33.59	-27.02			0.90	1.17	35.34	-28.42	0.00	0.00	Vehicle	Vehicle	77.53	-5.36	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	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**11.41**	**11.41**	**12.22**	**12.22**
	U$_{23}$ - L$_{23}$	72.26	39.61	-20.10			0.90	1.17	41.68	-21.15	0.00	0.00	Vehicle	Vehicle	148.12	-----	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	-----	-----	-----	-----	-----	**8.53**	**8.53**	-----	-----
	U$_{24}$ - L$_{24}$	112.13	46.72	-10.92			0.90	1.17	49.15	-11.49	0.00	0.00	Vehicle	Vehicle	209.67	-----	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	-----	-----	-----	-----	-----	**9.99**	**9.99**	-----	-----
	U$_{25}$ - L$_{25}$	127.84	54.43	-8.48			0.90	1.17	57.27	-8.92	0.00	0.00	Vehicle	Vehicle	240.65	-----	0.00	25.63	25.6315	845.84	131.71	15.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**9.13**	**9.13**	-----	-----
	U$_{26}$ - L$_{26}$	132.67	54.74	-8.87			0.90	1.17	57.59	-9.34	0.00	0.00	Vehicle	Vehicle	247.33	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.99**	**8.99**	-----	-----
	U$_{27}$ - L$_{27}$	137.94	53.99	-5.92			0.90	1.17	56.80	-6.23	0.00	0.00	Vehicle	Vehicle	253.16	-----	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	-----	-----	-----	-----	-----	**10.08**	**10.08**	-----	-----
	U$_{28}$ - L$_{28}$	122.80	55.89	-3.50			0.90	1.17	58.80	-3.68	0.00	0.00	Vehicle	Vehicle	236.07	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.98**	**8.98**	-----	-----
	U$_{29}$ - L$_{29}$	102.75	48.70	-4.27			0.90	1.17	51.24	-4.49	0.00	0.00	Vehicle	Vehicle	200.19	-----	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	-----	-----	-----	-----	-----	**10.69**	**10.69**	-----	-----
	U$_{30}$ - L$_{31}$	140.07	42.39	-7.12			0.90	1.18	45.13	-7.58	0.00	0.00	Vehicle	Vehicle	240.75	-----	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	-----	-----	-----	-----	-----	**14.13**	**14.13**	-----	-----
	U$_{31}$ - L$_{32}$	167.39	48.13	-7.83			0.90	1.18	51.24	-8.34	0.00	0.00	Vehicle	Vehicle	284.23	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**11.91**	**11.91**	-----	-----
	U$_{32}$ - L$_{33}$	202.10	55.33	-4.61			0.90	1.18	58.91	-4.91	0.00	0.00	Vehicle	Vehicle	339.32	-----	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	-----	-----	-----	-----	-----	**10.90**	**10.90**	-----	-----
	U$_{33}$ - L$_{34}$	201.91	54.18	-4.66			0.90	1.18	57.68	-4.96	0.00	0.00	Vehicle	Vehicle	337.47	-----	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	-----	-----	-----	-----	-----	**11.14**	**11.14**	-----	-----
	U$_{35}$ - L$_{35}$	180.76	54.52	-5.85			0.90	1.18	58.05	-6.22	0.00	0.00	Vehicle	Vehicle	310.45	-----	0.00	30.63	30.6305	1010.81	131.71	13.7604	2.8427	43.57	31.19	-812.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 2F1 **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 Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Upper Chord	Structure 1	U$_0$ - U$_1$	-52.64	8.73	-50.45			0.75	1.24	8.10	-46.81	0.00	0.00	Vehicle	Vehicle	-----	-129.28	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	-----	-----	10.95	10.95
		U$_1$ - U$_2$	-61.57	15.59	-77.11			0.75	1.24	14.46	-71.54	0.00	0.00	Vehicle	Vehicle	-----	-173.04	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	-----	-----	7.04	7.04
		U$_2$ - U$_3$	-26.99	21.65	-79.61			0.75	1.24	20.08	-73.86	0.00	0.00	Vehicle	Vehicle	-----	-131.10	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	7.29	7.29
		U$_3$ - U$_4$	32.92	27.71	-69.23			0.75	1.24	25.71	-64.23	0.00	0.00	Vehicle	Vehicle	76.22	-40.70	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	24.83	24.83	9.31	9.31
		U$_4$ - U$_5$	34.77	27.84	-69.25			0.75	1.24	25.83	-64.25	0.00	0.00	Vehicle	Vehicle	78.78	-38.32	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	24.64	24.64	9.34	9.34
		U$_5$ - U$_6$	124.13	33.01	-59.95			0.75	1.24	30.63	-55.61	0.00	0.00	Vehicle	Vehicle	201.19	-----	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	-----	-----	17.86	17.86	-----	-----
		U$_6$ - U$_7$	223.19	39.05	-42.73			0.75	1.24	36.23	-39.64	0.00	0.00	Vehicle	Vehicle	337.24	-----	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	-----	-----	16.04	16.04	-----	-----
		U$_7$ - U$_8$	331.76	44.25	-16.84			0.75	1.24	41.05	-15.62	0.00	0.00	Vehicle	Vehicle	484.66	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	18.96	18.96	-----	-----
		U$_8$ - U$_9$	267.61	39.05	-17.54			0.75	1.20	35.08	-15.76	0.00	0.00	Vehicle	Vehicle	393.50	-----	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	-----	-----	19.13	19.13	-----	-----
		U$_9$ - U$_{10}$	89.12	34.25	-39.25			0.75	1.20	30.77	-35.26	0.00	0.00	Vehicle	Vehicle	155.85	-----	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	-----	-----	20.15	20.15	-----	-----
		U$_{10}$ - U$_{11}$	-76.81	29.15	-62.99			0.75	1.20	26.19	-56.60	0.00	0.00	Vehicle	Vehicle	-----	-173.42	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	-----	-----	9.20	9.20
		U$_{11}$ - U$_{12}$	-230.69	24.41	-79.40			0.75	1.20	21.94	-71.34	0.00	0.00	Vehicle	Vehicle	-----	-392.63	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	-----	-----	8.16	8.16
		U$_{12}$ - U$_{13}$	-341.88	20.64	-95.46			0.75	1.20	18.55	-85.77	0.00	0.00	Vehicle	Vehicle	-----	-555.94	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	-----	-----	9.28	9.28
		U$_{13}$ - U$_{14}$	-421.62	17.20	-103.31			0.75	1.20	15.46	-92.82	0.00	0.00	Vehicle	Vehicle	-----	-668.78	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	-----	-----	9.76	9.76
		U$_{14}$ - U$_{15}$	-422.51	17.12	-103.35			0.75	1.20	15.39	-92.86	0.00	0.00	Vehicle	Vehicle	-----	-669.98	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	9.75	9.75
		U$_{15}$ - U$_{16}$	-439.94	13.34	-107.24			0.75	1.20	11.99	-96.36	0.00	0.00	Vehicle	Vehicle	-----	-697.19	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	9.21	9.21
		U$_{16}$ - U$_{17}$	-422.43	10.12	-99.08			0.75	1.20	9.09	-89.02	0.00	0.00	Vehicle	Vehicle	-----	-664.88	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	10.17	10.17
		U$_{17}$ - U$_{18}$	-340.94	6.78	-82.10			0.75	1.20	6.09	-73.77	0.00	0.00	Vehicle	Vehicle	-----	-539.11	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	-----	-----	8.54	8.54
		U$_{18}$ - U$_{19}$	-247.15	4.12	-58.77			0.75	1.20	3.70	-52.81	0.00	0.00	Vehicle	Vehicle	-----	-389.94	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	-----	-----	8.15	8.15
		U$_{19}$ - U$_{20}$	-131.71	2.05	-29.27			0.75	1.20	1.84	-26.30	0.00	0.00	Vehicle	Vehicle	-----	-205.41	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	-----	-----	20.76	20.76
	Structure 2	U$_0$ - U$_1$	-131.51	4.47	-33.92			0.75	1.18	3.96	-30.09	0.00	0.00	Vehicle	Vehicle	-----	-210.08	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	-----	-----	17.14	17.14
		U$_1$ - U$_2$	-247.03	9.55	-62.62			0.75	1.18	8.48	-55.56	0.00	0.00	Vehicle	Vehicle	-----	-393.36	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	-----	-----	9.80	9.80
		U$_2$ - U$_3$	-347.15	14.81	-83.57			0.75	1.18	13.14	-74.14	0.00	0.00	Vehicle	Vehicle	-----	-547.68	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	-----	-----	9.85	9.85
		U$_3$ - U$_4$	-437.07	20.77	-96.87			0.75	1.18	18.42	-85.95	0.00	0.00	Vehicle	Vehicle	-----	-679.92	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	-----	-----	10.52	10.52
		U$_4$ - U$_5$	-468.70	25.46	-108.72			0.75	1.18	22.59	-96.47	0.00	0.00	Vehicle	Vehicle	-----	-734.72	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	-----	-----	10.56	10.56
		U$_5$ - U$_6$	-471.03	30.09	-108.90			0.75	1.18	26.69	-96.62	0.00	0.00	Vehicle	Vehicle	-----	-737.95	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	-----	-----	10.52	10.52
		U$_6$ - U$_7$	-414.41	33.52	-100.96			0.75	1.18	29.74	-89.57	0.00	0.00	Vehicle	Vehicle	-----	-655.18	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	10.35	10.35
		U$_7$ - U$_8$	-413.45	33.57	-100.75			0.75	1.18	29.78	-89.39	0.00	0.00	Vehicle	Vehicle	-----	-653.69	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	10.38	10.38
		U$_8$ - U$_9$	-321.98	36.69	-92.09			0.75	1.18	32.55	-81.70	0.00	0.00	Vehicle	Vehicle	-----	-524.79	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	9.84	9.84
		U$_9$ - U$_{10}$	-182.11	38.81	-79.83			0.75	1.18	34.43	-70.83	0.00	0.00	Vehicle	Vehicle	-----	-328.81	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	-----	-----	9.94	9.94
		U$_{10}$ - U$_{11}$	-32.58	40.90	-62.84			0.75	1.18	36.29	-55.75	0.00	0.00	Vehicle	Vehicle	4.83	-114.83	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	25.99	25.99	13.22	13.22
		U$_{11}$ - U$_{12}$	133.59	42.23	-45.02			0.75	1.18	37.46	-39.94	0.00	0.00	Vehicle	Vehicle	222.37	-----	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	-----	-----	20.74	20.74	-----	-----
		U$_{12}$ - U$_{13}$	289.99	43.65	-29.18			0.75	1.18	38.73	-25.89	0.00	0.00	Vehicle	Vehicle	427.33	-----	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	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	21.93	21.93	-----	-----
		U$_{13}$ - U$_{14}$	434.76	44.86	-11.37			0.75	1.18	39.80	-10.09	0.00	0.00	Vehicle	Vehicle	616.93	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	28.38	28.38	-----	-----
		U$_{14}$ - U$_{15}$	474.45	37.90	-10.40			0.75	1.17	33.23	-9.12	0.00	0.00	Vehicle	Vehicle	659.98	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	32.80	32.80	-----	-----
		U$_{15}$ - U$_{16}$	383.28	36.42	-23.95			0.75	1.17	31.93	-21.00	0.00	0.00	Vehicle	Vehicle	539.77	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	27.85	27.85	-----	-----
		U$_{16}$ - U$_{17}$	279.57	34.27	-38.03			0.75	1.17	30.05	-33.35	0.00	0.00	Vehicle	Vehicle	402.51	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	25.44	25.44	-----	-----
		U$_{17}$ - U$_{18}$	172.63	31.75	-51.25			0.75	1.17	27.84	-44.93	0.00	0.00	Vehicle	Vehicle	260.61	-----	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	-----	-----	21.32	21.32	-----	-----
		U$_{18}$ - U$_{19}$	74.36	28.38	-62.89			0.75	1.17	24.88	-55.14	0.00	0.00	Vehicle	Vehicle	129.01	-----	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	-----	-----	27.81	27.81	-----	-----
		U$_{19}$ - U$_{20}$	-10.01	24.84	-75.38			0.75	1.17	21.78	-66.09	0.00	0.00	Vehicle	Vehicle	15.30	-98.94	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	38.12	38.12	10.33	10.33
		U$_{20}$ - U$_{21}$	-62.06	20.83	-82.45			0.75	1.17	18.26	-72.29	0.00	0.00	Vehicle	Vehicle	-----	-174.65	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	10.72	10.72
		U$_{21}$ - U$_{22}$	-88.74	17.99	-81.81			0.75	1.17	15.77	-71.73	0.00	0.00	Vehicle	Vehicle	-----	-208.60	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	10.43	10.43
		U$_{22}$ - U$_{23}$	-88.92	18.07	-81.75			0.75	1.17	15.84	-71.68	0.00	0.00	Vehicle	Vehicle	-----	-208.77	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	-----	-----	10.43	10.43
		U$_{23}$ - U$_{24}$	-76.67	22.17	-83.11			0.75	1.17	19.44	-72.86	0.00	0.00	Vehicle	Vehicle	-----	-194.39	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	10.43	10.43
		U$_{24}$ - U$_{25}$	-37.64	25.87	-76.98			0.75	1.17	22.68	-67.49	0.00	0.00	Vehicle	Vehicle	-----	-136.68	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	-----	-----	9.71	9.71
		U$_{25}$ - U$_{26}$	37.23	29.07	-66.62			0.75	1.17	25.48	-58.41	0.00	0.00	Vehicle	Vehicle	81.53	-27.53	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	28.61	28.61	11.72	11.72
		U$_{26}$ - U$_{27}$	128.02	32.43	-52.83			0.75	1.17	28.43	-46.32	0.00	0.00	Vehicle	Vehicle	203.38	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	22.45	22.45	-----	-----
		U$_{27}$ - U$_{28}$	233.68	34.76	-40.84			0.75	1.17	30.48	-35.80	0.00	0.00	Vehicle	Vehicle	343.40	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	26.59	26.59	-----	-----
		U$_{28}$ - U$_{29}$	337.65	36.64	-24.95			0.75	1.17	32.13	-21.87	0.00	0.00	Vehicle	Vehicle	480.71	-----	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	-----	-----	29.10	29.10	-----	-----
		U$_{29}$ - U$_{30}$	437.10	37.97	-9.66			0.75	1.17	33.29	-8.47	0.00	0.00	Vehicle	Vehicle	611.50	-----	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	-----	-----	33.86	33.86	-----	-----
		U$_{30}$ - U$_{31}$	420.53	45.12	-11.31			0.75	1.18	40.03	-10.03	0.00	0.00	Vehicle	Vehicle	598.73	-----	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	-----	-----	28.57	28.57	-----	-----
		U$_{31}$ - U$_{32}$	300.69	44.51	-27.87			0.75	1.18	39.49	-24.73	0.00	0.00	Vehicle	Vehicle	442.23	-----	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.

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: 2F1 **Condition:** As-Built

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

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

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

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	(No Impact) Pedestrian Load$_{MAX}$	(No Impact) Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Lower Chord	Structure 1	L$_0$ - L$_1$	8.49	7.62	-5.59			0.75	1.24	7.07	-5.19	0.00	0.00	Vehicle	Vehicle	20.23	-----	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	-----	-----	**69.86**	**69.86**	-----	-----
		L$_1$ - L$_2$	50.81	47.77	-9.09			0.75	1.24	44.32	-8.44	0.00	0.00	Vehicle	Vehicle	123.67	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**10.19**	**10.19**	-----	-----
		L$_2$ - L$_3$	61.22	70.79	-15.51			0.75	1.24	65.68	-14.39	0.00	0.00	Vehicle	Vehicle	164.97	-----	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	-----	-----	**9.25**	**9.25**	-----	-----
		L$_3$ - L$_4$	25.70	72.87	-21.38			0.75	1.24	67.61	-19.84	0.00	0.00	Vehicle	Vehicle	121.30	-----	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	-----	-----	**9.51**	**9.51**	-----	-----
		L$_4$ - L$_5$	-118.45	54.07	-31.52			0.75	1.24	50.16	-29.24	0.00	0.00	Vehicle	Vehicle	-----	-192.00	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	-----	-----	**13.06**	**13.06**
		L$_5$ - L$_6$	-217.80	38.07	-37.72			0.75	1.24	35.32	-34.99	0.00	0.00	Vehicle	Vehicle	-----	-328.63	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	-----	-----	**12.62**	**12.62**
		L$_6$ - L$_7$	-320.36	15.10	-43.26			0.75	1.24	14.00	-40.13	0.00	0.00	Vehicle	Vehicle	-----	-468.64	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**15.56**	**15.56**
		L$_7$ - L$_8$	-417.18	0.18	-46.67			0.75	1.24	0.17	-43.30	0.00	0.00	Vehicle	Vehicle	-----	-598.63	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	-----	-----	**18.07**	**18.07**
		L$_8$ - L$_9$	-410.79	0.05	-49.94			0.75	1.20	0.05	-44.87	0.00	0.00	Vehicle	Vehicle	-----	-592.36	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**17.58**	**17.58**
		L$_9$ - L$_{10}$	-247.75	15.68	-36.59			0.75	1.20	14.09	-32.88	0.00	0.00	Vehicle	Vehicle	-----	-364.82	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	-----	-----	**21.22**	**21.22**
		L$_{10}$ - L$_{11}$	-65.21	36.17	-31.60			0.75	1.20	32.50	-28.39	0.00	0.00	Vehicle	Vehicle	-----	-121.69	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	-----	-----	**15.33**	**15.33**
		L$_{11}$ - L$_{12}$	101.88	57.32	-26.97			0.75	1.20	51.50	-24.23	0.00	0.00	Vehicle	Vehicle	199.39	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**9.56**	**9.56**	-----	-----
		L$_{12}$ - L$_{13}$	264.09	73.55	-23.15			0.75	1.20	66.09	-20.80	0.00	0.00	Vehicle	Vehicle	429.23	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**10.75**	**10.75**	-----	-----
		L$_{13}$ - L$_{14}$	373.73	89.48	-19.43			0.75	1.20	80.40	-17.46	0.00	0.00	Vehicle	Vehicle	590.36	-----	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	-----	-----	**11.62**	**11.62**	-----	-----
		L$_{14}$ - L$_{15}$	476.34	97.92	-12.63			0.75	1.20	87.98	-11.35	0.00	0.00	Vehicle	Vehicle	733.62	-----	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	-----	-----	**12.48**	**12.48**	-----	-----
		L$_{15}$ - L$_{16}$	459.97	89.12	-9.40			0.75	1.20	80.07	-8.45	0.00	0.00	Vehicle	Vehicle	702.05	-----	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	-----	-----	**13.92**	**13.92**	-----	-----
		L$_{16}$ - L$_{17}$	381.37	70.75	-6.25			0.75	1.20	63.56	-5.61	0.00	0.00	Vehicle	Vehicle	578.41	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	**13.14**	**13.14**	-----	-----
		L$_{17}$ - L$_{18}$	288.98	49.27	-4.29			0.75	1.20	44.27	-3.86	0.00	0.00	Vehicle	Vehicle	433.22	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**13.43**	**13.43**	-----	-----
		L$_{18}$ - L$_{19}$	176.20	21.38	-3.66			0.75	1.20	19.21	-3.28	0.00	0.00	Vehicle	Vehicle	254.03	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**16.99**	**16.99**	-----	-----
		L$_{19}$ - L$_{20}$	69.74	7.69	-12.98			0.75	1.20	6.90	-11.66	0.00	0.00	Vehicle	Vehicle	99.64	-----	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	-----	-----	**62.69**	**62.69**	-----	-----
		L$_0$ - L$_1$	24.59	4.65	-5.69			0.75	1.18	4.13	-5.05	0.00	0.00	Vehicle	Vehicle	37.33	-----	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	-----	-----	**147.46**	**147.46**	-----	-----
		L$_1$ - L$_2$	138.59	34.47	-4.93			0.75	1.18	30.59	-4.38	0.00	0.00	Vehicle	Vehicle	219.93	-----	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	-----	-----	**16.18**	**16.18**	-----	-----
		L$_2$ - L$_3$	252.83	61.68	-10.30			0.75	1.18	54.72	-9.14	0.00	0.00	Vehicle	Vehicle	399.82	-----	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	-----	-----	**13.22**	**13.22**	-----	-----
		L$_3$ - L$_4$	352.30	78.74	-15.57			0.75	1.18	69.86	-13.81	0.00	0.00	Vehicle	Vehicle	548.82	-----	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	-----	-----	**13.70**	**13.70**	-----	-----
		L$_4$ - L$_5$	447.17	95.79	-21.55			0.75	1.18	84.99	-19.12	0.00	0.00	Vehicle	Vehicle	691.81	-----	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	-----	-----	**14.15**	**14.15**	-----	-----
		L$_5$ - L$_6$	477.93	101.58	-26.23			0.75	1.18	90.12	-23.27	0.00	0.00	Vehicle	Vehicle	738.47	-----	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	-----	-----	**14.59**	**14.59**	-----	-----
		L$_6$ - L$_7$	482.68	103.05	-30.87			0.75	1.18	91.43	-27.39	0.00	0.00	Vehicle	Vehicle	746.34	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**14.60**	**14.60**	-----	-----
		L$_7$ - L$_8$	336.61	85.96	-37.34			0.75	1.18	76.27	-33.13	0.00	0.00	Vehicle	Vehicle	536.74	-----	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	-----	-----	**13.18**	**13.18**	-----	-----
		L$_8$ - L$_9$	196.05	72.82	-38.92			0.75	1.18	64.61	-34.53	0.00	0.00	Vehicle	Vehicle	338.85	-----	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	-----	-----	**13.99**	**13.99**	-----	-----
		L$_9$ - L$_{10}$	45.60	56.45	-40.96			0.75	1.18	50.08	-36.35	0.00	0.00	Vehicle	Vehicle	124.38	-----	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	-----	-----	**16.30**	**16.30**	-----	-----
		L$_{10}$ - L$_{11}$	-126.26	38.90	-41.82			0.75	1.18	34.52	-37.11	0.00	0.00	Vehicle	Vehicle	-----	-212.38	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	-----	-----	**14.13**	**14.13**
		L$_{11}$ - L$_{12}$	-284.87	25.37	-43.29			0.75	1.18	22.51	-38.41	0.00	0.00	Vehicle	Vehicle	-----	-420.26	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	-----	-----	**16.81**	**16.81**
		L$_{12}$ - L$_{13}$	-433.79	12.26	-46.63			0.75	1.18	10.88	-41.37	0.00	0.00	Vehicle	Vehicle	-----	-617.71	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	-----	-----	**20.34**	**20.34**
		L$_{13}$ - L$_{14}$	-552.65	11.94	-47.45			0.75	1.18	10.59	-42.10	0.00	0.00	Vehicle	Vehicle	-----	-773.17	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**22.87**	**22.87**
		L$_{14}$ - L$_{15}$	-573.48	11.87	-50.25			0.75	1.17	10.41	-44.05	0.00	0.00	Vehicle	Vehicle	-----	-802.79	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**21.38**	**21.38**
		L$_{15}$ - L$_{16}$	-492.94	10.34	-39.79			0.75	1.17	9.07	-34.89	0.00	0.00	Vehicle	Vehicle	-----	-686.18	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	-----	-----	**22.43**	**22.43**
		L$_{16}$ - L$_{17}$	-395.30	20.47	-36.90			0.75	1.17	17.94	-32.35	0.00	0.00	Vehicle	Vehicle	-----	-555.94	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	-----	-----	**20.16**	**20.16**
		L$_{17}$ - L$_{18}$	-288.04	32.82	-34.63			0.75	1.17	28.77	-30.36	0.00	0.00	Vehicle	Vehicle	-----	-413.92	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	-----	-----	**14.47**	**14.47**
		L$_{18}$ - L$_{19}$	-175.85	45.48	-32.09			0.75	1.17	39.87	-28.14	0.00	0.00	Vehicle	Vehicle	-----	-265.18	1.25	26.75	25.5500	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	-----	-----	**14.14**	**14.14**
		L$_{19}$ - L$_{20}$	-78.08	57.55	-28.72			0.75	1.17	50.45	-25.18	0.00	0.00	Vehicle	Vehicle	-----	-134.24	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	-----	-----	**19.68**	**19.68**
	Structure 2	L$_{20}$ - L$_{21}$	7.55	71.35	-25.27			0.75	1.17	62.56	-22.16	0.00	0.00	Vehicle	Vehicle	91.15	-18.98	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	**15.30**	**15.30**	**37.09**	**37.09**
		L$_{21}$ - L$_{22}$	59.07	79.41	-21.24			0.75	1.17	69.62	-18.63	0.00	0.00	Vehicle	Vehicle	167.30	-----	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	-----	-----	**13.01**	**13.01**	-----	-----
		L$_{22}$ - L$_{23}$	71.98	77.94	-22.67			0.75	1.17	68.33	-19.88	0.00	0.00	Vehicle	Vehicle	182.41	-----	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	-----	-----	**13.06**	**13.06**	-----	-----
		L$_{23}$ - L$_{24}$	33.55	70.24	-26.30			0.75	1.17	61.58	-23.06	0.00	0.00	Vehicle	Vehicle	123.67	-----	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	-----	-----	**15.12**	**15.12**	-----	-----
		L$_{24}$ - L$_{25}$	-45.09	57.53	-29.23			0.75	1.17	50.44	-25.62	0.00	0.00	Vehicle	Vehicle	6.96	-91.92	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	**14.36**	**14.36**	**20.63**	**20.63**
		L$_{25}$ - L$_{26}$	-134.94	43.62	-32.08			0.75	1.17	38.24	-28.12	0.00	0.00	Vehicle	Vehicle	-----	-211.98	1.25	26.75	25.5500	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	-----	-----	**15.60**	**15.60**
		L$_{26}$ - L$_{27}$	-245.90	31.62	-33.77			0.75	1.17	27.72	-29.61	0.00	0.00	Vehicle	Vehicle	-----	-358.16	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**16.27**	**16.27**
		L$_{27}$ - L$_{28}$	-351.78	17.74	-35.62			0.75	1.17	15.55	-31.23	0.00	0.00	Vehicle	Vehicle	-----	-497.91	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	-----	-----	**22.28**	**22.28**
		L$_{28}$ - L$_{29}$	-458.29	8.51	-41.76			0.75	1.17	7.46	-36.61	0.00	0.00	Vehicle	Vehicle	-----	-643.38	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	-----	-----	**22.32**	**22.32**
		L$_{29}$ - L$_{30}$	-542.18	9.74	-53.27			0.75	1.17	8.54	-46.71	0.00	0.00	Vehicle	Vehicle	-----	-765.55	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	-----	-----	**20.83**	**20.83**
		L$_{30}$ - L$_{31}$	-514.03	11.63	-46.25			0.75	1.18	10.32	-41.03	0.00	0.00	Vehicle	Vehicle	-----	-721.58	11.98	70.85	58.8700	2338.05	131.71	11.1432	5.6285	17.82	32.70	-1969.16	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**24.39**	**24.39**
		L$_{31}$ - L$_{32}$	-411.21	12.03	-43.31			0.75	1.18	10.67	-38.42	0.00	0.00	Vehicle	Vehicle	-----	-584.53	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	-----	-----	**22.48**	**22.48**

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 2F1 **Condition:** As-Built

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

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

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

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	(No Impact) Pedestrian $Load_{MAX}$	(No Impact) Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Verticals	Structure 1	U_0 - L_0	-67.60	6.15	-86.64			0.75	1.24	5.71	-80.38	0.00	0.00	Vehicle	Vehicle	-----	-192.38	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	-----	-----	-----	-----	-----	3.44	3.44
		U_1 - L_1	-24.06	5.93	-42.60			0.75	1.24	5.51	-39.52	0.00	0.00	Vehicle	Vehicle	-----	-82.65	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	-----	-----	-----	-----	-----	8.30	8.30
		U_2 - L_2	12.88	5.60	-33.50			0.75	1.24	5.19	-31.08	0.00	0.00	Vehicle	Vehicle	23.49	-23.67	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	79.90	79.90	11.74	11.74
		U_3 - L_3	37.35	18.37	-24.22			0.75	1.24	17.05	-22.47	0.00	0.00	Vehicle	Vehicle	70.71	-----	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	-----	-----	22.90	22.90	-----	-----
		U_4 - L_4	-15.53	5.11	-38.64			0.75	1.24	4.74	-35.85	0.00	0.00	Vehicle	Vehicle	-----	-66.79	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	-----	-----	9.33	9.33
		U_5 - L_5	-92.52	9.60	-44.44			0.75	1.24	8.90	-41.23	0.00	0.00	Vehicle	Vehicle	-----	-173.87	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	-----	-----	8.07	8.07
		U_6 - L_6	-117.01	3.99	-51.47			0.75	1.24	3.70	-47.75	0.00	0.00	Vehicle	Vehicle	-----	-214.19	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	8.19	8.19
		U_7 - L_7	-127.49	0.27	-55.46			0.75	1.24	0.25	-51.46	0.00	0.00	Vehicle	Vehicle	-----	-232.63	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	-----	-----	6.47	6.47
		U_8 - L_8	-368.60	2.16	-79.68			0.75	1.24	2.00	-73.92	0.00	0.00	Vehicle	Vehicle	-----	-575.28	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	9.43	9.43
		U_9 - L_9	-214.45	2.96	-61.55			0.75	1.20	2.66	-55.31	0.00	0.00	Vehicle	Vehicle	-----	-350.69	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	-----	-----	7.79	7.79
		U_{10} - L_{10}	-198.57	2.71	-57.70			0.75	1.20	2.44	-51.84	0.00	0.00	Vehicle	Vehicle	-----	-325.53	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	-----	-----	10.50	10.50
		U_{11} - L_{11}	-171.30	8.31	-51.48			0.75	1.20	7.47	-46.26	0.00	0.00	Vehicle	Vehicle	-----	-282.82	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	-----	-----	10.16	10.16
		U_{12} - L_{12}	-128.27	13.19	-43.84			0.75	1.20	11.85	-39.39	0.00	0.00	Vehicle	Vehicle	-----	-217.96	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	10.26	10.26
		U_{13} - L_{13}	-96.55	16.08	-41.70			0.75	1.20	14.45	-37.47	0.00	0.00	Vehicle	Vehicle	-----	-174.23	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	7.58	7.58
		U_{14} - L_{14}	-11.04	4.33	-41.46			0.75	1.20	3.89	-37.25	0.00	0.00	Vehicle	Vehicle	-----	-62.78	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	-----	-----	8.96	8.96
		U_{15} - L_{15}	-2.54	22.67	-31.75			0.75	1.20	20.37	-28.53	0.00	0.00	Vehicle	Vehicle	23.18	-40.39	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	21.12	21.12	11.94	11.94
		U_{16} - L_{16}	-31.31	18.71	-34.91			0.75	1.20	16.81	-31.37	0.00	0.00	Vehicle	Vehicle	-----	-81.49	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	-----	-----	9.88	9.88
		U_{17} - L_{17}	-105.02	8.14	-47.64			0.75	1.20	7.32	-42.81	0.00	0.00	Vehicle	Vehicle	-----	-192.17	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	-----	-----	7.16	7.16
		U_{18} - L_{18}	-126.66	2.86	-52.61			0.75	1.20	2.57	-47.27	0.00	0.00	Vehicle	Vehicle	-----	-226.11	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	-----	-----	8.43	8.43
		U_{19} - L_{19}	-166.54	2.68	-53.81			0.75	1.20	2.41	-48.35	0.00	0.00	Vehicle	Vehicle	-----	-279.36	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	-----	-----	9.30	9.30
		U_{20} - L_{20}	-184.30	2.48	-64.20			0.75	1.20	2.23	-57.69	0.00	0.00	Vehicle	Vehicle	-----	-314.58	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	-----	-----	6.89	6.89
		U_0 - L_0	-203.39	6.64	-72.32			0.75	1.18	5.89	-64.17	0.00	0.00	Vehicle	Vehicle	-----	-347.83	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	-----	-----	6.84	6.84
		U_1 - L_1	-176.11	7.20	-55.49			0.75	1.18	6.38	-49.23	0.00	0.00	Vehicle	Vehicle	-----	-292.95	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	-----	-----	10.08	10.08
		U_2 - L_2	-137.45	6.82	-55.02			0.75	1.18	6.05	-48.82	0.00	0.00	Vehicle	Vehicle	-----	-242.16	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	-----	-----	8.95	8.95
		U_3 - L_3	-117.61	7.10	-49.35			0.75	1.18	6.30	-43.79	0.00	0.00	Vehicle	Vehicle	-----	-209.82	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	-----	-----	7.63	7.63
		U_4 - L_4	-50.97	17.40	-38.56			0.75	1.18	15.44	-34.21	0.00	0.00	Vehicle	Vehicle	-----	-110.73	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	8.42	8.42
		U_5 - L_5	-13.79	20.94	-36.10			0.75	1.18	18.58	-32.03	0.00	0.00	Vehicle	Vehicle	6.24	-59.57	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	23.76	23.76	10.20	10.20
		U_6 - L_6	45.46	25.63	-29.03			0.75	1.18	22.74	-25.76	0.00	0.00	Vehicle	Vehicle	88.65	-----	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	-----	-----	16.81	16.81	-----	-----
		U_7 - L_7	-22.33	2.64	-40.89			0.75	1.18	2.34	-36.28	0.00	0.00	Vehicle	Vehicle	-----	-76.19	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	-----	-----	8.77	8.77
		U_8 - L_8	-120.06	18.50	-38.24			0.75	1.18	16.41	-33.93	0.00	0.00	Vehicle	Vehicle	-----	-200.19	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	-----	-----	12.10	12.10
		U_9 - L_9	-177.00	12.49	-47.99			0.75	1.18	11.08	-42.58	0.00	0.00	Vehicle	Vehicle	-----	-285.45	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	-----	-----	12.08	12.08
		U_{10} - L_{10}	-205.85	11.39	-51.50			0.75	1.18	10.10	-45.69	0.00	0.00	Vehicle	Vehicle	-----	-327.01	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	-----	-----	12.53	12.53
		U_{11} - L_{11}	-239.21	6.21	-53.41			0.75	1.18	5.51	-47.39	0.00	0.00	Vehicle	Vehicle	-----	-372.58	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	-----	-----	11.09	11.09
		U_{12} - L_{12}	-257.92	4.08	-58.48			0.75	1.18	3.62	-51.89	0.00	0.00	Vehicle	Vehicle	-----	-402.76	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	-----	-----	10.48	10.48
		U_{13} - L_{13}	-243.80	3.44	-61.12			0.75	1.18	3.05	-54.23	0.00	0.00	Vehicle	Vehicle	-----	-387.44	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	-----	-----	8.23	8.23
		U_{14} - L_{14}	-420.84	3.41	-72.93			0.75	1.18	3.02	-64.71	0.00	0.00	Vehicle	Vehicle	-----	-631.22	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	-----	-----	9.75	9.75
		U_{15} - L_{15}	-158.85	5.63	-61.64			0.75	1.17	4.94	-54.04	0.00	0.00	Vehicle	Vehicle	-----	-276.76	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	-----	-----	9.83	9.83
		U_{16} - L_{16}	-174.03	4.39	-57.26			0.75	1.17	3.85	-50.20	0.00	0.00	Vehicle	Vehicle	-----	-291.50	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	9.80	9.80
		U_{17} - L_{17}	-156.46	7.13	-57.71			0.75	1.17	6.25	-50.60	0.00	0.00	Vehicle	Vehicle	-----	-269.17	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	-----	-----	9.23	9.23
		U_{18} - L_{18}	-142.20	10.01	-51.65			0.75	1.17	8.78	-45.29	0.00	0.00	Vehicle	Vehicle	-----	-243.74	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	-----	-----	9.61	9.61
		U_{19} - L_{19}	-113.66	13.43	-46.62			0.75	1.17	11.78	-40.88	0.00	0.00	Vehicle	Vehicle	-----	-200.90	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	-----	-----	9.73	9.73
	Structure 2	U_{20} - L_{20}	-76.52	17.11	-43.01			0.75	1.17	15.00	-37.71	0.00	0.00	Vehicle	Vehicle	-----	-148.49	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	7.92	7.92
		U_{21} - L_{21}	-45.78	18.15	-38.02			0.75	1.17	15.91	-33.33	0.00	0.00	Vehicle	Vehicle	-----	-102.84	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	-----	-----	8.84	8.84
		U_{22} - L_{22}	-17.71	4.29	-39.78			0.75	1.17	3.76	-34.87	0.00	0.00	Vehicle	Vehicle	-----	-68.36	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	9.29	9.29
		U_{23} - L_{23}	-30.66	21.37	-31.34			0.75	1.17	18.73	-27.47	0.00	0.00	Vehicle	Vehicle	-----	-75.58	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	-----	-----	11.28	11.28
		U_{24} - L_{24}	-62.03	17.09	-39.64			0.75	1.17	14.98	-34.75	0.00	0.00	Vehicle	Vehicle	-----	-125.82	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	-----	-----	9.01	9.01
		U_{25} - L_{25}	-103.10	14.02	-46.32			0.75	1.17	12.29	-40.61	0.00	0.00	Vehicle	Vehicle	-----	-186.82	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	-----	-----	10.05	10.05
		U_{26} - L_{26}	-134.31	10.47	-47.53			0.75	1.17	9.18	-41.67	0.00	0.00	Vehicle	Vehicle	-----	-228.77	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	10.63	10.63
		U_{27} - L_{27}	-155.93	6.09	-54.51			0.75	1.17	5.34	-47.79	0.00	0.00	Vehicle	Vehicle	-----	-264.83	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	-----	-----	9.78	9.78
		U_{28} - L_{28}	-179.28	3.76	-58.51			0.75	1.17	3.30	-51.30	0.00	0.00	Vehicle	Vehicle	-----	-299.75	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	9.49	9.49
		U_{29} - L_{29}	-171.45	2.66	-56.72			0.75	1.17	2.34	-49.73	0.00	0.00	Vehicle	Vehicle	-----	-287.52	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	10.43	10.43
		U_{30} - L_{30}	-392.76	5.00	-72.94			0.75	1.18	4.43	-64.72	0.00	0.00	Vehicle	Vehicle	-----	-594.71	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}	-203.21	5.69	-60.81			0.75	1.18	5.05	-53.96	0.00	0.00	Vehicle	Vehicle	-----	-334.32	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	9.02	9.02
		U_{32} - L_{32}	-222.46	2.30	-62.43			0.75	1.18	2.04	-55.39	0.00	0.00	Vehicle	Vehicle	-----	-361.19	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	10.46	10.46
		U_{33} - L_{33}	-211.56	5.71	-58.48			0.75	1.18	5.06	-51.89	0.00	0.00	Vehicle	Vehicle	-----	-342.48	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	-----	-----	10.66	10.66
		U_{34} - L_{34}	-191.20	9.69	-52.14			0.75	1.18	8.60	-46.26	0.00	0.00	Vehicle	Vehicle	-----	-308.69	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	-----	-----	12.70	12.70
		U_{35} - L_{35}	-171.49	12.37	-51.45			0.75	1.18	10.98	-45.

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 2F1 **Condition:** As-Built

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

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

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

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	(No Impact) Pedestrian $Load_{MAX}$	(No Impact) Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Diagonals	Structure 1	U_0 - L_1	53.25	64.62	-9.24			0.75	1.24	59.95	-8.57	0.00	0.00	Vehicle	Vehicle	147.17	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**8.89**	**8.89**	-----	-----
		U_1 - L_2	10.78	48.77	-8.51			0.75	1.24	45.25	-7.90	0.00	0.00	Vehicle	Vehicle	72.83	-----	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	-----	-----	-----	-----	-----	**9.21**	**9.21**	-----	-----
		U_2 - L_3	-44.02	36.98	-28.60			0.75	1.24	34.31	-26.53	0.00	0.00	Vehicle	Vehicle	-----	-91.72	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	-----	-----	-----	-----	-----	**10.94**	**10.94**
		U_3 - L_4	-76.72	28.97	-45.08			0.75	1.24	26.87	-41.82	0.00	0.00	Vehicle	Vehicle	-----	-154.10	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**6.21**	**6.21**
		U_4 - L_4	118.39	48.29	-24.26			0.75	1.24	44.80	-22.51	0.00	0.00	Vehicle	Vehicle	212.15	-----	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	-----	-----	-----	-----	-----	**9.07**	**9.07**	-----	-----
		U_5 - L_5	137.53	59.05	-12.39			0.75	1.24	54.78	-11.49	0.00	0.00	Vehicle	Vehicle	250.00	-----	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	-----	-----	-----	-----	-----	**9.37**	**9.37**	-----	-----
		U_6 - L_6	157.34	61.53	-4.14			0.75	1.24	57.08	-3.84	0.00	0.00	Vehicle	Vehicle	278.74	-----	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	-----	-----	-----	-----	-----	**8.64**	**8.64**	-----	-----
		U_7 - L_7	149.30	61.72	-0.31			0.75	1.24	57.26	-0.28	0.00	0.00	Vehicle	Vehicle	268.52	-----	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	-----	-----	-----	-----	-----	**8.76**	**8.76**	-----	-----
		U_8 - L_8	249.09	67.12	-3.40			0.75	1.20	60.31	-3.05	0.00	0.00	Vehicle	Vehicle	402.22	-----	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	-----	-----	-----	-----	-----	**11.82**	**11.82**	-----	-----
		U_9 - L_{10}	260.26	67.59	-2.76			0.75	1.20	60.73	-2.48	0.00	0.00	Vehicle	Vehicle	417.29	-----	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	-----	-----	-----	-----	-----	**11.56**	**11.56**	-----	-----
		U_{10} - L_{11}	236.30	64.23	-10.40			0.75	1.20	57.71	-9.34	0.00	0.00	Vehicle	Vehicle	382.22	-----	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	-----	-----	-----	-----	-----	**11.69**	**11.69**	-----	-----
		U_{11} - L_{12}	211.92	56.77	-17.73			0.75	1.20	51.01	-15.93	0.00	0.00	Vehicle	Vehicle	341.81	-----	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	-----	-----	-----	-----	-----	**11.09**	**11.09**	-----	-----
		U_{12} - L_{13}	151.66	55.38	-22.32			0.75	1.20	49.75	-20.05	0.00	0.00	Vehicle	Vehicle	261.84	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**9.64**	**9.64**	-----	-----
		U_{13} - L_{14}	108.60	45.90	-27.78			0.75	1.20	41.24	-24.96	0.00	0.00	Vehicle	Vehicle	194.79	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**7.74**	**7.74**	-----	-----
		U_{14} - L_{14}	-24.45	35.61	-38.50			0.75	1.20	32.00	-34.59	0.00	0.00	Vehicle	Vehicle	9.81	-76.75	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**14.13**	**14.13**	**8.78**	**8.78**
		U_{15} - L_{15}	23.99	42.52	-30.52			0.75	1.20	38.20	-27.43	0.00	0.00	Vehicle	Vehicle	80.86	-4.46	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	-----	-----	-----	-----	-----	**10.57**	**10.57**	**12.71**	**12.71**
		U_{17} - L_{16}	120.03	49.82	-19.41			0.75	1.20	44.76	-17.44	0.00	0.00	Vehicle	Vehicle	214.23	-----	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	-----	-----	-----	-----	-----	**9.04**	**9.04**	-----	-----
		U_{18} - L_{17}	144.79	56.59	-9.76			0.75	1.20	50.85	-8.77	0.00	0.00	Vehicle	Vehicle	254.33	-----	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	-----	-----	-----	-----	-----	**9.95**	**9.95**	-----	-----
		U_{19} - L_{18}	193.05	57.79	-3.46			0.75	1.20	51.93	-3.10	0.00	0.00	Vehicle	Vehicle	318.47	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**9.96**	**9.96**	-----	-----
		U_{20} - L_{19}	193.51	56.81	-2.83			0.75	1.20	51.04	-2.54	0.00	0.00	Vehicle	Vehicle	317.92	-----	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	-----	-----	-----	-----	-----	**10.12**	**10.12**	-----	-----
	Structure 2	U_0 - L_1	202.41	57.30	-7.50			0.75	1.18	50.84	-6.65	0.00	0.00	Vehicle	Vehicle	329.22	-----	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	-----	-----	-----	-----	-----	**11.31**	**11.31**	-----	-----
		U_1 - L_2	190.86	59.35	-8.40			0.75	1.18	52.65	-7.46	0.00	0.00	Vehicle	Vehicle	316.57	-----	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	-----	-----	-----	-----	-----	**11.14**	**11.14**	-----	-----
		U_2 - L_3	155.85	55.75	-8.19			0.75	1.18	49.47	-7.27	0.00	0.00	Vehicle	Vehicle	266.90	-----	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	-----	-----	-----	-----	-----	**10.00**	**10.00**	-----	-----
		U_3 - L_4	134.05	50.42	-18.55			0.75	1.18	44.73	-16.46	0.00	0.00	Vehicle	Vehicle	232.42	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**9.90**	**9.90**	-----	-----
		U_4 - L_5	46.02	43.96	-25.71			0.75	1.18	39.00	-22.81	0.00	0.00	Vehicle	Vehicle	110.52	-----	0.00	16.85	16.8486	556.00	131.71	15.3958	1.9682	70.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**9.79**	**9.79**	-----	-----
		U_5 - L_6	3.45	38.04	-31.65			0.75	1.18	33.75	-28.08	0.00	0.00	Vehicle	Vehicle	48.35	-32.03	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	-----	-----	-----	-----	-----	**12.57**	**12.57**	**11.72**	**11.72**
		U_6 - L_7	-84.29	28.79	-43.35			0.75	1.18	25.55	-38.46	0.00	0.00	Vehicle	Vehicle	-----	-159.57	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	**7.15**	**7.15**
		U_7 - L_7	137.30	48.11	-28.00			0.75	1.18	42.69	-24.85	0.00	0.00	Vehicle	Vehicle	233.98	-----	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	-----	-----	-----	-----	-----	**10.92**	**10.92**	-----	-----
		U_8 - L_8	210.89	51.47	-22.31			0.75	1.18	45.66	-19.79	0.00	0.00	Vehicle	Vehicle	333.52	-----	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	-----	-----	-----	-----	-----	**10.93**	**10.93**	-----	-----
		U_9 - L_9	236.36	58.34	-14.88			0.75	1.18	51.76	-13.21	0.00	0.00	Vehicle	Vehicle	374.56	-----	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	-----	-----	-----	-----	-----	**10.45**	**10.45**	-----	-----
		U_{10} - L_{10}	274.62	59.86	-12.66			0.75	1.18	53.11	-11.23	0.00	0.00	Vehicle	Vehicle	426.05	-----	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	-----	-----	-----	-----	-----	**10.73**	**10.73**	-----	-----
		U_{11} - L_{11}	281.06	58.53	-6.70			0.75	1.18	51.93	-5.94	0.00	0.00	Vehicle	Vehicle	432.89	-----	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	-----	-----	-----	-----	-----	**10.85**	**10.85**	-----	-----
		U_{12} - L_{12}	278.12	58.34	-4.47			0.75	1.18	51.77	-3.97	0.00	0.00	Vehicle	Vehicle	428.85	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**9.65**	**9.65**	-----	-----
		U_{14} - L_{13}	235.45	57.30	-4.93			0.75	1.18	50.84	-4.38	0.00	0.00	Vehicle	Vehicle	372.17	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**10.66**	**10.66**	-----	-----
		U_{14} - L_{15}	143.03	54.97	-5.51			0.75	1.17	48.19	-4.83	0.00	0.00	Vehicle	Vehicle	248.59	-----	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	-----	-----	-----	-----	-----	**10.53**	**10.53**	-----	-----
		U_{15} - L_{16}	171.91	55.23	-5.57			0.75	1.17	48.43	-4.88	0.00	0.00	Vehicle	Vehicle	286.44	-----	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	-----	-----	-----	-----	-----	**9.89**	**9.89**	-----	-----
		U_{16} - L_{17}	181.04	60.05	-7.42			0.75	1.17	52.65	-6.50	0.00	0.00	Vehicle	Vehicle	303.79	-----	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	-----	-----	-----	-----	-----	**10.05**	**10.05**	-----	-----
		U_{17} - L_{18}	171.16	55.48	-11.35			0.75	1.17	48.64	-9.95	0.00	0.00	Vehicle	Vehicle	285.74	-----	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	-----	-----	-----	-----	-----	**9.86**	**9.86**	-----	-----
		U_{18} - L_{19}	150.64	54.58	-15.43			0.75	1.17	47.85	-13.53	0.00	0.00	Vehicle	Vehicle	258.04	-----	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	-----	-----	-----	-----	-----	**10.45**	**10.45**	-----	-----
		U_{19} - L_{20}	125.86	51.94	-21.50			0.75	1.17	45.54	-18.85	0.00	0.00	Vehicle	Vehicle	222.82	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**10.48**	**10.48**	-----	-----
		U_{20} - L_{21}	76.05	46.70	-22.68			0.75	1.17	40.94	-19.89	0.00	0.00	Vehicle	Vehicle	152.09	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**8.59**	**8.59**	-----	-----
		U_{21} - L_{22}	38.34	37.37	-34.07			0.75	1.17	32.76	-29.87	0.00	0.00	Vehicle	Vehicle	92.44	-----	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	-----	-----	-----	-----	-----	**11.88**	**11.88**	-----	-----
		U_{23} - L_{22}	18.02	37.41	-37.29			0.75	1.17	32.80	-32.70	0.00	0.00	Vehicle	Vehicle	66.07	-19.08	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	-----	-----	-----	-----	-----	**12.49**	**12.49**	**10.43**	**10.43**
		U_{24} - L_{23}	58.54	42.24	-27.95			0.75	1.17	37.04	-24.51	0.00	0.00	Vehicle	Vehicle	124.25	-----	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	-----	-----	-----	-----	-----	**9.97**	**9.97**	-----	-----
		U_{25} - L_{24}	114.92	50.91	-22.15			0.75	1.17	44.63	-19.42	0.00	0.00	Vehicle	Vehicle	207.42	-----	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	-----	-----	-----	-----	-----	**10.94**	**10.94**	-----	-----
		U_{26} - L_{25}	142.93	56.48	-16.66			0.75	1.17	49.52	-14.61	0.00	0.00	Vehicle	Vehicle	250.19	-----	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	-----	-----	-----	-----	-----	**10.25**	**10.25**	-----	-----
		U_{27} - L_{26}	173.71	53.49	-11.98			0.75	1.17	46.90	-10.50	0.00	0.00	Vehicle	Vehicle	286.79	-----	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	-----	-----	-----	-----	-----	**10.17**	**10.17**	-----	-----
		U_{28} - L_{27}	186.49	59.27	-6.73			0.75	1.17	51.96	-5.90	0.00	0.00	Vehicle	Vehicle	309.99	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**10.08**	**10.08**	-----	-----
		U_{29} - L_{28}	190.57	58.25	-3.23			0.75	1.17	51.07	-2.83	0.00	0.00	Vehicle	Vehicle	314.14	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**9.01**	**9.01**	-----	-----
		U_{30} - L_{29}	161.74	53.13	-4.46			0.75	1.17	46.58	-3.91	0.00	0.00	Vehicle	Vehicle	270.82	-----	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	-----	-----	-----	-----	-----	**10.50**	**10.50**	-----	-----
		U_{30} - L_{31}	191.49	55.30	-5.58			0.75	1.18	49.07	-4.95	0.00	0.00	Vehicle	Vehicle	312.72	-----	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	-----	-----	-----	-----	-----	**11.94**	**11.94**	-----	-----
		U_{31} - L_{32}	226.17	59.94	-6.11			0.75	1.18	53.19	-5.42	0.00	0.00	Vehicle	Vehicle	363.16	-----	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	-----	-----	-----	-----	-----	**10.37**	**10.37**	-----	-----
		U_{32} - L_{33}	243.26	61.14	-5.84			0.75	1.18	54.25	-5.18	0.00	0.00	Vehicle	Vehicle	386.76	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**11.08**	**11.08**	-----	-----
		U_{33} - L_{34}	238.98	58.09	-10.55			0.75	1.18	51.54	-9.36	0.00	0.00	Vehicle	Vehicle	377.68	-----	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	-----	-----	-----	-----	-----	**11.75**	**11.75**	-----	-----
		U_{34} - L_{35}	222.10	59.54	-14.31			0.75	1.18	52.83	-12.70	0.00	0.00	Vehicle	Vehicle	357.41	-----	0.00	30.63

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 2F1 **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 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	5.68	-28.32	2.20	-8.83	0.90	1.24	6.33	-31.53	2.20	-8.83	Pedestrian	Vehicle	-----	-127.78	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	-----	-----	**15.81**	**15.81**
		U_1 - U_2	-86.66	13.52	-43.82	6.00	-16.34	0.90	1.24	15.05	-48.78	6.00	-16.34	Pedestrian	Pedestrian	-----	-197.31	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	-----	-----	**7.35**	**7.35**
		U_2 - U_3	-48.28	19.98	-46.22	9.44	-19.05	0.90	1.24	22.24	-51.46	9.44	-19.05	Pedestrian	Pedestrian	-----	-154.42	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	**7.33**	**7.33**
		U_3 - U_4	36.43	25.86	-41.05	12.72	-17.47	0.90	1.24	28.79	-45.70	12.72	-17.47	Pedestrian	Pedestrian	101.31	-34.76	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	**15.29**	**15.29**	**9.53**	**9.53**
		U_4 - U_5	38.78	25.94	-40.82	12.78	-17.37	0.90	1.24	28.88	-45.44	12.78	-17.37	Pedestrian	Pedestrian	104.58	-31.24	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	**15.18**	**15.18**	**9.62**	**9.62**
		U_5 - U_6	154.43	29.25	-26.61	15.13	-12.03	0.90	1.24	32.57	-29.62	15.13	-12.03	Pedestrian	Pedestrian	262.76	-----	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	-----	-----	**10.83**	**10.83**	-----	-----
		U_6 - U_7	288.19	31.91	-13.00	17.11	-4.31	0.90	1.24	35.52	-14.47	17.11	-4.31	Pedestrian	Vehicle	443.07	-----	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	-----	-----	**9.81**	**9.81**	-----	-----
		U_7 - U_8	410.75	32.72	-4.05	22.59	0.00	0.90	1.24	36.43	-4.51	22.59	0.00	Pedestrian	Vehicle	610.70	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	**11.85**	**11.85**	-----	-----
		U_8 - U_9	311.35	25.10	-5.17	19.05	0.00	0.90	1.20	27.06	-5.58	19.05	0.00	Pedestrian	Vehicle	464.69	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	**13.61**	**13.61**	-----	-----
		U_9 - U_{10}	78.25	25.27	-23.39	12.28	-6.83	0.90	1.20	27.24	-25.22	12.28	-6.83	Pedestrian	Vehicle	153.10	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	-----	-----	10.67	-----	-----	**15.96**	**15.96**	-----	-----
		U_{10} - U_{11}	-141.75	23.78	-39.60	11.11	-18.45	0.90	1.20	25.64	-42.70	11.11	-18.45	Pedestrian	Pedestrian	-----	-263.76	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	-----	-----	**7.45**	**7.45**
		U_{11} - U_{12}	-338.40	21.86	-59.39	9.77	-27.96	0.90	1.20	23.57	-64.03	9.77	-27.96	Pedestrian	Pedestrian	-----	-559.51	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	-----	-----	**5.15**	**5.15**
		U_{12} - U_{13}	-480.50	19.10	-69.56	8.23	-34.35	0.90	1.20	20.60	-75.00	8.23	-34.35	Pedestrian	Pedestrian	-----	-766.80	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	-----	-----	**6.01**	**6.01**
		U_{13} - U_{14}	-571.10	16.19	-73.42	6.68	-37.24	0.90	1.20	17.45	-79.16	6.68	-37.24	Pedestrian	Pedestrian	-----	-893.75	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**6.50**	**6.50**
		U_{14} - U_{15}	-571.52	16.11	-73.37	6.65	-37.25	0.90	1.20	17.37	-79.11	6.65	-37.25	Pedestrian	Pedestrian	-----	-894.24	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	-----	-----	**6.50**	**6.50**
		U_{15} - U_{16}	-582.34	12.55	-69.15	4.98	-36.14	0.90	1.20	13.53	-74.56	4.98	-36.14	Pedestrian	Pedestrian	-----	-900.95	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	-----	-----	**6.73**	**6.73**
		U_{16} - U_{17}	-539.92	9.35	-61.84	3.53	-31.87	0.90	1.20	10.08	-66.67	3.53	-31.87	Pedestrian	Pedestrian	-----	-829.99	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**7.99**	**7.99**
		U_{17} - U_{18}	-422.72	6.05	-45.93	2.26	-25.07	0.90	1.20	6.52	-49.52	2.26	-25.07	Pedestrian	Pedestrian	-----	-646.50	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	8.00	12.00	Pass	-----	-----	**7.35**	**7.35**
		U_{18} - U_{19}	-286.53	3.42	-29.43	1.28	-16.97	0.90	1.20	3.68	-31.73	1.28	-16.97	Pedestrian	Pedestrian	-----	-435.81	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	-----	-----	**8.03**	**8.03**
		U_{19} - U_{20}	-140.97	1.45	-13.05	0.55	-8.68	0.90	1.20	1.56	-14.07	0.55	-8.68	Pedestrian	Pedestrian	-----	-212.84	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	**23.58**	**23.58**
	Structure 2	U_0 - U_1	-147.48	2.87	-19.73	0.45	-4.88	0.90	1.18	3.06	-21.01	0.45	-4.88	Vehicle	Vehicle	-----	-219.04	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**23.80**	**23.80**
		U_1 - U_2	-319.09	6.10	-37.91	1.96	-13.36	0.90	1.18	6.50	-40.36	1.96	-13.36	Vehicle	Vehicle	-----	-467.28	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	-----	-----	**11.70**	**11.70**
		U_2 - U_3	-460.93	10.92	-54.83	3.77	-20.95	0.90	1.18	11.63	-58.38	3.77	-20.95	Vehicle	Pedestrian	-----	-702.32	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.50	4.00	0.50	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	**7.77**	**7.77**
		U_3 - U_4	-580.02	16.62	-71.44	5.92	-27.68	0.90	1.18	17.69	-76.06	5.92	-27.68	Pedestrian	Pedestrian	-----	-888.90	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	-----	-----	**7.34**	**7.34**
		U_4 - U_5	-616.47	21.61	-76.82	7.86	-31.35	0.90	1.18	23.01	-81.79	7.86	-31.35	Pedestrian	Pedestrian	-----	-948.50	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	-----	-----	**7.69**	**7.69**
		U_5 - U_6	-604.69	26.66	-77.40	9.87	-32.88	0.90	1.18	28.38	-82.40	9.87	-32.88	Pedestrian	Pedestrian	-----	-935.97	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	-----	-----	**7.65**	**7.65**
		U_6 - U_7	-514.75	30.53	-69.71	11.56	-31.23	0.90	1.18	32.51	-74.22	11.56	-31.23	Pedestrian	Pedestrian	-----	-806.27	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	-----	-----	**7.84**	**7.84**
		U_7 - U_8	-512.80	30.56	-69.53	11.57	-31.18	0.90	1.18	32.54	-74.03	11.57	-31.18	Pedestrian	Pedestrian	-----	-803.41	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	-----	-----	**7.88**	**7.88**
		U_8 - U_9	-373.48	34.01	-61.57	13.16	-27.41	0.90	1.18	36.21	-65.55	13.16	-27.41	Pedestrian	Pedestrian	-----	-606.37	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	-----	-----	**8.10**	**8.10**
		U_9 - U_{10}	-181.02	35.64	-46.66	14.25	-21.42	0.90	1.18	37.94	-49.67	14.25	-21.42	Pedestrian	Pedestrian	-----	-327.75	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	-----	-----	**9.92**	**9.92**
		U_{10} - U_{11}	26.21	36.89	-31.71	15.21	-14.40	0.90	1.18	39.27	-33.76	15.21	-14.40	Pedestrian	Pedestrian	104.90	-28.53	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	**16.23**	**16.23**	**16.52**	**16.52**
		U_{11} - U_{12}	237.41	36.07	-18.65	15.56	-6.85	0.90	1.18	38.41	-19.86	15.56	-6.85	Pedestrian	Pedestrian	378.78	-----	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	-----	-----	**12.48**	**12.48**	-----	-----
		U_{12} - U_{13}	435.92	35.34	-9.33	18.38	0.00	0.90	1.18	37.63	-9.93	18.38	0.00	Pedestrian	Vehicle	639.49	-----	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	-----	-----	**12.56**	**12.56**	-----	-----
		U_{13} - U_{14}	595.85	33.65	-8.72	24.32	0.00	0.90	1.18	35.83	-9.28	24.32	0.00	Pedestrian	Vehicle	852.80	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	**16.10**	**16.10**	-----	-----
		U_{14} - U_{15}	615.52	30.23	-7.56	24.37	0.00	0.90	1.17	31.80	-7.95	24.37	0.00	Pedestrian	Vehicle	873.20	-----	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	-----	-----	**16.89**	**16.89**	-----	-----
		U_{15} - U_{16}	486.12	31.55	-12.51	18.61	0.00	0.90	1.17	33.19	-13.16	18.61	0.00	Pedestrian	Vehicle	699.30	-----	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	-----	-----	**15.18**	**15.18**	-----	-----
		U_{16} - U_{17}	339.23	31.39	-23.19	14.66	-2.95	0.90	1.17	33.02	-24.40	14.66	-2.95	Pedestrian	Vehicle	502.98	-----	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	-----	-----	**14.78**	**14.78**	-----	-----
		U_{17} - U_{18}	192.06	30.70	-34.72	15.12	-9.49	0.90	1.17	32.30	-36.53	15.12	-9.49	Pedestrian	Vehicle	311.32	-----	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	-----	-----	**12.11**	**12.11**	-----	-----
		U_{18} - U_{19}	53.73	28.13	-46.26	15.12	-15.34	0.90	1.17	29.59	-48.67	15.12	-15.34	Pedestrian	Vehicle	127.97	-----	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	-----	-----	**15.94**	**15.94**	-----	-----
		U_{19} - U_{20}	-59.08	24.94	-56.17	15.07	-19.84	0.90	1.17	26.24	-59.09	15.07	-19.84	Pedestrian	Pedestrian	-----	-179.43	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	-----	-----	**8.03**	**8.03**
	Structure 3	U_0 - U_{21}	-125.50	20.80	-59.05	14.76	-22.39	0.90	1.17	21.88	-62.12	14.76	-22.39	Pedestrian	Pedestrian	-----	-273.01	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	-----	-----	**8.42**	**8.42**
		U_{21} - U_{22}	-146.93	17.26	-59.68	14.37	-22.74	0.90	1.17	18.16	-62.78	14.37	-22.74	Pedestrian	Pedestrian	-----	-302.19	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**8.07**	**8.07**
		U_{22} - U_{23}	-146.70	17.31	-59.67	14.36	-22.72	0.90	1.17	18.21	-62.78	14.36	-22.72	Pedestrian	Pedestrian	-----	-301.86	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**8.07**	**8.07**
		U_{23} - U_{24}	-112.76	21.04	-55.33	13.87	-21.04	0.90	1.17	22.14	-58.21	13.87	-21.04	Pedestrian	Pedestrian	-----	-249.62	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**9.14**	**9.14**
		U_{24} - U_{25}	-36.27	24.24	-47.17	13.40	-17.33	0.90	1.17	25.50	-49.62	13.40	-17.33	Pedestrian	Pedestrian	3.41	-134.19	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	**22.02**	**22.02**	**9.81**	**9.81**
		U_{25} - U_{26}	80.70	26.32	-35.73	12.92	-12.15	0.90	1.17	27.69	-37.60	12.92	-12.15	Pedestrian	Vehicle	157.70	-----	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	**16.88**	**16.88**	-----	-----
		U_{26} - U_{27}	220.59	28.04	-25.53	12.57	-7.08	0.90	1.17	29.50	-26.86	12.57	-7.08	Pedestrian	Vehicle	341.46	-----	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	-----	-----	**12.97**	**12.97**	-----	-----
		U_{27} - U_{28}	363.31	28.40	-14.09	14.90	-2.16	0.90	1.17	29.88	-14.83	14.90	-2.16	Pedestrian	Vehicle	530.51	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	**15.20**	**15.20**	-----	-----
		U_{28} - U_{29}	503.82	28.51	-8.00	21.74	0.00	0.90	1.17	29.99	-8.41	21.74	0.00	Pedestrian	Vehicle	722.21	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	**14.86**	**14.86**	-----	-----
		U_{29} - U_{30}	616.57	28.04	-7.73	27.08	0.00	0.90	1.17	29.50	-8.13	27.08	0.00	Pedestrian	Vehicle	875.09	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16

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: 2F1 **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)

			Member Forces from STAAD													Member Capacity in Tension				Member Capacity in Compression						Plate Thickness/Ratios																				Axial Force Rating			
																											Web																				Tension Member		Comp. Member	
Location		Member	D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	(No Impact) Pedestrian $Load_{MAX}$	(No Impact) Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Depth (in)	Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Inventory RF	Operating RF	Inventory RF	Operating RF
South Truss - Lower Chord	Structure 1	L_0- L_1	-2.01	5.09	-3.91	0.36	-2.06	0.90	1.24	5.67	-4.36	0.36	-2.06	Vehicle	Pedestrian	4.76	-10.95	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	88.98	88.98	65.71	65.71
		L_1 - L_2	67.91	27.77	-7.46	9.23	-3.36	0.90	1.24	30.91	-8.30	9.23	-3.36	Vehicle	Pedestrian	128.47	-----	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	-----	-----	14.06	14.06	-----	-----
		L_2 - L_3	78.84	46.16	-16.18	15.48	-7.39	0.90	1.24	51.39	-18.01	15.48	-7.39	Vehicle	Pedestrian	169.30	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	11.48	11.48	-----	-----
		L_3 - L_4	39.14	48.38	-22.57	18.09	-10.83	0.90	1.24	53.86	-25.12	18.09	-10.83	Pedestrian	Pedestrian	144.43	-----	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	8.75	8.75	-----	-----
		L_4 - L_5	-166.38	31.01	-32.79	10.96	-16.90	0.90	1.24	34.52	-36.50	10.96	-16.90	Vehicle	Pedestrian	-----	-285.72	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	6.25	6.25
		L_5 - L_6	-301.23	15.28	-35.53	3.23	-18.93	0.90	1.24	17.01	-39.56	3.23	-18.93	Vehicle	Pedestrian	-----	-467.63	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	-----	-----	6.13	6.13
		L_6 - L_7	-438.94	4.80	-38.34	0.00	-26.51	0.90	1.24	5.35	-42.69	0.00	-26.51	Vehicle	Pedestrian	-----	-660.57	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	-----	-----	7.31	7.31
		L_7 - L_8	-551.65	2.10	-38.47	0.00	-35.55	0.90	1.24	2.33	-42.83	0.00	-35.55	Vehicle	Pedestrian	-----	-819.03	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	-----	-----	8.27	8.27
		L_8 - L_9	-570.53	4.70	-42.41	0.00	-37.48	0.90	1.20	5.07	-45.73	0.00	-37.48	Vehicle	Pedestrian	-----	-849.85	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	7.56	7.56
		L_9 - L_{10}	-355.48	5.38	-24.63	0.00	-24.70	0.90	1.20	5.80	-26.55	0.00	-24.70	Vehicle	Pedestrian	-----	-528.75	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	11.51	11.51
		L_{10} - L_{11}	-118.48	21.31	-21.06	0.00	-12.43	0.90	1.20	22.97	-22.71	0.00	-12.43	Vehicle	Pedestrian	-----	-199.70	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	10.87	10.87
		L_{11} - L_{12}	103.45	35.55	-19.51	9.96	-9.47	0.90	1.20	38.33	-21.03	9.96	-9.47	Vehicle	Pedestrian	184.31	-----	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	-----	-----	12.80	12.80	-----	-----
		L_{12} - L_{13}	300.60	56.01	-18.05	17.83	-8.14	0.90	1.20	60.39	-19.46	17.83	-8.14	Vehicle	Pedestrian	469.29	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	11.16	11.16	-----	-----
		L_{13} - L_{14}	441.19	65.21	-15.32	24.15	-6.61	0.90	1.20	70.31	-16.52	24.15	-6.61	Pedestrian	Pedestrian	696.34	-----	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	-----	-----	9.18	9.18	-----	-----
		L_{14} - L_{15}	547.00	66.49	-9.98	24.57	-3.49	0.90	1.20	71.69	-10.76	24.57	-3.49	Pedestrian	Vehicle	836.23	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.74	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	10.67	10.67	-----	-----
		L_{15} - L_{16}	506.09	57.78	-9.37	20.32	-2.03	0.90	1.20	62.29	-10.10	20.32	-2.03	Vehicle	Vehicle	738.90	-----	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	-----	-----	17.15	17.15	-----	-----
		L_{16} - L_{17}	398.75	43.11	-8.40	12.72	-0.83	0.90	1.20	46.48	-9.05	12.72	-0.83	Vehicle	Vehicle	578.81	-----	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	-----	-----	17.59	17.59	-----	-----
		L_{17} - L_{18}	263.81	26.28	-6.87	4.81	0.00	0.90	1.20	28.33	-7.41	4.81	0.00	Vehicle	Vehicle	379.78	-----	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	-----	-----	21.87	21.87	-----	-----
		L_{18} - L_{19}	118.75	20.91	-5.40	0.71	-3.38	0.90	1.20	22.55	-5.83	0.71	-3.38	Vehicle	Pedestrian	183.69	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	17.03	17.03	-----	-----
		L_{19} - L_{20}	-23.36	17.93	-5.48	1.28	-12.08	0.90	1.20	19.34	-5.91	1.28	-12.08	Vehicle	Pedestrian	-----	-53.76	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	-----	-----	22.24	22.24
		L_0- L_1	-36.12	11.04	-7.44	1.33	-5.14	0.90	1.18	11.75	-7.92	1.33	-5.14	Vehicle	Pedestrian	-----	-63.93	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	-----	-----	38.19	38.19
		L_1 - L_2	132.64	19.12	-2.88	2.93	-0.06	0.90	1.18	20.35	-3.07	2.93	-0.06	Vehicle	Vehicle	198.90	-----	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	-----	-----	24.60	24.60	-----	-----
		L_2 - L_3	303.94	39.26	-6.12	10.52	-1.79	0.90	1.18	41.80	-6.52	10.52	-1.79	Vehicle	Vehicle	449.46	-----	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	-----	-----	16.08	16.08	-----	-----
		L_3 - L_4	445.73	53.89	-10.99	18.15	-3.63	0.90	1.18	57.38	-11.70	18.15	-3.63	Vehicle	Vehicle	654.04	-----	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	-----	-----	15.05	15.05	-----	-----
		L_4 - L_5	567.64	71.98	-17.61	24.81	-6.10	0.90	1.18	76.64	-18.75	24.81	-6.10	Vehicle	Vehicle	837.57	-----	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	-----	-----	14.12	14.12	-----	-----
		L_5 - L_6	603.43	76.61	-22.58	28.47	-8.06	0.90	1.18	81.57	-24.04	28.47	-8.06	Pedestrian	Pedestrian	927.51	-----	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	-----	-----	10.81	10.81	-----	-----
		L_6 - L_7	599.28	79.62	-28.66	30.25	-10.41	0.90	1.18	84.77	-30.51	30.25	-10.41	Pedestrian	Pedestrian	928.59	-----	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	-----	-----	10.59	10.59	-----	-----
		L_7 - L_8	373.73	63.73	-35.95	24.92	-13.66	0.90	1.18	67.86	-38.27	24.92	-13.66	Pedestrian	Pedestrian	606.46	-----	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	-----	-----	10.43	10.43	-----	-----
		L_8 - L_9	195.51	51.10	-38.71	19.51	-15.12	0.90	1.18	54.41	-41.22	19.51	-15.12	Pedestrian	Pedestrian	350.26	-----	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	-----	-----	12.23	12.23	-----	-----
		L_9 - L_{10}	-13.41	35.42	-40.03	12.45	-16.11	0.90	1.18	37.71	-42.62	12.45	-16.11	Vehicle	Pedestrian	31.59	-93.78	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	23.21	23.21	12.16	12.16
		L_{10} - L_{11}	-217.51	21.82	-40.59	5.50	-17.02	0.90	1.18	23.23	-43.21	5.50	-17.02	Vehicle	Pedestrian	-----	-361.06	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	7.19	7.19
		L_{11} - L_{12}	-420.12	10.94	-39.93	0.00	-23.35	0.90	1.18	11.65	-42.51	0.00	-23.35	Vehicle	Pedestrian	-----	-631.77	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	-----	-----	7.75	7.75
		L_{12} - L_{13}	-591.61	10.99	-40.78	0.00	-30.09	0.90	1.18	11.70	-43.42	0.00	-30.09	Vehicle	Pedestrian	-----	-864.66	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	9.30	9.30
		L_{13} - L_{14}	-724.42	10.30	-39.16	0.00	-35.12	0.90	1.18	10.97	-41.69	0.00	-35.12	Vehicle	Pedestrian	-----	-1041.60	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	-----	-----	10.29	10.29
		L_{14} - L_{15}	-747.19	11.89	-45.25	0.00	-36.29	0.90	1.17	12.51	-47.60	0.00	-36.29	Vehicle	Pedestrian	-----	-1080.41	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	-----	-----	9.15	9.15
		L_{15} - L_{16}	-632.29	10.92	-37.03	0.00	-31.22	0.90	1.17	11.49	-38.96	0.00	-31.22	Vehicle	Pedestrian	-----	-913.21	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	9.16	9.16
		L_{16} - L_{17}	-488.73	11.49	-26.48	0.00	-25.40	0.90	1.17	12.09	-27.86	0.00	-25.40	Vehicle	Pedestrian	-----	-704.57	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	-----	-----	10.49	10.49
		L_{17} - L_{18}	-337.06	19.93	-26.26	0.00	-18.13	0.90	1.17	20.97	-27.63	0.00	-18.13	Vehicle	Pedestrian	-----	-497.66	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	8.53	8.53
		L_{18} - L_{19}	-183.64	31.85	-25.85	4.48	-11.34	0.90	1.17	33.51	-27.20	4.48	-11.34	Vehicle	Pedestrian	-----	-288.82	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	-----	-----	10.12	10.12
		L_{19} - L_{20}	-45.76	40.17	-23.25	8.92	-9.58	0.90	1.17	42.27	-24.46	8.92	-9.58	Vehicle	Pedestrian	-----	-103.74	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	-----	-----	15.51	15.51
	Structure 2	L_{20} - L_{21}	68.06	52.09	-20.65	11.57	-9.12	0.90	1.17	54.81	-21.73	11.57	-9.12	Vehicle	Pedestrian	159.73	-----	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	-----	-----	16.36	16.36	-----	-----
		L_{21} - L_{22}	134.01	54.45	-16.51	13.61	-8.81	0.90	1.17	57.29	-17.37	13.61	-8.81	Vehicle	Pedestrian	248.68	-----	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	-----	-----	14.50	14.50	-----	-----
		L_{22} - L_{23}	122.68	52.89	-18.21	11.79	-7.57	0.90	1.17	55.64	-19.16	11.79	-7.57	Pedestrian	Pedestrian	231.83	-----	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	-----	-----	15.13	15.13	-----	-----
		L_{23} - L_{24}	46.89	44.41	-20.38	8.09	-7.09	0.90	1.17	46.73	-21.44	8.09	-7.09	Vehicle	Vehicle	121.70	-----	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	-----	-----	19.64	19.64	-----	-----
		L_{24} - L_{25}	-66.54	34.07	-22.66	3.32	-6.23	0.90	1.17	35.84	-23.84	3.32	-6.23	Vehicle	Vehicle	-----	-117.49	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	-----	-----	21.27	21.27
		L_{25} - L_{26}	-205.63	23.52	-24.19	0.00	-11.77	0.90	1.17	24.74	-25.45	0.00	-11.77	Vehicle	Pedestrian	-----	-315.71	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	9.89	9.89
		L_{26} - L_{27}	-350.43	21.88	-24.68	0.00	-18.87	0.90	1.17	23.01	-25.97	0.00	-18.87	Vehicle	Pedestrian	-----	-513.84	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	8.41	8.41
		L_{27} - L_{28}	-494.65	18.38	-24.65	0.00	-25.89	0.90	1.17	19.34	-25.93	0.00	-25.89	Vehicle	Pedestrian	-----	-710.41	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	-----	-----	10.67	10.67
		L_{28} - L_{29}	-620.83	15.83	-27.70	0.00	-31.78	0.90	1.17	16.66	-29.15	0.00	-31.78	Vehicle	Pedestrian	-----	-886.28	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	-----	-----	10.74	10.74
		L_{29} - L_{30}	-716.91	12.45	-33.23	0.00	-36.29	0.90	1.17	13.10	-34.96	0.00	-36.29	Vehicle	Pedestrian	-----	-1024.62	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.

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: 2F1
Condition: As-Built

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	(No Impact) Pedestrian $Load_{MAX}$	(No Impact) Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Verticals	Structure 1	U_0 - L_0	-93.72	7.38	-33.90	3.44	-12.32	0.90	1.24	8.22	-37.74	3.44	-12.32	Pedestrian	Vehicle	-----	-170.90	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	6.64	6.64
		U_1 - L_1	-46.53	6.36	-23.88	2.93	-9.05	0.90	1.24	7.08	-26.58	2.93	-9.05	Pedestrian	Pedestrian	-----	-106.81	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	-----	-----	-----	-----	-----	8.58	8.58
		U_2 - L_2	-0.10	5.75	-16.00	2.84	-5.68	0.90	1.24	6.40	-17.82	2.84	-5.68	Pedestrian	Vehicle	11.88	-23.29	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	46.32	46.32	19.75	19.75
		U_3 - L_3	39.60	6.21	-10.45	2.69	-2.12	0.90	1.24	6.91	-11.63	2.69	-2.12	Pedestrian	Vehicle	63.96	-----	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	-----	-----	-----	-----	-----	40.42	40.42	-----	-----
		U_4 - L_4	-30.20	0.86	-16.90	0.00	-3.46	0.90	1.24	0.96	-18.81	0.00	-3.46	Vehicle	Vehicle	-----	-63.72	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	-----	-----	16.99	16.99
		U_5 - L_5	-130.49	2.44	-21.56	0.00	-10.23	0.90	1.24	2.71	-24.00	0.00	-10.23	Vehicle	Pedestrian	-----	-214.13	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	-----	-----	-----	-----	-----	8.61	8.61
		U_6 - L_6	-158.18	3.59	-21.24	0.00	-13.06	0.90	1.24	4.00	-23.65	0.00	-13.06	Vehicle	Pedestrian	-----	-253.36	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	-----	-----	-----	-----	-----	9.53	9.53
		U_7 - L_7	-152.32	6.48	-20.91	0.00	-13.24	0.90	1.24	7.21	-23.28	0.00	-13.24	Vehicle	Pedestrian	-----	-245.49	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	-----	-----	-----	-----	-----	8.43	8.43
		U_8 - L_8	-455.55	7.90	-32.74	0.00	-31.72	0.90	1.24	8.80	-36.44	0.00	-31.72	Vehicle	Pedestrian	-----	-680.82	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	-----	-----	-----	8.95	8.95
		U_9 - L_9	-287.55	1.73	-33.42	0.00	-18.20	0.90	1.20	1.87	-36.03	0.00	-18.20	Vehicle	Pedestrian	-----	-444.32	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	-----	-----	16.25	-----	-----	32.50	45.00	Pass	9.60	12.00	Pass	-----	-----	-----	-----	-----	6.59	6.59
		U_{10} - L_{10}	-276.32	0.84	-31.77	0.00	-17.54	0.90	1.20	0.91	-34.25	0.00	-17.54	Vehicle	Pedestrian	-----	-426.56	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	-----	-----	-----	-----	-----	9.00	9.00
		U_{11} - L_{11}	-232.59	0.88	-29.33	0.00	-14.41	0.90	1.20	0.94	-31.62	0.00	-14.41	Vehicle	Pedestrian	-----	-362.21	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	-----	-----	-----	-----	-----	8.88	8.88
		U_{12} - L_{12}	-178.43	0.82	-24.93	0.00	-11.20	0.90	1.20	0.88	-26.88	0.00	-11.20	Vehicle	Pedestrian	-----	-281.45	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	-----	-----	-----	-----	-----	9.30	9.30
		U_{13} - L_{13}	-127.74	2.98	-18.94	0.00	-7.88	0.90	1.20	3.22	-20.42	0.00	-7.88	Vehicle	Pedestrian	-----	-202.85	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	-----	-----	-----	-----	-----	8.93	8.93
		U_{14} - L_{14}	-30.39	0.73	-15.23	0.00	-3.03	0.90	1.20	0.79	-16.42	0.00	-3.03	Vehicle	Vehicle	-----	-60.85	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	-----	-----	-----	-----	-----	9.15	9.15
		U_{15} - L_{15}	-28.94	5.86	-14.92	1.55	-4.54	0.90	1.20	6.32	-16.08	1.55	-4.54	Vehicle	Vehicle	-----	-58.53	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	-----	-----	-----	-----	-----	19.54	19.54
		U_{16} - L_{16}	-76.03	4.45	-17.52	1.39	-7.08	0.90	1.20	4.80	-18.89	1.39	-7.08	Vehicle	Pedestrian	-----	-132.59	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	-----	-----	-----	-----	-----	10.22	10.22
		U_{17} - L_{17}	-161.89	3.47	-23.94	1.30	-10.66	0.90	1.20	3.74	-25.81	1.30	-10.66	Pedestrian	Pedestrian	-----	-257.86	0.00	20.66	20.0644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	6.84	6.84
		U_{18} - L_{18}	-190.28	2.98	-23.57	1.12	-12.71	0.90	1.20	3.21	-25.42	1.12	-12.71	Pedestrian	Pedestrian	-----	-296.93	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	-----	-----	-----	-----	-----	8.79	8.79
		U_{19} - L_{19}	-228.17	2.55	-23.01	0.97	-14.98	0.90	1.20	2.75	-24.81	0.97	-14.98	Pedestrian	Pedestrian	-----	-348.35	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	-----	-----	-----	-----	-----	9.75	9.75
		U_{20} - L_{20}	-242.83	2.32	-23.70	0.95	-15.63	0.90	1.20	2.50	-25.55	0.95	-15.63	Pedestrian	Pedestrian	-----	-369.20	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	-----	-----	-----	-----	-----	8.24	8.24
	Structure 2	U_0 - L_0	-303.03	5.65	-34.33	2.22	-15.08	0.90	1.18	6.02	-36.55	2.22	-15.08	Pedestrian	Pedestrian	-----	-461.05	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	-----	-----	-----	-----	-----	6.58	6.58
		U_1 - L_1	-268.78	5.73	-33.67	2.12	-13.67	0.90	1.18	6.10	-35.85	2.12	-13.67	Pedestrian	Pedestrian	-----	-413.78	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	-----	-----	-----	-----	-----	8.15	8.15
		U_2 - L_2	-220.87	6.18	-30.12	2.34	-12.32	0.90	1.18	6.58	-32.06	2.34	-12.32	Pedestrian	Pedestrian	-----	-344.84	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	-----	-----	-----	-----	-----	7.96	7.96
		U_3 - L_3	-175.23	6.62	-27.86	2.49	-10.35	0.90	1.18	7.05	-29.66	2.49	-10.35	Pedestrian	Vehicle	-----	-279.80	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	-----	-----	-----	-----	-----	6.92	6.92
		U_4 - L_4	-82.08	5.75	-20.70	2.21	-6.62	0.90	1.18	6.13	-22.04	2.21	-6.62	Pedestrian	Vehicle	-----	-135.35	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	-----	-----	-----	-----	-----	11.67	11.67
		U_5 - L_5	-19.89	6.51	-15.35	2.23	-4.16	0.90	1.18	6.93	-16.34	2.23	-4.16	Vehicle	Vehicle	-----	-47.11	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	-----	-----	-----	-----	-----	19.62	19.62
		U_6 - L_6	60.32	12.77	-8.83	1.75	-0.47	0.90	1.18	13.59	-9.40	1.75	-0.47	Vehicle	Vehicle	96.09	-----	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	27.02	27.02	-----	-----
		U_7 - L_7	-41.77	0.74	-15.76	0.00	-2.50	0.90	1.18	0.79	-16.78	0.00	-2.50	Vehicle	Vehicle	-----	-76.12	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	-----	-----	-----	-----	-----	17.80	17.80
		U_8 - L_8	-189.01	2.72	-21.33	0.00	-8.38	0.90	1.18	2.89	-22.71	0.00	-8.38	Vehicle	Pedestrian	-----	-286.12	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	-----	-----	-----	-----	-----	10.99	10.99
		U_9 - L_9	-253.99	1.08	-26.63	0.00	-10.55	0.90	1.18	1.14	-28.35	0.00	-10.55	Vehicle	Pedestrian	-----	-380.77	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	-----	-----	-----	-----	-----	11.24	11.24
		U_{10} - L_{10}	-290.02	1.99	-26.99	0.00	-12.18	0.90	1.18	2.11	-28.74	0.00	-12.18	Vehicle	Pedestrian	-----	-430.22	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	-----	-----	-----	-----	-----	11.94	11.94
		U_{11} - L_{11}	-312.18	4.24	-28.82	0.00	-12.59	0.90	1.18	4.52	-30.68	0.00	-12.59	Vehicle	Pedestrian	-----	-462.08	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	-----	-----	-----	-----	-----	10.46	10.46
		U_{12} - L_{12}	-327.28	6.13	-26.35	0.00	-13.75	0.90	1.18	6.52	-28.05	0.00	-13.75	Vehicle	Pedestrian	-----	-479.80	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	11.35	11.35
		U_{13} - L_{13}	-277.21	8.21	-22.45	0.45	-12.38	0.90	1.18	8.74	-23.90	0.45	-12.38	Vehicle	Pedestrian	-----	-407.54	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	-----	-----	-----	-----	-----	11.38	11.38
		U_{14} - L_{14}	-505.44	10.70	-28.59	0.00	-21.41	0.90	1.18	11.39	-30.43	0.00	-21.41	Vehicle	Pedestrian	-----	-724.48	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	-----	-----	-----	-----	-----	10.54	10.54
		U_{15} - L_{15}	-232.94	2.98	-31.07	1.67	-12.16	0.90	1.17	3.13	-32.69	1.67	-12.16	Pedestrian	Pedestrian	-----	-361.12	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	10.19	10.19
		U_{16} - L_{16}	-260.12	3.36	-32.75	0.83	-13.04	0.90	1.17	3.53	-34.46	0.83	-13.04	Vehicle	Pedestrian	-----	-399.91	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	-----	-----	-----	-----	-----	8.55	8.55
		U_{17} - L_{17}	-228.24	3.79	-30.51	0.66	-11.76	0.90	1.17	3.99	-32.10	0.66	-11.76	Vehicle	Pedestrian	-----	-353.71	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	9.01	9.01
		U_{18} - L_{18}	-209.27	4.55	-28.11	0.00	-11.28	0.90	1.17	4.79	-29.57	0.00	-11.28	Vehicle	Pedestrian	-----	-325.17	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	-----	-----	-----	-----	-----	9.01	9.01
		U_{19} - L_{19}	-166.55	4.87	-26.06	0.00	-9.53	0.90	1.17	5.13	-27.42	0.00	-9.53	Vehicle	Pedestrian	-----	-264.55	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	9.33	9.33
		U_{20} - L_{20}	-113.95	4.91	-19.61	0.00	-7.50	0.90	1.17	5.16	-20.63	0.00	-7.50	Vehicle	Pedestrian	-----	-184.71	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	9.28	9.28
		U_{21} - L_{21}	-62.76	7.32	-15.95	0.00	-5.22	0.90	1.17	7.70	-16.79	0.00	-5.22	Vehicle	Vehicle	-----	-103.41	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	16.55	16.55
		U_{22} - L_{22}	-38.94	0.68	-17.44	0.00	-2.15	0.90	1.17	0.71	-18.35	0.00	-2.15	Vehicle	Vehicle	-----	-74.47	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	-----	-----	-----	-----	-----	16.51	16.51
		U_{23} - L_{23}	-74.43	5.48	-17.60	0.48	-6.10	0.90	1.17	5.77	-18.51	0.48	-6.10	Vehicle	Vehicle	-----	-120.83	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	-----	-----	-----	-----	-----	14.37	14.37
		U_{24} - L_{24}	-121.36	5.08	-20.66	0.37	-8.17	0.90	1.17	5.35	-21.74	0.37	-8.17	Vehicle	Pedestrian	-----	-196.65	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	-----	-----	-----	-----	-----	8.49	8.49
		U_{25} - L_{25}	-169.12	4.89	-24.27	0.43	-9.94	0.90	1.17	5.14	-25.53	0.43	-9.94	Vehicle	Pedestrian	-----	-265.97	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	-----	-----	-----	-----	-----	9.65	9.65
		U_{26} - L_{26}	-207.97	4.42	-25.45	0.14	-11.42	0.90	1.17	4.65	-26.77	0.14	-11.42	Vehicle	Pedestrian	-----	-320.02	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	-----	-----	-----	-----	-----	9.67	9.67
		U_{27} - L_{27}	-219.96	3.66	-26.87	0.16	-11.49	0.90	1.17	3.85	-28.27	0.16	-11.49	Vehicle	Pedestrian	-----	-337.64	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	10.14	10.14
		U_{28} - L_{28}	-240.91	5.26	-24.57	0.00	-12.60	0.90	1.17	5.53	-25.85	0.00	-12.60	Vehicle	Pedestrian	-----	-363.16	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	-----	-----	-----	-----	-----	11.06	11.06
		U_{29} - L_{29}	-202.73	8.21	-21.64	0.00	-10.35	0.90	1.17	8.64	-22.76	0.00	-10.35	Vehicle	Pedestrian	-----	-306.59	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	-----	-----	-----	-----	-----	14.72	14.72
		U_{30} - L_{30}	-518.05	8.51	-29.06	0.00	-22.08	0.90	1.18	9.06	-30.93	0.00	-22.08	Vehicle	Pedestrian	-----	-742.38	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----

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: 2F1 **Condition:** As-Built

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

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

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

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	(No Impact) Pedestrian Load$_{MAX}$	(No Impact) Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Diagonals	Structure 1	U$_0$ - L$_1$	87.66	36.25	-9.97	14.00	-4.60	0.90	1.24	40.35	-11.10	14.00	-4.60	Pedestrian	Pedestrian	184.62	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**9.18**	**9.18**	-----	-----
		U$_1$ - L$_2$	23.90	27.13	-9.74	9.20	-4.71	0.90	1.24	30.20	-10.85	9.20	-4.71	Vehicle	Pedestrian	70.33	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**13.37**	**13.37**	-----	-----
		U$_2$ - L$_3$	-49.02	15.78	-9.54	3.33	-4.32	0.90	1.24	17.57	-10.62	3.33	-4.32	Vehicle	Pedestrian	-----	-83.15	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----
		U$_3$ - L$_4$	-108.88	7.53	-17.19	0.00	-6.30	0.90	1.24	8.38	-19.13	0.00	-6.30	Vehicle	Vehicle	-----	-166.41	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	**11.89**	**11.89**
		U$_4$ - L$_4$	153.12	27.80	-3.44	10.11	0.00	0.90	1.24	30.95	-3.83	10.11	0.00	Vehicle	Vehicle	239.29	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**12.00**	**12.00**	-----	-----
		U$_5$ - L$_5$	186.35	29.02	-3.08	13.44	0.00	0.90	1.24	32.30	-3.43	13.44	0.00	Pedestrian	Vehicle	301.72	-----	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	-----	-----	-----	-----	-----	**10.15**	**10.15**	-----	-----
		U$_6$ - L$_6$	177.52	25.83	-6.10	14.13	0.00	0.90	1.24	28.76	-6.79	14.13	0.00	Pedestrian	Vehicle	286.53	-----	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	-----	-----	-----	-----	-----	**11.03**	**11.03**	-----	-----
		U$_7$ - L$_7$	173.18	23.19	-7.15	13.87	0.00	0.90	1.24	25.82	-7.96	13.87	0.00	Pedestrian	Vehicle	276.72	-----	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	-----	-----	-----	-----	-----	**12.03**	**12.03**	-----	-----
		U$_8$ - L$_8$	328.11	36.50	-2.21	19.45	-0.13	0.90	1.20	39.35	-2.38	19.45	-0.13	Pedestrian	Vehicle	502.98	-----	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	-----	-----	-----	-----	-----	**10.78**	**10.78**	-----	-----
		U$_9$ - L$_{10}$	339.70	38.81	-1.59	19.74	0.00	0.90	1.20	41.84	-1.71	19.74	0.00	Pedestrian	Vehicle	521.67	-----	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$_{11}$	313.22	37.09	-1.16	18.15	0.00	0.90	1.20	39.99	-1.25	18.15	0.00	Pedestrian	Vehicle	482.75	-----	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	-----	-----	-----	-----	-----	**10.28**	**10.28**	-----	-----
		U$_{11}$ - L$_{12}$	270.68	35.27	-1.15	14.84	0.00	0.90	1.20	38.02	-1.24	14.84	0.00	Pedestrian	Vehicle	420.61	-----	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	-----	-----	-----	-----	-----	**9.59**	**9.59**	-----	-----
		U$_{12}$ - L$_{13}$	194.17	26.35	-4.13	10.79	0.00	0.90	1.20	28.41	-4.46	10.79	0.00	Pedestrian	Vehicle	303.38	-----	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	-----	-----	-----	-----	-----	**11.14**	**11.14**	-----	-----
		U$_{13}$ - L$_{14}$	123.57	21.13	-7.79	5.96	0.00	0.90	1.20	22.78	-8.40	5.96	0.00	Vehicle	Vehicle	190.25	-----	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	-----	-----	-----	-----	-----	**13.35**	**13.35**	-----	-----
		U$_{14}$ - L$_{15}$	-16.32	17.51	-12.44	1.48	-2.35	0.90	1.20	18.88	-13.42	1.48	-2.35	Vehicle	Vehicle	3.33	-38.66	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	-----	-----	-----	**23.52**	**23.52**	**23.25**	**23.25**
		U$_{15}$ - L$_{15}$	59.12	20.68	-7.72	6.08	-2.09	0.90	1.20	22.30	-8.32	6.08	-2.09	Vehicle	Vehicle	105.85	-----	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	-----	-----	-----	-----	-----	**16.53**	**16.53**	-----	-----
		U$_{17}$ - L$_{16}$	172.14	28.47	-4.84	9.93	-1.86	0.90	1.20	30.70	-5.22	9.93	-1.86	Vehicle	Pedestrian	263.70	-----	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	-----	-----	-----	-----	-----	**11.48**	**11.48**	-----	-----
		U$_{18}$ - L$_{17}$	210.78	28.71	-4.10	12.51	-1.53	0.90	1.20	30.96	-4.42	12.51	-1.53	Pedestrian	Pedestrian	330.52	-----	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	-----	-----	-----	-----	-----	**10.12**	**10.12**	-----	-----
		U$_{19}$ - L$_{18}$	242.64	28.02	-3.28	13.73	-1.21	0.90	1.20	30.22	-3.53	13.73	-1.21	Pedestrian	Pedestrian	372.56	-----	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	-----	-----	-----	-----	-----	**10.64**	**10.64**	-----	-----
		U$_{20}$ - L$_{19}$	257.76	24.31	-2.69	15.70	-1.03	0.90	1.20	26.22	-2.90	15.70	-1.03	Pedestrian	Pedestrian	389.58	-----	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	-----	-----	-----	-----	-----	**10.79**	**10.79**	-----	-----
		U$_0$ - L$_1$	298.99	34.83	-5.98	14.21	-2.21	0.90	1.18	37.09	-6.36	14.21	-2.21	Pedestrian	Pedestrian	455.36	-----	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	-----	-----	-----	-----	-----	**9.33**	**9.33**	-----	-----
		U$_1$ - L$_2$	284.21	35.71	-7.12	14.05	-2.66	0.90	1.18	38.02	-7.58	14.05	-2.66	Pedestrian	Pedestrian	437.16	-----	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	-----	-----	-----	-----	-----	**9.47**	**9.47**	-----	-----
		U$_2$ - L$_3$	221.42	32.12	-7.60	11.83	-2.85	0.90	1.18	34.19	-8.09	11.83	-2.85	Pedestrian	Pedestrian	347.68	-----	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	-----	-----	-----	-----	-----	**9.33**	**9.33**	-----	-----
		U$_3$ - L$_4$	178.30	31.44	-8.59	10.08	-3.23	0.90	1.18	33.48	-9.14	10.08	-3.23	Vehicle	Pedestrian	275.31	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**11.91**	**11.91**	-----	-----
		U$_4$ - L$_5$	53.50	20.09	-7.60	5.37	-2.87	0.90	1.18	21.39	-8.09	5.37	-2.87	Vehicle	Pedestrian	97.36	-----	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	-----	-----	-----	-----	-----	**17.49**	**17.49**	-----	-----
		U$_5$ - L$_6$	-16.51	16.63	-11.85	2.23	-2.92	0.90	1.18	17.70	-12.62	2.23	-2.92	Vehicle	Vehicle	1.55	-37.87	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	-----	-----	-----	**25.09**	**25.09**	**24.50**	**24.50**
		U$_6$ - L$_7$	-133.21	8.00	-21.85	0.00	-5.36	0.90	1.18	8.52	-23.26	0.00	-5.36	Vehicle	Vehicle	-----	-203.41	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	-----	-----	-----	-----	-----	**9.72**	**9.72**
		U$_7$ - L$_7$	208.77	25.44	-5.85	8.33	0.00	0.90	1.18	27.09	-6.23	8.33	0.00	Vehicle	Vehicle	306.61	-----	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	-----	-----	-----	-----	-----	**14.56**	**14.56**	-----	-----
		U$_8$ - L$_8$	289.58	32.07	-1.34	10.70	0.00	0.90	1.18	34.15	-1.42	10.70	0.00	Vehicle	Vehicle	420.85	-----	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	-----	-----	-----	-----	-----	**12.32**	**12.32**	-----	-----
		U$_{10}$ - L$_9$	327.97	32.72	-1.29	12.66	0.00	0.90	1.18	34.83	-1.38	12.66	0.00	Pedestrian	Vehicle	488.11	-----	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	-----	-----	-----	-----	-----	**9.47**	**9.47**	-----	-----
		U$_{11}$ - L$_{10}$	349.25	34.09	-4.50	12.70	0.00	0.90	1.18	36.29	-4.79	12.70	0.00	Pedestrian	Vehicle	517.72	-----	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	-----	-----	-----	-----	-----	**10.11**	**10.11**	-----	-----
		U$_{12}$ - L$_{11}$	358.20	31.56	-4.77	13.52	0.00	0.90	1.18	33.60	-5.08	13.52	0.00	Pedestrian	Vehicle	526.91	-----	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	-----	-----	-----	-----	-----	**10.32**	**10.32**	-----	-----
		U$_{13}$ - L$_{12}$	307.75	26.53	-9.01	12.26	-0.24	0.90	1.18	28.25	-9.59	12.26	-0.24	Pedestrian	Vehicle	452.73	-----	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	-----	-----	-----	-----	-----	**11.60**	**11.60**	-----	-----
		U$_{14}$ - L$_{13}$	260.20	21.42	-7.61	11.72	-1.50	0.90	1.18	22.80	-8.11	11.72	-1.50	Pedestrian	Vehicle	383.14	-----	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	-----	-----	-----	-----	-----	**14.98**	**14.98**	-----	-----
		U$_{15}$ - L$_{15}$	208.42	28.44	-3.88	11.04	-2.51	0.90	1.17	29.92	-4.08	11.04	-2.51	Pedestrian	Pedestrian	324.19	-----	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	-----	-----	-----	-----	-----	**10.80**	**10.80**	-----	-----
		U$_{16}$ - L$_{16}$	243.55	33.53	-2.69	11.54	-1.48	0.90	1.17	35.27	-2.83	11.54	-1.48	Vehicle	Pedestrian	362.47	-----	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	-----	-----	-----	-----	-----	**11.54**	**11.54**	-----	-----
		U$_{17}$ - L$_{17}$	235.86	32.51	-3.99	12.23	-0.85	0.90	1.17	34.20	-4.20	12.23	-0.85	Pedestrian	Vehicle	392.99	-----	0.00	27.98	27.9777	923.26	131.71	15.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**9.78**	**9.78**	-----	-----
		U$_{18}$ - L$_{18}$	235.29	33.40	-4.68	11.35	-0.75	0.90	1.17	35.14	-4.92	11.35	-0.75	Vehicle	Vehicle	351.56	-----	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	-----	-----	-----	-----	-----	**11.82**	**11.82**	-----	-----
	Structure 2	U$_{19}$ - L$_{20}$	168.24	27.68	-6.32	9.14	0.00	0.90	1.17	29.12	-6.65	9.14	0.00	Vehicle	Vehicle	256.57	-----	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	-----	-----	-----	-----	-----	**14.94**	**14.94**	-----	-----
		U$_{20}$ - L$_{21}$	97.26	20.58	-8.95	6.66	0.00	0.90	1.17	21.65	-9.42	6.66	0.00	Vehicle	Vehicle	154.59	-----	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	-----	-----	-----	-----	-----	**15.26**	**15.26**	-----	-----
		U$_{21}$ - L$_{22}$	30.60	16.82	-13.85	3.66	-2.18	0.90	1.17	17.70	-14.57	3.66	-2.18	Vehicle	Vehicle	62.79	-----	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**22.44**	**22.44**	-----	-----
		U$_{22}$ - L$_{23}$	49.78	20.17	-10.21	5.11	-0.95	0.90	1.17	21.22	-10.74	5.11	-0.95	Vehicle	Vehicle	92.30	-----	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	-----	-----	-----	-----	-----	**17.81**	**17.81**	-----	-----
		U$_{24}$ - L$_{23}$	115.07	23.62	-6.90	8.00	-0.72	0.90	1.17	24.85	-7.25	8.00	-0.72	Vehicle	Vehicle	181.90	-----	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	-----	-----	-----	-----	-----	**12.58**	**12.58**	-----	-----
		U$_{25}$ - L$_{24}$	179.22	29.67	-6.70	10.10	-0.73	0.90	1.17	31.22	-7.05	10.10	-0.73	Vehicle	Vehicle	273.57	-----	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	-----	-----	-----	-----	-----	**13.58**	**13.58**	-----	-----
		U$_{26}$ - L$_{25}$	220.97	29.73	-5.88	11.89	-0.57	0.90	1.17	31.28	-6.18	11.89	-0.57	Pedestrian	Vehicle	343.38	-----	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	-----	-----	-----	-----	-----	**9.95**	**9.95**	-----	-----
		U$_{27}$ - L$_{26}$	234.87	30.91	-4.67	11.45	-0.35	0.90	1.17	32.52	-4.92	11.45	-0.35	Pedestrian	Vehicle	362.49	-----	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	-----	-----	-----	-----	-----	**9.46**	**9.46**	-----	-----
		U$_{28}$ - L$_{27}$	253.15	29.53	-4.23	12.25	-0.28	0.90	1.17	31.07	-4.45	12.25	-0.28	Pedestrian	Vehicle	385.41	-----	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	-----	-----	-----	-----	-----	**10.55**	**10.55**	-----	-----
		U$_{29}$ - L$_{28}$	215.91	23.92	-8.98	10.20	0.00	0.90	1.17	25.17	-9.44	10.20	0.00	Pedestrian	Vehicle	326.67	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**12.29**	**12.29**	-----	-----
		U$_{30}$ - L$_{29}$	180.73	20.20	-7.72	8.90	-0.90	0.90	1.17	21.26	-8.12	8.90	-0.90	Pedestrian	Vehicle	274.15	-----	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	-----	-----	-----	-----	-----	**15.58**	**15.58**	-----	-----
		U$_{30}$ - L$_{31}$	294.99	29.16	-4.57	12.90	-1.64	0.90	1.18	31.04	-4.86	12.90	-1.64	Pedestrian	Pedestrian	440.61	-----	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	-----	-----	-----	-----	-----	**10.98**	**10.98**	-----	-----
		U$_{31}$ - L$_{32}$	342.70	33.27	-4.07	13.70	-0.55	0.90	1.18	35.42	-4.33	13.70	-0.55	Pedestrian	Vehicle	509.37	-----	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	-----	-----	-----	-----	-----	**8.85**	**8.85**	-----	-----
		U$_{32}$ - L$_{33}$	363.39	34.53	-2.11	14.16	0.00	0.90	1.18	36.76	-2.24	14.16	0.00	Pedestrian	Vehicle	538.60	-----	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	-----	-----	-----	-----	-----	**9.45**	**9.45**	-----	-----
		U$_{33}$ - L$_{34}$	349.50	36.40	-2.26	13.34	0.00	0.90	1.18	38.75	-2.40	13.34	0.00	Pedestrian	Vehicle	522.07	-----	0.00	33.27	33.2657	1097.77	131.71	14.5729	2.8573

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
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		Live Load (Max)		Live Load (Min)		Pedestrian Load (Max)		Pedestrian Load (Min)		Lane Reduction & Impact Live Load		Lane Reduction & Impact Live Load		Impact Pedestrian Load 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-L_1	-129.85	-23.02	-0.09	0.76	2.00	-5.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_1-L_1	-54.81	-51.14	0.12	1.30	-0.91	-11.43	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_1-U_2	-139.81	-44.50	0.55	1.30	-3.31	-9.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_2-L_2	-52.27	-51.68	1.18	1.90	-4.74	-8.11	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_2-U_3	-27.43	50.17	1.32	1.30	-17.67	24.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_3-L_3	1.19	145.97	1.55	1.73	-8.52	-1.39	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_3-U_4	94.54	53.23	1.65	1.65	22.04	14.15	-95.90	-23.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_4-L_4	-70.13	598.66	0.98	2.32	-9.52	9.00	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-U_5	528.73	-128.77	3.96	0.36	5.08	-7.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_5-L_5	69.10	44.97	1.70	1.07	-0.99	-4.68	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_5-U_6	101.46	-177.08	1.68	1.35	0.74	-8.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_6-L_6	24.79	-160.13	1.32	1.30	0.72	-9.51	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_6-U_7	-56.63	-218.18	1.50	0.54	0.58	-7.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_7-L_7	-173.99	-244.03	0.99	1.30	-1.13	-16.97	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-U_8	-287.88	-237.50	0.75	1.30	-0.75	-18.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_8-L_8	-196.26	-337.79	1.27	0.08	-12.46	-5.63	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-U_9	-290.52	-154.89	0.47	1.30	-0.10	-13.02	-3.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_9-L_9	-190.08	-29.82	0.42	-0.39	-7.79	1.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_9-U_{10}	-179.61	-40.24	0.37	-0.42	-6.81	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{10}-L_{10}	-290.19	260.74	0.26	-0.13	-6.24	6.81	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}-U_{11}	-27.02	-172.57	-0.25	0.61	3.43	-5.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{11}-L_{11}	-25.34	-194.81	-0.12	0.60	3.34	-6.65	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_{11}-U_{12}	-52.13	-282.61	-0.28	0.83	0.32	-15.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{12}-L_{12}	339.12	-284.61	0.33	1.30	0.38	-17.11	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_{12}-U_{13}	-360.75	-390.17	0.09	1.39	-1.66	-17.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{13}-L_{13}	-403.61	-397.58	1.04	2.65	-2.27	-9.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{13}-U_{14}	-349.78	-208.78	1.93	1.90	-6.52	-20.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{14}-L_{14}	-253.89	-280.84	1.49	2.07	-21.30	-8.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{14}-U_{15}	-330.50	-53.72	1.64	1.30	-25.06	31.85	-102.07	-29.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{15}-L_{15}	-237.13	39.43	2.15	2.71	-14.54	-4.71	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_{15}-U_{16}	-152.23	52.64	2.40	1.30	-13.74	-3.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{16}-L_{16}	-116.81	170.72	2.28	1.85	-8.62	-2.27	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_{16}-U_{17}	-50.88	1.26	2.34	1.30	-5.34	-1.28	-66.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{17}-L_{17}	-211.15	1121.81	1.61	2.96	-0.25	-2.27	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_{17}-U_{18}	1023.87	-26.76	6.67	0.72	13.27	-14.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{18}-L_{18}	9.83	54.08	0.54	1.30	0.29	-5.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{18}-U_{19}	271.35	25.12	1.58	1.48	-1.33	-8.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{19}-L_{19}	141.34	1.86	1.42	1.30	-2.19	-10.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{19}-L_{20}	156.48	-8.75	2.71	1.66	-0.43	-10.61	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}-U_{21}	48.44	11.25	2.16	1.73	-4.69	-10.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{21}-L_{21}	29.25	-41.39	1.80	1.30	-5.13	-13.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Structure 2	L_{21}-U_{22}	-92.46	-65.91	0.86	0.95	-4.63	-15.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{22}-L_{22}	-59.53	-101.40	0.97	1.30	-3.99	-9.76	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_{22}-U_{23}	-48.21	-31.51	0.06	1.76	-10.69	-2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{23}-L_{23}	-30.25	32.64	0.76	1.30	-10.70	-3.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{23}-U_{24}	10.71	137.69	1.35	2.01	-11.10	-1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{24}-L_{24}	57.19	-122.64	1.72	1.51	-9.91	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{24}-U_{25}	84.58	3.84	1.67	1.30	-7.17	-24.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{25}-L_{25}	85.58	3.84	1.64	0.72	-11.07	-3.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{25}-U_{26}	14.12	816.02	1.24	2.44	-12.47	-13.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{26}-L_{26}	823.61	100.42	5.68	0.60	-0.67	-0.30	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}-U_{27}	34.12	39.62	2.47	1.94	1.40	-10.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{27}-L_{27}	190.29	-2.52	1.57	1.94	1.40	-10.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{27}-U_{28}	17.33	-89.79	2.08	2.18	-1.83	-9.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{28}-L_{28}	30.75	-29.20	2.09	1.30	-1.84	-9.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{28}-U_{29}	-75.26	-230.76	2.19	1.34	-0.60	-13.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{29}-L_{29}	-229.29	-341.14	2.03	1.30	-0.74	-13.06	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_{29}-U_{30}	-84.35	-278.75	2.16	1.87	-19.64	-7.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{30}-L_{30}	-311.84	-242.92	1.06	1.30	-17.45	-20.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{30}-U_{31}	-275.08	-274.62	1.36	0.17	-23.05	-11.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{31}-L_{31}	-257.08	-269.15	0.81	0.12	-19.82	-7.73	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_{31}-U_{32}	-154.75	-69.94	0.79	0.43	-15.38	-3.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{32}-L_{32}	-154.97	-33.11	0.55	-0.13	-8.65	-0.73	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_{32}-U_{33}	-10.71	1.73	0.31	0.31	-0.79	-0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{33}-L_{33}	40.07	167.66	-0.25	0.24	3.04	-6.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{33}-U_{34}	-10.53	-132.37	-0.19	0.32	0.37	-6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{34}-L_{34}	-26.15	-126.26	-0.20	0.30	1.36	-6.00	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}-U_{35}	-140.16	-260.93	-0.08	0.29	-1.70	-14.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{35}-L_{35}	-187.10	-276.08	0.71	1.00	-6.99	-14.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{35}-U_{36}	-322.62	-140.38	0.74	1.30	-7.13	-14.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{36}-L_{36}	-162.95	-104.84	0.54	1.57	-12.41	-3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{36}-U_{37}	-147.84	26.72	1.19	1.86	-10.02	-1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{37}-L_{37}	-116.14	109.58	1.14	2.09	-9.64	-1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Structure 3	U_{38}-L_{38}	-83.36	-55.45	2.08	0.54	-9.51	-4.31	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_{38}-U_{39}	-52.08	-52.08	1.48	1.30	-7.13	-8.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{39}-L_{39}	-36.55	-36.55	1.21	1.73	-8.69	-5.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

YY Axis Moments from STAAD

Location	Member	Max. Neg. Moment				Tension				Compression									
		Start (k-in)	End (k-in)	S_{xx} (in^3)	S_{xx} (in^3)	Yield				Buckle				Yield					
						Shape Factor	M_p (k-in)	Fy (ksi)	Formula 1.8 Term * Fy*S_{xx}	M_n (k-in)	Equivalent Mom. Factor		$C_{b(min)}$	Shape Factor	M_p (k-in)	Fy (ksi)	Formula 1.8 Term * Fy*S_{xx}	M_n (k-in)	Equivalent Mom. Factor		$C_{b(min)}$
											a	$C_{b(a)}$							a	$C_{b(a)}$	
Structure 1	U_0-L_1	-110.32	-16.82	-134.11	-134.03	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99800041	2974.3	0.099	0.64	0.64	4.07
	U_1-L_1	-85.17	-43.90	-81.66	-264.92	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99800041	2974.3	0.329	0.73	0.73	-4.48
	L_1-U_2	-117.82	91.00	-238.15	-112.20	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99800041	2974.3	0.403	0.76	0.76	-2.01
	L_2-U_3	-47.43	113.09	-150.21	-60.67	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99800041	2974.3	0.404	0.76	0.76	-7.07
	U_3-L_3	-12.68	51.06	-126.52	-29.20	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99800041	2974.3	0.136	0.55	0.55	-38.34
	L_4-U_4	28.40	219.76	-146.46	165.62	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99800041	2974.3	0.129	0.65	0.65	-19.56
	U_4-L_5	153.88	-181.28	772.74	-252.33	130.3	130.33	130.26	105.11	180.77	2955	1795.3	1.39	5965	0.99800041	4554.8	0.376	0.45	0.45
	U_5-L_6	106.65	84.92	72.26	19.95	90.2	90.61	79.12	139.29	2172	1367.9	1.40	4465	0.99873139	3184.1	0.705	0.52	0.52	-33.07
	U_6-L_7	91.15	64.89	-0.83	0.07	2.12	1.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-10.76
	U_7-L_8	50.50	-183.32	-34.14	-0.83	2.12	1.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-22.99
	L_8-U_9	19.39	6.92	7.47	81.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-6.66
	U_9-L_9	12.81	18.41	-14.62	-219.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-209.53
	L_9-U_{10}	16.90	9.73	-215.64	-95.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-352.28
	U_{10}-L_{10}	16.47	1.01	-161.15	-72.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-233.72
	L_{11}-U_{12}	0.00	0.00	-376.76	-202.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-320.89
	U_{12}-L_{12}	0.00	0.00	5.40	-5.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-240.07
	L_{13}-U_{14}	0.00	0.00	24.61	24.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-422.70
	U_{14}-L_{14}	0.00	0.00	19.06	26.42	-272.11	-78.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-305.27
	L_{15}-U_{16}	0.00	0.00	25.04	31.85	-102.07	-29.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-402.85
	U_{16}-L_{16}	0.00	0.00	27.48	34.66	-185.81	-60.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-272.54
	L_{17}-U_{18}	0.00	0.00	33.69	34.01	-70.57	-29.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-154.09
	L_{18}-U_{19}	0.00	0.00	29.14	23.59	-122.95	-3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-113.96
	L_{19}-U_{20}	0.00	0.00	28.81	13.53	-134.28	-66.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-21.24
	L_{20}-U_{21}	0.00	0.00	20.60	37.92	-3.19	-3.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	247.72
	L_{21}-U_{22}	0.00	0.00	84.20	9.12	167.47	-162.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-1446.99
	L_{22}-U_{23}	0.00	0.00	7.28	51.61	-26.62	-24.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.27
	L_{23}-U_{24}	0.00	0.00	19.94	18.74	-16.79	-108.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-378.67
	L_{24}-U_{25}	0.00	0.00	23.52	22.46	-87.73	-108.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-214.79
	L_{25}-U_{26}	0.00	0.00	27.37	20.96	-9.39	-133.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-229.00
	L_{26}-U_{27}	0.00	0.00	27.25	21.89	-99.15	-134.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-98.40
	L_{27}-U_{28}	0.00	0.00	29.39	23.30	-170.75	-134.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-154.09
	L_{28}-U_{29}	0.00	0.00	10.90	11.94	-58.47	-200.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-106.03
	L_{29}-U_{30}	0.00	0.00	11.99	0.79	-58.47	-200.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-62.69
	L_{30}-U_{31}	0.00	0.00	0.78	22.23	-134.90	-35.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-61.68
	L_{31}-U_{32}	0.00	0.00	10.71	0.00	-134.90	-35.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-36.09
	L_{32}-U_{33}	0.00	0.00	17.66	25.36	-140.13	-18.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-36.09
	L_{33}-U_{34}	0.00	0.00	21.68	19.05	-125.12	1.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-102.51
	L_{34}-U_{35}	0.00	0.00	12.44	12.37	-13.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-78.67
	L_{35}-U_{36}	0.00	0.00	7.62	8.55	-3.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-166.03
	L_{36}-U_{37}	0.00	0.00	5.94	3.94	-19.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-189

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: 2F1
Condition: As-Built

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

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

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

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

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (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	-44.17	-99.07	3.06	-0.40	2.23	-3.32	3.47	-6.36	-29.78	-44.39
	L_1-L_2	-131.02	-112.64	-0.54	-6.54	-0.17	1.03	-7.16	-87.41	-2.30	13.71
	L_2-L_3	-73.45	-79.05	-0.62	-6.68	0.53	1.22	-102.83	-89.18	-7.08	19.23
	L_3-L_4	18.36	16.12	-8.73	-5.37	0.58	2.20	-116.56	-71.72	7.78	29.43
	L_4-L_5	-68.34	210.23	-4.16	-0.92	-0.50	-0.42	-55.08	-65.42	22.50	22.50
	L_5-L_6	-8.36	229.14	-3.49	-3.90	1.32	2.56	-46.60	-52.10	17.65	34.07
	L_6-L_7	61.83	171.52	-3.09	-2.62	1.77	0.35	-68.73	-52.11	-4.23	6.01
	L_7-L_8	1.61	409.41	-0.03	0.52	0.12	6.05	-0.35	-3.23	-1.64	80.79
	L_8-L_9	439.88	-25.12	0.02	-10.21	3.45	0.12	-0.28	-0.12	44.57	1.57
	L_9-L_{10}	204.03	-117.02	-1.75	-3.58	-0.76	1.51	-23.87	-2.12	252.45	-126.68
	L_{10}-L_{11}	168.12	-117.13	-2.18	-2.39	2.32	1.10	-28.24	-30.94	29.98	14.19
	L_{11}-L_{12}	233.72	-212.27	-2.89	-4.30	4.04	0.51	-21.89	-53.27	18.67	11.83
	L_{12}-L_{13}	-19.73	-128.50	-4.42	-4.76	1.46	0.71	-57.23	-61.63	18.70	9.19
	L_{13}-L_{14}	175.78	-425.21	-5.19	-7.46	1.13	0.91	-67.14	-96.52	14.59	12.54
	L_{14}-L_{15}	-409.28	-20.70	-5.19	-3.73	0.00	0.00	-67.14	-96.52	14.59	12.54
	L_{15}-L_{16}	-209.39	-318.68	-7.25	-6.33	0.40	0.33	-83.83	-107.71	5.15	4.26
	L_{16}-L_{17}	-374.86	83.64	-5.78	-4.92	0.40	1.22	-74.84	-83.70	-2.31	-4.66
	L_{17}-L_{18}	-171.07	19.86	-3.67	-2.42	-0.28	0.78	-47.51	-31.34	-4.97	10.09
	L_{18}-L_{19}	-209.33	253.78	-1.07	-3.33	1.43	1.43	-13.88	-1.74	-17.23	18.48
	L_{19}-L_{20}	-84.78	1.02	-0.76	0.33	-2.05	1.58	-9.79	4.30	-26.58	20.48
	L_{20}-L_{21}	10.35	-213.29	0.26	-0.72	1.42	-3.15	3.36	-9.19	18.16	-40.18
	L_{21}-L_{22}	34.56	-247.73	0.16	-0.38	0.17	-0.72	-2.27	-8.89	23.72	-5.33
	L_{22}-L_{23}	-20.37	-194.33	-1.99	-6.53	-0.25	0.50	-20.37	-194.33	-1.99	-6.53
	L_{23}-L_{24}	-287.80	-299.08	-9.79	-8.83	-0.10	0.88	-125.03	-112.80	-1.26	11.18
	L_{24}-L_{25}	-467.54	-273.29	-15.09	-12.40	1.27	1.90	-192.39	-158.44	-16.16	24.25
	L_{25}-L_{26}	-310.55	-45.89	-11.44	-7.66	1.55	2.85	-146.17	-97.80	-19.77	-36.41
	L_{26}-L_{27}	-261.97	188.33	-5.07	-5.04	1.37	2.61	-64.79	-64.42	17.54	39.84
	L_{27}-L_{28}	-171.22	233.96	-3.44	-4.46	1.22	2.37	-43.87	-29.23	23.03	12.50
	L_{28}-L_{29}	-131.48	389.53	-3.43	-4.92	1.67	2.79	-43.80	-42.86	20.11	-36.77
	L_{29}-L_{30}	-164.35	-140.48	-0.61	0.00	2.48	-0.78	-7.77	-0.05	31.70	-10.00
	L_{30}-L_{31}	-267.47	-96.61	-0.15	0.00	0.00	0.00	-3.47	-2.80	52.27	1.19
	L_{31}-L_{32}	-912.03	-326.86	-0.28	-0.21	4.14	0.09	-3.47	-2.80	52.27	1.19
	L_{32}-L_{33}	-289.13	41.95	-0.44	-0.05	1.36	0.00	-38.01	-0.39	47.47	-0.01
	L_{33}-L_{34}	-515.59	-35.24	-2.48	-4.89	3.06	0.94	-31.32	-61.22	38.58	11.82
	L_{34}-L_{35}	-1,016.56	-1,016.56	-2.36	-2.36	1.46	1.46	-252.42	-252.42	37.43	37.43
	L_{35}-L_{36}	-252.02	-29.09	-3.71	-5.75	2.60	1.16	-46.85	-72.58	33.51	14.61
	L_{36}-L_{37}	-230.55	-46.37	-3.89	-7.06	1.56	1.77	-49.10	-89.10	16.07	33.69
	L_{37}-L_{38}	-41.53	-186.96	-8.63	-13.25	1.29	1.16	-108.89	-167.22	16.25	14.65
	L_{38}-L_{39}	-197.37	33.29	-11.55	-8.03	1.03	0.73	-140.63	-103.96	13.04	9.19
	L_{39}-L_{40}	-108.55	-10.73	-5.70	-10.15	0.79	2.14	-71.96	-128.13	10.01	27.06
	L_{40}-L_{41}	-30.28	313.71	-0.65	-4.60	0.47	0.00	-14.05	-60.35	39.39	0.00
	L_{41}-L_{42}	-65.47	173.47	-2.99	-5.45	1.02	2.36	-37.80	-68.74	12.84	29.77
	L_{42}-L_{43}	-30.98	151.24	-4.49	-4.49	-0.63	2.38	-56.64	-56.65	-7.90	30.06
	L_{43}-L_{44}	-20.02	73.17	-3.05	-4.05	-0.04	1.36	-19.38	-19.38	-0.04	1.36
	L_{44}-L_{45}	-19.38	-193.41	-0.46	-0.42	0.45	1.34	-5.82	-5.25	5.68	16.89
	L_{45}-L_{46}	-27.10	-118.05	-0.15	-0.81	0.65	1.36	-5.82	-5.25	5.68	16.89
	L_{46}-L_{47}	740.88	-268.17	-0.58	0.04	5.01	0.49	-7.44	0.55	64.02	-5.06
	L_{47}-L_{48}	-140.43	-76.07	0.11	-0.47	1.50	0.05	1.39	-5.49	19.18	1.19
	L_{48}-L_{49}	-277.39	-114.86	-0.15	-0.81	0.65	1.36	-5.82	-5.25	5.68	16.89
	L_{49}-L_{50}	-147.94	-145.21	-1.34	-5.91	1.12	1.93	-17.08	-75.46	14.27	24.72
	L_{50}-L_{51}	-55.51	-109.74	-1.78	-4.36	0.61	1.29	-43.96	-41.49	14.59	5.79
	L_{51}-L_{52}	-95.37	-212.64	-1.45	-7.64	1.57	1.56	-18.49	-87.66	20.03	-10.35
	L_{52}-L_{53}	-279.36	-146.15	-1.45	-4.50	0.04	1.13	-84.21	-69.52	20.03	22.69
	L_{53}-L_{54}	-182.93	-415.63	-9.75	-14.83	1.66	1.25	-399.74	-786.60	-220.44	-519.50
	L_{54}-L_{55}	-370.36	-165.17	-10.27	-14.88	1.26	0.27	-131.26	-190.09	16.03	14.33
	L_{55}-L_{56}	-284.70	-276.15	-7.59	-11.55	1.03	0.73	-183.01	-158.51	4.11	3.60
	L_{56}-L_{57}	-304.19	-21.34	-10.41	-4.32	0.61	-0.14	-568.38	-99.52	-389.31	-30.10
	L_{57}-L_{58}	-93.09	-223.34	-3.12	-5.39	0.12	0.07	-538.53	-79.16	-12.19	-38.63
	L_{58}-L_{59}	-227.31	-59.39	-8.13	-1.25	-0.56	0.53	-103.91	-15.92	-7.10	6.76
	L_{59}-L_{60}	-117.12	-63.98	-3.30	-3.30	-0.31	0.36	-11.82	-5.18	-3.30	-3.30
	L_{60}-L_{61}	43.83	-117.87	0.16	-0.82	1.69	-2.31	2.10	-8.06	21.85	29.84
	L_{61}-L_{62}	-152.35	-177.82	1.22	-1.07	0.72	-0.82	2.89	-13.82	9.33	-10.60
	L_{62}-L_{63}	-133.31	-133.31	-1.16	-1.16	-0.53	0.53	-8.28	-8.28	0.00	1.67
	L_{63}-L_{64}	55.48	-320.94	-1.62	-5.55	-0.07	0.35	-50.26	-97.63	-0.94	4.58
	L_{64}-L_{65}	-64.07	-301.08	-7.64	-9.76	0.00	1.08	-88.86	-126.21	-0.01	14.66
	L_{65}-L_{66}	-370.76	82.43	-4.77	-5.10	0.73	1.22	-79.26	-105.67	10.58	13.66
	L_{66}-L_{67}	-200.77	-149.87	-4.79	-1.76	0.89	1.42	-61.96	-22.72	11.55	18.02
	L_{67}-L_{68}	-131.78	166.76	-3.78	-2.05	-1.14	2.24	-48.93	-26.52	-14.79	29.03
	L_{68}-L_{69}	-361.88	-172.92	-0.08	0.06	0.46	0.13	-11.01	0.83	53.76	1.79
	L_{69}-L_{70}	61.50	-21.66	-2.04	-4.79	-0.68	1.66	-27.37	-64.03	-8.78	22.18
	L_{70}-L_{71}	-189.90	5.62	-1.06	-7.61	1.76	1.85	-14.17	-101.67	23.49	24.77
	L_{71}-L_{72}	-38.98	-56.51	-6.40	-7.46	1.32	0.63	-85.46	-89.72	17.67	8.35
	L_{72}-L_{73}	-66.62	-29.78	-6.47	-7.47	0.46	1.35	-85.46	-89.72	17.67	8.35

ZZ Axis Moments from STAAD

Location	Member	Max. Pos. Moment Start (k-ft)	Max. Pos. Moment End (k-ft)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F'$_y$/S_{top}	M_r (k-in)	Equivalent Mem. Factor a	Equivalent Mem. Factor C_{mx}	Equivalent Mem. Factor C_{mm}
Structure 1	L_0-L_1	-52.91	-135.76	18.71	-186.51	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99909394	2755.4	0.100	0.64	0.64
	L_1-L_2	161.01	-267.07	167.34	-128.62	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99909394	2755.4	0.035	0.35	0.35
	L_2-L_3	-208.88	-219.35	-60.05	-92.75	83.6	83.58	99.53	91.00	2315.49	1026.3	1.21	3332	0.99909394	2755.4	0.141	0.99	0.99
	L_3-L_4	-127.66	-72.25	33.98	99.22	99.9	99.93	84.14	129.49	3409	1372.0	1.26	4141	0.99911881	3294.8	0.566	0.83	0.83
	L_4-L_5	-161.06	-433.12	52.62	52.62	52.98	76.68	114.47	3186	2379.8	1026.3	1.21	3332	0.99909394	3052.4	-0.136	0.64	0.55
	L_5-L_6	-69.71	-230.15	33.81	342.31	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99923445	3448.5	0.099	0.64	0.64
	L_6-L_7	-168.79	-101.91	-49.69	-74.85	104.6	104.58	79.61	136.37	4040	1678.1	1.31	4520	0.99923445	4776.0	-0.229	0.51	0.51
	L_7-L_8	-0.35	-3.23	-1.64	80.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00000000	0.0	0.000	0.00	0.00
	L_8-L_9	1.65	597.53	4.23	702.25	145.8	145.75	130.44	228.84	6500	2932.4	1.57	7552	0.99925913	4806.3	0.006	0.65	0.60
	L_9-L_{10}	-192.48	257.53	-133.82	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.99913872	3052.5	-0.520	0.39	0.39
	L_{10}-L_{11}	-358.12	377.97	-358.12	330.70	369.39	369.39	324.58	16.68	6155	1.49	9174	0.99913872	3052.5	-0.705	0.40	0.40
	L_{11}-L_{12}	-183.61	-183.61	-183.61	-183.61	183.6	183.61	161.40	16.68	6155	1.49	9174	0.99913872	3052.5	-0.705	0.40	0.40
	L_{12}-L_{13}	-192.48	257.53	-133.82	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.99913872	3052.5	-0.520	0.39	0.39
	L_{13}-L_{14}	-1,016.56	-1,016.56	-252.42	-252.42	37.43	37.43	37.43	1.46	1.46	1.46	1.46	11452	0.99900000	8222.0	-0.338	0.46	0.46
	L_{14}-L_{15}	-252.02	-29.09	-46.85	-72.58	33.51	14.61	14.61	1.46	1.46	1.46	1.46	11452	0.99900000	8222.0	-0.038	0.45	0.45
	L_{15}-L_{16}	-230.55	-46.37	-49.10	-89.10	16.07	33.69	33.69	2.09	0.96	0.96	0.96	5182	0.99898981	4200.3	-0.096	0.56	0.56
	L_{16}-L_{17}	-41.53	-186.96	-108.89	-167.22	16.25	14.65	0.00	0.00	0.00	0.00	0.00	6852	0.99905700	5313.3	0.190	0.68	0.68
	L_{17}-L_{18}	-197.37	33.29	-140.63	-103.96	13.04	9.19	0.00	0.00	0.00	0.00	0.00	6852	0.99905700	5313.3	0.190	0.68	0.68
	L_{18}-L_{19}	-108.55	-10.73	-70.10	-128.13	10.01	27.06	0.00	0.00	0.00	0.00	0.00	6852	0.99905700	5313.3	0.778	0.91	0.91
	L_{19}-L_{20}	-30.28	313.71	-0.65	-60.35	39.39	0.00	0.00	0.00	0.00	0.00	0.00	6852	0.99905700	5313.3	0.778	0.91	0.91
	L_{20}-L_{21}	-65.47	173.47	-2.99	-5.45	1.02	2.36	-37.80	-68.74	12.84	29.77	0.00	0.00	0.00	0.00	-134.26	136.07	-68.42	364.18	127.4	127.41	116.92
	L_{21}-L_{22}	-30.98	151.24	-4.49	-4.49	-0.63	2.38	-56.64	-56.65	-7.90	30.06	0.00	0.00	0.00	0.00	-113.50	122.97	-50.54	235.76	149.0	149.01	130.61
	L_{22}-L_{23}	-20.02	73.17	-3.05	-4.05	-0.04	1.36	-19.38	-19.38	-0.04	1.36	0.00	0.00	0.00	0.00	-38.76	37.47	-19.38	73.17	149.0	149.01	130.61
	L_{23}-L_{24}	-19.38	-193.41	-0.46	-0.42	0.45	1.34	-5.82	-5.25	5.68	16.89	0.00	0.00	0.00	0.00	-32.77	-208.26	-17.81	-229.48	226.0	225.96	215.39
	L_{24}-L_{25}	-27.10	-118.05	-0.15	-0.81	0.65	1.36	-5.82	-5.25	5.68	16.89	0.00	0.00	0.00	0.00	-380.09	-29.47	-204.78	-325.55	226.0	225.96	215.39
	L_{25}-L_{26}	-55.51	-109.74	-1.78	-4.36	0.61	1.29	-43.96	-41.49	14.59	5.79	0.00	0.00	0.00	0.00	-153.43	-151.25	-98.63	-260.72	226.0	225.96	215.39
	L_{26}-L_{27}	-95.37	-212.64	-1.45	-7.64	1.57	1.56	-18.49	-87.66	20.03	-10.35	0.00	0.00	0.00	0.00	-99.96	-403.39	-50.02	-250.24	168.0	168.04	149.99
	L_{27}-L_{28}	-279.36	-146.15	-1.45	-4.50	0.04	1.13	-84.21	-69.52	20.03	22.69	0.00	0.00	0.00	0.00	-399.74	-786.60	-220.44	-519.50	218.3	216.33	205.74
	L_{28}-L_{29}	-182.93	-415.63	-9.75	-14.83	1.66	1.25	-399.74	-786.60	-220.44	-519.50	218.3	216.33	205.74	344.78	7625	3425.8	1.59	11379	0.99917356	6519.3	0.708	0.88	0.88
	L_{29}-L_{30}	-370.36	-165.17	-10.27	-14.88	1.26	0.27	-131.26	-190.09	16.03	14.33	0.00	0.00	0.00	0.00	-552.11	-441.83	-460.62	-212.19	197.7	197.72	175.89
	L_{30}-L_{31}	-284.70	-276.15	-7.59	-11.55	1.03	0.73	-183.01	-158.51	4.11	3.60	0.00	0.00	0.00	0.00	-433.80	-568.96	-220.44	-519.50	218.3	216.33	205.74
	L_{31}-L_{32}	-304.19	-21.34	-10.41	-4.32	0.61	-0.14	-568.38	-99.52	-389.31	-30.10	176.7	176.70	158.45	258.88	6704	2849.3	1.47	10443	0.99916481	6526.4	0.175	0.67	0.67
	L_{32}-L_{33}	-93.09	-223.34	-3.12	-5.39	0.12	0.07	-538.53	-79.16	-12.19	-38.63	176.7	176.70	158.45	258.88	6704	2849.3	1.47	10443	0.99916481	6526.4	0.175	0.67	0.67
	L_{33}-L_{34}	-227.31	-59.39	-8.13	-1.25	-0.56	0.53	-103.91	-15.92	-7.10	6.76	0.00	0.00	0.00	0.00	-430.59	-97.90	-304.74	85.99	122.0	122.01	103.28
	L_{34}-L_{35}	-117.12	-63.98	-3.30	-3.30	-0.31	0.36	-11.82	-5.18	-3.30	-3.30	0.00	0.00	0.00	0.00	-11.82	-5.18	-3.30	-3.30	122.0	122.01	103.28
	L_{35}-L_{36}	43.83	-117.87	0.16	-0.82	1.69	-2.31	2.10	-8.06	21.85	29.84	0.00	0.00	0.00	0.00	59.71	-163.71	89.39	-192.02	83.6	83.58	67.49
	L_{36}-L_{37}	-152.35	-177.82	1.22	-1.07	0.72	-0.82	2.89	-13.82	9.33	-10.60	0.00	0.00	0.00	0.00	-201.81	-249.13	-210.18	-244.94	83.6	83.58	74.62
	L_{37}-L_{38}	-133.31	-133.31	-1.16	-1.16	-0.53	0.53	-8.28	-8.28	0.00	1.67	0.00	0.00	0.00	0.00	-133.31	-133.31	-8.28	-8.28	0.00	0.00	0.00
	L_{38}-L_{39}	55.48	-320.94	-1.62	-5.55	-0.07	0.35	-50.26	-97.63	-0.94	4.58	0.00	0.00	0.00	0.00	44.87	-344.14	-50.26	-411.27	153.3	153.89	138.16
	L_{39}-L_{40}	-64.07	-301.08	-7.64	-9.76	0.00	1.08	-88.86	-126.21	-0.01	14.66	0.00	0.00	0.00	0.00	-211.81	-646.44	-83.30	-464.23	179.7	179.69	164.15
	L_{40}-L_{41}	-370.76	82.43	-4.77	-5.10	0.73	1.22	-79.26	-105.67	10.58	13.66	0.00	0.00	0.00	0.00	-585.17	-561.91	-489.82	-127.61	162.9	162.89	147.19
	L_{41}-L_{42}	-200.77	-149.87	-4.79	-1.76	0.89	1.42	-61.96	-22.72	11.55	18.02	0.00	0.00	0.00	0.00	-341.55	-165.29	-245.98	218.95	92.6	92.58	76.68
	L_{42}-L_{43}	-131.78	166.76	-3.78	-2.05	-1.14	2.24	-48.93	-26.52	-14.79	29.03	0.00	0.00	0.00	0.00	-234.93	-182.30	-190.54	254.53	144.9	144.85	129.09
	L_{43}-L_{44}	-361.88	-172.92	-0.08	0.06	0.46	0.13	-11.01	0.83	53.76	1.79	0.00	0.00	0.00	0.00	-409.00	-22.22	-540.33	-20.86	145.8	145.75	130.44
	L_{44}-L_{45}	61.50	-21.66	-2.04	-4.79	-0.68	1.66	-27.37	-64.03	-8.78	22.18	0.00	0.00	0.00	0.00	-97.01	-56.98	-59.70	-97.01	92.6	92.58	83.65
	L_{45}-L_{46}	-189.90	5.62	-1.06	-7.61	1.76	1.85	-14.17	-101.67	23.49	24.77	0.00	0.00	0.00	0.00	-228.44	-124.86	-277.40	39.50	92.6	92.58	76.68
	L_{46}-L_{47}	-38.98	-56.51	-6.40	-7.46	1.32	0.63	-85.46	-89.72	17.67	8.35	0.00	0.00	0.00	0.00	-61.75	-59.00	-23.13	-27.70	162.9	162.89	147.19
	L_{47}-L_{48}	-66.62	-29.78	-6.47	-7.47	0.46	1.35	-85.46	-89.72	17.67	8.35	0.00	0.00	0.00	0.00	-94.73	-25.65	-110.10	-6.58	83.6	83.58	74.65

YY Axis Moments from STAAD

Location	Member	Max. Neg. Moment Start (k-ft)	Max. Neg. Moment End (k-ft)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I_{yy} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F'$_y$/S_{top}	M_r (k-in)	Equivalent Mem. Factor a	Equivalent Mem. Factor C_{mx}	Equivalent Mem. Factor C_{mm}
Structure 1	L_0-L_1	-3.28	-12.00	2.22	8.26	128.3	128.29	121.63	141.18	626.8	1.10	4659	0.99905042	4225.3	0.273	0.71	0.71
	L_1-L_2	-130.04	-37.03	-40.65	-7.26	128.3	128.29	115.05	141.18	626.8	1.10	4659	0.99905042	4225.3	0.285	0.71	0.71
	L_2-L_3	-38.53	5.18	-22.83	-9.25	151.6	151.62	138.38	166.47	739.5	1.10	5497	0.99907816	5551.9	0.142	0.54	0.54
	L_3-L_4	46.96	74.37	3.66	62.39	171.6	171.62	158.81	188.47	749.5	1.10	6220	0.99919516	5651.9	0.631	0.85	0.85
	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	0.00000000	0.0	0.000	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	0.00000000	0.0	0.000	0.00	0.00
	L_6-L_7	-28.23	63.14	7.72	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00000000	0.0	0.000	0.00	0.00
	L_7-L_8	24.47	-2.70	6.17	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00000000	0.0	0.000	0.00	0.00
	L_8-L_9	28.81	91.29	1.83	-2.20	0.31	0.28	0.04	0.00	0.00	0.00	0.00	0.00000000	0.0	0.000	0.00	0.00
	L_9-L_{10}	-6.96	-39.32	3.86	-3.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00000000	0.0	0.000	0.00	0.00
	L_{10}-L_{11}	-68.41	-81.49	-68.32	-67.74	305.4	305.44	352.52	403.40	1093.1	1.13	13312	0.99911797	11898.3	0.781	0.91	0.91
	L_{11}-L_{12}	-123.57	-146.31	-110.06	-149.96	305.4	305.44	304.93	403.40	1093.1	1.13	13312	0.99911884	11898.5	0.432	0.89	0.89
	L_{12}-L_{13}	57.78	11.72	10.32	7.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00000000	0.0	0.000	0.00	0.00
	L_{13}-L_{14}	108.59	-27.46	115.02	-26.27	158.2	158.16	151.51	173.24	694.3	1.10	5717	0.99978831	5208.8	-0.228	0.51	0.51
	L_{14}-L_{15}	44.28	8.51	17.22	21.13	158.2	158.16	144.53	173.24	694.3	1.10	5717	0.99978826	5208.8	0.194	0.68	0.68
	L_{14}-L_{15}	44.28	8.51	17.22	21.13	158.2	158.16	144.53	173.24	694.3	1.10	5717	0.99978826	5208.8	0.194	0.68	0.68
	L_{15}-L_{16}	15.60	29.50	-6.59	-2.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00000000	0.0	0.000	0.00	0.00
	L_{16}-L_{17}	45.88	10.51	-0.40	-3.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00000000	0.0	0.000	0.00	0.00
	L_{17}-L_{18}	75.08	36.05	14.91	18.73	321.7	321.70	275.89	363.71	1221.7	1.13	12002	0.99974170	10568.7	0.480	0.79	0.79
	L_{18}-L_{19}	-132.74	-40.90	-0.09	-3.89	0.40	0.31	-1.20	-12.74	3.15	0.00	0.00	0.00000000	0.0	0.000	0.00	0.00
	L_{19}-L_{20}	-55.17

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

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	-66.29	86.22	0.00	-0.40	-1.99	2.37	0.00	0.00	0.00	0.00
	L_1~L_2	-14.44	23.27	0.39	-0.39	-1.93	1.94	0.00	0.00	0.00	0.00
	L_2~L_3	-4.73	5.53	-0.33	-1.05	-1.40	1.40	0.00	0.00	0.00	0.00
	L_3~U_4	36.84	-39.22	1.07	-1.04	-1.14	1.32	0.00	0.00	0.00	0.00
	U_0~U_1	49.77	-49.19	0.89	-0.91	-1.82	1.82	0.00	0.00	0.00	0.00
	U_1~L_2	57.71	-69.80	-0.11	0.04	1.50	-1.80	0.00	0.00	0.00	0.00
	U_2~L_3	63.32	-67.29	-0.42	0.00	1.48	-1.48	0.00	0.00	0.00	0.00
	U_3~L_4	106.28	-118.16	-0.07	0.06	2.80	-2.88	0.00	0.00	0.00	0.00
	U_0~L_1	-10.96	6.72	0.18	-0.21	-0.97	1.19	2.39	-2.86	-12.92	15.83
	L_1~L_2	-14.94	14.91	0.14	-0.14	-1.27	1.27	2.26	-2.26	-24.24	27.40
	L_2~L_3	-102.02	95.66	0.09	-0.17	-1.41	1.83	1.13	-2.15	-18.26	23.68
	L_3~U_4	-111.13	108.65	0.26	-0.18	-1.45	2.13	2.30	-2.26	-16.17	27.41
	L_0~L_1	-96.42	93.90	0.33	-0.29	-1.74	1.86	4.26	-3.85	-22.51	24.04
	L_1~L_2	-60.91	75.94	0.55	-0.53	-1.47	1.61	7.14	-6.84	-19.07	20.86
	L_2~L_3	-39.69	45.43	0.91	-0.91	-1.28	1.28	12.20	-12.20	-16.29	16.29
	L_3~L_4	8.32	-15.87	-0.94	0.93	1.78	-1.86	12.20	12.03	23.08	-24.04
	L_4~U_5	47.73	-50.39	-0.59	0.44	1.94	-1.99	8.72	7.57	25.06	25.75
	L_5~L_6	61.55	-72.81	-0.26	0.27	1.53	-1.72	-3.39	3.43	19.80	22.20
	L_6~L_7	133.11	-138.25	-0.36	0.37	1.34	-1.37	-4.71	4.71	40.57	42.33
	L_7~U_8	157.87	-153.86	-0.37	0.33	3.66	-3.58	-4.81	4.32	47.34	46.39
	U_0~L_1	-131.38	-213.66	-0.16	0.27	2.51	-3.42	-2.08	3.51	32.41	44.42
	L_1~L_2	-147.13	191.05	0.28	-0.36	-3.00	3.20	-1.88	4.32	38.72	40.94
	L_2~L_3	-122.87	130.77	0.34	-0.35	-2.76	2.81	4.29	-4.41	-25.34	35.85
	L_3~L_4	117.87	-123.76	0.41	-0.41	-2.32	2.32	5.31	-5.47	-25.34	32.16
	L_4~L_5	-62.46	69.03	0.27	-0.27	-1.15	1.38	3.41	-3.48	-14.67	17.66
	L_5~L_6	-37.86	43.29	0.38	-0.38	-1.03	1.03	1.49	-1.49	-9.67	10.95
	L_6~L_7	-9.11	15.69	0.88	-0.83	1.18	1.37	11.22	-10.62	-15.08	17.50
	L_7~L_8	14.84	-14.93	1.02	-1.07	-0.81	0.90	12.99	-13.71	-10.29	11.30
	L_8~U_9	39.69	-45.43	0.91	-0.91	-0.91	0.91	10.38	-12.28	2.35	2.47
	L_9~L_{10}	88.81	-97.92	-0.64	0.51	2.43	-2.43	-8.14	6.45	31.06	-31.02
	L_{10}~L_{11}	133.08	-133.02	-0.34	0.34	2.13	-2.13	-7.27	7.27	31.08	28.67
	L_{11}~U_{12}	140.09	-147.00	-0.14	0.01	2.72	-2.91	-1.76	0.17	34.76	37.12
	U_9~L_{10}	148.96	-153.44	-0.06	0.11	2.19	-2.88	-0.79	1.43	35.45	36.78
	L_{10}~L_{11}	147.87	-139.96	-0.18	0.25	2.12	-2.72	-0.44	2.12	35.47	34.09
	L_{11}~L_{12}	185.41	-182.32	-0.30	0.28	3.30	-3.17	-3.77	3.62	42.12	40.48
	L_{12}~U_{13}	72.60	-71.13	0.00	0.00	1.72	-1.72	2.02	-2.00	17.06	17.66
	U_9~L_{10}	-128.28	129.98	0.31	-0.27	-2.53	2.56	3.89	-3.42	-31.95	32.36
	L_{10}~L_{11}	-89.34	89.34	0.28	-0.28	-2.32	2.32	3.93	-3.93	-30.96	30.96
	L_{11}~L_{12}	-125.94	122.64	0.31	-0.29	-2.69	2.56	3.93	-3.70	-34.01	36.61
	L_{12}~U_{13}	-109.69	108.91	0.41	-0.40	-2.21	2.72	5.18	-5.09	-27.91	34.52
	U_{13}~L_{14}	-83.63	82.39	-0.28	0.28	-2.42	2.42	5.18	-5.09	-27.91	34.66
	L_{14}~L_{15}	-43.25	43.74	0.51	-0.44	-1.29	1.45	6.38	-5.49	-16.24	18.27
	L_{15}~U_{16}	-29.76	34.99	0.51	-0.51	-1.27	1.45	6.38	-5.49	-16.24	18.26
	U_{13}~L_{14}	-8.28	1.60	-0.72	0.86	-0.09	0.10	10.38	-10.14	1.21	0.00
	L_{14}~L_{15}	46.51	-47.34	-0.52	0.52	0.46	-0.46	-11.03	10.89	23.76	-24.43
	L_{15}~L_{16}	-6.55	5.79	0.46	-0.46	0.46	-0.46	0.00	0.00	0.00	0.00
	L_{16}~U_{17}	62.68	-61.36	-0.41	0.40	2.36	-2.36	-5.20	5.02	29.82	-29.74
	U_{17}~L_{18}	101.74	-101.54	-0.33	0.33	2.36	-2.36	-5.20	5.02	29.82	-29.74
	L_{18}~L_{19}	106.60	-105.79	-0.44	0.43	3.15	-3.39	-5.54	5.38	39.86	-42.61
	L_{19}~U_{20}	114.56	-114.55	-0.23	0.23	3.15	-3.39	-4.12	5.38	39.86	-42.61
	U_{17}~L_{18}	114.56	-114.55	-0.21	0.18	3.68	-3.49	-2.69	2.25	46.64	-44.06
	L_{18}~L_{19}	113.53	-113.53	-0.24	0.24	3.68	-3.49	-2.69	2.25	46.64	-44.06
	L_{19}~L_{20}	-121.12	118.67	0.33	-0.31	-2.50	2.41	4.23	-3.96	-31.97	30.77
	L_{20}~U_{21}	-92.37	86.40	0.26	-0.36	-1.98	2.19	3.33	-4.56	-25.30	27.93
	U_{21}~L_{22}	-96.77	103.11	0.15	-0.10	-2.27	2.45	1.97	-1.27	-28.95	31.34
	L_{22}~L_{23}	-51.90	51.90	0.37	-0.37	-2.03	2.03	4.84	-4.84	-20.95	20.95
	L_{23}~U_{24}	-43.45	70.69	0.38	-0.33	-1.66	1.82	4.84	-4.13	-20.95	23.24
	U_{21}~L_{22}	-32.66	38.67	0.32	-0.38	-0.40	0.40	4.14	-4.91	-5.11	5.70
	L_{22}~L_{23}	-16.10	17.76	0.35	-0.35	-0.35	0.35	4.14	-4.91	-5.11	5.70
	L_{23}~U_{24}	4.46	-6.40	0.98	0.94	1.05	-1.23	-12.57	11.91	13.38	-15.69
	U_{24}~L_{25}	47.22	-50.55	-0.33	0.33	1.87	-1.95	4.17	-4.20	23.94	-24.89
	L_{25}~L_{26}	47.22	-50.55	-0.33	0.33	1.87	-1.95	4.17	-4.20	23.94	-24.89
	L_{26}~U_{27}	104.86	-112.00	-0.47	0.44	3.62	-3.61	-5.97	5.61	46.23	-46.08
	U_{24}~L_{25}	108.12	-132.78	-0.24	0.38	2.50	-3.59	-3.00	4.91	32.61	45.85
	L_{25}~L_{26}	109.16	163.15	-0.20	0.29	2.50	-3.59	-3.00	4.91	32.61	43.88
	L_{26}~L_{27}	-109.22	-116.95	0.25	-0.23	-2.50	2.67	3.20	-3.03	-32.40	34.49
	L_{27}~U_{28}	-98.15	-107.29	0.25	-0.23	-2.50	2.67	3.20	-3.03	-32.40	34.39
	U_{25}~L_{26}	-48.65	58.79	0.21	-0.21	-1.32	1.51	2.65	-2.69	-17.05	19.59
	L_{26}~L_{27}	-16.10	27.76	0.31	-0.31	-1.32	1.51	2.65	-2.69	-17.05	19.59
	L_{27}~L_{28}	-5.41	11.55	0.83	-0.67	-1.65	1.76	3.51	-3.81	-34.77	44.58
	L_{28}~U_{29}	27.86	-30.67	0.90	-1.01	-0.49	0.49	11.63	-13.07	-6.28	8.37
	U_{27}~L_{28}	27.86	-30.67	0.90	-1.01	-0.49	0.49	11.63	-13.07	-6.28	8.37
	L_{28}~L_{29}	85.70	-83.03	-0.45	0.37	2.09	-2.11	-5.67	4.74	27.05	-28.12
	L_{29}~U_{30}	85.70	-83.03	-0.45	0.37	2.09	-2.11	-5.67	4.74	27.05	-28.12
	U_{28}~L_{29}	137.58	-137.58	-0.24	0.24	3.26	-3.26	0.00	0.00	0.00	0.00
	L_{29}~L_{30}	137.58	-137.58	-0.24	0.24	3.26	-3.26	0.00	0.00	0.00	0.00
	L_{30}~U_{31}	139.46	-154.10	-0.10	0.09	2.94	-3.22	-1.27	1.14	38.01	41.61
	U_{29}~L_{30}	99.11	-131.56	-0.24	0.07	2.33	-2.91	-3.05	0.87	30.20	37.66
	L_{30}~L_{31}	95.00	-87.91	-0.04	0.09	1.76	-2.25	-6.47	1.16	23.03	29.11
	L_{31}~U_{32}	135.46	-154.10	-0.10	0.09	2.94	-3.22	-1.27	1.14	38.01	41.61
	U_{30}~L_{31}	5.87	-8.62	-0.59	0.53	2.27	-2.23	-7.91	7.03	30.20	29.78
	L_{31}~U_{32}	20.19	-40.81	-0.12	0.40	0.89	-1.51	-1.64	5.40	11.62	20.17

Location	Member	ZZ Axis Moments from STAAD: Max. Neg. Mom. Start (k-ft)	Max. Neg. Mom. End (k-ft)	S_{bb} (in^3)	S_{tb} (in^3)	Z_z (in^3)	I_z (in^4)	Shape Factor f	M_p (k-in)	Formula f & Term Y / S_{xx}	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(x)}$	$C_{b(x)}$
Structure 1	U_0~L_1	0.00	0.00	-68.05	105.19	-107.70	153.26	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	L_1~L_2	0.00	0.00	-11.96	23.45	-52.27	63.97	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	L_2~L_3	0.00	0.00	-4.73	16.47	-16.45	6.84	15.50	15.4	15.42	23.71	2	751.9	1.54	782	1.5
	L_3~U_4	0.00	0.00	66.42	-63.85	28.04	-22.80	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_0~U_1	0.00	0.00	-80.11	79.67	-75.07	75.14	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_1~L_2	0.00	0.00	73.19	-90.01	101.10	-121.63	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5
	U_2~L_3	0.00	0.00	88.44	-86.59	125.41	-139.71	23.8	20.80	20.67	34.66	4	1076.0	1.67	1144	1.5
	L_3~U_4	0.00	0.00	136.99	-132.64	186.73	-203.70	18.5	18.45	18.36	30.78	7	1020.9	1.67	1016	1.5
	U_0~L_1	0.00	0.00	-11.14	5.01	-31.04	29.31	107.1	107.13	107.11	162.71	26	2058.9	1.52	5369	1.5
	L_1~L_2	0.00	0.00	-185.38	215.06	-225.10	258.56	33.1	33.05	32.91	54.51	14	1408.8	1.65	1929	1.5
	L_2~L_3	0.00	0.00	-131.16	121.57	-156.35	155.14	39.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5
	L_3~U_4	0.00	0.00	-140.10	200.68	-165.46	239.53	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	L_0~L_1	0.00	0.00	-119.81	117.12	-154.61	153.32	21.1	21.09	21.09	36.46	10	1137.6	1.68	1170	1.5
	L_1~L_2	0.00	0.00	-69.90	89.82	-103.97	125.83	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5
	L_2~L_3	0.00	0.00	-67.39	66.78	-83.47	83.62	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	L_3~L_4	0.00	0.00	-12.20	12.03	23.08	-24.04	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	L_4~U_5	0.00	0.00	-47.73	50.39	-57.59	61.07	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	L_5~L_6	0.00	0.00	-61.55	72.81	-72.26	84.98	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	L_6~L_7	0.00	0.00	-133.11	138.25	-154.19	179.31	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	L_7~U_8	0.00	0.00	-157.87	153.86	-197.38	260.78	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	U_0~L_1	0.00	0.00	-2.08	3.51	32.41	44.42	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	L_1~L_2	0.00	0.00	-186.62	240.32	-233.28	300.40	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	L_2~L_3	0.00	0.00	-154.15	164.27	-209.54	216.61	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5
	L_3~L_4	0.00	0.00	-117.87	123.76	-153.11	161.00	38.63	38.63	38.63	59.23	9	1422.1	1.53	2182	1.5
	L_4~L_5	0.00	0.00	-76.76	85.22	-100.27	112.69	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5
	L_5~L_6	0.00	0.00	-37.86	43.29	-48.97	56.05	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	L_6~L_7	0.00	0.00	-11.22	-10.62	-15.08	17.50	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_7~L_8	0.00	0.00	-12.99	-13.71	-10.29	11.30	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_8~U_9	0.00	0.00	-10.38	-12.28	2.35	2.47	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_9~L_{10}	0.00	0.00	-8.14	6.45	31.06	-31.02	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{10}~L_{11}	0.00	0.00	-7.27	7.27	31.08	28.67	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{11}~U_{12}	0.00	0.00	-1.76	0.17	34.76	37.12	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	U_9~L_{10}	0.00	0.00	-0.79	1.43	35.45	36.78	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{10}~L_{11}	0.00	0.00	-0.44	2.12	35.47	34.09	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{11}~L_{12}	0.00	0.00	-3.77	3.62	42.12	40.48	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{12}~U_{13}	0.00	0.00	2.02	-2.00	17.06	17.66	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	U_9~L_{10}	0.00	0.00	3.89	-3.42	-31.95	32.36	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{10}~L_{11}	0.00	0.00	3.93	-3.93	-30.96	30.96	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{11}~L_{12}	0.00	0.00	3.93	-3.70	-34.01	36.61	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{12}~U_{13}	0.00	0.00	5.18	-5.09	-27.91	34.52	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	U_{13}~L_{14}	0.00	0.00	5.18	-5.09	-27.91	34.66	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{14}~L_{15}	0.00	0.00	6.38	-5.49	-16.24	18.27	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{15}~U_{16}	0.00	0.00	6.38	-5.49	-16.24	18.26	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	U_{13}~L_{14}	0.00	0.00	-8.28	1.60	-0.72	0.86	-0.09	0.10	10.38	-10.14	1.21	0.00	0.00	0	0.0
	L_{14}~L_{15}	0.00	0.00	-11.03	10.89	23.76	-24.43	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{15}~L_{16}	0.00	0.00	-6.55	5.79	16.85	18.69	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{16}~U_{17}	0.00	0.00	-5.20	5.02	29.82	-29.74	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	U_{17}~L_{18}	0.00	0.00	-5.20	5.02	29.82	-29.74	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{18}~L_{19}	0.00	0.00	-5.54	5.38	39.86	-42.61	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{19}~U_{20}	0.00	0.00	-4.12	5.38	39.86	-42.61	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	U_{17}~L_{18}	0.00	0.00	-2.69	2.25	46.64	-44.06	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{18}~L_{19}	0.00	0.00	-2.69	2.25	46.64	-44.06	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{19}~L_{20}	0.00	0.00	4.23	-3.96	-31.97	30.77	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{20}~U_{21}	0.00	0.00	3.33	-4.56	-25.30	27.93	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	U_{21}~L_{22}	0.00	0.00	1.97	-1.27	-28.95	31.34	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{22}~L_{23}	0.00	0.00	4.84	-4.84	-20.95	20.95	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{23}~U_{24}	0.00	0.00	4.84	-4.13	-20.95	23.24	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	U_{21}~L_{22}	0.00	0.00	4.14	-4.91	-5.11	5.70	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{22}~L_{23}	0.00	0.00	4.14	-4.91	-5.11	5.70	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{23}~U_{24}	0.00	0.00	-12.57	11.91	13.38	-15.69	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	U_{24}~L_{25}	0.00	0.00	4.17	-4.20	23.94	-24.89	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{25}~L_{26}	0.00	0.00	4.17	-4.20	23.94	-24.89	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{26}~U_{27}	0.00	0.00	-5.97	5.61	46.23	-46.08	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	U_{24}~L_{25}	0.00	0.00	-3.00	4.91	32.61	45.85	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{25}~L_{26}	0.00	0.00	-3.00	4.91	32.61	43.88	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{26}~L_{27}	0.00	0.00	3.20	-3.03	-32.40	34.49	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{27}~U_{28}	0.00	0.00	3.20	-3.03	-32.40	34.39	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	U_{25}~L_{26}	0.00	0.00	2.65	-2.69	-17.05	19.59	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{26}~L_{27}	0.00	0.00	2.65	-2.69	-17.05	19.59	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{27}~L_{28}	0.00	0.00	3.51	-3.81	-34.77	44.58	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	L_{28}~U_{29}	0.00	0.00	11.63	-13.07	-6.28	8.37	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	U_{27}~L_{28}	0.00	0.00	11.63	-13.07	-6.28	8.37	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{28}~L_{29}	0.00	0.00	-5.67	4.74	27.05	-28.12	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{29}~U_{30}	0.00	0.00	-5.67	4.74	27.05	-28.12	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	U_{28}~L_{29}	0.00	0.00	-0.47	1.16	23.03	29.11	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{29}~L_{30}	0.00	0.00	-0.47	1.16	23.03	29.11	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{30}~U_{31}	0.00	0.00	-7.37	1.14	38.01	41.61	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	U_{29}~L_{30}	0.00	0.00	-3.05	0.87	30.20	-37.66	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{30}~L_{31}	0.00	0.00	-6.47	1.16	23.03	-29.11	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{31}~U_{32}	0.00	0.00	-7.37	1.14	38.01	-41.61	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	U_{30}~L_{31}	0.00	0.00	-7.91	7.03	30.20	-29.78	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
	L_{31}~U_{32}	0.00	0.00	-1.64

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
Condition: As-Built

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

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

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

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

Maximum Axial with Moment Interaction Check

M_z Information | M_y Information

Location		Member	ZZ Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)	Rcv. Proc. Mom. Start k-in	Rcv. Proc. Mom. End k-in	ZZ Axis Moments from STAAD: Start (k-in)	End (k-in)	S_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	I_{zz} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_x	M_z k-in	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(x)}$	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 Max (k-in)	Impact Pedestrian Load Max (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)	Tension: Shape Factor	M_p (k-in)	P_{allow} (kip)	Formula 1.8 Term * F_y/S_x	M_y k-in	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(y)}$	Pass	Compression: Axial Stress	Buckle: Moment Ratio	Buckle: Total	Pass	Yield: Axial Stress	Yield: Moment Ratio	Yield: Total	Pass
Structure 1		U_1-L_1	-23.44	-7.53	-0.38	0.34	0.11	-0.09							-37.02	15.62	28.53	8.13	15.6	15.63	15.58	25.96	5	804.0	1.66	857	1.5	773.7	-0.422	0.43	0.43	-28.15	-30.90	0.99	-0.34	0.18	0.33																												
		U_1-L_2	-3.41	-8.42	-0.74	0.02	0.16	-0.06							-9.85	0.20	21.01	-0.83	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	0.620	0.85	0.85	-44.15	-40.74	-1.57	-0.57	0.37	0.27																												
		L_1-U_2	-7.93	-13.37	-0.43	-0.36	0.01	-0.56							-5.72	-4.85	0.13	-7.41	0.00	0.00	0.00	0.00	2	751.9	1.54	782	1.5	763.3	-0.388	0.44	0.44	-33.39	-37.29	-1.76	-1.30	0.65	-1.82																												
		U_2-L_2	-4.65	-8.60	-0.74	0.02	0.16	-0.06							-9.96	0.20	21.01	-0.83	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.388	0.44	0.44	-23.31	-28.84	-0.74	-1.13	0.50	-1.79																												
		L_2-U_3	-37.44	-76.90	-1.62	1.04	-0.23	-0.20							-76.88	118.04	-52.71	96.40	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.651	0.34	0.34	-24.42	-25.04	-0.60	-14.84	0.00	0.00	-20.31	-85.23	-55.10	-51.88	148.0	147.96	147.96	167.25	221.8	1.13	5519	262	0.9584852	4728.8	0.238	0.70	0.367	0.083	0.45	Yes	0.202	0.046	0.25	Yes	—	—	—	—
		U_3-L_3	-21.19	-37.49	-1.62	1.04	-0.23	-0.20							-37.97	23.06	-0.33	0.00	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.388	0.44	0.44	-47.3	-51.3	-1.59	-0.99	0.61	-1.71																												
		L_3-U_4	-8.75	-101.99	-1.04	1.97	0.15	0.03							-13.92	29.32	-1.94	0.41	0.00	0.00	0.00	0.00	1	1183.7	1.51	1753	1.5	1737.0	-0.177	0.53	0.53	-37.15	-34.84	-20.56	12.99	0.00	0.00	0.00	121.75	53.00	196.78	115.18	148.0	147.96	147.96	167.25	221.8	1.13	5519	205	-0.9995947	4689.9	-0.585	0.83	0.83	0.378	0.130	0.51	Yes	0.207	0.072	0.28	Yes	—	—	—	—
		U_4-L_4	-5.11	-118.70	-0.62	1.36	0.17	-0.12							-17.12	177.22	-3.75	152.38	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2114.7	-0.091	0.56	0.56	66.10	50.77	1.57	1.95	1.67	0.25																												
		L_4-U_5	-77.69	-73.54	-1.61	1.02	0.16	-0.07							-125.63	115.63	111.05	-98.23	34.9	34.89	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2114.7	-0.091	0.25	0.25	34.00	97.62	0.66	2.69	1.69	0.53																												
		U_5-L_5	-43.88	-73.22	-1.35	0.51	-0.08	-0.25							-17.45	6.53	-0.98	-3.26	0.00	0.00	0.00	0.00	2	1035.74	1.53	1583.7	1.5	1568.6	-0.581	0.21	0.21	25.85	112.77	-1.34	1.63	2.07	0.23																												
		L_5-U_6	-22.22	-73.22	-1.37	0.51	-0.08	-0.25							-17.75	6.53	-1.99	-3.26	0.00	0.00	0.00	0.00	2	1035.74	1.53	1583.7	1.5	1568.6	-0.429	0.43	0.43	-7.98	9.61	-0.31	3.20	0.00	0.00	0.00	31.62	13.79	45.62	97.52	148.0	147.96	147.96	167.25	221.8	1.13	6690	277	0.9152526	5561.6	0.272	0.71	0.395	0.078	0.47	Yes	0.217	0.039	0.26	Yes	—	—	—	—
		U_6-L_6	-65.20	-48.77	-1.18	0.79	-0.07	-0.38							-15.27	10.23	-0.84	-4.96	0.00	0.00	0.00	0.00	2	1035.74	1.53	1583.7	1.5	1568.6	-0.429	0.43	0.43	-5.74	19.96	2.15	4.61	2.39	0.53																												
		L_6-U_7	-24.90	8.63	-0.75	0.11	0.12	-0.43							-8.70	1.42	1.55	-6.58	0.00	0.00	0.00	0.00	2	44.99	13.06	-30.35	3.96	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.290	0.48	0.48	-50.00	-66.36	-0.37	1.51	0.93	-0.59																												
		U_7-L_7	-5.91	-8.91	-0.74	0.02	0.16	-0.06							-9.91	0.20	-26.49	2.70	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.388	0.44	0.44	-39.44	-53.50	-0.79	-0.73	-3.14	0.08																												
		L_7-U_8	-25.30	9.99	-0.92	0.70	-0.01	-0.34							-11.88	9.02	-0.10	-4.39	0.00	0.00	0.00	0.00	2	751.9	1.54	782	1.5	763.3	-0.511	0.40	0.40	-117.56	-96.42	-1.60	-2.01	-5.18	0.21																												
		U_8-L_8	-37.01	-20.01	-1.17	0.33	-0.07	-0.17							-47.76	21.70	-49.23	23.38	19.4	19.37	19.37	29.87	2	907.0	1.54	986	1.5	958.8	-0.562	0.38	0.38	-130.16	-130.89	-2.65	-3.44	-13.37	0.31																												
		L_8-U_9	-101.94	74.52	-2.20	1.69	0.24	-0.24							-28.50	21.88	3.09	-3.07	0.00	0.00	0.00	0.00	2	169.57	125.05	-128.50	92.62	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.737	0.31	0.31	-138.27	-130.44	-3.76	-3.92	0.77	0.58																												
		U_9-L_9	-115.87	80.00	-2.45	1.82	0.26	-0.20							-31.76	23.77	2.57	-3.01	0.00	0.00	0.00	0.00	2	191.53	139.53	-147.00	100.18	38.4	38.83	38.83	59.23	4	1284.6	1.53	1955	1.5	1922.1	-0.704	0.32	0.32	-87.75	-119.66	-3.54	-3.47	0.71	0.58																												
		L_9-U_{10}	-75.86	78.94	-1.90	1.70	0.05	-0.12							-19.46	22.03	0.63	-3.04	0.00	0.00	0.00	0.00	2	123.92	131.23	-97.80	100.82	38.8	38.83	38.83	59.23	4	1284.6	1.53	1955	1.5	1922.1	-0.944	0.22	0.22	-120.64	-67.62	-3.32	-2.88	0.60	0.39																												
		U_{9}-L_{10}	-109.41	98.91	-1.57	1.72	0.22	-0.22							-20.00	22.01	2.75	-2.86	0.00	0.00	0.00	0.00	2	168.23	197.20	-138.66	124.86	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.934	0.23	0.23	-42.36	-43.81	0.32	-1.10	-0.04	0.06																												
		L_{10}-U_{11}	-89.79	78.94	-1.90	1.70	0.05	-0.12							-19.46	22.03	0.63	-3.04	0.00	0.00	0.00	0.00	2	123.92	131.23	-97.80	100.82	38.8	38.83	38.83	59.23	4	1284.6	1.53	1955	1.5	1922.1	-0.944	0.22	0.22	-120.64	-67.62	-3.32	-2.88	0.60	0.39																												
		U_{10}-L_{11}	-90.87	71.82	-2.23	1.57	0.31	-0.27							-28.45	20.03	4.01	-3.45	0.00	0.00	0.00	0.00	2	155.13	119.41	-112.92	88.88	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.770	0.29	0.29	-31.05	-69.37	-2.01	1.51	0.16	0.23																												
		L_{11}-U_{12}	-38.38	38.41	-0.58	0.51	0.08	-0.08							-14.66	11.61	1.93	-2.50	0.00	0.00	0.00	0.00	2	46.81	47.54	-34.59	35.13	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.388	0.44	0.44	-46.79	-39.53	-0.37	-0.57	0.34	0.24																												
		U_{11}-L_{12}	-20.35	3.86	-0.98	0.70	0.18	-0.40							-12.63	8.96	2.33	-5.10	0.00	0.00	0.00	0.00	2	42.74	24.46	-23.43	6.19	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.572	0.37	0.37	22.36	-64.71	-2.97	1.51	0.43	-0.79																												
		L_{12}-U_{13}	-7.38	-1.20	-0.84	0.00	0.16	-0.06							-10.78	0.20	-5.38	-2.50	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.388	0.44	0.44	-52.37	-54.43	-0.79	-0.73	-3.14	0.08																												
		U_{12}-L_{13}	-6.85	-23.87	-0.58	0.16	0.47	-0.72							-7.45	2.10	5.98	-9.22	0.00	0.00	0.00	0.00	2	42.74	24.46	-23.43	6.19	15.4	15.42	23.71	2	751.9	1.54	782	1.5	853.4	-0.388	0.44	0.44	-81.96	-104.45	-0.70	-1.50	0.80	-1.00																												
		L_{13}-U_{14}	-44.41	35.31	-1.11	0.59	-0.11	-0.46							-14.14	7.49	-1.42	-5.85	0.00	0.00	0.00	0.00	2	76.12	55.63	-58.58	38.29	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2	-0.731	0.31	0.31	-109.53	-164.85	-0.37	-2.40	-5.41	0.41																												
		U_{13}-L_{14}	-96.57	69.69	-1.89	1.66	0.24	-0.23							-24.78	18.39	-8.19	-4.60	0.00	0.00	0.00	0.00	2	156.98	114.45	-136.15	94.01	38.8	38.83	38.83	59.23	4	1284.6	1.53	1955	1.5	1922.1	-0.688	0.32	0.32	-28.27	-27.43	-107.31	17.73	-6.52	-1.32																												
		L_{14}-U_{15}	-85.40	67.30	-1.74	1.27	-0.19	-0.27							-22.21	16.20	-2.48	-3.48	0.00	0.00	0.00	0.00	2	139.89	108.55	-114.24	82.99	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.776	0.29	0.29	-35.52	-35.02	20.62	-6.20	0.00	0.00																												
		U_{14}-L_{15}	-70.74	58.91	-2.08	1.56	0.30	-0.25							-26.05	13.77	-3.36	-1.44	0.00	0.00	0.00	0.00	2	193.84	142.51	-134.43	104.63	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.776	0.29	0.29	-41.14	-42.51	-3.23	-3.33	1.46	0.90																												
		L_{15}-U_{16}	-109.84	116.34	-2.17	1.90	0.18	0.02							-27.71	24.24	2.33	-2.28	0.00	0.00	0.00	0.00	2	173.62	182.75	-134.57	151.61	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.950	0.22	0.22	-42.24	-14.43	-3.30	-3.39	1.53	0.88																												
		U_{15}-L_{16}	-141.98	130.02	-2.81	2.25	0.35	-0.11							-35.91	28.80	4.50	-2.18	0.00	0.00	0.00	0.00	2	231.39	207.24	-178.72	166.97	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.896	0.24	0.24	95.48	23.61	-3.32	-2.99	2.27	1.05																												
		L_{16}-U_{17}	-82.19	133.43	-2.58	2.16	0.29	-0.17							-19.43	22.51	3.41	-2.69	0.00	0.00	0.00	0.00	2	111.17	205.01	-85.81	154.29	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.950	0.22	0.22	-42.10	-43.25	19.54	-11.24	0.00	0.00																												
		U_{16}-L_{17}	-77.27	144.04	-2.74	2.16	0.32	-0.17							-26.74	23.83	1.79	-2.23	0.00	0.00	0.00	0.00	2	215.37	251.34	-166.31	185.28	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.950	0.22	0.22	-42.46	-33.63	-3.29	-3.39	1.53	0.88																												
		L_{17}-U_{18}	-66.19	89.97	-2.12	1.87	0.14	-0.18							-20.23	17.83	2.84	-2.64	0.00	0.00	0.00	0.00	2	143.25	154.39	-110.61	116.91	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.950	0.22	0.22	-42.87	-16.66	-3.29	-3.39	1.53	0.88																												
		U_{17}-L_{18}	-58.07	72.69	-1.84	1.47	0.20	-0.23							-23.17	18.51	2.53	-2.84	0.00	0.00	0.00	0.00	2	183.24	124.70	-142.13	96.51	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.950	0.22	0.22	-33.00	-12.92	-3.29	-3.39	1.53	0.88																												
		L_{18}-U_{19}	-31.84	37.59	-1.40	0.95	-0.03	-0.37							-17.70	12.02	-0.38	-4.70	0.00	0.00	0.00	0.00	2	64.40	64.49	-49.91	42.79	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2	-0.999	0.20	0.20	-5.29	-1.28	0.01	2.08	2.13	0.03																												
		U_{18}-L_{19}	-37.07	2.04	-1.16	0.45	0.37	-0.54							-44.05	9.16	-14.52	2.37	-6.04	0.00	0.00	0.00	2	24.49	9.39	-8.55	-4.36	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.381	0.45	0.45	-53.85	-47.21	0.16	0.99	0.77	-0.82																												
		L_{19}-U_{20}	-10.03	3.77	0.71	0.27	0.27	-0.56							-8.96	3.46	3.45	-7.12	0.00	0.00	0.00	0.00	2	24.49	9.39	-8.55	-4.36	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.381	0.45	0.45	-53.85	-47.21	0.16	0.99	0.77	-0.82																												
		U_{19}-L_{20}	-8.78	2.04	-1.16	0.45	0.37	-0.54							-23.05	9.16	-14.52	2.37	-6.04	0.00	0.00	0.00	2	24.49	9.39	-8.55	-4.36	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.381	0.45	0.45	-53.85	-47.21	0.16	0.99	0.77	-0.82																												
		L_{20}-U_{21}	-19.43	19.57	-0.51	0.76	-0.09	-0.29							-11.46	8.63	-1.16	-3.70	0.00	0.00	0.00	0.00	2	40.16	37.97	-26.77	20.63	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.945	0.22	0.22	-40.62	-40.22	-1.79	-0.83	0.61	-0.60																												
		U_{20}-L_{21}	-38.53	38.24	-1.30	1.16	-0.13	-0.46							-14.40	11.76	-1.18	-4.73	0.00	0.00	0.00	0.00	2	63.89	64.14	-48.53	35.51	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2	-0.814	0.31	0.31	-35.83	-47.04	0.14	0.99	0.77	-0.82																												
		L_{21}-U_{22}	-46.53	58.29	-2.04	1.66	0.27	-0.30							-25.70	20.89	3.40	-3.79	0.00	0.00	0.00	0.00	2	183.24	124.70	-142.13	96.51	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.971	0.21	0.21	-53.85	-47.21	0.16	0.99	0.77	-0.82																												
		U_{21}-L_{22}	-54.32	68.37	-2.02	1.78	0.22	-0.27							-25.50	22.45	2.80	-3.45	0.00	0.00	0.00	0.00	2	203.77	118.06	-166.97	84.40	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.879	0.25	0.25	-38.62	-33.43	0.71	6.44	0.00	0.00																												
		L_{22}-U_{23}	-49.49	72.12	-2.67	2.37	0.15	-0.18							-33.73	29.91	1.92	-2.31	0.00	0.00	0.00	0.00	2	134.19	132.64	-87.84	90.75	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.988	0.20	0.20	-37.37	-32.00	0.53	6.23	0.00	0.00																												
		U_{22}-L_{23}	-17.09	7.53	-1.00	0.25	0.44	-0.72							-23.44	14.47	3.16	-5.82	0.00	0.00	0.00	0.00	2	42.74	24.46	-23.43	6.19	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.572	0.37	0.37	-49.19	-64.54	-2.97	1.51	0.43	-0.79																												
		L_{23}-U_{24}	-35.84	53.55	-1.49	1.89	0.36	-0.29							-19.06	24.14	0.13	-4.61	0.00	0.00	0.00	0.00	2	115.63	98.92	-72.75	76.29	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.467	0.41	0.41	-58.72	-0.77	0.46	1.30	-0.02	0.22																												
		U_{23}-L_{24}	-26.26	35.09	-2.31	1.56	0.28	-0.12							-25.48	23.78	-2.58	-2.22	0.00	0.00	0.00	0.00	2	132.27	91.67	-102.67	64.63	38.8	38.83	38.83	59.23	4	1284.6	1.53	1955	1.5	1922.1	-0.688	0.32	0.32	-33.63	-29.94	16.71	-2.39	0.00	0.00																												
		L_{24}-U_{25}	-76.26	85.09	-2.02	1.56	0.28	-0.12							-25.80	19.93	3.58	-1.47	0.00	0.00	0.00	0.00	2	132.67	136.52	-84.49	108.75	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.971	0.21	0.21	-49.49	-85.87	-2.48	2.36	-0.55	0.17																												
		U_{24}-L_{25}	-78.38	71.14	-1.79	1.35	0.25	-0.32							-22.82	17.21	3.23	-2.23	0.00	0.00	0.00	0.00	2	131.96	114.86	-87.69	92.19	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.971	0.21	0.21	-55.04	109.77	-0.95	1.35	-0.34	0.44																												
		L_{25}-U_{26}	-76.64	88.38	-1.98	1.73	0.28	-0.13							-25.88	19.93	3.58	-1.47	0.00	0.00	0.00	0.00	2	133.29	91.67	-103.67	64.63	38.8	38.83	38.83	59.23	4	1284.6	1.53	1955	1.5	1922.1	-0.688	0.32	0.32	-33.63	-29.94	16.71	-2.39	0.00	0.00																												
		U_{25}-L_{26}	-78.38	71.14	-1.79	1.35	0.25	-0.32							-22.82	17.21	3.23	-2.23	0.00	0.00	0.00	0.00	2	131.96	114.86	-87.69	92.19	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.971	0.21	0.21	-55.04	109.77	-0.95	1.35	-0.34	0.44																												
		L_{26}-U_{27}	-76.64	88.38	-1.98	1.73	0.28	-0.13							-25.88	19.93	3.58	-1.47	0.00	0.00	0.00	0.00	2	133.29	91.67	-103.67	64.63	38.8	38.83	38.83	59.23	4	1284.6	1.53	1955	1.5	1922.1	-0.688	0.32	0.32	-33.63	-29.94	16.71	-2.39	0.00	0.00																												
		U_{26}-L_{27}	-26.26	-17.63	-0.53	0.09	0.29	-0.68							-6.73	1.15	3.64	-8.70	0.00	0.00	0.00	0.00	2	42.74	24.46	-23.43	6.19	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.572	0.37	0.37	-49.19	-64.54	-2.97	1.51	0.43	-0.79																												
		L_{27}-U_{28}	-1.03	-9.85	-0.71	0.46	0.14	-0.56							-9.02	5.92	1

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans:
Loading: **2F1**
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

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start-k-in	Dead Load End-k-in	Live Load (Max) Start-k-ft	Live Load (Max) End-k-ft	Pedestrian Load (Max) Start-k-ft	Pedestrian Load (Max) End-k-ft	Lane Reduction & Impact Live Load Start-k-ft	Lane Reduction & Impact Live Load End-k-ft	Impact Pedestrian Load Max Start-k-ft	Impact Pedestrian Load Max End-k-ft
Structure 1	U_1–U_2	-75.12	-0.70	5.64	0.60	3.17	-10.39	6.00	6.65	35.27	-115.66
	U_2–U_3	-46.81	-20.35	11.41	-7.61	-13.84	-12.14	36.23	11.77	-72.63	-39.84
	U_3–U_4	-112.19	86.51	0.58	1.56	-1.78	-11.14	6.41	17.33	-19.77	-124.02
	U_4–U_5	-15.68	66.14	0.98	1.46	-0.80	-10.33	10.90	13.12	-8.99	-115.04
	U_5–U_6	-9.16	61.58	0.97	1.46	-10.37	-3.92	10.79	16.28	-115.49	-43.64
	U_6–U_7	42.76	120.09	1.11	1.46	-9.95	-0.48	12.34	16.23	-110.87	-5.37
	U_7–U_8	42.76	120.09	1.11	1.46	-9.95	-0.48	12.34	16.23	-110.87	-5.37
	U_8–U_9	12.31	72.07	2.36	1.11	-6.95	-26.22	12.31	12.02	-68.57	-26.22
	U_9–U_{10}	-47.40	525.96	0.20	3.59	-11.52	10.15	2.24	39.91	128.21	112.96
	U_{10}–U_{11}	474.61	-124.27	3.36	0.69	-9.77	-1.24	24.39	-7.28	26.05	-109.37
	U_{11}–U_{12}	46.76	20.63	0.91	1.10	0.66	-6.91	9.80	11.85	7.13	-74.92
	U_{12}–U_{13}	64.51	-138.68	1.40	0.13	-0.13	-6.79	10.13	3.53	3.51	-56.60
	U_{13}–U_{14}	27.83	-140.42	1.51	0.70	-0.10	-10.16	16.23	7.49	-3.36	-109.43
	U_{14}–U_{15}	-106.18	-154.99	1.09	0.39	1.28	-10.82	11.77	4.16	13.81	-116.66
	U_{15}–U_{16}	-137.97	-202.65	0.76	0.13	1.78	-16.88	7.76	0.13	19.31	-170.57
	U_{16}–U_{17}	-245.66	-182.98	0.74	0.55	-18.82	-6.15	8.02	5.95	-202.88	-66.28
	U_{17}–U_{18}	-123.52	-326.70	0.91	0.13	-15.24	-5.59	9.34	1.41	-164.35	-60.31
	U_{18}–U_{19}	-269.82	-144.58	0.35	0.04	-14.06	-3.64	3.74	0.44	-151.39	-39.26
	U_{19}–U_{20}	-134.14	-67.25	0.37	-0.17	-12.06	-2.42	3.94	-1.78	-138.70	-4.54
	U_{20}–U_{21}	-170.35	-20.48	0.28	0.03	-6.20	1.26	3.03	-0.31	-68.87	13.62
	U_{21}–U_{22}	-186.12	24.46	0.31	-0.26	-5.91	4.42	3.36	-2.84	-63.71	47.61
	U_{22}–U_{23}	-327.18	109.47	0.29	-0.51	-5.91	10.27	3.08	-5.01	-209.21	110.37
	U_{23}–U_{24}	-70.88	-181.00	-0.12	0.88	-22.80	-12.30	-1.24	9.38	2.94	-130.94
	U_{24}–U_{25}	-53.59	-252.21	-0.20	0.12	-18.63	-18.24	-1.60	2.13	-0.63	-163.23
	U_{25}–U_{26}	-327.18	-325.33	0.58	1.25	-3.42	-17.77	6.22	13.32	-36.36	-189.19
	U_{26}–U_{27}	-338.53	-367.21	0.73	1.56	-6.71	-20.77	7.73	16.91	-42.62	-206.45
	U_{27}–U_{28}	-396.09	-197.74	1.23	2.39	-6.97	-17.08	13.13	25.39	-74.29	-181.87
	U_{28}–U_{29}	-344.15	-179.39	1.84	1.61	-4.22	-25.06	19.60	17.09	-44.89	-266.80
	U_{29}–U_{30}	-226.10	-291.71	1.35	1.24	-2.98	-25.15	14.32	19.39	-270.57	-241.61
	U_{30}–U_{31}	-350.17	-90.75	1.49	2.05	-15.28	-6.88	15.89	21.95	-182.63	-73.26
	U_{31}–U_{32}	-222.33	-313.81	1.81	1.33	-13.91	-14.61	19.32	14.23	-247.78	-147.97
	U_{32}–U_{33}	-167.07	-39.82	1.94	1.93	-11.69	-3.53	20.61	20.59	-124.45	-37.61
	U_{33}–U_{34}	-109.77	-170.72	1.72	1.59	-11.47	-3.01	18.66	17.00	-122.12	-22.72
	U_{34}–U_{35}	-261.00	-265.93	0.18	6.10	-0.32	-0.63	1.95	64.99	-3.38	-6.73
	U_{35}–U_{36}	-1192.75	-92.80	0.33	13.80	1.98	-1.33	65.24	147.09	6.71	-15.01
	U_{36}–U_{37}	-25.30	11.62	0.37	0.99	-2.58	-12.07	3.93	10.37	-37.03	-126.99
	U_{37}–U_{38}	-345.15	-13.43	1.44	1.63	-3.83	-18.70	15.82	12.96	-14.48	-191.35
	U_{38}–U_{39}	-150.58	33.05	1.50	1.23	0.00	-11.67	15.82	12.96	0.01	-122.75
	U_{39}–U_{40}	-147.30	4.36	1.74	1.25	0.12	-12.52	18.35	13.14	1.29	-131.74
	U_{40}–U_{41}	-25.30	11.62	0.37	0.99	-2.58	-12.07	3.93	10.37	-37.03	-126.99
	U_{41}–U_{42}	-37.67	-34.01	1.43	0.27	-1.26	-14.68	15.01	2.86	-13.24	-154.41
	U_{42}–U_{43}	-86.04	-71.79	1.37	0.61	-2.76	-16.12	14.50	6.76	-30.64	-174.19
	U_{43}–U_{44}	-60.95	-86.97	0.57	0.78	-16.98	-5.89	5.97	8.17	-178.68	-61.93
	U_{44}–U_{45}	-21.57	-55.15	0.38	0.21	-1.58	-6.43	4.03	2.11	-20.68	-67.41
	U_{45}–U_{46}	-32.99	-28.60	1.30	1.68	-15.06	-6.41	13.65	17.72	-158.41	-67.41
	U_{46}–U_{47}	-15.12	113.76	1.23	1.78	-13.23	-1.64	2.78	17.25	-139.21	-17.30
	U_{47}–U_{48}	-13.38	113.76	1.23	1.78	-13.23	-1.64	2.78	17.25	-139.21	-17.30
	U_{48}–U_{49}	-2.69	209.81	1.01	1.34	-13.04	-2.94	10.66	14.10	-137.14	-30.88
	U_{49}–U_{50}	-2.69	209.81	1.01	1.34	-13.04	-2.94	10.66	14.10	-137.14	-30.88
	U_{50}–U_{51}	-122.28	-116.56	0.14	6.29	-17.67	-11.38	1.50	66.17	-185.87	-119.71
	U_{51}–U_{52}	-1153.78	-196.80	4.74	6.03	13.40	-16.22	50.51	6.68	142.66	-172.72
	U_{52}–U_{53}	-1192.75	-92.80	0.33	13.80	1.98	-1.33	65.24	147.09	6.71	-15.01
	U_{53}–U_{54}	-178.87	-59.61	1.60	1.70	0.10	-12.03	16.99	18.24	1.09	-128.06
	U_{54}–U_{55}	-21.57	-55.15	0.38	0.21	-1.58	-6.43	4.03	2.11	-20.68	-67.41
	U_{55}–U_{56}	-68.77	-178.57	2.14	1.70	0.07	-15.49	22.75	18.10	0.73	-163.94
	U_{56}–U_{57}	-178.87	-59.61	1.60	1.70	0.10	-12.03	16.99	18.24	1.09	-128.06
	U_{57}–U_{58}	-236.40	-153.06	1.63	1.42	-2.60	-24.32	17.31	15.14	-26.56	-208.88
	U_{58}–U_{59}	-98.63	-313.14	1.72	1.61	-24.28	-6.96	18.27	17.18	-258.50	-74.14
	U_{59}–U_{60}	-139.47	-362.56	1.35	1.03	-19.36	-5.45	14.34	11.09	-206.36	-64.46
	U_{60}–U_{61}	-350.27	-386.72	1.28	0.35	-25.80	-11.48	13.57	3.75	-274.71	-122.26
	U_{61}–U_{62}	-489.92	-358.98	1.27	0.47	-28.13	-9.13	13.47	5.04	-297.41	-98.13
	U_{62}–U_{63}	-278.82	-117.63	0.86	-0.23	-16.03	-1.42	9.16	-2.42	-170.68	-15.09
	U_{63}–U_{64}	-292.26	-37.53	0.74	-0.46	-15.61	-2.82	8.61	-4.76	-161.87	2.82
	U_{64}–U_{65}	-186.18	-74.10	0.64	-0.37	-7.77	4.50	6.81	-3.93	-82.75	47.89
	U_{65}–U_{66}	-139.59	-187.78	-0.05	0.40	2.33	-7.40	-0.56	4.30	25.13	-79.83
	U_{66}–U_{67}	-47.42	-119.54	-0.07	0.24	1.84	-16.88	1.23	3.82	-104.22	-68.56
	U_{67}–U_{68}	-52.50	-128.95	-0.10	0.51	2.55	-12.77	-1.08	5.49	27.54	-137.63
	U_{68}–U_{69}	-277.57	-111.60	0.39	0.99	-6.19	-11.33	4.16	10.67	-66.69	-122.19
	U_{69}–U_{70}	-186.87	-240.33	0.68	0.83	-1.02	-19.67	7.32	10.05	-14.22	-213.99
	U_{70}–U_{71}	-287.50	-227.73	0.86	0.61	-9.01	-20.37	9.28	8.01	-209.29	-67.39
	U_{71}–U_{72}	-141.30	-113.93	0.57	1.09	-14.98	-3.48	6.12	11.34	-161.47	-37.31
	U_{72}–U_{73}	-140.41	-227.73	0.70	1.57	-10.37	-1.68	7.55	16.92	-111.81	-18.12
	U_{73}–U_{74}	-141.54	56.98	0.86	1.43	0.62	-1.36	9.30	15.71	-133.73	-14.86
	U_{74}–U_{75}	-112.19	86.51	0.58	1.56	-1.78	-11.14	6.41	17.33	-19.77	-124.02
	U_{75}–U_{76}	-15.68	66.14	0.98	1.46	-0.80	-10.33	10.90	13.12	-8.99	-115.04
	U_{76}–U_{77}	-9.16	61.58	0.97	1.46	-10.37	-3.92	10.79	16.28	-115.49	-43.64
	U_{77}–U_{78}	42.76	120.09	1.11	1.46	-9.95	-0.48	12.34	16.23	-110.87	-5.37
	U_{78}–U_{79}	42.76	120.09	1.11	1.46	-9.95	-0.48	12.34	16.23	-110.87	-5.37
	U_{79}–U_{80}	12.31	72.07	2.36	1.11	-6.95	-26.22	12.31	12.02	-68.57	-26.22
	U_{80}–U_{81}	-47.40	525.96	0.20	3.59	-11.52	10.15	2.24	39.91	128.21	112.96
	U_{81}–U_{82}	474.61	-124.27	3.36	0.69	-9.77	-1.24	24.39	-7.28	26.05	-109.37
	U_{82}–U_{83}	46.76	20.63	0.91	1.10	0.66	-6.91	9.80	11.85	7.13	-74.92
	U_{83}–U_{84}	64.51	-138.68	1.40	0.13	-0.13	-6.79	10.13	3.53	3.51	-56.60
	U_{84}–U_{85}	27.83	-140.42	1.51	0.70	-0.10	-10.16	16.23	7.49	-3.36	-109.43
	U_{85}–U_{86}	-106.18	-154.99	1.09	0.39	1.28	-10.82	11.77	4.16	13.81	-116.66
	U_{86}–U_{87}	-137.97	-202.65	0.76	0.13	1.78	-16.88	7.76	0.13	19.31	-170.57
	U_{87}–U_{88}	-245.66	-182.98	0.74	0.55	-18.82	-6.15	8.02	5.95	-202.88	-66.28
	U_{88}–U_{89}	-123.52	-326.70	0.91	0.13	-15.24	-5.59	9.34	1.41	-164.35	-60.31
	U_{89}–U_{90}	-269.82	-144.58	0.35	0.04	-14.06	-3.64	3.74	0.44	-151.39	-39.26
	U_{90}–U_{91}	-134.14	-67.25	0.37	-0.17	-12.06	-2.42	3.94	-1.78	-138.70	-4.54
	U_{91}–U_{92}	-170.35	-20.48	0.28	0.03	-6.20	1.26	3.03	-0.31	-68.87	13.62
	U_{92}–U_{93}	-186.12	24.46	0.31	-0.26	-5.91	4.42	3.36	-2.84	-63.71	47.61
	U_{93}–U_{94}	-327.18	109.47	0.29	-0.51	-5.91	10.27	3.08	-5.01	-209.21	110.37
	U_{94}–U_{95}	-70.88	-181.00	-0.12	0.88	-22.80	-12.30	-1.24	9.38	2.94	-130.94
	U_{95}–U_{96}	-53.59	-252.21	-0.20	0.12	-18.63	-18.24	-1.60	2.13	-0.63	-163.23
	U_{96}–U_{97}	-327.18	-325.33	0.58	1.25	-3.42	-17.77	6.22	13.32	-36.36	-189.19
	U_{97}–U_{98}	-338.53	-367.21	0.73	1.56	-6.71	-20.77	7.73	16.91	-42.62	-206.45
	U_{98}–U_{99}	-396.09	-197.74	1.23	2.39	-6.97	-17.08	13.13	25.39	-74.29	-181.87
	U_{99}–U_{100}	-344.15	-179.39	1.84	1.61	-4.22	-25.06	19.60	17.09	-44.89	-266.80
	U_{100}–U_{101}	-226.10	-291.71	1.35	1.24	-2.98	-25.15	14.32	19.39	-270.57	-241.61
	U_{101}–U_{102}	-350.17	-90.75	1.49	2.05	-15.28	-6.88	15.89	21.95	-182.63	-73.26
	U_{102}–U_{103}	-222.33	-313.81	1.81	1.33	-13.91	-14.61	19.32	14.23	-247.78	-147.97
	U_{103}–U_{104}	-167.07	-39.82	1.94	1.93	-11.69	-3.53	20.61	20.59	-124.45	-37.61
	U_{104}–U_{105}	-109.77	-170.72	1.72	1.59	-11.47	-3.01	18.66	17.00	-122.12	-22.72
	U_{105}–U_{106}	-261.00	-265.93	0.18	6.10	-0.32	-0.63	1.95	64.99	-3.38	-6.73
	U_{106}–U_{107}	-1192.75	-92.80	0.33	13.80	1.98	-1.33	65.24	147.09	6.71	-15.01
	U_{107}–U_{108}	-25.30	11.62	0.37	0.99	-2.58	-12.07	3.93	10.37	-37.03	-126.99
	U_{108}–U_{109}	-345.15	-13.43	1.44	1.63	-3.83	-18.70	15.82	12.96	-14.48	-191.35
	U_{109}–U_{110}	-150.58	33.05	1.50	1.23	0.00	-11.67	15.82	12.96	0.01	-122.75
	U_{110}–U_{111}	-147.30	4.36	1.74	1.25	0.12	-12.52	18.35	13.14	1.29	-131.74
	U_{111}–U_{112}	-25.30	11.62	0.37	0.99	-2.58	-12.07	3.93	10.37	-37.03	-126.99
	U_{112}–U_{113}	-37.67	-34.01	1.43	0.27	-1.26	-14.68	15.01	2.86	-13.24	-154.41
	U_{113}–U_{114}	-86.04	-71.79	1.37	0.61	-2.76	-16.12	14.50	6.76	-30.64	-174.19
	U_{114}–U_{115}	-60.95	-86.97	0.57	0.78	-16.98	-5.89	5.97	8.17	-178.68	-61.93
	U_{115}–U_{116}	-21.57	-55.15	0.38	0.21	-1.58	-6.43	4.03	2.11	-20.68	-67.41
	U_{116}–U_{117}	-32.99	-28.60	1.30	1.68	-15.06	-6.41	13.65	17.72	-158.41	-67.41
	U_{117}–U_{118}	-15.12	113.76	1.23	1.78	-13.23	-1.64	2.78	17.25	-139.21	-17.30
	U_{118}–U_{119}	-13.38	113.76	1.23	1.78	-13.23	-1.64	2.78	17.25	-139.21	-17.30
	U_{119}–U_{120}	-2.69	209.81	1.01	1.34	-13.04	-2.94	10.66	14.10	-137.14	-30.88
	U_{120}–U_{121}	-2.69	209.81	1.01	1.34	-13.04	-2.94	10.66	14.10	-137.14	-30.88
	U_{121}–U_{122}	-122.28	-116.56	0.14	6.29	-17.67	-11.38	1.50	66.17	-185.87	-119.71
	U_{122}–U_{123}	-1153.78	-196.80	4.74	6.03	13.40	-16.22	50.51	6.68	142.66	-172.72
	U_{123}–U_{124}	-1192.75	-92.80	0.33	13.80	1.98	-1.33	65.24	147.09	6.71	-15.01
	U_{124}–U_{125}	-178.87	-59.61	1.60	1.70	0.10	-12.03	16.99	18.24	1.09	-128.06
	U_{125}–U_{126}	-21.57	-55.15	0.38	0.21	-1.58	-6.43	4.03	2.11	-20.68	-67.41
	U_{126}–U_{127}	-68.77	-178.57	2.14	1.70	0.07	-15.49	22.75	18.10	0.73	-163.94
	U_{127}–U_{128}	-178.87	-59.61	1.60	1.70	0.10	-12.03	16.99	18.24	1.09	-128.06
	U_{128}–U_{129}	-236.40	-153.06	1.63	1.42	-2.60	-24.32	17.31	15.14	-26.56	-208.88
	U_{129}–U_{130}	-98.63	-313.14	1.72	1.61	-24.28	-6.96	18.27	17.18	-258.50	-74.14
	U_{130}–U_{131}	-139.47	-362.56	1.35	1.03	-19.36	-5.45	14.34	11.09	-206.36	-64.46
	U_{131}–U_{132}	-350.27	-386.72	1.28	0.35	-25.80	-11.48	13.57	3.75	-274.71	-122.26
	U_{132}–U_{133}	-489.92	-358.98	1.27	0.47	-28.13	-9.13	13.47	5.04	-297.41	-98.13
	U_{133}–U_{134}	-278.82	-117.63	0.86	-0.23	-16.03	-1.42	9.16	-2.42	-170.68	-15.09
	U_{134}–U_{135}	-292.26	-37.53	0.74	-0.46	-15.61	-2.82	8.61	-4.76	-161.87	2.82
	U_{135}–U_{136}	-186.18	-74.10	0.64	-0.37	-7.77	4.50	6.81	-3.93	-82.75	47.89
	U_{136}–U_{137}	-139.59	-187.78	-0.05	0.40	2.33	-7.40	-0.56	4.30	25.13	-79.83
	U_{137}–U_{138}	-47.42	-119.54	-0.07	0.24	1.84	-16.88	1.23	3.82	-104.22	-68.56
	U_{138}–U_{139}	-52.50	-128.95	-0.10	0.51	2.55	-12.77	-1.08	5.49	27.54	-137.63
	U_{139}–U_{140}	-277.57	-111.60	0.39	0.99	-6.19	-11.33	4.16	10.67	-66.69	-122.19
	U_{140}–U_{141}	-186.87	-240.33	0.68	0.83	-1.02	-19.67	7.32	10.05	-14.22	-213.99
	U_{141}–U_{142}	-287.50	-227.73	0.86	0.61	-9.01	-20.37	9.28	8.01	-209.29	-67.39
	U_{142}–U_{143}	-141.30	-113.93	0.57	1.09	-14.98	-3.48	6.12	11.34	-161.47	-37.31
	U_{143}–U_{144}	-140.41	-227.73	0.70	1.57	-10.37	-1.68	7.55	16.92	-111.81	-18.12
	U_{144}–U_{145}	-141.54	56.98	0.86	1.43	0.62	-1.36	9.30	15.71	-133.73	-14.86
Structure 2	U_{145}–U_{146}	-112.19	86.51	0.58	1.56	-1.78	-11.14	6.41	17.33	-19.77	-124.02
	U_{146}–U_{147}	-15.68	66.14	0.98	1.46	-0.80	-10.33	10.90	13.12	-8.99	-115.04
	U_{147}–U_{148}	-9.16	61.58	0.97	1.46	-10.37	-3.92	10.79	16.28	-115.49	-43.64
	U_{148}–U_{149}	42.76	120.09	1.11	1.46	-9.95	-0.48	12.34	16.23	-110.87	-5.37
	U_{149}–U_{150}	42.76	120.09	1.11	1.46	-9.95	-0.48	12.34	16.23	-110.87	-5.37
	U_{150}–U_{151}	12.31	72.07	2.36	1.11	-6.95	-26.22	12.31	12.02	-68.57	-26.22
	U_{151}–U_{152}	-47.40	525.96	0.20	3.59	-11.52	10.15	2.24	39.91	128.21	112.96
	U_{152}–U_{153}	474.61	-124.27	3.36	0.69	-9.77	-1.24	24.39	-7.28	26.05	-109.37
	U_{153}–U_{154}	46.76	20.63	0.91	1.10	0.66	-6.91	9.80	11.85	7.13	-74.92
	U_{154}–U_{155}	64.51	-138.68	1.40	0.13	-0.13	-6.79	10.13	3.53	3.51	-56.60
	U_{155}–U_{156}	27.83	-140.42	1.51	0.70	-0.10	-10.16	16.23	7.49	-3.36	-109.43
	U_{156}–U_{157}	-106.18	-154.99	1.09	0.39	1.28	-10.82	11.77	4.16	13.81	-116.66
	U_{157}–U_{158}	-137.97	-202.65	0.76	0.13	1.78	-16.88	7.76	0.13	19.31	-170.57
	U_{158}–U_{159}	-245.66	-182.98	0.74	0.55	-18.82	-6.15	8.02	5.95	-202.88	-66.28
	U_{159}–U_{160}	-123.52	-326.70	0.91	0.13	-15.24	-5.59	9.34	1.41	-164.35	-60.31
	U_{160}–U_{161}	-269.82	-144.58	0.35	0.04	-14.06	-3.64	3.74	0.44	-151.39	-39.26
	U_{161}–U_{162}	-134.14	-67.25	0.37	-0.17	-12.06	-2.42	3.94	-1.78	-138.70	-4.54
	U_{162}–U_{163}	-170.35	-20.48	0.28	0.03	-6.20	1.26	3.03	-0.31	-68.87	13.62
	U_{163}–U_{164}	-186.12	24.46	0.31	-0.26	-5.91	4.42	3.36	-2.84	-63.71	47.61
	U_{164}–U_{165}	-327.18	109.47	0.29	-0.51	-5.91	10.27	3.08	-5.01	-209.21	110.37
	U_{165}–U_{166}	-70.88	-181.00	-0.12	0.88	-22.80	-12.30	-1.24	9.38	2.94	-130.94
	U_{166}–U_{167}	-53.59	-252.21	-0.20	0.12	-18.63	-18.24	-1.60	2.13	-0.63	-163.23
	U_{167}–U_{168}	-327.18	-325.33	0.58	1.25	-3.42	-17.77	6.22	13.32	-36.36	-189.19
	U_{168}–U_{169}	-338.53	-367.21	0.73	1.56	-6.71	-20.77	7.73	16.91	-42.62	-206.45
	U_{169}–U_{170}	-396.09	-197.74	1.23	2.39	-6.97	-17.08	13.13	25.39	-74.29	-181.87
	U_{170}–U_{171}	-344.15	-179.39	1.84	1.61	-4.22	-25.06	19.60	17.09	-44.89	-266.80
	U_{171}–U_{172}	-226.10	-291.71	1.35	1.24	-2.98	-25.15	14.32	19.39	-270.57	-241.61
	U_{172}–U_{173}	-350.17	-90.75	1.49	2.05	-15.28	-6.88	15.89	21.95	-182.63	-73.26
	U_{173}–U_{174}	-222.33	-313.81	1.81	1.33	-13.91	-14.61	19.32	14.23	-247.78	-147.97
	U_{174}–U_{175}	-167.07	-39.82	1.94	1.93	-11.69	-3.53	20.61	20.59	-124.45	-37.61
	U_{175}–U_{176}	-109.77	-170.72	1.72	1.59	-11.47	-3.01	18.66	17.00	-122.12	-22.72
	U_{176}–U_{177}	-261.00	-265.93	0.18	6.10	-0.32	-0.63	1.95	64.99	-3.38	-6.73
	U_{177}–U_{178}	-1192.75	-92.80	0.33	13.80	1.98	-1.33	65.24	147.09	6.71	-15.01
	U_{178}–U_{179}	-25.30	11.62	0.37	0.99	-2.58	-12.07	3.93	10.37	-37.03	-126.99
	U_{179}–U_{180}	-345.15	-13.43	1.44	1.63	-3.83	-18.70	15.82	12.96	-14.48	-191.35
	U_{180}–U_{181}	-150.58	33.05	1.50	1.23	0.00	-11.67	15.82	12.96	0.01	-122.75
	U_{181}–U_{182}	-147.30	4.36	1.74	1.25	0.12	-12.52	18.35	13.14	1.29	-131.74
	U_{182}–U_{183}	-25.30	11.62	0.37	0.99	-2.58	-12.07	3.93	10.37	-37.03	-126.99
	U_{183}–U_{184}	-37.67	-34.01	1.43	0.27	-1.26	-14.68	15.01	2.86	-13.24	-154.41
	U_{184}–U_{185}	-86.04	-71.79	1.37	0.61	-2.76	-16.12	14.50	6.76	-30.64	-174.19
	U_{185}–U_{186}	-60.95	-86.97	0.57	0.78	-16.98	-5.89	5.97	8.17	-178.68	-61.93
	U_{186}–U_{187}	-21.57	-55.15	0.38	0.21	-1.58	-6.43	4.03	2.11	-20.68	-67.41
	U_{187}–U_{188}	-32.99	-28.60	1.30	1.68	-15.06	-6.41	13.65	17.72	-158.41	-67.41
	U_{188}–U_{189}	-15.12	113.76	1.23	1.78	-13.23	-1.64	2.78	17.25	-139.21	-17.30
	U_{189}–U_{190}	-13.38	113.76	1.23	1.78	-13.23	-1.64	2.78	17.25	-139.21	-17.30
	U_{190}–U_{191}	-2.69	209.81	1.01	1.34	-13.04	-2.94	10.66	14.10	-137.14	-30.88
	U_{191}–U_{192}	-2.69	209.81	1.01	1.34	-13.04	-2.94	10.66	14.10	-137.14	-30.88

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
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
Governing Section 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 Max Start (k-in)	Lane Reduction & Impact Live Load Max End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	L_0-L_1	-15.54	-73.33	2.87	-6.09	1.64	-1.05	31.91	-46.57	18.27	11.67
	L_1-L_2	39.76	-87.96	-3.97	-6.25	-0.05	0.98	-43.06	-69.55	-0.59	10.95
	L_2-L_3	79.59	-42.20	0.96	0.61	1.63	1.49	-95.99	-66.30	6.81	11.49
	L_3-L_4	-11.34	11.55	-9.62	-4.59	0.54	1.70	-107.14	-51.15	5.98	18.87
	L_4-L_5	-49.11	208.03	-4.00	-2.79	1.12	1.62	-44.05	-64.40	-12.42	17.56
	L_5-L_6	-0.46	181.07	-3.42	4.67	0.95	2.29	-38.09	-51.98	10.59	25.32
	L_6-L_7	41.44	218.72	-3.57	-0.57	0.00	0.00	-29.78	-65.27	-2.64	11.86
	L_7-L_8	-25.11	448.74	0.01	-0.02	0.10	3.91	0.08	-0.17	1.07	43.53
	L_8-L_9	425.89	-36.02	0.00	0.00	5.01	-5.43	-0.02	0.02	54.00	-4.65
	L_9-L_{10}	150.02	-126.53	-2.56	-4.98	-0.25	1.10	0.00	0.00	19.16	-22.67
	L_{10}-L_{11}	120.44	-115.99	-2.38	-3.21	1.67	0.77	-25.68	-34.59	-23.12	8.31
	L_{11}-L_{12}	89.08	-108.12	-2.10	-4.16	2.23	0.29	-33.27	-60.46	-13.23	6.36
	L_{12}-L_{13}	-45.24	-121.26	-4.07	-5.31	1.05	0.49	-43.92	-57.20	-11.29	5.28
	L_{13}-L_{14}	96.32	-264.98	-4.48	-10.60	0.64	0.59	-48.22	-114.30	9.01	6.35
	L_{14}-L_{15}	382.04	-66.89	-2.82	-4.68	0.00	0.00	-27.77	-58.91	-0.63	0.00
	L_{15}-L_{16}	-191.89	-319.35	-7.73	-9.00	0.38	0.11	-57.77	-53.95	-33.92	2.63
	L_{16}-L_{17}	-339.58	44.88	-7.80	-2.63	3.33	-0.15	-95.91	-38.37	3.53	-1.65
	L_{17}-L_{18}	-154.59	-31.26	-3.93	-3.17	0.09	-0.06	-42.29	-34.16	-9.99	-0.64
	L_{18}-L_{19}	-215.80	145.76	-3.82	-0.64	1.14	0.00	-41.02	-16.86	-10.03	0.00
	L_{19}-L_{20}	-136.32	-69.67	-0.34	-3.07	-2.63	1.84	-33.62	-49.07	-28.30	-28.36
	L_{20}-L_{21}	-2.68	-185.02	1.12	-3.43	1.58	-3.06	11.88	-36.54	16.77	-32.54
	L_{21}-L_{22}	78.15	249.23	1.77	-0.23	1.23	6.28	42.23	-21.80	23.83	6.29
	L_{22}-L_{23}	-4.23	-180.72	-3.88	-6.69	-0.08	0.63	-41.30	-60.61	-0.80	6.72
	L_{23}-L_{24}	-252.89	-126.03	-3.33	-4.13	-0.03	0.09	-38.05	-53.43	-0.03	0.09
	L_{24}-L_{25}	-252.89	-295.03	-9.33	-9.88	0.58	1.03	-99.26	-105.20	6.22	10.99
	L_{25}-L_{26}	-475.08	-292.15	-10.37	-10.91	1.59	1.60	-163.67	-116.12	16.97	17.07
	L_{26}-L_{27}	-280.47	-64.51	-6.29	-11.26	1.30	2.30	-66.92	-119.51	13.88	34.48
	L_{27}-L_{28}	-362.04	219.74	-5.10	-9.13	1.30	1.72	-54.21	-87.27	17.44	11.72
	L_{28}-L_{29}	-225.83	141.30	-4.69	-5.63	1.10	2.23	-49.88	-59.94	11.67	23.74
	L_{29}-L_{30}	-251.32	205.61	-3.39	-4.09	0.00	0.00	-36.07	-53.74	0.00	0.00
	L_{30}-L_{31}	-160.03	387.16	-3.27	-5.83	0.97	2.49	-34.79	-42.03	10.34	-36.48
	L_{31}-L_{32}	-202.71	204.45	-5.52	-5.74	2.51	3.06	-0.48	1.22	10.05	-26.42
	L_{32}-L_{33}	-379.76	1103.16	-3.86	-4.05	0.00	0.00	-0.01	-0.01	0.00	0.00
	L_{33}-L_{34}	1072.48	-412.35	-0.76	-0.05	7.30	-1.49	-8.04	-0.56	76.80	-15.71
	L_{34}-L_{35}	331.46	-81.32	-0.39	-0.23	3.39	-0.11	-3.31	-0.19	29.67	-0.94
	L_{35}-L_{36}	475.57	-49.03	-2.43	-0.25	2.62	0.65	-25.02	-65.79	27.61	5.76
	L_{36}-L_{37}	226.51	-26.84	-2.48	-0.27	2.28	0.24	-25.02	-65.79	27.61	5.76
	L_{37}-L_{38}	226.51	-41.81	-4.79	-5.69	2.52	0.88	-50.43	-69.91	22.28	9.24
	L_{38}-L_{39}	214.45	-56.43	-5.02	-7.18	1.25	1.31	-52.77	-75.56	13.13	13.74
	L_{39}-L_{40}	26.83	-52.26	-3.78	-5.26	1.70	1.32	-16.89	-111.12	10.71	14.00
	L_{40}-L_{41}	49.27	-202.49	-11.10	-10.56	1.02	0.80	-16.89	-111.12	10.71	14.00
	L_{41}-L_{42}	79.34	-197.10	-9.34	-9.44	0.79	0.61	-67.88	-112.82	9.85	11.60
	L_{42}-L_{43}	-111.92	0.86	-5.50	-10.70	0.84	1.83	-57.88	-112.82	9.85	19.25
	L_{43}-L_{44}	-111.92	-76.53	-5.50	-10.70	0.84	1.83	-57.88	-112.82	9.85	19.25
	L_{44}-L_{45}	-60.79	179.81	-3.41	-7.01	0.90	2.09	-35.85	-73.71	9.45	21.97
	L_{45}-L_{46}	-81.80	265.56	-3.88	-6.35	1.47	0.84	-40.81	-68.85	15.44	8.85
	L_{46}-L_{47}	-99.81	279.28	-3.16	-6.30	0.13	0.82	-40.81	-68.85	15.44	8.85
	L_{47}-L_{48}	-99.81	-279.28	-6.16	-6.30	0.13	0.82	-1.73	-3.17	1.39	0.00
	L_{48}-L_{49}	-231.96	1004.43	-3.21	-4.76	1.11	1.27	-0.62	-1.13	0.50	0.00
	L_{49}-L_{50}	1026.29	-362.30	-0.44	-0.01	8.70	-2.23	-4.67	0.11	82.67	-23.77
	L_{50}-L_{51}	-226.76	-125.36	0.07	-0.54	-1.65	1.36	0.70	-5.75	-17.57	14.69
	L_{51}-L_{52}	222.98	-243.21	-4.08	-8.33	1.35	1.50	-43.42	-88.67	14.37	15.99
	L_{52}-L_{53}	278.05	-132.91	-2.81	-5.79	1.14	1.74	-29.94	-61.64	12.09	18.54
	L_{53}-L_{54}	222.98	-243.21	-4.08	-8.33	1.35	1.50	-43.42	-88.67	14.37	15.99
	L_{54}-L_{55}	-187.98	-470.72	-3.51	-18.09	1.58	1.17	-37.40	-192.64	10.62	12.40
	L_{55}-L_{56}	-445.06	-93.48	-8.98	-17.39	1.34	0.28	-85.14	-185.13	14.31	2.98
	L_{56}-L_{57}	-291.79	-319.55	-6.10	-10.36	1.08	2.24	-61.16	-138.39	10.86	22.40
	L_{57}-L_{58}	-392.27	38.30	-10.15	-5.88	0.61	-0.20	-108.04	-62.64	6.44	-2.14
	L_{58}-L_{59}	-392.27	38.30	-10.15	-5.88	0.61	-0.20	-108.04	-62.64	6.44	-2.14
	L_{59}-L_{60}	-297.04	199.10	-8.03	-5.79	0.40	-0.20	-88.67	-8.38	4.26	-2.09
	L_{60}-L_{61}	-24.53	-109.42	1.83	3.39	1.89	-2.62	19.76	-36.57	20.39	28.19
	L_{61}-L_{62}	139.90	-177.77	0.77	-4.99	-0.17	0.39	8.26	-53.75	-1.83	4.16
	L_{62}-L_{63}	-11.57	-138.51	0.77	-4.99	-0.17	0.39	-21.66	-63.33	-3.23	2.70
	L_{63}-L_{64}	47.96	-293.64	-3.37	-6.90	-0.13	0.53	-36.32	-74.44	-1.36	6.09
	L_{64}-L_{65}	-11.57	-138.51	0.77	-4.99	-0.17	0.39	-21.66	-63.33	-3.23	2.70
	L_{65}-L_{66}	-47.68	-343.07	-9.44	-9.16	0.16	1.03	-101.78	-88.80	-1.33	5.00
	L_{66}-L_{67}	-341.10	86.20	-4.36	-10.43	0.80	0.75	-46.97	-112.50	8.58	8.05
	L_{67}-L_{68}	-201.09	152.50	-3.18	-5.05	0.56	1.26	-23.46	-54.49	6.05	13.82
	L_{68}-L_{69}	-201.09	152.50	-3.18	-5.05	0.56	1.26	-23.46	-54.49	6.05	13.82
	L_{69}-L_{70}	-148.24	148.96	-4.17	-3.40	1.09	-0.33	-44.94	-36.64	11.75	-3.50
	L_{70}-L_{71}	-148.24	148.96	-4.17	-3.40	1.09	-0.33	-44.94	-36.64	11.75	-3.50
	L_{71}-L_{72}	-428.31	-26.46	-0.01	-0.01	4.18	0.03	-0.16	-0.08	46.62	0.29
	L_{72}-L_{73}	-428.31	-26.46	-0.01	-0.01	4.18	0.03	-0.16	-0.08	46.62	0.29
	L_{73}-L_{74}	70.66	-27.55	-3.27	-6.07	-0.31	0.01	-34.68	-67.53	-0.64	11.90
	L_{74}-L_{75}	70.66	-27.55	-3.27	-6.07	-0.31	0.01	-34.68	-67.53	-0.64	11.90
	L_{75}-L_{76}	194.48	-25.11	-3.37	-7.38	1.49	1.22	-36.88	-82.18	16.55	13.72
	L_{76}-L_{77}	-291.79	-319.55	-6.10	-10.36	1.08	2.24	-61.16	-138.39	10.86	22.40
	L_{77}-L_{78}	-45.48	-80.88	-6.36	-7.58	0.87	0.30	-70.01	-84.42	9.70	3.30
	L_{78}-L_{79}	-45.48	-80.88	-6.36	-7.58	0.87	0.30	-70.01	-84.42	9.70	3.30
	L_{79}-L_{80}	-74.64	-5.53	-3.99	-2.38	1.67	1.82	-40.01	-28.54	-18.56	-10.62

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_z (in^3)	I (in^4)	I_{eff}	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/E_s	M_u (k-in)	Equivalent Mem. Factor a	Equivalent Mem. Factor C_{mx}	C_{mx}
Structure 1	L_0-L_1	21.28	-134.57	3.55	-110.00	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.138	0.54	0.54
	L_1-L_2	-4.29	-204.76	50.92	-100.11	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.021	0.61	0.61
	L_2-L_3	-227.21	-147.05	-69.69	-39.55	99.5	99.53	91.00	125.49	3469	1372.0	1.26	4141	0.99911881	3294.8	-0.112	0.65	0.65
	L_3-L_4	-154.02	-51.47	-6.96	39.55	99.9	99.93	84.14	125.49	3469	1372.0	1.26	4141	0.99911881	3294.8	0.334	0.73	0.73
	L_4-L_5	302.04	92.62	52.39	76.68	114.47	3286	3286	1.21	3332	0.99900394	3252.4	-0.153	0.53	0.53	
	L_5-L_6	-50.11	-167.82	13.17	268.57	104.6	104.58	95.61	136.57	4040	1678.1	1.31	4520	0.99923445	3448.5	0.049	0.62	0.62
	L_6-L_7	19.16	-228.67	191.60	-148.07	144.9	144.85	129.09	192.94	5700	2369.2	1.31	6364	0.99914166	4776.1	-0.056	0.32	0.32
	L_7-L_8	123.18	-195.75	182.73	-139.98	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.99913812	3252.5	-0.629	0.35	0.35
	L_8-L_9	163.42	-315.85	334.00	-249.29	92.6	92.58	76.69	114.47	3295	1304.9	1.24	3777	0.99913812	3252.5	-0.513	0.32	0.32
	L_9-L_{10}	-159.39	-258.32	86.26	356.73	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251	0.99902412	4912.7	-0.242	0.50	0.50
	L_{10}-L_{11}	36.46	-206.76	72.97	296.36	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251	0.99902412	4912.7	-0.082	0.57	0.57
	L_{11}-L_{12}	-131.89	-367.33	-127.95	-351.83	226.0	225.96	215.39	304.84	7480	3191.4	1.35	10060	0.99898766	7449.1	0.359	0.74	0.74
	L_{12}-L_{13}	-43.25	-274.47	-49.67	-257.46	226.0	225.96	215.39	304.84	7480	3191.4	1.35	10060	0.99898766	7449.1	0.077	0.74	0.74
	L_{13}-L_{14}	-270.68	-497.61	-464.47	-1129.79	226.0	225.96	215.39	304.84	7480	3191.4	1.35	10060	0.99898766	7449.1	-0.179	0.74	0.74
	L_{14}-L_{15}	-49.69	-59.94	11.67	23.74	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251	0.99902412	4912.7	-0.295	0.48	0.48
	L_{15}-L_{16}	-358.43	-105.76	-278.41	-214.55	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251	0.99902412	4912.7	-0.295	0.48	0.48
	L_{16}-L_{17}	-308.85	-313.93	-236.18	-98.69	149.0	149.01	138.21	189.42	4793	1908.4	1.27	6251	0.99902412	4912.7	-0.295	0.48	0.48
	L_{17}-L_{18}	-253.27	-622.67	-194.60	-537.70	165.6	165.55	155.01	222.43	5842	2444.6	1.34	7340	0.99916421	5408.6	-0.362	0.46	0.46
	L_{18}-L_{19}	-270.65	-264.19	-250.18	-300.12	226.0	225.96	215.39	304.84	7480	3191.4	1.35	10060	0.99898766	7449.1	0.834	0.93	0.93
	L_{19}-L_{20}	-487.71	-628.36	-1129.79	-1129.79	226.0	225.96	215.39	304.84	7480	3191.4	1.35	10060	0.99898766	7449.1	-0.179	0.74	0.74
	L_{20}-L_{21}	1383.74	-538.79	1494.04	-556.48	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99900039	8222.0	-0.372	0.45	0.45
	L_{21}-L_{22}	1383.74	-538.79	1494.04	-556.48	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99900039	8222.0	-0.372	0.45	0.45
	L_{22}-L_{23}	-429.27	-47.44	-329.56	-21.39	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99900039	8222.0	-0.372	0.45	0.45
	L_{23}-L_{24}	-678.56	-149.26	647.63	-54.92	180.3	180.26	169.70	249.67	6400	2721.8	1.36	8197	0.99915157	6543.8	-0.085	0.57	0.57
	L_{24}-L_{25}	-678.56	-149.26	647.63	-54.92	180.3	180.26	169.70	249.67	6400	2721.8	1.36	8197	0.99915157	6543.8	-0.085	0.57	0.57
	L_{25}-L_{26}	-228.91	-132.24	323.43	-42.26	127.4	127.41	116.92	157.02	3808	1501.0	1.23	5182	0.99898898	4200.3	-0.131	0.55	0.55
	L_{26}-L_{27}	-228.91	-132.24	323.43	-42.26	127.4	127.41	116.92	157.02	3808	1501.0	1.23	5182	0.99898898	4200.3	-0.131	0.55	0.55
	L_{27}-L_{28}	-34.79	-266.46	14.63	-193.99	127.4	127.41	108.77	157.02	3808	1501.0	1.23	5182	0.99898898	4200.3	-0.196	0.52	0.52
	L_{28}-L_{29}	-87.79	-407.69	77.88	-252.32	161.2	161.16	142.40	207.64	4974	2128.2	1.29	6852	0.99905738	5313.3	0.215	0.65	0.65
	L_{29}-L_{30}	-87.79	-407.69	77.88	-252.32	161.2	161.16	142.40	207.64	4974	2128.2	1.29	6852	0.99905738	5313.3	0.215	0.65	0.65
	L_{30}-L_{31}	-229.73	-145.26	-133.99	-39.14	161.2	161.16	150.63	207.64	4974	2128.2	1.29	6852	0.99905738	5313.3	0.658	0.86	0.86
	L_{31}-L_{32}	-487.71	-628.36	-1129.79	-1129.79	226.0	225.96	215.39	304.84	7480	3191.4	1.35	10060	0.99898766	7449.1	0.834	0.93	0.93
	L_{32}-L_{33}	-678.56	-149.26	647.63	-54.92	180.3	180.26	169.70	249.67	6400	2721.8	1.36	8197	0.99915157	6543.8	-0.085	0.57	0.57
	L_{33}-L_{34}	-678.56	-149.26	647.63	-54.92	180.3	180.26	169.70	249.67	6400	2721.8	1.36	8197	0.99915157	6543.8	-0.085	0.57	0.57
	L_{34}-L_{35}	-228.91	-132.24	323.43	-42.26	127.4	127.41	116.92	157.02	3808	1501.0	1.23	5182	0.99898898	4200.3	-0.131	0.55	0.55
	L_{35}-L_{36}	-34.79	-266.46	14.63	-193.99	127.4	127.41	108.77	157.02	3808	1501.0	1.23	5182	0.99898898	4200.3	-0.196	0.52	0.52
	L_{36}-L_{37}	-87.79	-407.69	77.88	-252.32	161.2	161.16	142.40	207.64	4974	2128.2	1.29	6852	0.99905738	5313.3	0.215	0.65	0.65
	L_{37}-L_{38}	-87.79	-407.69	77.88	-252.32	161.2	161.16	142.40	207.64	4974	2128.2	1.29	6852	0.99905738	5313.3	0.215	0.65	0.65
	L_{38}-L_{39}	-229.73	-145.26	-133.99	-39.14	161.2	161.16	150.63	207.64	4974	2128.2	1.29	6852	0.99905738	5313.3	0.658	0.86	0.86
	L_{39}-L_{40}	-229.73	-145.26	-133.99	-39.14	161.2	161.16	150.63	207.64	4974	2128.2	1.29	6852	0.99905738	5313.3	0.658	0.86	0.86
	L_{40}-L_{41}	-60.79	179.81	-3.41	-7.01	0.90	2.09	-35.85	-73.71	9.45	21.97	0.84	1.83	0.84	1.83
	L_{41}-L_{42}	-81.80	265.56	-3.88	-6.35	1.47	0.84	-40.81	-68.85	15.44	8.85	0.90	2.09	0.90	2.09
	L_{42}-L_{43}	-99.81	-279.28	-6.16	-6.30	0.13	0.82	-1.73	-3.17	1.39	0.00	1.47	0.84	1.47	0.84
	L_{43}-L_{44}	-231.96	1004.43	-3.21	-4.76	1.11	1.27	-0.62	-1.13	0.50	0.00	1.11	1.27	1.11	1.27
	L_{44}-L_{45}	1026.29	-362.30	-0.44	-0.01	8.70	-2.23	-4.67	0.11	82.67	-23.77	0.84	1.83	0.84	1.83
	L_{45}-L_{46}	-226.76	-125.36	0.07	-0.54	-1.65	1.36	0.70	-5.75	-17.57	14.69	0.90	2.09	0.90	2.09
	L_{46}-L_{47}	222.98	-243.21	-4.08	-8.33	1.35	1.50	-43.42	-88.67	14.37	15.99	1.47	0.84	1.47	0.84
	L_{47}-L_{48}	278.05	-132.91	-2.81	-5.79	1.14	1.74	-29.94	-61.64	12.09	18.54	0.00	0.00	0.00	0.00
	L_{48}-L_{49}	222.98	-243.21	-4.08	-8.33	1.35	1.50	-43.42	-88.67	14.37	15.99	1.47	0.84	1.47	0.84
	L_{49}-L_{50}	-187.98	-470.72	-3.51	-18.09	1.58	1.17	-37.40	-192.64	10.62	12.40	0.00	0.00	0.00	0.00
	L_{50}-L_{51}	-445.06	-93.48	-8.98	-17.39	1.34	0.28	-85.14	-185.13	14.31	2.98	1.47	0.84	1.47	0.84
	L_{51}-L_{52}	-291.79	-319.55	-6.10	-10.36	1.08	2.24	-61.16	-138.39	10.86	22.40	0.90	2.09	0.90	2.09
	L_{52}-L_{53}	-392.27	38.30	-10.15	-5.88	0.61	-0.20	-108.04	-62.64	6.44	-2.14	0.00	0.00	0.00	0.00
	L_{53}-L_{54}	-392.27	38.30	-10.15	-5.88	0.61	-0.20	-108.04	-62.64	6.44	-2.14	0.00	0.00	0.00	0.00
	L_{54}-L_{55}	-297.04	199.10	-8.03	-5.79	0.40	-0.20	-88.67	-8.38	4.26	-2.09	0.00	0.00	0.00	0.00
	L_{55}-L_{56}	24.53	-109.42	1.83	3.39	1.89	-2.62	19.76	-36.57	20.39	28.19	0.84	1.83	0.84	1.83
	L_{56}-L_{57}	139.90	-177.77	0.77	-4.99	-0.17	0.39	8.26	-53.75	-1.83	4.16	0.90	2.09	0.90	2.09
	L_{57}-L_{58}	-11.57	-138.51	0.77	-4.99	-0.17	0.39	-21.66	-63.33	-3.23	2.70	0.00	0.00	0.00	0.00
	L_{58}-L_{59}	47.96	-293.64	-3.37	-6.90	-0.13	0.53	-36.32	-74.44	-1.36	6.09	0.00	0.00	0.00	0.00
	L_{59}-L_{60}	-11.57	-138.51	0.77	-4.99	-0.17	0.39	-21.66	-63.33	-3.23	2.70	0.00	0.00	0.00	0.00
	L_{60}-L_{61}	-47.68	-343.07	-9.44	-9.16	0.16	1.03	-101.78	-88.80	-1.33	5.00	0.00	0.00	0.00	0.00
	L_{61}-L_{62}	-341.10	86.20	-4.36	-10.43	0.80	0.75	-46.97	-112.50	8.58	8.05	0.00	0.00	0.00	0.00
	L_{62}-L_{63}	-201.09	152.50	-3.18	-5.05	0.56	1.26	-23.46	-54.49	6.05	13.82	0.00	0.00	0.00	0.00
	L_{63}-L_{64}	-201.09	152.50	-3.18	-5.05	0.56	1.26	-23.46	-54.49	6.05	13.82	0.00	0.00	0.00	0.00
	L_{64}-L_{65}	-148.24	148.96	-4.17	-3.40	1.09	-0.33	-44.94	-36.64	11.75	-3.50	0.00	0.00	0.00	0.00
	L_{65}-L_{66}	-148.24	148.96	-4.17	-3.40	1.09	-0.33	-44.94	-36.64	11.75	-3.50	0.00	0.00	0.00	0.00
	L_{66}-L_{67}	-428.31	-26.46	-0.01	-0.01	4.18	0.03	-0.16	-0.08	46.62	0.29	0.00	0.00	0.00	0.00
	L_{67}-L_{68}	-428.31	-26.46	-0.01	-0.01	4.18	0.03	-0.16	-0.08	46.62	0.29	0.00	0.00	0.00	0.00
	L_{68}-L_{69}	70.66	-27.55	-3.27	-6.07	-0.31	0.01	-34.68	-67.53	-0.64	11.90	0.00	0.00	0.00	0.00
	L_{69}-L_{70}	70.66	-27.55	-3.27	-6.07	-0.31	0.01	-34.68	-67.53	-0.64	11.90	0.00	0.00	0.00	0.00
	L_{70}-L_{71}	194.48	-25.11	-3.37	-7.38	1.49	1.22	-36.88	-82.18	16.55	13.72	0.00	0.00	0.00	0.00
	L_{71}-L_{72}	-291.79	-319.55	-6.10	-10.36	1.08	2.24	-61.16	-138.39	10.86	22.40	0.90	2.09	0.90	2.09
	L_{72}-L_{73}	-45.48	-80.88	-6.36	-7.58	0.87	0.30	-70.01	-84.42	9.70	3.30	0.00	0.00	0.00	0.00
	L_{73}-L_{74}	-45.48	-80.88	-6.36	-7.58	0.87	0.30	-70.01	-84.42	9.70	3.30	0.00	0.00	0.00	0.00
	L_{74}-L_{75}	-74.64	-5.53	-3.99	-2.38	1.67	1.82	-40.01	-28.54	-18.56	-10.62	0.00	0.00	0.00	0.00

M_1 Information

YY Axis Moments from STAAD

| Location | Member | Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Ped

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3P1
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 w/ 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	-29.84	49.00	3.56	-0.40	0.23	0.87				
	U_1~L_1	-9.06	15.16	0.31	-0.33	-1.67	1.86				
	U_1~L_2	-13.88	15.97	1.71	-0.46	-1.08	1.52				
	U_2~L_2	33.43	-34.38	1.34	-1.39	-1.16	1.39				
	U_2~L_3	41.60	-42.42	1.41	-1.39	-1.73	1.73				
	U_3~L_3	45.52	-51.05	-0.41	0.35	1.89	-2.06				
	U_3~L_4	51.57	-55.65	-0.41	0.35	1.89	-2.06				
	U_4~L_4	51.91	-101.85	-0.02	0.02	2.96	-3.07				
	U_4~L_5	-20.53	21.18	0.23	-0.28	-0.51	0.66				
	U_5~L_5	-135.19	155.81	0.13	-0.07	-2.62	3.03				
	U_5~L_6	-88.41	88.14	0.23	-0.12	-1.40	2.02				
	U_6~L_6	-91.02	123.96	0.44	-0.27	-3.26	3.39				
	U_6~L_7	-79.50	78.32	0.71	-0.63	-1.64	1.82				
	U_7~L_7	-49.20	60.09	0.84	-0.83	-1.31	1.48				
	U_7~L_8	-29.72	34.60	1.15	-1.24	-0.87	0.87				
	U_8~L_8	-1.46	-2.70	1.47	1.44	-1.83	1.89				
	U_8~L_9	34.16	-36.57	1.02	-1.06	-2.11	2.09				
	U_9~L_9	46.21	-55.82	-0.36	0.25	1.77	-1.90				
	U_9~L_{10}	110.34	-114.53	-0.21	0.19	-3.26	3.26				
	U_{10}~L_{10}	-121.24	-131.09	-0.18	0.18	3.52	-3.53				
	U_{10}~L_{11}	-134.20	-173.18	-0.11	0.15	3.32	-3.64				
	U_{11}~L_{11}	-114.26	168.30	0.42	-0.48	-2.26	3.05				
	U_{11}~L_{12}	-124.38	133.15	0.40	-0.43	-2.38	2.77				
	U_{12}~L_{12}	-113.87	113.87	0.46	-0.47	-2.19	2.34				
	U_{12}~L_{13}	-56.00	62.15	0.27	-0.29	-1.21	1.45				
	U_{13}~L_{13}	-39.98	39.98	0.80	-0.80	-0.68	0.68				
	U_{13}~L_{14}	-7.05	12.30	1.19	-1.15	-1.03	1.26				
	U_{14}~L_{14}	15.85	-15.58	1.27	-1.36	-0.58	1.06				
	U_{14}~L_{15}	38.85	-44.93	1.00	-1.00	-2.07	2.07				
	U_{15}~L_{15}	86.89	-96.05	-1.08	0.97	2.67	-2.58				
	U_{15}~L_{16}	155.08	-159.44	-0.58	0.73	3.93	-3.93				
	U_{16}~L_{16}	141.21	-149.39	-0.72	0.45	2.67	-2.83				
	U_{16}~L_{17}	192.93	-192.81	-0.33	0.22	2.72	-2.81				
	U_{17}~L_{17}	147.39	-146.79	-0.45	0.45	2.73	-2.73				
	U_{17}~L_{18}	203.50	-203.15	-0.22	0.24	3.51	-3.41				
	U_{18}~L_{18}	60.02	-59.48	0.37	-0.34	-1.06	1.06				
	U_{18}~L_{19}	-159.87	162.82	0.36	-0.38	-3.19	3.24				
	U_{19}~L_{19}	-113.84	113.84	0.36	-0.38	-2.31	2.31				
	U_{19}~L_{20}	-130.37	-127.18	0.44	-0.30	-2.75	3.10				
	U_{20}~L_{20}	-113.07	114.60	0.63	-0.56	-2.32	2.85				
	U_{20}~L_{21}	-74.77	67.44	0.67	-0.63	-1.52	1.52				
	U_{21}~L_{21}	-44.77	46.58	0.78	-0.73	-1.11	1.32				
	U_{21}~L_{22}	-30.30	34.91	0.97	-0.92	-0.76	0.76				
	U_{22}~L_{22}	-3.70	4.34	1.19	-1.27	-0.17	0.16				
	U_{22}~L_{23}	22.64	-24.78	1.29	-1.32	0.13	-0.13				
	U_{23}~L_{23}	29.46	-29.72	0.87	0.80	1.74	-1.83				
	U_{23}~L_{24}	88.55	-87.48	-0.79	0.62	2.28	-2.28				
	U_{24}~L_{24}	138.76	-138.76	-0.49	0.49	3.23	-3.23				
	U_{24}~L_{25}	138.22	-138.66	-0.49	0.27	3.59	-3.72				
	U_{25}~L_{25}	124.45	-126.62	-0.27	0.27	3.72	-3.72				
	U_{25}~L_{26}	173.80	-176.10	-0.18	0.16	3.99	-3.91				
	U_{26}~L_{26}	2.19	-2.19	0.87	-0.34	0.16	0.16				
	U_{26}~L_{27}	-167.09	167.27	0.32	-0.36	-3.06	3.03				
	U_{27}~L_{27}	-116.04	109.89	0.16	-0.26	-2.16	2.52				
	U_{27}~L_{28}	124.03	-117.21	0.21	-0.16	-1.91	2.31				
	U_{28}~L_{28}	-119.83	124.38	0.51	-0.34	-2.14	2.43				
	U_{28}~L_{29}	-79.51	79.51	0.51	-0.51	-1.20	1.20				
	U_{29}~L_{29}	-79.51	88.86	0.73	-0.70	-1.73	1.86				
	U_{29}~L_{30}	-43.96	51.93	0.97	1.21	-0.33	0.33				
	U_{30}~L_{30}	-29.31	29.03	1.16	-1.16	-0.16	0.16				
	U_{30}~L_{31}	-5.57	1.81	-1.33	1.27	1.58	-1.73				
	U_{31}~L_{31}	29.31	29.03	1.16	-1.16	0.16	0.16				
	U_{31}~L_{32}	55.25	-61.09	-0.48	0.31	1.83	-1.89				
	U_{32}~L_{32}	104.42	-104.42	-0.24	0.24	2.43	-2.43				
	U_{32}~L_{33}	137.13	-150.74	-0.34	0.35	3.44	-3.50				
	U_{33}~L_{33}	165.72	-206.83	-0.25	0.34	3.23	-3.91				
	U_{33}~L_{34}	-82.72	143.91	-0.22	-0.25	-1.26	1.56				
	U_{34}~L_{34}	-109.81	112.89	0.23	-0.25	-2.48	2.74				
	U_{34}~L_{35}	-90.89	90.20	0.23	-0.23	-2.05	2.05				
	U_{35}~L_{35}	-38.40	-68.11	0.30	-0.22	-1.19	1.50				
	U_{35}~L_{36}	-37.97	34.14	0.69	-0.61	-0.74	0.74				
	U_{36}~L_{36}	-2.78	8.39	1.19	1.23	-1.52	1.65				
	U_{36}~L_{37}	25.87	-28.68	1.42	-1.54	-0.35	0.33				
	U_{37}~L_{37}	34.67	-34.67	0.69	0.69	1.79	-1.79				
	U_{37}~L_{38}	75.39	-76.96	-0.93	0.84	2.24	-2.28				
	U_{38}~L_{38}	137.37	-135.87	-0.73	0.62	3.52	-3.52				
	U_{38}~L_{39}	92.21	-95.87	-0.35	0.19	2.12	-2.44				
	U_{39}~L_{39}	142.63	-142.63	-0.52	0.69	3.66	-3.73				
	U_{39}~L_{40}	194.73	-194.73	-0.35	0.35	3.99	-3.99				
	U_{40}~L_{40}	94.22	-125.87	-0.73	0.52	1.66	-2.43				
	U_{40}~L_{41}	92.27	-95.87	-0.35	0.19	2.12	-2.44				
	U_{41}~L_{41}	142.63	-166.19	-0.05	0.06	3.18	-3.52				
	U_{41}~L_{42}	37.52	-58.80	-0.07	0.08	-1.60	1.77				
	U_{42}~L_{42}	-81.19	89.90	0.01	-0.02	-2.31	2.55				
	U_{42}~L_{43}	-48.49	45.44	0.23	-0.14	-1.69	2.06				
	U_{43}~L_{43}	-38.99	42.96	0.33	-0.30	-1.27	1.70				
	U_{43}~L_{44}	-39.90	40.31	-1.73	1.68	-0.95	0.94				
	U_{44}~L_{44}	-37.48	38.73	-1.93	2.01	1.64	-1.74				
	U_{44}~L_{45}	-10.29	11.13	-1.02	1.06	1.38	-1.73				
	U_{45}~L_{45}	3.53	-11.97	-0.32	0.31	2.48	-2.39				
	U_{45}~L_{46}	44.79	-53.89	-0.22	0.30	-0.17	-0.55				

ZZ Axis Moments from STAAD

Location	Member	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{bb} (in^3)	S_b (in^3)	Z_z (in^3)	J (in^4)	I_{yy} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term = F_y/S_{bb}	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(a)}$	Equivalent Mom. Factor $C_{b(in)}$
Structure 1	U_0~L_1	-33.54	57.68	35.50	76.29	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_1~L_1	-7.34	14.90	-35.92	46.68	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_1~L_2	18.84	-19.28	-2.30	9.39	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_2~L_2	62.80	-64.60	26.67	-24.66	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_2~L_3	74.54	-75.56	7.13	-4.84	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_3~L_3	53.29	-61.36	85.99	-86.22	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5	958.8
	U_3~L_4	66.29	-69.45	102.62	-107.07	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5	958.8
	U_4~L_4	117.90	-132.11	181.39	-176.76	19.5	19.45	18.36	30.78	7	1020.9	1.67	1016	1.5	913.3
	U_4~L_5	-23.38	23.49	-34.02	37.06	107.1	107.13	107.11	162.71	26	2056.9	1.52	5369	1.5	5302.3
	U_5~L_5	-173.93	200.11	-212.44	245.05	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0
	U_5~L_6	-111.74	112.92	-134.58	142.91	35.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
	U_6~L_6	-172.23	193.94	-196.21	193.91	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_6~L_7	-63.40	92.99	-126.34	127.34	21.1	21.09	21.09	35.46	10	1137.6	1.68	1170	1.5	1044.0
	U_7~L_7	-52.15	64.47	-82.28	98.66	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
	U_7~L_8	-53.33	52.34	-45.21	43.53	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_8~L_8	-15.87	15.54	19.76	-20.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_8~L_9	-11.02	9.46	21.49	-21.80	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_9~L_9	-3.89	2.73	19.03	-20.43	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_9~L_{10}	-2.23	2.23	33.96	-35.19	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_{10}~L_{10}	-1.96	1.98	37.95	-38.05	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_{10}~L_{11}	-1.18	1.65	35.80	-39.20	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_{11}~L_{11}	-142.72	212.18	139.90	-153.97	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_{11}~L_{12}	-156.11	167.15	-184.57	211.47	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1
	U_{12}~L_{12}	-144.38	144.38	-183.63	183.63	38.03	38.03	38.03	58.23	5	1622.1	1.62	2090	1.5	1938.9
	U_{12}~L_{13}	-71.05	78.84	-89.57	100.92	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5	1066.2
	U_{13}~L_{13}	-53.33	53.33	-68.53	68.53	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_{13}~L_{14}	-7.28	0.06	-23.36	33.48	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_{14}~L_{14}	38.22	-39.01	8.99	-5.60	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_{14}~L_{15}	64.37	-74.00	15.42	-20.52	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_{15}~L_{15}	98.07	-111.46	149.85	-160.56	20.8	20.80	20.67	34.64	5	1037.5	1.67	1143	1.5	1029.6
	U_{15}~L_{16}	168.46	-197.35	93.72	-100.57	15.5	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_{16}~L_{16}	173.62	-187.99	220.55	-233.32	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0
	U_{16}~L_{17}	191.15	-193.02	233.39	-234.89	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0
	U_{17}~L_{17}	185.35	-187.67	233.37	-234.89	43.0	43.01	43.24	68.76	15	1516.6	1.63	2322	1.5	2140.4
	U_{17}~L_{18}	261.45	-260.80	313.16	-311.25	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
	U_{18}~L_{18}	85.91	-84.93	112.72	-112.60	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
	U_{18}~L_{19}	-202.91	206.48	-251.39	255.91	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
	U_{19}~L_{19}	-144.13	144.13	-182.37	182.37	38.03	38.03	38.03	58.23	5	1622.1	1.62	2090	1.5	1938.9
	U_{19}~L_{20}	-163.52	161.18	-207.07	207.71	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{20}~L_{20}	-138.42	141.28	-178.71	188.00	39.8	39.83	39.83	59.23	6	1264.6	1.53	1955	1.5	1922.1
	U_{20}~L_{21}	-98.62	98.62	-127.07	127.07	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5	1066.2
	U_{21}~L_{21}	-83.50	83.50	-107.68	107.68	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5	1066.2
	U_{21}~L_{22}	-65.94	65.94	-85.04	85.04	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5	1066.2
	U_{22}~L_{22}	-50.04	50.04	-73.60	73.60	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
	U_{22}~L_{23}	-39.98	39.98	-58.81	58.81	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
	U_{23}~L_{23}	-29.89	31.13	-44.00	45.77	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
	U_{23}~L_{24}	11.42	-11.73	-7.66	7.83	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_{24}~L_{24}	11.42	-11.73	-7.66	7.83	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_{24}~L_{25}	39.84	-43.76	75.63	-79.76	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
	U_{25}~L_{25}	75.69	-79.32	117.73	-118.97	18.7	18.71	18.61	31.48	8	970.0	1.68	1039	1.5	926.1
	U_{25}~L_{26}	106.63	-107.94	159.66	-161.56	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5	958.8
	U_{26}~L_{26}	172.56	-176.56	228.79	-231.53	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{26}~L_{27}	164.62	-162.25	225.07	-224.57	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{27}~L_{27}	223.48	-226.77	280.48	-281.00	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
	U_{27}~L_{28}	117.58	-119.79	157.92	-159.29	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
	U_{28}~L_{28}	148.78	156.95	-185.39	195.32	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0
	U_{28}~L_{29}	117.13	117.13	-146.45	146.45	39.8	39.83	39.83	59.23	6	1264.6	1.53	1955	1.5	1922.1
	U_{29}~L_{29}	79.51	88.86	-107.68	118.26	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5	1066.2
	U_{29}~L_{30}	43.96	51.93	-67.97	76.21	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_{30}~L_{30}	29.31	29.03	-44.00	43.71	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_{31}~L_{31}	5.57	1.81	-1.33	1.27	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_{31}~L_{31}	29.31	29.03	-44.00	43.71	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_{31}~L_{32}	55.25	-61.09	-0.48	0.31	1.83	-1.89				
	U_{32}~L_{32}	104.42	-104.42	-0.24	0.24	2.43	-2.43				
	U_{32}~L_{33}	137.13	-150.74	-0.34	0.35	3.44	-3.50				
	U_{33}~L_{33}	165.72	-206.83	-0.25	0.34	3.23	-3.91				
	U_{33}~L_{34}	-82.72	143.91	-0.22	-0.25	-1.26	1.56				
	U_{34}~L_{34}	-109.81	112.89	0.23	-0.25	-2.48	2.74				
	U_{34}~L_{35}	-90.89	90.20	0.23	-0.23	-2.05	2.05				
	U_{35}~L_{35}	-38.40	-68.11	0.30	-0.22	-1.19	1.50				
	U_{35}~L_{36}	-37.97	34.14	0.69	-0.61	-0.74	0.74				
	U_{36}~L_{36}	-2.78	8.39	1.19	1.23	-1.52	1.65				
	U_{36}~L_{37}	25.87	-28.68	1.42	-1.54	-0.35	0.33				
	U_{37}~L_{37}	34.67	-34.67	0.69	0.69	1.79	-1.79				
	U_{37}~L_{38}	75.39	-76.96	-0.93	0.84	2.24	-2.28				
	U_{38}~L_{38}	137.37	-135.87	-0.73	0.62	3.52	-3.52				
	U_{38}~L_{39}	92.21	-95.87	-0.35	0.19	2.12	-2.44				
	U_{39}~L_{39}	142.63	-142.63	-0.52	0.69	3.66	-3.73				
	U_{39}~L_{40}	194.73	-194.73	-0.35	0.35	3.99	-3.99				
	U_{40}~L_{40}	94.22	-125.87	-0.73	0.52	1.66	-2.43				
	U_{40}~L_{41}	92.27	-95.87	-0.35	0.19	2.12	-2.44				
	U_{41}~L_{41}	142.63	-166.19	-0.05	0.06	3.18	-3.52				
	U_{41}~L_{42}	37.52	-58.80	-0.07	0.08	-1.60	1.77				
	U_{42}~L_{42}	-81.19	89.90	0.01	-0.02	-2.31	2.55				
	U_{42}~L_{43}	-48.49	45.44	0.23	-0.14	-1.69	2.06				
	U_{43}~L_{43}	-38.99	42.96	0.33	-0.30	-1.27	1.70				
	U_{43}~L_{44}	-39.90	40.31	-1.73	1.68	-0.95	0.94				
	U_{44}~L_{44}	-37.48	38.73	-1.93	2.01	1.64	-1.74				
	U_{44}~L_{45}	-10.29	11.13	-1.02	1.06	1.38	-1.73				
	U_{45}~L_{45}	3.53	-11.97	-0.32	0.31	2.48	-2.39				
	U_{45}~L_{46}	44.79	-53.89	-0.22	0.30	-0.17	-0.55				

YY Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0~L_1	10.44	3.30	-12.37	-3.56	0.00	0.00	0.00	-1.11	-0.36	
	U_1~L_1	6.71	0.38	-58.26	-14.50	0.00	0.00	0.00	-3.23	-1.30	
	U_1~L_2	-7.68	-1.24	14.38	10.54	0.00	0.00	0.00	0.71	0.55	
	U_2~L_2	-5.22	-2.62	8.87	10.28	0.00	0.00	0.00	-1.16	-0.47	
	U_2~L_3	-2.28	-1.50	7.13	4.54	0.00	0.00	0.00	-1.10	-0.44	
	U_3~L_3	3.70	0.08	5.60	4.73	0.00	0.00	0.00	-1.65	-0.66	
	U_3~L_4	5.29	0.81	6.40	4.73	0.00	0.00	0.00	-1.65	-0.66	
	U_4~L_4	0.27	0.07	17.58	4.17	0.00	0.00	0.00	-1.50	-0.38	
	U_5~L_5	2.40	0.08	2.98	1.14	0.00	0.00	0.00	-0.41	-0.14	
	U_5~L_6	3.25	2.57	0.30	0.33	0.00	0.00	0.00	-0.01	0.00	
	U_6~L_6	-3.56	-3.36	-6.49	-3.19	0.00	0.00	0.00	-0.90	-0.30	
	U_6~L_7	-0.87	-0.84	-2.31	-1.33	0.00	0.00	0.00	-0.34	-0.12	
	U_7~L_7	3.73	7.30	2.16	6.74	0.00	0.00	0.00	-1.60	-0.54	
	U_7~L_8	5.55	2.41	0.00	0.00	0.00	0.00	0.00	-0.42	-0.19	
	U_8~L_8	3.31	-1.48	24.21	-2.08	0.00	0.00	0.00	-1.61	-0.61	
	U_8~L_9	10.19	5.64	21.97	-12.03	0.00	0.00	0.00	-1.61	-0.61	
	U_9~L_9	11.11	-12.71	9.36	-0.09	0.00	0.00	0.00	-1.66	-0.56	
	U_9~L_{10}	2.15	-6.61	41.95	3.11	0.00	0.00	0.00	-1.75	-0.58	
	U_{10}~L_{10}	-1.10	-2.13	40.54	-6.25	0.00	0.00	0.00	-1.75	-0.58	
	U_{10}~L_{11}	-4.93	-0.65	125.57	16.45

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
Condition: As-Built

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

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

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

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

M_z Information

M_y Information

| Location | | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Max) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | Max. Pos. Mom. Start k-in | Max. Pos. Mom. End k-in | S_{top} (in^3) | S_b (in^3) | Z_z (in^3) | I (in^4) | I_{eff} (in^4) | Shape Factor | M_p (k-in) | Formula 1.8 Term * F_y/S_x | M_r k-in | Equivalent Mom. Factor a | Equivalent Mom. Factor C_{mx} | Equivalent Mom. Factor C_{mm} | 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_{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/M_{cy} | M_{cy} | Equivalent Mom. Factor a | Equivalent Mom. Factor C_{my} | Equivalent Mom. Factor C_{mm} | Axial Stress | Moment Stress | Total | Pass | Axial Stress | Moment Stress | Total | Pass | Axial Stress | Moment Stress | Total | Pass |
|---|---|---|---

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Segment
Loading: 2F1
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
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& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

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

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

M_z Information

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

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: 2F1
Condition: As-Built

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

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

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

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

M_y Information

M_z Information

| Location | | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | End (k-in) | Live Load (Max) Start (k-in) | End (k-in) | Live Load (Min) Start (k-in) | End (k-in) | Pedestrian Load (Max) Start (k-in) | End (k-in) | Pedestrian Load (Min) Start (k-in) | End (k-in) | Lane Reduction & Impact Live Load Max Start (k-in) | End (k-in) | Lane Reduction & Impact Live Load Min Start (k-in) | End (k-in) | Impact Pedestrian Load (Max) Start (k-in) | End (k-in) | Impact Pedestrian Load (Min) Start (k-in) | End (k-in) | Mxx: Pos. Mom. Start (k-in) | End (k-in) | Mxx: Neg. Mom. Start (k-in) | End (k-in) | YY Axis Moments from STAAD: S_{xx} (in^3) | S_{rb} (in^3) | Z_z (in^3) | I (in^4) | I_{eff} (in^4) | Shape Factor | M_p (k-in) | Formula I.8 Term 1 $P_u/\phi_c P_{cc}$ | M_z (k-in) | Equivalent Mom. Factor a | $C_{m(x)}$ | $C_{m(y)}$ | 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) | Mxx: Pos. Mom. Start (k-in) | End (k-in) | Mxx: Neg. Mom. Start (k-in) | End (k-in) | S_{xx} (in^3) | S_{rb} (in^3) | Z_z (in^3) | I_{zz} (in^4) | Shape Factor | M_p (k-in) | P_{crz} (kip) | Formula I.8 Term 1 $P_u/\phi_c P_{cc}$ | M_z (k-in) | Equivalent Mom. Factor a | $C_{m(x)}$ | $C_{m(y)}$ | Axial Moment Total | Axial Moment Total | Total | Pass | Axial Moment Total | Axial Moment Total | Total | Pass | Axial Moment Total | Axial Moment Total | Total | Pass | Axial Moment Total | Axial Moment Total | 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
Condition: As-Built

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

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

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

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

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) (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	U_0~L_1	-15.70	54.51	0.13	-0.31	1.81	1.89	0.03	-0.13	-0.04	0.43
	L_1~U_1	-27.61	29.28	0.42	-0.38	-0.86	1.04	0.20	-0.18	-0.57	0.52
	U_1~L_2	-0.23	0.23	-0.26	0.35	-0.70	0.63	0.20	-0.23	-0.26	0.35
	L_2~U_2	40.61	-41.50	0.53	-0.54	-0.26	0.40	0.17	-0.21	-0.06	0.10
	U_2~L_3	56.81	-57.80	0.53	-0.54	-0.03	0.25	0.07	0.00	-0.01	0.00
	L_3~U_3	64.44	-72.22	-0.12	0.08	0.97	-1.07	0.00	0.00	0.42	-0.47
	U_3~L_4	61.24	-83.74	-0.11	0.07	1.01	-1.11	0.00	0.00	0.42	-0.47
	L_4~U_4	109.00	-121.35	-0.33	0.36	1.04	-1.09	0.00	0.00	0.00	0.00
	U_4~L_5	-42.62	47.12	0.43	0.51	-1.09	1.31	0.00	0.00	-5.80	6.80
	L_5~U_5	-181.01	205.10	0.38	-0.08	1.40	1.62	0.00	0.00	-0.94	1.08
	U_5~L_6	-123.92	126.16	0.02	-0.06	-1.13	1.37	0.00	0.00	-0.65	0.65
	L_6~U_6	-127.70	170.40	0.00	-0.01	-1.07	1.36	0.00	0.00	-0.68	0.65
	U_6~L_7	-106.29	107.56	0.11	-0.06	-0.78	0.96	0.00	0.00	-0.52	0.55
	L_7~U_7	-66.48	79.89	0.18	-0.16	-0.54	1.01	0.00	0.00	-0.30	0.40
	U_7~L_8	-59.77	59.77	0.22	-0.22	-0.22	0.22	0.00	0.00	-0.13	0.13
	L_8~U_8	17.16	-23.69	-0.36	0.37	1.00	-1.06	0.00	0.00	0.11	0.27
	U_8~L_9	62.60	-64.15	0.02	-0.03	1.04	-0.99	0.00	0.00	0.39	-0.39
	L_9~U_9	74.44	-85.11	-0.15	0.19	1.02	-1.07	-0.06	0.06	0.44	-0.49
	U_9~L_{10}	157.77	-162.63	-0.22	0.22	1.01	-1.64	-0.08	0.08	0.83	-0.87
	L_{10}~U_{10}	164.37	-173.76	-0.19	0.18	1.51	-1.54	-0.07	0.07	0.91	-0.96
	U_{10}~L_{11}	194.92	-235.55	-0.13	0.16	1.36	-1.55	-0.06	0.07	1.06	-1.17
	L_{11}~U_{11}	133.48	204.39	-0.16	0.16	1.06	-0.11	-0.29	0.29	1.25	-1.36
	U_{11}~L_{12}	-201.32	204.79	0.39	-0.37	-1.62	1.80	0.15	-0.14	-0.91	1.08
	L_{12}~U_{12}	-189.53	189.53	0.41	-0.41	-1.74	1.90	0.00	0.00	-0.96	1.06
	U_{12}~L_{13}	-79.54	88.71	0.26	-0.27	-0.91	1.02	0.10	-0.10	-0.37	0.41
	L_{13}~U_{13}	-61.01	54.59	0.35	-0.35	-0.47	0.61	0.00	0.00	-0.24	0.29
	U_{13}~L_{14}	-6.04	12.50	0.41	-0.39	-0.69	0.75	0.13	-0.13	-0.17	0.21
	L_{14}~U_{14}	27.52	-27.99	0.64	-0.66	-0.41	0.45	0.10	-0.12	-0.04	0.05
	U_{14}~L_{15}	59.94	-69.39	0.02	-0.02	-0.20	0.22	0.10	-0.10	-0.06	0.06
	L_{15}~U_{15}	130.31	-141.80	-0.16	0.11	1.26	-1.31	0.00	0.00	-0.47	0.50
	U_{15}~L_{16}	216.58	-221.49	0.02	-0.01	1.91	-1.98	0.00	0.00	-0.68	0.71
	L_{16}~U_{16}	193.18	-200.19	-0.11	0.16	1.57	-1.64	0.00	0.00	-0.67	0.68
	U_{16}~L_{17}	194.78	-194.55	-0.19	0.23	1.38	-1.46	0.00	0.00	-0.65	0.65
	L_{17}~U_{17}	179.73	-179.73	-0.32	0.32	1.24	-1.24	0.00	0.00	-0.64	0.64
	U_{17}~L_{18}	231.65	-230.62	-0.50	0.51	1.38	-1.31	0.07	-0.12	0.72	-0.68
	L_{18}~U_{18}	29.62	-29.62	-0.31	0.31	0.00	0.00	0.00	0.00	0.00	0.00
	U_{18}~L_{19}	-225.23	219.22	0.11	-0.08	-1.88	1.83	0.02	0.03	-0.80	0.75
	L_{19}~U_{19}	-182.78	182.78	0.27	-0.27	-1.95	2.04	0.07	-0.08	-0.77	0.78
	U_{19}~L_{20}	-159.39	160.90	0.34	-0.34	-1.62	1.90	0.00	0.00	-0.74	0.76
	L_{20}~U_{20}	-69.51	69.51	0.26	-0.26	-0.80	0.85	0.00	0.00	-0.34	0.35
	U_{20}~L_{21}	37.52	-37.52	0.49	-0.49	0.49	-0.49	0.00	0.00	0.19	-0.19
	L_{21}~U_{21}	4.56	-5.01	-0.08	0.09	-0.16	0.15	0.00	0.00	-0.07	0.09
	U_{21}~L_{22}	28.39	-55.09	0.33	0.33	0.67	0.67	-12.76	-13.60	0.00	0.00
	L_{22}~U_{22}	70.77	-74.09	-0.30	0.29	1.05	-1.09	-0.05	0.05	0.40	-0.41
	U_{22}~L_{23}	104.65	-105.00	0.28	0.27	1.31	-1.29	-0.06	0.06	0.52	-0.51
	L_{23}~U_{23}	139.58	-139.58	0.26	0.26	1.31	-1.31	-0.06	0.06	0.52	-0.51
	U_{23}~L_{24}	189.58	-191.05	-0.17	0.22	1.56	-1.99	-0.06	0.05	0.80	-0.81
	L_{24}~U_{24}	207.01	-207.01	0.00	0.00	1.74	-1.74	0.00	0.00	0.00	0.00
	U_{24}~L_{25}	207.01	-210.59	-0.53	0.54	1.45	-1.39	-0.09	0.00	0.00	0.00
	L_{25}~U_{25}	194.68	-194.68	-0.32	0.32	1.32	-1.32	0.00	0.00	0.00	0.00
	U_{25}~L_{26}	-251.15	245.11	0.18	-0.17	-1.58	1.57	-0.03	0.06	-0.81	0.77
	L_{26}~U_{26}	-185.39	176.08	0.12	-0.19	-1.49	1.59	0.00	0.00	-0.60	0.56
	U_{26}~L_{27}	-185.34	185.34	0.19	-0.19	-1.59	1.59	0.00	0.00	-0.60	0.60
	L_{27}~U_{27}	-185.34	192.19	0.02	0.01	-1.20	1.45	0.00	0.00	-0.64	0.54
	U_{27}~L_{28}	-176.38	176.38	0.12	-0.19	-1.49	1.59	0.00	0.00	-0.60	0.56
	L_{28}~U_{28}	-116.39	129.36	0.13	-0.09	-1.06	1.15	0.00	0.00	-0.42	0.45
	U_{28}~L_{29}	-52.79	62.48	0.10	-0.11	-0.37	0.41	0.00	0.00	-0.18	0.22
	L_{29}~U_{29}	-19.17	20.05	0.40	-0.40	-0.18	0.22	-1.21	-1.42	-0.04	0.05
	U_{29}~L_{30}	18.83	-25.55	0.45	0.39	0.91	-0.99	-0.14	0.14	0.22	-0.25
	L_{30}~U_{30}	39.35	-43.59	0.02	-0.02	0.14	-0.14	0.00	0.00	0.00	0.00
	U_{30}~L_{31}	77.27	-183.34	0.38	-0.37	0.39	-0.39	-12.23	-12.99	0.00	0.00
	L_{31}~U_{31}	189.59	-202.30	-0.31	0.30	1.53	-1.56	-0.12	0.11	0.78	-0.81
	U_{31}~L_{32}	214.89	-270.10	-0.19	0.27	1.30	-1.62	-0.06	0.10	0.72	-0.93
	L_{32}~U_{32}	109.52	183.35	-0.09	-0.07	0.91	-0.93	-2.36	-2.48	0.00	0.00
	U_{32}~L_{33}	-186.19	183.03	0.27	-0.25	-1.69	1.81	0.10	-0.08	-0.14	0.10
	L_{33}~U_{33}	-144.26	161.23	0.27	-0.25	-1.69	1.81	0.10	-0.08	-0.14	0.10
	U_{33}~L_{34}	-68.06	78.17	0.18	-0.19	-0.98	1.07	0.07	-0.07	-0.44	0.48
	L_{34}~U_{34}	-19.17	20.05	0.40	-0.40	-0.18	0.22	-1.21	-1.42	-0.04	0.05
	U_{34}~L_{35}	-11.00	18.48	0.39	-0.39	-0.61	0.71	0.10	-0.11	-0.22	0.26
	L_{35}~U_{35}	39.39	-43.59	0.02	-0.02	0.14	-0.14	0.00	0.00	0.00	0.00
	U_{35}~L_{36}	77.27	-183.34	0.38	-0.37	0.39	-0.39	-12.23	-12.99	0.00	0.00
	L_{36}~U_{36}	119.89	-118.13	-0.16	0.14	1.16	-1.16	-0.05	0.06	0.56	-0.59
	U_{36}~L_{37}	129.25	-129.25	-0.12	0.20	1.03	-1.15	0.00	0.00	0.00	0.00
	L_{37}~U_{37}	129.25	-129.25	-0.12	0.20	1.03	-1.15	0.00	0.00	0.00	0.00
	U_{37}~L_{38}	119.89	-118.13	-0.16	0.14	1.16	-1.16	-0.05	0.06	0.56	-0.59
	L_{38}~U_{38}	77.27	-183.34	0.38	-0.37	0.39	-0.39	-12.23	-12.99	0.00	0.00
	U_{38}~L_{39}	39.39	-43.59	0.02	-0.02	0.14	-0.14	0.00	0.00	0.00	0.00
	L_{39}~U_{39}	-11.00	18.48	0.39	-0.39	-0.61	0.71	0.10	-0.11	-0.22	0.26
	U_{39}~L_{40}	-19.17	20.05	0.40	-0.40	-0.18	0.22	-1.21	-1.42	-0.04	0.05
	L_{40}~U_{40}	18.83	-25.55	0.45	0.39	0.91	-0.99	-0.14	0.14	0.22	-0.25
	U_{40}~L_{41}	39.35	-43.59	0.02	-0.02	0.14	-0.14	0.00	0.00	0.00	0.00
	L_{41}~U_{41}	95.02	-96.90	-0.25	0.25	0.94	-1.00	-0.10	-0.10	0.37	-0.40
	U_{41}~L_{42}	24.90	-48.24	0.40	0.51	-0.92	0.92	0.00	0.00	0.01	-0.14
	L_{42}~U_{42}	-42.62	47.12	0.43	0.51	-1.09	1.31	0.00	0.00	-5.80	6.80
	L_{43}~U_{43}	-181.01	205.10	0.38	-0.08	1.40	1.62	0.00	0.00	-0.94	1.08
	U_{43}~L_{44}	-123.92	126.16	0.02	-0.06	-1.13	1.37	0.00	0.00	-0.65	0.65
	L_{44}~U_{44}	-127.70	170.40	0.00	-0.01	-1.07	1.36	0.00	0.00	-0.68	0.65
	U_{44}~L_{45}	-106.29	107.56	0.11	-0.06	-0.78	0.96	0.00	0.00	-0.52	0.55
	L_{45}~U_{45}	-66.48	79.89	0.18	-0.16	-0.54	1.01	0.00	0.00	-0.30	0.40
	U_{45}~L_{46}	-59.77	59.77	0.22	-0.22	-0.22	0.22	0.00	0.00	-0.13	0.13
	L_{46}~U_{46}	17.16	-23.69	-0.36	0.37	1.00	-1.06	-0.08	0.08	0.11	0.27
	U_{46}~L_{47}	62.60	-64.15	0.02	-0.03	1.04	-0.99	0.00	0.00	0.39	-0.39
	L_{47}~U_{47}	74.44	-85.11	-0.15	0.19	1.02	-1.07	-0.06	0.06	0.44	-0.49
	U_{47}~L_{48}	157.77	-162.63	-0.22	0.22	1.01	-1.64	-0.08	0.08	0.83	-0.87
	L_{48}~U_{48}	164.37	-173.76	-0.19	0.18	1.51	-1.54	-0.07	0.07	0.91	-0.96
	U_{48}~L_{49}	194.92	-235.55	-0.13	0.16	1.36	-1.55	-0.06	0.07	1.06	-1.17
	L_{49}~U_{49}	133.48	204.39	-0.16	0.16	1.06	-0.11	-0.29	0.29	1.25	-1.36
	U_{49}~L_{50}	-201.32	204.79	0.39	-0.37	-1.62	1.80	0.15	-0.14	-0.91	1.08
	L_{50}~U_{50}	-189.53	189.53	0.41	-0.41	-1.74	1.90	0.00	0.00	-0.96	1.06
	U_{50}~L_{51}	-79.54	88.71	0.26	-0.27	-0.91	1.02	0.10	-0.10	-0.37	0.41
	L_{51}~U_{51}	-61.01	54.59	0.35	-0.35	-0.47	0.61	0.00	0.00	-0.24	0.29
	U_{51}~L_{52}	-6.04	12.50	0.41	-0.39	-0.69	0.75	0.13	-0.13	-0.17	0.21
	L_{52}~U_{52}	27.52	-27.99	0.64	-0.66	-0.41	0.45	0.10	-0.12	-0.04	0.05
	U_{52}~L_{53}	59.94	-69.39	0.02	-0.02	-0.20	0.22	0.10	-0.10	-0.06	0.06
	L_{53}~U_{53}	130.31	-141.80	-0.16	0.11	1.26	-1.31	0.00	0.00	-0.47	0.50
	U_{53}~L_{54}	216.58	-221.49	0.02	-0.01	1.91	-1.98	0.00	0.00	-0.68	0.71
	L_{54}~U_{54}	193.18	-200.19	-0.11	0.16	1.57	-1.64	0.00	0.00	-0.67	0.68
	U_{54}~L_{55}	194.78	-194.55	-0.19	0.23	1.38	-1.46	0.00	0.00	-0.65	0.65
	L_{55}~U_{55}	179.73	-179.73	-0.32	0.32	1.24	-1.24	0.00	0.00	-0.64	0.64
	U_{55}~L_{56}	231.65	-230.62	-0.50	0.51	1.38	-1.31	0.07	-0.12	0.72	-0.68
	L_{56}~U_{56}	29.62	-29.62	-0.31	0.31	0.00	0.00	0.00	0.00	0.00	0.00
	U_{56}~L_{57}	-225.23	219.22	0.11	-0.08	-1.88	1.83	0.02	0.03	-0.80	0.75
	L_{57}~U_{57}	-182.78	182.78	0.27	-0.27	-1.95	2.04	0.07	-0.08	-0.77	0.78
	U_{57}~L_{58}	-159.39	160.90	0.34	-0.34	-1.62	1.90	0.00	0.00	-0.74	0.76
	L_{58}~U_{58}	-69.51	69.51	0.26	-0.26	-0.80	0.85	0.00	0.00	-0.34	0.35
	U_{58}~L_{59}	37.52	-37.52	0.49	-0.49	0.49	-0.49	0.00	0.00	0.19	-0.19
	L_{59}~U_{59}	4.56	-5.01	-0.08	0.09	-0.16	0.15	0.00	0.00	-0.07	0.09
	U_{59}~L_{60}	28.39	-55.09	0.33	0.33	0.67	0.67	-12.76	-13.60	0.00	0.00
	L_{60}~U_{60}	70.77	-74.09	-0.30	0.29	1.05	-1.09	-0.05	0.05	0.40	-0.41
	U_{60}~L_{61}	104.65	-105.00	0.28	0.27	1.31	-1.29	-0.06	0.06	0.52	-0.51
	L_{61}~U_{61}	139.58	-139.58	0.26	0.26	1.31	-1.31	-0.06	0.06	0.52	-0.51
	U_{61}~L_{62}	189.58	-191.05	-0.17	0.22	1.56	-1.99	-0.06	0.05	0.80	-0.81
	L_{62}~U_{62}	207.01	-207.01	0.00	0.00	1.74	-1.74	0.00	0.00	0.00	0.00
	U_{62}~L_{63}	207.01	-210.59	-0.53	0.54	1.45	-1.39	-0.09	0.00	0.00	0.00
	L_{63}~U_{63}	194.68	-194.68	-0.32	0.32	1.32	-1.32	0.00	0.00	0.00	0.00
	U_{63}~L_{64}	-251.15	245.11	0.18	-0.17	-1.58	1.57	-0.03	0.06	-0.81	0.77
	L_{64}~U_{64}	-185.39	176.08	0.12	-0.19	-1.49	1.59	0.00	0.00	-0.60	0.56
	U_{64}~L_{65}	-185.34	185.34	0.19	-0.19	-1.59	1.59	0.00	0.00	-0.60	0.60
	L_{65}~U_{65}	-185.34	192.19	0.02	0.01	-1.20	1.45	0.00	0.00	-0.64	0.54
	U_{65}~L_{66}	-176.38	176.38	0.12	-0.19	-1.49	1.59	0.00	0.00	-0.60	0.56
	L_{66}~U_{66}	-116.39	129.36	0.13	-0.09	-1.06	1.15	0.00	0.00	-0.42	0.45
	U_{66}~L_{67}	-52.79	62.48	0.10	-0.11	-0.37	0.41	0.00	0.00	-0.18	0.22
	L_{67}~U_{67}	-19.17	20.05	0.40	-0.40	-0.18	0.22	-1.21	-1.42	-0.04	0.05
	U_{67}~L_{68}	18.83	-25.55	0.45	0.39	0.91	-0.99	-0.14	0.14	0.22	-0.25
	L_{68}~U_{68}	39.35	-43.59	0.02	-0.02	0.14	-0.14	0.00	0.00	0.00	0.00
	U_{68}~L_{69}	77.27	-183.34	0.38	-0.37	0.39	-0.39	-12.23	-12.99	0.00	0.00
	L_{69}~U_{69}	189.59	-202.30	-0.31	0.30	1.53	-1.56	-0.12	0.11	0.78	-0.81
	U_{69}~L_{70}	214.89	-270.10	-0.19	0.27	1.30	-1.62	-0.06	0.10	0.72	-0.93
	L_{70}~U_{70}	109.52	183.35	-0.09	-0.07	0.91	-0.93	-2.36	-2.48	0.00	0.00
	U_{70}~L_{71}	-186.19	183.03	0.27	-0.25	-1.69	1.81	0.10	-0.08	-0.14	0.10
	L_{71}~U_{71}	-144.26	161.23	0.27	-0.25	-1.69	1.81	0.10	-0.08	-0.14	0.10
	U_{71}~L_{72}	-68.06	78.17	0.18	-0.19	-0.98	1.07	0.07	-0.07	-0.44	0.48
	L_{72}~U_{72}	-19.17	20.05	0.40	-0.40	-0.18	0.22	-1.21	-1.42	-0.04	0.05
	U_{72}~L_{73}	-11.00	18.48	0.39	-0.39	-0.61	0.71	0.10	-0.11	-0.22	0.26
	L_{73}~U_{73}	39.39	-43.59	0.02	-0.02	0.14	-0.14	0.00	0.00	0.00	0.00
	U_{73}~L_{74}	77.27	-183.34	0.38	-0.37	0.39	-0.39	-12.23	-12.99	0.00	0.00
	L_{74}~U_{74}	119.89	-118.13	-0.16	0.14	1.16	-1.16	-0.05	0.06	0.56	-0.59
	U_{74}~L_{75}	129.25	-129.25	-0.12	0.20	1.03	-1.15	0.00	0.00	0.00	0.00
	L_{75}~U_{75}	129.25	-129.25	-0.12	0.20	1.03	-1.15	0.00	0.00	0.00	0.00
	U_{75}~L_{76}	119.89	-118.13	-0.16	0.14	1.16	-1.16	-0.05	0.06	0.56	-0.59
	L_{76}~U_{76}	77.27	-183.34	0.38	-0.37	0.39	-0.39	-12.23	-12.99	0.00	0.00
	U_{76}~L_{77}	39.39	-43.59	0.02	-0.02	0.14	-0.14	0.00	0.00	0.00	0.00
	L_{77}~U_{77}	-11.00	18.48	0.39	-0.39	-0.61	0.71	0.10	-0.11	-0.22	0.26
	U_{77}~L_{78}	-19.17	20.05	0.40	-0.40	-0.18	0.22	-1.21	-1.42	-0.04	0.05
	L_{78}~U_{78}	18.83	-25.55	0.45	0.39	0.91	-0.99	-0.14	0.14	0.22	-0.25
	U_{78}~L_{79}	39.35	-43.59	0.02	-0.02	0.14	-0.14	0.00	0.00	0.00	0.00
	L_{79}~U_{79}	95.02	-96.90	-0.25	0.25	0.94	-1.00	-0.10	-0.10	0.37	-0.40
	U_{79}~L_{80}	24.90	-48.24	0.40	0.51	-0.92	0.92	0.00	0.00	0.01	-0.14
Structure 2	U_0~L_1	140.58	-181.45	-0.17	0.12	1.13	-1.46	0.00	0.00	0.72	-0.89
	L_1~U_1	129.25	-129.19	-0.12	0.20	1.03	-1.15	0.00	0.00	0.67	-0.69
	U_1~L_2	47.96	-47.96	0.02	-0.02	0.38	-0.38	0.00	0.00	0.00	0.00
	L_2~U_2	41.96	-42.23	-0.26	0.26	0.33	-0.33	0.00	0.00	0.00	0.00
	U_2~L_3	28.09	-38.34	0.32	0.31	1.07	-1.05	-0.15	0.16	0.50	-0.53
	L_3~U_3	78.23	-95.55	-0.20	0.29	0.89	-1.08	-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 (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	U_0~L_1	-0.70	2.43	0.01	-0.01	0.08	0.08	0.00	-0.01	0.00	0.02
	L_1~U_1	-1.23	1.31	0.02	-0.02	-0.04	0.05	0.01	-0.01	-0.03	0.02
	U_1~L_2	-0.01	0.01	-0.01	0.02	-0.03	0.03	0.01	-0.01	-0.01	0.02
	L_2~U_2	1.81	-1.85	0.02	-0.02	-0.01	0.01	0.00	0.00	0.00	0.00
	U_2~L_3	2.53	-2.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_3~U_3	2.87	-3.23	-0.01	0.00	0.04	-0.05	0.00	0.00	-0.02	0.02
	U_3~L_4	2.73	-3.73	-0.01	0.00	0.04	-0.05	0.00	0.00	-0.02	0.02
	L_4~U_4	4.86	-5.41	0.01	-0.01	0.05	-0.05	0.00	0.00	0.00	0.00
	U_4~L_5	-1.90	2.10	0.02	0.02	-0.05	0.06	0.00	0.00	-0.03	0.03
	L_5~U_5	-8.07	9.14	0.02	-0.01	0.06	-0.07	0.00	0.00	-0.03	0.03
	U_5~L_6	-5.52	5.62	0.00	0.00	0.05	-0.05	0.00	0.00	-0.03	0.03
	L_6~U_6	-5.69	7.60	0.00	0.00	0.05	-0.06	0.00	0.00	-0.03	0.03
	U_6~L_7	-4.74	4.80	0.00	0.00	0.04	-0.05	0.00	0.00	-0.02	0.02
	L_7~U_7	-2.96	3.56	0.01	-0.01	0.04	-0.05	0.00	0.00	-0.02	0.02
	U_7~L_8	-2.67	2.67	0.01	-0.01	0.03	-0.03	0.00	0.00	-0.01	0.01
	L_8~U_8	0.76	-1.06	0.02	-0.02	-0.05	0.05	0.00	0.00	0.02	-0.02
	U_8~L_9	2.79	-2.85	0.00	0.00	-0.04	0.04	0.00	0.00	0.02	-0.02
	L_9~U_9	3.32	-3.71	0.00	0.00	-0.04	0.05	0.00	0.00	0.02	-0.02
	U_9~L_{10}	7.04	-7.26	0.01	-0.01	-0.08	0.08	0.00	0.00	0.04	-0.04
	L_{10}~U_{10}	7.33	-7.75	0.01	-0.01	-0.08	0.08	0.00	0.00	0.04	-0.04
	U_{10}~L_{11}	8.69	-10.51	0.01	-0.01	-0.06	0.07	0.00	0.00	0.05	-0.05
	L_{11}~U_{11}	5.95	9.12	0.01	-0.01	-0.05	0.06	0.00	0.00	0.05	-0.06
	U_{11}~L_{12}	-8.97	9.13	0.04	-0.03	0.14	-0.16	0.00	0.00	-0.04	0.04
	L_{12}~U_{12}	-8.45	8.45	0.04	-0.04	0.15	-0.17	0.00	0.00	-0.04	0.04
	U_{12}~L_{13}	-3.54	3.73	0.02	-0.02	0.06	-0.07	0.00	0.00	-0.02	0.02
	L_{13}~U_{13}	-2.72	2.72	0.02	-0.02	0.05	-0.05	0.00	0.00	-0.02	0.02
	$U_{13

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
Condition: As-Built

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

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

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

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

M_z Information

Location		Member	ZZ Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Start (k-in)	Impact Pedestrian Load End (k-in)	ZZ Axis Moment from STAAD: Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	S_{bb} (in^3)	S_{tb} (in^3)	Z_z (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_bb	M_z (k-in)	YY Axis Moments from STAAD: Equivalent Mom. Factor A	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor C_{mbx}	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{bb} (in^3)	S_{tb} (in^3)	Z_y (in^3)	I_{yy} (in^4)	Tension: Yield: Shape Factor	Yield: M_p (k-in)	Yield: P_y (k)	Yield: Formula 1.8 Term * F_y/S_bb	Yield: M_{ny} (k-in)	Yield: Pass	Fracture: Formula 1.8 Term * F_u/S_nb	Fracture: M_{nf} (k-in)	Fracture: Pass	Tension: Moment Total (k-in)	Tension: Pass	Compression: Buckle: Axial Problem	Buckle: Moment Problem	Buckle: Total	Buckle: Pass	Compression: Yield: Axial Problem	Yield: Moment Problem	Yield: Total	Yield: Pass
Structure 1		U_0-L_1	3.65	-1.42	-0.41	0.22	-0.02	-0.05	0.15	0.01	-0.03	-0.02	-0.40	-2.98	-0.20	-0.72	1.75	0.12	-0.34	-0.23	-0.66	2.19	5.58	25.66	5	804.0	1.66	857	1.5	773.7	0.857	0.95	0.55	-84.92	-28.02	-1.71	-3.27	1.00	1.00	-1.09	-0.56	0.55	0.50	-22.78	-43.63	13.40	13.37	-16.17	-8.33	8.12	7.42	-161.03	-103.98	-82.42	-83.37	100.5	100.60	100.48	120.29	66.1	1.20	3970	144	0.94257797	3126.1	0.646	0.86	0.86	0.86	0.242	0.045	0.29	Yes	0.146	0.525	0.18	Yes	—	—	—

Axial AB Operating

Operating Loads - 2F1

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			-----	-593.27	-180	70	95	-820	8	-8	-80	77	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.189	1.00	Yes	0.800	0.195	1.00	Yes	1.00	**7.59**
		U_1 - U_2			-----	-562.20	-63	21	-132	-834	-7	-42	16	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.231	1.00	Yes	0.758	0.198	0.96	Yes	1.00	**3.87**
		U_2 - U_3			-----	-582.54	-143	191	-412	-625	4	28	56	219	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.199	1.00	Yes	0.786	0.149	0.94	Yes	1.00	**4.02**
		U_3 - U_4			268.75	-586.12	43	258	-512	-679	18	37	123	41	0.308	0.182	0.50	Yes	0.211	0.125	0.34	Yes	0.798	0.199	1.00	Yes	0.790	0.162	0.96	Yes	1.00	**5.39**
		U_4 - U_5			270.47	-574.18	87	234	-914	-138	25	-26	67	-32	0.310	0.229	0.54	Yes	0.213	0.157	0.37	Yes	0.781	0.179	0.97	Yes	0.774	0.217	1.00	Yes	1.00	**5.34**
		U_5 - U_6			578.30	-----	207	419	-1131	5	-124	-56	378	19	0.663	0.333	1.00	Yes	0.447	0.217	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.65**
		U_6 - U_7			790.37	-----	343	210	-833	-168	-267	-109	482	-95	0.756	0.243	1.00	Yes	0.528	0.167	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.67**
		U_7 - U_8			949.13	-----	35	1077	-1292	1938	-433	-14	203	-178	0.658	0.338	1.00	Yes	0.459	0.230	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.42**
		U_8 - U_9			886.47	-----	1177	-122	1315	-1086	-378	-207	-220	183	0.726	0.267	1.00	Yes	0.497	0.182	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.35**
		U_9 - U_{10}			689.68	-----	238	290	-55	-628	-163	18	-48	641	0.748	0.244	1.00	Yes	0.507	0.163	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.76**
		U_{10} - U_{11}			-----	-594.93	301	-94	207	-1075	35	91	333	227	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.209	0.98	Yes	0.759	0.241	1.00	Yes	1.00	**6.00**
		U_{11} - U_{12}			-----	-846.54	203	-124	4	-896	107	408	243	670	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.191	1.00	Yes	0.794	0.149	0.95	Yes	1.00	**4.49**
		U_{12} - U_{13}			-----	-1209.48	2	-238	-76	-889	345	209	575	392	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.178	1.00	Yes	0.808	0.123	0.94	Yes	1.00	**5.08**
		U_{13} - U_{14}			-----	-1300.94	-156	-390	-306	-1651	226	182	417	516	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.243	1.00	Yes	0.746	0.182	0.93	Yes	1.00	**4.21**
		U_{14} - U_{15}			-----	-1285.15	-284	-257	-1522	-816	219	33	572	162	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.251	1.00	Yes	0.737	0.168	0.91	Yes	1.00	**4.10**
		U_{15} - U_{16}			-----	-1356.03	-161	-433	-1174	-855	89	37	460	206	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.213	1.00	Yes	0.777	0.130	0.91	Yes	1.00	**4.39**
		U_{16} - U_{17}			-----	-1344.37	-345	-209	-1493	-478	140	-52	635	103	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.220	1.00	Yes	0.771	0.165	0.94	Yes	1.00	**5.06**
		U_{17} - U_{18}			-----	-1053.10	-212	-72	-905	94	-1	-61	421	52	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.158	1.00	Yes	0.824	0.147	0.98	Yes	1.00	**5.03**
		U_{18} - U_{19}			-----	-730.08	-201	-70	-767	29	27	-121	372	-124	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.163	1.00	Yes	0.821	0.154	0.98	Yes	1.00	**5.13**
		U_{19} - U_{20}			-----	-578.54	-273	313	-1581	1708	-68	-136	251	-564	-----	-----	-----	-----	-----	-----	-----	-----	0.657	0.180	0.84	Yes	0.651	0.344	1.00	Yes	1.00	**11.96**
	Structure 2	U_0 - U_1			-----	-632.78	-89	-94	699	-1468	3	-70	-51	19	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.210	0.97	Yes	0.747	0.249	1.00	Yes	1.00	**12.88**
		U_1 - U_2			-----	-820.98	-46	-194	21	-1193	-70	-220	-51	-319	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.198	1.00	Yes	0.792	0.181	0.98	Yes	1.00	**6.55**
		U_2 - U_3			-----	-1102.30	-93	-290	-38	-1839	-28	359	61	519	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.204	1.00	Yes	0.782	0.187	0.97	Yes	1.00	**5.58**
		U_3 - U_4			-----	-1248.88	-426	-428	-879	-1821	518	879	439	642	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.274	1.00	Yes	0.711	0.162	0.88	Yes	1.00	**4.73**
		U_4 - U_5			-----	-1434.99	-462	-388	-612	-1994	762	302	409	291	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.250	1.00	Yes	0.737	0.165	0.91	Yes	1.00	**5.18**
		U_5 - U_6			-----	-1495.76	-437	-34	-945	-1698	188	-200	400	480	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.221	1.00	Yes	0.768	0.141	0.91	Yes	1.00	**5.08**
		U_6 - U_7			-----	-1285.36	-309	-128	-948	-1858	-121	-177	299	113	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.257	1.00	Yes	0.732	0.166	0.90	Yes	1.00	**4.55**
		U_7 - U_8			-----	-1308.93	-213	-203	-1996	-845	-97	-175	182	54	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.244	1.00	Yes	0.745	0.178	0.93	Yes	1.00	**4.71**
		U_8 - U_9			-----	-1186.79	-291	92	-1438	-363	-86	-194	390	-8	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.184	1.00	Yes	0.805	0.153	0.96	Yes	1.00	**5.17**
		U_9 - U_{10}			-----	-916.49	-116	294	-1611	-371	-124	-144	247	0	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.196	1.00	Yes	0.791	0.196	0.99	Yes	1.00	**5.39**
		U_{10} - U_{11}			-----	-755.16	126	331	-1568	-330	-160	-158	473	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.237	1.00	Yes	0.750	0.221	0.98	Yes	1.00	**7.40**
		U_{11} - U_{12}			806.02	-----	226	528	-1748	178	-340	-126	567	105	0.681	0.316	1.00	Yes	0.457	0.211	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.99**
		U_{12} - U_{13}			1051.24	-----	416	118	-1730	-1004	-395	-376	737	-180	0.710	0.288	1.00	Yes	0.506	0.196	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.78**
		U_{13} - U_{14}			1470.62	-----	137	2215	-338	1389	-950	-482	-414	-492	0.723	0.270	1.00	Yes	0.512	0.178	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.38**
		U_{14} - U_{15}			1212.31	-----	2468	88	3586	-2480	-931	-729	-650	-90	0.596	0.396	1.00	Yes	0.422	0.260	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.33**
		U_{15} - U_{16}			1212.16	-----	126	457	-433	-1687	-609	-378	-91	876	0.733	0.266	1.00	Yes	0.521	0.180	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.98**
		U_{16} - U_{17}			1012.73	-----	643	306	108	-1545	-205	-25	482	463	0.746	0.245	1.00	Yes	0.497	0.161	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.21**
		U_{17} - U_{18}			650.41	-----	417	287	346	-1304	14	261	295	825	0.653	0.342	1.00	Yes	0.435	0.226	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.62**
		U_{18} - U_{19}			611.05	-----	563	264	133	-1769	86	112	546	574	0.613	0.384	1.00	Yes	0.402	0.245	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.10**
		U_{19} - U_{20}			277.74	-688.33	287	195	-423	-1087	30	22	177	534	0.260	0.246	0.51	Yes	0.173	0.161	0.34	Yes	0.764	0.231	1.00	Yes	0.759	0.174	0.94	Yes	1.00	**6.32**
		U_{20} - U_{21}			-----	-841.96	153	-28	-64	-1343	-8	-53	355	315	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.221	1.00	Yes	0.768	0.195	0.97	Yes	1.00	**6.02**
		U_{21} - U_{22}			-----	-772.78	-48	-6	-508	-1415	3	68	197	381	-----	-----	-----	-----	-----	-----	-----	-----	0.710	0.289	1.00	Yes	0.705	0.205	0.92	Yes	1.00	**5.10**
		U_{22} - U_{23}			-----	-762.02	47	-52	-1394	-608	65	-3	417	119	-----	-----	-----	-----	-----	-----	-----	-----	0.701	0.292	1.00	Yes	0.695	0.202	0.90	Yes	1.00	**5.02**
		U_{23} - U_{24}			-----	-852.29	-57	135	-1128	-319	-23	-54	377	110	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.207	1.00	Yes	0.778	0.163	0.95	Yes	1.00	**6.07**
		U_{24} - U_{25}			234.28	-703.08	154	245	-1359	-409	-48	-85	440	-64	0.220	0.277	0.50	Yes	0.146	0.182	0.33	Yes	0.781	0.211	1.00	Yes	0.776	0.218	1.00	Yes	1.00	**5.70**
		U_{25} - U_{26}			433.78	-621.09	170	412	-1272	12	-147	-75	324	-6	0.435	0.263	0.70	Yes	0.286	0.168	0.46	Yes	0.738	0.255	1.00	Yes	0.733	0.216	0.95	Yes	1.00	**7.06**
		U_{26} - U_{27}			685.99	-----	329	383	-1393	177	-227	-71	467	-59	0.689	0.305	1.00	Yes	0.458	0.202	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.02**
		U_{27} - U_{28}			930.61	-----	283	520	-2001	-100	-337	-14	557	107	0.686	0.310	1.00	Yes	0.456	0.204	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.03**
		U_{28} - U_{29}			1142.80	-----	451	155	-2186	-799	-352	-248	695	-104	0.691	0.307	1.00	Yes	0.492	0.207	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.65**
		U_{29} - U_{30}			1519.35	-----	268	2071	-57	745	-853	-450	-267	-17	0.747	0.250	1.00	Yes	0.529	0.165	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.75**
		U_{30} - U_{31}			1457.82	-----	2464	17	907	-203	-704	-591	-204	-59	0.717	0.276	1.00	Yes	0.508	0.182	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.76**
		U_{31} - U_{32}			1137.71	-----	49	425	-882	-1100	-398	-215	-33	930	0.768	0.227	1.00	Yes	0.548	0.156	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.81**
		U_{32} - U_{33}			798.98	-----	436	228	409	-1679	-55	26	647	591	0.675	0.316	1.00	Yes	0.453	0.211	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.19**
		U_{33} - U_{34}			617.72	-684.79	336	213	-254	-1557	43	279	509	1068	0.522	0.350	0.88	Yes	0.355	0.230	0.59	Yes	0.685	0.308	1.00	Yes	0.681	0.220	0.91	Yes	1.00	**9.09**
		U_{34} - U_{35}			-----	-889.93	331	51	69	-1546	206	168	657	541	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.218	1.00	Yes	0.768	0.188	0.96	Yes	1.00	**7.38**
		U_{35} - U_{36}			-----	-1117.77	126	-163	-160	-1636	120	97	485	621	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.230	1.00	Yes	0.758	0.174	0.94	Yes	1.00	**6.16**
		U_{36} - U_{37}			-----	-1260.97	-93	4	-670	-2112	95	4	415	319	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.271	1.00	Yes	0.718	0.188	0.91	Yes	1.00	**5.83**
		U_{37} - U_{38}			-----	-1241.57	81	-186	-1997	-1115	52	17	359	296	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.280	1.00	Yes	0.707	0.178	0.89	Yes	1.00	**5.69**
		U_{38} - U_{39}			-----	-1508.09	92	-302	-1675	-1309	134	-35	763	271	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.219	1.00	Yes	0.774	0.139	0.92	Yes	1.00	**6.55**
		U_{39} - U_{40}			-----	-1359.27	-232	-341	-2483	-1380	36	-35	457	217	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.291	1.00	Yes	0.698	0.206	0.91	Yes	1.00	**5.55**
		U_{40} - U_{41}			-----	-1254.85	-259	-339	-2172	-1067	47	-119	581	41	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.280	1.00	Yes	0.715	0.194	0.91	Yes	1.00	**5.58**
		U_{41} - U_{42}			-----	-1102.33	-157	-128	-1726	-209	-67	-104	405	35	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.206	1.00	Yes	0.782	0.176	0.96	Yes	1.00	**6.49**
		U_{42} - U_{43}			-----	-809.43	-139	-58	-1221	-127	-40	-98	362	-105	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.210	1.00	Yes	0.781	0.185	0.97	Yes	1.00	**6.93**
		U_{43} - U_{44}			-----	-594.56	-21	-203	-1753	1387	-71	31	221	-359	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.228	0.94	Yes	0.702	0.298	1.00	Yes	1.00	**11.73**
	Structure 3	U_0 - U_1			-----	-605.64	2	-169	666	-1547	6	-78	-17	107	-----	-----	-----	-----	-----	-----	-----	-----	0.688	0.229	0.92	Yes	0.681	0.311	1.00	Yes	1.00	**12.00**
		U_1 - U_2			-----	-713.71	-32	-141	22	-755	-63	-232	7	-439	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.188	1.00	Yes	0.803	0.152	0.96	Yes	1.00	**5.78**
		U_2 - U_3			-----	-1031.64	-72	-167	124	-973	-52	335	8	429	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.175	1.00	Yes	0.807	0.158	0.97	Yes	1.00	**5.44**
		U_3 - U_4			-----	-1281.90	-189	-315	-328	-1544	489	820	489	680	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.248	1.00	Yes	0.735	0.170	0.91	Yes	1.00	**5.09**
		U_4 - U_5			-----	-1351.84	-399	-71	-703	-1095	684	228	500	312	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.208	1.00	Yes	0.775	0.121	0.90	Yes	1.00	**4.90**
		U_5 - U_6			-----	-1320.19	-186	-280	-800	-1519	141	-147	244	342	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.228	1.00	Yes	0.757	0.168	0.93	Yes	1.00	**4.74**
		U_6 - U_7			-----	-1328.36	-379	-105	-1610	-419	-88	-186	426	95	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.223	1.00	Yes	0.762	0.178	0.94	Yes	1.00	**4.80**
		U_7 - U_8			-----	-1163.27	-171	-17	-1158	-419	-55	-171	298	0	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.209	1.00	Yes	0.777	0.160	0.94	Yes	1.00	**4.53**
		U_8 - U_9			-----	-885.26	-105	171	-926	-82	-29	-153	315	-114	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.158	1.00	Yes	0.831	0.154	0.99	Yes	1.00	**4.36**
		U_9 - U_{10}			-----	-617.18	-80	222	-912	93	-97	-102	230	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.183	0.98	Yes	0.788	0.204	1.00	Yes	1.00	**5.22**
		U_{10} - U_{11}			612.90	-----	275	218	-1038	-121	-215	-131	598	-170	0.665	0.329	1.00	Yes	0.450	0.220	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.27**
		U_{11} - U_{12}			854.32	-----	-20	929	-1381	1427	-421	-104	307	-262	0.700	0.291	1.00	Yes	0.479	0.198	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.38**
		U_{12} - U_{13}			961.02	-----	1105	98	1848	-1463	-500	-463	-251	160	0.666	0.331	1.00	Yes	0.464	0.226	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.35**
		U_{13} - U_{14}			823.91	-----	214	417	-78	-632	-325	-202	-43	543	0.788	0.209	1.00	Yes	0.551	0.144	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.23**
		U_{14} - U_{15}			639.94	-----	421	291	391	-866	-127	-40	316	111	0.734	0.259	1.00	Yes	0.495	0.169	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.03**
		U_{15} - U_{16}			369.79	-555.19	293	204	-24	-1026	-55	137	157	424	0.424	0.316	0.74	Yes	0.291	0.216	0.51	Yes	0.755	0.188	0.95	Yes	0.749	0.244	1.00	Yes	1.00	**5.94**
		U_{16} - U_{17}			367.55	-563.36	362	108	-789	-508	85	74	386	203	0.421	0.253	0.68	Yes	0.289	0.173	0.47	Yes	0.767	0.229	1.00	Yes	0.760	0.188	0.95	Yes	1.00	**5.96**
		U_{17} - U_{18}			174.69	-567.31	282	-79	-687	-484	-37	71	296	226	0.200	0.213	0.42	Yes	0.135	0.140	0.28	Yes	0.772	0.223	1.00	Yes	0.765	0.163	0.93	Yes	1.00	**4.82**
		U_{18} - U_{19}			-----	-515.69	128	-46	-767	-284	-7	24	443	28	-----	-----	-----	-----	-----	-----	-----	-----	0.702	0.290	1.00	Yes	0.695	0.182	0.88	Yes	1.00	**4.42**
		U_{19} - U_{20}			-----	-533.15	145	-263	-1158	637	-100	89	336	-229	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.216	0.95	Yes	0.719	0.275	1.00	Yes	1.00	**7.43**

Operating Loads - 2F1

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	160.00	-----	94	-362	1240	-2063	-19	-67	166	612	0.245	0.751	1.00	Yes	0.144	0.457	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**33.52**
		L_1 - L_2	433.39	-----	121	-746	155	-52	-503	-186	-31	-29	0.663	0.332	1.00	Yes	0.405	0.219	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.28**
		L_2 - L_3	688.72	-----	-765	-702	-28	5	-101	92	-30	18	0.792	0.201	1.00	Yes	0.458	0.121	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.16**
		L_3 - L_4	680.10	-----	-725	-440	74	210	262	127	48	68	0.782	0.217	1.00	Yes	0.465	0.139	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.94**
		L_4 - L_5	-----	-536.58	-594	-191	119	612	-261	607	60	37	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.168	1.00	Yes	0.818	0.162	0.98	Yes	1.00	**6.99**
		L_5 - L_6	-----	-728.53	-396	-157	165	596	251	95	74	128	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.143	1.00	Yes	0.841	0.132	0.98	Yes	1.00	**6.72**
		L_6 - L_7	-----	-1063.38	-881	-95	199	167	58	641	119	-113	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.112	0.98	Yes	0.856	0.138	1.00	Yes	1.00	**9.06**
		L_7 - L_8	-----	-1223.22	-2	600	20	1482	-98	-133	-99	-185	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.208	1.00	Yes	0.775	0.196	0.98	Yes	1.00	**8.42**
		L_8 - L_9	-----	-1303.11	568	-34	1139	-13	-136	-152	-4	-187	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.158	1.00	Yes	0.825	0.151	0.98	Yes	1.00	**9.78**
		L_9 - L_{10}	-----	-1072.71	-70	-838	119	138	758	200	50	142	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.108	0.99	Yes	0.863	0.132	1.00	Yes	1.00	**11.40**
		L_{10} - L_{11}	-----	-560.26	-76	-475	531	-4	85	36	137	46	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.084	0.95	Yes	0.854	0.141	1.00	Yes	1.00	**8.02**
		L_{11} - L_{12}	581.03	-----	126	-762	460	-185	249	17	77	-24	0.752	0.245	1.00	Yes	0.451	0.160	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.33**
		L_{12} - L_{13}	1045.22	-----	-550	-732	146	-83	235	332	32	35	0.825	0.169	1.00	Yes	0.528	0.101	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.05**
		L_{13} - L_{14}	1306.42	-----	-343	-1374	353	-446	406	112	12	-2	0.768	0.223	1.00	Yes	0.498	0.137	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.54**
		L_{14} - L_{15}	1616.42	-----	-1485	-1178	-413	-15	-142	425	-83	-90	0.790	0.209	1.00	Yes	0.513	0.127	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.19**
		L_{15} - L_{16}	1605.49	-----	-1289	-1581	-216	-368	90	-292	-119	-56	0.784	0.211	1.00	Yes	0.503	0.123	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.34**
		L_{16} - L_{17}	1197.34	-----	-1297	-580	-431	96	-326	516	-104	-46	0.757	0.236	1.00	Yes	0.491	0.146	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.32**
		L_{17} - L_{18}	921.32	-----	-870	-401	-290	163	126	-187	-130	-66	0.802	0.192	1.00	Yes	0.514	0.115	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.48**
		L_{18} - L_{19}	480.47	-----	-492	336	-545	624	-101	265	-333	-18	0.735	0.256	1.00	Yes	0.497	0.162	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.27**
		L_{19} - L_{20}	203.99	-474.15	-253	58	-475	272	210	47	-66	-14	0.312	0.186	0.50	Yes	0.190	0.124	0.32	Yes	0.861	0.128	0.99	Yes	0.854	0.143	1.00	Yes	1.00	**10.18**
	Structure 2	L_0 - L_1	317.51	-----	205	-802	1050	-2572	24	84	-154	-534	0.386	0.611	1.00	Yes	0.229	0.392	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**43.94**
		L_1 - L_2	533.26	-----	182	-1277	184	-248	-548	-231	-43	18	0.648	0.350	1.00	Yes	0.385	0.222	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.67**
		L_2 - L_3	984.95	-----	-251	-1278	-40	-174	74	333	73	74	0.776	0.220	1.00	Yes	0.509	0.132	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.45**
		L_3 - L_4	1276.38	-----	-482	-1761	32	-444	460	196	152	82	0.750	0.243	1.00	Yes	0.505	0.151	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.54**
		L_4 - L_5	1725.72	-----	-1810	-1684	-389	-260	96	277	93	197	0.805	0.190	1.00	Yes	0.533	0.113	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.83**
		L_5 - L_6	1786.81	-----	-1248	-2448	-149	-401	196	-27	109	-15	0.767	0.229	1.00	Yes	0.515	0.139	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.01**
		L_6 - L_7	1759.20	-----	-2415	-1844	-456	-127	55	601	-159	46	0.745	0.249	1.00	Yes	0.495	0.147	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.23**
		L_7 - L_8	1370.73	-----	-1744	-956	-223	274	150	-84	-131	8	0.786	0.205	1.00	Yes	0.516	0.120	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.05**
		L_8 - L_9	1100.98	-----	-1139	-560	-112	514	-91	795	-28	14	0.770	0.229	1.00	Yes	0.519	0.145	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.85**
		L_9 - L_{10}	869.12	-591.28	-1181	-591	-113	710	251	-145	14	91	0.776	0.219	1.00	Yes	0.452	0.136	0.59	Yes	0.625	0.126	0.76	Yes	0.621	0.189	0.81	Yes	1.00	**9.98**
		L_{10} - L_{11}	-----	-684.02	-1077	175	92	531	-265	436	58	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.114	0.93	Yes	0.803	0.188	1.00	Yes	1.00	**7.99**
		L_{11} - L_{12}	-----	-1043.46	-769	-353	104	991	292	-80	80	237	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.114	0.98	Yes	0.856	0.135	1.00	Yes	1.00	**10.51**
		L_{12} - L_{13}	-----	-1549.40	-375	-184	446	-391	119	-163	199	-144	-----	-----	-----	-----	-----	-----	-----	-----	0.934	0.061	1.00	Yes	0.927	0.044	0.98	Yes	1.00	**16.02**
		L_{13} - L_{14}	-----	-1527.21	-367	1230	-610	2647	-262	-456	-236	-539	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.194	0.97	Yes	0.768	0.231	1.00	Yes	1.00	**10.42**
		L_{14} - L_{15}	-----	-1613.81	1125	-470	2099	-404	-517	-319	-333	-456	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.154	0.98	Yes	0.812	0.183	1.00	Yes	1.00	**13.44**
		L_{15} - L_{16}	-----	-1493.57	-470	-15	-1030	346	-215	96	17	401	-----	-----	-----	-----	-----	-----	-----	-----	0.901	0.092	1.00	Yes	0.893	0.102	1.00	Yes	1.00	**13.05**
		L_{16} - L_{17}	-----	-1161.05	226	-913	1217	122	143	184	404	191	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.143	1.00	Yes	0.846	0.150	1.00	Yes	1.00	**10.90**
		L_{17} - L_{18}	-----	-841.35	-48	-621	476	241	247	85	106	-58	-----	-----	-----	-----	-----	-----	-----	-----	0.890	0.101	1.00	Yes	0.883	0.099	0.99	Yes	1.00	**8.15**
		L_{18} - L_{19}	-----	-621.57	-123	-731	650	108	256	371	1	34	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.164	1.00	Yes	0.828	0.141	0.97	Yes	1.00	**7.41**
		L_{19} - L_{20}	-----	-571.32	-325	-1194	550	224	580	15	57	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.224	1.00	Yes	0.761	0.231	1.00	Yes	1.00	**9.79**
		L_{20} - L_{21}	978.04	-442.75	-1243	-1244	541	42	40	304	-94	-99	0.780	0.214	1.00	Yes	0.511	0.128	0.64	Yes	0.418	0.177	0.60	Yes	0.415	0.182	0.60	Yes	1.00	**10.93**
		L_{21} - L_{22}	853.83	-----	-979	-1830	208	-104	419	101	-88	-25	0.681	0.312	1.00	Yes	0.455	0.196	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.30**
		L_{22} - L_{23}	862.63	-----	-1754	-1081	-162	192	-58	474	-22	3	0.688	0.307	1.00	Yes	0.460	0.193	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.90**
		L_{23} - L_{24}	916.41	-267.79	-1067	-1668	-9	335	215	-98	8	73	0.731	0.266	1.00	Yes	0.479	0.158	0.64	Yes	0.253	0.301	0.56	Yes	0.251	0.243	0.50	Yes	1.00	**9.93**
		L_{24} - L_{25}	-----	-519.22	-1550	-955	305	417	-350	952	79	0	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.260	0.96	Yes	0.692	0.299	1.00	Yes	1.00	**13.59**
		L_{25} - L_{26}	-----	-628.32	-669	-837	113	685	88	-334	40	125	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.133	0.98	Yes	0.837	0.162	1.00	Yes	1.00	**11.89**
		L_{26} - L_{27}	-----	-805.60	-772	-535	-142	585	-106	651	-193	8	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.142	1.00	Yes	0.846	0.123	0.97	Yes	1.00	**9.93**
		L_{27} - L_{28}	-----	-1167.77	-67	216	-255	1169	88	197	-39	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.120	0.98	Yes	0.850	0.144	1.00	Yes	1.00	**10.62**
		L_{28} - L_{29}	-----	-1588.99	-112	-330	59	0	171	-19	-95	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.958	0.037	1.00	Yes	0.950	0.033	0.99	Yes	1.00	**11.44**
		L_{29} - L_{30}	-----	-1616.18	-373	808	-471	2024	-66	-130	-3	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.124	0.95	Yes	0.813	0.177	1.00	Yes	1.00	**9.45**
		L_{30} - L_{31}	-----	-1591.33	817	-338	2224	-448	-133	-117	-608	-463	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.168	0.98	Yes	0.801	0.194	1.00	Yes	1.00	**15.15**
		L_{31} - L_{32}	-----	-1566.39	-153	-253	305	-68	-59	73	-392	142	-----	-----	-----	-----	-----	-----	-----	-----	0.945	0.050	1.00	Yes	0.937	0.030	0.97	Yes	1.00	**19.82**
		L_{32} - L_{33}	-----	-1042.89	382	-370	994	155	159	20	-142	-66	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.097	0.96	Yes	0.855	0.135	1.00	Yes	1.00	**15.08**
		L_{33} - L_{34}	-----	-657.39	-52	-1268	396	165	552	125	10	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.159	0.94	Yes	0.772	0.222	1.00	Yes	1.00	**11.00**
		L_{34} - L_{35}	812.14	-----	-540	-1193	581	9	402	661	-17	75	0.725	0.270	1.00	Yes	0.422	0.166	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.62**
		L_{35} - L_{36}	1060.66	-----	-99	-1452	365	-34	595	64	106	-45	0.742	0.252	1.00	Yes	0.500	0.159	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.26**
		L_{36} - L_{37}	1312.49	-----	-959	-1817	208	-24	108	525	-100	18	0.753	0.244	1.00	Yes	0.494	0.145	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.81**
		L_{37} - L_{38}	1767.85	-----	-1598	-2609	-92	-365	302	-50	-42	-1	0.748	0.248	1.00	Yes	0.497	0.145	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.40**
		L_{38} - L_{39}	1769.43	-----	-1924	-2303	-305	-176	-19	580	-26	-16	0.759	0.240	1.00	Yes	0.510	0.148	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.45**
		L_{39} - L_{40}	1651.08	-----	-1508	-2134	-204	-312	87	-312	-51	-36	0.770	0.223	1.00	Yes	0.510	0.132	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.59**
		L_{40} - L_{41}	1270.08	-----	-1833	-624	-311	-47	-311	473	-60	-10	0.746	0.252	1.00	Yes	0.503	0.157	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.31**
		L_{41} - L_{42}	974.89	-----	-1344	-338	-168	-62	298	-23	-28	11	0.768	0.226	1.00	Yes	0.504	0.135	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.31**
		L_{42} - L_{43}	494.33	-----	-1600	277	-385	162	-405	314	-31	32	0.600	0.392	1.00	Yes	0.357	0.251	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.66**
		L_{43} - L_{44}	400.92	-----	-805	337	-1801	789	868	254	302	89	0.487	0.509	1.00	Yes	0.290	0.323	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**36.41**
	Structure 3	L_0 - L_1	438.17	-----	114	-374	655	-969	-31	-143	5	23	0.671	0.321	1.00	Yes	0.409	0.216	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**21.04**
		L_1 - L_2	539.96	-----	251	-483	368	-424	-71	46	46	120	0.826	0.170	1.00	Yes	0.559	0.106	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.03**
		L_2 - L_3	919.37	-----	-104	-942	5	-176	33	138	17	4	0.801	0.199	1.00	Yes	0.512	0.119	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.78**
		L_3 - L_4	1185.28	-----	-151	-1457	62	-368	355	165	47	54	0.749	0.245	1.00	Yes	0.486	0.151	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.19**
		L_4 - L_5	1597.47	-----	-1495	-1327	-334	-220	258	447	83	126	0.780	0.212	1.00	Yes	0.501	0.124	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.53**
		L_5 - L_6	1569.72	-----	-1012	-1669	-83	-351	416	196	141	78	0.767	0.230	1.00	Yes	0.498	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.23**
		L_6 - L_7	1338.31	-----	-1155	-789	-402	241	-102	615	-184	17	0.787	0.210	1.00	Yes	0.510	0.130	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.52**
		L_7 - L_8	1075.34	-----	-709	-663	-88	109	175	19	-30	40	0.849	0.146	1.00	Yes	0.543	0.087	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.73**
		L_8 - L_9	558.53	-----	-710	30	-177	329	-166	457	-18	45	0.723	0.268	1.00	Yes	0.434	0.173	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.57**
		L_9 - L_{10}	-----	-549.78	-587	-398	11	502	320	147	74	143	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.136	0.99	Yes	0.838	0.155	1.00	Yes	1.00	**9.81**
		L_{10} - L_{11}	-----	-1031.83	-1057	-263	-439	742	61	1077	-41	-122	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.129	0.97	Yes	0.831	0.166	1.00	Yes	1.00	**13.93**
		L_{11} - L_{12}	-----	-1257.09	-46	473	-53	1154	-131	-164	-351	-551	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.187	1.00	Yes	0.796	0.153	0.95	Yes	1.00	**8.70**
		L_{12} - L_{13}	-----	-1253.30	457	-13	1124	-2	-255	-291	-592	-324	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.191	1.00	Yes	0.794	0.149	0.95	Yes	1.00	**9.35**
		L_{13} - L_{14}	-----	-1036.43	-203	-637	-11	258	361	163	-240	110	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.152	1.00	Yes	0.834	0.100	0.94	Yes	1.00	**7.99**
		L_{14} - L_{15}	-----	-754.55	-46	-364	571	169	107	15	157	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.880	0.119	1.00	Yes	0.871	0.126	1.00	Yes	1.00	**6.56**
		L_{15} - L_{16}	-----	-525.16	145	-721	415	185	89	11	13	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.174	0.99	Yes	0.800	0.191	1.00	Yes	1.00	**5.51**
		L_{16} - L_{17}	623.23	-208.33	-261	-877	298	24	101	391	94	-27	0.717	0.275	1.00	Yes	0.426	0.176	0.61	Yes	0.285	0.217	0.51	Yes	0.282	0.212	0.50	Yes	1.00	**5.30**
		L_{17} - L_{18}	660.45	-----	-689	-818	81	-11	207	-6	4	12	0.760	0.231	1.00	Yes	0.440	0.138	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.75**
		L_{18} - L_{19}	424.54	-----	-814	-128	34	6	-134	447	20	-97	0.650	0.340	1.00	Yes	0.396	0.225	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.62**
		L_{19} - L_{20}	257.70	-----	-449	317	-1133	1077	1222	333	-93	-25	0.394	0.602	1.00	Yes	0.232	0.361	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**44.53**

Axial AB Operating

Operating Loads - 2F1

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	$U_0 - L_0$			-----	-326.84	-58	91	-178	238	-28	-9	-251	-81	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.188	0.92	Yes	0.692	0.304	1.00	Yes	1.00	**3.05**
		$U_1 - L_1$			-----	-338.82	19	-8	-207	220	-5	-2	-608	-222	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.244	0.99	Yes	0.717	0.281	1.00	Yes	1.00	**5.62**
		$U_2 - L_2$			83.54	-327.54	71	-78	-131	190	38	22	763	310	0.150	0.463	0.62	Yes	0.083	0.255	0.34	Yes	0.716	0.281	1.00	Yes	0.693	0.242	0.94	Yes	1.00	**7.66**
		$U_3 - L_3$			269.96	-----	284	-276	-205	247	-174	53	494	146	0.486	0.506	1.00	Yes	0.267	0.278	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.75**
		$U_4 - L_4$			-----	-352.38	179	-181	167	-164	-405	-173	696	211	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.220	1.00	Yes	0.746	0.231	0.98	Yes	1.00	**7.43**
		$U_5 - L_5$			-----	-434.87	66	-87	203	-244	8	8	366	24	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.192	0.98	Yes	0.750	0.247	1.00	Yes	1.00	**4.91**
		$U_6 - L_6$			-----	-521.83	87	-83	255	-279	-184	-67	482	105	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.169	0.96	Yes	0.748	0.244	1.00	Yes	1.00	**4.54**
		$U_7 - L_7$			-----	-437.14	134	-150	300	-321	-168	13	274	40	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.151	0.89	Yes	0.674	0.316	1.00	Yes	1.00	**3.34**
		$U_8 - L_8$			-----	-1134.21	9	-19	-139	161	-76	6	1707	393	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.175	1.00	Yes	0.786	0.030	0.82	Yes	1.00	**7.40**
		$U_9 - L_9$			-----	-658.43	-172	201	-395	446	-441	-187	-131	-188	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.157	0.95	Yes	0.744	0.248	1.00	Yes	1.00	**5.61**
		$U_{10} - L_{10}$			-----	-771.20	-122	104	-307	350	-767	-438	-180	-342	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.192	1.00	Yes	0.761	0.181	0.95	Yes	1.00	**7.33**
		$U_{11} - L_{11}$			-----	-677.82	-117	185	-280	435	-571	-313	222	-162	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.173	0.99	Yes	0.789	0.202	1.00	Yes	1.00	**6.45**
		$U_{12} - L_{12}$			-----	-532.10	-91	92	-306	315	-408	-225	100	-87	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.170	0.94	Yes	0.730	0.269	1.00	Yes	1.00	**6.17**
		$U_{13} - L_{13}$			-----	-382.37	-34	56	-199	229	-181	22	318	36	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.149	0.93	Yes	0.733	0.262	1.00	Yes	1.00	**4.81**
		$U_{14} - L_{14}$			-----	-324.18	-131	152	-120	127	-26	-15	884	99	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.267	1.00	Yes	0.686	0.194	0.88	Yes	1.00	**6.57**
		$U_{15} - L_{15}$			145.83	-315.41	-107	96	234	-253	32	87	544	-49	0.262	0.481	0.75	Yes	0.144	0.264	0.41	Yes	0.707	0.210	0.92	Yes	0.667	0.323	1.00	Yes	1.00	**7.43**
		$U_{16} - L_{16}$			-----	-321.55	10	-26	235	-243	34	-35	350	-132	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.160	0.89	Yes	0.680	0.311	1.00	Yes	1.00	**5.32**
		$U_{17} - L_{17}$			-----	-423.73	62	-76	187	-215	-120	-114	374	-108	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.204	1.00	Yes	0.731	0.218	0.95	Yes	1.00	**4.16**
		$U_{18} - L_{18}$			-----	-538.75	145	-152	413	-430	-132	-122	432	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.127	0.92	Yes	0.749	0.243	1.00	Yes	1.00	**4.54**
		$U_{19} - L_{19}$			-----	-640.59	172	-171	527	-515	-115	-46	323	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.125	0.93	Yes	0.746	0.245	1.00	Yes	1.00	**5.23**
		$U_{20} - L_{20}$			-----	-600.90	160	-259	345	-514	32	4	400	52	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.199	1.00	Yes	0.699	0.239	0.94	Yes	1.00	**4.14**
	Structure 2	$U_0 - L_0$			-----	-617.19	-170	221	-420	493	-38	-6	-1146	-194	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.252	1.00	Yes	0.661	0.209	0.88	Yes	1.00	**4.60**
		$U_1 - L_1$			-----	-724.31	-118	127	-500	516	-106	-7	-838	-109	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.163	1.00	Yes	0.776	0.219	1.00	Yes	1.00	**7.43**
		$U_2 - L_2$			-----	-606.17	-110	120	-394	428	-108	-38	459	72	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.135	0.95	Yes	0.772	0.219	1.00	Yes	1.00	**6.32**
		$U_3 - L_3$			-----	-491.00	-59	67	-177	205	70	-47	578	17	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.158	1.00	Yes	0.770	0.187	0.96	Yes	1.00	**5.04**
		$U_4 - L_4$			-----	-349.28	-13	25	-190	198	-63	26	206	37	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.138	0.94	Yes	0.739	0.253	1.00	Yes	1.00	**5.74**
		$U_5 - L_5$			-----	-322.22	89	-75	-148	178	-109	119	561	43	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.268	1.00	Yes	0.682	0.227	0.91	Yes	1.00	**6.92**
		$U_6 - L_6$			269.30	-----	145	-152	-81	92	-8	118	1074	173	0.484	0.506	1.00	Yes	0.266	0.278	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.47**
		$U_7 - L_7$			-----	-319.96	136	-159	71	-79	-15	-21	809	27	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.269	1.00	Yes	0.677	0.203	0.89	Yes	1.00	**6.27**
		$U_8 - L_8$			-----	-467.52	51	-76	361	-373	-63	-25	284	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.678	0.127	0.81	Yes	0.673	0.326	1.00	Yes	1.00	**6.09**
		$U_9 - L_9$			-----	-700.72	155	-169	516	-557	-35	-196	1000	108	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.212	1.00	Yes	0.751	0.236	0.99	Yes	1.00	**7.85**
		$U_{10} - L_{10}$			-----	-801.62	164	-189	531	-563	-33	-249	720	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.193	0.99	Yes	0.749	0.249	1.00	Yes	1.00	**7.71**
		$U_{11} - L_{11}$			-----	-814.26	187	-187	512	-529	-181	-68	334	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.128	0.95	Yes	0.761	0.234	1.00	Yes	1.00	**6.90**
		$U_{12} - L_{12}$			-----	-882.59	162	-150	531	-540	-220	-33	287	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.119	0.97	Yes	0.765	0.232	1.00	Yes	1.00	**7.36**
		$U_{13} - L_{13}$			-----	-741.78	212	-210	562	-546	-163	22	545	51	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.172	1.00	Yes	0.715	0.269	0.99	Yes	1.00	**5.86**
		$U_{14} - L_{14}$			-----	-1102.61	117	-114	231	-224	-46	237	1420	302	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.189	1.00	Yes	0.731	0.041	0.78	Yes	1.00	**8.70**
		$U_{15} - L_{15}$			-----	-696.65	-127	134	-496	503	-298	11	748	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.217	1.00	Yes	0.672	0.241	0.92	Yes	1.00	**7.93**
		$U_{16} - L_{16}$			-----	-704.41	-91	66	-489	483	-800	-259	-454	-355	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.183	1.00	Yes	0.755	0.207	0.97	Yes	1.00	**7.92**
		$U_{17} - L_{17}$			-----	-655.80	-128	126	-473	492	-274	-186	158	-320	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.120	0.93	Yes	0.763	0.229	1.00	Yes	1.00	**7.00**
		$U_{18} - L_{18}$			-----	-606.33	-98	98	-381	436	-113	-128	674	-131	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.142	0.95	Yes	0.773	0.223	1.00	Yes	1.00	**6.56**
		$U_{19} - L_{19}$			-----	-483.48	-62	70	-274	280	-223	-59	151	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.112	0.84	Yes	0.722	0.270	1.00	Yes	1.00	**5.90**
		$U_{20} - L_{20}$			-----	-396.02	-8	15	-180	196	-180	-24	445	13	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.182	1.00	Yes	0.759	0.223	0.99	Yes	1.00	**5.85**
		$U_{21} - L_{21}$			-----	-341.66	26	-21	-166	190	-91	59	663	56	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.225	1.00	Yes	0.723	0.243	0.97	Yes	1.00	**6.12**
		$U_{22} - L_{22}$			-----	-333.92	-81	97	-12	13	-46	-26	855	91	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.239	1.00	Yes	0.707	0.123	0.84	Yes	1.00	**6.70**
		$U_{23} - L_{23}$			-----	-317.89	-64	50	244	-255	-2	142	284	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.157	0.88	Yes	0.673	0.326	1.00	Yes	1.00	**6.70**
		$U_{24} - L_{24}$			-----	-388.03	7	-20	197	-218	78	21	716	60	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.202	1.00	Yes	0.743	0.249	1.00	Yes	1.00	**6.24**
		$U_{25} - L_{25}$			-----	-475.87	43	-43	299	-297	-83	-30	491	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.185	0.91	Yes	0.711	0.288	1.00	Yes	1.00	**5.62**
		$U_{26} - L_{26}$			-----	-568.02	73	-76	501	-528	-118	-23	498	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.153	0.92	Yes	0.724	0.270	1.00	Yes	1.00	**6.41**
		$U_{27} - L_{27}$			-----	-642.49	88	-88	505	-529	-134	2	880	52	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.183	0.98	Yes	0.748	0.246	1.00	Yes	1.00	**7.07**
		$U_{28} - L_{28}$			-----	-711.36	79	-76	536	-543	-150	16	783	52	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.150	0.98	Yes	0.762	0.230	1.00	Yes	1.00	**7.12**
		$U_{29} - L_{29}$			-----	-720.07	121	-125	634	-609	-113	28	598	23	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.181	0.99	Yes	0.694	0.303	1.00	Yes	1.00	**8.03**
		$U_{30} - L_{30}$			-----	-1020.68	-54	43	-187	160	-160	76	1662	226	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.248	1.00	Yes	0.677	0.033	0.71	Yes	1.00	**8.98**
		$U_{31} - L_{31}$			-----	-749.60	-110	110	-513	497	-314	-32	134	-78	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.156	1.00	Yes	0.723	0.246	0.97	Yes	1.00	**8.57**
		$U_{32} - L_{32}$			-----	-844.25	-83	61	-405	427	-687	-276	44	-274	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.184	1.00	Yes	0.732	0.183	0.92	Yes	1.00	**8.67**
		$U_{33} - L_{33}$			-----	-804.84	-120	110	-363	407	-419	-325	614	-235	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.182	1.00	Yes	0.752	0.180	0.94	Yes	1.00	**7.70**
		$U_{34} - L_{34}$			-----	-822.88	-102	119	-476	514	-333	-209	392	-165	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.122	0.94	Yes	0.769	0.227	1.00	Yes	1.00	**9.32**
		$U_{35} - L_{35}$			-----	-726.09	-93	120	-460	512	-224	28	866	127	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.162	0.98	Yes	0.778	0.217	1.00	Yes	1.00	**8.27**
		$U_{36} - L_{36}$			-----	-511.85	-41	56	-261	290	-76	62	979	179	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.250	1.00	Yes	0.737	0.254	1.00	Yes	1.00	**6.56**
		$U_{37} - L_{37}$			-----	-330.52	-8	9	-86	98	-23	15	752	42	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.247	1.00	Yes	0.699	0.126	0.83	Yes	1.00	**6.49**
		$U_{38} - L_{38}$			329.82	-----	-228	229	156	-153	9	125	369	-44	0.593	0.399	1.00	Yes	0.326	0.220	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.39**
		$U_{39} - L_{39}$			160.33	-333.69	-136	124	157	-188	48	66	798	-3	0.288	0.472	0.77	Yes	0.159	0.260	0.42	Yes	0.754	0.236	1.00	Yes	0.706	0.241	0.95	Yes	1.00	**8.70**
		$U_{40} - L_{40}$			-----	-345.14	-18	1	200	-203	10	-6	420	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.117	0.90	Yes	0.730	0.260	1.00	Yes	1.00	**5.87**
		$U_{41} - L_{41}$			-----	-488.45	30	-34	243	-254	6	-33	280	-109	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.109	0.95	Yes	0.766	0.231	1.00	Yes	1.00	**5.82**
		$U_{42} - L_{42}$			-----	-603.52	62	-71	419	-451	11	-36	849	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.143	0.96	Yes	0.769	0.231	1.00	Yes	1.00	**6.69**
		$U_{43} - L_{43}$			-----	-713.24	84	-96	542	-550	-48	-49	725	46	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.136	0.96	Yes	0.764	0.233	1.00	Yes	1.00	**6.76**
		$U_{44} - L_{44}$			-----	-669.44	118	-135	389	-522	-129	-22	679	115	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.196	1.00	Yes	0.717	0.222	0.94	Yes	1.00	**5.86**
	Structure 3	$U_0 - L_0$			-----	-565.20	-146	194	-420	472	-55	-7	-887	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.247	1.00	Yes	0.658	0.219	0.88	Yes	1.00	**4.53**
		$U_1 - L_1$			-----	-655.49	-116	127	-410	438	-121	-3	-859	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.180	1.00	Yes	0.763	0.203	0.97	Yes	1.00	**6.37**
		$U_2 - L_2$			-----	-549.10	-111	117	-384	404	-148	-45	186	47	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.094	0.90	Yes	0.764	0.229	1.00	Yes	1.00	**5.79**
		$U_3 - L_3$			-----	-460.79	-47	60	-170	199	42	-64	404	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.129	1.00	Yes	0.795	0.202	1.00	Yes	1.00	**4.82**
		$U_4 - L_4$			-----	-335.58	-11	21	-152	174	-78	35	646	70	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.240	1.00	Yes	0.710	0.222	0.94	Yes	1.00	**5.42**
		$U_5 - L_5$			-----	-327.14	71	-68	-212	234	-111	88	377	37	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.230	0.97	Yes	0.692	0.299	1.00	Yes	1.00	**7.39**
		$U_6 - L_6$			-----	-313.08	149	-166	-24	22	-157	-34	847	109	-----	-----	-----	-----	-----	-----	-----	-----	0.699	0.294	1.00	Yes	0.662	0.212	0.88	Yes	1.00	**7.44**
		$U_7 - L_7$			-----	-379.15	10	-23	212	-233	-13	-24	437	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.118	0.89	Yes	0.726	0.266	1.00	Yes	1.00	**5.69**
		$U_8 - L_8$			-----	-516.88	64	-70	330	-335	-34	-96	501	7	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.181	0.93	Yes	0.709	0.287	1.00	Yes	1.00	**6.22**
		$U_9 - L_9$			-----	-651.91	102	-163	394	-501	-44	-193	234	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.118	0.90	Yes	0.759	0.233	1.00	Yes	1.00	**6.74**
		$U_{10} - L_{10}$			-----	-748.19	119	-117	331	-389	-208	-101	862	223	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.225	1.00	Yes	0.738	0.202	0.94	Yes	1.00	**6.92**
		$U_{11} - L_{11}$			-----	-648.93	168	-193	422	-470	-150	-29	548	133	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.169	0.95	Yes	0.733	0.261	1.00	Yes	1.00	**4.98**
		$U_{12} - L_{12}$			-----	-1100.83	89	-121	183	-253	-88	33	1722	462	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.204	1.00	Yes	0.763	0.047	0.82	Yes	1.00	**8.30**
		$U_{13} - L_{13}$			-----	-472.85	-68	77	-242	266	-368	-51	404	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.177	0.97	Yes	0.729	0.262	1.00	Yes	1.00	**4.96**
		$U_{14} - L_{14}$			-----	-507.53	-46	33	-224	243	-769	-354	-425	-327	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.231	1.00	Yes	0.728	0.212	0.95	Yes	1.00	**6.05**
		$U_{15} - L_{15}$			-----	-441.46	-32	41	-174	207	-493	-232	-17	-186	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.197	1.00	Yes	0.762	0.210	0.98	Yes	1.00	**5.35**
		$U_{16} - L_{16}$			-----	-343.74	-11	15	-142	143	-465	-231	594	64	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.236	1.00	Yes	0.727	0.183	0.92	Yes	1.00	**5.95**
		$U_{17} - L_{17}$			291.95	-----	-307	319	194	-213	-155	84	198	-56	0.525	0.465	1.00	Yes	0.289	0.256	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.79**
		$U_{18} - L_{18}$			103.83	-297.11	-97	109	240	-285	-103	8	294	-18	0.187	0.449	0.64	Yes	0.103	0.247	0.35	Yes	0.649	0.174	0.83	Yes	0.629	0.364	1.00	Yes	1.00	**8.12**
		$U_{19} - L_{19}$			-----	-336.36	-47	36	218	-219	-84	-10	459	120	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.204	0.94	Yes	0.712	0.280	1.00	Yes	1.00	**5.34**
		$U_{20} - L_{20}$			-----	-349.36	19	-30	76	-137	-46	-15	470	151	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.219	1.00	Yes	0.739	0.176	0.92	Yes	1.00	**3.22**

Operating Loads - 2F1

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 - Diagonals	Structure 1	$U_0 - L_1$	678.36	-----	-76	50	-17	-2	82	-81	-15	-1	0.890	0.109	1.00	Yes	0.537	0.060	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.93**
		$U_1 - L_2$	456.68	-----	-83	-9	12	-18	-224	-114	-18	-24	0.821	0.171	1.00	Yes	0.452	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.13**
		$U_2 - L_3$	-----	-324.84	-108	2	-44	-80	-357	-70	121	-122	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.251	1.00	Yes	0.687	0.138	0.83	Yes					1.00	**10.56**
		$U_3 - L_4$	-----	-385.00	-25	-47	11	-63	-190	-156	11	-200	-----	-----	-----	-----	-----	-----	-----	-----	0.880	0.117	1.00	Yes	0.815	0.081	0.90	Yes					1.00	**4.77**
		$U_4 - L_4$	539.59	-----	-78	40	-63	-2	-103	-180	-557	-234	0.791	0.208	1.00	Yes	0.435	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.03**
		$U_5 - L_5$	672.64	-----	-207	201	-71	80	-260	-327	-454	-141	0.795	0.200	1.00	Yes	0.437	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.60**
		$U_5 - L_6$	660.16	-----	-283	237	-84	102	-130	-186	279	118	0.780	0.212	1.00	Yes	0.429	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.58**
		$U_6 - L_7$	649.55	-----	-101	301	1	135	-69	-126	302	182	0.768	0.227	1.00	Yes	0.422	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.94**
		$U_8 - L_8$	989.26	-----	-100	357	19	137	319	357	336	104	0.791	0.205	1.00	Yes	0.490	0.115	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**8.87**
		$U_9 - L_{10}$	1010.03	-----	-308	225	-78	86	138	422	282	216	0.807	0.191	1.00	Yes	0.500	0.107	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**8.39**
		$U_{10} - L_{11}$	988.32	-----	-255	160	-93	63	-138	355	298	177	0.835	0.165	1.00	Yes	0.517	0.093	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.60**
		$U_{11} - L_{12}$	858.74	-----	-259	114	-110	-9	-33	194	39	74	0.850	0.149	1.00	Yes	0.467	0.082	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.26**
		$U_{12} - L_{13}$	643.25	-----	-200	141	-91	26	-86	117	163	-95	0.784	0.207	1.00	Yes	0.493	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.83**
		$U_{13} - L_{14}$	456.75	-----	-98	21	-22	-26	-97	20	16	-163	0.821	0.172	1.00	Yes	0.452	0.095	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.18**
		$U_{15} - L_{14}$	245.77	-299.74	-62	-8	25	-98	-233	-246	-492	-126	0.442	0.268	0.71	Yes	0.243	0.147	0.40	Yes	0.702	0.297	1.00	Yes	0.634	0.125	0.76	Yes					1.00	**6.87**
		$U_{16} - L_{15}$	368.57	-----	-117	77	-34	-18	-299	-309	-627	-107	0.663	0.331	1.00	Yes	0.365	0.182	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.44**
		$U_{17} - L_{16}$	519.31	-----	-138	98	-35	14	-391	-351	-113	-132	0.762	0.231	1.00	Yes	0.419	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.58**
		$U_{18} - L_{17}$	609.17	-----	-320	241	-112	76	-500	-504	-114	-120	0.720	0.273	1.00	Yes	0.396	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.07**
		$U_{19} - L_{18}$	686.94	-----	-346	251	-133	88	-410	-448	-70	-110	0.744	0.251	1.00	Yes	0.409	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.74**
		$U_{20} - L_{19}$	725.86	-----	-234	256	-94	92	-455	-332	-103	-40	0.786	0.206	1.00	Yes	0.432	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.35**
	Structure 2	$U_0 - L_1$	809.23	-----	-348	355	-114	99	-13	-201	-60	-49	0.801	0.195	1.00	Yes	0.440	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.91**
		$U_1 - L_2$	785.75	-----	-392	299	-97	73	-238	43	-99	-28	0.777	0.217	1.00	Yes	0.428	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.32**
		$U_2 - L_3$	644.52	-----	-337	247	-87	67	-238	212	-24	87	0.762	0.234	1.00	Yes	0.419	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.91**
		$U_3 - L_4$	597.64	-----	-182	131	-39	17	-154	2	103	60	0.797	0.198	1.00	Yes	0.438	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.25**
		$U_4 - L_5$	422.51	-----	-135	90	-6	-31	-233	83	77	-171	0.760	0.240	1.00	Yes	0.418	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.65**
		$U_5 - L_6$	425.73	-271.18	-123	43	58	-104	-238	180	-5	-178	0.766	0.227	1.00	Yes	0.421	0.125	0.55	Yes	0.640	0.189	0.83	Yes	0.574	0.158	0.74	Yes					1.00	**8.69**
		$U_6 - L_7$	-----	-382.10	-48	-15	55	-101	-175	-89	-28	-300	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.181	1.00	Yes	0.732	0.116	0.85	Yes					1.00	**5.87**
		$U_8 - L_7$	547.32	-----	-171	106	-69	-1	-180	-460	-696	-173	0.698	0.295	1.00	Yes	0.439	0.169	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.16**
		$U_8 - L_8$	646.02	-----	-291	216	-181	59	-352	-359	-894	-286	0.700	0.296	1.00	Yes	0.385	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.27**
		$U_{10} - L_9$	792.66	-----	-302	227	-132	58	-415	-441	68	-193	0.784	0.206	1.00	Yes	0.431	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.62**
		$U_{11} - L_{10}$	864.63	-----	-338	269	-110	129	-357	-443	117	-14	0.788	0.204	1.00	Yes	0.433	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.10**
		$U_{12} - L_{11}$	866.81	-----	-362	347	-119	154	-285	-368	213	72	0.790	0.204	1.00	Yes	0.434	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.22**
		$U_{13} - L_{12}$	750.75	-----	-434	370	-153	155	-171	-235	326	124	0.743	0.250	1.00	Yes	0.408	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.35**
		$U_{14} - L_{13}$	755.67	-----	-278	422	-23	158	-158	-193	366	181	0.748	0.250	1.00	Yes	0.411	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.50**
		$U_{14} - L_{15}$	638.24	-----	-222	342	21	74	71	284	248	-34	0.755	0.245	1.00	Yes	0.415	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**8.18**
		$U_{15} - L_{16}$	635.11	-----	-369	342	-64	70	-164	176	-28	20	0.751	0.241	1.00	Yes	0.413	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.59**
		$U_{16} - L_{17}$	713.67	-----	-330	332	-70	97	-313	322	-148	64	0.773	0.223	1.00	Yes	0.425	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.01**
		$U_{17} - L_{18}$	646.70	-----	-293	256	-69	82	-106	378	-20	106	0.765	0.235	1.00	Yes	0.421	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.06**
		$U_{18} - L_{19}$	667.08	-----	-281	261	-50	69	56	242	35	21	0.789	0.203	1.00	Yes	0.434	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.91**
		$U_{19} - L_{20}$	601.71	-----	-196	154	-45	8	8	224	241	2	0.767	0.224	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.70**
		$U_{20} - L_{21}$	436.52	-----	-124	93	-9	-10	-78	164	89	-86	0.785	0.206	1.00	Yes	0.432	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.85**
		$U_{21} - L_{22}$	444.80	-----	-116	44	26	-77	-47	82	42	-179	0.800	0.200	1.00	Yes	0.440	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**8.80**
		$U_{23} - L_{22}$	381.37	-249.72	-100	32	-4	-60	-185	-277	-639	-40	0.686	0.313	1.00	Yes	0.377	0.172	0.55	Yes	0.595	0.309	0.91	Yes	0.528	0.128	0.66	Yes					1.00	**7.61**
		$U_{24} - L_{23}$	378.21	-----	-103	91	-33	0	-210	-207	-616	-19	0.680	0.311	1.00	Yes	0.374	0.171	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.25**
		$U_{25} - L_{24}$	566.41	-----	-183	174	-48	16	-340	-300	-540	-143	0.722	0.274	1.00	Yes	0.397	0.156	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.58**
		$U_{26} - L_{25}$	655.17	-----	-280	254	-31	43	-265	-368	105	35	0.775	0.225	1.00	Yes	0.426	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.57**
		$U_{27} - L_{26}$	665.15	-----	-289	281	-47	59	-232	-275	173	66	0.786	0.213	1.00	Yes	0.433	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.58**
		$U_{28} - L_{27}$	704.57	-----	-349	342	-49	68	-213	-336	198	109	0.763	0.234	1.00	Yes	0.420	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.11**
		$U_{29} - L_{28}$	638.93	-----	-365	338	-75	75	-80	-181	204	99	0.755	0.244	1.00	Yes	0.415	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.27**
		$U_{30} - L_{29}$	620.14	-----	-215	342	31	108	-87	-149	376	105	0.733	0.262	1.00	Yes	0.403	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.30**
		$U_{30} - L_{31}$	756.93	-----	-289	429	12	74	152	188	289	-3	0.749	0.242	1.00	Yes	0.412	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**9.80**
		$U_{31} - L_{32}$	761.96	-----	-440	378	-74	78	-193	261	-23	44	0.754	0.243	1.00	Yes	0.415	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**8.17**
		$U_{32} - L_{33}$	859.82	-----	-361	313	-63	96	-385	416	-135	134	0.783	0.210	1.00	Yes	0.431	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.80**
		$U_{33} - L_{34}$	878.59	-----	-346	276	-67	90	-58	327	26	203	0.800	0.191	1.00	Yes	0.440	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**8.22**
		$U_{34} - L_{35}$	806.04	-----	-309	218	-114	42	-5	264	382	5	0.797	0.200	1.00	Yes	0.439	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.57**
		$U_{35} - L_{36}$	726.48	-----	-331	209	-108	23	-52	213	149	-74	0.787	0.205	1.00	Yes	0.433	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.89**
		$U_{36} - L_{37}$	608.71	-----	-190	137	-32	-15	-135	77	19	-224	0.776	0.215	1.00	Yes	0.489	0.121	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.57**
		$U_{38} - L_{37}$	-----	-354.26	-32	-16	30	-75	-135	-250	-476	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.230	1.00	Yes	0.679	0.086	0.77	Yes					1.00	**4.60**
		$U_{39} - L_{38}$	279.20	-264.65	-77	39	17	-75	-257	-249	-806	-81	0.502	0.332	0.84	Yes	0.276	0.182	0.46	Yes	0.631	0.363	1.00	Yes	0.560	0.098	0.66	Yes					1.00	**6.67**
		$U_{40} - L_{39}$	380.14	-----	-121	92	-1	-37	-296	-282	-538	-100	0.684	0.311	1.00	Yes	0.376	0.171	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.02**
		$U_{41} - L_{40}$	568.30	-----	-172	123	-20	5	-359	-371	-99	-85	0.758	0.235	1.00	Yes	0.417	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.99**
		$U_{42} - L_{41}$	623.65	-----	-317	263	-51	34	-390	-422	-70	-67	0.737	0.256	1.00	Yes	0.406	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.25**
		$U_{43} - L_{42}$	744.48	-----	-393	290	-67	46	-465	-509	-7	-48	0.737	0.259	1.00	Yes	0.405	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.78**
		$U_{44} - L_{43}$	789.73	-----	-285	326	-94	81	-420	-355	53	-22	0.781	0.214	1.00	Yes	0.430	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.98**
	Structure 3	$U_0 - L_1$	714.59	-----	-347	296	-113	94	-18	-249	-62	-53	0.774	0.218	1.00	Yes	0.426	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.68**
		$U_1 - L_2$	709.71	-----	-338	253	-99	67	-298	-69	-125	-45	0.769	0.222	1.00	Yes	0.423	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.81**
		$U_2 - L_3$	643.82	-----	-331	241	-98	64	-266	152	-48	79	0.761	0.235	1.00	Yes	0.419	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.10**
		$U_3 - L_4$	547.02	-----	-153	89	-38	1	-142	97	119	-25	0.802	0.189	1.00	Yes	0.441	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.42**
		$U_4 - L_5$	427.66	-----	-131	91	-4	-35	-216	21	-80	-177	0.769	0.231	1.00	Yes	0.423	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.88**
		$U_5 - L_6$	378.33	-335.19	-103	-13	29	-111	-239	-18	41	-290	0.680	0.226	0.91	Yes	0.374	0.124	0.50	Yes	0.785	0.212	1.00	Yes	0.709	0.142	0.86	Yes					1.00	**8.50**
		$U_7 - L_6$	397.31	-----	-76	25	-41	-24	-201	-292	-647	-195	0.715	0.285	1.00	Yes	0.393	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.16**
		$U_8 - L_7$	577.33	-----	-190	121	-82	9	-378	-440	-654	-229	0.704	0.293	1.00	Yes	0.443	0.168	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.97**
		$U_8 - L_8$	754.70	-----	-237	94	-150	-19	-456	-491	-921	-460	0.747	0.248	1.00	Yes	0.411	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.99**
		$U_{10} - L_9$	952.01	-----	-248	170	-129	44	-491	-575	101	-233	0.804	0.190	1.00	Yes	0.498	0.108	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.60**
		$U_{11} - L_{10}$	985.94	-----	-319	224	-83	89	-473	-481	222	80	0.788	0.203	1.00	Yes	0.488	0.115	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.35**
		$U_{12} - L_{11}$	999.19	-----	-118	353	1	132	-279	-318	303	173	0.799	0.198	1.00	Yes	0.495	0.111	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.73**
		$U_{12} - L_{13}$	671.98	-----	-115	271	23	72	103	265	181	-32	0.794	0.203	1.00	Yes	0.437	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.03**
		$U_{13} - L_{14}$	673.08	-----	-288	242	-28	58	-89	192	54	80	0.796	0.199	1.00	Yes	0.438	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.25**
		$U_{14} - L_{15}$	710.55	-----	-197	190	-26	33	-233	232	161	55	0.840	0.155	1.00	Yes	0.462	0.085	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.96**
		$U_{15} - L_{16}$	579.31	-----	-98	14	-23	-3	-97	210	-3	55	0.850	0.148	1.00	Yes	0.467	0.081	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.96**
		$U_{17} - L_{16}$	-----	-397.24	-27	-40	13	-57	-17	-46	-224	17	-----	-----	-----	-----	-----	-----	-----	-----	0.908	0.082	1.00	Yes	0.841	0.072	0.92	Yes					1.00	**5.53**
		$U_{18} - L_{17}$	-----	-330.27	-74	1	-22	-68	-190	-214	-657	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.232	1.00	Yes	0.699	0.094	0.80	Yes					1.00	**7.54**
		$U_{19} - L_{18}$	428.22	-117.72	-92	29	23	-18	-362	-300	143	109	0.770	0.222	1.00	Yes	0.424	0.122	0.55	Yes	0.270	0.213	0.49	Yes	0.249	0.117	0.37	Yes					1.00	**6.47**
		$U_{20} - L_{19}$	654.49	-----	-18	28	-14	-6	-408	-365	87	99	0.859	0.135	1.00	Yes	0.518	0.074	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.40**

Axial AB Operating

Operating Loads - 2F1

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			-----	-493.75	-37	59	229	-1052	24	-16	-76	-405	-----	-----	-----	-----	-----	-----	-----	-----	0.672	0.322	1	Yes	0.666	0.250	0.92	Yes	1.00	**6.99**
		U_1 - U_2			-----	-543.86	-53	63	-201	-903	10	49	-29	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.251	1	Yes	0.733	0.215	0.95	Yes	1.00	**4.99**
		U_2 - U_3			-----	-574.42	-99	239	-290	-793	11	-90	194	-79	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.210	1	Yes	0.775	0.189	0.97	Yes	1.00	**5.62**
		U_3 - U_4			285.08	-562.59	82	238	-105	-998	-77	-79	-15	-240	0.327	0.278	0.61	Yes	0.224	0.191	0.42	Yes	0.766	0.227	1	Yes	0.759	0.237	1.00	Yes	1.00	**7.25**
		U_4 - U_5			283.51	-547.59	88	230	-1078	-323	-154	-27	-167	-113	0.325	0.284	0.61	Yes	0.223	0.195	0.42	Yes	0.745	0.233	0.98	Yes	0.738	0.256	1.00	Yes	1.00	**7.10**
		U_5 - U_6			545.87	-----	210	360	-1335	89	-323	-28	-179	-276	0.626	0.372	1.00	Yes	0.422	0.242	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.66**
		U_6 - U_7			756.33	-----	280	186	-1020	-281	-334	84	-397	-172	0.723	0.271	1.00	Yes	0.505	0.186	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.90**
		U_7 - U_8			933.82	-----	-34	1172	-1631	2066	-246	362	-251	154	0.647	0.350	1.00	Yes	0.451	0.238	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.42**
		U_8 - U_9			827.80	-----	1113	-137	1603	-1603	-99	212	58	414	0.678	0.320	1.00	Yes	0.464	0.218	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.52**
		U_9 - U_{10}			608.63	-----	218	217	175	-1166	112	401	206	454	0.660	0.334	1.00	Yes	0.447	0.224	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.32**
		U_{10} - U_{11}			-----	-587.16	214	-100	114	-1090	228	87	290	82	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.210	0.97	Yes	0.749	0.244	1.00	Yes	1.00	**6.62**
		U_{11} - U_{12}			-----	-874.99	167	-122	9	-1065	168	98	228	91	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.169	1	Yes	0.821	0.177	1.00	Yes	1.00	**6.20**
		U_{12} - U_{13}			-----	-1188.12	-36	-165	-18	-1213	221	-39	226	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.196	1	Yes	0.794	0.167	0.97	Yes	1.00	**6.67**
		U_{13} - U_{14}			-----	-1282.58	-118	-357	-296	-2013	150	59	113	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.249	1	Yes	0.735	0.222	0.96	Yes	1.00	**6.09**
		U_{14} - U_{15}			-----	-1265.69	-257	-192	-1885	-749	182	-56	222	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.266	1	Yes	0.726	0.208	0.94	Yes	1.00	**5.93**
		U_{15} - U_{16}			-----	-1330.98	-83	-414	-1455	-900	22	-66	153	-203	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.223	1	Yes	0.763	0.161	0.93	Yes	1.00	**6.06**
		U_{16} - U_{17}			-----	-1329.13	-318	-185	-1679	-532	50	-176	-76	-276	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.228	1	Yes	0.762	0.185	0.95	Yes	1.00	**6.74**
		U_{17} - U_{18}			-----	-964.98	-173	-100	-1189	-120	-160	-238	-127	-240	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.227	1	Yes	0.755	0.193	0.95	Yes	1.00	**5.44**
		U_{18} - U_{19}			-----	-729.44	-198	-29	-738	79	-193	-172	-15	-138	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.165	1	Yes	0.821	0.149	0.97	Yes	1.00	**5.95**
		U_{19} - U_{20}			-----	-638.12	-182	-19	-1373	877	-124	5	162	1	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.215	0.94	Yes	0.718	0.276	1.00	Yes	1.00	**13.66**
	Structure 2	U_0 - U_1			-----	-585.44	165	-165	388	-1792	95	180	-73	-105	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.213	0.91	Yes	0.691	0.304	1.00	Yes	1.00	**10.60**
		U_1 - U_2			-----	-751.91	-102	-163	-69	-1250	335	623	209	281	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.262	1	Yes	0.726	0.190	0.92	Yes	1.00	**5.96**
		U_2 - U_3			-----	-1072.30	-80	-241	-159	-1967	594	5	448	9	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.228	1	Yes	0.761	0.200	0.97	Yes	1.00	**6.44**
		U_3 - U_4			-----	-1310.02	-372	-308	-739	-2056	125	-285	278	202	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.249	1	Yes	0.746	0.183	0.93	Yes	1.00	**6.64**
		U_4 - U_5			-----	-1385.21	-375	-349	-491	-2599	-48	-341	56	-316	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.275	1	Yes	0.711	0.215	0.93	Yes	1.00	**6.19**
		U_5 - U_6			-----	-1481.10	-397	-29	-1182	-1892	-99	-288	-65	-361	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.231	1	Yes	0.760	0.157	0.92	Yes	1.00	**6.92**
		U_6 - U_7			-----	-1208.27	-301	-105	-783	-2227	-67	-253	-85	-325	-----	-----	-----	-----	-----	-----	-----	-----	0.693	0.297	1	Yes	0.688	0.198	0.89	Yes	1.00	**5.75**
		U_7 - U_8			-----	-1226.14	-184	-235	-2378	-782	-165	-206	-146	-225	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.293	1	Yes	0.698	0.212	0.92	Yes	1.00	**5.93**
		U_8 - U_9			-----	-1125.70	-318	72	-1863	-752	-194	-178	-119	-211	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.227	1	Yes	0.764	0.198	0.97	Yes	1.00	**6.66**
		U_9 - U_{10}			-----	-892.08	-118	258	-1841	-460	-251	-124	-154	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.222	1	Yes	0.770	0.224	1.00	Yes	1.00	**7.12**
		U_{10} - U_{11}			415.82	-746.21	43	312	-1788	-423	-301	-142	-133	-208	0.351	0.289	0.65	Yes	0.239	0.186	0.43	Yes	0.746	0.246	1	Yes	0.742	0.252	1.00	Yes	1.00	**9.71**
		U_{11} - U_{12}			763.74	-----	146	489	-2066	-293	-371	-181	-258	-452	0.645	0.347	1.00	Yes	0.433	0.232	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.12**
		U_{12} - U_{13}			1037.27	-----	261	28	-1869	-1372	-496	-115	-568	-454	0.700	0.290	1.00	Yes	0.499	0.196	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.12**
		U_{13} - U_{14}			1374.04	-----	-300	2967	-408	1509	-673	292	-537	-174	0.676	0.321	1.00	Yes	0.478	0.210	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.63**
		U_{14} - U_{15}			1129.69	-----	2558	-67	4292	-3032	-388	285	-107	590	0.556	0.438	1.00	Yes	0.393	0.287	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.87**
		U_{15} - U_{16}			1091.66	-----	40	286	-537	-2267	89	724	439	920	0.660	0.335	1.00	Yes	0.470	0.226	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.30**
		U_{16} - U_{17}			871.54	-----	565	220	869	-2354	322	312	533	209	0.642	0.352	1.00	Yes	0.427	0.232	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.01**
		U_{17} - U_{18}			652.73	-----	439	242	196	-1845	62	182	171	123	0.655	0.340	1.00	Yes	0.436	0.226	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.83**
		U_{18} - U_{19}			560.80	-----	534	251	216	-2452	-8	70	108	53	0.563	0.432	1.00	Yes	0.369	0.274	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.35**
		U_{19} - U_{20}			211.33	-693.78	257	131	58	-1411	18	134	72	17	0.198	0.244	0.45	Yes	0.131	0.160	0.30	Yes	0.770	0.161	0.94	Yes	0.765	0.226	1.00	Yes	1.00	**7.92**
		U_{20} - U_{21}			-----	-817.63	112	-15	-176	-1618	106	-19	128	-157	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.246	1	Yes	0.746	0.234	0.99	Yes	1.00	**7.84**
		U_{21} - U_{22}			-----	-762.51	-29	-2	-469	-1682	-5	-46	-27	-108	-----	-----	-----	-----	-----	-----	-----	-----	0.701	0.292	1	Yes	0.696	0.244	0.94	Yes	1.00	**6.94**
		U_{22} - U_{23}			-----	-750.20	-26	-41	-1661	-661	-52	-99	-2	-94	-----	-----	-----	-----	-----	-----	-----	-----	0.690	0.308	1	Yes	0.685	0.241	0.93	Yes	1.00	**6.81**
		U_{23} - U_{24}			-----	-748.50	8	54	-1478	-700	-188	-102	-131	-150	-----	-----	-----	-----	-----	-----	-----	-----	0.688	0.303	1	Yes	0.683	0.214	0.90	Yes	1.00	**6.85**
		U_{24} - U_{25}			-----	-662.59	81	198	-1483	-576	-207	-40	-156	-137	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.258	1	Yes	0.731	0.237	0.97	Yes	1.00	**6.99**
		U_{25} - U_{26}			338.12	-615.64	128	361	-1602	-49	-201	40	-77	-83	0.339	0.301	0.65	Yes	0.223	0.191	0.42	Yes	0.732	0.156	0.89	Yes	0.727	0.272	1.00	Yes	1.00	**8.75**
		U_{26} - U_{27}			627.01	-----	206	414	-1947	-470	-195	17	-209	-142	0.629	0.361	1.00	Yes	0.419	0.240	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.46**
		U_{27} - U_{28}			860.22	-----	191	530	-2507	-291	-332	-51	-169	-463	0.634	0.364	1.00	Yes	0.422	0.240	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.04**
		U_{28} - U_{29}			1070.41	-----	243	63	-2609	-1096	-394	70	-659	-417	0.647	0.352	1.00	Yes	0.460	0.236	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.12**
		U_{29} - U_{30}			1219.56	-----	-130	2798	-3795	3845	-533	500	-312	125	0.600	0.392	1.00	Yes	0.425	0.257	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.05**
		U_{30} - U_{31}			1209.95	-----	2337	-145	3863	-3117	-150	372	137	600	0.595	0.399	1.00	Yes	0.421	0.261	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.74**
		U_{31} - U_{32}			1033.39	-----	18	315	-193	-1806	186	611	547	757	0.698	0.300	1.00	Yes	0.497	0.204	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.52**
		U_{32} - U_{33}			771.77	-----	483	191	249	-1966	325	263	568	96	0.652	0.347	1.00	Yes	0.438	0.232	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.34**
		U_{33} - U_{34}			540.18	-751.23	367	162	-244	-1796	134	167	219	94	0.456	0.280	0.74	Yes	0.311	0.180	0.50	Yes	0.751	0.214	0.97	Yes	0.747	0.253	1.00	Yes	1.00	**11.00**
		U_{34} - U_{35}			-----	-884.06	317	-51	97	-1874	120	-19	162	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.172	0.94	Yes	0.763	0.228	1.00	Yes	1.00	**7.70**
		U_{35} - U_{36}			-----	-1167.32	128	-264	-309	-1768	102	75	141	-17	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.195	1	Yes	0.792	0.188	0.98	Yes	1.00	**7.60**
		U_{36} - U_{37}			-----	-1245.49	-158	-68	-537	-2439	163	-58	149	-18	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.282	1	Yes	0.709	0.217	0.93	Yes	1.00	**6.65**
		U_{37} - U_{38}			-----	-1214.11	23	-265	-2269	-1021	19	0	182	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.297	1	Yes	0.691	0.202	0.90	Yes	1.00	**6.37**
		U_{38} - U_{39}			-----	-1490.23	14	-410	-2111	-2100	80	-115	184	-151	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.228	1	Yes	0.765	0.175	0.95	Yes	1.00	**7.43**
		U_{39} - U_{40}			-----	-1322.57	-350	-474	-2581	-1449	-117	-148	-131	-307	-----	-----	-----	-----	-----	-----	-----	-----	0.684	0.312	1	Yes	0.679	0.214	0.90	Yes	1.00	**5.95**
		U_{40} - U_{41}			-----	-1235.83	-413	-436	-2224	-1136	-89	-142	-168	-273	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.283	1	Yes	0.704	0.198	0.91	Yes	1.00	**5.89**
		U_{41} - U_{42}			-----	-1103.61	-282	-174	-1869	-286	-100	25	-65	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.204	1	Yes	0.783	0.190	0.98	Yes	1.00	**6.79**
		U_{42} - U_{43}			-----	-822.48	-276	-55	-1218	-75	96	-67	230	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.195	1	Yes	0.794	0.185	0.98	Yes	1.00	**7.03**
		U_{43} - U_{44}			-----	-618.90	-136	-158	-1535	652	-71	1	207	63	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.260	1	Yes	0.731	0.261	1.00	Yes	1.00	**12.02**
	Structure 3	U_0 - U_1			-----	-609.08	172	-174	589	-1539	62	131	-64	-146	-----	-----	-----	-----	-----	-----	-----	-----	0.692	0.181	0.88	Yes	0.685	0.310	1.00	Yes	1.00	**12.47**
		U_1 - U_2			-----	-672.30	-67	-119	2	-832	252	507	213	116	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.236	1	Yes	0.756	0.167	0.93	Yes	1.00	**5.51**
		U_2 - U_3			-----	-977.49	-76	-127	137	-1196	517	10	471	-61	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.224	1	Yes	0.765	0.195	0.96	Yes	1.00	**5.75**
		U_3 - U_4			-----	-1321.81	-144	-209	-495	-1756	135	-233	211	-96	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.231	1	Yes	0.758	0.194	0.96	Yes	1.00	**7.06**
		U_4 - U_5			-----	-1370.56	-323	-48	-965	-1252	-12	-311	127	-344	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.197	1	Yes	0.786	0.138	0.93	Yes	1.00	**6.97**
		U_5 - U_6			-----	-1250.03	-159	-236	-330	-2019	-42	-201	-81	-269	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.268	1	Yes	0.717	0.223	0.94	Yes	1.00	**6.13**
		U_6 - U_7			-----	-1252.89	-315	-97	-2051	-626	-75	-226	-38	-177	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.266	1	Yes	0.718	0.226	0.95	Yes	1.00	**6.17**
		U_7 - U_8			-----	-1093.45	-137	-61	-1424	-436	-192	-199	-95	-251	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.256	1	Yes	0.730	0.196	0.93	Yes	1.00	**5.91**
		U_8 - U_9			-----	-866.94	-130	163	-1070	-113	-97	-112	-108	-203	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.177	1	Yes	0.813	0.177	1.00	Yes	1.00	**6.06**
		U_9 - U_{10}			-----	-590.75	-104	207	-1075	-54	-204	-131	-216	-211	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.223	0.99	Yes	0.754	0.241	1.00	Yes	1.00	**6.61**
		U_{10} - U_{11}			598.18	-----	199	208	-1319	-250	-330	-70	-249	-181	0.649	0.348	1.00	Yes	0.439	0.234	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.47**
		U_{11} - U_{12}			830.08	-----	-160	1161	-1662	1588	-324	144	-183	7	0.680	0.318	1.00	Yes	0.465	0.217	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.95**
		U_{12} - U_{13}			907.01	-----	1159	-27	2168	-1818	-338	85	-101	402	0.628	0.369	1.00	Yes	0.438	0.252	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.24**
		U_{13} - U_{14}			767.78	-----	181	297	42	-963	-88	370	105	423	0.734	0.263	1.00	Yes	0.513	0.180	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.33**
		U_{14} - U_{15}			551.36	-----	371	207	426	-1334	67	134	279	-25	0.632	0.364	1.00	Yes	0.426	0.237	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.96**
		U_{15} - U_{16}			261.78	-542.15	224	111	51	-1129	4	129	61	68	0.300	0.290	0.60	Yes	0.206	0.199	0.41	Yes	0.738	0.178	0.92	Yes	0.731	0.268	1.00	Yes	1.00	**6.82**
		U_{16} - U_{17}			268.13	-575.67	266	59	-927	-511	42	58	124	2	0.307	0.241	0.55	Yes	0.211	0.166	0.38	Yes	0.783	0.194	0.98	Yes	0.776	0.220	1.00	Yes	1.00	**7.14**
		U_{17} - U_{18}			-----	-581.11	226	-131	-798	-473	-67	137	57	-27	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.200	1	Yes	0.784	0.190	0.98	Yes	1.00	**5.69**
		U_{18} - U_{19}			-----	-558.24	40	-29	-856	-217	143	16	168	28	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.237	1	Yes	0.753	0.204	0.96	Yes	1.00	**5.47**
		U_{19} - U_{20}			-----	-586.54	120	-233	-859	296	-61	18	302	58	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.190	0.99	Yes	0.791	0.204	1.00	Yes	1.00	**9.04**

Axial AB Operating

Operating Loads - 2F1

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																		
Center Truss - Lower Chord	Structure 1	L_0 - L_1	188.60	-----	781	-1239	438	-388	-424	-1559	60	221	0.289	0.707	1.00	Yes	0.170	0.423	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**19.31**
		L_1 - L_2	446.15	-----	-318	-711	47	-20	-442	44	19	22	0.683	0.308	1.00	Yes	0.417	0.204	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.60**
		L_2 - L_3	651.26	-----	-937	-632	-43	45	-100	-43	12	-6	0.749	0.242	1.00	Yes	0.433	0.146	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.70**
		L_3 - L_4	636.64	-----	-971	-441	39	183	47	175	-35	40	0.732	0.263	1.00	Yes	0.435	0.170	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.86**
		L_4 - L_5	-----	-538.31	-649	-577	99	501	-251	-81	174	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.136	0.97	Yes	0.820	0.172	1.00	Yes	1.00	**10.11**
		L_5 - L_6	-----	-753.73	-513	-464	142	579	-20	39	19	83	-----	-----	-----	-----	-----	-----	-----	-----	0.879	0.115	1	Yes	0.870	0.128	1.00	Yes	1.00	**10.35**
		L_6 - L_7	-----	-1054.57	-686	-942	138	33	50	-43	191	20	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.120	0.98	Yes	0.849	0.148	1.00	Yes	1.00	**12.23**
		L_7 - L_8	-----	-1260.72	-31	581	-15	1306	40	73	185	257	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.183	1	Yes	0.798	0.173	0.98	Yes	1.00	**12.76**
		L_8 - L_9	-----	-1264.30	553	-46	1432	-122	37	-14	90	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.179	1	Yes	0.801	0.190	1.00	Yes	1.00	**12.52**
		L_9 - L_{10}	-----	-1005.80	-378	-1191	140	82	350	75	-1	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.110	0.93	Yes	0.810	0.187	1.00	Yes	1.00	**16.00**
		L_{10} - L_{11}	-----	-530.28	-246	-694	472	-20	-108	-414	69	7	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.141	0.96	Yes	0.808	0.184	1.00	Yes	1.00	**12.07**
		L_{11} - L_{12}	611.70	-----	-104	-675	330	-198	-71	124	-17	20	0.792	0.200	1.00	Yes	0.475	0.132	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.16**
		L_{12} - L_{13}	1041.34	-----	-523	-762	60	-102	-108	-317	-19	-32	0.822	0.172	1.00	Yes	0.526	0.103	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.12**
		L_{13} - L_{14}	1293.54	-----	-360	-1610	216	-398	-199	162	-107	65	0.761	0.238	1.00	Yes	0.493	0.146	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.73**
		L_{14} - L_{15}	1613.04	-----	-1228	-1541	-356	-81	-250	122	-66	-49	0.788	0.203	1.00	Yes	0.512	0.123	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.69**
		L_{15} - L_{16}	1611.75	-----	-1304	-1642	-197	-391	-109	-78	-76	15	0.787	0.206	1.00	Yes	0.505	0.119	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.74**
		L_{16} - L_{17}	1201.56	-----	-1506	-257	-402	40	-155	81	-33	-64	0.760	0.235	1.00	Yes	0.493	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.54**
		L_{17} - L_{18}	956.58	-----	-757	-489	-188	-49	-25	-158	-45	-2	0.833	0.166	1.00	Yes	0.533	0.100	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.09**
		L_{18} - L_{19}	449.84	-----	-754	111	-263	189	-201	382	4	-15	0.688	0.306	1.00	Yes	0.466	0.193	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.84**
		L_{19} - L_{20}	365.34	-----	-322	33	-1305	855	4	1	-212	-47	0.559	0.436	1.00	Yes	0.341	0.294	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**30.60**
	Structure 2	L_0 - L_1	232.98	-----	575	-2020	813	-1825	-521	-1812	50	175	0.283	0.709	1.00	Yes	0.168	0.444	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**37.45**
		L_1 - L_2	532.45	-----	105	-1140	163	-223	-693	255	72	103	0.647	0.346	1.00	Yes	0.385	0.218	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.86**
		L_2 - L_3	1035.74	-----	-539	-1018	-16	-148	66	-289	126	163	0.816	0.178	1.00	Yes	0.535	0.107	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.94**
		L_3 - L_4	1293.30	-----	-267	-1712	58	-334	-405	208	42	123	0.760	0.233	1.00	Yes	0.512	0.144	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.20**
		L_4 - L_5	1718.00	-----	-1658	-1791	-246	-237	100	-308	18	-10	0.801	0.190	1.00	Yes	0.530	0.113	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.29**
		L_5 - L_6	1756.50	-----	-1762	-2542	-40	-368	-207	104	-92	58	0.754	0.238	1.00	Yes	0.506	0.145	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.69**
		L_6 - L_7	1776.99	-----	-2675	-1788	-404	-113	26	152	52	-9	0.752	0.245	1.00	Yes	0.500	0.142	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.67**
		L_7 - L_8	1387.06	-----	-1198	-1577	-192	221	-306	-40	-70	77	0.795	0.199	1.00	Yes	0.522	0.117	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.58**
		L_8 - L_9	1174.64	-----	-1153	-957	-132	486	-155	204	42	-122	0.822	0.175	1.00	Yes	0.553	0.109	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.95**
		L_9 - L_{10}	901.82	-----	-1133	-825	-97	583	-43	-84	-36	37	0.805	0.191	1.00	Yes	0.469	0.120	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.94**
		L_{10} - L_{11}	-----	-730.11	-812	-442	17	563	-143	-93	115	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.076	0.94	Yes	0.858	0.142	1.00	Yes	1.00	**11.73**
		L_{11} - L_{12}	-----	-1055.22	-828	-603	-24	975	-17	-134	122	272	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.100	0.98	Yes	0.865	0.133	1.00	Yes	1.00	**13.72**
		L_{12} - L_{13}	-----	-1446.82	-381	-240	-44	-829	-22	-179	415	205	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.118	1	Yes	0.865	0.082	0.95	Yes	1.00	**16.42**
		L_{13} - L_{14}	-----	-1525.01	-477	1321	-944	2635	-193	-261	221	233	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.169	0.95	Yes	0.767	0.230	1.00	Yes	1.00	**14.74**
		L_{14} - L_{15}	-----	-1508.72	1255	-546	2725	-808	-242	-167	31	-149	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.169	0.94	Yes	0.759	0.238	1.00	Yes	1.00	**13.33**
		L_{15} - L_{16}	-----	-1470.92	-510	-91	-1137	185	-112	7	-188	-137	-----	-----	-----	-----	-----	-----	-----	-----	0.887	0.112	1	Yes	0.880	0.113	1.00	Yes	1.00	**18.30**
		L_{16} - L_{17}	-----	-1137.31	120	-1332	1144	67	-142	-622	6	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.160	1	Yes	0.828	0.164	1.00	Yes	1.00	**14.82**
		L_{17} - L_{18}	-----	-803.79	-17	-920	491	172	-516	112	18	-39	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.129	0.98	Yes	0.844	0.147	1.00	Yes	1.00	**10.88**
		L_{18} - L_{19}	-----	-616.04	-400	-879	601	73	62	35	-9	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.121	0.95	Yes	0.821	0.170	1.00	Yes	1.00	**10.59**
		L_{19} - L_{20}	-----	-542.04	-644	-1398	508	164	64	174	-30	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.189	0.92	Yes	0.722	0.270	1.00	Yes	1.00	**13.46**
		L_{20} - L_{21}	933.86	-317.45	-1012	-1719	338	-9	-37	25	2	-35	0.745	0.255	1.00	Yes	0.488	0.150	0.64	Yes	0.300	0.214	0.52	Yes	0.298	0.251	0.55	Yes	1.00	**11.36**
		L_{21} - L_{22}	921.04	-----	-1352	-1611	194	-161	-115	209	-55	25	0.734	0.258	1.00	Yes	0.491	0.161	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.33**
		L_{22} - L_{23}	891.83	-----	-802	-1786	-156	167	-214	-60	19	-40	0.711	0.284	1.00	Yes	0.476	0.178	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.99**
		L_{23} - L_{24}	933.51	-----	-982	-1626	-18	279	-101	-54	-8	66	0.744	0.248	1.00	Yes	0.488	0.147	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.12**
		L_{24} - L_{25}	675.78	-431.70	-1074	-758	91	440	-136	150	93	-89	0.766	0.230	1.00	Yes	0.453	0.147	0.61	Yes	0.579	0.125	0.71	Yes	0.575	0.207	0.79	Yes	1.00	**11.20**
		L_{25} - L_{26}	-----	-611.77	-635	-910	68	575	-106	-68	11	79	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.120	0.94	Yes	0.815	0.176	1.00	Yes	1.00	**11.94**
		L_{26} - L_{27}	-----	-829.07	-808	-805	159	497	-81	128	148	-55	-----	-----	-----	-----	-----	-----	-----	-----	0.877	0.093	0.97	Yes	0.871	0.129	1.00	Yes	1.00	**13.23**
		L_{27} - L_{28}	-----	-1142.93	-1310	-540	53	1104	-20	-216	86	189	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.136	0.98	Yes	0.832	0.162	1.00	Yes	1.00	**16.89**
		L_{28} - L_{29}	-----	-1557.68	-175	-446	-93	-136	139	98	254	-18	-----	-----	-----	-----	-----	-----	-----	-----	0.939	0.059	1	Yes	0.932	0.044	0.98	Yes	1.00	**20.21**
		L_{29} - L_{30}	-----	-1521.16	-497	1191	-692	2578	91	121	28	-70	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.155	0.93	Yes	0.765	0.225	1.00	Yes	1.00	**13.44**
		L_{30} - L_{31}	-----	-1440.12	1246	-469	3077	-918	119	67	128	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.182	0.92	Yes	0.725	0.269	1.00	Yes	1.00	**14.47**
		L_{31} - L_{32}	-----	-1499.30	-277	-306	-736	206	87	57	-146	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.905	0.091	1	Yes	0.897	0.073	0.97	Yes	1.00	**19.31**
		L_{32} - L_{33}	-----	-1047.39	-27	-1026	997	53	177	-352	-21	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.120	0.99	Yes	0.859	0.140	1.00	Yes	1.00	**13.85**
		L_{33} - L_{34}	-----	-694.52	-58	-1036	531	87	22	231	19	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.126	0.95	Yes	0.816	0.181	1.00	Yes	1.00	**10.77**
		L_{34} - L_{35}	818.91	-569.48	-391	-1257	628	-53	-7	-531	-2	-40	0.731	0.265	1.00	Yes	0.426	0.163	0.59	Yes	0.602	0.118	0.73	Yes	0.598	0.201	0.80	Yes	1.00	**12.71**
		L_{35} - L_{36}	1101.07	-----	-312	-1546	489	-94	-186	175	-81	19	0.770	0.226	1.00	Yes	0.519	0.141	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.67**
		L_{36} - L_{37}	1351.62	-----	-1041	-1858	295	-88	72	201	35	-3	0.775	0.222	1.00	Yes	0.509	0.130	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.66**
		L_{37} - L_{38}	1699.23	-----	-677	-2975	-12	-459	-286	5	-75	53	0.719	0.279	1.00	Yes	0.478	0.163	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.44**
		L_{38} - L_{39}	1778.09	-----	-1822	-2557	-390	-82	-107	157	10	-57	0.763	0.236	1.00	Yes	0.512	0.144	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.12**
		L_{39} - L_{40}	1658.10	-----	-1568	-2220	-274	-389	-98	-116	-55	10	0.773	0.218	1.00	Yes	0.512	0.128	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.03**
		L_{40} - L_{41}	1314.94	-----	-1831	-716	-431	24	-147	163	0	-20	0.773	0.227	1.00	Yes	0.520	0.140	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.41**
		L_{41} - L_{42}	999.14	-----	-1362	-371	-203	-94	140	83	19	105	0.787	0.212	1.00	Yes	0.516	0.126	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.89**
		L_{42} - L_{43}	522.94	-----	-1482	310	-334	181	-99	333	125	52	0.635	0.356	1.00	Yes	0.378	0.228	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.51**
		L_{43} - L_{44}	234.57	-----	-656	80	-3012	1395	-587	-171	-193	-57	0.285	0.709	1.00	Yes	0.169	0.455	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**57.96**
	Structure 3	L_0 - L_1	257.44	-----	599	-1191	617	-951	-259	-1174	35	160	0.394	0.601	1.00	Yes	0.240	0.393	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**22.06**
		L_1 - L_2	454.49	-----	258	-763	159	-190	-358	272	37	62	0.696	0.303	1.00	Yes	0.470	0.192	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.61**
		L_2 - L_3	924.60	-----	-263	-758	-19	-150	-8	-307	94	135	0.805	0.185	1.00	Yes	0.515	0.112	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.79**
		L_3 - L_4	1217.19	-----	-360	-1247	47	-311	-483	159	29	118	0.770	0.226	1.00	Yes	0.499	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.94**
		L_4 - L_5	1611.97	-----	-1592	-1462	-280	-141	117	249	27	13	0.788	0.209	1.00	Yes	0.506	0.122	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.29**
		L_5 - L_6	1585.51	-----	-1273	-1629	-34	-314	57	352	-63	134	0.775	0.221	1.00	Yes	0.503	0.134	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.21**
		L_6 - L_7	1395.04	-----	-985	-1184	-345	205	-183	189	2	-30	0.820	0.179	1.00	Yes	0.532	0.109	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.86**
		L_7 - L_8	1085.59	-----	-747	-754	-92	49	-25	69	-24	66	0.857	0.142	1.00	Yes	0.548	0.084	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.61**
		L_8 - L_9	655.74	-----	-501	-358	-200	339	-88	-50	60	-90	0.849	0.148	1.00	Yes	0.510	0.097	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.85**
		L_9 - L_{10}	-----	-546.86	-574	-598	-25	487	64	87	-15	33	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.097	0.94	Yes	0.833	0.158	1.00	Yes	1.00	**12.92**
		L_{10} - L_{11}	-----	-1010.25	-1158	-593	60	118	114	191	114	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.100	0.93	Yes	0.813	0.182	1.00	Yes	1.00	**16.53**
		L_{11} - L_{12}	-----	-1256.13	-57	532	-95	1363	-91	-108	-154	-239	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.185	1	Yes	0.796	0.180	0.98	Yes	1.00	**12.99**
		L_{12} - L_{13}	-----	-1246.58	554	-36	1309	-30	-139	-144	-327	-293	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.193	1	Yes	0.790	0.173	0.97	Yes	1.00	**12.44**
		L_{13} - L_{14}	-----	-1026.47	-433	-1057	7	145	170	64	-148	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.121	0.96	Yes	0.826	0.166	1.00	Yes	1.00	**11.63**
		L_{14} - L_{15}	-----	-723.41	-229	-597	558	129	-123	-363	-5	-64	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.148	1	Yes	0.835	0.132	0.97	Yes	1.00	**9.88**
		L_{15} - L_{16}	-----	-486.61	-171	-976	443	125	-90	267	4	-68	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.212	0.96	Yes	0.741	0.258	1.00	Yes	1.00	**8.83**
		L_{16} - L_{17}	622.32	-----	-200	-1057	208	2	-125	124	26	-71	0.716	0.275	1.00	Yes	0.425	0.179	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.64**
		L_{17} - L_{18}	655.24	-----	-707	-878	30	-75	65	155	11	103	0.754	0.237	1.00	Yes	0.436	0.142	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.04**
		L_{18} - L_{19}	436.69	-----	-958	-20	-39	33	61	167	50	-75	0.668	0.323	1.00	Yes	0.408	0.218	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.63**
		L_{19} - L_{20}	140.88	-----	-1746	1087	-862	826	1178	320	-243	-66	0.216	0.777	1.00	Yes	0.127	0.469	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**31.71**

Axial AB Operating

Operating Loads - 2F1

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	$U_0 - L_0$	-----	-390.90	-24	47	-29	100	-97	-31	-183	-59	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.120	1	Yes	0.827	0.128	0.96	Yes	1.00	**2.90**
		$U_1 - L_1$	-----	-354.75	16	-11	-164	190	39	17	-493	-130	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.211	0.99	Yes	0.751	0.242	1.00	Yes	1.00	**6.30**
		$U_2 - L_2$	78.66	-353.96	65	-74	-129	189	-109	-6	154	135	0.141	0.287	0.43	Yes	0.078	0.158	0.24	Yes	0.774	0.085	0.86	Yes	0.749	0.242	1.00	Yes	1.00	**9.17**
		$U_3 - L_3$	317.87	-----	279	-289	-161	199	-192	-44	-1	160	0.572	0.425	1.00	Yes	0.314	0.234	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.15**
		$U_4 - L_4$	-----	-350.04	199	-200	32	-43	-181	-110	-95	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.114	0.89	Yes	0.741	0.255	1.00	Yes	1.00	**7.08**
		$U_5 - L_5$	-----	-433.56	25	-37	216	-241	-122	-46	-109	-82	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.099	0.89	Yes	0.748	0.244	1.00	Yes	1.00	**5.85**
		$U_6 - L_6$	-----	-524.15	37	-56	256	-281	-77	28	138	87	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.093	0.89	Yes	0.752	0.246	1.00	Yes	1.00	**5.99**
		$U_7 - L_7$	-----	-440.95	117	-131	295	-315	-129	47	-36	69	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.121	0.86	Yes	0.680	0.310	1.00	Yes	1.00	**4.11**
		$U_8 - L_8$	-----	-1344.63	3	-9	-93	114	-191	-67	-185	-55	-----	-----	-----	-----	-----	-----	-----	-----	0.971	0.024	1	Yes	0.932	0.021	0.96	Yes	1.00	**9.01**
		$U_9 - L_9$	-----	-667.45	-166	189	-374	432	-222	-157	-243	-184	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.126	0.93	Yes	0.754	0.240	1.00	Yes	1.00	**5.41**
		$U_{10} - L_{10}$	-----	-821.63	-88	101	-279	351	-272	-185	-274	-181	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.107	0.96	Yes	0.811	0.182	1.00	Yes	1.00	**8.36**
		$U_{11} - L_{11}$	-----	-693.82	-70	120	-258	409	-174	-32	174	110	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.091	0.93	Yes	0.808	0.190	1.00	Yes	1.00	**7.83**
		$U_{12} - L_{12}$	-----	-543.81	-30	37	-273	290	-168	10	-126	59	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.092	0.88	Yes	0.746	0.248	1.00	Yes	1.00	**7.36**
		$U_{13} - L_{13}$	-----	-403.57	3	12	-169	197	-79	99	-90	95	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.088	0.91	Yes	0.773	0.224	1.00	Yes	1.00	**5.71**
		$U_{14} - L_{14}$	-----	-365.88	-145	171	-86	92	-97	-26	-149	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.112	0.93	Yes	0.774	0.219	1.00	Yes	1.00	**7.26**
		$U_{15} - L_{15}$	227.90	-327.14	-182	173	222	-235	-129	-134	108	-141	0.410	0.341	0.76	Yes	0.225	0.187	0.42	Yes	0.733	0.153	0.89	Yes	0.692	0.300	1.00	Yes	1.00	**8.73**
		$U_{16} - L_{16}$	-----	-324.21	-55	38	239	-245	-78	-79	20	-138	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.135	0.87	Yes	0.686	0.313	1.00	Yes	1.00	**6.95**
		$U_{17} - L_{17}$	-----	-448.47	32	-53	199	-221	-100	-206	-113	-114	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.144	0.99	Yes	0.774	0.225	1.00	Yes	1.00	**5.61**
		$U_{18} - L_{18}$	-----	-543.44	126	-131	416	-431	-161	-61	221	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.103	0.9	Yes	0.756	0.244	1.00	Yes	1.00	**6.16**
		$U_{19} - L_{19}$	-----	-652.94	140	-153	500	-514	-66	13	355	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.100	0.92	Yes	0.760	0.238	1.00	Yes	1.00	**6.94**
		$U_{20} - L_{20}$	-----	-576.87	168	-215	384	-454	33	4	796	104	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.231	1	Yes	0.671	0.211	0.89	Yes	1.00	**4.50**
	Structure 2	$U_0 - L_0$	-----	-645.75	-122	188	-292	412	-265	-45	-943	-160	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.224	1	Yes	0.692	0.175	0.87	Yes	1.00	**4.57**
		$U_1 - L_1$	-----	-631.74	-127	136	-369	415	17	-70	-1557	-279	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.274	1	Yes	0.677	0.176	0.86	Yes	1.00	**6.29**
		$U_2 - L_2$	-----	-620.44	-93	102	-348	396	82	38	-222	36	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.100	0.94	Yes	0.791	0.203	1.00	Yes	1.00	**6.96**
		$U_3 - L_3$	-----	-512.12	-49	56	-179	208	12	123	145	139	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.096	0.97	Yes	0.803	0.189	1.00	Yes	1.00	**6.31**
		$U_4 - L_4$	-----	-359.35	29	-10	-172	183	-105	65	-85	103	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.085	0.9	Yes	0.760	0.234	1.00	Yes	1.00	**6.59**
		$U_5 - L_5$	185.92	-369.31	130	-118	-129	164	-109	108	-136	100	0.334	0.249	0.59	Yes	0.184	0.137	0.33	Yes	0.834	0.106	0.94	Yes	0.781	0.209	1.00	Yes	1.00	**8.44**
		$U_6 - L_6$	359.70	-----	200	-211	-118	129	-126	103	262	148	0.647	0.346	1.00	Yes	0.356	0.190	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.17**
		$U_7 - L_7$	-----	-362.83	149	-175	59	-67	-148	-51	146	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.117	0.94	Yes	0.768	0.224	1.00	Yes	1.00	**7.08**
		$U_8 - L_8$	-----	-463.16	9	-32	370	-373	-142	-104	-43	-126	-----	-----	-----	-----	-----	-----	-----	-----	0.672	0.114	0.79	Yes	0.667	0.327	1.00	Yes	1.00	**6.96**
		$U_9 - L_9$	-----	-703.44	89	-122	548	-574	-139	-108	-155	-160	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.083	0.87	Yes	0.754	0.244	1.00	Yes	1.00	**8.55**
		$U_{10} - L_{10}$	-----	-808.55	93	-138	520	-550	-62	-46	127	-21	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.089	0.89	Yes	0.756	0.243	1.00	Yes	1.00	**9.11**
		$U_{11} - L_{11}$	-----	-816.76	158	-171	505	-515	-49	-147	44	3	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.085	0.91	Yes	0.764	0.227	1.00	Yes	1.00	**8.21**
		$U_{12} - L_{12}$	-----	-891.06	140	-165	503	-521	32	-133	40	65	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.083	0.94	Yes	0.772	0.224	1.00	Yes	1.00	**8.24**
		$U_{13} - L_{13}$	-----	-753.53	245	-244	566	-556	-81	44	105	74	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.110	0.96	Yes	0.726	0.271	1.00	Yes	1.00	**6.19**
		$U_{14} - L_{14}$	-----	-1337.49	152	-148	-190	167	-60	129	-106	82	-----	-----	-----	-----	-----	-----	-----	-----	0.978	0.018	1	Yes	0.887	0.034	0.93	Yes	1.00	**9.40**
		$U_{15} - L_{15}$	-----	-751.79	-170	171	-546	555	-84	-48	131	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.131	0.97	Yes	0.725	0.266	1.00	Yes	1.00	**7.76**
		$U_{16} - L_{16}$	-----	-737.00	-118	107	-474	483	-158	-94	-291	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.111	0.97	Yes	0.790	0.205	1.00	Yes	1.00	**7.83**
		$U_{17} - L_{17}$	-----	-672.67	-127	136	-438	468	-184	-52	-172	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.085	0.92	Yes	0.783	0.217	1.00	Yes	1.00	**7.13**
		$U_{18} - L_{18}$	-----	-607.67	-85	94	-375	429	-163	-28	139	47	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.083	0.9	Yes	0.774	0.220	1.00	Yes	1.00	**7.18**
		$U_{19} - L_{19}$	-----	-499.15	-28	38	-251	260	-157	-9	-144	20	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.085	0.84	Yes	0.745	0.250	1.00	Yes	1.00	**6.61**
		$U_{20} - L_{20}$	-----	-413.34	10	-3	-155	176	-149	22	-163	15	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.099	0.95	Yes	0.792	0.201	1.00	Yes	1.00	**6.40**
		$U_{21} - L_{21}$	-----	-356.69	46	-43	-164	185	-130	41	97	70	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.105	0.92	Yes	0.755	0.237	1.00	Yes	1.00	**6.86**
		$U_{22} - L_{22}$	-----	-388.82	126	-135	-23	23	-153	-56	165	11	-----	-----	-----	-----	-----	-----	-----	-----	0.875	0.097	0.98	Yes	0.823	0.172	1.00	Yes	1.00	**8.07**
		$U_{23} - L_{23}$	-----	-319.01	-109	97	241	-247	-111	-38	15	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.124	0.85	Yes	0.675	0.316	1.00	Yes	1.00	**7.82**
		$U_{24} - L_{24}$	-----	-387.00	-29	20	213	-224	-82	-61	-91	-82	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.099	0.9	Yes	0.741	0.256	1.00	Yes	1.00	**6.78**
		$U_{25} - L_{25}$	-----	-476.55	16	-33	289	-290	-85	-30	55	-23	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.081	0.8	Yes	0.712	0.279	1.00	Yes	1.00	**6.49**
		$U_{26} - L_{26}$	-----	-566.87	66	-104	502	-527	-68	42	20	0	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.079	0.84	Yes	0.722	0.270	1.00	Yes	1.00	**7.24**
		$U_{27} - L_{27}$	-----	-636.95	133	-155	523	-536	-49	-150	-95	6	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.081	0.87	Yes	0.741	0.249	1.00	Yes	1.00	**6.99**
		$U_{28} - L_{28}$	-----	-714.18	143	-140	535	-542	-115	25	199	89	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.081	0.91	Yes	0.765	0.230	1.00	Yes	1.00	**7.21**
		$U_{29} - L_{29}$	-----	-714.54	207	-212	641	-625	-113	27	57	55	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.121	0.92	Yes	0.689	0.307	1.00	Yes	1.00	**7.61**
		$U_{30} - L_{30}$	-----	-1322.51	42	-54	-77	52	-96	102	-126	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.967	0.025	1	Yes	0.877	0.014	0.90	Yes	1.00	**9.65**
		$U_{31} - L_{31}$	-----	-773.86	-185	182	-525	522	-121	-61	-169	-85	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.133	1	Yes	0.746	0.251	1.00	Yes	1.00	**7.27**
		$U_{32} - L_{32}$	-----	-913.76	-132	112	-410	445	-184	-96	-297	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.877	0.120	1	Yes	0.792	0.191	0.99	Yes	1.00	**8.67**
		$U_{33} - L_{33}$	-----	-855.31	-137	139	-388	433	-179	-35	196	54	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.083	0.95	Yes	0.800	0.191	1.00	Yes	1.00	**8.60**
		$U_{34} - L_{34}$	-----	-834.75	-88	115	-444	489	-210	-18	-145	50	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.084	0.91	Yes	0.780	0.216	1.00	Yes	1.00	**9.75**
		$U_{35} - L_{35}$	-----	-735.45	-81	111	-415	487	-175	71	-201	60	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.070	0.89	Yes	0.788	0.207	1.00	Yes	1.00	**8.64**
		$U_{36} - L_{36}$	-----	-513.05	-33	48	-271	296	-130	84	159	146	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.086	0.83	Yes	0.739	0.259	1.00	Yes	1.00	**7.01**
		$U_{37} - L_{37}$	-----	-358.71	-151	185	-89	101	-88	21	96	15	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.104	0.92	Yes	0.759	0.236	1.00	Yes	1.00	**7.02**
		$U_{38} - L_{38}$	360.07	-----	-242	244	149	-143	-107	-93	6	-127	0.648	0.349	1.00	Yes	0.356	0.192	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.37**
		$U_{39} - L_{39}$	225.61	-339.21	-174	162	192	-214	-117	-105	-98	-141	0.406	0.315	0.73	Yes	0.223	0.173	0.40	Yes	0.766	0.148	0.92	Yes	0.718	0.274	1.00	Yes	1.00	**9.07**
		$U_{40} - L_{40}$	-----	-346.78	-61	35	204	-208	-93	-78	38	-73	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.115	0.91	Yes	0.734	0.266	1.00	Yes	1.00	**6.99**
		$U_{41} - L_{41}$	-----	-485.94	27	-50	244	-256	-22	46	39	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.085	0.92	Yes	0.762	0.233	1.00	Yes	1.00	**6.80**
		$U_{42} - L_{42}$	-----	-592.67	110	-120	459	-474	-88	-47	88	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.079	0.88	Yes	0.755	0.243	1.00	Yes	1.00	**7.07**
		$U_{43} - L_{43}$	-----	-712.80	144	-161	526	-550	-34	-11	762	76	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.174	0.99	Yes	0.764	0.233	1.00	Yes	1.00	**7.30**
		$U_{44} - L_{44}$	-----	-660.28	196	-243	464	-570	-24	-4	691	117	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.203	1	Yes	0.708	0.242	0.95	Yes	1.00	**5.56**
	Structure 3	$U_0 - L_0$	-----	-557.07	-108	172	-310	391	-251	-33	-966	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.256	1	Yes	0.648	0.182	0.83	Yes	1.00	**4.16**
		$U_1 - L_1$	-----	-593.38	-117	124	-363	395	-6	-78	-1170	-134	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.257	1	Yes	0.691	0.183	0.88	Yes	1.00	**6.47**
		$U_2 - L_2$	-----	-560.48	-95	101	-350	379	79	30	-181	40	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.091	0.92	Yes	0.780	0.215	1.00	Yes	1.00	**6.55**
		$U_3 - L_3$	-----	-472.14	-27	46	-143	180	-102	71	-96	107	-----	-----	-----	-----	-----	-----	-----	-----	0.883	0.090	0.98	Yes	0.815	0.183	1.00	Yes	1.00	**5.59**
		$U_4 - L_4$	-----	-365.62	24	-16	-147	170	-150	95	105	163	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.092	0.92	Yes	0.774	0.217	1.00	Yes	1.00	**6.72**
		$U_5 - L_5$	205.93	-346.73	138	-135	-184	206	-147	69	-154	109	0.370	0.308	0.68	Yes	0.204	0.170	0.38	Yes	0.777	0.123	0.9	Yes	0.734	0.264	1.00	Yes	1.00	**8.45**
		$U_6 - L_6$	-----	-356.66	171	-187	0	-5	-180	-37	-150	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.119	0.92	Yes	0.755	0.239	1.00	Yes	1.00	**6.91**
		$U_7 - L_7$	-----	-372.78	-22	10	234	-248	-179	-140	-185	-167	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.143	0.9	Yes	0.714	0.283	1.00	Yes	1.00	**5.90**
		$U_8 - L_8$	-----	-514.97	8	-14	333	-334	-164	-139	9	-93	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.115	0.86	Yes	0.707	0.286	1.00	Yes	1.00	**7.34**
		$U_9 - L_9$	-----	-672.24	35	-102	322	-454	-104	-18	-152	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.096	0.91	Yes	0.782	0.211	1.00	Yes	1.00	**8.54**
		$U_{10} - L_{10}$	-----	-785.80	78	-102	372	-415	-36	-46	-41	40	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.067	0.89	Yes	0.775	0.215	1.00	Yes	1.00	**8.49**
		$U_{11} - L_{11}$	-----	-648.03	182	-211	417	-472	-51	62	92	119	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.100	0.88	Yes	0.732	0.263	1.00	Yes	1.00	**5.19**
		$U_{12} - L_{12}$	-----	-1352.09	40	-66	-166	153	-113	8	-107	16	-----	-----	-----	-----	-----	-----	-----	-----	0.976	0.021	1	Yes	0.937	0.031	0.97	Yes	1.00	**9.29**
		$U_{13} - L_{13}$	-----	-473.97	-105	116	-247	273	-116	-92	18	-86	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.126	0.92	Yes	0.731	0.269	1.00	Yes	1.00	**4.22**
		$U_{14} - L_{14}$	-----	-541.53	-42	47	-216	245	-213	-166	-276	-160	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.129	0.95	Yes	0.777	0.215	1.00	Yes	1.00	**6.24**
		$U_{15} - L_{15}$	-----	-462.12	-23	31	-155	196	-166	-51	-186	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.107	0.95	Yes	0.797	0.199	1.00	Yes	1.00	**5.69**
		$U_{16} - L_{16}$	-----	-347.14	-202	199	-135	134	-149	-48	84	10	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.104	0.87	Yes	0.735	0.259	1.00	Yes	1.00	**6.02**
		$U_{17} - L_{17}$	304.07	-----	-302	314	167	-179	-160	-70	-28	-127	0.547	0.447	1.00	Yes	0.301	0.246	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.07**
		$U_{18} - L_{18}$	153.31	-326.73	-162	167	186	-235	-57	-11	19	-85	0.276	0.326	0.61	Yes	0.152	0.179	0.34	Yes	0.714	0.099	0.82	Yes	0.691	0.301	1.00	Yes	1.00	**10.00**
		$U_{19} - L_{19}$	-----	-329.74	-25	13	232	-235	-164	-85	51	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.140	0.87	Yes	0.698	0.300	1.00	Yes	1.00	**6.34**
		$U_{20} - L_{20}$	-----	-393.51	49	-57	51	-112	-175	-56	-85	-27	-----	-----	-----	-----	-----	-----	-----	-----	0.879	0.111	1	Yes	0.833	0.144	0.98	Yes	1.00	**3.08**

Axial AB Operating

Operating Loads - 2F1

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	$U_0 - L_1$	660.26	-----	-49	28	3	-7	-161	-268	-50	-21	0.866	0.125	1.00	Yes	0.523	0.069	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.58**
		$U_1 - L_2$	466.51	-----	-89	-1	11	-13	-49	-134	7	3	0.839	0.152	1.00	Yes	0.461	0.084	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.69**
		$U_2 - L_3$	-----	-352.27	-66	-3	-2	-68	-181	-266	-281	-144	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.182	1	Yes	0.745	0.087	0.84	Yes					1.00	**8.55**
		$U_3 - L_4$	-----	-384.30	-25	-41	19	-54	-229	-177	-116	-122	-----	-----	-----	-----	-----	-----	-----	-----	0.879	0.116	1	Yes	0.813	0.069	0.89	Yes					1.00	**5.23**
		$U_4 - L_4$	600.28	-----	-78	51	-58	-11	-27	-148	-173	-119	0.880	0.119	1.00	Yes	0.484	0.065	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.66**
		$U_4 - L_5$	723.82	-----	-195	208	-55	35	67	-56	102	42	0.856	0.137	1.00	Yes	0.471	0.076	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.65**
		$U_5 - L_6$	656.84	-----	-281	232	-195	120	345	144	282	174	0.777	0.223	1.00	Yes	0.427	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.10**
		$U_6 - L_7$	647.11	-----	-106	299	-8	115	320	185	242	175	0.765	0.228	1.00	Yes	0.421	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.09**
		$U_8 - L_9$	1012.46	-----	-113	355	5	136	246	202	77	101	0.809	0.190	1.00	Yes	0.501	0.106	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**8.78**
		$U_9 - L_{10}$	1031.30	-----	-324	209	-80	88	199	146	83	102	0.824	0.170	1.00	Yes	0.511	0.095	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**8.78**
		$U_{10} - L_{11}$	1018.70	-----	-265	147	-77	25	-124	-90	17	-66	0.860	0.139	1.00	Yes	0.533	0.077	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**9.48**
		$U_{11} - L_{12}$	839.34	-----	-254	101	-120	-40	-284	-294	-310	-245	0.830	0.164	1.00	Yes	0.457	0.090	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**8.50**
		$U_{12} - L_{13}$	624.90	-----	-189	119	-65	1	-336	-303	-242	-273	0.762	0.230	1.00	Yes	0.479	0.130	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.61**
		$U_{13} - L_{14}$	440.75	-----	-91	25	-9	-28	-292	-271	-214	-289	0.793	0.201	1.00	Yes	0.436	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.59**
		$U_{15} - L_{14}$	252.16	-338.77	-64	-9	23	-83	-219	-302	-183	-279	0.454	0.194	0.65	Yes	0.249	0.107	0.36	Yes	0.794	0.197	1	Yes	0.717	0.107	0.83	Yes					1.00	**6.83**
		$U_{16} - L_{15}$	421.51	-249.01	-124	81	-18	-45	-196	-276	-202	-185	0.758	0.238	1.00	Yes	0.417	0.131	0.55	Yes	0.590	0.198	0.79	Yes	0.527	0.158	0.69	Yes					1.00	**7.86**
		$U_{17} - L_{16}$	535.74	-----	-140	103	-46	-12	-117	-210	-298	-144	0.786	0.212	1.00	Yes	0.432	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.53**
		$U_{18} - L_{17}$	618.34	-----	-313	237	-144	68	-123	-136	498	-77	0.731	0.267	1.00	Yes	0.402	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.51**
		$U_{19} - L_{18}$	729.56	-----	-356	257	-107	69	-53	-163	50	9	0.790	0.209	1.00	Yes	0.435	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.09**
		$U_{20} - L_{19}$	733.46	-----	-338	308	-127	106	-43	-165	0	36	0.794	0.200	1.00	Yes	0.437	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.26**
	Structure 2	$U_0 - L_1$	784.73	-----	-352	337	-70	80	-154	-399	-122	48	0.776	0.223	1.00	Yes	0.427	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.89**
		$U_1 - L_2$	789.73	-----	-409	290	-92	62	-62	-163	36	8	0.781	0.214	1.00	Yes	0.430	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.91**
		$U_2 - L_3$	649.48	-----	-328	241	-71	54	-213	-171	-79	-176	0.768	0.225	1.00	Yes	0.422	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.95**
		$U_3 - L_4$	575.73	-----	-176	123	-46	-6	-309	-271	-328	-224	0.767	0.230	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.90**
		$U_4 - L_5$	416.93	-----	-126	77	10	-43	-291	-249	-201	-224	0.750	0.246	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.04**
		$U_5 - L_6$	383.14	-310.61	-107	43	69	-104	-421	-213	-268	-240	0.689	0.259	0.95	Yes	0.379	0.142	0.53	Yes	0.734	0.263	1	Yes	0.657	0.137	0.80	Yes					1.00	**8.63**
		$U_6 - L_7$	-----	-372.64	-41	-16	47	-90	-306	-254	-280	-248	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.193	1	Yes	0.714	0.102	0.82	Yes					1.00	**5.26**
		$U_8 - L_7$	609.76	-----	-180	115	-65	-9	-90	-289	-139	-217	0.777	0.220	1.00	Yes	0.489	0.124	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.77**
		$U_8 - L_9$	723.21	-----	-313	251	-158	25	-82	-185	-328	-167	0.783	0.214	1.00	Yes	0.431	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.56**
		$U_{10} - L_9$	839.83	-----	-314	233	-139	51	-49	-138	-45	-81	0.831	0.166	1.00	Yes	0.457	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.91**
		$U_{11} - L_{10}$	913.56	-----	-356	288	-196	106	110	-42	52	0	0.832	0.166	1.00	Yes	0.458	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**8.06**
		$U_{12} - L_{11}$	828.95	-----	-337	323	-147	142	205	61	742	131	0.755	0.245	1.00	Yes	0.415	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.87**
		$U_{13} - L_{12}$	697.89	-----	-391	341	-254	202	275	136	825	150	0.690	0.305	1.00	Yes	0.380	0.168	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.00**
		$U_{14} - L_{13}$	707.66	-----	-254	402	-37	218	277	119	698	133	0.700	0.291	1.00	Yes	0.385	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.08**
		$U_{14} - L_{15}$	645.08	-----	-223	355	-4	106	133	149	56	40	0.763	0.228	1.00	Yes	0.419	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.33**
		$U_{15} - L_{16}$	646.10	-----	-377	335	-100	105	117	86	52	68	0.764	0.234	1.00	Yes	0.420	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.71**
		$U_{16} - L_{17}$	737.66	-----	-349	334	-90	108	10	-8	106	21	0.799	0.196	1.00	Yes	0.439	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.34**
		$U_{17} - L_{18}$	679.51	-----	-304	266	-76	72	-107	-31	-13	-30	0.803	0.191	1.00	Yes	0.442	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.23**
		$U_{18} - L_{19}$	680.34	-----	-282	247	-65	32	-146	-143	-170	-115	0.804	0.191	1.00	Yes	0.442	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.79**
		$U_{19} - L_{20}$	608.13	-----	-198	150	-28	-2	-205	-169	-112	-140	0.775	0.219	1.00	Yes	0.426	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.51**
		$U_{20} - L_{21}$	432.58	-----	-116	89	2	-18	-223	-116	-144	-143	0.778	0.213	1.00	Yes	0.428	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.27**
		$U_{21} - L_{22}$	429.90	-----	-110	42	21	-69	-266	-231	-255	-231	0.773	0.218	1.00	Yes	0.425	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**8.92**
		$U_{23} - L_{22}$	400.90	-352.85	-99	38	-7	-57	-70	-218	-83	-174	0.721	0.189	0.92	Yes	0.397	0.104	0.51	Yes	0.840	0.157	1	Yes	0.747	0.126	0.88	Yes					1.00	**8.85**
		$U_{24} - L_{23}$	440.50	-----	-114	102	-17	-23	-27	-127	-204	-61	0.792	0.204	1.00	Yes	0.436	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.57**
		$U_{25} - L_{24}$	628.49	-----	-200	171	-39	-8	13	-87	-14	-53	0.801	0.196	1.00	Yes	0.441	0.109	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**8.26**
		$U_{26} - L_{25}$	683.56	-----	-286	257	-114	48	110	-37	31	5	0.808	0.182	1.00	Yes	0.444	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.73**
		$U_{27} - L_{26}$	677.84	-----	-291	284	-155	107	184	38	-82	65	0.801	0.198	1.00	Yes	0.441	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.41**
		$U_{28} - L_{27}$	659.26	-----	-306	314	-130	134	181	96	715	73	0.714	0.278	1.00	Yes	0.393	0.153	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.17**
		$U_{29} - L_{28}$	631.32	-----	-358	327	-127	121	263	100	218	112	0.746	0.250	1.00	Yes	0.411	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.78**
		$U_{30} - L_{29}$	588.05	-----	-195	333	-11	160	230	101	621	66	0.695	0.301	1.00	Yes	0.382	0.166	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.24**
		$U_{30} - L_{31}$	781.74	-----	-289	446	-25	135	118	63	63	40	0.773	0.225	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**8.35**
		$U_{31} - L_{32}$	785.04	-----	-454	376	-134	132	51	35	37	48	0.777	0.218	1.00	Yes	0.427	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.10**
		$U_{32} - L_{33}$	894.86	-----	-370	321	-94	105	-165	-33	6	-38	0.815	0.179	1.00	Yes	0.448	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**8.20**
		$U_{33} - L_{34}$	886.87	-----	-345	265	-132	75	-245	-211	-269	-170	0.808	0.183	1.00	Yes	0.444	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**8.60**
		$U_{34} - L_{35}$	820.08	-----	-306	206	-105	41	-271	-274	-174	-237	0.811	0.183	1.00	Yes	0.446	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.74**
		$U_{35} - L_{36}$	709.99	-----	-316	210	-95	18	-383	-239	-287	-256	0.769	0.225	1.00	Yes	0.423	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.17**
		$U_{36} - L_{37}$	598.66	-----	-184	121	-36	-15	-303	-327	-324	-313	0.763	0.231	1.00	Yes	0.480	0.131	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.45**
		$U_{38} - L_{37}$	-----	-395.82	-25	-16	31	-78	-133	-217	-111	-205	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.140	1	Yes	0.758	0.089	0.85	Yes					1.00	**5.01**
		$U_{39} - L_{38}$	265.84	-341.00	-70	37	33	-88	-138	-213	-294	-159	0.478	0.197	0.68	Yes	0.263	0.108	0.38	Yes	0.812	0.186	1	Yes	0.722	0.112	0.84	Yes					1.00	**7.29**
		$U_{40} - L_{39}$	435.38	-218.20	-128	88	10	-53	-115	-173	-103	-120	0.783	0.214	1.00	Yes	0.431	0.118	0.55	Yes	0.522	0.150	0.68	Yes	0.462	0.164	0.63	Yes					1.00	**8.10**
		$U_{41} - L_{40}$	598.66	-----	-180	130	-64	-6	-59	-139	-113	-83	0.798	0.193	1.00	Yes	0.439	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.41**
		$U_{42} - L_{41}$	636.20	-----	-318	260	-148	66	-68	-94	-363	-35	0.752	0.246	1.00	Yes	0.414	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.25**
		$U_{43} - L_{42}$	803.17	-----	-394	306	-99	67	-12	-125	-2	-25	0.795	0.201	1.00	Yes	0.437	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**8.07**
		$U_{44} - L_{43}$	807.41	-----	-358	360	-140	124	-14	-217	34	9	0.799	0.199	1.00	Yes	0.439	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.58**
	Structure 3	$U_0 - L_1$	707.08	-----	-337	289	-69	72	-151	-334	-131	44	0.766	0.227	1.00	Yes	0.421	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.70**
		$U_1 - L_2$	722.28	-----	-363	252	-92	58	-68	-152	35	12	0.782	0.211	1.00	Yes	0.430	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.66**
		$U_2 - L_3$	642.35	-----	-329	223	-105	45	-237	-254	-197	-192	0.759	0.232	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.75**
		$U_3 - L_4$	525.22	-----	-144	82	-17	-17	-324	-249	-250	-224	0.770	0.222	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.09**
		$U_4 - L_5$	408.18	-----	-119	78	9	-52	-370	-290	-347	-238	0.734	0.260	1.00	Yes	0.404	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.25**
		$U_5 - L_6$	282.21	-313.98	-78	-17	37	-91	-399	-321	-268	-307	0.508	0.232	0.74	Yes	0.279	0.128	0.41	Yes	0.736	0.258	1	Yes	0.664	0.116	0.79	Yes					1.00	**6.83**
		$U_7 - L_6$	452.29	-----	-80	37	-33	-27	-88	-272	-257	-240	0.813	0.181	1.00	Yes	0.447	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.72**
		$U_8 - L_7$	645.94	-----	-187	144	-68	-9	-151	-214	-152	-169	0.787	0.205	1.00	Yes	0.495	0.115	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.31**
		$U_8 - L_9$	853.89	-----	-260	128	-162	-42	-9	-173	-71	-133	0.845	0.147	1.00	Yes	0.465	0.081	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**8.68**
		$U_{10} - L_9$	1010.57	-----	-250	181	-165	25	151	-19	-200	-28	0.854	0.142	1.00	Yes	0.528	0.079	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**10.03**
		$U_{11} - L_{10}$	897.03	-----	-277	213	-174	96	393	233	1215	466	0.717	0.278	1.00	Yes	0.444	0.159	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.21**
		$U_{12} - L_{11}$	925.12	-----	-101	335	38	188	394	244	854	382	0.740	0.258	1.00	Yes	0.458	0.146	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.34**
		$U_{12} - L_{13}$	681.74	-----	-117	281	9	112	178	181	97	95	0.806	0.193	1.00	Yes	0.443	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.31**
		$U_{13} - L_{14}$	679.42	-----	-294	227	-140	91	144	100	80	133	0.803	0.194	1.00	Yes	0.442	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.78**
		$U_{14} - L_{15}$	728.55	-----	-206	170	-19	21	-75	-116	46	-26	0.861	0.138	1.00	Yes	0.474	0.076	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.32**
		$U_{15} - L_{16}$	582.30	-----	-90	13	-16	-9	-204	-137	-80	-88	0.854	0.139	1.00	Yes	0.470	0.077	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.48**
		$U_{17} - L_{16}$	-----	-411.85	-17	-28	8	-47	-55	-154	-26	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.942	0.054	1	Yes	0.871	0.060	0.94	Yes					1.00	**5.36**
		$U_{18} - L_{17}$	-----	-383.45	-56	4	-25	-63	-68	-189	-159	-71	-----	-----	-----	-----	-----	-----	-----	-----	0.883	0.114	1	Yes	0.811	0.080	0.90	Yes					1.00	**7.24**
		$U_{19} - L_{18}$	404.38	-135.24	-81	6	-40	-30	-21	-145	-560	-167	0.727	0.266	1.00	Yes	0.400	0.146	0.55	Yes	0.310	0.279	0.59	Yes	0.286	0.104	0.40	Yes					1.00	**7.40**
		$U_{20} - L_{19}$	668.01	-----	-61	51	-22	3	-85	-196	29	-6	0.876	0.121	1.00	Yes	0.529	0.066	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.86**

Axial AB Operating

Operating Loads - 2F1

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			-----	-539.38	-199	124	110	-1113	-130	154	-115	-865	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.189	0.93	Yes	0.727	0.265	1.00	Yes	1.00	**11.04**
		U_1 - U_2			-----	-534.81	-103	86	-398	-680	-151	138	-84	-376	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.270	1	Yes	0.721	0.162	0.89	Yes	1.00	**4.99**
		U_2 - U_3			-----	-571.56	-101	299	-466	-456	-101	104	-215	-371	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.216	1	Yes	0.771	0.111	0.89	Yes	1.00	**5.55**
		U_3 - U_4			443.63	-555.80	122	374	-461	-593	-199	-2	-267	-238	0.508	0.186	0.70	Yes	0.349	0.128	0.48	Yes	0.756	0.235	1	Yes	0.749	0.141	0.90	Yes	1.00	**7.34**
		U_4 - U_5			436.05	-531.00	157	365	-830	-160	-76	-25	-249	-237	0.500	0.240	0.74	Yes	0.343	0.164	0.51	Yes	0.723	0.276	1	Yes	0.716	0.197	0.92	Yes	1.00	**7.12**
		U_5 - U_6			688.92	-----	274	502	-613	307	73	134	-108	-377	0.790	0.209	1.00	Yes	0.533	0.137	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.87**
		U_6 - U_7			899.95	-----	410	229	-133	-56	341	282	-326	168	0.861	0.134	1.00	Yes	0.601	0.092	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.68**
		U_7 - U_8			999.89	-----	-160	1469	-526	1213	574	752	5	268	0.693	0.299	1.00	Yes	0.483	0.204	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.07**
		U_8 - U_9			848.35	-----	1394	-355	1291	-802	430	555	108	-346	0.695	0.302	1.00	Yes	0.476	0.205	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.40**
		U_9 - U_{10}			675.98	-----	253	271	102	-716	47	352	-26	-612	0.733	0.259	1.00	Yes	0.497	0.174	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.18**
		U_{10} - U_{11}			-----	-628.47	260	-171	188	-872	69	107	-86	-289	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.154	0.97	Yes	0.802	0.195	1.00	Yes	1.00	**5.59**
		U_{11} - U_{12}			-----	-919.21	156	-212	15	-794	26	108	-127	-133	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.109	0.98	Yes	0.862	0.132	1.00	Yes	1.00	**4.01**
		U_{12} - U_{13}			-----	-1243.24	-56	-273	-288	-827	100	6	-107	-361	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.151	1	Yes	0.830	0.114	0.95	Yes	1.00	**4.35**
		U_{13} - U_{14}			-----	-1386.74	-198	-512	-552	-1347	-26	7	-175	-250	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.194	1	Yes	0.795	0.149	0.95	Yes	1.00	**4.26**
		U_{14} - U_{15}			-----	-1352.38	-417	-297	-1241	-653	58	-283	-169	-396	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.211	1	Yes	0.775	0.137	0.92	Yes	1.00	**4.03**
		U_{15} - U_{16}			-----	-1452.81	-202	-474	-880	-866	-134	-479	-211	-244	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.150	1	Yes	0.833	0.097	0.93	Yes	1.00	**4.83**
		U_{16} - U_{17}			-----	-1339.22	-428	-229	-1209	-473	-365	-413	-81	-319	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.221	1	Yes	0.768	0.133	0.91	Yes	1.00	**4.98**
		U_{17} - U_{18}			-----	-1021.92	-263	-55	-771	6	-147	75	-65	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.186	1	Yes	0.800	0.125	0.93	Yes	1.00	**4.87**
		U_{18} - U_{19}			-----	-671.79	-252	13	-586	95	378	-137	445	-329	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.230	1	Yes	0.756	0.118	0.88	Yes	1.00	**4.73**
		U_{19} - U_{20}			-----	-589.87	-236	-57	-1070	203	-25	-118	-122	-263	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.323	1	Yes	0.664	0.215	0.88	Yes	1.00	**13.74**
	Structure 2	U_0 - U_1			-----	-571.89	667	-454	996	-1856	325	-53	-25	-829	-----	-----	-----	-----	-----	-----	-----	-----	0.680	0.185	0.87	Yes	0.675	0.315	1.00	Yes	1.00	**13.92**
		U_1 - U_2			-----	-797.00	-150	-325	-250	-1168	-16	16	22	-409	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.219	1	Yes	0.769	0.177	0.95	Yes	1.00	**7.28**
		U_2 - U_3			-----	-1144.46	-122	-458	-87	-1295	-31	-74	-238	-541	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.176	1	Yes	0.812	0.132	0.95	Yes	1.00	**5.29**
		U_3 - U_4			-----	-1340.84	-538	-556	-847	-1562	-107	-31	-352	-416	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.225	1	Yes	0.763	0.139	0.91	Yes	1.00	**4.35**
		U_4 - U_5			-----	-1463.98	-592	-574	-1080	-1729	-110	-87	-299	-540	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.235	1	Yes	0.752	0.143	0.90	Yes	1.00	**4.50**
		U_5 - U_6			-----	-1521.31	-592	-40	-1429	-1085	-182	-38	-328	-526	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.210	1	Yes	0.781	0.118	0.90	Yes	1.00	**4.91**
		U_6 - U_7			-----	-1384.02	-334	-218	-1304	-1248	-149	-91	-114	-324	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.197	1	Yes	0.788	0.116	0.91	Yes	1.00	**5.21**
		U_7 - U_8			-----	-1378.75	-357	-219	-1384	-809	-74	-155	-310	-490	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.206	1	Yes	0.785	0.123	0.91	Yes	1.00	**5.21**
		U_8 - U_9			-----	-1115.22	-402	166	-1422	-333	1	-194	-372	-422	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.236	1	Yes	0.756	0.151	0.91	Yes	1.00	**5.21**
		U_9 - U_{10}			-----	-833.73	-147	472	-1319	9	-126	-234	-387	-604	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.267	1	Yes	0.719	0.160	0.88	Yes	1.00	**6.47**
		U_{10} - U_{11}			816.85	-657.82	309	608	-1334	-33	-146	-97	-737	-640	0.690	0.278	0.97	Yes	0.470	0.182	0.66	Yes	0.658	0.336	1	Yes	0.654	0.188	0.85	Yes	1.00	**11.05**
		U_{11} - U_{12}			906.01	-----	168	641	-1116	410	12	16	-425	-586	0.765	0.229	1.00	Yes	0.514	0.153	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.52**
		U_{12} - U_{13}			1360.04	-----	349	10	7	-110	339	362	-71	42	0.918	0.078	1.00	Yes	0.655	0.054	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.90**
		U_{13} - U_{14}			1317.44	-----	-410	3031	-415	2026	665	1026	310	589	0.648	0.351	1.00	Yes	0.459	0.231	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.94**
		U_{14} - U_{15}			1359.86	-----	2946	-249	1964	-241	761	790	511	420	0.669	0.327	1.00	Yes	0.473	0.215	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.66**
		U_{15} - U_{16}			1355.95	-----	81	239	-104	-1136	232	495	-167	-404	0.820	0.171	1.00	Yes	0.583	0.115	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.75**
		U_{16} - U_{17}			1072.01	-----	653	225	420	-1029	13	345	-132	-700	0.790	0.203	1.00	Yes	0.526	0.133	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.18**
		U_{17} - U_{18}			792.50	-----	486	280	95	-860	-39	308	121	-398	0.796	0.204	1.00	Yes	0.530	0.135	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.81**
		U_{18} - U_{19}			685.18	-----	617	220	233	-1179	22	175	-293	-756	0.688	0.311	1.00	Yes	0.451	0.199	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.59**
		U_{19} - U_{20}			-----	-729.61	260	106	-229	-998	-48	131	-175	-310	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.183	1	Yes	0.805	0.160	0.97	Yes	1.00	**6.36**
		U_{20} - U_{21}			-----	-859.60	106	-89	-544	-842	-2	11	-49	-450	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.209	1	Yes	0.785	0.122	0.91	Yes	1.00	**6.34**
		U_{21} - U_{22}			-----	-795.06	-98	-62	-500	-1140	-172	-92	-434	-245	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.265	1	Yes	0.726	0.165	0.90	Yes	1.00	**5.43**
		U_{22} - U_{23}			-----	-811.03	-94	-113	-1187	-716	-94	-161	-180	-149	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.250	1	Yes	0.740	0.172	0.92	Yes	1.00	**5.58**
		U_{23} - U_{24}			-----	-840.11	-92	144	-1058	-350	5	-68	-301	-302	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.225	1	Yes	0.767	0.153	0.93	Yes	1.00	**6.73**
		U_{24} - U_{25}			346.34	-724.47	175	307	-910	-152	23	-73	-271	-283	0.325	0.184	0.51	Yes	0.215	0.121	0.34	Yes	0.804	0.195	1	Yes	0.799	0.146	0.95	Yes	1.00	**7.78**
		U_{25} - U_{26}			713.83	-----	226	609	-1078	55	36	-8	-656	-241	0.717	0.279	1.00	Yes	0.470	0.179	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.53**
		U_{26} - U_{27}			766.25	-----	262	447	-782	214	17	17	-612	-191	0.769	0.222	1.00	Yes	0.512	0.147	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.77**
		U_{27} - U_{28}			1133.31	-----	25	858	-907	561	294	150	-441	-359	0.835	0.160	1.00	Yes	0.556	0.106	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.36**
		U_{28} - U_{29}			1429.75	-----	307	35	-660	-511	530	540	-612	342	0.864	0.127	1.00	Yes	0.615	0.087	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.52**
		U_{29} - U_{30}			1305.30	-----	-236	2992	-202	1939	789	1073	490	700	0.642	0.350	1.00	Yes	0.454	0.231	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.85**
		U_{30} - U_{31}			1346.43	-----	3025	-484	2077	-487	844	744	647	385	0.662	0.338	1.00	Yes	0.469	0.222	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.70**
		U_{31} - U_{32}			1232.97	-----	6	207	-316	-868	235	448	22	-554	0.833	0.162	1.00	Yes	0.593	0.111	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.99**
		U_{32} - U_{33}			902.51	-----	611	156	203	-968	25	250	182	-780	0.762	0.232	1.00	Yes	0.512	0.154	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.63**
		U_{33} - U_{34}			569.19	-798.49	448	118	2	-1411	-12	222	-310	-494	0.481	0.259	0.75	Yes	0.327	0.169	0.50	Yes	0.798	0.130	0.93	Yes	0.793	0.199	1.00	Yes	1.00	**8.95**
		U_{34} - U_{35}			-----	-963.27	357	-221	-69	-1324	52	35	-69	-407	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.118	0.96	Yes	0.831	0.161	1.00	Yes	1.00	**5.79**
		U_{35} - U_{36}			-----	-1225.99	80	-483	-399	-1330	-14	89	40	-296	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.154	1	Yes	0.832	0.141	0.98	Yes	1.00	**4.93**
		U_{36} - U_{37}			-----	-1399.89	-314	-330	-762	-1415	-16	-123	-254	-322	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.191	1	Yes	0.797	0.126	0.93	Yes	1.00	**4.53**
		U_{37} - U_{38}			-----	-1409.99	-216	-445	-1341	-1219	-97	-197	-211	-298	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.190	1	Yes	0.803	0.120	0.93	Yes	1.00	**4.59**
		U_{38} - U_{39}			-----	-1616.74	-175	-640	-1328	-1379	13	-217	-375	-415	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.155	1	Yes	0.830	0.114	0.95	Yes	1.00	**5.12**
		U_{39} - U_{40}			-----	-1525.42	-623	-574	-1705	-958	-1	-108	-125	-141	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.206	1	Yes	0.783	0.141	0.93	Yes	1.00	**4.88**
		U_{40} - U_{41}			-----	-1420.25	-546	-526	-1366	-837	138	-169	223	-217	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.185	1	Yes	0.809	0.122	0.94	Yes	1.00	**5.27**
		U_{41} - U_{42}			-----	-1151.65	-444	-121	-1167	-11	41	-8	53	-180	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.170	1	Yes	0.817	0.119	0.94	Yes	1.00	**5.79**
		U_{42} - U_{43}			-----	-797.04	-334	-39	-793	9	214	-200	214	-433	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.220	1	Yes	0.769	0.120	0.89	Yes	1.00	**6.04**
		U_{43} - U_{44}			-----	-581.67	-224	-194	-1228	297	-96	-124	-215	-223	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.307	1	Yes	0.687	0.209	0.90	Yes	1.00	**12.98**
	Structure 3	U_0 - U_1			-----	-593.20	633	-352	1186	-1643	277	-40	88	-1023	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.251	0.93	Yes	0.667	0.330	1.00	Yes	1.00	**16.94**
		U_1 - U_2			-----	-689.90	-78	-240	-63	-764	-13	-8	-136	-346	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.208	1	Yes	0.776	0.154	0.93	Yes	1.00	**4.57**
		U_2 - U_3			-----	-1030.95	-46	-253	9	-816	-30	-73	-129	-553	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.177	1	Yes	0.807	0.133	0.94	Yes	1.00	**4.76**
		U_3 - U_4			-----	-1380.02	-223	-387	-559	-1235	-104	-45	-127	-457	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.199	1	Yes	0.791	0.136	0.93	Yes	1.00	**5.27**
		U_4 - U_5			-----	-1398.83	-451	-144	-702	-872	-89	-74	-404	-555	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.180	1	Yes	0.802	0.096	0.90	Yes	1.00	**4.60**
		U_5 - U_6			-----	-1333.00	-268	-399	-674	-1284	-184	-149	-228	-323	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.222	1	Yes	0.764	0.142	0.91	Yes	1.00	**4.37**
		U_6 - U_7			-----	-1306.72	-523	-171	-1374	-488	-115	-298	-242	-454	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.241	1	Yes	0.749	0.152	0.91	Yes	1.00	**4.22**
		U_7 - U_8			-----	-1189.38	-252	15	-787	-204	-129	-299	-290	-544	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.191	1	Yes	0.794	0.109	0.91	Yes	1.00	**4.89**
		U_8 - U_9			-----	-838.75	-163	234	-707	82	-197	-188	-293	-361	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.204	1	Yes	0.787	0.117	0.91	Yes	1.00	**4.70**
		U_9 - U_{10}			-----	-534.79	-124	333	-909	202	-13	-36	-138	-368	-----	-----	-----	-----	-----	-----	-----	-----	0.689	0.308	1	Yes	0.682	0.204	0.89	Yes	1.00	**6.51**
		U_{10} - U_{11}			747.22	-----	317	264	-541	167	142	138	-382	-292	0.810	0.183	1.00	Yes	0.549	0.122	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.91**
		U_{11} - U_{12}			852.60	-----	-355	1405	-610	1045	253	485	-307	185	0.699	0.295	1.00	Yes	0.478	0.201	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.37**
		U_{12} - U_{13}			1024.38	-----	1498	-195	1398	-670	212	560	86	-393	0.710	0.284	1.00	Yes	0.495	0.194	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.98**
		U_{13} - U_{14}			854.06	-----	226	365	64	-533	-41	429	-268	-444	0.817	0.174	1.00	Yes	0.571	0.120	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.27**
		U_{14} - U_{15}			635.10	-----	465	229	185	-653	1	225	-84	-656	0.728	0.266	1.00	Yes	0.491	0.176	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.53**
		U_{15} - U_{16}			311.77	-606.91	281	118	-263	-734	-65	148	207	125	0.357	0.210	0.57	Yes	0.245	0.144	0.39	Yes	0.826	0.127	0.96	Yes	0.818	0.175	1.00	Yes	1.00	**6.57**
		U_{16} - U_{17}			320.53	-636.11	332	46	-564	-478	135	-66	146	-293	0.367	0.184	0.56	Yes	0.252	0.126	0.38	Yes	0.866	0.081	0.95	Yes	0.858	0.134	1.00	Yes	1.00	**6.85**
		U_{17} - U_{18}			-----	-633.86	219	-172	-531	-577	60	21	-69	-60	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.109	0.98	Yes	0.855	0.137	1.00	Yes	1.00	**5.42**
		U_{18} - U_{19}			-----	-548.64	-13	-74	-606	-163	197	-204	361	-382	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.248	1	Yes	0.740	0.144	0.89	Yes	1.00	**4.76**
		U_{19} - U_{20}			-----	-590.77	69	-247	-630	-225	-164	-108	-158	-183	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.189	1	Yes	0.797	0.150	0.95	Yes	1.00	**10.03**

Operating Loads - 2F1

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	273.47	-314.97	202	-237	818	-1115	235	864	68	250	0.419	0.520	0.94	Yes	0.246	0.313	0.56	Yes	0.572	0.421	1	Yes	0.567	0.335	0.91	Yes	1.00	**37.45**
		L_1 - L_2	353.64	-----	-194	-546	-8	6	-1335	216	328	-152	0.541	0.450	1.00	Yes	0.330	0.287	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.60**
		L_2 - L_3	641.86	-----	-783	-516	-21	111	274	-410	-174	116	0.738	0.255	1.00	Yes	0.427	0.152	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.07**
		L_3 - L_4	641.98	-----	-630	-481	-1	300	-638	-216	262	-210	0.739	0.255	1.00	Yes	0.439	0.160	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.32**
		L_4 - L_5	-----	-568.51	-405	229	98	477	-4	-275	-55	168	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.086	0.96	Yes	0.866	0.126	1.00	Yes	1.00	**5.07**
		L_5 - L_6	-----	-751.24	-178	298	123	595	-106	-117	130	-266	-----	-----	-----	-----	-----	-----	-----	-----	0.876	0.112	0.99	Yes	0.867	0.132	1.00	Yes	1.00	**4.73**
		L_6 - L_7	-----	-1175.33	-197	-100	118	-6	-269	-485	-278	519	-----	-----	-----	-----	-----	-----	-----	-----	0.957	0.034	1	Yes	0.946	0.031	0.98	Yes	1.00	**6.72**
		L_7 - L_8	-----	-1242.23	-35	675	-70	1275	350	197	444	428	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.198	1	Yes	0.787	0.169	0.96	Yes	1.00	**5.15**
		L_8 - L_9	-----	-1143.15	685	-41	1116	-71	205	344	377	414	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.261	1	Yes	0.724	0.148	0.88	Yes	1.00	**3.71**
		L_9 - L_{10}	-----	-1039.94	311	-222	519	-412	400	-53	408	-193	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.146	1	Yes	0.837	0.082	0.92	Yes	1.00	**8.67**
		L_{10} - L_{11}	-----	-475.68	65	-471	476	-209	-275	-616	-336	205	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.263	1	Yes	0.725	0.126	0.86	Yes	1.00	**7.04**
		L_{11} - L_{12}	487.17	-----	93	-631	380	-223	-1099	198	118	-89	0.631	0.359	1.00	Yes	0.379	0.227	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.08**
		L_{12} - L_{13}	1001.04	-----	-432	-650	100	-136	-274	-786	-157	116	0.790	0.207	1.00	Yes	0.505	0.127	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.77**
		L_{13} - L_{14}	1257.51	-----	-187	-1357	189	-531	-785	-156	139	41	0.740	0.252	1.00	Yes	0.479	0.156	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.57**
		L_{14} - L_{15}	1568.97	-----	-1723	-608	-584	-157	-271	-196	-153	145	0.767	0.227	1.00	Yes	0.498	0.137	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.86**
		L_{15} - L_{16}	1573.31	-----	-989	-1399	-308	-377	-885	-168	98	-143	0.769	0.231	1.00	Yes	0.493	0.137	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.30**
		L_{16} - L_{17}	1205.44	-----	-1379	134	-423	54	368	40	-127	168	0.762	0.235	1.00	Yes	0.495	0.145	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.37**
		L_{17} - L_{18}	886.85	-----	-814	128	-231	33	-544	-83	108	-98	0.772	0.227	1.00	Yes	0.494	0.138	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.77**
		L_{18} - L_{19}	498.42	-----	-477	238	-470	335	-141	294	-438	341	0.763	0.234	1.00	Yes	0.516	0.150	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.74**
		L_{19} - L_{20}	-----	-348.97	-342	119	-854	574	308	69	350	79	-----	-----	-----	-----	-----	-----	-----	-----	0.634	0.363	1	Yes	0.628	0.256	0.89	Yes	1.00	**13.62**
	Structure 2	L_0 - L_1	-----	-496.37	109	-399	467	-1417	86	298	63	219	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.239	0.96	Yes	0.709	0.288	1.00	Yes	1.00	**26.47**
		L_1 - L_2	445.81	-----	239	-1153	246	-405	-1352	399	118	33	0.541	0.457	1.00	Yes	0.322	0.284	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.33**
		L_2 - L_3	972.82	-----	-333	-973	-42	-276	-147	-845	-74	156	0.767	0.231	1.00	Yes	0.503	0.142	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.63**
		L_3 - L_4	1253.23	-----	-157	-1591	-9	-514	-899	341	180	1	0.736	0.258	1.00	Yes	0.496	0.162	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.03**
		L_4 - L_5	1688.90	-----	-1438	-1538	-441	-410	96	-865	-76	165	0.787	0.204	1.00	Yes	0.521	0.124	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.54**
		L_5 - L_6	1804.45	-----	-1174	-1945	-224	-508	-829	-200	182	-81	0.774	0.224	1.00	Yes	0.520	0.139	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.13**
		L_6 - L_7	1859.01	-----	-2209	-1247	-582	-210	-111	-239	-150	214	0.787	0.209	1.00	Yes	0.523	0.122	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.22**
		L_7 - L_8	1394.77	-----	-1403	-735	-301	392	-553	-251	210	-111	0.800	0.200	1.00	Yes	0.525	0.120	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.54**
		L_8 - L_9	1074.38	-----	-1277	144	-110	598	-187	-710	-71	171	0.751	0.239	1.00	Yes	0.506	0.151	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.53**
		L_9 - L_{10}	480.14	-792.27	-1004	130	-126	860	-916	-150	143	-93	0.429	0.271	0.70	Yes	0.250	0.165	0.42	Yes	0.838	0.146	0.99	Yes	0.832	0.161	1.00	Yes	1.00	**10.15**
		L_{10} - L_{11}	-----	-754.09	-556	367	10	575	-84	-422	-65	51	-----	-----	-----	-----	-----	-----	-----	-----	0.892	0.101	1	Yes	0.886	0.101	0.99	Yes	1.00	**6.02**
		L_{11} - L_{12}	-----	-1025.59	-276	710	-188	1141	152	-234	159	-440	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.118	0.97	Yes	0.841	0.155	1.00	Yes	1.00	**5.60**
		L_{12} - L_{13}	-----	-1478.68	-238	-358	2	-680	-128	138	-341	259	-----	-----	-----	-----	-----	-----	-----	-----	0.892	0.100	1	Yes	0.884	0.068	0.96	Yes	1.00	**7.43**
		L_{13} - L_{14}	-----	-1534.98	-622	1742	-886	2508	191	158	363	447	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.175	0.96	Yes	0.772	0.219	1.00	Yes	1.00	**5.94**
		L_{14} - L_{15}	-----	-1369.51	1743	-645	2301	-759	179	185	372	318	-----	-----	-----	-----	-----	-----	-----	-----	0.695	0.302	1	Yes	0.689	0.201	0.90	Yes	1.00	**3.65**
		L_{15} - L_{16}	-----	-1526.55	-511	-117	-495	-108	119	-145	314	-200	-----	-----	-----	-----	-----	-----	-----	-----	0.921	0.072	1	Yes	0.913	0.051	0.97	Yes	1.00	**7.72**
		L_{16} - L_{17}	-----	-1048.96	575	-352	1125	-107	-41	-230	-386	115	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.224	1	Yes	0.764	0.139	0.91	Yes	1.00	**5.97**
		L_{17} - L_{18}	-----	-770.91	299	-439	535	17	-591	23	219	-191	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.182	1	Yes	0.810	0.086	0.90	Yes	1.00	**5.59**
		L_{18} - L_{19}	-----	-586.15	28	-454	691	-93	107	-301	-261	165	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.208	1	Yes	0.781	0.133	0.92	Yes	1.00	**6.93**
		L_{19} - L_{20}	-----	-439.28	43	-918	487	121	-1140	213	136	-161	-----	-----	-----	-----	-----	-----	-----	-----	0.589	0.411	1	Yes	0.585	0.177	0.77	Yes	1.00	**8.58**
		L_{20} - L_{21}	913.23	-----	-928	-1124	477	-15	-137	-944	-178	55	0.728	0.266	1.00	Yes	0.478	0.163	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.58**
		L_{21} - L_{22}	845.96	-----	-799	-1319	156	-195	-1160	41	124	-99	0.675	0.317	1.00	Yes	0.451	0.203	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.02**
		L_{22} - L_{23}	851.31	-----	-1443	-827	-241	117	-184	-1004	-50	191	0.679	0.319	1.00	Yes	0.454	0.203	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.56**
		L_{23} - L_{24}	881.21	-----	-1266	-739	-67	439	-967	62	162	-140	0.703	0.289	1.00	Yes	0.461	0.177	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.50**
		L_{24} - L_{25}	-----	-586.15	-1090	-275	223	541	167	-1717	-106	153	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.203	0.99	Yes	0.781	0.210	1.00	Yes	1.00	**16.12**
		L_{25} - L_{26}	-----	-637.64	-462	111	-90	775	-476	-141	184	-284	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.126	0.99	Yes	0.850	0.150	1.00	Yes	1.00	**7.65**
		L_{26} - L_{27}	-----	-866.72	-245	420	67	558	-55	91	-134	319	-----	-----	-----	-----	-----	-----	-----	-----	0.916	0.076	1	Yes	0.910	0.089	1.00	Yes	1.00	**7.05**
		L_{27} - L_{28}	-----	-1147.06	-209	758	-96	1317	84	-177	309	-197	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.149	1	Yes	0.835	0.162	1.00	Yes	1.00	**7.48**
		L_{28} - L_{29}	-----	-1546.34	-218	-517	63	-554	-136	31	-118	389	-----	-----	-----	-----	-----	-----	-----	-----	0.933	0.062	1	Yes	0.925	0.055	0.98	Yes	1.00	**9.33**
		L_{29} - L_{30}	-----	-1538.96	-712	1871	-865	2527	114	99	415	355	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.168	0.95	Yes	0.774	0.221	1.00	Yes	1.00	**6.55**
		L_{30} - L_{31}	-----	-1379.98	1785	-559	2232	-683	354	286	269	265	-----	-----	-----	-----	-----	-----	-----	-----	0.701	0.291	1	Yes	0.694	0.195	0.89	Yes	1.00	**2.42**
		L_{31} - L_{32}	-----	-1526.59	-207	-276	-331	-340	212	-364	263	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.921	0.076	1	Yes	0.913	0.034	0.95	Yes	1.00	**6.68**
		L_{32} - L_{33}	-----	-972.19	648	-279	980	-213	-367	128	-299	144	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.196	1	Yes	0.797	0.133	0.94	Yes	1.00	**4.87**
		L_{33} - L_{34}	-----	-706.46	456	-350	614	-144	192	-11	206	-163	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.164	1	Yes	0.830	0.107	0.94	Yes	1.00	**5.91**
		L_{34} - L_{35}	643.77	-664.38	-130	-1336	770	-136	-86	-1734	-201	103	0.575	0.422	1.00	Yes	0.335	0.255	0.59	Yes	0.702	0.176	0.88	Yes	0.698	0.214	0.92	Yes	1.00	**14.54**
		L_{35} - L_{36}	901.30	-----	-31	-1254	529	-211	-2049	75	160	-110	0.630	0.362	1.00	Yes	0.425	0.234	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.63**
		L_{36} - L_{37}	1371.16	-----	-936	-1480	289	-267	328	-523	-202	153	0.786	0.206	1.00	Yes	0.516	0.123	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.67**
		L_{37} - L_{38}	1693.24	-----	-1308	-2373	-345	-671	-1194	65	104	-168	0.717	0.282	1.00	Yes	0.476	0.170	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.80**
		L_{38} - L_{39}	1748.24	-----	-2210	-1163	-627	-227	51	-737	-100	171	0.750	0.242	1.00	Yes	0.503	0.149	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.60**
		L_{39} - L_{40}	1671.25	-----	-1709	-1257	-455	-334	-746	272	120	-132	0.779	0.212	1.00	Yes	0.516	0.128	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.14**
		L_{40} - L_{41}	1291.96	-----	-1742	-55	-476	29	353	-182	-50	266	0.759	0.232	1.00	Yes	0.511	0.144	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.00**
		L_{41} - L_{42}	943.98	-----	-1217	80	-276	49	-673	50	251	63	0.744	0.247	1.00	Yes	0.488	0.150	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.77**
		L_{42} - L_{43}	497.13	-----	-1325	511	-293	217	740	296	101	331	0.604	0.391	1.00	Yes	0.359	0.247	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.50**
		L_{43} - L_{44}	-----	-399.69	-652	159	-822	286	-40	-12	1254	366	-----	-----	-----	-----	-----	-----	-----	-----	0.575	0.424	1	Yes	0.571	0.167	0.74	Yes	1.00	**32.48**
	Structure 3	L_0 - L_1	-----	-471.83	77	-238	277	-479	42	192	58	263	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.122	0.98	Yes	0.850	0.144	1.00	Yes	1.00	**8.56**
		L_1 - L_2	476.85	-----	226	-430	494	-616	314	-187	387	118	0.730	0.265	1.00	Yes	0.494	0.169	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.95**
		L_2 - L_3	822.42	-----	-139	-764	45	-235	-307	-1022	-25	164	0.716	0.278	1.00	Yes	0.458	0.171	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.91**
		L_3 - L_4	1102.52	-----	-194	-1233	48	-436	-1302	232	143	60	0.697	0.297	1.00	Yes	0.452	0.185	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.75**
		L_4 - L_5	1608.78	-----	-1432	-958	-375	-255	370	-486	-33	224	0.786	0.207	1.00	Yes	0.505	0.122	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.50**
		L_5 - L_6	1512.07	-----	-723	-1669	-146	-505	-824	-201	233	-26	0.739	0.259	1.00	Yes	0.480	0.158	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.74**
		L_6 - L_7	1288.50	-----	-1524	-82	-527	210	-213	-367	-61	241	0.758	0.240	1.00	Yes	0.491	0.147	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.75**
		L_7 - L_8	1023.61	-----	-728	-306	-132	108	-485	-345	122	-177	0.808	0.186	1.00	Yes	0.517	0.112	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.11**
		L_8 - L_9	519.43	-----	-679	90	-154	486	45	-841	-78	119	0.673	0.327	1.00	Yes	0.404	0.208	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.01**
		L_9 - L_{10}	-----	-555.96	-406	178	-189	553	-230	-86	311	-220	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.099	0.96	Yes	0.847	0.146	1.00	Yes	1.00	**7.04**
		L_{10} - L_{11}	-----	-1188.17	-253	277	-48	163	-234	114	-318	252	-----	-----	-----	-----	-----	-----	-----	-----	0.967	0.029	1	Yes	0.956	0.044	1.00	Yes	1.00	**10.40**
		L_{11} - L_{12}	-----	-1277.00	-37	665	-78	1298	302	28	274	-137	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.176	1	Yes	0.809	0.172	0.99	Yes	1.00	**6.50**
		L_{12} - L_{13}	-----	-1129.16	734	-30	1313	-69	-68	165	-46	112	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.273	1	Yes	0.715	0.174	0.89	Yes	1.00	**4.56**
		L_{13} - L_{14}	-----	-1039.17	-3	-334	93	51	-868	-189	344	-290	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.153	1	Yes	0.836	0.053	0.89	Yes	1.00	**6.67**
		L_{14} - L_{15}	-----	-671.45	149	-272	532	83	-257	-554	-206	80	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.211	1	Yes	0.775	0.118	0.90	Yes	1.00	**4.99**
		L_{15} - L_{16}	-----	-448.75	152	-451	427	59	-819	102	200	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.690	0.308	1	Yes	0.684	0.119	0.81	Yes	1.00	**4.92**
		L_{16} - L_{17}	712.97	-----	-618	-620	270	-61	-121	19	-166	153	0.820	0.176	1.00	Yes	0.487	0.114	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.54**
		L_{17} - L_{18}	675.17	-----	-754	-588	6	-110	-200	-28	94	-105	0.777	0.214	1.00	Yes	0.449	0.128	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.63**
		L_{18} - L_{19}	430.97	-----	-787	19	-60	-6	67	476	-81	223	0.660	0.338	1.00	Yes	0.402	0.224	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.90**
		L_{19} - L_{20}	252.22	-191.21	-557	327	-468	228	656	178	2059	559	0.386	0.609	1.00	Yes	0.227	0.359	0.59	Yes	0.347	0.570	0.92	Yes	0.344	0.167	0.52	Yes	1.00	**55.51**

Operating Loads - 2F1

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

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression											
DL Factor:	Vehicle 1.300	Pedestrian 1.300	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			Pass	Fracture			Pass	Buckle			Pass	Yield			Pass	Controlling Bi-Axial Moment & Axial Value	Rating
LL Factor:	1.300	1.300	(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in	Axial Portion	Moment Portion	Total		Axial Portion	Moment Portion	Total		Axial Portion	Moment Portion	Total		Axial Portion	Moment Portion	Total			
South Truss - Verticals	Structure 1	$U_0 - L_0$	-----	-266.69	-13	49	-113	158	199	64	-1123	-360	-----	-----	-----	-----	-----	-----	-----	-----	0.596	0.402	1	Yes	0.564	0.202	0.77	Yes	1.00	**2.95**
		$U_1 - L_1$	-----	-283.41	14	-7	-150	163	532	197	-820	-257	-----	-----	-----	-----	-----	-----	-----	-----	0.619	0.380	1	Yes	0.600	0.209	0.81	Yes	1.00	**4.81**
		$U_2 - L_2$	96.05	-185.68	90	-98	-85	123	678	193	-2078	-646	0.173	0.759	0.94	Yes	0.095	0.417	0.52	Yes	0.406	0.586	1	Yes	0.393	0.157	0.55	Yes	1.00	**8.01**
		$U_3 - L_3$	146.33	-----	143	-149	19	-1	-85	-144	-1876	-466	0.263	0.733	1.00	Yes	0.145	0.403	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.60**
		$U_4 - L_4$	-----	-203.99	77	-78	103	-106	957	474	-1837	-502	-----	-----	-----	-----	-----	-----	-----	-----	0.449	0.548	1	Yes	0.432	0.136	0.57	Yes	1.00	**6.74**
		$U_5 - L_5$	-----	-335.32	76	-89	171	-190	851	335	693	453	-----	-----	-----	-----	-----	-----	-----	-----	0.607	0.392	1	Yes	0.579	0.193	0.78	Yes	1.00	**3.72**
		$U_6 - L_6$	-----	-372.87	87	-80	181	-184	1285	603	1166	564	-----	-----	-----	-----	-----	-----	-----	-----	0.565	0.433	1	Yes	0.535	0.161	0.70	Yes	1.00	**3.50**
		$U_7 - L_7$	-----	-319.51	127	-142	218	-239	930	228	548	180	-----	-----	-----	-----	-----	-----	-----	-----	0.534	0.458	1	Yes	0.493	0.235	0.73	Yes	1.00	**2.56**
		$U_8 - L_8$	-----	-1179.29	-105	120	-181	213	1122	228	-1306	-373	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.147	1	Yes	0.818	0.040	0.86	Yes	1.00	**6.63**
		$U_9 - L_9$	-----	-564.59	-233	263	-339	386	538	218	-357	8	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.326	1	Yes	0.638	0.214	0.86	Yes	1.00	**2.71**
		$U_{10} - L_{10}$	-----	-680.35	-159	159	-300	323	610	300	-108	78	-----	-----	-----	-----	-----	-----	-----	-----	0.705	0.290	1	Yes	0.671	0.167	0.84	Yes	1.00	**4.77**
		$U_{11} - L_{11}$	-----	-671.65	-167	219	-342	466	627	370	-641	76	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.179	0.99	Yes	0.782	0.216	1.00	Yes	1.00	**6.17**
		$U_{12} - L_{12}$	-----	-430.50	-131	136	-223	239	500	334	-677	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.622	0.375	1	Yes	0.591	0.204	0.80	Yes	1.00	**4.01**
		$U_{13} - L_{13}$	-----	-322.67	-73	92	-177	203	343	187	126	256	-----	-----	-----	-----	-----	-----	-----	-----	0.652	0.339	1	Yes	0.618	0.232	0.85	Yes	1.00	**4.26**
		$U_{14} - L_{14}$	-----	-197.25	-54	63	-43	51	528	66	-2063	-328	-----	-----	-----	-----	-----	-----	-----	-----	0.440	0.557	1	Yes	0.417	0.080	0.50	Yes	1.00	**7.39**
		$U_{15} - L_{15}$	-----	-307.61	-56	50	240	-260	321	-190	-758	-134	-----	-----	-----	-----	-----	-----	-----	-----	0.689	0.304	1	Yes	0.651	0.333	0.99	Yes	1.00	**12.91**
		$U_{16} - L_{16}$	-----	-267.52	59	-68	188	-199	545	-4	241	97	-----	-----	-----	-----	-----	-----	-----	-----	0.603	0.391	1	Yes	0.566	0.254	0.82	Yes	1.00	**5.00**
		$U_{17} - L_{17}$	-----	-340.92	87	-101	162	-180	497	207	481	220	-----	-----	-----	-----	-----	-----	-----	-----	0.638	0.361	1	Yes	0.588	0.182	0.78	Yes	1.00	**2.75**
		$U_{18} - L_{18}$	-----	-419.53	188	-194	344	-354	692	182	757	185	-----	-----	-----	-----	-----	-----	-----	-----	0.614	0.380	1	Yes	0.584	0.201	0.79	Yes	1.00	**3.47**
		$U_{19} - L_{19}$	-----	-512.77	196	-209	379	-396	609	120	746	141	-----	-----	-----	-----	-----	-----	-----	-----	0.640	0.354	1	Yes	0.597	0.184	0.79	Yes	1.00	**4.18**
		$U_{20} - L_{20}$	-----	-607.77	236	-285	469	-548	465	61	464	61	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.191	1	Yes	0.707	0.254	0.97	Yes	1.00	**5.46**
	Structure 2	$U_0 - L_0$	-----	-624.64	-162	269	-307	455	45	8	-1012	-172	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.251	1	Yes	0.669	0.193	0.87	Yes	1.00	**3.44**
		$U_1 - L_1$	-----	-605.66	-227	233	-425	440	622	163	-751	11	-----	-----	-----	-----	-----	-----	-----	-----	0.693	0.302	1	Yes	0.649	0.187	0.84	Yes	1.00	**3.98**
		$U_2 - L_2$	-----	-510.60	-171	186	-362	386	615	291	-29	286	-----	-----	-----	-----	-----	-----	-----	-----	0.684	0.310	1	Yes	0.651	0.198	0.85	Yes	1.00	**3.87**
		$U_3 - L_3$	-----	-393.98	-85	96	-170	189	535	269	-117	245	-----	-----	-----	-----	-----	-----	-----	-----	0.671	0.328	1	Yes	0.618	0.173	0.80	Yes	1.00	**3.20**
		$U_4 - L_4$	-----	-252.54	-27	37	-119	135	543	234	-1195	-68	-----	-----	-----	-----	-----	-----	-----	-----	0.573	0.426	1	Yes	0.534	0.173	0.71	Yes	1.00	**5.09**
		$U_5 - L_5$	-----	-226.87	59	-45	-115	141	206	45	-1381	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.512	0.478	1	Yes	0.480	0.180	0.66	Yes	1.00	**9.46**
		$U_6 - L_6$	217.55	-----	120	-122	-17	22	73	-108	-1537	-150	0.391	0.601	1.00	Yes	0.215	0.331	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.87**
		$U_7 - L_7$	-----	-213.17	76	-88	85	-99	601	89	-1845	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.482	0.518	1	Yes	0.451	0.127	0.58	Yes	1.00	**7.28**
		$U_8 - L_8$	-----	-421.92	158	-177	292	-313	489	54	126	96	-----	-----	-----	-----	-----	-----	-----	-----	0.612	0.385	1	Yes	0.608	0.274	0.89	Yes	1.00	**4.36**
		$U_9 - L_9$	-----	-609.98	275	-282	511	-522	701	329	372	313	-----	-----	-----	-----	-----	-----	-----	-----	0.679	0.318	1	Yes	0.654	0.222	0.88	Yes	1.00	**5.53**
		$U_{10} - L_{10}$	-----	-636.55	242	-248	429	-445	931	529	683	458	-----	-----	-----	-----	-----	-----	-----	-----	0.629	0.362	1	Yes	0.595	0.196	0.80	Yes	1.00	**4.88**
		$U_{11} - L_{11}$	-----	-631.08	241	-237	386	-391	982	548	528	503	-----	-----	-----	-----	-----	-----	-----	-----	0.635	0.363	1	Yes	0.590	0.172	0.77	Yes	1.00	**4.00**
		$U_{12} - L_{12}$	-----	-635.43	210	-197	353	-344	1215	512	1033	497	-----	-----	-----	-----	-----	-----	-----	-----	0.610	0.385	1	Yes	0.551	0.152	0.71	Yes	1.00	**3.86**
		$U_{13} - L_{13}$	-----	-506.24	276	-274	407	-400	956	235	826	223	-----	-----	-----	-----	-----	-----	-----	-----	0.564	0.429	1	Yes	0.488	0.195	0.69	Yes	1.00	**3.09**
		$U_{14} - L_{14}$	-----	-1147.29	-15	9	-47	35	1155	-76	-1692	-161	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.157	1	Yes	0.761	0.008	0.77	Yes	1.00	**7.27**
		$U_{15} - L_{15}$	-----	-539.97	-278	281	-462	454	585	90	-402	66	-----	-----	-----	-----	-----	-----	-----	-----	0.602	0.396	1	Yes	0.521	0.221	0.75	Yes	1.00	**4.07**
		$U_{16} - L_{16}$	-----	-602.88	-204	191	-385	379	675	191	-862	57	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.298	1	Yes	0.646	0.163	0.81	Yes	1.00	**4.29**
		$U_{17} - L_{17}$	-----	-554.82	-217	216	-437	443	598	200	-157	185	-----	-----	-----	-----	-----	-----	-----	-----	0.685	0.307	1	Yes	0.646	0.205	0.86	Yes	1.00	**4.53**
		$U_{18} - L_{18}$	-----	-514.72	-181	187	-381	409	618	222	-576	66	-----	-----	-----	-----	-----	-----	-----	-----	0.686	0.310	1	Yes	0.656	0.209	0.87	Yes	1.00	**4.57**
		$U_{19} - L_{19}$	-----	-419.98	-105	106	-221	228	511	202	-741	70	-----	-----	-----	-----	-----	-----	-----	-----	0.632	0.367	1	Yes	0.627	0.220	0.85	Yes	1.00	**4.24**
		$U_{20} - L_{20}$	-----	-316.20	-58	63	-162	174	516	191	-174	93	-----	-----	-----	-----	-----	-----	-----	-----	0.648	0.346	1	Yes	0.606	0.199	0.81	Yes	1.00	**4.59**
		$U_{21} - L_{21}$	-----	-242.82	0	10	-139	156	173	-57	-1366	-86	-----	-----	-----	-----	-----	-----	-----	-----	0.549	0.445	1	Yes	0.514	0.200	0.72	Yes	1.00	**7.39**
		$U_{22} - L_{22}$	-----	-213.02	-3	4	-12	10	660	161	-1867	-231	-----	-----	-----	-----	-----	-----	-----	-----	0.479	0.511	1	Yes	0.451	0.015	0.47	Yes	1.00	**6.81**
		$U_{23} - L_{23}$	-----	-304.65	17	-28	207	-223	241	-205	-804	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.688	0.310	1	Yes	0.645	0.285	0.93	Yes	1.00	**8.64**
		$U_{24} - L_{24}$	-----	-304.23	74	-78	180	-188	588	209	410	194	-----	-----	-----	-----	-----	-----	-----	-----	0.624	0.376	1	Yes	0.583	0.215	0.80	Yes	1.00	**3.77**
		$U_{25} - L_{25}$	-----	-399.79	118	-119	251	-250	593	229	533	281	-----	-----	-----	-----	-----	-----	-----	-----	0.601	0.390	1	Yes	0.597	0.242	0.84	Yes	1.00	**3.90**
		$U_{26} - L_{26}$	-----	-490.82	196	-203	406	-427	711	311	285	305	-----	-----	-----	-----	-----	-----	-----	-----	0.654	0.338	1	Yes	0.625	0.219	0.85	Yes	1.00	**4.44**
		$U_{27} - L_{27}$	-----	-506.40	234	-233	436	-442	981	443	692	445	-----	-----	-----	-----	-----	-----	-----	-----	0.625	0.370	1	Yes	0.589	0.205	0.80	Yes	1.00	**4.26**
		$U_{28} - L_{28}$	-----	-546.28	184	-164	397	-378	1310	431	1222	469	-----	-----	-----	-----	-----	-----	-----	-----	0.631	0.362	1	Yes	0.585	0.168	0.76	Yes	1.00	**4.66**
		$U_{29} - L_{29}$	-----	-482.47	225	-228	454	-454	1055	157	324	156	-----	-----	-----	-----	-----	-----	-----	-----	0.538	0.455	1	Yes	0.465	0.217	0.69	Yes	1.00	**5.09**
		$U_{30} - L_{30}$	-----	-1156.12	-146	120	-256	211	954	-199	-1214	-173	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.153	1	Yes	0.767	0.045	0.82	Yes	1.00	**7.00**
		$U_{31} - L_{31}$	-----	-566.78	-319	312	-422	412	449	100	-280	82	-----	-----	-----	-----	-----	-----	-----	-----	0.632	0.364	1	Yes	0.546	0.202	0.75	Yes	1.00	**2.44**
		$U_{32} - L_{32}$	-----	-733.14	-233	219	-381	376	486	188	-137	147	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.294	1	Yes	0.635	0.163	0.80	Yes	1.00	**4.10**
		$U_{33} - L_{33}$	-----	-695.50	-250	242	-395	401	472	239	-502	166	-----	-----	-----	-----	-----	-----	-----	-----	0.700	0.293	1	Yes	0.650	0.177	0.83	Yes	1.00	**4.34**
		$U_{34} - L_{34}$	-----	-645.10	-239	250	-373	400	553	324	-1034	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.637	0.361	1	Yes	0.603	0.177	0.78	Yes	1.00	**4.41**
		$U_{35} - L_{35}$	-----	-623.15	-258	271	-474	501	631	370	-503	127	-----	-----	-----	-----	-----	-----	-----	-----	0.693	0.306	1	Yes	0.668	0.213	0.89	Yes	1.00	**5.71**
		$U_{36} - L_{36}$	-----	-432.90	-141	161	-266	293	387	221	-595	76	-----	-----	-----	-----	-----	-----	-----	-----	0.628	0.371	1	Yes	0.624	0.256	0.88	Yes	1.00	**4.75**
		$U_{37} - L_{37}$	-----	-202.74	-79	93	-108	124	528	123	-1821	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.458	0.534	1	Yes	0.429	0.158	0.59	Yes	1.00	**6.30**
		$U_{38} - L_{38}$	217.04	-----	-132	135	88	-91	-28	-344	-1490	-315	0.390	0.604	1.00	Yes	0.215	0.332	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.70**
		$U_{39} - L_{39}$	-----	-296.35	-60	41	196	-218	289	-421	-852	-82	-----	-----	-----	-----	-----	-----	-----	-----	0.669	0.323	1	Yes	0.627	0.278	0.91	Yes	1.00	**11.27**
		$U_{40} - L_{40}$	-----	-323.70	23	-32	214	-218	603	169	-56	8	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.259	1	Yes	0.685	0.279	0.97	Yes	1.00	**7.99**
		$U_{41} - L_{41}$	-----	-386.01	98	-107	190	-203	577	202	316	187	-----	-----	-----	-----	-----	-----	-----	-----	0.657	0.343	1	Yes	0.605	0.185	0.80	Yes	1.00	**3.39**
		$U_{42} - L_{42}$	-----	-471.72	194	-203	397	-406	693	183	594	201	-----	-----	-----	-----	-----	-----	-----	-----	0.632	0.361	1	Yes	0.601	0.208	0.81	Yes	1.00	**4.14**
		$U_{43} - L_{43}$	-----	-570.91	214	-231	424	-445	660	194	762	294	-----	-----	-----	-----	-----	-----	-----	-----	0.653	0.344	1	Yes	0.612	0.189	0.81	Yes	1.00	**4.72**
		$U_{44} - L_{44}$	-----	-606.81	260	-322	437	-551	541	92	808	137	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.266	1	Yes	0.650	0.234	0.89	Yes	1.00	**4.81**
	Structure 3	$U_0 - L_0$	-----	-588.80	-148	249	-286	424	314	41	-587	-77	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.216	1	Yes	0.685	0.197	0.89	Yes	1.00	**3.54**
		$U_1 - L_1$	-----	-556.92	-225	222	-413	412	613	152	-250	147	-----	-----	-----	-----	-----	-----	-----	-----	0.695	0.301	1	Yes	0.648	0.192	0.84	Yes	1.00	**3.75**
		$U_2 - L_2$	-----	-467.19	-174	185	-303	330	644	317	-499	222	-----	-----	-----	-----	-----	-----	-----	-----	0.684	0.315	1	Yes	0.650	0.187	0.84	Yes	1.00	**3.31**
		$U_3 - L_3$	-----	-354.35	-78	93	-150	172	547	276	137	294	-----	-----	-----	-----	-----	-----	-----	-----	0.663	0.335	1	Yes	0.611	0.174	0.79	Yes	1.00	**2.75**
		$U_4 - L_4$	-----	-271.94	-41	47	-158	173	558	220	-571	183	-----	-----	-----	-----	-----	-----	-----	-----	0.613	0.387	1	Yes	0.575	0.221	0.80	Yes	1.00	**4.77**
		$U_5 - L_5$	-----	-178.84	29	-20	-83	103	221	53	-1958	-117	-----	-----	-----	-----	-----	-----	-----	-----	0.401	0.591	1	Yes	0.378	0.132	0.52	Yes	1.00	**6.63**
		$U_6 - L_6$	-----	-196.76	54	-59	67	-73	713	139	-2018	-293	-----	-----	-----	-----	-----	-----	-----	-----	0.439	0.551	1	Yes	0.416	0.093	0.51	Yes	1.00	**6.94**
		$U_7 - L_7$	-----	-297.25	88	-105	184	-205	489	44	456	187	-----	-----	-----	-----	-----	-----	-----	-----	0.601	0.394	1	Yes	0.569	0.234	0.81	Yes	1.00	**3.25**
		$U_8 - L_8$	-----	-404.86	146	-145	263	-264	787	367	752	390	-----	-----	-----	-----	-----	-----	-----	-----	0.585	0.407	1	Yes	0.555	0.225	0.79	Yes	1.00	**3.77**
		$U_9 - L_9$	-----	-632.18	165	-224	371	-475	1054	421	585	519	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.239	1	Yes	0.736	0.221	0.96	Yes	1.00	**6.22**
		$U_{10} - L_{10}$	-----	-573.74	160	-154	282	-291	1354	748	1218	715	-----	-----	-----	-----	-----	-----	-----	-----	0.594	0.399	1	Yes	0.566	0.151	0.72	Yes	1.00	**4.11**
		$U_{11} - L_{11}$	-----	-489.97	218	-253	326	-373	1122	503	1003	515	-----	-----	-----	-----	-----	-----	-----	-----	0.584	0.412	1	Yes	0.553	0.208	0.77	Yes	1.00	**2.64**
		$U_{12} - L_{12}$	-----	-1157.53	-12	-8	-22	-20	1274	320	-1698	-274	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.158	1	Yes	0.803	0.004	0.81	Yes	1.00	**6.40**
		$U_{13} - L_{13}$	-----	-359.38	-157	170	-224	242	579	118	21	74	-----	-----	-----	-----	-----	-----	-----	-----	0.601	0.393	1	Yes	0.554	0.239	0.80	Yes	1.00	**1.87**
		$U_{14} - L_{14}$	-----	-440.98	-99	97	-176	192	606	249	-734	-150	-----	-----	-----	-----	-----	-----	-----	-----	0.668	0.332	1	Yes	0.632	0.167	0.80	Yes	1.00	**3.35**
		$U_{15} - L_{15}$	-----	-374.80	-80	90	-166	190	519	248	-66	127	-----	-----	-----	-----	-----	-----	-----	-----	0.678	0.315	1	Yes	0.647	0.193	0.84	Yes	1.00	**4.05**
		$U_{16} - L_{16}$	-----	-202.07	-84	85	-92	99	909	346	-1922	-661	-----	-----	-----	-----	-----	-----	-----	-----	0.444	0.554	1	Yes	0.428	0.127	0.56	Yes	1.00	**6.99**
		$U_{17} - L_{17}$	155.86	-----	-154	171	44	-62	345	132	-1701	-564	0.280	0.712	1.00	Yes	0.154	0.391	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.64**
		$U_{18} - L_{18}$	114.56	-264.54	-119	129	199	-238	393	135	-1222	-571	0.206	0.658	0.87	Yes	0.113	0.362	0.48	Yes	0.578	0.421	1	Yes	0.560	0.304	0.87	Yes	1.00	**12.60**
		$U_{19} - L_{19}$	-----	-278.14	-7	-8	179	-193	460	244	591	292	-----	-----	-----	-----	-----	-----	-----	-----	0.608	0.390	1	Yes	0.589	0.247	0.84	Yes	1.00	**5.42**
		$U_{20} - L_{20}$	-----	-255.50	87	-104	165	-203	631	202	623	200	-----	-----	-----	-----	-----	-----	-----	-----	0.571	0.422	1	Yes	0.541	0.259	0.80	Yes	1.00	**2.63**

Axial AB Operating

Operating Loads - 2F1

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	$U_0 - L_1$			628.85	-----	-30	28	0	-11	-479	-529	93	161	0.825	0.169	1.00	Yes	0.498	0.093	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.29**
		$U_1 - L_2$			412.06	-----	-93	8	26	-22	-458	-437	466	287	0.741	0.254	1.00	Yes	0.408	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.70**
		$U_2 - L_3$			-----	-256.14	-63	-24	-2	-59	-16	-495	-1119	-129	-----	-----	-----	-----	-----	-----	-----	-----	0.590	0.410	1	Yes	0.542	0.081	0.63	Yes	1.00	**9.91**
		$U_3 - L_4$			-----	-301.36	-5	-34	1	-56	162	70	-814	-170	-----	-----	-----	-----	-----	-----	-----	-----	0.689	0.303	1	Yes	0.638	0.071	0.71	Yes	1.00	**6.43**
		$U_4 - L_4$			528.46	-----	-83	40	-43	17	-213	61	596	201	0.775	0.223	1.00	Yes	0.426	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.19**
		$U_4 - L_5$			624.29	-----	-156	221	-66	95	-596	107	704	42	0.738	0.254	1.00	Yes	0.406	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.42**
		$U_5 - L_6$			601.12	-----	-257	252	-61	95	-750	-100	-506	-2	0.711	0.282	1.00	Yes	0.391	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.64**
		$U_6 - L_7$			620.88	-----	-70	313	19	102	-444	12	-436	-241	0.734	0.259	1.00	Yes	0.404	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.67**
		$U_8 - L_9$			966.54	-----	-94	356	3	184	67	-462	513	236	0.773	0.224	1.00	Yes	0.479	0.126	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.06**
		$U_9 - L_{10}$			993.26	-----	-304	257	-118	125	139	-173	503	203	0.794	0.200	1.00	Yes	0.492	0.113	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.89**
		$U_{10} - L_{11}$			958.34	-----	-241	182	-86	94	-11	-598	153	-38	0.809	0.190	1.00	Yes	0.501	0.108	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.29**
		$U_{11} - L_{12}$			792.76	-----	-257	84	-98	46	-86	-589	139	-49	0.784	0.207	1.00	Yes	0.431	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.42**
		$U_{12} - L_{13}$			575.78	-----	-197	136	-101	45	-6	-396	-613	-276	0.702	0.292	1.00	Yes	0.442	0.166	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.35**
		$U_{13} - L_{14}$			364.62	-----	-80	16	-39	-20	-122	-472	-819	-291	0.656	0.340	1.00	Yes	0.361	0.187	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.89**
		$U_{15} - L_{14}$			216.93	-190.45	-64	-17	-17	-71	-362	-233	1316	-264	0.390	0.472	0.87	Yes	0.215	0.259	0.48	Yes	0.446	0.550	1	Yes	0.403	0.091	0.50	Yes	1.00	**9.70**
		$U_{16} - L_{15}$			385.61	-----	-131	88	-34	-15	-358	-8	465	-214	0.694	0.302	1.00	Yes	0.381	0.166	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.65**
		$U_{17} - L_{16}$			520.76	-----	-144	94	-42	19	-365	-16	-290	-97	0.764	0.231	1.00	Yes	0.420	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.44**
		$U_{18} - L_{17}$			573.31	-----	-303	233	-136	94	-785	-175	-394	-95	0.678	0.314	1.00	Yes	0.373	0.173	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.30**
		$U_{19} - L_{18}$			647.80	-----	-313	240	-137	100	-826	-347	-462	-198	0.702	0.296	1.00	Yes	0.386	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.82**
		$U_{20} - L_{19}$			677.61	-----	-378	316	-177	143	-393	-209	-262	-140	0.734	0.258	1.00	Yes	0.404	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.29**
	Structure 2	$U_0 - L_1$			773.45	-----	-242	304	-103	129	-544	-596	-135	15	0.765	0.230	1.00	Yes	0.421	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.77**
		$U_1 - L_2$			745.49	-----	-400	304	-163	116	-182	-488	160	-17	0.738	0.259	1.00	Yes	0.406	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.56**
		$U_2 - L_3$			600.22	-----	-319	250	-118	88	-100	-559	138	-18	0.710	0.282	1.00	Yes	0.390	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.22**
		$U_3 - L_4$			525.47	-----	-169	104	-46	20	-280	-679	197	30	0.700	0.297	1.00	Yes	0.385	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.75**
		$U_4 - L_5$			361.23	-----	-129	81	-9	-32	-274	-601	-625	-127	0.650	0.346	1.00	Yes	0.357	0.190	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.49**
		$U_5 - L_6$			260.38	-222.39	-80	12	38	-97	-317	-685	-1397	-168	0.468	0.529	1.00	Yes	0.258	0.291	0.55	Yes	0.525	0.282	0.81	Yes	0.471	0.124	0.60	Yes	1.00	**12.25**
		$U_6 - L_7$			-----	-376.73	-10	-43	46	-100	57	-249	-490	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.188	1	Yes	0.722	0.114	0.84	Yes	1.00	**6.73**
		$U_8 - L_7$			558.40	-----	-174	134	-96	44	-355	28	631	-185	0.712	0.284	1.00	Yes	0.448	0.163	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.15**
		$U_8 - L_9$			717.50	-----	-328	236	-174	124	-175	196	-293	-143	0.777	0.216	1.00	Yes	0.427	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.68**
		$U_{10} - L_9$			812.86	-----	-299	252	-149	132	-371	97	-214	-23	0.804	0.194	1.00	Yes	0.442	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.26**
		$U_{11} - L_{10}$			851.68	-----	-322	305	-146	166	-585	41	-371	89	0.776	0.217	1.00	Yes	0.427	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.24**
		$U_{12} - L_{11}$			821.54	-----	-320	338	-146	182	-783	178	-508	37	0.748	0.251	1.00	Yes	0.412	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.81**
		$U_{13} - L_{12}$			709.41	-----	-406	369	-185	181	-687	25	-467	-14	0.702	0.291	1.00	Yes	0.386	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.87**
		$U_{14} - L_{13}$			767.55	-----	-264	442	-39	154	-205	-56	-178	-108	0.759	0.236	1.00	Yes	0.418	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.56**
		$U_{14} - L_{15}$			580.36	-----	-187	336	-15	167	206	-233	657	230	0.686	0.309	1.00	Yes	0.377	0.170	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.81**
		$U_{15} - L_{16}$			577.58	-----	-343	307	-164	161	235	-383	648	208	0.683	0.311	1.00	Yes	0.376	0.171	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.69**
		$U_{16} - L_{17}$			692.16	-----	-329	355	-133	160	312	-251	372	106	0.750	0.243	1.00	Yes	0.412	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.96**
		$U_{17} - L_{18}$			634.93	-----	-284	268	-112	128	-36	-448	357	87	0.751	0.242	1.00	Yes	0.413	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.20**
		$U_{18} - L_{19}$			628.18	-----	-278	249	-90	103	222	-523	279	65	0.743	0.252	1.00	Yes	0.408	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.25**
		$U_{19} - L_{20}$			573.46	-----	-193	155	-41	46	-290	-471	291	81	0.731	0.268	1.00	Yes	0.402	0.153	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.37**
		$U_{20} - L_{21}$			350.38	-----	-109	83	-35	7	-43	-485	-780	-60	0.630	0.365	1.00	Yes	0.347	0.201	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.96**
		$U_{21} - L_{22}$			323.21	-----	-107	8	10	-74	-164	-841	-944	-123	0.581	0.410	1.00	Yes	0.320	0.225	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.32**
		$U_{23} - L_{22}$			354.22	-----	-96	44	-17	-38	-262	-84	815	-120	0.637	0.359	1.00	Yes	0.350	0.198	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.49**
		$U_{24} - L_{23}$			423.45	-----	-123	102	-21	20	-217	180	-254	-63	0.762	0.230	1.00	Yes	0.419	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.48**
		$U_{25} - L_{24}$			595.16	-----	-191	173	-44	52	-197	71	-297	-80	0.759	0.231	1.00	Yes	0.417	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.92**
		$U_{26} - L_{25}$			653.63	-----	-268	275	-89	108	-351	79	-241	-49	0.773	0.219	1.00	Yes	0.425	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.53**
		$U_{27} - L_{26}$			626.65	-----	-274	286	-114	135	-493	163	-331	3	0.741	0.252	1.00	Yes	0.407	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.62**
		$U_{28} - L_{27}$			659.24	-----	-292	338	-109	157	-679	122	-485	23	0.714	0.284	1.00	Yes	0.393	0.156	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.86**
		$U_{29} - L_{28}$			579.01	-----	-336	325	-118	126	-644	-15	-478	-44	0.685	0.307	1.00	Yes	0.376	0.169	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.49**
		$U_{30} - L_{29}$			617.22	-----	-188	353	9	101	-219	90	-387	-283	0.730	0.270	1.00	Yes	0.401	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.75**
		$U_{30} - L_{31}$			719.21	-----	-252	422	-60	230	136	-440	604	210	0.712	0.286	1.00	Yes	0.391	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.88**
		$U_{31} - L_{32}$			744.46	-----	-432	380	-239	221	189	-209	416	100	0.736	0.263	1.00	Yes	0.405	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.68**
		$U_{32} - L_{33}$			862.53	-----	-349	347	-165	193	147	-484	268	44	0.786	0.214	1.00	Yes	0.432	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.89**
		$U_{33} - L_{34}$			852.14	-----	-328	275	-152	163	-23	-595	216	15	0.776	0.221	1.00	Yes	0.427	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.87**
		$U_{34} - L_{35}$			790.74	-----	-297	238	-153	124	-97	-485	19	-130	0.782	0.210	1.00	Yes	0.430	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.22**
		$U_{35} - L_{36}$			676.67	-----	-312	212	-180	97	-361	-653	-540	-287	0.733	0.267	1.00	Yes	0.403	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.45**
		$U_{36} - L_{37}$			520.78	-----	-168	126	-83	24	-129	-581	-895	-259	0.664	0.333	1.00	Yes	0.418	0.192	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.58**
		$U_{38} - L_{37}$			-----	-341.79	-21	-33	32	-86	-361	-112	509	-303	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.257	1	Yes	0.655	0.099	0.76	Yes	1.00	**6.90**
		$U_{39} - L_{38}$			289.78	-156.85	-87	25	10	-69	-215	236	1238	-171	0.521	0.469	1.00	Yes	0.287	0.258	0.55	Yes	0.374	0.447	0.83	Yes	0.332	0.111	0.45	Yes	1.00	**10.99**
		$U_{40} - L_{39}$			329.09	-----	-109	73	-39	-3	-347	59	906	-235	0.592	0.402	1.00	Yes	0.326	0.221	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.68**
		$U_{41} - L_{40}$			560.86	-----	-173	126	-49	24	-401	-106	-431	-191	0.748	0.249	1.00	Yes	0.411	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.82**
		$U_{42} - L_{41}$			596.73	-----	-312	248	-126	95	-645	-57	-411	-167	0.705	0.294	1.00	Yes	0.388	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.48**
		$U_{43} - L_{42}$			735.00	-----	-365	296	-142	108	-641	-193	-399	-206	0.727	0.265	1.00	Yes	0.400	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.71**
		$U_{44} - L_{43}$			787.23	-----	-381	372	-181	161	-253	5	-222	-108	0.779	0.215	1.00	Yes	0.428	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.64**
	Structure 3	$U_0 - L_1$			721.37	-----	-215	254	-79	105	-468	-496	-163	-4	0.781	0.211	1.00	Yes	0.430	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.64**
		$U_1 - L_2$			657.56	-----	-353	244	-165	114	-54	-596	142	-58	0.712	0.279	1.00	Yes	0.392	0.153	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.67**
		$U_2 - L_3$			609.24	-----	-322	251	-129	90	-107	-519	113	-42	0.720	0.276	1.00	Yes	0.396	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.65**
		$U_3 - L_4$			506.24	-----	-145	89	-46	23	-55	-439	136	-37	0.742	0.249	1.00	Yes	0.408	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.25**
		$U_4 - L_5$			330.02	-----	-122	64	-30	-18	-180	-834	-823	-173	0.594	0.397	1.00	Yes	0.326	0.218	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.28**
		$U_5 - L_6$			-----	-304.90	-79	-26	31	-120	-369	-579	-999	-267	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.276	1	Yes	0.645	0.154	0.80	Yes	1.00	**14.18**
		$U_7 - L_6$			390.75	-----	-81	24	-46	-7	-218	-4	655	-134	0.703	0.294	1.00	Yes	0.387	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.51**
		$U_8 - L_7$			560.09	-----	-183	140	-113	60	-432	-68	761	-79	0.683	0.308	1.00	Yes	0.430	0.177	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.30**
		$U_8 - L_9$			806.96	-----	-245	128	-102	37	-563	-110	-267	-1	0.798	0.198	1.00	Yes	0.439	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.93**
		$U_{10} - L_9$			930.54	-----	-217	194	-107	87	-581	177	842	186	0.786	0.211	1.00	Yes	0.487	0.121	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.38**
		$U_{11} - L_{10}$			978.21	-----	-292	278	-90	110	-653	-27	-439	0	0.782	0.213	1.00	Yes	0.484	0.121	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.40**
		$U_{12} - L_{11}$			954.81	-----	-50	384	14	138	-407	95	-504	-223	0.763	0.235	1.00	Yes	0.473	0.132	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.17**
		$U_{13} - L_{12}$			622.34	-----	-92	293	0	154	198	-233	528	266	0.736	0.263	1.00	Yes	0.405	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.27**
		$U_{13} - L_{14}$			615.66	-----	-277	228	-105	122	315	-210	592	223	0.728	0.265	1.00	Yes	0.400	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.67**
		$U_{14} - L_{15}$			686.77	-----	-192	225	-53	98	224	-299	296	87	0.812	0.183	1.00	Yes	0.447	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.15**
		$U_{15} - L_{16}$			519.99	-----	-82	36	-44	7	252	-146	-653	-331	0.763	0.235	1.00	Yes	0.419	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.10**
		$U_{17} - L_{16}$			-----	-318.80	-15	-40	-6	-48	-381	-303	673	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.266	1	Yes	0.675	0.062	0.74	Yes	1.00	**6.29**
		$U_{18} - L_{17}$			-----	-286.12	-99	-16	54	-37	-641	-67	-155	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.659	0.337	1	Yes	0.605	0.126	0.74	Yes	1.00	**14.48**
		$U_{19} - L_{18}$			436.05	-----	-85	11	25	-23	-367	-310	-159	-79	0.784	0.214	1.00	Yes	0.431	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.28**
		$U_{20} - L_{19}$			627.85	-----	-115	72	-27	4	-154	-35	-33	52	0.824	0.174	1.00	Yes	0.497	0.096	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.21**

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: 2F1 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

Axial Force Rating

Location	Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Upper Chord	Structure 1																																													
	U_1 - U_2	-71.64	-45.52	-6.40			0.90	1.24	-7.12	-50.68	0.00	0.00	Vehicle	Vehicle	-----	-159.01	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	9.74	9.74
	U_2 - U_3	-90.83	-2.14	-60.82			0.90	1.24	-2.38	-67.71	0.00	0.00	Vehicle	Vehicle	-----	-206.11	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	-----	-----	7.01	7.01
	U_3 - U_4	-61.13	24.32	-75.21			0.90	1.24	27.07	-83.73	0.00	0.00	Vehicle	Vehicle	-----	-188.32	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	-----	-----	6.02	6.02
	U_4 - U_5	10.71	32.63	-65.67			0.90	1.24	36.35	-73.11	0.00	0.00	Vehicle	Vehicle	61.17	-81.13	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	18.17	18.17	7.88	7.88
	U_5 - U_6	12.86	32.83	-76.44			0.90	1.24	36.54	-85.10	0.00	0.00	Vehicle	Vehicle	64.23	-93.91	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	18.01	18.01	6.79	6.79
	U_6 - U_7	121.37	37.97	-61.00			0.90	1.24	42.27	-67.91	0.00	0.00	Vehicle	Vehicle	212.74	-----	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	-----	-----	13.00	13.00	-----	-----
	U_7 - U_8	249.49	41.99	-38.99			0.90	1.24	46.74	-43.41	0.00	0.00	Vehicle	Vehicle	385.10	-----	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	-----	-----	11.87	11.87	-----	-----
	U_8 - U_9	376.92	40.34	-11.83			0.90	1.24	44.91	-13.17	0.00	0.00	Vehicle	Vehicle	548.37	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	16.33	16.33	-----	-----
	U_9 - U_{10}	319.74	-5.55	0.89			0.90	1.20	0.96	-5.98	0.00	0.00	Vehicle	Vehicle	416.90	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	645.17	645.17	-----	-----
	U_{10} - U_{11}	128.77	-6.28	-22.97			0.90	1.20	-6.77	-24.76	0.00	0.00	Vehicle	Vehicle	158.59	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
	U_{10} - U_{11}	-70.90	38.40	-36.38			0.90	1.20	41.41	-39.23	0.00	0.00	Vehicle	Vehicle	-----	-143.17	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	-----	-----	13.42	13.42
	U_{11} - U_{12}	-252.96	34.09	-70.70			0.90	1.20	36.76	-76.22	0.00	0.00	Vehicle	Vehicle	-----	-427.94	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	-----	-----	7.34	7.34
	U_{12} - U_{13}	-391.95	29.33	-83.02			0.90	1.20	31.63	-89.52	0.00	0.00	Vehicle	Vehicle	-----	-625.90	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	-----	-----	8.33	8.33
	U_{13} - U_{14}	-482.99	24.62	-90.25			0.90	1.20	26.54	-97.31	0.00	0.00	Vehicle	Vehicle	-----	-754.39	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	-----	-----	8.68	8.68
	U_{14} - U_{15}	-454.44	24.53	-114.17			0.90	1.20	26.44	-123.09	0.00	0.00	Vehicle	Vehicle	-----	-789.80	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	-----	-----	6.85	6.85
	U_{15} - U_{16}	-502.02	18.84	-114.36			0.90	1.20	20.32	-123.30	0.00	0.00	Vehicle	Vehicle	-----	-812.92	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.70	6.70
	U_{16} - U_{17}	-467.99	9.06	-103.76			0.90	1.20	9.77	-111.87	0.00	0.00	Vehicle	Vehicle	-----	-753.81	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	-----	-----	7.68	7.68
	U_{17} - U_{18}	-368.86	8.47	-79.85			0.90	1.20	9.13	-86.09	0.00	0.00	Vehicle	Vehicle	-----	-591.43	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	-----	-----	6.99	6.99
	U_{18} - U_{19}	-251.56	4.23	-54.24			0.90	1.20	4.56	-58.48	0.00	0.00	Vehicle	Vehicle	-----	-403.05	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	-----	-----	7.28	7.28
	U_{19} - U_{20}	-117.89	-2.96	-24.51			0.90	1.20	-3.19	-26.43	0.00	0.00	Vehicle	Vehicle	-----	-187.61	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	21.18	21.18
	Structure 2																																													
	U_1 - U_1	-118.23	-26.88	-16.77			0.90	1.18	-27.85	-28.62	0.00	0.00	Vehicle	Vehicle	-----	-190.90	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	-----	-----	18.49	18.49
	U_1 - U_2	-239.56	-50.67	-27.83			0.90	1.18	-29.63	-53.94	0.00	0.00	Vehicle	Vehicle	-----	-381.56	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	-----	-----	10.23	10.23
	U_2 - U_3	-350.44	-65.82	-48.93			0.90	1.18	-52.09	-70.08	0.00	0.00	Vehicle	Vehicle	-----	-546.68	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	-----	-----	10.37	10.37
	U_3 - U_4	-449.15	11.26	-90.43			0.90	1.18	11.99	-96.28	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	-----	-----	9.27	9.27
	U_4 - U_5	-483.26	14.43	-98.59			0.90	1.18	14.78	-104.96	0.00	0.00	Vehicle	Vehicle	-----	-764.69	5.50	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	9.56	9.56
	U_5 - U_6	-485.85	30.92	-116.75			0.90	1.18	32.92	-124.31	0.00	0.00	Vehicle	Vehicle	-----	-793.21	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	-----	-----	8.05	8.05
	U_6 - U_7	-428.85	36.61	-110.63			0.90	1.18	38.98	-117.79	0.00	0.00	Vehicle	Vehicle	-----	-710.64	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	7.75	7.75
	U_7 - U_8	-428.37	36.70	-115.35			0.90	1.18	39.07	-122.81	0.00	0.00	Vehicle	Vehicle	-----	-716.53	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	7.43	7.43
	U_8 - U_9	-335.42	42.06	-100.55			0.90	1.18	44.78	-107.06	0.00	0.00	Vehicle	Vehicle	-----	-575.22	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	-----	-----	7.39	7.39
	U_9 - U_{10}	-200.29	45.48	-87.89			0.90	1.18	48.42	-93.57	0.00	0.00	Vehicle	Vehicle	-----	-382.02	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	-----	-----	7.33	7.33
	U_{10} - U_{11}	-52.14	48.24	-67.07			0.90	1.18	51.37	-71.41	0.00	0.00	Vehicle	Vehicle	-----	-160.61	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	-----	-----	10.04	10.04
	U_{11} - U_{12}	107.02	48.11	-43.57			0.90	1.18	51.22	-46.39	0.00	0.00	Vehicle	Vehicle	205.70	-----	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	-----	-----	15.69	15.69	-----	-----
	U_{12} - U_{13}	259.33	47.62	-26.61			0.90	1.18	50.70	-28.33	0.00	0.00	Vehicle	Vehicle	403.04	-----	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	-----	-----	17.35	17.35	-----	-----
	U_{13} - U_{14}	391.98	42.34	-7.93			0.90	1.18	45.08	-8.44	0.00	0.00	Vehicle	Vehicle	568.18	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	26.00	26.00	-----	-----
	U_{14} - U_{15}	439.80	7.96	0.27			0.90	1.17	0.29	-8.38	0.00	0.00	Vehicle	Vehicle	571.60	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	3902.25	3902.25	-----	-----
	U_{15} - U_{16}	369.66	24.25	-16.45			0.90	1.17	25.51	-17.31	0.00	0.00	Vehicle	Vehicle	513.73	-----	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	-----	-----	35.38	35.38	-----	-----
	U_{16} - U_{17}	271.39	-10.49	-25.69			0.90	1.17	-11.04	-27.03	0.00	0.00	Vehicle	Vehicle	338.45	-----	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	-19.54	-35.17			0.90	1.17	-20.56	-37.00	0.00	0.00	Vehicle	Vehicle	196.55	-----	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	-38.16	-58.59			0.90	1.17	-40.15	-61.64	0.00	0.00	Vehicle	Vehicle	42.42	-----	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}	-8.11	33.33	-67.54			0.90	1.17	35.07	-71.06	0.00	0.00	Vehicle	Vehicle	35.05	-102.92	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	23.62	23.62	9.64	9.64
	U_{20} - U_{21}	-60.13	28.18	-72.66			0.90	1.17	29.64	-76.44	0.00	0.00	Vehicle	Vehicle	-----	-177.54	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	-----	-----	10.16	10.16
	U_{21} - U_{22}	-82.18	22.33	-89.10			0.90	1.17	23.49	-93.74	0.00	0.00	Vehicle	Vehicle	-----	-228.70	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	-----	-----	8.05	8.05
	U_{22} - U_{23}	-82.40	22.33	-95.43			0.90	1.17	23.49	-100.40	0.00	0.00	Vehicle	Vehicle	-----	-237.64	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.51	7.51
	U_{23} - U_{24}	-65.94	15.88	-92.28			0.90	1.17	16.71	-97.09	0.00	0.00	Vehicle	Vehicle	134.14	-211.94	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	-----	-----	7.94	7.94
	U_{24} - U_{25}	-61.94	33.04	-87.18			0.90	1.17	34.78	-91.73	0.00	0.00	Vehicle	Vehicle	21.85	-142.50	5.50	32.31	26.8125	1066.31	131.71	10.6302	5.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	24.11	24.11	7.36	7.36
	U_{25} - U_{26}	55.02	37.53	-71.76			0.90	1.17	39.49	-75.50	0.00	0.00	Vehicle	Vehicle	122.86	-26.62	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	18.01	18.01	9.30	9.30
	U_{26} - U_{27}	136.02	41.25	-53.85			0.90	1.17	43.40	-56.66	0.00	0.00	Vehicle	Vehicle	233.24	-----	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	-----	-----	14.52	14.52	-----	-----
	U_{27} - U_{28}	216.87	43.00	-39.88			0.90	1.17	45.24	-41.96	0.00	0.00	Vehicle	Vehicle	340.74	-----	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	-----	-----	18.28	18.28	-----	-----
	U_{28} - U_{29}	293.76	43.99	-22.61			0.90	1.17	46.28	-23.79	0.00	0.00	Vehicle	Vehicle	442.05	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	21.14	21.14	-----	-----
	U_{29} - U_{30}	358.11	42.02	-5.53			0.90	1.17	44.21	-5.81	0.00	0.00	Vehicle	Vehicle	523.02	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	27.28	27.28	-----	-----
	U_{30} - U_{31}	339.33	-1.27	-12.39			0.90	1.18	-1.35	-13.19	0.00	0.00	Vehicle	Vehicle	439.37	-----	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	21.90	-13.16			0.90	1.18	23.32	-14.01	0.00	0.00	Vehicle	Vehicle	356.83	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	38.08	38.08	-----	-----
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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: 2F1 **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)

North Truss - Lower Chord

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	L_0 - L_1	4.85	-0.53	-0.96			0.90	1.24	-0.59	-1.07	0.00	0.00	Vehicle	Vehicle	5.54	-----	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	38.67	30.35			0.90	1.24	43.05	33.79	0.00	0.00	Vehicle	Vehicle	152.51	-----	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	-----	-----	**9.95**	**9.95**	-----	-----
	L_2 - L_3	97.77	-17.85	75.20			0.90	1.24	83.72	-19.87	0.00	0.00	Vehicle	Vehicle	235.94	-----	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	-----	-----	**6.82**	**6.82**	-----	-----
	L_3 - L_4	66.93	-25.99	82.87			0.90	1.24	92.26	-28.93	0.00	0.00	Vehicle	Vehicle	206.95	-----	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	-----	-----	**6.52**	**6.52**	-----	-----
	L_4 - L_5	-108.46	-39.10	41.76			0.90	1.24	46.49	-43.53	0.00	0.00	Vehicle	Vehicle	-----	-197.59	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	5.72	12.00	Pass	-----	-----	**9.00**	**9.00**
	L_5 - L_6	-237.28	-43.20	30.99			0.90	1.24	34.50	-48.09	0.00	0.00	Vehicle	Vehicle	-----	-370.99	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	5.72	12.00	Pass	-----	-----	**8.78**	**8.78**
	L_6 - L_7	-362.27	-45.18	0.82			0.90	1.24	0.91	-50.29	0.00	0.00	Vehicle	Vehicle	-----	-536.33	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	-----	-----	**11.59**	**11.59**
	L_7 - L_8	-478.66	-40.74	-11.44			0.90	1.24	-12.73	-45.36	0.00	0.00	Vehicle	Vehicle	-----	-681.22	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	-----	-----	**15.89**	**15.89**
	L_8 - L_9	-477.02	-33.06	-0.16			0.90	1.20	-0.17	-35.65	0.00	0.00	Vehicle	Vehicle	-----	-666.47	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**20.27**	**20.27**
	L_9 - L_{10}	-301.43	-11.19	5.72			0.90	1.20	6.17	-12.06	0.00	0.00	Vehicle	Vehicle	-----	-407.54	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	-----	-----	**53.39**	**53.39**
	L_{10} - L_{11}	-104.46	-37.74	26.93			0.90	1.20	29.04	-40.69	0.00	0.00	Vehicle	Vehicle	-----	-188.69	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**9.73**	**9.73**
	L_{11} - L_{12}	97.11	27.69	44.09			0.90	1.20	47.54	29.85	0.00	0.00	Vehicle	Vehicle	188.04	-----	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	-----	-----	**10.45**	**10.45**	-----	-----
	L_{12} - L_{13}	268.74	-29.19	70.45			0.90	1.20	75.96	-31.47	0.00	0.00	Vehicle	Vehicle	448.11	-----	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	-----	-----	**9.30**	**9.30**	-----	-----
	L_{13} - L_{14}	405.66	69.83	84.94			0.90	1.20	91.58	75.29	0.00	0.00	Vehicle	Vehicle	646.41	-----	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	-----	-----	**9.85**	**9.85**	-----	-----
	L_{14} - L_{15}	502.77	-13.64	89.81			0.90	1.20	96.83	-14.71	0.00	0.00	Vehicle	Vehicle	779.49	-----	9.53	62.03	52.4950	2046.83	131.71	10.8224	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	-----	-----	**11.07**	**11.07**	-----	-----
	L_{15} - L_{16}	469.25	-8.46	77.74			0.90	1.20	83.82	-9.12	0.00	0.00	Vehicle	Vehicle	718.99	-----	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	-----	-----	**13.19**	**13.19**	-----	-----
	L_{16} - L_{17}	365.43	-6.96	60.98			0.90	1.20	65.75	-7.50	0.00	0.00	Vehicle	Vehicle	560.53	-----	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	-----	-----	**12.94**	**12.94**	-----	-----
	L_{17} - L_{18}	248.67	1.66	38.47			0.90	1.20	41.48	1.79	0.00	0.00	Vehicle	Vehicle	377.20	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**15.30**	**15.30**	-----	-----
	L_{18} - L_{19}	112.99	-1.13	10.14			0.90	1.20	10.94	-1.21	0.00	0.00	Vehicle	Vehicle	161.10	-----	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	-----	-----	**35.63**	**35.63**	-----	-----
	L_{19} - L_{20}	-14.26	7.91	-13.02			0.90	1.20	8.53	-14.04	0.00	0.00	Vehicle	Vehicle	-----	-36.79	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	-----	-----	**29.14**	**29.14**
Structure 2	L_0 - L_1	15.26	-3.10	0.32			0.90	1.18	0.34	-3.30	0.00	0.00	Vehicle	Vehicle	20.28	-----	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	-----	-----	**1825.56**	**1825.56**	-----	-----
	L_1 - L_2	136.12	20.68	14.90			0.90	1.18	22.02	15.86	0.00	0.00	Vehicle	Vehicle	205.58	-----	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	-----	-----	**22.58**	**22.58**	-----	-----
	L_2 - L_3	262.92	42.85	41.19			0.90	1.18	45.63	43.85	0.00	0.00	Vehicle	Vehicle	401.10	-----	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	16.63	105.28	299.25	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	**15.63**	**15.63**	-----	-----
	L_3 - L_4	373.32	57.88	64.20			0.90	1.18	68.35	61.63	0.00	0.00	Vehicle	Vehicle	574.18	-----	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	-----	-----	**13.69**	**13.69**	-----	-----
	L_4 - L_5	456.80	37.98	81.46			0.90	1.18	86.73	40.44	0.00	0.00	Vehicle	Vehicle	706.60	-----	11.08	65.05	53.1400	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	-----	-----	**13.76**	**13.76**	-----	-----
	L_5 - L_6	489.63	-23.29	102.52			0.90	1.18	109.16	-24.80	0.00	0.00	Vehicle	Vehicle	778.42	-----	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	-----	-----	**11.94**	**11.94**	-----	-----
	L_6 - L_7	479.27	-29.54	113.59			0.90	1.18	120.94	-31.45	0.00	0.00	Vehicle	Vehicle	780.27	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**11.07**	**11.07**	-----	-----
	L_7 - L_8	330.30	-40.46	88.68			0.90	1.18	94.41	-43.07	0.00	0.00	Vehicle	Vehicle	552.13	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	**10.71**	**10.71**	-----	-----
	L_8 - L_9	189.19	-43.73	76.24			0.90	1.18	81.18	-46.56	0.00	0.00	Vehicle	Vehicle	351.47	-----	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	-----	-----	**11.22**	**11.22**	-----	-----
	L_9 - L_{10}	39.95	-46.55	54.90			0.90	1.18	58.46	-49.57	0.00	0.00	Vehicle	Vehicle	127.93	-12.50	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**14.06**	**14.06**	**15.49**	**15.49**
	L_{10} - L_{11}	-127.23	-46.91	28.06			0.90	1.18	29.87	-49.94	0.00	0.00	Vehicle	Vehicle	-----	-230.32	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	-----	-----	**10.48**	**10.48**
	L_{11} - L_{12}	-282.51	-46.47	16.61			0.90	1.18	17.68	-49.48	0.00	0.00	Vehicle	Vehicle	-----	-431.59	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**13.10**	**13.10**
	L_{12} - L_{13}	-426.62	-44.37	-1.87			0.90	1.18	-1.99	-47.24	0.00	0.00	Vehicle	Vehicle	-----	-616.03	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**17.97**	**17.97**
	L_{13} - L_{14}	-536.34	-28.08	-15.70			0.90	1.18	-16.72	-29.90	0.00	0.00	Vehicle	Vehicle	-----	-736.11	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**32.74**	**32.74**
	L_{14} - L_{15}	-537.64	-17.60	-0.25			0.90	1.17	-0.27	-18.52	0.00	0.00	Vehicle	Vehicle	-----	-723.01	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	-----	-----	**52.78**	**52.78**
	L_{15} - L_{16}	-475.53	-41.75	3.22			0.90	1.17	3.38	-43.93	0.00	0.00	Vehicle	Vehicle	-----	-675.29	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**18.21**	**18.21**
	L_{16} - L_{17}	-384.21	-6.57	12.91			0.90	1.17	13.58	-6.91	0.00	0.00	Vehicle	Vehicle	-----	-508.45	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	-----	-----	**96.02**	**96.02**
	L_{17} - L_{18}	-281.70	9.82	21.00			0.90	1.17	22.09	10.33	0.00	0.00	Vehicle	Vehicle	-----	-352.79	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	-38.91	37.87			0.90	1.17	39.84	-40.93	0.00	0.00	Vehicle	Vehicle	-----	-280.69	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	-----	-----	**9.74**	**9.74**
	L_{19} - L_{20}	-76.34	34.75	49.25			0.90	1.17	51.82	36.56	0.00	0.00	Vehicle	Vehicle	-----	-51.72	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	-----	-----
	L_{20} - L_{21}	4.59	-30.01	65.02			0.90	1.17	68.41	-31.58	0.00	0.00	Vehicle	Vehicle	94.90	-35.08	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**14.03**	**14.03**	**25.93**	**25.93**
	L_{21} - L_{22}	56.15	-24.82	72.44			0.90	1.17	76.22	-26.12	0.00	0.00	Vehicle	Vehicle	172.07	-----	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	-----	-----	**11.92**	**11.92**	-----	-----
	L_{22} - L_{23}	63.16	-11.51	63.86			0.90	1.17	67.19	-12.11	0.00	0.00	Vehicle	Vehicle	169.45	-----	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	-----	-----	**13.42**	**13.42**	-----	-----
	L_{23} - L_{24}	15.68	-21.22	62.59			0.90	1.17	65.85	-22.33	0.00	0.00	Vehicle	Vehicle	105.99	-8.64	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	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**14.41**	**14.41**	**37.17**	**37.17**
	L_{24} - L_{25}	-55.90	-24.03	42.07			0.90	1.17	44.26	-25.28	0.00	0.00	Vehicle	Vehicle	-----	-105.54	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	-----	-----	**20.48**	**20.48**
	L_{25} - L_{26}	-136.32	-27.75	22.18			0.90	1.17	23.34	-29.19	0.00	0.00	Vehicle	Vehicle	-----	-215.17	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	-----	-----	**14.98**	**14.98**
	L_{26} - L_{27}	-217.71	-28.20	13.33			0.90	1.17	14.02	-29.67	0.00	0.00	Vehicle	Vehicle	-----	-321.60	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	-----	-----	**17.18**	**17.18**
	L_{27} - L_{28}	-296.28	-29.24	-0.71			0.90	1.17	-0.74	-30.76	0.00	0.00	Vehicle	Vehicle	-----	-425.15	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	-----	-----	**24.42**	**24.42**
	L_{28} - L_{29}	-364.24	-26.82	-16.82			0.90	1.17	-17.70	-28.22	0.00	0.00	Vehicle	Vehicle	-----	-510.19	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**32.29**	**32.29**
	L_{29} - L_{30}	-418.31	5.52	-11.03			0.90	1.17	5.81	-11.60	0.00	0.00	Vehicle	Vehicle	-----	-558.88	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	-----	-----	**94.53**	**94.53**
	L_{30} - L_{31}	-350.66	-13.68	10.23			0.90	1.18	10.89	-14.56	0.00	0.00	Vehicle	Vehicle	-----	-474.79	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	-----	-----	**79.95**	**79.95**
	L_{31} - L_{32}	-275.63	-43.81	-7.76			0.90	1.18	-8.27	-46.65	0.00	0.00	Vehicle	Vehicle	-----	-418.97	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	-----	-----	**21.42**	**21.42**
	L_{32} - L_{33}	-178.96	-4.89	11.26	

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: 2F1 **Condition:** As-Built

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

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

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

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

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Verticals																																														
Structure 1	U$_0$ - L$_0$	-77.20	7.46	-46.00			0.90	1.24	8.30	-51.21	0.00	0.00	Vehicle	Vehicle	-----	-166.94	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	-----	-----	-----	-----	-----	5.22	5.22
	U$_1$ - L$_1$	-33.88	6.71	-31.68			0.90	1.24	7.47	-35.26	0.00	0.00	Vehicle	Vehicle	-----	-89.89	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	-----	-----	-----	-----	-----	9.02	9.02
	U$_2$ - L$_2$	10.41	6.32	-24.09			0.90	1.24	7.03	-26.82	0.00	0.00	Vehicle	Vehicle	22.67	-21.34	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	-----	-----	-----	59.33	59.33	13.51	13.51
	U$_3$ - L$_3$	44.37	3.23	-13.86			0.90	1.24	3.59	-15.43	0.00	0.00	Vehicle	Vehicle	62.36	-----	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	-----	-----	-----	-----	-----	106.63	106.63	-----	-----
	U$_4$ - L$_4$	-16.71	-14.25	-0.04			0.90	1.24	-0.04	-15.87	0.00	0.00	Vehicle	Vehicle	-----	-42.35	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	20.99	20.99
	U$_5$ - L$_5$	-109.52	-38.91	2.30			0.90	1.24	2.56	-43.31	0.00	0.00	Vehicle	Vehicle	-----	-198.68	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	7.29	7.29
	U$_6$ - L$_6$	-143.61	-50.99	-1.25			0.90	1.24	-1.39	-56.76	0.00	0.00	Vehicle	Vehicle	-----	-260.48	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	-----	-----	-----	-----	-----	6.42	6.42
	U$_7$ - L$_7$	-142.76	-52.03	1.34			0.90	1.24	1.49	-57.93	0.00	0.00	Vehicle	Vehicle	-----	-260.89	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	-----	-----	-----	-----	-----	5.48	5.48
	U$_8$ - L$_8$	-391.96	-54.35	-50.01			0.90	1.24	-55.67	-60.51	0.00	0.00	Vehicle	Vehicle	-----	-588.21	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	-----	-----	-----	-----	-----	11.13	11.13
	U$_9$ - L$_9$	-223.26	4.64	-40.82			0.90	1.20	5.01	-44.01	0.00	0.00	Vehicle	Vehicle	-----	-347.45	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	-----	-----	-----	-----	-----	9.59	9.59
	U$_{10}$ - L$_{10}$	-225.85	2.25	-41.75			0.90	1.20	2.42	-45.02	0.00	0.00	Vehicle	Vehicle	-----	-352.13	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	-----	-----	-----	-----	-----	11.48	11.48
	U$_{11}$ - L$_{11}$	-198.80	-3.28	-41.56			0.90	1.20	-3.53	-44.81	0.00	0.00	Vehicle	Vehicle	-----	-316.70	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	-----	-----	-----	-----	-----	9.88	9.88
	U$_{12}$ - L$_{12}$	-154.81	4.39	-34.13			0.90	1.20	4.74	-36.80	0.00	0.00	Vehicle	Vehicle	-----	-249.09	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	9.60	12.00	Pass	-----	-----	-----	-----	-----	10.26	10.26
	U$_{13}$ - L$_{13}$	-109.06	10.64	-30.86			0.90	1.20	11.47	-33.27	0.00	0.00	Vehicle	Vehicle	-----	-165.03	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	-----	-----	-----	-----	-----	8.16	8.16
	U$_{14}$ - L$_{14}$	-12.31	-9.17	4.88			0.90	1.20	-7.41	-9.80	0.00	0.00	Vehicle	Vehicle	-----	-28.86	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	-----	-----	-----	-----	-----	33.61	33.61
	U$_{15}$ - L$_{15}$	-5.62	-24.58	14.70			0.90	1.20	15.85	-26.51	0.00	0.00	Vehicle	Vehicle	13.30	-41.76	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	-----	-----	-----	27.34	27.34	12.74	12.74
	U$_{16}$ - L$_{16}$	-51.73	-34.13	10.55			0.90	1.20	11.37	-36.80	0.00	0.00	Vehicle	Vehicle	-----	-115.09	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	-----	-----	-----	-----	-----	7.87	7.87
	U$_{17}$ - L$_{17}$	-127.32	-43.67	5.63			0.90	1.20	6.07	-47.08	0.00	0.00	Vehicle	Vehicle	-----	-226.71	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	-----	-----	-----	-----	-----	6.03	6.03
	U$_{18}$ - L$_{18}$	-159.94	-46.30	5.20			0.90	1.20	5.60	-49.92	0.00	0.00	Vehicle	Vehicle	-----	-272.82	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	7.32	7.32
	U$_{19}$ - L$_{19}$	-191.17	-53.45	4.39			0.90	1.20	4.74	-57.63	0.00	0.00	Vehicle	Vehicle	-----	-323.43	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$_{20}$	-212.33	-52.75	4.40			0.90	1.20	4.74	-56.88	0.00	0.00	Vehicle	Vehicle	-----	-349.97	0.00	30.63	30.6305	1010.81	131.71	20.3229	2.8427	64.34	29.06	-756.66	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.50	6.50
Structure 2	U$_0$ - L$_0$	-206.69	5.48	-54.77			0.90	1.18	5.83	-58.31	0.00	0.00	Vehicle	Vehicle	-----	-344.50	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	-----	-----	-----	-----	-----	7.47	7.47
	U$_1$ - L$_1$	-188.76	5.63	-42.99			0.90	1.18	5.99	-45.78	0.00	0.00	Vehicle	Vehicle	-----	-304.90	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	-----	-----	-----	-----	-----	10.57	10.57
	U$_2$ - L$_2$	-155.92	5.93	-41.17			0.90	1.18	6.32	-43.84	0.00	0.00	Vehicle	Vehicle	-----	-259.69	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	9.55	9.55
	U$_3$ - L$_3$	-134.58	5.72	-40.37			0.90	1.18	7.16	-42.98	0.00	0.00	Vehicle	Vehicle	-----	-230.83	0.00	22.75	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	-----	-----	-----	-----	-----	7.38	7.38
	U$_4$ - L$_4$	-64.49	8.16	-29.76			0.90	1.18	8.68	-31.68	0.00	0.00	Vehicle	Vehicle	-----	-125.03	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	-----	-----	-----	-----	-----	8.67	8.67
	U$_5$ - L$_5$	-19.94	14.93	-27.22			0.90	1.18	15.90	-28.99	0.00	0.00	Vehicle	Vehicle	-----	-63.60	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	11.06	11.06
	U$_6$ - L$_6$	40.08	21.02	-20.04			0.90	1.18	22.37	-21.34	0.00	0.00	Vehicle	Vehicle	81.19	-----	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	17.32	17.32	-----	-----
	U$_7$ - L$_7$	-26.04	-4.75	-0.99			0.90	1.18	-1.06	-5.05	0.00	0.00	Vehicle	Vehicle	-----	-40.42	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	-----	-----	-----	-----	-----	62.25	62.25
	U$_8$ - L$_8$	-125.25	-36.14	10.89			0.90	1.18	11.60	-38.48	0.00	0.00	Vehicle	Vehicle	-----	-212.84	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	-----	-----	-----	-----	-----	10.53	10.53
	U$_9$ - L$_9$	-174.53	-43.39	4.21			0.90	1.18	4.48	-46.19	0.00	0.00	Vehicle	Vehicle	-----	-286.94	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	11.18	11.18
	U$_{10}$ - L$_{10}$	-202.66	-46.10	1.87			0.90	1.18	1.99	-49.08	0.00	0.00	Vehicle	Vehicle	-----	-327.26	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	-----	-----	-----	-----	-----	11.73	11.73
	U$_{11}$ - L$_{11}$	-229.53	-54.03	1.23			0.90	1.18	1.31	-57.53	0.00	0.00	Vehicle	Vehicle	-----	-373.17	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	9.30	9.30
	U$_{12}$ - L$_{12}$	-250.85	-54.65	1.31			0.90	1.18	1.40	-58.19	0.00	0.00	Vehicle	Vehicle	-----	-401.74	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	9.47	9.47
	U$_{13}$ - L$_{13}$	-223.32	-55.63	5.46			0.90	1.18	5.81	-59.23	0.00	0.00	Vehicle	Vehicle	-----	-367.32	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	-----	-----	-----	-----	-----	7.88	7.88
	U$_{14}$ - L$_{14}$	-343.31	-48.43	41.52			0.90	1.18	-44.20	-51.57	0.00	0.00	Vehicle	Vehicle	-----	-513.34	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	13.74	13.74
	U$_{15}$ - L$_{15}$	-123.14	5.49	-42.87			0.90	1.17	5.78	-45.10	0.00	0.00	Vehicle	Vehicle	-----	-218.72	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	12.57	12.57
	U$_{16}$ - L$_{16}$	-156.70	4.20	-41.30			0.90	1.17	4.42	-43.45	0.00	0.00	Vehicle	Vehicle	-----	-260.19	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	-----	-----	-----	-----	-----	11.72	11.72
	U$_{17}$ - L$_{17}$	-147.91	4.11	-43.01			0.90	1.17	4.32	-45.25	0.00	0.00	Vehicle	Vehicle	-----	-251.11	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	-----	-----	-----	-----	-----	10.51	10.51
	U$_{18}$ - L$_{18}$	-142.22	5.16	-42.37			0.90	1.17	5.42	-44.58	0.00	0.00	Vehicle	Vehicle	-----	-242.84	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	-----	-----	-----	-----	-----	9.76	9.76
	U$_{19}$ - L$_{19}$	-111.48	5.76	-37.49			0.90	1.17	6.06	-39.44	0.00	0.00	Vehicle	Vehicle	-----	-196.20	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	-----	-----	-----	-----	-----	10.14	10.14
	U$_{20}$ - L$_{20}$	-76.55	10.83	-32.87			0.90	1.17	11.40	-34.58	0.00	0.00	Vehicle	Vehicle	-----	-144.47	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	-----	-----	-----	-----	-----	8.64	8.64
	U$_{21}$ - L$_{21}$	-44.31	13.29	-29.30			0.90	1.17	13.98	-30.83	0.00	0.00	Vehicle	Vehicle	-----	-97.68	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	-----	-----	-----	-----	-----	9.61	9.61
	U$_{22}$ - L$_{22}$	-21.25	-3.97	-0.38			0.90	1.17	-0.40	-4.18	0.00	0.00	Vehicle	Vehicle	-----	-33.06	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	-----	-----	-----	-----	-----	76.69	76.69
	U$_{23}$ - L$_{23}$	-39.07	-29.15	15.62			0.90	1.17	16.43	-30.67	0.00	0.00	Vehicle	Vehicle	-----	-90.66	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	-----	-----	-----	-----	-----	9.83	9.83
	U$_{24}$ - L$_{24}$	-74.84	-33.92	10.47			0.90	1.17	11.02	-35.69	0.00	0.00	Vehicle	Vehicle	-----	-143.68	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	-----	-----	-----	-----	-----	8.42	8.42
	U$_{25}$ - L$_{25}$	-103.27	-44.44	7.04			0.90	1.17	7.41	-46.75	0.00	0.00	Vehicle	Vehicle	-----	-195.03	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	-----	-----	-----	-----	-----	8.73	8.73
	U$_{26}$ - L$_{26}$	-120.22	-46.95	6.65			0.90	1.17	6.99	-49.40	0.00	0.00	Vehicle	Vehicle	-----	-220.50	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	-----	-----	-----	-----	-----	9.25	9.25
	U$_{27}$ - L$_{27}$	-123.93	-48.98	5.49			0.90	1.17	5.77	-51.53	0.00	0.00	Vehicle	Vehicle	-----	-228.10	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	-----	-----	-----	-----	-----	9.69	9.69
	U$_{28}$ - L$_{28}$	-135.60	-50.18	4.99			0.90	1.17	5.25	-52.79	0.00	0.00	Vehicle	Vehicle	-----	-244.90	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	-----	-----	-----	-----	-----	10.05	10.05
	U$_{29}$ - L$_{29}$	-116.87	-51.70	2.92			0.90	1.17	3.07	-54.40	0.00	0.00	Vehicle	Vehicle	-----	-222.65	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	-----	-----	-----	-----	-----	10.54	10.54
	U$_{30}$ - L$_{30}$	-262.02	-43.92	-41.56			0.90	1.18	-44.25	-46.76	0.00	0.00	Vehicle	Vehicle	-----	-401.41	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	-----	-----	-----	-----	-----	16.89	16.89
	U$_{31}$ - L$_{31}$	-156.38	6.90	-40.31			0.90	1.18	7.35	-42.91	0.00	0.00	Vehicle	Vehicle	-----	-259.08	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	-----	-----	-----	-----	-----	12.44	12.44
	U$_{32}$ - L$_{32}$	-185.51	4.87	-45.73			0.90	1.18	5.18	-48.69	0.00	0.00	Vehicle	Vehicle	-----	-304.45	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----

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: 2F1 **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
North Truss - Diagonals	Structure 1	U$_1$ - L$_1$	87.33	-9.50	38.96			0.90	1.24	43.37	-10.58	0.00	0.00	Vehicle	Vehicle	169.91	-----	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	-----	-----	-----	-----	-----	**11.51**	**11.51**	-----	-----
		U$_1$ - L$_2$	23.35	-10.46	32.78			0.90	1.24	36.50	-11.64	0.00	0.00	Vehicle	Vehicle	77.79	-----	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	-----	-----	-----	-----	-----	**11.08**	**11.08**	-----	-----
		U$_2$ - L$_3$	-37.85	-10.17	27.07			0.90	1.24	30.14	-11.32	0.00	0.00	Vehicle	Vehicle	-----	-63.92	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**26.18**	**26.18**
		U$_3$ - L$_4$	-92.19	-9.84	2.34			0.90	1.24	2.60	-10.95	0.00	0.00	Vehicle	Vehicle	-----	-134.09	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	-----	-----	-----	-----	-----	**22.30**	**22.30**
		U$_3$ - L$_4$	143.37	6.34	43.46			0.90	1.24	48.38	7.05	0.00	0.00	Vehicle	Vehicle	249.27	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**7.88**	**7.88**	-----	-----
		U$_5$ - L$_5$	177.90	5.21	38.57			0.90	1.24	42.94	5.80	0.00	0.00	Vehicle	Vehicle	287.08	-----	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	-----	-----	-----	-----	-----	**11.01**	**11.01**	-----	-----
		U$_5$ - L$_6$	184.42	0.61	51.75			0.90	1.24	57.61	0.68	0.00	0.00	Vehicle	Vehicle	314.64	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.09**	**8.09**	-----	-----
		U$_6$ - L$_7$	180.02	-1.27	58.07			0.90	1.24	64.65	-1.42	0.00	0.00	Vehicle	Vehicle	318.07	-----	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	-----	-----	-----	-----	-----	**7.28**	**7.28**	-----	-----
		U$_8$ - L$_9$	268.98	-0.24	49.33			0.90	1.20	53.19	-0.26	0.00	0.00	Vehicle	Vehicle	418.81	-----	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	-----	-----	-----	-----	-----	**13.03**	**13.03**	-----	-----
		U$_9$ - L$_{10}$	278.85	-5.05	40.04			0.90	1.20	43.17	-5.44	0.00	0.00	Vehicle	Vehicle	418.63	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**15.83**	**15.83**	-----	-----
		U$_{10}$ - L$_{11}$	285.04	5.61	58.00			0.90	1.20	62.54	6.05	0.00	0.00	Vehicle	Vehicle	451.85	-----	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	-----	-----	-----	-----	-----	**10.00**	**10.00**	-----	-----
		U$_{11}$ - L$_{12}$	250.60	-1.32	47.84			0.90	1.20	51.58	-1.42	0.00	0.00	Vehicle	Vehicle	392.82	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**10.22**	**10.22**	-----	-----
		U$_{12}$ - L$_{13}$	189.65	-7.66	48.57			0.90	1.20	52.37	-8.25	0.00	0.00	Vehicle	Vehicle	314.63	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**8.43**	**8.43**	-----	-----
		U$_{13}$ - L$_{14}$	123.32	-15.06	40.84			0.90	1.20	44.03	-16.23	0.00	0.00	Vehicle	Vehicle	217.55	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**6.91**	**6.91**	-----	-----
		U$_{13}$ - L$_{14}$	-24.41	-23.52	8.74			0.90	1.20	9.43	-25.36	0.00	0.00	Vehicle	Vehicle	-----	-64.70	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	-----	-----	-----	-----	-----	**11.99**	**11.99**
		U$_{14}$ - L$_{15}$	48.53	-16.05	40.07			0.90	1.20	43.20	-17.31	0.00	0.00	Vehicle	Vehicle	119.26	-----	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**8.78**	**8.78**	-----	-----
		U$_{15}$ - L$_{16}$	146.59	-7.70	44.51			0.90	1.20	47.99	-8.31	0.00	0.00	Vehicle	Vehicle	252.95	-----	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	-----	-----	-----	-----	-----	**7.88**	**7.88**	-----	-----
		U$_{16}$ - L$_{17}$	182.46	-6.63	52.31			0.90	1.20	56.40	-7.15	0.00	0.00	Vehicle	Vehicle	310.52	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.30**	**8.30**	-----	-----
		U$_{19}$ - L$_{18}$	223.82	-5.55	59.57			0.90	1.20	64.23	-5.98	0.00	0.00	Vehicle	Vehicle	374.47	-----	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	-----	-----	-----	-----	-----	**7.57**	**7.57**	-----	-----
		U$_{20}$ - L$_{19}$	232.72	-2.31	49.75			0.90	1.20	53.64	-2.49	0.00	0.00	Vehicle	Vehicle	372.27	-----	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	-----	-----	-----	-----	-----	**8.90**	**8.90**	-----	-----
	Structure 2	U$_1$ - L$_1$	213.54	-5.80	27.73			0.90	1.18	29.53	-6.17	0.00	0.00	Vehicle	Vehicle	315.98	-----	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	-----	-----	-----	-----	-----	**19.10**	**19.10**	-----	-----
		U$_1$ - L$_2$	200.48	-6.87	51.85			0.90	1.18	55.21	-7.31	0.00	0.00	Vehicle	Vehicle	332.40	-----	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	-----	-----	-----	-----	-----	**10.45**	**10.45**	-----	-----
		U$_3$ - L$_3$	172.81	-7.68	51.36			0.90	1.18	54.68	-8.18	0.00	0.00	Vehicle	Vehicle	295.74	-----	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	-----	-----	-----	-----	-----	**8.74**	**8.74**	-----	-----
		U$_3$ - L$_4$	147.16	-9.03	39.96			0.90	1.18	42.55	-9.61	0.00	0.00	Vehicle	Vehicle	246.63	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**10.10**	**10.10**	-----	-----
		U$_5$ - L$_5$	49.10	-14.46	38.96			0.90	1.18	41.48	-15.39	0.00	0.00	Vehicle	Vehicle	117.76	-----	0.00	16.85	16.8486	556.00	131.71	15.3992	1.9682	70.41	28.25	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**9.13**	**9.13**	-----	-----
		U$_5$ - L$_6$	2.96	-19.52	35.09			0.90	1.18	37.36	-20.79	0.00	0.00	Vehicle	Vehicle	52.43	-23.17	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	-----	-----	-----	-----	-----	**11.37**	**15.81**
		U$_6$ - L$_7$	-85.74	-33.30	12.43			0.90	1.18	13.23	-35.45	0.00	0.00	Vehicle	Vehicle	-----	-157.55	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	-----	-----	-----	-----	-----	**7.72**	**7.72**
		U$_8$ - L$_8$	140.30	-16.42	27.07			0.90	1.18	28.82	-17.48	0.00	0.00	Vehicle	Vehicle	219.85	-----	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	-----	-----	-----	-----	-----	**16.06**	**16.06**	-----	-----
		U$_8$ - L$_9$	204.22	-6.22	44.59			0.90	1.18	47.47	-6.62	0.00	0.00	Vehicle	Vehicle	327.20	-----	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	-----	-----	-----	-----	-----	**10.66**	**10.66**	-----	-----
		U$_{10}$ - L$_9$	234.87	4.07	52.87			0.90	1.18	56.29	4.33	0.00	0.00	Vehicle	Vehicle	378.51	-----	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	-----	-----	-----	-----	-----	**9.64**	**9.64**	-----	-----
		U$_{11}$ - L$_{10}$	263.10	-0.36	61.85			0.90	1.18	65.85	-0.39	0.00	0.00	Vehicle	Vehicle	427.63	-----	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	-----	-----	-----	-----	-----	**8.83**	**8.83**	-----	-----
		U$_{11}$ - L$_{11}$	274.02	-0.91	53.05			0.90	1.18	56.48	-0.97	0.00	0.00	Vehicle	Vehicle	429.64	-----	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	-----	-----	-----	-----	-----	**10.10**	**10.10**	-----	-----
		U$_{12}$ - L$_{12}$	254.94	-5.92	56.60			0.90	1.18	60.26	-6.30	0.00	0.00	Vehicle	Vehicle	409.76	-----	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	-----	-----	-----	-----	-----	**8.67**	**8.67**	-----	-----
		U$_{13}$ - L$_{13}$	217.71	-5.08	52.56			0.90	1.18	55.96	-5.41	0.00	0.00	Vehicle	Vehicle	355.77	-----	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	-----	-----	-----	-----	-----	**10.00**	**10.00**	-----	-----
		U$_{13}$ - L$_{15}$	110.05	-4.90	44.27			0.90	1.17	46.58	-5.15	0.00	0.00	Vehicle	Vehicle	203.61	-----	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	-----	-----	-----	-----	-----	**11.61**	**11.61**	-----	-----
		U$_{15}$ - L$_{16}$	132.30	-6.12	40.68			0.90	1.17	42.80	-6.44	0.00	0.00	Vehicle	Vehicle	227.62	-----	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	-----	-----	-----	-----	-----	**12.11**	**12.11**	-----	-----
		U$_{17}$ - L$_{17}$	172.89	-3.60	50.96			0.90	1.17	53.62	-3.79	0.00	0.00	Vehicle	Vehicle	294.46	-----	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	-----	-----	-----	-----	-----	**10.02**	**10.02**	-----	-----
		U$_{17}$ - L$_{18}$	160.19	-3.37	52.87			0.90	1.17	55.63	-3.54	0.00	0.00	Vehicle	Vehicle	280.56	-----	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	-----	-----	-----	-----	-----	**8.82**	**8.82**	-----	-----
		U$_{19}$ - L$_{19}$	152.35	-6.72	43.43			0.90	1.17	45.69	-7.07	0.00	0.00	Vehicle	Vehicle	257.45	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**10.90**	**10.90**	-----	-----
		U$_{19}$ - L$_{20}$	120.69	-7.69	48.53			0.90	1.17	51.05	-8.09	0.00	0.00	Vehicle	Vehicle	223.26	-----	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	-----	-----	-----	-----	-----	**9.45**	**9.45**	-----	-----
		U$_{20}$ - L$_{21}$	76.08	-13.14	42.18			0.90	1.17	44.38	-13.82	0.00	0.00	Vehicle	Vehicle	156.60	-----	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	-----	-----	-----	-----	-----	**7.92**	**7.92**	-----	-----
		U$_{21}$ - L$_{22}$	31.46	-18.23	25.36			0.90	1.17	26.68	-19.18	0.00	0.00	Vehicle	Vehicle	75.57	-----	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	-----	-----	-----	-----	-----	**14.85**	**14.85**	-----	-----
		U$_{23}$ - L$_{23}$	24.30	-23.96	18.86			0.90	1.17	19.85	-25.21	0.00	0.00	Vehicle	Vehicle	57.39	-1.19	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	-----	-----	-----	-----	-----	**20.33**	**20.33**	**13.78**	**13.78**
		U$_{23}$ - L$_{23}$	72.26	-14.31	39.61			0.90	1.17	41.68	-15.05	0.00	0.00	Vehicle	Vehicle	146.12	-----	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	-----	-----	-----	-----	-----	**8.53**	**8.53**	-----	-----
		U$_{24}$ - L$_{24}$	112.13	-9.38	46.50			0.90	1.17	48.93	-9.87	0.00	0.00	Vehicle	Vehicle	209.37	-----	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	-----	-----	-----	-----	-----	**10.04**	**10.04**	-----	-----
		U$_{25}$ - L$_{25}$	127.84	-8.48	54.43			0.90	1.17	57.27	-8.92	0.00	0.00	Vehicle	Vehicle	240.65	-----	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	-----	-----	-----	-----	-----	**9.13**	**9.13**	-----	-----
		U$_{26}$ - L$_{26}$	132.67	-6.87	49.07			0.90	1.17	51.62	-7.23	0.00	0.00	Vehicle	Vehicle	239.57	-----	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	-----	-----	-----	-----	-----	**10.03**	**10.03**	-----	-----
		U$_{26}$ - L$_{27}$	137.94	-5.92	53.99			0.90	1.17	56.80	-6.23	0.00	0.00	Vehicle	Vehicle	253.16	-----	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	-----	-----	-----	-----	-----	**10.08**	**10.08**	-----	-----
		U$_{28}$ - L$_{28}$	102.75	-3.72	48.70			0.90	1.17	51.24	-3.92	0.00	0.00	Vehicle	Vehicle	200.19	-----	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	-----	-----	-----	-----	-----	**10.69**	**10.69**	-----	-----
		U$_{30}$ - L$_{31}$	140.07	-5.63	42.39			0.90	1.18	45.13	-6.00	0.00	0.00	Vehicle	Vehicle	240.75	-----	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	-----	-----	-----	-----	-----	**14.13**	**14.13**	-----	-----
		U$_{31}$ - L$_{32}$	167.39	-7.83	48.13			0.90	1.18	51.24	-8.34	0.00	0.00	Vehicle	Vehicle	284.23	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**11.91**	**11.91**	-----	-----
		U$_{32}$ - L$_{33}$	202.10	-4.61	55.33			0.90	1.18	58.91	-4.91	0.00	0.00	Vehicle	Vehicle	339.32	-----	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	-----	-----	-----	-----	-----	**10.90**	**10.90**	-----	-----
		U$_{33}$ - L$_{34}$	201.91	-4.56	48.09			0.90	1.18	51.20	-4.85	0.00	0.00	Vehicle	Vehicle	329.05	-----	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	-----	-----	-----	-----	-----	**12.55**	**12.55**	-----	-----
		U$_{35}$ - L$_{35}$	180.76	-1.09	54.52			0.90	1.18	58.05	-1.16	0.00	0.00	Vehicle	Vehicle	310.45	-----	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	-----	-----	-----	-----	-----	**10.28**	**10.28**	-----	-----
		U$_{36}$ - L$_{36}$	162.94	-6.30	54.00			0.90	1.18	57.49	-6.70	0.00	0.00	Vehicle	Vehicle	285.56	-----	0.00	27.98	27.9777	923.26	131.71	13.3125	2.8289	42.35	31.29	-744.20	16.

Maximum Axial with Moment Interaction Check

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

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

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 2F1
Condition: As-Built

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

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (I+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Upper Chord	Structure 1	U_0 - U_1	-52.64	-32.77	-32.08			0.75	1.24	-29.76	-30.40	0.00	0.00	Vehicle	Vehicle	-----	-107.95	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	**16.86**	**16.86**
		U_1 - U_2	-61.57	-13.02	-59.11			0.75	1.24	-12.08	-54.84	0.00	0.00	Vehicle	Vehicle	-----	-151.33	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	**9.19**	**9.19**
		U_2 - U_3	-26.99	21.50	-63.41			0.75	1.24	19.95	-58.83	0.00	0.00	Vehicle	Vehicle	-----	-111.56	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	-----	-----	**9.15**	**9.15**
		U_3 - U_4	32.92	27.22	-55.30			0.75	1.24	25.25	-51.31	0.00	0.00	Vehicle	Vehicle	75.63	-23.90	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	**25.27**	**25.27**	**11.66**	**11.66**
		U_4 - U_5	34.77	27.34	-69.25			0.75	1.24	25.36	-64.25	0.00	0.00	Vehicle	Vehicle	78.18	-38.32	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	**25.09**	**25.09**	**9.34**	**9.34**
		U_5 - U_6	124.13	33.01	-59.95			0.75	1.24	30.63	-55.61	0.00	0.00	Vehicle	Vehicle	201.19	-----	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	-----	-----	**17.86**	**17.86**	-----	-----
		U_6 - U_7	223.19	-14.44	-42.73			0.75	1.24	-13.39	-39.64	0.00	0.00	Vehicle	Vehicle	272.73	-----	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	30.11	-16.84			0.75	1.24	27.93	-15.62	0.00	0.00	Vehicle	Vehicle	467.61	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	**27.87**	**27.87**	-----	-----
		U_8 - U_9	267.61	-10.01	3.87			0.75	1.20	3.48	-8.99	0.00	0.00	Vehicle	Vehicle	352.42	-----	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	-----	-----	**192.89**	**192.89**	-----	-----
		U_9 - U_{10}	89.12	-14.67	-27.13			0.75	1.20	-13.18	-24.38	0.00	0.00	Vehicle	Vehicle	98.71	-----	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	-33.04	-53.43			0.75	1.20	-29.69	-48.00	0.00	0.00	Vehicle	Vehicle	-----	-162.25	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**10.85**	**10.85**
		U_{11} - U_{12}	-230.69	-54.93	-63.62			0.75	1.20	-49.36	-57.16	0.00	0.00	Vehicle	Vehicle	-----	-374.20	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	-----	-----	**10.18**	**10.18**
		U_{12} - U_{13}	-341.88	-67.90	-76.32			0.75	1.20	-61.01	-68.58	0.00	0.00	Vehicle	Vehicle	-----	-533.59	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	**11.60**	**11.60**
		U_{13} - U_{14}	-421.62	17.20	-94.26			0.75	1.20	15.46	-84.69	0.00	0.00	Vehicle	Vehicle	-----	-658.21	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	-----	-----	**10.70**	**10.70**
		U_{14} - U_{15}	-422.51	-70.82	-103.35			0.75	1.20	-63.63	-92.86	0.00	0.00	Vehicle	Vehicle	-----	-669.98	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**9.75**	**9.75**
		U_{15} - U_{16}	-439.94	-76.23	-107.24			0.75	1.20	-68.49	-96.36	0.00	0.00	Vehicle	Vehicle	-----	-697.19	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**9.21**	**9.21**
		U_{16} - U_{17}	-422.43	10.00	-96.93			0.75	1.20	8.99	-87.09	0.00	0.00	Vehicle	Vehicle	-----	-662.37	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**10.39**	**10.39**
		U_{17} - U_{18}	-340.94	-27.22	-82.10			0.75	1.20	-24.45	-73.77	0.00	0.00	Vehicle	Vehicle	-----	-539.11	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	-----	-----	**8.54**	**8.54**
		U_{18} - U_{19}	-247.15	4.08	-57.10			0.75	1.20	3.67	-51.30	0.00	0.00	Vehicle	Vehicle	-----	-387.98	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	-----	-----	**8.39**	**8.39**
		U_{19} - U_{20}	-131.71	2.69	-25.96			0.75	1.20	-2.42	-23.33	0.00	0.00	Vehicle	Vehicle	-----	-201.55	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	-----	-----	**23.40**	**23.40**
	Structure 2	U_0 - U_1	-131.51	-22.70	-22.53			0.75	1.18	-19.99	-20.14	0.00	0.00	Vehicle	Vehicle	-----	-197.14	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	-----	-----	**25.62**	**25.62**
		U_1 - U_2	-247.03	-1.42	-48.06			0.75	1.18	-1.26	-42.64	0.00	0.00	Vehicle	Vehicle	-----	-376.57	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	-----	-----	**12.77**	**12.77**
		U_2 - U_3	-347.15	-67.90	-71.67			0.75	1.18	-60.24	-63.59	0.00	0.00	Vehicle	Vehicle	-----	-533.96	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	4.00	0.69	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	**11.48**	**11.48**
		U_3 - U_4	-437.07	-78.63	-85.93			0.75	1.18	-69.77	-76.24	0.00	0.00	Vehicle	Vehicle	-----	-667.29	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	**11.86**	**11.86**
		U_4 - U_5	-468.70	-81.18	-89.89			0.75	1.18	-72.02	-79.75	0.00	0.00	Vehicle	Vehicle	-----	-712.99	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	-----	-----	**12.77**	**12.77**
		U_5 - U_6	-471.03	30.09	-102.50			0.75	1.18	26.69	-90.94	0.00	0.00	Vehicle	Vehicle	-----	-730.57	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	-----	-----	**11.17**	**11.17**
		U_6 - U_7	-414.41	33.52	-95.45			0.75	1.18	29.74	-84.68	0.00	0.00	Vehicle	Vehicle	-----	-648.82	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	-----	-----	**10.95**	**10.95**
		U_7 - U_8	-413.45	33.57	-100.75			0.75	1.18	29.78	-89.39	0.00	0.00	Vehicle	Vehicle	-----	-653.69	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	**10.38**	**10.38**
		U_8 - U_9	-321.98	36.68	-92.09			0.75	1.18	32.55	-81.70	0.00	0.00	Vehicle	Vehicle	-----	-524.79	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	**9.84**	**9.84**
		U_9 - U_{10}	-182.11	38.47	-79.15			0.75	1.18	34.13	-70.23	0.00	0.00	Vehicle	Vehicle	-----	-328.03	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	-----	-----	**10.03**	**10.03**
		U_{10} - U_{11}	-32.58	40.47	-62.84			0.75	1.18	35.91	-55.75	0.00	0.00	Vehicle	Vehicle	4.33	-114.83	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	**26.27**	**26.27**	**13.22**	**13.22**
		U_{11} - U_{12}	133.59	41.62	-45.02			0.75	1.18	36.93	-39.94	0.00	0.00	Vehicle	Vehicle	221.67	-----	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	-----	-----	**21.04**	**21.04**	-----	-----
		U_{12} - U_{13}	289.99	-3.85	-28.45			0.75	1.18	-3.41	-25.24	0.00	0.00	Vehicle	Vehicle	372.55	-----	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	34.98	-11.23			0.75	1.18	31.04	-9.97	0.00	0.00	Vehicle	Vehicle	605.54	-----	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	-----	-----	**36.39**	**36.39**	-----	-----
		U_{14} - U_{15}	474.45	-10.40	-9.58			0.75	1.17	-8.40	-9.12	0.00	0.00	Vehicle	Vehicle	605.86	-----	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	-----	-----	-----	-----	-----	-----
		U_{15} - U_{16}	383.28	23.90	-20.74			0.75	1.17	20.96	-18.19	0.00	0.00	Vehicle	Vehicle	525.50	-----	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	-----	-----	**42.43**	**42.43**	-----	-----
		U_{16} - U_{17}	279.57	-14.46	-29.41			0.75	1.17	-12.68	-25.79	0.00	0.00	Vehicle	Vehicle	346.96	-----	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	-----	-----	-----	-----	-----	-----
		U_{17} - U_{18}	172.63	-22.84	-46.98			0.75	1.17	-20.03	-41.19	0.00	0.00	Vehicle	Vehicle	198.38	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U_{18} - U_{19}	74.36	-40.45	-53.19			0.75	1.17	-35.46	-46.64	0.00	0.00	Vehicle	Vehicle	50.57	-----	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U_{19} - U_{20}	-10.01	24.63	-59.89			0.75	1.17	21.59	-52.51	0.00	0.00	Vehicle	Vehicle	15.05	-81.28	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	**38.46**	**38.46**	**13.00**	**13.00**
	Structure 3	U_0 - U_{21}	-62.06	-61.73	-75.77			0.75	1.17	-54.12	-66.43	0.00	0.00	Vehicle	Vehicle	-----	-167.03	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	-----	-----	**11.66**	**11.66**
		U_{21} - U_{22}	-88.74	17.95	-75.19			0.75	1.17	15.74	-65.92	0.00	0.00	Vehicle	Vehicle	-----	-201.05	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	-----	-----	**11.35**	**11.35**
		U_{22} - U_{23}	-88.92	-58.80	-81.75			0.75	1.17	-51.55	-71.68	0.00	0.00	Vehicle	Vehicle	-----	-208.77	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	-----	-----	**10.43**	**10.43**
		U_{23} - U_{24}	-76.67	-59.00	-83.11			0.75	1.17	-51.73	-72.86	0.00	0.00	Vehicle	Vehicle	-----	-194.39	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**10.43**	**10.43**
		U_{24} - U_{25}	-37.64	25.68	-76.98			0.75	1.17	22.51	-67.49	0.00	0.00	Vehicle	Vehicle	-----	-136.68	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	-----	-----	**9.71**	**9.71**
		U_{25} - U_{26}	37.23	28.69	-66.62			0.75	1.17	25.15	-58.41	0.00	0.00	Vehicle	Vehicle	81.09	-27.53	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	**28.99**	**28.99**	**11.72**	**11.72**
		U_{26} - U_{27}	128.02	31.02	-52.83			0.75	1.17	27.20	-46.32	0.00	0.00	Vehicle	Vehicle	201.78	-----	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	-----	-----	**23.47**	**23.47**	-----	-----
		U_{27} - U_{28}	233.68	33.82	-39.76			0.75	1.17	29.66	-34.86	0.00	0.00	Vehicle	Vehicle	342.34	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	7.11	-----	-----	**27.32**	**27.32**	-----	-----
		U_{28} - U_{29}	337.65	-9.38	-24.95			0.75	1.17	-8.23	-21.87	0.00	0.00	Vehicle	Vehicle	428.26	-----	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	29.35	-9.66			0.75	1.17	25.73	-8.47	0.00	0.00	Vehicle	Vehicle	601.67	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	**43.81**	**43.81**	-----	-----
		U_{30} - U_{31}	420.53	-7.85	19.98			0.75	1.18	17.73	-6.96	0.00	0.00	Vehicle	Vehicle	569.74	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	**64.52**	**64.52**	-----	-----
		U_{31} - U_{32}	300.69	33.12	-18.00			0.75	1.18	29.39	-15.97	0.00	0.00	Vehicle	Vehicle	429.10	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.

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: 2F1 **Condition:** As-Built

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

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

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

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Lower Chord	Structure 1	L$_0$- L$_1$	8.49	7.62	-1.62			0.75	1.24	7.07	-1.50	0.00	0.00	Vehicle	Vehicle	20.23	-----	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	-----	-----	**69.86**	**69.86**	-----	-----
		L$_1$ - L$_2$	50.81	32.81	31.35			0.75	1.24	30.43	29.08	0.00	0.00	Vehicle	Vehicle	105.62	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**14.84**	**14.84**	-----	-----
		L$_2$ - L$_3$	61.22	-15.51	70.79			0.75	1.24	65.68	-14.39	0.00	0.00	Vehicle	Vehicle	164.97	-----	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	-----	-----	**9.25**	**9.25**	-----	-----
		L$_3$ - L$_4$	25.70	41.69	72.87			0.75	1.24	67.61	38.68	0.00	0.00	Vehicle	Vehicle	121.30	-----	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	-----	-----	**9.51**	**9.51**	-----	-----
		L$_4$ - L$_5$	-118.45	-30.81	45.37			0.75	1.24	42.09	-28.58	0.00	0.00	Vehicle	Vehicle	-----	-191.14	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	-----	-----	**13.36**	**13.36**
		L$_5$ - L$_6$	-217.80	-37.35	28.25			0.75	1.24	26.21	-34.65	0.00	0.00	Vehicle	Vehicle	-----	-328.19	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	-----	-----	**12.75**	**12.75**
		L$_6$ - L$_7$	-320.36	-40.45	5.06			0.75	1.24	4.70	-37.53	0.00	0.00	Vehicle	Vehicle	-----	-465.25	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**16.64**	**16.64**
		L$_7$ - L$_8$	-417.18	-21.60	-13.47			0.75	1.24	-12.50	-20.03	0.00	0.00	Vehicle	Vehicle	-----	-568.38	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	-----	-----	**39.05**	**39.05**
		L$_8$ - L$_9$	-410.79	-35.89	-3.90			0.75	1.20	-3.51	-32.25	0.00	0.00	Vehicle	Vehicle	-----	-575.95	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	-----	-----	**24.46**	**24.46**
		L$_9$ - L$_{10}$	-247.75	-9.50	9.18			0.75	1.20	8.25	-8.53	0.00	0.00	Vehicle	Vehicle	-----	-333.17	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	-----	-----	**81.76**	**81.76**
		L$_{10}$ - L$_{11}$	-65.21	-31.15	32.46			0.75	1.20	29.16	-27.99	0.00	0.00	Vehicle	Vehicle	-----	-121.16	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	-----	-----	**15.55**	**15.55**
		L$_{11}$ - L$_{12}$	101.88	29.25	47.54			0.75	1.20	42.71	26.28	0.00	0.00	Vehicle	Vehicle	187.97	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**11.52**	**11.52**	-----	-----
		L$_{12}$ - L$_{13}$	264.09	29.69	71.85			0.75	1.20	64.56	26.68	0.00	0.00	Vehicle	Vehicle	427.24	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**11.01**	**11.01**	-----	-----
		L$_{13}$ - L$_{14}$	373.73	62.76	83.05			0.75	1.20	74.62	56.39	0.00	0.00	Vehicle	Vehicle	582.85	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	**12.52**	**12.52**	-----	-----
		L$_{14}$ - L$_{15}$	476.34	-12.63	84.27			0.75	1.20	75.71	-11.35	0.00	0.00	Vehicle	Vehicle	717.67	-----	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	-----	-----	**14.50**	**14.50**	-----	-----
		L$_{15}$ - L$_{16}$	459.97	-9.40	80.04			0.75	1.20	71.92	-8.45	0.00	0.00	Vehicle	Vehicle	691.45	-----	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	-----	-----	**15.50**	**15.50**	-----	-----
		L$_{16}$ - L$_{17}$	381.37	-6.25	67.90			0.75	1.20	61.00	-5.61	0.00	0.00	Vehicle	Vehicle	575.08	-----	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	-----	-----	**13.69**	**13.69**	-----	-----
		L$_{17}$ - L$_{18}$	288.98	-3.59	48.53			0.75	1.20	43.61	-3.22	0.00	0.00	Vehicle	Vehicle	432.36	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**13.63**	**13.63**	-----	-----
		L$_{18}$ - L$_{19}$	176.20	-1.90	20.63			0.75	1.20	18.54	-1.71	0.00	0.00	Vehicle	Vehicle	253.15	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**17.61**	**17.61**	-----	-----
		L$_{19}$ - L$_{20}$	69.74	-0.33	-5.27			0.75	1.20	-0.30	-4.73	0.00	0.00	Vehicle	Vehicle	90.28	-----	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	-----	-----	5.23	-----	-----	5.23	-----	-----	-----	-----	-----	-----
		L$_0$- L$_1$	24.59	-2.70	-0.59			0.75	1.18	-0.52	-2.40	0.00	0.00	Vehicle	Vehicle	31.29	-----	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	-----	-----	-----	-----
		L$_1$ - L$_2$	138.59	23.39	12.17			0.75	1.18	20.75	10.80	0.00	0.00	Vehicle	Vehicle	207.14	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**23.84**	**23.84**	-----	-----
		L$_2$ - L$_3$	252.83	39.36	51.29			0.75	1.18	45.51	34.92	0.00	0.00	Vehicle	Vehicle	387.84	-----	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	-----	-----	**15.89**	**15.89**	-----	-----
		L$_3$ - L$_4$	352.30	55.60	66.40			0.75	1.18	58.91	49.33	0.00	0.00	Vehicle	Vehicle	534.58	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**16.24**	**16.24**	-----	-----
		L$_4$ - L$_5$	447.17	71.76	78.52			0.75	1.18	69.67	63.67	0.00	0.00	Vehicle	Vehicle	671.89	-----	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	-----	-----	**17.26**	**17.26**	-----	-----
		L$_5$ - L$_6$	477.93	76.08	95.20			0.75	1.18	84.47	67.50	0.00	0.00	Vehicle	Vehicle	731.12	-----	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	-----	-----	**15.57**	**15.57**	-----	-----
		L$_6$ - L$_7$	482.68	-30.87	103.05			0.75	1.18	91.43	-27.39	0.00	0.00	Vehicle	Vehicle	746.34	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**14.60**	**14.60**	-----	-----
		L$_7$ - L$_8$	336.61	-37.34	76.54			0.75	1.18	67.91	-33.13	0.00	0.00	Vehicle	Vehicle	525.88	-----	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	-----	-----	**14.80**	**14.80**	-----	-----
		L$_8$ - L$_9$	196.05	-38.92	68.57			0.75	1.18	60.84	-34.53	0.00	0.00	Vehicle	Vehicle	333.96	-----	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	-----	-----	**14.85**	**14.85**	-----	-----
		L$_9$ - L$_{10}$	45.60	-40.70	51.40			0.75	1.18	45.60	-36.11	0.00	0.00	Vehicle	Vehicle	118.56	-----	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	-----	-----	6.72	-----	-----	6.72	-----	-----	**17.90**	**17.90**	-----	-----
	Structure 2	L$_{10}$ - L$_{11}$	-126.26	-41.34	29.32			0.75	1.18	26.01	-36.68	0.00	0.00	Vehicle	Vehicle	-----	-211.82	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	-----	-----	**14.29**	**14.29**
		L$_{11}$ - L$_{12}$	-284.87	-42.36	16.95			0.75	1.18	15.04	-37.58	0.00	0.00	Vehicle	Vehicle	-----	-419.18	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**17.19**	**17.19**
		L$_{12}$ - L$_{13}$	-433.79	-37.55	3.65			0.75	1.18	3.24	-33.32	0.00	0.00	Vehicle	Vehicle	-----	-607.24	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**25.26**	**25.26**
		L$_{13}$ - L$_{14}$	-552.65	-17.27	-14.20			0.75	1.18	-12.60	-15.32	0.00	0.00	Vehicle	Vehicle	-----	-738.36	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**62.81**	**62.81**
		L$_{14}$ - L$_{15}$	-573.48	-21.44	11.87			0.75	1.17	10.41	-18.80	0.00	0.00	Vehicle	Vehicle	-----	-769.95	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	-----	-----	**50.10**	**50.10**
		L$_{15}$ - L$_{16}$	-492.94	-31.41	4.64			0.75	1.17	4.07	-27.53	0.00	0.00	Vehicle	Vehicle	-----	-676.62	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**28.42**	**28.42**
		L$_{16}$ - L$_{17}$	-395.30	-2.86	17.12			0.75	1.17	15.01	-2.50	0.00	0.00	Vehicle	Vehicle	-----	-517.15	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**260.44**	**260.44**
		L$_{17}$ - L$_{18}$	-288.04	9.57	31.44			0.75	1.17	27.57	8.39	0.00	0.00	Vehicle	Vehicle	-----	-363.55	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	18.16	41.55			0.75	1.17	36.43	15.92	0.00	0.00	Vehicle	Vehicle	-----	-207.90	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	37.23	50.24			0.75	1.17	44.05	32.64	0.00	0.00	Vehicle	Vehicle	-----	-59.06	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	32.77	65.85			0.75	1.17	57.73	28.73	0.00	0.00	Vehicle	Vehicle	84.87	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**16.58**	**16.58**	-----	-----
		L$_{21}$ - L$_{22}$	59.07	48.51	71.35			0.75	1.17	62.56	42.53	0.00	0.00	Vehicle	Vehicle	158.11	-----	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	-----	-----	**14.48**	**14.48**	-----	-----
		L$_{22}$ - L$_{23}$	71.98	-12.26	66.49			0.75	1.17	58.29	-10.74	0.00	0.00	Vehicle	Vehicle	169.35	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**15.31**	**15.31**	-----	-----
		L$_{23}$ - L$_{24}$	33.55	-26.30	65.51			0.75	1.17	57.43	-23.06	0.00	0.00	Vehicle	Vehicle	118.27	-----	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	-----	-----	**16.21**	**16.21**	-----	-----
		L$_{24}$ - L$_{25}$	-45.09	-29.23	52.23			0.75	1.17	45.79	-25.62	0.00	0.00	Vehicle	Vehicle	0.92	-91.92	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	**15.81**	**15.81**	**20.63**	**20.63**
		L$_{25}$ - L$_{26}$	-134.94	-32.08	31.49			0.75	1.17	27.61	-28.12	0.00	0.00	Vehicle	Vehicle	-----	-211.98	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	-----	-----	**15.60**	**15.60**
		L$_{26}$ - L$_{27}$	-245.90	-32.95	22.31			0.75	1.17	19.56	-28.89	0.00	0.00	Vehicle	Vehicle	-----	-357.23	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**16.67**	**16.67**
		L$_{27}$ - L$_{28}$	-351.78	-34.51	9.05			0.75	1.17	7.93	-30.26	0.00	0.00	Vehicle	Vehicle	-----	-496.64	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**23.00**	**23.00**
		L$_{28}$ - L$_{29}$	-458.29	-33.09	-7.46			0.75	1.17	-6.54	-29.01	0.00	0.00	Vehicle	Vehicle	-----	-633.49	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	-----	-----	**28.17**	**28.17**
		L$_{29}$ - L$_{30}$	-542.18	-14.41	-13.13			0.75	1.17	-11.51	-12.63	0.00	0.00	Vehicle	Vehicle	-----	-721.26	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	-----	-----	**77.02**	**77.02**
		L$_{30}$ - L$_{31}$	-514.03	-28.45	-24.68			0.75	1.18	-21.90	-25.24	0.00	0.00	Vehicle	Vehicle	-----	-701.06	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	-----	-----	**39.64**	**39.64**
		L$_{31}$ - L$_{32}$	-411.21	-28.46	2.40			0.75	1.18	2.13	-25.25	0.00	0.00	Vehicle	Vehicle	-----	-567.40	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	-----	-----	**34.21**	**34.21**
		L$_{32}$ - L$_{33}$	-287.47	-1.21

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: 2F1 **Condition:** As-Built

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

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

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

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

Axial Force Rating

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capicity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Verticals	Structure 1	U_0 - L_0	-67.60	6.15	-54.73			0.75	1.24	5.71	-50.77	0.00	0.00	Vehicle	Vehicle	-----	-153.88	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	-----	-----	-----	-----	-----	5.45	5.45
		U_1 - L_1	-24.06	5.91	-33.50			0.75	1.24	5.48	-31.08	0.00	0.00	Vehicle	Vehicle	-----	-71.68	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	-----	-----	-----	-----	-----	10.55	10.55
		U_2 - L_2	12.88	-7.43	-23.64			0.75	1.24	-6.90	-21.93	0.00	0.00	Vehicle	Vehicle	7.77	-11.77	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	-----	-----	-----	-----	-----	16.64	16.64
		U_3 - L_3	37.35	10.98	-15.79			0.75	1.24	10.18	-14.65	0.00	0.00	Vehicle	Vehicle	61.79	-----	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	38.33	38.33	-----	-----
		U_4 - L_4	-15.53	-14.18	4.65			0.75	1.24	4.31	-13.16	0.00	0.00	Vehicle	Vehicle	-----	-37.30	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	-----	-----	-----	-----	-----	25.41	25.41
		U_5 - L_5	-92.52	-37.79	4.98			0.75	1.24	4.62	-35.06	0.00	0.00	Vehicle	Vehicle	-----	-165.85	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	-----	-----	-----	-----	-----	9.49	9.49
		U_6 - L_6	-117.01	-48.68	3.99			0.75	1.24	3.70	-45.16	0.00	0.00	Vehicle	Vehicle	-----	-210.82	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	8.66	8.66
		U_7 - L_7	-127.49	-55.46	0.27			0.75	1.24	0.25	-51.46	0.00	0.00	Vehicle	Vehicle	-----	-232.63	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	-----	-----	-----	-----	-----	6.47	6.47
		U_8 - L_8	-368.60	-66.25	-66.12			0.75	1.24	-61.34	-61.46	0.00	0.00	Vehicle	Vehicle	-----	-559.08	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	-----	-----	-----	-----	-----	11.34	11.34
		U_9 - L_9	-214.45	2.96	-50.15			0.75	1.20	2.66	-45.06	0.00	0.00	Vehicle	Vehicle	-----	-337.37	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	-----	-----	-----	-----	-----	9.56	9.56
		U_{10} - L_{10}	-198.57	2.71	-48.50			0.75	1.20	2.44	-43.58	0.00	0.00	Vehicle	Vehicle	-----	-314.79	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	-----	-----	-----	-----	-----	12.49	12.49
		U_{11} - L_{11}	-171.30	-0.82	-42.84			0.75	1.20	-0.73	-38.49	0.00	0.00	Vehicle	Vehicle	-----	-272.73	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	12.21	12.21
		U_{12} - L_{12}	-128.27	13.19	-36.05			0.75	1.20	11.85	-32.39	0.00	0.00	Vehicle	Vehicle	-----	-208.86	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	12.48	12.48
		U_{13} - L_{13}	-96.55	16.08	-31.33			0.75	1.20	14.45	-28.15	0.00	0.00	Vehicle	Vehicle	-----	-162.11	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	10.09	10.09
		U_{14} - L_{14}	-11.04	-2.97	-3.28			0.75	1.20	-2.67	-2.94	0.00	0.00	Vehicle	Vehicle	-----	-18.18	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	-----	-----	-----	-----	-----	113.41	113.41
		U_{15} - L_{15}	-2.54	-30.93	22.67			0.75	1.20	20.37	-27.79	0.00	0.00	Vehicle	Vehicle	23.18	-39.42	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	-----	-----	-----	-----	-----	21.12	21.12	12.26	12.26
		U_{16} - L_{16}	-31.31	-34.91	18.71			0.75	1.20	16.81	-31.37	0.00	0.00	Vehicle	Vehicle	-----	-81.49	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	-----	-----	-----	-----	-----	9.88	9.88
		U_{17} - L_{17}	-105.02	-42.66	8.14			0.75	1.20	7.32	-38.33	0.00	0.00	Vehicle	Vehicle	-----	-186.35	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	7.99	7.99
		U_{18} - L_{18}	-126.66	-49.95	2.73			0.75	1.20	2.45	-44.88	0.00	0.00	Vehicle	Vehicle	-----	-223.00	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	-----	-----	-----	-----	-----	8.88	8.88
		U_{19} - L_{19}	-166.54	-53.81	-3.09			0.75	1.20	-2.78	-48.35	0.00	0.00	Vehicle	Vehicle	-----	-279.36	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	-----	-----	-----	-----	-----	9.30	9.30
		U_{20} - L_{20}	-184.30	-64.14	-3.64			0.75	1.20	-3.27	-57.63	0.00	0.00	Vehicle	Vehicle	-----	-314.51	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	-----	-----	-----	-----	-----	6.90	6.90
	Structure 2	U_0 - L_0	-203.39	6.59	-49.44			0.75	1.18	5.84	-43.87	0.00	0.00	Vehicle	Vehicle	-----	-321.43	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	-----	-----	-----	-----	-----	10.01	10.01
		U_1 - L_1	-176.11	7.20	-48.58			0.75	1.18	6.38	-43.10	0.00	0.00	Vehicle	Vehicle	-----	-284.98	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	-----	-----	-----	-----	-----	11.52	11.52
		U_2 - L_2	-137.45	6.82	-41.34			0.75	1.18	6.05	-36.68	0.00	0.00	Vehicle	Vehicle	-----	-226.37	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	-----	-----	-----	-----	-----	11.91	11.91
		U_3 - L_3	-117.61	3.84	-41.20			0.75	1.18	3.41	-36.55	0.00	0.00	Vehicle	Vehicle	-----	-200.41	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	-----	-----	-----	-----	-----	9.15	9.15
		U_4 - L_4	-50.97	17.40	-31.66			0.75	1.18	15.44	-28.09	0.00	0.00	Vehicle	Vehicle	-----	-102.77	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	10.26	10.26
		U_5 - L_5	-13.79	20.94	-27.10			0.75	1.18	18.58	-24.04	0.00	0.00	Vehicle	Vehicle	6.24	-49.18	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	23.76	23.76	13.59	13.59
		U_6 - L_6	45.46	23.57	-23.00			0.75	1.18	20.91	-20.41	0.00	0.00	Vehicle	Vehicle	86.28	-----	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	-----	-----	-----	-----	-----	18.28	18.28	-----	-----
		U_7 - L_7	-22.33	2.04	1.53			0.75	1.18	1.81	1.36	0.00	0.00	Vehicle	Vehicle	-----	-27.27	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----
		U_8 - L_8	-120.06	-38.24	18.50			0.75	1.18	16.41	-33.93	0.00	0.00	Vehicle	Vehicle	-----	-200.19	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	-----	-----	-----	-----	-----	12.10	12.10
		U_9 - L_9	-177.00	-42.61	12.49			0.75	1.18	11.08	-37.80	0.00	0.00	Vehicle	Vehicle	-----	-279.25	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	-----	-----	-----	-----	-----	13.60	13.60
		U_{10} - L_{10}	-205.85	-49.11	11.39			0.75	1.18	10.10	-43.57	0.00	0.00	Vehicle	Vehicle	-----	-324.25	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	13.14	13.14
		U_{11} - L_{11}	-239.21	-53.41	5.99			0.75	1.18	5.31	-47.39	0.00	0.00	Vehicle	Vehicle	-----	-372.58	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	-----	-----	-----	-----	-----	11.09	11.09
		U_{12} - L_{12}	-257.92	-53.68	4.08			0.75	1.18	3.62	-47.63	0.00	0.00	Vehicle	Vehicle	-----	-397.22	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	-----	-----	-----	-----	-----	11.42	11.42
		U_{13} - L_{13}	-243.80	-61.12	3.44			0.75	1.18	3.05	-54.23	0.00	0.00	Vehicle	Vehicle	-----	-387.44	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	-----	-----	-----	-----	-----	8.23	8.23
		U_{14} - L_{14}	-420.84	-55.13	-54.55			0.75	1.18	-48.40	-48.91	0.00	0.00	Vehicle	Vehicle	-----	-610.68	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	-----	-----	-----	-----	-----	12.90	12.90
		U_{15} - L_{15}	-158.85	5.63	-56.25			0.75	1.17	4.94	-49.32	0.00	0.00	Vehicle	Vehicle	-----	-270.61	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	-----	-----	-----	-----	-----	10.77	10.77
		U_{16} - L_{16}	-174.03	1.23	-48.10			0.75	1.17	1.07	-42.17	0.00	0.00	Vehicle	Vehicle	-----	-281.06	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	-----	-----	-----	-----	-----	11.67	11.67
		U_{17} - L_{17}	-156.46	7.13	-47.81			0.75	1.17	6.25	-41.91	0.00	0.00	Vehicle	Vehicle	-----	-257.89	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	-----	-----	-----	-----	-----	11.14	11.14
		U_{18} - L_{18}	-142.20	5.63	-43.44			0.75	1.17	4.94	-38.09	0.00	0.00	Vehicle	Vehicle	-----	-234.38	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	11.42	11.42
		U_{19} - L_{19}	-113.66	13.43	-38.23			0.75	1.17	11.78	-33.51	0.00	0.00	Vehicle	Vehicle	-----	-191.33	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	-----	-----	-----	-----	-----	11.87	11.87
		U_{20} - L_{20}	-76.52	17.11	-32.45			0.75	1.17	15.00	-28.45	0.00	0.00	Vehicle	Vehicle	-----	-136.46	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	10.50	10.50
		U_{21} - L_{21}	-45.78	15.44	-30.13			0.75	1.17	13.54	-26.41	0.00	0.00	Vehicle	Vehicle	-----	-93.85	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	-----	-----	-----	-----	-----	11.16	11.16
		U_{22} - L_{22}	-17.71	4.29	3.54			0.75	1.17	3.76	3.11	0.00	0.00	Vehicle	Vehicle	-----	-18.99	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	-31.34	21.37			0.75	1.17	18.73	-27.47	0.00	0.00	Vehicle	Vehicle	-----	-75.58	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	-----	-----	-----	-----	-----	11.28	11.28
		U_{24} - L_{24}	-62.03	-32.44	17.09			0.75	1.17	14.98	-28.44	0.00	0.00	Vehicle	Vehicle	-----	-117.61	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	11.01	11.01
		U_{25} - L_{25}	-103.10	-43.79	14.02			0.75	1.17	12.29	-38.39	0.00	0.00	Vehicle	Vehicle	-----	-183.94	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	10.63	10.63
		U_{26} - L_{26}	-134.31	-47.53	10.47			0.75	1.17	9.18	-41.67	0.00	0.00	Vehicle	Vehicle	-----	-228.77	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	10.63	10.63
		U_{27} - L_{27}	-155.93	-48.93	6.09			0.75	1.17	5.34	-42.89	0.00	0.00	Vehicle	Vehicle	-----	-258.47	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	10.90	10.90
		U_{28} - L_{28}	-179.28	-54.89	1.86			0.75	1.17	1.63	-48.13	0.00	0.00	Vehicle	Vehicle	-----	-295.63	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	10.11	10.11
		U_{29} - L_{29}	-171.45	-56.72	2.64			0.75	1.17	2.32	-49.73	0.00	0.00	Vehicle	Vehicle	-----	-287.52	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	10.43	10.43
		U_{30} - L_{30}	-392.76	-56.28	-54.07			0.75	1.18	-47.98	-49.93	0.00	0.00	Vehicle	Vehicle	-----	-575.50	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	-----	-----	-----	-----	-----	13.20	13.20
		U_{31} - L_{31}	-203.21	5.62	-50.25			0.75	1.18	4.98	-44.58	0.00	0.00	Vehicle	Vehicle	-----	-322.13	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	-----	-----	-----	-----	-----	10.92	10.92
		U_{32} - L_{32}	-222.46	2.16	-53.49			0.75	1.18	1.92	-47.46	0.00	0.00	Vehicle	Vehicle	-----	-350.89	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	-----	-----	-----	-----	-----	12.21	12.21
		U_{33} - L_{33}	-211.56	5.71	-49.45			0.75	1.18	5.06

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: 2F1 **Condition:** As-Built

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

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

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

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Diagonals	Structure 1	U_0 - L_1	53.25	0.69	30.08			0.75	1.24	27.91	0.64	0.00	0.00	Vehicle	Vehicle	105.51	-----	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	-----	-----	-----	-----	-----	**19.10**	**19.10**	-----	-----
		U_1 - L_2	10.78	-0.04	45.38			0.75	1.24	42.11	-0.04	0.00	0.00	Vehicle	Vehicle	68.74	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**9.90**	**9.90**	-----	-----
		U_2 - L_3	-44.02	-7.66	20.33			0.75	1.24	18.86	-7.11	0.00	0.00	Vehicle	Vehicle	-----	-66.46	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	-----	-----	-----	-----	-----	**40.84**	**40.84**
		U_3 - L_4	-76.72	-26.08	-7.14			0.75	1.24	-6.63	-24.20	0.00	0.00	Vehicle	Vehicle	-----	-131.19	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**10.73**	**10.73**
		U_4 - L_5	118.39	-10.09	24.99			0.75	1.24	23.19	-9.36	0.00	0.00	Vehicle	Vehicle	184.05	-----	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	-----	-----	-----	-----	-----	**17.52**	**17.52**	-----	-----
		U_5 - L_6	137.53	-5.94	45.50			0.75	1.24	42.22	-5.51	0.00	0.00	Vehicle	Vehicle	233.66	-----	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	-----	-----	-----	-----	-----	**12.15**	**12.15**	-----	-----
		U_6 - L_7	157.34	1.22	50.70			0.75	1.24	47.04	1.14	0.00	0.00	Vehicle	Vehicle	265.69	-----	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	-----	-----	-----	-----	-----	**10.49**	**10.49**	-----	-----
		U_7 - L_8	149.30	3.12	60.34			0.75	1.24	55.98	2.89	0.00	0.00	Vehicle	Vehicle	266.86	-----	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	-----	-----	-----	-----	-----	**8.96**	**8.96**	-----	-----
		U_8 - L_9	249.09	1.54	63.48			0.75	1.20	57.03	1.38	0.00	0.00	Vehicle	Vehicle	397.96	-----	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	-----	-----	-----	-----	-----	**12.50**	**12.50**	-----	-----
		U_9 - L_{10}	260.26	-1.94	37.92			0.75	1.20	34.07	-1.74	0.00	0.00	Vehicle	Vehicle	382.63	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**20.60**	**20.60**	-----	-----
		U_{10} - L_{11}	236.30	4.13	60.04			0.75	1.20	53.95	3.71	0.00	0.00	Vehicle	Vehicle	377.32	-----	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	-----	-----	-----	-----	-----	**12.50**	**12.50**	-----	-----
		U_{11} - L_{12}	211.92	2.23	51.74			0.75	1.20	46.49	2.01	0.00	0.00	Vehicle	Vehicle	335.94	-----	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	-----	-----	-----	-----	-----	**12.17**	**12.17**	-----	-----
		U_{12} - L_{13}	151.66	-15.22	55.38			0.75	1.20	49.75	-13.68	0.00	0.00	Vehicle	Vehicle	261.84	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**9.64**	**9.64**	-----	-----
		U_{13} - L_{14}	108.60	-20.28	38.95			0.75	1.20	35.00	-18.22	0.00	0.00	Vehicle	Vehicle	186.68	-----	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	-----	-----	-----	-----	-----	**9.12**	**9.12**	-----	-----
		U_{14} - L_{14}	-24.45	-31.13	16.67			0.75	1.20	14.98	-27.97	0.00	0.00	Vehicle	Vehicle	-----	-68.15	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	-----	-----	-----	-----	-----	**10.86**	**10.86**
		U_{15} - L_{15}	23.99	-21.97	42.52			0.75	1.20	38.20	-19.74	0.00	0.00	Vehicle	Vehicle	80.86	-----	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	-----	-----	-----	-----	-----	**10.57**	**10.57**	-----	-----
		U_{17} - L_{16}	120.03	-13.35	46.47			0.75	1.20	41.75	-11.99	0.00	0.00	Vehicle	Vehicle	210.32	-----	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	-----	-----	-----	-----	-----	**9.69**	**9.69**	-----	-----
		U_{18} - L_{17}	144.79	-4.14	42.80			0.75	1.20	38.46	-3.72	0.00	0.00	Vehicle	Vehicle	238.22	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**13.15**	**13.15**	-----	-----
		U_{19} - L_{18}	193.05	1.39	46.08			0.75	1.20	41.40	1.25	0.00	0.00	Vehicle	Vehicle	304.79	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**12.49**	**12.49**	-----	-----
		U_{20} - L_{19}	193.51	3.10	35.46			0.75	1.20	31.86	2.78	0.00	0.00	Vehicle	Vehicle	292.99	-----	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	-----	-----	-----	-----	-----	**16.22**	**16.22**	-----	-----
	Structure 2	U_0 - L_1	202.41	-7.43	33.44			0.75	1.18	29.67	-6.59	0.00	0.00	Vehicle	Vehicle	301.70	-----	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	-----	-----	-----	-----	-----	**19.39**	**19.39**	-----	-----
		U_1 - L_2	190.86	-8.40	59.35			0.75	1.18	52.65	-7.46	0.00	0.00	Vehicle	Vehicle	316.57	-----	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	-----	-----	-----	-----	-----	**11.14**	**11.14**	-----	-----
		U_2 - L_3	155.85	-8.19	55.75			0.75	1.18	49.47	-7.27	0.00	0.00	Vehicle	Vehicle	266.90	-----	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	-----	-----	-----	-----	-----	**10.00**	**10.00**	-----	-----
		U_3 - L_4	134.05	-8.89	50.42			0.75	1.18	44.73	-7.89	0.00	0.00	Vehicle	Vehicle	232.42	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**9.90**	**9.90**	-----	-----
		U_4 - L_5	46.02	-18.58	43.96			0.75	1.18	39.00	-16.48	0.00	0.00	Vehicle	Vehicle	110.52	-----	0.00	16.85	16.8486	556.00	131.71	15.3958	1.9682	70.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**9.79**	**9.79**	-----	-----
		U_5 - L_6	3.45	-25.15	38.04			0.75	1.18	33.75	-22.31	0.00	0.00	Vehicle	Vehicle	48.35	-24.52	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	-----	-----	-----	-----	-----	**12.57**	**12.57**	**14.75**	**14.75**
		U_6 - L_7	-84.29	-36.32	19.64			0.75	1.18	17.42	-32.22	0.00	0.00	Vehicle	Vehicle	-----	-151.46	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	-----	-----	-----	-----	-----	**8.53**	**8.53**
		U_7 - L_7	137.30	-21.24	28.76			0.75	1.18	25.52	-18.84	0.00	0.00	Vehicle	Vehicle	211.66	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**18.26**	**18.26**	-----	-----
		U_8 - L_8	210.89	-14.35	48.48			0.75	1.18	43.01	-12.73	0.00	0.00	Vehicle	Vehicle	330.07	-----	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	-----	-----	-----	-----	-----	**11.61**	**11.61**	-----	-----
		U_{10} - L_9	236.36	-11.06	42.55			0.75	1.18	37.76	-9.81	0.00	0.00	Vehicle	Vehicle	356.35	-----	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	-----	-----	-----	-----	-----	**14.33**	**14.33**	-----	-----
		U_{11} - L_{10}	274.62	-7.03	45.05			0.75	1.18	39.97	-6.24	0.00	0.00	Vehicle	Vehicle	408.97	-----	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	-----	-----	-----	-----	-----	**14.26**	**14.26**	-----	-----
		U_{12} - L_{11}	281.06	-4.74	52.49			0.75	1.18	46.57	-4.21	0.00	0.00	Vehicle	Vehicle	425.93	-----	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	-----	-----	-----	-----	-----	**12.10**	**12.10**	-----	-----
		U_{13} - L_{12}	278.12	-3.70	56.00			0.75	1.18	49.69	-3.28	0.00	0.00	Vehicle	Vehicle	426.14	-----	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	-----	-----	-----	-----	-----	**10.05**	**10.05**	-----	-----
		U_{14} - L_{13}	235.45	-4.27	57.30			0.75	1.18	50.84	-3.79	0.00	0.00	Vehicle	Vehicle	372.17	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**10.66**	**10.66**	-----	-----
		U_{15} - L_{15}	143.03	-3.52	54.97			0.75	1.17	48.19	-3.09	0.00	0.00	Vehicle	Vehicle	248.59	-----	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	-----	-----	-----	-----	-----	**10.53**	**10.53**	-----	-----
		U_{16} - L_{16}	171.91	-5.57	54.77			0.75	1.17	48.02	-4.88	0.00	0.00	Vehicle	Vehicle	285.90	-----	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	-----	-----	-----	-----	-----	**9.97**	**9.97**	-----	-----
		U_{17} - L_{17}	181.04	-3.97	60.05			0.75	1.17	52.65	-3.48	0.00	0.00	Vehicle	Vehicle	303.79	-----	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	-----	-----	-----	-----	-----	**10.05**	**10.05**	-----	-----
		U_{18} - L_{18}	171.16	-7.29	55.48			0.75	1.17	48.64	-6.39	0.00	0.00	Vehicle	Vehicle	285.74	-----	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	-----	-----	-----	-----	-----	**9.86**	**9.86**	-----	-----
		U_{19} - L_{19}	150.64	-11.53	47.45			0.75	1.17	41.60	-10.11	0.00	0.00	Vehicle	Vehicle	249.91	-----	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	-----	-----	-----	-----	-----	**12.02**	**12.02**	-----	-----
		U_{20} - L_{20}	125.86	-14.99	51.94			0.75	1.17	45.54	-13.15	0.00	0.00	Vehicle	Vehicle	222.82	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**10.48**	**10.48**	-----	-----
		U_{26} - L_{21}	76.05	-16.86	46.70			0.75	1.17	40.94	-14.78	0.00	0.00	Vehicle	Vehicle	152.09	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**8.59**	**8.59**	-----	-----
		U_{21} - L_{22}	38.34	-27.09	28.74			0.75	1.17	25.20	-23.75	0.00	0.00	Vehicle	Vehicle	82.60	-----	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	-----	-----	-----	-----	-----	**15.45**	**15.45**	-----	-----
		U_{23} - L_{22}	18.02	-27.90	18.98			0.75	1.17	16.64	-24.46	0.00	0.00	Vehicle	Vehicle	45.06	-8.36	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	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**24.62**	**24.62**	**13.94**	**13.94**
		U_{24} - L_{23}	58.54	-18.05	39.74			0.75	1.17	34.85	-15.82	0.00	0.00	Vehicle	Vehicle	121.40	-----	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	-----	-----	-----	-----	-----	**10.59**	**10.59**	-----	-----
		U_{25} - L_{24}	114.92	-16.60	50.91			0.75	1.17	44.63	-14.55	0.00	0.00	Vehicle	Vehicle	207.42	-----	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	-----	-----	-----	-----	-----	**10.94**	**10.94**	-----	-----
		U_{26} - L_{25}	142.93	-10.80	41.56			0.75	1.17	36.44	-9.47	0.00	0.00	Vehicle	Vehicle	233.18	-----	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	-----	-----	-----	-----	-----	**13.93**	**13.93**	-----	-----
		U_{27} - L_{26}	173.71	-6.93	47.32			0.75	1.17	41.49	-6.08	0.00	0.00	Vehicle	Vehicle	279.76	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**11.50**	**11.50**	-----	-----
		U_{28} - L_{27}	186.49	-3.41	55.71			0.75	1.17	48.85	-2.99	0.00	0.00	Vehicle	Vehicle	305.93	-----	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	-----	-----	-----	-----	-----	**10.72**	**10.72**	-----	-----
		U_{29} - L_{28}	190.57	-3.23	46.70			0.75	1.17	40.95	-2.83	0.00	0.00	Vehicle	Vehicle	300.97	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**11.24**	**11.24**	-----	-----
		U_{30} - L_{29}	161.74	-3.81	51.33			0.75	1.17	45.01	-3.34	0.00	0.00	Vehicle	Vehicle	268.77	-----	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	-----	-----	-----	-----	-----	**10.86**	**10.86**	-----	-----
		U_{31} - L_{31}	191.49	-4.67	55.30			0.75	1.18	49.07	-4.15	0.00	0.00	Vehicle	Vehicle	312.72	-----	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	-----	-----	-----	-----	-----	**11.94**	**11.94**	-----	-----
		U_{32} - L_{32}	226.17	-6.11	59.94			0.75	1.18	53.19	-5.42	0.00	0.00	Vehicle	Vehicle	363.16	-----	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	-----	-----	-----	-----	-----	**10.37**	**10.37**	-----	-----
		U_{33} - L_{33}	243.26	-2.62	61.14			0.75	1.18	54.25	-2.33	0.00	0.00	Vehicle	Vehicle	386.76	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**11.08**	**11.08**	-----	-----
		U_{34} - L_{34}	238.98	-1.16	50.45			0.75	1.18	44.76	-1.03	0.00	0.00	Vehicle	Vehicle	368.86	-----	0.00	33.27	33.2657	1097.77	131.71	14.5729	2.8573	45.90	31.00	-876.43	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**13.53**	**13.53**	-----	-----
		U_{35} - L_{35}	222.10	-9.01	59.54			0.75	1.18	52.83	-8.00	0.00	0.00	Vehicle	Vehicle	357.41	-----	0.00	30.63	30.6305	1010.81	131.71	13.7604	2.8427	43.57

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 2F1 **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	-20.83	-19.05	-8.83	2.20	0.90	1.24	-21.21	-23.19	2.20	-8.83	Vehicle	Pedestrian	-----	-128.43	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	-----	-----	**15.57**	**15.57**
		U_1 - U_2	-86.66	-3.27	-35.00	6.00	-16.34	0.90	1.24	-3.64	-38.97	6.00	-16.34	Vehicle	Pedestrian	-----	-184.55	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	**8.65**	**8.65**
		U_2 - U_3	-48.28	19.44	-38.30	9.44	-19.05	0.90	1.24	21.64	-42.64	9.44	-19.05	Pedestrian	Pedestrian	-----	-142.96	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	-----	-----	**8.38**	**8.38**
		U_3 - U_4	36.43	25.58	-38.85	12.72	-17.47	0.90	1.24	28.47	-43.26	12.72	-17.47	Pedestrian	Pedestrian	100.91	-31.58	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	**15.41**	**15.41**	**9.91**	**9.91**
		U_4 - U_5	38.78	25.66	-39.01	12.78	-17.37	0.90	1.24	28.56	-43.42	12.78	-17.37	Pedestrian	Pedestrian	104.16	-28.62	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	**15.30**	**15.30**	**9.94**	**9.94**
		U_5 - U_6	154.43	29.25	-26.61	15.13	-12.03	0.90	1.24	32.57	-29.62	15.13	-12.03	Pedestrian	Pedestrian	262.76	-----	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	-----	-----	**10.83**	**10.83**	-----	-----
		U_6 - U_7	288.19	31.91	-12.68	17.11	-4.31	0.90	1.24	35.52	-14.11	17.11	-4.31	Pedestrian	Vehicle	443.07	-----	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	-----	-----	**9.81**	**9.81**	-----	-----
		U_7 - U_8	410.75	4.62	-3.30	18.24	4.35	0.90	1.24	5.14	-3.68	18.24	4.35	Pedestrian	Vehicle	564.36	-----	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	-----	-----	**29.91**	**29.91**	-----	-----
		U_8 - U_9	311.35	1.98	-1.53	19.05	0.00	0.90	1.20	2.13	-1.65	19.05	0.00	Pedestrian	Vehicle	432.28	-----	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	-----	-----	**29.63**	**29.63**	-----	-----
		U_9 - U_{10}	78.25	-5.39	-19.82	5.45	0.00	0.90	1.20	-5.81	-21.37	5.45	0.00	Vehicle	Vehicle	94.17	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U_{10} - U_{11}	-141.75	23.78	-32.92	-7.34	0.00	0.90	1.20	25.64	-35.50	0.00	-7.34	Vehicle	Vehicle	-----	-230.42	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	-----	-----	**12.84**	**12.84**
		U_{11} - U_{12}	-338.40	21.86	-46.04	9.77	-27.96	0.90	1.20	23.57	-49.64	9.77	-27.96	Pedestrian	Pedestrian	-----	-540.80	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	-----	-----	**6.11**	**6.11**
		U_{12} - U_{13}	-480.50	19.10	-65.55	8.23	-34.35	0.90	1.20	20.60	-70.67	8.23	-34.35	Pedestrian	Pedestrian	-----	-761.17	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	**6.26**	**6.26**
		U_{13} - U_{14}	-571.10	16.19	-69.37	6.68	-37.24	0.90	1.20	17.45	-74.79	6.68	-37.24	Pedestrian	Pedestrian	-----	-888.07	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_{14} - U_{15}	-571.52	16.11	-73.37	6.65	-37.25	0.90	1.20	17.37	-79.11	6.65	-37.25	Pedestrian	Pedestrian	-----	-894.24	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	-----	-----	**6.50**	**6.50**
		U_{15} - U_{16}	-582.34	12.55	-67.24	4.98	-36.14	0.90	1.20	13.53	-72.50	4.98	-36.14	Pedestrian	Pedestrian	-----	-898.28	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	-----	-----	**6.86**	**6.86**
		U_{16} - U_{17}	-539.92	5.56	-58.05	3.53	-31.87	0.90	1.20	5.99	-62.59	3.53	-31.87	Pedestrian	Pedestrian	-----	-824.69	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	-----	-----	**8.34**	**8.34**
		U_{17} - U_{18}	-422.72	6.04	-42.01	2.26	-25.07	0.90	1.20	6.51	-45.29	2.26	-25.07	Pedestrian	Pedestrian	-----	-641.00	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	8.00	12.00	Pass	-----	-----	**7.79**	**7.79**
		U_{18} - U_{19}	-286.53	3.40	-28.90	1.28	-16.97	0.90	1.20	3.67	-31.16	1.28	-16.97	Pedestrian	Pedestrian	-----	-435.07	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	-----	-----	**8.12**	**8.12**
		U_{19} - U_{20}	-140.97	0.93	-12.65	0.55	-8.68	0.90	1.20	1.01	-13.64	0.55	-8.68	Pedestrian	Pedestrian	-----	-212.27	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	-----	-----	**24.04**	**24.04**
	Structure 2	U_0 - U_1	-147.48	-11.94	-6.40	-4.88	0.36	0.90	1.18	-6.82	-12.72	0.36	-4.88	Vehicle	Pedestrian	-----	-214.60	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	-----	-----	**28.41**	**28.41**
		U_1 - U_2	-319.09	-3.23	-31.09	1.96	-13.36	0.90	1.18	-3.43	-33.10	1.96	-13.36	Vehicle	Pedestrian	-----	-475.22	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	-----	-----	**10.16**	**10.16**
		U_2 - U_3	-460.93	-50.36	-44.86	-20.95	3.77	0.90	1.18	-47.77	-53.62	3.77	-20.95	Vehicle	Pedestrian	-----	-696.14	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	4.00	0.69	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	**8.27**	**8.27**
		U_3 - U_4	-580.02	16.60	-57.65	5.92	-27.68	0.90	1.18	17.67	-61.38	5.92	-27.68	Pedestrian	Pedestrian	-----	-869.81	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	-----	-----	**8.55**	**8.55**
		U_4 - U_5	-616.47	20.90	-73.54	7.86	-31.35	0.90	1.18	22.25	-78.30	7.86	-31.35	Pedestrian	Pedestrian	-----	-943.96	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	-----	-----	**7.94**	**7.94**
		U_5 - U_6	-604.69	26.48	-73.72	9.87	-32.88	0.90	1.18	28.19	-78.49	9.87	-32.88	Pedestrian	Pedestrian	-----	-930.88	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	-----	-----	**7.92**	**7.92**
		U_6 - U_7	-514.75	30.53	-69.71	11.56	-31.23	0.90	1.18	32.51	-74.22	11.56	-31.23	Pedestrian	Pedestrian	-----	-806.27	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	-----	-----	**7.84**	**7.84**
		U_7 - U_8	-512.80	30.56	-69.05	11.57	-31.18	0.90	1.18	32.54	-73.52	11.57	-31.18	Pedestrian	Pedestrian	-----	-802.74	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	**7.91**	**7.91**
		U_8 - U_9	-373.48	33.52	-60.32	13.16	-27.41	0.90	1.18	35.69	-64.22	13.16	-27.41	Pedestrian	Pedestrian	-----	-604.64	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	-----	-----	**8.21**	**8.21**
		U_9 - U_{10}	-181.02	35.64	-45.59	14.25	-21.42	0.90	1.18	37.94	-48.54	14.25	-21.42	Pedestrian	Pedestrian	-----	-326.27	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	-----	-----	**10.08**	**10.08**
		U_{10} - U_{11}	26.21	36.89	-30.65	15.21	-14.40	0.90	1.18	39.27	-32.64	15.21	-14.40	Pedestrian	Pedestrian	104.90	-27.07	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	**16.23**	**16.23**	**16.92**	**16.92**
		U_{11} - U_{12}	237.41	36.07	-18.65	15.56	-6.85	0.90	1.18	38.41	-19.86	15.56	-6.85	Pedestrian	Pedestrian	378.78	-----	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	-----	-----	**12.48**	**12.48**	-----	-----
		U_{12} - U_{13}	435.92	35.34	-7.50	15.82	0.56	0.90	1.18	37.63	-7.99	15.82	0.56	Pedestrian	Vehicle	636.16	-----	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	-----	-----	**13.16**	**13.16**	-----	-----
		U_{13} - U_{14}	595.85	2.36	-1.61	15.74	6.92	0.90	1.18	2.51	-1.72	15.74	6.92	Pedestrian	Pedestrian	798.34	-----	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	-----	-----	**53.05**	**53.05**	-----	-----
		U_{14} - U_{15}	615.52	-0.46	0.39	24.37	0.00	0.90	1.17	0.41	-0.49	24.37	0.00	Pedestrian	Vehicle	832.39	-----	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	-----	-----	**38.29**	**38.29**	-----	-----
		U_{15} - U_{16}	486.12	15.74	-8.36	14.17	3.09	0.90	1.17	16.56	-8.80	14.17	3.09	Pedestrian	Vehicle	671.92	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	**25.58**	**25.58**	-----	-----
		U_{16} - U_{17}	339.23	-2.13	-21.71	11.57	0.00	0.90	1.17	-2.24	-22.85	11.57	0.00	Pedestrian	Vehicle	453.13	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{17} - U_{18}	192.06	30.70	-31.10	4.46	0.00	0.90	1.17	32.30	-32.72	4.46	0.00	Vehicle	Vehicle	291.67	-----	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	-----	-----	**17.78**	**17.78**	-----	-----
		U_{18} - U_{19}	53.73	28.13	-38.18	-2.79	-12.78	0.90	1.17	29.59	-40.17	-2.79	-12.78	Vehicle	Vehicle	108.32	-----	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	-----	-----	**24.08**	**24.08**	-----	-----
		U_{19} - U_{20}	-59.08	24.94	-53.08	15.07	-15.68	0.90	1.17	26.24	-55.85	15.07	-15.68	Pedestrian	Vehicle	-----	-149.41	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**11.35**	**11.35**
	Structure 3	U_0 - U_{21}	-125.50	20.80	-55.12	14.76	-16.53	0.90	1.17	21.88	-57.99	14.76	-16.53	Pedestrian	Vehicle	-----	-238.54	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	-----	-----	**12.26**	**12.26**
		U_{21} - U_{22}	-146.93	17.06	-53.46	14.37	-22.74	0.90	1.17	17.94	-56.25	14.37	-22.74	Pedestrian	Pedestrian	-----	-293.69	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	-----	-----	**8.73**	**8.73**
		U_{22} - U_{23}	-146.70	16.04	-59.67	14.36	-22.72	0.90	1.17	16.88	-62.78	14.36	-22.72	Pedestrian	Pedestrian	-----	-301.86	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**8.07**	**8.07**
		U_{23} - U_{24}	-112.76	11.09	-55.02	13.87	-21.04	0.90	1.17	11.67	-57.89	13.87	-21.04	Pedestrian	Pedestrian	-----	-249.20	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**9.17**	**9.17**
		U_{24} - U_{25}	-36.27	23.85	-47.16	13.40	-15.02	0.90	1.17	25.09	-49.61	13.40	-15.02	Pedestrian	Vehicle	2.88	-111.65	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	**22.25**	**22.25**	**13.23**	**13.23**
		U_{25} - U_{26}	80.70	25.78	-35.52	12.92	-12.15	0.90	1.17	27.12	-37.37	12.92	-12.15	Pedestrian	Vehicle	156.96	-----	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	-----	-----	**17.12**	**17.12**	-----	-----
		U_{26} - U_{27}	220.59	27.24	-25.53	12.57	-5.86	0.90	1.17	28.66	-26.86	12.57	-5.86	Pedestrian	Vehicle	340.37	-----	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	-----	-----	**13.24**	**13.24**	-----	-----
		U_{27} - U_{28}	363.31	27.25	-13.68	12.37	0.18	0.90	1.17	28.67	-14.39	12.37	0.18	Pedestrian	Vehicle	525.65	-----	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	-----	-----	**16.59**	**16.59**	-----	-----
		U_{28} - U_{29}	503.82	3.61	-8.00	12.23	3.11	0.90	1.17	3.80	-8.41	12.23	3.11	Pedestrian	Vehicle	675.81	-----	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	-----	-----	**47.93**	**47.93**	-----	-----
		U_{29} - U_{30}	616.57	-0.79	-2.18	0.00	7.42	0.90	1.17	-0.83	-2.29	7.42	0.00	Pedestrian	Vehicle	810.10	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00

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: 2F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

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

E = 29000.0 ksi

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

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Lower Chord	Structure 1	L$_0$- L$_1$	-2.01	1.49	0.61	-2.06	0.36	0.90	1.24	1.66	0.68	0.36	-2.06	Vehicle	Pedestrian	-----	-4.40	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	-----	-----	-----	-----
		L$_1$ - L$_2$	67.91	20.44	18.63	0.00	5.87	0.90	1.24	22.76	20.74	5.87	0.00	Vehicle	Vehicle	117.86	-----	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	-----	-----	**19.10**	**19.10**	-----	-----
		L$_2$ - L$_3$	78.84	-15.84	46.16	-7.39	15.48	0.90	1.24	51.39	-17.63	15.48	-7.39	Vehicle	Pedestrian	169.30	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**11.48**	**11.48**	-----	-----
		L$_3$ - L$_4$	39.14	-22.57	47.53	-10.83	18.09	0.90	1.24	52.92	-25.12	18.09	-10.83	Pedestrian	Pedestrian	143.19	-----	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	-----	-----	**8.86**	**8.86**	-----	-----
		L$_4$ - L$_5$	-166.38	-32.30	28.38	-16.90	10.96	0.90	1.24	31.60	-35.96	10.96	-16.90	Pedestrian	Pedestrian	-----	-285.01	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	-----	-----	**6.32**	**6.32**
		L$_5$ - L$_6$	-301.23	-35.53	10.92	-18.93	3.23	0.90	1.24	12.16	-39.56	3.23	-18.93	Vehicle	Pedestrian	-----	-467.63	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	-----	-----	**6.13**	**6.13**
		L$_6$ - L$_7$	-438.94	-38.34	2.96	-21.52	-4.99	0.90	1.24	3.29	-42.69	-4.99	-21.52	Vehicle	Pedestrian	-----	-654.08	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	-----	-----	**7.88**	**7.88**
		L$_7$ - L$_8$	-551.65	0.58	-8.54	0.00	-35.55	0.90	1.24	0.64	-9.51	0.00	-35.55	Vehicle	Pedestrian	-----	-775.71	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	-----	-----	**14.38**	**14.38**
		L$_8$ - L$_9$	-570.53	-36.70	4.54	-37.48	0.00	0.90	1.20	4.90	-39.57	0.00	-37.48	Vehicle	Pedestrian	-----	-841.85	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**8.16**	**8.16**
		L$_9$ - L$_{10}$	-355.48	-14.62	-0.69	-13.03	-11.67	0.90	1.20	-0.75	-15.76	-11.67	-13.03	Pedestrian	Pedestrian	-----	-499.55	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**20.49**	**20.49**
		L$_{10}$ - L$_{11}$	-118.48	-21.06	19.20	-12.43	0.00	0.90	1.20	20.71	-22.71	0.00	-12.43	Vehicle	Pedestrian	-----	-199.70	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**10.87**	**10.87**
		L$_{11}$ - L$_{12}$	103.45	27.16	30.60	0.49	0.00	0.90	1.20	32.99	29.29	0.49	0.00	Vehicle	Vehicle	177.38	-----	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	-----	-----	**14.87**	**14.87**	-----	-----
		L$_{12}$ - L$_{13}$	300.60	-18.05	52.93	-8.14	17.83	0.90	1.20	57.07	-19.46	17.83	-8.14	Vehicle	Pedestrian	464.98	-----	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	-----	-----	**11.81**	**11.81**	-----	-----
		L$_{13}$ - L$_{14}$	441.19	48.56	61.83	-6.61	24.15	0.90	1.20	66.66	52.36	24.15	-6.61	Pedestrian	Vehicle	691.61	-----	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	-----	-----	**9.54**	**9.54**	-----	-----
		L$_{14}$ - L$_{15}$	547.00	-9.55	62.48	-3.49	24.57	0.90	1.20	67.37	-10.30	24.57	-3.49	Pedestrian	Pedestrian	830.61	-----	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	-----	-----	**11.18**	**11.18**	-----	-----
		L$_{15}$ - L$_{16}$	506.09	-6.62	56.25	-2.03	20.32	0.90	1.20	60.64	-7.13	20.32	-2.03	Pedestrian	Vehicle	763.17	-----	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	-----	-----	**13.20**	**13.20**	-----	-----
		L$_{16}$ - L$_{17}$	398.75	-8.40	40.00	-0.83	12.72	0.90	1.20	43.12	-9.05	12.72	-0.83	Vehicle	Vehicle	574.44	-----	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	-----	-----	**18.96**	**18.96**	-----	-----
		L$_{17}$ - L$_{18}$	263.81	-1.40	25.01	0.15	4.66	0.90	1.20	26.97	-1.51	4.66	0.15	Vehicle	Vehicle	378.01	-----	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	-----	-----	**22.98**	**22.98**	-----	-----
		L$_{18}$ - L$_{19}$	118.75	-5.38	10.41	0.71	-3.38	0.90	1.20	11.22	-5.80	0.71	-3.38	Vehicle	Pedestrian	168.96	-----	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	-----	-----	**34.22**	**34.22**	-----	-----
		L$_{19}$ - L$_{20}$	-23.36	1.65	-3.18	1.28	-12.08	0.90	1.20	1.78	-3.43	1.28	-12.08	Pedestrian	Pedestrian	-----	-50.53	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	-----	-----	**25.80**	**25.80**
		L$_0$'- L$_1$'	-36.12	1.34	2.12	-5.14	1.19	0.90	1.18	2.26	1.42	1.19	-5.14	Pedestrian	Pedestrian	-----	-51.79	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	45.00	Pass	6.32	12.00	Pass	6.32	12.00	Pass	-----	-----	-----	-----
		L$_1$' - L$_2$'	132.64	13.74	4.43	2.93	-0.06	0.90	1.18	14.63	4.72	2.93	-0.06	Vehicle	Vehicle	191.45	-----	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	-----	-----	**34.23**	**34.23**	-----	-----
		L$_2$' - L$_3$'	303.94	28.63	33.08	10.52	-1.79	0.90	1.18	35.22	30.48	10.52	-1.79	Vehicle	Vehicle	440.90	-----	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	-----	-----	**19.08**	**19.08**	-----	-----
		L$_3$' - L$_4$'	445.73	48.45	50.26	0.00	13.17	0.90	1.18	53.51	51.58	13.17	0.00	Vehicle	Vehicle	649.01	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**16.14**	**16.14**	-----	-----
		L$_4$' - L$_5$'	567.64	-14.68	68.25	-6.10	24.81	0.90	1.18	72.66	-15.63	24.81	-6.10	Pedestrian	Pedestrian	864.65	-----	11.00	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**11.10**	**11.10**	-----	-----
		L$_5$' - L$_6$'	603.43	-22.56	75.83	-8.06	28.47	0.90	1.18	80.74	-24.02	28.47	-8.06	Pedestrian	Pedestrian	926.42	-----	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	-----	-----	**10.89**	**10.89**	-----	-----
		L$_6$' - L$_7$'	599.28	-28.56	79.62	-10.41	30.25	0.90	1.18	84.77	-30.40	30.25	-10.41	Pedestrian	Pedestrian	928.59	-----	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	-----	-----	**10.59**	**10.59**	-----	-----
		L$_7$' - L$_8$'	373.73	-35.95	62.87	-13.66	24.92	0.90	1.18	66.94	-38.27	24.92	-13.66	Pedestrian	Pedestrian	605.27	-----	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	-----	-----	**10.54**	**10.54**	-----	-----
		L$_8$' - L$_9$'	195.51	-38.71	48.95	-15.12	19.51	0.90	1.18	52.11	-41.22	19.51	-15.12	Pedestrian	Pedestrian	347.27	-----	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	-----	-----	**12.63**	**12.63**	-----	-----
		L$_9$' - L$_{10}$'	-13.41	-40.03	32.56	-16.11	12.45	0.90	1.18	34.67	-42.62	12.45	-16.11	Pedestrian	Pedestrian	43.81	-93.78	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	**18.58**	**18.58**	**12.16**	**12.16**
		L$_{10}$ - L$_{11}$	-217.51	-40.59	20.08	-17.02	5.50	0.90	1.18	21.38	-43.21	5.50	-17.02	Vehicle	Pedestrian	-----	-361.06	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**7.19**	**7.19**
		L$_{11}$ - L$_{12}$	-420.12	-39.93	6.89	-17.31	-2.05	0.90	1.18	7.34	-42.51	-2.05	-17.31	Vehicle	Pedestrian	-----	-623.93	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$_{13}$	-591.61	-39.84	1.11	-18.75	-7.10	0.90	1.18	1.19	-42.42	-7.10	-18.75	Pedestrian	Pedestrian	-----	-848.61	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**11.18**	**11.18**
		L$_{13}$ - L$_{14}$	-724.42	0.82	-5.26	0.00	-35.12	0.90	1.18	0.87	-5.60	0.00	-35.12	Vehicle	Pedestrian	-----	-994.68	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	-----	-----	**19.42**	**19.42**
		L$_{14}$ - L$_{15}$	-747.19	-25.18	7.39	-36.29	0.00	0.90	1.17	7.78	-26.49	0.00	-36.29	Vehicle	Pedestrian	-----	-1052.96	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	-----	-----	**12.23**	**12.23**
		L$_{15}$ - L$_{16}$	-632.29	6.71	0.88	0.00	-31.22	0.90	1.17	7.06	0.92	0.00	-31.22	Vehicle	Pedestrian	-----	-861.36	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	-23.02	11.49	-25.40	0.00	0.90	1.17	12.09	-24.22	0.00	-25.40	Vehicle	Pedestrian	-----	-699.85	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**11.26**	**11.26**
		L$_{17}$ - L$_{18}$	-337.06	4.63	19.76	-18.13	0.00	0.90	1.17	20.79	4.87	0.00	-18.13	Vehicle	Pedestrian	-----	-455.41	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	-----	-----
		L$_{18}$ - L$_{19}$	-183.64	-25.85	31.05	-11.34	4.48	0.90	1.17	32.67	-27.20	4.48	-11.34	Vehicle	Pedestrian	-----	-288.82	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	-----	-----	**10.12**	**10.12**
		L$_{19}$ - L$_{20}$	-45.76	-23.25	39.56	-9.58	8.92	0.90	1.17	41.62	-24.46	8.92	-9.58	Vehicle	Pedestrian	-----	-103.74	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	-----	-----	**15.51**	**15.51**
	Structure 2	L$_{20}$ - L$_{21}$	68.06	-20.65	49.66	-9.12	11.57	0.90	1.17	52.25	-21.73	11.57	-9.12	Vehicle	Pedestrian	156.40	-----	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	-----	-----	**17.16**	**17.16**	-----	-----
		L$_{21}$ - L$_{22}$	134.01	-16.51	53.75	-8.81	13.61	0.90	1.17	56.55	-17.37	13.61	-8.81	Vehicle	Pedestrian	247.72	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**14.69**	**14.69**	-----	-----
		L$_{22}$ - L$_{23}$	122.68	-7.77	51.89	-7.57	11.79	0.90	1.17	54.59	-8.18	11.79	-7.57	Vehicle	Pedestrian	230.46	-----	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	-----	-----	**15.42**	**15.42**	-----	-----
		L$_{23}$ - L$_{24}$	46.89	-20.38	41.97	-7.09	8.09	0.90	1.17	44.16	-21.44	8.09	-7.09	Vehicle	Vehicle	118.37	-----	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	-----	-----	**20.78**	**20.78**	-----	-----
		L$_{24}$ - L$_{25}$	-66.54	-22.66	33.41	-6.23	2.64	0.90	1.17	35.15	-23.84	2.64	-6.23	Vehicle	Vehicle	-----	-117.49	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	-----	-----	**21.27**	**21.27**
		L$_{25}$ - L$_{26}$	-205.63	-24.17	20.93	-5.87	-3.61	0.90	1.17	22.02	-25.43	-3.61	-5.87	Vehicle	Vehicle	-----	-300.38	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	-----	-----	**14.47**	**14.47**
		L$_{26}$ - L$_{27}$	-350.43	-24.59	8.62	-5.25	-6.72	0.90	1.17	9.06	-25.87	-5.25	-6.72	Vehicle	Vehicle	-----	-489.19	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	-----	-----	**14.58**	**14.58**
		L$_{27}$ - L$_{28}$	-494.65	-24.44	2.40	-5.10	-12.12	0.90	1.17	2.53	-25.71	-5.10	-12.12	Vehicle	Pedestrian	-----	-692.22	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	-----	-----	**14.62**	**14.62**
		L$_{28}$ - L$_{29}$	-620.83	-15.20	-3.47	-31.78	-17.19	0.90	1.17	-3.65	-15.99	-17.19	-31.78	Pedestrian	Pedestrian	-----	-869.18	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	-----	-----	**13.70**	**13.70**
		L$_{29}$ - L$_{30}$	-716.91	-7.06	-9.43	0.00	-36.29	0.90	1.17	-7.42	-9.92	0.00	-36.29	Vehicle	Pedestrian	-----	-992.06	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	-----	-----	**17.27**	**17.27**
		L$_{30}$ - L$_{31}$

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: 2F1 **Condition:** As-Built

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

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

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

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capicity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Verticals	Structure 1	U_0 - L_0	-93.72	2.28	-33.90	3.44	-12.32	0.90	1.24	2.54	-37.74	3.44	-12.32	Pedestrian	Vehicle	-----	-170.90	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	6.64	6.64
		U_1 - L_1	-46.53	6.34	-19.04	2.93	-9.05	0.90	1.24	7.05	-21.20	2.93	-9.05	Pedestrian	Pedestrian	-----	-99.82	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	10.10	10.10
		U_2 - L_2	-0.10	5.75	-12.62	2.84	-5.68	0.90	1.24	6.40	-14.04	2.84	-5.68	Pedestrian	Pedestrian	11.88	-25.77	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	46.32	46.32	17.84	17.84
		U_3 - L_3	39.60	4.66	-7.80	2.69	-2.12	0.90	1.24	5.19	-8.68	2.69	-2.12	Pedestrian	Vehicle	61.72	-----	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	-----	-----	-----	-----	-----	49.24	49.24	-----	-----
		U_4 - L_4	-30.20	-3.80	0.03	-3.46	0.00	0.90	1.24	0.03	-4.23	0.00	-3.46	Vehicle	Pedestrian	-----	-49.27	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	41.55	41.55
		U_5 - L_5	-130.49	-21.56	2.44	-10.23	0.00	0.90	1.24	2.71	-24.00	0.00	-10.23	Vehicle	Pedestrian	-----	-214.13	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	-----	-----	-----	-----	-----	8.61	8.61
		U_6 - L_6	-158.18	-21.24	3.25	-13.06	0.00	0.90	1.24	3.62	-23.65	0.00	-13.06	Vehicle	Pedestrian	-----	-253.36	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	-----	-----	-----	-----	-----	9.53	9.53
		U_7 - L_7	-152.32	-19.72	6.42	-13.24	0.00	0.90	1.24	7.15	-21.95	0.00	-13.24	Vehicle	Pedestrian	-----	-243.77	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	-----	-----	-----	-----	-----	8.75	8.75
		U_8 - L_8	-455.55	-19.85	-31.94	-12.74	-18.97	0.90	1.24	-22.10	-35.56	-12.74	-18.97	Pedestrian	Pedestrian	-----	-663.10	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	-----	-----	-----	-----	-----	11.18	11.18
		U_9 - L_9	-287.55	1.73	-32.12	0.00	-18.20	0.90	1.20	1.87	-34.63	0.00	-18.20	Vehicle	Pedestrian	-----	-442.50	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	-----	-----	-----	-----	-----	6.77	6.77
		U_{10} - L_{10}	-276.32	0.84	-30.25	0.00	-17.54	0.90	1.20	0.91	-32.61	0.00	-17.54	Vehicle	Pedestrian	-----	-424.42	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	-----	-----	-----	-----	-----	9.30	9.30
		U_{11} - L_{11}	-232.59	-2.32	-27.57	0.00	-14.41	0.90	1.20	-2.51	-29.73	0.00	-14.41	Vehicle	Pedestrian	-----	-359.75	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	-----	-----	-----	-----	-----	9.26	9.26
		U_{12} - L_{12}	-178.43	0.82	-22.92	0.00	-11.20	0.90	1.20	0.88	-24.71	0.00	-11.20	Vehicle	Pedestrian	-----	-278.63	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	-----	-----	-----	-----	-----	9.86	9.86
		U_{13} - L_{13}	-127.74	1.38	-16.85	0.00	-7.88	0.90	1.20	1.49	-18.17	0.00	-7.88	Vehicle	Pedestrian	-----	-199.92	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	-----	-----	-----	-----	-----	9.70	9.70
		U_{14} - L_{14}	-30.39	-1.77	-1.58	0.00	-3.03	0.90	1.20	-1.70	-1.91	0.00	-3.03	Vehicle	Pedestrian	-----	-45.94	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	-----	-----	-----	-----	-----	63.60	63.60
		U_{15} - L_{15}	-28.94	-14.92	5.86	-4.54	1.55	0.90	1.20	6.32	-16.08	1.55	-4.54	Vehicle	Vehicle	-----	-58.53	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	-----	-----	-----	-----	-----	19.54	19.54
		U_{16} - L_{16}	-76.03	-16.66	4.45	-7.08	1.39	0.90	1.20	4.80	-17.96	1.39	-7.08	Vehicle	Pedestrian	-----	-131.39	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	-----	-----	-----	-----	-----	10.60	10.60
		U_{17} - L_{17}	-161.89	-23.94	3.47	-10.66	1.30	0.90	1.20	3.74	-25.81	1.30	-10.66	Pedestrian	Pedestrian	-----	-257.86	0.00	20.66	20.0644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	6.84	6.84
		U_{18} - L_{18}	-190.28	-23.57	2.98	-12.71	1.12	0.90	1.20	3.21	-25.42	1.12	-12.71	Pedestrian	Pedestrian	-----	-296.93	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	-----	-----	-----	-----	-----	8.79	8.79
		U_{19} - L_{19}	-228.17	-23.01	2.55	-14.98	0.97	0.90	1.20	2.75	-24.81	0.97	-14.98	Pedestrian	Pedestrian	-----	-348.35	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	-----	-----	-----	-----	-----	9.75	9.75
		U_{20} - L_{20}	-242.83	-23.70	0.27	-15.63	0.95	0.90	1.20	0.29	-25.55	0.95	-15.63	Pedestrian	Pedestrian	-----	-369.20	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	-----	-----	-----	-----	-----	8.24	8.24
	Structure 2	U_0 - L_0	-303.03	1.20	-34.33	2.22	-15.08	0.90	1.18	1.28	-36.55	2.22	-15.08	Pedestrian	Pedestrian	-----	-461.05	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	-----	-----	-----	-----	-----	6.58	6.58
		U_1 - L_1	-268.78	5.73	-32.22	2.12	-13.67	0.90	1.18	6.10	-34.30	2.12	-13.67	Pedestrian	Pedestrian	-----	-411.77	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	-----	-----	-----	-----	-----	8.42	8.42
		U_2 - L_2	-220.87	6.18	-28.37	2.34	-12.32	0.90	1.18	6.58	-30.20	2.34	-12.32	Pedestrian	Pedestrian	-----	-342.42	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	-----	-----	-----	-----	-----	8.31	8.31
		U_3 - L_3	-175.23	6.62	-26.34	2.49	-10.35	0.90	1.18	7.05	-28.04	2.49	-10.35	Pedestrian	Pedestrian	-----	-277.70	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	-----	-----	-----	-----	-----	7.21	7.21
		U_4 - L_4	-82.08	5.75	-19.36	2.21	-6.62	0.90	1.18	6.13	-20.62	2.21	-6.62	Pedestrian	Vehicle	-----	-133.50	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	12.47	12.47
		U_5 - L_5	-19.89	5.23	-14.02	2.23	-4.16	0.90	1.18	5.57	-14.92	2.23	-4.16	Pedestrian	Vehicle	-----	-45.26	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	-----	-----	-----	-----	-----	21.48	21.48
		U_6 - L_6	60.32	12.77	-7.95	1.75	-0.47	0.90	1.18	13.59	-8.47	1.75	-0.47	Vehicle	Vehicle	96.09	-----	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	27.02	27.02	-----	-----
		U_7 - L_7	-41.77	-4.79	-0.96	-2.49	0.00	0.90	1.18	-1.03	-5.10	0.00	-2.49	Vehicle	Pedestrian	-----	-64.17	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	39.35	39.35
		U_8 - L_8	-189.01	-20.55	2.72	-8.38	0.00	0.90	1.18	2.89	-21.87	0.00	-8.38	Vehicle	Pedestrian	-----	-285.04	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	11.29	11.29
		U_9 - L_9	-253.99	-26.63	0.11	-10.55	0.00	0.90	1.18	0.12	-28.35	0.00	-10.55	Vehicle	Pedestrian	-----	-380.77	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	-----	-----	-----	-----	-----	11.24	11.24
		U_{10} - L_{10}	-290.02	-26.99	1.99	-12.18	0.00	0.90	1.18	2.11	-28.74	0.00	-12.18	Vehicle	Pedestrian	-----	-430.22	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	-----	-----	-----	-----	-----	11.94	11.94
		U_{11} - L_{11}	-312.18	-28.21	4.23	-12.59	0.00	0.90	1.18	4.50	-30.04	0.00	-12.59	Vehicle	Pedestrian	-----	-461.24	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	-----	-----	-----	-----	-----	10.62	10.62
		U_{12} - L_{12}	-327.28	-25.41	6.10	-13.01	-0.93	0.90	1.18	6.49	-27.06	-0.93	-13.01	Vehicle	Pedestrian	-----	-477.54	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	-----	-----	-----	-----	-----	11.84	11.84
		U_{13} - L_{13}	-277.21	-22.45	8.13	-11.39	0.00	0.90	1.18	8.65	-23.90	0.00	-11.39	Vehicle	Pedestrian	-----	-406.25	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	11.70	11.70
		U_{14} - L_{14}	-505.44	-18.05	-25.63	-9.95	-11.34	0.90	1.18	-19.22	-27.28	-9.95	-11.34	Pedestrian	Pedestrian	-----	-707.29	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	14.15	14.15
		U_{15} - L_{15}	-232.94	1.63	-29.74	1.67	-11.17	0.90	1.17	1.72	-31.29	1.67	-11.17	Pedestrian	Pedestrian	-----	-358.01	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	-----	-----	-----	-----	-----	10.77	10.77
		U_{16} - L_{16}	-260.12	3.34	-31.40	0.83	-12.63	0.90	1.17	3.52	-33.03	0.83	-12.63	Vehicle	Pedestrian	-----	-397.52	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	-----	-----	-----	-----	-----	8.89	8.89
		U_{17} - L_{17}	-228.24	3.77	-28.79	0.66	-11.76	0.90	1.17	3.96	-30.29	0.66	-11.76	Vehicle	Pedestrian	-----	-351.37	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	-----	-----	-----	-----	-----	9.40	9.40
		U_{18} - L_{18}	-209.27	4.54	-26.77	-0.03	-11.28	0.90	1.17	4.78	-28.16	-0.03	-11.28	Vehicle	Pedestrian	-----	-323.34	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	-----	-----	-----	-----	-----	9.33	9.33
		U_{19} - L_{19}	-166.55	4.86	-24.66	-0.07	-9.53	0.90	1.17	5.12	-25.94	-0.07	-9.53	Vehicle	Pedestrian	-----	-262.63	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	-----	-----	-----	-----	-----	9.72	9.72
		U_{20} - L_{20}	-113.95	4.90	-18.16	-0.43	-7.50	0.90	1.17	5.15	-19.11	-0.43	-7.50	Vehicle	Pedestrian	-----	-182.72	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	9.82	9.82
		U_{21} - L_{21}	-62.76	7.32	-14.68	0.00	-5.22	0.90	1.17	7.70	-15.44	0.00	-5.22	Vehicle	Pedestrian	-----	-108.45	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	-----	-----	-----	-----	-----	13.44	13.44
		U_{22} - L_{22}	-38.94	-4.85	-5.42	-2.04	-2.15	0.90	1.17	-5.10	-5.70	-2.04	-2.15	Pedestrian	Pedestrian	-----	-60.82	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	-----	-----	-----	-----	-----	38.59	38.59
		U_{23} - L_{23}	-74.43	-16.63	5.48	-6.10	0.48	0.90	1.17	5.77	-17.49	0.48	-6.10	Vehicle	Pedestrian	-----	-127.43	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	-----	-----	-----	-----	-----	11.28	11.28
		U_{24} - L_{24}	-121.36	-19.15	5.08	-8.17	0.37	0.90	1.17	5.35	-20.15	0.37	-8.17	Vehicle	Pedestrian	-----	-194.58	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	-----	-----	-----	-----	-----	8.96	8.96
		U_{25} - L_{25}	-169.12	-24.27	4.89	-9.94	0.43	0.90	1.17	5.14	-25.53	0.43	-9.94	Vehicle	Pedestrian	-----	-265.97	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	-----	-----	-----	-----	-----	9.65	9.65
		U_{26} - L_{26}	-207.97	-24.64	4.42	-11.42	0.14	0.90	1.17	4.65	-25.92	0.14	-11.42	Vehicle	Pedestrian	-----	-318.92	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	-----	-----	-----	-----	-----	9.89	9.89
		U_{27} - L_{27}	-219.96	-26.87	3.64	-11.49	0.16	0.90	1.17	3.83	-28.27	0.16	-11.49	Vehicle	Pedestrian	-----	-337.64	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	10.14	10.14
		U_{28} - L_{28}	-240.91	-24.57	5.26	-12.60	-0.25	0.90	1.17	5.53	-25.85	-0.25	-12.60	Vehicle	Pedestrian	-----	-363.16	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	-----	-----	-----	-----	-----	11.06	11.06
		U_{29} - L_{29}	-202.73	-20.77	7.99	-10.35	0.00	0.90	1.17	8.40	-21.85	0.00	-10.35	Vehicle	Pedestrian	-----	-305.41	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	15.14	15.14
		U_{30} - L_{30}	-518.05	-18.62	-27.21	-8.23	-13.79	0.90	1.18	-19.82	-28.97	-8.23	-13.79	Pedestrian	Pedestrian	-----	-729.05	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	3.77	-30.57	0.00	-12.95	0.90	1.18	4.

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: 2F1 **Condition:** As-Built

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

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

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

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Diagonals	Structure 1	U$_0$ - L$_1$	87.66	-0.19	21.34	14.00	-4.60	0.90	1.24	23.75	-0.21	14.00	-4.60	Pedestrian	Pedestrian	163.04	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**13.21**	**13.21**	-----	-----
		U$_1$ - L$_2$	23.90	-9.74	21.51	-4.71	9.20	0.90	1.24	23.94	-10.85	9.20	-4.71	Pedestrian	Pedestrian	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	-----	-----	-----	-----	-----	**12.18**	**12.18**	-----	-----
		U$_2$ - L$_3$	-49.02	-8.22	3.03	-4.32	3.33	0.90	1.24	3.37	-9.15	3.33	-4.32	Pedestrian	Pedestrian	-----	-81.25	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**21.16**	**21.16**
		U$_3$ - L$_4$	-108.88	-7.54	-9.64	-4.20	-2.10	0.90	1.24	-8.39	-10.73	-2.10	-4.20	Vehicle	Pedestrian	-----	-160.94	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**15.24**	**15.24**
		U$_4$ - L$_5$	153.12	3.51	23.24	3.11	7.00	0.90	1.24	25.87	3.91	7.00	3.11	Vehicle	Pedestrian	232.69	-----	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	-----	-----	-----	-----	-----	**14.36**	**14.36**	-----	-----
		U$_5$ - L$_6$	186.35	0.57	26.23	2.78	10.66	0.90	1.24	29.20	0.63	10.66	2.78	Pedestrian	Pedestrian	294.07	-----	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	-----	-----	-----	-----	-----	**11.65**	**11.65**	-----	-----
		U$_6$ - L$_7$	177.52	-6.07	25.10	1.59	12.54	0.90	1.24	27.94	-6.76	12.54	1.59	Pedestrian	Vehicle	283.41	-----	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	-----	-----	-----	-----	-----	**11.69**	**11.69**	-----	-----
		U$_8$ - L$_7$	173.18	-1.62	23.19	0.41	13.46	0.90	1.24	25.82	-1.80	13.46	0.41	Pedestrian	Vehicle	276.19	-----	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	-----	-----	-----	-----	-----	**12.16**	**12.16**	-----	-----
		U$_8$ - L$_9$	328.11	-0.50	36.50	-0.13	19.45	0.90	1.20	39.35	-0.54	19.45	-0.13	Pedestrian	Vehicle	502.98	-----	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	-----	-----	-----	-----	-----	**10.78**	**10.78**	-----	-----
		U$_9$ - L$_{10}$	339.70	-0.50	36.90	0.85	18.90	0.90	1.20	39.78	-0.53	18.90	0.85	Pedestrian	Vehicle	517.89	-----	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	-----	-----	-----	-----	-----	**10.61**	**10.61**	-----	-----
		U$_{10}$ - L$_{11}$	313.22	1.97	28.93	1.69	16.46	0.90	1.20	31.19	2.12	16.46	1.69	Pedestrian	Pedestrian	469.12	-----	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	-----	-----	-----	-----	-----	**12.54**	**12.54**	-----	-----
		U$_{11}$ - L$_{12}$	270.68	2.41	35.27	1.81	13.03	0.90	1.20	38.02	2.60	13.03	1.81	Pedestrian	Pedestrian	418.25	-----	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	-----	-----	-----	-----	-----	**9.93**	**9.93**	-----	-----
		U$_{12}$ - L$_{13}$	194.17	-0.66	24.16	0.00	10.79	0.90	1.20	26.05	-0.71	10.79	0.00	Pedestrian	Vehicle	300.30	-----	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	-----	-----	-----	-----	-----	**11.86**	**11.86**	-----	-----
		U$_{13}$ - L$_{14}$	123.57	-5.50	13.59	0.00	5.96	0.90	1.20	14.65	-5.93	5.96	0.00	Pedestrian	Vehicle	187.43	-----	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	-----	-----	-----	-----	-----	**14.75**	**14.75**	-----	-----
		U$_{15}$ - L$_{14}$	-16.32	-11.53	13.74	-2.35	1.48	0.90	1.20	14.81	-12.43	1.48	-2.35	Vehicle	Vehicle	-----	-37.38	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	-----	-----	-----	-----	-----	**25.10**	**25.10**
		U$_{15}$ - L$_{15}$	59.12	-4.59	19.46	-2.09	6.08	0.90	1.20	20.98	-4.94	6.08	-2.09	Vehicle	Pedestrian	104.13	-----	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	-----	-----	-----	-----	-----	**17.57**	**17.57**	-----	-----
		U$_{17}$ - L$_{16}$	172.14	-4.83	28.47	-1.86	9.93	0.90	1.20	30.70	-5.21	9.93	-1.86	Vehicle	Pedestrian	263.70	-----	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	-----	-----	-----	-----	-----	**11.48**	**11.48**	-----	-----
		U$_{18}$ - L$_{17}$	210.78	-4.10	25.47	-1.53	12.51	0.90	1.20	27.46	-4.42	12.51	-1.53	Pedestrian	Pedestrian	325.97	-----	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	-----	-----	-----	-----	-----	**11.01**	**11.01**	-----	-----
		U$_{19}$ - L$_{18}$	242.64	-3.27	28.02	-1.21	13.73	0.90	1.20	30.22	-3.53	13.73	-1.21	Pedestrian	Pedestrian	372.56	-----	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	-----	-----	-----	-----	-----	**10.64**	**10.64**	-----	-----
		U$_{20}$ - L$_{19}$	257.76	-2.69	21.19	-1.03	15.70	0.90	1.20	22.85	-2.90	15.70	-1.03	Pedestrian	Pedestrian	385.20	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**11.74**	**11.74**	-----	-----
		U$_0$ - L$_1$	298.99	-2.33	22.17	-2.21	14.21	0.90	1.18	23.61	-2.48	14.21	-2.21	Pedestrian	Pedestrian	437.84	-----	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	-----	-----	-----	-----	-----	**12.66**	**12.66**	-----	-----
		U$_1$ - L$_2$	284.21	-7.12	32.93	-2.66	14.05	0.90	1.18	35.06	-7.58	14.05	-2.66	Pedestrian	Pedestrian	433.31	-----	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	-----	-----	-----	-----	-----	**10.05**	**10.05**	-----	-----
		U$_2$ - L$_3$	221.42	-7.60	32.12	-2.85	11.83	0.90	1.18	34.19	-8.09	11.83	-2.85	Pedestrian	Pedestrian	347.68	-----	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	-----	-----	-----	-----	-----	**9.33**	**9.33**	-----	-----
		U$_3$ - L$_4$	178.30	-8.59	31.44	-3.23	10.08	0.90	1.18	33.48	-9.14	10.08	-3.23	Vehicle	Pedestrian	275.31	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**11.91**	**11.91**	-----	-----
		U$_4$ - L$_5$	53.50	-7.37	20.09	-2.87	5.37	0.90	1.18	21.39	-7.84	5.37	-2.87	Vehicle	Vehicle	97.36	-----	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	-----	-----	-----	-----	-----	**17.49**	**17.49**	-----	-----
		U$_5$ - L$_6$	-16.51	-11.34	16.63	-2.92	2.23	0.90	1.18	17.70	-12.07	2.23	-2.92	Vehicle	Vehicle	1.55	-37.16	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	-----	-----	-----	-----	-----	**25.09**	**25.09**
		U$_6$ - L$_7$	-133.21	-20.02	6.69	-2.50	-2.48	0.90	1.18	7.12	-21.31	-2.48	-2.50	Vehicle	Vehicle	-----	-200.87	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	-----	-----	-----	-----	-----	**25.62**	**25.62**
		U$_6$ - L$_7$	208.77	-5.32	23.38	0.00	8.33	0.90	1.18	24.89	-5.66	8.33	0.00	Pedestrian	Vehicle	314.59	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**11.87**	**11.87**	-----	-----
		U$_8$ - L$_8$	289.58	-0.09	31.84	0.00	8.99	0.90	1.18	33.90	-0.10	8.99	0.00	Vehicle	Vehicle	420.52	-----	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	-----	-----	-----	-----	-----	**12.41**	**12.41**	-----	-----
		U$_{10}$ - L$_9$	327.97	-0.32	29.23	1.53	11.09	0.90	1.18	31.12	-0.34	11.09	1.53	Pedestrian	Pedestrian	481.23	-----	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	-----	-----	-----	-----	-----	**10.65**	**10.65**	-----	-----
		U$_{11}$ - L$_{10}$	349.25	-1.77	32.86	0.55	12.45	0.90	1.18	34.99	-1.88	12.45	0.55	Pedestrian	Vehicle	515.69	-----	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	-----	-----	-----	-----	-----	**10.44**	**10.44**	-----	-----
		U$_{12}$ - L$_{11}$	358.20	-4.69	31.56	0.48	13.32	0.90	1.18	33.60	-4.99	13.32	0.48	Pedestrian	Vehicle	526.65	-----	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	-----	-----	-----	-----	-----	**10.36**	**10.36**	-----	-----
		U$_{13}$ - L$_{12}$	307.75	-9.01	26.53	-0.24	12.26	0.90	1.18	28.25	-9.59	12.26	-0.24	Pedestrian	Vehicle	452.73	-----	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	-----	-----	-----	-----	-----	**11.60**	**11.60**	-----	-----
		U$_{14}$ - L$_{13}$	260.20	-5.67	21.42	-1.50	11.72	0.90	1.18	22.80	-6.04	11.72	-1.50	Vehicle	Vehicle	383.14	-----	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	-----	-----	-----	-----	-----	**14.98**	**14.98**	-----	-----
		U$_{14}$ - L$_{15}$	208.42	-3.79	28.44	-2.51	11.04	0.90	1.17	29.92	-3.99	11.04	-2.51	Pedestrian	Pedestrian	324.19	-----	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	-----	-----	-----	-----	-----	**10.80**	**10.80**	-----	-----
		U$_{16}$ - L$_{16}$	243.55	-2.69	33.53	-1.48	11.54	0.90	1.17	35.27	-2.83	11.54	-1.48	Vehicle	Pedestrian	362.47	-----	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	-----	-----	-----	-----	-----	**11.54**	**11.54**	-----	-----
		U$_{16}$ - L$_{17}$	255.86	-3.99	29.61	-0.85	11.67	0.90	1.17	31.15	-4.20	11.67	-0.85	Pedestrian	Vehicle	388.29	-----	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	-----	-----	-----	-----	-----	**10.61**	**10.61**	-----	-----
		U$_{17}$ - L$_{18}$	235.29	-4.68	33.40	-0.75	10.45	0.90	1.17	35.14	-4.92	10.45	-0.75	Vehicle	Vehicle	351.56	-----	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	-----	-----	-----	-----	-----	**11.82**	**11.82**	-----	-----
		U$_{18}$ - L$_{19}$	212.11	-5.70	30.66	0.01	8.95	0.90	1.17	32.25	-6.00	8.95	0.01	Vehicle	Vehicle	317.67	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**13.60**	**13.60**	-----	-----
	Structure 2	U$_{19}$ - L$_{20}$	168.24	-6.30	24.82	0.06	9.14	0.90	1.17	26.11	-6.63	9.14	0.06	Pedestrian	Vehicle	264.54	-----	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	-----	-----	-----	-----	-----	**12.34**	**12.34**	-----	-----
		U$_{20}$ - L$_{21}$	97.26	-6.17	20.58	0.46	6.66	0.90	1.17	21.65	-6.49	6.66	0.46	Vehicle	Vehicle	154.59	-----	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	-----	-----	-----	-----	-----	**15.26**	**15.26**	-----	-----
		U$_{21}$ - L$_{22}$	30.60	-12.34	16.82	0.58	3.66	0.90	1.17	17.70	-12.98	3.66	0.58	Vehicle	Vehicle	62.79	-----	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**22.44**	**22.44**	-----	-----
		U$_{23}$ - L$_{22}$	49.78	-7.35	18.53	-0.72	5.11	0.90	1.17	19.50	-7.74	5.11	-0.72	Vehicle	Vehicle	90.06	-----	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	-----	-----	-----	-----	-----	**19.38**	**19.38**	-----	-----
		U$_{24}$ - L$_{23}$	115.07	-6.88	23.62	-0.72	8.00	0.90	1.17	24.85	-7.23	8.00	-0.72	Vehicle	Vehicle	181.90	-----	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	-----	-----	-----	-----	-----	**12.58**	**12.58**	-----	-----
		U$_{25}$ - L$_{24}$	179.22	-6.68	29.67	-0.73	10.10	0.90	1.17	31.22	-7.03	10.10	-0.73	Vehicle	Vehicle	273.57	-----	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	-----	-----	-----	-----	-----	**13.58**	**13.58**	-----	-----
		U$_{26}$ - L$_{25}$	220.97	-5.86	28.63	-0.57	11.89	0.90	1.17	30.12	-6.17	11.89	-0.57	Pedestrian	Vehicle	341.87	-----	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	-----	-----	-----	-----	-----	**10.23**	**10.23**	-----	-----
		U$_{27}$ - L$_{26}$	234.87	-3.89	30.91	-0.35	11.45	0.90	1.17	32.52	-4.09	11.45	-0.35	Pedestrian	Vehicle	362.49	-----	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	-----	-----	-----	-----	-----	**9.46**	**9.46**	-----	-----
		U$_{28}$ - L$_{27}$	253.15	-4.23	29.53	-0.28	12.25	0.90	1.17	31.07	-4.45	12.25	-0.28	Pedestrian	Vehicle	385.41	-----	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	-----	-----	-----	-----	-----	**10.55**	**10.55**	-----	-----
		U$_{29}$ - L$_{28}$	215.91	-8.98	22.97	0.00	10.20	0.90	1.17	24.17	-9.44	10.20	0.00	Pedestrian	Vehicle	325.37	-----	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	-----	-----	-----	-----	-----	**12.65**	**12.65**	-----	-----
		U$_{30}$ - L$_{29}$	180.73	-4.63	20.20	-0.90	8.90	0.90	1.17	21.26	-4.87	8.90	-0.90	Pedestrian	Vehicle	274.15	-----	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	-----	-----	-----	-----	-----	**15.58**	**15.58**	-----	-----
		U$_{30}$ - L$_{31}$	294.99	-4.11	29.16	-1.64	12.90	0.90	1.18	31.04	-4.37	12.90	-1.64	Pedestrian	Pedestrian	440.61	-----	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	-----	-----	-----	-----	-----	**10.98**	**10.98**	-----	-----
		U$_{31}$ - L$_{32}$	342.70	-3.96	30.86	-0.55	13.70	0.90	1.18	32.85	-4.21	13.70	-0.55	Pedestrian	Vehicle	506.03	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**9.34**	**9.34**	-----	-----
		U$_{32}$ - L$_{33}$	363.39	-0.85	34.53	0.37	13.78	0.90	1.18	36.76	-0.91	13.78	0.37	Pedestrian	Vehicle	538.11	-----	0.00	33.27	33.2657	1097.77	131.71	16.2

Moment (Start) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss System
Loading: 2F1
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
Guidelines for Strength Design of Truss Bridges (LDF) 1985 rev 1996

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

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

M_z Information

| Location | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Min) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | ZZ Axis Moment Properties: Max. Pos. Moment: Start | End | Max. Neg. Mom.: Start | End | S_{bot} (in^3) | S_{top} (in^3) | Z_z (in^3) | I_{zz} (in^4) | Shape Factor | M_p (k-in) | Formula I, S Terms F_y*S_xx | M_y (k-in) | Equivalent Mom. Factor: a | $C_{b(a)}$ | 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) | YY Axis Moments from STAAD: 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 | End | Max. Neg. Mom.: Start | End | S_{bot} (in^3) | S_{top} (in^3) | Z_y (in^3) | I_{yy} (in^4) | Shape Factor | M_p (k-in) | P_{crit} (kip) | Formula I, S Terms F_y*S_xx | M_y (k-in) | Equivalent Mom. Factor: a | $C_{b(a)}$ | Yield: Axial Axial+Moment | Moment Axial+Moment | Total | Pass | Tension: Fracture: Axial Axial+Moment | Moment Axial+Moment | Total | Pass | Compression: Buckle: Axial Axial+Moment | Moment Axial+Moment | Total | Pass | Yield: Axial Axial+Moment | Moment Axial+Moment | Total | Pass |
|---|---|---|---

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
Condition: As-Built

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

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

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

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

Maximum Axial with Moment Interaction Check

M_2 Information

| Location | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Max) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | Max. Pos. Mom. Start (k-in) | Max. Pos. Mom. End (k-in) | S_{bb} (in^3) | S_b (in^3) | Z_z (in^3) | I (in^4) | I_{NA} (in^4) | Shape Factor | M_p (k-in) | Formula 1.8 Term * F$_y$/S$_{bb}$ | M_u (k-in) | Equivalent Mom. Factor: a | C_{mx} | C_{mx2} | 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_{bb} (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$_{bb}$ | M_u (k-in) | Equivalent Mom. Factor: a | C_{mx} | C_{mx2} | Tension: Axial Stress (ksi) | Moment Stress (ksi) | Total | Pass | Compression: Yield: Axial Stress (ksi) | Moment Stress (ksi) | Total | Pass | Buckle: Axial Portion | Moment Portion | Total | Pass | Fracture: 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: 2F1
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-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_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	I_z (in^4)	$I_{z/r}$ (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 $C_{m(x)}$	Equivalent Mom. Factor $C_{m(y)}$
Structure 1	U_0–L_1	-66.29	86.22	0.00	-0.40	-2.11	2.57	0.00	0.00	0.00	0.00	-68.05	105.19	-109.87	166.70	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_1–L_1	-14.44	23.27	0.39	-0.29	-2.20	2.09	5.24	-5.24	-29.40	27.87	0.00	0.00	-11.56	23.45	-57.00	66.48	15.4	15.42	15.42	23.71	2	751.9	1.54	782
	U_1–L_2	-5.58	5.55	0.00	-0.53	-1.79	2.07	0.00	0.00	0.00	0.00	-5.58	16.47	-16.46	-22.73	26.15	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_1–L_2	36.84	-39.22	1.14	-0.95	-1.28	1.40	15.27	-17.66	-17.13	18.73	0.00	0.00	67.24	-62.25	25.62	-21.44	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_2–U_2	49.77	-49.19	1.58	-1.42	-1.16	1.32	21.12	-19.76	-7.82	8.51	0.00	0.00	92.16	-82.14	-53.45	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_1–U_2	57.71	-69.80	1.84	-2.02	-0.61	0.04	24.58	-26.99	-1.40	0.58	0.00	0.00	106.97	-125.82	73.19	-90.01	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5	958.8
	U_2–L_3	68.32	-67.29	2.11	-1.91	-0.45	0.46	28.15	-25.49	-0.46	0.41	0.00	0.00	84.53	-88.59	52.21	-58.08	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_2–L_3	106.28	-118.16	2.80	-2.88	-0.07	0.06	37.35	-38.53	-0.96	0.80	0.00	0.00	185.73	-203.70	136.52	-152.50	18.5	18.45	18.36	30.78	3	1020.9	1.67	1016	1.5	913.3
	U_3–L_3	-10.96	6.72	3.25	-3.85	-2.24	2.69	43.41	-51.47	-29.91	35.92	0.00	0.00	42.18	-58.14	-53.13	55.43	107.1	107.13	107.11	162.71	26	2056.9	1.52	5369	1.5	5302.3
	L_3–L_4	-74.42	74.27	2.27	-2.67	-2.37	2.58	31.05	-31.05	-29.46	33.1	0.00	0.00	-185.23	214.93	-225.26	256.46	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1736.2
	U_3–L_4	-102.02	95.66	0.15	-0.09	-1.94	2.03	1.93	-1.13	-29.15	26.30	0.00	0.00	-130.08	122.89	-165.32	158.55	35.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
	U_4–L_4	-111.13	106.55	0.28	-0.12	-2.06	2.32	3.67	-3.05	-29.85	27.58	0.00	0.00	-139.66	203.73	-179.05	245.09	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_4–L_5	-96.42	93.90	0.39	-0.26	-1.93	1.94	5.07	-3.38	-24.96	25.14	0.00	0.00	-118.75	117.68	-157.79	154.75	21.1	21.09	21.09	35.46	10	1137.6	1.68	1170	1.5	1044.0
	U_5–L_5	-60.91	75.94	0.55	-0.53	-2.03	2.09	7.14	-6.84	-26.29	27.03	0.00	0.00	-69.90	89.82	-113.36	133.85	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
	L_5–L_6	-29.70	30.00	1.30	-1.09	-1.35	1.42	9.36	-9.36	-17.26	17.26	0.00	0.00	-29.70	37.20	-69.01	77.49	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_6–L_6	47.73	-50.39	1.94	-1.67	-0.94	0.93	23.11	-24.17	-12.29	12.03	0.00	0.00	40.85	-52.06	-5.05	-4.99	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_6–L_7	64.53	-68.39	2.56	-2.29	-0.56	0.55	25.12	-26.15	-7.57	7.72	0.00	0.00	94.63	-98.59	52.21	-58.08	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_7–L_7	61.55	-72.81	1.95	-2.00	-0.26	0.27	25.20	-25.93	-3.39	3.43	0.00	0.00	112.78	-128.36	75.60	-90.19	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8
	L_7–L_8	133.11	-138.25	3.16	-3.22	-0.36	0.37	41.13	-41.67	-4.74	4.74	0.00	0.00	226.51	-233.84	166.52	-173.51	33.1	33.09	33.09	53.51	14	1187.1	1.65	1766	1.5	1737.0
	U_8–L_8	157.87	-153.86	3.66	-3.58	-0.37	0.33	47.34	-46.30	-4.81	4.32	0.00	0.00	266.78	-262.07	198.58	-194.40	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_8–L_9	131.38	-213.66	2.79	-3.43	-0.16	0.27	36.03	-44.37	-2.08	3.01	0.00	0.00	217.61	-335.43	168.08	-273.19	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_9–L_9	-147.13	191.00	3.28	-3.20	-0.36	0.40	40.94	-50.96	-4.64	5.77	0.00	0.00	-186.62	242.33	-232.39	293.12	42.7	42.74	42.74	65.30	8	1711.0	1.53	2357	1.5	2312.1
	L_9–L_{10}	-122.87	130.77	3.04	-3.35	-2.83	2.75	4.29	-4.41	-36.09	35.70	0.00	0.00	-154.15	164.27	-206.65	216.41	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1
	U_{10}–L_{10}	-73.21	73.13	3.42	-3.41	-2.91	2.91	5.31	-5.31	-39.15	39.15	0.00	0.00	-92.61	92.61	-146.32	146.32	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1
	L_{10}–L_{11}	-62.46	69.03	0.27	-0.27	-1.63	1.67	3.41	-3.48	-20.77	21.37	0.00	0.00	-76.76	85.22	-108.20	117.53	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5	1066.2
	U_{11}–L_{11}	-37.86	-43.29	0.47	-0.51	-1.61	1.77	6.77	-7.27	-21.99	22.80	0.00	0.00	-37.86	-43.29	-47.63	-54.50	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5	1066.2
	L_{11}–L_{12}	-9.11	15.69	0.88	-0.83	-1.72	1.81	11.22	-10.62	-22.03	23.10	0.00	0.00	2.74	8.59	-49.48	53.43	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{12}–L_{12}	14.84	-14.93	1.02	-1.07	-1.45	1.43	12.99	-13.71	-17.91	18.23	0.00	0.00	36.18	-37.23	-4.00	4.30	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{12}–L_{13}	39.69	-45.43	1.11	-1.00	-0.85	0.77	14.19	-15.63	-8.01	8.69	0.00	0.00	70.05	-79.42	-50.16	59.51	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{13}–L_{14}	88.81	-97.92	2.43	-2.43	-0.64	0.51	31.06	-31.02	-8.14	6.45	0.00	0.00	155.83	-167.62	104.87	-118.91	20.8	20.80	20.67	34.64	5	1037.5	1.67	1143	1.5	1029.6
	U_{13}–L_{14}	73.45	-83.39	2.43	-2.74	-0.40	0.29	25.12	-25.12	-2.53	2.53	0.00	0.00	129.76	-141.56	82.78	-94.61	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{14}–L_{15}	140.09	-147.00	2.83	-2.91	-0.16	-0.01	36.12	-37.19	-2.06	-0.83	0.00	0.00	229.07	-239.45	179.44	-192.18	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0
	U_{14}–L_{15}	148.96	-153.44	2.78	-2.88	-0.07	0.10	35.45	-36.78	-0.84	1.26	0.00	0.00	239.14	-247.29	192.55	-197.83	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0
	L_{15}–L_{16}	141.87	-199.96	2.84	-3.10	-0.16	0.29	35.27	-43.63	-2.08	3.01	0.00	0.00	211.52	-290.59	179.75	-251.79	43.24	43.16	43.16	69.06	14	1479.6	1.60	2266	1.5	2129.0
	U_{15}–L_{16}	185.41	-182.32	3.30	-3.17	-0.30	0.30	42.12	-40.48	-3.85	3.79	0.00	0.00	295.79	-289.90	236.03	-232.34	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
	L_{16}–L_{17}	72.60	-73.13	1.70	-1.72	-0.72	0.69	47.27	-47.63	-44.93	44.50	0.00	0.00	156.09	-153.59	32.72	-30.22	39.2	39.17	39.17	112.02	10	1392.6	1.62	2090	1.5	1938.9
	U_{16}–L_{17}	-128.28	129.98	0.31	-0.27	-2.93	2.75	3.86	-3.42	-37.02	34.77	0.00	0.00	-161.71	164.52	-214.86	214.17	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
	L_{17}–L_{18}	-125.94	122.64	0.31	-0.29	-3.29	3.23	3.93	-3.70	-41.96	40.83	0.00	0.00	-158.62	154.62	-217.76	212.60	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{17}–L_{18}	-109.68	106.91	0.41	-0.40	-3.06	3.22	5.18	-5.09	-38.62	38.62	0.00	0.00	-135.86	134.97	-192.80	194.58	39.8	39.83	39.83	59.23	6	1264.6	1.53	1993	1.5	1922.1
	L_{18}–L_{19}	-83.60	78.19	0.41	-0.40	-2.38	2.29	5.18	-5.09	-30.62	30.62	0.00	0.00	-109.78	104.89	-166.72	162.50	18.1	18.61	18.61	28.87	3	907.0	1.54	986	1.5	958.8
	U_{18}–L_{19}	-43.25	43.74	0.51	-0.44	-1.89	1.91	6.38	-5.49	-23.85	24.14	0.00	0.00	-47.94	49.72	-67.23	88.24	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
	L_{19}–L_{20}	29.76	-34.19	0.65	-0.60	-1.45	1.54	8.24	-8.24	-18.18	18.18	0.00	0.00	29.76	-34.19	-28.00	-33.33	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{19}–L_{20}	-1.28	1.60	0.96	-1.01	-1.07	1.14	12.17	-12.73	-13.55	14.41	0.00	0.00	14.16	-14.46	-19.27	20.81	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{20}–L_{21}	38.51	-37.24	1.88	-1.81	-0.72	0.68	15.27	-14.76	-10.98	10.60	0.00	0.00	57.78	-56.50	-19.79	19.13	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{20}–L_{21}	46.57	-51.18	1.81	-1.87	-0.52	0.46	22.79	-23.60	-6.55	6.79	0.00	0.00	90.16	-97.21	52.02	-59.00	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
	L_{21}–L_{22}	62.68	-61.36	2.36	-2.36	-0.41	0.40	29.82	-29.74	-5.20	5.02	0.00	0.00	122.24	-118.43	74.72	-73.23	18.7	18.71	18.61	31.48	8	970.0	1.68	1139	1.5	1091.6
	U_{21}–L_{22}	90.98	-92.54	3.46	-3.46	-0.61	0.61	39.16	-39.16	-7.68	7.68	0.00	0.00	184.60	-183.76	119.77	-119.03	33.1	33.09	33.09	53.51	14	1187.1	1.65	1766	1.5	1737.0
	L_{22}–L_{23}	106.60	-105.79	3.70	-3.74	-0.44	0.43	46.69	-47.23	-5.54	5.38	0.00	0.00	199.28	-198.83	131.38	-130.54	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{22}–L_{23}	102.77	-103.71	3.70	-3.74	-0.42	0.42	45.40	-45.40	-5.32	5.32	0.00	0.00	192.17	-192.17	127.12	-127.12	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_{23}–L_{24}	114.56	-114.55	3.68	-3.49	-0.21	0.18	46.44	-44.06	-2.70	2.25	0.00	0.00	203.29	-206.19	140.41	-145.99	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
	U_{23}–L_{24}	-13.74	5.73	3.79	-3.84	-0.03	0.01	34.59	-27.00	-0.34	0.09	0.00	0.00	-13.74	5.73	34.59	-27.00	39.2	39.17	39.17	112.02	10	1392.6	1.62	2090	1.5	1938.9
	L_{24}–L_{25}	-121.12	118.67	3.33	-3.31	-2.53	2.34	4.23	-3.96	-32.30	30.09	0.00	0.00	-151.95	149.12	-199.52	193.20	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
	U_{24}–L_{25}	-92.37	86.40	0.27	-0.37	-2.48	2.41	3.40	-4.68	-31.86	30.79	0.00	0.00	-115.66	106.24	-161.24	152.35	43.2	43.24	43.16	70.66	10	1515.6	1.63	2332	1.5	2140.4
	L_{25}–L_{26}	-103.24	93.47	0.37	-0.51	-2.46	2.39	3.40	-4.68	-31.86	30.79	0.00	0.00	-115.66	106.24	-161.24	152.35	43.2	43.24	43.16	70.66	10	1515.6	1.63	2332	1.5	2140.4
	U_{25}–L_{26}	-96.77	103.11	0.15	-0.10	-2.58	2.59	1.97	-1.21	-32.92	33.09	0.00	0.00	-123.25	132.47	-168.57	177.07	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0
	L_{26}–L_{27}	-51.90	51.90	0.37	-0.37	-2.09	2.09	2.37	-2.37	-29.46	29.46	0.00	0.00	-51.90	51.90	-81.35	81.35	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{26}–L_{27}	-43.45	70.59	0.38	-0.33	-2.38	2.39	-6.19	86.35	-122.07	131.48	20.8	20.80	20.67	34.64	5	1037.5	1.67	1143	1.5	1029.6
	L_{27}–L_{28}	-32.66	38.67	0.49	-0.50	-1.28	1.43	6.20	-6.44	-16.33	18.24	0.00	0.00	-34.41	41.90	-63.69	73.99	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{27}–L_{28}	-29.76	34.19	0.65	-0.60	-1.45	1.54	8.24	-8.24	-18.18	18.18	0.00	0.00	-29.76	34.19	-28.00	-33.33	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{28}–L_{29}	-4.46	4.40	-1.51	-1.62	-0.98	0.94	12.71	-12.73	-12.57	11.97	0.00	0.00	30.84	-37.86	-10.55	4.64	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{28}–L_{29}	26.76	-29.03	1.79	-1.82	-0.58	0.58	22.80	-22.80	-7.14	7.14	0.00	0.00	63.79	-67.21	-11.84	11.84	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{29}–L_{30}	47.22	-50.55	1.87	-1.95	-0.33	0.33	23.94	-24.89	-4.17	4.20	0.00	0.00	92.51	-98.06	-55.97	-60.24	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5	1066.2
	U_{29}–L_{30}	43.16	-43.16	1.94	-1.94	-0.34	0.34	23.78	-23.78	-4.38	4.38	0.00	0.00	84.83	-84.83	-53.53	-53.53	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5	1066.2
	L_{30}–L_{31}	-104.86	-102.69	3.63	-3.51	-0.47	0.44	46.35	-44.86	-5.97	5.61	0.00	0.00	196.57	-202.92	128.56	-138.45	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1
	U_{30}–L_{31}	-108.12	-102.78	2.79	-3.62	-0.24	0.38	35.70	-46.24	-3.00	4.91	0.00	0.00	196.97	-232.73	136.66	-166.24	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1
	L_{31}–L_{32}	-124.18	-124.18	3.63	-3.63	-0.38	0.38	43.18	-43.18	-4.86	4.86	0.00	0.00	-168.05	-168.05	208.61	-208.61	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1
	U_{31}–L_{32}	-109.22	-116.95	0.25	-0.23	-2.75	2.74	3.20	-3.01	-35.92	35.41	0.00	0.00	-137.84	148.12	-188.18	198.08	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_{32}–L_{33}	-130.35	111.03	0.25	-0.23	-2.75	2.74	3.20	-3.01	-35.92	35.41	0.00	0.00	-137.84	148.12	-188.18	198.08	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{32}–L_{33}	-48.65	58.79	0.21	-0.21	-1.83	1.82	2.65	-2.69	-23.61	23.48	0.00	0.00	-50.80	72.53	-93.40	106.96	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8
	L_{33}–L_{34}	-98.15	-98.15	0.44	-0.44	-2.39	2.39	2.61	-2.61	-29.77	29.77	0.00	0.00	-98.15	-98.15	-154.06	-154.06	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{33}–L_{34}	-9.41	11.55	0.73	-0.75	-1.83	1.90	9.48	-9.06	-23.63	24.58	0.00	0.00	5.29	3.24	-37.75	46.97	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{34}–L_{35}	27.86	-30.67	1.16	-1.25	-1.13	1.15	14.56	-16.22	-14.58	14.89	0.00	0.00	55.66	-60.96	17.26	-20.51	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{34}–L_{35}	39.15	-42.89	0.44	-0.44	-2.39	2.39	2.61	-2.61	-29.77	29.77	0.00	0.00	100.45	-104.51	58.04	-62.10	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{35}–L_{36}	85.70	-83.03	2.09	-2.17	-0.45	0.33	27.25	-28.12	-5.87	4.74	0.00	0.00	144.65	-144.49	103.84	-101.79	21.1	21.09	21.09	35.46	10	1137.6	1.68	1170	1.5	1044.0
	U_{35}–L_{36}	70.07	67.33	2.33	-2.37	-0.45	0.31	28.30	-31.76	-4.47	3.61	0.00	0.00	144.65	-144.49	103.84	-101.79	21.1	21.09	21.09	35.46	10	1137.6	1.68	1170	1.5	1044.0
	L_{36}–L_{37}	70.07	67.33	2.09	-2.45	-0.64	-0.09	28.30	-31.76	-4.47	-0.62	0.00	0.00	160.29	-168.54	122.90	-128.09	35.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
	U_{36}–L_{37}	139.46	-154.19	2.56	-3.22	-0.10	0.09	38.01	-41.61	-1.27	1.14	0.00	0.00	225.51	-254.43	174.45	-198.66	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1736.0
	L_{37}–L_{38}	5.87	-8.62	2.60	-2.36	-0.59	0.53	34.67	-31.48	-7.91	7.03	0.00	0.00	52.68	-53.42	-2.66	-2.37	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{37}–L_{38}	20.15	-40.81	1.91	-2.71	-0.81	-0.25	25.52	-36.20	-10.75	-3.31	0.00	0.00	59.42	-100.19	12.26	-57.36	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3

M_z Information — YY Axis Moments from STAAD

Location	Member	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_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	$I_{z/r}$ (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 $C_{m(x)}$	Equivalent Mom. Factor $C_{m(y)}$
Structure 1	U_0–L_1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-3.94	1.27	-0.44	-0.14	-8.29	-2.66								
	U_1–L_1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-5.85	-1.87	-110.68	-35.50	0.00	0.00	0.00	-12.72	4.08	-149.01	-47.80	94.0	93.99	93.97
	U_1–L_2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.47	-0.88	-42.17	1.42	0.00	0.00	0.00	-19.86	2.88	-42.17	1.42	94.0	93.99	93.99
	L_1–L_2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.56	3.17	-9.20	3.50	0.00	0.00	0.00	-61.99	-5.06	-88.98	-5.20	94.0	93.99	93.99
	L_2–U_2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.80	17.27	-15.88	-2.90	0.00	0.00	0.00	19.75	18.50	-38.34	-7.73	94.0	93.99	93.99
	U_2–L_3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.75	5.12	-18.81	5.63	0.00	0.00	0.00	-5.70	15.78	-18.81	5.63	94.0	93.99	93.99
	L_2–L_3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.55	-10.31	15.50	9.71	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	0.12	-9.09	-0.89	0.41	1.58	-1.20	-11.92	5.52
	U_1-L_1	-3.41	-8.42	0.16	-9.06	-0.78	0.01	2.11	-0.83	-10.46	0.12
	U_1-L_2	-8.72	-9.72	0.21	-9.07	-0.67	-0.17	2.64	-0.46	-9.00	-0.29
	U_2-L_2	7.93	-13.37	0.18	0.05	-0.55	-0.50	2.39	0.60	-7.36	-6.65
	U_2-L_3	-14.61	18.52	0.08	0.25	-0.47	-0.12	1.02	3.73	-11.67	-1.02
	U_3-L_3	-37.44	76.90	0.18	0.43	-1.11	0.46	-2.42	5.78	-22.79	6.13
	U_3-L_4	37.01	20.01	0.17	-0.16	-1.18	0.67	2.31	2.79	-34.21	17.97
	U_4-L_4	-8.75	101.93	0.36	0.30	-1.54	1.57	4.89	3.99	-13.92	26.32
	U_4-L_5	-5.11	118.70	0.82	0.45	-0.68	1.19	10.57	5.77	-8.56	32.05
	U_5-L_5	-17.68	73.62	0.74	0.16	-0.07	0.63	2.33	-0.51	-19.78	8.15
	U_5-L_6	-43.88	73.22	0.22	0.48	-1.25	0.51	2.82	6.16	-17.45	6.53
	U_6-L_6	-22.22	22.22	0.18	0.18	-0.63	0.20	2.26	2.26	-19.82	2.60
	U_6-L_7	-65.20	48.77	0.11	0.25	-1.18	0.79	1.45	-3.23	-15.27	10.23
	U_7-L_7	-24.90	8.63	0.21	-0.39	-0.75	0.11	2.72	-5.01	-9.70	1.42
	U_7-L_8	-0.81	-2.24	0.16	-0.63	-0.31	0.16	2.98	-5.48	-3.68	-0.67
	U_8-L_8	-25.30	9.99	0.30	-0.47	-0.92	0.70	3.87	-6.04	-11.88	9.02
	U_8-L_9	31.27	20.01	0.17	-0.16	-1.18	0.67	2.31	-2.79	-34.21	17.97
	U_9-L_9	-101.94	74.32	0.24	-0.24	-2.20	1.69	3.09	-3.07	-28.50	21.89
	U_9-L_{10}	-115.87	80.00	0.22	-0.40	-1.85	1.39	2.79	-2.31	-32.87	23.87
	U_{10}-L_{10}	-75.88	78.94	0.09	-0.08	-2.69	1.80	4.03	0.09	-22.09	23.22
	U_{10}-L_{11}	-109.41	98.91	0.22	-0.22	-2.43	1.77	2.75	-2.85	-30.98	22.65
	U_{11}-L_{11}	-89.79	89.79	0.22	-0.22	-2.43	1.77	2.75	-2.85	-30.98	22.65
	U_{11}-L_{12}	-90.87	71.82	0.31	-0.27	-2.23	1.52	2.97	-2.98	-25.45	20.03
	U_{12}-L_{12}	-67.78	53.41	0.14	-0.16	-2.02	1.26	2.81	-2.56	-20.61	16.56
	U_{12}-L_{13}	-20.35	3.86	0.27	-0.39	-0.98	0.70	3.42	-5.01	-12.53	5.86
	U_{13}-L_{13}	-0.81	-2.24	0.16	-0.63	-0.31	0.16	2.98	-5.48	-3.68	-0.67
	U_{13}-L_{14}	6.85	-23.87	0.47	-0.72	-0.67	0.00	5.98	-9.22	-6.60	-2.01
	U_{14}-L_{14}	-44.41	35.31	0.29	-0.61	-1.18	0.24	3.65	-7.77	-15.05	3.12
	U_{14}-L_{15}	-96.57	69.69	0.27	-0.48	-2.05	1.24	3.01	-5.06	-24.65	12.24
	U_{15}-L_{15}	-85.40	67.30	0.15	0.30	-1.50	1.11	1.90	3.83	-24.29	14.21
	U_{15}-L_{16}	-31.77	20.01	0.17	-0.16	-1.18	0.67	2.31	-2.79	-34.21	17.97
	U_{16}-L_{16}	-109.84	116.34	0.26	0.11	-2.21	1.62	3.30	1.43	-28.18	20.71
	U_{16}-L_{17}	-141.98	130.62	0.33	-0.17	-2.81	2.25	4.50	-2.18	-35.91	28.80
	U_{17}-L_{17}	-42.19	133.41	0.74	0.16	-0.07	0.63	2.33	-0.51	-19.78	8.15
	U_{17}-L_{18}	-11.96	79.20	0.59	0.15	-1.54	1.78	7.50	1.93	-19.43	22.01
	U_{18}-L_{18}	-77.27	54.69	0.23	-0.25	-2.27	1.75	2.50	-2.46	-20.46	15.77
	U_{18}-L_{19}	-66.19	89.97	0.22	-0.14	-2.12	1.87	2.83	-1.78	-26.74	23.63
	U_{19}-L_{19}	-58.07	72.69	0.20	-0.23	-1.92	1.17	2.53	-2.84	-24.28	14.75
	U_{19}-L_{20}	-31.84	37.59	0.20	-0.20	-1.40	0.96	2.50	-2.55	-17.70	12.02
	U_{20}-L_{20}	-10.03	3.77	0.30	-0.49	-0.80	0.62	3.72	-6.19	-10.15	0.83
	U_{21}-L_{21}	-19.43	8.79	0.24	-0.40	-0.91	0.76	3.21	-5.05	-11.46	9.63
	U_{22}-L_{22}	-46.51	58.29	0.27	-0.30	-2.04	1.66	3.40	-3.75	-25.70	20.49
	U_{23}-L_{23}	-54.32	68.37	0.22	-0.27	-2.10	1.50	2.80	-3.45	-26.51	18.90
	U_{24}-L_{24}	-49.49	72.12	0.16	-0.10	-2.67	2.37	1.98	-1.22	-33.73	29.91
	U_{25}-L_{25}	-17.98	70.53	0.74	0.16	-0.07	0.63	2.33	-0.51	-19.78	8.15
	U_{26}-L_{26}	-35.84	53.55	0.74	0.16	-1.49	1.89	9.44	2.02	-19.06	24.13
	U_{27}-L_{27}	-76.26	86.09	0.28	-0.12	-2.62	1.56	3.58	-1.47	-25.80	19.93
	U_{28}-L_{28}	-78.38	71.14	0.25	-0.01	-1.86	1.03	3.25	-0.11	-23.90	13.15
	U_{29}-L_{29}	-26.84	38.18	0.25	-0.25	-1.76	1.15	3.23	-3.27	-23.07	14.68
	U_{30}-L_{30}	-76.64	55.13	0.11	-0.40	-2.03	1.20	1.46	-5.11	-25.88	15.38
	U_{31}-L_{31}	-20.76	33.86	0.18	-0.12	-1.46	0.96	2.36	-2.42	-17.08	12.42
	U_{32}-L_{32}	-78.38	71.14	0.25	-0.01	-1.86	1.03	3.25	-0.11	-23.90	13.15
	U_{33}-L_{33}	-26.84	38.18	0.25	-0.25	-1.76	1.15	3.23	-3.27	-23.07	14.68
	U_{34}-L_{34}	-76.64	55.13	0.11	-0.40	-2.03	1.20	1.46	-5.11	-25.88	15.38
	U_{35}-L_{35}	-20.76	33.86	0.18	-0.12	-1.46	0.96	2.36	-2.42	-17.08	12.42
	U_{36}-L_{36}	-8.26	-17.63	0.68	-0.85	-0.59	-0.10	6.78	-9.28	-9.02	1.92
	U_{37}-L_{37}	-1.03	-9.85	0.53	-0.73	-0.11	0.46	6.78	-9.28	-9.02	1.92
	U_{38}-L_{38}	-13.28	6.81	0.24	-0.40	-0.91	0.76	3.72	-6.19	-10.15	0.83
	U_{39}-L_{39}	-33.71	19.61	0.24	-0.21	-1.29	0.98	3.02	-2.67	-16.52	12.96
	U_{40}-L_{40}	-78.83	60.14	0.32	-0.28	-2.58	1.88	4.05	-3.63	-32.99	24.03
	U_{41}-L_{41}	-68.12	83.30	0.13	-0.13	-2.94	1.91	1.71	-1.64	-37.97	24.73
	U_{42}-L_{42}	-90.42	64.48	0.15	-0.15	-2.01	1.40	2.06	-1.88	-26.03	18.07
	U_{43}-L_{43}	-33.53	18.27	0.15	-0.14	-1.20	0.72	1.93	-1.77	-15.56	9.32
	U_{44}-L_{44}	-1.49	18.99	0.32	-0.56	-0.71	0.08	4.08	-7.27	-6.12	-1.03
	U_{45}-L_{45}	-53.89	37.99	0.11	-0.40	-1.19	0.71	1.44	-5.14	-15.42	9.21
	U_{46}-L_{46}	-61.82	22.38	0.53	-0.42	-1.66	0.05	1.91	5.42	-21.48	0.65
	U_{47}-L_{47}	-73.27	52.24	0.23	-0.25	-2.27	1.75	2.50	-2.46	-20.46	15.77
	U_{48}-L_{48}	-73.27	65.81	0.16	0.32	-1.50	0.73	2.12	4.13	-24.61	9.41
	U_{49}-L_{49}	-52.27	64.91	0.45	0.43	-1.60	1.53	6.04	5.77	-33.33	20.47
	U_{50}-L_{50}	-38.99	50.41	0.20	-0.08	-2.12	1.19	2.69	-1.04	-28.15	15.82
	U_{51}-L_{51}	-7.75	19.68	0.30	0.30	-0.85	-0.23	1.19	4.02	-11.32	-3.06
	U_{52}-L_{52}	-52.27	64.91	0.45	0.43	-1.60	1.53	6.04	5.77	-33.33	20.47
	U_{53}-L_{53}	-38.99	50.41	0.20	-0.08	-2.12	1.19	2.69	-1.04	-28.15	15.82
	U_{54}-L_{54}	-7.75	19.68	0.30	0.30	-0.85	-0.23	1.19	4.02	-11.32	-3.06
	U_{55}-L_{55}	2.61	-8.77	0.24	-0.68	-0.68	-0.23	2.86	-3.87	-8.35	-5.34
	U_{56}-L_{56}	2.61	-8.77	0.24	-0.68	-0.68	-0.23	2.86	-3.87	-8.35	-5.34
	U_{57}-L_{57}	-2.75	-5.59	0.22	-0.60	-0.57	-0.05	2.86	-3.87	-8.35	-5.34
	U_{58}-L_{58}	-2.75	-5.59	0.22	-0.60	-0.57	-0.05	2.86	-3.87	-8.35	-5.34

ZZ Axis Moments from STAAD (continued)

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	S_{bb} (in^3)	S_b (in^3)	Z_z (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F/S_{bb}	M_u (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor C_{mm}
Structure 1	U_0-L_1	-28.42	8.22	46.97	16.96	15.6	19.63	15.58	25.96	5	804.0	1.66	.857	1.5	773.7
	U_1-L_1	-1.69	-12.02	-18.03	-10.79	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5	763.3
	U_1-L_2	0.23	-13.82	-15.11	-15.58	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5	763.3
	U_2-L_2	13.41	-16.60	0.73	-26.03	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5	763.3
	U_2-L_3	1.03	-17.58	20.52	-19.37	15.4	19.37	19.37	29.87	5	907.0	1.54	.782	1.5	958.8
	U_3-L_3	-45.53	107.49	78.33	107.96	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0
	U_3-L_4	-89.54	103.52	-136.76	23.25	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0
	U_4-L_4	4.89	3.99	-13.92	26.32	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00
	U_4-L_5	10.57	5.77	-8.56	32.05	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00
	U_5-L_5	2.33	-0.51	-19.78	8.15	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00
	U_5-L_6	2.82	6.16	-17.45	6.53	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00
	U_6-L_6	2.26	2.26	-19.82	2.60	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00
	U_6-L_7	1.45	-3.23	-15.27	10.23	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00
	U_7-L_7	2.72	-5.01	-9.70	1.42	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00
	U_7-L_8	5.48	-9.67	-11.81	-0.67	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00
	U_8-L_8	-27.86	5.13	-48.33	24.71	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5	763.3
	U_8-L_9	-45.23	23.38	-67.97	37.24	15.4	19.37	19.37	29.87	5	907.0	1.54	.986	1.5	958.8
	U_9-L_9	-128.50	92.62	-169.57	125.05	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_9-L_{10}	-147.62	100.65	-191.93	139.03	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{10}-L_{10}	-97.09	101.23	-132.84	132.88	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{10}-L_{11}	-138.66	124.87	-182.51	168.03	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{11}-L_{11}	-125.20	98.10	-182.51	168.03	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{11}-L_{12}	-102.92	88.88	-153.13	119.41	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{12}-L_{12}	-67.84	53.63	-102.52	78.88	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{12}-L_{13}	-22.00	3.31	-42.74	24.46	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{13}-L_{13}	5.48	-9.67	-11.81	-0.67	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00
	U_{13}-L_{14}	16.67	-43.02	-2.28	-31.05	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
	U_{14}-L_{14}	-52.99	35.80	-77.33	49.95	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2
	U_{14}-L_{15}	-124.36	82.12	-167.08	106.75	36.5	36.83	36.83	59.23	4	1284.6	1.53	1955	1.5	1922.1
	U_{15}-L_{15}	-108.54	92.48	-142.68	105.96	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{15}-L_{16}	-125.26	121.53	-157.84	156.16	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{16}-L_{16}	-133.31	153.11	-174.23	178.17	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1
	U_{16}-L_{17}	-170.72	156.97	-231.26	207.24	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{17}-L_{17}	-68.53	73.72	-102.52	78.88	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{17}-L_{18}	-5.80	108.47	-60.61	132.22	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{18}-L_{18}	-95.58	97.33	-131.72	131.46	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{19}-L_{19}	-82.37	114.65	-120.81	147.68	38.8	38.83	38.83	59.23	4	1284.6	1.53	1955	1.5	1922.1
	U_{19}-L_{20}	-62.79	62.93	-93.47	74.19	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{20}-L_{20}	-69.60	90.67	-104.45	113.34	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{21}-L_{21}	-38.14	40.55	-64.40	64.49	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2
	U_{22}-L_{22}	-24.40	27.78	-43.03	36.55	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{23}-L_{23}	-8.19	-3.15	-26.23	5.98	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{24}-L_{24}	-4.03	7.91	-18.68	16.44	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{25}-L_{25}	-21.09	18.88	-40.16	37.97	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{26}-L_{26}	-68.53	73.72	-102.52	78.88	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{27}-L_{27}	-56.05	70.85	-83.88	102.93	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{28}-L_{28}	-56.97	94.40	-105.08	113.45	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{29}-L_{29}	-69.03	94.04	-93.72	133.76	38.8	38.83	38.83	59.23	4	1284.6	1.53	1955	1.5	1922.1
	U_{30}-L_{30}	-67.76	92.16	-134.19	132.64	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{31}-L_{31}	-39.68	49.73	-73.16	57.68	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{32}-L_{32}	-56.97	94.40	-105.08	113.45	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{33}-L_{33}	-69.03	94.04	-93.72	133.76	38.8	38.83	38.83	59.23	4	1284.6	1.53	1955	1.5	1922.1
	U_{34}-L_{34}	-67.76	92.16	-134.19	132.64	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{35}-L_{35}	-39.68	49.73	-73.16	57.68	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{36}-L_{36}	-8.26	-17.63	0.68	-0.85	-0.59	-0.10	6.78	-9.28	-9.02	1.92
	U_{37}-L_{37}	-1.03	-9.85	0.53	-0.73	-0.11	0.46	6.78	-9.28	-9.02	1.92
	U_{38}-L_{38}	-13.28	6.81	0.24	-0.40	-0.91	0.76	3.72	-6.19	-10.15	0.83
	U_{39}-L_{39}	-33.71	19.61	0.24	-0.21	-1.29	0.98	3.02	-2.67	-16.52	12.96
	U_{40}-L_{40}	-78.83	60.14	0.32	-0.28	-2.58	1.88	4.05	-3.63	-32.99	24.03
	U_{41}-L_{41}	-68.12	83.30	0.13	-0.13	-2.94	1.91	1.71	-1.64	-37.97	24.73
	U_{42}-L_{42}	-90.42	64.48	0.15	-0.15	-2.01	1.40	2.06	-1.88	-26.03	18.07
	U_{43}-L_{43}	-33.53	18.27	0.15	-0.14	-1.20	0.72	1.93	-1.77	-15.56	9.32
	U_{44}-L_{44}	-1.49	18.99	0.32	-0.56	-0.71	0.08	4.08	-7.27	-6.12	-1.03
	U_{45}-L_{45}	-53.89	37.99	0.11	-0.40	-1.19	0.71	1.44	-5.14	-15.42	9.21
	U_{46}-L_{46}	-61.82	22.38	0.53	-0.42	-1.66	0.05	1.91	5.42	-21.48	0.65
	U_{47}-L_{47}	-73.27	52.24	0.23	-0.25	-2.27	1.75	2.50	-2.46	-20.46	15.77
	U_{48}-L_{48}	-73.27	65.81	0.16	0.32	-1.50	0.73	2.12	4.13	-24.61	9.41
	U_{49}-L_{49}	-52.27	64.91	0.45	0.43	-1.60	1.53	6.04	5.77	-33.33	20.47
	U_{50}-L_{50}	-38.99	50.41	0.20	-0.08	-2.12	1.19	2.69	-1.04	-28.15	15.82
	U_{51}-L_{51}	-7.75	19.68	0.30	0.30	-0.85	-0.23	1.19	4.02	-11.32	-3.06
	U_{52}-L_{52}	-52.27	64.91	0.45	0.43	-1.60	1.53	6.04	5.77	-33.33	20.47
	U_{53}-L_{53}	-38.99	50.41	0.20	-0.08	-2.12	1.19	2.69	-1.04	-28.15	15.82
	U_{54}-L_{54}	-7.75	19.68	0.30	0.30	-0.85	-0.23	1.19	4.02	-11.32	-3.06
	U_{55}-L_{55}	2.61	-8.77	0.24	-0.68	-0.68	-0.23	2.86	-3.87	-8.35	-5.34
	U_{56}-L_{56}	2.61	-8.77	0.24	-0.68	-0.68	-0.23	2.86	-3.87	-8.35	-5.34
	U_{57}-L_{57}	-2.75	-5.59	0.22	-0.60	-0.57	-0.05	2.86	-3.87	-8.35	-5.34
	U_{58}-L_{58}	-2.75	-5.59	0.22	-0.60	-0.57	-0.05	2.86	-3.87	-8.35	-5.34

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	0.26	0.43	-0.21	-0.75	3.50	5.77	-69.58	-10.07
	U_1-L_1	-4.89	3.62	-57.97	-36.06	0.00	0.00	0.00	0.00	0.00	0.00
	U_1-L_2	-52.17	-20.78	-5.20	-1.81	-0.29	-2.71	5.24	7.73	-69.58	-10.07
	U_2-L_2	-33.39	-37.29	0.65	0.69	0.01	-0.86	8.64	9.16	0.19	-11.49
	U_2-L_3	-138.27	-68.84	0.52	0.37	-0.32	0.53	8.32	7.37	-68.67	-41.74
	U_3-L_3	24.42	-25.04	1.50	-0.94	-5.14	-3.12	20.05	12.57	-68.67	-41.74
	U_3-L_4	-117.11	-38.34	0.22	0.00	-0.26	0.00	29.43	17.23	-76.46	-45.06
	U_4-L_4	-28.63	13.33	-37.15	-34.84	0.00	0.00	0.00	0.00	0.00	0.00
	U_4-L_5	8.10	-5.07	50.17	34.42	0.00	0.00	0.00	0.00	0.00	0.00
	U_5-L_5	0.83	-0.36	50.51	35.79	0.00	0.00	0.00	0.00	0.00	0.00
	U_5-L_6	-28.63	13.33	-37.15	-34.84	0.00	0.00	0.00	0.00	0.00	0.00
	U_6-L_6	-29.43	13.69	-37.26	-34.93	0.00	0.00	0.00	0.00	0.00	0.00
	U_6-L_7	-118.31	-8.50	-9.74	19.96	0.00	0.00	0.00	0.00	0.00	0.00
	U_7-L_7	-15.25	-10.08	-4.74	19.58	0.00	0.00	0.00	0.00	0.00	0.00
	U_7-L_8	-12.16	-19.67	-21.81	-0.67	0.00	0.00	0.00	0.00	0.00	0.00
	U_8-L_8	-117.56	-96.42	-1.52	-0.28	-1.60	-2.01	-19.68	-3.64	-20.05	-26.01
	U_8-L_9	9.39	6.39	-31.38	-37.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_9-L_9

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
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
& Loading Specification for Strength Design of Truss Bridges (LDF) 1985 rev 1986

* 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 (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~U_2	-75.12	-70.72	4.52	-4.44	-11.44	-2.59	50.29	-49.37	-137.33	-28.82
	U_2~U_3	-46.81	-20.16	4.41	-1.36	-6.65	-4.34	49.53	-15.10	-84.23	-70.63
	U_3~U_4	-112.19	86.51	0.62	1.54	-8.61	-3.28	6.88	17.11	-95.83	-36.55
	U_4~U_5	-15.68	66.14	0.99	3.04	-5.49	-1.85	10.99	13.95	-54.40	-20.90
	U_5~U_6	-9.16	61.58	0.99	1.43	-10.37	-3.92	11.02	13.89	-115.49	-43.64
	U_6~U_7	42.76	120.09	1.11	1.46	-9.95	-0.48	12.34	16.23	-110.81	-5.37
	U_7~U_8	15.68	54.14	0.99	1.26	-9.13	-0.96	16.03	-69.73	-68.97	-26.22
	U_8~U_9	-47.40	525.96	0.58	1.46	-11.52	10.15	6.41	16.24	-128.21	112.96
	U_9~U_{10}	474.61	-124.27	1.58	0.12	-6.29	0.35	79.53	-87.57	-0.96	3.76
	U_{10}~U_{11}	46.76	20.63	1.38	-1.18	-3.61	-1.93	14.89	-12.69	-38.96	-20.77
	U_{11}~U_{12}	64.51	-13.88	1.42	-3.40	-2.71	-5.44	18.19	-17.06	-25.63	-58.62
	U_{12}~U_{13}	27.83	-140.42	1.61	1.40	-5.61	-4.36	17.35	-15.13	-60.53	-47.03
	U_{13}~U_{14}	-106.18	-154.99	2.03	0.80	-7.29	-4.93	21.66	8.65	-78.60	-53.19
	U_{14}~U_{15}	-137.97	-302.66	1.74	0.43	-8.46	-10.72	21.79	-4.63	-169.27	-147.43
	U_{15}~U_{16}	-245.66	-182.98	1.37	-7.56	-18.82	-6.15	14.76	-81.47	-202.88	-66.28
	U_{16}~U_{17}	-123.52	-326.70	2.57	-11.63	-15.24	-5.59	30.91	-124.82	-230.49	-174.25
	U_{17}~U_{18}	-269.82	-144.58	0.35	0.05	-15.56	-7.20	3.81	0.30	-187.81	-77.59
	U_{18}~U_{19}	-164.16	-67.25	0.39	-3.73	-12.06	-5.40	4.20	-4.05	-139.71	-382.02
	U_{19}~U_{20}	-170.35	-20.48	0.29	-9.04	-9.25	-1.05	3.08	-0.38	-89.76	-11.33
	U_{20}~U_{21}	-186.12	24.46	1.73	-9.32	-7.22	0.30	18.64	-100.45	-77.82	3.18
	U_{21}~U_{22}	-209.21	115.67	2.39	-8.40	-4.30	0.76	21.22	-142.06	-38.38	12.74
	U_{22}~U_{23}	-70.88	-181.00	0.98	-4.68	-5.05	-6.21	10.41	-5.11	-53.88	-66.16
	U_{23}~U_{24}	-53.69	-252.22	1.07	-2.72	-6.66	-11.64	9.59	-12.68	-52.82	-128.81
	U_{24}~U_{25}	-327.18	-325.33	0.63	2.54	-15.24	-11.83	6.69	27.05	-162.23	-125.95
	U_{25}~U_{26}	-338.53	-361.29	1.29	-2.21	-9.79	-7.75	18.19	-17.75	-165.13	-177.75
	U_{26}~U_{27}	-396.09	-197.74	1.23	2.39	-21.22	-8.15	13.13	25.39	-225.96	-86.73
	U_{27}~U_{28}	-344.15	-179.39	1.84	1.61	-15.89	-13.97	19.60	17.09	-169.16	-148.75
	U_{28}~U_{29}	-226.10	-291.71	1.36	-1.04	-12.30	-7.97	14.33	19.39	-270.57	-215.61
	U_{29}~U_{30}	-350.17	-90.75	1.57	2.05	-15.28	-4.88	16.66	21.77	-162.63	-73.26
	U_{30}~U_{31}	-237.33	-179.71	1.84	1.62	-15.79	-13.75	19.60	17.09	-169.16	-148.75
	U_{31}~U_{32}	-167.07	-39.82	2.00	1.98	-11.69	-3.53	21.28	21.09	-124.45	-37.61
	U_{32}~U_{33}	-109.77	170.72	1.79	1.61	-11.47	-3.01	19.06	17.13	-122.12	-22.72
	U_{33}~U_{34}	-8.73	29.71	0.99	1.26	-11.37	-3.39	11.02	13.89	-115.49	-43.64
	U_{34}~U_{35}	-261.00	1265.93	1.28	0.89	-16.67	12.71	13.59	9.43	-177.46	135.29
	U_{35}~U_{36}	-1192.75	-52.80	16.68	17.53	-6.99	-1.08	0.00	0.00	0.00	0.00
	U_{36}~U_{37}	-25.90	11.62	1.33	0.18	-12.27	-4.94	13.96	-29.06	-51.94	0.00
	U_{37}~U_{38}	-34.05	34.61	1.61	0.18	-11.38	-4.28	18.23	-38.10	-58.34	0.00
	U_{38}~U_{39}	-150.58	33.05	2.18	1.92	-7.22	-5.77	22.88	-20.17	-75.91	-50.72
	U_{39}~U_{40}	-147.32	4.36	2.71	-1.51	-6.96	-5.21	28.54	-15.91	-77.27	-54.82
	U_{40}~U_{41}	-57.05	-14.68	0.49	-0.32	-6.29	-4.71	6.86	-4.96	-29.81	-20.56
	U_{41}~U_{42}	-31.67	-34.01	1.77	-2.88	-10.71	-7.77	18.63	-30.29	-112.72	-81.71
	U_{42}~U_{43}	-86.04	-71.70	1.89	0.98	-9.34	-6.77	16.03	-69.73	-68.97	-26.22
	U_{43}~U_{44}	-60.95	-86.97	2.09	-11.51	-16.98	-5.89	22.00	-125.29	-178.68	-61.93
	U_{44}~U_{45}	-51.56	-81.66	1.83	-11.31	-14.92	-5.16	20.75	-118.06	-157.16	-54.49
	U_{45}~U_{46}	-32.99	-28.66	1.32	-1.69	-15.06	-6.41	13.90	-17.80	-158.41	-67.41
	U_{46}~U_{47}	-15.12	-113.76	1.31	-1.71	-13.23	-1.64	13.73	-17.98	-139.21	-17.30
	U_{47}~U_{48}	-14.36	-114.51	1.31	-1.71	-13.23	-1.64	13.73	-17.98	-139.21	-17.30
	U_{48}~U_{49}	-2.69	-209.81	1.07	-1.36	-13.31	-0.93	11.27	-29.37	-185.48	-260.09
	U_{49}~U_{50}	-64.51	-138.61	1.42	-3.40	-2.71	-5.44	18.19	-17.06	-25.63	-58.62
	U_{50}~U_{51}	27.83	-140.42	1.61	1.40	-5.61	-4.36	17.35	-15.13	-60.53	-47.03
	U_{51}~U_{52}	-106.18	-154.99	2.03	0.80	-7.29	-4.93	21.66	8.65	-78.60	-53.19
	U_{52}~U_{53}	-137.97	-302.66	1.74	0.43	-8.46	-10.72	21.79	-4.63	-169.27	-147.43
	U_{53}~U_{54}	-245.66	-182.98	1.37	-7.56	-18.82	-6.15	14.76	-81.47	-202.88	-66.28
	U_{54}~U_{55}	-123.52	-326.70	2.57	-11.63	-15.24	-5.59	30.91	-124.82	-230.49	-174.25
	U_{55}~U_{56}	-269.82	-144.58	0.35	0.05	-15.56	-7.20	3.81	0.30	-187.81	-77.59
	U_{56}~U_{57}	-164.16	-67.25	0.39	-3.73	-12.06	-5.40	4.20	-4.05	-139.71	-382.02
	U_{57}~U_{58}	-170.35	-20.48	0.29	-9.04	-9.25	-1.05	3.08	-0.38	-89.76	-11.33
	U_{58}~U_{59}	-186.12	24.46	1.73	-9.32	-7.22	0.30	18.64	-100.45	-77.82	3.18
	U_{59}~U_{60}	-209.21	115.67	2.39	-8.40	-4.30	0.76	21.22	-142.06	-38.38	12.74
	U_{60}~U_{61}	-70.88	-181.00	0.98	-4.68	-5.05	-6.21	10.41	-5.11	-53.88	-66.16
	U_{61}~U_{62}	-53.69	-252.22	1.07	-2.72	-6.66	-11.64	9.59	-12.68	-52.82	-128.81
	U_{62}~U_{63}	-327.18	-325.33	0.63	2.54	-15.24	-11.83	6.69	27.05	-162.23	-125.95
	U_{63}~U_{64}	-338.53	-361.29	1.29	-2.21	-9.79	-7.75	18.19	-17.75	-165.13	-177.75
	U_{64}~U_{65}	-396.09	-197.74	1.23	2.39	-21.22	-8.15	13.13	25.39	-225.96	-86.73
	U_{65}~U_{66}	-344.15	-179.39	1.84	1.61	-15.89	-13.97	19.60	17.09	-169.16	-148.75
	U_{66}~U_{67}	-226.10	-291.71	1.36	-1.04	-12.30	-7.97	14.33	19.39	-270.57	-215.61
	U_{67}~U_{68}	-350.17	-90.75	1.57	2.05	-15.28	-4.88	16.66	21.77	-162.63	-73.26
	U_{68}~U_{69}	-237.33	-179.71	1.84	1.62	-15.79	-13.75	19.60	17.09	-169.16	-148.75
	U_{69}~U_{70}	-167.07	-39.82	2.00	1.98	-11.69	-3.53	21.28	21.09	-124.45	-37.61
	U_{70}~U_{71}	-109.77	170.72	1.79	1.61	-11.47	-3.01	19.06	17.13	-122.12	-22.72
	U_{71}~U_{72}	-8.73	29.71	0.99	1.26	-11.37	-3.39	11.02	13.89	-115.49	-43.64
	U_{72}~U_{73}	-261.00	1265.93	1.28	0.89	-16.67	12.71	13.59	9.43	-177.46	135.29
	U_{73}~U_{74}	-1192.75	-52.80	16.68	17.53	-6.99	-1.08	0.00	0.00	0.00	0.00
	U_{74}~U_{75}	-25.90	11.62	1.33	0.18	-12.27	-4.94	13.96	-29.06	-51.94	0.00
	U_{75}~U_{76}	-34.05	34.61	1.61	0.18	-11.38	-4.28	18.23	-38.10	-58.34	0.00
	U_{76}~U_{77}	-150.58	33.05	2.18	1.92	-7.22	-5.77	22.88	-20.17	-75.91	-50.72
	U_{77}~U_{78}	-147.32	4.36	2.71	-1.51	-6.96	-5.21	28.54	-15.91	-77.27	-54.82
	U_{78}~U_{79}	-57.05	-14.68	0.49	-0.32	-6.29	-4.71	6.86	-4.96	-29.81	-20.56
	U_{79}~U_{80}	-31.67	-34.01	1.77	-2.88	-10.71	-7.77	18.63	-30.29	-112.72	-81.71
	U_{80}~U_{81}	-86.04	-71.70	1.89	0.98	-9.34	-6.77	16.03	-69.73	-68.97	-26.22
	U_{81}~U_{82}	-60.95	-86.97	2.09	-11.51	-16.98	-5.89	22.00	-125.29	-178.68	-61.93
	U_{82}~U_{83}	-51.56	-81.66	1.83	-11.31	-14.92	-5.16	20.75	-118.06	-157.16	-54.49
	U_{83}~U_{84}	-32.99	-28.66	1.32	-1.69	-15.06	-6.41	13.90	-17.80	-158.41	-67.41
	U_{84}~U_{85}	-15.12	-113.76	1.31	-1.71	-13.23	-1.64	13.73	-17.98	-139.21	-17.30
	U_{85}~U_{86}	-14.36	-114.51	1.31	-1.71	-13.23	-1.64	13.73	-17.98	-139.21	-17.30
	U_{86}~U_{87}	-2.69	-209.81	1.07	-1.36	-13.31	-0.93	11.27	-29.37	-185.48	-260.09
	U_{87}~U_{88}	-64.51	-138.61	1.42	-3.40	-2.71	-5.44	18.19	-17.06	-25.63	-58.62
	U_{88}~U_{89}	-122.28	-1156.50	0.86	-1.83	-17.67	-11.38	9.09	-19.25	-185.87	-119.71
	U_{89}~U_{90}	-1153.78	-166.80	15.19	-13.59	-0.65	1.76	161.77	-144.63	-6.88	14.83
	U_{90}~U_{91}	-67.41	-52.60	1.76	-1.72	-7.30	-6.05	22.86	-18.29	-77.69	-64.46
	U_{91}~U_{92}	-178.87	-59.61	2.44	-3.36	-5.34	-6.19	25.96	-35.82	-56.80	-65.93
	U_{92}~U_{93}	-54.99	-5.97	0.33	-0.39	-6.29	-5.39	6.88	-4.96	-29.81	-20.56
	U_{93}~U_{94}	-68.77	-178.57	2.15	-1.72	-7.30	-6.05	22.86	-18.29	-77.69	-64.46
	U_{94}~U_{95}	-67.41	-52.60	1.76	-1.72	-7.30	-6.05	22.86	-18.29	-77.69	-64.46
	U_{95}~U_{96}	-178.87	-59.61	2.44	-3.36	-5.34	-6.19	25.96	-35.82	-56.80	-65.93
	U_{96}~U_{97}	-54.99	-5.97	0.33	-0.39	-6.29	-5.39	6.88	-4.96	-29.81	-20.56
	U_{97}~U_{98}	-68.77	-178.57	2.15	-1.72	-7.30	-6.05	22.86	-18.29	-77.69	-64.46
	U_{98}~U_{99}	-236.40	-133.06	1.66	-1.28	-11.80	-11.98	17.70	-13.61	-125.59	-127.53
	U_{99}~U_{100}	-98.63	-313.14	2.40	-14.21	-24.28	-6.90	25.54	-151.34	-258.50	-14.74
	U_{100}~U_{101}	-139.47	-362.96	1.44	-4.05	-13.73	-5.75	13.57	-145.90	-187.55	-63.33
	U_{101}~U_{102}	-350.27	-386.72	1.28	-5.35	-25.84	-7.55	13.57	-275.07	-84.68	0.00
	U_{102}~U_{103}	-294.99	-337.57	1.28	-5.35	-25.84	-7.55	13.57	-275.07	-84.68	0.00
	U_{103}~U_{104}	-278.82	-117.63	0.86	-0.23	-19.36	-5.53	9.16	-2.42	-206.17	-58.67
	U_{104}~U_{105}	-292.25	-37.53	1.97	-1.03	-18.39	-5.89	21.24	-102.63	-101.50	-19.20
	U_{105}~U_{106}	-186.18	-74.10	2.00	-9.64	-9.57	-1.80	21.24	-102.63	-101.50	-19.20
	U_{106}~U_{107}	-139.59	-187.78	1.39	-5.91	-9.90	-1.84	57.68	-63.72	-106.69	-19.84
	U_{107}~U_{108}	-47.42	-115.14	1.39	-5.91	-9.90	-1.84	12.77	-79.80	-45.55	-57.29
	U_{108}~U_{109}	-52.50	-326.95	2.68	-5.37	-4.55	-5.03	27.76	-101.09	-46.87	-54.22
	U_{109}~U_{110}	-123.52	-326.70	2.57	-11.63	-15.24	-5.59	30.91	-124.82	-230.49	-174.25
	U_{110}~U_{111}	-277.57	-111.69	1.09	0.60	-12.88	-5.12	11.72	6.48	-138.86	-55.25
	U_{111}~U_{112}	-166.87	-240.33	0.68	0.83	-11.25	-6.02	7.32	10.03	-121.27	-65.04
	U_{112}~U_{113}	-287.50	-127.73	1.74	-1.78	-19.41	-5.32	16.03	-69.73	-68.97	-26.22
	U_{113}~U_{114}	-141.30	-113.93	0.57	1.05	-14.98	-3.48	6.12	11.34	-161.47	-37.31
	U_{114}~U_{115}	-292.25	-37.53	1.97	-1.03	-18.39	-5.89	21.24	-102.63	-101.50	-19.20
	U_{115}~U_{116}	-141.54	56.98	0.96	1.14	-9.62	-1.36	10.33	12.25	-103.73	-14.86
	U_{116}~U_{117}	-186.18	-74.10	2.00	-9.64	-9.57	-1.80	21.24	-102.63	-101.50	-19.20
	U_{117}~U_{118}	-136.80	470.88	0.52	1.08	-8.67	6.36	5.65	11.60	-164.22	-68.56
	U_{118}~U_{119}	-497.19	-34.44	11.37	-13.26	-0.03	0.06	126.60	-147.58	-0.33	0.63
	U_{119}~U_{120}	41.01	105.92	1.12	-0.83	-6.49	-2.19	12.22	-9.24	-72.30	-24.39
	U_{120}~U_{121}	113.01	44.44	2.00	-0.47	-3.35	-3.79	27.84	-5.25	-37.27	-42.18
	U_{121}~U_{122}	59.30	15.07	1.49	0.93	-6.29	-5.70	16.53	10.35	-70.03	-63.49
	U_{122}~U_{123}	86.04	-19.79	2.24	-7.01	-10.05	-4.70	36.09	-78.04	-111.90	-52.27
	U_{123}~U_{124}	80.24	-119.59	1.80	-9.07	-15.96	-3.89	20.06	-100.99	-122.00	-42.86
	U_{124}~U_{125}	-24.67	-27.08	1.67	-3.34	-12.54	-4.48	17.47	-37.14	-139.56	-49.85
	U_{125}~U_{126}	29.36	-160.66	0.85	-0.93	-10.90	-3.68	7.21	-10.33	-121.39	-40.75

ZZ Axis Moment Properties

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	S_{bc} (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor f	M_p (k-in)	Formula f_b ≤ Fm * F_y/S_m	M_n k-in	Equivalent Mom. Factor a	$C_{m(a)}$	$C_{m(b)}$
Structure 1	U_1~U_2	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	0.149	0.66	0.66	0.66
	U_2~U_3	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.240	0.50	0.50	0.50
	U_3~U_4	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.411	0.44	0.44	0.44
	U_4~U_5	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.444	0.54	0.54	0.54
	U_5~U_6	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.404	0.76	0.76	0.76
	U_6~U_7	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.411	0.94	0.94	0.94
	U_7~U_8	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.444	0.54	0.54	0.54
	U_8~U_9	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.404	0.76	0.76	0.76
	U_9~U_{10}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.411	0.94	0.94	0.94
	U_{10}~U_{11}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.444	0.54	0.54	0.54
	U_{11}~U_{12}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.404	0.76	0.76	0.76
	U_{12}~U_{13}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.411	0.94	0.94	0.94
	U_{13}~U_{14}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.444	0.54	0.54	0.54
	U_{14}~U_{15}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.404	0.76	0.76	0.76
	U_{15}~U_{16}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.411	0.94	0.94	0.94
	U_{16}~U_{17}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.444	0.54	0.54	0.54
	U_{17}~U_{18}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.404	0.76	0.76	0.76
	U_{18}~U_{19}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.411	0.94	0.94	0.94
	U_{19}~U_{20}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.444	0.54	0.54	0.54
	U_{20}~U_{21}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.404	0.76	0.76	0.76
	U_{21}~U_{22}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.411	0.94	0.94	0.94
	U_{22}~U_{23}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.444	0.54	0.54	0.54
	U_{23}~U_{24}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.404	0.76	0.76	0.76
	U_{24}~U_{25}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.411	0.94	0.94	0.94
	U_{25}~U_{26}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.444	0.54	0.54	0.54
	U_{26}~U_{27}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.404	0.76	0.76	0.76
	U_{27}~U_{28}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.411	0.94	0.94	0.94
	U_{28}~U_{29}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.444	0.54	0.54	0.54
	U_{29}~U_{30}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.404	0.76	0.76	0.76
	U_{30}~U_{31}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.411	0.94	0.94	0.94
	U_{31}~U_{32}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.444	0.54	0.54	0.54
	U_{32}~U_{33}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.404	0.76	0.76	0.76
	U_{33}~U_{34}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.411	0.94	0.94	0.94
	U_{34}~U_{35}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.444	0.54	0.54	0.54
	U_{35}~U_{36}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.404	0.76	0.76	0.76
	U_{36}~U_{37}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.411	0.94	0.94	0.94
	U_{37}~U_{38}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.444	0.54	0.54	0.54
	U_{38}~U_{39}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.404	0.76	0.76	0.76
	U_{39}~U_{40}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.411	0.94	0.94	0.94
	U_{40}~U_{41}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.444	0.54	0.54	0.54
	U_{41}~U_{42}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.404	0.76	0.76	0.76
	U_{42}~U_{43}	0.00	0.00	0.00	0.00	24.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.411	0.94	0.94	0.94
	U_{43}~U_{44}	0.00	0.00	0.00	0.00	24.24	127.46

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: 2F1
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
(-) Guidelines for Strength Design of Truss Bridges (LDF) 1985 rev 1996

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

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

M_z Information

| Location | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-ft) | Dead Load End (k-ft) | Live Load (Max) Start (k-ft) | Live Load (Max) End (k-ft) | Pedestrian Load (Max) Start (k-ft) | Pedestrian Load (Max) End (k-ft) | Lane Reduction & Impact Live Load Start (k-ft) | Lane Reduction & Impact Live Load End (k-ft) | Impact Pedestrian Load Max Start (k-ft) | Impact Pedestrian Load Max End (k-ft) | Max. Pos. Mom. Start k-in | Max. Pos. Mom. End k-in | Start (k-ft) | End (k-ft) | S_{bb} (in^3) | S_{tb} (in^3) | Z_z (in^3) | I (in^4) | I_{eff} (in^4) | Shape Factor | M_p (k-in) | Formula 1.8 Term * F_y/S_xx | M_r (k-in) | Equivalent Mom. Factors: a | C_{mx} | $C_{mx(b)}$ | 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-in | Max. Neg. Mom. End k-in | S_{bb} (in^3) | S_{tb} (in^3) | Z_z (in^3) | I_{zz} (in^4) | Shape Factor | M_p (k-in) | P_{cm} (kip) | Formula 1.8 Term * F_y/S_xx | M_r (k-in) | Equivalent Mom. Factor: a | C_{mx} | $C_{mx(b)}$ | Pass | Axial stress | Moment stress | Total | Pass | Axial stress | Moment stress | Total | Pass | Axial stress | Moment stress | Total | Pass |
|---|---|---|---

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
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 | M_7 Information

| Location | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Min) Start (k-in) | Lane Reduction & Impact Live Load Max Start (k-in) | Lane Reduction & Impact Live Load Max End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | 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_top | M_y (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor C_{mx} | Equivalent Mom. Factor C_{mm} | YY Axis Moments from STAAD: Dead Load (k-in) | Live Load (Max) (k-in) | Lane Reduction & Impact Live Load Max (k-in) | Pedestrian Load (Max) (k-in) | Pedestrian Load (Min) (k-in) | Lane Reduction & Impact Live Load Max (k-in) | Impact Pedestrian Load Max (k-in) | Impact Pedestrian Load Max (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) | Shape Factor f | M_p (k-in) | F_{cm} (ksi) | Formula 1.8 Term * F_y/S_{top} | M_y (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor C_{mx} | Equivalent Mom. Factor C_{mm} | Tension Pass | Compression: Yield Axial Factor | Yield Moment Factor | Yield Total | Yield Pass | Fracture Axial Factor | Fracture Moment Factor | Fracture Total | Fracture Pass | Buckle Axial Factor | Buckle Moment Factor | Buckle Total | Buckle Pass | Yield Axial Factor | Yield Moment Factor | Yield Total | Yield 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: 2F1
Condition: As-Built

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

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

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(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	-12.55	3.37	0.22	0.18	-1.84	0.73	2.43	1.88	-20.51	8.10
	U_1-L_1	-1.68	-7.06	0.12	-0.20	-0.82	-0.02	1.36	-2.25	-8.16	-0.20
	U_1-L_2	-2.05	-8.37	0.09	-0.63	-0.23	-0.03	1.95	-0.51	-7.01	-2.69
	U_1-L_3	9.78	-11.75	0.27	-0.37	-0.62	-0.43	2.56	-4.12	-6.87	-4.78
	U_2-L_2	-10.32	-17.59	0.13	-0.22	-1.40	-0.42	1.40	-2.22	-10.40	-3.67
	U_2-L_3	-26.82	-58.45	0.39	-0.37	-1.71	-0.49	4.30	-4.06	-29.04	5.50
	U_3-L_3	-36.39	-88.33	0.56	-0.42	-2.69	-1.34	6.61	-5.19	-28.80	14.40
	U_3-L_4	-6.36	-88.83	0.40	0.57	-1.15	1.91	4.40	-6.30	-12.76	21.29
	U_4-L_4	-9.60	-109.51	0.86	0.55	-0.66	1.54	-0.43	150.05	-24.49	164.00
	U_4-L_5	-74.77	-111.66	0.19	0.72	-1.88	0.65	1.99	1.30	-20.26	6.89
	U_5-L_5	-56.82	-54.75	0.18	0.32	-1.52	0.45	1.93	-3.48	-16.41	4.86
	U_5-L_6	-55.22	-52.52	0.12	0.15	-1.25	0.24	1.25	-2.62	-17.26	2.62
	U_6-L_6	-55.23	-39.04	0.28	0.47	-1.26	0.74	3.06	-5.01	-13.09	7.92
	U_6-L_7	-20.96	-7.36	0.32	-0.42	-0.82	0.11	3.43	-4.57	-8.87	1.14
	U_7-L_7	1.16	-20.29	0.21	-0.61	-0.86	-0.08	2.61	-3.21	-8.84	-1.27
	U_7-L_8	-19.01	4.12	0.51	-0.63	-0.90	0.65	5.48	-6.76	-8.68	7.45
	U_8-L_8	-39.28	-18.64	0.14	-0.26	-0.42	-0.12	2.52	-4.57	-12.77	8.19
	U_8-L_9	-89.28	58.13	0.16	-0.14	-2.22	1.16	1.73	-1.50	-23.98	12.47
	U_9-L_9	-89.27	61.33	0.36	-0.18	-2.21	1.37	3.91	-2.26	-25.76	14.12
	U_9-L_{10}	-105.04	88.64	0.20	0.03	-2.93	2.00	2.11	-0.29	-31.83	21.52
	U_{10}-L_{10}	-82.69	87.74	0.34	-0.31	-2.88	2.00	3.65	-3.34	-30.65	21.29
	U_{10}-L_{11}	-87.97	71.76	0.34	-0.27	-2.47	1.85	3.48	-3.29	-27.47	19.20
	U_{11}-L_{11}	-81.28	63.04	0.36	-0.29	-2.32	1.65	3.83	-3.11	-24.65	17.61
	U_{11}-L_{12}	-60.66	53.03	0.24	-0.21	-1.83	1.26	2.53	-2.04	-18.21	8.95
	U_{12}-L_{12}	-17.30	7.21	0.43	-0.52	-1.07	0.70	4.76	-5.57	-11.34	7.48
	U_{12}-L_{13}	-14.66	-11.45	0.64	-0.48	-0.97	0.48	5.77	-6.49	-8.48	5.17
	U_{13}-L_{13}	-7.42	-23.91	0.66	-0.80	-0.78	0.09	7.07	-8.50	-8.29	0.94
	U_{13}-L_{14}	-44.31	35.87	0.52	-0.72	-1.25	0.24	5.52	-7.62	-13.27	2.52
	U_{14}-L_{14}	-56.38	68.64	0.44	-0.40	-1.45	0.39	4.64	-7.40	-20.38	3.79
	U_{14}-L_{15}	-88.54	73.82	0.35	-0.55	-1.86	0.71	3.68	-5.83	-19.79	7.52
	U_{15}-L_{15}	-87.45	58.04	0.35	-0.52	-1.82	0.77	3.67	-5.47	-17.62	8.77
	U_{15}-L_{16}	-108.36	116.66	0.44	-0.28	-2.19	1.54	4.73	-2.93	-23.36	16.39
	U_{16}-L_{16}	-154.28	139.69	0.22	-0.09	-2.85	2.25	2.30	-0.96	-30.29	23.91
	U_{16}-L_{17}	-85.82	148.30	0.23	-0.04	-1.58	2.47	2.39	-0.25	-16.64	25.53
	U_{17}-L_{17}	-24.74	100.39	0.59	0.25	-1.90	2.24	6.23	2.67	-19.98	23.54
	U_{17}-L_{18}	-98.29	59.79	0.39	0.16	-2.11	1.38	3.14	-1.28	-28.61	23.22
	U_{18}-L_{18}	-74.15	95.51	0.25	-0.19	-2.52	2.05	2.62	-2.00	-26.40	21.98
	U_{18}-L_{19}	-55.45	68.65	0.33	-0.34	-2.01	1.21	3.46	-3.68	-21.19	12.70
	U_{19}-L_{19}	-32.97	39.97	0.36	-0.52	-1.91	0.96	3.77	-5.43	-15.90	10.04
	U_{19}-L_{20}	-10.33	4.39	0.44	-0.60	-0.87	0.14	4.63	-6.31	-9.20	1.46
	U_{20}-L_{20}	-17.07	16.15	0.43	-0.52	-0.93	0.65	4.51	-5.48	-9.81	6.79
	U_{20}-L_{21}	-55.66	65.11	0.49	-0.63	-2.08	1.06	5.17	-6.87	-21.66	11.07
	U_{21}-L_{21}	-69.18	80.37	0.38	-0.36	-2.14	1.47	3.99	-3.77	-22.55	15.44
	U_{21}-L_{22}	-85.82	148.30	0.23	-0.04	-1.58	2.47	2.39	-0.25	-16.64	25.53
	U_{22}-L_{22}	-106.02	102.92	0.14	-0.16	-2.81	2.08	1.50	-1.67	-29.61	21.89
	U_{23}-L_{23}	-39.07	104.47	0.19	-0.23	-1.26	2.45	2.03	-2.39	-13.31	25.68
	U_{23}-L_{24}	-47.57	127.97	0.75	0.32	-1.97	2.42	8.03	3.35	-20.93	25.80
	U_{24}-L_{24}	-74.19	139.69	0.34	-0.19	-2.43	2.25	3.64	-1.96	-24.40	23.91
	U_{24}-L_{25}	-89.45	99.26	-0.16	-0.23	-2.23	1.69	2.76	-1.54	-23.76	17.66
	U_{25}-L_{25}	-86.48	82.53	0.22	-0.17	-1.99	1.03	2.29	1.76	-21.13	10.96
	U_{25}-L_{26}	-67.58	64.00	0.19	-0.42	-1.92	0.98	2.10	-3.26	-16.09	11.54
	U_{26}-L_{26}	-50.13	67.65	0.38	-0.62	-2.00	1.23	4.09	-6.58	-21.30	13.13
	U_{26}-L_{27}	-39.06	52.05	0.37	-0.61	-1.91	1.24	4.19	-6.34	-19.97	13.29
	U_{27}-L_{27}	-12.59	-26.40	0.82	-0.87	-0.74	0.01	7.30	-8.60	-8.61	0.71
	U_{28}-L_{28}	6.51	-17.79	0.69	-0.81	-0.61	0.44	7.33	-8.60	-8.61	4.71
	U_{28}-L_{29}	-17.88	-38.87	0.35	-0.46	-0.79	0.29	5.32	-6.78	-8.73	-0.72
	U_{29}-L_{29}	-38.91	-20.55	0.34	-0.45	-1.26	1.01	3.60	-4.83	-13.46	10.70
	U_{29}-L_{30}	-83.63	51.09	0.34	-0.43	-1.92	1.04	3.18	-4.07	-20.59	16.33
	U_{30}-L_{30}	-98.49	71.14	0.30	-0.16	-2.42	1.76	3.22	-1.65	-25.77	18.75
	U_{30}-L_{31}	-70.17	69.10	0.21	-0.17	-3.22	2.05	2.21	-1.80	-34.74	22.07
	U_{31}-L_{31}	-86.86	56.37	0.19	-0.15	-2.33	1.66	2.09	-1.57	-25.07	17.92
	U_{31}-L_{32}	-54.59	52.05	0.21	-0.17	-2.26	1.25	2.37	-1.70	-24.43	13.96
	U_{32}-L_{32}	-26.09	12.76	0.21	-0.28	-1.29	0.77	2.21	-3.02	-13.94	8.33
	U_{33}-L_{33}	-0.98	-18.28	0.49	-0.63	-0.81	0.07	5.32	-6.78	-8.73	-0.72
	U_{34}-L_{34}	-17.88	-38.87	0.35	-0.46	-0.79	0.29	5.32	-6.78	-8.73	-0.72
	U_{35}-L_{35}	-50.46	39.07	0.38	-0.57	-1.18	0.96	4.11	-6.17	-12.76	10.34
	U_{36}-L_{36}	-59.57	20.60	0.17	-0.29	-1.67	0.55	1.78	-3.16	-17.98	5.56
	U_{37}-L_{37}	-67.16	31.99	0.25	-0.34	-2.03	0.74	2.77	-4.64	-20.61	7.44
	U_{38}-L_{38}	-77.37	51.15	0.08	0.13	-2.10	0.75	0.88	1.43	-22.66	7.54
	U_{39}-L_{39}	-84.08	68.48	0.08	0.10	-2.31	0.83	0.88	1.08	-25.03	8.29
	U_{40}-L_{40}	-2.84	82.09	0.41	0.60	-1.24	1.90	4.55	6.67	-13.80	21.19
	U_{41}-L_{41}	-54.59	58.66	0.12	0.16	-2.29	1.25	1.31	1.79	-28.00	13.96
	U_{42}-L_{42}	-16.16	17.57	0.08	-0.23	-0.90	-0.30	0.86	-2.56	-9.98	-3.26
	U_{43}-L_{43}	-23.22	7.61	0.27	-0.04	-1.37	0.72	3.02	-4.42	-15.30	8.04

YY 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_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F/S_{bc}	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{a1}	Equivalent Mom. Factor C_{a2}
Structure 1	U_0-L_1	-13.13	6.96	42.98	14.92	15.6	19.63	15.58	25.56	5	804.0	1.66	.857	1.5	773.7
	U_1-L_1	-13.13	6.96	42.98	14.92	15.6	19.63	15.58	25.56	5	804.0	1.66	.857	1.5	773.7
	U_1-L_2	0.41	-12.10	-14.09	-8.44	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5	763.3
	U_1-L_3	2.49	-11.93	-9.16	-14.26	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5	763.3
	U_2-L_2	16.56	-20.63	3.78	-21.48	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5	763.3
	U_2-L_3	-11.59	-10.98	-35.91	-18.05	15.4	19.37	19.37	29.87	3	907.0	1.54	.782	1.5	958.8
	U_3-L_3	4.30	-4.06	-29.28	70.70	-68.62	83.13	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0
	U_3-L_4	19.61	-1.59	-28.80	14.40	-76.91	87.54	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0
	U_4-L_4	4.40	-6.30	-12.76	21.29	-24.86	143.16	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0
	U_4-L_5	-9.60	109.51	0.86	0.55	-0.66	1.54	-0.43	150.05	-24.49	164.00	40.7	40.70	40.44	67.92	25	1661.0
	U_5-L_5	-74.77	111.66	0.19	0.72	-1.88	0.65	1.99	1.30	-20.26	6.89	1.67	2241	1.5	2014.7
	U_5-L_6	-56.82	54.75	0.18	0.32	-1.52	0.45	1.93	-3.48	-16.41	4.86	0.00	0.00	0.00	0.00
	U_6-L_6	-55.22	52.52	0.12	0.15	-1.25	0.24	1.25	-2.62	-17.26	2.62	0.00	0.00	0.00	0.00
	U_6-L_7	-55.23	39.04	0.28	0.47	-1.26	0.74	3.06	-5.01	-13.09	7.92	0.00	0.00	0.00	0.00
	U_7-L_7	-20.96	7.36	0.32	-0.42	-0.82	0.11	3.43	-4.57	-8.87	1.14	0.00	0.00	0.00	0.00
	U_7-L_8	1.16	20.29	0.21	-0.61	-0.86	-0.08	2.61	-3.21	-8.84	-1.27	0.00	0.00	0.00	0.00
	U_8-L_8	-19.01	4.12	0.51	-0.63	-0.90	0.65	5.48	-6.76	-8.68	7.45	0.00	0.00	0.00	0.00
	U_8-L_9	-39.28	18.64	0.14	-0.26	-0.42	-0.12	2.52	-4.57	-12.77	8.19	0.00	0.00	0.00	0.00
	U_9-L_9	-89.28	58.13	0.16	-0.14	-2.22	1.16	1.73	-1.50	-23.98	12.47	0.00	0.00	0.00	0.00
	U_9-L_{10}	-89.27	61.33	0.36	-0.18	-2.21	1.37	3.91	-2.26	-25.76	14.12	0.00	0.00	0.00	0.00
	U_{10}-L_{10}	-105.04	88.64	0.20	0.03	-2.93	2.00	2.11	-0.29	-31.83	21.52	0.00	0.00	0.00	0.00
	U_{10}-L_{11}	-82.69	87.74	0.34	-0.31	-2.88	2.00	3.65	-3.34	-30.65	21.29	0.00	0.00	0.00	0.00
	U_{11}-L_{11}	-87.97	71.76	0.34	-0.27	-2.47	1.85	3.48	-3.29	-27.47	19.20	0.00	0.00	0.00	0.00
	U_{11}-L_{12}	-81.28	63.04	0.36	-0.29	-2.32	1.65	3.83	-3.11	-24.65	17.61	0.00	0.00	0.00	0.00
	U_{12}-L_{12}	-60.66	53.03	0.24	-0.21	-1.83	1.26	2.53	-2.04	-18.21	8.95	0.00	0.00	0.00	0.00
	U_{12}-L_{13}	-17.30	7.21	0.43	-0.52	-1.07	0.70	4.76	-5.57	-11.34	7.48	0.00	0.00	0.00	0.00
	U_{13}-L_{13}	-14.66	11.45	0.64	-0.48	-0.97	0.48	5.77	-6.49	-8.48	5.17	0.00	0.00	0.00	0.00
	U_{13}-L_{14}	-7.42	23.91	0.66	-0.80	-0.78	0.09	7.07	-8.50	-8.29	0.94	0.00	0.00	0.00	0.00
	U_{14}-L_{14}	-44.31	35.87	0.52	-0.72	-1.25	0.24	5.52	-7.62	-13.27	2.52	0.00	0.00	0.00	0.00
	U_{14}-L_{15}	-56.38	68.64	0.44	-0.40	-1.45	0.39	4.64	-7.40	-20.38	3.79	0.00	0.00	0.00	0.00
	U_{15}-L_{15}	-88.54	73.82	0.35	-0.55	-1.86	0.71	3.68	-5.83	-19.79	7.52	0.00	0.00	0.00	0.00
	U_{15}-L_{16}	-87.45	58.04	0.35	-0.52	-1.82	0.77	3.67	-5.47	-17.62	8.77	0.00	0.00	0.00	0.00
	U_{16}-L_{16}	-108.36	116.66	0.44	-0.28	-2.19	1.54	4.73	-2.93	-23.36	16.39	0.00	0.00	0.00	0.00
	U_{16}-L_{17}	-154.28	139.69	0.22	-0.09	-2.85	2.25	2.30	-0.96	-30.29	23.91	0.00	0.00	0.00	0.00
	U_{17}-L_{17}	-85.82	148.30	0.23	-0.04	-1.58	2.47	2.39	-0.25	-16.64	25.53	0.00	0.00	0.00	0.00
	U_{17}-L_{18}	-24.74	100.39	0.59	0.25	-1.90	2.24	6.23	2.67	-19.98	23.54	0.00	0.00	0.00	0.00
	U_{18}-L_{18}	-98.29	59.79	0.39	0.16	-2.11	1.38	3.14	-1.28	-28.61	23.22	0.00	0.00	0.00	0.00
	U_{18}-L_{19}	-74.15	95.51	0.25	-0.19	-2.52	2.05	2.62	-2.00	-26.40	21.98	0.00	0.00	0.00	0.00
	U_{19}-L_{19}	-55.45	68.65	0.33	-0.34	-2.01	1.21	3.46	-3.68	-21.19	12.70	0.00	0.00	0.00	0.00
	U_{19}-L_{20}	-32.97	39.97	0.36	-0.52	-1.91	0.96	3.77	-5.43	-15.90	10.04	0.00	0.00	0.00	0.00
	U_{20}-L_{20}	-10.33	4.39	0.44	-0.60	-0.87	0.14	4.63	-6.31	-9.20	1.46	0.00	0.00	0.00	0.00
	U_{20}-L_{21}	-17.07	16.15	0.43	-0.52	-0.93	0.65	4.51	-5.48	-9.81	6.79	0.00	0.00	0.00	0.00
	U_{21}-L_{21}	-55.66	65.11	0.49	-0.63	-2.08	1.06	5.17	-6.87	-21.66	11.07	0.00	0.00	0.00	0.00
	U_{21}-L_{22}	-69.18	80.37	0.38	-0.36	-2.14	1.47	3.99	-3.77	-22.55	15.44	0.00	0.00	0.00	0.00
	U_{22}-L_{22}	-85.82	148.30	0.23	-0.04	-1.58	2.47	2.39	-0.25	-16.64	25.53	0.00	0.00	0.00	0.00
	U_{23}-L_{23}	-106.02	102.92	0.14	-0.16	-2.81	2.08	1.50	-1.67	-29.61	21.89	0.00	0.00	0.00	0.00
	U_{23}-L_{24}	-39.07	104.47	0.19	-0.23	-1.26	2.45	2.03	-2.39	-13.31	25.68	0.00	0.00	0.00	0.00
	U_{24}-L_{24}	-47.57	127.97	0.75	0.32	-1.97	2.42	8.03	3.35	-20.93	25.80	0.00	0.00	0.00	0.00
	U_{24}-L_{25}	-74.19	139.69	0.34	-0.19	-2.43	2.25	3.64	-1.96	-24.40	23.91	0.00	0.00	0.00	0.00
	U_{25}-L_{25}	-89.45	99.26	-0.16	-0.23	-2.23	1.69	2.76	-1.54	-23.76	17.66	0.00	0.00	0.00	0.00
	U_{25}-L_{26}	-86.48	82.53	0.22	-0.17	-1.99	1.03	2.29	1.76	-21.13	10.96	0.00	0.00	0.00	0.00
	U_{26}-L_{26}	-67.58	64.00	0.19	-0.42	-1.92	0.98	2.10	-3.26	-16.09	11.54	0.00	0.00	0.00	0.00
	U_{26}-L_{27}	-50.13	67.65	0.38	-0.62	-2.00	1.23	4.09	-6.58	-21.30	13.13	0.00	0.00	0.00	0.00
	U_{27}-L_{27}	-39.06	52.05	0.37	-0.61	-1.91	1.24	4.19	-6.34	-19.97	13.29	0.00	0.00	0.00	0.00
	U_{28}-L_{28}	-12.59	26.40	0.82	-0.87	-0.74	0.01	7.30	-8.60	-8.61	0.71	0.00	0.00	0.00	0.00
	U_{28}-L_{29}	6.51	-17.79	0.69	-0.81	-0.61	0.44	7.33	-8.60	-8.61	4.71	0.00	0.00	0.00	0.00
	U_{29}-L_{29}	-17.88	38.87	0.35	-0.46	-0.79	0.29	5.32	-6.78	-8.73	-0.72	0.00	0.00	0.00	0.00
	U_{29}-L_{30}	-38.91	20.55	0.34	-0.45	-1.26	1.01	3.60	-4.83	-13.46	10.70	0.00	0.00	0.00	0.00
	U_{30}-L_{30}	-83.63	51.09	0.34	-0.43	-1.92	1.04	3.18	-4.07	-20.59	16.33	0.00	0.00	0.00	0.00
	U_{30}-L_{31}	-98.49	71.14	0.30	-0.16	-2.42	1.76	3.22	-1.65	-25.77	18.75	0.00	0.00	0.00	0.00
	U_{31}-L_{31}	-70.17	69.10	0.21	-0.17	-3.22	2.05	2.21	-1.80	-34.74	22.07	0.00	0.00	0.00	0.00
	U_{31}-L_{32}	-86.86	56.37	0.19	-0.15	-2.33	1.66	2.09	-1.57	-25.07	17.92	0.00	0.00	0.00	0.00
	U_{32}-L_{32}	-54.59	52.05	0.21	-0.17	-2.26	1.25	2.37	-1.70	-24.43	13.96	0.00	0.00	0.00	0.00
	U_{33}-L_{33}	-26.09	12.76	0.21	-0.28	-1.29	0.77	2.21	-3.02	-13.94	8.33	0.00	0.00	0.00	0.00
	U_{34}-L_{34}	-0.98	18.28	0.49	-0.63	-0.81	0.07	5.32	-6.78	-8.73	-0.72	0.00	0.00	0.00	0.00
	U_{35}-L_{35}	-17.88	38.87	0.35	-0.46	-0.79	0.29	5.32	-6.78	-8.73	-0.72	0.00	0.00	0.00	0.00
	U_{36}-L_{36}	-50.46	39.07	0.38	-0.57	-1.18	0.96	4.11	-6.17	-12.76	10.34	0.00	0.00	0.00	0.00
	U_{37}-L_{37}	-59.57	20.60	0.17	-0.29	-1.67	0.55	1.78	-3.16	-17.98	5.56	0.00	0.00	0.00	0.00
	U_{38}-L_{38}	-67.16	31.99	0.25	-0.34	-2.03	0.74	2.77	-4.64	-20.61	7.44	0.00	0.00	0.00	0.00
	U_{39}-L_{39}	-77.37	51.15	0.08	0.13	-2.10	0.75	0.88	1.43	-22.66	7.54	0.00	0.00	0.00	0.00
	U_{40}-L_{40}	-84.08	68.48	0.08	0.10	-2.31	0.83	0.88	1.08	-25.03	8.29	0.00	0.00	0.00	0.00
	U_{41}-L_{41}	-2.84	82.09	0.41	0.60	-1.24	1.90	4.55	6.67	-13.80	21.19	0.00	0.00	0.00	0.00
	U_{42}-L_{42}	-54.59	58.66	0.12	0.16	-2.29	1.25	1.31	1.79	-28.00	13.96	0.00	0.00	0.00	0.00
	U_{43}-L_{43}	-16.16	17.57	0.08	-0.23	-0.90	-0.30	0.86	-2.56	-9.98	-3.26	0.00	0.00	0.00	0.00
	U_{44}-L_{44}	-23.22	7.61	0.27	-0.04	-1.37	0.72	3.02	-4.42	-15.30	8.04	0.00	0.00	0.00	0.00

YY Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 2	U_0-L_1	-7.69	6.29	-67.63	-15.81	0.00	0.00	0.00	0.00	-78.62	-16.96
	U_1-L_1	-29.25	-14.57	-9.27	-14.15	0.00	0.00	0.00	0.00	-31.49	-29.98
	U_1-L_2	6.41	6.00	-45.75	-63.58	0.00	0.00	0.00	0.00	-127.72	-57.56
	U_1-L_3	-8.54	-6.94	-15.58	-16.09	0.00	0.00	0.00	0.00	-127.72	-57.56
	U_2-L_2	-42.42	0.27	-16.60	-12.64	0.00	0.00	0.00	0.00	-85.32	-10.35
	U_2-L_3	-142.30	73.85	-0.23	-0.10	-0.12	-1.12	-1.10	-1.10	-185.03	94.63
	U_3-L_3	-227.89	124.30	-0.42	-0.16	-0.12	-1.12	-1.10	-1.10	-300.95	175.69
	U_3-L_4	-6.26	-8.89	0.00	2.79	0.00	0.00	0.00	0.00	251.25	183.85
	U_4-L_4	-109.62	103.78	0.71	0.78	0.97	1.10			152.39	145.90
	U_4-L_5	0.08	0.54	7.15	2.09	0.00	0.00	0.00	0.00	89.34	104.25
	U_5-L_5	-82.82	-53.16	0.44	0.49	-0.23	-0.53			-46.88	-52.20
	U_5-L_6	-147.97	-125.46	0.42	0.47	-0.62	-0.64			-186.29	-190.54
	U_6-L_6	-9.23	-6.40	-12.42	-12.55	0.00	0.00	0.00	0.00	-241.46	-203.80
	U_6-L_7	-6.50	-9.57	-9.91	-12.74	0.00	0.00	0.00	0.00	-217.97	-219.60
	U_7-L_7	-10.62	0.01	-12.49	-12.60	-1.60	-1.60	-1.60	-1.60	-88.80	-19.03
	U_7-L_8	-10.04	-5.61	-12.01	-15.58	0.00	0.00	0.00	0.00	-90.09	-123.64
	U_8-L_8	-14.85	-2.36

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
Condition: As-Built

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

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

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

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

M_Z Information

M_Y Information

| Location | | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (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 Moments from STAAD: 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_{avg} (in^3) | I (in^4) | I_{eff} (in^4) | Shape Factor | M_p (k-in) | Formula 1.8 Term / F_y/S_xx | M_y (k-in) | Equivalent Mem. Factor a | Equivalent Mem. Factor C_{min} | C_{max} | 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 Moments from STAAD: 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_{avg} (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_yy | M_y (k-in) | Equivalent Mem. Factor a | Equivalent Mem. Factor C_{min} | C_{max} | 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 | Compression Axial Portion | Compression Moment Portion | Compression Total | Pass |
|---|---|---|---

Moment (Start) - AB2

Maximum Axial with Moment Interaction Check

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

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) | Min. Pos. Mom. Start k-in | Min. Pos. Mom. End k-in | S_{bb} (in^3) | S_b (in^3) | Z_z (in^3) | I_z (in^4) | $I_{t/t}$ (in^4) | Shape Factor | M_p (k-in) | Formula 1.8 Term * F$_y$/S_{bb} | M_z (k-in) | Equivalent Mem. Factor C_m | $C_{b(x)}$ | $C_{b(m)}$ | YY Axis Moments from STAAD: Dead Load (Max) (k-in) | Live Load (Max) (k-in) | Lane Reduction & Impact Live Load Max (k-in) | Pedestrian Load (Max) (k-in) | Impact Pedestrian Load Max (k-in) | Max. Neg. Mom. (k-in) | Min. Pos. Mom. Start (k-in) | Min. Pos. Mom. End (k-in) | S_{bb} (in^3) | S_b (in^3) | Z_y (in^3) | $I_{t/t}$ (in^4) | Shape Factor | M_p (k-in) | P_{crit} (kip) | Formula 1.8 Term * F$_y$/S_{bb} | M_y (k-in) | Equivalent Mem. Factor C_m | $C_{b(x)}$ | $C_{b(m)}$ | Pass | Axial Axial | Moment Bottom | Moment Top | Total | Pass | Axial Axial | Moment Bottom | Moment Top | 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: 2F1
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.00	DL Factor:	1.00
LL Factor:	1.30	LL Factor:	1.30

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

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

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

South Truss Vertical

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_{bot} (in^3)	S_{top} (in^3)	Z_z (in^3)	I_z (in^4)	I_{xx} (in^4)	Shape Factor f	M_p (k-in)	Formula f & Terms F-S_{bot}	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(x)}$	$L_{b(x)}$ (in)
Structure 1	U_0–L_1	-15.70	54.51	0.00	-0.21	1.81	1.69	0.03	-0.13	-0.04	0.43	2.70	-2.74	-24.15	22.63	0.34	-1.55	-0.48	5.10	-16.48	65.30	51.81	100.29	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.517	0.39	0.39
	U_1–L_1	-27.61	29.28	0.42	-0.38	-1.32	1.23	0.20	-0.18	-0.57	0.52	5.57	-5.12	-17.65	16.38	2.40	-2.14	-0.82	6.19	-25.53	28.63	-67.70	-6.55	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-1.097	0.64	0.64
	U_1–L_2	-0.61	-5.24	0.35	-0.32	0.35	0.33	-0.23	-0.25	-0.35	5.18	-6.56	-12.36	14.55	2.34	-2.76	-3.13	4.21	20.98	-18.17	-8.58	35.09	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.201	0.50	0.50
	U_2–L_2	40.61	-41.50	0.63	-0.58	-0.61	0.67	0.17	-0.21	-0.06	0.10	8.44	-7.74	-8.10	8.95	1.99	-2.46	-0.70	1.25	66.36	-67.20	42.27	-42.31	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.988	0.20	0.20
	U_2–L_3	56.81	-57.80	0.91	-0.84	-0.73	0.76	-0.27	-0.32	-0.00	0.00	10.76	-10.57	-2.59	-2.22	0.00	0.00	0.00	0.00	92.46	-93.60	76.27	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-1.369	0.24	0.24
	U_3–L_3	64.44	-72.22	0.97	-1.07	-0.12	0.08	0.42	-0.47	0.00	0.00	12.96	-14.28	-1.60	1.07	5.02	-5.65	0.00	0.00	100.62	-112.46	81.69	85.16	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8	-0.895	0.24	0.24
	U_3–L_4	72.27	-89.74	0.99	-1.29	-0.14	-0.50	0.48	-0.58	0.00	0.00	14.52	-17.75	-0.61	3.24	-2.78	-7.02	0.00	0.00	111.13	-139.46	91.59	-0.983	0.21	0.21
	U_4–L_4	109.00	-121.30	1.08	-1.10	-0.34	0.36	0.74	-0.81	0.00	0.00	14.37	-14.63	-4.54	4.85	8.90	-8.76	0.00	0.00	160.39	-176.78	135.80	148.21	18.5	18.45	18.36	30.78	7	1020.9	1.67	1016	1.5	913.3	-0.907	0.24	0.24
	U_4–L_5	-42.62	47.12	1.31	-1.62	1.94	0.77	-0.93	-0.77	0.93	-21.46	-21.68	25.90	9.24	-11.11	-9.29	11.14	-20.14	18.91	-86.53	79.63	-160.53	-2.25	107.1	107.11	162.71	26	2058.9	1.52	5369	1.5	5302.3	-0.612	0.36	0.36
	U_5–L_5	-101.51	205.10	0.08	-0.08	-1.66	1.77	0.00	-0.94	1.08	-0.97	-0.67	-21.44	22.93	0.00	0.00	-11.24	12.90	-234.71	265.37	-279.45	-189.33	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0	0.680	0.87	0.87
	U_5–L_6	-123.92	126.16	0.02	-0.06	-1.24	1.39	0.00	-0.65	0.66	-0.28	-0.80	-16.07	18.00	0.00	0.00	-7.75	7.94	-160.72	162.96	-152.06	-127.37	35.5	35.42	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2	0.663	0.87	0.87
	U_6–L_6	-127.70	170.63	0.03	0.14	-1.40	1.56	0.00	0.00	-0.68	0.65	0.39	-4.12	0.00	0.00	0.00	-4.12	10.22	-153.57	223.97	-240.05	-123.77	42.74	42.74	42.74	65.30	9	1309.8	1.53	2155	1.5	2115.6	-0.709	0.31	0.31
	U_6–L_7	-106.29	107.56	0.11	-0.06	-1.24	1.20	0.00	0.00	-0.52	0.55	1.38	-0.71	-14.70	15.49	0.00	0.00	-6.18	6.60	-138.38	138.90	-163.32	-109.46	21.1	21.09	21.09	35.46	7	1020.9	1.67	1016	1.5	913.3	0.804	0.84	0.84
	U_7–L_7	-66.48	79.89	0.19	-0.14	-0.97	1.04	0.00	0.00	0.00	-0.30	0.40	2.40	-1.71	-12.58	13.48	0.00	0.00	-4.24	4.62	-83.24	101.55	-108.28	-62.62	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	0.578	0.83	0.83
	U_8–L_8	-37.84	36.79	0.47	-0.13	-0.55	0.59	0.00	-0.13	-0.04	0.06	4.80	-4.40	-0.77	0.00	0.00	-0.77	1.92	-33.17	39.33	-38.33	-25.74	0.00	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.089	0.20	0.20
	U_8–L_9	17.16	-23.69	1.00	-1.06	-0.36	0.30	0.27	-0.30	-0.10	0.11	12.99	-13.66	-4.64	4.80	3.08	-3.58	-1.20	1.31	39.20	-49.55	35.63	16.27	24.55	24.55	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.207	0.28	0.28
	U_9–L_9	60.40	-64.15	1.06	-1.29	-0.41	-0.09	0.48	-0.58	0.00	0.00	14.52	-15.49	-4.50	4.50	1.08	-1.08	-6.31	7.30	91.73	-101.83	83.12	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.693	0.32	0.32
	U_9–L_{10}	74.44	-85.11	1.02	-1.07	-0.16	0.16	0.43	-0.46	0.00	0.00	13.21	-13.81	-2.04	2.08	5.15	-5.53	-0.72	0.73	120.64	-135.78	93.18	100.43	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8	-0.889	0.24	0.24
	U_{10}–L_{10}	-17.77	-162.63	1.61	-1.64	-0.22	0.83	-0.97	-0.88	0.08	-0.78	-2.21	2.79	9.52	-10.52	-1.61	1.01	-20.44	-202.53	200.17	210.64	33.1	33.09	35.09	35.09	53.51	14	1187.1	1.65	1799	1.5	1737.2	-0.970	0.22	0.22
	U_{10}–L_{11}	-164.37	-173.76	1.51	-1.54	-0.19	0.91	-0.95	-0.97	0.07	0.94	-19.98	-19.42	-2.13	1.50	8.68	-10.73	0.00	0.00	203.59	-261.14	179.97	184.70	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.780	0.29	0.29
	U_{11}–L_{11}	-194.92	-255.55	1.36	-1.55	-0.13	0.08	1.06	-1.17	-0.06	0.07	17.60	-19.99	-1.73	0.97	12.73	-14.04	-0.77	0.88	292.83	-350.46	250.10	255.80	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.836	0.27	0.27
	U_{11}–L_{12}	-133.48	204.38	2.26	-2.76	-0.29	0.32	0.76	-0.85	0.00	0.00	24.96	-27.76	-3.50	3.50	8.63	-10.45	-1.61	2.01	291.50	-358.57	255.80	260.29	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2112.1	-0.970	0.22	0.22
	U_{12}–L_{12}	-201.32	204.79	0.39	-0.37	-2.04	2.05	0.15	-0.14	-0.91	0.88	4.97	-4.73	-26.08	28.19	1.51	-1.68	-10.88	10.92	-252.87	257.90	-309.74	-213.99	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	0.691	0.88	0.88
	U_{12}–L_{13}	-79.54	88.71	0.26	-0.27	-1.11	1.19	0.10	-0.10	-0.37	0.41	3.33	-3.44	-14.22	14.64	1.18	-1.21	-4.46	4.87	-97.54	109.28	-127.70	-78.04	21.5	21.54	21.54	33.27	3	987.9	1.54	1098	1.5	1066.2	0.611	0.84	0.84
	U_{13}–L_{14}	-54.34	54.34	0.43	-0.43	-0.76	0.76	0.00	0.00	-0.34	0.34	2.97	-2.97	-12.42	12.38	1.18	-1.18	-3.81	3.81	-74.39	74.39	-97.41	-59.52	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.744	0.31	0.31
	U_{14}–L_{15}	-4.54	12.92	0.43	-0.36	-0.80	0.80	0.13	-0.13	-0.17	0.21	5.48	-4.57	-10.26	11.14	1.51	-1.60	-2.05	2.32	3.19	8.23	19.54	0.00	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.626	0.35	0.35
	U_{15}–L_{16}	27.52	-27.99	0.64	-0.66	-0.65	0.67	0.10	-0.12	-0.04	0.05	8.22	-8.37	-8.32	8.59	1.22	-1.39	-0.43	0.60	46.46	-47.26	24.97	25.22	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.983	0.21	0.21
	U_{16}–L_{17}	59.94	-61.39	0.91	-0.84	-0.73	0.76	0.00	0.00	-0.00	0.00	10.76	-10.57	-2.59	-2.22	0.00	0.00	0.00	0.00	92.46	-93.60	76.27	81.79	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-1.369	0.24	0.24
	U_{17}–L_{18}	130.31	141.80	1.30	-1.36	-0.16	0.11	0.47	-0.50	0.00	0.00	16.65	-17.47	-2.08	1.37	5.58	-5.94	0.00	0.00	191.05	-206.98	168.70	171.19	20.6	20.60	20.67	34.64	1	1037.5	1.67	1143	1.5	1029.6	0.623	0.83	0.83
	U_{18}–L_{19}	216.58	-221.43	1.51	-1.57	-0.23	0.09	0.78	-0.84	0.00	0.00	23.13	-23.97	-3.43	2.46	8.05	-8.61	-1.47	1.08	318.31	-324.72	280.92	285.29	20.6	20.60	20.67	34.64	1	1037.5	1.67	1143	1.5	1029.6	-0.923	0.23	0.23
	U_{19}–L_{20}	193.18	-200.15	1.57	-1.64	-0.11	0.16	0.67	-0.68	0.00	0.00	20.00	-20.98	-1.38	2.01	8.02	-8.10	0.00	0.00	277.12	-287.52	249.33	253.74	43.0	43.01	42.96	68.56	14	1479.6	1.60	2266	1.5	2129.0	-0.964	0.21	0.21
	U_{20}–L_{21}	194.78	-194.55	1.49	-1.51	-0.19	0.24	0.65	-0.65	0.00	0.00	18.99	-19.33	-2.47	3.00	7.61	-7.82	0.00	0.00	277.89	-278.04	250.01	257.11	43.0	43.01	42.96	68.56	14	1479.6	1.60	2266	1.5	2129.0	-0.999	0.20	0.20
	U_{21}–L_{22}	177.31	-170.02	1.39	-1.39	-0.12	0.17	0.61	-0.61	0.00	0.00	17.29	-17.29	-2.34	2.53	6.93	-6.93	0.00	0.00	253.33	-247.84	227.43	231.13	43.0	43.01	43.24	43.76	15.66	15.66	15.66	15.66
	U_{22}–L_{23}	231.65	-230.62	1.38	-1.31	-0.53	0.53	0.77	-0.77	0.00	0.00	17.67	-16.67	-6.76	6.81	9.20	-9.19	0.00	0.00	324.12	-321.48	292.36	310.00	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.992	0.20	0.20
	U_{23}–L_{24}	26.62	-29.21	1.31	-1.30	-0.29	0.27	0.37	-0.36	-0.12	0.12	8.44	-8.44	-28.97	28.02	1.52	-1.52	-10.16	10.16	-37.01	39.23	-89.11	-11.22	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	0.721	0.85	0.85
	U_{24}–L_{25}	-225.23	219.22	0.17	-0.21	-2.13	1.98	0.02	0.03	-0.83	0.81	2.20	-2.60	-26.88	25.05	0.19	0.27	-9.92	9.76	-272.80	262.09	-334.15	241.06	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	0.721	0.85	0.85
	U_{25}–L_{26}	-144.26	152.33	0.23	-0.18	-1.40	1.26	0.00	-0.16	-0.56	0.53	0.26	-0.26	-17.98	17.98	0.00	0.00	-6.18	6.18	-178.53	183.21	-219.23	-153.32	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.777	0.22	0.22
	U_{26}–L_{27}	-182.78	181.59	0.28	-0.27	-2.67	2.09	0.07	-0.08	-0.77	0.69	3.57	-3.41	-26.13	26.41	0.80	-0.88	-9.28	9.34	-232.94	231.63	-283.62	-191.12	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	0.674	0.87	0.87
	U_{27}–L_{28}	-159.35	160.90	0.34	-0.34	-2.01	2.13	0.05	-0.09	-0.74	0.76	4.33	-4.33	-25.33	26.90	0.58	-1.10	-8.64	9.07	-201.52	207.43	-251.57	-160.38	38.9	38.83	38.83	59.23	6	1264.6	1.53	1955	1.5	1822.1	0.638	0.86	0.86
	U_{28}–L_{29}	-144.26	152.33	0.23	-0.18	-1.40	1.26	0.00	-0.16	-0.56	0.53	0.26	-0.26	-17.98	17.98	0.00	0.00	-6.18	6.18	-178.53	183.21	-219.23	-153.32	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.777	0.22	0.22
Structure 2	U_0–L_1	-49.51	63.36	0.26	-0.26	-0.93	0.97	0.00	-0.01	-0.34	0.35	3.28	-3.31	-11.73	12.27	0.02	-0.12	-4.02	4.24	-73.10	78.07	-97.84	-55.90	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	0.571	0.83	0.83
	U_1–L_1	-37.62	-34.49	0.63	-0.58	-0.61	0.67	0.17	-0.21	-0.06	0.10	8.44	-7.74	-8.10	8.95	1.99	-2.46	-0.70	1.25	66.36	-67.20	42.27	-42.31	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.988	0.20	0.20
	U_1–L_2	70.77	-74.09	1.06	-1.08	-0.32	0.30	0.29	-0.40	-0.41	0.05	0.07	0.05	13.33	-13.67	-3.74	3.71	4.75	4.93	-0.61	0.61	109.33	-114.09	86.35	97.62	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.998	0.22	0.22
	U_2–L_2	104.65	-105.00	1.31	-1.29	-0.28	0.27	0.52	-0.51	-0.06	0.06	16.54	-16.25	-3.51	3.38	6.19	-6.12	-0.66	0.70	-157.55	-157.52	130.63	141.35	18.7	18.71	18.61	31.48	8	970.0	1.68	1139	1.5	926.1	-0.900	0.20	0.20
	U_2–L_3	89.58	-89.58	1.29	-1.29	-0.26	0.26	0.44	-0.44	0.00	0.00	14.44	-14.44	-3.46	3.46	5.72	-5.72	0.00	0.00	-134.75	-134.75	111.73	120.84	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8	-0.891	0.24	0.24
	U_3–L_3	189.58	-191.05	1.96	-1.99	-0.28	0.27	0.80	-0.81	-0.06	0.05	24.69	-25.07	-3.50	3.48	9.58	-9.77	-0.72	0.65	-278.55	-280.96	240.97	251.71	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.951	0.20	0.20
	U_3–L_4	153.03	-151.72	1.74	-1.73	-0.23	0.23	0.71	-0.71	-0.05	0.05	21.44	-21.44	-3.01	3.01	8.47	-8.47	0.00	0.00	-240.46	-240.46	202.05	215.09	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.951	0.20	0.20
	U_4–L_4	207.01	-210.59	1.52	-1.42	-0.56	0.56	0.81	-0.81	0.00	0.00	19.20	-17.92	-7.07	7.27	9.72	-9.71	0.00	0.00	294.07	-297.05	259.52	278.37	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.990	0.20	0.20
	U_4–L_5	188.98	-189.26	1.62	-1.62	-0.56	0.56	0.81	-0.81	0.00	0.00	19.20	-19.20	-7.07	7.07	9.72	-9.72	0.00	0.00	294.07	-294.07	259.52	278.37	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.990	0.20	0.20
	U_5–L_5	-251.15	245.11	0.18	-0.21	-2.29	-23.19	0.01	0.00	-0.83	0.83	2.31	-2.25	-23.19	21.91	0.00	0.00	-8.83	8.68	-323.49	315.68	-369.42	-285.42	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	0.773	0.91	0.91
	U_5–L_6	-185.39	176.08	0.16	-0.28	-1.60	1.63	0.05	-0.10	-0.66	0.69	1.99	-3.53	-20.44	20.76	0.56	-1.25	-7.94	8.27	-238.41	226.92	-277.91	-203.26	43.2	43.24	43.16	70.66	19	1516.6	1.63	2332	1.5	2140.4	0.731	0.85	0.85
	U_6–L_6	-134.98	161.86	0.23	-0.18	-1.40	1.26	0.00	-0.16	-0.56	0.53	0.26	-0.26	-17.98	17.98	0.00	0.00	-6.18	6.18	-178.53	183.21	-219.23	-153.32	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.777	0.22	0.22
	U_6–L_7	-185.34	192.19	0.02	0.01	-1.60	1.65	0.00	0.00	-0.66	0.64	0.41	0.06	-20.40	21.64	0.00	0.00	-7.63	7.72	-240.54	249.93	-277.38	-202.77	43.0	43.01	42.96	68.56	14	1479.6	1.60	2266	1.5	2129.0	-0.731	0.85	0.85
	U_7–L_7	-130.29	130.29	0.00	0.00	-1.26	1.26	0.00	0.00	-0.52	0.52	0.00	0.00	-16.14	16.14	0.00	0.00	-6.00	6.00	-173.11	173.11	-213.00	-148.89	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.754	0.22	0.22
	U_8–L_8	-116.39	129.36	0.15	-0.08	-1.35	1.39	0.00	0.00	-0.42	0.45	1.87	-1.92	-17.26	17.68	0.00	0.00	-6.04	6.29	-149.59	166.84	-192.24	-121.20	20.8	20.80	20.67	34.64	1	1037.5	1.67	1143	1.5	1029.6	0.673	0.87	0.87
	U_9–L_9	-52.79	62.48	0.26	-0.29	-0.64	0.70	0.00	0.00	-0.35	0.37	3.31	-3.71	-8.14	8.88	0.00	0.00	-2.18	2.58	-64.33	76.40	-82.05	-53.73	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.695	0.96	0.96
	U_{10}–L_{10}	-19.17	20.05	0.31	-0.31	-0.32	0.32	0.15	-0.15	-0.05	0.05	4.00	-4.00	-2.56	2.56	2.56	-2.56	-0.82	0.82	-13.16	13.16	-17.00	-10.00	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.103	0.20	0.20
	U_{11}–L_{11}	18.83	-25.93	0.93	-0.99	-0.45	0.35	0.22	-0.25	-0.14	0.14	11.82	-12.60	-5.60	5.83	2.66	-3.02	-1.67	1.73	39.84	-49.59	16.34	-26.67	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.803	0.28	0.28
	U_{12}–L_{12}	95.02	-96.90	1.02	-1.04	-0.25	0.25	0.37	-0.40	-0.14	0.14	12.98	-13.30	-3.18	3.22	4.48	-4.75	-1.16	1.16	139.72	-149.44	111.38	122.23	21.5	21.54	21.54	33.27	3	987.9	1.54	1098	1.5	1066.2	-0.935	0.23	0.23
	U_{13}–L_{13}	77.23	-77.23	1.04	-1.04	-0.25	0.25	0.37	-0.37	-0.14	0.14	12.98	-12.98	-3.18	3.18	4.48	-4.48	0.00	0.00	-139.72	-139.72	111.38	122.23	21.5	21.54	21.54	33.27	3	987.9	1.54	1098	1.5	1066.2	-0.935	0.23	0.23
	U_{14}–L_{14}	189.59	-202.30	1.56	-1.57	-0.31	0.30	0.78	-0.81	-0.12	0.11	19.96	-20.00	-3.90	3.79	9.40	-9.73	-1.49	1.34	-284.61	-307.62	-239.51	-253.15	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.944	0.22	0.22
	U_{15}–L_{15}	214.89	-210.10	1.30	-1.63	-0.21	0.24	0.92	-0.93	-0.06	0.10	16.60	-20.88	-2.71	3.02	8.59	-11.12	-0.67	1.15	-312.10	-392.73	-274.96	-284.77	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.795	0.28	0.28
	U_{16}–L_{16}	201.36	-206.01	1.56	-1.57	-0.31	0.30	0.78	-0.81	-0.12	0.11	19.96	-20.00	-3.90	3.79	9.40	-9.73	-1.49	1.34	-284.61	-307.62	-239.51	-253.15	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.944	0.22	0.22
Structure 3	U_0–L_1	129.25	-129.19	1.06	-1.14	-0.16	0.09	0.67	-0.69	0.00	0.00	13.75	-14.76	-2.04	1.19	8.00	-8.23	0.00	0.00	185.91	-187.14	160.37	169.57	36.5	35.92	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2	-0.903	0.20	0.20
	U_1–L_1	180.48	-209.68	1.19	-1.27	-0.38	0.44	0.93	-1.09	0.00	0.00	15.37	-16.39	-4.88	5.72	11.17	-13.03	0.00	0.00	254.60	-293.89	228.28	242.06	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0	-0.866	0.25	0.25
	U_1–L_{1-2}	24.50	-49.24	1.08	-1.37	-1.94	2.21	0.79	-1.01	-0.77	0.86	14.40	-18.24	-25.89	29.48	9.43	-12.11	-9.24	10.36	63.30	-103.46	-13.30	84.17	107.1	107.13	107.11	162.71	26	2058.9	1.52	5369	1.5	5302.3	-0.612	0.36	0.36
	U_2–L_{1-2}	-121.66	132.24	0.05	-0.05	-1.56	1.58	0.00	0.00	-0.72	0.78	0.68	-0.61	-20.80	21.08	0.00	0.00	-8.66	9.37	-157.27	171.11	-166.46	-118.56	18.5	18.45	18.36	30.78	7	1020.9	1.67	1016	1.5	913.3	0.804	0.84	0.84
	U_2–L_3	-77.50

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

M_7 Information

Location		Member	ZZ Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load (Max) Start (k-in)	Lane Reduction & Impact Live Load (Max) End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)	Max. 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_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_x	M_n (k-in)	YY Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load (Max) Start (k-in)	Lane Reduction & Impact Live Load (Max) End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{req} (in^3)	S_x (in^3)	Z_y (in^3)	I_{yy} (in^4)	Shape Factor	M_p (k-in)	F_{yy} (ksi)	Formula 1.8 Term * F_y/S_x	M_n (k-in)	Tension: Yield: Axial Force (k)	Yield: Moment (k-in)	Yield: Pass	Tension: Fracture: Axial Force (k)	Fracture: Moment (k-in)	Fracture: Pass	Compression: Buckle: Axial Force (k)	Buckle: Moment (k-in)	Buckle: Pass	Compression: Yield: Axial Force (k)	Yield: Moment (k-in)	Yield: Pass
			Start (k-in)	End (k-in)	Start (k-in)	End (k-in)	Start (k-in)	End (k-in)	Start (k-in)	End (k-in)	Start (k-in)	End (k-in)	k-in	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-L_1	3.65	-1.42	0.10	0.04	-1.02	0.45	0.15	0.01	-0.03	-0.02	1.39	0.57	-13.65	5.96	1.75	0.12	-0.34	-0.23	8.81	0.94	-13.44	12.20	15.6	19.63	15.58	25.96	5	804.0	1.66	857	1.5	773.7	-0.907	0.24	0.24	-84.92	-28.02	-0.37	-0.01	-7.06	-2.79	-1.09	-0.56	0.55	0.50	-4.94	-0.16	-94.28	-37.26	-16.17	-8.33	8.12	7.42	-137.64	-47.47	-222.41	-148.19	100.5	100.60	150.48	126.29	66.1	1.20	3970	144	0.94257776	3126.1	0.671	0.87	0.87	0.214	0.072	0.29	Yes	0.129	0.039	0.17	Yes	—	—	—

Moment (Start) AB Operating

Operating Loads - 2F1

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	$U_0 - U_1$	1.300	1.300	-----	-576.51	86	-794	-767	8	-77	74	367	-509	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.211	1.00	Yes	0.777	0.189	0.97	Yes	1.00	**7.34**
		$U_1 - U_2$			-----	-539.70	-11	-90	-401	-681	-304	37	-223	-59	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.262	1.00	Yes	0.728	0.162	0.89	Yes	1.00	**4.79**
		$U_2 - U_3$			82.43	-580.17	-137	207	-813	-355	6	27	-117	239	0.094	0.234	0.33	Yes	0.064	0.152	0.22	Yes	0.789	0.202	1.00	Yes	0.782	0.193	0.98	Yes	1.00	**4.60**
		$U_3 - U_4$			307.41	-576.42	60	285	-911	-244	10	35	70	53	0.352	0.228	0.59	Yes	0.242	0.157	0.40	Yes	0.784	0.184	0.97	Yes	0.777	0.217	1.00	Yes	1.00	**6.21**
		$U_4 - U_5$			270.53	-574.33	87	234	-914	-138	25	-26	67	-32	0.310	0.229	0.54	Yes	0.213	0.157	0.37	Yes	0.781	0.179	0.97	Yes	0.774	0.217	1.00	Yes	1.00	**5.34**
		$U_5 - U_6$			566.59	-498.99	201	413	-1099	10	-121	-55	367	18	0.649	0.323	0.98	Yes	0.438	0.211	0.65	Yes	0.679	0.315	1.00	Yes	0.673	0.261	0.94	Yes	1.00	**7.44**
		$U_6 - U_7$			785.27	-103.72	341	209	-823	-166	-265	-109	475	-95	0.751	0.240	1.00	Yes	0.525	0.165	0.69	Yes	0.118	0.286	0.41	Yes	0.117	0.175	0.30	Yes	1.00	**7.59**
		$U_7 - U_8$			938.37	-----	44	1037	-1334	1978	-430	-3	219	-180	0.650	0.343	1.00	Yes	0.454	0.234	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.68**
		$U_8 - U_9$			445.99	-----	2961	-2326	574	32	-553	284	-1116	-83	0.365	0.634	1.00	Yes	0.250	0.431	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**24.32**
		$U_9 - U_{10}$			-----	-541.35	565	-446	-895	-546	-24	686	-786	1079	-----	-----	-----	-----	-----	-----	-----	-----	0.697	0.299	1.00	Yes	0.691	0.200	0.90	Yes	1.00	**22.02**
		$U_{10} - U_{11}$			512.06	-664.63	448	24	-250	-666	-39	98	133	230	0.555	0.186	0.75	Yes	0.370	0.120	0.49	Yes	0.856	0.138	1.00	Yes	0.848	0.149	1.00	Yes	1.00	**11.23**
		$U_{11} - U_{12}$			-----	-860.85	231	-107	-327	-731	97	404	82	727	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.184	1.00	Yes	0.808	0.121	0.93	Yes	1.00	**5.37**
		$U_{12} - U_{13}$			-----	-1214.09	27	-229	-756	-739	333	206	476	443	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.173	1.00	Yes	0.811	0.104	0.92	Yes	1.00	**6.05**
		$U_{13} - U_{14}$			-----	-1379.08	-127	-367	-988	-1032	211	169	339	583	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.196	1.00	Yes	0.791	0.114	0.91	Yes	1.00	**5.94**
		$U_{14} - U_{15}$			-----	-1285.15	-284	-257	-1522	-816	219	33	572	162	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.251	1.00	Yes	0.737	0.168	0.91	Yes	1.00	**4.10**
		$U_{15} - U_{16}$			-----	-1356.03	-161	-433	-1174	-855	89	37	460	206	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.213	1.00	Yes	0.777	0.130	0.91	Yes	1.00	**4.39**
		$U_{16} - U_{17}$			-----	-1344.37	-338	-192	-1493	-478	156	-49	635	103	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.220	1.00	Yes	0.771	0.165	0.94	Yes	1.00	**5.06**
		$U_{17} - U_{18}$			-----	-1008.24	-214	-70	-1069	-142	1	-62	417	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.193	1.00	Yes	0.789	0.174	0.97	Yes	1.00	**4.72**
		$U_{18} - U_{19}$			-----	-700.49	-203	-69	-915	-148	29	-122	409	-161	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.201	1.00	Yes	0.788	0.184	0.98	Yes	1.00	**4.91**
		$U_{19} - U_{20}$			-----	-550.97	-127	-893	-1877	1176	84	-1137	416	-438	-----	-----	-----	-----	-----	-----	-----	-----	0.626	0.272	0.90	Yes	0.620	0.378	1.00	Yes	1.00	**11.58**
	Structure 2	$U_0 - U_1$			-----	-622.27	683	-1440	-1555	-943	-50	17	1173	-322	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.256	1.00	Yes	0.735	0.264	1.00	Yes	1.00	**12.59**
		$U_1 - U_2$			-----	-867.49	92	-533	-467	-700	-182	-433	-72	-283	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.155	1.00	Yes	0.837	0.106	0.95	Yes	1.00	**7.93**
		$U_2 - U_3$			-----	-1193.62	168	-830	-804	-1014	-42	59	-177	529	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.140	1.00	Yes	0.847	0.103	0.96	Yes	1.00	**8.10**
		$U_3 - U_4$			-----	-1266.67	-414	-411	-1653	-1425	348	530	348	697	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.267	1.00	Yes	0.721	0.147	0.87	Yes	1.00	**5.46**
		$U_4 - U_5$			-----	-1438.75	-429	-428	-1885	-1394	458	162	409	290	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.250	1.00	Yes	0.739	0.156	0.90	Yes	1.00	**5.94**
		$U_5 - U_6$			-----	-1506.46	-432	-19	-1887	-1250	187	-206	273	482	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.213	1.00	Yes	0.773	0.156	0.93	Yes	1.00	**5.41**
		$U_6 - U_7$			-----	-1344.30	-290	-110	-1785	-1285	-131	-183	229	168	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.220	1.00	Yes	0.765	0.159	0.93	Yes	1.00	**5.14**
		$U_7 - U_8$			-----	-1308.93	-213	-203	-1996	-845	-97	-175	182	54	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.244	1.00	Yes	0.745	0.178	0.93	Yes	1.00	**4.71**
		$U_8 - U_9$			-----	-1164.16	-290	95	-1475	-737	-87	-194	376	-126	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.197	1.00	Yes	0.790	0.157	0.95	Yes	1.00	**5.23**
		$U_9 - U_{10}$			79.58	-917.33	-115	295	-1613	-371	-125	-144	247	0	0.058	0.223	0.29	Yes	0.040	0.151	0.20	Yes	0.796	0.196	1.00	Yes	0.792	0.196	0.99	Yes	1.00	**5.40**
		$U_{10} - U_{11}$			426.66	-755.16	129	331	-1568	-330	-158	-157	473	-11	0.360	0.279	0.64	Yes	0.245	0.181	0.43	Yes	0.755	0.237	1.00	Yes	0.750	0.221	0.98	Yes	1.00	**7.40**
		$U_{11} - U_{12}$			803.98	-463.10	229	527	-1748	178	-341	-122	567	105	0.679	0.316	1.00	Yes	0.456	0.211	0.67	Yes	0.463	0.175	0.64	Yes	0.460	0.247	0.71	Yes	1.00	**9.99**
		$U_{12} - U_{13}$			1044.58	-58.20	416	132	-1722	-1000	-387	-362	733	-181	0.705	0.287	1.00	Yes	0.503	0.195	0.70	Yes	0.047	0.367	0.42	Yes	0.046	0.217	0.27	Yes	1.00	**10.73**
		$U_{13} - U_{14}$			1220.25	-----	74	1759	-2927	3680	-787	-395	223	-653	0.600	0.394	1.00	Yes	0.425	0.259	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.13**
		$U_{14} - U_{15}$			580.38	-----	6656	-5819	1042	190	-791	377	-1378	-448	0.285	0.710	1.00	Yes	0.202	0.466	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**24.43**
		$U_{15} - U_{16}$			1026.25	-----	435	230	-2617	-766	-462	309	-535	939	0.620	0.377	1.00	Yes	0.441	0.254	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**16.45**
		$U_{16} - U_{17}$			-----	-771.45	2076	-1410	-2164	-1764	631	418	766	849	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.326	1.00	Yes	0.669	0.272	0.95	Yes	1.00	**32.00**
		$U_{17} - U_{18}$			-----	-594.43	737	-704	-1091	-606	104	745	25	998	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.287	1.00	Yes	0.702	0.185	0.89	Yes	1.00	**17.00**
		$U_{18} - U_{19}$			-----	-676.05	558	-490	-724	-983	294	222	304	505	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.196	1.00	Yes	0.798	0.167	0.97	Yes	1.00	**9.62**
		$U_{19} - U_{20}$			324.34	-689.11	323	224	-915	-708	18	11	85	508	0.304	0.215	0.52	Yes	0.202	0.141	0.35	Yes	0.765	0.231	1.00	Yes	0.760	0.147	0.91	Yes	1.00	**7.35**
		$U_{20} - U_{21}$			217.31	-840.09	204	-21	-1073	-397	-34	-64	320	279	0.169	0.190	0.36	Yes	0.118	0.123	0.25	Yes	0.772	0.219	1.00	Yes	0.767	0.155	0.93	Yes	1.00	**7.67**
		$U_{21} - U_{22}$			64.14	-789.20	-41	2	-1154	-976	-1	67	73	403	0.050	0.211	0.27	Yes	0.035	0.142	0.18	Yes	0.726	0.265	1.00	Yes	0.720	0.167	0.89	Yes	1.00	**5.60**
		$U_{22} - U_{23}$			46.11	-762.02	47	-52	-1394	-608	65	-3	417	119	0.036	0.248	0.29	Yes	0.025	0.166	0.20	Yes	0.701	0.292	1.00	Yes	0.695	0.202	0.90	Yes	1.00	**5.02**
		$U_{23} - U_{24}$			46.31	-853.09	95	-61	-1129	-319	-37	3	377	110	0.036	0.205	0.25	Yes	0.025	0.133	0.16	Yes	0.784	0.208	1.00	Yes	0.779	0.164	0.95	Yes	1.00	**6.08**
		$U_{24} - U_{25}$			235.15	-705.39	154	245	-1364	-411	-48	-85	441	-64	0.221	0.278	0.50	Yes	0.146	0.182	0.33	Yes	0.783	0.212	1.00	Yes	0.778	0.218	1.00	Yes	1.00	**5.72**
		$U_{25} - U_{26}$			433.78	-621.09	170	412	-1272	12	-147	-75	324	-6	0.435	0.263	0.70	Yes	0.286	0.168	0.46	Yes	0.738	0.255	1.00	Yes	0.733	0.216	0.95	Yes	1.00	**7.06**
		$U_{26} - U_{27}$			685.65	-487.39	328	383	-1392	177	-227	-71	466	-59	0.688	0.305	1.00	Yes	0.458	0.202	0.66	Yes	0.579	0.350	0.93	Yes	0.576	0.236	0.82	Yes	1.00	**9.02**
		$U_{27} - U_{28}$			927.19	-316.48	282	519	-1990	-98	-336	-14	553	106	0.683	0.308	1.00	Yes	0.455	0.203	0.66	Yes	0.276	0.291	0.57	Yes	0.274	0.250	0.53	Yes	1.00	**10.97**
		$U_{28} - U_{29}$			1143.37	-9.54	451	155	-2188	-799	-352	-248	696	-104	0.691	0.308	1.00	Yes	0.492	0.207	0.70	Yes	0.007	0.291	0.30	Yes	0.007	0.249	0.26	Yes	1.00	**12.66**
		$U_{29} - U_{30}$			1206.82	-----	197	1644	-2652	3834	-678	-349	206	-414	0.593	0.401	1.00	Yes	0.420	0.263	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.90**
		$U_{30} - U_{31}$			379.04	-164.80	7799	-4977	676	-301	-1286	289	-52	129	0.186	0.810	1.00	Yes	0.132	0.531	0.67	Yes	0.096	0.633	0.73	Yes	0.095	0.722	0.82	Yes	1.00	**35.35**
		$U_{31} - U_{32}$			892.20	-13.43	307	115	-2377	-337	-285	425	-478	993	0.602	0.394	1.00	Yes	0.429	0.268	0.70	Yes	0.011	0.188	0.20	Yes	0.011	0.300	0.32	Yes	1.00	**18.66**
		$U_{32} - U_{33}$			-----	-706.52	966	-1154	-679	-2097	520	409	654	915	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.288	1.00	Yes	0.702	0.296	1.00	Yes	1.00	**19.29**
		$U_{33} - U_{34}$			739.56	-719.92	399	280	-989	-1065	6	246	138	1102	0.625	0.285	0.91	Yes	0.425	0.188	0.62	Yes	0.720	0.275	1.00	Yes	0.715	0.150	0.87	Yes	1.00	**10.92**
		$U_{34} - U_{35}$			436.37	-922.38	401	109	-850	-1043	171	150	471	621	0.320	0.194	0.52	Yes	0.217	0.131	0.35	Yes	0.801	0.191	1.00	Yes	0.796	0.127	0.93	Yes	1.00	**9.18**
		$U_{35} - U_{36}$			218.91	-1170.63	215	-108	-1100	-914	86	84	288	598	0.126	0.166	0.30	Yes	0.089	0.110	0.20	Yes	0.800	0.197	1.00	Yes	0.794	0.117	0.92	Yes	1.00	**8.62**
		$U_{36} - U_{37}$			-----	-1336.13	-62	34	-1543	-1665	85	-1	291	366	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.232	1.00	Yes	0.761	0.148	0.91	Yes	1.00	**6.83**
		$U_{37} - U_{38}$			-----	-1241.43	81	-186	-1997	-1115	52	17	359	296	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.280	1.00	Yes	0.707	0.178	0.89	Yes	1.00	**5.69**
		$U_{38} - U_{39}$			-----	-1497.11	89	-303	-1659	-1300	134	-35	757	268	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.217	1.00	Yes	0.769	0.138	0.91	Yes	1.00	**6.48**
		$U_{39} - U_{40}$			-----	-1359.10	-232	-341	-2483	-1380	36	-35	457	217	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.291	1.00	Yes	0.698	0.206	0.91	Yes	1.00	**5.55**
		$U_{40} - U_{41}$			-----	-1254.85	-259	-339	-2172	-1067	46	-119	581	41	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.280	1.00	Yes	0.715	0.194	0.91	Yes	1.00	**5.58**
		$U_{41} - U_{42}$			-----	-1102.33	-157	-128	-1726	-209	-67	-104	405	35	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.206	1.00	Yes	0.782	0.176	0.96	Yes	1.00	**6.49**
		$U_{42} - U_{43}$			-----	-748.53	-142	-58	-1504	-433	-41	-100	401	-158	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.267	1.00	Yes	0.722	0.228	0.96	Yes	1.00	**6.61**
		$U_{43} - U_{44}$			-----	-529.12	-19	-206	-2206	607	-71	32	390	-294	-----	-----	-----	-----	-----	-----	-----	-----	0.629	0.331	0.96	Yes	0.625	0.374	1.00	Yes	1.00	**11.88**
	Structure 3	$U_0 - U_1$			-----	-610.00	672	-1559	-1008	-1031	-17	109	985	-126	-----	-----	-----	-----	-----	-----	-----	-----	0.693	0.257	0.95	Yes	0.686	0.314	1.00	Yes	1.00	**12.11**
		$U_1 - U_2$			-----	-722.78	119	-716	-307	-480	-83	-383	-53	-306	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.171	1.00	Yes	0.813	0.144	0.96	Yes	1.00	**5.92**
		$U_2 - U_3$			-----	-1068.05	168	-382	-433	-610	-88	149	-255	543	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.146	1.00	Yes	0.836	0.099	0.94	Yes	1.00	**6.66**
		$U_3 - U_4$			-----	-1320.39	-160	-432	-867	-1284	279	373	379	744	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.230	1.00	Yes	0.757	0.142	0.90	Yes	1.00	**5.93**
		$U_4 - U_5$			-----	-1351.16	-374	-136	-1367	-604	520	159	428	290	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.208	1.00	Yes	0.775	0.151	0.93	Yes	1.00	**5.34**
		$U_5 - U_6$			-----	-1380.01	-175	-264	-1161	-1086	138	-156	171	379	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.198	1.00	Yes	0.791	0.128	0.92	Yes	1.00	**5.66**
		$U_6 - U_7$			-----	-1326.92	-379	-105	-1607	-418	-88	-186	425	94	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.223	1.00	Yes	0.761	0.177	0.94	Yes	1.00	**4.79**
		$U_7 - U_8$			-----	-1158.08	-171	-18	-1151	-416	-55	-170	295	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.208	1.00	Yes	0.774	0.159	0.94	Yes	1.00	**4.50**
		$U_8 - U_9$			-----	-885.26	-105	171	-926	-82	-29	-153	315	-114	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.158	1.00	Yes	0.831	0.154	0.99	Yes	1.00	**4.36**
		$U_9 - U_{10}$			141.89	-617.18	-80	222	-912	93	-97	-102	230	-31	0.154	0.241	0.40	Yes	0.103	0.155	0.26	Yes	0.795	0.183	0.98	Yes	0.788	0.204	1.00	Yes	1.00	**5.22**
		$U_{10} - U_{11}$			614.61	-466.14	278	215	-1042	-122	-216	-132	600	-170	0.667	0.330	1.00	Yes	0.452	0.221	0.68	Yes	0.600	0.203	0.81	Yes	0.595	0.233	0.83	Yes	1.00	**9.31**
		$U_{11} - U_{12}$			858.79	-----	-19	932	-1391	1434	-423	-103	311	-262	0.704	0.292	1.00	Yes	0.481	0.199	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.46**
		$U_{12} - U_{13}$			495.90	-2.55	3763	-3647	400	187	-215	798	-734	-241	0.344	0.651	1.00	Yes	0.240	0.444	0.69	Yes	0.002	0.508	0.52	Yes	0.002	0.570	0.58	Yes	1.00	**20.72**
		$U_{13} - U_{14}$			835.03	-6.33	224	423	-646	-89	-328	-211	-343	404	0.799	0.193	1.00	Yes	0.558	0.132	0.70	Yes	0.007	0.184	0.20	Yes	0.007	0.137	0.15	Yes	1.00	**8.48**
		$U_{14} - U_{15}$			-----	-603.83	663	-383	-462	-681	246	-98	163	127	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.171	1.00	Yes	0.814	0.162	0.98	Yes	1.00	**14.36**
		$U_{15} - U_{16}$			394.34	-533.20	310	216	-400	-733	-61	134	2	462	0.452	0.252	0.71	Yes	0.310	0.173	0.49	Yes	0.726	0.274	1.00	Yes	0.719	0.174	0.90	Yes	1.00	**6.44**
		$U_{16} - U_{17}$			367.89	-564.09	362	109	-790	-509	85	74	386	203	0.422	0.253	0.68	Yes	0.289	0.173	0.47	Yes	0.768	0.229	1.00	Yes	0.761	0.188	0.95	Yes	1.00	**5.97**
		$U_{17} - U_{18}$			174.69	-567.31	282	-79	-687	-484	-37	71	296	226	0.200	0.213	0.42	Yes	0.135	0.140	0.28	Yes	0.772	0.223	1.00	Yes	0.765	0.163	0.93	Yes	1.00	**4.82**
		$U_{18} - U_{19}$			58.45	-515.69	129	-46	-767	-284	-8	24	443	28	0.067	0.257	0.33	Yes	0.046	0.176	0.23	Yes	0.702	0.290	1.00	Yes	0.695	0.182	0.88	Yes	1.00	**4.42**
		$U_{19} - U_{20}$			26.94	-480.54	149	-268	-1476	130	-102	91	414	-164	0.031	0.421	0.46	Yes	0.021	0.289	0.31	Yes	0.654	0.345	1.00	Yes	0.648	0.351	1.00	Yes	1.00	**7.59**

Operating Loads - 2F1

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			-----	-49.57	1661	-2704	-343	167	-454	-1667	-22	-78	-----	-----	-----	-----	-----	-----	-----	-----	0.090	0.901	1.00	Yes	0.089	0.811	0.91	Yes	1.00	**40.05**
		L_1 - L_2			421.27	-----	358	-884	-197	-462	-239	-177	411	-73	0.645	0.354	1.00	Yes	0.393	0.235	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.80**
		L_2 - L_3			688.73	-6.20	-28	4	-765	-702	-31	17	-101	92	0.792	0.201	1.00	Yes	0.458	0.121	0.58	Yes	0.008	0.238	0.25	Yes	0.008	0.185	0.20	Yes	1.00	**5.16**
		L_3 - L_4			678.09	-98.33	74	210	-723	-438	48	68	261	127	0.780	0.217	1.00	Yes	0.463	0.139	0.61	Yes	0.134	0.222	0.36	Yes	0.133	0.175	0.31	Yes	1.00	**4.93**
		L_4 - L_5			222.89	-481.70	90	583	-997	586	51	37	-235	123	0.289	0.306	0.60	Yes	0.173	0.200	0.38	Yes	0.741	0.139	0.88	Yes	0.734	0.264	1.00	Yes	1.00	**6.02**
		L_5 - L_6			-----	-710.84	159	584	-652	158	72	128	340	102	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.164	1.00	Yes	0.820	0.144	0.97	Yes	1.00	**6.44**
		L_6 - L_7			-----	-1036.60	186	170	-1041	452	117	-111	-111	257	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.072	0.92	Yes	0.834	0.164	1.00	Yes	1.00	**8.65**
		L_7 - L_8			-----	-1234.69	93	968	-639	1410	44	173	447	16	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.200	1.00	Yes	0.782	0.187	0.97	Yes	1.00	**10.39**
		L_8 - L_9			-----	-1209.34	1648	-83	531	-15	-215	-3	-149	-202	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.224	1.00	Yes	0.766	0.218	0.99	Yes	1.00	**12.71**
		L_9 - L_{10}			-----	-863.55	1553	-1933	-1219	-812	-927	-1329	1911	484	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.272	0.98	Yes	0.695	0.304	1.00	Yes	1.00	**30.08**
		L_{10} - L_{11}			169.00	-562.92	533	-3	-78	-477	137	46	85	37	0.219	0.165	0.39	Yes	0.127	0.100	0.23	Yes	0.865	0.084	0.95	Yes	0.858	0.141	1.00	Yes	1.00	**8.07**
		L_{11} - L_{12}			587.60	-----	531	-737	-29	-577	-207	-196	237	40	0.761	0.236	1.00	Yes	0.457	0.154	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.47**
		L_{12} - L_{13}			1042.33	-----	145	-83	-548	-729	32	35	234	331	0.823	0.168	1.00	Yes	0.526	0.101	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.02**
		L_{13} - L_{14}			1237.92	-----	603	-1716	-292	-1302	-75	-138	371	104	0.728	0.267	1.00	Yes	0.472	0.164	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.97**
		L_{14} - L_{15}			1488.80	-----	-379	-27	-2092	-475	-119	-63	-123	222	0.727	0.268	1.00	Yes	0.473	0.162	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.63**
		L_{15} - L_{16}			1581.48	-----	-190	-404	-1676	-1099	-87	-40	166	-286	0.773	0.222	1.00	Yes	0.496	0.130	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.92**
		L_{16} - L_{17}			1144.94	-----	-430	90	-1604	-104	-91	-54	-406	305	0.724	0.272	1.00	Yes	0.470	0.167	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.84**
		L_{17} - L_{18}			848.17	-----	-188	-33	-1155	42	-58	7	243	-101	0.739	0.254	1.00	Yes	0.473	0.152	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.73**
		L_{18} - L_{19}			304.97	-----	-219	298	-1328	720	-33	-33	-604	145	0.467	0.524	1.00	Yes	0.316	0.331	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.12**
		L_{19} - L_{20}			163.14	-317.75	-67	-58	-1423	629	-21	-5	501	112	0.250	0.531	0.79	Yes	0.152	0.355	0.51	Yes	0.577	0.355	0.94	Yes	0.572	0.427	1.00	Yes	1.00	**16.39**
	Structure 2	L_0 - L_1			36.29	-140.31	1085	-3406	-119	15	-449	-1562	-19	-66	0.044	0.950	1.00	Yes	0.026	0.603	0.63	Yes	0.202	0.674	0.88	Yes	0.200	0.693	0.90	Yes	1.00	**37.38**
		L_1 - L_2			521.89	-----	678	-1399	-182	-871	-262	-259	470	-39	0.634	0.362	1.00	Yes	0.377	0.231	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.05**
		L_2 - L_3			987.42	-----	346	-1383	-580	-1014	-149	119	21	184	0.778	0.219	1.00	Yes	0.510	0.130	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.88**
		L_3 - L_4			1339.27	-----	296	-1295	-833	-1498	-281	-177	469	207	0.787	0.213	1.00	Yes	0.530	0.133	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.61**
		L_4 - L_5			1692.50	-----	-268	-736	-2136	-1045	51	-34	-132	-50	0.789	0.211	1.00	Yes	0.522	0.124	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.74**
		L_5 - L_6			1835.95	-----	-147	-389	-1752	-2081	112	-15	331	62	0.788	0.205	1.00	Yes	0.529	0.125	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.45**
		L_6 - L_7			1763.79	-----	-455	-127	-2422	-1850	-160	46	55	603	0.746	0.250	1.00	Yes	0.496	0.148	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.26**
		L_7 - L_8			1295.67	-----	-222	274	-2106	-340	-131	8	188	-82	0.743	0.248	1.00	Yes	0.488	0.145	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.06**
		L_8 - L_9			1068.00	-225.55	-114	513	-1510	41	-28	14	-188	515	0.747	0.252	1.00	Yes	0.503	0.158	0.67	Yes	0.187	0.121	0.31	Yes	0.186	0.204	0.39	Yes	1.00	**7.79**
		L_9 - L_{10}			767.81	-555.06	-126	684	-1627	33	10	86	417	-164	0.685	0.310	1.00	Yes	0.399	0.192	0.60	Yes	0.587	0.167	0.76	Yes	0.583	0.260	0.85	Yes	1.00	**9.42**
		L_{10} - L_{11}			132.72	-663.78	80	525	-1236	569	54	0	-392	163	0.133	0.269	0.41	Yes	0.078	0.168	0.25	Yes	0.785	0.091	0.88	Yes	0.780	0.216	1.00	Yes	1.00	**7.68**
		L_{11} - L_{12}			-----	-1015.51	93	971	-1227	272	79	236	382	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.143	0.99	Yes	0.833	0.167	1.00	Yes	1.00	**10.08**
		L_{12} - L_{13}			-----	-1262.22	262	-305	-1927	-652	174	-142	-302	28	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.231	1.00	Yes	0.755	0.192	0.95	Yes	1.00	**11.52**
		L_{13} - L_{14}			-----	-1309.69	-221	1259	-2629	3842	-79	-50	453	69	-----	-----	-----	-----	-----	-----	-----	-----	0.665	0.247	0.92	Yes	0.659	0.336	1.00	Yes	1.00	**15.76**
		L_{14} - L_{15}			-----	-1188.45	4564	-3035	1031	-412	-327	159	-406	-302	-----	-----	-----	-----	-----	-----	-----	-----	0.603	0.272	0.88	Yes	0.598	0.398	1.00	Yes	1.00	**20.33**
		L_{15} - L_{16}			-----	-1343.92	23	236	-1904	-681	-422	-290	433	236	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.178	0.99	Yes	0.804	0.189	1.00	Yes	1.00	**12.71**
		L_{16} - L_{17}			149.45	-829.54	3176	-3022	-1413	-1009	-988	-776	-200	-155	0.093	0.474	0.57	Yes	0.062	0.284	0.35	Yes	0.609	0.329	0.94	Yes	0.604	0.392	1.00	Yes	1.00	**36.76**
		L_{17} - L_{18}			399.39	-8.35	2023	-3191	-995	-743	-1052	-783	395	190	0.356	0.637	1.00	Yes	0.208	0.394	0.61	Yes	0.009	0.421	0.43	Yes	0.009	0.511	0.52	Yes	1.00	**26.66**
		L_{18} - L_{19}			184.28	-650.51	674	118	-279	-430	-6	33	150	184	0.209	0.158	0.37	Yes	0.120	0.094	0.22	Yes	0.872	0.124	1.00	Yes	0.867	0.130	1.00	Yes	1.00	**7.95**
		L_{19} - L_{20}			622.06	-----	642	-1116	-526	-706	-51	-275	472	12	0.705	0.288	1.00	Yes	0.417	0.181	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.71**
		L_{20} - L_{21}			983.55	-445.29	543	43	-1251	-1250	-95	-99	40	306	0.784	0.215	1.00	Yes	0.514	0.129	0.65	Yes	0.421	0.178	0.60	Yes	0.418	0.182	0.61	Yes	1.00	**10.99**
		L_{21} - L_{22}			951.73	-228.10	242	-75	-1294	-1290	-93	-32	422	87	0.759	0.234	1.00	Yes	0.508	0.148	0.66	Yes	0.215	0.203	0.42	Yes	0.214	0.189	0.41	Yes	1.00	**8.87**
		L_{22} - L_{23}			787.31	-45.03	-21	48	-2320	-322	-2	-21	-102	246	0.628	0.365	1.00	Yes	0.420	0.228	0.65	Yes	0.043	0.272	0.32	Yes	0.042	0.339	0.39	Yes	1.00	**8.07**
		L_{23} - L_{24}			874.31	-269.15	-9	337	-1736	-953	8	73	376	-28	0.697	0.294	1.00	Yes	0.457	0.176	0.64	Yes	0.254	0.267	0.53	Yes	0.253	0.253	0.51	Yes	1.00	**9.98**
		L_{24} - L_{25}			519.04	-410.63	222	342	-1767	74	57	0	-336	425	0.588	0.406	1.00	Yes	0.348	0.258	0.61	Yes	0.551	0.182	0.74	Yes	0.547	0.341	0.89	Yes	1.00	**10.28**
		L_{25} - L_{26}			133.79	-566.26	86	622	-1224	226	33	113	257	-183	0.152	0.276	0.43	Yes	0.087	0.164	0.26	Yes	0.759	0.172	0.94	Yes	0.755	0.236	1.00	Yes	1.00	**10.25**
		L_{26} - L_{27}			-----	-717.14	299	370	-1503	153	157	55	-346	416	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.214	0.98	Yes	0.753	0.240	1.00	Yes	1.00	**11.25**
		L_{27} - L_{28}			-----	-1004.98	179	1016	-2126	696	246	507	495	-429	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.238	0.98	Yes	0.732	0.262	1.00	Yes	1.00	**15.50**
		L_{28} - L_{29}			-----	-1145.46	448	-553	-2450	-832	442	-151	-697	94	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.304	1.00	Yes	0.685	0.244	0.93	Yes	1.00	**18.32**
		L_{29} - L_{30}			-----	-1018.27	-199	1322	-5039	5503	-441	-1033	1525	1057	-----	-----	-----	-----	-----	-----	-----	-----	0.517	0.366	0.89	Yes	0.512	0.481	1.00	Yes	1.00	**31.45**
		L_{30} - L_{31}			-----	-986.90	5685	-2992	690	-328	644	759	-70	-88	-----	-----	-----	-----	-----	-----	-----	-----	0.501	0.359	0.87	Yes	0.497	0.496	1.00	Yes	1.00	**28.06**
		L_{31} - L_{32}			-----	-1282.52	191	-111	-1995	-264	-344	82	334	118	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.218	1.00	Yes	0.767	0.198	0.97	Yes	1.00	**15.24**
		L_{32} - L_{33}			442.20	-525.92	2778	-4122	-1567	-2449	-211	133	668	1118	0.308	0.666	0.98	Yes	0.205	0.400	0.61	Yes	0.435	0.349	0.79	Yes	0.431	0.562	1.00	Yes	1.00	**43.31**
		L_{33} - L_{34}			580.41	-----	1103	-1708	-643	-1157	-430	-487	849	203	0.580	0.413	1.00	Yes	0.340	0.257	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**19.90**
		L_{34} - L_{35}			918.29	-746.29	742	92	-948	-794	-61	60	94	204	0.820	0.176	1.00	Yes	0.477	0.109	0.59	Yes	0.789	0.128	0.92	Yes	0.784	0.152	0.94	Yes	1.00	**15.71**
		L_{35} - L_{36}			1056.78	-----	604	-1377	-522	-1161	-24	-201	749	152	0.739	0.256	1.00	Yes	0.498	0.162	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.41**
		L_{36} - L_{37}			1427.26	-81.91	282	31	-1360	-1366	-109	9	-99	264	0.818	0.172	1.00	Yes	0.538	0.102	0.64	Yes	0.056	0.178	0.24	Yes	0.055	0.151	0.21	Yes	1.00	**9.67**
		L_{37} - L_{38}			1774.32	-----	104	-356	-2474	-1902	0	-45	376	-73	0.751	0.241	1.00	Yes	0.499	0.141	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.37**
		L_{38} - L_{39}			1726.75	-----	-275	-165	-2563	-1443	-57	6	-117	353	0.741	0.249	1.00	Yes	0.497	0.152	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.45**
		L_{39} - L_{40}			1635.67	-----	-153	-382	-2219	-1161	-26	-41	230	-304	0.763	0.230	1.00	Yes	0.505	0.136	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.71**
		L_{40} - L_{41}			1240.78	-----	-309	-48	-1969	-43	-60	-11	-442	173	0.729	0.266	1.00	Yes	0.491	0.165	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.54**
		L_{41} - L_{42}			975.37	-----	-136	-118	-1345	-339	-32	-30	299	-23	0.769	0.226	1.00	Yes	0.504	0.135	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.32**
		L_{42} - L_{43}			494.33	-----	-221	17	-1600	277	-62	-63	-405	314	0.600	0.392	1.00	Yes	0.357	0.251	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.66**
		L_{43} - L_{44}			210.02	-82.96	-81	-7	-2719	672	-149	-44	1129	330	0.255	0.739	1.00	Yes	0.152	0.470	0.63	Yes	0.119	0.470	0.59	Yes	0.119	0.553	0.68	Yes	1.00	**23.02**
	Structure 3	L_0 - L_1			193.15	-210.52	1022	-1865	-18	-76	-148	-672	-9	-39	0.296	0.699	1.00	Yes	0.180	0.467	0.65	Yes	0.382	0.399	0.79	Yes	0.379	0.560	0.94	Yes	1.00	**23.14**
		L_1 - L_2			360.92	-----	811	-1240	-13	-576	-218	-130	-180	333	0.552	0.441	1.00	Yes	0.374	0.276	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**16.24**
		L_2 - L_3			880.34	-----	422	-1028	-446	-532	-54	106	219	162	0.767	0.226	1.00	Yes	0.491	0.136	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.71**
		L_3 - L_4			1177.57	-----	384	-1402	-464	-1224	-197	-112	476	224	0.745	0.248	1.00	Yes	0.483	0.153	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.78**
		L_4 - L_5			1609.28	-----	-334	-220	-1508	-1339	82	125	260	450	0.786	0.213	1.00	Yes	0.505	0.125	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.63**
		L_5 - L_6			1514.42	-----	44	-1875	-960	-1601	-176	-159	399	188	0.740	0.254	1.00	Yes	0.481	0.154	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.82**
		L_6 - L_7			1242.29	-----	-408	231	-1641	-131	-184	17	-66	412	0.731	0.260	1.00	Yes	0.473	0.160	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.04**
		L_7 - L_8			1004.39	-----	-91	102	-965	-335	-30	39	274	42	0.793	0.203	1.00	Yes	0.507	0.122	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.45**
		L_8 - L_9			550.35	-142.10	-165	349	-894	284	-13	45	-228	287	0.713	0.287	1.00	Yes	0.428	0.187	0.62	Yes	0.218	0.122	0.35	Yes	0.216	0.237	0.46	Yes	1.00	**6.41**
		L_9 - L_{10}			285.27	-506.94	-5	470	-848	-65	69	139	422	133	0.369	0.298	0.67	Yes	0.215	0.179	0.40	Yes	0.779	0.173	0.96	Yes	0.772	0.224	1.00	Yes	1.00	**8.93**
		L_{10} - L_{11}			-----	-951.36	196	210	-1459	478	125	-186	-288	365	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.098	0.88	Yes	0.766	0.229	1.00	Yes	1.00	**12.93**
		L_{11} - L_{12}			-----	-1215.86	116	1088	-838	1565	-90	-21	479	-118	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.215	1.00	Yes	0.770	0.207	0.98	Yes	1.00	**14.26**
		L_{12} - L_{13}			-----	-1148.04	1906	-190	424	-8	-277	-305	-199	-250	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.263	1.00	Yes	0.727	0.252	0.98	Yes	1.00	**14.53**
		L_{13} - L_{14}			-----	-861.18	1486	-1521	-1574	-1113	-952	-1025	1584	490	-----	-----	-----	-----	-----	-----	-----	-----	0.701	0.294	1.00	Yes	0.693	0.247	0.95	Yes	1.00	**29.49**
		L_{14} - L_{15}			-----	-749.89	574	168	-44	-361	143	-6	107	14	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.118	1.00	Yes	0.865	0.127	1.00	Yes	1.00	**6.52**
		L_{15} - L_{16}			453.00	-----	721	-1305	-222	-688	-325	-150	218	50	0.587	0.403	1.00	Yes	0.352	0.264	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.73**
		L_{16} - L_{17}			652.63	-240.34	334	32	-823	-471	90	-33	190	263	0.751	0.241	1.00	Yes	0.446	0.155	0.61	Yes	0.328	0.171	0.50	Yes	0.325	0.199	0.53	Yes	1.00	**6.11**
		L_{17} - L_{18}			639.49	-119.57	94	-7	-894	-499	6	8	247	4	0.736	0.256	1.00	Yes	0.426	0.153	0.58	Yes	0.163	0.277	0.45	Yes	0.162	0.216	0.38	Yes	1.00	**6.22**
		L_{18} - L_{19}			425.27	-14.41	36	5	-815	-128	19	-99	-134	448	0.651	0.341	1.00	Yes	0.397	0.226	0.63	Yes	0.026	0.204	0.24	Yes	0.026	0.245	0.28	Yes	1.00	**5.63**
		L_{19} - L_{20}			46.70	-48.19	46	-164	-1953	734	-21	-6	1550	422	0.071	0.919	1.00	Yes	0.042	0.554	0.60	Yes	0.087	0.680	0.77	Yes	0.087	0.586	0.68	Yes	1.00	**20.23**

Operating Loads - 2F1

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 - Verticals	Structure 1	$U_0 - L_0$	-----	-314.88	-57	90	-191	256	-30	-9	-469	-150	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.257	0.97	Yes	0.666	0.327	1.00	Yes	1.00	**3.22**
		$U_1 - L_1$	14.20	-318.95	22	-11	-248	248	-4	-3	-138	-12	0.026	0.357	0.39	Yes	0.014	0.196	0.22	Yes	0.697	0.120	0.82	Yes	0.675	0.317	1.00	Yes	1.00	**6.00**
		$U_2 - L_2$	92.14	-286.23	78	-87	-259	302	52	26	-180	29	0.166	0.438	0.61	Yes	0.091	0.241	0.34	Yes	0.626	0.162	0.79	Yes	0.606	0.386	1.00	Yes	1.00	**8.60**
		$U_3 - L_3$	130.27	-253.94	356	-302	-298	332	564	345	-338	-62	0.234	0.619	0.86	Yes	0.129	0.340	0.47	Yes	0.556	0.254	0.82	Yes	0.537	0.455	1.00	Yes	1.00	**15.53**
		$U_4 - L_4$	-----	-249.95	368	-348	-48	30	-15	51	-275	59	-----	-----	-----	-----	-----	-----	-----	-----	0.550	0.190	0.75	Yes	0.529	0.471	1.00	Yes	1.00	**11.06**
		$U_5 - L_5$	-----	-420.63	233	-264	66	-87	-11	-120	8	8	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.117	0.88	Yes	0.726	0.268	1.00	Yes	1.00	**4.94**
		$U_6 - L_6$	-----	-521.12	255	-279	81	-91	481	105	67	80	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.156	0.95	Yes	0.747	0.244	1.00	Yes	1.00	**4.53**
		$U_7 - L_7$	-----	-439.90	302	-323	134	-150	278	40	-151	16	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.152	0.89	Yes	0.679	0.318	1.00	Yes	1.00	**3.38**
		$U_8 - L_8$	-----	-1155.68	449	-541	-334	392	1017	305	482	187	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.160	1.00	Yes	0.801	0.101	0.91	Yes	1.00	**8.21**
		$U_9 - L_9$	-----	-651.72	-169	199	-421	461	-449	-154	-666	-368	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.199	0.98	Yes	0.736	0.256	1.00	Yes	1.00	**6.32**
		$U_{10} - L_{10}$	-----	-716.03	-114	114	-369	371	-694	-359	-1071	-664	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.253	1.00	Yes	0.707	0.192	0.90	Yes	1.00	**7.22**
		$U_{11} - L_{11}$	-----	-659.00	-112	218	-382	495	-456	-239	-540	-441	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.176	0.97	Yes	0.767	0.230	1.00	Yes	1.00	**6.88**
		$U_{12} - L_{12}$	-----	-516.58	-82	93	-339	337	-343	-184	-351	-254	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.166	0.92	Yes	0.709	0.290	1.00	Yes	1.00	**6.59**
		$U_{13} - L_{13}$	-----	-358.12	-33	54	-250	274	-186	23	-113	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.135	0.86	Yes	0.686	0.313	1.00	Yes	1.00	**5.00**
		$U_{14} - L_{14}$	-----	-222.68	188	-179	-396	412	301	139	301	264	-----	-----	-----	-----	-----	-----	-----	-----	0.497	0.232	0.73	Yes	0.471	0.527	1.00	Yes	1.00	**16.07**
		$U_{15} - L_{15}$	167.03	-298.90	265	-287	-123	112	83	-117	44	110	0.300	0.400	0.71	Yes	0.165	0.220	0.39	Yes	0.670	0.161	0.84	Yes	0.632	0.366	1.00	Yes	1.00	**8.46**
		$U_{16} - L_{16}$	11.95	-323.54	237	-245	9	-26	354	-132	34	-34	0.021	0.415	0.44	Yes	0.012	0.228	0.25	Yes	0.729	0.161	0.90	Yes	0.685	0.313	1.00	Yes	1.00	**5.36**
		$U_{17} - L_{17}$	-----	-435.20	224	-243	61	-75	134	-165	-120	-113	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.127	0.95	Yes	0.751	0.247	1.00	Yes	1.00	**4.41**
		$U_{18} - L_{18}$	-----	-533.21	441	-451	142	-149	82	-212	-133	-120	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.107	0.89	Yes	0.742	0.256	1.00	Yes	1.00	**5.01**
		$U_{19} - L_{19}$	-----	-645.63	531	-519	172	-170	328	-90	-116	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.127	0.94	Yes	0.751	0.247	1.00	Yes	1.00	**5.30**
		$U_{20} - L_{20}$	-----	-563.64	353	-502	160	-260	733	96	33	4	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.247	1.00	Yes	0.656	0.233	0.89	Yes	1.00	**3.89**
	Structure 2	$U_0 - L_0$	-----	-617.19	-170	221	-420	493	-38	-6	-1146	-194	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.252	1.00	Yes	0.661	0.209	0.88	Yes	1.00	**4.60**
		$U_1 - L_1$	-----	-718.29	-115	124	-533	539	-107	-7	-185	39	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.084	0.91	Yes	0.770	0.229	1.00	Yes	1.00	**7.95**
		$U_2 - L_2$	-----	-581.31	-107	118	-505	502	-107	-38	-300	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.114	0.90	Yes	0.741	0.258	1.00	Yes	1.00	**6.64**
		$U_3 - L_3$	-----	-489.11	-56	64	-233	246	75	-46	17	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.081	0.92	Yes	0.767	0.224	1.00	Yes	1.00	**5.62**
		$U_4 - L_4$	-----	-336.75	-1	23	-225	223	-84	78	-171	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.138	0.91	Yes	0.713	0.287	1.00	Yes	1.00	**6.14**
		$U_5 - L_5$	133.52	-316.61	101	-86	-233	252	-139	119	-100	-32	0.240	0.363	0.61	Yes	0.132	0.199	0.34	Yes	0.715	0.162	0.88	Yes	0.670	0.322	1.00	Yes	1.00	**7.71**
		$U_6 - L_6$	346.83	-228.95	190	-200	-217	221	-55	115	298	52	0.624	0.369	1.00	Yes	0.343	0.203	0.55	Yes	0.515	0.175	0.70	Yes	0.484	0.282	0.77	Yes	1.00	**10.13**
		$U_7 - L_7$	-----	-174.16	446	-493	-171	182	77	162	-182	280	-----	-----	-----	-----	-----	-----	-----	-----	0.393	0.253	0.65	Yes	0.369	0.630	1.00	Yes	1.00	**21.36**
		$U_8 - L_8$	-----	-465.22	360	-371	51	-77	282	-103	-63	-26	-----	-----	-----	-----	-----	-----	-----	-----	0.675	0.126	0.81	Yes	0.670	0.325	1.00	Yes	1.00	**6.05**
		$U_9 - L_9$	-----	-690.46	591	-602	151	-174	286	-125	-6	10	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.098	0.87	Yes	0.740	0.255	1.00	Yes	1.00	**7.72**
		$U_{10} - L_{10}$	-----	-783.54	565	-585	160	-200	143	-195	3	6	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.102	0.88	Yes	0.733	0.258	1.00	Yes	1.00	**8.15**
		$U_{11} - L_{11}$	-----	-817.15	513	-531	186	-188	337	-117	-174	-71	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.129	0.96	Yes	0.764	0.234	1.00	Yes	1.00	**6.94**
		$U_{12} - L_{12}$	-----	-879.69	529	-538	157	-137	285	-36	-163	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.118	0.97	Yes	0.762	0.231	1.00	Yes	1.00	**7.32**
		$U_{13} - L_{13}$	-----	-741.35	562	-545	212	-208	544	51	-160	21	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.171	1.00	Yes	0.715	0.269	0.99	Yes	1.00	**5.86**
		$U_{14} - L_{14}$	-----	-1232.83	816	-779	-632	586	589	281	142	334	-----	-----	-----	-----	-----	-----	-----	-----	0.902	0.097	1.00	Yes	0.817	0.144	0.97	Yes	1.00	**11.73**
		$U_{15} - L_{15}$	-----	-718.48	-119	127	-625	599	-310	16	-246	-88	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.160	0.97	Yes	0.693	0.299	1.00	Yes	1.00	**9.52**
		$U_{16} - L_{16}$	-----	-657.88	-90	64	-520	491	-789	-256	-1140	-450	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.237	1.00	Yes	0.705	0.221	0.93	Yes	1.00	**8.04**
		$U_{17} - L_{17}$	-----	-630.85	-126	124	-567	555	-274	-185	-658	-426	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.194	0.98	Yes	0.734	0.263	1.00	Yes	1.00	**7.46**
		$U_{18} - L_{18}$	-----	-577.25	-97	97	-483	500	-113	-128	-154	-271	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.114	0.89	Yes	0.736	0.256	1.00	Yes	1.00	**6.77**
		$U_{19} - L_{19}$	-----	-470.45	-55	59	-307	301	-66	-32	-231	-171	-----	-----	-----	-----	-----	-----	-----	-----	0.708	0.122	0.83	Yes	0.702	0.296	1.00	Yes	1.00	**6.35**
		$U_{20} - L_{20}$	-----	-371.68	-6	14	-244	247	-184	-24	-135	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.122	0.89	Yes	0.712	0.282	1.00	Yes	1.00	**6.05**
	Structure 3	$U_{21} - L_{21}$	60.72	-318.57	31	-25	-236	249	-93	63	80	-23	0.109	0.345	0.46	Yes	0.060	0.190	0.26	Yes	0.720	0.113	0.84	Yes	0.674	0.318	1.00	Yes	1.00	**6.51**
		$U_{22} - L_{22}$	-----	-170.20	413	-432	-464	493	181	237	-57	325	-----	-----	-----	-----	-----	-----	-----	-----	0.383	0.242	0.63	Yes	0.360	0.631	1.00	Yes	1.00	**26.24**
		$U_{23} - L_{23}$	90.91	-315.21	242	-253	-63	49	280	-44	-2	140	0.164	0.405	0.57	Yes	0.090	0.223	0.32	Yes	0.712	0.155	0.87	Yes	0.667	0.324	1.00	Yes	1.00	**6.63**
		$U_{24} - L_{24}$	-----	-370.47	235	-247	10	-22	276	-41	72	17	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.123	0.89	Yes	0.710	0.282	1.00	Yes	1.00	**5.89**
		$U_{25} - L_{25}$	-----	-473.19	298	-295	44	-43	487	-19	-83	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.184	0.90	Yes	0.707	0.286	1.00	Yes	1.00	**5.58**
		$U_{26} - L_{26}$	-----	-568.38	502	-528	73	-76	498	-9	-118	-23	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.153	0.92	Yes	0.724	0.270	1.00	Yes	1.00	**6.42**
		$U_{27} - L_{27}$	-----	-631.61	565	-569	88	-88	369	-43	-133	2	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.115	0.90	Yes	0.735	0.264	1.00	Yes	1.00	**7.02**
		$U_{28} - L_{28}$	-----	-702.31	570	-560	76	-73	266	-19	-153	17	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.097	0.91	Yes	0.753	0.242	1.00	Yes	1.00	**7.66**
		$U_{29} - L_{29}$	-----	-716.20	631	-606	121	-126	594	23	-112	28	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.179	0.98	Yes	0.690	0.302	1.00	Yes	1.00	**7.98**
		$U_{30} - L_{30}$	-----	-1242.47	915	-900	-745	675	661	-40	-678	146	-----	-----	-----	-----	-----	-----	-----	-----	0.909	0.090	1.00	Yes	0.824	0.162	0.99	Yes	1.00	**14.84**
		$U_{31} - L_{31}$	-----	-704.35	-108	108	-535	504	-318	-30	-561	-125	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.206	1.00	Yes	0.679	0.256	0.94	Yes	1.00	**8.98**
		$U_{32} - L_{32}$	-----	-789.71	-82	60	-477	459	-665	-271	-960	-417	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.239	1.00	Yes	0.684	0.204	0.89	Yes	1.00	**8.67**
		$U_{33} - L_{33}$	-----	-833.34	-118	107	-489	494	-456	-346	-317	-429	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.155	1.00	Yes	0.779	0.218	1.00	Yes	1.00	**8.91**
		$U_{34} - L_{34}$	-----	-798.61	-101	119	-545	556	-351	-216	-424	-375	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.130	0.92	Yes	0.747	0.245	1.00	Yes	1.00	**9.80**
		$U_{35} - L_{35}$	-----	-692.16	-91	119	-587	585	-234	28	-220	-174	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.087	0.86	Yes	0.742	0.249	1.00	Yes	1.00	**8.53**
		$U_{36} - L_{36}$	-----	-476.87	-41	56	-343	353	-76	62	181	34	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.118	0.81	Yes	0.687	0.309	1.00	Yes	1.00	**6.58**
		$U_{37} - L_{37}$	-----	-150.51	119	-118	-469	526	-136	190	-231	233	-----	-----	-----	-----	-----	-----	-----	-----	0.340	0.263	0.61	Yes	0.318	0.673	1.00	Yes	1.00	**20.08**
		$U_{38} - L_{38}$	330.42	-171.63	156	-154	-228	229	370	-44	8	125	0.594	0.400	1.00	Yes	0.327	0.220	0.55	Yes	0.386	0.130	0.52	Yes	0.363	0.293	0.66	Yes	1.00	**8.41**
		$U_{39} - L_{39}$	155.53	-324.13	218	-239	-133	121	275	-89	47	63	0.280	0.385	0.67	Yes	0.154	0.212	0.37	Yes	0.732	0.127	0.86	Yes	0.686	0.306	1.00	Yes	1.00	**8.47**
		$U_{40} - L_{40}$	29.63	-334.71	224	-222	-23	4	106	-125	11	-1	0.053	0.322	0.38	Yes	0.029	0.177	0.21	Yes	0.759	0.106	0.87	Yes	0.708	0.286	1.00	Yes	1.00	**6.39**
		$U_{41} - L_{41}$	-----	-487.53	242	-254	30	-34	280	-109	6	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.109	0.94	Yes	0.765	0.231	1.00	Yes	1.00	**5.80**
		$U_{42} - L_{42}$	-----	-583.40	484	-491	64	-72	282	-137	10	-37	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.093	0.88	Yes	0.743	0.251	1.00	Yes	1.00	**6.49**
		$U_{43} - L_{43}$	-----	-701.44	576	-571	80	-92	206	-41	-49	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.103	0.91	Yes	0.752	0.244	1.00	Yes	1.00	**7.29**
		$U_{44} - L_{44}$	-----	-607.32	392	-498	119	-138	1243	211	-121	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.265	1.00	Yes	0.651	0.211	0.87	Yes	1.00	**5.42**
	Structure 4	$U_0 - L_0$	-----	-565.20	-146	194	-420	472	-55	-7	-887	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.247	1.00	Yes	0.658	0.219	0.88	Yes	1.00	**4.53**
		$U_1 - L_1$	-----	-661.83	-112	124	-478	487	-122	-2	-545	27	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.138	0.97	Yes	0.770	0.226	1.00	Yes	1.00	**7.27**
		$U_2 - L_2$	-----	-536.63	-108	114	-441	445	-149	-45	-312	-26	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.119	0.91	Yes	0.746	0.252	1.00	Yes	1.00	**6.41**
		$U_3 - L_3$	-----	-437.04	-45	58	-222	234	44	-64	-134	-75	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.110	0.93	Yes	0.754	0.238	1.00	Yes	1.00	**5.17**
		$U_4 - L_4$	14.33	-326.77	-8	18	-225	234	-100	35	62	14	0.026	0.328	0.36	Yes	0.014	0.180	0.20	Yes	0.736	0.111	0.85	Yes	0.691	0.299	1.00	Yes	1.00	**5.88**
		$U_5 - L_5$	121.08	-304.36	94	-82	-260	278	-128	153	-158	-27	0.218	0.401	0.62	Yes	0.120	0.220	0.35	Yes	0.682	0.180	0.87	Yes	0.644	0.355	1.00	Yes	1.00	**8.22**
		$U_6 - L_6$	11.45	-75.90	525	-570	-441	447	-844	-94	-448	249	0.021	0.973	1.00	Yes	0.011	0.535	0.55	Yes	0.169	0.452	0.63	Yes	0.161	0.729	0.89	Yes	1.00	**25.15**
		$U_7 - L_7$	-----	-360.44	246	-266	11	-24	61	-138	-13	-25	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.119	0.85	Yes	0.691	0.304	1.00	Yes	1.00	**5.59**
		$U_8 - L_8$	-----	-515.21	329	-334	64	-70	498	7	-34	-96	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.180	0.93	Yes	0.707	0.286	1.00	Yes	1.00	**6.19**
		$U_9 - L_9$	-----	-657.36	397	-505	93	-168	238	-127	-79	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.114	0.91	Yes	0.765	0.234	1.00	Yes	1.00	**6.83**
		$U_{10} - L_{10}$	-----	-776.32	399	-437	119	-133	290	-7	109	69	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.123	0.93	Yes	0.766	0.226	1.00	Yes	1.00	**7.50**
		$U_{11} - L_{11}$	-----	-646.59	421	-468	168	-193	544	132	-150	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.168	0.94	Yes	0.730	0.260	1.00	Yes	1.00	**4.95**
		$U_{12} - L_{12}$	-----	-1204.27	554	-716	-518	568	772	340	334	219	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.129	1.00	Yes	0.835	0.133	0.97	Yes	1.00	**10.50**
		$U_{13} - L_{13}$	-----	-454.67	-67	76	-285	298	-381	-53	-232	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.178	0.94	Yes	0.701	0.294	1.00	Yes	1.00	**5.43**
		$U_{14} - L_{14}$	-----	-468.70	-38	45	-251	252	-549	-210	-983	-513	-----	-----	-----	-----	-----	-----	-----	-----	0.710	0.282	1.00	Yes	0.672	0.221	0.90	Yes	1.00	**6.38**
		$U_{15} - L_{15}$	-----	-421.73	-30	39	-238	252	-528	-241	-603	-385	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.237	1.00	Yes	0.728	0.256	0.99	Yes	1.00	**6.09**
		$U_{16} - L_{16}$	-----	-221.11	55	-28	-412	402	-549	-263	-73	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.486	0.293	0.78	Yes	0.468	0.527	1.00	Yes	1.00	**13.49**
		$U_{17} - L_{17}$	293.67	-257.52	196	-215	-309	321	200	-56	-155	85	0.528	0.468	1.00	Yes	0.290	0.257	0.55	Yes	0.564	0.145	0.71	Yes	0.545	0.410	0.96	Yes	1.00	**10.87**
		$U_{18} - L_{18}$	86.79	-297.79	241	-286	-126	120	294	-18	116	30	0.156	0.450	0.61	Yes	0.086	0.248	0.34	Yes	0.651	0.169	0.82	Yes	0.630	0.365	1.00	Yes	1.00	**8.14**
		$U_{19} - L_{19}$	40.86	-312.33	261	-243	-50	39	109	-37	-84	-8	0.073	0.366	0.44	Yes	0.040	0.201	0.25	Yes	0.682	0.108	0.80	Yes	0.661	0.334	1.00	Yes	1.00	**5.63**
		$U_{20} - L_{20}$	-----	-302.19	120	-186	-13	-65	775	249	-574	-184	-----	-----	-----	-----	-----	-----	-----	-----	0.675	0.320	1.00	Yes	0.639	0.238	0.88	Yes	1.00	**2.82**

Moment (Start) AB Operating

Operating Loads - 2F1

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	k-in	k-in																		
North Truss - Diagonals	Structure 1	$U_0 - L_1$	507.20	-----	-16	-1	-139	60	-5	12	-668	-132	0.665	0.330	1.00	Yes	0.402	0.182	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.98**
		$U_1 - L_2$	381.77	-81.74	16	-19	-105	-10	-10	-18	-616	-400	0.687	0.313	1.00	Yes	0.378	0.172	0.55	Yes	0.187	0.321	0.51	Yes	0.173	0.134	0.31	Yes	1.00	**7.41**
		$U_2 - L_3$	391.51	-214.71	38	-26	-135	-46	9	13	-422	30	0.704	0.294	1.00	Yes	0.387	0.162	0.55	Yes	0.494	0.320	0.82	Yes	0.454	0.172	0.63	Yes	1.00	**11.25**
		$U_3 - L_4$	-----	-330.49	56	-6	-131	-145	123	128	-40	-269	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.242	1.00	Yes	0.699	0.186	0.89	Yes	1.00	**14.80**
		$U_4 - L_4$	552.87	-----	-11	52	-107	12	25	-22	-270	-327	0.811	0.185	1.00	Yes	0.446	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.83**
		$U_5 - L_5$	625.22	-----	-26	153	-258	156	216	83	-598	-415	0.739	0.255	1.00	Yes	0.407	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.06**
		$U_5 - L_6$	631.33	-----	-77	119	-324	222	353	164	-361	-294	0.746	0.250	1.00	Yes	0.411	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.23**
		$U_6 - L_7$	646.37	-----	20	158	-100	300	353	183	-67	-124	0.764	0.235	1.00	Yes	0.420	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.91**
		$U_8 - L_8$	980.68	-----	119	223	-111	338	182	6	443	474	0.784	0.211	1.00	Yes	0.486	0.119	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.13**
		$U_9 - L_{10}$	929.01	-----	-70	84	-361	203	55	122	707	648	0.743	0.251	1.00	Yes	0.460	0.142	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.09**
		$U_{10} - L_{11}$	980.55	-----	-56	155	-253	159	126	187	-136	352	0.828	0.163	1.00	Yes	0.513	0.092	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.50**
		$U_{11} - L_{12}$	823.74	-----	-69	54	-283	64	26	126	28	308	0.815	0.177	1.00	Yes	0.448	0.097	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.43**
		$U_{12} - L_{13}$	648.56	-----	-74	39	-202	142	-153	-99	-87	119	0.791	0.206	1.00	Yes	0.497	0.116	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.90**
		$U_{13} - L_{14}$	454.63	-----	-14	-22	-97	21	-167	-180	-97	19	0.818	0.176	1.00	Yes	0.450	0.097	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.14**
		$U_{15} - L_{14}$	60.07	-278.69	48	-105	-89	-52	-248	-125	-594	-347	0.108	0.306	0.42	Yes	0.059	0.168	0.23	Yes	0.653	0.345	1.00	Yes	0.590	0.134	0.73	Yes	1.00	**7.49**
		$U_{16} - L_{15}$	410.34	-76.00	-2	-36	-128	85	-311	-155	-319	-334	0.738	0.261	1.00	Yes	0.406	0.143	0.55	Yes	0.180	0.190	0.38	Yes	0.161	0.164	0.33	Yes	1.00	**6.18**
		$U_{17} - L_{16}$	496.17	-----	-34	13	-145	81	-109	-129	-496	-429	0.728	0.263	1.00	Yes	0.400	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.90**
		$U_{18} - L_{17}$	609.17	-----	-112	76	-320	241	-114	-120	-500	-504	0.720	0.273	1.00	Yes	0.396	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.07**
		$U_{19} - L_{18}$	688.29	-----	-133	88	-347	252	-70	-109	-411	-449	0.745	0.251	1.00	Yes	0.410	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.76**
		$U_{20} - L_{19}$	661.50	-----	-91	95	-280	258	-152	-73	-803	-372	0.716	0.275	1.00	Yes	0.394	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.15**
	Structure 2	$U_0 - L_1$	577.11	-----	-114	100	-457	358	-60	-49	-1447	289	0.571	0.428	1.00	Yes	0.314	0.235	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.80**
		$U_1 - L_2$	789.32	-----	-96	73	-394	301	-99	-28	-239	43	0.781	0.218	1.00	Yes	0.429	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.37**
		$U_2 - L_3$	644.52	-----	-87	67	-337	247	-24	87	-238	212	0.762	0.234	1.00	Yes	0.419	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.91**
		$U_3 - L_4$	588.96	-----	-35	14	-201	117	109	63	-47	104	0.785	0.206	1.00	Yes	0.432	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.19**
		$U_4 - L_5$	422.17	-69.14	3	-30	-135	90	-127	-144	-233	83	0.759	0.240	1.00	Yes	0.418	0.132	0.55	Yes	0.171	0.123	0.30	Yes	0.146	0.172	0.32	Yes	1.00	**6.64**
		$U_5 - L_6$	418.55	-226.85	66	-97	-121	42	-299	-186	-235	175	0.753	0.242	1.00	Yes	0.414	0.133	0.55	Yes	0.536	0.206	0.75	Yes	0.480	0.155	0.64	Yes	1.00	**8.54**
		$U_6 - L_7$	-----	-382.01	55	-101	-57	-31	-28	-300	-75	-78	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.181	1.00	Yes	0.732	0.116	0.85	Yes	1.00	**5.87**
		$U_8 - L_7$	524.70	-25.27	-14	-46	-236	83	-311	-215	-509	-550	0.669	0.324	1.00	Yes	0.421	0.184	0.61	Yes	0.042	0.205	0.25	Yes	0.038	0.211	0.25	Yes	1.00	**9.14**
		$U_8 - L_8$	675.17	-----	-118	38	-338	196	-288	-213	-541	-516	0.731	0.262	1.00	Yes	0.402	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.64**
		$U_{10} - L_9$	782.55	-----	-95	120	-317	208	-8	-69	-407	-502	0.774	0.222	1.00	Yes	0.426	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.52**
		$U_{11} - L_{10}$	866.90	-----	-102	144	-339	270	142	13	-359	-445	0.790	0.205	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.13**
		$U_{12} - L_{11}$	841.49	-----	-109	164	-380	329	290	121	-430	-473	0.767	0.226	1.00	Yes	0.422	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.61**
		$U_{13} - L_{12}$	753.77	-----	-153	154	-436	372	327	124	-173	-237	0.746	0.251	1.00	Yes	0.410	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.39**
		$U_{14} - L_{13}$	775.15	-----	2	189	-286	432	91	91	-168	-204	0.767	0.231	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.76**
		$U_{14} - L_{15}$	636.20	-----	64	123	-221	341	154	-57	70	283	0.752	0.244	1.00	Yes	0.414	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.14**
		$U_{15} - L_{16}$	610.81	-----	-62	69	-393	331	-45	17	8	279	0.722	0.273	1.00	Yes	0.397	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.89**
		$U_{16} - L_{17}$	714.48	-----	-60	101	-330	333	-165	112	-313	323	0.774	0.223	1.00	Yes	0.426	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.03**
		$U_{17} - L_{18}$	646.71	-----	-69	97	-293	256	-29	170	-106	378	0.765	0.235	1.00	Yes	0.421	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.06**
		$U_{18} - L_{19}$	645.20	-----	-48	67	-310	239	32	19	118	316	0.763	0.233	1.00	Yes	0.420	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.53**
		$U_{19} - L_{20}$	607.89	-----	-19	26	-198	155	-30	-28	8	227	0.775	0.223	1.00	Yes	0.426	0.125	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.80**
		$U_{20} - L_{21}$	436.06	-6.09	-3	-9	-124	93	-102	-74	-78	164	0.784	0.206	1.00	Yes	0.431	0.113	0.55	Yes	0.014	0.093	0.11	Yes	0.013	0.158	0.18	Yes	1.00	**5.84**
		$U_{21} - L_{22}$	407.41	-222.66	38	-80	-152	16	-175	-222	113	207	0.733	0.259	1.00	Yes	0.403	0.143	0.55	Yes	0.526	0.220	0.75	Yes	0.471	0.195	0.67	Yes	1.00	**10.57**
		$U_{23} - L_{22}$	270.52	-271.92	57	-96	-130	4	-196	-49	-472	-368	0.487	0.303	0.79	Yes	0.268	0.166	0.44	Yes	0.648	0.343	1.00	Yes	0.575	0.166	0.75	Yes	1.00	**9.26**
		$U_{24} - L_{23}$	429.43	-27.24	1	-15	-118	103	-152	-59	-237	-235	0.772	0.219	1.00	Yes	0.425	0.120	0.55	Yes	0.065	0.117	0.19	Yes	0.058	0.150	0.21	Yes	1.00	**6.19**
		$U_{25} - L_{24}$	576.44	-----	-15	30	-198	158	63	2	-384	-391	0.735	0.257	1.00	Yes	0.404	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.77**
		$U_{26} - L_{25}$	650.78	-----	-32	44	-278	253	104	35	-263	-365	0.769	0.224	1.00	Yes	0.423	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.51**
		$U_{27} - L_{26}$	633.97	-----	-46	58	-308	258	176	68	-380	-381	0.750	0.243	1.00	Yes	0.412	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.88**
		$U_{28} - L_{27}$	704.41	-----	-49	68	-349	342	198	109	-213	-336	0.763	0.234	1.00	Yes	0.420	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.11**
		$U_{29} - L_{28}$	627.75	-----	-75	84	-359	332	255	124	-75	-175	0.742	0.249	1.00	Yes	0.408	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.12**
		$U_{30} - L_{29}$	641.37	-----	34	108	-224	353	187	125	-97	-159	0.758	0.234	1.00	Yes	0.417	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.62**
		$U_{30} - L_{31}$	770.31	-----	76	148	-295	436	228	5	154	192	0.762	0.237	1.00	Yes	0.419	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.03**
		$U_{31} - L_{32}$	759.02	-----	-75	78	-438	376	-23	44	-193	260	0.751	0.242	1.00	Yes	0.413	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.13**
		$U_{32} - L_{33}$	857.90	-----	-63	96	-360	312	-135	134	-384	415	0.781	0.209	1.00	Yes	0.430	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.77**
		$U_{33} - L_{34}$	839.71	-----	-65	91	-370	241	25	201	126	507	0.765	0.226	1.00	Yes	0.421	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.67**
		$U_{34} - L_{35}$	815.44	-----	-64	80	-312	220	78	83	-6	268	0.807	0.185	1.00	Yes	0.444	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.69**
		$U_{35} - L_{36}$	726.22	-----	-87	26	-331	209	-141	-127	-52	213	0.787	0.205	1.00	Yes	0.433	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.88**
		$U_{36} - L_{37}$	579.51	-----	-22	-17	-231	106	-202	-235	-8	139	0.739	0.254	1.00	Yes	0.465	0.143	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.95**
		$U_{38} - L_{37}$	-----	-371.47	69	-98	-45	-31	-187	-90	-301	-238	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.197	1.00	Yes	0.712	0.112	0.83	Yes	1.00	**5.36**
		$U_{39} - L_{38}$	357.24	-306.48	76	-115	-98	53	-396	-108	-287	-285	0.643	0.262	0.91	Yes	0.353	0.144	0.50	Yes	0.730	0.260	1.00	Yes	0.648	0.147	0.80	Yes	1.00	**8.50**
		$U_{40} - L_{39}$	395.55	-119.52	19	-45	-136	87	-239	-131	-309	-371	0.711	0.281	1.00	Yes	0.391	0.155	0.55	Yes	0.286	0.219	0.51	Yes	0.253	0.174	0.43	Yes	1.00	**7.57**
		$U_{41} - L_{40}$	571.15	-----	-20	5	-173	124	-99	-84	-360	-373	0.761	0.236	1.00	Yes	0.419	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.03**
		$U_{42} - L_{41}$	601.64	-----	-49	32	-337	242	-67	-64	-517	-523	0.711	0.286	1.00	Yes	0.391	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.74**
		$U_{43} - L_{42}$	744.18	-----	-67	46	-393	290	-7	-48	-465	-509	0.736	0.258	1.00	Yes	0.405	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.78**
		$U_{44} - L_{43}$	690.43	-----	-92	86	-337	323	-10	-12	-1019	-332	0.683	0.309	1.00	Yes	0.376	0.170	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.98**
	Structure 3	$U_0 - L_1$	557.33	-----	-114	95	-435	309	-61	-53	-1053	98	0.604	0.396	1.00	Yes	0.332	0.218	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.23**
		$U_1 - L_2$	680.21	-----	-99	67	-348	244	-125	-45	-494	-301	0.737	0.259	1.00	Yes	0.405	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.81**
		$U_2 - L_3$	643.82	-----	-98	64	-331	241	-48	79	-266	152	0.761	0.235	1.00	Yes	0.419	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.10**
		$U_3 - L_4$	549.52	-----	-30	11	-154	90	74	49	-143	97	0.806	0.190	1.00	Yes	0.443	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.46**
		$U_4 - L_5$	427.66	-103.46	-4	-35	-131	91	-80	-177	-216	21	0.769	0.231	1.00	Yes	0.423	0.127	0.55	Yes	0.245	0.118	0.37	Yes	0.219	0.168	0.39	Yes	1.00	**6.88**
		$U_5 - L_6$	419.63	-312.58	48	-113	-113	-12	-278	-323	-257	0	0.755	0.238	1.00	Yes	0.415	0.131	0.55	Yes	0.732	0.225	0.96	Yes	0.661	0.145	0.81	Yes	1.00	**9.38**
		$U_7 - L_6$	419.35	-21.79	-2	-39	-103	10	-215	-186	-327	-389	0.754	0.244	1.00	Yes	0.415	0.134	0.55	Yes	0.051	0.195	0.25	Yes	0.046	0.131	0.18	Yes	1.00	**6.81**
		$U_8 - L_7$	602.38	-----	-58	7	-198	126	-344	-222	-389	-457	0.734	0.262	1.00	Yes	0.462	0.149	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.37**
		$U_8 - L_8$	754.24	-----	-61	83	-293	36	-90	-138	-758	-722	0.746	0.249	1.00	Yes	0.410	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.63**
		$U_{10} - L_9$	923.38	-----	-45	129	-278	136	90	-8	-583	-658	0.780	0.215	1.00	Yes	0.483	0.122	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.97**
		$U_{11} - L_{10}$	907.17	-----	-73	130	-358	186	371	199	-881	-738	0.725	0.272	1.00	Yes	0.449	0.154	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.21**
		$U_{12} - L_{11}$	997.07	-----	85	174	-117	353	126	116	-277	-316	0.797	0.197	1.00	Yes	0.494	0.111	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.71**
		$U_{12} - L_{13}$	672.16	-----	62	137	-115	272	60	-73	103	265	0.795	0.203	1.00	Yes	0.437	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.03**
		$U_{13} - L_{14}$	635.48	-----	-24	55	-329	222	-123	30	139	298	0.751	0.241	1.00	Yes	0.413	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.59**
		$U_{14} - L_{15}$	710.82	-----	-2	126	-197	190	-29	106	-233	232	0.840	0.155	1.00	Yes	0.462	0.085	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.96**
		$U_{15} - L_{16}$	479.05	-----	9	89	-189	-23	183	246	444	353	0.702	0.295	1.00	Yes	0.386	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.13**
		$U_{17} - L_{16}$	-----	-366.93	40	-63	-61	-70	-45	39	-231	-188	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.154	1.00	Yes	0.776	0.090	0.87	Yes	1.00	**7.14**
		$U_{18} - L_{17}$	305.70	-259.66	55	-29	-142	-60	259	172	-526	-407	0.550	0.333	0.89	Yes	0.302	0.183	0.49	Yes	0.598	0.397	1.00	Yes	0.549	0.181	0.74	Yes	1.00	**12.35**
		$U_{19} - L_{18}$	407.40	-116.36	23	-18	-104	5	143	109	-453	-379	0.733	0.264	1.00	Yes	0.403	0.145	0.55	Yes	0.267	0.267	0.54	Yes	0.246	0.133	0.38	Yes	1.00	**6.42**
		$U_{20} - L_{19}$	281.64	-----	187	-16	-223	96	1300	49	-1448	-478	0.369	0.625	1.00	Yes	0.223	0.344	0.57	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**18.66**

Operating Loads - 2F1

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

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield									
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																						
Center Truss - Upper Chord	Structure 1	$U_0 - U_1$	-----	-422.48	494	-576	-1574	-337	-40	-296	527	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.575	0.424	1	Yes	0.570	0.374	0.95	Yes	1.00	**8.96**
		$U_1 - U_2$	-----	-545.83	-22	-155	-690	-626	238	-29	38	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.253	1	Yes	0.736	0.164	0.91	Yes	1.00	**6.53**
		$U_2 - U_3$	144.12	-563.56	-84	266	-1007	-216	-9	-89	115	-48	0.165	0.259	0.43	Yes	0.111	0.168	0.28	Yes	0.767	0.184	0.96	Yes	0.760	0.239	1.00	Yes	1.00	**6.91**
		$U_3 - U_4$	330.84	-542.40	105	268	-1097	-152	-100	-84	-3	-100	0.379	0.278	0.66	Yes	0.260	0.191	0.46	Yes	0.738	0.177	0.92	Yes	0.731	0.261	1.00	Yes	1.00	**8.77**
		$U_4 - U_5$	279.34	-547.85	90	227	-1078	-323	-162	-25	-167	-113	0.320	0.285	0.61	Yes	0.220	0.195	0.42	Yes	0.745	0.233	0.98	Yes	0.739	0.256	1.00	Yes	1.00	**7.10**
		$U_5 - U_6$	507.48	-467.10	195	340	-1197	95	-309	-33	-179	-256	0.582	0.337	0.92	Yes	0.392	0.219	0.62	Yes	0.636	0.359	1	Yes	0.630	0.284	0.92	Yes	1.00	**8.69**
		$U_6 - U_7$	5.84	-551.46	461	-1360	-1761	-500	-416	-151	-492	-268	0.006	0.442	0.45	Yes	0.004	0.303	0.31	Yes	0.627	0.342	0.97	Yes	0.620	0.374	1.00	Yes	1.00	**16.33**
		$U_7 - U_8$	850.69	-----	35	928	-1987	2380	-157	446	-253	150	0.589	0.406	1.00	Yes	0.411	0.277	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.55**
		$U_8 - U_9$	465.10	-----	3296	-3111	585	-35	50	473	-63	75	0.381	0.611	1.00	Yes	0.261	0.416	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**25.91**
		$U_9 - U_{10}$	-----	-548.13	466	-319	-1000	-539	199	335	48	543	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.291	1	Yes	0.699	0.224	0.93	Yes	1.00	**20.95**
		$U_{10} - U_{11}$	-----	-629.25	289	-595	-243	-827	328	22	340	88	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.186	1	Yes	0.803	0.185	0.99	Yes	1.00	**8.48**
		$U_{11} - U_{12}$	-----	-899.04	218	-341	-598	-675	247	-97	325	176	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.144	1	Yes	0.843	0.112	0.96	Yes	1.00	**8.06**
		$U_{12} - U_{13}$	-----	-1162.75	91	-111	-961	-759	224	-350	331	82	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.208	1	Yes	0.777	0.133	0.91	Yes	1.00	**8.06**
		$U_{13} - U_{14}$	-----	-1340.96	-107	-350	-1134	-1476	148	67	226	109	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.216	1	Yes	0.769	0.163	0.94	Yes	1.00	**7.20**
		$U_{14} - U_{15}$	-----	-1263.67	-206	-865	-1880	-748	132	-184	222	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.265	1	Yes	0.724	0.207	0.94	Yes	1.00	**5.92**
		$U_{15} - U_{16}$	-----	-1384.24	73	-1500	-1546	-933	-70	-340	161	-211	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.191	1	Yes	0.794	0.171	0.97	Yes	1.00	**6.48**
		$U_{16} - U_{17}$	-----	-1291.67	-318	-184	-1781	-850	56	-178	-111	-266	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.249	1	Yes	0.740	0.197	0.94	Yes	1.00	**6.56**
		$U_{17} - U_{18}$	-----	-965.98	-171	-372	-1190	-120	-215	-96	-126	-240	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.228	1	Yes	0.756	0.194	0.95	Yes	1.00	**5.45**
		$U_{18} - U_{19}$	-----	-688.96	-199	-29	-936	-108	-209	-178	-6	-189	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.213	1	Yes	0.775	0.188	0.97	Yes	1.00	**5.51**
		$U_{19} - U_{20}$	-----	-553.03	63	-1612	-1516	84	-168	-809	455	-78	-----	-----	-----	-----	-----	-----	-----	-----	0.628	0.371	1	Yes	0.622	0.324	0.95	Yes	1.00	**12.59**
	Structure 2	$U_0 - U_1$	-----	-583.94	1272	-1378	-1770	-1230	98	-62	715	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.694	0.247	0.95	Yes	0.690	0.301	1.00	Yes	1.00	**15.78**
		$U_1 - U_2$	-----	-769.80	17	-289	-659	-931	376	510	734	76	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.250	1	Yes	0.743	0.141	0.89	Yes	1.00	**8.09**
		$U_2 - U_3$	-----	-1098.04	245	-744	-1014	-1601	609	-25	394	33	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.216	1	Yes	0.779	0.163	0.95	Yes	1.00	**7.82**
		$U_3 - U_4$	-----	-1284.12	-363	-169	-1949	-1606	200	-261	233	-62	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.257	1	Yes	0.731	0.174	0.91	Yes	1.00	**7.22**
		$U_4 - U_5$	-----	-1378.41	-305	-705	-2152	-1443	-18	-589	96	-162	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.279	1	Yes	0.708	0.178	0.89	Yes	1.00	**7.42**
		$U_5 - U_6$	-----	-1429.47	-397	-29	-2545	-1036	-99	-288	65	-251	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.258	1	Yes	0.734	0.211	0.95	Yes	1.00	**6.91**
		$U_6 - U_7$	-----	-1310.26	-269	-78	-1989	-1588	-85	-263	-118	-227	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.240	1	Yes	0.746	0.177	0.93	Yes	1.00	**7.01**
		$U_7 - U_8$	-----	-1226.14	-184	-235	-2378	-782	-165	-206	-146	-225	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.293	1	Yes	0.698	0.212	0.92	Yes	1.00	**5.93**
		$U_8 - U_9$	-----	-1125.70	-311	70	-1863	-752	-201	-180	-119	-211	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.227	1	Yes	0.764	0.198	0.97	Yes	1.00	**6.66**
		$U_9 - U_{10}$	79.90	-888.30	-114	256	-1855	-291	-257	-125	-179	-137	0.059	0.254	0.32	Yes	0.040	0.172	0.22	Yes	0.771	0.219	0.99	Yes	0.767	0.226	1.00	Yes	1.00	**7.14**
		$U_{10} - U_{11}$	411.10	-746.35	52	318	-1789	-423	-131	-74	-133	-208	0.347	0.278	0.63	Yes	0.236	0.179	0.42	Yes	0.746	0.235	0.99	Yes	0.742	0.252	1.00	Yes	1.00	**9.71**
		$U_{11} - U_{12}$	764.83	-465.75	162	496	-2098	-302	-332	-163	-257	-455	0.646	0.351	1.00	Yes	0.434	0.235	0.67	Yes	0.466	0.209	0.68	Yes	0.463	0.296	0.76	Yes	1.00	**12.31**
		$U_{12} - U_{13}$	247.99	-577.55	883	-3268	-4227	-2121	-1123	559	-1001	-733	0.167	0.639	0.81	Yes	0.119	0.433	0.56	Yes	0.462	0.531	1	Yes	0.459	0.533	1.00	Yes	1.00	**29.09**
		$U_{13} - U_{14}$	1161.08	-----	-78	1827	-3746	4243	-189	402	-342	-145	0.571	0.420	1.00	Yes	0.404	0.275	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.77**
		$U_{14} - U_{15}$	295.85	-----	8338	-7328	1152	-83	-88	1104	-329	87	0.145	0.847	1.00	Yes	0.103	0.555	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**29.39**
		$U_{15} - U_{16}$	969.50	-----	281	137	-2935	-1075	564	814	358	885	0.586	0.409	1.00	Yes	0.417	0.274	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.30**
		$U_{16} - U_{17}$	-----	-731.96	1933	-874	-2574	-1764	750	9	773	523	-----	-----	-----	-----	-----	-----	-----	-----	0.639	0.355	1	Yes	0.635	0.323	0.96	Yes	1.00	**32.68**
		$U_{17} - U_{18}$	-----	-632.35	672	-377	-1383	-1220	148	-14	225	229	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.244	1	Yes	0.747	0.235	0.99	Yes	1.00	**16.00**
		$U_{18} - U_{19}$	-----	-689.38	673	-262	-1043	-918	84	-185	242	16	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.163	0.99	Yes	0.814	0.177	1.00	Yes	1.00	**12.97**
		$U_{19} - U_{20}$	271.63	-705.29	309	166	-1282	-756	-4	141	122	87	0.255	0.224	0.48	Yes	0.169	0.147	0.32	Yes	0.783	0.214	1	Yes	0.778	0.205	0.99	Yes	1.00	**10.14**
		$U_{20} - U_{21}$	-----	-800.12	161	-372	-1262	-929	104	-313	230	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.262	1	Yes	0.730	0.183	0.92	Yes	1.00	**8.33**
		$U_{21} - U_{22}$	42.93	-778.37	-18	10	-1431	-1080	-13	-50	11	-42	0.033	0.213	0.25	Yes	0.024	0.141	0.17	Yes	0.716	0.281	1	Yes	0.710	0.207	0.92	Yes	1.00	**7.74**
		$U_{22} - U_{23}$	-----	-743.22	113	-1210	-1644	-655	-20	-193	-2	-94	-----	-----	-----	-----	-----	-----	-----	-----	0.683	0.311	1	Yes	0.678	0.238	0.92	Yes	1.00	**6.74**
		$U_{23} - U_{24}$	-----	-807.33	160	-1284	-1610	-756	-221	-340	-133	-155	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.250	1	Yes	0.737	0.233	0.97	Yes	1.00	**7.47**
		$U_{24} - U_{25}$	155.76	-662.55	83	199	-1483	-576	-210	-40	-156	-137	0.146	0.266	0.42	Yes	0.097	0.175	0.28	Yes	0.736	0.258	1	Yes	0.731	0.237	0.97	Yes	1.00	**6.99**
		$U_{25} - U_{26}$	333.43	-613.54	136	352	-1597	-48	-248	28	-77	-83	0.335	0.308	0.65	Yes	0.220	0.195	0.42	Yes	0.729	0.161	0.89	Yes	0.725	0.271	1.00	Yes	1.00	**8.72**
		$U_{26} - U_{27}$	596.48	-565.93	216	400	-1901	-455	-166	30	-206	-140	0.599	0.353	0.96	Yes	0.399	0.234	0.64	Yes	0.672	0.312	0.99	Yes	0.668	0.323	1.00	Yes	1.00	**12.16**
		$U_{27} - U_{28}$	847.70	-335.63	203	535	-2571	94	-284	-15	-316	-416	0.625	0.367	1.00	Yes	0.416	0.242	0.66	Yes	0.293	0.321	0.62	Yes	0.291	0.323	0.62	Yes	1.00	**14.11**
		$U_{28} - U_{29}$	87.50	-495.50	1105	-5481	-5686	-2326	-958	-177	-1072	-793	0.053	0.737	0.80	Yes	0.038	0.493	0.54	Yes	0.355	0.559	0.92	Yes	0.352	0.646	1.00	Yes	1.00	**32.87**
		$U_{29} - U_{30}$	1133.95	-----	40	1927	-4246	4135	42	681	-319	117	0.558	0.440	1.00	Yes	0.395	0.288	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**16.91**
		$U_{30} - U_{31}$	956.45	-----	5239	-3599	1341	87	202	650	-444	-187	0.470	0.529	1.00	Yes	0.333	0.347	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.78**
		$U_{31} - U_{32}$	959.85	-----	141	460	-2184	-288	-57	193	329	779	0.648	0.349	1.00	Yes	0.462	0.237	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.89**
		$U_{32} - U_{33}$	-----	-739.28	928	-1037	-1289	-1843	668	111	733	132	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.226	0.97	Yes	0.735	0.260	1.00	Yes	1.00	**20.60**
		$U_{33} - U_{34}$	658.98	-815.12	435	226	-1212	-1237	120	196	168	189	0.557	0.198	0.76	Yes	0.379	0.128	0.51	Yes	0.815	0.180	1	Yes	0.810	0.175	0.99	Yes	1.00	**13.49**
		$U_{34} - U_{35}$	316.70	-985.96	423	35	-1044	-1172	98	1	189	44	0.232	0.163	0.40	Yes	0.157	0.111	0.27	Yes	0.856	0.132	0.99	Yes	0.851	0.143	1.00	Yes	1.00	**11.22**
		$U_{35} - U_{36}$	-----	-1189.84	155	-243	-1263	-1331	99	89	295	82	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.179	1	Yes	0.807	0.142	0.95	Yes	1.00	**8.54**
		$U_{36} - U_{37}$	-----	-1356.56	-108	-45	-1725	-1639	133	-76	350	116	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.221	1	Yes	0.772	0.154	0.93	Yes	1.00	**8.69**
		$U_{37} - U_{38}$	-----	-1324.62	115	-1850	-2592	-1114	-13	-85	206	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.237	1	Yes	0.754	0.231	0.99	Yes	1.00	**7.33**
		$U_{38} - U_{39}$	-----	-1483.17	246	-2552	-2096	-2088	-6	-424	183	-151	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.227	1	Yes	0.761	0.212	0.98	Yes	1.00	**7.38**
		$U_{39} - U_{40}$	-----	-1333.60	-348	-473	-2627	-1171	-117	-147	-126	-230	-----	-----	-----	-----	-----	-----	-----	-----	0.690	0.305	1	Yes	0.685	0.218	0.91	Yes	1.00	**6.07**
		$U_{40} - U_{41}$	-----	-1235.70	-403	-408	-2224	-1136	-17	-229	-168	-273	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.283	1	Yes	0.704	0.198	0.91	Yes	1.00	**5.89**
		$U_{41} - U_{42}$	-----	-1055.68	-285	-173	-2112	-653	-101	21	-142	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.241	1	Yes	0.749	0.215	0.97	Yes	1.00	**6.53**
		$U_{42} - U_{43}$	-----	-767.65	-239	-378	-1509	-388	-22	17	243	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.247	1	Yes	0.741	0.229	0.97	Yes	1.00	**6.69**
		$U_{43} - U_{44}$	-----	-506.48	62	-1564	-1700	-371	-111	-675	408	-115	-----	-----	-----	-----	-----	-----	-----	-----	0.602	0.392	1	Yes	0.598	0.289	0.89	Yes	1.00	**11.00**
	Structure 3	$U_0 - U_1$	-----	-567.43	1238	-1411	-1772	-607	-87	-467	959	-337	-----	-----	-----	-----	-----	-----	-----	-----	0.644	0.301	0.95	Yes	0.638	0.357	1.00	Yes	1.00	**14.09**
		$U_1 - U_2$	-----	-695.41	38	-779	-418	-447	189	265	338	357	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.206	1	Yes	0.782	0.157	0.94	Yes	1.00	**6.01**
		$U_2 - U_3$	-----	-993.99	168	-1026	-466	-628	560	-15	577	-18	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.203	1	Yes	0.778	0.167	0.95	Yes	1.00	**6.53**
		$U_3 - U_4$	-----	-1357.30	-85	-293	-1354	-1236	221	-311	258	48	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.213	1	Yes	0.778	0.149	0.93	Yes	1.00	**8.20**
		$U_4 - U_5$	-----	-1317.92	-252	-85	-1647	-657	41	-571	120	-209	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.234	1	Yes	0.756	0.182	0.94	Yes	1.00	**7.12**
		$U_5 - U_6$	-----	-1297.29	-144	-216	-1425	-964	-55	-213	-9	-165	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.241	1	Yes	0.744	0.157	0.91	Yes	1.00	**7.66**
		$U_6 - U_7$	-----	-1247.62	-172	-1174	-2039	-623	-126	-375	-38	-177	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.273	1	Yes	0.715	0.225	0.95	Yes	1.00	**6.12**
		$U_7 - U_8$	-----	-1089.17	-137	-62	-1416	-434	-192	-199	-95	-251	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.255	1	Yes	0.727	0.195	0.93	Yes	1.00	**5.87**
		$U_8 - U_9$	-----	-866.41	-116	142	-1069	-113	-181	-125	-108	-203	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.176	1	Yes	0.813	0.177	1.00	Yes	1.00	**6.05**
		$U_9 - U_{10}$	86.03	-589.07	-96	179	-1072	-53	-256	-134	-216	-211	0.093	0.281	0.38	Yes	0.062	0.180	0.25	Yes	0.758	0.228	0.99	Yes	0.752	0.240	1.00	Yes	1.00	**6.59**
		$U_{10} - U_{11}$	591.50	-541.03	218	214	-1345	-256	-302	-49	-250	-183	0.642	0.350	1.00	Yes	0.435	0.235	0.67	Yes	0.697	0.256	0.96	Yes	0.690	0.301	1.00	Yes	1.00	**12.71**
		$U_{11} - U_{12}$	730.01	-----	-68	838	-2209	1949	-206	189	-142	6	0.598	0.396	1.00	Yes	0.409	0.270	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.99**
		$U_{12} - U_{13}$	439.82	-72.23	4013	-3969	637	-28	-45	822	-134	59	0.305	0.692	1.00	Yes	0.213	0.472	0.69	Yes	0.059	0.470	0.53	Yes	0.059	0.608	0.67	Yes	1.00	**20.45**
		$U_{13} - U_{14}$	422.56	-431.40	352	-88	-1714	-459	294	554	199	564	0.404	0.442	0.85	Yes	0.282	0.303	0.59	Yes	0.490	0.504	1	Yes	0.485	0.364	0.85	Yes	1.00	**18.81**
		$U_{14} - U_{15}$	-----	-530.73	593	-26	-450	-618	344	-256	876	59	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.270	1	Yes	0.716	0.147	0.87	Yes	1.00	**12.33**
		$U_{15} - U_{16}$	310.04	-574.87	256	132	-682	-669	-7	140	175	243	0.355	0.203	0.56	Yes	0.244	0.139	0.39	Yes	0.782	0.215	1	Yes	0.775	0.162	0.94	Yes	1.00	**8.34**
		$U_{16} - U_{17}$	-----	-576.32	447	-751	-928	-512	27	-90	124	2	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.104	0.89	Yes	0.777	0.221	1.00	Yes	1.00	**7.15**
		$U_{17} - U_{18}$	-----	-577.54	252	-898	-793	-471	-104	-1	57	-27	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.139	0.93	Yes	0.779	0.213	1.00	Yes	1.00	**5.66**
		$U_{18} - U_{19}$	-----	-525.72	85	-283	-964	-368	32	179	152	28	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.278	1	Yes	0.709	0.229	0.94	Yes	1.00	**5.14**
		$U_{19} - U_{20}$	-----	-463.48	108	-311	-1158	-610	-67	17	413	-64	-----	-----	-----	-----	-----	-----	-----	-----	0.631	0.363	1	Yes	0.625	0.275	0.91	Yes	1.00	**7.57**

Operating Loads - 2F1

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	188.66	-26.70	781	-1240	-140	29	-424	-1560	19	68	0.289	0.707	1.00	Yes	0.170	0.423	0.60	Yes	0.048	0.508	0.56	Yes	0.048	0.372	0.43	Yes	1.00	**19.32**
		L_1 - L_2	402.53	-----	348	-976	-570	-443	4	-88	-404	118	0.616	0.379	1.00	Yes	0.376	0.253	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.50**
		L_2 - L_3	651.64	-45.72	-43	45	-938	-632	12	-6	-100	-43	0.750	0.242	1.00	Yes	0.434	0.146	0.58	Yes	0.062	0.254	0.32	Yes	0.062	0.226	0.29	Yes	1.00	**6.70**
		L_3 - L_4	635.08	-----	114	-862	-968	-440	-154	29	47	175	0.731	0.262	1.00	Yes	0.434	0.169	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.85**
		L_4 - L_5	285.73	-452.58	83	430	-1160	253	125	-123	-132	-15	0.370	0.331	0.71	Yes	0.222	0.218	0.45	Yes	0.696	0.220	0.92	Yes	0.690	0.307	1.00	Yes	1.00	**8.04**
		L_5 - L_6	30.08	-697.30	127	538	-860	84	9	71	61	110	0.029	0.205	0.24	Yes	0.019	0.124	0.15	Yes	0.813	0.169	0.99	Yes	0.805	0.190	1.00	Yes	1.00	**9.19**
		L_6 - L_7	-----	-991.04	159	110	-1266	270	166	28	21	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.092	0.9	Yes	0.798	0.199	1.00	Yes	1.00	**11.78**
		L_7 - L_8	-----	-1082.10	109	968	-1678	2344	-196	-97	44	109	-----	-----	-----	-----	-----	-----	-----	-----	0.694	0.283	0.98	Yes	0.685	0.310	1.00	Yes	1.00	**20.72**
		L_8 - L_9	-----	-1183.68	1844	-644	540	-9	-47	-62	69	13	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.221	0.98	Yes	0.750	0.244	1.00	Yes	1.00	**15.50**
		L_9 - L_{10}	62.21	-719.37	1630	-2627	-1761	-1115	38	-236	491	59	0.043	0.459	0.51	Yes	0.028	0.284	0.32	Yes	0.585	0.152	0.74	Yes	0.579	0.413	1.00	Yes	1.00	**35.82**
		L_{10} - L_{11}	406.84	-556.58	506	-13	-359	-553	76	10	19	8	0.527	0.160	0.69	Yes	0.307	0.097	0.41	Yes	0.856	0.066	0.93	Yes	0.848	0.146	1.00	Yes	1.00	**12.97**
		L_{11} - L_{12}	595.69	-----	464	-733	-238	-445	-104	14	-51	175	0.771	0.225	1.00	Yes	0.463	0.147	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.34**
		L_{12} - L_{13}	1074.62	-----	112	-69	-670	-734	-171	-125	-10	46	0.848	0.150	1.00	Yes	0.542	0.090	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.71**
		L_{13} - L_{14}	1245.08	-----	647	-1706	-664	-1042	-283	1	-118	244	0.732	0.259	1.00	Yes	0.474	0.158	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.83**
		L_{14} - L_{15}	1468.92	-----	-356	-81	-2228	-376	-66	-49	-146	102	0.718	0.279	1.00	Yes	0.466	0.168	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.63**
		L_{15} - L_{16}	1565.45	-----	-194	-389	-1836	-1021	-76	13	17	52	0.765	0.227	1.00	Yes	0.491	0.132	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.35**
		L_{16} - L_{17}	1178.02	-----	-402	40	-1622	-73	-35	-66	-147	-18	0.745	0.251	1.00	Yes	0.483	0.154	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.60**
		L_{17} - L_{18}	899.88	-----	-178	-55	-1048	-61	-76	-15	75	12	0.784	0.212	1.00	Yes	0.502	0.126	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.25**
		L_{18} - L_{19}	430.15	-----	-251	175	-976	400	-5	-34	-187	73	0.658	0.332	1.00	Yes	0.445	0.207	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.35**
		L_{19} - L_{20}	79.56	-85.00	-100	20	-2247	1073	-35	-8	961	215	0.122	0.874	1.00	Yes	0.074	0.582	0.66	Yes	0.154	0.513	0.67	Yes	0.153	0.674	0.83	Yes	1.00	**28.55**
	Structure 2	L_0 - L_1	7.58	-79.44	1029	-3189	-152	60	-584	-2028	14	47	0.009	0.982	1.00	Yes	0.005	0.620	0.63	Yes	0.114	0.715	0.83	Yes	0.114	0.649	0.77	Yes	1.00	**35.77**
		L_1 - L_2	537.46	-----	740	-1556	-348	-724	74	161	86	141	0.653	0.343	1.00	Yes	0.388	0.221	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.24**
		L_2 - L_3	955.09	-----	416	-1205	-661	-638	-14	120	617	208	0.753	0.240	1.00	Yes	0.494	0.146	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.59**
		L_3 - L_4	1365.72	-----	454	-1437	-1172	-1336	-74	113	-46	312	0.802	0.193	1.00	Yes	0.540	0.120	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.85**
		L_4 - L_5	1644.04	-----	100	-2145	-2281	-1041	-124	-86	148	180	0.766	0.228	1.00	Yes	0.507	0.134	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.73**
		L_5 - L_6	1798.07	-----	47	-2312	-2129	-1838	-370	-109	-95	212	0.771	0.228	1.00	Yes	0.518	0.139	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.72**
		L_6 - L_7	1776.99	-----	-404	-113	-2675	-1788	52	-9	26	152	0.752	0.245	1.00	Yes	0.500	0.142	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.67**
		L_7 - L_8	1252.04	-----	-198	210	-2431	-160	-71	77	-65	107	0.718	0.277	1.00	Yes	0.472	0.161	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.23**
		L_8 - L_9	1061.14	-202.74	-149	472	-1768	172	40	-118	-63	60	0.742	0.250	1.00	Yes	0.500	0.155	0.66	Yes	0.168	0.130	0.3	Yes	0.167	0.239	0.41	Yes	1.00	**10.19**
		L_9 - L_{10}	786.17	-516.37	-103	556	-1759	-6	-39	34	86	20	0.702	0.292	1.00	Yes	0.409	0.183	0.60	Yes	0.546	0.162	0.71	Yes	0.542	0.281	0.83	Yes	1.00	**12.26**
		L_{10} - L_{11}	176.21	-644.03	-10	549	-1378	563	116	-58	-116	3	0.176	0.257	0.44	Yes	0.103	0.162	0.27	Yes	0.762	0.076	0.84	Yes	0.757	0.241	1.00	Yes	1.00	**10.06**
		L_{11} - L_{12}	-----	-961.11	-13	918	-1526	486	12	55	-38	74	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.135	0.93	Yes	0.788	0.208	1.00	Yes	1.00	**12.09**
		L_{12} - L_{13}	-----	-1181.57	111	-276	-2232	-1059	94	33	-144	-85	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.286	1	Yes	0.707	0.222	0.93	Yes	1.00	**14.26**
		L_{13} - L_{14}	-----	-1139.45	-240	1435	-3870	4845	-523	-495	95	76	-----	-----	-----	-----	-----	-----	-----	-----	0.578	0.296	0.88	Yes	0.573	0.423	1.00	Yes	1.00	**21.13**
		L_{14} - L_{15}	-----	-1184.48	4606	-3017	1206	-549	-305	-70	-281	-188	-----	-----	-----	-----	-----	-----	-----	-----	0.601	0.265	0.87	Yes	0.596	0.402	1.00	Yes	1.00	**17.97**
		L_{15} - L_{16}	-----	-1218.48	-153	186	-2707	-885	166	152	-33	70	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.261	1	Yes	0.729	0.269	1.00	Yes	1.00	**16.14**
		L_{16} - L_{17}	313.74	-651.98	3613	-4190	-2036	-1217	-662	-309	438	378	0.194	0.572	0.77	Yes	0.129	0.339	0.47	Yes	0.479	0.404	0.89	Yes	0.475	0.517	1.00	Yes	1.00	**42.42**
		L_{17} - L_{18}	581.81	-83.34	1884	-2728	-1386	-1386	-288	-143	28	361	0.519	0.480	1.00	Yes	0.302	0.299	0.61	Yes	0.088	0.285	0.38	Yes	0.088	0.436	0.53	Yes	1.00	**26.68**
		L_{18} - L_{19}	623.88	-----	1001	-1314	-1138	-604	-165	-105	251	150	0.707	0.292	1.00	Yes	0.408	0.174	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**18.00**
		L_{19} - L_{20}	620.96	-----	749	-1320	-773	-602	-206	12	90	211	0.703	0.287	1.00	Yes	0.416	0.183	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.62**
		L_{20} - L_{21}	969.25	-----	436	-460	-1409	-1057	-195	-139	98	108	0.773	0.227	1.00	Yes	0.507	0.135	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.78**
		L_{21} - L_{22}	865.74	-----	314	-1889	-1447	-687	-219	13	-23	291	0.690	0.307	1.00	Yes	0.462	0.192	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.70**
		L_{22} - L_{23}	813.09	-39.05	-93	46	-2287	-329	-2	-45	-65	128	0.648	0.348	1.00	Yes	0.434	0.217	0.66	Yes	0.037	0.272	0.31	Yes	0.037	0.334	0.38	Yes	1.00	**9.49**
		L_{23} - L_{24}	856.28	-282.64	-20	274	-2021	-547	-8	66	-47	127	0.683	0.309	1.00	Yes	0.448	0.183	0.64	Yes	0.267	0.260	0.53	Yes	0.265	0.295	0.57	Yes	1.00	**10.88**
		L_{24} - L_{25}	578.92	-415.38	82	432	-1670	106	90	-87	-80	102	0.656	0.338	1.00	Yes	0.388	0.217	0.61	Yes	0.557	0.188	0.75	Yes	0.554	0.322	0.88	Yes	1.00	**10.71**
		L_{25} - L_{26}	211.56	-569.60	53	542	-1210	273	9	76	69	70	0.240	0.245	0.49	Yes	0.138	0.147	0.29	Yes	0.764	0.153	0.92	Yes	0.759	0.234	1.00	Yes	1.00	**10.78**
		L_{26} - L_{27}	-----	-721.34	119	479	-1467	387	124	-22	-43	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.161	0.93	Yes	0.757	0.235	1.00	Yes	1.00	**10.69**
		L_{27} - L_{28}	-----	-1037.24	60	1005	-1980	739	76	144	114	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.194	0.96	Yes	0.755	0.244	1.00	Yes	1.00	**14.74**
		L_{28} - L_{29}	-----	-1207.61	181	-518	-2188	-1051	204	165	-198	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.268	1	Yes	0.722	0.217	0.94	Yes	1.00	**16.22**
		L_{29} - L_{30}	-----	-1099.51	-171	1204	-4843	5030	-414	-512	-13	135	-----	-----	-----	-----	-----	-----	-----	-----	0.558	0.296	0.86	Yes	0.553	0.439	1.00	Yes	1.00	**24.03**
		L_{30} - L_{31}	-----	-1235.46	4321	-2270	1137	-276	-197	-43	-340	-243	-----	-----	-----	-----	-----	-----	-----	-----	0.627	0.263	0.9	Yes	0.622	0.377	1.00	Yes	1.00	**17.28**
		L_{31} - L_{32}	-----	-1129.50	-74	-251	-2686	-986	86	-26	253	219	-----	-----	-----	-----	-----	-----	-----	-----	0.681	0.312	1	Yes	0.676	0.267	0.95	Yes	1.00	**18.12**
		L_{32} - L_{33}	532.52	-434.94	2875	-4009	-1942	-1998	-377	180	847	443	0.371	0.626	1.00	Yes	0.247	0.374	0.63	Yes	0.360	0.399	0.76	Yes	0.357	0.546	0.91	Yes	1.00	**44.05**
		L_{33} - L_{34}	605.34	-----	1305	-1951	-904	-850	-98	119	124	398	0.604	0.395	1.00	Yes	0.354	0.248	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**22.59**
		L_{34} - L_{35}	781.14	-----	783	-1770	-836	-667	-96	-55	123	161	0.697	0.303	1.00	Yes	0.406	0.189	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.05**
		L_{35} - L_{36}	1111.89	-----	847	-1413	-738	-1105	-294	-39	-116	258	0.778	0.218	1.00	Yes	0.524	0.136	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.98**
		L_{36} - L_{37}	1336.87	-----	466	-1886	-1340	-1032	-114	39	197	277	0.767	0.231	1.00	Yes	0.504	0.136	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.62**
		L_{37} - L_{38}	1730.71	-----	141	-1679	-2745	-1662	-421	-235	-11	168	0.732	0.267	1.00	Yes	0.487	0.157	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.10**
		L_{38} - L_{39}	1697.11	-----	-387	-75	-2873	-1151	-1	-54	4	139	0.728	0.263	1.00	Yes	0.489	0.160	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.96**
		L_{39} - L_{40}	1623.34	-----	-260	-385	-2457	-1034	-62	4	30	7	0.757	0.236	1.00	Yes	0.501	0.139	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.09**
		L_{40} - L_{41}	1271.43	-----	-418	25	-2023	13	-8	-14	-136	85	0.747	0.248	1.00	Yes	0.503	0.153	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.76**
		L_{41} - L_{42}	970.82	-----	-191	-93	-1514	-175	8	61	56	128	0.765	0.232	1.00	Yes	0.502	0.138	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.88**
		L_{42} - L_{43}	525.93	-----	-315	177	-1492	311	47	10	-100	336	0.639	0.359	1.00	Yes	0.380	0.230	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.60**
		L_{43} - L_{44}	33.23	-----	-88	-50	-3374	817	-45	-13	1654	483	0.040	0.958	1.00	Yes	0.024	0.607	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**31.98**
	Structure 3	L_0 - L_1	40.02	-195.07	1133	-1998	-43	-25	-352	-1598	0	-1	0.061	0.931	1.00	Yes	0.037	0.612	0.65	Yes	0.354	0.595	0.95	Yes	0.351	0.600	0.96	Yes	1.00	**28.76**
		L_1 - L_2	389.41	-----	648	-1045	-47	-437	80	191	-431	345	0.596	0.403	1.00	Yes	0.403	0.254	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.82**
		L_2 - L_3	891.21	-----	317	-842	-379	-532	16	48	436	86	0.776	0.218	1.00	Yes	0.497	0.132	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.64**
		L_3 - L_4	1203.99	-----	466	-1391	-683	-1114	-75	102	-31	283	0.761	0.229	1.00	Yes	0.494	0.141	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.28**
		L_4 - L_5	1618.89	-----	-218	-224	-1639	-1286	-159	-123	131	144	0.791	0.209	1.00	Yes	0.508	0.122	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.38**
		L_5 - L_6	1475.23	-----	232	-2094	-1175	-1300	-240	143	-67	330	0.721	0.276	1.00	Yes	0.468	0.167	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.31**
		L_6 - L_7	1224.95	-----	-355	195	-1901	75	-1	-28	-53	105	0.720	0.271	1.00	Yes	0.467	0.165	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.90**
		L_7 - L_8	982.09	-----	-96	40	-1122	-298	-25	66	72	158	0.775	0.218	1.00	Yes	0.496	0.129	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.03**
		L_8 - L_9	568.40	-101.32	-187	311	-912	289	53	-107	-29	25	0.736	0.260	1.00	Yes	0.442	0.172	0.62	Yes	0.156	0.117	0.28	Yes	0.154	0.241	0.40	Yes	1.00	**8.04**
		L_9 - L_{10}	292.51	-477.81	-43	436	-996	30	-22	27	15	156	0.379	0.291	0.67	Yes	0.221	0.176	0.40	Yes	0.735	0.145	0.88	Yes	0.728	0.264	1.00	Yes	1.00	**11.15**
		L_{10} - L_{11}	-----	-924.65	65	170	-1618	347	89	-136	25	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.116	0.87	Yes	0.744	0.254	1.00	Yes	1.00	**15.17**
		L_{11} - L_{12}	-----	-1167.61	88	985	-1183	1900	64	115	154	25	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.227	0.98	Yes	0.739	0.252	1.00	Yes	1.00	**18.30**
		L_{12} - L_{13}	-----	-1131.81	2074	-445	553	-24	-188	-148	-121	-123	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.268	1	Yes	0.717	0.275	1.00	Yes	1.00	**14.49**
		L_{13} - L_{14}	-----	-828.69	1500	-2020	-2070	-1073	-15	-115	-130	12	-----	-----	-----	-----	-----	-----	-----	-----	0.675	0.152	0.83	Yes	0.667	0.325	1.00	Yes	1.00	**31.91**
		L_{14} - L_{15}	685.16	-215.50	1080	-1271	-1006	-1113	-339	43	76	118	0.672	0.327	1.00	Yes	0.435	0.198	0.64	Yes	0.251	0.233	0.49	Yes	0.249	0.281	0.53	Yes	1.00	**23.61**
		L_{15} - L_{16}	442.77	-----	869	-1356	-420	-519	-187	74	-19	331	0.573	0.418	1.00	Yes	0.344	0.274	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.26**
		L_{16} - L_{17}	640.38	-139.09	238	6	-978	-478	30	-74	-22	148	0.737	0.260	1.00	Yes	0.438	0.168	0.61	Yes	0.190	0.305	0.5	Yes	0.188	0.236	0.43	Yes	1.00	**7.82**
		L_{17} - L_{18}	619.63	-34.47	40	-71	-1022	-437	15	104	118	237	0.713	0.285	1.00	Yes	0.412	0.171	0.59	Yes	0.047	0.312	0.36	Yes	0.047	0.247	0.30	Yes	1.00	**7.88**
		L_{18} - L_{19}	438.53	-----	-39	33	-963	-21	50	-75	61	168	0.671	0.325	1.00	Yes	0.409	0.219	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.66**
		L_{19} - L_{20}	36.30	-----	11	-106	-2147	929	-117	-32	1355	369	0.056	0.935	1.00	Yes	0.033	0.565	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**22.33**

Moment (Start) AB Operating

Operating Loads - 2F1

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	$U_0 - L_0$			-----	-286.03	-23	47	-173	182	-96	-31	-1015	-325	-----	-----	-----	-----	-----	-----	-----	-----	0.639	0.359	1	Yes	0.605	0.233	0.84	Yes	1.00	**3.00**
		$U_1 - L_1$			18.82	-315.20	20	-14	-255	243	39	15	78	89	0.034	0.352	0.39	Yes	0.019	0.193	0.22	Yes	0.689	0.118	0.81	Yes	0.667	0.326	1.00	Yes	1.00	**7.03**
		$U_2 - L_2$			-----	-277.30	120	-77	-280	316	-309	-90	96	125	-----	-----	-----	-----	-----	-----	-----	-----	0.606	0.192	0.8	Yes	0.587	0.404	1.00	Yes	1.00	**10.31**
		$U_3 - L_3$			245.47	-234.76	385	-357	-340	351	-35	53	42	226	0.441	0.558	1.00	Yes	0.243	0.307	0.55	Yes	0.514	0.159	0.68	Yes	0.497	0.492	0.99	Yes	1.00	**14.87**
		$U_4 - L_4$			52.68	-242.49	378	-353	-125	100	158	50	-31	87	0.095	0.529	0.63	Yes	0.052	0.291	0.35	Yes	0.533	0.153	0.69	Yes	0.513	0.483	1.00	Yes	1.00	**13.00**
		$U_5 - L_5$			-----	-423.98	239	-259	17	-43	-30	-65	-83	-15	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.093	0.87	Yes	0.731	0.263	1.00	Yes	1.00	**6.66**
		$U_6 - L_6$			-----	-516.29	273	-291	35	-55	-39	20	-75	29	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.083	0.87	Yes	0.740	0.254	1.00	Yes	1.00	**6.20**
		$U_7 - L_7$			-----	-442.39	296	-316	117	-131	-36	69	-129	47	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.122	0.87	Yes	0.682	0.311	1.00	Yes	1.00	**4.14**
		$U_8 - L_8$			-----	-1270.49	497	-591	-422	502	-69	-34	-44	17	-----	-----	-----	-----	-----	-----	-----	-----	0.917	0.039	0.96	Yes	0.881	0.110	1.00	Yes	1.00	**9.90**
		$U_9 - L_9$			-----	-650.67	-164	187	-424	463	-218	-155	-247	-200	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.130	0.91	Yes	0.735	0.257	1.00	Yes	1.00	**6.35**
		$U_{10} - L_{10}$			-----	-793.93	-85	99	-397	412	-281	-190	-220	-171	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.111	0.94	Yes	0.783	0.213	1.00	Yes	1.00	**9.46**
		$U_{11} - L_{11}$			-----	-662.36	-52	153	-392	483	-72	44	0	71	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.084	0.88	Yes	0.771	0.224	1.00	Yes	1.00	**8.79**
		$U_{12} - L_{12}$			-----	-504.67	-24	31	-355	346	-172	11	-64	97	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.108	0.84	Yes	0.692	0.303	1.00	Yes	1.00	**8.03**
		$U_{13} - L_{13}$			-----	-356.77	11	5	-256	273	-76	105	-31	131	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.112	0.84	Yes	0.683	0.311	1.00	Yes	1.00	**6.32**
		$U_{14} - L_{14}$			-----	-106.47	350	-350	-589	605	-122	-49	151	193	-----	-----	-----	-----	-----	-----	-----	-----	0.238	0.249	0.49	Yes	0.225	0.774	1.00	Yes	1.00	**24.08**
		$U_{15} - L_{15}$			224.94	-314.67	247	-257	-180	171	-106	-175	-129	-133	0.405	0.379	0.79	Yes	0.223	0.208	0.44	Yes	0.705	0.169	0.88	Yes	0.666	0.328	1.00	Yes	1.00	**8.62**
		$U_{16} - L_{16}$			109.77	-321.48	237	-243	-54	37	18	-138	-79	-79	0.197	0.350	0.55	Yes	0.109	0.193	0.31	Yes	0.724	0.134	0.86	Yes	0.680	0.310	1.00	Yes	1.00	**6.89**
		$U_{17} - L_{17}$			-----	-436.07	220	-235	30	-51	-41	-97	-94	-213	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.152	0.97	Yes	0.752	0.239	1.00	Yes	1.00	**6.01**
		$U_{18} - L_{18}$			-----	-532.71	438	-445	123	-143	19	-78	-84	98	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.080	0.87	Yes	0.741	0.252	1.00	Yes	1.00	**6.31**
		$U_{19} - L_{19}$			-----	-652.04	499	-513	126	-184	354	-24	-3	352	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.097	0.92	Yes	0.759	0.238	1.00	Yes	1.00	**6.93**
		$U_{20} - L_{20}$			-----	-573.12	396	-460	158	-224	815	107	174	23	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.234	1	Yes	0.667	0.213	0.89	Yes	1.00	**4.45**
	Structure 2	$U_0 - L_0$			-----	-593.15	-115	180	-431	507	-264	-45	-1356	-230	-----	-----	-----	-----	-----	-----	-----	-----	0.710	0.289	1	Yes	0.636	0.215	0.86	Yes	1.00	**5.76**
		$U_1 - L_1$			-----	-707.39	-114	122	-564	558	35	-67	71	22	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.076	0.89	Yes	0.758	0.239	1.00	Yes	1.00	**8.54**
		$U_2 - L_2$			-----	-573.78	-84	93	-521	508	92	42	-26	81	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.086	0.86	Yes	0.731	0.266	1.00	Yes	1.00	**8.29**
		$U_3 - L_3$			-----	-487.18	-44	67	-242	251	-111	21	48	147	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.100	0.93	Yes	0.764	0.228	1.00	Yes	1.00	**7.04**
		$U_4 - L_4$			76.85	-326.67	35	-15	-239	232	-108	65	-59	118	0.138	0.339	0.48	Yes	0.076	0.187	0.27	Yes	0.741	0.101	0.85	Yes	0.691	0.305	1.00	Yes	1.00	**7.13**
		$U_5 - L_5$			210.26	-313.15	146	-134	-245	259	-111	115	-75	140	0.378	0.371	0.75	Yes	0.208	0.204	0.42	Yes	0.707	0.130	0.84	Yes	0.663	0.330	1.00	Yes	1.00	**9.45**
		$U_6 - L_6$			361.41	-235.88	233	-232	-236	234	-119	87	11	138	0.650	0.341	1.00	Yes	0.358	0.188	0.55	Yes	0.531	0.095	0.63	Yes	0.499	0.301	0.81	Yes	1.00	**11.12**
		$U_7 - L_7$			44.14	-----	604	-682	-330	339	-158	-108	-167	33	0.079	0.920	1.00	Yes	0.044	0.506	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**31.17**
		$U_8 - L_8$			-----	-463.51	370	-374	9	-31	-43	-126	-142	-104	-----	-----	-----	-----	-----	-----	-----	-----	0.672	0.114	0.79	Yes	0.668	0.327	1.00	Yes	1.00	**6.97**
		$U_9 - L_9$			-----	-691.47	592	-602	79	-113	-27	-122	-131	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.080	0.85	Yes	0.741	0.256	1.00	Yes	1.00	**9.39**
		$U_{10} - L_{10}$			-----	-799.09	548	-568	90	-136	-151	-116	-59	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.094	0.89	Yes	0.747	0.251	1.00	Yes	1.00	**9.38**
		$U_{11} - L_{11}$			-----	-816.94	505	-515	151	-181	44	3	-31	93	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.075	0.9	Yes	0.764	0.227	1.00	Yes	1.00	**8.21**
		$U_{12} - L_{12}$			-----	-879.10	534	-539	137	-163	122	97	38	-144	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.082	0.93	Yes	0.762	0.231	1.00	Yes	1.00	**8.78**
		$U_{13} - L_{13}$			-----	-751.99	565	-555	245	-244	104	74	-80	44	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.110	0.95	Yes	0.725	0.270	1.00	Yes	1.00	**6.17**
		$U_{14} - L_{14}$			-----	-1285.79	720	-689	-645	598	-57	-7	-56	182	-----	-----	-----	-----	-----	-----	-----	-----	0.940	0.051	1	Yes	0.853	0.127	0.99	Yes	1.00	**11.62**
		$U_{15} - L_{15}$			-----	-728.88	-168	169	-606	596	-82	-46	-147	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.140	0.96	Yes	0.703	0.290	1.00	Yes	1.00	**8.15**
		$U_{16} - L_{16}$			-----	-701.46	-109	111	-572	542	-256	-160	-243	-146	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.117	0.93	Yes	0.752	0.243	1.00	Yes	1.00	**8.67**
		$U_{17} - L_{17}$			-----	-636.92	-122	132	-542	536	-192	-52	-136	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.096	0.89	Yes	0.741	0.252	1.00	Yes	1.00	**7.96**
		$U_{18} - L_{18}$			-----	-575.17	-78	113	-496	507	-186	-46	-17	33	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.092	0.86	Yes	0.733	0.260	1.00	Yes	1.00	**7.88**
		$U_{19} - L_{19}$			-----	-464.59	-22	33	-316	300	-161	-9	-116	29	-----	-----	-----	-----	-----	-----	-----	-----	0.699	0.099	0.8	Yes	0.694	0.304	1.00	Yes	1.00	**7.27**
		$U_{20} - L_{20}$			41.90	-367.67	19	-11	-252	253	-154	26	-91	61	0.068	0.329	0.40	Yes	0.038	0.181	0.22	Yes	0.754	0.113	0.87	Yes	0.704	0.289	1.00	Yes	1.00	**7.25**
		$U_{21} - L_{21}$			73.05	-318.13	61	-48	-241	249	-128	29	-49	69	0.131	0.356	0.49	Yes	0.072	0.196	0.27	Yes	0.719	0.121	0.85	Yes	0.673	0.319	1.00	Yes	1.00	**7.53**
		$U_{22} - L_{22}$			118.74	-----	465	-498	-555	565	-209	-82	-72	34	0.214	0.782	1.00	Yes	0.117	0.430	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**28.98**
		$U_{23} - L_{23}$			151.81	-320.99	243	-249	-110	98	16	-84	-110	-38	0.273	0.350	0.63	Yes	0.150	0.193	0.35	Yes	0.725	0.125	0.86	Yes	0.679	0.318	1.00	Yes	1.00	**7.87**
		$U_{24} - L_{24}$			71.31	-369.05	249	-254	-41	31	-117	-98	-74	-62	0.116	0.320	0.44	Yes	0.064	0.176	0.25	Yes	0.757	0.113	0.87	Yes	0.707	0.290	1.00	Yes	1.00	**7.80**
		$U_{25} - L_{25}$			-----	-469.13	302	-298	14	-31	-106	-57	-84	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.087	0.8	Yes	0.701	0.291	1.00	Yes	1.00	**6.71**
		$U_{26} - L_{26}$			-----	-566.30	501	-526	66	-104	20	0	-68	42	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.079	0.84	Yes	0.722	0.269	1.00	Yes	1.00	**7.23**
		$U_{27} - L_{27}$			-----	-627.75	559	-562	128	-153	-9	26	-41	-164	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.087	0.87	Yes	0.731	0.261	1.00	Yes	1.00	**7.62**
		$U_{28} - L_{28}$			-----	-707.43	556	-554	114	-142	2	61	-17	68	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.070	0.89	Yes	0.758	0.236	1.00	Yes	1.00	**7.58**
		$U_{29} - L_{29}$			-----	-714.80	641	-625	207	-212	57	55	-113	27	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.121	0.92	Yes	0.689	0.307	1.00	Yes	1.00	**7.61**
		$U_{30} - L_{30}$			-----	-1270.27	688	-679	-634	568	-122	-136	-155	91	-----	-----	-----	-----	-----	-----	-----	-----	0.929	0.064	1	Yes	0.842	0.122	0.97	Yes	1.00	**11.70**
		$U_{31} - L_{31}$			-----	-742.88	-180	176	-588	563	-118	-59	-181	-96	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.146	0.98	Yes	0.716	0.282	1.00	Yes	1.00	**8.26**
		$U_{32} - L_{32}$			-----	-889.93	-112	118	-518	509	-259	-96	-271	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.127	0.99	Yes	0.771	0.222	1.00	Yes	1.00	**9.74**
		$U_{33} - L_{33}$			-----	-827.84	-134	137	-501	499	-189	-37	-7	34	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.090	0.93	Yes	0.774	0.221	1.00	Yes	1.00	**9.69**
		$U_{34} - L_{34}$			-----	-791.30	-81	111	-576	573	-221	-21	-90	72	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.092	0.88	Yes	0.740	0.254	1.00	Yes	1.00	**10.70**
		$U_{35} - L_{35}$			-----	-691.49	-64	98	-610	602	-188	77	-34	153	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.077	0.85	Yes	0.741	0.259	1.00	Yes	1.00	**10.16**
		$U_{36} - L_{36}$			-----	-468.02	-26	51	-362	366	-129	76	11	137	-----	-----	-----	-----	-----	-----	-----	-----	0.679	0.097	0.78	Yes	0.674	0.320	1.00	Yes	1.00	**7.26**
		$U_{37} - L_{37}$			46.53	-8.50	256	-274	-627	679	-133	-35	-102	90	0.084	0.907	1.00	Yes	0.046	0.499	0.55	Yes	0.019	0.255	0.28	Yes	0.018	0.868	0.89	Yes	1.00	**28.75**
		$U_{38} - L_{38}$			354.67	-136.79	149	-145	-238	240	-133	-155	-108	-93	0.638	0.352	1.00	Yes	0.351	0.194	0.55	Yes	0.308	0.125	0.44	Yes	0.289	0.307	0.60	Yes	1.00	**8.21**
		$U_{39} - L_{39}$			257.38	-317.29	238	-254	-198	185	-114	-158	-111	-108	0.463	0.371	0.84	Yes	0.255	0.204	0.46	Yes	0.717	0.170	0.89	Yes	0.671	0.325	1.00	Yes	1.00	**10.39**
		$U_{40} - L_{40}$			109.70	-337.66	219	-219	-62	36	-123	-120	-93	-78	0.197	0.316	0.52	Yes	0.109	0.174	0.29	Yes	0.766	0.129	0.9	Yes	0.714	0.280	1.00	Yes	1.00	**7.08**
		$U_{41} - L_{41}$			-----	-486.72	245	-257	27	-50	40	-38	-22	46	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.085	0.92	Yes	0.763	0.234	1.00	Yes	1.00	**6.82**
		$U_{42} - L_{42}$			-----	-577.51	501	-503	107	-117	146	-33	-87	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.091	0.87	Yes	0.736	0.257	1.00	Yes	1.00	**7.61**
		$U_{43} - L_{43}$			-----	-708.22	523	-546	144	-161	754	76	-33	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.172	0.99	Yes	0.759	0.232	1.00	Yes	1.00	**7.23**
		$U_{44} - L_{44}$			-----	-635.33	476	-569	197	-244	928	157	-23	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.234	1	Yes	0.681	0.241	0.93	Yes	1.00	**5.41**
	Structure 3	$U_0 - L_0$			-----	-534.56	-103	167	-408	462	-245	-32	-1099	-144	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.286	1	Yes	0.622	0.214	0.84	Yes	1.00	**5.68**
		$U_1 - L_1$			-----	-650.67	-109	117	-514	509	4	-75	49	25	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.079	0.9	Yes	0.757	0.239	1.00	Yes	1.00	**8.67**
		$U_2 - L_2$			-----	-524.99	-92	97	-460	454	82	31	-85	57	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.081	0.85	Yes	0.730	0.260	1.00	Yes	1.00	**7.42**
		$U_3 - L_3$			-----	-433.83	-22	42	-238	244	-122	62	4	168	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.118	0.93	Yes	0.748	0.248	1.00	Yes	1.00	**6.84**
		$U_4 - L_4$			76.43	-325.52	42	-25	-235	240	-174	83	-31	177	0.137	0.358	0.50	Yes	0.076	0.197	0.28	Yes	0.734	0.105	0.84	Yes	0.689	0.306	1.00	Yes	1.00	**7.40**
		$U_5 - L_5$			231.34	-291.73	154	-152	-284	292	-153	71	-148	132	0.416	0.418	0.84	Yes	0.229	0.230	0.46	Yes	0.654	0.145	0.8	Yes	0.617	0.374	1.00	Yes	1.00	**9.44**
		$U_6 - L_6$			79.01	-170.13	483	-494	-389	387	-229	-98	-138	114	0.142	0.698	0.84	Yes	0.078	0.384	0.47	Yes	0.380	0.218	0.6	Yes	0.360	0.631	1.00	Yes	1.00	**21.33**
		$U_7 - L_7$			10.98	-370.51	232	-246	-22	9	-185	-167	-179	-139	0.018	0.329	0.35	Yes	0.010	0.181	0.20	Yes	0.749	0.143	0.9	Yes	0.710	0.281	1.00	Yes	1.00	**5.85**
		$U_8 - L_8$			-----	-515.66	334	-335	8	-14	9	-93	-164	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.115	0.86	Yes	0.707	0.286	1.00	Yes	1.00	**7.35**
		$U_9 - L_9$			-----	-655.95	388	-490	38	-104	-15	-51	-106	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.091	0.88	Yes	0.763	0.227	1.00	Yes	1.00	**8.26**
		$U_{10} - L_{10}$			-----	-777.75	401	-431	74	-100	61	102	-31	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.076	0.89	Yes	0.767	0.223	1.00	Yes	1.00	**9.27**
		$U_{11} - L_{11}$			-----	-645.26	415	-470	182	-211	91	119	-51	62	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.099	0.87	Yes	0.729	0.261	1.00	Yes	1.00	**5.15**
		$U_{12} - L_{12}$			-----	-1285.12	438	-566	-499	542	90	53	35	88	-----	-----	-----	-----	-----	-----	-----	-----	0.928	0.046	0.98	Yes	0.891	0.105	1.00	Yes	1.00	**9.51**
		$U_{13} - L_{13}$			-----	-457.49	-104	116	-274	293	-141	-95	-153	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.139	0.91	Yes	0.706	0.289	1.00	Yes	1.00	**4.53**
		$U_{14} - L_{14}$			-----	-514.10	-36	54	-296	295	-198	-133	-227	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.130	0.91	Yes	0.737	0.259	1.00	Yes	1.00	**7.50**
		$U_{15} - L_{15}$			-----	-418.88	-15	24	-260	267	-173	-48	-118	22	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.115	0.88	Yes	0.723	0.271	1.00	Yes	1.00	**7.35**
		$U_{16} - L_{16}$			-----	-167.43	144	-116	-498	478	-297	-182	52	143	-----	-----	-----	-----	-----	-----	-----	-----	0.368	0.225	0.6	Yes	0.354	0.636	1.00	Yes	1.00	**17.27**
		$U_{17} - L_{17}$			294.35	-174.97	163	-174	-293	304	-251	-197	-160	-70	0.529	0.461	1.00	Yes	0.291	0.254	0.55	Yes	0.383	0.159	0.55	Yes	0.370	0.389	0.76	Yes	1.00	**8.73**
		$U_{18} - L_{18}$			148.98	-289.84	263	-300	-157	162	88	-55	-62	-14	0.268	0.409	0.68	Yes	0.147	0.225	0.38	Yes	0.633	0.119	0.76	Yes	0.613	0.384	1.00	Yes	1.00	**9.67**
		$U_{19} - L_{19}$			9.59	-328.66	231	-234	-25	13	50	-51	-164	-85	0.017	0.347	0.37	Yes	0.009	0.191	0.21	Yes	0.718	0.140	0.86	Yes	0.695	0.299	1.00	Yes	1.00	**6.31**
		$U_{20} - L_{20}$			-----	-335.12	182	-227	47	-71	356	114	-102	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.198	0.95	Yes	0.709	0.290	1.00	Yes	1.00	**3.15**

Operating Loads - 2F1

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

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Diagonals	Structure 1	U_0 - L_1			379.56	-----	11	26	-244	94	-154	45	-823	-201	0.498	0.493	1.00	Yes	0.301	0.271	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.55**
		U_1 - L_2			434.92	-----	11	-32	-94	-11	-333	-185	-134	-180	0.782	0.216	1.00	Yes	0.430	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.69**
		U_2 - L_3			374.39	-219.85	45	-23	-161	-70	86	54	-417	-394	0.673	0.326	1.00	Yes	0.370	0.179	0.55	Yes	0.506	0.366	0.88	Yes	0.465	0.205	0.68	Yes	1.00	**17.61**
		U_3 - L_4			-----	-364.10	45	-60	-62	-67	-210	-124	-287	-224	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.162	1	Yes	0.770	0.086	0.86	Yes	1.00	**8.40**
		U_4 - L_4			524.38	-----	9	-13	-180	-36	104	25	-154	-200	0.769	0.229	1.00	Yes	0.423	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.29**
		U_4 - L_5			690.17	-----	17	27	-265	143	158	83	37	-52	0.816	0.180	1.00	Yes	0.449	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.32**
		U_5 - L_6			622.51	-----	-72	99	-343	213	328	206	274	113	0.736	0.255	1.00	Yes	0.405	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.83**
		U_6 - L_7			655.79	-----	28	167	-114	291	295	232	309	198	0.775	0.222	1.00	Yes	0.426	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.34**
		U_8 - L_9			1012.91	-----	99	214	-124	343	234	237	269	278	0.810	0.189	1.00	Yes	0.502	0.105	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.29**
		U_9 - L_{10}			949.78	-----	-63	108	-461	210	91	113	218	141	0.759	0.233	1.00	Yes	0.470	0.130	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.80**
		U_{10} - L_{11}			1004.86	-----	-49	116	-286	134	9	0	-85	-143	0.849	0.151	1.00	Yes	0.525	0.084	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.95**
		U_{11} - L_{12}			832.03	-----	-64	56	-285	60	-136	-103	-274	-246	0.823	0.173	1.00	Yes	0.453	0.095	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.21**
		U_{12} - L_{13}			624.90	-----	-45	8	-189	119	-309	-251	-336	-303	0.762	0.230	1.00	Yes	0.479	0.130	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.61**
		U_{13} - L_{14}			430.00	-9.15	1	-28	-100	19	-263	-286	-291	-312	0.773	0.219	1.00	Yes	0.425	0.120	0.55	Yes	0.021	0.172	0.2	Yes	0.019	0.128	0.15	Yes	1.00	**6.35**
		U_{15} - L_{16}			129.39	-332.79	72	-108	-92	-36	-189	-296	-261	-304	0.233	0.226	0.46	Yes	0.128	0.124	0.26	Yes	0.780	0.211	1	Yes	0.704	0.138	0.85	Yes	1.00	**8.28**
		U_{16} - L_{15}			420.80	-170.09	31	-64	-123	81	-175	-174	-196	-275	0.757	0.237	1.00	Yes	0.416	0.131	0.55	Yes	0.403	0.181	0.59	Yes	0.360	0.158	0.52	Yes	1.00	**7.84**
		U_{17} - L_{18}			540.72	-----	-11	-25	-155	92	-170	-137	-146	-206	0.793	0.205	1.00	Yes	0.436	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.09**
		U_{18} - L_{17}			623.38	-----	-96	59	-387	217	4	-43	-230	-154	0.737	0.261	1.00	Yes	0.405	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.70**
		U_{19} - L_{18}			679.45	-----	-81	60	-388	226	-133	-25	-388	-229	0.736	0.262	1.00	Yes	0.405	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.96**
		U_{20} - L_{19}			562.14	-----	-116	113	-445	325	-56	170	-961	35	0.609	0.386	1.00	Yes	0.335	0.212	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.50**
	Structure 2	U_0 - L_1			612.15	-----	-65	75	-468	365	-121	53	-1125	-250	0.606	0.385	1.00	Yes	0.333	0.212	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.05**
		U_1 - L_2			789.73	-----	-92	62	-409	290	36	8	-62	-163	0.781	0.214	1.00	Yes	0.430	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.91**
		U_2 - L_3			649.48	-----	-71	54	-328	241	-79	-176	-213	-171	0.768	0.225	1.00	Yes	0.422	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.95**
		U_3 - L_4			575.73	-----	-34	17	-176	123	-235	-213	-309	-271	0.767	0.226	1.00	Yes	0.422	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.90**
		U_4 - L_5			414.77	-90.20	21	-42	-126	77	-261	-193	-291	-249	0.746	0.245	1.00	Yes	0.410	0.135	0.55	Yes	0.223	0.178	0.41	Yes	0.191	0.161	0.36	Yes	1.00	**7.00**
		U_5 - L_6			404.78	-260.16	79	-101	-113	46	-327	-224	-432	-216	0.728	0.270	1.00	Yes	0.400	0.148	0.55	Yes	0.614	0.254	0.87	Yes	0.550	0.145	0.70	Yes	1.00	**9.12**
		U_6 - L_7			33.18	-373.60	68	-101	-58	-23	-294	-257	-314	-220	0.054	0.197	0.26	Yes	0.030	0.108	0.14	Yes	0.800	0.200	1	Yes	0.716	0.115	0.84	Yes	1.00	**6.30**
		U_8 - L_7			549.12	-95.24	23	-64	-250	83	-192	-275	-232	-354	0.700	0.296	1.00	Yes	0.441	0.167	0.61	Yes	0.158	0.155	0.32	Yes	0.143	0.224	0.37	Yes	1.00	**11.17**
		U_8 - L_9			727.62	-----	-76	11	-340	227	-92	-139	-128	-185	0.788	0.204	1.00	Yes	0.433	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.11**
		U_{10} - L_9			810.96	-----	-66	18	-379	196	-34	-69	-58	-144	0.802	0.197	1.00	Yes	0.441	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.26**
		U_{11} - L_{10}			875.81	-----	-96	68	-415	250	56	26	-43	-130	0.798	0.194	1.00	Yes	0.439	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.98**
		U_{12} - L_{11}			860.71	-----	-91	119	-389	325	329	183	123	3	0.784	0.210	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.18**
		U_{13} - L_{12}			760.50	-----	-182	174	-444	374	267	150	271	107	0.752	0.246	1.00	Yes	0.414	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.18**
		U_{14} - L_{13}			758.00	-----	-7	219	-275	428	250	178	283	117	0.750	0.241	1.00	Yes	0.412	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.84**
		U_{14} - L_{15}			643.67	-----	27	156	-222	354	168	115	133	148	0.761	0.231	1.00	Yes	0.419	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.31**
		U_{15} - L_{16}			629.56	-----	-101	106	-370	318	53	69	237	-35	0.744	0.252	1.00	Yes	0.409	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.51**
		U_{16} - L_{17}			745.01	-----	-71	105	-353	337	68	44	10	-9	0.807	0.191	1.00	Yes	0.444	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.45**
		U_{17} - L_{18}			679.51	-----	-59	72	-304	266	-55	-12	-107	-31	0.803	0.191	1.00	Yes	0.442	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.23**
		U_{18} - L_{19}			670.47	-----	-33	25	-314	234	-152	-104	-162	-93	0.793	0.207	1.00	Yes	0.436	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.78**
		U_{19} - L_{20}			609.65	-----	-6	-1	-199	150	-200	-125	-205	-170	0.777	0.220	1.00	Yes	0.428	0.123	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.53**
		U_{20} - L_{21}			432.58	-21.59	6	-14	-116	89	-177	-130	-223	-116	0.778	0.213	1.00	Yes	0.428	0.117	0.55	Yes	0.051	0.106	0.16	Yes	0.046	0.148	0.20	Yes	1.00	**6.27**
		U_{21} - L_{22}			406.11	-286.00	52	-84	-143	26	-277	-251	-279	-184	0.730	0.264	1.00	Yes	0.402	0.145	0.55	Yes	0.676	0.233	0.91	Yes	0.605	0.183	0.79	Yes	1.00	**10.88**
		U_{23} - L_{22}			260.56	-325.10	80	-101	-138	10	-120	-225	-202	-253	0.469	0.249	0.72	Yes	0.258	0.137	0.40	Yes	0.774	0.223	1	Yes	0.688	0.176	0.87	Yes	1.00	**10.96**
		U_{24} - L_{23}			444.68	-91.27	26	-37	-126	93	-47	-77	-65	-112	0.800	0.193	1.00	Yes	0.440	0.106	0.55	Yes	0.218	0.061	0.28	Yes	0.193	0.161	0.36	Yes	1.00	**8.14**
		U_{25} - L_{24}			628.49	-6.82	12	-24	-200	171	6	-43	13	-87	0.801	0.196	1.00	Yes	0.441	0.109	0.56	Yes	0.011	0.056	0.07	Yes	0.010	0.178	0.19	Yes	1.00	**8.26**
		U_{26} - L_{25}			659.33	-----	-5	-2	-354	229	27	11	-9	-107	0.779	0.220	1.00	Yes	0.429	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.00**
		U_{27} - L_{26}			655.73	-----	-49	65	-324	265	192	94	113	-7	0.775	0.218	1.00	Yes	0.426	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.97**
		U_{28} - L_{27}			721.47	-----	-57	97	-354	343	190	135	183	51	0.781	0.212	1.00	Yes	0.430	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.54**
		U_{29} - L_{28}			616.80	-----	-124	118	-405	331	216	110	189	71	0.729	0.268	1.00	Yes	0.401	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.93**
		U_{30} - L_{29}			637.68	-----	13	160	-221	355	220	148	220	117	0.754	0.241	1.00	Yes	0.415	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.31**
		U_{30} - L_{31}			779.45	-----	25	203	-288	445	138	107	118	63	0.771	0.227	1.00	Yes	0.424	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.32**
		U_{31} - L_{32}			785.04	-----	-134	132	-454	376	37	48	51	35	0.777	0.218	1.00	Yes	0.427	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.10**
		U_{32} - L_{33}			890.87	-----	-87	113	-368	319	-28	-12	-165	-33	0.812	0.179	1.00	Yes	0.446	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.15**
		U_{33} - L_{34}			875.54	-----	-84	129	-379	246	-71	-35	-234	-154	0.798	0.193	1.00	Yes	0.439	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.71**
		U_{34} - L_{35}			822.99	-----	-77	45	-307	207	-260	-213	-272	-275	0.814	0.184	1.00	Yes	0.448	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.78**
		U_{35} - L_{36}			709.99	-----	-79	27	-316	210	-339	-248	-383	-239	0.769	0.225	1.00	Yes	0.423	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.17**
		U_{36} - L_{37}			576.80	-14.34	-11	-25	-215	101	-334	-322	-305	-268	0.735	0.261	1.00	Yes	0.463	0.147	0.62	Yes	0.024	0.144	0.17	Yes	0.022	0.193	0.22	Yes	1.00	**8.79**
		U_{38} - L_{37}			-----	-386.20	83	-105	-44	-33	-141	-226	-189	-249	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.161	1	Yes	0.740	0.120	0.86	Yes	1.00	**5.88**
		U_{39} - L_{38}			287.25	-344.61	92	-121	-89	30	-189	-181	-190	-213	0.517	0.216	0.74	Yes	0.284	0.119	0.41	Yes	0.821	0.173	1	Yes	0.729	0.154	0.89	Yes	1.00	**8.72**
		U_{40} - L_{39}			435.50	-167.36	46	-68	-128	88	-78	-106	-115	-173	0.783	0.214	1.00	Yes	0.431	0.118	0.55	Yes	0.401	0.141	0.55	Yes	0.354	0.164	0.52	Yes	1.00	**8.10**
		U_{41} - L_{40}			601.32	-----	-16	-20	-181	130	-82	-61	-60	-139	0.802	0.194	1.00	Yes	0.441	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.45**
		U_{42} - L_{41}			641.36	-----	-74	50	-363	246	1	-3	-168	-143	0.758	0.236	1.00	Yes	0.417	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.40**
		U_{43} - L_{42}			787.65	-----	-94	75	-403	293	-144	-39	-137	-184	0.779	0.215	1.00	Yes	0.429	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.22**
		U_{44} - L_{43}			708.15	-----	-140	142	-428	367	-20	34	-645	-210	0.701	0.295	1.00	Yes	0.385	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.43**
	Structure 3	U_0 - L_1			578.00	-----	-70	72	-428	304	-132	48	-895	-245	0.626	0.366	1.00	Yes	0.344	0.201	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.46**
		U_1 - L_2			722.28	-----	-92	58	-363	252	35	12	-68	-152	0.782	0.211	1.00	Yes	0.430	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.66**
		U_2 - L_3			645.52	-----	-81	51	-330	224	-74	-166	-238	-254	0.763	0.233	1.00	Yes	0.420	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.79**
		U_3 - L_4			525.04	-----	-16	-7	-144	82	-268	-207	-324	-249	0.770	0.222	1.00	Yes	0.423	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.09**
		U_4 - L_5			408.18	-140.77	17	-47	-119	78	-321	-224	-370	-290	0.734	0.260	1.00	Yes	0.404	0.143	0.55	Yes	0.334	0.205	0.54	Yes	0.298	0.152	0.46	Yes	1.00	**7.25**
		U_5 - L_6			368.14	-305.77	61	-101	-100	-16	-368	-323	-444	-356	0.662	0.258	0.93	Yes	0.364	0.142	0.51	Yes	0.716	0.280	1	Yes	0.647	0.129	0.78	Yes	1.00	**8.78**
		U_7 - L_6			388.62	-177.42	36	-67	-156	-4	-142	-304	-184	-324	0.699	0.293	1.00	Yes	0.384	0.161	0.55	Yes	0.412	0.216	0.63	Yes	0.375	0.199	0.58	Yes	1.00	**11.87**
		U_8 - L_7			649.79	-----	-26	-13	-188	145	-122	-155	-152	-215	0.792	0.206	1.00	Yes	0.498	0.116	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.37**
		U_8 - L_9			808.01	-----	-52	-18	-331	35	91	-7	-127	-249	0.799	0.191	1.00	Yes	0.440	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.85**
		U_{10} - L_9			925.46	-----	-30	27	-350	88	391	191	74	-46	0.782	0.213	1.00	Yes	0.484	0.120	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.59**
		U_{11} - L_{10}			963.49	-----	-89	107	-410	190	316	209	251	102	0.770	0.223	1.00	Yes	0.477	0.125	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.51**
		U_{12} - L_{11}			995.11	-----	116	206	-131	346	348	314	301	165	0.796	0.198	1.00	Yes	0.493	0.111	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.64**
		U_{12} - L_{13}			677.13	-----	33	161	-116	279	193	163	177	180	0.801	0.194	1.00	Yes	0.440	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.25**
		U_{13} - L_{14}			631.96	-----	-56	96	-383	231	129	162	143	99	0.747	0.248	1.00	Yes	0.411	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.56**
		U_{14} - L_{15}			724.64	-----	-8	42	-204	169	52	18	-74	-115	0.857	0.138	1.00	Yes	0.471	0.076	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.27**
		U_{15} - L_{16}			218.70	-310.75	26	-89	-449	-125	-285	-243	-755	-602	0.321	0.631	0.96	Yes	0.176	0.347	0.53	Yes	0.583	0.384	0.97	Yes	0.536	0.456	1.00	Yes	1.00	**33.73**
		U_{17} - L_{16}			-----	-406.21	59	-66	-64	-66	-42	-107	-192	-221	-----	-----	-----	-----	-----	-----	-----	-----	0.929	0.071	1	Yes	0.860	0.084	0.95	Yes	1.00	**7.88**
		U_{18} - L_{17}			340.22	-341.16	50	-87	-141	-68	-255	-83	-333	-344	0.612	0.280	0.90	Yes	0.337	0.154	0.50	Yes	0.785	0.210	1	Yes	0.722	0.180	0.91	Yes	1.00	**14.79**
		U_{19} - L_{18}			403.50	-50.04	27	-48	-131	-41	-100	-104	-337	-227	0.726	0.264	1.00	Yes	0.399	0.145	0.55	Yes	0.115	0.143	0.26	Yes	0.106	0.167	0.28	Yes	1.00	**10.60**
		U_{20} - L_{19}			279.47	-----	20	3	-282	142	-58	44	-1180	-80	0.367	0.627	1.00	Yes	0.221	0.345	0.57	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.68**

Operating Loads - 2F1

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

					Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression											
		Vehicle	Pedestrian	Max.	Max.	Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
DL Factor:		1.300	1.300	Tension	Comp.	Start	End	Start	End	Start	End	Start	End																		
LL Factor:		1.300	1.300	(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
South Truss - Upper Chord	Structure 1	U_0 - U_1		-----	-541.74	610	-575	-1112	-367	372	-466	640	-723	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.180	0.92	Yes	0.731	0.264	1.00	Yes	1.00	**10.93**
		U_1 - U_2		-----	-552.51	-76	-108	-563	-566	-49	20	299	-398	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.246	1	Yes	0.745	0.135	0.88	Yes	1.00	**6.12**
		U_2 - U_3		173.44	-531.61	-95	304	-680	-222	-106	119	150	-333	0.199	0.218	0.42	Yes	0.134	0.143	0.28	Yes	0.723	0.270	1	Yes	0.717	0.162	0.88	Yes	1.00	**5.85**
		U_3 - U_4		443.24	-536.28	124	375	-690	-368	-205	-4	101	-267	0.508	0.209	0.72	Yes	0.349	0.143	0.50	Yes	0.730	0.270	1	Yes	0.723	0.164	0.89	Yes	1.00	**7.39**
		U_4 - U_5		443.76	-528.07	164	369	-857	-175	-80	-26	-233	-178	0.509	0.243	0.76	Yes	0.349	0.167	0.52	Yes	0.719	0.280	1	Yes	0.712	0.204	0.92	Yes	1.00	**7.32**
		U_5 - U_6		684.74	-221.85	271	499	-608	306	73	133	-107	-374	0.785	0.208	1.00	Yes	0.529	0.136	0.67	Yes	0.302	0.174	0.48	Yes	0.299	0.144	0.45	Yes	1.00	**7.81**
		U_6 - U_7		889.34	-----	405	226	-139	-79	337	278	-425	207	0.850	0.144	1.00	Yes	0.594	0.099	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.52**
		U_7 - U_8		920.11	-----	202	905	-1006	1574	1213	1031	-544	57	0.638	0.362	1.00	Yes	0.445	0.248	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.70**
		U_8 - U_9		687.61	-----	2073	-987	720	-243	669	139	372	480	0.563	0.430	1.00	Yes	0.385	0.292	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.28**
		U_9 - U_{10}		-----	-477.23	383	-470	-306	-818	323	-255	1713	-1236	-----	-----	-----	-----	-----	-----	-----	-----	0.614	0.382	1	Yes	0.609	0.183	0.80	Yes	1.00	**20.84**
		U_{10} - U_{11}		133.48	-624.17	281	-144	-80	-717	42	124	792	-611	0.145	0.288	0.44	Yes	0.096	0.187	0.29	Yes	0.804	0.188	1	Yes	0.796	0.161	0.96	Yes	1.00	**9.53**
		U_{11} - U_{12}		-----	-929.93	180	-195	-166	-674	27	118	404	-149	-----	-----	-----	-----	-----	-----	-----	-----	0.880	0.111	1	Yes	0.872	0.112	0.99	Yes	1.00	**4.86**
		U_{12} - U_{13}		-----	-1254.64	-50	-271	-486	-732	101	8	386	-316	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.142	1	Yes	0.838	0.101	0.94	Yes	1.00	**4.61**
		U_{13} - U_{14}		-----	-1433.96	-191	-506	-753	-1181	-24	12	172	-270	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.167	1	Yes	0.822	0.130	0.96	Yes	1.00	**4.75**
		U_{14} - U_{15}		-----	-1356.87	-416	-297	-1247	-656	59	-282	-171	-397	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.212	1	Yes	0.778	0.138	0.92	Yes	1.00	**4.06**
		U_{15} - U_{16}		-----	-1440.88	-201	-474	-921	-899	-134	-479	-247	-170	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.156	1	Yes	0.826	0.102	0.93	Yes	1.00	**4.84**
		U_{16} - U_{17}		-----	-1333.11	-409	-210	-1239	-498	-213	-333	-123	-275	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.219	1	Yes	0.764	0.137	0.91	Yes	1.00	**5.14**
		U_{17} - U_{18}		-----	-1013.87	-261	-56	-795	-5	-142	72	-117	80	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.192	1	Yes	0.793	0.129	0.93	Yes	1.00	**5.08**
		U_{18} - U_{19}		-----	-665.33	-253	13	-643	84	374	-139	423	-294	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.241	1	Yes	0.749	0.129	0.88	Yes	1.00	**4.68**
		U_{19} - U_{20}		-----	-587.98	-217	-60	-1095	316	-42	-112	-218	-300	-----	-----	-----	-----	-----	-----	-----	-----	0.668	0.331	1	Yes	0.662	0.220	0.89	Yes	1.00	**13.95**
	Structure 2	U_0 - U_1		-----	-603.71	1650	-1429	-1016	-460	775	-260	887	-367	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.233	0.96	Yes	0.713	0.280	1.00	Yes	1.00	**18.01**
		U_1 - U_2		-----	-816.87	-84	-430	-491	-985	90	44	533	-388	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.197	1	Yes	0.788	0.150	0.94	Yes	1.00	**6.66**
		U_2 - U_3		-----	-1210.74	-12	-801	-513	-990	-36	-433	530	-470	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.132	1	Yes	0.859	0.101	0.97	Yes	1.00	**6.31**
		U_3 - U_4		-----	-1385.38	-530	-533	-1242	-1328	-112	-23	181	-359	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.198	1	Yes	0.789	0.118	0.91	Yes	1.00	**5.45**
		U_4 - U_5		-----	-1506.47	-587	-564	-1513	-1537	-113	-81	92	-515	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.215	1	Yes	0.773	0.127	0.91	Yes	1.00	**4.95**
		U_5 - U_6		-----	-1494.70	-591	-42	-1655	-792	-183	-40	27	-407	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.220	1	Yes	0.767	0.137	0.91	Yes	1.00	**4.89**
		U_6 - U_7		-----	-1393.97	-331	-215	-1315	-1260	-149	-90	-114	-326	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.198	1	Yes	0.794	0.117	0.92	Yes	1.00	**5.29**
		U_7 - U_8		-----	-1354.37	-361	-225	-1598	-949	-75	-158	-295	-281	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.219	1	Yes	0.771	0.142	0.92	Yes	1.00	**5.05**
		U_8 - U_9		-----	-1108.40	-400	163	-1440	-364	-2	-198	-459	-400	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.242	1	Yes	0.752	0.153	0.91	Yes	1.00	**5.23**
		U_9 - U_{10}		214.07	-837.70	-141	479	-1349	-21	-125	-231	-465	-590	0.157	0.228	0.39	Yes	0.106	0.154	0.27	Yes	0.727	0.270	1	Yes	0.723	0.164	0.89	Yes	1.00	**6.62**
		U_{10} - U_{11}		776.22	-606.60	282	584	-1397	-275	-154	-107	-1039	-320	0.656	0.324	0.98	Yes	0.446	0.213	0.66	Yes	0.606	0.385	1	Yes	0.603	0.197	0.80	Yes	1.00	**10.48**
		U_{11} - U_{12}		908.70	-----	170	642	-1120	410	12	17	-427	-587	0.768	0.230	1.00	Yes	0.516	0.153	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.55**
		U_{12} - U_{13}		1300.59	-----	451	58	-501	-249	343	419	-539	-3	0.878	0.114	1.00	Yes	0.626	0.079	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.56**
		U_{13} - U_{14}		1117.59	-----	61	2067	-2095	3607	1352	1678	-259	871	0.550	0.448	1.00	Yes	0.389	0.296	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.45**
		U_{14} - U_{15}		1108.64	-----	4093	-1354	1716	-173	758	180	608	1010	0.545	0.448	1.00	Yes	0.386	0.294	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.58**
		U_{15} - U_{16}		1295.90	-----	235	69	-1064	-495	471	270	1091	-109	0.783	0.213	1.00	Yes	0.557	0.146	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**16.62**
		U_{16} - U_{17}		792.15	-418.54	1759	-1243	-925	-1715	94	-378	1831	-1808	0.584	0.413	1.00	Yes	0.388	0.272	0.66	Yes	0.365	0.302	0.67	Yes	0.363	0.221	0.59	Yes	1.00	**28.94**
		U_{17} - U_{18}		753.64	-260.74	489	261	-295	-706	-58	288	840	-418	0.757	0.243	1.00	Yes	0.504	0.160	0.67	Yes	0.310	0.171	0.49	Yes	0.308	0.120	0.43	Yes	1.00	**12.00**
		U_{18} - U_{19}		624.75	-683.27	624	186	-516	-757	3	170	981	-667	0.627	0.272	0.90	Yes	0.411	0.175	0.59	Yes	0.812	0.188	1	Yes	0.807	0.128	0.94	Yes	1.00	**14.42**
		U_{19} - U_{20}		416.47	-743.65	359	195	-674	-957	-43	167	639	-424	0.391	0.239	0.63	Yes	0.259	0.157	0.42	Yes	0.826	0.173	1	Yes	0.820	0.153	0.98	Yes	1.00	**9.18**
		U_{20} - U_{21}		255.78	-826.20	186	-68	-946	-541	12	29	550	-494	0.198	0.197	0.40	Yes	0.139	0.129	0.27	Yes	0.760	0.232	1	Yes	0.754	0.137	0.90	Yes	1.00	**8.79**
		U_{21} - U_{22}		81.68	-857.56	-76	-34	-854	-818	-175	-90	125	-223	0.063	0.148	0.22	Yes	0.045	0.099	0.15	Yes	0.788	0.206	1	Yes	0.783	0.124	0.91	Yes	1.00	**6.49**
		U_{22} - U_{23}		35.76	-810.64	-58	-108	-1187	-716	-48	-161	-180	-149	0.028	0.192	0.22	Yes	0.020	0.128	0.15	Yes	0.745	0.249	1	Yes	0.740	0.172	0.92	Yes	1.00	**5.58**
		U_{23} - U_{24}		74.54	-829.94	5	-38	-1060	-404	1	-82	-398	-264	0.058	0.197	0.26	Yes	0.040	0.128	0.17	Yes	0.763	0.235	1	Yes	0.757	0.154	0.92	Yes	1.00	**6.66**
		U_{24} - U_{25}		480.18	-726.91	259	389	-1129	-220	32	-50	-503	-188	0.450	0.249	0.70	Yes	0.298	0.163	0.47	Yes	0.807	0.185	1	Yes	0.802	0.181	0.99	Yes	1.00	**10.54**
		U_{25} - U_{26}		688.47	-439.77	218	597	-1125	-13	32	-20	-777	-179	0.691	0.305	1.00	Yes	0.453	0.195	0.65	Yes	0.523	0.251	0.78	Yes	0.519	0.191	0.72	Yes	1.00	**11.21**
		U_{26} - U_{27}		766.13	-25.57	274	448	-798	213	6	12	-622	-193	0.769	0.227	1.00	Yes	0.512	0.150	0.67	Yes	0.030	0.215	0.25	Yes	0.030	0.135	0.17	Yes	1.00	**8.94**
		U_{27} - U_{28}		1127.60	-----	223	672	-978	624	260	283	-386	-385	0.831	0.163	1.00	Yes	0.553	0.108	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.28**
		U_{28} - U_{29}		1164.03	-----	860	200	-1533	-1050	489	1073	-1435	473	0.704	0.296	1.00	Yes	0.501	0.202	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**24.42**
		U_{29} - U_{30}		998.35	-----	456	1213	-2438	3815	1847	2177	-435	686	0.491	0.502	1.00	Yes	0.348	0.331	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**22.99**
		U_{30} - U_{31}		1029.01	-----	4482	-2041	1815	-436	819	-184	947	1126	0.506	0.492	1.00	Yes	0.358	0.323	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.16**
		U_{31} - U_{32}		1222.38	-----	72	352	-797	-512	252	431	756	-392	0.825	0.172	1.00	Yes	0.588	0.119	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.54**
		U_{32} - U_{33}		-----	-725.13	984	-1158	-660	-1458	281	-763	2132	-1746	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.270	1	Yes	0.721	0.206	0.93	Yes	1.00	**28.99**
		U_{33} - U_{34}		731.64	-845.30	532	214	-375	-1078	-18	261	780	-279	0.618	0.247	0.87	Yes	0.421	0.163	0.59	Yes	0.845	0.136	0.99	Yes	0.840	0.152	1.00	Yes	1.00	**11.26**
		U_{34} - U_{35}		88.79	-985.25	379	-203	-319	-1163	52	42	482	-421	0.065	0.194	0.26	Yes	0.044	0.131	0.18	Yes	0.855	0.122	0.98	Yes	0.850	0.142	1.00	Yes	1.00	**6.30**
		U_{35} - U_{36}		-----	-1268.33	105	-467	-606	-1196	-14	100	467	-260	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.131	1	Yes	0.860	0.127	0.99	Yes	1.00	**5.57**
		U_{36} - U_{37}		-----	-1448.25	-290	-307	-1116	-1116	-14	-118	305	-299	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.166	1	Yes	0.825	0.099	0.93	Yes	1.00	**5.26**
		U_{37} - U_{38}		-----	-1411.65	-215	-445	-1344	-1220	-97	-197	-212	-298	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.190	1	Yes	0.804	0.120	0.93	Yes	1.00	**4.60**
		U_{38} - U_{39}		-----	-1608.65	-176	-640	-1355	-1420	13	-217	-458	-394	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.161	1	Yes	0.826	0.118	0.95	Yes	1.00	**5.10**
		U_{39} - U_{40}		-----	-1514.08	-623	-574	-1735	-990	-1	-108	-171	-80	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.211	1	Yes	0.777	0.144	0.93	Yes	1.00	**4.88**
		U_{40} - U_{41}		-----	-1361.61	-539	-509	-1600	-1061	75	-180	62	-61	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.213	1	Yes	0.775	0.143	0.92	Yes	1.00	**5.16**
		U_{41} - U_{42}		-----	-1106.20	-443	-121	-1429	-198	42	-8	-145	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.204	1	Yes	0.785	0.146	0.94	Yes	1.00	**5.82**
		U_{42} - U_{43}		-----	-797.17	-313	-31	-977	-39	236	-190	145	-363	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.215	1	Yes	0.769	0.148	0.92	Yes	1.00	**6.36**
		U_{43} - U_{44}		-----	-559.35	-227	-190	-1250	483	-96	-124	-365	-288	-----	-----	-----	-----	-----	-----	-----	-----	0.665	0.329	1	Yes	0.661	0.212	0.88	Yes	1.00	**12.69**
	Structure 3	U_0 - U_1		-----	-567.54	1492	-1166	-1126	-629	747	-437	1466	-773	-----	-----	-----	-----	-----	-----	-----	-----	0.644	0.348	1	Yes	0.639	0.300	0.94	Yes	1.00	**18.29**
		U_1 - U_2		-----	-715.62	-25	-507	-214	-715	43	-169	282	-369	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.179	1	Yes	0.805	0.144	0.95	Yes	1.00	**5.59**
		U_2 - U_3		-----	-1088.54	69	-453	-244	-584	-24	-463	565	-506	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.131	1	Yes	0.852	0.095	0.95	Yes	1.00	**5.78**
		U_3 - U_4		-----	-1410.96	-213	-399	-746	-1111	-151	-140	248	-397	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.173	1	Yes	0.809	0.123	0.94	Yes	1.00	**6.22**
		U_4 - U_5		-----	-1387.92	-444	-188	-1029	-500	-93	-81	155	-397	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.187	1	Yes	0.796	0.113	0.91	Yes	1.00	**4.94**
		U_5 - U_6		-----	-1388.39	-261	-388	-922	-1146	-183	-145	93	-351	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.190	1	Yes	0.796	0.126	0.93	Yes	1.00	**4.83**
		U_6 - U_7		-----	-1304.20	-519	-170	-1395	-504	-116	-299	-258	-417	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.242	1	Yes	0.748	0.154	0.91	Yes	1.00	**4.24**
		U_7 - U_8		-----	-1184.01	-246	23	-839	-366	-123	-302	-405	-342	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.196	1	Yes	0.791	0.116	0.91	Yes	1.00	**5.23**
		U_8 - U_9		-----	-804.71	-165	226	-779	-6	-201	-193	-446	-250	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.229	1	Yes	0.755	0.129	0.89	Yes	1.00	**4.53**
		U_9 - U_{10}		199.91	-536.40	-123	328	-911	203	-15	-40	-139	-369	0.217	0.263	0.49	Yes	0.144	0.169	0.32	Yes	0.691	0.309	1	Yes	0.684	0.204	0.89	Yes	1.00	**6.53**
		U_{10} - U_{11}		746.25	-144.69	316	264	-540	167	142	138	-381	-292	0.809	0.182	1.00	Yes	0.548	0.122	0.68	Yes	0.186	0.199	0.39	Yes	0.185	0.121	0.31	Yes	1.00	**10.89**
		U_{11} - U_{12}		765.51	-----	45	942	-1171	1369	1107	987	-956	58	0.627	0.366	1.00	Yes	0.429	0.248	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**16.11**
		U_{12} - U_{13}		779.83	-----	2682	-1313	825	-134	119	-452	364	460	0.540	0.453	1.00	Yes	0.377	0.309	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.11**
		U_{13} - U_{14}		858.46	-----	227	367	-206	-68	-41	431	682	-108	0.821	0.172	1.00	Yes	0.574	0.119	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.34**
		U_{14} - U_{15}		595.55	-434.83	435	207	-155	-578	-58	246	1043	-829	0.683	0.314	1.00	Yes	0.460	0.208	0.67	Yes	0.592	0.230	0.83	Yes	0.586	0.138	0.73	Yes	1.00	**11.70**
		U_{15} - U_{16}		346.92	-625.20	305	137	-391	-625	-63	156	457	116	0.398	0.226	0.63	Yes	0.273	0.154	0.43	Yes	0.851	0.122	0.98	Yes	0.843	0.149	1.00	Yes	1.00	**7.27**
		U_{16} - U_{17}		320.83	-632.38	332	46	-581	-487	135	-66	228	-219	0.368	0.177	0.55	Yes	0.252	0.121	0.38	Yes	0.860	0.078	0.94	Yes	0.853	0.138	1.00	Yes	1.00	**6.85**
		U_{17} - U_{18}		88.83	-635.34	227	-170	-602	-593	61	20	-139	-8	0.102	0.166	0.27	Yes	0.069	0.108	0.18	Yes	0.864	0.125	0.99	Yes	0.857	0.143	1.00	Yes	1.00	**5.63**
		U_{18} - U_{19}		-----	-538.11	-13	-74	-702	-202	197	-204	278	-325	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.267	1	Yes	0.726	0.167	0.90	Yes	1.00	**4.77**
		U_{19} - U_{20}		-----	-591.94	69	-247	-631	-225	-164	-108	-158	-184	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.189	1	Yes	0.798	0.150	0.95	Yes	1.00	**10.06**

Moment (Start) AB Operating

Operating Loads - 2F1

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	43.18	-40.55	639	-976	-172	36	-807	-2965	51	187	0.066	0.929	1.00	Yes	0.039	0.549	0.59	Yes	0.074	0.907	0.99	Yes	0.073	0.293	0.37	Yes	1.00	**21.22**
		L_1 - L_2	337.08	-----	170	-709	-281	-407	-204	389	-1262	311	0.516	0.484	1.00	Yes	0.315	0.311	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.41**
		L_2 - L_3	636.46	-157.51	-48	44	-906	-670	-187	128	-3	-255	0.732	0.260	1.00	Yes	0.424	0.156	0.58	Yes	0.215	0.305	0.52	Yes	0.213	0.219	0.44	Yes	1.00	**7.99**
		L_3 - L_4	637.26	-246.02	0	301	-669	-344	263	-210	-611	-142	0.733	0.260	1.00	Yes	0.435	0.164	0.60	Yes	0.336	0.212	0.55	Yes	0.333	0.162	0.50	Yes	1.00	**6.35**
		L_4 - L_5	53.13	-550.94	92	466	-598	362	-62	178	-5	278	0.069	0.208	0.28	Yes	0.041	0.135	0.18	Yes	0.847	0.136	0.99	Yes	0.839	0.158	1.00	Yes	1.00	**4.87**
		L_5 - L_6	-----	-760.08	86	517	-249	376	163	-233	64	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.887	0.105	1	Yes	0.877	0.114	1.00	Yes	1.00	**4.85**
		L_6 - L_7	-----	-1123.80	145	9	-380	103	-159	366	-147	30	-----	-----	-----	-----	-----	-----	-----	-----	0.915	0.079	1	Yes	0.905	0.060	0.97	Yes	1.00	**6.63**
		L_7 - L_8	-----	-1185.10	0	623	-347	1525	555	248	-266	91	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.233	1	Yes	0.751	0.202	0.96	Yes	1.00	**7.99**
		L_8 - L_9	-----	-1294.58	1039	-82	665	-39	408	383	180	343	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.163	1	Yes	0.820	0.138	0.96	Yes	1.00	**5.52**
		L_9 - L_{10}	-----	-1043.37	857	-1005	-139	-214	812	833	-528	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.100	0.95	Yes	0.840	0.158	1.00	Yes	1.00	**15.53**
		L_{10} - L_{11}	98.02	-581.68	417	-100	4	-414	-249	58	142	-175	0.127	0.154	0.29	Yes	0.074	0.092	0.17	Yes	0.894	0.080	0.98	Yes	0.886	0.110	1.00	Yes	1.00	**9.36**
		L_{11} - L_{12}	488.59	-----	379	-804	54	-545	-156	468	-843	309	0.633	0.360	1.00	Yes	0.380	0.230	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.26**
		L_{12} - L_{13}	1074.30	-----	70	-149	-615	-709	-162	119	73	-76	0.848	0.145	1.00	Yes	0.542	0.086	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.21**
		L_{13} - L_{14}	1301.20	-----	266	-1192	-238	-1005	-6	270	-768	204	0.765	0.228	1.00	Yes	0.496	0.141	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.16**
		L_{14} - L_{15}	1564.50	-----	-490	-173	-1852	-411	-176	78	-116	146	0.764	0.236	1.00	Yes	0.497	0.142	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.14**
		L_{15} - L_{16}	1625.12	-----	-283	-447	-1110	-1021	-22	-188	-938	-163	0.794	0.200	1.00	Yes	0.510	0.120	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.19**
		L_{16} - L_{17}	1201.20	-----	-418	54	-1445	106	-126	173	185	-265	0.760	0.236	1.00	Yes	0.493	0.145	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.18**
		L_{17} - L_{18}	830.20	-----	-228	-12	-801	-58	83	-114	-898	-210	0.723	0.269	1.00	Yes	0.463	0.165	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.90**
		L_{18} - L_{19}	360.14	-13.82	-258	229	-1118	613	-162	118	50	512	0.551	0.442	1.00	Yes	0.373	0.279	0.66	Yes	0.025	0.398	0.43	Yes	0.025	0.336	0.37	Yes	1.00	**14.11**
		L_{19} - L_{20}	32.61	-349.63	-191	83	-1032	654	144	32	23	5	0.050	0.340	0.39	Yes	0.030	0.229	0.26	Yes	0.635	0.364	1	Yes	0.630	0.310	0.94	Yes	1.00	**15.83**
	Structure 2	L_0 - L_1	69.16	-172.02	672	-2299	-65	-123	-694	-2411	37	130	0.084	0.864	0.95	Yes	0.050	0.539	0.59	Yes	0.247	0.746	1	Yes	0.246	0.468	0.72	Yes	1.00	**25.87**
		L_1 - L_2	475.94	-----	641	-1375	-69	-611	-54	841	-492	273	0.578	0.418	1.00	Yes	0.344	0.264	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.96**
		L_2 - L_3	995.06	-----	191	-758	-501	-783	-25	175	894	105	0.784	0.208	1.00	Yes	0.514	0.129	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.10**
		L_3 - L_4	1249.54	-----	163	-1527	-402	-1414	70	753	-1042	329	0.734	0.262	1.00	Yes	0.494	0.165	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.63**
		L_4 - L_5	1756.22	-----	-437	-416	-1574	-1307	-71	165	414	66	0.819	0.177	1.00	Yes	0.542	0.106	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.04**
		L_5 - L_6	1826.86	-----	-222	-500	-1208	-1911	186	-84	-715	-132	0.784	0.214	1.00	Yes	0.526	0.132	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.34**
		L_6 - L_7	1859.01	-----	-580	-211	-2209	-1247	-152	218	-111	-239	0.787	0.209	1.00	Yes	0.523	0.122	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.22**
		L_7 - L_8	1329.64	-----	-314	367	-1618	-451	205	-114	-695	-228	0.762	0.236	1.00	Yes	0.501	0.141	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.07**
		L_8 - L_9	1113.99	-422.14	-85	620	-1419	377	-67	174	-5	-267	0.779	0.217	1.00	Yes	0.525	0.135	0.67	Yes	0.350	0.260	0.62	Yes	0.347	0.192	0.54	Yes	1.00	**9.23**
		L_9 - L_{10}	536.04	-707.37	-154	803	-1163	337	134	-108	-351	-277	0.478	0.228	0.71	Yes	0.279	0.141	0.42	Yes	0.748	0.246	1	Yes	0.743	0.186	0.93	Yes	1.00	**9.04**
		L_{10} - L_{11}	-----	-737.32	-64	533	-762	524	-87	90	-44	13	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.083	0.96	Yes	0.866	0.133	1.00	Yes	1.00	**5.81**
		L_{11} - L_{12}	-----	-1048.29	-120	1009	-690	905	76	-349	93	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.108	0.98	Yes	0.860	0.137	1.00	Yes	1.00	**6.46**
		L_{12} - L_{13}	-----	-1501.30	157	-739	-775	-607	-385	137	78	67	-----	-----	-----	-----	-----	-----	-----	-----	0.905	0.086	1	Yes	0.898	0.077	0.98	Yes	1.00	**9.21**
		L_{13} - L_{14}	-----	-1436.03	-455	1430	-1597	3101	677	555	-585	-214	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.225	0.96	Yes	0.723	0.271	1.00	Yes	1.00	**9.34**
		L_{14} - L_{15}	-----	-1542.93	2552	-784	1543	-479	294	296	391	385	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.174	0.96	Yes	0.776	0.223	1.00	Yes	1.00	**7.00**
		L_{15} - L_{16}	-----	-1317.43	-162	-40	-1404	-451	450	-299	-560	-144	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.197	1	Yes	0.788	0.140	0.93	Yes	1.00	**12.58**
		L_{16} - L_{17}	-----	-1179.18	1089	-313	501	-438	-332	-46	48	-344	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.127	1	Yes	0.859	0.134	1.00	Yes	1.00	**8.43**
		L_{17} - L_{18}	-----	-708.49	958	-1210	-9	-744	44	1062	-1631	255	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.243	1	Yes	0.744	0.194	0.94	Yes	1.00	**15.69**
		L_{18} - L_{19}	114.49	-655.37	621	-10	-53	-595	-189	71	209	-51	0.130	0.152	0.29	Yes	0.075	0.090	0.17	Yes	0.879	0.103	0.99	Yes	0.873	0.120	1.00	Yes	1.00	**8.32**
		L_{19} - L_{20}	554.08	-561.41	482	95	-230	-1044	148	-166	-1091	237	0.628	0.368	1.00	Yes	0.371	0.228	0.60	Yes	0.753	0.233	0.99	Yes	0.748	0.201	0.95	Yes	1.00	**11.34**
		L_{20} - L_{21}	945.74	-417.63	385	-87	-1242	-1043	-183	70	537	107	0.754	0.239	1.00	Yes	0.495	0.145	0.64	Yes	0.395	0.144	0.54	Yes	0.392	0.181	0.58	Yes	1.00	**12.62**
		L_{21} - L_{22}	858.63	-142.61	100	-298	-968	-1547	135	-101	-782	-5	0.685	0.310	1.00	Yes	0.458	0.196	0.66	Yes	0.135	0.248	0.39	Yes	0.134	0.226	0.36	Yes	1.00	**9.31**
		L_{22} - L_{23}	803.40	-26.24	-243	-41	-2082	-566	-113	162	-316	-467	0.641	0.354	1.00	Yes	0.428	0.223	0.66	Yes	0.025	0.382	0.41	Yes	0.025	0.304	0.33	Yes	1.00	**9.07**
		L_{23} - L_{24}	845.27	-319.82	-65	443	-1443	-377	162	-140	-1023	160	0.674	0.321	1.00	Yes	0.442	0.196	0.64	Yes	0.302	0.179	0.49	Yes	0.300	0.211	0.52	Yes	1.00	**13.66**
		L_{24} - L_{25}	525.12	-501.32	164	497	-1197	78	-107	150	231	-1124	0.595	0.403	1.00	Yes	0.352	0.250	0.61	Yes	0.672	0.187	0.86	Yes	0.668	0.231	0.90	Yes	1.00	**13.39**
		L_{25} - L_{26}	45.41	-628.53	23	715	-785	244	101	-169	-815	-26	0.051	0.276	0.33	Yes	0.030	0.162	0.20	Yes	0.843	0.155	1	Yes	0.838	0.151	0.99	Yes	1.00	**10.92**
		L_{26} - L_{27}	-----	-815.24	180	489	-845	659	-53	221	472	187	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.108	0.97	Yes	0.856	0.135	1.00	Yes	1.00	**10.69**
		L_{27} - L_{28}	-----	-1171.23	2	1156	-772	1048	225	-83	-276	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.117	0.98	Yes	0.853	0.143	1.00	Yes	1.00	**10.74**
		L_{28} - L_{29}	-----	-1485.62	296	-742	-692	-868	-118	690	-95	29	-----	-----	-----	-----	-----	-----	-----	-----	0.896	0.099	1	Yes	0.889	0.086	0.98	Yes	1.00	**10.93**
		L_{29} - L_{30}	-----	-1452.00	-566	1461	-1583	3044	644	629	-284	14	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.212	0.95	Yes	0.731	0.266	1.00	Yes	1.00	**8.66**
		L_{30} - L_{31}	-----	-1555.59	2451	-765	1696	-502	252	240	508	406	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.180	0.98	Yes	0.783	0.214	1.00	Yes	1.00	**5.61**
		L_{31} - L_{32}	-----	-1357.24	-60	-315	-1183	-597	552	-291	-345	-66	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.174	1	Yes	0.812	0.118	0.93	Yes	1.00	**12.50**
		L_{32} - L_{33}	-----	-1059.28	933	-416	481	-430	-126	55	175	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.876	0.094	0.98	Yes	0.869	0.127	1.00	Yes	1.00	**6.90**
		L_{33} - L_{34}	308.36	-86.30	1226	-2115	5	-1101	120	2334	-2114	906	0.308	0.684	1.00	Yes	0.181	0.419	0.60	Yes	0.102	0.447	0.55	Yes	0.101	0.370	0.48	Yes	1.00	**26.19**
		L_{34} - L_{35}	748.95	-776.03	855	-90	-396	-1117	-222	95	747	-663	0.668	0.268	0.94	Yes	0.389	0.164	0.56	Yes	0.820	0.114	0.94	Yes	0.815	0.179	1.00	Yes	1.00	**17.23**
		L_{35} - L_{36}	946.31	-----	566	-1234	-197	-1075	-134	715	-1758	283	0.662	0.332	1.00	Yes	0.446	0.214	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.01**
		L_{36} - L_{37}	1374.59	-----	291	-266	-939	-1484	-202	153	330	-525	0.788	0.207	1.00	Yes	0.518	0.123	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.71**
		L_{37} - L_{38}	1782.79	-----	-163	-670	-1563	-1843	61	-185	-1231	55	0.755	0.238	1.00	Yes	0.501	0.144	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.17**
		L_{38} - L_{39}	1854.55	-----	-571	-231	-2124	-673	-119	181	220	-191	0.796	0.202	1.00	Yes	0.534	0.123	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.09**
		L_{39} - L_{40}	1720.05	-----	-402	-446	-1525	-1166	111	-170	-730	96	0.802	0.193	1.00	Yes	0.531	0.117	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.01**
		L_{40} - L_{41}	1262.28	-----	-474	29	-1825	-81	-49	267	147	-496	0.742	0.253	1.00	Yes	0.499	0.158	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.20**
		L_{41} - L_{42}	901.12	-----	-260	-53	-1266	38	141	-73	-974	9	0.710	0.287	1.00	Yes	0.466	0.176	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.57**
		L_{42} - L_{43}	497.71	-----	-293	217	-1327	511	102	331	741	297	0.604	0.392	1.00	Yes	0.360	0.248	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.53**
		L_{43} - L_{44}	-----	-308.33	-245	33	-1701	683	409	119	876	256	-----	-----	-----	-----	-----	-----	-----	-----	0.443	0.552	1	Yes	0.441	0.346	0.79	Yes	1.00	**24.41**
	Structure 3	L_0 - L_1	20.25	-366.28	584	-1112	30	-147	-207	-936	26	116	0.031	0.528	0.56	Yes	0.019	0.347	0.37	Yes	0.665	0.326	1	Yes	0.659	0.334	1.00	Yes	1.00	**14.56**
		L_1 - L_2	274.08	-----	682	-1180	75	-472	73	1077	-564	363	0.419	0.577	1.00	Yes	0.284	0.370	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.55**
		L_2 - L_3	902.40	-----	232	-514	-285	-657	70	156	676	-175	0.786	0.213	1.00	Yes	0.503	0.130	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.96**
		L_3 - L_4	1149.30	-----	247	-1213	-327	-1071	46	826	-1054	491	0.727	0.272	1.00	Yes	0.472	0.169	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.27**
		L_4 - L_5	1616.60	-----	-373	-257	-1440	-963	-33	229	372	-491	0.790	0.208	1.00	Yes	0.507	0.123	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.60**
		L_5 - L_6	1607.30	-----	-142	-509	-689	-1209	243	-46	-859	185	0.785	0.206	1.00	Yes	0.510	0.127	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.62**
		L_6 - L_7	1306.06	-----	-500	257	-1453	181	-51	230	-29	-330	0.768	0.228	1.00	Yes	0.498	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.17**
		L_7 - L_8	1003.98	-----	-106	162	-631	-273	122	-148	-740	-227	0.792	0.198	1.00	Yes	0.507	0.121	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.09**
		L_8 - L_9	526.00	-404.13	-176	416	-1080	331	-113	175	28	55	0.681	0.317	1.00	Yes	0.409	0.208	0.62	Yes	0.621	0.346	0.97	Yes	0.616	0.286	0.91	Yes	1.00	**10.86**
		L_9 - L_{10}	-----	-552.56	-108	439	-591	318	143	-160	77	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.096	0.95	Yes	0.842	0.156	1.00	Yes	1.00	**7.31**
		L_{10} - L_{11}	-----	-1056.12	103	48	-674	322	-260	20	79	-132	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.140	1	Yes	0.850	0.106	0.96	Yes	1.00	**10.92**
		L_{11} - L_{12}	-----	-1190.06	15	861	-466	1430	664	125	-946	-393	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.229	1	Yes	0.754	0.189	0.95	Yes	1.00	**11.56**
		L_{12} - L_{13}	-----	-1295.51	1265	-51	707	-22	180	158	-67	209	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.167	1	Yes	0.820	0.168	0.99	Yes	1.00	**6.77**
		L_{13} - L_{14}	-----	-1029.22	664	-1086	-318	-112	380	657	-686	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.089	0.93	Yes	0.828	0.171	1.00	Yes	1.00	**14.13**
		L_{14} - L_{15}	-----	-747.64	495	68	91	-226	-240	90	51	-260	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.119	1	Yes	0.863	0.109	0.98	Yes	1.00	**6.59**
		L_{15} - L_{16}	383.81	-----	514	-887	-76	-589	-70	530	-1467	602	0.497	0.496	1.00	Yes	0.298	0.313	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.15**
		L_{16} - L_{17}	669.82	-160.48	273	-61	-683	-440	-166	153	-6	363	0.771	0.223	1.00	Yes	0.458	0.142	0.61	Yes	0.219	0.124	0.35	Yes	0.217	0.165	0.39	Yes	1.00	**6.61**
		L_{17} - L_{18}	651.22	-36.12	6	-110	-784	-578	94	-105	-323	-27	0.749	0.241	1.00	Yes	0.433	0.144	0.58	Yes	0.049	0.269	0.32	Yes	0.049	0.189	0.24	Yes	1.00	**6.66**
		L_{18} - L_{19}	430.89	-----	-58	-8	-787	19	-83	221	67	476	0.659	0.338	1.00	Yes	0.402	0.224	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.90**
		L_{19} - L_{20}	21.01	-101.99	98	-208	-2013	1521	161	43	-1062	-289	0.032	0.832	0.87	Yes	0.019	0.504	0.53	Yes	0.185	0.812	1	Yes	0.184	0.604	0.79	Yes	1.00	**48.99**

Moment (Start) AB Operating

Operating Loads - 2F1

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	$U_0 - L_0$			-----	-266.69	-9	54	-113	158	177	57	-1123	-360	-----	-----	-----	-----	-----	-----	-----	-----	0.596	0.402	1	Yes	0.564	0.202	0.77	Yes	1.00	**2.95**
		$U_1 - L_1$			12.14	-280.54	22	-15	-214	202	532	191	508	288	0.022	0.427	0.45	Yes	0.012	0.235	0.25	Yes	0.613	0.382	1	Yes	0.594	0.273	0.87	Yes	1.00	**5.60**
		$U_2 - L_2$			117.83	-252.02	107	-118	-187	233	694	182	794	357	0.212	0.528	0.74	Yes	0.117	0.290	0.41	Yes	0.551	0.443	1	Yes	0.533	0.298	0.84	Yes	1.00	**9.83**
		$U_3 - L_3$			183.37	-93.76	227	-225	-83	96	-1278	-689	-635	-119	0.330	0.661	1.00	Yes	0.181	0.363	0.55	Yes	0.205	0.392	0.6	Yes	0.198	0.291	0.49	Yes	1.00	**12.87**
		$U_4 - L_4$			-----	-218.07	325	-321	14	-24	-1203	-730	897	166	-----	-----	-----	-----	-----	-----	-----	-----	0.479	0.516	1	Yes	0.461	0.415	0.88	Yes	1.00	**17.88**
		$U_5 - L_5$			-----	-372.30	160	-178	74	-88	286	277	884	323	-----	-----	-----	-----	-----	-----	-----	-----	0.674	0.320	1	Yes	0.642	0.181	0.83	Yes	1.00	**4.55**
		$U_6 - L_6$			-----	-417.40	170	-174	83	-76	804	408	1238	604	-----	-----	-----	-----	-----	-----	-----	-----	0.632	0.367	1	Yes	0.599	0.152	0.76	Yes	1.00	**4.44**
		$U_7 - L_7$			-----	-370.00	212	-229	120	-134	614	175	1014	232	-----	-----	-----	-----	-----	-----	-----	-----	0.618	0.372	1	Yes	0.571	0.226	0.80	Yes	1.00	**3.76**
		$U_8 - L_8$			-----	-1212.98	253	-310	-407	483	683	80	-302	-338	-----	-----	-----	-----	-----	-----	-----	-----	0.876	0.124	1	Yes	0.841	0.090	0.94	Yes	1.00	**8.76**
		$U_9 - L_9$			-----	-559.49	-233	263	-351	393	538	218	271	167	-----	-----	-----	-----	-----	-----	-----	-----	0.667	0.328	1	Yes	0.632	0.218	0.86	Yes	1.00	**2.70**
		$U_{10} - L_{10}$			-----	-660.54	-159	159	-304	320	610	301	624	352	-----	-----	-----	-----	-----	-----	-----	-----	0.684	0.314	1	Yes	0.652	0.166	0.82	Yes	1.00	**4.62**
		$U_{11} - L_{11}$			-----	-659.54	-163	236	-378	485	327	184	664	534	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.205	1	Yes	0.768	0.225	1.00	Yes	1.00	**6.22**
		$U_{12} - L_{12}$			-----	-432.87	-130	136	-255	263	489	330	435	340	-----	-----	-----	-----	-----	-----	-----	-----	0.625	0.369	1	Yes	0.594	0.225	0.82	Yes	1.00	**4.30**
		$U_{13} - L_{13}$			-----	-283.29	-75	96	-162	186	265	133	639	347	-----	-----	-----	-----	-----	-----	-----	-----	0.573	0.422	1	Yes	0.543	0.213	0.76	Yes	1.00	**3.46**
		$U_{14} - L_{14}$			-----	-118.68	57	-56	-204	221	-241	-321	1448	65	-----	-----	-----	-----	-----	-----	-----	-----	0.265	0.727	1	Yes	0.251	0.282	0.54	Yes	1.00	**12.32**
		$U_{15} - L_{15}$			68.35	-307.34	240	-260	-56	50	-757	-134	321	-190	0.123	0.551	0.68	Yes	0.068	0.303	0.38	Yes	0.689	0.304	1	Yes	0.650	0.332	0.99	Yes	1.00	**12.90**
		$U_{16} - L_{16}$			-----	-314.23	195	-202	44	-54	98	13	547	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.708	0.282	1	Yes	0.665	0.259	0.93	Yes	1.00	**6.62**
		$U_{17} - L_{17}$			-----	-400.23	192	-211	82	-96	471	223	494	204	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.245	1	Yes	0.690	0.214	0.91	Yes	1.00	**4.00**
		$U_{18} - L_{18}$			-----	-532.46	435	-448	177	-183	794	184	685	179	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.203	0.99	Yes	0.741	0.254	1.00	Yes	1.00	**5.75**
		$U_{19} - L_{19}$			-----	-642.46	479	-498	185	-199	823	152	604	119	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.192	1	Yes	0.748	0.231	0.98	Yes	1.00	**6.68**
		$U_{20} - L_{20}$			-----	-565.25	437	-512	238	-295	465	61	569	75	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.246	1	Yes	0.658	0.238	0.90	Yes	1.00	**4.66**
	Structure 2	$U_0 - L_0$			-----	-620.25	-160	277	-304	452	-4	-1	-993	-168	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.248	1	Yes	0.665	0.192	0.86	Yes	1.00	**3.37**
		$U_1 - L_1$			-----	-613.20	-224	231	-465	468	621	162	235	141	-----	-----	-----	-----	-----	-----	-----	-----	0.701	0.296	1	Yes	0.657	0.199	0.86	Yes	1.00	**4.23**
		$U_2 - L_2$			-----	-496.50	-172	187	-370	388	615	291	606	405	-----	-----	-----	-----	-----	-----	-----	-----	0.665	0.333	1	Yes	0.633	0.199	0.84	Yes	1.00	**3.79**
		$U_3 - L_3$			-----	-376.95	-86	97	-176	191	535	270	504	345	-----	-----	-----	-----	-----	-----	-----	-----	0.642	0.351	1	Yes	0.591	0.174	0.77	Yes	1.00	**2.99**
		$U_4 - L_4$			-----	-322.82	-7	17	-191	201	560	220	-540	36	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.262	1	Yes	0.683	0.257	0.94	Yes	1.00	**8.06**
		$U_5 - L_5$			124.76	-314.23	129	-103	-204	232	-412	-395	-505	49	0.224	0.442	0.67	Yes	0.123	0.243	0.37	Yes	0.710	0.280	1	Yes	0.665	0.296	0.97	Yes	1.00	**14.86**
		$U_6 - L_6$			341.65	-85.52	195	-198	-125	130	-310	-382	-429	-52	0.614	0.378	1.00	Yes	0.338	0.208	0.55	Yes	0.192	0.168	0.37	Yes	0.181	0.254	0.44	Yes	1.00	**14.89**
		$U_7 - L_7$			-----	-228.97	280	-312	17	-22	-944	-509	-79	-299	-----	-----	-----	-----	-----	-----	-----	-----	0.517	0.476	1	Yes	0.484	0.399	0.89	Yes	1.00	**17.70**
		$U_8 - L_8$			-----	-492.40	305	-326	152	-173	121	31	436	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.181	0.9	Yes	0.709	0.285	1.00	Yes	1.00	**6.27**
		$U_9 - L_9$			-----	-722.68	515	-528	268	-292	-453	-9	618	-75	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.159	0.97	Yes	0.774	0.224	1.00	Yes	1.00	**7.76**
		$U_{10} - L_{10}$			-----	-750.74	434	-452	239	-242	92	231	1025	589	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.255	1	Yes	0.702	0.199	0.91	Yes	1.00	**7.02**
		$U_{11} - L_{11}$			-----	-724.85	395	-398	235	-230	601	473	1045	582	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.263	1	Yes	0.678	0.175	0.86	Yes	1.00	**5.76**
		$U_{12} - L_{12}$			-----	-710.19	356	-347	199	-180	1107	474	1216	503	-----	-----	-----	-----	-----	-----	-----	-----	0.681	0.310	1	Yes	0.616	0.153	0.77	Yes	1.00	**5.47**
		$U_{13} - L_{13}$			-----	-603.99	423	-415	254	-253	514	179	992	257	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.326	1	Yes	0.582	0.202	0.79	Yes	1.00	**5.31**
		$U_{14} - L_{14}$			-----	-1167.06	434	-418	-494	457	915	58	-114	-276	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.145	1	Yes	0.774	0.087	0.87	Yes	1.00	**10.16**
		$U_{15} - L_{15}$			-----	-523.61	-274	273	-478	466	668	78	420	79	-----	-----	-----	-----	-----	-----	-----	-----	0.584	0.411	1	Yes	0.505	0.229	0.74	Yes	1.00	**4.00**
		$U_{16} - L_{16}$			-----	-614.09	-203	189	-429	418	674	191	242	180	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.291	1	Yes	0.658	0.182	0.85	Yes	1.00	**4.65**
		$U_{17} - L_{17}$			-----	-533.55	-217	217	-437	437	597	200	532	267	-----	-----	-----	-----	-----	-----	-----	-----	0.658	0.333	1	Yes	0.621	0.203	0.83	Yes	1.00	**4.33**
		$U_{18} - L_{18}$			-----	-490.10	-183	189	-396	412	618	223	527	252	-----	-----	-----	-----	-----	-----	-----	-----	0.653	0.338	1	Yes	0.625	0.211	0.84	Yes	1.00	**4.25**
		$U_{19} - L_{19}$			-----	-433.17	-103	104	-255	255	512	201	107	210	-----	-----	-----	-----	-----	-----	-----	-----	0.652	0.342	1	Yes	0.647	0.245	0.90	Yes	1.00	**4.70**
		$U_{20} - L_{20}$			-----	-298.55	-59	64	-166	176	515	192	487	225	-----	-----	-----	-----	-----	-----	-----	-----	0.612	0.385	1	Yes	0.572	0.201	0.78	Yes	1.00	**4.35**
	Structure 3	$U_0 - L_0$			-----	-256.12	-6	16	-182	197	212	-28	488	246	-----	-----	-----	-----	-----	-----	-----	-----	0.579	0.416	1	Yes	0.542	0.252	0.80	Yes	1.00	**6.50**
		$U_1 - L_1$			-----	-291.61	278	-296	-195	203	302	-260	-371	-516	-----	-----	-----	-----	-----	-----	-----	-----	0.656	0.249	0.91	Yes	0.617	0.378	1.00	Yes	1.00	**23.62**
		$U_2 - L_2$			-----	-339.45	202	-217	14	-25	33	63	222	-188	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.173	0.95	Yes	0.718	0.277	1.00	Yes	1.00	**7.91**
		$U_3 - L_3$			-----	-354.84	185	-191	62	-66	381	152	548	190	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.264	1	Yes	0.680	0.219	0.90	Yes	1.00	**5.35**
		$U_4 - L_4$			-----	-493.19	263	-262	104	-105	103	160	535	201	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.199	0.95	Yes	0.736	0.254	1.00	Yes	1.00	**5.93**
		$U_5 - L_5$			-----	-599.03	433	-453	174	-180	343	277	624	262	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.198	1	Yes	0.763	0.232	1.00	Yes	1.00	**6.77**
		$U_6 - L_6$			-----	-641.92	468	-473	209	-212	160	344	680	276	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.202	1	Yes	0.747	0.219	0.97	Yes	1.00	**6.89**
		$U_7 - L_7$			-----	-607.98	380	-365	172	-147	843	362	1287	415	-----	-----	-----	-----	-----	-----	-----	-----	0.702	0.292	1	Yes	0.652	0.161	0.82	Yes	1.00	**5.90**
		$U_8 - L_8$			-----	-598.56	469	-460	196	-200	518	122	985	161	-----	-----	-----	-----	-----	-----	-----	-----	0.667	0.330	1	Yes	0.577	0.224	0.81	Yes	1.00	**8.00**
		$U_9 - L_9$			-----	-1167.26	262	-276	-534	472	564	-197	-142	-157	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.142	1	Yes	0.774	0.095	0.87	Yes	1.00	**8.88**
		$U_{10} - L_{10}$			-----	-559.82	-319	311	-432	420	446	99	226	105	-----	-----	-----	-----	-----	-----	-----	-----	0.624	0.367	1	Yes	0.540	0.207	0.75	Yes	1.00	**2.47**
		$U_{11} - L_{11}$			-----	-716.00	-231	213	-387	381	555	200	444	247	-----	-----	-----	-----	-----	-----	-----	-----	0.687	0.305	1	Yes	0.621	0.166	0.79	Yes	1.00	**3.97**
		$U_{12} - L_{12}$			-----	-684.18	-250	242	-413	410	476	242	401	319	-----	-----	-----	-----	-----	-----	-----	-----	0.688	0.308	1	Yes	0.640	0.182	0.83	Yes	1.00	**4.28**
		$U_{13} - L_{13}$			-----	-691.81	-239	250	-437	455	553	326	20	209	-----	-----	-----	-----	-----	-----	-----	-----	0.683	0.311	1	Yes	0.647	0.201	0.85	Yes	1.00	**5.38**
		$U_{14} - L_{14}$			-----	-616.96	-258	279	-495	512	384	218	546	423	-----	-----	-----	-----	-----	-----	-----	-----	0.687	0.311	1	Yes	0.661	0.217	0.88	Yes	1.00	**5.84**
		$U_{15} - L_{15}$			-----	-418.65	-140	162	-284	306	323	167	514	280	-----	-----	-----	-----	-----	-----	-----	-----	0.607	0.387	1	Yes	0.603	0.268	0.88	Yes	1.00	**4.60**
		$U_{16} - L_{16}$			-----	-221.04	-3	7	-274	309	-118	-186	-244	-259	-----	-----	-----	-----	-----	-----	-----	-----	0.499	0.493	1	Yes	0.468	0.395	0.87	Yes	1.00	**15.32**
		$U_{17} - L_{17}$			294.56	-149.98	162	-171	-185	188	-782	-255	-256	-564	0.530	0.467	1.00	Yes	0.291	0.257	0.55	Yes	0.338	0.246	0.59	Yes	0.317	0.240	0.56	Yes	1.00	**15.94**
		$U_{18} - L_{18}$			70.24	-318.21	231	-253	-77	55	-288	-40	252	-527	0.126	0.476	0.61	Yes	0.069	0.262	0.34	Yes	0.719	0.254	0.98	Yes	0.673	0.324	1.00	Yes	1.00	**13.44**
		$U_{19} - L_{19}$			-----	-316.45	249	-253	40	-48	541	202	592	172	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.267	0.99	Yes	0.670	0.324	1.00	Yes	1.00	**7.71**
		$U_{20} - L_{20}$			-----	-448.09	228	-240	89	-98	656	259	579	196	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.228	1	Yes	0.703	0.219	0.93	Yes	1.00	**4.88**
		$U_{21} - L_{21}$			-----	-567.41	490	-497	175	-184	1059	317	678	169	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.236	1	Yes	0.723	0.254	0.98	Yes	1.00	**6.41**
		$U_{22} - L_{22}$			-----	-673.46	508	-528	199	-217	1194	422	634	178	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.229	1	Yes	0.722	0.224	0.95	Yes	1.00	**6.85**
		$U_{23} - L_{23}$			-----	-645.24	462	-584	255	-321	841	143	643	109	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.227	1	Yes	0.692	0.248	0.94	Yes	1.00	**5.59**
	Structure 4	$U_0 - L_0$			-----	-616.51	-135	239	-302	443	107	14	-664	-87	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.181	1	Yes	0.718	0.206	0.93	Yes	1.00	**3.94**
		$U_1 - L_1$			-----	-527.01	-227	224	-422	411	612	153	602	204	-----	-----	-----	-----	-----	-----	-----	-----	0.658	0.338	1	Yes	0.613	0.196	0.81	Yes	1.00	**3.43**
		$U_2 - L_2$			-----	-448.70	-174	186	-320	338	643	317	371	351	-----	-----	-----	-----	-----	-----	-----	-----	0.657	0.337	1	Yes	0.624	0.192	0.82	Yes	1.00	**3.16**
		$U_3 - L_3$			-----	-337.45	-78	93	-151	169	546	276	529	344	-----	-----	-----	-----	-----	-----	-----	-----	0.631	0.360	1	Yes	0.582	0.172	0.76	Yes	1.00	**2.60**
		$U_4 - L_4$			-----	-251.23	-42	49	-175	185	557	221	545	295	-----	-----	-----	-----	-----	-----	-----	-----	0.566	0.432	1	Yes	0.532	0.237	0.77	Yes	1.00	**4.56**
		$U_5 - L_5$			78.11	-252.05	59	-50	-186	206	20	-56	-1166	-44	0.140	0.601	0.75	Yes	0.077	0.330	0.41	Yes	0.565	0.430	1	Yes	0.533	0.263	0.80	Yes	1.00	**11.26**
		$U_6 - L_6$			-----	-211.73	325	-348	-114	117	-1107	-728	-531	-714	-----	-----	-----	-----	-----	-----	-----	-----	0.472	0.523	1	Yes	0.448	0.444	0.90	Yes	1.00	**23.15**
		$U_7 - L_7$			-----	-374.04	202	-223	79	-97	-95	15	456	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.237	1	Yes	0.717	0.254	0.98	Yes	1.00	**5.28**
		$U_8 - L_8$			-----	-500.68	271	-272	140	-140	118	108	825	371	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.275	1	Yes	0.687	0.232	0.92	Yes	1.00	**5.91**
		$U_9 - L_9$			-----	-615.09	309	-389	166	-224	612	446	1048	422	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.257	1	Yes	0.716	0.181	0.90	Yes	1.00	**6.07**
		$U_{10} - L_{10}$			-----	-668.12	275	-283	152	-159	1215	682	1238	470	-----	-----	-----	-----	-----	-----	-----	-----	0.692	0.300	1	Yes	0.659	0.146	0.81	Yes	1.00	**5.97**
		$U_{11} - L_{11}$			-----	-562.75	315	-358	209	-243	709	393	1271	556	-----	-----	-----	-----	-----	-----	-----	-----	0.671	0.322	1	Yes	0.636	0.199	0.84	Yes	1.00	**4.01**
		$U_{12} - L_{12}$			-----	-1238.58	340	-456	-421	450	728	203	-402	-240	-----	-----	-----	-----	-----	-----	-----	-----	0.894	0.103	1	Yes	0.859	0.085	0.95	Yes	1.00	**9.93**
		$U_{13} - L_{13}$			-----	-356.06	-156	170	-232	248	579	116	445	115	-----	-----	-----	-----	-----	-----	-----	-----	0.595	0.396	1	Yes	0.549	0.244	0.80	Yes	1.00	**1.92**
		$U_{14} - L_{14}$			-----	-441.18	-99	94	-197	206	664	242	195	126	-----	-----	-----	-----	-----	-----	-----	-----	0.668	0.327	1	Yes	0.633	0.180	0.82	Yes	1.00	**3.64**
		$U_{15} - L_{15}$			-----	-344.82	-80	90	-163	182	519	248	633	354	-----	-----	-----	-----	-----	-----	-----	-----	0.624	0.372	1	Yes	0.595	0.185	0.78	Yes	1.00	**3.90**
		$U_{16} - L_{16}$			-----	-106.52	-41	48	-240	240	-46	-106	1485	382	-----	-----	-----	-----	-----	-----	-----	-----	0.234	0.756	1	Yes	0.225	0.307	0.54	Yes	1.00	**8.56**
		$U_{17} - L_{17}$			241.13	-243.03	223	-262	-266	258	746	271	-563	-654	0.434	0.556	1.00	Yes	0.239	0.306	0.55	Yes	0.533	0.274	0.81	Yes	0.514	0.340	0.86	Yes	1.00	**21.55**
		$U_{18} - L_{18}$			94.83	-256.88	218	-257	-100	107	1266	306	428	144	0.171	0.695	0.87	Yes	0.094	0.382	0.48	Yes	0.561	0.432	1	Yes	0.544	0.328	0.88	Yes	1.00	**10.55**
		$U_{19} - L_{19}$			-----	-300.55	203	-214	-14	0	896	429	457	245	-----	-----	-----	-----	-----	-----	-----	-----	0.657	0.337	1	Yes	0.636	0.273	0.91	Yes	1.00	**6.35**
		$U_{20} - L_{20}$			-----	-305.95	203	-250	77	-92	737	236	646	207	-----	-----	-----	-----	-----	-----	-----	-----	0.683	0.311	1	Yes	0.647	0.320	0.97	Yes	1.00	**4.19**

Moment (Start) AB Operating

Operating Loads - 2F1

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			469.60	-----	34	5	-127	52	-309	-116	-922	-318	0.616	0.381	1.00	Yes	0.372	0.210	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.25**
		U_1 - L_2			365.86	-126.12	18	-18	-111	1	405	236	-675	-586	0.658	0.337	1.00	Yes	0.362	0.186	0.55	Yes	0.289	0.308	0.6	Yes	0.267	0.142	0.41	Yes	1.00	**7.77**
		U_2 - L_3			36.93	-266.34	52	-32	-99	-54	495	262	-1006	-484	0.066	0.418	0.49	Yes	0.037	0.230	0.27	Yes	0.613	0.387	1	Yes	0.564	0.127	0.70	Yes	1.00	**11.57**
		U_3 - L_4			-----	-300.47	34	-14	-38	-76	408	220	-851	-287	-----	-----	-----	-----	-----	-----	-----	-----	0.687	0.313	1	Yes	0.636	0.097	0.74	Yes	1.00	**8.19**
		U_4 - L_4			539.49	-----	-7	69	-135	18	-153	98	-299	250	0.791	0.207	1.00	Yes	0.435	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.12**
		U_5 - L_5			654.16	-----	-15	154	-198	196	-237	67	-607	236	0.773	0.223	1.00	Yes	0.425	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.95**
		U_7 - L_6			614.83	-----	-51	103	-222	197	-796	-157	-296	121	0.727	0.271	1.00	Yes	0.400	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.30**
		U_8 - L_7			692.45	-----	65	192	-70	255	-66	-127	-171	182	0.819	0.179	1.00	Yes	0.450	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.15**
		U_9 - L_9			986.18	-----	49	217	-74	296	602	252	87	-493	0.788	0.209	1.00	Yes	0.488	0.118	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.32**
		U_9 - L_{10}			995.77	-----	-111	145	-266	189	648	312	-467	-668	0.796	0.203	1.00	Yes	0.493	0.115	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.26**
		U_{10} - L_{11}			905.19	-----	-66	141	-264	150	314	57	-666	-839	0.765	0.232	1.00	Yes	0.473	0.132	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.04**
		U_{11} - L_{12}			786.02	-----	-90	81	-264	73	180	-30	-97	-611	0.778	0.214	1.00	Yes	0.428	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.54**
		U_{12} - L_{13}			574.04	-----	-86	62	-174	98	79	-52	-365	-739	0.700	0.296	1.00	Yes	0.440	0.170	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.72**
		U_{13} - L_{14}			372.60	-----	-29	-17	-87	3	-203	-196	-748	-632	0.670	0.328	1.00	Yes	0.369	0.180	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.91**
		U_{15} - L_{14}			304.29	-294.39	34	-119	-120	-33	434	-183	81	262	0.547	0.278	0.83	Yes	0.301	0.153	0.46	Yes	0.690	0.306	1	Yes	0.623	0.153	0.78	Yes	1.00	**16.90**
		U_{16} - L_{15}			322.38	-5.48	-24	2	-147	83	-278	-129	-785	74	0.580	0.415	1.00	Yes	0.319	0.228	0.55	Yes	0.013	0.409	0.43	Yes	0.012	0.187	0.20	Yes	1.00	**9.00**
		U_{17} - L_{16}			460.68	-----	-50	26	-153	99	-300	-101	-693	-159	0.676	0.316	1.00	Yes	0.372	0.174	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.94**
		U_{18} - L_{17}			579.48	-----	-134	92	-320	229	-394	-98	-710	-14	0.685	0.310	1.00	Yes	0.377	0.171	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.88**
		U_{19} - L_{18}			647.80	-----	-137	100	-313	240	-459	-198	-826	-347	0.702	0.296	1.00	Yes	0.386	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.82**
		U_{20} - L_{19}			667.42	-----	-176	142	-394	321	-262	-140	-434	-102	0.723	0.273	1.00	Yes	0.398	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.63**
	Structure 2	U_0 - L_1			670.80	-----	-94	135	-285	305	-262	-56	-1255	-400	0.664	0.329	1.00	Yes	0.365	0.181	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.74**
		U_1 - L_2			717.35	-----	-163	117	-397	286	158	-18	-413	-700	0.710	0.289	1.00	Yes	0.390	0.159	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.45**
		U_2 - L_3			600.22	-----	-118	88	-319	250	138	-18	-100	-559	0.710	0.282	1.00	Yes	0.390	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.22**
		U_3 - L_4			515.77	-----	-55	28	-195	122	157	0	-106	-632	0.688	0.310	1.00	Yes	0.378	0.171	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.53**
		U_4 - L_5			357.71	-74.74	1	-15	-157	97	229	32	6	-539	0.643	0.356	1.00	Yes	0.354	0.196	0.55	Yes	0.184	0.285	0.47	Yes	0.158	0.200	0.36	Yes	1.00	**10.36**
		U_5 - L_6			333.52	-263.49	64	-118	-102	21	-766	-181	-442	-855	0.600	0.398	1.00	Yes	0.330	0.219	0.55	Yes	0.622	0.231	0.86	Yes	0.558	0.150	0.71	Yes	1.00	**15.42**
		U_6 - L_7			-----	-381.28	52	-105	-23	-51	-234	-81	74	-552	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.184	1	Yes	0.730	0.120	0.86	Yes	1.00	**7.51**
		U_8 - L_7			616.14	-----	-81	41	-179	118	-76	-140	-265	212	0.786	0.214	1.00	Yes	0.495	0.121	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.98**
		U_9 - L_8			718.33	-----	-162	152	-331	241	-306	-95	-196	90	0.778	0.220	1.00	Yes	0.428	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.76**
		U_{10} - L_9			812.50	-----	-126	161	-326	236	-167	12	-284	268	0.804	0.194	1.00	Yes	0.442	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.04**
		U_{11} - L_{10}			898.14	-----	-131	199	-308	262	-229	56	-200	328	0.818	0.176	1.00	Yes	0.450	0.097	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.20**
		U_{12} - L_{11}			866.53	-----	-137	189	-297	305	-520	39	-562	270	0.789	0.206	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.57**
		U_{13} - L_{12}			756.25	-----	-175	175	-366	334	-501	-34	-481	64	0.748	0.244	1.00	Yes	0.411	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.76**
		U_{14} - L_{13}			800.69	-----	34	220	-211	377	55	-93	-158	47	0.792	0.199	1.00	Yes	0.436	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.30**
		U_{14} - L_{15}			580.36	-----	-15	169	-187	336	650	226	206	-233	0.686	0.308	1.00	Yes	0.377	0.170	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.81**
		U_{15} - L_{16}			565.09	-----	-173	169	-387	347	572	170	376	-362	0.668	0.323	1.00	Yes	0.367	0.177	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.42**
		U_{16} - L_{17}			698.92	-----	-124	159	-299	302	438	152	-106	-525	0.757	0.241	1.00	Yes	0.416	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.58**
		U_{17} - L_{18}			634.93	-----	-112	128	-284	268	357	87	-36	-448	0.751	0.242	1.00	Yes	0.413	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.20**
		U_{18} - L_{19}			598.31	-----	-85	99	-272	229	286	73	-7	-714	0.707	0.283	1.00	Yes	0.389	0.156	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.69**
		U_{19} - L_{20}			561.45	-----	-43	57	-168	118	296	90	-462	-642	0.716	0.282	1.00	Yes	0.394	0.161	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.48**
		U_{20} - L_{21}			381.56	-----	-17	15	-119	89	230	62	-73	-554	0.686	0.313	1.00	Yes	0.377	0.172	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.06**
		U_{21} - L_{22}			335.33	-177.06	18	-72	-110	8	-352	-58	-180	-880	0.603	0.396	1.00	Yes	0.332	0.218	0.55	Yes	0.418	0.297	0.72	Yes	0.375	0.141	0.52	Yes	1.00	**12.85**
		U_{23} - L_{22}			415.63	-74.52	10	-16	-130	38	-293	-106	-56	249	0.748	0.251	1.00	Yes	0.411	0.138	0.55	Yes	0.177	0.167	0.35	Yes	0.158	0.166	0.33	Yes	1.00	**13.85**
		U_{24} - L_{23}			423.58	-----	-21	20	-123	102	-254	-63	-217	180	0.762	0.230	1.00	Yes	0.419	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.48**
		U_{25} - L_{24}			596.60	-----	-44	52	-191	173	-297	-80	-196	72	0.761	0.232	1.00	Yes	0.418	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.96**
		U_{26} - L_{25}			680.80	-----	-80	109	-248	231	-226	-54	-114	299	0.805	0.195	1.00	Yes	0.443	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.21**
		U_{27} - L_{26}			666.58	-----	-104	148	-251	255	-354	78	-309	213	0.788	0.209	1.00	Yes	0.433	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.32**
		U_{28} - L_{27}			698.21	-----	-104	158	-263	300	-480	15	-509	183	0.756	0.237	1.00	Yes	0.416	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.55**
		U_{29} - L_{28}			620.56	-----	-110	120	-308	287	-501	-43	-321	201	0.734	0.265	1.00	Yes	0.404	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.61**
		U_{30} - L_{29}			659.70	-----	54	171	-158	311	66	-83	-167	236	0.780	0.219	1.00	Yes	0.429	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.84**
		U_{30} - L_{31}			719.94	-----	-57	236	-253	422	579	197	136	-441	0.712	0.282	1.00	Yes	0.392	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.89**
		U_{31} - L_{32}			743.08	-----	-235	219	-388	333	529	154	-127	-393	0.735	0.259	1.00	Yes	0.404	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.92**
		U_{32} - L_{33}			865.18	-----	-159	208	-309	300	489	151	-77	-552	0.788	0.207	1.00	Yes	0.433	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.98**
		U_{33} - L_{34}			819.74	-----	-147	175	-320	252	322	65	-341	-802	0.747	0.246	1.00	Yes	0.411	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.25**
		U_{34} - L_{35}			753.23	-----	-135	147	-307	212	150	-11	-305	-702	0.745	0.247	1.00	Yes	0.410	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.33**
		U_{35} - L_{36}			676.67	-----	-158	134	-312	212	149	11	-361	-653	0.733	0.267	1.00	Yes	0.403	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.45**
		U_{36} - L_{37}			502.99	-----	-76	28	-180	103	-369	-235	-82	-930	0.641	0.351	1.00	Yes	0.404	0.202	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.18**
		U_{38} - L_{37}			-----	-374.07	51	-101	-38	-39	-10	-220	-275	86	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.187	1	Yes	0.717	0.116	0.84	Yes	1.00	**9.11**
		U_{39} - L_{38}			427.62	-230.08	64	-111	-129	52	26	-43	-188	194	0.769	0.222	1.00	Yes	0.423	0.122	0.55	Yes	0.548	0.199	0.75	Yes	0.487	0.166	0.66	Yes	1.00	**16.59**
		U_{40} - L_{39}			350.97	-14.25	-14	-2	-139	93	-366	-102	-656	13	0.631	0.368	1.00	Yes	0.347	0.202	0.55	Yes	0.034	0.371	0.41	Yes	0.030	0.178	0.21	Yes	1.00	**8.40**
		U_{41} - L_{40}			520.32	-----	-60	33	-197	132	-405	-173	-592	-51	0.694	0.304	1.00	Yes	0.381	0.167	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.13**
		U_{42} - L_{41}			594.02	-----	-127	95	-311	247	-411	-166	-643	-58	0.702	0.292	1.00	Yes	0.386	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.43**
		U_{43} - L_{42}			735.79	-----	-142	108	-366	296	-399	-206	-642	-193	0.728	0.266	1.00	Yes	0.400	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.73**
		U_{44} - L_{43}			788.02	-----	-172	160	-382	372	-197	-48	-254	5	0.780	0.215	1.00	Yes	0.429	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.66**
	Structure 3	U_0 - L_1			647.29	-----	-73	106	-262	259	-212	-43	-956	-431	0.701	0.291	1.00	Yes	0.386	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.47**
		U_1 - L_2			680.73	-----	-160	109	-306	209	162	-42	-211	-622	0.737	0.259	1.00	Yes	0.406	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.00**
		U_2 - L_3			597.71	-----	-123	84	-281	198	136	-24	-533	-732	0.707	0.292	1.00	Yes	0.389	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.91**
		U_3 - L_4			514.20	-----	-41	19	-122	74	153	-24	-254	-487	0.754	0.238	1.00	Yes	0.415	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.39**
		U_4 - L_5			324.99	-26.49	-17	-2	-148	78	174	-5	163	-752	0.585	0.406	1.00	Yes	0.321	0.224	0.55	Yes	0.063	0.261	0.33	Yes	0.056	0.189	0.25	Yes	1.00	**9.10**
		U_5 - L_6			198.33	-287.16	36	-116	-98	-55	-511	-202	-1175	-1059	0.357	0.489	0.85	Yes	0.196	0.269	0.47	Yes	0.673	0.325	1	Yes	0.608	0.149	0.76	Yes	1.00	**15.68**
		U_7 - L_6			436.23	-----	-23	-24	-110	18	-36	-85	104	239	0.785	0.210	1.00	Yes	0.432	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.10**
		U_8 - L_7			647.71	-----	-86	73	-176	136	-287	-107	-237	34	0.790	0.210	1.00	Yes	0.497	0.119	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.91**
		U_9 - L_8			800.24	-----	-81	98	-264	101	-181	13	-558	14	0.792	0.206	1.00	Yes	0.435	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.28**
		U_{10} - L_9			956.58	-----	-53	162	-258	167	-107	86	-503	354	0.808	0.186	1.00	Yes	0.500	0.105	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.17**
		U_{11} - L_{10}			962.99	-----	-80	124	-245	195	-895	-234	-15	365	0.770	0.223	1.00	Yes	0.477	0.127	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.18**
		U_{12} - L_{11}			1015.60	-----	116	239	-62	291	105	-1	13	407	0.812	0.181	1.00	Yes	0.503	0.102	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.61**
		U_{13} - L_{12}			608.34	-----	19	172	-68	246	769	317	212	-256	0.719	0.279	1.00	Yes	0.396	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.06**
		U_{13} - L_{14}			618.78	-----	-99	133	-238	191	680	285	71	-271	0.732	0.259	1.00	Yes	0.402	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.77**
		U_{14} - L_{15}			653.88	-----	-29	156	-219	185	545	236	-150	-532	0.773	0.223	1.00	Yes	0.425	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.34**
		U_{15} - L_{16}			506.26	-----	-11	73	-116	7	393	191	-576	-580	0.742	0.253	1.00	Yes	0.408	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.23**
		U_{17} - L_{16}			-----	-372.10	62	-7	-86	-125	-138	69	-118	-158	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.141	1	Yes	0.787	0.160	0.95	Yes	1.00	**15.29**
		U_{18} - L_{17}			113.46	-256.54	29	-28	-116	-52	-225	-75	-727	-65	0.204	0.359	0.57	Yes	0.112	0.197	0.31	Yes	0.590	0.409	1	Yes	0.543	0.148	0.70	Yes	1.00	**12.63**
		U_{19} - L_{18}			371.05	-109.17	10	-17	-99	10	-219	-125	-710	-478	0.667	0.332	1.00	Yes	0.367	0.183	0.55	Yes	0.250	0.361	0.62	Yes	0.231	0.126	0.36	Yes	1.00	**9.40**
		U_{20} - L_{19}			536.39	-----	-19	4	-134	73	164	73	-546	-87	0.704	0.294	1.00	Yes	0.425	0.162	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.95**

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: 2F1 — Fy = 33.0 ksi — Vehicle Load Factors: DL Factor: 1.30, LL Factor: 1.30 — Pedestrian Load Factors: DL Factor: 1.30

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

E = 29000.0 ksi

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

Axial Force Rating

Location	Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capacity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Upper Chord	Structure 1																																																
	U_1 - U_2	-71.64	-2.92	-43.72			0.90	1.24	-3.25	-48.68	0.00	0.00	Vehicle	Vehicle	-----	-156.40	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	**10.14**	**10.14**
	U_2 - U_3	-90.83	16.79	-79.32			0.90	1.24	18.69	-88.31	0.00	0.00	Vehicle	Vehicle	-----	-232.88	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	**5.37**	**5.37**
	U_3 - U_4	-61.13	24.93	-86.55			0.90	1.24	27.76	-96.35	0.00	0.00	Vehicle	Vehicle	-----	-204.73	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	-----	-----	**5.23**	**5.23**
	U_4 - U_5	10.71	32.65	-76.88			0.90	1.24	36.35	-85.59	0.00	0.00	Vehicle	Vehicle	61.17	-97.35	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	**18.17**	**18.17**	**6.73**	**6.73**
	U_5 - U_6	12.86	32.83	-53.74			0.90	1.24	36.54	-59.83	0.00	0.00	Vehicle	Vehicle	64.23	-61.06	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	**18.01**	**18.01**	**9.66**	**9.66**
	U_6 - U_7	121.37	-43.39	-42.55			0.90	1.24	-47.37	-48.31	0.00	0.00	Vehicle	Vehicle	96.20	-----	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	249.49	41.99	-27.66			0.90	1.24	46.74	-30.79	0.00	0.00	Vehicle	Vehicle	385.10	-----	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	-----	-----	**11.87**	**11.87**	-----	-----
	U_8 - U_9	376.92	-3.18	0.12			0.90	1.24	0.13	-3.54	0.00	0.00	Vehicle	Vehicle	490.17	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	**5581.68**	**5581.68**	-----	-----
	U_9 - U_{10}	319.74	1.98	-14.12			0.90	1.20	2.13	-15.22	0.00	0.00	Vehicle	Vehicle	418.43	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	**290.59**	**290.59**	-----	-----
	U_{10} - U_{11}	128.77	42.53	-31.72			0.90	1.20	45.86	-34.20	0.00	0.00	Vehicle	Vehicle	227.01	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	**12.66**	**12.66**	-----	-----
	U_{10} - U_{11}	-70.90	38.05	-59.79			0.90	1.20	41.03	-64.46	0.00	0.00	Vehicle	Vehicle	-----	-175.97	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**8.17**	**8.17**
	U_{11} - U_{12}	-252.96	33.99	-82.33			0.90	1.20	36.64	-88.77	0.00	0.00	Vehicle	Vehicle	-----	-444.25	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	-----	-----	**6.30**	**6.30**
	U_{12} - U_{13}	-391.95	29.33	-98.05			0.90	1.20	31.63	-105.71	0.00	0.00	Vehicle	Vehicle	-----	-646.96	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	-----	-----	**7.05**	**7.05**
	U_{13} - U_{14}	-482.99	24.62	-114.00			0.90	1.20	26.54	-122.92	0.00	0.00	Vehicle	Vehicle	-----	-787.68	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**6.87**	**6.87**
	U_{14} - U_{15}	-454.44	24.53	-98.70			0.90	1.20	26.44	-106.42	0.00	0.00	Vehicle	Vehicle	-----	-768.11	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	-----	-----	**7.92**	**7.92**
	U_{15} - U_{16}	-502.02	10.18	-102.21			0.90	1.20	10.97	-110.21	0.00	0.00	Vehicle	Vehicle	-----	-795.90	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**7.49**	**7.49**
	U_{16} - U_{17}	-467.99	-37.40	-75.66			0.90	1.20	-40.32	-81.58	0.00	0.00	Vehicle	Vehicle	-----	-714.44	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**10.54**	**10.54**
	U_{17} - U_{18}	-368.86	-73.39	-57.87			0.90	1.20	-62.40	-79.13	0.00	0.00	Vehicle	Vehicle	-----	-582.38	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	**7.61**	**7.61**
	U_{18} - U_{19}	-251.56	-3.82	-37.05			0.90	1.20	-4.12	-39.94	0.00	0.00	Vehicle	Vehicle	-----	-378.95	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	**10.66**	**10.66**
	U_{19} - U_{20}	-117.89	-20.39	-2.96			0.90	1.20	-3.19	-21.98	0.00	0.00	Vehicle	Vehicle	-----	-181.83	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	-----	-----	**25.46**	**25.46**
	Structure 2																																														
	U_1 - U_1	-118.23	3.22	-26.87			0.90	1.18	3.43	-28.61	0.00	0.00	Vehicle	Vehicle	-----	-190.89	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	-----	-----	**18.49**	**18.49**
	U_1 - U_2	-239.56	7.38	-56.25			0.90	1.18	7.86	-59.89	0.00	0.00	Vehicle	Vehicle	-----	-389.29	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	-----	-----	**9.21**	**9.21**
	U_2 - U_3	-350.44	12.31	-83.77			0.90	1.18	13.11	-89.19	0.00	0.00	Vehicle	Vehicle	-----	-571.52	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	-----	-----	**8.15**	**8.15**
	U_3 - U_4	-449.15	11.26	-101.67			0.90	1.18	11.99	-108.04	0.00	0.00	Vehicle	Vehicle	-----	-724.61	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	-----	-----	**8.24**	**8.24**
	U_4 - U_5	-483.26	11.75	-117.75			0.90	1.18	26.01	-118.98	0.00	0.00	Vehicle	Vehicle	-----	-782.91	5.50	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	-----	-----	**8.44**	**8.44**
	U_5 - U_6	-485.85	30.92	-122.90			0.90	1.18	32.92	-130.85	0.00	0.00	Vehicle	Vehicle	-----	-801.71	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	-----	-----	**7.65**	**7.65**
	U_6 - U_7	-428.85	36.61	-115.53			0.90	1.18	38.98	-123.00	0.00	0.00	Vehicle	Vehicle	-----	-717.41	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	-----	-----	**7.42**	**7.42**
	U_7 - U_8	-428.37	36.70	-105.22			0.90	1.18	39.07	-112.03	0.00	0.00	Vehicle	Vehicle	-----	-702.52	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	**8.15**	**8.15**
	U_8 - U_9	-335.42	42.06	-82.49			0.90	1.18	44.78	-87.83	0.00	0.00	Vehicle	Vehicle	-----	-550.22	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	-----	-----	**9.00**	**9.00**
	U_9 - U_{10}	-200.29	45.48	-70.55			0.90	1.18	48.42	-75.11	0.00	0.00	Vehicle	Vehicle	-----	-358.02	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	-----	-----	**9.13**	**9.13**
	U_{10} - U_{11}	-52.14	48.24	-57.14			0.90	1.18	51.37	-60.84	0.00	0.00	Vehicle	Vehicle	-----	-146.87	6.88	35.88	28.9950	1183.88	131.71	10.6302	5.5957	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	-----	-----	**11.79**	**11.79**
	U_{11} - U_{12}	107.02	-26.29	-28.19			0.90	1.18	-27.99	-30.02	0.00	0.00	Vehicle	Vehicle	102.73	-----	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	45.34	-15.60			0.90	1.18	48.27	-16.61	0.00	0.00	Vehicle	Vehicle	399.88	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	**18.23**	**18.23**	-----	-----
	U_{13} - U_{14}	391.98	-3.62	-0.77			0.90	1.18	-0.82	-3.86	0.00	0.00	Vehicle	Vehicle	508.51	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	-----	-----	-----	-----
	U_{14} - U_{15}	439.40	0.87	7.96			0.90	1.17	0.92	-8.38	0.00	0.00	Vehicle	Vehicle	572.42	-----	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	-----	-----	**1226.17**	**1226.17**	-----	-----
	U_{15} - U_{16}	369.66	44.01	-19.53			0.90	1.17	46.30	-20.55	0.00	0.00	Vehicle	Vehicle	540.76	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	**19.50**	**19.50**	-----	-----
	U_{16} - U_{17}	271.39	43.03	-29.72			0.90	1.17	45.27	-31.26	0.00	0.00	Vehicle	Vehicle	411.66	-----	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	-----	-----	**17.06**	**17.06**	-----	-----
	U_{17} - U_{18}	171.75	40.59	-49.94			0.90	1.17	42.70	-52.55	0.00	0.00	Vehicle	Vehicle	278.79	-----	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}	72.78	37.40	-65.25			0.90	1.17	39.35	-68.65	0.00	0.00	Vehicle	Vehicle	145.77	-----	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	**17.62**	**17.62**	-----	-----
	U_{19} - U_{20}	-8.11	33.12	-78.37			0.90	1.17	34.84	-82.45	0.00	0.00	Vehicle	Vehicle	34.75	-117.73	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	**23.77**	**23.77**	**8.30**	**8.30**
	U_{20} - U_{21}	-60.13	15.60	-92.83			0.90	1.17	16.41	-97.66	0.00	0.00	Vehicle	Vehicle	-----	-205.13	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**7.95**	**7.95**
	U_{21} - U_{22}	-82.18	21.67	-95.47			0.90	1.17	22.79	-100.44	0.00	0.00	Vehicle	Vehicle	-----	-237.41	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	-----	-----	**7.51**	**7.51**
	U_{22} - U_{23}	-82.40	22.33	-87.09			0.90	1.17	23.49	-91.62	0.00	0.00	Vehicle	Vehicle	-----	-226.24	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	-----	-----	**8.23**	**8.23**
	U_{23} - U_{24}	-65.94	27.71	-74.36			0.90	1.17	29.15	-78.23	0.00	0.00	Vehicle	Vehicle	-----	-187.43	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	-----	-----	**9.85**	**9.85**
	U_{24} - U_{25}	61.51	33.04	-70.88			0.90	1.17	34.76	-74.58	0.00	0.00	Vehicle	Vehicle	21.85	-120.30	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	**24.11**	**24.11**	**9.05**	**9.05**
	U_{25} - U_{26}	55.02	-40.61	-48.74			0.90	1.17	-42.73	-51.28	0.00	0.00	Vehicle	Vehicle	15.98	-----	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
	U_{26} - U_{27}	136.02	-32.17	-39.64			0.90	1.17	-33.84	-41.70	0.00	0.00	Vehicle	Vehicle	132.63	-----	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	-12.13	-28.53			0.90	1.17	-12.76	-30.02	0.00	0.00	Vehicle	Vehicle	265.34	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
	U_{28} - U_{29}	293.76	26.37	-17.31			0.90	1.17	27.74	-18.21	0.00	0.00	Vehicle	Vehicle	417.94	-----	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	-----	-----	**35.28**	**35.28**	-----	-----
	U_{29} - U_{30}	358.11	1.26	-10.85			0.90	1.17	1.32	-11.42	0.00	0.00	Vehicle	Vehicle	467.27	-----	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	-----	-----	**910.63**	**910.63**	-----	-----
	U_{30} - U_{31}	339.33	10.20	-7.16			0.90	1.18	10.86	-7.62	0.00	0.00	Vehicle	Vehicle	455.24	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	**112.80**	**112.80**	-----	-----
	U_{31} - U_{32}	251.17	48.03	-17.05			0.90	1.18	51.14	-18.15	0.00	0.00	Vehicle	Vehicle	393.00	-----	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

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: 2F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

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

E = 29000.0 ksi

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

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

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

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

North Truss - Lower Chord

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	L_0- L_1	4.85	-0.96	-0.89			0.90	1.24	-0.99	-1.07	0.00	0.00	Vehicle	Vehicle	5.02	-----	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	-----	-----	-----	-----
	L_1 - L_2	74.27	-9.44	38.67			0.90	1.24	43.05	-10.51	0.00	0.00	Vehicle	Vehicle	152.51	-----	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	-----	-----	**9.95**	**9.95**	-----	-----
	L_2 - L_3	97.77	-17.89	61.77			0.90	1.24	68.77	-19.91	0.00	0.00	Vehicle	Vehicle	216.49	-----	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	-----	-----	**8.30**	**8.30**	-----	-----
	L_3 - L_4	66.93	-25.99	72.34			0.90	1.24	80.54	-28.93	0.00	0.00	Vehicle	Vehicle	191.70	-----	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	-----	-----	**7.47**	**7.47**	-----	-----
	L_4 - L_5	-108.46	26.04	58.74			0.90	1.24	65.39	28.99	0.00	0.00	Vehicle	Vehicle	-----	-103.30	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	-42.34	37.32			0.90	1.24	41.55	-47.13	0.00	0.00	Vehicle	Vehicle	-----	-369.74	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	-----	-----	**8.96**	**8.96**
	L_6 - L_7	-362.27	-13.20	7.83			0.90	1.24	8.71	-14.70	0.00	0.00	Vehicle	Vehicle	-----	-490.05	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**39.65**	**39.65**
	L_7 - L_8	-478.66	-36.41	-0.34			0.90	1.24	-0.38	-40.53	0.00	0.00	Vehicle	Vehicle	-----	-674.94	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	-----	-----	**17.78**	**17.78**
	L_8 - L_9	-477.02	-40.07	-21.11			0.90	1.20	-22.76	-43.20	0.00	0.00	Vehicle	Vehicle	-----	-676.29	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	-----	-----	**16.72**	**16.72**
	L_9 - L_{10}	-301.43	-42.59	1.50			0.90	1.20	1.62	-45.92	0.00	0.00	Vehicle	Vehicle	-----	-451.56	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**14.02**	**14.02**
	L_{10} - L_{11}	-104.46	-37.73	10.34			0.90	1.20	11.15	-40.68	0.00	0.00	Vehicle	Vehicle	-----	-188.67	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**9.73**	**9.73**
	L_{11} - L_{12}	97.11	-33.69	38.48			0.90	1.20	41.49	-36.32	0.00	0.00	Vehicle	Vehicle	180.17	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**11.98**	**11.98**	-----	-----
	L_{12} - L_{13}	268.74	-29.19	62.71			0.90	1.20	67.61	-31.47	0.00	0.00	Vehicle	Vehicle	437.27	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**10.44**	**10.44**	-----	-----
	L_{13} - L_{14}	405.66	-24.56	69.83			0.90	1.20	75.29	-26.48	0.00	0.00	Vehicle	Vehicle	625.23	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	**11.98**	**11.98**	-----	-----
	L_{14} - L_{15}	502.77	54.07	95.53			0.90	1.20	103.09	58.30	0.00	0.00	Vehicle	Vehicle	787.50	-----	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	-----	-----	**10.41**	**10.41**	-----	-----
	L_{15} - L_{16}	469.25	-10.71	79.17			0.90	1.20	85.36	-11.55	0.00	0.00	Vehicle	Vehicle	720.98	-----	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	-----	-----	**12.95**	**12.95**	-----	-----
	L_{16} - L_{17}	365.43	39.76	61.92			0.90	1.20	66.76	42.87	0.00	0.00	Vehicle	Vehicle	561.85	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	**12.75**	**12.75**	-----	-----
	L_{17} - L_{18}	248.67	18.18	40.71			0.90	1.20	43.89	19.60	0.00	0.00	Vehicle	Vehicle	380.34	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**14.46**	**14.46**	-----	-----
	L_{18} - L_{19}	112.99	0.80	12.01			0.90	1.20	12.95	0.87	0.00	0.00	Vehicle	Vehicle	163.72	-----	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	-----	-----	**30.08**	**30.08**	-----	-----
	L_{19} - L_{20}	-14.26	-15.11	7.91			0.90	1.20	8.53	-16.29	0.00	0.00	Vehicle	Vehicle	-----	-39.71	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	-----	-----	**25.12**	**25.12**
Structure 2	L_0- L_1	15.26	0.32	-1.21			0.90	1.18	0.34	-1.29	0.00	0.00	Vehicle	Vehicle	20.28	-----	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	-----	-----	**1825.56**	**1825.56**	-----	-----
	L_1 - L_2	136.12	-3.02	22.16			0.90	1.18	23.59	-3.21	0.00	0.00	Vehicle	Vehicle	207.63	-----	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	-----	-----	**21.07**	**21.07**	-----	-----
	L_2 - L_3	262.92	-6.43	49.18			0.90	1.18	52.36	-6.84	0.00	0.00	Vehicle	Vehicle	409.85	-----	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	-----	-----	**13.62**	**13.62**	-----	-----
	L_3 - L_4	373.32	-8.41	75.84			0.90	1.18	80.75	-8.95	0.00	0.00	Vehicle	Vehicle	590.29	-----	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	-----	-----	**11.59**	**11.59**	-----	-----
	L_4 - L_5	456.80	-17.18	88.39			0.90	1.18	94.10	-18.29	0.00	0.00	Vehicle	Vehicle	716.18	-----	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	-----	-----	**12.68**	**12.68**	-----	-----
	L_5 - L_6	489.63	-23.29	103.75			0.90	1.18	110.47	-24.80	0.00	0.00	Vehicle	Vehicle	780.12	-----	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	-----	-----	**11.80**	**11.80**	-----	-----
	L_6 - L_7	479.27	-29.54	97.97			0.90	1.18	104.31	-31.45	0.00	0.00	Vehicle	Vehicle	758.65	-----	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	-----	-----	**12.83**	**12.83**	-----	-----
	L_7 - L_8	330.30	-40.46	92.01			0.90	1.18	97.96	-43.07	0.00	0.00	Vehicle	Vehicle	556.74	-----	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	-----	-----	**10.32**	**10.32**	-----	-----
	L_8 - L_9	189.19	53.45	78.70			0.90	1.18	83.79	56.91	0.00	0.00	Vehicle	Vehicle	354.87	-----	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	-----	-----	**10.87**	**10.87**	-----	-----
	L_9 - L_{10}	39.95	-46.55	59.14			0.90	1.18	62.97	-49.57	0.00	0.00	Vehicle	Vehicle	133.80	-12.50	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**13.05**	**13.05**	**15.49**	**15.49**
	L_{10} - L_{11}	-127.23	16.26	34.92			0.90	1.18	37.18	17.31	0.00	0.00	Vehicle	Vehicle	-----	-142.89	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	-20.27	22.23			0.90	1.18	23.67	-21.58	0.00	0.00	Vehicle	Vehicle	-----	-395.32	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	-----	-----	**30.04**	**30.04**
	L_{12} - L_{13}	-426.62	-43.55	1.27			0.90	1.18	1.35	-46.37	0.00	0.00	Vehicle	Vehicle	-----	-614.89	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	-----	-----	**18.31**	**18.31**
	L_{13} - L_{14}	-536.34	-27.55	1.04			0.90	1.18	1.10	-29.33	0.00	0.00	Vehicle	Vehicle	-----	-735.38	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	-----	-----	**33.37**	**33.37**
	L_{14} - L_{15}	-537.64	-41.81	-8.71			0.90	1.17	-9.17	-43.99	0.00	0.00	Vehicle	Vehicle	-----	-756.13	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**22.22**	**22.22**
	L_{15} - L_{16}	-475.53	-47.94	5.34			0.90	1.17	5.62	-50.44	0.00	0.00	Vehicle	Vehicle	-----	-683.75	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	-----	-----	**15.86**	**15.86**
	L_{16} - L_{17}	-384.21	-44.38	6.02			0.90	1.17	6.33	-46.69	0.00	0.00	Vehicle	Vehicle	-----	-560.17	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	-----	-----	**14.21**	**14.21**
	L_{17} - L_{18}	-281.70	-42.63	9.82			0.90	1.17	10.33	-44.85	0.00	0.00	Vehicle	Vehicle	-----	-424.52	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	-----	-----	**9.94**	**9.94**
	L_{18} - L_{19}	-174.99	-38.91	27.23			0.90	1.17	28.64	-40.93	0.00	0.00	Vehicle	Vehicle	-----	-280.69	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	-----	-----	**9.74**	**9.74**
	L_{19} - L_{20}	-76.34	-35.25	47.69			0.90	1.17	50.18	-37.08	0.00	0.00	Vehicle	Vehicle	-----	-147.46	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**13.41**	**13.41**
Structure 3	L_0 - L_{21}	4.59	-29.98	63.95			0.90	1.17	67.28	-31.54	0.00	0.00	Vehicle	Vehicle	93.44	-35.03	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	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**14.27**	**14.27**	**25.96**	**25.96**
	L_{21} - L_{22}	56.15	-5.93	62.71			0.90	1.17	65.98	-6.24	0.00	0.00	Vehicle	Vehicle	158.76	-----	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	-----	-----	**13.77**	**13.77**	-----	-----
	L_{22} - L_{23}	63.16	-15.91	69.00			0.90	1.17	72.60	-16.73	0.00	0.00	Vehicle	Vehicle	176.49	-----	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	-----	-----	**12.42**	**12.42**	-----	-----
	L_{23} - L_{24}	15.68	-21.22	65.99			0.90	1.17	69.42	-22.33	0.00	0.00	Vehicle	Vehicle	110.64	-8.64	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	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**13.67**	**13.67**	**37.17**	**37.17**
	L_{24} - L_{25}	-55.90	17.32	48.10			0.90	1.17	50.60	18.22	0.00	0.00	Vehicle	Vehicle	-----	-48.98	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	-----	-----	**14.91**	**14.91**
	L_{25} - L_{26}	-136.32	-15.35	33.95			0.90	1.17	35.72	-16.15	0.00	0.00	Vehicle	Vehicle	-----	-198.21	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	-----	-----	**27.07**	**27.07**
	L_{26} - L_{27}	-217.71	-14.87	22.41			0.90	1.17	23.58	-15.65	0.00	0.00	Vehicle	Vehicle	-----	-303.36	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	-----	-----	**32.58**	**32.58**
	L_{27} - L_{28}	-296.28	-49.91	9.86			0.90	1.17	10.37	-52.51	0.00	0.00	Vehicle	Vehicle	-----	-453.42	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	-----	-----	**14.31**	**14.31**
	L_{28} - L_{29}	-364.24	-71.31	1.97			0.90	1.17	2.07	-75.02	0.00	0.00	Vehicle	Vehicle	-----	-571.04	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	-----	-----	**12.15**	**12.15**
	L_{29} - L_{30}	-418.31	-40.68	20.74			0.90	1.17	21.82	-42.80	0.00	0.00	Vehicle	Vehicle	-----	-599.44	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	-----	-----	**25.63**	**25.63**
	L_{30} - L_{31}	-350.66	-40.31	-7.93			0.90	1.18	-8.44	-42.91	0.00	0.00	Vehicle	Vehicle	-----	-511.65	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	-----	-----	**27.13**	**27.13**
	L_{31} - L_{32}	-275.63	-21.87	-7.73			0.90	1.18	-8.23	-23.29	0.00	0.00	Vehicle	Vehicle	-----	-388.60	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	-----	-----	**42.92**	**42.92**
	L_{32} - L_{33}	-178.96	-38.82	-4.89

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: 2F1 **Condition:** As-Built

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

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

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

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

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

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

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Verticals																																															
Structure 1	U$_1$ - L$_0$	-77.20	-46.00	7.46			0.90	1.24	8.30	-51.21	0.00	0.00	Vehicle	Vehicle	-----	-166.94	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	-----	-----	-----	-----	-----	5.22	5.22
	U$_1$ - L$_1$	-33.88	-31.68	6.71			0.90	1.24	7.47	-35.26	0.00	0.00	Vehicle	Vehicle	-----	-89.89	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	-----	-----	-----	-----	-----	9.02	9.02
	U$_2$ - L$_2$	10.41	-24.09	6.32			0.90	1.24	7.03	-26.82	0.00	0.00	Vehicle	Vehicle	22.67	-21.34	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	-----	-----	-----	59.33	59.33	13.51	13.51
	U$_3$ - L$_3$	44.37	-13.86	11.50			0.90	1.24	12.81	-15.43	0.00	0.00	Vehicle	Vehicle	74.33	-----	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	-----	-----	-----	-----	-----	29.93	29.93	-----	-----
	U$_4$ - L$_4$	-16.71	-0.04	-14.25			0.90	1.24	-0.04	-15.87	0.00	0.00	Vehicle	Vehicle	-----	-42.35	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	20.99	20.99
	U$_5$ - L$_5$	-109.52	2.30	-38.91			0.90	1.24	2.56	-43.31	0.00	0.00	Vehicle	Vehicle	-----	-198.68	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	7.29	7.29
	U$_6$ - L$_6$	-143.61	-0.40	-50.99			0.90	1.24	-0.44	-56.76	0.00	0.00	Vehicle	Vehicle	-----	-260.48	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	-----	-----	-----	-----	-----	6.42	6.42
	U$_7$ - L$_7$	-142.76	1.34	-52.03			0.90	1.24	1.49	-57.93	0.00	0.00	Vehicle	Vehicle	-----	-260.89	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	-----	-----	-----	-----	-----	5.48	5.48
	U$_8$ - L$_8$	-391.96	-50.01	-54.35			0.90	1.24	-55.67	-60.51	0.00	0.00	Vehicle	Vehicle	-----	-588.21	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	-----	-----	-----	-----	-----	11.13	11.13
	U$_9$ - L$_9$	-223.26	-46.79	4.64			0.90	1.20	5.01	-50.45	0.00	0.00	Vehicle	Vehicle	-----	-355.82	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	-----	-----	-----	-----	-----	8.36	8.36
	U$_{10}$ - L$_{10}$	-225.85	-41.75	-2.02			0.90	1.20	-2.18	-45.02	0.00	0.00	Vehicle	Vehicle	-----	-352.13	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	-----	-----	-----	-----	-----	11.48	11.48
	U$_{11}$ - L$_{11}$	-198.80	-41.56	4.57			0.90	1.20	4.93	-44.81	0.00	0.00	Vehicle	Vehicle	-----	-316.70	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	-----	-----	-----	-----	-----	9.88	9.88
	U$_{12}$ - L$_{12}$	-154.81	-34.13	6.81			0.90	1.20	7.34	-36.80	0.00	0.00	Vehicle	Vehicle	-----	-249.09	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	-----	-----	-----	-----	-----	10.26	10.26
	U$_{13}$ - L$_{13}$	-109.06	-30.86	10.64			0.90	1.20	11.47	-33.27	0.00	0.00	Vehicle	Vehicle	-----	-185.03	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	-----	-----	-----	-----	-----	8.16	8.16
	U$_{14}$ - L$_{14}$	-12.31	6.88	0.58			0.90	1.20	0.62	-7.41	0.00	0.00	Vehicle	Vehicle	-----	-25.63	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	-----	-----	-----	-----	-----	44.85	44.85
	U$_{15}$ - L$_{15}$	-5.62	14.70	-24.58			0.90	1.20	15.85	-26.51	0.00	0.00	Vehicle	Vehicle	13.30	-41.76	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	-----	-----	-----	27.34	27.34	12.74	12.74
	U$_{16}$ - L$_{16}$	-51.73	10.55	-34.13			0.90	1.20	11.37	-36.80	0.00	0.00	Vehicle	Vehicle	-----	-115.09	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	-----	-----	-----	-----	-----	7.87	7.87
	U$_{17}$ - L$_{17}$	-127.32	5.63	-43.67			0.90	1.20	6.07	-47.08	0.00	0.00	Vehicle	Vehicle	-----	-226.71	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	-----	-----	-----	-----	-----	6.03	6.03
	U$_{18}$ - L$_{18}$	-159.94	5.20	-51.95			0.90	1.20	5.60	-56.01	0.00	0.00	Vehicle	Vehicle	-----	-280.74	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	-----	-----	-----	-----	-----	6.52	6.52
	U$_{19}$ - L$_{19}$	-191.17	4.39	-53.45			0.90	1.20	4.74	-57.63	0.00	0.00	Vehicle	Vehicle	-----	-323.43	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$_{20}$	-212.33	4.40	-52.75			0.90	1.20	4.74	-56.88	0.00	0.00	Vehicle	Vehicle	-----	-349.97	0.00	30.63	30.6305	1010.81	131.71	20.3229	2.8427	64.34	29.06	-756.66	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.50	6.50
Structure 2	U$_0$ - L$_0$	-206.69	-49.01	5.48			0.90	1.18	5.83	-52.18	0.00	0.00	Vehicle	Vehicle	-----	-336.53	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	-----	-----	-----	-----	-----	8.35	8.35
	U$_1$ - L$_1$	-188.76	-46.54	5.63			0.90	1.18	5.99	-49.56	0.00	0.00	Vehicle	Vehicle	-----	-309.81	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	-----	-----	-----	-----	-----	9.76	9.76
	U$_2$ - L$_2$	-155.92	-41.17	5.93			0.90	1.18	6.32	-43.84	0.00	0.00	Vehicle	Vehicle	-----	-259.69	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	9.55	9.55
	U$_3$ - L$_3$	-134.58	-40.37	6.72			0.90	1.18	7.16	-42.98	0.00	0.00	Vehicle	Vehicle	-----	-230.83	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	-----	-----	-----	-----	-----	7.38	7.38
	U$_4$ - L$_4$	-64.49	-29.76	6.41			0.90	1.18	6.82	-31.68	0.00	0.00	Vehicle	Vehicle	-----	-125.03	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	-----	-----	-----	-----	-----	8.67	8.67
	U$_5$ - L$_5$	-19.94	-27.22	14.93			0.90	1.18	15.90	-28.99	0.00	0.00	Vehicle	Vehicle	-----	-63.60	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	11.06	11.06
	U$_6$ - L$_6$	40.08	-20.04	21.02			0.90	1.18	22.37	-21.34	0.00	0.00	Vehicle	Vehicle	81.19	-----	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	17.32	17.32	-----	-----
	U$_7$ - L$_7$	-26.04	-0.99	-4.75			0.90	1.18	-1.06	-5.05	0.00	0.00	Vehicle	Vehicle	-----	-40.42	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	-----	-----	-----	-----	-----	62.25	62.25
	U$_8$ - L$_8$	-125.25	10.89	-36.14			0.90	1.18	11.60	-38.48	0.00	0.00	Vehicle	Vehicle	-----	-212.84	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	-----	-----	-----	-----	-----	10.53	10.53
	U$_9$ - L$_9$	-174.53	4.24	-43.39			0.90	1.18	4.51	-46.19	0.00	0.00	Vehicle	Vehicle	-----	-286.94	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	11.18	11.18
	U$_{10}$ - L$_{10}$	-202.66	-0.32	-46.10			0.90	1.18	-0.34	-49.08	0.00	0.00	Vehicle	Vehicle	-----	-327.26	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	-----	-----	-----	-----	-----	11.73	11.73
	U$_{11}$ - L$_{11}$	-229.53	1.31	-54.03			0.90	1.18	1.40	-57.53	0.00	0.00	Vehicle	Vehicle	-----	-373.17	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	9.30	9.30
	U$_{12}$ - L$_{12}$	-250.85	1.04	-54.65			0.90	1.18	1.11	-58.19	0.00	0.00	Vehicle	Vehicle	-----	-401.74	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	9.47	9.47
	U$_{13}$ - L$_{13}$	-223.32	5.46	-55.63			0.90	1.18	5.81	-59.23	0.00	0.00	Vehicle	Vehicle	-----	-367.32	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	-----	-----	-----	-----	-----	7.88	7.88
	U$_{14}$ - L$_{14}$	-343.31	41.52	-48.43			0.90	1.18	-44.20	-51.57	0.00	0.00	Vehicle	Vehicle	-----	-513.34	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	13.74	13.74
	U$_{15}$ - L$_{15}$	-123.14	-42.87	5.49			0.90	1.17	5.78	-45.10	0.00	0.00	Vehicle	Vehicle	-----	-218.72	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	12.57	12.57
	U$_{16}$ - L$_{16}$	-156.70	-41.30	4.20			0.90	1.17	4.42	-43.45	0.00	0.00	Vehicle	Vehicle	-----	-260.19	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	-----	-----	-----	-----	-----	11.72	11.72
	U$_{17}$ - L$_{17}$	-147.91	-43.01	4.11			0.90	1.17	4.32	-45.25	0.00	0.00	Vehicle	Vehicle	-----	-251.11	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	-----	-----	-----	-----	-----	10.51	10.51
	U$_{18}$ - L$_{18}$	-142.22	-42.37	5.16			0.90	1.17	5.42	-44.58	0.00	0.00	Vehicle	Vehicle	-----	-242.84	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	-----	-----	-----	-----	-----	9.76	9.76
	U$_{19}$ - L$_{19}$	-111.48	-37.49	5.76			0.90	1.17	6.06	-39.44	0.00	0.00	Vehicle	Vehicle	-----	-196.20	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	-----	-----	-----	-----	-----	10.14	10.14
	U$_{20}$ - L$_{20}$	-76.55	-32.87	10.83			0.90	1.17	11.40	-34.58	0.00	0.00	Vehicle	Vehicle	-----	-144.47	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	-----	-----	-----	-----	-----	8.64	8.64
	U$_{21}$ - L$_{21}$	-44.31	-29.30	13.29			0.90	1.17	13.98	-30.83	0.00	0.00	Vehicle	Vehicle	-----	-97.68	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	-----	-----	-----	-----	-----	9.61	9.61
	U$_{22}$ - L$_{22}$	-21.25	-0.38	-3.97			0.90	1.17	-0.40	-4.18	0.00	0.00	Vehicle	Vehicle	-----	-33.06	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	-----	-----	-----	-----	-----	76.69	76.69
	U$_{23}$ - L$_{23}$	-39.07	15.62	-29.15			0.90	1.17	16.43	-30.67	0.00	0.00	Vehicle	Vehicle	-----	-90.66	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	-----	-----	-----	-----	-----	9.83	9.83
	U$_{24}$ - L$_{24}$	-74.84	10.47	-33.92			0.90	1.17	11.02	-35.69	0.00	0.00	Vehicle	Vehicle	-----	-143.68	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	-----	-----	-----	-----	-----	8.42	8.42
	U$_{25}$ - L$_{25}$	-103.27	7.04	-44.44			0.90	1.17	7.41	-46.75	0.00	0.00	Vehicle	Vehicle	-----	-195.03	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	-----	-----	-----	-----	-----	8.73	8.73
	U$_{26}$ - L$_{26}$	-120.22	6.65	-46.95			0.90	1.17	6.99	-49.40	0.00	0.00	Vehicle	Vehicle	-----	-220.50	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	-----	-----	-----	-----	-----	9.25	9.25
	U$_{27}$ - L$_{27}$	-123.93	5.49	-48.98			0.90	1.17	5.77	-51.53	0.00	0.00	Vehicle	Vehicle	-----	-228.10	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	-----	-----	-----	-----	-----	9.69	9.69
	U$_{28}$ - L$_{28}$	-135.60	4.99	-54.94			0.90	1.17	5.25	-57.80	0.00	0.00	Vehicle	Vehicle	-----	-251.42	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	9.18	9.18
	U$_{29}$ - L$_{29}$	-116.87	2.92	-51.70			0.90	1.17	3.07	-54.40	0.00	0.00	Vehicle	Vehicle	-----	-222.65	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	-----	-----	-----	-----	-----	10.54	10.54
	U$_{30}$ - L$_{30}$	-262.02	-41.56	-43.92			0.90	1.18	-44.25	-46.76	0.00	0.00	Vehicle	Vehicle	-----	-401.41	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	-----	-----	-----	-----	-----	16.89	16.89
	U$_{31}$ - L$_{31}$	-156.38	-46.07	6.90			0.90	1.18	7.35	-49.05	0.00	0.00	Vehicle	Vehicle	-----	-267.05	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	-----	-----	-----	-----	-----	10.88	10.88
	U$_{32}$ - L$_{32}$	-185.51	-45.73	4.87			0.90	1.18	5.18	-48.69	0.00	0.00	Vehicle	Vehicle	-----	-304.45	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	----

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: 2F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — LL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30 — LL Factor: 1.30

Condition: As-Built — Fu = 60.0 ksi

E = 29000.0 ksi

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

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

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

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member 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	50.34	-10.48			0.90	1.24	56.05	-11.67	0.00	0.00	Vehicle	Vehicle	186.38	-----	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	-----	-----	-----	-----	-----	**8.90**	**8.90**	-----	-----
	U_1 - L_2	23.35	40.12	0.83			0.90	1.24	44.67	0.93	0.00	0.00	Vehicle	Vehicle	88.42	-----	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	-----	-----	-----	-----	-----	**9.05**	**9.05**	-----	-----
	U_3 - L_3	-37.85	23.37	-18.04			0.90	1.24	26.01	-20.09	0.00	0.00	Vehicle	-----	-----	-75.32	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**14.75**	**14.75**
	U_4 - L_4	-92.19	-9.84	-38.39			0.90	1.24	-10.95	-42.74	0.00	0.00	Vehicle	Vehicle	-----	-175.42	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**5.71**	**5.71**
	U_4 - L_5	143.37	36.97	-7.31			0.90	1.24	41.15	-8.14	0.00	0.00	Vehicle	Vehicle	239.88	-----	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	-----	-----	-----	-----	-----	**9.26**	**9.26**	-----	-----
	U_5 - L_5	177.90	52.47	-2.72			0.90	1.24	58.41	-3.03	0.00	0.00	Vehicle	Vehicle	307.20	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.09**	**8.09**	-----	-----
	U_5 - L_6	184.42	63.36	2.45			0.90	1.24	70.54	2.72	0.00	0.00	Vehicle	Vehicle	331.45	-----	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	-----	-----	-----	-----	-----	**6.61**	**6.61**	-----	-----
	U_6 - L_7	180.02	58.07	-0.30			0.90	1.24	64.65	-0.34	0.00	0.00	Vehicle	Vehicle	318.07	-----	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	-----	-----	-----	-----	-----	**7.28**	**7.28**	-----	-----
	U_8 - L_9	268.98	51.47	-5.80			0.90	1.20	55.50	-6.25	0.00	0.00	Vehicle	Vehicle	421.82	-----	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	-----	-----	-----	-----	-----	**12.49**	**12.49**	-----	-----
	U_9 - L_{10}	278.85	49.15	-4.83			0.90	1.20	53.00	-5.21	0.00	0.00	Vehicle	Vehicle	431.40	-----	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	-----	-----	-----	-----	-----	**12.89**	**12.89**	-----	-----
	U_{10} - L_{11}	285.04	53.00	-5.68			0.90	1.20	57.14	-6.12	0.00	0.00	Vehicle	Vehicle	444.84	-----	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	-----	-----	-----	-----	-----	**10.95**	**10.95**	-----	-----
	U_{11} - L_{12}	250.60	46.81	-4.63			0.90	1.20	50.47	-4.99	0.00	0.00	Vehicle	Vehicle	391.38	-----	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	-----	-----	-----	-----	-----	**10.44**	**10.44**	-----	-----
	U_{12} - L_{13}	189.65	44.37	-14.65			0.90	1.20	47.84	-15.79	0.00	0.00	Vehicle	Vehicle	308.74	-----	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	-----	-----	-----	-----	-----	**9.23**	**9.23**	-----	-----
	U_{13} - L_{14}	123.32	32.60	-19.33			0.90	1.20	35.15	-20.84	0.00	0.00	Vehicle	Vehicle	206.02	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.66	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**8.66**	**8.66**	-----	-----
	U_{13} - L_{14}	-24.41	23.33	-23.52			0.90	1.20	25.15	-25.36	0.00	0.00	Vehicle	Vehicle	0.96	-64.70	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**17.98**	**17.98**	**11.99**	**11.99**
	U_{14} - L_{15}	48.53	34.45	-16.05			0.90	1.20	37.15	-17.31	0.00	0.00	Vehicle	Vehicle	111.38	-----	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	-----	-----	-----	-----	-----	**10.21**	**10.21**	-----	-----
	U_{15} - L_{16}	146.59	51.22	-5.23			0.90	1.20	55.22	-5.64	0.00	0.00	Vehicle	Vehicle	262.35	-----	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	-----	-----	-----	-----	-----	**6.84**	**6.84**	-----	-----
	U_{16} - L_{17}	182.46	52.19	-6.63			0.90	1.20	56.27	-7.15	0.00	0.00	Vehicle	Vehicle	310.35	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.32**	**8.32**	-----	-----
	U_{19} - L_{18}	223.82	59.57	-5.55			0.90	1.20	64.23	-5.98	0.00	0.00	Vehicle	Vehicle	374.47	-----	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	-----	-----	-----	-----	-----	**7.57**	**7.57**	-----	-----
	U_{20} - L_{19}	232.72	49.75	-4.64			0.90	1.20	53.64	-5.00	0.00	0.00	Vehicle	Vehicle	372.27	-----	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	-----	-----	-----	-----	-----	**8.90**	**8.90**	-----	-----
	U_1 - L_1	213.54	47.71	-5.85			0.90	1.18	50.80	-6.23	0.00	0.00	Vehicle	Vehicle	343.64	-----	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	-----	-----	-----	-----	-----	**11.10**	**11.10**	-----	-----
	U_1 - L_2	200.48	47.52	-6.87			0.90	1.18	50.60	-7.31	0.00	0.00	Vehicle	Vehicle	326.40	-----	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	-----	-----	-----	-----	-----	**11.40**	**11.40**	-----	-----
	U_1 - L_3	172.81	47.02	-7.68			0.90	1.18	50.06	-8.18	0.00	0.00	Vehicle	Vehicle	289.73	-----	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	-----	-----	-----	-----	-----	**9.55**	**9.55**	-----	-----
	U_1 - L_4	147.16	42.61	-7.82			0.90	1.18	45.36	-8.33	0.00	0.00	Vehicle	Vehicle	250.28	-----	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	-----	-----	-----	-----	-----	**9.48**	**9.48**	-----	-----
	U_1 - L_5	49.10	36.53	-17.94			0.90	1.18	38.89	-19.10	0.00	0.00	Vehicle	Vehicle	114.40	-----	0.00	16.85	16.8486	556.00	131.71	15.3992	1.9682	78.25	28.23	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**9.73**	**9.73**	-----	-----
	U_1 - L_6	2.96	33.15	-22.88			0.90	1.18	35.30	-24.36	0.00	0.00	Vehicle	Vehicle	49.74	-27.81	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	-----	-----	-----	**12.03**	**12.03**	**13.49**	**13.49**
	U_1 - L_7	-85.74	16.89	-33.30			0.90	1.18	17.98	-35.45	0.00	0.00	Vehicle	Vehicle	-----	-157.55	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	-----	-----	-----	**----**	**----**	**7.72**	**7.72**
	U_1 - L_7	140.30	39.39	-16.42			0.90	1.18	41.93	-17.48	0.00	0.00	Vehicle	Vehicle	236.90	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**11.04**	**11.04**	-----	-----
	U_8 - L_8	204.22	46.32	-7.90			0.90	1.18	49.31	-8.41	0.00	0.00	Vehicle	Vehicle	329.59	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**10.26**	**10.26**	-----	-----
	U_{19} - L_9	234.87	53.21	-3.70			0.90	1.18	56.65	-3.94	0.00	0.00	Vehicle	Vehicle	378.98	-----	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	-----	-----	-----	-----	-----	**9.58**	**9.58**	-----	-----
	U_{11} - L_{10}	263.10	56.37	0.63			0.90	1.18	60.01	0.67	0.00	0.00	Vehicle	Vehicle	420.04	-----	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	-----	-----	-----	-----	-----	**9.69**	**9.69**	-----	-----
	U_{11} - L_{11}	274.02	59.31	0.04			0.90	1.18	63.15	0.04	0.00	0.00	Vehicle	Vehicle	438.32	-----	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	-----	-----	-----	-----	-----	**9.03**	**9.03**	-----	-----
	U_{12} - L_{12}	254.94	56.30	-5.80			0.90	1.18	59.94	-6.17	0.00	0.00	Vehicle	Vehicle	409.34	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.72**	**8.72**	-----	-----
	U_{13} - L_{13}	217.71	52.56	-5.95			0.90	1.18	55.96	-6.33	0.00	0.00	Vehicle	Vehicle	355.77	-----	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	-----	-----	-----	-----	-----	**10.00**	**10.00**	-----	-----
	U_{14} - L_{15}	110.05	44.27	-5.76			0.90	1.17	46.58	-6.06	0.00	0.00	Vehicle	Vehicle	203.61	-----	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	-----	-----	-----	-----	-----	**11.61**	**11.61**	-----	-----
	U_{16} - L_{16}	132.30	44.61	-6.13			0.90	1.17	46.93	-6.45	0.00	0.00	Vehicle	Vehicle	232.99	-----	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	-----	-----	-----	-----	-----	**11.05**	**11.05**	-----	-----
	U_{17} - L_{17}	172.89	46.36	-4.31			0.90	1.17	48.78	-4.53	0.00	0.00	Vehicle	Vehicle	288.17	-----	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	-----	-----	-----	-----	-----	**11.02**	**11.02**	-----	-----
	U_{17} - L_{18}	160.19	48.06	-5.13			0.90	1.17	50.57	-5.40	0.00	0.00	Vehicle	Vehicle	273.98	-----	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	-----	-----	-----	-----	-----	**9.70**	**9.70**	-----	-----
	U_{18} - L_{19}	152.35	49.65	-6.58			0.90	1.17	52.24	-6.92	0.00	0.00	Vehicle	Vehicle	265.96	-----	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	-----	-----	-----	-----	-----	**9.54**	**9.54**	-----	-----
	U_{20} - L_{20}	120.69	44.46	-9.14			0.90	1.17	46.78	-9.62	0.00	0.00	Vehicle	Vehicle	217.70	-----	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	-----	-----	-----	-----	-----	**10.32**	**10.32**	-----	-----
	U_{20} - L_{21}	76.08	39.08	-16.29			0.90	1.17	41.12	-17.14	0.00	0.00	Vehicle	Vehicle	152.36	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**8.55**	**8.55**	-----	-----
	U_{21} - L_{22}	31.46	25.06	-22.09			0.90	1.17	26.37	-23.24	0.00	0.00	Vehicle	Vehicle	75.17	-----	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	-----	-----	-----	-----	-----	**15.03**	**15.03**	-----	-----
	U_{22} - L_{22}	24.30	24.88	-23.96			0.90	1.17	26.18	-25.21	0.00	0.00	Vehicle	Vehicle	65.62	-1.19	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	-----	-----	-----	**15.41**	**15.41**	**13.78**	**13.78**
	U_{23} - L_{23}	72.26	34.65	-17.43			0.90	1.17	36.45	-18.33	0.00	0.00	Vehicle	Vehicle	141.33	-----	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	-----	-----	-----	-----	-----	**9.75**	**9.75**	-----	-----
	U_{23} - L_{24}	112.13	46.72	-9.20			0.90	1.17	49.15	-9.68	0.00	0.00	Vehicle	Vehicle	209.67	-----	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	-----	-----	-----	-----	-----	**9.99**	**9.99**	-----	-----
	U_{24} - L_{25}	112.13	46.72	-9.20			0.90	1.17	49.15	-9.68	0.00	0.00	Vehicle	Vehicle	209.67	-----	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	-----	-----	-----	-----	-----	**9.99**	**9.99**	-----	-----
	U_{25} - L_{26}	127.84	54.43	-5.83			0.90	1.17	57.27	-6.13	0.00	0.00	Vehicle	Vehicle	240.65	-----	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	-----	-----	-----	-----	-----	**9.13**	**9.13**	-----	-----
	U_{26} - L_{26}	132.67	54.74	-8.87			0.90	1.17	57.59	-7.23	0.00	0.00	Vehicle	Vehicle	247.33	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.99**	**8.99**	-----	-----
	U_{27} - L_{27}	137.94	53.79	-5.92			0.90	1.17	56.60	-6.23	0.00	0.00	Vehicle	Vehicle	252.90	-----	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	-----	-----	-----	-----	-----	**10.11**	**10.11**	-----	-----
	U_{28} - L_{28}	122.80	55.89	-3.49			0.90	1.17	58.80	-3.67	0.00	0.00	Vehicle	Vehicle	236.07	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.98**	**8.98**	-----	-----
	U_{29} - L_{29}	102.75	48.70	-2.74			0.90	1.17	51.24	-2.88	0.00	0.00	Vehicle	Vehicle	200.19	-----	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	-----	-----	-----	-----	-----	**10.69**	**10.69**	-----	-----
	U_{30} - L_{31}	140.07	42.39	-7.12			0.90	1.18	45.13	-7.58	0.00	0.00	Vehicle	Vehicle	240.75	-----	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	-----	-----	-----	-----	-----	**14.13**	**14.13**	-----	-----
	U_{31} - L_{32}	167.39	46.19	-7.81			0.90	1.18	49.18	-8.32	0.00	0.00	Vehicle	Vehicle	281.54	-----	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	-----	-----	-----	-----	-----	**12.41**	**12.41**	-----	-----
	U_{32} - L_{33}	202.10	51.13	-4.52			0.90	1.18	54.44	-4.81	0.00	0.00	Vehicle	Vehicle	333.51	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**11.80**	**11.80**	-----	-----
	U_{33} - L_{34}	201.91	49.38	-3.28			0.90	1.18	52.58	-3.50	0.00	0.00	Vehicle	Vehicle	330.84	-----	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

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: 2F1 **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 (I+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Upper Chord	Structure 1	U_0 - U_1	-52.64	6.25	-50.45			0.75	1.24	5.79	-46.81	0.00	0.00	Vehicle	Vehicle	-----	-129.28	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	-----	-----	**10.95**	**10.95**
		U_1 - U_2	-61.57	15.59	-77.11			0.75	1.24	14.46	-71.54	0.00	0.00	Vehicle	Vehicle	-----	-173.04	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	-----	-----	**7.04**	**7.04**
		U_2 - U_3	-26.99	21.65	-79.61			0.75	1.24	20.08	-73.86	0.00	0.00	Vehicle	Vehicle	-----	-131.10	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	**7.29**	**7.29**
		U_3 - U_4	32.92	-33.72	-69.23			0.75	1.24	-31.28	-64.23	0.00	0.00	Vehicle	Vehicle	2.13	-40.70	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	**9.31**	**9.31**
		U_4 - U_5	34.77	26.43	-47.18			0.75	1.24	24.52	-43.77	0.00	0.00	Vehicle	Vehicle	77.08	-11.70	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	**25.95**	**25.95**	**13.71**	**13.71**
		U_5 - U_6	124.13	-29.84	-38.68			0.75	1.24	-27.68	-35.89	0.00	0.00	Vehicle	Vehicle	125.39	-----	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	-7.24	-14.44			0.75	1.24	-6.71	-13.39	0.00	0.00	Vehicle	Vehicle	281.42	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	-----	-----	-----	-----
		U_7 - U_8	331.76	-7.53	1.29			0.75	1.24	1.20	-6.98	0.00	0.00	Vehicle	Vehicle	432.85	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	**648.41**	**648.41**	-----	-----
		U_8 - U_9	267.61	23.09	-17.54			0.75	1.20	20.75	-15.76	0.00	0.00	Vehicle	Vehicle	374.87	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	**32.35**	**32.35**	-----	-----
		U_9 - U_{10}	89.12	28.28	-39.25			0.75	1.20	25.41	-35.26	0.00	0.00	Vehicle	Vehicle	148.89	-----	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	-----	-----	**24.40**	**24.40**	-----	-----
		U_{10} - U_{11}	-76.81	25.41	-62.99			0.75	1.20	22.83	-56.60	0.00	0.00	Vehicle	Vehicle	-----	-173.42	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	**9.20**	**9.20**	-----	-----
		U_{11} - U_{12}	-230.69	22.19	-79.40			0.75	1.20	19.93	-71.34	0.00	0.00	Vehicle	Vehicle	-----	-392.63	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	**8.16**	**8.16**	-----	-----
		U_{12} - U_{13}	-341.88	-67.90	-95.46			0.75	1.20	-61.01	-85.77	0.00	0.00	Vehicle	Vehicle	-----	-555.94	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	**9.28**	**9.28**	-----	-----
		U_{13} - U_{14}	-421.62	-56.08	-103.31			0.75	1.20	-50.39	-92.82	0.00	0.00	Vehicle	Vehicle	-----	-668.78	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	**9.76**	**9.76**	-----	-----
		U_{14} - U_{15}	-422.51	-53.91	-83.72			0.75	1.20	-48.44	-75.22	0.00	0.00	Vehicle	Vehicle	-----	-647.05	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	**12.03**	**12.03**	-----	-----
		U_{15} - U_{16}	-439.94	-68.50	-76.23			0.75	1.20	-61.54	-68.49	0.00	0.00	Vehicle	Vehicle	-----	-660.96	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	**12.96**	**12.96**	-----	-----
		U_{16} - U_{17}	-422.43	-61.65	-73.02			0.75	1.20	-55.39	-65.61	0.00	0.00	Vehicle	Vehicle	-----	-634.44	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	**13.80**	**13.80**	-----	-----
		U_{17} - U_{18}	-340.94	-79.31	-55.20			0.75	1.20	-49.60	-71.26	0.00	0.00	Vehicle	Vehicle	-----	-535.85	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	**8.84**	**8.84**	-----	-----
		U_{18} - U_{19}	-247.15	-3.38	-35.26			0.75	1.20	-3.04	-31.68	0.00	0.00	Vehicle	Vehicle	-----	-362.47	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	**13.59**	**13.59**	-----	-----
		U_{19} - U_{20}	-131.71	-16.58	-4.07			0.75	1.20	-3.66	-14.90	0.00	0.00	Vehicle	Vehicle	-----	-190.59	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	**36.64**	**36.64**	-----	-----
	Structure 2	U_0 - U_1	-131.51	-0.91	-33.92			0.75	1.18	-0.81	-30.09	0.00	0.00	Vehicle	Vehicle	-----	-210.08	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	-----	-----	**17.14**	**17.14**
		U_1 - U_2	-247.03	9.46	-62.62			0.75	1.18	8.39	-55.56	0.00	0.00	Vehicle	Vehicle	-----	-393.36	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	-----	-----	**9.80**	**9.80**
		U_2 - U_3	-347.15	14.81	-83.57			0.75	1.18	13.14	-74.14	0.00	0.00	Vehicle	Vehicle	-----	-547.68	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	-----	-----	**9.85**	**9.85**
		U_3 - U_4	-437.07	-78.63	-96.39			0.75	1.18	-69.77	-85.52	0.00	0.00	Vehicle	Vehicle	-----	-679.36	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	-----	-----	**10.57**	**10.57**
		U_4 - U_5	-468.70	25.46	-108.72			0.75	1.18	22.59	-96.47	0.00	0.00	Vehicle	Vehicle	-----	-734.72	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	-----	-----	**10.56**	**10.56**
		U_5 - U_6	-471.03	-68.19	-108.90			0.75	1.18	-60.50	-96.62	0.00	0.00	Vehicle	Vehicle	-----	-737.95	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	-----	-----	**10.52**	**10.52**
		U_6 - U_7	-414.41	33.52	-100.96			0.75	1.18	29.74	-89.57	0.00	0.00	Vehicle	Vehicle	-----	-655.18	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	**10.35**	**10.35**
		U_7 - U_8	-413.45	33.57	-74.15			0.75	1.18	29.78	-65.79	0.00	0.00	Vehicle	Vehicle	-----	-623.01	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	-----	-----	**14.10**	**14.10**
		U_8 - U_9	-321.98	34.92	-65.93			0.75	1.18	30.98	-58.49	0.00	0.00	Vehicle	Vehicle	-----	-494.62	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	-----	-----	**13.75**	**13.75**
		U_9 - U_{10}	-182.11	37.61	-60.00			0.75	1.18	33.37	-53.23	0.00	0.00	Vehicle	Vehicle	-----	-305.94	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	-----	-----	**13.23**	**13.23**
		U_{10} - U_{11}	-32.58	40.83	-37.95			0.75	1.18	36.22	-33.67	0.00	0.00	Vehicle	Vehicle	4.74	-86.12	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	**26.04**	**26.04**	**21.88**	**21.88**
		U_{11} - U_{12}	133.59	-17.56	-29.63			0.75	1.18	-15.58	-26.29	0.00	0.00	Vehicle	Vehicle	153.41	-----	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	14.38	-16.08			0.75	1.18	12.75	-14.27	0.00	0.00	Vehicle	Vehicle	393.56	-----	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	-----	-----	**66.58**	**66.58**	-----	-----
		U_{13} - U_{14}	434.76	-7.43	-11.37			0.75	1.18	-6.59	-10.09	0.00	0.00	Vehicle	Vehicle	556.62	-----	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	24.50	-10.37			0.75	1.17	21.48	-9.09	0.00	0.00	Vehicle	Vehicle	644.71	-----	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	-----	-----	**50.74**	**50.74**	-----	-----
		U_{15} - U_{16}	383.28	29.08	-23.95			0.75	1.17	25.50	-21.00	0.00	0.00	Vehicle	Vehicle	531.41	-----	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	-----	-----	**34.87**	**34.87**	-----	-----
		U_{16} - U_{17}	279.57	30.83	-38.03			0.75	1.17	27.03	-33.35	0.00	0.00	Vehicle	Vehicle	398.58	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	**28.28**	**28.28**	-----	-----
		U_{17} - U_{18}	172.63	29.75	-49.16			0.75	1.17	26.08	-43.10	0.00	0.00	Vehicle	Vehicle	258.32	-----	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	-----	-----	**22.76**	**22.76**	-----	-----
		U_{18} - U_{19}	74.36	28.38	-62.89			0.75	1.17	24.88	-55.14	0.00	0.00	Vehicle	Vehicle	129.01	-----	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	-----	-----	**27.81**	**27.81**	-----	-----
		U_{19} - U_{20}	-10.01	24.84	-75.38			0.75	1.17	21.78	-66.09	0.00	0.00	Vehicle	Vehicle	15.30	-98.94	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	**38.12**	**38.12**	**10.33**	**10.33**
		U_{20} - U_{21}	-62.06	13.12	-82.45			0.75	1.17	11.50	-72.29	0.00	0.00	Vehicle	Vehicle	-----	-174.65	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**10.72**	**10.72**
		U_{21} - U_{22}	-88.74	-58.26	-81.81			0.75	1.17	-51.08	-71.73	0.00	0.00	Vehicle	Vehicle	-----	-208.60	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**10.43**	**10.43**
		U_{22} - U_{23}	-88.92	18.03	-58.80			0.75	1.17	15.81	-51.55	0.00	0.00	Vehicle	Vehicle	-----	-182.60	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**14.51**	**14.51**
		U_{23} - U_{24}	-76.67	-62.66	-59.00			0.75	1.17	-51.73	-54.94	0.00	0.00	Vehicle	Vehicle	-----	-171.08	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	-----	-----	**13.84**	**13.84**
		U_{24} - U_{25}	-37.64	25.68	-58.39			0.75	1.17	22.51	-51.19	0.00	0.00	Vehicle	Vehicle	-----	-115.48	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	-----	-----	**12.80**	**12.80**
		U_{25} - U_{26}	37.23	-53.53	-42.97			0.75	1.17	-37.67	-46.93	0.00	0.00	Vehicle	Vehicle	-----	-12.61	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	-----	-----	**14.59**	**14.59**
		U_{26} - U_{27}	128.02	-34.23	-34.27			0.75	1.17	-30.01	-30.05	0.00	0.00	Vehicle	Vehicle	127.41	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U_{27} - U_{28}	233.68	-16.38	-27.31			0.75	1.17	-14.36	-23.94	0.00	0.00	Vehicle	Vehicle	285.12	-----	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	19.11	-9.38			0.75	1.17	16.75	-8.23	0.00	0.00	Vehicle	Vehicle	460.73	-----	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	-----	-----	**55.79**	**55.79**	-----	-----
		U_{29} - U_{30}	437.10	-0.47	-8.65			0.75	1.17	-0.41	-7.58	0.00	0.00	Vehicle	Vehicle	567.68	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{30} - U_{31}	420.53	29.93	-11.31			0.75	1.18	26.55	-10.03	0.00	0.00	Vehicle	Vehicle	581.21	-----	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	-----	-----	**43.08**	**43.08**	-----	-----
		U_{31} - U_{32}	300.69	35.58	-27.87			0.75	1.18	31.57	-24.73	0.00	0.00	Vehicle	Vehicle	431.94	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	----

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 2F1 **Condition:** As-Built

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

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

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

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Lower Chord	Structure 1	L$_0$- L$_1$	8.49	-1.62	0.01			0.75	1.24	0.01	-1.50	0.00	0.00	Vehicle	Vehicle	11.05	-----	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	-----	-----	**88767.52**	**88767.52**	-----	-----
		L$_1$ - L$_2$	50.81	-9.09	37.75			0.75	1.24	35.02	-8.44	0.00	0.00	Vehicle	Vehicle	111.58	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**12.90**	**12.90**	-----	-----
		L$_2$ - L$_3$	61.22	-15.51	46.83			0.75	1.24	43.45	-14.39	0.00	0.00	Vehicle	Vehicle	136.07	-----	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	-----	-----	**13.98**	**13.98**	-----	-----
		L$_3$ - L$_4$	25.70	-21.19	41.69			0.75	1.24	38.68	-19.65	0.00	0.00	Vehicle	Vehicle	83.70	-----	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	-----	-----	**16.62**	**16.62**	-----	-----
		L$_4$ - L$_5$	-118.45	13.73	53.64			0.75	1.24	49.77	12.74	0.00	0.00	Vehicle	Vehicle	-----	-137.42	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	-8.62	38.07			0.75	1.24	35.32	-8.00	0.00	0.00	Vehicle	Vehicle	-----	-293.54	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	-----	-----	**55.21**	**55.21**
		L$_6$ - L$_7$	-320.36	-11.03	15.10			0.75	1.24	14.00	-10.23	0.00	0.00	Vehicle	Vehicle	-----	-429.76	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	-----	-----	**61.04**	**61.04**
		L$_7$ - L$_8$	-417.18	-34.52	-0.52			0.75	1.24	-0.48	-32.03	0.00	0.00	Vehicle	Vehicle	-----	-583.97	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**24.43**	**24.43**
		L$_8$ - L$_9$	-410.79	-23.56	-21.98			0.75	1.20	-19.75	-21.17	0.00	0.00	Vehicle	Vehicle	-----	-561.54	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**37.26**	**37.26**
		L$_9$ - L$_{10}$	-247.75	-29.61	8.02			0.75	1.20	7.20	-26.60	0.00	0.00	Vehicle	Vehicle	-----	-356.66	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	-----	-----	**26.22**	**26.22**
		L$_{10}$ - L$_{11}$	-65.21	-29.16	15.10			0.75	1.20	13.57	-26.20	0.00	0.00	Vehicle	Vehicle	-----	-118.83	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	-----	-----	**16.61**	**16.61**
		L$_{11}$ - L$_{12}$	101.88	-26.17	37.31			0.75	1.20	33.52	-23.52	0.00	0.00	Vehicle	Vehicle	176.02	-----	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	-----	-----	**14.68**	**14.68**	-----	-----
		L$_{12}$ - L$_{13}$	264.09	29.69	68.20			0.75	1.20	61.28	26.68	0.00	0.00	Vehicle	Vehicle	422.98	-----	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	-----	-----	**11.60**	**11.60**	-----	-----
		L$_{13}$ - L$_{14}$	373.73	-19.43	68.97			0.75	1.20	61.97	-17.46	0.00	0.00	Vehicle	Vehicle	566.42	-----	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	-----	-----	**15.07**	**15.07**	-----	-----
		L$_{14}$ - L$_{15}$	476.34	62.73	97.92			0.75	1.20	87.98	56.37	0.00	0.00	Vehicle	Vehicle	733.62	-----	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	-----	-----	**12.48**	**12.48**	-----	-----
		L$_{15}$ - L$_{16}$	459.97	39.45	85.96			0.75	1.20	77.23	35.45	0.00	0.00	Vehicle	Vehicle	698.36	-----	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	-----	-----	**14.43**	**14.43**	-----	-----
		L$_{16}$ - L$_{17}$	381.37	46.71	70.31			0.75	1.20	63.17	41.97	0.00	0.00	Vehicle	Vehicle	577.90	-----	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	-----	-----	**13.22**	**13.22**	-----	-----
		L$_{17}$ - L$_{18}$	288.98	31.62	49.27			0.75	1.20	44.27	28.41	0.00	0.00	Vehicle	Vehicle	433.22	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**13.43**	**13.43**	-----	-----
		L$_{18}$ - L$_{19}$	176.20	14.01	16.51			0.75	1.20	14.83	12.58	0.00	0.00	Vehicle	Vehicle	248.34	-----	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	-----	-----	**22.01**	**22.01**	-----	-----
		L$_{19}$ - L$_{20}$	69.74	-7.36	7.18			0.75	1.20	6.45	-6.61	0.00	0.00	Vehicle	Vehicle	99.05	-----	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	-----	-----	**67.11**	**67.11**	-----	-----
		L$_0$- L$_1$	24.59	-0.66	-1.48			0.75	1.18	-0.58	-1.31	0.00	0.00	Vehicle	Vehicle	31.21	-----	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	-4.93	29.71			0.75	1.18	26.36	-4.38	0.00	0.00	Vehicle	Vehicle	214.44	-----	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	-----	-----	**18.77**	**18.77**	-----	-----
		L$_2$ - L$_3$	252.83	-10.30	57.66			0.75	1.18	51.16	-9.14	0.00	0.00	Vehicle	Vehicle	395.19	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	**14.14**	**14.14**	-----	-----
		L$_3$ - L$_4$	352.30	-15.57	75.16			0.75	1.18	66.69	-13.81	0.00	0.00	Vehicle	Vehicle	544.69	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**14.35**	**14.35**	-----	-----
		L$_4$ - L$_5$	447.17	-21.55	87.81			0.75	1.18	77.91	-19.12	0.00	0.00	Vehicle	Vehicle	682.59	-----	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	-----	-----	**15.44**	**15.44**	-----	-----
		L$_5$ - L$_6$	477.93	-26.23	101.58			0.75	1.18	90.12	-23.27	0.00	0.00	Vehicle	Vehicle	738.47	-----	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	-----	-----	**14.59**	**14.59**	-----	-----
		L$_6$ - L$_7$	482.68	-30.87	82.09			0.75	1.18	72.83	-27.39	0.00	0.00	Vehicle	Vehicle	722.16	-----	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	-----	-----	**18.33**	**18.33**	-----	-----
		L$_7$ - L$_8$	336.61	58.04	85.96			0.75	1.18	76.27	51.49	0.00	0.00	Vehicle	Vehicle	536.74	-----	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	-----	-----	**13.18**	**13.18**	-----	-----
		L$_8$ - L$_9$	196.05	43.99	72.82			0.75	1.18	64.61	39.03	0.00	0.00	Vehicle	Vehicle	338.85	-----	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	-----	-----	**13.99**	**13.99**	-----	-----
		L$_9$ - L$_{10}$	45.60	31.50	56.45			0.75	1.18	50.08	27.95	0.00	0.00	Vehicle	Vehicle	124.38	-----	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	-----	-----	**16.30**	**16.30**	-----	-----
		L$_{10}$ - L$_{11}$	-126.26	16.14	38.90			0.75	1.18	34.52	14.32	0.00	0.00	Vehicle	Vehicle	-----	-145.51	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	-6.91	25.37			0.75	1.18	22.51	-6.13	0.00	0.00	Vehicle	Vehicle	-----	-378.30	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	-----	-----	**105.39**	**105.39**
		L$_{12}$ - L$_{13}$	-433.79	-17.20	5.03			0.75	1.18	4.47	-15.26	0.00	0.00	Vehicle	Vehicle	-----	-583.77	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	-----	-----	**55.14**	**55.14**
		L$_{13}$ - L$_{14}$	-552.65	-24.46	11.94			0.75	1.18	10.59	-21.70	0.00	0.00	Vehicle	Vehicle	-----	-746.65	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	-----	-----	**44.36**	**44.36**
		L$_{14}$ - L$_{15}$	-573.48	-25.01	-7.79			0.75	1.17	-6.83	-21.93	0.00	0.00	Vehicle	Vehicle	-----	-774.03	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	-----	-----	**42.94**	**42.94**
		L$_{15}$ - L$_{16}$	-492.94	-27.10	7.13			0.75	1.17	6.25	-23.76	0.00	0.00	Vehicle	Vehicle	-----	-671.71	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	-----	-----	**32.93**	**32.93**
		L$_{16}$ - L$_{17}$	-395.30	-33.04	13.48			0.75	1.17	11.82	-28.97	0.00	0.00	Vehicle	Vehicle	-----	-551.55	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	-----	-----	**22.51**	**22.51**
		L$_{17}$ - L$_{18}$	-288.04	-32.59	15.19			0.75	1.17	13.32	-28.57	0.00	0.00	Vehicle	Vehicle	-----	-411.60	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**15.38**	**15.38**
		L$_{18}$ - L$_{19}$	-175.85	-31.21	33.09			0.75	1.17	29.01	-27.36	0.00	0.00	Vehicle	Vehicle	-----	-264.17	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	-----	-----	**14.54**	**14.54**
		L$_{19}$ - L$_{20}$	-78.08	-28.72	53.64			0.75	1.17	47.03	-25.18	0.00	0.00	Vehicle	Vehicle	-----	-134.24	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	-----	-----	**19.68**	**19.68**
	Structure 2	L$_{20}$ - L$_{21}$	7.55	-25.27	71.35			0.75	1.17	62.56	-22.16	0.00	0.00	Vehicle	Vehicle	91.15	-18.98	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	**15.30**	**15.30**	**37.09**	**37.09**
		L$_{21}$ - L$_{22}$	59.07	-13.72	60.20			0.75	1.17	52.78	-12.03	0.00	0.00	Vehicle	Vehicle	145.40	-----	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	-----	-----	**17.16**	**17.16**	-----	-----
		L$_{22}$ - L$_{23}$	71.98	48.17	77.94			0.75	1.17	68.33	42.23	0.00	0.00	Vehicle	Vehicle	182.41	-----	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	-----	-----	**13.06**	**13.06**	-----	-----
		L$_{23}$ - L$_{24}$	33.55	34.29	70.24			0.75	1.17	61.58	30.06	0.00	0.00	Vehicle	Vehicle	123.67	-----	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	-----	-----	**15.12**	**15.12**	-----	-----
		L$_{24}$ - L$_{25}$	-45.09	33.21	50.55			0.75	1.17	44.32	29.11	0.00	0.00	Vehicle	Vehicle	-----	-20.76	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$_{25}$ - L$_{26}$	-134.94	16.68	43.62			0.75	1.17	38.24	14.62	0.00	0.00	Vehicle	Vehicle	-----	-156.41	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	-----	-----
		L$_{26}$ - L$_{27}$	-245.90	-0.86	31.62			0.75	1.17	27.72	-0.75	0.00	0.00	Vehicle	Vehicle	-----	-320.64	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**641.78**	**641.78**
		L$_{27}$ - L$_{28}$	-351.78	-11.40	14.95			0.75	1.17	13.11	-9.99	0.00	0.00	Vehicle	Vehicle	-----	-470.30	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	-----	-----	**69.63**	**69.63**
		L$_{28}$ - L$_{29}$	-458.29	-21.17	6.07			0.75	1.17	5.33	-18.56	0.00	0.00	Vehicle	Vehicle	-----	-619.91	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**44.03**	**44.03**
		L$_{29}$ - L$_{30}$	-542.18	-33.57	9.29			0.75	1.17	8.14	-29.43	0.00	0.00	Vehicle	Vehicle	-----	-743.09	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**33.06**	**33.06**
		L$_{30}$ - L$_{31}$	-514.03	-27.56	-9.13			0.75	1.18	-8.10	-24.45	0.00	0.00	Vehicle	Vehicle	-----	-700.02	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	-----	-----	**40.93**	**40.93**
		L$_{31}$ - L$_{32}$	-411.21	-36.68	-0.02			0.75	1.18	-0.02	-32.54	0.00	0.00	Vehicle	Vehicle	-----	-576.88	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	-----	-----	**26.55**	**26.55**
		L$_{32}$ - L$_{33}$	-287.47

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 2F1 **Condition:** As-Built

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

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

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

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Verticals	Structure 1	U_0 - L_0	-67.60	-71.87	6.15			0.75	1.24	5.71	-66.68	0.00	0.00	Vehicle	Vehicle	-----	-174.56	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	4.15	4.15
		U_1 - L_1	-24.06	-33.50	5.91			0.75	1.24	5.48	-31.08	0.00	0.00	Vehicle	Vehicle	-----	-71.68	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	-----	-----	-----	-----	-----	10.55	10.55
		U_2 - L_2	12.88	-23.64	1.48			0.75	1.24	1.37	-21.93	0.00	0.00	Vehicle	Vehicle	18.52	-11.77	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	303.14	303.14	16.64	16.64
		U_3 - L_3	37.35	-15.79	10.98			0.75	1.24	10.18	-14.65	0.00	0.00	Vehicle	Vehicle	61.79	-----	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	38.33	38.33	-----	-----
		U_4 - L_4	-15.53	4.65	-8.53			0.75	1.24	4.31	-7.91	0.00	0.00	Vehicle	Vehicle	-----	-30.48	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	-----	-----	42.26	42.26
		U_5 - L_5	-92.52	9.60	-44.44			0.75	1.24	8.90	-41.23	0.00	0.00	Vehicle	Vehicle	-----	-173.87	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	-----	-----	8.07	8.07
		U_6 - L_6	-117.01	3.99	-48.68			0.75	1.24	3.70	-45.16	0.00	0.00	Vehicle	Vehicle	-----	-210.82	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	8.66	8.66
		U_7 - L_7	-127.49	0.27	-55.46			0.75	1.24	0.25	-51.46	0.00	0.00	Vehicle	Vehicle	-----	-232.63	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	-----	-----	6.47	6.47
		U_8 - L_8	-368.60	-66.12	-66.25			0.75	1.24	-61.34	-61.46	0.00	0.00	Vehicle	Vehicle	-----	-559.08	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	-----	-----	11.34	11.34
		U_9 - L_9	-214.45	-61.55	2.96			0.75	1.20	2.66	-55.31	0.00	0.00	Vehicle	Vehicle	-----	-350.69	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	-----	-----	7.79	7.79
		U_{10} - L_{10}	-198.57	-48.50	-0.47			0.75	1.20	-0.42	-43.58	0.00	0.00	Vehicle	Vehicle	-----	-314.79	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	-----	-----	12.49	12.49
		U_{11} - L_{11}	-171.30	-42.84	8.31			0.75	1.20	7.47	-38.49	0.00	0.00	Vehicle	Vehicle	-----	-272.73	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	12.21	12.21
		U_{12} - L_{12}	-128.27	-36.05	13.19			0.75	1.20	11.85	-32.39	0.00	0.00	Vehicle	Vehicle	-----	-208.86	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	12.48	12.48
		U_{13} - L_{13}	-96.55	-31.33	16.08			0.75	1.20	14.45	-28.15	0.00	0.00	Vehicle	Vehicle	-----	-162.11	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	10.09	10.09
		U_{14} - L_{14}	-11.04	-3.28	-2.97			0.75	1.20	-2.67	-2.94	0.00	0.00	Vehicle	Vehicle	-----	-18.18	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	-----	-----	113.41	113.41
		U_{15} - L_{15}	-2.54	22.67	-30.93			0.75	1.20	20.37	-27.79	0.00	0.00	Vehicle	Vehicle	23.18	-39.42	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	21.12	21.12	12.26	12.26
		U_{16} - L_{16}	-31.31	18.71	-34.91			0.75	1.20	16.81	-31.37	0.00	0.00	Vehicle	Vehicle	-----	-81.49	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	-----	-----	9.88	9.88
		U_{17} - L_{17}	-105.02	8.14	-42.66			0.75	1.20	7.32	-38.33	0.00	0.00	Vehicle	Vehicle	-----	-186.35	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	7.99	7.99
		U_{18} - L_{18}	-126.66	2.86	-49.95			0.75	1.20	2.57	-44.88	0.00	0.00	Vehicle	Vehicle	-----	-223.00	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	-----	-----	8.88	8.88
		U_{19} - L_{19}	-166.54	2.66	-53.81			0.75	1.20	2.39	-48.35	0.00	0.00	Vehicle	Vehicle	-----	-279.36	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	-----	-----	9.30	9.30
		U_{20} - L_{20}	-184.30	2.48	-64.14			0.75	1.20	2.23	-57.63	0.00	0.00	Vehicle	Vehicle	-----	-314.51	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	-----	-----	6.90	6.90
	Structure 2	U_0 - L_0	-203.39	-57.73	6.64			0.75	1.18	5.89	-51.22	0.00	0.00	Vehicle	Vehicle	-----	-330.99	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	-----	-----	8.57	8.57
		U_1 - L_1	-176.11	-48.58	7.20			0.75	1.18	6.38	-43.10	0.00	0.00	Vehicle	Vehicle	-----	-284.98	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	-----	-----	11.52	11.52
		U_2 - L_2	-137.45	-45.76	6.82			0.75	1.18	6.05	-40.60	0.00	0.00	Vehicle	Vehicle	-----	-231.47	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	-----	-----	10.76	10.76
		U_3 - L_3	-117.61	-41.20	7.10			0.75	1.18	6.30	-36.55	0.00	0.00	Vehicle	Vehicle	-----	-200.41	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	-----	-----	9.15	9.15
		U_4 - L_4	-50.97	-31.66	17.40			0.75	1.18	15.44	-28.09	0.00	0.00	Vehicle	Vehicle	-----	-102.77	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	10.26	10.26
		U_5 - L_5	-13.79	-27.10	20.94			0.75	1.18	18.58	-24.04	0.00	0.00	Vehicle	Vehicle	6.24	-49.18	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	23.76	23.76	13.59	13.59
		U_6 - L_6	45.46	-23.00	23.57			0.75	1.18	20.91	-20.41	0.00	0.00	Vehicle	Vehicle	86.28	-----	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	-----	-----	18.28	18.28	-----	-----
		U_7 - L_7	-22.33	1.53	2.04			0.75	1.18	1.81	1.36	0.00	0.00	Vehicle	Vehicle	-----	-27.27	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----
		U_8 - L_8	-120.06	18.50	-38.24			0.75	1.18	16.41	-33.93	0.00	0.00	Vehicle	Vehicle	-----	-200.19	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	-----	-----	12.10	12.10
		U_9 - L_9	-177.00	12.49	-47.99			0.75	1.18	11.08	-42.58	0.00	0.00	Vehicle	Vehicle	-----	-285.45	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	-----	-----	12.08	12.08
		U_{10} - L_{10}	-205.85	11.39	-49.11			0.75	1.18	10.10	-43.57	0.00	0.00	Vehicle	Vehicle	-----	-324.25	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	13.14	13.14
		U_{11} - L_{11}	-239.21	6.21	-53.41			0.75	1.18	5.51	-47.39	0.00	0.00	Vehicle	Vehicle	-----	-372.58	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	-----	-----	11.09	11.09
		U_{12} - L_{12}	-257.92	0.14	-58.48			0.75	1.18	0.12	-51.89	0.00	0.00	Vehicle	Vehicle	-----	-402.76	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	-----	-----	10.48	10.48
		U_{13} - L_{13}	-243.80	3.44	-61.12			0.75	1.18	3.05	-54.23	0.00	0.00	Vehicle	Vehicle	-----	-387.44	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	-----	-----	8.23	8.23
		U_{14} - L_{14}	-420.84	-54.55	-55.13			0.75	1.18	-48.40	-48.91	0.00	0.00	Vehicle	Vehicle	-----	-610.68	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	-----	-----	12.90	12.90
		U_{15} - L_{15}	-158.85	-56.25	5.63			0.75	1.17	4.94	-49.32	0.00	0.00	Vehicle	Vehicle	-----	-270.61	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	-----	-----	10.77	10.77
		U_{16} - L_{16}	-174.03	-48.10	1.88			0.75	1.17	1.65	-42.17	0.00	0.00	Vehicle	Vehicle	-----	-281.06	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	-----	-----	11.67	11.67
		U_{17} - L_{17}	-156.46	-47.81	5.04			0.75	1.17	4.42	-41.91	0.00	0.00	Vehicle	Vehicle	-----	-257.89	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	-----	-----	11.14	11.14
		U_{18} - L_{18}	-142.20	-43.44	10.01			0.75	1.17	8.78	-38.09	0.00	0.00	Vehicle	Vehicle	-----	-234.38	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	11.42	11.42
		U_{19} - L_{19}	-113.66	-38.23	13.43			0.75	1.17	11.78	-33.51	0.00	0.00	Vehicle	Vehicle	-----	-191.33	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	-----	-----	11.87	11.87
		U_{20} - L_{20}	-76.52	-32.45	17.11			0.75	1.17	15.00	-28.45	0.00	0.00	Vehicle	Vehicle	-----	-136.46	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	10.50	10.50
		U_{21} - L_{21}	-45.78	-30.13	18.15			0.75	1.17	15.91	-26.41	0.00	0.00	Vehicle	Vehicle	-----	-93.85	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	-----	-----	11.16	11.16
		U_{22} - L_{22}	-17.71	3.54	4.29			0.75	1.17	3.76	3.11	0.00	0.00	Vehicle	Vehicle	-----	-18.99	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	21.37	-31.34			0.75	1.17	18.73	-27.47	0.00	0.00	Vehicle	Vehicle	-----	-75.58	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	-----	-----	11.28	11.28
		U_{24} - L_{24}	-62.03	17.09	-34.37			0.75	1.17	14.98	-30.14	0.00	0.00	Vehicle	Vehicle	-----	-119.82	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	-----	-----	10.39	10.39
		U_{25} - L_{25}	-103.10	14.02	-43.79			0.75	1.17	12.29	-38.39	0.00	0.00	Vehicle	Vehicle	-----	-183.94	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	10.63	10.63
		U_{26} - L_{26}	-134.31	10.47	-47.53			0.75	1.17	9.18	-41.67	0.00	0.00	Vehicle	Vehicle	-----	-228.77	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	10.63	10.63
		U_{27} - L_{27}	-155.93	4.38	-54.51			0.75	1.17	3.84	-47.79	0.00	0.00	Vehicle	Vehicle	-----	-264.83	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	-----	-----	9.78	9.78
		U_{28} - L_{28}	-179.28	1.90	-58.51			0.75	1.17	1.67	-51.30	0.00	0.00	Vehicle	Vehicle	-----	-299.75	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	9.49	9.49
		U_{29} - L_{29}	-171.45	2.64	-56.72			0.75	1.17	2.32	-49.73	0.00	0.00	Vehicle	Vehicle	-----	-287.52	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	10.43	10.43
		U_{30} - L_{30}	-392.76	-54.07	-56.28			0.75	1.18	-47.98	-49.93	0.00	0.00	Vehicle	Vehicle	-----	-575.50	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	-----	-----	13.20	13.20
		U_{31} - L_{31}	-203.21	-60.81	5.62			0.75	1.18	4.98	-53.96	0.00	0.00	Vehicle	Vehicle	-----	-334.32	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	9.02	9.02
		U_{32} - L_{32}	-222.46	-53.49	1.88			0.75	1.18	1.67	-47.46	0.00	0.00	Vehicle	Vehicle	-----	-350.89	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	-----	-----	12.21	12.21
		U_{33} - L_{33}	-211.56	-53.81	5.71			0.75	1.18	5.06	-47.74	0.00	0.00	Vehicle	Vehicle	-----	-337.10	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	-----	-----	11.59	11.59
		U_{34} - L_{34}	-191.20	-43.99	9.69			0.75	1.18	8.60	-39.03	0.00	0.00	Vehicle	Vehicle	-----	-299.29	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	-----	-----	15.05	15.05
		U_{35} - L_{35}	-171.49	-43.07	12.37			0.75	1.18	10.98	-38.21	0.00

Maximum Axial with Moment Interaction Check

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

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(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: 2F1 **Condition:** As-Built

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

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

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

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

Center Truss - Diagonals

Location	Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	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_1	53.25	30.08	-9.06			0.75	1.24	27.91	-8.41	0.00	0.00	Vehicle	Vehicle	105.51	-----	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	-----	-----	-----	-----	-----	**19.10**	**19.10**	-----	-----
	U_1 - L_2	10.78	36.54	-5.19			0.75	1.24	33.90	-4.82	0.00	0.00	Vehicle	Vehicle	58.07	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**12.30**	**12.30**	-----	-----
	U_2 - L_3	-44.02	26.97	-28.60			0.75	1.24	25.03	-26.53	0.00	0.00	Vehicle	Vehicle	-----	-91.72	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	-----	-----	-----	-----	-----	**10.94**	**10.94**
	U_3 - L_4	-76.72	13.13	-42.91			0.75	1.24	12.18	-39.81	0.00	0.00	Vehicle	Vehicle	-----	-151.49	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**6.52**	**6.52**
	U_4 - L_4	118.39	34.55	-16.66			0.75	1.24	32.05	-15.46	0.00	0.00	Vehicle	Vehicle	195.58	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**12.67**	**12.67**	-----	-----
	U_5 - L_5	137.53	50.92	-9.94			0.75	1.24	47.24	-9.22	0.00	0.00	Vehicle	Vehicle	240.20	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**10.86**	**10.86**	-----	-----
	U_6 - L_6	157.34	61.53	3.37			0.75	1.24	57.08	3.12	0.00	0.00	Vehicle	Vehicle	278.74	-----	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	-----	-----	-----	-----	-----	**8.64**	**8.64**	-----	-----
	U_7 - L_7	149.30	61.72	-0.31			0.75	1.24	57.26	-0.28	0.00	0.00	Vehicle	Vehicle	268.52	-----	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	-----	-----	-----	-----	-----	**8.76**	**8.76**	-----	-----
	U_8 - L_8	249.09	67.12	-3.27			0.75	1.20	60.31	-2.94	0.00	0.00	Vehicle	Vehicle	402.22	-----	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	-----	-----	-----	-----	-----	**11.82**	**11.82**	-----	-----
	U_9 - L_{10}	260.26	56.64	0.98			0.75	1.20	50.89	0.88	0.00	0.00	Vehicle	Vehicle	404.49	-----	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	-----	-----	-----	-----	-----	**13.79**	**13.79**	-----	-----
	U_{10} - L_{11}	236.30	54.70	-10.40			0.75	1.20	49.15	-9.34	0.00	0.00	Vehicle	Vehicle	371.09	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**13.72**	**13.72**	-----	-----
	U_{11} - L_{12}	211.92	47.48	-17.73			0.75	1.20	42.66	-15.93	0.00	0.00	Vehicle	Vehicle	330.96	-----	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	-----	-----	-----	-----	-----	**13.26**	**13.26**	-----	-----
	U_{12} - L_{13}	151.66	45.26	-22.16			0.75	1.20	40.67	-19.91	0.00	0.00	Vehicle	Vehicle	250.02	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**11.79**	**11.79**	-----	-----
	U_{13} - L_{14}	108.60	35.71	-27.78			0.75	1.20	32.08	-24.96	0.00	0.00	Vehicle	Vehicle	182.89	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**9.95**	**9.95**	-----	-----
	U_{15} - L_{14}	-24.45	24.39	-31.13			0.75	1.20	21.91	-27.97	0.00	0.00	Vehicle	Vehicle	-----	-68.15	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	-----	-----	-----	-----	-----	**10.86**	**10.86**
	U_{16} - L_{15}	23.99	42.35	-23.99			0.75	1.20	38.05	-21.55	0.00	0.00	Vehicle	Vehicle	80.65	-----	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**10.61**	**10.61**	-----	-----
	U_{17} - L_{16}	120.03	49.82	-13.35			0.75	1.20	44.76	-11.99	0.00	0.00	Vehicle	Vehicle	214.23	-----	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	-----	-----	-----	-----	-----	**9.04**	**9.04**	-----	-----
	U_{18} - L_{17}	144.79	56.59	-2.88			0.75	1.20	50.85	-2.59	0.00	0.00	Vehicle	Vehicle	254.33	-----	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	-----	-----	-----	-----	-----	**9.95**	**9.95**	-----	-----
	U_{19} - L_{18}	193.05	57.79	0.35			0.75	1.20	51.93	0.31	0.00	0.00	Vehicle	Vehicle	318.47	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**9.96**	**9.96**	-----	-----
	U_{20} - L_{19}	193.51	49.93	-2.83			0.75	1.20	44.86	-2.54	0.00	0.00	Vehicle	Vehicle	309.88	-----	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	-----	-----	-----	-----	-----	**11.52**	**11.52**	-----	-----
Structure 2	U_0 - L_1	202.41	45.84	-7.50			0.75	1.18	40.67	-6.65	0.00	0.00	Vehicle	Vehicle	316.01	-----	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	-----	-----	-----	-----	-----	**14.14**	**14.14**	-----	-----
	U_1 - L_2	190.86	50.41	-8.40			0.75	1.18	44.73	-7.46	0.00	0.00	Vehicle	Vehicle	306.27	-----	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	-----	-----	-----	-----	-----	**13.12**	**13.12**	-----	-----
	U_2 - L_3	155.85	51.72	-8.19			0.75	1.18	45.89	-7.27	0.00	0.00	Vehicle	Vehicle	262.25	-----	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	-----	-----	-----	-----	-----	**10.78**	**10.78**	-----	-----
	U_3 - L_4	134.05	43.80	-18.55			0.75	1.18	38.86	-16.46	0.00	0.00	Vehicle	Vehicle	224.79	-----	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	-----	-----	-----	-----	-----	**11.40**	**11.40**	-----	-----
	U_4 - L_5	46.02	36.37	-24.71			0.75	1.18	32.27	-21.92	0.00	0.00	Vehicle	Vehicle	101.77	-----	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	-----	-----	-----	-----	-----	**11.83**	**11.83**	-----	-----
	U_5 - L_6	3.45	33.97	-30.67			0.75	1.18	30.14	-27.21	0.00	0.00	Vehicle	Vehicle	43.66	-30.89	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**14.07**	**14.07**	**12.10**	**12.10**
	U_6 - L_7	-84.29	24.84	-43.35			0.75	1.18	22.04	-38.46	0.00	0.00	Vehicle	Vehicle	-----	-159.57	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	**7.15**	**7.15**
	U_7 - L_7	137.30	41.65	-21.24			0.75	1.18	36.95	-18.84	0.00	0.00	Vehicle	Vehicle	226.53	-----	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	-----	-----	-----	-----	-----	**12.61**	**12.61**	-----	-----
	U_8 - L_8	210.89	49.59	-17.38			0.75	1.18	44.00	-15.42	0.00	0.00	Vehicle	Vehicle	331.36	-----	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	-----	-----	-----	-----	-----	**11.35**	**11.35**	-----	-----
	U_9 - L_9	236.36	58.34	-11.06			0.75	1.18	51.76	-9.81	0.00	0.00	Vehicle	Vehicle	374.56	-----	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	-----	-----	-----	-----	-----	**10.45**	**10.45**	-----	-----
	U_{10} - L_{10}	274.62	56.94	-7.03			0.75	1.18	50.52	-6.24	0.00	0.00	Vehicle	Vehicle	422.68	-----	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	-----	-----	-----	-----	-----	**11.28**	**11.28**	-----	-----
	U_{11} - L_{11}	281.06	58.53	-4.74			0.75	1.18	51.93	-4.21	0.00	0.00	Vehicle	Vehicle	432.89	-----	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	-----	-----	-----	-----	-----	**10.85**	**10.85**	-----	-----
	U_{12} - L_{12}	278.12	58.34	1.88			0.75	1.18	51.77	1.66	0.00	0.00	Vehicle	Vehicle	428.85	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**9.65**	**9.65**	-----	-----
	U_{14} - L_{13}	235.45	57.30	-3.43			0.75	1.18	50.84	-3.05	0.00	0.00	Vehicle	Vehicle	372.17	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**10.66**	**10.66**	-----	-----
	U_{14} - L_{15}	143.03	54.97	-5.49			0.75	1.17	48.19	-4.81	0.00	0.00	Vehicle	Vehicle	248.59	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**10.53**	**10.53**	-----	-----
	U_{15} - L_{16}	171.91	55.23	-3.75			0.75	1.17	48.43	-3.29	0.00	0.00	Vehicle	Vehicle	286.44	-----	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	-----	-----	-----	-----	-----	**9.89**	**9.89**	-----	-----
	U_{16} - L_{17}	181.04	60.05	-5.33			0.75	1.17	52.65	-4.68	0.00	0.00	Vehicle	Vehicle	303.79	-----	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	-----	-----	-----	-----	-----	**10.05**	**10.05**	-----	-----
	U_{17} - L_{18}	171.16	51.01	-11.35			0.75	1.17	44.72	-9.95	0.00	0.00	Vehicle	Vehicle	280.65	-----	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	-----	-----	-----	-----	-----	**10.72**	**10.72**	-----	-----
	U_{18} - L_{19}	150.64	45.87	-12.68			0.75	1.17	40.22	-11.12	0.00	0.00	Vehicle	Vehicle	248.11	-----	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	-----	-----	-----	-----	-----	**12.43**	**12.43**	-----	-----
	U_{19} - L_{20}	125.86	41.56	-20.36			0.75	1.17	36.44	-17.85	0.00	0.00	Vehicle	Vehicle	210.99	-----	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	-----	-----	-----	-----	-----	**13.10**	**13.10**	-----	-----
	U_{20} - L_{21}	76.05	40.24	-21.63			0.75	1.17	35.28	-18.97	0.00	0.00	Vehicle	Vehicle	144.73	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**9.97**	**9.97**	-----	-----
	U_{21} - L_{22}	38.34	32.88	-34.07			0.75	1.17	28.83	-29.87	0.00	0.00	Vehicle	Vehicle	87.32	-----	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	-----	-----	6.56	-----	-----	-----	-----	-----	**13.51**	**13.51**	-----	-----
	U_{23} - L_{22}	18.02	30.22	-27.90			0.75	1.17	26.50	-24.46	0.00	0.00	Vehicle	Vehicle	57.88	-8.36	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	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**15.46**	**15.46**	**13.94**	**13.94**
	U_{24} - L_{23}	58.54	40.50	-22.08			0.75	1.17	35.51	-19.36	0.00	0.00	Vehicle	Vehicle	122.26	-----	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	-----	-----	-----	-----	-----	**10.40**	**10.40**	-----	-----
	U_{25} - L_{24}	114.92	44.89	-16.60			0.75	1.17	39.36	-14.55	0.00	0.00	Vehicle	Vehicle	200.56	-----	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	-----	-----	-----	-----	-----	**12.41**	**12.41**	-----	-----
	U_{26} - L_{25}	142.93	56.48	-10.80			0.75	1.17	49.52	-9.47	0.00	0.00	Vehicle	Vehicle	250.19	-----	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	-----	-----	-----	-----	-----	**10.25**	**10.25**	-----	-----
	U_{27} - L_{26}	173.71	53.49	-8.30			0.75	1.17	46.90	-7.27	0.00	0.00	Vehicle	Vehicle	286.79	-----	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	-----	-----	-----	-----	-----	**10.17**	**10.17**	-----	-----
	U_{28} - L_{27}	186.49	59.27	-3.41			0.75	1.17	51.96	-2.99	0.00	0.00	Vehicle	Vehicle	309.99	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**10.08**	**10.08**	-----	-----
	U_{29} - L_{28}	190.57	58.25	-3.20			0.75	1.17	51.07	-2.80	0.00	0.00	Vehicle	Vehicle	314.14	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**9.01**	**9.01**	-----	-----
	U_{30} - L_{29}	161.74	53.13	-2.55			0.75	1.17	46.58	-2.23	0.00	0.00	Vehicle	Vehicle	270.82	-----	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	-----	-----	-----	-----	-----	**10.50**	**10.50**	-----	-----
	U_{30} - L_{31}	191.49	55.30	-5.35			0.75	1.18	49.07	-4.75	0.00	0.00	Vehicle	Vehicle	312.72	-----	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	-----	-----	-----	-----	-----	**11.94**	**11.94**	-----	-----
	U_{31} - L_{32}	226.17	59.94	-6.07			0.75	1.18	53.19	-5.39	0.00	0.00	Vehicle	Vehicle	363.16	-----	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	-----	-----	-----	-----	-----	**10.37**	**10.37**	-----	-----
	U_{32} - L_{33}	243.26	57.07	-5.84			0.75	1.18	50.64	-5.18	0.00	0.00	Vehicle	Vehicle	382.06	-----	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	-----	-----	-----	-----	-----	**11.87**	**11.87**	-----	-----
	U_{33} - L_{34}	238.98	49.72	-8.98			0.75	1.18	44.11	-7.97	0.00	0.00	Vehicle	Vehicle	368.02	-----	0.00	33.27	33.2657	1097.77	131.71	14.5729	2.8573	45.90	31.00	-876.43	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**13.73**	**13.73**	-----	-----
	U_{34} - L_{35}	222.10	51.34	-13.07			0.75	1.18	45.55	-11.60	0.00	0.00	Vehicle	Vehicle	347.95	-----	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	-----	-----	-----	-----	-----	**12.19**	**12.19**	-----	-----
	U_{35} - L_{36}	201.12	47.99	-18.28			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: 2F1 — 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 (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$_{deduct}$ (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	5.57	-28.32	2.20	-8.83	0.90	1.24	6.20	-31.53	2.20	-8.83	Pedestrian	Vehicle	-----	-127.78	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	-----	-----	15.81	15.81
		U$_1$ - U$_2$	-86.66	13.51	-43.82	6.00	-16.34	0.90	1.24	15.04	-48.78	6.00	-16.34	Pedestrian	Pedestrian	-----	-197.31	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	-----	-----	7.35	7.35
		U$_2$ - U$_3$	-48.28	19.98	-46.03	9.44	-19.05	0.90	1.24	22.24	-51.25	9.44	-19.05	Pedestrian	Pedestrian	-----	-154.15	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	-----	-----	7.35	7.35
		U$_3$ - U$_4$	36.43	25.86	-39.17	12.72	-17.47	0.90	1.24	28.79	-43.61	12.72	-17.47	Pedestrian	Pedestrian	101.31	-32.04	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	15.29	15.29	9.85	9.85
		U$_4$ - U$_5$	38.78	25.94	-34.12	12.78	-17.37	0.90	1.24	28.88	-37.98	12.78	-17.37	Pedestrian	Pedestrian	104.58	-21.54	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	15.18	15.18	10.91	10.91
		U$_5$ - U$_6$	154.43	29.25	-10.66	3.10	0.00	0.90	1.24	32.57	-11.87	3.10	0.00	Vehicle	Vehicle	243.09	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	15.86	15.86	-----	-----
		U$_6$ - U$_7$	288.19	31.91	-4.02	17.11	-4.31	0.90	1.24	35.52	-4.48	17.11	-4.31	Pedestrian	Pedestrian	443.07	-----	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	-----	-----	9.81	9.81	-----	-----
		U$_7$ - U$_8$	410.75	-0.80	3.27	22.59	0.00	0.90	1.24	3.64	-0.89	22.59	0.00	Pedestrian	Vehicle	568.07	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	26.67	26.67	-----	-----
		U$_8$ - U$_9$	311.35	24.26	-5.17	12.90	6.15	0.90	1.20	26.16	-5.58	12.90	6.15	Pedestrian	Vehicle	455.53	-----	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	-----	-----	16.06	16.06	-----	-----
		U$_9$ - U$_{10}$	78.25	25.27	-23.39	12.28	-6.83	0.90	1.20	27.24	-25.22	12.28	-6.83	Pedestrian	Vehicle	153.10	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	-----	-----	10.67	-----	-----	15.96	15.96	-----	-----
		U$_{10}$ - U$_{11}$	-141.75	23.78	-39.60	11.11	-18.45	0.90	1.20	25.64	-42.70	11.11	-18.45	Pedestrian	Pedestrian	-----	-263.76	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	-----	-----	7.45	7.45
		U$_{11}$ - U$_{12}$	-338.40	21.86	-59.39	9.77	-27.96	0.90	1.20	23.57	-64.03	9.77	-27.96	Pedestrian	Pedestrian	-----	-559.51	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	-----	-----	5.15	5.15
		U$_{12}$ - U$_{13}$	-480.50	18.80	-69.56	8.23	-34.35	0.90	1.20	20.27	-75.00	8.23	-34.35	Pedestrian	Pedestrian	-----	-766.80	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	-----	-----	6.01	6.01
		U$_{13}$ - U$_{14}$	-571.10	16.01	-73.42	6.68	-37.24	0.90	1.20	17.26	-79.16	6.68	-37.24	Pedestrian	Pedestrian	-----	-893.75	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.50	6.50
		U$_{14}$ - U$_{15}$	-571.52	16.11	-58.63	6.65	-37.25	0.90	1.20	17.37	-63.22	6.65	-37.25	Pedestrian	Pedestrian	-----	-873.58	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	7.52	7.52
		U$_{15}$ - U$_{16}$	-582.34	6.19	-54.59	0.00	-31.16	0.90	1.20	6.68	-58.85	0.00	-31.16	Vehicle	Pedestrian	-----	-874.06	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	-----	-----	8.28	8.28
		U$_{16}$ - U$_{17}$	-539.92	5.32	-46.12	0.00	-28.35	0.90	1.20	5.74	-49.72	0.00	-28.35	Vehicle	Pedestrian	-----	-803.38	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	10.09	10.09
		U$_{17}$ - U$_{18}$	-422.72	-45.59	-17.79	-25.07	2.26	0.90	1.20	-19.18	-49.15	2.26	-25.07	Vehicle	Pedestrian	-----	-646.03	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	-----	-----	7.38	7.38
		U$_{18}$ - U$_{19}$	-286.53	-27.31	-5.93	-16.97	1.28	0.90	1.20	-6.39	-29.44	1.28	-16.97	Vehicle	Pedestrian	-----	-432.83	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	-----	-----	8.42	8.42
		U$_{19}$ - U$_{20}$	-140.97	-11.63	-7.03	-8.68	0.55	0.90	1.20	-7.58	-12.54	0.55	-8.68	Vehicle	Pedestrian	-----	-210.84	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	25.29	25.29
	Structure 2	U$_0$ - U$_1$	-147.48	1.78	-19.73	0.36	-4.88	0.90	1.18	1.89	-21.01	0.36	-4.88	Vehicle	Vehicle	-----	-219.04	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	23.80	23.80
		U$_1$ - U$_2$	-319.09	6.10	-37.91	1.96	-13.36	0.90	1.18	6.50	-40.36	1.96	-13.36	Vehicle	Vehicle	-----	-467.28	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	-----	-----	11.70	11.70
		U$_2$ - U$_3$	-460.93	10.92	-52.91	3.77	-20.95	0.90	1.18	11.63	-56.33	3.77	-20.95	Vehicle	Pedestrian	-----	-699.67	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.50	4.00	0.50	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	7.98	7.98
		U$_3$ - U$_4$	-580.02	16.60	-71.44	5.92	-27.68	0.90	1.18	17.67	-76.06	5.92	-27.68	Pedestrian	Pedestrian	-----	-888.90	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	-----	-----	7.34	7.34
		U$_4$ - U$_5$	-616.47	21.52	-76.82	7.86	-31.35	0.90	1.18	22.91	-81.79	7.86	-31.35	Pedestrian	Pedestrian	-----	-948.50	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	-----	-----	7.69	7.69
		U$_5$ - U$_6$	-604.69	26.66	-77.40	9.87	-32.88	0.90	1.18	28.38	-82.40	9.87	-32.88	Pedestrian	Pedestrian	-----	-935.97	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	-----	-----	7.65	7.65
		U$_6$ - U$_7$	-514.75	30.53	-69.13	11.56	-31.23	0.90	1.18	32.51	-73.61	11.56	-31.23	Pedestrian	Pedestrian	-----	-805.46	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	-----	-----	7.88	7.88
		U$_7$ - U$_8$	-512.80	30.56	-59.23	11.57	-31.18	0.90	1.18	32.54	-63.06	11.57	-31.18	Pedestrian	Pedestrian	-----	-789.15	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	-----	-----	8.79	8.79
		U$_8$ - U$_9$	-373.48	34.01	-52.28	13.16	-27.41	0.90	1.18	36.21	-55.66	13.16	-27.41	Pedestrian	Pedestrian	-----	-593.52	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	-----	-----	9.06	9.06
		U$_9$ - U$_{10}$	-181.02	35.64	-30.97	14.25	-21.42	0.90	1.18	37.94	-32.97	14.25	-21.42	Pedestrian	Pedestrian	-----	-306.03	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	-----	-----	12.96	12.96
		U$_{10}$ - U$_{11}$	26.21	36.89	-25.42	15.21	-14.40	0.90	1.18	39.27	-27.06	15.21	-14.40	Pedestrian	Pedestrian	104.90	-19.83	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	16.23	16.23	19.19	19.19
		U$_{11}$ - U$_{12}$	237.41	-3.88	-12.75	10.86	0.00	0.90	1.18	-4.13	-13.58	10.86	0.00	Pedestrian	Vehicle	317.38	-----	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	5.67	-0.80	15.82	0.56	0.90	1.18	6.03	-0.85	15.82	0.56	Pedestrian	Vehicle	595.09	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	32.19	32.19	-----	-----
		U$_{13}$ - U$_{14}$	595.85	4.52	2.95	24.32	0.00	0.90	1.18	4.81	3.14	24.32	0.00	Pedestrian	Vehicle	812.47	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	33.25	33.25	-----	-----
		U$_{14}$ - U$_{15}$	615.52	29.91	-2.39	13.42	8.77	0.90	1.17	31.47	-2.52	13.42	8.77	Pedestrian	Pedestrian	858.53	-----	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	-----	-----	21.14	21.14	-----	-----
		U$_{15}$ - U$_{16}$	486.12	31.30	-12.51	14.17	3.09	0.90	1.17	32.93	-13.16	14.17	3.09	Pedestrian	Vehicle	693.19	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	16.69	16.69	-----	-----
		U$_{16}$ - U$_{17}$	339.23	31.39	-23.19	14.66	-2.95	0.90	1.17	33.02	-24.40	14.66	-2.95	Pedestrian	Vehicle	502.98	-----	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	-----	-----	14.78	14.78	-----	-----
		U$_{17}$ - U$_{18}$	192.06	30.53	-34.72	15.12	-9.49	0.90	1.17	32.12	-36.53	15.12	-9.49	Pedestrian	Vehicle	311.09	-----	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	-----	-----	12.16	12.16	-----	-----
		U$_{18}$ - U$_{19}$	53.73	28.13	-46.26	15.12	-15.34	0.90	1.17	29.59	-48.67	15.12	-15.34	Pedestrian	Vehicle	127.97	-----	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	-----	-----	15.94	15.94	-----	-----
		U$_{19}$ - U$_{20}$	-59.08	24.94	-56.17	15.07	-19.84	0.90	1.17	26.24	-59.09	15.07	-19.84	Pedestrian	Pedestrian	-----	-179.43	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	-----	-----	8.03	8.03
	Structure 3	U$_{20}$ - U$_{21}$	-125.50	12.81	-59.05	14.76	-22.39	0.90	1.17	13.47	-62.12	14.76	-22.39	Pedestrian	Pedestrian	-----	-273.01	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	-----	-----	8.42	8.42
		U$_{21}$ - U$_{22}$	-146.93	17.23	-59.68	14.37	-22.74	0.90	1.17	18.13	-62.78	14.37	-22.74	Pedestrian	Pedestrian	-----	-302.19	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	8.07	8.07
		U$_{22}$ - U$_{23}$	-146.70	16.03	-50.97	14.36	-22.72	0.90	1.17	16.86	-53.62	14.36	-22.72	Pedestrian	Pedestrian	-----	-289.96	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	-----	-----	9.04	9.04
		U$_{23}$ - U$_{24}$	-112.76	21.01	-48.62	13.87	-16.66	0.90	1.17	22.10	-51.16	13.87	-16.66	Pedestrian	Vehicle	-----	-213.10	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	14.15	14.15
		U$_{24}$ - U$_{25}$	-36.27	24.19	-34.59	13.40	-15.02	0.90	1.17	25.45	-36.40	13.40	-15.02	Pedestrian	Pedestrian	3.35	-113.99	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	22.05	22.05	12.77	12.77
		U$_{25}$ - U$_{26}$	80.70	26.25	-27.40	0.37	0.00	0.90	1.17	27.61	-28.83	0.37	0.00	Vehicle	Vehicle	140.80	-----	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	-----	-----	24.83	24.83	-----	-----
		U$_{26}$ - U$_{27}$	220.59	-6.38	-20.19	7.92	0.00	0.90	1.17	-6.71	-21.24	7.92	0.00	Vehicle	Vehicle	278.05	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U$_{27}$ - U$_{28}$	363.31	1.46	-7.41	14.90	0.00	0.90	1.17	1.53	-7.79	14.90	0.00	Pedestrian	Vehicle	493.66	-----	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	-----	-----	41.43	41.43	-----	-----
		U$_{28}$ - U$_{29}$	503.82	19.91	-3.16	21.74	3.11	0.90	1.17	20.95	-3.32	21.74	3.11	Pedestrian	Vehicle	710.46	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	18.00	18.00	-----	-----
		U$_{29}$ - U$_{30}$	616.57	1.90	-1.78	27.08	0.00	0.90	1.17	2.00	-1.88	27.08	0.00	Pedestrian	Vehicle	839.33	-----	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

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: 2F1
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	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Lower Chord	Structure 1	L_0- L_1	-2.01	0.61	-1.32	0.36	-2.06	0.90	1.24	0.67	-1.47	0.36	-2.06	Pedestrian	Pedestrian	-----	-7.20	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	-----	-----	119.46	119.46
		L_1 - L_2	67.91	-7.46	25.57	-3.36	9.23	0.90	1.24	28.47	-8.30	9.23	-3.36	Vehicle	Pedestrian	125.29	-----	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	-----	-----	15.27	15.27	-----	-----
		L_2 - L_3	78.84	-16.18	45.33	-7.39	15.48	0.90	1.24	50.46	-18.01	15.48	-7.39	Vehicle	Pedestrian	168.09	-----	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	-----	-----	11.69	11.69	-----	-----
		L_3 - L_4	39.14	-22.54	36.27	-10.83	18.09	0.90	1.24	40.38	-25.09	18.09	-10.83	Pedestrian	Pedestrian	126.90	-----	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	-----	-----	10.77	10.77	-----	-----
		L_4 - L_5	-166.38	-32.79	21.47	-16.90	10.96	0.90	1.24	23.90	-36.50	10.96	-16.90	Pedestrian	Pedestrian	-----	-285.72	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	6.25	6.25
		L_5 - L_6	-301.23	-35.53	11.93	-15.70	0.00	0.90	1.24	13.29	-39.56	0.00	-15.70	Vehicle	Pedestrian	-----	-463.43	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	-----	-----	6.48	6.48
		L_6 - L_7	-438.94	-5.16	-4.89	-4.99	-21.52	0.90	1.24	-5.45	-5.74	-4.99	-21.52	Pedestrian	Pedestrian	-----	-606.06	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	18.56	18.56
		L_7 - L_8	-551.65	-34.16	1.62	-35.55	0.00	0.90	1.24	1.80	-38.03	0.00	-35.55	Vehicle	Pedestrian	-----	-812.79	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	-----	-----	8.80	8.80
		L_8 - L_9	-570.53	-18.87	-12.15	-11.71	-25.77	0.90	1.20	-13.10	-20.35	-11.71	-25.77	Pedestrian	Pedestrian	-----	-801.64	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	-----	-----	13.64	13.64
		L_9 - L_{10}	-355.48	-20.49	-7.39	-11.67	-13.03	0.90	1.20	-7.97	-22.09	-11.67	-13.03	Pedestrian	Pedestrian	-----	-507.78	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	16.79	16.79
		L_{10} - L_{11}	-118.48	-21.06	15.13	-10.69	-1.74	0.90	1.20	16.32	-22.71	-1.74	-10.69	Vehicle	Pedestrian	-----	-197.44	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	-----	-----	11.44	11.44
		L_{11} - L_{12}	103.45	-19.51	27.16	-9.47	9.96	0.90	1.20	29.29	-21.03	9.96	-9.47	Pedestrian	Pedestrian	185.50	-----	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	-----	-----	12.50	12.50	-----	-----
		L_{12} - L_{13}	300.60	-18.05	56.01	-8.14	17.83	0.90	1.20	60.39	-19.46	17.83	-8.14	Vehicle	Pedestrian	469.29	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	11.16	11.16	-----	-----
		L_{13} - L_{14}	441.19	-15.31	58.46	-6.61	24.15	0.90	1.20	63.03	-16.51	24.15	-6.61	Pedestrian	Pedestrian	686.88	-----	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	-----	-----	9.94	9.94	-----	-----
		L_{14} - L_{15}	547.00	-9.77	62.85	0.00	21.08	0.90	1.20	67.77	-10.53	21.08	0.00	Vehicle	Vehicle	799.19	-----	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	-----	-----	15.16	15.16	-----	-----
		L_{15} - L_{16}	506.09	-9.37	52.55	0.00	18.29	0.90	1.20	56.66	-10.10	18.29	0.00	Vehicle	Vehicle	731.57	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	18.86	18.86	-----	-----
		L_{16} - L_{17}	398.75	38.43	26.38	0.00	11.88	0.90	1.20	41.43	28.44	11.88	0.00	Vehicle	Vehicle	572.24	-----	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	-----	-----	19.74	19.74	-----	-----
		L_{17} - L_{18}	263.81	24.68	13.62	4.66	0.15	0.90	1.20	26.61	14.69	4.66	0.15	Vehicle	Vehicle	377.54	-----	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	-----	-----	23.29	23.29	-----	-----
		L_{18} - L_{19}	118.75	10.63	3.40	-3.38	0.71	0.90	1.20	11.46	3.66	0.71	-3.38	Vehicle	Vehicle	169.28	-----	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	-----	-----	33.49	33.49	-----	-----
		L_{19} - L_{20}	-23.36	-3.05	1.94	-12.08	1.28	0.90	1.20	2.09	-3.29	1.28	-12.08	Pedestrian	Pedestrian	-----	-50.35	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	-----	-----	26.03	26.03
		L_0- L_1	-36.12	2.12	1.34	1.19	-5.14	0.90	1.18	2.26	1.42	1.19	-5.14	Pedestrian	Pedestrian	-----	-51.79	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	45.00	Pass	6.32	12.00	Pass	6.32	12.00	Pass	-----	-----	-----	-----
		L_1 - L_2	132.64	-1.26	16.54	-0.06	2.93	0.90	1.18	17.61	-1.34	2.93	-0.06	Vehicle	Vehicle	195.33	-----	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	-----	-----	28.43	28.43	-----	-----
		L_2 - L_3	303.94	-6.01	37.73	-1.79	10.52	0.90	1.18	40.17	-6.40	10.52	-1.79	Vehicle	Vehicle	447.34	-----	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	-----	-----	16.73	16.73	-----	-----
		L_3 - L_4	445.73	-10.99	53.89	-3.63	18.15	0.90	1.18	57.38	-11.70	18.15	-3.63	Vehicle	Vehicle	654.04	-----	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	-----	-----	15.05	15.05	-----	-----
		L_4 - L_5	567.64	-17.56	71.98	-6.10	24.81	0.90	1.18	76.64	-18.70	24.81	-6.10	Vehicle	Vehicle	837.57	-----	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	-----	-----	14.12	14.12	-----	-----
		L_5 - L_6	603.43	-22.56	71.32	-8.06	28.47	0.90	1.18	75.93	-24.02	28.47	-8.06	Pedestrian	Pedestrian	920.18	-----	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	-----	-----	11.39	11.39	-----	-----
		L_6 - L_7	599.28	-28.66	66.55	-10.41	30.25	0.90	1.18	70.86	-30.51	30.25	-10.41	Pedestrian	Pedestrian	910.50	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	12.05	12.05	-----	-----
		L_7 - L_8	373.73	-35.95	61.83	-13.66	24.92	0.90	1.18	65.83	-38.27	24.92	-13.66	Pedestrian	Pedestrian	603.82	-----	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	-----	-----	10.66	10.66	-----	-----
		L_8 - L_9	195.51	-38.71	43.56	-15.12	19.51	0.90	1.18	46.38	-41.22	19.51	-15.12	Pedestrian	Pedestrian	339.82	-----	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	-----	-----	13.72	13.72	-----	-----
		L_9 - L_{10}	-13.41	-40.03	31.78	-7.61	12.45	0.90	1.18	33.83	-42.62	12.45	-7.61	Pedestrian	Vehicle	42.72	-72.85	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	18.91	18.91	16.76	16.76
		L_{10} - L_{11}	-217.51	12.92	19.07	-15.65	0.00	0.90	1.18	20.30	13.76	0.00	-15.65	Vehicle	Vehicle	-----	-264.87	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----
		L_{11} - L_{12}	-420.12	-39.93	5.43	-23.35	0.00	0.90	1.18	5.78	-42.51	0.00	-23.35	Vehicle	Pedestrian	-----	-631.77	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	-----	-----	7.75	7.75
		L_{12} - L_{13}	-591.61	-16.31	0.94	-7.10	-18.75	0.90	1.18	1.00	-17.36	-7.10	-18.75	Pedestrian	Pedestrian	-----	-816.03	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	-----	-----	18.94	18.94
		L_{13} - L_{14}	-724.42	-17.38	0.13	-35.12	0.00	0.90	1.18	0.14	-18.50	0.00	-35.12	Vehicle	Pedestrian	-----	-1011.45	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	-----	-----	14.75	14.75
		L_{14} - L_{15}	-747.19	7.39	-10.02	0.00	-36.29	0.90	1.17	7.78	-10.54	0.00	-36.29	Vehicle	Pedestrian	-----	-1032.23	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	16.40	16.40
		L_{15} - L_{16}	-632.29	-24.56	-3.05	-9.38	-12.11	0.90	1.17	-3.20	-25.84	-9.38	-12.11	Pedestrian	Pedestrian	-----	-871.31	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	-----	-----	16.95	16.95
		L_{16} - L_{17}	-686.17	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	-----	-----	14.29	14.29
		L_{17} - L_{18}	-337.06	-26.26	12.79	-9.73	-4.53	0.90	1.17	13.45	-27.63	-4.53	-9.73	Vehicle	Pedestrian	-----	-486.74	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	10.45	10.45
		L_{18} - L_{19}	-183.64	-25.85	28.79	-9.59	1.37	0.90	1.17	30.28	-27.20	1.37	-9.59	Vehicle	Pedestrian	-----	-286.54	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	-----	-----	10.60	10.60
		L_{19} - L_{20}	-45.76	-23.25	40.17	-9.58	7.21	0.90	1.17	42.27	-24.46	7.21	-9.58	Vehicle	Pedestrian	-----	-103.74	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	-----	-----	15.51	15.51
	Structure 2	L_{20} - L_{21}	68.06	-20.65	46.50	-9.12	11.07	0.90	1.17	48.92	-21.73	11.07	-9.12	Vehicle	Pedestrian	152.08	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	18.33	18.33	-----	-----
		L_{21} - L_{22}	134.01	-8.96	42.98	-8.81	13.61	0.90	1.17	45.21	-9.42	13.61	-8.81	Vehicle	Pedestrian	232.99	-----	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	-----	-----	18.37	18.37	-----	-----
		L_{22} - L_{23}	122.68	-17.01	52.21	-7.57	8.54	0.90	1.17	54.92	-17.90	8.54	-7.57	Pedestrian	Pedestrian	230.89	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	15.33	15.33	-----	-----
		L_{23} - L_{24}	46.89	-20.23	39.40	-7.09	6.92	0.90	1.17	41.46	-21.28	6.92	-7.09	Vehicle	Vehicle	114.85	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	22.14	22.14	-----	-----
		L_{24} - L_{25}	-66.54	-22.40	32.60	-4.27	3.32	0.90	1.17	34.30	-23.57	3.32	-4.27	Vehicle	Vehicle	-----	-117.14	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	-----	-----	21.52	21.52
		L_{25} - L_{26}	-205.63	-24.19	21.63	-11.77	0.00	0.90	1.17	22.75	-25.45	0.00	-11.77	Vehicle	Pedestrian	-----	-315.71	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	-----	-----	9.89	9.89
		L_{26} - L_{27}	-350.43	3.53	9.25	-18.87	0.00	0.90	1.17	9.73	3.71	0.00	-18.87	Vehicle	Pedestrian	-----	-475.25	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	-----	-----
		L_{27} - L_{28}	-494.65	-16.35	3.52	-25.89	0.00	0.90	1.17	3.71	-17.20	0.00	-25.89	Vehicle	Pedestrian	-----	-699.05	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	12.83	12.83
		L_{28} - L_{29}	-620.83	-27.47	-5.18	-21.97	-5.03	0.90	1.17	-5.45	-28.90	-5.03	-21.97	Pedestrian	Pedestrian	-----	-873.21	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	12.87	12.87
		L_{29} - L_{30}	-716.91	-12.42	-11.18	-36.29	0.00	0.90	1.17	-11.77	-13.07	0.00	-36.29	Vehicle	Pedestrian	-----	-996.15	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	-----	-----	16.17	16.17
		L_{30} - L_{31}	-850.71	17.50	-6.50	0.00	-35.97	0.90	1.18	18.63	-6.92	0.00	-35.97	Vehicle	Pedestrian	-----	-1161.68	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

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 2F1 **Condition:** As-Built

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

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

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

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Verticals	Structure 1	U$_0$ - L$_0$	-93.72	-33.90	7.38	-12.32	3.44	0.90	1.24	8.22	-37.74	3.44	-12.32	Pedestrian	Vehicle	-----	-170.90	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	6.64	6.64
		U$_1$ - L$_1$	-46.53	-22.82	6.34	-9.05	2.93	0.90	1.24	7.05	-25.40	2.93	-9.05	Pedestrian	Pedestrian	-----	-105.28	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	-----	-----	-----	-----	-----	8.87	8.87
		U$_2$ - L$_2$	-0.10	-12.62	5.75	-5.68	2.84	0.90	1.24	6.40	-14.04	2.84	-5.68	Pedestrian	Pedestrian	11.88	-25.77	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	46.32	46.32	17.84	17.84
		U$_3$ - L$_3$	39.60	-7.80	5.11	-2.12	2.69	0.90	1.24	5.69	-8.68	2.69	-2.12	Pedestrian	Vehicle	62.37	-----	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	-----	-----	-----	-----	-----	46.31	46.31	-----	-----
		U$_4$ - L$_4$	-30.20	0.03	-3.80	0.00	-3.46	0.90	1.24	0.03	-4.23	0.00	-3.46	Vehicle	Pedestrian	-----	-49.27	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	41.55	41.55
		U$_5$ - L$_5$	-130.49	2.44	-21.56	0.00	-10.23	0.90	1.24	2.71	-24.00	0.00	-10.23	Vehicle	Pedestrian	-----	-214.13	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	-----	-----	-----	-----	-----	8.61	8.61
		U$_6$ - L$_6$	-158.18	3.24	-21.24	0.00	-13.06	0.90	1.24	3.60	-23.65	0.00	-13.06	Vehicle	Pedestrian	-----	-253.36	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	-----	-----	-----	-----	-----	9.53	9.53
		U$_7$ - L$_7$	-152.32	6.42	-19.72	0.00	-13.24	0.90	1.24	7.15	-21.95	0.00	-13.24	Vehicle	Pedestrian	-----	-243.77	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	-----	-----	-----	-----	-----	8.75	8.75
		U$_8$ - L$_8$	-455.55	-31.94	-19.85	-18.97	-12.74	0.90	1.24	-22.10	-35.56	-12.74	-18.97	Pedestrian	Pedestrian	-----	-663.10	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	-----	-----	-----	-----	-----	11.18	11.18
		U$_9$ - L$_9$	-287.55	-32.12	-0.12	-18.20	0.00	0.90	1.20	-0.13	-34.63	0.00	-18.20	Vehicle	Pedestrian	-----	-442.50	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	-----	-----	-----	-----	-----	6.77	6.77
		U$_{10}$ - L$_{10}$	-276.32	-30.25	-1.27	-16.17	-1.37	0.90	1.20	-1.37	-32.61	-1.37	-16.17	Pedestrian	Pedestrian	-----	-422.64	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	-----	-----	-----	-----	-----	9.56	9.56
		U$_{11}$ - L$_{11}$	-232.59	-27.57	0.88	-14.41	0.00	0.90	1.20	0.94	-29.73	0.00	-14.41	Vehicle	Pedestrian	-----	-359.75	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	-----	-----	-----	-----	-----	9.26	9.26
		U$_{12}$ - L$_{12}$	-178.43	-22.92	0.82	-11.20	0.00	0.90	1.20	0.88	-24.71	0.00	-11.20	Vehicle	Pedestrian	-----	-278.63	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	-----	-----	-----	-----	-----	9.86	9.86
		U$_{13}$ - L$_{13}$	-127.74	-16.85	2.98	-7.88	0.00	0.90	1.20	3.22	-18.17	0.00	-7.88	Vehicle	Pedestrian	-----	-199.92	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	-----	-----	-----	-----	-----	9.70	9.70
		U$_{14}$ - L$_{14}$	-30.39	-1.58	-1.77	-3.03	0.00	0.90	1.20	-1.70	-1.91	0.00	-3.03	Vehicle	Pedestrian	-----	-45.94	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	-----	-----	-----	-----	-----	63.60	63.60
		U$_{15}$ - L$_{15}$	-28.94	5.86	-14.92	1.55	-4.54	0.90	1.20	6.32	-16.08	1.55	-4.54	Vehicle	Vehicle	-----	-58.53	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	-----	-----	-----	-----	-----	19.54	19.54
		U$_{16}$ - L$_{16}$	-76.03	3.25	-16.66	1.39	-7.08	0.90	1.20	3.51	-17.96	1.39	-7.08	Pedestrian	Pedestrian	-----	-131.39	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	-----	-----	-----	-----	-----	10.60	10.60
		U$_{17}$ - L$_{17}$	-161.89	3.47	-23.94	1.30	-10.66	0.90	1.20	3.74	-25.81	1.30	-10.66	Pedestrian	Pedestrian	-----	-257.86	0.00	20.66	20.0644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	6.84	6.84
		U$_{18}$ - L$_{18}$	-190.28	2.98	-23.57	1.12	-12.71	0.90	1.20	3.21	-25.42	1.12	-12.71	Pedestrian	Pedestrian	-----	-296.93	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	-----	-----	-----	-----	-----	8.79	8.79
		U$_{19}$ - L$_{19}$	-228.17	2.55	-23.01	0.97	-14.98	0.90	1.20	2.75	-24.81	0.97	-14.98	Pedestrian	Pedestrian	-----	-348.35	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	-----	-----	-----	-----	-----	9.75	9.75
		U$_{20}$ - L$_{20}$	-242.83	2.32	-23.70	0.95	-15.63	0.90	1.20	2.50	-25.55	0.95	-15.63	Pedestrian	Pedestrian	-----	-369.20	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	-----	-----	-----	-----	-----	8.24	8.24
	Structure 2	U$_0$ - L$_0$	-303.03	-33.84	5.61	-15.08	2.22	0.90	1.18	5.97	-36.02	2.22	-15.08	Pedestrian	Pedestrian	-----	-460.37	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	-----	-----	-----	-----	-----	6.64	6.64
		U$_1$ - L$_1$	-268.78	-32.22	5.73	-13.67	2.12	0.90	1.18	6.10	-34.30	2.12	-13.67	Pedestrian	Pedestrian	-----	-411.77	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	-----	-----	-----	-----	-----	8.42	8.42
		U$_2$ - L$_2$	-220.87	-28.37	6.18	-12.32	2.34	0.90	1.18	6.58	-30.20	2.34	-12.32	Pedestrian	Pedestrian	-----	-342.42	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	-----	-----	-----	-----	-----	8.31	8.31
		U$_3$ - L$_3$	-175.23	-26.34	6.62	-10.35	2.49	0.90	1.18	7.05	-28.04	2.49	-10.35	Pedestrian	Pedestrian	-----	-277.70	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	-----	-----	-----	-----	-----	7.21	7.21
		U$_4$ - L$_4$	-82.08	-19.36	5.75	-6.62	2.21	0.90	1.18	6.13	-20.62	2.21	-6.62	Pedestrian	Vehicle	-----	-133.50	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	12.47	12.47
		U$_5$ - L$_5$	-19.89	-14.02	6.51	-4.16	2.23	0.90	1.18	6.93	-14.92	2.23	-4.16	Vehicle	Vehicle	-----	-45.26	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	-----	-----	-----	-----	-----	21.48	21.48
		U$_6$ - L$_6$	60.32	-7.95	12.77	-0.47	1.75	0.90	1.18	13.59	-8.47	1.75	-0.47	Vehicle	Vehicle	96.09	-----	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	27.02	27.02	-----	-----
		U$_7$ - L$_7$	-41.77	-0.96	-1.13	0.00	-2.49	0.90	1.18	-1.03	-1.21	0.00	-2.49	Vehicle	Pedestrian	-----	-59.11	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	-----	-----	-----	-----	-----	80.91	80.91
		U$_8$ - L$_8$	-189.01	2.70	-20.55	0.00	-8.38	0.90	1.18	2.87	-21.87	0.00	-8.38	Vehicle	Pedestrian	-----	-285.04	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	11.29	11.29
		U$_9$ - L$_9$	-253.99	0.91	-26.63	0.00	-10.55	0.90	1.18	0.97	-28.35	0.00	-10.55	Vehicle	Pedestrian	-----	-380.77	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	-----	-----	-----	-----	-----	11.24	11.24
		U$_{10}$ - L$_{10}$	-290.02	1.99	-26.99	0.00	-12.18	0.90	1.18	2.11	-28.74	0.00	-12.18	Vehicle	Pedestrian	-----	-430.22	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	-----	-----	-----	-----	-----	11.94	11.94
		U$_{11}$ - L$_{11}$	-312.18	4.23	-28.21	0.00	-12.59	0.90	1.18	4.50	-30.04	0.00	-12.59	Vehicle	Pedestrian	-----	-461.24	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	-----	-----	-----	-----	-----	10.62	10.62
		U$_{12}$ - L$_{12}$	-327.28	6.13	-26.35	-0.93	-13.01	0.90	1.18	6.52	-28.05	-0.93	-13.01	Vehicle	Pedestrian	-----	-478.83	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	11.56	11.56
		U$_{13}$ - L$_{13}$	-277.21	8.13	-22.45	0.00	-11.39	0.90	1.18	8.65	-23.90	0.00	-11.39	Vehicle	Pedestrian	-----	-406.25	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	11.70	11.70
		U$_{14}$ - L$_{14}$	-505.44	-25.63	-18.05	-11.34	-9.95	0.90	1.18	-19.22	-27.28	-9.95	-11.34	Pedestrian	Pedestrian	-----	-707.29	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	14.15	14.15
		U$_{15}$ - L$_{15}$	-232.94	-29.74	1.63	-11.17	0.00	0.90	1.17	1.72	-31.29	0.00	-11.17	Vehicle	Pedestrian	-----	-358.01	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	-----	-----	-----	-----	-----	10.77	10.77
		U$_{16}$ - L$_{16}$	-260.12	-31.40	0.23	-12.63	0.83	0.90	1.17	0.24	-33.03	0.83	-12.63	Pedestrian	Pedestrian	-----	-397.52	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	-----	-----	-----	-----	-----	8.89	8.89
		U$_{17}$ - L$_{17}$	-228.24	-28.79	3.77	-11.76	0.66	0.90	1.17	3.96	-30.29	0.66	-11.76	Vehicle	Pedestrian	-----	-351.37	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	-----	-----	-----	-----	-----	9.40	9.40
		U$_{18}$ - L$_{18}$	-209.27	-26.77	4.54	-11.28	-0.03	0.90	1.17	4.78	-28.16	-0.03	-11.28	Vehicle	Pedestrian	-----	-323.34	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	-----	-----	-----	-----	-----	9.33	9.33
		U$_{19}$ - L$_{19}$	-166.55	-24.66	4.86	-9.53	-0.07	0.90	1.17	5.12	-25.94	-0.07	-9.53	Vehicle	Pedestrian	-----	-262.63	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	-----	-----	-----	-----	-----	9.72	9.72
		U$_{20}$ - L$_{20}$	-113.95	-18.16	4.90	-7.50	-0.43	0.90	1.17	5.15	-19.11	-0.43	-7.50	Vehicle	Pedestrian	-----	-182.72	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	9.82	9.82
		U$_{21}$ - L$_{21}$	-62.76	-14.68	7.32	-5.22	-0.44	0.90	1.17	7.70	-15.44	-0.44	-5.22	Vehicle	Pedestrian	-----	-108.45	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	-----	-----	-----	-----	-----	13.44	13.44
		U$_{22}$ - L$_{22}$	-38.94	-1.45	-0.72	-2.15	-2.04	0.90	1.17	-0.76	-1.52	-2.04	-2.15	Pedestrian	Pedestrian	-----	-55.39	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	-----	-----	-----	-----	-----	82.54	82.54
		U$_{23}$ - L$_{23}$	-74.43	5.19	-16.63	0.48	-6.10	0.90	1.17	5.46	-17.49	0.48	-6.10	Vehicle	Pedestrian	-----	-127.43	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	-----	-----	-----	-----	-----	11.28	11.28
		U$_{24}$ - L$_{24}$	-121.36	5.08	-20.66	0.37	-8.17	0.90	1.17	5.35	-21.74	0.37	-8.17	Vehicle	Pedestrian	-----	-196.65	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	-----	-----	-----	-----	-----	8.49	8.49
		U$_{25}$ - L$_{25}$	-169.12	4.89	-24.27	0.43	-9.94	0.90	1.17	5.14	-25.53	0.43	-9.94	Vehicle	Pedestrian	-----	-265.97	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	-----	-----	-----	-----	-----	9.65	9.65
		U$_{26}$ - L$_{26}$	-207.97	4.41	-24.64	0.14	-11.42	0.90	1.17	4.64	-25.92	0.14	-11.42	Vehicle	Pedestrian	-----	-318.92	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	-----	-----	-----	-----	-----	9.89	9.89
		U$_{27}$ - L$_{27}$	-219.96	3.64	-26.87	0.16	-11.49	0.90	1.17	3.83	-28.27	0.16	-11.49	Vehicle	Pedestrian	-----	-337.64	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	10.14	10.14
		U$_{28}$ - L$_{28}$	-240.91	5.24	-24.57	-0.25	-11.17	0.90	1.17	5.51	-25.85	-0.25	-11.17	Vehicle	Pedestrian	-----	-361.30	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	-----	-----	-----	-----	-----	11.49	11.49
		U$_{29}$ - L$_{29}$	-202.73	7.99	-20.77	0.00	-10.35	0.90	1.17	8.40	-21.85	0.00	-10.35	Vehicle	Pedestrian	-----	-305.41	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	15.14	15.14
		U$_{30}$ - L$_{30}$	-518.05	-27.21	-18.62	-13.79	-8.23	0.90	1.18	-19.82	-28.97	-8.23	-13.79	Pedestrian	Pedestrian	-----	-729.05	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.

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: 2F1 **Condition:** As-Built

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

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

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

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

Axial Force Rating

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capacity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Diagonals	Structure 1	U_0 - L_1	87.66	21.34	-7.97	14.00	-4.60	0.90	1.24	23.75	-8.87	14.00	-4.60	Pedestrian	Pedestrian	163.04	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**13.21**	**13.21**	-----	-----
		U_1 - L_2	23.90	22.26	1.30	9.20	-4.71	0.90	1.24	24.79	1.45	9.20	-4.71	Pedestrian	Pedestrian	75.24	-----	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	-----	-----	-----	-----	-----	**11.88**	**11.88**	-----	-----
		U_2 - L_3	-49.02	9.36	-9.54	0.00	-1.00	0.90	1.24	10.41	-10.62	0.00	-1.00	Vehicle	Vehicle	-----	-77.53	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	-----	-----	-----	-----	-----	**26.86**	**26.86**
		U_3 - L_4	-108.88	-2.13	-17.19	-4.20	-2.10	0.90	1.24	-2.38	-19.13	-2.10	-4.20	Pedestrian	Vehicle	-----	-166.41	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**11.89**	**11.89**
		U_4 - L_4	153.12	4.40	0.49	3.11	7.00	0.90	1.24	4.90	0.55	7.00	3.11	Pedestrian	Pedestrian	214.53	-----	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	-----	-----	-----	-----	-----	**31.21**	**31.21**	-----	-----
		U_5 - L_5	186.35	29.02	-2.33	13.44	0.00	0.90	1.24	32.30	-2.59	13.44	0.00	Pedestrian	Vehicle	301.72	-----	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	-----	-----	-----	-----	-----	**10.15**	**10.15**	-----	-----
		U_6 - L_6	177.52	25.83	-6.07	14.13	0.00	0.90	1.24	28.76	-6.76	14.13	0.00	Pedestrian	Vehicle	286.53	-----	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	-----	-----	-----	-----	-----	**11.03**	**11.03**	-----	-----
		U_7 - L_7	173.18	22.14	-7.13	13.87	0.00	0.90	1.24	24.65	-7.93	13.87	0.00	Pedestrian	Vehicle	275.19	-----	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	-----	-----	-----	-----	-----	**12.40**	**12.40**	-----	-----
		U_8 - L_8	328.11	35.52	-0.08	19.31	0.00	0.90	1.20	38.30	-0.08	19.31	0.00	Pedestrian	Vehicle	501.44	-----	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	-----	-----	-----	-----	-----	**11.01**	**11.01**	-----	-----
		U_9 - L_{10}	339.70	36.68	-1.43	19.74	0.00	0.90	1.20	39.55	-1.54	19.74	0.00	Pedestrian	Vehicle	518.69	-----	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	-----	-----	-----	-----	-----	**10.50**	**10.50**	-----	-----
		U_{10} - L_{11}	313.22	35.25	3.01	18.15	0.00	0.90	1.20	38.00	3.24	18.15	0.00	Pedestrian	Vehicle	480.17	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**10.64**	**10.64**	-----	-----
		U_{11} - L_{12}	270.68	32.86	2.37	14.84	0.00	0.90	1.20	35.43	2.56	14.84	0.00	Pedestrian	Vehicle	417.23	-----	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	-----	-----	-----	-----	-----	**10.08**	**10.08**	-----	-----
		U_{12} - L_{13}	194.17	23.87	-4.13	10.79	0.00	0.90	1.20	25.74	-4.46	10.79	0.00	Pedestrian	Vehicle	299.90	-----	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	-----	-----	-----	-----	-----	**11.96**	**11.96**	-----	-----
		U_{13} - L_{14}	123.57	15.82	-6.86	2.11	3.86	0.90	1.20	17.06	-7.40	3.86	2.11	Vehicle	Vehicle	182.81	-----	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	-----	-----	-----	-----	-----	**17.83**	**17.83**	-----	-----
		U_{15} - L_{14}	-16.32	15.12	-11.53	0.00	-0.87	0.90	1.20	16.30	-12.43	0.00	-0.87	Vehicle	Vehicle	-----	-37.38	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	-----	-----	-----	-----	-----	**25.10**	**25.10**
		U_{16} - L_{15}	59.12	20.68	-7.72	6.08	-2.09	0.90	1.20	22.30	-8.32	6.08	-2.09	Vehicle	Vehicle	105.85	-----	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	-----	-----	-----	-----	-----	**16.53**	**16.53**	-----	-----
		U_{17} - L_{16}	172.14	27.03	-2.97	9.93	-1.86	0.90	1.20	29.14	-3.20	9.93	-1.86	Pedestrian	Pedestrian	274.58	-----	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	-----	-----	-----	-----	-----	**9.02**	**9.02**	-----	-----
		U_{18} - L_{17}	210.78	28.71	-4.10	12.51	-1.53	0.90	1.20	30.96	-4.42	12.51	-1.53	Pedestrian	Pedestrian	330.52	-----	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	-----	-----	-----	-----	-----	**10.12**	**10.12**	-----	-----
		U_{19} - L_{18}	242.64	28.02	-3.27	13.73	-1.21	0.90	1.20	30.22	-3.53	13.73	-1.21	Pedestrian	Pedestrian	372.56	-----	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	-----	-----	-----	-----	-----	**10.64**	**10.64**	-----	-----
		U_{20} - L_{19}	257.76	24.31	-2.69	15.70	-1.03	0.90	1.20	26.22	-2.90	15.70	-1.03	Pedestrian	Pedestrian	389.58	-----	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	-----	-----	-----	-----	-----	**10.79**	**10.79**	-----	-----
		U_0 - L_1	298.99	22.17	-5.96	14.21	-2.21	0.90	1.18	23.61	-6.34	14.21	-2.21	Pedestrian	Pedestrian	437.84	-----	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	-----	-----	-----	-----	-----	**12.66**	**12.66**	-----	-----
		U_1 - L_2	284.21	33.71	-7.12	14.05	-2.66	0.90	1.18	35.89	-7.58	14.05	-2.66	Pedestrian	Pedestrian	434.39	-----	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	-----	-----	-----	-----	-----	**9.88**	**9.88**	-----	-----
		U_2 - L_3	221.42	30.83	-7.60	11.83	-2.85	0.90	1.18	32.83	-8.09	11.83	-2.85	Pedestrian	Pedestrian	345.91	-----	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	-----	-----	-----	-----	-----	**9.61**	**9.61**	-----	-----
		U_3 - L_4	178.30	30.21	-8.59	10.08	-3.23	0.90	1.18	32.16	-9.14	10.08	-3.23	Vehicle	Pedestrian	273.60	-----	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	-----	-----	-----	-----	-----	**12.40**	**12.40**	-----	-----
		U_4 - L_5	53.50	18.76	-7.60	5.37	-2.87	0.90	1.18	19.97	-8.09	5.37	-2.87	Vehicle	Pedestrian	95.51	-----	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	-----	-----	-----	-----	-----	**18.74**	**18.74**	-----	-----
		U_5 - L_6	-16.51	16.08	-10.93	2.23	-1.22	0.90	1.18	17.12	-11.63	2.23	-1.22	Vehicle	Vehicle	0.79	-36.59	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	-----	-----	-----	-----	-----	**25.94**	**25.94**	**26.58**	**26.58**
		U_6 - L_7	-133.21	6.29	-21.85	0.00	-5.36	0.90	1.18	6.70	-23.26	0.00	-5.36	Vehicle	Vehicle	-----	-203.41	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	-----	-----	-----	-----	-----	**9.72**	**9.72**
		U_7 - L_7	208.77	23.51	-5.32	8.33	0.00	0.90	1.18	25.03	-5.66	8.33	0.00	Vehicle	Vehicle	303.94	-----	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	-----	-----	-----	-----	-----	**15.76**	**15.76**	-----	-----
		U_8 - L_8	289.58	30.57	-1.07	10.70	0.00	0.90	1.18	32.54	-1.14	10.70	0.00	Vehicle	Vehicle	418.76	-----	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	-----	-----	-----	-----	-----	**12.92**	**12.92**	-----	-----
		U_{10} - L_9	327.97	32.72	-0.77	12.66	0.00	0.90	1.18	34.83	-0.82	12.66	0.00	Pedestrian	Vehicle	488.11	-----	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	-----	-----	-----	-----	-----	**9.47**	**9.47**	-----	-----
		U_{11} - L_{10}	349.25	34.09	-1.55	12.70	0.00	0.90	1.18	36.29	-1.65	12.70	0.00	Pedestrian	Vehicle	517.72	-----	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	-----	-----	-----	-----	-----	**10.11**	**10.11**	-----	-----
		U_{12} - L_{11}	358.20	31.01	-4.77	13.52	0.00	0.90	1.18	33.02	-5.08	13.52	0.00	Pedestrian	Vehicle	526.15	-----	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	-----	-----	-----	-----	-----	**10.45**	**10.45**	-----	-----
		U_{13} - L_{12}	307.75	26.53	-9.01	12.26	-0.24	0.90	1.18	28.25	-9.59	12.26	-0.24	Pedestrian	Vehicle	452.73	-----	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	-----	-----	-----	-----	-----	**11.60**	**11.60**	-----	-----
		U_{14} - L_{13}	260.20	21.42	-7.61	9.65	0.00	0.90	1.18	22.80	-8.11	9.65	0.00	Pedestrian	Vehicle	380.45	-----	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	-----	-----	-----	-----	-----	**15.94**	**15.94**	-----	-----
		U_{15} - L_{15}	208.42	27.79	-0.78	11.04	-2.51	0.90	1.17	29.24	-0.82	11.04	-2.51	Pedestrian	Pedestrian	323.31	-----	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	-----	-----	-----	-----	-----	**10.98**	**10.98**	-----	-----
		U_{16} - L_{16}	243.55	31.98	-2.44	11.54	-1.48	0.90	1.17	33.65	-2.56	11.54	-1.48	Pedestrian	Pedestrian	375.36	-----	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	-----	-----	-----	-----	-----	**9.01**	**9.01**	-----	-----
		U_{17} - L_{17}	255.86	32.51	-3.99	12.23	0.00	0.90	1.17	34.20	-4.20	12.23	0.00	Pedestrian	Vehicle	392.99	-----	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	-----	-----	-----	-----	-----	**9.78**	**9.78**	-----	-----
		U_{18} - L_{18}	235.29	31.76	-4.68	11.35	0.00	0.90	1.17	33.41	-4.92	11.35	0.00	Pedestrian	Vehicle	364.07	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**9.28**	**9.28**	-----	-----
		U_9 - L_8	212.11	29.48	-5.70	11.09	0.00	0.90	1.17	31.02	-6.00	11.09	0.00	Pedestrian	Vehicle	330.48	-----	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	-----	-----	-----	-----	-----	**10.41**	**10.41**	-----	-----
		U_{19} - L_{20}	168.24	25.57	-3.78	9.14	0.00	0.90	1.17	26.90	-3.98	9.14	0.00	Pedestrian	Vehicle	265.56	-----	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	-----	-----	-----	-----	-----	**12.07**	**12.07**	-----	-----
	Structure 2	U_{20} - L_{21}	97.26	20.01	-8.66	6.66	0.00	0.90	1.17	21.05	-9.11	6.66	0.00	Vehicle	Vehicle	153.80	-----	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	-----	-----	-----	-----	-----	**15.70**	**15.70**	-----	-----
		U_{21} - L_{22}	30.60	6.74	-13.85	0.58	-2.18	0.90	1.17	7.09	-14.57	0.58	-2.18	Vehicle	Vehicle	49.00	-----	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	-----	-----	-----	-----	-----	**56.04**	**56.04**	-----	-----
		U_{22} - L_{22}	49.78	18.15	-9.42	5.11	-0.95	0.90	1.17	19.10	-9.91	5.11	-0.95	Vehicle	Vehicle	89.54	-----	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**19.79**	**19.79**	-----	-----
		U_{23} - L_{23}	115.07	22.71	-6.34	8.00	-0.72	0.90	1.17	23.90	-6.67	8.00	-0.72	Pedestrian	Vehicle	191.06	-----	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	-----	-----	-----	-----	-----	**9.80**	**9.80**	-----	-----
		U_{24} - L_{24}	179.22	29.67	-6.68	10.10	0.00	0.90	1.17	31.22	-7.03	10.10	0.00	Vehicle	Vehicle	273.57	-----	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	-----	-----	-----	-----	-----	**13.58**	**13.58**	-----	-----
		U_{25} - L_{25}	220.97	29.73	-5.88	11.89	0.00	0.90	1.17	31.28	-6.18	11.89	0.00	Pedestrian	Vehicle	343.38	-----	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	-----	-----	-----	-----	-----	**9.95**	**9.95**	-----	-----
		U_{27} - L_{26}	234.87	29.58	-4.65	11.45	0.00	0.90	1.17	31.12	-4.89	11.45	0.00	Pedestrian	Vehicle	360.66	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**9.77**	**9.77**	-----	-----
		U_{26} - L_{27}	253.15	29.53	-4.23	12.25	0.00	0.90	1.17	31.07	-4.45	12.25	0.00	Pedestrian	Vehicle	385.41	-----	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	-----	-----	-----	-----	-----	**10.55**	**10.55**	-----	-----
		U_{28} - L_{28}	215.91	23.92	-8.98	10.20	0.61	0.90	1.17	25.17	-9.44	10.20	0.61	Pedestrian	Vehicle	326.67	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**12.29**	**12.29**	-----	-----
		U_{29} - L_{29}	180.73	20.20	-7.63	8.49	0.00	0.90	1.17	21.26	-8.03	8.49	0.00	Pedestrian	Vehicle	273.62	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**15.80**	**15.80**	-----	-----
		U_{30} - L_{31}	294.99	28.50	-4.34	12.90	0.00	0.90	1.18	30.35	-4.62	12.90	0.00	Pedestrian	Vehicle	439.70	-----	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	-----	-----	-----	-----	-----	**11.16**	**11.16**	-----	-----
		U_{31} - L_{32}	342.70	33.27	-4.07	13.70	-0.55	0.90	1.18	35.42	-4.33	13.70	-0.55	Pedestrian	Vehicle	509.37	-----	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	-----	-----	-----	-----	-----	**8.85**	**8.85**	-----	-----
		U_{32} - L_{33}	363.39	33.50	-1.97	14.16	0.00	0.90	1.18	35.67	-2.10	14.16	0.00	Pedestrian	Vehicle	537.19	-----	0.00	33.27	33.2657	1097

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 Spreads

Loading: 2F1
Condition: As-Built

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

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

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

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

M_z Information — M_y Information

| Location | | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-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. Pos. Mom. Start (k-ft) | Max. Pos. Mom. End (k-ft) | Max. Neg. Mom. Start (k-ft) | Max. Neg. Mom. End (k-ft) | S_{min} (in^3) | S_{tc} (in^3) | S_{bc} (in^3) | Z_c (in^3) | I_c (in^4) | Shape Factor | M_p (k-in) | Formula (.8 Term * F'c*S_{tc}) | M_r (k-in) | YY Axis Moments from STAAD: Dead Load Start (k-ft) | Dead Load End (k-ft) | Live Load (Max) Start (k-ft) | Live Load (Max) End (k-ft) | Pedestrian Load (Max) Start (k-ft) | Pedestrian Load (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. Pos. Mom. Start (k-ft) | Max. Pos. Mom. End (k-ft) | Max. Neg. Mom. Start (k-ft) | Max. Neg. Mom. End (k-ft) | S_{min} (in^3) | S_{tc} (in^3) | S_{bc} (in^3) | Z_c (in^3) | I_c (in^4) | Shape Factor | M_p (k-in) | F_{cr} (ksi) | Formula (.8 Term * F'c*S_{tc}) | M_r (k-in) | Yield: Axial Action | Yield: Moment Portion | Yield: Total | Pass | Tension: Axial Action | Tension: Moment Portion | Tension: Total | Pass | Compression: Buckle: Axial Action | Buckle: Moment Portion | Buckle: Total | Pass | Yield: Axial Action | Yield: Moment Portion | Yield: Total | Pass |
|---|---|---|---

Moment (End) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
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)
Structure 1	L_0-L_1	-44.17	-99.07	-0.41	0.43	2.20	-3.75	-5.49	5.68	29.42	-50.13
	L_1-L_2	-131.02	-112.64	-0.19	1.04	1.87	-7.32	-2.50	13.93	24.94	-97.82
	L_2-L_3	-75.50	-79.80	-0.75	1.93	1.42	-7.46	-7.08	18.22	18.33	-99.65
	L_3-L_4	18.36	16.12	0.58	2.20	-3.90	-8.30	7.79	29.43	-52.09	-110.94
	L_4-L_5	-68.34	-212.03	-2.52	0.61	-4.16	-1.49	-75.28	32.10	-55.58	-62.42
	L_5-L_6	8.36	229.14	2.29	2.56	-3.49	-3.90	17.29	34.20	-46.60	-52.14
	L_6-L_7	61.83	171.52	4.30	3.66	-2.59	-3.72	27.38	35.02	-34.59	-49.63
	L_7-L_8	1.81	459.41	-1.19	7.21	0.07	-0.12	-15.86	96.27	0.91	-1.64
	L_8-L_9	439.88	-25.12	3.09	0.48	4.12	-2.98	39.97	6.26	53.31	-38.58
	L_9-L_{10}	204.03	-117.02	-0.76	1.91	1.95	-4.36	19.58	12.33	26.46	-60.65
	L_{10}-L_{11}	168.12	-117.13	2.28	1.10	1.18	-3.99	29.54	14.23	15.25	-51.60
	L_{11}-L_{12}	23.72	-212.27	2.44	0.91	0.13	-5.29	18.67	11.80	1.78	-80.63
	L_{12}-L_{13}	-19.73	-128.50	1.45	0.71	-1.75	-5.36	18.70	9.19	-22.58	-89.34
	L_{13}-L_{14}	175.78	-425.21	1.13	0.97	3.73	-11.59	14.59	12.54	48.26	-149.94
	L_{14}-L_{15}	409.28	-77.79	2.76	0.79	8.50	-8.52	89.11	7.41	110.73	-29.47
	L_{15}-L_{16}	-209.39	-318.68	0.32	0.34	-3.69	-8.73	4.11	4.45	-47.70	-113.00
	L_{16}-L_{17}	374.86	83.54	-3.86	-2.62	-14.84	-63.70	-50.32	25.63	-74.84	-63.70
	L_{17}-L_{18}	-171.07	19.86	-2.13	2.09	-3.67	-2.42	-27.56	26.60	-47.51	-31.34
	L_{18}-L_{19}	-209.33	253.78	-4.46	2.82	-1.92	-1.20	-47.02	34.60	-10.74	-16.74
	L_{19}-L_{20}	-84.78	1.02	-4.25	2.44	0.20	-0.22	-55.04	31.53	2.63	-2.79
	L_{20}-L_{21}	10.35	-213.29	-0.21	0.47	1.63	-3.39	-2.73	6.02	20.81	-68.90
	L_{21}-L_{22}	34.56	-247.73	0.25	0.51	1.63	-3.73	-3.13	6.43	23.10	-73.20
	L_{22}-L_{23}	-0.36	-194.33	-0.27	0.51	-1.59	-6.53	-3.44	6.52	-20.37	-83.46
	L_{23}-L_{24}	2.07	313.17	-0.21	0.51	-1.46	-6.53	-3.09	6.52	-2.04	-83.46
	L_{24}-L_{25}	-287.80	-299.08	-0.10	0.88	-4.02	-10.42	-1.26	11.18	-51.37	-133.07
	L_{25}-L_{26}	-191.47	-191.87	-0.10	0.88	-2.67	-10.42	-1.42	11.18	-51.37	-133.07
	L_{26}-L_{27}	-467.54	-273.29	1.27	1.90	-6.74	-15.14	16.16	24.25	-86.05	-193.38
	L_{27}-L_{28}	-310.55	-49.89	1.55	2.85	-6.28	-9.93	19.77	36.41	-80.21	-126.87
	L_{28}-L_{29}	-272.22	-203.04	-4.56	2.82	-4.52	-6.12	-58.21	27.56	-76.18	-83.29
	L_{29}-L_{30}	-261.97	188.33	-1.37	2.81	-5.07	-5.04	17.54	35.84	-64.79	-64.42
	L_{30}-L_{31}	-233.44	233.34	-0.90	2.89	-4.51	-4.52	-5.45	36.46	-58.26	-58.66
	L_{31}-L_{32}	-131.48	389.15	-2.94	2.97	-3.43	-4.92	-37.50	37.91	-43.80	-62.86
	L_{32}-L_{33}	-164.35	-140.48	-1.46	0.90	-2.93	-7.08	-18.09	11.52	-37.37	-90.44
	L_{33}-L_{34}	-367.47	-994.41	-0.25	0.31	-4.70	-10.16	-4.83	-2.44	-16.26	-128.13
	L_{34}-L_{35}	912.03	-326.89	1.21	0.76	8.15	-8.25	15.24	9.54	102.86	-104.09
	L_{35}-L_{36}	-289.13	4.66	1.21	0.92	2.92	-4.16	29.54	11.49	29.54	-52.92
	L_{36}-L_{37}	515.59	-35.24	3.06	0.94	1.29	-6.12	38.58	11.82	16.24	-77.24
	L_{37}-L_{38}	319.18	-188.12	2.52	0.94	1.29	-6.12	38.58	11.82	16.24	-77.24
	L_{38}-L_{39}	-252.02	-29.09	2.65	1.16	0.70	-5.96	33.51	14.61	8.77	-75.49
	L_{39}-L_{40}	230.55	-46.37	1.56	1.77	-0.40	-8.57	19.67	22.33	-5.04	-101.94
	L_{40}-L_{41}	27.79	-114.86	2.53	2.53	-0.40	-8.57	19.67	22.33	-5.04	-101.94
	L_{41}-L_{42}	41.53	-186.96	-0.04	1.36	-1.08	-15.68	-0.49	17.12	-13.58	-197.56
	L_{42}-L_{43}	-197.37	-329.73	-0.04	1.36	-1.08	-15.68	-0.49	17.12	-13.58	-197.56
	L_{43}-L_{44}	-108.55	-10.73	0.79	2.14	-5.70	-10.16	10.01	27.06	-71.96	-128.13
	L_{44}-L_{45}	-50.83	-3.36	0.79	2.14	-5.70	-10.16	10.01	27.06	-71.96	-128.13
	L_{45}-L_{46}	-65.47	-170.47	2.04	2.70	-2.99	-5.45	-25.73	34.10	-37.80	-68.74
	L_{46}-L_{47}	-30.98	-151.24	-2.21	3.88	-4.49	-4.49	-45.76	48.95	-56.64	-56.65
	L_{47}-L_{48}	27.13	313.17	-2.21	3.88	-4.49	-4.49	-45.76	48.95	-56.64	-56.65
	L_{48}-L_{49}	-19.38	-193.41	0.45	1.34	-4.01	-8.12	5.68	16.89	-50.56	-102.55
	L_{49}-L_{50}	27.78	-114.86	2.53	2.53	-0.40	-8.57	19.67	22.33	-5.04	-101.94
	L_{50}-L_{51}	740.88	-268.17	2.16	0.24	7.21	-7.92	27.55	3.04	92.09	-101.23
	L_{51}-L_{52}	-140.43	-76.07	0.68	1.52	-1.95	-4.23	-8.68	19.36	-24.88	-79.58
	L_{52}-L_{53}	27.78	-114.86	2.53	2.53	-0.40	-8.57	19.67	22.33	-5.04	-101.94
	L_{53}-L_{54}	147.94	-145.21	1.12	1.93	2.10	-6.45	14.27	24.70	26.87	-82.43
	L_{54}-L_{55}	27.78	-114.86	2.53	2.53	-0.40	-8.57	19.67	22.33	-5.04	-101.94
	L_{55}-L_{56}	95.37	-212.64	1.57	1.58	-1.45	-7.64	20.03	20.15	-18.49	-97.66
	L_{56}-L_{57}	27.78	-114.86	2.53	2.53	-0.40	-8.57	19.67	22.33	-5.04	-101.94
	L_{57}-L_{58}	-182.93	-415.63	1.28	1.26	-3.36	-15.96	16.39	16.09	-42.88	-203.85
	L_{58}-L_{59}	-370.36	-165.17	1.47	0.36	-10.27	-14.68	18.78	4.56	-131.26	-190.09
	L_{59}-L_{60}	-370.36	-82.43	2.52	4.17	-6.13	-8.11	7.69	54.88	-75.35	-105.67
	L_{60}-L_{61}	-304.19	-21.34	-6.15	1.75	-6.93	-6.32	-77.26	22.56	-88.56	-80.71
	L_{61}-L_{62}	-227.31	59.39	-3.33	2.44	-1.92	-2.35	-49.61	31.77	-44.61	-29.25
	L_{62}-L_{63}	-227.31	59.39	-3.33	2.44	-1.92	-2.35	-80.82	31.11	-24.52	-30.01
	L_{63}-L_{64}	-189.17	-227.31	-2.68	1.92	-3.02	-3.00	-63.74	24.52	-37.50	-38.69
	L_{64}-L_{65}	43.83	-117.87	0.19	0.20	2.48	-6.40	-2.50	2.60	32.07	-56.90
	L_{65}-L_{66}	-152.35	-177.82	-0.23	0.22	1.83	-4.46	-3.00	2.85	23.66	-67.65
	L_{66}-L_{67}	55.48	-320.94	-0.07	0.35	-1.62	-7.50	-0.94	4.58	-20.96	-97.63
	L_{67}-L_{68}	-189.90	-179.14	-0.07	0.35	-1.62	-7.50	-0.29	4.58	-20.96	-97.63
	L_{68}-L_{69}	-64.07	-371.05	0.00	1.08	-3.19	-13.08	-0.01	13.95	-41.33	-169.29
	L_{69}-L_{70}	-370.76	82.43	2.52	4.17	-6.13	-8.11	-102.60	54.50	-79.35	-105.67
	L_{70}-L_{71}	-304.19	-21.34	-6.15	1.75	-6.93	-6.32	-77.26	22.56	-88.56	-80.71
	L_{71}-L_{72}	-200.77	149.87	-4.29	1.90	-2.55	-3.39	-55.53	24.53	-32.99	-43.67
	L_{72}-L_{73}	-131.78	166.76	-3.05	2.71	-1.61	-2.82	-39.40	35.11	-20.78	-36.50
	L_{73}-L_{74}	361.88	-17.92	2.52	0.47	5.67	-3.24	39.05	6.33	75.74	-42.34
	L_{74}-L_{75}	61.50	-153.31	2.52	0.47	5.67	-3.24	39.05	6.33	75.74	-42.34
	L_{75}-L_{76}	-189.90	-179.14	-0.07	0.35	-1.62	-7.50	-0.29	4.58	-20.96	-97.63
	L_{76}-L_{77}	-189.90	5.62	1.75	1.87	3.13	-8.66	23.34	24.93	41.79	-115.72
	L_{77}-L_{78}	-189.90	-179.14	-0.07	0.35	-1.62	-7.50	-0.29	4.58	-20.96	-97.63
	L_{78}-L_{79}	-38.98	-56.51	1.34	0.63	-3.11	-8.02	17.84	8.38	-41.48	-107.10
	L_{79}-L_{80}	-66.62	-75.78	4.18	2.43	0.38	-0.32	-55.86	32.40	5.02	-4.97

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 2	L_0-L_1	44.17	99.07	0.41	0.43	2.20	3.75	5.49	5.68	29.42	50.13
	L_1-L_2	131.02	112.64	0.19	1.04	1.87	7.32	2.50	13.93	24.94	97.82
	L_2-L_3	75.50	79.80	0.75	1.93	1.42	7.46	7.08	18.22	18.33	99.65
	L_3-L_4	18.36	16.12	0.58	2.20	3.90	8.30	7.79	29.43	52.09	110.94
	L_4-L_5	68.34	212.03	2.52	0.61	4.16	1.49	75.28	32.10	55.58	62.42
	L_5-L_6	8.36	229.14	2.29	2.56	3.49	3.90	17.29	34.20	46.60	52.14
	L_6-L_7	61.83	171.52	4.30	3.66	2.59	3.72	27.38	35.02	34.59	49.63
	L_7-L_8	1.81	459.41	-1.19	7.21	0.07	0.12	15.86	96.27	0.91	1.64
	L_8-L_9	439.88	25.12	3.09	0.48	4.12	2.98	39.97	6.26	53.31	38.58
	L_9-L_{10}	204.03	117.02	0.76	1.91	1.95	4.36	19.58	12.33	26.46	60.65
	L_{10}-L_{11}	168.12	117.13	2.28	1.10	1.18	3.99	29.54	14.23	15.25	51.60
	L_{11}-L_{12}	23.72	212.27	2.44	0.91	0.13	5.29	18.67	11.80	1.78	80.63
	L_{12}-L_{13}	19.73	128.50	1.45	0.71	1.75	5.36	18.70	9.19	22.58	89.34
	L_{13}-L_{14}	175.78	425.21	1.13	0.97	3.73	11.59	14.59	12.54	48.26	149.94
	L_{14}-L_{15}	409.28	77.79	2.76	0.79	8.50	8.52	89.11	7.41	110.73	29.47
	L_{15}-L_{16}	209.39	318.68	0.32	0.34	3.69	8.73	4.11	4.45	47.70	113.00
	L_{16}-L_{17}	374.86	83.54	3.86	2.62	14.84	63.70	50.32	25.63	74.84	63.70
	L_{17}-L_{18}	171.07	19.86	2.13	2.09	3.67	2.42	27.56	26.60	47.51	31.34
	L_{18}-L_{19}	209.33	253.78	4.46	2.82	1.92	1.20	47.02	34.60	10.74	16.74
	L_{19}-L_{20}	84.78	1.02	4.25	2.44	0.20	0.22	55.04	31.53	2.63	2.79
	L_{20}-L_{21}	10.35	213.29	0.21	0.47	1.63	3.39	2.73	6.02	20.81	68.90
	L_{21}-L_{22}	34.56	247.73	0.25	0.51	1.63	3.73	3.13	6.43	23.10	73.20
	L_{22}-L_{23}	0.36	194.33	0.27	0.51	1.59	6.53	3.44	6.52	20.37	83.46
	L_{23}-L_{24}	2.07	313.17	0.21	0.51	1.46	6.53	3.09	6.52	2.04	83.46
	L_{24}-L_{25}	287.80	299.08	0.10	0.88	4.02	10.42	1.26	11.18	51.37	133.07
	L_{25}-L_{26}	191.47	191.87	0.10	0.88	2.67	10.42	1.42	11.18	51.37	133.07
	L_{26}-L_{27}	467.54	273.29	1.27	1.90	6.74	15.14	16.16	24.25	86.05	193.38
	L_{27}-L_{28}	310.55	49.89	1.55	2.85	6.28	9.93	19.77	36.41	80.21	126.87
	L_{28}-L_{29}	272.22	203.04	4.56	2.82	4.52	6.12	58.21	27.56	76.18	83.29
	L_{29}-L_{30}	261.97	188.33	1.37	2.81	5.07	5.04	17.54	35.84	64.79	64.42
	L_{30}-L_{31}	233.44	233.34	0.90	2.89	4.51	4.52	5.45	36.46	58.26	58.66
	L_{31}-L_{32}	131.48	389.15	2.94	2.97	3.43	4.92	37.50	37.91	43.80	62.86
	L_{32}-L_{33}	164.35	140.48	1.46	0.90	2.93	7.08	18.09	11.52	37.37	90.44
	L_{33}-L_{34}	367.47	994.41	0.25	0.31	4.70	10.16	4.83	2.44	16.26	128.13
	L_{34}-L_{35}	912.03	326.89	1.21	0.76	8.15	8.25	15.24	9.54	102.86	104.09
	L_{35}-L_{36}	289.13	4.66	1.21	0.92	2.92	4.16	29.54	11.49	29.54	52.92
	L_{36}-L_{37}	515.59	35.24	3.06	0.94	1.29	6.12	38.58	11.82	16.24	77.24
	L_{37}-L_{38}	319.18	188.12	2.52	0.94	1.29	6.12	38.58	11.82	16.24	77.24
	L_{38}-L_{39}	252.02	29.09	2.65	1.16	0.70	5.96	33.51	14.61	8.77	75.49
	L_{39}-L_{40}	230.55	46.37	1.56	1.77	0.40	8.57	19.67	22.33	5.04	101.94
	L_{40}-L_{41}	27.79	114.86	2.53	2.53	0.40	8.57	19.67	22.33	5.04	101.94
	L_{41}-L_{42}	41.53	186.96	0.04	1.36	1.08	15.68	0.49	17.12	13.58	197.56
	L_{42}-L_{43}	197.37	329.73	0.04	1.36	1.08	15.68	0.49	17.12	13.58	197.56
	L_{43}-L_{44}	108.55	10.73	0.79	2.14	5.70	10.16	10.01	27.06	71.96	128.13
	L_{44}-L_{45}	50.83	3.36	0.79	2.14	5.70	10.16	10.01	27.06	71.96	128.13
	L_{45}-L_{46}	65.47	170.47	2.04	2.70	2.99	5.45	25.73	34.10	37.80	68.74
	L_{46}-L_{47}	30.98	151.24	2.21	3.88	4.49	4.49	45.76	48.95	56.64	56.65
	L_{47}-L_{48}	27.13	313.17	2.21	3.88	4.49	4.49	45.76	48.95	56.64	56.65
	L_{48}-L_{49}	19.38	193.41	0.45	1.34	4.01	8.12	5.68	16.89	50.56	102.55
	L_{49}-L_{50}	27.78	114.86	2.53	2.53	0.40	8.57	19.67	22.33	5.04	101.94
	L_{50}-L_{51}	740.88	268.17	2.16	0.24	7.21	7.92	27.55	3.04	92.09	101.23
	L_{51}-L_{52}	140.43	76.07	0.68	1.52	1.95	4.23	8.68	19.36	24.88	79.58
	L_{52}-L_{53}	27.78	114.86	2.53	2.53	0.40	8.57	19.67	22.33	5.04	101.94
	L_{53}-L_{54}	147.94	145.21	1.12	1.93	2.10	6.45	14.27	24.70	26.87	82.43
	L_{54}-L_{55}	27.78	114.86	2.53	2.53	0.40	8.57	19.67	22.33	5.04	101.94
	L_{55}-L_{56}	95.37	212.64	1.57	1.58	1.45	7.64	20.03	20.15	18.49	97.66
	L_{56}-L_{57}	27.78	114.86	2.53	2.53	0.40	8.57	19.67	22.33	5.04	101.94
	L_{57}-L_{58}	182.93	415.63	1.28	1.26	3.36	15.96	16.39	16.09	42.88	203.85
	L_{58}-L_{59}	370.36	165.17	1.47	0.36	10.27	14.68	18.78	4.56	131.26	190.09
	L_{59}-L_{60}	370.36	82.43	2.52	4.17	6.13	8.11	7.69	54.88	75.35	105.67
	L_{60}-L_{61}	304.19	21.34	6.15	1.75	6.93	6.32	77.26	22.56	88.56	80.71
	L_{61}-L_{62}	227.31	59.39	3.33	2.44	1.92	2.35	49.61	31.77	44.61	29.25
	L_{62}-L_{63}	227.31	59.39	3.33	2.44	1.92	2.35	80.82	31.11	24.52	30.01
	L_{63}-L_{64}	189.17	227.31	2.68	1.92	3.02	3.00	63.74	24.52	37.50	38.69
	L_{64}-L_{65}	43.83	117.87	0.19	0.20	2.48	6.40	2.50	2.60	32.07	56.90
	L_{65}-L_{66}	152.35	177.82	0.23	0.22	1.83	4.46	3.00	2.85	23.66	67.65
	L_{66}-L_{67}	55.48	320.94	0.07	0.35	1.62	7.50	0.94	4.58	20.96	97.63
	L_{67}-L_{68}	189.90	179.14	0.07	0.35	1.62	7.50	0.29	4.58	20.96	97.63
	L_{68}-L_{69}	64.07	371.05	0.00	1.08	3.19	13.08	0.01	13.95	41.33	169.29
	L_{69}-L_{70}	370.76	82.43	2.52	4.17	6.13	8.11	102.60	54.50	79.35	105.67
	L_{70}-L_{71}	304.19	21.34	6.15	1.75	6.93	6.32	77.26	22.56	88.56	80.71
	L_{71}-L_{72}	200.77	149.87	4.29	1.90	2.55	3.39	55.53	24.53	32.99	43.67
	L_{72}-L_{73}	131.78	166.76	3.05	2.71	1.61	2.82	39.40	35.11	20.78	36.50
	L_{73}-L_{74}	361.88	17.92	2.52	0.47	5.67	3.24	39.05	6.33	75.74	42.34
	L_{74}-L_{75}	61.50	153.31	2.52	0.47	5.67	3.24	39.05	6.33	75.74	42.34
	L_{75}-L_{76}	189.90	179.14	0.07	0.35	1.62	7.50	0.29	4.58	20.96	97.63
	L_{76}-L_{77}	189.90	5.62	1.75	1.87	3.13	8.66	23.34	24.93	41.79	115.72
	L_{77}-L_{78}	189.90	179.14	0.07	0.35	1.62	7.50	0.29	4.58	20.96	97.63
	L_{78}-L_{79}	38.98	56.51	1.34	0.63	3.11	8.02	17.84	8.38	41.48	107.10
	L_{79}-L_{80}	66.62	75.78	4.18	2.43	0.38	0.32	55.86	32.40	5.02	4.97

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 3	L_0-L_1	44.17	99.07	0.41	0.43	2.20	3.75	5.49	5.68	29.42	50.13
	L_1-L_2	131.02	112.64	0.19	1.04	1.87	7.32	2.50	13.93	24.94	97.82
	L_2-L_3	75.50	79.80	0.75	1.93	1.42	7.46	7.08	18.22	18.33	99.65
	L_3-L_4	18.36	16.12	0.58	2.20	3.90	8.30	7.79	29.43	52.09	110.94
	L_4-L_5	68.34	212.03	2.52	0.61	4.16	1.49	75.28	32.10	55.58	62.42
	L_5-L_6	8.36	229.14	2.29	2.56	3.49	3.90	17.29	34.20	46.60	52.14
	L_6-L_7	61.83	171.52	4.30	3.66	2.59	3.72	27.38	35.02	34.59	49.63
	L_7-L_8	1.81	459.41	-1.19	7.21	0.07	0.12	15.86	96.27	0.91	1.64
	L_8-L_9	439.88	25.12	3.09	0.48	4.12	2.98	39.97	6.26	53.31	38.58
	L_9-L_{10}	204.03	117.02	0.76	1.91	1.95	4.36	19.58	12.33	26.46	60.65
	L_{10}-L_{11}	168.12	117.13	2.28	1.10	1.18	3.99	29.54	14.23	15.25	51.60
	L_{11}-L_{12}	23.72	212.27	2.44	0.91	0.13	5.29	18.67	11.80	1.78	80.63
	L_{12}-L_{13}	19.73	128.50	1.45	0.71	1.75	5.36	18.70	9.19	22.58	89.34
	L_{13}-L_{14}	175.78	425.21	1.13	0.97	3.73	11.59	14.59	12.54	48.26	149.94
	L_{14}-L_{15}	409.28	77.79	2.76	0.79	8.50	8.52	89.11	7.41	110.73	29.47
	L_{15}-L_{16}	209.39	318.68	0.32	0.34	3.69	8.73	4.11	4.45	47.70	113.00
	L_{16}-L_{17}	374.86	83.54	3.86	2.62	14.84	63.70	50.32	25.63	74.84	63.70
	L_{17}-L_{18}	171.07	19.86	2.13	2.09	3.67	2.42	27.56	26.60	47.51	31.34
	L_{18}-L_{19}	209.33	253.78	4.46	2.82	1.92	1.20	47.02	34.60	10.74	16.74
	L_{19}-L_{20}	84.78	1.02	4.25	2.44	0.20	0.22	55.04	31.53	2.63	2.79
	L_{20}-L_{21}	10.35	213.29	0.21	0.47	1.63	3.39	2.73	6.02	20.81	68.90
	L_{21}-L_{22}	34.56	247.73	0.25	0.51	1.63	3.73	3.13	6.43	23.10	73.20
	L_{22}-L_{23}	0.36	194.33	0.27	0.51	1.59	6.53	3.44	6.52	20.37	83.46
	L_{23}-L_{24}	2.07	313.17	0.21	0.51	1.46	6.53	3.09	6.52	2.04	83.46
	L_{24}-L_{25}	287.80	299.08	0.10	0.88	4.02	10.42	1.26	11.18	51.37	133.07
	L_{25}-L_{26}	191.47	191.87	0.10	0.88	2.67	10.42	1.42	11.18	51.37	133.07
	L_{26}-L_{27}	467.54	273.29	1.27	1.90	6

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
Condition: As-Built

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

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

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

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

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-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	-56.29	86.22	2.11	2.57	0.50	-0.40	-28.23	34.32	3.94	-5.30
	U_1–L_2	-14.44	23.27	-2.20	2.09	0.39	-0.39	-29.40	27.87	5.24	-5.24
	U_1–L_1	-5.53	5.55	-0.84	0.87	0.47	-0.53	-23.39	27.67	5.25	-5.11
	U_2–L_3	36.84	-39.22	-1.28	1.40	1.07	-1.04	-17.13	18.73	14.25	-13.89
	U_2–L_2	49.77	-49.19	-2.09	1.80	1.48	-1.48	-7.82	5.51	21.12	-19.76
	U_3–L_3	57.71	-69.80	-0.11	0.04	1.84	-2.02	-1.40	0.56	24.58	-26.99
	U_3–L_4	63.32	-67.29	-0.02	0.00	1.62	-1.78	-0.24	0.10	28.13	-32.49
	U_4–L_4	106.28	-118.16	-0.07	0.06	2.80	-2.88	-0.96	0.86	37.35	-38.53
	U_4–L_5	-10.96	6.72	-2.24	2.69	3.25	-3.85	-29.91	35.92	43.41	-51.47
	U_5–L_5	-144.91	167.70	-2.18	-2.41	0.19	-0.18	-225.10	258.55	-2.32	-2.37
	U_5–L_6	-102.02	95.66	-1.94	2.03	-0.03	-0.19	-25.15	26.30	-0.40	-2.46
	U_6–L_6	-26.32	-111.13	-2.06	-2.52	2.26	-2.39	-43.63	42.98	2.31	-2.28
	U_6–L_7	-96.42	93.90	-1.93	-1.94	0.33	-0.29	-24.86	25.14	4.26	-3.80
	U_7–L_7	-90.91	75.94	-2.02	2.09	0.50	-0.53	-26.29	27.03	7.14	-6.84
	U_7–L_8	-33.59	37.06	-1.80	1.85	0.50	-0.51	-27.58	28.25	7.50	-7.18
	U_8–L_8	8.32	-15.87	-0.94	0.93	1.79	-1.87	-12.20	12.03	23.11	-24.17
	U_8–L_9	47.73	-50.39	-0.59	0.64	1.94	-1.98	-7.37	7.12	25.06	-25.79
	U_9–L_9	61.55	-72.81	-0.26	0.27	1.95	-2.00	-3.39	3.43	25.20	-25.93
	U_9–L_{10}	131.13	-138.23	-0.36	0.37	3.14	-3.27	-4.71	4.51	44.57	-42.33
	U_{10}–L_{10}	157.87	-153.86	-0.37	0.33	3.66	-3.58	-4.81	4.32	47.34	-46.30
	U_{10}–L_{11}	-131.38	-213.66	-0.16	0.27	2.79	-3.43	-2.68	3.01	36.03	-44.37
	U_{11}–L_{11}	-147.13	191.05	-2.61	-3.21	0.27	-0.28	-4.34	5.26	4.80	0.00
	U_{11}–L_{12}	-122.87	130.77	-2.76	2.81	0.34	-0.35	-25.24	35.85	4.29	-4.41
	U_{12}–L_{12}	-52.13	53.19	3.06	4.02	0.42	-0.43	-40.71	51.34	5.35	-5.29
	U_{12}–L_{13}	-62.46	69.03	-1.63	1.67	0.27	-0.27	-20.77	21.37	3.41	-3.48
	U_{13}–L_{13}	-37.86	43.29	-1.12	1.14	0.26	-0.26	-12.99	13.27	4.48	-4.27
	U_{13}–L_{14}	-9.11	15.69	-1.72	1.81	0.88	-0.83	-22.03	23.10	11.22	-10.62
	U_{14}–L_{14}	14.84	-14.93	-1.40	1.43	1.02	-1.07	-17.91	18.23	12.99	-13.71
	U_{14}–L_{15}	39.69	-45.43	-0.63	0.64	1.11	-1.22	-8.01	8.65	14.19	-15.63
	U_{15}–L_{15}	88.81	-97.92	-0.64	0.51	2.43	-2.43	-8.14	6.45	31.06	-31.02
	U_{15}–L_{16}	133.08	-133.02	-0.34	0.33	3.64	-3.49	-4.34	4.23	46.76	-44.98
	U_{16}–L_{16}	140.09	-147.06	0.00	0.05	2.83	-2.91	-0.05	0.61	36.12	-37.19
	U_{16}–L_{17}	148.96	-153.44	0.06	0.11	2.78	-2.88	-0.79	1.43	35.45	-36.78
	U_{17}–L_{17}	141.87	-139.95	-0.22	-0.22	2.66	-2.74	-2.22	2.22	34.00	-35.24
	U_{17}–L_{18}	185.41	-182.32	-0.30	0.30	3.30	-3.17	-3.85	3.75	42.12	-40.48
	U_{18}–L_{18}	72.60	-73.10	-0.73	0.73	1.47	-1.42	-17.43	17.47	44.99	0.00
	U_{18}–L_{19}	-128.28	129.98	-2.63	2.75	0.31	-0.27	-37.02	34.77	3.86	-3.42
	U_{19}–L_{19}	-81.78	83.38	-2.56	2.58	0.32	-0.31	-37.77	36.13	3.84	-3.63
	U_{19}–L_{20}	-125.94	122.64	-3.29	3.23	0.31	-0.29	-41.66	40.83	3.93	-3.70
	U_{20}–L_{20}	-109.69	106.91	-3.06	3.23	0.41	-0.40	-38.62	40.77	5.18	-5.09
	U_{20}–L_{21}	-83.03	76.39	-2.10	2.15	0.43	-0.43	-26.45	27.65	5.33	-5.33
	U_{21}–L_{21}	-43.25	43.74	-1.89	1.91	0.51	-0.44	-23.85	24.14	6.38	-5.49
	U_{21}–L_{22}	-29.76	34.99	-1.91	1.93	0.51	-0.44	-23.38	24.19	6.37	-5.17
	U_{22}–L_{22}	-1.28	1.60	-1.07	1.14	0.96	-1.01	-13.55	14.41	12.17	-12.73
	U_{22}–L_{23}	38.81	-37.74	-0.52	0.52	0.46	-1.81	-12.84	23.75	5.24	-24.43
	U_{23}–L_{23}	46.57	-51.18	-0.52	0.46	1.81	-1.87	-6.56	5.79	22.79	-23.56
	U_{23}–L_{24}	62.68	-61.36	-0.41	0.40	2.36	-2.36	-5.20	5.02	29.82	-29.74
	U_{24}–L_{24}	104.56	-101.54	-0.33	0.33	3.55	-3.55	-4.38	4.24	44.72	-44.72
	U_{24}–L_{25}	108.60	-105.79	-0.44	0.43	3.70	-3.74	-5.54	5.38	46.69	-47.23
	U_{25}–L_{25}	102.26	-99.72	-0.43	0.43	3.76	-3.76	-5.42	5.38	46.76	-47.03
	U_{25}–L_{26}	114.56	-114.55	-0.21	0.18	3.68	-3.49	-2.70	2.25	46.44	-44.06
	U_{26}–L_{26}	-13.74	5.73	-0.73	0.73	0.73	-0.73	-12.41	12.41	0.00	0.00
	U_{26}–L_{27}	-121.12	118.67	-2.50	2.41	0.33	-0.31	-31.97	30.77	4.23	-3.96
	U_{27}–L_{27}	-92.37	86.40	-2.48	2.41	0.27	-0.37	-31.66	30.79	3.40	-4.68
	U_{27}–L_{28}	-53.79	51.03	-1.73	1.73	0.27	-0.27	-31.66	30.79	3.40	-4.68
	U_{28}–L_{28}	-96.77	103.11	-2.58	2.59	0.04	-0.13	-32.50	33.09	0.46	-1.64
	U_{28}–L_{29}	-51.56	57.11	-2.13	2.09	0.04	-0.13	-32.50	33.09	0.46	-2.49
	U_{29}–L_{29}	-43.45	70.59	-2.38	2.39	0.38	-0.33	-30.45	30.55	4.84	-4.17
	U_{29}–L_{30}	-32.66	38.67	-1.28	1.43	0.49	-0.50	-16.33	18.24	6.20	-6.44
	U_{30}–L_{30}	-29.76	34.99	-1.91	1.93	0.51	-0.44	-23.38	24.19	6.37	-5.17
	U_{30}–L_{31}	4.46	-6.40	-0.98	0.94	1.51	-1.62	-12.57	11.97	19.27	-20.72
	U_{31}–L_{31}	25.29	-29.03	-0.98	0.94	1.51	-1.62	-12.57	11.97	19.27	-20.72
	U_{31}–L_{32}	47.22	-50.55	-0.33	0.33	1.87	-1.95	-4.17	4.20	23.94	0.00
	U_{32}–L_{32}	52.77	-54.32	-0.22	0.22	3.65	-3.40	-4.02	4.02	35.55	-46.37
	U_{33}–L_{33}	104.56	-112.00	-0.47	0.44	3.62	-3.61	-5.97	5.61	46.23	-46.08
	U_{34}–L_{34}	108.12	-102.78	-0.24	0.38	2.79	-3.62	-3.00	4.91	35.70	-48.24
	U_{35}–L_{35}	124.18	-116.53	-0.24	0.24	3.18	-3.18	-3.00	3.00	40.77	-40.77
	U_{36}–L_{36}	109.22	-116.95	-2.75	2.74	0.25	-0.23	-36.52	36.41	3.20	-3.03
	U_{37}–L_{37}	84.15	-88.15	-2.69	2.69	0.25	-0.23	-36.29	36.29	3.20	-3.03
	U_{38}–L_{38}	48.65	-58.79	-1.83	1.82	0.21	-0.21	-23.61	23.48	2.65	-2.69
	U_{39}–L_{39}	38.15	-42.89	-1.76	1.76	0.21	-0.21	-22.77	22.77	2.65	-2.69
	U_{40}–L_{40}	-5.41	11.55	-1.83	1.90	0.73	-0.70	-23.63	24.58	9.48	-9.06
	U_{41}–L_{41}	27.86	-30.67	-1.13	1.15	1.16	-1.25	-14.58	14.89	14.96	-16.22
	U_{42}–L_{42}	76.29	-82.89	-1.76	1.72	0.61	-0.61	-14.58	14.89	14.96	-16.22
	U_{43}–L_{43}	85.70	-83.03	-0.45	0.37	2.09	-2.11	-5.67	4.74	27.05	-28.12
	U_{44}–L_{44}	84.15	-90.07	-0.41	0.41	2.09	-2.11	-5.67	4.74	27.05	-28.12
	U_{45}–L_{45}	76.07	-81.37	0.04	0.14	2.19	-2.45	0.57	1.85	28.30	-31.74
	U_{46}–L_{46}	139.46	-154.10	-0.10	0.09	2.94	-3.22	0.57	1.85	28.30	-31.74
	U_{47}–L_{47}	99.11	-131.59	-0.24	0.07	2.33	-2.91	-3.05	0.87	30.20	-37.66
	U_{48}–L_{48}	95.00	-87.91	0.04	0.14	2.19	-2.45	0.57	1.85	28.30	-31.74
	U_{49}–L_{49}	139.46	-154.10	-0.10	0.09	2.94	-3.22	-1.27	1.14	38.01	-41.61
	U_{50}–L_{50}	52.77	-74.32	-3.22	3.65	2.66	-3.40	-43.02	42.72	35.55	-46.37
	U_{51}–L_{51}	-42.87	69.54	-2.15	2.20	0.16	-0.16	-28.76	29.42	2.12	-2.07
	U_{52}–L_{52}	-41.65	35.38	-1.62	1.87	0.09	-0.15	-21.60	25.04	1.18	-2.03
	U_{53}–L_{53}	-36.85	40.05	-1.80	1.89	0.17	-0.12	-24.03	25.28	2.27	-1.83
	U_{54}–L_{54}	-39.84	39.91	-1.54	1.49	0.40	-0.36	-20.55	19.95	5.28	-4.81
	U_{55}–L_{55}	-38.87	40.30	-1.37	1.42	1.30	-1.42	-18.29	19.00	17.42	-18.92
	U_{56}–L_{56}	-13.42	14.14	-0.77	0.72	1.83	-2.15	-10.27	9.57	24.42	-28.72
	U_{57}–L_{57}	5.87	-8.62	-0.59	0.53	2.62	-2.36	-7.91	7.03	34.67	-31.48
	U_{58}–L_{58}	20.15	-40.81	-0.12	0.40	1.78	-2.82	-1.64	5.40	23.78	-37.66

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_u (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(U)}$	Equivalent Mom. Factor $C_{b(L)}$
Structure 1	U_0–L_1	-109.87	156.70	68.05	105.19	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_1–L_2	-67.00	66.48	-11.96	23.45	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_1–L_1	-22.73	28.75	16.47	-16.48	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_2–L_3	25.62	-21.44	66.42	-63.85	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_2–L_2	54.55	-50.49	-0.75	54.14	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_3–L_3	72.19	-90.01	106.97	-125.82	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5	958.8
	U_3–L_4	82.61	-85.41	126.41	-139.71	23.4	20.80	20.67	34.66	4	1076.0	1.67	1144	1.5	1029.6
	U_4–L_4	136.92	-152.50	186.73	-203.75	18.5	18.45	18.36	30.78	4	1020.9	1.67	1016	1.5	913.3
	U_4–L_5	-53.13	55.43	42.18	-58.69	107.1	107.13	107.11	162.71	26	2056.9	1.52	5369	1.5	5302.3
	U_5–L_5	-225.10	258.55	-135.23	214.93	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1638.0
	U_5–L_6	-165.32	158.55	-133.14	121.16	35.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
	U_6–L_6	-179.05	245.39	-160.15	282.68	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_6–L_7	-119.81	117.12	21.1	21.09	21.09	39.46	10	1137.6	1.68	1170	1.5	1044.0	0.981	0.981
	U_7–L_7	-112.36	133.85	-69.90	89.82	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
	U_7–L_8	-60.01	54.09	-29.94	-33.92	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_8–L_8	-5.05	-5.99	40.85	-52.06	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_8–L_9	48.01	54.03	-68.98	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.982
	U_9–L_9	75.60	-90.19	112.78	-128.36	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8
	U_9–L_{10}	166.62	-173.51	225.79	-234.19	33.1	33.05	33.05	53.74	14	1157.0	1.65	1766	1.5	1737.0
	U_{10}–L_{10}	196.98	-194.40	266.78	-260.27	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{10}–L_{11}	168.06	-273.19	217.61	-335.43	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{11}–L_{11}	-254.59	302.53	-186.05	252.61	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{11}–L_{12}	-205.54	216.61	-154.15	164.27	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1
	U_{12}–L_{12}	-101.71	101.71	-76.28	76.28	38.63	38.63	38.63	59.23	10	1422.1	1.53	2183	1.5	2101.9
	U_{12}–L_{13}	-108.20	117.33	-76.76	85.22	21.5	21.54	21.54	33.27	3	987.9	1.54	1098	1.5	1066.2
	U_{13}–L_{13}	-72.84	77.19	-51.42	56.42	21.5	21.54	21.54	33.27	3	987.9	1.54	1098	1.5	1066.2
	U_{13}–L_{14}	-22.03	23.10	-11.22	-10.62	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{14}–L_{14}	-17.91	18.23	12.99	-13.71	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{14}–L_{15}	-8.01	8.65	14.19	-15.63	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{15}–L_{15}	-8.14	6.45	31.06	-31.02	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{15}–L_{16}	-4.34	4.23	46.76	-44.98	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{16}–L_{16}	-0.05	0.61	36.12	-37.19	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{16}–L_{17}	-0.79	1.43	35.45	-36.78	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{17}–L_{17}	-2.22	2.22	34.00	-35.24	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{17}–L_{18}	-3.85	3.75	42.12	-40.48	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{18}–L_{18}	-17.43	17.47	44.99	0.00	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{18}–L_{19}	-37.02	34.77	3.86	-3.42	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{19}–L_{19}	-37.77	36.13	3.84	-3.63	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{20}–L_{20}	-41.66	40.83	3.93	-3.70	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{20}–L_{21}	-38.62	40.77	5.18	-5.09	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{21}–L_{21}	-26.45	27.65	5.33	-5.33	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{21}–L_{22}	-23.85	24.14	6.38	-5.49	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{22}–L_{22}	-23.38	24.19	6.37	-5.17	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{22}–L_{23}	-13.55	14.41	12.17	-12.73	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{23}–L_{23}	-24.24	31.19	2.62	-24.43	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{23}–L_{24}	-6.56	5.79	22.79	-23.56	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{24}–L_{24}	-5.20	5.02	29.82	-29.74	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{24}–L_{25}	-4.38	4.24	44.72	-44.72	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{25}–L_{25}	-5.54	5.38	46.69	-47.23	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{25}–L_{26}	-5.42	5.38	46.76	-47.03	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{26}–L_{26}	-2.70	2.25	46.44	-44.06	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{26}–L_{27}	-13.74	5.73	12.41	-12.41	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{27}–L_{27}	-31.97	30.77	4.23	-3.96	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{27}–L_{28}	-31.66	30.79	3.40	-4.68	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{28}–L_{28}	-32.50	33.09	0.46	-1.64	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{28}–L_{29}	-32.50	33.09	0.46	-2.49	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{29}–L_{29}	-30.45	30.55	4.84	-4.17	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{29}–L_{30}	-16.33	18.24	6.20	-6.44	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{30}–L_{30}	-23.38	24.19	6.37	-5.17	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{31}–L_{31}	-12.57	11.97	19.27	-20.72	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{31}–L_{32}	25.29	-21.94	23.94	-22.04	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{32}–L_{32}	-4.17	4.20	23.94	0.00	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{32}–L_{33}	-4.02	4.02	35.55	-46.37	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{33}–L_{33}	-5.97	5.61	46.23	-46.08	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{34}–L_{34}	-3.00	4.91	35.70	-48.24	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{35}–L_{35}	-3.00	3.00	40.77	-40.77	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{36}–L_{36}	-36.52	36.41	3.20	-3.03	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{37}–L_{37}	-36.29	36.29	3.20	-3.03	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{38}–L_{38}	-23.61	23.48	2.65	-2.69	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{39}–L_{39}	-22.77	22.77	2.65	-2.69	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{40}–L_{40}	-23.63	24.58	9.48	-9.06	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{41}–L_{41}	-14.58	14.89	14.96	-16.22	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{42}–L_{42}	-14.58	14.89	14.96	-16.22	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{43}–L_{43}	-5.67	4.74	27.05	-28.12	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{44}–L_{44}	-5.67	4.74	27.05	-28.12	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{45}–L_{45}	0.57	1.85	28.30	-31.74	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{46}–L_{46}	-1.27	1.14	38.01	-41.61	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{47}–L_{47}	-3.05	0.87	30.20	-37.66	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_{48}–L_{48}	0.57	1.85	28.30	-31.74	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5

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: 2F1
Condition: As-Built

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

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

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

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

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Min) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)	Max. Pos. Mom. Start k-in	Max. Pos. Mom. End k-in	S_{req} (in^3)	S_x (in^3)	Z_x (in^3)	I (in^4)	$I_{x/n}$ (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term = F_y/S_{req}	M_r (k-in)	Equivalent Mom. Factor a	$C_{m/n}$	C_{min}	Pass
Structure 1	U_0-L_1	-23.44	-7.53	0.45	0.48	0.11	-0.09					-38.20	18.12	28.53	8.13	15.6	19.63	15.58	25.96	5	804.0	1.66	857	1.5	773.7	-0.474	0.41	0.41	Yes
	U_1-L_1	-3.41	-8.42	-0.62	0.27	-0.30	-0.15					-8.27	3.55	-4.05	-1.99	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	0.416	0.77	0.77	Yes
	U_1-L_2	-7.93	-13.37	0.18	0.05	0.01	-0.56					-19.76	8.48	-10.25	-2.95	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.388	0.44	0.44	Yes
	L_1-U_2	7.93	-13.37	0.18	0.05	0.01	-0.56					2.39	0.60	0.13	-7.41	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.388	0.44	0.44	Yes
	L_1-U_1	-14.61	18.52	-0.46	0.32	-0.11	-0.42					-6.13	4.33	-10.46	-4.29	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	0.308	0.24	0.24	Yes
	L_2-U_2	-37.44	76.90	1.36	1.28	-0.23	-0.20					-18.13	17.03	-10.13	-2.30	0.00	0.00	0.00	0.00	1	1183.7	1.51	1753	1.5	1737.0	-0.177	0.53	0.53	Yes
	L_2-U_3	-21.19	29.64	1.36	1.28	-0.23	-0.20					-37.97	23.06	-31.35	-8.35	0.00	0.00	0.00	0.00	1	1183.7	1.51	1753	1.5	1737.0	-0.968	0.21	0.21	Yes
	U_3-L_3	-8.75	101.99	-1.04	1.97	0.00	-0.02					-13.92	26.32	0.05	-0.28	0.00	0.00	0.00	0.00	1	1183.7	1.51	1753	1.5	1737.0	-0.177	0.53	0.53	Yes
	L_3-U_3	-5.11	118.70	-0.62	1.36	0.17	-0.12					-8.06	17.62	-2.23	-1.49	0.00	0.00	0.00	0.00	1	1177.22	-3.75	152.38	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2214.7	-0.949	0.22	0.22	Yes
	U_3-L_4	-77.69	73.54	-1.18	1.10	0.17	-0.07					-15.32	14.34	2.19	-0.92	0.00	0.00	0.00	0.00	1	1177.22	-120.91	114.23	-98.15	54.40	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2214.7	-0.949	0.22	0.22	Yes
	L_3-U_4	-43.88	73.22	-1.07	0.75	-0.08	-0.25					-13.83	9.65	-10.98	-3.26	0.00	0.00	0.00	0.00	1	1177.22	-101.03	107.73	-84.32	90.94	39.8	39.77	39.56	65.61	21	1610.3	1.65	2165	1.5	1968.6	-0.938	0.22	0.22	Yes
	U_4-L_4	-29.22	73.22	-1.15	0.75	-0.08	-0.40					-14.85	9.75	-7.94	-1.73	0.00	0.00	0.00	0.00	1	1177.22	-110.58	107.29	-101.51	31.83	42.74	42.74	42.74	65.30	8	1389.6	1.53	2135	1.5	2115.6	-0.464	0.41	0.41	Yes
	L_4-U_4	-65.20	48.77	-1.05	1.05	-0.07	-0.38					-13.61	13.59	-0.84	-4.96	0.00	0.00	0.00	0.00	1	1102.48	81.01	-85.86	56.96	20.80	20.80	20.67	34.66	1	1079.0	1.67	1444	1.5	1029.6	-0.791	0.28	0.28	Yes
	L_4-U_5	-24.90	8.63	-0.50	0.37	0.12	-0.43					-6.42	4.76	1.55	-0.58	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.427	0.43	0.43	Yes
	U_4-L_5	-0.81	22.03	-0.15	0.11	0.04	-0.13					-1.93	1.36	-25.39	5.48	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.388	0.44	0.44	Yes
	L_5-U_5	-10.30	9.99	-0.80	0.71	0.30	-0.47					-5.20	5.19	2.80	-0.34	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.539	0.38	0.38	Yes
	U_5-L_6	-37.01	20.01	-1.17	0.78	-0.15	-0.60					-15.11	12.07	0.78	-3.40	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.427	0.43	0.43	Yes
	L_5-U_6	-101.94	74.52	-1.99	1.82	0.24	-0.24					-25.72	23.53	3.09	-3.07	0.00	0.00	0.00	0.00	1	1165.95	127.20	-128.50	92.62	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.797	0.25	0.29	Yes
	U_6-L_6	-115.87	80.00	-2.40	1.85	-0.24	-0.24					-31.76	27.97	-2.57	-3.00	0.00	0.00	0.00	0.00	1	1165.95	-191.53	139.03	-147.00	100.08	38.4	38.83	38.83	59.23	3	1294.6	1.53	1955	1.5	1922.1	-0.792	0.32	0.32	Yes
	L_6-U_7	-75.88	78.94	-2.09	1.80	0.05	-0.12					-27.09	23.22	0.63	-1.94	0.00	0.00	0.00	0.00	1	1133.94	-132.82	87.80	100.82	88.83	38.83	38.83	59.23	3	1294.6	1.53	1955	1.5	1922.1	-0.792	0.20	0.20	Yes
	U_7-L_7	-109.41	98.91	-1.96	1.82	0.22	-0.22					-25.04	23.27	2.75	-2.86	0.00	0.00	0.00	0.00	1	1174.79	158.82	-138.66	124.86	42.7	42.74	42.74	65.30	8	1389.6	1.53	2135	1.5	2115.6	-0.909	0.24	0.24	Yes
	L_7-U_8	-89.79	79.79	-1.72	1.51	0.22	-0.22					-23.76	22.19	3.49	-3.09	0.00	0.00	0.00	0.00	1	1160.64	160.64	-139.35	125.22	42.7	42.74	42.74	65.30	8	1389.6	1.53	2135	1.5	2115.6	-0.909	0.24	0.24	Yes
	U_8-L_8	-90.87	71.82	-1.91	1.67	0.31	-0.27					-24.38	21.30	4.01	-3.45	0.00	0.00	0.00	0.00	1	1149.83	131.05	112.92	88.88	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.808	0.28	0.28	Yes
	L_8-U_9	-73.47	73.54	-1.83	1.51	0.31	-0.27					-13.01	12.92	3.85	-3.19	0.00	0.00	0.00	0.00	1	1133.94	-111.72	114.23	-98.15	54.40	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2214.7	-0.949	0.22	0.22	Yes
	U_9-L_9	-20.35	3.86	-0.88	0.80	0.18	-0.40					-11.22	10.20	2.33	-5.10	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.635	0.35	0.35	Yes
	L_9-U_{10}	-1.38	-11.28	-0.77	0.66	0.14	-0.58					-8.77	7.78	0.38	-7.58	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.388	0.44	0.44	Yes
	U_{10}-L_{10}	6.85	-23.87	-0.39	0.26	0.47	-0.72					-4.92	3.28	5.98	-9.22	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.388	0.44	0.44	Yes
	L_{10}-U_{11}	-44.41	35.31	-0.95	0.75	0.29	-0.61					-12.09	9.98	3.65	-2.94	0.00	0.00	0.00	0.00	1	1133.94	-73.45	58.35	-52.99	35.60	20.5	20.51	20.40	33.89	8	1017.2	1.65	1518	1.5	1510.2	-0.795	0.26	0.28	Yes
	U_{11}-L_{11}	-96.57	69.89	-1.74	1.56	0.31	-0.27					-22.12	19.56	-0.37	-7.07	0.00	0.00	0.00	0.00	1	1133.94	-154.28	115.16	-126.02	81.41	38.5	38.83	38.83	59.23	3	1294.6	1.53	1955	1.5	1922.1	-0.792	0.32	0.32	Yes
	L_{11}-U_{12}	-85.40	67.30	-1.74	1.27	-0.04	-0.31					-22.21	16.20	-0.96	-3.94	0.00	0.00	0.00	0.00	1	1139.89	158.05	138.55	-111.79	82.38	42.7	42.74	42.74	65.30	8	1389.6	1.53	2135	1.5	2115.6	-0.775	0.29	0.29	Yes
	U_{12}-L_{12}	-39.19	32.50	-1.84	1.32	-0.03	-0.31					-22.01	16.20	-0.96	-2.62	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.388	0.44	0.44	Yes
	L_{12}-U_{13}	-109.84	116.34	-2.17	1.90	-0.04	-0.53					-27.71	24.24	-0.47	-0.32	0.00	0.00	0.00	0.00	1	1173.62	182.75	-138.21	150.83	46.7	46.71	46.71	73.10	10	1711.0	1.53	2357	1.5	2312.1	-0.950	0.22	0.22	Yes
	U_{13}-L_{13}	-141.98	130.92	-2.63	2.29	0.35	-0.11					-33.08	29.22	4.23	-0.45	0.00	0.00	0.00	0.00	1	1173.62	229.22	251.79	-178.60	166.95	42.7	42.74	42.74	65.30	8	1389.6	1.53	2135	1.5	2115.6	-0.911	0.24	0.24	Yes
	L_{13}-U_{14}	-82.19	134.41	-1.83	2.29	0.35	-0.11					-19.43	22.51	3.41	-2.23	0.00	0.00	0.00	0.00	1	1171.17	311.61	251.79	-178.60	166.95	42.7	42.74	42.74	65.30	8	1389.6	1.53	2135	1.5	2115.6	-0.911	0.24	0.24	Yes
	U_{14}-L_{14}	-11.96	79.20	-1.74	1.78	0.27	-0.22					-19.43	22.51	3.41	-2.23	0.00	0.00	0.00	0.00	1	1160.64	-40.81	132.22	-111.12	99.41	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.309	0.48	0.48	Yes
	L_{14}-U_{15}	-77.27	79.20	-2.04	1.78	0.27	-0.22					-27.22	23.46	3.41	-2.21	0.00	0.00	0.00	0.00	1	1160.64	-115.95	132.22	-111.12	99.41	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.309	0.48	0.48	Yes
	U_{15}-L_{15}	-66.19	89.97	-1.83	1.91	0.14	-0.18					-23.09	24.05	1.79	-4.23	0.00	0.00	0.00	0.00	1	1160.64	-116.07	148.23	-83.72	114.05	38.8	38.83	38.83	59.23	3	1294.6	1.53	1955	1.5	1922.1	-0.783	0.29	0.29	Yes
	L_{15}-U_{16}	-56.07	72.69	-1.84	1.47	0.09	-0.34					-23.17	18.51	0.98	-2.66	0.00	0.00	0.00	0.00	1	1160.64	-115.27	120.39	-83.51	92.68	38.5	38.83	38.83	59.23	3	1294.6	1.53	1955	1.5	1922.1	-0.792	0.29	0.29	Yes
	U_{16}-L_{16}	-58.07	72.69	-1.84	1.47	0.09	-0.34					-23.17	18.51	0.98	-2.65	0.00	0.00	0.00	0.00	1	1133.94	-103.00	118.43	-72.13	88.83	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.870	0.25	0.25	Yes
	L_{16}-U_{17}	-37.84	37.59	-1.23	1.19	0.13	-0.38					-15.02	14.54	1.63	-4.15	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.539	0.38	0.38	Yes
	U_{17}-L_{17}	-37.01	37.59	-1.23	1.19	0.13	-0.38					-15.02	14.54	1.63	-4.04	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.539	0.38	0.38	Yes
	L_{17}-U_{18}	-10.03	3.77	-0.91	0.40	0.27	-0.56					-6.39	5.04	3.45	-7.12	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.388	0.44	0.44	Yes
	U_{18}-L_{18}	8.78	-24.46	-0.39	0.26	0.47	-0.72					-4.19	3.28	5.98	-8.27	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.388	0.44	0.44	Yes
	L_{18}-U_{19}	-19.43	19.57	-0.81	0.77	0.24	-0.45					-10.28	9.67	3.02	-5.67	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.539	0.38	0.38	Yes
	U_{19}-L_{19}	-46.53	38.29	-1.30	1.34	0.14	-0.18					-14.48	11.75	0.32	-5.50	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.427	0.43	0.43	Yes
	L_{19}-U_{20}	-46.53	58.29	-2.04	1.66	0.18	-0.43					-25.70	20.89	-2.30	-3.07	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.388	0.44	0.44	Yes
	U_{20}-L_{20}	-54.32	68.37	-2.02	1.78	0.22	-0.27					-25.50	22.45	2.80	-3.45	0.00	0.00	0.00	0.00	1	1133.77	118.06	-66.97	84.40	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.879	0.25	0.25	Yes
	L_{20}-U_{21}	-49.49	72.12	-2.67	2.37	0.15	-0.18					-27.22	23.46	3.41	-2.21	0.00	0.00	0.00	0.00	1	1160.64	-108.34	132.49	-83.84	99.75	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.988	0.20	0.20	Yes
	U_{21}-L_{21}	-49.49	72.12	-2.67	2.37	0.15	-0.18					-33.73	29.91	1.92	-2.31	0.00	0.00	0.00	0.00	1	1160.64	-134.19	132.64	-87.84	90.75	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.988	0.20	0.20	Yes
	L_{21}-U_{22}	-37.84	37.59	-1.23	1.19	0.13	-0.38					-15.02	14.54	1.63	-4.15	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.539	0.38	0.38	Yes
	U_{22}-L_{22}	-35.84	33.55	-1.49	1.89	0.36	-0.29					-19.06	24.13	4.61	-1.72	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.427	0.43	0.43	Yes
	L_{22}-U_{23}	-26.26	85.09	-1.75	1.66	0.27	-0.12					-27.18	23.46	3.41	-2.17	0.00	0.00	0.00	0.00	1	1160.64	-126.17	132.92	-83.84	99.75	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.988	0.20	0.20	Yes
	U_{23}-L_{23}	-26.26	85.09	-1.75	1.66	0.27	-0.12					-22.33	21.00	3.49	-1.49	0.00	0.00	0.00	0.00	1	1160.64	-128.17	137.92	-84.65	108.67	46.7	46.71	46.71	73.10	10	1711.0	1.53	2357	1.5	2312.1	-0.929	0.23	0.23	Yes
	L_{23}-U_{24}	-78.38	71.14	-1.55	1.42	-0.05	-0.16					-19.80	18.14	-0.69	-1.99	0.00	0.00	0.00	0.00	1	1177.22	-127.64	116.07	-102.79	89.89	46.7	46.71	46.71	73.10	10	1711.0	1.53	2357	1.5	2312.1	-0.909	0.24	0.24	Yes
	U_{24}-L_{24}	-78.38	71.14	-1.55	1.42	-0.05	-0.16					-19.16	18.14	-0.69	-3.35	0.00	0.00	0.00	0.00	1	1177.22	-127.64	116.07	-102.79	89.89	46.7	46.71	46.71	73.10	10	1711.0	1.53	2357	1.5	2312.1	-0.909	0.24	0.24	Yes
	L_{24}-U_{25}	-76.64	55.13	-1.78	1.52	-0.07	-0.42					-22.72	19.36	-0.95	-5.42	0.00	0.00	0.00	0.00	1	1160.64	-129.17	96.63	-100.67	64.63	38.8	38.83	38.83	59.23	3	1294.6	1.53	1955	1.5	1922.1	-0.750	0.30	0.30	Yes
	U_{25}-L_{25}	-26.26	33.90	-1.04	0.87	0.06	-0.26					-8.85	7.78	0.38	-5.12	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.388	0.44	0.44	Yes
	L_{25}-U_{26}	-6.26	-17.63	-0.33	0.19	0.68	-0.85					-4.15	2.38	8.66	-10.81	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.388	0.44	0.44	Yes
	L_{26}-U_{27}	1.03	-9.85	0.04	0.50	0.53	-0.73					-8.15	6.44	6.76	-9.29	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.427	0.43	0.43	Yes
	U_{27}-L_{27}	-13.28	6.61	-0.70	0.73	0.72	-0.44					-11.96	9.13	10.72	-14.12	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.427	0.43	0.43	Yes
	L_{27}-U_{28}	-33.71	19.61	-1.29	0.98	0.13	-0.31					-16.52	12.56	1.66	-3.91	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.427	0.43	0.43	Yes
	U_{28}-L_{28}	-28.34	24.29	-1.38	1.25	-0.01	-0.38					-28.34	24.29	-1.38	-3.88	0.00	0.00	0.00	0.00	1	1160.64	-122.98	97.35	-98.15	64.63	38.8	38.83	38.83	59.23	3	1294.6	1.53	1955	1.5	1922.1	-0.750	0.30	0.30	Yes
	L_{28}-U_{29}	-78.83	60.14	-2.40	2.00	0.32	-0.28					-30.63	25.91	4.05	-3.63	0.00	0.00	0.00	0.00	1	1160.64	-142.29	111.35	-97.23	73.47	42.7	42.74	42.74	65.30	8	1389.6	1.53	2135	1.5	2115.6	-0.783	0.29	0.29	Yes
	U_{29}-L_{29}	-68.12	63.30	-2.04	1.91	0.13	-0.13					-37.97	24.73	1.71	-1.64	0.00	0.00	0.00	0.00	1	1160.64	-176.92	140.43	-129.34	106.16	38.8	38.83	38.83	59.23	3	1294.6	1.53	1955	1.5	1922.1	-0.794	0.28	0.28	Yes
	L_{29}-U_{30}	-90.42	64.48	-1.93	1.47	0.16	-0.15					-24.92	19.07	2.06	-1.08	0.00	0.00	0.00	0.00	1	1160.64	-149.93	108.62	-114.87	81.39	38.8	38.83	38.83	59.23	3	1294.6	1.53	1955	1.5	1922.1	-0.734	0.31	0.31	Yes
	U_{30}-L_{30}	-90.42	64.48	-1.93	1.47	0.16	-0.15					-24.92	19.07	2.06	-1.08	0.00	0.00	0.00	0.00	1	1160.64	-149.93	108.62	-114.87	81.39	38.8	38.83	38.83	59.23	3	1294.6	1.53	1955	1.5	1922.1	-0.734	0.31	0.31	Yes
	L_{30}-U_{31}	-38.99	50.41	-1.89	1.40	0.18	-0.29					-25.27	18.76	2.44	-1.10	0.00	0.00	0.00	0.00	1	1160.64	-165.57	132.37	-114.76	89.89	46.7	46.71	46.71	73.10	10	1711.0	1.53	2357	1.5	2312.1	-0.909	0.24	0.24	Yes
	U_{31}-L_{31}	-38.99	50.41	-1.89	1.40	0.18	-0.29					-25.27	18.76	2.44	-1.10	0.00	0.00	0.00	0.00	1	1160.64	-165.57	132.37	-114.76	89.89	46.7	46.71	46.71	73.10	10	1711.0	1.53	2357	1.5	2312.1	-0.909	0.24	0.24	Yes
	L_{31}-U_{32}	-7.78	19.68	-0.43	0.35	-0.13	-0.27					-5.72	4.64	-1.72	-4.55	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.388	0.44	0.44	Yes
	U_{32}-L_{32}	-2.61	-8.77	-0.46	0.19	-0.20	-0.43					-6.11	2.50	-2.62	-6.79	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	0.001	0.60	0.60	Yes
	L_{32}-U_{33}	-7.50	-7.50	-0.60	0.36	0.53	-0.73					-8.67	4.76	-7.08	-7.08	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.539	0.38	0.38	Yes
	U_{33}-L_{33}	-0.74	-0.74	-0.35	0.00	0.00	-0.03					-0.74	0.00	-0.74	-0.74	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.388	0.44	0.44	Yes

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-in	Max. Neg. Mom. End k-in	S_{req} (in^3)	S_x (in^3)	Z_x (in^3)	I (in^4)	$I_{x/n}$ (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term = F_y/S_{req}	M_r (k-in)	Equivalent Mom. Factor a	$C_{m/n}$	C_{min}	Pass
Structure 2	L_0-U_1	-23.44	-7.53	0.45	0.48	0.11	-0.09					-38.20	18.12	28.53	8.13	15.6	19.63	15.58	25.96	5	804.0	1.66	857	1.5	773.7	-0.474	0.41	0.41	Yes
	U_1-L_1	-3.41	-8.42	-0.62	0.27	-0.30	-0.15					-8.27	3.55	-4.05	-1.99	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	0.416	0.77	0.77	Yes
	U_1-L_2	-7.93	-13.37	0.18	0.05	0.01	-0.56					-19.76	8.48	-10.25	-2.95	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.388	0.44	0.44	Yes
	L_1-U_2	7.93	-13.37	0.18	0.05	0.01	-0.56					2.39	0.60	0.13	-7.41	0.00	0.00	0.00	0.00	1	751.9	1.54	782	1.5	763.3	-0.388	0.44	0.44	Yes
	L_1-U_1	-14.61	18.52	-0.46	0.32	-0.11	-0.42					-6.13	4.33	-10.46	-4.29	0.00	0.00	0.00	0.00	1

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
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

Location	Member	ZZ Axis Moments from STAAD: Dead Load Start-(k-ft)	Dead Load End-(k-ft)	Live Load (Max) Start-(k-ft)	Live Load (Max) End-(k-ft)	Pedestrian Load (Max) Start-(k-ft)	Pedestrian Load (Min) End-(k-ft)	Lane Reduction & Impact Live Load Start-(k-ft)	Lane Reduction & Impact Live Load End-(k-ft)	Impact Pedestrian Load Max Start-(k-ft)	Impact Pedestrian Load Max End-(k-ft)
Structure 1	U_0-U_1	-75.12	-0.70	0.47	0.64	3.17	-10.39	-5.27	7.15	35.27	-115.66
	U_1-U_2	-46.81	-20.76	5.11	3.94	-12.34	-12.34	-20.26	11.01	13.76	-136.18
	U_2-U_3	-112.19	86.51	0.58	1.56	-1.78	-11.14	6.41	17.33	-19.77	-124.02
	U_3-U_4	-15.68	66.14	-5.26	-7.91	-0.80	-10.33	-58.04	-22.32	-8.95	-113.04
	U_4-U_5	-9.16	61.58	0.80	1.49	-1.67	-6.32	8.93	16.57	-11.90	-70.30
	U_5-U_6	42.76	120.09	-2.54	2.46	-1.61	-3.96	-28.27	27.41	-17.94	-44.09
	U_6-U_7	12.36	73.72	-4.14	5.77	-1.61	-5.89	-12.66	12.93	-16.03	-66.73
	U_7-U_8	-47.40	525.96	-7.43	10.95	0.09	-0.04	-169.19	842.19	-60.76	683.23
	U_8-U_9	474.61	-124.27	9.84	0.79	12.08	-0.28	9.04	8.75	72.08	-105.37
	U_9-U_{10}	46.76	20.63	0.83	1.25	0.66	-6.91	8.99	13.51	7.13	-74.92
	U_{10}-U_{11}	64.51	-138.68	1.36	0.97	0.03	-0.03	-13.59	11.42	3.51	-56.60
	U_{11}-U_{12}	27.83	-140.42	1.41	0.77	-0.31	-10.16	15.15	8.28	-3.36	-109.43
	U_{12}-U_{13}	-106.18	-154.99	2.03	0.80	1.28	-10.82	21.86	8.65	13.81	-116.66
	U_{13}-U_{14}	-137.97	-302.66	-4.64	-6.50	-0.82	-18.82	-244.43	-164.89	-18.31	-237.63
	U_{14}-U_{15}	-245.66	-182.98	-0.04	0.67	-1.04	-12.11	-5.44	7.25	-11.19	-130.42
	U_{15}-U_{16}	-123.52	-326.70	-2.25	-1.02	2.57	-11.83	-34.30	16.96	-27.67	-127.63
	U_{16}-U_{17}	-269.82	-144.98	-1.08	0.69	-2.43	-9.88	-11.68	7.47	-26.13	-106.54
	U_{17}-U_{18}	-74.16	-67.25	-7.44	-3.68	-1.96	-5.29	-80.19	3.80	-37.07	-72.00
	U_{18}-U_{19}	-8.10	-20.28	-0.76	1.88	-3.61	-2.88	-22.06	0.27	-272.10	-86.98
	U_{19}-U_{20}	-186.12	24.46	-3.53	4.91	1.22	-9.77	-38.02	52.91	-132.13	-105.34
	U_{20}-U_{21}	-19.47	29.14	-1.52	1.62	-10.27	-4.38	-47.88	21.13	-76.86	-258.82
	U_{21}-U_{22}	-70.88	-181.00	-0.12	-0.58	-12.30	-1.24	-9.38	2.84	-130.94	-0.00
	U_{22}-U_{23}	5.83	-252.21	-0.80	-1.12	-18.24	-0.00	-63.74	-223.11	-88.32	-455.52
	U_{23}-U_{24}	-327.18	-325.33	0.63	2.54	-5.14	-19.58	6.69	27.05	-54.75	-268.45
	U_{24}-U_{25}	-338.53	-367.21	0.73	1.56	-1.63	-14.77	-11.39	11.96	-61.71	-263.77
	U_{25}-U_{26}	-396.09	-197.74	-7.17	2.81	-6.97	-17.08	-76.34	29.92	-76.20	-181.87
	U_{26}-U_{27}	-344.15	-179.39	1.84	1.61	-4.22	-25.06	19.60	17.09	-44.89	-266.80
	U_{27}-U_{28}	-226.10	-291.11	1.35	1.42	-4.14	-19.36	14.32	19.35	-42.17	-270.30
	U_{28}-U_{29}	-350.17	-90.75	1.24	2.09	0.79	-10.57	13.16	22.25	8.39	-112.55
	U_{29}-U_{30}	-14.33	-279.31	1.73	1.72	1.23	-9.04	-16.77	14.32	-7.89	-82.30
	U_{30}-U_{31}	-167.07	39.82	1.88	1.99	0.21	-6.35	21.68	21.16	2.18	-67.56
	U_{31}-U_{32}	-109.77	170.72	-3.73	2.44	-1.74	-5.13	39.71	26.00	-16.16	-54.53
	U_{32}-U_{33}	-261.00	1265.93	-11.85	16.12	-0.32	-0.63	-126.18	171.64	-3.38	-6.75
	U_{33}-U_{34}	-1192.75	52.80	0.16	0.18	-1.63	-14.38	-1.63	14.38	-161.95	-188.99
	U_{34}-U_{35}	-25.30	11.62	1.08	1.89	-2.58	-12.07	11.36	13.93	-20.37	-126.99
	U_{35}-U_{36}	-13.36	13.43	1.51	1.51	-3.13	-13.47	11.63	15.83	-14.24	-124.97
	U_{36}-U_{37}	150.58	33.05	1.41	1.51	1.77	-11.78	14.88	15.83	18.67	-123.94
	U_{37}-U_{38}	147.30	4.36	1.74	1.25	0.12	-12.52	18.35	13.14	1.29	-137.74
	U_{38}-U_{39}	25.74	0.00	2.15	1.76	-0.05	-13.00	17.18	14.25	0.00	-141.06
	U_{39}-U_{40}	-31.67	-34.01	0.04	1.39	-1.26	-14.68	0.46	14.67	-13.24	-154.41
	U_{40}-U_{41}	-86.04	-71.76	-2.25	-1.15	-2.25	-14.12	-23.71	0.12	-32.68	-154.41
	U_{41}-U_{42}	-60.95	-86.97	0.58	0.63	2.09	-11.91	6.11	8.37	22.00	-125.25
	U_{42}-U_{43}	-21.07	-55.18	-4.51	1.68	-4.22	-12.47	13.90	17.80	-36.12	-127.07
	U_{43}-U_{44}	-32.99	-28.66	1.32	1.69	-3.43	-10.26	13.90	17.80	-36.12	-107.91
	U_{44}-U_{45}	-15.12	113.76	-5.87	2.73	-0.18	-7.38	-61.71	28.69	-11.85	-77.63
	U_{45}-U_{46}	-48.34	28.51	1.26	1.87	-1.42	-6.70	-46.34	21.50	5.62	-68.06
	U_{46}-U_{47}	-2.69	209.81	-4.12	3.72	-2.00	-4.68	-43.30	39.17	-21.05	-70.27
	U_{47}-U_{48}	-19.64	1.62	-1.13	1.13	-1.13	-4.68	-43.30	39.17	-21.05	-70.27
	U_{48}-U_{49}	-122.28	1156.58	-8.82	16.67	0.07	-0.83	-62.78	179.42	0.69	-8.69
	U_{49}-U_{50}	-1153.78	196.80	0.11	1.67	13.40	-16.22	1.12	17.82	142.66	-172.72
	U_{50}-U_{51}	-178.57	1.62	-1.13	1.13	-1.13	-16.22	1.12	17.82	142.66	-172.72
	U_{51}-U_{52}	178.87	-59.61	1.52	1.86	1.54	-12.28	16.20	19.80	16.34	-130.70
	U_{52}-U_{53}	68.77	-178.57	2.14	1.73	0.07	-15.40	22.82	18.42	3.73	-163.94
	U_{53}-U_{54}	-236.40	-153.06	1.10	2.11	-2.50	-14.32	-11.75	22.41	-26.56	-208.88
	U_{54}-U_{55}	-98.63	-313.14	1.09	3.09	2.40	-14.21	11.17	32.87	25.54	-197.34
	U_{55}-U_{56}	-108.47	-362.96	2.15	3.15	3.19	-20.33	11.17	32.87	25.54	-197.34
	U_{56}-U_{57}	-350.27	-386.72	-6.20	-1.11	-5.36	-17.58	-65.97	11.85	-57.06	-187.16
	U_{57}-U_{58}	-278.82	-117.63	-5.36	2.92	-1.06	-8.84	-57.03	31.11	-11.29	-94.10
	U_{58}-U_{59}	-292.25	-37.53	-5.61	2.84	-0.97	-8.84	-57.03	31.11	-11.29	-94.10
	U_{59}-U_{60}	-186.18	-74.10	-4.25	3.23	2.00	-9.64	-45.28	55.64	21.24	-102.63
	U_{60}-U_{61}	-139.59	-187.78	-5.61	0.57	4.70	-8.95	-60.47	6.18	52.69	-96.44
	U_{61}-U_{62}	-47.42	-115.54	-5.61	0.57	4.70	-8.95	-60.47	6.18	52.69	-96.44
	U_{62}-U_{63}	-52.50	-128.95	-0.10	0.51	2.55	-12.77	-1.08	5.49	27.54	-137.63
	U_{63}-U_{64}	-277.57	-111.60	-5.56	1.71	-3.05	-13.40	-70.70	18.46	-32.84	-144.51
	U_{64}-U_{65}	-166.87	-240.33	-1.88	1.24	-1.37	-19.67	-20.23	11.25	-14.22	-213.99
	U_{65}-U_{66}	-287.50	-127.73	-5.68	0.80	2.35	-11.74	-7.29	8.61	25.32	-126.60
	U_{66}-U_{67}	-141.30	-113.93	-1.73	2.01	-3.27	-7.76	-18.61	21.64	-39.21	-83.67
	U_{67}-U_{68}	-282.26	-17.53	-5.61	2.84	-0.97	-8.84	-57.03	31.11	-11.29	-94.10
	U_{68}-U_{69}	-141.54	56.98	-3.67	1.80	-0.17	-3.53	-39.54	19.39	-1.87	-38.10
	U_{69}-U_{70}	-136.80	470.98	-7.28	7.98	0.69	-0.02	-78.49	85.99	1.01	-0.24
	U_{70}-U_{71}	-497.19	-34.44	1.09	0.87	11.37	-13.26	12.11	9.64	126.69	-147.58
	U_{71}-U_{72}	-139.59	-187.78	-5.61	0.57	4.70	-8.95	-60.47	6.18	52.69	-96.44
	U_{72}-U_{73}	-47.42	-115.54	-5.61	0.57	4.70	-8.95	-60.47	6.18	52.69	-96.44
	U_{73}-U_{74}	-52.50	-128.95	-0.10	0.51	2.55	-12.77	-1.08	5.49	27.54	-137.63
	U_{74}-U_{75}	-277.57	-111.60	-5.56	1.71	-3.05	-13.40	-70.70	18.46	-32.84	-144.51
	U_{75}-U_{76}	-166.87	-240.33	-1.88	1.24	-1.37	-19.67	-20.23	11.25	-14.22	-213.99
	U_{76}-U_{77}	-287.50	-127.73	-5.68	0.80	2.35	-11.74	-7.29	8.61	25.32	-126.60
	U_{77}-U_{78}	-141.30	-113.93	-1.73	2.01	-3.27	-7.76	-18.61	21.64	-39.21	-83.67
	U_{78}-U_{79}	-282.26	-17.53	-5.61	2.84	-0.97	-8.84	-57.03	31.11	-11.29	-94.10
	U_{79}-U_{80}	-141.54	56.98	-3.67	1.80	-0.17	-3.53	-39.54	19.39	-1.87	-38.10
	U_{80}-U_{81}	-136.80	470.98	-7.28	7.98	0.69	-0.02	-78.49	85.99	1.01	-0.24
	U_{81}-U_{82}	-497.19	-34.44	1.09	0.87	11.37	-13.26	12.11	9.64	126.69	-147.58
	U_{82}-U_{83}	-113.01	44.44	1.54	1.07	1.94	-9.65	17.14	11.88	21.56	-107.48
	U_{83}-U_{84}	-59.30	15.07	1.49	0.93	-0.26	-11.63	16.53	10.35	-2.94	-129.47
	U_{84}-U_{85}	80.84	-19.79	1.49	0.82	0.95	-8.52	16.61	9.10	6.11	-84.88
	U_{85}-U_{86}	80.24	-119.59	-2.00	0.66	1.80	-8.07	-22.27	7.34	20.06	-100.99
	U_{86}-U_{87}	-24.67	-27.08	-0.25	0.57	0.60	-6.52	-2.82	6.30	7.20	-72.56
	U_{87}-U_{88}	29.36	-160.66	-3.88	4.88	-0.52	-6.83	-43.24	54.32	-5.76	-98.52

Location	Member	ZZ Axis Moments from STAAD: Lane Reduction & Impact Pedestrian Load Min Start-(k-ft)	Lane Reduction & Impact Pedestrian Load Min End-(k-ft)	Max. Pos. Mom. Start	Max. Pos. Mom. End	S_{top}	S_b	S_{bc}	Z_c	I_{xx}	Shape Factor	M_p	Formula f_b Tens.* F_y/S_m	M_n	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(xx)}$	$C_{b(min)}$
				k-in	k-in	(in^3)	(in^3)	(in^3)	(in^3)	(in^4)	f	(k-in)		(k-in)			
Structure 1	U_0-U_1	0.00	0.00	-88.00	8.39	-46.30	-151.90	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	0.300
	U_1-U_2	0.00	0.00	-59.28	-18.32	-38.00	-201.04	90.2	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	-0.284
	U_2-U_3	0.00	0.00	-137.51	134.99	-111.55	-48.74	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	0.284
	U_3-U_4	0.00	0.00	-96.46	-156.31	-32.19	-103.04	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	-0.033
	U_4-U_5	0.00	0.00	-0.30	101.59	-27.38	-11.34	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	-0.003
	U_5-U_6	0.00	0.00	18.85	191.75	32.28	98.81	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	0.098
	U_6-U_7	0.00	0.00	104.24	72.64	76.13	16.03	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	0.064
	U_7-U_8	0.00	0.00	-169.19	842.19	-60.76	683.23	138.2	138.17	111.77	199.97	3642	2197.7	1.45	6999	0.9989545	4564.8
	U_8-U_9	0.00	0.00	629.00	-130.13	710.95	-298.54	130.3	130.26	105.11	190.77	2960	1799.3	1.39	5965	0.9980938	4292.8
	U_9-U_{10}	0.00	0.00	72.48	44.38	70.05	-70.04	96.6	96.61	79.12	139.29	2174	1387.9	1.40	4465	0.9987316	3184.1
	U_{10}-U_{11}	0.00	0.00	101.52	-166.67	84.43	-117.36	96.61	83.55	139.29	2174	1387.9	1.40	4465	0.9987316	3184.1	-0.078
	U_{11}-U_{12}	0.00	0.00	55.87	-171.77	31.81	-324.79	128.7	128.69	105.26	182.66	3153	1864.4	1.42	6028	0.9987589	4241.5
	U_{12}-U_{13}	0.00	0.00	109.62	-190.25	-120.07	-353.15	151.8	151.76	130.54	219.77	4535	2932.6	1.45	7252	0.9990592	5003.4
	U_{13}-U_{14}	0.00	0.00	-244.43	-164.89	-18.31	-237.63	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	-0.080
	U_{14}-U_{15}	0.00	0.00	-319.93	-228.45	-333.91	-407.54	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.9989937	6214.6
	U_{15}-U_{16}	0.00	0.00	-34.30	16.96	-27.67	-127.63	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	-0.026
	U_{16}-U_{17}	0.00	0.00	-365.69	-178.79	-384.50	-326.97	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.9989994	6214.6
	U_{17}-U_{18}	0.00	0.00	-80.19	3.80	-37.07	-72.00	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	-0.028
	U_{18}-U_{19}	0.00	0.00	-272.10	0.27	-22.06	-86.98	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	-0.096
	U_{19}-U_{20}	0.00	0.00	-291.39	100.56	-224.90	-105.14	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.9988542	3452.6
	U_{20}-U_{21}	0.00	0.00	-87.86	-258.82	-12.33	-455.52	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.9988542	3452.6
	U_{21}-U_{22}	0.00	0.00	-93.74	-223.11	-88.32	-455.52	138.2	138.15	119.05	199.70	3434	1990.9	1.45	6999	0.9989081	4553.8
	U_{22}-U_{23}	0.00	0.00	-77.00	-68.43	-63.74	-268.45	79.12	79.12	79.12	139.29	2174	1387.9	1.40	4465	0.9987316	3184.1
	U_{23}-U_{24}	0.00	0.00	-416.64	-387.76	-496.50	-693.91	232.7	232.70	186.86	340.10	6520	3217.6	1.46	11223	0.9988836	7670.6
	U_{24}-U_{25}	0.00	0.00	-427.43	-445.20	-496.50	-693.91	232.7	232.70	186.86	340.10	6520	3217.6	1.46	11223	0.9988836	7670.6
	U_{25}-U_{26}	0.00	0.00	-76.34	29.92	-76.20	-181.87	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	-0.026
	U_{26}-U_{27}	0.00	0.00	-416.16	-218.17	-511.38	-493.49	251.7	251.73	209.41	365.62	7181	3870.6	1.45	12065	0.9989193	8298.1
	U_{27}-U_{28}	0.00	0.00	-421.92	-210.99	-505.75	-580.05	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.9988836	7670.6
	U_{28}-U_{29}	0.00	0.00	-275.30	-359.27	-310.52	-532.02	151.8	151.76	130.54	219.77	4535	2932.6	1.45	7252	0.9990592	5003.4
	U_{29}-U_{30}	0.00	0.00	-438.11	-89.05	-444.31	-264.29	198.9	198.88	169.65	289.08	5137	2713.1	1.43	9408	0.9988501	6555.5
	U_{30}-U_{31}	0.00	0.00	-189.78	79.27	-214.39	-36.69	156.8	156.80	134.92	214.81	3285	1852.3	1.37	7089	0.9985442	5166.9
	U_{31}-U_{32}	0.00	0.00	-194.32	255.73	-166.62	151.04	156.8	156.80	128.72	214.81	3285	1852.3	1.37	7089	0.9985442	5166.9
	U_{32}-U_{33}	0.00	0.00	-503.33	1868.83	-343.68	1636.93	221.8	221.77	196.91	327.26	6244	3427.0	1.48	10799	0.9989356	7310.6
	U_{33}-U_{34}	0.00	0.00	-188.91	-1.63	153.05	-181.95	221.8	221.77	196.91	327.26	6244	3427.0	1.48	10799	0.9989356	7310.6
	U_{34}-U_{35}	0.00	0.00	-18.12	119.01	-68.13	-71.98	185.7	185.70	154.12	266.55	4767	2721.4	1.44	8796	0.9988804	6121.2
	U_{35}-U_{36}	0.00	0.00	-151.33	31.80	-153.10	-84.24	185.7	185.70	154.12	266.55	4767	2721.4	1.44	8796	0.9988804	6121.2
	U_{36}-U_{37}	0.00	0.00	-215.10	63.55	-219.90	-118.15	127.8	127.83	101.64	178.51	2762	1538.8	1.40	5891	0.9986137	4212.5
	U_{37}-U_{38}	0.00	0.00	-229.35	22.75	-193.17	-165.60	127.8	127.83	101.16	178.51	2762	1538.8	1.40	5891	0.9986137	4212.5
	U_{38}-U_{39}	0.00	0.00	-217.74	0.00	-167.74	-141.06	127.8	127.83	101.16	178.51	2762	1538.8	1.40	5891	0.9986137	4212.5
	U_{39}-U_{40}	0.00	0.00	-60.67	-25.14	-58.38	-244.94	144.8	144.84	129.49	209.19	3613	2101.0	1.44	6903	0.9988874	4774.4
	U_{40}-U_{41}	0.00	0.00	-142.48	39.32	-154.41	-96.42	144.8	144.84	129.49	209.19	3613	2101.0	1.44	6903	0.9988874	4774.4
	U_{41}-U_{42}	0.00	0.00	-71.28	-102.77	-50.63	-275.89	144.8	144.84	130.31	209.19	3613	2101.0	1.44	6903	0.9988874	4774.4
	U_{42}-U_{43}	0.00	0.00	-21.07	-55.18	-4.51	-127.07	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	-0.010
	U_{43}-U_{44}	0.00	0.00	-24.82	60.39	-89.84	-103.04	134.9	134.91	112.76	189.26	3012	1689.0	1.40	6245	0.9986629	4446.1
	U_{44}-U_{45}	0.00	0.00	-89.88	185.17	-22.07	46.95	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.9986137	4212.5
	U_{45}-U_{46}	0.00	0.00	-46.34	21.50	5.62	-68.06	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	-0.018
	U_{46}-U_{47}	0.00	0.00	-43.30	39.17	-21.05	-70.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
	U_{47}-U_{48}	0.00	0.00	-59.79	323.68	30.80	181.41	173.0	173.03	144.25	241.17	3969	2180.7	1.39	7959	0.9986258	5702.3
	U_{48}-U_{49}	0.00	0.00	-62.78	179.42	0.69	-8.69	185.7	185.70	154.12	266.55	4767	2721.4	1.44	8796	0.9988804	6121.2
	U_{49}-U_{50}	0.00	0.00	-279.56	1731.49	-158.04	-1452.15	221.8	221.77	196.91	327.26	6244	3427.0	1.48	10799	0.9989356	7310.6
	U_{50}-U_{51}	0.00	0.00	-593.33	1.62	-1.13	1.13	221.8	221.77	196.91	327.26	6244	3427.0	1.48	10799	0.9989356	7310.6
	U_{51}-U_{52}	0.00	0.00	-253.60	51.73	253.78	2471.41	156.8	156.80	128.72	214.81	3285	1852.3	1.37	7089	0.9985442	5166.9
	U_{52}-U_{53}	0.00	0.00	-119.95	32.11	-97.18	49.23	156.8	156.80	134.92	214.81	3285	1852.3	1.37	7089	0.9985442	5166.9
	U_{53}-U_{54}	0.00	0.00	-119.06	-208.19	90.35	-445.26	181.9	181.87	147.20	249.02	3767	2047.9	1.37	8218	0.9984779	5982.6
	U_{54}-U_{55}	0.00	0.00	-73.08	-156.50	11.17	-354.16	181.9	181.87	147.20	249.02	3767	2047.9	1.37	8218	0.9984779	5982.6
	U_{55}-U_{56}	0.00	0.00	-322.60	-169.84	-341.86	-535.33	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.9988836	7670.6
	U_{56}-U_{57}	0.00	0.00	-113.70	-384.35	95.02	-603.82	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.9988836	7670.6
	U_{57}-U_{58}	0.00	0.00	-177.55	-62.33	34.53	-276.35	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.9988836	7670.6
	U_{58}-U_{59}	0.00	0.00	-65.97	11.85	-57.06	-187.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
	U_{59}-U_{60}	0.00	0.00	-45.28	55.64	21.24	-102.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
	U_{60}-U_{61}	0.00	0.00	-60.47	6.18	52.69	-96.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
	U_{61}-U_{62}	0.00	0.00	-60.47	6.18	52.69	-96.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
	U_{62}-U_{63}	0.00	0.00	-1.08	5.49	27.54	-137.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
	U_{63}-U_{64}	0.00	0.00	-70.70	18.46	-32.84	-144.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
	U_{64}-U_{65}	0.00	0.00	-20.23	11.25	-14.22	-213.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
	U_{65}-U_{66}	0.00	0.00	-7.29	8.61	25.32	-126.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
	U_{66}-U_{67}	0.00	0.00	-18.61	21.64	-39.21	-83.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
	U_{67}-$U_{

Moment (End) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
Condition: As-Built

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

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

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

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

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Max Start (k-ft)	Lane Reduction & Impact Live Load Max End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	L_0-L_1	-15.54	-73.33	-0.43	0.44	2.55	-4.71				
	L_1-L_2	39.76	-87.96	-0.05	0.98	1.66	-7.81				
	L_2-L_3	78.59	-42.20	0.51	1.03	-0.77	-7.68				
	L_3-L_4	-11.34	11.55	0.51	1.71	1.30	-8.85				
	L_4-L_5	-49.11	208.03	-4.58	2.50	-50.06	32.27	-37.23	-69.90		
	L_5-L_6	-12.48	181.07	-1.13	2.49	-3.42	-4.67				
	L_6-L_7	41.44	78.72	-4.05	2.80	-2.07	-5.30				
	L_7-L_8	-25.11	448.74	-1.66	7.73	0.07	-0.04				
	L_8-L_9	425.89	-36.02	0.91	0.57	5.17	-3.99				
	L_9-L_{10}	150.02	-126.53	0.13	1.32	2.72	-5.46				
	L_{10}-L_{11}	120.44	-115.99	1.63	0.80	1.04	-4.71				
	L_{11}-L_{12}	109.58	-108.12	1.32	0.20	0.73	-5.20				
	L_{12}-L_{13}	-45.24	-121.26	1.40	0.73	-2.71	-6.46				
	L_{13}-L_{14}	96.32	-264.98	0.84	0.59	3.59	-12.37				
	L_{14}-L_{15}	-382.04	66.89	0.13	0.24	-4.33	-1.57				
	L_{15}-L_{16}	-191.89	-318.35	-0.62	0.83	-4.19	-10.51				
	L_{16}-L_{17}	-339.58	44.88	-3.03	0.24	-32.65	22.42	-30.65	-56.80		
	L_{17}-L_{18}	-154.59	-31.26	-3.22	2.31	-3.93	-3.17				
	L_{18}-L_{19}	-215.80	145.76	-4.38	1.71	-4.17	-7.66				
	L_{19}-L_{20}	-136.32	49.67	-4.58	2.70	-0.19	-0.12				
Structure 2	L_0-L_1	-2.68	-185.02	-0.30	0.61	1.26	-6.12				
	L_1-L_2	33.75	-249.23	0.30	0.76	1.39	-7.83				
	L_2-L_3	-4.23	-180.72	-0.08	0.64	-3.10	-7.86				
	L_3-L_4	-4.06	-49.09	-1.33	0.38	-1.33	-8.30				
	L_4-L_5	-252.80	-295.03	0.58	1.03	-5.80	-12.39				
	L_5-L_6	-47.59	-222.52	0.22	1.02	-1.73	-11.46	-54.46	0.00		
	L_6-L_7	-475.08	-292.18	1.59	1.60	-3.82	-16.78				
	L_7-L_8	-280.47	-64.51	-10.86	3.26	-6.29	-11.26				
	L_8-L_9	-292.36	219.74	-3.11	-33.14	26.56	-34.71	-87.27			
	L_9-L_{10}	-225.83	141.30	-5.92	2.60	-6.49	-5.63				
	L_{10}-L_{11}	-201.58	205.63	-5.37	2.97	-3.49	-5.20				
	L_{11}-L_{12}	-160.03	387.16	-3.71	3.46	-3.27	-5.83				
	L_{12}-L_{13}	-202.71	204.45	0.78	1.56	-4.26	-10.22				
	L_{13}-L_{14}	-379.75	103.15	6.90	1.50	-4.27	-8.34				
	L_{14}-L_{15}	1072.48	-412.35	0.29	0.69	10.35	-11.24				
	L_{15}-L_{16}	1.02	-82.30	0.72	0.72	1.02	-8.67				
	L_{16}-L_{17}	475.57	-49.03	2.17	0.99	-0.11	-7.66				
	L_{17}-L_{18}	226.51	-26.82	0.86	0.86	2.08	-7.66				
	L_{18}-L_{19}	226.51	-41.81	2.17	0.91	-0.13	-6.79				
	L_{19}-L_{20}	214.45	-56.43	1.25	1.31	-2.14	-8.56				
	L_{20}-L_{21}	43.76	4.79	1.25	1.31	-0.06	-8.56				
	L_{21}-L_{22}	49.27	-202.49	0.21	1.29	-5.09	-15.65				
	L_{22}-L_{23}	-197.10	-34.91	1.44	1.44	-3.79	-14.76				
	L_{23}-L_{24}	-111.92	0.86	-2.82	2.25	-5.50	-10.70				
	L_{24}-L_{25}	-89.81	59.11	-4.42	2.47	-3.47	-8.73				
	L_{25}-L_{26}	-60.79	179.81	-4.69	2.93	-3.41	-7.01				
	L_{26}-L_{27}	-81.80	266.56	-4.71	3.76	-3.68	-6.35				
	L_{27}-L_{28}	-99.81	279.28	0.80	1.53	-5.51	-11.88				
	L_{28}-L_{29}	371.96	1004.43	-1.45	0.72	4.70	-5.91				
	L_{29}-L_{30}	1026.29	362.30	-0.78	0.85	9.67	-10.70				
	L_{30}-L_{31}	-226.76	-125.36	0.39	2.17	-4.60	-8.33				
	L_{31}-L_{32}	-279.05	-132.91	0.99	1.90	0.96	-7.17				
	L_{32}-L_{33}	278.05	-132.91	0.99	1.90	0.96	-7.17				
	L_{33}-L_{34}	222.98	-243.21	1.35	1.50	4.08	-8.33				
	L_{34}-L_{35}	222.98	-243.21	1.35	1.50	4.08	-8.33				
	L_{35}-L_{36}	-167.98	-470.72	1.68	1.20	-3.51	-18.09				
	L_{36}-L_{37}	-445.06	-93.48	-0.69	0.47	-8.88	-17.39				
	L_{37}-L_{38}	-291.78	-319.50	-1.47	1.36	-4.34	-16.24				
	L_{38}-L_{39}	-392.27	-38.30	-4.94	2.23	-7.15	-9.23				
	L_{39}-L_{40}	-297.04	-199.10	-5.07	2.52	-4.29	-2.91				
	L_{40}-L_{41}	24.53	-109.42	-0.19	0.29	2.42	-5.90				
	L_{41}-L_{42}	139.90	-177.77	-0.18	0.40	2.52	-5.32				
	L_{42}-L_{43}	70.66	-27.55	0.19	0.43	-0.10	-5.32				
	L_{43}-L_{44}	47.96	-293.64	-0.13	0.57	3.69	-8.76				
	L_{44}-L_{45}	194.48	-25.11	1.23	4.15	4.91					
	L_{45}-L_{46}	-445.48	-80.88	0.28	0.83	-3.08	-10.11				
	L_{46}-L_{47}	-74.64	-5.53	-4.28	2.97	0.32	-0.31				
Structure 3	L_0-L_1	-341.10	86.20	-6.97	3.78	-4.36	-10.43				
	L_1-L_2	-201.09	152.30	-3.56	2.13	-2.18	-5.55				
	L_2-L_3	-291.78	-319.50	-1.47	1.36	-4.34	-16.24				
	L_3-L_4	-148.24	148.96	-3.77	2.67	-2.35	-4.41				
	L_4-L_5	-428.31	-26.46	-1.29	0.51	6.85	-4.47				
	L_5-L_6	70.66	-27.55	0.19	0.43	-0.10	-5.32				
	L_6-L_7	194.48	-25.11	1.23	4.15	4.91					
	L_7-L_8	-445.48	-80.88	0.28	0.83	-3.08	-10.11				
	L_8-L_9	-74.64	-5.53	-4.28	2.97	0.32	-0.31				

ZZ Axis Moments from STAAD

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Min. Neg. Mom. Start (k-in)	Min. 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}/a
Structure 1	L_0-L_1	-26.38	-88.91	16.72	-163.53	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.102	0.56	0.56
	L_1-L_2	50.92	-100.11	75.76	-227.33	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.333	0.47	0.47
	L_2-L_3	-83.69	-39.39	-113.71	-166.02	99.5	99.53	91.00	125.49	3409	1372.0	1.26	4141	0.99991186	3294.8	-0.187	0.57	0.57
	L_3-L_4	-7.40	39.78	4.03	-113.04	99.9	99.93	84.14	125.49	3409	1372.0	1.26	4141	0.99991186	3294.8	-0.036	0.55	0.59
	L_4-L_5	-130.05	52.91	52.92	179.35	52.9	52.92	76.68	114.47	3186	1282.0	1.21	3777	0.99991186	3052.4	-0.416	0.43	0.43
	L_5-L_6	-17.27	271.42	-50.13	307.02	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99952345	3448.5	-0.064	0.57	0.57
	L_6-L_7	-112.92	142.99	-135.59	-9.96	104.6	104.58	124.05	129.09	152.94	3200	1.19	3784	0.99152249	4776.0	-0.787	0.29	0.29
	L_7-L_8	-56.63	695.23	-31.61	582.81	145.8	145.75	130.44	228.84	6500	2932.4	1.57	7552	0.99952915	4806.3	-0.081	0.57	0.57
	L_8-L_9	566.37	-38.78	626.06	-122.74	145.8	145.75	136.74	228.84	6500	2932.4	1.57	7552	0.99952915	4806.4	-0.164	0.53	0.53
	L_9-L_{10}	199.91	-143.97	191.93	-241.08	144.9	144.85	129.09	192.84	5010	2379.8	1.33	6364	0.99991186	4776.1	-0.759	0.26	0.29
	L_{10}-L_{11}	120.44	-115.99	1.63	0.80	1.04	-4.71											
	L_{11}-L_{12}	109.58	-108.12	1.32	0.20	0.73	-5.20											
	L_{12}-L_{13}	-45.24	-121.26	1.40	0.73	-2.71	-6.46											
	L_{13}-L_{14}	96.32	-264.98	0.84	0.59	3.59	-12.37											
	L_{14}-L_{15}	-382.04	66.89	0.13	0.24	-4.33	-1.57											
	L_{15}-L_{16}	-191.89	-318.35	-0.62	0.83	-4.19	-10.51											
	L_{16}-L_{17}	-339.58	44.88	-3.03	0.24	-32.65	22.42	-30.65	-56.80									
	L_{17}-L_{18}	-154.59	-31.26	-3.22	2.31	-3.93	-3.17											
	L_{18}-L_{19}	-215.80	145.76	-4.38	1.71	-4.17	-7.66											
	L_{19}-L_{20}	-136.32	49.67	-4.58	2.70	-0.19	-0.12											
Structure 2	L_0-L_1	-2.68	-185.02	-0.30	0.61	1.26	-6.12											
	L_1-L_2	33.75	-249.23	0.30	0.76	1.39	-7.83											
	L_2-L_3	-4.23	-180.72	-0.08	0.64	-3.10	-7.86											
	L_3-L_4	-4.06	-49.09	-1.33	0.38	-1.33	-8.30											
	L_4-L_5	-252.80	-295.03	0.58	1.03	-5.80	-12.39											
	L_5-L_6	-47.59	-222.52	0.22	1.02	-1.73	-11.46	-54.46	0.00									
	L_6-L_7	-475.08	-292.18	1.59	1.60	-3.82	-16.78											
	L_7-L_8	-280.47	-64.51	-10.86	3.26	-6.29	-11.26											
	L_8-L_9	-292.36	219.74	-3.11	-33.14	26.56	-34.71	-87.27										
	L_9-L_{10}	-225.83	141.30	-5.92	2.60	-6.49	-5.63											
	L_{10}-L_{11}	-201.58	205.63	-5.37	2.97	-3.49	-5.20											
	L_{11}-L_{12}	-160.03	387.16	-3.71	3.46	-3.27	-5.83											
	L_{12}-L_{13}	-202.71	204.45	0.78	1.56	-4.26	-10.22											
	L_{13}-L_{14}	-379.75	103.15	6.90	1.50	-4.27	-8.34											
	L_{14}-L_{15}	1072.48	-412.35	0.29	0.69	10.35	-11.24											
	L_{15}-L_{16}	1.02	-82.30	0.72	0.72	1.02	-8.67											
	L_{16}-L_{17}	475.57	-49.03	2.17	0.99	-0.11	-7.66											
	L_{17}-L_{18}	226.51	-26.82	0.86	0.86	2.08	-7.66											
	L_{18}-L_{19}	226.51	-41.81	2.17	0.91	-0.13	-6.79											
	L_{19}-L_{20}	214.45	-56.43	1.25	1.31	-2.14	-8.56											
	L_{20}-L_{21}	43.76	4.79	1.25	1.31	-0.06	-8.56											
	L_{21}-L_{22}	49.27	-202.49	0.21	1.29	-5.09	-15.65											
	L_{22}-L_{23}	-197.10	-34.91	1.44	1.44	-3.79	-14.76											
	L_{23}-L_{24}	-111.92	0.86	-2.82	2.25	-5.50	-10.70											
	L_{24}-L_{25}	-89.81	59.11	-4.42	2.47	-3.47	-8.73											
	L_{25}-L_{26}	-60.79	179.81	-4.69	2.93	-3.41	-7.01											
	L_{26}-L_{27}	-81.80	266.56	-4.71	3.76	-3.68	-6.35											
	L_{27}-L_{28}	-99.81	279.28	0.80	1.53	-5.51	-11.88											
	L_{28}-L_{29}	371.96	1004.43	-1.45	0.72	4.70	-5.91											
	L_{29}-L_{30}	1026.29	362.30	-0.78	0.85	9.67	-10.70											
	L_{30}-L_{31}	-226.76	-125.36	0.39	2.17	-4.60	-8.33											
	L_{31}-L_{32}	-279.05	-132.91	0.99	1.90	0.96	-7.17											
	L_{32}-L_{33}	278.05	-132.91	0.99	1.90	0.96	-7.17											
	L_{33}-L_{34}	222.98	-243.21	1.35	1.50	4.08	-8.33											
	L_{34}-L_{35}	222.98	-243.21	1.35	1.50	4.08	-8.33											
	L_{35}-L_{36}	-167.98	-470.72	1.68	1.20	-3.51	-18.09											
	L_{36}-L_{37}	-445.06	-93.48	-0.69	0.47	-8.88	-17.39											
	L_{37}-L_{38}	-291.78	-319.50	-1.47	1.36	-4.34	-16.24											
	L_{38}-L_{39}	-392.27	-38.30	-4.94	2.23	-7.15	-9.23											
	L_{39}-L_{40}	-297.04	-199.10	-5.07	2.52	-4.29	-2.91											
	L_{40}-L_{41}	24.53	-109.42	-0.19	0.29	2.42	-5.90											
	L_{41}-L_{42}	139.90	-177.77	-0.18	0.40	2.52	-5.32											
	L_{42}-L_{43}	70.66	-27.55	0.19	0.43	-0.10	-5.32											
	L_{43}-L_{44}	47.96	-293.64	-0.13	0.57	3.69	-8.76											
	L_{44}-L_{45}	194.48	-25.11	1.23	4.15	4.91												
	L_{45}-L_{46}	-445.48	-80.88	0.28	0.83	-3.08	-10.11											
	L_{46}-L_{47}	-74.64	-5.53	-4.28	2.97	0.32	-0.31											
Structure 3	L_0-L_1	-341.10	86.20	-6.97	3.78	-4.36	-10.43											
	L_1-L_2	-201.09	152.30	-3.56	2.13	-2.18	-5.55											
	L_2-L_3	-291.78	-319.50	-1.47	1.36	-4.34	-16.24											
	L_3-L_4	-148.24	148.96	-3.77	2.67	-2.35	-4.41											
	L_4-L_5	-428.31	-26.46	-1.29	0.51	6.85	-4.47											
	L_5-L_6	70.66	-27.55	0.19	0.43	-0.10	-5.32											
	L_6-L_7	194.48	-25.11	1.23	4.15	4.91												
	L_7-L_8	-445.48	-80.88	0.28	0.83	-3.08	-10.11											
	L_8-L_9	-74.64	-5.53	-4.28	2.97	0.32	-0.31											

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 (Max) End (k-ft)	Lane Reduction & Impact Live Load Max Start (k-ft)	Lane Reduction & Impact Live Load Max End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	L_0-L_1	0.95	3.47	-8.90	-32.69	0.00	0.00	0.00	0.00	3.96	14.56
	L_1-L_2	3.73	-1.74	-6.38	-227.33	83.6	83.58	67.49	100.97	2577	1026.3
	L_2-L_3	-1.50	-1.26	20.52	-3.63	0.23	0.23	0.23	0.23	0.00	0.00
	L_3-L_4	2.87	-3.20	-10.72	-4.95	0.00	0.00	0.00	0.00	-54.97	68.65
	L_4-L_5	-0.60	6.49	-25.33	-5.63	0.00	0.00	0.00	0.00	-72.98	130.3
	L_5-L_6	-2.67	7.64	0.13	-3.67	0.00	0.00	0.00	0.00	-17.51	89.66
	L_6-L_7	-1.16	-4.19	-0.57	-6.96	0.00	0.00	0.00	0.00	-110.40	-48.14
	L_7-L_8	-1.18	-1.66	-0.76	0.26	0.00	0.00	0.00	0.00	42.56	73.79
	L_8-L_9	-1.63	-0.75	3.76	-2.08	0.00	0.00	0.00	0.00	35.18	14.85
	L_9-L_{10}	0.74	1.70	-1.91	1.01	-0.27	0.04	0.00	0.00	12.09	15.75
	L_{10}-L_{11}	2.26	0.05	-9.13	-4.25	0.00	0.00	0.00	0.00	55.05	18.33
	L_{11}-L_{12}	1.10	-3.69	-5.35	-5.82	0.00	0.00	0.00	0.00	-37.03	55.40
	L_{12}-L_{13}	-15.28	-10.17	-0.70	-0.55	0.00	0.00	0.00	0.00	-17.89	-22.87
	L_{13}-L_{14}	-1.50	-12.56	0.72	-1.42	-0.94	-0.85	-0.05	0.00	0.00	0.00
	L_{14}-L_{15}	0.38	-3.08	-14.07	-3.43	0.00	0.00	0.00	0.00	-109.86	91.92
	L_{15}-L_{16}	2.29	0.56	-14.42	-13.64	0.00	0.00	0.00	0.00	-89.32	50.49
	L_{16}-L_{17}	9.99	12.64	-14.21	-15.36	0.00	0.00	0.00	0.00	-53.93	30.50
	L_{17}-L_{18}	-3.71	5.38	-17.05	-0.34	0.00	-1.03	-1.58	0.00	-54.69	-50.54
	L_{18}-L_{19}	5.82	7.02	5.05	-9.10	0.00	0.00	0.00	0.00	-96.71	-29.86
	L_{19}-L_{20}	-11.75	2.79	-14.53	-4.14	0.00	0.00	0.00	0.00	-26.35	-96.42
Structure 2	L_0-L_1	41.34	9.26	2.07	5.05	0.00	0.00	0.00	0.00	49.42	11.06
	L_1-L_2	1.24	0.34	-1.39	-14.20	0.00	0.00	0.00	0.00	-4.61	16.06
	L_2-L_3	2.04	-0.16	-0.39	-14.72	0.00	0.00	0.00	0.00	50.62	112.68
	L_3-L_4	1.04	0.69	-9.05	-9.53	0.00	0.00	0.00	0.00	99.01	112.68
	L_4-L_5	1.77	0.15	0.45	-4.37	0.00	0.00	0.00	0.00	24.21	13.57
	L_5-L_6	-0.40	-2.22	-1.14	2.36	0.00	0.00	0.00	0.00	22.76	7.24
	L_6-L_7	0.20	-0.31	-1.74	-2.39	0.00	0.00	0.00	0.00	0.00	0.00
	L_7-L_8	0.20	-0.31	-1.74	-2.39	0.00	0.00	0.00	0.00	64.63	19.18
	L_8-L_9	0.45	-3.32	-9.43	-3.11	0.00	0.00	0.00	0.00	41.14	28.05
	L_9-L_{10}	4.65	7.66	-16.48	-8.91	0.00	0.00	0.00	0.00	-64.45	80.95
	L_{10}-L_{11}	-0.76	4.01	-16.03	-9.49	0.00	0.00	0.00	0.00	-51.88	49.89
	L_{11}-L_{12}	4.26	8.11	0.15	-8.22	0.00	0.00	0.00	0.00	-40.31	65.22
	L_{12}-L_{13}	2.37	-0.73	-0.43	-2.09	0.00	0.00	0.00	0.00	-25.17	-24.05
	L_{13}-L_{14}	4.19	9.59	-0.17	-11.13	0.00	0.00	0.00	0.00	-8.80	77.07
	L_{14}-L_{15}	0.97	-0.69	0.39	-5.90	-0.02	-0.05	-1.05	0.00	0.00	0.00
	L_{15}-L_{16}	-23.26	-16.43	5.67	-2.38	0.00	0.00	0.00	0.00	33.54	-94.79
	L_{16}-L_{17}	-60.03	35.13	-3.27	-3.27	0.00	0.00	0.00	0.00	15.54	-56.40
	L_{17}-L_{18}	15.78	14.40	2.25	0.05	0.00	0.00	0.00	0.00	-105.57	89.82
	L_{18}-L_{19}	-29.97	-8.38	-2.57	-3.79	0.00	0.00	0.00	0.00	-74.29	-27.47
	L_{19}-L_{20}	7.71	2.64	-2.05	-0.34	0.00	0.00	0.00	0.00	0.00	0.00
	L_{20}-L_{21}	4.82	-4.18	-0.65	-0.65	0.00	0.00	0.00	0.00	0.00	0.00
	L_{21}-L_{22}	15.47	21.33	16.69	-16.32	180.6	180.57	174.56	198.17	1146.7	110.1
	L_{22}-L_{23}	1.55	-3.56	6.44	5.84	0.00	0.00	0.00	0.00	0.00	0.00
	L_{23}-L_{24}	12.91	-0.10	-14.98	3.08	0.00	0.00	0.00	0.00	-31.40	-0.99
	L_{24}-L_{25}	0.73	-0.42	-10.16	-2.17	0.00	0.00	0.00	0.00	-60.51	63.78
	L_{25}-L_{26}	-2.48	6.14	-10.43	-4.53	0.00	0.00	0.00	0.00	-42.40	33.19
	L_{26}-L_{27}	6.56	11.26	-4.94	-7.15	0.00	0.00	0.00	0.00	-20.21	64.43
	L_{27}-L_{28}	17.23	2.62	-10.56	-0.44	0.00	0.00	0.00	0.00	-44.49	108.91
	L_{28}-L_{29}	5.43	5.53	-5.97	-7.71	0.00	0.00	0.00	0.00	-6.51	60.01
	L_{29}-L_{30}	-10.30	18.10	-0.52	-0.57	-0.73	-0.65	-0.65	0.00	0.00	0.00
	L_{30}-L_{31}	-22.00	38.30	0.66	1.07	-0.47	-0.68				
	L_{31}-L_{32}	31.40	-0.99	-0.69	-0.69	-0.69	-0.69	-0.69	0.00	0.00	0.00
	L_{32}-L_{33}	-0.44	39.63	0.52	0.62	-0.57	-0.73				
	L_{33}-L_{34}	48.01	-23.14	-0.19	0.29	-0.79	0.88				
	L_{34}-L_{35}	22.68	-0.44	0.53	0.53	0.53	0.53	0.53	0.00	0.00	0.00
	L_{35}-L_{36}	3.89	7.22	-1.46	-4.30	0.00	0.00	0.00	0.00	-112.38	8.79
	L_{36}-L_{37}	-6.57	-7.20	-11.46	4.30	0.00	0.00	0.00	0.00	-106.02	10.55
	L_{37}-L_{38}	0.84	2.44	-6.64	-0.13	0.00	0.00	0.00	0.00	-240.40	383.93
	L_{38}-L_{39}	-15.42	-10.44	3.19	10.44	0.00	0.00	0.00	0.00	-25.77	31.23
	L_{39}-L_{40}	-7.66	-2.07	3.67	12.63	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 Segment
Loading: 2F1
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, 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-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	J (in^4)	I_{xx} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term * F$_y$/S_{top}	M_r (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mxx}	Equivalent Mom. Factor C_{mxb}	Pass
Structure 1	U_0–L_1	-29.84	49.00	2.37	2.82	0.35	-0.40					-23.11	104.47	33.54	67.98	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.700	0.32	0.32
	U_1–L_1	-9.06	15.16	-2.39	2.20	0.11	-0.33					-26.62	24.44	3.44	-3.70	0.0	0.00	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.901	0.24	0.24
	U_1–L_2	10.50	9.71	-1.47	2.20	0.67	-0.58					-45.39	51.27	-22.58	-21.55	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.957	0.22	0.22
	U_2–L_2	33.43	-34.38	-1.78	1.84	1.59	-1.45					-19.83	20.47	17.68	-16.13	0.0	0.00	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.988	0.20	0.20
	U_2–L_3	41.60	-42.42	-0.95	0.83	1.18	-1.16					-10.08	9.18	19.13	-17.92	0.0	0.00	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.994	0.20	0.20
	U_3–L_3	45.52	-51.05	-0.41	0.35	1.85	-2.06					-4.52	3.85	20.63	-22.97	0.0	0.00	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.998	0.20	0.24
	U_3–L_4	55.67	-55.85	-0.41	0.35	2.24	-2.44					-4.08	2.12	24.88	-27.11	0.0	0.00	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.999	0.21	0.21
	U_4–L_4	91.21	-101.85	-0.02	0.02	2.96	-3.07					-0.21	0.22	32.93	-34.12	0.0	0.00	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-1.000	0.21	0.21
	U_4–L_5	-20.53	21.18	2.76	3.31	3.66	-4.31					-30.69	36.85	40.70	-48.02	0.0	0.00	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.999	0.21	0.21
	U_5–L_5	-135.19	155.81	-2.62	3.03	0.13	-0.17					-212.44	245.05	-173.93	200.11	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0	-0.967	0.25	0.25
	U_5–L_6	-88.41	88.14	-2.13	2.24	0.04	-0.10					-22.98	24.10	0.45	-1.76	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_6–L_6	91.01	-103.95	-2.22	2.22	0.44	-0.37					-23.95	23.79	4.79	-4.02	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_6–L_7	-79.50	78.32	-2.23	2.17	0.71	-0.63					-24.09	23.43	7.61	-6.78	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_7–L_7	-49.20	60.09	-2.17	2.20	0.64	-0.62					-23.43	23.68	9.09	-8.56	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_7–L_8	-29.72	34.60	-1.63	1.66	1.15	-1.07					-22.92	22.52	10.56	-12.63	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_8–L_8	-1.46	-2.70	-1.47	1.44	2.06	-2.10					-15.87	15.54	22.24	-22.59	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_8–L_9	34.16	-36.57	-1.02	0.85	1.99	-2.02					-11.02	9.46	21.49	-21.80	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_9–L_9	46.21	-55.82	-0.36	0.25	1.89	-1.93					-3.89	2.73	20.42	-20.80	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_9–L_{10}	110.34	-114.53	-0.21	0.21	3.33	-3.35					-2.23	2.23	35.88	-36.09	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{10}–L_{10}	-121.24	-131.09	-0.18	0.18	3.52	-3.53					-1.96	1.98	37.95	-38.05	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{10}–L_{11}	-134.20	-173.18	-0.12	0.16	3.50	-3.76					-1.25	1.69	38.27	-40.53	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{11}–L_{11}	114.26	168.30	-0.45	0.45	3.85	-4.02					-0.80	0.80	40.66	-43.74	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{11}–L_{12}	-124.38	133.15	-3.41	3.26	0.40	-0.43					-36.25	34.67	4.29	-4.58	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{12}–L_{12}	113.83	-119.51	-3.28	3.19	0.46	-0.50					-34.06	32.48	4.90	-5.22	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{12}–L_{13}	-56.00	62.15	-1.74	1.75	0.27	-0.29					-18.55	18.59	2.89	-3.08	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{13}–L_{13}	54.04	-59.78	-1.67	1.67	0.13	-0.15					-16.96	16.81	2.33	-2.51	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{13}–L_{14}	-7.09	12.30	1.80	1.86	1.19	-1.15					-19.19	19.75	12.65	-12.25	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{14}–L_{14}	15.85	-15.58	-1.67	1.65	1.38	-1.38					-17.74	17.59	14.70	-14.66	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{14}–L_{15}	38.85	-44.93	-0.86	0.83	1.57	-1.57					-9.38	9.81	13.60	-15.38	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{15}–L_{15}	86.89	-96.05	-1.08	0.97	2.67	-2.58					-11.46	10.31	28.37	-27.46	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{15}–L_{16}	155.08	-159.44	-1.45	1.45	3.11	-3.10					-10.01	10.01	37.17	-37.13	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{16}–L_{16}	141.21	-149.39	-0.72	0.45	2.80	-2.88					-7.66	4.78	29.85	-30.62	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{16}–L_{17}	192.53	-192.81	-0.33	0.22	2.72	-2.81					-3.49	2.33	29.00	-29.87	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{17}–L_{17}	147.39	-146.75	-0.15	0.15	2.00	-2.00					-2.32	2.32	20.40	-20.40	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{17}–L_{18}	203.50	-203.15	-0.22	0.24	3.51	-3.41					-2.39	2.53	37.39	-36.27	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{18}–L_{18}	93.02	-99.46	-0.49	0.49	1.42	-1.42					-4.07	4.07	20.97	-20.97	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{18}–L_{19}	-159.87	162.82	-3.68	3.45	0.36	-0.38					-37.62	36.28	3.79	-3.99	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{19}–L_{19}	-113.84	113.58	-3.58	3.45	0.37	-0.39					-36.03	34.83	3.60	-3.81	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{19}–L_{20}	-130.37	127.18	-3.43	3.41	0.34	-0.33					-36.03	35.83	3.60	-3.51	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{20}–L_{20}	-113.07	114.60	-3.23	3.32	0.63	-0.56					-34.02	34.16	6.61	-6.92	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{20}–L_{21}	47.67	-47.44	-2.29	2.29	0.81	-0.81					-24.06	24.06	8.41	-8.41	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{21}–L_{21}	-44.77	46.58	-1.96	1.94	0.78	-0.73					-20.61	20.44	8.24	-7.63	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{21}–L_{22}	30.30	-34.19	-1.45	1.45	0.61	-0.53					-16.98	16.98	6.13	-5.83	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{22}–L_{22}	-3.70	4.34	-1.39	1.41	1.19	-1.27					-14.60	14.83	12.47	-13.36	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{22}–L_{23}	22.64	-25.19	-1.29	1.29	1.00	-0.94					-13.76	13.76	20.84	-21.05	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
Structure 2	U_{23}–L_{23}	39.84	-42.12	-0.87	0.80	1.84	-1.87					-9.20	8.46	19.94	-19.72	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{23}–L_{24}	88.55	-87.48	-0.79	0.62	2.35	-2.29					-8.33	6.47	24.68	-24.11	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{24}–L_{24}	139.16	-139.04	-0.36	0.36	2.77	-2.77					-3.16	3.16	27.32	-27.32	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{24}–L_{25}	138.22	-138.66	-0.32	0.32	3.59	-3.72					-3.36	3.31	37.77	-39.14	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{25}–L_{25}	124.45	-125.62	-0.32	0.32	3.37	-3.49					-3.37	3.37	35.49	-36.80	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{25}–L_{26}	173.80	-176.10	-0.18	0.16	3.99	-3.81					-1.89	1.66	41.95	-40.05	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{26}–L_{26}	124.03	127.50	-0.21	0.21	3.37	-3.37					-2.18	2.18	42.97	-42.97	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{26}–L_{27}	-167.05	167.27	-3.06	3.03	0.33	-0.36					-32.68	32.21	3.40	-3.77	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{27}–L_{27}	-116.04	109.89	-2.73	2.72	0.16	-0.29					-29.02	28.92	1.72	-3.08	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{27}–L_{28}	124.03	117.50	-2.43	2.41	0.28	-0.18					-25.69	25.69	2.96	-1.88	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{28}–L_{28}	-119.83	124.38	-2.84	2.78	0.51	-0.34					-30.24	29.59	5.39	-3.65	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{28}–L_{29}	113.07	-114.60	-2.61	2.61	0.63	-0.56					-27.47	27.47	6.64	-6.92	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{29}–L_{29}	-79.51	88.86	-2.58	2.50	0.73	-0.70					-27.47	26.60	7.75	-7.46	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{29}–L_{30}	-43.96	51.93	-1.43	1.54	0.79	-0.80					-15.24	16.36	8.37	-9.14	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{30}–L_{30}	-30.30	34.19	-1.45	1.45	0.61	-0.53					-16.98	16.98	6.13	-5.83	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{30}–L_{31}	-5.57	1.81	-1.33	1.27	1.71	-1.79					-14.14	13.52	16.16	-18.99	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{31}–L_{31}	26.91	-29.14	-1.26	1.26	1.00	-0.94					-13.76	13.76	20.84	-21.05	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{31}–L_{32}	55.25	-61.09	-0.48	0.31	1.83	-1.88					-5.07	3.32	19.53	-20.00	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{32}–L_{32}	97.21	-101.85	-0.02	0.02	2.96	-3.07					-0.21	0.22	32.93	-34.12	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{32}–L_{33}	137.13	-150.74	-0.34	0.35	3.44	-3.56					-3.49	3.61	37.24	-38.65	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{33}–L_{34}	165.72	-206.83	-0.25	0.34	3.49	-4.01					-2.68	3.59	37.12	-42.64	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{34}–L_{35}	72.72	-143.16	-0.26	0.26	2.58	-2.58					-38.96	39.39	2.67	-2.67	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{35}–L_{36}	-109.81	112.89	-2.96	3.04	0.23	-0.25					-31.67	32.82	2.50	-2.66	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{36}–L_{37}	108.63	-109.91	-2.84	2.84	0.24	-0.26					-30.28	30.28	2.67	-2.87	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{37}–L_{38}	-38.40	48.11	-1.56	1.90	0.30	-0.22					-21.13	20.45	3.18	-2.34	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{38}–L_{39}	39.90	-40.31	-1.78	1.70	0.79	-0.67					-19.86	18.94	8.74	-7.50	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{39}–L_{40}	-37.48	38.73	-1.53	2.01	1.97	-1.78					-21.32	22.36	18.64	-19.81	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{40}–L_{41}	-10.29	11.13	-1.02	1.06	1.97	-2.25					-11.40	11.76	21.98	-25.04	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{41}–L_{42}	3.53	-11.97	-0.32	0.31	2.48	-2.39					-3.61	3.50	27.58	-26.64	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00
	U_{42}–L_{43}	44.79	-53.89	-0.22	0.30	2.71	-3.44					-2.44	3.38	30.20	-38.34	0.0	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00	0.00	0.00	0.00

YY Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	J (in^4)	I_{xx} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term * F$_y$/S_{top}	M_r (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mxx}	Equivalent Mom. Factor C_{mxb}	Pass
Structure 1	U_0–L_1	-105.02	-33.68	-11.34	-3.64	0.94	0.30					-300.60	-96.41	-122.95	-39.43	94.0	93.99	93.97	104.66	65.3	1.11	3454	237	0.9832467	2993.9	0.321	0.73	0.73
	U_1–L_1	-126.21	-40.48	-10.44	-3.36	0.00	0.00					-300.60	-96.41	-122.95	-39.43	94.0	93.99	93.97	104.66	65.3	1.11	3454	237	0.9832467	2993.9	0.321	0.73	0.73
	U_1–L_2	10.35	10.97	6.07	2.88	0.00	0.00					-2.70	3.33	-8.28	-7.17	94.0	93.99	93.99	104.66	65.3	1.11	3454	384	0.9189252	3035.4	0.897	0.95	0.95
	U_2–L_2	8.45	8.67	0.00	0.00	0.00	0.00					-8.17	20.38	-30.57	4.52	94.0	93.99	93.99	104.66	65.3	1.11	3454	384	0.9189252	3035.4	0.897	0.95	0.95
	U_2–L_3	6.15	6.94	0.00	0.00	0.00	0.00					-99.51	12.70	-104.05	1.07	94.0	93.99	93.99	104.66	65.3	1.11	3454	384	0.9189157	3029.8	-0.010	0.60	0.60
	U_3–L_3	7.64	6.57	0.00	0.00	0.00	0.00					-102.57	-22.03	-104.05	1.07	94.0	93.99	93.99	104.66	65.3	1.11	3454	384	0.9146878	3022.2	0.497	0.79	0.79
	U_3–L_4	-115.65	-35.59	0.33	0.01	0.49	-0.43					-146.54	-46.17	-143.32	-52.42	113.4	113.37	90.38	120.15	82.8	1.15	4295	279	0.9704504	3630.7	0.317	0.73	0.73
	U_4–L_4	-125.60	-4.86	-10.78	-1.07	0.23	0.00					-146.54	-46.17	-143.32	-52.42	113.4	113.37	90.38	120.15	82.8	1.15	4295	279	0.9704504	3630.7	0.317	0.73	0.73
	U_4–L_5	-7.45	3.56	11.52	1.25	0.00	0.00					-120.60	-4.56	-119.78	3.24	133.5	132.49	132.31	154.40	108.5	1.16	5128	275	0.9705418	4271.9	-0.036	0.59	0.59
	U_5–L_5	0.27	0.07	17.58	4.17	0.00	0.00					-130.02	46.27	-107.52	51.61	124.7	124.69	119.31	145.38	96.3	1.17	4798	196	0.9579598	3941.6	-0.356	0.46	0.46
	U_5–L_6	-168.97	-52.49	-12.21	-4.22	0.00	0.00					-201.84	-59.64	-204.32	-64.81	214.5	214.51	214.48	237.85	154.1	1.16	10623	359	0.9170257	8850.7	-0.243	0.50	0.50
	U_6–L_6	-188.31	-73.79	-12.61	-5.11	0.00	0.00					-201.84	-59.64	-204.32	-64.81	214.5	274.51	274.48	318.87	198.9	1.16	10623	359	0.9170257	8850.7	-0.243	0.50	0.50
	U_6–L_7	-188.03	-103.11	-13.05	-6.03	0.00	0.00					-220.02	-73.79	-240.61	-103.11	262.7	262.71	262.66	291.41	188.7	1.16	13003	137	0.9159996	6244.3	0.170	0.67	0.67
	U_7–L_7	-220.02	-73.79	-13.05	-6.03	0.00	0.00					-188.03	-103.11	-240.61	-103.11	262.7	262.71	262.66	291.41	188.7	1.16	13003	137	0.9159996	6244.3	0.170	0.67	0.67
	U_7–L_8	-14.78	9.17	0.00	0.00	0.00	0.00					-220.02	-73.79	-240.61	-103.11	262.7	262.71	262.66	291.41	188.7	1.16	13003	137	0.9159996	6244.3	0.170	0.67	0.67
	U_8–L_8	9.62	9.17	0.57	1.17	0.00	0.00					-23.02	-67.67	-27.26	-78.06	203.1	201.30	201.30	221.31	271.8	1.10	7303	170	0.9607782	6382.4	0.349	0.74	0.74
	U_8–L_9	-14.78	9.17	0.57	1.17	0.00	0.00					-23.02	-67.67	-27.26	-78.06	203.1	201.30	201.30	221.31	271.8	1.10	7303	170	0.9607782	6382.4	0.349	0.74	0.74
	U_9–L_9	24.19

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: 2F1
Condition: As-Built

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

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

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

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

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (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	-12.55	3.37	1.84	0.73	0.18	-0.10				
	L_1-L_2	-1.68	-7.06	-0.60	0.39	-0.03	-0.29				
	L_2-L_3	-0.06	8.37	-0.35	3.46	-0.20	-0.11				
	L_3-L_4	9.78	-11.75	-0.16	0.06	0.20	-0.52				
	L_4-L_5	-10.32	17.09	-0.30	0.42	0.06	-0.75				
	L_5-L_6	-26.82	58.45	-1.16	1.25	0.02	-0.39				
	L_6-L_7	-59.78	65.36	2.21	1.57	-0.82	0.49				
	L_7-L_8	-12.34	23.19	0.09	-0.09	0.00	0.00				
	U_1-U_2	-9.60	109.51	0.81	1.73	0.10	-0.07				
	U_2-U_3	-74.77	111.66	1.25	2.16	0.05	-0.74				
	U_3-U_4	-56.82	54.75	-1.03	0.84	-0.02	-0.35				
	U_4-U_5	-60.52	22.04	-1.10	0.55	-0.01	-0.15				
	U_5-U_6	-55.23	39.04	-0.99	1.12	0.18	-0.57				
	U_6-U_7	-20.96	7.36	-0.49	0.48	0.24	-0.48				
	U_7-U_8	1.16	-3.79	-0.14	0.14	0.00	0.00				
	L_0-U_1	-19.01	4.12	-0.87	0.75	0.49	-0.63				
	L_1-U_2	-8.63	13.01	-1.13	0.94	0.26	-0.42				
	L_2-U_3	-89.28	58.13	-0.16	1.77	0.15	-0.21				
	L_3-U_4	-23.21	61.33	-2.36	1.78	-1.83	0.00				
	L_4-U_5	-105.04	88.64	-2.76	2.06	0.10	-0.09				
	L_5-U_6	-82.69	87.74	-2.72	2.18	0.34	-0.32				
	L_6-U_7	-38.97	31.76	-1.34	1.03	0.28	-0.28				
	L_7-U_8	-81.28	63.04	-2.05	1.73	0.36	-0.29				
	U_0-L_1	-17.36	7.21	-0.82	0.80	0.40	-0.57				
	U_1-L_2	-6.42	-11.45	-0.76	0.65	0.42	-0.63				
	U_2-L_3	-4.39	3.31	0.43	0.33	0.52	-0.80				
	U_3-L_4	-44.31	35.87	0.85	0.90	0.52	-0.72				
	U_4-L_5	-56.38	68.64	1.74	-1.14	0.88	-0.74				
	U_5-L_6	-88.54	73.82	-1.81	1.25	0.35	-0.55				
	U_6-L_7	-67.45	58.64	-1.88	1.51	0.25	-0.36				
	U_7-L_8	-108.36	115.66	-2.06	1.82	0.44	-0.28				
	U_1-U_3	-154.28	139.69	-2.76	2.31	0.03	-0.18				
	U_2-U_4	-85.82	148.30	-2.05	2.73	0.49	-0.52				
	U_3-U_5	-24.74	100.99	-1.90	2.24	0.27	-0.25				
	U_4-U_6	-98.29	39.79	-2.37	1.08	0.17	-0.18				
	U_5-U_7	-74.15	95.51	-2.52	2.09	0.20	-0.23				
	U_6-U_8	-55.49	68.85	-1.93	1.61	0.29	-0.59				
Structure 2	U_0-L_1	-32.97	39.97	-1.14	1.19	0.24	-0.51				
	L_1-U_2	-25.40	28.84	-0.78	0.86	0.45	-0.65				
	U_2-L_3	-10.33	4.39	-0.63	0.49	0.28	-0.61				
	L_3-U_4	-0.26	2.96	-0.04	0.04	0.00	0.00				
	U_4-L_5	-17.07	16.15	-0.85	0.79	0.42	-0.57				
	L_5-U_6	-55.66	65.11	-2.02	1.63	0.49	-0.63				
	U_6-L_7	-49.18	80.37	-1.98	1.77	0.21	-0.37				
	L_7-U_8	-106.02	102.50	-2.78	2.46	0.14	-0.16				
	U_1-L_2	-39.07	106.45	-1.75	2.20	0.07	-0.14				
	L_2-U_3	-47.57	127.97	-1.97	2.42	0.28	-0.28				
	U_3-L_4	-89.45	99.26	-2.00	1.75	0.19	-0.21				
	L_4-U_5	-86.48	82.53	-1.55	1.47	0.08	-0.30				
	U_5-L_6	-60.13	67.65	-1.62	1.56	0.22	-0.70				
	L_6-U_7	-12.59	26.40	-0.42	0.33	0.82	-0.87				
	U_7-L_8	6.51	-17.79	-0.77	0.63	0.69	-0.81				
Structure 3	U_0-L_1	-17.68	0.88	-0.77	0.63	0.69	-0.81				
	L_1-U_2	-38.91	20.55	-1.20	1.03	0.34	-0.45				
	U_2-L_3	-68.49	71.54	-2.28	1.91	0.26	-0.22				
	L_3-U_4	-68.49	71.14	-2.08	1.91	0.26	-0.22				
	U_4-L_5	-70.17	69.10	3.07	2.14	0.20	-0.17				
	L_5-U_6	-86.86	56.37	-1.82	1.66	0.19	-0.15				
	U_6-L_7	-18.86	52.05	-1.16	1.36	0.36	-0.30				
	L_7-U_8	-54.59	58.66	-1.59	1.56	0.30	-0.40				
	U_1-L_2	-9.16	17.57	-0.34	0.49	-0.13	-0.36				
	L_2-U_3	-23.22	7.61	-1.37	0.72	0.08	-0.04				
	U_3-L_4	-50.46	39.07	-1.03	1.05	0.38	-0.57				
	L_4-U_5	-59.57	20.60	-1.10	0.89	-0.50	-0.57				
	U_5-L_6	-77.57	51.96	-1.94	1.32	0.34	-0.42				
	L_6-U_7	-77.57	57.15	-1.32	1.28	0.03	-0.10				
	U_7-L_8	-54.68	58.68	-1.62	1.56	0.30	-0.40				

M_2 Information

YY Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-L_1	-47.83	-15.81	2.04	0.87	0.00	0.00				
	L_1-L_2	1.73	-8.33	-63.26	-26.25	0.00	0.00				
	L_2-L_3	-6.06	-16.90	-19.77	-3.49	0.00	0.00				
	L_3-L_4	-9.46	-16.38	-10.53	-11.57	0.00	0.00				
	L_4-L_5	-11.04	-27.43	-13.83	-17.47	0.00	0.00				
	L_5-L_6	-8.81	-15.94	-14.80	-4.76	0.00	0.00				
	L_6-L_7	-6.20	-3.31	0.69	4.10	0.00	0.00				
	L_7-L_8	9.71	-1.24	-0.10	-0.04	0.00	0.00				
	U_1-U_2	9.09	5.85	-4.86	-2.52	0.00	0.00				
	U_2-U_3	8.74	-8.53	12.82	10.10	0.00	0.00				
	U_3-U_4	-5.87	-6.93	5.70	0.29	0.00	0.00				
	U_4-U_5	-5.88	-3.09	-9.51	-7.46	0.00	0.00				
	U_5-U_6	-14.46	-14.81	-12.14	-8.65	0.00	0.00				
	U_6-U_7	-7.52	-13.38	-0.58	-11.25	0.00	0.00				
	U_7-U_8	-12.34	-21.98	9.56	-11.28	0.00	0.00				
	L_0-U_1	-8.99	-13.17	-11.46	-11.14	0.00	0.00				
	L_1-U_2	-12.41	-17.42	-17.68	-13.49	0.00	0.00				
	L_2-U_3	-9.23	-11.56	-6.02	-3.76	0.00	0.00				
	L_3-U_4	-4.94	-7.13	-6.07	-2.66	0.00	0.00				
	L_4-U_5	-2.13	-6.05	10.67	6.32	0.00	0.00				
	L_5-U_6	-2.10	-6.04	-4.58	0.04	0.00	0.00				
	L_6-U_7	-8.22	-2.86	-2.07	3.33	0.00	0.00				
	L_7-U_8	-2.79	-8.28	-5.06	-3.11	0.00	0.00				
	U_1-L_2	-4.29	-5.44	-5.03	-3.19	0.00	0.00				
	L_2-U_3	-2.54	-3.51	-2.30	-1.84	0.00	0.00				
	U_3-L_4	-1.84	-3.61	-2.62	-1.46	0.00	0.00				
	L_4-U_5	-6.80	-7.63	-2.00	-4.67	0.00	0.00				
	U_5-L_6	-11.98	-13.95	-10.54	-7.12	0.00	0.00				
	L_6-U_7	-6.20	-8.76	-3.96	-5.26	0.00	0.00				
	U_7-L_8	-8.28	-12.61	-9.75	-11.51	0.00	0.00				
Structure 2	U_0-L_1	-15.39	-13.38	5.52	3.19	0.00	0.00				
	L_1-U_2	-33.94	-31.62	-16.48	-13.15	0.00	0.00				
	U_2-L_3	-25.78	-24.98	-13.38	-9.96	0.00	0.00				
	L_3-U_4	-10.03	-10.03	-5.14	-3.84	0.00	0.00				
	U_4-L_5	-15.30	-14.82	-7.12	-5.37	0.00	0.00				
	L_5-U_6	-29.96	-29.96	-14.38	-10.79	0.00	0.00				
	U_6-L_7	-22.66	-22.66	-10.88	-8.16	0.00	0.00				
	L_7-U_8	-45.76	-45.76	-21.97	-16.48	0.00	0.00				
	U_1-L_2	-13.09	-11.01	-14.84	-7.31	0.00	0.00				
	L_2-U_3	-9.63	-8.10	-10.96	-4.42	0.00	0.00				
	U_3-L_4	-4.23	-3.56	-4.85	-1.96	0.00	0.00				
	L_4-U_5	-9.63	-8.10	-10.96	-4.42	0.00	0.00				
	U_5-L_6	-14.26	-11.87	-4.48	-7.57	0.00	0.00				
	L_6-U_7	-8.27	-8.28	-2.76	-4.43	0.00	0.00				
	U_7-L_8	-6.02	-5.00	5.26	0.40	0.00	0.00				
Structure 3	U_0-L_1	-6.43	-6.90	0.11	-1.09	0.00	0.00				
	L_1-U_2	-9.83	-8.53	-4.90	-3.50	0.00	0.00				
	U_2-L_3	-14.26	-11.87	-4.48	-7.57	0.00	0.00				
	L_3-U_4	-14.26	-11.87	-4.48	-7.57	0.00	0.00				
	L_4-U_5	-9.83	-8.53	-4.90	-3.50	0.00	0.00				
	U_5-L_6	-6.43	-6.90	0.11	-1.09	0.00	0.00				
	L_6-U_7	-8.27	-8.28	-2.76	-4.43	0.00	0.00				
	U_7-L_8	-6.02	-5.00	5.26	0.40	0.00	0.00				

Location	Member	Start (k-in)	End (k-in)	S_{xx} (in^3)	S_{xx} (in^3)	Z_z (in^3)	I (in^4)	I_{xx} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_xx	M_n (k-in)	a	$C_{a(u)}$	$C_{a(d)}$
Structure 1	U_0-L_1	-42.98	14.92	-13.76	2.92	15.6	15.63	15.58	25.96	5	804.0	1.66	857	1.5	773.7
	L_1-L_2	-105.57	118.29	-22.63	88.16	72.5	1111.4	1111.4	15.69	5	4014.7	0.75	2241	1.5	2074.7
	L_2-L_3	-49.25	72.65	-14.64	54.09	45.7	470.70	470.70	40.44	67.92	25	1661.0	1.67	2241	1.5
	L_3-L_4	-68.25	82.67	-14.18	66.25	39.8	39.77	39.56	65.61	21	1616.3	1.65	2165	1.5	1968.6
	L_4-L_5	-86.56	86.56	-22.42	63.58	39.09	42.74	42.74	62.54	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_5-L_6	-53.23	39.04	-9.99	12.32	6.18	-0.57	10.40	33.89	8	853.4	-0.399	444	1.4	1026.6
	L_6-L_7	-20.96	7.36	-0.49	0.48	0.24	-0.48	0.00	0.00	0	34.13	16.28	-23.54	2.79	15.4
	L_7-L_8	1.16	-3.79	-0.14	0.14	0.00	0.00	0.00	0.00	0	-3.86	-21.62	10.00	0.00	0.00
	L_0-U_1	-19.01	4.12	-0.87	0.75	0.49	-0.63	0.00	0.00	0	36.85	15.96	-18.00	-3.51	15.4
	L_1-U_2	-8.63	13.01	-1.13	0.94	0.26	-0.42	0.00	0.00	0	-62.99	30.13	-33.05	10.97	19.4
	L_2-U_3	-89.28	58.13	-0.16	1.77	0.15	-0.21	0.00	0.00	0	-146.31	150.31	-113.96	72.60	35.7
	L_3-U_4	-23.21	61.33	-2.36	1.78	-1.83	0.00	0.00	0.00	0	-164.27	164.74	-116.29	77.25	38.4
	L_4-U_5	-105.04	88.64	-2.76	2.06	0.10	-0.09	0.00	0.00	0	-179.24	144.31	-130.21	114.17	38.8
	L_5-U_6	-82.69	87.74	-2.72	2.18	0.34	-0.32	0.00	0.00	0	-145.13	144.22	-102.79	109.70	42.7
	L_6-U_7	-38.97	31.76	-1.34	1.03	0.28	-0.28	0.00	0.00	0	-155.57	118.29	-22.63	88.16	72.5
	L_7-U_8	-81.28	63.04	-2.05	1.73	0.36	-0.29	0.00	0.00	0	-134.01	105.93	-100.68	77.91	35.1
	U_0-L_1	-17.36	7.21	-0.82	0.80	0.40	-0.57	0.00	0.00	0	-15.82	19.56	4.37	6.10	0.00
	U_1-L_2	-6.42	-11.45	-0.76	0.65	0.42	-0.63	0.00	0.00	0	-8.07	6.64	-6.82	6.03	0.00
	U_2-L_3	-4.39	3.31	0.43	0.33	0.52	-0.80	0.00	0.00	0	-0.39	2.94	-26.52	16.83	42.20
	U_3-L_4	-44.31	35.87	0.85	0.90	0.52	-0.72	0.00	0.00	0	-69.41	69.07	-50.43	36.72	20.5
	U_4-L_5	-56.38	68.64	1.74	-1.14	0.88	-0.74	0.00	0.00	0	-149.39	111.15	-120.43	78.52	38.5
	L_5-U_6	-88.54	73.82	-1.81	1.25	0.35	-0.55	0.00	0.00	0	-140.21	113.28	-110.32	88.38	42.7
	L_6-U_7	-67.45	58.64	-1.88	1.51	0.25	-0.36	0.00	0.00	0	-157.84	153.51	-127.29	122.62	46.7
	L_7-U_8	-108.36	115.66	-2.06	1.82	0.44	-0.28	0.00	0.00	0	-189.44	175.55	-134.73	146.66	46.7
	U_1-U_3	-154.28	139.69	-2.76	2.31	0.03	-0.18	0.00	0.00	0	-236.71	213.50	-200.14	179.07	42.7
	U_2-U_4	-85.82	148.30	-2.05	2.73	0.49	-0.52	0.00	0.00	0	-229.37	254.51	-201.14	214.54	42.7
	U_3-U_5	-24.74	100.99	-1.90	2.24	0.27	-0.25	0.00	0.00	0	-98.13	161.36	-28.51	127.30	35.1
	U_4-U_6	-98.29	39.79	-2.37	1.08	0.17	-0.18	0.00	0.00	0	-164.84	104.12	-150.16	87.72	65.3
	U_5-U_7	-74.15	95.51	-2.52	2.09	0.20	-0.23	0.00	0.00	0	-130.79	152.73	-93.70	121.07	38.8
	U_6-U_8	-55.49	68.85	-1.93	1.61	0.29	-0.59	0.00	0.00	0	-92.65	110.10	-68.06	82.60	35.1
Structure 2	U_0-L_1	-32.97	39.97	-1.14	1.19	0.24	-0.51	0.00	0.00	0	-59.38	68.24	-39.56	44.22	20.5
	L_1-U_2	-25.40	28.84	-0.78	0.86	0.45	-0.65	0.00	0.00	0	-38.38	45.28	-22.65	31.16	14.5
	U_2-L_3	-10.33	4.39	-0.63	0.49	0.28	-0.61	0.00	0.00	0	-20.63	12.38	-9.59	2.69	15.4
	L_3-U_4	-0.26	2.96	-0.04	0.04	0.00	0.00	0.00	0.00	0	-5.91	7.11	-15.39	9.39	15.4
	U_4-L_5	-17.07	16.15	-0.85	0.79	0.42	-0.57	0.00	0.00	0	-33.94	31.62	-16.48	13.15	14.5
	L_5-U_6	-55.66	65.11	-2.02	1.63	0.49	-0.63	0.00	0.00	0	-100.03	106.99	-65.65	75.97	35.1
	U_6-L_7	-49.18	80.37	-1.98	1.77	0.21	-0.37	0.00	0.00	0	-117.03	128.70	-87.12	99.47	35.1
	L_7-U_8	-106.02	102.50	-2.78	2.46	0.14	-0.16	0.00	0.00	0	-175.90	166.63	-135.88	131.08	35.1
	U_1-L_2	-39.07	106.45	-1.75	2.20	0.07	-0.14	0.00	0.00	0	-89.49	159.96	-59.13	114.00	20.5
	L_2-U_3	-47.57	127.97	-1.97	2.42	0.28	-0.28	0.00	0.00	0	-89.05	199.30	-57.66	152.64	42.7
	U_3-L_4	-89.45	99.26	-2.00	1.75	0.19	-0.21	0.00	0.00	0	-143.94	153.20	-113.65	126.16	46.7
	L_4-U_5	-86.48	82.53	-1.55	1.47	0.08	-0.30	0.00	0.00	0	-133.81	127.69	-111.34	103.10	46.7
	U_5-L_6	-60.13	67.65	-1.62	1.56	0.22	-0.70	0.00	0.00	0	-139.63	109.60	-114.12	78.22	38.8
	L_6-U_7	-12.59	26.40	-0.42	0.33	0.82	-0.87	0.00	0.00	0	-10.51	-29.82	21.72	46.88	0.00
	U_7-L_8	6.51	-17.79	-0.77	0.63	0.69	-0.81	0.00	0.00	0	-8.17	6.68	7.35	-6.60	0.00
Structure 3	U_0-L_1	-17.68	0.88	-0.77	0.63	0.69	-0.81	0.00	0.00	0	-29.72	1.91	-34.54	10.39	34.2
	L_1-U_2	-38.91	20.55	-1.20	1.03	0.34	-0.45	0.00	0.00	0	-12.73	10.96	3.60	-4.83	0.00
	U_2-L_3	-68.49	71.54	-2.28	1.91	0.26	-0.22	0.00	0.00	0	-25.32	20.34	-2.81	-2.38	0.00
	L_3-U_4	-68.49	71.14	-2.08	1.91	0.26	-0.22	0.00	0.00	0	-25.32	20.34	-2.81	-2.38	0.00
	U_4-L_5	-70.17	69.10	3.07	2.14	0.20	-0.17	0.00	0.00	0	-33.09	23.06	-2.00	-2.41	0.00
	L_5-U_6	-86.86	56.37	-1.82	1.66	0.19	-0.15	0.00	0.00	0	-19.59	17.93	2.09	-1.57	0.00
	U_6-L_7	-18.86	52.05	-1.16	1.36	0.36	-0.30	0.00	0.00	0	-19.46	18.38	3.01	-2.62	0.00
	L_7-U_8	-54.59	58.66	-1.59	1.56	0.30	-0.40	0.00	0.00	0	-19.01	9.85	2.10	-4.19	0.00
	U_1-L_2	-9.16	17.57	-0.34	0.49	-0.13	-0.36	0.00	0.00	0	-7.85	3.83	3.01	-6.43	0.00
	L_2-U_3	-23.22	7.61	-1.37	0.72	0.08	-0.04	0.00	0.00	0	-4.80	4.14	4.60	-7.63	0.00
	U_3-L_4	-50.46	39.07	-1.03	1.05	0.38	-0.57	0.00	0.00	0	-11.12	11.35	4.11	-6.17	0.00
	L_4-U_5	-59.57	20.60	-1.10	0.89	-0.50	-0.57	0.00	0.00	0	-11.87	9.59	-5.38	6.13	0.00
	U_5-L_6	-77.57	51.96	-1.94	1.32	0.34	-0.42	0.00	0.00	0	-16.16	14.85	-3.49	3.77	0.00
	L_6-U_7	-77.57	57.15	-1.32	1.28	0.03	-0.10	0.00	0.00	0	-16.37	13.79	2.27	-1.11	0.00
	U_7-L_8	-54.68	58.68	-1.62	1.56	0.30	-0.40	0.00	0.00	0	-19.00	9.84	2.06	-4.16	0.00

M_2 Information

Max. Pos. Mom.

Location	Member	Start (k-in)	End (k-in)	S_{xx} (in^3)	S_{xx} (in^3)	Z_z (in^3)	I (in^4)	I_{xx} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_xx	M_n (k-in)	a	$C_{a(u)}$	$C_{a(d)}$
Structure 1	U_0-L_1	-42.98	14.92	-13.76	2.92	15.6	15.63	15.58	25.96	5	804.0	1.66	857	1.5	773.7
	L_1-L_2	-105.57	118.29	-22.63	88.16	72.5	1111.4	1111.4	15.69	5	4014.7	0.75	2241	1.5	2074.7
	L_2-L_3	-49.25	72.65	-14.64	54.09	45.7	470.70	470.70	40.44	67.92	25	1661.0	1.67	2241	1.5
	L_3-L_4	-68.25	82.67	-14.18	66.25	39.8	39.77	39.56	65.61	21	1616.3	1.65	2165	1.5	1968.6
	L_4-L_5	-86.56	86.56	-22.42	63.58	39.09	42.74	42.74	62.54	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_5-L_6	-53.23	39.04	-9.99	12.32	6.18	-0.57	10.40	33.89	8	853.4	-0.399	444	1.4	1026.6
	L_6-L_7	-20.96	7.36	-0.49	0.48	0.24	-0.48	0.00	0.00	0	34.13	16.28	-23.54	2.79	15.4
	L_7-L_8	1.16	-3.79	-0.14	0.14	0.00	0.00	0.00	0.00	0	-3.86	-21.62	10.00	0.00	0.00
	L_0-U_1	-19.01	4.12	-0.87	0.75	0.49	-0.63	0.00	0.00	0	36.85	15.96	-18.00	-3.51	15.4
	L_1-U_2	-8.63	13.01	-1.13	0.94	0.26	-0.42	0.00	0.00	0	-62.99	30.13	-33.05	10.97	19.4
	L_2-U_3	-89.28	58.13	-0.16	1.77	0.15	-0.21	0.00	0.00	0	-146.31	150.31	-113.96	72.60	35.7
	L_3-U_4	-23.21	61.33	-2.36	1.78	-1.83	0.00	0.00	0.00	0	-164.27	164.74	-116.29	77.25	38.4
	L_4-U_5	-105.04	88.64	-2.76	2.06	0.10	-0.09	0.00	0.00	0	-179.24	144.31	-130.21	114.17	38.8
	L_5-U_6	-82.69	87.74	-2.72	2.18	0.34	-0.32	0.00	0.00	0	-145.13	144.22	-102.79	109.70	42.7
	L_6-U_7	-38.97	31.76	-1.34	1.03	0.28	-0.28	0.00	0.00	0	-155.57	118.29	-22.63	88.16	72.5
	L_7-U_8	-81.28	63.04	-2.05	1.73	0.36	-0.29	0.00	0.00	0	-134.01	105.93	-100.68	77.91	35.1
	U_0-L_1	-17.36	7.21	-0.82	0.80	0.40	-0.57	0.00	0.00	0	-15.82	19.56	4.37	6.10	0.00
	U_1-L_2	-6.42	-11.45	-0.76	0.65	0.42	-0.63	0.00	0.00	0	-8.07	6.64	-6.82	6.03	0.00
	U_2-L_3	-4.39	3.31	0.43	0.33	0.52	-0.80	0.00	0.00	0	-0.39	2.94	-26.52	16.83	42.20
	U_3-L_4	-44.31	35.87	0.85	0.90	0.52	-0.72	0.00	0.00	0	-69.41	69.07	-50.43	36

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss System
Loading: 2F1
Condition: As-Built

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

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

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

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

M_z Information

| Location | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (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) | 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.8 Term = F$_y$*S$_{xx}$ | M_u (k-in) | Equivalent Mom. Factor: a | $C_{b(+)}$ | $C_{b(-)}$ | YY Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Max) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | YY Axis Moment Properties: Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{bb} (in^3) | S_{tt} (in^3) | S_{yy} (in^3) | Z_Y (in^3) | I_{yy} (in^4) | Shape Factor f | M_p (k-in) | σ_{cr} (ksi) | Formula I.8 Term = F$_y$*S$_{yy}$ | M_u (k-in) | Equivalent Mom. Factor: a | $C_{b(+)}$ | $C_{b(-)}$ | Yield: Axial Portion | Yield: Moment Portion | Yield: Total | Pass | Tension: Axial Portion | Tension: Moment Portion | Tension: Total | Pass | Fracture: Axial Portion | Fracture: Moment Portion | Fracture: Total | Pass | Buckle: Axial Portion | Buckle: Moment Portion | Buckle: Total | Pass | Compression Yield: Axial Portion | Compression Yield: Moment Portion | Compression Yield: Total | Pass |
|---|---|---|---

Moment (End) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
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

| Location | Member | M_2 Information: ZZ Axis Moments from STAAD | | | | | | | | | | | | | | | | | | | | | | | | | M_3 Information: YY Axis Moments from STAAD | | | | | | | | | | | | | | | | | | | | | | | | | Tension | | | | | | | | Compression | | | | | | | | |
|---|---|---|---

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: 2F1
Condition: As-Built

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

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

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

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

M_z Information — ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Min) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Min Start (k-in)	Impact Pedestrian Load Min End (k-in)	Max. Pos. Moms. Start (k-in)	Max. Pos. Moms. End (k-in)	S_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	I_z (in^4)	I_{xx} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term * F_y/S_x	M_r (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(xx)}$	$C_{b(zz)}$
Structure 1	U_0–L_1	-15.70	54.51	-1.81	1.69	0.13	-0.31	-0.04	0.43	0.03	-0.13	-24.15	22.63	1.70	-4.18	-0.48	5.10	0.34	-1.55	-52.43	106.92	-18.20	65.43	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.490	0.49	0.40
	U_1–L_1	-27.61	29.28	-1.30	1.29	0.42	-0.38	-0.57	0.52	0.20	-0.18	-17.42	17.19	1.53	-5.12	-0.82	6.19	2.40	-2.14	-67.40	112.74	-25.53	45.32	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.985	0.21	0.21
	U_1–L_2	-0.01	5.24	0.39	1.09	-0.40	-0.29	-0.35	0.33	0.23	-0.23	-12.24	14.56	5.18	-6.04	-3.13	6.29	2.39	-2.70	-8.94	17.26	20.56	-0.18	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.938	0.02	0.00
	U_2–L_2	40.61	-41.50	-0.61	0.67	0.63	-0.59	-0.06	0.10	0.17	-0.21	-8.10	8.55	9.39	-8.73	-6.70	1.25	1.99	-2.46	41.37	-40.69	63.70	-64.12	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.993	0.20	0.20
	U_2–L_3	56.81	-57.80	-0.19	0.75	0.87	0.00	0.00	0.00	0.23	-0.29	-10.57	0.00	0.00	0.00	-10.46	10.46	0.00	0.00	53.05	-53.05	0.00	0.00	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.000	0.84	0.00
	L_0–L_1	64.44	-72.22	-0.12	0.68	0.97	-1.07	0.00	0.00	0.42	-0.47	-1.60	-1.07	-12.96	14.28	0.00	0.00	0.00	-5.65	81.69	-92.50	107.14	57.66	19.4	19.37	19.31	29.87	1	958.8	1.54	782	1.5	1026.6	0.587	0.63	0.63
	L_1–L_2	72.27	-69.94	-0.11	0.67	0.91	-1.00	-1.35	1.29	0.40	-0.45	-13.27	-14.46	0.00	0.00	0.00	0.00	0.00	-5.31	91.61	-87.25	118.68	37.00	23.8	20.80	20.67	34.66	1	1076.0	1.67	1144	1.5	1529.6	0.587	0.63	0.63
	L_2–L_3	109.00	-121.35	-0.34	0.36	0.68	-1.10	0.00	0.00	0.00	0.74	0.00	0.00	8.90	-9.76	135.80	-131.45	171.97	110.00	18.5	18.45	18.36	30.78	1	1020.9	1.67	1016	1.5	913.3	0.840	0.86	0.86
	L_2–L_4	-42.62	47.12	1.62	1.94	1.34	-1.61	-0.77	0.93	0.77	-0.93	-21.58	21.46	-9.29	11.14	9.24	-11.11	85.53	-103.62	20.14	-97.74	107.1	107.13	19.4	19.37	19.31	29.87	1	958.8	1.54	782	1.5	1026.6	0.587	0.63	0.63
	L_3–L_4	-181.01	205.10	1.34	1.77	0.04	-0.09	-0.94	1.08	0.00	0.00	-26.84	-29.43	0.00	0.00	0.00	0.00	-263.84	-296.43	-235.24	-237.01	33.1	33.05	32.91	54.51	14	1409.8	1.65	1799	1.5	1758.2	-0.969	0.21	0.21
	U_3–L_3	-123.92	126.16	-1.24	1.39	-0.03	-0.13	-0.61	0.71	-0.04	-0.05	-16.07	18.00	-0.38	-1.62	-7.30	8.52	-0.44	-0.58	-191.47	198.47	-162.16	-163.94	35.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2	-0.969	0.21	0.21
	U_3–L_4	24.90	-27.70	-1.40	1.72	-0.01	-0.05	-0.68	0.85	0.00	0.00	-16.08	27.67	-0.95	-0.36	-6.36	13.22	0.00	0.00	-189.45	250.32	-166.11	-160.48	42.7	42.74	42.74	65.30	14	1389.8	1.65	2155	1.5	2115.6	-0.769	0.30	0.29
	U_4–L_4	-106.29	107.56	-1.14	1.20	0.11	-0.06	-0.52	0.55	0.00	0.00	-14.70	15.49	-1.38	-1.71	-6.18	6.60	0.00	0.00	-157.28	159.96	-136.38	-139.10	21.1	21.09	21.09	35.46	10	1137.6	1.68	1170	1.5	1044.0	-0.983	0.21	0.21
	L_4–L_5	-66.48	79.89	-0.97	1.04	0.18	-0.16	-0.35	0.40	0.00	0.00	-12.58	13.48	2.34	-2.12	-4.24	4.82	0.00	0.00	-102.77	121.38	-83.38	-89.18	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.947	0.25	0.26
	L_5–L_6	-31.84	36.78	-0.60	0.64	0.16	-0.14	-0.16	0.18	0.00	0.00	-5.80	6.21	1.08	-0.98	-1.95	2.22	0.00	0.00	-47.36	55.97	-38.42	-41.11	17.2	17.24	17.24	26.54	2	751.9	1.54	782	1.5	763.3	-0.907	0.26	0.28
	L_6–L_7	17.16	-23.69	-0.36	0.37	1.00	-1.00	-0.11	0.11	0.27	-0.30	-4.64	4.80	12.99	-13.66	-1.20	1.31	3.18	-3.58	16.27	-24.55	39.20	-48.55	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.907	0.26	0.28
	L_7–L_8	60.40	-64.15	-0.32	0.34	0.91	-0.91	-0.17	0.17	0.25	-0.27	-7.35	7.53	13.65	-13.82	-1.02	1.18	0.48	-0.90	74.30	-78.42	102.17	54.67	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.531	0.81	0.81
	L_8–L_9	74.44	-85.11	-0.15	0.19	1.02	-1.07	-0.06	0.06	0.29	-0.32	-8.13	8.43	0.46	-2.04	-2.08	13.21	-13.81	-0.72	0.73	5.15	-5.53	53.18	-106.98	120.64	71.63	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5	958.8	0.594	0.84	0.84
	L_9–L_{10}	157.77	-162.63	-0.22	0.22	1.01	-1.04	-0.08	0.08	0.83	-0.87	-21.19	20.78	21.21	-21.01	-1.00	1.10	9.53	-10.42	202.77	-206.48	240.01	163.09	33.1	33.05	32.91	54.51	14	1187.1	1.65	1766	1.5	1737.0	0.669	0.87	0.87
	L_{10}–L_{11}	164.37	-173.76	-0.19	0.18	1.51	-1.54	-0.07	0.07	0.91	-0.95	-2.42	2.32	19.54	-19.98	-0.85	0.83	10.97	-11.39	209.43	-221.80	253.34	172.91	42.7	42.74	42.74	65.30	3	1389.6	1.53	2155	1.5	2115.6	0.683	0.87	0.87
	L_{11}–L_{12}	194.92	-235.55	-0.13	0.16	1.36	-1.50	-0.06	0.07	1.66	-1.17	-1.63	2.11	17.60	-19.99	-0.77	0.88	12.73	-14.04	250.28	-302.34	292.83	209.16	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.828	0.27	0.27
	L_{12}–L_{13}	133.48	204.39	-1.67	0.16	1.23	-0.72	-0.04	0.07	1.35	-0.31	-3.50	13.63	0.46	-1.25	-0.09	-205.65	339.07	-210.64	46.71	-71.24	10.5	71.24	42.7	42.74	42.74	65.30	8	1711.0	1.53	2357	1.5	2312.1	-0.899	0.20	0.21
	L_{13}–L_{14}	-201.32	204.79	-2.04	2.05	0.39	-0.37	-0.91	0.88	0.15	-0.16	-26.08	26.19	9.57	-9.43	-7.73	7.47	-13.73	-10.88	10.50	1.81	-1.68	1.68	42.7	42.74	42.74	65.30	8	1711.0	1.53	2357	1.5	2312.1	-0.987	0.21	0.21
	L_{14}–L_{15}	159.93	-159.82	-1.93	1.93	0.41	-0.41	-0.58	0.58	0.25	-0.25	-22.71	22.71	9.17	-9.17	-7.38	7.38	-13.36	-13.36	-0.01	0.01	0.0	0.00	42.7	42.74	42.74	65.30	8	1711.0	1.53	2357	1.5	2312.1	-0.999	0.20	0.20
	L_{15}–L_{16}	-79.54	88.71	-1.11	1.15	0.26	-0.27	-0.37	0.41	0.10	-0.10	-14.22	14.64	3.33	-3.44	-4.46	4.87	1.18	-1.21	-122.79	140.69	-97.54	-109.45	21.5	21.54	21.54	33.27	2	987.9	1.54	1098	1.5	1066.2	-0.968	0.24	0.24
	L_{16}–L_{17}	-38.62	43.91	-0.57	0.61	0.07	-0.07	-0.11	0.11	0.07	-0.07	-6.32	6.62	-3.76	-3.87	-2.17	2.17	-1.36	-1.36	-59.64	67.51	-47.51	-51.97	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.907	0.26	0.26
	L_{17}–L_{18}	-4.04	12.92	0.80	0.87	0.41	-0.39	-0.17	0.21	0.13	-0.13	-10.26	11.14	5.38	-5.82	-3.76	3.97	2.56	-2.95	2.91	5.51	-1.60	-19.24	30.74	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.626	0.35	0.35
	L_{18}–L_{19}	27.52	-27.99	-0.65	0.67	0.64	-0.66	-0.04	0.05	0.10	-0.12	-8.32	8.59	8.22	-8.37	-5.43	5.60	1.22	-1.39	24.97	-25.22	46.46	-47.26	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.953	0.21	0.21
	L_{19}–L_{20}	59.94	-59.91	-0.27	0.27	0.76	-0.76	-0.02	0.02	0.23	-0.23	-7.65	7.65	13.65	-13.65	-1.02	1.02	0.00	0.00	77.20	-77.20	104.96	54.67	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.531	0.81	0.81
	L_{20}–L_{21}	130.31	-141.80	-0.12	0.12	1.30	-1.36	0.00	0.00	0.47	-0.58	-1.57	-1.48	16.65	-17.41	0.00	0.00	5.58	-6.94	167.37	-182.41	198.30	139.05	20.8	20.80	20.67	34.64	1	1037.5	1.67	1143	1.5	1229.6	0.721	0.88	0.88
	L_{21}–L_{22}	219.58	-231.43	-0.33	0.31	1.67	-1.76	-0.06	0.05	1.25	-0.85	-2.13	1.83	23.13	-22.82	0.00	0.00	9.91	-11.39	274.50	-288.80	322.84	228.00	42.7	42.74	42.74	65.30	8	1711.0	1.53	2357	1.5	2312.1	-0.931	0.21	0.21
	L_{22}–L_{23}	193.18	-200.19	-0.11	0.16	1.57	-1.64	0.00	0.00	-0.68	-1.38	-2.01	20.00	-20.98	0.00	0.00	8.02	-8.10	249.33	-257.64	287.54	213.33	43.0	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0	0.742	0.90	0.90
	L_{23}–L_{24}	194.78	-194.55	-0.19	0.24	1.49	-1.51	0.00	0.00	0.65	-0.67	-2.47	3.00	18.99	-19.33	0.00	0.00	7.81	-7.82	250.01	-249.01	288.05	217.91	43.0	42.96	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0	0.757	0.90	0.90
	L_{24}–L_{25}	187.73	-170.02	-0.32	0.30	1.53	-1.41	-0.06	0.05	0.26	-0.25	-2.51	2.71	18.29	-16.75	-0.74	0.66	7.52	-6.57	241.03	-209.11	277.25	183.01	43.0	42.96	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0	0.626	0.90	0.90
	L_{25}–L_{26}	231.65	-230.62	-0.53	0.53	1.38	-1.31	0.00	0.00	-0.77	-0.77	-6.76	6.81	17.67	-16.67	0.00	0.00	9.20	-9.19	292.36	-290.95	336.08	267.52	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	0.796	0.92	0.92
	L_{26}–L_{27}	26.62	-29.21	-0.34	0.34	0.79	-0.79	-0.01	0.01	0.12	-0.12	-19.30	19.30	0.00	0.00	0.00	0.00	-18.19	-18.19	0.00	0.00	0.0	0.00	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.999	0.20	0.20
	L_{27}–L_{28}	-225.23	219.22	-2.13	1.98	0.17	-0.21	-0.83	0.81	0.00	0.00	-26.88	25.05	2.20	-2.60	-9.92	9.76	0.00	0.00	-321.24	317.55	-283.45	-289.68	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.989	0.20	0.20
	L_{28}–L_{29}	-182.78	181.59	-2.09	2.09	0.28	-0.27	-0.77	0.78	0.07	0.00	-26.13	26.41	3.57	-3.41	-9.28	9.34	0.80	-0.98	-271.56	270.40	-231.90	-243.30	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.996	0.20	0.20
	L_{29}–L_{30}	-159.35	163.90	-2.01	2.13	0.34	-0.34	-0.74	0.76	0.05	0.09	-25.33	26.90	4.33	-4.23	-8.94	9.07	0.58	-1.10	-240.07	248.04	-200.77	-214.21	39.8	39.83	39.23	63.33	14	1262.6	1.53	1955	1.5	1822.1	-0.968	0.21	0.21
	L_{30}–L_{31}	60.40	54.19	-1.26	1.26	0.62	-0.62	-0.13	0.13	0.35	-0.35	-9.38	9.38	4.33	-4.33	-3.22	3.22	0.00	0.00	-74.39	67.34	-58.01	-59.85	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.992	0.20	0.20
	L_{31}–L_{32}	-99.51	63.36	-0.93	0.97	0.26	-0.26	-0.34	0.36	0.00	-0.01	-11.73	12.27	3.28	-3.31	-4.02	4.24	0.02	-0.12	-92.61	98.32	-73.07	-81.82	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.942	0.22	0.22
	L_{32}–L_{33}	-37.62	42.64	-0.59	0.63	0.07	-0.07	-0.09	0.13	-0.14	-0.61	-6.25	7.15	1.87	-2.58	-1.98	2.89	1.06	-1.52	-73.73	-65.21	-59.31	-63.21	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.389	0.44	0.44
	L_{33}–L_{34}	4.56	-5.01	-0.64	0.50	0.57	-0.63	-0.07	0.09	0.13	-0.14	-5.61	6.25	7.15	-7.98	-0.89	1.06	1.52	-1.73	-6.21	2.99	17.20	-6.69	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.389	0.44	0.44
	L_{34}–L_{35}	-38.28	65.09	-0.31	0.33	0.64	-0.64	-0.03	0.03	0.11	-0.13	-13.38	14.14	0.00	0.00	0.00	0.00	-6.94	-6.94	-39.12	66.54	-39.12	-66.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.194	0.72	0.72
	L_{35}–L_{36}	70.77	-74.69	-0.30	0.29	1.66	-1.69	-0.05	0.05	0.40	-0.41	-3.74	3.71	13.27	-13.81	-0.61	0.61	4.75	-4.93	87.14	-91.49	118.43	67.63	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.586	0.49	0.49
	L_{36}–L_{37}	104.65	-105.00	-0.28	0.27	1.31	-1.29	-0.06	0.06	0.52	-0.51	-3.51	3.38	16.54	-16.25	-0.66	0.70	6.19	-6.12	-137.48	-132.10	165.60	106.97	18.7	18.71	18.61	31.48	8	970.0	1.68	1339	1.5	926.1	0.646	0.86	0.86
	L_{37}–L_{38}	189.58	-191.55	-0.28	0.27	1.96	-1.99	-0.06	0.06	0.80	-0.83	-3.50	3.40	24.69	-25.07	-0.72	0.83	9.58	-9.77	241.90	-243.95	291.00	201.16	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	0.691	0.88	0.88
	L_{38}–L_{39}	153.03	-157.73	-0.24	0.24	1.61	-1.64	-0.05	0.05	0.66	-0.68	-2.88	2.79	20.31	-20.74	-0.61	0.57	7.89	-8.07	198.83	-200.83	239.21	165.33	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	0.691	0.88	0.88
	L_{39}–L_{40}	207.01	-210.59	-0.56	0.56	1.52	-1.42	0.00	0.00	0.81	-0.81	-7.07	7.12	19.25	-19.25	-1.07	1.07	0.00	0.00	-272.00	-276.50	-255.92	-264.51	30.6	30.71	30.61	51.48	8	1392.6	1.62	2090	1.5	1938.9	0.760	0.92	0.92
	L_{40}–L_{41}	64.03	-63.32	-0.22	0.22	0.68	-0.68	-0.03	0.03	0.08	-0.08	-2.68	2.68	8.22	-8.22	-2.17	2.17	0.00	0.00	-84.00	84.00	-58.01	-59.85	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.992	0.20	0.20
	L_{41}–L_{42}	-251.15	245.11	-1.82	1.72	0.18	-0.18	-0.82	0.81	0.00	0.00	-23.19	21.91	2.31	-2.77	-9.83	9.68	0.00	0.00	-356.64	347.12	-323.49	-329.45	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.973	0.21	0.21
	L_{42}–L_{43}	-185.39	178.08	-1.60	1.63	0.16	-0.28	-0.66	0.69	0.05	0.10	-20.44	20.76	1.99	-3.53	-7.94	8.27	0.56	-1.25	-297.38	-298.58	-257.68	-247.21	43.2	43.24	43.16	70.66	19	1516.6	1.63	2332	1.5	2140.4	-0.999	0.21	0.21
	L_{43}–L_{44}	52.98	116.87	-1.27	1.27	0.31	-0.31	-0.58	0.58	0.04	-0.04	-20.44	20.44	3.37	-3.37	-7.38	7.38	0.00	0.00	-276.10	-276.10	-216.77	-216.77	43.2	43.24	43.16	70.66	19	1516.6	1.63	2332	1.5	2140.4	-0.999	0.21	0.21
	L_{44}–L_{45}	-185.34	192.19	-1.60	1.69	-0.01	-0.06	-0.64	0.64	0.00	0.00	-20.40	21.64	-0.17	-0.70	-7.63	7.72	0.00	0.00	-267.46	277.99	-241.15	-241.85	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0	-0.962	0.22	0.22
	L_{45}–L_{46}	-202.26	210.06	-1.76	1.81	0.01	-0.06	-0.70	0.70	0.00	0.00	-22.03	23.76	-0.34	-0.48	-8.23	8.36	0.00	0.00	-293.56	305.12	-265.16	-265.16	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0	-0.962	0.22	0.22
	L_{46}–L_{47}	-116.39	129.36	-1.35	1.38	0.13	-0.09	-0.42	0.45	0.00	0.00	-17.26	17.68	1.65	-1.26	-4.99	5.40	0.00	0.00	-173.75	193.15	-149.17	-152.87	29.8	29.83	29.77	49.28	14	1137.6	1.68	1711	1.5	1711.0	-0.953	0.21	0.21
	L_{47}–L_{48}	-52.79	62.48	-0.62	0.71	0.26	-0.29	-0.16	0.22	0.00	0.00	-7.90	9.11	-3.91	-2.18	2.58	0.00	0.00	-78.90	93.06	-64.33	-73.45	-74.14	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.948	0.26	0.26
	L_{48}–L_{49}	-19.17	20.05	-0.26	0.26	0.53	-0.53	-0.03	0.03	0.08	-0.08	-2.68	2.68	5.52	-5.52	-1.46	1.46	0.00	0.00	-28.54	28.54	-21.75	-21.75	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.992	0.20	0.20
	L_{49}–L_{50}	18.83	-25.55	-0.45	0.39	0.93	-0.99	-0.14	0.14	0.22	-0.25	-5.80	5.03	11.82	-12.60	-1.67	1.73	2.66	-3.02	16.94	-26.67	39.84	-49.99	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.803	0.28	0.28
	L_{50}–L_{51}	95.02	-96.90	-0.25	0.25	1.02	-1.04	-0.10	0.10	0.37	-0.40	-3.18	3.12	18.29	-18.29	-0.93	0.93	7.16	-7.16	126.13	-126.27	139.53	94.25	19.4	19.37	19.31	29.87	1	907.0	1.54	986	1.5	958.8	0.594	0.84	0.84
	L_{51}–L_{52}	189.59	-202.30	-0.31	0.30	1.56	-1.62	-0.12	0.11	0.78	-0.81	-3.90	3.79	19.94	-20.00	-1.45	1.34	9.40	-9.72	239.51	-256.01	284.61	207.84	46.5	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.730	0.31	0.31
	L_{52}–L_{53}	214.89	-210.10	-0.19	0.27	1.30	-1.63	-0.06	0.10	0.92	-0.93	-2.36	3.48	16.60	-20.88	-0.67	1.15	8.59	-11.12	275.41	-345.11	312.10	237.76	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_{53}–L_{54}	200.52	-192.55	-0.17	0.17	1.21	-1.21	-0.05	0.05	0.86	-0.86	-2.17	2.17	15.50	-15.50	-0.62	0.62	8.02	-8.02	257.16	-247.42	292.00	214.89	46.5	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.779	0.29	0.29
	L_{54}–L_{55}	-186.19	183.03	-2.09	2.04	0.27	-0.25	-0.10	0.10	0.00	0.00	-27.00	26.45	3.43	-3.17	-13.21	12.55	0.00	0.00	-277.15	272.32	-236.09	-247.43	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.983	0.21	0.21
	L_{55}–L_{56}	-144.26	138.73	-1.59	1.59	0.21	-0.19	-0.08	0.08	0.00	0.00	-20.65	20.65	3.33	-3.33	-10.15	10.15	0.00	0.00	-213.96	213.96	-181.31	-181.31	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.993	0.20	0.20
	L_{56}–L_{57}	-66.06	78.17	-1.07	1.11	0.18	-0.19	-0.44	0.48	0.07	-0.07	-13.90	14.30	2.33	-2.42	-5.24	5.72	0.82	-0.82	-103.94	120.20	-81.79	-90.08	19.4	19.37	19.37	29.87	1	907.0	1.54	986	1.5	958.8	-0.965	0.25	0.25
	L_{57}–L_{58}	-11.00	18.48	0.91	0.96	0.39	-0.39	-0.22	0.26	0.10	-0.11	-11.75	12.42	4.99	-5.07	-2.69	3.16	1.16	-1.

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: 2F1
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-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	3.65	-1.42	-1.02	0.45	0.03	-0.06	0.15	0.01	0.03	-0.02
	U_1-L_1	-11.48	-3.33	-0.39	0.17	-0.04	-0.15	0.25	0.07	0.08	-0.04
	U_1-L_2	-21.51	-11.78	-0.24	0.07	-0.09	-0.23	0.00	0.00	-0.04	-0.06
	U_1-U_2	9.81	-15.01	0.06	0.05	-0.10	-0.33	0.08	0.01	-0.08	-0.12
	L_2-U_2	-16.21	25.06	0.08	-0.02	0.13	0.12	-0.17	-0.01	-0.11	-0.04
	U_2-L_3	-34.06	79.08	0.73	0.67	0.12	-0.11	-0.28	0.44	0.00	-0.03
	U_2-U_3	-41.10	82.89	0.83	0.78	0.13	-0.12	-0.32	0.51	0.00	-0.03
	L_3-U_3	-1.39	103.62	0.40	0.77	0.14	-0.29	-0.09	0.65	0.00	0.00
	U_3-L_4	-12.27	139.07	0.41	1.04	-0.08	-0.35	0.01	0.71	0.00	-0.05
	U_3-U_4	-10.50	90.29	0.52	0.79	0.05	-0.21	-0.50	0.51	0.00	-0.03
	L_4-U_4	-73.43	69.78	-0.77	0.52	-0.30	-0.07	-0.31	0.35	0.00	0.00
	U_4-L_5	-82.30	82.30	-0.82	0.82	-0.29	-0.29	0.23	0.00	0.00	0.00
	U_4-U_5	-69.90	47.85	-0.64	0.59	-0.16	-0.31	0.21	0.00	-0.23	0.00
	L_5-U_5	-27.40	6.37	-0.26	0.16	0.04	-0.23	-0.03	0.05	-0.12	-0.02
	U_5-L_6	-5.39	5.39	-0.14	0.14	-0.33	0.00	0.00	0.00	-0.06	0.00
	U_5-U_6	-31.05	12.71	-0.51	0.40	0.04	-0.18	0.19	0.11	0.05	-0.04
	L_6-U_6	-66.66	27.26	-0.51	0.68	0.12	-0.28	0.65	0.26	-0.57	0.31
	U_6-L_7	-118.88	85.32	-1.16	0.98	0.15	-0.14	-0.55	0.42	0.06	-0.05
	U_6-U_7	-118.21	87.79	-1.11	0.91	-0.57	0.46	0.04	-0.04	-14.30	11.57
	L_7-U_7	-146.00	120.15	-1.07	0.93	0.08	-0.09	-0.77	0.62	0.04	-0.04
	U_7-L_8	-86.84	116.71	-1.68	1.25	0.10	-0.18	-0.13	0.38	0.01	-0.06
	U_7-U_8	-134.13	114.46	-1.29	1.05	-0.69	0.53	0.12	-0.10	-16.51	14.68
	L_8-U_8	-118.22	92.25	-1.29	1.15	0.31	-0.28	-0.52	0.43	0.11	-0.09
	U_8-L_9	-84.32	84.32	-0.51	0.51	0.46	-0.19	-0.18	0.11	0.07	-0.06
	U_8-U_9	-84.32	8.60	-0.51	0.41	0.06	-0.19	-0.18	0.11	0.07	-0.06
	L_9-U_9	-13.33	-37.03	0.17	0.09	0.26	-0.47	0.00	0.00	0.04	-0.13
	U_9-L_{10}	-66.01	54.01	-0.59	0.51	0.04	-0.22	-0.23	0.17	0.00	0.00
	U_9-U_{10}	-133.76	104.35	-1.15	0.98	-0.33	0.00	0.00	0.00	-14.70	11.20
	L_{10}-U_{10}	-116.16	105.67	-1.09	0.77	-0.11	-0.36	-0.36	0.00	0.00	0.00
	U_{10}-L_{11}	-132.38	132.38	-1.13	0.89	0.00	-0.12	-0.26	0.45	0.00	0.00
	U_{10}-U_{11}	-131.93	101.03	-1.09	1.02	0.27	-0.11	-0.42	0.51	0.00	0.00
	L_{11}-U_{11}	-175.29	162.92	-1.23	1.09	0.44	-0.31	-0.64	0.56	0.42	0.00
	U_{11}-L_{12}	-45.28	135.72	-0.96	1.25	-0.02	-0.09	-0.36	0.49	0.18	-0.02
	U_{11}-U_{12}	-143.91	98.14	-1.29	0.94	0.21	-0.13	-0.49	0.44	0.00	0.00
	L_{12}-U_{12}	-112.48	136.84	-1.41	1.30	0.14	-0.17	-0.48	0.55	0.00	0.00
	U_{12}-L_{13}	-83.68	83.68	-1.16	0.93	-0.19	-0.19	-0.37	0.40	0.00	0.00
	U_{12}-U_{13}	-83.68	84.68	-1.16	0.93	-0.19	-0.37	0.40	0.00	0.00	0.00
	L_{13}-U_{13}	-91.76	54.22	-0.73	0.59	-0.02	-0.22	-0.27	0.25	0.00	0.00
	U_{13}-L_{14}	-14.01	14.01	-0.18	0.14	-0.38	0.00	0.04	-0.01	-0.08	-0.04
	U_{13}-U_{14}	-14.01	1.02	-0.10	0.18	0.14	-0.38	0.00	0.04	-0.01	-0.08
	L_{14}-U_{14}	-32.82	30.90	-0.54	0.47	0.10	-0.20	-0.20	0.17	0.03	0.00
	U_{14}-L_{15}	-83.99	102.03	-1.11	0.84	0.19	-0.20	-0.39	0.44	0.00	0.00
	U_{14}-U_{15}	-98.58	117.15	-1.09	1.01	0.16	-0.19	-0.42	0.49	0.00	0.00
	L_{15}-U_{15}	-126.17	124.51	-1.12	1.07	0.43	-0.33	-0.52	0.49	0.01	-0.01
	U_{15}-L_{16}	-29.24	122.38	-0.83	1.02	-0.36	-0.39	-0.23	0.20	-0.52	0.16
	U_{15}-U_{16}	-82.40	185.99	-1.02	1.32	0.28	-0.15	-0.44	0.60	0.00	0.00
	L_{16}-U_{16}	-138.42	138.42	-1.20	1.11	0.14	-0.03	-0.45	0.52	0.00	0.00
	U_{16}-L_{17}	-128.98	123.04	-1.15	0.88	-0.05	-0.05	-0.40	0.44	0.00	0.00
	U_{16}-U_{17}	-128.98	124.98	-1.15	0.88	-0.05	-0.40	0.44	0.00	0.00	0.00
	L_{17}-U_{17}	-128.43	95.01	-1.07	0.85	-0.10	-0.22	-0.41	0.35	0.00	0.00
	U_{17}-L_{18}	-138.42	138.42	-1.20	1.11	0.14	-0.03	-0.45	0.52	0.00	0.00
	U_{17}-U_{18}	-8.89	-32.25	-0.24	0.10	-0.39	0.00	0.00	0.03	-0.12	-0.04
	L_{18}-U_{18}	-4.65	-13.30	-0.43	0.29	-0.26	-0.34	-0.11	-0.03	-0.06	-0.04
	U_{18}-L_{19}	-43.22	40.48	-0.70	0.57	0.19	-0.16	-0.27	0.19	0.07	0.00
	U_{18}-U_{19}	-43.22	40.48	-0.70	0.57	0.19	-0.16	-0.27	0.19	0.07	0.00
	L_{19}-U_{19}	-135.94	107.53	-1.18	0.98	0.23	-0.21	-0.55	0.45	0.08	-0.06
	U_{19}-L_{20}	-65.25	88.28	-1.82	1.23	0.06	-0.10	-0.12	0.37	0.01	-0.06
	U_{19}-U_{20}	-138.22	96.74	-1.36	1.05	0.19	-0.15	-0.75	0.56	0.05	-0.05
	L_{20}-U_{20}	-113.16	116.77	-1.36	1.13	0.46	-0.37	-0.49	0.56	0.00	0.00
	U_{20}-L_{21}	-43.91	24.73	-0.63	0.52	0.13	-0.11	-0.30	0.20	0.05	-0.04
	U_{20}-U_{21}	-43.91	24.73	-0.63	0.52	0.13	-0.11	-0.30	0.20	0.05	-0.04
	L_{21}-U_{21}	-2.65	25.30	-0.20	0.11	0.13	-0.37	0.00	0.00	-0.05	0.00
	U_{21}-L_{22}	-77.40	53.68	-0.68	0.59	-0.02	-0.16	-0.32	0.23	0.00	0.00
	U_{21}-U_{22}	-81.44	41.31	-0.84	0.40	-0.18	-0.18	-0.36	0.26	0.00	0.00
	L_{22}-U_{22}	-113.16	113.16	-1.27	1.07	0.41	-0.31	-0.47	0.51	0.00	0.00
	U_{22}-L_{23}	-54.92	54.91	-0.68	0.65	0.26	-0.10	-0.45	0.52	0.00	0.00
	U_{22}-U_{23}	-54.92	54.91	-0.68	0.65	0.26	-0.10	-0.45	0.52	0.00	0.00
	L_{23}-U_{23}	-10.13	116.77	-0.57	1.14	-0.64	-0.57	-0.10	0.66	0.00	0.00
	U_{23}-L_{24}	-113.16	116.77	-1.36	1.13	0.46	-0.37	-0.49	0.56	0.00	0.00
	U_{23}-U_{24}	-89.38	90.66	-1.26	0.92	-0.57	0.50	-0.16	-0.38	0.42	0.00
	L_{24}-U_{24}	-113.16	113.16	-1.27	1.07	0.41	-0.31	-0.47	0.51	0.00	0.00
	U_{24}-L_{25}	-18.98	22.49	0.07	0.21	-0.19	-0.23	0.04	0.01	-0.18	-0.01
	U_{24}-U_{25}	-18.98	22.49	0.07	0.21	-0.19	-0.23	0.04	0.01	-0.18	-0.01
	L_{25}-U_{25}	-4.48	-12.52	-0.28	0.29	-0.27	-0.17	0.00	0.00	-0.06	-0.04
	U_{25}-L_{26}	-34.24	14.49	-0.37	0.27	0.07	-0.09	-0.20	0.13	0.07	-0.06

ZZ Axis Moments from STAAD

Location	Member	Max. Pos. Mom. Start (k-ft)	Max. Pos. Mom. End (k-ft)	Max. Neg. Mom. Start (k-ft)	Max. Neg. Mom. End (k-ft)	S_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F/S_{bot}	M_z (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(x)}$	Dead Load (k-ft)	Live Load (Max) (k-ft)	Live Load (Min) (k-ft)	Pedestrian Load (Max) (k-ft)	Pedestrian Load (Min) (k-ft)	Lane Reduction & Impact Live Load (k-ft)	Lane Reduction & Impact Live Load (k-ft)	Impact Pedestrian Load Max (k-ft)	Impact Pedestrian Load Min (k-ft)	Z_f (in^3)	I_{gt} (in^4)	Shape Factor	M_p (k-in)	P_{DH} (kips)	Formula 1.8 Term * F/S_{bot}	M_u (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(x)}$	Axial Force (kips)	Moment (k-in)	Total	Pass	Axial Force (kips)	Moment (k-in)	Total	Pass	Axial Force (kips)	Moment (k-in)	Total	Pass
Structure 1	U_0-L_1	0.00	0.00	-1.66	-0.66	857	1.5	773.7	-0.565	0.37	0.37	-84.92	-28.02	-7.06	-2.79	0.72	0.74	-1.09	-0.56	0.65	0.50	-94.28	-37.26	9.62	9.83	-16.17	-8.33	8.12	7.42	-253.98	-99.69	-87.34	-87.97	100.5	100.60	100.48	126.29	66.1	1.20	3970	144	0.94257797	3126.1	0.377	0.75	0.75	0.214	0.077	0.30	Yes	0.129	0.042	0.18	Yes	—	—	—	—
	U_1-L_1	-13.33	-3.33	-0.39	0.17	-0.04	-0.15	0.25	0.07	0.08	-0.04	-25.44	-6.35	-14.37	-18.08	15.4	15.42	15.42	23.71	23.71	2	751.9	1.54	782	1.5	783.3	0.314	0.61	0.61	122.21	23.62	33.86	-3.48	-0.11	0.49	0.45	45.20	12.45	33.93	93.99	93.99	104.66	65.3	1.11	3454	160	0.94257797	2947.3	0.341	0.75	0.75	0.074	0.037	0.12	Yes	—	—	—	—	—	—	—	—
	U_1-L_2	-23.51	-11.78	-0.24	0.07	-0.09	-0.23	0.00	0.00	-0.04	-0.06	-39.74	-19.87	-23.52	-29.58	15.4	15.42	15.42	23.71	23.71	2	751.9	1.54	782	1.5	783.3	0.314	0.61	0.61	139.74	40.92	12.10	-108.17	-17.67	0.00	0.00	24.45	6.64	153.54	37.47	43.68	30.36	94.0	93.99	93.99	104.66	65.3	1.11	3454	160	0.94257797	2947.3	0.341	0.75	0.75	0.074	0.037	0.12	Yes	0.178	0.055	0.24	Yes	—	—	—	—
	U_1-U_2	9.81	-15.01	0.06	0.05	-0.10	-0.33	0.08	0.01	-0.08	-0.12	0.73	0.64	-1.35	-4.36	0.90	0.13	-0.94	-1.40	14.90	-18.50	11.00	-25.17	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	783.3	-0.427	0.43	0.43	206.47	91.61	1.50	1.01	-9.70	-2.59	0.12	0.19	2.20	0.58	20.05	13.49	-129.64	-34.59	1.71	2.85	32.60	8.89	296.70	140.34	99.87	74.13	94.0	93.99	93.99	104.66	65.3	1.11	3454	171	0.91618676	2952.4	0.473	0.79	0.79	—	—	—	—	0.381	0.104	0.49	Yes	0.352	0.032	0.39	Yes
	L_2-U_2	-16.21	25.06	0.08	-0.02	0.13	0.12	-0.17	-0.01	-0.11	-0.04	19.25	2.97	1.94	2.98	-1.54	-0.36	1.42	2.24	-19.25	30.99	-13.20	29.87	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	783.3	-0.427	0.43	0.43	-154.31	8.15	0.38	0.24	-2.20	-0.63	5.13	7.23	0.82	24.82	5.05	3.56	-32.38	-12.35	-184.28	113.47	113.37	132.15	82.8	1.11	3454	171	0.91618676	2952.4	0.473	0.79	0.79	—	—	—	—	0.313	0.062	0.40	Yes	0.173	0.045	0.22	Yes
	U_2-L_3	-34.06	79.08	0.73	0.67	0.12	-0.11	-0.28	0.44	0.00	-0.03	8.96	1.62	-61.64	121.28	-42.18	100.93	15.42	23.71	23.71	2	751.9	1.54	782	1.5	783.3	-0.476	0.41	0.41	-192.51	23.27	-13.90	0.00	-15.99	14.71	25.83	-5.49	0.00	0.00	304.11	42.23	-212.11	35.52	148.0	147.96	147.96	167.25	221.8	1.13	5519	262	0.89348452	4728.8	0.139	0.34	0.34	0.357	0.124	0.49	Yes	0.196	0.068	0.27	Yes	—	—	—	—
	U_2-U_3	-41.10	82.89	0.83	0.78	0.13	-0.12	-0.32	0.51	0.00	-0.03	10.46	1.89	-71.92	141.50	-49.21	117.76	15.42	23.71	23.71	2	751.9	1.54	782	1.5	783.3	-0.476	0.41	0.41	-224.60	27.15	-16.22	0.00	-18.65	17.16	30.13	-6.40	0.00	0.00	354.80	49.26	-247.46	41.45	172.7	171.95	171.95	195.12	258.8	1.13	5519	262	0.89348452	4728.8	0.139	0.34	0.34	0.357	0.124	0.49	Yes	0.196	0.068	0.27	Yes	—	—	—	—
	L_3-U_3	-1.39	103.62	0.40	0.77	0.14	-0.29	-0.09	0.65	0.00	0.00	0.00	-0.12	-158.19	0.70	130.38	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.564	0.57	0.57	-153.23	-53.31	0.22	0.69	-1.41	-1.08	-1.81	-0.82	0.00	2.91	8.74	18.42	-14.40	-26.84	-12.19	0.00	0.00	-230.30	-125.78	-223.67	-140.52	148.0	147.96	147.96	167.25	221.8	1.13	5519	225	0.9599541	4689.9	0.546	0.82	0.82	0.325	0.132	0.46	Yes	0.179	0.073	0.26	Yes	—	—	—	—
	U_3-L_4	-12.27	139.07	0.41	1.04	-0.08	-0.35	0.01	0.71	0.00	-0.05	-22.73	209.31	-17.23	179.94	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2014.7	-0.109	0.56	0.56	-251.60	97.15	-3.11	-2.50	1.32	0.14	1.96	0.67	0.00	0.00	-40.26	-32.40	-17.05	1.75	28.12	9.60	0.00	0.00	311.29	96.86	349.24	128.57	202.9	202.86	190.44	238.56	256.9	1.18	7872	228	0.91181417	6497.7	0.294	0.71	0.71	0.415	0.107	0.53	Yes	0.245	0.062	0.31	Yes	—	—	—	—
	U_3-U_4	-10.50	90.29	0.52	0.79	0.05	-0.21	-0.50	0.51	0.00	-0.03	-19.26	180.72	-14.60	155.39	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2014.7	-0.109	0.56	0.56	-251.60	97.15	-3.11	-2.50	1.32	0.14	1.96	0.67	0.00	0.00	-40.26	-32.40	-17.05	1.75	28.12	9.60	0.00	0.00	311.29	96.86	349.24	128.57	202.9	202.86	190.44	238.56	256.9	1.18	7872	228	0.91181417	6497.7	0.294	0.71	0.71	0.415	0.107	0.53	Yes	0.245	0.062	0.31	Yes	—	—	—	—
	L_4-U_4	-73.43	69.78	-0.77	0.52	-0.30	-0.07	-0.31	0.35	0.00	0.00	-113.24	104.97	-100.47	89.57	39.8	39.77	39.55	65.61	21	1616.3	1.65	2165	1.5	1968.6	-0.927	0.23	0.23	62.46	-78.50	-3.76	-2.83	-9.36	-3.00	1.69	0.30	0.00	0.00	47.78	-144.29	-76.23	-132.58	197.4	197.41	184.99	230.30	248.6	1.17	7600	299	0.89831336	6309.9	0.500	0.80	0.80	0.406	0.072	0.48	Yes	0.251	0.041	0.30	Yes	—	—	—	—
	U_4-L_5	-82.30	82.30	-0.82	0.82	-0.29	-0.29	0.23	0.00	0.00	0.00	-127.65	127.65	-112.05	112.05	39.8	39.77	39.55	65.61	21	1616.3	1.65	2165	1.5	1968.6	-0.927	0.23	0.23	69.31	-87.17	-4.20	-3.20	-10.61	-4.05	2.23	0.69	0.00	0.00	38.44	-139.68	-117.79	-188.15	197.4	197.41	184.99	230.30	248.6	1.17	7600	299	0.89831336	6309.9	0.500	0.80	0.80	0.406	0.072	0.48	Yes	0.251	0.041	0.30	Yes	—	—	—	—
	U_4-U_5	-69.90	47.85	-0.64	0.59	-0.16	-0.31	0.21	0.00	-0.23	0.00	-106.38	74.49	-94.57	62.48	39.8	39.77	39.55	65.61	21	1616.3	1.65	2165	1.5	1968.6	-0.927	0.23	0.23	62.46	-78.50	-3.76	-2.83	-9.36	-3.00	1.69	0.30	0.00	0.00	47.78	-144.29	-76.23	-132.58	197.4	197.41	184.99	230.30	248.6	1.17	7600	299	0.89831336	6309.9	0.500	0.80	0.80	0.406	0.072	0.48	Yes	0.251	0.041	0.30	Yes	—	—	—	—
	L_5-U_5	-27.40	6.37	-0.26	0.16	0.04	-0.23	-0.03	0.05	-0.12	-0.02	-43.02	11.02	-35.63	4.15	15.4	15.42	15.42	23.71	23.71	2	751.9	1.54	782	1.5	783.3	-0.275	0.49	0.49	99.25	-19.65	-1.27	-0.51	-5.10	-1.46	-0.09	-0.07	2.45	0.86	-16.39	-6.55	-65.92	-18.63	-1.32	-0.93	35.15	12.35	53.72	-112.05	-8.67	-126.01	94.0	93.99	93.99	104.66	65.3	1.11	3454	145	0.94237353	2925.7	0.068	0.63	0.63	0.329	0.088	0.42	Yes	0.181	0.049	0.23	Yes	—	—	—	—
	U_5-L_6	-5.39	5.39	-0.14	0.14	-0.33	0.00	0.00	0.00	-0.06	0.00	-8.46	8.46	-11.87	11.87	15.4	15.42	15.42	23.71	23.71	2	751.9	1.54	782	1.5	783.3	-0.275	0.49	0.49	99.25	-20.28	-163.04	0.00	-4.59	0.00	0.00	0.00	-40.96	-8.76	-329.78	-131.47	-24.69	84.0	93.99	93.99	104.66	65.3	1.11	3454	160	0.94237353	2925.7	0.068	0.63	0.63	0.329	0.088	0.42	Yes	0.181	0.049	0.23	Yes	—	—	—	—
	U_5-U_6	-31.05	12.71	-0.51	0.40	0.04	-0.18	0.19	0.11	0.05	-0.04	-48.57	23.27	-39.74	13.55	15.4	15.42	15.42	23.71	23.71	2	751.9	1.54	782	1.5	783.3	-0.476	0.41	0.41	-199.02	-99.98	-0.55	0.68	4.04	-0.47	-2.80	-0.48	0.07	-0.03	-7.14	7.81	52.30	-0.04	-40.94	-4.90	106.1	-0.43	-268.01	-118.51	-190.74	-137.82	94.0	93.99	93.99	104.66	65.3	1.11	3454	123	0.93137227	2994.2	0.432	0.78	0.78	0.190	0.140	0.34	Yes	0.105	0.077	0.19	Yes	—	—	—	—
	L_6-U_6	-66.66	27.26	-0.51	0.68	0.12	-0.28	0.65	0.26	-0.57	0.31	-104.29	42.64	-95.27	80.54	39.8	39.77	39.55	65.61	21	1616.3	1.65	2165	1.5	1968.6	-0.927	0.23	0.23	62.46	-78.50	-3.76	-2.83	-9.36	-3.00	1.69	0.30	0.00	0.00	47.78	-144.29	-76.23	-132.58	197.4	197.41	184.99	230.30	248.6	1.17	7600	299	0.89831336	6309.9	0.500	0.80	0.80	0.406	0.072	0.48	Yes	0.251	0.041	0.30	Yes	—	—	—	—
	U_6-L_7	-118.88	85.32	-1.16	0.98	0.15	-0.14	-0.55	0.42	0.06	-0.05	-150.00	107.68	-157.48	112.97	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.734	0.31	0.31	301.40	-67.04	-9.94	0.59	-0.05	-0.17	-3.13	-1.42	0.03	0.05	-12.12	7.67	0.00	0.00	-465.07	-153.72	-392.16	-393.67	148.0	147.96	147.96	167.25	221.8	1.13	5519	207	0.89021955	4688.3	0.223	0.69	0.69	0.391	0.188	0.58	Yes	0.213	0.103	0.32	Yes	—	—	—	—
	U_6-U_7	-118.21	87.79	-1.11	0.91	-0.57	0.46	0.04	-0.04	-14.30	11.57	-149.12	110.72	-150.83	156.18	38.6	38.63	38.63	59.23	3	1394.6	1.52	2155	1.5	1902.1	-0.592	0.32	0.32	297.12	-100.44	-8.27	-6.46	0.00	-0.04	-3.27	-1.47	0.00	0.00	-47.05	-22.57	-6.17	0.22	-530.15	-221.51	-483.64	-398.61	148.0	147.96	147.96	167.25	221.8	1.13	5519	207	0.89021955	4688.3	0.223	0.69	0.69	0.391	0.188	0.58	Yes	0.213	0.103	0.32	Yes	—	—	—	—
	U_7-L_8	-146.00	120.15	-1.07	0.93	0.08	-0.09	-0.77	0.62	0.04	-0.04	-13.79	12.07	-9.09	1.74	-0.46	0.29	89.80	38.83	38.83	59.23	3	1394.6	1.53	1955	1.5	1922.1	-0.826	0.22	0.27	0.00	0.00	-0.77	0.03	0.02	0.00	9.06	6.37	0.08	0.00	-25.46	-14.74	-0.29	0.17	59.06	6080	156	0.94217776	5078.9	0.841	0.82	0.82	0.422	0.199	0.59	Yes	0.252	0.087	0.32	Yes	—	—	—	—
	U_7-L_8	-86.84	116.71	-1.68	1.25	0.10	-0.18	-0.13	0.38	0.01	-0.06	-21.49	15.97	-13.23	-1.50	-1.51	4.57	0.14	-0.70	-142.79	178.43	-111.11	-116.79	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.800	0.28	0.28	-189.77	-31.06	-9.40	-3.67	0.68	0.34	-1.06	-0.10	4.01	-120.11	-46.85	8.65	4.37	-15.09	-1.36	5.79	2.83	-422.46	-103.06	-227.93	-237.35	173.7	173.70	173.70	202.71	247.5	1.17	6890	180	0.95415621	5469.3	0.244	0.70	0.70	0.433	0.146	0.58	Yes	0.238	0.080	0.32	Yes	—	—	—	—
	U_7-U_8	-134.13	114.46	-1.29	1.05

Moment (End) AB Operating

Operating Loads - 2F1

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

					Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression											
		Vehicle	Pedestrian	Max.	Max.	Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
DL Factor:		1.300	1.300	Tension	Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
LL Factor:		1.300	1.300	(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Upper Chord	Structure 1	U_0 - U_1	-----	-562.99	-691	83	-97	-878	361	-270	-18	-312	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.231	1.00	Yes	0.759	0.209	0.97	Yes	1.00	**7.43**
		U_1 - U_2	-----	-561.02	-63	21	-132	-832	-7	-42	16	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.230	1.00	Yes	0.757	0.198	0.96	Yes	1.00	**3.86**
		U_2 - U_3	66.29	-585.45	-143	192	-413	-629	4	28	56	220	0.076	0.187	0.27	Yes	0.051	0.122	0.18	Yes	0.797	0.200	1.00	Yes	0.789	0.150	0.94	Yes	1.00	**4.04**
		U_3 - U_4	269.42	-587.70	43	258	-513	-681	18	37	123	41	0.309	0.183	0.50	Yes	0.212	0.125	0.34	Yes	0.800	0.200	1.00	Yes	0.793	0.162	0.96	Yes	1.00	**5.41**
		U_4 - U_5	401.95	-614.00	151	322	-261	-708	12	-33	32	-280	0.461	0.216	0.68	Yes	0.316	0.148	0.47	Yes	0.835	0.146	0.99	Yes	0.828	0.168	1.00	Yes	1.00	**8.11**
		U_5 - U_6	-----	-593.83	-803	578	-516	-467	303	31	353	-337	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.173	0.99	Yes	0.801	0.191	1.00	Yes	1.00	**11.97**
		U_6 - U_7	860.46	-28.83	376	231	-315	-568	-295	-111	338	-347	0.823	0.168	1.00	Yes	0.575	0.116	0.70	Yes	0.033	0.186	0.22	Yes	0.032	0.121	0.16	Yes	1.00	**8.82**
		U_7 - U_8	493.01	-----	-2119	3906	-67	746	490	-617	-432	-345	0.342	0.655	1.00	Yes	0.238	0.446	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.64**
		U_8 - U_9	473.93	-0.77	665	23	2484	-2796	-1139	-59	-188	747	0.388	0.609	1.00	Yes	0.266	0.414	0.68	Yes	0.001	0.417	0.42	Yes	0.001	0.469	0.47	Yes	1.00	**21.04**
		U_9 - U_{10}	706.04	-234.24	242	298	197	-660	-167	14	88	534	0.766	0.234	1.00	Yes	0.519	0.157	0.68	Yes	0.302	0.246	0.55	Yes	0.299	0.148	0.45	Yes	1.00	**9.03**
		U_{10} - U_{11}	225.15	-590.73	298	-94	206	-1067	37	92	331	225	0.244	0.292	0.54	Yes	0.163	0.188	0.36	Yes	0.761	0.208	0.97	Yes	0.754	0.239	1.00	Yes	1.00	**5.95**
		U_{11} - U_{12}	-----	-849.38	203	-121	4	-899	109	410	243	671	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.191	1.00	Yes	0.797	0.149	0.95	Yes	1.00	**4.51**
		U_{12} - U_{13}	-----	-1168.17	-5	-241	-336	-993	349	210	550	436	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.201	1.00	Yes	0.780	0.137	0.92	Yes	1.00	**4.79**
		U_{13} - U_{14}	-----	-1300.46	-156	-391	-306	-1650	226	182	417	516	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.243	1.00	Yes	0.746	0.182	0.93	Yes	1.00	**4.21**
		U_{14} - U_{15}	-----	-1332.04	-263	-245	-742	-1183	209	30	542	50	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.220	1.00	Yes	0.764	0.130	0.90	Yes	1.00	**5.08**
		U_{15} - U_{16}	-----	-1372.39	-203	-414	-684	-1289	82	45	413	121	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.201	1.00	Yes	0.787	0.142	0.93	Yes	1.00	**5.02**
		U_{16} - U_{17}	-----	-1376.86	-528	-163	-696	-1147	321	-76	546	-137	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.195	1.00	Yes	0.789	0.127	0.92	Yes	1.00	**7.25**
		U_{17} - U_{18}	-----	-1108.36	-669	209	-512	-449	432	32	363	-183	-----	-----	-----	-----	-----	-----	-----	-----	0.878	0.118	1.00	Yes	0.867	0.109	0.98	Yes	1.00	**6.11**
		U_{18} - U_{19}	-----	-718.90	-313	106	-709	-467	45	-100	408	-342	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.181	1.00	Yes	0.809	0.143	0.96	Yes	1.00	**7.55**
		U_{19} - U_{20}	-----	-543.40	-1372	1914	-91	-1114	196	-814	115	-1313	-----	-----	-----	-----	-----	-----	-----	-----	0.617	0.298	0.92	Yes	0.611	0.385	1.00	Yes	1.00	**13.65**
	Structure 2	U_0 - U_1	-----	-600.13	-85	-103	127	-1677	3	-70	238	148	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.278	1.00	Yes	0.709	0.285	1.00	Yes	1.00	**12.00**
		U_1 - U_2	-----	-820.17	-46	-194	21	-1192	-70	-220	-51	-319	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.198	1.00	Yes	0.792	0.181	0.98	Yes	1.00	**6.53**
		U_2 - U_3	-----	-1111.96	-94	-289	-38	-1861	-28	360	62	522	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.206	1.00	Yes	0.789	0.190	0.98	Yes	1.00	**5.66**
		U_3 - U_4	-----	-1279.26	-416	-417	-899	-1882	360	552	438	636	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.265	1.00	Yes	0.728	0.168	0.90	Yes	1.00	**4.94**
		U_4 - U_5	-----	-1410.71	-462	-391	-1199	-2000	760	301	446	333	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.264	1.00	Yes	0.724	0.166	0.90	Yes	1.00	**5.06**
		U_5 - U_6	-----	-1502.08	-437	-32	-948	-1708	188	-201	401	485	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.222	1.00	Yes	0.771	0.142	0.92	Yes	1.00	**5.12**
		U_6 - U_7	-----	-1284.70	-309	-128	-947	-1856	-121	-177	298	112	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.257	1.00	Yes	0.732	0.165	0.90	Yes	1.00	**4.55**
		U_7 - U_8	-----	-1369.76	-192	-173	-1529	-1326	-107	-184	177	-37	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.214	1.00	Yes	0.780	0.136	0.92	Yes	1.00	**5.58**
		U_8 - U_9	-----	-1205.06	-249	157	-669	-1186	-109	-207	289	-348	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.173	1.00	Yes	0.817	0.126	0.95	Yes	1.00	**6.74**
		U_9 - U_{10}	212.51	-993.96	-40	390	-950	-815	-154	-159	272	-196	0.156	0.145	0.31	Yes	0.106	0.098	0.21	Yes	0.863	0.129	1.00	Yes	0.858	0.116	0.98	Yes	1.00	**7.51**
		U_{10} - U_{11}	555.15	-805.58	214	405	-1219	-743	-192	-166	433	-213	0.469	0.225	0.70	Yes	0.319	0.146	0.47	Yes	0.805	0.189	1.00	Yes	0.801	0.172	0.98	Yes	1.00	**9.33**
		U_{11} - U_{12}	-----	-735.56	-1895	995	-400	-1421	745	-17	583	-525	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.193	0.93	Yes	0.731	0.267	1.00	Yes	1.00	**22.41**
		U_{12} - U_{13}	1093.41	-----	452	164	-295	-1665	-403	-358	309	-467	0.738	0.254	1.00	Yes	0.526	0.172	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.05**
		U_{13} - U_{14}	484.14	-----	-4096	7203	-288	1344	342	-1261	-878	-1056	0.238	0.753	1.00	Yes	0.169	0.494	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**23.92**
		U_{14} - U_{15}	599.37	-----	1138	294	6475	-5621	-1531	-383	-783	349	0.295	0.704	1.00	Yes	0.209	0.462	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**23.60**
		U_{15} - U_{16}	1206.72	-----	127	459	-436	-1700	-607	-370	-89	881	0.730	0.268	1.00	Yes	0.519	0.181	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.06**
		U_{16} - U_{17}	1001.52	-95.18	638	301	852	-1597	-201	-24	509	371	0.738	0.254	1.00	Yes	0.491	0.167	0.66	Yes	0.083	0.195	0.28	Yes	0.083	0.201	0.29	Yes	1.00	**11.02**
		U_{17} - U_{18}	648.74	-300.24	416	289	347	-1312	16	264	297	828	0.651	0.344	1.00	Yes	0.434	0.227	0.67	Yes	0.357	0.345	0.71	Yes	0.355	0.223	0.58	Yes	1.00	**7.66**
		U_{18} - U_{19}	493.78	-601.82	481	201	149	-1370	119	121	475	478	0.496	0.303	0.80	Yes	0.325	0.193	0.52	Yes	0.715	0.279	1.00	Yes	0.711	0.233	0.95	Yes	1.00	**7.80**
		U_{19} - U_{20}	276.12	-688.91	286	195	-424	-1088	32	24	177	534	0.259	0.246	0.51	Yes	0.172	0.162	0.34	Yes	0.765	0.232	1.00	Yes	0.760	0.174	0.94	Yes	1.00	**6.33**
		U_{20} - U_{21}	50.09	-841.26	-61	85	-64	-1342	77	-11	355	315	0.039	0.233	0.28	Yes	0.027	0.151	0.18	Yes	0.773	0.221	1.00	Yes	0.768	0.194	0.97	Yes	1.00	**6.01**
		U_{21} - U_{22}	44.31	-772.82	-52	10	-508	-1415	44	64	197	381	0.034	0.247	0.29	Yes	0.024	0.165	0.19	Yes	0.710	0.289	1.00	Yes	0.705	0.205	0.92	Yes	1.00	**5.10**
		U_{22} - U_{23}	76.40	-822.92	71	-36	-954	-1055	57	-2	401	21	0.059	0.197	0.26	Yes	0.042	0.132	0.18	Yes	0.757	0.236	1.00	Yes	0.751	0.153	0.91	Yes	1.00	**6.01**
		U_{23} - U_{24}	196.80	-843.88	-55	175	1	-1397	-31	-60	236	-60	0.153	0.228	0.39	Yes	0.107	0.147	0.26	Yes	0.776	0.218	1.00	Yes	0.770	0.202	0.98	Yes	1.00	**7.45**
		U_{24} - U_{25}	311.21	-741.02	199	296	-644	-946	-68	-86	372	-246	0.292	0.202	0.50	Yes	0.193	0.132	0.33	Yes	0.823	0.175	1.00	Yes	0.818	0.151	0.97	Yes	1.00	**7.40**
		U_{25} - U_{26}	-----	-717.73	-628	646	-243	-820	248	-210	225	-240	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.140	1.00	Yes	0.848	0.139	0.99	Yes	1.00	**11.84**
		U_{26} - U_{27}	-----	-613.78	-877	768	-115	-1304	350	-238	349	-514	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.263	1.00	Yes	0.725	0.221	0.95	Yes	1.00	**14.58**
		U_{27} - U_{28}	-----	-793.67	-1436	1825	-1121	-2133	623	-345	853	-336	-----	-----	-----	-----	-----	-----	-----	-----	0.692	0.302	1.00	Yes	0.688	0.268	0.96	Yes	1.00	**27.56**
		U_{28} - U_{29}	1070.46	-70.08	41	515	-1471	-2530	61	-613	685	-391	0.647	0.346	1.00	Yes	0.460	0.232	0.70	Yes	0.050	0.264	0.32	Yes	0.050	0.288	0.34	Yes	1.00	**19.10**
		U_{29} - U_{30}	508.98	-----	-3113	7279	-73	615	242	-968	-249	63	0.250	0.740	1.00	Yes	0.177	0.485	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**25.22**
		U_{30} - U_{31}	817.17	-----	1118	405	5625	-5530	-1060	-591	-653	650	0.402	0.593	1.00	Yes	0.284	0.389	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**26.64**
		U_{31} - U_{32}	1118.15	-----	29	428	-86	-1245	-391	-190	112	841	0.755	0.237	1.00	Yes	0.538	0.162	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.91**
		U_{32} - U_{33}	799.39	-297.74	436	228	409	-1681	-56	26	647	591	0.675	0.316	1.00	Yes	0.454	0.211	0.67	Yes	0.298	0.167	0.47	Yes	0.296	0.237	0.54	Yes	1.00	**9.20**
		U_{33} - U_{34}	618.35	-685.52	336	214	-254	-1559	43	279	509	1069	0.522	0.350	0.88	Yes	0.355	0.230	0.59	Yes	0.685	0.308	1.00	Yes	0.681	0.220	0.91	Yes	1.00	**9.10**
		U_{34} - U_{35}	326.04	-893.99	333	53	69	-1553	206	168	659	542	0.239	0.261	0.50	Yes	0.162	0.176	0.34	Yes	0.776	0.219	1.00	Yes	0.771	0.189	0.97	Yes	1.00	**7.42**
		U_{35} - U_{36}	72.72	-1121.33	125	-162	-160	-1642	122	98	486	623	0.042	0.226	0.27	Yes	0.029	0.149	0.18	Yes	0.766	0.231	1.00	Yes	0.761	0.175	0.94	Yes	1.00	**6.18**
		U_{36} - U_{37}	-----	-1257.37	-93	4	-668	-2104	96	4	414	318	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.270	1.00	Yes	0.716	0.187	0.91	Yes	1.00	**5.80**
		U_{37} - U_{38}	-----	-1357.62	124	-149	-1264	-1808	46	18	332	267	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.214	1.00	Yes	0.773	0.161	0.94	Yes	1.00	**6.88**
		U_{38} - U_{39}	-----	-1453.50	120	-290	-86	-2611	132	-32	526	-23	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.243	1.00	Yes	0.746	0.216	0.97	Yes	1.00	**7.28**
		U_{39} - U_{40}	-----	-1412.62	-248	-308	-1179	-2228	51	-6	469	134	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.263	1.00	Yes	0.725	0.185	0.91	Yes	1.00	**6.93**
		U_{40} - U_{41}	-----	-1302.37	-250	-317	-1727	-1702	47	-95	575	-85	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.252	1.00	Yes	0.742	0.154	0.90	Yes	1.00	**6.79**
		U_{41} - U_{42}	-----	-1206.24	-822	244	-558	-1178	369	-37	328	-304	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.138	1.00	Yes	0.856	0.120	0.98	Yes	1.00	**8.79**
		U_{42} - U_{43}	-----	-781.19	-312	104	-782	-1069	-80	-123	358	-531	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.239	1.00	Yes	0.754	0.162	0.92	Yes	1.00	**12.00**
		U_{43} - U_{44}	-----	-598.30	-1568	1725	-316	-952	145	-617	272	-501	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.269	0.99	Yes	0.707	0.293	1.00	Yes	1.00	**13.76**
	Structure 3	U_0 - U_1	-----	-580.83	-3	-162	577	-1722	-2	-51	23	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.659	0.268	0.93	Yes	0.653	0.346	1.00	Yes	1.00	**12.91**
		U_1 - U_2	-----	-707.02	-33	-140	0	-875	-63	-233	-211	-271	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.195	1.00	Yes	0.795	0.176	0.98	Yes	1.00	**5.98**
		U_2 - U_3	-----	-1038.75	-72	-166	126	-982	-52	335	9	430	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.177	1.00	Yes	0.813	0.160	0.98	Yes	1.00	**5.51**
		U_3 - U_4	-----	-1300.72	-170	-301	-332	-1575	382	606	489	677	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.243	1.00	Yes	0.746	0.174	0.92	Yes	1.00	**5.22**
		U_4 - U_5	-----	-1363.09	-399	-69	-707	-1108	684	228	498	313	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.210	1.00	Yes	0.781	0.122	0.91	Yes	1.00	**4.97**
		U_5 - U_6	-----	-1337.09	-184	-276	-458	-1586	140	-149	330	329	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.224	1.00	Yes	0.767	0.175	0.95	Yes	1.00	**4.93**
		U_6 - U_7	-----	-1358.25	-368	-84	-586	-1210	-102	-195	369	-115	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.206	1.00	Yes	0.779	0.133	0.92	Yes	1.00	**6.09**
		U_7 - U_8	-----	-1201.26	-158	20	-610	-835	-65	-182	269	-170	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.185	1.00	Yes	0.802	0.115	0.92	Yes	1.00	**5.92**
		U_8 - U_9	39.54	-929.05	-39	275	-427	-550	-72	-166	290	-360	0.032	0.134	0.17	Yes	0.021	0.090	0.12	Yes	0.879	0.113	1.00	Yes	0.872	0.091	0.97	Yes	1.00	**7.66**
		U_9 - U_{10}	376.92	-681.40	21	342	-415	-381	-146	-114	290	-388	0.409	0.155	0.57	Yes	0.272	0.101	0.38	Yes	0.877	0.118	1.00	Yes	0.870	0.093	0.97	Yes	1.00	**9.61**
		U_{10} - U_{11}	-----	-597.09	-664	531	-585	-798	443	-464	698	-833	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.223	1.00	Yes	0.762	0.179	0.95	Yes	1.00	**19.81**
		U_{11} - U_{12}	291.43	-----	-3039	3820	-175	527	653	-909	-459	-515	0.239	0.752	1.00	Yes	0.163	0.512	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**27.14**
		U_{12} - U_{13}	935.86	-----	1019	119	1921	-1547	-519	-477	-250	185	0.648	0.344	1.00	Yes	0.452	0.235	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.83**
		U_{13} - U_{14}	823.53	-80.05	214	417	-78	-632	-325	-202	-43	543	0.788	0.209	1.00	Yes	0.550	0.144	0.70	Yes	0.091	0.206	0.30	Yes	0.090	0.134	0.23	Yes	1.00	**8.23**
		U_{14} - U_{15}	641.07	-404.56	423	294	393	-876	-126	-39	319	113	0.735	0.262	1.00	Yes	0.496	0.171	0.67	Yes	0.550	0.270	0.83	Yes	0.546	0.208	0.76	Yes	1.00	**8.11**
		U_{15} - U_{16}	369.72	-555.03	293	204	-24	-1026	-55	137	157	424	0.424	0.316	0.74	Yes	0.291	0.216	0.51	Yes	0.755	0.188	0.95	Yes	0.748	0.244	1.00	Yes	1.00	**5.94**
		U_{16} - U_{17}	433.14	-535.14	410	137	-15	-982	70	71	383	82	0.496	0.298	0.80	Yes	0.341	0.204	0.55	Yes	0.728	0.266	1.00	Yes	0.722	0.234	0.96	Yes	1.00	**7.31**
		U_{17} - U_{18}	203.38	-569.18	311	-70	-410	-825	-51	71	290	160	0.233	0.245	0.48	Yes	0.157	0.160	0.32	Yes	0.774	0.216	1.00	Yes	0.768	0.196	0.97	Yes	1.00	**5.66**
		U_{18} - U_{19}	-----	-523.29	-75	-2	-80	-1166	76	-52	463	-306	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.283	1.00	Yes	0.706	0.277	0.99	Yes	1.00	**9.45**
		U_{19} - U_{20}	-----	-550.53	-908	960	4	-723	319	-403	278	-376	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.248	1.00	Yes	0.742	0.228	0.98	Yes	1.00	**9.05**

Moment (End) AB Operating

Operating Loads - 2F1

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 - Lower Chord	Structure 1	L_0 - L_1	-----	-50.96	-350	174	1512	-2804	-22	-80	399	1469	-----	-----	-----	-----	-----	-----	-----	-----	0.093	0.900	1.00	Yes	0.092	0.841	0.94	Yes	1.00	**41.05**
		L_1 - L_2	436.94	-----	151	-36	368	-920	-28	-30	-249	-186	0.669	0.329	1.00	Yes	0.408	0.221	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.08**
		L_2 - L_3	653.67	-25.40	-21	21	-345	-866	-32	22	-203	77	0.752	0.242	1.00	Yes	0.435	0.145	0.59	Yes	0.035	0.234	0.27	Yes	0.034	0.209	0.25	Yes	1.00	**5.89**
		L_3 - L_4	685.52	-127.98	82	240	-363	-803	57	69	16	24	0.789	0.205	1.00	Yes	0.468	0.133	0.61	Yes	0.175	0.190	0.37	Yes	0.173	0.194	0.37	Yes	1.00	**5.72**
		L_4 - L_5	505.05	-----	-831	721	-638	-243	-382	-102	-284	657	0.654	0.337	1.00	Yes	0.392	0.216	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.60**
		L_5 - L_6	63.68	-730.64	166	604	-407	-169	79	131	257	94	0.062	0.168	0.24	Yes	0.040	0.103	0.15	Yes	0.852	0.145	1.00	Yes	0.843	0.134	0.98	Yes	1.00	**6.89**
		L_6 - L_7	-----	-897.75	-1747	1412	-1084	-1218	-732	40	105	1557	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.240	0.98	Yes	0.723	0.274	1.00	Yes	1.00	**22.34**
		L_7 - L_8	-----	-1155.72	-207	1864	14	576	33	-176	-158	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.251	1.00	Yes	0.732	0.247	0.98	Yes	1.00	**10.12**
		L_8 - L_9	-----	-1266.58	1170	61	1369	-610	-180	-74	-39	277	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.187	1.00	Yes	0.802	0.181	0.99	Yes	1.00	**11.51**
		L_9 - L_{10}	-----	-1052.04	124	129	442	-964	46	139	80	-199	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.068	0.93	Yes	0.847	0.151	1.00	Yes	1.00	**11.06**
		L_{10} - L_{11}	-----	-536.61	510	-12	369	-661	131	36	-53	-89	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.100	0.93	Yes	0.818	0.175	1.00	Yes	1.00	**7.58**
		L_{11} - L_{12}	550.55	-245.21	497	-161	489	-956	95	-31	-146	-164	0.713	0.282	1.00	Yes	0.428	0.185	0.62	Yes	0.377	0.097	0.48	Yes	0.374	0.253	0.63	Yes	1.00	**7.87**
		L_{12} - L_{13}	1020.52	-----	160	-76	-250	-855	26	33	149	315	0.805	0.189	1.00	Yes	0.515	0.113	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.64**
		L_{13} - L_{14}	1220.83	-----	363	-437	673	-1934	12	-4	-92	-168	0.718	0.280	1.00	Yes	0.465	0.171	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.09**
		L_{14} - L_{15}	1617.15	-----	-1458	40	-1486	-1179	-375	-170	-142	426	0.790	0.209	1.00	Yes	0.513	0.127	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.20**
		L_{15} - L_{16}	1554.18	-----	-227	-365	-800	-1664	-113	-67	-157	-483	0.759	0.234	1.00	Yes	0.487	0.138	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.51**
		L_{16} - L_{17}	1202.07	-----	-1035	390	-1302	-585	-536	-66	-327	520	0.760	0.239	1.00	Yes	0.493	0.148	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.38**
		L_{17} - L_{18}	918.89	-----	-596	387	-867	-399	-157	-140	125	-186	0.800	0.191	1.00	Yes	0.512	0.114	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.44**
		L_{18} - L_{19}	340.17	-----	-1132	874	-622	79	-647	-112	-351	533	0.521	0.474	1.00	Yes	0.352	0.301	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.48**
		L_{19} - L_{20}	151.14	-342.68	-1218	629	-71	-54	902	202	-22	-5	0.231	0.553	0.79	Yes	0.141	0.364	0.51	Yes	0.622	0.377	1.00	Yes	0.617	0.366	0.99	Yes	1.00	**15.31**
	Structure 2	L_0 - L_1	37.76	-48.43	-131	41	1115	-3925	-21	-72	-263	-911	0.046	0.948	1.00	Yes	0.027	0.608	0.64	Yes	0.070	0.661	0.74	Yes	0.069	0.799	0.87	Yes	1.00	**40.73**
		L_1 - L_2	556.54	-----	164	-219	383	-1500	-36	38	21	-115	0.676	0.324	1.00	Yes	0.402	0.209	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.38**
		L_2 - L_3	983.99	-----	-43	-173	-250	-1276	77	76	74	333	0.775	0.220	1.00	Yes	0.509	0.132	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.44**
		L_3 - L_4	1279.49	-----	43	-438	-484	-1766	43	59	461	197	0.752	0.243	1.00	Yes	0.506	0.151	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.57**
		L_4 - L_5	1702.64	-----	-389	-257	-979	-1957	93	199	-7	223	0.794	0.200	1.00	Yes	0.526	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.06**
		L_5 - L_6	1777.84	-----	-149	-403	-1239	-2433	109	-15	195	-27	0.763	0.228	1.00	Yes	0.512	0.139	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.95**
		L_6 - L_7	1762.90	-----	-431	-90	-1548	-2468	-165	45	-139	490	0.746	0.247	1.00	Yes	0.496	0.146	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.41**
		L_7 - L_8	1433.13	-11.94	-201	313	-1226	-1360	-130	10	-62	-258	0.822	0.171	1.00	Yes	0.540	0.101	0.65	Yes	0.008	0.170	0.18	Yes	0.008	0.150	0.16	Yes	1.00	**7.88**
		L_8 - L_9	1097.73	-----	-947	570	-1136	-557	-291	21	-91	792	0.768	0.228	1.00	Yes	0.517	0.145	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.82**
		L_9 - L_{10}	866.48	-589.21	-114	708	-1179	-588	14	91	250	-144	0.773	0.219	1.00	Yes	0.450	0.136	0.59	Yes	0.623	0.126	0.75	Yes	0.619	0.189	0.81	Yes	1.00	**9.95**
		L_{10} - L_{11}	578.42	-----	-1732	1108	-1145	-424	-888	-65	-323	849	0.578	0.422	1.00	Yes	0.339	0.262	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.39**
		L_{11} - L_{12}	278.81	-956.26	-1194	1541	-1366	-1210	-39	293	528	-361	0.194	0.259	0.46	Yes	0.129	0.156	0.29	Yes	0.790	0.167	0.96	Yes	0.784	0.210	1.00	Yes	1.00	**21.00**
		L_{12} - L_{13}	-----	-1284.52	-506	-1	-802	-1606	61	-107	22	345	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.216	1.00	Yes	0.768	0.160	0.93	Yes	1.00	**12.11**
		L_{13} - L_{14}	-----	-1260.72	-1635	4171	-308	1175	-78	-250	-273	-398	-----	-----	-----	-----	-----	-----	-----	-----	0.640	0.272	0.92	Yes	0.634	0.364	1.00	Yes	1.00	**14.78**
		L_{14} - L_{15}	-----	-1466.55	1452	-258	2980	-2241	-235	-350	106	474	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.190	0.94	Yes	0.738	0.260	1.00	Yes	1.00	**13.42**
		L_{15} - L_{16}	-----	-1404.04	-869	329	-1540	-1279	-19	358	322	238	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.151	1.00	Yes	0.840	0.153	1.00	Yes	1.00	**11.98**
		L_{16} - L_{17}	-----	-1161.12	1217	122	900	-1140	404	191	-53	46	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.143	1.00	Yes	0.846	0.150	1.00	Yes	1.00	**10.90**
		L_{17} - L_{18}	-----	-807.86	466	222	818	-924	97	-54	-309	-229	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.125	0.98	Yes	0.848	0.148	1.00	Yes	1.00	**7.57**
		L_{18} - L_{19}	56.57	-633.38	660	112	415	-781	-2	33	110	205	0.064	0.182	0.25	Yes	0.037	0.108	0.15	Yes	0.849	0.143	1.00	Yes	0.844	0.151	1.00	Yes	1.00	**7.63**
		L_{19} - L_{20}	522.12	-558.47	543	216	237	-1323	56	-41	254	-125	0.591	0.294	0.89	Yes	0.350	0.187	0.54	Yes	0.749	0.204	0.96	Yes	0.744	0.255	1.00	Yes	1.00	**9.53**
		L_{20} - L_{21}	893.11	-409.91	509	30	-712	-1598	-86	-95	98	418	0.712	0.278	1.00	Yes	0.467	0.167	0.64	Yes	0.387	0.210	0.60	Yes	0.385	0.233	0.62	Yes	1.00	**10.14**
		L_{21} - L_{22}	796.24	-----	49	-55	-95	-2409	-37	42	19	-119	0.635	0.364	1.00	Yes	0.425	0.227	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.43**
		L_{22} - L_{23}	912.58	-109.32	-151	209	-1079	-1497	-20	3	-112	485	0.728	0.271	1.00	Yes	0.487	0.171	0.66	Yes	0.103	0.228	0.34	Yes	0.103	0.219	0.33	Yes	1.00	**8.80**
		L_{23} - L_{24}	910.40	-265.86	-10	333	-1061	-1657	8	72	213	-97	0.726	0.265	1.00	Yes	0.476	0.157	0.64	Yes	0.251	0.299	0.55	Yes	0.249	0.242	0.50	Yes	1.00	**9.86**
		L_{24} - L_{25}	586.96	-----	-588	374	-1153	-676	-279	131	-261	703	0.665	0.330	1.00	Yes	0.393	0.207	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.03**
		L_{25} - L_{26}	597.30	-527.50	-643	965	-905	-1265	-57	-151	127	-482	0.677	0.318	1.00	Yes	0.390	0.188	0.58	Yes	0.707	0.162	0.87	Yes	0.703	0.244	0.95	Yes	1.00	**16.68**
		L_{26} - L_{27}	319.88	-683.10	-1722	1448	-1488	-1252	-887	-135	-239	1267	0.286	0.428	0.72	Yes	0.166	0.261	0.43	Yes	0.722	0.261	0.99	Yes	0.717	0.275	1.00	Yes	1.00	**19.67**
		L_{27} - L_{28}	-----	-1151.11	-419	1288	-970	-255	-68	-37	262	-239	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.133	0.98	Yes	0.838	0.159	1.00	Yes	1.00	**11.22**
		L_{28} - L_{29}	-----	-1376.68	43	-48	-634	-1486	-50	-15	59	374	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.161	1.00	Yes	0.823	0.148	0.98	Yes	1.00	**9.26**
		L_{29} - L_{30}	-----	-1325.84	-1365	3772	-381	746	92	155	-53	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.220	0.90	Yes	0.667	0.329	1.00	Yes	1.00	**14.05**
		L_{30} - L_{31}	-----	-1437.61	1593	-279	3070	-2664	-486	-394	608	1064	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.229	0.96	Yes	0.723	0.268	1.00	Yes	1.00	**17.60**
		L_{31} - L_{32}	-----	-1066.49	-453	491	-946	-2519	-521	26	66	80	-----	-----	-----	-----	-----	-----	-----	-----	0.643	0.355	1.00	Yes	0.638	0.250	0.89	Yes	1.00	**23.39**
		L_{32} - L_{33}	-----	-977.25	943	130	1134	-1420	-121	-64	8	18	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.105	0.92	Yes	0.801	0.194	1.00	Yes	1.00	**13.86**
		L_{33} - L_{34}	156.53	-644.19	392	156	568	-1341	11	-90	-68	-194	0.156	0.261	0.42	Yes	0.092	0.164	0.26	Yes	0.762	0.102	0.87	Yes	0.757	0.235	1.00	Yes	1.00	**10.75**
		L_{34} - L_{35}	749.34	-564.72	606	21	48	-1546	-23	73	275	645	0.669	0.325	1.00	Yes	0.389	0.200	0.59	Yes	0.597	0.226	0.83	Yes	0.593	0.247	0.85	Yes	1.00	**12.24**
		L_{35} - L_{36}	1063.41	-219.91	366	-33	-99	-1456	106	-45	597	64	0.744	0.253	1.00	Yes	0.501	0.159	0.67	Yes	0.182	0.172	0.36	Yes	0.181	0.197	0.38	Yes	1.00	**9.29**
		L_{36} - L_{37}	1266.44	-37.63	243	2	-147	-2155	-104	13	-101	375	0.726	0.269	1.00	Yes	0.477	0.158	0.64	Yes	0.026	0.231	0.26	Yes	0.025	0.238	0.27	Yes	1.00	**8.69**
		L_{37} - L_{38}	1752.23	-----	-58	-364	-708	-2776	-45	-9	75	-179	0.742	0.255	1.00	Yes	0.493	0.148	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.44**
		L_{38} - L_{39}	1757.90	-----	-277	-165	-1910	-2284	-59	8	-19	575	0.754	0.238	1.00	Yes	0.506	0.146	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.37**
		L_{39} - L_{40}	1657.15	-----	-207	-310	-1515	-2144	-51	-36	88	-313	0.773	0.224	1.00	Yes	0.511	0.133	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.63**
		L_{40} - L_{41}	1322.31	-----	-1385	254	-1511	-1044	-551	-52	-295	560	0.777	0.221	1.00	Yes	0.523	0.138	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.68**
		L_{41} - L_{42}	1063.92	-----	-922	345	-987	-975	-58	-19	164	-159	0.838	0.160	1.00	Yes	0.550	0.095	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.93**
		L_{42} - L_{43}	486.19	-----	-1572	569	-683	-397	-511	70	-283	540	0.590	0.409	1.00	Yes	0.351	0.261	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.15**
		L_{43} - L_{44}	268.64	-278.88	-2810	1049	-24	-38	598	175	-192	-56	0.326	0.670	1.00	Yes	0.194	0.430	0.63	Yes	0.401	0.404	0.81	Yes	0.398	0.572	0.98	Yes	1.00	**30.95**
	Structure 3	L_0 - L_1	188.08	-212.23	-19	-74	1029	-1877	-9	-39	-149	-676	0.288	0.704	1.00	Yes	0.176	0.470	0.65	Yes	0.385	0.402	0.79	Yes	0.382	0.563	0.95	Yes	1.00	**23.30**
		L_1 - L_2	386.94	-----	144	-180	622	-1265	-52	20	89	-68	0.592	0.398	1.00	Yes	0.401	0.246	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.79**
		L_2 - L_3	868.01	-----	-33	-164	36	-1020	37	23	107	325	0.756	0.238	1.00	Yes	0.484	0.143	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.59**
		L_3 - L_4	1180.16	-----	62	-369	-149	-1449	48	54	354	165	0.746	0.244	1.00	Yes	0.484	0.151	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.13**
		L_4 - L_5	1605.31	-----	-380	-176	-883	-1578	117	225	22	282	0.784	0.210	1.00	Yes	0.503	0.123	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.03**
		L_5 - L_6	1502.04	-----	-83	-351	-473	-2077	141	78	156	70	0.734	0.261	1.00	Yes	0.477	0.158	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.25**
		L_6 - L_7	1301.00	-----	-1315	403	-1126	-750	-275	2	-105	589	0.765	0.230	1.00	Yes	0.496	0.142	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.24**
		L_7 - L_8	1073.62	-----	-88	109	-707	-661	-30	40	174	19	0.847	0.146	1.00	Yes	0.542	0.087	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.72**
		L_8 - L_9	560.85	-----	-689	384	-515	-143	-242	117	-162	509	0.726	0.271	1.00	Yes	0.436	0.175	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.92**
		L_9 - L_{10}	403.00	-548.94	11	501	-586	-397	74	143	320	147	0.522	0.211	0.74	Yes	0.304	0.126	0.44	Yes	0.844	0.136	0.98	Yes	0.836	0.155	1.00	Yes	1.00	**9.80**
		L_{10} - L_{11}	-----	-1004.50	-1192	1127	-710	-729	-563	-185	23	1132	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.141	0.96	Yes	0.809	0.187	1.00	Yes	1.00	**19.93**
		L_{11} - L_{12}	-----	-1221.76	-189	1456	-38	458	-319	-477	-195	-188	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.216	1.00	Yes	0.774	0.193	0.97	Yes	1.00	**10.17**
		L_{12} - L_{13}	-----	-1189.43	1149	87	1787	-777	-149	-288	-235	153	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.234	1.00	Yes	0.753	0.237	0.99	Yes	1.00	**13.37**
		L_{13} - L_{14}	-----	-1101.71	-20	282	353	-709	-244	122	-192	-165	-----	-----	-----	-----	-----	-----	-----	-----	0.897	0.078	0.98	Yes	0.887	0.111	1.00	Yes	1.00	**8.82**
		L_{14} - L_{15}	-----	-750.07	568	167	206	-479	156	-4	42	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.875	0.118	1.00	Yes	0.865	0.126	1.00	Yes	1.00	**6.50**
		L_{15} - L_{16}	98.04	-512.44	409	180	536	-794	10	-55	-222	-99	0.127	0.250	0.38	Yes	0.076	0.163	0.24	Yes	0.788	0.143	0.94	Yes	0.781	0.210	1.00	Yes	1.00	**5.33**
		L_{16} - L_{17}	628.21	-208.96	297	25	-264	-884	98	-33	101	394	0.723	0.277	1.00	Yes	0.429	0.177	0.61	Yes	0.285	0.219	0.51	Yes	0.283	0.214	0.50	Yes	1.00	**5.34**
		L_{17} - L_{18}	645.94	-124.00	96	-4	-392	-956	2	11	48	-160	0.743	0.256	1.00	Yes	0.430	0.154	0.59	Yes	0.169	0.239	0.41	Yes	0.168	0.231	0.40	Yes	1.00	**6.34**
		L_{18} - L_{19}	420.79	-----	-632	241	-432	-619	-168	102	-162	751	0.644	0.351	1.00	Yes	0.393	0.228	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.41**
		L_{19} - L_{20}	56.68	-77.16	-1808	965	68	-187	1693	460	-11	-3	0.087	0.906	1.00	Yes	0.051	0.545	0.60	Yes	0.140	0.667	0.81	Yes	0.139	0.543	0.69	Yes	1.00	**23.71**

Moment (End) AB Operating

Operating Loads - 2F1

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

DL Factor: 1.300 LL Factor: 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Verticals	Structure 1	U_0 - L_0			-----	-314.41	-191	256	-57	90	-468	-150	-30	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.702	0.257	0.96	Yes	0.665	0.327	1.00	Yes	1.00	**3.22**
		U_1 - L_1			14.17	-318.82	-248	247	22	-11	-138	-12	-4	-3	0.025	0.357	0.39	Yes	0.014	0.196	0.22	Yes	0.697	0.120	0.82	Yes	0.675	0.317	1.00	Yes	1.00	**5.99**
		U_2 - L_2			92.19	-286.43	-259	302	78	-87	-180	29	52	26	0.166	0.438	0.61	Yes	0.091	0.241	0.34	Yes	0.626	0.162	0.79	Yes	0.606	0.386	1.00	Yes	1.00	**8.60**
		U_3 - L_3			286.83	-218.46	-259	289	303	-294	-302	-56	-187	58	0.516	0.475	1.00	Yes	0.284	0.261	0.55	Yes	0.479	0.164	0.65	Yes	0.462	0.387	0.85	Yes	1.00	**13.76**
		U_4 - L_4			-----	-247.71	-47	29	365	-345	-273	58	-15	50	-----	-----	-----	-----	-----	-----	-----	-----	0.545	0.189	0.74	Yes	0.524	0.467	1.00	Yes	1.00	**10.95**
		U_5 - L_5			-----	-420.27	66	-87	233	-264	8	8	-11	-120	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.117	0.88	Yes	0.725	0.268	1.00	Yes	1.00	**4.94**
		U_6 - L_6			-----	-525.35	87	-81	257	-281	-210	-59	488	107	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.169	0.97	Yes	0.753	0.246	1.00	Yes	1.00	**4.59**
		U_7 - L_7			-----	-437.86	134	-150	301	-321	-150	16	275	40	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.151	0.89	Yes	0.675	0.316	1.00	Yes	1.00	**3.35**
		U_8 - L_8			-----	-1159.32	-335	394	452	-544	485	188	1023	306	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.161	1.00	Yes	0.804	0.101	0.91	Yes	1.00	**8.26**
		U_9 - L_9			-----	-662.43	-397	448	-171	201	-129	-189	-438	-156	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.156	0.95	Yes	0.748	0.249	1.00	Yes	1.00	**5.67**
		U_{10} - L_{10}			-----	-715.66	-368	371	-136	101	-1071	-663	-372	-222	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.253	1.00	Yes	0.706	0.192	0.90	Yes	1.00	**7.21**
		U_{11} - L_{11}			-----	-655.99	-381	493	-115	183	-538	-439	-586	-317	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.181	0.97	Yes	0.764	0.229	1.00	Yes	1.00	**6.82**
		U_{12} - L_{12}			-----	-514.69	-338	336	-89	90	-350	-253	-427	-232	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.181	0.93	Yes	0.706	0.289	1.00	Yes	1.00	**6.55**
		U_{13} - L_{13}			-----	-356.50	-249	273	-33	55	-113	-47	-185	23	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.134	0.86	Yes	0.683	0.312	1.00	Yes	1.00	**4.96**
		U_{14} - L_{14}			-----	-191.01	-442	459	213	-228	345	300	-407	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.426	0.267	0.70	Yes	0.404	0.587	1.00	Yes	1.00	**18.16**
		U_{15} - L_{15}			165.91	-297.01	-123	111	263	-285	43	109	82	-117	0.298	0.398	0.70	Yes	0.164	0.219	0.39	Yes	0.666	0.160	0.83	Yes	0.628	0.364	1.00	Yes	1.00	**8.41**
		U_{16} - L_{16}			11.87	-323.27	9	-26	236	-245	34	-34	353	-132	0.021	0.415	0.44	Yes	0.012	0.228	0.24	Yes	0.729	0.161	0.89	Yes	0.684	0.313	1.00	Yes	1.00	**5.35**
		U_{17} - L_{17}			-----	-435.36	61	-75	224	-243	-120	-113	135	-165	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.127	0.95	Yes	0.751	0.247	1.00	Yes	1.00	**4.41**
		U_{18} - L_{18}			-----	-539.37	145	-152	413	-430	-132	-122	433	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.127	0.92	Yes	0.750	0.244	1.00	Yes	1.00	**4.55**
		U_{19} - L_{19}			-----	-643.67	172	-170	530	-518	-116	-46	326	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.126	0.93	Yes	0.749	0.246	1.00	Yes	1.00	**5.27**
		U_{20} - L_{20}			-----	-563.32	160	-260	353	-502	33	4	732	96	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.247	1.00	Yes	0.656	0.233	0.89	Yes	1.00	**3.89**
	Structure 2	U_0 - L_0			-----	-679.95	-454	577	-163	212	-504	-85	-43	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.182	1.00	Yes	0.729	0.245	0.98	Yes	1.00	**6.06**
		U_1 - L_1			-----	-722.61	-499	515	-118	128	-835	-109	-106	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.162	0.99	Yes	0.774	0.219	1.00	Yes	1.00	**7.41**
		U_2 - L_2			-----	-578.36	-502	499	-108	118	-298	-47	-107	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.113	0.89	Yes	0.737	0.257	1.00	Yes	1.00	**6.59**
		U_3 - L_3			-----	-492.98	-235	248	-56	64	17	-54	75	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.082	0.93	Yes	0.773	0.226	1.00	Yes	1.00	**5.69**
		U_4 - L_4			-----	-336.28	-224	223	-14	22	-170	-34	244	74	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.156	0.92	Yes	0.712	0.287	1.00	Yes	1.00	**6.13**
		U_5 - L_5			133.72	-316.97	-233	252	101	-86	-100	-33	-140	119	0.240	0.363	0.61	Yes	0.132	0.200	0.34	Yes	0.716	0.163	0.88	Yes	0.671	0.323	1.00	Yes	1.00	**7.72**
		U_6 - L_6			348.20	-230.25	-218	222	191	-201	299	51	-56	115	0.626	0.370	1.00	Yes	0.344	0.204	0.55	Yes	0.518	0.176	0.70	Yes	0.487	0.284	0.78	Yes	1.00	**10.18**
		U_7 - L_7			-----	-173.12	-169	180	443	-490	-180	278	76	161	-----	-----	-----	-----	-----	-----	-----	-----	0.391	0.251	0.65	Yes	0.366	0.626	1.00	Yes	1.00	**21.21**
		U_8 - L_8			-----	-465.36	51	-77	360	-371	-63	-26	282	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.675	0.126	0.81	Yes	0.670	0.325	1.00	Yes	1.00	**6.05**
		U_9 - L_9			-----	-691.29	156	-169	592	-603	-37	-195	287	-125	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.104	0.88	Yes	0.741	0.256	1.00	Yes	1.00	**7.73**
		U_{10} - L_{10}			-----	-786.93	182	-185	567	-588	-149	-98	144	-195	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.103	0.89	Yes	0.736	0.259	1.00	Yes	1.00	**8.20**
		U_{11} - L_{11}			-----	-818.07	186	-187	514	-532	-182	-68	337	-117	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.129	0.96	Yes	0.765	0.235	1.00	Yes	1.00	**6.95**
		U_{12} - L_{12}			-----	-880.95	157	-136	530	-539	-148	6	286	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.118	0.97	Yes	0.764	0.231	1.00	Yes	1.00	**7.34**
		U_{13} - L_{13}			-----	-740.15	212	-208	561	-545	-159	21	543	51	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.171	1.00	Yes	0.714	0.268	0.99	Yes	1.00	**5.84**
		U_{14} - L_{14}			-----	-1230.89	-630	585	814	-777	141	333	588	280	-----	-----	-----	-----	-----	-----	-----	-----	0.900	0.097	1.00	Yes	0.816	0.144	0.97	Yes	1.00	**11.70**
		U_{15} - L_{15}			-----	-719.50	-626	600	-119	127	-246	-89	-310	16	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.160	0.97	Yes	0.694	0.299	1.00	Yes	1.00	**9.54**
		U_{16} - L_{16}			-----	-654.76	-517	489	-90	64	-1136	-449	-787	-256	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.235	1.00	Yes	0.702	0.220	0.93	Yes	1.00	**7.99**
		U_{17} - L_{17}			-----	-631.71	-567	556	-126	124	-659	-426	-274	-185	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.194	0.98	Yes	0.735	0.263	1.00	Yes	1.00	**7.47**
		U_{18} - L_{18}			-----	-577.68	-483	501	-97	97	-154	-271	-113	-128	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.114	0.89	Yes	0.736	0.256	1.00	Yes	1.00	**6.78**
		U_{19} - L_{19}			-----	-469.47	-307	301	-55	59	-231	-171	-66	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.122	0.83	Yes	0.701	0.295	1.00	Yes	1.00	**6.33**
		U_{20} - L_{20}			-----	-370.98	-243	246	-6	14	-135	-91	-184	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.121	0.89	Yes	0.711	0.281	1.00	Yes	1.00	**6.04**
		U_{21} - L_{21}			61.35	-319.94	-237	250	31	-25	80	-23	-93	63	0.110	0.347	0.46	Yes	0.061	0.191	0.26	Yes	0.723	0.114	0.84	Yes	0.677	0.320	1.00	Yes	1.00	**6.55**
		U_{22} - L_{22}			-----	-170.31	-464	494	414	-432	-57	325	181	237	-----	-----	-----	-----	-----	-----	-----	-----	0.383	0.242	0.63	Yes	0.360	0.631	1.00	Yes	1.00	**26.26**
		U_{23} - L_{23}			91.58	-316.46	-63	49	243	-254	-2	141	282	-44	0.165	0.407	0.58	Yes	0.091	0.224	0.32	Yes	0.715	0.156	0.88	Yes	0.670	0.325	1.00	Yes	1.00	**6.66**
		U_{24} - L_{24}			-----	-370.91	10	-22	235	-247	72	17	277	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.123	0.89	Yes	0.711	0.283	1.00	Yes	1.00	**5.90**
		U_{25} - L_{25}			-----	-475.54	44	-43	299	-297	-83	-30	491	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.185	0.91	Yes	0.710	0.288	1.00	Yes	1.00	**5.62**
		U_{26} - L_{26}			-----	-569.49	72	-76	503	-529	-118	-23	500	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.154	0.92	Yes	0.726	0.271	1.00	Yes	1.00	**6.43**
		U_{27} - L_{27}			-----	-628.56	88	-89	562	-566	-133	2	366	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.114	0.90	Yes	0.732	0.263	1.00	Yes	1.00	**6.98**
		U_{28} - L_{28}			-----	-711.19	79	-76	536	-543	-150	16	782	52	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.150	0.98	Yes	0.762	0.230	1.00	Yes	1.00	**7.12**
		U_{29} - L_{29}			-----	-718.98	121	-125	633	-608	-113	28	597	23	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.181	0.99	Yes	0.693	0.303	1.00	Yes	1.00	**8.02**
		U_{30} - L_{30}			-----	-1240.15	-743	673	912	-898	-676	146	659	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.907	0.090	1.00	Yes	0.822	0.162	0.99	Yes	1.00	**14.80**
		U_{31} - L_{31}			-----	-752.28	-515	499	-110	110	135	-78	-314	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.157	1.00	Yes	0.725	0.247	0.98	Yes	1.00	**8.61**
		U_{32} - L_{32}			-----	-791.16	-478	460	-82	59	-962	-418	-666	-271	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.239	1.00	Yes	0.686	0.205	0.90	Yes	1.00	**8.69**
		U_{33} - L_{33}			-----	-833.64	-489	494	-118	107	-317	-429	-437	-333	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.151	0.99	Yes	0.779	0.218	1.00	Yes	1.00	**8.92**
		U_{34} - L_{34}			-----	-801.35	-547	558	-120	113	-426	-377	-313	-298	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.130	0.93	Yes	0.749	0.246	1.00	Yes	1.00	**9.85**
		U_{35} - L_{35}			-----	-697.12	-591	589	-90	119	-223	-176	-237	27	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.088	0.87	Yes	0.747	0.251	1.00	Yes	1.00	**8.61**
		U_{36} - L_{36}			-----	-475.02	-341	352	-41	56	181	35	-75	62	-----	-----	-----	-----	-----	-----	-----	-----	0.689	0.117	0.81	Yes	0.684	0.308	1.00	Yes	1.00	**6.54**
		U_{37} - L_{37}			-----	-150.57	-469	527	119	-118	-231	233	-136	190	-----	-----	-----	-----	-----	-----	-----	-----	0.340	0.264	0.61	Yes	0.319	0.673	1.00	Yes	1.00	**20.09**
		U_{38} - L_{38}			354.28	-148.48	-245	246	163	-170	4	138	-89	-120	0.637	0.355	1.00	Yes	0.350	0.195	0.55	Yes	0.334	0.098	0.44	Yes	0.314	0.315	0.63	Yes	1.00	**9.10**
		U_{39} - L_{39}			155.46	-324.01	-133	121	218	-239	47	63	275	-89	0.280	0.385	0.67	Yes	0.154	0.212	0.37	Yes	0.732	0.127	0.86	Yes	0.686	0.305	1.00	Yes	1.00	**8.47**
		U_{40} - L_{40}			29.90	-335.54	-23	4	225	-222	11	-1	107	-125	0.054	0.323	0.38	Yes	0.030	0.178	0.21	Yes	0.761	0.106	0.87	Yes	0.710	0.287	1.00	Yes	1.00	**6.41**
		U_{41} - L_{41}			-----	-487.73	30	-34	242	-254	6	-34	280	-109	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.109	0.94	Yes	0.765	0.231	1.00	Yes	1.00	**5.81**
		U_{42} - L_{42}			-----	-581.26	64	-73	482	-490	10	-37	280	-136	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.092	0.88	Yes	0.741	0.250	1.00	Yes	1.00	**6.46**
		U_{43} - L_{43}			-----	-712.82	84	-96	542	-550	-48	-48	725	46	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.135	0.96	Yes	0.764	0.233	1.00	Yes	1.00	**6.75**
		U_{44} - L_{44}			-----	-607.39	119	-138	392	-498	-121	-20	1243	211	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.265	1.00	Yes	0.651	0.211	0.87	Yes	1.00	**5.42**
	Structure 3	U_0 - L_0			-----	-565.41	-421	472	-146	194	-887	-116	-55	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.247	1.00	Yes	0.658	0.219	0.88	Yes	1.00	**4.53**
		U_1 - L_1			-----	-664.39	-479	489	-112	123	-547	27	-121	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.139	0.97	Yes	0.773	0.227	1.00	Yes	1.00	**7.31**
		U_2 - L_2			-----	-535.41	-440	444	-108	114	-312	-26	-147	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.118	0.91	Yes	0.745	0.251	1.00	Yes	1.00	**6.39**
		U_3 - L_3			-----	-439.11	-223	235	-45	58	-135	-75	44	-64	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.111	0.94	Yes	0.758	0.239	1.00	Yes	1.00	**5.21**
		U_4 - L_4			14.58	-327.60	-225	235	-8	17	61	14	-100	35	0.026	0.329	0.36	Yes	0.014	0.181	0.20	Yes	0.738	0.111	0.85	Yes	0.693	0.300	1.00	Yes	1.00	**5.90**
		U_5 - L_5			120.93	-304.05	-259	278	94	-82	-158	-26	-128	153	0.218	0.400	0.62	Yes	0.120	0.220	0.34	Yes	0.681	0.179	0.87	Yes	0.643	0.355	1.00	Yes	1.00	**8.21**
		U_6 - L_6			11.44	-75.88	-440	447	525	-570	-448	249	-844	-94	0.021	0.973	1.00	Yes	0.011	0.535	0.55	Yes	0.169	0.452	0.63	Yes	0.161	0.729	0.89	Yes	1.00	**25.14**
		U_7 - L_7			-----	-360.27	11	-24	245	-266	-13	-25	61	-138	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.119	0.85	Yes	0.690	0.303	1.00	Yes	1.00	**5.58**
		U_8 - L_8			-----	-514.48	64	-70	329	-334	-34	-96	497	7	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.180	0.93	Yes	0.706	0.285	1.00	Yes	1.00	**6.18**
		U_9 - L_9			-----	-652.01	102	-163	394	-501	-44	-193	234	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.118	0.90	Yes	0.759	0.233	1.00	Yes	1.00	**6.75**
		U_{10} - L_{10}			-----	-776.72	129	-109	399	-437	-10	8	291	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.122	0.93	Yes	0.766	0.226	1.00	Yes	1.00	**7.50**
		U_{11} - L_{11}			-----	-647.06	168	-193	421	-468	-150	-29	545	132	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.168	0.94	Yes	0.731	0.260	1.00	Yes	1.00	**4.96**
		U_{12} - L_{12}			-----	-1198.10	-514	563	550	-711	331	218	766	338	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.128	1.00	Yes	0.831	0.132	0.97	Yes	1.00	**10.42**
		U_{13} - L_{13}			-----	-455.34	-285	299	-67	76	-232	-106	-381	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.178	0.94	Yes	0.702	0.294	1.00	Yes	1.00	**5.44**
		U_{14} - L_{14}			-----	-518.06	-229	248	-45	30	-426	-330	-645	-313	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.206	1.00	Yes	0.743	0.217	0.96	Yes	1.00	**6.21**
		U_{15} - L_{15}			-----	-420.55	-238	251	-30	39	-601	-384	-527	-241	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.236	1.00	Yes	0.726	0.255	0.99	Yes	1.00	**6.07**
		U_{16} - L_{16}			6.02	-221.69	-413	403	41	-33	-72	-37	-913	-403	0.011	0.792	0.81	Yes	0.006	0.436	0.45	Yes	0.487	0.403	0.90	Yes	0.469	0.528	1.00	Yes	1.00	**13.53**
		U_{17} - L_{17}			293.67	-257.52	-309	321	196	-215	-155	85	200	-56	0.528	0.468	1.00	Yes	0.290	0.257	0.55	Yes	0.564	0.145	0.71	Yes	0.545	0.410	0.96	Yes	1.00	**10.87**
		U_{18} - L_{18}			86.57	-296.80	-126	119	240	-285	116	30	293	-18	0.156	0.449	0.61	Yes	0.086	0.247	0.34	Yes	0.649	0.168	0.82	Yes	0.628	0.364	1.00	Yes	1.00	**8.11**
		U_{19} - L_{19}			40.81	-312.10	-50	39	261	-243	-84	-8	109	-37	0.073	0.365	0.44	Yes	0.040	0.201	0.25	Yes	0.682	0.107	0.79	Yes	0.660	0.334	1.00	Yes	1.00	**5.63**
		U_{20} - L_{20}			-----	-324.18	19	-31	124	-208	-46	-15	528	169	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.270	1.00	Yes	0.686	0.265	0.96	Yes	1.00	**3.16**

Moment (End) AB Operating

Operating Loads - 2F1

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

					Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression										
	Vehicle	Pedestrian			Max. 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																		
North Truss - Diagonals	Structure 1	$U_0 - L_1$	658.89	-----	-88	72	-16	-2	6	-98	-13	2	0.864	0.128	1.00	Yes	0.522	0.070	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.49**
		$U_1 - L_2$	423.48	-----	-77	20	-40	-28	-198	-214	470	84	0.762	0.235	1.00	Yes	0.419	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.77**
		$U_2 - L_3$	340.75	-350.30	-93	26	-48	-87	-195	-143	138	-131	0.613	0.175	0.79	Yes	0.337	0.096	0.44	Yes	0.806	0.189	1.00	Yes	0.741	0.119	0.86	Yes	1.00	**11.53**
		$U_3 - L_4$	-----	-383.97	25	-14	11	-63	10	8	11	-199	-----	-----	-----	-----	-----	-----	-----	-----	0.878	0.116	1.00	Yes	0.812	0.081	0.90	Yes	1.00	**4.75**
		$U_4 - L_4$	573.16	-----	-77	65	-32	-16	-96	-161	-343	-213	0.841	0.158	1.00	Yes	0.462	0.087	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.23**
		$U_4 - L_5$	664.75	-----	-183	226	-72	80	-225	-278	-464	-143	0.786	0.213	1.00	Yes	0.432	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.71**
		$U_5 - L_6$	673.50	-----	-289	242	-95	97	-139	-194	6	14	0.796	0.200	1.00	Yes	0.438	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.73**
		$U_6 - L_7$	663.57	-----	-104	307	-11	130	-77	-133	216	100	0.785	0.214	1.00	Yes	0.431	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.11**
		$U_8 - L_8$	992.95	-----	-100	359	19	137	321	358	337	104	0.794	0.206	1.00	Yes	0.492	0.115	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.92**
		$U_9 - L_{10}$	1039.69	-----	-297	279	-73	84	163	274	67	95	0.831	0.167	1.00	Yes	0.515	0.094	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.83**
		$U_{10} - L_{11}$	996.76	-----	-235	201	-94	59	22	301	327	180	0.842	0.151	1.00	Yes	0.521	0.085	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.43**
		$U_{11} - L_{12}$	839.94	-----	-243	138	-172	-15	35	161	377	184	0.831	0.169	1.00	Yes	0.457	0.093	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.84**
		$U_{12} - L_{13}$	645.19	-----	-198	176	-92	22	30	30	180	-101	0.786	0.208	1.00	Yes	0.495	0.117	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.41**
		$U_{13} - L_{14}$	463.29	-19.29	-88	52	-19	-37	-32	-93	39	-178	0.833	0.164	1.00	Yes	0.458	0.090	0.55	Yes	0.045	0.097	0.15	Yes	0.041	0.112	0.16	Yes	1.00	**6.63**
		$U_{15} - L_{14}$	257.81	-323.65	-62	8	57	-118	-249	-217	-269	-123	0.464	0.229	0.70	Yes	0.255	0.126	0.39	Yes	0.758	0.237	1.00	Yes	0.685	0.151	0.84	Yes	1.00	**8.86**
		$U_{16} - L_{15}$	403.64	-95.55	-127	97	3	-42	-373	-276	-333	-159	0.726	0.271	1.00	Yes	0.399	0.149	0.55	Yes	0.226	0.200	0.43	Yes	0.202	0.163	0.37	Yes	1.00	**7.05**
		$U_{17} - L_{16}$	520.46	-----	-138	98	-43	6	-392	-351	-406	-233	0.763	0.235	1.00	Yes	0.420	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.60**
		$U_{18} - L_{17}$	617.19	-----	-306	256	-112	76	-489	-450	-112	-119	0.730	0.262	1.00	Yes	0.401	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		$U_{19} - L_{18}$	687.61	-----	-347	251	-133	88	-410	-448	-70	-109	0.745	0.251	1.00	Yes	0.410	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.75**
		$U_{20} - L_{19}$	666.13	-----	-282	260	-94	92	-811	-376	-105	-40	0.721	0.278	1.00	Yes	0.397	0.153	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.21**
	Structure 2	$U_0 - L_1$	777.98	-----	-389	358	-115	100	-280	-135	-60	-50	0.770	0.222	1.00	Yes	0.423	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.58**
		$U_1 - L_2$	793.21	-----	-380	336	-93	70	-202	-157	-98	-27	0.785	0.207	1.00	Yes	0.432	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.10**
		$U_2 - L_3$	658.76	-----	-330	278	-83	63	-159	25	-22	90	0.779	0.215	1.00	Yes	0.428	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.67**
		$U_3 - L_4$	602.17	-----	-179	146	-53	8	-140	-95	71	-52	0.803	0.193	1.00	Yes	0.441	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.97**
		$U_4 - L_5$	428.67	-115.30	-132	108	-5	-35	-140	-41	81	-178	0.771	0.220	1.00	Yes	0.424	0.121	0.55	Yes	0.285	0.102	0.39	Yes	0.244	0.168	0.42	Yes	1.00	**7.22**
		$U_5 - L_6$	437.90	-295.68	-122	74	63	-112	-152	-19	-1	-181	0.788	0.208	1.00	Yes	0.433	0.115	0.55	Yes	0.698	0.174	0.88	Yes	0.626	0.156	0.79	Yes	1.00	**9.46**
		$U_6 - L_7$	24.12	-378.80	-28	-6	54	-101	-78	-166	-29	-299	0.039	0.193	0.24	Yes	0.022	0.106	0.13	Yes	0.811	0.180	1.00	Yes	0.726	0.115	0.85	Yes	1.00	**5.80**
		$U_8 - L_7$	589.12	-----	-175	139	-22	-29	-244	-417	-280	-215	0.751	0.242	1.00	Yes	0.473	0.137	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.46**
		$U_8 - L_8$	690.22	-----	-316	253	-129	30	-406	-324	-508	-259	0.748	0.245	1.00	Yes	0.411	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.63**
		$U_{10} - L_9$	792.66	-----	-302	227	-116	54	-415	-441	-287	-204	0.784	0.206	1.00	Yes	0.431	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.62**
		$U_{11} - L_{10}$	875.27	-----	-336	290	-130	94	-430	-418	-292	-222	0.797	0.201	1.00	Yes	0.439	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.83**
		$U_{12} - L_{11}$	865.96	-----	-361	347	-141	149	-285	-368	18	-44	0.789	0.204	1.00	Yes	0.434	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.21**
		$U_{13} - L_{12}$	760.70	-----	-425	379	-153	154	-146	-165	336	129	0.753	0.247	1.00	Yes	0.414	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.51**
		$U_{14} - L_{13}$	758.46	-----	-279	423	-40	149	-160	-195	349	175	0.750	0.248	1.00	Yes	0.413	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.54**
		$U_{14} - L_{15}$	632.22	-----	-220	339	20	74	70	280	214	-41	0.747	0.243	1.00	Yes	0.411	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.08**
		$U_{15} - L_{16}$	638.29	-----	-371	344	-63	70	-164	177	-28	20	0.755	0.242	1.00	Yes	0.415	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.64**
		$U_{16} - L_{17}$	717.14	-----	-319	360	-68	94	-198	181	-152	60	0.777	0.217	1.00	Yes	0.427	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.76**
		$U_{17} - L_{18}$	665.60	-----	-292	290	-66	79	-50	247	-26	102	0.787	0.210	1.00	Yes	0.433	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.96**
		$U_{18} - L_{19}$	671.69	-----	-283	262	-68	56	55	244	135	9	0.794	0.204	1.00	Yes	0.437	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.97**
		$U_{19} - L_{20}$	627.26	-----	-197	195	-25	1	81	88	-47	-37	0.800	0.195	1.00	Yes	0.440	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.74**
		$U_{20} - L_{21}$	451.12	-47.89	-124	115	-7	-15	16	68	105	-92	0.811	0.189	1.00	Yes	0.446	0.104	0.55	Yes	0.114	0.064	0.18	Yes	0.101	0.158	0.26	Yes	1.00	**6.59**
		$U_{21} - L_{22}$	440.06	-310.84	-110	81	39	-103	44	26	78	-217	0.791	0.203	1.00	Yes	0.435	0.112	0.55	Yes	0.734	0.170	0.91	Yes	0.658	0.140	0.80	Yes	1.00	**11.64**
		$U_{23} - L_{22}$	404.26	-327.35	-99	65	69	-115	-254	-245	-222	-47	0.727	0.220	0.95	Yes	0.400	0.121	0.53	Yes	0.780	0.212	1.00	Yes	0.693	0.146	0.84	Yes	1.00	**10.95**
		$U_{24} - L_{23}$	416.95	-68.52	-116	111	1	-25	-288	-190	-334	-55	0.750	0.245	1.00	Yes	0.412	0.135	0.55	Yes	0.164	0.135	0.30	Yes	0.145	0.149	0.30	Yes	1.00	**6.82**
		$U_{25} - L_{24}$	591.96	-----	-191	181	-20	6	-358	-314	-199	-113	0.755	0.244	1.00	Yes	0.415	0.138	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.98**
		$U_{26} - L_{25}$	654.06	-----	-279	254	-41	30	-265	-367	-206	-92	0.773	0.225	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.55**
		$U_{27} - L_{26}$	661.78	-----	-287	280	-47	60	-230	-273	172	65	0.782	0.212	1.00	Yes	0.430	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.54**
		$U_{28} - L_{27}$	713.40	-----	-334	357	-48	67	-211	-257	200	110	0.773	0.225	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.26**
		$U_{29} - L_{28}$	638.93	-----	-365	338	-75	75	-80	-181	205	99	0.755	0.244	1.00	Yes	0.415	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.27**
		$U_{30} - L_{29}$	646.36	-----	-226	356	-15	78	-99	-161	187	105	0.764	0.235	1.00	Yes	0.420	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.70**
		$U_{30} - L_{31}$	756.41	-----	-289	429	12	74	152	188	288	-3	0.748	0.242	1.00	Yes	0.412	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.79**
		$U_{31} - L_{32}$	769.64	-----	-439	393	-72	75	-92	-178	-1	46	0.761	0.230	1.00	Yes	0.419	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.63**
		$U_{32} - L_{33}$	884.50	-----	-354	351	-59	94	-275	246	-143	143	0.806	0.188	1.00	Yes	0.443	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.79**
		$U_{33} - L_{34}$	901.69	-----	-343	313	-110	68	-7	225	135	139	0.821	0.176	1.00	Yes	0.452	0.097	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.35**
		$U_{34} - L_{35}$	842.78	-----	-304	262	-86	36	125	154	37	-32	0.834	0.164	1.00	Yes	0.459	0.090	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.68**
		$U_{35} - L_{36}$	741.86	-----	-323	262	-109	18	11	47	164	-76	0.804	0.192	1.00	Yes	0.442	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.55**
		$U_{36} - L_{37}$	617.03	-8.49	-175	168	-31	-19	-67	-1	25	-233	0.787	0.204	1.00	Yes	0.495	0.115	0.62	Yes	0.014	0.083	0.10	Yes	0.013	0.157	0.17	Yes	1.00	**8.18**
		$U_{38} - L_{37}$	19.53	-389.32	-23	-5	72	-103	-189	-195	-189	-88	0.032	0.168	0.21	Yes	0.017	0.093	0.12	Yes	0.841	0.155	1.00	Yes	0.746	0.118	0.87	Yes	1.00	**5.71**
		$U_{39} - L_{38}$	306.80	-307.40	-89	59	76	-116	-295	-195	-397	-108	0.552	0.263	0.82	Yes	0.303	0.144	0.45	Yes	0.732	0.261	1.00	Yes	0.650	0.148	0.80	Yes	1.00	**8.53**
		$U_{40} - L_{39}$	412.61	-121.78	-131	100	20	-46	-312	-299	-240	-132	0.742	0.258	1.00	Yes	0.408	0.142	0.55	Yes	0.292	0.185	0.48	Yes	0.258	0.167	0.43	Yes	1.00	**7.68**
		$U_{41} - L_{40}$	566.84	-----	-172	123	-31	-5	-358	-370	-312	-194	0.756	0.235	1.00	Yes	0.416	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.97**
		$U_{42} - L_{41}$	623.55	-----	-317	263	-51	34	-390	-422	-70	-67	0.737	0.256	1.00	Yes	0.405	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.25**
		$U_{43} - L_{42}$	760.94	-----	-383	312	-65	45	-429	-429	-5	-47	0.753	0.242	1.00	Yes	0.414	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.05**
		$U_{44} - L_{43}$	789.59	-----	-285	325	-94	81	-420	-355	53	-22	0.781	0.214	1.00	Yes	0.430	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.98**
	Structure 3	$U_0 - L_1$	557.33	-----	-435	309	-114	95	-1053	98	-61	-53	0.604	0.396	1.00	Yes	0.332	0.218	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.23**
		$U_1 - L_2$	709.64	-----	-338	253	-99	67	-298	-69	-125	-45	0.769	0.222	1.00	Yes	0.423	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.81**
		$U_2 - L_3$	663.74	-----	-324	282	-94	60	-173	-49	-49	79	0.785	0.215	1.00	Yes	0.432	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.23**
		$U_3 - L_4$	556.04	-----	-149	112	-37	-2	-133	-43	125	-33	0.815	0.182	1.00	Yes	0.448	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.03**
		$U_4 - L_5$	430.17	-127.16	-131	109	0	-42	-147	-66	-98	-190	0.774	0.223	1.00	Yes	0.426	0.122	0.55	Yes	0.301	0.113	0.42	Yes	0.269	0.168	0.44	Yes	1.00	**7.96**
		$U_5 - L_6$	266.58	-332.95	-63	16	28	-111	-116	-187	40	-289	0.479	0.225	0.71	Yes	0.264	0.124	0.39	Yes	0.780	0.210	1.00	Yes	0.705	0.141	0.85	Yes	1.00	**8.44**
		$U_7 - L_6$	433.16	-66.08	-81	43	-7	-46	-221	-257	-386	-203	0.779	0.215	1.00	Yes	0.428	0.118	0.55	Yes	0.154	0.178	0.34	Yes	0.140	0.103	0.25	Yes	1.00	**6.83**
		$U_8 - L_7$	579.64	-----	-185	145	-82	8	-388	-375	-666	-230	0.707	0.292	1.00	Yes	0.445	0.167	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.13**
		$U_9 - L_8$	747.79	-----	-229	110	-158	-25	-506	-476	-1010	-490	0.740	0.258	1.00	Yes	0.407	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.70**
		$U_{10} - L_9$	940.70	-----	-235	185	-101	38	-598	-576	-679	-339	0.795	0.198	1.00	Yes	0.492	0.112	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.35**
		$U_{11} - L_{10}$	1003.52	-----	-304	253	-97	83	-446	-397	-140	-85	0.802	0.192	1.00	Yes	0.497	0.108	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.78**
		$U_{12} - L_{11}$	993.47	-----	-117	351	-13	129	-275	-314	232	106	0.794	0.197	1.00	Yes	0.492	0.110	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.67**
		$U_{12} - L_{13}$	668.03	-----	-109	304	25	71	177	124	203	-31	0.790	0.210	1.00	Yes	0.434	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.85**
		$U_{13} - L_{14}$	672.95	-----	-288	242	-28	55	-89	192	-73	14	0.796	0.199	1.00	Yes	0.438	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.25**
		$U_{14} - L_{15}$	696.19	-----	-173	245	-27	29	-80	170	191	52	0.823	0.174	1.00	Yes	0.453	0.096	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.93**
		$U_{15} - L_{16}$	614.48	-----	-82	84	-32	-20	-34	39	-8	30	0.901	0.094	1.00	Yes	0.496	0.052	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.63**
		$U_{17} - L_{16}$	-----	-285.40	24	-3	-48	-79	253	157	-731	51	-----	-----	-----	-----	-----	-----	-----	-----	0.653	0.341	1.00	Yes	0.604	0.101	0.71	Yes	1.00	**8.16**
		$U_{18} - L_{17}$	204.78	-331.82	-57	13	-22	-68	-207	-151	-661	-35	0.368	0.279	0.65	Yes	0.203	0.153	0.36	Yes	0.764	0.228	1.00	Yes	0.702	0.087	0.79	Yes	1.00	**7.58**
		$U_{19} - L_{18}$	368.39	-----	-81	36	-73	-22	-367	-294	-789	-215	0.663	0.332	1.00	Yes	0.364	0.183	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.24**
		$U_{20} - L_{19}$	545.49	-----	-74	40	51	-7	-764	-329	450	-2	0.716	0.279	1.00	Yes	0.432	0.154	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.38**

Moment (End) AB Operating

Operating Loads - 2F1

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	$U_0 - U_1$		-----	-493.75	-139	64	229	-1052	22	-4	-76	-405	-----	-----	-----	-----	-----	-----	-----	-----	0.672	0.323	1	Yes	0.666	0.250	0.92	Yes	1.00	**6.99**
	$U_1 - U_2$		13.72	-543.86	-53	63	-201	-903	10	49	-29	-36	0.016	0.223	0.24	Yes	0.011	0.153	0.17	Yes	0.740	0.251	1	Yes	0.733	0.215	0.95	Yes	1.00	**4.99**
	$U_2 - U_3$		111.73	-574.94	-99	239	-290	-794	11	-90	194	-79	0.128	0.221	0.35	Yes	0.086	0.144	0.24	Yes	0.782	0.210	1	Yes	0.775	0.189	0.97	Yes	1.00	**5.62**
	$U_3 - U_4$		-----	-559.45	-569	305	-104	-993	87	-38	-15	-239	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.120	0.89	Yes	0.754	0.236	1.00	Yes	1.00	**7.21**
	$U_4 - U_5$		386.18	-563.48	112	310	-177	-898	-113	34	-250	-228	0.443	0.256	0.70	Yes	0.304	0.175	0.48	Yes	0.767	0.233	1	Yes	0.760	0.213	0.98	Yes	1.00	**10.70**
	$U_5 - U_6$		-----	-544.73	-501	695	-297	-711	56	-347	-263	-588	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.255	1	Yes	0.735	0.169	0.91	Yes	1.00	**15.14**
	$U_6 - U_7$		-----	-320.56	-469	630	852	-2986	-806	-472	-604	-295	-----	-----	-----	-----	-----	-----	-----	-----	0.364	0.570	0.94	Yes	0.361	0.635	1.00	Yes	1.00	**35.08**
	$U_7 - U_8$		463.97	-----	-2314	4002	-44	673	-635	167	-246	163	0.321	0.671	1.00	Yes	0.224	0.457	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**20.94**
	$U_8 - U_9$		720.74	-----	780	-4	1912	-2055	-138	47	66	486	0.591	0.404	1.00	Yes	0.404	0.275	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.82**
	$U_9 - U_{10}$		533.74	-464.03	209	249	178	-1198	77	303	208	458	0.579	0.342	0.93	Yes	0.392	0.230	0.63	Yes	0.597	0.394	1	Yes	0.592	0.268	0.87	Yes	1.00	**12.65**
	$U_{10} - U_{11}$		98.15	-590.71	202	-89	114	-1096	213	55	290	82	0.106	0.292	0.40	Yes	0.071	0.187	0.26	Yes	0.761	0.211	0.98	Yes	0.754	0.246	1.00	Yes	1.00	**6.67**
	$U_{11} - U_{12}$		-----	-874.99	158	-116	9	-1065	156	58	228	91	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.169	1	Yes	0.821	0.177	1.00	Yes	1.00	**6.20**
	$U_{12} - U_{13}$		-----	-1183.10	50	-127	-19	-1206	227	-302	226	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.197	1	Yes	0.790	0.166	0.96	Yes	1.00	**6.62**
	$U_{13} - U_{14}$		-----	-1281.72	-575	-341	-296	-2011	285	21	113	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.256	1	Yes	0.735	0.222	0.96	Yes	1.00	**6.08**
	$U_{14} - U_{15}$		-----	-1298.20	-324	-166	-431	-1537	170	-271	35	-212	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.245	1	Yes	0.744	0.170	0.92	Yes	1.00	**7.66**
	$U_{15} - U_{16}$		-----	-1326.64	-428	-304	144	-1830	339	-85	-104	-419	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.226	1	Yes	0.761	0.202	0.97	Yes	1.00	**8.48**
	$U_{16} - U_{17}$		-----	-1306.58	-485	-102	-652	-1418	167	-277	-225	-345	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.237	1	Yes	0.749	0.156	0.91	Yes	1.00	**8.88**
	$U_{17} - U_{18}$		-----	-1042.72	-875	155	-380	-568	-81	-263	-165	-273	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.170	1	Yes	0.816	0.142	0.96	Yes	1.00	**6.47**
	$U_{18} - U_{19}$		-----	-700.13	-319	216	-687	-398	-232	-229	-1	-345	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.197	1	Yes	0.788	0.138	0.93	Yes	1.00	**9.20**
	$U_{19} - U_{20}$		-----	-487.05	-1048	1154	36	-2202	-263	-127	-14	-1001	-----	-----	-----	-----	-----	-----	-----	-----	0.553	0.407	0.97	Yes	0.548	0.443	1.00	Yes	1.00	**16.31**
Structure 2	$U_0 - U_1$		-----	-582.85	-505	-134	386	-1783	550	204	-72	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.693	0.272	0.97	Yes	0.688	0.303	1.00	Yes	1.00	**10.53**
	$U_1 - U_2$		-----	-749.67	-102	-163	-69	-1245	337	628	209	282	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.261	1	Yes	0.724	0.189	0.92	Yes	1.00	**5.93**
	$U_2 - U_3$		-----	-1069.67	-80	-241	-159	-1960	593	5	449	9	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.227	1	Yes	0.759	0.200	0.96	Yes	1.00	**6.42**
	$U_3 - U_4$		-----	-1285.38	-369	-196	-884	-2171	197	-254	206	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.262	1	Yes	0.732	0.193	0.93	Yes	1.00	**6.45**
	$U_4 - U_5$		-----	-1391.70	-375	-348	-492	-2617	-48	-341	56	-316	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.277	1	Yes	0.715	0.217	0.94	Yes	1.00	**6.24**
	$U_5 - U_6$		-----	-1538.15	-1246	30	-1226	-2000	132	-236	-69	-371	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.200	1	Yes	0.790	0.166	0.96	Yes	1.00	**7.37**
	$U_6 - U_7$		-----	-1208.27	-301	-105	-783	-2227	-67	-253	-85	-325	-----	-----	-----	-----	-----	-----	-----	-----	0.693	0.297	1	Yes	0.688	0.198	0.89	Yes	1.00	**5.75**
	$U_7 - U_8$		-----	-1321.16	-123	-154	-446	-1926	-211	-234	-284	-389	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.238	1	Yes	0.752	0.172	0.93	Yes	1.00	**9.16**
	$U_8 - U_9$		-----	-1119.21	-298	149	-355	-1466	-153	-109	-258	-501	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.228	1	Yes	0.759	0.156	0.92	Yes	1.00	**9.21**
	$U_9 - U_{10}$		211.62	-951.94	-50	367	-847	-1058	-173	-27	-215	-362	0.155	0.168	0.33	Yes	0.105	0.114	0.22	Yes	0.826	0.166	1	Yes	0.821	0.129	0.96	Yes	1.00	**10.34**
	$U_{10} - U_{11}$		741.74	-771.20	239	510	-170	-1411	-211	-41	-343	-252	0.627	0.241	0.87	Yes	0.426	0.156	0.59	Yes	0.771	0.228	1	Yes	0.766	0.199	0.97	Yes	1.00	**16.65**
	$U_{11} - U_{12}$		-----	-760.89	-1555	1146	-802	-1717	-248	-641	-421	-662	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.191	0.96	Yes	0.756	0.242	1.00	Yes	1.00	**27.35**
	$U_{12} - U_{13}$		734.00	-22.33	106	188	-135	-3219	-776	-997	-796	-359	0.496	0.500	1.00	Yes	0.353	0.340	0.70	Yes	0.018	0.452	0.47	Yes	0.018	0.406	0.43	Yes	1.00	**21.53**
	$U_{13} - U_{14}$		310.16	-----	-5219	8283	-470	1385	-1046	-272	-610	-308	0.153	0.838	1.00	Yes	0.108	0.549	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**29.75**
	$U_{14} - U_{15}$		1045.52	-----	1518	200	4775	-3891	-540	-174	-59	429	0.514	0.479	1.00	Yes	0.364	0.314	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.35**
	$U_{15} - U_{16}$		1026.74	-----	203	506	-595	-2539	-100	286	469	967	0.621	0.370	1.00	Yes	0.442	0.250	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.94**
	$U_{16} - U_{17}$		850.64	-237.65	606	273	905	-2511	209	79	546	211	0.627	0.373	1.00	Yes	0.417	0.246	0.67	Yes	0.207	0.245	0.46	Yes	0.206	0.316	0.53	Yes	1.00	**13.87**
	$U_{17} - U_{18}$		642.16	-465.85	434	297	493	-1942	-16	5	157	100	0.645	0.353	1.00	Yes	0.429	0.234	0.67	Yes	0.554	0.202	0.76	Yes	0.550	0.330	0.88	Yes	1.00	**12.32**
	$U_{18} - U_{19}$		410.98	-599.98	423	172	208	-1659	18	35	96	23	0.413	0.296	0.71	Yes	0.271	0.187	0.46	Yes	0.713	0.264	0.98	Yes	0.709	0.282	1.00	Yes	1.00	**9.72**
	$U_{19} - U_{20}$		212.66	-697.82	258	132	58	-1419	18	135	72	17	0.199	0.245	0.45	Yes	0.132	0.161	0.30	Yes	0.775	0.161	0.94	Yes	0.770	0.227	1.00	Yes	1.00	**7.97**
	$U_{20} - U_{21}$		36.69	-818.39	-36	105	-176	-1620	69	-93	128	-158	0.028	0.252	0.29	Yes	0.020	0.161	0.19	Yes	0.752	0.246	1	Yes	0.747	0.235	0.99	Yes	1.00	**7.85**
	$U_{21} - U_{22}$		-----	-762.51	-326	14	-469	-1682	32	-138	-27	-108	-----	-----	-----	-----	-----	-----	-----	-----	0.701	0.292	1	Yes	0.696	0.244	0.94	Yes	1.00	**6.94**
	$U_{22} - U_{23}$		91.77	-791.91	1	-3	209	-1756	-94	-104	-43	-242	0.071	0.281	0.36	Yes	0.050	0.187	0.24	Yes	0.728	0.269	1	Yes	0.723	0.254	0.98	Yes	1.00	**10.09**
	$U_{23} - U_{24}$		-----	-793.64	-627	160	216	-1644	92	-127	-255	-414	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.264	1	Yes	0.724	0.238	0.97	Yes	1.00	**9.72**
	$U_{24} - U_{25}$		208.28	-633.75	116	241	-456	-1196	-239	-33	-207	-238	0.195	0.224	0.42	Yes	0.129	0.147	0.28	Yes	0.704	0.290	1	Yes	0.699	0.191	0.90	Yes	1.00	**8.79**
	$U_{25} - U_{26}$		-----	-685.27	-984	596	-49	-1066	-58	-24	-211	-196	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.123	0.94	Yes	0.809	0.181	1.00	Yes	1.00	**12.03**
	$U_{26} - U_{27}$		-----	-581.62	-1239	795	245	-1827	-79	-102	-386	-326	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.255	0.95	Yes	0.687	0.310	1.00	Yes	1.00	**19.15**
	$U_{27} - U_{28}$		-----	-720.03	-1855	1948	-902	-2732	-393	-572	-526	-1051	-----	-----	-----	-----	-----	-----	-----	-----	0.628	0.364	1	Yes	0.624	0.343	0.97	Yes	1.00	**32.90**
	$U_{28} - U_{29}$		891.83	-----	-179	313	704	-3485	-720	-427	-719	-148	0.539	0.457	1.00	Yes	0.384	0.306	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**20.79**
	$U_{29} - U_{30}$		555.09	-----	-3097	7059	-137	1228	-976	177	-94	357	0.273	0.720	1.00	Yes	0.193	0.472	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**24.36**
	$U_{30} - U_{31}$		1092.34	-----	1523	110	4432	-3805	-439	-203	142	664	0.537	0.456	1.00	Yes	0.380	0.299	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.81**
	$U_{31} - U_{32}$		972.33	-64.60	122	443	-207	-2055	-22	238	580	794	0.657	0.335	1.00	Yes	0.468	0.228	0.70	Yes	0.052	0.193	0.25	Yes	0.051	0.259	0.32	Yes	1.00	**14.17**
	$U_{32} - U_{33}$		727.76	-422.45	495	243	497	-2191	209	58	612	214	0.615	0.384	1.00	Yes	0.413	0.256	0.67	Yes	0.422	0.154	0.58	Yes	0.420	0.309	0.73	Yes	1.00	**12.44**
	$U_{33} - U_{34}$		479.15	-751.03	350	198	-244	-1796	83	40	219	94	0.405	0.280	0.69	Yes	0.275	0.180	0.46	Yes	0.751	0.214	0.97	Yes	0.746	0.253	1.00	Yes	1.00	**10.99**
	$U_{34} - U_{35}$		167.21	-884.06	318	-48	97	-1874	120	-18	162	-92	0.123	0.246	0.37	Yes	0.083	0.167	0.25	Yes	0.767	0.172	0.94	Yes	0.763	0.228	1.00	Yes	1.00	**7.70**
	$U_{35} - U_{36}$		-----	-1168.48	116	-244	-310	-1770	84	18	141	-17	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.196	1	Yes	0.793	0.188	0.99	Yes	1.00	**7.61**
	$U_{36} - U_{37}$		-----	-1245.49	-409	-5	-537	-2439	174	-224	149	-18	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.283	1	Yes	0.709	0.217	0.93	Yes	1.00	**6.65**
	$U_{37} - U_{38}$		-----	-1354.85	13	8	194	-2317	13	-296	-25	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.217	1	Yes	0.771	0.206	0.98	Yes	1.00	**9.71**
	$U_{38} - U_{39}$		-----	-1416.65	41	-398	-173	-2904	82	-107	84	-330	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.262	1	Yes	0.727	0.241	0.97	Yes	1.00	**8.35**
	$U_{39} - U_{40}$		-----	-1361.98	-1123	-383	-1032	-2396	114	-187	-234	-476	-----	-----	-----	-----	-----	-----	-----	-----	0.705	0.289	1	Yes	0.699	0.199	0.90	Yes	1.00	**7.78**
	$U_{40} - U_{41}$		-----	-1250.68	-372	-387	-477	-2120	10	-247	-300	-351	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.275	1	Yes	0.712	0.189	0.91	Yes	1.00	**8.21**
	$U_{41} - U_{42}$		-----	-1187.21	-1030	211	-495	-1255	-103	-129	-167	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.143	1	Yes	0.843	0.128	0.98	Yes	1.00	**9.01**
	$U_{42} - U_{43}$		-----	-824.51	-496	345	-770	-991	13	-132	232	-407	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.195	1	Yes	0.796	0.150	0.95	Yes	1.00	**14.40**
	$U_{43} - U_{44}$		-----	-485.52	-1111	971	165	-2065	-196	-102	-101	-899	-----	-----	-----	-----	-----	-----	-----	-----	0.577	0.415	1	Yes	0.573	0.351	0.93	Yes	1.00	**14.76**
Structure 3	$U_0 - U_1$		-----	-560.45	-799	-144	1003	-1808	481	187	-70	-456	-----	-----	-----	-----	-----	-----	-----	-----	0.636	0.249	0.89	Yes	0.631	0.364	1.00	Yes	1.00	**12.47**
	$U_1 - U_2$		-----	-669.17	-67	-119	2	-827	252	507	214	119	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.235	1	Yes	0.753	0.166	0.92	Yes	1.00	**5.47**
	$U_2 - U_3$		-----	-976.28	-76	-127	137	-1193	517	10	471	-61	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.224	1	Yes	0.764	0.194	0.96	Yes	1.00	**5.73**
	$U_3 - U_4$		-----	-1305.36	-145	-211	-278	-1859	135	-232	195	-170	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.235	1	Yes	0.748	0.205	0.96	Yes	1.00	**6.93**
	$U_4 - U_5$		-----	-1382.47	-1011	25	-663	-1475	330	-166	30	-351	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.190	1	Yes	0.793	0.163	0.96	Yes	1.00	**7.08**
	$U_5 - U_6$		-----	-1247.86	-378	-227	-330	-2014	-63	-368	-81	-268	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.272	1	Yes	0.715	0.222	0.94	Yes	1.00	**6.11**
	$U_6 - U_7$		-----	-1299.72	-286	-63	-70	-1687	-118	-244	-196	-469	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.240	1	Yes	0.745	0.186	0.94	Yes	1.00	**9.24**
	$U_7 - U_8$		-----	-1112.18	-383	83	-560	-1042	87	-179	-235	-477	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.245	1	Yes	0.743	0.144	0.89	Yes	1.00	**8.22**
	$U_8 - U_9$		-----	-896.92	-537	264	-178	-894	97	-210	-209	-328	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.147	1	Yes	0.841	0.148	0.99	Yes	1.00	**10.30**
	$U_9 - U_{10}$		-----	-624.02	-841	396	-215	-559	-148	-297	-199	-397	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.191	1	Yes	0.796	0.188	0.99	Yes	1.00	**12.78**
	$U_{10} - U_{11}$		-----	-568.45	-521	535	-427	-1148	-544	-251	-357	-275	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.268	1	Yes	0.725	0.257	0.99	Yes	1.00	**24.23**
	$U_{11} - U_{12}$		373.53	-----	-2974	3676	-142	604	-584	21	-263	38	0.306	0.688	1.00	Yes	0.209	0.468	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**27.41**
	$U_{12} - U_{13}$		814.26	-----	823	96	2497	-2202	-409	-75	-91	477	0.564	0.427	1.00	Yes	0.394	0.291	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.25**
	$U_{13} - U_{14}$		738.07	-252.22	208	340	41	-1068	-144	271	114	439	0.706	0.287	1.00	Yes	0.493	0.197	0.70	Yes	0.287	0.304	0.6	Yes	0.284	0.227	0.52	Yes	1.00	**11.32**
	$U_{14} - U_{15}$		524.35	-515.04	355	202	409	-1250	67	133	270	-21	0.601	0.343	0.95	Yes	0.405	0.223	0.63	Yes	0.701	0.214	0.92	Yes	0.695	0.297	1.00	Yes	1.00	**9.36**
	$U_{15} - U_{16}$		261.78	-542.15	224	111	51	-1129	4	129	61	68	0.300	0.290	0.60	Yes	0.206	0.199	0.41	Yes	0.738	0.178	0.92	Yes	0.731	0.268	1.00	Yes	1.00	**6.82**
	$U_{16} - U_{17}$		341.93	-527.38	317	86	187	-1195	30	77	0	-110	0.392	0.303	0.70	Yes	0.269	0.208	0.48	Yes	0.718	0.129	0.85	Yes	0.711	0.284	1.00	Yes	1.00	**9.48**
	$U_{17} - U_{18}$		-----	-506.53	-152	-71	335	-1316	75	-264	-133	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.689	0.212	0.91	Yes	0.683	0.313	1.00	Yes	1.00	**8.84**
	$U_{18} - U_{19}$		-----	-524.29	-75	62	79	-1153	-58	234	101	-101	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.280	1	Yes	0.707	0.274	0.99	Yes	1.00	**11.85**
	$U_{19} - U_{20}$		-----	-432.45	-602	593	-48	-1661	87	-28	109	-647	-----	-----	-----	-----	-----	-----	-----	-----	0.588	0.404	1	Yes	0.583	0.395	0.98	Yes	1.00	**11.36**

Moment (End) AB Operating

Operating Loads - 2F1

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	11.27	-51.65	-218	111	1164	-2283	34	126	-376	-1382	0.017	0.982	1.00	Yes	0.010	0.594	0.61	Yes	0.094	0.697	0.8	Yes	0.093	0.685	0.78	Yes	1.00	**32.08**
		L_1 - L_2	436.83	-23.26	45	2	248	-1034	26	18	-81	-16	0.669	0.328	1.00	Yes	0.408	0.222	0.63	Yes	0.042	0.185	0.23	Yes	0.042	0.310	0.36	Yes	1.00	**8.14**
		L_2 - L_3	606.75	-94.98	-20	85	-207	-1092	7	-10	-215	68	0.698	0.298	1.00	Yes	0.404	0.179	0.59	Yes	0.130	0.317	0.45	Yes	0.129	0.264	0.40	Yes	1.00	**9.33**
		L_3 - L_4	558.64	-233.46	62	274	181	-1323	-20	29	-204	6	0.643	0.352	1.00	Yes	0.382	0.228	0.61	Yes	0.319	0.247	0.57	Yes	0.316	0.319	0.64	Yes	1.00	**10.44**
		L_4 - L_5	559.86	-----	-795	733	-512	-732	-97	2	-320	111	0.725	0.267	1.00	Yes	0.435	0.174	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.03**
		L_5 - L_6	704.53	-506.85	-359	1010	-1066	-1218	53	294	-18	-6	0.691	0.309	1.00	Yes	0.447	0.188	0.64	Yes	0.591	0.231	0.83	Yes	0.585	0.270	0.86	Yes	1.00	**21.51**
		L_6 - L_7	90.87	-787.14	-1688	1232	-1495	-2277	-65	-212	-35	-44	0.062	0.378	0.44	Yes	0.040	0.234	0.28	Yes	0.641	0.150	0.8	Yes	0.634	0.358	1.00	Yes	1.00	**27.87**
		L_7 - L_8	-----	-1127.13	-370	2155	-18	576	63	102	27	76	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.271	1	Yes	0.714	0.285	1.00	Yes	1.00	**14.05**
		L_8 - L_9	-----	-1130.50	829	128	2123	-1260	-9	-35	-69	-73	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.248	0.98	Yes	0.716	0.281	1.00	Yes	1.00	**21.68**
		L_9 - L_{10}	-----	-934.18	228	163	140	-1520	42	48	48	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.096	0.86	Yes	0.752	0.239	1.00	Yes	1.00	**17.70**
		L_{10} - L_{11}	124.98	-489.77	429	-17	330	-936	87	19	-89	-47	0.162	0.263	0.43	Yes	0.094	0.160	0.26	Yes	0.753	0.102	0.86	Yes	0.746	0.248	1.00	Yes	1.00	**11.89**
		L_{11} - L_{12}	555.52	-164.34	359	-170	449	-978	-25	14	-106	-13	0.719	0.277	1.00	Yes	0.432	0.183	0.62	Yes	0.253	0.110	0.37	Yes	0.250	0.259	0.51	Yes	1.00	**9.71**
		L_{12} - L_{13}	1022.92	-----	108	-71	-382	-929	-167	-122	-95	-16	0.807	0.184	1.00	Yes	0.516	0.110	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.53**
		L_{13} - L_{14}	1190.89	-----	228	-389	566	-1967	-106	61	-270	57	0.700	0.294	1.00	Yes	0.454	0.179	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.75**
		L_{14} - L_{15}	1580.25	-----	-1726	115	-1203	-1493	-47	140	-244	117	0.772	0.225	1.00	Yes	0.502	0.136	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.40**
		L_{15} - L_{16}	1554.01	-----	-332	-303	-808	-1817	57	190	-243	-156	0.759	0.236	1.00	Yes	0.487	0.138	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.52**
		L_{16} - L_{17}	1279.65	-----	-847	336	-1190	-815	-83	-9	-174	135	0.809	0.190	1.00	Yes	0.525	0.117	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.55**
		L_{17} - L_{18}	953.86	-----	-655	285	-755	-487	-28	53	-25	-158	0.831	0.166	1.00	Yes	0.532	0.099	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.05**
		L_{18} - L_{19}	412.00	-----	-862	530	-521	-30	-156	-73	-190	494	0.631	0.361	1.00	Yes	0.427	0.229	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.49**
		L_{19} - L_{20}	246.24	-68.76	-1367	767	-226	34	993	222	2	0	0.377	0.616	1.00	Yes	0.230	0.406	0.64	Yes	0.125	0.371	0.5	Yes	0.124	0.410	0.54	Yes	1.00	**18.55**
	Structure 2	L_0 - L_1	-----	-53.97	-212	186	878	-4511	21	74	-273	-949	-----	-----	-----	-----	-----	-----	-----	-----	0.078	0.778	0.86	Yes	0.077	0.918	1.00	Yes	1.00	**50.41**
		L_1 - L_2	546.89	-----	155	-204	475	-1360	76	101	-207	321	0.664	0.329	1.00	Yes	0.395	0.211	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.70**
		L_2 - L_3	1001.92	-----	-17	-146	-440	-1336	123	161	16	16	0.790	0.210	1.00	Yes	0.518	0.125	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.12**
		L_3 - L_4	1285.17	-----	57	-329	-580	-1901	43	124	110	240	0.755	0.242	1.00	Yes	0.508	0.149	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.54**
		L_4 - L_5	1675.94	-----	-241	-229	-1197	-2224	18	-10	7	26	0.781	0.212	1.00	Yes	0.517	0.124	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.81**
		L_5 - L_6	1769.56	-----	-39	-365	-1781	-2565	-92	58	-208	105	0.759	0.240	1.00	Yes	0.510	0.146	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.80**
		L_6 - L_7	1703.54	-----	-367	-76	-1219	-2967	53	-17	-167	146	0.721	0.271	1.00	Yes	0.479	0.158	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.36**
		L_7 - L_8	1350.10	-----	-1749	332	-1165	-1519	-45	163	-298	-36	0.774	0.217	1.00	Yes	0.509	0.128	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.20**
		L_8 - L_9	1174.57	-----	-852	664	-1153	-957	-3	56	-155	203	0.822	0.175	1.00	Yes	0.553	0.109	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.95**
		L_9 - L_{10}	854.25	-----	-1295	623	-1085	-768	22	183	-43	-76	0.762	0.229	1.00	Yes	0.444	0.143	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.21**
		L_{10} - L_{11}	673.95	-----	-1649	1152	-1138	-930	-158	-35	-249	-113	0.673	0.322	1.00	Yes	0.395	0.203	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**18.68**
		L_{11} - L_{12}	813.97	-692.74	-2287	2441	-2039	-2760	206	569	-23	-521	0.567	0.429	1.00	Yes	0.377	0.256	0.64	Yes	0.573	0.245	0.82	Yes	0.568	0.376	0.95	Yes	1.00	**40.47**
		L_{12} - L_{13}	-----	-964.81	-44	170	-1456	-3122	-547	-505	-85	-136	-----	-----	-----	-----	-----	-----	-----	-----	0.582	0.412	1	Yes	0.577	0.310	0.89	Yes	1.00	**20.20**
		L_{13} - L_{14}	-----	-1194.93	-2101	4513	-475	1305	-51	7	-210	-283	-----	-----	-----	-----	-----	-----	-----	-----	0.607	0.273	0.88	Yes	0.601	0.394	1.00	Yes	1.00	**16.89**
		L_{14} - L_{15}	-----	-1280.49	1469	-358	4051	-3420	282	243	-182	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.650	0.230	0.89	Yes	0.644	0.354	1.00	Yes	1.00	**18.77**
		L_{15} - L_{16}	-----	-1218.15	-406	465	-2432	-2271	-48	137	164	220	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.257	1	Yes	0.729	0.242	0.98	Yes	1.00	**18.69**
		L_{16} - L_{17}	-----	-1087.13	1063	141	589	-1658	174	48	-19	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.173	0.98	Yes	0.792	0.205	1.00	Yes	1.00	**15.22**
		L_{17} - L_{18}	-----	-767.86	479	198	794	-1200	15	-40	-71	73	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.116	0.93	Yes	0.806	0.192	1.00	Yes	1.00	**10.59**
		L_{18} - L_{19}	166.02	-600.84	605	76	275	-1027	-41	-73	-29	-20	0.188	0.209	0.40	Yes	0.109	0.125	0.24	Yes	0.806	0.141	0.95	Yes	0.801	0.198	1.00	Yes	1.00	**10.46**
		L_{19} - L_{20}	612.21	-483.70	478	133	-63	-1443	-33	-23	-155	120	0.694	0.302	1.00	Yes	0.410	0.193	0.61	Yes	0.649	0.192	0.85	Yes	0.645	0.279	0.93	Yes	1.00	**11.67**
		L_{20} - L_{21}	926.33	-314.79	336	-10	-1003	-1706	2	-35	-37	24	0.739	0.253	1.00	Yes	0.484	0.149	0.64	Yes	0.297	0.212	0.51	Yes	0.295	0.249	0.55	Yes	1.00	**11.27**
		L_{21} - L_{22}	774.72	-82.30	93	-83	52	-2440	-52	59	-196	36	0.618	0.377	1.00	Yes	0.413	0.236	0.65	Yes	0.078	0.258	0.34	Yes	0.077	0.356	0.44	Yes	1.00	**10.17**
		L_{22} - L_{23}	891.42	-----	-1677	253	-801	-1785	-44	59	-214	-60	0.711	0.284	1.00	Yes	0.475	0.177	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.98**
		L_{23} - L_{24}	923.75	-----	-569	340	-973	-1608	70	211	-100	-52	0.737	0.257	1.00	Yes	0.483	0.153	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.99**
		L_{24} - L_{25}	696.93	-----	-910	612	-762	-938	89	93	-170	-58	0.789	0.207	1.00	Yes	0.467	0.132	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.11**
		L_{25} - L_{26}	629.94	-----	-1118	883	-834	-1319	101	189	-139	-111	0.714	0.283	1.00	Yes	0.412	0.169	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**16.20**
		L_{26} - L_{27}	694.17	-347.12	-1918	1793	-1599	-2100	-11	82	-242	307	0.620	0.373	1.00	Yes	0.361	0.232	0.60	Yes	0.367	0.202	0.57	Yes	0.365	0.336	0.71	Yes	1.00	**28.13**
		L_{27} - L_{28}	97.41	-880.24	-2463	2859	-1281	-1560	194	499	-354	-601	0.060	0.403	0.47	Yes	0.040	0.239	0.28	Yes	0.646	0.280	0.93	Yes	0.641	0.353	1.00	Yes	1.00	**32.55**
		L_{28} - L_{29}	-----	-1050.57	77	30	-1550	-3425	-40	-160	-160	-89	-----	-----	-----	-----	-----	-----	-----	-----	0.634	0.363	1	Yes	0.628	0.340	0.97	Yes	1.00	**18.85**
		L_{29} - L_{30}	-----	-1270.66	-1613	4064	-492	1178	41	157	86	116	-----	-----	-----	-----	-----	-----	-----	-----	0.645	0.238	0.89	Yes	0.639	0.355	1.00	Yes	1.00	**14.79**
		L_{30} - L_{31}	-----	-1296.32	1121	-238	3980	-3397	-402	-286	76	251	-----	-----	-----	-----	-----	-----	-----	-----	0.658	0.240	0.9	Yes	0.652	0.348	1.00	Yes	1.00	**19.76**
		L_{31} - L_{32}	-----	-1206.98	-210	314	-1307	-1996	-157	-42	81	276	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.266	1	Yes	0.722	0.198	0.93	Yes	1.00	**15.89**
		L_{32} - L_{33}	-----	-985.35	916	77	1031	-1405	20	-37	12	38	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.116	0.94	Yes	0.808	0.191	1.00	Yes	1.00	**13.33**
		L_{33} - L_{34}	119.30	-665.52	503	99	498	-1196	-19	12	-14	171	0.119	0.232	0.36	Yes	0.070	0.146	0.22	Yes	0.787	0.136	0.93	Yes	0.782	0.209	1.00	Yes	1.00	**10.31**
		L_{34} - L_{35}	608.86	-679.08	694	-8	785	-1777	-8	-65	-96	-55	0.543	0.296	0.84	Yes	0.316	0.185	0.51	Yes	0.718	0.113	0.84	Yes	0.713	0.284	1.00	Yes	1.00	**15.12**
		L_{35} - L_{36}	1101.07	-262.05	489	-94	-312	-1546	-81	19	-186	175	0.770	0.226	1.00	Yes	0.519	0.141	0.66	Yes	0.217	0.113	0.34	Yes	0.216	0.209	0.43	Yes	1.00	**10.67**
		L_{36} - L_{37}	1227.69	-39.67	322	-63	226	-2472	17	-4	-113	193	0.704	0.289	1.00	Yes	0.462	0.169	0.64	Yes	0.027	0.226	0.26	Yes	0.027	0.273	0.30	Yes	1.00	**10.60**
		L_{37} - L_{38}	1688.01	-----	-2	-457	-673	-2951	-84	46	-284	6	0.714	0.277	1.00	Yes	0.475	0.162	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.34**
		L_{38} - L_{39}	1763.04	-----	-1364	-56	-1806	-2525	60	155	-105	155	0.756	0.234	1.00	Yes	0.508	0.142	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.99**
		L_{39} - L_{40}	1660.97	-----	-1396	-50	-1571	-2224	57	182	-98	-117	0.774	0.222	1.00	Yes	0.513	0.131	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.06**
		L_{40} - L_{41}	1358.28	-----	-1219	370	-1537	-1275	-88	19	-192	21	0.798	0.195	1.00	Yes	0.537	0.121	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.37**
		L_{41} - L_{42}	1051.10	-----	-707	360	-913	-979	40	146	-35	-203	0.828	0.163	1.00	Yes	0.543	0.097	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.17**
		L_{42} - L_{43}	522.87	-----	-1177	600	-1072	-247	24	-8	-154	736	0.635	0.360	1.00	Yes	0.378	0.227	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.27**
		L_{43} - L_{44}	38.37	-31.13	-2989	967	-91	-49	2048	598	-47	-14	0.047	0.945	1.00	Yes	0.028	0.595	0.63	Yes	0.045	0.661	0.71	Yes	0.044	0.608	0.66	Yes	1.00	**31.73**
	Structure 3	L_0 - L_1	37.92	-100.99	-50	-15	1096	-2343	1	2	-247	-1119	0.058	0.935	1.00	Yes	0.035	0.621	0.66	Yes	0.183	0.584	0.77	Yes	0.182	0.703	0.89	Yes	1.00	**31.39**
		L_1 - L_2	427.10	-----	154	-180	492	-898	35	60	35	347	0.654	0.342	1.00	Yes	0.442	0.215	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.94**
		L_2 - L_3	901.31	-----	-24	-141	-108	-998	86	125	37	26	0.785	0.208	1.00	Yes	0.502	0.124	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.47**
		L_3 - L_4	1205.98	-----	47	-312	-395	-1468	29	118	-38	242	0.763	0.237	1.00	Yes	0.495	0.146	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.83**
		L_4 - L_5	1608.11	-----	-271	-131	-1048	-1702	27	13	-11	42	0.786	0.208	1.00	Yes	0.504	0.121	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.65**
		L_5 - L_6	1381.22	-----	-31	-300	296	-2466	-63	133	-279	143	0.675	0.317	1.00	Yes	0.439	0.192	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.18**
		L_6 - L_7	1365.02	-----	-1282	567	-967	-1143	-7	106	-177	183	0.803	0.192	1.00	Yes	0.520	0.117	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.58**
		L_7 - L_8	1066.53	-----	-167	100	-732	-736	65	223	-26	69	0.842	0.157	1.00	Yes	0.538	0.094	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.40**
		L_8 - L_9	625.01	-----	-630	418	-487	-325	10	-31	-81	-51	0.809	0.181	1.00	Yes	0.486	0.119	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.38**
		L_9 - L_{10}	538.62	-548.44	-31	499	-580	-607	-23	23	65	88	0.698	0.176	0.88	Yes	0.406	0.107	0.52	Yes	0.843	0.098	0.95	Yes	0.836	0.161	1.00	Yes	1.00	**13.09**
		L_{10} - L_{11}	153.67	-835.34	-2026	1492	-1337	-1947	389	-112	44	-92	0.105	0.355	0.47	Yes	0.068	0.220	0.29	Yes	0.680	0.112	0.8	Yes	0.672	0.318	1.00	Yes	1.00	**34.67**
		L_{11} - L_{12}	-----	-1170.89	-570	1922	-57	531	3	-19	-92	-109	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.235	0.99	Yes	0.742	0.254	1.00	Yes	1.00	**15.56**
		L_{12} - L_{13}	-----	-1121.82	856	84	2154	-1078	-318	-258	-187	-141	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.279	1	Yes	0.710	0.285	1.00	Yes	1.00	**16.11**
		L_{13} - L_{14}	-----	-997.89	111	240	177	-1246	-113	-66	-46	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.088	0.91	Yes	0.803	0.196	1.00	Yes	1.00	**13.70**
		L_{14} - L_{15}	92.54	-710.26	546	144	-32	-805	48	-48	-42	7	0.091	0.185	0.28	Yes	0.059	0.111	0.18	Yes	0.828	0.154	0.99	Yes	0.819	0.178	1.00	Yes	1.00	**10.66**
		L_{15} - L_{16}	88.38	-464.29	430	114	748	-1095	2	-60	-156	69	0.114	0.318	0.44	Yes	0.069	0.209	0.28	Yes	0.714	0.152	0.87	Yes	0.707	0.290	1.00	Yes	1.00	**8.24**
		L_{16} - L_{17}	623.14	-----	-622	77	-201	-1058	62	23	-125	124	0.717	0.276	1.00	Yes	0.426	0.179	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.65**
		L_{17} - L_{18}	600.91	-----	-33	-28	-346	-1047	119	300	-39	70	0.691	0.301	1.00	Yes	0.400	0.180	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.44**
		L_{18} - L_{19}	426.68	-----	-515	207	-363	-741	54	-86	-40	559	0.653	0.343	1.00	Yes	0.398	0.225	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.06**
		L_{19} - L_{20}	10.38	-0.07	-1956	1280	42	-143	1843	501	-128	-35	0.016	0.982	1.00	Yes	0.009	0.591	0.60	Yes	0.000	0.671	0.68	Yes	0.000	0.587	0.59	Yes	1.00	**29.99**

Moment (End) AB Operating

Operating Loads - 2F1

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

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Verticals	Structure 1	$U_0 - L_0$	-----	-328.80	-134	177	-24	48	-593	-190	-99	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.256	1	Yes	0.696	0.226	0.93	Yes	1.00	**2.78**
		$U_1 - L_1$	18.95	-315.94	-256	244	20	-14	79	90	39	15	0.034	0.353	0.39	Yes	0.019	0.194	0.22	Yes	0.690	0.118	0.81	Yes	0.669	0.327	1.00	Yes	1.00	**7.05**
		$U_2 - L_2$	35.09	-277.30	-280	316	114	-99	96	125	-156	-38	0.063	0.449	0.52	Yes	0.035	0.247	0.29	Yes	0.606	0.135	0.75	Yes	0.587	0.404	1.00	Yes	1.00	**10.31**
		$U_3 - L_3$	245.47	-234.76	-340	351	385	-357	42	226	-35	53	0.441	0.558	1.00	Yes	0.243	0.307	0.55	Yes	0.514	0.159	0.68	Yes	0.497	0.492	0.99	Yes	1.00	**14.87**
		$U_4 - L_4$	72.74	-190.66	-174	143	466	-441	4	132	-124	-117	0.131	0.634	0.77	Yes	0.072	0.349	0.43	Yes	0.419	0.169	0.59	Yes	0.403	0.596	1.00	Yes	1.00	**16.58**
		$U_5 - L_5$	-----	-435.05	25	-37	217	-242	-122	-46	-109	-82	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.099	0.89	Yes	0.751	0.245	1.00	Yes	1.00	**5.87**
		$U_6 - L_6$	-----	-518.98	35	-55	274	-292	-75	29	-38	21	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.083	0.87	Yes	0.744	0.256	1.00	Yes	1.00	**6.25**
		$U_7 - L_7$	-----	-440.95	117	-131	295	-315	-129	47	-36	69	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.121	0.86	Yes	0.680	0.310	1.00	Yes	1.00	**4.11**
		$U_8 - L_8$	-----	-1270.49	-422	502	497	-591	-44	17	-69	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.917	0.039	0.96	Yes	0.881	0.110	1.00	Yes	1.00	**9.90**
		$U_9 - L_9$	-----	-667.45	-374	432	-166	189	-243	-184	-222	-157	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.126	0.93	Yes	0.754	0.240	1.00	Yes	1.00	**5.41**
		$U_{10} - L_{10}$	-----	-792.40	-397	411	-109	93	-220	-171	-266	-220	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.109	0.93	Yes	0.782	0.213	1.00	Yes	1.00	**9.43**
		$U_{11} - L_{11}$	-----	-660.93	-391	482	-65	115	-1	70	-178	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.099	0.9	Yes	0.769	0.224	1.00	Yes	1.00	**8.76**
		$U_{12} - L_{12}$	-----	-504.67	-355	346	-24	31	-64	97	-172	11	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.108	0.84	Yes	0.692	0.303	1.00	Yes	1.00	**8.03**
		$U_{13} - L_{13}$	-----	-356.77	-256	273	11	5	-31	131	-76	105	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.112	0.84	Yes	0.683	0.311	1.00	Yes	1.00	**6.32**
		$U_{14} - L_{14}$	-----	-106.47	-589	605	350	-350	151	193	-122	-49	-----	-----	-----	-----	-----	-----	-----	-----	0.238	0.249	0.49	Yes	0.225	0.774	1.00	Yes	1.00	**24.08**
		$U_{15} - L_{15}$	224.94	-314.67	-180	171	247	-257	-129	-133	-106	-175	0.405	0.379	0.79	Yes	0.223	0.208	0.44	Yes	0.705	0.169	0.88	Yes	0.666	0.328	1.00	Yes	1.00	**8.62**
		$U_{16} - L_{16}$	109.77	-321.48	-54	37	237	-243	-79	-79	18	-138	0.197	0.350	0.55	Yes	0.109	0.193	0.31	Yes	0.724	0.134	0.86	Yes	0.680	0.310	1.00	Yes	1.00	**6.89**
		$U_{17} - L_{17}$	-----	-436.07	30	-51	220	-235	-94	-213	-41	-97	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.152	0.97	Yes	0.752	0.239	1.00	Yes	1.00	**6.01**
		$U_{18} - L_{18}$	-----	-532.71	125	-130	438	-445	-161	-61	19	-78	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.093	0.88	Yes	0.741	0.252	1.00	Yes	1.00	**6.31**
		$U_{19} - L_{19}$	-----	-653.13	140	-153	500	-514	-64	12	355	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.100	0.92	Yes	0.760	0.239	1.00	Yes	1.00	**6.95**
		$U_{20} - L_{20}$	-----	-575.57	167	-215	398	-461	35	5	820	107	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.236	1	Yes	0.670	0.214	0.89	Yes	1.00	**4.48**
	Structure 2	$U_0 - L_0$	-----	-609.87	-396	495	-118	184	-1165	-198	-263	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.264	1	Yes	0.654	0.210	0.87	Yes	1.00	**5.19**
		$U_1 - L_1$	-----	-707.39	-564	558	-114	122	71	22	35	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.076	0.89	Yes	0.758	0.239	1.00	Yes	1.00	**8.54**
		$U_2 - L_2$	-----	-583.33	-485	485	-88	97	-116	53	87	40	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.087	0.87	Yes	0.743	0.248	1.00	Yes	1.00	**7.67**
		$U_3 - L_3$	-----	-487.18	-242	251	-46	53	48	147	15	125	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.100	0.93	Yes	0.764	0.228	1.00	Yes	1.00	**7.04**
		$U_4 - L_4$	76.85	-326.67	-239	232	35	-15	-59	118	-108	65	0.138	0.339	0.48	Yes	0.076	0.187	0.27	Yes	0.741	0.101	0.85	Yes	0.691	0.305	1.00	Yes	1.00	**7.13**
		$U_5 - L_5$	210.26	-313.15	-245	259	146	-134	-75	140	-111	115	0.378	0.371	0.75	Yes	0.208	0.204	0.42	Yes	0.707	0.130	0.84	Yes	0.663	0.330	1.00	Yes	1.00	**9.45**
		$U_6 - L_6$	362.29	-236.75	-237	235	234	-233	11	138	-119	87	0.652	0.342	1.00	Yes	0.358	0.188	0.55	Yes	0.533	0.096	0.63	Yes	0.501	0.302	0.81	Yes	1.00	**11.15**
		$U_7 - L_7$	44.02	-----	-329	338	603	-681	-167	33	-158	-108	0.079	0.919	1.00	Yes	0.044	0.505	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**31.12**
		$U_8 - L_8$	-----	-463.51	9	-31	370	-374	-142	-104	-43	-126	-----	-----	-----	-----	-----	-----	-----	-----	0.672	0.114	0.79	Yes	0.668	0.327	1.00	Yes	1.00	**6.97**
		$U_9 - L_9$	-----	-699.84	90	-122	546	-571	-139	-108	-155	-160	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.082	0.87	Yes	0.750	0.242	1.00	Yes	1.00	**8.49**
		$U_{10} - L_{10}$	-----	-799.09	90	-136	548	-568	-59	-45	-151	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.094	0.89	Yes	0.747	0.251	1.00	Yes	1.00	**9.38**
		$U_{11} - L_{11}$	-----	-816.94	158	-171	505	-515	-49	-147	44	3	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.085	0.91	Yes	0.764	0.227	1.00	Yes	1.00	**8.21**
		$U_{12} - L_{12}$	-----	-892.02	174	-156	503	-522	-29	128	40	65	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.077	0.94	Yes	0.773	0.224	1.00	Yes	1.00	**8.25**
		$U_{13} - L_{13}$	-----	-754.81	245	-244	566	-557	-81	44	106	74	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.111	0.96	Yes	0.728	0.271	1.00	Yes	1.00	**6.21**
		$U_{14} - L_{14}$	-----	-1285.79	-645	598	720	-689	-56	182	-57	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.940	0.051	1	Yes	0.853	0.127	0.99	Yes	1.00	**11.62**
		$U_{15} - L_{15}$	-----	-728.88	-606	596	-168	169	-147	-90	-82	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.140	0.96	Yes	0.703	0.290	1.00	Yes	1.00	**8.15**
		$U_{16} - L_{16}$	-----	-700.52	-571	541	-127	101	-242	-146	-167	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.115	0.93	Yes	0.751	0.242	1.00	Yes	1.00	**8.65**
		$U_{17} - L_{17}$	-----	-639.55	-544	538	-132	129	-136	-41	-100	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.087	0.88	Yes	0.744	0.253	1.00	Yes	1.00	**8.00**
		$U_{18} - L_{18}$	-----	-575.17	-496	507	-79	88	-17	33	-169	-28	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.089	0.86	Yes	0.733	0.260	1.00	Yes	1.00	**7.88**
		$U_{19} - L_{19}$	-----	-464.67	-316	300	-22	33	-116	29	-161	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.699	0.100	0.8	Yes	0.694	0.304	1.00	Yes	1.00	**7.27**
		$U_{20} - L_{20}$	41.90	-367.67	-252	253	19	-11	-91	61	-154	26	0.068	0.329	0.40	Yes	0.038	0.181	0.22	Yes	0.754	0.113	0.87	Yes	0.704	0.289	1.00	Yes	1.00	**7.25**
		$U_{21} - L_{21}$	96.25	-318.13	-241	249	55	-52	-49	69	-131	45	0.173	0.357	0.53	Yes	0.095	0.196	0.30	Yes	0.719	0.122	0.85	Yes	0.673	0.319	1.00	Yes	1.00	**7.53**
		$U_{22} - L_{22}$	118.74	-----	-555	565	465	-498	-72	34	-209	-82	0.214	0.782	1.00	Yes	0.117	0.430	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**28.98**
		$U_{23} - L_{23}$	151.81	-320.99	-110	98	243	-249	-110	-38	16	-84	0.273	0.350	0.63	Yes	0.150	0.193	0.35	Yes	0.725	0.125	0.86	Yes	0.679	0.318	1.00	Yes	1.00	**7.87**
		$U_{24} - L_{24}$	64.87	-373.31	-38	27	240	-246	-77	-62	-19	-61	0.106	0.301	0.41	Yes	0.058	0.166	0.23	Yes	0.765	0.099	0.87	Yes	0.715	0.281	1.00	Yes	1.00	**7.47**
		$U_{25} - L_{25}$	-----	-469.13	14	-31	302	-298	-84	-30	-106	-57	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.087	0.8	Yes	0.701	0.291	1.00	Yes	1.00	**6.71**
		$U_{26} - L_{26}$	-----	-566.30	66	-104	501	-526	-68	42	20	0	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.079	0.84	Yes	0.722	0.269	1.00	Yes	1.00	**7.23**
		$U_{27} - L_{27}$	-----	-636.80	149	-151	523	-536	-148	2	-95	6	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.081	0.87	Yes	0.741	0.249	1.00	Yes	1.00	**6.99**
		$U_{28} - L_{28}$	-----	-714.47	137	-134	535	-542	-38	-17	199	89	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.081	0.91	Yes	0.766	0.230	1.00	Yes	1.00	**7.22**
		$U_{29} - L_{29}$	-----	-714.44	207	-212	641	-625	-113	27	57	55	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.121	0.92	Yes	0.689	0.307	1.00	Yes	1.00	**7.60**
		$U_{30} - L_{30}$	-----	-1270.27	-634	568	688	-679	-155	91	-122	-136	-----	-----	-----	-----	-----	-----	-----	-----	0.929	0.064	1	Yes	0.842	0.122	0.97	Yes	1.00	**11.70**
		$U_{31} - L_{31}$	-----	-773.86	-525	522	-184	181	-169	-85	-121	-61	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.133	1	Yes	0.746	0.251	1.00	Yes	1.00	**7.27**
		$U_{32} - L_{32}$	-----	-891.78	-519	510	-129	104	-271	-119	-184	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.128	0.99	Yes	0.773	0.223	1.00	Yes	1.00	**9.77**
		$U_{33} - L_{33}$	-----	-841.07	-465	479	-136	138	-130	0	-184	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.086	0.94	Yes	0.786	0.212	1.00	Yes	1.00	**9.12**
		$U_{34} - L_{34}$	-----	-788.59	-574	571	-81	111	-90	72	-220	-21	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.091	0.88	Yes	0.737	0.253	1.00	Yes	1.00	**10.64**
		$U_{35} - L_{35}$	-----	-698.52	-573	580	-71	103	-124	103	-183	75	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.074	0.86	Yes	0.749	0.246	1.00	Yes	1.00	**9.57**
		$U_{36} - L_{36}$	-----	-468.02	-362	366	-30	45	11	137	-131	86	-----	-----	-----	-----	-----	-----	-----	-----	0.679	0.097	0.78	Yes	0.674	0.320	1.00	Yes	1.00	**7.26**
		$U_{37} - L_{37}$	46.77	-8.43	-628	681	257	-275	-102	90	-133	-35	0.084	0.909	1.00	Yes	0.046	0.500	0.55	Yes	0.019	0.256	0.28	Yes	0.018	0.871	0.89	Yes	1.00	**28.85**
		$U_{38} - L_{38}$	354.67	-136.79	-238	240	149	-145	-108	-93	-133	-155	0.638	0.352	1.00	Yes	0.351	0.194	0.55	Yes	0.308	0.125	0.44	Yes	0.289	0.307	0.60	Yes	1.00	**8.21**
		$U_{39} - L_{39}$	257.38	-317.29	-198	185	238	-254	-111	-108	-114	-158	0.463	0.371	0.84	Yes	0.255	0.204	0.46	Yes	0.717	0.170	0.89	Yes	0.671	0.325	1.00	Yes	1.00	**10.39**
		$U_{40} - L_{40}$	109.70	-337.66	-62	36	219	-219	-93	-78	-123	-120	0.197	0.316	0.52	Yes	0.109	0.174	0.29	Yes	0.766	0.129	0.9	Yes	0.714	0.280	1.00	Yes	1.00	**7.08**
		$U_{41} - L_{41}$	-----	-486.65	27	-50	245	-257	-22	46	40	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.085	0.92	Yes	0.763	0.234	1.00	Yes	1.00	**6.81**
		$U_{42} - L_{42}$	-----	-577.51	107	-117	501	-503	-87	-47	146	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.091	0.87	Yes	0.736	0.257	1.00	Yes	1.00	**7.61**
		$U_{43} - L_{43}$	-----	-708.22	144	-161	523	-546	-33	-10	754	76	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.172	0.99	Yes	0.759	0.232	1.00	Yes	1.00	**7.23**
		$U_{44} - L_{44}$	-----	-634.15	197	-244	476	-568	-23	-4	925	157	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.233	1	Yes	0.680	0.241	0.93	Yes	1.00	**5.39**
	Structure 3	$U_0 - L_0$	-----	-551.27	-377	453	-105	169	-985	-129	-247	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.270	1	Yes	0.642	0.210	0.86	Yes	1.00	**5.12**
		$U_1 - L_1$	-----	-662.45	-457	476	-112	120	-379	-6	0	-76	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.127	0.96	Yes	0.771	0.221	1.00	Yes	1.00	**7.72**
		$U_2 - L_2$	-----	-524.99	-460	454	-92	97	-85	57	82	31	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.081	0.85	Yes	0.730	0.260	1.00	Yes	1.00	**7.42**
		$U_3 - L_3$	-----	-434.18	-238	245	-22	42	4	168	-122	62	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.118	0.94	Yes	0.749	0.248	1.00	Yes	1.00	**6.85**
		$U_4 - L_4$	76.43	-325.52	-235	240	42	-25	-31	177	-174	83	0.137	0.358	0.50	Yes	0.076	0.197	0.28	Yes	0.734	0.105	0.84	Yes	0.689	0.306	1.00	Yes	1.00	**7.40**
		$U_5 - L_5$	231.34	-291.73	-284	292	154	-152	-148	132	-153	71	0.416	0.418	0.84	Yes	0.229	0.230	0.46	Yes	0.654	0.145	0.8	Yes	0.617	0.374	1.00	Yes	1.00	**9.44**
		$U_6 - L_6$	128.15	-----	-427	425	495	-540	-137	128	-252	-22	0.230	0.763	1.00	Yes	0.127	0.420	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**23.24**
		$U_7 - L_7$	30.27	-356.12	-35	22	255	-275	-181	-144	-210	-184	0.049	0.368	0.42	Yes	0.027	0.202	0.23	Yes	0.720	0.160	0.89	Yes	0.682	0.314	1.00	Yes	1.00	**6.81**
		$U_8 - L_8$	-----	-515.66	8	-14	334	-335	-164	-139	9	-93	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.115	0.86	Yes	0.707	0.286	1.00	Yes	1.00	**7.35**
		$U_9 - L_9$	-----	-655.95	38	-104	388	-490	-106	-20	-15	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.091	0.88	Yes	0.763	0.227	1.00	Yes	1.00	**8.26**
		$U_{10} - L_{10}$	-----	-786.35	104	-100	372	-415	-20	89	-41	40	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.072	0.89	Yes	0.776	0.215	1.00	Yes	1.00	**8.50**
		$U_{11} - L_{11}$	-----	-645.29	182	-211	415	-470	-51	62	91	119	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.099	0.87	Yes	0.729	0.261	1.00	Yes	1.00	**5.15**
		$U_{12} - L_{12}$	-----	-1285.12	-499	542	438	-566	35	88	90	53	-----	-----	-----	-----	-----	-----	-----	-----	0.928	0.046	0.98	Yes	0.891	0.105	1.00	Yes	1.00	**9.51**
		$U_{13} - L_{13}$	-----	-457.49	-274	293	-105	115	-153	-106	-114	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.139	0.91	Yes	0.706	0.289	1.00	Yes	1.00	**4.53**
		$U_{14} - L_{14}$	-----	-514.20	-296	295	-38	44	-227	-139	-223	-173	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.130	0.91	Yes	0.737	0.259	1.00	Yes	1.00	**7.50**
		$U_{15} - L_{15}$	-----	-418.53	-260	267	-15	24	-119	22	-173	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.115	0.88	Yes	0.722	0.270	1.00	Yes	1.00	**7.34**
		$U_{16} - L_{16}$	-----	-167.55	-498	478	145	-116	52	143	-297	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.368	0.225	0.6	Yes	0.355	0.637	1.00	Yes	1.00	**17.28**
		$U_{17} - L_{17}$	294.35	-174.97	-293	304	163	-174	-160	-70	-251	-197	0.529	0.461	1.00	Yes	0.291	0.254	0.55	Yes	0.383	0.159	0.55	Yes	0.370	0.389	0.76	Yes	1.00	**8.73**
		$U_{18} - L_{18}$	148.98	-289.84	-157	162	263	-300	-62	-14	88	-55	0.268	0.409	0.68	Yes	0.147	0.225	0.38	Yes	0.633	0.119	0.76	Yes	0.613	0.384	1.00	Yes	1.00	**9.67**
		$U_{19} - L_{19}$	9.59	-328.66	-25	13	231	-234	-164	-85	50	-51	0.017	0.347	0.37	Yes	0.009	0.191	0.21	Yes	0.718	0.140	0.86	Yes	0.695	0.299	1.00	Yes	1.00	**6.31**
		$U_{20} - L_{20}$	-----	-335.04	48	-56	182	-227	-171	-55	356	114	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.198	0.95	Yes	0.709	0.290	1.00	Yes	1.00	**3.15**

Moment (End) AB Operating

Operating Loads - 2F1

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

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Diagonals	Structure 1	$U_0 - L_1$	380.18	-24.42	-245	95	6	-8	-824	-201	-46	-15	0.499	0.493	1.00	Yes	0.301	0.272	0.58	Yes	0.042	0.340	0.39	Yes	0.038	0.286	0.33	Yes	1.00	**8.57**
		$U_1 - L_2$	382.62	-38.39	-75	38	2	-44	-22	-140	-729	-324	0.688	0.306	1.00	Yes	0.378	0.168	0.55	Yes	0.088	0.278	0.37	Yes	0.081	0.095	0.18	Yes	1.00	**8.37**
		$U_2 - L_3$	222.07	-353.33	-44	28	-2	-68	-128	-272	-281	-144	0.399	0.168	0.57	Yes	0.220	0.093	0.32	Yes	0.813	0.180	1	Yes	0.748	0.087	0.84	Yes	1.00	**8.59**
		$U_3 - L_4$	-----	-389.59	0	-10	29	-57	-186	-168	-193	-133	-----	-----	-----	-----	-----	-----	-----	-----	0.891	0.102	1	Yes	0.824	0.073	0.90	Yes	1.00	**5.60**
		$U_4 - L_4$	590.49	-56.64	-66	86	-4	-30	-40	-175	-77	-135	0.866	0.128	1.00	Yes	0.476	0.071	0.55	Yes	0.106	0.063	0.17	Yes	0.098	0.087	0.19	Yes	1.00	**10.48**
		$U_6 - L_5$	715.75	-----	-182	234	-33	27	89	-85	21	42	0.846	0.150	1.00	Yes	0.465	0.082	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.74**
		$U_7 - L_6$	653.43	-----	-280	231	-82	81	345	144	302	203	0.773	0.222	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.05**
		$U_8 - L_7$	647.11	-----	-106	299	-8	115	320	185	242	175	0.765	0.228	1.00	Yes	0.421	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.09**
		$U_9 - L_9$	1012.46	-----	-113	355	0	134	246	202	87	106	0.809	0.190	1.00	Yes	0.501	0.106	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.78**
		$U_9 - L_{10}$	1034.17	-----	-301	266	-121	78	209	170	265	242	0.827	0.168	1.00	Yes	0.512	0.094	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.52**
		$U_{10} - L_{11}$	1025.84	-----	-236	203	-77	16	-139	-170	30	-65	0.867	0.131	1.00	Yes	0.536	0.073	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.25**
		$U_{11} - L_{12}$	844.53	-----	-237	166	-129	-54	-320	-338	-334	-262	0.836	0.160	1.00	Yes	0.460	0.088	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.26**
		$U_{12} - L_{13}$	621.29	-10.48	-183	176	-51	-13	-380	-350	-356	-286	0.757	0.234	1.00	Yes	0.477	0.133	0.61	Yes	0.017	0.138	0.16	Yes	0.015	0.160	0.18	Yes	1.00	**8.02**
		$U_{13} - L_{14}$	444.42	-94.74	-77	58	-3	-40	-281	-334	-215	-313	0.799	0.195	1.00	Yes	0.440	0.107	0.55	Yes	0.220	0.166	0.39	Yes	0.200	0.099	0.30	Yes	1.00	**7.27**
		$U_{15} - L_{14}$	205.46	-334.65	-43	13	73	-109	-174	-307	-190	-297	0.370	0.228	0.60	Yes	0.203	0.125	0.33	Yes	0.784	0.209	1	Yes	0.708	0.139	0.85	Yes	1.00	**8.33**
		$U_{16} - L_{15}$	425.56	-192.19	-121	89	29	-65	-220	-252	-173	-176	0.765	0.228	1.00	Yes	0.421	0.125	0.55	Yes	0.456	0.175	0.64	Yes	0.407	0.155	0.57	Yes	1.00	**7.97**
		$U_{17} - L_{16}$	546.85	-----	-143	106	-13	-23	-120	-212	-163	-136	0.802	0.195	1.00	Yes	0.441	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.72**
		$U_{18} - L_{17}$	658.68	-----	-331	252	-101	54	-137	-143	-130	-70	0.779	0.214	1.00	Yes	0.428	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.12**
		$U_{19} - L_{18}$	721.15	-----	-352	254	-87	62	-51	-159	-235	-24	0.781	0.219	1.00	Yes	0.430	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.97**
		$U_{20} - L_{19}$	651.07	-----	-402	313	-127	106	-535	-246	0	37	0.705	0.293	1.00	Yes	0.388	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.85**
	Structure 2	$U_0 - L_1$	673.90	-----	-400	348	-71	80	-944	-134	-122	47	0.667	0.327	1.00	Yes	0.367	0.180	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.77**
		$U_1 - L_2$	797.25	-----	-394	336	-85	57	-60	-147	44	11	0.789	0.205	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.44**
		$U_2 - L_3$	655.56	-----	-321	264	-68	51	-207	-229	-78	-177	0.775	0.223	1.00	Yes	0.426	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.59**
		$U_3 - L_4$	576.15	-----	-167	147	-45	-12	-314	-290	-343	-227	0.768	0.225	1.00	Yes	0.422	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.95**
		$U_4 - L_5$	414.72	-181.28	-119	103	24	-58	-346	-295	-293	-216	0.746	0.252	1.00	Yes	0.410	0.139	0.55	Yes	0.448	0.214	0.67	Yes	0.384	0.152	0.54	Yes	1.00	**8.46**
		$U_5 - L_6$	354.75	-311.68	-95	66	76	-108	-403	-283	-350	-234	0.638	0.255	0.90	Yes	0.351	0.140	0.50	Yes	0.736	0.259	1	Yes	0.659	0.138	0.80	Yes	1.00	**8.94**
		$U_6 - L_7$	42.01	-374.04	-21	-7	48	-90	-299	-253	-280	-248	0.068	0.180	0.25	Yes	0.038	0.099	0.14	Yes	0.801	0.191	1	Yes	0.717	0.103	0.82	Yes	1.00	**5.29**
		$U_8 - L_7$	617.48	-45.37	-165	160	8	-44	-132	-270	-162	-246	0.787	0.203	1.00	Yes	0.496	0.115	0.62	Yes	0.075	0.093	0.17	Yes	0.068	0.148	0.22	Yes	1.00	**9.14**
		$U_8 - L_8$	736.31	-----	-320	266	-86	2	-113	-189	-168	-156	0.798	0.195	1.00	Yes	0.439	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.08**
		$U_{10} - L_9$	837.62	-----	-313	232	-77	36	-49	-138	-16	-58	0.829	0.166	1.00	Yes	0.456	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.88**
		$U_{11} - L_{10}$	919.28	-----	-354	301	-101	76	67	-44	68	27	0.837	0.160	1.00	Yes	0.461	0.088	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.56**
		$U_{12} - L_{11}$	877.88	-----	-358	342	-94	121	204	56	320	178	0.800	0.196	1.00	Yes	0.440	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.59**
		$U_{13} - L_{12}$	762.73	-----	-428	372	-198	167	279	135	277	178	0.755	0.240	1.00	Yes	0.415	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.96**
		$U_{14} - L_{13}$	760.89	-----	-276	430	-69	178	283	116	229	136	0.753	0.242	1.00	Yes	0.414	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.88**
		$U_{14} - L_{15}$	645.08	-----	-223	355	-5	105	133	149	57	40	0.763	0.228	1.00	Yes	0.419	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.33**
		$U_{15} - L_{16}$	646.10	-----	-377	335	-112	105	117	86	63	70	0.764	0.234	1.00	Yes	0.420	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.71**
		$U_{16} - L_{17}$	751.41	-----	-356	340	-76	101	10	-9	12	7	0.814	0.184	1.00	Yes	0.448	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.54**
		$U_{17} - L_{18}$	683.92	-----	-298	290	-74	68	-76	-69	-11	-32	0.809	0.182	1.00	Yes	0.445	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.94**
		$U_{18} - L_{19}$	685.76	-----	-265	283	-34	19	-157	-152	-99	-116	0.811	0.188	1.00	Yes	0.446	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.37**
		$U_{19} - L_{20}$	597.41	-48.86	-185	201	-13	-19	-258	-233	-241	-153	0.762	0.233	1.00	Yes	0.419	0.131	0.55	Yes	0.081	0.109	0.2	Yes	0.073	0.180	0.26	Yes	1.00	**9.16**
		$U_{20} - L_{21}$	435.80	-82.26	-112	111	10	-26	-225	-173	-211	-148	0.784	0.209	1.00	Yes	0.431	0.115	0.55	Yes	0.195	0.108	0.31	Yes	0.174	0.144	0.32	Yes	1.00	**7.35**
		$U_{21} - L_{22}$	430.68	-344.69	-87	74	25	-80	-251	-264	-271	-250	0.775	0.189	0.97	Yes	0.426	0.104	0.54	Yes	0.814	0.178	1	Yes	0.729	0.111	0.85	Yes	1.00	**10.16**
		$U_{23} - L_{22}$	430.52	-352.31	-93	76	86	-109	-85	-246	-131	-239	0.774	0.210	0.99	Yes	0.426	0.116	0.55	Yes	0.839	0.156	1	Yes	0.745	0.139	0.89	Yes	1.00	**11.82**
		$U_{24} - L_{23}$	450.13	-127.83	-117	109	24	-43	-50	-116	-99	-80	0.810	0.183	1.00	Yes	0.445	0.100	0.55	Yes	0.306	0.051	0.36	Yes	0.270	0.149	0.42	Yes	1.00	**8.10**
		$U_{25} - L_{24}$	626.56	-27.04	-197	187	19	-32	39	-90	-6	-51	0.799	0.194	1.00	Yes	0.439	0.108	0.55	Yes	0.045	0.060	0.11	Yes	0.041	0.176	0.22	Yes	1.00	**9.33**
		$U_{26} - L_{25}$	683.62	-----	-286	257	-20	18	110	-37	52	23	0.808	0.182	1.00	Yes	0.445	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.73**
		$U_{27} - L_{26}$	677.70	-----	-291	284	-69	67	184	38	80	69	0.801	0.198	1.00	Yes	0.441	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.41**
		$U_{28} - L_{27}$	724.75	-----	-338	343	-60	99	178	93	191	134	0.785	0.207	1.00	Yes	0.432	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.14**
		$U_{29} - L_{28}$	631.32	-----	-358	327	-127	121	263	100	219	112	0.746	0.250	1.00	Yes	0.411	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.78**
		$U_{30} - L_{29}$	633.62	-----	-213	357	-39	128	236	99	178	103	0.749	0.245	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.99**
		$U_{30} - L_{31}$	781.74	-----	-289	446	-29	134	118	63	64	39	0.773	0.225	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.35**
		$U_{31} - L_{32}$	785.04	-----	-454	376	-134	132	51	35	36	47	0.777	0.218	1.00	Yes	0.427	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.10**
		$U_{32} - L_{33}$	902.13	-----	-362	344	-92	103	-120	-100	11	-38	0.822	0.170	1.00	Yes	0.452	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.90**
		$U_{33} - L_{34}$	901.83	-----	-333	318	-101	64	-244	-220	-156	-142	0.822	0.175	1.00	Yes	0.452	0.096	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.31**
		$U_{34} - L_{35}$	827.69	-----	-289	246	-93	30	-309	-305	-300	-241	0.819	0.180	1.00	Yes	0.450	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.10**
		$U_{35} - L_{36}$	719.66	-----	-303	267	-92	7	-398	-313	-293	-267	0.779	0.220	1.00	Yes	0.429	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.28**
		$U_{36} - L_{37}$	612.36	-57.08	-157	162	-34	-23	-316	-350	-337	-326	0.781	0.216	1.00	Yes	0.491	0.123	0.62	Yes	0.094	0.124	0.22	Yes	0.086	0.145	0.24	Yes	1.00	**8.36**
		$U_{38} - L_{37}$	35.74	-388.72	-18	-8	84	-106	-127	-230	-142	-227	0.058	0.180	0.24	Yes	0.032	0.099	0.14	Yes	0.840	0.152	1	Yes	0.745	0.121	0.87	Yes	1.00	**5.93**
		$U_{39} - L_{38}$	313.32	-344.15	-84	52	92	-120	-169	-223	-189	-181	0.564	0.218	0.79	Yes	0.310	0.120	0.44	Yes	0.820	0.175	1	Yes	0.728	0.154	0.89	Yes	1.00	**8.70**
		$U_{40} - L_{39}$	433.85	-166.56	-128	88	46	-67	-114	-173	-78	-105	0.780	0.213	1.00	Yes	0.429	0.117	0.55	Yes	0.399	0.140	0.54	Yes	0.352	0.163	0.52	Yes	1.00	**8.07**
		$U_{41} - L_{40}$	603.44	-----	-179	138	-14	-22	-81	-136	-86	-61	0.804	0.192	1.00	Yes	0.442	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.79**
		$U_{42} - L_{41}$	654.67	-----	-327	268	-99	53	-71	-98	-219	-26	0.774	0.225	1.00	Yes	0.426	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.56**
		$U_{43} - L_{42}$	803.19	-----	-394	306	-99	67	-12	-125	-2	-25	0.795	0.201	1.00	Yes	0.437	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.07**
		$U_{44} - L_{43}$	706.64	-----	-427	366	-141	125	-642	-209	33	10	0.699	0.294	1.00	Yes	0.384	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.40**
	Structure 3	$U_0 - L_1$	610.26	-----	-389	298	-71	74	-823	-196	-132	44	0.661	0.334	1.00	Yes	0.364	0.184	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.93**
		$U_1 - L_2$	728.05	-----	-355	295	-87	54	-64	-143	38	12	0.789	0.205	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.51**
		$U_2 - L_3$	648.08	-----	-311	265	-106	40	-230	-266	-223	-198	0.766	0.224	1.00	Yes	0.421	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.24**
		$U_3 - L_4$	530.16	-----	-139	111	-14	-24	-341	-329	-257	-229	0.777	0.220	1.00	Yes	0.428	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.39**
		$U_4 - L_5$	410.00	-253.12	-115	106	16	-66	-391	-329	-372	-253	0.737	0.260	1.00	Yes	0.406	0.143	0.55	Yes	0.600	0.232	0.84	Yes	0.536	0.147	0.69	Yes	1.00	**8.87**
		$U_5 - L_6$	241.92	-315.96	-44	14	42	-94	-380	-357	-353	-313	0.435	0.231	0.67	Yes	0.239	0.127	0.37	Yes	0.740	0.254	1	Yes	0.669	0.120	0.79	Yes	1.00	**7.10**
		$U_7 - L_6$	452.01	-133.93	-78	57	10	-48	-85	-269	-168	-274	0.813	0.179	1.00	Yes	0.447	0.098	0.55	Yes	0.311	0.123	0.44	Yes	0.283	0.099	0.39	Yes	1.00	**8.16**
		$U_8 - L_7$	640.26	-0.24	-190	173	-20	-24	-162	-235	-138	-167	0.780	0.212	1.00	Yes	0.491	0.119	0.62	Yes	0.000	0.098	0.1	Yes	0.000	0.166	0.17	Yes	1.00	**8.62**
		$U_8 - L_9$	838.27	-----	-246	163	-154	-60	-68	-222	-320	-183	0.829	0.162	1.00	Yes	0.456	0.089	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.90**
		$U_{10} - L_9$	1023.52	-----	-237	210	-101	12	149	6	75	32	0.865	0.129	1.00	Yes	0.535	0.072	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.35**
		$U_{11} - L_{10}$	1004.39	-----	-304	258	-97	74	449	276	354	282	0.803	0.193	1.00	Yes	0.497	0.108	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.54**
		$U_{12} - L_{11}$	980.78	-----	-108	353	-13	141	404	246	277	209	0.784	0.209	1.00	Yes	0.486	0.117	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.02**
		$U_{13} - L_{12}$	667.01	-----	-110	300	-3	106	188	127	113	91	0.789	0.205	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.82**
		$U_{13} - L_{14}$	690.28	-----	-279	280	-71	75	123	85	92	116	0.816	0.182	1.00	Yes	0.449	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.02**
		$U_{14} - L_{15}$	690.09	-----	-157	256	-16	6	-135	-191	49	-38	0.816	0.180	1.00	Yes	0.449	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.50**
		$U_{15} - L_{16}$	528.33	-17.77	-57	87	-29	-24	-209	-234	-549	-336	0.775	0.216	1.00	Yes	0.426	0.119	0.55	Yes	0.033	0.162	0.2	Yes	0.031	0.088	0.12	Yes	1.00	**9.02**
		$U_{17} - L_{16}$	-----	-415.45	2	-7	61	-68	6	-99	-45	-109	-----	-----	-----	-----	-----	-----	-----	-----	0.950	0.043	1	Yes	0.879	0.086	0.97	Yes	1.00	**8.11**
		$U_{18} - L_{17}$	156.93	-387.71	-37	20	-25	-64	-9	-164	-161	-72	0.282	0.129	0.42	Yes	0.155	0.071	0.23	Yes	0.892	0.102	1	Yes	0.820	0.081	0.91	Yes	1.00	**7.33**
		$U_{19} - L_{18}$	467.60	-65.45	-89	56	33	-57	63	-122	-136	-124	0.841	0.153	1.00	Yes	0.463	0.084	0.55	Yes	0.150	0.076	0.23	Yes	0.138	0.114	0.26	Yes	1.00	**13.24**
		$U_{20} - L_{19}$	279.47	-49.60	-282	142	-16	-2	-1180	-80	39	-5	0.367	0.627	1.00	Yes	0.221	0.345	0.57	Yes	0.085	0.393	0.48	Yes	0.077	0.330	0.41	Yes	1.00	**12.68**

Moment (End) AB Operating

Operating Loads - 2F1

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	$U_0 - U_1$	33.67	-539.34	-205	124	110	-1113	-132	151	-115	-865	0.039	0.411	0.45	Yes	0.026	0.281	0.31	Yes	0.734	0.189	0.93	Yes	0.727	0.265	1.00	Yes	1.00	**11.04**
		$U_1 - U_2$	22.69	-531.59	-103	86	-396	-675	-151	138	-84	-373	0.026	0.224	0.25	Yes	0.018	0.153	0.18	Yes	0.723	0.268	1	Yes	0.717	0.161	0.88	Yes	1.00	**4.95**
		$U_2 - U_3$	161.45	-560.28	-103	294	-400	-494	-101	102	-396	-370	0.185	0.184	0.37	Yes	0.125	0.121	0.25	Yes	0.762	0.231	1	Yes	0.756	0.117	0.88	Yes	1.00	**5.44**
		$U_3 - U_4$	442.49	-534.17	121	373	-403	-617	-199	-2	-445	-229	0.507	0.222	0.73	Yes	0.348	0.152	0.50	Yes	0.727	0.271	1	Yes	0.720	0.147	0.87	Yes	1.00	**7.32**
		$U_4 - U_5$	525.82	-581.25	201	427	-719	-347	-66	-4	-349	48	0.603	0.230	0.84	Yes	0.414	0.157	0.58	Yes	0.791	0.204	1	Yes	0.784	0.171	0.96	Yes	1.00	**8.78**
		$U_5 - U_6$	693.47	-----	280	500	-5	3	98	138	-76	476	0.795	0.199	1.00	Yes	0.536	0.131	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.64**
		$U_6 - U_7$	878.35	-----	400	222	111	-209	332	273	-118	516	0.840	0.156	1.00	Yes	0.587	0.108	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.36**
		$U_7 - U_8$	857.30	-----	-801	2107	72	657	367	650	789	670	0.594	0.399	1.00	Yes	0.414	0.273	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.48**
		$U_8 - U_9$	859.61	-----	1154	-141	1391	-918	180	507	67	-475	0.704	0.296	1.00	Yes	0.482	0.201	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.96**
		$U_9 - U_{10}$	679.72	-267.12	254	273	102	-721	47	353	-27	-617	0.737	0.261	1.00	Yes	0.499	0.175	0.68	Yes	0.344	0.230	0.58	Yes	0.341	0.161	0.51	Yes	1.00	**11.25**
		$U_{10} - U_{11}$	82.93	-628.89	260	-171	188	-872	69	107	-86	-290	0.090	0.242	0.34	Yes	0.060	0.155	0.22	Yes	0.810	0.154	0.97	Yes	0.803	0.195	1.00	Yes	1.00	**5.59**
		$U_{11} - U_{12}$	-----	-919.21	156	-212	15	-794	26	108	-127	-133	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.109	0.98	Yes	0.862	0.132	1.00	Yes	1.00	**4.01**
		$U_{12} - U_{13}$	-----	-1243.24	-57	-273	-288	-827	97	5	-107	-361	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.151	1	Yes	0.830	0.114	0.95	Yes	1.00	**4.35**
		$U_{13} - U_{14}$	-----	-1388.83	-198	-511	-553	-1349	-28	5	-175	-251	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.194	1	Yes	0.796	0.149	0.95	Yes	1.00	**4.27**
		$U_{14} - U_{15}$	-----	-1436.86	-392	-282	-876	-917	68	-277	-386	-86	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.167	1	Yes	0.824	0.101	0.93	Yes	1.00	**5.31**
		$U_{15} - U_{16}$	-----	-1415.51	-266	-441	-516	-1102	-64	-318	-202	74	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.174	1	Yes	0.811	0.122	0.94	Yes	1.00	**5.63**
		$U_{16} - U_{17}$	-----	-1383.65	-401	-201	-1059	-710	-125	-287	-137	54	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.196	1	Yes	0.793	0.117	0.92	Yes	1.00	**6.72**
		$U_{17} - U_{18}$	-----	-1095.37	-553	58	-295	-220	-76	-130	-318	474	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.126	1	Yes	0.857	0.090	0.95	Yes	1.00	**5.66**
		$U_{18} - U_{19}$	-----	-735.61	-519	93	-300	-46	308	-234	113	530	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.164	1	Yes	0.828	0.104	0.94	Yes	1.00	**6.02**
		$U_{19} - U_{20}$	-----	-676.17	-912	404	-835	-192	-188	-113	590	-23	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.224	1	Yes	0.761	0.183	0.95	Yes	1.00	**17.87**
	Structure 2	$U_0 - U_1$	-----	-576.32	288	-324	1001	-1872	86	48	-28	-839	-----	-----	-----	-----	-----	-----	-----	-----	0.685	0.189	0.88	Yes	0.681	0.318	1.00	Yes	1.00	**14.08**
		$U_1 - U_2$	-----	-796.01	-150	-325	-250	-1166	-16	16	22	-408	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.218	1	Yes	0.768	0.177	0.95	Yes	1.00	**7.27**
		$U_2 - U_3$	-----	-1140.75	-123	-457	-273	-1372	-31	-73	-1	-574	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.176	1	Yes	0.810	0.140	0.95	Yes	1.00	**5.39**
		$U_3 - U_4$	-----	-1346.14	-537	-555	-850	-1570	-108	-32	-354	-420	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.227	1	Yes	0.767	0.140	0.91	Yes	1.00	**4.39**
		$U_4 - U_5$	-----	-1463.98	-591	-574	-1080	-1729	-111	-86	-299	-540	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.235	1	Yes	0.752	0.143	0.90	Yes	1.00	**4.50**
		$U_5 - U_6$	-----	-1518.70	-592	-41	-1426	-1082	-182	-39	-328	-524	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.209	1	Yes	0.780	0.118	0.90	Yes	1.00	**4.89**
		$U_6 - U_7$	-----	-1354.80	-341	-224	-963	-1437	-150	-94	-503	-395	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.219	1	Yes	0.771	0.128	0.90	Yes	1.00	**5.03**
		$U_7 - U_8$	-----	-1407.59	-333	-186	-1144	-1206	-66	-139	-425	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.186	1	Yes	0.801	0.107	0.91	Yes	1.00	**6.05**
		$U_8 - U_9$	-----	-1132.53	-376	203	-1261	-560	12	-181	-492	-120	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.225	1	Yes	0.768	0.134	0.91	Yes	1.00	**5.99**
		$U_9 - U_{10}$	402.40	-899.94	-27	613	-940	-406	-103	-179	-547	26	0.295	0.174	0.47	Yes	0.200	0.117	0.32	Yes	0.781	0.215	1	Yes	0.777	0.114	0.90	Yes	1.00	**9.40**
		$U_{10} - U_{11}$	880.34	-609.91	352	647	-1013	-429	-133	-82	-927	170	0.744	0.256	1.00	Yes	0.506	0.169	0.68	Yes	0.610	0.310	0.92	Yes	0.606	0.143	0.75	Yes	1.00	**11.95**
		$U_{11} - U_{12}$	640.65	-360.97	-2107	1876	-1539	-498	-244	-1109	-1296	762	0.541	0.455	1.00	Yes	0.363	0.304	0.67	Yes	0.361	0.285	0.65	Yes	0.359	0.297	0.66	Yes	1.00	**37.94**
		$U_{12} - U_{13}$	1065.65	-----	595	205	387	-1100	717	761	-393	1473	0.720	0.279	1.00	Yes	0.513	0.193	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.57**
		$U_{13} - U_{14}$	1157.57	-----	-1104	3856	-166	1633	554	1039	664	983	0.569	0.428	1.00	Yes	0.403	0.281	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.11**
		$U_{14} - U_{15}$	1309.37	-----	2542	-51	3272	-1312	509	727	732	-45	0.644	0.353	1.00	Yes	0.456	0.232	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.73**
		$U_{15} - U_{16}$	1342.52	-----	118	416	-109	-1228	231	495	-191	-453	0.812	0.181	1.00	Yes	0.577	0.122	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.61**
		$U_{16} - U_{17}$	1078.34	-----	656	227	420	-1039	13	347	-133	-708	0.795	0.205	1.00	Yes	0.529	0.135	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.28**
		$U_{17} - U_{18}$	792.05	-169.77	485	281	95	-862	-40	308	122	-399	0.795	0.205	1.00	Yes	0.529	0.136	0.67	Yes	0.202	0.159	0.37	Yes	0.200	0.146	0.35	Yes	1.00	**8.83**
		$U_{18} - U_{19}$	681.23	-595.67	615	218	233	-1172	22	174	-291	-751	0.684	0.309	1.00	Yes	0.449	0.198	0.65	Yes	0.708	0.230	0.94	Yes	0.703	0.199	0.91	Yes	1.00	**10.52**
		$U_{19} - U_{20}$	264.85	-729.61	260	106	-229	-998	-48	131	-175	-310	0.248	0.202	0.45	Yes	0.165	0.132	0.30	Yes	0.810	0.183	1	Yes	0.805	0.160	0.97	Yes	1.00	**6.36**
		$U_{20} - U_{21}$	68.28	-855.82	48	17	-542	-839	-61	-13	-49	-448	0.053	0.170	0.23	Yes	0.037	0.112	0.15	Yes	0.787	0.208	1	Yes	0.781	0.121	0.91	Yes	1.00	**6.30**
		$U_{21} - U_{22}$	39.47	-797.54	-97	-62	-501	-1144	-173	-92	-435	-245	0.031	0.213	0.25	Yes	0.022	0.143	0.17	Yes	0.733	0.266	1	Yes	0.728	0.166	0.90	Yes	1.00	**5.46**
		$U_{22} - U_{23}$	76.66	-844.51	-30	-89	-764	-935	-41	-155	-295	65	0.059	0.168	0.23	Yes	0.042	0.113	0.16	Yes	0.776	0.223	1	Yes	0.771	0.136	0.91	Yes	1.00	**6.59**
		$U_{23} - U_{24}$	354.03	-858.48	-41	261	-775	-895	13	-39	-606	170	0.275	0.196	0.48	Yes	0.192	0.129	0.33	Yes	0.789	0.206	1	Yes	0.783	0.130	0.92	Yes	1.00	**10.70**
		$U_{24} - U_{25}$	470.78	-732.59	250	383	-528	-720	32	-50	-364	338	0.442	0.164	0.61	Yes	0.293	0.108	0.41	Yes	0.813	0.185	1	Yes	0.808	0.115	0.93	Yes	1.00	**10.26**
		$U_{25} - U_{26}$	756.68	-575.58	257	706	-646	-578	26	-26	-785	633	0.760	0.235	1.00	Yes	0.498	0.151	0.65	Yes	0.684	0.177	0.87	Yes	0.680	0.120	0.80	Yes	1.00	**18.16**
		$U_{26} - U_{27}$	35.76	-508.00	-884	867	-1257	-724	-582	-295	-1669	1074	0.036	0.458	0.50	Yes	0.024	0.302	0.33	Yes	0.604	0.389	1	Yes	0.600	0.213	0.82	Yes	1.00	**28.78**
		$U_{27} - U_{28}$	939.05	-----	-921	1647	33	-319	-25	-399	-207	891	0.692	0.301	1.00	Yes	0.460	0.198	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**21.86**
		$U_{28} - U_{29}$	1342.06	-----	104	187	139	-857	66	277	-244	1044	0.811	0.186	1.00	Yes	0.577	0.127	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.38**
		$U_{29} - U_{30}$	1156.89	-----	-934	3776	8	1655	581	1034	786	1067	0.569	0.422	1.00	Yes	0.403	0.278	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.40**
		$U_{30} - U_{31}$	1323.33	-----	2574	-232	3225	-1517	664	728	530	-285	0.651	0.348	1.00	Yes	0.461	0.229	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.00**
		$U_{31} - U_{32}$	1222.16	-----	61	349	-325	-902	263	436	15	-583	0.825	0.169	1.00	Yes	0.588	0.116	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.38**
		$U_{32} - U_{33}$	914.55	-140.11	615	163	436	-1008	23	252	-157	-696	0.773	0.227	1.00	Yes	0.519	0.151	0.68	Yes	0.140	0.168	0.31	Yes	0.139	0.142	0.29	Yes	1.00	**9.83**
		$U_{33} - U_{34}$	568.29	-798.88	448	118	2	-1412	-13	221	-310	-494	0.480	0.260	0.74	Yes	0.327	0.169	0.50	Yes	0.799	0.130	0.93	Yes	0.794	0.199	1.00	Yes	1.00	**8.95**
		$U_{34} - U_{35}$	57.24	-967.74	359	-219	-71	-1331	51	35	-70	-410	0.042	0.206	0.25	Yes	0.028	0.140	0.17	Yes	0.840	0.118	0.96	Yes	0.835	0.162	1.00	Yes	1.00	**5.83**
		$U_{35} - U_{36}$	-----	-1226.12	80	-482	-399	-1331	-14	89	40	-296	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.154	1	Yes	0.832	0.141	0.98	Yes	1.00	**4.93**
		$U_{36} - U_{37}$	-----	-1407.23	-313	-328	-766	-1425	-16	-123	-256	-324	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.192	1	Yes	0.801	0.127	0.93	Yes	1.00	**4.58**
		$U_{37} - U_{38}$	-----	-1414.07	-199	-431	-816	-1408	-96	-193	-343	-145	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.182	1	Yes	0.805	0.125	0.94	Yes	1.00	**5.02**
		$U_{38} - U_{39}$	-----	-1570.05	-171	-638	-996	-1634	14	-216	-416	-140	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.180	1	Yes	0.806	0.135	0.95	Yes	1.00	**5.23**
		$U_{39} - U_{40}$	-----	-1521.33	-647	-528	-1162	-1605	6	-137	-115	408	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.210	1	Yes	0.781	0.133	0.92	Yes	1.00	**6.82**
		$U_{40} - U_{41}$	-----	-1418.17	-524	-502	-1266	-1277	87	-170	109	172	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.177	1	Yes	0.808	0.114	0.93	Yes	1.00	**6.13**
		$U_{41} - U_{42}$	-----	-1166.33	-1029	30	-1084	-376	105	-136	-138	322	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.162	1	Yes	0.828	0.110	0.94	Yes	1.00	**6.18**
		$U_{42} - U_{43}$	-----	-874.02	-769	36	-505	-173	127	-318	171	304	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.145	1	Yes	0.844	0.117	0.97	Yes	1.00	**8.21**
		$U_{43} - U_{44}$	-----	-619.44	-1003	434	-759	-353	-288	-159	739	19	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.262	1	Yes	0.732	0.170	0.91	Yes	1.00	**15.57**
	Structure 3	$U_0 - U_1$	-----	-592.85	312	-287	1185	-1642	48	80	89	-1022	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.234	0.91	Yes	0.667	0.330	1.00	Yes	1.00	**16.93**
		$U_1 - U_2$	-----	-691.38	-78	-240	-63	-766	-13	-8	-137	-348	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.208	1	Yes	0.778	0.154	0.94	Yes	1.00	**4.59**
		$U_2 - U_3$	-----	-1029.54	-46	-253	9	-815	-30	-73	-128	-552	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.177	1	Yes	0.806	0.133	0.94	Yes	1.00	**4.75**
		$U_3 - U_4$	-----	-1376.73	-221	-381	-557	-1231	-112	-51	-126	-455	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.198	1	Yes	0.789	0.136	0.93	Yes	1.00	**5.24**
		$U_4 - U_5$	-----	-1402.27	-454	-144	-703	-875	-89	-78	-406	-558	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.181	1	Yes	0.804	0.097	0.91	Yes	1.00	**4.62**
		$U_5 - U_6$	-----	-1319.66	-268	-398	-637	-1302	-184	-150	-367	-350	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.227	1	Yes	0.757	0.144	0.91	Yes	1.00	**4.33**
		$U_6 - U_7$	-----	-1340.88	-510	-159	-1232	-674	-112	-294	-359	-237	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.222	1	Yes	0.769	0.136	0.91	Yes	1.00	**4.89**
		$U_7 - U_8$	-----	-1253.10	-230	67	-556	-591	-118	-279	-396	16	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.148	1	Yes	0.837	0.081	0.92	Yes	1.00	**6.93**
		$U_8 - U_9$	-----	-841.41	-133	278	-607	-137	-193	-174	-458	103	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.199	1	Yes	0.789	0.101	0.90	Yes	1.00	**6.13**
		$U_9 - U_{10}$	494.97	-627.50	42	481	-880	-80	21	67	-530	312	0.537	0.282	0.82	Yes	0.358	0.182	0.55	Yes	0.808	0.182	1	Yes	0.801	0.197	1.00	Yes	1.00	**18.10**
		$U_{10} - U_{11}$	405.45	-----	-445	675	255	-477	-223	-467	-876	2497	0.440	0.553	1.00	Yes	0.298	0.370	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**25.24**
		$U_{11} - U_{12}$	744.07	-----	-814	1834	-82	683	249	451	635	607	0.610	0.385	1.00	Yes	0.417	0.262	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.73**
		$U_{12} - U_{13}$	1003.34	-----	1225	0	1664	-790	11	512	15	-414	0.695	0.304	1.00	Yes	0.485	0.208	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.68**
		$U_{13} - U_{14}$	859.06	-----	227	367	64	-539	-41	431	-270	-451	0.822	0.177	1.00	Yes	0.574	0.121	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.35**
		$U_{14} - U_{15}$	635.10	-309.27	465	229	185	-653	1	225	-84	-656	0.728	0.266	1.00	Yes	0.491	0.176	0.67	Yes	0.421	0.217	0.64	Yes	0.417	0.155	0.58	Yes	1.00	**8.53**
		$U_{15} - U_{16}$	311.21	-601.36	281	118	-241	-760	-65	148	100	201	0.357	0.215	0.58	Yes	0.245	0.147	0.40	Yes	0.818	0.131	0.95	Yes	0.811	0.181	1.00	Yes	1.00	**6.56**
		$U_{16} - U_{17}$	400.64	-581.66	392	81	-12	-879	148	-48	39	294	0.459	0.259	0.72	Yes	0.315	0.177	0.50	Yes	0.791	0.115	0.91	Yes	0.784	0.209	1.00	Yes	1.00	**8.46**
		$U_{17} - U_{18}$	110.24	-611.30	247	-163	-327	-739	62	19	-156	199	0.126	0.209	0.34	Yes	0.085	0.136	0.23	Yes	0.832	0.150	0.99	Yes	0.824	0.176	1.00	Yes	1.00	**6.32**
		$U_{18} - U_{19}$	-----	-550.21	14	-71	-687	-264	181	-203	50	129	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.249	1	Yes	0.742	0.163	0.91	Yes	1.00	**6.89**
		$U_{19} - U_{20}$	-----	-560.23	-376	-73	-474	-539	-149	-77	556	-245	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.235	1	Yes	0.755	0.128	0.89	Yes	1.00	**10.81**

Moment (End) AB Operating

Operating Loads - 2F1

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

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Lower Chord	Structure 1	L_0 - L_1			28.69	-109.29	-185	51	694	-1392	44	163	-673	-2472	0.044	0.948	1.00	Yes	0.026	0.565	0.60	Yes	0.198	0.781	0.98	Yes	0.197	0.418	0.62	Yes	1.00	**23.25**
		L_1 - L_2			388.34	-34.60	0	-12	16	-939	329	-148	-542	195	0.594	0.398	1.00	Yes	0.363	0.263	0.63	Yes	0.063	0.272	0.34	Yes	0.062	0.282	0.35	Yes	1.00	**8.11**
		L_2 - L_3			620.18	-158.11	-50	45	-775	-791	-182	122	-225	-579	0.713	0.284	1.00	Yes	0.413	0.168	0.59	Yes	0.216	0.330	0.55	Yes	0.214	0.191	0.41	Yes	1.00	**7.89**
		L_3 - L_4			664.93	-326.37	20	379	-378	-777	271	-206	10	-259	0.765	0.231	1.00	Yes	0.454	0.149	0.61	Yes	0.446	0.217	0.67	Yes	0.442	0.188	0.63	Yes	1.00	**8.08**
		L_4 - L_5			15.93	-572.03	100	478	-320	151	-55	167	-147	-56	0.021	0.156	0.18	Yes	0.012	0.102	0.12	Yes	0.879	0.104	0.99	Yes	0.872	0.127	1.00	Yes	1.00	**5.12**
		L_5 - L_6			-----	-764.29	92	529	-81	210	162	-235	39	-176	-----	-----	-----	-----	-----	-----	-----	-----	0.891	0.107	1	Yes	0.882	0.117	1.00	Yes	1.00	**5.19**
		L_6 - L_7			-----	-1074.72	-488	503	64	-497	556	1244	-475	-846	-----	-----	-----	-----	-----	-----	-----	-----	0.875	0.125	1	Yes	0.865	0.079	0.95	Yes	1.00	**14.22**
		L_7 - L_8			-----	-1293.01	-65	1039	-21	650	298	379	418	201	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.165	1	Yes	0.819	0.138	0.96	Yes	1.00	**6.02**
		L_8 - L_9			-----	-1128.92	995	-2	1183	-246	151	304	128	-241	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.266	1	Yes	0.715	0.157	0.88	Yes	1.00	**6.46**
		L_9 - L_{10}			-----	-957.65	153	73	629	-901	337	-250	342	528	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.221	1	Yes	0.771	0.142	0.92	Yes	1.00	**10.85**
		L_{10} - L_{11}			28.57	-527.74	400	-109	220	-732	-243	61	-249	-516	0.037	0.284	0.33	Yes	0.022	0.170	0.20	Yes	0.811	0.155	0.97	Yes	0.804	0.194	1.00	Yes	1.00	**8.61**
		L_{11} - L_{12}			531.42	-174.03	394	-213	390	-929	120	-94	82	323	0.688	0.302	1.00	Yes	0.413	0.197	0.62	Yes	0.268	0.138	0.41	Yes	0.265	0.246	0.52	Yes	1.00	**7.78**
		L_{12} - L_{13}			994.25	-----	46	-161	-496	-762	-156	122	-431	-628	0.785	0.208	1.00	Yes	0.502	0.127	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.69**
		L_{13} - L_{14}			1281.42	-----	199	-521	49	-1553	139	36	-309	-80	0.754	0.240	1.00	Yes	0.488	0.147	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.25**
		L_{14} - L_{15}			1536.22	-----	-568	-151	-1267	-935	-149	163	-365	-1352	0.751	0.248	1.00	Yes	0.488	0.153	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.37**
		L_{15} - L_{16}			1556.64	-----	-304	-370	-952	-1481	107	-139	-812	-242	0.761	0.236	1.00	Yes	0.488	0.140	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.20**
		L_{16} - L_{17}			1160.16	-----	-1135	254	-921	-322	614	496	-310	-1014	0.734	0.257	1.00	Yes	0.476	0.160	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.91**
		L_{17} - L_{18}			906.31	-----	-642	225	-575	-277	63	-47	-616	-226	0.789	0.203	1.00	Yes	0.505	0.124	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**16.29**
		L_{18} - L_{19}			372.33	-----	-825	508	-468	151	200	314	-79	-848	0.570	0.423	1.00	Yes	0.385	0.272	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.63**
		L_{19} - L_{20}			44.92	-374.24	-1061	704	-186	78	477	107	146	33	0.069	0.417	0.49	Yes	0.042	0.278	0.32	Yes	0.680	0.226	0.91	Yes	0.674	0.318	1.00	Yes	1.00	**17.21**
	Structure 2	L_0 - L_1			74.73	-178.02	-70	-113	703	-2393	37	131	-729	-2532	0.091	0.903	1.00	Yes	0.054	0.563	0.62	Yes	0.256	0.666	0.93	Yes	0.254	0.487	0.75	Yes	1.00	**27.11**
		L_1 - L_2			478.97	-----	193	-342	539	-1421	155	-59	-397	779	0.582	0.417	1.00	Yes	0.346	0.264	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.39**
		L_2 - L_3			961.16	-----	-44	-275	-65	-1062	-75	154	-94	-813	0.758	0.240	1.00	Yes	0.497	0.147	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.84**
		L_3 - L_4			1253.23	-----	-9	-514	-157	-1591	180	1	-899	341	0.736	0.258	1.00	Yes	0.496	0.162	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.03**
		L_4 - L_5			1688.90	-----	-443	-410	-1438	-1538	-77	162	96	-865	0.787	0.204	1.00	Yes	0.521	0.124	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.54**
		L_5 - L_6			1839.52	-----	-219	-485	-876	-2104	187	-85	-300	30	0.789	0.205	1.00	Yes	0.530	0.125	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.77**
		L_6 - L_7			1905.00	-----	-540	-163	-1715	-1823	-150	214	-10	-478	0.806	0.190	1.00	Yes	0.536	0.112	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.57**
		L_7 - L_8			1400.18	-37.34	-295	403	-1373	-808	213	-110	-488	-309	0.803	0.192	1.00	Yes	0.527	0.114	0.65	Yes	0.025	0.212	0.24	Yes	0.025	0.152	0.18	Yes	1.00	**7.75**
		L_8 - L_9			1071.57	-444.70	-74	629	-1095	-76	-65	175	-421	-1077	0.749	0.249	1.00	Yes	0.505	0.159	0.67	Yes	0.369	0.291	0.66	Yes	0.366	0.148	0.52	Yes	1.00	**9.54**
		L_9 - L_{10}			802.06	-772.21	-321	1068	-835	-300	382	-358	-871	-369	0.716	0.276	1.00	Yes	0.417	0.168	0.59	Yes	0.811	0.142	0.96	Yes	0.811	0.171	0.99	Yes	1.00	**13.62**
		L_{10} - L_{11}			386.71	-----	-1446	1111	-1285	-30	1136	789	-357	-2623	0.386	0.606	1.00	Yes	0.226	0.367	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**25.37**
		L_{11} - L_{12}			-----	-1044.08	-133	985	-320	616	83	-341	-2	-129	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.105	0.97	Yes	0.856	0.134	1.00	Yes	1.00	**5.82**
		L_{12} - L_{13}			-----	-1269.02	-410	-154	-372	-1288	-66	451	-650	-1109	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.226	1	Yes	0.759	0.128	0.89	Yes	1.00	**10.65**
		L_{13} - L_{14}			-----	-1550.08	-1036	2516	-482	1424	143	283	576	503	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.183	0.98	Yes	0.780	0.220	1.00	Yes	1.00	**8.73**
		L_{14} - L_{15}			-----	-1294.22	1596	-517	2669	-1145	352	343	34	-141	-----	-----	-----	-----	-----	-----	-----	-----	0.657	0.338	1	Yes	0.651	0.233	0.89	Yes	1.00	**5.30**
		L_{15} - L_{16}			-----	-1403.71	-885	281	-850	-1081	192	-292	-414	18	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.152	1	Yes	0.840	0.107	0.95	Yes	1.00	**11.79**
		L_{16} - L_{17}			-----	-1138.43	1181	63	1108	-898	-355	3	-109	-516	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.155	1	Yes	0.829	0.146	0.98	Yes	1.00	**9.90**
		L_{17} - L_{18}			-----	-779.85	480	85	571	-778	122	-162	-226	249	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.169	1	Yes	0.819	0.124	0.95	Yes	1.00	**7.04**
		L_{18} - L_{19}			81.21	-627.31	615	-13	151	-748	-188	72	-52	-457	0.092	0.214	0.31	Yes	0.053	0.126	0.18	Yes	0.841	0.153	1	Yes	0.836	0.144	0.99	Yes	1.00	**8.13**
		L_{19} - L_{20}			504.20	-513.51	462	71	-31	-1245	147	-160	-1177	146	0.571	0.420	1.00	Yes	0.338	0.261	0.60	Yes	0.689	0.253	0.95	Yes	0.684	0.240	0.93	Yes	1.00	**10.26**
		L_{20} - L_{21}			861.81	-399.07	372	-92	-663	-1470	-181	71	-208	-827	0.687	0.304	1.00	Yes	0.451	0.185	0.64	Yes	0.377	0.229	0.61	Yes	0.374	0.215	0.59	Yes	1.00	**12.16**
		L_{21} - L_{22}			800.63	-78.41	-25	-199	-238	-2319	138	-152	138	168	0.638	0.356	1.00	Yes	0.427	0.223	0.65	Yes	0.074	0.300	0.38	Yes	0.074	0.338	0.42	Yes	1.00	**10.66**
		L_{22} - L_{23}			829.94	-151.36	-304	111	-1538	-1018	-56	205	-368	-1023	0.662	0.335	1.00	Yes	0.443	0.213	0.66	Yes	0.143	0.387	0.54	Yes	0.142	0.224	0.37	Yes	1.00	**9.39**
		L_{23} - L_{24}			962.23	-401.69	-28	529	-978	-1205	169	-140	-478	344	0.767	0.227	1.00	Yes	0.503	0.137	0.65	Yes	0.379	0.153	0.54	Yes	0.377	0.176	0.56	Yes	1.00	**16.72**
		L_{24} - L_{25}			506.31	-493.86	161	499	-804	-301	-104	146	-9	-1755	0.574	0.423	1.00	Yes	0.339	0.258	0.60	Yes	0.662	0.172	0.84	Yes	0.658	0.155	0.82	Yes	1.00	**13.30**
		L_{25} - L_{26}			-----	-653.18	-18	633	-432	65	93	-170	-469	-204	-----	-----	-----	-----	-----	-----	-----	-----	0.876	0.111	0.99	Yes	0.871	0.122	1.00	Yes	1.00	**7.97**
		L_{26} - L_{27}			-----	-764.83	-975	955	-448	-9	970	693	-294	-1202	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.189	1	Yes	0.803	0.156	0.96	Yes	1.00	**15.70**
		L_{27} - L_{28}			-----	-1161.42	-286	1229	-324	554	336	-201	-213	-163	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.122	0.98	Yes	0.846	0.152	1.00	Yes	1.00	**9.25**
		L_{28} - L_{29}			-----	-1416.86	10	-343	-133	-1397	-138	440	-225	-510	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.138	1	Yes	0.848	0.139	0.99	Yes	1.00	**9.22**
		L_{29} - L_{30}			-----	-1535.27	-1150	2516	-592	1419	190	338	631	730	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.188	0.97	Yes	0.773	0.220	1.00	Yes	1.00	**9.40**
		L_{30} - L_{31}			-----	-1322.10	1746	-524	2479	-957	441	392	19	-105	-----	-----	-----	-----	-----	-----	-----	-----	0.671	0.323	1	Yes	0.665	0.216	0.89	Yes	1.00	**3.88**
		L_{31} - L_{32}			-----	-1391.65	-491	55	-617	-954	244	-253	-469	1	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.156	1	Yes	0.832	0.095	0.93	Yes	1.00	**8.22**
		L_{32} - L_{33}			-----	-1042.91	1032	-72	812	-818	-367	1	57	-323	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.126	0.99	Yes	0.855	0.141	1.00	Yes	1.00	**7.54**
		L_{33} - L_{34}			-----	-707.79	574	-26	709	-873	100	-127	105	750	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.161	1	Yes	0.831	0.153	0.99	Yes	1.00	**8.61**
		L_{34} - L_{35}			545.45	-720.02	811	-114	331	-1506	-211	98	489	-1410	0.487	0.411	0.90	Yes	0.283	0.250	0.54	Yes	0.761	0.166	0.93	Yes	0.756	0.241	1.00	Yes	1.00	**15.84**
		L_{35} - L_{36}			961.34	-287.43	573	-162	319	-1491	166	-124	-1271	478	0.672	0.321	1.00	Yes	0.453	0.205	0.66	Yes	0.238	0.158	0.4	Yes	0.237	0.201	0.44	Yes	1.00	**12.85**
		L_{36} - L_{37}			1280.93	-----	260	-287	-596	-1668	-198	157	24	-962	0.734	0.263	1.00	Yes	0.482	0.159	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.77**
		L_{37} - L_{38}			1772.33	-----	-282	-667	-1064	-2161	92	-171	-895	-78	0.750	0.245	1.00	Yes	0.499	0.147	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.05**
		L_{38} - L_{39}			1838.94	-----	-588	-222	-1615	-1217	-106	173	-227	-946	0.789	0.202	1.00	Yes	0.530	0.126	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.61**
		L_{39} - L_{40}			1648.74	-----	-442	-323	-1330	-1963	124	-126	-555	66	0.769	0.223	1.00	Yes	0.509	0.133	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.51**
		L_{40} - L_{41}			1210.13	-----	-1172	196	-1478	-534	537	520	-311	-1420	0.711	0.286	1.00	Yes	0.479	0.182	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.42**
		L_{41} - L_{42}			1032.96	-----	-931	333	-725	-418	426	35	-313	164	0.814	0.180	1.00	Yes	0.534	0.109	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**19.58**
		L_{42} - L_{43}			511.13	-----	-1190	592	-617	14	646	602	-65	-808	0.621	0.375	1.00	Yes	0.369	0.236	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**18.30**
		L_{43} - L_{44}			106.71	-325.24	-2600	1093	-89	-62	1338	390	-58	-17	0.130	0.749	0.88	Yes	0.077	0.474	0.56	Yes	0.468	0.503	0.98	Yes	0.465	0.529	1.00	Yes	1.00	**41.12**
	Structure 3	L_0 - L_1			19.17	-363.99	31	-148	580	-1104	26	116	-205	-927	0.029	0.524	0.56	Yes	0.018	0.344	0.37	Yes	0.661	0.331	1	Yes	0.655	0.331	0.99	Yes	1.00	**14.44**
		L_1 - L_2			257.54	-23.11	217	-249	793	-1350	151	-30	428	939	0.394	0.600	1.00	Yes	0.267	0.382	0.65	Yes	0.042	0.330	0.38	Yes	0.042	0.405	0.45	Yes	1.00	**14.16**
		L_2 - L_3			824.23	-----	-4	-222	-140	-766	-57	167	-308	-1027	0.718	0.279	1.00	Yes	0.459	0.171	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.95**
		L_3 - L_4			1135.44	-----	28	-406	45	-1400	191	4	-778	535	0.718	0.275	1.00	Yes	0.466	0.170	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.24**
		L_4 - L_5			1575.48	-----	-389	-243	-1247	-1176	-43	216	-30	-1060	0.770	0.225	1.00	Yes	0.494	0.135	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.31**
		L_5 - L_6			1572.46	-----	-144	-441	-272	-1682	234	-31	-300	214	0.768	0.224	1.00	Yes	0.499	0.136	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.22**
		L_6 - L_7			1262.01	-----	-1299	366	-998	-257	484	278	-176	-889	0.742	0.253	1.00	Yes	0.481	0.156	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.21**
		L_7 - L_8			1068.55	-----	-92	192	-490	-474	124	-132	-535	-288	0.843	0.149	1.00	Yes	0.539	0.091	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.29**
		L_8 - L_9			485.24	-----	-694	439	-618	42	364	360	-60	-1060	0.628	0.369	1.00	Yes	0.377	0.234	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.50**
		L_9 - L_{10}			-----	-576.07	-107	444	-275	129	141	-159	52	-55	-----	-----	-----	-----	-----	-----	-----	-----	0.886	0.079	0.97	Yes	0.878	0.117	1.00	Yes	1.00	**7.49**
		L_{10} - L_{11}			-----	-931.33	-501	672	-274	-266	-80	633	-806	-2202	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.239	1	Yes	0.750	0.106	0.86	Yes	1.00	**13.10**
		L_{11} - L_{12}			-----	-1282.67	-91	1092	-20	641	261	391	442	95	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.172	1	Yes	0.812	0.145	0.96	Yes	1.00	**7.64**
		L_{12} - L_{13}			-----	-1105.51	895	-20	1287	-197	-112	67	-197	-313	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.284	1	Yes	0.700	0.170	0.88	Yes	1.00	**4.58**
		L_{13} - L_{14}			-----	-1071.52	92	110	181	-633	239	-231	-696	-168	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.119	1	Yes	0.862	0.099	0.97	Yes	1.00	**7.85**
		L_{14} - L_{15}			-----	-737.08	477	59	260	-406	-234	91	-186	-368	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.132	1	Yes	0.850	0.106	0.96	Yes	1.00	**5.99**
		L_{15} - L_{16}			206.30	-518.99	462	100	287	-763	207	-196	-338	34	0.267	0.262	0.53	Yes	0.160	0.170	0.34	Yes	0.798	0.182	0.98	Yes	0.791	0.202	1.00	Yes	1.00	**6.10**
		L_{16} - L_{17}			625.95	-----	67	-64	-272	-804	-111	322	-235	-528	0.720	0.279	1.00	Yes	0.428	0.177	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.02**
		L_{17} - L_{18}			680.54	-47.32	16	-106	-641	-764	91	-104	-171	-106	0.783	0.212	1.00	Yes	0.453	0.127	0.59	Yes	0.065	0.253	0.32	Yes	0.064	0.184	0.25	Yes	1.00	**7.06**
		L_{18} - L_{19}			399.43	-----	-676	134	-244	-176	487	624	57	-857	0.611	0.387	1.00	Yes	0.373	0.251	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.02**
		L_{19} - L_{20}			146.42	-197.07	-2134	2043	633	-735	-373	-101	409	112	0.224	0.728	0.96	Yes	0.132	0.445	0.58	Yes	0.358	0.444	0.81	Yes	0.355	0.640	1.00	Yes	1.00	**96.61**

Moment (End) AB Operating

Operating Loads - 2F1

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	$U_0 - L_0$			-----	-269.61	-117	179	-14	54	-1046	-335	193	62	-----	-----	-----	-----	-----	-----	-----	-----	0.602	0.397	1	Yes	0.570	0.229	0.80	Yes	1.00	**3.01**
		$U_1 - L_1$			18.20	-332.04	-227	222	27	-19	-239	-3	535	188	0.033	0.445	0.48	Yes	0.018	0.245	0.27	Yes	0.725	0.259	0.99	Yes	0.703	0.290	1.00	Yes	1.00	**6.06**
		$U_2 - L_2$			122.11	-261.17	-194	242	111	-122	801	361	697	180	0.220	0.541	0.77	Yes	0.121	0.297	0.42	Yes	0.571	0.419	1	Yes	0.553	0.309	0.87	Yes	1.00	**10.18**
		$U_3 - L_3$			226.36	-129.61	-131	159	228	-217	661	441	-1029	-637	0.407	0.589	1.00	Yes	0.224	0.324	0.55	Yes	0.284	0.331	0.62	Yes	0.274	0.291	0.57	Yes	1.00	**16.05**
		$U_4 - L_4$			-----	-173.46	29	-36	325	-324	844	208	733	184	-----	-----	-----	-----	-----	-----	-----	-----	0.381	0.611	1	Yes	0.367	0.416	0.79	Yes	1.00	**13.42**
		$U_5 - L_5$			-----	-334.79	76	-89	171	-190	850	335	693	453	-----	-----	-----	-----	-----	-----	-----	-----	0.606	0.391	1	Yes	0.578	0.193	0.78	Yes	1.00	**3.71**
		$U_6 - L_6$			-----	-379.07	85	-78	184	-188	1192	579	1175	569	-----	-----	-----	-----	-----	-----	-----	-----	0.574	0.419	1	Yes	0.544	0.164	0.71	Yes	1.00	**3.63**
		$U_7 - L_7$			-----	-322.39	126	-141	224	-244	916	211	844	226	-----	-----	-----	-----	-----	-----	-----	-----	0.539	0.460	1	Yes	0.497	0.240	0.74	Yes	1.00	**2.72**
		$U_8 - L_8$			-----	-1215.93	-408	485	255	-311	-306	-340	684	80	-----	-----	-----	-----	-----	-----	-----	-----	0.878	0.114	1	Yes	0.843	0.090	0.94	Yes	1.00	**8.80**
		$U_9 - L_9$			-----	-661.83	-353	392	-233	260	-192	-8	625	297	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.203	1	Yes	0.748	0.218	0.97	Yes	1.00	**4.19**
		$U_{10} - L_{10}$			-----	-784.11	-365	395	-168	145	687	414	621	268	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.181	1	Yes	0.774	0.205	0.98	Yes	1.00	**6.70**
		$U_{11} - L_{11}$			-----	-671.67	-317	408	-167	219	37	215	628	369	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.186	1	Yes	0.782	0.189	0.98	Yes	1.00	**6.44**
		$U_{12} - L_{12}$			-----	-551.15	-269	278	-126	133	-459	-44	395	300	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.184	0.99	Yes	0.756	0.237	1.00	Yes	1.00	**6.84**
		$U_{13} - L_{13}$			-----	-387.08	-193	218	-67	86	120	193	254	145	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.169	0.96	Yes	0.742	0.249	1.00	Yes	1.00	**6.53**
		$U_{14} - L_{14}$			-----	-208.45	-335	356	168	-174	-626	-996	-1124	-864	-----	-----	-----	-----	-----	-----	-----	-----	0.465	0.532	1	Yes	0.441	0.455	0.90	Yes	1.00	**26.29**
		$U_{15} - L_{15}$			68.35	-307.34	-56	50	240	-260	321	-190	-757	-134	0.123	0.551	0.68	Yes	0.068	0.303	0.38	Yes	0.689	0.304	1	Yes	0.650	0.332	0.99	Yes	1.00	**12.90**
		$U_{16} - L_{16}$			-----	-231.05	58	-63	175	-182	440	105	699	160	-----	-----	-----	-----	-----	-----	-----	-----	0.521	0.476	1	Yes	0.489	0.233	0.73	Yes	1.00	**4.06**
		$U_{17} - L_{17}$			-----	-338.38	87	-101	161	-178	497	207	481	219	-----	-----	-----	-----	-----	-----	-----	-----	0.633	0.359	1	Yes	0.584	0.181	0.77	Yes	1.00	**2.70**
		$U_{18} - L_{18}$			-----	-419.53	188	-194	344	-354	692	182	757	185	-----	-----	-----	-----	-----	-----	-----	-----	0.614	0.380	1	Yes	0.584	0.201	0.79	Yes	1.00	**3.47**
		$U_{19} - L_{19}$			-----	-511.57	196	-209	378	-395	609	120	745	141	-----	-----	-----	-----	-----	-----	-----	-----	0.638	0.353	1	Yes	0.595	0.183	0.78	Yes	1.00	**4.15**
		$U_{20} - L_{20}$			-----	-607.86	236	-285	469	-548	465	61	464	61	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.191	1	Yes	0.707	0.254	0.97	Yes	1.00	**5.46**
	Structure 2	$U_0 - L_0$			-----	-683.72	-313	501	-159	262	-438	-74	59	10	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.180	1	Yes	0.733	0.213	0.95	Yes	1.00	**4.36**
		$U_1 - L_1$			-----	-710.73	-540	543	-211	218	92	128	620	157	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.180	1	Yes	0.762	0.230	1.00	Yes	1.00	**5.79**
		$U_2 - L_2$			-----	-589.79	-443	463	-156	172	603	442	615	277	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.203	1	Yes	0.752	0.237	0.99	Yes	1.00	**5.47**
		$U_3 - L_3$			-----	-441.65	-207	224	-78	89	494	370	537	262	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.239	1	Yes	0.693	0.204	0.90	Yes	1.00	**4.29**
		$U_4 - L_4$			-----	-316.80	-225	236	-22	33	1	251	556	236	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.273	1	Yes	0.670	0.301	0.98	Yes	1.00	**7.84**
		$U_5 - L_5$			108.34	-315.01	-205	232	96	-80	-508	49	38	-46	0.195	0.444	0.64	Yes	0.107	0.244	0.36	Yes	0.712	0.284	1	Yes	0.667	0.297	0.97	Yes	1.00	**14.90**
		$U_6 - L_6$			341.65	-85.52	-125	130	195	-198	-429	-52	-310	-382	0.614	0.378	1.00	Yes	0.338	0.208	0.55	Yes	0.192	0.168	0.37	Yes	0.181	0.254	0.44	Yes	1.00	**14.89**
		$U_7 - L_7$			-----	-122.46	29	-35	281	-325	45	-215	938	-25	-----	-----	-----	-----	-----	-----	-----	-----	0.277	0.723	1	Yes	0.259	0.415	0.68	Yes	1.00	**14.20**
		$U_8 - L_8$			-----	-401.47	161	-177	284	-305	529	169	620	198	-----	-----	-----	-----	-----	-----	-----	-----	0.582	0.415	1	Yes	0.578	0.266	0.85	Yes	1.00	**3.96**
		$U_9 - L_9$			-----	-587.29	279	-282	492	-503	925	468	399	314	-----	-----	-----	-----	-----	-----	-----	-----	0.654	0.340	1	Yes	0.629	0.214	0.85	Yes	1.00	**5.08**
		$U_{10} - L_{10}$			-----	-636.55	242	-248	429	-445	931	529	683	458	-----	-----	-----	-----	-----	-----	-----	-----	0.629	0.362	1	Yes	0.595	0.196	0.80	Yes	1.00	**4.88**
		$U_{11} - L_{11}$			-----	-627.71	240	-237	393	-394	969	538	948	587	-----	-----	-----	-----	-----	-----	-----	-----	0.631	0.362	1	Yes	0.587	0.174	0.77	Yes	1.00	**4.00**
		$U_{12} - L_{12}$			-----	-633.88	210	-197	357	-353	1218	514	1078	531	-----	-----	-----	-----	-----	-----	-----	-----	0.608	0.387	1	Yes	0.549	0.153	0.71	Yes	1.00	**3.90**
		$U_{13} - L_{13}$			-----	-512.97	272	-270	417	-412	889	224	791	224	-----	-----	-----	-----	-----	-----	-----	-----	0.572	0.425	1	Yes	0.495	0.200	0.70	Yes	1.00	**3.33**
		$U_{14} - L_{14}$			-----	-1104.77	-429	397	385	-371	-39	-249	864	44	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.191	1	Yes	0.733	0.076	0.81	Yes	1.00	**8.92**
		$U_{15} - L_{15}$			-----	-639.03	-499	483	-269	264	34	10	743	50	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.278	1	Yes	0.616	0.239	0.86	Yes	1.00	**6.09**
		$U_{16} - L_{16}$			-----	-681.43	-480	470	-197	166	136	178	758	164	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.208	1	Yes	0.730	0.204	0.94	Yes	1.00	**5.78**
		$U_{17} - L_{17}$			-----	-659.62	-463	464	-200	198	64	146	567	164	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.178	1	Yes	0.768	0.215	0.99	Yes	1.00	**6.64**
		$U_{18} - L_{18}$			-----	-605.83	-421	441	-166	167	25	94	586	184	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.188	1	Yes	0.772	0.225	1.00	Yes	1.00	**6.51**
		$U_{19} - L_{19}$			-----	-502.77	-252	252	-95	95	-402	71	485	177	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.184	0.95	Yes	0.751	0.243	1.00	Yes	1.00	**6.21**
		$U_{20} - L_{20}$			-----	-368.45	-174	184	-50	54	60	90	487	168	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.242	1	Yes	0.706	0.210	0.92	Yes	1.00	**6.37**
		$U_{21} - L_{21}$			13.42	-336.49	-204	218	14	-3	-118	84	37	-143	0.024	0.320	0.35	Yes	0.013	0.176	0.19	Yes	0.760	0.143	0.91	Yes	0.712	0.278	1.00	Yes	1.00	**9.49**
		$U_{22} - L_{22}$			-----	-140.47	-153	172	218	-244	1185	77	1493	235	-----	-----	-----	-----	-----	-----	-----	-----	0.316	0.678	1	Yes	0.297	0.312	0.61	Yes	1.00	**18.83**
		$U_{23} - L_{23}$			-----	-247.72	39	-44	175	-190	533	169	552	211	-----	-----	-----	-----	-----	-----	-----	-----	0.560	0.439	1	Yes	0.524	0.243	0.77	Yes	1.00	**4.92**
		$U_{24} - L_{24}$			-----	-303.93	74	-78	180	-188	588	209	410	194	-----	-----	-----	-----	-----	-----	-----	-----	0.623	0.375	1	Yes	0.582	0.215	0.80	Yes	1.00	**3.76**
		$U_{25} - L_{25}$			-----	-399.79	118	-119	251	-250	593	229	533	281	-----	-----	-----	-----	-----	-----	-----	-----	0.601	0.390	1	Yes	0.597	0.242	0.84	Yes	1.00	**3.90**
		$U_{26} - L_{26}$			-----	-463.51	198	-206	394	-411	712	312	793	405	-----	-----	-----	-----	-----	-----	-----	-----	0.618	0.378	1	Yes	0.591	0.210	0.81	Yes	1.00	**3.98**
		$U_{27} - L_{27}$			-----	-505.96	227	-230	436	-441	781	329	692	445	-----	-----	-----	-----	-----	-----	-----	-----	0.624	0.370	1	Yes	0.589	0.205	0.80	Yes	1.00	**4.26**
		$U_{28} - L_{28}$			-----	-542.03	184	-163	399	-383	1338	444	1289	497	-----	-----	-----	-----	-----	-----	-----	-----	0.626	0.366	1	Yes	0.581	0.169	0.76	Yes	1.00	**4.76**
		$U_{29} - L_{29}$			-----	-496.71	218	-222	479	-474	880	143	867	182	-----	-----	-----	-----	-----	-----	-----	-----	0.554	0.446	1	Yes	0.479	0.229	0.71	Yes	1.00	**5.57**
		$U_{30} - L_{30}$			-----	-1190.13	-555	491	278	-292	-167	-161	572	-203	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.128	1	Yes	0.789	0.098	0.89	Yes	1.00	**9.29**
		$U_{31} - L_{31}$			-----	-700.39	-472	457	-312	304	-222	37	480	97	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.218	1	Yes	0.675	0.226	0.91	Yes	1.00	**4.84**
		$U_{32} - L_{32}$			-----	-840.85	-399	392	-221	195	51	95	592	178	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.190	1	Yes	0.729	0.171	0.90	Yes	1.00	**5.95**
		$U_{33} - L_{33}$			-----	-821.87	-435	432	-250	235	-78	160	541	233	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.170	1	Yes	0.768	0.192	0.97	Yes	1.00	**6.61**
		$U_{34} - L_{34}$			-----	-802.68	-435	456	-243	243	-727	-72	511	252	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.200	1	Yes	0.750	0.201	0.96	Yes	1.00	**7.33**
		$U_{35} - L_{35}$			-----	-720.65	-496	513	-256	270	-152	143	630	373	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.164	0.97	Yes	0.772	0.218	1.00	Yes	1.00	**7.95**
		$U_{36} - L_{36}$			-----	-497.79	-300	321	-137	158	-14	113	318	204	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.151	0.88	Yes	0.717	0.281	1.00	Yes	1.00	**6.63**
		$U_{37} - L_{37}$			-----	-204.83	-352	409	50	-52	-999	-586	-589	-442	-----	-----	-----	-----	-----	-----	-----	-----	0.463	0.528	1	Yes	0.433	0.522	0.96	Yes	1.00	**27.65**
		$U_{38} - L_{38}$			294.56	-149.98	-185	188	162	-171	-256	-564	-782	-255	0.530	0.467	1.00	Yes	0.291	0.257	0.55	Yes	0.338	0.246	0.59	Yes	0.317	0.240	0.56	Yes	1.00	**15.94**
		$U_{39} - L_{39}$			70.24	-318.21	-77	55	231	-253	252	-527	-288	-40	0.126	0.476	0.61	Yes	0.069	0.262	0.34	Yes	0.719	0.254	0.98	Yes	0.673	0.324	1.00	Yes	1.00	**13.44**
		$U_{40} - L_{40}$			-----	-323.70	23	-32	214	-218	603	169	-56	8	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.259	1	Yes	0.685	0.279	0.97	Yes	1.00	**7.99**
		$U_{41} - L_{41}$			-----	-359.82	101	-110	183	-194	577	204	622	242	-----	-----	-----	-----	-----	-----	-----	-----	0.612	0.385	1	Yes	0.564	0.176	0.75	Yes	1.00	**2.89**
		$U_{42} - L_{42}$			-----	-471.72	194	-203	397	-406	693	183	594	201	-----	-----	-----	-----	-----	-----	-----	-----	0.632	0.361	1	Yes	0.601	0.208	0.81	Yes	1.00	**4.14**
		$U_{43} - L_{43}$			-----	-543.07	217	-235	405	-424	667	198	1008	347	-----	-----	-----	-----	-----	-----	-----	-----	0.621	0.373	1	Yes	0.582	0.180	0.77	Yes	1.00	**4.17**
		$U_{44} - L_{44}$			-----	-606.81	260	-322	437	-551	541	92	808	137	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.266	1	Yes	0.650	0.234	0.89	Yes	1.00	**4.81**
	Structure 3	$U_0 - L_0$			-----	-588.80	-266	379	-134	236	-695	-91	111	15	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.220	1	Yes	0.685	0.176	0.87	Yes	1.00	**3.54**
		$U_1 - L_1$			-----	-642.13	-426	418	-211	210	94	98	614	143	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.191	1	Yes	0.747	0.198	0.95	Yes	1.00	**5.24**
		$U_2 - L_2$			-----	-535.50	-324	342	-161	173	-210	158	648	305	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.212	1	Yes	0.745	0.193	0.94	Yes	1.00	**4.62**
		$U_3 - L_3$			-----	-399.02	-155	173	-70	85	194	240	550	268	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.253	1	Yes	0.688	0.175	0.87	Yes	1.00	**3.84**
		$U_4 - L_4$			-----	-306.42	-213	225	-34	40	551	315	567	216	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.305	1	Yes	0.648	0.287	0.94	Yes	1.00	**6.16**
		$U_5 - L_5$			78.11	-252.05	-186	206	59	-50	-1166	-44	20	-56	0.140	0.601	0.75	Yes	0.077	0.330	0.41	Yes	0.565	0.430	1	Yes	0.533	0.263	0.80	Yes	1.00	**11.26**
		$U_6 - L_6$			-----	-140.68	-47	46	246	-265	-61	-345	1103	101	-----	-----	-----	-----	-----	-----	-----	-----	0.314	0.685	1	Yes	0.298	0.339	0.64	Yes	1.00	**13.67**
		$U_7 - L_7$			-----	-297.94	88	-105	184	-205	489	43	455	187	-----	-----	-----	-----	-----	-----	-----	-----	0.602	0.394	1	Yes	0.571	0.234	0.81	Yes	1.00	**3.27**
		$U_8 - L_8$			-----	-404.86	146	-145	263	-264	787	367	752	390	-----	-----	-----	-----	-----	-----	-----	-----	0.585	0.407	1	Yes	0.555	0.225	0.79	Yes	1.00	**3.77**
		$U_9 - L_9$			-----	-586.35	167	-225	360	-452	1027	426	1167	718	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.292	1	Yes	0.682	0.210	0.90	Yes	1.00	**5.51**
		$U_{10} - L_{10}$			-----	-571.28	160	-154	284	-298	1367	756	1281	754	-----	-----	-----	-----	-----	-----	-----	-----	0.592	0.405	1	Yes	0.564	0.154	0.72	Yes	1.00	**4.27**
		$U_{11} - L_{11}$			-----	-490.87	218	-253	326	-374	1123	504	1004	515	-----	-----	-----	-----	-----	-----	-----	-----	0.585	0.412	1	Yes	0.554	0.208	0.77	Yes	1.00	**2.65**
		$U_{12} - L_{12}$			-----	-1112.53	-330	347	277	-377	-193	-156	1201	368	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.196	1	Yes	0.771	0.070	0.85	Yes	1.00	**7.93**
		$U_{13} - L_{13}$			-----	-434.35	-246	260	-156	169	108	38	604	153	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.274	1	Yes	0.670	0.256	0.93	Yes	1.00	**3.23**
		$U_{14} - L_{14}$			-----	-495.21	-224	241	-103	90	117	123	676	236	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.241	1	Yes	0.710	0.211	0.93	Yes	1.00	**4.78**
		$U_{15} - L_{15}$			-----	-411.63	-152	175	-80	88	-599	-92	627	253	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.247	1	Yes	0.710	0.178	0.89	Yes	1.00	**4.84**
		$U_{16} - L_{16}$			-----	-216.39	-423	414	20	-3	458	-546	-1251	-795	-----	-----	-----	-----	-----	-----	-----	-----	0.476	0.458	0.94	Yes	0.458	0.541	1.00	Yes	1.00	**24.17**
		$U_{17} - L_{17}$			205.44	-190.82	-275	276	165	-188	-560	-562	-933	-373	0.370	0.623	1.00	Yes	0.203	0.343	0.55	Yes	0.418	0.316	0.74	Yes	0.404	0.353	0.76	Yes	1.00	**17.64**
		$U_{18} - L_{18}$			84.18	-230.71	-90	96	195	-230	447	149	1198	294	0.151	0.641	0.80	Yes	0.083	0.353	0.44	Yes	0.504	0.493	1	Yes	0.488	0.294	0.79	Yes	1.00	**9.45**
		$U_{19} - L_{19}$			-----	-278.14	-7	-8	179	-193	460	244	591	292	-----	-----	-----	-----	-----	-----	-----	-----	0.608	0.390	1	Yes	0.589	0.247	0.84	Yes	1.00	**5.42**
		$U_{20} - L_{20}$			-----	-225.16	89	-107	154	-192	627	201	725	232	-----	-----	-----	-----	-----	-----	-----	-----	0.503	0.495	1	Yes	0.476	0.246	0.73	Yes	1.00	**2.21**

Moment (End) AB Operating

Operating Loads - 2F1

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	$U_0 - L_1$	454.57	-7.54	-103	53	5	-11	-1107	-448	50	119	0.596	0.399	1.00	Yes	0.360	0.220	0.58	Yes	0.013	0.317	0.33	Yes	0.012	0.120	0.14	Yes	1.00	**6.94**
		$U_1 - L_2$	335.57	-----	-87	23	-11	-26	-89	-95	-972	-293	0.604	0.393	1.00	Yes	0.332	0.216	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.89**
		$U_2 - L_3$	96.81	-227.40	-42	-1	-18	-62	-152	-133	-1455	-218	0.174	0.500	0.68	Yes	0.096	0.275	0.38	Yes	0.523	0.469	1	Yes	0.481	0.079	0.57	Yes	1.00	**11.86**
		$U_3 - L_4$	-----	-300.87	26	-13	2	-56	450	255	-811	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.688	0.306	1	Yes	0.637	0.071	0.71	Yes	1.00	**6.41**
		$U_4 - L_4$	450.50	-----	9	125	-128	-3	14	239	861	274	0.661	0.330	1.00	Yes	0.363	0.181	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**16.25**
		$U_5 - L_5$	640.74	-----	-161	227	-30	90	-611	111	5	68	0.758	0.240	1.00	Yes	0.417	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.70**
		$U_7 - L_6$	600.23	-----	-256	252	-57	92	-749	-100	-710	-107	0.710	0.282	1.00	Yes	0.390	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.63**
		$U_8 - L_7$	621.84	-----	-68	321	18	100	-446	-157	-393	-270	0.735	0.264	1.00	Yes	0.404	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.92**
		$U_8 - L_8$	953.74	-----	-64	382	-25	175	216	-82	483	142	0.762	0.232	1.00	Yes	0.472	0.130	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.04**
		$U_9 - L_{10}$	1014.16	-----	-305	274	-124	116	146	-25	343	134	0.811	0.180	1.00	Yes	0.502	0.101	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.43**
		$U_{10} - L_{11}$	905.15	-----	-217	188	-130	83	-147	-390	-993	-447	0.765	0.231	1.00	Yes	0.473	0.132	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.82**
		$U_{11} - L_{12}$	741.99	-----	-232	101	-145	19	-89	-271	-1022	-560	0.734	0.261	1.00	Yes	0.404	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.97**
		$U_{12} - L_{13}$	574.44	-----	-196	146	-101	44	-52	-228	-655	-287	0.700	0.299	1.00	Yes	0.441	0.171	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.78**
		$U_{13} - L_{14}$	376.01	-----	-78	35	-30	-32	-130	-186	-755	-341	0.676	0.319	1.00	Yes	0.372	0.175	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.71**
		$U_{15} - L_{14}$	329.87	-288.96	-88	3	33	-118	-297	-461	419	-184	0.593	0.284	0.88	Yes	0.326	0.156	0.49	Yes	0.677	0.320	1	Yes	0.611	0.150	0.77	Yes	1.00	**16.57**
		$U_{16} - L_{15}$	386.34	-38.67	-131	89	-34	-15	-358	-8	467	-214	0.695	0.303	1.00	Yes	0.382	0.167	0.55	Yes	0.092	0.203	0.3	Yes	0.082	0.168	0.25	Yes	1.00	**10.67**
		$U_{17} - L_{16}$	483.81	-----	-135	92	-50	22	-637	-239	-270	-86	0.709	0.286	1.00	Yes	0.390	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.12**
		$U_{18} - L_{17}$	573.31	-----	-303	233	-136	94	-785	-175	-394	-97	0.678	0.314	1.00	Yes	0.373	0.173	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.30**
		$U_{19} - L_{18}$	647.80	-----	-313	240	-137	100	-826	-347	-459	-198	0.702	0.296	1.00	Yes	0.386	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.82**
		$U_{20} - L_{19}$	679.91	-----	-380	317	-177	143	-394	-210	-262	-140	0.736	0.259	1.00	Yes	0.405	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.33**
	Structure 2	$U_0 - L_1$	670.80	-----	-285	305	-103	129	-1255	-400	-139	13	0.664	0.329	1.00	Yes	0.365	0.181	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.74**
		$U_1 - L_2$	764.10	-----	-408	319	-159	113	-206	-336	170	-8	0.756	0.239	1.00	Yes	0.416	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.08**
		$U_2 - L_3$	633.58	-----	-330	273	-112	83	-204	-340	151	-8	0.749	0.248	1.00	Yes	0.412	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.96**
		$U_3 - L_4$	566.54	-----	-177	124	-40	15	-370	-386	219	47	0.755	0.242	1.00	Yes	0.415	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.01**
		$U_4 - L_5$	356.54	-87.90	-125	86	-7	-35	-385	-316	-665	-132	0.641	0.352	1.00	Yes	0.353	0.194	0.55	Yes	0.217	0.278	0.5	Yes	0.186	0.159	0.35	Yes	1.00	**11.05**
		$U_5 - L_6$	308.11	-245.37	-92	39	59	-115	-459	-188	-1008	-218	0.554	0.439	1.00	Yes	0.305	0.241	0.55	Yes	0.579	0.307	0.89	Yes	0.519	0.147	0.67	Yes	1.00	**14.80**
		$U_6 - L_7$	-----	-372.04	-2	-39	46	-99	34	-76	-475	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.196	1	Yes	0.713	0.113	0.83	Yes	1.00	**6.58**
		$U_8 - L_7$	604.90	-----	-186	157	-79	33	-269	-101	-8	-128	0.771	0.221	1.00	Yes	0.485	0.125	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.25**
		$U_8 - L_8$	724.95	-----	-332	256	-178	106	-212	-91	-36	-18	0.785	0.205	1.00	Yes	0.432	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.24**
		$U_{10} - L_9$	812.86	-----	-299	252	-162	126	-371	97	185	31	0.804	0.194	1.00	Yes	0.442	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.26**
		$U_{11} - L_{10}$	856.72	-----	-324	306	-162	160	-589	42	-295	64	0.780	0.218	1.00	Yes	0.429	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.32**
		$U_{12} - L_{11}$	822.16	-----	-316	342	-145	182	-742	52	-509	38	0.749	0.247	1.00	Yes	0.412	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.89**
		$U_{13} - L_{12}$	709.41	-----	-406	369	-185	181	-687	25	-467	-14	0.702	0.291	1.00	Yes	0.386	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.87**
		$U_{14} - L_{13}$	736.87	-----	-229	441	-39	155	-441	-89	-178	-108	0.729	0.271	1.00	Yes	0.401	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.45**
		$U_{14} - L_{15}$	569.52	-----	-180	336	-45	166	107	74	750	312	0.673	0.326	1.00	Yes	0.370	0.180	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.70**
		$U_{15} - L_{16}$	595.78	-----	-353	327	-172	161	339	-39	487	133	0.704	0.288	1.00	Yes	0.387	0.158	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.75**
		$U_{16} - L_{17}$	692.16	-----	-329	355	-133	160	312	-251	372	106	0.750	0.243	1.00	Yes	0.412	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.96**
		$U_{17} - L_{18}$	646.07	-----	-283	294	-115	132	217	-34	354	83	0.764	0.231	1.00	Yes	0.420	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.85**
		$U_{18} - L_{19}$	658.79	-----	-283	273	-87	101	101	-270	283	69	0.779	0.211	1.00	Yes	0.428	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.00**
		$U_{19} - L_{20}$	579.55	-----	-193	175	-70	42	69	-84	-435	-131	0.739	0.261	1.00	Yes	0.406	0.148	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.70**
		$U_{20} - L_{21}$	401.94	-----	-121	107	-22	-4	-208	-225	-405	-89	0.723	0.272	1.00	Yes	0.398	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.07**
		$U_{21} - L_{22}$	175.63	-239.56	-43	44	16	-89	277	63	-1172	-157	0.316	0.454	0.77	Yes	0.174	0.250	0.43	Yes	0.566	0.432	1	Yes	0.507	0.114	0.63	Yes	1.00	**14.75**
		$U_{23} - L_{22}$	436.78	-128.28	-115	67	11	-62	-215	-197	133	-124	0.786	0.210	1.00	Yes	0.432	0.115	0.55	Yes	0.305	0.139	0.45	Yes	0.271	0.147	0.42	Yes	1.00	**14.99**
		$U_{24} - L_{23}$	412.19	-----	-118	106	-33	19	-357	-25	-59	-41	0.741	0.255	1.00	Yes	0.408	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.33**
		$U_{25} - L_{24}$	601.13	-----	-193	175	-43	51	-195	73	-298	-80	0.766	0.233	1.00	Yes	0.422	0.132	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.07**
		$U_{26} - L_{25}$	653.63	-----	-268	275	-89	108	-351	79	-241	-49	0.773	0.219	1.00	Yes	0.425	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.53**
		$U_{27} - L_{26}$	626.93	-----	-270	293	-113	134	-493	69	-330	2	0.741	0.255	1.00	Yes	0.408	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.81**
		$U_{28} - L_{27}$	656.90	-----	-291	336	-109	157	-677	121	-484	22	0.712	0.283	1.00	Yes	0.391	0.156	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.82**
		$U_{29} - L_{28}$	579.01	-----	-336	325	-118	126	-644	-15	-478	-44	0.685	0.307	1.00	Yes	0.376	0.169	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.49**
		$U_{30} - L_{29}$	606.34	-----	-169	362	7	101	-412	103	-209	-168	0.717	0.280	1.00	Yes	0.394	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.60**
		$U_{30} - L_{31}$	739.12	-----	-258	440	-78	226	12	-120	377	161	0.731	0.261	1.00	Yes	0.402	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.33**
		$U_{31} - L_{32}$	737.95	-----	-428	377	-239	221	192	-204	414	99	0.730	0.260	1.00	Yes	0.402	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.58**
		$U_{32} - L_{33}$	881.73	-----	-350	364	-165	192	49	-212	270	42	0.803	0.191	1.00	Yes	0.442	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.32**
		$U_{33} - L_{34}$	899.42	-----	-340	306	-173	155	-46	-267	109	-82	0.819	0.181	1.00	Yes	0.451	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.77**
		$U_{34} - L_{35}$	790.03	-----	-291	246	-171	119	-168	-323	-556	-278	0.782	0.218	1.00	Yes	0.430	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.47**
		$U_{35} - L_{36}$	703.33	-----	-320	248	-178	101	-77	-156	-447	-253	0.762	0.237	1.00	Yes	0.419	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.30**
		$U_{36} - L_{37}$	537.81	-----	-175	141	-83	30	116	-225	-763	-233	0.686	0.312	1.00	Yes	0.432	0.179	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.43**
		$U_{38} - L_{37}$	-----	-369.39	-24	-27	51	-100	-286	-214	-16	-220	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.194	1	Yes	0.708	0.114	0.83	Yes	1.00	**8.92**
		$U_{39} - L_{38}$	431.93	-243.94	-130	67	68	-117	-188	-152	48	-38	0.777	0.221	1.00	Yes	0.427	0.122	0.55	Yes	0.581	0.203	0.79	Yes	0.516	0.167	0.69	Yes	1.00	**17.57**
		$U_{40} - L_{39}$	403.70	-41.15	-132	91	-10	-24	-354	110	60	-130	0.726	0.272	1.00	Yes	0.399	0.149	0.55	Yes	0.099	0.192	0.3	Yes	0.087	0.169	0.26	Yes	1.00	**10.14**
		$U_{41} - L_{40}$	560.86	-----	-173	126	-49	24	-401	-106	-431	-191	0.748	0.249	1.00	Yes	0.411	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.82**
		$U_{42} - L_{41}$	601.94	-----	-312	254	-125	94	-611	-178	-412	-168	0.712	0.287	1.00	Yes	0.391	0.158	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.71**
		$U_{43} - L_{42}$	735.00	-----	-365	296	-142	108	-641	-193	-399	-206	0.727	0.265	1.00	Yes	0.400	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.71**
		$U_{44} - L_{43}$	785.37	-----	-380	371	-172	160	-253	4	-197	-48	0.777	0.214	1.00	Yes	0.427	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.61**
	Structure 3	$U_0 - L_1$	651.22	-----	-265	261	-79	105	-965	-437	-164	-5	0.705	0.294	1.00	Yes	0.388	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.54**
		$U_1 - L_2$	688.56	-----	-365	267	-163	112	-97	-361	148	-52	0.746	0.246	1.00	Yes	0.410	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.35**
		$U_2 - L_3$	609.24	-----	-322	251	-129	90	-107	-519	113	-42	0.720	0.276	1.00	Yes	0.396	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.65**
		$U_3 - L_4$	545.50	-----	-154	108	-43	21	-106	-187	149	-28	0.800	0.200	1.00	Yes	0.440	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.35**
		$U_4 - L_5$	329.46	-56.68	-117	79	-29	-21	-328	-437	-885	-180	0.593	0.406	1.00	Yes	0.326	0.223	0.55	Yes	0.134	0.210	0.35	Yes	0.120	0.150	0.27	Yes	1.00	**9.91**
		$U_5 - L_6$	142.78	-269.59	-46	-9	24	-112	-153	-97	-1175	-289	0.257	0.483	0.75	Yes	0.141	0.266	0.41	Yes	0.632	0.361	1	Yes	0.570	0.143	0.72	Yes	1.00	**12.61**
		$U_7 - L_6$	451.12	-----	-91	45	-23	-25	-207	-239	-31	-83	0.811	0.186	1.00	Yes	0.446	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.31**
		$U_8 - L_7$	611.75	-----	-202	160	-95	52	-375	-126	159	-73	0.746	0.250	1.00	Yes	0.469	0.141	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.65**
		$U_8 - L_8$	806.74	-----	-245	128	-126	33	-563	-110	414	148	0.798	0.198	1.00	Yes	0.439	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.93**
		$U_{10} - L_9$	980.54	-----	-223	213	-73	86	-485	128	-1	143	0.828	0.167	1.00	Yes	0.513	0.094	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.31**
		$U_{11} - L_{10}$	957.79	-----	-281	283	-86	109	-590	-38	-793	-179	0.766	0.227	1.00	Yes	0.474	0.129	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.37**
		$U_{12} - L_{11}$	941.02	-----	-49	379	14	139	-400	93	-576	-163	0.752	0.242	1.00	Yes	0.466	0.136	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.94**
		$U_{12} - L_{13}$	615.45	-----	-75	315	-17	146	292	65	480	164	0.728	0.267	1.00	Yes	0.400	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		$U_{13} - L_{14}$	641.21	-----	-283	252	-114	115	296	13	437	150	0.758	0.241	1.00	Yes	0.417	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		$U_{14} - L_{15}$	657.85	-----	-175	235	-70	92	188	-107	-440	-179	0.778	0.214	1.00	Yes	0.428	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.59**
		$U_{15} - L_{16}$	374.58	-----	-8	83	-58	-10	432	223	-1533	-707	0.549	0.441	1.00	Yes	0.302	0.243	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.07**
		$U_{17} - L_{16}$	-----	-366.40	61	-8	-83	-123	-142	64	249	30	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.154	1	Yes	0.775	0.157	0.94	Yes	1.00	**14.92**
		$U_{18} - L_{17}$	291.12	-161.30	-97	14	-93	-71	-362	-289	1216	-38	0.524	0.476	1.00	Yes	0.288	0.262	0.55	Yes	0.371	0.459	0.83	Yes	0.341	0.124	0.47	Yes	1.00	**18.75**
		$U_{19} - L_{18}$	383.27	-----	-81	13	-30	-19	-647	-501	684	278	0.689	0.302	1.00	Yes	0.379	0.166	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.35**
		$U_{20} - L_{19}$	607.63	-----	-125	76	-26	3	-198	-67	-29	59	0.797	0.196	1.00	Yes	0.481	0.108	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.54**

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: 2F1 Fy = 33.0 ksi DL Factor: 1.30 DL Factor: 1.30

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

E = 29000.0 ksi

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

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	8.32	-45.51			0.90	1.24	9.27	-50.66	0.00	0.00	Vehicle	Vehicle	-----	-158.95	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	9.75	9.75
	U$_1$ - U$_2$	-90.76	16.79	-79.31			0.90	1.24	18.69	-88.29	0.00	0.00	Vehicle	Vehicle	-----	-232.76	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	5.37	5.37
	U$_2$ - U$_3$	-61.05	24.93	-86.53			0.90	1.24	27.76	-96.33	0.00	0.00	Vehicle	Vehicle	-----	-204.60	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	5.23	5.23
	U$_3$ - U$_4$	10.82	32.66	-76.86			0.90	1.24	36.35	-85.57	0.00	0.00	Vehicle	Vehicle	61.32	-97.18	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	18.16	18.16	6.73	6.73
	U$_4$ - U$_5$	12.98	32.83	-76.42			0.90	1.24	36.55	-85.08	0.00	0.00	Vehicle	Vehicle	64.39	-93.73	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	18.01	18.01	6.80	6.80
	U$_5$ - U$_6$	121.44	37.98	-61.00			0.90	1.24	42.28	-67.91	0.00	0.00	Vehicle	Vehicle	212.84	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	13.00	-----	13.00	-----
	U$_6$ - U$_7$	249.52	41.99	-39.00			0.90	1.24	46.75	-43.41	0.00	0.00	Vehicle	Vehicle	385.15	-----	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	-----	-----	11.87	11.87	-----	-----
	U$_7$ - U$_8$	376.85	42.76	-11.85			0.90	1.24	47.61	-13.19	0.00	0.00	Vehicle	Vehicle	551.79	-----	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$_9$	319.70	45.66	-14.12			0.90	1.20	49.23	-15.23	0.00	0.00	Vehicle	Vehicle	479.60	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	12.58	12.58	-----	-----
	U$_9$ - U$_{10}$	128.80	42.51	-33.23			0.90	1.20	45.84	-35.83	0.00	0.00	Vehicle	Vehicle	227.03	-----	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	-----	-----	12.66	12.66	-----	-----
	U$_{10}$ - U$_{11}$	-70.81	38.39	-59.78			0.90	1.20	41.39	-64.45	0.00	0.00	Vehicle	Vehicle	-----	-175.85	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	-----	-----	8.17	8.17
	U$_{11}$ - U$_{12}$	-252.85	34.09	-82.32			0.90	1.20	36.75	-88.75	0.00	0.00	Vehicle	Vehicle	-----	-444.08	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	6.31	6.31
	U$_{12}$ - U$_{13}$	-391.81	29.33	-98.29			0.90	1.20	31.62	-105.97	0.00	0.00	Vehicle	Vehicle	-----	-647.11	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	-----	-----	7.04	7.04
	U$_{13}$ - U$_{14}$	-482.83	24.62	-113.99			0.90	1.20	26.54	-122.91	0.00	0.00	Vehicle	Vehicle	-----	-787.46	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.87	6.87
	U$_{14}$ - U$_{15}$	-484.28	24.53	-114.16			0.90	1.20	26.44	-123.08	0.00	0.00	Vehicle	Vehicle	-----	-789.58	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.85	6.85
	U$_{15}$ - U$_{16}$	-501.86	18.84	-114.35			0.90	1.20	20.32	-123.29	0.00	0.00	Vehicle	Vehicle	-----	-812.69	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	-----	-----	6.70	6.70
	U$_{16}$ - U$_{17}$	-467.82	13.70	-103.75			0.90	1.20	14.77	-111.86	0.00	0.00	Vehicle	Vehicle	-----	-753.59	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	-----	-----	7.69	7.69
	U$_{17}$ - U$_{18}$	-368.70	8.47	-81.42			0.90	1.20	9.14	-87.79	0.00	0.00	Vehicle	Vehicle	-----	-593.44	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	-----	-----	6.86	6.86
	U$_{18}$ - U$_{19}$	-251.42	4.23	-56.03			0.90	1.20	4.56	-60.41	0.00	0.00	Vehicle	Vehicle	-----	-405.37	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	-----	-----	7.05	7.05
	U$_{19}$ - U$_{20}$	-117.77	1.05	-25.35			0.90	1.20	1.14	-27.33	0.00	0.00	Vehicle	Vehicle	-----	-188.63	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	-----	-----	20.48	20.48
Structure 2	U$_1$ - U$_1$	-118.16	3.22	-26.87			0.90	1.18	3.43	-28.61	0.00	0.00	Vehicle	Vehicle	-----	-190.79	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	-----	-----	18.50	18.50
	U$_1$ - U$_2$	-239.45	7.38	-56.23			0.90	1.18	7.86	-59.87	0.00	0.00	Vehicle	Vehicle	-----	-389.11	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	-----	-----	9.22	9.22
	U$_2$ - U$_3$	-350.29	12.31	-83.75			0.90	1.18	13.11	-89.17	0.00	0.00	Vehicle	Vehicle	-----	-571.30	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	-----	-----	8.15	8.15
	U$_3$ - U$_4$	-448.96	18.35	-101.64			0.90	1.18	19.54	-108.22	0.00	0.00	Vehicle	Vehicle	-----	-724.33	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	-----	-----	8.25	8.25
	U$_4$ - U$_5$	-483.05	24.62	-117.45			0.90	1.18	26.03	-119.72	0.00	0.00	Vehicle	Vehicle	-----	-783.60	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	-----	-----	8.39	8.39
	U$_5$ - U$_6$	-485.65	30.92	-122.88			0.90	1.18	32.92	-130.83	0.00	0.00	Vehicle	Vehicle	-----	-801.42	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	-----	-----	7.65	7.65
	U$_6$ - U$_7$	-428.66	36.61	-115.52			0.90	1.18	38.98	-122.99	0.00	0.00	Vehicle	Vehicle	-----	-717.15	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	-----	-----	7.42	7.42
	U$_7$ - U$_8$	-428.18	36.70	-115.34			0.90	1.18	39.08	-122.80	0.00	0.00	Vehicle	Vehicle	-----	-716.27	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	-----	-----	7.44	7.44
	U$_8$ - U$_9$	-335.25	42.07	-104.89			0.90	1.18	44.79	-111.67	0.00	0.00	Vehicle	Vehicle	-----	-581.00	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	-----	-----	7.08	7.08
	U$_9$ - U$_{10}$	-200.15	45.48	-87.88			0.90	1.18	48.43	-93.57	0.00	0.00	Vehicle	Vehicle	-----	-381.84	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	7.33	7.33
	U$_{10}$ - U$_{11}$	-52.03	48.30	-67.07			0.90	1.18	51.42	-71.41	0.00	0.00	Vehicle	Vehicle	-----	-160.47	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	-----	-----	10.05	10.05
	U$_{11}$ - U$_{12}$	107.09	48.26	-43.58			0.90	1.18	51.38	-46.39	0.00	0.00	Vehicle	Vehicle	206.01	-----	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	-----	-----	15.64	15.64	-----	-----
	U$_{12}$ - U$_{13}$	259.37	47.85	-26.61			0.90	1.18	50.95	-28.33	0.00	0.00	Vehicle	Vehicle	403.41	-----	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	-----	-----	17.27	17.27	-----	-----
	U$_{13}$ - U$_{14}$	391.99	45.14	-9.10			0.90	1.18	48.06	-9.69	0.00	0.00	Vehicle	Vehicle	572.06	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	24.39	24.39	-----	-----
	U$_{14}$ - U$_{15}$	439.40	45.38	7.96			0.90	1.17	47.74	-8.38	0.00	0.00	Vehicle	Vehicle	633.29	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	23.56	23.56	-----	-----
	U$_{15}$ - U$_{16}$	369.68	44.64	-19.53			0.90	1.17	46.97	-20.55	0.00	0.00	Vehicle	Vehicle	541.64	-----	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	-----	-----	19.22	19.22	-----	-----
	U$_{16}$ - U$_{17}$	271.42	43.02	-32.18			0.90	1.17	45.27	-33.85	0.00	0.00	Vehicle	Vehicle	411.69	-----	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	-----	-----	17.07	17.07	-----	-----
	U$_{17}$ - U$_{18}$	171.80	41.00	-49.93			0.90	1.17	43.13	-52.53	0.00	0.00	Vehicle	Vehicle	279.41	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	13.78	13.78	-----	-----
	U$_{18}$ - U$_{19}$	72.84	37.39	-65.23			0.90	1.17	39.33	-68.63	0.00	0.00	Vehicle	Vehicle	145.82	-----	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	17.63	17.63	-----	-----
	U$_{19}$ - U$_{20}$	-8.04	33.32	-78.33			0.90	1.17	35.05	-82.41	0.00	0.00	Vehicle	Vehicle	35.11	-117.59	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	23.63	23.63	8.31	8.31
	U$_{20}$ - U$_{21}$	-60.07	28.16	-92.78			0.90	1.17	29.63	-97.62	0.00	0.00	Vehicle	Vehicle	-----	-204.99	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.96	7.96
	U$_{21}$ - U$_{22}$	-82.15	22.40	-95.43			0.90	1.17	23.56	-100.40	0.00	0.00	Vehicle	Vehicle	-----	-237.32	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.52	7.52
	U$_{22}$ - U$_{23}$	-82.37	22.31	-95.39			0.90	1.17	23.47	-100.36	0.00	0.00	Vehicle	Vehicle	-----	-237.55	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.52	7.52
	U$_{23}$ - U$_{24}$	-65.94	27.69	-92.24			0.90	1.17	29.14	-97.05	0.00	0.00	Vehicle	Vehicle	-----	-211.88	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	-----	-----	7.94	7.94
	U$_{24}$ - U$_{25}$	-11.98	33.03	-87.15			0.90	1.17	34.75	-91.69	0.00	0.00	Vehicle	Vehicle	21.79	-142.57	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	24.12	24.12	7.36	7.36
	U$_{25}$ - U$_{26}$	54.95	37.51	-71.74			0.90	1.17	39.47	-75.47	0.00	0.00	Vehicle	Vehicle	122.74	-26.68	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	18.02	18.02	9.31	9.31
	U$_{26}$ - U$_{27}$	135.89	41.24	-53.84			0.90	1.17	43.38	-56.64	0.00	0.00	Vehicle	Vehicle	233.06	-----	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	-----	-----	14.53	14.53	-----	-----
	U$_{27}$ - U$_{28}$	216.69	42.98	-39.88			0.90	1.17	45.22	-41.95	0.00	0.00	Vehicle	Vehicle	340.49	-----	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	-----	-----	18.29	18.29	-----	-----
	U$_{28}$ - U$_{29}$	293.53	43.97	-22.62			0.90	1.17	46.26	-23.79	0.00	0.00	Vehicle	Vehicle	441.74	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	21.16	21.16	-----	-----
	U$_{29}$ - U$_{30}$	357.86	43.39	-10.85			0.90	1.17	45.65	-11.42	0.00	0.00	Vehicle	Vehicle	524.57	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	26.43	26.43	-----	-----
	U$_{30}$ - U$_{31}$	339.12	49.75	-12.39			0.90	1.18	52.97	-13.19	0.00	0.00	Vehicle	Vehicle	509.72	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	23.13	23.13	-----	-----
	U$_{31}$ - U$_{32}$	251.34	49.62	-19.16			0.90	1.18	52.83	-20.40	0.00	0.00	Vehicle	Vehicle	395.42	-----	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	-----	-----	16.80	16.80	-----	-----
	U$_{32}$ - U$_{33}$	136.30	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: 2F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

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

E = 29000.0 ksi

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

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

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	L_0 - L_1	4.73	3.16	-2.30			0.90	1.24	3.52	-2.56	0.00	0.00	Vehicle	Vehicle	10.72	-----	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	-----	-----	**141.44**	**141.44**	-----	-----
	L_1 - L_2	74.19	44.07	-9.48			0.90	1.24	49.07	-10.55	0.00	0.00	Vehicle	Vehicle	160.23	-----	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	-----	-----	**8.73**	**8.73**	-----	-----
	L_2 - L_3	97.64	75.18	-17.88			0.90	1.24	83.69	-19.91	0.00	0.00	Vehicle	Vehicle	235.73	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**6.82**	**6.82**	-----	-----
	L_3 - L_4	66.79	82.85	-25.98			0.90	1.24	92.23	-28.92	0.00	0.00	Vehicle	Vehicle	206.72	-----	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	-----	-----	**6.53**	**6.53**	-----	-----
	L_4 - L_5	-108.59	58.72	-39.10			0.90	1.24	65.37	-43.53	0.00	0.00	Vehicle	Vehicle	-----	-197.75	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	-----	-----	**9.00**	**9.00**
	L_5 - L_6	-237.42	37.30	-43.19			0.90	1.24	41.53	-48.09	0.00	0.00	Vehicle	Vehicle	-----	-371.16	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	-----	-----	**8.78**	**8.78**
	L_6 - L_7	-362.38	10.00	-45.17			0.90	1.24	11.14	-50.28	0.00	0.00	Vehicle	Vehicle	-----	-536.47	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	-----	-----	**11.58**	**11.58**
	L_7 - L_8	-478.62	1.06	-49.27			0.90	1.24	1.18	-54.85	0.00	0.00	Vehicle	Vehicle	-----	-693.52	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	-----	-----	**13.14**	**13.14**
	L_8 - L_9	-476.97	0.38	-49.81			0.90	1.20	0.41	-53.70	0.00	0.00	Vehicle	Vehicle	-----	-689.87	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	-----	-----	**13.45**	**13.45**
	L_9 - L_{10}	-301.47	11.17	-42.59			0.90	1.20	12.04	-45.92	0.00	0.00	Vehicle	Vehicle	-----	-451.60	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**14.02**	**14.02**
	L_{10} - L_{11}	-104.56	26.93	-37.74			0.90	1.20	29.04	-40.69	0.00	0.00	Vehicle	Vehicle	-----	-188.82	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**9.73**	**9.73**
	L_{11} - L_{12}	96.98	51.25	-33.69			0.90	1.20	55.25	-36.33	0.00	0.00	Vehicle	Vehicle	197.90	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**9.00**	**9.00**	-----	-----
	L_{12} - L_{13}	268.60	70.46	-29.20			0.90	1.20	75.97	-31.48	0.00	0.00	Vehicle	Vehicle	447.94	-----	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	-----	-----	**9.30**	**9.30**	-----	-----
	L_{13} - L_{14}	405.49	84.95	-24.57			0.90	1.20	91.60	-26.49	0.00	0.00	Vehicle	Vehicle	646.22	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	**9.85**	**9.85**	-----	-----
	L_{14} - L_{15}	502.59	95.56	-13.77			0.90	1.20	103.03	-14.84	0.00	0.00	Vehicle	Vehicle	787.31	-----	9.53	62.03	52.4950	2046.83	131.71	10.8224	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	-----	-----	**10.40**	**10.40**	-----	-----
	L_{15} - L_{16}	469.06	85.24	-11.22			0.90	1.20	91.91	-12.10	0.00	0.00	Vehicle	Vehicle	729.26	-----	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	-----	-----	**12.03**	**12.03**	-----	-----
	L_{16} - L_{17}	365.26	61.95	-7.60			0.90	1.20	66.79	-8.20	0.00	0.00	Vehicle	Vehicle	561.67	-----	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	-----	-----	**12.75**	**12.75**	-----	-----
	L_{17} - L_{18}	248.52	40.73	-5.77			0.90	1.20	43.92	-6.22	0.00	0.00	Vehicle	Vehicle	380.17	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**14.46**	**14.46**	-----	-----
	L_{18} - L_{19}	112.87	19.40	-16.03			0.90	1.20	20.92	-17.29	0.00	0.00	Vehicle	Vehicle	173.92	-----	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	-----	-----	**18.63**	**18.63**	-----	-----
	L_{19} - L_{20}	-14.36	15.59	-31.90			0.90	1.20	16.81	-34.40	0.00	0.00	Vehicle	Vehicle	3.18	-63.39	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	**30.76**	**30.76**	**11.89**	**11.89**
Structure 2	L_0 - L_1	15.25	4.88	-5.09			0.90	1.18	5.20	-5.42	0.00	0.00	Vehicle	Vehicle	26.58	-----	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	-----	-----	**118.96**	**118.96**	-----	-----
	L_1 - L_2	136.09	24.12	-3.25			0.90	1.18	25.68	-3.46	0.00	0.00	Vehicle	Vehicle	210.30	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**19.37**	**19.37**	-----	-----
	L_2 - L_3	262.77	49.16	-6.57			0.90	1.18	52.34	-6.99	0.00	0.00	Vehicle	Vehicle	409.64	-----	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	-----	-----	**13.39**	**13.39**	-----	-----
	L_3 - L_4	373.14	75.82	-11.39			0.90	1.18	80.72	-12.12	0.00	0.00	Vehicle	Vehicle	590.03	-----	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	-----	-----	**11.44**	**11.44**	-----	-----
	L_4 - L_5	456.57	92.54	-17.19			0.90	1.18	98.53	-18.30	0.00	0.00	Vehicle	Vehicle	721.63	-----	11.08	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.93	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**12.11**	**12.11**	-----	-----
	L_5 - L_6	489.37	103.73	-23.30			0.90	1.18	110.44	-24.81	0.00	0.00	Vehicle	Vehicle	779.76	-----	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	-----	-----	**11.80**	**11.80**	-----	-----
	L_6 - L_7	479.01	113.57	-29.56			0.90	1.18	120.92	-31.47	0.00	0.00	Vehicle	Vehicle	779.90	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**11.07**	**11.07**	-----	-----
	L_7 - L_8	330.07	96.44	-40.48			0.90	1.18	102.68	-43.09	0.00	0.00	Vehicle	Vehicle	562.58	-----	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	-----	-----	**9.85**	**9.85**	-----	-----
	L_8 - L_9	188.98	78.70	-43.75			0.90	1.18	83.79	-46.58	0.00	0.00	Vehicle	Vehicle	354.60	-----	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	-----	-----	**10.87**	**10.87**	-----	-----
	L_9 - L_{10}	39.77	59.15	-46.58			0.90	1.18	62.98	-49.59	0.00	0.00	Vehicle	Vehicle	133.57	-12.76	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**13.05**	**13.05**	**15.47**	**15.47**
	L_{10} - L_{11}	-127.39	35.88	-46.93			0.90	1.18	38.20	-49.97	0.00	0.00	Vehicle	Vehicle	-----	-230.56	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	-----	-----	**10.47**	**10.47**
	L_{11} - L_{12}	-282.64	22.24	-46.50			0.90	1.18	23.68	-49.50	0.00	0.00	Vehicle	Vehicle	-----	-431.79	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**13.09**	**13.09**
	L_{12} - L_{13}	-426.73	11.07	-44.89			0.90	1.18	11.78	-47.80	0.00	0.00	Vehicle	Vehicle	-----	-616.89	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	-----	-----	**17.76**	**17.76**
	L_{13} - L_{14}	-536.42	10.29	-57.57			0.90	1.18	10.96	-61.29	0.00	0.00	Vehicle	Vehicle	-----	-777.03	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	-----	-----	**15.97**	**15.97**
	L_{14} - L_{15}	-537.75	12.28	-49.79			0.90	1.17	12.92	-52.39	0.00	0.00	Vehicle	Vehicle	-767.18	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	-----	-----	**18.66**	**18.66**
	L_{15} - L_{16}	-475.65	11.35	-49.02			0.90	1.17	11.94	-51.57	0.00	0.00	Vehicle	Vehicle	-885.39	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	-----	-----	**15.51**	**15.51**
	L_{16} - L_{17}	-384.35	14.85	-44.36			0.90	1.17	15.62	-46.67	0.00	0.00	Vehicle	Vehicle	-560.32	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**14.21**	**14.21**
	L_{17} - L_{18}	-281.86	26.71	-42.61			0.90	1.17	28.11	-44.83	0.00	0.00	Vehicle	Vehicle	-424.69	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	-----	-----	**9.94**	**9.94**
	L_{18} - L_{19}	-175.17	41.05	-38.88			0.90	1.17	43.19	-40.90	0.00	0.00	Vehicle	Vehicle	-280.89	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	-----	-----	**9.74**	**9.74**
	L_{19} - L_{20}	-76.53	55.40	-35.22			0.90	1.17	58.28	-37.05	0.00	0.00	Vehicle	Vehicle	-----	-147.66	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	-----	-----	**13.42**	**13.42**
	L_{20} - L_{21}	4.38	64.93	-29.98			0.90	1.17	68.31	-31.54	0.00	0.00	Vehicle	Vehicle	94.50	-35.31	6.13	37.50	31.3700	1237.50	131.71	10.6250	6.1479	15.55	32.77	-1044.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**13.87**	**13.87**	**25.62**	**25.62**
	L_{21} - L_{22}	55.94	78.11	-24.82			0.90	1.17	82.18	-26.11	0.00	0.00	Vehicle	Vehicle	179.56	-----	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	-----	-----	**10.90**	**10.90**	-----	-----
	L_{22} - L_{23}	62.99	72.16	-15.89			0.90	1.17	75.92	-16.71	0.00	0.00	Vehicle	Vehicle	180.58	-----	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	-----	-----	**11.71**	**11.71**	-----	-----
	L_{23} - L_{24}	15.54	65.90	-21.20			0.90	1.17	69.33	-22.31	0.00	0.00	Vehicle	Vehicle	110.33	-8.80	6.13	37.50	31.3700	1237.50	131.71	10.6250	6.1479	15.55	32.77	-1044.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**13.51**	**13.51**	**36.72**	**36.72**
	L_{24} - L_{25}	-56.00	48.04	-24.01			0.90	1.17	50.54	-25.26	0.00	0.00	Vehicle	Vehicle	-----	-105.64	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	-----	-----	**20.49**	**20.49**
	L_{25} - L_{26}	-136.37	33.92	-27.73			0.90	1.17	35.69	-29.17	0.00	0.00	Vehicle	Vehicle	-----	-215.21	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	-----	-----	**14.99**	**14.99**
	L_{26} - L_{27}	-217.73	22.39	-38.55			0.90	1.17	23.56	-40.56	0.00	0.00	Vehicle	Vehicle	-----	-335.77	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	-----	-----	**12.57**	**12.57**
	L_{27} - L_{28}	-296.25	16.12	-53.95			0.90	1.17	16.96	-56.76	0.00	0.00	Vehicle	Vehicle	-----	-458.91	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	-----	-----	**13.24**	**13.24**
	L_{28} - L_{29}	-364.18	19.42	-71.38			0.90	1.17	20.43	-75.10	0.00	0.00	Vehicle	Vehicle	-----	-571.06	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	-----	-----	**12.13**	**12.13**
	L_{29} - L_{30}	-418.23	20.75	-83.03			0.90	1.17	21.84	-87.36	0.00	0.00	Vehicle	Vehicle	-----	-657.26	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	-----	-----	**12.56**	**12.56**
	L_{30} - L_{31}	-350.38	10.27	-54.14			0.90	1.18	10.93	-57.64	0.00	0.00	Vehicle	Vehicle	-----	-530.42	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	-----	-----	**20.20**	**20.20**
	L_{31} - L_{32}	-275.46	10.53	-44.04			0.90	1.18	11.21	-46.88	0.00	0.00	Vehicle	Vehicle	-----	-419.04	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	-----	-----	**21.09**	**21.09**
	L_{32} - L_{33}	-179.08	11.48	-38.82			0.90	1.18	12.

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: 2F1 **Condition:** As-Inspected

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

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

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

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

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Verticals	Structure 1																																													
	U$_0$ - L$_0$	-77.19	7.45	-51.29			0.90	1.24	8.30	-57.10	0.00	0.00	Vehicle	Vehicle	------	-174.58	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	------	------	------	------	------	------	------	------	4.09	4.09
	U$_1$ - L$_1$	-33.88	6.71	-36.26			0.90	1.24	7.47	-40.37	0.00	0.00	Vehicle	Vehicle	------	-96.51	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	------	------	------	------	------	------	------	------	7.88	7.88
	U$_2$ - L$_2$	10.43	6.32	-30.77			0.90	1.24	7.03	-34.26	0.00	0.00	Vehicle	Vehicle	22.71	-30.98	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	------	------	------	------	------	------	------	------	59.32	59.32	10.58	10.58
	U$_3$ - L$_3$	44.39	11.51	-19.00			0.90	1.24	12.81	-21.15	0.00	0.00	Vehicle	Vehicle	74.36	------	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	------	------	6.56	------	------	------	------	------	------	------	------	29.92	29.92	------	------
	U$_4$ - L$_4$	-16.67	0.91	-30.72			0.90	1.24	1.02	-34.20	0.00	0.00	Vehicle	Vehicle	------	-56.12	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	------	------	------	------	9.74	9.74
	U$_5$ - L$_5$	-109.51	2.31	-41.15			0.90	1.24	2.57	-45.81	0.00	0.00	Vehicle	Vehicle	------	-201.91	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	------	------	------	------	------	------	------	------	------	------	6.89	6.89
	U$_6$ - L$_6$	-143.60	0.28	-50.97			0.90	1.24	0.32	-56.74	0.00	0.00	Vehicle	Vehicle	------	-260.45	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	------	------	------	------	------	------	------	------	------	------	5.94	5.94
	U$_7$ - L$_7$	-142.61	1.43	-51.97			0.90	1.24	1.60	-57.86	0.00	0.00	Vehicle	Vehicle	------	-260.61	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	------	------	------	------	------	------	------	------	------	------	5.01	5.01
	U$_8$ - L$_8$	-391.97	1.92	-58.32			0.90	1.24	2.13	-64.93	0.00	0.00	Vehicle	Vehicle	------	-593.97	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	------	------	------	------	------	------	------	------	------	------	10.37	10.37
	U$_9$ - L$_9$	-223.13	5.00	-46.77			0.90	1.20	5.39	-50.43	0.00	0.00	Vehicle	Vehicle	------	-355.63	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	------	------	------	------	------	------	------	------	------	------	8.05	8.05
	U$_{10}$ - L$_{10}$	-225.77	3.37	-46.48			0.90	1.20	3.63	-50.11	0.00	0.00	Vehicle	Vehicle	------	-358.65	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	------	------	------	------	------	------	------	------	------	------	9.69	9.69
	U$_{11}$ - L$_{11}$	-198.79	4.57	-46.36			0.90	1.20	4.93	-49.99	0.00	0.00	Vehicle	Vehicle	------	-323.41	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	------	------	------	------	------	------	------	------	------	------	8.85	8.85
	U$_{12}$ - L$_{12}$	-154.77	6.81	-38.27			0.90	1.20	7.35	-41.26	0.00	0.00	Vehicle	Vehicle	------	-254.83	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	------	------	16.25	------	------	32.50	45.00	Pass	8.89	12.00	Pass	------	------	------	------	------	------	------	------	------	------	9.16	9.16
	U$_{13}$ - L$_{13}$	-109.04	10.64	-35.66			0.90	1.20	11.47	-38.45	0.00	0.00	Vehicle	Vehicle	------	-191.74	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	------	------	------	------	------	------	------	------	------	------	7.06	7.06
	U$_{14}$ - L$_{14}$	-12.30	0.91	-33.49			0.90	1.20	0.98	-36.10	0.00	0.00	Vehicle	Vehicle	------	-82.93	0.00	16.85	16.8486	556.00	131.71	9.2805	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	------	------	------	------	9.21	9.21
	U$_{15}$ - L$_{15}$	-5.62	14.70	-29.57			0.90	1.20	15.85	-31.88	0.00	0.00	Vehicle	Vehicle	13.30	-48.75	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	------	------	------	------	------	------	------	------	27.33	27.33	10.59	10.59
	U$_{16}$ - L$_{16}$	-51.74	10.55	-34.13			0.90	1.20	11.38	-36.79	0.00	0.00	Vehicle	Vehicle	------	-115.09	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	------	------	------	------	------	------	------	------	------	------	7.87	7.87
	U$_{17}$ - L$_{17}$	-127.31	5.63	-44.30			0.90	1.20	6.07	-47.76	0.00	0.00	Vehicle	Vehicle	------	-227.59	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	------	------	16.16	------	------	33.25	45.00	Pass	5.37	12.00	Pass	------	------	------	------	------	------	------	------	------	------	5.95	5.95
	U$_{18}$ - L$_{18}$	-159.89	5.20	-51.94			0.90	1.20	5.60	-56.00	0.00	0.00	Vehicle	Vehicle	------	-280.66	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	------	------	------	------	------	------	------	------	------	------	6.53	6.53
	U$_{19}$ - L$_{19}$	-191.17	4.40	-53.46			0.90	1.20	4.74	-57.64	0.00	0.00	Vehicle	Vehicle	------	-323.44	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$_{20}$	-211.94	4.40	-55.95			0.90	1.20	4.74	-60.33	0.00	0.00	Vehicle	Vehicle	------	-353.95	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	------	------	------	------	------	------	------	------	------	------	5.70	5.70
	Structure 2																																													
	U$_0$ - L$_0$	-206.53	5.48	-54.73			0.90	1.18	5.83	-58.27	0.00	0.00	Vehicle	Vehicle	------	-344.25	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	------	------	------	------	------	------	------	------	------	------	6.98	6.98
	U$_1$ - L$_1$	-188.72	5.63	-46.54			0.90	1.18	5.99	-49.55	0.00	0.00	Vehicle	Vehicle	------	-309.76	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	------	------	------	------	------	9.76	9.76
	U$_2$ - L$_2$	-155.84	5.93	-46.12			0.90	1.18	6.32	-49.10	0.00	0.00	Vehicle	Vehicle	------	-266.43	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	------	------	------	------	------	------	------	------	------	------	8.52	8.52
	U$_3$ - L$_3$	-134.53	5.72	-45.30			0.90	1.18	7.16	-48.23	0.00	0.00	Vehicle	Vehicle	------	-237.59	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	------	------	------	------	------	------	------	------	------	------	6.58	6.58
	U$_4$ - L$_4$	-64.47	8.76	-33.41			0.90	1.18	9.33	-35.57	0.00	0.00	Vehicle	Vehicle	------	-130.05	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	------	------	------	------	------	------	------	------	------	------	7.72	7.72
	U$_5$ - L$_5$	-19.94	14.93	-30.93			0.90	1.18	15.90	-32.93	0.00	0.00	Vehicle	Vehicle	------	-68.72	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	------	------	------	------	9.74	9.74
	U$_6$ - L$_6$	40.07	21.01	-23.52			0.90	1.18	22.37	-25.05	0.00	0.00	Vehicle	Vehicle	81.18	------	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	------	------	6.56	------	------	------	------	------	------	------	------	17.33	17.33	------	------
	U$_7$ - L$_7$	-26.03	0.24	-32.98			0.90	1.18	0.25	-35.11	0.00	0.00	Vehicle	Vehicle	------	-79.49	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	------	------	------	------	------	------	------	------	------	------	8.96	8.96
	U$_8$ - L$_8$	-125.22	10.89	-36.14			0.90	1.18	11.60	-38.47	0.00	0.00	Vehicle	Vehicle	------	-212.80	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	------	------	------	------	------	------	------	------	------	------	10.54	10.54
	U$_9$ - L$_9$	-174.50	4.24	-43.59			0.90	1.18	4.51	-46.41	0.00	0.00	Vehicle	Vehicle	------	-287.18	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	------	------	------	------	------	------	------	------	------	------	11.13	11.13
	U$_{10}$ - L$_{10}$	-202.62	2.42	-50.44			0.90	1.18	2.57	-53.70	0.00	0.00	Vehicle	Vehicle	------	-333.22	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	------	------	------	------	------	------	------	------	------	------	10.73	10.73
	U$_{11}$ - L$_{11}$	-229.48	1.31	-54.03			0.90	1.18	1.40	-57.53	0.00	0.00	Vehicle	Vehicle	------	-373.11	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	------	------	------	------	------	------	------	------	------	------	9.31	9.31
	U$_{12}$ - L$_{12}$	-250.80	1.88	-54.65			0.90	1.18	2.00	-58.19	0.00	0.00	Vehicle	Vehicle	------	-401.68	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	6.06	12.00	Pass	------	------	------	------	------	------	------	------	------	------	9.47	9.47
	U$_{13}$ - L$_{13}$	-223.27	5.66	-55.63			0.90	1.18	6.03	-59.23	0.00	0.00	Vehicle	Vehicle	------	-367.25	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	------	------	16.32	------	------	20.13	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	------	------	------	------	------	7.88	7.88
	U$_{14}$ - L$_{14}$	-343.24	1.36	-54.51			0.90	1.18	1.44	-58.04	0.00	0.00	Vehicle	Vehicle	------	-521.67	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	------	------	------	------	------	------	------	------	------	------	12.21	12.21
	U$_{15}$ - L$_{15}$	-123.12	5.49	-49.45			0.90	1.17	5.77	-52.03	0.00	0.00	Vehicle	Vehicle	------	-227.69	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	------	------	------	------	------	------	------	------	------	------	10.90	10.90
	U$_{16}$ - L$_{16}$	-156.68	4.27	-46.23			0.90	1.17	4.49	-48.64	0.00	0.00	Vehicle	Vehicle	------	-266.90	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	------	------	------	------	------	------	------	------	------	------	10.47	10.47
	U$_{17}$ - L$_{17}$	-147.89	4.10	-48.44			0.90	1.17	4.32	-50.97	0.00	0.00	Vehicle	Vehicle	------	-258.52	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	------	------	------	------	------	------	------	------	------	------	9.33	9.33
	U$_{18}$ - L$_{18}$	-142.21	5.15	-46.95			0.90	1.17	5.42	-49.40	0.00	0.00	Vehicle	Vehicle	------	-249.09	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	------	------	------	------	------	------	------	------	------	------	8.81	8.81
	U$_{19}$ - L$_{19}$	-111.47	5.87	-41.98			0.90	1.17	6.17	-44.17	0.00	0.00	Vehicle	Vehicle	------	-202.34	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	------	------	------	------	------	------	------	------	------	------	9.05	9.05
	U$_{20}$ - L$_{20}$	-76.56	10.84	-37.09			0.90	1.17	11.40	-39.02	0.00	0.00	Vehicle	Vehicle	------	-150.26	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	------	------	------	------	------	------	------	7.65	7.65
	U$_{21}$ - L$_{21}$	-44.33	13.29	-33.91			0.90	1.17	13.98	-35.68	0.00	0.00	Vehicle	Vehicle	------	-104.02	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	------	------	------	------	------	------	------	------	------	------	8.30	8.30
	U$_{22}$ - L$_{22}$	-21.25	0.88	-33.42			0.90	1.17	0.93	-35.16	0.00	0.00	Vehicle	Vehicle	------	-73.33	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	------	------	------	------	9.12	9.12
	U$_{23}$ - L$_{23}$	-39.04	15.63	-29.16			0.90	1.17	16.44	-30.68	0.00	0.00	Vehicle	Vehicle	------	-90.63	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	------	------	------	------	------	------	------	------	------	------	9.83	9.83
	U$_{24}$ - L$_{24}$	-74.80	10.47	-34.10			0.90	1.17	11.02	-35.87	0.00	0.00	Vehicle	Vehicle	------	-143.88	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	------	------	------	------	------	------	------	------	------	------	8.37	8.37
	U$_{25}$ - L$_{25}$	-103.21	7.04	-44.44			0.90	1.17	7.41	-46.75	0.00	0.00	Vehicle	Vehicle	------	-194.95	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	------	------	15.75	------	------	31.50	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	------	------	------	------	------	8.73	8.73
	U$_{26}$ - L$_{26}$	-120.15	6.64	-46.95			0.90	1.17	6.99	-49.39	0.00	0.00	Vehicle	Vehicle	------	-220.40	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	------	------	------	------	------	------	------	------	------	------	9.25	9.25
	U$_{27}$ - L$_{27}$	-123.87	5.49	-49.78			0.90	1.17	5.77	-52.37	0.00	0.00	Vehicle	Vehicle	------	-229.11	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	------	------	------	------	------	------	------	------	------	------	9.54	9.54
	U$_{28}$ - L$_{28}$	-135.49	4.99	-54.93			0.90	1.17	5.25	-57.80	0.00	0.00	Vehicle	Vehicle	------	-251.27	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	------	------	------	------	------	9.18	9.18
	U$_{29}$ - L$_{29}$	-116.90	2.92	-51.71			0.90	1.17	3.07	-54.41

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: 2F1 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 - Diagonals																																														
Structure 1	U$_1$ - L$_1$	87.39	56.30	-10.48			0.90	1.24	62.67	-11.67	0.00	0.00	Vehicle	Vehicle	195.08	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**7.96**	**7.96**	-----	-----
	U$_1$ - L$_2$	23.29	48.06	-10.46			0.90	1.24	53.50	-11.64	0.00	0.00	Vehicle	Vehicle	99.83	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**7.56**	**7.56**	-----	-----
	U$_2$ - L$_3$	-37.87	30.15	-18.05			0.90	1.24	33.56	-20.09	0.00	0.00	Vehicle	-----	-----	-75.35	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**14.75**	**14.75**
	U$_3$ - L$_4$	-92.23	20.25	-38.40			0.90	1.24	22.55	-42.75	0.00	0.00	Vehicle	Vehicle	-----	-175.48	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**5.71**	**5.71**
	U$_3$ - L$_4$	143.29	48.45	-10.39			0.90	1.24	53.94	-11.57	0.00	0.00	Vehicle	Vehicle	256.40	-----	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	-----	-----	-----	-----	-----	**6.98**	**6.98**	-----	-----
	U$_5$ - L$_5$	177.89	54.48	-2.72			0.90	1.24	60.65	-3.03	0.00	0.00	Vehicle	Vehicle	310.11	-----	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	-----	-----	-----	-----	-----	**7.79**	**7.79**	-----	-----
	U$_5$ - L$_6$	184.40	63.36	-1.28			0.90	1.24	70.54	-1.42	0.00	0.00	Vehicle	Vehicle	331.42	-----	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	-----	-----	-----	-----	-----	**6.61**	**6.61**	-----	-----
	U$_6$ - L$_7$	179.98	58.06	-2.02			0.90	1.24	64.63	-2.25	0.00	0.00	Vehicle	Vehicle	318.00	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.28**	**7.28**	-----	-----
	U$_8$ - L$_8$	268.90	51.46	-5.79			0.90	1.20	55.48	-6.25	0.00	0.00	Vehicle	Vehicle	421.70	-----	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	-----	-----	-----	-----	-----	**12.50**	**12.50**	-----	-----
	U$_9$ - L$_{10}$	278.76	55.03	-5.43			0.90	1.20	59.33	-5.85	0.00	0.00	Vehicle	Vehicle	439.52	-----	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	-----	-----	-----	-----	-----	**11.52**	**11.52**	-----	-----
	U$_{10}$ - L$_{11}$	284.98	58.00	-5.68			0.90	1.20	62.53	-6.13	0.00	0.00	Vehicle	Vehicle	451.77	-----	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	-----	-----	-----	-----	-----	**10.01**	**10.01**	-----	-----
	U$_{11}$ - L$_{12}$	250.55	52.35	-8.24			0.90	1.20	56.44	-8.89	0.00	0.00	Vehicle	Vehicle	399.09	-----	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	-----	-----	-----	-----	-----	**9.34**	**9.34**	-----	-----
	U$_{12}$ - L$_{13}$	189.62	48.58	-14.64			0.90	1.20	52.38	-15.79	0.00	0.00	Vehicle	Vehicle	314.59	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**8.43**	**8.43**	-----	-----
	U$_{13}$ - L$_{14}$	123.30	40.84	-19.32			0.90	1.20	44.04	-20.84	0.00	0.00	Vehicle	Vehicle	217.53	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**6.91**	**6.91**	-----	-----
	U$_{14}$ - L$_{15}$	-24.40	28.80	-27.82			0.90	1.20	31.05	-30.00	0.00	0.00	Vehicle	Vehicle	8.64	-70.72	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**14.56**	**14.56**	**10.13**	**10.13**
	U$_{15}$ - L$_{15}$	48.54	40.07	-19.54			0.90	1.20	43.20	-21.07	0.00	0.00	Vehicle	Vehicle	119.26	-----	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**8.78**	**8.78**	-----	-----
	U$_{15}$ - L$_{16}$	146.57	51.22	-7.71			0.90	1.20	55.22	-8.31	0.00	0.00	Vehicle	Vehicle	262.33	-----	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	-----	-----	-----	-----	-----	**6.85**	**6.85**	-----	-----
	U$_{16}$ - L$_{17}$	182.43	52.31	-6.63			0.90	1.20	56.40	-7.15	0.00	0.00	Vehicle	Vehicle	310.49	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.30**	**8.30**	-----	-----
	U$_{19}$ - L$_{18}$	223.79	59.58	-5.55			0.90	1.20	64.23	-5.99	0.00	0.00	Vehicle	Vehicle	374.43	-----	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	-----	-----	-----	-----	-----	**7.57**	**7.57**	-----	-----
	U$_{20}$ - L$_{19}$	232.63	56.47	-4.64			0.90	1.20	60.88	-5.01	0.00	0.00	Vehicle	Vehicle	381.57	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.84**	**7.84**	-----	-----
Structure 2	U$_1$ - L$_1$	213.47	48.51	-5.85			0.90	1.18	51.65	-6.22	0.00	0.00	Vehicle	Vehicle	344.65	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**10.92**	**10.92**	-----	-----
	U$_1$ - L$_2$	200.39	51.84	-6.87			0.90	1.18	55.20	-7.31	0.00	0.00	Vehicle	Vehicle	332.27	-----	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	-----	-----	-----	-----	-----	**10.46**	**10.46**	-----	-----
	U$_3$ - L$_3$	172.76	51.36	-7.68			0.90	1.18	54.68	-8.18	0.00	0.00	Vehicle	Vehicle	295.68	-----	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	-----	-----	-----	-----	-----	**8.74**	**8.74**	-----	-----
	U$_3$ - L$_4$	147.11	46.94	-9.03			0.90	1.18	49.98	-9.61	0.00	0.00	Vehicle	Vehicle	256.22	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**8.60**	**8.60**	-----	-----
	U$_5$ - L$_5$	49.07	38.96	-17.95			0.90	1.18	41.48	-19.11	0.00	0.00	Vehicle	Vehicle	117.72	-----	0.00	16.85	16.8486	556.00	131.71	13.3992	1.9682	61.01	28.23	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**9.13**	**9.13**	-----	-----
	U$_5$ - L$_6$	2.97	35.10	-22.88			0.90	1.18	37.37	-24.36	0.00	0.00	Vehicle	Vehicle	52.43	-27.81	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	-----	-----	-----	**11.37**	**11.37**	**13.50**	**13.50**
	U$_6$ - L$_7$	-85.72	22.00	-33.29			0.90	1.18	23.42	-35.45	0.00	0.00	Vehicle	Vehicle	-----	-157.51	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	-----	-----	-----	-----	-----	**7.72**	**7.72**
	U$_8$ - L$_7$	140.27	42.81	-18.90			0.90	1.18	45.58	-20.12	0.00	0.00	Vehicle	Vehicle	241.60	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**10.16**	**10.16**	-----	-----
	U$_8$ - L$_8$	204.17	52.15	-9.22			0.90	1.18	55.52	-9.82	0.00	0.00	Vehicle	Vehicle	337.60	-----	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	-----	-----	-----	-----	-----	**9.11**	**9.11**	-----	-----
	U$_{10}$ - L$_9$	234.82	53.21	-4.79			0.90	1.18	56.65	-5.10	0.00	0.00	Vehicle	Vehicle	378.91	-----	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	-----	-----	-----	-----	-----	**9.58**	**9.58**	-----	-----
	U$_{11}$ - L$_{10}$	263.04	61.85	-1.36			0.90	1.18	65.85	-1.44	0.00	0.00	Vehicle	Vehicle	427.56	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**8.83**	**8.83**	-----	-----
	U$_{12}$ - L$_{11}$	273.97	59.31	-1.65			0.90	1.18	63.15	-1.75	0.00	0.00	Vehicle	Vehicle	438.25	-----	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	-----	-----	-----	-----	-----	**9.03**	**9.03**	-----	-----
	U$_{13}$ - L$_{12}$	254.88	56.60	-5.92			0.90	1.18	60.26	-6.31	0.00	0.00	Vehicle	Vehicle	409.68	-----	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	-----	-----	-----	-----	-----	**8.67**	**8.67**	-----	-----
	U$_{13}$ - L$_{13}$	217.66	52.56	-6.78			0.90	1.18	55.96	-7.22	0.00	0.00	Vehicle	Vehicle	355.71	-----	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	-----	-----	-----	-----	-----	**10.00**	**10.00**	-----	-----
	U$_{14}$ - L$_{15}$	110.03	44.27	-9.76			0.90	1.17	46.57	-6.06	0.00	0.00	Vehicle	Vehicle	203.58	-----	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	-----	-----	-----	-----	-----	**11.61**	**11.61**	-----	-----
	U$_{15}$ - L$_{16}$	132.26	44.80	-6.13			0.90	1.17	46.93	-6.45	0.00	0.00	Vehicle	Vehicle	232.95	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**11.05**	**11.05**	-----	-----
	U$_{17}$ - L$_{17}$	172.87	50.96	-4.31			0.90	1.17	53.61	-4.53	0.00	0.00	Vehicle	Vehicle	294.42	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**10.02**	**10.02**	-----	-----
	U$_{17}$ - L$_{18}$	160.16	52.87	-5.13			0.90	1.17	55.62	-5.40	0.00	0.00	Vehicle	Vehicle	280.52	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.82**	**8.82**	-----	-----
	U$_{19}$ - L$_{19}$	152.33	49.64	-6.71			0.90	1.17	52.23	-7.06	0.00	0.00	Vehicle	Vehicle	265.93	-----	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	-----	-----	-----	-----	-----	**9.54**	**9.54**	-----	-----
	U$_{20}$ - L$_{20}$	120.67	48.52	-11.19			0.90	1.17	51.04	-11.78	0.00	0.00	Vehicle	Vehicle	223.22	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**9.46**	**9.46**	-----	-----
	U$_{20}$ - L$_{21}$	76.10	42.19	-16.29			0.90	1.17	44.39	-17.14	0.00	0.00	Vehicle	Vehicle	156.63	-----	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	-----	-----	-----	-----	-----	**7.92**	**7.92**	-----	-----
	U$_{21}$ - L$_{22}$	31.50	33.55	-22.09			0.90	1.17	35.30	-23.24	0.00	0.00	Vehicle	Vehicle	86.83	-----	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	-----	-----	-----	-----	-----	**11.22**	**11.22**	-----	-----
	U$_{23}$ - L$_{23}$	24.27	33.61	-27.02			0.90	1.17	35.36	-28.43	0.00	0.00	Vehicle	Vehicle	77.51	-5.41	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	-----	-----	-----	**11.41**	**11.41**	**12.21**	**12.21**
	U$_{24}$ - L$_{23}$	72.21	39.62	-20.10			0.90	1.17	41.68	-21.15	0.00	0.00	Vehicle	Vehicle	148.06	-----	0.00	16.85	16.8486	556.00	131.71	13.8958	1.9682	63.35	29.18	-417.35	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**8.53**	**8.53**	-----	-----
	U$_{24}$ - L$_{24}$	112.05	46.70	-10.92			0.90	1.17	49.14	-11.49	0.00	0.00	Vehicle	Vehicle	209.55	-----	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	-----	-----	-----	-----	-----	**10.00**	**10.00**	-----	-----
	U$_{25}$ - L$_{25}$	127.76	54.42	-8.48			0.90	1.17	57.26	-8.92	0.00	0.00	Vehicle	Vehicle	240.53	-----	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	-----	-----	-----	-----	-----	**9.13**	**9.13**	-----	-----
	U$_{26}$ - L$_{26}$	132.58	54.73	-8.87			0.90	1.17	57.58	-7.22	0.00	0.00	Vehicle	Vehicle	247.21	-----	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	-----	-----	-----	-----	-----	**9.00**	**9.00**	-----	-----
	U$_{26}$ - L$_{27}$	137.86	53.98	-5.92			0.90	1.17	56.79	-6.22	0.00	0.00	Vehicle	Vehicle	253.04	-----	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	-----	-----	-----	-----	-----	**10.08**	**10.08**	-----	-----
	U$_{28}$ - L$_{28}$	122.74	55.89	-3.49			0.90	1.17	58.80	-3.67	0.00	0.00	Vehicle	Vehicle	236.01	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.98**	**8.98**	-----	-----
	U$_{29}$ - L$_{29}$	102.60	48.68	-4.29			0.90	1.17	51.21	-4.52	0.00	0.00	Vehicle	Vehicle	199.95	-----	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	-----	-----	-----	-----	-----	**10.70**	**10.70**	-----	-----
	U$_{30}$ - L$_{31}$	139.84	42.39	-7.12			0.90	1.18	45.13	-7.58	0.00	0.00	Vehicle	Vehicle	240.45	-----	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	-----	-----	-----	-----	-----	**14.13**	**14.13**	-----	-----
	U$_{31}$ - L$_{32}$	166.63	47.97	-7.81			0.90	1.18	51.07	-8.31	0.00	0.00	Vehicle	Vehicle	283.01	-----	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	-----	-----	-----	-----	-----	**11.24**	**11.24**	-----	-----
	U$_{32}$ - L$_{33}$	202.12	55.36	-4.62			0.90	1.18	58.95	-4.92	0.00	0.00	Vehicle	Vehicle	339.39	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**10.90**	**10.90**	-----	-----
	U$_{33}$ - L$_{34}$	201.72	54.16	-4.66			0.90	1.18	57.66	-4.96	0.00	0.00	Vehicle	Vehicle	337.19	-----	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	-----	-----	-----	-----	-----	**11.15**	**11.15**	-----	-----
	U$_{35}$ - L$_{35}$	180.72	54.52	-5.84			0.90	1.18	58.05	-6.22	0.00	0.00	Vehicle	Vehicle	310.39	-----	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

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: 2F1 **Condition:** As-Inspected

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

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

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

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (I+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Upper Chord	Structure 1	U$_0$ - U$_1$	-52.70	8.74	-50.46			0.75	1.24	8.11	-46.82	0.00	0.00	Vehicle	Vehicle	-----	-129.37	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	10.95	10.95
		U$_1$ - U$_2$	-61.66	15.60	-77.13			0.75	1.24	14.47	-71.56	0.00	0.00	Vehicle	Vehicle	-----	-173.18	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	-----	-----	7.04	7.04
		U$_2$ - U$_3$	-27.05	21.66	-79.64			0.75	1.24	20.10	-73.88	0.00	0.00	Vehicle	Vehicle	-----	-131.21	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	-----	-----	7.29	7.29
		U$_3$ - U$_4$	32.90	27.73	-69.28			0.75	1.24	25.72	-64.28	0.00	0.00	Vehicle	Vehicle	76.21	-40.78	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	24.81	24.81	9.31	9.31
		U$_4$ - U$_5$	34.76	27.86	-69.30			0.75	1.24	25.84	-64.29	0.00	0.00	Vehicle	Vehicle	78.78	-38.40	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	24.62	24.62	9.33	9.33
		U$_5$ - U$_6$	124.19	33.04	-59.98			0.75	1.24	30.65	-55.65	0.00	0.00	Vehicle	Vehicle	201.29	-----	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	-----	-----	17.84	17.84	-----	-----
		U$_6$ - U$_7$	223.31	39.06	-42.73			0.75	1.24	36.24	-39.64	0.00	0.00	Vehicle	Vehicle	337.41	-----	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	-----	-----	16.03	16.03	-----	-----
		U$_7$ - U$_8$	331.92	44.27	-16.83			0.75	1.24	41.07	-15.62	0.00	0.00	Vehicle	Vehicle	484.89	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	18.95	18.95	-----	-----
		U$_8$ - U$_9$	267.71	39.08	-17.53			0.75	1.20	35.11	-15.75	0.00	0.00	Vehicle	Vehicle	393.67	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	19.11	19.11	-----	-----
		U$_9$ - U$_{10}$	89.12	34.27	-39.24			0.75	1.20	30.79	-35.26	0.00	0.00	Vehicle	Vehicle	155.89	-----	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	-----	-----	20.14	20.14	-----	-----
		U$_{10}$ - U$_{11}$	-76.89	29.17	-62.99			0.75	1.20	26.21	-56.60	0.00	0.00	Vehicle	Vehicle	-----	-173.53	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	-----	-----	9.20	9.20
		U$_{11}$ - U$_{12}$	-230.86	24.43	-79.41			0.75	1.20	21.95	-71.35	0.00	0.00	Vehicle	Vehicle	-----	-392.87	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	-----	-----	8.15	8.15
		U$_{12}$ - U$_{13}$	-342.15	20.65	-95.47			0.75	1.20	18.55	-85.78	0.00	0.00	Vehicle	Vehicle	-----	-556.30	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	9.27	9.27
		U$_{13}$ - U$_{14}$	-421.98	17.21	-103.33			0.75	1.20	15.46	-92.84	0.00	0.00	Vehicle	Vehicle	-----	-669.27	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	-----	-----	9.75	9.75
		U$_{14}$ - U$_{15}$	-422.87	17.13	-103.37			0.75	1.20	15.39	-92.88	0.00	0.00	Vehicle	Vehicle	-----	-670.48	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	-----	-----	9.74	9.74
		U$_{15}$ - U$_{16}$	-440.39	13.35	-107.27			0.75	1.20	12.00	-96.38	0.00	0.00	Vehicle	Vehicle	-----	-697.81	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	-----	-----	9.20	9.20
		U$_{16}$ - U$_{17}$	-422.93	10.13	-99.12			0.75	1.20	9.10	-89.06	0.00	0.00	Vehicle	Vehicle	-----	-665.59	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	-----	-----	10.16	10.16
		U$_{17}$ - U$_{18}$	-341.45	6.79	-82.14			0.75	1.20	6.10	-73.81	0.00	0.00	Vehicle	Vehicle	-----	-539.83	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	-----	-----	8.53	8.53
		U$_{18}$ - U$_{19}$	-247.63	4.13	-58.82			0.75	1.20	3.71	-52.85	0.00	0.00	Vehicle	Vehicle	-----	-390.61	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	8.13	8.13
		U$_{19}$ - U$_{20}$	-132.06	2.06	-29.36			0.75	1.20	1.85	-26.33	0.00	0.00	Vehicle	Vehicle	-----	-205.90	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	20.72	20.72
	Structure 2	U$_0$ - U$_1$	-131.63	4.47	-33.95			0.75	1.18	3.97	-30.12	0.00	0.00	Vehicle	Vehicle	-----	-210.28	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	17.12	17.12
		U$_1$ - U$_2$	-247.12	9.56	-62.63			0.75	1.18	8.48	-55.57	0.00	0.00	Vehicle	Vehicle	-----	-393.50	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	-----	-----	9.79	9.79
		U$_2$ - U$_3$	-347.28	14.83	-83.58			0.75	1.18	13.16	-74.16	0.00	0.00	Vehicle	Vehicle	-----	-547.86	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	-----	-----	9.85	9.85
		U$_3$ - U$_4$	-437.20	20.78	-96.89			0.75	1.18	18.44	-85.97	0.00	0.00	Vehicle	Vehicle	-----	-680.12	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	-----	-----	10.52	10.52
		U$_4$ - U$_5$	-468.83	25.47	-108.73			0.75	1.18	22.60	-96.47	0.00	0.00	Vehicle	Vehicle	-----	-734.89	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	-----	-----	10.55	10.55
		U$_5$ - U$_6$	-471.14	30.11	-108.91			0.75	1.18	26.71	-96.63	0.00	0.00	Vehicle	Vehicle	-----	-738.10	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	-----	-----	10.51	10.51
		U$_6$ - U$_7$	-414.50	33.54	-100.97			0.75	1.18	29.76	-89.58	0.00	0.00	Vehicle	Vehicle	-----	-655.31	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	10.35	10.35
		U$_7$ - U$_8$	-413.54	33.59	-100.76			0.75	1.18	29.80	-89.40	0.00	0.00	Vehicle	Vehicle	-----	-653.82	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	-----	-----	10.38	10.38
		U$_8$ - U$_9$	-322.06	36.71	-92.10			0.75	1.18	32.57	-81.71	0.00	0.00	Vehicle	Vehicle	-----	-524.90	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	-----	-----	9.84	9.84
		U$_9$ - U$_{10}$	-182.16	38.83	-79.84			0.75	1.18	34.45	-70.84	0.00	0.00	Vehicle	Vehicle	-----	-328.90	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	-----	-----	9.94	9.94
		U$_{10}$ - U$_{11}$	-32.61	40.93	-62.85			0.75	1.18	36.31	-55.76	0.00	0.00	Vehicle	Vehicle	4.81	-114.88	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	25.98	25.98	13.21	13.21
		U$_{11}$ - U$_{12}$	133.57	42.24	-45.02			0.75	1.18	37.48	-39.95	0.00	0.00	Vehicle	Vehicle	222.36	-----	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	-----	-----	20.73	20.73	-----	-----
		U$_{12}$ - U$_{13}$	289.98	43.67	-29.19			0.75	1.18	38.74	-25.90	0.00	0.00	Vehicle	Vehicle	427.34	-----	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	-----	-----	21.92	21.92	-----	-----
		U$_{13}$ - U$_{14}$	434.77	44.88	-11.38			0.75	1.18	39.82	-10.10	0.00	0.00	Vehicle	Vehicle	616.97	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	28.36	28.36	-----	-----
		U$_{14}$ - U$_{15}$	474.48	37.89	-10.40			0.75	1.17	33.22	-9.12	0.00	0.00	Vehicle	Vehicle	660.01	-----	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	-----	-----	32.80	32.80	-----	-----
		U$_{15}$ - U$_{16}$	383.31	36.42	-23.95			0.75	1.17	31.93	-21.00	0.00	0.00	Vehicle	Vehicle	539.81	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	27.85	27.85	-----	-----
		U$_{16}$ - U$_{17}$	279.61	34.27	-38.03			0.75	1.17	30.05	-33.34	0.00	0.00	Vehicle	Vehicle	402.55	-----	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	-----	-----	25.44	25.44	-----	-----
		U$_{17}$ - U$_{18}$	172.67	31.75	-51.25			0.75	1.17	27.84	-44.93	0.00	0.00	Vehicle	Vehicle	260.66	-----	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	-----	-----	21.32	21.32	-----	-----
		U$_{18}$ - U$_{19}$	74.40	28.38	-62.89			0.75	1.17	24.88	-55.14	0.00	0.00	Vehicle	Vehicle	129.06	-----	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	-----	-----	27.81	27.81	-----	-----
		U$_{19}$ - U$_{20}$	-9.98	24.84	-75.39			0.75	1.17	21.78	-66.09	0.00	0.00	Vehicle	Vehicle	15.34	-98.89	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	38.12	38.12	10.33	10.33
	Structure 3	U$_{20}$ - U$_{21}$	-62.02	20.83	-82.46			0.75	1.17	18.26	-72.29	0.00	0.00	Vehicle	Vehicle	-----	-174.60	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	-----	-----	10.72	10.72
		U$_{21}$ - U$_{22}$	-88.69	17.99	-81.81			0.75	1.17	15.77	-71.73	0.00	0.00	Vehicle	Vehicle	-----	-208.54	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	10.43	10.43
		U$_{22}$ - U$_{23}$	-88.87	18.07	-81.76			0.75	1.17	15.84	-71.68	0.00	0.00	Vehicle	Vehicle	-----	-208.71	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	10.43	10.43
		U$_{23}$ - U$_{24}$	-76.60	22.18	-83.11			0.75	1.17	19.44	-72.86	0.00	0.00	Vehicle	Vehicle	-----	-194.30	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	10.43	10.43
		U$_{24}$ - U$_{25}$	-37.55	25.87	-76.98			0.75	1.17	22.68	-67.49	0.00	0.00	Vehicle	Vehicle	-----	-136.56	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	9.71	9.71
		U$_{25}$ - U$_{26}$	37.36	29.07	-66.62			0.75	1.17	25.49	-58.41	0.00	0.00	Vehicle	Vehicle	81.70	-27.37	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	28.60	28.60	11.72	11.72
		U$_{26}$ - U$_{27}$	128.18	32.44	-52.83			0.75	1.17	28.44	-46.32	0.00	0.00	Vehicle	Vehicle	203.61	-----	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	-----	-----	22.44	22.44	-----	-----
		U$_{27}$ - U$_{28}$	233.91	34.77	-40.84			0.75	1.17	30.49	-35.80	0.00	0.00	Vehicle	Vehicle	343.72	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	26.57	26.57	-----	-----
		U$_{28}$ - U$_{29}$	337.95	36.66	-24.95			0.75	1.17	32.14	-21.87	0.00	0.00	Vehicle	Vehicle	481.11	-----	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	-----	-----	29.08	29.08	-----	-----
		U$_{29}$ - U$_{30}$	437.48	37.99	-9.65			0.75	1.17	33.31	-8.46	0.00	0.00	Vehicle	Vehicle	612.02	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	33.83	33.83	-----	-----
		U$_{30}$ - U$_{31}$	420.86	45.13	-11.30			0.75	1.18	40.04	-10.02	0.00	0.00	Vehicle	Vehicle	599.17	-----	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	-----	-----	28.56	28.56	-----	-----
		U$_{31}$ - U$_{32}$	300.88	44.52	-27.88			0.75	1.18	39.50	-24.74	0.00	0.00	Vehicle	Vehicle	442.49	-----	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

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 2F1 **Condition:** As-Inspected

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

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

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

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Lower Chord	Structure 1	L$_0$ - L$_1$	8.48	7.62	-5.59			0.75	1.24	7.07	-5.19	0.00	0.00	Vehicle	Vehicle	20.22	-----	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	-----	-----	**69.86**	**69.86**	-----	-----
		L$_1$ - L$_2$	50.83	47.78	-9.09			0.75	1.24	44.33	-8.43	0.00	0.00	Vehicle	Vehicle	123.71	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**10.19**	**10.19**	-----	-----
		L$_2$ - L$_3$	61.27	70.81	-15.50			0.75	1.24	65.70	-14.38	0.00	0.00	Vehicle	Vehicle	165.05	-----	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	-----	-----	**9.24**	**9.24**	-----	-----
		L$_3$ - L$_4$	25.72	72.90	-21.38			0.75	1.24	67.63	-19.84	0.00	0.00	Vehicle	Vehicle	121.36	-----	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	-----	-----	**9.51**	**9.51**	-----	-----
		L$_4$ - L$_5$	-118.55	54.10	-31.52			0.75	1.24	50.19	-29.24	0.00	0.00	Vehicle	Vehicle	-----	-192.14	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	-----	-----	**13.05**	**13.05**
		L$_5$ - L$_6$	-217.97	38.07	-37.72			0.75	1.24	35.32	-35.00	0.00	0.00	Vehicle	Vehicle	-----	-328.86	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	-----	-----	**12.62**	**12.62**
		L$_6$ - L$_7$	-320.57	15.10	-43.26			0.75	1.24	14.00	-40.14	0.00	0.00	Vehicle	Vehicle	-----	-468.92	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	-----	-----	**15.56**	**15.56**
		L$_7$ - L$_8$	-417.42	0.17	-46.68			0.75	1.24	0.16	-43.31	0.00	0.00	Vehicle	Vehicle	-----	-598.94	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	-----	-----	**18.06**	**18.06**
		L$_8$ - L$_9$	-411.08	0.05	-49.94			0.75	1.20	0.05	-44.87	0.00	0.00	Vehicle	Vehicle	-----	-592.74	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	-----	-----	**17.57**	**17.57**
		L$_9$ - L$_{10}$	-247.97	15.69	-36.63			0.75	1.20	14.09	-32.91	0.00	0.00	Vehicle	Vehicle	-----	-365.14	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	-----	-----	**21.19**	**21.19**
		L$_{10}$ - L$_{11}$	-65.37	36.19	-31.61			0.75	1.20	32.52	-28.40	0.00	0.00	Vehicle	Vehicle	-----	-121.91	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**15.32**	**15.32**
		L$_{11}$ - L$_{12}$	101.81	57.34	-26.98			0.75	1.20	51.52	-24.24	0.00	0.00	Vehicle	Vehicle	199.32	-----	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	-----	-----	**9.55**	**9.55**	-----	-----
		L$_{12}$ - L$_{13}$	264.06	73.60	-23.15			0.75	1.20	66.13	-20.80	0.00	0.00	Vehicle	Vehicle	429.25	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**10.75**	**10.75**	-----	-----
		L$_{13}$ - L$_{14}$	373.80	89.51	-19.44			0.75	1.20	80.42	-17.46	0.00	0.00	Vehicle	Vehicle	590.48	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	**11.62**	**11.62**	-----	-----
		L$_{14}$ - L$_{15}$	476.54	97.96	-12.63			0.75	1.20	88.01	-11.35	0.00	0.00	Vehicle	Vehicle	733.92	-----	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	-----	-----	**12.47**	**12.47**	-----	-----
		L$_{15}$ - L$_{16}$	460.23	89.15	-9.40			0.75	1.20	80.10	-8.45	0.00	0.00	Vehicle	Vehicle	702.44	-----	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	-----	-----	**13.91**	**13.91**	-----	-----
		L$_{16}$ - L$_{17}$	381.61	70.79	-6.24			0.75	1.20	63.60	-5.61	0.00	0.00	Vehicle	Vehicle	578.77	-----	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	-----	-----	**13.13**	**13.13**	-----	-----
		L$_{17}$ - L$_{18}$	289.18	49.30	-4.31			0.75	1.20	44.30	-3.87	0.00	0.00	Vehicle	Vehicle	433.53	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**13.41**	**13.41**	-----	-----
		L$_{18}$ - L$_{19}$	176.31	21.38	-3.68			0.75	1.20	19.21	-3.31	0.00	0.00	Vehicle	Vehicle	254.17	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**16.99**	**16.99**	-----	-----
		L$_{19}$ - L$_{20}$	69.72	7.80	-12.95			0.75	1.20	7.01	-11.63	0.00	0.00	Vehicle	Vehicle	99.75	-----	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	-----	-----	**61.78**	**61.78**	-----	-----
		L$_0$ - L$_1$	24.42	4.61	-5.62			0.75	1.18	4.09	-4.99	0.00	0.00	Vehicle	Vehicle	37.06	-----	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	-----	-----	**118.62**	**118.62**	-----	-----
		L$_1$ - L$_2$	138.42	34.48	-4.93			0.75	1.18	30.59	-4.38	0.00	0.00	Vehicle	Vehicle	219.72	-----	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	-----	-----	**16.18**	**16.18**	-----	-----
		L$_2$ - L$_3$	252.76	61.71	-10.31			0.75	1.18	54.75	-9.14	0.00	0.00	Vehicle	Vehicle	399.76	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	**13.21**	**13.21**	-----	-----
		L$_3$ - L$_4$	352.26	78.78	-15.58			0.75	1.18	69.90	-13.82	0.00	0.00	Vehicle	Vehicle	548.81	-----	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	-----	-----	**13.69**	**13.69**	-----	-----
		L$_4$ - L$_5$	447.15	95.82	-21.56			0.75	1.18	85.02	-19.13	0.00	0.00	Vehicle	Vehicle	691.82	-----	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	-----	-----	**14.15**	**14.15**	-----	-----
		L$_5$ - L$_6$	477.91	101.60	-26.24			0.75	1.18	90.14	-23.28	0.00	0.00	Vehicle	Vehicle	738.47	-----	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	-----	-----	**14.59**	**14.59**	-----	-----
		L$_6$ - L$_7$	482.67	103.07	-30.88			0.75	1.18	91.44	-27.40	0.00	0.00	Vehicle	Vehicle	746.34	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**14.60**	**14.60**	-----	-----
		L$_7$ - L$_8$	336.57	85.96	-37.36			0.75	1.18	76.27	-33.14	0.00	0.00	Vehicle	Vehicle	536.69	-----	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	-----	-----	**13.18**	**13.18**	-----	-----
		L$_8$ - L$_9$	196.00	72.82	-38.93			0.75	1.18	64.61	-34.54	0.00	0.00	Vehicle	Vehicle	338.79	-----	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	-----	-----	**13.99**	**13.99**	-----	-----
		L$_9$ - L$_{10}$	45.53	56.45	-40.98			0.75	1.18	50.08	-36.36	0.00	0.00	Vehicle	Vehicle	124.30	-----	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	-----	-----	**16.30**	**16.30**	-----	-----
		L$_{10}$ - L$_{11}$	-126.32	38.90	-41.83			0.75	1.18	34.52	-37.12	0.00	0.00	Vehicle	Vehicle	-----	-212.47	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	-----	-----	**14.12**	**14.12**
		L$_{11}$ - L$_{12}$	-284.95	25.37	-43.30			0.75	1.18	22.51	-38.42	0.00	0.00	Vehicle	Vehicle	-----	-420.38	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	-----	-----	**16.81**	**16.81**
		L$_{12}$ - L$_{13}$	-433.89	12.27	-46.64			0.75	1.18	10.88	-41.38	0.00	0.00	Vehicle	Vehicle	-----	-617.86	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	-----	-----	**20.34**	**20.34**
		L$_{13}$ - L$_{14}$	-552.76	11.94	-47.46			0.75	1.18	10.60	-42.11	0.00	0.00	Vehicle	Vehicle	-----	-773.33	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	-----	-----	**22.86**	**22.86**
		L$_{14}$ - L$_{15}$	-573.53	11.87	-50.25			0.75	1.17	10.41	-44.06	0.00	0.00	Vehicle	Vehicle	-----	-802.86	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**21.37**	**21.37**
		L$_{15}$ - L$_{16}$	-493.00	10.35	-39.79			0.75	1.17	9.07	-34.89	0.00	0.00	Vehicle	Vehicle	-----	-686.25	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**22.43**	**22.43**
		L$_{16}$ - L$_{17}$	-395.34	20.48	-36.90			0.75	1.17	17.95	-32.35	0.00	0.00	Vehicle	Vehicle	-----	-556.00	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	-----	-----	**20.16**	**20.16**
		L$_{17}$ - L$_{18}$	-288.08	32.83	-34.63			0.75	1.17	28.79	-30.36	0.00	0.00	Vehicle	Vehicle	-----	-413.98	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	-----	-----	**14.47**	**14.47**
		L$_{18}$ - L$_{19}$	-175.85	45.50	-32.11			0.75	1.17	39.89	-28.15	0.00	0.00	Vehicle	Vehicle	-----	-265.19	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	-----	-----	**14.13**	**14.13**
		L$_{19}$ - L$_{20}$	-78.08	57.57	-28.74			0.75	1.17	50.47	-25.20	0.00	0.00	Vehicle	Vehicle	-----	-134.25	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	-----	-----	**19.67**	**19.67**
	Structure 2	L$_{20}$ - L$_{21}$	7.59	71.39	-25.29			0.75	1.17	62.59	-22.17	0.00	0.00	Vehicle	Vehicle	91.24	-18.95	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	**15.29**	**15.29**	**37.07**	**37.07**
		L$_{21}$ - L$_{22}$	59.10	79.45	-21.26			0.75	1.17	69.66	-18.64	0.00	0.00	Vehicle	Vehicle	167.39	-----	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	-----	-----	**13.00**	**13.00**	-----	-----
		L$_{22}$ - L$_{23}$	72.03	77.96	-22.69			0.75	1.17	68.35	-19.89	0.00	0.00	Vehicle	Vehicle	182.50	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**13.06**	**13.06**	-----	-----
		L$_{23}$ - L$_{24}$	33.57	70.26	-26.31			0.75	1.17	61.60	-23.07	0.00	0.00	Vehicle	Vehicle	123.72	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**15.11**	**15.11**	-----	-----
		L$_{24}$ - L$_{25}$	-45.06	57.54	-29.24			0.75	1.17	50.45	-25.63	0.00	0.00	Vehicle	Vehicle	7.01	-91.90	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	**14.35**	**14.35**	**20.62**	**20.62**
		L$_{25}$ - L$_{26}$	-134.95	43.63	-32.09			0.75	1.17	38.25	-28.13	0.00	0.00	Vehicle	Vehicle	-----	-212.01	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**15.59**	**15.59**
		L$_{26}$ - L$_{27}$	-245.92	31.63	-33.79			0.75	1.17	27.73	-29.62	0.00	0.00	Vehicle	Vehicle	-----	-358.21	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	-----	-----	**16.26**	**16.26**
		L$_{27}$ - L$_{28}$	-351.86	17.75	-35.63			0.75	1.17	15.56	-31.24	0.00	0.00	Vehicle	Vehicle	-----	-498.04	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	-----	-----	**22.27**	**22.27**
		L$_{28}$ - L$_{29}$	-458.41	8.50	-41.75			0.75	1.17	7.46	-36.61	0.00	0.00	Vehicle	Vehicle	-----	-643.52	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	-----	-----	**22.32**	**22.32**
		L$_{29}$ - L$_{30}$	-542.36	9.74	-53.27			0.75	1.17	8.54	-46.70	0.00	0.00	Vehicle	Vehicle	-----	-765.79	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**20.83**	**20.83**
		L$_{30}$ - L$_{31}$	-514.21	11.64	-46.26			0.75	1.18	10.33	-41.04	0.00	0.00	Vehicle	Vehicle	-----	-721.83	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	-----	-----	**24.38**	**24.38**
		L$_{31}$ - L$_{32}$	-411.27	12.04	-43.32			0.75	1.18	10.68	-38.44	0.00	0.00	Vehicle	Vehicle	-----	-584.62	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	-----	-----	**22.47**	**22.

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: 2F1 **Condition:** As-Inspected

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

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

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

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

Axial Force Rating

Location	Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Verticals																																															
Structure 1	U_0 - L_0	-67.68	6.16	-86.66			0.75	1.24	5.72	-80.40	0.00	0.00	Vehicle	Vehicle	-----	-192.51	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	-----	-----	-----	-----	-----	3.44	3.44
	U_1 - L_1	-24.09	5.94	-42.60			0.75	1.24	5.51	-39.52	0.00	0.00	Vehicle	Vehicle	-----	-82.69	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	-----	-----	-----	-----	-----	8.30	8.30
	U_2 - L_2	12.87	5.60	-33.51			0.75	1.24	5.19	-31.09	0.00	0.00	Vehicle	Vehicle	23.48	-23.68	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	-----	-----	-----	79.92	79.92	11.74	11.74
	U_3 - L_3	37.37	18.37	-24.23			0.75	1.24	17.04	-22.48	0.00	0.00	Vehicle	Vehicle	70.74	-----	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	-----	-----	-----	-----	-----	22.90	22.90	-----	-----
	U_4 - L_4	-15.55	5.10	-38.67			0.75	1.24	4.73	-35.87	0.00	0.00	Vehicle	Vehicle	-----	-66.85	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	9.32	9.32
	U_5 - L_5	-92.59	9.59	-44.48			0.75	1.24	8.89	-41.27	0.00	0.00	Vehicle	Vehicle	-----	-174.01	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	-----	-----	-----	-----	-----	8.06	8.06
	U_6 - L_6	-117.07	3.99	-51.49			0.75	1.24	3.70	-47.77	0.00	0.00	Vehicle	Vehicle	-----	-214.29	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	8.18	8.18
	U_7 - L_7	-127.52	0.27	-55.47			0.75	1.24	0.25	-51.47	0.00	0.00	Vehicle	Vehicle	-----	-232.68	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	-----	-----	-----	-----	-----	6.46	6.46
	U_8 - L_8	-368.71	2.16	-79.70			0.75	1.24	2.00	-73.94	0.00	0.00	Vehicle	Vehicle	-----	-575.45	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	-----	-----	-----	9.42	9.42
	U_9 - L_9	-214.56	2.96	-61.56			0.75	1.20	2.66	-55.31	0.00	0.00	Vehicle	Vehicle	-----	-350.84	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	-----	-----	-----	-----	-----	7.78	7.78
	U_{10} - L_{10}	-198.68	2.71	-57.71			0.75	1.20	2.43	-51.85	0.00	0.00	Vehicle	Vehicle	-----	-325.69	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	-----	-----	-----	-----	-----	10.49	10.49
	U_{11} - L_{11}	-171.40	8.31	-51.49			0.75	1.20	7.46	-46.26	0.00	0.00	Vehicle	Vehicle	-----	-282.96	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	10.16	10.16
	U_{12} - L_{12}	-128.37	13.19	-43.84			0.75	1.20	11.85	-39.39	0.00	0.00	Vehicle	Vehicle	-----	-218.09	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	-----	-----	-----	-----	-----	10.26	10.26
	U_{13} - L_{13}	-96.65	16.08	-41.71			0.75	1.20	14.44	-37.47	0.00	0.00	Vehicle	Vehicle	-----	-174.35	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	-----	-----	-----	-----	-----	7.57	7.57
	U_{14} - L_{14}	-11.04	4.33	-41.46			0.75	1.20	3.89	-37.25	0.00	0.00	Vehicle	Vehicle	-----	-62.78	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	-----	-----	-----	-----	-----	8.96	8.96
	U_{15} - L_{15}	-2.47	22.68	-31.75			0.75	1.20	20.38	-28.53	0.00	0.00	Vehicle	Vehicle	23.27	-40.30	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	-----	-----	-----	21.11	21.11	11.94	11.94
	U_{16} - L_{16}	-31.27	18.72	-34.91			0.75	1.20	16.82	-31.37	0.00	0.00	Vehicle	Vehicle	-----	-81.43	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	-----	-----	-----	-----	-----	9.89	9.89
	U_{17} - L_{17}	-105.05	8.15	-47.64			0.75	1.20	7.32	-42.81	0.00	0.00	Vehicle	Vehicle	-----	-192.22	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	-----	-----	-----	-----	-----	7.15	7.15
	U_{18} - L_{18}	-126.74	2.86	-52.63			0.75	1.20	2.57	-47.29	0.00	0.00	Vehicle	Vehicle	-----	-226.24	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	8.43	8.43
	U_{19} - L_{19}	-166.77	2.68	-53.84			0.75	1.20	2.41	-48.38	0.00	0.00	Vehicle	Vehicle	-----	-279.69	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	-----	-----	-----	-----	-----	9.29	9.29
	U_{20} - L_{20}	-184.59	2.49	-64.26			0.75	1.20	2.23	-57.74	0.00	0.00	Vehicle	Vehicle	-----	-315.02	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	-----	-----	-----	-----	-----	6.88	6.88
	U_0 - L_0	-203.59	6.66	-72.37			0.75	1.18	5.91	-64.21	0.00	0.00	Vehicle	Vehicle	-----	-348.14	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	-----	-----	-----	-----	-----	6.84	6.84
	U_1 - L_1	-176.11	7.20	-55.48			0.75	1.18	6.39	-49.23	0.00	0.00	Vehicle	Vehicle	-----	-292.94	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	-----	-----	-----	-----	-----	10.08	10.08
	U_2 - L_2	-137.55	6.83	-55.03			0.75	1.18	6.06	-48.82	0.00	0.00	Vehicle	Vehicle	-----	-242.28	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	-----	-----	-----	-----	-----	8.95	8.95
	U_3 - L_3	-117.62	7.10	-49.35			0.75	1.18	6.30	-43.78	0.00	0.00	Vehicle	Vehicle	-----	-209.82	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	-----	-----	-----	-----	-----	7.63	7.63
	U_4 - L_4	-50.97	17.40	-38.56			0.75	1.18	15.44	-34.21	0.00	0.00	Vehicle	Vehicle	-----	-110.74	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	-----	-----	-----	-----	-----	8.42	8.42
	U_5 - L_5	-13.78	20.95	-36.10			0.75	1.18	18.59	-32.03	0.00	0.00	Vehicle	Vehicle	6.25	-59.55	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	23.75	23.75	10.20	10.20
	U_6 - L_6	45.47	25.63	-29.03			0.75	1.18	22.74	-25.76	0.00	0.00	Vehicle	Vehicle	88.68	-----	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	-----	-----	-----	-----	-----	16.81	16.81	-----	-----
	U_7 - L_7	-22.33	2.64	-40.89			0.75	1.18	2.34	-36.28	0.00	0.00	Vehicle	Vehicle	-----	-76.19	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	-----	-----	-----	-----	-----	8.77	8.77
	U_8 - L_8	-120.08	18.50	-38.25			0.75	1.18	16.41	-33.93	0.00	0.00	Vehicle	Vehicle	-----	-200.21	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	-----	-----	-----	-----	-----	12.10	12.10
	U_9 - L_9	-177.03	12.49	-47.99			0.75	1.18	11.08	-42.58	0.00	0.00	Vehicle	Vehicle	-----	-285.48	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	-----	-----	-----	-----	-----	12.08	12.08
	U_{10} - L_{10}	-205.88	11.39	-51.50			0.75	1.18	10.10	-45.69	0.00	0.00	Vehicle	Vehicle	-----	-327.04	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	-----	-----	-----	-----	-----	12.53	12.53
	U_{11} - L_{11}	-239.23	6.21	-53.41			0.75	1.18	5.51	-47.39	0.00	0.00	Vehicle	Vehicle	-----	-372.61	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	-----	-----	-----	-----	-----	11.09	11.09
	U_{12} - L_{12}	-257.95	4.08	-58.48			0.75	1.18	3.62	-51.89	0.00	0.00	Vehicle	Vehicle	-----	-402.79	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	-----	-----	-----	-----	-----	10.48	10.48
	U_{13} - L_{13}	-243.82	3.44	-61.12			0.75	1.18	3.05	-54.23	0.00	0.00	Vehicle	Vehicle	-----	-387.47	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	-----	-----	-----	-----	-----	8.23	8.23
	U_{14} - L_{14}	-420.85	3.41	-72.93			0.75	1.18	3.02	-64.71	0.00	0.00	Vehicle	Vehicle	-----	-631.23	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	9.75	9.75
	U_{15} - L_{15}	-158.83	5.64	-61.64			0.75	1.17	4.94	-54.05	0.00	0.00	Vehicle	Vehicle	-----	-276.74	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	-----	-----	-----	-----	-----	9.83	9.83
	U_{16} - L_{16}	-174.02	4.39	-57.26			0.75	1.17	3.85	-50.20	0.00	0.00	Vehicle	Vehicle	-----	-291.49	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	9.80	9.80
	U_{17} - L_{17}	-156.46	7.13	-57.71			0.75	1.17	6.25	-50.60	0.00	0.00	Vehicle	Vehicle	-----	-269.18	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	-----	-----	-----	-----	-----	9.23	9.23
	U_{18} - L_{18}	-142.21	10.01	-51.66			0.75	1.17	8.78	-45.29	0.00	0.00	Vehicle	Vehicle	-----	-243.74	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	-----	-----	-----	-----	-----	9.61	9.61
	U_{19} - L_{19}	-113.66	13.43	-46.63			0.75	1.17	11.78	-40.88	0.00	0.00	Vehicle	Vehicle	-----	-200.90	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	-----	-----	-----	-----	-----	9.73	9.73
Structure 2	U_{20} - L_{20}	-76.51	17.11	-43.01			0.75	1.17	15.00	-37.71	0.00	0.00	Vehicle	Vehicle	-----	-148.49	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	7.92	7.92
	U_{21} - L_{21}	-45.77	18.15	-38.02			0.75	1.17	15.91	-33.33	0.00	0.00	Vehicle	Vehicle	-----	-102.84	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	-----	-----	-----	-----	-----	8.84	8.84
	U_{22} - L_{22}	-17.72	4.29	-39.78			0.75	1.17	3.76	-34.88	0.00	0.00	Vehicle	Vehicle	-----	-68.37	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	9.29	9.29
	U_{23} - L_{23}	-30.69	21.36	-31.34			0.75	1.17	18.73	-27.48	0.00	0.00	Vehicle	Vehicle	-----	-75.61	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	-----	-----	-----	-----	-----	11.28	11.28
	U_{24} - L_{24}	-62.06	17.09	-39.64			0.75	1.17	14.98	-34.75	0.00	0.00	Vehicle	Vehicle	-----	-125.86	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	-----	-----	-----	-----	-----	9.01	9.01
	U_{25} - L_{25}	-103.15	14.02	-46.32			0.75	1.17	12.29	-40.61	0.00	0.00	Vehicle	Vehicle	-----	-186.89	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	-----	-----	-----	-----	-----	10.05	10.05
	U_{26} - L_{26}	-134.38	10.47	-47.53			0.75	1.17	9.18	-41.67	0.00	0.00	Vehicle	Vehicle	-----	-228.86	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	-----	-----	-----	-----	-----	10.63	10.63
	U_{27} - L_{27}	-156.03	6.08	-54.51			0.75	1.17	5.33	-47.79	0.00	0.00	Vehicle	Vehicle	-----	-264.96	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	-----	-----	-----	-----	-----	9.78	9.78
	U_{28} - L_{28}	-179.40	3.76	-58.51			0.75	1.17	3.30	-51.30	0.00	0.00	Vehicle	Vehicle	-----	-299.92	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	9.49	9.49
	U_{29} - L_{29}	-171.60	2.66	-56.73			0.75	1.17	2.34	-49.74	0.00	0.00	Vehicle	Vehicle	-----	-287.75	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	-----	-----	-----	-----	-----	10.42	10.42
	U_{30} - L_{30}	-393.29	4.99	-72.97			0.75	1.18	4.43	-64.74	0.00	0.00	Vehicle	Vehicle	-----	-595.44	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	-----	-----	-----	-----	-----	10.17	10.17
	U_{31} - L_{31}	-203.49	5.68	-60.85			0.75	1.18	5.04	-53.99	0.00	0.00	Vehicle	Vehicle	-----	-334.71	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	-----	-----	-----	-----	-----	9.01	9.01
	U_{32} - L_{32}	-222.61	2.30	-62.46			0.75	1.18	2.04	-55.41	0.00	0.00	Vehicle	Vehicle	-----	-361.43	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	-----	-----	-----	-----	-----	10.45	10.45
	U_{33} - L_{33}	-211.72	5.70	-58.49			0.75	1.18	5.06	-51.89	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: 2F1 — 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	64.63	-9.24			0.75	1.24	59.96	-8.58	0.00	0.00	Vehicle	Vehicle	147.23	-----	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	-----	-----	16.16	-----	-----	32.06	-----	-----	6.56	-----	-----	-----	-----	-----	**8.89**	**8.89**	-----	-----
		U_1 - L_2	10.80	48.78	-8.52			0.75	1.24	45.26	-7.90	0.00	0.00	Vehicle	Vehicle	72.88	-----	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	-----	-----	-----	-----	-----	**9.21**	**9.21**	-----	-----
		U_2 - L_3	-44.05	36.99	-28.60			0.75	1.24	34.32	-26.53	0.00	0.00	Vehicle	Vehicle	-----	-91.76	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	-----	-----	-----	-----	-----	**10.94**	**10.94**
		U_3 - L_4	-76.77	28.98	-45.08			0.75	1.24	26.89	-41.82	0.00	0.00	Vehicle	Vehicle	-----	-154.17	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	-----	-----	-----	-----	-----	**6.21**	**6.21**
		U_4 - L_5	118.48	48.31	-24.26			0.75	1.24	44.82	-22.51	0.00	0.00	Vehicle	Vehicle	212.29	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**9.06**	**9.06**	-----	-----
		U_5 - L_6	137.62	59.11	-12.38			0.75	1.24	54.84	-11.48	0.00	0.00	Vehicle	Vehicle	250.19	-----	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	-----	-----	-----	-----	-----	**9.36**	**9.36**	-----	-----
		U_6 - L_7	157.39	61.55	-4.14			0.75	1.24	57.10	-3.84	0.00	0.00	Vehicle	Vehicle	278.83	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.64**	**8.64**	-----	-----
		U_7 - L_8	149.33	61.73	-0.31			0.75	1.24	57.27	-0.28	0.00	0.00	Vehicle	Vehicle	268.57	-----	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	-----	-----	-----	-----	-----	**8.75**	**8.75**	-----	-----
		U_8 - L_9	249.21	67.13	-3.40			0.75	1.20	60.32	-3.05	0.00	0.00	Vehicle	Vehicle	402.39	-----	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	-----	-----	-----	-----	-----	**11.82**	**11.82**	-----	-----
		U_9 - L_{10}	260.39	67.61	-2.76			0.75	1.20	60.74	-2.48	0.00	0.00	Vehicle	Vehicle	417.47	-----	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	-----	-----	-----	-----	-----	**11.55**	**11.55**	-----	-----
		U_{10} - L_{11}	236.43	64.24	-10.39			0.75	1.20	57.72	-9.34	0.00	0.00	Vehicle	Vehicle	382.39	-----	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	-----	-----	-----	-----	-----	**11.68**	**11.68**	-----	-----
		U_{11} - L_{12}	212.05	56.78	-17.72			0.75	1.20	51.02	-15.92	0.00	0.00	Vehicle	Vehicle	341.99	-----	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	-----	-----	-----	-----	-----	**11.08**	**11.08**	-----	-----
		U_{12} - L_{13}	151.78	55.38	-22.31			0.75	1.20	49.76	-20.05	0.00	0.00	Vehicle	Vehicle	262.01	-----	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	-----	-----	-----	-----	-----	**9.63**	**9.63**	-----	-----
		U_{13} - L_{14}	108.73	45.90	-27.78			0.75	1.20	41.24	-24.96	0.00	0.00	Vehicle	Vehicle	194.96	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**7.73**	**7.73**	-----	-----
		U_{14} - L_{15}	-24.56	35.61	-38.51			0.75	1.20	31.99	-34.60	0.00	0.00	Vehicle	Vehicle	9.66	-76.91	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**14.14**	**14.14**	**8.78**	**8.78**
		U_{15} - L_{16}	23.90	42.51	-30.53			0.75	1.20	38.20	-27.43	0.00	0.00	Vehicle	Vehicle	80.73	-4.59	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	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**10.57**	**10.57**	**12.70**	**12.70**
		U_{17} - L_{18}	120.04	49.82	-19.42			0.75	1.20	44.76	-17.45	0.00	0.00	Vehicle	Vehicle	214.24	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**9.04**	**9.04**	-----	-----
		U_{18} - L_{17}	144.84	56.59	-9.77			0.75	1.20	50.85	-8.78	0.00	0.00	Vehicle	Vehicle	254.40	-----	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	-----	-----	-----	-----	-----	**9.95**	**9.95**	-----	-----
		U_{19} - L_{18}	193.27	57.82	-3.46			0.75	1.20	51.95	-3.11	0.00	0.00	Vehicle	Vehicle	318.79	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**9.95**	**9.95**	-----	-----
		U_{20} - L_{19}	193.75	56.84	-2.83			0.75	1.20	51.07	-2.55	0.00	0.00	Vehicle	Vehicle	318.27	-----	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	-----	-----	-----	-----	-----	**10.11**	**10.11**	-----	-----
		U_0 - L_1	202.60	57.36	-7.51			0.75	1.18	50.89	-6.66	0.00	0.00	Vehicle	Vehicle	329.54	-----	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	-----	-----	-----	-----	-----	**11.30**	**11.30**	-----	-----
		U_1 - L_2	190.84	59.33	-8.41			0.75	1.18	52.64	-7.46	0.00	0.00	Vehicle	Vehicle	316.52	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**11.14**	**11.14**	-----	-----
		U_2 - L_3	155.90	55.75	-8.20			0.75	1.18	49.46	-7.27	0.00	0.00	Vehicle	Vehicle	266.97	-----	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	-----	-----	-----	-----	-----	**10.00**	**10.00**	-----	-----
		U_3 - L_4	134.06	50.41	-18.56			0.75	1.18	44.73	-16.47	0.00	0.00	Vehicle	Vehicle	232.43	-----	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	-----	-----	-----	-----	-----	**9.90**	**9.90**	-----	-----
		U_4 - L_5	46.01	43.95	-25.71			0.75	1.18	39.00	-22.81	0.00	0.00	Vehicle	Vehicle	110.50	-----	0.00	16.85	16.8486	556.00	131.71	15.3958	1.9682	70.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**9.79**	**9.79**	-----	-----
		U_5 - L_6	3.43	38.03	-31.65			0.75	1.18	33.75	-28.09	0.00	0.00	Vehicle	Vehicle	48.32	-32.06	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	-----	-----	-----	-----	-----	**12.57**	**12.57**	**11.72**	**11.72**
		U_6 - L_7	-84.31	28.79	-43.35			0.75	1.18	25.54	-38.46	0.00	0.00	Vehicle	Vehicle	-----	-159.60	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	-----	-----	-----	-----	-----	**7.15**	**7.15**
		U_7 - L_8	137.33	48.12	-28.00			0.75	1.18	42.69	-24.85	0.00	0.00	Vehicle	Vehicle	234.02	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**10.91**	**10.91**	-----	-----
		U_8 - L_9	210.92	51.47	-22.31			0.75	1.18	45.66	-19.79	0.00	0.00	Vehicle	Vehicle	333.56	-----	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	-----	-----	-----	-----	-----	**10.93**	**10.93**	-----	-----
		U_9 - L_{10}	236.39	58.34	-14.88			0.75	1.18	51.77	-13.20	0.00	0.00	Vehicle	Vehicle	374.60	-----	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	-----	-----	-----	-----	-----	**10.45**	**10.45**	-----	-----
		U_{11} - L_{10}	274.65	59.86	-12.66			0.75	1.18	53.11	-11.23	0.00	0.00	Vehicle	Vehicle	426.09	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**10.73**	**10.73**	-----	-----
		U_{12} - L_{11}	281.09	58.53	-6.70			0.75	1.18	51.93	-5.94	0.00	0.00	Vehicle	Vehicle	432.92	-----	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	-----	-----	-----	-----	-----	**10.85**	**10.85**	-----	-----
		U_{13} - L_{12}	278.14	58.34	-4.47			0.75	1.18	51.77	-3.97	0.00	0.00	Vehicle	Vehicle	428.88	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**9.65**	**9.65**	-----	-----
		U_{14} - L_{13}	235.47	57.30	-4.93			0.75	1.18	50.84	-4.38	0.00	0.00	Vehicle	Vehicle	372.20	-----	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	-----	-----	-----	-----	-----	**10.66**	**10.66**	-----	-----
		U_{14} - L_{15}	143.01	54.97	-5.51			0.75	1.17	48.19	-4.83	0.00	0.00	Vehicle	Vehicle	248.57	-----	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	-----	-----	-----	-----	-----	**10.53**	**10.53**	-----	-----
		U_{15} - L_{16}	171.90	55.24	-5.58			0.75	1.17	48.43	-4.89	0.00	0.00	Vehicle	Vehicle	286.42	-----	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	-----	-----	-----	-----	-----	**9.89**	**9.89**	-----	-----
		U_{16} - L_{17}	181.04	60.05	-7.41			0.75	1.17	52.65	-6.50	0.00	0.00	Vehicle	Vehicle	303.79	-----	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	-----	-----	-----	-----	-----	**10.05**	**10.05**	-----	-----
		U_{17} - L_{18}	171.16	55.49	-11.34			0.75	1.17	48.65	-9.94	0.00	0.00	Vehicle	Vehicle	285.75	-----	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	-----	-----	-----	-----	-----	**9.86**	**9.86**	-----	-----
		U_{18} - L_{19}	150.64	54.58	-15.43			0.75	1.17	47.86	-13.52	0.00	0.00	Vehicle	Vehicle	258.05	-----	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	-----	-----	-----	-----	-----	**10.45**	**10.45**	-----	-----
		U_{19} - L_{20}	125.86	51.94	-21.50			0.75	1.17	45.54	-18.85	0.00	0.00	Vehicle	Vehicle	222.83	-----	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	-----	-----	-----	-----	-----	**10.48**	**10.48**	-----	-----
		U_{20} - L_{21}	76.04	46.70	-22.69			0.75	1.17	40.94	-19.89	0.00	0.00	Vehicle	Vehicle	152.08	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**8.59**	**8.59**	-----	-----
		U_{21} - L_{22}	38.33	37.37	-34.07			0.75	1.17	32.77	-29.87	0.00	0.00	Vehicle	Vehicle	92.42	-----	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**11.88**	**11.88**	-----	-----
		U_{23} - L_{22}	18.05	37.42	-37.29			0.75	1.17	32.80	-32.69	0.00	0.00	Vehicle	Vehicle	66.11	-19.03	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	-----	-----	-----	-----	-----	**12.49**	**12.49**	**10.43**	**10.43**
		U_{24} - L_{23}	58.57	42.25	-27.95			0.75	1.17	37.04	-24.51	0.00	0.00	Vehicle	Vehicle	124.30	-----	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	-----	-----	-----	-----	-----	**9.97**	**9.97**	-----	-----
		U_{25} - L_{24}	114.98	50.91	-22.15			0.75	1.17	44.63	-19.42	0.00	0.00	Vehicle	Vehicle	207.49	-----	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	-----	-----	-----	-----	-----	**10.94**	**10.94**	-----	-----
		U_{26} - L_{25}	143.00	56.48	-16.66			0.75	1.17	49.52	-14.61	0.00	0.00	Vehicle	Vehicle	250.27	-----	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	-----	-----	-----	-----	-----	**10.25**	**10.25**	-----	-----
		U_{27} - L_{26}	173.82	53.49	-11.98			0.75	1.17	46.90	-10.50	0.00	0.00	Vehicle	Vehicle	286.93	-----	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	-----	-----	-----	-----	-----	**10.17**	**10.17**	-----	-----
		U_{28} - L_{27}	186.60	59.27	-6.72			0.75	1.17	51.97	-5.89	0.00	0.00	Vehicle	Vehicle	310.13	-----	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	-----	-----	-----	-----	-----	**10.08**	**10.08**	-----	-----
		U_{29} - L_{28}	190.75	58.26	-3.23			0.75	1.17	51.08	-2.83	0.00	0.00	Vehicle	Vehicle	314.38	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**9.00**	**9.00**	-----	-----
		U_{30} - L_{29}	161.86	53.14	-4.46			0.75	1.17	46.59	-3.91	0.00	0.00	Vehicle	Vehicle	270.99	-----	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	-----	-----	-----	-----	-----	**10.49**	**10.49**	-----	-----
		U_{30} - L_{31}	191.72	55.33	-5.58			0.75	1.18	49.09	-4.95	0.00	0.00	Vehicle	Vehicle	313.06	-----	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	-----	-----	-----	-----	-----	**11.93**	**11.93**	-----	-----
		U_{31} - L_{32}	226.45	59.98	-6.10			0.75	1.18	53.21	-5.42	0.00	0.00	Vehicle	Vehicle	363.56	-----	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	-----	-----	-----	-----	-----	**10.36**	**10.36**	-----	-----
		U_{32} - L_{33}	243.42	61.15	-5.84			0.75	1.18	54.26	-5.18	0.00	0.00	Vehicle	Vehicle	386.98	-----	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	-----	-----	-----	-----	-----	**11.08**	**11.08**	-----	-----
		U_{33} - L_{34}	239.13	58.10	-10.55			0.75	1.18	51.55	-9.36	0.00	0.00	Vehicle	Vehicle	377.88	-----	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	-----	-----	-----	-----	-----	**11.74**	**11.74**	-----	-----
		U_{34} - L_{35}	222.16	59.54	-14.31			0.75	1.18	52.83	-12.69	0.00	0.00	Vehicle	Vehicle	357.49	-----	0.00	30.63	30.6305	1010.

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: 2F1 — 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 (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Upper Chord	Structure 1	U_0 - U_1	-66.70	5.68	-28.32	2.21	-8.83	0.90	1.24	6.33	-31.53	2.21	-8.83	Pedestrian	Vehicle	-----	-127.70	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	**15.82**	**15.82**
		U_1 - U_2	-86.55	13.52	-43.81	6.01	-16.34	0.90	1.24	15.05	-48.78	6.01	-16.34	Pedestrian	Pedestrian	-----	-197.17	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	-----	-----	**7.35**	**7.35**
		U_2 - U_3	-48.14	19.98	-46.22	9.46	-19.05	0.90	1.24	22.24	-51.46	9.46	-19.05	Pedestrian	Pedestrian	-----	-154.25	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	-----	-----	**7.33**	**7.33**
		U_3 - U_4	36.58	25.86	-41.05	12.74	-17.47	0.90	1.24	28.79	-45.70	12.74	-17.47	Pedestrian	Pedestrian	101.54	-34.57	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	**15.28**	**15.28**	**9.53**	**9.53**
		U_4 - U_5	38.93	25.95	-40.82	12.80	-17.38	0.90	1.24	28.89	-45.44	12.80	-17.38	Pedestrian	Pedestrian	104.81	-31.05	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	**15.16**	**15.16**	**9.62**	**9.62**
		U_5 - U_6	154.60	29.26	-26.61	15.16	-12.03	0.90	1.24	32.57	-29.63	15.16	-12.03	Pedestrian	Pedestrian	263.02	-----	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	-----	-----	**10.82**	**10.82**	-----	-----
		U_6 - U_7	288.38	31.91	-13.01	17.14	-4.31	0.90	1.24	35.53	-14.48	17.14	-4.31	Pedestrian	Vehicle	443.36	-----	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	-----	-----	**9.80**	**9.80**	-----	-----
		U_7 - U_8	410.94	32.73	-4.06	22.63	0.00	0.90	1.24	36.43	-4.51	22.63	0.00	Pedestrian	Vehicle	610.99	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	**11.84**	**11.84**	-----	-----
		U_8 - U_9	311.57	25.09	-5.18	19.08	0.00	0.90	1.20	27.05	-5.58	19.08	0.00	Pedestrian	Vehicle	465.02	-----	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	-----	-----	**13.60**	**13.60**	-----	-----
		U_9 - U_{10}	78.52	25.26	-23.39	12.28	-6.79	0.90	1.20	27.24	-25.22	12.28	-6.79	Pedestrian	Vehicle	153.44	-----	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	-----	-----	**15.96**	**15.96**	-----	-----
		U_{10} - U_{11}	-141.43	23.77	-39.60	11.10	-18.41	0.90	1.20	25.63	-42.69	11.10	-18.41	Pedestrian	Pedestrian	-----	-263.29	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	-----	-----	**7.46**	**7.46**
		U_{11} - U_{12}	-338.03	21.86	-59.38	9.77	-27.93	0.90	1.20	23.56	-64.02	9.77	-27.93	Pedestrian	Pedestrian	-----	-558.98	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	-----	-----	**5.16**	**5.16**
		U_{12} - U_{13}	-480.08	19.10	-69.54	8.23	-34.32	0.90	1.20	20.59	-74.98	8.23	-34.32	Pedestrian	Pedestrian	-----	-766.20	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	-----	-----	**6.02**	**6.02**
		U_{13} - U_{14}	-570.65	16.18	-73.40	6.68	-37.21	0.90	1.20	17.45	-79.14	6.68	-37.21	Pedestrian	Pedestrian	-----	-893.10	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**6.51**	**6.51**
		U_{14} - U_{15}	-571.07	16.11	-73.35	6.65	-37.22	0.90	1.20	17.36	-79.08	6.65	-37.22	Pedestrian	Pedestrian	-----	-893.59	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	-----	-----	**6.50**	**6.50**
		U_{15} - U_{16}	-581.88	12.55	-69.13	4.98	-36.12	0.90	1.20	13.53	-74.53	4.98	-36.12	Pedestrian	Pedestrian	-----	-900.28	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	-----	-----	**6.74**	**6.74**
		U_{16} - U_{17}	-539.46	9.35	-61.81	3.52	-31.85	0.90	1.20	10.08	-66.64	3.52	-31.85	Pedestrian	Pedestrian	-----	-829.33	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	-----	-----	**8.00**	**8.00**
		U_{17} - U_{18}	-422.33	6.05	-45.90	2.26	-25.05	0.90	1.20	6.52	-49.49	2.26	-25.05	Pedestrian	Pedestrian	-----	-645.92	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	-----	-----	**7.36**	**7.36**
		U_{18} - U_{19}	-286.19	3.41	-29.41	1.28	-16.96	0.90	1.20	3.68	-31.71	1.28	-16.96	Pedestrian	Pedestrian	-----	-435.31	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	**8.04**	**8.04**
		U_{19} - U_{20}	-140.84	1.45	-13.04	0.55	-8.68	0.90	1.20	1.56	-14.06	0.55	-8.68	Pedestrian	Pedestrian	-----	-212.65	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	**23.60**	**23.60**
	Structure 2	U_0 - U_1	-147.44	2.87	-19.73	0.45	-4.88	0.90	1.18	3.06	-21.01	0.45	-4.88	Vehicle	Vehicle	-----	-218.99	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**23.80**	**23.80**
		U_1 - U_2	-319.06	6.10	-37.91	1.96	-13.36	0.90	1.18	6.50	-40.36	1.96	-13.36	Vehicle	Vehicle	-----	-467.25	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	-----	-----	**11.70**	**11.70**
		U_2 - U_3	-460.91	10.92	-54.83	3.77	-20.95	0.90	1.18	11.63	-58.38	3.77	-20.95	Vehicle	Pedestrian	-----	-702.31	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	-----	-----	**7.77**	**7.77**
		U_3 - U_4	-580.03	16.62	-71.44	5.92	-27.68	0.90	1.18	17.70	-76.07	5.92	-27.68	Pedestrian	Pedestrian	-----	-888.91	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	-----	-----	**7.34**	**7.34**
		U_4 - U_5	-616.49	21.61	-76.83	7.86	-31.35	0.90	1.18	23.01	-81.80	7.86	-31.35	Pedestrian	Pedestrian	-----	-948.53	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	-----	-----	**7.69**	**7.69**
		U_5 - U_6	-604.71	26.66	-77.40	9.87	-32.88	0.90	1.18	28.38	-82.41	9.87	-32.88	Pedestrian	Pedestrian	-----	-936.00	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	-----	-----	**7.65**	**7.65**
		U_6 - U_7	-514.78	30.53	-69.72	11.56	-31.23	0.90	1.18	32.51	-74.23	11.56	-31.23	Pedestrian	Pedestrian	-----	-806.31	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	**7.84**	**7.84**
		U_7 - U_8	-512.83	30.56	-69.54	11.57	-31.18	0.90	1.18	32.54	-74.04	11.57	-31.18	Pedestrian	Pedestrian	-----	-803.45	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	-----	-----	**7.87**	**7.87**
		U_8 - U_9	-373.51	34.01	-61.57	13.16	-27.41	0.90	1.18	36.21	-65.56	13.16	-27.41	Pedestrian	Pedestrian	-----	-606.42	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	**8.10**	**8.10**
		U_9 - U_{10}	-181.05	35.64	-46.66	14.25	-21.42	0.90	1.18	37.94	-49.68	14.25	-21.42	Pedestrian	Pedestrian	-----	-327.79	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	-----	-----	**9.92**	**9.92**
		U_{10} - U_{11}	26.18	36.89	-31.71	15.21	-14.40	0.90	1.18	39.27	-33.76	15.21	-14.40	Pedestrian	Pedestrian	104.86	-28.58	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	**16.23**	**16.23**	**16.52**	**16.52**
		U_{11} - U_{12}	237.39	36.07	-18.65	15.56	-6.85	0.90	1.18	38.41	-19.86	15.56	-6.85	Pedestrian	Pedestrian	378.76	-----	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	-----	-----	**12.48**	**12.48**	-----	-----
		U_{12} - U_{13}	435.89	35.34	-9.33	18.37	0.00	0.90	1.18	37.63	-9.93	18.37	0.00	Pedestrian	Vehicle	639.46	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	**12.56**	**12.56**	-----	-----
		U_{13} - U_{14}	595.84	33.65	-8.72	24.32	0.00	0.90	1.18	35.83	-9.28	24.32	0.00	Pedestrian	Vehicle	852.78	-----	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	-----	-----	**16.10**	**16.10**	-----	-----
		U_{14} - U_{15}	615.53	30.22	-7.56	24.37	0.00	0.90	1.17	31.80	-7.95	24.37	0.00	Pedestrian	Vehicle	873.21	-----	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	-----	-----	**16.89**	**16.89**	-----	-----
		U_{15} - U_{16}	486.15	31.55	-12.51	18.61	0.00	0.90	1.17	33.19	-13.16	18.61	0.00	Pedestrian	Vehicle	699.33	-----	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	-----	-----	**15.18**	**15.18**	-----	-----
		U_{16} - U_{17}	339.27	31.39	-23.19	14.66	-2.95	0.90	1.17	33.02	-24.40	14.66	-2.95	Pedestrian	Vehicle	503.04	-----	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	-----	-----	**14.78**	**14.78**	-----	-----
		U_{17} - U_{18}	192.13	30.70	-34.72	15.12	-9.49	0.90	1.17	32.30	-36.53	15.12	-9.49	Pedestrian	Vehicle	311.41	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	**12.11**	**12.11**	-----	-----
		U_{18} - U_{19}	53.83	28.13	-46.26	15.12	-15.34	0.90	1.17	29.59	-48.67	15.12	-15.34	Pedestrian	Vehicle	128.11	-----	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	-----	-----	**15.93**	**15.93**	-----	-----
		U_{19} - U_{20}	-58.94	24.94	-56.17	15.07	-19.84	0.90	1.17	26.24	-59.09	15.07	-19.84	Pedestrian	Pedestrian	-----	-179.24	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	-----	-----	**8.03**	**8.03**
	Structure 3	U_0 - U_{21}	-125.32	20.80	-59.05	14.77	-22.39	0.90	1.17	21.88	-62.12	14.77	-22.39	Pedestrian	Pedestrian	-----	-272.78	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	-----	-----	**8.42**	**8.42**
		U_{21} - U_{22}	-146.72	17.27	-59.68	14.37	-22.74	0.90	1.17	18.17	-62.79	14.37	-22.74	Pedestrian	Pedestrian	-----	-301.91	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	-----	-----	**8.07**	**8.07**
		U_{22} - U_{23}	-146.49	17.32	-59.67	14.36	-22.72	0.90	1.17	18.22	-62.78	14.36	-22.72	Pedestrian	Pedestrian	-----	-301.59	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	-----	-----	**8.07**	**8.07**
		U_{23} - U_{24}	-112.53	21.05	-55.33	13.88	-21.04	0.90	1.17	22.15	-58.21	13.88	-21.04	Pedestrian	Pedestrian	-----	-249.32	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**9.14**	**9.14**
		U_{24} - U_{25}	-36.03	24.25	-47.17	13.40	-17.33	0.90	1.17	25.51	-49.62	13.40	-17.33	Pedestrian	Pedestrian	3.75	-133.87	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	**22.00**	**22.00**	**9.81**	**9.81**
		U_{25} - U_{26}	80.94	26.33	-35.73	12.93	-12.15	0.90	1.17	27.70	-37.60	12.93	-12.15	Pedestrian	Vehicle	158.04	-----	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	**16.87**	**16.87**	-----	-----
		U_{26} - U_{27}	220.82	28.05	-25.53	12.57	-7.08	0.90	1.17	29.51	-26.86	12.57	-7.08	Pedestrian	Vehicle	341.77	-----	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	-----	-----	**12.96**	**12.96**	-----	-----
		U_{27} - U_{28}	363.48	28.41	-14.09	14.90	-2.16	0.90	1.17	29.89	-14.82	14.90	-2.16	Pedestrian	Vehicle	530.75	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	**15.19**	**15.19**	-----	-----
		U_{28} - U_{29}	503.92	28.51	-8.00	21.74	0.00	0.90	1.17	29.99	-8.41	21.74	0.00	Pedestrian	Vehicle	722.34	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	**14.86**	**14.86**	-----	-----
		U_{29} - U_{30}	616.62	28.04	-7.73	27.08	0.00	0.90	1.17	29.50	-8.13	27.08	0.00	Pedestrian	Vehicle	875.17	-----	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	-----	-----	**16.75**	**16.75**	-----	-----
		U_{30} - U_{31}	559.73	33.84

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 2F1 — 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 Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Lower Chord	Structure 1	L_0- L_1	-1.94	5.11	-3.91	0.37	-2.06	0.90	1.24	5.68	-4.36	0.37	-2.06	Vehicle	Pedestrian	4.87	-10.86	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	88.76	88.76	65.74	65.74
		L_1 - L_2	67.93	27.77	-7.46	9.23	-3.35	0.90	1.24	30.91	-8.30	9.23	-3.35	Vehicle	Pedestrian	128.50	-----	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	-----	-----	14.06	14.06	-----	-----
		L_2 - L_3	78.83	46.15	-16.18	15.48	-7.39	0.90	1.24	51.38	-18.01	15.48	-7.39	Vehicle	Pedestrian	169.27	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	11.48	11.48	-----	-----
		L_3 - L_4	39.11	48.38	-22.57	18.09	-10.83	0.90	1.24	53.86	-25.13	18.09	-10.83	Pedestrian	Pedestrian	144.37	-----	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	-----	-----	8.75	8.75	-----	-----
		L_4 - L_5	-166.44	31.01	-32.79	10.96	-16.91	0.90	1.24	34.52	-36.51	10.96	-16.91	Vehicle	Pedestrian	-----	-285.80	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	6.25	6.25
		L_5 - L_6	-301.30	15.28	-35.54	3.24	-18.94	0.90	1.24	17.01	-39.56	3.24	-18.94	Vehicle	Pedestrian	-----	-467.74	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	-----	-----	6.12	6.12
		L_6 - L_7	-439.01	4.80	-38.35	0.00	-26.52	0.90	1.24	5.35	-42.69	0.00	-26.52	Vehicle	Pedestrian	-----	-660.68	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	7.31	7.31
		L_7 - L_8	-551.71	2.10	-38.48	0.00	-35.56	0.90	1.24	2.34	-42.83	0.00	-35.56	Vehicle	Pedestrian	-----	-819.13	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	-----	-----	8.26	8.26
		L_8 - L_9	-570.55	4.69	-42.41	0.00	-37.48	0.90	1.20	5.06	-45.73	0.00	-37.48	Vehicle	Pedestrian	-----	-849.88	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	7.56	7.56
		L_9 - L_{10}	-355.55	5.37	-24.63	0.00	-24.70	0.90	1.20	5.79	-26.56	0.00	-24.70	Vehicle	Pedestrian	-----	-528.84	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	11.51	11.51
		L_{10} - L_{11}	-118.56	21.30	-21.06	0.00	-12.42	0.90	1.20	22.96	-22.71	0.00	-12.42	Vehicle	Pedestrian	-----	-199.79	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	-----	-----	10.87	10.87
		L_{11} - L_{12}	103.33	35.54	-19.51	9.97	-9.47	0.90	1.20	38.32	-21.04	9.97	-9.47	Vehicle	Pedestrian	184.14	-----	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	-----	-----	12.81	12.81	-----	-----
		L_{12} - L_{13}	300.47	56.00	-18.06	17.86	-8.15	0.90	1.20	60.38	-19.47	17.86	-8.15	Vehicle	Pedestrian	469.09	-----	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	-----	-----	11.17	11.17	-----	-----
		L_{13} - L_{14}	441.01	65.19	-15.33	24.18	-6.62	0.90	1.20	70.29	-16.52	24.18	-6.62	Pedestrian	Pedestrian	696.12	-----	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	-----	-----	9.18	9.18	-----	-----
		L_{14} - L_{15}	546.80	66.47	-9.95	24.61	-3.50	0.90	1.20	71.67	-10.73	24.61	-3.50	Pedestrian	Vehicle	836.00	-----	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	-----	-----	10.67	10.67	-----	-----
		L_{15} - L_{16}	505.90	57.76	-9.34	20.37	-2.04	0.90	1.20	62.28	-10.07	20.37	-2.04	Vehicle	Vehicle	738.62	-----	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	-----	-----	17.16	17.16	-----	-----
		L_{16} - L_{17}	398.64	43.10	-8.36	12.78	-0.84	0.90	1.20	46.47	-9.02	12.78	-0.84	Vehicle	Vehicle	578.64	-----	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	-----	-----	17.60	17.60	-----	-----
		L_{17} - L_{18}	263.76	26.27	-6.84	4.87	0.00	0.90	1.20	28.33	-7.37	4.87	0.00	Vehicle	Vehicle	379.71	-----	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	-----	-----	21.87	21.87	-----	-----
		L_{18} - L_{19}	118.86	20.77	-5.36	0.70	-3.28	0.90	1.20	22.39	-5.78	0.70	-3.28	Vehicle	Pedestrian	183.62	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	17.14	17.14	-----	-----
		L_{19} - L_{20}	-23.25	17.79	-5.44	1.27	-12.00	0.90	1.20	19.18	-5.87	1.27	-12.00	Vehicle	Pedestrian	-----	-53.45	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	-----	-----	20.16	20.16
		L_0- L_1	-35.95	11.04	-7.43	1.33	-5.13	0.90	1.18	11.76	-7.91	1.33	-5.13	Vehicle	Pedestrian	-----	-63.69	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	-----	-----	38.25	38.25
		L_1 - L_2	132.83	19.10	-2.88	2.94	-0.07	0.90	1.18	20.33	-3.07	2.94	-0.07	Vehicle	Vehicle	199.11	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	24.61	24.61	-----	-----
		L_2 - L_3	304.11	39.26	-6.12	10.53	-1.80	0.90	1.18	41.79	-6.52	10.53	-1.80	Vehicle	Vehicle	449.67	-----	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	-----	-----	16.08	16.08	-----	-----
		L_3 - L_4	445.92	53.89	-10.99	18.16	-3.63	0.90	1.18	57.38	-11.70	18.16	-3.63	Vehicle	Vehicle	654.28	-----	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	-----	-----	15.05	15.05	-----	-----
		L_4 - L_5	567.84	71.99	-17.61	24.82	-6.10	0.90	1.18	76.65	-18.75	24.82	-6.10	Vehicle	Vehicle	837.83	-----	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	-----	-----	14.12	14.12	-----	-----
		L_5 - L_6	603.64	76.62	-22.58	28.47	-8.06	0.90	1.18	81.58	-24.04	28.47	-8.06	Pedestrian	Pedestrian	927.79	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	10.81	10.81	-----	-----
		L_6 - L_7	599.48	79.63	-28.66	30.26	-10.41	0.90	1.18	84.78	-30.51	30.26	-10.41	Pedestrian	Pedestrian	928.87	-----	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	-----	-----	10.59	10.59	-----	-----
		L_7 - L_8	373.94	63.74	-35.95	24.93	-13.66	0.90	1.18	67.87	-38.27	24.93	-13.66	Pedestrian	Pedestrian	606.75	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	10.43	10.43	-----	-----
		L_8 - L_9	195.71	51.11	-38.71	19.52	-15.12	0.90	1.18	54.42	-41.21	19.52	-15.12	Pedestrian	Pedestrian	350.54	-----	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	-----	-----	12.23	12.23	-----	-----
		L_9 - L_{10}	-13.21	35.43	-40.03	12.45	-16.11	0.90	1.18	37.72	-42.62	12.45	-16.11	Vehicle	Pedestrian	31.86	-93.52	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	23.20	23.20	12.17	12.17
		L_{10} - L_{11}	-217.32	21.82	-40.58	5.50	-17.02	0.90	1.18	23.23	-43.21	5.50	-17.02	Vehicle	Pedestrian	-----	-360.80	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	-----	-----	7.19	7.19
		L_{11} - L_{12}	-419.93	10.94	-39.92	0.00	-23.34	0.90	1.18	11.65	-42.51	0.00	-23.34	Vehicle	Pedestrian	-----	-631.51	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	-----	-----	7.76	7.76
		L_{12} - L_{13}	-591.41	10.99	-40.77	0.00	-30.09	0.90	1.18	11.70	-43.41	0.00	-30.09	Vehicle	Pedestrian	-----	-864.37	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	-----	-----	9.16	9.16
		L_{13} - L_{14}	-724.23	10.30	-39.15	0.00	-35.12	0.90	1.18	10.97	-41.68	0.00	-35.12	Vehicle	Pedestrian	-----	-1041.34	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	-----	-----	10.30	10.30
		L_{14} - L_{15}	-747.05	11.89	-45.24	0.00	-36.29	0.90	1.17	12.51	-47.60	0.00	-36.29	Vehicle	Pedestrian	-----	-1080.21	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	9.16	9.16
		L_{15} - L_{16}	-632.15	10.92	-37.03	0.00	-31.21	0.90	1.17	11.49	-38.95	0.00	-31.21	Vehicle	Pedestrian	-----	-913.01	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	9.17	9.17
		L_{16} - L_{17}	-488.62	11.49	-26.48	0.00	-25.39	0.90	1.17	12.09	-27.85	0.00	-25.39	Vehicle	Pedestrian	-----	-704.43	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	-----	-----	10.49	10.49
		L_{17} - L_{18}	-336.98	19.93	-26.26	0.00	-18.12	0.90	1.17	20.97	-27.63	0.00	-18.12	Vehicle	Pedestrian	-----	-497.55	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	8.53	8.53
		L_{18} - L_{19}	-183.61	31.85	-25.85	4.48	-11.34	0.90	1.17	33.51	-27.20	4.48	-11.34	Vehicle	Pedestrian	-----	-288.79	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	-----	-----	10.12	10.12
		L_{19} - L_{20}	-45.77	40.18	-23.25	8.92	-9.58	0.90	1.17	42.27	-24.46	8.92	-9.58	Vehicle	Pedestrian	-----	-103.76	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	-----	-----	15.50	15.50
	Structure 2	L_{20} - L_{21}	68.00	52.10	-20.65	11.57	-9.12	0.90	1.17	54.81	-21.73	11.57	-9.12	Vehicle	Pedestrian	159.65	-----	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	-----	-----	16.36	16.36	-----	-----
		L_{21} - L_{22}	133.90	54.46	-16.51	13.61	-8.82	0.90	1.17	57.30	-17.37	13.61	-8.82	Vehicle	Pedestrian	248.56	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	14.50	14.50	-----	-----
		L_{22} - L_{23}	122.50	52.90	-18.21	11.79	-7.58	0.90	1.17	55.65	-19.16	11.79	-7.58	Vehicle	Pedestrian	231.60	-----	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	-----	-----	15.13	15.13	-----	-----
		L_{23} - L_{24}	46.70	44.42	-20.39	8.09	-7.09	0.90	1.17	46.73	-21.46	8.09	-7.09	Vehicle	Vehicle	121.46	-----	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	-----	-----	19.64	19.64	-----	-----
		L_{24} - L_{25}	-66.76	34.07	-22.68	3.32	-6.24	0.90	1.17	35.85	-23.86	3.32	-6.24	Vehicle	Vehicle	-----	-117.80	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	21.25	21.25
		L_{25} - L_{26}	-205.83	23.52	-24.20	0.00	-11.78	0.90	1.17	24.74	-25.47	0.00	-11.78	Vehicle	Pedestrian	-----	-316.00	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	-----	-----	9.87	9.87
		L_{26} - L_{27}	-350.61	21.89	-24.70	0.00	-18.88	0.90	1.17	23.03	-25.98	0.00	-18.88	Vehicle	Pedestrian	-----	-514.11	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	-----	-----	8.40	8.40
		L_{27} - L_{28}	-494.76	18.40	-24.66	0.00	-25.89	0.90	1.17	19.35	-25.95	0.00	-25.89	Vehicle	Pedestrian	-----	-710.58	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	-----	-----	10.66	10.66
		L_{28} - L_{29}	-620.88	15.85	-27.70	0.00	-31.79	0.90	1.17	16.68	-29.14	0.00	-31.79	Vehicle	Pedestrian	-----	-886.34	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	10.74	10.74
		L_{29} - L_{30}	-716.82	12.47	-33.23	0.00	-36.30	0.90	1.17	13.12	-34.96	0.00	-36.30	Vehicle	Pedestrian	-----	-1024.49	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	11.20	11.20
		L_{30} - L_{31}	-850.86	18.54	-48.15	0.00	-35.98	0.90	1.18	19.74	-51.27	0.00	-35.98	Vehicle	Pedestrian	-----	-1219.54	11.

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 2F1 **Condition:** As-Inspected

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

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

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

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Verticals	Structure 1	U$_0$ - L$_0$	-93.63	7.38	-33.90	3.44	-12.32	0.90	1.24	8.22	-37.74	3.44	-12.32	Pedestrian	Vehicle	-----	-170.78	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	-----	-----	-----	-----	-----	6.65	6.65
		U$_1$ - L$_1$	-46.50	6.36	-23.87	2.93	-9.05	0.90	1.24	7.08	-26.58	2.93	-9.05	Pedestrian	Pedestrian	-----	-106.76	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	-----	-----	-----	-----	-----	8.58	8.58
		U$_2$ - L$_2$	-0.07	5.75	-16.00	2.84	-5.68	0.90	1.24	6.40	-17.82	2.84	-5.68	Pedestrian	Vehicle	11.92	-23.25	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	-----	-----	-----	-----	-----	46.29	46.29	19.75	19.75
		U$_3$ - L$_3$	39.61	6.21	-10.45	2.70	-2.12	0.90	1.24	6.91	-11.63	2.70	-2.12	Pedestrian	Vehicle	63.99	-----	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	-----	-----	-----	-----	-----	-----	40.40	40.40	-----	-----
		U$_4$ - L$_4$	-30.21	0.87	-16.90	0.00	-3.47	0.90	1.24	0.96	-18.81	0.00	-3.47	Vehicle	Vehicle	-----	-63.72	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	-----	-----	-----	-----	-----	16.99	16.99
		U$_5$ - L$_5$	-130.50	2.44	-21.55	0.00	-10.24	0.90	1.24	2.71	-23.99	0.00	-10.24	Vehicle	Pedestrian	-----	-214.15	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	-----	-----	-----	-----	-----	8.61	8.61
		U$_6$ - L$_6$	-158.19	3.60	-21.24	0.00	-13.06	0.90	1.24	4.00	-23.65	0.00	-13.06	Vehicle	Pedestrian	-----	-253.37	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	9.53	9.53
		U$_7$ - L$_7$	-152.33	6.49	-20.91	0.00	-13.25	0.90	1.24	7.22	-23.28	0.00	-13.25	Vehicle	Pedestrian	-----	-245.50	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	-----	-----	-----	-----	-----	8.43	8.43
		U$_8$ - L$_8$	-455.44	7.92	-32.73	0.00	-31.72	0.90	1.24	8.82	-36.43	0.00	-31.72	Vehicle	Pedestrian	-----	-680.67	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	-----	-----	-----	-----	-----	8.89	8.89
		U$_9$ - L$_9$	-287.50	1.73	-33.42	0.00	-18.21	0.90	1.20	1.87	-36.03	0.00	-18.21	Vehicle	Pedestrian	-----	-444.26	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	-----	-----	-----	-----	-----	6.59	6.59
		U$_{10}$ - L$_{10}$	-276.27	0.84	-31.77	0.00	-17.55	0.90	1.20	0.91	-34.25	0.00	-17.55	Vehicle	Pedestrian	-----	-426.48	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	-----	-----	-----	-----	-----	9.00	9.00
		U$_{11}$ - L$_{11}$	-232.54	0.88	-29.33	0.00	-14.42	0.90	1.20	0.94	-31.62	0.00	-14.42	Vehicle	Pedestrian	-----	-362.15	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	-----	-----	-----	-----	-----	8.88	8.88
		U$_{12}$ - L$_{12}$	-178.38	0.82	-24.93	0.00	-11.20	0.90	1.20	0.88	-26.88	0.00	-11.20	Vehicle	Pedestrian	-----	-281.39	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	-----	-----	-----	-----	-----	9.30	9.30
		U$_{13}$ - L$_{13}$	-127.70	2.99	-18.94	0.00	-7.88	0.90	1.20	3.22	-20.42	0.00	-7.88	Vehicle	Pedestrian	-----	-202.80	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	-----	-----	-----	-----	-----	8.93	8.93
		U$_{14}$ - L$_{14}$	-30.38	0.73	-15.22	0.00	-3.03	0.90	1.20	0.79	-16.41	0.00	-3.03	Vehicle	Vehicle	-----	-60.83	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	-----	-----	-----	-----	-----	9.15	9.15
		U$_{15}$ - L$_{15}$	-28.93	5.86	-14.92	1.55	-4.53	0.90	1.20	6.32	-16.08	1.55	-4.53	Vehicle	Vehicle	-----	-58.52	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	-----	-----	-----	-----	-----	19.54	19.54
		U$_{16}$ - L$_{16}$	-75.99	4.45	-17.52	1.39	-7.07	0.90	1.20	4.80	-18.88	1.39	-7.07	Vehicle	Pedestrian	-----	-132.53	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	-----	-----	-----	-----	-----	10.22	10.22
		U$_{17}$ - L$_{17}$	-161.81	3.47	-23.93	1.30	-10.66	0.90	1.20	3.74	-25.80	1.30	-10.66	Pedestrian	Pedestrian	-----	-257.75	0.00	20.66	20.0644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	6.84	6.84
		U$_{18}$ - L$_{18}$	-190.09	2.98	-23.56	1.12	-12.69	0.90	1.20	3.21	-25.40	1.12	-12.69	Pedestrian	Pedestrian	-----	-296.64	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	-----	-----	-----	-----	-----	8.80	8.80
		U$_{19}$ - L$_{19}$	-228.09	2.55	-23.00	0.97	-14.99	0.90	1.20	2.75	-24.79	0.97	-14.99	Pedestrian	Pedestrian	-----	-348.23	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	-----	-----	-----	-----	-----	9.76	9.76
		U$_{20}$ - L$_{20}$	-242.54	2.32	-23.66	0.95	-15.62	0.90	1.20	2.50	-25.51	0.95	-15.62	Pedestrian	Pedestrian	-----	-368.77	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	-----	-----	-----	-----	-----	6.91	6.91
		U$_0$ - L$_0$	-302.99	5.65	-34.32	2.22	-15.08	0.90	1.18	6.02	-36.54	2.22	-15.08	Pedestrian	Pedestrian	-----	-461.00	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	-----	-----	-----	-----	-----	6.58	6.58
		U$_1$ - L$_1$	-268.80	5.73	-33.67	2.12	-13.67	0.90	1.18	6.10	-35.85	2.12	-13.67	Pedestrian	Pedestrian	-----	-413.81	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	-----	-----	-----	-----	-----	8.15	8.15
		U$_2$ - L$_2$	-220.88	6.18	-30.12	2.34	-12.32	0.90	1.18	6.58	-32.07	2.34	-12.32	Pedestrian	Pedestrian	-----	-344.85	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	-----	-----	-----	-----	-----	7.96	7.96
		U$_3$ - L$_3$	-175.24	6.62	-27.86	2.49	-10.35	0.90	1.18	7.05	-29.66	2.49	-10.35	Pedestrian	Pedestrian	-----	-279.83	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	-----	-----	-----	-----	-----	6.91	6.91
		U$_4$ - L$_4$	-82.09	5.75	-20.70	2.21	-6.62	0.90	1.18	6.13	-22.04	2.21	-6.62	Pedestrian	Vehicle	-----	-135.36	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	-----	-----	-----	-----	-----	11.67	11.67
		U$_5$ - L$_5$	-19.91	6.51	-15.35	2.23	-4.16	0.90	1.18	6.93	-16.34	2.23	-4.16	Vehicle	Vehicle	-----	-47.12	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	-----	-----	-----	-----	-----	19.62	19.62
		U$_6$ - L$_6$	60.32	12.77	-8.83	1.75	-0.47	0.90	1.18	13.59	-9.40	1.75	-0.47	Vehicle	Vehicle	96.09	-----	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	-----	27.02	27.02	-----	-----
		U$_7$ - L$_7$	-41.78	0.74	-15.76	0.00	-2.50	0.90	1.18	0.79	-16.78	0.00	-2.50	Vehicle	Vehicle	-----	-76.12	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	-----	-----	-----	-----	-----	17.80	17.80
		U$_8$ - L$_8$	-189.01	2.72	-21.33	0.00	-8.38	0.90	1.18	2.89	-22.71	0.00	-8.38	Vehicle	Pedestrian	-----	-286.12	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	-----	-----	-----	-----	-----	10.99	10.99
		U$_9$ - L$_9$	-254.00	1.08	-26.63	0.00	-10.55	0.90	1.18	1.14	-28.35	0.00	-10.55	Vehicle	Pedestrian	-----	-380.77	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	-----	-----	-----	-----	-----	11.24	11.24
		U$_{10}$ - L$_{10}$	-290.02	1.99	-26.99	0.00	-12.18	0.90	1.18	2.12	-28.74	0.00	-12.18	Vehicle	Pedestrian	-----	-430.22	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	-----	-----	-----	-----	-----	11.94	11.94
		U$_{11}$ - L$_{11}$	-312.19	4.24	-28.82	0.00	-12.59	0.90	1.18	4.52	-30.68	0.00	-12.59	Vehicle	Pedestrian	-----	-462.10	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	-----	-----	-----	-----	-----	10.46	10.46
		U$_{12}$ - L$_{12}$	-327.27	6.13	-26.34	0.00	-13.75	0.90	1.18	6.52	-28.05	0.00	-13.75	Vehicle	Pedestrian	-----	-479.78	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	-----	-----	-----	-----	-----	11.35	11.35
		U$_{13}$ - L$_{13}$	-277.23	8.21	-22.45	0.45	-12.38	0.90	1.18	8.74	-23.90	0.45	-12.38	Vehicle	Pedestrian	-----	-407.56	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	-----	-----	-----	-----	-----	11.38	11.38
		U$_{14}$ - L$_{14}$	-505.47	10.70	-28.59	0.00	-21.42	0.90	1.18	11.39	-30.44	0.00	-21.42	Vehicle	Pedestrian	-----	-724.52	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	10.54	10.54
		U$_{15}$ - L$_{15}$	-232.92	2.98	-31.07	1.67	-12.16	0.90	1.17	3.13	-32.69	1.67	-12.16	Pedestrian	Pedestrian	-----	-361.10	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	-----	-----	-----	-----	-----	10.19	10.19
		U$_{16}$ - L$_{16}$	-260.09	3.36	-32.75	0.83	-13.04	0.90	1.17	3.54	-34.46	0.83	-13.04	Vehicle	Pedestrian	-----	-399.87	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	-----	-----	-----	-----	-----	8.55	8.55
		U$_{17}$ - L$_{17}$	-228.20	3.79	-30.51	0.66	-11.76	0.90	1.17	3.99	-32.10	0.66	-11.76	Vehicle	Pedestrian	-----	-353.67	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	-----	-----	-----	-----	-----	9.01	9.01
		U$_{18}$ - L$_{18}$	-209.23	4.56	-28.11	0.00	-11.28	0.90	1.17	4.79	-29.57	0.00	-11.28	Vehicle	Pedestrian	-----	-325.11	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	9.01	9.01
		U$_{19}$ - L$_{19}$	-166.51	4.88	-26.06	0.00	-9.53	0.90	1.17	5.13	-27.42	0.00	-9.53	Vehicle	Pedestrian	-----	-264.49	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	9.33	9.33
	Structure 2	U$_{20}$ - L$_{20}$	-113.91	4.91	-19.61	0.00	-7.50	0.90	1.17	5.16	-20.63	0.00	-7.50	Vehicle	Pedestrian	-----	-184.66	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	-----	-----	-----	-----	-----	9.29	9.29
		U$_{21}$ - L$_{21}$	-62.73	7.32	-15.96	0.00	-5.22	0.90	1.17	7.70	-16.79	0.00	-5.22	Vehicle	Vehicle	-----	-103.37	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	16.55	16.55
		U$_{22}$ - L$_{22}$	-38.93	0.68	-17.44	0.00	-2.15	0.90	1.17	0.71	-18.35	0.00	-2.15	Vehicle	Vehicle	-----	-74.47	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	-----	-----	-----	-----	-----	16.51	16.51
		U$_{23}$ - L$_{23}$	-74.45	5.48	-17.60	0.48	-6.10	0.90	1.17	5.77	-18.51	0.48	-6.10	Vehicle	Vehicle	-----	-120.85	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	-----	-----	-----	-----	-----	14.37	14.37
		U$_{24}$ - L$_{24}$	-121.37	5.08	-20.66	0.37	-8.17	0.90	1.17	5.35	-21.74	0.37	-8.17	Vehicle	Pedestrian	-----	-196.66	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	-----	-----	-----	-----	-----	8.49	8.49
		U$_{25}$ - L$_{25}$	-169.10	4.89	-24.27	0.43	-9.94	0.90	1.17	5.14	-25.53	0.43	-9.94	Vehicle	Pedestrian	-----	-265.95	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	9.65	9.65
		U$_{26}$ - L$_{26}$	-207.93	4.42	-25.45	0.14	-11.42	0.90	1.17	4.65	-26.77	0.14	-11.42	Vehicle	Pedestrian	-----	-319.96	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	-----	-----	-----	-----	-----	9.67	9.67
		U$_{27}$ - L$_{27}$	-219.90	3.66	-26.87	0.16	-11.49	0.90	1.17	3.85	-28.27	0.16	-11.49	Vehicle	Pedestrian	-----	-337.55	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	10.15	10.15
		U$_{28}$ - L$_{28}$	-240.66	5.26	-24.56	0.00	-12.59	0.90	1.17	5.54	-25.84	0.00	-12.59	Vehicle	Pedestrian	-----	-362.82	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	-----	-----	-----	-----	-----	11.07	11.07
		U$_{29}$ - L$_{29}$	-202.76	8.24	-21.64	0.00	-10.35	0.90	1.17	8.67	-22.77	0.00	-10.35	Vehicle	Pedestrian	-----	-306.64	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	-----	-----	-----	-----	-----	14.71	14.71
		U$_{30}$ - L$_{30}$	-516.45	8.51	-28.95	0.00	-22.02	0.90	1.18	9.06	-30.83	0.00	-22.02	Vehicle	Pedestrian	-----	-740.09	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

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: 2F1 — 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 - Diagonals	Structure 1	U_0 - L_1	87.61	36.24	-9.97	14.00	-4.60	0.90	1.24	40.35	-11.10	14.00	-4.60	Pedestrian	Pedestrian	184.54	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**9.18**	**9.18**	-----	-----
		U_1 - L_2	23.84	27.13	-9.74	9.20	-4.72	0.90	1.24	30.20	-10.85	9.20	-4.72	Vehicle	Pedestrian	70.26	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**13.37**	**13.37**	-----	-----
		U_2 - L_3	-49.05	15.78	-9.54	3.33	-4.33	0.90	1.24	17.57	-10.62	3.33	-4.33	Vehicle	Pedestrian	-----	-83.19	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	-----	-----	-----	-----	-----	**19.08**	**19.08**
		U_3 - L_4	-108.90	7.53	-17.18	0.00	-6.31	0.90	1.24	8.39	-19.13	0.00	-6.31	Vehicle	Vehicle	-----	-166.43	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**11.89**	**11.89**
		U_4 - L_4	153.14	27.80	-3.44	10.12	0.00	0.90	1.24	30.94	-3.83	10.12	0.00	Vehicle	Vehicle	239.31	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**12.00**	**12.00**	-----	-----
		U_5 - L_5	186.37	29.01	-3.08	13.44	0.00	0.90	1.24	32.30	-3.43	13.44	0.00	Pedestrian	Vehicle	301.75	-----	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	-----	-----	-----	-----	-----	**10.15**	**10.15**	-----	-----
		U_6 - L_6	177.53	25.83	-6.11	14.14	0.00	0.90	1.24	28.76	-6.80	14.14	0.00	Pedestrian	Vehicle	286.55	-----	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	-----	-----	-----	-----	-----	**11.03**	**11.03**	-----	-----
		U_7 - L_7	173.15	23.19	-7.16	13.87	0.00	0.90	1.24	25.82	-7.97	13.87	0.00	Pedestrian	Vehicle	276.69	-----	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	-----	-----	-----	-----	-----	**12.03**	**12.03**	-----	-----
		U_8 - L_8	328.03	36.50	-2.21	19.45	-0.14	0.90	1.20	39.35	-2.38	19.45	-0.14	Pedestrian	Vehicle	502.87	-----	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	-----	-----	-----	-----	-----	**10.79**	**10.79**	-----	-----
		U_9 - L_{10}	339.64	38.81	-1.59	19.75	0.00	0.90	1.20	41.84	-1.72	19.75	0.00	Pedestrian	Vehicle	521.59	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**10.11**	**10.11**	-----	-----
		U_{10} - L_{11}	313.15	37.08	-1.15	18.15	0.00	0.90	1.20	39.98	-1.24	18.15	0.00	Pedestrian	Vehicle	482.67	-----	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	-----	-----	-----	-----	-----	**10.28**	**10.28**	-----	-----
		U_{11} - L_{12}	270.62	35.26	-1.15	14.84	0.00	0.90	1.20	38.02	-1.24	14.84	0.00	Pedestrian	Vehicle	420.52	-----	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	-----	-----	-----	-----	-----	**9.59**	**9.59**	-----	-----
		U_{12} - L_{13}	194.11	26.35	-4.14	10.79	0.00	0.90	1.20	28.41	-4.46	10.79	0.00	Pedestrian	Vehicle	303.30	-----	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	-----	-----	-----	-----	-----	**11.15**	**11.15**	-----	-----
		U_{13} - L_{14}	123.52	21.12	-7.79	5.97	0.00	0.90	1.20	22.77	-8.40	5.97	0.00	Vehicle	Vehicle	190.18	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**13.36**	**13.36**	-----	-----
		U_{15} - L_{14}	-16.31	17.51	-12.44	1.47	-2.35	0.90	1.20	18.88	-13.42	1.47	-2.35	Vehicle	Vehicle	3.34	-38.65	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**23.51**	**23.51**	**23.26**	**23.26**
		U_{16} - L_{15}	59.11	20.69	-7.72	6.08	-2.09	0.90	1.20	22.30	-8.33	6.08	-2.09	Vehicle	Vehicle	105.84	-----	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	-----	-----	-----	-----	-----	**16.53**	**16.53**	-----	-----
		U_{17} - L_{16}	172.05	28.47	-4.84	9.93	-1.86	0.90	1.20	30.69	-5.22	9.93	-1.86	Vehicle	Pedestrian	263.57	-----	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	-----	-----	-----	-----	-----	**11.48**	**11.48**	-----	-----
		U_{18} - L_{17}	210.69	28.71	-4.10	12.50	-1.53	0.90	1.20	30.95	-4.42	12.50	-1.53	Pedestrian	Pedestrian	330.39	-----	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	-----	-----	-----	-----	-----	**10.13**	**10.13**	-----	-----
		U_{19} - L_{18}	242.30	28.00	-3.27	13.72	-1.21	0.90	1.20	30.19	-3.53	13.72	-1.21	Pedestrian	Pedestrian	372.08	-----	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	-----	-----	-----	-----	-----	**10.66**	**10.66**	-----	-----
		U_{20} - L_{19}	257.77	24.30	-2.69	15.71	-1.03	0.90	1.20	26.20	-2.90	15.71	-1.03	Pedestrian	Pedestrian	389.59	-----	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	-----	-----	-----	-----	-----	**10.80**	**10.80**	-----	-----
		U_0 - L_1	299.01	34.83	-5.98	14.21	-2.21	0.90	1.18	37.09	-6.36	14.21	-2.21	Pedestrian	Pedestrian	455.39	-----	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	-----	-----	-----	-----	-----	**9.33**	**9.33**	-----	-----
		U_1 - L_2	284.23	35.71	-7.12	14.05	-2.66	0.90	1.18	38.02	-7.58	14.05	-2.66	Pedestrian	Pedestrian	437.19	-----	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	-----	-----	-----	-----	-----	**9.47**	**9.47**	-----	-----
		U_2 - L_3	221.45	32.12	-7.60	11.83	-2.85	0.90	1.18	34.19	-8.09	11.83	-2.85	Pedestrian	Pedestrian	347.71	-----	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	-----	-----	-----	-----	-----	**9.32**	**9.32**	-----	-----
		U_3 - L_4	178.33	31.44	-8.59	10.08	-3.23	0.90	1.18	33.48	-9.14	10.08	-3.23	Vehicle	Pedestrian	275.35	-----	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	-----	-----	-----	-----	-----	**11.91**	**11.91**	-----	-----
		U_4 - L_5	53.52	20.09	-7.59	5.38	-2.87	0.90	1.18	21.39	-8.09	5.38	-2.87	Vehicle	Pedestrian	97.38	-----	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	-----	-----	-----	-----	-----	**17.49**	**17.49**	-----	-----
		U_5 - L_6	-16.50	16.63	-11.85	2.23	-2.92	0.90	1.18	17.70	-12.62	2.23	-2.92	Vehicle	Vehicle	1.56	-37.85	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	-----	-----	-----	**25.09**	**25.09**	**24.51**	**24.51**
		U_6 - L_7	-133.20	8.00	-21.85	0.00	-5.36	0.90	1.18	8.52	-23.26	0.00	-5.36	Vehicle	Vehicle	-----	-203.40	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	**9.72**	**9.72**
		U_7 - L_7	208.77	25.44	-5.85	8.33	0.00	0.90	1.18	27.09	-6.23	8.33	0.00	Vehicle	Vehicle	306.61	-----	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	-----	-----	-----	-----	-----	**14.56**	**14.56**	-----	-----
		U_8 - L_8	289.58	32.07	-1.34	10.70	0.00	0.90	1.18	34.15	-1.42	10.70	0.00	Vehicle	Vehicle	420.85	-----	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	-----	-----	-----	-----	-----	**12.32**	**12.32**	-----	-----
		U_{10} - L_9	327.97	32.72	-1.29	12.66	0.00	0.90	1.18	34.83	-1.38	12.66	0.00	Pedestrian	Vehicle	488.11	-----	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	-----	-----	-----	-----	-----	**9.47**	**9.47**	-----	-----
		U_{11} - L_{10}	349.27	34.09	-4.50	12.70	0.00	0.90	1.18	36.29	-4.79	12.70	0.00	Pedestrian	Vehicle	517.74	-----	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	-----	-----	-----	-----	-----	**10.11**	**10.11**	-----	-----
		U_{12} - L_{11}	358.20	31.56	-4.77	13.52	0.00	0.90	1.18	33.60	-5.08	13.52	0.00	Pedestrian	Vehicle	526.91	-----	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	-----	-----	-----	-----	-----	**10.32**	**10.32**	-----	-----
		U_{13} - L_{12}	307.76	26.53	-9.01	12.26	-0.24	0.90	1.18	28.25	-9.59	12.26	-0.24	Pedestrian	Vehicle	452.74	-----	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	-----	-----	-----	-----	-----	**11.60**	**11.60**	-----	-----
		U_{14} - L_{13}	260.25	21.42	-7.61	11.73	-1.50	0.90	1.18	22.80	-8.11	11.73	-1.50	Pedestrian	Vehicle	383.21	-----	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	-----	-----	-----	-----	-----	**14.98**	**14.98**	-----	-----
		U_{15} - L_{15}	208.41	28.44	-3.88	11.04	-2.52	0.90	1.17	29.92	-4.08	11.04	-2.52	Pedestrian	Pedestrian	324.18	-----	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	-----	-----	-----	-----	-----	**10.80**	**10.80**	-----	-----
		U_{16} - L_{15}	243.53	33.53	-2.69	11.54	-1.48	0.90	1.17	35.27	-2.83	11.54	-1.48	Vehicle	Pedestrian	362.45	-----	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	-----	-----	-----	-----	-----	**11.54**	**11.54**	-----	-----
		U_{16} - L_{17}	255.83	32.51	-3.99	12.23	-0.85	0.90	1.17	34.20	-4.20	12.23	-0.85	Pedestrian	Vehicle	392.94	-----	0.00	27.98	27.9777	923.26	131.71	13.8958	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**9.79**	**9.79**	-----	-----
		U_{17} - L_{18}	235.25	33.40	-4.68	11.35	-0.75	0.90	1.17	35.14	-4.92	11.35	-0.75	Vehicle	Vehicle	351.51	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**11.82**	**11.82**	-----	-----
	Structure 2	U_{18} - L_{19}	212.06	30.66	-5.71	11.09	0.00	0.90	1.17	32.25	-6.00	11.09	0.00	Pedestrian	Vehicle	332.02	-----	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	-----	-----	-----	-----	-----	**10.12**	**10.12**	-----	-----
		U_{19} - L_{20}	168.18	27.68	-6.32	9.14	0.00	0.90	1.17	29.12	-6.65	9.14	0.00	Vehicle	Vehicle	256.50	-----	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	-----	-----	-----	-----	-----	**14.94**	**14.94**	-----	-----
		U_{20} - L_{21}	97.21	20.58	-8.95	6.66	0.00	0.90	1.17	21.65	-9.42	6.66	0.00	Vehicle	Vehicle	154.52	-----	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	-----	-----	-----	-----	-----	**15.26**	**15.26**	-----	-----
		U_{21} - L_{22}	30.55	16.82	-13.85	3.66	-2.18	0.90	1.17	17.70	-14.57	3.66	-2.18	Vehicle	Vehicle	62.73	-----	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**22.44**	**22.44**	-----	-----
		U_{23} - L_{22}	49.81	20.17	-10.21	5.11	-0.95	0.90	1.17	21.22	-10.74	5.11	-0.95	Vehicle	Vehicle	92.35	-----	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	-----	-----	-----	-----	-----	**17.81**	**17.81**	-----	-----
		U_{24} - L_{23}	115.09	23.63	-6.90	8.00	-0.72	0.90	1.17	24.86	-7.25	8.00	-0.72	Vehicle	Vehicle	181.93	-----	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	-----	-----	-----	-----	-----	**12.58**	**12.58**	-----	-----
		U_{25} - L_{24}	179.20	29.68	-6.70	10.10	-0.73	0.90	1.17	31.22	-7.05	10.10	-0.73	Vehicle	Vehicle	273.55	-----	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	-----	-----	-----	-----	-----	**13.58**	**13.58**	-----	-----
		U_{26} - L_{25}	220.95	29.73	-5.88	11.89	-0.57	0.90	1.17	31.28	-6.18	11.89	-0.57	Pedestrian	Vehicle	343.35	-----	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	-----	-----	-----	-----	-----	**9.96**	**9.96**	-----	-----
		U_{27} - L_{26}	234.79	30.91	-4.67	11.44	-0.35	0.90	1.17	32.52	-4.92	11.44	-0.35	Pedestrian	Vehicle	362.38	-----	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	-----	-----	-----	-----	-----	**9.46**	**9.46**	-----	-----
		U_{28} - L_{27}	253.01	29.53	-4.23	12.25	-0.28	0.90	1.17	31.07	-4.45	12.25	-0.28	Pedestrian	Vehicle	385.23	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**10.55**	**10.55**	-----	-----
		U_{29} - L_{28}	215.83	23.93	-8.99	10.20	0.00	0.90	1.17	25.17	-9.46	10.20	0.00	Pedestrian	Vehicle	326.56	-----	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	-----	-----	-----	-----	-----	**12.29**	**12.29**	-----	-----
		U_{30} - L_{29}	179.92	20.18	-7.74	8.89	-0.93	0.90	1.17	21.24	-8.14	8.89	-0.93	Pedestrian	Vehicle	273.06	-----	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	-----	-----	-----	-----	-----	**15.62**	**15.62**	-----	-----
		U_{30} - L_{31}	294.37	29.13	-4.58	12.88	-1.65	0.90	1.18	31.02	-4.87	12.88	-1.65	Pedestrian	Pedestrian	439.74	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**11.01**	**11.01**	-----	-----
		U_{31} - L_{32}	342.78	33.27	-4.07	13.71	-0.55	0.90	1.18	35.42	-4.33	13.71	-0.55	Pedestrian	Vehicle	509.48	-----	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	-----	-----	-----	-----	-----	**8.85**	**8.85**	-----	-----
		U_{32} - L_{33}	363.31	34.52	-2.11	14.15	0.00	0.90	1.18	36.76	-2.24	14.15	0.00	Pedestrian	Vehicle	538.48	-----	0.00	33.27	33.2657	1097.77	131.71	16

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 Spreads
Loading: 2F1
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_0-U_1	-131.25	-22.60	-0.09	0.76	1.95	-5.96	-1.18	10.09	26.01	-79.89
	U_1-U_2	-54.49	-51.15	0.12	1.30	-0.90	-11.43	1.59	17.37	12.08	-152.66
	U_2-U_3	-139.47	-64.72	0.55	1.61	-3.31	-9.75	7.32	25.52	-44.15	-132.72
	U_3-U_4	-52.26	-61.06	1.18	1.89	-4.74	-8.13	15.79	29.29	-63.28	-108.57
	U_4-U_5	-28.29	-50.99	1.32	2.14	-5.74	-6.50	17.63	24.16	-126.82	-28.94
	U_5-U_6	2.12	145.13	1.55	1.72	-8.52	-1.42	20.71	23.03	-113.77	-19.02
	U_6-U_7	54.63	-69.27	1.65	1.65	-7.91	-0.06	21.99	21.16	-166.40	-29.34
	U_7-U_8	-69.92	-603.38	0.98	2.32	-9.97	9.11	13.12	31.03	-125.15	-121.67
	U_8-U_9	531.74	-129.19	3.99	0.36	5.10	-7.45	51.64	4.63	66.01	-56.40
	U_9-U_{10}	68.54	-61.95	1.70	1.00	-4.68	-8.64	12.90	20.35	-12.89	-80.55
	U_{10}-U_{11}	-100.48	-176.70	1.67	1.35	0.72	-8.36	21.65	17.43	9.37	-108.17
	U_{11}-U_{12}	-25.29	-160.14	1.52	1.52	-0.72	-9.11	24.78	13.25	-20.42	-108.17
	U_{12}-U_{13}	-56.66	-218.08	1.50	0.54	0.58	-7.09	19.39	6.92	7.45	-81.73
	U_{13}-U_{14}	-113.90	-344.96	0.89	0.80	-1.13	-16.97	12.81	10.62	-14.02	-218.66
	U_{14}-U_{15}	-287.80	-237.44	1.31	0.75	-18.67	-7.36	16.90	9.73	-219.64	-95.25
	U_{15}-U_{16}	-196.20	-337.71	1.27	0.08	-12.45	-5.64	20.11	1.02	-161.13	-72.91
	U_{16}-U_{17}	-295.83	-154.75	0.41	0.29	-13.02	-3.25	6.11	1.22	-168.46	-42.04
	U_{17}-U_{18}	-189.93	-29.96	0.42	-0.39	-7.79	1.51	5.40	-5.07	-100.74	20.26
	U_{18}-U_{19}	-179.63	-39.55	0.37	-0.42	-6.91	2.22	4.83	-4.82	-92.22	19.00
	U_{19}-U_{20}	-249.78	258.69	0.26	-0.13	-6.24	6.78	3.35	-1.63	-80.71	87.75
	U_{20}-U_{21}	-28.62	-172.11	-0.25	0.61	3.41	-5.81	-3.19	7.79	-13.53	-74.18
	U_{21}-U_{22}	-24.91	-195.34	-0.12	0.55	3.00	-6.68	-3.37	7.39	-14.86	-83.91
	U_{22}-U_{23}	-53.03	-283.30	-0.27	0.84	0.31	-15.50	-3.49	10.67	3.90	-203.14
	U_{23}-U_{24}	-339.68	-284.90	-0.39	0.49	-17.10	-7.36	-4.16	6.77	-41.15	-218.48
	U_{24}-U_{25}	-360.46	-389.97	0.09	1.39	-1.66	-17.27	1.09	17.71	-21.22	-220.61
	U_{25}-U_{26}	-403.42	-377.84	1.04	2.65	-4.28	-16.01	-0.61	27.24	-43.65	-218.68
	U_{26}-U_{27}	-349.63	-208.07	1.93	1.93	-5.82	-20.98	24.62	24.22	-83.34	-268.10
	U_{27}-U_{28}	-253.78	-280.71	1.49	2.07	-21.30	-8.14	19.06	26.42	-272.11	-78.38
	U_{28}-U_{29}	-330.32	-53.64	1.61	0.29	-20.39	-3.24	20.56	31.81	-192.07	-39.60
	U_{29}-U_{30}	-237.02	-39.91	2.15	2.71	-14.54	-4.71	27.48	34.68	-185.81	-40.22
	U_{30}-U_{31}	-116.69	-116.69	2.28	2.28	-13.74	-3.26	33.70	33.70	-40.62	-40.62
	U_{31}-U_{32}	-116.69	170.75	2.28	1.85	-8.62	-6.27	29.16	23.59	-122.95	-3.39
	U_{32}-U_{33}	-24.91	-195.34	1.26	0.55	-6.68	-3.00	24.37	7.39	-144.86	-33.71
	U_{33}-U_{34}	-211.04	1121.68	1.61	2.96	-0.25	-2.37	20.61	37.79	-3.21	-3.44
	U_{34}-U_{35}	1028.71	-26.69	6.67	0.72	13.27	-14.43	84.21	9.12	167.47	-162.12
	U_{35}-U_{36}	9.97	54.62	0.54	0.54	2.65	-2.65	7.28	7.28	-24.52	-24.52
	U_{36}-U_{37}	271.38	25.19	1.68	1.48	-1.33	-8.57	19.84	18.72	-16.78	-108.20
	U_{37}-U_{38}	23.32	23.32	1.86	1.86	-15.98	-15.98	23.32	23.32	-48.73	-48.73
	U_{38}-U_{39}	156.55	-8.67	2.07	1.66	-0.43	-10.61	27.36	20.92	-37.30	-133.89
	U_{39}-U_{40}	48.55	11.41	2.16	1.74	-4.68	-10.62	27.22	21.96	-99.01	-134.13
	U_{40}-U_{41}	26.50	-13.08	2.16	2.16	-13.74	-3.26	33.70	33.70	-40.62	-40.62
	U_{41}-U_{42}	-92.57	-65.85	0.87	0.94	-4.64	-15.88	10.95	11.92	-58.61	-200.43
	U_{42}-U_{43}	-59.44	-161.51	0.94	0.87	-1.99	-9.75	18.98	10.22	-21.96	-105.03
	U_{43}-U_{44}	-48.31	-31.52	0.06	1.77	-10.71	-2.80	0.81	22.28	-135.15	-35.30
	U_{44}-U_{45}	10.77	-13.62	1.35	2.01	-11.10	-1.44	17.03	25.36	-140.08	-18.21
	U_{45}-U_{46}	57.22	-122.85	1.72	1.51	-9.91	0.12	21.66	19.05	-125.08	1.52
	U_{46}-U_{47}	85.41	-4.86	1.83	0.73	-11.07	-3.86	20.63	9.20	-139.77	-48.76
	U_{47}-U_{48}	13.52	806.37	1.99	1.32	-2.32	-13.18	12.50	31.04	-13.39	-124.00
	U_{48}-U_{49}	821.42	-89.58	5.67	0.61	-0.67	-0.29	72.47	7.74	-8.52	-3.74
	U_{49}-U_{50}	29.52	-24.60	0.47	1.64	-1.61	-5.61	4.03	14.61	-18.63	-51.83
	U_{50}-U_{51}	145.61	-52.49	1.97	1.34	-3.90	-10.56	20.07	24.80	16.58	-134.31
	U_{51}-U_{52}	17.52	-88.46	2.08	2.18	-1.83	-9.55	26.55	27.83	-23.39	-121.98
	U_{52}-U_{53}	36.02	-29.26	2.16	2.16	-13.74	-3.26	33.70	33.70	-40.62	-40.62
	U_{53}-U_{54}	-75.13	-230.47	2.19	1.34	-0.60	-13.06	27.53	17.09	-7.72	-166.89
	U_{54}-U_{55}	-209.03	-228.87	1.23	0.60	-1.12	-12.06	23.31	5.97	-18.62	-166.45
	U_{55}-U_{56}	-64.17	-278.54	2.16	1.87	-19.84	-7.97	27.60	23.87	-253.50	-101.76
	U_{56}-U_{57}	-274.89	-185.04	1.36	0.17	-23.05	-11.10	17.40	2.22	-294.51	-141.77
	U_{57}-U_{58}	-274.89	-274.55	1.36	0.17	-23.05	-11.10	17.40	2.22	-294.51	-141.77
	U_{58}-U_{59}	-256.96	-269.01	0.81	0.12	-19.82	-7.73	10.32	1.47	-253.28	-98.75
	U_{59}-U_{60}	-154.35	-69.69	0.79	0.45	-12.61	-3.72	10.16	5.74	-153.43	-47.48
	U_{60}-U_{61}	-154.35	-34.80	0.55	0.14	-8.65	-0.76	6.99	-1.72	-113.01	-9.73
	U_{61}-U_{62}	-40.05	-167.61	0.25	0.24	3.04	-6.58	3.21	3.16	39.29	-85.13
	U_{62}-U_{63}	-10.43	-132.23	-0.19	0.32	3.37	-6.00	-2.47	4.10	4.76	-77.62
	U_{63}-U_{64}	-26.19	-26.19	-0.26	-0.26	1.35	-1.35	-3.31	-3.31	-42.00	-42.00
	U_{64}-U_{65}	-140.08	-260.72	-0.08	0.29	-1.70	-14.08	-0.97	3.73	-22.05	-192.16
	U_{65}-U_{66}	-322.39	-140.23	-0.31	0.12	-4.01	-7.79	-4.05	1.53	-144.37	-60.64
	U_{66}-U_{67}	-187.01	-275.87	0.71	1.00	-6.99	-14.59	9.23	12.87	-90.49	-188.31
	U_{67}-U_{68}	-322.39	-140.23	-0.31	0.12	-4.01	-7.79	-4.05	1.53	-144.37	-60.64
	U_{68}-U_{69}	-147.74	26.71	1.19	1.86	-10.02	-1.59	15.36	24.12	-129.66	-20.55
	U_{69}-U_{70}	-153.72	-61.91	1.36	0.42	-8.12	-2.06	20.36	6.30	-129.66	-20.55
	U_{70}-U_{71}	-102.87	-104.84	0.54	1.57	-12.41	-3.70	6.96	20.30	-160.57	-47.89
	U_{71}-U_{72}	-52.68	-52.68	1.48	1.48	-7.21	-7.21	19.12	19.12	-47.38	-47.38
	U_{72}-U_{73}	-8.37	-30.47	1.21	1.74	-8.89	5.24	16.15	-23.18	-118.79	70.00

ZZ Axis Moment Properties

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I_z (in^4)	I_{xy} (in^4)	Shape Factor	M_p (k-in)	Formula (If Term > F_y*S_{top})	M_y (k-in)
Structure 1	U_0-U_1	-172.15	-16.27	-130.81	-133.24	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880041
	U_1-U_2	-68.77	-43.92	-86.54	-264.95	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880041
	U_2-U_3	-239.77	-111.56	-83.60	-72.35	90.2	90.24	76.71	127.45	2147	1328.6	1.41	4206	0.99880041
	U_3-U_4	-47.41	-112.25	-150.21	-61.77	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880041
	U_4-U_5	-72.85	-31.30	-224.90	-50.34	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880041
	U_5-U_6	20.71	23.03	-113.77	-19.02	90.2	90.24	76.71	127.45	2147	1328.6	1.41	4206	0.99880041
	U_6-U_7	21.99	21.16	-166.40	-29.34	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880041
	U_7-U_8	13.12	31.03	-125.15	-121.67	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880041
	U_8-U_9	51.64	4.63	66.01	-56.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_9-U_{10}	12.90	20.35	-12.89	-80.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{10}-U_{11}	21.65	17.43	9.37	-108.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{11}-U_{12}	24.78	13.25	-20.42	-108.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{12}-U_{13}	19.39	6.92	7.45	-81.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{13}-U_{14}	12.81	10.62	-14.02	-218.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{14}-U_{15}	16.90	9.73	-219.64	-95.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{15}-U_{16}	20.11	1.02	-161.13	-72.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{16}-U_{17}	6.11	1.22	-168.46	-42.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{17}-U_{18}	5.40	-5.07	-100.74	20.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{18}-U_{19}	4.83	-4.82	-92.22	19.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{19}-U_{20}	3.35	-1.63	-80.71	87.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{20}-U_{21}	-3.19	7.79	-13.53	-74.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{21}-U_{22}	-3.37	7.39	-14.86	-83.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{22}-U_{23}	-3.49	10.67	3.90	-203.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{23}-U_{24}	-4.16	6.77	-41.15	-218.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{24}-U_{25}	1.09	17.71	-21.22	-220.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{25}-U_{26}	-0.61	27.24	-43.65	-218.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{26}-U_{27}	24.62	24.22	-83.34	-268.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{27}-U_{28}	19.06	26.42	-272.11	-78.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{28}-U_{29}	20.56	31.81	-192.07	-39.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{29}-U_{30}	27.48	34.68	-185.81	-40.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{30}-U_{31}	33.70	33.70	-40.62	-40.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{31}-U_{32}	29.16	23.59	-122.95	-3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{32}-U_{33}	24.37	7.39	-144.86	-33.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{33}-U_{34}	20.61	37.79	-3.21	-3.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{34}-U_{35}	84.21	9.12	167.47	-162.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{35}-U_{36}	7.28	7.28	-24.52	-24.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{36}-U_{37}	19.84	18.72	-16.78	-108.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{37}-U_{38}	23.32	23.32	-48.73	-48.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{38}-U_{39}	27.36	20.92	-37.30	-133.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{39}-U_{40}	27.22	21.96	-99.01	-134.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{40}-U_{41}	33.70	33.70	-40.62	-40.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{41}-U_{42}	10.95	11.92	-58.61	-200.43	90.2	90.24	144.84	120.41	209.19	3613	2101.0	144	6903
	U_{42}-U_{43}	18.98	10.22	-21.96	-105.03	90.2	90.24	144.84	120.49	209.19	3613	2101.0	144	6903
	U_{43}-U_{44}	0.81	22.28	-135.15	-35.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{44}-U_{45}	17.03	25.36	-140.08	-18.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{45}-U_{46}	21.66	19.05	-125.08	1.52	90.2	90.24	144.84	120.49	209.19	3613	2101.0	144	6903
	U_{46}-U_{47}	20.63	9.20	-139.77	-48.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{47}-U_{48}	12.50	31.04	-13.39	-124.00	90.2	90.24	144.84	120.41	209.19	3613	2101.0	144	6903
	U_{48}-U_{49}	72.47	7.74	-8.52	-3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{49}-U_{50}	4.03	14.61	-18.63	-51.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{50}-U_{51}	20.07	24.80	16.58	-134.31	90.2	90.24	144.84	120.41	209.19	3613	2101.0	144	6903
	U_{51}-U_{52}	26.55	27.83	-23.39	-121.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{52}-U_{53}	33.70	33.70	-40.62	-40.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{53}-U_{54}	27.53	17.09	-7.72	-166.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{54}-U_{55}	23.31	5.97	-18.62	-166.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{55}-U_{56}	27.60	23.87	-253.50	-101.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{56}-U_{57}	17.40	2.22	-294.51	-141.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{57}-U_{58}	17.40	2.22	-294.51	-141.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{58}-U_{59}	10.32	1.47	-253.28	-98.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{59}-U_{60}	10.16	5.74	-153.43	-47.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{60}-U_{61}	6.99	-1.72	-113.01	-9.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{61}-U_{62}	3.21	3.16	39.29	-85.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{62}-U_{63}	-2.47	4.10	4.76	-77.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{63}-U_{64}	-26.19	-26.19	-1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{64}-U_{65}	-140.08	-260.72	-0.08	0.29	-1.70	-14.08	-0.97	3.73	-22.05	-192.16	0.00	0.00	0.00
	U_{65}-U_{66}	-322.39	-140.23	-0.31	0.12	-4.01	-7.79	-4.05	1.53	-144.37	-60.64	0.00	0.00	0.00
	U_{66}-U_{67}	-187.01	-275.87	0.71	1.00	-6.99	-14.59	9.23	12.87	-90.49	-188.31	0.00	0.00	0.00
	U_{67}-U_{68}	-322.39	-140.23	-0.31	0.12	-4.01	-7.79	-4.05	1.53	-144.37	-60.64	0.00	0.00	0.00
	U_{68}-U_{69}	-147.74	26.71	1.19	1.86	-10.02	-1.59	15.36	24.12	-129.66	-20.55	0.00	0.00	0.00
	U_{69}-U_{70}	-153.72	-61.91	1.36	0.42	-8.12	-2.06	20.36	6.30	-129.66	-20.55	0.00	0.00	0.00
	U_{70}-U_{71}	-102.87	-104.84	0.54	1.57	-12.41	-3.70	6.96	20.30	-160.57	-47.89	0.00	0.00	0.00
	U_{71}-U_{72}	-52.68	-52.68	1.48	1.48	-7.21	-7.21	19.12	19.12	-47.38	-47.38	0.00	0.00	0.00
	U_{72}-U_{73}	-8.37	-30.47	1.21	1.74	-8.89	5.24	16.15	-23.18	-118.79	70.00	0.00	0.00	0.00

YY Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-U_1	4.32	-17.87	0.03	0.11	-0.62	0.77	0.36	1.52	-8.24	10.20
	U_1-U_2	-0.23	6.71	-4.45	-58.42	-0.02	0.50	0.33	-1.39	-0.55	0.00
	U_2-U_3	1.30	-1.55	-1.25	-81.78	0.16	0.86	-2.02	-27.84	-3.65	0.00
	U_3-U_4	-7.07	-1.84	7.88	-1.20	0.00	0.00	0.00	0.00	0.00	0.00
	U_4-U_5	-5.75	-1.30	2.47	-2.14	0.00	0.00	0.00	0.00	0.00	0.00
	U_5-U_6	-0.85	-2.57	-0.62	-4.98	0.00	0.00	0.00	0.00	0.00	0.00
	U_6-U_7	-0.98	-2.39	-0.62	-4.74	0.00	0.00	0.00	0.00	0.00	0.00
	U_7-U_8	-2.42	-11.72	-1.29	-10.17	0.00	0.00	0.00	0.00	0.00	0.00
	U_8-U_9	-14.84	-8.17	1.77	31.79	0.00	0.00	0.00	0.00	0.00	0.00
	U_9-U_{10}	-10.54	-11.46	-0.35	-42.09	0.00	0.00	0.00	0.00	0.00	0.00
	U_{10}-U_{11}	-10.82	0.91	27.64	18.23	0.00	0.00	0.00	0.00	0.00	0.00
	U_{11}-U_{12}	-9.34	0.00	28.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{12}-U_{13}	-6.66	-2.41	25.18	25.28	0.00	0.00	0.00	0.00	0.00	0.00
	U_{13}-U_{14}	-8.66	-2.41	25.18	25.28	0.00	0.00	0.00	0.00	0.00	0.00
	U_{14}-U_{15}	-8.00	-1.90	58.27	22.40	0.00	0.00	0.00	0.00	0.00	0.00
	U_{15}-U_{16}	-6.75	1.66	58.21	31.26	0.00	0.00	0.00	0.00	0.00	0.00
	U_{16}-U_{17}	-4.19	1.81	71.14	25.29	0.00	0.00	0.00	0.00	0.00	0.00
	U_{17}-U_{18}	-5.71	1.41	59.00	18.86	0.00	0.00	0.00	0.00	0.00	0.00
	U_{18}-U_{19}	-5.19	1.27	54.49	17.74	0.00	0.00	0.00	0.00	0.00	0.00
	U_{19}-U_{20}	1.05	1.54	21.54	26.01	0.00	0.00	0.00	0.00	0.00	0.00
	U_{20}-U_{21}	0.40	-0.09	-2.68	5.31	0.00	0.00	0.00	0.00	0.00	0.00
	U_{21}-U_{22}	0.34	-0.08	-2.68	5.31	0.00	0.00	0.00	0.00	0.00	0.00
	U_{22}-U_{23}	-47.99	-0.41	-0.44	-0.12	-1.06	-0.04	-63.36	-0.42	-0.28	-0.08
	U_{23}-U_{24}	-19.06	239.87	-0.03	0.52	0.94	2.23	-25.21	320.41	-

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
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

Maximum Axial with Moment Interaction Check

M_2 Information

| Location | Member | ZZ Axis Moments from STAAD: Dead Load Start-End (k-ft) | Live Load (Max) Start-End (k-ft) | Live Load (Min) Start-End (k-ft) | Pedestrian Load (Max) Start-End (k-ft) | Pedestrian Load (Min) Start-End (k-ft) | Lane Reduction & Impact Live Load Start-End (k-ft) | Lane Reduction & Impact Live Load Start-End (k-ft) | Impact Pedestrian Load Max Start-End (k-ft) | Impact Pedestrian Load Min Start-End (k-ft) | ZZ Axis Moment 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_{DS} (in^4) | Shape Factor | M_p (k-in) | Formula 1.8 Term * F$_y$/S_{bb} | M_2 (k-in) | Equivalent Mom. Factor a | $C_{m(a)}$ | $C_{m(b)}$ | Pass | Dead Load Start-End (k-ft) | Live Load (Max) Start-End (k-ft) | Live Load (Min) Start-End (k-ft) | Pedestrian Load (Max) Start-End (k-ft) | Pedestrian Load (Min) Start-End (k-ft) | Lane Reduction & Impact Live Load Start-End (k-ft) | Lane Reduction & Impact Live Load End-(k-ft) | Impact Pedestrian Load Max Start-End (k-ft) | Impact Pedestrian Load Min Start-End (k-ft) | YY Axis Moment from STAAD: Max. Neg. Mom. Start (k-ft) | Max. Neg. Mom. End (k-ft) | S_{bb} (in^3) | S_b (in^3) | Z_y (in^3) | I_{DS} (in^4) | Shape Factor | M_p (k-in) | P_{crit} (kip) | Formula 1.8 Term * F$_y$/S_{bb} | M_2 (k-in) | Equivalent Mom. Factor a | $C_{m(a)}$ | $C_{m(b)}$ | Pass | Axial Force (k) | Tension Moment (k-in) | Total | Pass | Axial Force (k) | Buckle Moment (k-in) | Total | Pass | Axial Force (k) | Fracture Moment (k-in) | Total | Pass | Axial Force (k) | Compression Moment (k-in) | Total | Pass |
|---|---|---|---

Columbia Parkway (HAM-471-0025).

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Load Rating Analysis - Truss Spans
Loading: 2F1
Condition: As-inspected

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

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**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

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

M_z Information

M_y Information

North/Truss Vertices

| Location | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Min) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{top} (in^3) | S_{bot} (in^3) | Z_z (in^3) | I_z (in^4) | 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 $C_{b(LL)}$ | Equivalent Mom. Factor $C_{b(DL)}$ | YY Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Min) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{top} (in^3) | S_{bot} (in^3) | Z_y (in^3) | I_{yy} (in^4) | Shape Factor | M_p (k-in) | σ_{allow} (ksi) | Formula 1.8 Term * F$_y$/S_{bot} | M_y (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor $C_{b(LL)}$ | Equivalent Mom. Factor $C_{b(DL)}$ | Yield: Axial Actual | Yield: Moment Positive | Yield: Total | Pass | Tension: Axial Actual | Tension: Moment Positive | Tension: Total | Pass | Buckle: Axial Actual | Buckle: Moment Positive | Buckle: Total | Pass | Compression: Axial Actual | Compression: Moment Positive | Compression: Total | Pass | Yield: Axial Actual | Yield: Moment Positive | Yield: Total | Pass |
|---|---|---|---

Columbia Parkway (HAM-471-0025).

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: **2F1**
Condition: **As-inspected**

Vehicle Load Factors		Pedestrian Load Factors	
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**** 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 (Max) Start (k-ft)	Lane Reduction & Impact Live Load (Max) End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_1-L_1	-23.63	-7.60	-9.39	0.34	0.11	-0.09	-5.14	-4.57	-1.50	-1.26
	U_1-L_2	-3.36	-8.44	-0.74	0.01	0.16	-0.06	-9.83	0.19	2.11	-0.83
	U_1-L_3	7.94	-13.41	-0.43	-0.36	0.01	-0.56	-5.72	-4.85	0.15	-7.43
	U_1-L_4	-14.57	-18.47	-0.67	-0.84	-0.69	-3.94	-6.94	-2.42	-6.69	-3.94
	L_1-U_2	-37.80	-7.38	-1.64	1.05	-0.23	-0.21	-7.55	-18.85	-52.08	97.03
	L_2-U_2	-73.38	-7.46	-2.45	1.77	-0.31	0.32	-32.74	23.60	-1.37	1.23
	L_2-U_3	-9.33	-102.64	-1.06	2.00	0.15	0.03	-14.19	29.73	-1.95	0.40
	L_3-U_3	-5.01	-118.90	-0.63	1.37	0.17	-0.12	-8.11	17.70	-2.25	-1.51
	L_3-U_4	-78.52	-74.40	-1.48	0.94	0.17	-0.07	-19.17	12.19	2.13	-0.88
	L_4-U_4	-64.28	-73.58	-1.36	0.51	-0.08	-0.25	-17.24	6.61	-0.97	-3.26
	L_4-U_5	-78.52	-74.40	-1.48	0.94	0.17	-0.07	-17.73	9.51	-1.99	-0.08
	L_5-U_5	-65.20	-48.77	-1.18	0.79	-0.07	-0.38	-15.28	10.23	-0.84	-4.96
	L_5-U_6	-24.89	8.62	-0.75	0.11	0.12	-0.43	-9.70	1.42	1.55	-5.58
	L_6-U_6	-0.81	3.28	-0.23	0.03	0.04	-0.15	-4.82	-0.38	0.48	-1.73
	L_6-U_7	-25.30	9.99	-0.92	0.70	-0.01	-0.34	-11.88	9.02	-0.10	-4.39
	L_7-U_7	-66.20	-49.77	-1.17	0.93	0.17	-0.14	-15.11	12.07	2.23	-2.02
	L_7-U_8	-101.98	74.35	-2.20	1.69	0.24	-0.24	-28.52	21.89	3.09	-3.07
	L_8-U_8	-116.65	79.79	-2.45	1.84	0.22	-0.20	-31.72	23.42	2.66	-2.66
	L_8-U_9	-78.53	79.74	-1.51	1.72	0.05	-0.12	-19.89	22.20	0.65	-1.84
	L_9-U_9	-109.78	99.44	-1.57	1.73	0.22	-0.23	-20.08	22.14	2.76	-2.89
	L_9-U_{10}	-89.86	84.11	-1.27	1.40	0.18	-0.26	-17.96	20.77	3.49	-3.09
	L_{10}-U_{10}	-90.94	71.81	-1.23	1.37	0.31	-0.27	-28.48	20.06	4.01	-3.45
	L_{10}-U_{11}	-20.34	53.38	-0.56	0.98	0.17	-0.18	-14.66	11.61	2.50	-2.60
	L_{11}-U_{11}	-20.34	9.87	-0.98	0.70	0.18	-0.40	-12.63	8.96	2.34	-5.10
	L_{11}-U_{12}	-1.38	-1.20	-0.84	-0.01	0.01	-0.16	-10.78	5.38	-0.28	-7.90
	L_{12}-U_{12}	6.85	-23.86	-0.58	0.16	0.47	-0.72	-5.97	-0.22	5.97	-5.20
	L_{12}-U_{13}	-44.40	35.30	-1.11	0.59	-0.11	-0.46	-14.14	7.49	-1.42	-5.85
	L_{13}-U_{13}	-96.54	69.68	-1.89	1.20	-0.14	-0.19	-24.78	18.39	-2.18	-4.60
	L_{13}-U_{14}	-85.37	67.30	-1.74	1.27	-0.19	-0.27	-22.21	16.19	-2.48	-3.48
	L_{14}-U_{14}	-90.17	72.38	-1.82	1.37	-0.21	-0.27	-23.16	17.56	-2.58	-3.44
	L_{14}-U_{15}	-109.81	116.32	-2.27	1.90	0.18	0.02	-27.71	24.24	2.33	-0.28
	L_{15}-U_{15}	-141.94	130.59	-2.81	2.25	0.35	-0.11	-35.91	28.80	4.50	-2.18
	L_{15}-U_{16}	-82.17	133.38	-1.50	2.41	0.26	-0.79	-19.43	22.51	3.41	-2.69
	L_{16}-U_{16}	-11.95	79.18	-1.54	1.78	0.27	-0.21	-19.43	22.51	3.41	-2.69
	L_{16}-U_{17}	-77.25	2.10	-1.77	0.10	0.27	-0.21	-19.43	22.51	3.41	-2.69
	L_{17}-U_{17}	-66.17	89.96	-2.12	1.87	0.14	-0.18	-26.74	23.63	1.79	-2.24
	L_{17}-U_{18}	-66.17	89.96	-2.12	1.87	0.14	-0.18	-26.74	23.63	1.79	-2.24
	L_{18}-U_{18}	-56.05	72.68	-1.83	1.46	0.20	-0.23	-23.15	18.48	2.53	-2.84
	L_{18}-U_{19}	-31.83	37.59	-1.40	0.95	0.03	-0.37	-17.71	12.04	-0.39	-4.68
	L_{19}-U_{19}	-10.04	3.78	-0.71	0.27	0.27	-0.56	-8.96	3.46	3.43	-7.11
	L_{19}-U_{20}	-10.04	3.78	-0.71	0.27	0.27	-0.56	-8.96	3.46	3.43	-7.11
	L_{20}-U_{20}	-19.42	19.66	-0.91	0.76	-0.09	-0.29	-11.48	9.65	-1.16	-3.71
	L_{20}-U_{21}	-38.76	34.60	-1.30	1.30	-0.15	-0.12	-14.40	11.76	-1.92	-4.12
	L_{21}-U_{21}	-46.48	58.24	-2.04	1.65	0.27	-0.30	-25.69	20.87	3.40	-3.79
	L_{21}-U_{22}	-54.27	68.32	-2.02	1.78	0.22	-0.27	-25.50	22.45	2.79	-3.45
	L_{22}-U_{22}	-54.27	68.32	-2.02	1.78	0.22	-0.27	-25.50	22.45	2.79	-3.45
	L_{22}-U_{23}	-69.31	71.94	-2.07	2.37	0.15	-0.18	-33.72	29.88	1.92	-2.31
	L_{23}-U_{23}	-69.31	71.94	-2.07	2.37	0.15	-0.18	-33.72	29.88	1.92	-2.31
	L_{23}-U_{24}	-38.18	54.54	-1.50	1.91	0.36	-0.29	-19.14	24.45	4.14	-3.61
	L_{24}-U_{24}	-38.18	54.54	-1.50	1.91	0.36	-0.29	-19.14	24.45	4.14	-3.61
	L_{24}-U_{25}	-77.08	85.18	-2.64	1.56	0.28	-0.12	-26.03	19.97	3.62	-1.47
	L_{25}-U_{25}	-78.35	71.28	-1.79	1.35	0.25	-0.02	-22.63	17.25	3.23	-0.23
	L_{25}-U_{26}	-76.52	55.14	-2.03	1.20	-0.07	-0.42	-25.90	15.38	-0.95	-5.40
	L_{26}-U_{26}	-76.52	55.14	-2.03	1.20	-0.07	-0.42	-25.90	15.38	-0.95	-5.40
	L_{26}-U_{27}	-6.27	-17.63	-0.53	0.09	0.29	-0.68	-6.73	1.15	3.64	-8.70
	L_{27}-U_{27}	-6.27	-17.63	-0.53	0.09	0.29	-0.68	-6.73	1.15	3.64	-8.70
	L_{28}-U_{28}	1.05	-9.86	-0.71	0.46	0.14	-0.56	-9.02	5.92	1.79	-7.91
	L_{28}-U_{29}	-33.68	19.58	-1.29	0.98	0.24	-0.21	-16.52	12.56	3.02	-2.67
	L_{29}-U_{29}	-33.68	19.58	-1.29	0.98	0.24	-0.21	-16.52	12.56	3.02	-2.67
	L_{29}-U_{30}	-78.90	59.78	-2.68	1.87	0.32	-0.29	-32.98	23.89	4.04	-3.62
	L_{30}-U_{30}	-78.90	59.78	-2.68	1.87	0.32	-0.29	-32.98	23.89	4.04	-3.62
	L_{30}-U_{31}	-98.27	63.59	-1.96	1.68	0.13	-0.13	-25.29	21.75	1.71	-1.64
	L_{31}-U_{31}	-98.27	63.59	-1.96	1.68	0.13	-0.13	-25.29	21.75	1.71	-1.64
	L_{31}-U_{32}	-90.31	64.36	-1.93	1.47	0.16	-0.15	-24.92	19.06	2.06	-1.80
	L_{32}-U_{32}	-90.31	64.36	-1.93	1.47	0.16	-0.15	-24.92	19.06	2.06	-1.80
	L_{32}-U_{33}	-38.98	50.40	-1.89	1.40	0.19	-0.25	-25.27	18.74	2.39	-2.83
	L_{33}-U_{33}	-38.98	50.40	-1.89	1.40	0.19	-0.25	-25.27	18.74	2.39	-2.83
	L_{33}-U_{34}	-7.78	19.68	-0.55	-0.11	-0.13	-0.27	-11.29	-1.50	-1.72	-0.66
	L_{34}-U_{34}	-7.78	19.68	-0.55	-0.11	-0.13	-0.27	-11.29	-1.50	-1.72	-0.66
	L_{34}-U_{35}	2.61	-8.77	-0.59	-0.20	-0.43	-0.43	-7.88	-1.24	-2.62	-6.78
	L_{35}-U_{35}	2.61	-8.77	-0.59	-0.20	-0.43	-0.43	-7.88	-1.24	-2.62	-6.78
	L_{35}-U_{36}	-5.73	0.35	-0.10	0.25	0.06	-0.09	-7.45	2.10	0.22	-3.92
	L_{36}-U_{36}	-5.73	0.35	-0.10	0.25	0.06	-0.09	-7.45	2.10	0.22	-3.92

Location	Member	Lane Reduction & Impact Live Load (Max) Start (k-ft)	Lane Reduction & Impact Live Load (Max) End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_1-L_1	-1.20	-0.96	-0.22	-0.18
	U_1-L_2	-2.36	0.04	0.00	0.00
	U_1-L_3	-1.37	-1.16	-0.03	0.00
	U_1-L_4	-1.67	-0.58	-1.61	-0.95
	L_1-U_2	-1.81	-4.52	23.31	-20.89
	L_2-U_2	-7.85	5.66	-0.33	0.30
	L_2-U_3	-3.41	7.13	-0.47	0.10
	L_3-U_3	-1.94	-4.24	4.25	-3.64
	L_3-U_4	-4.60	2.93	-0.21	0.21
	L_4-U_4	-4.13	1.59	-0.23	-0.06
	L_4-U_5	-4.25	2.28	-0.48	0.04
	L_5-U_5	-3.66	2.45	-0.20	-0.09
	L_5-U_6	-2.33	0.34	-0.11	-0.10
	L_6-U_6	-1.15	-0.09	0.12	-0.04
	L_6-U_7	-2.70	2.16	-0.02	-0.08
	L_7-U_7	-3.62	2.89	0.53	-0.48
	L_7-U_8	-6.83	5.24	0.74	-0.59
	L_8-U_8	-7.60	5.61	0.53	-0.44
	L_8-U_9	-4.77	5.32	0.16	-0.44
	L_9-U_9	-4.81	5.35	0.66	-0.70
	L_9-U_{10}	-4.30	4.98	0.84	-0.74
	L_{10}-U_{10}	-6.82	4.80	0.96	-0.83
	L_{10}-U_{11}	-3.51	2.78	0.60	-1.22
	L_{11}-U_{11}	-3.03	2.15	0.56	-1.22
	L_{11}-U_{12}	-2.58	1.29	-0.07	-1.90
	L_{12}-U_{12}	1.64	-5.72	1.43	-1.25
	L_{12}-U_{13}	-3.39	1.80	-0.34	-1.40
	L_{13}-U_{13}	-5.78	4.41	-0.05	-0.05
	L_{13}-U_{14}	-5.32	3.88	-0.05	-0.06
	L_{14}-U_{14}	-5.54	4.21	-0.05	-0.06
	L_{14}-U_{15}	-6.57	5.81	0.54	-0.56
	L_{15}-U_{15}	-8.61	6.91	1.08	-0.91
	L_{15}-U_{16}	-4.66	5.40	0.82	-0.64
	L_{16}-U_{16}	-4.66	5.40	0.82	-0.64
	L_{16}-U_{17}	-4.66	5.40	0.82	-0.64
	L_{17}-U_{17}	-6.41	4.61	0.86	-0.54
	L_{17}-U_{18}	-6.41	4.61	0.86	-0.54
	L_{18}-U_{18}	-5.54	3.98	0.74	-0.47
	L_{18}-U_{19}	-4.27	2.89	0.24	-0.90
	L_{19}-U_{19}	-2.47	1.71	0.65	-0.85
	L_{19}-U_{20}	-2.47	1.71	0.65	-0.85
	L_{20}-U_{20}	-2.77	1.99	0.74	-0.96
	L_{20}-U_{21}	-3.98	2.86	1.06	-1.38
	L_{21}-U_{21}	-4.48	3.22	1.19	-1.55
	L_{21}-U_{22}	-4.20	3.02	1.12	-1.45
	L_{22}-U_{22}	-4.20	3.02	1.12	-1.45
	L_{22}-U_{23}	-5.07	3.64	1.35	-1.75
	L_{23}-U_{23}	-5.07	3.64	1.35	-1.75
	L_{23}-U_{24}	-3.69	2.65	0.98	-1.28
	L_{24}-U_{24}	-3.69	2.65	0.98	-1.28
	L_{24}-U_{25}	-4.03	2.89	1.07	-1.39
	L_{25}-U_{25}	-3.51	2.52	0.93	-1.21
	L_{26}-U_{26}	-3.51	2.52	0.93	-1.21
	L_{26}-U_{27}	-1.04	0.75	0.28	-0.36
	L_{27}-U_{27}	-1.04	0.75	0.28	-0.36
	L_{28}-U_{28}	-1.39	1.00	0.37	-0.48
	L_{28}-U_{29}	-2.55	1.83	0.68	-0.88
	L_{29}-U_{29}	-2.55	1.83	0.68	-0.88
	L_{29}-U_{30}	-4.08	2.93	1.09	-1.41
	L_{30}-U_{30}	-4.08	2.93	1.09	-1.41
	L_{30}-U_{31}	-3.93	2.82	1.05	-1.36
	L_{31}-U_{31}	-3.93	2.82	1.05	-1.36
	L_{31}-U_{32}	-3.84	2.76	1.02	-1.33
	L_{32}-U_{32}	-3.84	2.76	1.02	-1.33
	L_{32}-U_{33}	-3.89	2.79	1.04	-1.34
	L_{33}-U_{33}	-3.89	2.79	1.04	-1.34
	L_{33}-U_{34}	-1.15	-0.08	0.13	-0.04
	L_{34}-U_{34}	-1.15	-0.08	0.13	-0.04
	L_{34}-U_{35}	-1.61	-0.12	0.18	-0.06
	L_{35}-U_{35}	-1.61	-0.12	0.18	-0.06
	L_{35}-U_{36}	-1.32	0.95	0.35	-0.13
	L_{36}-U_{36}	-1.32	0.95	0.35	-0.13

Rcc. Pos. Mom.

Member	Start (k-in)	End (k-in)
U_1-L_1	-37.40	15.62
U_1-L_2	-17.15	-17.73
U_1-L_3	-13.33	-17.73
U_1-L_4	2.87	-23.74
L_1-U_2	-30.56	-27.16
U_2-L_2	-77.55	118.85
L_2-U_3	-137.97	132.79
U_3-L_3	-106.37	168.19
L_3-U_4	-106.37	168.19
U_4-L_4	-165.38	139.25
U_4-L_5	-155.24	119.43
U_5-L_5	-80.78	112.57
U_5-L_6	-42.73	24.47
U_6-L_6	-16.77	8.38
U_6-L_7	-47.78	-28.30
U_7-L_7	-76.10	55.62
L_7-U_8	-156.93	114.33
U_8-L_8	-139.85	108.53
L_8-U_9	-151.91	142.50
U_9-L_9	-173.98	182.73
L_9-U_{10}	-231.21	257.21
U_{10}-L_{10}	-111.14	213.57
L_{10}-U_{11}	-40.80	132.20
U_{11}-L_{11}	-139.83	132.10
L_{11}-U_{12}	-120.79	147.67
U_{12}-L_{12}	-102.96	118.39
L_{12}-U_{13}	-64.01	64.53
U_{13}-L_{13}	-156.93	114.33
L_{13}-U_{14}	-139.85	108.53
U_{14}-L_{14}	-151.91	142.50
L_{14}-U_{15}	-124.45	84.22
U_{15}-L_{15}	-231.21	257.21
L_{15}-U_{16}	-111.14	213.57
U_{16}-L_{16}	-40.80	132.20
L_{16}-U_{17}	-139.83	132.10
U_{17}-L_{17}	-120.79	147.67
L_{17}-U_{18}	-102.96	118.39
U_{18}-L_{18}	-64.01	64.53
L_{18}-U_{19}	-44.05	29.20
U_{19}-L_{19}	-24.71	9.61
L_{19}-U_{20}	-22.05	8.57
U_{20}-L_{20}	-40.16	37.96
L_{20}-U_{21}	-14.40	11.76
U_{21}-L_{21}	-63.82	102.64
L_{21}-U_{22}	-103.71	118.00
U_{22}-L_{22}	-103.71	118.00
L_{22}-U_{23}	-133.94	132.37
U_{23}-L_{23}	-133.94	132.37
L_{23}-U_{24}	-77.91	154.95
U_{24}-L_{24}	-77.91	154.95
L_{24}-U_{25}	-134.04	134.69
U_{25}-L_{25}	-131.53	115.09
L_{25}-U_{26}	-133.28	91.68
U_{26}-L_{26}	-133.28	91.68
L_{26}-U_{27}	-66.84	61.43
U_{27}-L_{27}	-66.84	61.43
L_{28}-U_{28}	-50.37	3.12
U_{28}-L_{29}	-32.03	20.48
L_{29}-U_{29}	-65.26	41.78
U_{29}-L_{30}	-123.25	87.47
L_{30}-U_{30}	-140.44	108.77
U_{30}-L_{31}	-160.56	136.94
L_{31}-U_{31}	-160.56	136.94
U_{31}-L_{32}	-149.79	108.44
L_{32}-U_{32}	-152.97	108.19
U_{32}-L_{33}	-63.79	39.85
L_{33}-U_{33}	-63.79	39.85
U_{33}-L_{34}	-13.77	-23.32
L_{34}-U_{34}	-13.77	-23.32
U_{34}-L_{35}	-60.03	37.34
L_{35}-U_{35}	-60.03	37.34
U_{35}-L_{36}	-8.17	4.71
L_{36}-U_{36}	-8.47	-0.56

Max. Neg. Mom.

Member	Start (k-in)	End (k-in)
U_1-L_1	-37.40	15.62
U_1-L_2	-17.15	-17.73
U_1-L_3	-13.33	-17.73
U_1-L_4	2.87	-23.74
L_1-U_2	-30.56	-27.16
U_2-L_2	-77.55	118.85
L_2-U_3	-137.97	132.79
U_3-L_3	-106.37	168.19
L_3-U_4	-106.37	168.19
U_4-L_4	-165.38	139.25
U_4-L_5	-155.24	119.43
U_5-L_5	-80.78	112.57
U_5-L_6	-42.73	24.47
U_6-L_6	-16.77	8.38
U_6-L_7	-47.78	-28.30
U_7-L_7	-76.10	55.62
L_7-U_8	-156.93	114.33
U_8-L_8	-139.85	108.53
L_8-U_9	-151.91	142.50
U_9-L_9	-173.98	182.73
L_9-U_{10}	-231.21	257.21
U_{10}-L_{10}	-111.14	213.57
L_{10}-U_{11}	-40.80	132.20
U_{11}-L_{11}	-139.83	132.10
L_{11}-U_{12}	-120.79	147.67
U_{12}-L_{12}	-102.96	118.39
L_{12}-U_{13}	-64.01	64.53
U_{13}-L_{13}	-156.93	114.33
L_{13}-U_{14}	-139.85	108.53
U_{14}-L_{14}	-151.91	142.50
L_{14}-U_{15}	-124.45	84.22
U_{15}-L_{15}	-231.21	257.21
L_{15}-U_{16}	-111.14	213.57
U_{16}-L_{16}	-40.80	132.20
L_{16}-U_{17}	-139.83	132.10
U_{17}-L_{17}	-120.79	147.67
L_{17}-U_{18}	-102.96	118.39
U_{18}-L_{18}	-64.01	64.53
L_{18}-U_{19}	-44.05	29.20
U_{19}-L_{19}	-24.71	9.61
L_{19}-U_{20}	-22.05	8.57
U_{20}-L_{20}	-40.16	37.96
L_{20}-U_{21}	-14.40	11.76
U_{21}-L_{21}	-63.82	102.64
L_{21}-U_{22}	-103.71	118.00
U_{22}-L_{22}	-103.71	118.00
L_{22}-U_{23}	-133.94	132.37
U_{23}-L_{23}	-133.94	132.37
L_{23}-U_{24}	-77.91	154.95
U_{24}-L_{24}	-77.91	154.95
L_{24}-U_{25}	-134.04	134.69
U_{25}-L_{25}	-131.53	115.09
L_{25}-U_{26}	-133.28	91.68
U_{26}-L_{26}	-133.28	91.68
L_{26}-U_{27}	-66.84	61.43
U_{27}-L_{27}	-66.84	61.43
L_{28}-U_{28}	-50.37	3.12
U_{28}-L_{29}	-32.03	20.48
L_{29}-U_{29}	-65.26	41.78
U_{29}-L_{30}	-123.25	87.47
L_{30}-U_{30}	-140.44	108.77
U_{30}-L_{31}	-160.56	136.94
L_{31}-U_{31}	-160.56	136.94
U_{31}-L_{32}	-149.79	108.44
L_{32}-U_{32}	-152.97	108.19
U_{32}-L_{33}	-63.79	39.85
L_{33}-U_{33}	-63.79	39.85
U_{33}-L_{34}	-13.77	-23.32
L_{34}-U_{34}	-13.77	-23.32
U_{34}-L_{35}	-60.03	37.34
L_{35}-U_{35}	-60.03	37.34
U_{35}-L_{36}	-8.17	4.71
L_{36}-U_{36}	-8.47	-0.56

Shape Factor

Member	a	C_{min}	C_{max}
U_1-L_1	1.666	.857	1.5
U_1-L_2	1.5	1.5	1.5
U_1-L_3	1.5	1.5	1.5
U_1-L_4	1.5	1.5	1.5
L_1-U_2	1.5	1.5	1.5
U_2-L_2	1.5	1.5	1.5
L_2-U_3	1.5	1.5	1.5
U_3-L_3	1.5	1.5	1.5
L_3-U_4	1.5	1.5	1.5
U_4-L_4	1.5	1.5	1.5
L_4-U_5	1.5	1.5	1.5
U_5-L_5	1.5	1.5	1.5
L_5-U_6	1.5	1.5	1.5
U_6-L_6	1.5	1.5	1.5
L_6-U_7	1.5	1.5	1.5
U_7-L_7	1.5	1.5	1.5
L_7-U_8	1.5	1.5	1.5
U_8-L_8	1.5	1.5	1.5
L_8-U_9	1.5	1.5	1.5
U_9-L_9	1.5	1.5	1.5
L_9-U_{10}	1.5	1.5	1.5
U_{10}-L_{10}	1.5	1.5	1.5
L_{10}-U_{11}	1.5	1.5	1.5
U_{11}-L_{11}	1.5	1.5	1.5
L_{11}-U_{12}	1.5	1.5	1.5
U_{12}-L_{12}	1.5	1.5	1.5
L_{12}-U_{13}	1.5	1.5	1.5
U_{13}-L_{13}	1.5	1.5	1.5
L_{13}-U_{14}	1.5	1.5	1.5
U_{14}-L_{14}	1.5	1.5	1.5
L_{14}-U_{15}	1.5	1.5	1.5
U_{15}-L_{15}	1.5	1.5	1.5
L_{15}-U_{16}	1.5	1.5	1.5
U_{16}-L_{16}	1.5	1.5	1.5
L_{16}-U_{17}	1.5	1.5	1.5
U_{17}-L_{17}	1.5	1.5	1.5
L_{17}-U_{18}	1.5	1.5	1.5
U_{18}-L_{18}	1.5	1.5	1.5
L_{18}-U_{19}	1.5	1.5	1.5
U_{19}-L_{19}	1.5	1.5	1.5
L_{19}-U_{20}	1.5	1.5	1.5
U_{20}-L_{20}	1.5	1.5	1.5
L_{20}-U_{21}	1.5	1.5	1.5
U_{21}-L_{21}	1.5	1.5	1.5
L_{21}-U_{22}	1.5	1.5	1.5
U_{22}-L_{22}	1.5	1.5	1.5
L_{22}-U_{23}	1.5	1.5	1.5
U_{23}-L_{23}	1.5	1.5	1.5
L_{23}-U_{24}	1.5	1.5	1.5
U_{24}-L_{24}	1.5	1.5

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
Condition: As-inspected

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

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

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

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

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0 - U_1	-79.17	-0.72	0.54	0.60	3.16	-10.39	5.98	6.66	35.22	-115.66
	U_1 - U_2	-46.62	-50.29	0.11	-1.24	-1.94	-12.12	-1.26	-13.76	-20.74	-136.20
	U_2 - L_1	-112.29	66.52	0.58	1.56	-1.78	-11.14	6.41	17.33	-19.78	-124.01
	L_1 - U_3	-15.71	66.12	0.98	1.45	-0.81	-10.34	-6.25	17.33	-44.84	-124.01
	U_3 - L_2	-9.25	61.62	0.97	1.46	-15.38	-3.92	10.79	16.29	-115.57	-43.69
	L_2 - U_4	42.76	120.21	1.11	1.46	-9.96	-0.48	12.34	16.23	-110.90	-5.33
	U_4 - L_3	42.76	120.21	1.11	1.46	-9.96	-0.48	12.34	16.23	-110.90	-5.33
	L_3 - U_5	-47.38	526.15	0.20	3.59	-11.52	10.15	2.24	39.93	-129.23	112.98
	U_5 - L_4	475.03	-124.35	3.06	0.16	6.69	-9.77	84.48	-139.37	711.25	-105.38
	L_4 - U_6	46.82	20.59	0.91	1.10	0.66	-6.91	9.81	11.86	7.13	-74.92
	U_6 - L_5	64.59	-138.78	1.40	0.87	0.53	-6.79	-3.14	5.33	3.51	-164.60
	L_5 - U_7	27.91	-140.51	1.51	0.70	-0.31	-10.16	16.24	7.49	-3.37	-109.43
	U_7 - L_6	-106.12	-155.13	1.09	0.39	1.28	-10.82	11.77	4.16	13.81	-116.67
	L_6 - U_8	-138.04	-302.90	0.72	0.76	3.33	-19.88	7.76	4.13	39.11	-204.66
	U_8 - L_7	-245.80	-183.07	0.74	0.55	-18.82	-6.15	8.02	5.95	-202.90	-66.28
	L_7 - U_9	-123.51	-327.01	0.91	0.13	-13.24	-5.60	10.00	1.44	-147.77	-423.29
	U_9 - L_8	-269.97	-145.19	0.35	0.04	-14.06	-3.64	3.74	0.44	-151.62	-39.28
	L_8 - U_{10}	-154.36	-67.49	0.37	-0.17	-12.06	-2.42	3.97	-1.84	-130.55	-90.07
	U_{10} - L_9	-170.82	-20.32	0.28	-0.03	-6.21	1.26	3.03	-0.32	-66.93	13.62
	L_9 - U_{11}	-186.23	23.42	0.31	-0.26	-5.91	4.41	3.36	-2.82	-53.72	47.55
	U_{11} - L_{10}	14.62	-238.71	0.15	0.75	1.16	-10.25	0.00	0.00	0.00	0.00
	L_{10} - U_{12}	-71.24	-180.99	-0.12	0.28	0.85	-12.30	-1.24	9.38	2.85	-150.93
	U_{12} - L_{11}	-327.34	-325.40	0.58	1.25	-3.42	-17.77	6.22	13.33	-36.39	-269.20
	L_{11} - U_{13}	-336.58	-367.31	0.73	1.30	-6.72	-20.77	8.11	14.96	-74.89	-303.27
	U_{13} - L_{12}	-396.14	-197.74	1.23	2.39	-9.67	-17.08	13.14	25.40	-74.21	-197.06
	L_{12} - U_{14}	-344.18	-179.44	1.84	1.61	-4.22	-25.06	19.61	17.10	-44.89	-266.80
	U_{14} - L_{13}	-226.16	-295.72	1.35	1.04	-0.68	-25.12	14.34	11.09	-25.00	-270.08
	L_{13} - U_{15}	-350.21	-90.73	1.49	2.05	-15.28	-6.88	15.50	21.96	-182.64	-73.26
	U_{15} - L_{14}	-227.50	-231.53	1.81	1.33	-10.03	-20.74	19.22	14.19	-107.96	-220.92
	L_{14} - U_{16}	-167.09	-39.84	1.94	1.39	-11.69	-3.53	20.62	20.60	-124.45	-37.61
	U_{16} - L_{15}	-109.78	170.74	1.72	1.59	-11.47	-3.01	18.88	24.03	-98.31	181.79
	L_{15} - U_{17}	-8.75	-79.50	1.25	1.16	-7.73	-12.72	13.66	12.34	-108.96	-74.39
	U_{17} - L_{16}	-261.01	1266.00	0.18	6.11	-0.32	-0.63	1.95	65.01	-3.39	6.75
	L_{16} - U_{18}	-1192.78	1.62	6.29	0.00	33.80	-1.98	365.17	0.00	1.62	0.00
	U_{18} - L_{17}	-25.29	11.66	0.07	0.99	-2.58	-12.07	3.93	10.37	-37.03	126.99
	L_{17} - U_{19}	-25.29	11.66	0.07	0.99	-2.58	-12.07	3.93	10.37	-37.03	126.99
	U_{19} - L_{18}	-150.60	33.06	1.50	1.23	0.00	-11.67	15.82	12.96	0.01	-122.76
	L_{18} - U_{20}	-147.31	4.37	1.79	1.25	0.12	-12.52	16.36	13.15	1.26	-131.75
	U_{20} - L_{19}	-21.55	-15.55	1.49	1.06	-0.13	-13.00	17.75	11.15	-1.36	-136.78
	L_{19} - U_{21}	-31.69	-33.99	1.43	0.27	-1.26	-14.68	15.02	2.86	-13.25	-154.43
	U_{21} - L_{20}	-86.03	-71.70	1.88	0.71	-0.97	-13.76	19.91	7.52	-10.26	-144.76
	L_{20} - U_{22}	-60.96	-66.98	0.57	0.78	-16.98	-5.89	5.97	8.17	-178.67	-61.94
	U_{22} - L_{21}	-21.10	-65.15	0.38	0.68	-15.64	-6.42	4.00	7.16	-164.64	-67.59
	L_{21} - U_{23}	-33.01	-28.69	1.30	1.68	-15.06	-6.41	13.65	17.72	-158.41	-67.41
	U_{23} - L_{22}	-15.13	113.76	1.23	1.78	-13.23	-1.64	12.85	18.75	-139.21	-17.30
	L_{22} - U_{24}	-13.38	124.16	1.26	1.78	-13.23	-1.64	13.38	18.75	-139.21	-17.30
	U_{24} - L_{23}	-2.74	209.64	1.01	1.34	-13.04	-2.94	10.66	14.11	-137.14	-30.89
	L_{23} - U_{25}	-64.59	-138.78	1.40	0.87	0.53	-6.79	-3.14	5.33	3.51	-164.60
	U_{25} - U_{26}	-122.51	1157.56	0.14	6.29	-17.67	11.38	-157.31	1590.89	-460.98	119.77
	L_{24} - U_{26}	1154.91	-197.36	4.75	0.63	13.41	-16.23	50.52	6.68	142.71	-172.76
	U_{26} - L_{25}	-87.84	62.30	0.90	1.26	-0.61	-15.90	6.49	16.45	49.26	-169.36
	L_{25} - U_{27}	178.89	-59.81	1.60	1.70	0.07	-12.03	17.00	18.24	1.06	-128.07
	U_{27} - L_{26}	-21.55	-15.55	1.49	1.06	-0.13	-13.00	17.75	11.15	-1.36	-136.78
	L_{26} - U_{28}	68.66	-178.68	2.14	1.70	0.07	-15.49	22.76	18.10	0.72	-163.95
	U_{28} - L_{27}	-87.84	62.30	0.90	1.26	-0.61	-15.90	6.49	16.45	49.26	-169.36
	L_{27} - U_{29}	-236.51	-153.10	1.63	1.42	-2.60	-24.32	17.32	15.14	-26.57	-208.89
	U_{29} - L_{28}	68.66	-178.68	2.14	1.70	0.07	-15.49	22.76	18.10	0.72	-163.95
	L_{28} - U_{30}	-159.54	-360.07	1.15	1.05	-15.45	-9.97	12.30	11.20	-164.47	-249.01
	U_{30} - L_{29}	-350.37	-386.86	1.28	0.35	-25.80	-11.49	13.59	3.76	-274.72	-122.28
	L_{29} - U_{31}	-279.39	-117.76	0.86	-0.23	-16.04	-1.42	9.16	-2.41	-170.72	-15.10
	U_{31} - L_{30}	-282.51	-37.61	0.54	-0.51	-15.97	-2.83	6.81	-3.93	-92.76	-47.88
	L_{30} - U_{32}	-186.32	-74.12	0.64	-0.37	-7.77	-4.50	6.81	-3.93	-92.76	-47.88
	U_{32} - L_{31}	-139.08	-187.97	-0.05	0.40	2.33	-7.41	-0.55	4.30	25.15	-79.84
	L_{31} - U_{33}	-47.38	-119.85	-0.07	0.40	2.33	-7.41	-0.55	4.30	25.15	-79.84
	U_{33} - L_{32}	-52.58	-129.17	-0.10	0.51	2.55	-12.77	-1.08	5.49	27.92	-137.64
	L_{32} - U_{34}	-52.58	-129.17	-0.10	0.51	2.55	-12.77	-1.08	5.49	27.92	-137.64
	U_{34} - L_{33}	-277.84	-111.68	0.39	0.99	-6.19	-11.33	4.17	10.67	-66.71	-122.19
	L_{33} - U_{35}	-166.98	-243.52	0.68	0.93	-1.02	-19.67	7.32	10.03	-14.23	-213.60
	U_{35} - L_{34}	-287.74	-127.82	0.86	0.65	-19.41	-5.32	7.09	6.61	-209.26	-67.39
	L_{34} - U_{36}	-141.43	-113.94	0.57	1.09	-14.98	-3.48	6.12	11.33	-161.48	-37.01
	U_{36} - L_{35}	-282.51	-37.61	0.54	-0.51	-15.97	-2.83	6.81	-3.93	-92.76	-47.88
	L_{35} - U_{37}	-186.32	-74.12	0.64	-0.37	-7.77	-4.50	6.81	-3.93	-92.76	-47.88
	U_{37} - L_{36}	-136.67	-67.04	0.22	3.57	-9.67	-6.36	1.25	38.51	-104.24	-68.56
	L_{36} - U_{38}	-497.26	-34.44	3.83	0.13	11.37	-13.26	42.65	1.45	126.59	-147.58
	U_{38} - L_{37}	-113.04	-44.48	1.56	1.04	1.94	-9.66	17.31	11.54	21.56	-107.49
	L_{37} - U_{39}	-59.35	-15.11	1.49	0.93	-0.26	-11.63	16.53	10.36	-2.94	-129.47
	U_{39} - L_{38}	-287.74	-127.82	0.86	0.65	-19.41	-5.32	7.09	6.61	-209.26	-67.39
	L_{38} - U_{40}	-141.43	-113.94	0.57	1.09	-14.98	-3.48	6.12	11.33	-161.48	-37.01
	U_{40} - L_{39}	-59.35	-15.11	1.49	0.93	-0.26	-11.63	16.53	10.36	-2.94	-129.47
	L_{39} - U_{41}	80.30	-119.58	1.48	0.30	-15.96	-3.89	16.45	3.36	-122.01	-42.86
	U_{41} - U_{42}	-24.63	-27.07	0.91	0.08	-10.41	-2.30	10.14	0.88	-115.89	-25.63
	L_{41} - U_{42}	29.38	-160.66	0.63	-0.19	-6.85	3.85	7.04	-2.28	-75.22	42.91

ZZ Axis Moment Properties

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	S_{bb} (in^3)	S_{tb} (in^3)	S_{tb} (in^3)	J (in^4)	I_{xx} (in^4)	Shape Factor	M_p (k-in)	Formula I & Y from "F:\"Sa	M_u (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(x)}$	Equivalent Mom. Factor $C_{m(y)}$
Structure 1	U_0 - U_1	-83.40	7.71	-46.43	-151.30	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	0.300	0.72	0.72
	U_1 - U_2	-89.31	-50.29	-49.73	-208.11	-5.10	-88.56	-202.14	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	0.284	0.71
	U_2 - L_1	-137.64	130.01	-171.69	-48.74	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	0.284	0.71
	L_1 - U_3	-6.25	130.01	-48.84	-48.74	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	-0.058	0.58
	U_3 - L_2	2.00	191.28	-162.27	23.92	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	-0.144	0.54
	L_2 - U_4	71.62	177.37	-88.56	149.33	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	0.404	0.76
	U_4 - L_3	71.62	177.37	-88.56	149.33	90.2	90.24	76.71	78.18	142.56	2586	1649.1	1.47	4704	0.99901736	3201.5	0.404	0.76
	L_3 - U_5	-58.69	735.91	-228.30	830.87	138.2	138.17	111.77	199.97	3642	2197.7	1.45	6099	0.99894945	4264.8	-0.225	0.49
	U_5 - L_4	864.68	159.37	711.25	-105.38	130.3	130.26	105.11	180.77	2960	1799.3	1.39	5665	0.99880639	4250.8	-0.420	0.43
	L_4 - U_6	73.62	42.19	70.13	-70.68	96.6	96.61	79.12	139.29	2174	1387.9	1.40	4465	0.99873184	3184.1	0.573	0.83
	U_6 - L_5	103.64	-168.29	94.33	-171.69	83.55	83.59	73.16	130.29	2174	1387.9	1.40	4465	0.99873184	3184.1	-0.279	0.49
	L_5 - U_7	57.39	-172.92	31.89	-324.92	128.7	128.69	105.26	182.66	3153	1864.4	1.42	6028	0.99875288	4241.5	-0.099	0.56
	U_7 - L_6	122.65	-196.26	-120.00	-353.35	151.8	151.76	130.54	219.77	4535	2932.6	1.45	7252	0.99905082	5003.4	0.340	0.74
	L_6 - U_8	165.35	-347.78	-188.61	-647.07	-229.80	188.53	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899964	6214.6	0.438
	U_8 - L_7	155.53	-90.57	-382.28	-83.70	127.3	127.33	110.40	189.23	3668	2526.5	1.46	6146	0.99907149	4197.7	0.245	0.70
	L_7 - U_9	209.13	-190.91	0.95	-444.39	-258.00	188.53	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899964	6214.6	0.438
	U_9 - L_8	-346.30	-188.17	-648.07	-229.80	188.53	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899964	6214.6	0.438	0.78
	L_8 - U_{10}	-346.30	-188.17	-648.07	-229.80	188.53	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899964	6214.6	0.438	0.78
	U_{10} - L_9	-155.53	-90.57	-382.28	-83.70	127.3	127.33	110.40	189.23	3668	2526.5	1.46	6146	0.99907149	4197.7	0.245	0.70
	L_9 - U_{11}	-218.12	-26.84	-339.08	-8.72	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99886452	3452.6	0.028	0.61
	U_{11} - L_{10}	-237.72	26.78	-324.93	92.26	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99886452	3452.6	-0.284	0.49
	L_{10} - U_{12}	-150.71	-261.23	-131.37	-323.71	127.3	127.33	110.40	189.23	3668	2526.5	1.46	6146	0.99907149	4212.5	-0.470	0.40
	U_{12} - L_{11}	-5.24	9.38	2.85	-150.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00
	L_{11} - U_{13}	-84.21	-223.09	-88.50	-655.49	138.2	138.15	119.05	199.70	3434	1990.9	1.45	6099	0.99885981	4553.8	0.219	0.65
	U_{13} - L_{12}	-84.21	-223.09	-88.50	-655.49	138.2	138.15	119.05	199.70	3434	1990.9	1.45	6099	0.99885981	4553.8	0.219	0.65
	L_{12} - U_{14}	-417.48	-405.69	-472.85	-668.98	232.7	232.70	186.86	340.10	6520	3217.6	1.46	11223	0.99885838	7670.8	0.707	0.88
	U_{14} - L_{13}	-417.48	-405.69	-472.85	-668.98	232.7	232.70	186.86	340.10	6520	3217.6	1.46	11223	0.99885838	7670.8	0.707	0.88
	L_{13} - U_{15}	-427.40	-446.36	-477.31	-760.61	232.7	232.70	186.86	340.10	6520	3217.6	1.46	11223	0.99885838	7670.8	0.707	0.88
	U_{15} - L_{14}	-434.61	-89.40	-668.71	-213.19	198.9	198.88	169.65	280.08	5137	2713.1	1.43	9408	0.99885601	6355.5	0.320	0.73
	L_{14} - U_{16}	-190.40	-78.58	-379.00	2.91	156.8	156.80	134.92	214.81	3285	1852.3	1.37	7089	0.99854402	5166.9	-0.009	0.60
	U_{16} - L_{15}	-118.88	243.98	-351.47	379.42	156.8	156.80	128.72	214.81	3285	1852.3	1.37	7089	0.99854402	5166.9	-0.599	0.36
	L_{15} - U_{17}	-38.84	1266.00	-3.39	6.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00
	U_{17} - L_{16}	-336.79	1730.31	-343.72	1637.02	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99893092	7310.6	-0.195	0.52
	L_{16} - U_{18}	-1192.78	1.62	6.29	0.00	33.80	-1.98	365.17	0.00	1.62	0.00	0.00	0.00	0.00	0.00	0.000	0.00
	U_{18} - L_{17}	-3.75	106.64	-68.10	-73.93	185.0	185.70	154.12	266.55	4767	2721.4	1.44	8796	0.99886001	6121.2	-0.260	0.50
	L_{17} - U_{19}	-3.75	106.64	-68.10	-73.93	185.0	185.70	154.12	266.55	4767	2721.4	1.44	8796	0.99886001	6121.2	-0.260	0.50
	U_{19} - L_{18}	216.35	88.83	789.76	-116.61	127.3	127.33	105.84	178.51	2762	1538.8	1.40	5891	0.99861372	4212.5	0.277	0.71
	L_{18} - U_{20}	215.37	22.78	793.17	-165.60	127.3	127.33	111.16	178.51	2762	1538.8	1.40	5891	0.99861372	4212.5	0.106	0.64
	U_{20} - L_{19}	97.24	54.83	322.17	-76.78	83.6	83.59	73.16	130.29	2174	1387.9	1.40	4465	0.99873184	3184.1	0.404	0.76
	L_{19} - U_{21}	24.76	40.46	-58.42	-244.94	144.8	144.84	125.49	208.19	3613	2101.0	1.44	6903	0.99888742	4774.4	0.239	0.70
	U_{21} - L_{20}	-67.67	40.46	-58.42	-244.94	144.8	144.84	125.49	208.19	3613	2101.0	1.44	6903	0.99888742	4774.4	0.239	0.70
	L_{20} - U_{22}	-51.50	-102.44	-311.52	-193.69	144.8	144.84	130.31	208.19	3613	2101.0	1.44	6903	0.99888742	4774.4	0.621	0.85
	U_{22} - L_{21}	-51.50	-102.44	-311.52	-193.69	144.8	144.84	130.31	208.19	3613	2101.0	1.44	6903	0.99888742	4774.4	0.621	0.85
	L_{21} - U_{23}	-25.17	80.33	-248.85	-50.33	134.9	134.91	112.76	189.26	3012	1689.0	1.40	6245	0.99866254	4446.1	0.202	0.68
	U_{23} - L_{22}	-2.79	172.29	-350.65	125.43	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861372	4212.5	0.625	0.35
	L_{22} - U_{24}	13.38	183.76	-337.63	138.43	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861372	4212.5	0.625	0.35
	U_{24} - L_{23}	10.66	14.11	-137.14	30.89	83.6	83.59	73.16	130.29	2174	1387.9	1.40	4465	0.99873184	3184.1	0.573	0.83
	L_{23} - U_{25}	-64.59	-138.78	-164.24	-6.79	-3.14	5.33	3.51	-164.60	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00
	U_{25} - U_{26}	-157.31	1590.89	-460.98	1660.64	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99893092	7310.6	-0.241	0.50
	L_{24} - U_{26}	1567.06	-247.89	1686.54	-481.16	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99893092	7310.6	-0.293	0.49
	U_{26} - L_{25}	49.26	-79.75	-169.36	138.99	96.6	96.61	79.12	139.29	2174	1387.9	1.40	4465	0.99873184	3184.1	-0.280	0.49
	L_{25} - U_{27}	254.55	-54.04	233.93	-244.25	156.8	156.80	128.72	214.81	3285	1852.3	1.37	7089	0.99854402	5166.9	-0.272	0.52
	U_{27} - L_{26}	216.35	88.83	789.76	-116.61	127.3	127.33	105.84	178.51	2762	1538.8	1.40	5891	0.99861372	4212.5	0.277	0.71
	L_{26} - U_{28}	-284.94	-179.30	342.01	-535.99	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885838	7670.8	0.639	0.86
	U_{28} - L_{27}	-284.94	-179.30	342.01	-535.99	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885838	7670.8	0.639	0.86
	L_{27} - U_{29}	-164.49	-384.83	-464.30	-503.56	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885838	7670.8	0.922	0.97
	U_{29} - L_{28}	-164.49	-384.83	-464.30	-503.56	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885838	7670.8	0.922	0.97
	L_{28} - U_{30}	-155.53	-90.57	-382.28	-83.70	127.3	127.33	110.40	189.23	3668	2526.5	1.46	6146	0.99907149	4197.7	0.245	0.70
	U_{30} - L_{29}	-218.12	-26.84	-339.08	-8.72	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99886452	3452.6	0.028	0.61
	L_{29} - U_{31}	-237.72	26.78	-324.93	92.26	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99886452	3452.6	-0.284	0.49
	U_{31} - L_{30}	-150.71	-261.23	-131.37	-323.71	127.3	127.33	110.40	189.23	3668	2526.5	1.46	6146	0.99907149	4212.5	-0.470	0.40
	L_{30} - U_{32}	-5.24	9.38	2.85	-150.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00
	U_{32} - L_{31}	-84.21	-223.09	-88.50	-655.49	138.2	138.15	119.05	199.70	3434	1990.9	1.45	6099	0.99885981	4553.8	0.219	0.65
	L_{31} - U_{33}	-84.21	-223.09	-88.50	-655.49	138.2	138.15	119.05	199.70	3434	1990.9	1.45	6099	0.99885981	4553.8	0.219	0.65
	U_{33} - L_{32}	-417.48	-405.69	-472.85	-668.98	232.7	232.70	186.86	340.10	6520	3217.6	1.46	11223	0.99885838	7670.8	0.707	0.88
	L_{32} - U_{34}	-417.48	-405.69	-472.85	-668.98	232.7	232.70	186.86	340.10	6520	3217.6	1.46	11223	0.99885838	7670.8	0.707	0.88
	U_{34} - L_{33}	-427.40	-446.36	-477.31	-760.61	232.7	232.70	186.86	340.10	6520	3217.6	1.46	11223	0.99885838	7670.8	0.707	0.88
	L_{33} - U_{35}	-434.61	-89.40	-668.71	-213.19	198.9	198.88	169.65	280.08	5137	2713.1	1.43	9408	0.99885601	6355.5	0.320	0.73
	U_{35} - L_{34}	-190.40	-78.58	-379.00	2.91	156.8	156.80	134.92	214.81	3285	1852.3	1.37	7089	0.99854402	5166.9	-0.009	0.60
	L_{34} - U_{36}	-118.88	243.98	-351.47	379.42	156.8	156.80	128.72	214.81	3285	1852.3	1.37	7089	0.99854402	5166.9	-0.599	0.36
	U_{36} - L_{35}	-38.84	1266.00	-3.39	6.75	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: 2F1
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

Maximum Axial with Moment Interaction Check

Cycle: Truck - Lane Only

M_z Information

Location	Member	ZZ Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) Start (k-in)	Lane Reduction & Impact Live Load 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_b (in^3)	Z_z (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F'c/S_{bb}	M_r (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	C_{mx}/a	Pass
Structure 1	L_0-L_1	-15.50	-19.38	2.87	-6.09	1.64	-1.05					21.34	-154.64	3.81	-110.97	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.138	0.54	0.54
	L_1-L_2	39.75	-88.06	-3.87	-6.25	-0.05	0.98					-4.30	-204.92	50.91	-100.23	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	0.021	0.61	0.61
	L_2-L_3	39.40	-82.40	-3.87	-6.25	-0.06	0.61					-50.01	-68.37	6.80	-31.97	83.6	83.58	39.58	99.5	99.53	81.00	1.21	120	0.99000394	99.4	0.000	0.61	0.61
	L_3-L_4	-11.39	11.52	-9.63	-4.60	0.54	1.70					-107.16	-51.20	5.98	18.87	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
	L_4-L_5	-49.18	2.08	-14.31	-4.01	-0.79	1.62					-127.83	-51.20	5.98	18.87	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
	L_5-L_6	-0.43	187.22	-3.42	6.67	0.95	2.29					-38.11	-51.97	10.60	25.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_6-L_7	41.36	78.74	-3.57	0.90	0.00	1.00					-29.78	-57.68	13.09	-4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_7-L_8	-25.09	448.92	0.01	-0.02	0.10	3.91					0.08	-0.17	1.07	43.55	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_8-L_9	426.08	-36.00	0.00	0.00	5.01	-5.43					-0.02	0.02	54.02	-4.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_9-L_{10}	150.12	-126.55	-2.56	-0.98	-0.24	1.10					193.30	-228.71	191.73	-140.08	144.9	144.85	129.09	192.84	5210	2376.8	1.33	6364	0.99000394	4176.1	-0.016	0.32	0.32
	L_{10}-L_{11}	120.53	-116.03	-2.38	-3.21	1.67	0.77					-25.68	-34.60	20.13	8.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{11}-L_{12}	39.16	-39.16	2.10	-4.16	2.23	0.29					-33.27	-60.45	13.24	6.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{12}-L_{13}	-45.20	-121.29	4.07	-5.31	1.05	0.49					-43.93	-57.20	11.29	5.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{13}-L_{14}	96.42	-200.16	-4.48	-10.60	0.64	0.59					-48.22	-114.31	9.01	6.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{14}-L_{15}	-352.17	48.21	-8.62	-19.05	0.33	0.76					-565.50	-21.49	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
	L_{15}-L_{16}	-192.00	-318.69	-7.73	-9.00	0.38	0.11					-357.93	-540.43	-244.22	-411.94	179.7	179.69	170.68	251.43	5763	2700.1	1.40	8297	0.99012252	5524.6	0.662	0.86	0.86
	L_{16}-L_{17}	84.69	-84.69	2.80	-2.63	3.33	-0.15					-566.54	-21.34	-427.23	56.09	153.9	153.89	138.16	206.43	5057	2460.7	1.34	7277	0.99012252	4846.0	0.000	0.86	0.86
	L_{17}-L_{18}	-154.69	-31.48	-3.93	-3.17	0.09	-0.06					-42.42	-34.19	0.99	-0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{18}-L_{19}	-216.17	148.84	-3.83	-0.64	1.14	0.00					-41.24	-16.86	-3.83	-0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{19}-L_{20}	-136.64	49.93	0.34	-3.07	2.63	1.84					-3.67	-0.80	-28.39	19.88	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_1-L_7	2.99	-170.85	1.15	-3.28	1.61	2.92					12.20	-34.95	17.09	31.10	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
	L_2-L_8	39.56	-265.54	0.00	0.00	0.00	0.00					4.15	-11.51	-3.42	-4.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_3-L_9	-39.75	-103.15	-3.06	-5.91	-0.69	0.63					-61.62	-60.62	-0.75	6.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_4-L_{10}	39.75	-103.15	-2.56	-4.08	-0.24	1.10					-28.45	-30.64	2.04	10.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_5-L_{11}	-253.03	-295.08	-9.34	-9.88	0.59	1.03					-99.39	-105.21	11.00	6.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_6-L_{12}	47.36	-39.16	-2.38	-2.35	-0.51	0.49					-131.00	-144.54	12.01	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	0.00
	L_7-L_{13}	-475.14	-252.19	15.37	-10.91	1.59	1.60					-163.67	-116.12	16.97	17.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_8-L_{14}	-280.52	-64.48	6.29	-11.26	1.31	2.30					-66.52	-119.51	13.89	24.49	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
	L_9-L_{15}	-252.72	69.23	7.10	-5.32	1.32	1.32					-54.21	-87.27	17.44	14.10	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
	L_{10}-L_{16}	-225.89	141.33	-4.69	-5.63	1.10	2.23					-49.88	-59.94	-11.60	23.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{11}-L_{17}	-201.56	205.03	-3.39	-3.39	1.72	1.72					-36.07	-36.07	11.72	11.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{12}-L_{18}	-160.00	387.18	-3.27	-5.83	0.97	2.49					-34.79	-42.03	10.35	26.46	0.00	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_{19}	-202.72	204.41	-0.52	-5.12	0.96	2.25					-0.48	1.22	10.26	-26.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{14}-L_{20}	39.75	-103.15	-3.06	-5.91	-0.69	0.63					-61.62	-60.62	-0.75	6.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{15}-L_{21}	1072.48	-412.36	-0.76	-0.05	7.30	-1.49					-8.03	-0.57	76.82	-15.71	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
	L_{16}-L_{22}	339.48	-41.53	-2.32	-2.35	-0.51	0.49					-131.00	-144.54	12.01	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	0.00
	L_{17}-L_{23}	475.61	49.01	-2.43	-5.25	2.62	0.65					-25.02	-65.79	27.61	5.79	0.00	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_{24}	272.22	-38.93	-2.48	-4.27	2.48	0.47					-25.02	-65.79	27.61	5.79	0.00	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_{25}	226.53	-41.80	-4.79	-5.69	2.52	0.88					-50.44	-59.91	22.29	9.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{20}-L_{26}	214.46	-56.44	-5.02	-7.18	1.25	1.31					-52.78	-75.57	-13.94	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{21}-L_{27}	49.26	-202.49	-11.10	-10.56	1.02	0.80					-116.83	-111.13	10.71	8.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{22}-L_{28}	49.26	-197.13	-9.34	-9.88	0.59	1.03					-99.39	-105.21	11.00	6.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{23}-L_{29}	-111.93	0.87	-5.50	-10.70	0.84	1.83					-57.69	-112.61	8.85	19.25	0.00	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_{30}	39.75	-103.15	-4.25	-5.91	-0.69	0.63					-61.62	-60.62	-0.75	6.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{25}-L_{31}	-60.79	179.83	-3.41	-7.01	0.90	2.29					-35.85	-73.72	9.45	21.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{26}-L_{32}	-81.88	265.66	-3.88	-6.35	1.47	0.84					-40.81	-68.85	15.44	8.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{27}-L_{33}	-100.08	-279.84	-0.16	-0.30	0.13	0.82					-1.73	-3.17	1.38	25.93	0.00	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_{34}	372.05	1000.64	-0.16	-0.30	0.13	0.82					-1.73	-3.17	1.38	25.93	0.00	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_{35}	1027.57	382.68	-0.44	-0.51	8.71	-2.24					-4.67	0.11	92.74	23.81	0.00	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_{36}	-227.20	-125.85	0.07	-0.54	-1.65	1.36					0.72	-5.75	-17.57	14.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{31}-L_{37}	372.05	1000.64	-0.16	-0.30	0.13	0.82					-1.73	-3.17	1.38	25.93	0.00	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_{38}	278.16	-133.13	-2.81	-5.79	1.14	1.74					-29.94	-61.66	12.09	18.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{33}-L_{39}	222.96	-243.33	-4.08	-8.33	1.35	1.50					-43.42	-88.68	14.37	16.00	0.00	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_{40}	167.99	-470.86	-3.01	-18.09	1.58	1.17					-37.40	-192.60	16.63	12.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{35}-L_{41}	-445.18	-83.63	-8.88	-17.39	1.30	2.28					-94.96	-185.13	14.32	28.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{36}-L_{42}	-29.76	-319.65	-4.44	-8.09	1.67	2.22					-87.81	-156.51	-38.79	2.22	0.00	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_{43}	-392.42	-38.25	-10.15	-5.88	0.61	-0.20					-108.06	-62.65	6.45	-2.14	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
	L_{38}-L_{44}	-297.29	199.08	-9.23	-5.88	0.61	-0.20					-88.68	-62.65	6.45	-2.14	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
	L_{39}-L_{45}	24.89	-109.63	1.83	3.39	1.89	-2.62					19.76	-36.57	20.42	28.25	0.00	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_{46}	-139.96	-178.06	0.77	-4.99	-0.17	0.39					8.26	-53.76	-1.83	4.17	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
	L_{41}-L_{47}	-11.70	-139.07	3.42	-6.90	-0.13	0.57					-21.66	-60.45	3.34	2.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{42}-L_{48}	47.96	-293.92	-3.37	-6.90	-0.13	0.57					-36.34	-74.44	-1.36	-6.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{43}-L_{49}	-41.79	-343.26	-9.44	-9.16	0.16	1.03					-101.79	-98.81	-11.73	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Structure 2	L_{44}-L_{50}	-341.31	86.25	-4.36	-10.43	0.80	0.75					-46.96	-112.50	8.98	8.55	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_{45}-L_{51}	-45.44	-80.85	-6.36	-7.58	0.87	0.30					-70.01	-84.42	9.01	3.30	0.00	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_{52}	-74.43	-5.53	-3.59	2.38	1.67	1.82					-40.01	-29.54	-16.56	50.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{47}-L_{53}	1072.48	-412.36	-0.76	-0.05	7.30	-1.49					-8.03	-0.57	76.82	-15.71	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
	L_{48}-L_{54}	339.48	-41.53	-2.32	-2.35	-0.51	0.49					-131.00	-144.54	12.01	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	0.00
	L_{49}-L_{55}	475.61	49.01	-2.43	-5.25	2.62	0.65					-25.02	-65.79	27.61	5.79	0.00	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_{56}	272.22	-38.93	-2.48	-4.27	2.48	0.47					-25.02	-65.79	27.61	5.79	0.00	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_{57}	226.53	-41.80	-4.79	-5.69	2.52	0.88					-50.44	-59.91	22.29	9.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{52}-L_{58}	214.46	-56.44	-5.02	-7.18	1.25	1.31					-52.78	-75.57	-13.94	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{53}-L_{59}	49.26	-202.49	-11.10	-10.56	1.02	0.80					-116.83	-111.13	10.71	8.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{54}-L_{60}	49.26	-197.13	-9.34	-9.88	0.59	1.03					-99.39	-105.21	11.00	6.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{55}-L_{61}	-111.93	0.87	-5.50	-10.70	0.84	1.83					-57.69	-112.61	8.85	19.25	0.00	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_{62}	39.75	-103.15	-4.25	-5.91	-0.69	0.63					-61.62	-60.62	-0.75	6.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{57}-L_{63}	-60.79	179.83	-3.41	-7.01	0.90	2.29					-35.85	-73.72	9.45	21.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{58}-L_{64}	-81.88	265.66	-3.88	-6.35	1.47	0.84					-40.81	-68.85	15.44	8.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{59}-L_{65}	-100.08	-279.84	-0.16	-0.30	0.13	0.82					-1.73	-3.17	1.38	25.93	0.00	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_{66}	372.05	1000.64	-0.16	-0.30	0.13	0.82					-1.73	-3.17	1.38	25.93	0.00	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_{67}	1027.57	382.68	-0.44	-0.51	8.71	-2.24					-4.67	0.11	92.74	23.81	0.00	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_{68}	-227.20	-125.85	0.07	-0.54	-1.65	1.36					0.72	-5.75	-17.57	14.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{63}-L_{69}	372.05	1000.64	-0.16	-0.30	0.13	0.82					-1.73	-3.17	1.38	25.93	0.00	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_{70}	278.16	-133.13	-2.81	-5.79	1.14	1.74					-29.94	-61.66	12.09	18.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{65}-L_{71}	222.96	-243.33	-4.08	-8.33	1.35	1.50					-43.42	-88.68	14.37	16.00	0.00	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_{72}	167.99	-470.86	-3.01	-18.09	1.58	1.17					-37.40	-192.60	16.63	12.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{67}-L_{73}	-445.18	-83.63	-8.88	-17.39	1.30	2.28					-94.96	-185.13	14.32	28.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{68}-L_{74}	-29.76	-319.65	-4.44	-8.09	1.67	2.22					-87.81	-156.51	-38.79	2.22	0.00	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_{75}	-392.42	-38.25	-10.15	-5.88	0.61	-0.20					-108.06	-62.65	6.45	-2.14	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
	L_{70}-L_{76}	-297.29	199.08	-9.23	-5.88	0.61	-0.20					-88.68	-62.65	6.45	-2.14	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
	L_{71}-L_{77}	24.89	-109.63	1.83	3.39	1.89	-2.62					19.76	-36.57	20.42	28.25	0.00	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_{78}	-139.96	-178.06	0.77	-4.99	-0.17	0.39					8.26	-53.76	-1.83	4.17	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
	L_{73}-L_{79}	-11.70	-139.07	3.42	-6.90	-0.13	0.57					-21.66	-60.45	3.34	2.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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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: 2F1
Condition: As-inspected

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

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

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

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

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_1–L_1	-29.87	49.03	0.36	-0.40	0.23	0.87	4.04	-4.40	2.55	9.67
	U_2–L_2	-9.08	15.18	0.31	-0.33	-1.67	1.86	3.42	-3.70	-18.58	20.75
	U_3–L_3	10.20	9.70	0.39	-0.46	-1.08	1.52	4.33	-5.72	-11.97	18.92
	U_4–L_4	33.45	-34.40	1.34	-1.39	-1.16	1.39	14.88	-15.47	-12.93	15.42
	U_5–L_5	41.64	-42.40	1.41	-1.39	-0.97	1.40	15.73	-15.71	-7.37	12.30
	U_6–L_6	45.56	-51.10	-0.41	0.35	1.89	-2.07	4.52	3.85	20.64	-22.89
	U_7–L_7	41.58	-55.58	-0.41	0.35	1.89	-2.07	-4.58	2.15	23.54	-26.62
	U_8–L_8	91.24	-101.87	-0.02	0.02	2.96	-3.07	-0.21	0.22	32.94	-34.13
	U_9–L_9	-20.57	21.23	0.23	-0.28	-0.51	0.66	2.64	-3.12	-5.64	7.35
	U_{10}–L_{10}	-135.26	118.65	0.18	-0.16	-2.62	3.03	-17.01	14.98	-29.24	32.69
	U_{11}–L_{11}	-88.47	88.21	0.23	-0.12	-1.40	2.02	2.46	-1.28	-15.12	21.79
	U_{12}–L_{12}	-91.11	90.15	0.44	-0.27	-1.25	2.29	4.70	-4.25	-13.76	24.33
	U_{13}–L_{13}	-79.57	78.39	0.71	-0.63	-1.64	1.82	7.61	-6.79	-17.68	19.63
	U_{14}–L_{14}	-49.26	60.16	0.84	-0.83	-1.31	1.48	9.09	-8.96	-14.10	15.96
	U_{15}–L_{15}	-29.77	34.65	1.05	-1.24	-0.87	1.47	11.13	-10.97	-9.41	15.88
	U_{16}–L_{16}	-1.50	-2.65	-1.47	1.44	1.83	-1.89	-15.88	15.55	19.76	-20.36
	U_{17}–L_{17}	34.13	-36.55	-1.02	0.98	3.52	-3.53	-11.02	9.46	37.97	-37.80
	U_{18}–L_{18}	46.23	-56.85	-0.36	0.25	1.76	-1.90	-3.90	2.74	19.02	-20.43
	U_{19}–L_{19}	110.44	-114.63	-0.21	0.13	1.19	-1.27	-2.23	2.36	13.96	-15.20
	U_{20}–L_{20}	121.36	-131.26	-0.18	0.18	3.82	-3.53	-1.96	1.98	37.97	-38.07
	U_{21}–L_{21}	-134.59	-173.50	-0.12	0.16	3.32	-3.64	-1.26	1.70	35.81	-39.22
	U_{22}–L_{22}	-134.23	-168.97	-0.24	0.40	2.26	-3.05	-2.42	4.00	24.13	-32.42
	U_{23}–L_{23}	-123.79	-131.39	0.40	-0.43	-2.36	2.73	4.28	-4.54	-25.15	29.03
	U_{24}–L_{24}	-109.46	-113.46	0.46	-0.47	-3.19	3.70	4.93	-4.96	-34.00	37.54
	U_{25}–L_{25}	-56.01	62.13	0.27	-0.29	-1.21	1.45	2.89	-3.05	-12.89	15.47
	U_{26}–L_{26}	-51.11	56.71	0.27	-0.29	-1.21	1.45	2.89	-3.05	-12.89	15.47
	U_{27}–L_{27}	-7.04	-12.29	1.19	1.15	-1.03	1.26	12.66	-12.25	-10.92	13.45
	U_{28}–L_{28}	15.85	-15.59	1.27	-1.36	-0.98	1.06	13.55	-14.44	-10.47	11.26
	U_{29}–L_{29}	38.85	-44.94	1.00	-1.05	-0.97	1.47	15.07	-16.07	-12.68	17.69
	U_{30}–L_{30}	86.91	-96.07	-1.08	0.97	2.67	-2.58	-11.46	10.31	28.37	-27.46
	U_{31}–L_{31}	95.38	-106.08	-1.49	1.39	3.73	-3.70	-14.05	12.58	31.17	-33.01
	U_{32}–L_{32}	141.23	-149.41	-0.72	0.45	2.67	-2.83	-7.66	4.78	29.45	-30.09
	U_{33}–L_{33}	192.55	-192.83	-0.33	0.22	2.72	-2.91	-3.49	2.33	29.01	-29.88
	U_{34}–L_{34}	147.41	-148.81	0.45	-0.33	-2.73	2.79	4.80	-3.51	-29.07	29.84
	U_{35}–L_{35}	203.52	-203.17	-0.22	0.24	3.51	-3.41	-2.38	2.53	37.39	-36.27
	U_{36}–L_{36}	93.05	-93.71	0.57	-0.54	-3.06	3.08	6.07	-5.77	-32.77	32.72
	U_{37}–L_{37}	-159.89	162.81	0.36	-0.38	-3.19	3.24	3.79	-3.99	-33.51	34.04
	U_{38}–L_{38}	-113.84	116.39	0.53	-0.57	-3.21	3.27	5.57	-5.87	-33.72	34.26
	U_{39}–L_{39}	-130.37	-127.18	0.44	-0.30	-2.75	3.10	4.59	-3.20	-28.91	32.59
	U_{40}–L_{40}	-113.07	114.60	0.63	-0.56	-2.32	2.85	6.61	-5.92	-24.40	30.03
	U_{41}–L_{41}	-44.77	47.44	0.47	-0.50	-1.03	1.26	4.95	-5.26	-10.84	13.31
	U_{42}–L_{42}	-44.77	46.58	0.78	-0.73	-1.11	1.52	8.24	-7.63	-11.69	13.92
	U_{43}–L_{43}	-30.30	34.99	0.91	-0.87	-0.92	1.39	9.62	-9.08	-9.68	15.76
	U_{44}–L_{44}	-9.69	4.33	1.19	-1.27	-0.17	0.16	12.47	-13.36	-1.74	1.68
	U_{45}–L_{45}	22.65	-25.72	1.29	1.32	-0.39	0.34	13.59	-14.31	-3.98	2.84
	U_{46}–L_{46}	-9.20	8.46	0.34	0.87	0.80	1.74	-1.83	-9.20	8.46	18.34
	U_{47}–L_{47}	68.57	-67.50	-0.79	0.62	2.28	-2.28	-8.33	6.47	24.01	-24.03
	U_{48}–L_{48}	68.57	-67.50	-0.79	0.62	2.28	-2.28	-8.33	6.47	24.01	-24.03
	U_{49}–L_{49}	138.29	-139.04	-0.49	0.27	3.59	-3.72	-5.18	2.84	37.77	-39.14
	U_{50}–L_{50}	138.29	-139.04	-0.49	0.27	3.59	-3.72	-5.18	2.84	37.77	-39.14
	U_{51}–L_{51}	136.94	-136.62	-0.49	0.27	3.59	-3.72	-5.18	2.84	37.77	-39.14
	U_{52}–L_{52}	-179.36	-176.28	-0.18	0.16	3.33	-3.56	-1.89	1.66	41.96	-40.05
	U_{53}–L_{53}	-179.36	-176.28	-0.18	0.16	3.33	-3.56	-1.89	1.66	41.96	-40.05
	U_{54}–L_{54}	-167.25	-167.49	0.32	-0.36	-3.06	3.03	3.42	-3.75	-32.62	32.23
	U_{55}–L_{55}	-116.13	-110.00	0.16	-0.26	-2.16	2.52	1.68	-2.78	-22.98	26.84
	U_{56}–L_{56}	-124.98	-121.99	0.16	-0.91	-2.21	2.53	1.68	-9.61	-23.06	26.57
	U_{57}–L_{57}	-119.87	-124.44	0.51	-0.34	-2.14	2.43	5.39	-3.65	-22.77	25.86
	U_{58}–L_{58}	-79.40	-79.47	0.42	-0.42	-1.47	1.67	4.47	-4.47	-15.47	17.67
	U_{59}–L_{59}	-79.51	88.87	0.73	-0.70	-1.73	1.86	7.75	-7.46	-16.39	19.82
	U_{60}–L_{60}	-43.86	51.94	-0.97	1.21	-0.33	0.35	-10.35	12.85	-3.50	3.71
	U_{61}–L_{61}	-39.24	46.74	-0.97	1.21	-0.33	0.35	-10.35	12.85	-3.50	3.71
	U_{62}–L_{62}	-5.58	1.82	-1.33	1.27	-1.58	-1.73	-14.14	13.52	16.86	-18.38
	U_{63}–L_{63}	55.25	-61.09	-0.48	0.31	1.83	-1.89	-5.07	3.32	19.53	-19.26
	U_{64}–L_{64}	115.62	-122.77	-0.41	0.24	3.43	-3.50	-4.30	2.69	33.66	-34.26
	U_{65}–L_{65}	137.15	-150.77	-0.34	0.35	3.44	-3.50	-3.65	3.71	36.65	-37.28
	U_{66}–L_{66}	165.74	-206.85	-0.25	0.34	3.23	-3.91	-2.68	3.59	34.41	-41.67
	U_{67}–L_{67}	82.96	-144.15	-0.22	0.45	2.29	-3.05	-2.68	4.64	24.13	-32.42
	U_{68}–L_{68}	-109.90	-113.62	0.23	-0.25	-2.48	2.74	2.50	-2.66	-26.76	29.52
	U_{69}–L_{69}	-109.90	-93.97	0.23	-0.25	-2.48	2.74	2.50	-2.66	-26.76	29.52
	U_{70}–L_{70}	-38.43	-48.15	-0.30	-0.22	-1.19	1.50	3.18	-2.34	-12.86	16.17
	U_{71}–L_{71}	-38.43	-38.15	-0.30	-0.22	-1.19	1.50	3.18	-2.34	-12.86	16.17
	U_{72}–L_{72}	-2.76	8.97	1.20	-1.23	-1.62	1.65	12.88	-13.28	-16.39	17.78
	U_{73}–L_{73}	25.90	-28.71	1.42	-1.54	-0.35	0.33	15.28	-16.65	-3.74	3.58
	U_{74}–L_{74}	79.40	-77.51	-0.93	0.84	2.24	-2.28	-10.01	9.05	24.13	-24.67
	U_{75}–L_{75}	79.40	-77.51	-0.93	0.84	2.24	-2.28	-10.01	9.05	24.13	-24.67
	U_{76}–L_{76}	127.54	-126.84	-0.73	0.52	3.52	-3.54	-7.91	5.57	17.94	-26.15
	U_{77}–L_{77}	94.27	-125.94	-0.73	0.52	1.66	-2.43	-7.91	5.57	17.94	-26.15
	U_{78}–L_{78}	92.31	-95.87	-0.35	0.19	2.12	2.44	-3.76	2.04	22.83	-26.28
	U_{79}–L_{79}	33.45	-34.40	1.34	-1.39	-1.16	1.39	14.88	-15.47	-12.93	15.42
	U_{80}–L_{80}	41.64	-42.40	1.41	-1.39	-0.97	1.40	15.73	-15.71	-7.37	12.30
	U_{81}–L_{81}	45.56	-51.10	-0.41	0.35	1.89	-2.07	-4.52	3.85	20.64	-22.89
	U_{82}–L_{82}	41.58	-55.58	-0.41	0.35	1.89	-2.07	-4.58	2.15	23.54	-26.62
	U_{83}–L_{83}	91.24	-101.87	-0.02	0.02	2.96	-3.07	-0.21	0.22	32.94	-34.13
	U_{84}–L_{84}	-20.57	21.23	0.23	-0.28	-0.51	0.66	2.64	-3.12	-5.64	7.35
	U_{85}–L_{85}	-135.26	118.65	0.18	-0.16	-2.62	3.03	-17.01	14.98	-29.24	32.69
	U_{86}–L_{86}	-88.47	88.21	0.23	-0.12	-1.40	2.02	2.46	-1.28	-15.12	21.79
	U_{87}–L_{87}	-91.11	90.15	0.44	-0.27	-1.25	2.29	4.70	-4.25	-13.76	24.33
	U_{88}–L_{88}	-79.57	78.39	0.71	-0.63	-1.64	1.82	7.61	-6.79	-17.68	19.63
	U_{89}–L_{89}	-49.26	60.16	0.84	-0.83	-1.31	1.48	9.09	-8.96	-14.10	15.96
	U_{90}–L_{90}	-29.77	34.65	1.05	-1.24	-0.87	1.47	11.13	-10.97	-9.41	15.88
	U_{91}–L_{91}	-1.50	-2.65	-1.47	1.44	1.83	-1.89	-15.88	15.55	19.76	-20.36
	U_{92}–L_{92}	34.13	-36.55	-1.02	0.98	3.52	-3.53	-11.02	9.46	37.97	-37.80
	U_{93}–L_{93}	46.23	-56.85	-0.36	0.25	1.76	-1.90	-3.90	2.74	19.02	-20.43
	U_{94}–L_{94}	110.44	-114.63	-0.21	0.13	1.19	-1.27	-2.23	2.36	13.96	-15.20
	U_{95}–L_{95}	121.36	-131.26	-0.18	0.18	3.82	-3.53	-1.96	1.98	37.97	-38.07
	U_{96}–L_{96}	-134.59	-173.50	-0.12	0.16	3.32	-3.64	-1.26	1.70	35.81	-39.22
	U_{97}–L_{97}	-134.23	-168.97	-0.24	0.40	2.26	-3.05	-2.42	4.00	24.13	-32.42
	U_{98}–L_{98}	-123.79	-131.39	0.40	-0.43	-2.36	2.73	4.28	-4.54	-25.15	29.03
	U_{99}–L_{99}	-109.46	-113.46	0.46	-0.47	-3.19	3.70	4.93	-4.96	-34.00	37.54
	U_{100}–L_{100}	-56.01	62.13	0.27	-0.29	-1.21	1.45	2.89	-3.05	-12.89	15.47
	U_{101}–L_{101}	-51.11	56.71	0.27	-0.29	-1.21	1.45	2.89	-3.05	-12.89	15.47
	U_{102}–L_{102}	-7.04	-12.29	1.19	1.15	-1.03	1.26	12.66	-12.25	-10.92	13.45
	U_{103}–L_{103}	15.85	-15.59	1.27	-1.36	-0.98	1.06	13.55	-14.44	-10.47	11.26
	U_{104}–L_{104}	38.85	-44.94	1.00	-1.05	-0.97	1.47	15.07	-16.07	-12.68	17.69
	U_{105}–L_{105}	86.91	-96.07	-1.08	0.97	2.67	-2.58	-11.46	10.31	28.37	-27.46
	U_{106}–L_{106}	95.38	-106.08	-1.49	1.39	3.73	-3.70	-14.05	12.58	31.17	-33.01
	U_{107}–L_{107}	141.23	-149.41	-0.72	0.45	2.67	-2.83	-7.66	4.78	29.45	-30.09
	U_{108}–L_{108}	192.55	-192.83	-0.33	0.22	2.72	-2.91	-3.49	2.33	29.01	-29.88
	U_{109}–L_{109}	147.41	-148.81	0.45	-0.33	-2.73	2.79	4.80	-3.51	-29.07	29.84
	U_{110}–L_{110}	203.52	-203.17	-0.22	0.24	3.51	-3.41	-2.38	2.53	37.39	-36.27
	U_{111}–L_{111}	93.05	-93.71	0.57	-0.54	-3.06	3.08	6.07	-5.77	-32.77	32.72
	U_{112}–L_{112}	-159.89	162.81	0.36	-0.38	-3.19	3.24	3.79	-3.99	-33.51	34.04
	U_{113}–L_{113}	-113.84	116.39	0.53	-0.57	-3.21	3.27	5.57	-5.87	-33.72	34.26
	U_{114}–L_{114}	-130.37	-127.18	0.44	-0.30	-2.75	3.10	4.59	-3.20	-28.91	32.59
	U_{115}–L_{115}	-113.07	114.60	0.63	-0.56	-2.32	2.85	6.61	-5.92	-24.40	30.03
	U_{116}–L_{116}	-44.77	47.44	0.47	-0.50	-1.03	1.26	4.95	-5.26	-10.84	13.31
	U_{117}–L_{117}	-44.77	46.58	0.78	-0.73	-1.11	1.52	8.24	-7.63	-11.69	13.92
	U_{118}–L_{118}	-30.30	34.99	0.91	-0.87	-0.92	1.39	9.62	-9.08	-9.68	15.76
	U_{119}–L_{119}	-9.69	4.33	1.19	-1.27	-0.17	0.16	12.47	-13.36	-1.74	1.68
	U_{120}–L_{120}	22.65	-25.72	1.29	1.32	-0.39	0.34	13.59	-14.31	-3.98	2.84
	U_{121}–L_{121}	-9.20	8.46	0.34	0.87	0.80	1.74	-1.83	-9.20	8.46	18.34
	U_{122}–L_{122}	68.57	-67.50	-0.79	0.62	2.28	-2.28	-8.33	6.47	24.01	-24.03
	U_{123}–L_{123}	68.57	-67.50	-0.79	0.62	2.28	-2.28	-8.33	6.47	24.01	-24.03
	U_{124}–L_{124}	138.29	-139.04	-0.49	0.27	3.59	-3.72	-5.18	2.84	37.77	-39.14
	U_{125}–L_{125}	138.29	-139.04	-0.49	0.27	3.59	-3.72	-5.18	2.84	37.77	-39.14
	U_{126}–L_{126}	136.94	-136.62	-0.49	0.27	3.59	-3.72	-5.18	2.84	37.77	-39.14
	U_{127}–L_{127}	-179.36	-176.28	-0.18	0.16	3.33	-3.56	-1.89	1.66	41.96	-40.05
	U_{128}–L_{128}	-179.36	-176.28	-0.18	0.16	3.33	-3.56	-1.89	1.66	41.96	-40.05
	U_{129}–L_{129}	-167.25	-167.49	0.32	-0.36	-3.06	3.03	3.42	-3.75	-32.62	32.23
	U_{130}–L_{130}	-116.13	-110.00	0.16	-0.26	-2.16	2.52	1.68	-2.78	-22.98	26.84
	U_{131}–L_{131}	-124.98	-121.99	0.16	-0.91	-2.21	2.53	1.68	-9.61	-23.06	26.57
	U_{132}–L_{132}	-119.87	-124.44	0.51	-0.34	-2.14	2.43	5.39	-3.65	-22.77	25.86
	U_{133}–L_{133}	-79.40	-79.47	0.42	-0.42	-1.47	1.67	4.47	-4.47	-15.47	17.67
	U_{134}–L_{134}	-79.51	88.87	0.73	-0.70	-1.73	1.86	7.75	-7.46	-16.39	19.82
	U_{135}–L_{135}	-43.86	51.94	-0.97	1.21	-0.33	0.35	-10.35	12.85	-3.50	3.71
	U_{136}–L_{136}	-39.24	46.74	-0.97	1.21	-0.33	0.35	-10.35	12.85	-3.50	3.71
	U_{137}–L_{137}	-5.58	1.82	-1.33	1.27	-1.58	-1.73	-14.14	13.52	16.86	-18.38
	U_{138}–L_{138}	55.25	-61.09	-0.48	0.31	1.83	-1.89	-5.07	3.32	19.53	-19.26
	U_{139}–L_{139}	115.62	-122.77	-0.41	0.24	3.43	-3.50	-4.30	2.69	33.66	-34.26
	U_{140}–L_{140}	137.15	-150.77	-0.34	0.35	3.44	-3.50	-3.65	3.71	36.65	-37.28
	U_{141}–L_{141}	165.74	-206.85	-0.25	0.34	3.23	-3.91	-2.68	3.59	34.41	-41.67
	U_{142}–L_{142}	82.96	-144.15	-0.22	0.45	2.29	-3.05	-2.68	4.64	24.13	-32.42
	U_{143}–L_{143}	-109.90	-113.62	0.23	-0.25	-2.48	2.74	2.50	-2.66	-26.76	29.52
	U_{144}–L_{144}	-109.90	-93.97	0.23	-0.25	-2.48	2.74	2.50	-2.66	-26.76	29.52
	U_{145}–L_{145}	-38.43	-48.15	-0.30	-0.22	-1.19	1.50	3.18	-2.34	-12.86	16.17
	U_{146}–L_{146}	-38.43	-38.15	-0.30	-0.22	-1.19	1.50	3.18	-2.34	-12.86	16.17
	U_{147}–L_{147}	-2.76	8.97	1.20	-1.23	-1.62	1.65	12.88	-13.28	-16.39	17.78
	U_{148}–L_{148}	25.90	-28.71	1.42	-1.54	-0.35	0.33	15.28	-16.65	-3.74	3.58
	U_{149}–L_{149}	79.40	-77.51	-0.93	0.84	2.24	-2.28	-10.01	9.05	24.13	-24.67
	U_{150}–L_{150}	79.40	-77.51	-0.93	0.84	2.24	-2.28	-10.01	9.05	24.13	-24.67
	U_{151}–L_{151}	127.54	-126.84	-0.73	0.52	3.52	-3.54	-7.91	5.57	17.94	-26.15
	U_{152}–L_{152}	94.27	-125.94	-0.73	0.52	1.66	-2.43	-7.91	5.57	17.94	-26.15
	U_{153}–L_{153}	92.31	-95.87	-0.35	0.19	2.12	2.44	-3.76	2.04	22.83	-26.28

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	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_u (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(x)}$	Equivalent Mom. Factor $C_{m(y)}$
Structure 1	U_1–L_1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-33.58	58.02	35.52	76.32	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_2–L_2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-7.37	14.93	-35.96	46.72	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_3–L_3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.84	-19.27	-2.30	9.39	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_4–L_4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.83	-64.83	26.68	-24.67	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_5–L_5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	74.58	-75.61	53.47	-45.28	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_6–L_6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	53.35	-51.42	86.06	-96.31	19.4	19.37	19.31	29.87	3	958.8	1.54	1477	1.5	958.8
	U_7–L_7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.49	-52.88	137.12	-124.84	20.80	20.67	34.66	9	1076.0	1.67	1796	1.5	1029.6	-0.960
	U_8–L_8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	118.34	-132.14	161.44	-176.81	18.5	18.45	18.36	30.78	7	1020.9	1.67	1016	1.5	913.3
	U_9–L_9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-23.44	23.54	-34.08	37.15	107.1	107.13	107.11	162.71	26	2058.9	1.52	3269	1.5	5302.3
	U_{10}–L_{10}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-114.01	210.73	200.21	-212.55	245.14	33.1	33.05	32.91	54.51	14	1409.8	1.65	1799	1.5	1638.0
	U_{11}–L_{11}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-111.82	113.00	-134.66	142.99	35.5	35.52	35.44	58.46	14	1409.8	1.65	1799	1.5	1638.0
	U_{12}–L_{12}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-112.33	116.05	-136.32	150.72	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{13}–L_{13}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-93.55	93.08	-126.43	127.42	21.1	21.09	21.09	39.40	10	1137.6	1.68	1170	1.5	1044.0
	U_{14}–L_{14}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-52.22	66.56	-62.37	98.95	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
	U_{15}–L_{15}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-53.41	52.43	-45.28	53.09	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{16}–L_{16}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-22.60	16.77	23.74	-29.90	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{17}–L_{17}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.05	-28.23	72.01	-75.86	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{18}–L_{18}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	55.02	-69.04	84.82	-99.16

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: 2F1
Condition: As-Inspected

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

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

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

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

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0-L_1	-12.57	3.38	-0.30	0.21	0.18	-0.10	-3.34	2.35	-1.97	-1.12
	L_1-L_2	-1.68	-7.06	-0.78	0.07	0.12	-0.03	-8.66	0.80	-1.35	-0.37
	L_2-L_3	-0.06	-8.38	-0.33	0.06	-0.02	-0.46	-5.91	0.69	-1.20	-0.51
	L_3-L_4	-9.78	-11.76	-0.50	-0.34	0.08	-0.51	-5.52	-3.79	0.86	-0.64
	L_4-L_5	-10.33	-17.60	-0.58	-0.29	0.25	-0.41	-4.52	-5.41	0.00	-0.64
	L_5-L_6	-26.83	-58.49	-1.45	1.20	-0.19	-0.37	-21.80	-2.63	-4.32	0.00
	L_6-L_7	-59.79	-58.79	-2.31	1.57	-1.40	-1.04	-25.72	-18.62	-14.66	4.46
	L_7-L_8	-6.35	-88.66	-1.11	2.08	0.01	-2.01	-12.35	-23.19	0.09	-0.09
	L_8-L_9	-9.60	-109.55	-0.82	1.73	0.14	-0.05	-23.90	-16.68	-13.45	0.00
	L_9-L_{10}	-74.80	-111.89	-1.85	1.05	0.14	0.03	-19.90	10.89	1.48	2.27
	L_{10}-L_{11}	-58.84	-54.78	-1.44	0.57	-0.02	-0.35	-15.53	6.15	-0.25	-3.78
	L_{11}-L_{12}	-60.50	-22.28	-1.45	0.15	-0.08	-0.26	-15.89	13.54	-3.77	6.21
	L_{12}-L_{13}	-55.25	39.07	-1.26	0.74	-0.77	-0.77	-13.60	7.52	-0.77	0.00
	L_{13}-L_{14}	-20.99	7.38	-0.82	0.20	0.24	-0.48	-8.19	2.16	2.54	-5.22
	L_{14}-L_{15}	-1.19	32.29	-0.47	0.05	0.24	-0.48	-7.39	-3.89	-4.62	0.00
	L_{15}-L_{16}	-19.00	4.09	-0.90	0.69	0.06	-0.46	-9.68	7.45	0.61	-4.94
	L_{16}-L_{17}	-28.64	12.99	-1.13	0.72	-0.13	-0.16	-12.13	10.16	-1.08	-3.55
	L_{17}-L_{18}	-89.35	58.15	-1.76	1.77	-0.31	-0.09	-23.28	19.03	-3.31	-0.92
	L_{18}-L_{19}	-89.37	61.38	-2.36	1.76	-0.54	-0.11	-25.47	13.32	-3.07	-1.18
	L_{19}-L_{20}	-105.39	89.05	-1.98	1.90	0.10	-0.10	-21.34	20.46	1.05	-1.02
	L_{20}-L_{21}	-82.31	86.26	-2.23	2.01	0.34	-0.31	-23.79	21.38	3.62	-3.02
	L_{21}-L_{22}	-88.17	73.28	-2.26	1.79	0.34	-0.31	-24.16	19.26	3.49	-2.94
	L_{22}-L_{23}	-84.24	62.98	-2.32	1.65	0.36	-0.29	-24.65	17.60	3.83	-3.11
	L_{23}-L_{24}	-81.41	54.64	-2.29	1.51	0.36	-0.29	-13.48	9.96	1.95	-4.37
	L_{24}-L_{25}	-17.36	7.00	-1.07	0.70	0.33	-0.54	-11.34	7.46	3.60	-5.73
	L_{25}-L_{26}	-1.61	-11.46	-0.89	0.01	0.33	-0.54	-8.48	-1.47	-6.22	-2.94
	L_{26}-L_{27}	-7.43	-23.92	-0.70	0.21	0.52	-0.80	-7.43	2.27	5.53	-8.55
	L_{27}-L_{28}	-44.32	35.88	-1.13	0.63	-0.07	-0.52	-12.07	8.74	-0.76	-5.48
	L_{28}-L_{29}	-66.39	68.66	-1.79	1.15	-0.43	-0.44	-19.09	16.45	-3.38	-4.54
	L_{29}-L_{30}	-88.55	73.83	-1.81	1.25	-0.22	-0.41	-19.31	13.32	-2.36	-4.33
	L_{30}-L_{31}	-90.40	58.36	-2.01	1.46	-0.13	-0.54	-21.29	13.16	-1.54	0.00
	L_{31}-L_{32}	-108.38	115.68	-2.06	1.82	-0.67	-0.09	-21.98	19.36	-0.70	-0.98
	L_{32}-L_{33}	-154.28	139.71	-2.76	2.31	-0.77	-0.29	-29.36	24.54	-0.20	-2.12
	L_{33}-L_{34}	-86.83	98.70	-2.13	1.71	-0.61	-0.29	-19.98	23.54	2.94	-2.61
	L_{34}-L_{35}	-24.73	100.98	-1.90	2.24	0.28	-0.25	-19.98	23.54	2.94	-2.61
	L_{35}-L_{36}	-98.38	98.38	-2.19	2.19	0.28	-0.25	-26.46	21.98	3.14	-1.31
	L_{36}-L_{37}	-74.14	95.51	-2.52	2.09	0.07	-0.16	-26.46	21.98	0.72	-1.70
	L_{37}-L_{38}	-55.45	88.65	-1.91	2.18	0.07	-0.16	-20.75	15.57	0.74	-1.70
	L_{38}-L_{39}	-55.45	68.65	-1.97	1.48	0.07	-0.54	-20.75	15.57	0.74	-0.64
	L_{39}-L_{40}	-32.97	39.97	-1.51	0.95	0.14	-0.53	-15.90	10.04	1.47	-0.56
	L_{40}-L_{41}	-10.32	4.39	-0.79	0.30	0.28	-0.61	-8.33	3.17	2.95	-6.46
	L_{41}-L_{42}	-10.32	4.39	-0.79	0.30	0.28	-0.61	-8.33	3.17	2.95	-6.46
	L_{42}-L_{43}	-7.88	6.27	-0.57	0.45	0.00	-0.47	-7.88	5.27	0.00	-4.98
	L_{43}-L_{44}	-17.08	16.16	-0.89	0.78	0.06	-0.43	-8.31	8.24	0.58	-4.49
	L_{44}-L_{45}	-55.69	55.14	-1.43	1.43	0.00	-0.43	-14.01	11.62	1.85	-4.81
	L_{45}-L_{46}	-55.69	65.14	-2.02	1.63	-0.39	-0.34	-21.28	17.19	-4.10	-3.61
	L_{46}-L_{47}	-49.22	80.41	-1.98	1.77	-0.64	-0.02	-20.84	18.63	-6.73	0.23
	L_{47}-L_{48}	-105.11	102.67	-2.73	2.66	-0.78	-0.02	-29.29	26.84	0.00	0.00
	L_{48}-L_{49}	-105.11	102.67	-2.78	2.46	0.14	-0.16	-29.29	26.84	1.00	-1.67
	L_{49}-L_{50}	-47.87	39.11	-1.75	1.25	-0.29	-0.51	-18.38	12.48	2.68	-2.68
	L_{50}-L_{51}	-47.87	128.15	-1.57	2.42	0.32	-0.27	-20.94	25.81	3.40	-2.68
	L_{51}-L_{52}	-47.87	128.15	-1.57	2.42	0.32	-0.27	-20.94	25.81	3.40	-2.68
	L_{52}-L_{53}	-89.53	99.33	-2.23	1.69	0.19	-0.21	-23.75	17.95	2.07	-2.21
	L_{53}-L_{54}	-86.54	82.57	-1.96	1.32	-0.17	-0.28	-20.45	14.09	-1.79	-2.93
	L_{54}-L_{55}	-86.54	82.57	-1.96	1.32	-0.17	-0.28	-20.45	14.09	-1.79	-2.93
	L_{55}-L_{56}	-90.17	67.66	-2.00	1.23	0.22	-0.70	-21.30	13.13	2.36	-7.48
	L_{56}-L_{57}	-90.17	67.66	-2.00	1.23	0.22	-0.70	-21.30	13.13	2.36	-7.48
	L_{57}-L_{58}	-12.59	26.40	-0.60	0.26	0.21	-0.63	-6.35	2.75	2.26	-6.65
	L_{58}-L_{59}	-6.51	11.79	-0.78	0.59	0.24	-0.64	-8.27	6.32	2.59	-6.76
	L_{59}-L_{60}	-11.88	9.87	-0.97	0.73	0.28	-0.76	-8.27	6.32	2.59	-6.76
	L_{60}-L_{61}	-38.92	20.55	-1.26	1.01	-0.13	-0.32	-13.46	10.70	-1.41	-3.06
	L_{61}-L_{62}	-38.92	20.55	-1.26	1.01	-0.13	-0.32	-22.19	19.20	-4.17	-3.06
	L_{62}-L_{63}	-98.53	71.15	-2.38	1.91	0.27	-0.22	-25.32	20.34	2.82	-2.38
	L_{63}-L_{64}	-98.53	71.15	-2.38	1.91	0.27	-0.22	-25.32	20.34	2.82	-2.38
	L_{64}-L_{65}	-24.45	69.24	-2.28	1.85	0.21	-0.17	-20.45	19.24	2.00	-1.61
	L_{65}-L_{66}	-86.92	56.40	-2.33	1.66	0.19	-0.15	-25.08	17.93	2.09	-1.57
	L_{66}-L_{67}	-86.92	56.40	-2.33	1.66	0.19	-0.15	-25.08	17.93	2.09	-1.57
	L_{67}-L_{68}	-28.11	12.70	-1.29	0.77	0.20	-0.39	-13.94	8.33	2.10	-4.19
	L_{68}-L_{69}	-28.11	12.70	-1.29	0.77	0.20	-0.39	-13.03	7.30	2.43	-4.64
	L_{69}-L_{70}	-8.07	-18.30	-0.81	0.07	0.39	-0.70	-8.73	0.72	4.15	-7.59
	L_{70}-L_{71}	-50.49	35.10	-1.18	0.96	-0.02	-0.54	-12.77	10.34	-0.22	-5.57
	L_{71}-L_{72}	-50.49	35.10	-1.18	0.96	-0.02	-0.54	-16.22	8.97	-7.47	-6.12
	L_{72}-L_{73}	-59.60	20.61	-1.50	0.83	-0.69	-0.57	-16.22	8.97	-7.47	-6.12
	L_{73}-L_{74}	-59.60	20.61	-1.50	0.83	-0.69	-0.57	-13.46	8.73	-3.27	-6.12
	L_{74}-L_{75}	-77.34	67.11	-1.74	1.25	-0.73	0.08	-18.77	13.42	-7.82	0.88
	L_{75}-L_{76}	-77.34	67.11	-1.74	1.25	-0.73	0.08	-18.77	13.42	-7.82	0.88
	L_{76}-L_{77}	-2.84	82.10	-1.24	1.90	0.14	0.06	-13.80	21.19	-1.91	0.67
	L_{77}-L_{78}	-54.59	58.66	-2.27	1.54	-0.11	0.15	-25.28	17.72	-7.85	1.67
	L_{78}-L_{79}	-54.59	58.66	-2.27	1.54	-0.11	0.15	-25.28	17.72	-7.85	1.67
	L_{79}-L_{80}	-9.15	17.58	-0.84	-0.11	-0.04	-0.34	-8.33	-1.18	-4.65	-3.73
	L_{80}-L_{81}	-9.15	17.58	-0.84	-0.11	-0.04	-0.34	-8.33	-1.18	-4.65	-3.73
	L_{81}-L_{82}	-0.13	-8.77	-0.54	0.15	-0.24	-0.49	-5.98	1.68	-2.64	-6.47
	L_{82}-L_{83}	-0.13	-8.77	-0.54	0.15	-0.24	-0.49	-5.98	1.68	-2.64	-6.47
	L_{83}-L_{84}	-23.22	7.61	-0.27	0.36	0.07	-0.59	-3.02	4.01	-0.78	-0.68

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_{top}	M_2 (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor C_{mx2}
Structure 1	U_0-L_1	-20.68	7.45	-13.77	2.93	15.6	19.63	15.58	25.56	5	804.0	1.66	857	1.5	773.7
	L_1-L_2	-13.44	8.14	-9.43	-0.63	9.66	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_2-L_3	-13.72	-0.03	-9.23	-1.16	9.66	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_3-L_4	5.54	-20.21	13.83	-22.63	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_4-L_5	-21.80	20.43	-14.53	18.45	15.4	19.4	19.37	29.87	5	907.0	1.54	986	1.5	958.8
	L_5-L_6	-55.87	93.35	-37.58	70.71	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0
	L_6-L_7	-111.16	109.19	-67.64	78.41	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0
	L_7-L_8	-24.31	145.66	-8.14	115.40	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0
	L_8-L_9	-23.90	168.68	-10.46	141.71	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2214.7
	L_9-L_{10}	-123.11	98.89	-85.32	85.09	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2214.7
	L_{10}-L_{11}	-64.08	79.20	-74.22	66.29	39.8	39.77	39.56	65.61	21	1616.3	1.65	2165	1.5	1968.6
	L_{11}-L_{12}	-56.36	37.60	-64.62	31.02	39.8	39.77	39.56	65.61	21	1616.3	1.65	2165	1.5	1968.6
	L_{12}-L_{13}	-89.50	81.10	-76.83	43.29	20.8	20.80	20.67	34.66	7	1076.0	1.67	1444	1.5	1029.6
	L_{13}-L_{14}	-38.70	12.40	-23.97	2.81	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{14}-L_{15}	-7.99	-23.89	4.62	-24.76	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{15}-L_{16}	-37.28	15.00	-23.90	-1.10	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{16}-L_{17}	-53.00	30.09	-38.63	-12.53	15.4	19.37	19.37	29.87	5	907.0	1.54	986	1.5	958.8
	L_{17}-L_{18}	-146.41	100.33	-120.45	74.40	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	L_{18}-L_{19}	-154.35	104.79	-119.26	78.26	35.4	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1
	L_{19}-L_{20}	-164.75	142.36	-130.65	114.43	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1
	L_{20}-L_{21}	-137.92	139.96	-102.29	107.85	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_{21}-L_{22}	-163.28	118.23	-132.03	87.02	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_{22}-L_{23}	-137.66	154.75	-100.63	77.63	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	L_{23}-L_{24}	-73.07	144.25	-53.41	71.54	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	L_{24}-L_{25}	-37.23	18.81	-17.63	1.66	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{25}-L_{26}	-13.12	-8.17	-7.39	-2.98	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{26}-L_{27}	-0.01	-28.15	16.84	-42.21	17.2	17.24	17.24	26.54	8	824.7	1.54	876	1.5	853.4
	L_{27}-L_{28}	-73.31	55.45	-58.59	39.51	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1016.2
	L_{28}-L_{29}	-150.12	110.64	-129.69	92.72	38.5	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1
	L_{29}-L_{30}	-146.22	113.29	-118.19	90.34	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_{30}-L_{31}	-153.10	143.18	-139.85	129.61	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_{31}-L_{32}	-169.46	175.57	-141.80	149.10	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1
	L_{32}-L_{33}	-236.75	213.32	-185.68	162.71	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_{33}-L_{34}	-114.40	227.21	-76.52	192.53	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_{34}-L_{35}	-58.12	161.35	-28.33	127.36	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	L_{35}-L_{36}	-164.63	150.19	-124.62	110.58	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	L_{36}-L_{37}	-130.79	152.73	-95.48	121.94	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1
	L_{37}-L_{38}	-114.82	127.21	-84.13	97.52	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	L_{38}-L_{39}	-89.06	109.79	-71.13	82.18	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	L_{39}-L_{40}	-63.52	60.01	-40.94	44.74	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1015.2
	L_{40}-L_{41}	-41.93	27.75	-16.53	13.35	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{41}-L_{42}	-24.25	9.62	-9.59	-2.69	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{42}-L_{43}	-7.88	5.27	-4.98	0.00	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{43}-L_{44}	-34.31	31.72	-21.48	15.17	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{44}-L_{45}	-67.89	60.19	-39.51	33.62	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1015.2
	L_{45}-L_{46}	-100.07	107.03	-77.73	79.99	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	L_{46}-L_{47}	-117.08	128.76	-98.74	104.84	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	L_{47}-L_{48}	-176.02	166.94	-135.98	131.17	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	L_{48}-L_{49}	-176.02	166.94	-135.98	131.17	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	L_{49}-L_{50}	-69.94	79.17	-53.98	61.12	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	L_{50}-L_{51}	-147.27	152.46	-113.71	126.24	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1
	L_{51}-L_{52}	-139.60	125.66	-114.83	103.54	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1
	L_{52}-L_{53}	-144.92	105.03	-114.15	78.23	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1
	L_{53}-L_{54}	-135.95	92.72	-107.12	69.01	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1
	L_{54}-L_{55}	-8.12	-30.75	19.30	-42.68	17.2	17.24	17.24	26.54	8	824.7	1.54	876	1.5	853.4
	L_{55}-L_{56}	-2.29	-14.91	11.83	-31.96	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{56}-L_{57}	-29.12	15.90	-20.54	4.96	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{57}-L_{58}	-6.35	2.75	-2.26	-6.65	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{58}-L_{59}	-8.27	6.32	-2.59	-6.76	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{59}-L_{60}	-8.27	6.32	-2.59	-6.76	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{60}-L_{61}	-13.46	10.70	-1.41	-3.06	15.4	21.54	21.54	33.27	5	987.9	1.54	1098	1.5	1068.2
	L_{61}-L_{62}	-22.19	19.20	-4.17	-3.06	15.4	21.54	21.54	33.27	5	987.9	1.54	1098	1.5	1068.2
	L_{62}-L_{63}	-25.32	20.34	-2.82	-2.38	15.4	20.80	20.67	34.66	7	1076.0	1.67	1444	1.5	1029.6
	L_{63}-L_{64}	-25.32	20.34	-2.82	-2.38	15.4	20.80	20.67	34.66	7	1076.0	1.67	1444	1.5	1029.6
	L_{64}-L_{65}	-20.45	19.24	-2.00	-1.61	15.4	20.80	20.67	34.66	7	1076.0	1.67	1444	1.5	1029.6
	L_{65}-L_{66}	-25.08	17.93	-2.09	-1.57	15.4	20.80	20.67	34.66	7	1076.0	1.67	1444	1.5	1029.6
	L_{66}-L_{67}	-25.08	17.93	-2.09	-1.57	15.4	20.80	20.67	34.66	7	1076.0	1.67	1444	1.5	1029.6
	L_{67}-L_{68}	-13.94	8.33	-2.10	-4.19	15.4	19.37	19.37	29.87	5	907.0	1.54	986	1.5	958.8
	L_{68}-L_{69}	-13.03	7.30	-2.43	-4.64	15.4	19.37	19.37	29.87	5	907.0	1.54	986	1.5	958.8
	L_{69}-L_{70}	-8.73	0.72	-4.15	-7.59	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{70}-L_{71}	-12.77	10.34	-0.22	-5.57	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{71}-L_{72}	-16.22	8.97	-7.47	-6.12	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{72}-L_{73}	-16.22	8.97	-7.47	-6.12	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{73}-L_{74}	-13.46	8.73	-3.27	-6.12	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{74}-L_{75}	-18.77	13.42	-7.82	0.88	15.4	20.80	20.67	34.66	7	1076.0	1.67	1444	1.5	1029.6
	L_{75}-L_{76}	-18.77	13.42	-7.82	0.88	15.4	20.80	20.67	34.66	7	1076.0	1.67	1444	1.5	1029.6
	L_{76}-L_{77}	-13.80	21.19	-1.91	0.67	15.4	20.80	20.67	34.66	7	1076.0	1.67	1444	1.5	1029.6
	L_{77}-L_{78}	-25.28	17.72	-7.85	1.67	15.4	20.80	20.67	34.66	7	1076.0	1.67	1444	1.5	1029.6
	L_{78}-L_{79}	-25.28	17.72	-7.85	1.67	15.4	20.80	20.67	34.66	7	1076.0	1.67	1444	1.5	1029.6
	L_{79}-L_{80}	-8.33	-1.18	-4.65	-3.73	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{80}-L_{81}	-8.33	-1.18	-4.65	-3.73	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{81}-L_{82}	-5.98	1.68	-2.64	-6.47	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
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 for Load Rating 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-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)	ZZ Axis Moment Properties: Max. Pos. Mom. Start k-in	Max. Pos. Mom. End k-in	S_{bb} (in^3)	S_b (in^3)	S_{tt} (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term = F_y*S_bb	M_u (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	C_{mm}	YY Axis Moments from STAAD: Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (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)	YY Axis Moment Properties: Max. Neg. Mom. Start k-in	Max. Neg. Mom. End k-in	S_{bb} (in^3)	S_b (in^3)	S_{tt} (in^3)	Z_Y (in^3)	I_{YY} (in^4)	Shape Factor f	M_p (k-in)	P_{crit} (kip)	Formula 1.8 Term = F_y*S_bb	M_u (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	C_{mm}	Pass
Structure 1	U_0–U_1	88.99	-98.04	-1.06	0.91	-0.03	0.14	0.65	0.45	2.38	-2.03	-14.11	12.17	-0.43	68.63	7.81	5.35	28.61	-24.37	87.19	-104.68	115.13	-261.15	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99850004	2974.3	-0.531	0.39	0.39	72.93	-4.52	-0.70	0.57	-1.10	-4.48	-0.43	0.24	1.16	0.96	-0.34	7.55	-14.68	-59.86	-6.32	3.59	17.28	0.92	14.45	8.80	75.72	83.70	158.6	158.64	128.68	179.40	778.9	1.13	9920	—	0.99724251	5220.7	0.905	0.24	0.24	0.172	0.052	0.23	Yes
	U_1–$U_{1.5}$	-214.86	128.23	1.06	1.03	-4.09	0.02	0.39	0.52	-1.79	0.34	13.68	13.37	-52.96	0.19	4.70	6.29	-21.47	4.03	-209.43	192.25	378.07	-273.63	96.6	96.61	83.59	139.29	2174	1387.9	1.40	4465	0.99873153	3184.1	0.728	0.89	0.89	-19.75	-152.80	0.15	0.66	-1.75	-1.56	-0.04	0.21	0.65	-0.52	1.99	8.51	-22.63	-20.20	-0.52	3.09	8.34	-7.49	-23.76	-118.61	-42.95	41.67	160.8	160.79	138.34	188.45	825.4	1.14	6219	—	0.99717164	5455.6	0.230	0.68	0.68	0.231	0.121	0.36	Yes
	$U_{1.5}$–U_2	22.90	83.89	1.12	0.66	-2.32	0.08	0.48	0.31	-0.85	0.25	14.45	7.21	-30.00	1.06	5.78	3.77	-10.20	3.02	56.08	-122.93	-22.49	35.08	96.6	96.61	79.12	139.29	2174	1387.9	1.40	4465	0.99873153	3184.1	0.466	0.78	0.78	-23.41	-53.18	0.56	0.88	-2.01	-0.35	0.34	0.22	0.09	-0.78	7.26	11.40	-26.02	-4.48	4.92	3.21	1.24	-11.23	-14.61	-50.14	-62.65	-50.85	165.8	165.79	136.31	188.45	825.4	1.14	6219	—	0.99717172	5455.6	0.812	0.92	0.92	0.242	0.038	0.28	Yes	0.164	0.025	0.19	Yes	—	—	—	—	—	—	—	—	—	—	—	—
	U_2–$U_{2.5}$	-185.98	640.73	0.32	2.04	-3.42	1.98	-1.47	3.55	0.00	0.00	0.00	4.14	20.42	-44.30	25.62	-17.60	42.58	0.00	0.00	-260.98	922.64	-309.67	866.25	130.3	130.26	105.11	180.77	2990	1799.3	1.39	5995	0.99860938	4250.8	-0.282	0.49	0.49	90.52	209.77	0.46	1.23	-3.96	-0.78	0.12	0.71	0.00	0.00	5.91	15.89	41.26	-10.07	10.37	10.25	0.00	0.00	138.64	352.78	51.04	255.72	212.8	212.76	173.24	246.38	1118.1	1.16	8131	—	0.99723715	8571.6	0.608	0.84	0.84	0.418	0.182	0.60	Yes	0.292	0.124	0.42	Yes	—	—	—	—	—	—	—	—	—	—	—	—
	$U_{2.5}$–U_3	705.85	-109.11	1.24	0.77	3.96	-4.36	3.95	-1.35	0.00	0.00	16.53	10.33	62.96	-58.18	47.41	-16.21	0.00	0.00	1000.72	-149.50	886.45	-217.48	138.2	138.17	111.77	199.97	3642	2197.7	1.45	6399	0.99894545	4564.8	-0.149	0.54	0.54	134.05	193.21	-0.59	1.21	-0.73	-0.31	0.81	1.21	0.00	0.00	-7.94	16.13	-9.78	-70.99	12.08	17.96	0.00	0.00	179.66	296.49	161.85	158.88	260.5	260.46	209.97	298.48	1150.4	1.15	9850	—	0.99725757	8571.6	0.608	0.84	0.84	0.418	0.182	0.60	Yes	0.292	0.124	0.42	Yes	—	—	—	—	—	—	—	—	—	—	—	—
	U_3–U_4	53.54	85.06	0.73	1.20	-2.04	-4.48	0.40	0.66	-0.20	-0.87	9.74	15.99	-0.51	-59.85	4.79	7.88	-2.45	-10.45	88.49	141.61	68.94	32.77	97.1	97.11	78.18	142.56	2586	1648.1	1.47	4704	0.99901136	3201.5	0.625	0.85	0.85	-27.99	192.22	-0.33	0.83	-1.65	-4.51	0.27	0.68	-0.78	0.19	-4.38	11.06	-21.48	-60.23	4.01	10.05	-11.53	2.86	-36.87	230.53	-64.32	124.79	196.9	196.91	155.47	230.42	811.9	1.12	7274	—	0.99714894	6479.5	0.160	0.54	0.54	0.382	0.062	0.45	Yes	0.267	0.043	0.31	Yes	—	—	—	—	—	—	—	—	—	—	—	—
	U_4–U_5	156.84	-12.62	1.15	1.10	-0.12	-4.30	0.70	0.62	0.15	-1.34	15.31	14.63	-1.64	-57.43	8.40	7.46	1.62	-16.07	234.72	12.32	201.16	-91.06	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.9988051	2974.3	0.552	0.62	0.62	2.78	47.13	-0.30	0.91	-0.59	-4.84	0.26	0.18	-0.48	0.52	-4.03	12.17	-7.88	-54.71	3.81	2.60	-7.14	7.72	3.33	80.47	-6.43	-22.98	158.6	158.64	128.76	179.40	778.9	1.13	9920	—	0.99724715	5220.7	0.041	0.62	0.62	0.233	0.069	0.31	Yes	0.157	0.045	0.21	Yes	—	—	—	—	—	—	—	—	—	—	—	—
	U_5–U_6	46.75	-46.31	1.27	1.10	-2.18	-4.68	0.74	0.52	-0.74	-1.39	16.57	14.72	-29.11	-62.26	8.86	6.20	-8.88	-16.68	94.35	-32.99	11.42	-41.84	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99860037	2974.3	-0.359	0.46	0.46	-59.98	58.75	0.01	0.75	3.37	0.01	0.09	-0.09	-0.78	0.39	0.17	10.01	45.00	0.19	1.40	-1.28	-11.59	5.82	-75.84	85.12	-34.55	-70.17	158.6	158.64	128.68	179.40	778.9	1.13	9920	—	0.99724645	5220.7	-0.892	0.24	0.24	0.038	0.037	0.08	Yes	0.026	0.025	0.06	Yes	0.140	0.019	0.17	Yes	0.144	0.022	0.17	Yes
	U_6–$U_{6.5}$	57.88	-78.76	1.49	0.83	-4.46	-2.04	0.74	0.46	-1.03	-1.25	19.89	11.13	-59.52	-27.20	8.93	5.37	-12.34	-15.54	112.70	-80.69	-18.17	20.33	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99860042	2974.3	-0.716	0.31	0.31	59.66	-109.93	0.69	0.44	0.07	0.20	-0.10	0.18	0.45	-1.32	7.87	5.85	0.90	2.69	-1.44	2.75	6.74	-19.53	80.52	-131.79	87.49	55.66	158.6	158.64	128.68	179.40	778.9	1.13	9920	—	0.99724525	5220.7	-0.652	0.34	0.34	0.024	0.049	0.09	Yes	0.023	0.024	0.06	Yes	0.158	0.021	0.18	Yes	0.148	0.027	0.18	Yes
	$U_{6.5}$–U_7	20.58	-172.42	1.36	0.36	-4.66	-2.72	0.76	0.23	-1.42	-1.15	18.21	4.76	-62.28	-36.35	9.11	2.70	-17.55	-13.80	62.27	-214.45	-76.32	-38.44	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99860042	2974.3	-0.290	0.48	0.48	30.94	29.48	0.21	0.02	-1.44	-1.72	0.00	-0.13	0.25	0.66	2.74	0.25	-19.21	-22.99	0.03	-1.94	3.77	9.74	43.82	30.90	20.15	22.99	158.6	158.64	128.76	179.40	778.9	1.13	9920	—	0.99724525	5220.7	0.705	0.88	0.88	—	—	—	—	—	—	—	—	0.299	0.043	0.35	Yes	0.297	0.051	0.35	Yes
	U_7–U_8	-101.33	43.03	0.56	0.08	-4.14	-0.40	0.53	0.02	-1.79	-0.65	12.83	1.02	-55.30	-5.29	6.36	0.22	-21.44	-7.79	186.79	-80.34	-231.92	-148.19	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99860042	2974.3	0.643	0.86	0.86	192.49	-168.00	-0.27	0.06	-1.32	-0.60	-0.34	-0.03	2.40	-1.39	-3.62	0.75	17.61	-7.99	-4.99	-0.50	35.57	-20.57	239.04	-206.68	273.58	213.10	158.6	158.64	128.65	179.40	778.9	1.13	9920	—	0.99724525	5220.7	0.775	0.91	0.91	—	—	—	—	—	—	—	—	0.332	0.116	0.46	Yes	0.334	0.055	0.39	Yes
	U_8–U_9	-55.81	170.19	0.58	-0.26	-1.84	0.12	0.26	0.12	-1.52	-0.15	7.75	-3.46	-24.51	1.59	3.13	1.44	-18.18	-1.85	-58.41	-223.88	-128.06	-72.89	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99860042	2974.3	0.261	0.70	0.70	-107.75	-80.55	-0.23	-0.02	0.93	0.30	-0.10	0.00	-0.93	-0.68	-2.32	-0.25	12.37	4.01	-1.47	0.01	-13.75	-52.03	-142.41	-109.02	-141.86	-147.82	158.6	158.64	128.68	179.40	778.9	1.13	9920	—	0.99724525	5220.7	0.939	0.98	0.98	—	—	—	—	—	—	—	—	0.239	0.092	0.33	Yes	0.237	0.053	0.30	Yes

M_y Information

Location	Member	YY Axis Moments from STAAD: Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (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)	YY Axis Moment Properties: Max. Pos. Mom. Start k-in	Max. Pos. Mom. End k-in	S_{bb} (in^3)	S_b (in^3)	S_{tt} (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term = F_y*S_bb	M_u (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	C_{mm}	Pass
Structure 1	U_0–U_1	72.93	-4.52	-0.70	0.57	-1.10	-4.48	-0.43	0.24	1.16	0.96	-0.34	7.55	-14.68	-59.86	-6.32	3.59	17.28	0.92	14.45	8.80	75.72	83.70	158.6	158.64	128.68	179.40	778.9	1.13	9920	—	0.99724251	7218.5	0.960	0.98	0.98	—	—	—	—	—	—	—	—	0.446	0.110	0.56	Yes	0.442	0.059	0.51	Yes
	U_1–$U_{1.5}$	-20.20	-0.52	3.09	8.34	-7.49	-23.76	-118.61	-42.95	41.67	160.8	160.79	138.34	188.45	825.4	1.14	6219	—	0.99717164	5455.6	0.230	0.68	0.68	—	—	—	—	—	—	—	—	0.231	0.121	0.36	Yes	0.229	0.094	0.32	Yes
	$U_{1.5}$–U_2	-50.14	-62.65	-50.85	165.8	165.79	136.31	188.45	825.4	1.14	6219	—	0.99717172	5455.6	0.812	0.92	0.92	0.242	0.038	0.28	Yes	0.164	0.025	0.19	Yes	—	—	—	—	—	—	—	—	—	—	—	—
	U_2–$U_{2.5}$	-14.61	-50.14	-62.65	-50.85	165.8	165.79	136.31	188.45	825.4	1.14	6219	—	0.99717172	5455.6	0.812	0.92	0.92	0.242	0.038	0.28	Yes	0.164	0.025	0.19	Yes	—	—	—	—	—	—	—	—	—	—	—	—
	$U_{2.5}$–U_3	-11.23	-14.61	-50.14	-62.65	-50.85	165.8	165.79	136.31	188.45	825.4	1.14	6219	—	0.99717172	5455.6	0.812	0.92	0.92	0.242	0.038	0.28	Yes	0.164	0.025	0.19	Yes	—	—	—	—	—	—	—	—	—	—	—	—
	U_3–U_4	1.24	-1.11	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_4–U_5	1.62	-0.59	0.23	0.31	-0.85	-2.01	0.31	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_5–U_6	0.09	-0.78	0.39	0.17	10.01	45.00	0.19	1.40	-1.28	-11.59	5.82	-75.84	85.12	-34.55	-70.17	158.6	158.64	128.68	179.40	778.9	1.13	9920	—	0.99724645	5220.7	-0.892	0.24	0.24	0.038	0.037	0.08	Yes	0.026	0.025	0.06	Yes	0.140	0.019	0.17	Yes	0.144	0.022	0.17	Yes
	U_6–$U_{6.5}$	-1.32	7.87	5.85	0.90	2.69	-1.44	2.75	6.74	-19.53	80.52	-131.79	87.49	55.66	158.6	158.64	128.68	179.40	778.9	1.13	9920	—	0.99724525	5220.7	-0.652	0.34	0.34	0.024	0.049	0.09	Yes	0.023	0.024	0.06	Yes	0.158	0.021	0.18	Yes	0.148	0.027	0.18	Yes
	$U_{6.5}$–U_7	0.03	-1.94	3.77	9.74	43.82	30.90	20.15	22.99	158.6	158.64	128.76	179.40	778.9	1.13	9920	—	0.99724525	5220.7	0.705	0.88	0.88	—	—	—	—	—	—	—	—	0.299	0.043	0.35	Yes	0.297	0.051	0.35	Yes
	U_7–U_8	-0.99	-0.50	35.57	-20.57	239.04	-206.68	273.58	213.10	158.6	158.64	128.65	179.40	778.9	1.13	9920	—	0.99724525	5220.7	0.775	0.91	0.91	—	—	—	—	—	—	—	—	0.332	0.116	0.46	Yes	0.334	0.055	0.39	Yes
	U_8–U_9	-4.01	-1.47	0.01	-13.75	-52.03	-142.41	-109.02	-141.86	-147.82	158.6	158.64	128.68	179.40	778.9	1.13	9920	—	0.99724525	5220.7	0.939	0.98	0.98	—	—	—	—	—	—	—	—	0.239	0.092	0.33	Yes	0.237	0.053	0.30	Yes
Structure 2	U_9–U_{10}	-201.53	70.43	0.98	1.26	-4.12	0.01	0.30	0.99	-1.62	-0.15	12.65	16.25	-53.29	0.14	3.60	7.10	-19.39	-1.76	-241.38	121.91	-357.00	-264.62	128.7	128.69	105.26	182.66	3153	1864.4	1.42	6028	0.99875895	4241.5	0.741	0.90	0.90	-161.82	-160.14	0.00	0.38	-1.39	-0.55	0.16	0.19	0.31	-0.99	-0.04	4.88	-17.82	-7.12	2.24	2.73	4.41	-13.70	-207.50	-224.29	-227.92	-237.42	219.3	219.34	180.69	253.75	1122.8	1.16	8374	—	0.99727421	7218.5	0.960	0.98	0.98	—	—	—	—	—	—	—	—	0.446	0.110	0.56	Yes	0.442	0.059	0.51	Yes
	U_{10}–$U_{10.5}$	-214.86	128.23	1.06	1.03	-4.09	0.02	0.39	0.52	-1.79	0.34	13.68	13.37	-52.96	0.19	4.70	6.29	-21.47	4.03	-209.43	192.25	378.07	-273.63	96.6	96.61	83.59	139.29	2174	1387.9	1.40	4465	0.99873153	3184.1	0.728	0.89	0.89	-19.75	-152.80	0.15	0.66	-1.75	-1.56	-0.04	0.21	0.65	-0.52	1.99	8.51	-22.63	-20.20	-0.52	3.09	8.34	-7.49	-23.76	-118.61	-42.95	41.67	160.8	160.79	138.34	188.45	825.4	1.14	6219	—	0.99717164	5455.6	0.230	0.68	0.68	0.231	0.121	0.36	Yes
	$U_{10.5}$–U_{11}	22.90	83.89	1.12	0.66	-2.32	0.08	0.48	0.31	-0.85	0.25	14.45	7.21	-30.00	1.06	5.78	3.77	-10.20	3.02	56.08	-122.93	-22.49	35.08	96.6	96.61	79.12	139.29	2174	1387.9	1.40	4465	0.99873153	3184.1	0.466	0.78	0.78	-23.41	-53.18	0.56	0.88	-2.01	-0.35	0.34	0.22	0.09	-0.78	7.26	11.40	-26.02	-4.48	4.92	3.21	1.24	-11.23	-14.61	-50.14	-62.65	-50.85	165.8	165.79	136.31	188.45	825.4	1.14	6219	—	0.99717172	5455.6	0.812	0.92	0.92	0.242	0.038	0.28	Yes	0.164	0.025	0.19	Yes	—	—	—	—	—	—	—	—	—	—	—	—
	U_{11}–$U_{11.5}$	-185.98	640.73	0.32	2.04	-3.42	1.98	-1.47	3.55	0.00	0.00	0.00	4.14	20.42	-44.30	25.62	-17.60	42.58	0.00	0.00	-260.98	922.64	-309.67	866.25	130.3	130.26	105.11	180.77	2990	1799.3	1.39	5995	0.99860938	4250.8	-0.282	0.49	0.49	90.52	209.77	0.46	1.23	-3.96	-0.78	0.12	0.71	0.00	0.00	5.91	15.89	41.26	-10.07	10.37	10.25	0.00	0.00	138.64	352.78	51.04	255.72	212.8	212.76	173.24	246.38	1118.1	1.16	8131	—	0.99723715	7002.2	0.409	0.78	0.78	0.424	0.192	0.62	Yes	0.295	0.131	0.43	Yes	—	—	—	—	—	—	—	—	—	—	—	—
	$U_{11.5}$–U_{12}	46.75	-46.31	1.27	1.10	-2.18	-4.68	0.74	0.52	-0.74	-1.39	16.57	14.72	-29.11	-62.26	8.86	6.20	-8.88	-16.68	94.35	-32.99	11.42	-41.84	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99860037	2974.3	-0.359	0.46	0.46	-59.98	58.75	0.01	0.75	3.37	0.01	0.09	-0.09	-0.78	0.39	0.17	10.01	45.00	0.19	1.40	-1.28	-11.59	5.82	-75.84	85.12	-34.55	-70.17	158.6	158.64	128.68	179.40	778.9	1.13	9920	—	0.99724645	5220.7	-0.892	0.24	0.24	0.038	0.037	0.08	Yes	0.026	0.025	0.06	Yes	0.140	0.019	0.17	Yes	0.144	0.022	0.17	Yes
	U_{12}–$U_{12.5}$	57.88	-78.76	1.49	0.83	-4.46	-2.04	0.74	0.46	-1.03	-1.25	19.89	11.13	-59.52	-27.20	8.93	5.37	-12.34	-15.54	112.70	-80.69	-18.17	20.33	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99860042	2974.3	-0.716	0.31	0.31	59.66	-109.93	0.69	0.44	0.07	0.20	-0.10	0.18	0.45	-1.32	7.87	5.85	0.90	2.69	-1.44	2.75	6.74	-19.53	80.52	-131.79	87.49	55.66	158.6	158.64	128.68	179.40	778.9	1.13	9920	—	0.99724525	5220.7	-0.652	0.34	0.34	0.024	0.049	0.09	Yes	0.023	0.024	0.06	Yes	0.158	0.021	0.18	Yes	0.148	0.027	0.18	Yes
	$U_{12.5}$–U_{13}	20.58	-172.42	1.36	0.36	-4.66	-2.72	0.76	0.23	-1.42	-1.15	18.21	4.76	-62.28	-36.35	9.11	2.70	-17.55	-13.80	62.27	-214.45	-76.32	-38.44	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99860042	2974.3	-0.290	0.48	0.48	30.94	29.48	0.21	0.02	-1.44	-1.72	0.00	-0.13	0.25	0.66	2.74	0.25	-19.21	-22.99	0.03	-1.94	3.77	9.74	43.82	30.90	20.15	22.99	158.6	158.64	128.76	179.40	778.9	1.13	9920	—	0.99724525	5220.7	0.705	0.88	0.88	—	—	—	—	—	—	—	—	0.299	0.043	0.35	Yes	0.297	0.051	0.35	Yes
	U_{13}–U_{14}	-101.33	43.03	0.56	0.08	-4.14	-0.40	0.53	0.02	-1.79	-0.65	12.83	1.02	-55.30	-5.29	6.36	0.22	-21.44	-7.79	186.79	-80.34	-231.92	-148.19	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99860042	2974.3	0.643	0.86	0.86	192.49	-168.00	-0.27	0.06	-1.32	-0.60	-0.34	-0.03	2.40	-1.39	-3.62	0.75	17.61	-7.99	-4.99	-0.50	35.57	-20.57	239.04	-206.68	273.58	213.10	158.6	158.64	128.65	179.40	778.9	1.13	9920	—	0.99724525	5220.7	0.775	0.91	0.91	—	—	—	—	—	—	—	—	0.332	0.116	0.46	Yes	0.334	0.055	0.39	Yes
	U_{14}–U_{15}	-55.81	170.19	0.58	-0.26	-1.84	0.12	0.26	0.12	-1.52	-0.15	7.75	-3.46	-24.51	1.59	3.13	1.44	-18.18	-1.85	-58.41	-223.88	-128.06	-72.89	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99860042	2974.3	0.261	0.70	0.70	-107.75	-80.55	-0.23	-0.02	0.93	0.30	-0.10	0.00	-0.93	-0.68	-2.32	-0.25	12.37	4.01	-1.47	0.01	-13.75	-52.03	-142.41	-109.02	-141.86	-147.82	158.6	158.64	128.68	179.40	778.9	1.13	9920	—	0.99724525	5220.7	0.939	0.98	0.98	—	—	—	—	—	—	—	—	0.239	0.092	0.33	Yes	0.237	0.053	0.30	Yes
Structure 3	U_0–U_1	88.99	-88.04	-1.06	0.91	-0.03	0.14	0.65	0.45	2.38	-2.03	-14.11	12.17	-0.43	68.63	7.81	5.35	28.61	-24.37	87.19	-104.68	115.13	-261.15	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99850004	2974.3	-0.531	0.39	0.39	72.93	-4.52	-0.70	0.57	-1.10	-4.48	-0.43	0.24	1.16	0.96	-0.34	7.55	-14.68	-59.86	-6.32	3.59	17.28	0.92	14.45	8.80	75.72	83.70	158.6	158.64	128.68	179.40	778.9	1.13	9920	—	0.99724251	5220.7	0.905	0.24	0.24	0.172	0.052	0.23	Yes
	U_1–$U_{1.5}$	-214.86	128.23	1.06	1.03	-4.09	0.02	0.39	0.52	-1.79	0.34	13.68	13.37	-52.96	0.19	4.70	6.29	-21.47	4.03	-209.43	192.25	378.

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
Condition: As-inspected

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

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

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

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

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) | Min. Mz. Moments: Start (k-in) | Min. Mz. Moments: End (k-in) | Max. Neg. Mom. (k-in) | S_{xx} (in^3) | S_{bc} (in^3) | Z_z (in^3) | I_z (in^4) | I_{xx} (in^4) | Shape Factor | M_p (k-in) | Formula 1.8 Term * F$_y$/S_{xx} | M_z (k-in) | Equivalent Mom. Factor: a | C_b=12.5/(2.5a+3+4b+3c) | Max. Mz 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) | Min. Neg. Mom. (k-in) | S_{xx} (in^3) | S_{bc} (in^3) | Z_y (in^3) | I_{yy} (in^4) | Shape Factor | M_p (k-in) | P_{crit} (kip) | Formula 1.8 Term * F$_y$/S_{xx} | M_y (k-in) | Equivalent Mom. Factor: a | C_b=12.5/(2.5a+3+4b+3c) | Axial Tension (k) | Moment Tension (k-in) | Total | Pass | Axial Compression (k) | Moment Compression (k-in) | Total | Pass |
|---|---|---

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spreadsheet
Loading: 2F1
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 (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)	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)	$I_{t/n}$ (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term * F_y/S_bot	M_y (k-in)	Equivalent Mom. Factor Start	Equivalent Mom. Factor End	C_m	$C_{b(min)}$
Structure 1	U_0–L_1	-15.73	54.50	0.13	-0.31	-1.81	1.89	0.03	-0.13	-0.04	0.43	1.70	-4.18	-24.17	22.63	0.34	-1.55	-0.48	5.10	-17.81	63.40	81.87	100.27	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.517	0.39	0.39
	U_1–L_2	-27.56	29.23	0.42	-0.38	-0.86	1.04	0.20	-0.18	-0.57	0.52	5.56	-15.12	-11.48	13.83	2.41	-2.14	-6.82	6.19	-25.47	-28.57	-59.61	-9.80	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.164	0.67	0.67
	U_2–L_3	-39.39	5.27	0.39	-0.45	-0.69	0.83	0.20	-0.22	-0.26	0.35	5.56	-6.56	-8.27	12.44	2.34	-2.76	-3.13	4.21	-21.01	-16.22	-37.52	-9.62	9.21	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.882	0.20	0.20
	U_3–L_4	-40.63	-41.52	0.53	-0.54	-0.26	0.40	0.17	-0.21	-0.06	0.10	7.11	-7.15	-3.45	5.32	2.00	-2.46	-0.70	1.25	-64.67	-66.47	-48.34	-47.07	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.973	0.21	0.21
	U_4–L_5	-56.81	-77.81	0.53	-0.54	0.01	0.25	0.07	0.00	-0.01	-0.36	3.34	-3.57	0.00	0.00	0.00	0.00	0.00	0.00	74.31	-75.52	-75.52	-75.52	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-1.000	0.21	0.21
	U_5–L_6	-64.44	-72.23	-0.12	0.08	0.97	-1.07	0.00	0.00	0.42	-0.47	-1.60	-1.07	-12.96	14.28	0.00	0.00	0.00	0.00	0.02	-5.65	8.69	-92.50	107.14	57.86	15.4	19.37	33.31	29.87	907.0	1.54	986	1.5	958.8	0.540	0.82	0.82
	U_6–L_7	-64.44	-72.27	-0.11	0.07	0.97	-1.07	0.00	0.00	0.42	-0.47	-1.60	-1.07	-13.27	14.46	0.00	0.00	0.00	0.00	5.81	-5.09	12.91	-87.52	118.67	57.29	15.4	20.80	33.31	29.87	907.0	1.54	986	1.5	958.8	0.587	0.82	0.82
	U_7–L_8	-109.02	-121.41	-0.33	0.36	1.64	-1.09	0.00	0.00	0.74	-0.84	-2.48	-1.64	-20.14	22.63	0.00	0.00	0.00	0.00	9.90	-9.77	8.69	-132.95	118.13	18.13	15.4	18.36	30.78	1020.9	1.67	1016	1.5	913.3	0.643	0.86	0.86
	U_8–L_9	-42.58	47.08	0.43	-0.43	-1.01	1.31	0.00	0.00	-0.60	0.80	-6.80	-14.54	17.54	0.00	0.00	0.00	0.00	0.02	-62.90	70.04	-74.32	-32.52	107.1	107.11	107.11	162.57	26	2126.9	1.52	5365	1.5	5302.3	0.438	0.76	0.78
	U_9–L_{10}	-101.49	205.17	0.88	-0.98	-2.30	3.00	0.00	0.00	1.37	-1.91	-16.07	20.95	0.00	0.00	0.00	0.00	0.00	0.00	-11.24	12.91	-234.67	265.45	-274.05	-197.12	15.4	19.37	33.31	29.87	907.0	1.54	986	1.5	958.8	0.787	0.82	0.82
	U_{10}–L_{11}	-123.88	126.08	0.02	-0.06	-1.13	1.37	0.00	0.00	0.65	0.65	-6.28	-0.80	-14.59	17.67	0.00	0.00	0.00	0.00	-7.75	7.94	-160.67	162.86	-160.09	-127.74	35.5	35.52	59.42	58.46	14	1309.7	1.65	1929	1.5	1758.2	0.672	0.87	0.87
	U_{11}–L_{12}	-127.66	127.41	0.00	-0.03	-1.07	1.30	0.00	0.00	-0.68	0.65	-13.86	22.22	0.00	0.00	0.00	0.00	0.00	0.00	-5.12	10.21	-156.06	221.06	-194.53	-129.39	35.5	35.52	59.42	58.46	14	1309.7	1.65	2193	1.5	2105.6	-0.751	0.30	0.30
	U_{12}–L_{13}	-106.25	107.52	0.11	-0.06	-0.78	0.96	0.00	0.00	-0.52	0.55	-1.38	-0.71	-10.14	12.41	0.00	0.00	0.00	0.00	-6.18	6.60	-133.83	136.80	-159.35	-113.42	21.1	21.09	21.09	35.46	10	1134.0	0.712	0.88	0.88
	U_{13}–L_{14}	-66.44	79.85	0.18	-0.16	-0.54	1.01	0.00	0.00	-0.32	0.40	2.34	-2.12	-12.10	13.05	0.00	0.00	0.00	0.00	-4.24	4.82	-53.33	101.05	-107.61	63.13	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	0.587	0.83	0.83
	U_{14}–L_{15}	-51.82	56.77	0.10	-0.13	-0.42	0.56	0.00	0.00	-0.25	0.31	1.82	-1.65	-9.43	10.17	0.00	0.00	0.00	0.00	-42.86	44.92	-41.59	-36.68	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.907	0.21	0.21
	U_{15}–L_{16}	-17.15	-23.67	-0.36	0.37	1.00	-1.06	-0.10	0.11	0.26	-0.30	-4.64	4.80	12.99	-13.66	-1.20	1.31	3.17	-3.56	16.26	-24.53	39.18	-48.53	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.907	0.26	0.28
	U_{16}–L_{17}	-50.44	-54.12	-0.19	0.19	0.94	-0.99	-0.09	0.09	0.39	-0.44	-2.21	-12.83	-1.10	1.18	4.60	-4.90	-0.62	1.24	-30.24	-32.04	-102.59	-55.52	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-1.000	0.21	0.21
	U_{17}–L_{18}	-74.38	-85.04	-0.15	0.19	1.02	-1.07	-0.06	0.06	0.44	-0.49	-2.04	-2.08	-13.20	-13.79	-0.72	0.73	5.14	-5.52	93.10	-106.89	120.53	71.59	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8	0.594	0.84	0.84
	U_{18}–L_{19}	-97.78	-162.61	0.22	-0.22	1.01	-1.64	-0.08	0.08	0.63	-0.67	-2.79	-2.78	20.78	21.19	0.00	0.00	0.00	0.00	-5.62	-10.42	39.18	-204.47	240.02	164.22	19.3	35.09	35.09	53.01	1182	1.54	1166	1.5	1137.0	0.693	0.87	0.87
	U_{19}–L_{20}	-163.50	-173.08	-0.19	0.18	1.61	-1.56	-0.07	0.07	0.91	-0.93	-2.42	-2.32	-10.90	-11.36	0.00	0.00	0.00	0.00	-11.36	0.00	-222.92	252.09	171.79	42.7	42.74	42.74	65.30	1389.6	1.53	2125	1.5	2115.6	0.681	0.87	0.87
	U_{20}–L_{21}	-187.90	-226.20	-0.12	0.16	1.29	-1.48	-0.06	0.07	1.03	-1.13	-1.58	2.02	16.66	-19.08	-0.74	0.84	12.36	-13.56	241.24	-290.34	282.02	201.83	37.4	37.40	37.40	57.29	8	1264.8	1.53	1890	1.5	1881.3	-0.831	0.27	0.27
	U_{21}–L_{22}	-133.50	204.40	0.17	-0.16	-0.96	2.19	0.00	0.00	-0.49	0.76	-1.05	-3.50	8.63	-11.70	0.00	0.00	0.00	0.00	-73.24	73.24	-150.14	-73.24	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-1.000	0.21	0.21
	U_{22}–L_{23}	-201.27	204.39	-0.39	-0.37	-1.62	1.80	0.15	-0.14	-0.91	0.88	4.97	-4.73	-20.53	23.04	0.00	0.00	0.00	0.00	-1.68	-10.88	10.92	-252.84	257.88	232.63	219.06	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.788	0.31	0.31
	U_{23}–L_{24}	-183.93	183.93	0.41	-0.41	-1.74	1.74	0.00	0.00	-0.79	0.79	3.41	-3.41	0.00	0.00	0.00	0.00	0.00	0.00	-1.85	1.85	-231.71	231.71	231.71	231.71	231.71	231.71	12	3838.3	1.53	5900	1.5	5847.0	-0.707	0.32	0.32
	U_{24}–L_{25}	-79.55	88.71	0.26	-0.27	-0.91	1.02	0.10	-0.10	-0.37	0.41	3.33	-3.44	-11.09	12.98	1.18	-1.21	-4.46	4.87	-67.55	109.28	-124.28	-80.20	21.5	21.54	21.54	33.27	4	987.9	1.54	1098	1.5	1066.2	0.646	0.86	0.86
	U_{25}–L_{26}	-51.67	54.08	0.30	-0.30	-0.55	0.67	0.15	-0.15	-0.23	0.27	3.73	-3.73	-8.73	9.72	1.18	-1.21	-3.61	3.98	-54.38	-54.38	-54.38	-54.38	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-1.000	0.21	0.21
	U_{26}–L_{27}	-4.05	12.51	0.41	-0.39	-0.69	0.75	0.13	-0.13	-0.17	0.21	5.28	-4.94	-8.84	10.12	1.51	-1.60	-2.05	2.50	-0.95	9.83	-17.40	29.41	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.592	0.36	0.36
	U_{27}–L_{28}	27.52	-27.99	0.64	-0.66	-0.41	0.45	0.10	-0.12	-0.04	0.05	8.22	-8.37	-5.19	5.70	1.22	-1.39	-0.43	0.60	46.46	-47.26	-29.04	-28.97	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.983	0.21	0.21
	U_{28}–L_{29}	59.94	-61.39	-0.02	0.00	-0.20	0.22	0.00	0.00	0.12	-0.13	-0.76	0.74	-2.27	2.42	0.00	0.00	0.00	0.00	-42.86	44.92	-41.59	-36.68	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.907	0.21	0.21
	U_{29}–L_{30}	130.30	-141.79	-0.16	0.11	1.26	-1.31	0.00	0.00	0.47	-0.57	16.07	-16.74	0.00	0.00	0.00	0.00	5.58	-5.94	166.69	-182.56	197.54	139.91	20.8	20.80	20.80	32.15	4	1037.5	1.67	1743	1.5	1229.6	0.708	0.88	0.88
	U_{30}–L_{31}	216.97	-221.44	0.00	-0.01	1.91	-1.98	0.00	0.00	0.71	-0.86	23.13	-23.82	0.00	0.00	0.00	0.00	9.60	-9.81	277.64	-288.73	353.18	253.01	20.8	20.80	20.80	32.15	4	1037.5	1.67	2357	1.5	2312.1	-0.788	0.31	0.31
	U_{31}–L_{32}	193.17	-200.18	-0.11	0.16	1.57	-1.64	0.00	0.00	0.67	-0.68	-1.38	-2.01	20.00	-20.98	0.00	0.00	0.00	0.00	8.03	-8.10	249.32	-257.63	287.53	213.31	43.0	43.01	42.96	68.66	14	1479.6	1.60	2366	1.5	2129.0	0.742	0.90	0.90
	U_{32}–L_{33}	194.78	-194.58	-0.19	0.23	1.38	-1.46	0.00	0.00	0.65	-0.65	-2.44	2.98	17.63	-18.67	0.00	0.00	0.00	0.00	-7.82	-7.82	-250.04	-249.08	286.29	218.77	43.0	43.01	43.24	68.66	14	1479.6	1.60	2366	1.5	2129.0	0.764	0.91	0.91
	U_{33}–L_{34}	231.79	-230.81	-0.50	0.51	1.38	-1.31	0.07	-0.12	0.72	-0.68	-4.38	4.52	17.67	-18.67	0.89	-1.38	8.62	-8.15	293.04	-291.59	335.50	269.06	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	0.902	0.92	0.92
	U_{34}–L_{35}	26.59	-26.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27.75	-27.75	-27.75	-27.75	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	0.743	0.90	0.90
	U_{35}–L_{36}	-225.27	219.21	0.11	-0.08	-1.88	1.83	0.02	0.03	-0.80	0.75	1.36	-1.04	-23.74	23.04	0.19	0.27	-9.54	8.95	-284.29	284.11	-329.53	244.69	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	0.743	0.90	0.90
	U_{36}–L_{37}	-210.72	210.72	0.22	-0.22	-1.83	1.83	0.02	0.02	-0.78	0.78	2.76	-2.76	-22.52	22.52	0.00	0.00	0.00	0.00	-2.76	2.76	-270.72	270.72	270.72	270.72	270.72	270.72	14	4487.1	1.53	6900	1.5	6835.2	-0.707	0.32	0.32
	U_{37}–L_{38}	-182.72	181.55	0.28	-0.27	-1.95	2.04	0.07	-0.08	-0.77	0.78	3.57	-3.41	-24.99	25.78	0.69	-0.88	-8.28	9.34	-232.90	231.58	-281.57	-191.89	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	0.681	0.87	0.87
	U_{38}–L_{39}	-159.30	160.85	0.34	-0.34	-1.62	1.90	0.00	0.00	-0.74	0.76	4.33	-4.33	-20.44	23.92	0.00	0.00	0.00	0.00	-8.84	9.07	-201.47	207.38	245.16	164.20	38.9	38.83	38.83	59.23	6	1264.6	1.53	1900	1.5	1822.1	0.670	0.87	0.87
	U_{39}–L_{40}	-116.39	116.39	0.13	-0.13	-1.26	1.26	0.00	0.00	-0.52	0.52	-1.26	1.26	-16.84	16.84	0.00	0.00	0.00	0.00	-1.26	1.26	-184.61	184.61	184.61	184.61	184.61	184.61	10	3201.9	1.53	4900	1.5	4856.0	-0.707	0.32	0.32
	U_{40}–L_{41}	-49.48	63.33	0.26	-0.26	-0.80	0.85	0.00	0.00	-0.34	0.35	3.28	-3.31	-10.14	11.39	0.00	0.00	0.00	0.00	-4.02	4.24	-73.06	78.03	-65.73	-57.28	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	0.598	0.84	0.84
	U_{41}–L_{42}	-37.60	39.49	0.19	-0.19	-0.59	0.63	0.00	0.00	-0.25	0.26	2.43	-2.46	-7.52	8.45	0.00	0.00	0.00	0.00	-42.24	43.94	-41.59	-36.68	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.907	0.21	0.21
	U_{42}–L_{43}	-5.68	-5.03	0.08	0.09	-0.16	0.15	0.00	0.00	-0.07	0.09	-1.02	1.17	-2.03	1.91	0.00	0.00	0.00	0.00	-0.89	1.06	4.63	-5.01	3.31	-4.06	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.923	0.23	0.23
	U_{43}–L_{44}	28.89	-56.10	0.33	-0.33	0.91	-1.04	0.00	0.00	0.41	-0.46	-12.76	13.48	-0.61	0.61	0.00	0.00	0.00	0.00	5.61	-5.94	166.69	-182.56	197.54	139.91	20.8	20.80	20.80	32.15	4	1037.5	1.67	1743	1.5	1229.6	0.708	0.88	0.88
	U_{44}–L_{45}	70.77	-74.09	-0.30	0.29	1.05	-1.09	-0.05	0.05	0.49	-0.41	-3.74	3.71	-12.37	13.81	-0.61	0.61	4.75	-4.93	87.15	-81.49	118.43	67.64	15.4	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	0.586	0.83	0.83
	U_{45}–L_{46}	104.64	-104.99	-0.28	0.27	1.31	-1.29	-0.06	0.06	0.52	-0.51	-3.51	3.38	16.54	-16.25	-0.66	0.70	6.19	-6.12	-137.47	-132.09	165.59	106.96	38.1	18.71	18.61	31.48	8	970.0	1.68	1539	1.5	926.1	0.646	0.86	0.86
	U_{46}–L_{47}	139.52	-139.52	0.00	0.00	1.74	-1.74	0.00	0.00	0.69	-0.69	-2.76	2.76	-22.01	22.01	0.00	0.00	0.00	0.00	-2.76	2.76	-270.72	270.72	270.72	270.72	270.72	270.72	14	4487.1	1.53	6900	1.5	6835.2	-0.707	0.32	0.32
	U_{47}–L_{48}	189.52	-191.09	-0.17	0.22	1.56	-1.99	-0.06	0.05	0.80	-0.81	-2.18	2.73	24.69	-25.07	-0.73	0.55	9.58	-9.77	243.54	-244.87	290.93	201.08	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	0.691	0.88	0.88
	U_{48}–L_{49}	174.76	-174.76	0.00	0.00	1.74	-1.74	0.00	0.00	0.69	-0.69	-2.76	2.76	-22.01	22.01	0.00	0.00	0.00	0.00	-2.76	2.76	-270.72	270.72	270.72	270.72	270.72	270.72	14	4487.1	1.53	6900	1.5	6835.2	-0.707	0.32	0.32
	U_{49}–L_{50}	207.45	-212.05	-0.54	0.55	1.45	-1.40	0.00	0.00	0.81	-0.82	-6.77	6.91	18.31	-17.64	0.00	0.00	0.00	0.00	9.74	-9.78	88.80	-266.69	306.15	234.04	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	0.764	0.91	0.91
	U_{50}–L_{51}	62.23	62.23	-0.53	0.53	0.89	-1.14	0.00	0.00	0.41	-0.41	-17.75	19.25	0.00	0.00	0.00	0.00	0.00	0.00	-17.75	17.75	-107.62	-112.60	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	0.789	0.92	0.92
	U_{51}–L_{52}	-251.63	246.68	0.18	-0.17	-1.58	1.57	-0.03	0.06	-0.81	0.81	-2.30	-2.20	-20.21	-20.10	-0.31	0.72	-9.77	9.29	-324.16	-317.80	-364.12	-288.95	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	0.789	0.92	0.92
	U_{52}–L_{53}	-185.28	177.57	0.12	-0.19	-1.49	1.59	0.00	0.00	-0.61	0.61	-1.26	-1.26	-18.99	20.41	0.00	0.00	0.00	0.00	-7.24	6.72	-238.86	227.69	-274.96	-205.72	42.7	43.24	43.16	70.66	19	1515.6	1.63	2332	1.5	2140.4	0.748	0.90	0.90
	U_{53}–L_{54}	-185.28	177.57	0.12	-0.19	-1.49	1.59	0.00	0.00	-0.61	0.61	-1.26	-1.26	-18.99	20.41	0.00	0.00	0.00	0.00	-7.24	6.72	-238.86	227.69	-274.96	-205.72	42.7	43.24	43.16	70.66	19	1515.6	1.63	2332	1.5	2140.4	0.748	0.90	0.90
	U_{54}–L_{55}	-185.33	192.16	0.02	0.01	-1.20	1.45	0.00	0.00	-0.64	0.64	0.31	0.00	-15.36	18.49	0.00	0.00	0.00	0.00	-7.63	7.72	-240.53	249.88	-270.81	-206.86	43.0	43.01	42.96	68.66	14	1479.6	1.60	2366	1.5	2129.0	0.764	0.91	0.91
	U_{55}–L_{56}	-202.36	202.36	0.00	0.00	-1.58	1.58	0.00	0.00	-0.69	0.69	2.76	-2.76	-22.46	22.46	0.00	0.00	0.00	0.00	2.76	-2.76	-270.72	270.72	270.72	270.72	270.72	270.72	14	4487.1	1.53	6900	1.5	6835.2	-0.707	0.32	0.32
	U_{56}–L_{57}	-116.39	129.35	0.13	-0.09	-1.06	1.15	0.00	0.00	-0.42	0.45	1.66	-1.26	-13.57	14.74	0.00	0.00	0.00	0.00	-4.99	5.40	-149.13	-166.60	-179.44	-125.12	20.8	20.80	20.80	32.15	4	1037.5	1.67	1743	1.5	1229.6	0.708	0.88	0.88
	U_{57}–L_{58}	-52.79	62.47	-0.10	0.11	-0.37	0.41	0.00	0.00	-0.18	0.22	-7.21	1.42	-4.78	5.17	0.00	0.00	0.00	0.00	-2.18	2.58	-70.20	53.05	-74.83	87.93	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.951	0.26	0.26
	U_{58}–L_{59}	-19.79	20.04	0.01	-0.01	-0.14	0.14	0.00	0.00	-0.06	0.07	-2.70	0.53	-1.79	1.94	0.00	0.00	0.00	0.00	-0.82	0.97	-26.32	19.89	-28.04	-32.70	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.907	0.26	0.26
	U_{59}–L_{60}	18.85	-25.58	0.45	0.39	0.91	-0.99	-0.14	0.14	0.22	-0.25	-0.80	5.02	11.68	-12.61	-1.67	1.73	2.60	-3.02	16.96	-26.72	39.68	-49.64	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.799	0.28	0.28
	U_{60}–L_{61}	39.39	-43.58	0.32	-0.32	0.14	-0.14	0.00	0.00	-0.16	0.17	0.28	-2.27	11.77	-12.70	-1.16	1.16	4.46	-4.74	111.26	-120.17	138.39	94.12	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5	1066.2	0.680	0.87	0.87
	U_{61}–L_{62}	39.39	-43.58	0.32	-0.32	0.14	-0.14	0.00	0.00	-0.16	0.17	0.28	-2.27	11.77	-12.70	-1.16	1.16	4.46	-4.74	111.26	-120.17	138.39	94.12	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5	1066.2	0.680	0.87	0.87
	U_{62}–L_{63}	189.59	-202.27	-0.31	0.30	1.53	-1.56	-0.12	0.11	0.78	-0.81	-3.90	3.79	19.55	-19.89	-1.45	1.34	9.40	-9.72	229.51	-256.27	284.09	207.87	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	0.732	0.89	0.89
	U_{63}–L_{64}	214.86	-270.07	-0.19	0.27	1.30	-1.63	-0.06	0.10	0.72	-0.93	-2.36	3.48	16.60	-20.85	-0.67	1.15	8.59	-11.12	279.37	-345.07	312.06	237.11	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.798	0.28	0.28
	U_{64}–L_{65}	227.63	227.63	0.00	0.00	1.74	-1.74	0.00	0.00	0.69	-0.69	2.76	-2.76	-22.01	22.01	0.00	0.00	0.00	0.00	2.76	-2.76	270.72	-270.72	270.72	270.72	270.72	270.72	14	4487.1	1.53	6900	1.5	6835.2	-0.707	0.32	0.32
	U_{65}–L_{66}	180.45	-209.65

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
Condition: As-inspected

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

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

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

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

M_z Information

Location		Member	ZZ Axis Moments from STAAD: Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)	Max. Pos. Mom. Start (k-ft)	Max. Pos. Mom. End (k-ft)	S_{bb} (in^3)	S_{tb} (in^3)	Z_z (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_{bb}	M_z (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor $C_{mx/b}$	YY Axis Moments from STAAD: Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)	Max. Pos. Mom. Start (k-ft)	Max. Pos. Mom. End (k-ft)	Max. Neg. Mom. S_{bb} (in^3)	Max. Neg. Mom. S_{tb} (in^3)	Z_y (in^3)	I_{yy} (in^4)	Tension: Shape Factor	Tension: M_p (k-in)	Tension: P_{yn} (kips)	Tension: Formula 1.8 Term * F_y/M_p	Tension: M_{ny} (k-in)	Tension: Equivalent Mom. Factor a	Tension: Equivalent Mom. Factor C_{mx}	Tension: Equivalent Mom. Factor $C_{mx/b}$	Tension: Pass	Compression: Axial Force (k)	Compression: Buckle Moment (k-in)	Compression: Buckle Total (k-in)	Compression: Buckle Pass	Compression: Yield Axial Force (k)	Compression: Yield Moment (k-in)	Compression: Yield Total (k-in)	Compression: Yield Pass
Structure 1		U_0-L_1	3.62	-1.41	0.41	0.22	-0.02	-0.05	0.15	0.01	0.03	-0.02	-0.40	-2.98	-0.20	-0.72	1.75	0.12	-0.35	-0.23	-0.11	2.20	3.99	3.47	15.6	19.63	15.58	25.96	5	804.0	1.66	857	1.5	773.7	0.889	0.95	0.95	-84.71	-28.00	-1.79	-3.26	1.00	1.00	-1.09	-0.56	0.65	0.50	-22.76	-43.61	13.40	13.37	-16.17	-8.33	8.12	7.41	-160.74	-103.91	-82.15	-83.11	100.5	100.60	150.48	126.29	66.1	1.20	3970	144	0.94257776	3126.1	0.646	0.86	0.86	0.86	0.242	0.045	0.29	Yes	0.146	0.525	0.18	Yes	—	—	—	—	0.381	0.090	0.48	Yes	0.332	0.032	0.39	Yes	—	—	—	—
		U_1-L_1	-11.46	-3.33	-0.47	0.07	-0.17	-0.27	0.25	0.07	0.08	-0.04	-0.24	-6.23	0.95	-2.33	5.52	-0.92	-2.95	0.84	0.98	-0.47	-22.99	-13.16	15.2	19.63	15.58	25.96	5	804.0	1.66	857	1.5	773.7	0.889	0.95	0.95	122.41	23.66	-3.65	-2.77	1.26	1.03	1.18	-0.11	0.49	0.45	-48.88	-37.06	17.02	13.69	17.52	-1.60	7.33	6.62	95.59	-17.42	190.81	189.54	93.9	93.99	93.99	93.99	104.66	65.3	1.11	3454	160	0.94257776	2947.3	0.972	0.99	0.99	0.99	0.126	0.085	0.22	Yes	0.069	0.047	0.12	Yes	—	—	—	—
		U_2-L_2	-13.39	-3.91	-0.55	-0.09	-0.23	-0.33	-0.03	0.09	-0.05	-0.02	-0.32	-7.28	1.06	-0.37	-0.54	-0.13	-3.22	-1.52	-0.39	1.56	-0.37	-0.54	-15.2	-18.12	-13.75	-22.92	5	804.0	1.66	857	1.5	773.7	0.889	0.95	0.95	139.81	40.83	-3.13	-3.18	1.46	1.19	1.36	-0.37	0.54	0.52	-53.12	-43.72	19.27	15.8	5.17	3.44	101.85	-12.29	55.52	163.45	94.0	93.99	93.99	93.99	104.66	65.3	1.11	3454	160	0.94257776	2947.3	0.939	0.97	0.97	0.97	0.126	0.085	0.22	Yes	0.069	0.047	0.12	Yes	—	—	—	—
		U_3-L_3	9.82	-15.00	-0.16	-0.13	-0.10	-0.33	0.00	0.00	0.00	-0.11	-2.16	-1.79	-1.35	-4.36	0.00	0.00	-0.02	-1.27	9.93	-21.83	11.01	-25.16	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.438	0.42	0.42	206.42	91.50	-0.95	-0.44	-9.70	-2.59	0.00	0.00	0.00	0.00	34.29	11.46	251.86	111.30	99.88	73.94	94.0	93.99	93.99	93.99	104.66	65.3	1.11	3454	171	0.95178076	2952.4	0.442	0.78	—	—	—	—	0.381	0.090	0.48	Yes	0.332	0.032	0.39	Yes	—	—	—	—
		U_4-L_4	-16.21	25.07	-0.43	0.00	-0.15	-0.05	0.00	0.00	0.00	-0.07	-2.57	-2.51	-1.60	-6.07	-1.26	-2.49	-0.04	-1.77	-26.61	32.46	-17.10	35.07	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.438	0.42	0.42	-254.18	8.21	-0.09	0.00	-1.19	-0.27	14.80	17.90	-27.01	-8.59	0.00	0.00	-103.03	33.94	-113.4	113.37	113.37	132.15	82.8	93.99	93.99	93.99	104.66	65.3	1.11	3454	171	0.95178076	3006.3	0.084	0.57	0.57	0.57	0.381	0.081	0.44	Yes	0.193	0.045	0.24	Yes	—	—	—	—
		U_5-L_5	-34.06	79.11	-0.75	0.67	-0.19	-0.37	-0.28	0.44	0.00	0.00	-10.02	8.96	-3.97	-2.43	-3.32	5.26	0.00	0.00	-61.63	121.33	-47.62	101.63	15.1	35.09	35.09	53.13	4	1783.7	1.51	1753	1.5	1737.0	-0.568	0.40	0.40	-192.50	23.39	-1.20	1.10	8.06	1.90	0.00	0.00	-13.99	14.71	-104.25	-42.58	148.0	147.96	147.96	147.96	167.25	201.8	1.13	5519	262	0.99548452	4728.8	0.139	0.54	0.54	0.54	0.357	0.124	0.49	Yes	0.196	0.068	0.27	Yes	—	—	—	—
		U_6-L_6	-34.71	82.07	-0.84	0.69	-0.19	-0.37	-0.30	0.45	0.00	0.00	-12.44	10.45	-3.93	-2.41	-3.29	5.21	0.00	0.00	-117.09	124.44	-47.62	101.63	15.1	35.09	35.09	53.13	4	1783.7	1.51	1753	1.5	1737.0	-0.568	0.40	0.40	-192.50	23.39	-1.20	1.10	-8.06	-1.90	0.00	0.00	13.99	-14.71	104.25	42.58	148.0	147.96	147.96	147.96	167.25	201.8	1.13	5519	262	0.99548452	4728.8	0.139	0.54	0.54	0.54	0.357	0.124	0.49	Yes	0.196	0.068	0.27	Yes	—	—	—	—
		U_7-L_7	-1.45	103.74	-0.43	0.76	-0.16	-0.25	-0.29	0.65	0.00	0.00	-5.73	10.14	2.07	3.31	-1.07	7.78	0.00	0.00	-10.73	158.15	0.80	130.55	35.1	35.09	35.09	53.13	4	1783.7	1.51	1753	1.5	1737.0	-0.568	0.57	0.57	-153.51	-53.38	0.18	1.91	-1.78	-0.90	-1.81	-0.82	0.00	0.00	2.34	25.53	-23.79	-12.05	-26.87	-12.17	0.00	0.00	-231.45	-104.03	-230.56	-137.08	148.0	147.96	147.96	147.96	167.25	201.8	1.13	5519	265	0.99564741	4689.9	0.449	0.78	0.78	0.78	0.327	0.132	0.46	Yes	0.180	0.073	0.26	Yes	—	—	—	—
		U_8-L_8	-12.32	139.19	0.48	0.94	0.16	0.02	-0.19	0.58	0.21	0.13	-6.15	12.16	2.10	3.30	-27.03	20.65	-12.39	6.96	2.47	1.56	-27.03	205.80	-13.29	181.33	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2014.7	-0.131	0.55	0.55	251.85	97.14	-1.95	-5.03	1.57	0.53	-0.21	0.07	2.17	0.60	-25.28	-65.02	20.25	11.99	-3.06	0.95	31.14	8.64	290.54	43.00	353.73	141.88	202.9	202.86	190.44	238.56	256.9	1.18	7872	328	1.063845	6452.3	0.401	0.76	0.76	0.76	0.402	0.137	0.54	Yes	0.249	0.077	0.33	Yes	—	—	—	—
		U_9-L_9	-23.41	69.80	-0.89	0.42	0.08	0.03	-0.31	0.35	0.00	0.00	-11.33	5.37	1.01	1.04	-3.77	4.25	0.00	0.00	-115.32	103.24	-94.12	91.18	39.8	39.77	39.56	65.61	21	1610.3	1.65	2165	1.5	1968.6	-0.899	0.24	0.24	62.43	-78.54	-2.52	-4.28	0.59	1.09	0.30	0.00	-32.63	-56.68	7.69	6.70	22.83	4.33	0.00	0.00	68.42	-170.17	91.04	-93.39	197.4	197.41	184.99	230.30	248.6	1.17	7600	299	0.99531326	6306.9	0.452	0.44	0.44	0.44	0.408	0.076	0.49	Yes	0.252	0.043	0.30	Yes	—	—	—	—
		U_{10}-L_{10}	-81.96	42.02	-0.39	0.23	0.00	0.00	-0.13	0.44	0.00	0.00	-13.44	2.29	1.52	0.44	-4.52	2.71	0.00	0.00	-130.03	49.27	-105.22	43.34	42.74	42.74	42.74	65.30	9	1389.8	1.53	2155	1.5	2115.6	-0.209	0.40	0.40	49.24	-37.24	3.02	-5.13	0.68	0.92	2.23	0.84	32.00	9.50	0.56	0.00	40.60	-187.61	75.61	-103.26	171.7	172.70	202.71	247.5	1.17	6690	277	0.91252526	5561.6	0.216	0.51	0.51	0.51	0.416	0.088	0.57	Yes	0.229	0.049	0.28	Yes	—	—	—	—
		U_{11}-L_{11}	-69.88	47.84	-0.71	0.50	-0.09	-0.16	-0.31	0.21	0.00	0.00	-9.16	6.40	-0.18	2.78	-3.08	3.70	2.56	0.00	0.00	-107.56	73.84	-82.37	59.49	20.8	20.80	20.67	34.66	1	1076.0	1.67	1444	1.5	1329.6	-0.687	0.33	0.33	0.00	0.00	0.00	0.00	-29.47	-44.39	-5.11	-19.85	27.89	9.91	0.00	0.00	4.84	-198.87	-80.76	-137.63	133.5	133.45	123.27	155.40	108.8	1.10	5128	176	0.95303181	4196.9	0.220	0.50	0.50	0.50	0.370	0.125	0.50	Yes	0.223	0.070	0.31	Yes	—	—	—	—
		U_{12}-L_{12}	-27.39	6.37	-0.38	0.07	-0.03	-0.24	-0.15	0.03	0.00	0.00	-4.97	0.88	-0.34	0.11	-1.75	0.34	0.00	0.00	-42.06	9.42	-36.04	4.24	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.224	0.51	0.51	59.26	-19.74	-1.72	-3.18	-1.74	-1.62	2.30	0.79	0.00	0.00	-22.19	-41.18	-100.10	-20.90	33.80	11.42	0.00	0.00	48.19	-157.20	-53.10	-130.63	94.0	93.99	93.99	93.99	104.66	65.3	1.11	3454	145	0.94237355	2925.7	-0.307	0.48	0.48	0.48	0.342	0.099	0.40	Yes	0.188	0.055	0.25	Yes	—	—	—	—
		U_{13}-L_{13}	-0.38	3.28	-0.16	-0.26	-0.10	-0.05	0.04	0.00	0.00	0.00	-0.26	0.00	-0.09	0.00	-0.02	0.00	0.00	0.00	-12.86	0.00	-9.88	0.00	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.438	0.42	0.42	-205.50	183.33	-0.06	-0.02	-8.56	-2.29	8.93	2.74	-411.89	-8.99	10.76	-0.79	-325.78	187.98	-179.14	191.75	138.29	138.29	93.99	104.66	65.3	1.11	3454	171	0.95178076	3006.3	0.084	0.57	0.57	0.57	0.381	0.081	0.44	Yes	0.193	0.045	0.24	Yes	—	—	—	—
		U_{14}-L_{14}	-31.03	12.71	0.51	0.40	0.04	-0.18	-0.19	0.11	0.05	-0.04	-6.55	5.19	0.48	2.29	-28.72	13.04	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.476	0.41	0.41	-199.71	-100.30	-0.56	0.68	-0.14	-0.06	1.45	0.43	-268.97	-118.94	-191.75	-138.28	94.0	93.99	93.99	93.99	104.66	65.3	1.11	3454	123	0.93137227	2894.2	-0.432	0.70	0.70	0.70	0.310	0.140	0.34	Yes	0.170	0.077	0.19	Yes	—	—	—	—
		U_{15}-L_{15}	-40.63	27.25	-0.66	0.41	-0.11	-0.26	-0.26	0.16	0.04	0.00	-8.50	6.63	-1.22	-2.31	-3.21	2.27	0.00	0.00	-148.75	84.29	-63.26	-58.15	15.4	15.42	15.42	23.71	2	907.0	1.54	986	1.5	958.8	-0.593	0.37	0.37	56.32	-69.60	-3.61	-4.52	0.72	0.46	1.19	0.51	-3.11	-1.16	0.08	0.04	-82.50	72.37	-25.65	72.31	83.99	83.99	83.99	83.99	104.66	65.3	1.11	3454	123	0.93137227	2894.2	-0.432	0.70	0.70	0.70	0.310	0.140	0.34	Yes	0.170	0.077	0.19	Yes	—	—	—	—
		U_{16}-L_{16}	-118.88	85.28	-1.16	0.98	0.15	-0.14	-0.55	0.42	0.06	-0.05	-15.00	12.64	1.99	1.84	-6.59	5.04	0.67	-0.62	-182.34	133.85	-150.82	-157.48	39.5	35.09	35.09	53.51	4	1783.7	1.53	1766	1.5	1737.0	-0.734	0.31	0.31	302.82	-67.43	-0.94	0.59	-0.05	-0.17	-3.14	-1.42	0.03	0.05	-12.20	7.65	-0.63	-2.19	-45.08	-20.43	-0.39	0.79	-468.14	-104.26	-393.99	-395.50	148.0	147.96	147.96	147.96	167.25	201.8	1.13	5519	267	0.99521955	4688.3	0.223	0.69	0.69	0.69	0.391	0.188	0.58	Yes	0.213	0.103	0.32	Yes	—	—	—	—
		U_{17}-L_{17}	-117.64	87.57	-1.10	0.91	-0.13	-0.57	-0.45	0.54	0.04	-0.04	-14.28	11.11	1.82	-1.42	-6.75	5.48	0.52	-0.46	-180.33	135.37	-150.10	-154.42	39.8	38.83	38.83	59.23	3	1394.8	1.53	1955	1.5	1922.1	-0.830	0.32	0.32	299.59	-101.27	-1.08	-2.23	0.94	-0.05	-3.28	-1.47	0.02	0.04	-12.62	8.98	-0.17	0.22	-22.62	-6.17	0.22	-0.52	-222.49	-66.29	-96.96	-150.97	160.7	184.25	223.3	1.15	6080	193	0.95172364	5072.2	0.240	0.61	0.61	0.61	0.379	0.159	0.54	Yes	0.222	0.099	0.33	Yes	—	—	—	—
		U_{18}-L_{18}	-148.08	120.85	-1.07	0.93	0.09	-0.09	-0.79	0.63	0.04	-0.04	-13.81	12.08	1.10	-1.14	-8.47	7.56	0.50	-0.46	-222.74	182.60	-192.40	-194.55	38.8	38.83	38.83	59.23	3	1394.8	1.53	1955	1.5	1922.1	-0.820	0.27	0.27	270.49	-107.79	0.73	0.49	0.00	0.00	1.86	0.82	0.00	0.00	-12.61	9.39	6.33	0.04	0.01	-0.01	-26.11	-150.84	-274.08	-273.40	160.8	160.57	160.57	184.25	223.9	1.15	6080	156	0.94177756	5078.9	0.509	0.80	0.80	0.80	0.422	0.163	0.59	Yes	0.232	0.089	0.33	Yes	—	—	—	—
		U_{19}-L_{19}	-86.91	116.74	-1.23	1.23	0.09	-0.18	-0.13	0.38	0.01	-0.06	-15.65	15.66	1.15	-2.29	-1.51	4.57	0.14	-0.70	-135.30	178.07	-111.30	-116.86	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.760	0.30	0.30	189.45	-31.21	-1.92	-3.69	0.71	0.36	-1.06	-0.10	0.41	0.20	-24.48	-72.75	9.02	4.56	-15.09	-1.36	5.79	2.83	-297.72	-136.52	-227.03	-236.68	173.7	173.70	173.70	202.71	247.5	1.17	6690	180	0.95421562	5469.3	0.460	0.78	0.78	0.78	0.451	0.127	0.58	Yes	0.248	0.070	0.32	Yes	—	—	—	—
		U_{20}-L_{20}	-104.13	114.46	-1.21	1.21	0.09	-0.17	-0.13	0.37	0.01	-0.06	-15.35	15.36	-3.33	-2.29	-4.70	4.48	0.14	-0.69	-236.35	176.08	-109.16	-114.59	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.760	0.30	0.30	189.45	-31.21	-1.92	-3.69	0.71	0.36	-1.06	-0.10	0.41	0.20	-24.48	-72.75	9.02	4.56	-15.09	-1.36	5.79	2.83	-297.72	-136.52	-227.03	-236.68	173.7	173.70	173.70	202.71	247.5	1.17	6690	180	0.95421562	5469.3	0.460	0.78	0.78	0.78	0.451	0.127	0.58	Yes	0.248	0.070	0.32	Yes	—	—	—	—
		U_{21}-L_{21}	-118.23	92.26	-1.42	1.10	0.31	-0.28	-0.52	0.43	0.11	-0.10	-18.08	13.99	3.96	3.51	-6.28	5.11	1.37	-1.25	-189.32	144.77	-148.78	-159.89	39.1	35.09	35.09	53.51	4	1783.7	1.53	1766	1.5	1737.0	-0.781	0.25	0.25	29.29	32.87	-71.82	-2.77	-0.39	0.73	0.58	1.01	0.01	0.33	2.26	-39.39	-68.80	9.28	7.41	14.32	-16.10	4.70	3.62	15.30	-124.51	-82.02	-60.90	-57.07	148.0	147.96	147.96	167.25	201.8	1.13	5519	217	0.99518976	4696.6	-0.084	0.57	0.57	0.57	0.357	0.121	0.48	Yes	0.196	0.066	0.26	Yes	—	—	—	—
		U_{22}-L_{22}	-24.33	8.61	-0.56	0.40	0.06	-0.19	-0.18	0.11	0.07	-0.06	-7.14	5.10	0.82	-2.48	-2.14	1.27	0.86	-0.72	-40.91	17.82	-29.44	-35.78	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.435	0.43	0.43	88.13	-32.75	-2.23	-3.20	-4.48	-0.64	1.44	0.29	0.21	0.14	-28.47	-40.92	-57.29	-8.13	20.43	4.07	3.04	1.92	77.56	-85.77	44.04	106.50	94.0	93.99	93.99	93.99	104.66	65.3	1.11	3454	96	0.91396827	2834.9	0.414	0.77	0.77	0.77	0.175	0.083	0.26	Yes	0.096	0.046	0.15	Yes	—	—	—	—
		U_{23}-L_{23}	-1.47	13.42	-0.41	0.41	-0.18	-0.09	-0.26	0.26	0.00	0.00	-2.26	-4.60	-1.17	0.00	-0.68	-1.44	0.00	0.00	-4.61	27.46	-4.85	24.94	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.438	0.42	0.42	78.53	-4.02	-2.38	-2.12	-1.23	-0.33	0.00	0.00	0.00	0.00	-4.81	-4.17	-8.45	-2.84	1.12	0.33	-0.64	0.14	-17.38	-28.71	-45.52	-46.09	93.9	93.99	93.99	93.99	104.66	65.3	1.11	3454	171	0.95178076	3006.3	0.084	0.57	0.57	0.57	0.381	0.081	0.44	Yes	0.193	0.045	0.24	Yes	—	—	—	—
		U_{24}-L_{24}	-13.33	-37.03	-0.24	0.05	0.26	-0.47	0.00	0.00	0.00	-0.14	-3.12	-0.63	-3.30	-0.95	0.00	0.00	0.00	0.00	-154.50	-123.27	-21.61	-55.88	17.2	17.24	17.24	26.54	2	824.7	1.54	878	1.5	853.4	-0.397	0.45	0.45	131.99	1.76	-1.02	-2.25	-5.91	-0.24	0.00	0.00	2.09	0.73	-13.10	-28.71	-75.52	-3.03	0.00	0.00	29.68	10.41	154.06	-39.03	73.0	73.00	73.00	73.00	104.66	65.3	1.11	3841	126	0.93048167	2654.5	0.299	0.64	0.64	0.64	0.435	0.064	0.5	Yes	0.350	0.064	0.46	Yes	—	—	—	—
		U_{25}-L_{25}	-66.01	54.01	-0.65	0.47	-0.08	-0.19	-0.23	0.17	0.00	0.00	-8.32	6.06	-0.58	-2.44	-2.80	2.04	0.00	0.00	-96.63	78.09	-87.10	67.04	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1016.2	-0.809	0.26	0.26	243.56	-138.11	-0.26	1.53	7.05	-0.04	-1.76	-0.67	0.00	0.00	-3.59	-19.56	89.41	-0.54	24.96	-5.45	0.00	0.00	-321.29	-154.11	-200.39	-180.23	128.2	128.15	118.23	148.43	106.4	1.16	4898	160	0.94859354	4011.5	0.480	0.76	0.76	0.76	0.391	0.152	0.55	Yes	0.245	0.087	0.34	Yes	—	—	—	—
		U_{26}-L_{26}	-133.77	104.34	-1.21	1.21	0.09	-0.16	-0.42	0.37	0.01	-0.06	-15.01	13.08	2.01	-1.23	-6.53	5.48	0.29	-0.27	-193.50	157.21	-153.70	-154.42	39.8	38.83	38.83	59.23	3	1394.8	1.53	1955	1.5	1922.1	-0.830	0.32	0.32	299.59	-101.27	-1.08	-2.23	0.94	-0.05	-3.28	-1.47	0.02	0.04	-12.62	8.98	-0.17	0.22	-22.62	-6.17	0.22	-0.52	-222.49	-66.29	-96.96	-150.97	160.7	184.25	223.3	1.15	6080	193	0.95172364	5072.2	0.240	0.61	0.61	0.61	0.379	0.159	0.54	Yes	0.222	0.099	0.33	Yes	—	—	—	—
		U_{27}-L_{27}	-116.17	105.67	-1.09	0.77	0.02	-0.35	-0.36	0.36	0.00	0.00	-13.94	9.83	0.19	-0.68	-4.27	4.31	0.00	0.00	-174.70	155.74	-150.77	-136.49	42.7	42.74	42.74	65.30	9	1389.6	1.53	2155	1.5	2115.6	-0.891	0.24	0.24	-153.55	-20.11	0.18	1.55	-0.14	0.04	-1.64	0.32	0.00	0.00	-6.86	-23.31	-4.56	0.00	-23.31	-4.56	0.00	0.00	-226.57	-6.86	-201.53	-26.07	173.7	173.70	173.70	202.71	247.5	1.17	6690	204	0.95475159	5330.1	0.030	0.61	0.61	0.61	0.483	0.115	0.60	Yes	0.266	0.063	0.33	Yes	—	—	—	—
		U_{28}-L_{28}	-33.48	10.54	-0.71	0.51	-0.11	-0.33	-0.32	0.22	0.00	0.00	-5.45	1.46	-0.46	-2.89	-2.57	0.89	0.00	0.00	-53.39	11.58	-45.07	5.20	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.438	0.42	0.42	107.77	-39.51	-2.26	-2.02	-1.69	-0.45	0.00	0.00	0.00	0.00	-6.61	-5.73	-11.61	-3.90	1.54	0.46	-0.88	0.19	-23.89	-39.47	-62.57	-63.36	93.9	93.99	93.99	93.99	104.66	65.3	1.11	3454	171	0.95178076	3006.3	0.084	0.57	0.57	0.57	0.381	0.081	0.44	Yes	0.193	0.045	0.24	Yes	—	—	—	—
		U_{29}-L_{29}	-131.97	101.07	-1.15	0.99	0.27	-0.15	-0.42	0.51	0.00	0.00	-14.64	12.67	3.40	3.48	-6.89	6.03	0.11	0.00	-197.13	220.81	-167.14	193.93	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.893	0.24	0.24	-325.20	1.03	-1.28	2.47	-0.88	0.38	-2.21	-0.57	0.00	0.00	-16.34	31.49	-1.76	4.79	-31.42	-8.12

Axial AI Operating

Operating Loads - 2F1

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			-----	-593.08	-182	70	86	-818	9	-8	-76	78	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.188	1.00	Yes	0.800	0.194	1.00	Yes	1.00	**7.59**
		U_1 - U_2			-----	-562.57	-63	21	-132	-835	-7	-42	17	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.231	1.00	Yes	0.759	0.199	0.96	Yes	1.00	**3.87**
		U_2 - U_3			-----	-583.28	-143	192	-412	-626	4	28	56	220	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.199	1.00	Yes	0.787	0.149	0.94	Yes	1.00	**4.02**
		U_3 - U_4			267.79	-583.16	42	256	-510	-678	18	37	122	41	0.307	0.182	0.49	Yes	0.211	0.125	0.34	Yes	0.793	0.200	1.00	Yes	0.786	0.161	0.95	Yes	1.00	**5.37**
		U_4 - U_5			272.47	-578.10	87	237	-924	-136	24	-26	67	-32	0.312	0.231	0.55	Yes	0.214	0.159	0.38	Yes	0.787	0.180	0.97	Yes	0.780	0.220	1.00	Yes	1.00	**5.38**
		U_5 - U_6			579.59	-----	209	418	-1132	-1	-124	-55	379	20	0.664	0.333	1.00	Yes	0.448	0.217	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.67**
		U_6 - U_7			787.15	-----	341	204	-827	-187	-266	-108	482	-92	0.753	0.242	1.00	Yes	0.526	0.166	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.61**
		U_7 - U_8			949.98	-----	36	1084	-1300	1960	-434	-15	210	-179	0.658	0.341	1.00	Yes	0.459	0.233	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.43**
		U_8 - U_9			882.64	-----	1181	-124	1318	-1083	-378	-207	-220	182	0.723	0.267	1.00	Yes	0.495	0.182	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.30**
		U_9 - U_{10}			688.40	-----	236	288	-57	-631	-163	19	-48	640	0.747	0.244	1.00	Yes	0.506	0.164	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.74**
		U_{10} - U_{11}			-----	-591.01	298	-95	203	-1067	36	91	334	225	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.209	0.97	Yes	0.754	0.239	1.00	Yes	1.00	**5.95**
		U_{11} - U_{12}			-----	-846.31	203	-123	5	-896	107	407	243	670	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.191	1.00	Yes	0.794	0.149	0.95	Yes	1.00	**4.49**
		U_{12} - U_{13}			-----	-1207.28	2	-238	-77	-888	345	209	575	391	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.178	1.00	Yes	0.806	0.122	0.93	Yes	1.00	**5.07**
		U_{13} - U_{14}			-----	-1300.68	-156	-390	-306	-1651	226	182	417	516	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.243	1.00	Yes	0.746	0.182	0.93	Yes	1.00	**4.21**
		U_{14} - U_{15}			-----	-1288.44	-284	-257	-1529	-819	219	32	574	163	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.252	1.00	Yes	0.739	0.169	0.91	Yes	1.00	**4.12**
		U_{15} - U_{16}			-----	-1350.49	-162	-433	-1167	-852	90	37	457	205	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.212	1.00	Yes	0.774	0.129	0.91	Yes	1.00	**4.36**
		U_{16} - U_{17}			-----	-1342.93	-344	-209	-1491	-477	140	-52	635	103	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.220	1.00	Yes	0.770	0.164	0.94	Yes	1.00	**5.05**
		U_{17} - U_{18}			-----	-1055.05	-212	-72	-908	94	-1	-61	423	54	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.159	1.00	Yes	0.826	0.148	0.98	Yes	1.00	**5.04**
		U_{18} - U_{19}			-----	-729.75	-201	-69	-767	31	28	-120	373	-123	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.162	1.00	Yes	0.821	0.154	0.98	Yes	1.00	**5.13**
		U_{19} - U_{20}			-----	-578.27	-273	311	-1580	1701	-68	-135	251	-563	-----	-----	-----	-----	-----	-----	-----	-----	0.657	0.178	0.84	Yes	0.651	0.342	1.00	Yes	1.00	**11.97**
	Structure 2	U_0 - U_1			-----	-632.46	-91	-93	691	-1466	4	-69	-48	21	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.211	0.97	Yes	0.747	0.249	1.00	Yes	1.00	**12.88**
		U_1 - U_2			-----	-818.68	-45	-195	22	-1191	-69	-219	-49	-316	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.197	1.00	Yes	0.790	0.181	0.98	Yes	1.00	**6.52**
		U_2 - U_3			-----	-1103.19	-94	-291	-41	-1844	-27	360	63	519	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.204	1.00	Yes	0.783	0.188	0.98	Yes	1.00	**5.59**
		U_3 - U_4			-----	-1249.68	-427	-427	-881	-1822	518	880	440	642	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.275	1.00	Yes	0.712	0.162	0.88	Yes	1.00	**4.73**
		U_4 - U_5			-----	-1443.60	-461	-386	-613	-2010	763	302	406	291	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.252	1.00	Yes	0.741	0.167	0.91	Yes	1.00	**5.24**
		U_5 - U_6			-----	-1495.39	-437	-33	-945	-1697	188	-201	400	480	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.221	1.00	Yes	0.768	0.141	0.91	Yes	1.00	**5.08**
		U_6 - U_7			-----	-1286.26	-309	-128	-948	-1860	-121	-177	299	113	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.257	1.00	Yes	0.732	0.166	0.90	Yes	1.00	**4.56**
		U_7 - U_8			-----	-1308.62	-213	-203	-1996	-845	-98	-175	182	54	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.244	1.00	Yes	0.745	0.178	0.93	Yes	1.00	**4.71**
		U_8 - U_9			-----	-1183.78	-291	92	-1434	-362	-86	-194	389	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.183	1.00	Yes	0.803	0.152	0.96	Yes	1.00	**5.15**
		U_9 - U_{10}			-----	-916.29	-115	294	-1611	-371	-125	-144	247	0	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.196	1.00	Yes	0.791	0.196	0.99	Yes	1.00	**5.39**
		U_{10} - U_{11}			-----	-755.03	127	331	-1568	-330	-160	-158	473	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.237	1.00	Yes	0.750	0.221	0.98	Yes	1.00	**7.40**
		U_{11} - U_{12}			806.19	-----	227	528	-1748	178	-340	-126	566	105	0.681	0.316	1.00	Yes	0.457	0.211	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.99**
		U_{12} - U_{13}			1051.35	-----	416	118	-1730	-1004	-395	-376	737	-180	0.710	0.288	1.00	Yes	0.506	0.196	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.78**
		U_{13} - U_{14}			1472.77	-----	139	2216	-339	1389	-951	-481	-414	-492	0.724	0.270	1.00	Yes	0.513	0.178	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.42**
		U_{14} - U_{15}			1212.29	-----	2468	88	3586	-2480	-931	-729	-650	-90	0.596	0.396	1.00	Yes	0.422	0.260	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.33**
		U_{15} - U_{16}			1212.12	-----	126	457	-433	-1687	-609	-378	-91	875	0.733	0.266	1.00	Yes	0.521	0.180	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.98**
		U_{16} - U_{17}			1012.66	-----	643	306	108	-1544	-205	-25	481	463	0.746	0.245	1.00	Yes	0.496	0.161	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.21**
		U_{17} - U_{18}			650.10	-----	417	287	346	-1302	15	261	295	825	0.653	0.342	1.00	Yes	0.434	0.226	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.61**
		U_{18} - U_{19}			606.53	-----	560	261	134	-1754	88	113	543	570	0.609	0.381	1.00	Yes	0.399	0.243	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.01**
		U_{19} - U_{20}			277.68	-687.91	287	195	-423	-1088	30	22	177	534	0.260	0.246	0.51	Yes	0.173	0.162	0.34	Yes	0.764	0.231	1.00	Yes	0.759	0.174	0.94	Yes	1.00	**6.32**
		U_{20} - U_{21}			-----	-840.78	153	-28	-65	-1344	-8	-53	355	315	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.221	1.00	Yes	0.767	0.195	0.97	Yes	1.00	**6.01**
		U_{21} - U_{22}			-----	-772.48	-48	-7	-509	-1414	3	67	197	382	-----	-----	-----	-----	-----	-----	-----	-----	0.710	0.289	1.00	Yes	0.705	0.205	0.91	Yes	1.00	**5.10**
		U_{22} - U_{23}			-----	-761.72	47	-52	-1394	-609	64	-3	417	120	-----	-----	-----	-----	-----	-----	-----	-----	0.700	0.292	1.00	Yes	0.695	0.202	0.90	Yes	1.00	**5.02**
		U_{23} - U_{24}			-----	-851.94	-56	135	-1130	-320	-23	-54	377	111	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.208	1.00	Yes	0.778	0.164	0.95	Yes	1.00	**6.07**
		U_{24} - U_{25}			234.10	-702.84	154	245	-1360	-409	-48	-85	440	-64	0.220	0.277	0.50	Yes	0.146	0.182	0.33	Yes	0.780	0.211	1.00	Yes	0.775	0.218	1.00	Yes	1.00	**5.70**
		U_{25} - U_{26}			433.50	-620.97	170	412	-1271	12	-147	-75	324	-6	0.435	0.263	0.70	Yes	0.285	0.168	0.46	Yes	0.738	0.255	1.00	Yes	0.733	0.216	0.95	Yes	1.00	**7.06**
		U_{26} - U_{27}			685.61	-----	329	383	-1393	177	-227	-71	467	-59	0.688	0.305	1.00	Yes	0.458	0.202	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.02**
		U_{27} - U_{28}			932.63	-----	284	521	-2008	-103	-337	-13	560	108	0.687	0.311	1.00	Yes	0.457	0.205	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.07**
		U_{28} - U_{29}			1142.19	-----	450	158	-2187	-795	-352	-249	696	-104	0.691	0.307	1.00	Yes	0.491	0.207	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.65**
		U_{29} - U_{30}			1517.88	-----	271	2056	-56	741	-855	-453	-268	-17	0.746	0.249	1.00	Yes	0.528	0.164	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.74**
		U_{30} - U_{31}			1457.60	-----	2459	32	904	-188	-705	-593	-204	-59	0.717	0.276	1.00	Yes	0.507	0.181	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.76**
		U_{31} - U_{32}			1132.86	-----	58	412	-851	-1135	-395	-212	-29	930	0.765	0.232	1.00	Yes	0.545	0.159	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.74**
		U_{32} - U_{33}			799.24	-----	429	228	387	-1678	-55	25	651	591	0.675	0.316	1.00	Yes	0.453	0.211	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.19**
		U_{33} - U_{34}			620.72	-687.04	338	215	-255	-1562	43	278	512	1072	0.524	0.351	0.88	Yes	0.357	0.231	0.59	Yes	0.687	0.309	1.00	Yes	0.683	0.220	0.91	Yes	1.00	**9.13**
		U_{34} - U_{35}			-----	-894.25	334	53	70	-1554	206	167	660	542	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.219	1.00	Yes	0.772	0.189	0.97	Yes	1.00	**7.43**
		U_{35} - U_{36}			-----	-1118.71	126	-163	-160	-1638	120	96	485	620	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.230	1.00	Yes	0.759	0.174	0.94	Yes	1.00	**6.17**
		U_{36} - U_{37}			-----	-1260.49	-92	5	-669	-2111	95	4	415	318	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.271	1.00	Yes	0.718	0.188	0.91	Yes	1.00	**5.83**
		U_{37} - U_{38}			-----	-1241.09	82	-186	-1997	-1115	52	17	359	295	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.280	1.00	Yes	0.707	0.178	0.89	Yes	1.00	**5.69**
		U_{38} - U_{39}			-----	-1507.26	92	-302	-1674	-1308	134	-35	763	271	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.219	1.00	Yes	0.774	0.139	0.92	Yes	1.00	**6.55**
		U_{39} - U_{40}			-----	-1358.89	-232	-341	-2483	-1380	36	-35	457	217	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.291	1.00	Yes	0.698	0.206	0.91	Yes	1.00	**5.55**
		U_{40} - U_{41}			-----	-1254.51	-259	-339	-2172	-1066	47	-119	581	41	-----	-----	-----	-----	-----	-----	-----	-----	0.719	0.280	1.00	Yes	0.714	0.194	0.91	Yes	1.00	**5.58**
		U_{41} - U_{42}			-----	-1100.56	-157	-127	-1723	-208	-67	-103	404	36	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.206	1.00	Yes	0.781	0.175	0.96	Yes	1.00	**6.48**
		U_{42} - U_{43}			-----	-810.17	-138	-61	-1220	-133	-40	-98	363	-105	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.211	1.00	Yes	0.782	0.185	0.97	Yes	1.00	**6.94**
		U_{43} - U_{44}			-----	-588.15	-25	-200	-1741	1369	-72	29	217	-356	-----	-----	-----	-----	-----	-----	-----	-----	0.699	0.227	0.93	Yes	0.695	0.295	1.00	Yes	1.00	**11.58**
	Structure 3	U_0 - U_1			-----	-605.40	2	-169	665	-1547	7	-77	-14	112	-----	-----	-----	-----	-----	-----	-----	-----	0.687	0.229	0.92	Yes	0.681	0.311	1.00	Yes	1.00	**12.00**
		U_1 - U_2			-----	-711.64	-32	-141	22	-753	-62	-232	9	-437	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.187	1.00	Yes	0.801	0.151	0.96	Yes	1.00	**5.76**
		U_2 - U_3			-----	-1030.79	-72	-166	124	-972	-51	335	10	430	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.175	1.00	Yes	0.807	0.158	0.97	Yes	1.00	**5.44**
		U_3 - U_4			-----	-1293.45	-189	-314	-330	-1563	489	820	490	678	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.251	1.00	Yes	0.742	0.172	0.92	Yes	1.00	**5.17**
		U_4 - U_5			-----	-1352.00	-399	-70	-703	-1096	684	227	500	310	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.208	1.00	Yes	0.775	0.121	0.90	Yes	1.00	**4.91**
		U_5 - U_6			-----	-1319.82	-186	-279	-800	-1518	140	-148	243	341	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.228	1.00	Yes	0.757	0.167	0.93	Yes	1.00	**4.74**
		U_6 - U_7			-----	-1327.99	-379	-105	-1609	-419	-89	-186	425	94	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.223	1.00	Yes	0.761	0.178	0.94	Yes	1.00	**4.80**
		U_7 - U_8			-----	-1159.98	-171	-17	-1154	-417	-55	-171	296	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.208	1.00	Yes	0.775	0.159	0.94	Yes	1.00	**4.52**
		U_8 - U_9			-----	-884.93	-105	171	-926	-82	-29	-153	315	-114	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.158	1.00	Yes	0.830	0.154	0.99	Yes	1.00	**4.36**
		U_9 - U_{10}			-----	-617.00	-80	222	-912	93	-97	-102	230	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.183	0.98	Yes	0.787	0.204	1.00	Yes	1.00	**5.22**
		U_{10} - U_{11}			612.90	-----	275	218	-1038	-121	-215	-131	598	-170	0.665	0.329	1.00	Yes	0.450	0.220	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.27**
		U_{11} - U_{12}			859.61	-----	-18	933	-1393	1435	-423	-103	312	-262	0.704	0.293	1.00	Yes	0.482	0.199	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.47**
		U_{12} - U_{13}			961.13	-----	1105	98	1848	-1463	-500	-463	-251	160	0.666	0.331	1.00	Yes	0.465	0.226	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.35**
		U_{13} - U_{14}			823.29	-----	214	417	-78	-631	-324	-202	-43	542	0.787	0.209	1.00	Yes	0.550	0.144	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.22**
		U_{14} - U_{15}			639.72	-----	421	291	391	-865	-127	-41	316	111	0.733	0.259	1.00	Yes	0.495	0.169	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.02**
		U_{15} - U_{16}			369.94	-555.36	293	204	-24	-1027	-55	137	157	424	0.424	0.316	0.74	Yes	0.291	0.216	0.51	Yes	0.756	0.188	0.95	Yes	0.749	0.244	1.00	Yes	1.00	**5.94**
		U_{16} - U_{17}			366.57	-561.04	361	108	-786	-506	85	74	385	202	0.420	0.252	0.68	Yes	0.288	0.172	0.47	Yes	0.763	0.228	1.00	Yes	0.757	0.187	0.95	Yes	1.00	**5.94**
		U_{17} - U_{18}			174.50	-566.54	282	-79	-686	-484	-37	71	295	226	0.200	0.213	0.42	Yes	0.135	0.139	0.28	Yes	0.771	0.222	1.00	Yes	0.764	0.163	0.93	Yes	1.00	**4.81**
		U_{18} - U_{19}			-----	-519.90	129	-46	-774	-286	-7	24	446	29	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.292	1.00	Yes	0.701	0.184	0.89	Yes	1.00	**4.46**
		U_{19} - U_{20}			-----	-533.15	145	-264	-1158	637	-100	89	336	-229	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.216	0.95	Yes	0.719	0.275	1.00	Yes	1.00	**7.43**

Axial AI Operating

Operating Loads - 2F1

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			157.19	-----	77	-368	1140	-2085	-19	-70	164	604	0.241	0.755	1.00	Yes	0.142	0.460	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**33.01**
		L_1 - L_2			432.62	-----	119	-745	155	-52	-503	-185	-31	-29	0.662	0.332	1.00	Yes	0.404	0.218	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.27**
		L_2 - L_3			686.92	-----	-763	-700	-28	5	-101	92	-30	17	0.790	0.200	1.00	Yes	0.457	0.120	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.15**
		L_3 - L_4			679.39	-----	-724	-441	74	210	262	127	48	68	0.782	0.217	1.00	Yes	0.464	0.139	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.94**
		L_4 - L_5			-----	-536.36	-593	-195	118	612	-262	606	60	37	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.168	1.00	Yes	0.817	0.162	0.98	Yes	1.00	**6.98**
		L_5 - L_6			-----	-726.56	-400	-160	163	595	253	98	73	128	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.143	1.00	Yes	0.838	0.132	0.97	Yes	1.00	**6.69**
		L_6 - L_7			-----	-1062.72	-890	-87	197	167	54	630	119	-114	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.113	0.98	Yes	0.855	0.140	1.00	Yes	1.00	**9.05**
		L_7 - L_8			-----	-1219.42	8	602	45	1485	-102	-134	-100	-184	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.210	1.00	Yes	0.772	0.197	0.97	Yes	1.00	**8.38**
		L_8 - L_9			-----	-1307.62	568	-32	1143	-8	-135	-149	-2	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.159	1.00	Yes	0.828	0.151	0.98	Yes	1.00	**9.85**
		L_9 - L_{10}			-----	-1073.58	-65	-842	121	138	759	204	52	143	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.108	0.99	Yes	0.864	0.132	1.00	Yes	1.00	**11.42**
		L_{10} - L_{11}			-----	-559.38	-75	-478	531	-7	85	35	136	45	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.084	0.95	Yes	0.852	0.141	1.00	Yes	1.00	**8.00**
		L_{11} - L_{12}			579.37	-----	125	-760	458	-185	247	17	77	-24	0.750	0.244	1.00	Yes	0.450	0.160	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.31**
		L_{12} - L_{13}			1046.36	-----	-550	-732	146	-83	236	333	32	35	0.826	0.169	1.00	Yes	0.528	0.102	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.06**
		L_{13} - L_{14}			1305.11	-----	-342	-1372	352	-446	405	112	12	-2	0.768	0.223	1.00	Yes	0.497	0.137	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.53**
		L_{14} - L_{15}			1614.43	-----	-1483	-1175	-413	-15	-142	425	-83	-90	0.789	0.209	1.00	Yes	0.513	0.127	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.18**
		L_{15} - L_{16}			1605.13	-----	-1288	-1581	-216	-368	91	-290	-119	-56	0.784	0.211	1.00	Yes	0.503	0.123	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.33**
		L_{16} - L_{17}			1198.33	-----	-1298	-581	-431	96	-325	515	-103	-46	0.758	0.236	1.00	Yes	0.492	0.146	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.33**
		L_{17} - L_{18}			920.62	-----	-869	-398	-290	164	121	-193	-132	-70	0.802	0.192	1.00	Yes	0.513	0.115	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.47**
		L_{18} - L_{19}			482.82	-----	-493	332	-546	618	-97	270	-344	-24	0.739	0.257	1.00	Yes	0.500	0.163	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.36**
		L_{19} - L_{20}			202.73	-471.73	-260	57	-490	269	210	47	-71	-16	0.310	0.191	0.51	Yes	0.189	0.127	0.32	Yes	0.857	0.132	0.99	Yes	0.849	0.147	1.00	Yes	1.00	**10.13**
	Structure 2	L_0 - L_1			312.93	-----	187	-813	986	-2602	23	80	-153	-532	0.380	0.617	1.00	Yes	0.226	0.396	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**43.39**
		L_1 - L_2			530.19	-----	169	-1265	181	-248	-547	-231	-44	18	0.644	0.347	1.00	Yes	0.383	0.221	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.58**
		L_2 - L_3			974.57	-----	-239	-1246	-37	-173	72	328	73	73	0.778	0.219	1.00	Yes	0.512	0.127	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.30**
		L_3 - L_4			1268.32	-----	-462	-1737	36	-441	456	195	151	82	0.753	0.243	1.00	Yes	0.508	0.157	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.46**
		L_4 - L_5			1730.80	-----	-1810	-1690	-387	-259	98	279	93	198	0.807	0.190	1.00	Yes	0.534	0.113	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.88**
		L_5 - L_6			1788.38	-----	-1250	-2451	-149	-400	197	-28	109	-16	0.767	0.230	1.00	Yes	0.515	0.140	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.03**
		L_6 - L_7			1755.74	-----	-2410	-1840	-456	-128	54	599	-160	46	0.743	0.249	1.00	Yes	0.494	0.147	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.21**
		L_7 - L_8			1381.47	-----	-1759	-967	-220	278	153	-85	-131	8	0.792	0.207	1.00	Yes	0.520	0.121	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.13**
		L_8 - L_9			1100.32	-----	-1139	-560	-112	515	-91	794	-28	14	0.770	0.228	1.00	Yes	0.518	0.145	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.85**
		L_9 - L_{10}			867.92	-591.03	-1180	-590	-113	710	251	-145	14	91	0.775	0.219	1.00	Yes	0.451	0.136	0.59	Yes	0.625	0.126	0.76	Yes	0.621	0.189	0.81	Yes	1.00	**9.97**
		L_{10} - L_{11}			-----	-682.99	-1074	176	92	531	-265	435	57	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.114	0.93	Yes	0.802	0.188	1.00	Yes	1.00	**7.96**
		L_{11} - L_{12}			-----	-1043.36	-769	-352	104	990	291	-79	80	237	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.114	0.98	Yes	0.856	0.135	1.00	Yes	1.00	**10.50**
		L_{12} - L_{13}			-----	-1542.47	-374	-184	442	-389	119	-163	198	-144	-----	-----	-----	-----	-----	-----	-----	-----	0.930	0.061	1.00	Yes	0.923	0.044	0.97	Yes	1.00	**15.90**
		L_{13} - L_{14}			-----	-1527.78	-367	1230	-610	2647	-262	-456	-236	-539	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.194	0.97	Yes	0.769	0.231	1.00	Yes	1.00	**10.42**
		L_{14} - L_{15}			-----	-1613.55	1125	-470	2097	-404	-517	-319	-333	-455	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.154	0.98	Yes	0.812	0.183	1.00	Yes	1.00	**13.43**
		L_{15} - L_{16}			-----	-1489.66	-469	-15	-1027	345	-214	96	17	399	-----	-----	-----	-----	-----	-----	-----	-----	0.898	0.091	0.99	Yes	0.891	0.102	1.00	Yes	1.00	**13.00**
		L_{16} - L_{17}			-----	-1156.69	229	-908	1214	121	143	183	402	190	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.143	1.00	Yes	0.842	0.150	1.00	Yes	1.00	**10.83**
		L_{17} - L_{18}			-----	-843.12	-49	-623	476	242	248	86	106	-58	-----	-----	-----	-----	-----	-----	-----	-----	0.892	0.101	1.00	Yes	0.885	0.100	0.99	Yes	1.00	**8.18**
		L_{18} - L_{19}			-----	-618.91	-120	-727	648	107	255	369	1	34	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.163	1.00	Yes	0.825	0.140	0.97	Yes	1.00	**7.36**
		L_{19} - L_{20}			-----	-572.40	-328	-1193	551	224	581	14	57	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.224	1.00	Yes	0.763	0.230	1.00	Yes	1.00	**9.82**
		L_{20} - L_{21}			965.42	-437.38	-1215	-1212	535	39	37	299	-93	-97	0.780	0.214	1.00	Yes	0.513	0.124	0.64	Yes	0.419	0.177	0.60	Yes	0.416	0.181	0.60	Yes	1.00	**10.81**
		L_{21} - L_{22}			844.61	-----	-947	-1787	207	-103	413	100	-87	-24	0.683	0.311	1.00	Yes	0.458	0.189	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.22**
		L_{22} - L_{23}			852.61	-----	-1711	-1045	-160	192	-58	469	-22	3	0.689	0.306	1.00	Yes	0.462	0.187	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.81**
		L_{23} - L_{24}			902.73	-263.72	-1036	-1631	-11	330	212	-95	8	72	0.729	0.266	1.00	Yes	0.480	0.153	0.64	Yes	0.252	0.305	0.56	Yes	0.251	0.243	0.50	Yes	1.00	**9.79**
		L_{24} - L_{25}			-----	-521.57	-1553	-962	305	419	-349	959	79	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.699	0.261	0.97	Yes	0.695	0.300	1.00	Yes	1.00	**13.67**
		L_{25} - L_{26}			-----	-628.46	-670	-837	114	686	89	-334	40	126	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.133	0.98	Yes	0.838	0.162	1.00	Yes	1.00	**11.90**
		L_{26} - L_{27}			-----	-805.53	-769	-534	-141	584	-106	649	-193	8	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.142	1.00	Yes	0.846	0.123	0.97	Yes	1.00	**9.91**
		L_{27} - L_{28}			-----	-1166.58	-67	218	-254	1169	88	197	-39	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.120	0.98	Yes	0.850	0.144	1.00	Yes	1.00	**10.59**
		L_{28} - L_{29}			-----	-1592.49	-113	-335	59	-10	171	-19	-96	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.960	0.037	1.00	Yes	0.953	0.033	0.99	Yes	1.00	**11.46**
		L_{29} - L_{30}			-----	-1622.73	-378	810	-482	2037	-66	-130	-2	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.124	0.95	Yes	0.817	0.178	1.00	Yes	1.00	**9.50**
		L_{30} - L_{31}			-----	-1581.63	826	-331	2236	-422	-134	-117	-605	-459	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.169	0.98	Yes	0.796	0.195	1.00	Yes	1.00	**15.03**
		L_{31} - L_{32}			-----	-1550.01	-146	-257	328	-96	-60	74	-386	144	-----	-----	-----	-----	-----	-----	-----	-----	0.943	0.054	1.00	Yes	0.935	0.033	0.97	Yes	1.00	**19.56**
		L_{32} - L_{33}			-----	-1050.68	361	-370	992	159	160	20	-144	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.096	0.97	Yes	0.862	0.135	1.00	Yes	1.00	**15.22**
		L_{33} - L_{34}			-----	-654.76	-37	-1266	398	162	548	125	10	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.157	0.94	Yes	0.769	0.221	1.00	Yes	1.00	**10.95**
		L_{34} - L_{35}			813.45	-----	-547	-1196	582	10	403	662	-17	74	0.726	0.271	1.00	Yes	0.423	0.166	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.66**
		L_{35} - L_{36}			1059.12	-----	-97	-1451	365	-34	594	64	105	-45	0.741	0.252	1.00	Yes	0.499	0.158	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.25**
		L_{36} - L_{37}			1312.75	-----	-959	-1818	208	-23	108	525	-100	17	0.753	0.244	1.00	Yes	0.494	0.145	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.82**
		L_{37} - L_{38}			1760.51	-----	-1590	-2597	-92	-366	300	-50	-42	-2	0.745	0.247	1.00	Yes	0.495	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.35**
		L_{38} - L_{39}			1768.46	-----	-1923	-2302	-305	-176	-19	580	-26	-16	0.759	0.240	1.00	Yes	0.509	0.148	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.45**
		L_{39} - L_{40}			1654.06	-----	-1512	-2139	-204	-312	88	-313	-51	-36	0.771	0.223	1.00	Yes	0.511	0.132	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.61**
		L_{40} - L_{41}			1260.55	-----	-1818	-622	-312	-48	-309	469	-61	-10	0.741	0.250	1.00	Yes	0.499	0.156	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.23**
		L_{41} - L_{42}			977.92	-----	-1350	-323	-167	-59	303	-18	-28	11	0.771	0.227	1.00	Yes	0.505	0.136	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.36**
		L_{42} - L_{43}			473.21	-----	-1491	269	-372	156	-381	294	-31	28	0.605	0.390	1.00	Yes	0.361	0.226	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.08**
		L_{43} - L_{44}			400.43	-----	-807	337	-1814	789	863	252	301	88	0.486	0.511	1.00	Yes	0.289	0.324	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**36.46**
	Structure 3	L_0 - L_1			424.25	-----	109	-372	630	-955	-31	-141	4	20	0.675	0.319	1.00	Yes	0.414	0.214	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**20.34**
		L_1 - L_2			540.95	-----	248	-483	365	-425	-72	47	48	124	0.828	0.171	1.00	Yes	0.560	0.107	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.09**
		L_2 - L_3			919.17	-----	-102	-941	5	-176	31	137	17	4	0.800	0.199	1.00	Yes	0.512	0.119	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.78**
		L_3 - L_4			1189.08	-----	-152	-1462	62	-368	357	166	47	54	0.752	0.246	1.00	Yes	0.488	0.152	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.23**
		L_4 - L_5			1600.78	-----	-1499	-1330	-334	-220	258	447	83	125	0.782	0.212	1.00	Yes	0.502	0.125	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.56**
		L_5 - L_6			1570.44	-----	-1013	-1669	-83	-351	415	196	141	78	0.767	0.230	1.00	Yes	0.499	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.23**
		L_6 - L_7			1341.02	-----	-1157	-792	-402	241	-101	616	-184	17	0.789	0.211	1.00	Yes	0.511	0.130	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.55**
		L_7 - L_8			1075.14	-----	-708	-662	-88	109	175	19	-29	40	0.848	0.146	1.00	Yes	0.543	0.087	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.73**
		L_8 - L_9			558.73	-----	-710	30	-177	329	-166	457	-17	45	0.724	0.268	1.00	Yes	0.434	0.173	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.57**
		L_9 - L_{10}			-----	-549.12	-586	-397	11	501	320	147	74	143	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.136	0.98	Yes	0.837	0.155	1.00	Yes	1.00	**9.80**
		L_{10} - L_{11}			-----	-1026.13	-1050	-259	-437	738	60	1068	-40	-122	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.128	0.97	Yes	0.826	0.165	1.00	Yes	1.00	**13.82**
		L_{11} - L_{12}			-----	-1258.71	-46	473	-53	1156	-131	-164	-351	-551	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.187	1.00	Yes	0.797	0.153	0.96	Yes	1.00	**8.72**
		L_{12} - L_{13}			-----	-1251.74	457	-13	1123	-2	-255	-291	-591	-324	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.191	1.00	Yes	0.793	0.149	0.95	Yes	1.00	**9.33**
		L_{13} - L_{14}			-----	-1038.59	-204	-639	-11	259	363	164	-241	110	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.153	1.00	Yes	0.836	0.100	0.94	Yes	1.00	**8.01**
		L_{14} - L_{15}			-----	-755.39	-47	-365	572	169	107	15	157	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.881	0.119	1.00	Yes	0.872	0.127	1.00	Yes	1.00	**6.57**
		L_{15} - L_{16}			-----	-524.79	145	-720	415	185	88	11	13	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.174	0.99	Yes	0.800	0.191	1.00	Yes	1.00	**5.50**
		L_{16} - L_{17}			623.23	-208.33	-261	-877	298	24	101	391	94	-27	0.717	0.275	1.00	Yes	0.426	0.176	0.61	Yes	0.285	0.217	0.51	Yes	0.282	0.212	0.50	Yes	1.00	**5.30**
		L_{17} - L_{18}			660.65	-----	-689	-818	81	-11	207	-6	4	12	0.760	0.231	1.00	Yes	0.440	0.138	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.75**
		L_{18} - L_{19}			425.12	-----	-815	-128	34	6	-134	448	20	-97	0.651	0.341	1.00	Yes	0.397	0.226	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.63**
		L_{19} - L_{20}			258.09	-----	-449	317	-1134	1078	1224	333	-93	-25	0.395	0.603	1.00	Yes	0.233	0.362	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**44.59**

Operating Loads - 2F1

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

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
		Vehicle	Pedestrian	Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
				(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Verticals	Structure 1	$U_0 - L_0$		-----	-293.12	-59	90	-161	211	-25	-8	-211	-68	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.199	0.93	Yes	0.685	0.314	1.00	Yes	1.00	**2.60**
		$U_1 - L_1$		-----	-338.87	20	-8	-207	220	-5	-3	-608	-223	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.244	0.99	Yes	0.717	0.281	1.00	Yes	1.00	**5.62**
		$U_2 - L_2$		83.63	-327.72	71	-78	-131	190	38	22	763	310	0.150	0.463	0.62	Yes	0.083	0.255	0.34	Yes	0.716	0.281	1.00	Yes	0.693	0.243	0.94	Yes	1.00	**7.66**
		$U_3 - L_3$		271.07	-----	285	-277	-207	249	-176	54	496	147	0.488	0.508	1.00	Yes	0.268	0.279	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.81**
		$U_4 - L_4$		-----	-351.33	179	-181	167	-164	-406	-173	693	210	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.219	1.00	Yes	0.743	0.231	0.98	Yes	1.00	**7.42**
		$U_5 - L_5$		-----	-431.87	66	-88	202	-243	6	7	360	23	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.190	0.98	Yes	0.745	0.247	1.00	Yes	1.00	**4.86**
		$U_6 - L_6$		-----	-490.87	86	-83	236	-257	-172	-62	417	85	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.172	0.96	Yes	0.741	0.249	1.00	Yes	1.00	**4.12**
		$U_7 - L_7$		-----	-411.90	129	-143	273	-290	-156	15	231	32	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.154	0.89	Yes	0.672	0.321	1.00	Yes	1.00	**3.01**
		$U_8 - L_8$		-----	-1132.45	9	-18	-138	161	-77	7	1704	392	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.174	1.00	Yes	0.785	0.030	0.82	Yes	1.00	**7.38**
		$U_9 - L_9$		-----	-643.95	-172	200	-386	433	-434	-183	-138	-186	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.162	0.96	Yes	0.745	0.252	1.00	Yes	1.00	**5.40**
		$U_{10} - L_{10}$		-----	-733.12	-122	105	-292	330	-730	-417	-201	-336	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.202	1.00	Yes	0.753	0.184	0.94	Yes	1.00	**6.75**
		$U_{11} - L_{11}$		-----	-677.82	-117	185	-280	436	-572	-314	221	-164	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.173	0.99	Yes	0.789	0.202	1.00	Yes	1.00	**6.45**
		$U_{12} - L_{12}$		-----	-531.74	-91	92	-306	315	-409	-225	99	-88	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.170	0.94	Yes	0.730	0.269	1.00	Yes	1.00	**6.16**
		$U_{13} - L_{13}$		-----	-382.92	-34	56	-199	230	-181	22	318	36	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.149	0.93	Yes	0.734	0.262	1.00	Yes	1.00	**4.82**
		$U_{14} - L_{14}$		-----	-326.44	-132	152	-121	128	-26	-16	891	100	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.270	1.00	Yes	0.691	0.195	0.89	Yes	1.00	**6.61**
		$U_{15} - L_{15}$		145.82	-315.24	-107	96	234	-253	32	87	544	-49	0.262	0.480	0.75	Yes	0.144	0.264	0.41	Yes	0.707	0.210	0.92	Yes	0.667	0.323	1.00	Yes	1.00	**7.43**
		$U_{16} - L_{16}$		-----	-322.58	9	-26	236	-244	34	-34	352	-131	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.161	0.89	Yes	0.683	0.312	1.00	Yes	1.00	**5.34**
		$U_{17} - L_{17}$		-----	-423.73	62	-76	187	-215	-120	-114	374	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.204	1.00	Yes	0.731	0.218	0.95	Yes	1.00	**4.16**
		$U_{18} - L_{18}$		-----	-538.99	145	-151	413	-430	-133	-123	431	-129	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.127	0.92	Yes	0.750	0.243	1.00	Yes	1.00	**4.55**
		$U_{19} - L_{19}$		-----	-646.05	172	-171	532	-522	-117	-47	326	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.126	0.94	Yes	0.752	0.247	1.00	Yes	1.00	**5.31**
		$U_{20} - L_{20}$		-----	-580.85	160	-260	335	-502	27	4	358	47	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.195	1.00	Yes	0.711	0.241	0.96	Yes	1.00	**3.89**
	Structure 2	$U_0 - L_0$		-----	-588.49	-169	219	-395	466	-37	-6	-1035	-175	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.260	1.00	Yes	0.660	0.210	0.87	Yes	1.00	**4.22**
		$U_1 - L_1$		-----	-725.75	-118	128	-502	519	-107	-7	-842	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.165	1.00	Yes	0.778	0.220	1.00	Yes	1.00	**7.46**
		$U_2 - L_2$		-----	-611.67	-109	119	-397	431	-108	-38	467	73	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.137	0.96	Yes	0.779	0.220	1.00	Yes	1.00	**6.41**
		$U_3 - L_3$		-----	-490.84	-59	67	-177	205	70	-47	577	17	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.158	1.00	Yes	0.770	0.187	0.96	Yes	1.00	**5.04**
		$U_4 - L_4$		-----	-350.03	-13	25	-190	198	-64	26	206	37	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.138	0.94	Yes	0.741	0.253	1.00	Yes	1.00	**5.76**
		$U_5 - L_5$		-----	-322.71	89	-75	-148	178	-110	119	561	43	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.269	1.00	Yes	0.683	0.228	0.92	Yes	1.00	**6.93**
		$U_6 - L_6$		270.36	-----	146	-153	-81	93	-9	118	1079	173	0.486	0.508	1.00	Yes	0.267	0.279	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.50**
		$U_7 - L_7$		-----	-319.93	136	-159	71	-79	-15	-21	808	27	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.269	1.00	Yes	0.677	0.203	0.89	Yes	1.00	**6.27**
		$U_8 - L_8$		-----	-463.48	52	-77	358	-370	-64	-27	280	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.672	0.126	0.80	Yes	0.668	0.323	1.00	Yes	1.00	**6.01**
		$U_9 - L_9$		-----	-699.46	155	-169	515	-556	-36	-196	997	107	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.212	1.00	Yes	0.750	0.236	0.99	Yes	1.00	**7.83**
		$U_{10} - L_{10}$		-----	-802.07	164	-189	531	-563	-33	-249	720	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.194	0.99	Yes	0.750	0.249	1.00	Yes	1.00	**7.72**
		$U_{11} - L_{11}$		-----	-814.20	187	-186	512	-529	-181	-68	334	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.128	0.95	Yes	0.761	0.234	1.00	Yes	1.00	**6.90**
		$U_{12} - L_{12}$		-----	-877.57	162	-150	528	-537	-219	-33	284	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.118	0.96	Yes	0.761	0.230	1.00	Yes	1.00	**7.29**
		$U_{13} - L_{13}$		-----	-740.41	212	-210	561	-545	-163	22	543	51	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.171	1.00	Yes	0.714	0.268	0.99	Yes	1.00	**5.85**
		$U_{14} - L_{14}$		-----	-1102.28	117	-114	231	-224	-47	237	1419	302	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.189	1.00	Yes	0.731	0.041	0.78	Yes	1.00	**8.70**
		$U_{15} - L_{15}$		-----	-697.32	-127	134	-497	503	-298	11	749	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.218	1.00	Yes	0.672	0.241	0.92	Yes	1.00	**7.94**
		$U_{16} - L_{16}$		-----	-705.44	-91	66	-489	484	-801	-259	-454	-356	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.183	1.00	Yes	0.756	0.208	0.97	Yes	1.00	**7.94**
		$U_{17} - L_{17}$		-----	-656.04	-128	126	-473	493	-274	-186	158	-320	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.120	0.93	Yes	0.764	0.229	1.00	Yes	1.00	**7.00**
		$U_{18} - L_{18}$		-----	-603.50	-99	98	-379	434	-113	-128	669	-131	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.141	0.95	Yes	0.769	0.222	1.00	Yes	1.00	**6.52**
		$U_{19} - L_{19}$		-----	-484.98	-62	70	-275	281	-224	-59	152	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.112	0.85	Yes	0.724	0.271	1.00	Yes	1.00	**5.92**
		$U_{20} - L_{20}$		-----	-396.36	-8	15	-180	196	-180	-24	446	13	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.182	1.00	Yes	0.759	0.224	0.99	Yes	1.00	**5.85**
	Structure 3	$U_0 - L_0$		-----	-552.31	-146	194	-409	461	-55	-7	-844	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.244	1.00	Yes	0.663	0.221	0.89	Yes	1.00	**4.36**
		$U_1 - L_1$		-----	-652.06	-116	128	-409	437	-122	-3	-857	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.179	1.00	Yes	0.759	0.203	0.97	Yes	1.00	**6.33**
		$U_2 - L_2$		-----	-549.30	-111	117	-384	404	-149	-45	185	46	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.093	0.90	Yes	0.764	0.229	1.00	Yes	1.00	**5.79**
		$U_3 - L_3$		-----	-458.20	-47	60	-169	198	42	-64	401	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.127	0.99	Yes	0.791	0.201	1.00	Yes	1.00	**4.78**
		$U_4 - L_4$		-----	-335.41	-11	20	-152	174	-78	35	645	70	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.240	1.00	Yes	0.710	0.222	0.94	Yes	1.00	**5.42**
		$U_5 - L_5$		-----	-328.01	71	-68	-213	234	-113	88	377	37	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.230	0.97	Yes	0.694	0.299	1.00	Yes	1.00	**7.42**
		$U_6 - L_6$		-----	-312.94	149	-166	-24	22	-157	-35	846	109	-----	-----	-----	-----	-----	-----	-----	-----	0.698	0.294	1.00	Yes	0.662	0.213	0.88	Yes	1.00	**7.43**
		$U_7 - L_7$		-----	-381.40	10	-23	213	-235	-14	-24	441	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.119	0.90	Yes	0.731	0.268	1.00	Yes	1.00	**5.74**
		$U_8 - L_8$		-----	-516.82	64	-70	330	-335	-34	-96	501	7	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.181	0.93	Yes	0.709	0.287	1.00	Yes	1.00	**6.22**
		$U_9 - L_9$		-----	-651.16	102	-163	393	-501	-44	-192	233	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.118	0.90	Yes	0.758	0.232	1.00	Yes	1.00	**6.73**
		$U_{10} - L_{10}$		-----	-748.03	119	-117	331	-389	-208	-101	862	223	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.225	1.00	Yes	0.738	0.202	0.94	Yes	1.00	**6.92**
		$U_{11} - L_{11}$		-----	-648.81	168	-193	422	-470	-150	-29	548	133	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.169	0.95	Yes	0.733	0.261	1.00	Yes	1.00	**4.98**
		$U_{12} - L_{12}$		-----	-1092.83	89	-121	182	-251	-88	34	1702	457	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.202	1.00	Yes	0.758	0.047	0.81	Yes	1.00	**8.20**
		$U_{13} - L_{13}$		-----	-473.04	-68	77	-242	266	-369	-52	404	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.177	0.97	Yes	0.730	0.262	1.00	Yes	1.00	**4.97**
		$U_{14} - L_{14}$		-----	-505.41	-47	33	-223	242	-767	-353	-425	-326	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.230	1.00	Yes	0.725	0.211	0.94	Yes	1.00	**6.01**
		$U_{15} - L_{15}$		-----	-441.45	-32	41	-174	207	-493	-233	-17	-186	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.197	1.00	Yes	0.762	0.210	0.98	Yes	1.00	**5.35**
		$U_{16} - L_{16}$		-----	-343.70	-11	15	-142	143	-465	-231	594	64	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.235	1.00	Yes	0.727	0.183	0.92	Yes	1.00	**5.95**
		$U_{17} - L_{17}$		293.72	-----	-309	321	196	-215	-155	85	200	-56	0.528	0.468	1.00	Yes	0.291	0.257	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.87**
		$U_{18} - L_{18}$		103.79	-296.90	-97	108	240	-285	-103	8	293	-18	0.187	0.449	0.64	Yes	0.103	0.247	0.35	Yes	0.649	0.174	0.83	Yes	0.628	0.364	1.00	Yes	1.00	**8.12**
		$U_{19} - L_{19}$		-----	-336.16	-47	36	218	-219	-84	-10	458	120	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.204	0.94	Yes	0.711	0.280	1.00	Yes	1.00	**5.34**
		$U_{20} - L_{20}$		-----	-349.16	19	-30	76	-137	-46	-15	470	151	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.218	1.00	Yes	0.739	0.176	0.92	Yes	1.00	**3.22**

Operating Loads - 2F1

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	$U_0 - L_1$	671.62	-----	-77	51	-17	-1	77	-80	-16	-2	0.881	0.109	1.00	Yes	0.532	0.060	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.85**
		$U_1 - L_2$	459.60	-----	-83	-9	13	-18	-225	-114	-18	-24	0.827	0.172	1.00	Yes	0.455	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.17**
		$U_2 - L_3$	-----	-322.90	-107	2	-44	-80	-355	-70	119	-122	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.249	1.00	Yes	0.683	0.137	0.82	Yes					1.00	**10.48**
		$U_3 - L_4$	-----	-384.28	-25	-47	11	-63	-189	-156	10	-199	-----	-----	-----	-----	-----	-----	-----	-----	0.879	0.117	1.00	Yes	0.813	0.081	0.90	Yes					1.00	**4.76**
		$U_4 - L_4$	535.14	-----	-77	40	-62	-1	-102	-179	-550	-232	0.792	0.206	1.00	Yes	0.436	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.98**
		$U_4 - L_5$	672.41	-----	-208	203	-71	81	-259	-327	-456	-140	0.795	0.201	1.00	Yes	0.437	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.59**
		$U_5 - L_6$	657.76	-----	-289	242	-86	104	-128	-189	280	119	0.778	0.216	1.00	Yes	0.428	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.56**
		$U_6 - L_7$	651.54	-----	-104	306	0	136	-72	-132	303	184	0.770	0.229	1.00	Yes	0.424	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.97**
		$U_8 - L_8$	992.19	-----	-100	360	20	137	321	357	335	100	0.793	0.206	1.00	Yes	0.491	0.115	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**8.91**
		$U_9 - L_{10}$	1009.74	-----	-312	229	-79	87	135	419	281	209	0.807	0.192	1.00	Yes	0.500	0.108	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**8.39**
		$U_{10} - L_{11}$	983.84	-----	-256	161	-93	64	-143	353	293	176	0.831	0.165	1.00	Yes	0.514	0.093	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.55**
		$U_{11} - L_{12}$	855.55	-----	-258	114	-110	-9	-34	193	38	73	0.846	0.148	1.00	Yes	0.466	0.082	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.22**
		$U_{12} - L_{13}$	642.90	-----	-200	141	-91	26	-87	117	162	-95	0.784	0.207	1.00	Yes	0.493	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.82**
		$U_{13} - L_{14}$	455.45	-----	-97	21	-22	-26	-97	19	15	-163	0.819	0.172	1.00	Yes	0.451	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.16**
		$U_{15} - L_{14}$	243.28	-297.43	-61	-8	25	-97	-232	-245	-488	-125	0.438	0.266	0.71	Yes	0.241	0.146	0.39	Yes	0.697	0.295	1.00	Yes	0.629	0.125	0.76	Yes					1.00	**6.81**
		$U_{16} - L_{15}$	369.13	-----	-117	77	-34	-18	-299	-309	-628	-106	0.664	0.331	1.00	Yes	0.365	0.182	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.45**
		$U_{17} - L_{16}$	519.29	-----	-138	98	-35	14	-391	-350	-113	-132	0.762	0.231	1.00	Yes	0.419	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.58**
		$U_{18} - L_{17}$	609.12	-----	-321	241	-112	76	-500	-504	-114	-120	0.720	0.273	1.00	Yes	0.396	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.07**
		$U_{19} - L_{18}$	689.89	-----	-347	252	-133	88	-411	-452	-69	-110	0.747	0.252	1.00	Yes	0.411	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.78**
		$U_{20} - L_{19}$	725.12	-----	-235	258	-95	93	-452	-332	-101	-40	0.785	0.206	1.00	Yes	0.432	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.34**
	Structure 2	$U_0 - L_1$	810.20	-----	-350	358	-114	99	-16	-200	-60	-49	0.802	0.196	1.00	Yes	0.441	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.93**
		$U_1 - L_2$	788.28	-----	-393	300	-96	72	-239	43	-98	-28	0.780	0.218	1.00	Yes	0.429	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.35**
		$U_2 - L_3$	643.01	-----	-336	247	-88	67	-238	211	-25	87	0.760	0.233	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.89**
		$U_3 - L_4$	595.09	-----	-182	131	-39	17	-154	2	103	60	0.793	0.198	1.00	Yes	0.436	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.22**
		$U_4 - L_5$	422.46	-----	-135	90	-6	-31	-234	83	76	-171	0.760	0.240	1.00	Yes	0.418	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.65**
		$U_5 - L_6$	426.04	-271.33	-123	43	58	-104	-239	180	-6	-178	0.766	0.227	1.00	Yes	0.421	0.125	0.55	Yes	0.641	0.190	0.84	Yes	0.574	0.158	0.74	Yes					1.00	**8.69**
		$U_6 - L_7$	-----	-381.00	-48	-15	54	-101	-175	-90	-29	-300	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.181	1.00	Yes	0.730	0.115	0.85	Yes					1.00	**5.85**
		$U_8 - L_7$	547.25	-----	-171	106	-69	-1	-180	-460	-696	-173	0.698	0.295	1.00	Yes	0.439	0.169	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.16**
		$U_8 - L_8$	645.94	-----	-291	216	-181	59	-352	-359	-894	-286	0.700	0.296	1.00	Yes	0.385	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.27**
		$U_{10} - L_9$	792.59	-----	-302	227	-132	58	-415	-441	68	-193	0.784	0.206	1.00	Yes	0.431	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.62**
		$U_{11} - L_{10}$	864.56	-----	-338	269	-110	129	-357	-443	117	-14	0.788	0.204	1.00	Yes	0.433	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.10**
		$U_{12} - L_{11}$	865.82	-----	-361	347	-119	153	-285	-368	213	72	0.789	0.204	1.00	Yes	0.434	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.21**
		$U_{13} - L_{12}$	751.12	-----	-435	370	-153	155	-172	-236	326	124	0.743	0.251	1.00	Yes	0.409	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.36**
		$U_{14} - L_{13}$	750.94	-----	-276	419	-24	158	-156	-190	363	180	0.743	0.249	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.43**
		$U_{14} - L_{15}$	638.04	-----	-222	342	21	74	71	284	248	-34	0.754	0.245	1.00	Yes	0.415	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**8.18**
		$U_{15} - L_{16}$	635.00	-----	-369	342	-64	70	-164	176	-28	20	0.751	0.241	1.00	Yes	0.413	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.59**
		$U_{16} - L_{17}$	714.19	-----	-330	333	-70	97	-313	323	-148	64	0.774	0.223	1.00	Yes	0.425	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.02**
		$U_{17} - L_{18}$	646.96	-----	-294	256	-69	82	-105	378	-20	106	0.765	0.235	1.00	Yes	0.421	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.07**
		$U_{18} - L_{19}$	667.38	-----	-281	260	-50	69	56	242	35	21	0.789	0.203	1.00	Yes	0.434	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.91**
		$U_{19} - L_{20}$	603.76	-----	-196	154	-45	8	8	225	242	2	0.770	0.225	1.00	Yes	0.423	0.127	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.73**
		$U_{20} - L_{21}$	437.03	-----	-124	93	-9	-10	-78	164	89	-86	0.786	0.207	1.00	Yes	0.432	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.86**
		$U_{21} - L_{22}$	440.88	-----	-115	44	26	-76	-47	80	40	-178	0.793	0.198	1.00	Yes	0.436	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**8.71**
		$U_{23} - L_{22}$	381.49	-249.82	-100	32	-4	-60	-185	-277	-638	-40	0.686	0.313	1.00	Yes	0.377	0.172	0.55	Yes	0.595	0.309	0.91	Yes	0.529	0.128	0.66	Yes					1.00	**7.61**
		$U_{24} - L_{23}$	378.58	-----	-104	91	-33	0	-210	-207	-617	-19	0.681	0.311	1.00	Yes	0.374	0.171	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.25**
		$U_{25} - L_{24}$	565.12	-----	-182	174	-48	16	-339	-299	-539	-143	0.721	0.273	1.00	Yes	0.396	0.156	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.57**
		$U_{26} - L_{25}$	653.04	-----	-279	253	-32	43	-264	-367	105	35	0.772	0.224	1.00	Yes	0.425	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.54**
		$U_{27} - L_{26}$	665.24	-----	-289	281	-47	59	-232	-275	173	66	0.786	0.213	1.00	Yes	0.433	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.58**
		$U_{28} - L_{27}$	703.42	-----	-348	341	-49	68	-213	-335	198	109	0.762	0.233	1.00	Yes	0.419	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.10**
		$U_{29} - L_{28}$	633.68	-----	-362	334	-75	75	-77	-178	204	98	0.749	0.242	1.00	Yes	0.412	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.20**
		$U_{30} - L_{29}$	616.32	-----	-215	342	30	109	-86	-147	376	105	0.729	0.262	1.00	Yes	0.401	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.25**
		$U_{30} - L_{31}$	755.62	-----	-290	433	12	75	151	188	288	-4	0.748	0.244	1.00	Yes	0.411	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**9.78**
		$U_{31} - L_{32}$	721.84	-----	-410	356	-76	79	-181	243	-25	43	0.750	0.242	1.00	Yes	0.412	0.124	0.54	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.61**
		$U_{32} - L_{33}$	859.14	-----	-364	313	-64	96	-387	414	-136	132	0.783	0.211	1.00	Yes	0.430	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.78**
		$U_{33} - L_{34}$	885.11	-----	-348	279	-67	90	-63	328	23	203	0.806	0.193	1.00	Yes	0.443	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**8.31**
		$U_{34} - L_{35}$	805.88	-----	-309	217	-114	42	-6	263	380	4	0.797	0.200	1.00	Yes	0.438	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.57**
		$U_{35} - L_{36}$	726.28	-----	-331	209	-108	23	-53	212	148	-75	0.787	0.204	1.00	Yes	0.433	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.88**
		$U_{36} - L_{37}$	611.72	-----	-191	137	-32	-15	-136	78	19	-225	0.780	0.216	1.00	Yes	0.491	0.122	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.62**
		$U_{38} - L_{37}$	-----	-354.59	-32	-16	30	-75	-135	-251	-476	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.230	1.00	Yes	0.679	0.086	0.77	Yes					1.00	**4.60**
		$U_{39} - L_{38}$	279.09	-264.71	-77	39	17	-75	-257	-249	-806	-81	0.502	0.332	0.84	Yes	0.276	0.182	0.46	Yes	0.631	0.363	1.00	Yes	0.560	0.098	0.66	Yes					1.00	**6.67**
		$U_{40} - L_{39}$	379.90	-----	-121	92	-1	-37	-296	-282	-538	-100	0.683	0.310	1.00	Yes	0.376	0.171	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.01**
		$U_{41} - L_{40}$	568.21	-----	-172	123	-20	5	-359	-371	-99	-85	0.757	0.235	1.00	Yes	0.417	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.99**
		$U_{42} - L_{41}$	622.57	-----	-316	263	-51	34	-390	-422	-70	-67	0.736	0.255	1.00	Yes	0.405	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.24**
		$U_{43} - L_{42}$	744.70	-----	-393	288	-67	46	-465	-508	-7	-48	0.737	0.258	1.00	Yes	0.405	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.78**
		$U_{44} - L_{43}$	789.44	-----	-285	325	-94	81	-421	-355	53	-22	0.781	0.214	1.00	Yes	0.430	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.98**
	Structure 3	$U_0 - L_1$	714.05	-----	-347	297	-113	94	-21	-251	-63	-53	0.773	0.219	1.00	Yes	0.425	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.68**
		$U_1 - L_2$	709.35	-----	-338	252	-99	67	-298	-68	-125	-45	0.768	0.222	1.00	Yes	0.423	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.81**
		$U_2 - L_3$	645.13	-----	-331	242	-97	63	-267	152	-49	78	0.763	0.236	1.00	Yes	0.419	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.12**
		$U_3 - L_4$	547.33	-----	-153	89	-38	0	-143	97	118	-26	0.803	0.189	1.00	Yes	0.441	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.43**
		$U_4 - L_5$	426.76	-----	-131	91	-4	-35	-217	20	-81	-178	0.768	0.230	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.87**
		$U_5 - L_6$	378.83	-335.60	-103	-13	29	-111	-240	-18	40	-290	0.681	0.226	0.91	Yes	0.375	0.124	0.50	Yes	0.786	0.212	1.00	Yes	0.710	0.142	0.86	Yes					1.00	**8.51**
		$U_7 - L_6$	396.47	-----	-76	25	-41	-24	-201	-291	-646	-195	0.713	0.284	1.00	Yes	0.392	0.156	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.15**
		$U_8 - L_7$	577.26	-----	-190	121	-82	9	-378	-440	-654	-229	0.704	0.293	1.00	Yes	0.443	0.168	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.97**
		$U_9 - L_8$	756.09	-----	-238	95	-150	-19	-457	-491	-923	-460	0.748	0.248	1.00	Yes	0.411	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.01**
		$U_{10} - L_9$	951.93	-----	-248	170	-129	44	-491	-575	101	-233	0.804	0.190	1.00	Yes	0.498	0.108	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.60**
		$U_{11} - L_{10}$	984.58	-----	-318	224	-83	88	-471	-480	222	80	0.787	0.203	1.00	Yes	0.488	0.114	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.34**
		$U_{12} - L_{11}$	999.83	-----	-118	353	1	132	-279	-318	303	173	0.799	0.198	1.00	Yes	0.495	0.111	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.74**
		$U_{12} - L_{13}$	669.28	-----	-114	270	23	72	102	263	180	-32	0.791	0.202	1.00	Yes	0.435	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.00**
		$U_{13} - L_{14}$	669.67	-----	-287	241	-28	58	-89	191	53	79	0.792	0.198	1.00	Yes	0.435	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.21**
		$U_{14} - L_{15}$	711.55	-----	-197	190	-26	33	-233	232	161	55	0.841	0.155	1.00	Yes	0.463	0.085	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.97**
		$U_{15} - L_{16}$	579.53	-----	-98	14	-23	-3	-98	210	-3	55	0.850	0.148	1.00	Yes	0.467	0.081	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.96**
		$U_{17} - L_{16}$	-----	-400.42	-28	-41	13	-57	-17	-46	-226	17	-----	-----	-----	-----	-----	-----	-----	-----	0.916	0.083	1.00	Yes	0.847	0.073	0.93	Yes					1.00	**5.59**
		$U_{18} - L_{17}$	-----	-330.26	-74	1	-22	-68	-190	-214	-657	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.232	1.00	Yes	0.699	0.094	0.80	Yes					1.00	**7.54**
		$U_{19} - L_{18}$	427.77	-117.60	-92	29	23	-18	-361	-300	143	109	0.769	0.222	1.00	Yes	0.423	0.122	0.55	Yes	0.270	0.213	0.49	Yes	0.249	0.117	0.37	Yes					1.00	**6.46**
		$U_{20} - L_{19}$	652.69	-----	-18	28	-14	-6	-407	-364	86	98	0.856	0.135	1.00	Yes	0.517	0.074	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.38**

Axial AI Operating

Operating Loads - 2F1

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			-----	-494.44	-37	60	229	-1053	24	-16	-76	-406	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.323	1	Yes	0.667	0.250	0.92	Yes	1.00	**7.00**
		U_1 - U_2			-----	-544.09	-53	63	-201	-903	10	49	-29	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.251	1	Yes	0.734	0.215	0.95	Yes	1.00	**4.99**
		U_2 - U_3			-----	-578.69	-99	240	-292	-800	10	-90	194	-79	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.212	1	Yes	0.780	0.190	0.98	Yes	1.00	**5.66**
		U_3 - U_4			285.22	-563.05	82	238	-105	-999	-77	-79	-15	-240	0.327	0.278	0.61	Yes	0.224	0.191	0.42	Yes	0.766	0.227	1	Yes	0.759	0.237	1.00	Yes	1.00	**7.25**
		U_4 - U_5			284.38	-549.86	88	231	-1082	-324	-154	-27	-168	-110	0.326	0.285	0.62	Yes	0.224	0.196	0.42	Yes	0.748	0.233	0.99	Yes	0.741	0.257	1.00	Yes	1.00	**7.12**
		U_5 - U_6			543.31	-----	209	358	-1326	90	-322	-29	-174	-275	0.623	0.370	1.00	Yes	0.420	0.241	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.58**
		U_6 - U_7			755.45	-----	279	185	-1017	-280	-334	83	-397	-173	0.722	0.271	1.00	Yes	0.505	0.186	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.87**
		U_7 - U_8			927.95	-----	-35	1167	-1612	2050	-247	360	-251	154	0.643	0.347	1.00	Yes	0.448	0.237	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.30**
		U_8 - U_9			828.35	-----	1114	-137	1604	-1603	-99	212	58	415	0.679	0.320	1.00	Yes	0.464	0.218	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.52**
		U_9 - U_{10}			611.60	-----	219	218	176	-1173	112	402	207	455	0.663	0.336	1.00	Yes	0.449	0.225	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.38**
		U_{10} - U_{11}			-----	-587.26	214	-100	114	-1090	228	87	290	82	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.210	0.97	Yes	0.749	0.244	1.00	Yes	1.00	**6.62**
		U_{11} - U_{12}			-----	-875.26	167	-122	9	-1065	168	97	228	91	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.169	1	Yes	0.821	0.177	1.00	Yes	1.00	**6.20**
		U_{12} - U_{13}			-----	-1188.57	-36	-166	-18	-1213	221	-39	226	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.196	1	Yes	0.794	0.167	0.97	Yes	1.00	**6.67**
		U_{13} - U_{14}			-----	-1283.19	-118	-357	-296	-2013	150	59	113	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.249	1	Yes	0.736	0.222	0.96	Yes	1.00	**6.09**
		U_{14} - U_{15}			-----	-1266.31	-258	-192	-1885	-749	182	-56	223	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.266	1	Yes	0.726	0.208	0.94	Yes	1.00	**5.93**
		U_{15} - U_{16}			-----	-1331.76	-83	-414	-1455	-900	23	-65	153	-201	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.223	1	Yes	0.763	0.161	0.93	Yes	1.00	**6.06**
		U_{16} - U_{17}			-----	-1331.13	-318	-185	-1681	-533	51	-175	-74	-275	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.228	1	Yes	0.763	0.185	0.95	Yes	1.00	**6.75**
		U_{17} - U_{18}			-----	-963.92	-173	-100	-1185	-120	-159	-238	-126	-239	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.227	1	Yes	0.754	0.193	0.95	Yes	1.00	**5.42**
		U_{18} - U_{19}			-----	-733.97	-198	-29	-744	80	-192	-172	-12	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.166	1	Yes	0.826	0.150	0.98	Yes	1.00	**6.00**
		U_{19} - U_{20}			-----	-641.14	-182	-20	-1378	878	-125	4	163	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.217	0.95	Yes	0.721	0.277	1.00	Yes	1.00	**13.72**
	Structure 2	U_0 - U_1			-----	-586.01	165	-164	383	-1790	95	180	-77	-105	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.213	0.91	Yes	0.692	0.304	1.00	Yes	1.00	**10.60**
		U_1 - U_2			-----	-755.44	-102	-162	-70	-1258	335	624	209	279	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.263	1	Yes	0.729	0.191	0.93	Yes	1.00	**6.01**
		U_2 - U_3			-----	-1072.56	-79	-241	-159	-1968	594	5	449	9	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.228	1	Yes	0.761	0.200	0.97	Yes	1.00	**6.44**
		U_3 - U_4			-----	-1303.87	-372	-309	-737	-2042	125	-285	277	198	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.247	1	Yes	0.742	0.182	0.93	Yes	1.00	**6.58**
		U_4 - U_5			-----	-1391.29	-375	-348	-492	-2615	-49	-341	56	-317	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.277	1	Yes	0.714	0.217	0.94	Yes	1.00	**6.23**
		U_5 - U_6			-----	-1481.32	-397	-29	-1182	-1892	-99	-289	-65	-362	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.231	1	Yes	0.761	0.157	0.92	Yes	1.00	**6.92**
		U_6 - U_7			-----	-1208.46	-301	-105	-783	-2228	-67	-254	-85	-325	-----	-----	-----	-----	-----	-----	-----	-----	0.693	0.297	1	Yes	0.688	0.198	0.89	Yes	1.00	**5.75**
		U_7 - U_8			-----	-1226.33	-184	-235	-2379	-782	-165	-206	-146	-226	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.294	1	Yes	0.698	0.212	0.92	Yes	1.00	**5.93**
		U_8 - U_9			-----	-1125.86	-318	72	-1863	-752	-194	-178	-120	-211	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.227	1	Yes	0.764	0.198	0.97	Yes	1.00	**6.66**
		U_9 - U_{10}			-----	-892.22	-118	258	-1841	-460	-251	-124	-154	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.222	1	Yes	0.770	0.224	1.00	Yes	1.00	**7.12**
		U_{10} - U_{11}			416.05	-746.35	43	312	-1788	-423	-301	-142	-133	-208	0.351	0.289	0.65	Yes	0.239	0.186	0.43	Yes	0.746	0.246	1	Yes	0.742	0.252	1.00	Yes	1.00	**9.71**
		U_{11} - U_{12}			763.95	-----	146	489	-2066	-293	-371	-181	-258	-452	0.645	0.347	1.00	Yes	0.433	0.232	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.12**
		U_{12} - U_{13}			1037.52	-----	261	28	-1869	-1372	-496	-115	-568	-454	0.701	0.290	1.00	Yes	0.499	0.196	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.12**
		U_{13} - U_{14}			1373.17	-----	-300	2965	-408	1509	-673	291	-538	-173	0.675	0.320	1.00	Yes	0.478	0.210	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.61**
		U_{14} - U_{15}			1129.63	-----	2558	-67	4292	-3032	-388	285	-107	590	0.555	0.438	1.00	Yes	0.393	0.287	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.87**
		U_{15} - U_{16}			1094.51	-----	41	287	-539	-2278	89	725	440	921	0.662	0.337	1.00	Yes	0.471	0.227	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.36**
		U_{16} - U_{17}			874.40	-----	567	221	872	-2367	322	313	534	209	0.644	0.354	1.00	Yes	0.429	0.233	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.08**
		U_{17} - U_{18}			652.76	-----	439	242	196	-1846	62	182	171	123	0.655	0.340	1.00	Yes	0.436	0.226	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.83**
		U_{18} - U_{19}			562.41	-----	535	252	216	-2461	-8	70	108	54	0.565	0.434	1.00	Yes	0.370	0.275	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.40**
		U_{19} - U_{20}			211.38	-693.75	257	131	58	-1411	18	134	72	18	0.198	0.244	0.45	Yes	0.131	0.160	0.30	Yes	0.770	0.161	0.94	Yes	0.765	0.226	1.00	Yes	1.00	**7.92**
		U_{20} - U_{21}			-----	-817.60	112	-15	-176	-1618	106	-19	128	-157	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.246	1	Yes	0.746	0.234	0.99	Yes	1.00	**7.84**
		U_{21} - U_{22}			-----	-766.20	-28	-1	-471	-1691	-6	-46	-26	-108	-----	-----	-----	-----	-----	-----	-----	-----	0.704	0.294	1	Yes	0.699	0.245	0.95	Yes	1.00	**6.98**
		U_{22} - U_{23}			-----	-750.15	-26	-41	-1661	-661	-53	-99	-1	-94	-----	-----	-----	-----	-----	-----	-----	-----	0.690	0.308	1	Yes	0.685	0.241	0.93	Yes	1.00	**6.81**
		U_{23} - U_{24}			-----	-753.55	8	55	-1490	-705	-189	-101	-131	-150	-----	-----	-----	-----	-----	-----	-----	-----	0.693	0.305	1	Yes	0.688	0.216	0.91	Yes	1.00	**6.90**
		U_{24} - U_{25}			-----	-662.46	81	198	-1483	-576	-207	-40	-156	-137	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.258	1	Yes	0.731	0.237	0.97	Yes	1.00	**6.99**
		U_{25} - U_{26}			337.32	-613.09	127	360	-1597	-48	-201	40	-77	-83	0.339	0.300	0.64	Yes	0.222	0.191	0.42	Yes	0.728	0.156	0.89	Yes	0.724	0.271	1.00	Yes	1.00	**8.71**
		U_{26} - U_{27}			627.35	-----	206	414	-1948	-470	-194	17	-209	-142	0.630	0.361	1.00	Yes	0.419	0.240	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.46**
		U_{27} - U_{28}			857.01	-----	190	529	-2491	-287	-332	-53	-169	-461	0.631	0.361	1.00	Yes	0.420	0.238	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.95**
		U_{28} - U_{29}			1064.51	-----	241	62	-2583	-1086	-395	67	-657	-413	0.644	0.349	1.00	Yes	0.458	0.234	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.96**
		U_{29} - U_{30}			1219.46	-----	-130	2798	-3792	3845	-533	503	-309	128	0.600	0.392	1.00	Yes	0.425	0.257	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.03**
		U_{30} - U_{31}			1210.53	-----	2338	-146	3866	-3119	-150	371	139	601	0.595	0.399	1.00	Yes	0.421	0.261	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.74**
		U_{31} - U_{32}			1026.92	-----	16	313	-192	-1787	187	610	545	754	0.693	0.297	1.00	Yes	0.494	0.202	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.38**
		U_{32} - U_{33}			772.00	-----	483	191	248	-1967	325	263	568	96	0.652	0.347	1.00	Yes	0.438	0.232	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.34**
		U_{33} - U_{34}			536.69	-746.08	364	160	-243	-1785	134	166	219	93	0.453	0.279	0.74	Yes	0.308	0.179	0.49	Yes	0.746	0.213	0.96	Yes	0.741	0.252	1.00	Yes	1.00	**10.92**
		U_{34} - U_{35}			-----	-884.20	317	-51	97	-1874	120	-19	161	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.172	0.94	Yes	0.763	0.228	1.00	Yes	1.00	**7.70**
		U_{35} - U_{36}			-----	-1170.37	128	-264	-310	-1774	102	75	141	-17	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.196	1	Yes	0.794	0.189	0.99	Yes	1.00	**7.63**
		U_{36} - U_{37}			-----	-1245.66	-158	-68	-537	-2439	163	-58	149	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.282	1	Yes	0.709	0.217	0.93	Yes	1.00	**6.65**
		U_{37} - U_{38}			-----	-1214.28	23	-265	-2269	-1021	19	0	181	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.297	1	Yes	0.691	0.202	0.90	Yes	1.00	**6.37**
		U_{38} - U_{39}			-----	-1490.42	14	-410	-2111	-2101	80	-115	184	-150	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.228	1	Yes	0.765	0.175	0.95	Yes	1.00	**7.43**
		U_{39} - U_{40}			-----	-1322.75	-350	-474	-2582	-1449	-117	-148	-131	-306	-----	-----	-----	-----	-----	-----	-----	-----	0.684	0.312	1	Yes	0.679	0.214	0.90	Yes	1.00	**5.95**
		U_{40} - U_{41}			-----	-1243.03	-413	-435	-2243	-1144	-89	-141	-169	-273	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.285	1	Yes	0.708	0.200	0.91	Yes	1.00	**5.95**
		U_{41} - U_{42}			-----	-1103.81	-282	-174	-1870	-286	-100	25	-64	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.204	1	Yes	0.783	0.190	0.98	Yes	1.00	**6.79**
		U_{42} - U_{43}			-----	-821.82	-276	-55	-1217	-75	96	-67	229	-55	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.195	1	Yes	0.793	0.185	0.98	Yes	1.00	**7.02**
		U_{43} - U_{44}			-----	-618.98	-136	-158	-1535	652	-71	1	206	63	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.260	1	Yes	0.731	0.261	1.00	Yes	1.00	**12.02**
	Structure 3	U_0 - U_1			-----	-609.48	172	-175	589	-1539	62	131	-63	-145	-----	-----	-----	-----	-----	-----	-----	-----	0.692	0.182	0.88	Yes	0.686	0.310	1.00	Yes	1.00	**12.47**
		U_1 - U_2			-----	-671.14	-67	-119	2	-830	252	507	214	117	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.235	1	Yes	0.755	0.167	0.93	Yes	1.00	**5.49**
		U_2 - U_3			-----	-978.26	-76	-127	137	-1196	517	9	470	-62	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.224	1	Yes	0.765	0.195	0.97	Yes	1.00	**5.75**
		U_3 - U_4			-----	-1316.64	-145	-210	-493	-1746	134	-234	209	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.230	1	Yes	0.755	0.193	0.95	Yes	1.00	**7.00**
		U_4 - U_5			-----	-1371.34	-323	-48	-965	-1252	-13	-312	126	-345	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.197	1	Yes	0.786	0.138	0.93	Yes	1.00	**6.97**
		U_5 - U_6			-----	-1250.64	-159	-237	-331	-2019	-42	-201	-81	-268	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.268	1	Yes	0.717	0.223	0.94	Yes	1.00	**6.13**
		U_6 - U_7			-----	-1255.86	-315	-97	-2057	-628	-76	-226	-39	-177	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.267	1	Yes	0.720	0.227	0.95	Yes	1.00	**6.19**
		U_7 - U_8			-----	-1093.92	-137	-61	-1424	-436	-193	-199	-95	-251	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.256	1	Yes	0.731	0.196	0.93	Yes	1.00	**5.91**
		U_8 - U_9			-----	-865.96	-130	162	-1068	-113	-97	-112	-108	-202	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.176	1	Yes	0.812	0.177	0.99	Yes	1.00	**6.04**
		U_9 - U_{10}			-----	-590.95	-104	207	-1075	-54	-204	-131	-216	-211	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.223	0.99	Yes	0.754	0.241	1.00	Yes	1.00	**6.61**
		U_{10} - U_{11}			598.06	-----	199	208	-1319	-250	-330	-70	-249	-181	0.649	0.348	1.00	Yes	0.439	0.234	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.47**
		U_{11} - U_{12}			830.01	-----	-160	1161	-1662	1589	-324	144	-183	7	0.680	0.318	1.00	Yes	0.465	0.217	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.95**
		U_{12} - U_{13}			907.15	-----	1159	-27	2168	-1818	-338	85	-101	402	0.629	0.369	1.00	Yes	0.438	0.252	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.24**
		U_{13} - U_{14}			764.01	-----	180	296	42	-955	-88	369	104	422	0.731	0.261	1.00	Yes	0.511	0.179	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.25**
		U_{14} - U_{15}			551.47	-----	371	207	426	-1334	67	135	279	-24	0.632	0.364	1.00	Yes	0.426	0.237	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.96**
		U_{15} - U_{16}			260.21	-537.58	223	111	51	-1120	5	129	61	68	0.298	0.288	0.59	Yes	0.205	0.198	0.41	Yes	0.731	0.176	0.91	Yes	0.725	0.266	1.00	Yes	1.00	**6.77**
		U_{16} - U_{17}			268.24	-575.64	266	59	-927	-511	42	58	124	2	0.307	0.241	0.55	Yes	0.211	0.166	0.38	Yes	0.783	0.194	0.98	Yes	0.776	0.220	1.00	Yes	1.00	**7.14**
		U_{17} - U_{18}			-----	-581.07	226	-131	-799	-473	-67	137	58	-27	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.200	1	Yes	0.784	0.190	0.98	Yes	1.00	**5.69**
		U_{18} - U_{19}			-----	-558.21	40	-29	-856	-217	142	16	168	28	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.237	1	Yes	0.753	0.204	0.96	Yes	1.00	**5.47**
		U_{19} - U_{20}			-----	-588.05	120	-233	-862	297	-61	18	303	58	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.190	1	Yes	0.793	0.205	1.00	Yes	1.00	**9.07**

Operating Loads - 2F1

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	188.96	-----	783	-1242	440	-389	-425	-1563	60	221	0.289	0.708	1.00	Yes	0.170	0.424	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**19.35**
		L_1 - L_2	446.52	-----	-318	-712	47	-20	-443	44	19	22	0.683	0.309	1.00	Yes	0.417	0.204	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**6.60**
		L_2 - L_3	655.69	-----	-944	-636	-43	46	-101	-43	12	-6	0.754	0.244	1.00	Yes	0.436	0.147	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**6.74**
		L_3 - L_4	633.57	-----	-966	-439	38	182	47	174	-35	40	0.729	0.261	1.00	Yes	0.433	0.169	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**6.83**
		L_4 - L_5	-----	-538.12	-650	-576	99	501	-250	-81	174	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.136	0.97	Yes	0.820	0.172	1.00	Yes							1.00	**10.10**
		L_5 - L_6	-----	-751.74	-511	-460	141	577	-19	39	19	83	-----	-----	-----	-----	-----	-----	-----	-----	0.877	0.114	1	Yes	0.867	0.128	1.00	Yes							1.00	**10.29**
		L_6 - L_7	-----	-1053.15	-685	-939	138	34	51	-43	191	19	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.120	0.98	Yes	0.848	0.148	1.00	Yes							1.00	**12.20**
		L_7 - L_8	-----	-1261.16	-31	581	-15	1306	41	73	186	257	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.184	1	Yes	0.799	0.173	0.98	Yes							1.00	**12.76**
		L_8 - L_9	-----	-1273.74	554	-46	1444	-123	37	-14	91	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.181	1	Yes	0.807	0.191	1.00	Yes							1.00	**12.67**
		L_9 - L_{10}	-----	-1000.38	-373	-1182	141	80	347	75	-1	-28	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.110	0.93	Yes	0.805	0.186	1.00	Yes							1.00	**15.85**
		L_{10} - L_{11}	-----	-532.04	-248	-695	474	-20	-109	-416	69	7	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.142	0.96	Yes	0.811	0.184	1.00	Yes							1.00	**12.11**
		L_{11} - L_{12}	612.62	-----	-104	-676	330	-198	-71	124	-17	20	0.793	0.201	1.00	Yes	0.476	0.132	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**7.17**
		L_{12} - L_{13}	1044.93	-----	-525	-765	61	-102	-109	-319	-19	-33	0.825	0.173	1.00	Yes	0.527	0.104	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**8.16**
		L_{13} - L_{14}	1293.88	-----	-360	-1610	216	-398	-199	162	-107	65	0.761	0.238	1.00	Yes	0.493	0.146	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**7.73**
		L_{14} - L_{15}	1623.31	-----	-1236	-1555	-355	-81	-252	124	-66	-49	0.793	0.205	1.00	Yes	0.515	0.124	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**8.77**
		L_{15} - L_{16}	1612.53	-----	-1305	-1643	-197	-391	-108	-77	-76	15	0.788	0.206	1.00	Yes	0.506	0.120	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**9.74**
		L_{16} - L_{17}	1201.84	-----	-1506	-257	-403	40	-155	81	-33	-64	0.760	0.235	1.00	Yes	0.493	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**8.54**
		L_{17} - L_{18}	957.19	-----	-758	-490	-188	-49	-26	-159	-45	-2	0.834	0.166	1.00	Yes	0.534	0.100	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**10.09**
		L_{18} - L_{19}	451.68	-----	-759	110	-263	189	-203	385	4	-15	0.691	0.308	1.00	Yes	0.468	0.195	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**8.91**
		L_{19} - L_{20}	366.59	-----	-322	33	-1296	848	3	0	-209	-47	0.561	0.432	1.00	Yes	0.342	0.291	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**30.29**
	Structure 2	L_0 - L_1	195.82	-----	493	-1624	689	-1469	-418	-1451	39	136	0.296	0.699	1.00	Yes	0.179	0.342	0.53	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**30.85**
		L_1 - L_2	536.12	-----	140	-1151	172	-223	-690	271	72	103	0.651	0.348	1.00	Yes	0.387	0.220	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**8.96**
		L_2 - L_3	1037.89	-----	-547	-1020	-18	-148	70	-288	126	163	0.818	0.178	1.00	Yes	0.536	0.107	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**9.97**
		L_3 - L_4	1292.60	-----	-266	-1710	58	-334	-403	207	43	123	0.759	0.232	1.00	Yes	0.511	0.144	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**9.19**
		L_4 - L_5	1732.03	-----	-1674	-1808	-245	-235	100	-312	18	-10	0.807	0.192	1.00	Yes	0.535	0.114	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**10.41**
		L_5 - L_6	1757.94	-----	-1764	-2544	-40	-368	-207	104	-93	58	0.754	0.239	1.00	Yes	0.506	0.145	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**9.70**
		L_6 - L_7	1772.67	-----	-2667	-1782	-405	-114	27	152	52	-9	0.750	0.244	1.00	Yes	0.499	0.142	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**9.63**
		L_7 - L_8	1387.07	-----	-1198	-1577	-192	221	-306	-40	-70	77	0.795	0.199	1.00	Yes	0.522	0.117	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**9.58**
		L_8 - L_9	1174.60	-----	-1153	-957	-132	486	-155	203	42	-123	0.822	0.175	1.00	Yes	0.553	0.109	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**10.95**
		L_9 - L_{10}	901.76	-----	-1133	-825	-97	583	-43	-84	-36	37	0.805	0.191	1.00	Yes	0.469	0.120	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**12.94**
		L_{10} - L_{11}	-----	-730.05	-812	-441	17	563	-143	-93	115	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.076	0.94	Yes	0.858	0.142	1.00	Yes							1.00	**11.73**
		L_{11} - L_{12}	-----	-1049.13	-823	-592	-25	971	-17	-132	121	271	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.100	0.97	Yes	0.860	0.132	1.00	Yes							1.00	**13.59**
		L_{12} - L_{13}	-----	-1455.63	-382	-239	-42	-835	-22	-180	419	208	-----	-----	-----	-----	-----	-----	-----	-----	0.878	0.119	1	Yes	0.871	0.083	0.96	Yes							1.00	**16.57**
		L_{13} - L_{14}	-----	-1525.36	-477	1321	-944	2635	-193	-261	221	232	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.169	0.95	Yes	0.768	0.230	1.00	Yes							1.00	**14.74**
		L_{14} - L_{15}	-----	-1511.87	1255	-546	2730	-809	-242	-167	31	-149	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.170	0.94	Yes	0.761	0.238	1.00	Yes							1.00	**13.38**
		L_{15} - L_{16}	-----	-1471.03	-510	-91	-1137	185	-112	7	-188	-137	-----	-----	-----	-----	-----	-----	-----	-----	0.887	0.112	1	Yes	0.880	0.113	1.00	Yes							1.00	**18.30**
		L_{16} - L_{17}	-----	-1137.46	120	-1332	1144	67	-142	-622	6	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.160	1	Yes	0.828	0.164	1.00	Yes							1.00	**14.82**
		L_{17} - L_{18}	-----	-807.92	-20	-928	492	175	-521	113	18	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.130	0.99	Yes	0.848	0.149	1.00	Yes							1.00	**10.98**
		L_{18} - L_{19}	-----	-616.21	-400	-879	601	73	61	35	-9	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.121	0.95	Yes	0.821	0.170	1.00	Yes							1.00	**10.59**
		L_{19} - L_{20}	-----	-542.27	-645	-1398	509	165	64	174	-30	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.189	0.92	Yes	0.723	0.270	1.00	Yes							1.00	**13.46**
	Structure 3	L_0 - L_1	934.17	-317.55	-1012	-1719	338	-9	-37	25	2	-35	0.745	0.255	1.00	Yes	0.489	0.150	0.64	Yes	0.300	0.214	0.52	Yes	0.298	0.251	0.55	Yes							1.00	**11.36**
		L_1 - L_2	921.49	-----	-1353	-1611	194	-161	-115	209	-55	25	0.735	0.258	1.00	Yes	0.491	0.161	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**9.33**
		L_2 - L_3	894.25	-----	-803	-1791	-156	168	-214	-59	19	-40	0.713	0.284	1.00	Yes	0.477	0.178	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**9.01**
		L_3 - L_4	933.80	-----	-982	-1626	-18	279	-101	-54	-7	66	0.745	0.248	1.00	Yes	0.488	0.147	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**11.12**
		L_4 - L_5	675.98	-431.79	-1075	-758	91	440	-136	150	93	-89	0.766	0.230	1.00	Yes	0.453	0.147	0.61	Yes	0.579	0.125	0.71	Yes	0.575	0.207	0.79	Yes							1.00	**11.20**
		L_5 - L_6	-----	-612.35	-636	-911	68	575	-106	-68	11	79	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.120	0.95	Yes	0.816	0.176	1.00	Yes							1.00	**11.95**
		L_6 - L_7	-----	-828.56	-807	-803	159	497	-81	128	148	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.876	0.093	0.97	Yes	0.870	0.129	1.00	Yes							1.00	**13.21**
		L_7 - L_8	-----	-1148.52	-1319	-549	54	1109	-21	-218	86	190	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.137	0.99	Yes	0.836	0.163	1.00	Yes							1.00	**17.02**
		L_8 - L_9	-----	-1557.62	-175	-447	-94	-137	140	98	255	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.939	0.059	1	Yes	0.932	0.044	0.98	Yes							1.00	**20.21**
		L_9 - L_{10}	-----	-1533.04	-498	1191	-696	2598	92	122	27	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.157	0.94	Yes	0.771	0.227	1.00	Yes							1.00	**13.64**
		L_{10} - L_{11}	-----	-1435.90	1248	-470	3070	-917	118	67	128	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.182	0.92	Yes	0.723	0.268	1.00	Yes							1.00	**14.38**
		L_{11} - L_{12}	-----	-1499.76	-278	-307	-736	206	87	57	-146	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.905	0.091	1	Yes	0.897	0.073	0.98	Yes							1.00	**19.31**
		L_{12} - L_{13}	-----	-1044.60	-25	-1022	995	52	176	-350	-20	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.119	0.99	Yes	0.857	0.139	1.00	Yes							1.00	**13.78**
		L_{13} - L_{14}	-----	-694.56	-58	-1037	531	87	22	230	19	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.126	0.95	Yes	0.816	0.181	1.00	Yes							1.00	**10.77**
		L_{14} - L_{15}	819.36	-569.45	-391	-1258	628	-53	-7	-532	-2	-40	0.731	0.265	1.00	Yes	0.426	0.163	0.59	Yes	0.602	0.119	0.73	Yes	0.598	0.201	0.80	Yes							1.00	**12.71**
		L_{15} - L_{16}	1101.22	-----	-312	-1545	489	-95	-186	174	-81	19	0.770	0.226	1.00	Yes	0.519	0.141	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**10.66**
		L_{16} - L_{17}	1352.11	-----	-1041	-1858	295	-88	72	201	35	-3	0.775	0.222	1.00	Yes	0.509	0.130	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**9.66**
		L_{17} - L_{18}	1700.90	-----	-678	-2978	-12	-459	-286	5	-75	52	0.720	0.279	1.00	Yes	0.478	0.163	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**9.44**
		L_{18} - L_{19}	1772.90	-----	-1816	-2544	-391	-83	-106	156	10	-57	0.761	0.235	1.00	Yes	0.511	0.143	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**10.07**
		L_{19} - L_{40}	1665.58	-----	-1576	-2232	-273	-389	-98	-117	-55	9	0.776	0.219	1.00	Yes	0.514	0.129	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**10.09**
		L_{40} - L_{41}	1313.72	-----	-1829	-715	-431	24	-147	162	0	-20	0.772	0.227	1.00	Yes	0.520	0.140	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**9.39**
		L_{41} - L_{42}	998.51	-----	-1359	-371	-203	-94	140	83	19	105	0.787	0.211	1.00	Yes	0.516	0.125	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**9.87**
		L_{42} - L_{43}	523.53	-----	-1482	310	-334	181	-99	333	125	52	0.636	0.356	1.00	Yes	0.378	0.229	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**9.51**
		L_{43} - L_{44}	235.80	-----	-656	80	-3012	1395	-587	-171	-193	-56	0.286	0.709	1.00	Yes	0.170	0.456	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**57.96**
		L_0 - L_1	257.77	-----	601	-1196	620	-956	-260	-1180	35	160	0.395	0.604	1.00	Yes	0.241	0.395	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**22.16**
		L_1 - L_2	451.46	-----	257	-757	159	-191	-354	270	37	62	0.691	0.301	1.00	Yes	0.467	0.190	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**7.52**
		L_2 - L_3	924.82	-----	-263	-758	-19	-150	-7	-306	95	136	0.805	0.185	1.00	Yes	0.516	0.112	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**8.79**
		L_3 - L_4	1213.91	-----	-358	-1243	47	-312	-480	159	29	118	0.768	0.225	1.00	Yes	0.498	0.139	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**8.90**
		L_4 - L_5	1613.46	-----	-1594	-1463	-280	-141	117	249	27	13	0.788	0.210	1.00	Yes	0.506	0.122	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**10.30**
		L_5 - L_6	1587.33	-----	-1275	-1631	-34	-314	57	351	-63	134	0.776	0.221	1.00	Yes	0.504	0.134	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**9.22**
		L_6 - L_7	1384.93	-----	-979	-1169	-346	204	-181	187	2	-30	0.815	0.177	1.00	Yes	0.528	0.108	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**8.76**
		L_7 - L_8	1085.87	-----	-747	-754	-92	49	-25	69	-24	66	0.857	0.142	1.00	Yes	0.548	0.084	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**8.61**
		L_8 - L_9	656.63	-----	-501	-359	-200	339	-88	-50	60	-90	0.850	0.148	1.00	Yes	0.510	0.098	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**7.86**
		L_9 - L_{10}	-----	-547.47	-575	-597	-25	488	64	87	-15	33	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.097	0.94	Yes	0.834	0.158	1.00	Yes							1.00	**12.94**
		L_{10} - L_{11}	-----	-1002.07	-1143	-579	57	120	113	187	114	-108	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.099	0.92	Yes	0.811	0.181	1.00	Yes							1.00	**16.34**
		L_{11} - L_{12}	-----	-1256.34	-57	532	-95	1363	-91	-108	-154	-239	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.185	1	Yes	0.796	0.181	0.98	Yes							1.00	**12.99**
		L_{12} - L_{13}	-----	-1246.88	554	-36	1310	-30	-139	-144	-327	-293	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.193	1	Yes	0.790	0.173	0.97	Yes							1.00	**12.44**
		L_{13} - L_{14}	-----	-1027.50	-433	-1058	6	145	170	64	-148	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.121	0.96	Yes	0.827	0.166	1.00	Yes							1.00	**11.65**
		L_{14} - L_{15}	-----	-728.40	-234	-603	561	130	-125	-367	-5	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.149	1	Yes	0.840	0.133	0.98	Yes							1.00	**9.99**
		L_{15} - L_{16}	-----	-485.71	-169	-973	442	124	-90	267	4	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.211	0.96	Yes	0.740	0.258	1.00	Yes							1.00	**8.80**
		L_{16} - L_{17}	621.73	-----	-200	-1056	208	2	-125	124	27	-71	0.715	0.275	1.00	Yes	0.425	0.179	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**6.64**
		L_{17} - L_{18}	658.71	-----	-711	-883	30	-75	65	155	11	103	0.758	0.238	1.00	Yes	0.438	0.143	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**7.08**
		L_{18} - L_{19}	437.85	-----	-961	-20	-39	33	61	168	50	-75	0.670	0.324	1.00	Yes	0.409	0.219	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**6.65**
		L_{19} - L_{20}	140.81	-----	-1746	1087	-862	826	1178	320	-243	-66	0.216	0.777	1.00	Yes	0.127	0.469	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**31.71**

Operating Loads - 2F1

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	$U_0 - L_0$			-----	-392.07	-24	47	-29	100	-97	-31	-184	-59	-----	-----	-----	-----	-----	-----	-----	-----	0.876	0.120	1	Yes	0.830	0.128	0.96	Yes	1.00	**2.91**
		$U_1 - L_1$			-----	-354.52	16	-10	-164	189	38	17	-493	-130	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.211	0.99	Yes	0.750	0.242	1.00	Yes	1.00	**6.29**
		$U_2 - L_2$			78.71	-354.45	65	-74	-130	189	-109	-6	155	135	0.142	0.287	0.43	Yes	0.078	0.158	0.24	Yes	0.775	0.085	0.86	Yes	0.750	0.242	1.00	Yes	1.00	**9.18**
		$U_3 - L_3$			317.89	-----	279	-289	-161	199	-192	-44	0	159	0.572	0.425	1.00	Yes	0.314	0.234	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.15**
		$U_4 - L_4$			-----	-350.02	199	-200	32	-43	-182	-111	-97	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.114	0.89	Yes	0.741	0.255	1.00	Yes	1.00	**7.07**
		$U_5 - L_5$			-----	-433.04	25	-37	216	-241	-123	-46	-110	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.099	0.89	Yes	0.747	0.244	1.00	Yes	1.00	**5.83**
		$U_6 - L_6$			-----	-523.78	37	-56	255	-281	-77	28	139	87	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.093	0.89	Yes	0.751	0.246	1.00	Yes	1.00	**5.98**
		$U_7 - L_7$			-----	-443.42	117	-131	296	-317	-129	47	-36	69	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.122	0.87	Yes	0.684	0.312	1.00	Yes	1.00	**4.15**
		$U_8 - L_8$			-----	-1344.98	3	-9	-93	114	-191	-67	-186	-55	-----	-----	-----	-----	-----	-----	-----	-----	0.971	0.024	1	Yes	0.932	0.021	0.96	Yes	1.00	**9.01**
		$U_9 - L_9$			-----	-666.35	-166	190	-374	432	-222	-157	-243	-184	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.126	0.93	Yes	0.753	0.240	1.00	Yes	1.00	**5.39**
		$U_{10} - L_{10}$			-----	-821.85	-88	101	-279	352	-272	-185	-273	-181	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.107	0.96	Yes	0.811	0.182	1.00	Yes	1.00	**8.36**
		$U_{11} - L_{11}$			-----	-690.17	-71	121	-257	407	-173	-32	172	109	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.091	0.92	Yes	0.803	0.189	1.00	Yes	1.00	**7.77**
		$U_{12} - L_{12}$			-----	-543.98	-31	37	-273	290	-168	10	-126	59	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.092	0.88	Yes	0.746	0.248	1.00	Yes	1.00	**7.36**
		$U_{13} - L_{13}$			-----	-402.16	3	12	-168	196	-79	99	-90	95	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.087	0.91	Yes	0.770	0.224	1.00	Yes	1.00	**5.68**
		$U_{14} - L_{14}$			-----	-365.88	-145	171	-86	93	-97	-26	-149	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.112	0.93	Yes	0.774	0.219	1.00	Yes	1.00	**7.26**
		$U_{15} - L_{15}$			228.85	-328.10	-183	174	223	-235	-129	-134	109	-141	0.412	0.341	0.76	Yes	0.226	0.188	0.42	Yes	0.735	0.153	0.89	Yes	0.694	0.301	1.00	Yes	1.00	**8.76**
		$U_{16} - L_{16}$			-----	-324.19	-55	38	239	-245	-79	-79	20	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.135	0.87	Yes	0.686	0.313	1.00	Yes	1.00	**6.95**
		$U_{17} - L_{17}$			-----	-448.52	32	-53	199	-221	-101	-207	-114	-115	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.145	0.99	Yes	0.774	0.225	1.00	Yes	1.00	**5.61**
		$U_{18} - L_{18}$			-----	-539.64	126	-131	413	-428	-163	-61	213	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.101	0.9	Yes	0.751	0.242	1.00	Yes	1.00	**6.10**
		$U_{19} - L_{19}$			-----	-652.44	140	-153	500	-513	-66	13	354	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.100	0.92	Yes	0.759	0.238	1.00	Yes	1.00	**6.93**
		$U_{20} - L_{20}$			-----	-576.42	168	-216	384	-454	36	5	796	104	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.231	1	Yes	0.671	0.211	0.89	Yes	1.00	**4.48**
	Structure 2	$U_0 - L_0$			-----	-642.57	-122	190	-290	410	-266	-45	-939	-159	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.222	1	Yes	0.689	0.174	0.87	Yes	1.00	**4.53**
		$U_1 - L_1$			-----	-633.79	-126	133	-368	410	17	-70	-1559	-272	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.273	1	Yes	0.679	0.174	0.86	Yes	1.00	**6.33**
		$U_2 - L_2$			-----	-618.99	-93	102	-348	396	82	38	-220	36	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.100	0.93	Yes	0.789	0.202	1.00	Yes	1.00	**6.94**
		$U_3 - L_3$			-----	-512.10	-49	56	-179	208	12	123	145	139	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.095	0.97	Yes	0.803	0.189	1.00	Yes	1.00	**6.31**
		$U_4 - L_4$			-----	-359.21	29	-10	-171	183	-105	66	-85	103	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.085	0.9	Yes	0.760	0.234	1.00	Yes	1.00	**6.59**
		$U_5 - L_5$			185.97	-369.27	130	-118	-129	163	-109	108	-136	101	0.334	0.248	0.59	Yes	0.184	0.137	0.33	Yes	0.834	0.105	0.94	Yes	0.781	0.209	1.00	Yes	1.00	**8.44**
		$U_6 - L_6$			361.10	-----	201	-212	-118	129	-126	104	264	149	0.649	0.347	1.00	Yes	0.357	0.191	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.22**
		$U_7 - L_7$			-----	-364.08	149	-176	59	-67	-148	-51	147	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.117	0.94	Yes	0.770	0.224	1.00	Yes	1.00	**7.10**
		$U_8 - L_8$			-----	-463.20	9	-32	370	-373	-142	-104	-43	-126	-----	-----	-----	-----	-----	-----	-----	-----	0.672	0.114	0.79	Yes	0.667	0.327	1.00	Yes	1.00	**6.96**
		$U_9 - L_9$			-----	-703.48	90	-122	548	-574	-139	-108	-155	-160	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.083	0.87	Yes	0.754	0.244	1.00	Yes	1.00	**8.55**
		$U_{10} - L_{10}$			-----	-808.59	93	-138	520	-550	-62	-46	127	-21	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.089	0.89	Yes	0.756	0.243	1.00	Yes	1.00	**9.11**
		$U_{11} - L_{11}$			-----	-816.80	158	-171	505	-515	-49	-147	44	3	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.085	0.91	Yes	0.764	0.227	1.00	Yes	1.00	**8.21**
		$U_{12} - L_{12}$			-----	-890.34	140	-165	503	-521	32	-132	40	65	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.083	0.94	Yes	0.772	0.223	1.00	Yes	1.00	**8.23**
		$U_{13} - L_{13}$			-----	-753.57	245	-244	566	-556	-80	44	105	74	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.110	0.96	Yes	0.727	0.271	1.00	Yes	1.00	**6.19**
		$U_{14} - L_{14}$			-----	-1332.33	152	-147	-188	166	-60	128	-106	82	-----	-----	-----	-----	-----	-----	-----	-----	0.974	0.018	1	Yes	0.883	0.033	0.92	Yes	1.00	**9.33**
		$U_{15} - L_{15}$			-----	-751.78	-170	171	-546	555	-84	-48	131	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.131	0.97	Yes	0.725	0.266	1.00	Yes	1.00	**7.76**
		$U_{16} - L_{16}$			-----	-738.31	-118	106	-475	484	-158	-94	-292	-140	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.111	0.97	Yes	0.791	0.205	1.00	Yes	1.00	**7.85**
		$U_{17} - L_{17}$			-----	-667.05	-127	136	-434	464	-184	-52	-172	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.084	0.91	Yes	0.776	0.215	1.00	Yes	1.00	**7.05**
		$U_{18} - L_{18}$			-----	-611.08	-85	93	-377	432	-164	-28	141	48	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.083	0.9	Yes	0.779	0.221	1.00	Yes	1.00	**7.24**
		$U_{19} - L_{19}$			-----	-500.16	-27	38	-251	260	-157	-9	-144	20	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.085	0.84	Yes	0.747	0.250	1.00	Yes	1.00	**6.63**
		$U_{20} - L_{20}$			-----	-413.35	10	-3	-155	176	-149	22	-163	15	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.099	0.95	Yes	0.792	0.201	1.00	Yes	1.00	**6.40**
		$U_{21} - L_{21}$			-----	-356.70	46	-43	-164	185	-130	41	96	70	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.105	0.92	Yes	0.755	0.237	1.00	Yes	1.00	**6.86**
		$U_{22} - L_{22}$			-----	-388.46	126	-134	-23	23	-153	-56	165	11	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.097	0.98	Yes	0.822	0.172	1.00	Yes	1.00	**8.06**
		$U_{23} - L_{23}$			-----	-321.55	-110	98	243	-249	-110	-38	16	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.125	0.86	Yes	0.680	0.319	1.00	Yes	1.00	**7.88**
		$U_{24} - L_{24}$			-----	-387.79	-29	20	214	-225	-82	-61	-91	-82	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.099	0.9	Yes	0.743	0.257	1.00	Yes	1.00	**6.80**
		$U_{25} - L_{25}$			-----	-476.61	16	-33	289	-290	-86	-30	55	-23	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.081	0.8	Yes	0.712	0.280	1.00	Yes	1.00	**6.49**
		$U_{26} - L_{26}$			-----	-570.99	65	-104	505	-531	-67	42	22	0	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.079	0.85	Yes	0.728	0.272	1.00	Yes	1.00	**7.32**
		$U_{27} - L_{27}$			-----	-637.09	133	-155	523	-536	-49	-150	-95	6	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.081	0.87	Yes	0.742	0.249	1.00	Yes	1.00	**6.99**
		$U_{28} - L_{28}$			-----	-714.39	143	-140	535	-542	-115	25	198	88	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.080	0.91	Yes	0.766	0.230	1.00	Yes	1.00	**7.21**
		$U_{29} - L_{29}$			-----	-712.25	208	-213	639	-623	-113	27	56	55	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.120	0.92	Yes	0.687	0.306	1.00	Yes	1.00	**7.56**
		$U_{30} - L_{30}$			-----	-1329.82	42	-54	-78	53	-96	103	-126	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.973	0.025	1	Yes	0.882	0.014	0.90	Yes	1.00	**9.73**
		$U_{31} - L_{31}$			-----	-774.10	-185	182	-525	522	-120	-61	-169	-85	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.133	1	Yes	0.746	0.251	1.00	Yes	1.00	**7.26**
		$U_{32} - L_{32}$			-----	-914.26	-132	112	-410	446	-184	-96	-293	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.877	0.119	1	Yes	0.792	0.191	0.99	Yes	1.00	**8.67**
		$U_{33} - L_{33}$			-----	-855.59	-137	139	-389	433	-179	-34	197	55	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.083	0.95	Yes	0.800	0.191	1.00	Yes	1.00	**8.60**
		$U_{34} - L_{34}$			-----	-831.36	-88	116	-443	487	-209	-18	-144	50	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.084	0.91	Yes	0.777	0.215	1.00	Yes	1.00	**9.69**
		$U_{35} - L_{35}$			-----	-735.52	-81	111	-415	487	-175	71	-201	60	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.070	0.89	Yes	0.788	0.207	1.00	Yes	1.00	**8.64**
		$U_{36} - L_{36}$			-----	-513.07	-33	48	-271	296	-130	84	159	146	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.086	0.83	Yes	0.739	0.259	1.00	Yes	1.00	**7.01**
		$U_{37} - L_{37}$			-----	-357.03	-151	184	-89	101	-89	21	95	14	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.103	0.91	Yes	0.755	0.235	1.00	Yes	1.00	**6.98**
		$U_{38} - L_{38}$			358.30	-----	-241	243	148	-142	-107	-93	5	-127	0.644	0.348	1.00	Yes	0.354	0.191	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.32**
		$U_{39} - L_{39}$			225.65	-339.19	-174	162	192	-214	-117	-105	-98	-141	0.406	0.315	0.73	Yes	0.223	0.173	0.40	Yes	0.766	0.148	0.92	Yes	0.718	0.274	1.00	Yes	1.00	**9.07**
		$U_{40} - L_{40}$			-----	-344.17	-60	35	203	-207	-94	-79	37	-73	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.115	0.9	Yes	0.728	0.264	1.00	Yes	1.00	**6.94**
		$U_{41} - L_{41}$			-----	-484.59	27	-50	244	-255	-23	45	38	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.084	0.91	Yes	0.760	0.233	1.00	Yes	1.00	**6.77**
		$U_{42} - L_{42}$			-----	-592.74	110	-120	459	-474	-88	-47	88	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.079	0.88	Yes	0.755	0.243	1.00	Yes	1.00	**7.07**
		$U_{43} - L_{43}$			-----	-712.91	144	-161	526	-550	-34	-11	762	76	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.174	0.99	Yes	0.764	0.233	1.00	Yes	1.00	**7.30**
		$U_{44} - L_{44}$			-----	-660.35	196	-243	464	-570	-24	-4	691	117	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.203	1	Yes	0.708	0.242	0.95	Yes	1.00	**5.56**
	Structure 3	$U_0 - L_0$			-----	-557.02	-108	173	-310	391	-251	-33	-965	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.255	1	Yes	0.648	0.182	0.83	Yes	1.00	**4.15**
		$U_1 - L_1$			-----	-594.03	-117	124	-363	396	-5	-78	-1171	-134	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.257	1	Yes	0.691	0.184	0.88	Yes	1.00	**6.48**
		$U_2 - L_2$			-----	-561.16	-95	101	-350	380	80	30	-176	41	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.091	0.92	Yes	0.781	0.215	1.00	Yes	1.00	**6.56**
		$U_3 - L_3$			-----	-472.28	-27	46	-143	180	-101	72	-96	108	-----	-----	-----	-----	-----	-----	-----	-----	0.883	0.091	0.98	Yes	0.815	0.183	1.00	Yes	1.00	**5.59**
		$U_4 - L_4$			-----	-365.60	24	-16	-147	170	-150	95	105	163	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.092	0.92	Yes	0.774	0.217	1.00	Yes	1.00	**6.72**
		$U_5 - L_5$			206.03	-346.65	138	-135	-184	206	-147	69	-154	109	0.371	0.308	0.68	Yes	0.204	0.169	0.38	Yes	0.777	0.123	0.9	Yes	0.733	0.264	1.00	Yes	1.00	**8.45**
		$U_6 - L_6$			-----	-357.56	171	-187	0	-5	-180	-37	-150	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.119	0.92	Yes	0.757	0.239	1.00	Yes	1.00	**6.93**
		$U_7 - L_7$			-----	-371.29	-22	9	233	-247	-179	-139	-185	-167	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.143	0.9	Yes	0.711	0.282	1.00	Yes	1.00	**5.87**
		$U_8 - L_8$			-----	-513.93	8	-14	333	-334	-164	-139	8	-93	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.114	0.86	Yes	0.705	0.285	1.00	Yes	1.00	**7.31**
		$U_9 - L_9$			-----	-673.86	34	-102	322	-455	-104	-18	-152	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.096	0.91	Yes	0.784	0.211	1.00	Yes	1.00	**8.57**
		$U_{10} - L_{10}$			-----	-786.03	78	-102	372	-415	-36	-46	-41	40	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.067	0.89	Yes	0.776	0.215	1.00	Yes	1.00	**8.49**
		$U_{11} - L_{11}$			-----	-647.83	182	-211	417	-472	-51	62	92	119	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.100	0.88	Yes	0.732	0.263	1.00	Yes	1.00	**5.19**
		$U_{12} - L_{12}$			-----	-1352.13	40	-66	-166	153	-113	8	-107	16	-----	-----	-----	-----	-----	-----	-----	-----	0.976	0.021	1	Yes	0.937	0.031	0.97	Yes	1.00	**9.29**
		$U_{13} - L_{13}$			-----	-471.12	-105	116	-245	272	-116	-92	17	-87	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.125	0.92	Yes	0.727	0.267	1.00	Yes	1.00	**4.19**
		$U_{14} - L_{14}$			-----	-541.54	-42	47	-216	245	-213	-166	-276	-160	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.128	0.95	Yes	0.777	0.215	1.00	Yes	1.00	**6.24**
		$U_{15} - L_{15}$			-----	-462.11	-23	31	-155	196	-166	-51	-186	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.107	0.95	Yes	0.797	0.199	1.00	Yes	1.00	**5.69**
		$U_{16} - L_{16}$			-----	-349.37	-203	200	-135	135	-149	-48	86	11	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.104	0.88	Yes	0.739	0.260	1.00	Yes	1.00	**6.06**
		$U_{17} - L_{17}$			304.10	-----	-302	314	167	-179	-160	-70	-28	-127	0.547	0.447	1.00	Yes	0.301	0.246	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.07**
		$U_{18} - L_{18}$			153.12	-326.19	-161	167	186	-235	-58	-12	18	-85	0.275	0.325	0.61	Yes	0.151	0.179	0.34	Yes	0.713	0.099	0.82	Yes	0.690	0.300	1.00	Yes	1.00	**9.98**
		$U_{19} - L_{19}$			-----	-329.72	-25	13	232	-235	-164	-85	51	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.140	0.87	Yes	0.698	0.300	1.00	Yes	1.00	**6.34**
		$U_{20} - L_{20}$			-----	-395.66	49	-56	51	-113	-175	-56	-84	-27	-----	-----	-----	-----	-----	-----	-----	-----	0.884	0.112	1	Yes	0.837	0.144	0.99	Yes	1.00	**3.10**

Operating Loads - 2F1

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

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Diagonals	Structure 1	$U_0 - L_1$			662.00	-----	-49	28	3	-7	-162	-269	-49	-21	0.868	0.125	1.00	Yes	0.524	0.069	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.60**
		$U_1 - L_2$			466.02	-----	-89	-1	11	-13	-49	-134	6	3	0.838	0.152	1.00	Yes	0.461	0.084	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.68**
		$U_2 - L_3$			-----	-352.29	-66	-3	-2	-68	-180	-266	-281	-144	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.182	1	Yes	0.745	0.087	0.84	Yes	1.00	**8.55**
		$U_3 - L_4$			-----	-384.36	-25	-41	19	-54	-228	-177	-116	-122	-----	-----	-----	-----	-----	-----	-----	-----	0.879	0.116	1	Yes	0.813	0.069	0.89	Yes	1.00	**5.23**
		$U_4 - L_4$			600.57	-----	-78	51	-58	-11	-28	-148	-173	-119	0.881	0.119	1.00	Yes	0.484	0.065	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.66**
		$U_5 - L_5$			724.48	-----	-195	209	-55	35	64	-58	101	42	0.857	0.137	1.00	Yes	0.471	0.075	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.65**
		$U_7 - L_6$			650.34	-----	-278	230	-194	120	345	144	283	173	0.769	0.221	1.00	Yes	0.423	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.00**
		$U_8 - L_7$			647.23	-----	-106	299	-8	115	320	185	242	175	0.765	0.228	1.00	Yes	0.421	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.09**
		$U_9 - L_9$			1007.69	-----	-112	354	5	136	246	202	78	102	0.806	0.189	1.00	Yes	0.499	0.106	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.72**
		$U_9 - L_{10}$			1031.60	-----	-324	209	-80	88	199	147	83	102	0.825	0.170	1.00	Yes	0.511	0.095	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.78**
		$U_{10} - L_{11}$			1018.92	-----	-265	147	-77	25	-123	-90	17	-66	0.861	0.139	1.00	Yes	0.533	0.077	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.48**
		$U_{11} - L_{12}$			838.06	-----	-254	101	-120	-39	-284	-293	-309	-245	0.829	0.164	1.00	Yes	0.456	0.090	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.48**
		$U_{12} - L_{13}$			625.12	-----	-189	119	-65	1	-336	-303	-242	-273	0.762	0.231	1.00	Yes	0.479	0.130	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.61**
		$U_{13} - L_{14}$			440.97	-----	-91	25	-9	-28	-292	-271	-214	-289	0.793	0.201	1.00	Yes	0.436	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.59**
		$U_{15} - L_{14}$			251.74	-338.74	-63	-9	23	-83	-219	-302	-183	-279	0.453	0.194	0.65	Yes	0.249	0.107	0.36	Yes	0.794	0.197	1	Yes	0.717	0.107	0.83	Yes	1.00	**6.82**
		$U_{16} - L_{15}$			421.50	-249.33	-124	81	-18	-45	-196	-276	-202	-186	0.758	0.238	1.00	Yes	0.417	0.131	0.55	Yes	0.591	0.198	0.79	Yes	0.528	0.158	0.69	Yes	1.00	**7.86**
		$U_{17} - L_{16}$			534.68	-----	-140	103	-46	-11	-117	-210	-297	-144	0.784	0.211	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.51**
		$U_{18} - L_{17}$			618.41	-----	-313	237	-144	68	-122	-136	500	-77	0.731	0.268	1.00	Yes	0.402	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.51**
		$U_{19} - L_{18}$			726.83	-----	-354	256	-107	69	-54	-161	50	9	0.787	0.208	1.00	Yes	0.433	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.04**
		$U_{20} - L_{19}$			735.37	-----	-339	310	-127	106	-45	-166	0	36	0.796	0.201	1.00	Yes	0.438	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.28**
	Structure 2	$U_0 - L_1$			779.91	-----	-348	329	-70	78	-149	-400	-122	47	0.772	0.222	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.81**
		$U_1 - L_2$			789.58	-----	-410	291	-92	63	-63	-163	36	8	0.781	0.215	1.00	Yes	0.430	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.91**
		$U_2 - L_3$			649.54	-----	-328	241	-71	54	-213	-172	-79	-176	0.768	0.225	1.00	Yes	0.422	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.95**
		$U_3 - L_4$			576.43	-----	-177	123	-46	-6	-309	-271	-328	-224	0.768	0.230	1.00	Yes	0.423	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.92**
		$U_4 - L_5$			416.97	-----	-126	77	10	-43	-291	-250	-201	-224	0.750	0.246	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.05**
		$U_5 - L_6$			383.10	-310.68	-107	43	69	-104	-421	-213	-268	-240	0.689	0.259	0.95	Yes	0.379	0.142	0.53	Yes	0.734	0.263	1	Yes	0.657	0.137	0.80	Yes	1.00	**8.63**
		$U_6 - L_7$			-----	-372.70	-41	-16	47	-90	-306	-254	-280	-248	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.193	1	Yes	0.714	0.102	0.82	Yes	1.00	**5.26**
		$U_8 - L_7$			609.81	-----	-180	115	-65	-9	-90	-289	-139	-217	0.778	0.220	1.00	Yes	0.489	0.124	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.77**
		$U_9 - L_8$			723.02	-----	-313	251	-158	25	-82	-185	-328	-167	0.783	0.214	1.00	Yes	0.431	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.56**
		$U_{10} - L_9$			839.87	-----	-314	233	-139	51	-49	-138	-45	-81	0.831	0.166	1.00	Yes	0.457	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.91**
		$U_{11} - L_{10}$			913.73	-----	-356	288	-196	106	110	-42	52	0	0.832	0.166	1.00	Yes	0.458	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.06**
		$U_{12} - L_{11}$			828.99	-----	-337	323	-147	142	205	61	742	131	0.755	0.245	1.00	Yes	0.415	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.87**
		$U_{13} - L_{12}$			697.92	-----	-391	341	-254	202	275	137	825	150	0.690	0.305	1.00	Yes	0.380	0.168	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.00**
		$U_{14} - L_{13}$			707.69	-----	-254	402	-37	218	277	119	698	133	0.700	0.291	1.00	Yes	0.385	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.08**
		$U_{14} - L_{15}$			645.07	-----	-222	355	-4	106	133	149	56	40	0.763	0.228	1.00	Yes	0.419	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.33**
		$U_{15} - L_{16}$			646.11	-----	-377	335	-100	105	117	86	52	68	0.764	0.234	1.00	Yes	0.420	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.71**
		$U_{16} - L_{17}$			737.70	-----	-349	334	-90	108	10	-8	106	21	0.799	0.196	1.00	Yes	0.439	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.34**
		$U_{17} - L_{18}$			680.82	-----	-304	267	-75	72	-107	-31	-13	-30	0.805	0.192	1.00	Yes	0.443	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.25**
		$U_{18} - L_{19}$			680.40	-----	-282	247	-65	32	-146	-143	-170	-115	0.804	0.191	1.00	Yes	0.442	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.79**
		$U_{19} - L_{20}$			608.18	-----	-198	150	-28	-2	-205	-169	-112	-140	0.775	0.219	1.00	Yes	0.427	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.51**
		$U_{20} - L_{21}$			432.58	-----	-116	89	2	-18	-223	-116	-144	-143	0.778	0.213	1.00	Yes	0.428	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.27**
		$U_{21} - L_{22}$			429.89	-----	-110	42	21	-69	-266	-231	-255	-231	0.773	0.218	1.00	Yes	0.425	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.92**
		$U_{23} - L_{22}$			401.34	-353.13	-99	38	-7	-57	-70	-218	-83	-175	0.722	0.190	0.92	Yes	0.397	0.104	0.51	Yes	0.841	0.157	1	Yes	0.747	0.126	0.88	Yes	1.00	**8.86**
		$U_{24} - L_{23}$			440.57	-----	-114	102	-17	-23	-27	-126	-204	-61	0.792	0.204	1.00	Yes	0.436	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.57**
		$U_{25} - L_{24}$			628.59	-----	-200	171	-40	-8	13	-87	-14	-53	0.801	0.196	1.00	Yes	0.441	0.109	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.26**
		$U_{26} - L_{25}$			685.97	-----	-287	258	-114	48	110	-38	30	4	0.811	0.183	1.00	Yes	0.446	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.77**
		$U_{27} - L_{26}$			677.98	-----	-291	284	-155	107	184	38	-82	65	0.802	0.198	1.00	Yes	0.441	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.41**
		$U_{28} - L_{27}$			657.76	-----	-305	313	-130	134	181	96	714	73	0.712	0.278	1.00	Yes	0.392	0.153	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.15**
		$U_{29} - L_{28}$			630.58	-----	-357	327	-127	121	263	101	218	112	0.746	0.250	1.00	Yes	0.410	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.76**
		$U_{30} - L_{29}$			588.31	-----	-195	334	-11	160	230	101	621	66	0.696	0.302	1.00	Yes	0.383	0.166	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.24**
		$U_{30} - L_{31}$			782.32	-----	-289	447	-25	136	118	63	63	40	0.774	0.225	1.00	Yes	0.426	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.35**
		$U_{31} - L_{32}$			781.54	-----	-452	374	-134	133	51	35	37	48	0.773	0.217	1.00	Yes	0.425	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.04**
		$U_{32} - L_{33}$			895.16	-----	-370	321	-94	106	-164	-34	7	-38	0.815	0.179	1.00	Yes	0.448	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.20**
		$U_{33} - L_{34}$			887.12	-----	-346	265	-132	75	-245	-211	-269	-170	0.808	0.183	1.00	Yes	0.444	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.60**
		$U_{34} - L_{35}$			819.94	-----	-306	206	-105	41	-271	-274	-174	-238	0.811	0.183	1.00	Yes	0.446	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.73**
		$U_{35} - L_{36}$			710.05	-----	-316	210	-95	18	-383	-239	-287	-256	0.769	0.225	1.00	Yes	0.423	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.17**
		$U_{36} - L_{37}$			598.70	-----	-184	121	-36	-15	-303	-327	-324	-313	0.763	0.231	1.00	Yes	0.481	0.131	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.45**
		$U_{38} - L_{37}$			-----	-395.86	-25	-16	31	-78	-133	-216	-111	-205	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.140	1	Yes	0.758	0.089	0.85	Yes	1.00	**5.01**
		$U_{39} - L_{38}$			265.14	-340.29	-70	37	33	-87	-138	-213	-293	-159	0.477	0.197	0.68	Yes	0.262	0.108	0.38	Yes	0.811	0.186	1	Yes	0.720	0.112	0.84	Yes	1.00	**7.28**
		$U_{40} - L_{39}$			434.58	-217.77	-128	88	10	-53	-114	-173	-102	-119	0.782	0.214	1.00	Yes	0.430	0.117	0.55	Yes	0.521	0.150	0.68	Yes	0.461	0.163	0.63	Yes	1.00	**8.08**
		$U_{41} - L_{40}$			598.69	-----	-180	130	-64	-6	-59	-139	-112	-83	0.798	0.193	1.00	Yes	0.439	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.41**
		$U_{42} - L_{41}$			636.26	-----	-318	260	-148	66	-68	-94	-362	-35	0.752	0.246	1.00	Yes	0.414	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.25**
		$U_{43} - L_{42}$			803.32	-----	-394	306	-98	67	-12	-125	-2	-25	0.795	0.201	1.00	Yes	0.437	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.07**
		$U_{44} - L_{43}$			806.48	-----	-358	360	-140	124	-14	-216	34	10	0.798	0.199	1.00	Yes	0.439	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.56**
	Structure 3	$U_0 - L_1$			705.11	-----	-336	288	-69	72	-152	-333	-131	44	0.764	0.227	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.67**
		$U_1 - L_2$			725.05	-----	-364	253	-92	58	-70	-153	35	12	0.785	0.211	1.00	Yes	0.432	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.69**
		$U_2 - L_3$			642.53	-----	-329	223	-105	45	-235	-254	-195	-192	0.760	0.232	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.75**
		$U_3 - L_4$			525.32	-----	-144	82	-17	-17	-323	-249	-249	-224	0.770	0.222	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.09**
		$U_4 - L_5$			408.08	-----	-119	78	9	-52	-370	-290	-346	-238	0.734	0.260	1.00	Yes	0.404	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.25**
		$U_5 - L_6$			282.08	-314.14	-78	-17	37	-91	-398	-320	-268	-307	0.507	0.232	0.74	Yes	0.279	0.128	0.41	Yes	0.736	0.258	1	Yes	0.665	0.117	0.79	Yes	1.00	**6.83**
		$U_7 - L_6$			453.13	-----	-80	37	-33	-27	-88	-272	-258	-240	0.815	0.181	1.00	Yes	0.448	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.73**
		$U_8 - L_7$			649.33	-----	-188	145	-68	-10	-152	-215	-153	-169	0.792	0.206	1.00	Yes	0.498	0.116	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.36**
		$U_8 - L_9$			854.09	-----	-260	128	-162	-42	-8	-172	-71	-133	0.845	0.147	1.00	Yes	0.465	0.081	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.68**
		$U_{10} - L_9$			1010.76	-----	-250	182	-165	25	152	-19	-200	-27	0.854	0.142	1.00	Yes	0.529	0.079	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.03**
		$U_{11} - L_{10}$			895.82	-----	-276	213	-174	96	393	234	1213	466	0.716	0.277	1.00	Yes	0.444	0.158	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.19**
		$U_{12} - L_{11}$			925.27	-----	-101	335	38	189	394	244	854	382	0.740	0.258	1.00	Yes	0.458	0.146	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.34**
		$U_{12} - L_{13}$			680.73	-----	-117	280	9	112	178	181	98	95	0.805	0.193	1.00	Yes	0.443	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.30**
		$U_{13} - L_{14}$			679.08	-----	-294	227	-140	91	144	100	80	133	0.803	0.194	1.00	Yes	0.442	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.78**
		$U_{14} - L_{15}$			724.59	-----	-204	169	-19	21	-74	-115	46	-26	0.857	0.137	1.00	Yes	0.471	0.076	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.27**
		$U_{15} - L_{16}$			582.30	-----	-91	13	-16	-9	-204	-136	-80	-88	0.854	0.139	1.00	Yes	0.470	0.077	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.48**
		$U_{17} - L_{16}$			-----	-410.93	-17	-28	8	-47	-55	-153	-26	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.940	0.054	1	Yes	0.870	0.060	0.93	Yes	1.00	**5.35**
		$U_{18} - L_{17}$			-----	-382.22	-56	4	-25	-63	-68	-189	-158	-71	-----	-----	-----	-----	-----	-----	-----	-----	0.880	0.113	1	Yes	0.809	0.080	0.89	Yes	1.00	**7.21**
		$U_{19} - L_{18}$			404.36	-135.26	-82	6	-40	-30	-21	-145	-559	-166	0.727	0.266	1.00	Yes	0.400	0.146	0.55	Yes	0.310	0.279	0.59	Yes	0.286	0.104	0.40	Yes	1.00	**7.40**
		$U_{20} - L_{19}$			667.57	-----	-61	51	-22	3	-85	-196	29	-6	0.876	0.121	1.00	Yes	0.529	0.066	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.85**

Operating Loads - 2F1

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	-----	-----	-539.30	-199	124	110	-1113	-130	154	-116	-865	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.189	0.93	Yes	0.727	0.265	1.00	Yes	1.00	**11.04**
		U_1 - U_2	-----	-----	-535.10	-103	87	-398	-680	-151	139	-84	-377	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.270	1	Yes	0.722	0.162	0.89	Yes	1.00	**4.99**
		U_2 - U_3	-----	-----	-573.95	-101	300	-468	-459	-101	104	-216	-371	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.216	1	Yes	0.774	0.111	0.89	Yes	1.00	**5.58**
		U_3 - U_4	444.08	-555.67	122	375	-461	-593	-199	-2	-267	-238	0.509	0.186	0.70	Yes	0.349	0.127	0.48	Yes	0.756	0.235	1	Yes	0.749	0.141	0.90	Yes	1.00	**7.34**
		U_4 - U_5	436.50	-530.86	157	365	-830	-160	-76	-25	-250	-238	0.500	0.240	0.74	Yes	0.343	0.164	0.51	Yes	0.722	0.276	1	Yes	0.716	0.197	0.92	Yes	1.00	**7.12**
		U_5 - U_6	689.48	-----	274	502	-613	307	73	134	-109	-377	0.790	0.209	1.00	Yes	0.533	0.137	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.87**
		U_6 - U_7	901.68	-----	410	229	-133	-56	343	283	-327	169	0.862	0.134	1.00	Yes	0.603	0.092	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.69**
		U_7 - U_8	1004.86	-----	-160	1474	-530	1216	577	755	2	266	0.696	0.300	1.00	Yes	0.486	0.205	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.13**
		U_8 - U_9	849.33	-----	1394	-355	1291	-803	430	555	108	-346	0.696	0.302	1.00	Yes	0.476	0.205	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.41**
		U_9 - U_{10}	676.01	-----	253	271	102	-716	47	352	-26	-612	0.733	0.259	1.00	Yes	0.497	0.174	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.17**
		U_{10} - U_{11}	-----	-627.75	260	-170	188	-871	69	107	-86	-290	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.154	0.97	Yes	0.801	0.195	1.00	Yes	1.00	**5.59**
		U_{11} - U_{12}	-----	-918.51	157	-211	15	-794	26	108	-127	-133	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.109	0.98	Yes	0.862	0.132	1.00	Yes	1.00	**4.01**
		U_{12} - U_{13}	-----	-1242.43	-56	-273	-288	-827	100	6	-107	-360	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.151	1	Yes	0.830	0.114	0.95	Yes	1.00	**4.35**
		U_{13} - U_{14}	-----	-1383.80	-198	-512	-551	-1344	-25	8	-173	-249	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.193	1	Yes	0.793	0.148	0.95	Yes	1.00	**4.24**
		U_{14} - U_{15}	-----	-1354.22	-416	-297	-1244	-655	60	-282	-169	-396	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.212	1	Yes	0.776	0.137	0.92	Yes	1.00	**4.05**
		U_{15} - U_{16}	-----	-1456.16	-201	-473	-883	-868	-133	-478	-209	-243	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.151	1	Yes	0.835	0.097	0.94	Yes	1.00	**4.86**
		U_{16} - U_{17}	-----	-1332.83	-428	-229	-1202	-471	-364	-414	-83	-321	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.219	1	Yes	0.764	0.133	0.90	Yes	1.00	**4.93**
		U_{17} - U_{18}	-----	-1024.26	-263	-56	-774	5	-147	74	-65	-13	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.186	1	Yes	0.801	0.126	0.93	Yes	1.00	**4.90**
		U_{18} - U_{19}	-----	-673.43	-252	15	-589	100	379	-141	445	-337	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.230	1	Yes	0.758	0.118	0.88	Yes	1.00	**4.76**
		U_{19} - U_{20}	-----	-589.36	-233	-72	-1063	169	-28	-126	-130	-281	-----	-----	-----	-----	-----	-----	-----	-----	0.669	0.323	1	Yes	0.663	0.214	0.88	Yes	1.00	**13.74**
	Structure 2	U_0 - U_1	-----	-----	-573.01	667	-454	997	-1860	325	-54	-26	-831	-----	-----	-----	-----	-----	-----	-----	-----	0.681	0.185	0.87	Yes	0.677	0.316	1.00	Yes	1.00	**13.96**
		U_1 - U_2	-----	-----	-796.46	-150	-325	-250	-1167	-17	16	21	-408	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.219	1	Yes	0.769	0.177	0.95	Yes	1.00	**7.27**
		U_2 - U_3	-----	-----	-1145.21	-122	-458	-87	-1296	-31	-74	-238	-542	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.177	1	Yes	0.813	0.132	0.95	Yes	1.00	**5.29**
		U_3 - U_4	-----	-----	-1340.87	-538	-556	-847	-1562	-107	-31	-352	-417	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.225	1	Yes	0.764	0.139	0.91	Yes	1.00	**4.35**
		U_4 - U_5	-----	-----	-1464.81	-592	-574	-1081	-1731	-111	-87	-299	-540	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.235	1	Yes	0.752	0.143	0.90	Yes	1.00	**4.51**
		U_5 - U_6	-----	-----	-1519.32	-592	-41	-1427	-1083	-182	-39	-328	-525	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.209	1	Yes	0.780	0.118	0.90	Yes	1.00	**4.89**
		U_6 - U_7	-----	-----	-1396.07	-331	-215	-1317	-1263	-149	-90	-114	-327	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.199	1	Yes	0.795	0.117	0.92	Yes	1.00	**5.30**
		U_7 - U_8	-----	-----	-1381.48	-356	-218	-1388	-811	-74	-155	-310	-491	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.207	1	Yes	0.787	0.124	0.92	Yes	1.00	**5.23**
		U_8 - U_9	-----	-----	-1110.72	-404	164	-1416	-331	1	-194	-370	-421	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.235	1	Yes	0.753	0.151	0.91	Yes	1.00	**5.17**
		U_9 - U_{10}	-----	-----	-833.83	-148	472	-1319	9	-126	-234	-387	-604	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.267	1	Yes	0.720	0.161	0.89	Yes	1.00	**6.47**
		U_{10} - U_{11}	816.81	-657.92	309	608	-1334	-33	-146	-97	-737	-640	0.690	0.278	0.97	Yes	0.470	0.182	0.66	Yes	0.658	0.337	1	Yes	0.654	0.188	0.85	Yes	1.00	**11.05**
		U_{11} - U_{12}	904.00	-----	167	640	-1113	410	12	16	-424	-584	0.764	0.228	1.00	Yes	0.513	0.152	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.49**
		U_{12} - U_{13}	1360.01	-----	349	11	7	-110	339	362	-71	42	0.918	0.078	1.00	Yes	0.655	0.054	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.90**
		U_{13} - U_{14}	1317.19	-----	-409	3031	-414	2026	664	1026	310	589	0.648	0.351	1.00	Yes	0.459	0.231	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.94**
		U_{14} - U_{15}	1358.37	-----	2943	-249	1964	-241	760	789	511	420	0.668	0.326	1.00	Yes	0.473	0.214	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.64**
		U_{15} - U_{16}	1359.76	-----	82	241	-104	-1142	232	496	-169	-407	0.822	0.172	1.00	Yes	0.585	0.116	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.81**
		U_{16} - U_{17}	1072.76	-----	654	225	420	-1031	12	345	-132	-700	0.790	0.203	1.00	Yes	0.526	0.134	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.19**
		U_{17} - U_{18}	792.38	-----	486	280	95	-859	-39	308	121	-397	0.795	0.204	1.00	Yes	0.530	0.135	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.80**
		U_{18} - U_{19}	681.63	-----	615	218	233	-1172	22	174	-290	-751	0.684	0.309	1.00	Yes	0.449	0.198	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.52**
		U_{19} - U_{20}	-----	-729.44	260	106	-229	-998	-48	131	-175	-310	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.182	1	Yes	0.805	0.160	0.97	Yes	1.00	**6.36**
		U_{20} - U_{21}	-----	-855.99	105	-89	-542	-839	-3	11	-49	-448	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.208	1	Yes	0.781	0.122	0.91	Yes	1.00	**6.31**
		U_{21} - U_{22}	-----	-794.80	-98	-62	-500	-1140	-172	-92	-434	-245	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.265	1	Yes	0.725	0.165	0.90	Yes	1.00	**5.43**
		U_{22} - U_{23}	-----	-810.78	-94	-113	-1187	-716	-93	-161	-180	-149	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.250	1	Yes	0.740	0.172	0.92	Yes	1.00	**5.58**
		U_{23} - U_{24}	-----	-840.65	-92	145	-1059	-350	5	-68	-301	-302	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.225	1	Yes	0.767	0.153	0.93	Yes	1.00	**6.74**
		U_{24} - U_{25}	345.32	-721.56	175	307	-906	-151	24	-73	-270	-283	0.324	0.183	0.51	Yes	0.215	0.120	0.34	Yes	0.801	0.194	1	Yes	0.796	0.145	0.95	Yes	1.00	**7.75**
		U_{25} - U_{26}	714.39	-----	226	610	-1077	55	37	-9	-656	-241	0.717	0.279	1.00	Yes	0.470	0.179	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.53**
		U_{26} - U_{27}	766.71	-----	263	448	-782	214	16	17	-612	-192	0.770	0.222	1.00	Yes	0.512	0.147	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.77**
		U_{27} - U_{28}	1133.68	-----	25	856	-907	560	295	149	-441	-360	0.835	0.160	1.00	Yes	0.556	0.105	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.36**
		U_{28} - U_{29}	1433.31	-----	307	42	-664	-508	532	543	-615	343	0.867	0.128	1.00	Yes	0.616	0.087	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.57**
		U_{29} - U_{30}	1309.93	-----	-232	2991	-199	1932	794	1077	492	700	0.644	0.350	1.00	Yes	0.456	0.231	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.91**
		U_{30} - U_{31}	1346.01	-----	3015	-481	2069	-485	844	745	647	385	0.662	0.337	1.00	Yes	0.469	0.221	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.69**
		U_{31} - U_{32}	1232.57	-----	10	206	-311	-868	235	447	22	-555	0.832	0.162	1.00	Yes	0.593	0.111	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.98**
		U_{32} - U_{33}	903.84	-----	610	157	201	-968	24	250	181	-782	0.763	0.232	1.00	Yes	0.513	0.155	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.65**
		U_{33} - U_{34}	568.75	-797.84	448	118	2	-1410	-12	222	-310	-494	0.480	0.259	0.74	Yes	0.327	0.169	0.50	Yes	0.798	0.130	0.93	Yes	0.793	0.199	1.00	Yes	1.00	**8.94**
		U_{34} - U_{35}	-----	-968.47	359	-219	-71	-1332	52	35	-71	-410	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.118	0.96	Yes	0.836	0.162	1.00	Yes	1.00	**5.84**
		U_{35} - U_{36}	-----	-1225.93	80	-483	-399	-1330	-14	89	40	-296	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.154	1	Yes	0.831	0.141	0.98	Yes	1.00	**4.93**
		U_{36} - U_{37}	-----	-1407.37	-312	-328	-766	-1425	-16	-123	-256	-324	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.192	1	Yes	0.801	0.127	0.93	Yes	1.00	**4.59**
		U_{37} - U_{38}	-----	-1409.95	-216	-445	-1341	-1218	-97	-197	-211	-298	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.190	1	Yes	0.803	0.120	0.93	Yes	1.00	**4.59**
		U_{38} - U_{39}	-----	-1620.02	-174	-639	-1332	-1382	14	-217	-376	-416	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.155	1	Yes	0.832	0.115	0.95	Yes	1.00	**5.15**
		U_{39} - U_{40}	-----	-1525.26	-622	-574	-1705	-958	-1	-108	-125	-141	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.206	1	Yes	0.783	0.141	0.93	Yes	1.00	**4.88**
		U_{40} - U_{41}	-----	-1417.37	-546	-527	-1362	-838	137	-169	222	-218	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.184	1	Yes	0.807	0.121	0.93	Yes	1.00	**5.25**
		U_{41} - U_{42}	-----	-1159.41	-444	-122	-1178	-12	42	-9	54	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.171	1	Yes	0.823	0.120	0.95	Yes	1.00	**5.87**
		U_{42} - U_{43}	-----	-796.94	-335	-39	-794	9	214	-200	214	-433	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.221	1	Yes	0.769	0.121	0.89	Yes	1.00	**6.04**
		U_{43} - U_{44}	-----	-578.98	-225	-193	-1222	295	-96	-124	-214	-222	-----	-----	-----	-----	-----	-----	-----	-----	0.688	0.306	1	Yes	0.684	0.207	0.90	Yes	1.00	**12.89**
	Structure 3	U_0 - U_1	-----	-594.35	629	-351	1161	-1642	275	-40	90	-1026	-----	-----	-----	-----	-----	-----	-----	-----	0.675	0.250	0.93	Yes	0.669	0.330	1.00	Yes	1.00	**17.00**
		U_1 - U_2	-----	-691.34	-77	-240	-60	-767	-14	-8	-138	-349	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.208	1	Yes	0.778	0.154	0.94	Yes	1.00	**4.59**
		U_2 - U_3	-----	-1036.10	-46	-253	8	-822	-31	-72	-131	-558	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.179	1	Yes	0.811	0.134	0.95	Yes	1.00	**4.82**
		U_3 - U_4	-----	-1376.61	-222	-387	-557	-1231	-104	-45	-127	-455	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.198	1	Yes	0.789	0.136	0.93	Yes	1.00	**5.24**
		U_4 - U_5	-----	-1403.39	-451	-143	-703	-876	-89	-73	-407	-558	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.181	1	Yes	0.805	0.097	0.91	Yes	1.00	**4.63**
		U_5 - U_6	-----	-1332.74	-268	-399	-674	-1284	-184	-149	-228	-323	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.222	1	Yes	0.764	0.142	0.91	Yes	1.00	**4.37**
		U_6 - U_7	-----	-1306.47	-523	-171	-1373	-488	-115	-298	-242	-454	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.241	1	Yes	0.749	0.152	0.91	Yes	1.00	**4.22**
		U_7 - U_8	-----	-1189.14	-252	15	-787	-203	-129	-299	-290	-544	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.191	1	Yes	0.794	0.109	0.91	Yes	1.00	**4.89**
		U_8 - U_9	-----	-838.53	-163	234	-707	82	-197	-188	-293	-361	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.204	1	Yes	0.787	0.117	0.91	Yes	1.00	**4.70**
		U_9 - U_{10}	-----	-534.62	-124	333	-909	202	-13	-36	-138	-368	-----	-----	-----	-----	-----	-----	-----	-----	0.688	0.308	1	Yes	0.682	0.204	0.89	Yes	1.00	**6.51**
		U_{10} - U_{11}	748.56	-----	317	265	-542	167	143	139	-383	-292	0.812	0.183	1.00	Yes	0.550	0.123	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.94**
		U_{11} - U_{12}	851.59	-----	-354	1403	-609	1045	252	485	-306	186	0.698	0.295	1.00	Yes	0.477	0.201	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.35**
		U_{12} - U_{13}	1024.34	-----	1498	-195	1398	-670	212	560	86	-393	0.710	0.284	1.00	Yes	0.495	0.194	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.98**
		U_{13} - U_{14}	854.04	-----	226	367	64	-533	-40	430	-267	-444	0.817	0.174	1.00	Yes	0.571	0.120	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.27**
		U_{14} - U_{15}	637.19	-----	468	230	186	-656	1	226	-84	-659	0.730	0.267	1.00	Yes	0.493	0.176	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.57**
		U_{15} - U_{16}	311.76	-606.88	281	118	-263	-734	-65	148	207	125	0.357	0.210	0.57	Yes	0.245	0.144	0.39	Yes	0.826	0.127	0.96	Yes	0.818	0.175	1.00	Yes	1.00	**6.57**
		U_{16} - U_{17}	320.93	-636.83	332	46	-565	-479	135	-67	146	-293	0.368	0.184	0.56	Yes	0.252	0.126	0.38	Yes	0.867	0.081	0.95	Yes	0.859	0.134	1.00	Yes	1.00	**6.85**
		U_{17} - U_{18}	-----	-633.22	219	-172	-531	-577	60	21	-68	-60	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.109	0.98	Yes	0.854	0.137	1.00	Yes	1.00	**5.41**
		U_{18} - U_{19}	-----	-547.34	-13	-74	-605	-163	197	-204	361	-381	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.247	1	Yes	0.738	0.144	0.89	Yes	1.00	**4.74**
		U_{19} - U_{20}	-----	-590.76	69	-248	-630	-225	-164	-108	-158	-183	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.189	1	Yes	0.797	0.150	0.95	Yes	1.00	**10.03**

Axial AI Operating

Operating Loads - 2F1

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

DL Factor: 1.300 (Vehicle) 1.300 (Pedestrian)
LL Factor: 1.300 (Vehicle) 1.300 (Pedestrian)

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Lower Chord	Structure 1	L_0 - L_1	274.26	-314.88	202	-237	818	-1115	236	868	68	250	0.420	0.521	0.95	Yes	0.247	0.314	0.57	Yes	0.572	0.422	1	Yes	0.567	0.335	0.91	Yes	1.00	**37.45**
		L_1 - L_2	354.20	-----	-194	-547	-9	6	-1337	217	329	-152	0.542	0.451	1.00	Yes	0.331	0.288	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.62**
		L_2 - L_3	640.92	-----	-781	-515	-22	111	273	-408	-174	116	0.737	0.254	1.00	Yes	0.427	0.151	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.06**
		L_3 - L_4	641.38	-----	-629	-480	-1	300	-637	-216	262	-210	0.738	0.254	1.00	Yes	0.438	0.160	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.31**
		L_4 - L_5	-----	-570.63	-406	229	100	478	-5	-278	-55	167	-----	-----	-----	-----	-----	-----	-----	-----	0.877	0.086	0.97	Yes	0.869	0.126	1.00	Yes	1.00	**5.10**
		L_5 - L_6	-----	-752.06	-178	298	123	596	-107	-117	131	-266	-----	-----	-----	-----	-----	-----	-----	-----	0.877	0.113	0.99	Yes	0.868	0.132	1.00	Yes	1.00	**4.74**
		L_6 - L_7	-----	-1184.96	-201	-103	120	-9	-272	-497	-280	523	-----	-----	-----	-----	-----	-----	-----	-----	0.965	0.035	1	Yes	0.954	0.032	0.99	Yes	1.00	**6.83**
		L_7 - L_8	-----	-1241.94	-35	675	-71	1275	350	197	444	427	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.198	1	Yes	0.787	0.169	0.96	Yes	1.00	**5.15**
		L_8 - L_9	-----	-1140.34	685	-42	1114	-72	205	344	376	413	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.260	1	Yes	0.722	0.148	0.87	Yes	1.00	**3.69**
		L_9 - L_{10}	-----	-1041.50	311	-222	519	-413	401	-53	408	-193	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.146	1	Yes	0.838	0.082	0.92	Yes	1.00	**8.69**
		L_{10} - L_{11}	-----	-477.06	65	-472	477	-208	-275	-619	-337	206	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.264	1	Yes	0.727	0.126	0.86	Yes	1.00	**7.07**
		L_{11} - L_{12}	490.60	-----	91	-634	381	-222	-1112	201	118	-90	0.635	0.362	1.00	Yes	0.381	0.228	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.15**
		L_{12} - L_{13}	1002.33	-----	-433	-652	100	-136	-275	-788	-157	116	0.791	0.208	1.00	Yes	0.506	0.127	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.79**
		L_{13} - L_{14}	1256.93	-----	-187	-1356	189	-531	-784	-156	139	41	0.739	0.252	1.00	Yes	0.479	0.156	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.57**
		L_{14} - L_{15}	1577.62	-----	-1734	-612	-583	-156	-272	-198	-153	146	0.771	0.228	1.00	Yes	0.501	0.138	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.93**
		L_{15} - L_{16}	1563.19	-----	-982	-1389	-308	-378	-875	-167	98	-143	0.764	0.229	1.00	Yes	0.490	0.136	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.19**
		L_{16} - L_{17}	1206.61	-----	-1380	134	-423	55	369	39	-127	168	0.763	0.235	1.00	Yes	0.495	0.145	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.40**
		L_{17} - L_{18}	886.69	-----	-814	129	-230	33	-546	-88	107	-100	0.772	0.227	1.00	Yes	0.494	0.138	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.77**
		L_{18} - L_{19}	497.14	-----	-476	238	-470	336	-147	294	-443	344	0.761	0.235	1.00	Yes	0.515	0.151	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.77**
		L_{19} - L_{20}	-----	-306.92	-334	107	-790	484	292	65	332	74	-----	-----	-----	-----	-----	-----	-----	-----	0.616	0.380	1	Yes	0.610	0.258	0.87	Yes	1.00	**11.91**
	Structure 2	L_0 - L_1	-----	-494.53	109	-399	466	-1415	86	299	63	221	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.239	0.95	Yes	0.707	0.288	1.00	Yes	1.00	**26.41**
		L_1 - L_2	444.72	-----	239	-1150	246	-405	-1346	398	118	33	0.540	0.455	1.00	Yes	0.321	0.283	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.29**
		L_2 - L_3	970.11	-----	-331	-970	-41	-277	-147	-840	-74	156	0.765	0.230	1.00	Yes	0.501	0.141	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.58**
		L_3 - L_4	1258.26	-----	-158	-1598	-10	-514	-907	343	180	1	0.739	0.259	1.00	Yes	0.498	0.163	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.10**
		L_4 - L_5	1691.78	-----	-1440	-1541	-441	-410	96	-867	-76	165	0.789	0.204	1.00	Yes	0.522	0.124	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.57**
		L_5 - L_6	1793.44	-----	-1164	-1932	-225	-511	-818	-199	182	-81	0.770	0.222	1.00	Yes	0.516	0.138	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.05**
		L_6 - L_7	1859.28	-----	-2209	-1247	-582	-210	-111	-239	-150	214	0.787	0.209	1.00	Yes	0.523	0.122	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.22**
		L_7 - L_8	1394.28	-----	-1402	-734	-301	391	-552	-251	210	-111	0.799	0.200	1.00	Yes	0.525	0.120	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.53**
		L_8 - L_9	1078.64	-----	-1281	143	-109	599	-187	-714	-71	171	0.754	0.240	1.00	Yes	0.508	0.152	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.58**
		L_9 - L_{10}	483.63	-796.90	-1008	128	-125	864	-922	-149	143	-92	0.432	0.272	0.71	Yes	0.251	0.166	0.42	Yes	0.842	0.147	0.99	Yes	0.837	0.161	1.00	Yes	1.00	**10.21**
		L_{10} - L_{11}	-----	-753.95	-556	366	10	575	-85	-422	-65	51	-----	-----	-----	-----	-----	-----	-----	-----	0.891	0.101	1	Yes	0.886	0.101	0.99	Yes	1.00	**6.02**
		L_{11} - L_{12}	-----	-1026.11	-276	711	-188	1142	152	-234	159	-440	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.118	0.97	Yes	0.841	0.156	1.00	Yes	1.00	**5.61**
		L_{12} - L_{13}	-----	-1465.91	-234	-355	3	-670	-128	139	-338	258	-----	-----	-----	-----	-----	-----	-----	-----	0.892	0.101	1	Yes	0.884	0.067	0.96	Yes	1.00	**7.30**
		L_{13} - L_{14}	-----	-1541.38	-619	1743	-886	2517	191	158	364	449	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.176	0.96	Yes	0.776	0.220	1.00	Yes	1.00	**6.01**
		L_{14} - L_{15}	-----	-1370.41	1743	-645	2302	-760	179	185	372	318	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.302	1	Yes	0.690	0.201	0.90	Yes	1.00	**3.66**
		L_{15} - L_{16}	-----	-1525.42	-511	-117	-494	-108	119	-145	313	-200	-----	-----	-----	-----	-----	-----	-----	-----	0.920	0.072	1	Yes	0.912	0.051	0.97	Yes	1.00	**7.71**
		L_{16} - L_{17}	-----	-1052.10	573	-354	1128	-106	-39	-232	-387	116	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.224	1	Yes	0.766	0.139	0.91	Yes	1.00	**6.02**
		L_{17} - L_{18}	-----	-768.10	300	-436	534	17	-585	22	218	-190	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.181	1	Yes	0.807	0.085	0.90	Yes	1.00	**5.55**
		L_{18} - L_{19}	-----	-586.72	27	-455	691	-93	108	-301	-261	165	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.209	1	Yes	0.782	0.133	0.92	Yes	1.00	**6.95**
		L_{19} - L_{20}	-----	-438.64	43	-917	487	121	-1137	212	136	-161	-----	-----	-----	-----	-----	-----	-----	-----	0.588	0.410	1	Yes	0.585	0.177	0.77	Yes	1.00	**8.57**
		L_{20} - L_{21}	912.76	-----	-927	-1124	477	-15	-136	-943	-178	55	0.728	0.266	1.00	Yes	0.477	0.163	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.57**
		L_{21} - L_{22}	847.72	-----	-801	-1322	156	-194	-1163	41	124	-99	0.676	0.318	1.00	Yes	0.452	0.203	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.04**
		L_{22} - L_{23}	845.44	-----	-1435	-821	-243	116	-183	-994	-51	191	0.674	0.316	1.00	Yes	0.451	0.201	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.48**
		L_{23} - L_{24}	880.72	-----	-1265	-738	-67	439	-966	62	162	-140	0.702	0.289	1.00	Yes	0.461	0.177	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.50**
		L_{24} - L_{25}	-----	-587.09	-1090	-275	224	541	168	-1717	-106	154	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.204	1	Yes	0.782	0.210	1.00	Yes	1.00	**16.13**
		L_{25} - L_{26}	-----	-637.03	-461	113	-90	774	-475	-141	184	-284	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.126	0.98	Yes	0.849	0.149	1.00	Yes	1.00	**7.63**
		L_{26} - L_{27}	-----	-866.89	-245	419	68	556	-55	91	-134	319	-----	-----	-----	-----	-----	-----	-----	-----	0.917	0.076	1	Yes	0.910	0.089	1.00	Yes	1.00	**7.05**
		L_{27} - L_{28}	-----	-1148.28	-208	764	-95	1326	84	-179	309	-200	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.150	1	Yes	0.836	0.164	1.00	Yes	1.00	**7.49**
		L_{28} - L_{29}	-----	-1540.46	-219	-543	59	-588	-137	33	-120	390	-----	-----	-----	-----	-----	-----	-----	-----	0.929	0.065	1	Yes	0.921	0.058	0.98	Yes	1.00	**9.26**
		L_{29} - L_{30}	-----	-1534.20	-736	1891	-896	2548	117	102	417	358	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.168	0.95	Yes	0.772	0.223	1.00	Yes	1.00	**6.50**
		L_{30} - L_{31}	-----	-1381.29	1804	-582	2257	-712	356	288	270	267	-----	-----	-----	-----	-----	-----	-----	-----	0.701	0.294	1	Yes	0.695	0.197	0.90	Yes	1.00	**2.43**
		L_{31} - L_{32}	-----	-1518.18	-228	-278	-364	-342	212	-359	264	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.916	0.079	1	Yes	0.908	0.036	0.95	Yes	1.00	**6.59**
		L_{32} - L_{33}	-----	-966.55	653	-279	981	-214	-363	128	-296	144	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.196	1	Yes	0.793	0.134	0.93	Yes	1.00	**4.79**
		L_{33} - L_{34}	-----	-703.11	455	-349	612	-145	191	-11	205	-161	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.163	1	Yes	0.826	0.107	0.94	Yes	1.00	**5.85**
		L_{34} - L_{35}	641.53	-663.09	-128	-1333	769	-137	-87	-1729	-201	103	0.573	0.421	1.00	Yes	0.333	0.254	0.59	Yes	0.701	0.175	0.88	Yes	0.696	0.213	0.91	Yes	1.00	**14.50**
		L_{35} - L_{36}	901.59	-----	-31	-1255	529	-210	-2051	75	160	-110	0.631	0.362	1.00	Yes	0.425	0.234	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.64**
		L_{36} - L_{37}	1372.29	-----	-937	-1482	290	-267	329	-524	-202	153	0.787	0.207	1.00	Yes	0.517	0.123	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.69**
		L_{37} - L_{38}	1682.03	-----	-1299	-2355	-346	-672	-1180	63	103	-168	0.712	0.280	1.00	Yes	0.473	0.168	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.69**
		L_{38} - L_{39}	1756.59	-----	-2223	-1171	-626	-227	52	-746	-100	171	0.754	0.244	1.00	Yes	0.506	0.150	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.69**
		L_{39} - L_{40}	1670.77	-----	-1708	-1251	-455	-332	-748	269	120	-133	0.779	0.212	1.00	Yes	0.516	0.128	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.14**
		L_{40} - L_{41}	1279.52	-----	-1713	-42	-474	33	344	-177	-52	264	0.759	0.231	1.00	Yes	0.512	0.149	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.80**
		L_{41} - L_{42}	934.72	-----	-1191	82	-274	50	-658	51	249	60	0.746	0.247	1.00	Yes	0.491	0.146	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.55**
		L_{42} - L_{43}	494.99	-----	-1319	509	-293	218	739	298	100	330	0.601	0.390	1.00	Yes	0.358	0.246	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.40**
		L_{43} - L_{44}	-----	-399.36	-652	159	-821	286	-38	-11	1252	365	-----	-----	-----	-----	-----	-----	-----	-----	0.574	0.424	1	Yes	0.571	0.167	0.74	Yes	1.00	**32.43**
	Structure 3	L_0 - L_1	-----	-470.11	67	-247	256	-500	43	194	59	266	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.131	0.99	Yes	0.846	0.150	1.00	Yes	1.00	**8.52**
		L_1 - L_2	478.95	-----	222	-430	486	-616	317	-188	391	120	0.733	0.266	1.00	Yes	0.496	0.169	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.02**
		L_2 - L_3	825.67	-----	-138	-767	45	-235	-308	-1030	-24	164	0.719	0.280	1.00	Yes	0.460	0.172	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.98**
		L_3 - L_4	1101.76	-----	-194	-1232	48	-436	-1300	231	143	60	0.697	0.297	1.00	Yes	0.452	0.185	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.74**
		L_4 - L_5	1617.36	-----	-1441	-963	-374	-255	372	-493	-34	224	0.790	0.208	1.00	Yes	0.507	0.123	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.61**
		L_5 - L_6	1508.30	-----	-720	-1664	-147	-505	-820	-200	232	-26	0.737	0.258	1.00	Yes	0.479	0.158	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.71**
		L_6 - L_7	1287.41	-----	-1522	-81	-527	210	-212	-366	-61	241	0.757	0.240	1.00	Yes	0.490	0.147	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.74**
		L_7 - L_8	1023.45	-----	-728	-306	-132	108	-485	-345	122	-177	0.808	0.186	1.00	Yes	0.517	0.112	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.11**
		L_8 - L_9	517.14	-----	-677	91	-155	485	44	-835	-78	119	0.670	0.325	1.00	Yes	0.402	0.207	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.95**
		L_9 - L_{10}	-----	-555.82	-406	178	-189	553	-230	-86	311	-220	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.099	0.96	Yes	0.847	0.146	1.00	Yes	1.00	**7.03**
		L_{10} - L_{11}	-----	-1187.04	-252	277	-48	163	-234	114	-318	252	-----	-----	-----	-----	-----	-----	-----	-----	0.966	0.029	1	Yes	0.955	0.044	1.00	Yes	1.00	**10.38**
		L_{11} - L_{12}	-----	-1276.00	-37	665	-78	1297	302	28	274	-137	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.176	1	Yes	0.808	0.172	0.98	Yes	1.00	**6.49**
		L_{12} - L_{13}	-----	-1127.90	734	-30	1312	-68	-68	165	-46	112	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.272	1	Yes	0.714	0.174	0.89	Yes	1.00	**4.55**
		L_{13} - L_{14}	-----	-1034.63	-2	-332	93	49	-859	-189	343	-288	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.152	1	Yes	0.833	0.052	0.89	Yes	1.00	**6.61**
		L_{14} - L_{15}	-----	-658.65	156	-261	522	77	-251	-527	-204	82	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.212	1	Yes	0.772	0.118	0.90	Yes	1.00	**4.80**
		L_{15} - L_{16}	-----	-448.78	153	-451	426	59	-818	103	200	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.690	0.308	1	Yes	0.684	0.120	0.81	Yes	1.00	**4.93**
		L_{16} - L_{17}	709.88	-----	-615	-617	269	-62	-121	20	-166	154	0.817	0.176	1.00	Yes	0.485	0.113	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.51**
		L_{17} - L_{18}	675.21	-----	-754	-588	6	-110	-200	-28	94	-105	0.777	0.214	1.00	Yes	0.449	0.128	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.63**
		L_{18} - L_{19}	431.76	-----	-788	19	-59	-7	68	477	-81	223	0.661	0.339	1.00	Yes	0.403	0.224	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.91**
		L_{19} - L_{20}	251.50	-190.19	-556	326	-468	228	655	178	2054	558	0.385	0.608	1.00	Yes	0.227	0.358	0.59	Yes	0.345	0.568	0.92	Yes	0.342	0.167	0.51	Yes	1.00	**55.38**

Operating Loads - 2F1

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																		
South Truss - Verticals	Structure 1	$U_0 - L_0$	-----	-266.48	-13	49	-113	158	201	64	-1121	-360	-----	-----	-----	-----	-----	-----	-----	-----	0.595	0.402	1	Yes	0.564	0.202	0.77	Yes	1.00	**2.95**
		$U_1 - L_1$	-----	-281.60	14	-7	-149	162	532	198	-809	-253	-----	-----	-----	-----	-----	-----	-----	-----	0.615	0.376	1	Yes	0.596	0.207	0.81	Yes	1.00	**4.78**
		$U_2 - L_2$	96.19	-185.72	90	-98	-85	123	679	193	-2078	-646	0.173	0.759	0.94	Yes	0.095	0.417	0.52	Yes	0.406	0.586	1	Yes	0.393	0.157	0.55	Yes	1.00	**8.02**
		$U_3 - L_3$	145.93	-----	142	-148	19	-2	-81	-142	-1863	-462	0.262	0.729	1.00	Yes	0.144	0.401	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.56**
		$U_4 - L_4$	-----	-203.99	77	-78	103	-106	957	474	-1837	-502	-----	-----	-----	-----	-----	-----	-----	-----	0.449	0.548	1	Yes	0.432	0.136	0.57	Yes	1.00	**6.74**
		$U_5 - L_5$	-----	-335.20	76	-89	171	-190	850	335	693	453	-----	-----	-----	-----	-----	-----	-----	-----	0.606	0.392	1	Yes	0.578	0.193	0.78	Yes	1.00	**3.72**
		$U_6 - L_6$	-----	-373.23	87	-80	181	-184	1287	604	1167	565	-----	-----	-----	-----	-----	-----	-----	-----	0.565	0.434	1	Yes	0.535	0.161	0.70	Yes	1.00	**3.51**
		$U_7 - L_7$	-----	-319.54	127	-142	218	-239	931	228	548	180	-----	-----	-----	-----	-----	-----	-----	-----	0.534	0.458	1	Yes	0.493	0.235	0.73	Yes	1.00	**2.56**
		$U_8 - L_8$	-----	-1175.95	-105	119	-180	212	1118	227	-1293	-370	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.144	1	Yes	0.818	0.039	0.86	Yes	1.00	**6.59**
		$U_9 - L_9$	-----	-560.69	-233	263	-337	383	537	218	-340	12	-----	-----	-----	-----	-----	-----	-----	-----	0.669	0.324	1	Yes	0.633	0.213	0.85	Yes	1.00	**2.65**
		$U_{10} - L_{10}$	-----	-681.25	-159	159	-300	323	611	300	-111	78	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.290	1	Yes	0.672	0.168	0.84	Yes	1.00	**4.78**
		$U_{11} - L_{11}$	-----	-670.28	-167	219	-342	465	627	370	-636	77	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.178	0.99	Yes	0.780	0.216	1.00	Yes	1.00	**6.15**
		$U_{12} - L_{12}$	-----	-430.41	-131	136	-223	239	500	334	-677	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.622	0.375	1	Yes	0.591	0.204	0.80	Yes	1.00	**4.01**
		$U_{13} - L_{13}$	-----	-325.38	-73	92	-178	204	340	185	119	256	-----	-----	-----	-----	-----	-----	-----	-----	0.658	0.341	1	Yes	0.623	0.233	0.86	Yes	1.00	**4.33**
		$U_{14} - L_{14}$	-----	-196.62	-54	63	-43	51	529	66	-2053	-326	-----	-----	-----	-----	-----	-----	-----	-----	0.439	0.554	1	Yes	0.416	0.080	0.50	Yes	1.00	**7.36**
		$U_{15} - L_{15}$	-----	-307.73	-56	50	240	-260	322	-190	-757	-134	-----	-----	-----	-----	-----	-----	-----	-----	0.690	0.304	1	Yes	0.651	0.333	0.99	Yes	1.00	**12.92**
		$U_{16} - L_{16}$	-----	-268.43	59	-68	189	-199	547	-5	241	97	-----	-----	-----	-----	-----	-----	-----	-----	0.605	0.393	1	Yes	0.568	0.255	0.83	Yes	1.00	**5.03**
		$U_{17} - L_{17}$	-----	-341.05	87	-100	162	-180	498	207	483	220	-----	-----	-----	-----	-----	-----	-----	-----	0.638	0.362	1	Yes	0.588	0.182	0.78	Yes	1.00	**2.76**
		$U_{18} - L_{18}$	-----	-417.87	188	-194	343	-353	694	182	760	186	-----	-----	-----	-----	-----	-----	-----	-----	0.612	0.380	1	Yes	0.581	0.200	0.79	Yes	1.00	**3.45**
		$U_{19} - L_{19}$	-----	-512.04	195	-208	377	-395	611	125	750	148	-----	-----	-----	-----	-----	-----	-----	-----	0.639	0.354	1	Yes	0.596	0.183	0.78	Yes	1.00	**4.17**
		$U_{20} - L_{20}$	-----	-510.99	233	-280	382	-449	443	58	446	59	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.248	1	Yes	0.654	0.238	0.90	Yes	1.00	**3.66**
	Structure 2	$U_0 - L_0$	-----	-623.90	-162	269	-307	455	47	8	-1007	-171	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.250	1	Yes	0.669	0.193	0.87	Yes	1.00	**3.43**
		$U_1 - L_1$	-----	-607.74	-226	233	-426	441	622	164	-762	10	-----	-----	-----	-----	-----	-----	-----	-----	0.695	0.305	1	Yes	0.651	0.187	0.84	Yes	1.00	**4.01**
		$U_2 - L_2$	-----	-512.63	-171	186	-363	388	615	291	-35	286	-----	-----	-----	-----	-----	-----	-----	-----	0.687	0.311	1	Yes	0.653	0.198	0.86	Yes	1.00	**3.91**
		$U_3 - L_3$	-----	-393.27	-85	96	-170	189	535	269	-114	245	-----	-----	-----	-----	-----	-----	-----	-----	0.669	0.328	1	Yes	0.617	0.172	0.79	Yes	1.00	**3.18**
		$U_4 - L_4$	-----	-252.78	-27	37	-119	135	543	234	-1197	-68	-----	-----	-----	-----	-----	-----	-----	-----	0.573	0.426	1	Yes	0.535	0.173	0.71	Yes	1.00	**5.10**
		$U_5 - L_5$	-----	-227.70	59	-45	-115	141	205	44	-1389	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.514	0.480	1	Yes	0.482	0.180	0.67	Yes	1.00	**9.50**
		$U_6 - L_6$	218.67	-----	121	-123	-18	22	70	-111	-1553	-153	0.393	0.607	1.00	Yes	0.216	0.334	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.94**
		$U_7 - L_7$	-----	-212.54	76	-88	85	-99	601	89	-1835	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.480	0.515	1	Yes	0.450	0.127	0.58	Yes	1.00	**7.25**
		$U_8 - L_8$	-----	-422.71	158	-177	293	-313	489	54	124	96	-----	-----	-----	-----	-----	-----	-----	-----	0.613	0.385	1	Yes	0.609	0.274	0.89	Yes	1.00	**4.38**
		$U_9 - L_9$	-----	-610.27	275	-282	511	-523	701	329	372	313	-----	-----	-----	-----	-----	-----	-----	-----	0.679	0.319	1	Yes	0.654	0.222	0.88	Yes	1.00	**5.54**
		$U_{10} - L_{10}$	-----	-637.97	242	-247	430	-446	932	530	683	458	-----	-----	-----	-----	-----	-----	-----	-----	0.630	0.363	1	Yes	0.596	0.197	0.80	Yes	1.00	**4.91**
		$U_{11} - L_{11}$	-----	-631.10	241	-237	386	-391	982	548	528	503	-----	-----	-----	-----	-----	-----	-----	-----	0.635	0.363	1	Yes	0.590	0.173	0.77	Yes	1.00	**4.00**
		$U_{12} - L_{12}$	-----	-638.52	210	-196	355	-346	1219	514	1034	499	-----	-----	-----	-----	-----	-----	-----	-----	0.613	0.387	1	Yes	0.553	0.152	0.71	Yes	1.00	**3.92**
		$U_{13} - L_{13}$	-----	-505.54	276	-274	406	-399	955	235	825	223	-----	-----	-----	-----	-----	-----	-----	-----	0.564	0.428	1	Yes	0.487	0.195	0.69	Yes	1.00	**3.08**
		$U_{14} - L_{14}$	-----	-1146.21	-15	9	-47	35	1154	-76	-1687	-161	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.156	1	Yes	0.760	0.008	0.77	Yes	1.00	**7.26**
		$U_{15} - L_{15}$	-----	-539.85	-278	281	-462	454	585	90	-402	66	-----	-----	-----	-----	-----	-----	-----	-----	0.602	0.396	1	Yes	0.520	0.221	0.75	Yes	1.00	**4.07**
		$U_{16} - L_{16}$	-----	-602.51	-204	191	-385	379	675	191	-860	57	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.298	1	Yes	0.646	0.163	0.81	Yes	1.00	**4.28**
		$U_{17} - L_{17}$	-----	-554.53	-217	216	-437	443	598	200	-156	185	-----	-----	-----	-----	-----	-----	-----	-----	0.684	0.307	1	Yes	0.645	0.205	0.86	Yes	1.00	**4.52**
		$U_{18} - L_{18}$	-----	-512.82	-182	187	-380	407	618	222	-567	67	-----	-----	-----	-----	-----	-----	-----	-----	0.683	0.309	1	Yes	0.653	0.208	0.87	Yes	1.00	**4.53**
		$U_{19} - L_{19}$	-----	-417.85	-105	106	-220	227	511	202	-728	71	-----	-----	-----	-----	-----	-----	-----	-----	0.629	0.363	1	Yes	0.624	0.219	0.85	Yes	1.00	**4.19**
		$U_{20} - L_{20}$	-----	-316.28	-58	63	-162	175	516	192	-174	93	-----	-----	-----	-----	-----	-----	-----	-----	0.648	0.347	1	Yes	0.606	0.199	0.81	Yes	1.00	**4.60**
		$U_{21} - L_{21}$	-----	-242.81	0	10	-139	156	173	-57	-1367	-86	-----	-----	-----	-----	-----	-----	-----	-----	0.549	0.445	1	Yes	0.514	0.200	0.72	Yes	1.00	**7.39**
		$U_{22} - L_{22}$	-----	-212.99	-3	4	-12	10	660	162	-1866	-231	-----	-----	-----	-----	-----	-----	-----	-----	0.479	0.511	1	Yes	0.451	0.015	0.47	Yes	1.00	**6.81**
		$U_{23} - L_{23}$	-----	-304.43	17	-28	207	-223	242	-204	-802	-71	-----	-----	-----	-----	-----	-----	-----	-----	0.688	0.309	1	Yes	0.644	0.285	0.93	Yes	1.00	**8.63**
		$U_{24} - L_{24}$	-----	-304.12	74	-78	180	-188	588	210	410	194	-----	-----	-----	-----	-----	-----	-----	-----	0.624	0.376	1	Yes	0.583	0.215	0.80	Yes	1.00	**3.76**
		$U_{25} - L_{25}$	-----	-399.77	118	-119	251	-250	593	229	533	281	-----	-----	-----	-----	-----	-----	-----	-----	0.601	0.390	1	Yes	0.597	0.242	0.84	Yes	1.00	**3.90**
		$U_{26} - L_{26}$	-----	-491.35	195	-203	406	-428	712	311	284	306	-----	-----	-----	-----	-----	-----	-----	-----	0.655	0.338	1	Yes	0.626	0.219	0.85	Yes	1.00	**4.45**
		$U_{27} - L_{27}$	-----	-506.31	234	-233	436	-442	983	444	693	446	-----	-----	-----	-----	-----	-----	-----	-----	0.625	0.370	1	Yes	0.589	0.205	0.80	Yes	1.00	**4.26**
		$U_{28} - L_{28}$	-----	-545.92	184	-163	396	-377	1314	432	1225	470	-----	-----	-----	-----	-----	-----	-----	-----	0.630	0.362	1	Yes	0.585	0.168	0.76	Yes	1.00	**4.66**
		$U_{29} - L_{29}$	-----	-482.27	225	-230	455	-457	1058	158	327	157	-----	-----	-----	-----	-----	-----	-----	-----	0.538	0.457	1	Yes	0.465	0.219	0.69	Yes	1.00	**5.08**
		$U_{30} - L_{30}$	-----	-1121.41	-139	114	-239	197	901	-194	-1071	-158	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.146	1	Yes	0.772	0.044	0.82	Yes	1.00	**6.55**
		$U_{31} - L_{31}$	-----	-567.09	-320	314	-422	414	450	101	-278	83	-----	-----	-----	-----	-----	-----	-----	-----	0.632	0.365	1	Yes	0.547	0.202	0.75	Yes	1.00	**2.44**
		$U_{32} - L_{32}$	-----	-728.60	-233	218	-379	373	487	189	-126	149	-----	-----	-----	-----	-----	-----	-----	-----	0.699	0.292	1	Yes	0.632	0.162	0.80	Yes	1.00	**4.04**
		$U_{33} - L_{33}$	-----	-695.49	-250	242	-395	401	472	239	-502	166	-----	-----	-----	-----	-----	-----	-----	-----	0.700	0.293	1	Yes	0.650	0.177	0.83	Yes	1.00	**4.34**
		$U_{34} - L_{34}$	-----	-643.95	-239	250	-372	399	553	324	-1027	-21	-----	-----	-----	-----	-----	-----	-----	-----	0.636	0.360	1	Yes	0.602	0.176	0.78	Yes	1.00	**4.39**
		$U_{35} - L_{35}$	-----	-622.65	-258	271	-474	501	631	370	-501	127	-----	-----	-----	-----	-----	-----	-----	-----	0.693	0.305	1	Yes	0.667	0.213	0.88	Yes	1.00	**5.70**
		$U_{36} - L_{36}$	-----	-432.66	-141	161	-266	292	387	221	-594	76	-----	-----	-----	-----	-----	-----	-----	-----	0.627	0.371	1	Yes	0.623	0.256	0.88	Yes	1.00	**4.74**
		$U_{37} - L_{37}$	-----	-202.73	-79	93	-108	124	527	123	-1821	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.458	0.534	1	Yes	0.429	0.158	0.59	Yes	1.00	**6.30**
		$U_{38} - L_{38}$	216.87	-----	-132	135	88	-91	-28	-344	-1488	-315	0.390	0.603	1.00	Yes	0.215	0.332	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.70**
		$U_{39} - L_{39}$	-----	-296.76	-61	40	196	-218	289	-422	-854	-82	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.324	1	Yes	0.628	0.279	0.91	Yes	1.00	**11.29**
		$U_{40} - L_{40}$	-----	-323.19	23	-32	214	-218	603	169	-54	9	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.258	1	Yes	0.684	0.278	0.97	Yes	1.00	**7.97**
		$U_{41} - L_{41}$	-----	-385.96	98	-107	190	-203	577	202	316	187	-----	-----	-----	-----	-----	-----	-----	-----	0.657	0.342	1	Yes	0.605	0.185	0.80	Yes	1.00	**3.39**
		$U_{42} - L_{42}$	-----	-472.06	194	-203	397	-406	693	183	593	201	-----	-----	-----	-----	-----	-----	-----	-----	0.632	0.361	1	Yes	0.602	0.208	0.81	Yes	1.00	**4.15**
		$U_{43} - L_{43}$	-----	-568.96	214	-232	423	-443	661	194	762	294	-----	-----	-----	-----	-----	-----	-----	-----	0.651	0.343	1	Yes	0.610	0.188	0.80	Yes	1.00	**4.69**
		$U_{44} - L_{44}$	-----	-607.28	260	-322	437	-551	541	92	809	137	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.266	1	Yes	0.651	0.234	0.89	Yes	1.00	**4.82**
	Structure 3	$U_0 - L_0$	-----	-551.67	-144	241	-259	386	271	35	-450	-59	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.209	1	Yes	0.691	0.198	0.89	Yes	1.00	**3.02**
		$U_1 - L_1$	-----	-553.35	-226	224	-411	412	615	154	-234	150	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.301	1	Yes	0.644	0.191	0.84	Yes	1.00	**3.69**
		$U_2 - L_2$	-----	-464.38	-174	185	-301	328	644	318	-484	224	-----	-----	-----	-----	-----	-----	-----	-----	0.680	0.314	1	Yes	0.646	0.186	0.84	Yes	1.00	**3.27**
		$U_3 - L_3$	-----	-352.01	-78	93	-149	171	547	276	144	294	-----	-----	-----	-----	-----	-----	-----	-----	0.658	0.333	1	Yes	0.607	0.173	0.79	Yes	1.00	**2.71**
		$U_4 - L_4$	-----	-270.41	-41	48	-157	172	558	220	-562	183	-----	-----	-----	-----	-----	-----	-----	-----	0.609	0.383	1	Yes	0.572	0.220	0.80	Yes	1.00	**4.73**
		$U_5 - L_5$	-----	-179.75	29	-20	-83	104	220	52	-1973	-120	-----	-----	-----	-----	-----	-----	-----	-----	0.403	0.596	1	Yes	0.380	0.133	0.52	Yes	1.00	**6.67**
		$U_6 - L_6$	-----	-196.86	54	-59	67	-73	713	139	-2020	-293	-----	-----	-----	-----	-----	-----	-----	-----	0.439	0.552	1	Yes	0.417	0.093	0.51	Yes	1.00	**6.94**
		$U_7 - L_7$	-----	-295.92	88	-105	183	-204	490	45	457	187	-----	-----	-----	-----	-----	-----	-----	-----	0.598	0.393	1	Yes	0.567	0.233	0.80	Yes	1.00	**3.22**
		$U_8 - L_8$	-----	-405.39	146	-145	263	-264	788	367	753	390	-----	-----	-----	-----	-----	-----	-----	-----	0.586	0.408	1	Yes	0.556	0.226	0.79	Yes	1.00	**3.78**
		$U_9 - L_9$	-----	-632.15	165	-224	371	-475	1054	421	585	519	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.239	1	Yes	0.736	0.221	0.96	Yes	1.00	**6.22**
		$U_{10} - L_{10}$	-----	-576.71	160	-154	284	-293	1359	751	1222	717	-----	-----	-----	-----	-----	-----	-----	-----	0.597	0.401	1	Yes	0.569	0.152	0.73	Yes	1.00	**4.17**
		$U_{11} - L_{11}$	-----	-491.12	218	-253	326	-374	1124	504	1004	516	-----	-----	-----	-----	-----	-----	-----	-----	0.586	0.413	1	Yes	0.555	0.208	0.77	Yes	1.00	**2.66**
		$U_{12} - L_{12}$	-----	-1157.97	-12	-8	-22	-20	1274	321	-1699	-275	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.158	1	Yes	0.803	0.004	0.81	Yes	1.00	**6.41**
		$U_{13} - L_{13}$	-----	-358.30	-157	170	-224	242	579	118	26	74	-----	-----	-----	-----	-----	-----	-----	-----	0.599	0.392	1	Yes	0.553	0.238	0.80	Yes	1.00	**1.85**
		$U_{14} - L_{14}$	-----	-438.27	-99	97	-175	190	606	249	-716	-145	-----	-----	-----	-----	-----	-----	-----	-----	0.664	0.327	1	Yes	0.629	0.166	0.80	Yes	1.00	**3.31**
		$U_{15} - L_{15}$	-----	-376.17	-80	90	-166	191	519	248	-70	126	-----	-----	-----	-----	-----	-----	-----	-----	0.681	0.316	1	Yes	0.649	0.194	0.85	Yes	1.00	**4.08**
		$U_{16} - L_{16}$	-----	-201.96	-84	85	-92	99	909	346	-1920	-660	-----	-----	-----	-----	-----	-----	-----	-----	0.444	0.553	1	Yes	0.427	0.127	0.56	Yes	1.00	**6.98**
		$U_{17} - L_{17}$	155.84	-----	-154	171	44	-62	345	132	-1701	-564	0.280	0.711	1.00	Yes	0.154	0.391	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.64**
		$U_{18} - L_{18}$	114.12	-263.60	-119	128	198	-237	394	135	-1216	-568	0.205	0.655	0.86	Yes	0.113	0.360	0.48	Yes	0.576	0.418	1	Yes	0.558	0.303	0.87	Yes	1.00	**12.55**
		$U_{19} - L_{19}$	-----	-277.61	-7	-8	178	-193	460	244	591	292	-----	-----	-----	-----	-----	-----	-----	-----	0.607	0.390	1	Yes	0.587	0.246	0.84	Yes	1.00	**5.41**
		$U_{20} - L_{20}$	-----	-255.26	87	-104	165	-203	631	202	623	200	-----	-----	-----	-----	-----	-----	-----	-----	0.570	0.421	1	Yes	0.540	0.259	0.80	Yes	1.00	**2.62**

Operating Loads - 2F1

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	$U_0 - L_1$			629.06	-----	-30	28	0	-11	-479	-529	94	161	0.825	0.169	1.00	Yes	0.498	0.093	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.29**
		$U_1 - L_2$			413.38	-----	-94	8	26	-22	-460	-438	468	288	0.743	0.255	1.00	Yes	0.409	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.74**
		$U_2 - L_3$			-----	-255.28	-63	-24	-2	-59	-14	-492	-1112	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.588	0.407	1	Yes	0.540	0.081	0.63	Yes	1.00	**9.86**
		$U_3 - L_4$			-----	-302.91	-6	-35	1	-56	161	69	-825	-173	-----	-----	-----	-----	-----	-----	-----	-----	0.693	0.307	1	Yes	0.641	0.072	0.72	Yes	1.00	**6.49**
		$U_4 - L_4$			528.46	-----	-83	40	-43	17	-213	61	596	201	0.775	0.223	1.00	Yes	0.426	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.19**
		$U_4 - L_5$			627.76	-----	-157	223	-66	95	-599	108	713	42	0.742	0.256	1.00	Yes	0.408	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.48**
		$U_5 - L_6$			600.59	-----	-256	252	-61	95	-750	-100	-507	-2	0.710	0.282	1.00	Yes	0.391	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.63**
		$U_6 - L_7$			620.62	-----	-70	313	19	102	-444	12	-437	-241	0.734	0.259	1.00	Yes	0.404	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.67**
		$U_8 - L_9$			962.63	-----	-93	355	3	184	69	-458	512	236	0.770	0.224	1.00	Yes	0.477	0.126	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.02**
		$U_9 - L_{10}$			994.52	-----	-304	257	-118	125	139	-174	504	203	0.795	0.200	1.00	Yes	0.492	0.113	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.91**
		$U_{10} - L_{11}$			954.04	-----	-239	181	-86	94	-11	-595	153	-39	0.806	0.189	1.00	Yes	0.499	0.107	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.24**
		$U_{11} - L_{12}$			793.52	-----	-257	85	-98	46	-86	-590	139	-49	0.785	0.208	1.00	Yes	0.432	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.43**
		$U_{12} - L_{13}$			575.62	-----	-197	136	-101	45	-6	-396	-613	-276	0.702	0.292	1.00	Yes	0.442	0.166	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.34**
		$U_{13} - L_{14}$			364.52	-----	-80	16	-39	-20	-122	-472	-819	-291	0.656	0.340	1.00	Yes	0.361	0.187	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.89**
		$U_{15} - L_{16}$			217.38	-190.72	-64	-16	-17	-71	-363	-233	1318	-264	0.391	0.472	0.87	Yes	0.215	0.260	0.48	Yes	0.447	0.551	1	Yes	0.404	0.091	0.50	Yes	1.00	**9.72**
		$U_{16} - L_{15}$			385.10	-----	-131	88	-34	-15	-359	-9	462	-214	0.693	0.301	1.00	Yes	0.381	0.166	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.63**
		$U_{17} - L_{18}$			518.78	-----	-143	93	-42	19	-367	-17	-291	-97	0.761	0.231	1.00	Yes	0.418	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.40**
		$U_{18} - L_{17}$			572.68	-----	-303	232	-136	94	-788	-175	-395	-97	0.677	0.314	1.00	Yes	0.372	0.173	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.29**
		$U_{19} - L_{18}$			647.09	-----	-312	239	-136	99	-832	-348	-465	-199	0.701	0.297	1.00	Yes	0.385	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.82**
		$U_{20} - L_{19}$			674.78	-----	-381	316	-179	144	-414	-207	-276	-139	0.731	0.263	1.00	Yes	0.402	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.23**
	Structure 2	$U_0 - L_1$			776.11	-----	-243	305	-103	129	-545	-600	-134	15	0.768	0.231	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.81**
		$U_1 - L_2$			745.10	-----	-400	304	-163	116	-182	-488	160	-17	0.737	0.259	1.00	Yes	0.405	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.55**
		$U_2 - L_3$			600.26	-----	-319	250	-118	88	-100	-559	138	-18	0.710	0.282	1.00	Yes	0.390	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.22**
		$U_3 - L_4$			525.36	-----	-169	104	-46	20	-280	-679	197	29	0.700	0.297	1.00	Yes	0.385	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.74**
		$U_4 - L_5$			362.66	-----	-129	81	-9	-33	-275	-603	-629	-128	0.652	0.348	1.00	Yes	0.359	0.191	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.54**
		$U_5 - L_6$			260.25	-222.24	-80	12	38	-97	-317	-684	-1396	-168	0.468	0.528	1.00	Yes	0.257	0.291	0.55	Yes	0.525	0.282	0.81	Yes	0.470	0.124	0.60	Yes	1.00	**12.24**
		$U_6 - L_7$			-----	-376.45	-10	-43	46	-100	57	-249	-489	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.187	1	Yes	0.721	0.114	0.84	Yes	1.00	**6.72**
		$U_8 - L_7$			556.84	-----	-173	134	-96	45	-354	27	626	-185	0.710	0.283	1.00	Yes	0.447	0.162	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.11**
		$U_8 - L_9$			717.13	-----	-328	236	-174	124	-175	196	-293	-143	0.777	0.216	1.00	Yes	0.427	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.67**
		$U_{10} - L_9$			812.86	-----	-299	252	-149	132	-371	97	-214	-23	0.804	0.194	1.00	Yes	0.442	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.26**
		$U_{11} - L_{10}$			851.45	-----	-322	305	-147	166	-585	41	-371	89	0.776	0.217	1.00	Yes	0.427	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.24**
		$U_{12} - L_{11}$			821.54	-----	-320	338	-146	182	-783	178	-508	38	0.748	0.251	1.00	Yes	0.412	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.81**
		$U_{13} - L_{12}$			711.97	-----	-407	370	-185	181	-690	25	-468	-14	0.704	0.292	1.00	Yes	0.387	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.92**
		$U_{14} - L_{13}$			766.34	-----	-264	441	-39	154	-205	-56	-178	-108	0.758	0.235	1.00	Yes	0.417	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.54**
		$U_{14} - L_{15}$			580.35	-----	-187	336	-15	167	206	-233	657	230	0.686	0.309	1.00	Yes	0.377	0.170	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.81**
		$U_{15} - L_{16}$			579.94	-----	-344	308	-164	161	233	-387	650	209	0.686	0.312	1.00	Yes	0.377	0.172	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.74**
		$U_{16} - L_{17}$			693.74	-----	-330	356	-132	160	312	-252	372	106	0.751	0.243	1.00	Yes	0.413	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.98**
		$U_{17} - L_{18}$			635.57	-----	-285	268	-112	128	-36	-449	357	87	0.751	0.242	1.00	Yes	0.413	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.22**
		$U_{18} - L_{19}$			629.56	-----	-279	249	-90	103	222	-525	279	66	0.744	0.253	1.00	Yes	0.409	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.28**
		$U_{19} - L_{20}$			571.75	-----	-192	155	-41	46	-288	-469	291	81	0.729	0.267	1.00	Yes	0.401	0.152	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.33**
		$U_{20} - L_{21}$			349.21	-----	-109	82	-35	7	-42	-483	-775	-59	0.628	0.364	1.00	Yes	0.345	0.200	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.92**
		$U_{21} - L_{22}$			324.00	-----	-107	8	10	-75	-165	-844	-947	-123	0.583	0.411	1.00	Yes	0.321	0.226	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.36**
		$U_{23} - L_{22}$			353.27	-----	-96	44	-17	-38	-262	-84	811	-120	0.635	0.358	1.00	Yes	0.349	0.197	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.46**
		$U_{24} - L_{23}$			423.49	-----	-123	102	-21	20	-217	180	-254	-63	0.762	0.230	1.00	Yes	0.419	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.48**
		$U_{25} - L_{24}$			595.17	-----	-191	173	-44	52	-197	71	-298	-80	0.759	0.231	1.00	Yes	0.417	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.92**
		$U_{26} - L_{25}$			653.56	-----	-268	275	-89	108	-351	79	-242	-49	0.773	0.220	1.00	Yes	0.425	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.53**
		$U_{27} - L_{26}$			626.53	-----	-274	286	-114	135	-494	163	-331	3	0.741	0.252	1.00	Yes	0.407	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.62**
		$U_{28} - L_{27}$			659.02	-----	-292	338	-109	157	-680	121	-487	23	0.714	0.285	1.00	Yes	0.393	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.86**
		$U_{29} - L_{28}$			578.94	-----	-335	324	-118	125	-647	-15	-480	-44	0.684	0.307	1.00	Yes	0.376	0.169	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.49**
		$U_{30} - L_{29}$			611.19	-----	-188	353	8	103	-223	88	-391	-282	0.723	0.271	1.00	Yes	0.397	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.63**
		$U_{30} - L_{31}$			714.36	-----	-253	423	-62	233	140	-434	605	208	0.707	0.287	1.00	Yes	0.389	0.158	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.81**
		$U_{31} - L_{32}$			742.67	-----	-430	378	-239	220	191	-208	416	99	0.735	0.262	1.00	Yes	0.404	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.65**
		$U_{32} - L_{33}$			855.49	-----	-346	345	-165	193	150	-475	268	44	0.779	0.212	1.00	Yes	0.429	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.79**
		$U_{33} - L_{34}$			850.51	-----	-328	274	-152	163	-22	-592	216	15	0.775	0.220	1.00	Yes	0.426	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.85**
		$U_{34} - L_{35}$			789.95	-----	-297	238	-153	124	-97	-484	19	-129	0.782	0.210	1.00	Yes	0.430	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.21**
		$U_{35} - L_{36}$			676.70	-----	-312	212	-180	96	-361	-653	-540	-287	0.733	0.267	1.00	Yes	0.403	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.46**
		$U_{36} - L_{37}$			519.01	-----	-167	125	-83	24	-127	-578	-889	-257	0.662	0.331	1.00	Yes	0.417	0.191	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.53**
		$U_{38} - L_{37}$			-----	-341.91	-21	-33	32	-86	-361	-112	509	-303	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.258	1	Yes	0.655	0.099	0.76	Yes	1.00	**6.91**
		$U_{39} - L_{38}$			292.01	-158.03	-88	26	10	-69	-214	239	1249	-171	0.525	0.474	1.00	Yes	0.289	0.260	0.55	Yes	0.377	0.452	0.83	Yes	0.334	0.112	0.45	Yes	1.00	**11.07**
		$U_{40} - L_{39}$			330.06	-----	-110	74	-39	-3	-347	59	912	-235	0.594	0.404	1.00	Yes	0.326	0.222	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.72**
		$U_{41} - L_{40}$			560.84	-----	-173	126	-49	24	-402	-107	-432	-191	0.748	0.249	1.00	Yes	0.411	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.82**
		$U_{42} - L_{41}$			596.75	-----	-312	248	-126	95	-645	-57	-411	-166	0.706	0.294	1.00	Yes	0.388	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.48**
		$U_{43} - L_{42}$			734.86	-----	-365	296	-142	108	-641	-193	-399	-206	0.727	0.265	1.00	Yes	0.400	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.71**
		$U_{44} - L_{43}$			789.24	-----	-382	373	-181	161	-253	5	-221	-108	0.781	0.215	1.00	Yes	0.429	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.68**
	Structure 3	$U_0 - L_1$			720.49	-----	-219	257	-81	106	-463	-496	-159	-5	0.780	0.213	1.00	Yes	0.429	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.63**
		$U_1 - L_2$			661.89	-----	-354	245	-164	113	-54	-602	143	-57	0.717	0.280	1.00	Yes	0.394	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.73**
		$U_2 - L_3$			609.15	-----	-322	251	-129	90	-106	-518	113	-42	0.720	0.276	1.00	Yes	0.396	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.65**
		$U_3 - L_4$			506.19	-----	-145	89	-45	23	-54	-438	136	-37	0.742	0.249	1.00	Yes	0.408	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.25**
		$U_4 - L_5$			330.00	-----	-122	64	-30	-18	-179	-833	-822	-172	0.594	0.397	1.00	Yes	0.326	0.218	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.28**
		$U_5 - L_6$			-----	-306.52	-79	-26	31	-121	-372	-582	-1006	-268	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.278	1	Yes	0.649	0.155	0.81	Yes	1.00	**14.26**
		$U_7 - L_6$			391.76	-----	-82	24	-46	-7	-218	-3	660	-134	0.705	0.295	1.00	Yes	0.388	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.54**
		$U_8 - L_7$			563.45	-----	-184	141	-114	60	-434	-67	773	-78	0.687	0.312	1.00	Yes	0.432	0.179	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.36**
		$U_8 - L_9$			804.05	-----	-244	127	-102	37	-561	-109	-267	-1	0.795	0.197	1.00	Yes	0.437	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.89**
		$U_{10} - L_9$			930.46	-----	-217	194	-107	87	-581	177	842	186	0.786	0.211	1.00	Yes	0.487	0.121	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.38**
		$U_{11} - L_{10}$			977.04	-----	-291	278	-90	110	-653	-27	-439	0	0.781	0.213	1.00	Yes	0.484	0.120	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.38**
		$U_{12} - L_{11}$			954.70	-----	-50	384	14	138	-406	95	-504	-223	0.763	0.235	1.00	Yes	0.473	0.132	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.17**
		$U_{13} - L_{12}$			622.94	-----	-92	293	0	154	198	-234	529	266	0.736	0.263	1.00	Yes	0.405	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.28**
		$U_{13} - L_{14}$			615.03	-----	-277	228	-105	122	316	-209	592	223	0.727	0.265	1.00	Yes	0.400	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.66**
		$U_{14} - L_{15}$			689.38	-----	-193	226	-53	98	224	-301	297	88	0.815	0.184	1.00	Yes	0.448	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.20**
		$U_{15} - L_{16}$			519.69	-----	-82	36	-44	8	252	-146	-652	-331	0.762	0.235	1.00	Yes	0.419	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.09**
		$U_{17} - L_{16}$			-----	-318.44	-15	-39	-6	-48	-381	-303	671	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.265	1	Yes	0.674	0.062	0.74	Yes	1.00	**6.28**
		$U_{18} - L_{17}$			-----	-285.74	-99	-16	53	-37	-640	-67	-156	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.658	0.336	1	Yes	0.605	0.126	0.74	Yes	1.00	**14.46**
		$U_{19} - L_{18}$			435.64	-----	-85	11	25	-23	-367	-310	-159	-80	0.784	0.214	1.00	Yes	0.431	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.27**
		$U_{20} - L_{19}$			623.44	-----	-115	72	-27	4	-153	-35	-34	51	0.818	0.173	1.00	Yes	0.494	0.095	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.14**

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: 2F1 **Condition:** As-Inspected

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Upper Chord	Structure 1	U$_1$ - U$_1$	-71.60	-45.51	-6.39			0.90	1.24	-7.11	-50.66	0.00	0.00	Vehicle	Vehicle	-----	-158.95	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	9.75	9.75
		U$_1$ - U$_2$	-90.76	-2.12	-60.81			0.90	1.24	-2.36	-67.69	0.00	0.00	Vehicle	Vehicle	-----	-205.99	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	7.01	7.01
		U$_2$ - U$_3$	-61.05	24.33	-75.19			0.90	1.24	27.08	-83.71	0.00	0.00	Vehicle	Vehicle	-----	-168.18	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	-----	-----	6.02	6.02
		U$_3$ - U$_4$	10.82	32.66	-65.65			0.90	1.24	36.35	-73.09	0.00	0.00	Vehicle	Vehicle	61.32	-80.96	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	18.16	18.16	7.88	7.88
		U$_4$ - U$_5$	12.98	32.83	-76.42			0.90	1.24	36.55	-85.08	0.00	0.00	Vehicle	Vehicle	64.39	-93.73	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	18.01	18.01	6.80	6.80
		U$_5$ - U$_6$	121.44	37.98	-61.00			0.90	1.24	42.28	-67.91	0.00	0.00	Vehicle	Vehicle	212.84	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	13.00	13.00	-----	-----
		U$_6$ - U$_7$	249.52	41.99	-39.00			0.90	1.24	46.75	-43.41	0.00	0.00	Vehicle	Vehicle	385.15	-----	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	-----	-----	11.87	11.87	-----	-----
		U$_7$ - U$_8$	376.85	40.35	-11.85			0.90	1.24	44.92	-13.19	0.00	0.00	Vehicle	Vehicle	548.29	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	16.33	16.33	-----	-----
		U$_8$ - U$_9$	319.70	-5.55	0.89			0.90	1.20	0.96	-5.99	0.00	0.00	Vehicle	Vehicle	416.86	-----	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	-----	-----	644.48	644.48	-----	-----
		U$_9$ - U$_{10}$	128.80	-6.27	-22.96			0.90	1.20	-6.76	-24.76	0.00	0.00	Vehicle	Vehicle	158.64	-----	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	38.39	-36.37			0.90	1.20	41.39	-39.22	0.00	0.00	Vehicle	Vehicle	-----	-143.04	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	-----	-----	13.43	13.43
		U$_{11}$ - U$_{12}$	-252.85	34.09	-70.69			0.90	1.20	36.75	-76.21	0.00	0.00	Vehicle	Vehicle	-----	-427.78	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	7.34	7.34
		U$_{12}$ - U$_{13}$	-391.81	29.33	-83.02			0.90	1.20	31.62	-89.51	0.00	0.00	Vehicle	Vehicle	-----	-625.71	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	-----	-----	8.33	8.33
		U$_{13}$ - U$_{14}$	-482.83	24.62	-90.25			0.90	1.20	26.54	-97.30	0.00	0.00	Vehicle	Vehicle	-----	-754.18	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	-----	-----	8.68	8.68
		U$_{14}$ - U$_{15}$	-484.28	24.53	-114.16			0.90	1.20	26.44	-123.08	0.00	0.00	Vehicle	Vehicle	-----	-789.58	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.85	6.85
		U$_{15}$ - U$_{16}$	-501.86	18.84	-114.35			0.90	1.20	20.32	-123.29	0.00	0.00	Vehicle	Vehicle	-----	-812.69	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	-----	-----	6.70	6.70
		U$_{16}$ - U$_{17}$	-467.82	9.06	-103.75			0.90	1.20	9.77	-111.86	0.00	0.00	Vehicle	Vehicle	-----	-753.59	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	-----	-----	7.69	7.69
		U$_{17}$ - U$_{18}$	-368.70	8.47	-79.84			0.90	1.20	9.14	-86.08	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	10.67	12.00	Pass	-----	-----	6.99	6.99
		U$_{18}$ - U$_{19}$	-251.42	4.23	-54.23			0.90	1.20	4.56	-58.47	0.00	0.00	Vehicle	Vehicle	-----	-402.86	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	-----	-----	7.29	7.29
		U$_{19}$ - U$_{20}$	-117.77	-2.95	-24.50			0.90	1.20	-3.18	-26.41	0.00	0.00	Vehicle	Vehicle	-----	-187.43	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	-----	-----	21.19	21.19
	Structure 2	U$_0$ - U$_1$	-118.16	-26.87	-16.75			0.90	1.18	-27.83	-28.61	0.00	0.00	Vehicle	Vehicle	-----	-190.79	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	-----	-----	18.50	18.50
		U$_1$ - U$_2$	-239.45	-50.65	-27.81			0.90	1.18	-29.61	-53.92	0.00	0.00	Vehicle	Vehicle	-----	-381.38	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	-----	-----	10.23	10.23
		U$_2$ - U$_3$	-350.29	-65.80	-48.91			0.90	1.18	-52.07	-70.06	0.00	0.00	Vehicle	Vehicle	-----	-546.45	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	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	-----	-----	10.38	10.38
		U$_3$ - U$_4$	-448.96	11.26	-90.40			0.90	1.18	11.99	-96.25	0.00	0.00	Vehicle	Vehicle	-----	-708.77	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	-----	-----	9.27	9.27
		U$_4$ - U$_5$	-483.05	14.53	-98.56			0.90	1.18	14.83	-104.93	0.00	0.00	Vehicle	Vehicle	-----	-764.38	12.50	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	-----	-----	9.57	9.57
		U$_5$ - U$_6$	-485.65	30.92	-116.74			0.90	1.18	32.92	-124.29	0.00	0.00	Vehicle	Vehicle	-----	-792.91	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	-----	-----	8.06	8.06
		U$_6$ - U$_7$	-428.66	36.61	-110.62			0.90	1.18	38.98	-117.78	0.00	0.00	Vehicle	Vehicle	-----	-710.37	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	-----	-----	7.75	7.75
		U$_7$ - U$_8$	-428.18	36.70	-115.34			0.90	1.18	39.08	-122.80	0.00	0.00	Vehicle	Vehicle	-----	-716.27	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	-----	-----	7.44	7.44
		U$_8$ - U$_9$	-335.25	42.07	-100.55			0.90	1.18	44.79	-107.05	0.00	0.00	Vehicle	Vehicle	-----	-574.99	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	-----	-----	7.39	7.39
		U$_9$ - U$_{10}$	-200.15	45.48	-87.88			0.90	1.18	48.43	-93.57	0.00	0.00	Vehicle	Vehicle	-----	-381.84	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	7.33	7.33
		U$_{10}$ - U$_{11}$	-52.03	48.25	-67.07			0.90	1.18	51.37	-71.41	0.00	0.00	Vehicle	Vehicle	-----	-160.47	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	-----	-----	10.05	10.05
		U$_{11}$ - U$_{12}$	107.09	48.11	-43.58			0.90	1.18	51.22	-46.39	0.00	0.00	Vehicle	Vehicle	205.80	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	15.69	15.69	-----	-----
		U$_{12}$ - U$_{13}$	259.37	47.62	-26.61			0.90	1.18	50.71	-28.33	0.00	0.00	Vehicle	Vehicle	403.10	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	17.35	17.35	-----	-----
		U$_{13}$ - U$_{14}$	391.99	42.34	-7.93			0.90	1.18	45.08	-8.44	0.00	0.00	Vehicle	Vehicle	568.19	-----	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	-----	-----	26.00	26.00	-----	-----
		U$_{14}$ - U$_{15}$	439.80	-7.96	0.27			0.90	1.17	0.29	-8.38	0.00	0.00	Vehicle	Vehicle	571.60	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	3902.26	3902.26	-----	-----
		U$_{15}$ - U$_{16}$	369.68	24.27	-16.45			0.90	1.17	25.53	-17.31	0.00	0.00	Vehicle	Vehicle	513.77	-----	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	-----	-----	35.36	35.36	-----	-----
		U$_{16}$ - U$_{17}$	271.42	-10.48	-25.69			0.90	1.17	-11.02	-27.03	0.00	0.00	Vehicle	Vehicle	338.51	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U$_{17}$ - U$_{18}$	171.80	-19.51	-35.16			0.90	1.17	-20.53	-36.99	0.00	0.00	Vehicle	Vehicle	196.65	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U$_{18}$ - U$_{19}$	72.84	-38.12	-58.57			0.90	1.17	-40.11	-61.62	0.00	0.00	Vehicle	Vehicle	42.55	-----	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U$_{19}$ - U$_{20}$	-8.04	33.32	-67.51			0.90	1.17	35.05	-71.03	0.00	0.00	Vehicle	Vehicle	35.11	-102.79	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	23.63	23.63	9.64	9.64
		U$_{20}$ - U$_{21}$	-60.07	28.16	-72.62			0.90	1.17	29.63	-76.40	0.00	0.00	Vehicle	Vehicle	-----	-177.42	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	-----	-----	10.17	10.17
		U$_{21}$ - U$_{22}$	-82.15	22.31	-89.06			0.90	1.17	23.47	-93.70	0.00	0.00	Vehicle	Vehicle	-----	-228.61	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	-----	-----	8.05	8.05
		U$_{22}$ - U$_{23}$	-82.37	22.31	-95.39			0.90	1.17	23.47	-100.36	0.00	0.00	Vehicle	Vehicle	-----	-237.55	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.52	7.52
		U$_{23}$ - U$_{24}$	-65.94	15.86	-92.24			0.90	1.17	16.69	-97.05	0.00	0.00	Vehicle	Vehicle	-----	-211.88	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	-----	-----	7.94	7.94
		U$_{24}$ - U$_{25}$	-11.98	33.03	-87.15			0.90	1.17	34.73	-91.69	0.00	0.00	Vehicle	Vehicle	21.79	-142.57	5.50	32.31	26.8125	1066.31	131.71	10.6302	5.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	24.12	24.12	7.36	7.36
		U$_{25}$ - U$_{26}$	54.95	37.51	-71.74			0.90	1.17	39.47	-75.47	0.00	0.00	Vehicle	Vehicle	122.74	-26.68	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	18.02	18.02	9.31	9.31
		U$_{26}$ - U$_{27}$	135.89	41.24	-53.84			0.90	1.17	43.38	-56.64	0.00	0.00	Vehicle	Vehicle	233.06	-----	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	-----	-----	14.53	14.53	-----	-----
		U$_{27}$ - U$_{28}$	216.69	42.98	-39.88			0.90	1.17	45.22	-41.95	0.00	0.00	Vehicle	Vehicle	340.49	-----	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	-----	-----	18.29	18.29	-----	-----
		U$_{28}$ - U$_{29}$	293.53	43.97	-22.62			0.90	1.17	46.26	-23.79	0.00	0.00	Vehicle	Vehicle	441.74	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	21.16	21.16	-----	-----
		U$_{29}$ - U$_{30}$	357.86	42.01	-5.53			0.90	1.17	44.20	-5.82	0.00	0.00	Vehicle	Vehicle	522.67	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	27.30	27.30	-----	-----
		U$_{30}$ - U$_{31}$	339.12	-1.29	-12.38			0.90	1.18	-1.37	-13.18	0.00	0.00	Vehicle	Vehicle	439.08	-----	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	-----	-----	-----	-----	-----	-----
		U$_{31}$ - U$_{32}$	251.34	21.92	-13.15			0.90	1.18	23.34	-14.00	0.00	0.00	Vehicle	Vehicle	357.07	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42

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: 2F1 — Fy = 33.0 ksi — Vehicle Load Factors: DL Factor: 1.30, LL Factor: 1.30 — Pedestrian Load Factors: DL Factor: 1.30

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

E = 29000.0 ksi

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

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	-0.58	-0.95			0.90	1.24	-0.64	-1.06	0.00	0.00	Vehicle	Vehicle	5.31	-----	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	38.65	30.33			0.90	1.24	43.03	33.77	0.00	0.00	Vehicle	Vehicle	152.38	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**9.96**	**9.96**	-----	-----
	L_2 - L_3	97.64	-17.88	75.18			0.90	1.24	83.69	-19.91	0.00	0.00	Vehicle	Vehicle	235.73	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**6.82**	**6.82**	-----	-----
	L_3 - L_4	66.79	-25.98	82.85			0.90	1.24	92.23	-28.92	0.00	0.00	Vehicle	Vehicle	206.72	-----	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	-----	-----	**6.53**	**6.53**	-----	-----
	L_4 - L_5	-108.59	-39.10	41.75			0.90	1.24	46.48	-43.53	0.00	0.00	Vehicle	Vehicle	-----	-197.75	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	-----	-----	**9.00**	**9.00**
	L_5 - L_6	-237.42	-43.19	30.97			0.90	1.24	34.47	-48.09	0.00	0.00	Vehicle	Vehicle	-----	-371.16	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	-----	-----	**8.78**	**8.78**
	L_6 - L_7	-362.38	-45.17	0.80			0.90	1.24	0.90	-50.28	0.00	0.00	Vehicle	Vehicle	-----	-536.47	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	-----	-----	**11.58**	**11.58**
	L_7 - L_8	478.62	-40.74	-11.42			0.90	1.24	-12.71	-45.36	0.00	0.00	Vehicle	Vehicle	-----	-681.17	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	-----	-----	**15.89**	**15.89**
	L_8 - L_9	-476.97	-33.04	-0.16			0.90	1.20	-0.17	-35.62	0.00	0.00	Vehicle	Vehicle	-----	-666.37	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	-----	-----	**20.28**	**20.28**
	L_9 - L_{10}	-301.47	-11.18	5.72			0.90	1.20	6.17	-12.05	0.00	0.00	Vehicle	Vehicle	-----	-407.57	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**53.43**	**53.43**
	L_{10} - L_{11}	-104.56	-37.74	26.93			0.90	1.20	29.04	-40.69	0.00	0.00	Vehicle	Vehicle	-----	-188.82	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**9.73**	**9.73**
	L_{11} - L_{12}	96.98	27.69	44.09			0.90	1.20	47.54	29.86	0.00	0.00	Vehicle	Vehicle	187.87	-----	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	-----	-----	**10.46**	**10.46**	-----	-----
	L_{12} - L_{13}	268.60	-29.20	70.46			0.90	1.20	75.97	-31.48	0.00	0.00	Vehicle	Vehicle	447.94	-----	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	-----	-----	**9.30**	**9.30**	-----	-----
	L_{13} - L_{14}	405.49	69.85	84.95			0.90	1.20	91.60	75.31	0.00	0.00	Vehicle	Vehicle	646.22	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	**9.85**	**9.85**	-----	-----
	L_{14} - L_{15}	502.59	-13.66	89.84			0.90	1.20	96.87	-14.73	0.00	0.00	Vehicle	Vehicle	779.30	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**11.07**	**11.07**	-----	-----
	L_{15} - L_{16}	469.06	-8.48	77.78			0.90	1.20	83.86	-9.14	0.00	0.00	Vehicle	Vehicle	718.80	-----	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	-----	-----	**13.18**	**13.18**	-----	-----
	L_{16} - L_{17}	365.26	-6.96	61.02			0.90	1.20	65.79	-7.50	0.00	0.00	Vehicle	Vehicle	560.36	-----	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	-----	-----	**12.94**	**12.94**	-----	-----
	L_{17} - L_{18}	248.52	1.64	38.50			0.90	1.20	41.51	1.77	0.00	0.00	Vehicle	Vehicle	377.04	-----	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	-----	-----	**15.30**	**15.30**	-----	-----
	L_{18} - L_{19}	112.87	-1.13	10.16			0.90	1.20	10.95	-1.21	0.00	0.00	Vehicle	Vehicle	160.97	-----	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	-----	-----	**35.59**	**35.59**	-----	-----
	L_{19} - L_{20}	-14.36	7.90	-13.02			0.90	1.20	8.51	-14.04	0.00	0.00	Vehicle	Vehicle	-----	-36.91	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	-----	-----	**29.15**	**29.15**
	Structure 2																																														
	L_0 - L_1	15.25	-3.10	0.31			0.90	1.18	0.33	-3.30	0.00	0.00	Vehicle	Vehicle	20.26	-----	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	-----	-----	**1854.75**	**1854.75**	-----	-----
	L_1 - L_2	136.09	20.68	14.90			0.90	1.18	22.02	15.86	0.00	0.00	Vehicle	Vehicle	205.54	-----	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	-----	-----	**22.58**	**22.58**	-----	-----
	L_2 - L_3	262.77	42.83	41.18			0.90	1.18	45.60	43.84	0.00	0.00	Vehicle	Vehicle	400.89	-----	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	-----	-----	**15.36**	**15.36**	-----	-----
	L_3 - L_4	373.14	57.86	64.18			0.90	1.18	68.33	61.60	0.00	0.00	Vehicle	Vehicle	573.92	-----	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	-----	-----	**13.51**	**13.51**	-----	-----
	L_4 - L_5	456.13	37.00	81.43			0.90	1.18	86.70	40.43	0.00	0.00	Vehicle	Vehicle	706.26	-----	11.08	65.05	54.0000	2145.00	131.71	10.6406	5.6658	16.93	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**13.76**	**13.76**	-----	-----
	L_5 - L_6	489.37	-23.30	102.49			0.90	1.18	109.13	-24.81	0.00	0.00	Vehicle	Vehicle	778.05	-----	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	-----	-----	**11.94**	**11.94**	-----	-----
	L_6 - L_7	479.01	-29.56	113.57			0.90	1.18	120.92	-31.47	0.00	0.00	Vehicle	Vehicle	779.90	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**11.07**	**11.07**	-----	-----
	L_7 - L_8	330.07	-40.48	88.67			0.90	1.18	94.40	-43.09	0.00	0.00	Vehicle	Vehicle	551.82	-----	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	-----	-----	**10.71**	**10.71**	-----	-----
	L_8 - L_9	188.98	-43.75	76.24			0.90	1.18	81.18	-46.58	0.00	0.00	Vehicle	Vehicle	351.20	-----	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	-----	-----	**11.22**	**11.22**	-----	-----
	L_9 - L_{10}	39.77	-46.58	54.91			0.90	1.18	58.46	-49.59	0.00	0.00	Vehicle	Vehicle	127.70	-12.76	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	**14.06**	**14.06**	**15.47**	**15.47**
	L_{10} - L_{11}	-127.39	-46.93	28.06			0.90	1.18	29.88	-49.97	0.00	0.00	Vehicle	Vehicle	-----	-230.56	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	-----	-----	**10.47**	**10.47**
	L_{11} - L_{12}	-282.64	-46.50	16.62			0.90	1.18	17.69	-49.50	0.00	0.00	Vehicle	Vehicle	-----	-431.79	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**13.09**	**13.09**
	L_{12} - L_{13}	-426.73	-44.40	-1.86			0.90	1.18	-1.98	-47.27	0.00	0.00	Vehicle	Vehicle	-----	-616.20	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	-----	-----	**17.95**	**17.95**
	L_{13} - L_{14}	-536.42	-28.10	-15.70			0.90	1.18	-16.72	-29.91	0.00	0.00	Vehicle	Vehicle	-----	-736.24	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**32.72**	**32.72**
	L_{14} - L_{15}	-537.75	-17.61	-0.25			0.90	1.17	-0.26	-18.52	0.00	0.00	Vehicle	Vehicle	-----	-723.16	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	-----	-----	**52.77**	**52.77**
	L_{15} - L_{16}	-475.65	-41.80	3.22			0.90	1.17	3.36	-43.97	0.00	0.00	Vehicle	Vehicle	-----	-675.51	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	-----	-----	**18.19**	**18.19**
	L_{16} - L_{17}	-384.35	-6.58	12.91			0.90	1.17	13.58	-6.93	0.00	0.00	Vehicle	Vehicle	-----	-508.66	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	-----	-----	**95.74**	**95.74**
	L_{17} - L_{18}	-281.86	9.79	20.99			0.90	1.17	22.09	10.29	0.00	0.00	Vehicle	Vehicle	-----	-353.03	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	-----	-----	-----	-----
	L_{18} - L_{19}	-175.17	-38.88	37.85			0.90	1.17	39.82	-40.90	0.00	0.00	Vehicle	Vehicle	-----	-280.89	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	-----	-----	**9.74**	**9.74**
	L_{19} - L_{20}	-76.53	34.66	49.21			0.90	1.17	51.77	36.46	0.00	0.00	Vehicle	Vehicle	-----	-52.09	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	-----	-----
	L_{20} - L_{21}	4.38	-29.98	64.93			0.90	1.17	68.31	-31.54	0.00	0.00	Vehicle	Vehicle	94.50	-35.31	6.13	37.50	31.3700	1237.50	131.71	10.6250	6.1479	15.55	32.77	-1044.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**13.87**	**13.87**	**25.62**	**25.62**
	L_{21} - L_{22}	55.94	-24.78	72.34			0.90	1.17	76.11	-26.08	0.00	0.00	Vehicle	Vehicle	171.67	-----	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	-----	-----	**11.77**	**11.77**	-----	-----
	L_{22} - L_{23}	62.99	-11.48	63.75			0.90	1.17	67.07	-12.07	0.00	0.00	Vehicle	Vehicle	169.07	-----	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	-----	-----	**13.25**	**13.25**	-----	-----
	L_{23} - L_{24}	15.54	-21.20	62.48			0.90	1.17	65.74	-22.31	0.00	0.00	Vehicle	Vehicle	105.66	-8.80	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	**14.24**	**14.24**	**36.72**	**36.72**
	L_{24} - L_{25}	-56.00	-24.01	41.99			0.90	1.17	44.18	-25.26	0.00	0.00	Vehicle	Vehicle	-----	-105.64	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	-----	-----	**20.49**	**20.49**
	L_{25} - L_{26}	-136.37	-27.73	22.13			0.90	1.17	23.28	-29.17	0.00	0.00	Vehicle	Vehicle	-----	-215.21	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	-----	-----	**14.99**	**14.99**
	L_{26} - L_{27}	-217.73	-28.19	13.30			0.90	1.17	13.99	-29.65	0.00	0.00	Vehicle	Vehicle	-----	-321.60	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	-----	-----	**17.19**	**17.19**
	L_{27} - L_{28}	-296.25	-29.22	-0.72			0.90	1.17	-0.76	-30.74	0.00	0.00	Vehicle	Vehicle	-----	-425.09	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	-----	-----	**24.44**	**24.44**
	L_{28} - L_{29}	-364.18	-26.80	-16.84			0.90	1.17	-17.72	-28.20	0.00	0.00	Vehicle	Vehicle	-----	-510.09	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**32.32**	**32.32**
	L_{29} - L_{30}	-418.23	5.50	-11.04			0.90	1.17	5.79	-11.61	0.00	0.00	Vehicle	Vehicle	-----	-558.79	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**94.46**	**94.46**
	L_{30} - L_{31}	-350.38	-13.67	10.23			0.90	1.18	10.89	-14.56	0.00	0.00	Vehicle	Vehicle	-----	-474.41	11.98	70.85	58.8700	2338.05	131.71	10.9531	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	-----	-----	**79.98**	**79.98**
	L_{31} - L_{32}	-275.46	-43.80	-7.77			0.90	1.18	-8.27	-46.64	0.00	0.00	Vehicle	Vehicle	-----	-418.72	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	-----	-----	**21.20**	**21.20**
	L_{32} - L_{33}	-179.08	-26.

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: 2F1 **Condition:** As-Inspected

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

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

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

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

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

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

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Verticals	Structure 1																																														
	U_0 - L_0	-77.19	7.45	-45.98			0.90	1.24	8.30	-51.19	0.00	0.00	Vehicle	Vehicle	------	-166.90	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	------	------	------	------	------	------	**4.57**	**4.57**
	U_1 - L_1	-33.88	6.71	-31.68			0.90	1.24	7.47	-35.26	0.00	0.00	Vehicle	Vehicle	------	-89.88	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	**9.02**	**9.02**
	U_2 - L_2	10.43	6.32	-24.09			0.90	1.24	7.03	-26.81	0.00	0.00	Vehicle	Vehicle	22.71	-21.30	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	**59.32**	**59.32**	**13.52**	**13.52**
	U_3 - L_3	44.39	3.23	-13.86			0.90	1.24	3.60	-15.43	0.00	0.00	Vehicle	Vehicle	62.38	------	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	------	------	------	------	------	------	**106.50**	**106.50**	------	------
	U_4 - L_4	-16.67	-14.24	-0.03			0.90	1.24	-0.04	-15.85	0.00	0.00	Vehicle	Vehicle	------	-42.28	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	------	------
	U_5 - L_5	-109.51	-38.90	2.31			0.90	1.24	2.57	-43.31	0.00	0.00	Vehicle	Vehicle	------	-198.66	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	------	------	16.16	------	------	33.25	45.00	Pass	5.37	12.00	Pass	------	------	------	------	------	------	**7.29**	**7.29**
	U_6 - L_6	-143.60	-50.97	-1.26			0.90	1.24	-1.41	-56.74	0.00	0.00	Vehicle	Vehicle	------	-260.45	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	------	------	------	------	------	------	**5.94**	**5.94**
	U_7 - L_7	-142.61	-51.97	1.34			0.90	1.24	1.49	-57.86	0.00	0.00	Vehicle	Vehicle	------	-260.61	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	------	------	------	------	------	------	**5.01**	**5.01**
	U_8 - L_8	-391.97	-54.37	-50.01			0.90	1.24	-55.67	-60.53	0.00	0.00	Vehicle	Vehicle	------	-588.25	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	------	------	15.25	------	------	18.60	45.00	Pass	5.96	12.00	Pass	------	------	------	------	------	------	**11.13**	**11.13**
	U_9 - L_9	-223.13	4.64	-40.81			0.90	1.20	5.00	-44.00	0.00	0.00	Vehicle	Vehicle	------	-347.27	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	------	------	------	------	------	------	**9.22**	**9.22**
	U_{10} - L_{10}	-225.77	2.24	-41.74			0.90	1.20	2.42	-45.00	0.00	0.00	Vehicle	Vehicle	------	-352.01	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	------	------	------	------	------	------	**10.80**	**10.80**
	U_{11} - L_{11}	-198.79	-3.27	-41.57			0.90	1.20	-3.53	-44.82	0.00	0.00	Vehicle	Vehicle	------	-316.68	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	------	------	------	------	------	------	**9.88**	**9.88**
	U_{12} - L_{12}	-154.77	4.40	-34.13			0.90	1.20	4.74	-36.80	0.00	0.00	Vehicle	Vehicle	------	-249.04	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	------	------	------	------	------	------	**10.26**	**10.26**
	U_{13} - L_{13}	-109.04	10.64	-30.86			0.90	1.20	11.47	-33.28	0.00	0.00	Vehicle	Vehicle	------	-185.01	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	------	------	------	**8.16**	**8.16**
	U_{14} - L_{14}	-12.30	-9.17	4.87			0.90	1.20	-7.41	-9.89	0.00	0.00	Vehicle	Vehicle	------	-28.85	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	------	------	------	------	------	------	**33.61**	**33.61**
	U_{15} - L_{15}	-5.62	-24.58	14.70			0.90	1.20	15.85	-26.50	0.00	0.00	Vehicle	Vehicle	13.30	-41.76	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	------	------	------	**27.33**	**27.33**	**12.74**	**12.74**
	U_{16} - L_{16}	-51.74	-34.13	10.55			0.90	1.20	11.38	-36.79	0.00	0.00	Vehicle	Vehicle	------	-115.09	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	------	------	------	------	------	------	**7.87**	**7.87**
	U_{17} - L_{17}	-127.31	-43.67	5.63			0.90	1.20	6.07	-47.08	0.00	0.00	Vehicle	Vehicle	------	-226.70	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	------	------	------	------	------	------	**6.03**	**6.03**
	U_{18} - L_{18}	-159.89	-46.29	5.20			0.90	1.20	5.60	-49.91	0.00	0.00	Vehicle	Vehicle	------	-272.74	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	------	------	16.16	------	------	32.06	45.00	Pass	7.23	12.00	Pass	------	------	------	------	------	------	**7.32**	**7.32**
	U_{19} - L_{19}	-191.17	-53.46	4.40			0.90	1.20	4.74	-57.64	0.00	0.00	Vehicle	Vehicle	------	-323.44	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}	-211.94	-52.68	4.40			0.90	1.20	4.74	-56.80	0.00	0.00	Vehicle	Vehicle	------	-349.36	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	------	------	------	------	------	------	**6.06**	**6.06**
	Structure 2																																														
	U_0 - L_0	-206.53	5.48	-54.73			0.90	1.18	5.83	-58.27	0.00	0.00	Vehicle	Vehicle	------	-344.25	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	------	------	------	------	------	------	**6.98**	**6.98**
	U_1 - L_1	-188.72	5.63	-42.99			0.90	1.18	5.99	-45.77	0.00	0.00	Vehicle	Vehicle	------	-304.84	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	------	------	------	------	------	------	**10.57**	**10.57**
	U_2 - L_2	-155.84	5.93	-41.17			0.90	1.18	6.32	-43.83	0.00	0.00	Vehicle	Vehicle	------	-259.58	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	------	------	------	------	------	------	**9.55**	**9.55**
	U_3 - L_3	-134.53	5.72	-40.37			0.90	1.18	7.16	-42.98	0.00	0.00	Vehicle	Vehicle	------	-230.75	0.00	22.77	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	------	------	------	------	------	------	**7.38**	**7.38**
	U_4 - L_4	-64.47	8.16	-29.76			0.90	1.18	8.69	-31.68	0.00	0.00	Vehicle	Vehicle	------	-124.99	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	------	------	------	------	------	------	**8.67**	**8.67**
	U_5 - L_5	-19.94	14.93	-27.23			0.90	1.18	15.90	-28.99	0.00	0.00	Vehicle	Vehicle	------	-63.60	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	**11.06**	**11.06**
	U_6 - L_6	40.07	21.01	-20.04			0.90	1.18	22.37	-21.34	0.00	0.00	Vehicle	Vehicle	81.18	------	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	------	------	6.56	------	------	------	------	------	------	**17.33**	**17.33**	------	------
	U_7 - L_7	-26.03	-4.75	-0.99			0.90	1.18	-1.06	-5.05	0.00	0.00	Vehicle	Vehicle	------	-40.41	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	------	------	------	------	------	------	**62.25**	**62.25**
	U_8 - L_8	-125.22	-36.14	10.89			0.90	1.18	11.60	-38.47	0.00	0.00	Vehicle	Vehicle	------	-212.80	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	------	------	------	------	------	------	**10.54**	**10.54**
	U_9 - L_9	-174.50	-43.39	4.21			0.90	1.18	4.48	-46.19	0.00	0.00	Vehicle	Vehicle	------	-286.90	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	------	------	------	------	------	------	**11.19**	**11.19**
	U_{10} - L_{10}	-202.62	-46.10	1.87			0.90	1.18	1.99	-49.08	0.00	0.00	Vehicle	Vehicle	------	-327.22	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	------	------	------	------	------	------	**11.73**	**11.73**
	U_{11} - L_{11}	-229.48	-54.03	1.23			0.90	1.18	1.31	-57.53	0.00	0.00	Vehicle	Vehicle	------	-373.11	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	------	------	------	------	------	------	**9.31**	**9.31**
	U_{12} - L_{12}	-250.80	-54.65	1.31			0.90	1.18	1.40	-58.19	0.00	0.00	Vehicle	Vehicle	------	-401.68	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	6.06	12.00	Pass	------	------	------	------	------	------	**9.47**	**9.47**
	U_{13} - L_{13}	-223.27	-55.63	5.46			0.90	1.18	5.82	-59.23	0.00	0.00	Vehicle	Vehicle	------	-367.25	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	------	------	16.32	------	------	20.13	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	------	**7.88**	**7.88**
	U_{14} - L_{14}	-343.24	-48.44	41.52			0.90	1.18	-44.20	-51.57	0.00	0.00	Vehicle	Vehicle	------	-513.25	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	------	------	------	------	------	------	**13.74**	**13.74**
	U_{15} - L_{15}	-123.12	5.36	-42.87			0.90	1.17	5.64	-45.10	0.00	0.00	Vehicle	Vehicle	------	-218.68	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	------	**12.57**	**12.57**
	U_{16} - L_{16}	-156.68	4.20	-41.30			0.90	1.17	4.42	-43.45	0.00	0.00	Vehicle	Vehicle	------	-260.16	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	------	------	------	------	------	------	**11.72**	**11.72**
	U_{17} - L_{17}	-147.89	4.10	-43.00			0.90	1.17	4.32	-45.24	0.00	0.00	Vehicle	Vehicle	------	-251.08	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	------	------	------	------	------	------	**10.51**	**10.51**
	U_{18} - L_{18}	-142.21	5.15	-42.37			0.90	1.17	5.42	-44.57	0.00	0.00	Vehicle	Vehicle	------	-242.82	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	------	**9.76**	**9.76**
	U_{19} - L_{19}	-111.47	5.76	-37.48			0.90	1.17	6.06	-39.44	0.00	0.00	Vehicle	Vehicle	------	-196.18	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	------	------	------	------	------	------	**10.14**	**10.14**
	U_{20} - L_{20}	-76.56	10.84	-32.88			0.90	1.17	11.40	-34.59	0.00	0.00	Vehicle	Vehicle	------	-144.50	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	------	------	------	------	------	------	**8.63**	**8.63**
	U_{21} - L_{21}	-44.33	13.29	-29.31			0.90	1.17	13.98	-30.83	0.00	0.00	Vehicle	Vehicle	------	-97.72	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	------	------	------	------	------	------	**9.61**	**9.61**
	U_{22} - L_{22}	-21.25	-3.98	-0.38			0.90	1.17	-0.40	-4.18	0.00	0.00	Vehicle	Vehicle	------	-33.06	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	------	------	------	------	------	------	**76.61**	**76.61**
	U_{23} - L_{23}	-39.04	-29.16	15.63			0.90	1.17	16.44	-30.68	0.00	0.00	Vehicle	Vehicle	------	-90.63	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	------	------	------	------	------	------	**9.83**	**9.83**
	U_{24} - L_{24}	-74.80	-33.93	10.47			0.90	1.17	11.02	-35.69	0.00	0.00	Vehicle	Vehicle	------	-143.64	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	------	------	------	------	------	------	**8.42**	**8.42**
	U_{25} - L_{25}	-103.21	-44.44	7.04			0.90	1.17	7.41	-46.75	0.00	0.00	Vehicle	Vehicle	------	-194.95	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	------	------	15.75	------	------	31.50	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	------	**8.73**	**8.73**
	U_{26} - L_{26}	-120.15	-46.95	6.64			0.90	1.17	6.99	-49.39	0.00	0.00	Vehicle	Vehicle	------	-220.40	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	------	------	------	------	------	------	**9.25**	**9.25**
	U_{27} - L_{27}	-123.87	-48.98	5.49			0.90	1.17	5.77	-51.53	0.00	0.00	Vehicle	Vehicle	------	-228.01	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	------	------	------	------	------	------	**9.69**	**9.69**
	U_{28} - L_{28}	-135.49	-50.17	4.99			0.90	1.17	5.25	-52.78	0.00	0.00	Vehicle	Vehicle	------	-244.75	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	------	**10.05**	**10.05**
	U_{29} - L_{29}	-116.90	-51.71	2.92			0.90	1.17	3.07	-54.41	0.00	0.00	Vehicle	Vehicle	------	-222.69	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	------	------	------	------	------	------	**10.54**	**10.54**
	U_{30} - L_{30}	-261.40	-43.85	-41.50			0.90	1.18	-44.19	-46.69	0.00	0.00	Vehicle	Vehicle	------	-400.52	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	------	------	------	------	------	------	**16.53**	**16.53**
	U_{31} - L_{31}	-156.06	6.90	-40.26			0.90	1.18	7.34	-42.87	0.00	0.00	Vehicle	Vehicle	------	-258.60	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	------	------	------	------	------	------	**12.46**	**12.46**
	$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: 2F1
Condition: As-Inspected

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

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

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

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Diagonals																																														
Structure 1	U_1 - L_1	87.39	-9.50	38.98			0.90	1.24	43.40	-10.58	0.00	0.00	Vehicle	Vehicle	170.02	-----	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	-----	-----	-----	-----	-----	11.50	11.50	-----	-----
	U_1 - L_2	23.29	-10.46	32.77			0.90	1.24	36.48	-11.64	0.00	0.00	Vehicle	77.71	-----	-----	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	-----	-----	-----	-----	-----	11.08	11.08	-----	-----
	U_2 - L_3	-37.87	-10.17	27.07			0.90	1.24	30.14	-11.32	0.00	0.00	Vehicle	-----	-63.94	-----	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	-----	-----	-----	-----	-----	-----
	U_3 - L_4	-92.23	-9.84	2.33			0.90	1.24	2.60	-10.95	0.00	0.00	Vehicle	-----	-134.14	-----	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	-----	-----	-----	22.29	22.29	-----	-----
	U_3 - L_4	143.29	6.34	43.43			0.90	1.24	48.35	7.05	0.00	0.00	Vehicle	Vehicle	249.14	-----	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	-----	-----	-----	-----	-----	7.79	7.79	-----	-----
	U_4 - L_5	177.89	5.21	38.56			0.90	1.24	42.93	5.80	0.00	0.00	Vehicle	Vehicle	287.06	-----	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	-----	-----	-----	-----	-----	11.01	11.01	-----	-----
	U_4 - L_6	184.40	0.61	51.74			0.90	1.24	57.61	0.68	0.00	0.00	Vehicle	Vehicle	314.61	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	8.09	8.09	-----	-----
	U_5 - L_7	179.98	-1.27	58.06			0.90	1.24	64.63	-1.42	0.00	0.00	Vehicle	Vehicle	318.00	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	7.28	7.28	-----	-----
	U_6 - L_8	268.90	-0.25	49.32			0.90	1.20	53.17	-0.26	0.00	0.00	Vehicle	Vehicle	418.69	-----	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	-----	-----	-----	-----	-----	13.04	13.04	-----	-----
	U_6 - L_{19}	278.76	-5.05	40.02			0.90	1.20	43.15	-5.44	0.00	0.00	Vehicle	Vehicle	418.49	-----	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	-----	-----	-----	-----	-----	15.84	15.84	-----	-----
	U_{10} - L_{11}	284.98	5.60	58.00			0.90	1.20	62.53	6.04	0.00	0.00	Vehicle	Vehicle	451.77	-----	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	-----	-----	-----	-----	-----	10.01	10.01	-----	-----
	U_{11} - L_{12}	250.55	-1.32	47.83			0.90	1.20	51.57	-1.42	0.00	0.00	Vehicle	Vehicle	392.76	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	10.22	10.22	-----	-----
	U_{12} - L_{13}	189.62	-7.66	48.58			0.90	1.20	52.38	-8.25	0.00	0.00	Vehicle	Vehicle	314.59	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	8.43	8.43	-----	-----
	U_{13} - L_{14}	123.30	-15.05	40.84			0.90	1.20	44.04	-16.23	0.00	0.00	Vehicle	Vehicle	217.53	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.66	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	6.91	6.91	-----	-----
	U_{13} - L_{14}	-24.40	-23.52	8.74			0.90	1.20	9.42	-25.36	0.00	0.00	Vehicle	-----	-64.70	-----	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	-----	-----	-----	11.98	11.98	-----	-----
	U_{14} - L_{15}	48.54	-16.06	40.07			0.90	1.20	43.20	-17.31	0.00	0.00	Vehicle	Vehicle	119.26	-----	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	8.78	8.78	-----	-----
	U_{15} - L_{16}	146.57	-7.71	44.51			0.90	1.20	47.99	-8.31	0.00	0.00	Vehicle	Vehicle	252.93	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	7.88	7.88	-----	-----
	U_{16} - L_{17}	182.43	-6.63	52.31			0.90	1.20	56.40	-7.15	0.00	0.00	Vehicle	Vehicle	310.49	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	8.30	8.30	-----	-----
	U_{19} - L_{18}	223.79	1.60	59.58			0.90	1.20	64.23	1.72	0.00	0.00	Vehicle	Vehicle	374.43	-----	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	-----	-----	-----	-----	-----	7.57	7.57	-----	-----
	U_{20} - L_{19}	232.63	-2.31	49.74			0.90	1.20	53.63	-2.49	0.00	0.00	Vehicle	Vehicle	372.14	-----	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	-----	-----	-----	-----	-----	8.90	8.90	-----	-----
Structure 2	U_1 - L_1	213.47	-5.85	27.73			0.90	1.18	29.52	-6.22	0.00	0.00	Vehicle	Vehicle	315.88	-----	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	-----	-----	-----	-----	-----	19.11	19.11	-----	-----
	U_1 - L_2	200.39	-6.87	51.84			0.90	1.18	55.20	-7.31	0.00	0.00	Vehicle	Vehicle	332.27	-----	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	-----	-----	-----	-----	-----	10.46	10.46	-----	-----
	U_2 - L_3	172.76	-7.68	51.36			0.90	1.18	54.68	-8.18	0.00	0.00	Vehicle	Vehicle	295.68	-----	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	-----	-----	-----	-----	-----	8.74	8.74	-----	-----
	U_3 - L_4	147.11	-9.03	39.96			0.90	1.18	42.54	-9.61	0.00	0.00	Vehicle	Vehicle	246.55	-----	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	-----	-----	-----	-----	-----	10.11	10.11	-----	-----
	U_4 - L_5	49.07	-14.47	38.96			0.90	1.18	41.48	-15.40	0.00	0.00	Vehicle	Vehicle	117.72	-----	0.00	16.85	16.8486	556.00	131.71	13.3994	1.9682	61.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	9.13	9.13	-----	-----
	U_5 - L_6	2.97	-19.52	35.10			0.90	1.18	37.37	-20.79	0.00	0.00	Vehicle	52.43	-23.16	-----	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	-----	-----	-----	11.37	15.81	-----	-----
	U_6 - L_7	-85.72	-33.29	12.43			0.90	1.18	13.24	-35.45	0.00	0.00	Vehicle	-----	-157.51	-----	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	-----	-----	-----	-----	7.72	7.72	-----	-----
	U_6 - L_7	140.27	-16.42	27.07			0.90	1.18	28.82	-17.49	0.00	0.00	Vehicle	Vehicle	219.81	-----	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	-----	-----	-----	-----	-----	16.07	16.07	-----	-----
	U_8 - L_8	204.17	-6.22	44.59			0.90	1.18	47.47	-6.62	0.00	0.00	Vehicle	Vehicle	327.13	-----	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	-----	-----	-----	-----	-----	10.66	10.66	-----	-----
	U_{19} - L_9	234.82	4.06	52.87			0.90	1.18	56.29	4.33	0.00	0.00	Vehicle	Vehicle	378.44	-----	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	-----	-----	-----	-----	-----	9.64	9.64	-----	-----
	U_{11} - L_{10}	263.04	-0.37	61.85			0.90	1.18	65.85	-0.39	0.00	0.00	Vehicle	Vehicle	427.56	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	8.83	8.83	-----	-----
	U_{12} - L_{11}	273.97	-0.92	53.05			0.90	1.18	56.48	-0.98	0.00	0.00	Vehicle	Vehicle	429.58	-----	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	-----	-----	-----	-----	-----	10.10	10.10	-----	-----
	U_{13} - L_{12}	254.88	-5.92	56.60			0.90	1.18	60.26	-6.31	0.00	0.00	Vehicle	Vehicle	409.68	-----	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	-----	-----	-----	-----	-----	8.67	8.67	-----	-----
	U_{13} - L_{13}	217.66	-5.08	52.56			0.90	1.18	55.96	-5.41	0.00	0.00	Vehicle	Vehicle	355.71	-----	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	-----	-----	-----	-----	-----	10.00	10.00	-----	-----
	U_{14} - L_{15}	110.03	-4.89	44.27			0.90	1.17	46.57	-5.15	0.00	0.00	Vehicle	Vehicle	203.58	-----	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	-----	-----	-----	-----	-----	11.61	11.61	-----	-----
	U_{15} - L_{16}	132.26	-6.13	40.67			0.90	1.17	42.79	-6.45	0.00	0.00	Vehicle	Vehicle	227.57	-----	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	-----	-----	-----	-----	-----	12.11	12.11	-----	-----
	U_{16} - L_{17}	172.87	-3.60	50.96			0.90	1.17	53.61	-3.79	0.00	0.00	Vehicle	Vehicle	294.42	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	10.02	10.02	-----	-----
	U_{17} - L_{18}	160.16	-5.13	52.87			0.90	1.17	55.62	-5.40	0.00	0.00	Vehicle	Vehicle	280.52	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	8.82	8.82	-----	-----
	U_{18} - L_{19}	152.33	-6.71	43.43			0.90	1.17	45.69	-7.06	0.00	0.00	Vehicle	Vehicle	257.42	-----	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	-----	-----	-----	-----	-----	10.91	10.91	-----	-----
	U_{19} - L_{20}	120.67	-7.68	48.52			0.90	1.17	51.04	-8.08	0.00	0.00	Vehicle	Vehicle	223.22	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	9.46	9.46	-----	-----
	U_{20} - L_{21}	76.10	-13.14	42.19			0.90	1.17	44.39	-13.82	0.00	0.00	Vehicle	Vehicle	156.63	-----	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	-----	-----	-----	-----	-----	7.92	7.92	-----	-----
	U_{21} - L_{22}	31.50	-18.23	25.37			0.90	1.17	26.70	-19.18	0.00	0.00	Vehicle	75.65	-----	-----	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_{22} - L_{23}	24.27	-23.97	18.88			0.90	1.17	19.86	-25.21	0.00	0.00	Vehicle	57.37	-1.23	-----	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	-----	-----	-----	20.31	20.31	13.77	13.77
	U_{23} - L_{23}	72.21	-14.31	39.62			0.90	1.17	41.68	-15.05	0.00	0.00	Vehicle	148.06	-----	-----	0.00	16.85	16.8486	556.00	131.71	13.8958	1.9682	63.35	29.18	-417.35	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	8.53	8.53	-----	-----
	U_{23} - L_{24}	112.05	-9.38	46.49			0.90	1.17	48.92	-9.87	0.00	0.00	Vehicle	209.26	-----	-----	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	-----	-----	-----	-----	-----	10.04	10.04	-----	-----
	U_{24} - L_{25}	127.76	-8.48	54.42			0.90	1.17	57.26	-8.92	0.00	0.00	Vehicle	240.53	-----	-----	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	-----	-----	-----	-----	-----	9.13	9.13	-----	-----
	U_{25} - L_{26}	132.58	-6.86	49.06			0.90	1.17	51.61	-7.22	0.00	0.00	Vehicle	239.45	-----	-----	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	-----	-----	-----	-----	-----	10.04	10.04	-----	-----
	U_{26} - L_{27}	137.86	-5.92	53.98			0.90	1.17	56.79	-6.22	0.00	0.00	Vehicle	253.04	-----	-----	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	-----	-----	-----	-----	-----	10.08	10.08	-----	-----
	U_{27} - L_{28}	102.60	-3.74	48.68			0.90	1.17	51.21	-3.93	0.00	0.00	Vehicle	199.95	-----	-----	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	-----	-----	-----	-----	-----	10.70	10.70	-----	-----
	U_{28} - L_{29}	139.84	-5.66	42.39			0.90	1.18	45.13	-6.03	0.00	0.00	Vehicle	240.45	-----	-----	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	-----	-----	-----	-----	-----	14.13	14.13	-----	-----
	U_{29} - L_{31}	166.63	-7.81	47.97			0.90	1.18	51.07	-8.31	0.00	0.00	Vehicle	283.01	-----	-----	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	-----	-----	-----	-----	-----	11.24	11.24	-----	-----
	U_{31} - L_{32}	202.12	-4.62	55.36			0.90	1.18	58.95	-4.92	0.00	0.00	Vehicle	339.39	-----	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	10.90	10.90	-----	-----
	U_{32} - L_{34}	201.72	-4.55	48.07			0.90	1.18	51.18	-4.85	0.00	0.00	Vehicle	328.76	-----	-----	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	-----	-----	-----	-----	-----	12.56	12.56	-----	-----
	U_{33} - L_{35}	180.72	-1.09	54.52			0.90	1.18	58.05	-1.16	0.00	0.00	Vehicle	310.39	-----	-----	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	-----	-----	-----	-----	-----	10.28	10.28	-----	-----
	U_{34} - L_{36}	162.90	-6.30	54.00			0.90	1.18	57.49	-6.71	0.00	0.00	Vehicle	285.51	-----	-----	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	-----	-----

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 2F1 — 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 - Upper Chord	Structure 1	U$_0$ - U$_1$	-52.70	-32.78	-32.10			0.75	1.24	-29.78	-30.41	0.00	0.00	Vehicle	Vehicle	-----	-108.05	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	**16.86**	**16.86**
		U$_1$ - U$_2$	-61.66	-13.04	-59.13			0.75	1.24	-12.10	-54.86	0.00	0.00	Vehicle	Vehicle	-----	-151.47	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	**9.18**	**9.18**
		U$_2$ - U$_3$	-27.05	21.52	-63.44			0.75	1.24	19.96	-58.85	0.00	0.00	Vehicle	Vehicle	-----	-111.67	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	-----	-----	**9.15**	**9.15**
		U$_3$ - U$_4$	32.90	27.24	-55.34			0.75	1.24	25.27	-51.34	0.00	0.00	Vehicle	Vehicle	75.63	-23.97	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	**25.26**	**25.26**	**11.65**	**11.65**
		U$_4$ - U$_5$	34.76	27.36	-69.30			0.75	1.24	25.38	-64.29	0.00	0.00	Vehicle	Vehicle	78.18	-38.40	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	**25.07**	**25.07**	**9.33**	**9.33**
		U$_5$ - U$_6$	124.19	33.04	-59.98			0.75	1.24	30.65	-55.65	0.00	0.00	Vehicle	Vehicle	201.29	-----	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	-----	-----	**17.84**	**17.84**	-----	-----
		U$_6$ - U$_7$	223.31	-14.43	-42.73			0.75	1.24	-13.39	-39.64	0.00	0.00	Vehicle	Vehicle	272.90	-----	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$_8$	331.92	30.13	-16.83			0.75	1.24	27.95	-15.62	0.00	0.00	Vehicle	Vehicle	467.83	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	**27.85**	**27.85**	-----	-----
		U$_8$ - U$_9$	267.71	-10.00	3.88			0.75	1.20	3.48	-8.99	0.00	0.00	Vehicle	Vehicle	352.55	-----	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	-----	-----	**192.66**	**192.66**	-----	-----
		U$_9$ - U$_{10}$	89.12	-14.67	-27.13			0.75	1.20	-13.18	-24.38	0.00	0.00	Vehicle	Vehicle	98.72	-----	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	-33.04	-53.42			0.75	1.20	-29.69	-48.00	0.00	0.00	Vehicle	Vehicle	-----	-162.36	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**10.84**	**10.84**
		U$_{11}$ - U$_{12}$	-230.86	-54.94	-63.63			0.75	1.20	-49.36	-57.17	0.00	0.00	Vehicle	Vehicle	-----	-374.44	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	-----	-----	**10.18**	**10.18**
		U$_{12}$ - U$_{13}$	-342.15	-67.92	-76.33			0.75	1.20	-61.02	-68.58	0.00	0.00	Vehicle	Vehicle	-----	-533.95	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	-----	-----	**11.60**	**11.60**
		U$_{13}$ - U$_{14}$	-421.98	17.21	-94.28			0.75	1.20	15.46	-84.71	0.00	0.00	Vehicle	Vehicle	-----	-658.70	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**10.69**	**10.69**
		U$_{14}$ - U$_{15}$	-422.87	-70.85	-103.37			0.75	1.20	-63.65	-92.88	0.00	0.00	Vehicle	Vehicle	-----	-670.48	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	-----	-----	**9.74**	**9.74**
		U$_{15}$ - U$_{16}$	-440.39	-76.26	-107.27			0.75	1.20	-68.52	-96.38	0.00	0.00	Vehicle	Vehicle	-----	-697.81	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	-----	-----	**9.20**	**9.20**
		U$_{16}$ - U$_{17}$	-422.93	10.01	-96.97			0.75	1.20	8.99	-87.12	0.00	0.00	Vehicle	Vehicle	-----	-663.08	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**10.38**	**10.38**
		U$_{17}$ - U$_{18}$	-341.45	-27.25	-82.14			0.75	1.20	-24.49	-73.81	0.00	0.00	Vehicle	Vehicle	-----	-539.83	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	-----	-----	**8.53**	**8.53**
		U$_{18}$ - U$_{19}$	-247.63	4.09	-57.15			0.75	1.20	3.67	-51.34	0.00	0.00	Vehicle	Vehicle	-----	-388.66	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	-----	-----	**8.37**	**8.37**
		U$_{19}$ - U$_{20}$	-132.06	-2.71	-25.99			0.75	1.20	-2.43	-23.35	0.00	0.00	Vehicle	Vehicle	-----	-202.03	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	-----	-----	**23.36**	**23.36**
	Structure 2	U$_0$ - U$_1$	-131.63	-22.72	-22.56			0.75	1.18	-20.01	-20.16	0.00	0.00	Vehicle	Vehicle	-----	-197.32	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**25.59**	**25.59**
		U$_1$ - U$_2$	-247.12	-1.43	-48.08			0.75	1.18	-1.27	-42.66	0.00	0.00	Vehicle	Vehicle	-----	-376.71	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	-----	-----	**12.76**	**12.76**
		U$_2$ - U$_3$	-347.28	-67.91	-71.68			0.75	1.18	-60.25	-63.60	0.00	0.00	Vehicle	Vehicle	-----	-534.14	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.50	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	-----	-----	**11.48**	**11.48**
		U$_3$ - U$_4$	-437.20	-78.65	-85.93			0.75	1.18	-69.78	-76.24	0.00	0.00	Vehicle	Vehicle	-----	-667.47	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	-----	-----	**11.86**	**11.86**
		U$_4$ - U$_5$	-468.83	-81.19	-89.89			0.75	1.18	-72.03	-79.76	0.00	0.00	Vehicle	Vehicle	-----	-713.16	15.14	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**12.77**	**12.77**
		U$_5$ - U$_6$	-471.14	30.11	-102.51			0.75	1.18	26.71	-90.95	0.00	0.00	Vehicle	Vehicle	-----	-730.72	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	-----	-----	**11.17**	**11.17**
		U$_6$ - U$_7$	-414.50	33.54	-95.46			0.75	1.18	29.76	-84.69	0.00	0.00	Vehicle	Vehicle	-----	-648.95	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	-----	-----	**10.94**	**10.94**
		U$_7$ - U$_8$	-413.54	33.59	-100.76			0.75	1.18	29.80	-89.40	0.00	0.00	Vehicle	Vehicle	-----	-653.82	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	-----	-----	**10.38**	**10.38**
		U$_8$ - U$_9$	-322.06	36.70	-92.10			0.75	1.18	32.57	-81.71	0.00	0.00	Vehicle	Vehicle	-----	-524.90	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	-----	-----	**9.84**	**9.84**
		U$_9$ - U$_{10}$	-182.16	38.49	-79.16			0.75	1.18	34.15	-70.23	0.00	0.00	Vehicle	Vehicle	-----	-328.11	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	-----	-----	**10.02**	**10.02**
		U$_{10}$ - U$_{11}$	-32.61	40.49	-62.85			0.75	1.18	35.92	-55.76	0.00	0.00	Vehicle	Vehicle	4.30	-114.88	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	**26.26**	**26.26**	**13.21**	**13.21**
		U$_{11}$ - U$_{12}$	133.57	41.64	-45.02			0.75	1.18	36.94	-39.95	0.00	0.00	Vehicle	Vehicle	221.66	-----	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	-----	-----	**21.04**	**21.04**	-----	-----
		U$_{12}$ - U$_{13}$	289.98	-3.85	-28.46			0.75	1.18	-3.41	-25.25	0.00	0.00	Vehicle	Vehicle	372.54	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	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	35.00	-11.24			0.75	1.18	31.05	-9.97	0.00	0.00	Vehicle	Vehicle	605.57	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	**36.37**	**36.37**	-----	-----
		U$_{14}$ - U$_{15}$	474.48	-10.40	-9.59			0.75	1.17	-8.40	-9.12	0.00	0.00	Vehicle	Vehicle	605.89	-----	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	-----	-----	-----	-----	-----	-----
		U$_{15}$ - U$_{16}$	383.31	23.92	-20.74			0.75	1.17	20.97	-18.18	0.00	0.00	Vehicle	Vehicle	525.57	-----	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	-----	-----	**42.40**	**42.40**	-----	-----
		U$_{16}$ - U$_{17}$	279.61	-14.46	-29.41			0.75	1.17	-12.67	-25.78	0.00	0.00	Vehicle	Vehicle	347.01	-----	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$_{17}$ - U$_{18}$	172.67	-22.84	-46.97			0.75	1.17	-20.02	-41.18	0.00	0.00	Vehicle	Vehicle	198.43	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U$_{18}$ - U$_{19}$	74.40	-40.44	-53.19			0.75	1.17	-35.46	-46.64	0.00	0.00	Vehicle	Vehicle	50.62	-----	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	24.63	-59.89			0.75	1.17	21.59	-52.51	0.00	0.00	Vehicle	Vehicle	15.10	-81.23	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	**38.45**	**38.45**	**13.01**	**13.01**
	Structure 3	U$_0$ - U$_1$	-62.02	-61.74	-75.77			0.75	1.17	-54.13	-66.43	0.00	0.00	Vehicle	Vehicle	-----	-166.98	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	-----	-----	**11.66**	**11.66**
		U$_1$ - U$_2$	-88.69	17.95	-75.19			0.75	1.17	15.74	-65.92	0.00	0.00	Vehicle	Vehicle	-----	-200.99	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**11.35**	**11.35**
		U$_2$ - U$_3$	-88.87	-58.80	-81.76			0.75	1.17	-51.55	-71.68	0.00	0.00	Vehicle	Vehicle	-----	-208.71	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**10.43**	**10.43**
		U$_3$ - U$_4$	-76.60	-59.01	-83.11			0.75	1.17	-51.73	-72.86	0.00	0.00	Vehicle	Vehicle	-----	-194.30	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**10.43**	**10.43**
		U$_4$ - U$_5$	-37.55	25.69	-76.98			0.75	1.17	22.52	-67.49	0.00	0.00	Vehicle	Vehicle	-----	-136.56	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**9.71**	**9.71**
		U$_5$ - U$_6$	37.36	28.69	-66.62			0.75	1.17	25.16	-58.41	0.00	0.00	Vehicle	Vehicle	81.27	-27.37	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	**28.98**	**28.98**	**11.72**	**11.72**
		U$_6$ - U$_7$	128.18	31.03	-52.83			0.75	1.17	27.21	-46.32	0.00	0.00	Vehicle	Vehicle	202.00	-----	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	-----	-----	**23.45**	**23.45**	-----	-----
		U$_7$ - U$_8$	233.91	33.84	-39.76			0.75	1.17	29.67	-34.86	0.00	0.00	Vehicle	Vehicle	342.65	-----	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	-----	-----	**27.31**	**27.31**	-----	-----
		U$_8$ - U$_9$	337.95	-9.38	-24.95			0.75	1.17	-8.22	-21.87	0.00	0.00	Vehicle	Vehicle	428.64	-----	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	-----	-----	-----	-----	-----	-----
		U$_9$ - U$_{10}$	437.48	29.37	-9.65			0.75	1.17	25.75	-8.46	0.00	0.00	Vehicle	Vehicle	602.19	-----	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	-----	-----	**43.77**	**43.77**	-----	-----
		U$_{10}$ - U$_{11}$	420.86	-7.84	20.00			0.75	1.18	17.75	-6.96	0.00	0.00	Vehicle	Vehicle	570.19	-----	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	-----	-----	**64.43**	**64.43**	-----	-----
		U$_{11}$ - U$_{12}$	300.88	33.14	-18.00			0.75	1.18	29.40	-15.97	0.00	0.00	Vehicle	Vehicle	429.36	-----	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	-----	-----	**28.51**

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 2F1 **Condition:** As-Inspected

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

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

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

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Lower Chord	Structure 1	L$_0$ - L$_1$	8.48	7.62	-1.61			0.75	1.24	7.07	-1.50	0.00	0.00	Vehicle	Vehicle	20.22	-----	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	-----	-----	**69.86**	**69.86**	-----	-----
		L$_1$ - L$_2$	50.83	32.81	31.36			0.75	1.24	30.44	29.09	0.00	0.00	Vehicle	Vehicle	105.66	-----	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	-----	-----	**14.84**	**14.84**	-----	-----
		L$_2$ - L$_3$	61.27	-15.50	70.81			0.75	1.24	65.70	-14.38	0.00	0.00	Vehicle	Vehicle	165.05	-----	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	-----	-----	**9.24**	**9.24**	-----	-----
		L$_3$ - L$_4$	25.72	41.74	72.90			0.75	1.24	67.63	38.72	0.00	0.00	Vehicle	Vehicle	121.36	-----	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	-----	-----	**9.51**	**9.51**	-----	-----
		L$_4$ - L$_5$	-118.55	-30.81	45.41			0.75	1.24	42.13	-28.58	0.00	0.00	Vehicle	Vehicle	-----	-191.28	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	-----	-----	**13.36**	**13.36**
		L$_5$ - L$_6$	-217.97	-37.36	28.25			0.75	1.24	26.21	-34.66	0.00	0.00	Vehicle	Vehicle	-----	-328.42	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	-----	-----	**12.74**	**12.74**
		L$_6$ - L$_7$	-320.57	-40.46	5.05			0.75	1.24	4.69	-37.53	0.00	0.00	Vehicle	Vehicle	-----	-465.53	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	-----	-----	**16.63**	**16.63**
		L$_7$ - L$_8$	-417.42	-21.62	-13.48			0.75	1.24	-12.50	-20.06	0.00	0.00	Vehicle	Vehicle	-----	-568.72	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	-----	-----	**38.98**	**38.98**
		L$_8$ - L$_9$	-411.08	-35.89	-3.91			0.75	1.20	-3.51	-32.25	0.00	0.00	Vehicle	Vehicle	-----	-576.33	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	-----	-----	**24.45**	**24.45**
		L$_9$ - L$_{10}$	-247.97	-9.49	9.19			0.75	1.20	8.26	-8.53	0.00	0.00	Vehicle	Vehicle	-----	-333.44	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	-----	-----	**81.77**	**81.77**
		L$_{10}$ - L$_{11}$	-65.37	-31.17	32.47			0.75	1.20	29.17	-28.00	0.00	0.00	Vehicle	Vehicle	-----	-121.38	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	-----	-----	**15.53**	**15.53**
		L$_{11}$ - L$_{12}$	101.81	29.27	47.56			0.75	1.20	42.73	26.29	0.00	0.00	Vehicle	Vehicle	187.90	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**11.52**	**11.52**	-----	-----
		L$_{12}$ - L$_{13}$	264.06	29.71	71.87			0.75	1.20	64.58	26.69	0.00	0.00	Vehicle	Vehicle	427.23	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**11.01**	**11.01**	-----	-----
		L$_{13}$ - L$_{14}$	373.80	62.78	83.07			0.75	1.20	74.64	56.40	0.00	0.00	Vehicle	Vehicle	582.97	-----	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	-----	-----	**12.52**	**12.52**	-----	-----
		L$_{14}$ - L$_{15}$	476.54	-12.63	84.31			0.75	1.20	75.75	-11.35	0.00	0.00	Vehicle	Vehicle	717.99	-----	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	-----	-----	**14.49**	**14.49**	-----	-----
		L$_{15}$ - L$_{16}$	460.23	-9.40	80.08			0.75	1.20	71.95	-8.45	0.00	0.00	Vehicle	Vehicle	691.84	-----	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	-----	-----	**15.49**	**15.49**	-----	-----
		L$_{16}$ - L$_{17}$	381.61	-6.24	67.95			0.75	1.20	61.05	-5.61	0.00	0.00	Vehicle	Vehicle	575.46	-----	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	-----	-----	**13.68**	**13.68**	-----	-----
		L$_{17}$ - L$_{18}$	289.18	-3.61	48.57			0.75	1.20	43.64	-3.24	0.00	0.00	Vehicle	Vehicle	432.67	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**13.62**	**13.62**	-----	-----
		L$_{18}$ - L$_{19}$	176.31	-1.89	20.64			0.75	1.20	18.55	-1.70	0.00	0.00	Vehicle	Vehicle	253.31	-----	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	-----	-----	**17.59**	**17.59**	-----	-----
		L$_{19}$ - L$_{20}$	69.72	-0.33	-5.28			0.75	1.20	-0.29	-4.75	0.00	0.00	Vehicle	Vehicle	90.26	-----	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	-----	-----	-----	-----
		L$_0$' - L$_1$'	24.42	-2.66	-0.59			0.75	1.18	-0.52	-2.36	0.00	0.00	Vehicle	Vehicle	31.07	-----	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	23.46	12.19			0.75	1.18	20.82	10.82	0.00	0.00	Vehicle	Vehicle	207.01	-----	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	-----	-----	**23.77**	**23.77**	-----	-----
		L$_2$' - L$_3$'	252.76	39.42	51.31			0.75	1.18	45.53	34.97	0.00	0.00	Vehicle	Vehicle	387.78	-----	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	-----	-----	**15.89**	**15.89**	-----	-----
		L$_3$' - L$_4$'	352.26	55.65	66.46			0.75	1.18	58.96	49.37	0.00	0.00	Vehicle	Vehicle	534.59	-----	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	-----	-----	**16.23**	**16.23**	-----	-----
		L$_4$' - L$_5$'	447.15	71.78	78.56			0.75	1.18	69.71	63.69	0.00	0.00	Vehicle	Vehicle	671.92	-----	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	-----	-----	**17.26**	**17.26**	-----	-----
		L$_5$' - L$_6$'	477.91	76.09	95.24			0.75	1.18	84.50	67.51	0.00	0.00	Vehicle	Vehicle	731.13	-----	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	-----	-----	**15.56**	**15.56**	-----	-----
		L$_6$' - L$_7$'	482.67	-30.88	103.07			0.75	1.18	91.44	-27.40	0.00	0.00	Vehicle	Vehicle	746.34	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**14.60**	**14.60**	-----	-----
		L$_7$' - L$_8$'	336.57	-37.36	76.54			0.75	1.18	67.91	-33.14	0.00	0.00	Vehicle	Vehicle	525.83	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	**14.80**	**14.80**	-----	-----
		L$_8$' - L$_9$'	196.00	-38.93	68.58			0.75	1.18	60.85	-34.54	0.00	0.00	Vehicle	Vehicle	333.90	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	**14.85**	**14.85**	-----	-----
		L$_9$' - L$_{10}$'	45.53	-40.71	51.40			0.75	1.18	45.60	-36.12	0.00	0.00	Vehicle	Vehicle	118.48	-----	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	-----	-----	**17.90**	**17.90**	-----	-----
	Structure 2	L$_{10}$ - L$_{11}$	-126.32	-41.35	29.32			0.75	1.18	26.01	-36.68	0.00	0.00	Vehicle	Vehicle	-----	-211.91	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	-----	-----	**14.29**	**14.29**
		L$_{11}$ - L$_{12}$	-284.95	-42.36	16.95			0.75	1.18	15.04	-37.59	0.00	0.00	Vehicle	Vehicle	-----	-419.30	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	-----	-----	**17.18**	**17.18**
		L$_{12}$ - L$_{13}$	-433.89	-37.56	3.65			0.75	1.18	3.24	-33.33	0.00	0.00	Vehicle	Vehicle	-----	-607.38	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	-----	-----	**25.25**	**25.25**
		L$_{13}$ - L$_{14}$	-552.76	-17.27	-14.20			0.75	1.18	-12.60	-15.32	0.00	0.00	Vehicle	Vehicle	-----	-738.50	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	-----	-----	**62.82**	**62.82**
		L$_{14}$ - L$_{15}$	-573.53	-21.44	11.87			0.75	1.17	10.41	-18.80	0.00	0.00	Vehicle	Vehicle	-----	-770.02	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	-----	-----	**50.10**	**50.10**
		L$_{15}$ - L$_{16}$	-493.00	-31.41	4.64			0.75	1.17	4.07	-27.54	0.00	0.00	Vehicle	Vehicle	-----	-676.69	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**28.41**	**28.41**
		L$_{16}$ - L$_{17}$	-395.34	-2.85	17.12			0.75	1.17	15.01	-2.50	0.00	0.00	Vehicle	Vehicle	-----	-517.19	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	-----	-----	**260.97**	**260.97**
		L$_{17}$ - L$_{18}$	-288.08	9.58	31.45			0.75	1.17	27.57	8.40	0.00	0.00	Vehicle	Vehicle	-----	-363.58	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	-----	-----
		L$_{18}$ - L$_{19}$	-175.85	18.18	41.57			0.75	1.17	36.45	15.94	0.00	0.00	Vehicle	Vehicle	-----	-207.88	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	37.26	50.27			0.75	1.17	44.07	32.67	0.00	0.00	Vehicle	Vehicle	-----	-59.03	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$_{21}$	7.59	32.80	65.88			0.75	1.17	57.76	28.76	0.00	0.00	Vehicle	Vehicle	84.96	-----	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	-----	-----	**16.57**	**16.57**	-----	-----
		L$_{21}$ - L$_{22}$	59.10	48.54	71.39			0.75	1.17	62.59	42.56	0.00	0.00	Vehicle	Vehicle	158.20	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**14.47**	**14.47**	-----	-----
		L$_{22}$ - L$_{23}$	72.03	-12.27	66.51			0.75	1.17	58.32	-10.75	0.00	0.00	Vehicle	Vehicle	169.44	-----	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	-----	-----	**15.31**	**15.31**	-----	-----
		L$_{23}$ - L$_{24}$	33.57	-26.31	65.53			0.75	1.17	57.45	-23.07	0.00	0.00	Vehicle	Vehicle	118.33	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**16.21**	**16.21**	-----	-----
		L$_{24}$ - L$_{25}$	-45.06	-29.24	52.24			0.75	1.17	45.80	-25.63	0.00	0.00	Vehicle	Vehicle	0.97	-91.90	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	**15.81**	**15.81**	**20.62**	**20.62**
		L$_{25}$ - L$_{26}$	-134.95	-32.09	31.50			0.75	1.17	27.62	-28.13	0.00	0.00	Vehicle	Vehicle	-----	-212.01	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**15.59**	**15.59**
		L$_{26}$ - L$_{27}$	-245.92	-32.96	22.32			0.75	1.17	19.57	-28.90	0.00	0.00	Vehicle	Vehicle	-----	-357.27	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	-----	-----	**16.67**	**16.67**
		L$_{27}$ - L$_{28}$	-351.86	-34.52	9.05			0.75	1.17	7.94	-30.27	0.00	0.00	Vehicle	Vehicle	-----	-496.77	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	-----	-----	**22.99**	**22.99**
		L$_{28}$ - L$_{29}$	-458.41	-33.10	-7.46			0.75	1.17	-6.54	-29.02	0.00	0.00	Vehicle	Vehicle	-----	-633.66	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	-----	-----	**28.15**	**28.15**
		L$_{29}$ - L$_{30}$	-542.36	-14.40	-13.14			0.75	1.17	-11.52	-12.62	0.00	0.00	Vehicle	Vehicle	-----	-721.48	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	-----	-----	**77.08**	**77.08**
		L$_{30}$ - L$_{31}$	-514.21	-28.47	-24.71			0.75	1.18	-21.92	-25.26	0.00	0.00	Vehicle	Vehicle	-----	-701.31	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	-----	-----	**39.61**	**39.61**
		L$_{31}$ - L$_{32}$	-411.27	-28.45	2.40			0.75	1.18	2.13	-25.24	0.00	0.00	Vehicle	Vehicle	-----	-567.47	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	-----	-----	**34.22**	**34.22**
		L$_{32}$ - 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: 2F1 **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

Member Forces from STAAD | Member Capacity in Tension | Member Capacity in Compression | Plate Thickness/Ratios | Tension Member | Comp. Member

Location	Member	D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Verticals	Structure 1																																															
	U_0 - L_0	-67.68	6.16	-54.76			0.75	1.24	5.72	-50.80	0.00	0.00	Vehicle	Vehicle	-----	-154.03	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	-----	-----	-----	-----	-----	5.45	5.45
	U_1 - L_1	-24.09	5.91	-33.51			0.75	1.24	5.49	-31.09	0.00	0.00	Vehicle	Vehicle	-----	-71.72	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	-----	-----	-----	-----	-----	10.55	10.55
	U_2 - L_2	12.87	-7.44	-23.65			0.75	1.24	-6.90	-21.94	0.00	0.00	Vehicle	Vehicle	7.77	-11.78	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	-----	-----	-----	-----	-----	16.63	16.63
	U_3 - L_3	37.37	10.98	-15.80			0.75	1.24	10.18	-14.66	0.00	0.00	Vehicle	Vehicle	61.82	-----	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	38.33	38.33	-----	-----
	U_4 - L_4	-15.55	-14.20	4.64			0.75	1.24	4.31	-13.18	0.00	0.00	Vehicle	Vehicle	-----	-37.34	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	25.37	25.37
	U_5 - L_5	-92.59	-37.83	4.97			0.75	1.24	4.61	-35.09	0.00	0.00	Vehicle	Vehicle	-----	-165.99	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	-----	-----	-----	-----	-----	9.48	9.48
	U_6 - L_6	-117.07	-48.71	3.99			0.75	1.24	3.70	-45.19	0.00	0.00	Vehicle	Vehicle	-----	-210.93	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	8.65	8.65
	U_7 - L_7	-127.52	-55.47	0.27			0.75	1.24	0.25	-51.47	0.00	0.00	Vehicle	Vehicle	-----	-232.68	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	-----	-----	-----	-----	-----	6.46	6.46
	U_8 - L_8	-368.71	-66.26	-66.13			0.75	1.24	-61.35	-61.47	0.00	0.00	Vehicle	Vehicle	-----	-559.24	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	-----	-----	-----	11.33	11.33
	U_9 - L_9	-214.56	2.96	-50.16			0.75	1.20	2.66	-45.07	0.00	0.00	Vehicle	Vehicle	-----	-337.52	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	-----	-----	-----	-----	-----	9.55	9.55
	U_{10} - L_{10}	-198.68	2.71	-48.51			0.75	1.20	2.43	-43.58	0.00	0.00	Vehicle	Vehicle	-----	-314.94	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	12.48	12.48
	U_{11} - L_{11}	-171.40	-0.82	-42.85			0.75	1.20	-0.73	-38.50	0.00	0.00	Vehicle	Vehicle	-----	-272.87	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	-----	-----	-----	-----	-----	12.21	12.21
	U_{12} - L_{12}	-128.37	13.19	-36.06			0.75	1.20	11.85	-32.40	0.00	0.00	Vehicle	Vehicle	-----	-208.99	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	-----	-----	-----	-----	-----	12.48	12.48
	U_{13} - L_{13}	-96.65	16.08	-31.34			0.75	1.20	14.44	-28.15	0.00	0.00	Vehicle	Vehicle	-----	-162.24	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	-----	-----	-----	-----	-----	10.08	10.08
	U_{14} - L_{14}	-11.04	-2.97	-3.27			0.75	1.20	-2.67	-2.94	0.00	0.00	Vehicle	Vehicle	-----	-18.18	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	-----	-----	-----	-----	-----	113.44	113.44
	U_{15} - L_{15}	-2.47	-30.92	22.68			0.75	1.20	20.38	-27.78	0.00	0.00	Vehicle	Vehicle	23.27	-39.33	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	21.11	21.11	12.26	12.26
	U_{16} - L_{16}	-31.27	-34.91	18.72			0.75	1.20	16.82	-31.37	0.00	0.00	Vehicle	Vehicle	-----	-81.43	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	-----	-----	-----	-----	-----	9.89	9.89
	U_{17} - L_{17}	-105.05	-42.66	8.15			0.75	1.20	7.32	-38.33	0.00	0.00	Vehicle	Vehicle	-----	-186.40	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	7.99	7.99
	U_{18} - L_{18}	-126.74	-49.97	2.72			0.75	1.20	2.45	-44.89	0.00	0.00	Vehicle	Vehicle	-----	-223.13	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	-----	-----	-----	-----	-----	8.88	8.88
	U_{19} - L_{19}	-166.77	-53.84	-3.10			0.75	1.20	-2.79	-48.38	0.00	0.00	Vehicle	Vehicle	-----	-279.69	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	-----	-----	-----	-----	-----	9.29	9.29
	U_{20} - L_{20}	-184.59	-64.19	-3.65			0.75	1.20	-3.28	-57.68	0.00	0.00	Vehicle	Vehicle	-----	-314.94	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	-----	-----	-----	-----	-----	6.89	6.89
	Structure 2																																															
	U_0 - L_0	-203.59	6.60	-49.50			0.75	1.18	5.85	-43.91	0.00	0.00	Vehicle	Vehicle	-----	-321.75	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	-----	-----	-----	-----	-----	9.99	9.99
	U_1 - L_1	-176.11	7.20	-48.57			0.75	1.18	6.39	-43.09	0.00	0.00	Vehicle	Vehicle	-----	-284.96	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	11.52	11.52
	U_2 - L_2	-137.55	6.83	-41.34			0.75	1.18	6.06	-36.68	0.00	0.00	Vehicle	Vehicle	-----	-226.50	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	-----	-----	-----	-----	-----	11.91	11.91
	U_3 - L_3	-117.62	3.85	-41.19			0.75	1.18	3.41	-36.55	0.00	0.00	Vehicle	Vehicle	-----	-200.41	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	-----	-----	-----	-----	-----	9.15	9.15
	U_4 - L_4	-50.97	17.40	-31.65			0.75	1.18	15.44	-28.09	0.00	0.00	Vehicle	Vehicle	-----	-102.78	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	10.26	10.26
	U_5 - L_5	-13.78	20.95	-27.10			0.75	1.18	18.59	-24.04	0.00	0.00	Vehicle	Vehicle	6.25	-49.16	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	23.75	23.75	13.59	13.59
	U_6 - L_6	45.47	23.58	-23.00			0.75	1.18	20.92	-20.40	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	-----	-----	6.56	-----	-----	-----	-----	-----	18.27	18.27	-----	-----
	U_7 - L_7	-22.33	2.04	1.53			0.75	1.18	1.81	1.36	0.00	0.00	Vehicle	Vehicle	-----	-27.27	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	-----
	U_8 - L_8	-120.08	-38.25	18.50			0.75	1.18	16.41	-33.93	0.00	0.00	Vehicle	Vehicle	-----	-200.21	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	-----	-----	-----	-----	-----	12.10	12.10
	U_9 - L_9	-177.03	-42.61	12.49			0.75	1.18	11.08	-37.80	0.00	0.00	Vehicle	Vehicle	-----	-279.28	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	-----	-----	-----	-----	-----	13.60	13.60
	U_{10} - L_{10}	-205.88	-49.11	11.39			0.75	1.18	10.10	-43.57	0.00	0.00	Vehicle	Vehicle	-----	-324.29	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	-----	-----	-----	-----	-----	13.14	13.14
	U_{11} - L_{11}	-239.23	-53.41	5.99			0.75	1.18	5.31	-47.39	0.00	0.00	Vehicle	Vehicle	-----	-372.61	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	-----	-----	-----	-----	-----	11.09	11.09
	U_{12} - L_{12}	-257.95	-53.68	4.08			0.75	1.18	3.62	-47.63	0.00	0.00	Vehicle	Vehicle	-----	-397.26	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	-----	-----	-----	-----	-----	11.42	11.42
	U_{13} - L_{13}	-243.82	-61.12	3.44			0.75	1.18	3.05	-54.23	0.00	0.00	Vehicle	Vehicle	-----	-387.47	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	-----	-----	-----	-----	-----	8.23	8.23
	U_{14} - L_{14}	-420.85	-55.13	-54.56			0.75	1.18	-48.40	-48.91	0.00	0.00	Vehicle	Vehicle	-----	-610.69	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	-----	-----	-----	-----	-----	12.90	12.90
	U_{15} - L_{15}	-158.83	5.64	-56.25			0.75	1.17	4.94	-49.32	0.00	0.00	Vehicle	Vehicle	-----	-270.60	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	-----	-----	-----	-----	-----	10.77	10.77
	U_{16} - L_{16}	-174.02	1.23	-48.10			0.75	1.17	1.07	-42.18	0.00	0.00	Vehicle	Vehicle	-----	-281.06	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	-----	-----	-----	-----	-----	11.67	11.67
	U_{17} - L_{17}	-156.46	7.13	-47.81			0.75	1.17	6.25	-41.92	0.00	0.00	Vehicle	Vehicle	-----	-257.89	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	-----	-----	-----	-----	-----	11.14	11.14
	U_{18} - L_{18}	-142.21	5.63	-43.45			0.75	1.17	4.94	-38.09	0.00	0.00	Vehicle	Vehicle	-----	-234.39	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	-----	-----	-----	-----	-----	11.42	11.42
	U_{19} - L_{19}	-113.66	13.43	-38.23			0.75	1.17	11.78	-33.52	0.00	0.00	Vehicle	Vehicle	-----	-191.34	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	-----	-----	-----	-----	-----	11.86	11.86
	U_{20} - L_{20}	-76.51	17.11	-32.46			0.75	1.17	15.00	-28.45	0.00	0.00	Vehicle	Vehicle	-----	-136.46	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	10.50	10.50
	U_{21} - L_{21}	-45.77	15.44	-30.13			0.75	1.17	13.54	-26.42	0.00	0.00	Vehicle	Vehicle	-----	-93.85	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	-----	-----	-----	-----	-----	11.16	11.16
	U_{22} - L_{22}	-17.72	4.29	3.54			0.75	1.17	3.76	3.11	0.00	0.00	Vehicle	Vehicle	-----	-19.00	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	-31.34	21.36			0.75	1.17	18.73	-27.48	0.00	0.00	Vehicle	Vehicle	-----	-75.61	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	-----	-----	-----	-----	-----	11.28	11.28
	U_{24} - L_{24}	-62.06	-32.44	17.09			0.75	1.17	14.98	-28.44	0.00	0.00	Vehicle	Vehicle	-----	-117.66	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	-----	-----	-----	-----	-----	11.01	11.01
	U_{25} - L_{25}	-103.15	-43.79	14.02			0.75	1.17	12.29	-38.39	0.00	0.00	Vehicle	Vehicle	-----	-184.00	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	-----	-----	-----	-----	-----	10.63	10.63
	U_{26} - L_{26}	-134.38	-47.53	10.47			0.75	1.17	9.18	-41.67	0.00	0.00	Vehicle	Vehicle	-----	-228.86	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	-----	-----	-----	-----	-----	10.63	10.63
	U_{27} - L_{27}	-156.03	-48.93	6.08			0.75	1.17	5.33	-42.90	0.00	0.00	Vehicle	Vehicle	-----	-258.60	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	-----	-----	-----	-----	-----	10.89	10.89
	U_{28} - L_{28}	-179.40	-54.90	1.86			0.75	1.17	1.63	-48.13	0.00	0.00	Vehicle	Vehicle	-----	-295.80	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	10.11	10.11
	U_{29} - L_{29}	-171.60	-56.73	2.64			0.75	1.17	2.32	-49.74	0.00	0.00	Vehicle	Vehicle	-----	-287.75	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	-----	-----	-----	-----	-----	10.42	10.42
	U_{30} - L_{30}	-393.29	-56.30	-54.12			0.75	1.18	-48.01	-49.95	0.00	0.00	Vehicle	Vehicle	-----	-576.21	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	-----	-----	-----	-----	-----	13.18	13.18
	U_{31} - L_{31}	-203.49	5.61	-50.28			0.75	1.18	4.98	-44.61	0.00	0.00	Vehicle	Vehicle	-----	-322.53	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	-----	-----	-----	-----	-----	10.91	10.91
	U_{32} - L_{32}	-222.61	2.15	-53.51			0.75	1.18	1.91	-47.48	0.00	0.00	Vehicle	Vehicle	-----	-351.11	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.

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: 2F1
Condition: As-Inspected

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

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

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

Location	Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Diagonals	Structure 1																																															
	U_0 - L_1	53.29	0.69	30.10			0.75	1.24	27.93	0.64	0.00	0.00	Vehicle	Vehicle	105.58	-----	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	-----	-----	-----	-----	-----	**19.09**	**19.09**	-----	-----
	U_1 - L_2	10.80	-0.03	45.39			0.75	1.24	42.11	-0.03	0.00	0.00	Vehicle	Vehicle	68.79	-----	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	-----	-----	-----	-----	-----	**9.90**	**9.90**	-----	-----
	U_2 - L_3	-44.05	-7.66	20.34			0.75	1.24	18.87	-7.11	0.00	0.00	Vehicle	Vehicle	-----	-66.51	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	-----	-----	-----	-----	-----	**40.81**	**40.81**
	U_3 - L_4	-76.77	-26.08	-7.13			0.75	1.24	-6.62	-24.20	0.00	0.00	Vehicle	Vehicle	-----	-131.26	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	-----	-----	-----	-----	-----	**10.73**	**10.73**
	U_4 - L_4	118.48	-10.09	25.01			0.75	1.24	23.20	-9.36	0.00	0.00	Vehicle	Vehicle	184.19	-----	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	-----	-----	-----	-----	-----	**17.50**	**17.50**	-----	-----
	U_5 - L_5	137.62	-5.94	45.56			0.75	1.24	42.26	-5.51	0.00	0.00	Vehicle	Vehicle	233.84	-----	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	-----	-----	-----	-----	-----	**12.14**	**12.14**	-----	-----
	U_6 - L_6	157.39	1.23	50.71			0.75	1.24	47.05	1.14	0.00	0.00	Vehicle	Vehicle	265.76	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**10.48**	**10.48**	-----	-----
	U_7 - L_7	149.33	3.12	60.35			0.75	1.24	55.99	2.90	0.00	0.00	Vehicle	Vehicle	266.90	-----	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	-----	-----	-----	-----	-----	**8.95**	**8.95**	-----	-----
	U_8 - L_8	249.21	1.54	63.48			0.75	1.20	57.04	1.39	0.00	0.00	Vehicle	Vehicle	398.13	-----	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	-----	-----	-----	-----	-----	**12.50**	**12.50**	-----	-----
	U_9 - L_{10}	260.39	-1.93	37.93			0.75	1.20	34.08	-1.74	0.00	0.00	Vehicle	Vehicle	382.81	-----	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	-----	-----	-----	-----	-----	**20.59**	**20.59**	-----	-----
	U_{10} - L_{11}	236.43	4.14	60.05			0.75	1.20	53.95	3.72	0.00	0.00	Vehicle	Vehicle	377.49	-----	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	-----	-----	-----	-----	-----	**12.50**	**12.50**	-----	-----
	U_{11} - L_{12}	212.05	2.24	51.75			0.75	1.20	46.49	2.01	0.00	0.00	Vehicle	Vehicle	336.11	-----	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	-----	-----	-----	-----	-----	**12.16**	**12.16**	-----	-----
	U_{12} - L_{13}	151.78	-15.22	55.38			0.75	1.20	49.76	-13.68	0.00	0.00	Vehicle	Vehicle	262.01	-----	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	-----	-----	-----	-----	-----	**9.63**	**9.63**	-----	-----
	U_{13} - L_{14}	108.73	-20.27	38.96			0.75	1.20	35.01	-18.21	0.00	0.00	Vehicle	Vehicle	186.85	-----	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	-----	-----	-----	-----	-----	**9.11**	**9.11**	-----	-----
	U_{15} - L_{14}	-24.56	-31.14	16.66			0.75	1.20	14.97	-27.98	0.00	0.00	Vehicle	Vehicle	-----	-68.31	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	-----	-----	-----	-----	-----	**10.86**	**10.86**
	U_{16} - L_{15}	23.90	-21.98	42.51			0.75	1.20	38.20	-19.75	0.00	0.00	Vehicle	Vehicle	80.73	-----	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**10.57**	**10.57**	-----	-----
	U_{17} - L_{16}	120.04	-13.35	46.47			0.75	1.20	41.75	-12.00	0.00	0.00	Vehicle	Vehicle	210.32	-----	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	-----	-----	-----	-----	-----	**9.69**	**9.69**	-----	-----
	U_{18} - L_{17}	144.84	-4.14	42.80			0.75	1.20	38.45	-3.72	0.00	0.00	Vehicle	Vehicle	238.29	-----	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	-----	-----	-----	-----	-----	**13.15**	**13.15**	-----	-----
	U_{19} - L_{18}	193.27	1.40	46.11			0.75	1.20	41.43	1.26	0.00	0.00	Vehicle	Vehicle	305.11	-----	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	-----	-----	-----	-----	-----	**12.48**	**12.48**	-----	-----
	U_{20} - L_{19}	193.75	3.11	35.50			0.75	1.20	31.89	2.79	0.00	0.00	Vehicle	Vehicle	293.34	-----	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	-----	-----	-----	-----	-----	**16.19**	**16.19**	-----	-----
	U_0 - L_1	202.60	-7.44	33.50			0.75	1.18	29.72	-6.60	0.00	0.00	Vehicle	Vehicle	302.02	-----	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	-----	-----	-----	-----	-----	**19.34**	**19.34**	-----	-----
	U_1 - L_2	190.84	-8.41	59.33			0.75	1.18	52.64	-7.46	0.00	0.00	Vehicle	Vehicle	316.52	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**11.14**	**11.14**	-----	-----
	U_2 - L_3	155.90	-8.20	55.75			0.75	1.18	49.46	-7.27	0.00	0.00	Vehicle	Vehicle	266.97	-----	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	-----	-----	-----	-----	-----	**10.00**	**10.00**	-----	-----
	U_3 - L_4	134.06	-8.90	50.41			0.75	1.18	44.73	-7.89	0.00	0.00	Vehicle	Vehicle	232.43	-----	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	-----	-----	-----	-----	-----	**9.90**	**9.90**	-----	-----
	U_4 - L_5	46.01	-18.59	43.95			0.75	1.18	39.00	-16.49	0.00	0.00	Vehicle	Vehicle	110.50	-----	0.00	16.85	16.8486	556.00	131.71	15.3958	1.9682	70.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**9.79**	**9.79**	-----	-----
	U_5 - L_6	3.43	-25.15	38.03			0.75	1.18	33.75	-22.31	0.00	0.00	Vehicle	Vehicle	48.32	-24.55	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	-----	-----	-----	-----	-----	**12.57**	**12.57**	**14.75**	**14.75**
	U_6 - L_7	-84.31	-36.32	19.64			0.75	1.18	17.42	-32.23	0.00	0.00	Vehicle	Vehicle	-----	-151.50	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	-----	-----	-----	-----	-----	**8.53**	**8.53**
	U_7 - L_7	137.33	-21.24	28.76			0.75	1.18	25.52	-18.84	0.00	0.00	Vehicle	Vehicle	211.70	-----	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	-----	-----	-----	-----	-----	**18.26**	**18.26**	-----	-----
	U_8 - L_8	210.92	-14.35	48.48			0.75	1.18	43.01	-12.73	0.00	0.00	Vehicle	Vehicle	330.11	-----	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	-----	-----	-----	-----	-----	**11.61**	**11.61**	-----	-----
	U_{10} - L_9	236.39	-11.06	42.55			0.75	1.18	37.76	-9.81	0.00	0.00	Vehicle	Vehicle	356.38	-----	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	-----	-----	-----	-----	-----	**14.33**	**14.33**	-----	-----
	U_{11} - L_{10}	274.65	-7.03	45.05			0.75	1.18	39.97	-6.24	0.00	0.00	Vehicle	Vehicle	409.01	-----	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	-----	-----	-----	-----	-----	**14.25**	**14.25**	-----	-----
	U_{12} - L_{11}	281.09	-4.74	52.49			0.75	1.18	46.58	-4.21	0.00	0.00	Vehicle	Vehicle	425.96	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**12.10**	**12.10**	-----	-----
	U_{13} - L_{12}	278.14	-3.70	56.00			0.75	1.18	49.69	-3.28	0.00	0.00	Vehicle	Vehicle	426.18	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**10.05**	**10.05**	-----	-----
	U_{14} - L_{13}	235.47	-4.27	57.30			0.75	1.18	50.84	-3.79	0.00	0.00	Vehicle	Vehicle	372.20	-----	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	-----	-----	-----	-----	-----	**10.66**	**10.66**	-----	-----
	U_{14} - L_{15}	143.01	-3.53	54.97			0.75	1.17	48.19	-3.09	0.00	0.00	Vehicle	Vehicle	248.57	-----	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	-----	-----	-----	-----	-----	**10.53**	**10.53**	-----	-----
	U_{15} - L_{16}	171.90	-5.58	54.77			0.75	1.17	48.02	-4.89	0.00	0.00	Vehicle	Vehicle	285.89	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**9.97**	**9.97**	-----	-----
	U_{16} - L_{17}	181.04	-3.97	60.05			0.75	1.17	52.65	-3.48	0.00	0.00	Vehicle	Vehicle	303.79	-----	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	-----	-----	-----	-----	-----	**10.05**	**10.05**	-----	-----
	U_{17} - L_{18}	171.16	-7.29	55.49			0.75	1.17	48.65	-6.39	0.00	0.00	Vehicle	Vehicle	285.75	-----	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	-----	-----	-----	-----	-----	**9.86**	**9.86**	-----	-----
	U_{18} - L_{19}	150.64	-11.53	47.45			0.75	1.17	41.60	-10.11	0.00	0.00	Vehicle	Vehicle	249.92	-----	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	-----	-----	-----	-----	-----	**12.02**	**12.02**	-----	-----
	U_{19} - L_{20}	125.86	-14.99	51.94			0.75	1.17	45.54	-13.14	0.00	0.00	Vehicle	Vehicle	222.83	-----	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	-----	-----	-----	-----	-----	**10.48**	**10.48**	-----	-----
	Structure 2 U_{20} - L_{21}	76.04	-16.86	46.70			0.75	1.17	40.94	-14.78	0.00	0.00	Vehicle	Vehicle	152.08	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**8.59**	**8.59**	-----	-----
	U_{21} - L_{22}	38.33	-27.09	28.74			0.75	1.17	25.20	-23.75	0.00	0.00	Vehicle	Vehicle	82.58	-----	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	-----	-----	-----	-----	-----	**15.45**	**15.45**	-----	-----
	U_{23} - L_{22}	18.05	-27.89	18.98			0.75	1.17	16.64	-24.45	0.00	0.00	Vehicle	Vehicle	45.11	-8.32	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	-----	-----	-----	-----	-----	**24.61**	**24.61**	**13.95**	**13.95**
	U_{24} - L_{23}	58.57	-18.05	39.75			0.75	1.17	34.85	-15.82	0.00	0.00	Vehicle	Vehicle	121.45	-----	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	-----	-----	-----	-----	-----	**10.59**	**10.59**	-----	-----
	U_{25} - L_{24}	114.98	-16.60	50.91			0.75	1.17	44.63	-14.55	0.00	0.00	Vehicle	Vehicle	207.49	-----	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	-----	-----	-----	-----	-----	**10.94**	**10.94**	-----	-----
	U_{26} - L_{25}	143.00	-10.80	41.56			0.75	1.17	36.44	-9.47	0.00	0.00	Vehicle	Vehicle	233.26	-----	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	-----	-----	-----	-----	-----	**13.93**	**13.93**	-----	-----
	U_{27} - L_{26}	173.82	-6.93	47.32			0.75	1.17	41.49	-6.07	0.00	0.00	Vehicle	Vehicle	279.89	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**11.49**	**11.49**	-----	-----
	U_{28} - L_{27}	186.60	-3.41	55.72			0.75	1.17	48.85	-2.99	0.00	0.00	Vehicle	Vehicle	306.08	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**10.72**	**10.72**	-----	-----
	U_{29} - L_{28}	190.75	-3.23	46.71			0.75	1.17	40.95	-2.83	0.00	0.00	Vehicle	Vehicle	301.21	-----	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	-----	-----	-----	-----	-----	**11.23**	**11.23**	-----	-----
	U_{30} - L_{29}	161.86	-3.81	51.35			0.75	1.17	45.02	-3.34	0.00	0.00	Vehicle	Vehicle	268.95	-----	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	-----	-----	-----	-----	-----	**10.86**	**10.86**	-----	-----
	U_{30} - L_{31}	191.72	-4.67	55.33			0.75	1.18	49.09	-4.15	0.00	0.00	Vehicle	Vehicle	313.06	-----	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	-----	-----	-----	-----	-----	**11.93**	**11.93**	-----	-----
	U_{31} - L_{32}	226.45	-6.10	59.98			0.75	1.18	53.21	-5.42	0.00	0.00	Vehicle	Vehicle	363.56	-----	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	-----	-----	-----	-----	-----	**10.36**	**10.36**	-----	-----
	U_{32} - L_{33}	243.42	-2.62	61.15			0.75	1.18	54.26	-2.32	0.00	0.00	Vehicle	Vehicle	386.98	-----	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	-----	-----	-----	-----	-----	**11.08**	**11.08**	-----	-----
	U_{33} - L_{34}	239.13	-1.16	50.45			0.75	1.18	44.76	-1.03	0.00	0.00	Vehicle	Vehicle	369.06	-----	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	-----	-----	-----	-----	-----	**13.52**	**13.52**	-----	-----
	U_{34} - L_{35}	222.16	-9.01	59.54			0.75	1.18	52.83	-8.00	0.00	0.00	Vehicle	Vehicle	357.49	-----	0.00	30.63	30.6305	1010.81	131.71	13.7604	2.8427	43.57	31.19	-

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: 2F1 **Condition:** As-Inspected

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

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

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

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Upper Chord	Structure 1	U_0 - U_1	-66.70	-20.83	-19.05	-8.83	2.21	0.90	1.24	-21.21	-23.19	2.21	-8.83	Vehicle	Pedestrian	-----	-128.34	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	-----	-----	15.57	15.57
		U_1 - U_2	-86.55	-3.27	-35.00	6.01	-16.34	0.90	1.24	-3.63	-38.96	6.01	-16.34	Vehicle	Pedestrian	-----	-184.41	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	8.66	8.66
		U_2 - U_3	-48.14	19.44	-38.30	9.46	-19.05	0.90	1.24	21.64	-42.64	9.46	-19.05	Pedestrian	Pedestrian	-----	-142.78	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	8.38	8.38
		U_3 - U_4	36.58	25.58	-38.86	12.74	-17.47	0.90	1.24	28.48	-43.26	12.74	-17.47	Pedestrian	Pedestrian	101.14	-31.40	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	15.40	15.40	9.91	9.91
		U_4 - U_5	38.93	25.66	-39.01	12.80	-17.38	0.90	1.24	28.57	-43.43	12.80	-17.38	Pedestrian	Pedestrian	104.39	-28.43	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	15.28	15.28	9.94	9.94
		U_5 - U_6	154.60	29.26	-26.61	15.16	-12.03	0.90	1.24	32.57	-29.63	15.16	-12.03	Pedestrian	Pedestrian	263.02	-----	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	-----	-----	10.82	10.82	-----	-----
		U_6 - U_7	288.38	31.91	-12.68	17.14	-4.31	0.90	1.24	35.53	-14.12	17.14	-4.31	Pedestrian	Vehicle	443.36	-----	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	-----	-----	9.80	9.80	-----	-----
		U_7 - U_8	410.94	4.59	-3.31	18.28	4.35	0.90	1.24	5.11	-3.68	18.28	4.35	Pedestrian	Vehicle	564.63	-----	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	-----	-----	29.89	29.89	-----	-----
		U_8 - U_9	311.57	1.97	-1.55	19.08	0.00	0.90	1.20	2.13	-1.67	19.08	0.00	Pedestrian	Vehicle	432.62	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	29.58	29.58	-----	-----
		U_9 - U_{10}	78.52	-5.38	-19.83	5.48	0.00	0.90	1.20	-5.80	-21.38	5.48	0.00	Vehicle	Vehicle	94.53	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U_{10} - U_{11}	-141.43	23.77	-32.92	-7.31	0.00	0.90	1.20	25.63	-35.50	0.00	-7.31	Vehicle	Vehicle	-----	-230.01	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	-----	-----	12.85	12.85
		U_{11} - U_{12}	-338.03	21.86	-46.04	9.77	-27.93	0.90	1.20	23.56	-49.63	9.77	-27.93	Pedestrian	Pedestrian	-----	-540.27	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	6.12	6.12
		U_{12} - U_{13}	-480.08	19.10	-65.53	8.23	-34.32	0.90	1.20	20.59	-70.66	8.23	-34.32	Pedestrian	Pedestrian	-----	-760.58	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	-----	-----	6.26	6.26
		U_{13} - U_{14}	-570.65	16.18	-69.35	6.68	-37.21	0.90	1.20	17.45	-74.77	6.68	-37.21	Pedestrian	Pedestrian	-----	-887.42	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	-----	-----	6.76	6.76
		U_{14} - U_{15}	-571.07	16.11	-73.35	6.65	-37.22	0.90	1.20	17.36	-79.08	6.65	-37.22	Pedestrian	Pedestrian	-----	-893.59	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	-----	-----	6.50	6.50
		U_{15} - U_{16}	-581.88	12.55	-67.22	4.98	-36.12	0.90	1.20	13.53	-72.47	4.98	-36.12	Pedestrian	Pedestrian	-----	-897.60	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	-----	-----	6.87	6.87
		U_{16} - U_{17}	-539.46	5.55	-58.02	3.52	-31.85	0.90	1.20	5.99	-62.56	3.52	-31.85	Pedestrian	Pedestrian	-----	-824.03	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	-----	-----	8.35	8.35
		U_{17} - U_{18}	-422.33	6.03	-41.98	2.26	-25.05	0.90	1.20	6.50	-45.26	2.26	-25.05	Pedestrian	Pedestrian	-----	-640.43	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	-----	-----	7.80	7.80
		U_{18} - U_{19}	-286.19	3.40	-28.88	1.28	-16.96	0.90	1.20	3.67	-31.14	1.28	-16.96	Pedestrian	Pedestrian	-----	-434.57	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	-----	-----	8.14	8.14
		U_{19} - U_{20}	-140.84	0.93	-12.64	0.55	-8.68	0.90	1.20	1.00	-13.63	0.55	-8.68	Pedestrian	Pedestrian	-----	-212.08	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	-----	-----	24.07	24.07
	Structure 2	U_0 - U_1	-147.44	-11.94	-6.41	-4.88	0.36	0.90	1.18	-6.82	-12.72	0.36	-4.88	Vehicle	Pedestrian	-----	-214.55	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	28.41	28.41
		U_1 - U_2	-319.06	-3.22	-31.09	1.96	-13.36	0.90	1.18	-3.43	-33.10	1.96	-13.36	Vehicle	Pedestrian	-----	-475.18	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	-----	-----	10.16	10.16
		U_2 - U_3	-460.91	-50.37	-44.87	-20.95	3.77	0.90	1.18	-47.77	-53.62	3.77	-20.95	Vehicle	Pedestrian	-----	-696.13	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	-----	-----	8.27	8.27
		U_3 - U_4	-580.03	16.60	-57.66	5.92	-27.68	0.90	1.18	17.67	-61.39	5.92	-27.68	Pedestrian	Pedestrian	-----	-869.82	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	-----	-----	8.55	8.55
		U_4 - U_5	-616.49	20.90	-73.55	7.86	-31.35	0.90	1.18	22.25	-78.31	7.86	-31.35	Pedestrian	Pedestrian	-----	-943.99	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	-----	-----	7.94	7.94
		U_5 - U_6	-604.71	26.48	-73.73	9.87	-32.88	0.90	1.18	28.19	-78.50	9.87	-32.88	Pedestrian	Pedestrian	-----	-930.92	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	-----	-----	7.92	7.92
		U_6 - U_7	-514.78	30.53	-69.72	11.56	-31.23	0.90	1.18	32.51	-74.23	11.56	-31.23	Pedestrian	Pedestrian	-----	-806.31	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	7.84	7.84
		U_7 - U_8	-512.83	30.56	-69.06	11.57	-31.18	0.90	1.18	32.54	-73.52	11.57	-31.18	Pedestrian	Pedestrian	-----	-802.79	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	7.91	7.91
		U_8 - U_9	-373.51	33.52	-60.32	13.16	-27.41	0.90	1.18	35.69	-64.22	13.16	-27.41	Pedestrian	Pedestrian	-----	-604.69	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	8.21	8.21
		U_9 - U_{10}	-181.05	35.64	-45.59	14.25	-21.42	0.90	1.18	37.94	-48.54	14.25	-21.42	Pedestrian	Pedestrian	-----	-326.31	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	10.08	10.08
		U_{10} - U_{11}	26.18	36.89	-30.66	15.21	-14.40	0.90	1.18	39.27	-32.64	15.21	-14.40	Pedestrian	Pedestrian	104.86	-27.11	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	16.23	16.23	16.91	16.91
		U_{11} - U_{12}	237.39	36.07	-18.65	15.56	-6.85	0.90	1.18	38.41	-19.86	15.56	-6.85	Pedestrian	Pedestrian	378.76	-----	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	-----	-----	12.48	12.48	-----	-----
		U_{12} - U_{13}	435.89	35.34	-7.50	15.82	0.56	0.90	1.18	37.63	-7.99	15.82	0.56	Pedestrian	Vehicle	636.14	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	13.16	13.16	-----	-----
		U_{13} - U_{14}	595.84	2.36	-1.61	15.74	6.91	0.90	1.18	2.51	-1.72	15.74	6.91	Pedestrian	Pedestrian	798.32	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	53.05	53.05	-----	-----
		U_{14} - U_{15}	615.53	-0.46	0.40	24.37	0.00	0.90	1.17	0.42	-0.49	24.37	0.00	Pedestrian	Vehicle	832.42	-----	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	-----	-----	38.28	38.28	-----	-----
		U_{15} - U_{16}	486.15	15.74	-8.36	14.17	3.08	0.90	1.17	16.56	-8.80	14.17	3.08	Pedestrian	Vehicle	671.95	-----	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	-----	-----	25.58	25.58	-----	-----
		U_{16} - U_{17}	339.27	-2.13	-21.71	11.57	0.00	0.90	1.17	-2.24	-22.84	11.57	0.00	Pedestrian	Vehicle	453.19	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{17} - U_{18}	192.13	30.70	-31.10	4.46	0.00	0.90	1.17	32.30	-32.72	4.46	0.00	Vehicle	Vehicle	291.76	-----	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	-----	-----	17.78	17.78	-----	-----
		U_{18} - U_{19}	53.83	28.13	-38.18	-2.79	-12.78	0.90	1.17	29.59	-40.17	-2.79	-12.78	Vehicle	Vehicle	108.45	-----	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	24.08	24.08	-----	-----
		U_{19} - U_{20}	-58.94	24.94	-53.09	15.07	-15.67	0.90	1.17	26.24	-55.85	15.07	-15.67	Pedestrian	Vehicle	-----	-149.23	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	-----	-----	11.35	11.35
	Structure 3	U_0 - U_{21}	-125.32	20.80	-55.13	14.77	-16.52	0.90	1.17	21.88	-58.00	14.77	-16.52	Pedestrian	Vehicle	-----	-238.31	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	12.27	12.27
		U_{21} - U_{22}	-146.72	17.07	-53.46	14.37	-22.74	0.90	1.17	17.96	-56.25	14.37	-22.74	Pedestrian	Pedestrian	-----	-293.42	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	-----	-----	8.74	8.74
		U_{22} - U_{23}	-146.49	16.04	-59.67	14.36	-22.72	0.90	1.17	16.88	-62.78	14.36	-22.72	Pedestrian	Pedestrian	-----	-301.59	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	-----	-----	8.07	8.07
		U_{23} - U_{24}	-112.53	11.09	-55.02	13.88	-21.04	0.90	1.17	11.67	-57.89	13.88	-21.04	Pedestrian	Pedestrian	-----	-248.90	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	9.18	9.18
		U_{24} - U_{25}	-36.03	23.86	-47.16	13.40	-15.01	0.90	1.17	25.11	-49.61	13.40	-15.01	Pedestrian	Vehicle	3.22	-111.33	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	22.24	22.24	13.24	13.24
		U_{25} - U_{26}	80.94	25.79	-35.52	12.93	-12.15	0.90	1.17	27.13	-37.37	12.93	-12.15	Pedestrian	Vehicle	157.30	-----	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	-----	-----	17.11	17.11	-----	-----
		U_{26} - U_{27}	220.82	27.25	-25.53	12.57	-5.86	0.90	1.17	28.67	-26.86	12.57	-5.86	Pedestrian	Vehicle	340.68	-----	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	-----	-----	13.23	13.23	-----	-----
		U_{27} - U_{28}	363.48	27.25	-13.68	12.37	0.18	0.90	1.17	28.67	-14.39	12.37	0.18	Pedestrian	Vehicle	525.89	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	16.58	16.58	-----	-----
		U_{28} - U_{29}	503.92	3.62	-8.00	12.24	3.11	0.90	1.17	3.80	-8.41	12.24	3.11	Pedestrian	Vehicle	675.94	-----	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	-----	-----	47.91	47.91	-----	-----
		U_{29} - U_{30}	616.62	-0.79	-2.18	0.00	7.42	0.90	1.17	-0.84	-2.29	7.42	0.00	Pedestrian	Vehicle	810.17	-----	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

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: 2F1 **Condition:** As-Inspected

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

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

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

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Lower Chord	Structure 1	L$_0$- L$_1$	-1.94	1.49	0.61	-2.06	0.37	0.90	1.24	1.66	0.68	0.37	-2.06	Vehicle	Pedestrian	-----	-4.31	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	-----	-----	-----	-----
		L$_1$ - L$_2$	67.93	20.44	18.63	0.00	5.88	0.90	1.24	22.76	20.74	5.88	0.00	Vehicle	Vehicle	117.89	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**19.10**	**19.10**	-----	-----
		L$_2$ - L$_3$	78.83	-15.84	46.15	-7.39	15.48	0.90	1.24	51.38	-17.63	15.48	-7.39	Vehicle	Pedestrian	169.27	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**11.48**	**11.48**	-----	-----
		L$_3$ - L$_4$	39.11	-22.57	47.53	-10.83	18.09	0.90	1.24	52.91	-25.13	18.09	-10.83	Pedestrian	Pedestrian	143.14	-----	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	-----	-----	**8.87**	**8.87**	-----	-----
		L$_4$ - L$_5$	-166.44	-32.30	28.38	-16.91	10.96	0.90	1.24	31.60	-35.96	10.96	-16.91	Pedestrian	Pedestrian	-----	-285.09	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	-----	-----	**6.32**	**6.32**
		L$_5$ - L$_6$	-301.30	-35.54	10.92	-18.94	3.24	0.90	1.24	12.16	-39.56	3.24	-18.94	Vehicle	Pedestrian	-----	-467.74	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	-----	-----	**6.12**	**6.12**
		L$_6$ - L$_7$	-439.01	-38.35	2.96	-21.52	-4.99	0.90	1.24	3.29	-42.69	-4.99	-21.52	Vehicle	Pedestrian	-----	-654.19	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	-----	-----	**7.88**	**7.88**
		L$_7$ - L$_8$	-551.71	0.58	-8.54	0.00	-35.56	0.90	1.24	0.65	-9.51	0.00	-35.56	Vehicle	Pedestrian	-----	-775.80	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**14.37**	**14.37**
		L$_8$ - L$_9$	-570.55	-36.70	4.54	-37.48	0.00	0.90	1.20	4.90	-39.57	0.00	-37.48	Vehicle	Pedestrian	-----	-841.88	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	-----	-----	**8.16**	**8.16**
		L$_9$ - L$_{10}$	-355.55	-14.62	-0.70	-13.03	-11.67	0.90	1.20	-0.75	-15.76	-11.67	-13.03	Pedestrian	Pedestrian	-----	-499.64	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	-----	-----	**20.49**	**20.49**
		L$_{10}$ - L$_{11}$	-118.56	-21.06	19.20	-12.42	0.00	0.90	1.20	20.70	-22.71	0.00	-12.42	Vehicle	Pedestrian	-----	-199.79	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	-----	-----	**10.87**	**10.87**
		L$_{11}$ - L$_{12}$	103.33	27.15	30.59	0.50	0.00	0.90	1.20	32.98	29.28	0.50	0.00	Vehicle	Vehicle	177.20	-----	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	-----	-----	**14.88**	**14.88**	-----	-----
		L$_{12}$ - L$_{13}$	300.47	-18.06	52.92	-8.15	17.86	0.90	1.20	57.06	-19.47	17.86	-8.15	Vehicle	Pedestrian	464.78	-----	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	-----	-----	**11.82**	**11.82**	-----	-----
		L$_{13}$ - L$_{14}$	441.01	48.54	61.81	-6.62	24.18	0.90	1.20	66.65	52.34	24.18	-6.62	Pedestrian	Vehicle	691.39	-----	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	-----	-----	**9.55**	**9.55**	-----	-----
		L$_{14}$ - L$_{15}$	546.80	-9.56	62.46	-3.50	24.61	0.90	1.20	67.35	-10.31	24.61	-3.50	Pedestrian	Pedestrian	830.38	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**11.18**	**11.18**	-----	-----
		L$_{15}$ - L$_{16}$	505.90	-6.63	56.23	-2.04	20.37	0.90	1.20	60.63	-7.14	20.37	-2.04	Pedestrian	Vehicle	762.97	-----	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	-----	-----	**13.19**	**13.19**	-----	-----
		L$_{16}$ - L$_{17}$	398.64	-8.36	39.99	-0.84	12.78	0.90	1.20	43.12	-9.02	12.78	-0.84	Vehicle	Vehicle	574.29	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	**18.97**	**18.97**	-----	-----
		L$_{17}$ - L$_{18}$	263.76	-1.41	25.01	0.15	4.73	0.90	1.20	26.96	-1.52	4.73	0.15	Vehicle	Vehicle	377.94	-----	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	-----	-----	**22.98**	**22.98**	-----	-----
		L$_{18}$ - L$_{19}$	118.86	-5.34	10.42	0.70	-3.28	0.90	1.20	11.23	-5.75	0.70	-3.28	Vehicle	Pedestrian	169.11	-----	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	-----	-----	**34.17**	**34.17**	-----	-----
		L$_{19}$ - L$_{20}$	-23.25	1.64	-3.16	1.27	-12.00	0.90	1.20	1.77	-3.40	1.27	-12.00	Pedestrian	Pedestrian	-----	-50.24	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	-----	-----	**23.39**	**23.39**
		L$_0$'- L$_1$'	-35.95	1.32	2.12	-5.13	1.19	0.90	1.18	2.26	1.40	1.19	-5.13	Pedestrian	Pedestrian	-----	-51.58	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	45.00	Pass	6.32	12.00	Pass	6.32	12.00	Pass	-----	-----	-----	-----
		L$_1$' - L$_2$'	132.83	13.73	4.42	2.94	-0.07	0.90	1.18	14.62	4.71	2.94	-0.07	Vehicle	Vehicle	191.68	-----	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	-----	-----	**34.24**	**34.24**	-----	-----
		L$_2$' - L$_3$'	304.11	28.63	33.07	10.53	-1.80	0.90	1.18	35.21	30.48	10.53	-1.80	Vehicle	Vehicle	441.11	-----	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	-----	-----	**19.09**	**19.09**	-----	-----
		L$_3$' - L$_4$'	445.92	48.45	50.25	0.00	13.17	0.90	1.18	53.50	51.59	13.17	0.00	Vehicle	Vehicle	649.25	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**16.14**	**16.14**	-----	-----
		L$_4$' - L$_5$'	567.84	-14.68	68.25	-6.10	24.82	0.90	1.18	72.66	-15.63	24.82	-6.10	Pedestrian	Pedestrian	864.92	-----	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	-----	-----	**11.10**	**11.10**	-----	-----
		L$_5$' - L$_6$'	603.64	-22.56	75.83	-8.06	28.47	0.90	1.18	80.74	-24.02	28.47	-8.06	Pedestrian	Pedestrian	926.70	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	**10.89**	**10.89**	-----	-----
		L$_6$' - L$_7$'	599.48	-28.56	79.63	-10.41	30.26	0.90	1.18	84.78	-30.41	30.26	-10.41	Pedestrian	Pedestrian	928.87	-----	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	-----	-----	**10.59**	**10.59**	-----	-----
		L$_7$' - L$_8$'	373.94	-35.95	62.88	-13.66	24.93	0.90	1.18	66.95	-38.27	24.93	-13.66	Pedestrian	Pedestrian	605.56	-----	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	-----	-----	**10.53**	**10.53**	-----	-----
		L$_8$' - L$_9$'	195.71	-38.71	48.95	-15.12	19.52	0.90	1.18	52.12	-41.21	19.52	-15.12	Pedestrian	Pedestrian	347.55	-----	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	-----	-----	**12.62**	**12.62**	-----	-----
		L$_9$' - L$_{10}$'	-13.21	-40.03	32.57	-16.11	12.45	0.90	1.18	34.67	-42.62	12.45	-16.11	Pedestrian	Pedestrian	44.08	-93.52	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	**18.57**	**18.57**	**12.17**	**12.17**
		L$_{10}$ - L$_{11}$	-217.32	-40.58	20.08	-17.02	5.50	0.90	1.18	21.38	-43.21	5.50	-17.02	Vehicle	Pedestrian	-----	-360.80	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	-----	-----	**7.19**	**7.19**
		L$_{11}$ - L$_{12}$	-419.93	-39.92	6.90	-17.31	-2.04	0.90	1.18	7.34	-42.51	-2.04	-17.31	Vehicle	Pedestrian	-----	-623.67	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	-----	-----	**8.54**	**8.54**
		L$_{12}$ - L$_{13}$	-591.41	-39.84	1.11	-18.75	-7.09	0.90	1.18	1.19	-42.41	-7.09	-18.75	Pedestrian	Pedestrian	-----	-848.33	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	-----	-----	**11.01**	**11.01**
		L$_{13}$ - L$_{14}$	-724.23	0.82	-5.26	0.00	-35.12	0.90	1.18	0.87	-5.60	0.00	-35.12	Vehicle	Pedestrian	-----	-994.43	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	-----	-----	**19.43**	**19.43**
		L$_{14}$ - L$_{15}$	-747.05	-25.17	7.40	-36.29	0.00	0.90	1.17	7.78	-26.49	0.00	-36.29	Vehicle	Pedestrian	-----	-1052.77	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	-----	-----	**12.24**	**12.24**
		L$_{15}$ - L$_{16}$	-632.15	6.72	0.88	0.00	-31.21	0.90	1.17	7.07	0.92	0.00	-31.21	Vehicle	Pedestrian	-----	-861.17	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----
		L$_{16}$ - L$_{17}$	-488.62	-23.01	11.49	-25.39	0.00	0.90	1.17	12.09	-24.21	0.00	-25.39	Vehicle	Pedestrian	-----	-699.70	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**11.26**	**11.26**
		L$_{17}$ - L$_{18}$	-336.98	4.64	19.76	-18.12	0.00	0.90	1.17	20.79	4.88	0.00	-18.12	Vehicle	Pedestrian	-----	-455.29	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	-25.85	31.06	-11.34	4.48	0.90	1.17	32.68	-27.20	4.48	-11.34	Vehicle	Pedestrian	-----	-288.79	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	-----	-----	**10.12**	**10.12**
		L$_{19}$ - L$_{20}$	-45.77	-23.25	39.56	-9.58	8.92	0.90	1.17	41.62	-24.46	8.92	-9.58	Vehicle	Pedestrian	-----	-103.76	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	-----	-----	**15.50**	**15.50**
	Structure 2	L$_{20}$ - L$_{21}$	68.00	-20.65	49.67	-9.12	11.57	0.90	1.17	52.25	-21.73	11.57	-9.12	Vehicle	Pedestrian	156.32	-----	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	-----	-----	**17.16**	**17.16**	-----	-----
		L$_{21}$ - L$_{22}$	133.90	-16.51	53.76	-8.82	13.61	0.90	1.17	56.56	-17.37	13.61	-8.82	Vehicle	Pedestrian	247.60	-----	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	-----	-----	**14.69**	**14.69**	-----	-----
		L$_{22}$ - L$_{23}$	122.50	-7.78	51.90	-7.58	11.79	0.90	1.17	54.60	-8.18	11.79	-7.58	Vehicle	Pedestrian	230.23	-----	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	-----	-----	**15.42**	**15.42**	-----	-----
		L$_{23}$ - L$_{24}$	46.70	-20.39	41.98	-7.09	8.09	0.90	1.17	44.17	-21.46	8.09	-7.09	Vehicle	Vehicle	118.12	-----	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	-----	-----	**20.78**	**20.78**	-----	-----
		L$_{24}$ - L$_{25}$	-66.76	-22.68	33.41	-6.24	2.64	0.90	1.17	35.15	-23.86	2.64	-6.24	Vehicle	Vehicle	-----	-117.80	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**21.25**	**21.25**
		L$_{25}$ - L$_{26}$	-205.83	-24.19	20.93	-5.88	-3.61	0.90	1.17	22.02	-25.45	-3.61	-5.88	Vehicle	Vehicle	-----	-300.67	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	-----	-----	**14.45**	**14.45**
		L$_{26}$ - L$_{27}$	-350.61	-24.61	8.62	-5.26	-6.72	0.90	1.17	9.07	-25.89	-5.26	-6.72	Vehicle	Vehicle	-----	-489.45	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	-----	-----	**14.56**	**14.56**
		L$_{27}$ - L$_{28}$	-494.76	-24.45	2.40	-5.10	-12.12	0.90	1.17	2.53	-25.72	-5.10	-12.12	Vehicle	Pedestrian	-----	-692.40	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	-----	-----	**14.61**	**14.61**
		L$_{28}$ - L$_{29}$	-620.88	-15.20	-3.47	-31.79	-17.19	0.90	1.17	-3.65	-15.99	-17.19	-31.79	Pedestrian	Pedestrian	-----	-869.24	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**13.70**	**13.70**
		L$_{29}$ - L$_{30}$	-716.82	-7.04	-9.43	0.00	-36.30	0.90	1.17	-7.41	-9.92	0.00	-36.30	Vehicle	Pedestrian	-----	-991.94	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	-----	-----	**17.28**	**17.28**
		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: 2F1 **Condition:** As-Inspected

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

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

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

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Verticals	Structure 1	U$_0$ - L$_0$	-93.63	2.28	-33.90	3.44	-12.32	0.90	1.24	2.53	-37.74	3.44	-12.32	Pedestrian	Vehicle	-----	-170.78	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	-----	-----	-----	-----	-----	6.65	6.65
		U$_1$ - L$_1$	-46.50	6.34	-19.04	2.93	-9.05	0.90	1.24	7.06	-21.20	2.93	-9.05	Pedestrian	Pedestrian	-----	-99.77	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	10.10	10.10
		U$_2$ - L$_2$	-0.07	5.75	-12.61	2.84	-5.68	0.90	1.24	6.40	-14.04	2.84	-5.68	Pedestrian	Pedestrian	11.92	-25.72	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	46.29	46.29	17.85	17.85			
		U$_3$ - L$_3$	39.61	4.66	-7.80	2.70	-2.12	0.90	1.24	5.19	-8.68	2.70	-2.12	Pedestrian	Vehicle	61.75	-----	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	-----	-----	-----	-----	-----	-----	49.22	49.22	-----	-----
		U$_4$ - L$_4$	-30.21	-3.80	0.03	-3.47	0.00	0.90	1.24	0.03	-4.23	0.00	-3.47	Vehicle	Pedestrian	-----	-49.27	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	41.54	41.54
		U$_5$ - L$_5$	-130.50	-21.55	2.44	-10.24	0.00	0.90	1.24	2.71	-23.99	0.00	-10.24	Vehicle	Pedestrian	-----	-214.15	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	-----	-----	-----	-----	-----	8.61	8.61
		U$_6$ - L$_6$	-158.19	-21.24	3.26	-13.06	0.00	0.90	1.24	3.63	-23.65	0.00	-13.06	Vehicle	Pedestrian	-----	-253.37	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	9.53	9.53
		U$_7$ - L$_7$	-152.33	-19.72	6.43	-13.25	0.00	0.90	1.24	7.16	-21.95	0.00	-13.25	Vehicle	Pedestrian	-----	-243.78	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	-----	-----	-----	-----	-----	8.75	8.75
		U$_8$ - L$_8$	-455.44	-19.85	-31.93	-12.74	-18.98	0.90	1.24	-22.10	-35.54	-12.74	-18.98	Pedestrian	Pedestrian	-----	-662.95	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	-----	-----	-----	-----	-----	11.12	11.12
		U$_9$ - L$_9$	-287.50	1.73	-32.12	0.00	-18.21	0.90	1.20	1.87	-34.63	0.00	-18.21	Vehicle	Pedestrian	-----	-442.44	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	-----	-----	-----	-----	-----	6.77	6.77
		U$_{10}$ - L$_{10}$	-276.27	0.84	-30.25	0.00	-17.55	0.90	1.20	0.91	-32.61	0.00	-17.55	Vehicle	Pedestrian	-----	-424.35	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	9.30	9.30
		U$_{11}$ - L$_{11}$	-232.54	-2.32	-27.57	0.00	-14.42	0.90	1.20	-2.50	-29.73	0.00	-14.42	Vehicle	Pedestrian	-----	-359.69	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	-----	-----	-----	-----	-----	9.26	9.26
		U$_{12}$ - L$_{12}$	-178.38	0.82	-22.92	0.00	-11.20	0.90	1.20	0.88	-24.71	0.00	-11.20	Vehicle	Pedestrian	-----	-278.57	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	-----	-----	-----	-----	-----	9.86	9.86
		U$_{13}$ - L$_{13}$	-127.70	1.38	-16.85	0.00	-7.88	0.90	1.20	1.49	-18.17	0.00	-7.88	Vehicle	Pedestrian	-----	-199.87	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	9.71	9.71
		U$_{14}$ - L$_{14}$	-30.38	-1.77	-1.58	0.00	-3.03	0.90	1.20	-1.70	-1.91	0.00	-3.03	Vehicle	Pedestrian	-----	-45.92	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	-----	-----	-----	-----	-----	63.63	63.63
		U$_{15}$ - L$_{15}$	-28.93	-14.92	5.86	-4.53	1.55	0.90	1.20	6.32	-16.08	1.55	-4.53	Vehicle	Vehicle	-----	-58.52	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	-----	-----	-----	-----	-----	19.54	19.54
		U$_{16}$ - L$_{16}$	-75.99	-16.65	4.45	-7.07	1.39	0.90	1.20	4.80	-17.96	1.39	-7.07	Vehicle	Pedestrian	-----	-131.32	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	-----	-----	-----	-----	-----	10.60	10.60
		U$_{17}$ - L$_{17}$	-161.81	-23.93	3.47	-10.66	1.30	0.90	1.20	3.74	-25.80	1.30	-10.66	Pedestrian	Pedestrian	-----	-257.75	0.00	20.66	20.0644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	6.84	6.84
		U$_{18}$ - L$_{18}$	-190.09	-23.56	2.98	-12.69	1.12	0.90	1.20	3.21	-25.40	1.12	-12.69	Pedestrian	Pedestrian	-----	-296.64	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	-----	-----	-----	-----	-----	8.80	8.80
		U$_{19}$ - L$_{19}$	-228.09	-23.00	2.55	-14.99	0.97	0.90	1.20	2.75	-24.79	0.97	-14.99	Pedestrian	Pedestrian	-----	-348.23	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	-----	-----	-----	-----	-----	9.76	9.76
		U$_{20}$ - L$_{20}$	-242.54	-23.66	0.30	-15.62	0.95	0.90	1.20	0.32	-25.51	0.95	-15.62	Pedestrian	Pedestrian	-----	-368.77	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	-----	-----	-----	-----	-----	6.91	6.91
	Structure 2	U$_0$ - L$_0$	-302.99	1.20	-34.32	2.22	-15.08	0.90	1.18	1.28	-36.54	2.22	-15.08	Pedestrian	Pedestrian	-----	-461.00	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	-----	-----	-----	-----	-----	6.58	6.58
		U$_1$ - L$_1$	-268.80	5.73	-32.22	2.12	-13.67	0.90	1.18	6.10	-34.30	2.12	-13.67	Pedestrian	Pedestrian	-----	-411.80	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	-----	-----	-----	-----	-----	8.41	8.41
		U$_2$ - L$_2$	-220.88	6.18	-28.37	2.34	-12.32	0.90	1.18	6.58	-30.20	2.34	-12.32	Pedestrian	Pedestrian	-----	-342.43	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	-----	-----	-----	-----	-----	8.31	8.31
		U$_3$ - L$_3$	-175.24	6.62	-26.34	2.49	-10.35	0.90	1.18	7.05	-28.04	2.49	-10.35	Pedestrian	Pedestrian	-----	-277.72	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	45.00	Pass	4.91	12.00	Pass	-----	-----	-----	-----	-----	7.21	7.21
		U$_4$ - L$_4$	-82.09	5.75	-19.36	2.21	-6.62	0.90	1.18	6.13	-20.62	2.21	-6.62	Pedestrian	Vehicle	-----	-133.51	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	12.47	12.47
		U$_5$ - L$_5$	-19.91	5.23	-14.02	2.23	-4.16	0.90	1.18	5.57	-14.93	2.23	-4.16	Pedestrian	Vehicle	-----	-45.28	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	-----	-----	-----	-----	-----	21.48	21.48
		U$_6$ - L$_6$	60.32	12.77	-7.95	1.75	-0.47	0.90	1.18	13.59	-8.47	1.75	-0.47	Vehicle	Vehicle	96.09	-----	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	-----	27.02	27.02	-----	-----
		U$_7$ - L$_7$	-41.78	-4.79	-0.96	-2.49	0.00	0.90	1.18	-1.03	-5.10	0.00	-2.49	Vehicle	Pedestrian	-----	-64.18	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	39.35	39.35
		U$_8$ - L$_8$	-189.01	-20.55	2.72	-8.38	0.00	0.90	1.18	2.89	-21.87	0.00	-8.38	Vehicle	Pedestrian	-----	-285.03	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	-----	-----	-----	-----	-----	11.29	11.29
		U$_9$ - L$_9$	-254.00	-26.63	0.11	-10.55	0.00	0.90	1.18	0.12	-28.35	0.00	-10.55	Vehicle	Pedestrian	-----	-380.77	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	-----	-----	-----	-----	-----	11.24	11.24
		U$_{10}$ - L$_{10}$	-290.02	-26.99	1.99	-12.18	0.00	0.90	1.18	2.12	-28.74	0.00	-12.18	Vehicle	Pedestrian	-----	-430.22	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	-----	-----	-----	-----	-----	11.94	11.94
		U$_{11}$ - L$_{11}$	-312.19	-28.21	4.23	-12.59	0.00	0.90	1.18	4.50	-30.04	0.00	-12.59	Vehicle	Pedestrian	-----	-461.26	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	-----	-----	-----	-----	-----	10.62	10.62
		U$_{12}$ - L$_{12}$	-327.27	-25.41	6.13	-13.01	-0.93	0.90	1.18	6.52	-27.06	-0.93	-13.01	Vehicle	Pedestrian	-----	-477.53	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	11.84	11.84
		U$_{13}$ - L$_{13}$	-277.23	-22.45	8.13	-11.39	0.00	0.90	1.18	8.65	-23.90	0.00	-11.39	Vehicle	Pedestrian	-----	-406.28	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	-----	-----	-----	-----	-----	11.70	11.70
		U$_{14}$ - L$_{14}$	-505.47	-18.05	-25.63	-9.95	-11.35	0.90	1.18	-19.22	-27.29	-9.95	-11.35	Pedestrian	Pedestrian	-----	-707.33	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	-----	-----	-----	-----	-----	14.14	14.14
		U$_{15}$ - L$_{15}$	-232.92	1.63	-29.74	1.67	-11.17	0.90	1.17	1.72	-31.29	1.67	-11.17	Pedestrian	Pedestrian	-----	-357.99	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	10.77	10.77
		U$_{16}$ - L$_{16}$	-260.09	3.35	-31.40	0.83	-12.63	0.90	1.17	3.52	-33.03	0.83	-12.63	Vehicle	Pedestrian	-----	-397.48	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	-----	-----	-----	-----	-----	8.89	8.89
		U$_{17}$ - L$_{17}$	-228.20	3.77	-28.79	0.66	-11.76	0.90	1.17	3.96	-30.29	0.66	-11.76	Vehicle	Pedestrian	-----	-351.32	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	-----	-----	-----	-----	-----	9.40	9.40
		U$_{18}$ - L$_{18}$	-209.23	4.55	-26.77	-0.02	-11.28	0.90	1.17	4.78	-28.16	-0.02	-11.28	Vehicle	Pedestrian	-----	-323.28	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	9.33	9.33
		U$_{19}$ - L$_{19}$	-166.51	4.86	-24.66	-0.07	-9.53	0.90	1.17	5.12	-25.94	-0.07	-9.53	Vehicle	Pedestrian	-----	-262.57	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	-----	-----	-----	-----	-----	9.72	9.72
		U$_{20}$ - L$_{20}$	-113.91	4.90	-18.16	-0.43	-7.50	0.90	1.17	5.16	-19.11	-0.43	-7.50	Vehicle	Pedestrian	-----	-182.67	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	-----	-----	-----	-----	-----	9.82	9.82
		U$_{21}$ - L$_{21}$	-62.73	7.32	-14.68	0.00	-5.22	0.90	1.17	7.70	-15.45	0.00	-5.22	Vehicle	Pedestrian	-----	-108.40	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	-----	-----	-----	-----	-----	13.44	13.44
		U$_{22}$ - L$_{22}$	-38.93	-4.85	-5.42	-2.04	-2.15	0.90	1.17	-5.10	-5.70	-2.04	-2.15	Pedestrian	Pedestrian	-----	-60.82	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	-----	-----	-----	-----	-----	38.59	38.59
		U$_{23}$ - L$_{23}$	-74.45	-16.63	5.48	-6.10	0.48	0.90	1.17	5.77	-17.50	0.48	-6.10	Vehicle	Pedestrian	-----	-127.46	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	-----	-----	-----	-----	-----	11.28	11.28
		U$_{24}$ - L$_{24}$	-121.37	-19.15	5.08	-8.17	0.37	0.90	1.17	5.35	-20.15	0.37	-8.17	Vehicle	Pedestrian	-----	-194.59	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	-----	-----	-----	-----	-----	8.96	8.96
		U$_{25}$ - L$_{25}$	-169.10	-24.27	4.89	-9.94	0.43	0.90	1.17	5.14	-25.53	0.43	-9.94	Vehicle	Pedestrian	-----	-265.95	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	9.65	9.65
		U$_{26}$ - L$_{26}$	-207.93	-24.64	4.42	-11.42	0.14	0.90	1.17	4.65	-25.92	0.14	-11.42	Vehicle	Pedestrian	-----	-318.86	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	-----	-----	-----	-----	-----	9.89	9.89
		U$_{27}$ - L$_{27}$	-219.90	-26.87	3.64	-11.49	0.16	0.90	1.17	3.83	-28.27	0.16	-11.49	Vehicle	Pedestrian	-----	-337.55	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	10.15	10.15
		U$_{28}$ - L$_{28}$	-240.66	-24.56	5.23	-12.59	-0.25	0.90	1.17	5.50	-25.84	-0.25	-12.59	Vehicle	Pedestrian	-----	-362.82	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	-----	-----	-----	-----	-----	11.07	11.07
		U$_{29}$ - L$_{29}$	-202.76	-20.78	8.01	-10.35	0.00	0.90	1.17	8.42	-21.86	0.00	-10.35	Vehicle	Pedestrian	-----	-305.46	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	-----	-----	-----	-----	-----	15.13	15.13
		U$_{30}$ - L$_{30}$	-516.45	-18.56	-27.12	-8.21	-13.75	0.90	1.18	-19.76	-28.88	-8.21	-13.75	Pedestrian	Pedestrian	-----	-726.79	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

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: 2F1 **Condition:** As-Inspected

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

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

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

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Diagonals	Structure 1	U$_0$ - L$_1$	87.61	-0.19	21.33	14.00	-4.60	0.90	1.24	23.75	-0.21	14.00	-4.60	Pedestrian	Pedestrian	162.96	-----	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	-----	-----	-----	-----	-----	13.21	13.21	-----	-----
		U$_1$ - L$_2$	23.84	-9.74	21.50	-4.72	9.20	0.90	1.24	23.94	-10.85	9.20	-4.72	Pedestrian	Pedestrian	74.07	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	12.19	12.19	-----	-----
		U$_2$ - L$_3$	-49.05	-8.22	3.03	-4.33	3.33	0.90	1.24	3.37	-9.15	3.33	-4.33	Pedestrian	Pedestrian	-----	-81.29	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	-----	-----	-----	-----	-----	21.15	21.15
		U$_3$ - L$_4$	-108.90	-7.54	-9.63	-4.21	-2.10	0.90	1.24	-8.40	-10.72	-2.10	-4.21	Vehicle	Pedestrian	-----	-160.97	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	15.24	15.24
		U$_4$ - L$_5$	153.14	3.51	23.24	3.12	7.00	0.90	1.24	25.87	3.91	7.00	3.12	Vehicle	Pedestrian	232.72	-----	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	-----	-----	-----	-----	-----	14.36	14.36	-----	-----
		U$_5$ - L$_6$	186.37	-1.66	26.23	2.79	10.66	0.90	1.24	29.20	-1.84	10.66	2.79	Pedestrian	Vehicle	294.10	-----	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	-----	-----	-----	-----	-----	11.65	11.65	-----	-----
		U$_6$ - L$_7$	177.53	-6.09	25.10	1.60	12.54	0.90	1.24	27.94	-6.77	12.54	1.60	Pedestrian	Vehicle	283.42	-----	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	-----	-----	-----	-----	-----	11.69	11.69	-----	-----
		U$_7$ - L$_8$	173.15	-1.62	23.19	0.41	13.46	0.90	1.24	25.82	-1.80	13.46	0.41	Pedestrian	Vehicle	276.16	-----	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	-----	-----	-----	-----	-----	12.16	12.16	-----	-----
		U$_8$ - L$_9$	328.03	-0.50	36.50	-0.14	19.45	0.90	1.20	39.35	-0.54	19.45	-0.14	Pedestrian	Vehicle	502.87	-----	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	-----	-----	-----	-----	-----	10.79	10.79	-----	-----
		U$_9$ - L$_{10}$	339.64	-0.50	36.90	0.85	18.90	0.90	1.20	39.78	-0.53	18.90	0.85	Pedestrian	Vehicle	517.81	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	10.61	10.61	-----	-----
		U$_{10}$ - L$_{11}$	313.15	1.97	28.93	1.69	16.46	0.90	1.20	31.19	2.12	16.46	1.69	Pedestrian	Pedestrian	469.04	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	12.54	12.54	-----	-----
		U$_{11}$ - L$_{12}$	270.62	2.41	35.26	1.81	13.03	0.90	1.20	38.02	2.60	13.03	1.81	Pedestrian	Pedestrian	418.17	-----	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	-----	-----	-----	-----	-----	9.93	9.93	-----	-----
		U$_{12}$ - L$_{13}$	194.11	-0.66	24.16	0.00	10.79	0.90	1.20	26.04	-0.71	10.79	0.00	Pedestrian	Vehicle	300.23	-----	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	-----	-----	-----	-----	-----	11.86	11.86	-----	-----
		U$_{13}$ - L$_{14}$	123.52	-5.50	13.58	0.00	5.97	0.90	1.20	14.65	-5.93	5.97	0.00	Pedestrian	Vehicle	187.37	-----	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	-----	-----	-----	-----	-----	14.76	14.76	-----	-----
		U$_{14}$ - L$_{15}$	-16.31	-11.53	13.74	-2.35	1.47	0.90	1.20	14.81	-12.43	1.47	-2.35	Vehicle	Vehicle	-----	-37.36	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	-----	-----	-----	-----	-----	25.10	25.10
		U$_{15}$ - L$_{16}$	59.11	-4.59	19.46	-2.09	6.08	0.90	1.20	20.98	-4.94	6.08	-2.09	Vehicle	Pedestrian	104.12	-----	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	17.57	17.57	-----	-----
		U$_{17}$ - L$_{16}$	172.05	-4.83	28.47	-1.86	9.93	0.90	1.20	30.69	-5.21	9.93	-1.86	Vehicle	Pedestrian	263.57	-----	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	-----	-----	-----	-----	-----	11.48	11.48	-----	-----
		U$_{18}$ - L$_{17}$	210.69	-4.10	25.46	-1.53	12.50	0.90	1.20	27.46	-4.42	12.50	-1.53	Pedestrian	Pedestrian	325.84	-----	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	-----	-----	-----	-----	-----	11.01	11.01	-----	-----
		U$_{19}$ - L$_{18}$	242.30	-3.27	28.00	-1.21	13.72	0.90	1.20	30.19	-3.52	13.72	-1.21	Pedestrian	Pedestrian	372.08	-----	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	-----	-----	-----	-----	-----	10.66	10.66	-----	-----
		U$_{20}$ - L$_{19}$	257.77	-2.69	21.17	-1.03	15.71	0.90	1.20	22.83	-2.90	15.71	-1.03	Pedestrian	Pedestrian	385.20	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	11.74	11.74	-----	-----
		U$_0$ - L$_1$	299.01	-2.33	22.17	-2.21	14.21	0.90	1.18	23.61	-2.48	14.21	-2.21	Pedestrian	Pedestrian	437.87	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	12.65	12.65	-----	-----
		U$_1$ - L$_2$	284.23	-7.12	32.93	-2.66	14.05	0.90	1.18	35.06	-7.58	14.05	-2.66	Pedestrian	Pedestrian	433.34	-----	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	-----	-----	-----	-----	-----	10.04	10.04	-----	-----
		U$_2$ - L$_3$	221.45	-7.60	32.12	-2.85	11.83	0.90	1.18	34.19	-8.09	11.83	-2.85	Pedestrian	Pedestrian	347.71	-----	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	-----	-----	-----	-----	-----	9.32	9.32	-----	-----
		U$_3$ - L$_4$	178.33	-8.59	31.44	-3.23	10.08	0.90	1.18	33.48	-9.14	10.08	-3.23	Vehicle	Pedestrian	275.35	-----	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	-----	-----	-----	-----	-----	11.91	11.91	-----	-----
		U$_4$ - L$_5$	53.52	-7.37	20.09	-2.87	5.38	0.90	1.18	21.39	-7.84	5.38	-2.87	Vehicle	Pedestrian	97.38	-----	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	-----	-----	-----	-----	-----	17.49	17.49	-----	-----
		U$_5$ - L$_6$	-16.50	-11.34	16.63	-2.92	2.23	0.90	1.18	17.70	-12.07	2.23	-2.92	Vehicle	Vehicle	1.56	-37.14	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	-----	-----	-----	-----	-----	25.09	25.09	25.62	25.62
		U$_6$ - L$_7$	-133.20	-20.02	6.69	-2.50	-2.48	0.90	1.18	7.12	-21.31	-2.48	-2.50	Vehicle	Vehicle	-----	-200.86	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	-----	-----	-----	-----	-----	-----	-----	10.61	10.61
		U$_7$ - L$_7$	208.77	-5.32	23.38	0.00	8.33	0.90	1.18	24.89	-5.66	8.33	0.00	Pedestrian	Vehicle	314.59	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	11.87	11.87	-----	-----
		U$_8$ - L$_8$	289.58	-0.09	31.84	0.00	8.99	0.90	1.18	33.90	-0.10	8.99	0.00	Vehicle	Vehicle	420.53	-----	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	-----	-----	-----	-----	-----	12.41	12.41	-----	-----
		U$_{10}$ - L$_9$	327.97	-0.32	29.23	1.53	11.09	0.90	1.18	31.12	-0.34	11.09	1.53	Pedestrian	Pedestrian	481.24	-----	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	-----	-----	-----	-----	-----	10.65	10.65	-----	-----
		U$_{11}$ - L$_{10}$	349.27	-1.77	32.86	0.55	12.45	0.90	1.18	34.99	-1.89	12.45	0.55	Pedestrian	Vehicle	515.71	-----	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	-----	-----	-----	-----	-----	10.44	10.44	-----	-----
		U$_{12}$ - L$_{11}$	358.20	-4.69	31.56	0.48	13.32	0.90	1.18	33.60	-4.99	13.32	0.48	Pedestrian	Vehicle	526.65	-----	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	-----	-----	-----	-----	-----	10.36	10.36	-----	-----
		U$_{13}$ - L$_{12}$	307.76	-9.01	26.53	-0.24	12.26	0.90	1.18	28.25	-9.59	12.26	-0.24	Pedestrian	Vehicle	452.74	-----	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	-----	-----	-----	-----	-----	11.60	11.60	-----	-----
		U$_{14}$ - L$_{13}$	260.25	-5.67	21.42	-1.50	11.73	0.90	1.18	22.80	-6.04	11.73	-1.50	Vehicle	Vehicle	383.21	-----	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	-----	-----	-----	-----	-----	14.98	14.98	-----	-----
		U$_{15}$ - L$_{15}$	208.41	-3.79	28.44	-2.52	11.04	0.90	1.17	29.92	-3.99	11.04	-2.52	Pedestrian	Pedestrian	324.18	-----	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	-----	-----	-----	-----	-----	10.80	10.80	-----	-----
		U$_{16}$ - L$_{16}$	243.53	-2.69	33.53	-1.48	11.54	0.90	1.17	35.27	-2.83	11.54	-1.48	Vehicle	Pedestrian	362.45	-----	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	-----	-----	-----	-----	-----	11.54	11.54	-----	-----
		U$_{17}$ - L$_{17}$	255.83	-3.99	29.61	-0.85	11.67	0.90	1.17	31.15	-4.20	11.67	-0.85	Pedestrian	Vehicle	388.24	-----	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	-----	-----	-----	-----	-----	10.61	10.61	-----	-----
		U$_{18}$ - L$_{18}$	235.25	-4.68	33.40	-0.75	10.45	0.90	1.17	35.14	-4.92	10.45	-0.75	Vehicle	Vehicle	351.51	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	11.82	11.82	-----	-----
		U$_{19}$ - L$_{19}$	212.06	-5.70	30.66	0.01	8.95	0.90	1.17	32.25	-6.00	8.95	0.01	Vehicle	Vehicle	317.61	-----	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	-----	-----	-----	-----	-----	13.60	13.60	-----	-----
	Structure 2	U$_{20}$ - L$_{20}$	168.18	-6.31	24.82	0.06	9.14	0.90	1.17	26.11	-6.63	9.14	0.06	Pedestrian	Vehicle	264.47	-----	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	-----	-----	-----	-----	-----	12.34	12.34	-----	-----
		U$_{20}$ - L$_{21}$	97.21	-6.17	20.58	0.45	6.66	0.90	1.17	21.65	-6.49	6.66	0.45	Vehicle	Vehicle	154.52	-----	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	-----	-----	-----	-----	-----	15.26	15.26	-----	-----
		U$_{21}$ - L$_{22}$	30.55	-12.34	16.82	0.58	3.66	0.90	1.17	17.70	-12.98	3.66	0.58	Vehicle	Vehicle	62.73	-----	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	22.44	22.44	-----	-----
		U$_{22}$ - L$_{22}$	49.81	-7.35	18.53	-0.72	5.11	0.90	1.17	19.50	-7.74	5.11	-0.72	Vehicle	Vehicle	90.10	-----	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	-----	-----	-----	-----	-----	19.38	19.38	-----	-----
		U$_{24}$ - L$_{23}$	115.09	-6.88	23.63	-0.72	8.00	0.90	1.17	24.86	-7.23	8.00	-0.72	Vehicle	Vehicle	181.93	-----	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	-----	-----	-----	-----	-----	12.58	12.58	-----	-----
		U$_{25}$ - L$_{24}$	179.20	-6.68	29.68	-0.73	10.10	0.90	1.17	31.22	-7.03	10.10	-0.73	Vehicle	Vehicle	273.55	-----	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	-----	-----	-----	-----	-----	13.58	13.58	-----	-----
		U$_{26}$ - L$_{25}$	220.95	-5.86	28.63	-0.57	11.89	0.90	1.17	30.12	-6.17	11.89	-0.57	Pedestrian	Vehicle	341.84	-----	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	-----	-----	-----	-----	-----	10.23	10.23	-----	-----
		U$_{27}$ - L$_{26}$	234.79	-3.89	30.91	-0.35	11.44	0.90	1.17	32.52	-4.09	11.44	-0.35	Pedestrian	Vehicle	362.38	-----	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	-----	-----	-----	-----	-----	9.46	9.46	-----	-----
		U$_{28}$ - L$_{27}$	253.01	-4.23	29.53	-0.28	12.25	0.90	1.17	31.07	-4.45	12.25	-0.28	Pedestrian	Vehicle	385.23	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	10.55	10.55	-----	-----
		U$_{29}$ - L$_{28}$	215.83	-8.99	22.97	0.00	10.20	0.90	1.17	24.17	-9.46	10.20	0.00	Pedestrian	Vehicle	325.26	-----	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	-----	-----	-----	-----	-----	12.65	12.65	-----	-----
		U$_{30}$ - L$_{29}$	179.92	-4.68	20.18	-0.93	8.89	0.90	1.17	21.24	-4.93	8.89	-0.93	Pedestrian	Vehicle	273.06	-----	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	-----	-----	-----	-----	-----	15.62	15.62	-----	-----
		U$_{30}$ - L$_{31}$	294.37	-4.13	29.13	-1.65	12.88	0.90	1.18	31.02	-4.39	12.88	-1.65	Pedestrian	Pedestrian	439.74	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	11.01	11.01	-----	-----
		U$_{31}$ - L$_{32}$	342.78	-3.96	30.86	-0.55	13.71	0.90	1.18	32.86	-4.21	13.71	-0.55	Pedestrian	Vehicle	506.15	-----	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	-----	-----	-----	-----	-----	9.34	9.34	-----	-----
		U$_{32}$ - L$_{33}$	363.31	-0.85	34.52	0.37	13.77	0.90	1.18	36.76	-0.91	13.77	0.37	Pedestrian	Vehicle	537.99	-----	0.00	33.27	33

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 Spreads
Location: 2F1
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
Load Rating Procedure for Strength Design of Truss Bridges (LDF) 1985 rev 1996

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

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

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (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	1.95	-5.98	-4.77	0.32	26.01	-79.89	-63.74	4.25
	U_0-L_1	-54.49	-51.15	0.74	-12.29	-3.96	-7.39	9.94	-3.85	-52.84	-98.77
	U_0-L_1	-139.27	-84.72	0.55	-7.33	-24.98	-10.61	-88.98	7.33	-106.65	-88.98
	U_1-L_1	-52.26	-61.06	1.18	1.89	-7.62	-3.03	15.79	29.29	-104.43	-80.43
	U_1-L_2	-28.29	50.99	1.32	0.49	-1.26	-2.11	-17.63	24.16	-126.62	-28.94
	U_1-U_2	2.12	145.13	1.55	-12.72	-8.52	-1.42	20.11	23.03	-113.77	-19.02
	L_1-L_2	54.63	49.27	1.65	1.55	-7.19	-1.10	11.88	12.44	-156.03	-26.34
	L_1-U_2	-69.92	603.38	1.02	1.95	-9.97	9.11	13.59	26.01	-125.15	-121.67
	L_2-U_2	531.73	-129.19	5.59	-5.29	-0.28	0.49	72.26	-58.42	-3.58	6.31
	L_2-U_3	68.54	-49.95	2.39	-3.28	-1.63	0.61	16.60	-17.83	-34.64	-21.14
	L_2-L_3	100.48	-176.70	1.67	1.35	-2.03	-2.31	21.65	17.43	-26.21	-29.85
	L_3-U_3	24.76	-160.14	1.52	1.26	-4.25	-5.38	24.76	-53.33	-124.56	-124.56
	U_3-L_3	-56.66	-218.08	1.50	1.54	-6.19	-4.47	19.39	6.92	-80.13	-57.87
	U_3-U_4	-173.50	-144.94	1.89	1.92	-8.68	-7.59	12.81	15.62	-98.68	-75.59
	L_3-U_4	-287.80	-237.44	1.31	0.75	-16.67	-7.36	16.90	9.73	-215.64	-95.25
	L_3-L_4	-196.20	-337.71	1.27	0.08	-12.45	-5.64	16.47	1.02	-161.13	-72.91
	U_4-L_4	-299.83	-164.75	0.55	0.10	-13.02	-3.25	20.04	7.72	-375.36	-139.43
	L_4-U_4	-189.93	-29.96	0.42	-0.39	-10.35	-1.31	5.40	-5.07	-133.85	-16.88
	L_4-L_5	-179.63	-39.55	0.37	-0.25	-9.78	-1.16	4.83	-4.56	-127.25	-14.88
	U_4-L_5	-249.78	258.69	1.03	-4.39	-7.97	4.26	13.35	-82.66	-103.07	55.17
	L_5-U_5	-28.62	-172.11	3.41	-5.81	-7.38	3.41	43.53	-74.18	-94.34	43.55
	U_5-L_5	-24.91	-195.34	3.46	-6.46	-7.11	-6.73	43.53	-74.18	-94.34	43.55
	U_5-U_6	-53.03	-283.30	1.74	-3.45	-5.49	-4.91	22.27	-44.07	-70.09	-51.45
	L_5-U_6	-339.68	-339.40	1.74	-3.45	-5.49	-4.91	22.27	-44.07	-70.09	-51.45
	L_5-L_6	-360.46	-389.97	0.41	0.80	-14.35	-8.96	5.17	10.21	-183.33	-114.78
	U_6-L_6	-403.42	-377.79	1.04	-1.55	-15.55	-6.87	20.04	-2.12	-213.04	-78.84
	L_6-U_6	-349.63	-208.07	1.93	1.90	-15.09	-11.88	24.62	24.22	-199.21	-151.73
	L_6-L_7	-253.78	-280.71	1.49	2.07	-21.30	-8.14	19.06	26.42	-272.11	-78.38
	U_6-L_7	-330.32	-83.64	1.61	2.25	-20.90	-31.85	25.00	31.85	-153.56	-99.39
	L_7-U_7	-237.02	-39.91	2.15	2.71	-14.54	-4.71	27.48	34.68	-185.81	-60.22
	U_7-L_7	-152.28	-5.38	2.60	2.60	-13.74	-3.28	33.95	34.68	-185.81	-60.22
	L_7-L_8	-116.69	170.75	2.30	1.84	-8.62	-2.27	29.36	23.51	-122.95	-3.39
	U_7-L_8	-31.78	-92.84	2.27	1.11	-8.73	-4.29	28.94	14.76	-122.95	-3.39
	L_8-U_8	-211.04	1121.68	1.73	1.48	-13.17	11.03	22.10	19.01	-168.27	140.92
	U_8-L_8	1028.71	-26.69	13.27	-14.43	-5.74	0.56	167.47	-162.12	-9.30	7.08
	L_8-L_9	9.97	1.04	1.54	-1.54	-0.61	0.04	19.75	1.19	-122.97	-44.69
	U_8-L_9	271.38	25.19	3.28	-2.75	-4.79	-3.42	41.45	-34.57	-60.92	-43.19
	L_9-U_9	1.97	1.98	1.28	1.25	-0.13	-0.11	25.65	25.65	-122.97	-37.52
	U_9-L_9	156.55	-8.67	2.25	-3.03	-5.88	-6.13	28.37	-38.23	-74.17	-77.63
	L_9-L_{10}	48.55	11.41	2.16	1.74	-8.11	-6.92	27.22	21.96	-102.39	-75.74
	U_9-L_{10}	-92.57	-65.85	0.87	0.95	-11.27	-9.69	10.97	11.97	-142.26	-122.30
	L_{10}-U_{10}	-59.44	-59.51	0.87	0.99	-11.27	-9.69	18.98	22.02	-142.26	-122.30
	U_{10}-L_{10}	-48.31	-31.52	1.59	-0.20	-10.71	-2.80	20.01	-2.34	-135.15	-35.30
	L_{10}-L_{11}	10.77	13.62	1.59	2.01	-11.10	-1.44	17.03	25.36	-140.08	-18.21
	U_{10}-L_{11}	10.77	13.62	1.59	2.01	-11.10	-1.44	17.03	25.36	-140.08	-18.21
	L_{11}-U_{11}	57.22	-122.85	1.72	1.51	-9.91	0.12	21.66	19.05	-125.08	1.52
	U_{11}-L_{11}	20.63	8.96	0.97	1.27	-8.04	-3.74	20.63	9.20	-139.77	-48.76
	L_{11}-L_{12}	85.41	4.86	1.83	0.73	-11.07	-3.86	20.63	9.20	-139.77	-48.76
	U_{11}-L_{12}	-13.52	806.37	1.72	1.51	-9.91	0.12	21.66	19.05	-125.08	1.52
	L_{12}-U_{12}	821.42	-89.58	11.44	-8.07	-6.67	-0.29	146.10	103.67	-8.59	-3.71
	U_{12}-L_{12}	26.55	27.83	1.49	1.14	-8.07	-6.92	15.18	17.88	-189.30	-164.19
	L_{12}-L_{13}	149.63	-52.49	2.34	-3.39	-2.85	-6.31	29.87	-43.27	-36.36	-80.67
	U_{12}-L_{13}	17.52	-88.46	2.08	2.18	-5.57	-5.23	26.55	27.83	-71.16	-66.83
	L_{13}-U_{13}	36.02	-37.26	2.08	2.18	-5.57	-5.23	26.55	27.83	-71.16	-66.83
	U_{13}-L_{13}	-75.13	-230.47	2.19	1.34	-7.05	-4.29	27.53	17.09	-89.41	-54.75
	L_{13}-L_{14}	-209.03	-113.17	2.19	1.34	-7.05	-4.29	23.31	17.09	-89.41	-54.75
	U_{13}-L_{14}	-64.17	-278.54	2.16	1.87	-19.84	-7.97	27.60	23.87	-253.50	-101.76
	L_{14}-U_{14}	-311.84	-185.63	2.50	1.96	-17.75	-7.47	27.60	23.87	-253.50	-101.76
	U_{14}-L_{14}	-274.89	-274.55	1.16	0.17	-23.05	-11.10	17.40	2.22	-294.51	-141.77
	L_{14}-U_{15}	-256.96	-269.01	0.81	0.12	-19.82	-7.73	15.39	1.56	-253.28	-98.75
	U_{14}-L_{15}	-229.55	-229.55	0.81	0.12	-19.82	-7.73	15.39	1.56	-253.28	-98.75
	L_{15}-U_{15}	-154.28	-34.80	0.55	-0.14	-11.86	-3.58	6.99	-1.72	-151.52	-45.79
	U_{15}-L_{15}	-28.96	-28.96	0.73	0.73	-11.86	-3.58	6.99	-1.72	-151.52	-45.79
	L_{15}-L_{16}	40.05	-167.61	3.04	-6.58	-5.26	-3.98	39.29	-85.13	-67.99	-51.47
	U_{15}-L_{16}	-10.43	-132.23	1.33	-5.46	-2.95	-3.09	17.22	-70.62	-38.12	-39.97
	L_{16}-U_{16}	-140.08	-260.72	2.22	-0.93	-6.67	-5.48	2.85	-11.98	-88.89	-122.63
	U_{16}-L_{16}	-187.01	-275.87	0.71	1.00	-9.63	-7.63	9.23	12.87	-124.60	-98.71
	L_{16}-L_{17}	-322.39	-140.31	1.27	0.54	-12.41	-3.70	6.96	20.30	-160.57	-47.89
	U_{16}-L_{17}	-147.74	26.71	1.19	1.86	-10.02	-1.59	15.36	24.12	-129.66	-20.55
	L_{17}-U_{17}	-152.87	61.91	1.36	1.82	-9.56	-1.49	15.36	24.12	-129.66	-20.55
	U_{17}-L_{17}	10.81	46.01	1.69	0.99	-6.75	-1.16	21.85	12.86	-87.77	-15.03
	L_{17}-L_{18}	-126.04	-126.04	1.69	0.99	-6.75	-1.16	11.08	12.86	-87.77	-15.03
	U_{17}-L_{18}	426.14	9.08	0.92	-10.17	-6.43	0.49	119.15	-135.84	-5.73	6.65
	L_{18}-U_{18}	1.97	1.98	0.92	-10.17	-6.43	0.49	119.15	-135.84	-5.73	6.65
	U_{18}-L_{18}	128.06	54.05	1.99	1.82	-2.52	-3.01	26.59	-34.26	-33.68	-40.23
	L_{18}-L_{19}	70.11	43.65	1.90	1.63	-4.39	-7.06	26.17	19.36	-58.65	-34.29
	U_{18}-L_{19}	-14.17	2.08	0.54	1.42	-4.39	-7.06	26.17	19.36	-58.65	-34.29
	L_{19}-U_{19}	-8.37	-30.47	2.14	0.54	-9.51	-4.31	27.75	7.20	-127.01	-57.54
	U_{19}-L_{19}	-52.60	-52.60	2.14	0.54	-9.51	-4.31	27.75	7.20	-127.01	-57.54
	L_{19}-L_{20}	-8.37	-30.47	1.74	-1.11	-11.11	1.26	16.15	-23.18	-148.42	-17.15

ZZ Axis Moment Properties

Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(ns)}$	M_{ns} (k-in)	Formula 1.8 Term * F.*S_{bx}	M_n (k-in)	YY Axis Moments from STAAD Shape Factor	M_p (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{xx} (in^3)	S_{yy} (in^3)	Z_y (in^3)	I_{yy} (in^4)
U_0-L_1	-8.24	10.30	38.61	-50.82	0.00	0.00	0.00	1.13	5920	-9.09	-8.84	55.81	-89.30	158.6	128.68
L_1-L_2	-47.79	17.97	-34.76	2.74	0.00	0.00	0.00	1.13	5920	-67.92	-52.98	-50.97	-72.38	158.6	128.68
L_1-U_2	-2.02	27.84	24.24	-27.36	0.00	0.00	0.00	1.13	5920	-0.84	34.24	-27.36	80.39	158.6	128.76
L_2-U_2	51.88	38.10	-0.53	-0.14	0.03	0.04	0.00	1.13	5920	58.25	47.13	67.87	50.13	158.6	128.68
L_2-U_3	38.35	-3.80	2.47	-2.74	0.00	0.00	0.00	1.13	5920	43.13	30.20	47.58	29.08	158.6	128.68
L_2-L_3	19.66	-22.91	42.52	4.98	0.00	0.00	0.00	1.13	5920	-38.38	-33.12	27.11	-23.30	158.6	128.75
U_3-L_3	-42.44	-73.72	-1.29	-0.10	4.26	0.03	0.00	1.13	5920	-33.39	-47.49	-7.24	-66.28	158.6	128.75
L_3-U_4	-185.44	-89.56	-1.43	0.84	3.49	-0.48	0.00	1.15	5850	-265.84	-101.80	-180.46	-124.82	260.5	260.46
U_4-L_4	-182.47	-92.09	-0.78	0.99	-2.15	0.09	0.00	1.15	5850	-260.34	-103.14	-273.18	-118.26	260.5	212.76
L_4-U_5	-33.57	-114.59	0.29	-0.14	-2.01	2.51	0.00	1.14	6219	-51.77	-77.43	-191.21	-165.9	260.5	178.35
U_5-L_5	92.30	64.86	-0.84	0.07	0.07	0.77	0.00	1.14	6219	105.53	85.49	121.24	97.30	165.8	165.79
L_5-U_6	92.30	64.86	-0.84	0.07	0.07	0.77	0.00	1.14	6219	105.53	85.49	121.24	97.30	165.8	165.79
L_6-U_7	81.04	-1.83.52	-12.84	30.68	0.00	0.00	0.00	1.15	5850	148.24	62.69	145.22	62.69	219.3	219.34
L_7-U_8	-9.66	-2.41	8.58	27.69	0.00	0.00	0.00	1.15	5850	396.45	221.87	425.16	260.39	332.4	332.43
L_8-U_9	-82.68	-10.68	0.76	47.89	0.00	0.00	0.00	1.14	6219	-254.59	-205.35	276.20	-275.14	381.9	381.94
L_9-U_{10}	-8.00	-1.90	58.27	22.40	0.00	0.00	0.00	1.14	6219	251.33	40.16	337.48	71.75	381.9	381.94
L_{10}-U_{11}	-6.75	1.66	58.21	31.26	0.00	0.00	0.00	1.14	6219	119.06	29.69	203.52	48.75	381.9	381.94
L_{11}-U_{12}	-1.63	2.24	71.14	25.29	0.00	0.00	0.00	1.14	6219	150.15	-50.51	299.75	276.20	381.9	381.94
L_{12}-U_{13}	-5.71	1.41	62.13	10.32	0.00	0.00	0.00	1.14	6219	28.56	-68.20	116.75	-56.61	286.7	286.69
L_{13}-U_{14}	-2.25	-22.11	62.41	5.71	0.00	0.00	0.00	1.14	6219	47.83	-108.59	-0.40	-29.42	286.7	232.97
L_{14}-U_{15}	11.19	-65.56	53.29	-18.62	0.00	0.00	0.00	1.14	6219	-69.58	-243.95	-40.99	-182.93	184.2	184.21
L_{15}-U_{16}	-2.68	5.31	72.97	-15.13	0.00	0.00	0.00	1.14	6219	-6.41	-60.83	91.94	-87.41	183.7	183.74
L_{16}-U_{17}	-11.42	-22.39	43.37	-3.24	0.00	0.00	0.00	1.14	6219	-77.12	-103.33	-25.13	-122.21	183.7	183.74
L_{17}-U_{18}	-1.55	-23.92	16.32	20.62	0.00	0.00	0.00	1.14	6219	-28.79	280.73	-43.37	338.63	291.07	224.51
L_{18}-U_{19}	-16.98	38.37	-30.14	63.97	0.00	0.00	0.00	1.14	6219	-61.09	-185.14	63.97	-185.14	375.8	375.84
L_{19}-U_{20}	-28.22	-13.59	-34.53	2.98	0.00	0.00	0.00	1.15	6578	639.45	249.06	631.25	270.60	436.1	435.13
L_{20}-U_{21}	-1.89	-12.74	-1.29	80.61	0.00	0.00	0.00	1.15	6578	133.80	1284.4	133.80	1284.4	435.1	435.13
L_{21}-U_{22}	-3.19	-98.18	107.67	-6.66	0.00	0.00	0.00	1.15	6578	83.53	82.72	88.17	96.18	254.7	254.68
L_{22}-U_{23}	-2.28	18.54	21.82	18.69	0.00	0.00	0.00	1.15	6578	87.49	82.57	94.73	84.48	254.7	254.68
L_{23}-U_{24}	-1.76	116.29	0.39	0.46	0.45	2.25	0.00	1.15	6578	238.98	157.35	240.03	186.83	183.7	183.74
L_{24}-U_{25}	-9.04	-6.65	2.01	43.48	0.00	0.00	0.00	1.14	6219	92.71	81.70	101.72	149.47	202.2	202.19
L_{25}-U_{26}	-2.16	-49.83	0.00	-18.63	0.00	0.00	0.00	1.14	6219	60.88	5.58	49.01	5.58	202.2	202.19
L_{26}-U_{27}	-7.26	-2.58	3.03	43.66	0.00	0.00	0.00	1.14	6219	42.07	82.04	55.44	142.14	249.0	249.01
L_{27}-U_{28}	-0.61	5.31	0.34	43.66	0.00	0.00	0.00	1.14	6219	79.24	4.83	79.24	4.83	249.0	249.01
L_{28}-U_{29}	-8.25	-0.45	0.29	3.67	0.00	0.00	0.00	1.14	6219	5.18	21.41	71.31	-3.33	277.4	277.44
L_{29}-U_{30}	-13.42	-22.61	0.67	0.00	0.00	0.00	0.00	1.14	6219	7.16	0.00	7.16	0.00	277.4	277.44
L_{30}-U_{31}	-88.81	70.40	-22.13	-60.60	183.7	183.74	154.30	206.87	1307.3	13.13	6827				
L_{31}-U_{32}	-100.23	-86.81	-23.36	-85.54	183.7	183.74	154.32	206.87	1307.3	13.13	6827				
L_{32}-U_{33}	-78.52	-1.35	-0.79	-0.79	0.00	0.00	0.00	1.14	6219	0.00	0.00	0.00	0.00	277.4	277.44
L_{33}-U_{34}	-122.41	-168.98	-39.61	-155.54	317.8	317.83	249.27	358.38	1804.5	13.13	11827				
L_{34}-U_{35}	-211.96	-138.96	-39.61	-155.54	317.8	317.83	249.27	358.38	1804.5	13.13	11827				
L_{35}-U_{36}	-37.09	-46.70	0.64	-0.79	0.00	0.00	0.00	1.14	6219	0.00	0.00	0.00	0.00	277.4	277.44
L_{36}-U_{37}	-341.80	-151.99	-306.57	-185.66	388.9	388.89	314.88	444.22	2202.2	14.14	14669				
L_{37}-U_{38}	-124.40	-124.40	-306.57	-185.66	388.9	388.89	314.88	444.22	2202.2	14.14	14669				
L_{38}-U_{39}	-207.73	-190.17	-214.89	-216.48	219.5	219.53	182.71	248.50	1660.7	13.13	8251				
L_{39}-U_{40}	-207.76	-222.96	-220.14	-301.29	219.5	219.53	175.69	248.50	1660.7	13.13	8251				
L_{40}-U_{41}	-15.60	-13.68	-6.22	-46.57	0.00	0.00	0.00	1.14	6219	0.00	0.00	0.00	0.00	277.4	277.44
L_{41}-U_{42}	-15.24	8.42	-10.54	0.00	0.00	0.00	0.00	1.14	6219	0.00	0.00	0.00	0.00	277.4	277.44
L_{42}-U_{43}	-10.76	-3.87	7.27	41.89	0.00	0.00	0.00	1.14	6219	192.15	121.93	215.59	181.09	321.6	321.56
L_{43}-U_{44}	-7.74	-3.85	-0.28	41.89	0.00	0.00	0.00	1.14	6219	192.15	121.93	215.59	181.09	321.6	321.56
L_{44}-U_{45}	-4.20	0.33	12.29	38.00	0.00	0.00	0.00	1.14	6219	77.64	14.94	131.58	63.91	375.8	375.84
L_{45}-U_{46}	-1.74	-1.60	0.85	43.94	0.00	0.00	0.00	1.14	6219	77.64	14.94	131.58	63.91	375.8	375.84
L_{46}-U_{47}	-1.44	4.45	56.63	39.31	0.00	0.00	0.00	1.14	6219	46.16	-61.03	122.03	-15.71	436.1	435.13
L_{47}-U_{48}	-1.26	5.94	56.98	25.57	0.00	0.00	0.00	1.14	6219	38.75	-139.95	134.58	-111.35	375.8	375.84
L_{48}-U_{49}	-0.27	-0.27	-0.14	0.00	0.00	0.00	0.00	1.14	6219	0.00	0.00	0.00	0.00	277.4	277.44
L_{49}-U_{50}	-1.72	4.55	53.18	-2.24	0.00	0.00	0.00	1.14	6219	-53.23	-132.94	13.36	-141.76	232.9	232.94
L_{50}-U_{51}	-2.44	5.24	51.97	-20.12	0.00	0.00	0.00	1.14	6219	-63.53	-38.97	-20.12	-38.97	232.9	232.94
L_{51}-U_{52}	-1.30	-50.21	-0.08	0.91	-0.25	-0.24	0.00	1.14	6219	0.42	-56.50	83.72	-75.96	184.2	184.21
L_{52}-U_{53}	-3.00	-21.26	0.88	-11.28	0.00	0.00	0.00	1.14	6219	-62.05	-249.91	-57.01	-232.94	184.2	184.21
L_{53}-U_{54}	-4.59	-22.78	0.93	-11.28	0.00	0.00	0.00	1.14	6219	-44.73	-167.90	-23.61	-164.07	183.7	183.74
L_{54}-U_{55}	-4.59	-22.78	0.93	-11.28	0.00	0.00	0.00	1.14	6219	-44.73	-167.90	-23.61	-164.07	183.7	183.74
L_{55}-U_{56}	-24.85	-63.16	-11.80	4.98	0.00	0.00	0.00	1.14	6219	438.79	713.12	455.76	775.77	381.9	381.94
L_{56}-U_{57}	-24.85	-63.16	-11.80	4.98	0.00	0.00	0.00	1.14	6219	438.79	713.12	455.76	775.77	381.9	381.94
L_{57}-U_{58}	-2.39	-7.54	2.16	65.09	0.00	0.00	0.00	1.14	6219	51.55	-111.28	157.47	-16.85	381.9	381.94
L_{58}-U_{59}	-2.39	-7.54	2.16	65.09	0.00	0.00	0.00	1.14	6219	51.55	-111.28	157.47	-16.85	381.9	381.94
L_{59}-U_{60}	-8.47	-13.03	-0.58	0.17	5.03	-0.29	0.00	1.14	6219	0.00	0.00	0.00	0.00	277.4	277.44
L_{60}-U_{61}	-8.47	-13.03	-0.58	0.17	5.03	-0.29	0.00	1.14	6219	0.00	0.00	0.00	0.00	277.4	277.44
L_{61}-U_{62}	-8.64	-12.57	-43.59	-13.28	0.00	0.00	0.00	1.14	6219	0.00	0.00	0.00	0.00	277.4	277.44

M_y Information

Location	Member	Tension Yield Axial Area*	Tension Yield Moment Portion	Tension Yield Total	Pass	Tension Fracture Axial Area**	Tension Fracture Moment Portion	Tension Fracture Total	Pass	Compression Buckle Axial Area*	Compression Buckle Moment Portion	Compression Buckle Total	Pass	Compression Yield Axial Area*	Compression Yield Moment Portion	Compression Yield Total	Pass
Structure 1	U_0-L_1	—	—	—	—	—	—	—	—	0.276	0.061	0.28	Yes	0.214	0.060	0.28	Yes
	U_0-L_1	—	—	—	—	—	—	—	—	0.280	0.021	0.30	Yes	0.278	0.046	0.33	Yes
	U_0-L_1	—	—	—	—	—	—	—	—	0.276	0.076	0.34	Yes	0.276	0.062	0.34	Yes
	U_1-L_1	—	—	—	—	—	—	—	—	0.048	0.041	0.09	Yes	0.110	0.049	0.16	Yes
	U_1-L_2	—	—	—	—	—	—	—	—	0.051	0.039	0.09	Yes	0.128	0.042	0.17	Yes
	U_1-U_2	—	—	—	—	—	—	—	—	0.047	0.048	0.09	Yes	0.126	0.048	0.17	Yes
	L_1-L_2	—	—	—	—	—	—	—	—	0.244	0.058	0.31	Yes	0.193	0.038	0.21	Yes
	L_1-U_2	—	—	—	—	—	—	—	—	0.367	0.047	0.41	Yes	0.297	0.032	0.29	Yes
	L_2-U_2	—	—	—	—	—	—	—	—	0.380	0.170	0.55	Yes	0.265	0.116	0.39	Yes
	L_2-U_3	—	—	—	—	—	—	—	—	0.342	0.165	0.51	Yes	0.234	0.112	0.35	Yes
	L_2-L_3	—	—	—	—	—	—	—	—	0.172	0.006	0.23	Yes	0.117	0.207	0.10	Yes
	L_3-U_3	—	—	—	—	—	—	—	—	0.177	0.060	0.25	Yes	0.163	0.060	0.25	Yes
	U_3-L_3	—	—	—	—	—	—	—	—	0.183	0.060	0.25	Yes	0.163	0.060	0.25	Yes
	L_3-U_4	—	—	—	—	—	—	—	—	0.401	0.061	0.46	Yes	0.405	0.064	0.50	Yes
	U_4-L_4	—	—	—	—	—	—	—	—	0.401	0.061	0.46	Yes	0.405	0.064	0.50	Yes
	L_4-U_5	—	—	—	—	—	—	—	—	0.423	0.096	0.52	Yes	0.418	0.049	0.47	Yes
	U_5-L_5	—	—	—	—	—	—	—	—	0.427	0.099	0.54	Yes	0.422	0.060	0.50	Yes
	L_5-U_6	—	—	—	—	—	—	—	—	0.432	0.060	0.50	Yes	0.427	0.060	0.54	Yes
	$L

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: 2F1
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
Per Guidelines for Strength Design of Truss Bridges (LDF) 1985 rev 1996

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

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

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (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	-48.04	-101.19	2.36	-3.80	-0.39	0.44	31.46	-50.71	-5.21	5.88
	L_1-L_2	-130.93	-112.57	1.84	-7.32	-3.69	3.13	24.62	-97.82	-49.26	41.79
	L_2-L_3	-73.67	-79.42	3.53	-7.22	-7.89	6.67	7.07	16.22	-102.79	89.72
	L_3-L_4	18.53	15.80	0.58	2.20	-8.72	-5.38	7.78	29.42	-116.51	71.86
	L_4-L_5	68.87	210.26	1.71	-2.70	-4.70	10.76	22.80	-22.91	-116.26	23.39
	L_5-L_6	7.25	228.45	1.32	2.66	-5.98	-1.27	17.62	34.25	-79.90	-17.02
	L_6-L_7	62.67	171.77	1.77	-0.33	-4.42	1.56	23.69	-1.77	-85.81	20.12
	L_7-L_8	7.98	461.19	0.51	2.05	-3.46	4.54	6.79	27.43	-46.25	60.63
	L_8-L_9	439.37	-23.36	5.00	-5.23	-0.19	0.08	64.70	-2.96	-2.48	1.06
	L_9-L_{10}	204.91	-116.77	2.56	-3.51	-2.92	1.32	30.06	-33.41	-37.53	17.03
	L_{10}-L_{11}	168.38	-118.38	2.32	1.09	-2.19	2.41	30.02	14.15	-28.28	-31.13
	L_{11}-L_{12}	234.93	-217.73	1.85	0.88	-2.49	3.35	23.00	-46.79	-34.71	-39.20
	L_{12}-L_{13}	-19.53	-128.48	1.45	0.71	-4.42	-4.76	18.70	9.18	-97.79	-81.61
	L_{13}-L_{14}	179.75	-425.17	3.72	-11.59	-5.19	7.46	48.26	-149.96	-67.14	-96.52
	L_{14}-L_{15}	408.18	-26.47	5.00	-5.31	-0.19	0.08	64.70	-2.96	-2.48	1.06
	L_{15}-L_{16}	-209.34	-318.54	0.55	0.07	-8.37	-4.57	7.05	0.88	-121.17	-69.06
	L_{16}-L_{17}	-374.18	-83.63	0.43	0.51	-6.15	-4.70	5.59	-1.50	-109.01	-24.60
	L_{17}-L_{18}	-170.99	-20.48	0.21	-0.36	-5.69	0.11	2.76	-4.63	-73.67	1.38
	L_{18}-L_{19}	-297.50	250.73	0.28	-0.64	-4.45	2.24	3.92	-12.12	-73.67	28.34
	L_{19}-L_{20}	-99.23	0.16	0.21	-0.22	-4.82	2.22	2.73	-2.79	-52.22	29.36
	L_{20}-L_{21}	5.36	-218.26	1.64	-5.14	-0.20	0.48	20.99	-93.70	-2.61	6.16
	L_{21}-L_{22}	18.76	-247.31	1.37	-5.74	-0.23	0.54	29.02	-84.80	-2.91	6.85
	L_{22}-L_{23}	1.07	-191.80	1.93	-6.19	-3.16	-4.15	26.66	-79.09	-60.39	-53.03
	L_{23}-L_{24}	-87.67	-287.61	1.45	-4.21	-3.91	3.43	19.23	-83.76	-53.76	46.98
	L_{24}-L_{25}	-286.08	-298.86	0.66	-2.15	-15.84	-4.05	8.42	-37.42	-138.55	-51.76
	L_{25}-L_{26}	-143.96	-200.92	0.29	-1.12	-7.47	-2.13	3.61	-22.34	-68.67	-33.79
	L_{26}-L_{27}	-467.27	-273.20	1.27	-1.90	-15.06	-12.40	16.16	24.25	-192.37	-158.43
	L_{27}-L_{28}	-310.47	-45.78	1.55	2.85	-14.53	-3.39	19.77	36.43	-185.58	-30.59
	L_{28}-L_{29}	-214.10	-223.01	1.27	1.96	-10.03	-7.15	23.70	22.01	-114.25	-74.57
	L_{29}-L_{30}	-261.82	188.40	1.37	2.81	-8.22	-1.36	17.55	35.85	-105.55	17.35
	L_{30}-L_{31}	-171.20	-33.97	1.36	2.38	-7.22	-1.22	16.24	30.24	-104.65	3.62
	L_{31}-L_{32}	-131.41	389.19	1.58	2.78	-6.31	-1.49	20.12	35.48	-80.59	-17.85
	L_{32}-L_{33}	-164.24	-140.43	2.49	-0.64	-8.95	-2.46	31.77	-8.11	-114.39	-31.38
	L_{33}-L_{34}	-97.38	696.22	1.48	-0.96	-5.11	-1.40	19.23	37.76	-70.65	-17.85
	L_{34}-L_{35}	911.85	-326.76	10.12	-7.82	-5.46	0.04	127.95	-98.74	-5.83	0.48
	L_{35}-L_{36}	-289.04	42.03	1.91	-2.61	-1.33	0.92	24.14	-9.76	-92.32	44.49
	L_{36}-L_{37}	515.61	-35.20	4.15	-4.93	-3.45	-1.60	52.43	-62.27	-43.59	-20.15
	L_{37}-L_{38}	1.96	-28.64	3.85	-4.57	-3.20	-1.48	48.66	-58.00	-40.42	-18.69
	L_{38}-L_{39}	-252.11	-25.04	2.65	1.16	4.65	-3.09	33.49	-14.62	-58.67	-29.20
	L_{39}-L_{40}	230.58	-46.22	1.95	-5.99	-4.70	-3.66	24.57	-75.61	-59.33	-46.21
	L_{40}-L_{41}	-271.20	-33.97	1.36	2.38	-7.22	-1.22	16.24	30.24	-104.65	3.62
	L_{41}-L_{42}	-43.89	-183.34	1.27	1.13	-5.11	-7.07	16.02	14.30	-115.00	-89.26
	L_{42}-L_{43}	-193.07	3.94	1.77	-0.33	-4.42	1.56	23.69	-1.77	-85.81	20.12
	L_{43}-L_{44}	-104.37	-9.61	0.78	2.13	-8.62	-5.67	9.78	26.89	-121.45	-71.55
	L_{44}-L_{45}	-43.89	-183.34	1.27	1.13	-5.11	-7.07	16.02	14.30	-115.00	-89.26
	L_{45}-L_{46}	-65.51	172.40	1.02	2.36	-6.77	0.01	12.85	29.76	-85.51	0.09
	L_{46}-L_{47}	-30.91	-151.01	1.83	0.54	-7.92	-2.24	23.15	11.92	-89.93	-2.99
	L_{47}-L_{48}	-277.43	-33.08	1.35	2.36	-7.21	-1.21	16.23	30.23	-104.63	3.63
	L_{48}-L_{49}	-19.86	-197.53	1.57	-1.02	-6.07	-1.99	19.82	-12.85	-101.92	-25.15
	L_{49}-L_{50}	297.47	-13.88	3.30	-1.93	-1.23	0.85	44.46	-1.10	-74.09	-15.27
	L_{50}-L_{51}	-747.52	-264.15	10.21	-5.72	-6.59	0.05	135.49	-73.11	-7.51	0.64
	L_{51}-L_{52}	-140.80	-80.21	1.58	-0.12	-7.16	-0.64	20.19	-1.96	-91.75	-8.16
	L_{52}-L_{53}	284.87	-113.99	3.23	-2.04	-1.21	0.84	43.77	-15.68	-73.00	-30.13
	L_{53}-L_{54}	-150.40	-145.70	2.80	-4.61	-2.47	-2.94	35.77	-58.89	-31.60	-37.32
	L_{54}-L_{55}	94.86	-178.06	1.76	-4.25	-2.62	-1.86	30.26	-71.76	-27.92	-23.50
	L_{55}-L_{56}	95.69	-212.39	3.07	-7.04	-4.13	-5.66	39.26	-89.98	-52.72	-72.31
	L_{56}-L_{57}	-72.36	-205.04	2.63	-6.71	-4.03	-5.51	37.52	-85.71	-50.41	-69.13
	L_{57}-L_{58}	-182.72	-415.49	2.20	-1.18	-14.37	-8.75	18.85	4.57	-183.58	-111.83
	L_{58}-L_{59}	-370.16	-165.14	1.48	-0.36	-14.83	-8.70	18.85	4.57	-189.47	-111.79
	L_{59}-L_{60}	-224.09	-278.61	1.48	-0.36	-14.83	-8.70	18.85	4.57	-189.47	-111.79
	L_{60}-L_{61}	-304.14	-22.17	0.61	-0.14	-11.09	-0.12	7.79	-1.79	-141.69	-1.49
	L_{61}-L_{62}	-222.88	-99.03	0.46	-0.37	-7.97	-1.28	5.86	-4.75	-101.80	-16.33
	L_{62}-L_{63}	-42.77	-120.03	2.47	-4.45	-0.19	0.20	31.92	-57.59	-2.92	2.59
	L_{63}-L_{64}	150.98	-177.52	2.22	-3.89	-0.79	-1.26	28.78	-67.76	-10.26	-16.29
	L_{64}-L_{65}	61.96	-210.79	2.74	-3.03	-3.23	-2.22	36.60	-80.43	-43.15	-29.77
	L_{65}-L_{66}	55.38	-320.81	2.12	-6.67	-3.64	-5.46	27.36	-86.31	-47.63	-70.70
	L_{66}-L_{67}	-64.00	-370.85	1.11	-12.14	-7.64	-8.75	14.37	-157.12	-88.96	-126.20
	L_{67}-L_{68}	-370.60	82.40	1.72	-12.60	-2.34	-1.46	9.38	15.73	-147.54	-30.26
	L_{68}-L_{69}	-129.81	-44.52	2.29	-4.27	-2.34	-1.46	29.37	-16.65	-72.72	-30.26
	L_{69}-L_{70}	-200.72	-149.84	1.89	-1.43	-5.87	0.83	11.55	-18.55	-73.99	-10.71
	L_{70}-L_{71}	-131.75	166.74	1.69	-0.03	-5.92	1.26	21.67	-21.41	-76.62	15.51
	L_{71}-L_{72}	-37.08	34.76	0.66	-0.08	-2.98	-0.80	8.42	-5.00	-37.42	-5.80
	L_{72}-L_{73}	361.79	-17.90	0.89	-0.66	-0.19	0.06	76.02	-8.84	-2.40	-1.07
	L_{73}-L_{74}	61.96	-210.79	2.74	-3.03	-3.23	-2.22	36.60	-80.43	-43.15	-29.77
	L_{74}-L_{75}	189.89	5.64	3.13	-8.66	-3.09	-4.59	41.79	-115.72	-41.33	-61.33
	L_{75}-L_{76}	-38.98	-56.51	1.34	0.61	-7.81	-3.94	17.49	8.18	-104.33	-52.07
	L_{76}-L_{77}	-66.65	-75.79	0.37	0.31	-2.19	-1.62	5.09	-4.96	-70.97	-29.20

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	-8.87	-32.60	-3.36	-12.29	1.28	1.28	29.51	121.63	141.18	626.8
	L_1-L_2	-26.06	-23.19	-10.62	60.10	-8.35	8.00	6.80	121.63	141.18	626.8
	L_2-L_3	-1.40	4.96	-0.93	1.94	-0.23	0.22	1.85	121.63	141.18	626.8
	L_3-L_4	8.60	1.10	41.91	10.33	0.00	0.00	0.00	3.56	62.37	46.86
	L_4-L_5	7.12	0.43	-23.21	-94.45	0.00	0.00	0.00	4.32	-29.71	-57.53
	L_5-L_6	4.19	1.14	36.26	1.82	0.00	0.00	0.00	42.35	120.03	84.04
	L_6-L_7	3.82	-3.11	17.15	29.03	0.00	0.00	0.00	79.07	41.17	11.80
	L_7-L_8	-1.96	18.16	36.50	6.32	0.00	0.00	0.00	-54.11	-51.87	-17.01
	L_8-L_9	-5.05	8.63	-1.58	-3.30	0.00	0.00	0.00	-128.13	-132.09	-123.42
	L_9-L_{10}	-21.17	-34.19	51.40	125.04	15.00	30.70	45.39	288.5	288.46	246.71
	L_{10}-L_{11}	2.42	7.97	-2.50	7.05	0.00	0.00	0.00	114.19	-27.74	107.80
	L_{11}-L_{12}	-22.06	-20.88	23.78	3.45	0.00	0.00	0.00	-22.41	-19.81	36.72
	L_{12}-L_{13}	-6.60	-2.87	-15.65	11.68	29.83	0.00	0.00	83.76	57.87	112.72
	L_{13}-L_{14}	-11.61	-20.70	45.89	10.51	0.00	0.00	0.00	0.37	-4.55	75.12
	L_{14}-L_{15}	1.44	-1.46	-4.82	0.17	0.00	0.00	0.00	-129.12	-60.83	-31.66
	L_{15}-L_{16}	-106.66	-78.31	-78.17	-105.81	37.5	375.47	322.87	431.42	1347.7	115.1
	L_{16}-L_{17}	-153.52	-124.34	-142.39	-11.26	32.9	303.89	258.42	354.62	1154.2	112.4
	L_{17}-L_{18}	-73.53	-12.47	-43.20	-24.62	213.3	213.34	184.04	236.66	908.1	111.1
	L_{18}-L_{19}	2.29	-1.93	13.42	13.00	111.5	107.40	146.13	626.8	110.9	1.10
	L_{19}-L_{20}	0.67	0.16	25.27	5.87	0.00	0.00	0.00	-35.67	7.95	-3.70
	L_{20}-L_{21}	-9.34	-32.45	-0.38	-1.34	0.00	0.00	0.00	-12.87	-44.67	-1.23
	L_{21}-L_{22}	-15.61	-24.31	-0.31	-1.12	0.00	0.00	0.00	-39.64	36.33	-2.95
	L_{22}-L_{23}	-18.17	4.36	-3.41	8.89	0.00	0.00	0.00	57.45	62.86	73.13
	L_{23}-L_{24}	-3.28	-13.86	-17.78	-15.14	0.00	0.00	0.00	89.21	123.57	70.35
	L_{24}-L_{25}	-4.25	-4.11	6.84	1.65	0.00	0.00	0.00	-3.44	-0.46	19.34
	L_{25}-L_{26}	-3.54	-0.46	19.24	58.61	0.00	0.00	0.00	-131.09	49.42	-101.47
	L_{26}-L_{27}	0.55	1.38	35.34	-8.50	0.00	0.00	0.00	-135.41	2.62	-90.19
	L_{27}-L_{28}	2.95	1.10	44.99	-22.09	0.00	0.00	0.00	-44.88	1.52	-22.72
	L_{28}-L_{29}	-49.11	-13.56	-5.95	-23.08	22.5	229.58	217.57	251.95	1341.1	110.4
	L_{29}-L_{30}	-183.11	289.41	-34.50	-39.12	0.00	0.00	0.00	-26.45	17.35	-30.98
	L_{30}-L_{31}	1.90	-2.53	25.04	-18.70	0.00	0.00	0.00	56.62	209.55	86.70
	L_{31}-L_{32}	-3.99	-2.27	28.14	9.06	0.00	0.00	0.00	-124.80	110.29	83.57
	L_{32}-L_{33}	-149.14	-147.87	-38.59	-33.27	0.00	0.00	0.00	-144.92	92.35	49.67
	L_{33}-L_{34}	1.63	15.57	-1.38	-1.87	0.00	0.00	0.00	-367.65	231.98	-371.56
	L_{34}-L_{35}	-14.71	-19.90	37.07	13.64	0.00	0.00	0.00	-198.64	14.76	-254.65
	L_{35}-L_{36}	-23.47	-15.18	-6.96	-2.17	0.00	0.00	0.00	101.75	71.29	123.23
	L_{36}-L_{37}	-28.59	-22.33	1.83	6.57	0.00	0.00	0.00	78.99	49.16	88.64
	L_{37}-L_{38}	-7.42	-20.14	30.21	0.66	0.00	0.00	0.00	42.07	22.96	90.96
	L_{38}-L_{39}	-6.21	-4.75	-6.10	-10.53	0.00	0.00	0.00	-14.86	-23.53	-14.80
	L_{39}-L_{40}	-3.48	-3.36	40.96	6.93	0.00	0.00	0.00	-56.90	2.87	0.88
	L_{40}-L_{41}	-222.89	-147.87	-38.59	-33.27	0.00	0.00	0.00	-144.92	-92.35	49.67
	L_{41}-L_{42}	-1.35	3.69	29.64	4.07	0.00	0.00	0.00	-7.52	29.44	26.25
	L_{42}-L_{43}	3.16	5.97	20.91	16.29	0.00	0.00	0.00	-5.06	61.22	16.85
	L_{43}-L_{44}	1.66	0.43	25.73	26.95	0.00	0.00	0.00	41.38	24.79	-3.35
	L_{44}-L_{45}	8.45	6.30	32.74	22.25	0.00	0.00	0.00	64.60	44.02	56.89
	L_{45}-L_{46}	12.73	-4.76	-35.14	5.49	0.00	0.00	0.00	154.53	-44.18	92.31
	L_{46}-L_{47}	-14.71	-19.90	37.07	13.64	0.00	0.00	0.00	-198.64	14.76	-254.65
	L_{47}-L_{48}	8.66	2.26	-25.73	26.95	0.00	0.00	0.00	41.38	24.79	-3.35
	L_{48}-L_{49}	12.73	-4.76	-35.14	5.49	0.00	0.00	0.00	154.53	-44.18	92.31
	L_{49}-L_{50}	-23.68	-25.17	3.94	3.42	0.00	0.00	0.00	-182.39	-121.72	-208.63
	L_{50}-L_{51}	-11.69	-2.63	-22.40	4.33	0.00	0.00	0.00	-121.65	36.99	-77.07
	L_{51}-L_{52}	-6.46	-3.05	29.77	3.85	0.00	0.00	0.00	-56.79	49.16	88.64
	L_{52}-L_{53}	-3.72	-3.58	40.96	6.93	0.00	0.00	0.00	-56.90	2.87	0.88
	L_{53}-L_{54}	-40.37	-38.03	-8.31	-40.90	0.00	0.00	0.00	-40.37	-38.03	-8.31
	L_{54}-L_{55}	-10.51	-17.35	52.74	11.54	0.00	0.00	0.00	89.64	-11.77	171.87
	L_{55}-L_{56}	-37.72	-33.58	40.96	6.93	0.00	0.00	0.00	-56.90	2.87	0.88
	L_{56}-L_{57}	-17.63	-18.91	31.79	7.78	0.00	0.00	0.00	-40.37	-38.03	-8.31
	L_{57}-L_{58}	-6.36	-8.04	30.21	0.66	0.00	0.00	0.00	42.07	22.96	90.96
	L_{58}-L_{59}	-2.48	-2.48	24.62	-7.66	0.00	0.00	0.00	-73.53	-12.47	-43.20
	L_{59}-L_{60}	-2.48	-2.48	24.62	-7.66	0.00	0.00	0.00	-73.53	-12.47	-43.20
	L_{60}-L_{61}	-1.02	-0.62	-0.52	1.12	0.00	0.00	0.00	-8.04	-2.50	0.89
	L_{61}-L_{62}	-1.52	0.80	0.24	-2.68	0.00	0.00	0.00	-35.67	7.95	-3.70
	L_{62}-L_{63}	-4.11	-18.61	-0.37	-1.95	0.00	0.00	0.00	-28.11	-6.27	0.05
	L_{63}-L_{64}	-3.28	-13.86	-17.78	-15.14	0.00	0.00	0.00	-35.23	6.66	-3.70
	L_{64}-L_{65}	-4.25	-4.11	6.84	1.65	0.00	0.00	0.00	-3.44	-0.46	19.34
	L_{65}-L_{66}	-3.54	-0.46	19.24	58.61	0.00	0.00	0.00	-131.09	49.42	-101.47
	L_{66}-L_{67}	0.55	1.38	35.34	-8.50	0.00	0.00	0.00	-135.41	2.62	-90.19
	L_{67}-L_{68}	2.95	1.10	44.99	-22.09	0.00	0.00	0.00	-44.88	1.52	-22.72
	L_{68}-L_{69}	-49.11	-13.56	-5.95	-23.08	22.5	229.58	217.57	251.95	1341.1	110.4
	L_{69}-L_{70}	-183.11	289.41	-34.50	-39.12	0.00	0.00	0.00	-26.45	17.35	-30.98
	L_{70}-L_{71}	1.90	-2.53	25.04	-18.70	0.00	0.00	0.00	56.62	209.55	86.70
	L_{71}-L_{72}	-3.99	-2.27	28.14	9.06	0.00	0.00	0.00	-124.80	110.29	83.57
	L_{72}-L_{73}	-149.14	-147.87	-38.59	-33.27	0.00	0.00	0.00	-144.92	92.35	49.67
	L_{73}-L_{74}	1.63	15.57	-1.38	-1.87	0.00	0.00	0.00	-367.65	231.98	-371.56
	L_{74}-L_{75}	-14.71	-19.90	37.07	13.64	0.00	0.00	0.00	-198.64	14.76	-254.65
	L_{75}-L_{76}	-23.47	-15.18	-6.96	-2.17	0.00	0.00	0.00	101.75	71.29	123.23
	L_{76}-L_{77}	-28.59	-22.33	1.83	6.57	0.00	0.00	0.00	78.99	49.16	88.64

Tension

Location	Member	Max. Neg. Mom. Start (k-ft)	Max. Neg. Mom. End (k-ft)	Axial Tension (k)	Moment Tension (k-ft)	Pass	Fracture $\frac{1.8\ \text{Tens}^*}{F^*S_{net}}$	S_{net} (in^3)	I_{net} (in^4)	Shape Factor	M_p (k-in)	σ_{cr} (ksi)	Buckle $\frac{\text{Formula 1.8 Tens}^*}{F^*S_{eff}}$	M_{eff} (k-in)	Equivalent Mom. Factor a	C_{mx}	C_{mm}	Axial Tension	Moment Tension	Pass	Yield $\frac{\text{Tens}}{F_y A_g}$	Total	Pass
Structure 1	L_0-L_1	-14.42	-52.96	-3.36	-12.29	128.3	121.63	141.18	626.8	1.10	4659	—	0.9980542	4225.3	0.272	0.71	0.71	0.008	0.071	0.08	Yes	0.005	0.043	0.05	Yes
	L_1-L_2	-35.67	-32.22	35.15	-14.22	128.3	121.63	141.18	626.8	1.10	4659	—	0.9980542	4225.3	0.419	0.77	0.77	0.233	0.099	0.34	Yes	0.032	0.066	0.21	Yes
	L_2-L_3	-22.73	8.01	-36.41	8.10	131.6	121.62	141.18	626.8	1.10	4659	—	0.9978195	4225.3	0.140	0.74	0.74	0.245	0.034	0.28	Yes	0.157	0.022	0.18	Yes
	L_3-L_4	3.56	62.37	46.86	74.37	171.6	171.62	158.81	188.47	749.5	1.10	6220	—	0.9979195	5651.9	0.630	0.85	0.85	0.238	0.043	0.29	Yes	0.141	0.027	0.17	Yes
	L_4-L_5	4.32	-29.71	-57.53	-91.39	171.6	171.62	158.81	188.47	749.5	1.10	6220	—	0.9979795	5114.9	0.901	0.91	0.91	0.324	0.054	0.38	Yes	—	—	—	—
	L_5-L_6	42.35	120.03	84.04	116.09	206.5	206.53	176.18	784.3	1.10	7464	—	0.9977898	6800.4	0.353	0.74	0.74	—	—	—	—	0.430	0.078	0.52	Yes
	L_6-L_7	79.07	41.17	11.80	-39.39	288.5	288.46	246.71	1347.7	1.10	10626	—	0.9975349	9456.8	0.122	0.65	0.65	—	—	—	—	0.332	0.050	0.37	Yes
	L_7-L_8	-54.11	-51.87	-17.01	-47.06	355.4	355.44	302.52	403.40	1093.1	1.13	13312	—	0.9971797	11898.3	0.254	0.70	0.70	—	—	—	0.437	0.096	0.53	Yes
	L_8-L_9	-128.13	-132.09	-123.42	-147.58	355.4	355.44	304.93	403.40	1093.1	1.13	13312	—	0.9971884	11898.5	0.835	0.93	0.93	—	—	—	0.422	0.087	0.51	Yes
	L_9-L_{10}	-125.04	-15.00	-30.70	45.39	288.5	288.46	246.71	327.09	1086.4	1.12	10626	—	0.9975491	9456.8	0.122	0.65	0.65	—	—	—	0.332	0.050	0.37	Yes
	L_{10}-L_{11}	114.19	-27.74	107.80	-28.94	158.2	158.16	151.51	173.24	694.3	1.10	5717	—	0.9975983	5208.8	-0.243	0.50	0.50	—	—	—	0.290	0.044	0.34	Yes
	L_{11}-L_{12}	-22.06	-20.88	23.78	3.45	158.2	158.16	151.51	173.24	694.3	1.10	5717	—	0.9975835	5208.8	0.322	0.73	0.73	0.243	0.087	0.35	Yes	—	—	—	—
	L_{12}-L_{13}	-6.60	-2.87	-15.65	11.68	29.83	0.00	0.00	83.76	57.87	112.72	100.09	233.3	233.26	201.34	209.94	975.8	1.11	8859	—	—	0.146	0.064	0.22	Yes
	L_{13}-L_{14}	-11.61	-20.70	45.89	10.51	0.00	0.00	0.00	0.37	-4.55	75.12	36.02	321.7	321.70	275.89	363.71	1221.7	1.13	12002	—	—	0.226	0.084	0.32	Yes
	L_{14}-L_{15}	1.44	-1.46	-4.82	0.17	0.00	0.00	0.00	-129.12	-60.83	-31.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	—	—	—	—	—	—	—
	L_{15}-L_{16}	-106.66	-78.31	-78.17	-105.81	375.5	375.47	322.87	431.42	1347.7	115.1	14237	—	0.9972272	12356.7	0.734	0.89	0.89	0.351	0.067	0.42	Yes	0.327	0.056	0.38	Yes
	$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
& 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

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Min) Start (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0-L_1	-55.75	82.39	0.29	-0.38	-2.09	2.49	3.89	-5.10	-27.87	33.31
	U_1-L_1	-14.37	23.26	0.39	-0.39	-2.20	2.09	5.24	-5.25	-29.42	27.92
	U_1-L_2	10.61	-5.37	0.47	-0.53	-1.79	2.07	6.45	-6.16	-24.85	27.63
	U_2-L_2	36.81	-35.20	1.14	-0.95	-1.28	1.40	15.26	-12.66	-17.13	18.74
	U_2-L_3	49.94	-69.31	1.59	-1.61	-1.83	0.52	21.17	-19.81	-7.83	6.52
	U_3-L_3	57.83	-70.07	1.84	-2.03	-0.10	0.04	24.62	-27.07	-1.39	0.58
	U_3-L_4	67.62	-56.38	2.19	-1.93	0.31	-0.36	27.77	-31.86	1.92	-2.61
	U_4-L_4	102.14	-112.44	2.68	-2.75	-0.07	0.06	35.83	-36.78	-0.91	0.81
	U_4-L_5	-10.55	7.04	3.28	-3.85	-2.25	2.69	43.77	-51.42	-30.02	35.64
	U_5-L_5	-144.53	166.25	0.19	-0.19	-2.19	2.27	4.21	-4.25	-28.27	29.37
	U_5-L_6	-101.27	95.46	0.15	-0.09	-1.53	2.02	1.93	-1.11	-25.02	26.15
	U_6-L_6	-111.05	108.51	0.28	-0.13	-2.00	2.34	3.67	-1.56	-25.61	22.63
	U_6-L_7	-96.41	93.86	0.39	-0.26	-1.93	1.94	5.07	-3.38	-24.96	25.13
	U_7-L_7	-90.90	75.93	0.55	-0.53	-2.03	2.09	7.14	-6.84	-26.29	27.03
	U_7-L_8	-60.96	47.03	0.80	-0.80	-1.90	1.33	11.08	-10.05	-24.65	17.39
	U_8-L_8	84.73	-90.39	1.54	-1.89	-0.94	0.50	23.10	-24.16	-12.20	12.03
	U_8-L_9	67.73	-50.39	1.54	-1.99	-0.99	0.64	26.09	-25.75	-7.58	5.73
	U_9-L_9	61.54	-72.81	1.95	-2.00	-0.26	0.27	25.20	-25.93	-3.39	3.43
	U_9-L_{10}	133.07	-138.05	3.16	-3.22	-0.36	0.37	51.12	-51.64	-4.74	4.74
	U_{10}-L_{10}	158.01	-154.56	3.66	-3.60	-0.37	0.34	47.39	-46.56	-4.83	4.33
	U_{10}-L_{11}	131.43	-213.61	2.79	-3.45	-0.16	0.27	36.05	-44.57	-2.08	3.52
	U_{11}-L_{11}	-144.69	187.26	0.28	-0.36	-2.96	3.17	4.03	-5.17	-40.45	44.50
	U_{11}-L_{12}	-122.98	131.23	0.34	-0.35	-2.83	2.80	4.29	-4.42	-36.12	35.81
	U_{12}-L_{12}	-141.11	139.50	0.42	-0.41	-3.16	2.95	5.41	-5.26	-39.08	33.60
	U_{12}-L_{13}	-62.37	68.86	0.27	-0.27	-1.63	1.67	3.40	-3.48	-20.76	21.36
	U_{13}-L_{13}	-37.86	43.18	0.47	-0.47	-1.61	1.29	5.97	-5.97	-20.39	16.30
	U_{13}-L_{14}	-9.72	15.71	0.88	-0.83	-1.72	1.81	11.22	-10.60	-21.83	23.10
	U_{14}-L_{14}	14.83	-14.93	1.02	-1.07	-1.45	1.43	12.99	-13.71	-17.91	18.23
	U_{14}-L_{15}	39.68	-43.44	1.11	-1.15	-1.03	0.81	14.19	-15.63	-8.01	8.69
	U_{15}-L_{15}	88.70	-97.90	2.43	-2.43	-0.64	0.51	31.06	-31.02	-8.14	6.45
	U_{15}-L_{16}	133.02	-133.03	3.66	-3.74	-0.37	0.49	47.39	-47.39	-2.53	3.50
	U_{16}-L_{16}	140.07	-146.97	2.83	-3.91	-0.16	-0.57	36.12	-37.19	-2.06	-0.83
	U_{16}-L_{17}	148.94	-153.41	2.78	-2.98	-0.07	0.10	35.45	-36.78	-0.84	1.26
	U_{17}-L_{17}	141.98	-139.91	2.74	-2.74	-0.08	0.11	34.89	-35.73	-0.96	1.40
	U_{17}-L_{18}	185.37	-182.48	3.30	-3.17	-0.30	0.30	42.12	-40.48	-3.85	3.79
	U_{18}-L_{18}	72.78	-71.71	1.70	-1.72	-0.27	0.27	17.27	-17.43	-3.44	3.50
	U_{18}-L_{19}	-128.23	129.95	0.31	-0.27	-2.93	2.75	3.85	-3.37	-37.02	34.77
	U_{19}-L_{19}	-125.93	127.02	0.31	-0.29	-2.93	2.75	3.85	-3.37	-37.02	34.77
	U_{19}-L_{20}	-125.93	122.62	0.31	-0.29	-3.29	3.23	3.93	-3.89	-41.96	40.82
	U_{20}-L_{20}	-109.68	106.90	0.41	-0.40	-3.06	3.22	5.16	-5.09	-38.62	40.77
	U_{20}-L_{21}	-88.63	76.39	0.53	-0.53	-2.78	3.01	6.75	-6.75	-35.40	38.31
	U_{21}-L_{21}	-43.26	43.75	0.51	-0.43	-1.89	1.91	6.39	-5.48	-23.84	24.13
	U_{21}-L_{22}	29.76	-34.24	0.91	-0.91	-1.61	1.24	8.27	-8.27	-20.38	24.18
	U_{22}-L_{22}	-3.29	1.62	0.97	-1.01	-1.07	1.14	12.18	-12.73	-13.56	14.41
	U_{22}-L_{23}	36.85	-37.71	1.88	-1.87	-0.52	0.46	22.79	-23.60	-6.55	5.78
	U_{23}-L_{23}	46.59	-51.19	1.81	-1.87	-0.52	0.46	22.79	-23.60	-6.55	5.78
	U_{23}-L_{24}	62.64	-61.32	2.36	-2.36	-0.41	0.40	29.81	-29.73	-5.20	5.02
	U_{24}-L_{24}	104.42	-111.07	3.62	-3.61	-0.47	0.44	46.29	-44.78	-5.97	5.60
	U_{24}-L_{25}	108.55	-105.78	3.70	-3.74	-0.44	0.43	46.69	-47.23	-5.54	5.38
	U_{25}-L_{25}	108.55	-105.78	3.70	-3.74	-0.44	0.43	46.69	-47.23	-5.54	5.38
	U_{25}-L_{26}	114.59	-114.85	3.68	-3.50	-0.21	0.18	46.45	-44.14	-2.69	2.25
	U_{26}-L_{26}	112.82	-112.89	3.77	-3.58	-0.20	0.17	46.45	-44.14	-2.69	2.25
	U_{26}-L_{27}	-122.25	119.98	0.34	-0.31	-2.56	2.37	4.28	-4.01	-32.72	30.51
	U_{27}-L_{27}	-93.65	87.71	0.27	-0.37	-2.51	2.44	3.46	-4.75	-32.04	31.20
	U_{27}-L_{28}	-52.08	47.29	0.42	-0.55	-1.93	1.93	5.60	-7.39	-25.01	25.01
	U_{28}-L_{28}	-96.77	103.24	0.15	-0.09	-2.58	2.59	1.97	-1.19	-32.90	33.13
	U_{28}-L_{29}	-93.65	87.71	0.27	-0.37	-2.51	2.44	3.46	-4.75	-32.04	31.20
	U_{29}-L_{29}	-93.65	87.71	0.27	-0.37	-2.51	2.44	3.46	-4.75	-32.04	31.20
	U_{29}-L_{30}	-43.45	70.58	0.38	-0.43	-2.38	2.39	4.90	-5.41	-30.45	30.55
	U_{30}-L_{30}	-32.67	38.68	0.48	-0.50	-1.28	1.43	6.18	-6.44	-16.33	18.24
	U_{30}-L_{31}	-16.12	17.79	0.61	-0.64	-1.27	1.14	8.21	-8.39	-16.09	16.07
	U_{31}-L_{31}	4.43	-8.37	1.01	-1.02	-0.98	0.94	12.18	-12.73	-13.56	14.41
	U_{31}-L_{32}	29.76	-29.79	1.79	-1.79	-0.62	0.58	22.80	-22.80	-8.14	7.56
	U_{32}-L_{32}	47.21	-50.58	1.88	-1.95	-0.33	0.33	23.96	-24.89	-4.17	4.20
	U_{32}-L_{33}	43.71	-43.71	1.68	-1.68	-0.32	0.32	23.96	-24.89	-4.17	4.20
	U_{33}-L_{33}	104.42	-111.07	3.62	-3.61	-0.47	0.44	46.29	-44.78	-5.97	5.60
	U_{33}-L_{34}	108.14	-102.78	2.79	-3.62	-0.24	0.39	35.70	-46.20	-3.00	4.92
Structure 2	U_0-L_1	99.06	-131.45	2.33	-2.91	-0.31	0.02	30.20	-37.66	-4.01	0.31
	U_1-L_{1a}	94.97	-87.87	2.19	-2.45	-0.04	-0.05	28.30	-31.74	-2.47	-0.61
	U_{1a}-L_{1a}	139.42	-154.07	2.94	-3.22	-0.10	0.09	38.01	-41.61	-1.27	1.14
	U_{1a}-L_2	52.78	-74.30	2.66	-3.40	-3.22	3.65	35.55	-45.37	-43.02	48.72
	U_2-L_{1a}	-62.86	69.92	0.18	-0.16	-2.15	2.20	2.12	-2.07	-28.76	29.42
	U_{1a}-L_{2a}	-41.64	35.38	0.14	-0.01	-1.77	1.86	1.92	-0.08	-23.70	24.88
	U_{2a}-L_{2a}	-36.85	40.05	0.17	-0.12	-1.80	1.89	2.27	-1.63	-24.03	25.28
	U_{2a}-L_3	-39.84	39.91	0.46	-0.34	-1.54	1.49	6.08	-4.54	-20.55	19.95
	U_3-L_{2a}	-38.88	40.30	1.30	-1.42	-1.37	1.42	17.42	-18.92	-18.29	19.00
	U_{2a}-L_{3a}	-13.42	14.14	1.83	-2.15	-0.77	0.72	24.42	-28.72	-10.27	9.55
	U_{3a}-L_{3a}	5.87	-8.62	2.60	-2.36	-0.59	0.53	34.67	-31.48	-7.91	7.03
	U_{3a}-L_4	20.18	-40.81	1.91	-2.71	-0.81	-0.25	25.52	-36.20	-10.75	-3.31

M_2 Information

Max. Neg. Mom.

Member	Start (k-ft)	End (k-ft)	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 1 F$_y$*S$_{top}$	M_n (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(UD)}$	$C_{b(DD)}$
U_0-L_1	67.45	100.48	158.70	150.41	13.2	13.18	15.42	20.35	2	612.4	1.54	672	1.5
U_1-L_1	67.45	100.48	158.70	150.41	13.2	13.18	15.42	20.35	2	612.4	1.54	672	1.5
U_1-L_2	56.93	66.53	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.856
U_2-L_2	16.48	16.48	22.72	28.71	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
U_2-L_3	67.69	42.23	25.59	21.40	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
U_3-L_3	21.17	19.81	7.83	6.52	0.00	0.00	15.42	23.71	2	751.9	1.54	782	1.5
U_3-L_4	24.62	-27.07	-1.39	0.58	0.00	0.00	15.42	23.71	2	751.9	1.54	782	1.5
U_4-L_4	53.23	-127.14	76.43	63.10	15.53	20.67	1.35	1396.4	1.65	1718	1.5	1500.3	-0.884
U_4-L_5	77.88	-170.91	101.61	85.44	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5
U_5-L_5	129.15	164.94	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.972
U_5-L_6	129.15	122.66	164.19	158.09	32.8	32.76	33.44	54.32	14	1236.0	1.66	1793	1.5
U_6-L_6	129.15	122.66	164.19	158.09	32.8	32.76	33.44	54.32	14	1236.0	1.66	1793	1.5
U_6-L_7	139.68	205.12	178.95	296.40	42.74	42.74	42.74	65.30	8	1389.6	1.53	2130	1.5
U_7-L_7	43.18	-57.33	-52.74	55.89	107.1	107.13	107.11	162.71	26	2098.9	1.52	3269	1.5
U_7-L_8	184.88	213.06	224.76	254.30	31.4	31.42	32.07	54	14	1356.4	1.66	1718	1.5
U_8-L_8	129.15	122.66	164.19	158.09	32.8	32.76	33.44	54.32	14	1236.0	1.66	1793	1.5
U_8-L_9	129.15	122.66	164.19	158.09	32.8	32.76	33.44	54.32	14	1236.0	1.66	1793	1.5
U_9-L_9	139.68	205.12	178.95	296.40	42.74	42.74	42.74	65.30	8	1389.6	1.53	2130	1.5
U_9-L_{10}	43.18	-57.33	-52.74	55.89	107.1	107.13	107.11	162.71	26	2098.9	1.52	3269	1.5
U_{10}-L_{10}	184.88	213.06	224.76	254.30	31.4	31.42	32.07	54	14	1356.4	1.66	1718	1.5
U_{10}-L_{11}	129.15	164.94	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.972
U_{11}-L_{11}	67.45	100.48	158.70	150.41	13.2	13.18	15.42	20.35	2	612.4	1.54	672	1.5
U_{11}-L_{12}	67.45	100.48	158.70	150.41	13.2	13.18	15.42	20.35	2	612.4	1.54	672	1.5
U_{12}-L_{12}	56.93	66.53	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.856
U_{12}-L_{13}	16.48	16.48	22.72	28.71	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
U_{13}-L_{13}	67.69	42.23	25.59	21.40	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
U_{13}-L_{14}	21.17	19.81	7.83	6.52	0.00	0.00	15.42	23.71	2	751.9	1.54	782	1.5
U_{14}-L_{14}	24.62	-27.07	-1.39	0.58	0.00	0.00	15.42	23.71	2	751.9	1.54	782	1.5
U_{14}-L_{15}	53.23	-127.14	76.43	63.10	15.53	20.67	1.35	1396.4	1.65	1718	1.5	1500.3	-0.884
U_{15}-L_{15}	77.88	-170.91	101.61	85.44	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5
U_{15}-L_{16}	129.15	164.94	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.972
U_{16}-L_{16}	129.15	122.66	164.19	158.09	32.8	32.76	33.44	54.32	14	1236.0	1.66	1793	1.5
U_{16}-L_{17}	129.15	122.66	164.19	158.09	32.8	32.76	33.44	54.32	14	1236.0	1.66	1793	1.5
U_{17}-L_{17}	139.68	205.12	178.95	296.40	42.74	42.74	42.74	65.30	8	1389.6	1.53	2130	1.5
U_{17}-L_{18}	43.18	-57.33	-52.74	55.89	107.1	107.13	107.11	162.71	26	2098.9	1.52	3269	1.5
U_{18}-L_{18}	184.88	213.06	224.76	254.30	31.4	31.42	32.07	54	14	1356.4	1.66	1718	1.5
U_{18}-L_{19}	129.15	164.94	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.972
U_{19}-L_{19}	67.45	100.48	158.70	150.41	13.2	13.18	15.42	20.35	2	612.4	1.54	672	1.5
U_{19}-L_{20}	67.45	100.48	158.70	150.41	13.2	13.18	15.42	20.35	2	612.4	1.54	672	1.5
U_{20}-L_{20}	56.93	66.53	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.856
U_{20}-L_{21}	16.48	16.48	22.72	28.71	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
U_{21}-L_{21}	67.69	42.23	25.59	21.40	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
U_{21}-L_{22}	21.17	19.81	7.83	6.52	0.00	0.00	15.42	23.71	2	751.9	1.54	782	1.5
U_{22}-L_{22}	24.62	-27.07	-1.39	0.58	0.00	0.00	15.42	23.71	2	751.9	1.54	782	1.5
U_{22}-L_{23}	53.23	-127.14	76.43	63.10	15.53	20.67	1.35	1396.4	1.65	1718	1.5	1500.3	-0.884
U_{23}-L_{23}	77.88	-170.91	101.61	85.44	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5
U_{23}-L_{24}	129.15	164.94	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.972
U_{24}-L_{24}	129.15	122.66	164.19	158.09	32.8	32.76	33.44	54.32	14	1236.0	1.66	1793	1.5
U_{24}-L_{25}	129.15	122.66	164.19	158.09	32.8	32.76	33.44	54.32	14	1236.0	1.66	1793	1.5
U_{25}-L_{25}	139.68	205.12	178.95	296.40	42.74	42.74	42.74	65.30	8	1389.6	1.53	2130	1.5
U_{25}-L_{26}	43.18	-57.33	-52.74	55.89	107.1	107.13	107.11	162.71	26	2098.9	1.52	3269	1.5
U_{26}-L_{26}	184.88	213.06	224.76	254.30	31.4	31.42	32.07	54	14	1356.4	1.66	1718	1.5
U_{26}-L_{27}	129.15	164.94	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.972
U_{27}-L_{27}	67.45	100.48	158.70	150.41	13.2	13.18	15.42	20.35	2	612.4	1.54	672	1.5
U_{27}-L_{28}	67.45	100.48	158.70	150.41	13.2	13.18	15.42	20.35	2	612.4	1.54	672	1.5
U_{28}-L_{28}	56.93	66.53	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.856
U_{28}-L_{29}	16.48	16.48	22.72	28.71	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
U_{29}-L_{29}	67.69	42.23	25.59	21.40	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
U_{29}-L_{30}	21.17	19.81	7.83	6.52	0.00	0.00	15.42	23.71	2	751.9	1.54	782	1.5
U_{30}-L_{30}	24.62	-27.07	-1.39	0.58	0.00	0.00	15.42	23.71	2	751.9	1.54	782	1.5
U_{30}-L_{31}	53.23	-127.14	76.43	63.10	15.53	20.67	1.35	1396.4	1.65	1718	1.5	1500.3	-0.884
U_{31}-L_{31}	77.88	-170.91	101.61	85.44	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5
U_{31}-L_{32}	129.15	164.94	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.972
U_{32}-L_{32}	129.15	122.66	164.19	158.09	32.8	32.76	33.44	54.32	14	1236.0	1.66	1793	1.5
U_{32}-L_{33}	129.15	122.66	164.19	158.09	32.8	32.76	33.44	54.32	14	1236.0	1.66	1793	1.5
U_{33}-L_{33}	139.68	205.12	178.95	296.40	42.74	42.74	42.74	65.30	8	1389.6	1.53	2130	1.5
U_{33}-L_{34}	43.18	-57.33	-52.74	55.89	107.1	107.13	107.11	162.71	26	2098.9	1.52	3269	1.5
U_{34}-L_{34}	184.88	213.06	224.76	254.30	31.4	31.42	32.07	54	14	1356.4	1.66	1718	1.5

YY Axis Moments from STAAD

Max. Mov. Mom.

Member	Start (k-ft)	End (k-ft)	S_{top} (in^3)	S_b (in^3)	Z_y (in^3)	I_{YY} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term 1 F$_y$*S$_{top}$	M_n (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(UD)}$	$C_{b(DD)}$
U_0-L_1	-4.73	1.52	-0.42	-0.13	-8.07	-2.59	0.00	0.00	0.00	0.00	-13.39	4.31	-146.34
U_1-L_1	-6.57	-1.79	-107.84	-34.69	0.00	0.00	0.00	0.00	0.00	0.00	-19.96	2.68	-42.45
U_1-L_2	2.51	-0.87	-14.79	-2.03	0.00	0.00	0.00	0.00	0.00	0.00	11.57	3.16	-6.22
U_2-L_2	28.76	17.26	-15.92	-2.91	0.00	0.00	0.00	0.00	0.00	0.00	19.45	18.36	-38.64
U_2-L_3	2.51	-0.87	-14.79	-2.03	0.00	0.00	0.00	0.00	0.00	0.00	-19.96	2.68	-42.45
U_3-L_3	7.52	-10.39	10.45	9.61	0.00	0.00	0.00	0.00	0.00	0.00	-50.01	-68.00	-46.21
U_3-L_4	83.81	21.72	25.33	19.85	0.00	0.00	0.00	0.00	0.00	0.00	66.26	-2.42	-72.28
U_4-L_4	77.86	3.70	-16.91	0.01	0.00	0.00	0.00	0.00	0.00	0.00	27.25	22.48	-95.96
U_4-L_5	105.17	27.91	54.76	17.01	0.00	0.00	0.00	0.00	0.00	0.00	35.18	40.89	-30.35
U_5-L_5	-14.09	2.12	-39.07	-129.46	-1.09	0.10	-3.09	-1.83	0.00	0.00	350.25	193.04	180.71
U_5-L_6	-21.90	-4.72	-61.33	-36.62	0.00	0.00	0.00	0.00	0.00	0.00	-504.26	-310.48	-555.51
U_6-L_6	-16.13	0.17	-25.64	-22.50	0.00	0.00	0.00	0.00	0.00	0.00	-333.29	-241.45	-242.04
U_6-L_7	-26.41	-8.53	-27.38	-16.63	0.00	0.00	0.00	0.00	0.00	0.00	-151.85	-122.76	-153.11
U_7-L_7	-21.83	2.85	-10.66	-8.01	0.00	0.00	0.00	0.00	0.00	0.00	-72.82	7.82	-58.31
U_7-L_8	16.07	12.17	-15.02	-2.91	0.00	0.00	0.00	0.00	0.00	0.00	-19.45	18.36	-38.64
U_8-L_8	-29.28	-81.58	-43.89	-54.67	-8.23	0.70	1.31	1.01	0.00	0.00	63.44	-3.95	-0.84
U_8-L_9	-29.28	-81.58	-43.89	-54.67	-8.23	0.70	1.31	1.01	0.00	0.00	63.44	-3.95	-0.84
U_9-L_9	42.05	-6.35	-2.52	2.59	0.00	0.00	0.00	0.00	0.00	0.00	-51.50	-136.39	-109.45
U_9-L_{10}	30.86	3.38	-10.08	-4.01	0.00	0.00	0.00	0.00	0.00	0.00	-67.67	-98.56	-122.57
U_{10}-L_{10}	63.44	-3.95	-0.84	2.48	0.00	0.00	0.00	0.00	0.00	0.00	-29.08	-69.27	-112.64
U_{10}-L_{11}	129.16	16.94	-3.52	-0.47	0.00	0.00	0.00	0.00	0.00	0.00	-213.03	27.95	40.58
U_{11}-L_{11}	-2.73	0.16	-0.44	-0.13	-8.07	-2.59	0.00	0.00	0.00	0.00	-13.39	4.31	-146.34
U_{11}-L_{12}	-10.83	-2.84	-107.84	-34.69	0.00	0.00	0.00	0.00	0.00	0.00	-19.96	2.68	-42.45
U_{12}-L_{12}	-5.70	-1.06	-8.36	3.40	0.

Moment (Start) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
Condition: As-inspected

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

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

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

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

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-L_1	-23.63	-7.60	0.12	-0.09	-0.91	0.42	1.58	-1.20	-12.10	5.65
	U_1-L_2	-3.36	-8.44	0.16	-0.06	-0.78	0.01	2.11	-0.83	-10.43	0.09
	U_2-L_3	78.82	76.40	0.16	-0.07	-1.95	0.64	2.34	-0.50	-19.99	8.32
	U_3-L_4	-64.28	-73.58	0.22	0.48	-1.36	0.51	2.81	-6.16	-17.54	6.61
	U_4-L_5	-16.32	-18.04	0.23	0.18	-0.46	0.20	2.25	-1.63	-19.80	2.59
	U_5-L_6	-65.20	-48.77	0.11	-0.25	-1.18	0.79	1.45	-3.23	-15.28	10.23
	U_6-L_7	-24.89	8.62	0.21	-0.39	-0.75	0.11	2.72	-5.01	-9.70	7.02
	U_7-L_8	-0.81	2.24	0.13	-0.07	-0.18	0.18	5.48	-5.68	-3.82	6.98
	U_8-L_9	-25.30	9.99	0.30	-0.47	-0.92	0.70	3.87	-6.04	-11.88	9.02
	U_9-L_{10}	-3.37	20.00	0.17	-0.16	-1.18	0.67	2.33	-2.52	-15.27	8.64
	U_{10}-L_{11}	-101.98	74.35	0.24	-0.24	-2.20	1.69	3.09	-3.07	-28.52	21.89
	U_{11}-L_{12}	-115.65	79.79	0.22	-0.21	-1.84	1.41	2.79	-3.13	-23.72	23.82
	U_{12}-L_{13}	-76.53	79.74	0.09	-0.08	-2.11	1.81	1.20	-1.09	-27.31	23.46
	U_{13}-L_{14}	-109.78	99.44	0.22	-0.23	-2.45	1.79	2.76	-2.89	-31.26	22.90
	U_{14}-L_{15}	-89.86	84.11	0.21	-0.19	-2.56	1.96	3.49	-2.85	-27.55	20.71
	U_{15}-L_{16}	-90.94	71.81	0.31	-0.27	-2.23	1.52	4.01	-3.45	-28.48	20.06
	U_{16}-L_{17}	-62.92	58.84	0.28	-0.22	-2.17	1.67	2.82	-2.59	-27.16	19.53
	U_{17}-L_{18}	-20.34	9.87	0.27	-0.39	-0.98	0.79	3.44	-5.01	-12.53	8.96
	U_{18}-L_{19}	-1.38	-1.20	0.48	-0.07	-0.19	0.14	5.01	-5.47	-10.76	5.14
	U_{19}-L_{20}	6.85	-23.86	0.47	-0.72	-0.67	0.00	5.97	-9.22	-8.60	0.01
	U_{20}-L_{21}	-44.40	35.30	0.29	-0.61	-1.18	0.24	3.67	-7.78	-15.05	3.12
	U_{21}-L_{22}	-96.54	69.68	0.27	-0.36	-2.05	1.24	3.61	-5.01	-24.65	12.24
	U_{22}-L_{23}	-85.37	67.30	0.15	0.30	-1.50	1.11	1.93	-3.83	-24.29	14.21
	U_{23}-L_{24}	-43.17	33.38	0.14	-0.21	-1.16	0.96	2.31	-2.45	-26.55	19.13
	U_{24}-L_{25}	-109.81	116.32	0.26	0.11	-2.21	1.62	3.30	-1.43	-28.18	20.71
	U_{25}-L_{26}	-141.94	130.59	0.33	-0.17	-2.81	2.25	4.50	-2.18	-35.91	27.06
	U_{26}-L_{27}	-82.17	133.38	0.14	-0.12	-2.33	2.37	4.01	-1.45	-28.48	28.60
	U_{27}-L_{28}	-11.95	79.18	0.59	0.15	-1.54	1.78	7.50	1.53	-19.43	22.01
	U_{28}-L_{29}	-77.25	73.94	0.39	0.25	-2.26	2.12	3.74	-1.27	-28.46	22.91
	U_{29}-L_{30}	-66.17	89.96	0.22	-0.14	-2.12	1.87	2.83	-1.78	-26.74	23.63
	U_{30}-L_{31}	-56.05	72.68	0.20	-0.23	-1.92	1.67	2.53	-2.84	-24.27	18.73
	U_{31}-L_{32}	-56.05	72.68	0.20	-0.23	-1.92	1.17	2.53	-2.84	-24.27	14.73
	U_{32}-L_{33}	-31.83	37.59	0.20	-0.20	-1.40	0.99	2.50	-2.54	-17.71	12.04
	U_{33}-L_{34}	-10.04	3.78	0.30	-0.49	-0.81	0.07	3.72	-6.19	-10.16	0.00
	U_{34}-L_{35}	-19.42	8.79	0.25	-0.40	-0.91	0.76	3.21	-6.05	-11.48	9.65
	U_{35}-L_{36}	-46.48	38.24	0.27	-0.30	-2.04	1.65	3.40	-3.75	-26.69	18.90
	U_{36}-L_{37}	-54.27	68.32	0.22	-0.27	-2.10	1.50	2.80	-3.45	-26.50	18.90
	U_{37}-L_{38}	-69.31	71.94	0.16	-0.10	-2.67	2.37	1.98	-1.22	-33.72	28.88
	U_{38}-L_{39}	-77.99	78.06	0.16	-0.10	-2.67	2.37	1.98	-1.22	-33.72	28.88
	U_{39}-L_{40}	-36.18	54.54	0.14	0.17	-1.92	1.91	9.40	2.12	-19.14	24.35
	U_{40}-L_{41}	-36.18	54.54	0.14	0.17	-1.92	1.91	9.40	2.12	-19.14	24.35
	U_{41}-L_{42}	-77.08	85.18	0.28	-0.12	-2.04	1.56	3.62	-1.47	-26.03	19.97
	U_{42}-L_{43}	-78.35	71.28	0.25	-0.01	-1.86	1.53	3.25	-0.11	-23.92	13.20
	U_{43}-L_{44}	-76.52	55.14	0.11	-0.40	-2.03	1.26	1.46	-5.11	-25.90	15.38
	U_{44}-L_{45}	-76.52	55.14	0.11	-0.40	-2.03	1.26	1.46	-5.11	-25.90	15.38
	U_{45}-L_{46}	-6.27	-17.63	0.68	-0.85	-0.59	-0.10	5.12	-5.39	-7.47	-1.23
	U_{46}-L_{47}	1.05	-9.86	0.53	-0.73	-0.11	0.46	6.76	-9.28	-9.02	1.92
	U_{47}-L_{48}	-33.68	19.58	0.24	-0.21	-1.29	0.98	3.02	-2.67	-16.52	12.96
	U_{48}-L_{49}	-33.68	19.58	0.24	-0.21	-1.29	0.98	3.02	-2.67	-16.52	12.96
	U_{49}-L_{50}	-78.90	59.78	0.32	-0.28	-2.58	1.87	4.04	-3.62	-32.98	23.89
	U_{50}-L_{51}	-78.90	59.78	0.32	-0.28	-2.58	1.87	4.04	-3.62	-32.98	23.89
	U_{51}-L_{52}	-68.21	63.59	0.13	-0.13	-2.95	1.92	1.71	-1.64	-36.14	24.88
	U_{52}-L_{53}	-68.21	63.59	0.13	-0.13	-2.95	1.92	1.71	-1.64	-36.14	24.88
	U_{53}-L_{54}	-90.31	64.36	0.16	-0.15	-2.01	1.40	2.06	-1.88	-26.02	18.05
	U_{54}-L_{55}	-90.31	64.36	0.16	-0.15	-2.01	1.40	2.06	-1.88	-26.02	18.05
	U_{55}-L_{56}	-33.50	-18.26	0.15	-0.14	-1.20	0.72	1.93	-1.77	-15.56	9.32
	U_{56}-L_{57}	-33.50	-18.26	0.15	-0.14	-1.20	0.72	1.93	-1.77	-15.56	9.32
	U_{57}-L_{58}	-1.49	-18.98	0.32	-0.56	-0.70	0.08	4.08	-7.27	-8.11	1.05
	U_{58}-L_{59}	-53.83	37.97	0.11	-0.40	-1.19	0.71	1.64	-5.14	-15.42	9.21
	U_{59}-L_{60}	-61.79	22.37	0.15	-0.42	-1.66	0.05	1.91	-5.42	-21.48	0.65
	U_{60}-L_{61}	-75.25	52.23	0.23	-0.46	-2.06	0.46	2.39	-5.16	-25.30	4.28
	U_{61}-L_{62}	-73.25	65.79	0.16	-0.32	-1.90	0.72	2.12	-4.13	-24.61	9.41
	U_{62}-L_{63}	-51.30	50.88	0.12	-0.25	-1.50	0.73	1.60	-3.87	-17.58	9.50
	U_{63}-L_{64}	5.27	64.89	0.45	0.43	-1.00	1.53	6.04	5.77	-13.33	20.47
	U_{64}-L_{65}	-38.98	50.40	0.20	-0.08	-2.17	1.19	2.69	-1.04	-28.15	15.82
	U_{65}-L_{66}	-38.98	50.40	0.20	-0.08	-2.17	1.19	2.69	-1.04	-28.15	15.82
	U_{66}-L_{67}	-7.78	19.68	0.30	-0.55	-0.23	0.00	1.19	4.02	-12.10	0.00
	U_{67}-L_{68}	-7.78	19.68	0.30	-0.55	-0.23	0.00	1.19	4.02	-12.10	0.00
	U_{68}-L_{69}	2.61	-8.77	0.24	-0.68	-0.68	-0.23	5.55	-7.42	-6.35	-1.34
	U_{69}-L_{70}	2.61	-8.77	0.24	-0.68	-0.68	-0.23	5.55	-7.42	-6.35	-1.34
	U_{70}-L_{71}	-35.70	0.58	0.05	-0.60	-0.67	0.30	2.86	-3.49	-20.25	5.53
	U_{71}-L_{72}	-35.70	0.58	0.05	-0.60	-0.67	0.30	2.86	-3.49	-20.25	5.53

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_2 (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mDL}	Equivalent Mom. Factor C_{mLL}
Structure 2	U_0-L_1	-28.67	8.32	46.45	17.23	15.6	19.63	15.58	25.56	5	804.0	1.66	857	1.5	773.7
	U_1-L_2	-1.62	-12.05	108.76	35.1	25.6	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_2-L_3	0.25	-3.81	15.11	15.84	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_3-L_4	13.43	-16.66	0.77	-26.10	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_4-L_5	17.60	-28.64	12.82	-37.94	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_5-L_6	-46.62	108.15	-79.03	108.76	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0
	U_6-L_7	-92.41	105.63	-140.66	105.19	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0
	U_7-L_8	-5.78	138.63	-30.57	168.19	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0
	U_8-L_9	-82.40	154.04	-167.98	174.77	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2214.7
	U_9-L_{10}	-89.42	95.59	-128.45	107.60	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2214.7
	U_{10}-L_{11}	-79.91	103.66	-106.37	104.25	39.8	39.77	39.56	65.61	21	1610.3	1.65	2165	1.5	1968.6
	U_{11}-L_{12}	-68.16	40.64	-116.86	41.89	39.8	39.77	39.56	65.61	21	1610.3	1.65	2165	1.5	1968.6
	U_{12}-L_{13}	-62.88	59.20	-104.62	76.71	20.8	20.80	20.67	34.66	2	1079.0	1.67	1344	1.5	1229.6
	U_{13}-L_{14}	-28.85	4.70	-44.98	13.06	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{14}-L_{15}	-5.48	-39.68	-2.82	-60.64	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{15}-L_{16}	-27.86	5.14	-48.33	24.71	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{16}-L_{17}	-40.21	23.38	-57.95	37.24	15.4	15.37	15.37	29.87	2	907.0	1.54	986	1.5	958.8
	U_{17}-L_{18}	-128.53	92.67	-169.62	125.11	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{18}-L_{19}	-146.71	101.91	-191.58	136.72	35.1	35.09	35.03	59.23	3	1294.6	1.53	1950	1.5	1922.1
	U_{19}-L_{20}	-20.19	-27.31	-23.46	0.00	0.0	0.00	0.00	0.00	0	0.0	1.53	0	1.5	0.0
	U_{20}-L_{21}	-139.13	125.52	-183.36	159.04	42.7	42.74	42.74	65.30	8	1399.6	1.53	2155	1.5	2115.6
	U_{21}-L_{22}	-125.02	91.89	-165.31	120.27	42.7	42.74	42.74	65.30	8	1399.6	1.53	2155	1.5	2115.6
	U_{22}-L_{23}	-113.00	88.67	-150.24	119.43	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{23}-L_{24}	-21.57	8.32	-42.73	24.47	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{24}-L_{25}	-124.33	82.66	-164.11	110.46	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{25}-L_{26}	-168.57	116.33	-231.27	207.21	42.7	42.74	42.74	65.30	8	1399.6	1.53	2155	1.5	2115.6
	U_{26}-L_{27}	-68.51	176.68	-94.67	187.74	42.7	42.74	42.74	65.30	8	1399.6	1.53	2155	1.5	2115.6
	U_{27}-L_{28}	-5.79	105.44	-40.80	132.20	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{28}-L_{29}	-95.57	72.19	-131.23	96.08	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{29}-L_{30}	-92.35	114.63	-129.79	147.67	38.8	38.83	38.83	59.23	6	1294.6	1.53	1950	1.5	1922.1
	U_{30}-L_{31}	-79.98	114.63	-112.43	147.67	38.8	38.83	38.83	59.23	6	1294.6	1.53	1950	1.5	1922.1
	U_{31}-L_{32}	-49.68	90.67	-164.41	113.61	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{32}-L_{33}	-38.13	43.57	-64.41	64.53	20.5	20.51	20.40	33.89	8	1017.2	1.65	1518	1.5	1515.2
	U_{33}-L_{34}	-23.46	20.79	-34.16	30.03	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{34}-L_{35}	-6.21	-33.26	-6.01	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{35}-L_{36}	-4.04	-37.67	-4.04	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{36}-L_{37}	-21.07	18.86	-40.16	37.96	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{37}-L_{38}	-68.51	176.68	-94.67	187.74	42.7	42.74	42.74	65.30	8	1399.6	1.53	2155	1.5	2115.6
	U_{38}-L_{39}	-5.79	105.44	-40.80	132.20	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{39}-L_{40}	-95.57	72.19	-131.23	96.08	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{40}-L_{41}	-82.35	114.63	-129.79	147.67	38.8	38.83	38.83	59.23	6	1294.6	1.53	1950	1.5	1922.1
	U_{41}-L_{42}	-79.98	114.63	-112.43	147.67	38.8	38.83	38.83	59.23	6	1294.6	1.53	1950	1.5	1922.1
	U_{42}-L_{43}	-49.68	90.67	-164.41	113.61	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{43}-L_{44}	-38.13	43.57	-64.41	64.53	20.5	20.51	20.40	33.89	8	1017.2	1.65	1518	1.5	1515.2
	U_{44}-L_{45}	-23.46	20.79	-34.16	30.03	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{45}-L_{46}	-6.21	-33.26	-6.01	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{46}-L_{47}	-4.04	-37.67	-4.04	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{47}-L_{48}	-21.07	18.86	-40.16	37.96	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{48}-L_{49}	-68.51	176.68	-94.67	187.74	42.7	42.74	42.74	65.30	8	1399.6	1.53	2155	1.5	2115.6
	U_{49}-L_{50}	-5.79	105.44	-40.80	132.20	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{50}-L_{51}	-95.57	72.19	-131.23	96.08	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{51}-L_{52}	-82.35	114.63	-129.79	147.67	38.8	38.83	38.83	59.23	6	1294.6	1.53	1950	1.5	1922.1
	U_{52}-L_{53}	-79.98	114.63	-112.43	147.67	38.8	38.83	38.83	59.23	6	1294.6	1.53	1950	1.5	1922.1
	U_{53}-L_{54}	-49.68	90.67	-164.41	113.61	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{54}-L_{55}	-38.13	43.57	-64.41	64.53	20.5	20.51	20.40	33.89	8	1017.2	1.65	1518	1.5	1515.2
	U_{55}-L_{56}	-23.46	20.79	-34.16	30.03	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{56}-L_{57}	-6.21	-33.26	-6.01	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{57}-L_{58}	-4.04	-37.67	-4.04	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{58}-L_{59}	-21.07	18.86	-40.16	37.96	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{59}-L_{60}	-68.51	176.68	-94.67	187.74	42.7	42.74	42.74	65.30	8	1399.6	1.53	2155	1.5	2115.6
	U_{60}-L_{61}	-5.79	105.44	-40.80	132.20	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{61}-L_{62}	-95.57	72.19	-131.23	96.08	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{62}-L_{63}	-82.35	114.63	-129.79	147.67	38.8	38.83	38.83	59.23	6	1294.6	1.53	1950	1.5	1922.1
	U_{63}-L_{64}	-79.98	114.63	-112.43	147.67	38.8	38.83	38.83	59.23	6	1294.6	1.53	1950	1.5	1922.1
	U_{64}-L_{65}	-49.68	90.67	-164.41	113.61	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	U_{65}-L_{66}	-38.13	43.57	-64.41	64.53	20.5	20.51	20.40	33.89	8	1017.2	1.65	1518	1.5	1515.2
	U_{66}-L_{67}	-23.46	20.79	-34.16	30.03	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{67}-L_{68}	-6.21	-33.26	-6.01	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{68}-L_{69}	-4.04	-37.67	-4.04	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{69}-L_{70}	-21.07	18.86	-40.16	37.96	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{70}-L_{71}	-68.51	176.68	-94.67	187.74	42.7	42.74	42.74	65.30	8	1399.6	1.53	2155	1.5	2115.6
	U_{71}-L_{72}	-5.79	105.44	-40.80	132.20	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0

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	3.41	-5.76	-70.31	-9.99	0.00	0.00	0.00	0.00	-32.48	-32.99
	U_1-L_2	4.88	3.62	-58.06	36.10	0.00	0.00	0.00	0.00	-51.08	-48.25
	U_2-L_3	5.24	2.71	-58.25	3.87	0.00	0.00	0.00	0.00	-52.20	-20.75
	U_3-L_4	8.64	9.16	9.16	-11.48	0.00	0.00	0.00	0.00	-32.22	-36.60
	U_4-L_5	8.35	7.39	-30.65	-32.92	0.00	0.00	0.00	0.00	-67.05	-60.16
	U_5-L_6	20.07	12.58	-88.34	-41.68	0.00	0.00	0.00	0.00	-58.62	-16.27
	U_6-L_7	25.98	17.19	-75.94	-22.68	0.00	0.00	0.00	0.00	-191.34	-75.32
	U_7-L_8	28.63	13.28	-37.49	-35.76	0.00	0.00	0.00	0.00	-206.97	-115.96
	U_8-L_9	8.11	-4.88	30.25	34.84	0.00	0.00	0.00	0.00	-95.81	-57.24
	U_9-L_{10}	0.76	-0.51	50.83	42.06	0.00	0.00	0.00	0.00	-63.57	-127.73
	U_{10}-L_{11}	23.54	112.60	0.74	0.32	-1.37	1.63	0.00	0.00	43.12	151.77
	U_{11}-L_{12}	21.88	79.55	-0.13	0.19	-0.12	1.63	0.00	0.00	39.24	106.58
	U_{12}-L_{13}	-18.33	-8.51	-9.77	19.96	0.00	0.00	0.00	0.00	-36.66	-44.96
	U_{13}-L_{14}	-15.28	-10.08	-4.75	19.59	0.00	0.00	0.00	0.00	-60.01	-125.42
	U_{14}-L_{15}	-12.15	-11.76	-4.47	21.01	0.00	0.00	0.00	0.00	-140.56	-139.23
	U_{15}-L_{16}	-19.67	-3.61	-20.65	-25.99	0.00	0.00	0.00	0.00	-178.32	-130.03
	U_{16}-L_{17}	9.41	6.39	-37.97	3.14	0.00	0.00	0.00	0.00	-158.64	-101.81
	U_{17}-L_{18}	-130.05	-130.86	0.73	0.49	-3.97	3.14	0.00	0.00	-166.64	-159.77
	U_{18}-L_{19}	9.99	7.56	-48.65	-50.73	0.00	0.00	0.00	0.00	-166.62	-159.77
	U_{19}-L_{20}	-27.12	-7.88	-45.76	-47.61	0.00	0.00	0.00	0.00	-161.74	-160.33
	U_{20}-L_{21}	0.66	0.28	-37.30	-44.42	0.00	0.00	0.00	0.00	-153.74	-74.75
	U_{21}-L_{22}	-0.47	0.75	-138.96	34.34	0.00	0.00	0.00	0.00	-56.20	-55.63
	U_{22}-L_{23}	0.22	-0.27	-47.35	-39.18

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: 2F1
Condition: As-Inspected

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

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

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

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

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load (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 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)
Structure 1	U_0–U_1	-75.17	-0.72	4.52	-44.40	-11.44	-2.59	50.27	-49.37	-127.32
	U_1–U_2	-46.82	-29.29	1.63	-6.55	-4.30	-1.04	-50.00	-15.74	-70.65
	U_2–U_3	-112.29	66.52	6.62	1.54	-8.61	-3.28	6.83	17.12	-95.84
	U_3–U_4	-15.71	66.12	0.99	1.35	-6.45	-1.85	10.99	13.95	-64.41
	U_4–U_5	-9.25	61.62	1.39	1.43	-10.38	-3.92	11.02	15.99	-115.57
	U_5–U_6	42.76	120.21	1.11	1.46	-9.96	-0.48	12.34	16.23	-110.90
	U_6–U_7	93.15	174.30	1.11	1.46	-9.96	-0.48	12.34	16.23	-110.90
	U_7–U_8	-47.38	526.15	5.08	1.46	-11.52	10.15	6.41	16.25	-728.23
	U_8–U_9	475.03	-124.35	7.38	1.46	-11.52	10.15	79.55	87.58	-74.82
	U_9–U_{10}	46.82	20.99	1.38	-1.18	-3.61	-1.93	14.89	-12.70	-38.96
	U_{10}–U_{11}	64.59	-138.78	1.72	-3.40	-2.71	-5.44	18.59	-17.58	-29.64
	U_{11}–U_{12}	27.91	-140.51	1.61	-1.40	-5.61	-4.36	17.34	-15.14	-60.53
	U_{12}–U_{13}	-106.12	-155.13	2.03	0.80	-7.29	-4.93	21.66	8.64	-78.60
	U_{13}–U_{14}	-138.04	-262.76	1.72	0.80	-7.29	-4.93	21.66	8.64	-78.60
	U_{14}–U_{15}	-245.80	-183.07	1.37	-7.56	-18.82	-6.15	14.75	-81.47	-202.90
	U_{15}–U_{16}	-123.51	-327.01	2.57	-11.63	-13.24	-5.60	27.66	-27.56	-164.35
	U_{16}–U_{17}	-269.97	-145.19	0.35	0.05	-15.57	-7.20	3.81	0.50	-167.84
	U_{17}–U_{18}	-154.36	-67.45	0.39	0.74	-12.09	-5.40	4.19	0.45	-137.61
	U_{18}–U_{19}	-170.82	-20.32	0.29	-0.04	-9.26	-1.05	3.08	-0.38	-89.83
	U_{19}–U_{20}	-186.23	23.42	1.73	-9.30	-7.22	0.29	18.60	-100.28	-77.85
	U_{20}–U_{21}	-201.64	66.62	1.73	-9.30	-7.22	0.29	18.60	-100.28	-77.85
	U_{21}–U_{22}	-71.24	-180.99	0.98	-0.48	-5.07	-6.21	10.38	-5.11	-53.97
	U_{22}–U_{23}	-56.09	-252.13	1.07	-0.48	-5.07	-6.21	10.38	-5.11	-53.97
	U_{23}–U_{24}	-327.34	-325.40	0.63	2.54	-15.24	-11.83	6.67	-27.04	-162.26
	U_{24}–U_{25}	-338.58	-387.31	1.29	-2.21	-9.13	-7.75	14.33	-59.36	-177.75
	U_{25}–U_{26}	-396.14	-197.74	1.23	2.39	-21.22	-8.15	13.14	25.40	-229.97
	U_{26}–U_{27}	-344.18	-179.44	1.84	1.61	-15.89	-13.97	19.61	17.10	-169.16
	U_{27}–U_{28}	-226.16	295.72	1.36	1.34	-14.32	-11.79	14.32	19.36	-270.08
	U_{28}–U_{29}	-350.21	-90.73	1.57	2.05	-15.28	-6.88	16.66	21.78	-182.64
	U_{29}–U_{30}	-273.70	31.71	1.84	1.62	-15.89	-13.97	19.61	17.10	-169.16
	U_{30}–U_{31}	-167.09	39.84	2.06	1.98	-11.69	-3.53	21.29	21.09	-124.45
	U_{31}–U_{32}	-109.78	170.74	1.79	1.61	-11.47	-3.07	19.07	17.14	-122.12
	U_{32}–U_{33}	-8.75	-79.50	1.79	1.61	-11.47	-3.07	19.07	17.14	-122.12
	U_{33}–U_{34}	-261.01	1266.00	1.28	0.89	-16.67	12.71	13.59	9.44	-177.46
	U_{34}–U_{35}	-1192.78	-62.92	1.79	1.61	-11.47	-3.07	19.07	17.14	-122.12
	U_{35}–U_{36}	-25.29	11.66	1.33	0.18	-12.27	-4.94	13.46	12.96	-129.06
	U_{36}–U_{37}	-150.60	33.06	2.61	0.18	-4.92	-2.57	18.08	18.02	-61.94
	U_{37}–U_{38}	-150.60	33.06	2.18	0.18	-4.92	-2.57	22.88	-20.18	-75.91
	U_{38}–U_{39}	-147.31	4.37	2.71	-1.51	-6.97	-5.21	26.54	-15.92	-73.28
	U_{39}–U_{40}	-36.51	0.09	2.71	-1.51	-6.97	-5.21	17.78	-15.92	-73.28
	U_{40}–U_{41}	-31.69	-33.99	1.77	-2.88	-10.72	-7.77	18.62	-30.30	-112.73
	U_{41}–U_{42}	-86.03	-71.70	1.77	-2.89	-10.72	-7.77	18.62	-30.30	-112.73
	U_{42}–U_{43}	-90.66	-66.98	2.09	-11.51	-16.98	-5.89	21.99	-125.26	-178.67
	U_{43}–U_{44}	-87.75	-61.15	1.83	-11.51	-13.61	-5.89	21.99	-125.26	-178.67
	U_{44}–U_{45}	-33.03	28.69	1.32	1.69	-15.06	-6.41	13.91	17.80	-158.41
	U_{45}–U_{46}	-15.13	112.78	1.31	-1.71	-13.23	-1.64	13.73	17.99	-139.21
	U_{46}–U_{47}	-14.36	209.84	1.07	1.36	-13.31	-0.93	14.36	13.83	-17.30
	U_{47}–U_{48}	-2.74	209.84	1.07	1.36	-13.31	-0.93	11.27	14.33	-139.99
	U_{48}–U_{49}	-64.59	-138.78	1.72	-3.40	-2.71	-5.44	18.59	-17.58	-29.64
	U_{49}–U_{50}	-122.51	1157.56	0.86	1.84	-17.67	11.38	9.04	19.31	-185.94
	U_{50}–U_{51}	1154.91	-197.36	15.20	-13.59	-0.64	1.26	161.66	-144.70	-6.86
	U_{51}–U_{52}	-87.84	62.39	1.72	-7.30	-6.06	-2.19	11.62	-69.33	-156.51
	U_{52}–U_{53}	-178.89	-59.81	2.44	-3.37	-5.34	-6.19	25.95	-25.83	-56.82
	U_{53}–U_{54}	-68.66	-178.68	2.15	-11.28	-11.80	-11.98	21.95	-23.83	-70.62
	U_{54}–U_{55}	-68.66	-178.68	2.15	1.72	-7.30	-6.06	22.87	18.30	-77.70
	U_{55}–U_{56}	-159.54	-363.07	1.72	-7.30	-6.06	-2.19	11.62	-69.33	-156.51
	U_{56}–U_{57}	-236.51	-153.10	1.66	-1.28	-11.80	-11.98	17.11	-13.61	-127.54
	U_{57}–U_{58}	-98.60	-313.21	2.40	-14.22	-24.28	-6.90	25.54	-151.35	-258.50
	U_{58}–U_{59}	-159.54	-363.07	1.72	-7.30	-6.06	-2.19	11.62	-69.33	-156.51
	U_{59}–U_{60}	-350.37	-386.86	1.28	0.35	-25.84	-7.56	13.59	3.76	-275.08
	U_{60}–U_{61}	-279.39	-117.76	0.86	-0.23	-19.37	-5.53	9.16	-2.41	-206.19
	U_{61}–U_{62}	-252.51	-37.61	0.86	-0.23	-19.37	-5.53	9.16	-2.41	-206.19
	U_{62}–U_{63}	-186.32	-74.12	2.00	-9.64	-9.87	-1.80	21.24	-102.64	-101.93
	U_{63}–U_{64}	-139.08	-187.97	1.34	-5.91	-9.89	-1.84	57.59	-63.74	-106.66
	U_{64}–U_{65}	-47.36	-119.85	1.19	-4.14	-8.89	-3.57	12.80	-29.92	-84.50
	U_{65}–U_{66}	-52.58	-125.17	2.37	-5.37	-4.55	-5.03	27.73	-101.07	-66.87
	U_{66}–U_{67}	-277.84	-111.68	1.09	0.60	-12.88	-5.12	11.70	6.48	-138.89
	U_{67}–U_{68}	-166.98	-243.52	0.68	0.93	-11.25	-6.02	7.32	10.05	-121.26
	U_{68}–U_{69}	-287.74	-127.82	2.35	0.74	-19.41	-5.32	13.39	3.76	-275.08
	U_{69}–U_{70}	-141.43	-113.94	0.57	1.05	-14.98	-3.48	6.12	11.33	-161.48
	U_{70}–U_{71}	-141.64	56.96	0.96	1.14	-9.62	-1.36	10.33	12.34	-133.73
	U_{71}–U_{72}	-136.67	471.04	0.53	1.08	-9.67	6.36	5.67	11.59	-104.24
	U_{72}–U_{73}	-497.26	-34.44	11.37	-13.26	-0.03	0.06	128.99	-147.58	-0.33
	U_{73}–U_{74}	-59.35	15.11	1.49	0.93	-6.29	-5.70	16.53	10.36	-70.03
	U_{74}–U_{75}	86.09	-19.75	2.24	-7.01	-10.05	-4.70	36.09	-78.04	-111.90
	U_{75}–U_{76}	80.30	-119.58	1.80	-9.07	-15.96	-3.89	20.06	-100.99	-122.01
	U_{76}–U_{77}	-24.63	-27.07	1.67	-3.34	-12.54	-4.48	17.47	-37.14	-139.56
	U_{77}–U_{78}	-29.38	-160.66	0.85	-0.93	-10.99	-3.68	7.21	-10.33	-121.39

ZZ Axis Moment Properties

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	S_{bc} (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor f	M_p (k-in)	Formula I & F Terms F/Sqrt(f)	M_u k-in	Equivalent Mom. Factor a	$C_{m(a)}$	$C_{m(b)}$
Structure 1	U_0–U_1	0.00	0.00	0.00	0.00	25.88	45.13	256.73	3846.42	2924.8	0.150	0.66	0.66	4206	0.99880042	2974.3	0.150	0.66	0.66
	U_1–U_2	0.00	0.00	0.00	0.00	26.00	45.13	256.73	3846.42	2924.8	0.150	0.66	0.66	4206	0.99880042	2974.3	0.150	0.66	0.66
	U_2–U_3	0.00	0.00	0.00	0.00	137.07	134.73	-210.57	64.94	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3
	U_3–U_4	0.00	0.00	0.00	0.00	6.13	168.13	-187.12	64.94	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3
	U_4–U_5	0.00	0.00	0.00	0.00	53.26	705.13	-228.30	830.87	138.2	138.17	111.77	199.97	3642	2197.7	1.45	6999	0.99894945	4554.8
	U_5–U_6	0.00	0.00	0.00	0.00	720.95	-2.73	-516.29	-156.77	130.3	130.26	105.11	180.77	2960	1799.3	1.39	5995	0.99880639	4250.8
	U_6–U_7	0.00	0.00	0.00	0.00	80.22	10.26	10.22	-0.24	96.6	96.61	79.12	135.29	2174	1387.9	1.40	4465	0.99873194	3184.1
	U_7–U_8	0.00	0.00	0.00	0.00	18.59	17.58	-29.64	18.63	83.55	83.59	68.33	116.79	1877	1199.5	1.40	3855	0.99873194	3184.1
	U_8–U_9	0.00	0.00	0.00	0.00	58.82	-202.34	-42.41	-243.82	128.7	128.69	105.26	182.66	3153	1864.4	1.42	6028	0.99875895	4241.5
	U_9–U_{10}	0.00	0.00	0.00	0.00	109.55	-190.45	-240.14	-270.83	151.8	151.76	130.94	219.77	4535	2632.6	1.45	7252	0.99905082	5003.4
	U_{10}–U_{11}	0.00	0.00	0.00	0.00	185.35	34.78	-272.06	-241.15	151.8	151.76	130.94	219.77	4535	2632.6	1.45	7252	0.99905082	5003.4
	U_{11}–U_{12}	0.00	0.00	0.00	0.00	300.37	-343.90	-583.31	-324.15	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899944	6214.6
	U_{12}–U_{13}	0.00	0.00	0.00	0.00	-124.61	-249.94	-374.22	-503.59	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899944	6214.6
	U_{13}–U_{14}	0.00	0.00	0.00	0.00	-346.02	-188.10	-568.18	-289.63	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899944	6214.6
	U_{14}–U_{15}	0.00	0.00	0.00	0.00	-414.19	-382.28	-83.70	-127.13	130.3	130.26	105.11	180.77	2960	1799.3	1.39	5995	0.99880639	4250.8
	U_{15}–U_{16}	0.00	0.00	0.00	0.00	-218.05	-26.91	-351.84	-41.14	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99886042	3452.4
	U_{16}–U_{17}	0.00	0.00	0.00	0.00	-229.29	-341.39	-22.27	-373.42	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99886042	3452.4
	U_{17}–U_{18}	0.00	0.00	0.00	0.00	10.38	-5.11	-53.97	-56.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{18}–U_{19}	0.00	0.00	0.00	0.00	-35.17	-52.63	-12.91	-2.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{19}–U_{20}	0.00	0.00	0.00	0.00	-416.88	-387.87	-636.48	-886.76	232.7	232.70	198.86	340.10	6520	3217.6	1.46	11223	0.99885838	7670.6
	U_{20}–U_{21}	0.00	0.00	0.00	0.00	-416.88	-387.87	-636.48	-886.76	232.7	232.70	198.86	340.10	6520	3217.6	1.46	11223	0.99885838	7670.6
	U_{21}–U_{22}	0.00	0.00	0.00	0.00	-177.75	-108.15	-177.75	-108.15	232.7	232.70	198.86	340.10	6520	3217.6	1.46	11223	0.99885838	7670.6
	U_{22}–U_{23}	0.00	0.00	0.00	0.00	-177.75	-108.15	-177.75	-108.15	232.7	232.70	198.86	340.10	6520	3217.6	1.46	11223	0.99885838	7670.6
	U_{23}–U_{24}	0.00	0.00	0.00	0.00	-497.50	-224.04	-808.75	-369.82	251.7	251.73	219.41	365.62	7161	3870.6	1.45	12065	0.99891031	8258.1
	U_{24}–U_{25}	0.00	0.00	0.00	0.00	-421.94	-311.04	-667.34	-426.64	232.7	232.70	198.45	340.10	6520	3217.6	1.46	11223	0.99885838	7670.6
	U_{25}–U_{26}	0.00	0.00	0.00	0.00	-275.36	-359.28	-445.13	-533.12	232.7	232.70	198.45	340.10	6520	3217.6	1.46	11223	0.99885838	7670.6
	U_{26}–U_{27}	0.00	0.00	0.00	0.00	-433.61	-89.63	-668.71	-213.19	198.9	198.88	169.65	289.08	5137	2713.1	1.43	9408	0.99885601	6505.5
	U_{27}–U_{28}	0.00	0.00	0.00	0.00	-275.36	-359.28	-445.13	-533.12	232.7	232.70	198.45	340.10	6520	3217.6	1.46	11223	0.99885838	7670.6
	U_{28}–U_{29}	0.00	0.00	0.00	0.00	-189.53	-79.22	-379.00	2.91	156.8	156.80	134.92	214.81	3285	1852.3	1.37	7089	0.99854451	5168.9
	U_{29}–U_{30}	0.00	0.00	0.00	0.00	-117.92	-244.24	-351.47	-179.42	156.8	156.80	128.72	214.81	3285	1852.3	1.37	7089	0.99854451	5168.9
	U_{30}–U_{31}	0.00	0.00	0.00	0.00	-19.38	-212.51	-131.79	-313.77	79.12	79.12	65.37	108.91	1647	1199.5	1.40	3855	0.99873194	3184.1
	U_{31}–U_{32}	0.00	0.00	0.00	0.00	-321.66	-1698.07	-570.02	1821.67	221.8	221.77	196.91	327.26	6244	3427.0	1.48	10799	0.99893092	7310.6
	U_{32}–U_{33}	0.00	0.00	0.00	0.00	-321.66	-1698.07	-570.02	1821.67	221.8	221.77	196.91	327.26	6244	3427.0	1.48	10799	0.99893092	7310.6
	U_{33}–U_{34}	0.00	0.00	0.00	0.00	177.04	338.63	-384.61	-359.94	221.8	221.77	196.91	327.26	6244	3427.0	1.48	10799	0.99893092	7310.6
	U_{34}–U_{35}	0.00	0.00	0.00	0.00	-14.22	95.67	-200.65	25.63	185.0	185.70	154.12	266.55	4767	2721.4	1.44	8796	0.99886004	6121.2
	U_{35}–U_{36}	0.00	0.00	0.00	0.00	38.02	51.36	-48.28	-61.64	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99886042	3452.4
	U_{36}–U_{37}	0.00	0.00	0.00	0.00	22.88	-20.18	-75.91	-80.72	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99886042	3452.4
	U_{37}–U_{38}	0.00	0.00	0.00	0.00	26.54	-15.92	-73.28	-54.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{38}–U_{39}	0.00	0.00	0.00	0.00	17.78	-15.92	-73.28	-54.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{39}–U_{40}	0.00	0.00	0.00	0.00	18.62	-30.30	-112.73	-81.72	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99886042	3452.4
	U_{40}–U_{41}	0.00	0.00	0.00	0.00	18.62	-30.30	-112.73	-81.72	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99886042	3452.4
	U_{41}–U_{42}	0.00	0.00	0.00	0.00	21.99	-125.26	-178.67	-81.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{42}–U_{43}	0.00	0.00	0.00	0.00	21.99	-125.26	-178.67	-81.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{43}–U_{44}	0.00	0.00	0.00	0.00	13.91	17.80	-158.41	-67.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{44}–U_{45}	0.00	0.00	0.00	0.00	13.73	17.99	-139.21	-17.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{45}–U_{46}	0.00	0.00	0.00	0.00	14.36	13.83	-17.30	-7.86	97.1	97.11	78.18	142.56	2586	1649.1	1.47	4704	0.99901136	3297.5
	U_{46}–U_{47}	0.00	0.00	0.00	0.00	11.27	14.33	-139.99	-9.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{47}–U_{48}	0.00	0.00	0.00	0.00	11.09	291.42	-185.50	260.11	173.0	173.03	144.25	241.17	3969	2180.7	1.39	7959	0.99862246	5702.3
	U_{48}–U_{49}	0.00	0.00	0.00	0.00	18.59	17.58	-29.64	18.63	83.55	83.59	68.33	116.79	1877	1199.5	1.40	3855	0.99873194	3184.1
	U_{49}–U_{50}	0.00	0.00	0.00	0.00	9.04	19.31	-185.94	119.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{50}–U_{51}	0.00	0.00	0.00	0.00	161.66	-144.70	-6.86	14.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{51}–U_{52}	0.00	0.00	0.00	0.00	11.62	-69.33	-156.51	-23.35	97.1	97.11	78.18	142.56	2586	1649.1	1.47	4704	0.99901136	3297.5
	U_{52}–U_{53}	0.00	0.00	0.00	0.00	25.95	-25.83	-56.82	-65.93	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99886042	3452.4
	U_{53}–U_{54}	0.00	0.00	0.00	0.00	21.95	-23.83	-70.62	-68.66	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99886042	3452.4
	U_{54}–U_{55}	0.00	0.00	0.00	0.00	22.87	18.30	-77.70	-64.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{55}–U_{56}	0.00	0.00	0.00	0.00	11.62	-69.33	-156.51	-23.35	97.1	97.11	78.18	142.56	2586	1649.1	1.47	4704	0.99901136	3297.5
	U_{56}–U_{57}	0.00	0.00	0.00	0.00	17.11	-13.61	-127.54	-50.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{57}–U_{58}	0.00	0.00	0.00	0.00	25.54	-151.35	-258.50	-14.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{58}–U_{59}	0.00	0.00	0.00	0.00	11.62	-69.33	-156.51	-23.35	97.1	97.11	78.18	142.56	2586	1649.1	1.47	4704	0.99901136	3297.5
	U_{59}–U_{60}	0.00	0.00	0.00	0.00	13.59	3.76	-275.08	-84.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{60}–U_{61}	0.00	0.00	0.00	0.00	9.16	-2.41	-206.19	-68.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{61}–U_{62}	0.00	0.00	0.00	0.00	9.16	-2.41	-206.19	-68.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{62}–U_{63}	0.00	0.00	0.00	0.00	21.24	-102.64	-101.93	-19.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{63}–U_{64}	0.00	0.00	0.00	0.00	57.59	-63.74	-106.66	-19.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{64}–U_{65}	0.00	0.00	0.00	0.00	12.80	-29.92	-84.50	-47.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{65}–U_{66}	0.00	0.00	0.00	0.00	27.73	-101.07	-66.87	-54.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{66}–U_{67}	0.00	0.00	0.00	0.00	11.70	6.48	-138.89	-55.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{67}–U_{68}	0.00	0.00	0.00	0.00	7.32	10.05	-121.26	-65.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{68}–U_{69}	0.00	0.00	0.00	0.00	13.39	3.76	-275.08	-84.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{69}–U_{70}	0.00	0.00	0.00	0.00	6.12	11.33	-161.48	-37.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{70}–U_{71}	0.00	0.00	0.00	0.00	10.33	12.34	-133.73	-14.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{71}–U_{72}	0.00	0.00	0.00	0.00	5.67	11.59	-104.24	68.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0

Moment (Start) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
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) Governing Load Rating Based on Section Capacity for Shear

Per AASHTO Standard Specifications for Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

* 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

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

M_2 Information

Location	Member	ZZ Axis Moments from STAAD: 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. Neg. Mom. Start (k-in)	End (k-in)	S_{bb} (in^3)	S_{tb} (in^3)	Z_z (in^3)	I_z (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F'c/S_{bb}	M_r k-in	Equivalent Mom. Factor a	C_{mx}	C_{mx}/a	Pass
Structure 1	L_0-L_1	-15.50	-73.38	2.87	-6.09	-0.43	0.44			31.92	-45.58	-4.75	4.94	0.00	0.00	0.00	0.00	21.34	-154.64	26.34	48.96	83.6	83.58	74.65	100.97	2577	1626.3	1.21	3332	0.99000394	2755.4	-0.138	0.54	0.54																															
	L_1-L_2	39.75	-88.06	2.41	-7.00	-5.05	2.67			26.79	-77.92	-56.24	29.04	0.00	0.00	0.00	0.00	86.50	-215.77	-21.44	-153.13	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.401	0.44	0.44																															
	L_2-L_3	70.40	-42.24	1.05	-1.23	-8.62	-5.56			69.91	-8.85	-39.99	-227.26	-147.12	99.5	99.53	91.00	129.49	-137.49	99.5	99.53	84.14	125.49	3409	1372.0	1.26	4141	0.99991188	3294.8	0.335	0.73	0.73																															
	L_3-L_4	-11.39	11.52	1.30	-8.85	-9.63	-4.60			14.44	-98.57	-107.16	-51.20	0.00	0.00	0.00	0.00	3.97	-113.16	-154.10	-51.58	99.9	99.93	84.14	125.49	3409	1372.0	1.26	4141	0.99991188	3294.8	0.335	0.73	0.73	-45.12	56.05	-0.90	-0.45	1.07	1.02																															
	L_4-L_5	-49.18	108.14	1.06	-1.37	-9.43	-13.75			14.05	-71.25	-105.02	-51.68	0.00	0.00	0.00	0.00	-45.66	268.04	92.6	92.59	76.68	114.47	3186	1282.7	1.26	3777	0.99991060	3052.4	-0.127	0.54	0.54	0.06	-3.04	-16.45	7.41	0.06	0.67	0.64																															
	L_5-L_6	-0.43	187.22	0.56	2.28	-6.46	-1.14			10.65	25.35	-71.94	-12.68	0.00	0.00	0.00	0.00	13.29	268.54	94.8	218.14	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99992483	3448.5	0.049	0.62	0.62	0.55	61.63	0.23	-0.07	0.63	0.23																															
	L_6-L_7	41.36	78.74	1.25	0.05	-7.11	0.80			37.75	-33.76	-10.98	-0.01	0.00	0.00	0.00	0.00	-57.18	56.15	-108.72	-61.63	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99992483	4776.0	-0.744	0.30	0.30	0.24	61.63	0.23	0.64	0.69	0.23																															
	L_7-L_8	-25.09	448.92	0.47	1.29	-5.49	5.87			5.24	14.32	-61.10	65.37	0.00	0.00	0.00	0.00	-25.80	602.21	-112.05	668.58	145.8	145.75	130.44	228.84	6500	2932.4	1.57	7552	0.99992915	4806.3	-0.168	0.53	0.53	0.16	57.36	0.39	-0.79	-0.56	0.01	0.12																															
	L_8-L_9	426.08	-36.00	5.94	-2.75	-5.06	0.17			64.05	-29.62	-0.69	1.87	0.00	0.00	0.00	0.00	637.17	-85.31	553.01	643.04	145.8	145.75	136.74	228.84	6500	2932.4	1.57	7552	0.99992915	4806.4	-0.134	0.55	0.55	0.15	28.96	-10.45	0.35	0.64	0.12																															
	L_9-L_{10}	70.14	-126.55	2.86	0.83	-52.89	-42.00	-20.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	233.25	-233.27	140.58	-191.08	144.9	144.85	129.69	192.84	5210	2375.8	1.33	6364	0.99991496	4776.1	-0.992	0.20	0.20	0.20	18.93	6.80	0.13	-0.49	0.50	0.10																															
	L_{10}-L_{11}	-120.53	-116.03	1.92	0.76	-2.84	-2.22			20.71	8.16	-30.61	-23.89	0.00	0.00	0.00	0.00	-183.61	-140.23	116.89	-181.90	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.99991387	3052.5	-0.764	0.29	0.29	0.29	39.98	14.01	0.13	-0.04	-0.18	-0.06																															
	L_{11}-L_{12}	39.16	-198.23	2.20	-4.06	-3.80	-1.67			23.68	-43.81	-41.05	-17.33	0.00	0.00	0.00	0.00	-227.69	-214.60	140.61	-280.13	92.6	92.58	76.68	114.47	3295	1304.9	1.24	3777	0.99991387	3052.5	-0.956	0.22	0.22	0.22	-6.06	-4.29	-0.72	0.13	-0.40	0.10																															
	L_{12}-L_{13}	-45.20	-121.29	1.40	0.73	-5.61	-4.72			15.05	7.82	-53.99	-50.90	0.00	0.00	0.00	0.00	-39.19	-147.52	-128.94	-223.85	130.1	130.08	121.10	170.72	3885	1793.2	1.31	5634	0.99992283	4288.6	0.576	0.83	0.83	0.83	1.46	-7.43	-1.42	-0.94	-0.46	0.49																															
	L_{13}-L_{14}	96.42	-350.16	4.76	-11.34	-7.20	-5.30			51.27	-122.29	-77.65	-57.10	0.00	0.00	0.00	0.00	-192.00	-620.69	24.47	-535.94	162.9	162.89	147.19	219.93	6887	2613.8	1.35	7258	0.99991006	5370.6	-0.359	0.48	0.48	0.48	-64.89	-73.79	-1.57	-0.86	-0.07	1.35																															
	L_{14}-L_{15}	-52.72	-64.64	2.42	-3.32	-3.79	-2.42			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-445.09	-22.24	-62.86	-82.66	162.9	162.89	147.19	219.93	6887	3050.7	1.40	8297	0.99991202	5924.6	-0.057	0.54	0.54	0.54	0.59	-4.29	-0.23	-0.30	-0.61	0.10																															
	L_{15}-L_{16}	-192.00	-318.69	0.38	0.17	-10.94	-4.19			4.14	1.81	-117.93	-45.16	0.00	0.00	0.00	0.00	-244.22	-411.66	-612.91	-473.00	179.7	179.69	170.68	251.43	7453	3050.7	1.40	8297	0.99991202	5924.6	0.852	0.54	0.54		-51.39	26.31	-0.06	-0.14	0.58	0.12																															
	L_{16}-L_{17}	-154.69	-31.48	0.37	0.10	-6.54	-0.16			3.58	1.61	-105.54	-11.78	0.00	0.00	0.00	0.00	-437.18	56.15	-579.52	-184.12	179.7	179.69	170.68	251.43	7453	6812.2	1.40	9519.3	-0.074	0.57	0.57	0.57	-28.23	-58.66	-0.52	0.48	0.49	0.85																															
	L_{17}-L_{18}	-154.69	-31.48	0.37	0.10	-6.54	-0.16			1.88	-1.11	-70.49	-1.70	0.00	0.00	0.00	0.00	-198.62	-42.37	-292.70	-43.14	121.1	121.08	112.11	157.22	3591	1640.0	1.30	5188	0.99990448	3891.8	0.147	0.66	0.66	0.66	-80.58	-30.17	0.19	0.17	1.38	0.39																															
	L_{18}-L_{19}	-216.17	148.84	0.25	-0.49	-1.80	1.21			2.74	-2.24	-49.51	19.42	0.00	0.00	0.00	0.00	-277.46	187.97	-364.46	214.84	83.6	83.58	74.62	100.97	2140	1098.2	1.21	3332	0.99990597	2755.5	-0.593	0.34	0.34	0.34	-8.51	-29.43	0.05	0.06	-1.56	0.96																															
	L_{19}-L_{20}	-136.64	49.93	0.19	-0.11	-5.18	2.52			-23.90	1.29	-1.20	65.80	27.18	0.00	0.00	0.00	-174.91	63.36	-250.17	100.25	83.6	83.58	67.49	100.97	2140	1098.2	1.21	3332	0.99990597	2755.5	-0.401	0.44	0.44	0.44	-3.14	-0.71	-0.08	-0.02	0.41	0.54																															
	L_{20}-L_{21}	2.99	-170.85	2.15	-5.68	-0.30	0.58			22.88	-60.50	-3.24	6.20	0.00	0.00	0.00	0.00	-33.63	-300.75	-9.32	-214.05	98.1	98.05	103.28	125.70	3592	1066.5	1.28	4148	0.99991164	3232.5	-0.172	0.56	0.56	0.56	-83.63	-13.33	-1.14	-3.94	0.04	0.13																															
	L_{21}-L_{22}	34.16	-265.54	1.96	-6.24	-1.78	2.23			32.44	-111.97	-29.19	-23.72	0.00	0.00	0.00	0.00	-253.67	-413.29	-113.20	-422.01	98.1	98.05	89.12	125.70	3592	1066.5	1.28	4148	0.99991164	4022.2	-0.512	0.50	0.50	0.50	1.35	-4.24	0.31	0.20	0.20	0.20																															
	L_{22}-L_{23}	-6.26	-160.81	2.85	-6.82	-4.52	-2.75			30.39	-70.47	-48.31	-29.28	0.00	0.00	0.00	0.00	31.37	-326.66	70.68	-273.11	162.3	162.31	151.98	209.67	4946	2152.2	1.29	6919	0.99992436	5267.2	-0.096	0.52	0.52	0.52	104.88	109.08	-1.02	-0.15	3.37	0.50																															
	L_{23}-L_{24}	70.84	-81.44	1.63	-2.45	-3.34	-1.63			24.72	-31.34	-21.36	-10.03	0.00	0.00	0.00	0.00	-89.17	-176.70	-108.45	-204.89	162.3	162.31	151.98	209.67	4946	2152.2	1.29	6919	0.99991188	5026.4	-0.556	0.52	0.52	0.52	25.75	19.82	-0.32	-0.62	0.68	0.68																															
	L_{24}-L_{25}	-253.03	-206.08	2.64	-10.85	-12.02	-4.06			28.10	-115.49	-128.01	-43.09	0.00	0.00	0.00	0.00	-292.44	-533.74	-495.38	-439.62	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10583	0.99992244	6746.8	0.548	0.82	0.82	0.82	17.68	-8.49	-0.91	-0.49	0.77	1.15																															
	L_{25}-L_{26}	-75.14	-162.59	1.60	-3.13	-7.03	-3.11			19.93	-73.09	-88.53	-40.23	0.00	0.00	0.00	0.00	-151.64	-359.39	-341.82	-299.11	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10583	0.99992244	6746.8	0.548	0.82	0.82	0.82	16.46	-13.67	33.59	8.80	385.1	385.05	321.50	445.45	1568.6	1.16	14832																															
	L_{26}-L_{27}	-475.14	-252.78	1.59	-1.60	-13.37	-10.91			16.97	-17.06	-163.67	-116.12	0.00	0.00	0.00	0.00	-599.42	-330.64	-830.45	-478.79	216.3	216.33	205.74	344.19	7625	3425.8	1.99	13178	0.99991114	7132.6	0.577	0.83	0.83	0.83	35.81	24.89	0.04	-0.31	-0.15	0.90																															
	L_{27}-L_{28}	-280.52	-64.48	1.31	2.30	-16.18	-6.60			13.89	24.49	-172.31	-6.33	0.00	0.00	0.00	0.00	-346.61	-51.99	-588.68	-92.06	255.7	255.71	195.15	274.47	5445	2642.2	1.33	9057	0.99989547	6781.3	0.156	0.66	0.66	0.66	-37.36	54.60	0.23	0.05	0.28	0.29																															
	L_{28}-L_{29}	-291.56	219.77	1.56	-3.32	-14.53	-5.43			17.44	14.10	-194.73	-6.50	0.00	0.00	0.00	0.00	-357.47	304.02	-616.28	214.24	168.2	168.24	149.99	222.16	5024	2497.2	1.32	6604	0.99991202	5924.6	-0.077	0.54	0.54	0.54	-5.85	-40.56	-0.30	0.39	0.46	0.85																															
	L_{29}-L_{30}	-225.89	141.33	-1.13	2.19	-8.63	-1.12			11.98	23.35	-91.93	-11.91	0.00	0.00	0.00	0.00	-278.05	214.08	-413.12	168.24	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251	0.99991202	5924.6	-0.407	0.44	0.44	0.44	-35.30	42.03	0.04	-0.13	0.77	-0.21																															
	L_{30}-L_{31}	-201.56	205.01	1.81	-3.19	-7.21	1.26			19.23	12.52	-87.39	13.63	0.00	0.00	0.00	0.00	-227.01	302.76	-313.58	168.24	149.0	149.01	138.16	189.42	4793	1908.4	1.27	6251	0.99991202	5924.6	-0.407	0.44	0.44	0.44	-27.30	-40.74	0.08	-0.09	-0.01	1.08																															
	L_{31}-L_{32}	-160.00	387.18	1.16	2.48	-7.88	-0.11			12.38	26.40	-83.86	-1.44	0.00	0.00	0.00	0.00	-191.97	537.66	-317.08	501.86	165.6	165.55	155.01	222.43	5842	2444.6	1.34	7340	0.99991421	5468.6	-0.307	0.46	0.46	0.46	-10.96	-69.72	0.16	-0.09	-0.14	0.06																															
	L_{32}-L_{33}	-202.72	-204.41	1.90	-5.05	-9.97	-4.00			20.22	-0.53	-106.19	-42.78	0.00	0.00	0.00	0.00	-237.35	-266.43	-401.58	-321.35	226.0	225.96	205.74	344.19	7625	3425.8	1.99	13178	0.99991114	7132.6	-0.377	0.50	0.50	0.50	-49.09	-56.51	0.15	0.54	-1.06	-0.06																															
	L_{33}-L_{34}	-379.75	-103.15	3.85	-4.90	-17.72	-5.46			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-475.72	-104.15	-504.15	-104.15	226.0	225.96	205.74	344.19	7625	3425.8	1.99	13178	0.99991114	7132.6	-0.377	0.50	0.50	0.50	-49.09	-56.51	0.15	0.54	-1.06	-0.06																															
	L_{34}-L_{35}	1072.48	-412.36	13.07	-10.10	-0.76	-0.05			137.52	-106.23	-8.03	-0.57	0.00	0.00	0.00	0.00	1573.00	-674.17	1383.78	-536.61	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99990030	8222.0	-0.429	0.43	0.43	0.43	-98.09	-83.55	-0.72	0.16	-0.63	-0.32																															
	L_{35}-L_{36}	1.19	-139.31	2.17	-4.77	-1.31	1.17			13.28	-51.09	-38.78	-16.55	0.00	0.00	0.00	0.00	-413.66	-20.24	-508.50	-39.92	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99990030	8222.0	-0.429	0.43	0.43	0.43	-60.42	-27.44	-0.13	-0.14	0.20	0.47																															
	L_{36}-L_{37}	470.61	-49.01	5.17	-7.11	-4.56	-1.99			54.43	-74.83	-48.00	-20.92	0.00	0.00	0.00	0.00	682.55	-160.99	549.40	-90.91	180.3	180.26	169.70	249.67	6400	2721.8	1.36	8701	0.99991557	6543.8	-0.236	0.51	0.51	0.51	5.74	-11.03	31.70	5.18	32.7	32.74	27.63	38.29	1622.3	1.11	11059																															
	L_{37}-L_{38}	212.02	-72.05	3.65	-5.03	-7.11	-2.51			30.16	-53.83	-41.22	-17.63	0.00	0.00	0.00	0.00	303.70	-124.32	214.90	-84.91	127.4	127.41	116.92	157.02	3808	1501.0	1.23	5182	0.99989888	4200.3	-0.373	0.45	0.45	0.45	-12.44	-12.26	-0.76	-0.36	0.93	0.87																															
	L_{38}-L_{39}	226.53	-41.80	2.87	-5.12	-5.82	-2.24			30.16	-53.83	-41.22	-17.63	0.00	0.00	0.00	0.00	303.70	-124.32	214.90	-84.91	127.4	127.41	116.92	157.02	3808	1501.0	1.23	5182	0.99989888	4200.3	-0.373	0.45	0.45	0.45	-10.49	-12.26	-0.76	-0.36	0.93	0.87																															
	L_{39}-L_{40}	214.46	-56.64	2.72	-7.21	-6.10	-3.00			28.66	-75.84	-64.14	-32.00	0.00	0.00	0.00	0.00	-516.06	-114.56	195.42	-117.70	127.4	127.41	116.92	157.02	3808	1501.0	1.23	5182	0.99989891	4200.3	-0.552	0.38	0.38	0.38	-43.80	-24.14	-0.86	-0.11	0.85	1.05																															
	L_{40}-L_{41}	44.76	-54.20	1.82	-4.06	-1.92	-0.63			22.68	-51.37	-22.65	-9.05	0.00	0.00	0.00	0.00	-12.75	-161.37	-22.65	-161.37	127.4	127.41	116.92	157.02	3808	1501.0	1.23	5182	0.99989891	4200.3	-0.552	0.38	0.38	0.38	-12.86	-4.06	-0.74	-0.11	0.85	1.05																															
	L_{41}-L_{42}	49.26	-202.49	1.88	-12.26	-11.39	-3.20			19.82	-128.96	-119.79	-33.63	0.00	0.00	0.00	0.00	89.81	-430.88	-81.69	-306.95	161.2	161.16	142.40	207.64	4974	2128.2	1.29	6852	0.99990577	5313.3	-0.208	0.52	0.52	0.52	-47.25	49.52	-1.18	-0.39	0.29	1.71																															
	L_{42}-L_{43}	-197.13	39.33	1.13	-2.39	-5.13	1.31			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-229.07	51.13	-262.42	51.13	161.2	161.16	142.40	207.64	4974	2128.2	1.29	6852	0.99990577	5313.3	0.150	0.62	0.62	0.62	-10.28	-28.08	0.11	0.02	0.13	0.23																															
	L_{43}-L_{44}	-111.93	0.87	0.84	-1.83	-12.60	-3.68			8.85	19.25	-152.58	-38.76	0.00	0.00	0.00	0.00	-134.01	26.17	-317.88	49.25	161.2	161.16	150.63	207.64	4974	2128.2	1.29	6852	0.99990577	5313.3	0.155	0.66	0.66	0.66	-134.01	26.17	-317.88	49.25	161.2	161.16	150.63	207.64	4974	2128.2	1.29	6852	0.99990577	5313.3	0.155	0.66	0.66	0.66	-27.28	51.26	-30.82	56.89	256.0	256.03	214.35	281.67	1450.4	1.10	9292																															
	L_{44}-L_{45}	-60.79	179.83	0.90	2.09	-7.67	2.26			9.49	21.96	-80.72	25.76	0.00	0.00	0.00	0.00	-66.75	262.35	-183.96	237.36	127.4	127.41	116.92	157.02	3808	1501.0	1.23	5182	0.99989888	4200.3	-0.254	0.50	0.50	0.50	-10.41	39.70	0.15	0.17	0.96	0.13																															
	L_{45}-L_{46}	-81.88	265.66	1.54	0.91	-9.30	0.28			14.26	9.61	-87.86	2.99	0.00	0.00	0.00	0.00	-85.38	367.85	-233.65	349.25	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251	0.99992292	4912.7	-0.239	0.50	0.50	0.50	48.02	-23.13	0.42	0.05	0.19	0.45																															
	L_{46}-L_{47}	-100.08	-279.84	1.40	-0.70	-9.28	-3.10			14.72	-7.39	-97.59	-32.62	0.00	0.00	0.00	0.00	-110.97	-373.39	-256.97	-406.19	226.0	225.96	215.39	304.84	7460	3191.4	1.35	10060	0.99989785	7449.1	-0.633	0.85	0.85	0.85	93.26	12.52	0.38	0.67	-1.44	-0.30																															
	L_{47}-L_{48}	337.48	-173.51	3.77	-5.01	-11.77	-4.39			13.28	-51.09	-38.78	-16.55	0.00	0.00	0.00	0.00	413.66	-20.24	508.50	-39.92	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99990030	8222.0	-0.429	0.43	0.43	0.43	60.42	-27.44	0.13	-0.14	0.20	0.47																															
	L_{48}-L_{49}	1027.57	-362.88	12.49	-7.52	-6.82	0.82			133.01	-80.10	-8.74	8.68	0.00	0.00	0.00	0.00	1508.75	-575.87	1324.47	-460.46	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99990030	8221.8	-0.382	0.45	0.45	0.45	-98.09	-83.55	-0.72	0.16	-0.63	-0.32																															
	L_{49}-L_{50}	-227.20	-125.85	0.88	-0.35	-9.54	-3.28			9.33	-3.77	-101.52	-34.96	0.00	0.00	0.00	0.00	-283.23	-168.50	-427.33	-209.05	226.0	225.96	215.39	304.84	7460	3191.4	1.35	10060	0.99989785	7449.1	0.489	0.80	0.80	0.80	3.41	-1.76	10.51	8.62	0.00	0.00																															
	L_{50}-L_{51}	-282.19	-26.77	1.39	-0.34	-9.54	-3.28			9.33	-3.77	-101.52	-34.96	0.00	0.00	0.00	0.00	-283.23	-168.50	-427.33	-209.05	226.0	225.96	215.39	304.84	7460	3191.4	1.35	10060	0.99989785	7449.1	0.489	0.80	0.80	0.80	3.41	-1.76	10.51	8.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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: 2F1
Condition: As-inspected

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

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

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

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

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start-I (k-ft)	Dead Load End-J (k-ft)	Live Load (Max) Start-I (k-ft)	Live Load (Max) End-J (k-ft)	Pedestrian Load (Max) Start-I (k-ft)	Pedestrian Load (Min) End-J (k-ft)	Lane Reduction & Impact Live Load Max Start-I (k-ft)	Lane Reduction & Impact Live Load Max End-J (k-ft)	Impact Pedestrian Load Max Start-I (k-ft)	Impact Pedestrian Load Max End-J (k-ft)
Structure 1	U_1–L_1	-29.87	49.03	0.36	-0.40	3.08	2.73				
	U_2–L_2	-9.08	15.18	0.31	-0.33	-2.39	2.20				
	U_3–L_3	10.04	-9.70	0.31	-0.43	-1.97	2.20				
	U_4–L_4	33.45	-34.40	1.59	-1.45	-1.78	1.84				
	U_5–L_5	41.64	-42.40	1.72	-1.56	-1.67	1.65				
	U_6–L_6	45.56	-51.10	1.87	-2.00	-0.44	0.25				
	U_7–L_7	51.60	-55.58	2.24	-2.44	-0.48	2.13				
	U_8–L_8	91.24	-101.87	2.96	-3.07	-0.02	0.02				
	U_9–L_9	-20.57	21.23	3.66	-4.31	-2.76	3.31				
	U_{10}–L_{10}	-91.10	104.85	0.13	-0.14	-0.06	0.06				
	U_{11}–L_{11}	-88.47	88.21	0.23	-0.12	-2.13	2.24				
	U_{12}–L_{12}	-34.05	39.79	0.54	-0.57	-2.22	2.52				
	U_{13}–L_{13}	-79.57	78.39	0.71	-0.83	-2.24	2.17				
	U_{14}–L_{14}	-49.26	60.16	0.84	-0.83	-2.17	2.20				
	U_{15}–L_{15}	-29.77	34.65	1.03	-1.03	-1.83	1.66				
	U_{16}–L_{16}	-1.50	-2.65	2.06	-2.10	-1.47	1.44				
	U_{17}–L_{17}	34.13	-36.55	1.99	-2.02	-1.02	0.88				
	U_{18}–L_{18}	46.23	-55.85	1.89	-1.93	-0.26	0.25				
	U_{19}–L_{19}	110.44	-114.63	3.33	-3.33	-0.23	0.06				
	U_{20}–L_{20}	-121.36	-131.26	3.52	-3.63	-0.33	-0.14				
	U_{21}–L_{21}	-134.59	-173.50	3.55	-3.76	-0.26	0.02				
	U_{22}–L_{22}	-114.23	168.91	0.42	-0.47	-13.35	13.35				
	U_{23}–L_{23}	-123.79	131.39	0.40	-0.43	-3.40	3.24				
	U_{24}–L_{24}	-155.46	113.46	0.47	-0.47	-3.35	3.24				
	U_{25}–L_{25}	-56.01	62.13	0.30	-0.14	-1.74	1.75				
	U_{26}–L_{26}	-34.05	39.79	0.80	-0.80	-0.68	0.67				
	U_{27}–L_{27}	-7.04	-12.29	1.19	-1.15	-1.80	1.86				
	U_{28}–L_{28}	15.85	-15.59	1.38	-1.38	-1.67	1.65				
	U_{29}–L_{29}	38.86	-44.54	1.25	-1.26	-1.68	1.66				
	U_{30}–L_{30}	86.91	-96.07	2.67	-2.58	-1.08	0.93				
	U_{31}–L_{31}	-155.08	-159.47	3.01	-3.45	-0.89	0.52				
	U_{32}–L_{32}	141.23	-149.41	2.80	-2.88	-0.72	0.45				
	U_{33}–L_{33}	-192.55	-192.83	2.73	-2.81	-0.40	0.14				
	U_{34}–L_{34}	-146.81	-148.91	2.62	-2.65	-0.43	0.22				
	U_{35}–L_{35}	203.52	-203.17	3.51	-3.41	-0.22	0.24				
	U_{36}–L_{36}	60.09	-59.91	1.03	-1.00	-0.38	0.38				
	U_{37}–L_{37}	-159.89	162.81	0.36	-0.38	-3.58	3.45				
	U_{38}–L_{38}	-113.84	113.33	0.35	-0.35	-3.20	3.05				
	U_{39}–L_{39}	-130.37	127.18	0.44	-0.30	-3.43	3.41				
	U_{40}–L_{40}	-113.07	114.60	0.64	-0.34	-3.23	3.32				
	U_{41}–L_{41}	-73.20	67.44	0.67	-0.67	-3.50	3.50				
	U_{42}–L_{42}	-44.77	46.58	0.78	-0.73	-1.96	1.94				
	U_{43}–L_{43}	-30.30	34.88	0.97	-0.97	-0.98	0.98				
	U_{44}–L_{44}	-3.69	4.33	1.19	-1.27	-1.39	1.41				
	U_{45}–L_{45}	22.65	-25.72	1.98	-1.98	-1.87	0.80				
	U_{46}–L_{46}	39.85	-42.14	1.85	-1.87	-0.87	0.80				
	U_{47}–L_{47}	66.57	-67.50	2.35	-2.29	-0.79	0.62				
	U_{48}–L_{48}	114.60	-124.81	3.54	-3.45	-0.34	0.23				
	U_{49}–L_{49}	138.29	-139.04	3.64	-3.66	-0.49	0.27				
	U_{50}–L_{50}	126.54	-126.64	3.24	-3.27	-0.53	0.33				
	U_{51}–L_{51}	173.56	-176.28	3.99	-3.81	-0.18	0.16				
	U_{52}–L_{52}	29.29	-2.25	6.82	-4.27	-4.10	3.93				
	U_{53}–L_{53}	-167.25	167.49	0.33	-0.36	-3.25	3.03				
	U_{54}–L_{54}	-116.13	110.00	0.29	-0.18	-2.73	2.72				
	U_{55}–L_{55}	124.98	137.56	0.21	-0.23	-2.64	2.74				
	U_{56}–L_{56}	-119.87	124.44	0.51	-0.34	-2.64	2.78				
	U_{57}–L_{57}	79.40	79.40	0.62	-0.62	-2.58	2.58				
	U_{58}–L_{58}	-79.51	88.87	0.77	-0.64	-2.58	2.50				
	U_{59}–L_{59}	-43.96	51.94	0.79	-0.86	-1.43	1.54				
	U_{60}–L_{60}	-14.91	17.75	0.93	-0.93	-1.26	1.26				
	U_{61}–L_{61}	-5.58	1.82	1.71	-1.78	-1.33	1.21				
	U_{62}–L_{62}	16.16	-16.99	1.41	-1.41	-1.13	1.13				
	U_{63}–L_{63}	55.25	-51.69	1.83	-1.88	-0.48	0.31				
	U_{64}–L_{64}	102.75	-102.77	3.33	-3.33	-0.34	0.34				
	U_{65}–L_{65}	137.10	-150.77	3.44	-3.50	-0.34	0.35				
	U_{66}–L_{66}	165.74	-206.85	3.49	-4.01	-0.25	0.34				
Structure 2	U_1–L_1	92.31	-95.87	2.16	-2.35	0.35	0.19				
	U_2–L_2	142.75	166.20	3.19	-3.52	-0.05	0.06				
	U_3–L_3	37.93	-58.82	2.83	-3.56	-3.98	4.49				
	U_4–L_4	-87.20	89.91	0.02	-0.02	-2.56	2.69				
	U_5–L_5	-48.49	45.44	0.25	-0.05	-2.15	2.17				
	U_6–L_6	-38.99	42.97	0.33	-0.30	-1.97	1.99				
	U_7–L_7	-38.90	40.31	0.79	-0.67	-1.76	1.70				
	U_8–L_8	-37.48	38.74	1.67	-1.78	-1.93	2.01				
	U_9–L_9	-10.30	11.14	1.97	-2.25	-1.02	1.06				
	U_{10}–L_{10}	3.52	-11.96	2.48	-2.39	-0.32	0.31				
	U_{11}–L_{11}	44.79	-53.88	2.71	-3.44	-0.24	-0.02				

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Max. Neg. Mom. Start (k-ft)	Max. Neg. Mom. End (k-ft)	S_{req} (in^3)	S_x (in^3)	Z_x (in^3)	I_x (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term 1 F_y*S_{req}	M_n (k-in)	Equivalent Mom. Factor a	$C_{b(a)}$	$C_{b(b)}$
Structure 1	U_1–L_1	-33.58	58.02	83.44	103.22	15.4	15.42	15.42	23.71	2	791.9	1.54	.782	1.5
	U_2–L_2	-7.32	14.93	-66.43	51.52	15.4	15.42	15.42	23.71	2	791.9	1.54	.782	1.5
	U_3–L_3	-23.58	-18.81	-15.21	19.27	15.4	15.42	15.42	23.71	2	791.9	1.54	.782	1.5
	U_4–L_4	-66.46	-65.68	17.69	-18.08	15.4	15.42	15.42	23.71	2	791.9	1.54	.782	1.5
	U_5–L_5	-79.62	-78.07	7.61	-9.04	15.4	15.42	15.42	23.71	2	791.9	1.54	.782	1.5
	U_6–L_6	-86.30	-95.33	52.50	-62.86	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5
	U_7–L_7	-114.64	-107.52	66.33	-66.49	23.4	20.80	20.67	34.66	4	1076.0	1.67	1144	1.5
	U_8–L_8	-174.01	-176.81	118.34	-132.14	18.5	18.45	18.36	30.78	3	1020.9	1.67	1016	1.5
	U_9–L_9	-26.17	-34.64	-66.64	75.51	107.1	107.13	107.11	162.71	26	2056.9	1.52	5369	1.5
	U_{10}–L_{10}	-114.05	-201.21	-214.91	243.70	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5
	U_{11}–L_{11}	-111.82	113.00	-144.88	146.08	35.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5
	U_{12}–L_{12}	-54.79	53.84	-66.64	75.51	107.1	107.13	107.11	162.71	26	2056.9	1.52	5369	1.5
	U_{13}–L_{13}	-93.55	93.08	-134.77	132.36	21.1	21.09	21.09	36.40	10	1137.6	1.68	1170	1.5
	U_{14}–L_{14}	-52.22	66.56	-94.50	108.99	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5
	U_{15}–L_{15}	-29.77	34.65	-26.64	-61.68	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_{16}–L_{16}	26.96	-32.81	-22.60	16.77	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_{17}–L_{17}	72.31	-76.86	30.05	-35.23	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_{18}–L_{18}	86.64	-99.64	55.02	-69.04	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5
	U_{19}–L_{19}	-192.22	-195.57	140.36	-148.17	33.1	33.09	33.09	53.51	14	1187.2	1.65	1766	1.5
	U_{20}–L_{20}	-207.13	-220.13	153.20	-172.61	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	U_{21}–L_{21}	-274.75	-278.26	171.37	-229.21	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	U_{22}–L_{22}	-142.69	-213.26	-97.42	96.71	71.0	70.99	70.91	108.50	10	1711.0	1.53	2357	1.5
	U_{23}–L_{23}	-165.36	164.90	-207.94	215.98	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5
	U_{24}–L_{24}	-187.12	187.12	-207.94	215.98	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5
	U_{25}–L_{25}	-68.64	78.86	-96.52	104.92	21.5	21.54	21.54	33.27	3	987.9	1.54	1098	1.5
	U_{26}–L_{26}	-53.19	53.19	-66.64	75.51	107.1	107.13	107.11	162.71	26	2056.9	1.52	5369	1.5
	U_{27}–L_{27}	-0.30	0.05	-34.10	41.66	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_{28}–L_{28}	39.72	-39.33	-2.45	2.60	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_{29}–L_{29}	68.27	-78.42	36.32	-45.68	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_{30}–L_{30}	-149.87	-160.58	98.10	-111.49	20.8	20.80	20.67	34.64	5	1037.5	1.67	1143	1.5
	U_{31}–L_{31}	-183.20	-249.40	39.30	-35.23	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_{32}–L_{32}	-224.05	-234.06	173.65	-188.02	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5
	U_{33}–L_{33}	-233.43	-234.92	190.23	-194.20	43.0	43.04	43.04	68.66	14	1479.6	1.60	2266	1.5
	U_{34}–L_{34}	-206.42	-206.47	-256.73	258.81	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5
	U_{35}–L_{35}	-313.19	-311.27	261.47	-260.92	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5
	U_{36}–L_{36}	-133.34	-131.72	112.72	-112.60	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5
	U_{37}–L_{37}	-202.90	206.47	-256.73	258.81	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5
	U_{38}–L_{38}	-143.50	131.76	112.72	-112.60	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5
	U_{39}–L_{39}	-163.52	161.17	-216.33	213.93	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	U_{40}–L_{40}	-138.23	144.37	-191.22	194.44	39.8	39.83	39.83	59.23	6	1264.6	1.53	1955	1.5
	U_{41}–L_{41}	-84.23	84.23	-249.40	39.30	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_{42}–L_{42}	-47.49	50.63	-84.99	87.12	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5
	U_{43}–L_{43}	-26.06	-32.44	-61.68	64.19	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_{44}–L_{44}	11.41	-11.74	-23.78	24.91	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_{45}–L_{45}	45.77	-47.80	-2.45	2.60	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_{46}–L_{46}	77.64	-80.30	39.86	-43.79	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5
	U_{47}–L_{47}	111.63	-119.10	75.71	-79.34	18.7	18.71	18.61	31.48	8	970.0	1.68	1339	1.5
	U_{48}–L_{48}	-174.01	-201.21	223.69	-227.01	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5
	U_{49}–L_{49}	-229.49	-230.75	173.04	-177.05	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	U_{50}–L_{50}	-212.52	212.74	-262.45	259.63	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5
	U_{51}–L_{51}	-147.01	-140.45	-188.71	180.60	43.2	43.24	43.16	70.66	19	1516.6	1.63	2332	1.5
	U_{52}–L_{52}	-158.87	-158.89	-187.66	187.66	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	U_{53}–L_{53}	-148.83	157.02	-185.14	200.23	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5
	U_{54}–L_{54}	-107.73	107.73	-134.77	132.36	21.1	21.09	21.09	36.40	10	1137.6	1.68	1170	1.5
	U_{55}–L_{55}	-97.68	97.68	-134.77	132.36	21.1	21.09	21.09	36.40	10	1137.6	1.68	1170	1.5
	U_{56}–L_{56}	-41.51	0.53	-83.83	83.83	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5
	U_{57}–L_{57}	-79.40	79.40	-94.50	108.99	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5
	U_{58}–L_{58}	-79.51	88.87	-94.50	108.99	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5
	U_{59}–L_{59}	-43.96	51.94	-79.09	86.14	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_{60}–L_{60}	-14.91	17.75	-26.64	30.64	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_{61}–L_{61}	16.16	-22.33	-25.64	19.94	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_{62}–L_{62}	61.06	-67.18	30.05	-35.23	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_{63}–L_{63}	97.31	-105.41	65.24	-75.10	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5
	U_{64}–L_{64}	137.10	-150.77	94.50	-108.99	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5
	U_{65}–L_{65}	165.74	-206.85	94.50	-108.99	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5
	U_{66}–L_{66}	92.31	-95.87	2.16	-2.35	0.35	0.19				
Structure 2	U_1–L_1	24.78	-30.42	-7.91	5.57	0.00	0.00	0.00	0.00	0.00	154.76
	U_2–L_2	23.31	-38.38	-3.78	2.04	0.00	0.00	0.00	0.00	0.00	150.31
	U_3–L_3	18.64	-19.81	-21.52	22.36	0.00	0.00	0.00	0.00	0.00	-24.50
	U_4–L_4	21.98	-25.04	-11.40	11.76	0.00	0.00	0.00	0.00	0.00	15.18
	U_5–L_5	27.08	-26.64	-3.61	3.50	0.00	0.00	0.00	0.00	0.00	48.42
	U_6–L_6	30.20	-38.34	-2.67	0.23	0.00	0.00	0.00	0.00	0.00	97.49

YY Axis Moments from STAAD

Location	Member	Max. Neg. Mom. Start (k-ft)	Max. Neg. Mom. End (k-ft)	S_{req} (in^3)	S_x (in^3)	Z_x (in^3)	I_x (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term 1 F_y*S_{req}	M_n (k-in)	Equivalent Mom. Factor a	$C_{b(a)}$	$C_{b(b)}$
Structure 1	U_1–L_1	10.49	3.36	-225.14	-72.20	0.00	0.00	0.00	0.00	0.00	-123.32	39.55	-429.63	-137.78
	U_2–L_2	6.06	2.88	10.34	10.97	0.00	0.00	0.00	0.00	0.00	-8.45	-7.29	-2.87	3.22
	U_3–L_3	-21.78	-7.43	8.44	8.66	0.00	0.00	0.00	0.00	0.00	-13.10	-7.04	-4.05	20.42
	U_4–L_4	3.90	2.91	7.87	11.83	0.00	0.00	0.00	0.00	0.00	-9.44	1.10	-99.41	12.71
	U_5–L_5	18.75	7.53	-78.07	7.61	0.00	0.00	0.00	0.00	0.00	-123.65	-67.39	1.68	0.66
	U_6–L_6	13.87	-2.18	7.73	3.57	0.00	0.00	0.00	0.00	0.00	-13.53	-9.77	-1.25	-6.20
	U_7–L_7	14.52	2.56	7.50	11.44	0.00	0.00	0.00	0.00	0.00	-14.24	-7.59	3.17	1.05
	U_8–L_8	19.42	7.52	-1.80	-1.01	0.00	0.00	0.00	0.00	0.00	-13.96	78.22	-41.55	67.13
	U_9–L_9	15.29	3.31	10.81	8.07	0.00	0.00	0.00	0.00	0.00	-75.68	16.94	-84.49	20.53
	U_{10}–L_{10}	-2.27	-0.03	2.26	1.95	0.00	0.00	0.00	0.00	0.00	-140.03	-94.99	-142.62	-97.48
	U_{11}–L_{11}	-3.60	-0.17	-6.49	-0.77	0.00	0.00	0.00	0.00	0.00	-167.56	-131.50	-171.71	-132.68
	U_{12}–L_{12}	-3.35	1.61	2.35	8.95	0.00	0.00	0.00	0.00	0.00	-149.31	-61.32	-137.88	-61.78
	U_{13}–L_{13}	-6.03	-4.34	9.51	10.14	0.00	0.00	0.00	0.00	0.00	-169.57	-90.17	-149.37	-71.35
	U_{14}–L_{14}	-5.90	-10.22	2.04	0.95	0.00	0.00	0.00	0.00	0.00	-191.31	-94.56	-180.99	-80.04
	U_{15}–L_{15}	23.92	3.60	11.99	6.82	0.00	0.00	0.00	0.00	0.00	-182.16	-95.45	-197.68	-91.29
	U_{16}–L_{16}	24.69	2.26	-1.39	-1.85	0.00	0.00	0.00	0.00	0.00	-120.40	-66.79	-134.26	-72.13
	U_{17}–L_{17}	119.78	38.42	7.87	2.33	0.00	0.00	0.00	0.00	0.00	21.56	6.92	-123.93	-39.74
Structure 2	U_1–L_1	12.95	1.82	4.56	4.70	0.00	0.00	0.00	0.00	0.00	-157.62	-68.12	-148.53	-64.38
	U_2–L_2	12.39	7.47	4.74	-5.23	0.00	0.00	0.00	0.00	0.00	-72.06	21.65	-81.98	5.14
	U_3–L_3	19.85	2.03	-3.20	-1.64	0.00	0.00	0.00	0.00	0.00	-28.89	60.26	-58.85	55.48
	U_4–L_4	2.89	4.21	2.89	-2.28	0.00	0.00	0.00	0.00	0.00	-77.62	-33.65	-77.62	-33.65
	U_5–L_5	2.89	2.89	-2.42	-1.28	0.00	0.00	0.00	0.00	0.00	-16.32	73.90	-124.22	-76.39
	U_6–L_6	1.98	-4.99	9.97	7.07	0.00	0.00	0.00	0.00	0.00	-68.43	81.04	-0.19	0.47
	U_7–L_7	-0.94	3.60	8.06	7.11	0.00	0.00	0.00	0.00	0.00	-106.81	40.04	-95.11	44.80
	U_8–L_8	-0.73	1.83	-0.26	0.00	0.00	0.00	0.00	0.00	0.00	-129.06	64.54	-129.06	64.54
	U_9–L_9	1.48	1.48	2.64	0.98	0.00	0.00	0.00	0.00	0.00	-148.58	-114.62	-162.79	-111.45
	U_{10}–L_{10}	13.57	-1.46	2.64	0.98	0.00	0.00	0.00	0.00	0.00	-148.58	-114.62	-162.79	-111.45
	U_{11}–L_{11}	-0.94	3.60	8.06	7.11	0.00	0.00	0.00	0.00	0.00	-199.30	-78.14	-201.30	-72.31
	U_{12}–L_{12}	0.32	-3.27	8.49	2.56	0.00	0.00	0.00	0.00	0.00	-160.98	-80.82	-151.14	-73.26
	U_{13}–L_{13}	15.61	1.45	8.54	9.05	0.00	0.00	0.00	0.00	0.00	-101.98	-11.05	-101.98	-11.05
	U_{14}–L_{14}	19.85	2.03	-3.20	-1.64	0.00	0.00	0.00	0.00	0.00	-28.89	60.26	-58.85	55.48
	U_{15}–L_{15}	2.89	4.21	2.89	-2.28	0.00	0.00	0.00	0.00	0.00	-77.62	-33.65	-77.62	-33.65
	U_{16}–L_{16}	2.89	2.89	-2.42	-1.28	0.00	0.00	0.00	0.00	0.00	-16.32	73.90	-124.22	-76.39
	U_{17}–L_{17}	-7.05	0.09	-1.99	-1.13	0.00	0.00	0.00	0.00	0.00	-128.27	-52.53	-121.17	-51.19
	U_{18}–L_{18}	-7.69	-1.43	6.81	6.28	0.00	0.00	0.00	0.00	0.00	-116.92	-33.60	-95.48	-23.57
	U_{19}–L_{19}	-8.74	-5.36	6.81	6.28	0.00	0.00	0.00	0.00	0.00	-116.92	-33.60	-95.48	-23.57
	U_{20}–L_{20}	-4.73	5.16	-2.37	-0.43	0.00

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: 2F1
Condition: As-Inspected

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

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

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

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

M_z Information

M_y Information

Location		Member	ZZ Axis Moments from STAAD: Dead Load Start (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_z (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_r (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{x/c/d}$	YY Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Max Start (k-in)	Lane Reduction & Impact Live Load Max End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{req} (in^3)	S_y (in^3)	Z_y (in^3)	$I_{y/c}$ (in^4)	Shape Factor	M_p (k-in)	P_{crit} (kip)	Formula 1.8 Term * F_y/S_y	M_r (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{x/c/d}$	Axial Force (kip)	Moment (k-in)	Pass	Axial Force (kip)	Moment (k-in)	Pass	Axial Force (kip)	Moment (k-in)	Pass	Axial Force (kip)	Moment (k-in)	Pass
Structure 1		U_0-L_1	-12.57	3.38	0.22	0.18	-1.84	0.73	2.49	1.98	-20.51	8.10	0.00	0.00	0.00	0.00	-13.14	6.97	-42.99	14.93	15.6	15.63	15.58	25.56	5	804.0	1.66	857	1.5	773.7	-0.347	0.46	0.48	-52.80	-19.29	-0.69	0.56	-6.10	-1.42	0.00	0.00	0.00	0.00	-7.73	6.28	-87.87	-15.83	0.00	0.00	0.00	0.00	-78.68	-16.91	-156.86	-45.66	100.5	100.60	150.48	126.29	66.1	1.20	3970	144	0.94257776	3126.1	0.291	0.72	0.72	0.139	0.000	0.23	Yes	0.084	0.049	0.14	Yes	—	—	—

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
Condition: As-inspected

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

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

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

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

M_z Information

| Location | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Min) Start (k-in) | Pedestrian Load (Min) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Start (k-in) | Impact Pedestrian Load End (k-in) | ZZ Axis Moment Properties: Max Pos. Mom. Start (k-in) | Max Pos. Mom. End (k-in) | S_{top} (in^3) | S_{bot} (in^3) | S_{min} (in^3) | I (in^4) | I_{eff} (in^4) | Shape Factor f | M_p (k-in) | Formula I & Form ? F/"S$_{bot}$ | M_n (k-in) | Equivalent Mem. Factor a | $C_{b(a)}$ | $C_{b(min)}$ | YY Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Min) Start (k-in) | Pedestrian Load (Min) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load 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_{bot} (in^3) | Z_y (in^3) | I_{yy} (in^4) | Shape Factor f | M_p (k-in) | P_{crit} (kip) | Formula I & Form ? F/"S$_{bot}$ | M_n (k-in) | Equivalent Mem. Factor a | $C_{b(a)}$ | $C_{b(min)}$ | 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 | Compression: Axial Portion | Compression: Moment Portion | Compression: 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: 2F1
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_2 Information

M_1 Information

| Location | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Max) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Start (k-in) | Impact Pedestrian Load End (k-in) | Max. Pos. Mom. Start (k-in) | Max. Pos. Mom. End (k-in) | S_{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 I.8 Term * F_y/E_s | M_2 (k-in) | Equivalent Mom. Factor C_m | C_{comb} | C_{min} | YY Axis Moments from STAAD: Dead Load (k-in) | Live Load (Max) (k-in) | Lane Reduction & Impact Live Load (Max) (k-in) | Pedestrian Load (Max) (k-in) | Lane Reduction & Impact Live Load (Max) (k-in) | Impact Pedestrian Load (Max) (k-in) | Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{top} (in^3) | S_{bot} (in^3) | Z_y (in^3) | I_{yy} (in^4) | Shape Factor | M_p (k-in) | P_{crit} (kip) | Formula I.8 Term * F_y/E_s | M_1 (k-in) | Equivalent Mom. Factor C_m | C_{comb} | C_{min} | Tension: Axial Axial Capacity | Tension: Axial Moment Capacity | Tension: Axial Moment Total | Tension: Pass | Compression: Axial Axial Capacity | Compression: Axial Moment Capacity | Compression: Axial Moment Total | Compression: Pass |
|---|---|---|---

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spreadsheet
Loading: 2F1
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 | M_y Information

| Location | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) (k-in) | Pedestrian Load (Min) (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Start (k-in) | Impact Pedestrian Load End (k-in) | 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) | $I_{t/t}$ (in^4) | Shape Factor | M_p (k-in) | Formula 1.8 Term * F_y/S_xx | M_z (k-in) | ZZ Axis Moment Properties: Equivalent Mom. Factor $C_{m(x)}$ | $C_{m(y)}$ | $C_{m(z)}$ | 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 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) | $I_{y/t}$ (in^4) | Shape Factor | M_p (k-in) | P_{crit} (kips) | Formula 1.8 Term * F_y/S_xx | M_y (k-in) | YY Axis Moment Properties: Equivalent Mom. Factor $C_{m(x)}$ | $C_{m(y)}$ | $C_{m(z)}$ | Yield: Axial Axial Tension | Moment Portion | Total | Pass | Tension: Fracture: Axial Axial Tension | Moment Portion | Total | Pass | Compression: Buckle: Axial Axial Compression | Moment Portion | Total | Pass | Yield: Axial Axial Compression | Moment Portion | 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: 2F1
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-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) (k-ft)	Pedestrian Load (Min) (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Start (k-ft)	Impact Pedestrian Load End (k-ft)
Structure 1	U_0-L_1	3.62	-1.41	0.10	0.04	1.02	0.45	0.15	0.01	0.03	0.02
	L_1-L_2	-11.46	-3.33	0.17	-0.07	-0.49	-0.02	0.08	-0.04	-0.25	0.07
	L_2-L_3	-11.65	-11.79	0.18	-0.05	-0.38	-0.10	0.09	-0.03	-0.13	-0.05
	L_3-U_4	9.82	-15.00	0.15	0.04	-0.28	-0.29	0.08	0.01	-0.08	-0.12
	U_0-U_1	-16.21	25.07	0.08	0.01	-0.60	-0.07	0.03	-0.01	0.12	-0.17
	U_1-U_2	-34.06	79.11	0.16	0.03	-0.81	0.48	0.06	-0.21	0.33	0.22
	U_2-U_3	-71.07	82.84	0.13	0.11	-0.57	0.41	0.11	-0.16	0.42	0.28
	U_3-U_4	-1.45	103.74	0.29	0.20	-0.43	0.76	0.15	0.18	0.24	0.47
	U_4-U_5	-12.32	139.19	0.34	0.17	-0.48	0.54	0.21	0.13	0.19	0.58
	U_5-U_6	-23.41	169.80	0.16	0.24	-0.50	0.24	0.06	0.14	-0.38	0.21
	U_6-U_7	-29.96	182.20	0.11	0.16	-0.34	0.12	0.04	0.12	-0.43	0.13
	U_7-U_8	-69.88	47.84	0.04	0.00	-0.74	0.32	0.00	0.00	-0.31	0.21
	U_8-U_9	-27.39	6.37	0.05	-0.19	-0.39	-0.04	0.00	0.00	-0.15	0.03
	U_9-U_{10}	-5.38	2.27	0.00	-0.10	-0.06	-0.01	0.00	0.00	-0.03	-0.10
	U_{10}-U_{11}	-31.03	12.71	0.11	-0.10	-0.52	0.34	0.05	-0.04	-0.19	0.11
	U_{11}-U_{12}	-46.63	27.25	0.11	-0.09	-0.49	0.47	0.04	-0.04	-0.28	0.18
	U_{12}-U_{13}	-118.88	85.28	0.15	-0.14	-1.17	0.81	0.06	-0.05	-0.65	0.42
	U_{13}-U_{14}	-117.64	87.57	0.13	-0.16	-1.06	0.84	0.04	-0.04	-0.57	0.45
	U_{14}-U_{15}	-148.08	120.85	0.09	-0.09	-1.11	0.90	0.04	-0.04	-0.79	0.63
	L_1-U_2	-86.91	116.74	0.19	-0.12	-1.68	1.25	0.01	-0.06	-0.13	0.38
	L_2-U_3	-104.13	114.46	0.22	-0.12	-1.52	1.02	0.10	-0.10	-0.69	0.33
	L_3-U_4	-118.23	92.26	0.31	-0.28	-1.42	1.10	0.11	-0.10	-0.52	0.43
	U_4-L_5	-38.97	30.21	0.21	-0.18	-0.51	0.39	0.07	-0.06	-0.18	0.14
	L_5-U_6	-34.33	8.61	0.19	-0.15	-0.56	0.40	0.07	-0.06	-0.18	0.11
	U_6-L_7	-13.42	13.42	0.24	-0.24	-0.37	0.37	0.03	-0.03	-0.07	0.07
	L_7-U_8	13.33	-37.03	0.28	-0.46	-0.33	-0.03	0.06	-0.04	-0.03	0.09
	U_8-L_9	-66.01	54.01	0.04	-0.22	-0.70	0.36	0.00	0.00	-0.23	0.07
	L_9-U_{10}	-133.77	104.64	0.03	-0.43	-1.32	0.72	0.00	0.00	-0.43	0.12
	U_{10}-L_{11}	-116.17	105.67	0.17	-0.10	-1.11	0.62	0.04	-0.01	-0.44	0.22
	L_{11}-U_{12}	-139.08	104.34	0.09	-0.12	-1.27	0.89	0.07	-0.04	-0.47	0.24
	U_{12}-L_{13}	-131.97	101.07	0.27	-0.14	-1.15	0.95	0.05	0.08	-0.49	0.43
	L_{13}-U_{14}	-175.19	162.79	0.44	-0.31	-1.23	1.05	0.04	-0.02	-0.64	0.56
	U_{14}-L_{15}	-84.39	98.07	0.21	-0.18	-0.61	0.57	0.02	-0.01	-0.29	0.27
	L_1-U_0	-45.28	-135.71	0.29	-0.06	-1.09	1.22	0.18	-0.02	-0.36	0.69
	L_2-U_1	-143.90	97.28	0.29	-0.19	-1.29	1.08	0.19	-0.08	-0.61	0.39
	L_3-U_2	-112.48	136.83	0.14	-0.17	-1.42	1.16	0.07	0.00	-0.50	0.49
	L_4-U_3	-108.58	108.58	0.14	-0.14	-1.42	1.16	0.07	0.00	-0.50	0.49
	L_5-U_4	-83.86	94.66	0.09	-0.19	-1.29	0.84	0.06	0.00	-0.37	0.27
	L_6-U_5	-91.74	54.21	0.17	-0.16	-0.82	0.39	0.03	0.05	-0.27	0.25
	L_7-U_6	-34.67	54.66	0.23	-0.18	-0.15	0.66	0.03	0.03	-0.07	0.13
	L_8-U_7	-14.00	1.02	0.17	-0.35	-0.44	0.03	0.00	0.04	-0.11	0.03
	L_9-U_8	18.17	5.26	0.17	-0.34	-0.44	0.03	0.00	0.04	-0.11	0.03
	L_{10}-U_9	-32.82	30.91	0.16	-0.19	-0.58	0.44	0.03	0.00	-0.20	0.17
	L_{11}-U_{10}	-33.84	33.84	0.17	-0.17	-0.61	0.47	0.03	0.00	-0.20	0.17
	L_{12}-U_{11}	-83.88	100.04	0.09	-0.20	-1.17	0.85	0.06	0.03	-0.39	0.44
	L_{13}-U_{12}	-98.49	117.09	0.19	-0.17	-1.18	0.99	0.05	0.02	-0.49	0.57
	L_{14}-U_{13}	-108.58	108.58	0.19	-0.19	-1.46	1.36	0.05	0.02	-0.49	0.57
	L_{15}-U_{14}	-125.63	123.54	0.43	-0.15	-1.15	1.00	0.00	0.00	-0.52	0.49
	L_{16}-U_{15}	-30.08	33.08	0.11	-0.09	-0.27	0.26	0.00	0.00	-0.07	0.07
	L_{17}-U_{16}	-83.58	187.86	0.35	-0.06	-1.08	1.29	0.17	0.01	-0.45	0.61
	L_{18}-U_{17}	-108.58	108.58	0.46	-0.13	-1.46	1.73	0.17	0.01	-0.45	0.61
	L_{19}-U_{18}	-138.54	150.45	0.18	0.07	-1.30	1.06	0.04	0.06	-0.51	0.45
	L_{20}-U_{19}	-128.90	122.99	0.17	0.12	-1.27	0.76	0.04	0.09	-0.46	0.23
	L_{21}-U_{20}	-128.90	146.13	0.29	0.24	-1.27	0.76	0.04	0.09	-0.46	0.23
	L_{22}-U_{21}	-128.40	95.00	0.08	-0.17	-1.71	0.71	0.00	0.00	-0.41	0.15
	L_{23}-U_{22}	-28.65	28.65	0.03	-0.04	-0.37	0.37	0.00	0.00	-0.04	0.04
	L_{24}-U_{23}	8.88	-32.25	0.26	-0.39	-0.33	0.02	0.06	-0.04	-0.04	0.07
	L_{25}-U_{24}	-4.65	-13.30	0.26	-0.34	-0.45	0.25	0.07	-0.06	-0.11	0.03
	L_{26}-U_{25}	-28.65	28.65	0.07	-0.04	-0.37	0.37	0.00	0.00	-0.04	0.04
	L_{27}-U_{26}	-29.27	29.27	0.07	-0.04	-0.37	0.37	0.00	0.00	-0.04	0.04
	L_{28}-U_{27}	-43.21	40.39	0.19	-0.16	-0.72	0.49	0.07	-0.07	-0.27	0.18
	L_{29}-U_{28}	-43.21	40.39	0.19	-0.16	-0.72	0.49	0.07	-0.07	-0.27	0.18
	L_{30}-U_{29}	-135.93	107.52	0.23	-0.21	-1.18	0.96	0.08	-0.08	-0.55	0.45
	L_{31}-U_{30}	-135.93	107.52	0.23	-0.21	-1.18	0.96	0.08	-0.08	-0.55	0.45
	L_{32}-U_{31}	-66.35	69.44	0.12	-0.08	-1.85	1.25	0.01	-0.03	-0.13	0.38
	L_{33}-U_{32}	-137.90	96.45	0.19	-0.15	-1.51	0.98	0.05	-0.05	-0.75	0.56
	L_{34}-U_{33}	-89.32	82.81	0.17	-0.14	-1.05	0.76	0.04	-0.04	-0.51	0.38
	L_{35}-U_{34}	-89.32	90.65	0.17	-0.14	-1.05	0.76	0.04	-0.04	-0.51	0.38
	L_{36}-U_{35}	-18.99	22.49	0.06	-0.20	-0.48	-0.15	0.04	0.01	-0.11	0.08
	L_{37}-U_{36}	-28.65	28.65	0.07	-0.04	-0.37	0.37	0.00	0.00	-0.04	0.04
	L_{38}-U_{37}	-28.27	28.27	0.07	-0.04	-0.37	0.37	0.00	0.00	-0.04	0.04
	L_{39}-U_{38}	-43.21	40.39	0.19	-0.16	-0.72	0.49	0.07	-0.07	-0.27	0.18
	L_{40}-U_{39}	-43.21	40.39	0.19	-0.16	-0.72	0.49	0.07	-0.07	-0.27	0.18
	L_{41}-U_{40}	-135.93	107.52	0.23	-0.21	-1.18	0.96	0.08	-0.08	-0.55	0.45
	L_{42}-U_{41}	-135.93	107.52	0.23	-0.21	-1.18	0.96	0.08	-0.08	-0.55	0.45
	L_{43}-U_{42}	-66.35	69.44	0.12	-0.08	-1.85	1.25	0.01	-0.03	-0.13	0.38
	L_{44}-U_{43}	-137.90	96.45	0.19	-0.15	-1.51	0.98	0.05	-0.05	-0.75	0.56
	L_{45}-U_{44}	-89.32	82.81	0.17	-0.14	-1.05	0.76	0.04	-0.04	-0.51	0.38
	L_{46}-U_{45}	-89.32	90.65	0.17	-0.14	-1.05	0.76	0.04	-0.04	-0.51	0.38
	L_{47}-U_{46}	-18.99	22.49	0.06	-0.20	-0.48	-0.15	0.04	0.01	-0.11	0.08
	L_{48}-U_{47}	-28.65	28.65	0.07	-0.04	-0.37	0.37	0.00	0.00	-0.04	0.04
	L_{49}-U_{48}	-28.27	28.27	0.07	-0.04	-0.37	0.37	0.00	0.00	-0.04	0.04
	L_{50}-U_{49}	-43.21	40.39	0.19	-0.16	-0.72	0.49	0.07	-0.07	-0.27	0.18
	L_{51}-U_{50}	-43.21	40.39	0.19	-0.16	-0.72	0.49	0.07	-0.07	-0.27	0.18
	L_{52}-U_{51}	-135.93	107.52	0.23	-0.21	-1.18	0.96	0.08	-0.08	-0.55	0.45
	L_{53}-U_{52}	-135.93	107.52	0.23	-0.21	-1.18	0.96	0.08	-0.08	-0.55	0.45
	L_{54}-U_{53}	-66.35	69.44	0.12	-0.08	-1.85	1.25	0.01	-0.03	-0.13	0.38
	L_{55}-U_{54}	-137.90	96.45	0.19	-0.15	-1.51	0.98	0.05	-0.05	-0.75	0.56
	L_{56}-U_{55}	-89.32	82.81	0.17	-0.14	-1.05	0.76	0.04	-0.04	-0.51	0.38
	L_{57}-U_{56}	-89.32	90.65	0.17	-0.14	-1.05	0.76	0.04	-0.04	-0.51	0.38
	L_{58}-U_{57}	-18.99	22.49	0.06	-0.20	-0.48	-0.15	0.04	0.01	-0.11	0.08
	L_{59}-U_{58}	-28.65	28.65	0.07	-0.04	-0.37	0.37	0.00	0.00	-0.04	0.04
	L_{60}-U_{59}	-28.27	28.27	0.07	-0.04	-0.37	0.37	0.00	0.00	-0.04	0.04
	L_{61}-U_{60}	-43.21	40.39	0.19	-0.16	-0.72	0.49	0.07	-0.07	-0.27	0.18
	L_{62}-U_{61}	-43.21	40.39	0.19	-0.16	-0.72	0.49	0.07	-0.07	-0.27	0.18
	L_{63}-U_{62}	-135.93	107.52	0.23	-0.21	-1.18	0.96	0.08	-0.08	-0.55	0.45
	L_{64}-U_{63}	-135.93	107.52	0.23	-0.21	-1.18	0.96	0.08	-0.08	-0.55	0.45
	L_{65}-U_{64}	-66.35	69.44	0.12	-0.08	-1.85	1.25	0.01	-0.03	-0.13	0.38
	L_{66}-U_{65}	-137.90	96.45	0.19	-0.15	-1.51	0.98	0.05	-0.05	-0.75	0.56
	L_{67}-U_{66}	-89.32	82.81	0.17	-0.14	-1.05	0.76	0.04	-0.04	-0.51	0.38
	L_{68}-U_{67}	-89.32	90.65	0.17	-0.14	-1.05	0.76	0.04	-0.04	-0.51	0.38
	L_{69}-U_{68}	-18.99	22.49	0.06	-0.20	-0.48	-0.15	0.04	0.01	-0.11	0.08
	L_{70}-U_{69}	-28.65	28.65	0.07	-0.04	-0.37	0.37	0.00	0.00	-0.04	0.04
	L_{71}-U_{70}	-28.27	28.27	0.07	-0.04	-0.37	0.37	0.00	0.00	-0.04	0.04
	L_{72}-U_{71}	-43.21	40.39	0.19	-0.16	-0.72	0.49	0.07	-0.07	-0.27	0.18
	L_{73}-U_{72}	-43.21	40.39	0.19	-0.16	-0.72	0.49	0.07	-0.07	-0.27	0.18
	L_{74}-U_{73}	-135.93	107.52	0.23	-0.21	-1.18	0.96	0.08	-0.08	-0.55	0.45
	L_{75}-U_{74}	-135.93	107.52	0.23	-0.21	-1.18	0.96	0.08	-0.08	-0.55	0.45
	L_{76}-U_{75}	-66.35	69.44	0.12	-0.08	-1.85	1.25	0.01	-0.03	-0.13	0.38
	L_{77}-U_{76}	-137.90	96.45	0.19	-0.15	-1.51	0.98	0.05	-0.05	-0.75	0.56
	L_{78}-U_{77}	-89.32	82.81	0.17	-0.14	-1.05	0.76	0.04	-0.04	-0.51	0.38
	L_{79}-U_{78}	-89.32	90.65	0.17	-0.14	-1.05	0.76	0.04	-0.04	-0.51	0.38
	L_{80}-U_{79}	-18.99	22.49	0.06	-0.20	-0.48	-0.15	0.04	0.01	-0.11	0.08
	L_{81}-U_{80}	-28.65	28.65	0.07	-0.04	-0.37	0.37	0.00	0.00	-0.04	0.04
	L_{82}-U_{81}	-28.27	28.27	0.07	-0.04	-0.37	0.37	0.00	0.00	-0.04	0.04
	L_{83}-U_{82}	-43.21	40.39	0.19	-0.16	-0.72	0.49	0.07	-0.07	-0.27	0.18
	L_{84}-U_{83}	-43.21	40.39	0.19	-0.16	-0.72	0.49	0.07	-0.07	-0.27	0.18
	L_{85}-U_{84}	-135.93	107.52	0.23	-0.21	-1.18	0.96	0.08	-0.08	-0.55	0.45
	L_{86}-U_{85}	-135.93	107.52	0.23	-0.21	-1.18	0.96	0.08	-0.08	-0.55	0.45
	L_{87}-U_{86}	-66.35	69.44	0.12	-0.08	-1.85	1.25	0.01	-0.03	-0.13	0.38
	L_{88}-U_{87}	-137.90	96.45	0.19	-0.15	-1.51	0.98	0.05	-0.05	-0.75	0.56
	L_{89}-U_{88}	-89.32	82.81	0.17	-0.14	-1.05	0.76	0.04	-0.04	-0.51	0.38
	L_{90}-U_{89}	-89.32	90.65	0.17	-0.14	-1.05	0.76	0.04	-0.04	-0.51	0.38
	L_{91}-U_{90}	-18.99	22.49	0.06	-0.20	-0.48	-0.15	0.04	0.01	-0.11	0.08
	L_{92}-U_{91}	-28.65	28.65	0.07	-0.04	-0.37	0.37	0.00	0.00	-0.04	0.04
	L_{93}-U_{92}	-28.27	28.27	0.07	-0.04	-0.37	0.37	0.00	0.00	-0.04	0.04
	L_{94}-U_{93}	-43.21	40.39	0.19	-0.16	-0.72	0.49	0.07	-0.07	-0.27	0.18
	L_{95}-U_{94}	-43.21	40.39	0.19	-0.16	-0.72	0.49	0.07	-0.07	-0.27	0.18
	L_{96}-U_{95}	-135.93	107.52	0.23	-0.21	-1.18	0.96	0.08	-0.08	-0.55	0.45
	L_{97}-U_{96}	-135.93	107.52	0.23	-0.21	-1.18	0.96	0.08	-0.08	-0.55	0.45
	L_{98}-U_{97}	-66.35	69.44	0.12	-0.08	-1.85	1.25	0.01	-0.03	-0.13	0.38
	L_{99}-U_{98}	-137.90	96.45	0.19	-0.15	-1.51	0.98	0.05	-0.05	-0.75	0.56
	L_{100}-U_{99}	-89.32	82.81	0.17	-0.14	-1.05	0.76	0.04	-0.04	-0.51	0.38
	L_{101}-U_{100}	-89.32	90.65	0.17	-0.14	-1.05	0.76	0.04	-0.04	-0.51	0.38
	L_{102}-U_{101}	-18.99	22.49	0.06	-0.20	-0.48	-0.15	0.04	0.01	-0.11	0.08
	L_{103}-U_{102}	-28.65	28.65	0.07	-0.04	-0.37	0.37	0.00	0.00	-0.04	0.04
	L_{104}-U_{103}	-28.27	28.27	0.07	-0.04	-0.37	0.37	0.00	0.00	-0.04	0.04
	L_{105}-U_{104}	-43.21	40.39	0.19	-0.16	-0.72	0.49	0.07	-0.07	-0.27	0.18
	L_{106}-U_{105}	-43.21	40.39	0.19	-0.16	-0.72	0.49	0.07	-0.07	-0.27	0.18
	L_{107}-U_{106}	-135.93	107.52	0.23	-0.21	-1.18	0.96	0.08	-0.08	-0.55	0.45
	L_{108}-U_{107}	-135.93	107.52	0.23	-0.21	-1.18	0.96	0.08	-0.08	-0.55	0.45
	L_{109}-U_{108}	-66.35	69.44	0.12	-0.08	-1.85	1.25	0.01	-0.03	-0.13	0.38
	L_{110}-U_{109}	-137.90	96.45	0.19	-0.15	-1.51	0.98	0.05	-0.05	-0.75	0.56
	L_{111}-U_{110}	-89.32	82.81	0.17	-0.14	-1.05	0.76	0.04	-0.04	-0.51	0.38
	L_{112}-U_{111}	-89.32	90.65	0.17	-0.14	-1.05	0.76	0.04	-0.04	-0.51	0.38
	L_{113}-U_{112}	-18.99	22.49	0.06	-0.20	-0.48	-0.15	0.04	0.01	-0.11	0.08
	L_{114}-U_{113}	-28.65	28.65	0.07	-0.04	-0.37	0.37	0.00	0.00	-0.04	0.04
	L_{115}-U_{114}	-28.27	28.27	0.07	-0.04	-0.37	0.37	0.00	0.00	-0.04	0.04
	L_{116}-U_{115}	-43.21	40.39	0.19	-0.16	-0.72	0.49	0.07	-0.07	-0.27	0.18
	L_{117}-U_{116}	-43.21	40.39	0.19	-0.16	-0.72	0.49	0.07	-0.07	-0.27	0.18
	L_{118}-U_{117}	-135.93	107.52	0.23	-0.21	-1.18	0.96	0.08	-0.08	-0.55	0.45
	L_{119}-U_{118}	-135.93	107.52	0.23	-0.21	-1.18	0.96	0.08	-0.08	-0.55	0.45
	L_{120}-U_{119}	-66.35	69.44	0.12	-0.08	-1.85	1.25	0.01	-0.03	-0.13	0.38
	L_{121}-U_{120}	-137.90	96.45	0.19	-0.15	-1.51	0.98	0.05	-0.05	-0.75	0.56
	L_{122}-U_{121}	-89.32	82.81	0.17	-0.14	-1.05	0.76	0.04	-0.04	-0.51	0.38
	L_{123}-U_{122}	-89.32	90.65	0.17	-0.14	-1.05	0.76	0.04	-0.04	-0.51	0.38
	L_{124}-U_{123}	-18.99	22.49	0.06	-0.20	-0.48	-0.15	0.04	0.01	-0.11	0.08
	L_{125}-U_{124}	-28.65	28.65	0.07	-0.04	-0.37	0.37	0.00	0.00	-0.04	0.04
	L_{126}-U_{125}	-28.27	28.27	0.07	-0.04	-0.37	0.37	0.00	0.00	-0.04	0.04
	L_{127}-U_{126}	-43.21	40.39	0.19	-0.16	-0.72	0.49	0.07	-0.07	-0.27	0.18
	L_{128}-U_{127}	-43.21	40.39	0.19	-0.16	-0.72	0.49	0.07	-0.07	-0.27	0.18
	L_{129}-U_{128}	-135.93	107.52	0.23	-0.21	-1.18	0.96	0.08	-0.08	-0.55	0.45
	L_{130}-U_{129}	-135.93	107.52	0.23	-0.21	-1.18	0.96	0.08	-0.08	-0.55	0.45
	L_{131}-U_{130}	-66.35	69.44	0.12	-0.08	-1.85	1.25	0.01	-0.03	-0.13	0.38
	L_{132}-U_{131}	-137.90	96.45	0.19	-0.15	-1.51	0.98	0.05	-0.05	-0.75	0.56
	L_{133}-U_{132}	-89.32	82.81	0.17	-0.14	-1.05	0.76	0.04	-0.04	-0.51	0.38
	L_{134}-U_{133}	-89.32	90.65	0.17	-0.14	-1.05	0.76	0.04	-0.04	-0.51	0.38
	L_{135}-U_{134}	-18.99	22.49	0.06	-0.20	-0.48	-0.15	0.04	0.01	-0.11	0.08
	L_{136}-U_{135}	-28.65	28.65	0.07	-0.04	-0.37	0.37	0.00	0.00	-0.04	0.04
	L_{137}-U_{136}	-28.27	28.27	0.07	-0.04	-0.37	0.37	0.00	0.00	-0.04	0.04
	L_{138}-U_{137}	-43.21	40.39	0.19	-0.16	-0.72	0.49	0.07	-0.07	-0.27	0.18
	L_{139}-U_{138}	-43.21	40.39	0.19	-0.16	-0.72	0.49	0.07	-0.07	-0.27	0.18
	L_{140}-U_{139}	-135.93	107.52	0.23	-0.21	-1.18	0.96	0.08	-0.08	-0.55	0.45
	L_{141}-U_{140}	-135.93	107.52	0.23	-0.21	-1.18	0.96	0.08	-0.08	-0.55	0.45
	L_{142}-U_{141}	-66.35	69.44	0.12	-0.08	-1.85	1.25	0.01	-0.03	-0.13	0.38
	L_{143}-U_{142}	-137.90	96.45	0.19	-0.15	-1.51	0.98	0.05	-0.05	-0.75	0.56
	L_{144}-U_{143}	-89.32	82.81	0.17	-0.14	-1.05	0.76	0.04	-0.04	-0.51	0.38
	L_{145}-U_{144}	-89.32	90.65	0.17	-0.14	-1.05	0.76	0.04	-0.04	-0.51	0.38
	L_{146}-U_{145}	-18.99	22.49	0.06	-0.20	-0.48	-0.15	0.04	0.01	-0.11	0.08
	L_{147}-U_{146}	-28.65	28.65	0.07	-0.04	-0.37	0.37	0.00	0.00	-0.04	0.04
	L_{148}-U_{147}	-28.27	28.27	0.07	-0.04	-0.37	0.37	0.00	0.00	-0.04	0.04
	L_{149}-U_{148}	-43.21	40.39	0.19	-0.16	-0.72	0.49	0.07	-0.07	-0.27	0.18
	L_{150}-U_{149}	-43.21	40.39	0.19	-0.16	-0.72	0.49	0.07	-0.07	-0.27	0.18
	L_{151}-U_{150}	-135.93	107.52	0.23	-0.21	-1.18	0.96	0.08	-0.08	-0.55	0.45
	L_{152}-U_{151}	-135.93	107.52	0.23	-0.21	-1.18	0.96	0.08	-0.08	-0.55	0.45
	L_{153}-U_{152}	-66.35	69.44	0.12	-0.08	-1.85	1.25	0.01	-0.03	-0.13	0.38
	L_{154}-U_{153}	-137.90	96.45	0.19	-0.15	-1.51	0.98	0.05	-0.05	-0.75	0.56
	L_{155}-U_{154}	-89.32	82.81	0.17	-0.14	-1.05	0.76	0.04	-0.04	-0.51	0.38
	L_{156}-U_{155}	-89.32	90.65	0.17	-0.14	-1.05	0.76	0.04	-0.04	-0.51	0.38
	L_{157}-U_{156}	-18.99	22.49	0.06	-0.20	-0.48	-0.15	0.04	0.01	-0.11	0.08
	L_{158}-U_{157}	-28.65	28.65	0.07	-0.04	-0.37	0.37	0.00	0.00	-0.04	0.04
	L_{159}-U_{158}	-28.27	28.27	0.07	-0.04	-0.37	0.37	0.00	0.00	-0.04	0.04
	L_{160}-U_{159}	-43.21	40.39	0.19	-0.16	-0.72	0.49	0.07	-0.07	-0.

Moment (Start) AI Operating

Operating Loads - 2F1

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 - 2F1

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			-----	-47.37	1522	-2687	-326	165	-450	-1653	-21	-77	-----	-----	-----	-----	-----	-----	-----	-----	0.086	0.910	1.00	Yes	0.085	0.806	0.90	Yes	1.00	**38.76**
		L_1 - L_2			421.75	-----	356	-886	-202	-462	-240	-177	411	-73	0.645	0.354	1.00	Yes	0.394	0.235	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.82**
		L_2 - L_3			688.06	-6.53	-28	6	-764	-701	-30	17	-101	92	0.792	0.201	1.00	Yes	0.458	0.121	0.58	Yes	0.009	0.237	0.25	Yes	0.009	0.184	0.20	Yes	1.00	**5.16**
		L_3 - L_4			675.69	-97.84	74	208	-720	-438	47	68	260	127	0.777	0.216	1.00	Yes	0.462	0.138	0.61	Yes	0.134	0.221	0.36	Yes	0.132	0.174	0.31	Yes	1.00	**4.91**
		L_4 - L_5			222.82	-482.02	89	583	-1000	587	51	37	-236	123	0.289	0.307	0.60	Yes	0.173	0.201	0.38	Yes	0.741	0.139	0.88	Yes	0.734	0.265	1.00	Yes	1.00	**6.02**
		L_5 - L_6			-----	-709.35	156	582	-656	155	72	128	339	103	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.164	1.00	Yes	0.818	0.145	0.97	Yes	1.00	**6.41**
		L_6 - L_7			-----	-1034.73	184	170	-1043	456	117	-112	-118	248	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.072	0.92	Yes	0.833	0.164	1.00	Yes	1.00	**8.62**
		L_7 - L_8			-----	-1233.96	101	969	-613	1417	43	170	428	10	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.202	1.00	Yes	0.782	0.188	0.97	Yes	1.00	**10.37**
		L_8 - L_9			-----	-1211.00	1645	-80	530	-13	-205	4	-148	-198	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.223	1.00	Yes	0.767	0.218	0.99	Yes	1.00	**12.76**
		L_9 - L_{10}			-----	-863.24	1559	-1928	-1213	-818	-925	-1329	1913	494	-----	-----	-----	-----	-----	-----	-----	-----	0.702	0.271	0.98	Yes	0.695	0.303	1.00	Yes	1.00	**30.09**
		L_{10} - L_{11}			165.67	-558.57	531	-7	-75	-477	136	45	85	35	0.215	0.164	0.38	Yes	0.125	0.099	0.23	Yes	0.859	0.083	0.95	Yes	0.851	0.140	1.00	Yes	1.00	**7.99**
		L_{11} - L_{12}			584.54	-----	527	-733	-29	-575	-207	-194	235	41	0.757	0.235	1.00	Yes	0.454	0.154	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.42**
		L_{12} - L_{13}			1049.07	-----	147	-82	-552	-735	32	35	237	334	0.828	0.169	1.00	Yes	0.530	0.102	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.09**
		L_{13} - L_{14}			1240.51	-----	604	-1721	-294	-1304	-75	-139	373	104	0.730	0.268	1.00	Yes	0.473	0.164	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.99**
		L_{14} - L_{15}			1484.00	-----	-380	-27	-2083	-472	-119	-63	-122	221	0.725	0.267	1.00	Yes	0.471	0.161	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.60**
		L_{15} - L_{16}			1581.68	-----	-190	-404	-1676	-1099	-87	-39	167	-284	0.773	0.222	1.00	Yes	0.496	0.130	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.92**
		L_{16} - L_{17}			1145.90	-----	-430	90	-1606	-104	-91	-54	-405	304	0.725	0.272	1.00	Yes	0.470	0.168	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.85**
		L_{17} - L_{18}			847.66	-----	-187	-32	-1153	44	-59	7	236	-111	0.738	0.253	1.00	Yes	0.472	0.151	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.72**
		L_{18} - L_{19}			306.73	-----	-218	295	-1338	711	-35	-35	-620	138	0.469	0.530	1.00	Yes	0.318	0.335	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.24**
		L_{19} - L_{20}			159.04	-311.70	-72	-58	-1430	613	-22	-5	491	110	0.243	0.531	0.78	Yes	0.149	0.355	0.51	Yes	0.566	0.358	0.93	Yes	0.561	0.429	1.00	Yes	1.00	**16.06**
	Structure 2	L_0 - L_1			35.72	-137.41	1008	-3417	-117	10	-446	-1550	-19	-66	0.043	0.950	1.00	Yes	0.026	0.603	0.63	Yes	0.198	0.682	0.88	Yes	0.196	0.695	0.90	Yes	1.00	**36.69**
		L_1 - L_2			524.18	-----	668	-1404	-202	-872	-266	-263	469	-38	0.637	0.363	1.00	Yes	0.379	0.231	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.13**
		L_2 - L_3			972.57	-----	343	-1344	-557	-983	-145	117	22	180	0.777	0.217	1.00	Yes	0.511	0.125	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.64**
		L_3 - L_4			1325.21	-----	298	-1275	-801	-1471	-273	-171	461	205	0.786	0.212	1.00	Yes	0.531	0.137	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.46**
		L_4 - L_5			1679.60	-----	-266	-732	-2107	-1037	52	-32	-129	-48	0.783	0.208	1.00	Yes	0.518	0.122	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.64**
		L_5 - L_6			1837.96	-----	-147	-389	-1757	-2084	112	-16	332	62	0.789	0.206	1.00	Yes	0.529	0.126	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.47**
		L_6 - L_7			1755.81	-----	-456	-128	-2410	-1840	-160	46	54	599	0.743	0.249	1.00	Yes	0.494	0.147	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.21**
		L_7 - L_8			1304.68	-----	-220	278	-2125	-343	-131	8	192	-83	0.748	0.250	1.00	Yes	0.491	0.146	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.13**
		L_8 - L_9			1067.33	-225.84	-114	513	-1510	41	-28	14	-188	515	0.747	0.252	1.00	Yes	0.503	0.158	0.67	Yes	0.187	0.120	0.31	Yes	0.186	0.204	0.39	Yes	1.00	**7.79**
		L_9 - L_{10}			763.97	-552.49	-126	682	-1620	34	10	86	414	-164	0.682	0.309	1.00	Yes	0.397	0.192	0.59	Yes	0.584	0.166	0.75	Yes	0.580	0.259	0.84	Yes	1.00	**9.37**
		L_{10} - L_{11}			131.36	-662.24	79	524	-1231	568	53	0	-391	163	0.131	0.268	0.40	Yes	0.077	0.168	0.25	Yes	0.783	0.091	0.88	Yes	0.778	0.215	1.00	Yes	1.00	**7.65**
		L_{11} - L_{12}			-----	-1007.83	89	965	-1213	275	79	235	378	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.141	0.98	Yes	0.826	0.165	1.00	Yes	1.00	**9.95**
		L_{12} - L_{13}			-----	-1265.77	264	-305	-1934	-655	174	-142	-304	29	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.231	1.00	Yes	0.757	0.192	0.95	Yes	1.00	**11.57**
		L_{13} - L_{14}			-----	-1312.13	-221	1258	-2636	3851	-79	-48	455	71	-----	-----	-----	-----	-----	-----	-----	-----	0.666	0.247	0.92	Yes	0.660	0.336	1.00	Yes	1.00	**15.81**
		L_{14} - L_{15}			-----	-1188.06	4559	-3032	1031	-412	-327	159	-406	-302	-----	-----	-----	-----	-----	-----	-----	-----	0.603	0.272	0.88	Yes	0.598	0.398	1.00	Yes	1.00	**20.31**
		L_{15} - L_{16}			-----	-1342.99	22	236	-1900	-679	-422	-290	431	236	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.178	0.99	Yes	0.803	0.189	1.00	Yes	1.00	**12.68**
		L_{16} - L_{17}			148.63	-830.33	3174	-3019	-1411	-1008	-988	-776	-200	-155	0.092	0.474	0.57	Yes	0.061	0.284	0.35	Yes	0.610	0.329	0.94	Yes	0.605	0.391	1.00	Yes	1.00	**36.73**
		L_{17} - L_{18}			400.98	-8.71	2027	-3199	-998	-744	-1055	-785	396	190	0.358	0.639	1.00	Yes	0.208	0.395	0.61	Yes	0.009	0.422	0.44	Yes	0.009	0.512	0.53	Yes	1.00	**26.73**
		L_{18} - L_{19}			183.37	-650.01	674	118	-279	-430	-6	33	150	184	0.208	0.158	0.37	Yes	0.120	0.094	0.22	Yes	0.872	0.124	1.00	Yes	0.866	0.130	1.00	Yes	1.00	**7.94**
		L_{19} - L_{20}			620.98	-----	642	-1112	-526	-703	-51	-277	472	12	0.703	0.287	1.00	Yes	0.416	0.181	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.70**
		L_{20} - L_{21}			963.25	-436.38	534	38	-1212	-1209	-92	-97	37	298	0.778	0.213	1.00	Yes	0.512	0.124	0.64	Yes	0.418	0.177	0.60	Yes	0.415	0.180	0.60	Yes	1.00	**10.78**
		L_{21} - L_{22}			940.27	-224.49	240	-75	-1254	-1256	-92	-31	414	86	0.760	0.232	1.00	Yes	0.510	0.142	0.66	Yes	0.215	0.203	0.42	Yes	0.213	0.187	0.41	Yes	1.00	**8.77**
		L_{22} - L_{23}			778.96	-43.62	-21	51	-2270	-303	-2	-20	-101	244	0.629	0.364	1.00	Yes	0.422	0.221	0.65	Yes	0.042	0.274	0.32	Yes	0.041	0.338	0.38	Yes	1.00	**8.00**
		L_{23} - L_{24}			870.06	-268.17	-9	335	-1706	-937	8	72	374	-28	0.703	0.295	1.00	Yes	0.462	0.171	0.64	Yes	0.257	0.272	0.53	Yes	0.255	0.254	0.51	Yes	1.00	**9.94**
		L_{24} - L_{25}			518.31	-410.82	222	342	-1761	72	57	0	-335	426	0.587	0.405	1.00	Yes	0.347	0.257	0.61	Yes	0.551	0.182	0.74	Yes	0.548	0.340	0.89	Yes	1.00	**10.29**
		L_{25} - L_{26}			136.27	-570.25	88	626	-1237	227	33	114	260	-186	0.154	0.279	0.44	Yes	0.089	0.166	0.26	Yes	0.765	0.174	0.94	Yes	0.760	0.239	1.00	Yes	1.00	**10.36**
	Structure 3	L_{26} - L_{27}			-----	-718.74	300	370	-1508	152	157	55	-348	418	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.215	0.98	Yes	0.755	0.241	1.00	Yes	1.00	**11.30**
		L_{27} - L_{28}			-----	-1003.39	179	1016	-2122	700	246	506	493	-429	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.238	0.98	Yes	0.731	0.262	1.00	Yes	1.00	**15.47**
		L_{28} - L_{29}			-----	-1146.34	447	-564	-2458	-857	442	-152	-701	93	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.304	1.00	Yes	0.686	0.244	0.94	Yes	1.00	**18.36**
		L_{29} - L_{30}			-----	-1018.52	-205	1326	-5085	5539	-438	-1028	1531	1067	-----	-----	-----	-----	-----	-----	-----	-----	0.517	0.367	0.89	Yes	0.513	0.484	1.00	Yes	1.00	**31.45**
		L_{30} - L_{31}			-----	-983.67	5705	-2996	699	-320	645	759	-71	-89	-----	-----	-----	-----	-----	-----	-----	-----	0.500	0.362	0.87	Yes	0.495	0.498	1.00	Yes	1.00	**27.91**
		L_{31} - L_{32}			-----	-1273.13	213	-135	-1983	-264	-340	85	333	119	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.224	1.00	Yes	0.768	0.200	0.97	Yes	1.00	**15.09**
		L_{32} - L_{33}			83.88	-970.36	1444	-835	-597	-1231	471	-398	371	505	0.058	0.244	0.31	Yes	0.039	0.147	0.19	Yes	0.802	0.137	0.94	Yes	0.796	0.197	1.00	Yes	1.00	**20.40**
		L_{33} - L_{34}			583.42	-----	1127	-1723	-627	-1167	-434	-490	853	205	0.583	0.416	1.00	Yes	0.342	0.258	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**20.03**
		L_{34} - L_{35}			919.66	-749.39	743	94	-958	-795	-61	60	95	204	0.821	0.178	1.00	Yes	0.478	0.110	0.59	Yes	0.792	0.129	0.93	Yes	0.787	0.153	0.95	Yes	1.00	**15.76**
		L_{35} - L_{36}			1057.91	-----	606	-1379	-522	-1162	-26	-202	750	152	0.740	0.257	1.00	Yes	0.498	0.162	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.43**
		L_{36} - L_{37}			1438.15	-87.23	286	35	-1373	-1377	-109	8	-99	266	0.825	0.174	1.00	Yes	0.542	0.102	0.65	Yes	0.059	0.180	0.24	Yes	0.059	0.152	0.22	Yes	1.00	**9.77**
		L_{37} - L_{38}			1779.69	-----	106	-355	-2484	-1908	0	-45	377	-73	0.753	0.242	1.00	Yes	0.501	0.142	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.41**
		L_{38} - L_{39}			1739.69	-----	-272	-164	-2586	-1456	-57	6	-117	357	0.746	0.252	1.00	Yes	0.501	0.154	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.54**
		L_{39} - L_{40}			1635.22	-----	-153	-381	-2218	-1160	-26	-41	230	-304	0.762	0.230	1.00	Yes	0.505	0.136	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.71**
		L_{40} - L_{41}			1246.31	-----	-308	-49	-1980	-46	-59	-11	-444	175	0.732	0.267	1.00	Yes	0.493	0.166	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.60**
		L_{41} - L_{42}			977.92	-----	-136	-116	-1350	-323	-31	-29	303	-18	0.771	0.227	1.00	Yes	0.505	0.136	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.36**
		L_{42} - L_{43}			473.21	-----	-221	21	-1491	269	-58	-59	-381	294	0.605	0.390	1.00	Yes	0.361	0.226	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.08**
		L_{43} - L_{44}			210.99	-85.20	-79	-7	-2720	679	-148	-43	1130	330	0.256	0.739	1.00	Yes	0.152	0.470	0.63	Yes	0.123	0.470	0.60	Yes	0.122	0.554	0.68	Yes	1.00	**23.18**
		L_0 - L_1			187.89	-202.30	986	-1834	-17	-81	-146	-662	-9	-39	0.299	0.701	1.00	Yes	0.183	0.459	0.65	Yes	0.382	0.406	0.79	Yes	0.379	0.554	0.94	Yes	1.00	**22.41**
		L_1 - L_2			360.77	-----	803	-1238	-20	-574	-223	-136	-181	337	0.552	0.442	1.00	Yes	0.373	0.277	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**16.23**
		L_2 - L_3			883.43	-----	425	-1031	-447	-533	-56	105	222	164	0.769	0.227	1.00	Yes	0.492	0.136	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.77**
		L_3 - L_4			1182.71	-----	386	-1408	-468	-1229	-198	-113	478	226	0.748	0.249	1.00	Yes	0.485	0.154	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.84**
		L_4 - L_5			1600.05	-----	-334	-220	-1498	-1330	83	125	258	447	0.782	0.212	1.00	Yes	0.502	0.125	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.56**
		L_5 - L_6			1510.49	-----	44	-1869	-956	-1596	-176	-158	397	188	0.738	0.253	1.00	Yes	0.480	0.154	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.79**
		L_6 - L_7			1246.76	-----	-408	231	-1648	-132	-184	17	-65	414	0.733	0.261	1.00	Yes	0.475	0.160	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.08**
		L_7 - L_8			1004.22	-----	-91	102	-965	-335	-30	39	274	42	0.792	0.203	1.00	Yes	0.507	0.122	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.45**
		L_8 - L_9			550.57	-142.30	-165	349	-894	284	-13	45	-228	287	0.713	0.287	1.00	Yes	0.428	0.187	0.62	Yes	0.219	0.122	0.35	Yes	0.217	0.237	0.46	Yes	1.00	**6.41**
		L_9 - L_{10}			283.37	-504.58	-6	468	-844	-63	69	139	419	133	0.367	0.297	0.67	Yes	0.214	0.178	0.40	Yes	0.776	0.172	0.95	Yes	0.769	0.223	1.00	Yes	1.00	**8.88**
		L_{10} - L_{11}			-----	-954.39	198	210	-1465	479	125	-187	-290	368	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.098	0.88	Yes	0.768	0.230	1.00	Yes	1.00	**12.99**
		L_{11} - L_{12}			-----	-1213.67	115	1086	-835	1562	-91	-21	478	-118	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.215	1.00	Yes	0.769	0.207	0.98	Yes	1.00	**14.22**
		L_{12} - L_{13}			-----	-1141.17	1891	-189	424	-8	-276	-305	-200	-250	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.261	1.00	Yes	0.723	0.250	0.98	Yes	1.00	**14.37**
		L_{13} - L_{14}			-----	-861.15	1486	-1521	-1574	-1113	-953	-1025	1584	490	-----	-----	-----	-----	-----	-----	-----	-----	0.701	0.294	1.00	Yes	0.693	0.247	0.95	Yes	1.00	**29.49**
		L_{14} - L_{15}			0.37	-754.43	577	169	-47	-365	144	-6	107	15	0.000	0.147	0.15	Yes	0.000	0.089	0.09	Yes	0.880	0.119	1.00	Yes	0.870	0.128	1.00	Yes	1.00	**6.58**
		L_{15} - L_{16}			454.75	-----	722	-1309	-223	-690	-326	-150	219	50	0.589	0.405	1.00	Yes	0.353	0.265	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.75**
		L_{16} - L_{17}			652.65	-240.34	334	32	-823	-471	90	-33	190	263	0.751	0.241	1.00	Yes	0.446	0.155	0.61	Yes	0.328	0.171	0.50	Yes	0.325	0.199	0.53	Yes	1.00	**6.11**
		L_{17} - L_{18}			643.53	-120.77	95	-7	-900	-501	6	8	249	4	0.740	0.257	1.00	Yes	0.428	0.154	0.59	Yes	0.165	0.279	0.45	Yes	0.163	0.217	0.39	Yes	1.00	**6.26**
		L_{18} - L_{19}			425.30	-14.41	36	5	-815	-128	19	-99	-134	448	0.651	0.341	1.00	Yes	0.397	0.226	0.63	Yes	0.026	0.204	0.24	Yes	0.026	0.245	0.28	Yes	1.00	**5.63**
		L_{19} - L_{20}			46.80	-48.26	46	-165	-1954	735	-22	-6	1551	422	0.072	0.919	1.00	Yes	0.042	0.554	0.60	Yes	0.088	0.681	0.77	Yes	0.087	0.586	0.68	Yes	1.00	**20.24**

Operating Loads - 2F1

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 - Verticals	Structure 1	$U_0 - L_0$	-----	-282.16	-59	89	-171	225	-26	-8	-389	-125	-----	-----	-----	-----	-----	-----	-----	-----	0.698	0.273	0.98	Yes	0.659	0.336	1.00	Yes	1.00	**2.73**
		$U_1 - L_1$	14.64	-320.98	22	-11	-250	250	-4	-3	-139	-12	0.026	0.360	0.39	Yes	0.014	0.198	0.22	Yes	0.701	0.122	0.83	Yes	0.679	0.319	1.00	Yes	1.00	**6.04**
		$U_2 - L_2$	92.18	-286.17	78	-87	-259	302	52	26	-181	29	0.166	0.438	0.61	Yes	0.091	0.241	0.34	Yes	0.625	0.162	0.79	Yes	0.606	0.386	1.00	Yes	1.00	**8.60**
		$U_3 - L_3$	130.58	-254.73	357	-302	-299	334	564	345	-340	-63	0.235	0.619	0.86	Yes	0.129	0.341	0.47	Yes	0.558	0.254	0.82	Yes	0.539	0.456	1.00	Yes	1.00	**15.57**
		$U_4 - L_4$	-----	-248.97	369	-348	-47	29	-18	50	-276	58	-----	-----	-----	-----	-----	-----	-----	-----	0.547	0.191	0.74	Yes	0.527	0.471	1.00	Yes	1.00	**11.03**
		$U_5 - L_5$	-----	-420.75	233	-265	66	-87	-11	-121	7	9	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.118	0.88	Yes	0.726	0.269	1.00	Yes	1.00	**4.94**
		$U_6 - L_6$	-----	-491.26	236	-257	80	-90	417	85	50	69	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.160	0.95	Yes	0.742	0.250	1.00	Yes	1.00	**4.13**
		$U_7 - L_7$	-----	-414.80	275	-292	129	-143	235	32	-141	18	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.155	0.90	Yes	0.676	0.323	1.00	Yes	1.00	**3.05**
		$U_8 - L_8$	-----	-1157.76	455	-542	-335	394	1025	303	485	187	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.160	1.00	Yes	0.803	0.101	0.91	Yes	1.00	**8.24**
		$U_9 - L_9$	-----	-634.59	-169	198	-409	446	-442	-152	-645	-353	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.203	0.98	Yes	0.734	0.260	1.00	Yes	1.00	**6.02**
		$U_{10} - L_{10}$	-----	-676.76	-115	115	-345	347	-662	-345	-998	-616	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.261	1.00	Yes	0.695	0.193	0.89	Yes	1.00	**6.55**
		$U_{11} - L_{11}$	-----	-657.67	-112	219	-381	495	-456	-240	-541	-442	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.176	0.97	Yes	0.765	0.230	1.00	Yes	1.00	**6.85**
		$U_{12} - L_{12}$	-----	-513.52	-82	93	-337	335	-342	-184	-350	-253	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.165	0.91	Yes	0.705	0.288	1.00	Yes	1.00	**6.53**
		$U_{13} - L_{13}$	-----	-356.63	-33	55	-249	273	-185	23	-113	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.134	0.86	Yes	0.683	0.312	1.00	Yes	1.00	**4.97**
		$U_{14} - L_{14}$	-----	-222.57	187	-179	-396	412	300	139	301	264	-----	-----	-----	-----	-----	-----	-----	-----	0.497	0.232	0.73	Yes	0.471	0.527	1.00	Yes	1.00	**16.07**
		$U_{15} - L_{15}$	166.95	-298.63	265	-286	-123	112	83	-117	44	110	0.300	0.400	0.71	Yes	0.165	0.220	0.39	Yes	0.669	0.161	0.84	Yes	0.632	0.366	1.00	Yes	1.00	**8.46**
		$U_{16} - L_{16}$	11.94	-323.37	236	-245	9	-26	353	-131	34	-34	0.021	0.415	0.44	Yes	0.012	0.228	0.25	Yes	0.729	0.161	0.89	Yes	0.684	0.313	1.00	Yes	1.00	**5.35**
		$U_{17} - L_{17}$	-----	-433.83	224	-242	61	-75	133	-164	-121	-113	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.127	0.94	Yes	0.748	0.246	1.00	Yes	1.00	**4.38**
		$U_{18} - L_{18}$	-----	-534.48	442	-452	142	-148	82	-214	-134	-121	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.108	0.90	Yes	0.743	0.256	1.00	Yes	1.00	**5.03**
		$U_{19} - L_{19}$	-----	-644.41	531	-521	172	-171	324	-91	-117	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.126	0.94	Yes	0.750	0.246	1.00	Yes	1.00	**5.28**
		$U_{20} - L_{20}$	-----	-544.22	341	-489	161	-261	656	86	28	4	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.241	1.00	Yes	0.666	0.235	0.91	Yes	1.00	**3.64**
	Structure 2	$U_0 - L_0$	-----	-588.49	-169	219	-395	466	-37	-6	-1035	-175	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.260	1.00	Yes	0.660	0.210	0.87	Yes	1.00	**4.22**
		$U_1 - L_1$	-----	-715.85	-116	125	-531	539	-107	-8	-186	38	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.084	0.91	Yes	0.767	0.229	1.00	Yes	1.00	**7.91**
		$U_2 - L_2$	-----	-576.50	-108	118	-500	497	-108	-38	-298	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.113	0.89	Yes	0.735	0.256	1.00	Yes	1.00	**6.56**
		$U_3 - L_3$	-----	-493.51	-56	64	-235	248	75	-46	17	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.082	0.93	Yes	0.774	0.226	1.00	Yes	1.00	**5.70**
		$U_4 - L_4$	-----	-335.15	-1	23	-223	222	-83	78	-169	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.137	0.90	Yes	0.709	0.286	1.00	Yes	1.00	**6.10**
		$U_5 - L_5$	133.62	-316.77	101	-86	-233	252	-140	119	-100	-32	0.240	0.363	0.61	Yes	0.132	0.200	0.34	Yes	0.716	0.163	0.88	Yes	0.670	0.322	1.00	Yes	1.00	**7.72**
		$U_6 - L_6$	348.55	-230.68	191	-201	-218	222	-57	115	299	51	0.627	0.371	1.00	Yes	0.345	0.204	0.55	Yes	0.519	0.176	0.70	Yes	0.488	0.284	0.78	Yes	1.00	**10.19**
		$U_7 - L_7$	-----	-174.22	446	-493	-171	182	77	162	-182	279	-----	-----	-----	-----	-----	-----	-----	-----	0.394	0.253	0.65	Yes	0.369	0.630	1.00	Yes	1.00	**21.37**
		$U_8 - L_8$	-----	-465.23	360	-371	51	-77	282	-103	-64	-26	-----	-----	-----	-----	-----	-----	-----	-----	0.675	0.126	0.81	Yes	0.670	0.325	1.00	Yes	1.00	**6.05**
		$U_9 - L_9$	-----	-690.08	591	-602	151	-174	286	-125	-6	10	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.098	0.87	Yes	0.740	0.255	1.00	Yes	1.00	**7.71**
		$U_{10} - L_{10}$	-----	-786.74	567	-588	160	-200	144	-195	4	6	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.103	0.89	Yes	0.736	0.259	1.00	Yes	1.00	**8.20**
		$U_{11} - L_{11}$	-----	-811.43	510	-528	186	-188	332	-116	-173	-71	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.127	0.95	Yes	0.759	0.233	1.00	Yes	1.00	**6.86**
		$U_{12} - L_{12}$	-----	-879.73	529	-538	157	-137	285	-36	-163	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.118	0.97	Yes	0.763	0.231	1.00	Yes	1.00	**7.32**
		$U_{13} - L_{13}$	-----	-741.28	562	-545	212	-208	544	51	-160	21	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.171	1.00	Yes	0.715	0.269	0.99	Yes	1.00	**5.86**
		$U_{14} - L_{14}$	-----	-1233.59	816	-779	-633	587	590	281	142	334	-----	-----	-----	-----	-----	-----	-----	-----	0.902	0.097	1.00	Yes	0.818	0.145	0.97	Yes	1.00	**11.74**
		$U_{15} - L_{15}$	-----	-718.15	-119	127	-625	599	-278	27	-246	-88	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.154	0.96	Yes	0.692	0.299	1.00	Yes	1.00	**9.52**
		$U_{16} - L_{16}$	-----	-657.11	-90	64	-519	491	-788	-256	-1139	-450	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.236	1.00	Yes	0.704	0.220	0.93	Yes	1.00	**8.03**
		$U_{17} - L_{17}$	-----	-626.57	-126	124	-563	551	-274	-185	-654	-424	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.193	0.97	Yes	0.729	0.261	1.00	Yes	1.00	**7.38**
		$U_{18} - L_{18}$	-----	-579.25	-97	97	-484	502	-113	-128	-154	-272	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.115	0.89	Yes	0.738	0.257	1.00	Yes	1.00	**6.81**
		$U_{19} - L_{19}$	-----	-469.65	-55	59	-307	301	-66	-32	-231	-171	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.122	0.83	Yes	0.701	0.295	1.00	Yes	1.00	**6.33**
		$U_{20} - L_{20}$	-----	-370.75	-6	14	-243	246	-184	-24	-135	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.121	0.89	Yes	0.710	0.281	1.00	Yes	1.00	**6.03**
	Structure 3	$U_{21} - L_{21}$	60.60	-318.40	31	-25	-236	249	-93	63	79	-23	0.109	0.345	0.46	Yes	0.060	0.190	0.25	Yes	0.719	0.113	0.84	Yes	0.674	0.318	1.00	Yes	1.00	**6.51**
		$U_{22} - L_{22}$	-----	-170.24	414	-432	-464	493	179	236	-57	325	-----	-----	-----	-----	-----	-----	-----	-----	0.383	0.241	0.63	Yes	0.360	0.630	1.00	Yes	1.00	**26.22**
		$U_{23} - L_{23}$	91.84	-316.81	243	-254	-64	50	282	-45	-2	141	0.165	0.407	0.58	Yes	0.091	0.224	0.32	Yes	0.716	0.156	0.88	Yes	0.670	0.325	1.00	Yes	1.00	**6.67**
		$U_{24} - L_{24}$	-----	-372.09	236	-248	10	-22	278	-41	73	17	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.123	0.89	Yes	0.713	0.283	1.00	Yes	1.00	**5.92**
		$U_{25} - L_{25}$	-----	-472.61	297	-295	44	-43	486	-19	-83	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.184	0.90	Yes	0.706	0.286	1.00	Yes	1.00	**5.57**
		$U_{26} - L_{26}$	-----	-567.18	501	-527	73	-76	497	-9	-118	-23	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.153	0.91	Yes	0.723	0.270	1.00	Yes	1.00	**6.40**
		$U_{27} - L_{27}$	-----	-631.88	565	-569	88	-88	369	-43	-134	2	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.115	0.90	Yes	0.735	0.264	1.00	Yes	1.00	**7.03**
		$U_{28} - L_{28}$	-----	-705.99	573	-563	76	-73	268	-20	-154	16	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.098	0.92	Yes	0.757	0.243	1.00	Yes	1.00	**7.72**
		$U_{29} - L_{29}$	-----	-716.31	631	-607	121	-126	593	23	-113	28	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.179	0.98	Yes	0.691	0.302	1.00	Yes	1.00	**7.98**
		$U_{30} - L_{30}$	-----	-1216.38	887	-873	-719	649	630	-38	-657	146	-----	-----	-----	-----	-----	-----	-----	-----	0.906	0.089	1.00	Yes	0.822	0.160	0.99	Yes	1.00	**14.44**
		$U_{31} - L_{31}$	-----	-703.90	-109	109	-541	510	-319	-30	-562	-126	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.207	1.00	Yes	0.679	0.259	0.94	Yes	1.00	**8.99**
		$U_{32} - L_{32}$	-----	-786.40	-83	61	-481	464	-666	-271	-964	-417	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.239	1.00	Yes	0.682	0.206	0.89	Yes	1.00	**8.63**
		$U_{33} - L_{33}$	-----	-821.46	-117	107	-480	484	-449	-342	-317	-425	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.153	0.99	Yes	0.774	0.217	1.00	Yes	1.00	**8.74**
		$U_{34} - L_{34}$	-----	-800.40	-101	119	-546	558	-354	-217	-427	-378	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.131	0.93	Yes	0.748	0.246	1.00	Yes	1.00	**9.84**
		$U_{35} - L_{35}$	-----	-696.59	-90	119	-591	588	-238	27	-224	-177	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.088	0.87	Yes	0.747	0.251	1.00	Yes	1.00	**8.61**
		$U_{36} - L_{36}$	-----	-474.80	-41	56	-341	351	-76	62	180	34	-----	-----	-----	-----	-----	-----	-----	-----	0.688	0.117	0.81	Yes	0.684	0.307	1.00	Yes	1.00	**6.54**
		$U_{37} - L_{37}$	-----	-151.19	120	-119	-471	529	-137	191	-233	234	-----	-----	-----	-----	-----	-----	-----	-----	0.342	0.265	0.61	Yes	0.320	0.677	1.00	Yes	1.00	**20.20**
		$U_{38} - L_{38}$	330.15	-171.36	156	-154	-228	229	369	-44	8	125	0.594	0.400	1.00	Yes	0.327	0.220	0.55	Yes	0.386	0.130	0.52	Yes	0.363	0.293	0.66	Yes	1.00	**8.40**
		$U_{39} - L_{39}$	156.24	-325.25	219	-240	-133	121	276	-89	48	64	0.281	0.387	0.67	Yes	0.155	0.213	0.37	Yes	0.735	0.128	0.87	Yes	0.688	0.307	1.00	Yes	1.00	**8.50**
		$U_{40} - L_{40}$	29.57	-334.28	224	-221	-23	4	107	-124	12	-1	0.053	0.322	0.38	Yes	0.029	0.177	0.21	Yes	0.758	0.106	0.87	Yes	0.707	0.286	1.00	Yes	1.00	**6.38**
		$U_{41} - L_{41}$	-----	-487.48	242	-254	30	-34	280	-109	6	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.109	0.94	Yes	0.764	0.231	1.00	Yes	1.00	**5.80**
		$U_{42} - L_{42}$	-----	-584.45	484	-491	63	-72	283	-136	10	-37	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.092	0.88	Yes	0.745	0.251	1.00	Yes	1.00	**6.51**
		$U_{43} - L_{43}$	-----	-701.03	574	-569	79	-92	205	-42	-50	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.103	0.91	Yes	0.751	0.244	1.00	Yes	1.00	**7.29**
		$U_{44} - L_{44}$	-----	-606.75	392	-498	119	-138	1242	211	-121	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.265	1.00	Yes	0.650	0.211	0.87	Yes	1.00	**5.41**
	Structure 4	$U_0 - L_0$	-----	-552.31	-145	194	-409	461	-55	-7	-844	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.244	1.00	Yes	0.663	0.221	0.89	Yes	1.00	**4.36**
		$U_1 - L_1$	-----	-660.93	-112	124	-477	487	-123	-3	-547	27	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.139	0.97	Yes	0.769	0.226	1.00	Yes	1.00	**7.26**
		$U_2 - L_2$	-----	-536.46	-108	114	-441	445	-148	-45	-314	-27	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.119	0.91	Yes	0.746	0.252	1.00	Yes	1.00	**6.41**
		$U_3 - L_3$	-----	-437.73	-45	58	-222	235	43	-64	-135	-75	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.111	0.93	Yes	0.755	0.238	1.00	Yes	1.00	**5.18**
		$U_4 - L_4$	14.92	-328.40	-8	17	-226	235	-102	35	60	14	0.027	0.330	0.36	Yes	0.015	0.182	0.20	Yes	0.740	0.112	0.86	Yes	0.695	0.301	1.00	Yes	1.00	**5.92**
		$U_5 - L_5$	121.12	-304.33	94	-82	-260	278	-129	153	-159	-27	0.218	0.401	0.62	Yes	0.120	0.221	0.35	Yes	0.682	0.180	0.87	Yes	0.644	0.355	1.00	Yes	1.00	**8.22**
		$U_6 - L_6$	11.44	-75.73	524	-569	-440	446	-843	-94	-447	249	0.021	0.972	1.00	Yes	0.011	0.534	0.55	Yes	0.169	0.452	0.63	Yes	0.160	0.728	0.89	Yes	1.00	**25.10**
		$U_7 - L_7$	-----	-360.58	246	-266	11	-24	61	-138	-13	-25	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.119	0.85	Yes	0.691	0.304	1.00	Yes	1.00	**5.59**
		$U_8 - L_8$	-----	-514.56	329	-334	64	-70	497	7	-34	-96	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.180	0.93	Yes	0.706	0.285	1.00	Yes	1.00	**6.18**
		$U_9 - L_9$	-----	-651.86	394	-501	94	-168	234	-127	-79	-21	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.113	0.90	Yes	0.759	0.233	1.00	Yes	1.00	**6.74**
		$U_{10} - L_{10}$	-----	-775.12	399	-436	119	-133	290	-7	108	69	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.123	0.93	Yes	0.765	0.226	1.00	Yes	1.00	**7.48**
		$U_{11} - L_{11}$	-----	-646.53	421	-468	168	-193	544	132	-150	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.168	0.94	Yes	0.730	0.260	1.00	Yes	1.00	**4.95**
		$U_{12} - L_{12}$	-----	-1205.70	555	-717	-520	569	773	341	334	220	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.129	1.00	Yes	0.836	0.134	0.97	Yes	1.00	**10.52**
		$U_{13} - L_{13}$	-----	-454.84	-67	76	-285	298	-382	-53	-233	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.178	0.94	Yes	0.702	0.294	1.00	Yes	1.00	**5.44**
		$U_{14} - L_{14}$	-----	-469.26	-38	45	-251	253	-550	-210	-984	-513	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.282	1.00	Yes	0.673	0.221	0.90	Yes	1.00	**6.39**
		$U_{15} - L_{15}$	-----	-418.78	-30	39	-236	250	-525	-240	-600	-383	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.235	1.00	Yes	0.722	0.254	0.98	Yes	1.00	**6.03**
		$U_{16} - L_{16}$	-----	-220.79	55	-28	-412	401	-548	-263	-73	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.485	0.293	0.78	Yes	0.467	0.526	1.00	Yes	1.00	**13.47**
		$U_{17} - L_{17}$	293.63	-257.47	196	-215	-309	321	200	-56	-155	85	0.528	0.468	1.00	Yes	0.290	0.257	0.55	Yes	0.564	0.144	0.71	Yes	0.545	0.410	0.96	Yes	1.00	**10.86**
		$U_{18} - L_{18}$	86.60	-296.95	240	-285	-126	119	293	-18	116	30	0.156	0.449	0.61	Yes	0.086	0.247	0.34	Yes	0.649	0.168	0.82	Yes	0.628	0.364	1.00	Yes	1.00	**8.12**
		$U_{19} - L_{19}$	40.86	-312.33	261	-243	-50	39	109	-37	-84	-8	0.073	0.366	0.44	Yes	0.040	0.201	0.25	Yes	0.682	0.108	0.80	Yes	0.661	0.334	1.00	Yes	1.00	**5.63**
		$U_{20} - L_{20}$	-----	-302.33	120	-186	-13	-65	776	249	-574	-184	-----	-----	-----	-----	-----	-----	-----	-----	0.675	0.320	1.00	Yes	0.640	0.238	0.88	Yes	1.00	**2.82**

Operating Loads - 2F1

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 - Diagonals	Structure 1	$U_0 - L_1$			505.95	-----	-16	-1	-140	61	-6	12	-673	-130	0.664	0.333	1.00	Yes	0.401	0.183	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.95**
		$U_1 - L_2$			378.28	-80.77	16	-19	-104	-10	-11	-18	-611	-397	0.680	0.310	1.00	Yes	0.374	0.170	0.55	Yes	0.185	0.318	0.51	Yes	0.171	0.133	0.31	Yes	1.00	**7.34**
		$U_2 - L_3$			389.20	-213.90	38	-26	-134	-45	8	12	-421	29	0.700	0.293	1.00	Yes	0.385	0.161	0.55	Yes	0.492	0.318	0.82	Yes	0.453	0.171	0.63	Yes	1.00	**11.19**
		$U_3 - L_4$			-----	-329.97	56	-6	-131	-145	122	127	-40	-269	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.242	1.00	Yes	0.698	0.186	0.89	Yes	1.00	**14.75**
		$U_4 - L_4$			547.14	-----	-11	52	-105	12	24	-23	-267	-323	0.810	0.182	1.00	Yes	0.445	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.74**
		$U_5 - L_5$			623.45	-----	-27	154	-259	158	216	82	-597	-413	0.737	0.256	1.00	Yes	0.405	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.03**
		$U_1 - L_6$			629.17	-----	-80	121	-331	228	353	164	-360	-300	0.744	0.254	1.00	Yes	0.409	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.20**
		$U_6 - L_7$			644.77	-----	19	159	-102	303	352	183	-69	-129	0.762	0.237	1.00	Yes	0.419	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.89**
		$U_5 - L_8$			980.14	-----	121	222	-111	339	181	6	444	477	0.784	0.212	1.00	Yes	0.485	0.119	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.12**
		$U_9 - L_{10}$			927.17	-----	-72	85	-364	206	53	115	705	647	0.741	0.252	1.00	Yes	0.459	0.142	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.07**
		$U_{10} - L_{11}$			987.91	-----	-56	156	-257	161	126	187	-144	355	0.834	0.165	1.00	Yes	0.517	0.093	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.60**
		$U_{11} - L_{12}$			825.43	-----	-69	54	-283	64	25	125	27	308	0.817	0.177	1.00	Yes	0.449	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.45**
		$U_{12} - L_{13}$			649.13	-----	-74	39	-202	142	-154	-99	-88	120	0.791	0.207	1.00	Yes	0.498	0.116	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.91**
		$U_{13} - L_{14}$			454.40	-----	-14	-22	-97	21	-167	-180	-97	19	0.817	0.176	1.00	Yes	0.449	0.097	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.14**
		$U_{15} - L_{14}$			59.56	-277.50	48	-104	-89	-52	-247	-125	-591	-346	0.107	0.304	0.42	Yes	0.059	0.167	0.23	Yes	0.650	0.344	1.00	Yes	0.587	0.133	0.73	Yes	1.00	**7.45**
		$U_{16} - L_{15}$			410.55	-76.14	-2	-36	-128	86	-311	-154	-319	-334	0.738	0.261	1.00	Yes	0.406	0.144	0.55	Yes	0.180	0.190	0.38	Yes	0.161	0.164	0.33	Yes	1.00	**6.19**
		$U_{17} - L_{16}$			496.15	-----	-34	13	-145	81	-109	-129	-496	-429	0.728	0.263	1.00	Yes	0.400	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.90**
		$U_{18} - L_{17}$			609.12	-----	-112	76	-321	241	-114	-120	-500	-504	0.720	0.273	1.00	Yes	0.396	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.07**
		$U_{19} - L_{18}$			684.04	-----	-133	95	-344	250	-292	-204	-407	-447	0.741	0.250	1.00	Yes	0.407	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.71**
		$U_{20} - L_{19}$			664.57	-----	-91	96	-284	262	-150	-73	-812	-375	0.720	0.279	1.00	Yes	0.396	0.153	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
	Structure 2	$U_0 - L_1$			574.02	-----	-115	100	-457	359	-60	-49	-1451	288	0.568	0.429	1.00	Yes	0.312	0.236	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.73**
		$U_1 - L_2$			789.10	-----	-96	72	-393	300	-98	-28	-239	43	0.781	0.218	1.00	Yes	0.429	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.37**
		$U_2 - L_3$			643.01	-----	-88	67	-336	247	-25	87	-238	211	0.760	0.233	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.89**
		$U_3 - L_4$			589.51	-----	-35	14	-202	117	109	63	-48	103	0.786	0.207	1.00	Yes	0.432	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.20**
		$U_4 - L_5$			422.12	-69.26	3	-30	-135	90	-128	-145	-233	83	0.759	0.240	1.00	Yes	0.418	0.132	0.55	Yes	0.171	0.123	0.30	Yes	0.147	0.172	0.32	Yes	1.00	**6.64**
		$U_5 - L_6$			420.33	-227.81	66	-97	-122	43	-301	-187	-236	176	0.756	0.243	1.00	Yes	0.416	0.134	0.55	Yes	0.538	0.207	0.75	Yes	0.482	0.156	0.64	Yes	1.00	**8.57**
		$U_6 - L_7$			-----	-380.44	54	-101	-56	-31	-29	-299	-75	-79	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.181	1.00	Yes	0.729	0.115	0.85	Yes	1.00	**5.84**
		$U_8 - L_7$			524.62	-25.34	-14	-47	-236	83	-311	-215	-510	-550	0.669	0.324	1.00	Yes	0.421	0.184	0.61	Yes	0.042	0.205	0.25	Yes	0.038	0.211	0.25	Yes	1.00	**9.14**
		$U_9 - L_8$			675.58	-----	-118	38	-338	196	-289	-213	-541	-517	0.732	0.262	1.00	Yes	0.402	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.65**
		$U_{10} - L_9$			782.47	-----	-95	120	-317	208	-8	-69	-407	-502	0.774	0.222	1.00	Yes	0.426	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.52**
		$U_{11} - L_{10}$			867.82	-----	-102	144	-339	270	143	13	-359	-445	0.791	0.205	1.00	Yes	0.435	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.14**
		$U_{12} - L_{11}$			841.34	-----	-109	164	-380	329	290	121	-430	-473	0.766	0.226	1.00	Yes	0.422	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.61**
		$U_{13} - L_{12}$			751.12	-----	-153	155	-435	370	326	124	-172	-236	0.743	0.251	1.00	Yes	0.409	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.36**
		$U_{14} - L_{13}$			771.82	-----	2	189	-285	430	91	91	-167	-202	0.764	0.230	1.00	Yes	0.420	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.72**
		$U_{14} - L_{15}$			635.56	-----	64	123	-221	341	154	-57	70	282	0.751	0.244	1.00	Yes	0.413	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.13**
		$U_{15} - L_{16}$			610.22	-----	-62	69	-392	331	-26	20	8	279	0.721	0.273	1.00	Yes	0.397	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.88**
		$U_{16} - L_{17}$			714.41	-----	-60	101	-330	333	-165	112	-313	323	0.774	0.223	1.00	Yes	0.426	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.03**
		$U_{17} - L_{18}$			642.41	-----	-69	82	-291	254	-20	106	-104	375	0.759	0.233	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.01**
		$U_{18} - L_{19}$			647.04	-----	-48	66	-311	239	31	19	119	317	0.765	0.234	1.00	Yes	0.421	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.56**
		$U_{19} - L_{20}$			607.63	-----	-19	26	-198	155	-30	-28	8	227	0.775	0.223	1.00	Yes	0.426	0.125	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.79**
		$U_{20} - L_{21}$			436.17	-6.06	-3	-9	-124	93	-102	-74	-78	164	0.784	0.206	1.00	Yes	0.431	0.113	0.55	Yes	0.014	0.093	0.11	Yes	0.013	0.159	0.18	Yes	1.00	**5.84**
		$U_{21} - L_{22}$			408.34	-223.06	38	-80	-153	17	-176	-222	113	207	0.734	0.260	1.00	Yes	0.404	0.143	0.55	Yes	0.527	0.221	0.75	Yes	0.472	0.195	0.67	Yes	1.00	**10.59**
		$U_{23} - L_{22}$			270.69	-272.00	57	-96	-130	5	-195	-49	-472	-369	0.487	0.303	0.79	Yes	0.268	0.167	0.44	Yes	0.648	0.344	1.00	Yes	0.576	0.166	0.75	Yes	1.00	**9.26**
		$U_{24} - L_{23}$			432.95	-28.58	1	-16	-119	104	-153	-59	-239	-237	0.779	0.221	1.00	Yes	0.428	0.121	0.55	Yes	0.068	0.118	0.19	Yes	0.060	0.152	0.22	Yes	1.00	**6.26**
		$U_{25} - L_{24}$			576.26	-----	-15	30	-198	158	64	2	-384	-391	0.735	0.257	1.00	Yes	0.404	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.77**
		$U_{26} - L_{25}$			650.58	-----	-32	44	-278	252	104	35	-263	-365	0.769	0.224	1.00	Yes	0.423	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.51**
		$U_{27} - L_{26}$			636.94	-----	-45	58	-309	259	176	68	-383	-383	0.753	0.244	1.00	Yes	0.414	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.92**
		$U_{28} - L_{27}$			704.59	-----	-49	68	-349	342	199	109	-213	-336	0.763	0.234	1.00	Yes	0.420	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.12**
		$U_{29} - L_{28}$			629.04	-----	-74	84	-359	332	256	124	-75	-176	0.744	0.250	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.14**
		$U_{30} - L_{29}$			642.76	-----	33	109	-225	356	187	126	-98	-160	0.760	0.235	1.00	Yes	0.418	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.65**
		$U_{30} - L_{31}$			764.41	-----	74	150	-294	437	226	4	152	191	0.756	0.237	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.93**
		$U_{31} - L_{32}$			723.11	-----	-76	79	-411	356	-25	43	-182	243	0.751	0.243	1.00	Yes	0.413	0.124	0.54	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.63**
		$U_{32} - L_{33}$			859.14	-----	-64	96	-364	313	-136	132	-387	414	0.783	0.211	1.00	Yes	0.430	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.78**
		$U_{33} - L_{34}$			845.89	-----	-65	91	-373	243	23	201	123	510	0.771	0.228	1.00	Yes	0.424	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.77**
		$U_{34} - L_{35}$			815.27	-----	-64	80	-312	220	77	82	-8	267	0.807	0.185	1.00	Yes	0.444	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.69**
		$U_{35} - L_{36}$			729.53	-----	-86	26	-333	210	-143	-129	-54	214	0.790	0.205	1.00	Yes	0.435	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.93**
		$U_{36} - L_{37}$			578.90	-----	-22	-16	-230	106	-202	-235	-9	139	0.738	0.254	1.00	Yes	0.465	0.143	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.94**
		$U_{38} - L_{37}$			-----	-370.54	68	-98	-44	-31	-187	-90	-301	-238	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.196	1.00	Yes	0.710	0.112	0.83	Yes	1.00	**5.34**
		$U_{39} - L_{38}$			357.22	-306.62	76	-115	-98	53	-396	-108	-288	-285	0.642	0.262	0.91	Yes	0.353	0.144	0.50	Yes	0.731	0.260	1.00	Yes	0.649	0.147	0.80	Yes	1.00	**8.50**
		$U_{40} - L_{39}$			395.88	-119.77	19	-45	-136	87	-239	-131	-310	-371	0.712	0.282	1.00	Yes	0.392	0.155	0.55	Yes	0.287	0.219	0.51	Yes	0.253	0.174	0.43	Yes	1.00	**7.58**
		$U_{41} - L_{40}$			568.67	-----	-20	5	-173	123	-99	-85	-359	-371	0.758	0.235	1.00	Yes	0.417	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.99**
		$U_{42} - L_{41}$			598.96	-----	-49	32	-336	241	-67	-64	-514	-521	0.708	0.285	1.00	Yes	0.389	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.70**
		$U_{43} - L_{42}$			744.41	-----	-67	46	-393	288	-7	-48	-465	-508	0.736	0.258	1.00	Yes	0.405	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.78**
		$U_{44} - L_{43}$			689.53	-----	-92	86	-337	323	-11	-13	-1017	-330	0.682	0.309	1.00	Yes	0.375	0.170	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.97**
	Structure 3	$U_0 - L_1$			555.13	-----	-114	95	-435	309	-62	-53	-1057	98	0.601	0.396	1.00	Yes	0.331	0.218	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.19**
		$U_1 - L_2$			679.71	-----	-99	67	-348	243	-125	-45	-494	-301	0.736	0.259	1.00	Yes	0.405	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.81**
		$U_2 - L_3$			645.13	-----	-97	63	-331	242	-49	78	-267	152	0.763	0.236	1.00	Yes	0.419	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.12**
		$U_3 - L_4$			549.12	-----	-30	11	-154	90	73	48	-144	97	0.805	0.190	1.00	Yes	0.443	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.45**
		$U_4 - L_5$			426.76	-103.17	-4	-35	-131	91	-81	-178	-217	20	0.768	0.230	1.00	Yes	0.422	0.127	0.55	Yes	0.245	0.118	0.37	Yes	0.218	0.168	0.39	Yes	1.00	**6.87**
		$U_5 - L_6$			418.46	-311.84	48	-113	-113	-12	-278	-323	-257	0	0.753	0.238	1.00	Yes	0.414	0.131	0.55	Yes	0.731	0.225	0.96	Yes	0.660	0.145	0.81	Yes	1.00	**9.35**
		$U_7 - L_6$			419.29	-21.84	-2	-39	-103	10	-215	-186	-327	-389	0.754	0.244	1.00	Yes	0.415	0.134	0.55	Yes	0.051	0.195	0.25	Yes	0.046	0.131	0.18	Yes	1.00	**6.81**
		$U_8 - L_7$			601.77	-----	-58	7	-197	125	-344	-221	-389	-457	0.734	0.262	1.00	Yes	0.462	0.149	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.36**
		$U_8 - L_8$			754.87	-----	-61	83	-294	36	-90	-138	-759	-722	0.747	0.250	1.00	Yes	0.411	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.64**
		$U_{10} - L_9$			928.05	-----	-45	130	-279	136	91	-7	-586	-661	0.784	0.216	1.00	Yes	0.485	0.122	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.03**
		$U_{11} - L_{10}$			904.46	-----	-73	129	-357	186	370	199	-877	-735	0.723	0.271	1.00	Yes	0.448	0.153	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.18**
		$U_{12} - L_{11}$			999.47	-----	85	174	-118	353	126	116	-279	-318	0.799	0.198	1.00	Yes	0.495	0.111	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.74**
		$U_{12} - L_{13}$			672.25	-----	62	137	-115	272	60	-73	103	265	0.795	0.203	1.00	Yes	0.437	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.03**
		$U_{13} - L_{14}$			634.57	-----	-24	55	-328	221	-124	30	138	298	0.750	0.241	1.00	Yes	0.413	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.58**
		$U_{14} - L_{15}$			711.79	-----	-2	126	-197	190	-29	106	-233	232	0.842	0.155	1.00	Yes	0.463	0.085	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.98**
		$U_{15} - L_{16}$			480.11	-----	9	89	-189	-23	183	246	445	354	0.704	0.295	1.00	Yes	0.387	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.17**
		$U_{17} - L_{16}$			-----	-367.74	40	-63	-61	-70	-45	40	-232	-189	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.155	1.00	Yes	0.778	0.090	0.87	Yes	1.00	**7.16**
		$U_{18} - L_{17}$			304.40	-258.97	54	-29	-141	-60	257	172	-524	-406	0.547	0.332	0.88	Yes	0.301	0.183	0.49	Yes	0.596	0.395	1.00	Yes	0.548	0.180	0.73	Yes	1.00	**12.31**
		$U_{19} - L_{18}$			406.17	-116.02	23	-18	-104	5	142	109	-452	-378	0.731	0.263	1.00	Yes	0.402	0.145	0.55	Yes	0.266	0.266	0.54	Yes	0.245	0.133	0.38	Yes	1.00	**6.40**
		$U_{20} - L_{19}$			281.64	-----	187	-16	-223	96	1300	48	-1448	-478	0.369	0.625	1.00	Yes	0.223	0.344	0.57	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**18.66**

Operating Loads - 2F1

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 - 2F1

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	188.86	-26.58	782	-1241	-140	29	-425	-1562	19	68	0.289	0.708	1.00	Yes	0.170	0.424	0.60	Yes	0.048	0.508	0.56	Yes	0.048	0.373	0.43	Yes	1.00	**19.34**
		L_1 - L_2	403.32	-----	348	-978	-571	-444	4	-88	-404	118	0.617	0.380	1.00	Yes	0.377	0.253	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.52**
		L_2 - L_3	656.57	-46.65	-43	46	-945	-637	11	-6	-101	-43	0.755	0.244	1.00	Yes	0.437	0.147	0.59	Yes	0.064	0.256	0.32	Yes	0.063	0.228	0.30	Yes	1.00	**6.76**
		L_3 - L_4	635.34	-----	114	-862	-968	-441	-154	28	47	174	0.731	0.262	1.00	Yes	0.434	0.169	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.85**
		L_4 - L_5	283.34	-450.96	82	429	-1154	253	124	-123	-131	-14	0.367	0.329	0.70	Yes	0.220	0.217	0.44	Yes	0.693	0.218	0.92	Yes	0.687	0.306	1.00	Yes	1.00	**7.99**
		L_5 - L_6	29.10	-696.58	126	538	-858	84	9	71	61	110	0.029	0.205	0.24	Yes	0.018	0.124	0.15	Yes	0.812	0.169	0.99	Yes	0.804	0.190	1.00	Yes	1.00	**9.17**
		L_6 - L_7	-----	-993.97	160	110	-1271	271	166	28	20	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.092	0.91	Yes	0.800	0.200	1.00	Yes	1.00	**11.83**
		L_7 - L_8	-----	-1082.96	109	969	-1678	2344	-196	-96	45	109	-----	-----	-----	-----	-----	-----	-----	-----	0.695	0.283	0.98	Yes	0.686	0.310	1.00	Yes	1.00	**20.72**
		L_8 - L_9	-----	-1182.22	1840	-642	540	-9	-47	-62	69	13	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.220	0.98	Yes	0.749	0.244	1.00	Yes	1.00	**15.45**
		L_9 - L_{10}	62.14	-719.49	1631	-2627	-1761	-1116	39	-236	492	58	0.043	0.459	0.51	Yes	0.028	0.285	0.32	Yes	0.585	0.152	0.74	Yes	0.579	0.413	1.00	Yes	1.00	**35.82**
		L_{10} - L_{11}	405.42	-555.70	505	-14	-358	-552	76	10	19	8	0.525	0.160	0.69	Yes	0.306	0.097	0.41	Yes	0.854	0.066	0.93	Yes	0.847	0.146	1.00	Yes	1.00	**12.93**
		L_{11} - L_{12}	595.76	-----	464	-733	-238	-445	-104	14	-51	175	0.772	0.225	1.00	Yes	0.463	0.147	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.34**
		L_{12} - L_{13}	1074.83	-----	112	-69	-670	-734	-171	-125	-10	46	0.848	0.150	1.00	Yes	0.543	0.090	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.71**
		L_{13} - L_{14}	1253.72	-----	653	-1720	-673	-1049	-284	0	-118	245	0.737	0.261	1.00	Yes	0.478	0.159	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.91**
		L_{14} - L_{15}	1469.63	-----	-357	-81	-2229	-377	-66	-48	-146	102	0.718	0.279	1.00	Yes	0.467	0.168	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.63**
		L_{15} - L_{16}	1566.26	-----	-194	-390	-1836	-1022	-76	14	17	52	0.765	0.227	1.00	Yes	0.491	0.132	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.35**
		L_{16} - L_{17}	1178.89	-----	-402	40	-1622	-74	-35	-66	-148	-19	0.745	0.251	1.00	Yes	0.484	0.154	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.60**
		L_{17} - L_{18}	896.12	-----	-179	-54	-1041	-61	-81	-18	72	11	0.780	0.211	1.00	Yes	0.500	0.126	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.17**
		L_{18} - L_{19}	430.62	-----	-251	176	-978	400	-5	-33	-187	74	0.659	0.332	1.00	Yes	0.446	0.207	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.35**
		L_{19} - L_{20}	79.80	-85.58	-100	20	-2249	1074	-35	-8	962	216	0.122	0.874	1.00	Yes	0.075	0.582	0.66	Yes	0.155	0.513	0.67	Yes	0.154	0.675	0.83	Yes	1.00	**28.55**
	Structure 2	L_0 - L_1	11.32	-61.10	904	-2603	-123	22	-481	-1669	11	36	0.017	0.982	1.00	Yes	0.010	0.485	0.50	Yes	0.109	0.737	0.85	Yes	0.108	0.628	0.74	Yes	1.00	**30.27**
		L_1 - L_2	538.76	-----	771	-1560	-298	-729	72	159	94	152	0.654	0.344	1.00	Yes	0.389	0.222	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.26**
		L_2 - L_3	951.94	-----	408	-1200	-667	-636	-13	121	628	215	0.750	0.240	1.00	Yes	0.492	0.146	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.53**
		L_3 - L_4	1368.77	-----	456	-1439	-1173	-1338	-73	113	-46	312	0.804	0.193	1.00	Yes	0.542	0.120	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.88**
		L_4 - L_5	1644.57	-----	100	-2145	-2282	-1041	-124	-86	147	180	0.767	0.228	1.00	Yes	0.508	0.134	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.73**
		L_5 - L_6	1798.42	-----	47	-2312	-2129	-1838	-370	-109	-96	211	0.772	0.228	1.00	Yes	0.518	0.139	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.72**
		L_6 - L_7	1772.67	-----	-405	-114	-2667	-1782	52	-9	27	152	0.750	0.244	1.00	Yes	0.499	0.142	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.63**
		L_7 - L_8	1252.03	-----	-198	210	-2431	-160	-71	77	-65	107	0.718	0.277	1.00	Yes	0.472	0.161	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.23**
		L_8 - L_9	1061.13	-202.91	-149	473	-1768	172	40	-118	-64	60	0.742	0.250	1.00	Yes	0.500	0.155	0.66	Yes	0.168	0.130	0.3	Yes	0.167	0.239	0.41	Yes	1.00	**10.19**
		L_9 - L_{10}	786.11	-516.59	-103	556	-1759	-6	-39	33	85	20	0.702	0.292	1.00	Yes	0.409	0.183	0.60	Yes	0.546	0.162	0.71	Yes	0.542	0.281	0.83	Yes	1.00	**12.26**
		L_{10} - L_{11}	174.97	-642.56	-11	549	-1374	562	116	-58	-115	3	0.175	0.256	0.44	Yes	0.102	0.162	0.27	Yes	0.760	0.076	0.84	Yes	0.755	0.240	1.00	Yes	1.00	**10.03**
		L_{11} - L_{12}	-----	-961.33	-13	918	-1526	485	12	56	-38	74	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.135	0.93	Yes	0.788	0.208	1.00	Yes	1.00	**12.09**
		L_{12} - L_{13}	-----	-1174.28	107	-275	-2208	-1049	94	31	-142	-85	-----	-----	-----	-----	-----	-----	-----	-----	0.708	0.283	1	Yes	0.702	0.219	0.93	Yes	1.00	**14.09**
		L_{13} - L_{14}	-----	-1139.10	-240	1435	-3867	4842	-522	-494	94	76	-----	-----	-----	-----	-----	-----	-----	-----	0.578	0.296	0.88	Yes	0.573	0.423	1.00	Yes	1.00	**21.11**
		L_{14} - L_{15}	-----	-1184.32	4604	-3016	1207	-549	-305	-70	-281	-187	-----	-----	-----	-----	-----	-----	-----	-----	0.601	0.265	0.87	Yes	0.596	0.402	1.00	Yes	1.00	**17.96**
		L_{15} - L_{16}	-----	-1219.46	-152	186	-2711	-887	166	152	-33	70	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.262	1	Yes	0.729	0.269	1.00	Yes	1.00	**16.16**
		L_{16} - L_{17}	313.79	-651.73	3613	-4190	-2035	-1217	-663	-309	438	378	0.194	0.572	0.77	Yes	0.129	0.339	0.47	Yes	0.479	0.404	0.89	Yes	0.475	0.517	1.00	Yes	1.00	**42.42**
		L_{17} - L_{18}	577.97	-84.31	1878	-2717	-1379	-1381	-287	-142	27	360	0.516	0.478	1.00	Yes	0.300	0.298	0.60	Yes	0.089	0.284	0.38	Yes	0.089	0.435	0.53	Yes	1.00	**26.57**
		L_{18} - L_{19}	624.25	-----	1000	-1314	-1138	-605	-165	-105	251	150	0.707	0.292	1.00	Yes	0.408	0.174	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**18.00**
		L_{19} - L_{20}	624.37	-----	751	-1325	-778	-605	-207	12	91	212	0.707	0.288	1.00	Yes	0.418	0.184	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.67**
		L_{20} - L_{21}	969.83	-----	435	-460	-1409	-1057	-195	-139	99	109	0.773	0.227	1.00	Yes	0.507	0.135	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.78**
		L_{21} - L_{22}	866.21	-----	314	-1890	-1447	-687	-218	13	-23	292	0.691	0.307	1.00	Yes	0.462	0.193	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.70**
		L_{22} - L_{23}	813.45	-39.11	-93	46	-2287	-329	-2	-45	-65	128	0.649	0.348	1.00	Yes	0.434	0.217	0.66	Yes	0.037	0.272	0.31	Yes	0.037	0.334	0.38	Yes	1.00	**9.49**
		L_{23} - L_{24}	856.60	-282.77	-20	274	-2021	-547	-8	66	-47	127	0.683	0.309	1.00	Yes	0.448	0.183	0.64	Yes	0.267	0.260	0.53	Yes	0.265	0.295	0.57	Yes	1.00	**10.88**
		L_{24} - L_{25}	579.72	-415.80	82	432	-1671	106	91	-87	-81	102	0.657	0.338	1.00	Yes	0.389	0.217	0.61	Yes	0.558	0.188	0.75	Yes	0.554	0.323	0.88	Yes	1.00	**10.72**
		L_{25} - L_{26}	214.91	-573.04	54	544	-1220	273	9	77	70	70	0.243	0.247	0.50	Yes	0.140	0.148	0.29	Yes	0.768	0.154	0.93	Yes	0.764	0.235	1.00	Yes	1.00	**10.87**
		L_{26} - L_{27}	-----	-721.51	119	479	-1467	387	124	-22	-43	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.161	0.93	Yes	0.758	0.235	1.00	Yes	1.00	**10.69**
		L_{27} - L_{28}	-----	-1035.18	59	1004	-1972	738	76	144	114	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.193	0.96	Yes	0.754	0.243	1.00	Yes	1.00	**14.68**
		L_{28} - L_{29}	-----	-1209.11	181	-520	-2192	-1053	205	166	-198	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.268	1	Yes	0.723	0.218	0.95	Yes	1.00	**16.25**
		L_{29} - L_{30}	-----	-1103.91	-168	1205	-4895	5076	-419	-519	-13	138	-----	-----	-----	-----	-----	-----	-----	-----	0.560	0.298	0.86	Yes	0.555	0.443	1.00	Yes	1.00	**24.31**
		L_{30} - L_{31}	-----	-1230.20	4294	-2253	1141	-279	-195	-43	-338	-241	-----	-----	-----	-----	-----	-----	-----	-----	0.625	0.261	0.89	Yes	0.619	0.375	1.00	Yes	1.00	**17.11**
		L_{31} - L_{32}	-----	-1129.47	-76	-252	-2687	-987	86	-26	253	218	-----	-----	-----	-----	-----	-----	-----	-----	0.681	0.312	1	Yes	0.676	0.267	0.95	Yes	1.00	**18.12**
		L_{32} - L_{33}	529.74	-434.23	2866	-3997	-1934	-1993	-375	181	844	443	0.369	0.624	1.00	Yes	0.245	0.372	0.62	Yes	0.359	0.397	0.76	Yes	0.356	0.545	0.91	Yes	1.00	**43.90**
		L_{33} - L_{34}	600.95	-----	1299	-1941	-896	-847	-97	119	123	395	0.600	0.393	1.00	Yes	0.352	0.247	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**22.45**
		L_{34} - L_{35}	780.58	-----	782	-1768	-835	-667	-96	-55	122	161	0.697	0.302	1.00	Yes	0.406	0.189	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.03**
		L_{35} - L_{36}	1113.93	-----	847	-1415	-740	-1106	-294	-39	-116	259	0.779	0.219	1.00	Yes	0.525	0.137	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.00**
		L_{36} - L_{37}	1337.37	-----	465	-1886	-1341	-1032	-114	39	197	277	0.767	0.231	1.00	Yes	0.504	0.136	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.62**
		L_{37} - L_{38}	1731.29	-----	141	-1679	-2745	-1662	-421	-235	-11	168	0.733	0.267	1.00	Yes	0.487	0.157	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.10**
		L_{38} - L_{39}	1709.93	-----	-385	-74	-2899	-1162	-2	-54	4	141	0.734	0.266	1.00	Yes	0.492	0.161	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.07**
		L_{39} - L_{40}	1624.06	-----	-260	-385	-2457	-1035	-62	4	31	7	0.757	0.236	1.00	Yes	0.501	0.139	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.09**
		L_{40} - L_{41}	1271.36	-----	-419	25	-2022	13	-8	-14	-136	85	0.747	0.248	1.00	Yes	0.503	0.152	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.75**
		L_{41} - L_{42}	965.19	-----	-192	-92	-1501	-174	7	61	55	127	0.761	0.230	1.00	Yes	0.499	0.136	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.77**
		L_{42} - L_{43}	526.05	-----	-316	177	-1491	311	47	10	-100	336	0.639	0.359	1.00	Yes	0.380	0.230	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.58**
		L_{43} - L_{44}	33.34	-----	-89	-50	-3353	812	-45	-13	1642	480	0.040	0.952	1.00	Yes	0.024	0.604	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**31.76**
	Structure 3	L_0 - L_1	40.41	-195.81	1136	-2003	-43	-25	-353	-1601	0	0	0.062	0.933	1.00	Yes	0.038	0.613	0.66	Yes	0.356	0.596	0.96	Yes	0.353	0.601	0.96	Yes	1.00	**28.82**
		L_1 - L_2	389.26	-----	647	-1044	-47	-437	79	190	-429	344	0.596	0.402	1.00	Yes	0.403	0.254	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.78**
		L_2 - L_3	889.11	-----	316	-840	-377	-530	17	50	435	87	0.774	0.218	1.00	Yes	0.496	0.132	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.60**
		L_3 - L_4	1209.15	-----	468	-1398	-687	-1119	-75	102	-31	283	0.765	0.230	1.00	Yes	0.496	0.142	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.33**
		L_4 - L_5	1609.90	-----	-220	-224	-1628	-1277	-158	-122	130	142	0.787	0.207	1.00	Yes	0.505	0.121	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.29**
		L_5 - L_6	1476.07	-----	231	-2095	-1176	-1300	-241	143	-68	330	0.721	0.276	1.00	Yes	0.469	0.167	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.31**
		L_6 - L_7	1225.34	-----	-356	195	-1901	75	-1	-28	-53	105	0.721	0.271	1.00	Yes	0.467	0.165	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.90**
		L_7 - L_8	982.37	-----	-96	40	-1122	-298	-25	66	72	157	0.775	0.218	1.00	Yes	0.496	0.129	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.03**
		L_8 - L_9	567.05	-100.29	-187	311	-909	288	53	-107	-29	24	0.734	0.259	1.00	Yes	0.441	0.171	0.62	Yes	0.154	0.116	0.28	Yes	0.153	0.241	0.40	Yes	1.00	**8.01**
		L_9 - L_{10}	295.19	-480.78	-42	438	-1002	30	-22	27	16	156	0.382	0.293	0.68	Yes	0.223	0.177	0.40	Yes	0.739	0.145	0.89	Yes	0.732	0.265	1.00	Yes	1.00	**11.23**
		L_{10} - L_{11}	-----	-915.45	62	171	-1594	348	89	-136	26	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.115	0.87	Yes	0.741	0.253	1.00	Yes	1.00	**14.96**
		L_{11} - L_{12}	-----	-1168.76	88	986	-1182	1904	64	115	154	25	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.228	0.98	Yes	0.740	0.252	1.00	Yes	1.00	**18.33**
		L_{12} - L_{13}	-----	-1131.02	2072	-445	553	-24	-188	-148	-121	-123	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.268	1	Yes	0.716	0.274	1.00	Yes	1.00	**14.47**
		L_{13} - L_{14}	-----	-827.18	1496	-2015	-2063	-1070	-15	-115	-130	11	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.152	0.83	Yes	0.666	0.324	1.00	Yes	1.00	**31.82**
		L_{14} - L_{15}	685.98	-215.27	1081	-1272	-1008	-1114	-339	43	76	118	0.673	0.327	1.00	Yes	0.435	0.199	0.64	Yes	0.251	0.234	0.49	Yes	0.248	0.281	0.53	Yes	1.00	**23.63**
		L_{15} - L_{16}	444.06	-----	870	-1359	-422	-520	-187	74	-19	332	0.575	0.419	1.00	Yes	0.345	0.274	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.28**
		L_{16} - L_{17}	637.71	-138.54	237	6	-974	-476	30	-73	-22	147	0.734	0.259	1.00	Yes	0.436	0.168	0.61	Yes	0.189	0.304	0.5	Yes	0.188	0.235	0.43	Yes	1.00	**7.79**
		L_{17} - L_{18}	620.21	-34.78	40	-71	-1023	-438	15	104	119	237	0.714	0.285	1.00	Yes	0.413	0.171	0.59	Yes	0.048	0.312	0.36	Yes	0.047	0.247	0.30	Yes	1.00	**7.89**
		L_{18} - L_{19}	436.01	-----	-39	33	-957	-20	50	-75	61	167	0.667	0.323	1.00	Yes	0.407	0.218	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.61**
		L_{19} - L_{20}	36.26	-----	11	-106	-2147	929	-117	-32	1355	369	0.056	0.935	1.00	Yes	0.033	0.565	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**22.33**

Operating Loads - 2F1

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	$U_0 - L_0$			-----	-286.01	-23	47	-173	182	-96	-31	-1015	-325	-----	-----	-----	-----	-----	-----	-----	-----	0.639	0.358	1	Yes	0.605	0.233	0.84	Yes	1.00	**3.00**
		$U_1 - L_1$			18.77	-315.11	20	-14	-255	243	39	15	78	89	0.034	0.352	0.39	Yes	0.019	0.193	0.22	Yes	0.689	0.118	0.81	Yes	0.667	0.326	1.00	Yes	1.00	**7.02**
		$U_2 - L_2$			-----	-277.39	120	-77	-280	316	-309	-90	96	125	-----	-----	-----	-----	-----	-----	-----	-----	0.606	0.192	0.8	Yes	0.587	0.404	1.00	Yes	1.00	**10.31**
		$U_3 - L_3$			245.45	-234.91	385	-357	-340	351	-34	54	43	226	0.441	0.558	1.00	Yes	0.243	0.307	0.55	Yes	0.515	0.159	0.68	Yes	0.497	0.493	0.99	Yes	1.00	**14.87**
		$U_4 - L_4$			52.41	-242.45	377	-352	-124	100	155	49	-32	87	0.094	0.527	0.63	Yes	0.052	0.290	0.35	Yes	0.533	0.152	0.69	Yes	0.513	0.482	1.00	Yes	1.00	**12.97**
		$U_5 - L_5$			-----	-424.46	240	-259	17	-43	-31	-65	-83	-16	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.093	0.87	Yes	0.732	0.263	1.00	Yes	1.00	**6.67**
		$U_6 - L_6$			-----	-516.97	273	-291	35	-55	-38	21	-75	29	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.083	0.87	Yes	0.741	0.255	1.00	Yes	1.00	**6.21**
		$U_7 - L_7$			-----	-444.32	297	-317	117	-131	-36	69	-129	47	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.122	0.87	Yes	0.685	0.312	1.00	Yes	1.00	**4.16**
		$U_8 - L_8$			-----	-1270.34	497	-590	-422	502	-69	-34	-45	17	-----	-----	-----	-----	-----	-----	-----	-----	0.917	0.039	0.96	Yes	0.881	0.110	1.00	Yes	1.00	**9.90**
		$U_9 - L_9$			-----	-651.00	-164	187	-424	463	-218	-155	-247	-200	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.130	0.91	Yes	0.735	0.258	1.00	Yes	1.00	**6.35**
		$U_{10} - L_{10}$			-----	-794.16	-85	99	-398	412	-281	-190	-220	-171	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.111	0.94	Yes	0.784	0.213	1.00	Yes	1.00	**9.46**
		$U_{11} - L_{11}$			-----	-662.54	-52	153	-392	484	-72	44	0	71	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.084	0.88	Yes	0.771	0.224	1.00	Yes	1.00	**8.79**
		$U_{12} - L_{12}$			-----	-505.82	-24	31	-356	347	-172	11	-64	97	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.108	0.84	Yes	0.694	0.304	1.00	Yes	1.00	**8.05**
		$U_{13} - L_{13}$			-----	-356.93	11	5	-257	273	-76	105	-31	131	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.112	0.84	Yes	0.684	0.311	1.00	Yes	1.00	**6.32**
		$U_{14} - L_{14}$			-----	-106.01	348	-348	-587	603	-122	-49	149	192	-----	-----	-----	-----	-----	-----	-----	-----	0.237	0.248	0.49	Yes	0.224	0.770	1.00	Yes	1.00	**23.97**
		$U_{15} - L_{15}$			225.57	-315.17	248	-257	-180	171	-106	-176	-129	-134	0.406	0.379	0.79	Yes	0.223	0.209	0.44	Yes	0.706	0.169	0.88	Yes	0.667	0.329	1.00	Yes	1.00	**8.64**
		$U_{16} - L_{16}$			109.93	-321.51	237	-243	-54	37	18	-139	-79	-80	0.198	0.350	0.55	Yes	0.109	0.193	0.31	Yes	0.725	0.135	0.86	Yes	0.680	0.310	1.00	Yes	1.00	**6.89**
		$U_{17} - L_{17}$			-----	-436.13	220	-235	30	-51	-42	-98	-95	-213	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.152	0.97	Yes	0.752	0.239	1.00	Yes	1.00	**6.01**
		$U_{18} - L_{18}$			-----	-532.95	438	-445	123	-144	16	-79	-86	97	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.080	0.87	Yes	0.741	0.252	1.00	Yes	1.00	**6.31**
		$U_{19} - L_{19}$			-----	-652.57	500	-514	126	-184	354	-24	-3	352	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.097	0.92	Yes	0.760	0.238	1.00	Yes	1.00	**6.93**
		$U_{20} - L_{20}$			-----	-575.03	397	-461	159	-224	819	107	175	23	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.235	1	Yes	0.669	0.214	0.89	Yes	1.00	**4.47**
	Structure 2	$U_0 - L_0$			-----	-592.27	-115	182	-429	505	-265	-45	-1355	-230	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.289	1	Yes	0.635	0.214	0.85	Yes	1.00	**5.74**
		$U_1 - L_1$			-----	-707.27	-113	120	-562	553	35	-67	70	21	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.074	0.89	Yes	0.758	0.239	1.00	Yes	1.00	**8.54**
		$U_2 - L_2$			-----	-573.02	-84	94	-520	508	92	42	-26	81	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.086	0.86	Yes	0.730	0.266	1.00	Yes	1.00	**8.27**
		$U_3 - L_3$			-----	-488.30	-43	67	-243	251	-112	20	49	147	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.100	0.94	Yes	0.766	0.229	1.00	Yes	1.00	**7.06**
		$U_4 - L_4$			76.89	-326.65	35	-15	-239	232	-108	65	-59	118	0.138	0.339	0.48	Yes	0.076	0.187	0.27	Yes	0.741	0.101	0.85	Yes	0.691	0.305	1.00	Yes	1.00	**7.13**
		$U_5 - L_5$			210.32	-313.13	146	-134	-245	259	-111	115	-75	140	0.378	0.371	0.75	Yes	0.208	0.204	0.42	Yes	0.707	0.130	0.84	Yes	0.663	0.330	1.00	Yes	1.00	**9.45**
		$U_6 - L_6$			362.92	-237.26	234	-233	-237	235	-119	88	11	139	0.653	0.343	1.00	Yes	0.359	0.189	0.55	Yes	0.534	0.096	0.63	Yes	0.502	0.303	0.81	Yes	1.00	**11.17**
		$U_7 - L_7$			43.50	-----	599	-676	-326	335	-158	-107	-167	33	0.078	0.913	1.00	Yes	0.043	0.502	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**30.89**
		$U_8 - L_8$			-----	-463.55	370	-374	9	-32	-43	-126	-142	-104	-----	-----	-----	-----	-----	-----	-----	-----	0.672	0.114	0.79	Yes	0.668	0.327	1.00	Yes	1.00	**6.97**
		$U_9 - L_9$			-----	-691.51	592	-602	79	-113	-27	-122	-131	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.080	0.85	Yes	0.741	0.256	1.00	Yes	1.00	**9.39**
		$U_{10} - L_{10}$			-----	-798.95	548	-568	90	-136	-151	-116	-59	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.094	0.89	Yes	0.747	0.251	1.00	Yes	1.00	**9.38**
		$U_{11} - L_{11}$			-----	-816.51	505	-515	151	-181	44	3	-31	93	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.074	0.9	Yes	0.763	0.227	1.00	Yes	1.00	**8.20**
		$U_{12} - L_{12}$			-----	-879.14	534	-539	137	-163	122	97	38	-144	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.082	0.93	Yes	0.762	0.231	1.00	Yes	1.00	**8.78**
		$U_{13} - L_{13}$			-----	-752.03	565	-555	245	-244	105	74	-80	44	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.110	0.95	Yes	0.725	0.270	1.00	Yes	1.00	**6.17**
		$U_{14} - L_{14}$			-----	-1285.51	720	-688	-644	598	-57	-7	-56	182	-----	-----	-----	-----	-----	-----	-----	-----	0.940	0.051	1	Yes	0.852	0.127	0.98	Yes	1.00	**11.61**
		$U_{15} - L_{15}$			-----	-730.79	-168	169	-608	597	-82	-46	-147	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.140	0.96	Yes	0.705	0.291	1.00	Yes	1.00	**8.18**
		$U_{16} - L_{16}$			-----	-701.57	-109	111	-572	542	-256	-160	-243	-146	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.117	0.93	Yes	0.752	0.243	1.00	Yes	1.00	**8.67**
		$U_{17} - L_{17}$			-----	-636.97	-122	132	-542	536	-192	-52	-136	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.096	0.89	Yes	0.741	0.252	1.00	Yes	1.00	**7.96**
		$U_{18} - L_{18}$			-----	-575.22	-78	113	-496	507	-186	-46	-17	33	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.092	0.86	Yes	0.733	0.260	1.00	Yes	1.00	**7.88**
		$U_{19} - L_{19}$			-----	-464.64	-22	33	-316	300	-161	-9	-117	29	-----	-----	-----	-----	-----	-----	-----	-----	0.699	0.100	0.8	Yes	0.694	0.304	1.00	Yes	1.00	**7.27**
		$U_{20} - L_{20}$			41.91	-367.69	19	-11	-252	253	-154	26	-92	61	0.068	0.329	0.40	Yes	0.038	0.181	0.22	Yes	0.754	0.113	0.87	Yes	0.704	0.289	1.00	Yes	1.00	**7.25**
		$U_{21} - L_{21}$			73.06	-318.14	61	-48	-241	249	-128	29	-50	69	0.131	0.356	0.49	Yes	0.072	0.196	0.27	Yes	0.719	0.121	0.85	Yes	0.673	0.319	1.00	Yes	1.00	**7.53**
		$U_{22} - L_{22}$			118.70	-----	465	-498	-555	565	-209	-82	-72	34	0.213	0.782	1.00	Yes	0.117	0.430	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**28.98**
		$U_{23} - L_{23}$			151.31	-320.39	242	-248	-109	97	16	-84	-110	-38	0.272	0.349	0.63	Yes	0.150	0.192	0.35	Yes	0.724	0.125	0.85	Yes	0.678	0.317	1.00	Yes	1.00	**7.85**
		$U_{24} - L_{24}$			71.26	-369.12	249	-254	-41	31	-117	-98	-74	-62	0.116	0.320	0.44	Yes	0.064	0.176	0.24	Yes	0.757	0.113	0.87	Yes	0.707	0.290	1.00	Yes	1.00	**7.80**
		$U_{25} - L_{25}$			-----	-469.20	302	-298	14	-31	-106	-57	-84	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.087	0.8	Yes	0.701	0.291	1.00	Yes	1.00	**6.71**
		$U_{26} - L_{26}$			-----	-567.46	502	-528	66	-104	20	-1	-68	42	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.079	0.84	Yes	0.723	0.270	1.00	Yes	1.00	**7.25**
		$U_{27} - L_{27}$			-----	-627.89	559	-562	128	-153	-9	26	-41	-165	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.087	0.87	Yes	0.731	0.261	1.00	Yes	1.00	**7.62**
		$U_{28} - L_{28}$			-----	-707.64	556	-554	114	-142	1	61	-17	68	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.070	0.89	Yes	0.758	0.236	1.00	Yes	1.00	**7.58**
		$U_{29} - L_{29}$			-----	-715.13	641	-625	207	-213	57	55	-113	27	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.121	0.92	Yes	0.689	0.307	1.00	Yes	1.00	**7.61**
		$U_{30} - L_{30}$			-----	-1278.00	694	-686	-640	573	-121	-137	-156	92	-----	-----	-----	-----	-----	-----	-----	-----	0.935	0.065	1	Yes	0.847	0.123	0.98	Yes	1.00	**11.81**
		$U_{31} - L_{31}$			-----	-743.56	-180	176	-589	564	-117	-59	-181	-96	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.146	0.98	Yes	0.717	0.282	1.00	Yes	1.00	**8.26**
		$U_{32} - L_{32}$			-----	-887.25	-113	118	-517	507	-257	-96	-268	-118	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.126	0.98	Yes	0.769	0.222	1.00	Yes	1.00	**9.69**
		$U_{33} - L_{33}$			-----	-826.77	-134	137	-500	498	-188	-36	-6	35	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.090	0.93	Yes	0.773	0.221	1.00	Yes	1.00	**9.67**
		$U_{34} - L_{34}$			-----	-788.91	-81	111	-574	571	-220	-21	-89	72	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.091	0.88	Yes	0.738	0.254	1.00	Yes	1.00	**10.65**
		$U_{35} - L_{35}$			-----	-685.24	-65	99	-604	596	-186	77	-34	151	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.076	0.84	Yes	0.734	0.256	1.00	Yes	1.00	**10.03**
		$U_{36} - L_{36}$			-----	-468.04	-26	51	-362	366	-129	76	11	137	-----	-----	-----	-----	-----	-----	-----	-----	0.679	0.097	0.78	Yes	0.674	0.320	1.00	Yes	1.00	**7.26**
		$U_{37} - L_{37}$			46.52	-8.47	256	-274	-627	679	-133	-35	-102	90	0.084	0.907	1.00	Yes	0.046	0.499	0.55	Yes	0.019	0.255	0.28	Yes	0.018	0.868	0.89	Yes	1.00	**28.75**
		$U_{38} - L_{38}$			357.76	-139.14	151	-147	-240	243	-133	-155	-107	-93	0.643	0.355	1.00	Yes	0.354	0.195	0.55	Yes	0.313	0.126	0.44	Yes	0.294	0.310	0.61	Yes	1.00	**8.30**
		$U_{39} - L_{39}$			257.42	-317.27	238	-254	-198	185	-114	-158	-111	-108	0.463	0.371	0.84	Yes	0.255	0.204	0.46	Yes	0.717	0.170	0.89	Yes	0.671	0.325	1.00	Yes	1.00	**10.39**
		$U_{40} - L_{40}$			109.73	-337.64	219	-219	-62	36	-123	-120	-93	-79	0.197	0.316	0.52	Yes	0.109	0.174	0.29	Yes	0.766	0.129	0.9	Yes	0.714	0.280	1.00	Yes	1.00	**7.08**
		$U_{41} - L_{41}$			-----	-486.77	245	-257	27	-50	39	-38	-22	46	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.085	0.92	Yes	0.763	0.234	1.00	Yes	1.00	**6.82**
		$U_{42} - L_{42}$			-----	-578.99	502	-505	107	-117	147	-33	-87	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.091	0.87	Yes	0.738	0.258	1.00	Yes	1.00	**7.64**
		$U_{43} - L_{43}$			-----	-710.82	525	-548	144	-161	758	76	-34	-13	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.173	0.99	Yes	0.762	0.233	1.00	Yes	1.00	**7.27**
		$U_{44} - L_{44}$			-----	-637.91	478	-571	196	-244	935	159	-20	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.235	1	Yes	0.684	0.242	0.93	Yes	1.00	**5.45**
	Structure 3	$U_0 - L_0$			-----	-533.62	-103	168	-407	461	-245	-32	-1096	-144	-----	-----	-----	-----	-----	-----	-----	-----	0.705	0.285	1	Yes	0.621	0.214	0.84	Yes	1.00	**5.66**
		$U_1 - L_1$			-----	-651.45	-109	117	-514	509	4	-74	50	25	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.079	0.9	Yes	0.758	0.239	1.00	Yes	1.00	**8.67**
		$U_2 - L_2$			-----	-528.32	-92	97	-463	457	83	32	-82	58	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.081	0.86	Yes	0.735	0.262	1.00	Yes	1.00	**7.48**
		$U_3 - L_3$			-----	-434.00	-22	42	-238	244	-121	63	5	169	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.119	0.94	Yes	0.749	0.248	1.00	Yes	1.00	**6.84**
		$U_4 - L_4$			76.50	-325.50	42	-25	-235	240	-174	83	-30	178	0.138	0.358	0.50	Yes	0.076	0.197	0.28	Yes	0.734	0.106	0.84	Yes	0.689	0.306	1.00	Yes	1.00	**7.40**
		$U_5 - L_5$			231.44	-291.66	155	-152	-284	292	-153	71	-148	132	0.416	0.418	0.84	Yes	0.229	0.230	0.46	Yes	0.654	0.145	0.8	Yes	0.617	0.373	1.00	Yes	1.00	**9.44**
		$U_6 - L_6$			79.04	-170.11	483	-494	-389	387	-229	-98	-138	114	0.142	0.698	0.84	Yes	0.078	0.384	0.47	Yes	0.380	0.218	0.6	Yes	0.360	0.631	1.00	Yes	1.00	**21.33**
		$U_7 - L_7$			10.95	-370.80	233	-246	-22	9	-185	-167	-179	-139	0.018	0.329	0.35	Yes	0.010	0.181	0.20	Yes	0.750	0.143	0.9	Yes	0.710	0.281	1.00	Yes	1.00	**5.86**
		$U_8 - L_8$			-----	-515.79	334	-335	8	-14	10	-93	-163	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.115	0.86	Yes	0.708	0.286	1.00	Yes	1.00	**7.35**
		$U_9 - L_9$			-----	-660.32	391	-493	37	-103	-14	-51	-105	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.092	0.89	Yes	0.769	0.229	1.00	Yes	1.00	**8.34**
		$U_{10} - L_{10}$			-----	-778.05	401	-431	74	-100	61	102	-31	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.076	0.89	Yes	0.768	0.223	1.00	Yes	1.00	**9.27**
		$U_{11} - L_{11}$			-----	-645.39	416	-471	182	-211	91	119	-51	62	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.099	0.87	Yes	0.729	0.262	1.00	Yes	1.00	**5.15**
		$U_{12} - L_{12}$			-----	-1286.52	440	-568	-501	545	91	54	36	88	-----	-----	-----	-----	-----	-----	-----	-----	0.930	0.046	0.98	Yes	0.893	0.106	1.00	Yes	1.00	**9.55**
		$U_{13} - L_{13}$			-----	-458.34	-105	116	-274	294	-141	-95	-153	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.139	0.91	Yes	0.707	0.289	1.00	Yes	1.00	**4.55**
		$U_{14} - L_{14}$			-----	-514.10	-36	54	-296	295	-198	-133	-227	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.130	0.91	Yes	0.737	0.259	1.00	Yes	1.00	**7.50**
		$U_{15} - L_{15}$			-----	-418.87	-15	24	-260	267	-173	-48	-119	22	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.115	0.88	Yes	0.723	0.271	1.00	Yes	1.00	**7.35**
		$U_{16} - L_{16}$			-----	-168.41	146	-117	-501	480	-298	-183	53	145	-----	-----	-----	-----	-----	-----	-----	-----	0.370	0.226	0.6	Yes	0.356	0.640	1.00	Yes	1.00	**17.39**
		$U_{17} - L_{17}$			297.28	-177.58	165	-177	-296	307	-251	-199	-160	-70	0.535	0.465	1.00	Yes	0.294	0.256	0.55	Yes	0.389	0.160	0.55	Yes	0.376	0.392	0.77	Yes	1.00	**8.83**
		$U_{18} - L_{18}$			148.45	-288.52	262	-299	-156	162	86	-55	-63	-15	0.267	0.407	0.68	Yes	0.147	0.224	0.38	Yes	0.631	0.118	0.75	Yes	0.610	0.382	1.00	Yes	1.00	**9.63**
		$U_{19} - L_{19}$			9.61	-328.64	231	-234	-25	13	50	-51	-164	-85	0.017	0.347	0.37	Yes	0.010	0.191	0.21	Yes	0.718	0.140	0.86	Yes	0.695	0.299	1.00	Yes	1.00	**6.31**
		$U_{20} - L_{20}$			-----	-335.10	182	-227	47	-71	356	114	-102	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.198	0.95	Yes	0.709	0.290	1.00	Yes	1.00	**3.15**

Moment (Start) AI Operating

Operating Loads - 2F1

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

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression											
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Diagonals	Structure 1	$U_0 - L_1$			379.78	-----	11	26	-244	95	-155	45	-823	-201	0.498	0.493	1.00	Yes	0.301	0.271	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.55**
		$U_1 - L_2$			434.14	-----	11	-32	-94	-11	-333	-185	-134	-180	0.781	0.216	1.00	Yes	0.429	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.67**
		$U_2 - L_3$			372.59	-219.24	44	-23	-160	-70	85	54	-415	-391	0.670	0.325	1.00	Yes	0.369	0.178	0.55	Yes	0.505	0.364	0.87	Yes	0.464	0.204	0.67	Yes	1.00	**17.53**
		$U_3 - L_4$			-----	-362.79	45	-60	-62	-67	-209	-124	-285	-223	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.161	1	Yes	0.768	0.086	0.86	Yes	1.00	**8.36**
		$U_4 - L_4$			524.80	-----	9	-13	-180	-36	104	26	-156	-199	0.770	0.229	1.00	Yes	0.423	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.29**
		$U_5 - L_5$			690.88	-----	17	27	-266	143	158	83	34	-53	0.817	0.180	1.00	Yes	0.449	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.32**
		$U_6 - L_6$			627.85	-----	-72	99	-347	215	329	207	274	112	0.742	0.257	1.00	Yes	0.408	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.92**
		$U_6 - L_7$			655.90	-----	28	167	-113	291	295	232	309	198	0.775	0.222	1.00	Yes	0.426	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.34**
		$U_8 - L_8$			1013.14	-----	99	214	-124	344	235	237	269	278	0.810	0.189	1.00	Yes	0.502	0.106	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.29**
		$U_8 - L_{10}$			950.05	-----	-63	108	-461	210	91	113	218	141	0.759	0.233	1.00	Yes	0.470	0.130	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.80**
		$U_{10} - L_{11}$			1005.09	-----	-49	116	-286	134	9	-1	-85	-143	0.849	0.151	1.00	Yes	0.526	0.084	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.95**
		$U_{11} - L_{12}$			832.26	-----	-64	56	-285	60	-136	-103	-274	-246	0.823	0.173	1.00	Yes	0.453	0.095	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.21**
		$U_{12} - L_{13}$			625.12	-----	-46	8	-189	119	-309	-251	-336	-303	0.762	0.231	1.00	Yes	0.479	0.130	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.61**
		$U_{13} - L_{14}$			430.22	-8.96	1	-28	-101	19	-263	-286	-291	-312	0.774	0.219	1.00	Yes	0.426	0.120	0.55	Yes	0.021	0.172	0.2	Yes	0.019	0.128	0.15	Yes	1.00	**6.35**
		$U_{15} - L_{14}$			129.61	-333.85	72	-109	-93	-36	-190	-297	-261	-304	0.233	0.227	0.46	Yes	0.128	0.125	0.26	Yes	0.782	0.211	1	Yes	0.706	0.139	0.85	Yes	1.00	**8.30**
		$U_{16} - L_{15}$			420.42	-170.19	31	-64	-123	81	-176	-174	-196	-275	0.756	0.237	1.00	Yes	0.416	0.131	0.55	Yes	0.403	0.181	0.59	Yes	0.360	0.158	0.52	Yes	1.00	**7.84**
		$U_{17} - L_{16}$			540.41	-----	-11	-25	-155	92	-170	-137	-146	-207	0.792	0.205	1.00	Yes	0.436	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.08**
		$U_{18} - L_{17}$			623.43	-----	-96	59	-387	217	4	-44	-229	-155	0.737	0.261	1.00	Yes	0.405	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.70**
		$U_{19} - L_{18}$			678.85	-----	-81	60	-387	226	-134	-26	-388	-229	0.735	0.262	1.00	Yes	0.404	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.94**
		$U_{20} - L_{19}$			562.41	-----	-117	113	-445	326	-57	170	-962	35	0.609	0.386	1.00	Yes	0.335	0.212	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.49**
	Structure 2	$U_0 - L_1$			614.80	-----	-64	73	-469	361	-121	52	-1121	-262	0.608	0.385	1.00	Yes	0.335	0.212	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.09**
		$U_1 - L_2$			789.58	-----	-92	63	-410	291	36	8	-63	-163	0.781	0.215	1.00	Yes	0.430	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.91**
		$U_2 - L_3$			649.54	-----	-71	54	-328	241	-79	-176	-213	-172	0.768	0.225	1.00	Yes	0.422	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.95**
		$U_3 - L_4$			576.43	-----	-34	17	-177	123	-236	-213	-309	-271	0.768	0.226	1.00	Yes	0.423	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.92**
		$U_4 - L_5$			414.73	-90.27	21	-42	-126	77	-261	-193	-291	-249	0.746	0.245	1.00	Yes	0.410	0.135	0.55	Yes	0.223	0.178	0.41	Yes	0.191	0.161	0.36	Yes	1.00	**7.00**
		$U_5 - L_6$			401.92	-258.37	79	-100	-112	46	-326	-223	-431	-216	0.723	0.268	1.00	Yes	0.398	0.148	0.55	Yes	0.610	0.253	0.87	Yes	0.547	0.144	0.70	Yes	1.00	**9.06**
		$U_6 - L_7$			31.24	-370.15	67	-100	-57	-24	-293	-256	-313	-219	0.051	0.195	0.25	Yes	0.028	0.107	0.14	Yes	0.792	0.198	1	Yes	0.709	0.114	0.83	Yes	1.00	**6.22**
		$U_8 - L_7$			549.17	-95.20	22	-64	-250	83	-192	-275	-232	-354	0.700	0.296	1.00	Yes	0.441	0.167	0.61	Yes	0.158	0.155	0.32	Yes	0.143	0.224	0.37	Yes	1.00	**11.17**
		$U_8 - L_8$			729.78	-----	-76	11	-341	228	-93	-140	-129	-185	0.790	0.205	1.00	Yes	0.435	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.15**
		$U_{10} - L_9$			810.99	-----	-66	18	-379	196	-34	-69	-58	-144	0.802	0.197	1.00	Yes	0.441	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.26**
		$U_{11} - L_{10}$			881.82	-----	-96	68	-418	251	55	26	-45	-132	0.803	0.196	1.00	Yes	0.442	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.10**
		$U_{12} - L_{11}$			860.76	-----	-91	119	-389	325	329	183	123	3	0.784	0.210	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.18**
		$U_{13} - L_{12}$			760.54	-----	-182	174	-444	374	267	150	271	107	0.752	0.246	1.00	Yes	0.414	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.18**
		$U_{14} - L_{13}$			758.04	-----	-7	219	-275	428	250	178	283	117	0.750	0.241	1.00	Yes	0.412	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.84**
		$U_{14} - L_{15}$			643.66	-----	27	156	-222	354	168	115	133	148	0.761	0.231	1.00	Yes	0.419	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.31**
		$U_{15} - L_{16}$			629.58	-----	-101	106	-370	318	52	69	237	-35	0.744	0.252	1.00	Yes	0.409	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.51**
		$U_{16} - L_{17}$			745.05	-----	-71	105	-353	337	68	44	10	-9	0.807	0.191	1.00	Yes	0.444	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.45**
		$U_{17} - L_{18}$			680.82	-----	-59	72	-304	267	-55	-12	-107	-31	0.805	0.192	1.00	Yes	0.443	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.25**
		$U_{18} - L_{19}$			670.53	-----	-33	25	-314	234	-152	-104	-162	-93	0.793	0.207	1.00	Yes	0.436	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.78**
		$U_{19} - L_{20}$			609.70	-----	-6	-1	-199	150	-200	-125	-205	-170	0.777	0.220	1.00	Yes	0.428	0.123	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.53**
		$U_{20} - L_{21}$			432.58	-21.61	6	-14	-116	89	-177	-130	-223	-116	0.778	0.213	1.00	Yes	0.428	0.117	0.55	Yes	0.051	0.106	0.16	Yes	0.046	0.148	0.20	Yes	1.00	**6.27**
		$U_{21} - L_{22}$			406.09	-286.03	52	-84	-143	26	-277	-251	-279	-184	0.730	0.264	1.00	Yes	0.402	0.145	0.55	Yes	0.676	0.233	0.91	Yes	0.605	0.183	0.79	Yes	1.00	**10.88**
		$U_{23} - L_{22}$			259.29	-323.02	79	-100	-137	10	-119	-224	-201	-252	0.466	0.248	0.72	Yes	0.256	0.136	0.40	Yes	0.769	0.221	1	Yes	0.683	0.175	0.86	Yes	1.00	**10.90**
		$U_{24} - L_{23}$			444.76	-91.22	26	-37	-126	93	-47	-77	-65	-112	0.800	0.194	1.00	Yes	0.440	0.106	0.55	Yes	0.218	0.061	0.28	Yes	0.193	0.161	0.36	Yes	1.00	**8.14**
		$U_{25} - L_{24}$			628.59	-6.74	12	-24	-200	171	6	-43	13	-87	0.801	0.196	1.00	Yes	0.441	0.109	0.56	Yes	0.011	0.056	0.07	Yes	0.010	0.178	0.19	Yes	1.00	**8.26**
		$U_{26} - L_{25}$			659.42	-----	-5	-2	-354	229	27	11	-9	-107	0.780	0.220	1.00	Yes	0.429	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.00**
		$U_{27} - L_{26}$			653.56	-----	-49	66	-322	264	192	94	113	-6	0.773	0.217	1.00	Yes	0.425	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.93**
		$U_{28} - L_{27}$			720.99	-----	-57	97	-354	343	191	135	184	51	0.781	0.212	1.00	Yes	0.430	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.53**
		$U_{29} - L_{28}$			616.11	-----	-124	118	-404	330	216	110	189	71	0.728	0.268	1.00	Yes	0.401	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.91**
		$U_{30} - L_{29}$			634.53	-----	13	160	-220	354	220	148	220	117	0.750	0.240	1.00	Yes	0.413	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.25**
		$U_{30} - L_{31}$			775.89	-----	24	203	-287	443	138	107	117	63	0.768	0.226	1.00	Yes	0.422	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.25**
		$U_{31} - L_{32}$			781.54	-----	-134	133	-452	374	37	48	51	35	0.773	0.217	1.00	Yes	0.425	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.04**
		$U_{32} - L_{33}$			891.17	-----	-87	113	-368	319	-27	-12	-164	-34	0.812	0.179	1.00	Yes	0.446	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.15**
		$U_{33} - L_{34}$			875.80	-----	-84	130	-379	246	-71	-35	-234	-154	0.798	0.193	1.00	Yes	0.439	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.71**
		$U_{34} - L_{35}$			823.08	-----	-77	45	-307	207	-260	-213	-272	-275	0.814	0.184	1.00	Yes	0.448	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.78**
		$U_{35} - L_{36}$			710.05	-----	-79	27	-316	210	-339	-248	-383	-239	0.769	0.225	1.00	Yes	0.423	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.17**
		$U_{36} - L_{37}$			576.82	-14.32	-11	-25	-215	101	-334	-322	-305	-268	0.735	0.261	1.00	Yes	0.463	0.147	0.62	Yes	0.024	0.144	0.17	Yes	0.021	0.193	0.22	Yes	1.00	**8.79**
		$U_{38} - L_{37}$			-----	-386.24	83	-105	-44	-33	-141	-226	-189	-249	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.161	1	Yes	0.740	0.120	0.86	Yes	1.00	**5.88**
		$U_{39} - L_{38}$			286.45	-343.88	92	-120	-89	30	-188	-181	-189	-212	0.515	0.215	0.74	Yes	0.283	0.118	0.41	Yes	0.819	0.172	1	Yes	0.728	0.154	0.89	Yes	1.00	**8.70**
		$U_{40} - L_{39}$			435.71	-167.53	46	-68	-128	88	-78	-106	-115	-173	0.784	0.214	1.00	Yes	0.431	0.118	0.55	Yes	0.401	0.141	0.55	Yes	0.354	0.164	0.52	Yes	1.00	**8.10**
		$U_{41} - L_{40}$			601.35	-----	-16	-20	-181	130	-82	-61	-59	-139	0.802	0.194	1.00	Yes	0.441	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.45**
		$U_{42} - L_{41}$			641.44	-----	-74	50	-363	246	1	-3	-169	-143	0.758	0.236	1.00	Yes	0.417	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.40**
		$U_{43} - L_{42}$			787.80	-----	-94	75	-404	293	-144	-39	-137	-184	0.779	0.215	1.00	Yes	0.429	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.22**
		$U_{44} - L_{43}$			708.27	-----	-140	142	-428	367	-20	34	-645	-210	0.701	0.295	1.00	Yes	0.385	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.43**
	Structure 3	$U_0 - L_1$			582.00	-----	-70	72	-432	306	-133	48	-904	-249	0.630	0.370	1.00	Yes	0.347	0.203	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.53**
		$U_1 - L_2$			725.05	-----	-92	58	-364	253	35	12	-70	-153	0.785	0.211	1.00	Yes	0.432	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.69**
		$U_2 - L_3$			646.29	-----	-81	51	-331	224	-74	-167	-237	-255	0.764	0.233	1.00	Yes	0.420	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.80**
		$U_3 - L_4$			524.37	-----	-16	-7	-144	82	-268	-207	-323	-249	0.769	0.221	1.00	Yes	0.423	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.08**
		$U_4 - L_5$			408.08	-140.91	17	-47	-119	78	-321	-224	-370	-290	0.734	0.260	1.00	Yes	0.404	0.143	0.55	Yes	0.334	0.205	0.54	Yes	0.298	0.152	0.46	Yes	1.00	**7.25**
		$U_5 - L_6$			367.85	-305.83	61	-101	-100	-16	-368	-323	-444	-355	0.662	0.258	0.92	Yes	0.364	0.142	0.51	Yes	0.717	0.280	1	Yes	0.647	0.129	0.78	Yes	1.00	**8.78**
		$U_7 - L_6$			388.83	-177.25	36	-67	-156	-4	-142	-304	-184	-324	0.699	0.293	1.00	Yes	0.385	0.161	0.55	Yes	0.412	0.216	0.63	Yes	0.375	0.199	0.58	Yes	1.00	**11.87**
		$U_8 - L_7$			649.98	-----	-26	-13	-188	145	-122	-155	-152	-215	0.792	0.206	1.00	Yes	0.499	0.116	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.37**
		$U_8 - L_9$			808.89	-----	-52	-18	-331	35	92	-7	-127	-249	0.800	0.191	1.00	Yes	0.440	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.86**
		$U_{10} - L_9$			928.06	-----	-30	27	-351	88	392	192	74	-46	0.784	0.214	1.00	Yes	0.485	0.120	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.64**
		$U_{11} - L_{10}$			963.69	-----	-88	107	-410	190	317	209	251	102	0.770	0.223	1.00	Yes	0.477	0.125	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.51**
		$U_{12} - L_{11}$			992.51	-----	116	206	-131	345	348	314	302	165	0.793	0.198	1.00	Yes	0.491	0.111	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.60**
		$U_{12} - L_{13}$			676.78	-----	33	161	-116	279	193	163	177	180	0.800	0.194	1.00	Yes	0.440	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.25**
		$U_{13} - L_{14}$			634.27	-----	-56	96	-384	232	129	163	143	99	0.750	0.249	1.00	Yes	0.412	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.60**
		$U_{14} - L_{15}$			725.94	-----	-8	42	-205	170	52	18	-75	-116	0.858	0.138	1.00	Yes	0.472	0.076	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.29**
		$U_{15} - L_{16}$			219.10	-313.39	26	-90	-452	-125	-286	-244	-759	-605	0.321	0.635	0.96	Yes	0.177	0.349	0.53	Yes	0.588	0.386	0.98	Yes	0.541	0.458	1.00	Yes	1.00	**33.92**
		$U_{17} - L_{16}$			-----	-404.27	59	-66	-63	-65	-41	-106	-190	-220	-----	-----	-----	-----	-----	-----	-----	-----	0.924	0.070	1	Yes	0.855	0.084	0.94	Yes	1.00	**7.83**
		$U_{18} - L_{17}$			340.23	-341.18	50	-87	-141	-68	-255	-83	-333	-344	0.612	0.280	0.90	Yes	0.337	0.154	0.50	Yes	0.785	0.210	1	Yes	0.722	0.180	0.91	Yes	1.00	**14.79**
		$U_{19} - L_{18}$			406.54	-50.55	27	-48	-132	-41	-101	-104	-340	-229	0.731	0.267	1.00	Yes	0.402	0.147	0.55	Yes	0.116	0.145	0.27	Yes	0.107	0.168	0.28	Yes	1.00	**10.68**
		$U_{20} - L_{19}$			278.72	-----	19	3	-281	142	-58	44	-1176	-80	0.366	0.625	1.00	Yes	0.221	0.344	0.57	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.64**

Moment (Start) AI Operating

Operating Loads - 2F1

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) Al Operating

Operating Loads - 2F1

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			43.11	-40.29	636	-971	-171	35	-802	-2949	51	188	0.066	0.925	1.00	Yes	0.039	0.546	0.59	Yes	0.073	0.902	0.98	Yes	0.073	0.292	0.37	Yes	1.00	**21.11**
		L_1 - L_2			335.91	-----	169	-706	-280	-406	-202	387	-1255	309	0.514	0.481	1.00	Yes	0.314	0.310	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.37**
		L_2 - L_3			636.42	-157.52	-48	44	-905	-670	-187	128	-3	-255	0.732	0.260	1.00	Yes	0.424	0.155	0.58	Yes	0.215	0.305	0.52	Yes	0.213	0.219	0.44	Yes	1.00	**7.99**
		L_3 - L_4			637.18	-246.08	0	302	-669	-343	262	-210	-610	-142	0.733	0.260	1.00	Yes	0.435	0.164	0.60	Yes	0.336	0.212	0.55	Yes	0.333	0.162	0.50	Yes	1.00	**6.35**
		L_4 - L_5			53.63	-551.78	93	466	-599	362	-62	178	-6	277	0.069	0.208	0.28	Yes	0.042	0.135	0.18	Yes	0.848	0.136	0.99	Yes	0.841	0.159	1.00	Yes	1.00	**4.88**
		L_5 - L_6			-----	-765.67	87	520	-253	377	163	-233	62	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.893	0.105	1	Yes	0.883	0.115	1.00	Yes	1.00	**4.92**
		L_6 - L_7			-----	-1122.10	144	9	-379	101	-158	366	-146	31	-----	-----	-----	-----	-----	-----	-----	-----	0.913	0.079	1	Yes	0.903	0.060	0.97	Yes	1.00	**6.60**
		L_7 - L_8			-----	-1184.87	0	624	-348	1526	556	249	-266	91	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.233	1	Yes	0.750	0.202	0.96	Yes	1.00	**7.98**
		L_8 - L_9			-----	-1296.13	1042	-83	665	-40	409	383	181	344	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.163	1	Yes	0.822	0.138	0.97	Yes	1.00	**5.55**
		L_9 - L_{10}			-----	-1044.74	857	-1006	-142	-214	813	836	-530	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.100	0.96	Yes	0.841	0.158	1.00	Yes	1.00	**15.56**
		L_{10} - L_{11}			97.11	-580.51	416	-100	4	-413	-249	58	141	-174	0.126	0.154	0.28	Yes	0.073	0.092	0.17	Yes	0.892	0.080	0.98	Yes	0.884	0.110	1.00	Yes	1.00	**9.34**
		L_{11} - L_{12}			487.96	-----	379	-803	54	-545	-156	468	-842	309	0.632	0.360	1.00	Yes	0.379	0.230	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.25**
		L_{12} - L_{13}			1079.24	-----	72	-149	-619	-712	-163	119	75	-78	0.852	0.145	1.00	Yes	0.545	0.087	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.28**
		L_{13} - L_{14}			1302.64	-----	266	-1193	-238	-1005	-6	270	-770	204	0.766	0.228	1.00	Yes	0.496	0.141	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.18**
		L_{14} - L_{15}			1556.18	-----	-492	-172	-1840	-409	-175	79	-116	146	0.760	0.234	1.00	Yes	0.494	0.141	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.07**
		L_{15} - L_{16}			1627.60	-----	-282	-447	-1112	-1022	-22	-187	-940	-162	0.795	0.200	1.00	Yes	0.510	0.120	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.21**
		L_{16} - L_{17}			1205.86	-----	-417	54	-1451	107	-126	173	188	-268	0.762	0.237	1.00	Yes	0.495	0.146	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.27**
		L_{17} - L_{18}			830.12	-----	-228	-12	-801	-58	82	-116	-899	-214	0.723	0.269	1.00	Yes	0.463	0.165	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.90**
		L_{18} - L_{19}			360.58	-11.31	-258	230	-1117	612	-163	119	44	515	0.552	0.442	1.00	Yes	0.373	0.279	0.66	Yes	0.021	0.398	0.42	Yes	0.020	0.335	0.36	Yes	1.00	**14.11**
		L_{19} - L_{20}			24.56	-308.34	-199	79	-949	550	148	33	46	10	0.042	0.344	0.39	Yes	0.026	0.206	0.24	Yes	0.618	0.380	1	Yes	0.613	0.310	0.93	Yes	1.00	**13.89**
	Structure 2	L_0 - L_1			68.81	-171.82	670	-2293	-65	-124	-692	-2402	37	130	0.084	0.861	0.95	Yes	0.050	0.538	0.59	Yes	0.247	0.744	1	Yes	0.246	0.467	0.72	Yes	1.00	**25.79**
		L_1 - L_2			477.25	-----	642	-1378	-70	-612	-54	845	-494	274	0.580	0.419	1.00	Yes	0.345	0.265	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**16.03**
		L_2 - L_3			999.30	-----	193	-761	-504	-786	-25	175	901	104	0.788	0.209	1.00	Yes	0.516	0.130	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.20**
		L_3 - L_4			1253.34	-----	164	-1532	-404	-1419	69	756	-1049	330	0.736	0.263	1.00	Yes	0.496	0.166	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.69**
		L_4 - L_5			1755.76	-----	-438	-416	-1573	-1306	-71	165	413	66	0.819	0.177	1.00	Yes	0.542	0.106	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.03**
		L_5 - L_6			1818.44	-----	-223	-503	-1200	-1902	185	-84	-707	-132	0.780	0.213	1.00	Yes	0.524	0.131	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.28**
		L_6 - L_7			1859.28	-----	-580	-212	-2209	-1247	-152	218	-111	-239	0.787	0.209	1.00	Yes	0.523	0.122	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.22**
		L_7 - L_8			1321.86	-----	-316	363	-1607	-447	204	-114	-687	-227	0.758	0.234	1.00	Yes	0.498	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.00**
		L_8 - L_9			1113.16	-420.86	-85	619	-1418	377	-67	174	-6	-267	0.779	0.216	1.00	Yes	0.524	0.135	0.66	Yes	0.349	0.260	0.61	Yes	0.346	0.191	0.54	Yes	1.00	**9.22**
		L_9 - L_{10}			536.16	-706.75	-155	803	-1162	337	134	-108	-351	-277	0.479	0.228	0.71	Yes	0.279	0.141	0.42	Yes	0.747	0.246	1	Yes	0.742	0.186	0.93	Yes	1.00	**9.03**
		L_{10} - L_{11}			-----	-733.19	-66	532	-758	523	-87	90	-45	14	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.082	0.95	Yes	0.861	0.133	1.00	Yes	1.00	**5.76**
		L_{11} - L_{12}			-----	-1045.32	-121	1009	-688	906	77	-348	93	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.108	0.98	Yes	0.857	0.137	1.00	Yes	1.00	**6.42**
		L_{12} - L_{13}			-----	-1500.91	159	-734	-769	-600	-385	137	78	67	-----	-----	-----	-----	-----	-----	-----	-----	0.913	0.087	1	Yes	0.905	0.077	0.99	Yes	1.00	**9.21**
		L_{13} - L_{14}			-----	-1438.04	-453	1429	-1595	3110	678	555	-588	-215	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.226	0.96	Yes	0.724	0.272	1.00	Yes	1.00	**9.38**
		L_{14} - L_{15}			-----	-1542.14	2551	-784	1543	-479	293	296	390	385	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.174	0.96	Yes	0.776	0.223	1.00	Yes	1.00	**7.00**
		L_{15} - L_{16}			-----	-1317.57	-162	-40	-1405	-451	449	-300	-561	-144	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.197	1	Yes	0.788	0.140	0.93	Yes	1.00	**12.59**
		L_{16} - L_{17}			-----	-1179.52	1090	-313	501	-439	-332	-46	48	-345	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.127	1	Yes	0.859	0.134	1.00	Yes	1.00	**8.44**
		L_{17} - L_{18}			-----	-708.72	959	-1212	-10	-745	44	1064	-1634	256	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.243	1	Yes	0.744	0.194	0.94	Yes	1.00	**15.72**
		L_{18} - L_{19}			115.21	-656.05	622	-10	-54	-596	-190	71	209	-51	0.131	0.152	0.29	Yes	0.075	0.090	0.17	Yes	0.880	0.103	0.99	Yes	0.874	0.120	1.00	Yes	1.00	**8.33**
		L_{19} - L_{20}			554.35	-561.59	482	95	-230	-1044	148	-166	-1091	237	0.628	0.368	1.00	Yes	0.371	0.228	0.60	Yes	0.753	0.233	0.99	Yes	0.748	0.201	0.95	Yes	1.00	**11.34**
		L_{20} - L_{21}			945.27	-417.50	385	-87	-1242	-1043	-183	70	537	107	0.754	0.239	1.00	Yes	0.494	0.145	0.64	Yes	0.394	0.144	0.54	Yes	0.392	0.181	0.58	Yes	1.00	**12.61**
		L_{21} - L_{22}			857.04	-142.11	100	-298	-966	-1545	135	-101	-780	-5	0.683	0.309	1.00	Yes	0.457	0.196	0.66	Yes	0.134	0.247	0.39	Yes	0.133	0.225	0.36	Yes	1.00	**9.29**
		L_{22} - L_{23}			804.46	-26.97	-242	-41	-2085	-567	-113	163	-316	-469	0.642	0.355	1.00	Yes	0.429	0.223	0.66	Yes	0.025	0.383	0.41	Yes	0.025	0.304	0.33	Yes	1.00	**9.09**
		L_{23} - L_{24}			844.80	-320.21	-65	443	-1442	-377	163	-140	-1022	160	0.674	0.321	1.00	Yes	0.442	0.196	0.64	Yes	0.303	0.179	0.49	Yes	0.300	0.211	0.52	Yes	1.00	**13.66**
		L_{24} - L_{25}			524.95	-501.94	165	497	-1197	78	-107	151	231	-1123	0.595	0.403	1.00	Yes	0.352	0.250	0.61	Yes	0.673	0.187	0.87	Yes	0.669	0.231	0.90	Yes	1.00	**13.39**
		L_{25} - L_{26}			44.70	-628.47	24	716	-784	245	101	-170	-814	-27	0.051	0.276	0.33	Yes	0.029	0.161	0.20	Yes	0.843	0.154	1	Yes	0.838	0.151	0.99	Yes	1.00	**10.91**
		L_{26} - L_{27}			-----	-816.70	182	488	-846	658	-53	222	474	187	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.108	0.98	Yes	0.858	0.135	1.00	Yes	1.00	**10.72**
		L_{27} - L_{28}			-----	-1169.18	2	1162	-768	1055	225	-84	-275	-115	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.117	0.98	Yes	0.852	0.143	1.00	Yes	1.00	**10.69**
		L_{28} - L_{29}			-----	-1487.14	294	-773	-697	-905	-119	693	-96	28	-----	-----	-----	-----	-----	-----	-----	-----	0.897	0.102	1	Yes	0.890	0.090	0.98	Yes	1.00	**10.95**
		L_{29} - L_{30}			-----	-1449.17	-586	1480	-1619	3072	645	630	-284	10	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.213	0.95	Yes	0.729	0.268	1.00	Yes	1.00	**8.61**
		L_{30} - L_{31}			-----	-1544.91	2461	-792	1717	-525	251	241	502	404	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.179	0.97	Yes	0.777	0.215	1.00	Yes	1.00	**5.48**
		L_{31} - L_{32}			-----	-1352.44	-81	-316	-1224	-598	549	-288	-343	-64	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.179	1	Yes	0.809	0.122	0.94	Yes	1.00	**12.35**
		L_{32} - L_{33}			-----	-1061.11	939	-417	487	-430	-125	56	178	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.877	0.095	0.98	Yes	0.870	0.128	1.00	Yes	1.00	**6.93**
		L_{33} - L_{34}			308.36	-86.46	1224	-2116	3	-1101	121	2335	-2114	906	0.308	0.684	1.00	Yes	0.181	0.419	0.60	Yes	0.102	0.447	0.55	Yes	0.102	0.370	0.48	Yes	1.00	**26.21**
		L_{34} - L_{35}			745.30	-773.46	853	-92	-393	-1113	-222	95	743	-660	0.665	0.267	0.94	Yes	0.387	0.164	0.56	Yes	0.818	0.114	0.94	Yes	0.812	0.178	1.00	Yes	1.00	**17.15**
		L_{35} - L_{36}			944.34	-----	565	-1232	-196	-1073	-133	713	-1754	283	0.661	0.331	1.00	Yes	0.445	0.213	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.98**
		L_{36} - L_{37}			1369.74	-----	289	-267	-934	-1479	-202	153	328	-522	0.785	0.206	1.00	Yes	0.516	0.123	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.66**
		L_{37} - L_{38}			1782.32	-----	-163	-670	-1563	-1843	61	-185	-1231	55	0.754	0.238	1.00	Yes	0.501	0.144	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.17**
		L_{38} - L_{39}			1845.19	-----	-573	-231	-2114	-671	-118	181	217	-189	0.792	0.201	1.00	Yes	0.531	0.122	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.02**
		L_{39} - L_{40}			1719.53	-----	-401	-444	-1525	-1161	110	-171	-732	93	0.802	0.193	1.00	Yes	0.531	0.117	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.01**
		L_{40} - L_{41}			1247.69	-----	-473	33	-1790	-67	-51	265	142	-482	0.740	0.252	1.00	Yes	0.500	0.162	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.96**
		L_{41} - L_{42}			889.36	-----	-258	-50	-1233	42	141	-73	-946	12	0.710	0.284	1.00	Yes	0.467	0.169	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.25**
		L_{42} - L_{43}			496.87	-----	-293	217	-1324	511	101	331	744	298	0.603	0.392	1.00	Yes	0.359	0.248	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.50**
		L_{43} - L_{44}			-----	-308.94	-244	33	-1703	684	409	119	880	257	-----	-----	-----	-----	-----	-----	-----	-----	0.444	0.553	1	Yes	0.441	0.347	0.79	Yes	1.00	**24.45**
	Structure 3	L_0 - L_1			17.79	-362.18	541	-1135	24	-155	-202	-917	26	118	0.027	0.531	0.56	Yes	0.017	0.349	0.37	Yes	0.658	0.337	1	Yes	0.652	0.341	1.00	Yes	1.00	**14.30**
		L_1 - L_2			272.88	-----	668	-1173	63	-469	76	1074	-559	365	0.418	0.575	1.00	Yes	0.282	0.369	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.47**
		L_2 - L_3			897.99	-----	233	-513	-281	-655	70	156	672	-171	0.782	0.212	1.00	Yes	0.501	0.130	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.87**
		L_3 - L_4			1141.86	-----	244	-1205	-323	-1064	47	818	-1041	486	0.722	0.270	1.00	Yes	0.468	0.168	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.16**
		L_4 - L_5			1607.55	-----	-374	-258	-1431	-957	-33	229	369	-486	0.785	0.207	1.00	Yes	0.504	0.122	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.49**
		L_5 - L_6			1609.17	-----	-142	-509	-690	-1210	243	-46	-862	185	0.786	0.206	1.00	Yes	0.511	0.127	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.64**
		L_6 - L_7			1310.40	-----	-499	258	-1458	181	-51	230	-28	-333	0.771	0.229	1.00	Yes	0.499	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.21**
		L_7 - L_8			1007.62	-----	-106	163	-634	-275	122	-148	-745	-228	0.795	0.199	1.00	Yes	0.509	0.122	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.13**
		L_8 - L_9			523.95	-401.90	-176	415	-1076	331	-112	176	28	56	0.679	0.316	1.00	Yes	0.407	0.208	0.62	Yes	0.618	0.344	0.97	Yes	0.612	0.285	0.90	Yes	1.00	**10.81**
		L_9 - L_{10}			-----	-548.34	-109	437	-586	318	143	-160	78	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.095	0.94	Yes	0.835	0.155	1.00	Yes	1.00	**7.23**
		L_{10} - L_{11}			-----	-1053.76	102	49	-671	322	-260	20	78	-131	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.139	1	Yes	0.848	0.106	0.96	Yes	1.00	**10.87**
		L_{11} - L_{12}			-----	-1196.18	16	862	-471	1439	670	126	-961	-398	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.231	1	Yes	0.758	0.190	0.95	Yes	1.00	**11.71**
		L_{12} - L_{13}			-----	-1294.53	1264	-51	707	-22	179	158	-68	209	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.167	1	Yes	0.820	0.167	0.99	Yes	1.00	**6.75**
		L_{13} - L_{14}			-----	-1027.43	661	-1080	-316	-113	381	658	-683	-13	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.089	0.93	Yes	0.827	0.170	1.00	Yes	1.00	**14.07**
		L_{14} - L_{15}			-----	-738.61	489	65	97	-220	-238	90	47	-251	-----	-----	-----	-----	-----	-----	-----	-----	0.875	0.121	1	Yes	0.866	0.111	0.98	Yes	1.00	**6.45**
		L_{15} - L_{16}			386.53	-----	516	-891	-76	-591	-71	533	-1472	607	0.501	0.498	1.00	Yes	0.300	0.314	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.21**
		L_{16} - L_{17}			669.83	-160.29	273	-61	-683	-440	-167	153	-6	363	0.771	0.223	1.00	Yes	0.458	0.142	0.61	Yes	0.219	0.124	0.35	Yes	0.217	0.165	0.39	Yes	1.00	**6.61**
		L_{17} - L_{18}			654.02	-36.97	7	-109	-787	-580	93	-105	-325	-26	0.752	0.242	1.00	Yes	0.435	0.145	0.58	Yes	0.051	0.270	0.33	Yes	0.050	0.190	0.25	Yes	1.00	**6.70**
		L_{18} - L_{19}			430.50	-----	-58	-8	-786	19	-83	222	67	476	0.659	0.338	1.00	Yes	0.402	0.223	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.89**
		L_{19} - L_{20}			20.98	-101.19	97	-208	-2007	1517	160	43	-1059	-287	0.032	0.830	0.87	Yes	0.019	0.503	0.53	Yes	0.184	0.810	1	Yes	0.182	0.602	0.79	Yes	1.00	**48.85**

Moment (Start) AI Operating

Operating Loads - 2F1

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																		
South Truss - Verticals	Structure 1	$U_0 - L_0$	-----	-266.48	-9	54	-113	158	178	57	-1121	-360	-----	-----	-----	-----	-----	-----	-----	-----	0.595	0.402	1	Yes	0.564	0.202	0.77	Yes	1.00	**2.95**
		$U_1 - L_1$	12.68	-281.90	23	-15	-215	203	533	191	508	288	0.023	0.429	0.46	Yes	0.013	0.236	0.25	Yes	0.616	0.383	1	Yes	0.596	0.275	0.88	Yes	1.00	**5.63**
		$U_2 - L_2$	118.25	-252.62	108	-119	-187	233	694	182	796	358	0.213	0.529	0.75	Yes	0.117	0.291	0.41	Yes	0.552	0.444	1	Yes	0.535	0.298	0.84	Yes	1.00	**9.85**
		$U_3 - L_3$	184.62	-95.01	229	-226	-84	97	-1292	-697	-645	-122	0.332	0.667	1.00	Yes	0.183	0.367	0.55	Yes	0.208	0.396	0.61	Yes	0.201	0.293	0.50	Yes	1.00	**12.99**
		$U_4 - L_4$	-----	-217.40	324	-319	14	-24	-1195	-726	896	167	-----	-----	-----	-----	-----	-----	-----	-----	0.478	0.513	1	Yes	0.460	0.414	0.88	Yes	1.00	**17.81**
		$U_5 - L_5$	-----	-372.41	161	-178	74	-88	286	277	884	323	-----	-----	-----	-----	-----	-----	-----	-----	0.674	0.320	1	Yes	0.642	0.181	0.83	Yes	1.00	**4.56**
		$U_6 - L_6$	-----	-414.80	169	-173	84	-76	805	408	1235	602	-----	-----	-----	-----	-----	-----	-----	-----	0.628	0.366	1	Yes	0.595	0.151	0.75	Yes	1.00	**4.38**
		$U_7 - L_7$	-----	-371.62	213	-230	119	-134	614	175	1018	233	-----	-----	-----	-----	-----	-----	-----	-----	0.621	0.374	1	Yes	0.573	0.226	0.80	Yes	1.00	**3.79**
		$U_8 - L_8$	-----	-1202.43	248	-303	-401	476	680	79	-288	-331	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.122	1	Yes	0.837	0.089	0.93	Yes	1.00	**8.61**
		$U_9 - L_9$	-----	-560.47	-233	263	-351	393	539	218	270	167	-----	-----	-----	-----	-----	-----	-----	-----	0.668	0.329	1	Yes	0.633	0.219	0.86	Yes	1.00	**2.72**
		$U_{10} - L_{10}$	-----	-656.74	-159	159	-302	318	610	301	624	352	-----	-----	-----	-----	-----	-----	-----	-----	0.680	0.313	1	Yes	0.648	0.165	0.82	Yes	1.00	**4.56**
		$U_{11} - L_{11}$	-----	-657.06	-163	236	-376	483	328	185	663	533	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.205	1	Yes	0.765	0.224	0.99	Yes	1.00	**6.18**
		$U_{12} - L_{12}$	-----	-431.38	-130	136	-254	262	490	331	436	340	-----	-----	-----	-----	-----	-----	-----	-----	0.623	0.369	1	Yes	0.592	0.224	0.82	Yes	1.00	**4.27**
		$U_{13} - L_{13}$	-----	-284.24	-75	96	-163	187	263	132	641	348	-----	-----	-----	-----	-----	-----	-----	-----	0.575	0.423	1	Yes	0.545	0.213	0.76	Yes	1.00	**3.49**
		$U_{14} - L_{14}$	-----	-119.57	58	-57	-206	223	-249	-326	1459	64	-----	-----	-----	-----	-----	-----	-----	-----	0.267	0.733	1	Yes	0.253	0.285	0.54	Yes	1.00	**12.47**
		$U_{15} - L_{15}$	68.91	-308.62	241	-261	-56	50	-761	-135	321	-191	0.124	0.554	0.68	Yes	0.068	0.305	0.38	Yes	0.692	0.306	1	Yes	0.653	0.334	0.99	Yes	1.00	**12.96**
		$U_{16} - L_{16}$	-----	-314.49	195	-202	44	-53	99	13	549	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.283	1	Yes	0.665	0.259	0.93	Yes	1.00	**6.63**
		$U_{17} - L_{17}$	-----	-400.07	192	-211	82	-96	473	224	495	205	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.245	1	Yes	0.690	0.214	0.91	Yes	1.00	**4.00**
		$U_{18} - L_{18}$	-----	-531.16	434	-447	177	-183	798	186	687	179	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.204	0.99	Yes	0.739	0.253	1.00	Yes	1.00	**5.74**
		$U_{19} - L_{19}$	-----	-641.82	477	-497	184	-198	829	161	606	124	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.193	1	Yes	0.747	0.231	0.98	Yes	1.00	**6.68**
		$U_{20} - L_{20}$	-----	-502.60	376	-443	233	-286	446	59	517	68	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.265	1	Yes	0.643	0.234	0.88	Yes	1.00	**3.50**
	Structure 2	$U_0 - L_0$	-----	-623.90	-160	276	-307	455	-2	0	-1007	-171	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.251	1	Yes	0.669	0.193	0.87	Yes	1.00	**3.43**
		$U_1 - L_1$	-----	-613.23	-224	231	-465	468	622	163	236	142	-----	-----	-----	-----	-----	-----	-----	-----	0.701	0.296	1	Yes	0.657	0.199	0.86	Yes	1.00	**4.23**
		$U_2 - L_2$	-----	-497.19	-172	187	-371	389	615	292	606	406	-----	-----	-----	-----	-----	-----	-----	-----	0.666	0.333	1	Yes	0.634	0.199	0.84	Yes	1.00	**3.80**
		$U_3 - L_3$	-----	-378.41	-86	97	-177	192	535	270	504	346	-----	-----	-----	-----	-----	-----	-----	-----	0.644	0.353	1	Yes	0.593	0.175	0.77	Yes	1.00	**3.02**
		$U_4 - L_4$	-----	-321.47	-7	18	-191	200	560	221	-533	38	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.262	1	Yes	0.680	0.256	0.94	Yes	1.00	**8.01**
		$U_5 - L_5$	124.91	-314.62	129	-103	-204	232	-413	-396	-506	49	0.225	0.443	0.67	Yes	0.124	0.244	0.37	Yes	0.711	0.281	1	Yes	0.666	0.296	0.97	Yes	1.00	**14.88**
		$U_6 - L_6$	342.53	-86.10	195	-199	-126	130	-313	-384	-432	-53	0.616	0.379	1.00	Yes	0.339	0.209	0.55	Yes	0.194	0.169	0.37	Yes	0.182	0.254	0.44	Yes	1.00	**14.95**
		$U_7 - L_7$	-----	-229.49	280	-313	17	-22	-948	-511	-81	-300	-----	-----	-----	-----	-----	-----	-----	-----	0.518	0.478	1	Yes	0.486	0.399	0.89	Yes	1.00	**17.75**
		$U_8 - L_8$	-----	-492.79	305	-327	152	-173	120	30	435	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.181	0.9	Yes	0.710	0.286	1.00	Yes	1.00	**6.28**
		$U_9 - L_9$	-----	-722.67	515	-528	268	-292	-453	-9	618	-75	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.159	0.97	Yes	0.774	0.224	1.00	Yes	1.00	**7.76**
		$U_{10} - L_{10}$	-----	-750.71	434	-452	239	-242	92	232	1026	589	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.255	1	Yes	0.702	0.199	0.91	Yes	1.00	**7.02**
		$U_{11} - L_{11}$	-----	-724.88	395	-398	235	-230	601	473	1045	582	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.263	1	Yes	0.678	0.175	0.86	Yes	1.00	**5.76**
		$U_{12} - L_{12}$	-----	-710.11	356	-347	199	-179	1107	474	1252	522	-----	-----	-----	-----	-----	-----	-----	-----	0.681	0.317	1	Yes	0.616	0.153	0.77	Yes	1.00	**5.47**
		$U_{13} - L_{13}$	-----	-602.04	422	-414	255	-253	515	179	990	257	-----	-----	-----	-----	-----	-----	-----	-----	0.671	0.325	1	Yes	0.580	0.202	0.79	Yes	1.00	**5.27**
		$U_{14} - L_{14}$	-----	-1160.94	429	-413	-488	452	910	56	-107	-273	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.144	1	Yes	0.770	0.086	0.86	Yes	1.00	**10.03**
		$U_{15} - L_{15}$	-----	-523.59	-274	273	-478	466	668	78	420	79	-----	-----	-----	-----	-----	-----	-----	-----	0.584	0.411	1	Yes	0.505	0.229	0.74	Yes	1.00	**4.00**
		$U_{16} - L_{16}$	-----	-613.73	-203	189	-429	418	674	191	243	180	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.290	1	Yes	0.658	0.182	0.84	Yes	1.00	**4.64**
		$U_{17} - L_{17}$	-----	-534.10	-217	217	-438	438	597	200	532	267	-----	-----	-----	-----	-----	-----	-----	-----	0.659	0.333	1	Yes	0.622	0.203	0.83	Yes	1.00	**4.34**
		$U_{18} - L_{18}$	-----	-489.59	-183	189	-396	411	618	223	527	252	-----	-----	-----	-----	-----	-----	-----	-----	0.652	0.338	1	Yes	0.624	0.210	0.84	Yes	1.00	**4.24**
		$U_{19} - L_{19}$	-----	-433.44	-103	104	-255	255	512	201	106	210	-----	-----	-----	-----	-----	-----	-----	-----	0.652	0.342	1	Yes	0.647	0.245	0.90	Yes	1.00	**4.71**
		$U_{20} - L_{20}$	-----	-298.78	-59	64	-167	176	515	192	487	225	-----	-----	-----	-----	-----	-----	-----	-----	0.613	0.385	1	Yes	0.572	0.201	0.78	Yes	1.00	**4.36**
		$U_{21} - L_{21}$	-----	-257.51	-5	15	-183	199	210	-30	488	246	-----	-----	-----	-----	-----	-----	-----	-----	0.582	0.417	1	Yes	0.545	0.254	0.80	Yes	1.00	**6.55**
		$U_{22} - L_{22}$	-----	-291.30	278	-295	-195	202	303	-259	-370	-516	-----	-----	-----	-----	-----	-----	-----	-----	0.656	0.249	0.91	Yes	0.616	0.377	1.00	Yes	1.00	**23.59**
		$U_{23} - L_{23}$	-----	-339.26	202	-217	14	-25	33	64	222	-187	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.174	0.95	Yes	0.718	0.277	1.00	Yes	1.00	**7.91**
		$U_{24} - L_{24}$	-----	-355.50	185	-192	62	-66	381	152	548	190	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.264	1	Yes	0.681	0.219	0.90	Yes	1.00	**5.37**
		$U_{25} - L_{25}$	-----	-493.18	263	-262	104	-105	103	160	536	201	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.199	0.95	Yes	0.736	0.254	1.00	Yes	1.00	**5.93**
		$U_{26} - L_{26}$	-----	-596.62	432	-451	174	-180	346	277	625	263	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.198	1	Yes	0.760	0.231	1.00	Yes	1.00	**6.72**
		$U_{27} - L_{27}$	-----	-645.70	470	-475	208	-212	155	345	680	276	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.203	1	Yes	0.752	0.221	0.98	Yes	1.00	**6.96**
		$U_{28} - L_{28}$	-----	-606.07	379	-363	171	-146	846	362	1297	421	-----	-----	-----	-----	-----	-----	-----	-----	0.700	0.294	1	Yes	0.650	0.161	0.82	Yes	1.00	**5.87**
		$U_{29} - L_{29}$	-----	-598.24	469	-462	196	-201	520	124	987	163	-----	-----	-----	-----	-----	-----	-----	-----	0.667	0.331	1	Yes	0.577	0.225	0.81	Yes	1.00	**7.99**
		$U_{30} - L_{30}$	-----	-1123.97	229	-243	-488	429	544	-187	-87	-147	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.139	1	Yes	0.773	0.090	0.87	Yes	1.00	**8.17**
		$U_{31} - L_{31}$	-----	-563.78	-320	313	-436	425	448	101	223	107	-----	-----	-----	-----	-----	-----	-----	-----	0.628	0.371	1	Yes	0.544	0.209	0.76	Yes	1.00	**2.53**
		$U_{32} - L_{32}$	-----	-714.96	-231	213	-387	380	558	202	445	248	-----	-----	-----	-----	-----	-----	-----	-----	0.686	0.305	1	Yes	0.620	0.166	0.79	Yes	1.00	**3.95**
		$U_{33} - L_{33}$	-----	-682.58	-250	242	-412	409	476	242	402	319	-----	-----	-----	-----	-----	-----	-----	-----	0.687	0.307	1	Yes	0.638	0.182	0.83	Yes	1.00	**4.26**
		$U_{34} - L_{34}$	-----	-693.66	-239	250	-438	456	553	326	16	208	-----	-----	-----	-----	-----	-----	-----	-----	0.685	0.312	1	Yes	0.649	0.201	0.85	Yes	1.00	**5.41**
		$U_{35} - L_{35}$	-----	-615.83	-258	279	-494	511	385	219	546	423	-----	-----	-----	-----	-----	-----	-----	-----	0.685	0.311	1	Yes	0.660	0.217	0.88	Yes	1.00	**5.82**
		$U_{36} - L_{36}$	-----	-421.63	-140	162	-287	309	319	165	513	280	-----	-----	-----	-----	-----	-----	-----	-----	0.611	0.389	1	Yes	0.607	0.270	0.88	Yes	1.00	**4.68**
		$U_{37} - L_{37}$	-----	-221.38	-3	7	-275	310	-120	-187	-246	-260	-----	-----	-----	-----	-----	-----	-----	-----	0.500	0.494	1	Yes	0.468	0.396	0.87	Yes	1.00	**15.35**
		$U_{38} - L_{38}$	294.33	-149.85	162	-171	-184	188	-781	-255	-255	-563	0.529	0.466	1.00	Yes	0.291	0.257	0.55	Yes	0.337	0.246	0.59	Yes	0.317	0.240	0.56	Yes	1.00	**15.92**
		$U_{39} - L_{39}$	70.23	-318.27	231	-253	-77	54	-288	-40	252	-527	0.126	0.476	0.61	Yes	0.069	0.262	0.34	Yes	0.719	0.255	0.98	Yes	0.673	0.324	1.00	Yes	1.00	**13.44**
		$U_{40} - L_{40}$	-----	-318.23	251	-254	40	-48	541	202	592	172	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.268	0.99	Yes	0.673	0.325	1.00	Yes	1.00	**7.78**
		$U_{41} - L_{41}$	-----	-448.04	227	-240	89	-98	656	259	579	196	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.228	1	Yes	0.703	0.219	0.93	Yes	1.00	**4.88**
		$U_{42} - L_{42}$	-----	-567.91	490	-497	175	-184	1060	317	678	169	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.236	1	Yes	0.724	0.254	0.98	Yes	1.00	**6.42**
		$U_{43} - L_{43}$	-----	-669.18	505	-524	199	-218	1188	419	635	179	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.228	1	Yes	0.717	0.222	0.94	Yes	1.00	**6.77**
		$U_{44} - L_{44}$	-----	-642.05	460	-581	255	-321	839	142	643	109	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.226	1	Yes	0.688	0.246	0.94	Yes	1.00	**5.52**
	Structure 3	$U_0 - L_0$	-----	-551.28	-135	234	-259	386	103	13	-449	-59	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.209	1	Yes	0.691	0.198	0.89	Yes	1.00	**3.01**
		$U_1 - L_1$	-----	-524.16	-227	225	-419	411	614	155	605	207	-----	-----	-----	-----	-----	-----	-----	-----	0.654	0.337	1	Yes	0.610	0.195	0.81	Yes	1.00	**3.39**
		$U_2 - L_2$	-----	-449.31	-174	186	-320	339	644	318	371	351	-----	-----	-----	-----	-----	-----	-----	-----	0.658	0.337	1	Yes	0.625	0.192	0.82	Yes	1.00	**3.17**
		$U_3 - L_3$	-----	-337.46	-78	93	-151	169	546	276	529	344	-----	-----	-----	-----	-----	-----	-----	-----	0.631	0.360	1	Yes	0.582	0.172	0.76	Yes	1.00	**2.61**
		$U_4 - L_4$	-----	-250.36	-42	49	-174	184	557	221	545	294	-----	-----	-----	-----	-----	-----	-----	-----	0.564	0.431	1	Yes	0.530	0.236	0.77	Yes	1.00	**4.54**
		$U_5 - L_5$	78.06	-251.86	59	-50	-186	206	20	-56	-1165	-44	0.140	0.600	0.75	Yes	0.077	0.330	0.41	Yes	0.565	0.429	1	Yes	0.533	0.263	0.80	Yes	1.00	**11.25**
		$U_6 - L_6$	-----	-211.73	325	-348	-114	117	-1107	-728	-531	-714	-----	-----	-----	-----	-----	-----	-----	-----	0.472	0.522	1	Yes	0.448	0.444	0.90	Yes	1.00	**23.15**
		$U_7 - L_7$	-----	-374.80	202	-223	79	-97	-97	15	456	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.237	1	Yes	0.718	0.254	0.98	Yes	1.00	**5.30**
		$U_8 - L_8$	-----	-497.30	270	-270	140	-140	126	112	824	371	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.274	1	Yes	0.682	0.231	0.92	Yes	1.00	**5.83**
		$U_9 - L_9$	-----	-613.46	309	-388	166	-224	614	446	1047	423	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.257	1	Yes	0.714	0.180	0.90	Yes	1.00	**6.03**
		$U_{10} - L_{10}$	-----	-667.62	275	-282	152	-159	1216	682	1238	470	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.300	1	Yes	0.659	0.146	0.81	Yes	1.00	**5.97**
		$U_{11} - L_{11}$	-----	-562.68	315	-358	209	-243	709	394	1271	557	-----	-----	-----	-----	-----	-----	-----	-----	0.671	0.322	1	Yes	0.636	0.199	0.84	Yes	1.00	**4.01**
		$U_{12} - L_{12}$	-----	-1239.90	341	-457	-422	451	729	204	-404	-241	-----	-----	-----	-----	-----	-----	-----	-----	0.895	0.103	1	Yes	0.860	0.085	0.95	Yes	1.00	**9.95**
		$U_{13} - L_{13}$	-----	-356.10	-156	170	-232	248	579	116	445	115	-----	-----	-----	-----	-----	-----	-----	-----	0.595	0.396	1	Yes	0.549	0.244	0.80	Yes	1.00	**1.92**
		$U_{14} - L_{14}$	-----	-441.51	-99	94	-197	206	664	242	194	126	-----	-----	-----	-----	-----	-----	-----	-----	0.669	0.327	1	Yes	0.633	0.180	0.82	Yes	1.00	**3.64**
		$U_{15} - L_{15}$	-----	-344.89	-80	90	-163	182	519	248	633	354	-----	-----	-----	-----	-----	-----	-----	-----	0.624	0.372	1	Yes	0.595	0.185	0.79	Yes	1.00	**3.91**
		$U_{16} - L_{16}$	-----	-106.53	-41	48	-240	240	-46	-106	1485	382	-----	-----	-----	-----	-----	-----	-----	-----	0.234	0.756	1	Yes	0.225	0.307	0.54	Yes	1.00	**8.56**
		$U_{17} - L_{17}$	242.30	-244.76	225	-264	-268	259	747	271	-569	-659	0.436	0.558	1.00	Yes	0.240	0.307	0.55	Yes	0.536	0.275	0.82	Yes	0.518	0.342	0.87	Yes	1.00	**21.68**
		$U_{18} - L_{18}$	94.81	-256.82	218	-257	-100	107	1266	306	429	144	0.171	0.695	0.87	Yes	0.094	0.382	0.48	Yes	0.561	0.432	1	Yes	0.543	0.328	0.88	Yes	1.00	**10.55**
		$U_{19} - L_{19}$	-----	-301.05	204	-214	-15	0	897	430	457	245	-----	-----	-----	-----	-----	-----	-----	-----	0.658	0.337	1	Yes	0.637	0.274	0.92	Yes	1.00	**6.37**
		$U_{20} - L_{20}$	-----	-305.94	203	-250	77	-92	737	236	645	207	-----	-----	-----	-----	-----	-----	-----	-----	0.683	0.311	1	Yes	0.647	0.320	0.97	Yes	1.00	**4.19**

Operating Loads - 2F1

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	$U_0 - L_1$	470.65	-----	34	5	-128	52	-310	-117	-924	-318	0.617	0.382	1.00	Yes	0.373	0.210	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.27**
		$U_1 - L_2$	367.14	-126.90	18	-18	-112	1	406	237	-678	-588	0.660	0.339	1.00	Yes	0.363	0.186	0.55	Yes	0.291	0.309	0.61	Yes	0.269	0.143	0.42	Yes					1.00	**7.80**
		$U_2 - L_3$	36.59	-265.82	52	-32	-99	-54	494	261	-1001	-482	0.066	0.416	0.49	Yes	0.036	0.229	0.27	Yes	0.612	0.385	1	Yes	0.562	0.126	0.69	Yes					1.00	**11.53**
		$U_3 - L_4$	-----	-298.80	33	-14	-37	-76	406	219	-838	-283	-----	-----	-----	-----	-----	-----	-----	-----	0.683	0.308	1	Yes	0.632	0.097	0.73	Yes					1.00	**8.10**
		$U_4 - L_4$	539.20	-----	-7	69	-135	18	-153	98	-298	250	0.791	0.207	1.00	Yes	0.435	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**10.11**
		$U_4 - L_5$	700.02	-----	-12	136	-169	176	-351	123	-347	338	0.828	0.164	1.00	Yes	0.455	0.090	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**8.83**
		$U_5 - L_6$	614.85	-----	-51	103	-222	197	-796	-158	-296	122	0.727	0.271	1.00	Yes	0.400	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.30**
		$U_6 - L_7$	691.91	-----	65	193	-70	255	-67	-127	-172	182	0.818	0.179	1.00	Yes	0.450	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**9.14**
		$U_8 - L_9$	987.31	-----	49	217	-75	297	603	252	86	-494	0.789	0.209	1.00	Yes	0.489	0.118	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.34**
		$U_9 - L_{10}$	991.14	-----	-112	145	-264	188	645	310	-461	-661	0.792	0.202	1.00	Yes	0.491	0.115	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.20**
		$U_{10} - L_{11}$	902.17	-----	-66	141	-263	150	313	56	-662	-835	0.762	0.231	1.00	Yes	0.472	0.132	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.99**
		$U_{11} - L_{12}$	785.42	-----	-90	81	-264	73	179	-30	-97	-611	0.777	0.214	1.00	Yes	0.427	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.53**
		$U_{12} - L_{13}$	574.72	-----	-86	62	-174	98	79	-52	-366	-740	0.701	0.297	1.00	Yes	0.441	0.170	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.73**
		$U_{13} - L_{14}$	371.45	-----	-29	-17	-87	3	-202	-196	-744	-629	0.668	0.326	1.00	Yes	0.367	0.179	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.87**
		$U_{15} - L_{14}$	304.36	-294.40	34	-119	-120	-33	432	-184	80	261	0.547	0.278	0.83	Yes	0.301	0.153	0.46	Yes	0.690	0.305	1	Yes	0.623	0.153	0.78	Yes					1.00	**16.91**
		$U_{16} - L_{15}$	322.76	-5.62	-24	2	-147	83	-279	-129	-788	74	0.581	0.416	1.00	Yes	0.319	0.229	0.55	Yes	0.013	0.411	0.43	Yes	0.012	0.187	0.20	Yes					1.00	**9.02**
		$U_{17} - L_{16}$	460.95	-----	-50	26	-153	100	-300	-101	-696	-160	0.676	0.317	1.00	Yes	0.372	0.174	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.95**
		$U_{18} - L_{17}$	579.26	-----	-134	92	-320	229	-396	-98	-713	-15	0.685	0.311	1.00	Yes	0.377	0.171	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.88**
		$U_{19} - L_{18}$	647.09	-----	-136	99	-312	239	-462	-199	-832	-348	0.701	0.297	1.00	Yes	0.385	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.82**
		$U_{20} - L_{19}$	664.32	-----	-179	143	-396	321	-277	-139	-449	-101	0.720	0.276	1.00	Yes	0.396	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.57**
	Structure 2	$U_0 - L_1$	669.89	-----	-94	135	-284	305	-262	-56	-1252	-399	0.663	0.328	1.00	Yes	0.365	0.181	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.72**
		$U_1 - L_2$	716.99	-----	-163	117	-397	286	158	-19	-412	-699	0.709	0.289	1.00	Yes	0.390	0.159	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.44**
		$U_2 - L_3$	600.26	-----	-118	88	-319	250	138	-18	-100	-559	0.710	0.282	1.00	Yes	0.390	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.22**
		$U_3 - L_4$	515.32	-----	-55	28	-195	122	157	0	-105	-631	0.687	0.310	1.00	Yes	0.378	0.171	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.51**
		$U_4 - L_5$	357.21	-74.45	0	-15	-156	97	229	31	6	-538	0.642	0.356	1.00	Yes	0.353	0.196	0.55	Yes	0.184	0.285	0.47	Yes	0.158	0.200	0.36	Yes					1.00	**10.34**
		$U_5 - L_6$	333.30	-263.28	64	-118	-102	21	-765	-181	-441	-854	0.599	0.398	1.00	Yes	0.330	0.219	0.55	Yes	0.622	0.231	0.86	Yes	0.557	0.150	0.71	Yes					1.00	**15.41**
		$U_6 - L_7$	-----	-379.58	52	-105	-23	-51	-231	-81	75	-547	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.182	1	Yes	0.727	0.119	0.85	Yes					1.00	**7.45**
		$U_8 - L_7$	616.20	-----	-81	41	-179	118	-76	-140	-265	212	0.786	0.214	1.00	Yes	0.495	0.121	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.98**
		$U_8 - L_9$	717.73	-----	-162	151	-330	240	-306	-95	-197	90	0.777	0.219	1.00	Yes	0.428	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.74**
		$U_{10} - L_9$	812.51	-----	-126	161	-326	236	-168	12	-284	268	0.804	0.194	1.00	Yes	0.442	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.04**
		$U_{11} - L_{10}$	897.57	-----	-131	199	-308	262	-229	56	-200	328	0.818	0.175	1.00	Yes	0.450	0.096	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.19**
		$U_{12} - L_{11}$	866.53	-----	-137	189	-297	305	-520	39	-562	270	0.789	0.206	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.57**
		$U_{13} - L_{12}$	755.92	-----	-175	174	-365	334	-500	-34	-481	64	0.748	0.244	1.00	Yes	0.411	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.76**
		$U_{14} - L_{13}$	804.98	-----	35	221	-212	379	57	-92	-158	48	0.796	0.199	1.00	Yes	0.438	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**10.40**
		$U_{14} - L_{15}$	580.35	-----	-15	169	-187	336	650	226	206	-233	0.686	0.308	1.00	Yes	0.377	0.170	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.81**
		$U_{15} - L_{16}$	568.14	-----	-172	168	-389	349	574	171	375	-368	0.672	0.324	1.00	Yes	0.369	0.178	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.49**
		$U_{16} - L_{17}$	695.66	-----	-124	159	-298	300	437	152	-101	-520	0.753	0.239	1.00	Yes	0.414	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.52**
		$U_{17} - L_{18}$	635.57	-----	-112	128	-285	268	357	87	-36	-449	0.751	0.242	1.00	Yes	0.413	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.22**
		$U_{18} - L_{19}$	599.17	-----	-85	99	-272	230	286	73	-7	-716	0.708	0.284	1.00	Yes	0.390	0.156	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.71**
		$U_{19} - L_{20}$	559.41	-----	-43	57	-168	118	296	89	-458	-638	0.713	0.280	1.00	Yes	0.392	0.161	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.44**
		$U_{20} - L_{21}$	380.22	-----	-17	15	-119	89	229	62	-72	-551	0.684	0.311	1.00	Yes	0.376	0.171	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**9.02**
		$U_{21} - L_{22}$	333.48	-175.78	18	-72	-110	8	-348	-58	-177	-874	0.600	0.393	1.00	Yes	0.330	0.216	0.55	Yes	0.415	0.295	0.71	Yes	0.372	0.140	0.52	Yes					1.00	**12.77**
		$U_{22} - L_{22}$	415.68	-74.47	10	-16	-130	38	-294	-106	-56	249	0.748	0.251	1.00	Yes	0.411	0.138	0.55	Yes	0.177	0.167	0.35	Yes	0.158	0.166	0.33	Yes					1.00	**13.85**
		$U_{24} - L_{23}$	423.79	-----	-21	20	-123	102	-254	-63	-217	180	0.762	0.231	1.00	Yes	0.419	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**8.48**
		$U_{25} - L_{24}$	597.48	-----	-43	51	-192	174	-298	-80	-197	72	0.762	0.232	1.00	Yes	0.419	0.131	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**8.98**
		$U_{26} - L_{25}$	680.77	-----	-80	109	-248	231	-227	-54	-115	299	0.805	0.195	1.00	Yes	0.443	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.21**
		$U_{27} - L_{26}$	666.46	-----	-104	148	-250	255	-355	78	-309	213	0.788	0.209	1.00	Yes	0.433	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.32**
		$U_{28} - L_{27}$	698.00	-----	-104	158	-264	300	-482	15	-510	182	0.756	0.238	1.00	Yes	0.416	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.55**
		$U_{29} - L_{28}$	620.31	-----	-110	119	-307	286	-503	-44	-323	201	0.733	0.265	1.00	Yes	0.403	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.60**
		$U_{30} - L_{29}$	657.99	-----	52	175	-160	314	63	-84	-170	235	0.778	0.220	1.00	Yes	0.428	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**10.83**
		$U_{30} - L_{31}$	719.38	-----	-59	239	-256	426	585	197	138	-442	0.712	0.285	1.00	Yes	0.391	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.90**
		$U_{31} - L_{32}$	744.11	-----	-234	218	-388	332	531	155	-127	-394	0.736	0.259	1.00	Yes	0.405	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.93**
		$U_{32} - L_{33}$	865.04	-----	-159	208	-309	301	490	151	-77	-552	0.788	0.207	1.00	Yes	0.433	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.98**
		$U_{33} - L_{34}$	820.61	-----	-147	174	-321	252	323	65	-342	-804	0.748	0.246	1.00	Yes	0.411	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.27**
		$U_{34} - L_{35}$	753.56	-----	-135	147	-307	212	150	-11	-305	-703	0.746	0.248	1.00	Yes	0.410	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.34**
		$U_{35} - L_{36}$	676.27	-----	-158	134	-312	212	150	11	-360	-652	0.732	0.267	1.00	Yes	0.403	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.45**
		$U_{36} - L_{37}$	502.94	-----	-76	28	-180	103	-369	-234	-82	-930	0.641	0.351	1.00	Yes	0.404	0.202	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**8.18**
		$U_{38} - L_{37}$	-----	-372.79	51	-101	-37	-39	-12	-220	-276	84	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.186	1	Yes	0.714	0.115	0.83	Yes					1.00	**9.06**
		$U_{39} - L_{38}$	431.24	-231.98	65	-112	-131	52	28	-42	-187	197	0.776	0.224	1.00	Yes	0.427	0.123	0.55	Yes	0.553	0.201	0.76	Yes	0.491	0.167	0.66	Yes					1.00	**16.73**
		$U_{40} - L_{39}$	349.78	-13.81	-14	-2	-139	93	-365	-102	-655	12	0.629	0.367	1.00	Yes	0.346	0.202	0.55	Yes	0.033	0.370	0.41	Yes	0.029	0.177	0.21	Yes					1.00	**8.37**
		$U_{41} - L_{40}$	519.56	-----	-60	33	-197	132	-405	-173	-592	-51	0.693	0.304	1.00	Yes	0.381	0.167	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.11**
		$U_{42} - L_{41}$	594.04	-----	-127	95	-311	247	-411	-166	-643	-58	0.702	0.293	1.00	Yes	0.386	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.43**
		$U_{43} - L_{42}$	735.64	-----	-142	108	-366	296	-399	-206	-642	-193	0.728	0.266	1.00	Yes	0.400	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.73**
		$U_{44} - L_{43}$	789.62	-----	-172	160	-382	373	-197	-47	-253	5	0.781	0.215	1.00	Yes	0.430	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.69**
	Structure 3	$U_0 - L_1$	648.07	-----	-75	107	-267	264	-208	-43	-960	-432	0.702	0.295	1.00	Yes	0.386	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.49**
		$U_1 - L_2$	680.31	-----	-160	109	-306	208	163	-42	-209	-621	0.737	0.259	1.00	Yes	0.405	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.99**
		$U_2 - L_3$	597.20	-----	-123	84	-281	198	137	-24	-531	-731	0.706	0.292	1.00	Yes	0.388	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.91**
		$U_3 - L_4$	516.22	-----	-41	19	-123	74	154	-24	-256	-489	0.757	0.239	1.00	Yes	0.416	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.42**
		$U_4 - L_5$	325.86	-26.80	-17	-2	-148	79	174	-5	164	-754	0.586	0.407	1.00	Yes	0.322	0.224	0.55	Yes	0.064	0.262	0.33	Yes	0.057	0.189	0.25	Yes					1.00	**9.13**
		$U_5 - L_6$	198.42	-287.34	36	-116	-98	-55	-510	-202	-1175	-1059	0.357	0.489	0.85	Yes	0.196	0.269	0.47	Yes	0.673	0.324	1	Yes	0.608	0.149	0.76	Yes					1.00	**15.69**
		$U_7 - L_6$	437.43	-----	-23	-24	-111	18	-35	-84	106	241	0.787	0.211	1.00	Yes	0.433	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**10.15**
		$U_8 - L_7$	647.70	-----	-86	73	-176	136	-287	-107	-236	34	0.790	0.210	1.00	Yes	0.497	0.118	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.91**
		$U_8 - L_9$	796.23	-----	-81	97	-262	100	-181	13	-556	14	0.788	0.205	1.00	Yes	0.433	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.21**
		$U_{10} - L_9$	957.22	-----	-53	162	-259	167	-107	86	-503	355	0.809	0.186	1.00	Yes	0.501	0.105	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**9.19**
		$U_{11} - L_{10}$	964.35	-----	-80	124	-245	195	-896	-235	-14	366	0.771	0.223	1.00	Yes	0.478	0.127	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**9.20**
		$U_{12} - L_{11}$	1014.87	-----	116	239	-62	290	105	-1	13	407	0.811	0.181	1.00	Yes	0.503	0.102	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**10.60**
		$U_{13} - L_{12}$	608.90	-----	19	172	-69	246	770	318	211	-257	0.720	0.280	1.00	Yes	0.396	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.07**
		$U_{13} - L_{14}$	619.04	-----	-99	132	-238	192	681	285	71	-270	0.732	0.259	1.00	Yes	0.403	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.77**
		$U_{14} - L_{15}$	651.89	-----	-29	156	-218	184	544	235	-148	-529	0.771	0.223	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.30**
		$U_{15} - L_{16}$	507.33	-----	-11	72	-116	7	394	191	-579	-582	0.744	0.254	1.00	Yes	0.409	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**8.26**
		$U_{17} - L_{16}$	-----	-372.93	62	-7	-87	-126	-138	70	-117	-158	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.141	1	Yes	0.789	0.161	0.95	Yes					1.00	**15.35**
		$U_{18} - L_{17}$	113.46	-256.52	29	-28	-116	-52	-226	-75	-727	-65	0.204	0.359	0.57	Yes	0.112	0.197	0.31	Yes	0.590	0.409	1	Yes	0.543	0.148	0.70	Yes					1.00	**12.63**
		$U_{19} - L_{18}$	370.70	-108.99	10	-17	-99	10	-219	-125	-710	-478	0.667	0.332	1.00	Yes	0.367	0.182	0.55	Yes	0.250	0.361	0.62	Yes	0.231	0.126	0.36	Yes					1.00	**9.39**
		$U_{20} - L_{19}$	537.27	-----	-19	4	-134	73	165	73	-547	-87	0.705	0.294	1.00	Yes	0.426	0.162	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**8.97**

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 2F1 — Fy = 33.0 ksi — Vehicle Load Factors: DL Factor: 1.30, LL Factor: 1.30 — Pedestrian Load Factors: DL Factor: 1.30

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

E = 29000.0 ksi

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

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

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, 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	-71.60	-2.91	-43.71			0.90	1.24	-3.24	-48.66	0.00	0.00	Vehicle	Vehicle	-----	-156.34	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	-----	-----	10.15	10.15
		U_2 - U_3	-90.76	16.79	-79.31			0.90	1.24	18.69	-88.29	0.00	0.00	Vehicle	Vehicle	-----	-232.76	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	5.37	5.37
		U_3 - U_4	-61.05	24.93	-86.53			0.90	1.24	27.76	-96.33	0.00	0.00	Vehicle	Vehicle	-----	-204.60	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	5.23	5.23
		U_4 - U_5	10.82	32.66	-76.86			0.90	1.24	36.35	-85.57	0.00	0.00	Vehicle	Vehicle	61.32	-97.18	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	18.16	18.16	6.73	6.73
		U_5 - U_6	12.98	32.83	-53.74			0.90	1.24	36.55	-59.83	0.00	0.00	Vehicle	Vehicle	64.39	-60.90	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	18.01	18.01	9.67	9.67
		U_6 - U_7	121.44	-43.39	-42.54			0.90	1.24	-47.36	-48.30	0.00	0.00	Vehicle	Vehicle	96.31	-----	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	41.99	-27.66			0.90	1.24	46.75	-30.79	0.00	0.00	Vehicle	Vehicle	385.15	-----	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	-----	-----	11.87	11.87	-----	-----
		U_8 - U_9	376.85	-3.21	0.12			0.90	1.24	0.14	-3.58	0.00	0.00	Vehicle	Vehicle	490.08	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	5399.20	5399.20	-----	-----
		U_9 - U_{10}	319.70	1.98	-14.12			0.90	1.20	2.13	-15.23	0.00	0.00	Vehicle	Vehicle	418.38	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	290.75	290.75	-----	-----
		U_{10} - U_{11}	128.80	42.51	-31.71			0.90	1.20	45.84	-34.19	0.00	0.00	Vehicle	Vehicle	227.03	-----	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	-----	-----	12.66	12.66	-----	-----
		U_{11} - U_{12}	-70.81	38.04	-59.78			0.90	1.20	41.01	-64.45	0.00	0.00	Vehicle	Vehicle	-----	-175.85	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	-----	-----	8.17	8.17
		U_{12} - U_{13}	-252.85	33.98	-82.32			0.90	1.20	36.64	-88.75	0.00	0.00	Vehicle	Vehicle	-----	-444.08	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	6.31	6.31
		U_{13} - U_{14}	-391.81	29.33	-98.04			0.90	1.20	31.62	-105.70	0.00	0.00	Vehicle	Vehicle	-----	-646.76	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	-----	-----	7.06	7.06
		U_{14} - U_{15}	-482.83	24.62	-113.99			0.90	1.20	26.54	-122.91	0.00	0.00	Vehicle	Vehicle	-----	-787.46	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.87	6.87
		U_{15} - U_{16}	-484.28	24.53	-98.69			0.90	1.20	26.44	-106.40	0.00	0.00	Vehicle	Vehicle	-----	-767.89	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	-----	-----	7.92	7.92
		U_{16} - U_{17}	-501.86	10.18	-102.20			0.90	1.20	10.97	-110.20	0.00	0.00	Vehicle	Vehicle	-----	-795.67	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	7.49	7.49
		U_{17} - U_{18}	-467.82	-37.40	-75.65			0.90	1.20	-40.32	-81.57	0.00	0.00	Vehicle	Vehicle	-----	-714.20	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	10.54	10.54
		U_{18} - U_{19}	-368.70	-73.38	-57.86			0.90	1.20	-62.38	-79.12	0.00	0.00	Vehicle	Vehicle	-----	-582.17	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	-----	-----	7.61	7.61
		U_{19} - U_{20}	-251.42	-3.82	-37.04			0.90	1.20	-4.11	-39.93	0.00	0.00	Vehicle	Vehicle	-----	-378.76	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	10.67	10.67
		U_{20} - U_{21}	-117.77	-20.38	-2.95			0.90	1.20	-3.18	-21.97	0.00	0.00	Vehicle	Vehicle	-----	-181.65	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	25.48	25.48
	Structure 2	U_1 - U_1	-118.16	3.22	-26.86			0.90	1.18	3.43	-28.60	0.00	0.00	Vehicle	Vehicle	-----	-190.78	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	-----	-----	18.51	18.51
		U_1 - U_2	-239.45	7.38	-56.23			0.90	1.18	7.86	-59.87	0.00	0.00	Vehicle	Vehicle	-----	-389.11	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	-----	-----	9.22	9.22
		U_2 - U_3	-350.29	12.31	-83.75			0.90	1.18	13.11	-89.17	0.00	0.00	Vehicle	Vehicle	-----	-571.30	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	-----	-----	8.15	8.15
		U_3 - U_4	-448.96	11.26	-101.64			0.90	1.18	11.99	-108.22	0.00	0.00	Vehicle	Vehicle	-----	-724.33	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	-----	-----	8.25	8.25
		U_4 - U_5	-483.05	26.38	-117.31			0.90	1.18	28.07	-118.95	0.00	0.00	Vehicle	Vehicle	-----	-782.80	5.50	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	8.44	8.44
		U_5 - U_6	-485.65	30.92	-122.88			0.90	1.18	32.92	-130.83	0.00	0.00	Vehicle	Vehicle	-----	-801.42	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	-----	-----	7.65	7.65
		U_6 - U_7	-428.66	36.61	-115.52			0.90	1.18	38.98	-122.99	0.00	0.00	Vehicle	Vehicle	-----	-717.15	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	-----	-----	7.42	7.42
		U_7 - U_8	-428.18	36.70	-105.22			0.90	1.18	39.08	-112.02	0.00	0.00	Vehicle	Vehicle	-----	-702.26	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	8.15	8.15
		U_8 - U_9	-335.25	42.07	-82.49			0.90	1.18	44.79	-87.82	0.00	0.00	Vehicle	Vehicle	-----	-550.00	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	-----	-----	9.00	9.00
		U_9 - U_{10}	-200.15	45.48	-70.55			0.90	1.18	48.43	-75.11	0.00	0.00	Vehicle	Vehicle	-----	-357.85	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	-----	-----	9.13	9.13
		U_{10} - U_{11}	-52.03	48.25	-57.14			0.90	1.18	51.37	-60.84	0.00	0.00	Vehicle	Vehicle	-----	-146.73	6.88	35.88	28.9950	1183.88	131.71	10.6302	5.5957	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	-----	-----	11.79	11.79
		U_{11} - U_{12}	107.09	-26.29	-28.19			0.90	1.18	-27.99	-30.02	0.00	0.00	Vehicle	Vehicle	102.82	-----	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}	259.37	45.34	-15.60			0.90	1.18	48.27	-16.61	0.00	0.00	Vehicle	Vehicle	399.94	-----	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	-----	-----	18.22	18.22	-----	-----
		U_{13} - U_{14}	391.99	-3.62	-0.77			0.90	1.18	-0.82	-3.86	0.00	0.00	Vehicle	Vehicle	508.52	-----	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	0.87	7.96			0.90	1.17	0.92	-8.38	0.00	0.00	Vehicle	Vehicle	572.41	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	1227.58	1227.58	-----	-----
		U_{15} - U_{16}	369.68	44.01	-19.53			0.90	1.17	46.30	-20.55	0.00	0.00	Vehicle	Vehicle	540.77	-----	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	-----	-----	19.50	19.50	-----	-----
		U_{16} - U_{17}	271.42	43.02	-29.71			0.90	1.17	45.27	-31.26	0.00	0.00	Vehicle	Vehicle	411.69	-----	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	-----	-----	17.07	17.07	-----	-----
		U_{17} - U_{18}	171.80	40.58	-49.93			0.90	1.17	42.69	-52.53	0.00	0.00	Vehicle	Vehicle	278.84	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	13.92	13.92	-----	-----
		U_{18} - U_{19}	72.84	37.39	-65.23			0.90	1.17	39.33	-68.63	0.00	0.00	Vehicle	Vehicle	145.82	-----	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	17.63	17.63	-----	-----
		U_{19} - U_{20}	-8.04	33.32	-78.33			0.90	1.17	35.05	-82.41	0.00	0.00	Vehicle	Vehicle	35.11	-117.59	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	23.63	23.63	8.31	8.31
		U_{20} - U_{21}	-60.07	15.59	-92.78			0.90	1.17	16.40	-97.62	0.00	0.00	Vehicle	Vehicle	-----	-204.99	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.96	7.96
		U_{21} - U_{22}	-82.15	21.65	-95.43			0.90	1.17	22.78	-100.40	0.00	0.00	Vehicle	Vehicle	-----	-237.32	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.52	7.52
		U_{22} - U_{23}	-82.37	22.31	-87.05			0.90	1.17	23.47	-91.58	0.00	0.00	Vehicle	Vehicle	-----	-226.15	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	-----	-----	8.24	8.24
		U_{23} - U_{24}	-65.94	27.69	-74.33			0.90	1.17	29.14	-78.20	0.00	0.00	Vehicle	Vehicle	-----	-187.37	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	9.86	9.86
		U_{24} - U_{25}	-61.98	33.03	-70.86			0.90	1.17	34.75	-74.55	0.00	0.00	Vehicle	Vehicle	21.79	-120.29	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	24.12	24.12	9.05	9.05
		U_{25} - U_{26}	54.95	-40.57	-48.73			0.90	1.17	-42.69	-51.27	0.00	0.00	Vehicle	Vehicle	15.94	-----	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_{26} - U_{27}	135.89	-32.14	-39.64			0.90	1.17	-33.81	-41.70	0.00	0.00	Vehicle	Vehicle	132.70	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U_{27} - U_{28}	216.69	-12.11	-28.53			0.90	1.17	-12.75	-30.02	0.00	0.00	Vehicle	Vehicle	265.13	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{28} - U_{29}	293.53	26.38	-17.31			0.90	1.17	27.75	-18.21	0.00	0.00	Vehicle	Vehicle	417.67	-----	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	-----	-----	35.27	35.27	-----	-----
		U_{29} - U_{30}	357.86	1.26	-10.85			0.90	1.17	1.32	-11.42	0.00	0.00	Vehicle	Vehicle	466.94	-----	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	-----	-----	912.27	912.27	-----	-----
		U_{30} - U_{31}	339.12	10.20	-7.17			0.90	1.18	10.86	-7.63	0.00	0.00	Vehicle	Vehicle	454.98	-----	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	-----	-----	112.79	112.79	-----	-----
		U_{31} - U_{32}	251.34	48.04	-17.00			0.90	1.18	51.14	-18.10	0.00	0.00	Vehicle	Vehicle	393.22	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 2F1 — 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 - Lower Chord	Structure 1	L$_0$- L$_1$	4.73	-0.95	-0.93			0.90	1.24	-1.03	-1.06	0.00	0.00	Vehicle	Vehicle	4.80	-----	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	-9.43	38.65			0.90	1.24	43.03	-10.50	0.00	0.00	Vehicle	Vehicle	152.38	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**9.96**	**9.96**	-----	-----
		L$_2$ - L$_3$	97.64	-17.88	61.74			0.90	1.24	68.74	-19.91	0.00	0.00	Vehicle	Vehicle	216.29	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**8.31**	**8.31**	-----	-----
		L$_3$ - L$_4$	66.79	-25.98	72.32			0.90	1.24	80.51	-28.92	0.00	0.00	Vehicle	Vehicle	191.49	-----	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	-----	-----	**7.48**	**7.48**	-----	-----
		L$_4$ - L$_5$	-108.59	26.03	58.72			0.90	1.24	65.37	28.98	0.00	0.00	Vehicle	Vehicle	-----	-103.50	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	-----	-----	-----	-----
		L$_5$ - L$_6$	-237.42	42.33	37.30			0.90	1.24	41.53	-47.13	0.00	0.00	Vehicle	Vehicle	-----	-369.92	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	-----	-----	**8.96**	**8.96**
		L$_6$ - L$_7$	-362.38	-13.22	7.81			0.90	1.24	8.70	-14.71	0.00	0.00	Vehicle	Vehicle	-----	-490.22	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	-----	-----	**39.60**	**39.60**
		L$_7$ - L$_8$	-478.62	-36.37	-0.35			0.90	1.20	-0.39	-40.50	0.00	0.00	Vehicle	Vehicle	-----	-674.85	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	-----	-----	**17.80**	**17.80**
		L$_8$ - L$_9$	-476.97	-40.07	-21.10			0.90	1.20	-22.74	-43.21	0.00	0.00	Vehicle	Vehicle	-----	-676.23	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**16.72**	**16.72**
		L$_9$ - L$_{10}$	-301.47	-42.32	1.51			0.90	1.20	1.63	-45.63	0.00	0.00	Vehicle	Vehicle	-----	-451.23	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**14.11**	**14.11**
		L$_{10}$ - L$_{11}$	-104.56	-37.73	10.34			0.90	1.20	11.15	-40.68	0.00	0.00	Vehicle	Vehicle	-----	-188.80	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**9.73**	**9.73**
		L$_{11}$ - L$_{12}$	96.98	-33.69	38.49			0.90	1.20	41.50	-36.33	0.00	0.00	Vehicle	Vehicle	180.02	-----	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	-----	-----	**11.98**	**11.98**	-----	-----
		L$_{12}$ - L$_{13}$	268.60	-29.20	62.72			0.90	1.20	67.63	-31.48	0.00	0.00	Vehicle	Vehicle	437.10	-----	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	-----	-----	**10.44**	**10.44**	-----	-----
		L$_{13}$ - L$_{14}$	405.49	-24.57	69.85			0.90	1.20	75.31	-26.49	0.00	0.00	Vehicle	Vehicle	625.04	-----	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	-----	-----	**11.98**	**11.98**	-----	-----
		L$_{14}$ - L$_{15}$	502.59	54.10	95.56			0.90	1.20	103.03	58.33	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	-----	-----	**10.40**	**10.40**	-----	-----
		L$_{15}$ - L$_{16}$	469.06	-10.71	79.20			0.90	1.20	85.39	-11.55	0.00	0.00	Vehicle	Vehicle	720.79	-----	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	-----	-----	**12.95**	**12.95**	-----	-----
		L$_{16}$ - L$_{17}$	365.26	39.80	61.95			0.90	1.20	66.79	42.91	0.00	0.00	Vehicle	Vehicle	561.67	-----	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	-----	-----	**12.75**	**12.75**	-----	-----
		L$_{17}$ - L$_{18}$	248.52	18.22	40.73			0.90	1.20	43.92	19.64	0.00	0.00	Vehicle	Vehicle	380.17	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**14.46**	**14.46**	-----	-----
		L$_{18}$ - L$_{19}$	112.87	0.83	12.01			0.90	1.20	12.95	0.89	0.00	0.00	Vehicle	Vehicle	163.56	-----	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	-----	-----	**30.10**	**30.10**	-----	-----
		L$_{19}$ - L$_{20}$	-14.36	-15.10	7.90			0.90	1.20	8.51	-16.28	0.00	0.00	Vehicle	Vehicle	-----	-39.84	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	-----	-----	**25.13**	**25.13**
		L$_0$- L$_1$	15.25	0.31	-1.22			0.90	1.18	0.33	-1.29	0.00	0.00	Vehicle	Vehicle	20.26	-----	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	-----	-----	**1854.75**	**1854.75**	-----	-----
		L$_1$ - L$_2$	136.09	-3.03	22.16			0.90	1.18	23.60	-3.22	0.00	0.00	Vehicle	Vehicle	207.59	-----	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	-----	-----	**21.07**	**21.07**	-----	-----
		L$_2$ - L$_3$	262.77	-6.43	49.16			0.90	1.18	52.34	-6.85	0.00	0.00	Vehicle	Vehicle	409.64	-----	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	-----	-----	**13.39**	**13.39**	-----	-----
		L$_3$ - L$_4$	373.14	-8.41	75.82			0.90	1.18	80.72	-8.95	0.00	0.00	Vehicle	Vehicle	590.03	-----	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	-----	-----	**11.44**	**11.44**	-----	-----
		L$_4$ - L$_5$	456.57	-17.19	88.36			0.90	1.18	94.08	-18.39	0.00	0.00	Vehicle	Vehicle	715.84	-----	11.08	65.00	54.5000	2145.00	131.71	10.6406	5.6658	16.93	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**12.69**	**12.69**	-----	-----
		L$_5$ - L$_6$	489.37	-23.30	103.73			0.90	1.18	110.44	-24.81	0.00	0.00	Vehicle	Vehicle	779.76	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5772	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	**11.80**	**11.80**	-----	-----
		L$_6$ - L$_7$	479.01	-29.56	97.96			0.90	1.18	104.30	-31.47	0.00	0.00	Vehicle	Vehicle	758.29	-----	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	-----	-----	**12.83**	**12.83**	-----	-----
		L$_7$ - L$_8$	330.07	-40.48	92.01			0.90	1.18	97.96	-43.09	0.00	0.00	Vehicle	Vehicle	556.45	-----	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	-----	-----	**10.33**	**10.33**	-----	-----
		L$_8$ - L$_9$	188.98	53.45	78.70			0.90	1.18	83.79	56.91	0.00	0.00	Vehicle	Vehicle	354.60	-----	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	-----	-----	**10.87**	**10.87**	-----	-----
		L$_9$ - L$_{10}$	39.77	-46.58	59.15			0.90	1.18	62.98	-49.59	0.00	0.00	Vehicle	Vehicle	133.57	-12.76	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**13.05**	**13.05**	**15.47**	**15.47**
		L$_{10}$ - L$_{11}$	-127.39	16.26	34.92			0.90	1.18	37.18	17.32	0.00	0.00	Vehicle	Vehicle	-----	-143.09	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	-20.26	22.24			0.90	1.18	23.68	-21.58	0.00	0.00	Vehicle	Vehicle	-----	-395.48	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	-----	-----	**30.04**	**30.04**
		L$_{12}$ - L$_{13}$	-426.73	-43.55	1.27			0.90	1.18	1.35	-46.36	0.00	0.00	Vehicle	Vehicle	-----	-615.02	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**18.31**	**18.31**
		L$_{13}$ - L$_{14}$	-536.42	-27.55	1.04			0.90	1.18	1.11	-29.33	0.00	0.00	Vehicle	Vehicle	-----	-735.48	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	-----	-----	**33.37**	**33.37**
		L$_{14}$ - L$_{15}$	-537.75	-41.85	-8.71			0.90	1.17	-9.16	-44.03	0.00	0.00	Vehicle	Vehicle	-----	-756.31	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	-----	-----	**22.20**	**22.20**
		L$_{15}$ - L$_{16}$	-475.65	-47.93	5.34			0.90	1.17	5.62	-50.43	0.00	0.00	Vehicle	Vehicle	-----	-683.89	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	-----	-----	**15.86**	**15.86**
		L$_{16}$ - L$_{17}$	-384.35	-44.36	6.01			0.90	1.17	6.32	-46.67	0.00	0.00	Vehicle	Vehicle	-----	-560.32	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**14.21**	**14.21**
		L$_{17}$ - L$_{18}$	-281.86	-42.61	9.79			0.90	1.17	10.29	-44.83	0.00	0.00	Vehicle	Vehicle	-----	-424.69	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	-----	-----	**9.94**	**9.94**
		L$_{18}$ - L$_{19}$	-175.17	-38.88	27.17			0.90	1.17	28.59	-40.90	0.00	0.00	Vehicle	Vehicle	-----	-280.89	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	-----	-----	**9.74**	**9.74**
		L$_{19}$ - L$_{20}$	-76.53	-35.22	47.62			0.90	1.17	50.10	-37.05	0.00	0.00	Vehicle	Vehicle	-----	-147.66	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	-----	-----	**13.42**	**13.42**
		L$_0$ - L$_{21}$	4.38	-29.94	63.85			0.90	1.17	67.17	-31.50	0.00	0.00	Vehicle	Vehicle	93.02	-35.26	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	**14.11**	**14.11**	**25.64**	**25.64**
		L$_{21}$ - L$_{22}$	55.94	-5.92	62.60			0.90	1.17	65.86	-6.22	0.00	0.00	Vehicle	Vehicle	158.35	-----	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	-----	-----	**13.60**	**13.60**	-----	-----
		L$_{22}$ - L$_{23}$	62.99	-15.89	68.90			0.90	1.17	72.49	-16.71	0.00	0.00	Vehicle	Vehicle	176.13	-----	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	-----	-----	**12.26**	**12.26**	-----	-----
		L$_{23}$ - L$_{24}$	15.54	-21.20	65.90			0.90	1.17	69.33	-22.31	0.00	0.00	Vehicle	Vehicle	110.33	-8.80	6.13	37.50	31.3700	1237.50	131.71	10.6250	6.1479	15.55	32.77	-1044.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**13.51**	**13.51**	**36.72**	**36.72**
		L$_{24}$ - L$_{25}$	-56.00	17.22	48.04			0.90	1.17	50.54	18.12	0.00	0.00	Vehicle	Vehicle	-----	-49.26	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	-----	-----
		L$_{25}$ - L$_{26}$	-136.37	-15.45	33.92			0.90	1.17	35.69	-16.25	0.00	0.00	Vehicle	Vehicle	-----	-198.41	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**26.91**	**26.91**
		L$_{26}$ - L$_{27}$	-217.73	-14.93	22.39			0.90	1.17	23.56	-15.70	0.00	0.00	Vehicle	Vehicle	-----	-303.46	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	-----	-----	**32.47**	**32.47**
		L$_{27}$ - L$_{28}$	-296.25	-49.97	9.85			0.90	1.17	10.36	-52.57	0.00	0.00	Vehicle	Vehicle	-----	-453.47	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	-----	-----	**14.29**	**14.29**
		L$_{28}$ - L$_{29}$	-364.18	-71.38	1.96			0.90	1.17	2.06	-75.10	0.00	0.00	Vehicle	Vehicle	-----	-571.06	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	-----	-----	**12.13**	**12.13**
		L$_{29}$ - L$_{30}$	-418.23	-40.69	20.75			0.90	1.17	21.84	-42.81	0.00	0.00	Vehicle	Vehicle	-----	-599.35	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**25.62**	**25.62**
		L$_{30}$ - L$_{31}$	-350.38	-40.30	-7.93			0.90	1.18	-8.45	-42.90	0.00	0.00	Vehicle	Vehicle	-----	-511.26	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	-----	-----	**27.14**	**27.14**
		L$_{31}$ - L$_{32}$	-275.46	-21.87	-7.74			0.90	1.18	-8.24	-23.28	0.00	0.00	Vehicle	Vehicle	-----	-388.36	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	-----	-----	**42.48**	**42.48**

Maximum Axial with Moment Interaction Check

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

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

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 2F1
Condition: As-Inspected

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

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

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

Location	Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capacity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Verticals	Structure 1																																															
	U_0 - L_0	-77.19	-45.98	7.45			0.90	1.24	8.30	-51.19	0.00	0.00	Vehicle	Vehicle	-----	-166.90	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	-----	-----	-----	-----	-----	4.57	4.57
	U_1 - L_1	-33.88	-31.68	6.71			0.90	1.24	7.47	-35.26	0.00	0.00	Vehicle	Vehicle	-----	-89.88	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	9.02	9.02
	U_2 - L_2	10.43	-24.09	6.32			0.90	1.24	7.03	-26.81	0.00	0.00	Vehicle	Vehicle	22.71	-21.30	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	59.32	59.32	13.52	13.52
	U_3 - L_3	44.39	-13.86	11.51			0.90	1.24	12.81	-15.43	0.00	0.00	Vehicle	Vehicle	74.36	-----	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	-----	-----	-----	-----	-----	29.92	29.92	-----	-----
	U_4 - L_4	-16.67	-0.03	-14.24			0.90	1.24	-0.04	-15.85	0.00	0.00	Vehicle	Vehicle	-----	-42.28	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	21.01	21.01
	U_5 - L_5	-109.51	2.31	-38.90			0.90	1.24	2.57	-43.31	0.00	0.00	Vehicle	Vehicle	-----	-198.66	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	7.29	7.29
	U_6 - L_6	-143.60	-0.48	-50.97			0.90	1.24	-0.53	-56.74	0.00	0.00	Vehicle	Vehicle	-----	-260.45	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	-----	-----	-----	-----	-----	5.94	5.94
	U_7 - L_7	-142.61	1.34	-51.97			0.90	1.24	1.49	-57.86	0.00	0.00	Vehicle	Vehicle	-----	-260.61	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	-----	-----	-----	-----	-----	5.01	5.01
	U_8 - L_8	-391.97	-50.01	-54.37			0.90	1.24	-55.67	-60.53	0.00	0.00	Vehicle	Vehicle	-----	-588.25	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	-----	-----	-----	11.13	11.13
	U_9 - L_9	-223.13	-46.77	4.64			0.90	1.20	5.00	-50.43	0.00	0.00	Vehicle	Vehicle	-----	-355.63	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	-----	-----	-----	-----	-----	8.05	8.05
	U_{10} - L_{10}	-225.77	-41.74	-2.02			0.90	1.20	-2.17	-45.00	0.00	0.00	Vehicle	Vehicle	-----	-352.01	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	-----	-----	-----	-----	-----	10.80	10.80
	U_{11} - L_{11}	-198.79	-41.57	4.57			0.90	1.20	4.93	-44.82	0.00	0.00	Vehicle	Vehicle	-----	-316.68	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	-----	-----	-----	-----	-----	9.88	9.88
	U_{12} - L_{12}	-154.77	-34.13	6.81			0.90	1.20	7.35	-36.80	0.00	0.00	Vehicle	Vehicle	-----	-249.04	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	-----	-----	-----	-----	-----	10.26	10.26
	U_{13} - L_{13}	-109.04	-30.86	10.64			0.90	1.20	11.47	-33.28	0.00	0.00	Vehicle	Vehicle	-----	-185.01	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	8.16	8.16
	U_{14} - L_{14}	-12.30	-6.87	0.58			0.90	1.20	0.62	-7.41	0.00	0.00	Vehicle	Vehicle	-----	-25.63	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	-----	-----	-----	-----	-----	44.86	44.86
	U_{15} - L_{15}	-5.62	14.70	-24.58			0.90	1.20	15.85	-26.50	0.00	0.00	Vehicle	Vehicle	13.30	-41.76	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	-----	-----	-----	27.33	27.33	12.74	12.74
	U_{16} - L_{16}	-51.74	10.55	-34.13			0.90	1.20	11.38	-36.79	0.00	0.00	Vehicle	Vehicle	-----	-115.09	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	-----	-----	-----	-----	-----	7.87	7.87
	U_{17} - L_{17}	-127.31	5.63	-43.67			0.90	1.20	6.07	-47.08	0.00	0.00	Vehicle	Vehicle	-----	-226.70	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	-----	-----	-----	-----	-----	6.03	6.03
	U_{18} - L_{18}	-159.89	5.20	-51.94			0.90	1.20	5.60	-56.00	0.00	0.00	Vehicle	Vehicle	-----	-280.66	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	-----	-----	-----	-----	-----	6.53	6.53
	U_{19} - L_{19}	-191.17	4.40	-53.46			0.90	1.20	4.74	-57.64	0.00	0.00	Vehicle	Vehicle	-----	-323.44	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}	-211.94	4.40	-52.68			0.90	1.20	4.74	-56.80	0.00	0.00	Vehicle	Vehicle	-----	-349.36	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	-----	-----	-----	-----	-----	6.06	6.06
	Structure 2																																															
	U_0 - L_0	-206.53	-48.98	5.48			0.90	1.18	5.83	-52.15	0.00	0.00	Vehicle	Vehicle	-----	-336.28	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	-----	-----	-----	-----	-----	7.80	7.80
	U_1 - L_1	-188.72	-46.54	5.63			0.90	1.18	5.99	-49.55	0.00	0.00	Vehicle	Vehicle	-----	-309.76	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	9.76	9.76
	U_2 - L_2	-155.84	-41.17	5.93			0.90	1.18	6.32	-43.83	0.00	0.00	Vehicle	Vehicle	-----	-259.58	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	-----	-----	-----	-----	-----	9.55	9.55
	U_3 - L_3	-134.53	-40.37	6.72			0.90	1.18	7.16	-42.98	0.00	0.00	Vehicle	Vehicle	-----	-230.75	0.00	22.73	22.7330	750.10	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	45.00	Pass	4.91	12.00	Pass	-----	-----	-----	-----	-----	7.38	7.38
	U_4 - L_4	-64.47	-29.76	6.39			0.90	1.18	6.81	-31.68	0.00	0.00	Vehicle	Vehicle	-----	-124.99	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	-----	-----	-----	-----	-----	8.67	8.67
	U_5 - L_5	-19.94	-27.23	14.93			0.90	1.18	15.90	-28.99	0.00	0.00	Vehicle	Vehicle	-----	-63.60	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	11.06	11.06
	U_6 - L_6	40.07	-20.04	21.01			0.90	1.18	22.37	-21.34	0.00	0.00	Vehicle	Vehicle	81.18	-----	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	17.33	17.33	-----	-----
	U_7 - L_7	-26.03	-0.99	-4.75			0.90	1.18	-1.06	-5.05	0.00	0.00	Vehicle	Vehicle	-----	-40.41	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	-----	-----	-----	-----	-----	62.25	62.25
	U_8 - L_8	-125.22	10.89	-36.14			0.90	1.18	11.60	-38.47	0.00	0.00	Vehicle	Vehicle	-----	-212.80	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	-----	-----	-----	-----	-----	10.54	10.54
	U_9 - L_9	-174.50	4.24	-43.39			0.90	1.18	4.51	-46.19	0.00	0.00	Vehicle	Vehicle	-----	-286.90	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	-----	-----	-----	-----	-----	11.19	11.19
	U_{10} - L_{10}	-202.62	-0.32	-46.10			0.90	1.18	-0.34	-49.08	0.00	0.00	Vehicle	Vehicle	-----	-327.22	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	-----	-----	-----	-----	-----	11.73	11.73
	U_{11} - L_{11}	-229.48	1.31	-54.03			0.90	1.18	1.40	-57.53	0.00	0.00	Vehicle	Vehicle	-----	-373.11	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	-----	-----	-----	-----	-----	9.31	9.31
	U_{12} - L_{12}	-250.80	1.04	-54.65			0.90	1.18	1.11	-58.91	0.00	0.00	Vehicle	Vehicle	-----	-401.68	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	6.06	12.00	Pass	-----	-----	-----	-----	-----	9.47	9.47
	U_{13} - L_{13}	-223.27	5.46	-55.63			0.90	1.18	5.82	-59.23	0.00	0.00	Vehicle	Vehicle	-----	-367.25	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.88	7.88
	U_{14} - L_{14}	-343.24	41.52	-48.44			0.90	1.18	-44.20	-51.57	0.00	0.00	Vehicle	Vehicle	-----	-513.25	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	-----	-----	-----	-----	-----	13.74	13.74
	U_{15} - L_{15}	-123.12	-42.87	5.49			0.90	1.17	5.77	-45.10	0.00	0.00	Vehicle	Vehicle	-----	-218.68	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	12.57	12.57
	U_{16} - L_{16}	-156.68	-41.30	4.20			0.90	1.17	4.42	-43.45	0.00	0.00	Vehicle	Vehicle	-----	-260.16	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	-----	-----	-----	-----	-----	11.72	11.72
	U_{17} - L_{17}	-147.89	-43.00	4.10			0.90	1.17	4.32	-45.24	0.00	0.00	Vehicle	Vehicle	-----	-251.08	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	-----	-----	-----	-----	-----	10.51	10.51
	U_{18} - L_{18}	-142.21	-42.37	5.15			0.90	1.17	5.42	-44.57	0.00	0.00	Vehicle	Vehicle	-----	-242.82	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	9.76	9.76
	U_{19} - L_{19}	-111.47	-37.48	5.76			0.90	1.17	6.06	-39.44	0.00	0.00	Vehicle	Vehicle	-----	-196.18	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	-----	-----	-----	-----	-----	10.14	10.14
	U_{20} - L_{20}	-76.56	-32.88	10.84			0.90	1.17	11.40	-34.59	0.00	0.00	Vehicle	Vehicle	-----	-144.50	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	-----	-----	-----	-----	-----	8.63	8.63
	U_{21} - L_{21}	-44.33	-29.31	13.29			0.90	1.17	13.98	-30.83	0.00	0.00	Vehicle	Vehicle	-----	-97.72	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	-----	-----	-----	-----	-----	9.61	9.61
	U_{22} - L_{22}	-21.25	-0.38	-3.98			0.90	1.17	-0.40	-4.18	0.00	0.00	Vehicle	Vehicle	-----	-33.06	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	-----	-----	-----	-----	-----	76.61	76.61
	U_{23} - L_{23}	-39.04	15.63	-29.16			0.90	1.17	16.44	-30.68	0.00	0.00	Vehicle	Vehicle	-----	-90.63	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	-----	-----	-----	-----	-----	9.83	9.83
	U_{24} - L_{24}	-74.80	10.47	-33.93			0.90	1.17	11.02	-35.69	0.00	0.00	Vehicle	Vehicle	-----	-143.64	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	-----	-----	-----	-----	-----	8.42	8.42
	U_{25} - L_{25}	-103.21	7.04	-44.44			0.90	1.17	7.41	-46.75	0.00	0.00	Vehicle	Vehicle	-----	-194.95	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	8.73	8.73
	U_{26} - L_{26}	-120.15	6.64	-46.95			0.90	1.17	6.99	-49.39	0.00	0.00	Vehicle	Vehicle	-----	-220.40	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	-----	-----	-----	-----	-----	9.25	9.25
	U_{27} - L_{27}	-123.87	5.49	-48.98			0.90	1.17	5.77	-51.53	0.00	0.00	Vehicle	Vehicle	-----	-228.01	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	-----	-----	-----	-----	-----	9.69	9.69
	U_{28} - L_{28}	-135.49	4.99	-54.93			0.90	1.17	5.25	-57.80	0.00	0.00	Vehicle	Vehicle	-----	-251.27	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	9.18	9.18
	U_{29} - L_{29}	-116.90	2.92	-51.71			0.90	1.17	3.07	-54.41	0.00	0.00	Vehicle	Vehicle	-----	-222.69	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	-----	-----	-----	-----	-----	10.54	10.54
	U_{30} - L_{30}	-261.40	-41.50	-43.85			0.90	1.18	-44.19	-46.69	0.00	0.00	Vehicle	Vehicle	-----	-400.52	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	-----	-----	-----	-----	-----	16.53	16.53
	U_{31} - L_{31}	-156.06	-46.04	6.90			0.90	1.18	7.34	-49.02	0.00	0.00	Vehicle	Vehicle	-----	-266.60	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	-----	-----	-----	-----	-----	10.89	10.89
	U_{32} - L_{32}	-185.16	-45.68	4.86			0.90	1.18	5.17	-48.63	0.00	0.00	Vehicle	Vehicle	-----	-303.93	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----

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: 2F1 **Condition:** As-Inspected

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

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

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

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

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Diagonals Structure 1	U$_1$ - L$_1$	87.39	50.35	-10.30			0.90	1.24	56.05	-11.46	0.00	0.00	Vehicle	Vehicle	186.48	-----	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	-----	-----	-----	-----	-----	**8.90**	**8.90**	-----	-----
	U$_1$ - L$_2$	23.29	40.12	0.82			0.90	1.24	44.66	0.91	0.00	0.00	Vehicle	Vehicle	88.34	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**9.06**	**9.06**	-----	-----
	U$_2$ - L$_3$	-37.87	23.37	-18.05			0.90	1.24	26.01	-20.09	0.00	0.00	Vehicle	-----	-----	-75.35	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**14.75**	**14.75**
	U$_2$ - L$_4$	-92.23	-9.84	-38.40			0.90	1.24	-10.95	-42.75	0.00	0.00	Vehicle	Vehicle	-----	-175.48	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**5.71**	**5.71**
	U$_3$ - L$_4$	143.29	36.95	-7.31			0.90	1.24	41.13	-8.14	0.00	0.00	Vehicle	Vehicle	239.75	-----	0.00	20.48	20.4800	675.84	131.71	11.6953	2.0102	52.36	30.39	-529.06	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**9.16**	**9.16**	-----	-----
	U$_3$ - L$_5$	177.89	52.47	-2.72			0.90	1.24	58.41	-3.03	0.00	0.00	Vehicle	Vehicle	307.19	-----	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	-----	-----	-----	-----	-----	**8.09**	**8.09**	-----	-----
	U$_4$ - L$_6$	184.40	63.36	2.45			0.90	1.24	70.54	2.72	0.00	0.00	Vehicle	Vehicle	331.42	-----	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	-----	-----	-----	-----	-----	**6.61**	**6.61**	-----	-----
	U$_4$ - L$_7$	179.98	58.06	-0.30			0.90	1.24	64.63	-0.34	0.00	0.00	Vehicle	Vehicle	318.00	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.28**	**7.28**	-----	-----
	U$_5$ - L$_8$	268.90	51.46	-5.79			0.90	1.20	55.48	-6.25	0.00	0.00	Vehicle	Vehicle	421.70	-----	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	-----	-----	-----	-----	-----	**12.50**	**12.50**	-----	-----
	U$_5$ - L$_9$	278.76	49.15	-4.83			0.90	1.20	52.99	-5.21	0.00	0.00	Vehicle	Vehicle	431.27	-----	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	-----	-----	-----	-----	-----	**12.90**	**12.90**	-----	-----
	U$_{10}$ - L$_{11}$	284.98	52.99	-5.68			0.90	1.20	57.14	-6.13	0.00	0.00	Vehicle	Vehicle	444.75	-----	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	-----	-----	-----	-----	-----	**10.95**	**10.95**	-----	-----
	U$_{11}$ - L$_{12}$	250.55	46.81	-4.63			0.90	1.20	50.47	-4.99	0.00	0.00	Vehicle	Vehicle	391.33	-----	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	-----	-----	-----	-----	-----	**10.44**	**10.44**	-----	-----
	U$_{12}$ - L$_{13}$	189.62	44.38	-14.64			0.90	1.20	47.85	-15.79	0.00	0.00	Vehicle	Vehicle	308.71	-----	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	-----	-----	-----	-----	-----	**9.23**	**9.23**	-----	-----
	U$_{13}$ - L$_{14}$	123.30	32.61	-19.32			0.90	1.20	35.16	-20.84	0.00	0.00	Vehicle	Vehicle	205.99	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.66	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**8.66**	**8.66**	-----	-----
	U$_{14}$ - L$_{15}$	-24.40	23.32	-23.52			0.90	1.20	25.15	-25.36	0.00	0.00	Vehicle	Vehicle	0.97	-64.70	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	12.00	Pass	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**17.98**	**17.98**	-----	-----
	U$_{15}$ - L$_{15}$	48.54	34.45	-16.06			0.90	1.20	37.14	-17.31	0.00	0.00	Vehicle	Vehicle	111.39	-----	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	-----	-----	-----	-----	-----	**10.21**	**10.21**	-----	-----
	U$_{17}$ - L$_{16}$	146.57	51.22	-5.23			0.90	1.20	55.22	-5.64	0.00	0.00	Vehicle	Vehicle	262.33	-----	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	-----	-----	-----	-----	-----	**6.85**	**6.85**	-----	-----
	U$_{18}$ - L$_{17}$	182.43	52.19	-6.63			0.90	1.20	56.27	-7.15	0.00	0.00	Vehicle	Vehicle	310.32	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.32**	**8.32**	-----	-----
	U$_{19}$ - L$_{18}$	223.79	59.58	-5.55			0.90	1.20	64.23	-5.99	0.00	0.00	Vehicle	Vehicle	374.43	-----	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	-----	-----	-----	-----	-----	**7.57**	**7.57**	-----	-----
	U$_{20}$ - L$_{19}$	232.63	49.74	-4.64			0.90	1.20	53.63	-5.01	0.00	0.00	Vehicle	Vehicle	372.14	-----	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	-----	-----	-----	-----	-----	**8.90**	**8.90**	-----	-----
	U$_1$ - L$_1$	213.47	47.70	-5.85			0.90	1.18	50.79	-6.22	0.00	0.00	Vehicle	Vehicle	343.53	-----	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	-----	-----	-----	-----	-----	**11.11**	**11.11**	-----	-----
	U$_1$ - L$_2$	200.39	47.51	-6.87			0.90	1.18	50.58	-7.31	0.00	0.00	Vehicle	Vehicle	326.27	-----	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	-----	-----	-----	-----	-----	**11.41**	**11.41**	-----	-----
	U$_1$ - L$_3$	172.76	47.01	-7.68			0.90	1.18	50.06	-8.18	0.00	0.00	Vehicle	Vehicle	289.66	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**9.55**	**9.55**	-----	-----
	U$_1$ - L$_4$	147.11	42.60	-7.84			0.90	1.18	45.36	-8.34	0.00	0.00	Vehicle	Vehicle	250.21	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**9.48**	**9.48**	-----	-----
	U$_1$ - L$_5$	49.07	36.53	-17.95			0.90	1.18	38.89	-19.11	0.00	0.00	Vehicle	Vehicle	114.35	-----	0.00	16.85	16.8486	556.00	131.71	15.3992	1.9682	70.40	28.23	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**9.73**	**9.73**	-----	-----
	U$_1$ - L$_6$	2.97	33.15	-22.88			0.90	1.18	35.30	-24.36	0.00	0.00	Vehicle	Vehicle	49.75	-27.81	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	-----	-----	-----	**12.03**	**12.03**	**13.50**	**13.50**
	U$_1$ - L$_7$	-85.72	16.89	-33.29			0.90	1.18	17.98	-35.45	0.00	0.00	Vehicle	Vehicle	-----	-157.51	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	-----	-----	-----	-----	-----	**7.72**	**7.72**
	U$_2$ - L$_7$	140.27	39.38	-16.42			0.90	1.18	41.93	-17.49	0.00	0.00	Vehicle	Vehicle	236.85	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**11.04**	**11.04**	-----	-----
	U$_2$ - L$_8$	204.17	46.31	-7.90			0.90	1.18	49.31	-8.41	0.00	0.00	Vehicle	Vehicle	329.52	-----	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	-----	-----	-----	-----	-----	**10.26**	**10.26**	-----	-----
	U$_{19}$ - L$_9$	234.82	53.21	-3.70			0.90	1.18	56.65	-3.94	0.00	0.00	Vehicle	Vehicle	378.91	-----	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	-----	-----	-----	-----	-----	**9.58**	**9.58**	-----	-----
	U$_{11}$ - L$_{10}$	263.04	56.37	0.63			0.90	1.18	60.01	0.67	0.00	0.00	Vehicle	Vehicle	419.97	-----	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	-----	-----	-----	-----	-----	**9.69**	**9.69**	-----	-----
	U$_{11}$ - L$_{11}$	273.97	59.31	0.04			0.90	1.18	63.15	0.04	0.00	0.00	Vehicle	Vehicle	438.25	-----	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	-----	-----	-----	-----	-----	**9.03**	**9.03**	-----	-----
	U$_{12}$ - L$_{12}$	254.88	56.30	-5.80			0.90	1.18	59.94	-6.18	0.00	0.00	Vehicle	Vehicle	409.26	-----	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	-----	-----	-----	-----	-----	**8.72**	**8.72**	-----	-----
	U$_{13}$ - L$_{13}$	217.66	52.56	-5.95			0.90	1.18	55.96	-6.33	0.00	0.00	Vehicle	Vehicle	355.71	-----	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	-----	-----	-----	-----	-----	**10.00**	**10.00**	-----	-----
	U$_{14}$ - L$_{15}$	110.03	44.27	-5.75			0.90	1.17	46.57	-6.05	0.00	0.00	Vehicle	Vehicle	203.59	-----	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	-----	-----	-----	-----	-----	**11.61**	**11.61**	-----	-----
	U$_{15}$ - L$_{16}$	132.26	44.60	-6.13			0.90	1.17	46.93	-6.45	0.00	0.00	Vehicle	Vehicle	232.95	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**11.05**	**11.05**	-----	-----
	U$_{16}$ - L$_{17}$	172.87	46.36	-4.31			0.90	1.17	48.77	-4.53	0.00	0.00	Vehicle	Vehicle	288.13	-----	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	-----	-----	-----	-----	-----	**11.02**	**11.02**	-----	-----
	U$_{17}$ - L$_{18}$	160.16	48.05	-5.13			0.90	1.17	50.56	-5.40	0.00	0.00	Vehicle	Vehicle	273.94	-----	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	-----	-----	-----	-----	-----	**9.70**	**9.70**	-----	-----
	U$_{18}$ - L$_{19}$	152.33	49.64	-6.58			0.90	1.17	52.23	-6.92	0.00	0.00	Vehicle	Vehicle	265.93	-----	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	-----	-----	-----	-----	-----	**9.54**	**9.54**	-----	-----
	U$_{20}$ - L$_{20}$	120.67	44.44	-9.15			0.90	1.17	46.76	-9.62	0.00	0.00	Vehicle	Vehicle	217.66	-----	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	-----	-----	-----	-----	-----	**10.32**	**10.32**	-----	-----
	U$_{20}$ - L$_{21}$	76.10	39.08	-16.29			0.90	1.17	41.12	-17.14	0.00	0.00	Vehicle	Vehicle	152.38	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**8.55**	**8.55**	-----	-----
	U$_{21}$ - L$_{22}$	31.50	25.06	-22.09			0.90	1.17	26.37	-23.24	0.00	0.00	Vehicle	Vehicle	75.22	-----	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	-----	-----	-----	-----	-----	**15.03**	**15.03**	-----	-----
	U$_{22}$ - L$_{23}$	24.27	24.88	-23.97			0.90	1.17	26.18	-25.21	0.00	0.00	Vehicle	Vehicle	65.57	-1.23	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	-----	-----	-----	**15.41**	**15.41**	**13.77**	**13.77**
	U$_{22}$ - L$_{23}$	72.21	34.64	-17.42			0.90	1.17	36.44	-18.33	0.00	0.00	Vehicle	Vehicle	141.26	-----	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	-----	-----	-----	-----	-----	**9.75**	**9.75**	-----	-----
	U$_{23}$ - L$_{24}$	112.05	46.70	-9.20			0.90	1.17	49.14	-9.68	0.00	0.00	Vehicle	Vehicle	209.55	-----	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	-----	-----	-----	-----	-----	**10.00**	**10.00**	-----	-----
	U$_{23}$ - L$_{25}$	127.76	54.42	-5.84			0.90	1.17	57.26	-6.14	0.00	0.00	Vehicle	Vehicle	240.53	-----	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	-----	-----	-----	-----	-----	**9.13**	**9.13**	-----	-----
	U$_{24}$ - L$_{26}$	132.58	54.73	-8.87			0.90	1.17	57.58	-7.22	0.00	0.00	Vehicle	Vehicle	247.21	-----	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	-----	-----	-----	-----	-----	**9.00**	**9.00**	-----	-----
	U$_{24}$ - L$_{27}$	137.86	53.79	-5.92			0.90	1.17	56.59	-6.22	0.00	0.00	Vehicle	Vehicle	252.78	-----	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	-----	-----	-----	-----	-----	**10.11**	**10.11**	-----	-----
	U$_{25}$ - L$_{28}$	102.60	55.89	-3.49			0.90	1.17	58.80	-3.67	0.00	0.00	Vehicle	Vehicle	236.01	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.98**	**8.98**	-----	-----
	U$_{26}$ - L$_{29}$	102.60	48.68	-2.73			0.90	1.17	51.21	-2.87	0.00	0.00	Vehicle	Vehicle	199.95	-----	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	-----	-----	-----	-----	-----	**10.70**	**10.70**	-----	-----
	U$_{30}$ - L$_{31}$	139.84	42.39	-7.12			0.90	1.18	45.13	-7.58	0.00	0.00	Vehicle	Vehicle	240.45	-----	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	-----	-----	-----	-----	-----	**14.13**	**14.13**	-----	-----
	U$_{31}$ - L$_{32}$	166.63	47.97	-7.79			0.90	1.18	51.07	-8.29	0.00	0.00	Vehicle	Vehicle	283.01	-----	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	-----	-----	-----	-----	-----	**11.24**	**11.24**	-----	-----
	U$_{32}$ - L$_{33}$	202.12	51.16	-4.53			0.90	1.18	54.47	-4.82	0.00	0.00	Vehicle	Vehicle	333.58	-----	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	-----	-----	-----	-----	-----	**11.79**	**11.79**	-----	-----
	U$_{33}$ - L$_{34}$	201.72	49.37	-3.30			0.90	1.18	52.56	-3.52	0.00	0.00	Vehicle	Vehicle	330.56	-----	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	-----	-----	-----	-----	-----	**12.23**	**12.23**	-----	-----
	U$_{34}$ - L$_{35}$	180.72	50.59	-4.71			0.90	1.18	53.86	-5.01	0.00	0.00	Vehicle	Vehicle	304.96	-----	0.00	30.63	30.6305	1010.81	131.71	13.7604	2.8427	43.57	31.19	-812.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 2F1 **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 (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	6.25	-50.46			0.75	1.24	5.80	-46.82	0.00	0.00	Vehicle	Vehicle	-----	-129.37	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	10.95	10.95
		U_1 - U_2	-61.66	15.60	-77.13			0.75	1.24	14.47	-71.56	0.00	0.00	Vehicle	Vehicle	-----	-173.18	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	-----	-----	7.04	7.04
		U_2 - U_3	-27.05	21.66	-79.64			0.75	1.24	20.10	-73.88	0.00	0.00	Vehicle	Vehicle	-----	-131.21	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	-----	-----	7.29	7.29
		U_3 - U_4	32.90	-33.75	-69.28			0.75	1.24	-31.31	-64.28	0.00	0.00	Vehicle	Vehicle	2.08	-40.78	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	-----	-----	9.31	9.31
		U_4 - U_5	34.76	26.44	-47.22			0.75	1.24	24.53	-43.81	0.00	0.00	Vehicle	Vehicle	77.08	-11.76	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	25.94	25.94	13.70	13.70
		U_5 - U_6	124.19	-29.86	-38.69			0.75	1.24	-27.70	-35.90	0.00	0.00	Vehicle	Vehicle	125.43	-----	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	-7.23	-14.43			0.75	1.24	-6.71	-13.39	0.00	0.00	Vehicle	Vehicle	281.58	-----	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	-7.52	1.29			0.75	1.24	1.20	-6.98	0.00	0.00	Vehicle	Vehicle	433.05	-----	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	-----	-----	648.28	648.28	-----	-----
		U_8 - U_9	267.71	23.12	-17.53			0.75	1.20	20.77	-15.75	0.00	0.00	Vehicle	Vehicle	375.02	-----	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	-----	-----	32.31	32.31	-----	-----
		U_9 - U_{10}	89.12	28.31	-39.24			0.75	1.20	25.43	-35.26	0.00	0.00	Vehicle	Vehicle	148.92	-----	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	-----	-----	24.38	24.38	-----	-----
		U_{10} - U_{11}	-76.89	25.43	-62.99			0.75	1.20	22.85	-56.60	0.00	0.00	Vehicle	Vehicle	-----	-173.53	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	-----	-----	9.20	9.20
		U_{11} - U_{12}	-230.86	22.20	-79.41			0.75	1.20	19.94	-71.35	0.00	0.00	Vehicle	Vehicle	-----	-392.87	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	-----	-----	8.15	8.15
		U_{12} - U_{13}	-342.15	-67.92	-95.47			0.75	1.20	-61.02	-85.78	0.00	0.00	Vehicle	Vehicle	-----	-556.30	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	9.27	9.27
		U_{13} - U_{14}	-421.98	-56.09	-103.33			0.75	1.20	-50.40	-92.84	0.00	0.00	Vehicle	Vehicle	-----	-669.27	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	-----	-----	9.75	9.75
		U_{14} - U_{15}	-422.87	-53.94	-83.74			0.75	1.20	-48.46	-75.24	0.00	0.00	Vehicle	Vehicle	-----	-647.55	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	-----	-----	12.02	12.02
		U_{15} - U_{16}	-440.39	-68.52	-76.26			0.75	1.20	-61.56	-68.52	0.00	0.00	Vehicle	Vehicle	-----	-661.58	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	12.95	12.95
		U_{16} - U_{17}	-422.93	-61.68	-73.06			0.75	1.20	-55.42	-65.65	0.00	0.00	Vehicle	Vehicle	-----	-635.15	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	-----	-----	13.78	13.78
		U_{17} - U_{18}	-341.45	-79.35	-55.25			0.75	1.20	-49.64	-71.29	0.00	0.00	Vehicle	Vehicle	-----	-536.56	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	-----	-----	8.83	8.83
		U_{18} - U_{19}	-247.63	-3.41	-35.29			0.75	1.20	-3.06	-31.71	0.00	0.00	Vehicle	Vehicle	-----	-363.14	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	-----	-----	13.56	13.56
		U_{19} - U_{20}	-132.06	-16.60	-4.08			0.75	1.20	-3.66	-14.92	0.00	0.00	Vehicle	Vehicle	-----	-191.07	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	-----	-----	36.57	36.57
	Structure 2	U_0 - U_1	-131.63	-0.92	-33.95			0.75	1.18	-0.81	-30.12	0.00	0.00	Vehicle	Vehicle	-----	-210.28	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	17.12	17.12
		U_1 - U_2	-247.12	9.47	-62.63			0.75	1.18	8.40	-55.57	0.00	0.00	Vehicle	Vehicle	-----	-393.50	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	-----	-----	9.79	9.79
		U_2 - U_3	-347.28	14.83	-83.58			0.75	1.18	13.16	-74.16	0.00	0.00	Vehicle	Vehicle	-----	-547.86	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	-----	-----	9.85	9.85
		U_3 - U_4	-437.20	-78.65	-96.40			0.75	1.18	-69.78	-85.53	0.00	0.00	Vehicle	Vehicle	-----	-679.54	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	-----	-----	10.57	10.57
		U_4 - U_5	-468.83	25.47	-108.73			0.75	1.18	22.60	-96.47	0.00	0.00	Vehicle	Vehicle	-----	-734.89	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	-----	-----	10.55	10.55
		U_5 - U_6	-471.14	-68.19	-108.91			0.75	1.18	-60.50	-96.63	0.00	0.00	Vehicle	Vehicle	-----	-738.10	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	-----	-----	10.51	10.51
		U_6 - U_7	-414.50	33.54	-100.97			0.75	1.18	29.76	-89.58	0.00	0.00	Vehicle	Vehicle	-----	-655.31	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	10.35	10.35
		U_7 - U_8	-413.54	33.59	-74.16			0.75	1.18	29.80	-65.80	0.00	0.00	Vehicle	Vehicle	-----	-623.15	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	-----	-----	14.10	14.10
		U_8 - U_9	-322.06	34.94	-65.94			0.75	1.18	31.00	-58.50	0.00	0.00	Vehicle	Vehicle	-----	-494.73	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	-----	-----	13.74	13.74
		U_9 - U_{10}	-182.16	37.63	-60.01			0.75	1.18	33.38	-53.24	0.00	0.00	Vehicle	Vehicle	-----	-306.02	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	-----	-----	13.22	13.22
		U_{10} - U_{11}	-32.61	40.84	-37.96			0.75	1.18	36.24	-33.68	0.00	0.00	Vehicle	Vehicle	4.71	-86.18	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	26.03	26.03	21.88	21.88
		U_{11} - U_{12}	133.57	-17.57	-29.63			0.75	1.18	-15.59	-26.29	0.00	0.00	Vehicle	Vehicle	153.38	-----	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	14.37	-16.08			0.75	1.18	12.75	-14.27	0.00	0.00	Vehicle	Vehicle	393.55	-----	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	-----	-----	66.62	66.62	-----	-----
		U_{13} - U_{14}	434.77	-7.44	-11.38			0.75	1.18	-6.60	-10.10	0.00	0.00	Vehicle	Vehicle	556.62	-----	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	24.49	-10.37			0.75	1.17	21.48	-9.09	0.00	0.00	Vehicle	Vehicle	644.74	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	50.75	50.75	-----	-----
		U_{15} - U_{16}	383.31	29.08	-23.95			0.75	1.17	25.50	-21.00	0.00	0.00	Vehicle	Vehicle	531.45	-----	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	-----	-----	34.87	34.87	-----	-----
		U_{16} - U_{17}	279.61	30.82	-38.03			0.75	1.17	27.02	-33.34	0.00	0.00	Vehicle	Vehicle	398.62	-----	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	-----	-----	28.28	28.28	-----	-----
		U_{17} - U_{18}	172.67	29.75	-49.15			0.75	1.17	26.08	-43.09	0.00	0.00	Vehicle	Vehicle	258.37	-----	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	-----	-----	22.76	22.76	-----	-----
		U_{18} - U_{19}	74.40	28.38	-62.89			0.75	1.17	24.88	-55.14	0.00	0.00	Vehicle	Vehicle	129.06	-----	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	-----	-----	27.81	27.81	-----	-----
		U_{19} - U_{20}	-9.98	24.84	-75.39			0.75	1.17	21.78	-66.09	0.00	0.00	Vehicle	Vehicle	15.34	-98.89	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	38.12	38.12	10.33	10.33
	Structure 3	U_0 - U_{21}	-62.02	13.12	-82.46			0.75	1.17	11.50	-72.29	0.00	0.00	Vehicle	Vehicle	-----	-174.60	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	-----	-----	10.72	10.72
		U_{21} - U_{22}	-88.69	-58.26	-81.81			0.75	1.17	-51.08	-71.73	0.00	0.00	Vehicle	Vehicle	-----	-208.54	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	10.43	10.43
		U_{22} - U_{23}	-88.87	18.03	-58.80			0.75	1.17	15.81	-51.55	0.00	0.00	Vehicle	Vehicle	-----	-182.54	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	14.51	14.51
		U_{23} - U_{24}	-76.60	-62.66	-59.01			0.75	1.17	-51.73	-54.94	0.00	0.00	Vehicle	Vehicle	-----	-170.99	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	13.84	13.84
		U_{24} - U_{25}	-37.55	25.69	-58.39			0.75	1.17	22.52	-51.19	0.00	0.00	Vehicle	Vehicle	-----	-115.36	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	-----	-----	12.80	12.80
		U_{25} - U_{26}	37.36	-53.52	-42.97			0.75	1.17	-37.67	-46.93	0.00	0.00	Vehicle	Vehicle	-----	-12.44	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	-----	-----	14.59	14.59
		U_{26} - U_{27}	128.18	-34.23	-34.27			0.75	1.17	-30.01	-30.05	0.00	0.00	Vehicle	Vehicle	127.63	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U_{27} - U_{28}	233.91	-16.37	-27.31			0.75	1.17	-14.36	-23.94	0.00	0.00	Vehicle	Vehicle	285.42	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{28} - U_{29}	337.95	19.11	-9.38			0.75	1.17	16.76	-8.22	0.00	0.00	Vehicle	Vehicle	461.11	-----	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	-----	-----	55.76	55.76	-----	-----
		U_{29} - U_{30}	437.48	-0.47	-8.65			0.75	1.17	-0.41	-7.59	0.00	0.00	Vehicle	Vehicle	568.19	-----	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	-----	-----	-----	-----	-----	-----
		U_{30} - U_{31}	420.86	29.95	-11.30			0.75	1.18	26.57	-10.02	0.00	0.00	Vehicle	Vehicle	581.66	-----	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	-----	-----	43.04	43.04	-----	-----
		U_{31} - U_{32}	300.88	35.60	-27.88			0.75	1.18	31.58	-24.74	0.00	0.00	Vehicle	Vehicle	432.20	-----	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: 2F1 **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	-1.61	0.01			0.75	1.24	0.01	-1.50	0.00	0.00	Vehicle	Vehicle	11.03	-----	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	-----	-----	**88769.49**	**88769.49**	-----	-----
		L_1 - L_2	50.83	-9.09	37.76			0.75	1.24	35.03	-8.43	0.00	0.00	Vehicle	Vehicle	111.62	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**12.90**	**12.90**	-----	-----
		L_2 - L_3	61.27	-15.50	46.85			0.75	1.24	43.47	-14.38	0.00	0.00	Vehicle	Vehicle	136.15	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**13.97**	**13.97**	-----	-----
		L_3 - L_4	25.72	-21.18	41.74			0.75	1.24	38.72	-19.65	0.00	0.00	Vehicle	Vehicle	83.77	-----	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	-----	-----	**16.60**	**16.60**	-----	-----
		L_4 - L_5	-118.55	13.76	53.67			0.75	1.24	49.80	12.76	0.00	0.00	Vehicle	Vehicle	-----	-137.53	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	-8.63	38.07			0.75	1.24	35.32	-8.00	0.00	0.00	Vehicle	Vehicle	-----	-293.76	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	-----	-----	**55.17**	**55.17**
		L_6 - L_7	-320.57	-11.05	15.10			0.75	1.24	14.00	-10.25	0.00	0.00	Vehicle	Vehicle	-----	-430.06	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**60.91**	**60.91**
		L_7 - L_8	-417.42	-34.53	-0.53			0.75	1.24	-0.49	-32.04	0.00	0.00	Vehicle	Vehicle	-----	-584.29	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**24.41**	**24.41**
		L_8 - L_9	-411.08	-23.58	-21.98			0.75	1.20	-19.75	-21.19	0.00	0.00	Vehicle	Vehicle	-----	-561.96	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	-----	-----	**37.21**	**37.21**
		L_9 - L_{10}	-247.97	-29.64	8.02			0.75	1.20	7.21	-26.63	0.00	0.00	Vehicle	Vehicle	-----	-356.98	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**26.19**	**26.19**
		L_{10} - L_{11}	-65.37	-29.18	15.11			0.75	1.20	13.58	-26.22	0.00	0.00	Vehicle	Vehicle	-----	-119.06	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	-----	-----	**16.59**	**16.59**
		L_{11} - L_{12}	101.81	-26.19	37.32			0.75	1.20	33.53	-23.53	0.00	0.00	Vehicle	Vehicle	175.95	-----	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	-----	-----	**14.68**	**14.68**	-----	-----
		L_{12} - L_{13}	264.06	29.71	68.22			0.75	1.20	61.30	26.69	0.00	0.00	Vehicle	Vehicle	422.97	-----	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	-----	-----	**11.59**	**11.59**	-----	-----
		L_{13} - L_{14}	373.80	-19.44	69.00			0.75	1.20	62.00	-17.46	0.00	0.00	Vehicle	Vehicle	566.53	-----	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	-----	-----	**15.07**	**15.07**	-----	-----
		L_{14} - L_{15}	476.54	62.78	97.96			0.75	1.20	88.01	56.41	0.00	0.00	Vehicle	Vehicle	733.92	-----	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	-----	-----	**12.47**	**12.47**	-----	-----
		L_{15} - L_{16}	460.23	39.50	86.01			0.75	1.20	77.28	35.49	0.00	0.00	Vehicle	Vehicle	698.76	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**14.42**	**14.42**	-----	-----
		L_{16} - L_{17}	381.61	46.75	70.34			0.75	1.20	63.20	42.01	0.00	0.00	Vehicle	Vehicle	578.26	-----	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	-----	-----	**13.21**	**13.21**	-----	-----
		L_{17} - L_{18}	289.18	31.67	49.30			0.75	1.20	44.30	28.46	0.00	0.00	Vehicle	Vehicle	433.53	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**13.41**	**13.41**	-----	-----
		L_{18} - L_{19}	176.31	14.03	16.50			0.75	1.20	14.82	12.61	0.00	0.00	Vehicle	Vehicle	248.47	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**22.01**	**22.01**	-----	-----
		L_{19} - L_{20}	69.72	-7.35	7.27			0.75	1.20	6.53	-6.61	0.00	0.00	Vehicle	Vehicle	99.13	-----	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	-----	-----	**66.24**	**66.24**	-----	-----
	Structure 2	L_0 - L_1	24.42	-0.65	-1.45			0.75	1.18	-0.58	-1.29	0.00	0.00	Vehicle	Vehicle	30.99	-----	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	-4.93	29.74			0.75	1.18	26.38	-4.38	0.00	0.00	Vehicle	Vehicle	214.25	-----	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	-----	-----	**18.76**	**18.76**	-----	-----
		L_2 - L_3	252.76	-10.30	57.72			0.75	1.18	51.21	-9.14	0.00	0.00	Vehicle	Vehicle	395.17	-----	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	-----	-----	**14.12**	**14.12**	-----	-----
		L_3 - L_4	352.26	-15.58	75.22			0.75	1.18	66.74	-13.82	0.00	0.00	Vehicle	Vehicle	544.70	-----	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	-----	-----	**14.34**	**14.34**	-----	-----
		L_4 - L_5	447.15	-21.56	87.84			0.75	1.18	77.94	-19.13	0.00	0.00	Vehicle	Vehicle	682.62	-----	11.00	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**15.43**	**15.43**	-----	-----
		L_5 - L_6	477.91	-26.24	101.60			0.75	1.18	90.14	-23.28	0.00	0.00	Vehicle	Vehicle	738.47	-----	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	-----	-----	**14.59**	**14.59**	-----	-----
		L_6 - L_7	482.67	-30.88	82.10			0.75	1.18	72.84	-27.40	0.00	0.00	Vehicle	Vehicle	722.16	-----	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	-----	-----	**18.33**	**18.33**	-----	-----
		L_7 - L_8	336.57	58.05	85.96			0.75	1.18	76.27	51.50	0.00	0.00	Vehicle	Vehicle	536.69	-----	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	-----	-----	**13.18**	**13.18**	-----	-----
		L_8 - L_9	196.00	43.99	72.82			0.75	1.18	64.61	39.03	0.00	0.00	Vehicle	Vehicle	338.79	-----	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	-----	-----	**13.99**	**13.99**	-----	-----
		L_9 - L_{10}	45.53	31.50	56.45			0.75	1.18	50.08	27.95	0.00	0.00	Vehicle	Vehicle	124.30	-----	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	-----	-----	**16.30**	**16.30**	-----	-----
		L_{10} - L_{11}	-126.32	16.15	38.90			0.75	1.18	34.52	14.32	0.00	0.00	Vehicle	Vehicle	-----	-145.60	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	-6.91	25.37			0.75	1.18	22.51	-6.13	0.00	0.00	Vehicle	Vehicle	-----	-378.40	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	-----	-----	**105.39**	**105.39**
		L_{12} - L_{13}	-433.89	-17.20	5.03			0.75	1.18	4.47	-15.26	0.00	0.00	Vehicle	Vehicle	-----	-583.90	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	-----	-----	**55.14**	**55.14**
		L_{13} - L_{14}	-552.76	-24.46	11.94			0.75	1.18	10.60	-21.70	0.00	0.00	Vehicle	Vehicle	-----	-746.80	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	-----	-----	**44.35**	**44.35**
		L_{14} - L_{15}	-573.53	-25.02	-7.79			0.75	1.17	-6.83	-21.93	0.00	0.00	Vehicle	Vehicle	-----	-774.10	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	-----	-----	**42.94**	**42.94**
		L_{15} - L_{16}	-493.00	-27.10	7.13			0.75	1.17	6.25	-23.76	0.00	0.00	Vehicle	Vehicle	-----	-671.79	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	-----	-----	**32.93**	**32.93**
		L_{16} - L_{17}	-395.34	-33.04	13.49			0.75	1.17	11.83	-28.97	0.00	0.00	Vehicle	Vehicle	-----	-551.60	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	-----	-----	**22.51**	**22.51**
		L_{17} - L_{18}	-288.08	-32.60	15.20			0.75	1.17	13.33	-28.58	0.00	0.00	Vehicle	Vehicle	-----	-411.66	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	-----	-----	**15.37**	**15.37**
		L_{18} - L_{19}	-175.85	-31.23	33.11			0.75	1.17	29.03	-27.38	0.00	0.00	Vehicle	Vehicle	-----	-264.19	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	-----	-----	**14.53**	**14.53**
		L_{19} - L_{20}	-78.08	-28.74	53.67			0.75	1.17	47.05	-25.20	0.00	0.00	Vehicle	Vehicle	-----	-134.25	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	-----	-----	**19.67**	**19.67**
		L_{20} - L_{21}	7.59	-25.29	71.39			0.75	1.17	62.59	-22.17	0.00	0.00	Vehicle	Vehicle	91.24	-18.95	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	**15.29**	**15.29**	**37.07**	**37.07**
		L_{21} - L_{22}	59.10	-13.73	60.23			0.75	1.17	52.81	-12.04	0.00	0.00	Vehicle	Vehicle	145.48	-----	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	-----	-----	**17.15**	**17.15**	-----	-----
		L_{22} - L_{23}	72.03	48.20	77.96			0.75	1.17	68.35	42.26	0.00	0.00	Vehicle	Vehicle	182.50	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**13.06**	**13.06**	-----	-----
		L_{23} - L_{24}	33.57	34.31	70.26			0.75	1.17	61.60	30.08	0.00	0.00	Vehicle	Vehicle	123.72	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**15.11**	**15.11**	-----	-----
		L_{24} - L_{25}	-45.06	33.22	50.56			0.75	1.17	44.33	29.13	0.00	0.00	Vehicle	Vehicle	-----	-20.71	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_{25} - L_{26}	-134.95	16.69	43.63			0.75	1.17	38.25	14.64	0.00	0.00	Vehicle	Vehicle	-----	-156.41	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	-----	-----
		L_{26} - L_{27}	-245.92	-0.85	31.63			0.75	1.17	27.73	-0.74	0.00	0.00	Vehicle	Vehicle	-----	-320.66	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	-----	-----	**650.10**	**650.10**
		L_{27} - L_{28}	-351.86	-11.39	14.96			0.75	1.17	13.11	-9.99	0.00	0.00	Vehicle	Vehicle	-----	-470.41	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	-----	-----	**69.67**	**69.67**
		L_{28} - L_{29}	-458.41	-21.16	6.08			0.75	1.17	5.33	-18.55	0.00	0.00	Vehicle	Vehicle	-----	-620.05	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	-----	-----	**44.05**	**44.05**
		L_{29} - L_{30}	-542.36	-33.57	9.28			0.75	1.17	8.14	-29.43	0.00	0.00	Vehicle	Vehicle	-----	-743.33	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	-----	-----	**33.06**	**33.06**
		L_{30} - L_{31}	-514.21	-27.58	-9.14			0.75	1.18	-8.11	-24.47	0.00	0.00	Vehicle	Vehicle	-----	-700.29	11.98	70.85	58.8700	2338.05	131.71	11.1432	5.6285	17.82	32.70	-1969.16	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**40.88**	**40.88**
		L_{31} - L_{32}	-411.27	-36.70	-0.02			0.75	1.18	-0.02	-32.56	0.00	0.00	Vehicle	Vehicle	-----	-576.98	9.73	59.60	49.8700	1966.80	131.71	11.1432	5.8413	17.17	32.72	-1657.58	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**26.53**	**26.53**
		L_{32} - L_{33}	-

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 2F1 — 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 (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capicity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Verticals	Structure 1	U_0 - L_0	-67.68	-71.88	6.16			0.75	1.24	5.72	-66.69	0.00	0.00	Vehicle	Vehicle	-----	-174.68	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	-----	-----	-----	-----	-----	4.15	4.15
		U_1 - L_1	-24.09	-33.51	5.91			0.75	1.24	5.49	-31.09	0.00	0.00	Vehicle	Vehicle	-----	-71.72	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	-----	-----	-----	-----	-----	10.55	10.55
		U_2 - L_2	12.87	-23.65	1.47			0.75	1.24	1.37	-21.94	0.00	0.00	Vehicle	Vehicle	18.51	-11.78	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	303.55	303.55	16.63	16.63
		U_3 - L_3	37.37	-15.80	10.98			0.75	1.24	10.18	-14.66	0.00	0.00	Vehicle	Vehicle	61.82	-----	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	38.33	38.33	-----	-----
		U_4 - L_4	-15.55	4.64	-8.55			0.75	1.24	4.31	-7.93	0.00	0.00	Vehicle	Vehicle	-----	-30.52	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	-----	-----	42.16	42.16
		U_5 - L_5	-92.59	9.59	-44.48			0.75	1.24	8.89	-41.27	0.00	0.00	Vehicle	Vehicle	-----	-174.01	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	-----	-----	-----	-----	-----	8.06	8.06
		U_6 - L_6	-117.07	3.99	-48.71			0.75	1.24	3.70	-45.19	0.00	0.00	Vehicle	Vehicle	-----	-210.93	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	8.65	8.65
		U_7 - L_7	-127.52	0.27	-55.47			0.75	1.24	0.25	-51.47	0.00	0.00	Vehicle	Vehicle	-----	-232.68	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	-----	-----	-----	-----	-----	6.46	6.46
		U_8 - L_8	-368.71	-66.13	-66.26			0.75	1.24	-61.35	-61.47	0.00	0.00	Vehicle	Vehicle	-----	-559.24	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	-----	-----	-----	11.33	11.33
		U_9 - L_9	-214.56	-61.56	2.96			0.75	1.20	2.66	-55.31	0.00	0.00	Vehicle	Vehicle	-----	-350.84	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	-----	-----	-----	-----	-----	7.78	7.78
		U_{10} - L_{10}	-198.68	-48.51	-0.47			0.75	1.20	-0.42	-43.58	0.00	0.00	Vehicle	Vehicle	-----	-314.94	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	12.48	12.48
		U_{11} - L_{11}	-171.40	-42.85	8.31			0.75	1.20	7.46	-38.50	0.00	0.00	Vehicle	Vehicle	-----	-272.87	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	-----	-----	-----	-----	-----	12.21	12.21
		U_{12} - L_{12}	-128.37	-36.06	13.19			0.75	1.20	11.85	-32.40	0.00	0.00	Vehicle	Vehicle	-----	-208.99	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	-----	-----	-----	-----	-----	12.48	12.48
		U_{13} - L_{13}	-96.65	-31.34	16.08			0.75	1.20	14.44	-28.15	0.00	0.00	Vehicle	Vehicle	-----	-162.24	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	-----	-----	-----	-----	-----	10.08	10.08
		U_{14} - L_{14}	-11.04	-3.27	-2.97			0.75	1.20	-2.67	-2.94	0.00	0.00	Vehicle	Vehicle	-----	-18.18	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	-----	-----	-----	-----	-----	113.44	113.44
		U_{15} - L_{15}	-2.47	22.68	-30.92			0.75	1.20	20.38	-27.78	0.00	0.00	Vehicle	Vehicle	23.27	-39.33	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	21.11	21.11	12.26	12.26
		U_{16} - L_{16}	-31.27	18.72	-34.91			0.75	1.20	16.82	-31.37	0.00	0.00	Vehicle	Vehicle	-----	-81.43	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	-----	-----	9.89	9.89
		U_{17} - L_{17}	-105.05	8.15	-42.66			0.75	1.20	7.32	-38.33	0.00	0.00	Vehicle	Vehicle	-----	-186.40	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	7.99	7.99
		U_{18} - L_{18}	-126.74	2.86	-49.97			0.75	1.20	2.57	-44.89	0.00	0.00	Vehicle	Vehicle	-----	-223.13	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	-----	-----	8.88	8.88
		U_{19} - L_{19}	-166.77	2.66	-53.84			0.75	1.20	2.39	-48.38	0.00	0.00	Vehicle	Vehicle	-----	-279.69	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	-----	-----	9.29	9.29
		U_{20} - L_{20}	-184.59	2.49	-64.19			0.75	1.20	2.23	-57.68	0.00	0.00	Vehicle	Vehicle	-----	-314.94	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	-----	-----	6.89	6.89
	Structure 2	U_0 - L_0	-203.59	-57.77	6.66			0.75	1.18	5.91	-51.26	0.00	0.00	Vehicle	Vehicle	-----	-331.30	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	-----	-----	8.56	8.56
		U_1 - L_1	-176.11	-48.57	7.20			0.75	1.18	6.39	-43.09	0.00	0.00	Vehicle	Vehicle	-----	-284.96	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	11.52	11.52
		U_2 - L_2	-137.55	-45.77	6.83			0.75	1.18	6.06	-40.60	0.00	0.00	Vehicle	Vehicle	-----	-231.60	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	-----	-----	10.76	10.76
		U_3 - L_3	-117.62	-41.19	7.10			0.75	1.18	6.30	-36.55	0.00	0.00	Vehicle	Vehicle	-----	-200.41	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	-----	-----	9.15	9.15
		U_4 - L_4	-50.97	-31.65	17.40			0.75	1.18	15.44	-28.09	0.00	0.00	Vehicle	Vehicle	-----	-102.78	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	10.26	10.26
		U_5 - L_5	-13.78	-27.10	20.95			0.75	1.18	18.59	-24.04	0.00	0.00	Vehicle	Vehicle	6.25	-49.16	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	23.75	23.75	13.59	13.59
		U_6 - L_6	45.47	-23.00	23.58			0.75	1.18	20.92	-20.40	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	-----	-----	6.56	-----	-----	-----	-----	-----	18.27	18.27	-----	-----
		U_7 - L_7	-22.33	1.53	2.04			0.75	1.18	1.81	1.36	0.00	0.00	Vehicle	Vehicle	-----	-27.27	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----
		U_8 - L_8	-120.08	18.50	-38.25			0.75	1.18	16.41	-33.93	0.00	0.00	Vehicle	Vehicle	-----	-200.21	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	-----	-----	12.10	12.10
		U_9 - L_9	-177.03	12.49	-47.99			0.75	1.18	11.08	-42.58	0.00	0.00	Vehicle	Vehicle	-----	-285.48	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	-----	-----	12.08	12.08
		U_{10} - L_{10}	-205.88	11.39	-49.11			0.75	1.18	10.10	-43.57	0.00	0.00	Vehicle	Vehicle	-----	-324.29	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	-----	-----	13.14	13.14
		U_{11} - L_{11}	-239.23	6.21	-53.41			0.75	1.18	5.51	-47.39	0.00	0.00	Vehicle	Vehicle	-----	-372.61	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	-----	-----	11.09	11.09
		U_{12} - L_{12}	-257.95	0.13	-58.48			0.75	1.18	0.12	-51.89	0.00	0.00	Vehicle	Vehicle	-----	-402.79	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	-----	-----	10.48	10.48
		U_{13} - L_{13}	-243.82	3.44	-61.12			0.75	1.18	3.05	-54.23	0.00	0.00	Vehicle	Vehicle	-----	-387.47	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	-----	-----	8.23	8.23
		U_{14} - L_{14}	-420.85	-54.56	-55.13			0.75	1.18	-48.40	-48.91	0.00	0.00	Vehicle	Vehicle	-----	-610.69	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	-----	-----	31.50	45.00	Pass	5.68	12.00	Pass	-----	-----	12.90	12.90
		U_{15} - L_{15}	-158.83	-56.25	5.64			0.75	1.17	4.94	-49.32	0.00	0.00	Vehicle	Vehicle	-----	-270.60	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	-----	-----	10.77	10.77
		U_{16} - L_{16}	-174.02	-48.10	1.89			0.75	1.17	1.65	-42.18	0.00	0.00	Vehicle	Vehicle	-----	-281.06	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	-----	-----	11.67	11.67
		U_{17} - L_{17}	-156.46	-47.81	5.04			0.75	1.17	4.42	-41.92	0.00	0.00	Vehicle	Vehicle	-----	-257.89	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	-----	-----	11.14	11.14
		U_{18} - L_{18}	-142.21	-43.45	10.01			0.75	1.17	8.78	-38.09	0.00	0.00	Vehicle	Vehicle	-----	-234.39	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	-----	-----	11.42	11.42
		U_{19} - L_{19}	-113.66	-38.23	13.43			0.75	1.17	11.78	-33.52	0.00	0.00	Vehicle	Vehicle	-----	-191.34	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	-----	-----	11.86	11.86
		U_{20} - L_{20}	-76.51	-32.46	17.11			0.75	1.17	15.00	-28.45	0.00	0.00	Vehicle	Vehicle	-----	-136.46	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	10.50	10.50
		U_{21} - L_{21}	-45.77	-30.13	18.15			0.75	1.17	15.91	-26.42	0.00	0.00	Vehicle	Vehicle	-----	-93.85	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	-----	-----	11.16	11.16
		U_{22} - L_{22}	-17.72	3.54	4.29			0.75	1.17	3.76	3.11	0.00	0.00	Vehicle	Vehicle	-----	-19.00	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	21.36	-31.34			0.75	1.17	18.73	-27.48	0.00	0.00	Vehicle	Vehicle	-----	-75.61	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	-----	-----	11.28	11.28
		U_{24} - L_{24}	-62.06	17.09	-34.38			0.75	1.17	14.98	-30.14	0.00	0.00	Vehicle	Vehicle	-----	-119.86	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	-----	-----	10.39	10.39
		U_{25} - L_{25}	-103.15	14.02	-43.79			0.75	1.17	12.29	-38.39	0.00	0.00	Vehicle	Vehicle	-----	-184.00	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	-----	-----	10.63	10.63
		U_{26} - L_{26}	-134.38	10.47	-47.53			0.75	1.17	9.18	-41.67	0.00	0.00	Vehicle	Vehicle	-----	-228.86	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	-----	-----	10.63	10.63
		U_{27} - L_{27}	-156.03	4.38	-54.51			0.75	1.17	3.84	-47.79	0.00	0.00	Vehicle	Vehicle	-----	-264.96	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	-----	-----	9.78	9.78
		U_{28} - L_{28}	-179.40	1.90	-58.51			0.75	1.17	1.66	-51.30	0.00	0.00	Vehicle	Vehicle	-----	-299.92	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	9.49	9.49
		U_{29} - L_{29}	-171.60	2.64	-56.73			0.75	1.17	2.32	-49.74	0.00	0.00	Vehicle	Vehicle	-----	-287.75	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	-----	-----	10.42	10.42
		U_{30} - L_{30}	-393.29	-54.12	-56.30			0.75	1.18	-48.01	-49.95	0.00	0.00	Vehicle	Vehicle	-----	-576.21	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	-----	-----	13.18	13.18
		U_{31} - L_{31}	-203.49	-60.85	5.61			0.75	1.18	4.98	-53.99	0.00	0.00	Vehicle	Vehicle	-----	-334.71	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	-----	-----	9.01	9.01
		U_{32} - L_{32}	-222.61	-53.51	1.88			0.75	1.18	1.66	-47.48	0.00	0.00	Vehicle	Vehicle	-----	-351.11	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	-----	-----	12.20	12.20
		U_{33} - L_{33}	-211.72	-53.82	5.70			0.75	1.18	5.06	-47.75	0.00	0.00	Vehicle	Vehicle	-----	-337.30	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	-----	-----	11.58	11.58
		U_{34} - L_{34}	-191.28	-43.99	9.69			0.75	1.18	8.60	-39.03	0.00	0.00	Vehicle	Vehicle	-----	-299.40	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	-----	-----	15.05	15.05
		$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: 2F1 Fy = 33.0 ksi Vehicle Load Factors Pedestrian Load Factors
Condition: As-Inspected Fu = 60.0 ksi DL Factor: 1.30 DL Factor: 1.30
E = 29000.0 ksi LL Factor: 1.30 LL Factor: 1.30

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

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Diagonals	Structure 1	U_0 - L_1	53.29	30.10	-9.06			0.75	1.24	27.93	-8.41	0.00	0.00	Vehicle	Vehicle	105.58	-----	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	-----	-----	-----	-----	-----	**19.09**	**19.09**	-----	-----
		U_1 - L_2	10.80	36.55	-5.18			0.75	1.24	33.91	-4.81	0.00	0.00	Vehicle	Vehicle	58.12	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**12.30**	**12.30**	-----	-----
		U_2 - L_3	-44.05	26.99	-28.60			0.75	1.24	25.04	-26.53	0.00	0.00	Vehicle	Vehicle	-----	-91.76	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	-----	-----	-----	-----	-----	**10.94**	**10.94**
		U_3 - L_4	-76.77	13.14	-42.91			0.75	1.24	12.19	-39.81	0.00	0.00	Vehicle	Vehicle	-----	-151.56	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**6.52**	**6.52**
		U_4 - L_4	118.48	34.56	-16.66			0.75	1.24	32.07	-15.46	0.00	0.00	Vehicle	Vehicle	195.71	-----	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	-----	-----	-----	-----	-----	**12.66**	**12.66**	-----	-----
		U_5 - L_5	137.62	50.97	-9.93			0.75	1.24	47.28	-9.21	0.00	0.00	Vehicle	Vehicle	240.37	-----	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	-----	-----	-----	-----	-----	**10.85**	**10.85**	-----	-----
		U_6 - L_6	157.39	61.55	3.37			0.75	1.24	57.10	3.12	0.00	0.00	Vehicle	Vehicle	278.83	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.64**	**8.64**	-----	-----
		U_7 - L_7	149.33	61.73	-0.31			0.75	1.24	57.27	-0.28	0.00	0.00	Vehicle	Vehicle	268.57	-----	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	-----	-----	-----	-----	-----	**8.75**	**8.75**	-----	-----
		U_8 - L_8	249.21	67.13	-3.27			0.75	1.20	60.32	-2.94	0.00	0.00	Vehicle	Vehicle	402.39	-----	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	-----	-----	-----	-----	-----	**11.82**	**11.82**	-----	-----
		U_9 - L_{10}	260.39	56.65	0.99			0.75	1.20	50.90	0.89	0.00	0.00	Vehicle	Vehicle	404.67	-----	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	-----	-----	-----	-----	-----	**13.79**	**13.79**	-----	-----
		U_{10} - L_{11}	236.43	54.71	-10.39			0.75	1.20	49.16	-9.34	0.00	0.00	Vehicle	Vehicle	371.26	-----	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	-----	-----	-----	-----	-----	**13.72**	**13.72**	-----	-----
		U_{11} - L_{12}	212.05	47.49	-17.72			0.75	1.20	42.67	-15.92	0.00	0.00	Vehicle	Vehicle	331.13	-----	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	-----	-----	-----	-----	-----	**13.25**	**13.25**	-----	-----
		U_{12} - L_{13}	151.78	45.27	-22.15			0.75	1.20	40.67	-19.90	0.00	0.00	Vehicle	Vehicle	250.20	-----	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	-----	-----	-----	-----	-----	**11.78**	**11.78**	-----	-----
		U_{13} - L_{14}	108.73	35.72	-27.78			0.75	1.20	32.09	-24.96	0.00	0.00	Vehicle	Vehicle	183.07	-----	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	-----	-----	-----	-----	-----	**9.94**	**9.94**	-----	-----
		U_{15} - L_{14}	-24.56	24.38	-31.14			0.75	1.20	21.91	-27.98	0.00	0.00	Vehicle	Vehicle	-----	-68.31	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	-----	-----	-----	-----	-----	**10.86**	**10.86**
		U_{16} - L_{15}	23.90	42.34	-24.00			0.75	1.20	38.04	-21.56	0.00	0.00	Vehicle	Vehicle	80.53	-----	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	-----	-----	-----	-----	-----	**10.61**	**10.61**	-----	-----
		U_{17} - L_{16}	120.04	49.82	-13.35			0.75	1.20	44.76	-12.00	0.00	0.00	Vehicle	Vehicle	214.24	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**9.04**	**9.04**	-----	-----
		U_{18} - L_{17}	144.84	56.59	-2.88			0.75	1.20	50.85	-2.59	0.00	0.00	Vehicle	Vehicle	254.40	-----	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	-----	-----	-----	-----	-----	**9.95**	**9.95**	-----	-----
		U_{19} - L_{18}	193.27	57.82	0.36			0.75	1.20	51.95	0.32	0.00	0.00	Vehicle	Vehicle	318.79	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**9.95**	**9.95**	-----	-----
		U_{20} - L_{19}	193.75	49.96	-2.83			0.75	1.20	44.89	-2.55	0.00	0.00	Vehicle	Vehicle	310.23	-----	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	-----	-----	-----	-----	-----	**11.51**	**11.51**	-----	-----
		U_0 - L_1	202.60	45.89	-7.44			0.75	1.18	40.71	-6.60	0.00	0.00	Vehicle	Vehicle	316.30	-----	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	-----	-----	-----	-----	-----	**14.12**	**14.12**	-----	-----
		U_1 - L_2	190.84	50.40	-8.41			0.75	1.18	44.72	-7.46	0.00	0.00	Vehicle	Vehicle	306.22	-----	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	-----	-----	-----	-----	-----	**13.12**	**13.12**	-----	-----
		U_2 - L_3	155.90	51.72	-8.20			0.75	1.18	45.89	-7.27	0.00	0.00	Vehicle	Vehicle	262.32	-----	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	-----	-----	-----	-----	-----	**10.78**	**10.78**	-----	-----
		U_3 - L_4	134.06	43.80	-18.56			0.75	1.18	38.86	-16.47	0.00	0.00	Vehicle	Vehicle	224.80	-----	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	-----	-----	-----	-----	-----	**11.40**	**11.40**	-----	-----
		U_4 - L_5	46.01	36.37	-24.72			0.75	1.18	32.27	-21.93	0.00	0.00	Vehicle	Vehicle	101.76	-----	0.00	16.85	16.8486	556.00	131.71	15.3958	1.9682	70.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**11.83**	**11.83**	-----	-----
		U_5 - L_6	3.43	33.97	-30.67			0.75	1.18	30.14	-27.21	0.00	0.00	Vehicle	Vehicle	43.64	-30.92	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**14.08**	**14.08**	**12.10**	**12.10**
		U_6 - L_7	-84.31	24.84	-43.35			0.75	1.18	22.04	-38.46	0.00	0.00	Vehicle	Vehicle	-----	-159.60	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	-----	-----	-----	-----	-----	**7.15**	**7.15**
		U_7 - L_7	137.33	41.65	-21.24			0.75	1.18	36.96	-18.84	0.00	0.00	Vehicle	Vehicle	226.57	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**12.61**	**12.61**	-----	-----
		U_8 - L_8	210.92	49.59	-17.38			0.75	1.18	44.00	-15.42	0.00	0.00	Vehicle	Vehicle	331.39	-----	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	-----	-----	-----	-----	-----	**11.35**	**11.35**	-----	-----
		U_9 - L_9	236.39	58.34	-11.06			0.75	1.18	51.77	-9.81	0.00	0.00	Vehicle	Vehicle	374.60	-----	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	-----	-----	-----	-----	-----	**10.45**	**10.45**	-----	-----
		U_{10} - L_{10}	274.65	56.94	-7.03			0.75	1.18	50.52	-6.24	0.00	0.00	Vehicle	Vehicle	422.72	-----	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	-----	-----	-----	-----	-----	**11.28**	**11.28**	-----	-----
		U_{11} - L_{11}	281.09	58.53	-4.74			0.75	1.18	51.93	-4.21	0.00	0.00	Vehicle	Vehicle	432.92	-----	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	-----	-----	-----	-----	-----	**10.85**	**10.85**	-----	-----
		U_{12} - L_{12}	278.14	58.34	1.88			0.75	1.18	51.77	1.66	0.00	0.00	Vehicle	Vehicle	428.88	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**9.65**	**9.65**	-----	-----
		U_{14} - L_{13}	235.47	57.30	-3.43			0.75	1.18	50.84	-3.05	0.00	0.00	Vehicle	Vehicle	372.20	-----	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	-----	-----	-----	-----	-----	**10.66**	**10.66**	-----	-----
		U_{14} - L_{15}	143.01	54.97	-5.49			0.75	1.17	48.19	-4.81	0.00	0.00	Vehicle	Vehicle	248.57	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	7.23	-----	-----	-----	-----	-----	**10.53**	**10.53**	-----	-----
		U_{15} - L_{16}	171.90	55.24	-3.75			0.75	1.17	48.43	-3.29	0.00	0.00	Vehicle	Vehicle	286.42	-----	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	-----	-----	-----	-----	-----	**9.89**	**9.89**	-----	-----
		U_{16} - L_{17}	181.04	60.05	-5.34			0.75	1.17	52.65	-4.68	0.00	0.00	Vehicle	Vehicle	303.79	-----	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	-----	-----	-----	-----	-----	**10.05**	**10.05**	-----	-----
		U_{17} - L_{18}	171.16	51.02	-11.34			0.75	1.17	44.73	-9.94	0.00	0.00	Vehicle	Vehicle	280.66	-----	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	-----	-----	-----	-----	-----	**10.72**	**10.72**	-----	-----
		U_{18} - L_{19}	150.64	45.88	-12.68			0.75	1.17	40.22	-11.11	0.00	0.00	Vehicle	Vehicle	248.13	-----	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	-----	-----	-----	-----	-----	**12.43**	**12.43**	-----	-----
		U_{19} - L_{20}	125.86	41.56	-20.35			0.75	1.17	36.44	-17.85	0.00	0.00	Vehicle	Vehicle	211.00	-----	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	-----	-----	-----	-----	-----	**13.10**	**13.10**	-----	-----
	Structure 2	U_{20} - L_{21}	76.04	40.25	-21.64			0.75	1.17	35.28	-18.97	0.00	0.00	Vehicle	Vehicle	144.72	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**9.97**	**9.97**	-----	-----
		U_{21} - L_{22}	38.33	32.88	-34.07			0.75	1.17	28.83	-29.87	0.00	0.00	Vehicle	Vehicle	87.31	-----	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	-----	-----	-----	-----	-----	**13.51**	**13.51**	-----	-----
		U_{23} - L_{22}	18.05	30.23	-27.89			0.75	1.17	26.50	-24.45	0.00	0.00	Vehicle	Vehicle	57.92	-8.32	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	-----	-----	-----	-----	-----	**15.46**	**15.46**	**13.95**	**13.95**
		U_{24} - L_{23}	58.57	40.50	-22.08			0.75	1.17	35.51	-19.36	0.00	0.00	Vehicle	Vehicle	122.31	-----	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	-----	-----	-----	-----	-----	**10.39**	**10.39**	-----	-----
		U_{25} - L_{24}	114.98	44.89	-16.60			0.75	1.17	39.36	-14.55	0.00	0.00	Vehicle	Vehicle	200.64	-----	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	-----	-----	-----	-----	-----	**12.41**	**12.41**	-----	-----
		U_{26} - L_{25}	143.00	56.48	-10.80			0.75	1.17	49.52	-9.47	0.00	0.00	Vehicle	Vehicle	250.27	-----	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	-----	-----	-----	-----	-----	**10.25**	**10.25**	-----	-----
		U_{27} - L_{26}	173.82	53.49	-8.30			0.75	1.17	46.90	-7.27	0.00	0.00	Vehicle	Vehicle	286.93	-----	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	-----	-----	-----	-----	-----	**10.17**	**10.17**	-----	-----
		U_{28} - L_{27}	186.60	59.27	-3.41			0.75	1.17	51.97	-2.99	0.00	0.00	Vehicle	Vehicle	310.13	-----	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	-----	-----	-----	-----	-----	**10.08**	**10.08**	-----	-----
		U_{29} - L_{28}	190.75	58.26	-3.20			0.75	1.17	51.08	-2.80	0.00	0.00	Vehicle	Vehicle	314.38	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**9.00**	**9.00**	-----	-----
		U_{30} - L_{29}	161.86	53.14	-2.55			0.75	1.17	46.59	-2.23	0.00	0.00	Vehicle	Vehicle	270.99	-----	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	-----	-----	-----	-----	-----	**10.49**	**10.49**	-----	-----
		U_{30} - L_{31}	191.72	55.33	-5.35			0.75	1.18	49.09	-4.74	0.00	0.00	Vehicle	Vehicle	313.06	-----	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	-----	-----	-----	-----	-----	**11.93**	**11.93**	-----	-----
		U_{31} - L_{32}	226.45	59.98	-6.07			0.75	1.18	53.21	-5.38	0.00	0.00	Vehicle	Vehicle	363.56	-----	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	-----	-----	-----	-----	-----	**10.36**	**10.36**	-----	-----
		U_{32} - L_{33}	243.42	57.08	-5.84			0.75	1.18	50.64	-5.18	0.00	0.00	Vehicle	Vehicle	382.29	-----	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	-----	-----	-----	-----	-----	**11.87**	**11.87**	-----	-----
		U_{33} - L_{34}	239.13	49.72	-8.98			0.75	1.18	44.12	-7.97	0.00	0.00	Vehicle	Vehicle	368.21	-----	0.00	33.27	33.2657	1097.77	131.71	14.5729	2.8573	45.90	31.00	-876.43	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**13.72**	**13.72**	-----	-----
		U_{34} - L_{35}	222.16	51.34	-13.07			0.75	1.18	45.55	-11.60	0.00	0.00	Vehicle	Vehicle	348.02	-----	0.00	30.63	30.6305	1010.81	131.71	13.7604	2.8427	43.57	31.19

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: 2F1 **Condition:** As-Inspected

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

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

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

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capacity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Upper Chord	Structure 1	U_0 - U_1	-66.70	5.57	-28.32	2.21	-8.83	0.90	1.24	6.20	-31.53	2.21	-8.83	Pedestrian	Vehicle	-----	-127.70	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	15.82	15.82
		U_1 - U_2	-86.55	13.52	-43.81	6.01	-16.34	0.90	1.24	15.05	-48.78	6.01	-16.34	Pedestrian	Pedestrian	-----	-197.17	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	-----	-----	7.35	7.35
		U_2 - U_3	-48.14	19.98	-46.03	9.46	-19.05	0.90	1.24	22.24	-51.25	9.46	-19.05	Pedestrian	Pedestrian	-----	-153.98	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	7.36	7.36
		U_3 - U_4	36.58	25.86	-39.17	12.74	-17.47	0.90	1.24	28.79	-43.61	12.74	-17.47	Pedestrian	Pedestrian	101.54	-31.86	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	15.28	15.28	9.85	9.85
		U_4 - U_5	38.93	25.95	-34.12	12.80	-17.38	0.90	1.24	28.89	-37.98	12.80	-17.38	Pedestrian	Pedestrian	104.81	-21.35	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	15.16	15.16	10.92	10.92
		U_5 - U_6	154.60	29.26	-10.66	3.13	0.00	0.90	1.24	32.57	-11.87	3.13	0.00	Vehicle	Vehicle	243.32	-----	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	-----	-----	15.86	15.86	-----	-----
		U_6 - U_7	288.38	31.91	-4.03	17.14	-4.31	0.90	1.24	35.53	-4.49	17.14	-4.31	Pedestrian	Pedestrian	443.36	-----	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	-----	-----	9.80	9.80	-----	-----
		U_7 - U_8	410.94	-0.81	3.25	22.63	0.00	0.90	1.24	3.62	-0.90	22.63	0.00	Pedestrian	Vehicle	568.34	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	26.64	26.64	-----	-----
		U_8 - U_9	311.57	24.26	-5.18	12.90	6.19	0.90	1.20	26.15	-5.58	12.90	6.19	Pedestrian	Vehicle	455.81	-----	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	-----	-----	16.06	16.06	-----	-----
		U_9 - U_{10}	78.52	25.26	-23.39	12.28	-6.79	0.90	1.20	27.24	-25.22	12.28	-6.79	Pedestrian	Vehicle	153.44	-----	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	-----	-----	15.96	15.96	-----	-----
		U_{10} - U_{11}	-141.43	23.77	-39.60	11.10	-18.41	0.90	1.20	25.63	-42.69	11.10	-18.41	Pedestrian	Pedestrian	-----	-263.29	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	-----	-----	7.46	7.46
		U_{11} - U_{12}	-338.03	21.86	-59.38	9.77	-27.93	0.90	1.20	23.56	-64.02	9.77	-27.93	Pedestrian	Pedestrian	-----	-558.98	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	-----	-----	5.16	5.16
		U_{12} - U_{13}	-480.08	18.80	-69.54	8.23	-34.32	0.90	1.20	20.27	-74.98	8.23	-34.32	Pedestrian	Pedestrian	-----	-766.20	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	-----	-----	6.02	6.02
		U_{13} - U_{14}	-570.65	16.00	-73.40	6.68	-37.21	0.90	1.20	17.25	-79.14	6.68	-37.21	Pedestrian	Pedestrian	-----	-893.10	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.51	6.51
		U_{14} - U_{15}	-571.07	16.11	-58.61	6.65	-37.22	0.90	1.20	17.36	-63.19	6.65	-37.22	Pedestrian	Pedestrian	-----	-872.92	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	7.53	7.53
		U_{15} - U_{16}	-581.88	6.19	-54.56	0.00	-31.14	0.90	1.20	6.67	-58.82	0.00	-31.14	Vehicle	Pedestrian	-----	-873.39	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	-----	-----	8.29	8.29
		U_{16} - U_{17}	-539.46	5.32	-46.09	0.00	-28.33	0.90	1.20	5.73	-49.70	0.00	-28.33	Vehicle	Pedestrian	-----	-802.73	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	10.10	10.10
		U_{17} - U_{18}	-422.33	45.56	-17.77	-25.05	2.26	0.90	1.20	-19.16	-49.13	2.26	-25.05	Vehicle	Pedestrian	-----	-645.46	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	-----	-----	7.39	7.39
		U_{18} - U_{19}	-286.19	-27.29	-5.92	-16.96	1.28	0.90	1.20	-6.38	-29.42	1.28	-16.96	Vehicle	Pedestrian	-----	-432.34	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	8.44	8.44
		U_{19} - U_{20}	-140.84	-11.62	-7.02	0.00	-8.13	0.90	1.20	-7.57	-12.53	0.00	-8.13	Vehicle	Pedestrian	-----	-209.94	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	-----	-----	25.98	25.98
	Structure 2	U_0 - U_1	-147.44	1.78	-19.73	0.36	-4.88	0.90	1.18	1.90	-21.01	0.36	-4.88	Vehicle	Vehicle	-----	-218.99	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	23.80	23.80
		U_1 - U_2	-319.06	6.10	-37.91	1.96	-13.36	0.90	1.18	6.50	-40.36	1.96	-13.36	Vehicle	Vehicle	-----	-467.25	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	-----	-----	11.70	11.70
		U_2 - U_3	-460.91	10.92	-52.91	3.77	-20.95	0.90	1.18	11.63	-56.34	3.77	-20.95	Vehicle	Pedestrian	-----	-699.65	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.50	4.00	0.50	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	7.98	7.98
		U_3 - U_4	-580.03	16.60	-71.44	5.92	-27.68	0.90	1.18	17.67	-76.07	5.92	-27.68	Pedestrian	Pedestrian	-----	-888.91	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	-----	-----	7.34	7.34
		U_4 - U_5	-616.49	21.52	-76.83	7.86	-31.35	0.90	1.18	22.91	-81.80	7.86	-31.35	Pedestrian	Pedestrian	-----	-948.53	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	-----	-----	7.69	7.69
		U_5 - U_6	-604.71	26.66	-77.40	9.87	-32.88	0.90	1.18	28.38	-82.41	9.87	-32.88	Pedestrian	Pedestrian	-----	-936.00	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	-----	-----	7.65	7.65
		U_6 - U_7	-514.78	30.53	-69.14	11.56	-31.23	0.90	1.18	32.51	-73.61	11.56	-31.23	Pedestrian	Pedestrian	-----	-805.51	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	-----	-----	7.88	7.88
		U_7 - U_8	-512.83	30.56	-59.23	11.57	-31.18	0.90	1.18	32.54	-63.07	11.57	-31.18	Pedestrian	Pedestrian	-----	-789.19	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	-----	-----	8.79	8.79
		U_8 - U_9	-373.51	34.01	-52.28	13.16	-27.41	0.90	1.18	36.21	-55.67	13.16	-27.41	Pedestrian	Pedestrian	-----	-593.56	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	-----	-----	9.06	9.06
		U_9 - U_{10}	-181.05	35.64	-30.97	14.25	-21.42	0.90	1.18	37.94	-32.97	14.25	-21.42	Pedestrian	Pedestrian	-----	-306.07	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	-----	-----	12.96	12.96
		U_{10} - U_{11}	26.18	36.89	-25.42	15.21	-14.40	0.90	1.18	39.27	-27.06	15.21	-14.40	Pedestrian	Pedestrian	104.86	-19.87	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	16.23	16.23	19.19	19.19
		U_{11} - U_{12}	237.39	-3.88	-12.75	10.86	0.00	0.90	1.18	-4.13	-13.58	10.86	0.00	Pedestrian	Vehicle	317.35	-----	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	5.67	-0.80	15.82	0.56	0.90	1.18	6.03	-0.85	15.82	0.56	Pedestrian	Vehicle	595.06	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	32.19	32.19	-----	-----
		U_{13} - U_{14}	595.84	4.51	2.95	24.32	0.00	0.90	1.18	4.81	3.15	24.32	0.00	Pedestrian	Vehicle	812.45	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	33.26	33.26	-----	-----
		U_{14} - U_{15}	615.53	29.91	-2.39	13.42	8.77	0.90	1.17	31.47	-2.52	13.42	8.77	Pedestrian	Pedestrian	858.54	-----	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	-----	-----	21.14	21.14	-----	-----
		U_{15} - U_{16}	486.15	31.30	-12.51	14.17	3.08	0.90	1.17	32.93	-13.16	14.17	3.08	Pedestrian	Vehicle	693.22	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	16.69	16.69	-----	-----
		U_{16} - U_{17}	339.27	31.39	-23.19	14.66	-2.95	0.90	1.17	33.02	-24.40	14.66	-2.95	Pedestrian	Vehicle	503.04	-----	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	-----	-----	14.78	14.78	-----	-----
		U_{17} - U_{18}	192.13	30.53	-34.72	15.12	-9.49	0.90	1.17	32.12	-36.53	15.12	-9.49	Pedestrian	Vehicle	311.18	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	12.16	12.16	-----	-----
		U_{18} - U_{19}	53.83	28.13	-46.26	15.12	-15.34	0.90	1.17	29.59	-48.67	15.12	-15.34	Pedestrian	Vehicle	128.11	-----	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	-----	-----	15.93	15.93	-----	-----
		U_{19} - U_{20}	-58.94	24.94	-56.17	15.07	-19.84	0.90	1.17	26.24	-59.09	15.07	-19.84	Pedestrian	Pedestrian	-----	-179.24	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	-----	-----	8.03	8.03
	Structure 3	U_0 - U_1	-120.93	0.75	-18.35	0.28	-5.10	0.90	1.20	0.81	-19.78	0.28	-5.10	Pedestrian	Vehicle	-----	-182.93	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	28.14	28.14
		U_1 - U_2	-276.62	3.53	-38.04	1.13	-14.58	0.90	1.20	3.80	-41.02	1.13	-14.58	Vehicle	Pedestrian	-----	-431.88	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	7.21	7.21
		U_2 - U_3	-409.97	6.88	-52.75	2.28	-23.49	0.90	1.20	7.42	-56.87	2.28	-23.49	Vehicle	Pedestrian	-----	-637.43	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	-----	-----	6.98	6.98
		U_3 - U_4	-521.37	9.03	-66.15	3.72	-31.20	0.90	1.20	9.74	-71.32	3.72	-31.20	Pedestrian	Pedestrian	-----	-811.07	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	-----	-----	7.86	7.86
		U_4 - U_5	-556.38	14.36	-72.01	5.28	-35.33	0.90	1.20	15.48	-77.64	5.28	-35.33	Pedestrian	Pedestrian	-----	-870.15	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.83	6.83
		U_5 - U_6	-535.38	18.18	-69.27	7.07	-36.15	0.90	1.20	19.60	-74.68	7.07	-36.15	Pedestrian	Pedestrian	-----	-840.08	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	-----	-----	7.15	7.15
		U_6 - U_7	-533.59	18.22	-60.99	7.10	-36.10	0.90	1.20	19.65	-65.76	7.10	-36.10	Pedestrian	Pedestrian	-----	-826.09	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	-----	-----	7.79	7.79
		U_7 - U_8	-436.11	20.68	-40.12	8.76	-32.90	0.90	1.20	22.30	-43.25	8.76	-32.90	Pedestrian	Pedestrian	-----	-665.95	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	-----	-----	9.21	9.21
		U_8 - U_9	-286.48	22.90	-30.16	10.46	-26.28	0.90	1.20	24.69	-32.51	10.46	-26.28	Pedestrian	Pedestrian	-----	-448.85	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	-----	-----	8.95	8.95
		U_9 - U_{10}	-88.11	24.03	-20.21	-4.96	0.00	0.90	1.20	25.91	-21.79	0.00	-4.96	Vehicle	Vehicle	-----	-142.87	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

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: 2F1 **Condition:** As-Inspected

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

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

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

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Lower Chord	Structure 1	L_0- L_1	-1.94	0.61	-1.32	0.37	-2.06	0.90	1.24	0.67	-1.47	0.37	-2.06	Pedestrian	Pedestrian	-----	-7.11	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	-----	-----	119.56	119.56
		L_1 - L_2	67.93	-7.46	25.57	-3.35	9.23	0.90	1.24	28.47	-8.30	9.23	-3.35	Vehicle	Pedestrian	125.32	-----	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	-----	-----	15.27	15.27	-----	-----
		L_2 - L_3	78.83	-16.18	45.32	-7.39	15.48	0.90	1.24	50.45	-18.01	15.48	-7.39	Vehicle	Pedestrian	168.06	-----	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	-----	-----	11.69	11.69	-----	-----
		L_3 - L_4	39.11	-22.55	36.27	-10.83	18.09	0.90	1.24	40.38	-25.10	18.09	-10.83	Pedestrian	Pedestrian	126.85	-----	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	-----	-----	10.77	10.77	-----	-----
		L_4 - L_5	-166.44	-32.79	21.47	-16.91	10.96	0.90	1.24	23.90	-36.51	10.96	-16.91	Pedestrian	Pedestrian	-----	-285.80	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	6.25	6.25
		L_5 - L_6	-301.30	-35.54	11.93	-15.71	0.00	0.90	1.24	13.29	-39.56	0.00	-15.71	Vehicle	Pedestrian	-----	-463.54	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	-----	-----	6.48	6.48
		L_6 - L_7	-439.01	-5.16	-4.90	-4.99	-21.52	0.90	1.24	-5.45	-5.74	-4.99	-21.52	Pedestrian	Pedestrian	-----	-606.15	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	-----	-----	18.56	18.56
		L_7 - L_8	-551.71	-34.16	1.62	-35.56	0.00	0.90	1.24	1.81	-38.03	0.00	-35.56	Vehicle	Pedestrian	-----	-812.88	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	-----	-----	8.80	8.80
		L_8 - L_9	-570.55	-18.87	-12.15	-11.71	-25.77	0.90	1.20	-13.10	-20.35	-11.71	-25.77	Pedestrian	Pedestrian	-----	-801.67	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	-----	-----	13.64	13.64
		L_9 - L_{10}	-355.55	-20.49	-7.39	-11.67	-13.03	0.90	1.20	-7.97	-22.09	-11.67	-13.03	Pedestrian	Pedestrian	-----	-507.86	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	16.79	16.79
		L_{10} - L_{11}	-118.56	-21.06	15.13	-10.69	-1.73	0.90	1.20	16.31	-22.71	-1.73	-10.69	Vehicle	Pedestrian	-----	-197.54	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	-----	-----	11.43	11.43
		L_{11} - L_{12}	103.33	-19.51	27.15	-9.47	9.97	0.90	1.20	29.28	-21.04	9.97	-9.47	Pedestrian	Pedestrian	185.35	-----	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	-----	-----	12.50	12.50	-----	-----
		L_{12} - L_{13}	300.47	-18.06	56.00	-8.15	17.86	0.90	1.20	60.38	-19.47	17.86	-8.15	Vehicle	Pedestrian	469.09	-----	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	-----	-----	11.17	11.17	-----	-----
		L_{13} - L_{14}	441.01	-15.32	58.44	-6.62	24.18	0.90	1.20	63.01	-16.52	24.18	-6.62	Pedestrian	Pedestrian	686.66	-----	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	-----	-----	9.94	9.94	-----	-----
		L_{14} - L_{15}	546.80	-9.74	62.84	0.00	21.12	0.90	1.20	67.75	-10.50	21.12	0.00	Vehicle	Vehicle	798.91	-----	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	-----	-----	15.17	15.17	-----	-----
		L_{15} - L_{16}	505.90	-9.34	52.54	0.00	18.34	0.90	1.20	56.65	-10.07	18.34	0.00	Vehicle	Vehicle	731.30	-----	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	-----	-----	18.86	18.86	-----	-----
		L_{16} - L_{17}	398.64	38.42	26.40	0.00	11.94	0.90	1.20	41.42	28.46	11.94	0.00	Vehicle	Vehicle	572.08	-----	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	-----	-----	19.75	19.75	-----	-----
		L_{17} - L_{18}	263.76	24.67	13.64	4.73	0.15	0.90	1.20	26.60	14.70	4.73	0.15	Vehicle	Vehicle	377.46	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	23.30	23.30	-----	-----
		L_{18} - L_{19}	118.86	10.64	3.41	-3.28	0.70	0.90	1.20	11.47	3.67	0.70	-3.28	Vehicle	Vehicle	169.42	-----	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	-----	-----	33.46	33.46	-----	-----
		L_{19} - L_{20}	-23.25	-3.03	1.92	-12.00	1.27	0.90	1.20	2.07	-3.27	1.27	-12.00	Pedestrian	Pedestrian	-----	-50.07	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	-----	-----	23.60	23.60
		L_0- L_1	-35.95	2.12	1.32	1.19	-5.13	0.90	1.18	2.26	1.40	1.19	-5.13	Pedestrian	Pedestrian	-----	-51.58	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	45.00	Pass	6.32	12.00	Pass	6.32	12.00	Pass	-----	-----	-----	-----
		L_1 - L_2	132.83	-1.26	16.53	-0.07	2.94	0.90	1.18	17.60	-1.35	2.94	-0.07	Vehicle	Vehicle	195.55	-----	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	-----	-----	28.44	28.44	-----	-----
		L_2 - L_3	304.11	-6.02	37.73	-1.80	10.53	0.90	1.18	40.17	-6.41	10.53	-1.80	Vehicle	Vehicle	447.56	-----	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	-----	-----	16.73	16.73	-----	-----
		L_3 - L_4	445.92	-10.99	53.89	-3.63	18.16	0.90	1.18	57.38	-11.70	18.16	-3.63	Vehicle	Vehicle	654.28	-----	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	-----	-----	15.05	15.05	-----	-----
		L_4 - L_5	567.84	-17.56	71.99	-6.10	24.82	0.90	1.18	76.65	-18.70	24.82	-6.10	Vehicle	Vehicle	837.83	-----	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	-----	-----	14.12	14.12	-----	-----
		L_5 - L_6	603.64	-22.56	71.33	-8.06	28.47	0.90	1.18	75.94	-24.02	28.47	-8.06	Pedestrian	Pedestrian	920.46	-----	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	-----	-----	11.39	11.39	-----	-----
		L_6 - L_7	599.48	-28.66	66.56	-10.41	30.26	0.90	1.18	70.87	-30.51	30.26	-10.41	Pedestrian	Pedestrian	910.79	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	12.05	12.05	-----	-----
		L_7 - L_8	373.94	-35.95	61.84	-13.66	24.93	0.90	1.18	65.84	-38.27	24.93	-13.66	Pedestrian	Pedestrian	604.12	-----	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	-----	-----	10.66	10.66	-----	-----
		L_8 - L_9	195.71	-38.71	43.57	-15.12	19.52	0.90	1.18	46.38	-41.21	19.52	-15.12	Pedestrian	Pedestrian	340.10	-----	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	-----	-----	13.72	13.72	-----	-----
		L_9 - L_{10}	-13.21	-40.03	31.78	-7.60	12.45	0.90	1.18	33.84	-42.62	12.45	-7.60	Pedestrian	Vehicle	43.00	-72.58	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	18.90	18.90	16.76	16.76
		L_{10} - L_{11}	-217.32	12.93	19.07	-15.65	0.00	0.90	1.18	20.30	13.77	0.00	-15.65	Vehicle	Vehicle	-----	-264.61	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----
		L_{11} - L_{12}	-419.93	-39.92	5.43	-23.34	0.00	0.90	1.18	5.78	-42.51	0.00	-23.34	Vehicle	Pedestrian	-----	-631.51	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	-----	-----	7.76	7.76
		L_{12} - L_{13}	-591.41	-16.30	0.94	-7.09	-18.75	0.90	1.18	1.00	-17.36	-7.09	-18.75	Pedestrian	Pedestrian	-----	-815.76	9.73	59.10	49.3700	1950.30	131.71	10.9531	5.8186	16.94	32.73	-1644.04	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	18.65	18.65
		L_{13} - L_{14}	-724.23	-17.37	0.13	-35.12	0.00	0.90	1.18	0.14	-18.49	0.00	-35.12	Vehicle	Pedestrian	-----	-1011.19	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	14.75	14.75
		L_{14} - L_{15}	-747.05	7.40	-10.01	0.00	-36.29	0.90	1.17	7.78	-10.54	0.00	-36.29	Vehicle	Pedestrian	-----	-1032.03	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	-----	-----	16.41	16.41
		L_{15} - L_{16}	-632.15	-24.56	-3.04	-9.38	-12.11	0.90	1.17	-3.20	-25.84	-9.38	-12.11	Pedestrian	Pedestrian	-----	-871.13	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	-----	-----	16.95	16.95
		L_{16} - L_{17}	-488.62	-26.29	1.86	-9.25	-11.44	0.90	1.17	1.95	-27.66	-9.25	-11.44	Pedestrian	Pedestrian	-----	-686.04	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	-----	-----	14.29	14.29
		L_{17} - L_{18}	-336.98	-26.26	12.79	-9.73	-4.53	0.90	1.17	13.46	-27.63	-4.53	-9.73	Vehicle	Pedestrian	-----	-486.64	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	-----	-----	10.45	10.45
		L_{18} - L_{19}	-183.61	-25.85	28.79	-9.59	1.37	0.90	1.17	30.29	-27.20	1.37	-9.59	Vehicle	Pedestrian	-----	-286.51	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	-----	-----	10.60	10.60
		L_{19} - L_{20}	-45.77	-23.25	40.18	-9.58	7.21	0.90	1.17	42.27	-24.46	7.21	-9.58	Vehicle	Pedestrian	-----	-103.76	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	-----	-----	15.50	15.50
	Structure 2	L_{20} - L_{21}	68.00	-20.65	46.51	-9.12	11.07	0.90	1.17	48.93	-21.73	11.07	-9.12	Vehicle	Pedestrian	152.00	-----	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	-----	-----	18.32	18.32	-----	-----
		L_{21} - L_{22}	133.90	-8.97	42.98	-8.82	13.61	0.90	1.17	45.22	-9.44	13.61	-8.82	Vehicle	Pedestrian	232.86	-----	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	-----	-----	18.37	18.37	-----	-----
		L_{22} - L_{23}	122.50	-17.02	52.21	-7.58	8.54	0.90	1.17	54.93	-17.91	8.54	-7.58	Vehicle	Pedestrian	230.66	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	15.33	15.33	-----	-----
		L_{23} - L_{24}	46.70	-20.24	39.41	-7.09	6.92	0.90	1.17	41.46	-21.30	6.92	-7.09	Vehicle	Vehicle	114.60	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	22.14	22.14	-----	-----
		L_{24} - L_{25}	-66.76	-22.42	32.60	-4.28	3.32	0.90	1.17	34.30	-23.59	3.32	-4.28	Vehicle	Vehicle	-----	-117.44	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	-----	-----	21.49	21.49
		L_{25} - L_{26}	-205.83	-24.20	21.63	-11.78	0.00	0.90	1.17	22.75	-25.47	0.00	-11.78	Vehicle	Pedestrian	-----	-316.00	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	-----	-----	9.87	9.87
		L_{26} - L_{27}	-350.61	3.53	9.25	-18.88	0.00	0.90	1.17	9.73	3.72	0.00	-18.88	Vehicle	Pedestrian	-----	-475.50	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	-----	-----
		L_{27} - L_{28}	-494.76	-16.34	3.52	-25.89	0.00	0.90	1.17	3.70	-17.19	0.00	-25.89	Vehicle	Pedestrian	-----	-699.20	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	12.83	12.83
		L_{28} - L_{29}	-620.88	-27.32	-5.19	-21.97	-5.04	0.90	1.17	-5.46	-28.74	-5.04	-21.97	Pedestrian	Pedestrian	-----	-873.06	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	-----	-----	12.91	12.91
		L_{29} - L_{30}	-716.82	-12.42	-11.18	-36.30	0.00	0.90	1.17	-11.76	-13.06	0.00	-36.30	Vehicle	Pedestrian	-----	-996.03	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	-----	-----	16.17	16.17
		L_{30} - L_{31}	-850.86	17.51	-6.51	0.00	-35.98	0.90	1.18	18.65	-6.93	0.00	-35.98	Vehicle	Pedestrian	-----	-1161.90	11.98	70.85	58.8700

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: 2F1 **Condition:** As-Inspected

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

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

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

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Verticals	Structure 1	U_0 - L_0	-93.63	-33.90	7.38	-12.32	3.44	0.90	1.24	8.22	-37.74	3.44	-12.32	Pedestrian	Vehicle	-----	-170.78	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	-----	-----	-----	-----	-----	6.65	6.65
		U_1 - L_1	-46.50	-22.81	6.34	-9.05	2.93	0.90	1.24	7.06	-25.40	2.93	-9.05	Pedestrian	Pedestrian	-----	-105.23	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	-----	-----	-----	-----	-----	8.87	8.87
		U_2 - L_2	-0.07	-12.61	5.75	-5.68	2.84	0.90	1.24	6.40	-14.04	2.84	-5.68	Pedestrian	Pedestrian	11.92	-25.72	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	46.29	46.29	17.85	17.85
		U_3 - L_3	39.61	-7.80	5.11	-2.12	2.70	0.90	1.24	5.69	-8.68	2.70	-2.12	Pedestrian	Vehicle	62.40	-----	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	-----	-----	-----	-----	-----	-----	46.28	46.28	-----	-----
		U_4 - L_4	-30.21	0.03	-3.80	0.00	-3.47	0.90	1.24	0.03	-4.23	0.00	-3.47	Vehicle	Pedestrian	-----	-49.27	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	41.54	41.54
		U_5 - L_5	-130.50	2.44	-21.55	0.00	-10.24	0.90	1.24	2.71	-23.99	0.00	-10.24	Vehicle	Pedestrian	-----	-214.15	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	-----	-----	-----	-----	-----	8.61	8.61
		U_6 - L_6	-158.19	3.24	-21.24	0.00	-13.06	0.90	1.24	3.61	-23.65	0.00	-13.06	Vehicle	Pedestrian	-----	-253.37	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	9.53	9.53
		U_7 - L_7	-152.33	6.43	-19.72	0.00	-13.25	0.90	1.24	7.16	-21.95	0.00	-13.25	Vehicle	Pedestrian	-----	-243.78	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	-----	-----	-----	-----	-----	8.75	8.75
		U_8 - L_8	-455.44	-31.93	-19.85	-18.98	-12.74	0.90	1.24	-22.10	-35.54	-12.74	-18.98	Pedestrian	Pedestrian	-----	-662.95	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	-----	-----	-----	-----	-----	11.12	11.12
		U_9 - L_9	-287.50	-32.12	0.33	-18.21	0.00	0.90	1.20	0.36	-34.63	0.00	-18.21	Vehicle	Pedestrian	-----	-442.44	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	-----	-----	-----	-----	-----	6.77	6.77
		U_{10} - L_{10}	-276.27	-30.25	-1.27	-16.18	-1.37	0.90	1.20	-1.37	-32.61	-1.37	-16.18	Pedestrian	Pedestrian	-----	-422.57	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	9.56	9.56
		U_{11} - L_{11}	-232.54	-27.57	0.88	-14.42	0.00	0.90	1.20	0.94	-29.73	0.00	-14.42	Vehicle	Pedestrian	-----	-359.69	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	-----	-----	-----	-----	-----	9.26	9.26
		U_{12} - L_{12}	-178.38	-22.92	0.82	-11.20	0.00	0.90	1.20	0.88	-24.71	0.00	-11.20	Vehicle	Pedestrian	-----	-278.57	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	-----	-----	-----	-----	-----	9.86	9.86
		U_{13} - L_{13}	-127.70	-16.85	2.99	-7.88	0.00	0.90	1.20	3.22	-18.17	0.00	-7.88	Vehicle	Pedestrian	-----	-199.87	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	9.71	9.71
		U_{14} - L_{14}	-30.38	-1.58	-1.77	-3.03	0.00	0.90	1.20	-1.70	-1.91	0.00	-3.03	Vehicle	Pedestrian	-----	-45.92	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	-----	-----	-----	-----	-----	63.63	63.63
		U_{15} - L_{15}	-28.93	5.86	-14.92	1.55	-4.53	0.90	1.20	6.32	-16.08	1.55	-4.53	Vehicle	Vehicle	-----	-58.52	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	-----	-----	-----	-----	-----	19.54	19.54
		U_{16} - L_{16}	-75.99	3.25	-16.65	1.39	-7.07	0.90	1.20	3.51	-17.96	1.39	-7.07	Pedestrian	Pedestrian	-----	-131.32	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	-----	-----	-----	-----	-----	10.60	10.60
		U_{17} - L_{17}	-161.81	3.47	-23.93	1.30	-10.66	0.90	1.20	3.74	-25.80	1.30	-10.66	Pedestrian	Pedestrian	-----	-257.75	0.00	20.66	20.0644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	6.84	6.84
		U_{18} - L_{18}	-190.09	2.98	-23.56	1.12	-12.69	0.90	1.20	3.21	-25.40	1.12	-12.69	Pedestrian	Pedestrian	-----	-296.64	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	-----	-----	-----	-----	-----	8.80	8.80
		U_{19} - L_{19}	-228.09	2.55	-23.00	0.97	-14.99	0.90	1.20	2.75	-24.79	0.97	-14.99	Pedestrian	Pedestrian	-----	-348.23	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	-----	-----	-----	-----	-----	9.76	9.76
		U_{20} - L_{20}	-242.54	2.32	-23.66	0.95	-15.62	0.90	1.20	2.50	-25.51	0.95	-15.62	Pedestrian	Pedestrian	-----	-368.77	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	-----	-----	-----	-----	-----	6.91	6.91
	Structure 2	U_0 - L_0	-302.99	-33.83	5.60	-15.08	2.22	0.90	1.18	5.97	-36.02	2.22	-15.08	Pedestrian	Pedestrian	-----	-460.32	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	-----	-----	-----	-----	-----	6.64	6.64
		U_1 - L_1	-268.80	-32.22	5.73	-13.67	2.12	0.90	1.18	6.10	-34.30	2.12	-13.67	Pedestrian	Pedestrian	-----	-411.80	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	-----	-----	-----	-----	-----	8.41	8.41
		U_2 - L_2	-220.88	-28.37	6.18	-12.32	2.34	0.90	1.18	6.58	-30.20	2.34	-12.32	Pedestrian	Pedestrian	-----	-342.43	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	-----	-----	-----	-----	-----	8.31	8.31
		U_3 - L_3	-175.24	-26.34	6.62	-10.35	2.49	0.90	1.18	7.05	-28.04	2.49	-10.35	Pedestrian	Pedestrian	-----	-277.72	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	45.00	Pass	4.91	12.00	Pass	-----	-----	-----	-----	-----	7.21	7.21
		U_4 - L_4	-82.09	-19.36	5.75	-6.62	2.21	0.90	1.18	6.13	-20.62	2.21	-6.62	Pedestrian	Vehicle	-----	-133.51	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	12.47	12.47
		U_5 - L_5	-19.91	-14.02	6.51	-4.16	2.23	0.90	1.18	6.93	-14.93	2.23	-4.16	Vehicle	Vehicle	-----	-45.28	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	-----	-----	-----	-----	-----	21.48	21.48
		U_6 - L_6	60.32	-7.95	12.77	-0.47	1.75	0.90	1.18	13.59	-8.47	1.75	-0.47	Vehicle	Vehicle	96.09	-----	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	-----	27.02	27.02	-----	-----
		U_7 - L_7	-41.78	-0.96	-1.13	0.00	-2.49	0.90	1.18	-1.03	-1.21	0.00	-2.49	Vehicle	Pedestrian	-----	-59.11	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	-----	-----	-----	-----	-----	80.91	80.91
		U_8 - L_8	-189.01	2.70	-20.55	0.00	-8.38	0.90	1.18	2.87	-21.87	0.00	-8.38	Vehicle	Pedestrian	-----	-285.03	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	-----	-----	-----	-----	-----	11.29	11.29
		U_9 - L_9	-254.00	0.91	-26.63	0.00	-10.55	0.90	1.18	0.97	-28.35	0.00	-10.55	Vehicle	Pedestrian	-----	-380.77	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	-----	-----	-----	-----	-----	11.24	11.24
		U_{10} - L_{10}	-290.02	1.99	-26.99	0.00	-12.18	0.90	1.18	2.12	-28.74	0.00	-12.18	Vehicle	Pedestrian	-----	-430.22	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	-----	-----	-----	-----	-----	11.94	11.94
		U_{11} - L_{11}	-312.19	4.23	-28.21	0.00	-12.59	0.90	1.18	4.50	-30.04	0.00	-12.59	Vehicle	Pedestrian	-----	-461.26	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	-----	-----	-----	-----	-----	10.62	10.62
		U_{12} - L_{12}	-327.27	6.13	-26.34	-0.93	-13.01	0.90	1.18	6.52	-28.05	-0.93	-13.01	Vehicle	Pedestrian	-----	-478.82	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	-----	-----	-----	-----	-----	11.56	11.56
		U_{13} - L_{13}	-277.23	8.13	-22.45	0.00	-11.39	0.90	1.18	8.65	-23.90	0.00	-11.39	Vehicle	Pedestrian	-----	-406.28	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	-----	-----	-----	-----	-----	11.70	11.70
		U_{14} - L_{14}	-505.47	-25.63	-18.05	-11.35	-9.95	0.90	1.18	-19.22	-27.29	-9.95	-11.35	Pedestrian	Pedestrian	-----	-707.33	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	-----	-----	-----	-----	-----	14.14	14.14
		U_{15} - L_{15}	-232.92	-29.74	1.63	-11.17	0.00	0.90	1.17	1.72	-31.29	0.00	-11.17	Vehicle	Pedestrian	-----	-357.99	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	10.77	10.77
		U_{16} - L_{16}	-260.09	-31.40	0.23	-12.63	0.83	0.90	1.17	0.24	-33.03	0.83	-12.63	Pedestrian	Pedestrian	-----	-397.48	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	-----	-----	-----	-----	-----	8.89	8.89
		U_{17} - L_{17}	-228.20	-28.79	3.78	-11.76	0.66	0.90	1.17	3.98	-30.29	0.66	-11.76	Vehicle	Pedestrian	-----	-351.32	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	-----	-----	-----	-----	-----	9.40	9.40
		U_{18} - L_{18}	-209.23	-26.77	4.55	-11.28	-0.02	0.90	1.17	4.78	-28.16	-0.02	-11.28	Vehicle	Pedestrian	-----	-323.28	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	9.33	9.33
		U_{19} - L_{19}	-166.51	-24.66	4.86	-9.53	-0.07	0.90	1.17	5.12	-25.94	-0.07	-9.53	Vehicle	Pedestrian	-----	-262.57	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	-----	-----	-----	-----	-----	9.72	9.72
		U_{20} - L_{20}	-113.91	-18.16	4.90	-7.50	-0.43	0.90	1.17	5.16	-19.11	-0.43	-7.50	Vehicle	Pedestrian	-----	-182.67	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	-----	-----	-----	-----	-----	9.82	9.82
		U_{21} - L_{21}	-62.73	-14.68	7.32	-5.22	-0.44	0.90	1.17	7.70	-15.45	-0.44	-5.22	Vehicle	Pedestrian	-----	-108.40	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	-----	-----	-----	-----	-----	13.44	13.44
		U_{22} - L_{22}	-38.93	-1.45	-0.72	-2.15	-2.04	0.90	1.17	-0.76	-1.52	-2.04	-2.15	Pedestrian	Pedestrian	-----	-55.38	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	-----	-----	-----	-----	-----	82.54	82.54
		U_{23} - L_{23}	-74.45	5.19	-16.63	0.48	-6.10	0.90	1.17	5.46	-17.50	0.48	-6.10	Vehicle	Pedestrian	-----	-127.46	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	-----	-----	-----	-----	-----	11.28	11.28
		U_{24} - L_{24}	-121.37	5.08	-20.66	0.37	-8.17	0.90	1.17	5.35	-21.74	0.37	-8.17	Vehicle	Pedestrian	-----	-196.66	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	-----	-----	-----	-----	-----	8.49	8.49
		U_{25} - L_{25}	-169.10	4.89	-24.27	0.43	-9.94	0.90	1.17	5.14	-25.53	0.43	-9.94	Vehicle	Pedestrian	-----	-265.95	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	9.65	9.65
		U_{26} - L_{26}	-207.93	4.41	-24.64	0.14	-11.42	0.90	1.17	4.64	-25.92	0.14	-11.42	Vehicle	Pedestrian	-----	-318.86	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	-----	-----	-----	-----	-----	9.89	9.89
		U_{27} - L_{27}	-219.90	3.64	-26.87	0.16	-11.49	0.90	1.17	3.83	-28.27	0.16	-11.49	Vehicle	Pedestrian	-----	-337.55	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	10.15	10.15
		U_{28} - L_{28}	-240.66	5.24	-24.56	-0.25	-11.17	0.90	1.17	5.52	-25.84	-0.25	-11.17	Vehicle	Pedestrian	-----	-360.97	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	11.49	11.49
		U_{29} - L_{29}	-202.76	8.01	-20.78	0.00	-10.35	0.90	1.17	8.42	-21.86	0.00	-10.35	Vehicle	Pedestrian	-----	-305.46	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	-----	-----	-----	-----	-----	15.13	15.13
		U_{30} - L_{30}	-516.45	-27.12	-18.56	-13.75	-8.21	0.90	1.18	-19.76	-28.88	-8.21	-13.75	Pedestrian	Pedestrian	-----	-726.79	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

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: 2F1 **Condition:** As-Inspected

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

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

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

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

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

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

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Diagonals	Structure 1	U_0 - L_1	87.61	21.33	-7.97	14.00	-4.60	0.90	1.24	23.75	-8.87	14.00	-4.60	Pedestrian	Pedestrian	162.96	-----	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	-----	-----	-----	-----	-----	**13.21**	**13.21**	-----	-----
		U_1 - L_2	23.84	22.26	1.29	9.20	-4.72	0.90	1.24	24.78	1.44	9.20	-4.72	Pedestrian	Pedestrian	75.17	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**11.88**	**11.88**	-----	-----
		U_2 - L_3	-49.05	9.36	-9.54	0.00	-1.00	0.90	1.24	10.42	-10.62	0.00	-1.00	Vehicle	Vehicle	-----	-77.57	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	-----	-----	-----	-----	-----	**26.85**	**26.85**
		U_3 - L_4	-108.90	-2.13	-17.18	-4.21	-2.10	0.90	1.24	-2.37	-19.13	-2.10	-4.21	Pedestrian	Vehicle	-----	-166.43	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**11.89**	**11.89**
		U_4 - L_4	153.14	4.40	0.49	3.12	7.00	0.90	1.24	4.90	0.54	7.00	3.12	Pedestrian	Pedestrian	214.56	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**31.20**	**31.20**	-----	-----
		U_5 - L_5	186.37	29.01	-2.33	13.44	0.00	0.90	1.24	32.30	-2.59	13.44	0.00	Pedestrian	Vehicle	301.75	-----	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	-----	-----	-----	-----	-----	**10.15**	**10.15**	-----	-----
		U_6 - L_6	177.53	25.83	-6.09	14.14	0.00	0.90	1.24	28.76	-6.77	14.14	0.00	Pedestrian	Vehicle	286.55	-----	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	-----	-----	-----	-----	-----	**11.03**	**11.03**	-----	-----
		U_7 - L_7	173.15	22.14	-7.14	13.87	0.00	0.90	1.24	24.65	-7.94	13.87	0.00	Pedestrian	Vehicle	275.17	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**12.40**	**12.40**	-----	-----
		U_8 - L_8	328.03	35.52	-0.08	19.31	0.00	0.90	1.20	38.29	-0.09	19.31	0.00	Pedestrian	Vehicle	501.32	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**11.01**	**11.01**	-----	-----
		U_9 - L_{10}	339.64	36.68	-1.43	19.75	0.00	0.90	1.20	39.55	-1.54	19.75	0.00	Pedestrian	Vehicle	518.61	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**10.50**	**10.50**	-----	-----
		U_{10} - L_{11}	313.15	35.24	3.00	18.15	0.00	0.90	1.20	38.00	3.24	18.15	0.00	Pedestrian	Vehicle	480.09	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**10.64**	**10.64**	-----	-----
		U_{11} - L_{12}	270.62	32.86	2.37	14.84	0.00	0.90	1.20	35.43	2.55	14.84	0.00	Pedestrian	Vehicle	417.15	-----	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	-----	-----	-----	-----	-----	**10.09**	**10.09**	-----	-----
		U_{12} - L_{13}	194.11	23.87	-4.14	10.79	0.00	0.90	1.20	25.73	-4.46	10.79	0.00	Pedestrian	Vehicle	299.82	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**11.96**	**11.96**	-----	-----
		U_{13} - L_{14}	123.52	15.82	-6.87	2.11	3.86	0.90	1.20	17.06	-7.40	3.86	2.11	Vehicle	Vehicle	182.74	-----	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	-----	-----	-----	-----	-----	**17.83**	**17.83**	-----	-----
		U_{15} - L_{14}	-16.31	15.12	-11.53	0.00	-0.88	0.90	1.20	16.30	-12.43	0.00	-0.88	Vehicle	Vehicle	-----	-37.36	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	-----	-----	-----	-----	-----	**25.10**	**25.10**
		U_{16} - L_{15}	59.11	20.69	-7.72	6.08	-2.09	0.90	1.20	22.30	-8.33	6.08	-2.09	Vehicle	Vehicle	105.84	-----	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	-----	-----	-----	-----	-----	**16.53**	**16.53**	-----	-----
		U_{17} - L_{16}	172.05	27.02	-2.97	9.93	-1.86	0.90	1.20	29.13	-3.20	9.93	-1.86	Pedestrian	Pedestrian	274.45	-----	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	-----	-----	-----	-----	-----	**9.02**	**9.02**	-----	-----
		U_{18} - L_{17}	210.69	28.71	-4.10	12.50	-1.53	0.90	1.20	30.95	-4.42	12.50	-1.53	Pedestrian	Pedestrian	330.39	-----	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	-----	-----	-----	-----	-----	**10.13**	**10.13**	-----	-----
		U_{19} - L_{18}	242.30	28.00	-3.27	13.72	-1.21	0.90	1.20	30.19	-3.52	13.72	-1.21	Pedestrian	Pedestrian	372.08	-----	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	-----	-----	-----	-----	-----	**10.66**	**10.66**	-----	-----
		U_{20} - L_{19}	257.77	24.30	-2.69	15.71	-1.03	0.90	1.20	26.20	-2.90	15.71	-1.03	Pedestrian	Pedestrian	389.59	-----	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	-----	-----	-----	-----	-----	**10.80**	**10.80**	-----	-----
		U_0 - L_1	299.01	22.17	-5.96	14.21	-2.21	0.90	1.18	23.61	-6.34	14.21	-2.21	Pedestrian	Pedestrian	437.87	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**12.65**	**12.65**	-----	-----
		U_1 - L_2	284.23	33.71	-7.12	14.05	-2.66	0.90	1.18	35.89	-7.58	14.05	-2.66	Pedestrian	Pedestrian	434.42	-----	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	-----	-----	-----	-----	-----	**9.88**	**9.88**	-----	-----
		U_2 - L_3	221.45	30.83	-7.60	11.83	-2.85	0.90	1.18	32.83	-8.09	11.83	-2.85	Pedestrian	Pedestrian	345.94	-----	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	-----	-----	-----	-----	-----	**9.61**	**9.61**	-----	-----
		U_3 - L_4	178.33	30.21	-8.59	10.08	-3.23	0.90	1.18	32.16	-9.14	10.08	-3.23	Vehicle	Pedestrian	273.64	-----	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	-----	-----	-----	-----	-----	**12.40**	**12.40**	-----	-----
		U_4 - L_5	53.52	18.76	-7.59	5.38	-2.87	0.90	1.18	19.97	-8.09	5.38	-2.87	Vehicle	Pedestrian	95.53	-----	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	-----	-----	-----	-----	-----	**18.74**	**18.74**	-----	-----
		U_5 - L_6	-16.50	16.08	-10.93	2.23	-1.22	0.90	1.18	17.12	-11.63	2.23	-1.22	Vehicle	Vehicle	0.81	-36.57	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	-----	-----	-----	-----	-----	**25.94**	**25.94**	**26.58**	**26.58**
		U_6 - L_7	-133.20	6.29	-21.85	0.00	-5.36	0.90	1.18	6.70	-23.26	0.00	-5.36	Vehicle	Vehicle	-----	-203.40	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	**9.72**	**9.72**
		U_7 - L_7	208.77	23.51	-5.32	8.33	0.00	0.90	1.18	25.03	-5.66	8.33	0.00	Vehicle	Vehicle	303.93	-----	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	-----	-----	-----	-----	-----	**15.76**	**15.76**	-----	-----
		U_8 - L_8	289.58	30.57	-1.07	10.70	0.00	0.90	1.18	32.54	-1.14	10.70	0.00	Vehicle	Vehicle	418.76	-----	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	-----	-----	-----	-----	-----	**12.92**	**12.92**	-----	-----
		U_{10} - L_9	327.97	32.72	-0.77	12.66	0.00	0.90	1.18	34.83	-0.82	12.66	0.00	Pedestrian	Vehicle	488.11	-----	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	-----	-----	-----	-----	-----	**9.47**	**9.47**	-----	-----
		U_{11} - L_{10}	349.27	34.09	-1.55	12.70	0.00	0.90	1.18	36.29	-1.65	12.70	0.00	Pedestrian	Vehicle	517.74	-----	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	-----	-----	-----	-----	-----	**10.11**	**10.11**	-----	-----
		U_{12} - L_{11}	358.20	31.01	-4.77	13.52	0.00	0.90	1.18	33.02	-5.08	13.52	0.00	Pedestrian	Vehicle	526.15	-----	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	-----	-----	-----	-----	-----	**10.45**	**10.45**	-----	-----
		U_{13} - L_{12}	307.76	26.53	-9.01	12.26	-0.24	0.90	1.18	28.25	-9.59	12.26	-0.24	Pedestrian	Vehicle	452.74	-----	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	-----	-----	-----	-----	-----	**11.60**	**11.60**	-----	-----
		U_{14} - L_{13}	260.25	21.42	-7.59	9.65	0.00	0.90	1.18	22.80	-8.08	9.65	0.00	Pedestrian	Vehicle	380.51	-----	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	-----	-----	-----	-----	-----	**15.94**	**15.94**	-----	-----
		U_{15} - L_{15}	208.41	27.79	-0.78	11.04	-2.52	0.90	1.17	29.24	-0.82	11.04	-2.52	Pedestrian	Pedestrian	323.29	-----	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	-----	-----	-----	-----	-----	**10.98**	**10.98**	-----	-----
		U_{16} - L_{16}	243.53	31.98	-2.44	11.54	-1.48	0.90	1.17	33.65	-2.57	11.54	-1.48	Pedestrian	Pedestrian	375.33	-----	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	-----	-----	-----	-----	-----	**9.01**	**9.01**	-----	-----
		U_{17} - L_{17}	255.83	32.51	-3.99	12.23	0.00	0.90	1.17	34.20	-4.20	12.23	0.00	Pedestrian	Vehicle	392.94	-----	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	-----	-----	-----	-----	-----	**9.79**	**9.79**	-----	-----
		U_{18} - L_{18}	235.25	31.76	-4.68	11.35	0.00	0.90	1.17	33.41	-4.92	11.35	0.00	Pedestrian	Vehicle	364.02	-----	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	-----	-----	-----	-----	-----	**9.28**	**9.28**	-----	-----
		U_{19} - L_{19}	212.06	29.48	-5.70	11.09	0.00	0.90	1.17	31.02	-6.00	11.09	0.00	Pedestrian	Vehicle	330.42	-----	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	-----	-----	-----	-----	-----	**10.42**	**10.42**	-----	-----
		U_{20} - L_{20}	168.18	25.57	-3.78	9.14	0.00	0.90	1.17	26.90	-3.98	9.14	0.00	Pedestrian	Vehicle	265.49	-----	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	-----	-----	-----	-----	-----	**12.07**	**12.07**	-----	-----
		U_{20} - L_{21}	97.21	20.01	-8.66	6.66	0.00	0.90	1.17	21.05	-9.11	6.66	0.00	Vehicle	Vehicle	153.73	-----	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	-----	-----	-----	-----	-----	**15.70**	**15.70**	-----	-----
		U_{21} - L_{22}	30.55	6.73	-13.85	0.58	-2.18	0.90	1.17	7.08	-14.57	0.58	-2.18	Vehicle	Vehicle	48.93	-----	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	-----	-----	-----	-----	-----	**56.06**	**56.06**	-----	-----
		U_{22} - L_{23}	49.81	18.15	-9.42	5.11	-0.95	0.90	1.17	19.10	-9.91	5.11	-0.95	Vehicle	Vehicle	89.59	-----	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**19.79**	**19.79**	-----	-----
		U_{23} - L_{23}	115.09	22.71	-6.34	8.00	-0.72	0.90	1.17	23.90	-6.67	8.00	-0.72	Pedestrian	Vehicle	191.09	-----	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	-----	-----	-----	-----	-----	**9.80**	**9.80**	-----	-----
		U_{25} - L_{24}	179.20	29.68	-6.68	10.10	0.00	0.90	1.17	31.22	-7.03	10.10	0.00	Vehicle	Vehicle	273.55	-----	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	-----	-----	-----	-----	-----	**13.58**	**13.58**	-----	-----
		U_{26} - L_{25}	220.95	29.73	-5.88	11.89	0.00	0.90	1.17	31.28	-6.18	11.89	0.00	Pedestrian	Vehicle	343.35	-----	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	-----	-----	-----	-----	-----	**9.96**	**9.96**	-----	-----
		U_{27} - L_{26}	234.79	29.58	-4.65	11.44	0.00	0.90	1.17	31.12	-4.89	11.44	0.00	Pedestrian	Vehicle	360.56	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**9.77**	**9.77**	-----	-----
		U_{28} - L_{27}	253.01	29.53	-4.23	12.25	0.00	0.90	1.17	31.07	-4.45	12.25	0.00	Pedestrian	Vehicle	385.23	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**10.55**	**10.55**	-----	-----
		U_{29} - L_{28}	215.83	23.93	-8.99	10.20	0.61	0.90	1.17	25.17	-9.46	10.20	0.61	Pedestrian	Vehicle	326.56	-----	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	-----	-----	-----	-----	-----	**12.29**	**12.29**	-----	-----
		U_{30} - L_{29}	179.92	20.18	-7.64	8.46	0.00	0.90	1.17	21.24	-8.03	8.46	0.00	Pedestrian	Vehicle	272.50	-----	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	-----	-----	-----	-----	-----	**15.85**	**15.85**	-----	-----
		U_{30} - L_{31}	294.37	28.48	-4.35	12.88	0.00	0.90	1.18	30.32	-4.63	12.88	0.00	Pedestrian	Vehicle	438.83	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**11.18**	**11.18**	-----	-----
		U_{31} - L_{32}	342.78	33.27	-4.04	13.71	-0.55	0.90	1.18	35.42	-4.30	13.71	-0.55	Pedestrian	Vehicle	509.48	-----	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	-----	-----	-----	-----	-----	**8.85**	**8.85**	-----	-----
		U_{32} - L_{33}	363.31	33.50	-1.98	14.15	0.00	0.90	1.18	35.67	-2.10	14.15	0.00	Pedestrian	Vehicle	537.06	-----	0.00	33.27	33.2657	1097.

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: 2F1
Condition: As-inspected

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

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

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

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

M_2 Information

Location	Member	ZZ Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (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_b (in^3)	Z_x (in^3)	I (in^4)	I_{bb} (in^4)	Shape Factor	M_p (k-in)	Formula (.8 Term * F$_y$*S_{bb})	M_y (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{bb} (in^3)	S_b (in^3)	Z_x (in^3)	I_{bb} (in^4)	Shape Factor	M_p (k-in)	P_{crit} (kip)	Formula (.8 Term * F$_y$*S_{bb})	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(ns)}$	Equivalent Mom. Factor $C_{m(sw)}$	Yield Axial Anchor	Yield Moment Portion	Yield Total	Pass	Tension Axial Anchor	Tension Moment Portion	Tension Total	Pass	Fracture Axial Anchor	Fracture Moment Portion	Fracture Total	Pass	Buckle Axial Anchor	Buckle Moment Portion	Buckle Total	Pass	Compression Axial Anchor	Compression Moment Portion	Compression Total	Pass
Structure 1	U_0-L_1	-131.25	-22.60	-4.15	0.91	0.54	-6.57		-55.39	12.09	7.21	-87.79	0.00	0.00	0.00	0.00	-242.53	-13.67	-161.24	-143.00	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99800	2974.3	0.055	0.62	0.62	4.32	-17.87	2.83	-1.99	-0.19	-2.23		37.79	-25.40	-2.37	-29.85	0.00	0.00	0.00	54.75	-56.25	2.29	-62.53	158.6	128.68	179.40	778.9	1.13	5920	—	—	0.99724/5	5220.7	-0.037	0.09	0.39	—	—	—

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: 2F1
Condition: As-inspected

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

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

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

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

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start-El (k-ft)	Dead Load End-El (k-ft)	Live Load (Max) Start-El (k-ft)	Live Load (Max) End-El (k-ft)	Pedestrian Load (Max) Start-El (k-ft)	Pedestrian Load (Max) End-El (k-ft)	Lane Reduction & Impact Live Load Start-El (k-ft)	Lane Reduction & Impact Live Load End-El (k-ft)	Impact Pedestrian Load Max Start-El (k-ft)	Impact Pedestrian Load Max End-El (k-ft)
Structure 1	L_0-L_1	-49.04	-101.19	-9.39	0.44	2.69	-3.85	—	—	0.00	0.00
	L_1-L_2	-130.93	-112.57	-0.18	1.04	-1.84	-7.32	—	—	0.00	0.00
	L_2-L_3	-33.07	-79.42	-5.53	1.42	-2.54	-7.46	—	—	0.00	0.00
	L_3-L_4	18.53	15.80	0.58	2.20	-3.90	-8.31	—	—	0.00	0.00
	L_4-L_5	-68.87	210.25	-5.64	3.32	-55.50	-65.85	—	—	0.00	0.00
	L_5-L_6	7.25	228.45	1.29	2.57	-3.53	-3.93	—	—	0.00	0.00
	L_6-L_7	-62.67	171.77	-4.30	3.68	-2.63	-3.66	—	—	0.00	0.00
	L_7-L_8	7.98	461.19	-1.02	7.26	0.07	-0.12	—	—	0.00	0.00
	L_8-L_9	439.37	-23.36	3.08	0.49	4.13	-2.95	—	—	0.00	0.00
	L_9-L_{10}	204.91	-118.77	-0.69	1.51	0.97	-4.37	—	—	0.00	0.00
	L_{10}-L_{11}	168.38	-118.38	2.29	1.10	1.18	-4.01	—	—	0.00	0.00
	L_{11}-L_{12}	234.93	277.13	1.44	0.01	3.17	-5.26	—	—	0.00	0.00
	L_{12}-L_{13}	-19.53	-128.44	1.45	0.71	-1.74	-5.36	—	—	0.00	0.00
	L_{13}-L_{14}	175.75	-425.17	1.13	0.97	3.73	-11.59	—	—	0.00	0.00
	L_{14}-L_{15}	408.18	-27.07	2.70	0.89	4.78	-8.52	—	—	0.00	0.00
	L_{15}-L_{16}	-209.34	318.54	0.32	0.34	-3.69	-8.74	—	—	0.00	0.00
	L_{16}-L_{17}	-374.18	83.83	-3.48	1.99	-6.79	-4.93	—	—	0.00	0.00
	L_{17}-L_{18}	-170.99	204.48	-2.13	2.09	-3.67	-2.41	—	—	0.00	0.00
	L_{18}-L_{19}	-297.50	293.75	-4.66	2.77	-7.42	-3.01	—	—	0.00	0.00
	L_{19}-L_{20}	-99.23	0.16	-4.35	2.43	0.21	-2.22	—	—	0.00	0.00
	L_0-L_2	5.36	-218.26	-0.20	0.48	1.56	-5.51	—	—	0.00	0.00
	L_1-L_3	16.16	-247.31	0.13	0.56	4.51	-7.05	—	—	0.00	0.00
	L_2-L_4	1.07	-191.80	-0.27	0.51	-1.55	-6.45	—	—	0.00	0.00
	L_3-L_5	-27.67	-327.61	-0.27	0.51	-1.48	-6.45	—	—	0.00	0.00
	L_4-L_6	-286.08	-268.86	-0.10	0.68	-4.00	-10.41	—	—	0.00	0.00
	L_5-L_7	-142.96	-432.12	-0.29	0.68	-3.67	-10.41	—	—	0.00	0.00
	L_6-L_8	-467.27	-273.20	1.27	1.56	-6.73	-15.14	—	—	0.00	0.00
	L_7-L_9	-310.47	-45.78	1.55	2.85	-6.28	-9.93	—	—	0.00	0.00
	L_8-L_{10}	271.10	237.01	4.56	2.85	-6.28	-9.93	—	—	0.00	0.00
	L_9-L_{11}	-261.82	188.40	-1.37	2.81	-5.07	-5.04	—	—	0.00	0.00
	L_{10}-L_{12}	203.66	198.83	0.97	2.89	-4.51	-5.04	—	—	0.00	0.00
	L_{11}-L_{13}	-131.41	389.79	-2.94	2.97	-3.43	-4.92	—	—	0.00	0.00
	L_{12}-L_{14}	-164.24	-140.43	-1.46	0.90	-2.93	-7.08	—	—	0.00	0.00
	L_{13}-L_{15}	267.38	696.22	0.35	0.90	-2.93	-7.08	—	—	0.00	0.00
	L_{14}-L_{16}	911.85	-326.76	1.20	0.76	8.15	-8.25	—	—	0.00	0.00
	L_{15}-L_{17}	288.04	42.03	1.19	0.75	4.92	-4.78	—	—	0.00	0.00
	L_{16}-L_{18}	515.61	-35.20	3.06	0.94	1.29	-6.12	—	—	0.00	0.00
	L_{17}-L_{19}	189.46	118.48	1.02	0.76	1.29	-6.12	—	—	0.00	0.00
	L_{18}-L_{20}	252.11	-25.04	2.65	1.16	0.70	-5.96	—	—	0.00	0.00
Structure 2	L_0-L_{20}	230.58	-46.22	1.56	1.76	-0.41	-8.54	—	—	0.00	0.00
	L_{20}-L_{21}	43.89	-183.34	-0.04	1.34	-1.01	-15.46	—	—	0.00	0.00
	L_{21}-L_{22}	43.89	-183.34	-0.04	1.34	-1.01	-15.46	—	—	0.00	0.00
	L_{22}-L_{23}	-154.37	-9.01	0.78	9.03	1.53	-14.58	—	—	0.00	0.00
	L_{23}-L_{24}	-104.37	-8.61	0.78	23.13	-5.60	-10.07	—	—	0.00	0.00
	L_{24}-L_{25}	65.51	33.20	-0.33	-3.36	-1.61	-5.44	—	—	0.00	0.00
	L_{25}-L_{26}	-65.51	170.40	-2.03	2.71	-3.00	-5.44	—	—	0.00	0.00
	L_{26}-L_{27}	-30.91	151.01	-5.21	3.88	-4.48	-4.49	—	—	0.00	0.00
	L_{27}-L_{28}	-19.86	213.53	3.19	0.85	4.26	-4.49	—	—	0.00	0.00
	L_{28}-L_{29}	-19.86	-197.53	0.45	1.31	-4.01	-8.20	—	—	0.00	0.00
	L_{29}-L_{30}	277.47	-103.86	2.34	0.32	4.10	-12.26	—	—	0.00	0.00
	L_{30}-L_{31}	-747.52	-264.15	0.27	0.27	7.29	-7.98	—	—	0.00	0.00
	L_{31}-L_{32}	-140.80	-80.21	0.71	1.53	-1.64	-6.20	—	—	0.00	0.00
	L_{32}-L_{33}	284.87	-113.99	2.34	0.32	4.10	-12.26	—	—	0.00	0.00
	L_{33}-L_{34}	150.40	-145.70	1.12	1.93	2.15	-6.47	—	—	0.00	0.00
	L_{34}-L_{35}	94.80	-176.01	1.12	1.93	2.15	-6.47	—	—	0.00	0.00
	L_{35}-L_{36}	95.69	-212.39	1.57	1.58	-1.44	-7.64	—	—	0.00	0.00
	L_{36}-L_{37}	95.69	-212.39	1.57	1.58	-1.44	-7.64	—	—	0.00	0.00
	L_{37}-L_{38}	-182.72	415.40	1.28	1.26	-3.36	-15.99	—	—	0.00	0.00
	L_{38}-L_{39}	-370.16	-165.14	1.48	0.36	-10.27	-14.68	—	—	0.00	0.00
	L_{39}-L_{40}	-224.09	-278.61	1.48	0.36	-10.27	-14.68	—	—	0.00	0.00
	L_{40}-L_{41}	-304.14	-22.17	6.15	1.74	-6.93	-6.34	—	—	0.00	0.00
	L_{41}-L_{42}	-222.88	59.03	6.21	2.42	-1.86	-2.29	—	—	0.00	0.00
Structure 3	L_{42}-L_{43}	42.77	-120.03	0.19	0.20	2.47	-4.45	—	—	0.00	0.00
	L_{43}-L_{44}	192.98	-177.52	-0.23	0.22	1.81	-4.45	—	—	0.00	0.00
	L_{44}-L_{45}	55.38	-320.81	-0.07	0.35	-1.62	-7.50	—	—	0.00	0.00
	L_{45}-L_{46}	55.38	-320.81	-0.07	0.35	-1.62	-7.50	—	—	0.00	0.00
	L_{46}-L_{47}	-64.00	-370.85	0.00	1.08	-3.19	-13.08	—	—	0.00	0.00
	L_{47}-L_{48}	-370.60	82.46	0.72	2.82	-6.13	-8.11	—	—	0.00	0.00
	L_{48}-L_{49}	-200.72	149.84	-4.29	1.90	-2.55	-3.39	—	—	0.00	0.00
	L_{49}-L_{50}	-131.75	166.74	-3.04	2.72	-1.61	-2.82	—	—	0.00	0.00
	L_{50}-L_{51}	-37.28	37.28	0.87	0.87	-1.19	-3.24	—	—	0.00	0.00
	L_{51}-L_{52}	361.79	-17.90	2.92	0.47	5.67	-3.24	—	—	0.00	0.00
	L_{52}-L_{53}	97.95	21.70	0.66	1.66	1.19	-4.62	—	—	0.00	0.00
	L_{53}-L_{54}	189.89	5.64	1.75	1.87	3.13	-8.66	—	—	0.00	0.00
	L_{54}-L_{55}	189.89	5.64	1.75	1.87	3.13	-8.66	—	—	0.00	0.00
	L_{55}-L_{56}	-38.98	-56.51	1.34	0.63	-3.11	-8.02	—	—	0.00	0.00
	L_{56}-L_{57}	-66.65	-79.79	4.18	2.43	0.38	-0.32	—	—	0.00	0.00

ZZ Axis Moments from STAAD

Member	Max. Pos. Mom. Start	Max. Pos. Mom. 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_{bot}	M_n (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor C_{mm}
L_0-L_1	-70.52	-123.90	27.41	-168.42	83.6	83.58	74.65	1.80	3317	0.99900394	2705.4	0.138	0.66	0.66
L_1-L_2	167.05	-128.23	202.21	-273.50	83.6	83.58	67.49	1.80	3317	0.99900394	2705.4	0.739	0.30	0.30
L_2-L_3	-65.91	-82.14	-120.89	-232.77	99.5	99.53	91.00	1.80	3948	0.99900394	3218.6	0.373	0.63	0.63
L_3-L_4	34.19	58.79	-43.58	-123.85	99.9	99.93	84.14	1.80	3409	0.99918196	3294.8	0.352	0.74	0.74
L_4-L_5	-187.40	-40.44	317.17	52.6	52.59	76.68	114.47	3186	2105	0.99900391	3052.4	-0.421	0.43	0.43
L_5-L_6	31.88	341.55	-51.85	228.68	104.6	104.58	95.61	1.80	4220	0.99952345	3448.5	0.093	0.64	0.64
L_6-L_7	-156.12	216.73	-127.17	138.39	104.6	104.58	95.61	1.80	4220	0.99952345	3448.5	-0.064	0.57	0.57
L_7-L_8	-17.32	725.71	11.54	597.42	145.8	145.75	130.44	228.84	6500	2932.4	1.57	7552	0.99952915	4806.3
L_8-L_9	622.92	-22.15	640.63	-80.00	145.8	145.75	130.74	228.84	6500	2932.4	1.57	7552	0.99952915	4806.4
L_9-L_{10}	254.71	-126.37	262.68	-225.22	144.9	144.85	129.09	192.84	5910	2379.8	1.33	6364	0.99914196	4776.1
L_{10}-L_{11}	257.32	-135.41	238.12	-221.28	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.99913812	3052.5
L_{11}-L_{12}	329.63	-268.85	340.80	-340.80	92.6	92.58	76.68	114.47	3295	1304.9	1.24	3777	0.99913812	3052.5
L_0-L_{20}	-1.09	-155.05	-54.71	-257.13	130.1	130.08	121.10	170.72	3885	1793.2	1.31	5634	0.99952915	4288.6
L_{20}-L_{21}	-247.45	-536.35	291.22	-747.59	162.9	162.89	147.19	219.93	6887	2613.8	1.35	7258	0.99910E	5370.6
L_{21}-L_{22}	-659.46	-77.64	-535.60	-802.72	162.9	162.89	147.19	219.93	6887	2613.8	1.35	7258	0.99910E	5370.6
L_{22}-L_{23}	-266.79	-408.33	-334.15	-561.03	179.7	179.69	170.68	251.43	7953	4000.7	1.40	8297	0.99913212	5924.6
L_{23}-L_{24}	-552.64	142.51	-584.51	26.12	103.9	103.89	138.16	298.43	5972	2460.7	1.34	6912	0.99914196	5273.9
L_{24}-L_{25}	-258.12	61.34	-284.05	-13.93	121.1	121.08	112.11	157.22	3591	1640.0	1.30	5188	0.99904481	3891.8
L_{25}-L_{26}	-340.24	372.53	-300.75	393.27	83.6	83.58	74.62	150.37	2746	1096.2	1.21	3332	0.99905612	2755.5
L_{26}-L_{27}	-202.18	-41.10	-125.46	-342.6	83.6	83.58	67.49	150.37	2746	1096.2	1.21	3332	0.99905612	2755.5
L_{27}-L_{28}	3.58	-275.73	32.81	-375.28	122.0	122.01	103.28	148.92	3592	1395.7	1.22	4914	0.99853332	4022.0
L_{28}-L_{29}	206.43	-373.23	23.16	-511.87	122.0	122.01	103.28	148.92	3592	1395.7	1.22	4914	0.99853332	4022.0
L_{29}-L_{30}	-3.08	-240.89	-24.62	-356.92	157.0	157.00	151.98	208.63	4946	2118.1	1.31	6796	0.99900E	5176.2
L_{30}-L_{31}	227.25	-384.74	242.52	-384.74	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.99914812	3086.6
L_{31}-L_{32}	-373.09	-373.09	-438.40	-561.47	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10583	0.99952244	6746.8
L_{32}-L_{33}	227.25	-384.74	242.52	-384.74	92.6	92.58	76.68	114.47	3295	1304.9	1.24	3777	0.99913812	3052.5
L_{33}-L_{34}	-182.36	-404.67	-233.56	-459.89	157.0	157.00	141.80	208.63	4946	2118.1	1.31	6796	0.99900E	5176.2
L_{34}-L_{35}	586.44	-322.64	-719.30	-606.58	213.3	216.33	205.74	344.78	7625	3425.8	1.99	11719	0.99914E	7132.6
L_{35}-L_{36}	-377.92	-12.16	-557.89	-224.46	205.7	205.71	195.15	274.47	5445	2642.2	1.33	9057	0.99895E	6781.3
L_{36}-L_{37}	-429.92	325.82	-503.81	325.82	205.7	205.71	195.15	274.47	5445	2642.2	1.33	9057	0.99895E	6781.3
L_{37}-L_{38}	-317.54	291.52	-424.58	161.16	149.0	149.01	130.61	189.42	4703	1908.4	1.27	6251	0.99904E	4912.7
L_{38}-L_{39}	-320.64	407.11	-404.52	407.11	138.2	138.21	129.39	203.42	4384	1752.7	1.25	5719	0.99952E	4305.0
L_{39}-L_{40}	-219.98	155.22	-227.77	424.23	165.6	165.55	155.01	222.43	5842	2444.6	1.34	7340	0.99914E	5468.6
L_{40}-L_{41}	-237.67	-197.57	-262.09	-300.13	226.0	226.00	325.96	291.39	8397	3194.4	1.39	11452	0.99900E	8222.2
L_{41}-L_{42}	-434.74	340.25	-504.26	340.25	226.0	226.00	325.96	291.39	8397	3194.4	1.39	11452	0.99900E	8222.2
L_{42}-L_{43}	1205.15	-412.35	1319.12	-560.12	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99900E	8222.2
L_{43}-L_{44}	-416.91	-39.12	-474.72	-364.74	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99900E	8222.2
L_{44}-L_{45}	-720.45	-30.40	691.42	-146.16	180.3	180.26	169.70	249.67	6400	2721.8	1.36	9197	0.99915E	6543.8
L_{45}-L_{46}	-1035.72	-29.17	-1179.34	-29.17	180.3	180.26	169.70	249.67	6400	2721.8	1.36	9197	0.99915E	6543.8
L_{46}-L_{47}	-720.45	-30.40	691.42	-146.16	180.3	180.26	169.70	249.67	6400	2721.8	1.36	9197	0.99915E	6543.8
L_{47}-L_{48}	-1035.72	-29.17	-1179.34	-29.17	180.3	180.26	169.70	249.67	6400	2721.8	1.36	9197	0.99915E	6543.8
L_{48}-L_{49}	-467.27	-273.20	1.27	1.56	-6.73	-15.14	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{49}-L_{50}	-310.47	-45.78	1.55	2.85	-6.28	-9.93	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{50}-L_{51}	271.10	237.01	4.56	2.85	-6.28	-9.93	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{51}-L_{52}	-261.82	188.40	-1.37	2.81	-5.07	-5.04	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{52}-L_{53}	203.66	198.83	0.97	2.89	-4.51	-5.04	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{53}-L_{54}	-131.41	389.79	-2.94	2.97	-3.43	-4.92	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{54}-L_{55}	-164.24	-140.43	-1.46	0.90	-2.93	-7.08	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{55}-L_{56}	267.38	696.22	0.35	0.90	-2.93	-7.08	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{56}-L_{57}	911.85	-326.76	1.20	0.76	8.15	-8.25	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{57}-L_{58}	288.04	42.03	1.19	0.75	4.92	-4.78	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{58}-L_{59}	515.61	-35.20	3.06	0.94	1.29	-6.12	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{59}-L_{60}	189.46	118.48	1.02	0.76	1.29	-6.12	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{60}-L_{61}	252.11	-25.04	2.65	1.16	0.70	-5.96	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{61}-L_{62}	230.58	-46.22	1.56	1.76	-0.41	-8.54	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{62}-L_{63}	43.89	-183.34	-0.04	1.34	-1.01	-15.46	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{63}-L_{64}	43.89	-183.34	-0.04	1.34	-1.01	-15.46	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{64}-L_{65}	-154.37	-9.01	0.78	9.03	1.53	-14.58	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{65}-L_{66}	-104.37	-8.61	0.78	23.13	-5.60	-10.07	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{66}-L_{67}	65.51	33.20	-0.33	-3.36	-1.61	-5.44	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{67}-L_{68}	-65.51	170.40	-2.03	2.71	-3.00	-5.44	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{68}-L_{69}	-30.91	151.01	-5.21	3.88	-4.48	-4.49	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{69}-L_{70}	-19.86	213.53	3.19	0.85	4.26	-4.49	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{70}-L_{71}	-19.86	-197.53	0.45	1.31	-4.01	-8.20	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{71}-L_{72}	277.47	-103.86	2.34	0.32	4.10	-12.26	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{72}-L_{73}	-747.52	-264.15	0.27	0.27	7.29	-7.98	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{73}-L_{74}	-140.80	-80.21	0.71	1.53	-1.64	-6.20	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{74}-L_{75}	284.87	-113.99	2.34	0.32	4.10	-12.26	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{75}-L_{76}	150.40	-145.70	1.12	1.93	2.15	-6.47	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{76}-L_{77}	94.80	-176.01	1.12	1.93	2.15	-6.47	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{77}-L_{78}	95.69	-212.39	1.57	1.58	-1.44	-7.64	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{78}-L_{79}	95.69	-212.39	1.57	1.58	-1.44	-7.64	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{79}-L_{80}	-182.72	415.40	1.28	1.26	-3.36	-15.99	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{80}-L_{81}	-370.16	-165.14	1.48	0.36	-10.27	-14.68	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{81}-L_{82}	-224.09	-278.61	1.48	0.36	-10.27	-14.68	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{82}-L_{83}	-304.14	-22.17	6.15	1.74	-6.93	-6.34	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{83}-L_{84}	-222.88	59.03	6.21	2.42	-1.86	-2.29	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{84}-L_{85}	42.77	-120.03	0.19	0.20	2.47	-4.45	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{85}-L_{86}	192.98	-177.52	-0.23	0.22	1.81	-4.45	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{86}-L_{87}	55.38	-320.81	-0.07	0.35	-1.62	-7.50	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{87}-L_{88}	55.38	-320.81	-0.07	0.35	-1.62	-7.50	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{88}-L_{89}	-64.00	-370.85	0.00	1.08	-3.19	-13.08	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{89}-L_{90}	-370.60	82.46	0.72	2.82	-6.13	-8.11	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{90}-L_{91}	-200.72	149.84	-4.29	1.90	-2.55	-3.39	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{91}-L_{92}	-131.75	166.74	-3.04	2.72	-1.61	-2.82	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{92}-L_{93}	-37.28	37.28	0.87	0.87	-1.19	-3.24	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{93}-L_{94}	361.79	-17.90	2.92	0.47	5.67	-3.24	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{94}-L_{95}	97.95	21.70	0.66	1.66	1.19	-4.62	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{95}-L_{96}	189.89	5.64	1.75	1.87	3.13	-8.66	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{96}-L_{97}	189.89	5.64	1.75	1.87	3.13	-8.66	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{97}-L_{98}	-38.98	-56.51	1.34	0.63	-3.11	-8.02	—	—	0.00	0.00	0.00	0.00	0.00	0.00
L_{98}-L_{99}	-66.65	-79.79	4.18	2.43	0.38	-0.32	—	—	0.00	0.00	0.00	0.00	0.00	0.00

M_3 Information

YY Axis Moments from STAAD

Member	Dead Load Start-El (k-ft)	Dead Load End-El (k-ft)	Live Load (Max) Start-El (k-ft)	Live Load (Max) End-El (k-ft)	Pedestrian Load (Max) Start-El (k-ft)	Pedestrian Load (Max) End-El (k-ft)	Lane Reduction & Impact Live Load Start-El (k-ft)	Lane Reduction & Impact Live Load End-El (k-ft)	Impact Pedestrian Load Max Start-El (k-ft)	Impact Pedestrian Load Max End-El (k-ft)
L_0-L_1	-0.22	8.14	-0.03	-0.10	0.55	2.04	—	—	0.00	0.00
L_1-L_2	-40.52	-6.70	-76.87	-32.22	139.20	0.00	—	—	0.00	0.00
L_2

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Analysis
Loading: 2F1
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

Moment (End) - Al2

Maximum Axial with Moment Interaction Check

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start-I	Dead Load End-I	Live Load (Max) Start-I	Live Load (Max) End-I	Pedestrian Load (Max) Start-I	Pedestrian Load (Min) Start-I	Lane Reduction & Impact Live Load Max Start-I	Lane Reduction & Impact Live Load Max End-I	Impact Pedestrian Load Max Start-I	Impact Pedestrian Load Max End-I
Structure 1	U_0–L_1	-55.75	82.39	2.09	2.49	0.29	-0.39	-27.97	33.31	3.86	6.10
	U_1–L_1	-14.37	23.26	-2.20	2.09	0.39	-0.39	-29.42	27.92	5.24	5.25
	U_1–L_2	5.01	-5.37	1.79	2.07	0.47	-0.53	-23.99	27.65	5.25	5.01
	U_2–L_2	36.81	-39.20	-1.28	1.40	1.07	-1.04	-17.13	18.74	14.24	13.89
	U_2–L_3	49.94	-49.31	-0.59	1.00	1.48	-1.48	-7.83	8.52	21.17	19.81
	U_3–L_3	57.83	-70.07	-0.10	0.04	1.84	-2.03	-1.39	0.56	24.62	27.07
	U_3–L_4	67.02	-68.30	-0.03	0.00	1.94	-1.98	-0.25	0.16	27.77	31.88
	U_4–L_4	102.14	-112.44	-0.07	0.06	2.68	-2.75	-0.91	0.81	35.83	36.78
	U_4–L_5	-10.55	7.04	2.25	2.69	3.28	-3.85	-0.74	0.55	43.18	47.25
	U_5–L_5	-144.53	166.25	-2.12	2.28	0.19	-0.18	-224.61	256.37	-184.88	213.06
	U_5–L_6	-101.27	95.46	-1.83	2.02	-0.03	-0.18	-25.02	26.15	-0.34	-2.38
	U_6–L_6	-111.05	108.51	-2.06	2.52	0.25	-0.36	-43.01	32.62	3.20	-2.26
	U_6–L_7	-96.41	93.86	-1.93	1.94	0.33	-0.29	-24.96	25.13	4.26	-3.80
	U_7–L_7	-90.90	75.93	-2.03	2.09	0.50	-0.53	-26.29	27.03	7.14	-1.46
	U_7–L_8	-69.94	68.31	-1.82	1.82	0.50	-0.53	-26.29	27.03	7.14	-1.46
	U_8–L_8	8.32	-15.89	-0.94	0.93	1.79	-1.87	-12.20	12.03	23.10	-24.16
	U_8–L_9	47.73	-50.39	-0.59	0.44	1.94	-1.98	-7.58	7.71	25.06	25.75
	U_9–L_9	61.54	-72.81	-0.26	0.27	1.95	-2.00	-3.39	3.43	25.20	25.53
	U_9–L_{10}	133.07	-138.05	-0.36	0.37	3.14	-3.27	-4.71	4.16	46.56	42.30
	U_{10}–L_{10}	158.01	-154.56	-0.37	0.34	3.66	-3.60	-4.83	4.33	47.39	46.50
	U_{10}–L_{11}	131.43	-213.61	-0.16	0.27	2.79	-3.43	-2.08	3.52	36.05	44.57
	U_{11}–L_{11}	144.68	167.26	-2.57	3.21	0.28	-0.28	-250.76	298.74	183.53	214.25
	U_{11}–L_{12}	-122.98	131.23	-2.76	2.82	0.34	-0.35	-35.26	35.97	4.29	4.42
	U_{12}–L_{12}	117.72	-125.50	-2.53	3.18	0.06	-0.42	-40.68	39.57	5.91	-5.29
	U_{12}–L_{13}	-62.37	68.66	-1.63	1.67	0.27	-0.27	-20.76	21.36	-3.48	3.48
	U_{13}–L_{13}	37.80	-53.18	-1.72	1.64	0.27	-0.27	-27.06	27.57	-4.28	4.28
	U_{13}–L_{14}	-9.12	15.71	-1.72	1.81	0.88	-0.83	-22.03	23.10	11.22	-10.60
	U_{14}–L_{14}	14.83	-14.93	-1.40	1.43	1.02	-1.07	-17.91	18.23	12.99	-13.71
	U_{14}–L_{15}	39.68	-43.44	-0.63	0.63	1.11	-1.22	-8.01	8.65	14.19	-15.63
	U_{15}–L_{15}	88.70	-97.90	-0.64	0.51	2.43	-2.43	-8.14	6.45	31.06	-31.02
	U_{15}–L_{16}	133.02	-133.04	-0.33	0.24	3.33	-3.34	-7.58	5.71	28.08	-40.16
	U_{16}–L_{16}	140.07	-146.97	0.00	0.05	2.83	-2.91	-0.05	0.61	36.12	37.19
	U_{16}–L_{17}	148.94	-153.41	0.06	0.11	2.78	-2.88	-0.19	1.44	35.65	36.78
	U_{17}–L_{17}	141.94	-139.91	0.12	0.17	2.68	-2.77	-0.33	2.26	34.19	35.24
	U_{17}–L_{18}	185.37	-182.48	0.30	0.30	3.30	-3.17	-3.85	3.75	42.12	40.48
	U_{18}–L_{18}	72.78	-71.51	0.13	0.13	1.40	-1.37	-47.63	47.37	44.97	43.27
	U_{18}–L_{19}	-128.23	129.95	-2.93	2.75	0.31	-0.27	-37.02	34.77	3.85	-3.42
	U_{19}–L_{19}	117.74	-119.36	-2.82	2.96	0.37	-0.31	-37.74	36.21	3.85	-4.62
	U_{19}–L_{20}	-125.93	122.62	-3.29	3.23	0.31	-0.29	-41.56	40.82	3.93	-3.69
	U_{20}–L_{20}	-109.68	106.90	-3.06	3.23	0.41	-0.40	-38.62	40.77	6.16	-5.09
	U_{20}–L_{21}	84.03	76.39	-2.10	2.01	0.41	-0.40	-29.18	30.96	6.16	-3.33
	U_{21}–L_{21}	-43.26	-43.75	-1.89	1.91	0.51	-0.43	-23.84	24.13	6.39	-5.48
	U_{21}–L_{22}	29.76	34.24	-1.93	1.93	0.51	-0.43	-23.33	24.13	6.39	-8.19
	U_{22}–L_{22}	-3.29	1.62	-1.07	1.14	0.97	-1.01	-13.56	14.41	12.18	-12.73
	U_{22}–L_{23}	28.80	32.71	-0.52	0.52	0.46	-1.81	-23.98	23.75	24.40	23.00
	U_{23}–L_{23}	46.56	-51.19	-0.52	0.46	1.81	-1.87	-6.56	5.78	22.79	-23.60
	U_{23}–L_{24}	62.64	-61.32	-0.41	0.40	2.36	-2.36	-5.20	5.02	29.81	-29.73
	U_{24}–L_{24}	90.76	-97.49	-0.43	0.43	3.43	-3.43	-5.20	5.02	44.72	47.01
	U_{24}–L_{25}	108.55	-105.78	-0.44	0.43	3.70	-3.74	-5.54	5.38	46.69	47.23
	U_{25}–L_{25}	93.19	-94.61	-0.43	0.43	3.70	-3.74	-4.12	3.99	46.69	47.23
	U_{25}–L_{26}	114.59	-114.85	-0.21	0.18	3.68	-3.50	-2.69	2.25	46.45	44.14
	U_{26}–L_{26}	102.68	-101.99	-0.32	0.32	3.26	-3.26	-4.12	3.99	41.26	41.26
	U_{26}–L_{27}	-122.25	119.98	-2.52	2.43	0.34	-0.31	-32.25	31.06	4.28	-4.01
	U_{27}–L_{27}	-93.65	87.71	-2.51	2.44	0.27	-0.37	-32.04	31.20	3.45	-4.73
	U_{27}–L_{28}	102.68	101.27	-2.42	2.42	0.31	-0.37	-32.04	31.20	4.28	-2.34
	U_{28}–L_{28}	-96.77	103.24	-2.58	2.59	0.04	-0.13	-32.50	33.13	0.46	-1.64
	U_{28}–L_{29}	101.52	-97.52	-2.13	2.09	0.04	-0.13	-32.50	33.13	0.46	-2.50
	U_{29}–L_{29}	-83.45	70.58	-2.38	2.39	0.38	-0.33	-30.45	30.55	4.84	-4.17
	U_{29}–L_{30}	-32.67	38.68	-1.28	1.43	0.48	-0.50	-16.33	18.24	6.18	-6.44
	U_{30}–L_{30}	4.43	-8.37	-0.98	0.94	1.51	-1.62	-12.57	11.97	19.27	-20.72
	U_{30}–L_{31}	47.21	-50.58	-0.33	0.33	1.88	-1.95	-4.17	4.20	23.96	-24.89
	U_{31}–L_{31}	104.42	-111.67	-0.47	0.44	3.61	-3.61	-5.97	5.60	46.16	46.07
	U_{31}–L_{32}	108.14	-102.78	-0.24	0.39	2.79	-3.62	-3.00	4.92	35.70	46.20
	U_{32}–L_{32}	-123.31	122.35	-2.70	2.74	0.25	-0.23	-43.84	42.52	3.01	-3.08
	U_{33}–L_{33}	-109.30	117.29	-2.75	2.74	0.25	-0.23	-35.54	35.49	3.20	-3.03
	U_{34}–L_{34}	-48.62	58.77	-1.83	1.82	0.21	-0.21	-26.29	27.03	7.14	-1.46
	U_{35}–L_{35}	-39.13	42.86	-1.76	1.80	0.17	-0.12	-23.67	23.57	6.48	-6.07
	U_{36}–L_{36}	-5.41	11.54	-1.83	1.96	0.73	-0.70	-23.63	24.57	9.48	-9.07
	U_{37}–L_{37}	27.84	-30.65	-1.13	1.15	1.16	-1.25	-14.58	14.89	14.96	-16.22
	U_{38}–L_{38}	75.13	-82.86	-0.76	0.76	1.92	-2.04	-8.14	7.49	25.39	-25.39
	U_{39}–L_{39}	85.72	-83.00	-0.45	0.37	2.09	-2.11	-5.67	4.74	27.05	-28.12
	U_{40}–L_{40}	94.97	-87.87	0.04	0.14	2.19	-2.45	-0.57	1.85	28.30	-31.74
	U_{41}–L_{41}	139.42	-154.57	0.10	0.09	2.94	-3.22	-1.27	1.14	38.01	-41.61
	U_{42}–L_{42}	52.79	-74.30	-3.22	3.65	2.66	-3.40	-43.02	42.72	35.55	46.37
	U_{43}–L_{43}	-62.86	69.82	-2.15	2.20	0.16	-0.16	-28.76	29.42	2.12	-2.07
	U_{44}–L_{44}	-41.64	35.38	-1.62	1.87	0.09	-0.15	-21.60	25.04	1.18	-2.03
	U_{45}–L_{45}	-36.85	40.05	-1.80	1.89	0.17	-0.12	-24.03	25.28	2.27	-1.83
	U_{46}–L_{46}	-39.84	39.91	-1.54	1.49	0.40	-0.36	-20.55	19.95	5.28	-4.81
	U_{47}–L_{47}	-38.98	40.30	-1.37	1.42	1.30	-1.42	-18.29	19.00	17.42	-18.92
	U_{48}–L_{48}	-13.42	14.14	-0.77	0.72	1.83	-2.15	-10.27	9.55	24.42	-28.72
	U_{49}–L_{49}	5.87	-8.62	-0.59	0.53	2.60	-2.36	-7.91	7.03	34.67	-31.48
	U_{50}–L_{50}	20.18	-40.81	-0.12	0.40	1.78	-2.82	-1.64	5.40	23.78	-37.66

Location	Member	Pedestrian Load (Min) End-I	Lane Reduction & Impact Live Load Max Start-I	Lane Reduction & Impact Live Load Max End-I	Impact Pedestrian Load Max Start-I	Impact Pedestrian Load Max End-I
Structure 1	U_0–L_1	0.00	0.00	0.00	0.00	0.00
	U_1–L_1	0.00	0.00	0.00	0.00	0.00
	U_1–L_2	0.00	0.00	0.00	0.00	0.00
	U_2–L_2	0.00	0.00	0.00	0.00	0.00
	U_2–L_3	0.00	0.00	0.00	0.00	0.00
	U_3–L_3	0.00	0.00	0.00	0.00	0.00
	U_3–L_4	0.00	0.00	0.00	0.00	0.00
	U_4–L_4	0.00	0.00	0.00	0.00	0.00
	U_4–L_5	0.00	0.00	0.00	0.00	0.00
	U_5–L_5	0.00	0.00	0.00	0.00	0.00
	U_5–L_6	0.00	0.00	0.00	0.00	0.00
	U_6–L_6	0.00	0.00	0.00	0.00	0.00
	U_6–L_7	0.00	0.00	0.00	0.00	0.00
	U_7–L_7	0.00	0.00	0.00	0.00	0.00
	U_7–L_8	0.00	0.00	0.00	0.00	0.00
	U_8–L_8	0.00	0.00	0.00	0.00	0.00
	U_8–L_9	0.00	0.00	0.00	0.00	0.00
	U_9–L_9	0.00	0.00	0.00	0.00	0.00
	U_9–L_{10}	0.00	0.00	0.00	0.00	0.00
	U_{10}–L_{10}	0.00	0.00	0.00	0.00	0.00
	U_{10}–L_{11}	0.00	0.00	0.00	0.00	0.00
	U_{11}–L_{11}	0.00	0.00	0.00	0.00	0.00
	U_{11}–L_{12}	0.00	0.00	0.00	0.00	0.00
	U_{12}–L_{12}	0.00	0.00	0.00	0.00	0.00
	U_{12}–L_{13}	0.00	0.00	0.00	0.00	0.00
	U_{13}–L_{13}	0.00	0.00	0.00	0.00	0.00
	U_{13}–L_{14}	0.00	0.00	0.00	0.00	0.00
	U_{14}–L_{14}	0.00	0.00	0.00	0.00	0.00
	U_{14}–L_{15}	0.00	0.00	0.00	0.00	0.00
	U_{15}–L_{15}	0.00	0.00	0.00	0.00	0.00
	U_{15}–L_{16}	0.00	0.00	0.00	0.00	0.00
	U_{16}–L_{16}	0.00	0.00	0.00	0.00	0.00
	U_{16}–L_{17}	0.00	0.00	0.00	0.00	0.00
	U_{17}–L_{17}	0.00	0.00	0.00	0.00	0.00
	U_{17}–L_{18}	0.00	0.00	0.00	0.00	0.00
	U_{18}–L_{18}	0.00	0.00	0.00	0.00	0.00
	U_{18}–L_{19}	0.00	0.00	0.00	0.00	0.00
	U_{19}–L_{19}	0.00	0.00	0.00	0.00	0.00
	U_{19}–L_{20}	0.00	0.00	0.00	0.00	0.00
	U_{20}–L_{20}	0.00	0.00	0.00	0.00	0.00
	U_{20}–L_{21}	0.00	0.00	0.00	0.00	0.00
	U_{21}–L_{21}	0.00	0.00	0.00	0.00	0.00
	U_{21}–L_{22}	0.00	0.00	0.00	0.00	0.00
	U_{22}–L_{22}	0.00	0.00	0.00	0.00	0.00
	U_{22}–L_{23}	0.00	0.00	0.00	0.00	0.00
	U_{23}–L_{23}	0.00	0.00	0.00	0.00	0.00
	U_{23}–L_{24}	0.00	0.00	0.00	0.00	0.00
	U_{24}–L_{24}	0.00	0.00	0.00	0.00	0.00
	U_{24}–L_{25}	0.00	0.00	0.00	0.00	0.00
	U_{25}–L_{25}	0.00	0.00	0.00	0.00	0.00
	U_{25}–L_{26}	0.00	0.00	0.00	0.00	0.00
	U_{26}–L_{26}	0.00	0.00	0.00	0.00	0.00
	U_{26}–L_{27}	0.00	0.00	0.00	0.00	0.00
	U_{27}–L_{27}	0.00	0.00	0.00	0.00	0.00
	U_{27}–L_{28}	0.00	0.00	0.00	0.00	0.00
	U_{28}–L_{28}	0.00	0.00	0.00	0.00	0.00
	U_{28}–L_{29}	0.00	0.00	0.00	0.00	0.00
	U_{29}–L_{29}	0.00	0.00	0.00	0.00	0.00
	U_{29}–L_{30}	0.00	0.00	0.00	0.00	0.00
	U_{30}–L_{30}	0.00	0.00	0.00	0.00	0.00
	U_{30}–L_{31}	0.00	0.00	0.00	0.00	0.00
	U_{31}–L_{31}	0.00	0.00	0.00	0.00	0.00
	U_{31}–L_{32}	0.00	0.00	0.00	0.00	0.00
	U_{32}–L_{32}	0.00	0.00	0.00	0.00	0.00
	U_{33}–L_{33}	0.00	0.00	0.00	0.00	0.00
	U_{34}–L_{34}	0.00	0.00	0.00	0.00	0.00
	U_{35}–L_{35}	0.00	0.00	0.00	0.00	0.00
	U_{36}–L_{36}	0.00	0.00	0.00	0.00	0.00
	U_{37}–L_{37}	0.00	0.00	0.00	0.00	0.00
	U_{38}–L_{38}	0.00	0.00	0.00	0.00	0.00
	U_{39}–L_{39}	0.00	0.00	0.00	0.00	0.00
	U_{40}–L_{40}	0.00	0.00	0.00	0.00	0.00
	U_{41}–L_{41}	0.00	0.00	0.00	0.00	0.00
	U_{42}–L_{42}	0.00	0.00	0.00	0.00	0.00
	U_{43}–L_{43}	0.00	0.00	0.00	0.00	0.00
	U_{44}–L_{44}	0.00	0.00	0.00	0.00	0.00
	U_{45}–L_{45}	0.00	0.00	0.00	0.00	0.00
	U_{46}–L_{46}	0.00	0.00	0.00	0.00	0.00
	U_{47}–L_{47}	0.00	0.00	0.00	0.00	0.00
	U_{48}–L_{48}	0.00	0.00	0.00	0.00	0.00
	U_{49}–L_{49}	0.00	0.00	0.00	0.00	0.00
	U_{50}–L_{50}	0.00	0.00	0.00	0.00	0.00

Max. Neg. Mom.

Member	Start-I	End-I	S_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	I_z (in^4)
U_0–L_1	-108.70	192.41	67.45	100.48	13.2	13.18
U_1–L_1	-56.53	66.53	-11.67	23.41	15.4	15.42
U_1–L_2	-22.70	-28.73	-16.48	-16.48	15.4	15.42
U_2–L_2	25.59	-21.40	66.37	-63.63	15.4	15.42
U_2–L_3	54.74	-55.63	-7.80	8.14	15.4	15.42
U_3–L_3	72.38	-90.36	167.19	-126.27	19.4	19.37
U_3–L_4	86.79	-84.93	123.23	-137.74	19.4	19.37
U_4–L_4	131.60	-145.12	179.36	-193.99	16.2	16.18
U_4–L_5	-52.74	55.89	43.18	-57.75	107.1	107.13
U_5–L_5	-224.61	256.37	-184.88	213.06	31.4	32.07
U_5–L_6	-164.19	158.09	-132.09	121.01	32.8	32.76
U_6–L_6	-178.96	246.40	-140.09	237.04	42.74	42.74
U_6–L_7	-157.78	154.68	-119.80	117.67	21.1	21.09
U_7–L_7	-112.35	133.84	-69.88	89.61	17.2	17.24
U_7–L_8	-66.00	73.59	-29.93	38.18	17.2	17.24
U_8–L_8	-12.20	12.03	23.10	-24.16	15.4	15.42
U_8–L_9	-7.58	7.71	25.06	25.75	15.4	15.42
U_9–L_9	-3.39	3.43	25.20	-25.53	15.4	15.42
U_9–L_{10}	-4.71	4.16	-46.56	42.30	15.4	15.42
U_{10}–L_{10}	-4.83	4.33	47.39	-46.50	15.4	15.42
U_{10}–L_{11}	-2.08	3.52	36.05	-44.57	15.4	15.42
U_{11}–L_{11}	-250.76	298.74	183.53	-214.25	15.4	15.42
U_{11}–L_{12}	-35.26	35.97	4.29	-4.42	15.4	15.42
U_{12}–L_{12}	-40.68	39.57	5.91	-5.29	15.4	15.42
U_{12}–L_{13}	-20.76	21.36	-3.48	3.48	15.4	15.42
U_{13}–L_{13}	-27.06	27.57	-4.28	4.28	15.4	15.42
U_{13}–L_{14}	-22.03	23.10	11.22	-10.60	15.4	15.42
U_{14}–L_{14}	-4.01	4.30	36.17	-37.22	15.4	15.42
U_{14}–L_{15}	-8.01	8.65	14.19	-15.63	15.4	15.42
U_{15}–L_{15}	-8.14	6.45	31.06	-31.02	15.4	15.42
U_{15}–L_{16}	-7.58	5.71	28.08	-40.16	15.4	15.42
U_{16}–L_{16}	-0.05	0.61	36.12	37.19	15.4	15.42
U_{16}–L_{17}	-0.19	1.44	35.65	36.78	15.4	15.42
U_{17}–L_{17}	-0.33	2.26	34.19	35.24	15.4	15.42
U_{17}–L_{18}	-3.85	3.75	42.12	40.48	15.4	15.42
U_{18}–L_{18}	-47.63	47.37	44.97	43.27	15.4	15.42
U_{18}–L_{19}	-37.02	34.77	3.85	-3.42	15.4	15.42
U_{19}–L_{19}	-37.74	36.21	3.85	-4.62	15.4	15.42
U_{19}–L_{20}	-41.56	40.82	3.93	-3.69	15.4	15.42
U_{20}–L_{20}	-38.62	40.77	6.16	-5.09	15.4	15.42
U_{20}–L_{21}	-29.18	30.96	6.16	-3.33	15.4	15.42
U_{21}–L_{21}	-23.84	24.13	6.39	-5.48	15.4	15.42
U_{21}–L_{22}	-23.33	24.13	6.39	-8.19	15.4	15.42
U_{22}–L_{22}	-13.56	14.41	12.18	-12.73	15.4	15.42
U_{22}–L_{23}	-23.98	23.75	24.40	23.00	15.4	15.42
U_{23}–L_{23}	-6.56	5.78	22.79	-23.60	15.4	15.42
U_{23}–L_{24}	-5.20	5.02	29.81	-29.73	15.4	15.42
U_{24}–L_{24}	-5.20	5.02	44.72	47.01	15.4	15.42
U_{24}–L_{25}	-5.54	5.38	46.69	47.23	15.4	15.42
U_{25}–L_{25}	-4.12	3.99	46.69	47.23	15.4	15.42
U_{25}–L_{26}	-2.69	2.25	46.45	44.14	15.4	15.42
U_{26}–L_{26}	-4.12	3.99	41.26	41.26	15.4	15.42
U_{26}–L_{27}	-32.25	31.06	4.28	-4.01	15.4	15.42
U_{27}–L_{27}	-32.04	31.20	3.45	-4.73	15.4	15.42
U_{27}–L_{28}	-32.04	31.20	4.28	-2.34	15.4	15.42
U_{28}–L_{28}	-32.50	33.13	0.46	-1.64	15.4	15.42
U_{28}–L_{29}	-32.50	33.13	0.46	-2.50	15.4	15.42
U_{29}–L_{29}	-30.45	30.55	4.84	-4.17	15.4	15.42
U_{29}–L_{30}	-16.33	18.24	6.18	-6.44	15.4	15.42
U_{30}–L_{30}	-12.57	11.97	19.27	-20.72	15.4	15.42
U_{30}–L_{31}	-4.17	4.20	23.96	-24.89	15.4	15.42
U_{31}–L_{31}	-5.97	5.60	46.16	-46.07	15.4	15.42
U_{31}–L_{32}	-3.00	4.92	35.70	-46.20	15.4	15.42
U_{32}–L_{32}	-43.84	42.52	3.01	-3.08	15.4	15.42
U_{33}–L_{33}	-35.54	35.49	3.20	-3.03	15.4	15.42
U_{34}–L_{34}	-26.29	27.03	7.14	-1.46	15.4	15.42
U_{35}–L_{35}	-23.61	23.48	6.48	-6.07	15.4	15.42
U_{36}–L_{36}	-23.67	24.57	9.48	-9.07	15.4	15.42
U_{37}–L_{37}	-14.58	14.89	14.96	-16.22	15.4	15.42
U_{38}–L_{38}	-8.14	7.49	25.39	-25.39	15.4	15.42
U_{39}–L_{39}	-5.67	4.74	27.05	-28.12	15.4	15.42
U_{40}–L_{40}	-0.57	1.85	28.30	-31.74	15.4	15.42
U_{41}–L_{41}	0.57	1.85	28.30	-31.74	15.4	15.42
U_{42}–L_{42}	-7.91	7.03	34.67	-31.48	15.4	15.42
U_{43}–L_{43}	-28.76	29.42	2.12	-2.07	15.4	15.42
U_{44}–L_{44}	-21.60	25.04	1.18	-2.03	15.4	15.42
U_{45}–L_{45}	-24.03	25.28	2.27	-1.83	15.4	15.42
U_{46}–L_{46}	-20.55	19.95	5.28	-4.81	15.4	15.42
U_{47}–L_{47}	-18.29	19.00	17.42	-18.92	15.4	15.42
U_{48}–L_{48}	-10.27	9.55	24.42	-28.72	15.4	15.42
U_{49}–L_{49}	-7.91	7.03	34.67	-31.48	15.4	15.42
U_{50}–L_{50}	-1.64	5.40	23.78	-37.66	15.4	15.42

Shape Factor

Member	Shape Factor f
U_0–L_1	1.54
U_1–L_1	1.54
U_1–L_2	1.54
U_2–L_2	1.54
U_2–L_3	1.54
U_3–$L

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: 2F1
Condition: As-Inspected

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

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

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

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

M_2 Information

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_x (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_x	M_n (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor C_{mx}	Pass
Structure 1	U_0-L_1	-23.63	7.60	0.45	0.48	0.11	-0.09					-9.99	6.47													
	U_1-L_1	-3.36	-8.44	-0.62	0.27	-0.30	-0.15					-2.56	3.54	-4.01	-2.03	0.00	0.00	0.00	0.00	0.00	0.00	-15.19	-8.28	0.00	0.00	0.00	
	U_1-L_2	7.94	-13.41	0.18	0.05	0.01	-0.56					2.39	0.60	0.15	-7.43	0.00	0.00	0.00	0.00	0.00	0.00	-13.43	-16.66	10.51	-27.09	0.00	0.00	0.00	0.00	0.00	0.00	8.64	9.16	9.70	-24.39	0.00	0.00	0.00	0.00	0.00	0.00	-32.22	-36.60	-32.15	-80.23	94.0	93.99	93.99	104.66	65.3	1.11	3454	171	0.9413576	3126.1	0.6533	0.86	0.86	0.245	0.057	0.31	Yes	0.148	0.031	0.18	Yes												

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
Condition: As-inspected

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

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

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

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

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0 - U_1	-75.17	-0.72	-0.47	0.64	3.16	-10.39	-5.27	7.15	35.22	-115.66
	U_1 - U_2	-46.62	-20.29	0.11	-0.26	1.24	-13.94	-1.20	13.76	-2.61	-136.20
	U_2 - L_1	-112.29	86.52	0.58	-1.56	-1.78	-11.14	6.41	17.33	-19.78	-124.01
	L_1 - U_3	-75.71	66.12	-0.26	2.09	-0.81	-12.34	-8.05	12.25	-8.57	-115.10
	U_3 - L_2	-9.25	61.62	0.80	1.49	-1.67	-6.32	8.93	16.58	-11.93	-70.36
	L_2 - U_4	42.76	120.21	-2.54	2.47	-1.61	-3.96	-28.32	27.44	-17.96	-44.08
	U_4 - L_3	-12.91	72.98	0.16	1.44	-0.59	-5.59	-12.91	12.98	10.04	-66.73
	L_3 - U_5	-47.38	526.15	-7.44	10.95	0.09	-0.04	-82.77	121.90	0.66	-0.40
	U_5 - L_4	475.03	-124.35	9.06	8.79	-72.09	-505.38	9.08	8.75	72.09	-505.38
	L_4 - U_6	46.82	20.99	0.83	1.25	0.66	-6.91	8.99	13.51	7.13	-74.50
	U_6 - L_5	64.59	-138.73	1.26	0.97	0.03	-0.03	-13.60	11.42	3.51	-56.60
	L_5 - U_7	27.91	-140.51	1.41	0.77	-0.31	-10.10	15.16	8.28	-3.37	-109.43
	U_7 - U_8	-106.12	-155.13	2.03	0.80	1.28	-10.82	21.86	8.64	13.81	-116.67
	U_8 - L_6	-139.54	-387.21	3.73	1.56	4.79	-20.77	39.07	16.80	24.69	-223.77
	L_6 - U_9	-245.80	-183.07	-0.04	0.67	-1.04	-12.11	-0.45	7.23	-11.19	-130.53
	U_9 - U_{10}	-123.51	-327.11	-2.25	-1.02	2.57	-11.83	-27.96	-27.66	-27.66	-127.94
	U_{10} - L_7	-269.97	-145.19	-1.09	0.69	-2.43	-9.88	-11.71	7.45	-26.18	-106.55
	L_7 - U_{11}	-134.36	-67.49	-1.44	0.92	-1.98	-5.30	-46.20	8.98	-32.71	-87.11
	U_{11} - L_8	-170.82	-20.32	-0.76	1.88	-3.62	-2.88	-8.17	20.24	-28.90	-31.03
	L_8 - U_{12}	-186.23	23.42	-3.53	4.89	-1.21	-9.76	-38.05	52.77	13.09	-105.21
	U_{12} - L_9	114.62	-239.71	1.45	0.59	-1.03	-10.26	86.53	-258.13	11.32	-114.65
	L_9 - U_{13}	-71.24	-180.99	-0.12	0.88	0.27	-12.30	-1.22	9.39	2.85	-130.93
	U_{13} - L_{10}	-152.64	-152.64	-0.32	1.12	-0.62	-18.24	-3.26	12.06	-7.60	-195.01
	L_{10} - U_{14}	-327.34	-325.40	0.63	2.54	-5.15	-19.58	6.67	27.04	-54.78	-208.46
	U_{14} - L_{11}	-338.58	-367.31	0.73	1.56	-6.19	-20.77	7.79	16.80	-64.77	-263.77
	L_{11} - U_{15}	-396.14	-197.74	-7.17	2.81	-6.97	-17.08	-76.35	29.92	-76.21	-181.87
	U_{15} - U_{16}	-344.18	-179.44	1.84	1.61	-4.22	-25.06	19.61	17.10	-44.89	-266.80
	U_{16} - L_{12}	-226.16	-295.72	1.70	1.35	-2.77	-20.35	18.07	14.51	-29.34	-217.15
	L_{12} - U_{17}	-350.21	-90.73	-1.24	2.09	0.79	-10.57	13.16	22.25	8.39	-112.56
	U_{17} - L_{13}	-275.36	23.78	-1.72	1.23	-0.44	-9.75	21.09	13.17	2.18	-82.30
	L_{13} - U_{18}	-167.09	39.84	-1.98	1.99	0.21	-6.35	21.89	21.13	2.18	-67.56
	U_{18} - L_{14}	-109.78	170.74	-3.73	2.44	-1.74	-5.13	39.71	26.00	-16.16	-54.53
	L_{14} - U_{19}	-8.79	29.50	-0.34	0.42	-0.46	-4.19	4.11	5.04	-1.84	-43.63
	U_{19} - L_{15}	-261.01	1266.00	-11.85	16.12	-0.32	-0.63	-26.18	171.64	-3.39	-6.75
	L_{15} - U_{20}	-1192.78	62.74	-16.16	1.63	1.36	-1.36	-1.64	13.48	-161.05	-188.89
	U_{20} - L_{16}	-25.29	11.66	-1.08	1.89	-2.58	-12.07	1.33	19.93	-27.10	-126.99
	L_{16} - U_{21}	-13.46	13.44	-1.51	1.51	-1.67	-11.78	1.33	19.93	-27.10	-144.25
	U_{21} - U_{22}	-150.60	33.06	-1.41	1.51	1.77	-11.78	14.88	15.84	18.67	-123.95
	U_{22} - L_{17}	-147.31	4.37	1.76	1.25	0.12	-12.52	18.36	13.15	1.26	-137.75
	L_{17} - U_{23}	-215.74	0.15	-1.51	0.00	0.00	-13.50	0.00	0.00	0.00	-141.42
	U_{23} - L_{18}	-31.69	-33.99	0.04	1.40	-1.26	-14.68	0.46	14.68	-13.25	-154.40
	L_{18} - U_{24}	-86.03	-71.70	-2.26	1.26	-0.72	-13.16	-23.72	13.16	-13.25	-138.56
	U_{24} - L_{19}	-60.96	-86.98	0.58	2.00	-0.09	-11.91	6.11	8.37	21.99	-125.26
	L_{19} - U_{25}	-21.50	-55.15	-4.51	1.58	-2.49	-12.47	-21.50	-55.15	-4.51	-127.47
	U_{25} - L_{20}	-33.01	-28.69	-1.32	1.69	-3.43	-10.26	13.91	17.80	-36.12	-107.92
	L_{20} - U_{26}	-15.13	113.78	-5.87	2.73	-0.18	-7.38	-61.72	28.69	-1.85	-77.63
	U_{26} - L_{21}	-46.16	129.54	-6.42	3.04	-0.16	-7.38	-46.16	129.54	-6.42	-77.63
	L_{21} - U_{27}	-2.74	209.84	-4.12	3.72	-2.00	-6.68	-43.30	39.10	21.01	-70.28
	U_{27} - L_{22}	-64.59	-138.73	1.26	0.97	0.03	-0.03	-13.60	11.42	3.51	-56.60
	L_{22} - U_{28}	-122.51	1157.56	-8.62	16.68	0.07	-0.83	-82.62	179.46	0.69	-8.69
	U_{28} - U_{29}	-1154.91	-197.36	0.11	1.67	13.41	-16.23	1.15	17.62	142.73	-172.76
	L_{23} - U_{29}	-87.84	62.20	-1.39	1.39	-1.16	-18.08	1.33	19.93	-27.10	-185.75
	U_{29} - L_{24}	-178.89	-59.81	1.52	1.86	1.53	-12.28	16.22	19.80	16.33	-130.72
	L_{24} - U_{30}	-11.85	-11.85	-1.51	1.51	-1.67	-11.78	19.86	15.84	-27.76	-117.27
	U_{30} - U_{31}	-68.66	-178.68	2.14	1.73	0.07	-15.40	22.83	18.42	0.72	-163.95
	L_{25} - U_{31}	-87.84	62.20	-1.39	1.39	-1.16	-18.08	1.33	19.93	-27.10	-185.75
	U_{31} - L_{26}	-236.51	-153.10	-1.10	2.10	-2.50	-24.32	-11.75	22.40	-26.57	-208.89
	L_{26} - U_{32}	-98.60	-313.27	1.05	3.09	2.40	-14.22	11.17	32.87	25.54	-151.35
	U_{32} - L_{27}	-159.54	-393.07	2.15	3.15	3.19	-29.33	11.17	32.87	25.54	-151.35
	L_{27} - U_{33}	-350.37	-386.86	-6.20	1.11	-5.36	-17.58	-65.98	11.84	-57.07	-187.17
	U_{33} - L_{28}	-279.98	-117.76	-5.36	2.92	-1.06	-8.84	-57.05	31.10	-11.30	-94.11
	L_{28} - U_{34}	-252.51	-231.61	-3.61	2.92	-1.06	-8.84	-57.05	31.10	-11.30	-94.11
	U_{34} - L_{29}	-186.32	-74.12	-4.26	3.23	2.00	-9.64	-85.20	55.66	21.24	-102.64
	L_{29} - U_{35}	-139.08	-187.57	-5.61	0.57	4.69	-8.95	40.43	6.17	50.99	-96.46
	U_{35} - L_{30}	-47.38	-118.55	-0.84	0.57	1.32	-2.68	-2.52	2.52	6.17	-27.12
	L_{30} - U_{36}	-52.58	-129.17	-0.10	0.51	2.55	-12.77	-1.08	5.49	27.50	-137.64
	U_{36} - L_{31}	-277.84	-111.68	-6.56	1.71	-3.05	-13.40	-70.73	18.46	-32.87	-144.51
	L_{31} - U_{37}	-199.58	-243.52	-1.88	1.04	-1.12	-19.67	-20.24	11.19	-14.23	-213.60
	U_{37} - L_{32}	-287.74	-127.82	-5.80	2.35	-11.74	-7.29	-58.61	8.61	25.31	-126.61
	L_{32} - U_{38}	-141.43	-113.94	-1.73	2.01	-3.27	-7.70	-18.62	21.64	-35.22	-83.67
	U_{38} - L_{33}	-146.52	-22.75	-2.41	1.63	0.07	-6.40	-26.02	17.54	0.79	-66.96
	L_{33} - U_{39}	-141.64	56.96	-3.67	1.82	-0.17	-3.53	-39.54	7.39	-1.87	-38.10
	U_{39} - L_{34}	-112.29	86.52	0.58	1.56	-1.78	-11.14	6.41	17.33	-19.78	-124.01
	L_{34} - U_{40}	-75.71	66.12	-0.26	2.09	-0.81	-12.34	-8.05	12.25	-8.57	-115.10
	U_{40} - L_{35}	-9.25	61.62	0.80	1.49	-1.67	-6.32	8.93	16.58	-11.93	-70.36
	L_{35} - U_{41}	42.76	120.21	-2.54	2.47	-1.61	-3.96	-28.32	27.44	-17.96	-44.08
	U_{41} - L_{36}	-12.91	72.98	0.16	1.44	-0.59	-5.59	-12.91	12.98	10.04	-66.73
	L_{36} - U_{42}	-47.38	526.15	-7.44	10.95	0.09	-0.04	-82.77	121.90	0.66	-0.40
	U_{42} - L_{37}	475.03	-124.35	9.06	8.79	-72.09	-505.38	9.08	8.75	72.09	-505.38
	L_{37} - U_{43}	46.82	20.99	0.83	1.25	0.66	-6.91	8.99	13.51	7.13	-74.50
	U_{43} - L_{38}	64.59	-138.73	1.26	0.97	0.03	-0.03	-13.60	11.42	3.51	-56.60
	L_{38} - U_{44}	27.91	-140.51	1.41	0.77	-0.31	-10.10	15.16	8.28	-3.37	-109.43
	U_{44} - U_{45}	-106.12	-155.13	2.03	0.80	1.28	-10.82	21.86	8.64	13.81	-116.67
	L_{39} - U_{45}	-139.54	-387.21	3.73	1.56	4.79	-20.77	39.07	16.80	24.69	-223.77
	U_{45} - L_{40}	-245.80	-183.07	-0.04	0.67	-1.04	-12.11	-0.45	7.23	-11.19	-130.53
	L_{40} - U_{46}	-123.51	-327.11	-2.25	-1.02	2.57	-11.83	-27.96	-27.66	-27.66	-127.94
	U_{46} - L_{41}	-269.97	-145.19	-1.09	0.69	-2.43	-9.88	-11.71	7.45	-26.18	-106.55
	L_{41} - U_{47}	-134.36	-67.49	-1.44	0.92	-1.98	-5.30	-46.20	8.98	-32.71	-87.11
	U_{47} - L_{42}	-170.82	-20.32	-0.76	1.88	-3.62	-2.88	-8.17	20.24	-28.90	-31.03
	L_{42} - U_{48}	-186.23	23.42	-3.53	4.89	-1.21	-9.76	-38.05	52.77	13.09	-105.21
	U_{48} - L_{43}	114.62	-239.71	1.45	0.59	-1.03	-10.26	86.53	-258.13	11.32	-114.65
	L_{43} - U_{49}	-71.24	-180.99	-0.12	0.88	0.27	-12.30	-1.22	9.39	2.85	-130.93
	U_{49} - L_{44}	-152.64	-152.64	-0.32	1.12	-0.62	-18.24	-3.26	12.06	-7.60	-195.01
	L_{44} - U_{50}	-327.34	-325.40	0.63	2.54	-5.15	-19.58	6.67	27.04	-54.78	-208.46
	U_{50} - L_{45}	-338.58	-367.31	0.73	1.56	-6.19	-20.77	7.79	16.80	-64.77	-263.77
	L_{45} - U_{51}	-396.14	-197.74	-7.17	2.81	-6.97	-17.08	-76.35	29.92	-76.21	-181.87
	U_{51} - U_{52}	-344.18	-179.44	1.84	1.61	-4.22	-25.06	19.61	17.10	-44.89	-266.80
	U_{52} - L_{46}	-226.16	-295.72	1.70	1.35	-2.77	-20.35	18.07	14.51	-29.34	-217.15
	L_{46} - U_{53}	-350.21	-90.73	-1.24	2.09	0.79	-10.57	13.16	22.25	8.39	-112.56
	U_{53} - L_{47}	-275.36	23.78	-1.72	1.23	-0.44	-9.75	21.09	13.17	2.18	-82.30
	L_{47} - U_{54}	-167.09	39.84	-1.98	1.99	0.21	-6.35	21.89	21.13	2.18	-67.56
	U_{54} - L_{48}	-109.78	170.74	-3.73	2.44	-1.74	-5.13	39.71	26.00	-16.16	-54.53
	L_{48} - U_{55}	-8.79	29.50	-0.34	0.42	-0.46	-4.19	4.11	5.04	-1.84	-43.63
	U_{55} - L_{49}	-261.01	1266.00	-11.85	16.12	-0.32	-0.63	-26.18	171.64	-3.39	-6.75
	L_{49} - U_{56}	-1192.78	62.74	-16.16	1.63	1.36	-1.36	-1.64	13.48	-161.05	-188.89
	U_{56} - L_{50}	-25.29	11.66	-1.08	1.89	-2.58	-12.07	1.33	19.93	-27.10	-126.99
	L_{50} - U_{57}	-13.46	13.44	-1.51	1.51	-1.67	-11.78	1.33	19.93	-27.10	-144.25
	U_{57} - U_{58}	-150.60	33.06	-1.41	1.51	1.77	-11.78	14.88	15.84	18.67	-123.95
	U_{58} - L_{51}	-147.31	4.37	1.76	1.25	0.12	-12.52	18.36	13.15	1.26	-137.75
	L_{51} - U_{59}	-215.74	0.15	-1.51	0.00	0.00	-13.50	0.00	0.00	0.00	-141.42
	U_{59} - U_{60}	-31.69	-33.99	0.04	1.40	-1.26	-14.68	0.46	14.68	-13.25	-154.40
	L_{52} - U_{60}	-86.03	-71.70	-2.26	1.26	-0.72	-13.16	-23.72	13.16	-13.25	-138.56
	U_{60} - L_{53}	-60.96	-86.98	0.58	2.00	-0.09	-11.91	6.11	8.37	21.99	-125.26
	L_{53} - U_{61}	-21.50	-55.15	-4.51	1.58	-2.49	-12.47	-21.50	-55.15	-4.51	-127.47
	U_{61} - L_{54}	-33.01	-28.69	-1.32	1.69	-3.43	-10.26	13.91	17.80	-36.12	-107.92
	L_{54} - U_{62}	-15.13	113.78	-5.87	2.73	-0.18	-7.38	-61.72	28.69	-1.85	-77.63
	U_{62} - L_{55}	-46.16	129.54	-6.42	3.04	-0.16	-7.38	-46.16	129.54	-6.42	-77.63
	L_{55} - U_{63}	-2.74	209.84	-4.12	3.72	-2.00	-6.68	-43.30	39.10	21.01	-70.28
	U_{63} - L_{56}	-64.59	-138.73	1.26	0.97	0.03	-0.03	-13.60	11.42	3.51	-56.60
	L_{56} - U_{64}	-122.51	1157.56	-8.62	16.68	0.07	-0.83	-82.62	179.46	0.69	-8.69
	U_{64} - U_{65}	-1154.91	-197.36	0.11	1.67	13.41	-16.23	1.15	17.62	142.73	-172.76
	L_{57} - U_{65}	-87.84	62.20	-1.39	1.39	-1.16	-18.08	1.33	19.93	-27.10	-185.75
	U_{65} - L_{58}	-178.89	-59.81	1.52	1.86	1.53	-12.28	16.22	19.80	16.33	-130.72
	L_{58} - U_{66}	-11.85	-11.85	-1.51	1.51	-1.67	-11.78	19.86	15.84	-27.76	-117.27
	U_{66} - U_{67}	-68.66	-178.68	2.14	1.73	0.07	-15.40	22.83	18.42	0.72	-163.95
	L_{59} - U_{67}	-87.84	62.20	-1.39	1.39	-1.16	-18.08	1.33	19.93	-27.10	-185.75
	U_{67} - L_{60}	-236.51	-153.10	-1.10	2.10	-2.50	-24.32	-11.75	22.40	-26.57	-208.89
	L_{60} - U_{68}	-98.60	-313.27	1.05	3.09	2.40	-14.22	11.17	32.87	25.54	-151.35
	U_{68} - L_{61}	-159.54	-393.07	2.15	3.15	3.19	-29.33	11.17	32.87	25.54	-151.35
	L_{61} - U_{69}	-350.37	-386.86	-6.20	1.11	-5.36	-17.58	-65.98	11.84	-57.07	-187.17
	U_{69} - L_{62}	-279.98	-117.76	-5.36	2.92	-1.06	-8.84	-57.05	31.10	-11.30	-94.11
	L_{62} - U_{70}	-252.51	-231.61	-3.61	2.92	-1.06	-8.84	-57.05	31.10	-11.30	-94.11
	U_{70} - L_{63}	-186.32	-74.12	-4.26	3.23	2.00	-9.64	-85.20	55.66	21.24	-102.64
	L_{63} - U_{71}	-139.08	-187.57	-5.61	0.57	4.69	-8.95	40.43	6.17	50.99	-96.46
	U_{71} - L_{64}	-47.38	-118.55	-0.84	0.57	1.32	-2.68	-2.52	2.52	6.17	-27.12
	L_{64} - U_{72}	-52.58	-129.17	-0.10	0.51	2.55	-12.77	-1.08	5.49	27.50	-137.64
	U_{72} - L_{65}	-277.84	-111.68	-6.56	1.71	-3.05	-13.40	-70.73	18.46	-32.87	-144.51
	L_{65} - U_{73}	-199.58	-243.52	-1.88	1.04	-1.12	-19.67	-20.24	11.19	-14.23	-213.60
	U_{73} - L_{66}	-287.74	-127.82	-5.80	2.35	-11.74	-7.29	-58.61	8.61	25.31	-126.61
	L_{66} - U_{74}	-141.43	-113.94	-1.73	2.01	-3.27	-7.70	-18.62	21.64	-35.22	-83.67
	U_{74} - L_{67}	-146.52	-22.75	-2.41	1.63	0.07	-6.40	-26.02	17.54	0.79	-66.96
	L_{67} - U_{75}	-141.64	56.96	-3.67	1.82	-0.17	-3.53	-39.54	7.39	-1.87	-38.10
	U_0 - U_{75}	-75.17	-0.72	-0.47	0.64	3.16	-10.39	-5.27	7.15	35.22	-115.66

ZZ Axis Moments from STAAD

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	S_{bb} (in^3)	Z_z (in^4)	I_{xx} (in^4)	Shape Factor	M_p (k-in)	Formula I.8 Term-1 F.*S$_{top}$	M_n k/in-in	Equivalent Mom. Factors a	$C_{b(x)}$	$C_{b(xb)}$
Structure 1	U_0 - U_1	-0.47	0.64	3.16	-10.39	35.22	-115.66	0.00	0.00	0.00	0.00	-98.07	8.35	-46.43	-151.30	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206
	U_1 - U_2	-20.29	0.11	-0.26	1.24	13.76	-2.61	-136.20	0.00	0.00	0.00	0.00	-89.31	11.89	-202.14	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206
	U_2 - L_1	86.52	0.58	-1.56	-1.78	-11.14	6.41	17.33	-19.78	-124.01	0.00	0.00	0.00	-137.64	130.01	-171.69	-48.74	90.2	90.24	76.71	127.46	2147	1328.6
	L_1 - U_3	66.12	-0.26	2.09	-0.81	-12.34	-8.05	12.25	-8.57	-115.10	0.00	0.00	0.00	-66.53	-16.23	-32.58	-43.05	90.2	90.24	72.24	127.46	2147	1328.6
	U_3 - L_2	61.62	0.80	1.49	-1.67	-6.32	8.93	16.58	-11.93	-70.36	0.00	0.00	0.00	-0.42	101.66	27.54	-11.36	90.2	90.24	72.24	127.46	2147	1328.6
	L_2 - U_4	120.21	-2.54	2.47	-1.61	-3.96	-28.32	27.44	-17.96	-44.08	0.00	0.00	0.00	18.77	191.94	32.24	98.97	90.2	90.24	76.71	127.46	2147	1328.6
	U_4 - L_3	72.98	0.16	1.44	-0.59	-5.59	-12.91	12.98	10.04	-66.73	0.00	0.00	0.00	104.34	0.00	141.98	-29.48	90.2	90.24	76.18	142.56	2386	1549.1
	L_3 - U_5	526.15	-7.44	10.95	0.09	-0.04	-82.77	121.90	0.66	-0.40	0.00	0.00	0.00	-169.20	842.46	-60.74	683.48	138.2	138.17	111.77	199.97	3642	2197.7
	U_5 - L_4	-124.35	9.06	8.79	72.09	-505.38	9.08	8.75	72.09	-505.38	0.00	0.00	0.00	629.31	-7.68	711.26	-298.66	130.3	130.26	109.11	180.77	2960	1799.3
	L_4 - U_6	20.99	0.83	1.25	0.66	-6.91	8.99	13.51	7.13	-74.50	0.00	0.00	0.00	72.55	44.33	70.13	-70.08	96.6	96.61	79.12	139.29	2174	1387.9
	U_6 - L_5	-138.73	1.26	0.97	0.03	-0.03	-13.60	11.42	3.51	-56.60	0.00	0.00	0.00	57.64	-166.80	84.33	-171.68	96.6	96.61	83.55	139.29	2174	1387.9
	L_5 - U_7	-140.51	1.41	0.77	-0.31	-10.10	15.16	8.28	-3.37	-109.43	0.00	0.00	0.00	55.99	-171.90	91.89	-324.92	128.7	128.69	105.26	182.66	3153	1864.4
	U_7 - U_8	-155.13	2.03	0.80	1.28	-10.82	21.86	8.64	13.81	-116.67	0.00	0.00	0.00	-109.55	-190.45	-120.00	-353.35	151.8	151.76	130.54	219.77	4535	2632.6
	U_8 - L_6	-387.21	3.73	1.56	4.79	-20.77	39.07	16.80	24.69	-223.77	0.00	0.00	0.00	-244.51	-766.16	-198.63	-1,014.69	151.8	151.76	130.54	219.77	4535	2632.6
	L_6 - U_9	-183.07	-0.04	0.67	-1.04	-12.11	-0.45	7.23	-11.19	-130.53	0.00	0.00	0.00	-330.13	-228.99	-334.09	-407.68	188.5	188.51	157.55	274.68	5476	3413.6
	U_9 - U_{10}	-327.11	-2.25	-1.02	2.57	-11.83	-27.96	-27.66	-27.66	-127.94	0.00	0.00	0.00	-192.16	-410.96	-124.01	-593.94	188.5	188.51	164.41	274.68	5476	3413.6
	U_{10} - L_7	-145.19	-1.09	0.69	-2.43	-9.88	-11.71	7.45	-26.18	-106.55	0.00	0.00	0.00	-366.19	-179.06	-385.00	-327.25	188.5	188.51	157.55	274.68	5476	3413.6
	L_7 - U_{11}	-67.49	-1.44	0.92	-1.98	-5.30	-46.20	8.98	-32.71	-87.11	0.00	0.00	0.00	-304.52	-90.27	-228.39	-167.08	127.3	127.32	110.40	199.23	3668	2326.5
	U_{11} - L_8	-20.32	-0.76	1.88	-3.62	-2.88	-8.17	20.24	-28.90	-31.03	0.00	0.00	0.00	-232.69	-0.11	-272.76	-66.76	104.8	104.75	86.43	150.63	2589	1554.3
	L_8 - U_{12}	23.42	-3.53	4.89	-1.21	-9.76	-38.05	52.77	13.09	-105.21	0.00	0.00	0.00	-291.56	99.05	-225.08	-106.33	104.8	104.75	86.43	150.63	2589	1554.3
	U_{12} - L_9	-258.13	1.45	0.59	-1.03	-10.26	86.53	-258.13	11.32	-114.65	0.00	0.00	0.00	-99.13	-258.13	-11.32	-414.65	104.8	104.75	86.43	150.63	2589	1554.3
	L_9 - U_{13}	-180.99	-0.12	0.88	0.27	-12.30	-1.22	9.39	2.85	-130.93	0.00	0.00	0.00	-94.20	-223.07	-88.50	-405.49	138.2	138.15	119.05	199.70	3434	1990.9
	U_{13} - L_{10}	-152.64	-0.32	1.12	-0.62	-18.24	-3.26	12.06	-7.60	-195.01	0.00	0.00	0.00	-152.64	-152.64	-152.64	-195.01	138.2	138.15	119

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: 2F1
Condition: As-inspected

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

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

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

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

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-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	-0.43	0.44	2.55	-4.71			0.00	0.00
	L_1-L_2	39.75	-88.06	-0.05	0.98	1.66	-7.81			0.00	0.00
	L_2-L_3	79.00	-42.24	-0.51	0.00	-0.77	-7.68			0.00	0.00
	L_3-L_4	-11.39	11.52	0.51	1.71	1.30	-8.85			0.00	0.00
	L_4-L_5	-49.18	208.14	-4.58	0.00	-21.27	-31.26			0.00	0.00
	L_5-L_6	-12.85	277.74	-3.69	-3.42	-4.67				0.00	0.00
	L_6-L_7	41.36	78.74	-4.05	2.65	-2.07	-5.50			0.00	0.00
	L_7-L_8	-25.09	448.92	-1.66	7.73	0.07	-0.04			0.00	0.00
	L_8-L_9	426.08	-36.00	0.91	0.57	5.17	-3.99			0.00	0.00
	L_9-L_{10}	70.40	-41.33	0.61	0.00	1.44	-14.24			0.00	0.00
	L_{10}-L_{11}	120.53	-116.03	1.63	0.80	1.04	-4.71			0.00	0.00
	L_{11}-L_{12}	139.16	-198.23	1.52	0.00	0.78	-5.20			0.00	0.00
	L_{12}-L_{13}	-45.20	-121.29	1.40	0.73	-2.71	-6.46			0.00	0.00
	L_{13}-L_{14}	96.42	-350.16	0.84	0.59	3.60	-12.28			0.00	0.00
	L_{14}-L_{15}	-352.17	-46.23	0.00	0.18	18.78	-9.73			0.00	0.00
	L_{15}-L_{16}	-192.00	-318.69	-0.62	0.83	-4.19	-10.51			0.00	0.00
	L_{16}-L_{17}	339.87	44.80	-3.03	2.08	-4.60	-4.53			0.00	0.00
	L_{17}-L_{18}	-154.69	-31.48	-3.23	2.31	-3.93	-3.17			0.00	0.00
	L_{18}-L_{19}	-216.17	148.84	-4.38	1.91	-7.01	-1.60			0.00	0.00
	L_{19}-L_{20}	-136.64	-69.93	-4.58	2.70	-0.19	-0.12			0.00	0.00
	L_0-L_1	2.99	-170.85	-0.30	0.59	1.34	-5.82			0.00	0.00
	L_1-L_2	52.56	-245.54	0.32	0.35	1.81	-7.14			0.00	0.00
	L_2-L_3	-6.26	-180.81	-0.08	0.64	-3.12	-7.86			0.00	0.00
	L_3-L_4	34.34	-43.24	0.01	0.00	0.43	-7.68			0.00	0.00
	L_4-L_5	-253.03	-295.08	0.59	1.03	-5.81	-12.39			0.00	0.00
	L_5-L_6	81.36	-406.13	0.01	0.00	-1.63	-10.48			0.00	0.00
	L_6-L_7	-475.19	-252.78	1.59	1.60	-3.82	-16.78			0.00	0.00
	L_7-L_8	-280.52	-64.48	-10.86	3.26	-6.29	-11.26			0.00	0.00
	L_8-L_9	-33.15	26.50	-3.11	0.00	-0.61	-8.27			0.00	0.00
	L_9-L_{10}	-225.89	141.33	-5.92	2.60	-6.49	-5.63			0.00	0.00
	L_{10}-L_{11}	257.56	205.01	-5.37	2.97	-4.33	-5.20			0.00	0.00
	L_{11}-L_{12}	-160.00	387.78	-3.71	3.46	-3.27	-5.83			0.00	0.00
	L_{12}-L_{13}	-202.72	-204.41	0.78	1.56	-4.26	-10.22			0.00	0.00
	L_{13}-L_{14}	705.75	-103.15	6.90	0.17	-1.65	-4.53			0.00	0.00
	L_{14}-L_{15}	1072.48	-412.36	0.29	0.69	10.35	-11.24			0.00	0.00
	L_{15}-L_{16}	319.48	-473.15	1.03	1.07	-8.30	-9.23			0.00	0.00
	L_{16}-L_{17}	476.61	-89.01	2.17	0.99	-5.11	-7.66			0.00	0.00
	L_{17}-L_{18}	252.82	-22.86	2.08	0.00	-1.16	-8.60			0.00	0.00
	L_{18}-L_{19}	226.53	-41.80	2.17	0.91	-0.13	-6.79			0.00	0.00
	L_{19}-L_{20}	214.46	-56.44	1.25	1.31	-2.14	-8.51			0.00	0.00
	L_0-L_1	43.76	-49.23	0.00	0.00	0.00	0.00			0.00	0.00
	L_1-L_2	49.26	-202.49	0.21	1.29	-0.09	-15.65			0.00	0.00
	L_2-L_3	197.13	34.33	-1.21	1.71	-1.46	-14.79			0.00	0.00
	L_3-L_4	-111.93	0.87	-2.82	2.25	-5.50	-10.70			0.00	0.00
	L_4-L_5	-80.79	178.83	-4.09	2.93	-3.41	-7.01			0.00	0.00
	L_5-L_6	-81.88	265.66	-4.71	3.76	-3.88	-4.35			0.00	0.00
	L_6-L_7	-100.08	-279.84	0.80	1.52	-5.51	-11.88			0.00	0.00
	L_7-L_8	372.05	1050.64	0.00	0.00	0.00	0.00			0.00	0.00
	L_8-L_9	1027.57	362.88	-0.78	0.68	-9.88	-10.70			0.00	0.00
	L_9-L_{10}	-227.20	-125.85	3.39	2.17	-4.60	-8.34			0.00	0.00
	L_{10}-L_{11}	68.89	-114.31	2.70	1.91	0.96	-7.13			0.00	0.00
	L_{11}-L_{12}	278.16	-133.13	0.99	1.91	0.96	-7.13			0.00	0.00
	L_{12}-L_{13}	222.98	-243.33	1.35	1.50	4.08	-8.33			0.00	0.00
	L_{13}-L_{14}	1.70	-330.07	0.00	0.00	0.00	0.00			0.00	0.00
	L_{14}-L_{15}	-187.99	-470.86	1.68	1.20	-3.51	-18.09			0.00	0.00
	L_{15}-L_{16}	-440.18	-93.63	-5.69	0.47	-8.88	-17.39			0.00	0.00
	L_{16}-L_{17}	-291.76	-319.61	-3.76	0.00	-4.36	-16.64			0.00	0.00
	L_{17}-L_{18}	-392.42	-38.25	-4.94	2.23	-7.16	-9.23			0.00	0.00
	L_{18}-L_{19}	-297.29	-199.08	-5.07	2.52	-4.40	-2.91			0.00	0.00
	L_{19}-L_{20}	-23.96	-98.13	-4.74	2.64	-0.63	-0.41			0.00	0.00
	L_0-L_1	24.89	-109.63	0.19	0.29	2.42	-5.51			0.00	0.00
	L_1-L_2	139.96	-178.06	-0.19	0.40	2.52	-5.32			0.00	0.00
	L_2-L_3	31.70	-330.01	-0.44	0.88	0.87	-8.97			0.00	0.00
	L_3-L_4	47.96	-293.32	-0.13	0.57	3.69	-8.76			0.00	0.00
	L_4-L_5	-41.79	-343.26	0.00	0.00	0.00	0.00			0.00	0.00
	L_5-L_6	-341.31	86.25	-6.98	3.78	-4.36	-10.43			0.00	0.00
	L_6-L_7	-201.18	-152.50	-6.96	2.13	-2.18	-5.98			0.00	0.00
	L_7-L_8	-147.72	-149.48	-7.07	2.34	-0.36	-4.38			0.00	0.00
	L_8-L_9	428.40	-26.47	1.29	0.51	6.86	-4.47			0.00	0.00
	L_9-L_{10}	70.64	-27.53	1.10	1.39	0.43	-6.10			0.00	0.00
	L_{10}-L_{11}	194.51	-25.06	1.49	1.23	4.15	-8.91			0.00	0.00
	L_{11}-L_{12}	-45.44	-80.85	0.28	0.83	-3.08	-10.11			0.00	0.00
	L_{12}-L_{13}	-74.43	-5.53	-4.28	2.97	0.32	-0.31			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_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F'c/S_{top}	M_u (k-in)	Equivalent Mom. Factor a	C_{mx}	$C_{mx}/(1-a)$
Structure 1	L_0-L_1	-26.34	-88.56	16.77	-163.08	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.122	0.56	0.56
	L_1-L_2	50.91	-100.23	75.74	-227.48	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.333	0.47	0.47
	L_2-L_3	83.85	-39.94	-113.87	-167.32	99.5	99.53	91.00	125.49	3409	1373.0	1.26	4141	0.99911881	3294.8	-0.035	0.55	0.59
	L_3-L_4	-7.47	39.76	3.97	-113.16	99.9	99.93	84.14	125.49	3409	1373.0	1.26	4141	0.99911881	3294.8	-0.035	0.55	0.59
	L_4-L_5	-132.25	312.54	-25.07	179.28	52.6	52.59	76.68	114.47	3186	1599.0	1.21	3777	0.99913981	3052.4	-0.417	0.43	0.43
	L_5-L_6	-17.26	271.65	-50.10	168.03	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99923445	3448.5	-0.064	0.57	0.57
	L_6-L_7	-112.47	182.50	-150.30	-9.97	104.6	104.58	124.55	129.09	1924	2375.8	1.33	6364	0.99914981	4776.0	-0.766	0.28	0.28
	L_7-L_8	-18.48	86.07	0.80	-44.02	52.6	52.59	74.65	100.64	2532	2932.4	1.57	7552	0.99952915	4806.3	-0.081	0.57	0.57
	L_8-L_9	-31.58	583.04	145.8	145.75	130.44	228.84	650	2932.4	1.57	7552	0.99952915	4806.3	-0.081	0.57	0.57
	L_9-L_{10}	626.33	-152.16	145.8	145.75	136.74	228.84	650	2932.4	1.57	7552	0.99952915	4806.4	-0.164	0.53	0.53
	L_{10}-L_{11}	147.02	192.05	-241.70	144.9	144.85	129.09	192.94	5010	2376.8	1.33	6364	0.99914981	4776.1	-0.757	0.28	0.28
	L_{11}-L_{12}	-216.84	-12.56	-276.84	0.24	144.9	144.85	129.09	192.94	5010	2376.8	1.33	6364	0.99914981	4776.1	-0.757	0.28	0.28
	L_{12}-L_{13}	-265.09	448.92	-36.00	426.08	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.122	0.56	0.56
	L_{13}-L_{14}	-73.38	70.40	-41.33	0.00	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.333	0.47	0.47
	L_{14}-L_{15}	-116.03	120.53	-198.23	139.16	99.5	99.53	91.00	125.49	3409	1373.0	1.26	4141	0.99911881	3294.8	-0.035	0.55	0.59
	L_{15}-L_{16}	-4.58	139.16	-121.29	96.42	99.9	99.93	84.14	125.49	3409	1373.0	1.26	4141	0.99911881	3294.8	-0.035	0.55	0.59
	L_{16}-L_{17}	-350.16	-46.23	0.00	-352.17	52.6	52.59	76.68	114.47	3186	1599.0	1.21	3777	0.99913981	3052.5	-0.417	0.43	0.43
	L_{17}-L_{18}	-318.69	-192.00	-83.76	339.87	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99923445	3448.5	-0.064	0.57	0.57
	L_{18}-L_{19}	-31.48	-154.69	-44.80	-3.03	104.6	104.58	124.55	129.09	1924	2375.8	1.33	6364	0.99914981	4776.0	-0.766	0.28	0.28
	L_{19}-L_{20}	148.84	-216.17	-69.93	-136.64	52.6	52.59	74.62	100.64	2532	2932.4	1.57	7552	0.99952915	4806.3	-0.081	0.57	0.57
	L_0-L_1	-170.85	2.99	-245.54	52.56	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99900394	2755.5	-0.693	0.34	0.34
	L_1-L_2	-180.81	-6.26	-43.24	34.34	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99900394	2755.5	-0.429	0.43	0.43
	L_2-L_3	-295.08	-253.03	-406.13	81.36	99.5	99.53	91.00	125.70	3592	1066.5	1.28	4148	0.99901164	3232.5	-0.074	0.57	0.57
	L_3-L_4	-252.78	-475.19	-64.48	-280.52	99.9	99.93	84.14	125.70	3592	1066.5	1.28	4148	0.99901164	3232.5	-0.074	0.57	0.57
	L_4-L_5	-26.50	-33.15	-141.33	-225.89	52.6	52.59	74.62	100.64	2532	2932.4	1.57	7552	0.99952915	4806.3	-0.081	0.57	0.57
	L_5-L_6	-205.01	257.56	-141.01	-160.00	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99923445	3448.5	-0.064	0.57	0.57
	L_6-L_7	-387.78	160.00	-205.01	-257.56	104.6	104.58	124.55	129.09	1924	2375.8	1.33	6364	0.99914981	4776.0	-0.766	0.28	0.28
	L_7-L_8	-204.41	202.72	-103.15	705.75	52.6	52.59	74.62	100.64	2532	2932.4	1.57	7552	0.99952915	4806.3	-0.081	0.57	0.57
	L_8-L_9	-412.36	1072.48	-473.15	319.48	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.122	0.56	0.56
	L_9-L_{10}	-89.01	476.61	-22.86	252.82	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.333	0.47	0.47
	L_{10}-L_{11}	-41.80	226.53	-56.44	214.46	99.5	99.53	91.00	125.49	3409	1373.0	1.26	4141	0.99911881	3294.8	-0.035	0.55	0.59
	L_{11}-L_{12}	-49.23	43.76	0.00	0.00	99.9	99.93	84.14	125.49	3409	1373.0	1.26	4141	0.99911881	3294.8	-0.035	0.55	0.59
	L_{12}-L_{13}	-202.49	49.26	-15.65	-94.64	52.6	52.59	74.62	100.64	2532	2932.4	1.57	7552	0.99952915	4806.3	-0.081	0.57	0.57
	L_{13}-L_{14}	-34.33	197.13	-34.79	-271.71	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99900394	2755.5	-0.693	0.34	0.34
	L_{14}-L_{15}	-178.83	111.93	-0.87	-252.25	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99900394	2755.5	-0.429	0.43	0.43
	L_{15}-L_{16}	-265.66	80.79	-471.71	-29.63	99.5	99.53	91.00	125.70	3592	1066.5	1.28	4148	0.99901164	3232.5	-0.074	0.57	0.57
	L_{16}-L_{17}	-178.83	111.93	-0.87	-252.25	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99900394	2755.5	-0.693	0.34	0.34
	L_{17}-L_{18}	-265.66	80.79	-471.71	-29.63	99.5	99.53	91.00	125.70	3592	1066.5	1.28	4148	0.99901164	3232.5	-0.074	0.57	0.57
	L_{18}-L_{19}	-180.08	111.93	-0.87	-252.25	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99900394	2755.5	-0.693	0.34	0.34
	L_{19}-L_{20}	-265.66	80.79	-471.71	-29.63	99.5	99.53	91.00	125.70	3592	1066.5	1.28	4148	0.99901164	3232.5	-0.074	0.57	0.57
	L_0-L_1	-170.85	2.99	-245.54	52.56	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99900394	2755.5	-0.693	0.34	0.34
	L_1-L_2	-180.81	-6.26	-43.24	34.34	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99900394	2755.5	-0.429	0.43	0.43
	L_2-L_3	-295.08	-253.03	-406.13	81.36	99.5	99.53	91.00	125.70	3592	1066.5	1.28	4148	0.99901164	3232.5	-0.074	0.57	0.57
	L_3-L_4	-252.78	-475.19	-64.48	-280.52	99.9	99.93	84.14	125.70	3592	1066.5	1.28	4148	0.99901164	3232.5	-0.074	0.57	0.57
	L_4-L_5	-26.50	-33.15	-141.33	-225.89	52.6	52.59	74.62	100.64	2532	2932.4	1.57	7552	0.99952915	4806.3	-0.081	0.57	0.57
	L_5-L_6	-205.01	257.56	-141.01	-160.00	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99923445	3448.5	-0.064	0.57	0.57
	L_6-L_7	-387.78	160.00	-205.01	-257.56	104.6	104.58	124.55	129.09	1924	2375.8	1.33	6364	0.99914981	4776.0	-0.766	0.28	0.28
	L_7-L_8	-204.41	202.72	-103.15	705.75	52.6	52.59	74.62	100.64	2532	2932.4	1.57	7552	0.99952915	4806.3	-0.081	0.57	0.57
	L_8-L_9	-412.36	1072.48	-473.15	319.48	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.122	0.56	0.56
	L_9-L_{10}	-89.01	476.61	-22.86	252.82	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.333	0.47	0.47
	L_{10}-L_{11}	-41.80	226.53	-56.44	214.46	99.5	99.53	91.00	125.49	3409	1373.0	1.26	4141	0.99911881	3294.8	-0.035	0.55	0.59
	L_{11}-L_{12}	-49.23	43.76	0.00	0.00	99.9	99.93	84.14	125.49	3409	1373.0	1.26	4141	0.99911881	3294.8	-0.035	0.55	0.59
	L_{12}-L_{13}	-202.49	49.26	-15.65	-94.64	52.6	52.59	74.62	100.64	2532	2932.4	1.57	7552	0.99952915	4806.3	-0.081	0.57	0.57
	L_{13}-L_{14}	-34.33	197.13	-34.79	-271.71	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99900394	2755.5	-0.693	0.34	0.34
	L_{14}-L_{15}	-178.83	111.93	-0.87	-252.25	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99900394	2755.5	-0.429	0.43	0.43
	L_{15}-L_{16}	-265.66	80.79	-471.71	-29.63	99.5	99.53	91.00	125.70	3592	1066.5	1.28	4148	0.99901164	3232.5	-0.074	0.57	0.57
	L_{16}-L_{17}	-178.83	111.93	-0.87	-252.25	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99900394	2755.5	-0.693	0.34	0.34
	L_{17}-L_{18}	-265.66	80.79	-471.71	-29.63	99.5	99.53	91.00	125.70	3592	1066.5	1.28	4148	0.99901164	3232.5	-0.074	0.57	0.57
	L_{18}-L_{19}	-180.08	111.93	-0.87	-252.25	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99900394	2755.5	-0.693	0.34	0.34
	L_{19}-L_{20}	-265.66	80.79	-471.71	-29.63	99.5	99.53	91.00	125.70	3592	1066.5	1.28	4148	0.99901164	3232.5	-0.074	0.57	0.57
Structure 2	L_0-L_1	-170.85	2.99	-245.54	52.56	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99900394	2755.5	-0.693	0.34	0.34
	L_1-L_2	-180.81	-6.26	-43.24	34.34	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99900394	2755.5	-0.429	0.43	0.43
	L_2-L_3	-295.08	-253.03	-406.13	81.36	99.5	99.53	91.00	125.70	3592	1066.5	1.28	4148	0.99901164	3232.5	-0.074	0.57	0.57
	L_3-L_4	-252.78	-475.19	-64.48	-280.52	99.9	99.93	84.14	125.70	3592	1066.5	1.28	4148	0.99901164	3232.5	-0.074	0.57	0.57
	L_4-L_5	-26.50	-33.15	-141.33	-225.89	52.6	52.59	74.62	100.64	2532	2932.4	1.57	7552	0.99952915	4806.3	-0.081	0.57	0.57
	L_5-L_6	-205.01	257.56	-141.01	-160.00	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99923445	3448.5	-0.064	0.57	0.57
	L_6-L_7	-387.78	160.00	-205.01	-257.56	104.6	104.58	124.55	129.09	1924	2375.8	1.33	6364	0.99914981	4776.0	-0.766	0.28	0.28
	L_7-L_8	-204.41	202.72	-103.15	705.75	52.6	52.59	74.62	100.64	2532	2932.4	1.57	7552	0.99952915	4806.3	-0.081	0.57	0.57
	L_8-L_9	-412.36	1072.48	-473.15	319.48	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.122	0.56	0.56
	L_9-L_{10}	-89.01	476.61	-22.86	252.82	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.333	0.47	0.47
	L_{10}-L_{11}	-41.80	226.53	-56.44	214.46	99.5	99.53	91.00	125.49	3409	1373.0	1.26	4141	0.99911881	3294.8	-0.035	0.55	0.59
	L_{11}-L_{12}	-49.23	43.76	0.00	0.00	99.9	99.93	84.14	125.49	3409	1373.0	1.26	4141	0.99911881	3294.8	-0.035	0.55	0.59
	L_{12}-L_{13}	-202.49	49.26	-15.65	-94.64	52.6	52.59	74.62	100.64	2532	2932.4	1.57	7552	0.99952915	4806.3	-0.081	0.57	0.57
	L_{13}-L_{14}	-34.33	197.13	-34.79	-271.71	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99900394	2755.5	-0.693	0.34	0.34
	L_{14}-L_{15}	-178.83	111.93	-0.87	-252.25	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99900394	2755.5	-0.429	0.43	0.43
	L_{15}-L_{16}	-265.66	80.79	-471.71	-29.63	99.5	99.53	91.00	125.70	3592	1066.5	1.28	4148	0.99901164	3232.5	-0.074	0.57	0.57
	L_{16}-L_{17}	-178.83	111.93	-0.87	-252.25	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99900394	2755.5	-0.693	0.34	0.34
	L_{17}-L_{18}	-265.66	80.79	-471.71	-29.63	99.5	99.53	91.00	125.70	3592	1066.5	1.28	4148	0.99901164	3232.5	-0.074	0.57	0.57
	L_{18}-L_{19}	-180.08	111.93	-0.87	-252.25	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99900394	2755.5	-0.693	0.34	0.34
	L_{19}-L_{20}	-265.66	80.79	-471.71	-29.63	99.5	99.53	91.00	125.70	3592	1066.5	1.28	4148	0.99901164	3232.5	-0.074	0.57	0.57
Structure 3	L_0-L_1	-170.85	2.99	-245.54	52.56	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99900394	2755.5	-0.693	0.34	0.34
	L_1-L_2	-180.81	-6.26	-43.24	34.34	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99900394	2755.5	-0.429	0.43	0.43
	L_2-L_3	-295.08	-253

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: 2F1
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 Guidelines for Strength Design of Truss Bridges (LDF) 1985 rev 1986

* 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

M_2 Information

ZZ Axis Moment from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0~L_1	-29.87	49.03	-2.37	2.82	0.56	-0.40	-26.41	31.37	4.04	-4.40
	U_1~L_2	-9.08	15.18	-2.39	2.20	1.59	-1.43	-26.63	24.45	3.45	-3.70
	U_2~L_3	10.20	9.70	-1.97	2.20	0.67	-0.58	-21.99	24.53	7.46	-7.45
	U_3~L_4	33.45	-34.40	-1.78	1.84	1.59	-1.45	-19.84	20.48	17.68	-16.13
	U_4~L_5	41.64	-42.40	-0.95	0.83	1.72	-1.61	-10.08	9.19	19.13	-17.92
	U_5~L_6	45.56	-51.10	-0.41	0.35	1.85	-2.07	-4.52	3.85	20.64	-22.99
	U_6~L_7	50.63	-55.58	-0.41	0.35	2.24	-2.44	-2.13	1.43	24.89	-27.13
	U_7~L_8	51.24	-101.87	-0.02	0.02	2.96	-3.07	-0.21	0.22	32.94	-34.13
	U_8~L_9	-20.57	21.23	2.76	3.31	3.66	-4.31	-30.69	36.86	40.73	-48.03
	U_9~L_{10}	-68.47	69.21	2.76	3.31	3.66	-4.31	-32.88	39.48	40.73	-48.03
	U_{10}~L_{11}	-68.47	69.21	-2.13	2.24	0.04	-0.10	-22.98	24.10	0.45	-1.73
	U_{11}~L_{12}	-68.47	69.11	-2.13	2.22	0.04	-0.07	-22.95	24.05	0.45	-4.02
	U_{12}~L_{13}	-79.57	78.39	-2.24	2.17	0.71	-0.63	-24.10	23.43	7.61	-6.78
	U_{13}~L_{14}	-49.26	60.16	-2.17	2.20	0.64	-0.62	-23.43	23.68	9.09	-8.56
	U_{14}~L_{15}	-29.77	34.65	-1.83	1.86	1.57	-1.51	-19.88	20.50	16.85	-12.63
	U_{15}~L_{16}	-1.50	-2.65	-1.47	1.44	2.06	-2.10	-15.88	15.55	22.24	-22.59
	U_{16}~L_{17}	34.13	-36.55	-1.02	1.00	2.84	-2.92	-11.02	9.46	21.49	-21.80
	U_{17}~L_{18}	46.23	-56.85	-0.36	0.25	1.89	-1.93	-3.90	2.74	20.42	-20.80
	U_{18}~L_{19}	110.44	-114.63	-0.21	0.21	3.33	-3.35	-2.23	2.23	35.88	-36.10
	U_{19}~L_{20}	121.36	-131.24	-0.18	0.18	3.52	-3.53	-1.97	1.98	37.97	-38.07
	U_{20}~L_{21}	134.59	-173.50	-0.12	0.16	3.50	-3.76	-1.26	1.70	38.29	-40.56
	U_{21}~L_{22}	114.23	168.97	-0.45	0.38	3.62	-4.10	-4.06	3.40	39.26	-44.39
	U_{22}~L_{23}	-123.79	131.39	-3.40	3.24	0.40	-0.43	-36.17	34.44	4.28	-4.54
	U_{23}~L_{24}	-109.48	113.46	-3.28	3.19	0.46	-0.47	-34.86	33.87	4.96	-5.01
	U_{24}~L_{25}	-56.01	62.13	-1.74	1.75	0.27	-0.29	-18.55	18.58	2.89	-3.04
	U_{25}~L_{26}	-34.05	39.79	-1.07	1.07	0.16	-0.17	-10.96	11.52	1.74	-1.84
	U_{26}~L_{27}	-7.04	12.29	-1.80	1.86	1.19	-1.15	-19.19	19.75	12.68	-12.25
	U_{27}~L_{28}	15.85	-15.59	-1.67	1.65	1.38	-1.38	-17.74	17.59	14.70	-14.66
	U_{28}~L_{29}	38.85	-44.94	-0.86	0.82	1.45	-1.51	-9.38	8.91	13.60	-13.38
	U_{29}~L_{30}	86.91	-96.07	-1.08	0.97	2.67	-2.58	-11.46	10.31	28.37	-27.46
	U_{30}~L_{31}	155.08	-169.45	-1.45	1.30	3.91	-3.77	-15.38	13.81	37.11	-35.87
	U_{31}~L_{32}	141.23	-149.41	-0.72	0.45	2.80	-2.88	-7.66	4.78	29.85	-30.62
	U_{32}~L_{33}	192.55	-192.83	-0.33	0.22	2.73	-2.81	-3.49	2.33	29.01	-29.84
	U_{33}~L_{34}	147.21	-148.81	-0.15	0.15	1.90	-1.96	-1.58	1.58	19.67	-20.27
	U_{34}~L_{35}	203.52	-203.17	-0.22	0.24	3.51	-3.61	-2.39	2.53	37.39	-38.27
	U_{35}~L_{36}	93.19	-93.19	-0.11	0.11	1.62	-1.67	-1.14	1.14	16.94	-17.32
	U_{36}~L_{37}	-109.89	162.81	-3.08	3.45	0.36	-0.39	-37.62	36.28	3.79	-3.99
	U_{37}~L_{38}	-113.84	113.84	-3.58	3.58	0.37	-0.37	-36.03	36.03	3.60	-3.60
	U_{38}~L_{39}	-130.37	127.18	-3.43	3.41	0.34	-0.33	-36.03	35.85	3.60	-3.60
	U_{39}~L_{40}	-113.07	114.60	-3.23	3.32	0.63	-0.56	-34.02	34.97	6.61	-6.92
	U_{40}~L_{41}	-44.77	47.44	-2.29	2.35	0.41	-0.36	-20.61	20.44	8.24	-7.63
	U_{41}~L_{42}	-44.77	46.58	-1.96	1.96	0.78	-0.73	-20.61	20.44	8.24	-7.63
	U_{42}~L_{43}	-30.30	31.94	-1.35	1.35	0.54	-0.50	-14.06	13.93	5.63	-5.21
	U_{43}~L_{44}	-3.69	4.33	-1.39	1.41	1.19	-1.27	-14.60	14.83	12.47	-13.36
	U_{44}~L_{45}	22.65	25.72	-1.29	1.35	1.09	-1.16	-13.78	14.39	20.84	-21.05
	U_{45}~L_{46}	39.85	-42.14	-0.87	0.80	1.84	-1.87	-9.20	8.46	19.34	-19.72
	U_{46}~L_{47}	66.57	-67.50	-0.79	0.62	2.35	-2.29	-8.33	6.47	24.68	-24.11
	U_{47}~L_{48}	138.29	-139.04	-0.32	0.32	3.59	-3.72	-3.36	3.31	37.77	-39.14
	U_{48}~L_{49}	124.54	-124.54	-0.32	0.32	3.60	-3.72	-3.37	3.37	37.77	-39.14
	U_{49}~L_{50}	173.56	-176.28	-0.18	0.16	3.99	-3.81	-1.89	1.66	41.96	-40.05
	U_{50}~L_{51}	94.29	-94.29	-0.09	0.09	2.17	-2.06	-0.92	0.92	22.81	-21.78
	U_{51}~L_{52}	-167.25	167.49	-3.06	3.03	0.33	-0.36	-32.65	32.23	3.46	-3.84
	U_{52}~L_{53}	-116.13	110.00	-2.73	2.72	0.16	-0.29	-29.03	28.93	1.71	-3.08
	U_{53}~L_{54}	-124.98	121.91	-2.45	2.45	0.14	-0.26	-27.67	27.67	1.57	-2.93
	U_{54}~L_{55}	-119.87	124.44	-2.84	2.78	0.51	-0.34	-30.24	29.58	5.39	-3.65
	U_{55}~L_{56}	-109.40	109.40	-2.62	2.62	0.49	-0.32	-28.98	28.98	5.16	-3.50
	U_{56}~L_{57}	-79.51	88.87	-2.58	2.50	0.73	-0.70	-27.47	26.60	7.75	-7.46
	U_{57}~L_{58}	-43.96	51.94	-1.43	1.54	0.79	-0.86	-15.24	16.36	8.37	-9.14
	U_{58}~L_{59}	-24.00	27.46	-1.14	1.22	0.63	-0.68	-12.03	12.94	6.64	-7.23
	U_{59}~L_{60}	-5.58	1.82	-1.33	1.27	1.71	-1.79	-14.14	13.52	18.16	-18.99
	U_{60}~L_{61}	12.91	-12.91	-1.20	1.20	1.59	-1.66	-13.12	13.12	16.85	-17.62
	U_{61}~L_{62}	55.25	-61.09	-0.48	0.31	1.83	-1.88	-5.07	3.32	19.53	-20.00
	U_{62}~L_{63}	97.10	-97.10	-0.24	0.24	3.26	-3.41	-4.39	4.39	35.44	-36.74
	U_{63}~L_{64}	137.10	-150.77	-0.34	0.35	3.44	-3.59	-3.44	3.65	37.37	-38.65
	U_{64}~L_{65}	165.74	-206.85	-0.25	0.34	3.49	-4.01	-2.68	3.59	37.12	-42.64
	U_{65}~L_{66}	82.56	-144.10	-0.26	0.26	3.49	-3.56	-2.61	2.61	37.72	-39.24
	U_{66}~L_{67}	-109.90	113.02	-2.96	3.05	0.23	-0.25	-35.28	33.50	2.40	-2.66
	U_{67}~L_{68}	-109.90	109.90	-2.96	3.05	0.23	-0.25	-38.43	38.15	2.66	-2.66
	U_{68}~L_{69}	-38.43	48.15	-1.96	1.90	0.30	-0.22	-21.13	20.45	9.18	-9.37
	U_{69}~L_{70}	-21.98	34.15	-1.87	1.87	0.54	-0.35	-21.13	20.45	9.18	-9.37
	U_{70}~L_{71}	-2.76	8.97	2.12	2.13	1.20	-1.23	-22.84	22.93	12.88	-13.28
	U_{71}~L_{72}	25.90	-28.71	-1.41	1.42	1.42	-1.54	-15.25	15.30	15.28	-16.05
	U_{72}~L_{73}	48.86	-48.86	-0.74	0.74	1.81	-1.91	-7.35	7.35	22.83	-23.60
	U_{73}~L_{74}	-79.40	77.51	-0.93	0.84	2.24	-2.28	-10.01	9.05	24.13	-24.57
	U_{74}~L_{75}	-138.58	135.54	-1.58	1.54	3.91	-3.98	-17.35	16.97	43.11	-43.91
	U_{75}~L_{76}	92.31	-95.87	-0.14	0.21	2.12	-2.44	-1.48	2.28	22.83	-26.28
	U_{76}~L_{77}	142.75	166.29	-0.05	0.06	3.19	-3.52	-0.53	0.69	34.34	-37.98
	U_{77}~L_{78}	37.93	-58.82	-3.56	4.49	2.77	-3.56	-44.32	50.01	30.81	-39.59
	U_{78}~L_{79}	-87.20	89.91	2.56	2.69	0.61	-0.52	-28.55	29.91	0.10	-0.24
	U_{79}~L_{80}	-48.49	45.44	2.15	2.17	0.23	-0.14	-23.89	24.19	2.58	-1.50
	U_{80}~L_{81}	-38.99	42.97	1.97	1.99	0.33	-0.30	-21.97	22.10	3.71	-3.32
	U_{81}~L_{82}	-39.90	40.31	-1.78	1.70	0.79	-0.67	-19.86	18.94	8.74	-7.50
	U_{82}~L_{83}	-37.48	38.74	-1.53	2.01	1.67	-1.78	-21.32	22.36	18.64	-19.81
	U_{83}~L_{84}	-10.30	11.14	-1.02	1.06	1.97	-2.25	-11.40	11.76	21.98	-25.04
	U_{84}~L_{85}	3.52	-11.96	-0.32	0.31	2.48	-2.39	-3.61	3.50	27.58	-26.64
	U_{85}~L_{86}	44.79	-53.88	-0.22	0.30	2.71	-3.44	-2.46	3.38	30.20	-38.34

ZZ Axis Moment from STAAD

Location	Member	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	J (in^4)	I_{yy} (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_0~L_1	-73.16	104.53	33.58	68.02	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_1~L_2	-46.43	51.52	-7.32	14.93	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_2~L_3	-15.21	19.27	22.98	-20.59	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_3~L_4	17.69	-18.08	66.46	-65.68	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_4~L_5	40.38	-42.24	104.30	-78.45	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_5~L_6	53.35	-61.42	86.06	-96.31	19.4	19.37	19.31	29.87	3	997.0	1.54	986	1.5	958.8
	U_6~L_7	66.33	-69.49	104.64	-107.52	23.4	23.32	20.80	35.87	3	1256.1	1.67	1241	1.5	1209.6
	U_7~L_8	118.34	-132.14	161.44	-176.81	18.5	18.45	18.36	30.78	3	1020.9	1.67	1016	1.5	913.3
	U_8~L_9	-66.64	75.51	26.17	34.84	107.1	107.13	107.11	162.71	26	2056.9	1.52	5369	1.5	5302.3
	U_9~L_{10}	-212.95	265.14	174.05	200.21	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1638.0
	U_{10}~L_{11}	-144.88	146.08	-114.42	112.40	39.5	39.52	39.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
	U_{11}~L_{12}	-149.57	197.96	-142.33	116.05	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{12}~L_{13}	-134.77	132.36	-93.55	93.08	21.1	21.09	21.09	36.40	10	1137.6	1.68	1170	1.5	1044.0
	U_{13}~L_{14}	-54.70	108.99	-52.22	66.56	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
	U_{14}~L_{15}	-61.58	38.32	33.69	-33.69	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_{15}~L_{16}	-22.60	16.77	26.96	-32.81	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_{16}~L_{17}	30.55	-39.23	72.31	-75.86	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_{17}~L_{18}	55.02	-69.04	86.64	-99.64	19.4	19.37	19.37	29.87	3	997.0	1.54	986	1.5	958.8
	U_{18}~L_{19}	140.67	-146.13	190.22	-193.97	19.3	19.29	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{19}~L_{20}	155.20	-168.06	207.13	-229.13	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{20}~L_{21}	178.41	-273.23	234.75	-278.26	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{21}~L_{22}	190.27	272.66	237.75	-193.97	35.7	35.09	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{22}~L_{23}	-155.20	-168.06	207.13	-229.13	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{23}~L_{24}	-178.41	-273.23	234.75	-278.26	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{24}~L_{25}	-190.27	272.66	237.75	-193.97	35.7	35.09	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{25}~L_{26}	-140.67	146.13	190.22	193.97	19.3	19.29	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{26}~L_{27}	-154.77	168.66	207.13	229.13	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{27}~L_{28}	-177.98	273.83	234.75	278.26	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{28}~L_{29}	-189.85	272.26	237.75	193.97	35.7	35.09	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{29}~L_{30}	-140.67	146.13	190.22	193.97	19.3	19.29	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{30}~L_{31}	-154.77	168.66	207.13	229.13	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{31}~L_{32}	-177.98	273.83	234.75	278.26	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{32}~L_{33}	-189.85	272.26	237.75	193.97	35.7	35.09	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{33}~L_{34}	-140.67	146.13	190.22	193.97	19.3	19.29	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{34}~L_{35}	-154.77	168.66	207.13	229.13	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{35}~L_{36}	-177.98	273.83	234.75	278.26	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{36}~L_{37}	-189.85	272.26	237.75	193.97	35.7	35.09	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{37}~L_{38}	-140.67	146.13	190.22	193.97	19.3	19.29	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{38}~L_{39}	-154.77	168.66	207.13	229.13	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{39}~L_{40}	-177.98	273.83	234.75	278.26	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{40}~L_{41}	-189.85	272.26	237.75	193.97	35.7	35.09	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{41}~L_{42}	-140.67	146.13	190.22	193.97	19.3	19.29	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{42}~L_{43}	-154.77	168.66	207.13	229.13	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{43}~L_{44}	-177.98	273.83	234.75	278.26	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{44}~L_{45}	-189.85	272.26	237.75	193.97	35.7	35.09	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{45}~L_{46}	-140.67	146.13	190.22	193.97	19.3	19.29	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{46}~L_{47}	-154.77	168.66	207.13	229.13	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{47}~L_{48}	-177.98	273.83	234.75	278.26	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{48}~L_{49}	-189.85	272.26	237.75	193.97	35.7	35.09	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{49}~L_{50}	-140.67	146.13	190.22	193.97	19.3	19.29	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{50}~L_{51}	-154.77	168.66	207.13	229.13	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{51}~L_{52}	-177.98	273.83	234.75	278.26	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{52}~L_{53}	-189.85	272.26	237.75	193.97	35.7	35.09	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{53}~L_{54}	-140.67	146.13	190.22	193.97	19.3	19.29	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{54}~L_{55}	-154.77	168.66	207.13	229.13	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{55}~L_{56}	-177.98	273.83	234.75	278.26	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{56}~L_{57}	-189.85	272.26	237.75	193.97	35.7	35.09	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{57}~L_{58}	-140.67	146.13	190.22	193.97	19.3	19.29	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{58}~L_{59}	-154.77	168.66	207.13	229.13	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{59}~L_{60}	-177.98	273.83	234.75	278.26	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{60}~L_{61}	-189.85	272.26	237.75	193.97	35.7	35.09	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{61}~L_{62}	-140.67	146.13	190.22	193.97	19.3	19.29	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{62}~L_{63}	-154.77	168.66	207.13	229.13	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{63}~L_{64}	-177.98	273.83	234.75	278.26	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{64}~L_{65}	-189.85	272.26	237.75	193.97	35.7	35.09	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{65}~L_{66}	-140.67	146.13	190.22	193.97	19.3	19.29	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{66}~L_{67}	-154.77	168.66	207.13	229.13	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{67}~L_{68}	-177.98	273.83	234.75	278.26	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{68}~L_{69}	-189.85	272.26	237.75	193.97	35.7	35.09	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{69}~L_{70}	-140.67	146.13	190.22	193.97	19.3	19.29	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{70}~L_{71}	-154.77	168.66	207.13	229.13	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{71}~L_{72}	-177.98	273.83	234.75	278.26	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{72}~L_{73}	-189.85	272.26	237.75	193.97	35.7	35.09	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{73}~L_{74}	-140.67	146.13	190.22	193.97	19.3	19.29	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{74}~L_{75}	-154.77	168.66	207.13	229.13	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{75}~L_{76}	-177.98	273.83	234.75	278.26	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{76}~L_{77}	-189.85	272.26	237.75	193.97	35.7	35.09	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{77}~L_{78}	-140.67	146.13	190.22	193.97	19.3	19.29	35.09	53.51	4	1157.2	1.67	1166	1.5	1737.2
	U_{78}~L_{79}	-154.77	168.66	207.13	229.13	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{79}~L_{80}	-177.98	273.83	234.75	278.26	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155

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: 2F1
Condition: As-inspected

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

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

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

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

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_1-L_1	-12.57	3.38	1.84	5.73	0.18	-0.10	-20.01	8.10	1.96	-1.12
	L_1-L_2	-1.68	-7.06	-0.60	0.39	-0.03	-0.29	-6.66	4.34	0.35	-2.24
	L_2-L_3	-4.74	11.08	2.61	5.31	-0.02	-0.46	-3.56	3.46	-0.20	0.11
	L_3-L_4	9.78	-11.76	-0.16	0.06	0.20	-0.52	-1.73	0.67	2.17	-0.78
	L_4-L_5	-10.33	17.60	-0.30	0.47	0.70	-0.91	-3.87	4.54	0.70	-1.31
	L_5-L_6	-26.83	58.49	-1.16	1.25	0.02	-0.39	-61.67	94.14	-34.64	70.28
	L_6-L_7	-59.79	83.29	-2.31	1.57	-0.06	0.49	-25.72	18.60	-1.98	0.49
	L_7-L_8	-6.35	88.86	-1.11	2.08	0.01	-0.01	-12.35	23.19	0.09	-0.09
	L_8-L_9	-9.60	109.55	0.82	1.73	0.10	-0.07	-8.79	18.66	1.11	-0.74
	L_9-L_{10}	-74.80	111.68	2.61	1.73	-0.16	-0.05	-14.93	13.29	-1.73	-0.50
	L_{10}-L_{11}	-56.84	54.78	-1.03	0.84	-0.02	-0.35	-11.06	9.55	-0.25	-3.78
	L_{11}-L_{12}	-56.84	54.78	-1.10	0.84	-0.02	-0.37	-11.06	10.26	-0.77	-4.21
	L_{12}-L_{13}	-55.25	39.07	-0.99	1.12	0.18	-0.57	-10.65	12.05	1.98	-6.15
	L_{13}-L_{14}	-20.99	7.38	-0.49	0.48	0.24	-0.48	-5.29	5.16	2.54	-5.22
	L_{14}-L_{15}	1.78	-3.79	-0.29	0.41	0.23	-0.46	-3.83	3.71	-27.66	19.07
	L_{15}-L_{16}	-19.00	4.09	-0.87	0.75	0.48	-0.63	-9.34	8.08	0.16	0.81
	L_{16}-L_{17}	-28.64	12.99	-1.13	1.16	0.64	-0.26	-12.13	10.16	1.84	-4.57
	L_{17}-L_{18}	-89.35	58.15	-3.16	1.77	0.15	-0.21	-23.28	19.03	1.62	-2.29
	L_{18}-L_{19}	-89.35	61.38	-2.36	1.78	0.15	-0.21	-25.47	19.03	1.62	-2.29
	L_{19}-L_{20}	-105.39	89.05	-2.76	2.06	0.10	-0.10	-29.78	22.19	1.09	-1.02
	L_{20}-L_{21}	-82.31	86.26	-2.71	2.15	0.34	-0.31	-28.86	22.86	3.84	-2.50
	L_{21}-L_{22}	-82.31	86.26	-2.71	2.15	0.34	-0.31	-28.86	22.86	3.84	-2.50
	L_{22}-L_{23}	-21.81	62.98	-2.05	1.73	0.36	-0.29	-21.81	18.43	3.83	-3.11
	L_{23}-L_{24}	-17.36	7.00	-0.82	0.80	0.40	-0.57	-8.76	8.52	4.27	-6.10
	L_{24}-L_{25}	-17.36	7.00	-0.82	0.80	0.40	-0.57	-8.76	8.52	4.27	-6.10
	L_{25}-L_{26}	-0.61	-11.46	-0.76	0.76	0.65	-0.63	-8.07	6.64	6.63	-6.03
	L_{26}-L_{27}	7.43	-23.92	-0.41	0.33	0.52	-0.80	-4.39	3.31	5.53	-4.83
	L_{27}-L_{28}	-44.32	35.88	-0.85	0.90	0.52	-0.72	-8.68	9.57	5.52	-7.62
	L_{28}-L_{29}	-66.39	68.66	-1.74	1.76	0.52	-0.72	-18.04	16.89	3.74	-4.32
	L_{29}-L_{30}	-88.55	73.83	-1.81	1.25	0.35	-0.55	-19.31	13.32	3.68	-5.83
	L_{30}-L_{31}	-88.55	73.83	-1.81	1.25	0.35	-0.55	-19.31	13.32	3.68	-5.83
	L_{31}-L_{32}	-108.38	116.68	-2.06	1.82	0.44	-0.28	-21.98	19.36	4.73	-2.93
	L_{32}-L_{33}	-154.28	139.71	-2.76	2.01	0.33	-0.18	-29.36	24.54	3.01	-1.95
	L_{33}-L_{34}	-85.83	58.31	-1.49	0.79	0.42	-0.57	-23.17	14.89	4.27	-5.89
	L_{34}-L_{35}	-24.73	100.98	-1.90	2.24	0.27	-0.25	-19.98	23.54	2.82	-2.67
	L_{35}-L_{36}	-98.38	97.09	-2.53	2.19	0.37	-0.34	-28.31	24.43	3.90	-2.98
	L_{36}-L_{37}	-74.14	95.51	-2.52	2.09	0.20	-0.23	-26.46	21.98	2.07	-2.28
	L_{37}-L_{38}	-55.48	68.85	-1.83	1.51	0.29	-0.56	-19.83	15.84	3.09	-0.78
	L_{38}-L_{39}	-55.48	68.85	-1.83	1.51	0.29	-0.56	-19.83	15.84	3.09	-0.78
	L_{39}-L_{40}	-32.97	39.97	-1.14	1.19	0.24	-0.51	-10.39	9.24	2.54	-0.95
	L_{40}-L_{41}	-8.85	8.54	-0.38	0.86	0.24	-0.45	-8.85	8.54	2.54	-0.95
	L_{41}-L_{42}	-10.32	4.39	-0.63	0.49	0.28	-0.61	-5.54	5.13	2.95	-6.46
	L_{42}-L_{43}	-6.27	2.67	-0.38	0.30	0.17	-0.37	-3.37	3.12	1.79	-3.93
	L_{43}-L_{44}	-17.08	16.16	-0.85	0.79	0.42	-0.57	-8.95	8.32	4.40	-6.04
	L_{44}-L_{45}	-26.84	25.96	-1.34	1.27	1.63	-1.69	-13.08	11.94	1.40	-1.89
	L_{45}-L_{46}	-55.69	65.14	-2.02	1.63	0.49	-0.63	-21.28	17.19	5.17	-6.67
	L_{46}-L_{47}	-69.22	80.41	-1.98	1.77	0.21	-0.37	-20.84	18.63	2.17	-3.85
	L_{47}-L_{48}	-105.11	102.67	-2.78	2.46	0.14	-0.16	-29.29	26.84	1.49	-1.67
	L_{48}-L_{49}	-105.11	102.67	-2.78	2.46	0.14	-0.16	-29.29	26.84	1.49	-1.67
	L_{49}-L_{50}	-47.87	128.15	-1.97	2.42	0.28	-0.28	-20.94	25.81	2.88	-2.94
	L_{50}-L_{51}	-89.53	99.33	-2.60	1.75	0.19	-0.21	-21.28	18.59	2.07	-2.01
	L_{51}-L_{52}	-86.54	82.57	-1.55	1.47	0.08	-0.30	-16.45	15.69	0.83	-3.23
	L_{52}-L_{53}	-60.17	67.66	-1.62	1.56	0.22	-0.76	-17.26	16.65	2.36	-7.48
	L_{53}-L_{54}	-60.17	67.66	-1.62	1.56	0.22	-0.76	-17.26	16.65	2.36	-7.48
	L_{54}-L_{55}	12.59	-26.40	-0.42	0.33	0.82	-0.87	-4.50	3.46	8.73	-9.24
	L_{55}-L_{56}	6.51	-17.79	-0.77	0.63	0.69	-0.81	-8.17	6.68	7.35	-8.01
	L_{56}-L_{57}	-17.68	6.27	-0.87	0.53	0.69	-0.81	-8.17	6.68	7.35	-8.01
	L_{57}-L_{58}	-38.92	20.55	-1.20	1.03	0.34	-0.45	-12.73	10.96	3.60	-4.80
	L_{58}-L_{59}	-68.53	71.15	-2.38	1.91	0.27	-0.22	-22.19	19.25	2.73	-2.03
	L_{59}-L_{60}	-68.53	71.15	-2.38	1.91	0.27	-0.22	-25.22	20.34	2.82	-2.38
	L_{60}-L_{61}	-33.13	23.71	-1.11	0.91	0.20	-0.39	-14.84	12.05	2.07	-3.33
	L_{61}-L_{62}	-33.13	23.71	-1.11	0.91	0.20	-0.39	-14.84	12.05	2.07	-3.33
	L_{62}-L_{63}	-86.92	56.40	-1.82	1.66	0.19	-0.15	-19.60	17.94	2.09	-1.57
	L_{63}-L_{64}	-86.92	56.40	-1.82	1.66	0.19	-0.15	-19.60	17.94	2.09	-1.57
	L_{64}-L_{65}	-54.59	58.66	-1.59	1.56	0.30	-0.36	-17.70	17.36	3.01	-3.07
	L_{65}-L_{66}	-54.59	58.66	-1.59	1.56	0.30	-0.36	-17.70	17.36	3.01	-3.07
	L_{66}-L_{67}	-9.15	17.58	-0.34	0.49	-0.13	-0.36	-3.83	5.49	1.47	-4.01
	L_{67}-L_{68}	-9.15	17.58	-0.34	0.49	-0.13	-0.36	-3.83	5.49	1.47	-4.01
	L_{68}-L_{69}	-0.13	-8.77	-0.35	0.24	-0.49	-0.49	-3.90	3.31	-2.64	-6.47
	L_{69}-L_{70}	-23.22	7.61	-1.37	0.72	0.08	-0.04	-15.20	8.04	-0.86	-2.67

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_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F/S_{bot}	M_d (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor C_{min}
Structure 1	U_1-L_1	-42.99	14.93	-13.79	2.93	15.6	15.63	15.58	25.56	5	804.0	1.66	.857	1.5	773.7	-0.347	0.46
	L_1-L_2	-10.84	-3.54	-1.73	-13.39	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5	763.3	0.109	0.24
	L_2-L_3	-3.07	17.34	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5	763.3	-0.222	0.44
	L_3-L_4	10.47	-14.42	15.54	-22.60	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5	763.3	-0.602	0.33
	L_4-L_5	-16.46	28.92	-13.83	17.66	15.4	15.37	19.37	29.87	5	908.8	1.68	.857	1.5	773.7	-0.347	0.46
	L_5-L_6	-61.67	94.14	-34.64	70.28	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.582	0.21
	L_6-L_7	-111.16	109.19	-78.40	94.37	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.582	0.21
	L_7-L_8	-24.31	145.66	-8.14	115.40	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.187	0.53
	L_8-L_9	-23.90	166.68	-11.04	141.45	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2014.7	-0.473	0.25
	L_9-L_{10}	-116.65	152.02	-69.48	84.09	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2014.7	-0.573	0.25
	L_{10}-L_{11}	-68.28	82.91	-74.22	66.29	39.8	39.77	39.56	65.61	21	1616.3	1.65	2165	1.5	1968.6	-0.939	0.22
	L_{11}-L_{12}	-68.28	82.91	-74.22	66.29	39.8	39.77	39.56	65.61	21	1616.3	1.65	2165	1.5	1968.6	-0.939	0.22
	L_{12}-L_{13}	-83.62	23.02	-42.44	-49.29	42.74	42.74	42.74	65.30	3	1389.6	1.53	2155	1.5	2115.6	-0.451	0.42
	L_{13}-L_{14}	-85.67	66.46	-29.05	42.80	20.8	20.80	20.67	34.66	7	1076.0	1.67	1344	1.5	1029.6	-0.776	0.29
	L_{14}-L_{15}	-34.16	16.31	-23.97	2.81	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5	763.3	-0.477	0.41
	L_{15}-L_{16}	-3.83	-27.66	-10.07	27.66	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5	763.3	-0.477	0.41
	L_{16}-L_{17}	-36.84	15.81	-17.88	-3.54	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5	763.3	-0.429	0.43
	L_{17}-L_{18}	-53.00	30.99	-33.54	10.95	15.4	15.37	19.37	29.87	5	907.0	1.54	986	1.5	958.8	-0.609	0.36
	L_{18}-L_{19}	-146.41	160.33	-114.05	72.62	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.685	0.33
	L_{19}-L_{20}	-164.35	164.78	-118.37	77.28	35.8	35.83	35.83	59.23	3	1264.6	1.53	1955	1.5	1922.1	-0.679	0.32
	L_{20}-L_{21}	-169.46	175.57	-134.74	146.67	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.969	0.21
	L_{21}-L_{22}	-169.46	175.57	-134.74	146.67	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.969	0.21
	L_{22}-L_{23}	-29.36	24.54	2.01	-1.95	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5	763.3	-0.940	0.22
	L_{23}-L_{24}	-114.40	227.21	-82.70	164.93	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.600	0.26
	L_{24}-L_{25}	-58.12	161.35	-28.48	127.28	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.360	0.46
	L_{25}-L_{26}	-164.83	152.72	-118.37	77.28	35.8	35.83	35.83	59.23	3	1264.6	1.53	1955	1.5	1922.1	-0.679	0.32
	L_{26}-L_{27}	-130.79	152.73	-93.69	121.07	38.8	38.83	38.83	59.23	6	1264.6	1.53	1955	1.5	1922.1	-0.856	0.26
	L_{27}-L_{28}	-67.67	132.11	-48.06	82.60	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.842	0.26
	L_{28}-L_{29}	-67.67	132.11	-48.06	82.60	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.842	0.26
	L_{29}-L_{30}	-68.39	68.24	-39.56	44.22	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1015.2	-0.896	0.26
	L_{30}-L_{31}	-68.39	68.24	-39.56	44.22	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1015.2	-0.896	0.26
	L_{31}-L_{32}	-28.26	142.51	-8.14	115.40	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.360	0.46
	L_{32}-L_{33}	-20.63	32.38	-9.59	-2.69	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5	763.3	-0.600	0.36
	L_{33}-L_{34}	-15.37	15.29	-13.39	13.16	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5	763.3	-0.940	0.22
	L_{34}-L_{35}	-33.85	31.83	-16.49	13.16	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5	763.3	-0.940	0.22
	L_{35}-L_{36}	-114.40	227.21	-82.70	164.93	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.600	0.26
	L_{36}-L_{37}	-58.12	161.35	-28.48	127.28	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.360	0.46
	L_{37}-L_{38}	-164.83	152.72	-118.37	77.28	35.8	35.83	35.83	59.23	3	1264.6	1.53	1955	1.5	1922.1	-0.679	0.32
	L_{38}-L_{39}	-130.79	152.73	-93.69	121.07	38.8	38.83	38.83	59.23	6	1264.6	1.53	1955	1.5	1922.1	-0.856	0.26
	L_{39}-L_{40}	-67.67	132.11	-48.06	82.60	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.842	0.26
	L_{40}-L_{41}	-68.39	68.24	-39.56	44.22	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1015.2	-0.896	0.26
	L_{41}-L_{42}	-8.85	8.54	-0.38	0.86	0.24	-0.45	-8.85	8.54	2.54	-0.95	0.24	.857	1.5	773.7	-0.406	0.44
	L_{42}-L_{43}	-5.54	5.13	2.95	-6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00
	L_{43}-L_{44}	-15.37	15.29	-13.39	13.16	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5	763.3	-0.940	0.22
	L_{44}-L_{45}	-33.85	31.83	-16.49	13.16	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5	763.3	-0.940	0.22
	L_{45}-L_{46}	-114.40	227.21	-82.70	164.93	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.600	0.26
	L_{46}-L_{47}	-58.12	161.35	-28.48	127.28	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.360	0.46
	L_{47}-L_{48}	-164.83	152.72	-118.37	77.28	35.8	35.83	35.83	59.23	3	1264.6	1.53	1955	1.5	1922.1	-0.679	0.32
	L_{48}-L_{49}	-130.79	152.73	-93.69	121.07	38.8	38.83	38.83	59.23	6	1264.6	1.53	1955	1.5	1922.1	-0.856	0.26
	L_{49}-L_{50}	-67.67	132.11	-48.06	82.60	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.842	0.26
	L_{50}-L_{51}	-68.39	68.24	-39.56	44.22	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1015.2	-0.896	0.26
	L_{51}-L_{52}	-43.33	97.21	-31.42	111.62	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.954	0.22
	L_{52}-L_{53}	-72.42	137.03	-39.57	124.53	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.940	0.22
	L_{53}-L_{54}	-139.66	159.61	-114.15	78.23	35.8	35.83	35.83	59.23	3	1264.6	1.53	1955	1.5	1922.1	-0.785	0.29
	L_{54}-L_{55}	-139.66	159.61	-114.15	78.23	35.8	35.83	35.83	59.23	3	1264.6	1.53	1955	1.5	1922.1	-0.785	0.29
	L_{55}-L_{56}	-10.51	29.82	21.72	-46.34	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5	763.3	-0.598	0.36
	L_{56}-L_{57}	-2.15	14.45	18.02	-34.31	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5	763.3	-0.529	0.39
	L_{57}-L_{58}	-67.57	79.14	-19.32	76.03	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.685	0.33
	L_{58}-L_{59}	-121.82	105.15	-93.69	85.79	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2014.7	-0.663	0.25
	L_{59}-L_{60}	-134.59	120.05	-88.64	87.66	38.8	38.83	38.83	59.23	6	1264.6	1.53	1955	1.5	1922.1	-0.892	0.24
	L_{60}-L_{61}	-138.48	96.65	-110.27	71.28	38.8	38.83	38.83	59.23	6	1264.6	1.53	1955	1.5	1922.1	-0.898	0.32
	L_{61}-L_{62}	-127.64	91.61	-102.27	66.29	38.8	38.83	38.83	59.23	6	1264.6	1.53	1955	1.5	1922.1	-0.898	0.32
	L_{62}-L_{63}	-127.64	91.61	-102.27	66.29	38.8	38.83	38.83	59.23	6	1264.6	1.53	1955	1.5	1922.1	-0.898	0.32
	L_{63}-L_{64}	-54.59	58.66	-1.59	1.56	0.30	-0.36	-17.70	17.36	3.01	-3.07	0.30	.857	1.5	773.7	-0.406	0.44
	L_{64}-L_{65}	-54.59	58.66	-1.59	1.56	0.30	-0.36	-17.70	17.36	3.01	-3.07	0.30	.857	1.5	773.7	-0.406	0.44
	L_{65}-L_{66}	-3.83	5.49	-1.47	4.01	-0.13	-0.36	-9.15	17.58	-0.34	0.49	-0.13	-0.36	0.00	0.00	0.000	0.00
	L_{66}-L_{67}	-3.83	5.49	-1.47	4.01	-0.13	-0.36	-9.15	17.58	-0.34	0.49	-0.13	-0.36	0.00	0.00	0.000	0.00
	L_{67}-L_{68}	-3.90	3.31	-2.64	6.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00
	L_{68}-L_{69}	-15.20	8.04	-0.86	-2.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00

M_1 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 2	U_1-L_1	-12.57	3.38	1.84	5.73	0.18	-0.10	-20.01	8.10	1.96	-1.12
	L_1-L_2	-1.68	-7.06	-0.60	0.39	-0.03	-0.29	-6.66	4.34	0.35	-2.24
	L_2-L_3	-4.74	11.08	2.61	5.31	-0.02	-0.46	-3.56	3.46	-0.20	0.11
	L_3-L_4	9.78	-11.76	-0.16	0.06	0.20	-0.52	-1.73	0.67	2.17	-0.78
	L_4-L_5	-10.33	17.60	-0.30	0.47	0.70	-0.91	-3.87	4.54	0.70	-1.31
	L_5-L_6	-26.83	58.49	-1.16	1.25	0.02	-0.39	-61.67	94.14	-34.64	70.28
	L_6-L_7	-59.79	83.29	-2.31	1.57	-0.06	0.49	-25.72	18.60	-1.98	0.49
	L_7-L_8	-6.35	88.86	-1.11	2.08	0.01	-0.01	-12.35	23.19	0.09	-0.09
	L_8-L_9	-9.60	109.55	0.82	1.73	0.10	-0.07	-8.79	18.66	1.11	-0.74
	L_9-L_{10}	-74.80	111.68	2.61	1.73	-0.16	-0.05	-14.93	13.29	-1.73	-0.50
	L_{10}-L_{11}	-56.84	54.78	-1.03	0.84	-0.02	-0.35	-11.06	9.55	-0.25	-3.78
	L_{11}-L_{12}	-56.84	54.78	-1.10	0.84	-0.02	-0.37	-11.06	10.26	-0.77	-4.21
	L_{12}-L_{13}	-55.25	39.07	-0.99	1.12	0.18	-0.57	-10.65	12.05	1.98	-6.15
	L_{13}-L_{14}	-20.99	7.38	-0.49	0.48	0.24	-0.48	-5.29	5.16	2.54	-5.22
	L_{14}-L_{15}	1.78	-3.79	-0.29	0.41	0.23	-0.46	-3.83	3.71	-27.66	19.07
	L_{15}-L_{16}	-19.00	4.09	-0.87	0.75	0.48	-0.63	-9.34	8.08	0.16	0.81
	L_{16}-L_{17}	-28.64	12.99	-1.13	1.16	0.64	-0.26	-12.13	10.16	1.84	-4.57
	L_{17}-L_{18}	-89.35	58

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
Condition: As-inspected

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

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

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

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

M_z Information

| Location | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Max) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load 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 f | M_p (k-in) | Formula I & Torsion ? F/T/Ss | M_z (k-in) | Equivalent Mem. Factor: a | C_{Axial} | C_{Mom} | 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_T (in^3) | I_{gy} (in^4) | Shape Factor f | M_p (k-in) | P_{crit} (kip) | Formula I & Torsion ? F/T/Ss | M_z (k-in) | Equivalent Mem. Factor: a | C_{Axial} | C_{Mom} | 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 Yield: Axial Portion | Compression Yield: Moment Portion | Compression 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: 2F1
Condition: As-inspected

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

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

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

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

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load (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)
Structure 1	L_0-L_1	-19.48	-91.69	-0.29	0.31	1.52	-2.58	-0.11	0.13	0.30	-0.64
	L_1-L_2	30.30	-116.56	-0.28	0.99	-0.10	-4.39	-0.16	0.42	-0.07	-1.33
	L_2-L_3	39.07	-118.01	-0.27	1.07	-3.75	-3.89	-0.23	0.50	-1.04	-1.27
	L_3-L_4	-65.02	14.74	0.54	1.80	-1.03	-4.47	0.23	0.86	-1.19	-1.34
	L_4-L_5	-50.69	234.13	1.43	1.43	-2.38	-1.04	0.68	0.72	-1.48	-0.39
	L_5-L_6	-2.17	269.23	1.05	1.79	-0.86	-1.56	-0.51	1.16	0.00	-0.60
	L_6-L_7	-0.23	249.76	1.16	1.42	-0.67	-0.90	-0.34	0.92	0.00	-0.47
	L_7-L_8	-38.81	137.46	0.15	2.84	0.28	-0.89	-0.35	3.66	0.00	-0.46
	L_8-L_9	555.91	-39.94	1.29	0.42	2.30	-1.50	1.31	0.25	0.10	-0.32
	L_9-L_{10}	185.62	-153.59	-0.15	0.97	1.47	-2.96	-0.37	0.46	0.00	-1.39
	L_{10}-L_{11}	164.49	164.37	1.29	0.72	-0.23	-2.60	0.70	0.32	0.30	-1.05
	L_{11}-L_{12}	78.56	-201.15	0.84	0.03	0.72	-3.40	0.42	0.26	0.16	-1.55
	L_1-L_0	-57.21	-170.41	0.94	0.47	-2.73	-3.28	0.43	0.20	-0.57	-0.97
	L_2-L_1	70.10	-469.56	0.71	0.64	0.02	-6.80	0.35	0.20	-0.43	-2.28
	L_3-L_2	-489.53	-191.76	0.49	0.49	-4.81	-4.85	0.00	0.72	-1.48	-1.48
	L_4-L_3	-272.75	-354.04	0.25	0.44	-2.91	-4.97	0.00	0.00	-1.30	-1.07
	L_5-L_4	-38.62	-47.80	0.14	0.14	-0.39	-0.81	0.00	0.00	-0.17	-0.17
	L_6-L_5	-202.30	-202.51	-1.38	0.73	-1.14	-1.11	-0.96	0.27	0.06	-0.97
	L_7-L_6	-240.68	-180.28	-2.08	-1.51	-1.57	-0.56	-1.05	0.06	-0.08	-0.87
	L_8-L_7	-192.40	90.95	-1.72	1.07	0.16	-0.13	-1.23	0.86	0.06	-0.22
	L_9-L_8	26.60	-260.09	-0.18	0.38	1.16	-3.55	-0.06	0.13	0.35	-1.08
	L_{10}-L_9	201.84	-347.07	-0.31	0.45	2.27	-4.36	-0.12	0.17	0.45	-1.27
	L_{11}-L_{10}	7.16	-277.32	-0.30	0.48	-0.42	-3.90	-0.13	0.17	0.23	-1.18
	L_{12}-L_{11}	19.38	-479.24	-0.09	0.69	-0.73	-6.29	-0.02	0.25	0.00	-1.82
	L_1-L_2	-367.51	-421.35	0.22	0.67	-4.06	-6.26	0.04	0.32	-1.24	-1.72
	L_2-L_3	-367.51	-421.35	0.22	0.67	-4.06	-6.26	0.04	0.32	-1.24	-1.72
	L_3-L_4	-419.43	-397.04	1.42	1.53	-4.68	-7.67	0.47	0.59	-1.41	-2.01
	L_4-L_5	-294.52	-7.37	2.27	2.36	-4.86	-5.31	0.46	0.90	-1.94	-1.64
	L_5-L_6	-324.29	260.70	1.94	2.11	-4.81	-4.85	0.00	0.72	-1.48	-1.48
	L_6-L_7	-295.59	262.58	1.15	2.22	-2.00	-2.84	-0.92	1.06	1.43	-0.05
	L_7-L_8	-344.93	84.11	0.30	1.40	-2.18	-2.18	0.00	0.80	0.00	-0.67
	L_8-L_9	-188.97	686.21	1.17	2.31	-0.77	-1.50	-0.58	1.88	0.00	-0.43
	L_9-L_{10}	-129.46	-276.11	0.44	1.14	-1.64	-4.04	0.04	0.55	1.24	-0.66
	L_{10}-L_{11}	-472.29	1361.45	2.88	2.95	-0.76	-1.61	-0.78	2.91	-0.06	-0.37
	L_{11}-L_{12}	1356.12	-488.32	-1.92	1.36	5.60	-4.12	0.00	0.00	5.06	-1.83
	L_{12}-L_{13}	306.66	-8.00	0.73	1.74	1.38	0.00	0.72	1.48	1.38	0.00
	L_1-L_{13}	579.83	-109.25	1.82	0.87	1.30	-3.79	0.85	0.41	0.93	-0.52
	L_2-L_{12}	389.62	-47.34	1.08	0.60	0.88	-2.57	0.58	0.28	0.63	-0.35
	L_3-L_{11}	275.68	-101.76	1.93	0.89	1.67	-3.69	0.70	0.49	0.12	-0.38
	L_4-L_{10}	209.89	-114.91	1.12	1.64	0.46	-5.42	0.64	0.18	1.10	-0.59
	L_5-L_9	16.71	-78.03	0.42	0.73	0.11	-2.74	0.27	0.04	0.41	-0.28
	L_6-L_8	-33.73	-318.64	0.11	1.23	-0.17	-8.96	0.43	0.76	-0.99	-2.03
	L_7-L_7	-328.90	-38.44	0.33	0.33	0.33	-1.57	0.33	0.33	0.33	-0.52
	L_8-L_6	-183.23	53.46	0.77	1.68	-2.69	-4.64	0.42	0.44	-0.58	-0.56
	L_9-L_5	-100.74	310.76	0.88	1.76	-2.50	-2.59	-0.56	1.26	0.00	-0.60
	L_{10}-L_4	-69.72	308.73	-3.48	2.14	-1.43	-1.62	-0.77	2.07	-1.04	-0.38
	L_{11}-L_3	-18.47	438.87	0.45	1.31	-0.74	-4.11	-0.15	0.00	0.00	-1.65
	L_{12}-L_2	1437.37	471.51	1.63	1.04	4.94	-4.09	0.00	0.00	5.29	-1.88
	L_{13}-L_1	-253.75	-181.16	0.42	1.64	-2.18	-4.25	-1.03	0.00	-0.21	-1.07
	L_{13}-L_{12}	54.71	-198.25	0.77	0.77	-0.39	-4.25	0.33	0.33	0.33	-1.07
	L_{12}-L_{11}	399.20	-203.85	0.82	1.67	-1.77	-4.25	0.33	0.82	0.47	-1.24
	L_{11}-L_{10}	243.13	341.77	1.21	1.32	0.01	-4.90	0.50	0.46	-0.15	-1.37
	L_{10}-L_9	1.43	1.43	0.72	0.72	0.72	-0.72	0.72	0.72	0.72	-0.72
	L_9-L_8	-365.08	644.79	0.80	1.03	-4.41	-8.89	0.68	0.27	-0.07	-2.23
	L_8-L_7	-620.48	-212.54	1.01	0.28	-3.06	-5.90	0.38	0.07	-2.14	-1.36
	L_7-L_6	-434.07	-326.96	0.47	0.47	-3.15	-3.15	0.19	0.19	-1.32	-1.32
	L_6-L_5	-497.52	30.57	-2.77	0.79	-4.23	-2.71	0.00	0.00	-1.17	-0.38
	L_5-L_4	-241.27	199.23	-2.15	0.73	-3.15	-1.02	-1.72	-1.23	-0.97	0.65
	L_4-L_3	-332.43	186.70	-2.49	1.19	-6.61	-0.75	-1.17	0.34	0.10	-0.10
	L_3-L_2	-127.13	162.45	-0.74	1.47	-5.91	-1.86	-0.85	0.67	0.45	-0.34
	L_2-L_1	53.61	162.26	0.14	0.19	1.46	-2.93	-0.06	0.54	0.53	-0.99
	L_1-L_0	-192.76	-240.13	-0.16	0.27	-1.60	-3.31	-0.10	0.64	-0.05	-1.12
	L_2-L_{13}	24.74	24.74	0.72	0.72	0.72	-0.72	0.72	0.72	0.72	-0.72
	L_3-L_{12}	40.28	-374.07	-0.13	0.42	-0.04	-4.83	-0.09	0.05	-0.04	-1.62
	L_4-L_{11}	-121.39	-479.27	0.00	0.22	-0.04	-6.02	-0.09	0.00	-0.04	-2.02
	L_5-L_{10}	-476.75	95.76	0.77	0.77	-3.15	-3.15	0.19	0.19	-1.32	-1.32
	L_6-L_9	-241.27	199.23	-2.15	0.73	-3.15	-1.02	-1.72	-1.23	-0.97	0.65
	L_7-L_8	-127.13	162.45	-0.74	1.47	-5.91	-1.86	-0.85	0.67	0.45	-0.34
	L_8-L_7	-332.43	186.70	-2.49	1.19	-6.61	-0.75	-1.17	0.34	0.10	-0.10
	L_9-L_6	-497.52	30.57	-2.77	0.79	-4.23	-2.71	0.00	0.00	-1.17	-0.38
	L_{10}-L_5	-434.07	-326.96	0.47	0.47	-3.15	-3.15	0.19	0.19	-1.32	-1.32
	L_{11}-L_4	-620.48	-212.54	1.01	0.28	-3.06	-5.90	0.38	0.07	-2.14	-1.36
	L_{12}-L_3	-365.08	644.79	0.80	1.03	-4.41	-8.89	0.68	0.27	-0.07	-2.23
	L_{13}-$L_2

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: 2F1
Condition: As-inspected

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

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

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

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

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Start (k-in)	Impact Pedestrian Load End (k-in)
Structure 1	U_0–L_1	-15.73	54.50	-1.81	1.69	0.13	-0.31	-0.04	0.43	0.03	-0.13
	U_1–L_1	-27.56	29.23	-1.30	1.29	0.42	-0.38	-0.57	0.52	0.20	-0.18
	U_1–L_2	40.63	-39.56	-1.39	1.39	-0.40	-0.29	0.55	-0.52	-0.27	0.25
	U_2–L_2	40.63	-41.52	-0.61	0.67	0.63	-0.59	-0.06	0.10	0.17	-0.21
	U_2–L_3	56.81	-57.81	-0.19	0.17	0.81	0.00	-0.08	0.00	0.23	0.00
	U_3–L_3	64.44	-72.23	-0.12	0.08	0.97	-1.07	0.00	0.00	0.42	-0.47
	U_3–L_4	64.44	-72.27	-0.89	0.12	0.97	-1.07	0.00	0.00	0.42	-0.47
	U_4–L_4	109.02	-121.41	-0.34	0.36	0.88	-1.10	0.00	0.00	0.74	-0.81
	U_4–L_5	-42.58	47.08	-1.82	1.94	-1.34	1.61	-0.77	0.93	0.77	-0.93
	U_5–L_5	-101.49	205.17	-1.85	1.77	0.05	-0.09	-0.94	1.08	0.03	-0.04
	U_5–L_6	-123.88	126.08	-1.24	1.39	-0.03	-0.13	-0.61	0.71	0.04	-0.05
	U_6–L_6	-127.66	170.41	-1.40	1.72	-0.01	-0.05	-0.68	0.85	0.00	0.00
	U_6–L_7	-106.25	107.52	-1.14	1.20	0.11	-0.06	-0.52	0.55	0.00	0.00
	U_7–L_7	-66.44	79.85	-0.97	1.04	0.18	-0.10	-0.35	0.40	0.00	0.00
	U_7–L_8	-31.62	36.77	-0.66	0.71	0.26	-0.13	-0.16	0.18	0.00	0.00
	U_8–L_8	17.15	-23.67	-0.36	0.37	1.00	-1.00	0.11	0.26	-0.30	-0.64
	U_8–L_9	60.44	-74.02	-0.19	0.17	0.97	-1.07	-0.13	-0.62	-1.10	-1.08
	U_9–L_9	74.38	-85.04	-0.15	0.19	1.02	-1.07	-0.06	0.06	0.43	-0.46
	U_9–L_{10}	127.76	-162.61	-0.22	0.22	1.01	-1.64	-0.08	0.08	0.83	-0.87
	U_{10}–L_{10}	163.50	-173.08	-0.19	0.18	1.61	-1.56	-0.07	0.07	0.91	-0.95
	U_{10}–L_{11}	187.90	-226.20	-0.12	0.16	1.29	-1.48	-0.06	0.07	1.03	-1.13
	U_{11}–L_{11}	133.50	204.40	-1.66	1.66	-1.21	1.26	-0.72	0.72	0.04	-0.05
	U_{11}–L_{12}	-201.27	204.78	-2.04	2.05	0.39	-0.37	0.91	0.88	-0.15	-0.16
	U_{12}–L_{12}	-79.55	119.82	-1.93	1.93	0.41	-0.39	0.35	0.25	-0.21	0.17
	U_{12}–L_{13}	-79.55	88.71	-1.11	1.15	0.26	-0.27	-0.37	0.41	0.10	-0.10
	U_{13}–L_{13}	-4.93	54.58	-0.87	0.87	0.11	-0.11	-0.17	0.19	0.02	-0.02
	U_{13}–L_{14}	-4.93	12.51	-0.80	0.87	0.41	-0.39	-0.17	0.21	0.13	-0.13
	U_{14}–L_{14}	27.52	-27.99	-0.65	0.67	0.64	-0.66	-0.04	0.05	0.10	-0.12
	U_{14}–L_{15}	59.94	-69.39	-0.23	0.22	0.81	-0.87	-0.01	0.01	0.20	-0.23
	U_{15}–L_{15}	130.30	-141.79	-0.12	0.12	1.30	-1.36	0.00	0.00	0.47	-0.58
	U_{15}–L_{16}	216.97	-221.44	-0.03	0.01	1.98	-2.00	0.00	0.00	0.84	-1.05
	U_{16}–L_{16}	193.17	-200.18	-0.11	0.16	1.57	-1.64	0.00	0.00	0.00	-0.98
	U_{16}–L_{17}	194.78	-194.58	-0.19	0.24	1.49	-1.51	0.00	0.00	0.65	-0.67
	U_{17}–L_{17}	177.79	-179.92	-0.19	0.24	1.49	-1.51	0.00	0.00	0.65	-0.67
	U_{17}–L_{18}	231.79	-230.81	-0.53	0.53	1.38	-1.31	0.00	0.00	0.00	-9.20
	U_{18}–L_{18}	26.69	28.19	-1.24	1.24	-0.34	0.29	-0.19	0.19	0.00	0.00
	U_{18}–L_{19}	-225.27	219.21	-2.13	1.98	0.17	-0.21	-0.83	0.81	0.00	0.00
	U_{19}–L_{19}	-182.72	182.72	-2.04	2.04	0.28	-0.27	-0.77	0.78	0.00	0.00
	U_{19}–L_{20}	-182.72	181.55	-2.07	2.09	0.28	-0.27	-0.77	0.78	0.07	0.00
	U_{20}–L_{20}	-159.30	160.85	-2.01	2.13	0.34	-0.34	-0.74	0.76	0.05	0.09
	U_{20}–L_{21}	-159.30	159.47	-1.96	2.01	0.34	-0.34	-0.74	0.76	0.05	0.09
	U_{21}–L_{21}	-99.48	83.33	-0.93	0.97	0.26	-0.26	-0.34	0.35	0.00	-0.01
	U_{21}–L_{22}	-99.48	97.60	-0.99	0.97	0.26	-0.26	-0.34	0.35	0.00	-0.01
	U_{22}–L_{22}	70.77	-74.09	-0.30	0.29	0.66	-1.09	-0.05	0.05	0.40	-0.41
	U_{22}–L_{23}	104.64	-104.99	-0.28	0.27	1.31	-1.29	-0.06	0.06	0.52	-0.51
	U_{23}–L_{23}	104.64	-116.11	-0.29	0.27	1.31	-1.29	-0.06	0.06	0.52	-0.51
	U_{23}–L_{24}	189.52	-191.09	-0.28	0.27	1.96	-1.99	-0.06	0.06	0.80	-0.81
	U_{24}–L_{24}	152.80	-157.48	-0.28	0.27	1.96	-1.99	-0.06	0.06	0.80	-0.81
	U_{24}–L_{25}	207.45	-212.05	-0.56	0.57	1.52	-1.42	0.00	0.00	0.81	-0.82
	U_{25}–L_{25}	207.45	-212.05	-0.56	0.57	1.52	-1.42	0.00	0.00	0.81	-0.82
	U_{25}–L_{26}	251.63	-246.66	-1.82	1.72	0.18	-0.18	-0.82	0.81	0.00	0.00
	U_{26}–L_{26}	-185.28	177.57	-1.60	1.62	0.16	-0.28	-0.66	0.69	0.05	-0.11
	U_{26}–L_{27}	-185.33	187.04	-1.67	1.74	0.16	-0.28	-0.66	0.69	0.05	-0.11
	U_{27}–L_{27}	-185.33	192.16	-1.60	1.69	-0.01	-0.06	-0.64	0.64	0.00	0.00
	U_{27}–L_{28}	-166.39	167.76	-1.49	1.57	-0.01	-0.06	-0.60	0.60	0.00	0.00
	U_{28}–L_{28}	-116.39	129.39	-1.35	1.38	0.13	-0.09	-0.42	0.45	0.00	0.00
	U_{28}–L_{29}	-52.79	62.47	-0.62	0.71	0.26	-0.29	-0.16	0.22	0.00	0.00
	U_{29}–L_{29}	-18.85	25.68	-0.45	0.39	0.91	-0.99	-0.14	0.14	0.22	-0.25
	U_{29}–L_{30}	18.85	-25.68	-0.45	0.39	0.91	-0.99	-0.14	0.14	0.22	-0.25
	U_{30}–L_{30}	89.93	-96.82	-0.25	0.25	1.02	-1.04	-0.10	0.10	0.37	-0.40
	U_{30}–L_{31}	89.93	-96.82	-0.25	0.25	1.02	-1.04	-0.10	0.10	0.37	-0.40
	U_{31}–L_{31}	189.59	-202.27	-0.31	0.30	1.96	-1.92	-0.12	0.11	0.78	-0.84
	U_{31}–L_{32}	214.86	-270.07	-0.19	0.27	1.30	-1.63	-0.06	0.10	0.72	-0.93
	U_{32}–L_{32}	-127.63	185.14	-1.55	1.55	-0.53	0.53	-0.53	0.53	0.23	-0.23
	U_{32}–L_{33}	-186.34	183.96	-2.09	2.05	0.27	-0.25	-0.10	1.04	0.10	-0.11
	U_{33}–L_{33}	-144.22	152.73	-2.03	2.03	0.27	-0.25	-0.10	1.04	0.10	-0.11
	U_{33}–L_{34}	-66.05	78.17	-1.07	1.11	0.18	-0.19	-0.44	0.48	0.07	-0.07
	U_{34}–L_{34}	-66.05	78.17	-1.07	1.11	0.18	-0.19	-0.44	0.48	0.07	-0.07
	U_{34}–L_{35}	-11.09	18.47	-0.91	0.96	0.39	-0.39	-0.22	0.26	0.10	-0.11
	U_{35}–L_{35}	39.39	-43.58	-0.43	0.45	0.70	-0.75	0.00	0.00	0.00	0.00
	U_{35}–L_{36}	119.88	-118.18	-0.16	0.14	1.16	-1.19	0.00	0.00	0.00	0.00
	U_{36}–L_{36}	129.24	-129.17	-0.12	0.20	1.03	-1.15	0.05	0.02	0.62	-0.71
	U_{36}–L_{37}	180.45	-209.65	-0.38	0.44	1.19	-1.27	0.00	0.00	0.93	-1.09
	U_{37}–L_{37}	24.87	-49.22	-1.54	2.21	1.07	-1.37	-0.27	0.86	0.79	-1.01
	U_{37}–L_{38}	-121.63	132.23	-1.56	1.58	0.64	-0.96	-0.72	0.78	0.00	0.00
	U_{38}–L_{38}	-77.64	76.04	-1.12	1.26	0.01	-0.29	-0.43	0.51	-0.04	-0.03
	U_{38}–L_{39}	42.63	70.41	-0.84	1.00	0.01	-0.04	-0.40	0.40	0.00	0.00
	U_{39}–L_{39}	-57.66	58.81	-0.83	0.81	0.23	-0.19	-0.32	0.33	0.00	0.00
	U_{39}–L_{40}	-41.96	42.31	-0.57	0.54	0.72	-0.79	-0.17	0.20	0.03	-0.05
	U_{40}–L_{40}	-9.20	-2.43	-0.37	0.41	0.94	-1.07	-0.19	0.21	0.28	-0.35
	U_{40}–L_{41}	28.08	-38.33	-0.32	0.31	1.07	-1.05	-0.15	0.16	0.50	-0.53
	U_{41}–L_{41}	78.24	-95.55	-0.20	0.29	0.86	-1.13	-0.15	0.17	0.56	-0.71

ZZ Axis Moments from STAAD

Location	Member	Start (k-in)	End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{bb} (in^3)	S_{tb} (in^3)	Z_x (in^3)	J (in^4)	I_{xx} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term * F$_y$/S$_{bb}$	M_n (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{bb1}	Equivalent Mom. Factor C_{bb2}
Structure 1	U_0–L_1	54.50	-1.81	1.69	0.13	-0.31	-0.04	0.43	0.03	-0.13	-24.17	22.63	1.70	4.18	-0.48	5.10	0.34
	U_1–L_1	29.23	-1.30	1.29	0.42	-0.38	-0.57	0.52	0.20	-0.18	-17.41	17.19	1.53	4.12	-0.82	6.19	2.41
	U_1–L_2	-39.56	-1.39	1.39	-0.40	-0.29	0.55	-0.52	-0.27	0.25	-12.28	14.55	5.18	-6.04	-3.13	4.29	2.38
	U_2–L_2	-41.52	-0.61	0.67	0.63	-0.59	-0.06	0.10	0.17	-0.21	-8.10	8.95	3.99	-8.73	-0.70	1.25	2.00
	U_2–L_3	-57.81	-0.19	0.17	0.81	0.00	-0.08	0.00	0.23	0.00	-5.53	6.12	5.42	-13.77	10.55	0.00	0.00
	U_3–L_3	-72.23	-0.12	0.08	0.97	-1.07	0.00	0.00	0.42	-0.47	-1.60	1.60	7.22	-18.37	14.07	0.00	0.00
	U_3–L_4	-72.27	-0.89	0.12	0.97	-1.07	0.00	0.00	0.42	-0.47	-1.60	1.60	7.22	-18.37	14.07	0.00	0.00
	U_4–L_4	-121.41	-0.34	0.36	0.88	-1.10	0.00	0.00	0.74	-0.81	-13.27	14.46	6.00	-15.24	11.68	0.00	0.00
	U_4–L_5	47.08	-1.82	1.94	-1.34	1.61	-0.77	0.93	0.77	-0.93	-21.58	21.90	1.66	4.16	-0.77	5.03	2.31
	U_5–L_5	205.17	-1.85	1.77	0.05	-0.09	-0.94	1.08	0.03	-0.04	-26.17	29.56	1.54	4.08	-0.94	7.00	3.00
	U_5–L_6	126.08	-1.24	1.39	-0.03	-0.13	-0.61	0.71	0.04	-0.05	-16.07	18.00	-0.38	-1.62	-1.30	8.52	-0.44
	U_6–L_6	170.41	-1.40	1.72	-0.01	-0.05	-0.68	0.85	0.00	0.00	-22.26	22.26	0.07	-1.19	-1.24	12.91	0.00
	U_6–L_7	107.52	-1.14	1.20	0.11	-0.06	-0.52	0.55	0.00	0.00	-14.70	15.49	1.38	-7.71	-6.18	6.60	0.00
	U_7–L_7	79.85	-0.97	1.04	0.18	-0.10	-0.35	0.40	0.00	0.00	-12.58	13.48	2.34	-2.12	-4.24	4.82	0.00
	U_7–L_8	36.77	-0.66	0.71	0.26	-0.13	-0.16	0.18	0.00	0.00	-6.98	7.48	2.60	-1.61	-2.58	2.77	0.00
	U_8–L_8	-23.67	-0.36	0.37	1.00	-1.00	0.11	0.26	-0.30	-0.64	4.80	12.99	13.66	-12.39	24.53	39.18	48.53
	U_8–L_9	-74.02	-0.19	0.17	0.97	-1.07	-0.13	-0.62	-1.10	-1.08	4.66	-4.50	13.78	34.53	-13.42	11.42	15.44
	U_9–L_9	-85.04	-0.15	0.19	1.02	-1.07	-0.06	0.06	0.43	-0.46	-2.04	2.08	13.20	-13.79	-0.72	0.73	5.14
	U_9–L_{10}	-162.61	-0.22	0.22	1.01	-1.64	-0.08	0.08	0.83	-0.87	-2.19	2.19	20.76	-21.19	-1.02	1.03	5.52
	U_{10}–L_{10}	-173.08	-0.19	0.18	1.61	-1.56	-0.07	0.07	0.91	-0.95	-2.42	2.32	19.52	-19.99	-0.85	0.83	10.90
	U_{10}–L_{11}	-226.20	-0.12	0.16	1.29	-1.48	-0.06	0.07	1.03	-1.13	-1.58	2.02	16.66	-19.08	-0.74	0.84	12.36
	U_{11}–L_{11}	204.40	-1.66	1.66	-1.21	1.26	-0.72	0.72	0.04	-0.05	-26.58	26.58	1.51	4.03	-0.72	4.84	2.26
	U_{11}–L_{12}	204.78	-2.04	2.05	0.39	-0.37	0.91	0.88	-0.15	-0.16	-26.08	29.19	4.97	4.73	-10.88	10.50	1.81
	U_{12}–L_{12}	119.82	-1.93	1.93	0.41	-0.39	0.35	0.25	-0.21	0.17	-16.71	17.96	4.97	4.73	-10.88	10.50	1.81
	U_{12}–L_{13}	88.71	-1.11	1.15	0.26	-0.27	-0.37	0.41	0.10	-0.10	-14.22	14.64	3.33	-3.44	-4.46	4.87	1.18
	U_{13}–L_{13}	54.58	-0.87	0.87	0.11	-0.11	-0.17	0.19	0.02	-0.02	-8.57	8.57	3.82	-3.76	-3.81	3.78	1.36
	U_{13}–L_{14}	12.51	-0.80	0.87	0.41	-0.39	-0.17	0.21	0.13	-0.13	-10.26	11.14	5.28	-4.54	-2.05	2.93	1.51
	U_{14}–L_{14}	-27.99	-0.65	0.67	0.64	-0.66	-0.04	0.05	0.10	-0.12	-8.32	8.59	8.22	-8.37	-0.43	0.60	1.22
	U_{14}–L_{15}	-69.39	-0.23	0.22	0.81	-0.87	-0.01	0.01	0.20	-0.23	-2.67	2.85	8.13	-8.32	-0.19	0.21	1.38
	U_{15}–L_{15}	-141.79	-0.12	0.12	1.30	-1.36	0.00	0.00	0.47	-0.58	-1.57	1.57	16.65	-17.41	0.00	0.00	5.58
	U_{15}–L_{16}	-221.44	-0.03	0.01	1.98	-2.00	0.00	0.00	0.84	-1.05	-0.74	0.74	23.13	-22.82	0.00	0.00	10.08
	U_{16}–L_{16}	-200.18	-0.11	0.16	1.57	-1.64	0.00	0.00	0.00	-0.98	0.00	0.00	8.02	-8.10	-249.32	-257.63	287.53
	U_{16}–L_{17}	-194.58	-0.19	0.24	1.49	-1.51	0.00	0.00	0.65	-0.67	0.00	0.00	7.91	-7.92	-250.00	-249.05	288.05
	U_{17}–L_{17}	-179.92	-0.19	0.24	1.49	-1.51	0.00	0.00	0.65	-0.67	0.00	0.00	7.91	-7.92	-250.00	-249.05	288.05
	U_{17}–L_{18}	-230.81	-0.53	0.53	1.38	-1.31	0.00	0.00	0.00	-9.20	0.00	0.00	9.20	-9.20	292.54	-291.21	336.26
	U_{18}–L_{18}	28.19	-1.24	1.24	-0.34	0.29	-0.19	0.19	0.00	0.00	-19.28	-13.19	0.00	11.02	0.00	-67.49	0.00
	U_{18}–L_{19}	219.21	-2.13	1.98	0.17	-0.21	-0.83	0.81	0.00	0.00	-26.88	25.05	2.20	-2.00	-9.92	9.76	0.00
	U_{19}–L_{19}	182.72	-2.04	2.04	0.28	-0.27	-0.77	0.78	0.00	0.00	-22.84	22.84	2.20	-2.00	-9.92	9.76	0.00
	U_{19}–L_{20}	181.55	-2.07	2.09	0.28	-0.27	-0.77	0.78	0.07	0.00	-26.13	26.41	3.57	-3.42	-9.28	9.34	0.80
	U_{20}–L_{20}	160.85	-2.01	2.13	0.34	-0.34	-0.74	0.76	0.05	0.09	-25.33	26.90	4.33	-4.23	-8.84	9.07	0.58
	U_{20}–L_{21}	159.47	-1.96	2.01	0.34	-0.34	-0.74	0.76	0.05	0.09	-25.33	26.90	4.33	-4.23	-8.84	9.07	0.58
	U_{21}–L_{21}	83.33	-0.93	0.97	0.26	-0.26	-0.34	0.35	0.00	-0.01	-11.73	12.27	3.28	-3.31	-4.02	4.24	0.02
	U_{21}–L_{22}	97.60	-0.99	0.97	0.26	-0.26	-0.34	0.35	0.00	-0.01	-11.73	12.27	3.28	-3.31	-4.02	4.24	0.02
	U_{22}–L_{22}	-74.09	-0.30	0.29	0.66	-1.09	-0.05	0.05	0.40	-0.41	-3.74	3.71	13.27	-13.81	-0.61	0.81	4.75
	U_{22}–L_{23}	-104.99	-0.28	0.27	1.31	-1.29	-0.06	0.06	0.52	-0.51	-3.51	3.38	16.54	-16.25	-0.66	0.70	6.19
	U_{23}–L_{23}	-116.11	-0.29	0.27	1.31	-1.29	-0.06	0.06	0.52	-0.51	-3.51	3.38	16.54	-16.25	-0.66	0.70	6.19
	U_{23}–L_{24}	-191.09	-0.28	0.27	1.96	-1.99	-0.06	0.06	0.80	-0.81	-3.50	3.40	24.69	-25.07	-0.73	0.65	9.58
	U_{24}–L_{24}	-157.48	-0.28	0.27	1.96	-1.99	-0.06	0.06	0.80	-0.81	-3.50	3.40	24.69	-25.07	-0.73	0.65	9.58
	U_{24}–L_{25}	-212.05	-0.56	0.57	1.52	-1.42	0.00	0.00	0.81	-0.82	-7.10	7.16	19.22	-19.87	0.00	0.00	9.00
	U_{25}–L_{25}	-212.05	-0.56	0.57	1.52	-1.42	0.00	0.00	0.81	-0.82	-7.10	7.16	19.22	-19.87	0.00	0.00	9.00
	U_{25}–L_{26}	246.66	-1.82	1.72	0.18	-0.18	-0.82	0.81	0.00	0.00	-23.21	21.99	2.30	-2.26	-9.86	9.76	0.00
	U_{26}–L_{26}	177.57	-1.60	1.62	0.16	-0.28	-0.66	0.69	0.05	-0.11	-20.44	20.74	1.99	-3.53	-7.94	8.26	0.56
	U_{26}–L_{27}	187.04	-1.67	1.74	0.16	-0.28	-0.66	0.69	0.05	-0.11	-20.44	20.74	1.99	-3.53	-7.94	8.26	0.56
	U_{27}–L_{27}	192.16	-1.60	1.69	-0.01	-0.06	-0.64	0.64	0.00	0.00	-20.40	21.64	-0.77	-0.70	-7.63	7.72	0.00
	U_{27}–L_{28}	167.76	-1.49	1.57	-0.01	-0.06	-0.60	0.60	0.00	0.00	-17.76	18.65	1.65	-2.96	-6.60	6.94	0.00
	U_{28}–L_{28}	129.39	-1.35	1.38	0.13	-0.09	-0.42	0.45	0.00	0.00	-17.76	19.15	-149.17	-152.87	89.64	-73.44	19.14
	U_{28}–L_{29}	62.47	-0.62	0.71	0.26	-0.29	-0.16	0.22	0.00	0.00	-7.90	9.11	-3.91	-3.21	-2.18	2.58	0.00
	U_{29}–L_{29}	25.68	-0.45	0.39	0.91	-0.99	-0.14	0.14	0.22	-0.25	-5.80	5.02	11.68	-12.61	-1.67	1.73	2.66
	U_{29}–L_{30}	-25.68	-0.45	0.39	0.91	-0.99	-0.14	0.14	0.22	-0.25	-5.80	5.02	11.68	-12.61	-1.67	1.73	2.66
	U_{30}–L_{30}	96.82	-0.25	0.25	1.02	-1.04	-0.10	0.10	0.37	-0.40	-3.18	3.02	12.97	-13.29	-1.16	1.16	4.46
	U_{30}–L_{31}	96.82	-0.25	0.25	1.02	-1.04	-0.10	0.10	0.37	-0.40	-3.18	3.02	12.97	-13.29	-1.16	1.16	4.46
	U_{31}–L_{31}	202.27	-0.31	0.30	1.96	-1.92	-0.12	0.11	0.78	-0.84	-3.90	3.79	19.94	-20.00	-1.45	1.34	9.40
	U_{31}–L_{32}	270.07	-0.19	0.27	1.30	-1.63	-0.06	0.10	0.72	-0.93	-2.36	3.48	16.60	-20.88	-0.67	1.15	8.59
	U_{32}–L_{32}	185.14	-1.55	1.55	-0.53	0.53	-0.53	0.53	0.23	-0.23	-23.23	21.99	2.30	-2.26	-9.86	9.76	0.00
	U_{33}–L_{33}	152.73	-2.03	2.03	0.27	-0.25	-0.10	1.04	0.10	-0.11	-20.44	20.74	1.99	-3.53	-7.94	8.26	0.56
	U_{34}–L_{34}	78.17	-1.07	1.11	0.18	-0.19	-0.44	0.48	0.07	-0.07	-13.00	14.30	2.33	-2.42	-5.24	5.72	0.82
	U_{35}–L_{35}	18.47	-0.91	0.96	0.39	-0.39	-0.22	0.26	0.10	-0.11	-11.75	12.42	4.99	-5.07	-2.69	3.16	1.16
	U_{35}–L_{36}	-43.58	-0.43	0.45	0.70	-0.75	0.00	0.00	0.00	0.00	-5.50	5.78	9.08	-9.66	0.00	0.00	1.88
	U_{36}–L_{36}	-129.17	-0.12	0.20	1.03	-1.15	0.05	0.02	0.62	-0.71	-2.62	2.62	13.23	-13.79	-0.56	0.56	5.49
	U_{36}–L_{37}	-209.65	-0.38	0.44	1.19	-1.27	0.00	0.00	0.93	-1.09	-4.88	5.72	15.37	-16.39	0.00	0.00	11.17
	U_{37}–L_{37}	-49.22	-1.54	2.21	1.07	-1.37	-0.27	0.86	0.79	-1.01	-25.89	23.46	14.32	-18.25	-8.24	10.38	5.43
	U_{37}–L_{38}	-132.23	-1.56	1.58	0.64	-0.96	-0.72	0.78	0.00	0.00	-20.80	21.08	0.52	-0.73	-8.66	9.37	0.00
	U_{38}–L_{38}	-76.04	-1.12	1.26	0.01	-0.29	-0.43	0.51	-0.04	-0.03	-14.64	16.79	0.08	-1.15	-5.17	6.14	-0.50
	U_{38}–L_{39}	-70.41	-0.84	1.00	0.01	-0.04	-0.40	0.40	0.00	0.00	-11.24	13.31	0.17

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: 2F1
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_2 Information

| Location | | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-ft) | Live Load (Max) End (k-ft) | Pedestrian Load (Max) Start (k-ft) | Pedestrian Load (Max) End (k-ft) | Lane Reduction & Impact Live Load Start (k-ft) | Lane Reduction & Impact Live Load End (k-ft) | Impact Pedestrian Load Max (k-ft) | Impact Pedestrian Load Min (k-ft) | Max. Neg. Moms. Start (k-in) | Max. Neg. Moms. End (k-in) | S_{bb} (in^3) | S_{tb} (in^3) | Z_z (in^3) | I (in^4) | I_{eff} (in^4) | Shape Factor | M_p (k-in) | Formula 1.8 Term * F_y/S_{bb} | M_r (k-in) | YY Axis Moments from STAAD: Equivalent Mom. Factor a | C | 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 (k-in) | Impact Pedestrian Load Min (k-in) | Max. Pos. Moms. Start (k-in) | Max. Pos. Moms. End (k-in) | Max. Neg. Moms. Start (k-in) | Max. Neg. Moms. End (k-in) | S_{bb} (in^3) | S_{tb} (in^3) | Z_y (in^3) | I_{yy} (in^4) | Shape Factor | M_p (k-in) | P_{crit} (kips) | Formula 1.8 Term * F_y/M_{cr} | M_{cr} (k-in) | Equivalent Mom. Factor a | C | C_{mod} | Pass | Axial Action | Moment Action | Total | Pass | Axial Action | Moment Action | Total | Pass |
|---|---|---

Moment (End) AI Operating

Operating Loads - 2F1

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			-----	-562.80	-705	87	-101	-877	370	-268	-19	-311	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.231	1.00	Yes	0.759	0.208	0.97	Yes	1.00	**7.43**
		U_1 - U_2			-----	-560.64	-63	21	-131	-832	-7	-42	17	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.230	1.00	Yes	0.756	0.198	0.96	Yes	1.00	**3.86**
		U_2 - U_3			66.54	-585.67	-143	192	-414	-629	4	28	56	221	0.076	0.187	0.27	Yes	0.051	0.122	0.18	Yes	0.797	0.200	1.00	Yes	0.790	0.150	0.94	Yes	1.00	**4.04**
		U_3 - U_4			268.97	-585.96	43	257	-512	-682	18	37	123	41	0.308	0.183	0.50	Yes	0.212	0.125	0.34	Yes	0.797	0.201	1.00	Yes	0.790	0.162	0.96	Yes	1.00	**5.39**
		U_4 - U_5			402.89	-614.94	149	324	-262	-707	11	-33	31	-280	0.462	0.215	0.68	Yes	0.317	0.148	0.47	Yes	0.837	0.145	0.99	Yes	0.829	0.168	1.00	Yes	1.00	**8.12**
		U_5 - U_6			-----	-597.08	-800	573	-517	-473	304	33	354	-339	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.173	0.99	Yes	0.805	0.190	1.00	Yes	1.00	**12.02**
		U_6 - U_7			859.40	-28.00	375	226	-313	-589	-294	-110	340	-345	0.822	0.173	1.00	Yes	0.574	0.119	0.70	Yes	0.032	0.188	0.23	Yes	0.032	0.125	0.16	Yes	1.00	**8.80**
		U_7 - U_8			492.97	-----	-2095	3905	-67	752	486	-614	-430	-343	0.342	0.654	1.00	Yes	0.238	0.446	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.39**
		U_8 - U_9			473.26	-----	670	21	2479	-2778	-1133	-61	-189	741	0.388	0.605	1.00	Yes	0.265	0.412	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**20.83**
		U_9 - U_{10}			702.87	-231.94	240	295	195	-661	-167	15	88	532	0.762	0.234	1.00	Yes	0.516	0.157	0.68	Yes	0.299	0.245	0.55	Yes	0.296	0.148	0.45	Yes	1.00	**8.99**
		U_{10} - U_{11}			225.15	-590.54	296	-94	203	-1066	38	92	334	225	0.244	0.292	0.54	Yes	0.163	0.188	0.36	Yes	0.760	0.209	0.97	Yes	0.754	0.239	1.00	Yes	1.00	**5.95**
		U_{11} - U_{12}			-----	-850.31	204	-121	4	-901	109	410	244	672	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.192	1.00	Yes	0.798	0.149	0.95	Yes	1.00	**4.52**
		U_{12} - U_{13}			-----	-1168.42	-5	-240	-337	-993	349	210	551	436	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.201	1.00	Yes	0.780	0.137	0.92	Yes	1.00	**4.80**
		U_{13} - U_{14}			-----	-1299.13	-156	-390	-306	-1648	226	182	417	516	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.242	1.00	Yes	0.745	0.182	0.93	Yes	1.00	**4.20**
		U_{14} - U_{15}			-----	-1330.93	-263	-245	-742	-1181	209	30	542	50	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.220	1.00	Yes	0.763	0.130	0.90	Yes	1.00	**5.07**
		U_{15} - U_{16}			-----	-1372.10	-203	-413	-683	-1289	82	45	413	122	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.201	1.00	Yes	0.787	0.142	0.93	Yes	1.00	**5.02**
		U_{16} - U_{17}			-----	-1377.50	-529	-163	-696	-1149	321	-76	546	-137	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.195	1.00	Yes	0.790	0.127	0.92	Yes	1.00	**7.26**
		U_{17} - U_{18}			-----	-1105.67	-667	208	-511	-448	430	32	362	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.876	0.118	1.00	Yes	0.865	0.108	0.98	Yes	1.00	**6.09**
		U_{18} - U_{19}			-----	-716.09	-313	107	-706	-462	46	-99	407	-340	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.180	1.00	Yes	0.806	0.142	0.95	Yes	1.00	**7.50**
		U_{19} - U_{20}			-----	-542.28	-1370	1904	-88	-1128	196	-811	114	-1320	-----	-----	-----	-----	-----	-----	-----	-----	0.616	0.297	0.92	Yes	0.610	0.383	1.00	Yes	1.00	**13.63**
	Structure 2	U_0 - U_1			-----	-599.81	-87	-102	114	-1674	3	-69	245	151	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.279	1.00	Yes	0.708	0.284	1.00	Yes	1.00	**12.00**
		U_1 - U_2			-----	-819.87	-45	-195	22	-1194	-69	-219	-49	-317	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.197	1.00	Yes	0.791	0.181	0.98	Yes	1.00	**6.53**
		U_2 - U_3			-----	-1111.63	-95	-290	-40	-1863	-27	360	64	522	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.206	1.00	Yes	0.789	0.190	0.98	Yes	1.00	**5.66**
		U_3 - U_4			-----	-1278.85	-417	-417	-900	-1881	360	553	439	637	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.265	1.00	Yes	0.728	0.168	0.90	Yes	1.00	**4.94**
		U_4 - U_5			-----	-1410.27	-461	-390	-1198	-2000	760	301	446	333	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.264	1.00	Yes	0.724	0.166	0.89	Yes	1.00	**5.06**
		U_5 - U_6			-----	-1501.70	-436	-32	-948	-1708	188	-202	401	484	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.222	1.00	Yes	0.771	0.142	0.92	Yes	1.00	**5.12**
		U_6 - U_7			-----	-1284.39	-309	-128	-947	-1856	-121	-177	298	112	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.257	1.00	Yes	0.731	0.165	0.90	Yes	1.00	**4.55**
		U_7 - U_8			-----	-1369.46	-192	-173	-1529	-1326	-107	-184	177	-37	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.214	1.00	Yes	0.780	0.136	0.92	Yes	1.00	**5.58**
		U_8 - U_9			-----	-1204.82	-249	157	-669	-1186	-109	-207	289	-349	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.173	1.00	Yes	0.817	0.126	0.95	Yes	1.00	**6.74**
		U_9 - U_{10}			214.66	-996.74	-39	391	-953	-818	-154	-159	273	-197	0.157	0.146	0.31	Yes	0.107	0.099	0.21	Yes	0.865	0.130	1.00	Yes	0.860	0.116	0.98	Yes	1.00	**7.54**
		U_{10} - U_{11}			555.37	-805.45	214	406	-1219	-743	-192	-166	433	-213	0.469	0.225	0.70	Yes	0.319	0.146	0.47	Yes	0.805	0.189	1.00	Yes	0.800	0.172	0.98	Yes	1.00	**9.33**
		U_{11} - U_{12}			-----	-731.90	-1888	992	-399	-1414	741	-17	581	-523	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.192	0.93	Yes	0.727	0.266	1.00	Yes	1.00	**22.32**
		U_{12} - U_{13}			1093.32	-----	452	164	-295	-1665	-403	-358	309	-467	0.738	0.254	1.00	Yes	0.526	0.172	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.05**
		U_{13} - U_{14}			484.14	-----	-4098	7206	-288	1344	342	-1262	-878	-1056	0.238	0.753	1.00	Yes	0.169	0.494	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**23.93**
		U_{14} - U_{15}			599.33	-----	1137	294	6474	-5621	-1531	-383	-783	349	0.295	0.704	1.00	Yes	0.209	0.462	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**23.60**
		U_{15} - U_{16}			1202.34	-----	127	458	-433	-1688	-605	-368	-90	876	0.727	0.266	1.00	Yes	0.517	0.180	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.99**
		U_{16} - U_{17}			999.93	-93.97	638	300	851	-1593	-200	-24	508	370	0.737	0.254	1.00	Yes	0.490	0.167	0.66	Yes	0.082	0.195	0.28	Yes	0.081	0.200	0.29	Yes	1.00	**11.00**
		U_{17} - U_{18}			649.43	-300.94	416	290	347	-1314	15	264	297	829	0.652	0.345	1.00	Yes	0.434	0.228	0.67	Yes	0.358	0.346	0.71	Yes	0.355	0.223	0.58	Yes	1.00	**7.68**
		U_{18} - U_{19}			494.21	-602.34	481	201	149	-1371	119	121	475	478	0.496	0.303	0.80	Yes	0.325	0.193	0.52	Yes	0.716	0.279	1.00	Yes	0.711	0.233	0.95	Yes	1.00	**7.81**
		U_{19} - U_{20}			278.61	-690.10	288	196	-424	-1091	30	22	177	535	0.261	0.247	0.51	Yes	0.173	0.162	0.34	Yes	0.766	0.232	1.00	Yes	0.761	0.175	0.94	Yes	1.00	**6.34**
	Structure 3	U_0 - U_1			-----	-579.46	-3	-162	576	-1718	-1	-50	24	-181	-----	-----	-----	-----	-----	-----	-----	-----	0.658	0.267	0.93	Yes	0.652	0.346	1.00	Yes	1.00	**12.88**
		U_1 - U_2			-----	-704.12	-33	-140	-1	-870	-62	-232	-208	-270	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.194	1.00	Yes	0.792	0.175	0.97	Yes	1.00	**5.94**
		U_2 - U_3			-----	-1031.69	-72	-166	124	-973	-51	335	10	430	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.176	1.00	Yes	0.807	0.158	0.97	Yes	1.00	**5.45**
		U_3 - U_4			-----	-1303.52	-169	-301	-332	-1579	382	605	490	677	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.243	1.00	Yes	0.747	0.174	0.93	Yes	1.00	**5.24**
		U_4 - U_5			-----	-1362.71	-399	-69	-707	-1108	684	227	497	311	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.210	1.00	Yes	0.781	0.122	0.91	Yes	1.00	**4.97**
		U_5 - U_6			-----	-1329.59	-185	-277	-456	-1574	139	-149	328	325	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.222	1.00	Yes	0.762	0.174	0.94	Yes	1.00	**4.88**
		U_6 - U_7			-----	-1357.88	-368	-84	-586	-1210	-103	-195	368	-115	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.206	1.00	Yes	0.778	0.133	0.92	Yes	1.00	**6.09**
		U_7 - U_8			-----	-1196.44	-158	19	-607	-831	-66	-182	267	-170	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.184	1.00	Yes	0.799	0.115	0.92	Yes	1.00	**5.89**
		U_8 - U_9			39.96	-929.26	-39	275	-427	-550	-72	-166	290	-360	0.032	0.134	0.17	Yes	0.022	0.090	0.12	Yes	0.880	0.114	1.00	Yes	0.872	0.091	0.97	Yes	1.00	**7.66**
		U_9 - U_{10}			377.37	-681.65	21	342	-415	-381	-146	-114	290	-388	0.409	0.155	0.57	Yes	0.273	0.101	0.38	Yes	0.878	0.118	1.00	Yes	0.870	0.093	0.97	Yes	1.00	**9.62**
		U_{10} - U_{11}			-----	-597.33	-664	531	-586	-799	443	-465	698	-834	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.223	1.00	Yes	0.762	0.179	0.95	Yes	1.00	**19.82**
		U_{11} - U_{12}			291.34	-----	-3062	3846	-175	526	660	-915	-461	-517	0.239	0.757	1.00	Yes	0.163	0.515	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**27.36**
		U_{12} - U_{13}			934.55	-----	1018	119	1918	-1543	-519	-477	-250	183	0.648	0.343	1.00	Yes	0.452	0.234	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.80**
		U_{13} - U_{14}			823.64	-80.09	214	417	-78	-632	-325	-202	-43	543	0.788	0.209	1.00	Yes	0.550	0.144	0.70	Yes	0.091	0.206	0.30	Yes	0.090	0.134	0.23	Yes	1.00	**8.23**
		U_{14} - U_{15}			641.18	-404.58	423	294	393	-876	-127	-39	319	113	0.735	0.262	1.00	Yes	0.496	0.171	0.67	Yes	0.551	0.270	0.83	Yes	0.546	0.208	0.76	Yes	1.00	**8.11**
		U_{15} - U_{16}			369.55	-554.52	293	204	-24	-1025	-55	137	157	424	0.424	0.315	0.74	Yes	0.291	0.216	0.51	Yes	0.755	0.188	0.95	Yes	0.748	0.244	1.00	Yes	1.00	**5.93**
		U_{16} - U_{17}			433.43	-535.50	410	137	-15	-983	70	71	383	82	0.497	0.298	0.80	Yes	0.341	0.204	0.55	Yes	0.729	0.266	1.00	Yes	0.722	0.234	0.96	Yes	1.00	**7.32**
		U_{17} - U_{18}			203.82	-570.22	311	-70	-411	-826	-51	72	290	160	0.234	0.245	0.48	Yes	0.158	0.160	0.32	Yes	0.776	0.217	1.00	Yes	0.769	0.196	0.97	Yes	1.00	**5.67**
		U_{18} - U_{19}			-----	-522.78	-75	-2	-80	-1165	76	-52	463	-305	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.283	1.00	Yes	0.705	0.277	0.99	Yes	1.00	**9.44**
		U_{19} - U_{20}			-----	-550.02	-907	959	4	-723	319	-402	278	-376	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.248	1.00	Yes	0.742	0.228	0.97	Yes	1.00	**9.05**

Operating Loads - 2F1

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																		
North Truss - Lower Chord	Structure 1	L_0 - L_1	-----	-49.10	-335	174	1390	-2808	-22	-79	382	1406	-----	-----	-----	-----	-----	-----	-----	-----	0.089	0.906	1.00	Yes	0.088	0.843	0.94	Yes	1.00	**40.01**
		L_1 - L_2	435.77	-----	151	-36	364	-918	-28	-30	-249	-185	0.667	0.329	1.00	Yes	0.407	0.220	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.07**
		L_2 - L_3	652.01	-25.13	-21	21	-344	-864	-32	22	-202	77	0.750	0.241	1.00	Yes	0.434	0.145	0.58	Yes	0.034	0.234	0.27	Yes	0.034	0.209	0.25	Yes	1.00	**5.88**
		L_3 - L_4	682.76	-127.26	82	238	-361	-802	56	69	15	24	0.785	0.205	1.00	Yes	0.467	0.133	0.60	Yes	0.174	0.189	0.37	Yes	0.172	0.194	0.37	Yes	1.00	**5.69**
		L_4 - L_5	504.93	-----	-834	723	-638	-247	-382	-103	-284	657	0.654	0.338	1.00	Yes	0.392	0.217	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.60**
		L_5 - L_6	64.23	-731.81	165	605	-414	-175	79	132	260	97	0.063	0.169	0.24	Yes	0.041	0.103	0.15	Yes	0.854	0.145	1.00	Yes	0.844	0.134	0.98	Yes	1.00	**6.91**
		L_6 - L_7	-----	-897.21	-1745	1414	-1100	-1201	-743	31	104	1533	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.237	0.97	Yes	0.722	0.274	1.00	Yes	1.00	**22.28**
		L_7 - L_8	-----	-1156.14	-169	1879	22	578	21	-177	-157	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.255	1.00	Yes	0.732	0.249	0.99	Yes	1.00	**10.14**
		L_8 - L_9	-----	-1265.47	1166	64	1369	-601	-180	-74	-38	274	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.187	1.00	Yes	0.801	0.181	0.99	Yes	1.00	**11.49**
		L_9 - L_{10}	-----	-1051.47	137	131	448	-968	75	148	81	-199	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.068	0.93	Yes	0.846	0.152	1.00	Yes	1.00	**11.12**
		L_{10} - L_{11}	-----	-535.87	510	-14	369	-664	130	35	-55	-93	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.100	0.93	Yes	0.816	0.176	1.00	Yes	1.00	**7.56**
		L_{11} - L_{12}	551.70	-246.51	497	-161	487	-957	95	-31	-148	-164	0.714	0.282	1.00	Yes	0.429	0.186	0.62	Yes	0.379	0.098	0.48	Yes	0.376	0.253	0.63	Yes	1.00	**7.89**
		L_{12} - L_{13}	1018.43	-----	160	-76	-249	-853	27	33	150	315	0.804	0.188	1.00	Yes	0.514	0.113	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.61**
		L_{13} - L_{14}	1217.00	-----	362	-438	671	-1926	12	-3	-91	-167	0.716	0.279	1.00	Yes	0.464	0.170	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.05**
		L_{14} - L_{15}	1613.57	-----	-1454	39	-1482	-1174	-374	-169	-142	424	0.788	0.208	1.00	Yes	0.512	0.127	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.17**
		L_{15} - L_{16}	1554.83	-----	-227	-365	-800	-1665	-113	-66	-156	-481	0.760	0.234	1.00	Yes	0.488	0.138	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.51**
		L_{16} - L_{17}	1193.71	-----	-1029	387	-1293	-577	-531	-66	-324	511	0.755	0.237	1.00	Yes	0.490	0.147	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.28**
		L_{17} - L_{18}	925.98	-----	-601	393	-875	-402	-162	-147	123	-195	0.806	0.194	1.00	Yes	0.516	0.116	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.56**
		L_{18} - L_{19}	339.44	-----	-1128	860	-619	67	-662	-124	-346	535	0.519	0.476	1.00	Yes	0.351	0.302	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.45**
		L_{19} - L_{20}	148.84	-339.09	-1237	619	-75	-55	902	202	-23	-5	0.228	0.558	0.79	Yes	0.139	0.368	0.51	Yes	0.616	0.383	1.00	Yes	0.611	0.371	0.99	Yes	1.00	**15.14**
	Structure 2	L_0 - L_1	37.04	-47.09	-128	35	1034	-3923	-21	-72	-267	-926	0.045	0.950	1.00	Yes	0.027	0.609	0.64	Yes	0.068	0.672	0.74	Yes	0.067	0.798	0.87	Yes	1.00	**39.75**
		L_1 - L_2	551.76	-----	162	-220	366	-1481	-36	38	20	-114	0.670	0.320	1.00	Yes	0.399	0.207	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.22**
		L_2 - L_3	974.03	-----	-40	-171	-239	-1246	77	75	72	328	0.778	0.219	1.00	Yes	0.511	0.127	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.29**
		L_3 - L_4	1272.23	-----	47	-435	-465	-1743	43	60	457	196	0.755	0.244	1.00	Yes	0.509	0.157	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.50**
		L_4 - L_5	1709.26	-----	-387	-256	-978	-1966	93	199	-5	224	0.797	0.201	1.00	Yes	0.528	0.119	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.12**
		L_5 - L_6	1776.57	-----	-149	-403	-1239	-2432	109	-15	196	-27	0.762	0.228	1.00	Yes	0.512	0.139	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.94**
		L_6 - L_7	1759.45	-----	-431	-91	-1545	-2463	-165	45	-139	489	0.745	0.247	1.00	Yes	0.495	0.145	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.38**
		L_7 - L_8	1438.27	-14.86	-200	316	-1230	-1367	-130	10	-62	-259	0.825	0.172	1.00	Yes	0.542	0.101	0.65	Yes	0.010	0.171	0.19	Yes	0.010	0.151	0.17	Yes	1.00	**7.92**
		L_8 - L_9	1092.55	-----	-943	569	-1132	-552	-290	21	-91	787	0.764	0.227	1.00	Yes	0.515	0.144	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.77**
		L_9 - L_{10}	867.30	-590.54	-113	709	-1179	-590	14	91	250	-145	0.774	0.219	1.00	Yes	0.451	0.136	0.59	Yes	0.624	0.126	0.76	Yes	0.620	0.189	0.81	Yes	1.00	**9.96**
		L_{10} - L_{11}	574.02	-----	-1723	1103	-1140	-420	-883	-64	-322	844	0.573	0.420	1.00	Yes	0.336	0.261	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.30**
		L_{11} - L_{12}	278.54	-956.09	-1194	1540	-1366	-1209	-39	293	528	-360	0.194	0.259	0.46	Yes	0.129	0.156	0.29	Yes	0.790	0.167	0.96	Yes	0.784	0.210	1.00	Yes	1.00	**20.99**
		L_{12} - L_{13}	-----	-1284.60	-506	-1	-802	-1606	61	-108	23	345	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.216	1.00	Yes	0.768	0.160	0.93	Yes	1.00	**12.11**
		L_{13} - L_{14}	-----	-1259.81	-1633	4166	-308	1175	-78	-250	-273	-398	-----	-----	-----	-----	-----	-----	-----	-----	0.640	0.272	0.92	Yes	0.634	0.364	1.00	Yes	1.00	**14.75**
		L_{14} - L_{15}	-----	-1466.30	1450	-258	2978	-2239	-235	-350	106	473	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.189	0.94	Yes	0.738	0.260	1.00	Yes	1.00	**13.40**
		L_{15} - L_{16}	-----	-1397.79	-865	327	-1531	-1269	-20	355	318	236	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.150	1.00	Yes	0.836	0.152	0.99	Yes	1.00	**11.89**
		L_{16} - L_{17}	-----	-1163.46	1219	122	901	-1144	405	192	-54	46	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.143	1.00	Yes	0.847	0.150	1.00	Yes	1.00	**10.94**
		L_{17} - L_{18}	-----	-806.40	466	222	817	-921	97	-54	-309	-229	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.125	0.98	Yes	0.847	0.147	1.00	Yes	1.00	**7.55**
		L_{18} - L_{19}	57.31	-635.52	662	113	416	-786	-3	33	110	205	0.065	0.183	0.25	Yes	0.037	0.109	0.15	Yes	0.852	0.144	1.00	Yes	0.847	0.152	1.00	Yes	1.00	**7.67**
		L_{19} - L_{20}	514.86	-553.87	541	213	237	-1306	57	-40	251	-125	0.583	0.290	0.88	Yes	0.345	0.185	0.54	Yes	0.743	0.201	0.95	Yes	0.738	0.252	1.00	Yes	1.00	**9.43**
		L_{20} - L_{21}	884.64	-406.51	505	28	-695	-1563	-85	-94	94	413	0.715	0.278	1.00	Yes	0.470	0.161	0.64	Yes	0.389	0.211	0.61	Yes	0.386	0.233	0.62	Yes	1.00	**10.07**
		L_{21} - L_{22}	784.28	-----	51	-55	-80	-2347	-37	42	18	-116	0.634	0.362	1.00	Yes	0.425	0.218	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.31**
		L_{22} - L_{23}	903.65	-107.59	-149	209	-1051	-1456	-20	3	-111	480	0.730	0.269	1.00	Yes	0.490	0.165	0.66	Yes	0.103	0.229	0.34	Yes	0.102	0.217	0.32	Yes	1.00	**8.72**
		L_{23} - L_{24}	905.53	-264.63	-11	331	-1039	-1636	8	72	213	-96	0.732	0.267	1.00	Yes	0.481	0.153	0.64	Yes	0.253	0.306	0.56	Yes	0.252	0.244	0.50	Yes	1.00	**9.82**
		L_{24} - L_{25}	585.12	-----	-585	373	-1147	-676	-279	131	-258	703	0.663	0.329	1.00	Yes	0.392	0.206	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.01**
		L_{25} - L_{26}	595.29	-529.11	-641	965	-904	-1262	-57	-152	128	-481	0.674	0.317	1.00	Yes	0.389	0.188	0.58	Yes	0.710	0.161	0.88	Yes	0.705	0.244	0.95	Yes	1.00	**16.65**
		L_{26} - L_{27}	316.78	-682.86	-1713	1442	-1481	-1247	-884	-135	-238	1261	0.283	0.426	0.71	Yes	0.165	0.260	0.43	Yes	0.722	0.260	0.99	Yes	0.717	0.274	1.00	Yes	1.00	**19.58**
		L_{27} - L_{28}	-----	-1148.10	-417	1286	-965	-249	-67	-36	261	-237	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.133	0.98	Yes	0.836	0.159	1.00	Yes	1.00	**11.16**
		L_{28} - L_{29}	-----	-1381.73	43	-56	-639	-1509	-52	-15	58	377	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.163	1.00	Yes	0.826	0.150	0.98	Yes	1.00	**9.30**
		L_{29} - L_{30}	-----	-1321.59	-1380	3770	-386	750	91	153	-54	-108	-----	-----	-----	-----	-----	-----	-----	-----	0.671	0.219	0.89	Yes	0.665	0.329	1.00	Yes	1.00	**13.98**
		L_{30} - L_{31}	-----	-1439.02	1609	-263	3105	-2681	-486	-393	618	1074	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.232	0.97	Yes	0.724	0.271	1.00	Yes	1.00	**17.63**
		L_{31} - L_{32}	-----	-1041.78	-450	471	-873	-2464	-505	26	69	88	-----	-----	-----	-----	-----	-----	-----	-----	0.634	0.363	1.00	Yes	0.628	0.248	0.88	Yes	1.00	**22.59**
		L_{32} - L_{33}	-----	-975.58	933	131	1082	-1412	-120	-65	14	17	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.102	0.91	Yes	0.800	0.192	1.00	Yes	1.00	**13.82**
		L_{33} - L_{34}	156.23	-645.16	395	156	580	-1346	10	-90	-69	-194	0.156	0.261	0.42	Yes	0.091	0.165	0.26	Yes	0.763	0.101	0.87	Yes	0.758	0.235	1.00	Yes	1.00	**10.77**
		L_{34} - L_{35}	749.96	-566.50	605	22	44	-1549	-23	72	275	645	0.669	0.325	1.00	Yes	0.390	0.200	0.60	Yes	0.599	0.227	0.83	Yes	0.595	0.248	0.85	Yes	1.00	**12.26**
		L_{35} - L_{36}	1063.58	-220.84	367	-32	-98	-1457	105	-45	596	64	0.744	0.253	1.00	Yes	0.501	0.159	0.67	Yes	0.183	0.172	0.36	Yes	0.182	0.197	0.38	Yes	1.00	**9.30**
		L_{36} - L_{37}	1269.23	-39.64	245	4	-147	-2162	-104	13	-101	376	0.728	0.270	1.00	Yes	0.478	0.159	0.64	Yes	0.027	0.231	0.26	Yes	0.027	0.239	0.27	Yes	1.00	**8.73**
		L_{37} - L_{38}	1752.21	-----	-58	-364	-708	-2777	-45	-9	75	-179	0.742	0.255	1.00	Yes	0.493	0.148	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.44**
		L_{38} - L_{39}	1758.16	-----	-276	-165	-1911	-2285	-57	6	-19	575	0.754	0.239	1.00	Yes	0.506	0.147	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.38**
		L_{39} - L_{40}	1650.93	-----	-207	-310	-1509	-2134	-51	-37	87	-312	0.770	0.223	1.00	Yes	0.510	0.132	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.59**
		L_{40} - L_{41}	1320.18	-----	-1383	251	-1509	-1047	-550	-51	-295	561	0.776	0.221	1.00	Yes	0.522	0.138	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.67**
		L_{41} - L_{42}	1055.08	-----	-914	353	-978	-942	-57	-18	163	-156	0.832	0.159	1.00	Yes	0.545	0.095	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.81**
		L_{42} - L_{43}	460.76	-----	-1450	529	-636	-349	-469	68	-268	495	0.589	0.402	1.00	Yes	0.352	0.232	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.24**
		L_{43} - L_{44}	268.59	-281.19	-2810	1050	-23	-37	599	175	-190	-55	0.326	0.670	1.00	Yes	0.194	0.430	0.63	Yes	0.404	0.404	0.81	Yes	0.402	0.572	0.98	Yes	1.00	**30.98**
	Structure 3	L_0 - L_1	183.23	-204.38	-17	-79	994	-1848	-9	-39	-148	-668	0.291	0.706	1.00	Yes	0.179	0.463	0.65	Yes	0.386	0.410	0.80	Yes	0.382	0.558	0.95	Yes	1.00	**22.60**
		L_1 - L_2	388.96	-----	143	-179	618	-1271	-52	20	90	-68	0.595	0.400	1.00	Yes	0.403	0.248	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.88**
		L_2 - L_3	871.78	-----	-33	-163	37	-1025	37	23	105	325	0.759	0.239	1.00	Yes	0.486	0.144	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.66**
		L_3 - L_4	1191.04	-----	62	-368	-153	-1465	47	54	357	167	0.753	0.247	1.00	Yes	0.489	0.152	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.25**
		L_4 - L_5	1609.29	-----	-379	-175	-885	-1582	117	225	21	282	0.786	0.211	1.00	Yes	0.505	0.123	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.07**
		L_5 - L_6	1506.21	-----	-83	-350	-474	-2084	141	78	156	70	0.736	0.262	1.00	Yes	0.478	0.158	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.28**
		L_6 - L_7	1301.34	-----	-1315	404	-1126	-751	-275	2	-105	589	0.765	0.230	1.00	Yes	0.496	0.142	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.25**
		L_7 - L_8	1079.88	-----	-87	110	-712	-666	-29	40	176	19	0.852	0.147	1.00	Yes	0.545	0.088	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.77**
		L_8 - L_9	556.99	-----	-685	382	-513	-140	-241	116	-160	504	0.721	0.269	1.00	Yes	0.433	0.173	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.87**
		L_9 - L_{10}	403.85	-549.75	11	502	-586	-398	74	143	320	147	0.523	0.211	0.74	Yes	0.305	0.127	0.44	Yes	0.845	0.136	0.99	Yes	0.838	0.155	1.00	Yes	1.00	**9.81**
		L_{10} - L_{11}	-----	-1005.65	-1194	1129	-711	-731	-564	-185	24	1134	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.141	0.96	Yes	0.809	0.188	1.00	Yes	1.00	**19.97**
		L_{11} - L_{12}	-----	-1213.81	-187	1446	-38	458	-318	-474	-195	-188	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.214	1.00	Yes	0.769	0.191	0.97	Yes	1.00	**10.06**
		L_{12} - L_{13}	-----	-1183.34	1143	86	1775	-770	-150	-287	-236	150	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.232	1.00	Yes	0.749	0.235	0.99	Yes	1.00	**13.25**
		L_{13} - L_{14}	-----	-1095.89	-19	280	351	-703	-244	121	-193	-163	-----	-----	-----	-----	-----	-----	-----	-----	0.892	0.077	0.97	Yes	0.882	0.110	1.00	Yes	1.00	**8.74**
		L_{14} - L_{15}	-----	-749.61	568	167	206	-479	156	-4	42	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.118	1.00	Yes	0.865	0.126	1.00	Yes	1.00	**6.49**
		L_{15} - L_{16}	97.95	-512.35	409	180	536	-794	10	-55	-222	-99	0.127	0.250	0.38	Yes	0.076	0.163	0.24	Yes	0.788	0.143	0.94	Yes	0.781	0.210	1.00	Yes	1.00	**5.33**
		L_{16} - L_{17}	626.16	-208.34	299	25	-263	-882	96	-33	101	393	0.720	0.276	1.00	Yes	0.428	0.177	0.61	Yes	0.285	0.218	0.51	Yes	0.282	0.213	0.50	Yes	1.00	**5.32**
		L_{17} - L_{18}	640.82	-122.42	95	-5	-389	-948	2	11	48	-158	0.737	0.254	1.00	Yes	0.427	0.153	0.58	Yes	0.167	0.237	0.41	Yes	0.166	0.229	0.40	Yes	1.00	**6.28**
		L_{18} - L_{19}	419.81	-----	-630	240	-431	-617	-167	102	-161	749	0.643	0.350	1.00	Yes	0.392	0.227	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.39**
		L_{19} - L_{20}	52.90	-77.99	-1823	974	70	-188	1708	464	-20	-5	0.081	0.914	1.00	Yes	0.048	0.549	0.60	Yes	0.142	0.672	0.82	Yes	0.140	0.547	0.69	Yes	1.00	**23.92**

Moment (End) AI Operating

Operating Loads - 2F1

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	-----	-282.72	-172	226	-59	89	-390	-125	-26	-8	-----	-----	-----	-----	-----	-----	-----	-----	0.699	0.273	0.98	Yes	0.660	0.336	1.00	Yes	1.00	**2.74**
		U_1 - L_1	14.34	-319.55	-249	248	22	-11	-139	-12	-4	-3	0.026	0.358	0.39	Yes	0.014	0.197	0.22	Yes	0.698	0.121	0.82	Yes	0.676	0.318	1.00	Yes	1.00	**6.01**
		U_2 - L_2	92.42	-287.05	-259	303	78	-87	-181	29	52	26	0.166	0.439	0.61	Yes	0.091	0.242	0.34	Yes	0.627	0.162	0.79	Yes	0.607	0.387	1.00	Yes	1.00	**8.62**
		U_3 - L_3	288.11	-219.82	-260	291	304	-296	-304	-56	-188	58	0.518	0.477	1.00	Yes	0.285	0.262	0.55	Yes	0.482	0.165	0.65	Yes	0.465	0.389	0.86	Yes	1.00	**13.83**
		U_4 - L_4	-----	-248.66	-47	29	368	-348	-276	58	-17	50	-----	-----	-----	-----	-----	-----	-----	-----	0.547	0.190	0.74	Yes	0.526	0.471	1.00	Yes	1.00	**11.01**
		U_5 - L_5	-----	-421.18	66	-87	234	-265	7	9	-11	-121	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.118	0.88	Yes	0.727	0.269	1.00	Yes	1.00	**4.95**
		U_6 - L_6	-----	-495.39	86	-81	238	-260	-192	-51	424	86	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.173	0.97	Yes	0.748	0.252	1.00	Yes	1.00	**4.18**
		U_7 - L_7	-----	-411.29	129	-143	273	-290	-140	18	230	32	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.153	0.89	Yes	0.671	0.321	1.00	Yes	1.00	**3.00**
		U_8 - L_8	-----	-1157.36	-335	394	455	-541	485	187	1024	303	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.160	1.00	Yes	0.802	0.101	0.91	Yes	1.00	**8.23**
		U_9 - L_9	-----	-643.71	-385	433	-171	200	-138	-186	-431	-153	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.161	0.95	Yes	0.745	0.252	1.00	Yes	1.00	**5.39**
		U_{10} - L_{10}	-----	-680.11	-347	349	-135	104	-1003	-619	-375	-224	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.263	1.00	Yes	0.699	0.195	0.90	Yes	1.00	**6.61**
		U_{11} - L_{11}	-----	-657.71	-381	495	-115	184	-541	-442	-588	-319	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.182	0.98	Yes	0.766	0.230	1.00	Yes	1.00	**6.85**
		U_{12} - L_{12}	-----	-514.64	-338	336	-89	90	-351	-253	-427	-232	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.181	0.93	Yes	0.706	0.289	1.00	Yes	1.00	**6.55**
		U_{13} - L_{13}	-----	-358.32	-250	275	-33	54	-114	-48	-186	23	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.135	0.86	Yes	0.686	0.313	1.00	Yes	1.00	**5.01**
		U_{14} - L_{14}	-----	-191.23	-442	460	214	-228	345	301	-409	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.427	0.267	0.70	Yes	0.405	0.588	1.00	Yes	1.00	**18.19**
		U_{15} - L_{15}	166.96	-298.65	-123	112	265	-286	44	110	83	-117	0.300	0.400	0.71	Yes	0.165	0.220	0.39	Yes	0.669	0.161	0.84	Yes	0.632	0.366	1.00	Yes	1.00	**8.46**
		U_{16} - L_{16}	12.12	-323.95	9	-26	237	-245	35	-33	354	-132	0.022	0.416	0.44	Yes	0.012	0.229	0.25	Yes	0.730	0.162	0.90	Yes	0.685	0.313	1.00	Yes	1.00	**5.37**
		U_{17} - L_{17}	-----	-435.85	61	-75	225	-244	-121	-113	135	-165	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.128	0.95	Yes	0.752	0.247	1.00	Yes	1.00	**4.42**
		U_{18} - L_{18}	-----	-542.59	145	-151	415	-432	-133	-123	437	-129	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.128	0.93	Yes	0.755	0.245	1.00	Yes	1.00	**4.60**
		U_{19} - L_{19}	-----	-640.58	173	-171	528	-518	-117	-47	320	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.124	0.93	Yes	0.746	0.245	1.00	Yes	1.00	**5.23**
		U_{20} - L_{20}	-----	-543.14	161	-261	341	-488	29	4	654	86	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.240	1.00	Yes	0.665	0.235	0.90	Yes	1.00	**3.62**
	Structure 2	U_0 - L_0	-----	-645.21	-425	540	-163	211	-457	-77	-42	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.185	1.00	Yes	0.723	0.243	0.97	Yes	1.00	**5.56**
		U_1 - L_1	-----	-719.91	-498	515	-119	128	-833	-110	-107	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.163	0.99	Yes	0.772	0.218	1.00	Yes	1.00	**7.37**
		U_2 - L_2	-----	-581.73	-505	501	-107	117	-300	-47	-107	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.114	0.90	Yes	0.741	0.258	1.00	Yes	1.00	**6.65**
		U_3 - L_3	-----	-490.84	-234	247	-56	64	17	-54	75	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.081	0.92	Yes	0.770	0.225	1.00	Yes	1.00	**5.66**
		U_4 - L_4	-----	-336.19	-224	223	-14	22	-171	-33	245	74	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.156	0.92	Yes	0.711	0.287	1.00	Yes	1.00	**6.13**
		U_5 - L_5	133.61	-316.76	-233	252	101	-86	-100	-32	-140	119	0.240	0.363	0.61	Yes	0.132	0.200	0.34	Yes	0.716	0.163	0.88	Yes	0.670	0.322	1.00	Yes	1.00	**7.72**
		U_6 - L_6	348.55	-230.68	-218	222	191	-201	299	51	-57	115	0.627	0.371	1.00	Yes	0.345	0.204	0.55	Yes	0.519	0.176	0.70	Yes	0.488	0.284	0.78	Yes	1.00	**10.19**
		U_7 - L_7	-----	-173.35	-170	181	444	-491	-181	278	76	161	-----	-----	-----	-----	-----	-----	-----	-----	0.392	0.251	0.65	Yes	0.367	0.627	1.00	Yes	1.00	**21.24**
		U_8 - L_8	-----	-465.77	51	-76	360	-372	-64	-26	282	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.675	0.126	0.81	Yes	0.671	0.325	1.00	Yes	1.00	**6.06**
		U_9 - L_9	-----	-690.34	156	-169	591	-602	-37	-194	286	-125	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.104	0.88	Yes	0.740	0.255	1.00	Yes	1.00	**7.72**
		U_{10} - L_{10}	-----	-790.12	182	-184	570	-590	-149	-98	146	-196	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.103	0.89	Yes	0.739	0.260	1.00	Yes	1.00	**8.25**
		U_{11} - L_{11}	-----	-817.10	186	-186	513	-531	-182	-68	337	-117	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.129	0.96	Yes	0.764	0.234	1.00	Yes	1.00	**6.94**
		U_{12} - L_{12}	-----	-878.65	157	-136	528	-537	-148	6	284	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.117	0.97	Yes	0.762	0.230	1.00	Yes	1.00	**7.31**
		U_{13} - L_{13}	-----	-740.09	212	-208	561	-545	-159	21	543	51	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.171	1.00	Yes	0.714	0.268	0.99	Yes	1.00	**5.84**
		U_{14} - L_{14}	-----	-1229.33	-629	583	812	-775	141	333	587	280	-----	-----	-----	-----	-----	-----	-----	-----	0.899	0.097	1.00	Yes	0.815	0.144	0.96	Yes	1.00	**11.68**
		U_{15} - L_{15}	-----	-718.81	-625	600	-119	127	-246	-89	-310	16	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.160	0.97	Yes	0.693	0.299	1.00	Yes	1.00	**9.53**
		U_{16} - L_{16}	-----	-657.99	-520	491	-90	64	-1140	-451	-789	-256	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.237	1.00	Yes	0.705	0.221	0.93	Yes	1.00	**8.04**
		U_{17} - L_{17}	-----	-631.15	-567	555	-126	124	-658	-426	-274	-185	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.194	0.98	Yes	0.735	0.263	1.00	Yes	1.00	**7.46**
		U_{18} - L_{18}	-----	-579.05	-484	502	-97	97	-154	-272	-113	-128	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.115	0.89	Yes	0.738	0.257	1.00	Yes	1.00	**6.80**
		U_{19} - L_{19}	-----	-467.93	-306	300	-55	59	-230	-170	-66	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.704	0.121	0.83	Yes	0.699	0.294	1.00	Yes	1.00	**6.30**
		U_{20} - L_{20}	-----	-372.33	-244	247	-6	14	-135	-91	-185	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.122	0.89	Yes	0.713	0.282	1.00	Yes	1.00	**6.07**
		U_{21} - L_{21}	61.21	-319.74	-237	250	31	-25	80	-23	-93	63	0.110	0.347	0.46	Yes	0.061	0.191	0.26	Yes	0.722	0.114	0.84	Yes	0.677	0.320	1.00	Yes	1.00	**6.54**
		U_{22} - L_{22}	-----	-170.30	-464	493	414	-432	-57	325	179	236	-----	-----	-----	-----	-----	-----	-----	-----	0.383	0.242	0.63	Yes	0.360	0.631	1.00	Yes	1.00	**26.23**
		U_{23} - L_{23}	92.58	-318.19	-64	50	244	-255	-2	142	283	-45	0.167	0.409	0.58	Yes	0.092	0.225	0.32	Yes	0.719	0.157	0.88	Yes	0.673	0.327	1.00	Yes	1.00	**6.71**
		U_{24} - L_{24}	-----	-370.63	10	-22	235	-247	72	17	276	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.123	0.89	Yes	0.710	0.282	1.00	Yes	1.00	**5.89**
		U_{25} - L_{25}	-----	-475.99	43	-43	299	-297	-83	-30	491	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.185	0.91	Yes	0.711	0.288	1.00	Yes	1.00	**5.62**
		U_{26} - L_{26}	-----	-567.88	73	-76	501	-528	-118	-23	498	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.153	0.91	Yes	0.724	0.270	1.00	Yes	1.00	**6.41**
		U_{27} - L_{27}	-----	-631.85	88	-88	565	-569	-134	2	369	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.115	0.90	Yes	0.735	0.264	1.00	Yes	1.00	**7.03**
		U_{28} - L_{28}	-----	-712.86	79	-76	538	-544	-150	16	785	52	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.151	0.98	Yes	0.764	0.231	1.00	Yes	1.00	**7.14**
		U_{29} - L_{29}	-----	-719.09	121	-126	633	-609	-113	28	596	23	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.181	0.99	Yes	0.693	0.303	1.00	Yes	1.00	**8.02**
		U_{30} - L_{30}	-----	-1218.71	-721	651	890	-875	-658	146	632	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.907	0.090	1.00	Yes	0.823	0.160	0.99	Yes	1.00	**14.48**
		U_{31} - L_{31}	-----	-750.51	-519	503	-111	111	137	-78	-315	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.157	1.00	Yes	0.724	0.248	0.98	Yes	1.00	**8.59**
		U_{32} - L_{32}	-----	-790.15	-484	467	-83	60	-968	-419	-668	-271	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.241	1.00	Yes	0.685	0.207	0.90	Yes	1.00	**8.69**
		U_{33} - L_{33}	-----	-824.30	-481	486	-117	107	-317	-426	-451	-342	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.154	1.00	Yes	0.777	0.218	1.00	Yes	1.00	**8.78**
		U_{34} - L_{34}	-----	-801.24	-547	558	-120	113	-428	-378	-314	-299	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.131	0.93	Yes	0.749	0.246	1.00	Yes	1.00	**9.85**
		U_{35} - L_{35}	-----	-696.52	-591	588	-90	119	-224	-177	-238	27	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.088	0.87	Yes	0.746	0.251	1.00	Yes	1.00	**8.61**
		U_{36} - L_{36}	-----	-474.95	-341	352	-41	56	180	34	-76	62	-----	-----	-----	-----	-----	-----	-----	-----	0.689	0.117	0.81	Yes	0.684	0.308	1.00	Yes	1.00	**6.54**
		U_{37} - L_{37}	-----	-150.56	-469	527	119	-118	-232	233	-136	190	-----	-----	-----	-----	-----	-----	-----	-----	0.340	0.264	0.61	Yes	0.319	0.673	1.00	Yes	1.00	**20.09**
		U_{38} - L_{38}	353.98	-148.23	-245	246	163	-169	4	138	-89	-120	0.637	0.354	1.00	Yes	0.350	0.195	0.55	Yes	0.334	0.098	0.44	Yes	0.314	0.314	0.63	Yes	1.00	**9.09**
		U_{39} - L_{39}	155.80	-324.47	-133	121	218	-239	48	63	275	-89	0.280	0.386	0.67	Yes	0.154	0.212	0.37	Yes	0.733	0.127	0.87	Yes	0.687	0.306	1.00	Yes	1.00	**8.48**
		U_{40} - L_{40}	29.97	-335.50	-23	4	225	-222	12	-1	107	-125	0.054	0.323	0.38	Yes	0.030	0.178	0.21	Yes	0.761	0.106	0.87	Yes	0.710	0.287	1.00	Yes	1.00	**6.41**
		U_{41} - L_{41}	-----	-487.68	30	-34	242	-254	6	-34	280	-109	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.109	0.94	Yes	0.765	0.231	1.00	Yes	1.00	**5.81**
		U_{42} - L_{42}	-----	-583.03	63	-72	483	-489	10	-37	282	-136	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.092	0.88	Yes	0.743	0.250	1.00	Yes	1.00	**6.49**
		U_{43} - L_{43}	-----	-713.76	83	-96	542	-550	-49	-49	724	45	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.135	0.96	Yes	0.765	0.233	1.00	Yes	1.00	**6.76**
		U_{44} - L_{44}	-----	-607.09	119	-138	392	-498	-121	-20	1243	211	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.265	1.00	Yes	0.651	0.211	0.87	Yes	1.00	**5.42**
	Structure 3	U_0 - L_0	-----	-553.11	-409	462	-145	194	-846	-111	-55	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.245	1.00	Yes	0.664	0.221	0.89	Yes	1.00	**4.37**
		U_1 - L_1	-----	-660.71	-477	487	-112	124	-547	26	-123	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.139	0.97	Yes	0.769	0.226	1.00	Yes	1.00	**7.25**
		U_2 - L_2	-----	-535.24	-440	444	-108	114	-313	-27	-148	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.118	0.91	Yes	0.744	0.251	1.00	Yes	1.00	**6.39**
		U_3 - L_3	-----	-436.75	-222	234	-45	58	-135	-75	43	-64	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.110	0.93	Yes	0.753	0.237	1.00	Yes	1.00	**5.17**
		U_4 - L_4	14.94	-328.49	-226	235	-8	17	60	14	-102	35	0.027	0.330	0.36	Yes	0.015	0.182	0.20	Yes	0.740	0.112	0.86	Yes	0.695	0.301	1.00	Yes	1.00	**5.92**
		U_5 - L_5	120.98	-304.02	-259	277	94	-82	-159	-26	-129	153	0.218	0.400	0.62	Yes	0.120	0.220	0.34	Yes	0.681	0.179	0.87	Yes	0.643	0.355	1.00	Yes	1.00	**8.21**
		U_6 - L_6	11.66	-76.13	-443	450	528	-573	-451	250	-850	-95	0.021	0.979	1.00	Yes	0.012	0.538	0.55	Yes	0.170	0.455	0.63	Yes	0.161	0.732	0.90	Yes	1.00	**25.28**
		U_7 - L_7	-----	-360.16	11	-24	245	-266	-13	-25	60	-138	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.119	0.85	Yes	0.690	0.303	1.00	Yes	1.00	**5.58**
		U_8 - L_8	-----	-515.41	64	-70	329	-334	-34	-96	498	7	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.181	0.93	Yes	0.707	0.286	1.00	Yes	1.00	**6.20**
		U_9 - L_9	-----	-651.95	102	-163	394	-501	-44	-192	234	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.118	0.90	Yes	0.759	0.233	1.00	Yes	1.00	**6.75**
		U_{10} - L_{10}	-----	-778.56	129	-109	400	-438	-9	8	292	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.122	0.93	Yes	0.768	0.227	1.00	Yes	1.00	**7.53**
		U_{11} - L_{11}	-----	-647.00	168	-193	421	-468	-150	-29	545	132	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.168	0.94	Yes	0.731	0.260	1.00	Yes	1.00	**4.96**
		U_{12} - L_{12}	-----	-1196.70	-513	562	549	-710	330	218	764	338	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.127	1.00	Yes	0.830	0.132	0.97	Yes	1.00	**10.40**
		U_{13} - L_{13}	-----	-454.43	-285	298	-67	76	-233	-106	-381	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.178	0.94	Yes	0.701	0.293	1.00	Yes	1.00	**5.43**
		U_{14} - L_{14}	-----	-520.23	-230	249	-45	29	-426	-331	-647	-314	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.207	1.00	Yes	0.746	0.218	0.97	Yes	1.00	**6.25**
		U_{15} - L_{15}	-----	-421.22	-238	252	-30	39	-602	-385	-528	-241	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.237	1.00	Yes	0.727	0.256	0.99	Yes	1.00	**6.08**
		U_{16} - L_{16}	6.08	-222.13	-414	403	41	-33	-73	-37	-915	-404	0.011	0.794	0.81	Yes	0.006	0.437	0.45	Yes	0.488	0.404	0.90	Yes	0.470	0.529	1.00	Yes	1.00	**13.56**
		U_{17} - L_{17}	293.60	-257.43	-309	321	195	-215	-155	85	200	-56	0.528	0.468	1.00	Yes	0.290	0.257	0.55	Yes	0.564	0.144	0.71	Yes	0.545	0.410	0.96	Yes	1.00	**10.86**
		U_{18} - L_{18}	86.67	-297.29	-126	119	241	-285	116	30	294	-18	0.156	0.449	0.61	Yes	0.086	0.247	0.34	Yes	0.650	0.169	0.82	Yes	0.629	0.364	1.00	Yes	1.00	**8.13**
		U_{19} - L_{19}	40.81	-312.10	-50	39	261	-243	-84	-8	109	-37	0.073	0.365	0.44	Yes	0.040	0.201	0.25	Yes	0.682	0.107	0.79	Yes	0.660	0.334	1.00	Yes	1.00	**5.62**
		U_{20} - L_{20}	-----	-323.32	20	-31	124	-207	-46	-15	526	169	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.269	1.00	Yes	0.684	0.265	0.95	Yes	1.00	**3.15**

Operating Loads - 2F1

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

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression											
	Vehicle	Pedestrian	Max.	Max.	Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
DL Factor:	1.300	1.300	Tension	Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
LL Factor:	1.300	1.300	(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Diagonals	Structure 1	$U_0 - L_1$	660.40	-----	-89	73	-16	-2	6	-97	-12	5	0.866	0.129	1.00	Yes	0.523	0.071	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.50**
		$U_1 - L_2$	424.87	-----	-77	20	-40	-29	-199	-214	471	84	0.764	0.235	1.00	Yes	0.420	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.80**
		$U_2 - L_3$	340.94	-350.62	-93	26	-48	-86	-195	-143	138	-132	0.613	0.175	0.79	Yes	0.337	0.096	0.44	Yes	0.807	0.189	1.00	Yes	0.742	0.119	0.87	Yes	1.00	**11.54**
		$U_3 - L_4$	-----	-383.57	25	-14	11	-63	10	8	10	-199	-----	-----	-----	-----	-----	-----	-----	-----	0.877	0.116	1.00	Yes	0.812	0.081	0.90	Yes	1.00	**4.74**
		$U_4 - L_4$	567.37	-----	-76	64	-32	-16	-95	-160	-338	-210	0.840	0.156	1.00	Yes	0.462	0.086	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.13**
		$U_4 - L_5$	660.39	-----	-183	227	-71	80	-220	-276	-460	-141	0.781	0.213	1.00	Yes	0.429	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.65**
		$U_5 - L_6$	670.39	-----	-295	247	-98	99	-137	-196	7	13	0.793	0.204	1.00	Yes	0.436	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.70**
		$U_6 - L_7$	662.13	-----	-106	311	-12	132	-79	-138	216	102	0.783	0.216	1.00	Yes	0.431	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.10**
		$U_8 - L_8$	992.69	-----	-101	360	20	137	321	357	335	100	0.794	0.206	1.00	Yes	0.492	0.115	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.92**
		$U_9 - L_{10}$	1039.46	-----	-301	282	-74	85	158	263	64	86	0.831	0.168	1.00	Yes	0.515	0.094	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.83**
		$U_{10} - L_{11}$	998.59	-----	-237	202	-94	60	15	301	325	180	0.843	0.152	1.00	Yes	0.522	0.086	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.46**
		$U_{11} - L_{12}$	832.89	-----	-240	136	-171	-14	34	160	371	183	0.824	0.167	1.00	Yes	0.453	0.092	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.73**
		$U_{12} - L_{13}$	642.79	-----	-198	176	-92	22	29	29	179	-101	0.784	0.208	1.00	Yes	0.493	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.37**
		$U_{13} - L_{14}$	463.33	-19.28	-88	52	-19	-37	-33	-92	38	-178	0.833	0.164	1.00	Yes	0.458	0.090	0.55	Yes	0.045	0.097	0.15	Yes	0.041	0.112	0.16	Yes	1.00	**6.63**
		$U_{15} - L_{14}$	257.79	-323.75	-62	8	57	-118	-249	-217	-269	-123	0.464	0.229	0.70	Yes	0.255	0.126	0.39	Yes	0.758	0.237	1.00	Yes	0.685	0.151	0.84	Yes	1.00	**8.86**
		$U_{16} - L_{15}$	403.61	-95.61	-127	97	3	-42	-373	-276	-333	-158	0.726	0.271	1.00	Yes	0.399	0.149	0.55	Yes	0.227	0.200	0.43	Yes	0.202	0.163	0.37	Yes	1.00	**7.05**
		$U_{17} - L_{16}$	520.44	-----	-138	98	-43	6	-392	-351	-406	-232	0.763	0.235	1.00	Yes	0.420	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.60**
		$U_{18} - L_{17}$	617.15	-----	-306	256	-112	76	-489	-450	-112	-119	0.730	0.262	1.00	Yes	0.401	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		$U_{19} - L_{18}$	689.40	-----	-347	251	-133	88	-410	-451	-69	-110	0.747	0.252	1.00	Yes	0.411	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.77**
		$U_{20} - L_{19}$	662.82	-----	-283	261	-95	93	-809	-374	-103	-41	0.718	0.278	1.00	Yes	0.395	0.153	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.17**
	Structure 2	$U_0 - L_1$	778.80	-----	-391	361	-115	101	-287	-134	-60	-49	0.770	0.225	1.00	Yes	0.424	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.59**
		$U_1 - L_2$	795.74	-----	-381	336	-93	69	-203	-158	-98	-27	0.787	0.207	1.00	Yes	0.433	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.14**
		$U_2 - L_3$	661.38	-----	-331	279	-83	63	-160	24	-22	90	0.782	0.217	1.00	Yes	0.430	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.71**
		$U_3 - L_4$	604.37	-----	-180	146	-53	8	-142	-96	70	-53	0.806	0.194	1.00	Yes	0.443	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.01**
		$U_4 - L_5$	428.63	-115.43	-132	108	-5	-35	-141	-41	80	-179	0.771	0.220	1.00	Yes	0.424	0.121	0.55	Yes	0.285	0.102	0.39	Yes	0.244	0.168	0.42	Yes	1.00	**7.22**
		$U_5 - L_6$	439.28	-296.58	-122	74	63	-112	-153	-19	-2	-181	0.790	0.209	1.00	Yes	0.435	0.115	0.55	Yes	0.700	0.175	0.88	Yes	0.628	0.156	0.79	Yes	1.00	**9.49**
		$U_6 - L_7$	24.75	-379.87	-28	-6	54	-101	-78	-166	-29	-299	0.040	0.193	0.24	Yes	0.022	0.106	0.13	Yes	0.813	0.180	1.00	Yes	0.728	0.115	0.85	Yes	1.00	**5.83**
		$U_8 - L_7$	589.04	-----	-175	139	-22	-30	-244	-417	-280	-215	0.751	0.242	1.00	Yes	0.473	0.137	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.46**
		$U_8 - L_8$	690.13	-----	-316	253	-129	30	-406	-324	-508	-259	0.747	0.245	1.00	Yes	0.411	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.63**
		$U_{10} - L_9$	792.59	-----	-302	227	-116	54	-415	-441	-287	-204	0.784	0.206	1.00	Yes	0.431	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.62**
		$U_{11} - L_{10}$	875.19	-----	-336	290	-130	94	-430	-418	-292	-222	0.797	0.201	1.00	Yes	0.438	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.83**
		$U_{12} - L_{11}$	866.04	-----	-361	347	-141	149	-285	-368	18	-44	0.789	0.204	1.00	Yes	0.434	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.21**
		$U_{13} - L_{12}$	753.16	-----	-421	375	-153	154	-141	-162	332	127	0.745	0.245	1.00	Yes	0.410	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.41**
		$U_{14} - L_{13}$	751.80	-----	-276	419	-40	150	-156	-191	345	174	0.744	0.246	1.00	Yes	0.409	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.44**
		$U_{14} - L_{15}$	635.12	-----	-221	341	20	74	70	282	215	-41	0.751	0.244	1.00	Yes	0.413	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.13**
		$U_{15} - L_{16}$	637.65	-----	-371	344	-63	70	-164	177	-28	20	0.754	0.242	1.00	Yes	0.415	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.63**
		$U_{16} - L_{17}$	717.05	-----	-319	360	-68	94	-198	181	-152	60	0.777	0.217	1.00	Yes	0.427	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.76**
		$U_{17} - L_{18}$	667.53	-----	-293	291	-66	79	-50	247	-26	102	0.789	0.211	1.00	Yes	0.434	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.99**
		$U_{18} - L_{19}$	669.66	-----	-282	261	-68	56	56	243	135	9	0.792	0.204	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.95**
		$U_{19} - L_{20}$	627.73	-----	-198	195	-25	1	82	89	-47	-37	0.800	0.195	1.00	Yes	0.440	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.75**
		$U_{20} - L_{21}$	449.93	-47.36	-123	115	-7	-15	16	68	104	-92	0.809	0.188	1.00	Yes	0.445	0.103	0.55	Yes	0.112	0.064	0.18	Yes	0.100	0.158	0.26	Yes	1.00	**6.57**
		$U_{21} - L_{22}$	438.43	-309.39	-109	81	39	-102	44	26	76	-216	0.789	0.202	1.00	Yes	0.434	0.111	0.55	Yes	0.731	0.169	0.90	Yes	0.655	0.140	0.80	Yes	1.00	**11.60**
		$U_{23} - L_{22}$	404.41	-327.62	-100	65	69	-115	-254	-245	-222	-47	0.727	0.220	0.95	Yes	0.400	0.121	0.53	Yes	0.780	0.213	1.00	Yes	0.693	0.147	0.84	Yes	1.00	**10.96**
		$U_{24} - L_{23}$	417.80	-69.06	-117	111	2	-25	-289	-191	-335	-55	0.751	0.246	1.00	Yes	0.413	0.135	0.55	Yes	0.165	0.135	0.31	Yes	0.146	0.149	0.30	Yes	1.00	**6.84**
		$U_{25} - L_{24}$	590.82	-----	-191	181	-20	7	-358	-314	-199	-113	0.753	0.244	1.00	Yes	0.414	0.138	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.97**
		$U_{26} - L_{25}$	653.86	-----	-279	253	-41	30	-265	-368	-206	-92	0.773	0.225	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.55**
		$U_{27} - L_{26}$	661.64	-----	-287	280	-47	60	-230	-273	173	65	0.782	0.212	1.00	Yes	0.430	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.54**
		$U_{28} - L_{27}$	714.32	-----	-335	357	-48	67	-211	-258	200	110	0.774	0.225	1.00	Yes	0.426	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.27**
		$U_{29} - L_{28}$	633.68	-----	-362	334	-75	75	-77	-178	205	99	0.749	0.242	1.00	Yes	0.412	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.20**
		$U_{30} - L_{29}$	641.80	-----	-225	355	-15	79	-97	-159	187	105	0.759	0.235	1.00	Yes	0.417	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.64**
		$U_{30} - L_{31}$	759.91	-----	-292	435	12	75	151	190	289	-4	0.752	0.245	1.00	Yes	0.413	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.85**
		$U_{31} - L_{32}$	721.84	-----	-410	356	-76	79	-181	243	-8	45	0.750	0.242	1.00	Yes	0.412	0.124	0.54	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.61**
		$U_{32} - L_{33}$	886.42	-----	-358	352	-60	93	-279	244	-145	142	0.807	0.190	1.00	Yes	0.444	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.81**
		$U_{33} - L_{34}$	901.99	-----	-343	314	-110	69	-11	225	132	138	0.822	0.176	1.00	Yes	0.452	0.097	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.36**
		$U_{34} - L_{35}$	844.48	-----	-304	262	-86	35	124	153	35	-33	0.835	0.164	1.00	Yes	0.460	0.090	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.70**
		$U_{35} - L_{36}$	741.64	-----	-323	262	-109	19	10	47	162	-77	0.803	0.192	1.00	Yes	0.442	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.55**
		$U_{36} - L_{37}$	617.05	-8.44	-175	168	-31	-19	-68	-1	24	-234	0.787	0.204	1.00	Yes	0.495	0.115	0.62	Yes	0.014	0.083	0.10	Yes	0.013	0.157	0.17	Yes	1.00	**8.18**
		$U_{38} - L_{37}$	19.66	-389.85	-23	-5	73	-103	-189	-195	-189	-88	0.032	0.169	0.21	Yes	0.018	0.093	0.12	Yes	0.842	0.156	1.00	Yes	0.747	0.118	0.87	Yes	1.00	**5.72**
		$U_{39} - L_{38}$	308.62	-309.32	-89	59	77	-116	-296	-195	-398	-108	0.555	0.264	0.82	Yes	0.305	0.145	0.46	Yes	0.737	0.263	1.00	Yes	0.655	0.149	0.81	Yes	1.00	**8.58**
		$U_{40} - L_{39}$	409.45	-120.53	-130	99	20	-45	-311	-297	-239	-131	0.736	0.256	1.00	Yes	0.405	0.141	0.55	Yes	0.289	0.184	0.48	Yes	0.255	0.166	0.43	Yes	1.00	**7.62**
		$U_{41} - L_{40}$	570.13	-----	-173	124	-31	-5	-360	-372	-313	-195	0.760	0.236	1.00	Yes	0.418	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.01**
		$U_{42} - L_{41}$	625.41	-----	-318	264	-51	34	-391	-424	-70	-67	0.739	0.257	1.00	Yes	0.407	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.27**
		$U_{43} - L_{42}$	761.13	-----	-383	311	-66	45	-429	-429	-5	-46	0.753	0.242	1.00	Yes	0.414	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.05**
		$U_{44} - L_{43}$	789.67	-----	-285	326	-94	81	-421	-355	53	-22	0.781	0.214	1.00	Yes	0.430	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.98**
	Structure 3	$U_0 - L_1$	555.13	-----	-435	309	-114	95	-1057	98	-62	-53	0.601	0.396	1.00	Yes	0.331	0.218	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.19**
		$U_1 - L_2$	710.34	-----	-338	253	-99	67	-299	-68	-125	-45	0.769	0.222	1.00	Yes	0.423	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.82**
		$U_2 - L_3$	660.22	-----	-322	280	-94	60	-173	-49	-50	79	0.781	0.214	1.00	Yes	0.429	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.18**
		$U_3 - L_4$	556.35	-----	-149	112	-37	-2	-134	-43	124	-34	0.816	0.183	1.00	Yes	0.449	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.04**
		$U_4 - L_5$	430.74	-127.50	-131	109	0	-42	-148	-66	-100	-191	0.775	0.223	1.00	Yes	0.426	0.123	0.55	Yes	0.302	0.113	0.42	Yes	0.270	0.168	0.44	Yes	1.00	**7.97**
		$U_5 - L_6$	268.28	-334.82	-63	16	29	-111	-118	-187	40	-290	0.483	0.226	0.71	Yes	0.265	0.124	0.39	Yes	0.784	0.212	1.00	Yes	0.708	0.142	0.86	Yes	1.00	**8.49**
		$U_7 - L_6$	431.91	-65.36	-81	43	-7	-46	-221	-256	-384	-203	0.777	0.214	1.00	Yes	0.427	0.118	0.55	Yes	0.152	0.177	0.33	Yes	0.138	0.103	0.25	Yes	1.00	**6.80**
		$U_8 - L_7$	575.73	-----	-184	144	-82	8	-386	-373	-661	-230	0.702	0.290	1.00	Yes	0.442	0.166	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.07**
		$U_9 - L_8$	745.86	-----	-229	110	-158	-25	-505	-475	-1007	-489	0.738	0.257	1.00	Yes	0.406	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.67**
		$U_{10} - L_9$	940.63	-----	-235	185	-101	38	-598	-576	-679	-339	0.795	0.198	1.00	Yes	0.492	0.112	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.35**
		$U_{11} - L_{10}$	1007.98	-----	-305	255	-97	83	-449	-399	-141	-85	0.806	0.193	1.00	Yes	0.499	0.109	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.83**
		$U_{12} - L_{11}$	997.19	-----	-117	353	-12	129	-277	-316	233	106	0.797	0.198	1.00	Yes	0.494	0.111	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.71**
		$U_{12} - L_{13}$	664.65	-----	-109	302	25	71	176	123	201	-31	0.786	0.209	1.00	Yes	0.432	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.80**
		$U_{13} - L_{14}$	670.45	-----	-287	241	-28	55	-89	192	-73	15	0.793	0.199	1.00	Yes	0.436	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.22**
		$U_{14} - L_{15}$	694.49	-----	-172	244	-27	29	-80	169	190	52	0.821	0.174	1.00	Yes	0.452	0.096	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.90**
		$U_{15} - L_{16}$	612.70	-----	-81	83	-32	-20	-34	39	-8	30	0.898	0.094	1.00	Yes	0.494	0.052	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.60**
		$U_{17} - L_{16}$	-----	-286.01	24	-3	-48	-79	253	157	-733	51	-----	-----	-----	-----	-----	-----	-----	-----	0.654	0.342	1.00	Yes	0.605	0.102	0.71	Yes	1.00	**8.19**
		$U_{18} - L_{17}$	204.94	-331.97	-57	13	-22	-68	-207	-151	-661	-35	0.369	0.279	0.65	Yes	0.203	0.153	0.36	Yes	0.764	0.228	1.00	Yes	0.702	0.087	0.79	Yes	1.00	**7.58**
		$U_{19} - L_{18}$	367.06	-----	-81	36	-73	-22	-366	-293	-787	-215	0.660	0.331	1.00	Yes	0.363	0.182	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.21**
		$U_{20} - L_{19}$	548.09	-----	-75	40	52	-7	-767	-331	452	-2	0.719	0.281	1.00	Yes	0.434	0.154	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.41**

Moment (End) AI Operating

Operating Loads - 2F1

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

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

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Upper Chord	Structure 1	$U_0 - U_1$	-----	-494.44	-139	64	229	-1053	22	-4	-76	-406	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.324	1	Yes	0.667	0.250	0.92	Yes	1.00	**7.00**
		$U_1 - U_2$	13.66	-544.09	-53	63	-201	-903	10	49	-29	-36	0.016	0.223	0.24	Yes	0.011	0.153	0.17	Yes	0.740	0.251	1	Yes	0.734	0.215	0.95	Yes	1.00	**4.99**
		$U_2 - U_3$	111.74	-575.21	-99	239	-291	-794	10	-90	193	-79	0.128	0.221	0.35	Yes	0.086	0.144	0.24	Yes	0.783	0.210	1	Yes	0.776	0.189	0.97	Yes	1.00	**5.62**
		$U_3 - U_4$	-----	-562.88	-572	305	-105	-999	87	-38	-15	-240	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.121	0.89	Yes	0.759	0.237	1.00	Yes	1.00	**7.25**
		$U_4 - U_5$	384.47	-560.67	111	309	-177	-893	-112	33	-250	-223	0.441	0.254	0.70	Yes	0.302	0.174	0.48	Yes	0.763	0.232	1	Yes	0.756	0.212	0.97	Yes	1.00	**10.64**
		$U_5 - U_6$	-----	-542.16	-500	694	-296	-708	63	-347	-260	-586	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.253	1	Yes	0.731	0.168	0.90	Yes	1.00	**15.08**
		$U_6 - U_7$	-----	-318.37	-466	629	850	-2977	-808	-477	-604	-292	-----	-----	-----	-----	-----	-----	-----	-----	0.362	0.569	0.94	Yes	0.358	0.633	1.00	Yes	1.00	**34.97**
		$U_7 - U_8$	464.46	-----	-2335	4031	-44	673	-641	165	-247	163	0.322	0.676	1.00	Yes	0.224	0.461	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**21.12**
		$U_8 - U_9$	720.87	-----	780	-4	1912	-2053	-137	47	66	486	0.591	0.404	1.00	Yes	0.404	0.275	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.81**
		$U_9 - U_{10}$	535.69	-466.17	209	250	179	-1203	77	303	208	459	0.581	0.343	0.93	Yes	0.394	0.230	0.63	Yes	0.600	0.395	1	Yes	0.595	0.269	0.87	Yes	1.00	**12.70**
		$U_{10} - U_{11}$	98.18	-590.80	202	-90	114	-1096	213	55	290	82	0.106	0.292	0.40	Yes	0.071	0.187	0.26	Yes	0.761	0.211	0.98	Yes	0.754	0.246	1.00	Yes	1.00	**6.67**
		$U_{11} - U_{12}$	-----	-875.26	158	-116	9	-1065	155	58	228	91	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.169	1	Yes	0.821	0.177	1.00	Yes	1.00	**6.20**
		$U_{12} - U_{13}$	-----	-1183.54	50	-127	-19	-1207	227	-302	226	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.197	1	Yes	0.791	0.166	0.96	Yes	1.00	**6.62**
		$U_{13} - U_{14}$	-----	-1282.76	-575	-341	-296	-2012	286	21	113	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.256	1	Yes	0.735	0.222	0.96	Yes	1.00	**6.08**
		$U_{14} - U_{15}$	-----	-1298.88	-324	-166	-431	-1538	171	-271	35	-212	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.245	1	Yes	0.745	0.170	0.92	Yes	1.00	**7.66**
		$U_{15} - U_{16}$	-----	-1327.56	-428	-304	144	-1831	340	-84	-103	-418	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.226	1	Yes	0.761	0.202	0.97	Yes	1.00	**8.48**
		$U_{16} - U_{17}$	-----	-1307.11	-486	-103	-653	-1418	168	-276	-223	-344	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.237	1	Yes	0.749	0.156	0.91	Yes	1.00	**8.87**
		$U_{17} - U_{18}$	-----	-1040.73	-872	154	-379	-566	-80	-262	-165	-272	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.169	1	Yes	0.814	0.142	0.96	Yes	1.00	**6.44**
		$U_{18} - U_{19}$	-----	-704.63	-321	218	-693	-401	-231	-231	3	-347	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.198	1	Yes	0.793	0.139	0.94	Yes	1.00	**9.28**
		$U_{19} - U_{20}$	-----	-487.96	-1049	1149	35	-2200	-263	-128	-15	-1003	-----	-----	-----	-----	-----	-----	-----	-----	0.554	0.409	0.97	Yes	0.549	0.443	1.00	Yes	1.00	**16.31**
	Structure 2	$U_0 - U_1$	-----	-583.42	-507	-132	381	-1780	547	204	-76	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.693	0.271	0.97	Yes	0.689	0.302	1.00	Yes	1.00	**10.53**
		$U_1 - U_2$	-----	-749.87	-102	-163	-71	-1245	337	629	210	282	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.262	1	Yes	0.724	0.189	0.92	Yes	1.00	**5.93**
		$U_2 - U_3$	-----	-1069.92	-79	-241	-158	-1961	594	5	449	9	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.227	1	Yes	0.759	0.200	0.96	Yes	1.00	**6.42**
		$U_3 - U_4$	-----	-1286.24	-370	-196	-885	-2173	197	-255	206	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.262	1	Yes	0.732	0.194	0.93	Yes	1.00	**6.46**
		$U_4 - U_5$	-----	-1384.79	-375	-349	-492	-2597	-48	-341	56	-316	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.275	1	Yes	0.711	0.215	0.93	Yes	1.00	**6.18**
		$U_5 - U_6$	-----	-1538.37	-1247	30	-1226	-2000	132	-236	-69	-371	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.200	1	Yes	0.790	0.166	0.96	Yes	1.00	**7.37**
		$U_6 - U_7$	-----	-1208.46	-301	-105	-783	-2228	-67	-254	-85	-325	-----	-----	-----	-----	-----	-----	-----	-----	0.693	0.297	1	Yes	0.688	0.198	0.89	Yes	1.00	**5.75**
		$U_7 - U_8$	-----	-1321.39	-123	-154	-446	-1926	-211	-234	-284	-389	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.238	1	Yes	0.752	0.172	0.93	Yes	1.00	**9.16**
		$U_8 - U_9$	-----	-1124.63	-296	151	-354	-1476	-153	-109	-259	-504	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.230	1	Yes	0.763	0.157	0.92	Yes	1.00	**9.28**
		$U_9 - U_{10}$	211.73	-952.12	-50	367	-847	-1057	-173	-27	-215	-362	0.155	0.168	0.33	Yes	0.105	0.114	0.22	Yes	0.826	0.166	1	Yes	0.822	0.129	0.96	Yes	1.00	**10.34**
		$U_{10} - U_{11}$	742.01	-771.36	239	510	-170	-1410	-211	-41	-344	-252	0.627	0.241	0.87	Yes	0.427	0.156	0.59	Yes	0.771	0.228	1	Yes	0.767	0.199	0.97	Yes	1.00	**16.65**
		$U_{11} - U_{12}$	-----	-756.70	-1548	1142	-799	-1708	-249	-640	-420	-660	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.190	0.95	Yes	0.752	0.241	1.00	Yes	1.00	**27.22**
		$U_{12} - U_{13}$	732.63	-21.14	105	187	-135	-3209	-776	-995	-795	-359	0.495	0.499	1.00	Yes	0.353	0.339	0.70	Yes	0.017	0.450	0.47	Yes	0.017	0.404	0.43	Yes	1.00	**21.46**
		$U_{13} - U_{14}$	310.01	-----	-5219	8283	-470	1385	-1047	-272	-610	-308	0.152	0.838	1.00	Yes	0.108	0.549	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**29.75**
		$U_{14} - U_{15}$	1043.99	-----	1518	199	4764	-3878	-538	-173	-60	428	0.513	0.478	1.00	Yes	0.363	0.313	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.30**
		$U_{15} - U_{16}$	1026.71	-----	203	506	-595	-2539	-100	286	469	966	0.621	0.370	1.00	Yes	0.442	0.250	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.94**
		$U_{16} - U_{17}$	850.64	-237.51	606	273	905	-2512	209	79	545	210	0.627	0.373	1.00	Yes	0.417	0.246	0.67	Yes	0.207	0.245	0.46	Yes	0.206	0.316	0.53	Yes	1.00	**13.87**
		$U_{17} - U_{18}$	638.51	-459.69	432	295	491	-1925	-15	6	156	100	0.641	0.350	1.00	Yes	0.427	0.232	0.66	Yes	0.546	0.200	0.75	Yes	0.543	0.327	0.87	Yes	1.00	**12.21**
		$U_{18} - U_{19}$	411.74	-601.52	424	172	208	-1663	18	35	96	24	0.413	0.296	0.71	Yes	0.271	0.188	0.46	Yes	0.715	0.265	0.98	Yes	0.710	0.282	1.00	Yes	1.00	**9.74**
		$U_{19} - U_{20}$	212.53	-697.25	258	132	58	-1418	18	134	72	18	0.199	0.245	0.45	Yes	0.132	0.161	0.30	Yes	0.774	0.161	0.94	Yes	0.769	0.227	1.00	Yes	1.00	**7.96**
		$U_{20} - U_{21}$	36.77	-818.35	-36	106	-176	-1620	69	-93	128	-157	0.029	0.252	0.29	Yes	0.020	0.161	0.19	Yes	0.752	0.247	1	Yes	0.747	0.235	0.99	Yes	1.00	**7.85**
		$U_{21} - U_{22}$	-----	-766.20	-327	15	-471	-1691	32	-138	-26	-108	-----	-----	-----	-----	-----	-----	-----	-----	0.704	0.294	1	Yes	0.699	0.245	0.95	Yes	1.00	**6.98**
		$U_{22} - U_{23}$	91.89	-791.87	1	-3	209	-1756	-94	-104	-42	-242	0.071	0.281	0.36	Yes	0.051	0.187	0.24	Yes	0.728	0.269	1	Yes	0.723	0.254	0.98	Yes	1.00	**10.09**
		$U_{23} - U_{24}$	-----	-793.87	-628	161	216	-1645	92	-127	-254	-414	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.264	1	Yes	0.725	0.238	0.97	Yes	1.00	**9.72**
		$U_{24} - U_{25}$	208.61	-633.93	116	241	-456	-1196	-239	-32	-206	-238	0.196	0.224	0.42	Yes	0.130	0.147	0.28	Yes	0.704	0.291	1	Yes	0.699	0.192	0.90	Yes	1.00	**8.79**
		$U_{25} - U_{26}$	-----	-691.86	-993	601	-49	-1077	-57	-24	-211	-197	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.124	0.95	Yes	0.817	0.183	1.00	Yes	1.00	**12.14**
		$U_{26} - U_{27}$	-----	-581.38	-1239	795	245	-1827	-79	-102	-386	-326	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.255	0.95	Yes	0.687	0.310	1.00	Yes	1.00	**19.15**
		$U_{27} - U_{28}$	-----	-719.77	-1855	1947	-902	-2733	-392	-572	-526	-1051	-----	-----	-----	-----	-----	-----	-----	-----	0.628	0.364	1	Yes	0.624	0.343	0.97	Yes	1.00	**32.90**
		$U_{28} - U_{29}$	892.31	-----	-179	312	704	-3486	-721	-427	-723	-145	0.539	0.457	1.00	Yes	0.384	0.306	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**20.79**
		$U_{29} - U_{30}$	555.59	-----	-3124	7110	-137	1227	-980	176	-92	360	0.273	0.725	1.00	Yes	0.193	0.475	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**24.57**
		$U_{30} - U_{31}$	1091.89	-----	1525	109	4428	-3799	-437	-201	144	664	0.537	0.455	1.00	Yes	0.380	0.298	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.77**
		$U_{31} - U_{32}$	975.43	-66.49	123	444	-208	-2066	-23	237	582	796	0.659	0.336	1.00	Yes	0.470	0.229	0.70	Yes	0.053	0.193	0.25	Yes	0.053	0.260	0.32	Yes	1.00	**14.23**
		$U_{32} - U_{33}$	728.25	-422.60	495	243	497	-2192	210	57	612	213	0.615	0.384	1.00	Yes	0.413	0.257	0.67	Yes	0.423	0.153	0.58	Yes	0.420	0.309	0.73	Yes	1.00	**12.44**
		$U_{33} - U_{34}$	479.31	-751.15	350	198	-245	-1796	83	39	219	93	0.405	0.280	0.69	Yes	0.276	0.180	0.46	Yes	0.751	0.214	0.97	Yes	0.746	0.253	1.00	Yes	1.00	**10.99**
		$U_{34} - U_{35}$	167.23	-884.20	318	-48	97	-1874	119	-18	161	-92	0.123	0.246	0.37	Yes	0.083	0.167	0.25	Yes	0.768	0.172	0.94	Yes	0.763	0.228	1.00	Yes	1.00	**7.70**
		$U_{35} - U_{36}$	-----	-1168.64	116	-244	-310	-1771	84	18	141	-17	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.196	1	Yes	0.793	0.188	0.99	Yes	1.00	**7.61**
		$U_{36} - U_{37}$	-----	-1245.66	-409	-5	-537	-2439	174	-224	149	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.283	1	Yes	0.709	0.217	0.93	Yes	1.00	**6.65**
		$U_{37} - U_{38}$	-----	-1359.73	13	10	196	-2328	13	-298	-25	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.218	1	Yes	0.774	0.207	0.99	Yes	1.00	**9.76**
		$U_{38} - U_{39}$	-----	-1416.84	41	-398	-173	-2904	82	-107	84	-329	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.262	1	Yes	0.727	0.241	0.97	Yes	1.00	**8.35**
		$U_{39} - U_{40}$	-----	-1362.19	-1123	-383	-1033	-2396	114	-187	-234	-476	-----	-----	-----	-----	-----	-----	-----	-----	0.705	0.289	1	Yes	0.699	0.199	0.90	Yes	1.00	**7.78**
		$U_{40} - U_{41}$	-----	-1248.83	-372	-387	-478	-2115	10	-247	-299	-350	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.274	1	Yes	0.711	0.188	0.90	Yes	1.00	**8.18**
		$U_{41} - U_{42}$	-----	-1187.43	-1031	211	-495	-1255	-102	-130	-167	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.143	1	Yes	0.843	0.128	0.98	Yes	1.00	**9.01**
		$U_{42} - U_{43}$	-----	-824.69	-496	345	-771	-991	13	-132	232	-408	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.195	1	Yes	0.796	0.150	0.95	Yes	1.00	**14.40**
		$U_{43} - U_{44}$	-----	-485.61	-1111	972	165	-2065	-197	-102	-101	-899	-----	-----	-----	-----	-----	-----	-----	-----	0.577	0.415	1	Yes	0.573	0.351	0.93	Yes	1.00	**14.76**
	Structure 3	$U_0 - U_1$	-----	-560.99	-799	-144	1001	-1808	482	188	-70	-457	-----	-----	-----	-----	-----	-----	-----	-----	0.637	0.250	0.89	Yes	0.631	0.364	1.00	Yes	1.00	**12.47**
		$U_1 - U_2$	-----	-671.14	-67	-119	2	-830	252	507	214	117	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.235	1	Yes	0.755	0.167	0.93	Yes	1.00	**5.49**
		$U_2 - U_3$	-----	-970.22	-76	-127	134	-1182	517	9	470	-61	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.222	1	Yes	0.759	0.192	0.96	Yes	1.00	**5.67**
		$U_3 - U_4$	-----	-1305.70	-145	-211	-278	-1859	134	-233	194	-172	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.235	1	Yes	0.749	0.205	0.96	Yes	1.00	**6.93**
		$U_4 - U_5$	-----	-1381.86	-1011	24	-663	-1473	328	-167	29	-352	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.189	1	Yes	0.792	0.162	0.96	Yes	1.00	**7.07**
		$U_5 - U_6$	-----	-1245.69	-377	-228	-330	-2008	-64	-367	-81	-268	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.271	1	Yes	0.714	0.222	0.94	Yes	1.00	**6.09**
		$U_6 - U_7$	-----	-1300.03	-287	-63	-70	-1687	-118	-244	-196	-469	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.240	1	Yes	0.745	0.186	0.94	Yes	1.00	**9.24**
		$U_7 - U_8$	-----	-1112.68	-383	83	-560	-1042	87	-179	-235	-477	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.245	1	Yes	0.743	0.144	0.89	Yes	1.00	**8.22**
		$U_8 - U_9$	-----	-892.93	-535	263	-179	-887	96	-209	-208	-327	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.146	1	Yes	0.838	0.147	0.99	Yes	1.00	**10.22**
		$U_9 - U_{10}$	-----	-624.19	-841	396	-215	-559	-148	-296	-199	-397	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.191	1	Yes	0.797	0.188	0.99	Yes	1.00	**12.78**
		$U_{10} - U_{11}$	-----	-566.28	-519	534	-425	-1145	-543	-250	-357	-275	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.267	1	Yes	0.723	0.256	0.98	Yes	1.00	**24.15**
		$U_{11} - U_{12}$	373.40	-----	-2969	3670	-142	604	-584	21	-263	38	0.306	0.687	1.00	Yes	0.209	0.468	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**27.35**
		$U_{12} - U_{13}$	818.45	-----	825	98	2516	-2225	-412	-76	-91	481	0.567	0.430	1.00	Yes	0.396	0.293	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.36**
		$U_{13} - U_{14}$	738.06	-252.20	208	340	41	-1068	-144	271	114	439	0.706	0.287	1.00	Yes	0.493	0.197	0.70	Yes	0.287	0.304	0.6	Yes	0.284	0.227	0.52	Yes	1.00	**11.32**
		$U_{14} - U_{15}$	524.46	-515.02	355	202	409	-1250	66	133	270	-21	0.601	0.343	0.95	Yes	0.405	0.223	0.63	Yes	0.701	0.214	0.92	Yes	0.694	0.297	1.00	Yes	1.00	**9.36**
		$U_{15} - U_{16}$	260.21	-537.58	223	111	51	-1120	5	129	61	68	0.298	0.288	0.59	Yes	0.205	0.198	0.41	Yes	0.731	0.176	0.91	Yes	0.725	0.266	1.00	Yes	1.00	**6.77**
		$U_{16} - U_{17}$	342.06	-527.35	317	86	187	-1195	31	77	0	-110	0.392	0.303	0.70	Yes	0.269	0.208	0.48	Yes	0.718	0.129	0.85	Yes	0.711	0.284	1.00	Yes	1.00	**9.48**
		$U_{17} - U_{18}$	-----	-506.49	-152	-71	335	-1316	75	-264	-133	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.689	0.212	0.91	Yes	0.683	0.313	1.00	Yes	1.00	**8.84**
		$U_{18} - U_{19}$	-----	-524.27	-75	62	79	-1153	-58	234	101	-101	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.280	1	Yes	0.707	0.274	0.99	Yes	1.00	**11.85**
		$U_{19} - U_{20}$	-----	-433.74	-604	596	-48	-1666	88	-28	110	-649	-----	-----	-----	-----	-----	-----	-----	-----	0.590	0.406	1	Yes	0.585	0.396	0.99	Yes	1.00	**11.40**

Moment (End) AI Operating

Operating Loads - 2F1

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 - Lower Chord	Structure 1	L_0 - L_1		11.26	-51.36	-218	111	1165	-2284	34	126	-376	-1383	0.017	0.982	1.00	Yes	0.010	0.594	0.61	Yes	0.093	0.697	0.8	Yes	0.092	0.685	0.78	Yes	1.00	**32.09**
		L_1 - L_2		436.95	-23.18	45	2	248	-1035	26	18	-81	-16	0.669	0.328	1.00	Yes	0.408	0.222	0.64	Yes	0.042	0.185	0.23	Yes	0.042	0.311	0.36	Yes	1.00	**8.14**
		L_2 - L_3		608.07	-95.20	-20	85	-207	-1095	7	-10	-216	68	0.700	0.299	1.00	Yes	0.405	0.179	0.59	Yes	0.130	0.317	0.45	Yes	0.129	0.264	0.40	Yes	1.00	**9.35**
		L_3 - L_4		556.26	-231.94	61	272	180	-1316	-20	30	-203	5	0.640	0.350	1.00	Yes	0.380	0.227	0.61	Yes	0.317	0.245	0.57	Yes	0.314	0.318	0.64	Yes	1.00	**10.39**
		L_4 - L_5		560.26	-----	-796	734	-512	-733	-97	3	-319	112	0.726	0.267	1.00	Yes	0.435	0.174	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.04**
		L_5 - L_6		703.16	-506.88	-359	1010	-1065	-1216	54	293	-17	-5	0.690	0.308	1.00	Yes	0.446	0.187	0.64	Yes	0.591	0.231	0.83	Yes	0.585	0.269	0.86	Yes	1.00	**21.49**
		L_6 - L_7		90.11	-787.70	-1686	1232	-1493	-2275	-66	-213	-34	-44	0.062	0.378	0.44	Yes	0.040	0.233	0.28	Yes	0.641	0.150	0.8	Yes	0.634	0.357	1.00	Yes	1.00	**27.84**
		L_7 - L_8		-----	-1124.05	-367	2146	-18	576	62	102	28	76	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.270	1	Yes	0.712	0.284	1.00	Yes	1.00	**13.96**
		L_8 - L_9		-----	-1133.08	831	128	2128	-1263	-8	-35	-69	-73	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.248	0.98	Yes	0.718	0.282	1.00	Yes	1.00	**21.73**
		L_9 - L_{10}		-----	-940.30	229	166	140	-1532	42	49	48	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.097	0.87	Yes	0.757	0.241	1.00	Yes	1.00	**17.85**
		L_{10} - L_{11}		125.20	-490.77	429	-17	330	-937	87	19	-89	-48	0.162	0.264	0.43	Yes	0.094	0.160	0.26	Yes	0.754	0.102	0.86	Yes	0.748	0.248	1.00	Yes	1.00	**11.91**
		L_{11} - L_{12}		556.98	-165.58	360	-169	450	-980	-25	13	-106	-14	0.721	0.278	1.00	Yes	0.433	0.184	0.62	Yes	0.255	0.111	0.37	Yes	0.252	0.260	0.52	Yes	1.00	**9.74**
		L_{12} - L_{13}		1023.12	-----	108	-71	-382	-929	-168	-122	-95	-16	0.807	0.184	1.00	Yes	0.516	0.110	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.53**
		L_{13} - L_{14}		1191.25	-----	228	-389	566	-1967	-106	61	-270	57	0.701	0.294	1.00	Yes	0.454	0.179	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.75**
		L_{14} - L_{15}		1579.13	-----	-1725	115	-1201	-1491	-47	140	-244	117	0.772	0.225	1.00	Yes	0.501	0.136	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.39**
		L_{15} - L_{16}		1552.70	-----	-332	-304	-807	-1814	57	191	-242	-155	0.759	0.236	1.00	Yes	0.487	0.137	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.50**
		L_{16} - L_{17}		1275.37	-----	-845	334	-1186	-810	-82	-10	-173	134	0.806	0.189	1.00	Yes	0.523	0.117	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.48**
		L_{17} - L_{18}		950.96	-----	-653	282	-752	-485	-30	51	-27	-158	0.828	0.165	1.00	Yes	0.530	0.099	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.98**
		L_{18} - L_{19}		412.42	-----	-865	531	-522	-30	-156	-73	-191	495	0.631	0.362	1.00	Yes	0.427	0.230	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.51**
		L_{19} - L_{20}		247.78	-68.24	-1365	766	-227	34	991	222	2	0	0.379	0.615	1.00	Yes	0.231	0.405	0.64	Yes	0.124	0.370	0.5	Yes	0.123	0.410	0.54	Yes	1.00	**18.50**
	Structure 2	L_0 - L_1		1.69	-35.49	-164	103	751	-3457	16	53	-212	-737	0.003	0.990	1.00	Yes	0.002	0.505	0.51	Yes	0.063	0.738	0.81	Yes	0.063	0.833	0.90	Yes	1.00	**40.14**
		L_1 - L_2		546.12	-----	164	-204	505	-1360	76	101	-203	325	0.663	0.330	1.00	Yes	0.395	0.212	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.68**
		L_2 - L_3		997.19	-----	-19	-147	-442	-1328	123	161	17	17	0.786	0.209	1.00	Yes	0.515	0.124	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.04**
		L_3 - L_4		1284.51	-----	58	-329	-578	-1899	43	124	111	240	0.755	0.241	1.00	Yes	0.508	0.149	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.53**
		L_4 - L_5		1676.35	-----	-241	-229	-1197	-2224	17	-10	7	26	0.782	0.212	1.00	Yes	0.517	0.124	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.81**
		L_5 - L_6		1769.18	-----	-39	-365	-1780	-2564	-93	58	-208	105	0.759	0.240	1.00	Yes	0.509	0.146	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.80**
		L_6 - L_7		1700.83	-----	-368	-76	-1217	-2960	53	-17	-166	146	0.720	0.270	1.00	Yes	0.478	0.157	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.34**
		L_7 - L_8		1350.10	-----	-1749	332	-1165	-1518	-45	163	-298	-36	0.774	0.217	1.00	Yes	0.509	0.128	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.20**
		L_8 - L_9		1174.53	-----	-852	664	-1153	-957	-3	56	-155	203	0.822	0.175	1.00	Yes	0.553	0.109	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.95**
		L_9 - L_{10}		854.18	-----	-1295	623	-1085	-768	22	183	-44	-76	0.762	0.229	1.00	Yes	0.444	0.143	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.21**
		L_{10} - L_{11}		675.20	-----	-1651	1153	-1139	-933	-158	-35	-250	-114	0.674	0.323	1.00	Yes	0.395	0.203	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**18.71**
		L_{11} - L_{12}		813.82	-692.80	-2287	2441	-2039	-2760	206	569	-23	-521	0.567	0.429	1.00	Yes	0.377	0.256	0.64	Yes	0.573	0.245	0.82	Yes	0.568	0.376	0.95	Yes	1.00	**40.47**
		L_{12} - L_{13}		-----	-963.80	-45	169	-1452	-3115	-546	-504	-85	-136	-----	-----	-----	-----	-----	-----	-----	-----	0.581	0.411	1	Yes	0.577	0.310	0.89	Yes	1.00	**20.15**
		L_{13} - L_{14}		-----	-1195.49	-2102	4516	-475	1304	-51	7	-210	-283	-----	-----	-----	-----	-----	-----	-----	-----	0.607	0.273	0.88	Yes	0.602	0.394	1.00	Yes	1.00	**16.91**
		L_{14} - L_{15}		-----	-1275.39	1468	-360	4025	-3392	277	239	-182	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.647	0.229	0.88	Yes	0.642	0.351	1.00	Yes	1.00	**18.58**
		L_{15} - L_{16}		-----	-1218.24	-406	465	-2432	-2271	-48	137	164	220	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.257	1	Yes	0.729	0.242	0.98	Yes	1.00	**18.69**
		L_{16} - L_{17}		-----	-1086.81	1062	141	589	-1657	175	49	-19	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.173	0.98	Yes	0.792	0.204	1.00	Yes	1.00	**15.21**
		L_{17} - L_{18}		-----	-766.64	478	197	792	-1196	15	-39	-71	72	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.116	0.93	Yes	0.805	0.191	1.00	Yes	1.00	**10.55**
		L_{18} - L_{19}		165.35	-600.16	604	76	275	-1024	-41	-73	-29	-20	0.187	0.209	0.40	Yes	0.108	0.125	0.24	Yes	0.805	0.140	0.95	Yes	0.800	0.198	1.00	Yes	1.00	**10.44**
		L_{19} - L_{20}		612.39	-483.79	478	133	-63	-1443	-33	-23	-154	120	0.694	0.302	1.00	Yes	0.410	0.193	0.61	Yes	0.649	0.192	0.85	Yes	0.645	0.279	0.93	Yes	1.00	**11.67**
		L_{20} - L_{21}		926.86	-314.96	336	-10	-1003	-1706	2	-35	-36	25	0.739	0.253	1.00	Yes	0.485	0.149	0.64	Yes	0.298	0.212	0.51	Yes	0.295	0.249	0.55	Yes	1.00	**11.27**
		L_{21} - L_{22}		773.90	-82.10	93	-84	52	-2436	-52	59	-195	36	0.617	0.377	1.00	Yes	0.413	0.235	0.65	Yes	0.078	0.258	0.34	Yes	0.077	0.356	0.44	Yes	1.00	**10.15**
		L_{22} - L_{23}		891.73	-----	-1677	253	-801	-1785	-43	59	-214	-59	0.711	0.284	1.00	Yes	0.476	0.177	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.98**
		L_{23} - L_{24}		924.03	-----	-569	340	-973	-1608	70	210	-100	-53	0.737	0.257	1.00	Yes	0.483	0.153	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.99**
		L_{24} - L_{25}		693.77	-----	-906	611	-759	-932	88	92	-169	-58	0.786	0.206	1.00	Yes	0.465	0.131	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.05**
		L_{25} - L_{26}		631.76	-----	-1120	884	-836	-1322	101	189	-139	-111	0.716	0.284	1.00	Yes	0.413	0.169	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**16.23**
		L_{26} - L_{27}		694.39	-346.80	-1918	1793	-1599	-2100	-11	82	-242	307	0.620	0.373	1.00	Yes	0.361	0.232	0.60	Yes	0.367	0.202	0.57	Yes	0.364	0.336	0.71	Yes	1.00	**28.13**
		L_{27} - L_{28}		98.86	-881.11	-2469	2864	-1284	-1565	194	500	-355	-602	0.061	0.404	0.47	Yes	0.041	0.240	0.29	Yes	0.647	0.280	0.93	Yes	0.642	0.353	1.00	Yes	1.00	**32.63**
		L_{28} - L_{29}		-----	-1050.04	76	28	-1549	-3423	-40	-160	-159	-89	-----	-----	-----	-----	-----	-----	-----	-----	0.633	0.363	1	Yes	0.628	0.340	0.97	Yes	1.00	**18.83**
		L_{29} - L_{30}		-----	-1271.22	-1615	4068	-493	1179	41	157	86	116	-----	-----	-----	-----	-----	-----	-----	-----	0.645	0.238	0.89	Yes	0.640	0.355	1.00	Yes	1.00	**14.80**
		L_{30} - L_{31}		-----	-1292.55	1125	-240	3964	-3377	-399	-284	75	249	-----	-----	-----	-----	-----	-----	-----	-----	0.656	0.239	0.9	Yes	0.650	0.346	1.00	Yes	1.00	**19.62**
		L_{31} - L_{32}		-----	-1207.49	-210	313	-1308	-1997	-157	-42	81	275	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.267	1	Yes	0.722	0.199	0.93	Yes	1.00	**15.89**
		L_{32} - L_{33}		-----	-984.11	915	77	1029	-1402	20	-36	12	38	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.116	0.93	Yes	0.807	0.191	1.00	Yes	1.00	**13.30**
		L_{33} - L_{34}		122.75	-670.43	505	101	500	-1207	-19	11	-14	172	0.123	0.234	0.36	Yes	0.072	0.148	0.22	Yes	0.793	0.137	0.93	Yes	0.788	0.211	1.00	Yes	1.00	**10.41**
		L_{34} - L_{35}		607.80	-677.31	693	-8	783	-1773	-8	-66	-96	-55	0.543	0.295	0.84	Yes	0.316	0.185	0.51	Yes	0.716	0.113	0.83	Yes	0.711	0.284	1.00	Yes	1.00	**15.08**
		L_{35} - L_{36}		1101.22	-261.79	489	-95	-312	-1545	-81	19	-186	174	0.770	0.226	1.00	Yes	0.519	0.141	0.66	Yes	0.217	0.113	0.34	Yes	0.215	0.209	0.43	Yes	1.00	**10.66**
		L_{36} - L_{37}		1228.21	-39.52	322	-63	225	-2472	17	-4	-113	193	0.704	0.289	1.00	Yes	0.463	0.169	0.64	Yes	0.027	0.226	0.26	Yes	0.027	0.273	0.30	Yes	1.00	**10.60**
		L_{37} - L_{38}		1688.58	-----	-2	-457	-673	-2951	-84	46	-284	6	0.715	0.277	1.00	Yes	0.475	0.162	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.34**
		L_{38} - L_{39}		1763.73	-----	-1365	-56	-1806	-2525	60	155	-105	155	0.757	0.234	1.00	Yes	0.508	0.142	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.99**
		L_{39} - L_{40}		1659.10	-----	-1393	-51	-1568	-2221	57	182	-98	-116	0.773	0.222	1.00	Yes	0.512	0.131	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.03**
		L_{40} - L_{41}		1364.44	-----	-1224	371	-1544	-1283	-89	19	-193	21	0.802	0.196	1.00	Yes	0.540	0.121	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.44**
		L_{41} - L_{42}		1054.95	-----	-710	361	-916	-983	40	147	-36	-204	0.831	0.164	1.00	Yes	0.545	0.098	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.22**
		L_{42} - L_{43}		524.24	-----	-1180	601	-1074	-249	24	-8	-155	738	0.637	0.361	1.00	Yes	0.379	0.228	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.30**
		L_{43} - L_{44}		38.40	-30.08	-2991	968	-91	-50	2049	598	-47	-14	0.047	0.945	1.00	Yes	0.028	0.595	0.63	Yes	0.043	0.661	0.71	Yes	0.043	0.609	0.66	Yes	1.00	**31.75**
	Structure 3	L_0 - L_1		38.51	-100.47	-50	-15	1092	-2334	1	3	-246	-1113	0.059	0.931	1.00	Yes	0.036	0.619	0.66	Yes	0.182	0.581	0.77	Yes	0.181	0.701	0.89	Yes	1.00	**31.23**
		L_1 - L_2		426.68	-----	154	-181	491	-897	35	60	35	347	0.653	0.341	1.00	Yes	0.442	0.215	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.93**
		L_2 - L_3		902.17	-----	-24	-142	-109	-999	86	126	38	28	0.786	0.209	1.00	Yes	0.503	0.125	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.47**
		L_3 - L_4		1205.12	-----	47	-312	-394	-1467	29	118	-37	242	0.762	0.237	1.00	Yes	0.494	0.146	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.81**
		L_4 - L_5		1609.00	-----	-272	-131	-1049	-1702	27	13	-11	41	0.786	0.208	1.00	Yes	0.505	0.121	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.65**
		L_5 - L_6		1390.53	-----	-31	-298	299	-2488	-63	133	-282	143	0.679	0.320	1.00	Yes	0.441	0.193	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.29**
		L_6 - L_7		1363.39	-----	-1281	566	-966	-1140	-7	105	-177	182	0.802	0.192	1.00	Yes	0.519	0.117	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.56**
		L_7 - L_8		1066.80	-----	-167	100	-732	-736	65	223	-26	69	0.842	0.157	1.00	Yes	0.538	0.094	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.40**
		L_8 - L_9		625.13	-----	-630	418	-487	-325	10	-31	-81	-51	0.810	0.181	1.00	Yes	0.486	0.119	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.38**
		L_9 - L_{10}		537.03	-547.02	-31	497	-578	-604	-23	23	65	88	0.695	0.175	0.88	Yes	0.405	0.106	0.52	Yes	0.841	0.098	0.94	Yes	0.833	0.160	1.00	Yes	1.00	**13.06**
		L_{10} - L_{11}		150.21	-831.36	-2010	1482	-1321	-1920	387	-112	45	-92	0.103	0.355	0.46	Yes	0.067	0.217	0.29	Yes	0.681	0.112	0.8	Yes	0.673	0.318	1.00	Yes	1.00	**34.41**
		L_{11} - L_{12}		-----	-1166.49	-566	1913	-57	531	3	-20	-92	-109	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.234	0.99	Yes	0.739	0.253	1.00	Yes	1.00	**15.45**
		L_{12} - L_{13}		-----	-1113.98	853	82	2132	-1064	-316	-257	-186	-142	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.276	1	Yes	0.706	0.282	0.99	Yes	1.00	**15.90**
		L_{13} - L_{14}		-----	-992.19	111	237	177	-1233	-113	-67	-47	-12	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.088	0.9	Yes	0.799	0.194	1.00	Yes	1.00	**13.56**
		L_{14} - L_{15}		88.47	-705.66	543	143	-29	-797	47	-47	-42	6	0.087	0.183	0.27	Yes	0.056	0.110	0.17	Yes	0.823	0.152	0.98	Yes	0.814	0.176	1.00	Yes	1.00	**10.54**
		L_{15} - L_{16}		88.53	-464.78	430	114	748	-1096	2	-60	-156	69	0.115	0.318	0.44	Yes	0.069	0.209	0.28	Yes	0.715	0.153	0.87	Yes	0.708	0.290	1.00	Yes	1.00	**8.25**
		L_{16} - L_{17}		623.06	-----	-622	77	-201	-1058	62	23	-125	124	0.717	0.276	1.00	Yes	0.426	0.179	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.65**
		L_{17} - L_{18}		600.99	-----	-33	-28	-346	-1048	119	300	-39	70	0.691	0.301	1.00	Yes	0.400	0.180	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.44**
		L_{18} - L_{19}		426.64	-----	-515	207	-363	-741	54	-86	-40	559	0.653	0.343	1.00	Yes	0.398	0.225	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.06**
		L_{19} - L_{20}		10.41	-----	-1948	1275	42	-143	1834	499	-128	-35	0.016	0.978	1.00	Yes	0.009	0.588	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**29.86**

Moment (End) AI Operating

Operating Loads - 2F1

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

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Verticals	Structure 1	$U_0 - L_0$	-----	-331.46	-135	178	-24	48	-598	-192	-99	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.258	1	Yes	0.701	0.228	0.93	Yes	1.00	**2.81**
		$U_1 - L_1$	18.89	-315.77	-255	243	20	-14	78	89	39	15	0.034	0.352	0.39	Yes	0.019	0.194	0.22	Yes	0.690	0.118	0.81	Yes	0.668	0.327	1.00	Yes	1.00	**7.04**
		$U_2 - L_2$	35.06	-277.39	-280	316	114	-99	96	125	-155	-38	0.063	0.449	0.52	Yes	0.035	0.247	0.29	Yes	0.606	0.135	0.75	Yes	0.587	0.404	1.00	Yes	1.00	**10.31**
		$U_3 - L_3$	245.45	-234.91	-340	351	385	-357	43	226	-34	54	0.441	0.558	1.00	Yes	0.243	0.307	0.55	Yes	0.515	0.159	0.68	Yes	0.497	0.493	0.99	Yes	1.00	**14.87**
		$U_4 - L_4$	72.41	-190.77	-173	142	466	-441	3	132	-127	-117	0.130	0.633	0.77	Yes	0.072	0.348	0.42	Yes	0.419	0.168	0.59	Yes	0.404	0.595	1.00	Yes	1.00	**16.55**
		$U_5 - L_5$	-----	-432.99	25	-37	216	-241	-123	-46	-110	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.099	0.89	Yes	0.747	0.244	1.00	Yes	1.00	**5.83**
		$U_6 - L_6$	-----	-518.75	35	-55	274	-292	-74	29	-37	21	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.083	0.87	Yes	0.744	0.256	1.00	Yes	1.00	**6.24**
		$U_7 - L_7$	-----	-443.42	117	-131	296	-317	-129	47	-36	69	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.122	0.87	Yes	0.684	0.312	1.00	Yes	1.00	**4.15**
		$U_8 - L_8$	-----	-1270.34	-422	502	497	-590	-45	17	-69	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.917	0.039	0.96	Yes	0.881	0.110	1.00	Yes	1.00	**9.90**
		$U_9 - L_9$	-----	-666.35	-374	432	-166	190	-243	-184	-222	-157	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.126	0.93	Yes	0.753	0.240	1.00	Yes	1.00	**5.39**
		$U_{10} - L_{10}$	-----	-794.10	-397	412	-109	93	-220	-171	-266	-220	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.109	0.94	Yes	0.784	0.213	1.00	Yes	1.00	**9.46**
		$U_{11} - L_{11}$	-----	-660.97	-391	482	-65	116	-1	70	-178	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.099	0.9	Yes	0.769	0.224	1.00	Yes	1.00	**8.75**
		$U_{12} - L_{12}$	-----	-505.82	-356	347	-24	31	-64	97	-172	11	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.108	0.84	Yes	0.694	0.304	1.00	Yes	1.00	**8.05**
		$U_{13} - L_{13}$	-----	-356.93	-257	273	11	5	-31	131	-76	105	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.112	0.84	Yes	0.684	0.311	1.00	Yes	1.00	**6.32**
		$U_{14} - L_{14}$	-----	-106.01	-587	603	348	-348	149	192	-122	-49	-----	-----	-----	-----	-----	-----	-----	-----	0.237	0.248	0.49	Yes	0.224	0.770	1.00	Yes	1.00	**23.97**
		$U_{15} - L_{15}$	225.57	-315.17	-180	171	248	-257	-129	-134	-106	-176	0.406	0.379	0.79	Yes	0.223	0.209	0.44	Yes	0.706	0.169	0.88	Yes	0.667	0.329	1.00	Yes	1.00	**8.64**
		$U_{16} - L_{16}$	109.93	-321.51	-54	37	237	-243	-79	-80	18	-139	0.198	0.350	0.55	Yes	0.109	0.193	0.31	Yes	0.725	0.135	0.86	Yes	0.680	0.310	1.00	Yes	1.00	**6.89**
		$U_{17} - L_{17}$	-----	-436.13	30	-51	220	-235	-95	-213	-42	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.152	0.97	Yes	0.752	0.239	1.00	Yes	1.00	**6.01**
		$U_{18} - L_{18}$	-----	-532.95	125	-130	438	-445	-162	-61	16	-79	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.093	0.88	Yes	0.741	0.252	1.00	Yes	1.00	**6.31**
		$U_{19} - L_{19}$	-----	-652.22	140	-153	500	-513	-64	12	354	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.100	0.92	Yes	0.759	0.238	1.00	Yes	1.00	**6.92**
		$U_{20} - L_{20}$	-----	-575.73	168	-216	398	-462	36	5	821	108	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.236	1	Yes	0.670	0.214	0.89	Yes	1.00	**4.48**
	Structure 2	$U_0 - L_0$	-----	-611.23	-397	495	-118	185	-1170	-198	-264	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.265	1	Yes	0.655	0.210	0.87	Yes	1.00	**5.20**
		$U_1 - L_1$	-----	-707.27	-562	553	-113	120	70	21	35	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.074	0.89	Yes	0.758	0.239	1.00	Yes	1.00	**8.54**
		$U_2 - L_2$	-----	-584.31	-486	487	-88	97	-115	53	88	40	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.087	0.87	Yes	0.745	0.249	1.00	Yes	1.00	**7.68**
		$U_3 - L_3$	-----	-488.30	-243	251	-46	53	49	147	15	126	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.100	0.94	Yes	0.766	0.229	1.00	Yes	1.00	**7.06**
		$U_4 - L_4$	76.89	-326.65	-239	232	35	-15	-59	118	-108	65	0.138	0.339	0.48	Yes	0.076	0.187	0.27	Yes	0.741	0.101	0.85	Yes	0.691	0.305	1.00	Yes	1.00	**7.13**
		$U_5 - L_5$	210.32	-313.13	-245	259	146	-134	-75	140	-111	115	0.378	0.371	0.75	Yes	0.208	0.204	0.42	Yes	0.707	0.130	0.84	Yes	0.663	0.330	1.00	Yes	1.00	**9.45**
		$U_6 - L_6$	362.36	-236.71	-237	235	234	-233	11	138	-119	88	0.652	0.342	1.00	Yes	0.358	0.188	0.55	Yes	0.533	0.096	0.63	Yes	0.501	0.302	0.81	Yes	1.00	**11.15**
		$U_7 - L_7$	44.06	-----	-329	338	603	-681	-167	33	-158	-108	0.079	0.919	1.00	Yes	0.044	0.505	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**31.12**
		$U_8 - L_8$	-----	-463.55	9	-32	370	-374	-142	-104	-43	-126	-----	-----	-----	-----	-----	-----	-----	-----	0.672	0.114	0.79	Yes	0.668	0.327	1.00	Yes	1.00	**6.97**
		$U_9 - L_9$	-----	-699.88	90	-122	546	-571	-139	-108	-155	-160	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.082	0.87	Yes	0.750	0.242	1.00	Yes	1.00	**8.49**
		$U_{10} - L_{10}$	-----	-798.95	90	-136	548	-568	-59	-45	-151	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.094	0.89	Yes	0.747	0.251	1.00	Yes	1.00	**9.38**
		$U_{11} - L_{11}$	-----	-816.51	158	-171	505	-515	-49	-147	44	3	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.085	0.91	Yes	0.763	0.227	1.00	Yes	1.00	**8.20**
		$U_{12} - L_{12}$	-----	-887.44	175	-156	501	-519	-29	127	39	65	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.076	0.93	Yes	0.769	0.223	1.00	Yes	1.00	**8.18**
		$U_{13} - L_{13}$	-----	-754.85	245	-244	566	-557	-81	44	106	74	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.111	0.96	Yes	0.728	0.271	1.00	Yes	1.00	**6.21**
		$U_{14} - L_{14}$	-----	-1285.51	-644	598	720	-688	-56	182	-57	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.940	0.051	1	Yes	0.852	0.127	0.98	Yes	1.00	**11.61**
		$U_{15} - L_{15}$	-----	-730.79	-608	597	-168	169	-147	-90	-82	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.140	0.96	Yes	0.705	0.291	1.00	Yes	1.00	**8.18**
		$U_{16} - L_{16}$	-----	-702.16	-573	542	-127	101	-243	-146	-167	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.115	0.93	Yes	0.753	0.243	1.00	Yes	1.00	**8.68**
		$U_{17} - L_{17}$	-----	-638.92	-544	538	-132	129	-136	-41	-100	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.087	0.88	Yes	0.744	0.252	1.00	Yes	1.00	**7.99**
		$U_{18} - L_{18}$	-----	-575.22	-496	507	-79	88	-17	33	-169	-28	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.089	0.86	Yes	0.733	0.260	1.00	Yes	1.00	**7.88**
		$U_{19} - L_{19}$	-----	-464.71	-316	300	-22	33	-117	29	-161	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.699	0.100	0.8	Yes	0.694	0.304	1.00	Yes	1.00	**7.27**
		$U_{20} - L_{20}$	41.91	-367.69	-252	253	19	-11	-92	61	-154	26	0.068	0.329	0.40	Yes	0.038	0.181	0.22	Yes	0.754	0.113	0.87	Yes	0.704	0.289	1.00	Yes	1.00	**7.25**
		$U_{21} - L_{21}$	96.27	-318.14	-241	249	55	-52	-50	69	-131	45	0.173	0.357	0.53	Yes	0.095	0.196	0.30	Yes	0.719	0.122	0.85	Yes	0.673	0.319	1.00	Yes	1.00	**7.53**
		$U_{22} - L_{22}$	118.70	-----	-555	565	465	-498	-72	34	-209	-82	0.213	0.782	1.00	Yes	0.117	0.430	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**28.98**
		$U_{23} - L_{23}$	151.31	-320.39	-109	97	242	-248	-110	-38	16	-84	0.272	0.349	0.63	Yes	0.150	0.192	0.35	Yes	0.724	0.125	0.85	Yes	0.678	0.317	1.00	Yes	1.00	**7.85**
		$U_{24} - L_{24}$	64.82	-373.36	-37	27	240	-246	-77	-62	-19	-61	0.106	0.301	0.41	Yes	0.058	0.166	0.23	Yes	0.766	0.099	0.87	Yes	0.715	0.281	1.00	Yes	1.00	**7.47**
		$U_{25} - L_{25}$	-----	-469.20	14	-31	302	-298	-84	-31	-106	-57	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.087	0.8	Yes	0.701	0.291	1.00	Yes	1.00	**6.71**
		$U_{26} - L_{26}$	-----	-567.46	66	-104	502	-528	-68	42	20	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.079	0.84	Yes	0.723	0.270	1.00	Yes	1.00	**7.25**
		$U_{27} - L_{27}$	-----	-636.95	149	-151	523	-536	-148	2	-95	6	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.081	0.87	Yes	0.741	0.249	1.00	Yes	1.00	**6.99**
		$U_{28} - L_{28}$	-----	-714.69	137	-134	535	-542	-38	-17	198	89	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.081	0.91	Yes	0.766	0.230	1.00	Yes	1.00	**7.22**
		$U_{29} - L_{29}$	-----	-714.77	207	-213	641	-625	-113	27	57	55	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.121	0.92	Yes	0.689	0.307	1.00	Yes	1.00	**7.60**
		$U_{30} - L_{30}$	-----	-1278.00	-640	573	694	-686	-156	92	-121	-137	-----	-----	-----	-----	-----	-----	-----	-----	0.935	0.065	1	Yes	0.847	0.123	0.98	Yes	1.00	**11.81**
		$U_{31} - L_{31}$	-----	-774.10	-525	522	-185	181	-169	-85	-121	-61	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.133	1	Yes	0.746	0.251	1.00	Yes	1.00	**7.26**
		$U_{32} - L_{32}$	-----	-892.41	-520	510	-129	104	-269	-119	-183	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.127	0.99	Yes	0.774	0.223	1.00	Yes	1.00	**9.77**
		$U_{33} - L_{33}$	-----	-841.34	-465	480	-136	138	-129	1	-183	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.086	0.94	Yes	0.787	0.212	1.00	Yes	1.00	**9.12**
		$U_{34} - L_{34}$	-----	-788.74	-574	571	-81	111	-89	72	-220	-21	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.091	0.88	Yes	0.737	0.253	1.00	Yes	1.00	**10.64**
		$U_{35} - L_{35}$	-----	-698.59	-573	580	-71	103	-124	103	-183	75	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.074	0.86	Yes	0.749	0.246	1.00	Yes	1.00	**9.57**
		$U_{36} - L_{36}$	-----	-468.04	-362	366	-30	45	11	137	-131	86	-----	-----	-----	-----	-----	-----	-----	-----	0.679	0.097	0.78	Yes	0.674	0.320	1.00	Yes	1.00	**7.26**
		$U_{37} - L_{37}$	46.77	-8.40	-628	681	257	-275	-102	90	-133	-35	0.084	0.909	1.00	Yes	0.046	0.500	0.55	Yes	0.019	0.256	0.28	Yes	0.018	0.871	0.89	Yes	1.00	**28.85**
		$U_{38} - L_{38}$	357.76	-139.14	-240	243	151	-147	-107	-93	-133	-155	0.643	0.355	1.00	Yes	0.354	0.195	0.55	Yes	0.313	0.126	0.44	Yes	0.294	0.310	0.61	Yes	1.00	**8.30**
		$U_{39} - L_{39}$	257.42	-317.27	-198	185	238	-254	-111	-108	-114	-158	0.463	0.371	0.84	Yes	0.255	0.204	0.46	Yes	0.717	0.170	0.89	Yes	0.671	0.325	1.00	Yes	1.00	**10.39**
		$U_{40} - L_{40}$	109.73	-337.64	-62	36	219	-219	-93	-79	-123	-120	0.197	0.316	0.52	Yes	0.109	0.174	0.29	Yes	0.766	0.129	0.9	Yes	0.714	0.280	1.00	Yes	1.00	**7.08**
		$U_{41} - L_{41}$	-----	-486.70	27	-50	245	-257	-22	46	39	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.085	0.92	Yes	0.763	0.234	1.00	Yes	1.00	**6.81**
		$U_{42} - L_{42}$	-----	-578.99	107	-117	502	-505	-87	-47	147	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.091	0.87	Yes	0.738	0.258	1.00	Yes	1.00	**7.64**
		$U_{43} - L_{43}$	-----	-710.82	144	-161	525	-548	-33	-11	758	76	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.173	0.99	Yes	0.762	0.233	1.00	Yes	1.00	**7.27**
		$U_{44} - L_{44}$	-----	-633.66	197	-244	475	-567	-22	-4	924	157	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.232	1	Yes	0.679	0.241	0.92	Yes	1.00	**5.38**
	Structure 3	$U_0 - L_0$	-----	-547.51	-374	450	-105	170	-976	-128	-247	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.267	1	Yes	0.637	0.209	0.85	Yes	1.00	**5.05**
		$U_1 - L_1$	-----	-663.14	-458	477	-113	120	-378	-6	0	-76	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.127	0.96	Yes	0.772	0.221	1.00	Yes	1.00	**7.72**
		$U_2 - L_2$	-----	-528.32	-463	457	-92	97	-82	58	83	32	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.081	0.86	Yes	0.735	0.262	1.00	Yes	1.00	**7.48**
		$U_3 - L_3$	-----	-432.91	-237	244	-22	42	5	168	-121	63	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.118	0.93	Yes	0.747	0.247	1.00	Yes	1.00	**6.82**
		$U_4 - L_4$	76.50	-325.50	-235	240	42	-25	-30	178	-174	83	0.138	0.358	0.50	Yes	0.076	0.197	0.28	Yes	0.734	0.106	0.84	Yes	0.689	0.306	1.00	Yes	1.00	**7.40**
		$U_5 - L_5$	231.44	-291.66	-284	292	155	-152	-148	132	-153	71	0.416	0.418	0.84	Yes	0.229	0.230	0.46	Yes	0.654	0.145	0.8	Yes	0.617	0.373	1.00	Yes	1.00	**9.44**
		$U_6 - L_6$	128.18	-----	-427	425	495	-540	-137	128	-252	-22	0.231	0.763	1.00	Yes	0.127	0.420	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**23.24**
		$U_7 - L_7$	29.83	-355.66	-35	22	255	-274	-181	-144	-209	-184	0.049	0.368	0.42	Yes	0.027	0.202	0.23	Yes	0.719	0.160	0.88	Yes	0.681	0.313	1.00	Yes	1.00	**6.79**
		$U_8 - L_8$	-----	-515.79	8	-14	334	-335	-163	-139	10	-93	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.115	0.86	Yes	0.708	0.286	1.00	Yes	1.00	**7.35**
		$U_9 - L_9$	-----	-660.32	37	-103	391	-493	-105	-20	-14	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.092	0.89	Yes	0.769	0.229	1.00	Yes	1.00	**8.34**
		$U_{10} - L_{10}$	-----	-786.63	104	-99	372	-415	-20	89	-41	40	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.072	0.89	Yes	0.776	0.215	1.00	Yes	1.00	**8.50**
		$U_{11} - L_{11}$	-----	-645.42	182	-211	416	-471	-51	62	91	119	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.099	0.87	Yes	0.729	0.262	1.00	Yes	1.00	**5.15**
		$U_{12} - L_{12}$	-----	-1268.78	-572	625	481	-631	53	98	-84	3	-----	-----	-----	-----	-----	-----	-----	-----	0.916	0.051	0.97	Yes	0.880	0.118	1.00	Yes	1.00	**10.78**
		$U_{13} - L_{13}$	-----	-458.34	-274	294	-105	115	-153	-106	-114	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.139	0.91	Yes	0.707	0.289	1.00	Yes	1.00	**4.55**
		$U_{14} - L_{14}$	-----	-514.20	-296	295	-38	44	-227	-139	-223	-173	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.130	0.91	Yes	0.737	0.259	1.00	Yes	1.00	**7.50**
		$U_{15} - L_{15}$	-----	-418.52	-260	267	-15	24	-119	22	-173	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.115	0.88	Yes	0.722	0.270	1.00	Yes	1.00	**7.34**
		$U_{16} - L_{16}$	-----	-168.01	-500	479	145	-117	53	144	-298	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.369	0.225	0.6	Yes	0.355	0.639	1.00	Yes	1.00	**17.34**
		$U_{17} - L_{17}$	297.28	-177.58	-296	307	165	-177	-160	-70	-251	-199	0.535	0.465	1.00	Yes	0.294	0.256	0.55	Yes	0.389	0.160	0.55	Yes	0.376	0.392	0.77	Yes	1.00	**8.83**
		$U_{18} - L_{18}$	148.45	-288.52	-156	162	262	-299	-63	-15	86	-55	0.267	0.407	0.68	Yes	0.147	0.224	0.38	Yes	0.631	0.118	0.75	Yes	0.610	0.382	1.00	Yes	1.00	**9.63**
		$U_{19} - L_{19}$	9.61	-328.64	-25	13	231	-234	-164	-85	50	-51	0.017	0.347	0.37	Yes	0.010	0.191	0.21	Yes	0.718	0.140	0.86	Yes	0.695	0.299	1.00	Yes	1.00	**6.31**
		$U_{20} - L_{20}$	-----	-335.02	48	-56	182	-227	-171	-55	356	114	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.198	0.95	Yes	0.709	0.290	1.00	Yes	1.00	**3.15**

Moment (End) AI Operating

Operating Loads - 2F1

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

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Diagonals	Structure 1	$U_0 - L_1$	380.40	-24.41	-245	95	5	-8	-825	-201	-46	-16	0.499	0.494	1.00	Yes	0.301	0.272	0.58	Yes	0.042	0.340	0.39	Yes	0.038	0.286	0.33	Yes	1.00	**8.57**
		$U_1 - L_2$	382.77	-38.24	-75	38	2	-44	-22	-140	-729	-325	0.688	0.306	1.00	Yes	0.379	0.169	0.55	Yes	0.088	0.278	0.37	Yes	0.081	0.095	0.18	Yes	1.00	**8.37**
		$U_2 - L_3$	222.21	-353.36	-44	28	-2	-68	-128	-271	-282	-144	0.400	0.168	0.57	Yes	0.220	0.093	0.32	Yes	0.813	0.180	1	Yes	0.748	0.087	0.84	Yes	1.00	**8.59**
		$U_3 - L_4$	-----	-388.98	0	-10	28	-57	-185	-168	-193	-133	-----	-----	-----	-----	-----	-----	-----	-----	0.889	0.101	1	Yes	0.823	0.073	0.90	Yes	1.00	**5.59**
		$U_4 - L_4$	590.78	-56.49	-66	86	-4	-30	-40	-175	-78	-135	0.866	0.128	1.00	Yes	0.476	0.070	0.55	Yes	0.106	0.063	0.17	Yes	0.097	0.087	0.19	Yes	1.00	**10.48**
		$U_6 - L_5$	717.59	-----	-182	235	-33	26	86	-87	20	41	0.848	0.150	1.00	Yes	0.467	0.082	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.76**
		$U_7 - L_6$	654.67	-----	-280	232	-82	81	345	144	302	204	0.774	0.222	1.00	Yes	0.426	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.06**
		$U_8 - L_7$	647.23	-----	-106	299	-8	115	320	185	242	175	0.765	0.228	1.00	Yes	0.421	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.09**
		$U_8 - L_9$	1007.69	-----	-112	354	0	134	246	202	88	107	0.806	0.189	1.00	Yes	0.499	0.106	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.72**
		$U_9 - L_{10}$	1033.72	-----	-301	266	-121	78	209	170	265	242	0.826	0.168	1.00	Yes	0.512	0.094	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.51**
		$U_{10} - L_{11}$	1026.08	-----	-236	203	-78	16	-139	-170	31	-65	0.867	0.131	1.00	Yes	0.537	0.073	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.25**
		$U_{11} - L_{12}$	843.92	-----	-237	166	-129	-54	-320	-337	-334	-262	0.835	0.160	1.00	Yes	0.459	0.088	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.24**
		$U_{12} - L_{13}$	626.55	-12.73	-184	178	-51	-14	-382	-352	-358	-287	0.764	0.236	1.00	Yes	0.481	0.134	0.62	Yes	0.020	0.139	0.16	Yes	0.018	0.161	0.18	Yes	1.00	**8.12**
		$U_{13} - L_{14}$	444.67	-94.53	-77	58	-3	-40	-281	-334	-215	-313	0.800	0.195	1.00	Yes	0.440	0.107	0.55	Yes	0.220	0.166	0.39	Yes	0.200	0.099	0.30	Yes	1.00	**7.27**
		$U_{15} - L_{14}$	205.19	-334.79	-43	13	73	-109	-175	-307	-190	-297	0.369	0.228	0.60	Yes	0.203	0.125	0.33	Yes	0.784	0.210	1	Yes	0.708	0.139	0.85	Yes	1.00	**8.33**
		$U_{16} - L_{15}$	427.56	-193.64	-122	89	29	-66	-221	-252	-174	-177	0.769	0.229	1.00	Yes	0.423	0.126	0.55	Yes	0.459	0.176	0.64	Yes	0.410	0.156	0.57	Yes	1.00	**8.02**
		$U_{17} - L_{16}$	546.60	-----	-143	106	-12	-23	-120	-213	-163	-136	0.802	0.195	1.00	Yes	0.441	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.71**
		$U_{18} - L_{17}$	658.75	-----	-332	252	-101	54	-136	-144	-130	-70	0.779	0.214	1.00	Yes	0.428	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.12**
		$U_{19} - L_{18}$	720.06	-----	-351	253	-87	62	-52	-159	-235	-25	0.780	0.218	1.00	Yes	0.429	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.94**
		$U_{20} - L_{19}$	648.70	-----	-400	312	-128	107	-533	-244	-1	37	0.703	0.292	1.00	Yes	0.386	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.80**
	Structure 2	$U_0 - L_1$	678.33	-----	-401	345	-70	78	-946	-142	-123	50	0.671	0.328	1.00	Yes	0.369	0.180	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.84**
		$U_1 - L_2$	797.09	-----	-394	337	-85	57	-60	-147	44	11	0.789	0.205	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.44**
		$U_2 - L_3$	655.62	-----	-321	264	-68	51	-207	-229	-78	-177	0.775	0.223	1.00	Yes	0.426	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.59**
		$U_3 - L_4$	576.27	-----	-167	147	-45	-12	-314	-290	-343	-227	0.768	0.225	1.00	Yes	0.422	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.96**
		$U_4 - L_5$	413.20	-180.35	-118	102	24	-58	-346	-294	-292	-216	0.743	0.252	1.00	Yes	0.409	0.138	0.55	Yes	0.445	0.213	0.66	Yes	0.382	0.151	0.54	Yes	1.00	**8.42**
		$U_5 - L_6$	354.71	-311.75	-95	66	76	-108	-403	-283	-350	-235	0.638	0.255	0.90	Yes	0.351	0.140	0.50	Yes	0.736	0.259	1	Yes	0.660	0.138	0.80	Yes	1.00	**8.94**
		$U_6 - L_7$	43.48	-376.72	-21	-7	48	-90	-300	-254	-281	-249	0.071	0.181	0.26	Yes	0.039	0.100	0.14	Yes	0.807	0.192	1	Yes	0.722	0.103	0.83	Yes	1.00	**5.34**
		$U_8 - L_7$	617.55	-45.33	-165	160	8	-44	-132	-270	-162	-246	0.787	0.203	1.00	Yes	0.496	0.115	0.62	Yes	0.075	0.093	0.17	Yes	0.068	0.148	0.22	Yes	1.00	**9.14**
		$U_8 - L_9$	736.90	-----	-320	266	-86	2	-113	-190	-169	-157	0.798	0.195	1.00	Yes	0.439	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.09**
		$U_{10} - L_9$	837.67	-----	-313	232	-77	36	-49	-138	-16	-58	0.829	0.166	1.00	Yes	0.456	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.88**
		$U_{11} - L_{10}$	919.00	-----	-354	301	-101	76	68	-44	69	27	0.837	0.160	1.00	Yes	0.460	0.088	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.56**
		$U_{12} - L_{11}$	877.92	-----	-358	342	-94	121	204	56	320	178	0.800	0.196	1.00	Yes	0.440	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.59**
		$U_{13} - L_{12}$	759.73	-----	-426	370	-198	167	279	135	277	178	0.752	0.240	1.00	Yes	0.413	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.92**
		$U_{14} - L_{13}$	758.47	-----	-275	428	-69	178	283	117	229	136	0.750	0.241	1.00	Yes	0.413	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.84**
		$U_{14} - L_{15}$	645.07	-----	-222	355	-5	105	133	149	57	40	0.763	0.228	1.00	Yes	0.419	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.33**
		$U_{15} - L_{16}$	646.11	-----	-377	335	-112	105	117	86	63	70	0.764	0.234	1.00	Yes	0.420	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.71**
		$U_{16} - L_{17}$	751.45	-----	-356	340	-76	101	9	-9	12	7	0.814	0.184	1.00	Yes	0.448	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.54**
		$U_{17} - L_{18}$	687.89	-----	-300	292	-74	68	-76	-69	-11	-32	0.813	0.183	1.00	Yes	0.447	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.00**
		$U_{18} - L_{19}$	685.84	-----	-265	283	-34	19	-157	-152	-99	-116	0.811	0.188	1.00	Yes	0.446	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.37**
		$U_{19} - L_{20}$	597.63	-48.91	-185	201	-13	-19	-259	-233	-242	-153	0.762	0.233	1.00	Yes	0.419	0.131	0.56	Yes	0.081	0.110	0.2	Yes	0.073	0.180	0.26	Yes	1.00	**9.16**
		$U_{20} - L_{21}$	435.81	-82.28	-112	111	10	-26	-225	-173	-211	-148	0.784	0.209	1.00	Yes	0.431	0.115	0.55	Yes	0.195	0.108	0.31	Yes	0.174	0.144	0.32	Yes	1.00	**7.35**
		$U_{21} - L_{22}$	431.21	-345.28	-87	74	26	-80	-252	-265	-271	-250	0.776	0.189	0.97	Yes	0.427	0.104	0.54	Yes	0.816	0.179	1	Yes	0.731	0.111	0.85	Yes	1.00	**10.18**
		$U_{23} - L_{22}$	430.71	-352.30	-94	76	86	-109	-85	-246	-131	-239	0.775	0.210	0.99	Yes	0.426	0.116	0.55	Yes	0.839	0.157	1	Yes	0.745	0.139	0.89	Yes	1.00	**11.82**
		$U_{24} - L_{23}$	450.21	-127.77	-117	109	24	-43	-50	-116	-99	-80	0.810	0.183	1.00	Yes	0.445	0.100	0.55	Yes	0.306	0.051	0.36	Yes	0.270	0.149	0.42	Yes	1.00	**8.10**
		$U_{25} - L_{24}$	624.81	-26.28	-196	187	19	-32	40	-90	-6	-51	0.797	0.194	1.00	Yes	0.438	0.108	0.55	Yes	0.044	0.060	0.11	Yes	0.039	0.176	0.22	Yes	1.00	**9.29**
		$U_{26} - L_{25}$	683.71	-----	-286	258	-20	18	110	-37	52	23	0.808	0.182	1.00	Yes	0.445	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.73**
		$U_{27} - L_{26}$	677.84	-----	-291	284	-69	67	184	38	80	69	0.801	0.198	1.00	Yes	0.441	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.41**
		$U_{28} - L_{27}$	724.90	-----	-338	343	-60	99	178	93	192	134	0.785	0.207	1.00	Yes	0.432	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.14**
		$U_{29} - L_{28}$	630.58	-----	-357	327	-127	121	263	101	218	112	0.746	0.250	1.00	Yes	0.410	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.76**
		$U_{30} - L_{29}$	633.89	-----	-213	357	-39	128	236	99	178	103	0.749	0.245	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.99**
		$U_{30} - L_{31}$	782.32	-----	-289	447	-30	135	118	63	64	39	0.774	0.225	1.00	Yes	0.426	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.35**
		$U_{31} - L_{32}$	781.54	-----	-452	374	-135	133	51	35	36	47	0.773	0.217	1.00	Yes	0.425	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.04**
		$U_{32} - L_{33}$	906.96	-----	-365	346	-92	103	-119	-101	13	-38	0.826	0.171	1.00	Yes	0.454	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.97**
		$U_{33} - L_{34}$	902.08	-----	-333	318	-101	64	-244	-220	-156	-142	0.822	0.175	1.00	Yes	0.452	0.096	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.31**
		$U_{34} - L_{35}$	827.48	-----	-289	246	-93	30	-309	-306	-300	-241	0.819	0.180	1.00	Yes	0.450	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.10**
		$U_{35} - L_{36}$	715.53	-----	-301	266	-92	8	-397	-312	-293	-266	0.775	0.219	1.00	Yes	0.426	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.20**
		$U_{36} - L_{37}$	612.65	-57.21	-157	162	-34	-23	-316	-350	-337	-326	0.781	0.216	1.00	Yes	0.492	0.123	0.62	Yes	0.094	0.124	0.22	Yes	0.086	0.145	0.24	Yes	1.00	**8.36**
		$U_{38} - L_{37}$	37.12	-390.86	-19	-7	84	-106	-127	-230	-142	-228	0.060	0.181	0.25	Yes	0.033	0.100	0.14	Yes	0.844	0.153	1	Yes	0.749	0.121	0.88	Yes	1.00	**5.98**
		$U_{39} - L_{38}$	314.86	-345.63	-84	53	92	-121	-169	-223	-189	-181	0.566	0.219	0.79	Yes	0.311	0.121	0.44	Yes	0.823	0.176	1	Yes	0.731	0.155	0.89	Yes	1.00	**8.74**
		$U_{40} - L_{39}$	433.82	-166.60	-128	88	46	-67	-114	-173	-78	-105	0.780	0.213	1.00	Yes	0.429	0.117	0.55	Yes	0.399	0.140	0.54	Yes	0.353	0.163	0.52	Yes	1.00	**8.07**
		$U_{41} - L_{40}$	603.49	-----	-179	138	-14	-22	-81	-136	-86	-61	0.804	0.192	1.00	Yes	0.442	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.79**
		$U_{42} - L_{41}$	653.72	-----	-327	268	-99	53	-71	-97	-218	-26	0.773	0.224	1.00	Yes	0.425	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.54**
		$U_{43} - L_{42}$	803.35	-----	-394	306	-98	67	-12	-125	-2	-25	0.795	0.201	1.00	Yes	0.437	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.07**
		$U_{44} - L_{43}$	706.76	-----	-427	366	-141	125	-642	-209	33	10	0.699	0.294	1.00	Yes	0.385	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.40**
	Structure 3	$U_0 - L_1$	608.93	-----	-388	297	-72	74	-820	-195	-132	44	0.660	0.334	1.00	Yes	0.363	0.183	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.89**
		$U_1 - L_2$	730.80	-----	-356	296	-87	54	-65	-144	38	12	0.792	0.206	1.00	Yes	0.435	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.55**
		$U_2 - L_3$	653.74	-----	-313	267	-106	39	-230	-268	-223	-199	0.773	0.226	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.33**
		$U_3 - L_4$	530.27	-----	-139	111	-14	-24	-341	-329	-256	-229	0.778	0.220	1.00	Yes	0.428	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.39**
		$U_4 - L_5$	409.90	-253.25	-115	106	16	-66	-390	-329	-372	-252	0.737	0.260	1.00	Yes	0.405	0.143	0.55	Yes	0.600	0.232	0.84	Yes	0.536	0.147	0.69	Yes	1.00	**8.87**
		$U_5 - L_6$	241.20	-315.43	-44	14	42	-94	-380	-356	-352	-312	0.434	0.230	0.67	Yes	0.239	0.127	0.37	Yes	0.739	0.254	1	Yes	0.667	0.120	0.79	Yes	1.00	**7.09**
		$U_7 - L_6$	451.55	-133.22	-78	57	10	-48	-85	-268	-167	-274	0.812	0.179	1.00	Yes	0.447	0.098	0.55	Yes	0.310	0.123	0.44	Yes	0.282	0.099	0.39	Yes	1.00	**8.14**
		$U_8 - L_7$	640.48	-0.08	-190	173	-20	-24	-162	-234	-138	-167	0.781	0.212	1.00	Yes	0.491	0.119	0.62	Yes	0.000	0.098	0.1	Yes	0.000	0.166	0.17	Yes	1.00	**8.62**
		$U_8 - L_9$	841.59	-----	-247	163	-154	-61	-68	-223	-322	-183	0.833	0.163	1.00	Yes	0.458	0.089	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.95**
		$U_{10} - L_9$	1023.74	-----	-237	210	-101	12	150	7	76	32	0.865	0.129	1.00	Yes	0.535	0.072	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.35**
		$U_{11} - L_{10}$	998.95	-----	-302	257	-97	74	448	276	354	281	0.799	0.192	1.00	Yes	0.495	0.108	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.46**
		$U_{12} - L_{11}$	980.94	-----	-108	353	-13	141	404	246	278	209	0.784	0.209	1.00	Yes	0.486	0.117	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.02**
		$U_{13} - L_{12}$	666.76	-----	-110	300	-3	106	188	127	113	91	0.788	0.205	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.82**
		$U_{13} - L_{14}$	689.92	-----	-278	280	-71	75	123	85	92	116	0.816	0.182	1.00	Yes	0.449	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.01**
		$U_{14} - L_{15}$	690.09	-----	-157	256	-16	6	-135	-191	49	-38	0.816	0.180	1.00	Yes	0.449	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.50**
		$U_{15} - L_{16}$	528.32	-17.78	-57	87	-29	-24	-209	-234	-549	-336	0.775	0.216	1.00	Yes	0.426	0.119	0.55	Yes	0.033	0.162	0.2	Yes	0.031	0.088	0.12	Yes	1.00	**9.02**
		$U_{17} - L_{16}$	-----	-415.11	2	-7	60	-68	6	-99	-45	-109	-----	-----	-----	-----	-----	-----	-----	-----	0.949	0.043	1	Yes	0.878	0.086	0.97	Yes	1.00	**8.10**
		$U_{18} - L_{17}$	156.93	-387.73	-37	20	-25	-64	-9	-164	-161	-72	0.282	0.129	0.42	Yes	0.155	0.071	0.23	Yes	0.892	0.102	1	Yes	0.820	0.081	0.91	Yes	1.00	**7.33**
		$U_{19} - L_{18}$	467.61	-65.48	-89	56	33	-57	63	-122	-136	-124	0.841	0.153	1.00	Yes	0.463	0.084	0.55	Yes	0.150	0.076	0.23	Yes	0.139	0.114	0.26	Yes	1.00	**13.24**
		$U_{20} - L_{19}$	278.72	-49.26	-281	142	-16	-2	-1176	-80	39	-5	0.366	0.625	1.00	Yes	0.221	0.344	0.57	Yes	0.084	0.392	0.48	Yes	0.076	0.329	0.41	Yes	1.00	**12.64**

Moment (End) Al Operating

Operating Loads - 2F1

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

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

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Upper Chord	Structure 1	$U_0 - U_1$	35.09	-543.67	-209	127	109	-1122	-135	152	-118	-874	0.040	0.414	0.46	Yes	0.028	0.283	0.32	Yes	0.740	0.191	0.94	Yes	0.733	0.267	1.00	Yes	1.00	**11.15**
		$U_1 - U_2$	23.10	-531.93	-103	86	-396	-676	-151	139	-84	-374	0.026	0.224	0.26	Yes	0.018	0.153	0.18	Yes	0.724	0.268	1	Yes	0.717	0.161	0.88	Yes	1.00	**4.95**
		$U_2 - U_3$	161.67	-559.90	-103	295	-400	-494	-101	102	-396	-369	0.185	0.184	0.37	Yes	0.125	0.121	0.25	Yes	0.762	0.230	1	Yes	0.755	0.117	0.88	Yes	1.00	**5.44**
		$U_3 - U_4$	442.95	-534.04	122	374	-403	-617	-199	-2	-445	-229	0.508	0.222	0.73	Yes	0.348	0.152	0.51	Yes	0.727	0.271	1	Yes	0.720	0.147	0.87	Yes	1.00	**7.32**
		$U_4 - U_5$	526.81	-581.76	201	428	-719	-347	-66	-4	-349	47	0.604	0.230	0.84	Yes	0.414	0.158	0.58	Yes	0.792	0.205	1	Yes	0.784	0.171	0.96	Yes	1.00	**8.79**
		$U_5 - U_6$	692.84	-----	280	499	-5	3	98	138	-77	475	0.794	0.199	1.00	Yes	0.536	0.131	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.62**
		$U_6 - U_7$	878.96	-----	400	223	111	-209	333	274	-118	517	0.841	0.156	1.00	Yes	0.587	0.108	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.36**
		$U_7 - U_8$	856.45	-----	-798	2102	71	657	367	649	789	670	0.593	0.399	1.00	Yes	0.414	0.272	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.44**
		$U_8 - U_9$	852.45	-----	1148	-143	1382	-907	182	503	71	-463	0.698	0.293	1.00	Yes	0.478	0.200	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.81**
		$U_9 - U_{10}$	676.01	-264.31	253	271	102	-716	47	352	-26	-612	0.733	0.259	1.00	Yes	0.497	0.174	0.68	Yes	0.340	0.228	0.57	Yes	0.337	0.160	0.50	Yes	1.00	**11.17**
		$U_{10} - U_{11}$	82.98	-627.68	260	-170	188	-871	69	107	-86	-290	0.090	0.242	0.34	Yes	0.060	0.155	0.22	Yes	0.808	0.154	0.97	Yes	0.801	0.195	1.00	Yes	1.00	**5.59**
		$U_{11} - U_{12}$	-----	-918.51	157	-211	15	-794	26	108	-127	-133	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.109	0.98	Yes	0.862	0.132	1.00	Yes	1.00	**4.01**
		$U_{12} - U_{13}$	-----	-1242.43	-57	-273	-288	-827	97	6	-107	-360	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.151	1	Yes	0.830	0.114	0.95	Yes	1.00	**4.35**
		$U_{13} - U_{14}$	-----	-1387.95	-198	-511	-553	-1349	-28	5	-174	-250	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.194	1	Yes	0.796	0.149	0.95	Yes	1.00	**4.27**
		$U_{14} - U_{15}$	-----	-1429.54	-393	-283	-872	-912	69	-277	-381	-87	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.166	1	Yes	0.820	0.101	0.93	Yes	1.00	**5.26**
		$U_{15} - U_{16}$	-----	-1412.92	-266	-441	-515	-1100	-63	-318	-199	73	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.174	1	Yes	0.810	0.121	0.94	Yes	1.00	**5.61**
		$U_{16} - U_{17}$	-----	-1375.05	-401	-201	-1052	-704	-127	-289	-139	47	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.195	1	Yes	0.788	0.116	0.91	Yes	1.00	**6.64**
		$U_{17} - U_{18}$	-----	-1096.26	-553	58	-295	-221	-76	-132	-319	473	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.126	1	Yes	0.858	0.090	0.95	Yes	1.00	**5.67**
		$U_{18} - U_{19}$	-----	-731.52	-516	95	-300	-44	308	-237	115	520	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.162	1	Yes	0.823	0.104	0.93	Yes	1.00	**5.96**
		$U_{19} - U_{20}$	-----	-577.12	-799	314	-1045	-167	-163	-122	369	-279	-----	-----	-----	-----	-----	-----	-----	-----	0.655	0.340	1	Yes	0.649	0.210	0.86	Yes	1.00	**14.67**
	Structure 2	$U_0 - U_1$	-----	-572.74	291	-325	996	-1859	88	48	-25	-831	-----	-----	-----	-----	-----	-----	-----	-----	0.681	0.188	0.87	Yes	0.676	0.316	1.00	Yes	1.00	**13.95**
		$U_1 - U_2$	-----	-796.46	-150	-325	-250	-1167	-17	16	21	-408	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.219	1	Yes	0.769	0.177	0.95	Yes	1.00	**7.27**
		$U_2 - U_3$	-----	-1141.72	-123	-457	-274	-1374	-31	-73	-2	-575	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.177	1	Yes	0.810	0.140	0.96	Yes	1.00	**5.40**
		$U_3 - U_4$	-----	-1346.17	-537	-555	-850	-1570	-108	-32	-355	-420	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.227	1	Yes	0.767	0.140	0.91	Yes	1.00	**4.39**
		$U_4 - U_5$	-----	-1464.81	-591	-574	-1081	-1731	-112	-86	-299	-540	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.235	1	Yes	0.752	0.143	0.90	Yes	1.00	**4.51**
		$U_5 - U_6$	-----	-1518.76	-592	-41	-1426	-1083	-182	-39	-328	-524	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.209	1	Yes	0.780	0.118	0.90	Yes	1.00	**4.89**
		$U_6 - U_7$	-----	-1347.44	-343	-226	-958	-1426	-150	-94	-500	-393	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.217	1	Yes	0.767	0.127	0.90	Yes	1.00	**4.98**
		$U_7 - U_8$	-----	-1408.19	-333	-186	-1144	-1207	-67	-139	-425	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.186	1	Yes	0.802	0.108	0.91	Yes	1.00	**6.05**
		$U_8 - U_9$	-----	-1125.77	-378	200	-1254	-555	11	-182	-487	-121	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.224	1	Yes	0.764	0.133	0.90	Yes	1.00	**5.93**
		$U_9 - U_{10}$	402.38	-900.01	-27	613	-940	-406	-104	-180	-547	26	0.295	0.174	0.47	Yes	0.200	0.117	0.32	Yes	0.781	0.215	1	Yes	0.777	0.114	0.90	Yes	1.00	**9.40**
		$U_{10} - U_{11}$	874.08	-605.24	348	643	-1007	-425	-134	-84	-923	167	0.738	0.255	1.00	Yes	0.502	0.168	0.68	Yes	0.605	0.309	0.92	Yes	0.601	0.142	0.75	Yes	1.00	**11.86**
		$U_{11} - U_{12}$	640.46	-361.00	-2107	1875	-1539	-499	-244	-1108	-1296	762	0.541	0.455	1.00	Yes	0.363	0.304	0.67	Yes	0.361	0.285	0.65	Yes	0.359	0.297	0.66	Yes	1.00	**37.94**
		$U_{12} - U_{13}$	1061.16	-----	590	203	384	-1090	711	755	-390	1461	0.717	0.276	1.00	Yes	0.511	0.191	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.41**
		$U_{13} - U_{14}$	1159.26	-----	-1106	3865	-164	1632	555	1041	665	985	0.570	0.429	1.00	Yes	0.404	0.282	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.16**
		$U_{14} - U_{15}$	1309.36	-----	2542	-51	3272	-1312	510	728	731	-46	0.644	0.353	1.00	Yes	0.456	0.232	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.73**
		$U_{15} - U_{16}$	1342.54	-----	118	416	-109	-1228	231	495	-191	-453	0.812	0.181	1.00	Yes	0.577	0.122	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.61**
		$U_{16} - U_{17}$	1078.77	-----	656	228	420	-1040	12	347	-133	-708	0.795	0.205	1.00	Yes	0.529	0.135	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.29**
		$U_{17} - U_{18}$	786.12	-165.03	482	278	96	-853	-40	306	120	-393	0.789	0.202	1.00	Yes	0.525	0.134	0.66	Yes	0.196	0.157	0.36	Yes	0.195	0.145	0.34	Yes	1.00	**8.73**
		$U_{18} - U_{19}$	683.24	-597.56	616	219	233	-1175	22	174	-291	-753	0.686	0.310	1.00	Yes	0.450	0.198	0.65	Yes	0.710	0.231	0.95	Yes	0.706	0.199	0.91	Yes	1.00	**10.55**
		$U_{19} - U_{20}$	265.06	-729.44	260	106	-229	-998	-48	131	-175	-310	0.249	0.201	0.46	Yes	0.165	0.132	0.30	Yes	0.810	0.182	1	Yes	0.805	0.160	0.97	Yes	1.00	**6.36**
		$U_{20} - U_{21}$	69.65	-858.70	-48	18	-544	-842	-61	-13	-49	-449	0.054	0.171	0.23	Yes	0.038	0.112	0.15	Yes	0.789	0.209	1	Yes	0.784	0.122	0.91	Yes	1.00	**6.33**
		$U_{21} - U_{22}$	40.04	-797.29	-97	-61	-501	-1144	-172	-92	-435	-245	0.031	0.213	0.25	Yes	0.022	0.143	0.17	Yes	0.733	0.266	1	Yes	0.728	0.166	0.90	Yes	1.00	**5.46**
		$U_{22} - U_{23}$	76.99	-844.25	-30	-89	-763	-935	-40	-155	-295	65	0.060	0.168	0.23	Yes	0.042	0.113	0.16	Yes	0.776	0.223	1	Yes	0.771	0.135	0.91	Yes	1.00	**6.59**
		$U_{23} - U_{24}$	357.13	-861.84	-40	263	-778	-899	14	-38	-609	172	0.277	0.197	0.48	Yes	0.194	0.130	0.33	Yes	0.792	0.207	1	Yes	0.787	0.130	0.92	Yes	1.00	**10.76**
		$U_{24} - U_{25}$	471.34	-732.24	251	383	-528	-720	32	-50	-364	338	0.442	0.164	0.61	Yes	0.293	0.108	0.41	Yes	0.813	0.184	1	Yes	0.808	0.115	0.93	Yes	1.00	**10.26**
		$U_{25} - U_{26}$	759.90	-577.99	259	708	-648	-581	26	-26	-788	636	0.763	0.236	1.00	Yes	0.500	0.152	0.66	Yes	0.687	0.178	0.87	Yes	0.683	0.120	0.81	Yes	1.00	**18.23**
		$U_{26} - U_{27}$	36.13	-507.34	-884	867	-1256	-723	-581	-295	-1668	1073	0.036	0.457	0.50	Yes	0.024	0.302	0.33	Yes	0.603	0.389	1	Yes	0.599	0.213	0.82	Yes	1.00	**28.77**
		$U_{27} - U_{28}$	939.06	-----	-920	1643	34	-320	-25	-402	-206	889	0.692	0.300	1.00	Yes	0.460	0.197	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**21.84**
		$U_{28} - U_{29}$	1341.68	-----	103	193	139	-850	65	276	-243	1044	0.811	0.185	1.00	Yes	0.577	0.127	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.37**
		$U_{29} - U_{30}$	1157.26	-----	-929	3763	11	1649	583	1035	790	1068	0.569	0.421	1.00	Yes	0.403	0.277	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.41**
		$U_{30} - U_{31}$	1316.25	-----	2561	-233	3196	-1501	664	725	531	-276	0.647	0.345	1.00	Yes	0.458	0.227	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.89**
		$U_{31} - U_{32}$	1219.97	-----	64	348	-319	-900	263	435	16	-582	0.824	0.169	1.00	Yes	0.587	0.116	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.35**
		$U_{32} - U_{33}$	907.97	-136.69	612	161	433	-1000	22	250	-156	-688	0.767	0.225	1.00	Yes	0.515	0.150	0.67	Yes	0.137	0.167	0.31	Yes	0.136	0.141	0.28	Yes	1.00	**9.73**
		$U_{33} - U_{34}$	568.30	-798.73	448	118	2	-1412	-13	221	-311	-494	0.480	0.259	0.74	Yes	0.327	0.169	0.50	Yes	0.799	0.130	0.93	Yes	0.794	0.199	1.00	Yes	1.00	**8.95**
		$U_{34} - U_{35}$	57.40	-967.71	359	-219	-71	-1331	51	35	-70	-410	0.042	0.206	0.25	Yes	0.029	0.140	0.17	Yes	0.840	0.118	0.96	Yes	0.835	0.162	1.00	Yes	1.00	**5.83**
		$U_{35} - U_{36}$	-----	-1226.91	81	-482	-399	-1331	-14	90	40	-296	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.154	1	Yes	0.832	0.142	0.98	Yes	1.00	**4.94**
		$U_{36} - U_{37}$	-----	-1407.12	-313	-328	-765	-1425	-16	-123	-256	-324	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.192	1	Yes	0.801	0.127	0.93	Yes	1.00	**4.58**
		$U_{37} - U_{38}$	-----	-1416.81	-199	-430	-818	-1411	-95	-193	-344	-145	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.183	1	Yes	0.807	0.126	0.94	Yes	1.00	**5.04**
		$U_{38} - U_{39}$	-----	-1569.90	-170	-638	-996	-1634	14	-216	-415	-140	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.180	1	Yes	0.806	0.135	0.95	Yes	1.00	**5.23**
		$U_{39} - U_{40}$	-----	-1521.09	-647	-528	-1162	-1604	6	-138	-114	408	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.210	1	Yes	0.781	0.133	0.92	Yes	1.00	**6.82**
		$U_{40} - U_{41}$	-----	-1418.56	-524	-503	-1266	-1279	87	-170	108	171	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.178	1	Yes	0.808	0.114	0.93	Yes	1.00	**6.13**
		$U_{41} - U_{42}$	-----	-1161.88	-1027	28	-1082	-375	104	-135	-137	319	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.162	1	Yes	0.825	0.110	0.94	Yes	1.00	**6.13**
		$U_{42} - U_{43}$	-----	-876.89	-773	37	-506	-174	126	-319	170	307	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.146	1	Yes	0.846	0.117	0.97	Yes	1.00	**8.27**
		$U_{43} - U_{44}$	-----	-619.37	-1003	434	-758	-352	-288	-159	739	19	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.261	1	Yes	0.731	0.170	0.91	Yes	1.00	**15.57**
	Structure 3	$U_0 - U_1$	-----	-593.66	308	-286	1160	-1640	46	80	90	-1025	-----	-----	-----	-----	-----	-----	-----	-----	0.674	0.233	0.91	Yes	0.668	0.330	1.00	Yes	1.00	**16.97**
		$U_1 - U_2$	-----	-690.92	-77	-240	-60	-766	-14	-8	-138	-348	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.208	1	Yes	0.777	0.154	0.94	Yes	1.00	**4.58**
		$U_2 - U_3$	-----	-1032.30	-46	-253	8	-818	-31	-73	-130	-555	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.178	1	Yes	0.808	0.133	0.95	Yes	1.00	**4.78**
		$U_3 - U_4$	-----	-1377.26	-221	-381	-557	-1232	-112	-51	-127	-455	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.198	1	Yes	0.790	0.136	0.93	Yes	1.00	**5.25**
		$U_4 - U_5$	-----	-1400.51	-454	-144	-702	-874	-89	-78	-405	-556	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.181	1	Yes	0.803	0.096	0.90	Yes	1.00	**4.61**
		$U_5 - U_6$	-----	-1318.57	-268	-398	-637	-1301	-184	-150	-367	-349	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.227	1	Yes	0.756	0.144	0.90	Yes	1.00	**4.32**
		$U_6 - U_7$	-----	-1340.64	-510	-159	-1232	-674	-112	-294	-359	-237	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.222	1	Yes	0.769	0.136	0.91	Yes	1.00	**4.89**
		$U_7 - U_8$	-----	-1252.87	-230	67	-556	-591	-118	-279	-396	16	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.148	1	Yes	0.837	0.081	0.92	Yes	1.00	**6.93**
		$U_8 - U_9$	-----	-843.90	-132	279	-609	-139	-193	-173	-460	105	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.200	1	Yes	0.792	0.101	0.90	Yes	1.00	**6.17**
		$U_9 - U_{10}$	489.88	-623.01	40	479	-875	-78	21	65	-525	308	0.531	0.280	0.82	Yes	0.354	0.181	0.54	Yes	0.802	0.181	0.99	Yes	0.795	0.196	1.00	Yes	1.00	**17.95**
		$U_{10} - U_{11}$	406.84	-----	-447	678	256	-480	-225	-468	-880	2509	0.441	0.555	1.00	Yes	0.299	0.372	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**25.35**
		$U_{11} - U_{12}$	745.86	-----	-817	1840	-81	682	249	452	638	609	0.611	0.387	1.00	Yes	0.418	0.263	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.78**
		$U_{12} - U_{13}$	1000.20	-----	1223	-2	1659	-786	12	510	16	-410	0.693	0.303	1.00	Yes	0.483	0.207	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.63**
		$U_{13} - U_{14}$	854.52	-----	226	367	64	-533	-40	430	-267	-445	0.817	0.174	1.00	Yes	0.571	0.120	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.27**
		$U_{14} - U_{15}$	633.38	-307.61	466	228	186	-651	1	224	-83	-654	0.726	0.265	1.00	Yes	0.490	0.175	0.67	Yes	0.419	0.216	0.64	Yes	0.415	0.155	0.57	Yes	1.00	**8.50**
		$U_{15} - U_{16}$	312.29	-603.29	282	119	-242	-763	-65	148	100	201	0.358	0.215	0.58	Yes	0.246	0.148	0.40	Yes	0.821	0.131	0.96	Yes	0.814	0.181	1.00	Yes	1.00	**6.58**
		$U_{16} - U_{17}$	400.74	-581.83	392	81	-12	-879	148	-49	39	294	0.459	0.259	0.72	Yes	0.315	0.177	0.50	Yes	0.792	0.115	0.91	Yes	0.785	0.209	1.00	Yes	1.00	**8.46**
		$U_{17} - U_{18}$	112.99	-607.26	249	-163	-324	-734	63	19	-154	198	0.130	0.208	0.34	Yes	0.087	0.136	0.23	Yes	0.826	0.149	0.98	Yes	0.819	0.175	1.00	Yes	1.00	**6.27**
		$U_{18} - U_{19}$	-----	-548.74	14	-71	-685	-264	182	-203	51	128	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.248	1	Yes	0.740	0.163	0.91	Yes	1.00	**6.86**
		$U_{19} - U_{20}$	-----	-557.14	-373	-74	-471	-536	-149	-77	551	-244	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.234	1	Yes	0.751	0.128	0.88	Yes	1.00	**10.73**

Operating Loads - 2F1

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	29.10	-109.31	-186	51	695	-1394	45	164	-674	-2477	0.045	0.950	1.00	Yes	0.026	0.565	0.60	Yes	0.198	0.782	0.99	Yes	0.197	0.418	0.62	Yes	1.00	**23.29**
		L_1 - L_2	389.98	-35.19	0	-12	16	-943	330	-148	-546	197	0.597	0.400	1.00	Yes	0.364	0.265	0.63	Yes	0.064	0.274	0.34	Yes	0.063	0.283	0.35	Yes	1.00	**8.15**
		L_2 - L_3	619.42	-157.76	-50	45	-774	-790	-183	122	-225	-577	0.713	0.283	1.00	Yes	0.412	0.168	0.59	Yes	0.216	0.329	0.55	Yes	0.214	0.191	0.41	Yes	1.00	**7.88**
		L_3 - L_4	664.53	-326.25	20	380	-378	-777	271	-206	11	-259	0.765	0.231	1.00	Yes	0.454	0.148	0.61	Yes	0.446	0.217	0.67	Yes	0.442	0.188	0.63	Yes	1.00	**8.07**
		L_4 - L_5	16.25	-572.75	101	479	-321	151	-55	167	-147	-57	0.021	0.156	0.18	Yes	0.013	0.102	0.12	Yes	0.881	0.104	0.99	Yes	0.873	0.127	1.00	Yes	1.00	**5.13**
		L_5 - L_6	-----	-758.71	91	526	-79	212	162	-235	41	-176	-----	-----	-----	-----	-----	-----	-----	-----	0.885	0.107	1	Yes	0.875	0.116	1.00	Yes	1.00	**5.11**
		L_6 - L_7	-----	-1070.67	-484	498	64	-494	551	1237	-471	-837	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.124	1	Yes	0.862	0.078	0.95	Yes	1.00	**14.11**
		L_7 - L_8	-----	-1297.49	-66	1042	-21	649	299	381	420	202	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.166	1	Yes	0.822	0.138	0.96	Yes	1.00	**6.07**
		L_8 - L_9	-----	-1132.84	998	-2	1188	-249	150	304	126	-247	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.267	1	Yes	0.717	0.157	0.88	Yes	1.00	**6.52**
		L_9 - L_{10}	-----	-954.38	152	71	625	-896	337	-249	341	524	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.219	1	Yes	0.768	0.141	0.91	Yes	1.00	**10.78**
		L_{10} - L_{11}	28.33	-527.76	400	-109	220	-731	-243	61	-248	-516	0.037	0.284	0.33	Yes	0.021	0.170	0.20	Yes	0.811	0.155	0.97	Yes	0.804	0.194	1.00	Yes	1.00	**8.61**
		L_{11} - L_{12}	533.78	-176.17	395	-212	391	-933	120	-94	82	325	0.691	0.304	1.00	Yes	0.415	0.198	0.62	Yes	0.271	0.139	0.41	Yes	0.268	0.247	0.52	Yes	1.00	**7.83**
		L_{12} - L_{13}	993.81	-----	46	-161	-495	-762	-156	122	-431	-627	0.784	0.208	1.00	Yes	0.502	0.126	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.69**
		L_{13} - L_{14}	1279.08	-----	199	-521	50	-1549	139	36	-308	-79	0.752	0.239	1.00	Yes	0.487	0.146	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.23**
		L_{14} - L_{15}	1532.37	-----	-568	-151	-1263	-932	-149	164	-364	-1345	0.749	0.247	1.00	Yes	0.487	0.152	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.33**
		L_{15} - L_{16}	1551.43	-----	-304	-371	-949	-1475	107	-139	-807	-241	0.758	0.234	1.00	Yes	0.487	0.139	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.14**
		L_{16} - L_{17}	1159.68	-----	-1135	254	-921	-322	614	496	-310	-1014	0.733	0.257	1.00	Yes	0.476	0.160	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.91**
		L_{17} - L_{18}	908.70	-----	-643	226	-576	-278	62	-51	-619	-226	0.791	0.203	1.00	Yes	0.507	0.124	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**16.36**
		L_{18} - L_{19}	373.99	-----	-827	509	-468	150	199	316	-76	-852	0.572	0.425	1.00	Yes	0.387	0.273	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.72**
		L_{19} - L_{20}	36.86	-337.18	-994	603	-193	74	454	102	149	34	0.062	0.430	0.50	Yes	0.038	0.253	0.30	Yes	0.676	0.248	0.93	Yes	0.671	0.324	1.00	Yes	1.00	**15.47**
	Structure 2	L_0 - L_1	74.37	-177.84	-69	-114	700	-2387	38	131	-726	-2523	0.090	0.900	1.00	Yes	0.054	0.562	0.62	Yes	0.256	0.664	0.92	Yes	0.254	0.486	0.74	Yes	1.00	**27.03**
		L_1 - L_2	477.01	-----	193	-342	537	-1415	155	-59	-393	775	0.579	0.415	1.00	Yes	0.345	0.263	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.30**
		L_2 - L_3	958.57	-----	-44	-275	-65	-1059	-74	154	-94	-808	0.755	0.239	1.00	Yes	0.495	0.147	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.79**
		L_3 - L_4	1258.26	-----	-10	-514	-158	-1598	180	1	-907	343	0.739	0.259	1.00	Yes	0.498	0.163	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.10**
		L_4 - L_5	1691.78	-----	-443	-410	-1440	-1541	-77	162	96	-867	0.789	0.204	1.00	Yes	0.522	0.124	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.57**
		L_5 - L_6	1837.82	-----	-219	-486	-875	-2101	187	-85	-300	30	0.789	0.205	1.00	Yes	0.529	0.125	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.76**
		L_6 - L_7	1906.54	-----	-540	-163	-1716	-1824	-150	214	-11	-479	0.807	0.190	1.00	Yes	0.536	0.112	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.57**
		L_7 - L_8	1404.74	-39.44	-294	405	-1377	-812	213	-110	-491	-310	0.805	0.192	1.00	Yes	0.529	0.115	0.65	Yes	0.027	0.213	0.24	Yes	0.027	0.152	0.18	Yes	1.00	**7.78**
		L_8 - L_9	1072.29	-444.68	-73	629	-1096	-76	-65	175	-422	-1078	0.750	0.249	1.00	Yes	0.505	0.159	0.67	Yes	0.369	0.291	0.66	Yes	0.366	0.148	0.52	Yes	1.00	**9.55**
		L_9 - L_{10}	808.82	-777.75	-320	1073	-839	-305	384	-359	-878	-370	0.722	0.277	1.00	Yes	0.420	0.169	0.59	Yes	0.822	0.143	0.97	Yes	0.817	0.172	0.99	Yes	1.00	**13.73**
		L_{10} - L_{11}	389.60	-----	-1450	1112	-1289	-33	1140	792	-358	-2634	0.389	0.608	1.00	Yes	0.228	0.368	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**25.46**
		L_{11} - L_{12}	-----	-1045.27	-133	986	-321	617	83	-340	-2	-129	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.105	0.97	Yes	0.857	0.134	1.00	Yes	1.00	**5.83**
		L_{12} - L_{13}	-----	-1259.88	-403	-154	-363	-1263	-68	446	-638	-1085	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.226	1	Yes	0.760	0.127	0.89	Yes	1.00	**10.46**
		L_{13} - L_{14}	-----	-1544.01	-1028	2510	-482	1428	144	283	572	500	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.183	0.97	Yes	0.777	0.219	1.00	Yes	1.00	**8.64**
		L_{14} - L_{15}	-----	-1294.67	1596	-516	2671	-1146	351	343	33	-142	-----	-----	-----	-----	-----	-----	-----	-----	0.657	0.338	1	Yes	0.651	0.233	0.89	Yes	1.00	**5.31**
		L_{15} - L_{16}	-----	-1397.77	-881	277	-846	-1071	191	-292	-409	16	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.151	1	Yes	0.836	0.106	0.95	Yes	1.00	**11.67**
		L_{16} - L_{17}	-----	-1142.97	1185	65	1111	-906	-356	2	-108	-521	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.156	1	Yes	0.832	0.146	0.98	Yes	1.00	**9.99**
		L_{17} - L_{18}	-----	-781.06	480	86	571	-781	122	-162	-228	250	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.170	1	Yes	0.820	0.125	0.95	Yes	1.00	**7.06**
		L_{18} - L_{19}	81.77	-627.85	616	-13	151	-749	-188	72	-52	-457	0.093	0.215	0.31	Yes	0.053	0.126	0.18	Yes	0.842	0.153	1	Yes	0.837	0.145	0.99	Yes	1.00	**8.14**
		L_{19} - L_{20}	507.31	-515.98	463	73	-33	-1251	147	-161	-1184	147	0.575	0.422	1.00	Yes	0.340	0.262	0.61	Yes	0.692	0.255	0.95	Yes	0.688	0.241	0.93	Yes	1.00	**10.31**
		L_{20} - L_{21}	865.75	-401.71	374	-91	-667	-1476	-181	71	-208	-831	0.690	0.305	1.00	Yes	0.453	0.186	0.64	Yes	0.379	0.230	0.61	Yes	0.377	0.215	0.60	Yes	1.00	**12.22**
		L_{21} - L_{22}	800.25	-78.64	-25	-199	-238	-2317	138	-152	138	168	0.638	0.356	1.00	Yes	0.427	0.223	0.65	Yes	0.074	0.300	0.38	Yes	0.074	0.338	0.42	Yes	1.00	**10.65**
		L_{22} - L_{23}	828.94	-151.48	-304	111	-1537	-1017	-56	206	-367	-1021	0.661	0.334	1.00	Yes	0.442	0.213	0.66	Yes	0.143	0.387	0.53	Yes	0.142	0.224	0.37	Yes	1.00	**9.38**
		L_{23} - L_{24}	959.48	-400.98	-28	528	-975	-1201	170	-140	-476	343	0.765	0.227	1.00	Yes	0.502	0.137	0.64	Yes	0.379	0.152	0.54	Yes	0.376	0.175	0.56	Yes	1.00	**16.68**
		L_{24} - L_{25}	504.17	-493.12	160	499	-801	-299	-104	147	-10	-1748	0.571	0.422	1.00	Yes	0.338	0.257	0.60	Yes	0.661	0.172	0.84	Yes	0.657	0.155	0.82	Yes	1.00	**13.25**
		L_{25} - L_{26}	-----	-653.50	-18	634	-432	65	93	-170	-468	-204	-----	-----	-----	-----	-----	-----	-----	-----	0.876	0.111	0.99	Yes	0.871	0.122	1.00	Yes	1.00	**7.97**
		L_{26} - L_{27}	-----	-764.69	-973	953	-447	-10	968	692	-293	-1200	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.189	1	Yes	0.803	0.156	0.96	Yes	1.00	**15.68**
		L_{27} - L_{28}	-----	-1160.92	-286	1234	-323	561	335	-203	-213	-165	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.123	0.98	Yes	0.846	0.152	1.00	Yes	1.00	**9.24**
		L_{28} - L_{29}	-----	-1411.19	22	-373	-136	-1434	-111	457	-225	-510	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.141	1	Yes	0.844	0.143	0.99	Yes	1.00	**9.16**
		L_{29} - L_{30}	-----	-1542.71	-1192	2559	-610	1432	187	334	637	736	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.190	0.98	Yes	0.776	0.223	1.00	Yes	1.00	**9.52**
		L_{30} - L_{31}	-----	-1314.62	1768	-548	2484	-976	435	388	24	-94	-----	-----	-----	-----	-----	-----	-----	-----	0.668	0.323	1	Yes	0.661	0.217	0.88	Yes	1.00	**3.74**
		L_{31} - L_{32}	-----	-1389.98	-518	51	-653	-955	247	-251	-465	2	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.156	1	Yes	0.831	0.095	0.93	Yes	1.00	**8.19**
		L_{32} - L_{33}	-----	-1040.12	1035	-73	818	-813	-365	2	56	-319	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.126	0.99	Yes	0.853	0.141	1.00	Yes	1.00	**7.49**
		L_{33} - L_{34}	-----	-708.15	573	-26	708	-873	100	-127	106	749	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.160	1	Yes	0.832	0.153	0.99	Yes	1.00	**8.61**
		L_{34} - L_{35}	540.93	-715.65	808	-115	332	-1498	-211	98	484	-1399	0.483	0.408	0.90	Yes	0.281	0.248	0.53	Yes	0.757	0.164	0.93	Yes	0.751	0.240	1.00	Yes	1.00	**15.73**
		L_{35} - L_{36}	958.56	-286.18	573	-163	319	-1487	165	-124	-1266	476	0.670	0.320	1.00	Yes	0.452	0.204	0.66	Yes	0.237	0.157	0.4	Yes	0.235	0.201	0.44	Yes	1.00	**12.81**
		L_{36} - L_{37}	1281.50	-----	260	-287	-596	-1670	-198	157	24	-963	0.735	0.263	1.00	Yes	0.483	0.159	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.78**
		L_{37} - L_{38}	1769.49	-----	-283	-667	-1063	-2158	92	-171	-892	-78	0.749	0.245	1.00	Yes	0.498	0.146	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.03**
		L_{38} - L_{39}	1852.91	-----	-585	-221	-1626	-1231	-106	173	-229	-962	0.795	0.204	1.00	Yes	0.534	0.127	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.74**
		L_{39} - L_{40}	1656.06	-----	-441	-320	-1336	-1968	124	-127	-561	67	0.772	0.224	1.00	Yes	0.511	0.134	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.62**
		L_{40} - L_{41}	1197.37	-----	-1155	200	-1451	-509	521	512	-305	-1386	0.710	0.284	1.00	Yes	0.479	0.184	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.19**
		L_{41} - L_{42}	1020.39	-----	-914	328	-709	-405	418	32	-305	160	0.815	0.180	1.00	Yes	0.536	0.106	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**19.23**
		L_{42} - L_{43}	509.78	-----	-1188	591	-616	15	647	603	-67	-806	0.619	0.374	1.00	Yes	0.368	0.236	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**18.25**
		L_{43} - L_{44}	106.02	-324.96	-2592	1089	-90	-62	1338	390	-57	-16	0.129	0.747	0.88	Yes	0.077	0.473	0.55	Yes	0.467	0.502	0.97	Yes	0.464	0.528	1.00	Yes	1.00	**40.98**
	Structure 3	L_0 - L_1	17.03	-360.54	24	-156	538	-1129	26	118	-201	-910	0.026	0.528	0.56	Yes	0.016	0.347	0.37	Yes	0.655	0.344	1	Yes	0.649	0.339	0.99	Yes	1.00	**14.21**
		L_1 - L_2	257.34	-23.34	213	-249	777	-1348	152	-30	433	942	0.394	0.600	1.00	Yes	0.266	0.382	0.65	Yes	0.042	0.333	0.38	Yes	0.042	0.405	0.45	Yes	1.00	**14.16**
		L_2 - L_3	825.46	-----	-3	-222	-138	-767	-57	167	-308	-1029	0.719	0.280	1.00	Yes	0.460	0.172	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.98**
		L_3 - L_4	1134.63	-----	28	-406	44	-1399	191	4	-777	534	0.717	0.275	1.00	Yes	0.465	0.170	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.23**
		L_4 - L_5	1570.00	-----	-390	-243	-1242	-1171	-43	216	-31	-1054	0.767	0.224	1.00	Yes	0.492	0.134	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.25**
		L_5 - L_6	1574.40	-----	-144	-440	-272	-1685	234	-31	-301	214	0.769	0.224	1.00	Yes	0.500	0.136	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.24**
		L_6 - L_7	1256.19	-----	-1294	364	-995	-255	480	277	-176	-881	0.739	0.252	1.00	Yes	0.479	0.156	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.16**
		L_7 - L_8	1068.42	-----	-92	192	-490	-474	124	-132	-535	-288	0.843	0.149	1.00	Yes	0.539	0.091	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.29**
		L_8 - L_9	483.50	-----	-692	438	-616	43	362	359	-61	-1054	0.626	0.368	1.00	Yes	0.376	0.233	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.45**
		L_9 - L_{10}	-----	-576.26	-107	444	-274	129	141	-159	52	-55	-----	-----	-----	-----	-----	-----	-----	-----	0.886	0.079	0.97	Yes	0.878	0.118	1.00	Yes	1.00	**7.49**
		L_{10} - L_{11}	-----	-932.16	-501	673	-274	-267	-80	633	-808	-2206	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.240	1	Yes	0.750	0.106	0.86	Yes	1.00	**13.12**
		L_{11} - L_{12}	-----	-1289.18	-91	1096	-19	640	262	395	445	96	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.172	1	Yes	0.816	0.145	0.97	Yes	1.00	**7.72**
		L_{12} - L_{13}	-----	-1102.77	894	-20	1284	-196	-112	67	-196	-310	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.283	1	Yes	0.698	0.170	0.87	Yes	1.00	**4.54**
		L_{13} - L_{14}	-----	-1073.45	93	110	181	-635	239	-230	-699	-168	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.120	1	Yes	0.864	0.100	0.97	Yes	1.00	**7.88**
		L_{14} - L_{15}	-----	-729.26	473	56	262	-397	-232	91	-184	-357	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.134	1	Yes	0.855	0.107	0.97	Yes	1.00	**5.88**
		L_{15} - L_{16}	205.92	-518.33	460	99	287	-762	207	-196	-337	34	0.267	0.262	0.53	Yes	0.160	0.170	0.34	Yes	0.797	0.182	0.98	Yes	0.790	0.202	1.00	Yes	1.00	**6.09**
		L_{16} - L_{17}	625.71	-----	67	-64	-272	-804	-111	321	-235	-528	0.720	0.279	1.00	Yes	0.428	0.177	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.01**
		L_{17} - L_{18}	681.54	-47.50	16	-106	-642	-765	91	-104	-171	-106	0.784	0.212	1.00	Yes	0.454	0.127	0.59	Yes	0.065	0.254	0.32	Yes	0.064	0.185	0.25	Yes	1.00	**7.07**
		L_{18} - L_{19}	398.23	-----	-674	133	-244	-175	484	622	56	-852	0.609	0.385	1.00	Yes	0.372	0.250	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.97**
		L_{19} - L_{20}	147.23	-197.06	-2144	2053	637	-739	-376	-102	408	112	0.225	0.731	0.96	Yes	0.133	0.447	0.58	Yes	0.358	0.446	0.81	Yes	0.355	0.643	1.00	Yes	1.00	**97.10**

Moment (End) AI Operating

Operating Loads - 2F1

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	$U_0 - L_0$	-----	-269.50	-117	179	-14	54	-1045	-335	194	62	-----	-----	-----	-----	-----	-----	-----	-----	0.602	0.397	1	Yes	0.570	0.229	0.80	Yes	1.00	**3.01**
		$U_1 - L_1$	18.29	-331.99	-227	222	27	-19	-239	-3	535	188	0.033	0.445	0.48	Yes	0.018	0.245	0.27	Yes	0.725	0.259	0.99	Yes	0.702	0.290	1.00	Yes	1.00	**6.06**
		$U_2 - L_2$	122.54	-261.79	-194	242	111	-123	803	362	697	180	0.220	0.542	0.77	Yes	0.121	0.298	0.42	Yes	0.572	0.421	1	Yes	0.554	0.309	0.87	Yes	1.00	**10.21**
		$U_3 - L_3$	225.68	-128.78	-130	158	227	-217	661	440	-1020	-632	0.406	0.586	1.00	Yes	0.223	0.322	0.55	Yes	0.282	0.328	0.62	Yes	0.272	0.290	0.57	Yes	1.00	**15.98**
		$U_4 - L_4$	-----	-173.42	29	-36	325	-324	844	208	732	184	-----	-----	-----	-----	-----	-----	-----	-----	0.381	0.610	1	Yes	0.367	0.415	0.79	Yes	1.00	**13.41**
		$U_5 - L_5$	-----	-334.82	76	-89	171	-190	850	335	693	453	-----	-----	-----	-----	-----	-----	-----	-----	0.606	0.391	1	Yes	0.578	0.193	0.78	Yes	1.00	**3.71**
		$U_6 - L_6$	-----	-379.88	85	-78	184	-188	1194	580	1177	570	-----	-----	-----	-----	-----	-----	-----	-----	0.575	0.420	1	Yes	0.545	0.164	0.71	Yes	1.00	**3.65**
		$U_7 - L_7$	-----	-322.36	126	-141	224	-244	916	211	844	226	-----	-----	-----	-----	-----	-----	-----	-----	0.539	0.461	1	Yes	0.497	0.240	0.74	Yes	1.00	**2.72**
		$U_8 - L_8$	-----	-1213.38	407	483	254	-310	-302	-338	683	79	-----	-----	-----	-----	-----	-----	-----	-----	0.879	0.113	1	Yes	0.844	0.090	0.94	Yes	1.00	**8.77**
		$U_9 - L_9$	-----	-666.85	-355	394	-232	260	-203	-11	616	285	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.201	1	Yes	0.753	0.219	0.98	Yes	1.00	**4.27**
		$U_{10} - L_{10}$	-----	-784.41	-365	395	-168	145	687	415	621	268	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.181	1	Yes	0.774	0.205	0.98	Yes	1.00	**6.71**
		$U_{11} - L_{11}$	-----	-672.83	-318	408	-167	218	35	214	628	369	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.186	1	Yes	0.783	0.190	0.98	Yes	1.00	**6.46**
		$U_{12} - L_{12}$	-----	-552.50	-269	278	-126	133	-464	-46	394	299	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.186	0.99	Yes	0.758	0.238	1.00	Yes	1.00	**6.87**
		$U_{13} - L_{13}$	-----	-390.02	-195	220	-66	86	115	192	251	143	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.169	0.96	Yes	0.747	0.251	1.00	Yes	1.00	**6.62**
		$U_{14} - L_{14}$	-----	-208.54	-335	356	168	-174	-627	-997	-1125	-864	-----	-----	-----	-----	-----	-----	-----	-----	0.465	0.533	1	Yes	0.441	0.456	0.90	Yes	1.00	**26.32**
		$U_{15} - L_{15}$	68.91	-308.62	-56	50	241	-261	321	-191	-761	-135	0.124	0.554	0.68	Yes	0.068	0.305	0.38	Yes	0.692	0.306	1	Yes	0.653	0.334	0.99	Yes	1.00	**12.96**
		$U_{16} - L_{16}$	-----	-231.19	58	-63	175	-182	441	105	701	160	-----	-----	-----	-----	-----	-----	-----	-----	0.521	0.477	1	Yes	0.489	0.233	0.73	Yes	1.00	**4.07**
		$U_{17} - L_{17}$	-----	-338.24	87	-101	161	-178	498	207	483	220	-----	-----	-----	-----	-----	-----	-----	-----	0.633	0.359	1	Yes	0.584	0.181	0.77	Yes	1.00	**2.70**
		$U_{18} - L_{18}$	-----	-417.87	188	-194	343	-353	694	182	760	186	-----	-----	-----	-----	-----	-----	-----	-----	0.612	0.380	1	Yes	0.581	0.200	0.79	Yes	1.00	**3.45**
		$U_{19} - L_{19}$	-----	-514.19	195	-208	379	-397	611	125	752	148	-----	-----	-----	-----	-----	-----	-----	-----	0.642	0.355	1	Yes	0.598	0.184	0.79	Yes	1.00	**4.21**
		$U_{20} - L_{20}$	-----	-512.34	233	-280	383	-450	443	58	447	59	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.249	1	Yes	0.656	0.238	0.90	Yes	1.00	**3.69**
	Structure 2	$U_0 - L_0$	-----	-684.22	-314	501	-159	262	-437	-74	61	10	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.180	1	Yes	0.733	0.213	0.95	Yes	1.00	**4.37**
		$U_1 - L_1$	-----	-709.75	-539	542	-211	218	94	128	621	157	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.180	1	Yes	0.761	0.230	1.00	Yes	1.00	**5.78**
		$U_2 - L_2$	-----	-589.30	-443	462	-156	172	603	442	616	277	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.203	1	Yes	0.751	0.236	0.99	Yes	1.00	**5.47**
		$U_3 - L_3$	-----	-444.62	-209	226	-78	89	493	371	537	262	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.240	1	Yes	0.697	0.205	0.91	Yes	1.00	**4.34**
		$U_4 - L_4$	-----	-319.29	-227	238	-22	32	-4	251	557	235	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.275	1	Yes	0.676	0.304	0.98	Yes	1.00	**7.93**
		$U_5 - L_5$	107.98	-314.36	-204	232	96	-79	-505	49	39	-45	0.194	0.442	0.64	Yes	0.107	0.243	0.36	Yes	0.710	0.283	1	Yes	0.665	0.296	0.97	Yes	1.00	**14.87**
		$U_6 - L_6$	342.53	-86.10	-126	130	195	-199	-432	-53	-313	-384	0.616	0.379	1.00	Yes	0.339	0.209	0.55	Yes	0.194	0.169	0.37	Yes	0.182	0.254	0.44	Yes	1.00	**14.95**
		$U_7 - L_7$	-----	-121.69	30	-36	279	-322	51	-211	933	-23	-----	-----	-----	-----	-----	-----	-----	-----	0.275	0.718	1	Yes	0.257	0.412	0.67	Yes	1.00	**14.04**
		$U_8 - L_8$	-----	-402.31	161	-177	284	-305	528	169	620	199	-----	-----	-----	-----	-----	-----	-----	-----	0.583	0.416	1	Yes	0.579	0.267	0.85	Yes	1.00	**3.98**
		$U_9 - L_9$	-----	-587.56	279	-282	492	-504	925	468	398	314	-----	-----	-----	-----	-----	-----	-----	-----	0.654	0.340	1	Yes	0.630	0.214	0.85	Yes	1.00	**5.09**
		$U_{10} - L_{10}$	-----	-636.53	242	-248	429	-445	931	529	683	458	-----	-----	-----	-----	-----	-----	-----	-----	0.629	0.362	1	Yes	0.595	0.196	0.80	Yes	1.00	**4.88**
		$U_{11} - L_{11}$	-----	-627.74	240	-237	393	-394	969	538	948	587	-----	-----	-----	-----	-----	-----	-----	-----	0.631	0.362	1	Yes	0.587	0.174	0.77	Yes	1.00	**4.00**
		$U_{12} - L_{12}$	-----	-632.58	210	-197	357	-352	1216	513	1078	530	-----	-----	-----	-----	-----	-----	-----	-----	0.607	0.386	1	Yes	0.548	0.153	0.71	Yes	1.00	**3.88**
		$U_{13} - L_{13}$	-----	-513.00	272	-271	418	-412	889	224	791	224	-----	-----	-----	-----	-----	-----	-----	-----	0.572	0.425	1	Yes	0.495	0.200	0.70	Yes	1.00	**3.33**
		$U_{14} - L_{14}$	-----	-1098.61	-423	391	380	-367	-32	-246	859	43	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.189	1	Yes	0.728	0.075	0.81	Yes	1.00	**8.79**
		$U_{15} - L_{15}$	-----	-639.00	-499	483	-269	264	34	10	743	50	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.278	1	Yes	0.616	0.239	0.86	Yes	1.00	**6.09**
		$U_{16} - L_{16}$	-----	-681.89	-481	471	-197	166	136	178	759	164	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.208	1	Yes	0.731	0.204	0.94	Yes	1.00	**5.79**
		$U_{17} - L_{17}$	-----	-660.26	-464	464	-200	198	63	146	567	164	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.178	1	Yes	0.768	0.216	0.99	Yes	1.00	**6.65**
		$U_{18} - L_{18}$	-----	-606.65	-422	441	-165	167	23	94	585	184	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.188	1	Yes	0.773	0.226	1.00	Yes	1.00	**6.53**
		$U_{19} - L_{19}$	-----	-503.79	-252	253	-95	95	-406	71	485	176	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.184	0.95	Yes	0.752	0.243	1.00	Yes	1.00	**6.23**
		$U_{20} - L_{20}$	-----	-368.80	-175	184	-50	54	60	89	487	168	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.243	1	Yes	0.707	0.210	0.92	Yes	1.00	**6.38**
		$U_{21} - L_{21}$	14.21	-338.46	-205	219	14	-4	-122	83	33	-146	0.026	0.322	0.35	Yes	0.014	0.177	0.20	Yes	0.765	0.145	0.91	Yes	0.716	0.280	1.00	Yes	1.00	**9.56**
		$U_{22} - L_{22}$	-----	-140.29	-153	172	218	-244	1184	77	1491	235	-----	-----	-----	-----	-----	-----	-----	-----	0.316	0.677	1	Yes	0.297	0.312	0.61	Yes	1.00	**18.80**
		$U_{23} - L_{23}$	-----	-246.92	39	-44	175	-190	533	169	552	211	-----	-----	-----	-----	-----	-----	-----	-----	0.558	0.438	1	Yes	0.522	0.242	0.77	Yes	1.00	**4.89**
		$U_{24} - L_{24}$	-----	-301.30	74	-78	178	-186	588	210	414	195	-----	-----	-----	-----	-----	-----	-----	-----	0.618	0.373	1	Yes	0.577	0.213	0.79	Yes	1.00	**3.69**
		$U_{25} - L_{25}$	-----	-399.77	118	-119	251	-250	593	229	533	281	-----	-----	-----	-----	-----	-----	-----	-----	0.601	0.390	1	Yes	0.597	0.242	0.84	Yes	1.00	**3.90**
		$U_{26} - L_{26}$	-----	-461.01	199	-206	392	-408	713	313	793	404	-----	-----	-----	-----	-----	-----	-----	-----	0.614	0.376	1	Yes	0.587	0.209	0.80	Yes	1.00	**3.93**
		$U_{27} - L_{27}$	-----	-506.22	227	-230	436	-442	783	330	693	446	-----	-----	-----	-----	-----	-----	-----	-----	0.625	0.371	1	Yes	0.589	0.205	0.80	Yes	1.00	**4.26**
		$U_{28} - L_{28}$	-----	-544.89	183	-162	401	-385	1346	447	1295	500	-----	-----	-----	-----	-----	-----	-----	-----	0.629	0.369	1	Yes	0.584	0.170	0.76	Yes	1.00	**4.82**
		$U_{29} - L_{29}$	-----	-493.25	219	-225	476	-473	879	144	866	182	-----	-----	-----	-----	-----	-----	-----	-----	0.550	0.443	1	Yes	0.476	0.228	0.71	Yes	1.00	**5.48**
		$U_{30} - L_{30}$	-----	-1138.85	-501	441	240	-253	-103	-149	549	-191	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.127	1	Yes	0.784	0.093	0.88	Yes	1.00	**8.44**
		$U_{31} - L_{31}$	-----	-697.17	-471	457	-313	307	-212	39	480	99	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.217	1	Yes	0.672	0.226	0.90	Yes	1.00	**4.78**
		$U_{32} - L_{32}$	-----	-840.33	-399	391	-221	194	52	96	592	179	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.191	1	Yes	0.728	0.171	0.90	Yes	1.00	**5.95**
		$U_{33} - L_{33}$	-----	-823.00	-436	433	-250	235	-80	159	541	232	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.170	1	Yes	0.769	0.192	0.97	Yes	1.00	**6.63**
		$U_{34} - L_{34}$	-----	-801.87	-435	456	-243	243	-724	-72	511	252	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.200	1	Yes	0.750	0.201	0.96	Yes	1.00	**7.32**
		$U_{35} - L_{35}$	-----	-727.39	-500	518	-256	270	-166	139	630	373	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.164	0.98	Yes	0.780	0.220	1.00	Yes	1.00	**8.09**
		$U_{36} - L_{36}$	-----	-497.61	-300	321	-137	158	-13	113	318	204	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.151	0.88	Yes	0.717	0.280	1.00	Yes	1.00	**6.63**
		$U_{37} - L_{37}$	-----	-205.94	-355	411	51	-53	-1011	-591	-597	-446	-----	-----	-----	-----	-----	-----	-----	-----	0.465	0.534	1	Yes	0.436	0.526	0.97	Yes	1.00	**27.86**
		$U_{38} - L_{38}$	294.33	-149.85	-184	188	162	-171	-255	-563	-781	-255	0.529	0.466	1.00	Yes	0.291	0.257	0.55	Yes	0.337	0.246	0.59	Yes	0.317	0.240	0.56	Yes	1.00	**15.92**
		$U_{39} - L_{39}$	52.25	-297.95	-61	41	197	-219	288	-424	-860	-83	0.094	0.529	0.63	Yes	0.052	0.291	0.35	Yes	0.673	0.326	1	Yes	0.630	0.280	0.92	Yes	1.00	**11.34**
		$U_{40} - L_{40}$	-----	-323.19	24	-32	214	-218	602	169	-54	9	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.258	1	Yes	0.684	0.278	0.97	Yes	1.00	**7.97**
		$U_{41} - L_{41}$	-----	-359.78	101	-109	182	-194	577	204	622	241	-----	-----	-----	-----	-----	-----	-----	-----	0.612	0.385	1	Yes	0.564	0.176	0.75	Yes	1.00	**2.89**
		$U_{42} - L_{42}$	-----	-472.06	194	-203	397	-406	693	183	593	201	-----	-----	-----	-----	-----	-----	-----	-----	0.632	0.361	1	Yes	0.602	0.208	0.81	Yes	1.00	**4.15**
		$U_{43} - L_{43}$	-----	-545.49	217	-235	407	-426	667	198	1011	348	-----	-----	-----	-----	-----	-----	-----	-----	0.624	0.375	1	Yes	0.585	0.181	0.77	Yes	1.00	**4.22**
		$U_{44} - L_{44}$	-----	-607.28	260	-322	437	-551	541	92	809	137	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.266	1	Yes	0.651	0.234	0.89	Yes	1.00	**4.82**
	Structure 3	$U_0 - L_0$	-----	-551.28	-242	349	-133	231	-536	-70	107	14	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.212	1	Yes	0.691	0.179	0.87	Yes	1.00	**3.01**
		$U_1 - L_1$	-----	-646.05	-428	422	-211	211	91	99	615	145	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.192	1	Yes	0.752	0.199	0.96	Yes	1.00	**5.30**
		$U_2 - L_2$	-----	-534.58	-323	341	-161	173	-207	159	648	306	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.212	1	Yes	0.744	0.193	0.94	Yes	1.00	**4.61**
		$U_3 - L_3$	-----	-399.04	-155	173	-70	85	193	240	550	268	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.253	1	Yes	0.688	0.175	0.87	Yes	1.00	**3.84**
		$U_4 - L_4$	-----	-304.96	-212	223	-34	40	551	315	567	216	-----	-----	-----	-----	-----	-----	-----	-----	0.687	0.304	1	Yes	0.645	0.286	0.94	Yes	1.00	**6.12**
		$U_5 - L_5$	78.06	-251.86	-186	206	59	-50	-1165	-44	20	-56	0.140	0.600	0.75	Yes	0.077	0.330	0.41	Yes	0.565	0.429	1	Yes	0.533	0.263	0.80	Yes	1.00	**11.25**
		$U_6 - L_6$	-----	-140.14	-46	46	245	-264	-58	-342	1101	101	-----	-----	-----	-----	-----	-----	-----	-----	0.313	0.683	1	Yes	0.297	0.337	0.64	Yes	1.00	**13.60**
		$U_7 - L_7$	-----	-297.53	88	-105	184	-205	489	44	456	187	-----	-----	-----	-----	-----	-----	-----	-----	0.602	0.394	1	Yes	0.570	0.234	0.81	Yes	1.00	**3.26**
		$U_8 - L_8$	-----	-405.39	146	-145	263	-264	788	367	753	390	-----	-----	-----	-----	-----	-----	-----	-----	0.586	0.408	1	Yes	0.556	0.226	0.79	Yes	1.00	**3.78**
		$U_9 - L_9$	-----	-585.38	167	-225	359	-451	1026	427	1166	717	-----	-----	-----	-----	-----	-----	-----	-----	0.702	0.291	1	Yes	0.681	0.209	0.90	Yes	1.00	**5.49**
		$U_{10} - L_{10}$	-----	-569.72	160	-154	283	-297	1365	755	1280	753	-----	-----	-----	-----	-----	-----	-----	-----	0.590	0.404	1	Yes	0.562	0.154	0.72	Yes	1.00	**4.24**
		$U_{11} - L_{11}$	-----	-490.81	218	-253	326	-374	1124	504	1004	516	-----	-----	-----	-----	-----	-----	-----	-----	0.585	0.412	1	Yes	0.554	0.208	0.77	Yes	1.00	**2.65**
		$U_{12} - L_{12}$	-----	-1106.89	-326	342	275	-374	-184	-152	1195	366	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.194	1	Yes	0.767	0.070	0.84	Yes	1.00	**7.85**
		$U_{13} - L_{13}$	-----	-432.07	-244	259	-156	169	113	39	603	152	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.273	1	Yes	0.667	0.255	0.93	Yes	1.00	**3.19**
		$U_{14} - L_{14}$	-----	-496.84	-225	242	-104	90	114	122	676	236	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.241	1	Yes	0.713	0.212	0.93	Yes	1.00	**4.80**
		$U_{15} - L_{15}$	-----	-411.78	-152	175	-80	89	-600	-92	627	253	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.247	1	Yes	0.710	0.178	0.89	Yes	1.00	**4.84**
		$U_{16} - L_{16}$	-----	-214.68	-419	411	19	-2	459	-538	-1233	-784	-----	-----	-----	-----	-----	-----	-----	-----	0.472	0.452	0.93	Yes	0.454	0.536	1.00	Yes	1.00	**23.93**
		$U_{17} - L_{17}$	205.96	-191.59	-275	277	166	-189	-564	-565	-938	-375	0.370	0.626	1.00	Yes	0.204	0.344	0.55	Yes	0.420	0.318	0.74	Yes	0.405	0.354	0.76	Yes	1.00	**17.70**
		$U_{18} - L_{18}$	83.62	-229.34	-89	95	194	-229	449	149	1194	294	0.150	0.638	0.79	Yes	0.083	0.351	0.44	Yes	0.501	0.491	1	Yes	0.485	0.292	0.78	Yes	1.00	**9.39**
		$U_{19} - L_{19}$	-----	-277.40	-7	-8	178	-193	460	244	590	291	-----	-----	-----	-----	-----	-----	-----	-----	0.606	0.390	1	Yes	0.587	0.246	0.84	Yes	1.00	**5.40**
		$U_{20} - L_{20}$	-----	-225.22	89	-107	154	-192	627	201	725	232	-----	-----	-----	-----	-----	-----	-----	-----	0.503	0.495	1	Yes	0.477	0.246	0.73	Yes	1.00	**2.21**

Moment (End) Al Operating

Operating Loads - 2F1

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	$U_0 - L_1$	453.52	-7.31	-102	53	5	-10	-1104	-446	49	119	0.595	0.398	1.00	Yes	0.359	0.219	0.58	Yes	0.012	0.316	0.33	Yes	0.011	0.120	0.14	Yes	1.00	**6.92**
		$U_1 - L_2$	334.93	-----	-87	23	-11	-26	-88	-95	-970	-292	0.602	0.392	1.00	Yes	0.331	0.216	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.88**
		$U_2 - L_3$	96.96	-227.60	-42	-1	-18	-62	-152	-133	-1456	-217	0.174	0.501	0.68	Yes	0.096	0.275	0.38	Yes	0.524	0.470	1	Yes	0.482	0.079	0.57	Yes	1.00	**11.87**
		$U_3 - L_4$	-----	-300.38	26	-13	2	-56	449	255	-807	-168	-----	-----	-----	-----	-----	-----	-----	-----	0.687	0.305	1	Yes	0.636	0.071	0.71	Yes	1.00	**6.39**
		$U_4 - L_4$	452.17	-----	9	126	-128	-3	16	240	868	276	0.663	0.332	1.00	Yes	0.365	0.183	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**16.35**
		$U_5 - L_5$	638.61	-----	-160	226	-30	90	-609	110	4	68	0.755	0.239	1.00	Yes	0.415	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.67**
		$U_5 - L_6$	600.30	-----	-256	252	-57	92	-749	-100	-711	-107	0.710	0.282	1.00	Yes	0.390	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.63**
		$U_6 - L_7$	620.74	-----	-68	321	18	101	-446	-157	-394	-270	0.734	0.264	1.00	Yes	0.404	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.90**
		$U_8 - L_8$	954.63	-----	-64	382	-25	175	216	-83	484	142	0.763	0.232	1.00	Yes	0.473	0.130	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.05**
		$U_8 - L_{10}$	1019.03	-----	-306	275	-124	116	144	-27	344	134	0.815	0.180	1.00	Yes	0.505	0.101	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.49**
		$U_{10} - L_{11}$	905.06	-----	-217	188	-130	83	-147	-391	-993	-447	0.764	0.231	1.00	Yes	0.473	0.132	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.82**
		$U_{11} - L_{12}$	745.14	-----	-233	101	-145	19	-91	-272	-1031	-564	0.737	0.262	1.00	Yes	0.405	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.02**
		$U_{12} - L_{13}$	574.35	-----	-196	146	-101	44	-52	-228	-655	-287	0.700	0.299	1.00	Yes	0.441	0.171	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.78**
		$U_{13} - L_{14}$	375.38	-----	-78	35	-30	-32	-130	-186	-753	-341	0.675	0.318	1.00	Yes	0.371	0.175	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.69**
		$U_{15} - L_{14}$	328.30	-287.72	-87	3	33	-117	-299	-461	414	-185	0.590	0.283	0.88	Yes	0.325	0.156	0.49	Yes	0.674	0.319	1	Yes	0.609	0.150	0.76	Yes	1.00	**16.49**
		$U_{16} - L_{15}$	384.53	-38.04	-131	88	-34	-15	-359	-9	461	-214	0.692	0.301	1.00	Yes	0.380	0.165	0.55	Yes	0.090	0.201	0.3	Yes	0.080	0.167	0.25	Yes	1.00	**10.61**
		$U_{17} - L_{16}$	483.50	-----	-135	92	-50	22	-639	-239	-271	-87	0.709	0.286	1.00	Yes	0.390	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.12**
		$U_{18} - L_{17}$	572.68	-----	-303	232	-136	94	-788	-175	-395	-97	0.677	0.314	1.00	Yes	0.372	0.173	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.29**
		$U_{19} - L_{18}$	647.09	-----	-312	239	-136	99	-832	-348	-462	-199	0.701	0.297	1.00	Yes	0.385	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.82**
		$U_{20} - L_{19}$	675.19	-----	-381	317	-179	144	-414	-207	-276	-139	0.731	0.263	1.00	Yes	0.402	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.24**
	Structure 2	$U_0 - L_1$	669.89	-----	-284	305	-103	129	-1252	-399	-139	13	0.663	0.328	1.00	Yes	0.365	0.181	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.72**
		$U_1 - L_2$	763.30	-----	-407	319	-159	113	-205	-336	170	-9	0.755	0.239	1.00	Yes	0.415	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.07**
		$U_2 - L_3$	634.37	-----	-330	274	-112	83	-204	-340	151	-8	0.750	0.249	1.00	Yes	0.412	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.97**
		$U_3 - L_4$	563.51	-----	-176	123	-41	15	-366	-383	218	46	0.751	0.241	1.00	Yes	0.413	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.93**
		$U_4 - L_5$	356.96	-88.08	-125	86	-7	-35	-385	-316	-666	-132	0.642	0.352	1.00	Yes	0.353	0.194	0.55	Yes	0.217	0.278	0.5	Yes	0.186	0.160	0.35	Yes	1.00	**11.07**
		$U_5 - L_6$	309.07	-245.98	-92	39	60	-115	-461	-188	-1011	-218	0.556	0.440	1.00	Yes	0.306	0.242	0.55	Yes	0.581	0.308	0.89	Yes	0.520	0.148	0.67	Yes	1.00	**14.85**
		$U_6 - L_7$	-----	-372.09	-2	-39	46	-99	34	-76	-475	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.196	1	Yes	0.713	0.113	0.83	Yes	1.00	**6.58**
		$U_8 - L_7$	606.30	-----	-187	157	-79	33	-269	-100	-6	-128	0.773	0.222	1.00	Yes	0.487	0.125	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.29**
		$U_8 - L_9$	726.69	-----	-333	256	-178	106	-212	-91	-35	-18	0.787	0.205	1.00	Yes	0.433	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.28**
		$U_{10} - L_9$	812.86	-----	-299	252	-162	126	-371	97	185	31	0.804	0.194	1.00	Yes	0.442	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.26**
		$U_{11} - L_{10}$	856.75	-----	-324	306	-162	160	-589	42	-295	64	0.780	0.218	1.00	Yes	0.429	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.32**
		$U_{12} - L_{11}$	822.16	-----	-316	343	-146	182	-742	52	-509	38	0.749	0.247	1.00	Yes	0.412	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.89**
		$U_{13} - L_{12}$	711.97	-----	-407	370	-185	181	-690	25	-468	-14	0.704	0.292	1.00	Yes	0.387	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.92**
		$U_{14} - L_{13}$	736.97	-----	-230	441	-40	155	-441	-89	-231	-127	0.729	0.271	1.00	Yes	0.401	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.45**
		$U_{14} - L_{15}$	568.89	-----	-180	336	-45	166	108	74	749	312	0.673	0.326	1.00	Yes	0.370	0.179	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.69**
		$U_{15} - L_{16}$	597.76	-----	-354	328	-172	161	339	-40	487	133	0.707	0.289	1.00	Yes	0.389	0.159	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.79**
		$U_{16} - L_{17}$	693.74	-----	-330	356	-132	160	312	-252	372	106	0.751	0.243	1.00	Yes	0.413	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.98**
		$U_{17} - L_{18}$	644.70	-----	-282	294	-115	132	217	-34	354	83	0.762	0.230	1.00	Yes	0.419	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.82**
		$U_{18} - L_{19}$	660.29	-----	-283	274	-87	101	101	-271	283	70	0.781	0.212	1.00	Yes	0.429	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.03**
		$U_{19} - L_{20}$	575.21	-----	-191	174	-70	43	71	-83	-427	-129	0.733	0.258	1.00	Yes	0.403	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.61**
		$U_{20} - L_{21}$	401.12	-----	-121	107	-22	-4	-207	-224	-403	-89	0.721	0.271	1.00	Yes	0.397	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.04**
		$U_{21} - L_{22}$	175.28	-239.02	-43	44	16	-89	278	63	-1170	-157	0.315	0.453	0.77	Yes	0.173	0.249	0.43	Yes	0.565	0.431	1	Yes	0.506	0.114	0.62	Yes	1.00	**14.72**
		$U_{23} - L_{22}$	436.82	-128.23	-115	67	11	-62	-215	-197	133	-124	0.786	0.210	1.00	Yes	0.432	0.115	0.55	Yes	0.305	0.139	0.45	Yes	0.271	0.147	0.42	Yes	1.00	**14.99**
		$U_{24} - L_{23}$	412.23	-----	-118	106	-33	19	-358	-25	-60	-41	0.741	0.255	1.00	Yes	0.408	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.33**
		$U_{25} - L_{24}$	601.14	-----	-193	175	-43	51	-196	73	-298	-81	0.766	0.233	1.00	Yes	0.422	0.132	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.07**
		$U_{26} - L_{25}$	653.56	-----	-268	275	-89	108	-351	79	-242	-49	0.773	0.220	1.00	Yes	0.425	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.53**
		$U_{27} - L_{26}$	626.82	-----	-270	293	-113	134	-494	69	-331	2	0.741	0.255	1.00	Yes	0.408	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.81**
		$U_{28} - L_{27}$	656.91	-----	-291	337	-110	158	-678	121	-486	22	0.712	0.284	1.00	Yes	0.391	0.156	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.82**
		$U_{29} - L_{28}$	578.94	-----	-335	324	-118	125	-647	-15	-480	-44	0.684	0.307	1.00	Yes	0.376	0.169	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.49**
		$U_{30} - L_{29}$	600.38	-----	-169	364	6	104	-415	100	-213	-168	0.710	0.281	1.00	Yes	0.390	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.49**
		$U_{30} - L_{31}$	736.62	-----	-260	443	-80	229	16	-119	381	161	0.729	0.263	1.00	Yes	0.401	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.30**
		$U_{31} - L_{32}$	739.62	-----	-428	376	-239	220	192	-205	414	99	0.732	0.261	1.00	Yes	0.402	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.60**
		$U_{32} - L_{33}$	879.87	-----	-349	364	-165	193	50	-211	270	42	0.802	0.191	1.00	Yes	0.441	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.29**
		$U_{33} - L_{34}$	891.80	-----	-337	303	-173	155	-42	-263	111	-82	0.812	0.179	1.00	Yes	0.447	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.65**
		$U_{34} - L_{35}$	789.66	-----	-291	246	-171	119	-167	-322	-556	-278	0.781	0.218	1.00	Yes	0.430	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.47**
		$U_{35} - L_{36}$	702.83	-----	-319	247	-178	101	-77	-156	-447	-253	0.761	0.237	1.00	Yes	0.419	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.30**
		$U_{36} - L_{37}$	535.62	-----	-174	141	-83	30	116	-224	-756	-232	0.683	0.310	1.00	Yes	0.430	0.178	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.37**
		$U_{38} - L_{37}$	-----	-370.57	-24	-27	51	-100	-286	-214	-15	-220	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.194	1	Yes	0.710	0.115	0.83	Yes	1.00	**8.97**
		$U_{39} - L_{38}$	431.83	-243.80	-130	67	68	-117	-188	-152	47	-38	0.777	0.221	1.00	Yes	0.427	0.122	0.55	Yes	0.581	0.203	0.79	Yes	0.516	0.167	0.69	Yes	1.00	**17.57**
		$U_{40} - L_{39}$	400.78	-39.93	-131	90	-10	-23	-354	108	56	-130	0.721	0.270	1.00	Yes	0.396	0.149	0.55	Yes	0.096	0.191	0.29	Yes	0.084	0.168	0.26	Yes	1.00	**10.05**
		$U_{41} - L_{40}$	560.84	-----	-173	126	-49	24	-402	-107	-432	-191	0.748	0.249	1.00	Yes	0.411	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.82**
		$U_{42} - L_{41}$	601.96	-----	-312	254	-125	94	-611	-178	-412	-168	0.712	0.287	1.00	Yes	0.391	0.158	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.71**
		$U_{43} - L_{42}$	734.86	-----	-365	296	-142	108	-641	-193	-399	-206	0.727	0.265	1.00	Yes	0.400	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.71**
		$U_{44} - L_{43}$	786.81	-----	-381	372	-172	160	-253	5	-197	-48	0.778	0.215	1.00	Yes	0.428	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.64**
	Structure 3	$U_0 - L_1$	644.92	-----	-265	262	-81	107	-952	-428	-161	-6	0.699	0.292	1.00	Yes	0.384	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.43**
		$U_1 - L_2$	694.18	-----	-367	268	-162	111	-98	-365	150	-52	0.752	0.248	1.00	Yes	0.414	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.43**
		$U_2 - L_3$	609.15	-----	-322	251	-129	90	-106	-518	113	-42	0.720	0.276	1.00	Yes	0.396	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.65**
		$U_3 - L_4$	542.23	-----	-153	107	-43	21	-103	-185	149	-29	0.795	0.198	1.00	Yes	0.437	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.29**
		$U_4 - L_5$	329.45	-56.72	-117	79	-29	-21	-327	-437	-884	-180	0.593	0.406	1.00	Yes	0.326	0.223	0.55	Yes	0.134	0.209	0.35	Yes	0.120	0.150	0.27	Yes	1.00	**9.91**
		$U_5 - L_6$	143.22	-270.18	-46	-9	24	-112	-154	-97	-1178	-289	0.258	0.484	0.75	Yes	0.142	0.266	0.41	Yes	0.633	0.362	1	Yes	0.572	0.143	0.72	Yes	1.00	**12.64**
		$U_7 - L_6$	447.84	-----	-91	44	-23	-25	-208	-238	-34	-83	0.805	0.185	1.00	Yes	0.443	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.19**
		$U_8 - L_7$	610.59	-----	-201	159	-95	52	-375	-125	158	-73	0.744	0.249	1.00	Yes	0.468	0.141	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.63**
		$U_8 - L_9$	806.69	-----	-245	128	-126	33	-563	-109	414	148	0.798	0.198	1.00	Yes	0.439	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.93**
		$U_{10} - L_9$	983.53	-----	-224	214	-73	86	-487	129	1	144	0.831	0.167	1.00	Yes	0.514	0.095	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.35**
		$U_{11} - L_{10}$	957.69	-----	-281	283	-86	109	-590	-38	-793	-179	0.766	0.227	1.00	Yes	0.474	0.129	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.37**
		$U_{12} - L_{11}$	940.13	-----	-49	378	14	139	-399	93	-576	-162	0.752	0.242	1.00	Yes	0.466	0.136	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.92**
		$U_{12} - L_{13}$	615.08	-----	-75	315	-17	146	292	66	480	164	0.727	0.267	1.00	Yes	0.400	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.43**
		$U_{13} - L_{14}$	636.60	-----	-281	250	-114	115	297	15	437	150	0.753	0.239	1.00	Yes	0.414	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.37**
		$U_{14} - L_{15}$	658.49	-----	-174	235	-70	92	188	-107	-441	-179	0.779	0.214	1.00	Yes	0.428	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.60**
		$U_{15} - L_{16}$	376.74	-----	-8	84	-59	-11	435	225	-1556	-716	0.552	0.447	1.00	Yes	0.304	0.246	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.20**
		$U_{17} - L_{16}$	-----	-368.46	61	-8	-84	-124	-141	66	254	32	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.156	1	Yes	0.780	0.158	0.94	Yes	1.00	**15.06**
		$U_{18} - L_{17}$	288.46	-160.45	-97	14	-92	-71	-361	-288	1204	-38	0.519	0.472	1.00	Yes	0.285	0.260	0.55	Yes	0.369	0.454	0.83	Yes	0.340	0.124	0.47	Yes	1.00	**18.60**
		$U_{19} - L_{18}$	383.56	-----	-81	13	-30	-19	-647	-501	685	279	0.690	0.302	1.00	Yes	0.379	0.166	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.36**
		$U_{20} - L_{19}$	608.14	-----	-125	76	-26	3	-198	-68	-29	58	0.798	0.196	1.00	Yes	0.482	0.108	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.55**

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
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	1.35	1.35	-0.85	-0.85					1.24	0.90	4.03	1.51	-----	Vehicle	-7.05	-0.94	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**59.93**	**99.88**	**93.99**	**156.66**
	U_1 - U_2	3.66	-3.76	1.57	1.57	-0.23	-0.23					1.24	0.90	3.66	1.75	-----	Vehicle	-3.76	-0.26	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**51.74**	**86.24**	**353.44**	**589.07**
	U_2 - U_3	2.55	-7.28	1.00	1.00	-0.69	-0.69					1.24	0.90	2.55	1.11	-----	Vehicle	-7.28	-0.77	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**81.94**	**136.57**	**115.06**	**191.76**
	U_3 - U_4	2.05	-4.84	0.89	0.89	-0.82	-0.82					1.24	0.90	2.05	0.99	-----	Vehicle	-4.84	-0.91	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**92.79**	**154.65**	**98.42**	**164.04**
	U_4 - U_5	2.25	-4.26	0.61	0.61	-1.14	-1.14					1.24	0.90	2.25	0.67	-----	Vehicle	-4.26	-1.26	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**135.49**	**225.81**	**71.38**	**118.97**
	U_5 - U_6	3.34	-7.20	0.11	0.11	-1.22	-1.22					1.24	0.90	3.34	0.12	-----	Vehicle	-7.20	-1.36	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**761.83**	**1269.71**	**65.22**	**108.70**
	U_6 - U_7	6.22	-5.16	0.58	0.58	-0.90	-0.90					1.24	0.90	6.22	0.64	-----	Vehicle	-5.16	-1.00	-----	Vehicle	14.00	0.75	2	9.33	5	73.85	92.32	1	401.94	401.9	**282.00**	**470.00**	**182.87**	**304.78**
	U_7 - U_8	-2.11	-14.70	0.04	0.04	-2.76	-2.76					1.24	0.90	-2.11	0.04	-----	Vehicle	-14.70	-3.07	-----	Vehicle	14.00	1.00	2	7.00	5	73.85	92.32	1	535.92	535.9	**6203.11**	**10338.51**	**77.57**	**129.29**
	U_8 - U_9	15.50	2.88	2.10	2.10	-0.13	-0.13					1.20	0.90	15.50	2.26	-----	Vehicle	2.88	-0.14	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**43.75**	**72.91**	**796.61**	**1327.69**
	U_9 - U_{10}	6.69	-6.01	0.92	0.92	-0.31	-0.31					1.20	0.90	6.69	0.99	-----	Vehicle	-6.01	-0.34	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**89.75**	**149.59**	**265.00**	**441.67**
	U_{10} - U_{11}	9.67	-1.66	1.57	1.57	-0.09	-0.09					1.20	0.90	9.67	1.69	-----	Vehicle	-1.66	-0.09	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**51.34**	**85.56**	**967.10**	**1611.83**
	U_{11} - U_{12}	7.40	-2.11	1.30	1.30	-0.26	-0.26					1.20	0.90	7.40	1.40	-----	Vehicle	-2.11	-0.27	-----	Vehicle	14.00	0.50	2	14.00	5	73.85	92.32	1	267.96	268.0	**85.20**	**141.99**	**445.21**	**742.01**
	U_{12} - U_{13}	9.24	-6.21	1.15	1.15	-0.60	-0.60					1.20	0.90	9.24	1.24	-----	Vehicle	-6.21	-0.65	-----	Vehicle	14.00	1.33	2	5.24	5	73.85	92.32	1	715.3575	715.4	**262.03**	**436.72**	**502.93**	**838.22**
	U_{13} - U_{14}	6.34	-2.26	2.27	2.27	-0.36	-0.36					1.20	0.90	6.34	2.45	-----	Vehicle	-2.26	-0.39	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**156.49**	**260.82**	**989.46**	**1649.10**
	U_{14} - U_{15}	3.46	-4.65	0.84	0.84	-1.37	-1.37					1.20	0.90	3.46	0.90	-----	Vehicle	-4.65	-1.47	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**425.45**	**709.08**	**260.52**	**434.19**
	U_{15} - U_{16}	9.23	-5.79	1.38	1.38	-0.99	-0.99					1.20	0.90	9.23	1.49	-----	Vehicle	-5.79	-1.07	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**256.02**	**426.71**	**357.37**	**595.62**
	U_{16} - U_{17}	2.63	-6.22	0.80	0.80	-1.49	-1.49					1.20	0.90	2.63	0.86	-----	Vehicle	-6.22	-1.61	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**448.48**	**747.46**	**237.93**	**396.55**
	U_{17} - U_{18}	5.96	-9.96	0.21	0.21	-1.40	-1.40					1.20	0.90	5.96	0.23	-----	Vehicle	-9.96	-1.51	-----	Vehicle	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	**1225.90**	**2043.16**	**183.78**	**306.30**
	U_{18} - U_{19}	3.04	-6.68	0.33	0.33	-1.12	-1.12					1.20	0.90	3.04	0.35	-----	Vehicle	-6.68	-1.20	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**303.61**	**506.02**	**86.60**	**144.34**
	U_{19} - U_{20}	-1.83	-11.18	1.12	1.12	-1.99	-1.99					1.20	0.90	-1.83	1.21	-----	Vehicle	-11.18	-2.15	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**90.36**	**150.60**	**47.24**	**78.73**
Structure 2	U_0 - U_1	10.02	-6.16	1.47	1.47	-0.67	-0.67					1.18	0.90	10.02	1.57	-----	Vehicle	-6.16	-0.71	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**67.94**	**113.23**	**152.71**	**254.52**
	U_1 - U_2	9.17	-4.67	1.46	1.46	-0.11	-0.11					1.18	0.90	9.17	1.55	-----	Vehicle	-4.67	-0.11	-----	Vehicle	17.00	0.75	2	11.33	5	73.85	92.32	1	488.07	488.1	**141.66**	**236.11**	**1971.15**	**3285.24**
	U_2 - U_3	8.60	-2.60	2.53	2.53	-0.22	-0.22					1.18	0.90	8.60	2.69	-----	Vehicle	-2.60	-0.23	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**60.78**	**101.30**	**731.24**	**1218.74**
	U_3 - U_4	8.30	-7.59	1.71	1.71	-0.75	-0.75					1.18	0.90	8.30	1.82	-----	Vehicle	-7.59	-0.80	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**203.24**	**338.73**	**463.23**	**772.04**
	U_4 - U_5	5.53	-4.81	2.28	2.28	-0.90	-0.90					1.18	0.90	5.53	2.43	-----	Vehicle	-4.81	-0.96	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**184.06**	**306.77**	**468.20**	**780.33**
	U_5 - U_6	2.61	-7.66	1.78	1.78	-1.62	-1.62					1.18	0.90	2.61	1.89	-----	Vehicle	-7.66	-1.73	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**237.16**	**395.27**	**258.38**	**430.63**
	U_6 - U_7	6.14	-9.62	2.14	2.14	-0.82	-0.82					1.18	0.90	6.14	2.28	-----	Vehicle	-9.62	-0.87	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**163.08**	**271.81**	**424.97**	**708.29**
	U_7 - U_8	8.07	-7.40	0.98	0.98	-2.29	-2.29					1.18	0.90	8.07	1.05	-----	Vehicle	-7.40	-2.43	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**354.09**	**590.16**	**152.36**	**253.94**
	U_8 - U_9	4.03	-10.39	1.19	1.19	-1.44	-1.44					1.18	0.90	4.03	1.26	-----	Vehicle	-10.39	-1.53	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**250.39**	**417.31**	**204.08**	**340.13**
	U_9 - U_{10}	2.04	-9.48	0.34	0.34	-1.64	-1.64					1.18	0.90	2.04	0.36	-----	Vehicle	-9.48	-1.75	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**360.68**	**601.14**	**72.04**	**120.07**
	U_{10} - U_{11}	4.39	-9.86	0.43	0.43	-1.41	-1.41					1.18	0.90	4.39	0.45	-----	Vehicle	-9.86	-1.51	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**283.91**	**473.18**	**83.35**	**138.92**
	U_{11} - U_{12}	3.80	-11.57	0.61	0.61	-1.52	-1.52					1.18	0.90	3.80	0.65	-----	Vehicle	-11.57	-1.62	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**199.47**	**332.45**	**77.01**	**128.34**
	U_{12} - U_{13}	9.58	-8.07	0.97	0.97	-0.93	-0.93					1.18	0.90	9.58	1.04	-----	Vehicle	-8.07	-0.99	-----	Vehicle	17.00	0.94	2	9.07	5	73.85	92.32	1	610.0875	610.1	**265.99**	**443.31**	**278.59**	**464.31**
	U_{13} - U_{14}	-8.42	-23.99	0.15	0.15	-3.53	-3.53					1.18	0.90	-8.42	0.16	-----	Vehicle	-23.99	-3.76	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**2467.09**	**4111.81**	**101.09**	**168.48**
	U_{14} - U_{15}	20.62	5.04	4.04	4.04	-0.20	-0.20					1.17	0.90	20.62	4.25	-----	Vehicle	5.04	-0.21	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**89.86**	**149.76**	**1897.31**	**3162.19**
	U_{15} - U_{16}	6.58	-9.91	1.07	1.07	-0.91	-0.91					1.17	0.90	6.58	1.12	-----	Vehicle	-9.91	-0.96	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**280.49**	**467.49**	**327.11**	**545.18**
	U_{16} - U_{17}	8.97	-2.82	1.77	1.77	-0.21	-0.21					1.17	0.90	8.97	1.86	-----	Vehicle	-2.82	-0.22	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**88.08**	**146.80**	**771.72**	**1286.20**
	U_{17} - U_{18}	8.01	-5.78	1.86	1.86	-0.33	-0.33					1.17	0.90	8.01	1.95	-----	Vehicle	-5.78	-0.34	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**55.19**	**91.98**	**318.28**	**530.46**
	U_{18} - U_{19}	8.40	-4.13	1.58	1.58	-0.28	-0.28					1.17	0.90	8.40	1.66	-----	Vehicle	-4.13	-0.30	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**64.89**	**108.15**	**368.65**	**614.42**
	U_{19} - U_{20}	5.53	-4.62	1.31	1.31	-0.43	-0.43					1.17	0.90	5.53	1.37	-----	Vehicle	-4.62	-0.45	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**93.22**	**155.36**	**287.68**	**479.47**
	U_{20} - U_{21}	6.82	-6.42	1.88	1.88	-0.82	-0.82					1.17	0.90	6.82	1.97	-----	Vehicle	-6.42	-0.86	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**121.57**	**202.61**	**279.77**	**466.28**
	U_{21} - U_{22}	6.17	-6.84	1.69	1.69	-0.48	-0.48					1.17	0.90	6.17	1.77	-----	Vehicle	-6.84	-0.51	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**135.57**	**225.94**	**475.11**	**791.84**
	U_{22} - U_{23}	7.10	-6.07	0.98	0.98	-1.51	-1.51					1.17	0.90	7.10	1.03	-----	Vehicle	-6.07	-1.59	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**233.74**	**389.57**	**151.12**	**251.86**
	U_{23} - U_{24}	6.42	-6.83	1.71	1.71	-1.16	-1.16					1.17	0.90	6.42	1.80	-----	Vehicle	-6.83	-1.22	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**133.58**	**222.64**	**196.09**	**326.82**
	U_{24} - U_{25}	4.41	-5.74	0.45	0.45	-1.39	-1.39					1.17	0.90	4.41	0.47	-----	Vehicle	-5.74	-1.46	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**271.36**	**452.26**	**87.82**	**146.36**
	U_{25} - U_{26}	4.63	-7.90	0.59	0.59	-1.49	-1.49					1.17	0.90	4.63	0.62	-----	Vehicle	-7.90	-1.57	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**176.68**	**294.46**	**68.64**	**114.40**
	U_{26} - U_{27}	6.07	-7.72	0.81	0.81	-1.52	-1.52					1.17	0.90	6.07	0.85	-----	Vehicle	-7.72	-1.60	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**128.53**	**214.22**	**67.67**	**112.78**
	U_{27} - U_{28}	3.92	-7.87	0.40	0.40	-1.59	-1.59					1.17	0.90	3.92	0.42	-----	Vehicle	-7.87	-1.67	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**392.91**	**654.85**	**98.05**	**163.42**
	U_{28} - U_{29}	9.25	-7.25	1.13	1.13	-1.11	-1.11					1.17	0.90	9.25	1.19	-----	Vehicle	-7.25	-1.17	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**262.83**	**438.05**	**268.81**	**448.02**
	U_{29} - U_{30}	-2.24	-17.81	0.14	0.14	-3.73	-3.73					1.17	0.90	-2.24	0.14	-----	Vehicle	-17.81	-3.92	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**2784.93**	**4641.56**	**97.73**	**162.88**
	U_{30} - U_{31}	19.02	3.44	3.28	3.28	-0.22	-0.22					1.18	0.90	19.02	3.49	-----	Vehicle	3.44	-0.24	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**109.55**	**182.58**	**1669.04**	**2781.73**
	U_{31} - U_{32}	7.21	-10.44	1.01	1.01	-0.91	-0.91					1.18	0.90	7.21	1.08	-----	Vehicle	-10.44	-0.97	-----	Vehicle	17.00	0.94	2	9.07	5	73.85	92.32	1	610.0875	610.1	**257.57**	**429.29**	**283.54**	**472.56**
	U_{32} - U_{33}	10.43	-4.94	1.94	1.94	-0.10	-0.10					1.18	0.90	10.43	2.06	-----	Vehicle	-4.94	-0.10	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**60.65**	**101.08**	**1230.96**	**2051.61**
	U_{33} - U_{34}	8.67	-5.58	1.35	1.35	-0.29	-0.29					1.18	0.90	8.67	1.44	-----	Vehicle	-5.58	-0.31	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**87.74**	**146.23**	**410.49**	**684.16**
	U_{34} - U_{35}	8.17	-3.35	1.82	1.82	-0.29	-0.29					1.18	0.90	8.17	1.94	-----	Vehicle	-3.35	-0.31	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**65.25**	**108.75**	**421.98**	**703.29**
	U_{35} - U_{36}	9.30	-5.12	2.01	2.01	-0.44	-0.44					1.18	0.90	9.30	2.14	-----	Vehicle	-5.12	-0.47	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**146.66**	**244.43**	**668.57**	**1114.28**
	U_{36} - U_{37}	6.76	-8.71	2.40	2.40	-0.37	-0.37					1.18	0.90	6.76	2.56	-----	Vehicle	-8.71	-0.40	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**145.10**	**241.83**	**929.71**	**1549.52**
	U_{37} - U_{38}	10.16	-5.61	1.57	1.57	-1.76	-1.76					1.18	0.90	10.16	1.67	-----	Vehicle	-5.61	-1.87	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**221.10**	**368.49**	**198.78**	**331.31**
	U_{38} - U_{39}	7.26	-3.01	2.80	2.80	-0.80	-0.80					1.18	0.90	7.26	2.98	-----	Vehicle	-3.01	-0.85	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**149.77**	**249.62**	**527.47**	**879.12**
	U_{39} - U_{40}	5.16	-5.17	1.33	1.33	-1.79	-1.79					1.18	0.90	5.16	1.42	-----	Vehicle	-5.17	-1.90	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**315.26**	**525.43**	**235.29**	**392.16**
	U_{40} - U_{41}	8.09	-7.79	1.01	1.01	-1.80	-1.80					1.18	0.90	8.09	1.07	-----	Vehicle	-7.79	-1.91	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**345.99**	**576.65**	**193.89**	**323.15**
	U_{41} - U_{42}	3.96	-7.24	0.84	0.84	-1.96	-1.96					1.18	0.90	3.96	0.89	-----	Vehicle	-7.24	-2.09	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**186.47**	**310.78**	**78.84**	**131.40**
	U_{42} - U_{43}	5.30	-8.54	0.36	0.36	-1.33	-1.33					1.18	0.90	5.30	0.38	-----	Vehicle	-8.54	-1.41	-----	Vehicle	17.00	0.75	2	11.33	5	73.85	92.32	1	488.07	488.1	**585.91**	**976.52**	**156.05**	**260.08**
	U_{43} - U_{44}	6.34	-9.84	0.69	0.69	-2.43	-2.43					1.18	0.90	6.34	0.73	-----	Vehicle	-9.84	-2.59	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**148.57**	**247.62**	**41.28**	**68.81**
Structure 3	U_0 - U_1	7.32	-2.03	1.47	1.47	-0.38	-0.38					1.20	0.90	7.32	1.58	-----	Vehicle	-2.03	-0.41	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**65.51**	**109.18**	**263.23**	**438.72**
	U_1 - U_2	6.45	-3.27	1.12	1.12	-0.08	-0.08					1.20	0.90	6.45	1.20	-----	Vehicle	-3.27	-0.09	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**86.79**	**144.66**	**1231.83**	**2053.05**
	U_2 - U_3	9.46	-6.46	1.54	1.54	-0.19	-0.19					1.20	0.90	9.46	1.66	-----	Vehicle	-6.46	-0.20	-----	Vehicle	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	**167.39**	**278.98**	**1366.37**	**2277.29**
	U_3 - U_4	5.96	-2.88	1.89	1.89	-0.34	-0.34					1.20	0.90	5.96	2.04	-----	Vehicle	-2.88	-0.37	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**187.90**	**313.17**	**1040.37**	**1733.94**
	U_4 - U_5	5.42	-9.60	1.09	1.09	-0.99	-0.99					1.20	0.90	5.42	1.17	-----	Vehicle	-9.60	-1.07	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**326.68**	**544.47**	**357.04**	**595.06**
	U_5 - U_6	5.10	-3.00	1.73	1.73	-0.28	-0.28					1.20	0.90	5.10	1.86	-----	Vehicle	-3.00	-0.31	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**205.79**	**342.99**	**1260.70**	**2101.17**
	U_6 - U_7	2.12	-6.47	1.20	1.20	-1.69	-1.69					1.20	0.90	2.12	1.30	-----	Vehicle	-6.47	-1.82	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**297.23**	**495.38**	**209.85**	**349.74**
	U_7 - U_8	7.00	-8.45	0.65	0.65	-1.31	-1.31					1.20	0.90	7.00	0.70	-----	Vehicle	-8.45	-1.41	-----	Vehicle	14.00	1.33	2	5.24	5	73.85	92.32	1	715.3575	715.4	**467.27**	**778.78**	**231.05**	**385.08**
	U_8 - U_9	2.51	-7.01	0.42	0.42	-1.31	-1.31					1.20	0.90	2.51	0.45	-----	Vehicle	-7.01	-1.41	-----	Vehicle	14.00	0.50	2	14.00	5	73.85	92.32	1	267.96	268.0	**269.78**	**449.64**	**84.91**	**141.51**
	U_9 - U_{10}	2.56	-8.76	0.26	0.26	-1.42	-1.42					1.20	0.90	2.56	0.28	-----	Vehicle	-8.76	-1.54	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**321.68**	**536.14**	**56.99**	**94.98**
	U_{10} - U_{11}	5.86	-6.85	0.25	0.25	-1.02	-1.02					1.20	0.90	5.86	0.27	-----	Vehicle	-6.85	-1.10	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**336.46**	**560.76**	**80.76**	**134.60**
	U_{11} - U_{12}	-1.36	-13.98	0.03	0.03	-2.26	-2.26					1.20	0.90	-1.36	0.03	-----	Vehicle	-13.98	-2.43	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**3370.76**	**5617.93**	**41.02**	**68.37**
	U_{12} - U_{13}	11.54	-1.05	2.88	2.88	-0.14	-0.14					1.24	0.90	11.54	3.21	-----	Vehicle	-1.05	-0.16	-----	Vehicle	14.00	1.00	2	7.00	5	73.85	92.32	1	535.92	535.9	**75.01

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
Condition: As-Built

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

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

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

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

		Member Forces from STAAD																										Shear Force Rating			
		D		LL_{max}		LL_{min}		Pedestrian $Load_{max}$		Pedestrian $Load_{min}$		Impact (1+I)	Lane Reduction	Maximum Positive Shear				Minimum Negative Shear				Depth of Web (inches)	Thickness of Web (inches	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Positive Shear Member		Negative Shear Member	
Location	Member	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)			Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &											Inventory RF	Operating RF	Inventory RF	Operating RF
North Truss - Lower Chord																																			
Structure 1	L_0 - L_1	8.29	-6.54	1.18	1.18	-0.16	-0.16					1.24	0.90	8.29	1.31	-----	Vehicle	-6.54	-0.18	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**76.97**	**128.29**	**573.08**	**955.13**
	L_1 - L_2	13.57	-7.41	1.39	1.39	-0.19	-0.19					1.24	0.90	13.57	1.55	-----	Vehicle	-7.41	-0.21	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**63.11**	**105.18**	**490.45**	**817.42**
	L_2 - L_3	8.55	-7.89	0.88	0.88	-0.56	-0.56					1.24	0.90	8.55	0.98	-----	Vehicle	-7.89	-0.62	-----	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	**161.39**	**268.98**	**257.41**	**429.02**
	L_3 - L_4	10.78	-10.72	1.11	1.11	-0.90	-0.90					1.24	0.90	10.78	1.23	-----	Vehicle	-10.72	-1.01	-----	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	**127.41**	**212.36**	**156.52**	**260.86**
	L_4 - L_5	8.11	-17.42	0.11	0.11	-1.54	-1.54					1.24	0.90	8.11	0.12	-----	Vehicle	-17.42	-1.71	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**1095.55**	**1825.92**	**74.28**	**123.80**
	L_5 - L_6	5.24	-12.36	0.23	0.23	-0.99	-0.99					1.24	0.90	5.24	0.26	-----	Vehicle	-12.36	-1.10	-----	Vehicle	15.00	0.77	2	9.74	5	73.85	92.32	1	442.134	442.1	**777.89**	**1296.48**	**179.14**	**298.57**
	L_6 - L_7	8.00	-14.21	0.43	0.43	-1.26	-1.26					1.24	0.90	8.00	0.47	-----	Vehicle	-14.21	-1.41	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**669.37**	**1115.61**	**222.94**	**371.57**
	L_7 - L_8	-2.07	-18.23	0.05	0.05	-2.50	-2.50					1.24	0.90	-2.07	0.06	-----	Vehicle	-18.23	-2.78	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**7564.62**	**12607.70**	**150.18**	**250.30**
	L_8 - L_9	18.91	4.31	2.13	2.13	-0.08	-0.08					1.20	0.90	18.91	2.29	-----	Vehicle	4.31	-0.09	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**181.71**	**302.85**	**4873.19**	**8121.99**
	L_9 - L_{10}	15.84	-6.96	1.01	1.01	-0.53	-0.53					1.20	0.90	15.84	1.09	-----	Vehicle	-6.96	-0.57	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**288.05**	**480.09**	**560.87**	**934.78**
	L_{10} - L_{11}	13.53	-2.36	1.21	1.21	-0.21	-0.21					1.20	0.90	13.53	1.31	-----	Vehicle	-2.36	-0.23	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**99.08**	**165.13**	**605.25**	**1008.76**
	L_{11} - L_{12}	19.25	-6.84	1.06	1.06	-0.18	-0.18					1.20	0.90	19.25	1.15	-----	Vehicle	-6.84	-0.19	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**110.16**	**183.60**	**692.77**	**1154.62**
	L_{12} - L_{13}	12.12	-8.55	0.75	0.75	-0.39	-0.39					1.20	0.90	12.12	0.81	-----	Vehicle	-8.55	-0.42	-----	Vehicle	15.00	1.02	2	7.35	5	73.85	92.32	1	585.684	585.7	**326.60**	**544.33**	**637.19**	**1061.98**
	L_{13} - L_{14}	22.27	-6.22	2.46	2.46	-0.23	-0.23					1.20	0.90	22.27	2.65	-----	Vehicle	-6.22	-0.25	-----	Vehicle	15.00	1.46	2	5.15	5	73.85	92.32	1	836.8965	836.9	**140.88**	**234.79**	**1535.87**	**2559.79**
	L_{14} - L_{15}	10.80	-20.25	0.44	0.44	-1.72	-1.72					1.20	0.90	10.80	0.48	-----	Vehicle	-20.25	-1.85	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**993.79**	**1656.32**	**252.48**	**420.80**
	L_{15} - L_{16}	11.52	-8.07	0.96	0.96	-0.91	-0.91					1.20	0.90	11.52	1.03	-----	Vehicle	-8.07	-0.98	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**458.50**	**764.16**	**484.34**	**807.23**
	L_{16} - L_{17}	4.39	-17.69	0.11	0.11	-1.48	-1.48					1.20	0.90	4.39	0.12	-----	Vehicle	-17.69	-1.60	-----	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	**2862.36**	**4770.59**	**215.04**	**358.40**
	L_{17} - L_{18}	6.80	-13.02	0.11	0.11	-1.13	-1.13					1.20	0.90	6.80	0.12	-----	Vehicle	-13.02	-1.22	-----	Vehicle	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	**1958.82**	**3264.69**	**189.02**	**315.03**
	L_{18} - L_{19}	5.40	-17.11	0.09	0.09	-1.18	-1.18					1.20	0.90	5.40	0.10	-----	Vehicle	-17.11	-1.27	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**1070.92**	**1784.87**	**75.31**	**125.52**
	L_{19} - L_{20}	8.88	-11.26	0.06	0.06	-1.04	-1.04					1.20	0.90	8.88	0.07	-----	Vehicle	-11.26	-1.12	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**1482.13**	**2470.22**	**88.34**	**147.23**
Structure 2	L_0 - L_1	8.18	-2.11	1.14	1.14	-0.11	-0.11					1.18	0.90	8.18	1.22	-----	Vehicle	-2.11	-0.12	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**113.56**	**189.27**	**1189.50**	**1982.50**
	L_1 - L_2	10.03	-0.24	1.10	1.10	-0.11	-0.11					1.18	0.90	10.03	1.17	-----	Vehicle	-0.24	-0.11	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**117.38**	**195.63**	**1266.75**	**2111.25**
	L_2 - L_3	7.20	-1.56	1.42	1.42	-0.19	-0.19					1.18	0.90	7.20	1.52	-----	Vehicle	-1.56	-0.20	-----	Vehicle	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	**170.20**	**283.67**	**1299.16**	**2165.27**
	L_3 - L_4	11.38	-0.50	1.43	1.43	-0.11	-0.11					1.18	0.90	11.38	1.52	-----	Vehicle	-0.50	-0.12	-----	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	**243.99**	**406.65**	**3198.57**	**5330.94**
	L_4 - L_5	6.29	-6.01	1.24	1.24	-0.99	-0.99					1.18	0.90	6.29	1.32	-----	Vehicle	-6.01	-1.06	-----	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	**374.12**	**623.54**	**466.12**	**776.86**
	L_5 - L_6	10.14	-2.08	1.84	1.84	-0.47	-0.47					1.18	0.90	10.14	1.95	-----	Vehicle	-2.08	-0.50	-----	Vehicle	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	**276.66**	**461.09**	**1089.80**	**1816.34**
	L_6 - L_7	3.45	-8.48	1.30	1.30	-1.36	-1.36					1.18	0.90	3.45	1.39	-----	Vehicle	-8.48	-1.45	-----	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	**398.41**	**664.01**	**379.08**	**631.81**
	L_7 - L_8	3.58	-10.31	0.56	0.56	-1.85	-1.85					1.18	0.90	3.58	0.59	-----	Vehicle	-10.31	-1.97	-----	Vehicle	18.00	1.23	2	7.35	5	73.85	92.32	1	844.074	844.1	**653.29**	**1088.81**	**194.64**	**324.40**
	L_8 - L_9	0.48	-13.07	0.10	0.10	-1.39	-1.39					1.18	0.90	0.48	0.11	-----	Vehicle	-13.07	-1.47	-----	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	**2894.95**	**4824.91**	**201.81**	**336.35**
	L_9 - L_{10}	1.68	-14.60	0.36	0.36	-1.29	-1.29					1.18	0.90	1.68	0.38	-----	Vehicle	-14.60	-1.37	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**586.31**	**977.19**	**155.70**	**259.51**
	L_{10} - L_{11}	3.92	-15.22	0.17	0.17	-1.42	-1.42					1.18	0.90	3.92	0.18	-----	Vehicle	-15.22	-1.51	-----	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	**1029.12**	**1715.19**	**120.42**	**200.70**
	L_{11} - L_{12}	1.30	-14.23	0.22	0.22	-1.15	-1.15					1.18	0.90	1.30	0.24	-----	Vehicle	-14.23	-1.23	-----	Vehicle	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	**1294.51**	**2157.51**	**242.93**	**404.88**
	L_{12} - L_{13}	6.61	-7.28	0.99	0.99	-1.12	-1.12					1.18	0.90	6.61	1.05	-----	Vehicle	-7.28	-1.20	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**424.12**	**706.86**	**372.04**	**620.07**
	L_{13} - L_{14}	-16.93	-26.03	0.10	0.10	-3.93	-3.93					1.18	0.90	-16.93	0.11	-----	Vehicle	-26.03	-4.18	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**5046.00**	**8410.00**	**127.50**	**212.51**
	L_{14} - L_{15}	25.44	16.49	3.64	3.64	-0.11	-0.11					1.17	0.90	25.44	3.83	-----	Vehicle	16.49	-0.11	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**139.11**	**231.85**	**5007.74**	**8346.24**
	L_{15} - L_{16}	1.92	-10.98	0.90	0.90	-1.11	-1.11					1.17	0.90	1.92	0.95	-----	Vehicle	-10.98	-1.17	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**471.09**	**785.14**	**377.64**	**629.41**
	L_{16} - L_{17}	14.35	-0.89	1.33	1.33	-0.27	-0.27					1.17	0.90	14.35	1.40	-----	Vehicle	-0.89	-0.29	-----	Vehicle	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	**247.26**	**412.10**	**1239.06**	**2065.11**
	L_{17} - L_{18}	10.22	-3.50	1.60	1.60	-0.20	-0.20					1.17	0.90	10.22	1.68	-----	Vehicle	-3.50	-0.21	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**128.92**	**214.87**	**1032.48**	**1720.80**
	L_{18} - L_{19}	9.38	-1.77	1.10	1.10	-0.33	-0.33					1.17	0.90	9.38	1.16	-----	Vehicle	-1.77	-0.35	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**132.53**	**220.88**	**449.47**	**749.12**
	L_{19} - L_{20}	12.39	-6.31	1.05	1.05	-0.14	-0.14					1.17	0.90	12.39	1.10	-----	Vehicle	-6.31	-0.14	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**137.34**	**228.90**	**1092.88**	**1821.46**
	L_{20} - L_{21}	8.96	-3.52	1.48	1.48	-0.64	-0.64					1.17	0.90	8.96	1.55	-----	Vehicle	-3.52	-0.67	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**162.93**	**271.55**	**380.01**	**633.35**
	L_{21} - L_{22}	9.68	-4.49	1.99	1.99	-0.36	-0.36					1.17	0.90	9.68	2.09	-----	Vehicle	-4.49	-0.38	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**120.82**	**201.37**	**680.77**	**1134.62**
	L_{22} - L_{23}	4.66	-10.03	0.70	0.70	-1.80	-1.80					1.17	0.90	4.66	0.73	-----	Vehicle	-10.03	-1.90	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**349.05**	**581.75**	**133.04**	**221.73**
	L_{23} - L_{24}	3.70	-6.40	0.75	0.75	-1.17	-1.17					1.17	0.90	3.70	0.79	-----	Vehicle	-6.40	-1.23	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**323.35**	**538.92**	**207.32**	**345.54**
	L_{24} - L_{25}	-0.87	-1.56	0.11	0.11	-1.34	-1.34					1.17	0.90	-0.87	0.11	-----	Vehicle	-1.56	-1.41	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**1404.01**	**2340.02**	**112.46**	**187.43**
	L_{25} - L_{26}	-3.04	-3.58	0.41	0.41	-1.13	-1.13					1.17	0.90	-3.04	0.43	-----	Vehicle	-3.58	-1.18	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**375.59**	**625.99**	**332.41**	**220.68**
	L_{26} - L_{27}	-1.83	-2.61	0.13	0.13	-1.54	-1.54					1.17	0.90	-1.83	0.14	-----	Vehicle	-2.61	-1.62	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**1623.16**	**2705.26**	**136.61**	**227.68**
	L_{27} - L_{28}	-4.05	-5.16	0.18	0.18	-1.42	-1.42					1.17	0.90	-4.05	0.19	-----	Vehicle	-5.16	-1.50	-----	Vehicle	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	**1867.28**	**3112.14**	**235.30**	**392.16**
	L_{28} - L_{29}	3.03	1.87	0.93	0.93	-1.04	-1.04					1.17	0.90	3.03	0.98	-----	Vehicle	1.87	-1.09	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**456.25**	**760.42**	**412.75**	**687.92**
	L_{29} - L_{30}	-16.84	-17.95	0.15	0.15	-4.00	-4.00					1.17	0.90	-16.84	0.15	-----	Vehicle	-17.95	-4.21	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**3612.38**	**6020.63**	**127.89**	**213.15**
	L_{30} - L_{31}	17.64	16.51	3.39	3.39	-0.13	-0.13					1.18	0.90	17.64	3.61	-----	Vehicle	16.51	-0.14	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**148.97**	**248.28**	**4098.04**	**6830.07**
	L_{31} - L_{32}	-0.36	-1.54	0.93	0.93	-1.13	-1.13					1.18	0.90	-0.36	0.99	-----	Vehicle	-1.54	-1.20	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**453.39**	**755.65**	**373.26**	**622.10**
	L_{32} - L_{33}	5.29	4.30	1.30	1.30	-0.22	-0.22					1.18	0.90	5.29	1.39	-----	Vehicle	4.30	-0.23	-----	Vehicle	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	**219.00**	**365.00**	**1351.33**	**2252.22**
	L_{33} - L_{34}	3.87	3.17	1.23	1.23	-0.17	-0.17					1.18	0.90	3.87	1.31	-----	Vehicle	3.17	-0.18	-----	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	**143.70**	**239.50**	**1083.83**	**1806.39**
	L_{34} - L_{35}	4.21	3.54	1.36	1.36	-0.33	-0.33					1.18	0.90	4.21	1.44	-----	Vehicle	3.54	-0.35	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**152.33**	**253.88**	**633.87**	**1056.45**
	L_{35} - L_{36}	4.37	3.40	1.53	1.53	-0.16	-0.16					1.18	0.90	4.37	1.63	-----	Vehicle	3.40	-0.17	-----	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	**185.89**	**309.81**	**1839.40**	**3065.67**
	L_{36} - L_{37}	2.06	0.88	1.96	1.96	-0.33	-0.33					1.18	0.90	2.06	2.08	-----	Vehicle	0.88	-0.35	-----	Vehicle	18.00	1.23	1	14.69	5	73.85	92.32	1	422.037	422.0	**92.89**	**154.82**	**555.90**	**926.49**
	L_{37} - L_{38}	3.79	2.22	1.95	1.95	-1.23	-1.23					1.18	0.90	3.79	2.08	-----	Vehicle	2.22	-1.30	-----	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	**266.33**	**443.88**	**426.71**	**711.18**
	L_{38} - L_{39}	-1.73	-3.35	0.68	0.68	-1.44	-1.44					1.18	0.90	-1.73	0.73	-----	Vehicle	-3.35	-1.53	-----	Vehicle	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	**751.98**	**1253.30**	**356.44**	**594.07**
	L_{39} - L_{40}	1.42	-0.10	1.03	1.03	-1.14	-1.14					1.18	0.90	1.42	1.09	-----	Vehicle	-0.10	-1.21	-----	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	**453.22**	**755.37**	**409.70**	**682.84**
	L_{40} - L_{41}	-3.01	-4.16	0.12	0.12	-1.67	-1.67					1.18	0.90	-3.01	0.13	-----	Vehicle	-4.16	-1.78	-----	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	**2926.36**	**4877.27**	**211.36**	**352.27**
	L_{41} - L_{42}	-1.55	-2.29	0.24	0.24	-1.31	-1.31					1.18	0.90	-1.55	0.25	-----	Vehicle	-2.29	-1.40	-----	Vehicle	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	**1043.44**	**1739.07**	**186.98**	**311.64**
	L_{42} - L_{43}	-3.17	-3.75	0.17	0.17	-1.36	-1.36					1.18	0.90	-3.17	0.18	-----	Vehicle	-3.75	-1.45	-----	Vehicle	18.00	0.45	1	40.00	5	73.85	92.32	1	155.034	155.0	**403.47**	**672.45**	**47.90**	**79.83**
	L_{43} - L_{44}	-3.25	-3.76	0.11	0.11	-1.33	-1.33					1.18	0.90	-3.25	0.12	-----	Vehicle	-3.76	-1.42	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**1227.42**	**2045.70**	**99.47**	**165.78**
Structure 3	L_0 - L_1	6.90	-2.96	1.00	1.00	-0.06	-0.06					1.20	0.90	6.90	1.08	-----	Vehicle	-2.96	-0.06	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**94.10**	**156.84**	**1695.98**	**2826.64**
	L_1 - L_2	10.33	-2.13	0.94	0.94	-0.07	-0.07					1.20	0.90	10.33	1.01	-----	Vehicle	-2.13	-0.07	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**98.79**	**164.65**	**1449.75**	**2416.24**
	L_2 - L_3	8.48	-3.27	1.03	1.03	-0.11	-0.11					1.20	0.90	8.48	1.11	-----	Vehicle	-3.27	-0.11	-----	Vehicle	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	**209.98**	**349.97**	**2089.48**	**3482.46**
	L_3 - L_4	10.92	-0.17	1.51	1.51	-0.10	-0.10					1.20	0.90	10.92	1.62	-----	Vehicle	-0.17	-0.10	-----	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	**214.40**	**357.34**	**3388.20**	**5647.00**
	L_4 - L_5	3.28	-6.17	0.91	0.91	-0.75	-0.75					1.20	0.90	3.28	0.98	-----	Vehicle	-6.17	-0.80	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**486.74**	**811.24**	**591.73**	**986.22**
	L_5 - L_6	10.07	-2.62	1.93	1.93	-0.35	-0.35					1.20	0.90	10.07	2.08	-----	Vehicle	-2.62	-0.38	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**227.17**	**378.62**	**1261.58**	**2102.63**
	L_6 - L_7	-0.48	-11.65	0.33	0.33	-2.09	-2.09					1.20	0.90	-0.48	0.36	-----	Vehicle	-11.65	-2.25	-----	Vehicle	15.00	1.46	2	5.15	5	73.85	92.32	1	836.8965	836.9	**1086.40**	**1810.67**	**168.71**	**281.18**
	L_7 - L_8	3.36	-6.18	0.42	0.42	-0.94	-0.94					1.20	0.90	3.36	0.45	-----	Vehicle	-6.18	-1.02	-----	Vehicle	15.00	1.02	2	7.35	5	73.85	92.32	1	585.684	585.7	**595.31**	**992.18**	**261.94**	**436.57**
	L_8 - L_9	1.47	-11.13	0.14	0.14	-1.11	-1.11					1.20	0.90	1.47	0.15	-----	Vehicle	-11.13	-1.19	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**913.63**	**1522.72**	**109.76**	**182.94**
	L_9 - L_{10}	-0.54	-9.03	0.18	0.18	-1.16	-1.16					1.20	0.90	-0.54	0.20	-----	Vehicle	-9.03	-1.25	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**703.93**	**1173.22**	**106.12**	**176.87**
	L_{10} - L_{11}	2.22	-10.62	0.44	0.44	-1.20	-1.20					1.20	0.90	2.22	0.48	-----	Vehicle	-10.62	-1.29	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**673.41**	**1122.36**	**243.95**	**406.58**
	L_{11} - L_{12}	-6.24	-14.06	0.04	0.04	-2.43	-2.43					1.20	0.90	-6.24	0.05	-----	Vehicle	-14.06	-2.61	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**9539.84**	**15899.73**	**160.57**	**267.62**
	L_{12} - L_{13}	12.41	3.95	2.30	2.30	-0.06	-0.06					1.24	0.90	12.41	2.56	-----	Vehicle	3.95	-0

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
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
Structure 1	U_0 - L_0		-3.17	-3.17	0.19	0.19	-1.25	-1.25					1.24	0.90	-3.17	0.21	-----	Vehicle	-3.17	-1.39	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**562.95**	**938.25**	**80.65**	**134.42**
	U_0 - L_1		-0.96	-0.96	0.24	0.24	-1.32	-1.32					1.24	0.90	-0.96	0.27	-----	Vehicle	-0.96	-1.46	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**427.21**	**712.02**	**77.51**	**129.18**
	U_2 - L_2		0.27	0.27	0.27	0.27	-1.03	-1.03					1.24	0.90	0.27	0.30	-----	Vehicle	0.27	-1.14	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**384.57**	**640.95**	**99.98**	**166.64**
	U_3 - L_3		1.48	1.48	0.52	0.52	-0.66	-0.66					1.24	0.90	1.48	0.58	-----	Vehicle	1.48	-0.74	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**195.46**	**325.77**	**155.95**	**259.91**
	U_4 - L_4		2.22	2.22	0.82	0.82	-0.29	-0.29					1.24	0.90	2.22	0.92	-----	Vehicle	2.22	-0.32	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**123.02**	**205.03**	**359.84**	**599.74**
	U_5 - L_5		2.71	2.71	0.98	0.98	-0.04	-0.04					1.24	0.90	2.71	1.09	-----	Vehicle	2.71	-0.04	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**125.31**	**208.85**	**3407.97**	**5679.95**
	U_6 - L_6		2.52	2.52	1.01	1.01	-0.03	-0.03					1.24	0.90	2.52	1.13	-----	Vehicle	2.52	-0.03	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**108.54**	**180.90**	**4324.77**	**7207.96**
	U_7 - L_7		2.77	2.77	0.84	0.84	-0.02	-0.02					1.24	0.90	2.77	0.94	-----	Vehicle	2.77	-0.02	-----	Vehicle	16.25	0.44	2	18.57	5	73.85	92.32	1	272.14688	272.1	**132.54**	**220.90**	**5715.73**	**9526.22**
	U_8 - L_8		-0.17	-0.17	0.80	0.80	-0.56	-0.56					1.24	0.90	-0.17	0.89	-----	Vehicle	-0.17	-0.62	-----	Vehicle	15.25	0.82	2	9.30	5	73.85	92.32	1	478.6914	478.7	**248.49**	**414.14**	**357.41**	**595.68**
	U_9 - L_9		-4.89	-4.89	0.07	0.07	-0.86	-0.86					1.20	0.90	-4.89	0.07	-----	Vehicle	-4.89	-0.93	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**1969.01**	**3281.69**	**151.12**	**251.86**
	U_{10} - L_{10}		-4.01	-4.01	0.06	0.06	-0.97	-0.97					1.20	0.90	-4.01	0.07	-----	Vehicle	-4.01	-1.04	-----	Vehicle	16.16	0.83	2	9.75	5	73.85	92.32	1	512.74682	512.7	**3576.16**	**5960.27**	**224.21**	**373.68**
	U_{11} - L_{11}		-5.48	-5.48	0.11	0.11	-1.12	-1.12					1.20	0.90	-5.48	0.11	-----	Vehicle	-5.48	-1.21	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1516.56**	**2527.60**	**137.60**	**229.33**
	U_{12} - L_{12}		-3.87	-3.87	0.16	0.16	-0.95	-0.95					1.20	0.90	-3.87	0.17	-----	Vehicle	-3.87	-1.02	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**845.59**	**1409.32**	**138.46**	**230.77**
	U_{13} - L_{13}		-2.32	-2.32	0.22	0.22	-0.84	-0.84					1.20	0.90	-2.32	0.24	-----	Vehicle	-2.32	-0.91	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**533.81**	**889.69**	**136.73**	**227.88**
	U_{14} - L_{14}		-1.13	-1.13	0.32	0.32	-0.48	-0.48					1.20	0.90	-1.13	0.35	-----	Vehicle	-1.13	-0.52	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**330.44**	**550.73**	**217.25**	**362.08**
	U_{15} - L_{15}		0.33	0.33	0.60	0.60	-0.31	-0.31					1.20	0.90	0.33	0.65	-----	Vehicle	0.33	-0.33	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**175.40**	**292.33**	**344.02**	**573.37**
	U_{16} - L_{16}		1.29	1.29	0.62	0.62	-0.16	-0.16					1.20	0.90	1.29	0.67	-----	Vehicle	1.29	-0.17	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**169.44**	**282.41**	**657.36**	**1095.60**
	U_{17} - L_{17}		1.86	1.86	0.66	0.66	-0.09	-0.09					1.20	0.90	1.86	0.71	-----	Vehicle	1.86	-0.09	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**194.90**	**324.84**	**1491.11**	**2485.19**
	U_{18} - L_{18}		3.24	3.24	0.92	0.92	-0.11	-0.11					1.20	0.90	3.24	0.99	-----	Vehicle	3.24	-0.11	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**143.42**	**239.03**	**1288.22**	**2147.04**
	U_{19} - L_{19}		2.88	2.88	0.80	0.80	-0.08	-0.08					1.20	0.90	2.88	0.87	-----	Vehicle	2.88	-0.08	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**194.16**	**323.60**	**2042.45**	**3404.09**
	U_{20} - L_{20}		2.24	2.24	0.48	0.48	-0.03	-0.03					1.20	0.90	2.24	0.52	-----	Vehicle	2.24	-0.04	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**323.27**	**538.78**	**4675.10**	**7791.83**
Structure 2	U_0 - L_0		-2.38	-2.38	0.05	0.05	-0.52	-0.52					1.18	0.90	-2.38	0.06	-----	Vehicle	-2.38	-0.56	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**3251.42**	**5419.03**	**329.95**	**549.91**
	U_1 - L_1		-2.50	-2.50	0.08	0.08	-0.66	-0.66					1.18	0.90	-2.50	0.09	-----	Vehicle	-2.50	-0.71	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**2195.54**	**3659.23**	**260.28**	**433.80**
	U_2 - L_2		-2.86	-2.86	0.12	0.12	-0.88	-0.88					1.18	0.90	-2.86	0.12	-----	Vehicle	-2.86	-0.94	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1252.11**	**2086.85**	**162.81**	**271.35**
	U_3 - L_3		-1.82	-1.82	0.09	0.09	-0.55	-0.55					1.18	0.90	-1.82	0.09	-----	Vehicle	-1.82	-0.58	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**1621.20**	**2702.00**	**259.55**	**432.59**
	U_4 - L_4		-1.16	-1.16	0.14	0.14	-0.57	-0.57					1.18	0.90	-1.16	0.14	-----	Vehicle	-1.16	-0.61	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**792.40**	**1320.66**	**185.80**	**309.67**
	U_5 - L_5		-0.32	-0.32	0.26	0.26	-0.54	-0.54					1.18	0.90	-0.32	0.28	-----	Vehicle	-0.32	-0.57	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**412.66**	**687.77**	**198.77**	**331.28**
	U_6 - L_6		0.40	0.40	0.33	0.33	-0.45	-0.45					1.18	0.90	0.40	0.35	-----	Vehicle	0.40	-0.48	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**321.00**	**534.99**	**238.00**	**396.67**
	U_7 - L_7		1.09	1.09	0.36	0.36	-0.20	-0.20					1.18	0.90	1.09	0.38	-----	Vehicle	1.09	-0.21	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**297.49**	**495.82**	**538.64**	**897.73**
	U_8 - L_8		2.68	2.68	0.84	0.84	-0.20	-0.20					1.18	0.90	2.68	0.89	-----	Vehicle	2.68	-0.21	-----	Vehicle	15.75	0.44	2	18.00	5	73.85	92.32	1	263.77313	263.8	**134.64**	**224.41**	**588.10**	**980.16**
	U_9 - L_9		4.62	4.62	1.12	1.12	-0.10	-0.10					1.18	0.90	4.62	1.20	-----	Vehicle	4.62	-0.11	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**152.83**	**254.72**	**1716.88**	**2861.46**
	U_{10} - L_{10}		4.05	4.05	0.97	0.97	-0.03	-0.03					1.18	0.90	4.05	1.03	-----	Vehicle	4.05	-0.03	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**225.98**	**376.63**	**8623.74**	**14372.89**
	U_{11} - L_{11}		3.61	3.61	0.81	0.81	-0.03	-0.03					1.18	0.90	3.61	0.86	-----	Vehicle	3.61	-0.03	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**271.82**	**453.03**	**8958.63**	**14931.05**
	U_{12} - L_{12}		2.81	2.81	0.69	0.69	-0.07	-0.07					1.18	0.90	2.81	0.73	-----	Vehicle	2.81	-0.08	-----	Vehicle	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	**355.94**	**593.23**	**3498.70**	**5831.17**
	U_{13} - L_{13}		2.75	2.75	0.58	0.58	-0.05	-0.05					1.18	0.90	2.75	0.62	-----	Vehicle	2.75	-0.06	-----	Vehicle	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	**376.53**	**627.55**	**4094.57**	**6824.28**
	U_{14} - L_{14}		0.70	0.70	0.42	0.42	-0.42	-0.42					1.18	0.90	0.70	0.45	-----	Vehicle	0.70	-0.45	-----	Vehicle	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	**507.08**	**845.13**	**508.95**	**848.25**
	U_{15} - L_{15}		-1.74	-1.74	0.05	0.05	-0.46	-0.46					1.17	0.90	-1.74	0.05	-----	Vehicle	-1.74	-0.48	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**3140.74**	**5234.56**	**316.58**	**527.64**
	U_{16} - L_{16}		-1.62	-1.62	0.07	0.07	-0.61	-0.61					1.17	0.90	-1.62	0.07	-----	Vehicle	-1.62	-0.64	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**2568.77**	**4281.28**	**287.07**	**478.45**
	U_{17} - L_{17}		-2.53	-2.53	0.07	0.07	-0.80	-0.80					1.17	0.90	-2.53	0.08	-----	Vehicle	-2.53	-0.84	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2203.56**	**3672.61**	**200.72**	**334.53**
	U_{18} - L_{18}		-2.65	-2.65	0.12	0.12	-0.92	-0.92					1.17	0.90	-2.65	0.12	-----	Vehicle	-2.65	-0.96	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1255.38**	**2092.30**	**158.41**	**264.02**
	U_{19} - L_{19}		-1.79	-1.79	0.10	0.10	-0.63	-0.63					1.17	0.90	-1.79	0.10	-----	Vehicle	-1.79	-0.67	-----	Vehicle	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	**1359.82**	**2266.37**	**206.98**	**344.96**
	U_{20} - L_{20}		-1.24	-1.24	0.16	0.16	-0.65	-0.65					1.17	0.90	-1.24	0.17	-----	Vehicle	-1.24	-0.69	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**743.70**	**1239.50**	**181.47**	**302.45**
	U_{21} - L_{21}		-0.83	-0.83	0.20	0.20	-0.59	-0.59					1.17	0.90	-0.83	0.21	-----	Vehicle	-0.83	-0.62	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**538.97**	**898.28**	**183.86**	**306.43**
	U_{22} - L_{22}		-0.04	-0.04	0.33	0.33	-0.37	-0.37					1.17	0.90	-0.04	0.35	-----	Vehicle	-0.04	-0.39	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**326.57**	**544.28**	**290.55**	**484.25**
	U_{23} - L_{23}		0.80	0.80	0.60	0.60	-0.27	-0.27					1.17	0.90	0.80	0.63	-----	Vehicle	0.80	-0.29	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**181.41**	**302.36**	**397.28**	**662.13**
	U_{24} - L_{24}		1.40	1.40	0.63	0.63	-0.17	-0.17					1.17	0.90	1.40	0.66	-----	Vehicle	1.40	-0.18	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**187.67**	**312.78**	**713.23**	**1188.72**
	U_{25} - L_{25}		1.60	1.60	0.73	0.73	-0.13	-0.13					1.17	0.90	1.60	0.77	-----	Vehicle	1.60	-0.13	-----	Vehicle	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	**180.40**	**300.67**	**1065.22**	**1775.37**
	U_{26} - L_{26}		2.43	2.43	1.06	1.06	-0.15	-0.15					1.17	0.90	2.43	1.12	-----	Vehicle	2.43	-0.16	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**136.50**	**227.50**	**961.09**	**1601.82**
	U_{27} - L_{27}		2.17	2.17	0.91	0.91	-0.11	-0.11					1.17	0.90	2.17	0.96	-----	Vehicle	2.17	-0.11	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**176.25**	**293.74**	**1536.36**	**2560.59**
	U_{28} - L_{28}		1.53	1.53	0.76	0.76	-0.07	-0.07					1.17	0.90	1.53	0.80	-----	Vehicle	1.53	-0.07	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**229.95**	**383.25**	**2726.05**	**4543.41**
	U_{29} - L_{29}		1.55	1.55	0.58	0.58	-0.03	-0.03					1.17	0.90	1.55	0.61	-----	Vehicle	1.55	-0.03	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**251.28**	**418.79**	**4609.45**	**7682.41**
	U_{30} - L_{30}		-0.10	-0.10	0.44	0.44	-0.33	-0.33					1.18	0.90	-0.10	0.47	-----	Vehicle	-0.10	-0.35	-----	Vehicle	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	**490.70**	**817.83**	**647.52**	**1079.20**
	U_{31} - L_{31}		-1.79	-1.79	0.06	0.06	-0.44	-0.44					1.18	0.90	-1.79	0.06	-----	Vehicle	-1.79	-0.47	-----	Vehicle	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	**3869.60**	**6449.34**	**496.71**	**827.85**
	U_{32} - L_{32}		-1.78	-1.78	0.08	0.08	-0.58	-0.58					1.18	0.90	-1.78	0.08	-----	Vehicle	-1.78	-0.62	-----	Vehicle	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	**3260.91**	**5434.85**	**420.93**	**701.55**
	U_{33} - L_{33}		-2.46	-2.46	0.04	0.04	-0.69	-0.69					1.18	0.90	-2.46	0.04	-----	Vehicle	-2.46	-0.74	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**5317.16**	**8861.93**	**319.17**	**531.95**
	U_{34} - L_{34}		-2.82	-2.82	0.04	0.04	-0.87	-0.87					1.18	0.90	-2.82	0.04	-----	Vehicle	-2.82	-0.93	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**5321.99**	**8869.98**	**252.11**	**420.19**
	U_{35} - L_{35}		-3.37	-3.37	0.10	0.10	-1.13	-1.13					1.18	0.90	-3.37	0.11	-----	Vehicle	-3.37	-1.20	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1710.06**	**2850.09**	**153.05**	**255.08**
	U_{36} - L_{36}		-1.93	-1.93	0.12	0.12	-0.82	-0.82					1.18	0.90	-1.93	0.13	-----	Vehicle	-1.93	-0.88	-----	Vehicle	15.75	0.44	2	18.00	5	73.85	92.32	1	263.77313	263.8	**946.13**	**1576.89**	**137.62**	**229.36**
	U_{37} - L_{37}		-0.91	-0.91	0.15	0.15	-0.42	-0.42					1.18	0.90	-0.91	0.16	-----	Vehicle	-0.91	-0.44	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**708.08**	**1180.14**	**256.87**	**428.12**
	U_{38} - L_{38}		-0.45	-0.45	0.40	0.40	-0.47	-0.47					1.18	0.90	-0.45	0.43	-----	Vehicle	-0.45	-0.50	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**265.76**	**442.94**	**226.40**	**377.34**
	U_{39} - L_{39}		0.16	0.16	0.48	0.48	-0.29	-0.29					1.18	0.90	0.16	0.51	-----	Vehicle	0.16	-0.31	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**224.37**	**373.95**	**365.89**	**609.82**
	U_{40} - L_{40}		0.80	0.80	0.60	0.60	-0.16	-0.16					1.18	0.90	0.80	0.64	-----	Vehicle	0.80	-0.17	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**177.78**	**296.29**	**668.10**	**1113.50**
	U_{41} - L_{41}		1.35	1.35	0.64	0.64	-0.11	-0.11					1.18	0.90	1.35	0.68	-----	Vehicle	1.35	-0.12	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**224.41**	**374.01**	**1321.32**	**2202.20**
	U_{42} - L_{42}		2.23	2.23	0.95	0.95	-0.15	-0.15					1.18	0.90	2.23	1.01	-----	Vehicle	2.23	-0.15	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**151.03**	**251.72**	**1007.88**	**1679.80**
	U_{43} - L_{43}		2.14	2.14	0.85	0.85	-0.11	-0.11					1.18	0.90	2.14	0.91	-----	Vehicle	2.14	-0.11	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**202.61**	**337.69**	**1639.62**	**2732.70**
	U_{44} - L_{44}		1.70	1.70	0.54	0.54	-0.05	-0.05					1.18	0.90	1.70	0.58	-----	Vehicle	1.70	-0.06	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**319.70**	**532.84**	**3369.05**	**5615.09**
Structure 3	U_0 - L_0		-1.87	-1.87	0.03	0.03	-0.53	-0.53					1.20	0.90	-1.87	0.04	-----	Vehicle	-1.87	-0.57	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**4669.01**	**7781.68**	**295.60**	**492.66**
	U_1 - L_1		-2.09	-2.09	0.05	0.05	-0.61	-0.61					1.20	0.90	-2.09	0.06	-----	Vehicle	-2.09	-0.66	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2997.57**	**4995.94**	**257.47**	**429.12**
	U_2 - L_2		-2.61	-2.61	0.08	0.08	-0.80	-0.80					1.20	0.90	-2.61	0.09	-----	Vehicle	-2.61	-0.86	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1645.24**	**2742.07**	**165.01**	**275.02**
	U_3 - L_3		-1.48	-1.48	0.07	0.07	-0.60	-0.60					1.20	0.90	-1.48	0.07	-----	Vehicle	-1.48	-0.65	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**1904.70**	**3174.50**	**212.05**	**353.42**
	U_4 - L_4		-1.08	-1.08	0.13	0.13	-0.56	-0.56					1.20	0.90	-1.08	0.14	-----	Vehicle	-1.08	-0.61	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**818.26**	**1363.77**	**186.81**	**311.35**
	U_5 - L_5		-0.23	-0.23	0.24	0.24	-0.61	-0.61					1.20	0.90	-0.23	0.25	-----	Vehicle	-0.23	-0.66	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**448.74**	**747.91**	**172.06**	**286.76**
	U_6 - L_6		0.90	0.90	0.44	0.44	-0.42	-0.42					1.20	0.90	0.90	0.48	-----	Vehicle	0.90	-0.45	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**238.18**	**396.97**	**254.24**	**423.73**
	U_7 - L_7		1.97	1.97	0.78	0.78	-0.25	-0.25					1.20	0.90	1.97	0.84	-----	Vehicle	1.97	-0.27	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**146.94**	**244.90**	**470.84**	**784.74**
	U_8 - L_8		3.44	3.44	1.04	1.04	-0.20	-0.20					1.20	0.90	3.44	1.12	-----	Vehicle	3.44	-0.22	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**126.06**	**210.10**	**675.25**	**1125.42**
	U_9 - L_9		4.72	4.72	1.29	1.29	-0.08	-0.08					1.20	0.90	4.72	1.39	-----	Vehicle	4.72	-0.09	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**120.40**	**200.67**	**1955.27**	**3258.79**
	U_{10} - L_{10}		3.92	3.92	1.13	1.13

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
Condition: As-Built

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

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

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

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

			Member Forces from STAAD												Maximum Positive Shear				Minimum Negative Shear												Shear Force Rating			
			D		LL_{max}		LL_{min}		Pedestrian $Load_{max}$		Pedestrian $Load_{min}$																				Positive Shear Member		Negative Shear Member	
	Location	Member	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Impact (1+I)	Lane Reduction	Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Inventory RF	Operating RF	Inventory RF	Operating RF
North Truss - Diagonals	Structure 1	U_0 - L_1	-0.26	-0.76	0.04	0.04	-0.26	-0.26					1.24	0.90	-0.26	0.05	-----	Vehicle	-0.76	-0.29	-----	Vehicle	10.00	0.31	2	16.00	5	73.85	92.32	1	119.625	119.6	1212.93	2021.55	190.63	317.72
		U_1 - L_2	0.21	-0.09	0.03	0.03	-0.13	-0.13					1.24	0.90	0.21	0.04	-----	Vehicle	-0.09	-0.15	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	3100.75	5167.91	764.12	1273.54
		U_2 - L_3	0.24	-0.07	0.04	0.04	-0.10	-0.10					1.24	0.90	0.24	0.05	-----	Vehicle	-0.07	-0.11	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	2495.40	4158.99	1077.94	1796.56
		U_3 - L_4	0.40	0.09	0.08	0.08	-0.02	-0.02					1.24	0.90	0.40	0.09	-----	Vehicle	0.09	-0.02	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	1293.94	2156.57	5394.08	8990.13
		U_4 - L_4	-0.25	-0.59	0.03	0.03	-0.13	-0.13					1.24	0.90	-0.25	0.04	-----	Vehicle	-0.59	-0.14	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	3781.01	6301.69	956.29	1593.82
		U_5 - L_5	-1.06	-1.52	0.03	0.03	-0.36	-0.36					1.24	0.90	-1.06	0.04	-----	Vehicle	-1.52	-0.40	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	3934.12	6556.87	356.77	594.61
		U_6 - L_6	-1.31	-1.77	0.01	0.01	-0.52	-0.52					1.24	0.90	-1.31	0.01	-----	Vehicle	-1.77	-0.57	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	11814.38	19690.63	249.12	415.20
		U_7 - L_7	-0.76	-1.25	0.01	0.01	-0.33	-0.33					1.24	0.90	-0.76	0.01	-----	Vehicle	-1.25	-0.37	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	10804.96	18008.27	392.02	653.36
		U_8 - L_9	-0.94	-1.86	0.05	0.05	-0.27	-0.27					1.20	0.90	-0.94	0.05	-----	Vehicle	-1.86	-0.29	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	3338.93	5564.88	614.83	1024.71
		U_9 - L_{10}	-1.58	-2.42	0.04	0.04	-0.38	-0.38					1.20	0.90	-1.58	0.04	-----	Vehicle	-2.42	-0.41	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	4182.52	6970.87	436.71	727.85
		U_{10} - L_{11}	-1.35	-2.21	0.03	0.03	-0.29	-0.29					1.20	0.90	-1.35	0.03	-----	Vehicle	-2.21	-0.31	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	4184.13	6973.54	456.44	760.74
		U_{11} - L_{12}	-1.02	-1.50	0.04	0.04	-0.30	-0.30					1.20	0.90	-1.02	0.04	-----	Vehicle	-1.50	-0.33	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	4277.72	7129.53	519.44	865.74
		U_{12} - L_{13}	-0.89	-1.60	0.06	0.06	-0.28	-0.28					1.20	0.90	-0.89	0.06	-----	Vehicle	-1.60	-0.30	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	1919.96	3199.93	413.86	689.77
		U_{13} - L_{14}	-0.18	-0.51	0.07	0.07	-0.11	-0.11					1.20	0.90	-0.18	0.08	-----	Vehicle	-0.51	-0.12	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	1430.74	2384.56	950.35	1583.92
		U_{15} - L_{14}	0.39	0.05	0.12	0.12	-0.09	-0.09					1.20	0.90	0.39	0.13	-----	Vehicle	0.05	-0.09	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	894.57	1490.95	1230.27	2050.45
		U_{16} - L_{15}	-0.16	-0.50	0.09	0.09	-0.18	-0.18					1.20	0.90	-0.16	0.09	-----	Vehicle	-0.50	-0.20	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	1230.93	2051.55	582.84	971.40
		U_{17} - L_{16}	-0.37	-0.76	0.04	0.04	-0.25	-0.25					1.20	0.90	-0.37	0.04	-----	Vehicle	-0.76	-0.27	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	3305.15	5508.59	511.04	851.73
		U_{18} - L_{17}	-1.43	-1.90	0.05	0.05	-0.44	-0.44					1.20	0.90	-1.43	0.06	-----	Vehicle	-1.90	-0.48	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	2486.20	4143.67	299.55	499.25
		U_{19} - L_{18}	-1.43	-1.96	0.04	0.04	-0.45	-0.45					1.20	0.90	-1.43	0.05	-----	Vehicle	-1.96	-0.48	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	3345.77	5576.29	318.34	530.57
		U_{20} - L_{19}	-0.81	-1.39	0.02	0.02	-0.33	-0.33					1.20	0.90	-0.81	0.02	-----	Vehicle	-1.39	-0.36	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	9568.07	15946.78	429.91	716.51
	Structure 2	U_0 - L_1	-1.46	-2.01	0.04	0.04	-0.42	-0.42					1.18	0.90	-1.46	0.05	-----	Vehicle	-2.01	-0.45	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	3648.38	6080.63	377.55	629.25
		U_1 - L_2	-1.39	-1.93	0.06	0.06	-0.42	-0.42					1.18	0.90	-1.39	0.06	-----	Vehicle	-1.93	-0.45	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	2767.10	4611.83	374.98	624.97
		U_2 - L_3	-1.30	-1.78	0.07	0.07	-0.43	-0.43					1.18	0.90	-1.30	0.07	-----	Vehicle	-1.78	-0.46	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	2058.90	3431.50	311.25	518.76
		U_3 - L_4	-0.57	-0.98	0.05	0.05	-0.26	-0.26					1.18	0.90	-0.57	0.05	-----	Vehicle	-0.98	-0.27	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	2815.36	4692.27	559.64	932.73
		U_4 - L_5	-0.10	-0.45	0.07	0.07	-0.18	-0.18					1.18	0.90	-0.10	0.08	-----	Vehicle	-0.45	-0.19	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	1488.49	2480.82	583.95	973.24
		U_5 - L_6	0.26	-0.08	0.12	0.12	-0.15	-0.15					1.18	0.90	0.26	0.13	-----	Vehicle	-0.08	-0.16	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	906.49	1510.82	718.59	1197.65
		U_6 - L_7	0.47	0.08	0.13	0.13	-0.08	-0.08					1.18	0.90	0.47	0.14	-----	Vehicle	0.08	-0.09	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	924.05	1540.08	1470.78	2451.30
		U_7 - L_7	-0.31	-1.10	0.09	0.09	-0.18	-0.18					1.18	0.90	-0.31	0.10	-----	Vehicle	-1.10	-0.19	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	1044.48	1740.80	544.08	906.81
		U_8 - L_8	-1.36	-1.87	0.06	0.06	-0.39	-0.39					1.18	0.90	-1.36	0.07	-----	Vehicle	-1.87	-0.41	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	2275.78	3792.97	370.70	617.83
		U_9 - L_9	-1.34	-1.84	0.03	0.03	-0.38	-0.38					1.18	0.90	-1.34	0.04	-----	Vehicle	-1.84	-0.40	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	4862.44	8104.07	421.99	703.32
		U_{11} - L_{10}	-1.60	-2.16	0.02	0.02	-0.43	-0.43					1.18	0.90	-1.60	0.02	-----	Vehicle	-2.16	-0.46	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	8339.84	13899.73	404.25	673.75
		U_{12} - L_{11}	-1.61	-2.20	0.02	0.02	-0.42	-0.42					1.18	0.90	-1.61	0.02	-----	Vehicle	-2.20	-0.45	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	10302.32	17170.53	413.86	689.76
		U_{13} - L_{12}	-1.62	-2.23	0.04	0.04	-0.43	-0.43					1.18	0.90	-1.62	0.05	-----	Vehicle	-2.23	-0.46	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	3650.47	6084.11	368.48	614.14
		U_{14} - L_{13}	-0.88	-1.51	0.05	0.05	-0.30	-0.30					1.18	0.90	-0.88	0.05	-----	Vehicle	-1.51	-0.32	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	3269.43	5449.04	526.02	876.69
		U_{15} - L_{15}	-0.27	-0.82	0.04	0.04	-0.24	-0.24					1.17	0.90	-0.27	0.04	-----	Vehicle	-0.82	-0.25	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	3912.10	6520.17	572.70	954.50
		U_{15} - L_{16}	-0.82	-1.35	0.05	0.05	-0.34	-0.34					1.17	0.90	-0.82	0.05	-----	Vehicle	-1.35	-0.36	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	2983.47	4972.44	395.35	658.91
		U_{16} - L_{17}	-0.97	-1.52	0.04	0.04	-0.38	-0.38					1.17	0.90	-0.97	0.04	-----	Vehicle	-1.52	-0.40	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	4205.05	7008.41	380.56	634.26
		U_{17} - L_{18}	-1.04	-1.53	0.04	0.04	-0.39	-0.39					1.17	0.90	-1.04	0.04	-----	Vehicle	-1.53	-0.41	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	3434.14	5723.56	351.15	585.26
		U_{18} - L_{19}	-0.98	-1.46	0.05	0.05	-0.38	-0.38					1.17	0.90	-0.98	0.05	-----	Vehicle	-1.46	-0.39	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	2861.02	4768.37	362.50	604.17
		U_{19} - L_{20}	-0.28	-1.03	0.06	0.06	-0.27	-0.27					1.17	0.90	-0.28	0.06	-----	Vehicle	-1.03	-0.28	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	1742.84	2904.74	366.53	610.88
		U_{20} - L_{21}	-0.23	-0.57	0.07	0.07	-0.19	-0.19					1.17	0.90	-0.23	0.07	-----	Vehicle	-0.57	-0.20	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	1528.57	2547.61	568.81	948.01
		U_{21} - L_{22}	0.04	-0.30	0.10	0.10	-0.11	-0.11					1.17	0.90	0.04	0.10	-----	Vehicle	-0.30	-0.12	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	1128.94	1881.56	957.76	1596.26
		U_{23} - L_{22}	0.07	-0.27	0.12	0.12	-0.10	-0.10					1.17	0.90	0.07	0.13	-----	Vehicle	-0.27	-0.11	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	895.53	1492.55	1050.89	1751.49
		U_{24} - L_{23}	-0.17	-0.52	0.07	0.07	-0.18	-0.18					1.17	0.90	-0.17	0.08	-----	Vehicle	-0.52	-0.19	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	1486.24	2477.06	607.31	1012.19
		U_{25} - L_{24}	-0.29	-1.06	0.07	0.07	-0.26	-0.26					1.17	0.90	-0.29	0.07	-----	Vehicle	-1.06	-0.27	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	1461.03	2435.05	385.07	641.78
		U_{26} - L_{25}	-0.69	-1.19	0.07	0.07	-0.40	-0.40					1.17	0.90	-0.69	0.07	-----	Vehicle	-1.19	-0.42	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	2110.24	3517.07	342.81	571.35
		U_{27} - L_{26}	-0.78	-1.29	0.05	0.05	-0.38	-0.38					1.17	0.90	-0.78	0.05	-----	Vehicle	-1.29	-0.40	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	2744.33	4573.89	354.27	590.44
		U_{28} - L_{27}	-0.72	-1.28	0.04	0.04	-0.41	-0.41					1.17	0.90	-0.72	0.04	-----	Vehicle	-1.28	-0.43	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	3500.72	5834.53	359.34	598.90
		U_{29} - L_{28}	-0.68	-1.22	0.03	0.03	-0.41	-0.41					1.17	0.90	-0.68	0.03	-----	Vehicle	-1.22	-0.43	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	5079.86	8466.43	335.99	559.98
		U_{30} - L_{29}	-0.22	-0.79	0.03	0.03	-0.25	-0.25					1.17	0.90	-0.22	0.03	-----	Vehicle	-0.79	-0.27	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	5475.94	9126.56	536.70	894.50
		U_{30} - L_{31}	-0.49	-1.12	0.05	0.05	-0.25	-0.25					1.18	0.90	-0.49	0.05	-----	Vehicle	-1.12	-0.27	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	3264.89	5441.49	631.25	1052.09
		U_{31} - L_{32}	-1.09	-1.69	0.06	0.06	-0.37	-0.37					1.18	0.90	-1.09	0.06	-----	Vehicle	-1.69	-0.40	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	2628.24	4380.40	425.61	709.35
		U_{32} - L_{33}	-1.17	-1.76	0.04	0.04	-0.39	-0.39					1.18	0.90	-1.17	0.05	-----	Vehicle	-1.76	-0.42	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	4067.35	6778.91	444.22	740.37
		U_{33} - L_{34}	-1.34	-1.87	0.04	0.04	-0.40	-0.40					1.18	0.90	-1.34	0.04	-----	Vehicle	-1.87	-0.43	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	4999.72	8332.86	428.66	714.44
		U_{34} - L_{35}	-1.13	-1.62	0.04	0.04	-0.39	-0.39					1.18	0.90	-1.13	0.04	-----	Vehicle	-1.62	-0.41	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	4454.00	7423.33	409.26	682.11
		U_{35} - L_{36}	-1.11	-1.61	0.06	0.06	-0.41	-0.41					1.18	0.90	-1.11	0.07	-----	Vehicle	-1.61	-0.43	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	2273.59	3789.32	353.76	589.60
		U_{36} - L_{37}	-0.27	-1.04	0.07	0.07	-0.21	-0.21					1.18	0.90	-0.27	0.07	-----	Vehicle	-1.04	-0.22	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	1487.29	2478.82	470.63	784.38
		U_{38} - L_{37}	0.40	0.00	0.16	0.16	-0.06	-0.06					1.18	0.90	0.40	0.17	-----	Vehicle	0.00	-0.07	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	757.37	1262.28	1866.99	3111.65
		U_{39} - L_{38}	0.27	-0.08	0.13	0.13	-0.13	-0.13					1.18	0.90	0.27	0.14	-----	Vehicle	-0.08	-0.13	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	798.22	1330.37	856.56	1427.61
		U_{40} - L_{39}	0.01	-0.35	0.07	0.07	-0.17	-0.17					1.18	0.90	0.01	0.08	-----	Vehicle	-0.35	-0.18	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	1447.45	2412.41	644.08	1073.47
		U_{41} - L_{40}	-0.30	-0.73	0.05	0.05	-0.26	-0.26					1.18	0.90	-0.30	0.06	-----	Vehicle	-0.73	-0.28	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	2758.32	4597.19	541.11	901.85
		U_{42} - L_{41}	-0.81	-1.29	0.07	0.07	-0.44	-0.44					1.18	0.90	-0.81	0.07	-----	Vehicle	-1.29	-0.47	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	1965.31	3275.51	304.13	506.88
		U_{43} - L_{42}	-0.95	-1.50	0.06	0.06	-0.47	-0.47					1.18	0.90	-0.95	0.07	-----	Vehicle	-1.50	-0.50	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	2543.49	4239.14	336.57	560.95
		U_{44} - L_{43}	-1.00	-1.57	0.03	0.03	-0.37	-0.37					1.18	0.90	-1.00	0.03	-----	Vehicle	-1.57	-0.39	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	5526.57	9210.95	432.76	721.26
	Structure 3	U_0 - L_1	-1.06	-1.63	0.02	0.02	-0.43	-0.43					1.20	0.90	-1.06	0.02	-----	Vehicle	-1.63	-0.47	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	6246.26	10410.44	329.08	548.47
		U_1 - L_2	-1.16	-1.67	0.03	0.03	-0.37	-0.37					1.20	0.90	-1.16	0.04	-----	Vehicle	-1.67	-0.40	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	4355.07	7258.46	380.05	633.42
		U_2 - L_3	-1.32	-1.78	0.05	0.05	-0.44	-0.44					1.20	0.90	-1.32	0.05	-----	Vehicle	-1.78	-0.47	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	2855.19	4758.65	304.53	507.55
		U_3 - L_4	-0.36	-0.74	0.04	0.04	-0.24	-0.24					1.20	0.90	-0.36	0.04	-----	Vehicle	-0.74	-0.26	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	3222.30	5370.50	527.92	879.87
		U_4 - L_5	-0.13	-0.47	0.07	0.07	-0.19	-0.19					1.20	0.90	-0.13	0.08	-----	Vehicle	-0.47	-0.20	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	1449.96	2416.60	567.26	945.44
		U_5 - L_6	0.35	0.02	0.11	0.11	-0.10	-0.10					1.20	0.90	0.35	0.12	-----	Vehicle	0.02	-0.11	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	951.18	1585.30	1057.87	1763.11
		U_7 - L_6	-0.07	-0.41	0.07	0.07	-0.09	-0.09					1.20	0.90	-0.07	0.08	-----	Vehicle	-0.41	-0.10	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	1469.64	2449.41	1122.81	1871.35
		U_8 - L_7	-0.58	-1.31	0.06	0.06	-0.25	-0.25					1.20	0.90	-0.58	0.07	-----	Vehicle	-1.31	-0.27	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	1825.79	3042.99	452.27	753.79
		U_9 - L_8	-0.75	-1.24	0.05	0.05	-0.31	-0.31					1.20	0.90	-0.75	0.05	-----	Vehicle	-1.24	-0.34	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	3294.20	5490.33	503.26	838.76
		U_{10} - L_9	-0.89	-1.77	0.01	0.01	-0.31	-0.31					1.20	0.90	-0.89	0.01	-----	Vehicle	-1.77	-0.34	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	16704.02	27840.03	423.56	705.94
		U_{11} - L_{10}	-1.27	-2.15	0.01	0.01	-0.43	-0.43					1.20	0.90	-1.27	0.01	-----	Vehicle	-2.15	-0.46	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	15193.43	25322.38	383.36	638.94
		U_{12} - L_{11}	-0.73	-1.69	0.06	0.06	-0.31	-0.31					1.20	0.90	-0.73	0.06	-----	Vehicle	-1.69	-0.34	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
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	2.30	2.30	-1.50	-1.50					1.24	0.75	4.56	2.13	-----	Vehicle	-6.52	-1.39	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**42.24**	**70.40**	**63.88**	**106.47**
		U_1 - U_2	3.38	-4.04	1.55	1.55	-0.32	-0.32					1.24	0.75	3.38	1.43	-----	Vehicle	-4.04	-0.30	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**63.26**	**105.43**	**304.26**	**507.11**
		U_2 - U_3	2.36	-7.47	1.44	1.44	-0.92	-0.92					1.24	0.75	2.36	1.34	-----	Vehicle	-7.47	-0.85	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**68.18**	**113.63**	**103.65**	**172.74**
		U_3 - U_4	2.44	-4.45	1.40	1.40	-1.08	-1.08					1.24	0.75	2.44	1.30	-----	Vehicle	-4.45	-1.00	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**70.19**	**116.98**	**89.74**	**149.57**
		U_4 - U_5	2.34	-4.17	0.99	0.99	-1.22	-1.22					1.24	0.75	2.34	0.92	-----	Vehicle	-4.17	-1.13	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**99.77**	**166.28**	**79.54**	**132.57**
		U_5 - U_6	4.24	-6.30	0.44	0.44	-1.51	-1.51					1.24	0.75	4.24	0.40	-----	Vehicle	-6.30	-1.40	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**223.53**	**372.56**	**63.35**	**105.58**
		U_6 - U_7	6.32	-5.06	1.14	1.14	-0.89	-0.89					1.24	0.75	6.32	1.05	-----	Vehicle	-5.06	-0.83	-----	Vehicle	14.00	0.75	2	9.33	5	73.85	92.32	1	401.94	401.9	**172.42**	**287.37**	**220.25**	**367.09**
		U_7 - U_8	-0.91	-13.50	0.01	0.01	-3.27	-3.27					1.24	0.75	-0.91	0.01	-----	Vehicle	-13.50	-3.03	-----	Vehicle	14.00	1.00	2	7.00	5	73.85	92.32	1	535.92	535.9	**19085.63**	**31809.38**	**78.93**	**131.56**
		U_8 - U_9	14.68	2.06	2.76	2.76	-0.10	-0.10					1.20	0.75	14.68	2.48	-----	Vehicle	2.06	-0.09	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**40.08**	**66.81**	**1243.00**	**2071.67**
		U_9 - U_{10}	6.72	-5.99	1.28	1.28	-0.41	-0.41					1.20	0.75	6.72	1.15	-----	Vehicle	-5.99	-0.37	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**77.21**	**128.68**	**242.04**	**403.40**
		U_{10} - U_{11}	8.58	-2.74	1.80	1.80	-0.18	-0.18					1.20	0.75	8.58	1.61	-----	Vehicle	-2.74	-0.16	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**54.32**	**90.53**	**557.16**	**928.59**
		U_{11} - U_{12}	6.93	-2.59	1.52	1.52	-0.58	-0.58					1.20	0.75	6.93	1.37	-----	Vehicle	-2.59	-0.52	-----	Vehicle	14.00	0.50	2	14.00	5	73.85	92.32	1	267.96	268.0	**87.40**	**145.66**	**234.74**	**391.24**
		U_{12} - U_{13}	8.34	-7.12	1.81	1.81	-0.78	-0.78					1.20	0.75	8.34	1.63	-----	Vehicle	-7.12	-0.70	-----	Vehicle	14.00	1.33	2	5.24	5	73.85	92.32	1	715.3575	715.4	**199.50**	**332.50**	**466.81**	**778.01**
		U_{13} - U_{14}	6.26	-2.33	2.52	2.52	-0.83	-0.83					1.20	0.75	6.26	2.27	-----	Vehicle	-2.33	-0.75	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**168.90**	**281.49**	**515.74**	**859.57**
		U_{14} - U_{15}	3.31	-4.79	1.57	1.57	-1.79	-1.79					1.20	0.75	3.31	1.41	-----	Vehicle	-4.79	-1.61	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**273.26**	**455.44**	**238.12**	**396.86**
		U_{15} - U_{16}	9.98	-5.04	2.10	2.10	-1.41	-1.41					1.20	0.75	9.98	1.89	-----	Vehicle	-5.04	-1.26	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**201.75**	**336.25**	**303.32**	**505.53**
		U_{16} - U_{17}	2.83	-6.01	1.31	1.31	-1.59	-1.59					1.20	0.75	2.83	1.18	-----	Vehicle	-6.01	-1.43	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**326.41**	**544.01**	**267.67**	**446.11**
		U_{17} - U_{18}	6.87	-9.04	0.62	0.62	-1.88	-1.88					1.20	0.75	6.87	0.56	-----	Vehicle	-9.04	-1.69	-----	Vehicle	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	**503.65**	**839.42**	**164.88**	**274.80**
		U_{18} - U_{19}	2.90	-6.82	0.46	0.46	-1.29	-1.29					1.20	0.75	2.90	0.41	-----	Vehicle	-6.82	-1.15	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**258.73**	**431.22**	**90.18**	**150.31**
		U_{19} - U_{20}	1.99	-7.35	1.69	1.69	-1.58	-1.58					1.20	0.75	1.99	1.52	-----	Vehicle	-7.35	-1.42	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**70.60**	**117.67**	**73.26**	**122.10**
	Structure 2	U_0 - U_1	12.40	-3.78	2.04	2.04	-1.05	-1.05					1.18	0.75	12.40	1.81	-----	Vehicle	-3.78	-0.93	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**58.23**	**97.05**	**118.47**	**197.45**
		U_1 - U_2	8.38	-5.46	2.00	2.00	-0.16	-0.16					1.18	0.75	8.38	1.78	-----	Vehicle	-5.46	-0.14	-----	Vehicle	17.00	0.75	2	11.33	5	73.85	92.32	1	488.07	488.1	**123.86**	**206.44**	**1573.56**	**2622.61**
		U_2 - U_3	8.24	-2.95	2.95	2.95	-0.38	-0.38					1.18	0.75	8.24	2.62	-----	Vehicle	-2.95	-0.34	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**62.57**	**104.29**	**493.25**	**822.08**
		U_3 - U_4	7.92	-7.97	2.14	2.14	-1.20	-1.20					1.18	0.75	7.92	1.90	-----	Vehicle	-7.97	-1.06	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**194.87**	**324.78**	**348.42**	**580.71**
		U_4 - U_5	5.54	-4.79	3.53	3.53	-1.31	-1.31					1.18	0.75	5.54	3.13	-----	Vehicle	-4.79	-1.16	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**142.74**	**237.91**	**384.85**	**641.42**
		U_5 - U_6	2.70	-7.57	2.01	2.01	-2.27	-2.27					1.18	0.75	2.70	1.78	-----	Vehicle	-7.57	-2.01	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**252.09**	**420.16**	**221.63**	**369.39**
		U_6 - U_7	5.85	-9.91	3.09	3.09	-0.99	-0.99					1.18	0.75	5.85	2.74	-----	Vehicle	-9.91	-0.87	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**135.88**	**226.47**	**422.79**	**704.64**
		U_7 - U_8	8.61	-6.86	1.65	1.65	-3.10	-3.10					1.18	0.75	8.61	1.47	-----	Vehicle	-6.86	-2.75	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**252.62**	**421.03**	**134.92**	**224.86**
		U_8 - U_9	3.73	-10.69	1.83	1.83	-1.41	-1.41					1.18	0.75	3.73	1.62	-----	Vehicle	-10.69	-1.25	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**195.06**	**325.10**	**249.43**	**415.72**
		U_9 - U_{10}	2.20	-9.32	0.82	0.82	-2.00	-2.00					1.18	0.75	2.20	0.73	-----	Vehicle	-9.32	-1.77	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**178.15**	**296.91**	**71.08**	**118.46**
		U_{10} - U_{11}	4.11	-10.14	1.15	1.15	-1.43	-1.43					1.18	0.75	4.11	1.02	-----	Vehicle	-10.14	-1.27	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**126.81**	**211.35**	**98.91**	**164.85**
		U_{11} - U_{12}	3.90	-11.48	0.85	0.85	-1.74	-1.74					1.18	0.75	3.90	0.75	-----	Vehicle	-11.48	-1.54	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**171.34**	**285.57**	**80.70**	**134.50**
		U_{12} - U_{13}	9.71	-7.93	1.52	1.52	-1.01	-1.01					1.18	0.75	9.71	1.35	-----	Vehicle	-7.93	-0.90	-----	Vehicle	17.00	0.94	2	9.07	5	73.85	92.32	1	610.0875	610.1	**204.20**	**340.34**	**308.30**	**513.83**
		U_{13} - U_{14}	-10.77	-26.35	0.18	0.18	-4.29	-4.29					1.18	0.75	-10.77	0.16	-----	Vehicle	-26.35	-3.80	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**2494.97**	**4158.28**	**99.53**	**165.88**
		U_{14} - U_{15}	23.41	7.84	5.08	5.08	-0.29	-0.29					1.17	0.75	23.41	4.45	-----	Vehicle	7.84	-0.25	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**85.39**	**142.31**	**1596.46**	**2660.76**
		U_{15} - U_{16}	7.06	-9.43	1.66	1.66	-1.37	-1.37					1.17	0.75	7.06	1.45	-----	Vehicle	-9.43	-1.20	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**216.75**	**361.25**	**261.16**	**435.27**
		U_{16} - U_{17}	8.63	-3.17	2.48	2.48	-0.38	-0.38					1.17	0.75	8.63	2.17	-----	Vehicle	-3.17	-0.33	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**75.41**	**125.69**	**504.05**	**840.09**
		U_{17} - U_{18}	8.38	-5.41	2.05	2.05	-0.66	-0.66					1.17	0.75	8.38	1.80	-----	Vehicle	-5.41	-0.58	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**59.90**	**99.83**	**190.18**	**316.97**
		U_{18} - U_{19}	8.11	-4.42	1.96	1.96	-0.55	-0.55					1.17	0.75	8.11	1.71	-----	Vehicle	-4.42	-0.48	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**62.84**	**104.73**	**226.83**	**378.06**
		U_{19} - U_{20}	5.79	-4.35	1.89	1.89	-0.81	-0.81					1.17	0.75	5.79	1.66	-----	Vehicle	-4.35	-0.71	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**77.04**	**128.40**	**180.91**	**301.51**
	Structure 3	U_0 - U_{21}	6.65	-6.59	2.31	2.31	-1.08	-1.08					1.17	0.75	6.65	2.03	-----	Vehicle	-6.59	-0.95	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**118.47**	**197.45**	**253.55**	**422.58**
		U_{21} - U_{22}	6.33	-6.69	1.94	1.94	-1.02	-1.02					1.17	0.75	6.33	1.70	-----	Vehicle	-6.69	-0.89	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**140.95**	**234.92**	**269.19**	**448.65**
		U_{22} - U_{23}	6.91	-6.27	2.07	2.07	-1.64	-1.64					1.17	0.75	6.91	1.82	-----	Vehicle	-6.27	-1.44	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**132.05**	**220.09**	**166.80**	**278.00**
		U_{23} - U_{24}	7.16	-6.08	2.00	2.00	-1.56	-1.56					1.17	0.75	7.16	1.75	-----	Vehicle	-6.08	-1.37	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**136.79**	**227.98**	**175.53**	**292.55**
		U_{24} - U_{25}	4.32	-5.83	1.11	1.11	-1.49	-1.49					1.17	0.75	4.32	0.97	-----	Vehicle	-5.83	-1.31	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**132.24**	**220.41**	**97.71**	**162.86**
		U_{25} - U_{26}	4.60	-7.93	1.12	1.12	-1.79	-1.79					1.17	0.75	4.60	0.98	-----	Vehicle	-7.93	-1.57	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**112.39**	**187.32**	**68.62**	**114.37**
		U_{26} - U_{27}	5.15	-8.64	1.30	1.30	-1.53	-1.53					1.17	0.75	5.15	1.14	-----	Vehicle	-8.64	-1.34	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**96.03**	**160.05**	**79.94**	**133.24**
		U_{27} - U_{28}	3.24	-8.55	0.88	0.88	-1.88	-1.88					1.17	0.75	3.24	0.78	-----	Vehicle	-8.55	-1.64	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**215.48**	**359.13**	**99.65**	**166.09**
		U_{28} - U_{29}	8.81	-7.68	2.13	2.13	-1.26	-1.26					1.17	0.75	8.81	1.87	-----	Vehicle	-7.68	-1.10	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**168.05**	**280.09**	**285.38**	**475.64**
		U_{29} - U_{30}	-7.76	-23.33	0.13	0.13	-4.51	-4.51					1.17	0.75	-7.76	0.11	-----	Vehicle	-23.33	-3.95	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**3499.49**	**5832.49**	**96.26**	**160.44**
		U_{30} - U_{31}	24.20	8.63	4.32	4.32	-0.31	-0.31					1.18	0.75	24.20	3.83	-----	Vehicle	8.63	-0.27	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**99.06**	**165.10**	**1471.05**	**2451.75**
		U_{31} - U_{32}	7.18	-10.46	1.55	1.55	-1.26	-1.26					1.18	0.75	7.18	1.38	-----	Vehicle	-10.46	-1.12	-----	Vehicle	17.00	0.94	2	9.07	5	73.85	92.32	1	610.0875	610.1	**201.23**	**335.38**	**245.48**	**409.14**
		U_{32} - U_{33}	10.91	-4.46	2.24	2.24	-0.22	-0.22					1.18	0.75	10.91	1.99	-----	Vehicle	-4.46	-0.19	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**62.79**	**104.66**	**665.52**	**1109.20**
		U_{33} - U_{34}	9.22	-5.03	1.66	1.66	-0.57	-0.57					1.18	0.75	9.22	1.47	-----	Vehicle	-5.03	-0.50	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**85.57**	**142.61**	**254.30**	**423.84**
		U_{34} - U_{35}	9.09	-2.43	2.50	2.50	-0.55	-0.55					1.18	0.75	9.09	2.22	-----	Vehicle	-2.43	-0.49	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**56.83**	**94.71**	**265.81**	**443.01**
		U_{35} - U_{36}	10.27	-4.15	2.01	2.01	-1.03	-1.03					1.18	0.75	10.27	1.78	-----	Vehicle	-4.15	-0.91	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**175.40**	**292.33**	**347.83**	**579.71**
		U_{36} - U_{37}	6.69	-8.78	3.29	3.29	-0.70	-0.70					1.18	0.75	6.69	2.92	-----	Vehicle	-8.78	-0.62	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**127.20**	**212.01**	**592.63**	**987.71**
		U_{37} - U_{38}	10.53	-5.24	2.46	2.46	-2.56	-2.56					1.18	0.75	10.53	2.18	-----	Vehicle	-5.24	-2.27	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**169.19**	**281.98**	**163.72**	**272.86**
		U_{38} - U_{39}	8.00	-2.27	3.59	3.59	-0.92	-0.92					1.18	0.75	8.00	3.19	-----	Vehicle	-2.27	-0.81	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**139.78**	**232.97**	**552.06**	**920.11**
		U_{39} - U_{40}	5.61	-4.72	1.89	1.89	-2.62	-2.62					1.18	0.75	5.61	1.67	-----	Vehicle	-4.72	-2.32	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**267.08**	**445.14**	**192.96**	**321.60**
		U_{40} - U_{41}	7.75	-8.14	2.17	2.17	-1.95	-1.95					1.18	0.75	7.75	1.93	-----	Vehicle	-8.14	-1.73	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**192.23**	**320.38**	**214.73**	**357.88**
		U_{41} - U_{42}	3.50	-7.70	1.22	1.22	-2.28	-2.28					1.18	0.75	3.50	1.08	-----	Vehicle	-7.70	-2.03	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**154.77**	**257.96**	**81.13**	**135.21**
		U_{42} - U_{43}	4.07	-9.77	0.72	0.72	-1.61	-1.61					1.18	0.75	4.07	0.64	-----	Vehicle	-9.77	-1.43	-----	Vehicle	17.00	0.75	2	11.33	5	73.85	92.32	1	488.07	488.1	**348.32**	**580.53**	**153.21**	**255.35**
		U_{43} - U_{44}	6.60	-9.58	1.86	1.86	-1.96	-1.96					1.18	0.75	6.60	1.65	-----	Vehicle	-9.58	-1.74	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**66.03**	**110.05**	**61.59**	**102.65**
	Structure 3	U_0 - U_1	8.84	-0.50	2.08	2.08	-1.23	-1.23					1.20	0.75	8.84	1.87	-----	Vehicle	-0.50	-1.11	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**54.96**	**91.60**	**97.64**	**162.74**
		U_1 - U_2	5.80	-3.92	1.50	1.50	-0.12	-0.12					1.20	0.75	5.80	1.35	-----	Vehicle	-3.92	-0.11	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**77.61**	**129.34**	**981.85**	**1636.42**
		U_2 - U_3	8.91	-7.00	2.30	2.30	-0.30	-0.30					1.20	0.75	8.91	2.06	-----	Vehicle	-7.00	-0.27	-----	Vehicle	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	**134.97**	**224.95**	**1040.70**	**1734.50**
		U_3 - U_4	5.49	-3.35	2.31	2.31	-0.68	-0.68					1.20	0.75	5.49	2.08	-----	Vehicle	-3.35	-0.61	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**184.38**	**307.30**	**631.13**	**1051.88**
		U_4 - U_5	5.50	-9.53	1.62	1.62	-1.25	-1.25					1.20	0.75	5.50	1.46	-----	Vehicle	-9.53	-1.12	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**262.77**	**437.94**	**339.57**	**565.94**
		U_5 - U_6	4.95	-3.15	2.62	2.62	-0.78	-0.78					1.20	0.75	4.95	2.35	-----	Vehicle	-3.15	-0.70	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**163.16**	**271.94**	**550.18**	**916.96**
		U_6 - U_7	2.39	-6.20	2.02	2.02	-2.02	-2.02					1.20	0.75	2.39	1.81	-----	Vehicle	-6.20	-1.81	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**212.36**	**353.93**	**211.20**	**352.01**
		U_7 - U_8	7.38	-8.07	1.05	1.05	-1.72	-1.72					1.20	0.75	7.38	0.95	-----	Vehicle	-8.07	-1.55	-----	Vehicle	14.00	1.33	2	5.24	5	73.85	92.32	1	715.3575	715.4	**344.61**	**574.35**	**210.02**	**350.03**
		U_8 - U_9	2.59	-6.93	1.00	1.00	-1.34	-1.34					1.20	0.75	2.59	0.90	-----	Vehicle	-6.93	-1.21	-----	Vehicle	14.00	0.50	2	14.00	5	73.85	92.32	1	267.96	268.0	**135.78**	**226.30**	**98.97**	**164.96**
		U_9 - U_{10}	2.81	-8.52	0.58	0.58	-1.54	-1.54					1.20	0.75	2.81	0.52	-----	Vehicle	-8.52	-1.39	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**174.75**	**291.26**	**63.22**	**105.36**
		U_{10} - U_{11}	5.83	-6.88	0.64	0.64	-1.03	-1.03					1.20	0.75	5.83	0.57	-----	Vehicle	-6.88	-0.93	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**156.45**	**260.74**	**95.77**	**159.61**
		U_{11} - U_{12}	-2.18	-14.80	0.03	0.03	-2.69	-2.69					1.20	0.75	-2.18	0.03	-----	Vehicle	-14.80	-2.41	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**3693.79**	**6156.31**	**41.14**	**68.57**
		U_{12} - U_{13}	12.98	0.39	3.71	3.71	-0.01	-0.01					1.24	0.75	12.98	3.45	-----	Vehicle	0.39	-0.01	-----	Vehicle	14.00	1.00	2	7

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
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	1.39	1.39	-0.17	-0.17					1.24	0.75	4.20	1.29	-----	Vehicle	-2.36	-0.15	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**80.42**	**134.03**	**679.11**	**1131.85**
	L_1 - L_2	5.75	-2.53	1.44	1.44	-0.54	-0.54					1.24	0.75	5.75	1.33	-----	Vehicle	-2.53	-0.50	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**77.03**	**128.39**	**208.96**	**348.26**
	L_2 - L_3	2.73	-3.85	1.27	1.27	-0.81	-0.81					1.24	0.75	2.73	1.17	-----	Vehicle	-3.85	-0.75	-----	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	**138.05**	**230.08**	**214.61**	**357.68**
	L_3 - L_4	3.90	-4.48	1.53	1.53	-1.22	-1.22					1.24	0.75	3.90	1.42	-----	Vehicle	-4.48	-1.13	-----	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	**113.66**	**189.43**	**142.33**	**237.21**
	L_4 - L_5	1.53	-7.85	0.51	0.51	-1.55	-1.55					1.24	0.75	1.53	0.48	-----	Vehicle	-7.85	-1.43	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**287.63**	**479.38**	**92.80**	**154.66**
	L_5 - L_6	1.34	-7.19	0.41	0.41	-1.25	-1.25					1.24	0.75	1.34	0.38	-----	Vehicle	-7.19	-1.16	-----	Vehicle	15.00	0.77	2	9.74	5	73.85	92.32	1	442.134	442.1	**533.06**	**888.44**	**172.52**	**287.53**
	L_6 - L_7	3.62	-6.82	0.50	0.50	-1.29	-1.29					1.24	0.75	3.62	0.46	-----	Vehicle	-6.82	-1.20	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**694.19**	**1156.98**	**265.03**	**441.71**
	L_7 - L_8	-6.36	-14.66	0.04	0.04	-3.03	-3.03					1.24	0.75	-6.36	0.03	-----	Vehicle	-14.66	-2.81	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**12587.24**	**20978.73**	**149.47**	**249.11**
	L_8 - L_9	15.52	7.55	2.82	2.82	-0.09	-0.09					1.20	0.75	15.52	2.53	-----	Vehicle	7.55	-0.08	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**165.58**	**275.97**	**5601.00**	**9335.00**
	L_9 - L_{10}	10.29	-2.64	1.29	1.29	-0.56	-0.56					1.20	0.75	10.29	1.16	-----	Vehicle	-2.64	-0.50	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**272.92**	**454.86**	**643.07**	**1071.78**
	L_{10} - L_{11}	8.89	0.36	1.40	1.40	-0.33	-0.33					1.20	0.75	8.89	1.26	-----	Vehicle	0.36	-0.29	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**105.54**	**175.90**	**472.67**	**787.78**
	L_{11} - L_{12}	11.21	-1.42	1.16	1.16	-0.36	-0.36					1.20	0.75	11.21	1.04	-----	Vehicle	-1.42	-0.32	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**125.55**	**209.25**	**422.23**	**703.72**
	L_{12} - L_{13}	6.02	-3.53	1.23	1.23	-0.46	-0.46					1.20	0.75	6.02	1.10	-----	Vehicle	-3.53	-0.42	-----	Vehicle	15.00	1.02	2	7.35	5	73.85	92.32	1	585.684	585.7	**241.72**	**402.86**	**643.31**	**1072.19**
	L_{13} - L_{14}	11.62	0.44	2.58	2.58	-0.68	-0.68					1.20	0.75	11.62	2.32	-----	Vehicle	0.44	-0.61	-----	Vehicle	15.00	1.46	2	5.15	5	73.85	92.32	1	836.8965	836.9	**163.62**	**272.70**	**632.63**	**1054.38**
	L_{14} - L_{15}	2.83	-9.85	1.05	1.05	-1.82	-1.82					1.20	0.75	2.83	0.95	-----	Vehicle	-9.85	-1.64	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**504.02**	**840.04**	**288.84**	**481.40**
	L_{15} - L_{16}	6.71	-2.72	1.20	1.20	-1.28	-1.28					1.20	0.75	6.71	1.07	-----	Vehicle	-2.72	-1.15	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**442.02**	**736.69**	**416.06**	**693.44**
	L_{16} - L_{17}	-0.07	-11.08	0.27	0.27	-1.51	-1.51					1.20	0.75	-0.07	0.24	-----	Vehicle	-11.08	-1.36	-----	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	**1483.26**	**2472.10**	**255.85**	**426.42**
	L_{17} - L_{18}	3.82	-7.83	0.19	0.19	-1.38	-1.38					1.20	0.75	3.82	0.17	-----	Vehicle	-7.83	-1.24	-----	Vehicle	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	**1398.45**	**2330.75**	**188.03**	**313.38**
	L_{18} - L_{19}	1.59	-10.77	0.11	0.11	-1.18	-1.18					1.20	0.75	1.59	0.10	-----	Vehicle	-10.77	-1.06	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**1082.57**	**1804.28**	**93.89**	**156.48**
	L_{19} - L_{20}	2.58	-7.20	0.05	0.05	-1.15	-1.15					1.20	0.75	2.58	0.04	-----	Vehicle	-7.20	-1.04	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**2583.53**	**4305.89**	**98.16**	**163.59**
Structure 2	L_0- L_1	7.47	-2.52	1.31	1.31	-0.15	-0.15					1.18	0.75	7.47	1.16	-----	Vehicle	-2.52	-0.13	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**119.36**	**198.94**	**1078.32**	**1797.20**
	L_1 - L_2	11.63	-2.16	1.38	1.38	-0.15	-0.15					1.18	0.75	11.63	1.23	-----	Vehicle	-2.16	-0.14	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**111.10**	**185.17**	**1037.88**	**1729.79**
	L_2 - L_3	8.06	-2.93	1.66	1.66	-0.30	-0.30					1.18	0.75	8.06	1.47	-----	Vehicle	-2.93	-0.27	-----	Vehicle	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	**175.38**	**292.30**	**975.83**	**1626.38**
	L_3 - L_4	12.24	-1.94	1.56	1.56	-0.34	-0.34					1.18	0.75	12.24	1.39	-----	Vehicle	-1.94	-0.30	-----	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	**267.67**	**446.12**	**1253.89**	**2089.82**
	L_4 - L_5	9.46	-8.43	1.96	1.96	-1.16	-1.16					1.18	0.75	9.46	1.74	-----	Vehicle	-8.43	-1.03	-----	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	**281.90**	**469.84**	**477.47**	**795.79**
	L_5 - L_6	11.40	-2.08	1.86	1.86	-0.93	-0.93					1.18	0.75	11.40	1.65	-----	Vehicle	-2.08	-0.83	-----	Vehicle	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	**326.37**	**543.94**	**659.50**	**1099.16**
	L_6 - L_7	4.02	-9.79	2.01	2.01	-1.84	-1.84					1.18	0.75	4.02	1.78	-----	Vehicle	-9.79	-1.64	-----	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	**309.82**	**516.36**	**335.94**	**559.90**
	L_7 - L_8	4.78	-10.27	0.76	0.76	-2.38	-2.38					1.18	0.75	4.78	0.67	-----	Vehicle	-10.27	-2.11	-----	Vehicle	18.00	1.23	2	7.35	5	73.85	92.32	1	844.074	844.1	**574.24**	**957.06**	**181.80**	**303.00**
	L_8 - L_9	0.58	-13.59	0.47	0.47	-1.38	-1.38					1.18	0.75	0.58	0.42	-----	Vehicle	-13.59	-1.22	-----	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	**728.51**	**1214.18**	**243.14**	**405.24**
	L_9 - L_{10}	-0.11	-10.43	0.54	0.54	-1.47	-1.47					1.18	0.75	-0.11	0.48	-----	Vehicle	-10.43	-1.30	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**463.06**	**771.76**	**166.11**	**276.85**
	L_{10} - L_{11}	-0.07	-12.28	0.30	0.30	-1.38	-1.38					1.18	0.75	-0.07	0.27	-----	Vehicle	-12.28	-1.23	-----	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	**719.41**	**1199.01**	**149.39**	**248.98**
	L_{11} - L_{12}	1.07	-14.66	0.38	0.38	-1.31	-1.31					1.18	0.75	1.07	0.34	-----	Vehicle	-14.66	-1.16	-----	Vehicle	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	**905.55**	**1509.25**	**256.16**	**426.93**
	L_{12} - L_{13}	6.89	-6.84	1.32	1.32	-1.10	-1.10					1.18	0.75	6.89	1.17	-----	Vehicle	-6.84	-0.98	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**378.87**	**631.45**	**455.64**	**759.40**
	L_{13} - L_{14}	-19.00	-32.90	0.22	0.22	-4.89	-4.89					1.18	0.75	-19.00	0.19	-----	Vehicle	-32.90	-4.34	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**2921.97**	**4869.94**	**121.89**	**203.15**
	L_{14} - L_{15}	32.02	18.24	4.87	4.87	-0.26	-0.26					1.17	0.75	32.02	4.27	-----	Vehicle	18.24	-0.23	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**124.06**	**206.76**	**2483.19**	**4138.65**
	L_{15} - L_{16}	2.21	-10.14	1.15	1.15	-1.29	-1.29					1.17	0.75	2.21	1.00	-----	Vehicle	-10.14	-1.13	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**445.76**	**742.93**	**392.09**	**653.49**
	L_{16} - L_{17}	13.39	-0.69	1.80	1.80	-0.38	-0.38					1.17	0.75	13.39	1.58	-----	Vehicle	-0.69	-0.33	-----	Vehicle	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	**219.81**	**366.35**	**1073.14**	**1788.56**
	L_{17} - L_{18}	9.56	-2.17	1.66	1.66	-0.44	-0.44					1.17	0.75	9.56	1.46	-----	Vehicle	-2.17	-0.38	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**148.92**	**248.21**	**577.63**	**962.71**
	L_{18} - L_{19}	8.70	-1.33	1.36	1.36	-0.59	-0.59					1.17	0.75	8.70	1.19	-----	Vehicle	-1.33	-0.52	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**128.88**	**214.80**	**305.33**	**508.88**
	L_{19} - L_{20}	9.27	-3.28	1.31	1.31	-0.40	-0.40					1.17	0.75	9.27	1.15	-----	Vehicle	-3.28	-0.35	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**133.70**	**222.84**	**446.68**	**744.47**
	L_{20} - L_{21}	7.20	-3.21	1.83	1.83	-0.76	-0.76					1.17	0.75	7.20	1.60	-----	Vehicle	-3.21	-0.67	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**158.35**	**263.92**	**383.88**	**639.80**
	L_{21} - L_{22}	8.50	-2.78	2.12	2.12	-1.12	-1.12					1.17	0.75	8.50	1.86	-----	Vehicle	-2.78	-0.98	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**136.21**	**227.01**	**262.14**	**436.90**
	L_{22} - L_{23}	2.93	-8.09	1.45	1.45	-1.87	-1.87					1.17	0.75	2.93	1.27	-----	Vehicle	-8.09	-1.64	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**202.15**	**336.91**	**154.72**	**257.87**
	L_{23} - L_{24}	3.61	-6.79	0.88	0.88	-1.54	-1.54					1.17	0.75	3.61	0.77	-----	Vehicle	-6.79	-1.35	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**332.10**	**553.49**	**188.11**	**313.52**
	L_{24} - L_{25}	3.13	-9.39	0.40	0.40	-1.31	-1.31					1.17	0.75	3.13	0.35	-----	Vehicle	-9.39	-1.15	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**445.82**	**743.03**	**133.95**	**223.25**
	L_{25} - L_{26}	1.67	-8.33	0.60	0.60	-1.32	-1.32					1.17	0.75	1.67	0.52	-----	Vehicle	-8.33	-1.16	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**301.38**	**502.29**	**133.18**	**221.96**
	L_{26} - L_{27}	1.60	-10.07	0.41	0.41	-1.53	-1.53					1.17	0.75	1.60	0.36	-----	Vehicle	-10.07	-1.34	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**613.62**	**1022.71**	**161.45**	**269.08**
	L_{27} - L_{28}	0.95	-13.04	0.31	0.31	-1.68	-1.68					1.17	0.75	0.95	0.27	-----	Vehicle	-13.04	-1.47	-----	Vehicle	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	**1325.89**	**2209.81**	**235.92**	**393.21**
	L_{28} - L_{29}	8.62	-3.57	1.26	1.26	-1.04	-1.04					1.17	0.75	8.62	1.11	-----	Vehicle	-3.57	-0.92	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**400.99**	**668.31**	**488.42**	**814.03**
	L_{29} - L_{30}	-17.40	-30.90	0.31	0.31	-5.18	-5.18					1.17	0.75	-17.40	0.27	-----	Vehicle	-30.90	-4.54	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**2083.69**	**3472.81**	**116.73**	**194.55**
	L_{30} - L_{31}	30.59	16.41	4.44	4.44	-0.33	-0.33					1.18	0.75	30.59	3.94	-----	Vehicle	16.41	-0.30	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**134.51**	**224.18**	**1890.06**	**3150.10**
	L_{31} - L_{32}	5.57	-8.34	1.26	1.26	-1.34	-1.34					1.18	0.75	5.57	1.12	-----	Vehicle	-8.34	-1.19	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**399.46**	**665.77**	**373.89**	**623.16**
	L_{32} - L_{33}	14.28	-1.54	1.49	1.49	-0.33	-0.33					1.18	0.75	14.28	1.32	-----	Vehicle	-1.54	-0.29	-----	Vehicle	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	**225.10**	**375.17**	**1041.37**	**1735.62**
	L_{33} - L_{34}	11.19	-1.33	1.34	1.34	-0.27	-0.27					1.18	0.75	11.19	1.19	-----	Vehicle	-1.33	-0.24	-----	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	**154.85**	**258.08**	**790.27**	**1317.11**
	L_{34} - L_{35}	10.35	-0.01	1.70	1.70	-0.53	-0.53					1.18	0.75	10.35	1.51	-----	Vehicle	-0.01	-0.47	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**143.14**	**238.56**	**477.89**	**796.49**
	L_{35} - L_{36}	12.98	-1.23	1.51	1.51	-0.45	-0.45					1.18	0.75	12.98	1.34	-----	Vehicle	-1.23	-0.40	-----	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	**222.16**	**370.27**	**758.09**	**1263.48**
	L_{36} - L_{37}	10.09	-4.97	2.52	2.52	-0.59	-0.59					1.18	0.75	10.09	2.24	-----	Vehicle	-4.97	-0.52	-----	Vehicle	18.00	1.23	1	14.69	5	73.85	92.32	1	422.037	422.0	**84.28**	**140.46**	**365.78**	**609.64**
	L_{37} - L_{38}	10.82	-3.01	2.26	2.26	-1.93	-1.93					1.18	0.75	10.82	2.00	-----	Vehicle	-3.01	-1.71	-----	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	**274.01**	**456.69**	**322.84**	**538.07**
	L_{38} - L_{39}	2.38	-11.08	1.26	1.26	-1.47	-1.47					1.18	0.75	2.38	1.12	-----	Vehicle	-11.08	-1.30	-----	Vehicle	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	**486.11**	**810.19**	**414.27**	**690.45**
	L_{39} - L_{40}	9.28	-8.60	1.17	1.17	-1.74	-1.74					1.18	0.75	9.28	1.04	-----	Vehicle	-8.60	-1.54	-----	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	**472.51**	**787.51**	**319.26**	**532.10**
	L_{40} - L_{41}	1.61	-12.52	0.37	0.37	-1.66	-1.66					1.18	0.75	1.61	0.32	-----	Vehicle	-12.52	-1.47	-----	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	**1162.01**	**1936.69**	**251.46**	**419.09**
	L_{41} - L_{42}	3.29	-7.64	0.32	0.32	-1.49	-1.49					1.18	0.75	3.29	0.29	-----	Vehicle	-7.64	-1.32	-----	Vehicle	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	**911.44**	**1519.06**	**194.99**	**324.99**
	L_{42} - L_{43}	1.35	-12.36	0.32	0.32	-1.32	-1.32					1.18	0.75	1.35	0.28	-----	Vehicle	-12.36	-1.17	-----	Vehicle	18.00	0.45	1	40.00	5	73.85	92.32	1	155.034	155.0	**251.53**	**419.22**	**54.72**	**91.20**
	L_{43} - L_{44}	1.52	-8.38	0.11	0.11	-1.45	-1.45					1.18	0.75	1.52	0.09	-----	Vehicle	-8.38	-1.29	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**1497.82**	**2496.36**	**107.26**	**178.76**
Structure 3	L_0- L_1	6.56	-3.30	1.08	1.08	-0.07	-0.07					1.20	0.75	6.56	0.97	-----	Vehicle	-3.30	-0.06	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**104.80**	**174.67**	**1653.99**	**2756.66**
	L_1 - L_2	10.13	-2.33	1.17	1.17	-0.09	-0.09					1.20	0.75	10.13	1.05	-----	Vehicle	-2.33	-0.08	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**95.22**	**158.70**	**1322.98**	**2204.97**
	L_2 - L_3	7.92	-3.84	1.41	1.41	-0.18	-0.18					1.20	0.75	7.92	1.27	-----	Vehicle	-3.84	-0.16	-----	Vehicle	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	**184.00**	**306.66**	**1476.94**	**2461.56**
	L_3 - L_4	10.42	-0.67	1.68	1.68	-0.27	-0.27					1.20	0.75	10.42	1.51	-----	Vehicle	-0.67	-0.25	-----	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	**230.54**	**384.24**	**1443.42**	**2405.70**
	L_4 - L_5	3.19	-6.26	1.25	1.25	-1.14	-1.14					1.20	0.75	3.19	1.12	-----	Vehicle	-6.26	-1.02	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**424.12**	**706.87**	**464.40**	**774.00**
	L_5 - L_6	10.01	-2.69	2.42	2.42	-0.87	-0.87					1.20	0.75	10.01	2.17	-----	Vehicle	-2.69	-0.78	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**217.54**	**362.57**	**612.84**	**1021.40**
	L_6 - L_7	-0.14	-11.31	0.98	0.98	-2.20	-2.20					1.20	0.75	-0.14	0.88	-----	Vehicle	-11.31	-1.98	-----	Vehicle	15.00	1.46	2	5.15	5	73.85	92.32	1	836.8965	836.9	**440.11**	**733.51**	**191.80**	**319.67**
	L_7 - L_8	3.69	-5.85	0.53	0.53	-1.30	-1.30					1.20	0.75	3.69	0.48	-----	Vehicle	-5.85	-1.16	-----	Vehicle	15.00	1.02	2	7.35	5	73.85	92.32	1	585.684	585.7	**560.88**	**934.79**	**229.30**	**382.17**
	L_8 - L_9	1.43	-11.17	0.48	0.48	-1.09	-1.09					1.20	0.75	1.43	0.43	-----	Vehicle	-11.17	-0.98	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**320.21**	**533.69**	**134.24**	**223.73**
	L_9 - L_{10}	-0.27	-8.76	0.42	0.42	-1.29	-1.29					1.20	0.75	-0.27	0.38	-----	Vehicle	-8.76	-1.16	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**365.61**	**609.36**	**114.63**	**191.04**
	L_{10} - L_{11}	2.24	-10.60	0.55	0.55	-1.25	-1.25					1.20	0.75	2.24	0.49	-----	Vehicle	-10.60	-1.12	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**655.35**	**1092.25**	**280.82**	**468.03**
	L_{11} - L_{12}	-7.73	-15.55	0.03	0.03	-2.99	-2.99					1.20	0.75	-7.73	0.03	-----	Vehicle	-15.55	-2.69	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**15542.05**	**25903.41**	**155.78**	**259.64**
	L_{12} - L_{13}	14.02	5.56	3.00	3.00	-0.02	-0.02					1.24	0.75	14.02	2.79	-----	Vehicle	5.56	-0.02	-----	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: 2F1
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
Structure 1	U_0 - L_0		-1.75	-1.75	0.20	0.20	-1.55	-1.55					1.24	0.75	-1.75	0.19	-----	Vehicle	-1.75	-1.44	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**614.16**	**1023.60**	**78.63**	**131.05**
	U_1 - L_1		-0.62	-0.62	0.20	0.20	-1.41	-1.41					1.24	0.75	-0.62	0.18	-----	Vehicle	-0.62	-1.31	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**626.03**	**1043.38**	**87.08**	**145.14**
	U_2 - L_2		0.44	0.44	0.33	0.33	-1.11	-1.11					1.24	0.75	0.44	0.31	-----	Vehicle	0.44	-1.03	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**368.29**	**613.82**	**111.10**	**185.17**
	U_3 - L_3		1.39	1.39	0.75	0.75	-0.89	-0.89					1.24	0.75	1.39	0.70	-----	Vehicle	1.39	-0.83	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**162.70**	**271.17**	**138.67**	**231.11**
	U_4 - L_4		1.88	1.88	0.90	0.90	-0.48	-0.48					1.24	0.75	1.88	0.83	-----	Vehicle	1.88	-0.44	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**135.99**	**226.65**	**260.26**	**433.77**
	U_5 - L_5		2.05	2.05	1.00	1.00	-0.19	-0.19					1.24	0.75	2.05	0.92	-----	Vehicle	2.05	-0.18	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**148.68**	**247.81**	**785.88**	**1309.80**
	U_6 - L_6		2.06	2.06	1.04	1.04	-0.13	-0.13					1.24	0.75	2.06	0.96	-----	Vehicle	2.06	-0.12	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**126.90**	**211.49**	**1004.77**	**1674.62**
	U_7 - L_7		2.38	2.38	0.89	0.89	-0.01	-0.01					1.24	0.75	2.38	0.83	-----	Vehicle	2.38	-0.01	-----	Vehicle	16.25	0.44	2	18.57	5	73.85	92.32	1	272.14688	272.1	**150.22**	**250.37**	**22821.21**	**38035.35**
	U_8 - L_8		-0.39	-0.39	0.90	0.90	-0.68	-0.68					1.24	0.75	-0.39	0.83	-----	Vehicle	-0.39	-0.63	-----	Vehicle	15.25	0.82	2	9.30	5	73.85	92.32	1	478.6914	478.7	**265.77**	**442.94**	**348.30**	**580.50**
	U_9 - L_9		-4.56	-4.56	0.06	0.06	-1.07	-1.07					1.20	0.75	-4.56	0.05	-----	Vehicle	-4.56	-0.96	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**2856.29**	**4760.49**	**145.93**	**243.21**
	U_{10} - L_{10}		-3.59	-3.59	0.09	0.09	-1.07	-1.07					1.20	0.75	-3.59	0.08	-----	Vehicle	-3.59	-0.96	-----	Vehicle	16.16	0.83	2	9.75	5	73.85	92.32	1	512.74682	512.7	**3126.82**	**5211.37**	**245.06**	**408.44**
	U_{11} - L_{11}		-4.40	-4.40	0.20	0.20	-1.19	-1.19					1.20	0.75	-4.40	0.18	-----	Vehicle	-4.40	-1.07	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**965.76**	**1609.60**	**156.83**	**261.38**
	U_{12} - L_{12}		-3.21	-3.21	0.33	0.33	-1.08	-1.08					1.20	0.75	-3.21	0.29	-----	Vehicle	-3.21	-0.97	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**496.66**	**827.77**	**146.35**	**243.92**
	U_{13} - L_{13}		-1.86	-1.86	0.34	0.34	-0.89	-0.89					1.20	0.75	-1.86	0.31	-----	Vehicle	-1.86	-0.80	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**412.36**	**687.27**	**155.03**	**258.39**
	U_{14} - L_{14}		-0.98	-0.98	0.43	0.43	-0.60	-0.60					1.20	0.75	-0.98	0.38	-----	Vehicle	-0.98	-0.54	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**299.50**	**499.16**	**209.06**	**348.43**
	U_{15} - L_{15}		0.02	0.02	0.69	0.69	-0.48	-0.48					1.20	0.75	0.02	0.62	-----	Vehicle	0.02	-0.43	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**185.28**	**308.80**	**264.46**	**440.76**
	U_{16} - L_{16}		0.93	0.93	0.63	0.63	-0.30	-0.30					1.20	0.75	0.93	0.57	-----	Vehicle	0.93	-0.27	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**199.22**	**332.04**	**425.17**	**708.61**
	U_{17} - L_{17}		1.41	1.41	0.63	0.63	-0.10	-0.10					1.20	0.75	1.41	0.57	-----	Vehicle	1.41	-0.09	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**242.10**	**403.50**	**1523.28**	**2538.80**
	U_{18} - L_{18}		2.69	2.69	0.96	0.96	-0.06	-0.06					1.20	0.75	2.69	0.86	-----	Vehicle	2.69	-0.05	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**165.65**	**276.08**	**2699.09**	**4498.48**
	U_{19} - L_{19}		2.33	2.33	0.78	0.78	-0.04	-0.04					1.20	0.75	2.33	0.70	-----	Vehicle	2.33	-0.04	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**240.01**	**400.02**	**4653.82**	**7756.37**
	U_{20} - L_{20}		2.00	2.00	0.57	0.57	-0.02	-0.02					1.20	0.75	2.00	0.51	-----	Vehicle	2.00	-0.02	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**330.26**	**550.43**	**7940.88**	**13234.80**
	U_0 - L_0		-1.99	-1.99	0.08	0.08	-0.62	-0.62					1.18	0.75	-1.99	0.07	-----	Vehicle	-1.99	-0.55	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**2768.79**	**4614.64**	**336.69**	**561.15**
	U_1 - L_1		-2.54	-2.54	0.10	0.10	-0.79	-0.79					1.18	0.75	-2.54	0.09	-----	Vehicle	-2.54	-0.70	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**2151.00**	**3584.99**	**263.16**	**438.59**
	U_2 - L_2		-2.56	-2.56	0.13	0.13	-0.91	-0.91					1.18	0.75	-2.56	0.12	-----	Vehicle	-2.56	-0.81	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1340.43**	**2234.04**	**188.33**	**313.88**
	U_3 - L_3		-1.64	-1.64	0.09	0.09	-0.58	-0.58					1.18	0.75	-1.64	0.08	-----	Vehicle	-1.64	-0.51	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**1880.65**	**3134.41**	**295.00**	**491.67**
	U_4 - L_4		-1.05	-1.05	0.25	0.25	-0.65	-0.65					1.18	0.75	-1.05	0.22	-----	Vehicle	-1.05	-0.58	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**510.86**	**851.44**	**196.96**	**328.27**
	U_5 - L_5		-0.25	-0.25	0.36	0.36	-0.56	-0.56					1.18	0.75	-0.25	0.32	-----	Vehicle	-0.25	-0.49	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**361.53**	**602.55**	**230.47**	**384.12**
	U_6 - L_6		0.42	0.42	0.44	0.44	-0.53	-0.53					1.18	0.75	0.42	0.39	-----	Vehicle	0.42	-0.47	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**291.49**	**485.82**	**243.52**	**405.86**
	U_7 - L_7		1.07	1.07	0.42	0.42	-0.28	-0.28					1.18	0.75	1.07	0.37	-----	Vehicle	1.07	-0.24	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**305.77**	**509.62**	**468.34**	**780.57**
	U_8 - L_8		2.63	2.63	0.90	0.90	-0.35	-0.35					1.18	0.75	2.63	0.80	-----	Vehicle	2.63	-0.31	-----	Vehicle	15.75	0.44	2	18.00	5	73.85	92.32	1	263.77313	263.8	**149.82**	**249.70**	**394.86**	**658.09**
	U_9 - L_9		4.75	4.75	1.10	1.10	-0.30	-0.30					1.18	0.75	4.75	0.97	-----	Vehicle	4.75	-0.27	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**188.01**	**313.35**	**700.63**	**1167.72**
	U_{10} - L_{10}		4.10	4.10	0.96	0.96	-0.20	-0.20					1.18	0.75	4.10	0.85	-----	Vehicle	4.10	-0.18	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**273.96**	**456.60**	**1359.06**	**2265.10**
	U_{11} - L_{11}		3.59	3.59	0.79	0.79	-0.08	-0.08					1.18	0.75	3.59	0.70	-----	Vehicle	3.59	-0.07	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**333.62**	**556.03**	**3445.52**	**5742.54**
	U_{12} - L_{12}		2.93	2.93	0.68	0.68	-0.08	-0.08					1.18	0.75	2.93	0.60	-----	Vehicle	2.93	-0.07	-----	Vehicle	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	**433.30**	**722.16**	**3681.14**	**6135.24**
	U_{13} - L_{13}		3.04	3.04	0.62	0.62	-0.04	-0.04					1.18	0.75	3.04	0.55	-----	Vehicle	3.04	-0.04	-----	Vehicle	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	**421.64**	**702.74**	**6476.18**	**10793.64**
	U_{14} - L_{14}		0.58	0.58	0.46	0.46	-0.51	-0.51					1.18	0.75	0.58	0.40	-----	Vehicle	0.58	-0.45	-----	Vehicle	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	**563.30**	**938.83**	**506.19**	**843.65**
	U_{15} - L_{15}		-2.18	-2.18	0.06	0.06	-0.57	-0.57					1.17	0.75	-2.18	0.05	-----	Vehicle	-2.18	-0.50	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2957.24**	**4928.74**	**306.60**	**511.00**
	U_{16} - L_{16}		-1.90	-1.90	0.06	0.06	-0.73	-0.73					1.17	0.75	-1.90	0.05	-----	Vehicle	-1.90	-0.64	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**3734.78**	**6224.64**	**286.50**	**477.50**
	U_{17} - L_{17}		-2.63	-2.63	0.09	0.09	-0.84	-0.84					1.17	0.75	-2.63	0.08	-----	Vehicle	-2.63	-0.73	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2174.88**	**3624.80**	**230.12**	**383.53**
	U_{18} - L_{18}		-2.76	-2.76	0.17	0.17	-0.96	-0.96					1.17	0.75	-2.76	0.15	-----	Vehicle	-2.76	-0.84	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1022.05**	**1703.42**	**182.26**	**303.76**
	U_{19} - L_{19}		-1.74	-1.74	0.19	0.19	-0.68	-0.68					1.17	0.75	-1.74	0.16	-----	Vehicle	-1.74	-0.60	-----	Vehicle	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	**850.43**	**1417.39**	**230.60**	**384.34**
	U_{20} - L_{20}		-1.31	-1.31	0.26	0.26	-0.67	-0.67					1.17	0.75	-1.31	0.23	-----	Vehicle	-1.31	-0.59	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**554.93**	**924.88**	**212.17**	**353.61**
	U_{21} - L_{21}		-0.84	-0.84	0.29	0.29	-0.62	-0.62					1.17	0.75	-0.84	0.26	-----	Vehicle	-0.84	-0.54	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**448.98**	**748.29**	**210.57**	**350.96**
	U_{22} - L_{22}		-0.11	-0.11	0.41	0.41	-0.47	-0.47					1.17	0.75	-0.11	0.36	-----	Vehicle	-0.11	-0.41	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**315.14**	**525.24**	**276.01**	**460.01**
	U_{23} - L_{23}		0.63	0.63	0.62	0.62	-0.39	-0.39					1.17	0.75	0.63	0.54	-----	Vehicle	0.63	-0.34	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**208.77**	**347.95**	**333.78**	**556.30**
	U_{24} - L_{24}		1.17	1.17	0.64	0.64	-0.29	-0.29					1.17	0.75	1.17	0.56	-----	Vehicle	1.17	-0.25	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**223.32**	**372.20**	**498.73**	**831.22**
	U_{25} - L_{25}		1.72	1.72	0.72	0.72	-0.22	-0.22					1.17	0.75	1.72	0.63	-----	Vehicle	1.72	-0.19	-----	Vehicle	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	**219.99**	**366.65**	**736.74**	**1227.89**
	U_{26} - L_{26}		2.90	2.90	1.06	1.06	-0.21	-0.21					1.17	0.75	2.90	0.93	-----	Vehicle	2.90	-0.18	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**164.73**	**274.56**	**859.57**	**1432.62**
	U_{27} - L_{27}		2.83	2.83	0.89	0.89	-0.09	-0.09					1.17	0.75	2.83	0.78	-----	Vehicle	2.83	-0.08	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**214.78**	**357.96**	**2106.20**	**3510.33**
	U_{28} - L_{28}		2.23	2.23	0.79	0.79	-0.08	-0.08					1.17	0.75	2.23	0.69	-----	Vehicle	2.23	-0.07	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**265.90**	**443.17**	**2767.64**	**4612.74**
	U_{29} - L_{29}		2.36	2.36	0.63	0.63	-0.03	-0.03					1.17	0.75	2.36	0.55	-----	Vehicle	2.36	-0.02	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**276.28**	**460.46**	**6576.31**	**10960.52**
	U_{30} - L_{30}		0.03	0.03	0.49	0.49	-0.44	-0.44					1.18	0.75	0.03	0.44	-----	Vehicle	0.03	-0.39	-----	Vehicle	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	**523.91**	**873.18**	**590.09**	**983.48**
	U_{31} - L_{31}		-2.50	-2.50	0.06	0.06	-0.56	-0.56					1.18	0.75	-2.50	0.06	-----	Vehicle	-2.50	-0.50	-----	Vehicle	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	**4276.75**	**7127.91**	**465.81**	**776.35**
	U_{32} - L_{32}		-2.25	-2.25	0.06	0.06	-0.65	-0.65					1.18	0.75	-2.25	0.05	-----	Vehicle	-2.25	-0.58	-----	Vehicle	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	**5316.30**	**8860.49**	**452.64**	**754.40**
	U_{33} - L_{33}		-2.93	-2.93	0.05	0.05	-0.73	-0.73					1.18	0.75	-2.93	0.05	-----	Vehicle	-2.93	-0.64	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**5159.68**	**8599.46**	**364.61**	**607.68**
	U_{34} - L_{34}		-3.45	-3.45	0.14	0.14	-0.95	-0.95					1.18	0.75	-3.45	0.13	-----	Vehicle	-3.45	-0.84	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**1865.63**	**3109.38**	**277.59**	**462.66**
	U_{35} - L_{35}		-4.24	-4.24	0.26	0.26	-1.09	-1.09					1.18	0.75	-4.24	0.23	-----	Vehicle	-4.24	-0.97	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**808.97**	**1348.29**	**189.19**	**315.31**
	U_{36} - L_{36}		-2.42	-2.42	0.25	0.25	-0.88	-0.88					1.18	0.75	-2.42	0.22	-----	Vehicle	-2.42	-0.78	-----	Vehicle	15.75	0.44	2	18.00	5	73.85	92.32	1	263.77313	263.8	**564.42**	**940.70**	**154.95**	**258.24**
	U_{37} - L_{37}		-1.22	-1.22	0.25	0.25	-0.46	-0.46					1.18	0.75	-1.22	0.22	-----	Vehicle	-1.22	-0.40	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**513.36**	**855.59**	**280.68**	**467.80**
	U_{38} - L_{38}		-0.80	-0.80	0.52	0.52	-0.56	-0.56					1.18	0.75	-0.80	0.46	-----	Vehicle	-0.80	-0.50	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**247.27**	**412.12**	**227.76**	**379.60**
	U_{39} - L_{39}		-0.09	-0.09	0.53	0.53	-0.40	-0.40					1.18	0.75	-0.09	0.47	-----	Vehicle	-0.09	-0.35	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**241.73**	**402.89**	**324.43**	**540.72**
	U_{40} - L_{40}		0.85	0.85	0.63	0.63	-0.31	-0.31					1.18	0.75	0.85	0.56	-----	Vehicle	0.85	-0.27	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**203.12**	**338.53**	**421.93**	**703.21**
	U_{41} - L_{41}		1.61	1.61	0.62	0.62	-0.13	-0.13					1.18	0.75	1.61	0.55	-----	Vehicle	1.61	-0.12	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**276.86**	**461.44**	**1320.63**	**2201.04**
	U_{42} - L_{42}		2.80	2.80	0.93	0.93	-0.12	-0.12					1.18	0.75	2.80	0.82	-----	Vehicle	2.80	-0.10	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**185.31**	**308.86**	**1528.31**	**2547.18**
	U_{43} - L_{43}		2.84	2.84	0.82	0.82	-0.08	-0.08					1.18	0.75	2.84	0.73	-----	Vehicle	2.84	-0.07	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**252.33**	**420.55**	**2573.17**	**4288.61**
	U_{44} - L_{44}		2.62	2.62	0.63	0.63	-0.05	-0.05					1.18	0.75	2.62	0.56	-----	Vehicle	2.62	-0.04	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**327.50**	**545.83**	**4217.13**	**7028.55**
Structure 2	U_0 - L_0		-1.54	-1.54	0.04	0.04	-0.57	-0.57					1.20	0.75	-1.54	0.03	-----	Vehicle	-1.54	-0.51	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**5142.54**	**8570.90**	**331.38**	**552.30**
	U_1 - L_1		-2.02	-2.02	0.05	0.05	-0.67	-0.67					1.20	0.75	-2.02	0.05	-----	Vehicle	-2.02	-0.61	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**3596.21**	**5993.68**	**278.78**	**464.63**
	U_2 - L_2		-2.23	-2.23	0.07	0.07	-0.92	-0.92					1.20	0.75	-2.23	0.07	-----	Vehicle	-2.23	-0.83	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2184.38**	**3640.64**	**171.90**	**286.49**
	U_3 - L_3		-1.20	-1.20	0.09	0.09	-0.64	-0.64					1.20	0.75	-1.20	0.08	-----	Vehicle	-1.20	-0.57	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**1826.24**	**3043.74**	**240.43**	**400.72**
	U_4 - L_4		-0.86	-0.86	0.23	0.23	-0.59	-0.59					1.20	0.75	-0.86	0.21	-----	Vehicle	-0.86	-0.53	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**549.59**	**915.98**	**213.43**	**355.72**
	U_5 - L_5		-0.15	-0.15	0.40	0.40	-0.70	-0.70					1.20	0.75	-0.15	0.36	-----	Vehicle	-0.15	-0.63	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**318.37**	**530.62**	**181.44**	**302.40**
	U_6 - L_6		0.83	0.83	0.56	0.56	-0.52	-0.52					1.20	0.75	0.83	0.50	-----	Vehicle	0.83	-0.47	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**227.29**	**378.81**	**245.16**	**408.61**
	U_7 - L_7		1.75	1.75	0.86	0.86	-0.41	-0.41					1.20	0.75	1.75	0.77	-----	Vehicle	1.75	-0.37	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**161.27**	**268.78**	**344.46**	**574.11**
Structure 3	U_8 - L_8		3.18	3.18	1.10	1.10	-0.43	-0.43					1.20	0.75	3.18	0.99	-----	Vehicle	3.18	-0.39	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**142.92**	**238.20**	**374.75**	**624.58**
	U_9 - L_9		4.50	4.50	1.26	1.26	-0.31	-0.31					1.20	0.75	4.50	1.13	-----	Vehicle	4.50	-0.28	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**148.16**	**246.94**	**626.24**	**1043.73**
	U_{10} - L_{10}		3.82	3.82	1.11	1.11

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
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	0.06	0.06	-0.51	-0.51					1.24	0.75	-0.01	0.05	-----	Vehicle	-0.51	-0.47	-----	Vehicle	10.00	0.31	2	16.00	5	73.85	92.32	1	119.625	119.6	**1082.13**	**1803.55**	**116.95**	**194.92**
		U_1 - L_2	0.22	-0.08	0.05	0.05	-0.15	-0.15					1.24	0.75	0.22	0.05	-----	Vehicle	-0.08	-0.14	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**2505.85**	**4176.41**	**824.66**	**1374.43**
		U_2 - L_3	0.25	-0.05	0.07	0.07	-0.10	-0.10					1.24	0.75	0.25	0.06	-----	Vehicle	-0.05	-0.09	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1888.66**	**3147.77**	**1266.95**	**2111.59**
		U_3 - L_4	0.41	0.09	0.10	0.10	-0.03	-0.03					1.24	0.75	0.41	0.09	-----	Vehicle	0.09	-0.03	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1239.03**	**2065.05**	**3843.32**	**6405.53**
		U_4 - L_4	-0.19	-0.52	0.06	0.06	-0.13	-0.13					1.24	0.75	-0.19	0.06	-----	Vehicle	-0.52	-0.12	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**2375.95**	**3959.91**	**1165.82**	**1943.03**
		U_5 - L_5	-0.74	-1.19	0.10	0.10	-0.36	-0.36					1.24	0.75	-0.74	0.09	-----	Vehicle	-1.19	-0.33	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1525.29**	**2542.14**	**431.10**	**718.51**
		U_6 - L_6	-1.07	-1.54	0.00	0.00	-0.50	-0.50					1.24	0.75	-1.07	0.00	-----	Vehicle	-1.54	-0.46	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**51931.73**	**86552.89**	**309.46**	**515.76**
		U_7 - L_7	-0.62	-1.11	0.00	0.00	-0.35	-0.35					1.24	0.75	-0.62	0.00	-----	Vehicle	-1.11	-0.32	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**77751.44**	**129585.73**	**444.92**	**741.53**
		U_8 - L_9	-0.89	-1.81	0.04	0.04	-0.35	-0.35					1.20	0.75	-0.89	0.04	-----	Vehicle	-1.81	-0.31	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**4769.05**	**7948.42**	**575.37**	**958.95**
		U_9 - L_{10}	-1.43	-2.27	0.02	0.02	-0.45	-0.45					1.20	0.75	-1.43	0.02	-----	Vehicle	-2.27	-0.41	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**11147.86**	**18579.76**	**437.51**	**729.18**
		U_{10} - L_{11}	-1.02	-1.87	0.05	0.05	-0.31	-0.31					1.20	0.75	-1.02	0.05	-----	Vehicle	-1.87	-0.28	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**3146.07**	**5243.44**	**506.44**	**844.06**
		U_{11} - L_{12}	-0.81	-1.29	0.07	0.07	-0.32	-0.32					1.20	0.75	-0.81	0.06	-----	Vehicle	-1.29	-0.28	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2790.99**	**4651.65**	**598.06**	**996.77**
		U_{12} - L_{13}	-0.67	-1.39	0.10	0.10	-0.28	-0.28					1.20	0.75	-0.67	0.09	-----	Vehicle	-1.39	-0.25	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**1394.88**	**2324.80**	**490.03**	**816.71**
		U_{13} - L_{14}	-0.13	-0.46	0.09	0.09	-0.13	-0.13					1.20	0.75	-0.13	0.08	-----	Vehicle	-0.46	-0.11	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1351.21**	**2252.01**	**1004.94**	**1674.89**
		U_{14} - L_{14}	0.38	0.05	0.16	0.16	-0.10	-0.10					1.20	0.75	0.38	0.14	-----	Vehicle	0.05	-0.09	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**801.74**	**1336.23**	**1232.62**	**2054.37**
		U_{15} - L_{15}	-0.04	-0.39	0.13	0.13	-0.18	-0.18					1.20	0.75	-0.04	0.11	-----	Vehicle	-0.39	-0.16	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**999.65**	**1666.09**	**699.82**	**1166.37**
		U_{17} - L_{16}	-0.22	-0.61	0.08	0.08	-0.25	-0.25					1.20	0.75	-0.22	0.07	-----	Vehicle	-0.61	-0.22	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**1885.11**	**3141.85**	**623.59**	**1039.31**
		U_{18} - L_{17}	-1.16	-1.63	0.04	0.04	-0.45	-0.45					1.20	0.75	-1.16	0.04	-----	Vehicle	-1.63	-0.40	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**3924.97**	**6541.62**	**357.45**	**595.74**
		U_{19} - L_{18}	-1.07	-1.60	0.06	0.06	-0.43	-0.43					1.20	0.75	-1.07	0.05	-----	Vehicle	-1.60	-0.39	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**3078.63**	**5131.06**	**396.78**	**661.31**
		U_{20} - L_{19}	-1.08	-1.67	0.02	0.02	-0.42	-0.42					1.20	0.75	-1.08	0.02	-----	Vehicle	-1.67	-0.38	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**9074.22**	**15123.70**	**406.13**	**676.88**
	Structure 2	U_0 - L_1	-1.14	-1.70	0.07	0.07	-0.49	-0.49					1.18	0.75	-1.14	0.06	-----	Vehicle	-1.70	-0.44	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2915.47**	**4859.11**	**385.63**	**642.71**
		U_1 - L_2	-1.31	-1.85	0.07	0.07	-0.49	-0.49					1.18	0.75	-1.31	0.06	-----	Vehicle	-1.85	-0.43	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2873.61**	**4789.35**	**388.57**	**647.61**
		U_2 - L_3	-1.13	-1.60	0.07	0.07	-0.45	-0.45					1.18	0.75	-1.13	0.07	-----	Vehicle	-1.60	-0.40	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2201.99**	**3669.98**	**357.20**	**595.34**
		U_3 - L_4	-0.50	-0.90	0.07	0.07	-0.27	-0.27					1.18	0.75	-0.50	0.06	-----	Vehicle	-0.90	-0.24	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**2426.03**	**4043.38**	**634.45**	**1057.42**
		U_4 - L_5	-0.05	-0.40	0.11	0.11	-0.19	-0.19					1.18	0.75	-0.05	0.09	-----	Vehicle	-0.40	-0.17	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1212.92**	**2021.53**	**664.61**	**1107.69**
		U_5 - L_6	0.27	-0.07	0.16	0.16	-0.16	-0.16					1.18	0.75	0.27	0.14	-----	Vehicle	-0.07	-0.14	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**828.09**	**1380.14**	**813.23**	**1355.38**
		U_6 - L_7	0.48	0.08	0.16	0.16	-0.10	-0.10					1.18	0.75	0.48	0.14	-----	Vehicle	0.08	-0.09	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**896.95**	**1494.92**	**1440.81**	**2401.35**
		U_7 - L_7	-0.31	-1.10	0.13	0.13	-0.19	-0.19					1.18	0.75	-0.31	0.12	-----	Vehicle	-1.10	-0.17	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**906.31**	**1510.51**	**621.63**	**1036.05**
		U_8 - L_8	-1.34	-1.86	0.13	0.13	-0.39	-0.39					1.18	0.75	-1.34	0.12	-----	Vehicle	-1.86	-0.35	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1324.03**	**2206.72**	**443.72**	**739.53**
		U_{10} - L_9	-1.44	-1.94	0.11	0.11	-0.38	-0.38					1.18	0.75	-1.44	0.10	-----	Vehicle	-1.94	-0.34	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1719.82**	**2866.37**	**496.96**	**828.26**
		U_{11} - L_{10}	-1.67	-2.23	0.08	0.08	-0.42	-0.42					1.18	0.75	-1.67	0.07	-----	Vehicle	-2.23	-0.37	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**2695.04**	**4491.74**	**496.59**	**827.64**
		U_{12} - L_{11}	-1.62	-2.22	0.07	0.07	-0.40	-0.40					1.18	0.75	-1.62	0.07	-----	Vehicle	-2.22	-0.35	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**2840.24**	**4733.74**	**518.95**	**864.92**
		U_{13} - L_{12}	-1.77	-2.38	0.03	0.03	-0.43	-0.43					1.18	0.75	-1.77	0.02	-----	Vehicle	-2.38	-0.38	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**7417.18**	**12361.97**	**439.90**	**733.16**
		U_{14} - L_{13}	-1.00	-1.63	0.04	0.04	-0.33	-0.33					1.18	0.75	-1.00	0.04	-----	Vehicle	-1.63	-0.29	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**4690.80**	**7818.00**	**580.94**	**968.23**
		U_{15} - L_{15}	-0.47	-1.03	0.04	0.04	-0.30	-0.30					1.17	0.75	-0.47	0.03	-----	Vehicle	-1.03	-0.26	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**4327.57**	**7212.62**	**552.11**	**920.18**
		U_{16} - L_{16}	-1.08	-1.61	0.04	0.04	-0.42	-0.42					1.17	0.75	-1.08	0.04	-----	Vehicle	-1.61	-0.37	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**4121.58**	**6869.30**	**386.31**	**643.85**
		U_{17} - L_{17}	-1.08	-1.63	0.04	0.04	-0.44	-0.44					1.17	0.75	-1.08	0.04	-----	Vehicle	-1.63	-0.39	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**4206.81**	**7011.34**	**395.54**	**659.24**
		U_{18} - L_{17}	-1.09	-1.58	0.07	0.07	-0.40	-0.40					1.17	0.75	-1.09	0.06	-----	Vehicle	-1.58	-0.35	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2389.44**	**3982.40**	**403.57**	**672.62**
		U_{19} - L_{18}	-0.94	-1.42	0.10	0.10	-0.39	-0.39					1.17	0.75	-0.94	0.09	-----	Vehicle	-1.42	-0.34	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1664.31**	**2773.85**	**416.21**	**693.69**
		U_{20} - L_{20}	-0.31	-1.06	0.10	0.10	-0.28	-0.28					1.17	0.75	-0.31	0.09	-----	Vehicle	-1.06	-0.24	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**1204.37**	**2007.29**	**423.99**	**706.64**
		U_{20} - L_{21}	-0.23	-0.57	0.10	0.10	-0.20	-0.20					1.17	0.75	-0.23	0.09	-----	Vehicle	-0.57	-0.17	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1276.82**	**2128.03**	**665.06**	**1108.43**
		U_{21} - L_{22}	0.03	-0.31	0.12	0.12	-0.13	-0.13					1.17	0.75	0.03	0.11	-----	Vehicle	-0.31	-0.11	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1083.83**	**1806.38**	**1030.68**	**1717.80**
		U_{23} - L_{22}	0.11	-0.23	0.14	0.14	-0.12	-0.12					1.17	0.75	0.11	0.12	-----	Vehicle	-0.23	-0.10	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**942.04**	**1570.06**	**1120.00**	**1866.67**
		U_{24} - L_{23}	-0.12	-0.47	0.11	0.11	-0.18	-0.18					1.17	0.75	-0.12	0.09	-----	Vehicle	-0.47	-0.16	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1239.61**	**2066.02**	**733.09**	**1221.82**
		U_{25} - L_{24}	-0.19	-0.96	0.11	0.11	-0.27	-0.27					1.17	0.75	-0.19	0.10	-----	Vehicle	-0.96	-0.24	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**1054.41**	**1757.35**	**435.16**	**725.27**
		U_{26} - L_{25}	-0.84	-1.33	0.12	0.12	-0.39	-0.39					1.17	0.75	-0.84	0.11	-----	Vehicle	-1.33	-0.34	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1361.13**	**2268.55**	**415.31**	**692.18**
		U_{27} - L_{26}	-1.01	-1.51	0.08	0.08	-0.38	-0.38					1.17	0.75	-1.01	0.07	-----	Vehicle	-1.51	-0.33	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2197.54**	**3662.56**	**430.32**	**717.20**
		U_{28} - L_{27}	-1.07	-1.63	0.07	0.07	-0.42	-0.42					1.17	0.75	-1.07	0.06	-----	Vehicle	-1.63	-0.37	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2598.21**	**4330.35**	**415.27**	**692.12**
		U_{29} - L_{28}	-1.12	-1.67	0.02	0.02	-0.42	-0.42					1.17	0.75	-1.12	0.02	-----	Vehicle	-1.67	-0.37	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**6870.58**	**11450.97**	**388.06**	**646.77**
		U_{30} - L_{29}	-0.53	-1.09	0.03	0.03	-0.28	-0.28					1.17	0.75	-0.53	0.02	-----	Vehicle	-1.09	-0.24	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**6092.13**	**10153.55**	**589.81**	**983.02**
		U_{30} - L_{31}	-0.77	-1.41	0.04	0.04	-0.33	-0.33					1.18	0.75	-0.77	0.04	-----	Vehicle	-1.41	-0.29	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**4367.50**	**7279.16**	**583.17**	**971.95**
		U_{31} - L_{32}	-1.50	-2.10	0.05	0.05	-0.46	-0.46					1.18	0.75	-1.50	0.04	-----	Vehicle	-2.10	-0.41	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**4188.34**	**6980.56**	**412.64**	**687.73**
		U_{32} - L_{33}	-1.42	-2.00	0.04	0.04	-0.43	-0.43					1.18	0.75	-1.42	0.04	-----	Vehicle	-2.00	-0.38	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**4773.70**	**7956.17**	**487.62**	**812.71**
		U_{33} - L_{34}	-1.55	-2.08	0.05	0.05	-0.42	-0.42					1.18	0.75	-1.55	0.04	-----	Vehicle	-2.08	-0.38	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**4202.60**	**7004.34**	**490.95**	**818.26**
		U_{34} - L_{35}	-1.39	-1.88	0.09	0.09	-0.40	-0.40					1.18	0.75	-1.39	0.08	-----	Vehicle	-1.88	-0.35	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2265.75**	**3776.24**	**475.94**	**793.24**
		U_{35} - L_{36}	-1.38	-1.88	0.12	0.12	-0.40	-0.40					1.18	0.75	-1.38	0.11	-----	Vehicle	-1.88	-0.35	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1409.62**	**2349.37**	**431.49**	**719.15**
		U_{36} - L_{37}	-0.43	-1.20	0.12	0.12	-0.21	-0.21					1.18	0.75	-0.43	0.10	-----	Vehicle	-1.20	-0.18	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**1007.68**	**1679.47**	**569.75**	**949.58**
		U_{38} - L_{37}	0.53	0.13	0.17	0.17	-0.09	-0.09					1.18	0.75	0.53	0.15	-----	Vehicle	0.13	-0.08	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**818.51**	**1364.19**	**1604.90**	**2674.83**
		U_{39} - L_{38}	0.39	0.04	0.16	0.16	-0.15	-0.15					1.18	0.75	0.39	0.14	-----	Vehicle	0.04	-0.13	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**801.71**	**1336.18**	**868.68**	**1447.80**
		U_{40} - L_{39}	0.07	-0.29	0.12	0.12	-0.19	-0.19					1.18	0.75	0.07	0.11	-----	Vehicle	-0.29	-0.16	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1070.76**	**1784.59**	**693.75**	**1156.25**
		U_{41} - L_{40}	-0.36	-0.78	0.09	0.09	-0.26	-0.26					1.18	0.75	-0.36	0.08	-----	Vehicle	-0.78	-0.23	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**1871.29**	**3118.82**	**651.65**	**1086.08**
		U_{42} - L_{41}	-1.06	-1.54	0.06	0.06	-0.42	-0.42					1.18	0.75	-1.06	0.05	-----	Vehicle	-1.54	-0.37	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2760.96**	**4601.60**	**386.43**	**644.05**
		U_{43} - L_{42}	-1.22	-1.77	0.05	0.05	-0.45	-0.45					1.18	0.75	-1.22	0.05	-----	Vehicle	-1.77	-0.40	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**3701.35**	**6168.91**	**420.42**	**700.70**
		U_{44} - L_{43}	-1.57	-2.14	0.04	0.04	-0.45	-0.45					1.18	0.75	-1.57	0.03	-----	Vehicle	-2.14	-0.40	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**5208.37**	**8680.61**	**420.80**	**701.33**
	Structure 3	U_0 - L_1	-0.75	-1.32	0.03	0.03	-0.47	-0.47					1.20	0.75	-0.75	0.03	-----	Vehicle	-1.32	-0.42	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**5217.79**	**8696.32**	**363.41**	**605.69**
		U_1 - L_2	-1.05	-1.57	0.04	0.04	-0.44	-0.44					1.20	0.75	-1.05	0.03	-----	Vehicle	-1.57	-0.39	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**4659.18**	**7765.29**	**389.59**	**649.31**
		U_2 - L_3	-1.08	-1.54	0.05	0.05	-0.49	-0.49					1.20	0.75	-1.08	0.04	-----	Vehicle	-1.54	-0.44	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**3351.52**	**5585.87**	**327.41**	**545.69**
		U_3 - L_4	-0.22	-0.60	0.07	0.07	-0.26	-0.26					1.20	0.75	-0.22	0.07	-----	Vehicle	-0.60	-0.23	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**2088.91**	**3481.51**	**590.16**	**983.61**
		U_4 - L_5	-0.08	-0.42	0.11	0.11	-0.19	-0.19					1.20	0.75	-0.08	0.10	-----	Vehicle	-0.42	-0.17	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1123.73**	**1872.89**	**666.57**	**1110.95**
		U_5 - L_6	0.35	0.03	0.14	0.14	-0.11	-0.11					1.20	0.75	0.35	0.13	-----	Vehicle	0.03	-0.10	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**879.81**	**1466.34**	**1143.68**	**1906.13**
		U_7 - L_6	-0.05	-0.39	0.09	0.09	-0.11	-0.11					1.20	0.75	-0.05	0.08	-----	Vehicle	-0.39	-0.10	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1365.17**	**2275.28**	**1120.97**	**1868.29**
		U_8 - L_7	-0.51	-1.25	0.12	0.12	-0.27	-0.27					1.20	0.75	-0.51	0.11	-----	Vehicle	-1.25	-0.24	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**1169.38**	**1948.96**	**516.27**	**860.44**
		U_9 - L_8	-0.70	-1.19	0.10	0.10	-0.33	-0.33					1.20	0.75	-0.70	0.09	-----	Vehicle	-1.19	-0.30	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1976.18**	**3293.64**	**569.34**	**948.90**
		U_{10} - L_9	-0.88	-1.76	0.07	0.07	-0.30	-0.30					1.20	0.75	-0.88	0.06	-----	Vehicle	-1.76	-0.27	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**2323.92**	**3873.20**	**532.18**	**886.97**
		U_{11} - L_{10}	-1.33	-2.21	0.02	0.02	-0.44	-0.44					1.20	0.75	-1.33	0.02	-----	Vehicle	-2.21	-0.40	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**10557.75**	**17596.26**	**449.50**	**749.17**
		U_{12} - L_{11}	-0.81	-1.77	0.06	0.06	-0.34	-0.34					1.20	0.75	-0.81	0.06	-----	Vehicle	-1.77	-0.31	-----	Vehicle	16.25	0.63	2	13.00	5	73

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
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
Structure 1	U_0 - U_1	8.19	-2.89	0.98	0.98	-0.75	-0.75	0.75	0.75	-0.19	-0.19	1.24	0.90	8.19	1.09	0.75	Pedestrian	-2.89	-0.83	-0.19	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**63.80**	**79.76**	**109.60**	**182.66**
	U_1 - U_2	2.96	-4.47	0.67	0.67	-0.14	-0.14	0.07	0.07	-0.06	-0.06	1.24	0.90	2.96	0.74	0.07	Vehicle	-4.47	-0.16	-0.06	Pedestrian	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**122.16**	**203.59**	**561.29**	**701.61**
	U_2 - U_3	2.48	-7.36	0.49	0.49	-0.38	-0.38	0.07	0.07	-0.09	-0.09	1.24	0.90	2.48	0.55	0.07	Vehicle	-7.36	-0.43	-0.09	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**166.62**	**277.71**	**206.65**	**344.41**
	U_3 - U_4	1.94	-4.95	0.45	0.45	-0.35	-0.35	0.00	0.00	-0.05	-0.05	1.24	0.90	1.94	0.50	-----	Vehicle	-4.95	-0.39	-0.05	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**184.47**	**307.45**	**228.46**	**380.77**
	U_4 - U_5	1.94	-4.56	0.18	0.18	-0.59	-0.59	0.00	0.00	-0.15	-0.15	1.24	0.90	1.94	0.20	-----	Vehicle	-4.56	-0.65	-0.15	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**447.11**	**745.19**	**137.51**	**229.18**
	U_5 - U_6	3.13	-7.41	0.16	0.16	-0.63	-0.63	0.00	0.00	-0.25	-0.25	1.24	0.90	3.13	0.18	-----	Vehicle	-7.41	-0.70	-0.25	Pedestrian	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**513.38**	**855.64**	**125.01**	**156.26**
	U_6 - U_7	6.57	-4.82	0.36	0.36	-0.34	-0.34	0.03	0.03	-0.09	-0.09	1.24	0.90	6.57	0.40	0.03	Vehicle	-4.82	-0.38	-0.09	Vehicle	14.00	0.75	2	9.33	5	73.85	92.32	1	401.94	401.9	**456.84**	**761.41**	**479.63**	**799.39**
	U_7 - U_8	-2.87	-15.47	0.35	0.35	-1.13	-1.13	0.00	0.00	-0.80	-0.80	1.24	0.90	-2.87	0.38	-----	Vehicle	-15.47	-1.26	-0.80	Pedestrian	14.00	1.00	2	7.00	5	73.85	92.32	1	535.92	535.9	**648.47**	**1080.79**	**153.86**	**192.32**
	U_8 - U_9	17.77	5.14	1.38	1.38	-0.10	-0.10	0.85	0.85	0.00	0.00	1.20	0.90	17.77	1.49	0.85	Pedestrian	5.14	-0.11	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**55.44**	**69.30**	**1012.04**	**1686.74**
	U_9 - U_{10}	7.55	-5.15	0.64	0.64	-0.08	-0.08	0.20	0.20	-0.04	-0.04	1.20	0.90	7.55	0.69	0.20	Vehicle	-5.15	-0.09	-0.04	Pedestrian	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**128.66**	**214.43**	**953.26**	**1191.58**
	U_{10} - U_{11}	10.27	-1.06	0.85	0.85	-0.02	-0.02	0.37	0.37	0.00	0.00	1.20	0.90	10.27	0.92	0.37	Pedestrian	-1.06	-0.03	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**89.55**	**111.93**	**3559.99**	**5933.32**
	U_{11} - U_{12}	8.07	-1.44	0.88	0.88	-0.03	-0.03	0.26	0.26	0.00	0.00	1.20	0.90	8.07	0.95	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	**125.53**	**209.21**	**4380.81**	**7301.35**
	U_{12} - U_{13}	9.20	-6.26	0.65	0.65	-0.24	-0.24	0.20	0.20	0.00	0.00	1.20	0.90	9.20	0.70	0.20	Vehicle	-6.26	-0.25	-----	Vehicle	14.00	1.33	2	5.24	5	73.85	92.32	1	715.3575	715.4	**462.52**	**770.87**	**1282.79**	**2137.98**
	U_{13} - U_{14}	7.06	-1.54	0.88	0.88	-0.12	-0.12	0.17	0.17	0.00	0.00	1.20	0.90	7.06	0.95	0.17	Vehicle	-1.54	-0.13	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**402.41**	**670.68**	**2979.95**	**4966.58**
	U_{14} - U_{15}	2.68	-5.43	0.41	0.41	-0.81	-0.81	0.02	0.02	-0.11	-0.11	1.20	0.90	2.68	0.44	0.02	Vehicle	-5.43	-0.87	-0.11	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**874.91**	**1458.18**	**439.89**	**733.15**
	U_{15} - U_{16}	9.21	-5.82	0.68	0.68	-0.43	-0.43	0.06	0.06	-0.12	-0.12	1.20	0.90	9.21	0.73	0.06	Vehicle	-5.82	-0.46	-0.12	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**521.13**	**868.55**	**826.08**	**1376.80**
	U_{16} - U_{17}	2.12	-6.72	0.25	0.25	-0.79	-0.79	0.01	0.01	-0.14	-0.14	1.20	0.90	2.12	0.27	0.01	Vehicle	-6.72	-0.85	-0.14	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**1434.82**	**2391.36**	**451.29**	**752.14**
	U_{17} - U_{18}	5.43	-10.49	0.27	0.27	-0.70	-0.70	0.03	0.03	-0.26	-0.26	1.20	0.90	5.43	0.29	0.03	Vehicle	-10.49	-0.76	-0.26	Pedestrian	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	**956.56**	**1594.27**	**365.67**	**457.09**
	U_{18} - U_{19}	1.81	-7.91	0.06	0.06	-0.59	-0.59	0.02	0.02	-0.28	-0.28	1.20	0.90	1.81	0.06	0.02	Pedestrian	-7.91	-0.63	-0.28	Pedestrian	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**1692.82**	**2116.03**	**151.78**	**189.73**
	U_{19} - U_{20}	1.62	-7.72	0.09	0.09	-0.52	-0.52	0.02	0.02	-0.22	-0.22	1.20	0.90	1.62	0.09	0.02	Vehicle	-7.72	-0.56	-0.22	Pedestrian	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**1156.56**	**1927.60**	**178.80**	**223.50**
Structure 2	U_0 - U_1	18.71	2.53	1.25	1.25	-0.73	-0.73	0.86	0.86	-0.13	-0.13	1.18	0.90	18.71	1.33	0.86	Pedestrian	2.53	-0.77	-0.13	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**61.66**	**77.07**	**147.88**	**246.47**
	U_1 - U_2	9.39	-4.45	0.89	0.89	-0.09	-0.09	0.13	0.13	-0.03	-0.03	1.18	0.90	9.39	0.95	0.13	Vehicle	-4.45	-0.09	-0.03	Vehicle	17.00	0.75	2	11.33	5	73.85	92.32	1	488.07	488.1	**231.78**	**386.30**	**2375.74**	**3959.56**
	U_2 - U_3	9.93	-1.26	1.08	1.08	-0.17	-0.17	0.32	0.32	-0.07	-0.07	1.18	0.90	9.93	1.15	0.32	Vehicle	-1.26	-0.19	-0.07	Pedestrian	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**142.27**	**237.12**	**892.52**	**1115.65**
	U_3 - U_4	8.70	-7.19	1.20	1.20	-0.13	-0.13	0.11	0.11	-0.03	-0.03	1.18	0.90	8.70	1.28	0.11	Vehicle	-7.19	-0.14	-0.03	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**289.77**	**482.95**	**2702.12**	**4503.54**
	U_4 - U_5	5.86	-4.47	0.99	0.99	-0.53	-0.53	0.14	0.14	-0.05	-0.05	1.18	0.90	5.86	1.05	0.14	Vehicle	-4.47	-0.56	-0.05	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**424.94**	**708.24**	**796.65**	**1327.74**
	U_5 - U_6	1.29	-8.98	0.56	0.56	-0.80	-0.80	0.00	0.00	-0.15	-0.15	1.18	0.90	1.29	0.60	-----	Vehicle	-8.98	-0.85	-0.15	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**750.30**	**1250.50**	**523.92**	**873.20**
	U_6 - U_7	6.54	-9.22	1.02	1.02	-0.50	-0.50	0.09	0.09	0.00	0.00	1.18	0.90	6.54	1.09	0.09	Vehicle	-9.22	-0.53	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**341.09**	**568.49**	**693.47**	**1155.78**
	U_7 - U_8	6.96	-8.51	0.35	0.35	-0.89	-0.89	0.00	0.00	-0.18	-0.18	1.18	0.90	6.96	0.37	-----	Vehicle	-8.51	-0.95	-0.18	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**1004.90**	**1674.83**	**390.82**	**651.36**
	U_8 - U_9	2.04	-12.38	0.28	0.28	-0.92	-0.92	0.00	0.00	-0.25	-0.25	1.18	0.90	2.04	0.30	-----	Vehicle	-12.38	-0.98	-0.25	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**1066.36**	**1777.26**	**319.25**	**532.09**
	U_9 - U_{10}	-0.19	-11.71	0.30	0.30	-0.87	-0.87	0.00	0.00	-0.31	-0.31	1.18	0.90	-0.19	0.32	-----	Vehicle	-11.71	-0.93	-0.31	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**407.67**	**679.45**	**134.28**	**223.80**
	U_{10} - U_{11}	3.22	-11.03	0.13	0.13	-0.72	-0.72	0.00	0.00	-0.20	-0.20	1.18	0.90	3.22	0.14	-----	Vehicle	-11.03	-0.77	-0.20	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**907.48**	**1512.47**	**162.56**	**270.93**
	U_{11} - U_{12}	1.81	-13.56	0.16	0.16	-0.82	-0.82	0.02	0.02	-0.32	-0.32	1.18	0.90	1.81	0.17	0.02	Vehicle	-13.56	-0.87	-0.32	Pedestrian	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**769.79**	**1282.99**	**138.00**	**172.50**
	U_{12} - U_{13}	10.30	-7.34	0.69	0.69	-0.35	-0.35	0.06	0.06	-0.06	-0.06	1.18	0.90	10.30	0.73	0.06	Vehicle	-7.34	-0.37	-0.06	Vehicle	17.00	0.94	2	9.07	5	73.85	92.32	1	610.0875	610.1	**374.88**	**624.79**	**748.08**	**1246.80**
	U_{13} - U_{14}	-14.76	-30.33	0.54	0.54	-1.45	-1.45	0.00	0.00	-0.99	-0.99	1.18	0.90	-14.76	0.57	-----	Vehicle	-30.33	-1.55	-0.99	Pedestrian	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**706.29**	**1177.15**	**197.39**	**246.73**
	U_{14} - U_{15}	28.72	13.15	2.06	2.06	-0.36	-0.36	0.97	0.97	0.00	0.00	1.17	0.90	28.72	2.17	0.97	Pedestrian	13.15	-0.38	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**160.47**	**200.59**	**1058.69**	**1764.48**
	U_{15} - U_{16}	7.66	-8.84	0.91	0.91	-0.29	-0.29	0.10	0.10	-0.07	-0.07	1.17	0.90	7.66	0.96	0.10	Vehicle	-8.84	-0.31	-0.07	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**328.52**	**547.53**	**1018.02**	**1696.71**
	U_{16} - U_{17}	10.20	-1.59	0.90	0.90	-0.09	-0.09	0.27	0.27	-0.02	-0.02	1.17	0.90	10.20	0.95	0.27	Vehicle	-1.59	-0.09	-0.02	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**172.15**	**286.92**	**1835.32**	**3058.86**
	U_{17} - U_{18}	9.53	-4.26	0.97	0.97	-0.09	-0.09	0.21	0.21	-0.04	-0.04	1.17	0.90	9.53	1.02	0.21	Vehicle	-4.26	-0.10	-0.04	Pedestrian	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**105.19**	**175.32**	**1105.69**	**1382.11**
	U_{18} - U_{19}	9.52	-3.01	0.97	0.97	-0.13	-0.13	0.25	0.25	-0.01	-0.01	1.17	0.90	9.52	1.02	0.25	Vehicle	-3.01	-0.13	-0.01	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**105.31**	**175.52**	**842.71**	**1404.52**
	U_{19} - U_{20}	6.34	-3.80	0.81	0.81	-0.09	-0.09	0.11	0.11	0.00	0.00	1.17	0.90	6.34	0.86	0.11	Vehicle	-3.80	-0.09	0.00	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**149.18**	**248.63**	**1410.66**	**2351.10**
Structure 3	U_{20} - U_{21}	7.04	-6.20	0.59	0.59	-0.56	-0.56	0.17	0.17	0.00	0.00	1.17	0.90	7.04	0.62	0.17	Vehicle	-6.20	-0.59	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**386.98**	**644.97**	**404.99**	**674.99**
	U_{21} - U_{22}	6.53	-6.48	1.01	1.01	-0.13	-0.13	0.06	0.06	-0.02	-0.02	1.17	0.90	6.53	1.07	0.06	Vehicle	-6.48	-0.14	-0.02	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**225.07**	**375.12**	**1769.43**	**2949.04**
	U_{22} - U_{23}	6.59	-6.58	0.30	0.30	-0.70	-0.70	0.03	0.03	-0.07	-0.07	1.17	0.90	6.59	0.31	0.03	Vehicle	-6.58	-0.73	-0.07	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**763.18**	**1271.96**	**326.93**	**544.89**
	U_{23} - U_{24}	5.44	-7.80	0.58	0.58	-0.64	-0.64	0.02	0.02	-0.22	-0.22	1.17	0.90	5.44	0.61	0.02	Vehicle	-7.80	-0.67	-0.22	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**393.89**	**656.48**	**356.59**	**594.31**
	U_{24} - U_{25}	3.86	-6.29	0.35	0.35	-0.66	-0.66	0.01	0.01	-0.10	-0.10	1.17	0.90	3.86	0.37	0.01	Vehicle	-6.29	-0.70	-0.10	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**353.59**	**589.32**	**182.70**	**304.50**
	U_{25} - U_{26}	2.64	-9.89	0.16	0.16	-0.75	-0.75	0.03	0.03	-0.27	-0.27	1.17	0.90	2.64	0.16	0.03	Vehicle	-9.89	-0.79	-0.27	Pedestrian	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**680.98**	**1134.96**	**133.95**	**167.43**
	U_{26} - U_{27}	4.46	-9.33	0.23	0.23	-0.79	-0.79	0.03	0.03	-0.19	-0.19	1.17	0.90	4.46	0.25	0.03	Vehicle	-9.33	-0.83	-0.19	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**448.54**	**747.57**	**128.78**	**214.63**
	U_{27} - U_{28}	1.06	-10.73	0.36	0.36	-0.82	-0.82	0.03	0.03	-0.29	-0.29	1.17	0.90	1.06	0.38	0.03	Vehicle	-10.73	-0.86	-0.29	Pedestrian	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**448.11**	**746.85**	**188.64**	**235.81**
	U_{28} - U_{29}	9.64	-6.86	0.61	0.61	-0.44	-0.44	0.04	0.04	-0.06	-0.06	1.17	0.90	9.64	0.64	0.04	Vehicle	-6.86	-0.46	-0.06	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**486.64**	**811.06**	**682.03**	**1136.71**
	U_{29} - U_{30}	-12.69	-28.27	0.55	0.55	-1.60	-1.60	0.00	0.00	-0.96	-0.96	1.17	0.90	-12.69	0.58	-----	Vehicle	-28.27	-1.68	-0.96	Pedestrian	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**689.40**	**1148.99**	**190.52**	**238.15**
	U_{30} - U_{31}	31.65	16.08	2.14	2.14	-0.24	-0.24	1.05	1.05	0.00	0.00	1.18	0.90	31.65	2.27	1.05	Pedestrian	16.08	-0.25	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**150.45**	**188.07**	**1600.48**	**2667.47**
	U_{31} - U_{32}	8.09	-9.55	0.57	0.57	-0.26	-0.26	0.09	0.09	-0.06	-0.06	1.18	0.90	8.09	0.61	0.09	Vehicle	-9.55	-0.27	-0.06	Vehicle	17.00	0.94	2	9.07	5	73.85	92.32	1	610.0875	610.1	**455.18**	**758.64**	**1004.21**	**1673.68**
	U_{32} - U_{33}	13.14	-2.23	0.91	0.91	-0.07	-0.07	0.30	0.30	-0.01	-0.01	1.18	0.90	13.14	0.97	0.30	Vehicle	-2.23	-0.07	-0.01	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**126.93**	**211.54**	**1823.31**	**3038.85**
	U_{33} - U_{34}	11.33	-2.92	1.01	1.01	-0.05	-0.05	0.22	0.22	-0.01	-0.01	1.18	0.90	11.33	1.08	0.22	Vehicle	-2.92	-0.05	-0.01	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**115.64**	**192.74**	**2485.18**	**4141.97**
	U_{34} - U_{35}	11.30	-0.22	0.97	0.97	-0.04	-0.04	0.29	0.29	0.00	0.00	1.18	0.90	11.30	1.03	0.29	Vehicle	-0.22	-0.05	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**120.92**	**201.54**	**2802.13**	**4670.22**
	U_{35} - U_{36}	12.24	-2.18	0.91	0.91	-0.17	-0.17	0.25	0.25	0.00	0.00	1.18	0.90	12.24	0.97	0.25	Vehicle	-2.18	-0.18	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**320.74**	**534.56**	**1809.09**	**3015.16**
	U_{36} - U_{37}	7.78	-7.69	1.17	1.17	-0.18	-0.18	0.13	0.13	0.00	0.00	1.18	0.90	7.78	1.25	0.13	Vehicle	-7.69	-0.19	0.00	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**297.13**	**495.22**	**1903.22**	**3172.03**
	U_{37} - U_{38}	9.81	-5.96	0.77	0.77	-0.62	-0.62	0.03	0.03	-0.09	-0.09	1.18	0.90	9.81	0.82	0.03	Vehicle	-5.96	-0.66	-0.09	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**450.19**	**750.32**	**560.62**	**934.37**
	U_{38} - U_{39}	8.20	-2.06	0.85	0.85	-0.52	-0.52	0.13	0.13	0.00	0.00	1.18	0.90	8.20	0.90	0.13	Vehicle	-2.06	-0.55	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**493.54**	**822.57**	**819.39**	**1365.65**
	U_{39} - U_{40}	3.71	-6.62	0.88	0.88	-0.88	-0.88	0.06	0.06	-0.20	-0.20	1.18	0.90	3.71	0.94	0.06	Vehicle	-6.62	-0.94	-0.20	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**476.85**	**794.75**	**474.45**	**790.75**
	U_{40} - U_{41}	7.22	-8.66	0.41	0.41	-0.74	-0.74	0.02	0.02	-0.07	-0.07	1.18	0.90	7.22	0.43	0.02	Vehicle	-8.66	-0.79	-0.07	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**854.30**	**1423.83**	**467.39**	**778.99**
	U_{41} - U_{42}	1.01	-10.18	0.28	0.28	-1.02	-1.02	0.06	0.06	-0.30	-0.30	1.18	0.90	1.01	0.29	0.06	Vehicle	-10.18	-1.08	-0.30	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**572.86**	**954.77**	**150.53**	**250.89**
	U_{42} - U_{43}	3.31	-10.54	0.18	0.18	-0.70	-0.70	0.02	0.02	-0.20	-0.20	1.18	0.90	3.31	0.19	0.02	Vehicle	-10.54	-0.74	-0.20	Vehicle	17.00	0.75	2	11.33	5	73.85	92.32	1	488.07	488.1	**1145.96**	**1909.94**	**295.03**	**491.72**
	U_{43} - U_{44}	4.39	-11.79	0.17	0.17	-0.69	-0.69	0.08	0.08	-0.37	-0.37	1.18	0.90	4.39	0.18	0.08	Pedestrian	-11.79	-0.74	-0.37	Pedestrian	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**557.51**	**696.89**	**127.52**	**159.40**
Structure 3	U_0 - U_1	14.18	4.83	1.00	1.00	-0.71	-0.71	0.84	0.84	-0.05	-0.05	1.20	0.90	14.18	1.07	0.84	Pedestrian	4.83	-0.77	-0.05	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**69.43**	**86.78**	**144.33**	**240.56**
	U_1 - U_2	6.82	-2.91	0.87	0.87	-0.07	-0.07	0.18	0.18	-0.02	-0.02	1.20	0.90	6.82	0.94	0.18	Vehicle	-2.91	-0.07	-0.02	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**110.50**	**184.16**	**1473.87**	**2456.45**
	U_2 - U_3	10.42	-5.49	0.80	0.80	-0.09	-0.09	0.29	0.29	-0.03	-0.03	1.20	0.90	10.42	0.86	0.29	Pedestrian	-5.49	-0.10	-0.03	Vehicle	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	**322.53**	**403.16**	**2827.69**	**4712.82**
	U_3 - U_4	6.43	-2.41	0.88	0.88	-0.07	-0.07	0.16	0.16	-0.02	-0.02	1.20	0.90	6.43	0.95	0.16	Vehicle	-2.41	-0.08	-0.02	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**401.44**	**669.06**	**5029.72**	**8382.86**
	U_4 - U_5	5.41	-9.62	0.68	0.68	-0.59	-0.59	0.07	0.07	-0.06	-0.06	1.20	0.90	5.41	0.74

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
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	0.79	0.79	-0.12	-0.12	0.18	0.18	-0.05	-0.05	1.24	0.90	4.43	0.88	0.18	Vehicle	-2.13	-0.13	-0.05	Pedestrian	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**117.65**	**196.09**	**802.36**	**1002.95**
	L_1 - L_2	6.00	-2.28	0.71	0.71	-0.19	-0.19	0.19	0.19	-0.09	-0.09	1.24	0.90	6.00	0.79	0.19	Vehicle	-2.28	-0.21	-0.09	Pedestrian	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**128.83**	**214.72**	**462.35**	**577.93**
	L_2 - L_3	2.92	-3.66	0.41	0.41	-0.33	-0.33	0.04	0.04	-0.05	-0.05	1.24	0.90	2.92	0.45	0.04	Vehicle	-3.66	-0.37	-0.05	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	**358.46**	**597.44**	**434.56**	**724.26**
	L_3 - L_4	3.19	-5.19	0.52	0.52	-0.33	-0.33	0.02	0.02	-0.10	-0.10	1.24	0.90	3.19	0.58	0.02	Vehicle	-5.19	-0.36	-0.10	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	**279.60**	**466.00**	**442.68**	**737.79**
	L_4 - L_5	1.06	-8.32	0.08	0.08	-0.82	-0.82	0.00	0.00	-0.22	-0.22	1.24	0.90	1.06	0.09	-----	Vehicle	-8.32	-0.92	-0.22	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**1502.57**	**2504.29**	**144.96**	**241.60**
	L_5 - L_6	-0.11	-8.64	0.13	0.13	-0.49	-0.49	0.00	0.00	-0.28	-0.28	1.24	0.90	-0.11	0.15	-----	Vehicle	-8.64	-0.55	-0.28	Pedestrian	15.00	0.77	2	9.74	5	73.85	92.32	1	442.134	442.1	**1378.60**	**2297.67**	**319.67**	**399.59**
	L_6 - L_7	4.46	-5.99	0.35	0.35	-0.49	-0.49	0.18	0.18	-0.20	-0.20	1.24	0.90	4.46	0.39	0.18	Pedestrian	-5.99	-0.55	-0.20	Pedestrian	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**757.79**	**947.23**	**568.05**	**710.07**
	L_7 - L_8	-9.36	-17.66	0.33	0.33	-1.12	-1.12	0.00	0.00	-1.06	-1.06	1.24	0.90	-9.36	0.36	-----	Vehicle	-17.66	-1.24	-1.06	Pedestrian	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**1199.16**	**1998.60**	**241.45**	**301.81**
	L_8 - L_9	18.84	10.87	1.36	1.36	-0.23	-0.23	1.10	1.10	0.00	0.00	1.20	0.90	18.84	1.46	1.10	Pedestrian	10.87	-0.25	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**216.90**	**271.13**	**1768.66**	**2947.77**
	L_9 - L_{10}	11.17	-1.76	0.74	0.74	-0.21	-0.21	0.27	0.27	-0.14	-0.14	1.20	0.90	11.17	0.79	0.27	Pedestrian	-1.76	-0.23	-0.14	Pedestrian	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**394.12**	**492.65**	**1168.05**	**1460.06**
	L_{10} - L_{11}	10.70	2.17	0.69	0.69	-0.02	-0.02	0.41	0.41	0.00	0.00	1.20	0.90	10.70	0.74	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	**152.91**	**191.14**	**8063.79**	**13439.64**
	L_{11} - L_{12}	12.21	-0.42	0.74	0.74	-0.02	-0.02	0.26	0.26	0.00	0.00	1.20	0.90	12.21	0.79	0.26	Vehicle	-0.42	-0.02	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**164.20**	**273.67**	**6714.73**	**11191.22**
	L_{12} - L_{13}	6.63	-2.92	0.40	0.40	-0.19	-0.19	0.13	0.13	0.00	0.00	1.20	0.90	6.63	0.44	0.13	Vehicle	-2.92	-0.20	-----	Vehicle	15.00	1.02	2	7.35	5	73.85	92.32	1	585.684	585.7	**611.43**	**1019.06**	**1324.93**	**2208.22**
	L_{13} - L_{14}	12.80	1.62	1.15	1.15	-0.04	-0.04	0.31	0.31	0.00	0.00	1.20	0.90	12.80	1.24	0.31	Vehicle	1.62	-0.05	-----	Vehicle	15.00	1.46	2	5.15	5	73.85	92.32	1	836.8965	836.9	**305.32**	**508.87**	**8352.26**	**13920.43**
	L_{14} - L_{15}	1.98	-10.69	0.13	0.13	-0.99	-0.99	0.05	0.05	-0.21	-0.21	1.20	0.90	1.98	0.14	0.05	Pedestrian	-10.69	-1.07	-0.21	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**3334.07**	**4167.59**	**441.41**	**735.69**
	L_{15} - L_{16}	5.99	-3.43	0.46	0.46	-0.31	-0.31	0.03	0.03	-0.07	-0.07	1.20	0.90	5.99	0.49	0.03	Vehicle	-3.43	-0.33	-0.07	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**969.09**	**1615.16**	**1431.60**	**2386.00**
	L_{16} - L_{17}	-0.84	-11.84	0.08	0.08	-0.86	-0.86	0.02	0.02	-0.20	-0.20	1.20	0.90	-0.84	0.09	0.02	Vehicle	-11.84	-0.93	-0.20	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	**4014.81**	**6691.35**	**375.04**	**625.07**
	L_{17} - L_{18}	2.19	-9.46	0.06	0.06	-0.51	-0.51	0.03	0.03	-0.24	-0.24	1.20	0.90	2.19	0.07	0.03	Pedestrian	-9.46	-0.55	-0.24	Pedestrian	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	**3403.40**	**4254.25**	**390.94**	**488.68**
	L_{18} - L_{19}	0.84	-11.52	0.05	0.05	-0.52	-0.52	0.02	0.02	-0.26	-0.26	1.20	0.90	0.84	0.06	0.02	Pedestrian	-11.52	-0.56	-0.26	Pedestrian	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**1873.89**	**2342.37**	**161.35**	**201.69**
	L_{19} - L_{20}	1.28	-8.50	0.04	0.04	-0.44	-0.44	0.02	0.02	-0.32	-0.32	1.20	0.90	1.28	0.05	0.02	Pedestrian	-8.50	-0.47	-0.32	Pedestrian	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**2217.30**	**2771.63**	**170.43**	**213.04**
Structure 2	L_0 - L_1	8.88	-1.10	0.77	0.77	-0.09	-0.09	0.23	0.23	-0.03	-0.03	1.18	0.90	8.88	0.82	0.23	Vehicle	-1.10	-0.10	-0.03	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**168.94**	**281.56**	**1486.56**	**2477.60**
	L_1 - L_2	13.41	-0.38	0.80	0.80	-0.12	-0.12	0.25	0.25	-0.04	-0.04	1.18	0.90	13.41	0.85	0.25	Vehicle	-0.38	-0.12	-0.04	Pedestrian	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**158.97**	**264.94**	**1165.60**	**1456.99**
	L_2 - L_3	9.63	-1.36	0.68	0.68	-0.14	-0.14	0.25	0.25	-0.05	-0.05	1.18	0.90	9.63	0.73	0.25	Pedestrian	-1.36	-0.14	-0.05	Pedestrian	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	**351.93**	**439.91**	**1772.59**	**2215.74**
	L_3 - L_4	13.25	-0.94	0.99	0.99	-0.13	-0.13	0.21	0.21	-0.05	-0.05	1.18	0.90	13.25	1.05	0.21	Vehicle	-0.94	-0.14	-0.05	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	**352.08**	**586.80**	**2647.70**	**4412.84**
	L_4 - L_5	9.60	-8.29	0.52	0.52	-0.50	-0.50	0.07	0.07	-0.04	-0.04	1.18	0.90	9.60	0.55	0.07	Vehicle	-8.29	-0.54	-0.04	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	**893.99**	**1489.98**	**918.56**	**1530.93**
	L_5 - L_6	11.25	-2.22	0.84	0.84	-0.18	-0.18	0.12	0.12	-0.06	-0.06	1.18	0.90	11.25	0.89	0.12	Vehicle	-2.22	-0.19	-0.06	Pedestrian	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	**607.23**	**1012.05**	**2843.83**	**3554.79**
	L_6 - L_7	3.51	-10.30	0.55	0.55	-0.96	-0.96	0.00	0.00	-0.07	-0.07	1.18	0.90	3.51	0.58	-----	Vehicle	-10.30	-1.02	-0.07	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	**947.97**	**1579.95**	**539.96**	**899.94**
	L_7 - L_8	2.60	-12.44	0.27	0.27	-0.78	-0.78	0.00	0.00	-0.24	-0.24	1.18	0.90	2.60	0.29	-----	Vehicle	-12.44	-0.83	-0.24	Vehicle	18.00	1.23	2	7.35	5	73.85	92.32	1	844.074	844.1	**1359.82**	**2266.37**	**460.11**	**766.85**
	L_8 - L_9	-0.35	-14.52	0.08	0.08	-0.86	-0.86	0.00	0.00	-0.19	-0.19	1.18	0.90	-0.35	0.08	0.00	Vehicle	-14.52	-0.92	-0.19	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	**3680.36**	**6133.93**	**323.68**	**539.46**
	L_9 - L_{10}	-2.85	-13.17	0.15	0.15	-0.67	-0.67	0.00	0.00	-0.34	-0.34	1.18	0.90	-2.85	0.16	-----	Vehicle	-13.17	-0.71	-0.34	Pedestrian	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**1433.28**	**2388.80**	**273.16**	**341.45**
	L_{10} - L_{11}	-0.58	-12.80	0.17	0.17	-0.75	-0.75	0.05	0.05	-0.23	-0.23	1.18	0.90	-0.58	0.18	0.05	Vehicle	-12.80	-0.80	-0.23	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	**1056.13**	**1760.22**	**230.26**	**383.77**
	L_{11} - L_{12}	-1.75	-17.48	0.11	0.11	-0.59	-0.59	0.00	0.00	-0.37	-0.37	1.18	0.90	-1.75	0.12	-----	Vehicle	-17.48	-0.63	-0.37	Pedestrian	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	**2652.31**	**4420.51**	**395.25**	**494.06**
	L_{12} - L_{13}	8.95	-4.77	0.74	0.74	-0.49	-0.49	0.30	0.30	-0.17	-0.17	1.18	0.90	8.95	0.79	0.30	Pedestrian	-4.77	-0.52	-0.17	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**543.54**	**679.42**	**862.58**	**1437.64**
	L_{13} - L_{14}	-25.08	-38.97	0.68	0.68	-1.82	-1.82	0.00	0.00	-1.43	-1.43	1.18	0.90	-25.08	0.72	-----	Vehicle	-38.97	-1.93	-1.43	Pedestrian	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**780.79**	**1301.32**	**208.26**	**260.33**
	L_{14} - L_{15}	38.11	24.33	2.00	2.00	-0.67	-0.67	1.40	1.40	0.00	0.00	1.17	0.90	38.11	2.11	1.40	Pedestrian	24.33	-0.70	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**199.97**	**249.96**	**804.95**	**1341.58**
	L_{15} - L_{16}	2.20	-10.15	0.73	0.73	-0.46	-0.46	0.09	0.09	-0.29	-0.29	1.17	0.90	2.20	0.77	0.09	Vehicle	-10.15	-0.48	-0.29	Pedestrian	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**583.95**	**973.26**	**762.47**	**953.09**
	L_{16} - L_{17}	15.46	1.39	0.74	0.74	-0.10	-0.10	0.38	0.38	0.00	0.00	1.17	0.90	15.46	0.78	0.38	Pedestrian	1.39	-0.10	-----	Vehicle	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	**398.29**	**497.87**	**3452.29**	**5753.82**
	L_{17} - L_{18}	10.48	-1.25	0.93	0.93	-0.13	-0.13	0.22	0.22	-0.08	-0.08	1.17	0.90	10.48	0.98	0.22	Vehicle	-1.25	-0.14	-0.08	Pedestrian	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**220.61**	**367.69**	**1358.05**	**1697.56**
	L_{18} - L_{19}	10.20	0.17	0.65	0.65	-0.20	-0.20	0.27	0.27	0.00	0.00	1.17	0.90	10.20	0.69	0.27	Pedestrian	0.17	-0.21	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**213.45**	**266.82**	**752.39**	**1253.99**
	L_{19} - L_{20}	9.84	-2.71	0.75	0.75	-0.07	-0.07	0.12	0.12	-0.03	-0.03	1.17	0.90	9.84	0.79	0.12	Vehicle	-2.71	-0.08	-0.03	Pedestrian	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**193.26**	**322.10**	**1963.85**	**2454.82**
	L_{20} - L_{21}	7.95	-2.45	0.51	0.51	-0.39	-0.39	0.16	0.16	0.00	0.00	1.17	0.90	7.95	0.53	0.16	Vehicle	-2.45	-0.41	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**477.34**	**795.57**	**619.79**	**1032.98**
	L_{21} - L_{22}	8.88	-2.40	1.20	1.20	-0.15	-0.15	0.16	0.16	-0.05	-0.05	1.17	0.90	8.88	1.26	0.16	Vehicle	-2.40	-0.16	-0.05	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**200.61**	**334.35**	**1585.87**	**2643.11**
	L_{22} - L_{23}	2.01	-9.01	0.18	0.18	-1.05	-1.05	0.06	0.06	-0.18	-0.18	1.17	0.90	2.01	0.19	0.06	Pedestrian	-9.01	-1.10	-0.18	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**1370.44**	**1713.04**	**230.10**	**383.50**
	L_{23} - L_{24}	1.86	-8.53	0.33	0.33	-0.61	-0.61	0.00	0.00	-0.20	-0.20	1.17	0.90	1.86	0.35	-----	Vehicle	-8.53	-0.64	-0.20	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**741.01**	**1235.01**	**394.64**	**657.73**
	L_{24} - L_{25}	2.80	-9.72	0.07	0.07	-0.67	-0.67	0.03	0.03	-0.11	-0.11	1.17	0.90	2.80	0.07	0.03	Pedestrian	-9.72	-0.70	-0.11	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**2152.86**	**2691.07**	**218.61**	**364.34**
	L_{25} - L_{26}	-0.70	-10.70	0.17	0.17	-0.57	-0.57	0.00	0.00	-0.30	-0.30	1.17	0.90	-0.70	0.18	-----	Vehicle	-10.70	-0.60	-0.30	Pedestrian	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**901.99**	**1503.32**	**224.61**	**280.77**
	L_{26} - L_{27}	1.32	-10.35	0.17	0.17	-0.85	-0.85	0.05	0.05	-0.19	-0.19	1.17	0.90	1.32	0.18	0.05	Vehicle	-10.35	-0.90	-0.19	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**1240.22**	**2067.04**	**241.42**	**402.36**
	L_{27} - L_{28}	-2.21	-16.20	0.10	0.10	-0.70	-0.70	0.00	0.00	-0.41	-0.41	1.17	0.90	-2.21	0.11	-----	Vehicle	-16.20	-0.74	-0.41	Pedestrian	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	**3354.41**	**5590.68**	**401.68**	**502.10**
	L_{28} - L_{29}	11.79	-0.40	0.70	0.70	-0.41	-0.41	0.27	0.27	-0.04	-0.04	1.17	0.90	11.79	0.73	0.27	Pedestrian	-0.40	-0.43	-0.04	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**587.01**	**733.76**	**1043.34**	**1738.90**
	L_{29} - L_{30}	-25.96	-39.46	0.59	0.59	-1.87	-1.87	0.00	0.00	-1.47	-1.47	1.17	0.90	-25.96	0.62	-----	Vehicle	-39.46	-1.97	-1.47	Pedestrian	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**911.94**	**1519.90**	**203.73**	**254.66**
	L_{30} - L_{31}	38.82	24.63	2.01	2.01	-0.53	-0.53	1.43	1.43	0.00	0.00	1.18	0.90	38.82	2.14	1.43	Pedestrian	24.63	-0.56	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**196.13**	**245.16**	**998.35**	**1663.92**
	L_{31} - L_{32}	6.18	-7.73	0.67	0.67	-0.46	-0.46	0.15	0.15	-0.25	-0.25	1.18	0.90	6.18	0.71	0.15	Vehicle	-7.73	-0.48	-0.25	Pedestrian	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**626.38**	**1043.97**	**811.50**	**1014.37**
	L_{32} - L_{33}	16.95	1.13	0.66	0.66	-0.08	-0.08	0.34	0.34	0.00	0.00	1.18	0.90	16.95	0.71	0.34	Pedestrian	1.13	-0.09	-----	Vehicle	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	**377.74**	**472.17**	**3478.90**	**5798.16**
	L_{33} - L_{34}	12.91	0.40	0.87	0.87	-0.12	-0.12	0.24	0.24	-0.04	-0.04	1.18	0.90	12.91	0.92	0.24	Vehicle	0.40	-0.13	-0.04	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	**198.31**	**330.52**	**1458.87**	**2431.45**
	L_{34} - L_{35}	12.86	2.50	0.74	0.74	-0.11	-0.11	0.31	0.31	0.00	0.00	1.18	0.90	12.86	0.78	0.31	Pedestrian	2.50	-0.11	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**261.29**	**326.61**	**2004.69**	**3341.15**
	L_{35} - L_{36}	14.48	0.27	0.79	0.79	-0.06	-0.06	0.19	0.19	0.00	0.00	1.18	0.90	14.48	0.84	0.19	Vehicle	0.27	-0.06	-----	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	**353.69**	**589.49**	**5218.59**	**8697.65**
	L_{36} - L_{37}	11.87	-3.19	1.00	1.00	-0.20	-0.20	0.19	0.19	0.00	0.00	1.18	0.90	11.87	1.06	0.19	Vehicle	-3.19	-0.21	-----	Vehicle	18.00	1.23	1	14.69	5	73.85	92.32	1	422.037	422.0	**176.61**	**294.36**	**924.24**	**1540.40**
	L_{37} - L_{38}	10.52	-3.30	0.94	0.94	-0.45	-0.45	0.10	0.10	0.00	0.00	1.18	0.90	10.52	1.00	0.10	Vehicle	-3.30	-0.48	-----	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	**547.86**	**913.10**	**1159.84**	**1933.07**
	L_{38} - L_{39}	1.68	-11.78	0.14	0.14	-0.91	-0.91	0.05	0.05	-0.12	-0.12	1.18	0.90	1.68	0.15	0.05	Vehicle	-11.78	-0.96	-0.12	Vehicle	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	**3583.45**	**5972.42**	**559.93**	**933.22**
	L_{39} - L_{40}	7.67	-10.20	0.50	0.50	-0.51	-0.51	0.05	0.05	-0.12	-0.12	1.18	0.90	7.67	0.53	0.05	Vehicle	-10.20	-0.54	-0.12	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	**924.77**	**1541.28**	**903.84**	**1506.40**
	L_{40} - L_{41}	0.89	-13.24	0.11	0.11	-0.83	-0.83	0.03	0.03	-0.16	-0.16	1.18	0.90	0.89	0.11	0.03	Vehicle	-13.24	-0.89	-0.16	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	**3285.36**	**5475.61**	**417.60**	**696.00**
	L_{41} - L_{42}	1.02	-9.90	0.13	0.13	-0.65	-0.65	0.05	0.05	-0.24	-0.24	1.18	0.90	1.02	0.14	0.05	Pedestrian	-9.90	-0.69	-0.24	Pedestrian	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	**1864.15**	**2330.19**	**366.01**	**457.51**
	L_{42} - L_{43}	0.59	-13.12	0.09	0.09	-0.58	-0.58	0.03	0.03	-0.22	-0.22	1.18	0.90	0.59	0.09	0.03	Vehicle	-13.12	-0.62	-0.22	Pedestrian	18.00	0.45	1	40.00	5	73.85	92.32	1	155.034	155.0	**786.78**	**1311.30**	**101.75**	**127.19**
	L_{43} - L_{44}	-0.09	-9.99	0.08	0.08	-0.51	-0.51	0.03	0.03	-0.29	-0.29	1.18	0.90	-0.09	0.09	0.03	Vehicle	-9.99	-0.54	-0.29	Pedestrian	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**1620.03**	**2700.05**	**219.52**	**274.40**
Structure 3	L_0 - L_1	7.56	-2.30	0.64	0.64	-0.05	-0.05	0.22	0.22	-0.01	-0.01	1.20	0.90	7.56	0.69	0.22	Vehicle	-2.30	-0.05	-0.01	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**147.28**	**245.47**	**2021.63**	**3369.39**
	L_1 - L_2	11.66	-0.81	0.74	0.74	-0.07	-0.07	0.27	0.27	-0.02	-0.02	1.20	0.90	11.66	0.79	0.27	Pedestrian	-0.81	-0.08	-0.02	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**124.23**	**155.29**	**1340.67**	**2234.46**
	L_2 - L_3	9.44	-2.32	0.59	0.59	-0.08	-0.08	0.25	0.25	-0.03	-0.03	1.20	0.90	9.44	0.63	0.25	Pedestrian	-2.32	-0.08	-0.03	Pedestrian	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	**351.71**	**439.63**	**2772.87**	**3466.09**
	L_3 - L_4	11.46	0.38	0.83	0.83	-0.10	-0.10	0.24	0.24	-0.02	-0.02	1.20	0.90	11.46	0.90	0.24	Vehicle	0.38	-0.11	-0.02	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	**387.93**	**646.55**	**3193.77**	**5322.95**
	L_4 - L_5	3.42	-6.02	0.47	0.47

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
Condition: As-Built

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

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

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

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

			Member Forces from STAAD												Maximum Positive Shear				Minimum Negative Shear												Shear Force Rating			
			D		LL_{max}		LL_{min}		Pedestrian $Load_{max}$		Pedestrian $Load_{min}$		Impact (1+I)	Lane Reduction	Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Positive Shear Member Inventory RF	Positive Shear Member Operating RF	Negative Shear Member Inventory RF	Negative Shear Member Operating RF
Location	Member	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)																						
Structure 1	U_0 - L_0	-1.56	-1.56	0.12	0.12	-0.93	-0.93	0.04	0.04	-0.12	-0.12	1.24	0.90	-1.56	0.13	0.04	Vehicle	-1.56	-1.04	-0.12	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	875.25	1458.75	108.78	181.30
	U_1 - L_1	-1.45	-1.45	0.25	0.25	-0.80	-0.80	0.12	0.12	-0.33	-0.33	1.24	0.90	-1.45	0.27	0.12	Pedestrian	-1.45	-0.89	-0.33	Pedestrian	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	394.14	492.67	123.98	154.98
	U_2 - L_2	0.31	0.31	0.22	0.22	-0.54	-0.54	0.11	0.11	-0.16	-0.16	1.24	0.90	0.31	0.25	0.11	Pedestrian	0.31	-0.60	-0.16	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	421.40	526.75	191.78	319.64
	U_3 - L_3	1.69	1.69	0.30	0.30	-0.32	-0.32	0.09	0.09	-0.04	-0.04	1.24	0.90	1.69	0.33	0.09	Vehicle	1.69	-0.35	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	338.43	564.05	328.09	546.82
	U_4 - L_4	2.57	2.57	0.43	0.43	-0.10	-0.10	0.16	0.16	0.00	0.00	1.24	0.90	2.57	0.48	0.16	Pedestrian	2.57	-0.11	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	233.39	291.74	1070.34	1783.90
	U_5 - L_5	2.90	2.90	0.52	0.52	-0.05	-0.05	0.23	0.23	0.00	0.00	1.24	0.90	2.90	0.58	0.23	Pedestrian	2.90	-0.06	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	227.28	284.10	2474.50	4124.16
	U_6 - L_6	2.64	2.64	0.46	0.46	-0.07	-0.07	0.22	0.22	0.00	0.00	1.24	0.90	2.64	0.51	0.22	Pedestrian	2.64	-0.08	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	222.02	277.52	1520.38	2533.97
	U_7 - L_7	2.84	2.84	0.32	0.32	-0.10	-0.10	0.23	0.23	0.00	0.00	1.24	0.90	2.84	0.36	0.23	Pedestrian	2.84	-0.12	-----	Vehicle	16.25	0.44	2	18.57	5	73.85	92.32	1	272.14688	272.1	281.26	351.58	1099.55	1832.59
	U_8 - L_8	-0.84	-0.84	0.33	0.33	-0.40	-0.40	0.19	0.19	-0.19	-0.19	1.24	0.90	-0.84	0.37	0.19	Pedestrian	-0.84	-0.45	-0.19	Pedestrian	15.25	0.82	2	9.30	5	73.85	92.32	1	478.6914	478.7	527.71	659.63	461.16	576.45
	U_9 - L_9	-6.05	-6.05	0.03	0.03	-0.64	-0.64	0.00	0.00	-0.38	-0.38	1.20	0.90	-6.05	0.03	-----	Vehicle	-6.05	-0.69	-0.38	Pedestrian	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	4875.25	8125.41	173.97	217.46
	U_{10} - L_{10}	-5.08	-5.08	0.03	0.03	-0.64	-0.64	0.00	0.00	-0.32	-0.32	1.20	0.90	-5.08	0.03	0.00	Vehicle	-5.08	-0.69	-0.32	Pedestrian	16.16	0.83	2	9.75	5	73.85	92.32	1	512.74682	512.7	7666.01	12776.68	307.41	384.27
	U_{11} - L_{11}	-6.10	-6.10	0.01	0.01	-0.77	-0.77	0.00	0.00	-0.38	-0.38	1.20	0.90	-6.10	0.01	-----	Vehicle	-6.10	-0.82	-0.38	Pedestrian	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	26850.23	44750.39	184.89	231.12
	U_{12} - L_{12}	-4.35	-4.35	0.04	0.04	-0.57	-0.57	0.00	0.00	-0.26	-0.26	1.20	0.90	-4.35	0.04	-----	Vehicle	-4.35	-0.61	-0.26	Pedestrian	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	3389.02	5648.37	214.87	268.58
	U_{13} - L_{13}	-2.49	-2.49	0.07	0.07	-0.41	-0.41	0.00	0.00	-0.15	-0.15	1.20	0.90	-2.49	0.08	-----	Vehicle	-2.49	-0.44	-0.15	Pedestrian	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	1678.99	2798.32	276.29	345.36
	U_{14} - L_{14}	-1.05	-1.05	0.18	0.18	-0.25	-0.25	0.00	0.00	-0.05	-0.05	1.20	0.90	-1.05	0.19	-----	Vehicle	-1.05	-0.27	-0.05	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	594.17	990.28	420.76	701.27
	U_{15} - L_{15}	0.56	0.56	0.34	0.34	-0.12	-0.12	0.09	0.09	-0.04	-0.04	1.20	0.90	0.56	0.37	0.09	Vehicle	0.56	-0.13	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	311.10	518.49	884.05	1473.42
	U_{16} - L_{16}	1.64	1.64	0.33	0.33	-0.07	-0.07	0.13	0.13	-0.03	-0.03	1.20	0.90	1.64	0.36	0.13	Pedestrian	1.64	-0.07	-0.03	Pedestrian	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	310.11	387.63	1514.95	1893.68
	U_{17} - L_{17}	2.21	2.21	0.35	0.35	-0.05	-0.05	0.15	0.15	-0.02	-0.02	1.20	0.90	2.21	0.37	0.15	Pedestrian	2.21	-0.06	-0.02	Pedestrian	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	352.36	440.45	2421.10	3026.37
	U_{18} - L_{18}	3.83	3.83	0.47	0.47	-0.06	-0.06	0.24	0.24	-0.02	-0.02	1.20	0.90	3.83	0.50	0.24	Pedestrian	3.83	-0.07	-0.02	Pedestrian	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	253.64	317.05	2145.59	2681.99
	U_{19} - L_{19}	3.13	3.13	0.34	0.34	-0.04	-0.04	0.21	0.21	-0.02	-0.02	1.20	0.90	3.13	0.37	0.21	Pedestrian	3.13	-0.04	-0.02	Pedestrian	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	391.64	489.55	3871.57	4839.46
	U_{20} - L_{20}	2.80	2.80	0.23	0.23	-0.02	-0.02	0.17	0.17	-0.01	-0.01	1.20	0.90	2.80	0.24	0.17	Pedestrian	2.80	-0.02	-0.01	Pedestrian	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	537.46	671.83	6594.26	8242.83
	U_0 - L_0	-2.52	-2.52	0.04	0.04	-0.36	-0.36	0.01	0.01	-0.09	-0.09	1.18	0.90	-2.52	0.04	0.01	Vehicle	-2.52	-0.38	-0.09	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	4391.38	7318.96	481.38	802.30
	U_1 - L_1	-4.00	-4.00	0.09	0.09	-0.48	-0.48	0.03	0.03	-0.21	-0.21	1.18	0.90	-4.00	0.10	0.03	Pedestrian	-4.00	-0.52	-0.21	Pedestrian	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	1929.89	2412.37	336.14	420.17
	U_2 - L_2	-3.87	-3.87	0.12	0.12	-0.54	-0.54	0.04	0.04	-0.21	-0.21	1.18	0.90	-3.87	0.12	0.04	Pedestrian	-3.87	-0.58	-0.21	Pedestrian	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	1253.86	1567.33	257.74	322.18
	U_3 - L_3	-2.33	-2.33	0.09	0.09	-0.38	-0.38	0.03	0.03	-0.13	-0.13	1.18	0.90	-2.33	0.09	0.03	Pedestrian	-2.33	-0.40	-0.13	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	1619.95	2024.93	378.53	630.88
	U_4 - L_4	-1.45	-1.45	0.10	0.10	-0.33	-0.33	0.04	0.04	-0.11	-0.11	1.18	0.90	-1.45	0.11	0.04	Pedestrian	-1.45	-0.35	-0.11	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	1045.60	1307.00	320.18	533.63
	U_5 - L_5	-0.22	-0.22	0.12	0.12	-0.26	-0.26	0.04	0.04	-0.06	-0.06	1.18	0.90	-0.22	0.13	0.04	Vehicle	-0.22	-0.27	-0.06	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	878.99	1464.98	419.58	699.30
	U_6 - L_6	0.74	0.74	0.21	0.21	-0.21	-0.21	0.04	0.04	-0.01	-0.01	1.18	0.90	0.74	0.22	0.04	Vehicle	0.74	-0.22	-0.01	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	515.45	859.09	509.62	849.37
	U_7 - L_7	1.65	1.65	0.22	0.22	-0.07	-0.07	0.07	0.07	0.00	0.00	1.18	0.90	1.65	0.24	0.07	Vehicle	1.65	-0.07	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	476.16	793.60	1612.63	2687.72
	U_8 - L_8	3.91	3.91	0.46	0.46	-0.05	-0.05	0.17	0.17	0.00	0.00	1.18	0.90	3.91	0.49	0.17	Pedestrian	3.91	-0.05	-----	Vehicle	15.75	0.44	2	18.00	5	73.85	92.32	1	263.77313	263.8	243.13	303.92	2479.70	4132.83
	U_9 - L_9	6.62	6.62	0.67	0.67	-0.03	-0.03	0.26	0.26	0.00	0.00	1.18	0.90	6.62	0.71	0.26	Pedestrian	6.62	-0.03	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	249.02	311.27	6844.79	11407.98
	U_{10} - L_{10}	5.55	5.55	0.54	0.54	-0.05	-0.05	0.23	0.23	0.00	0.00	1.18	0.90	5.55	0.58	0.23	Pedestrian	5.55	-0.05	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	385.80	482.25	5001.36	8335.60
	U_{11} - L_{11}	4.64	4.64	0.43	0.43	-0.06	-0.06	0.19	0.19	0.00	0.00	1.18	0.90	4.64	0.46	0.19	Pedestrian	4.64	-0.06	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	484.39	605.49	3681.14	6135.24
	U_{12} - L_{12}	3.46	3.46	0.33	0.33	-0.08	-0.08	0.16	0.16	-0.01	-0.01	1.18	0.90	3.46	0.35	0.16	Pedestrian	3.46	-0.09	-0.01	Vehicle	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	683.66	854.57	2997.28	4995.47
	U_{13} - L_{13}	3.45	3.45	0.24	0.24	-0.10	-0.10	0.14	0.14	0.00	0.00	1.18	0.90	3.45	0.26	0.14	Pedestrian	3.45	-0.10	-----	Vehicle	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	784.89	981.11	2331.62	3886.03
	U_{14} - L_{14}	0.27	0.27	0.17	0.17	-0.27	-0.27	0.11	0.11	-0.10	-0.10	1.18	0.90	0.27	0.18	0.11	Pedestrian	0.27	-0.28	-0.10	Pedestrian	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	1055.50	1319.37	805.39	1006.74
	U_{15} - L_{15}	-2.96	-2.96	0.03	0.03	-0.33	-0.33	0.00	0.00	-0.13	-0.13	1.17	0.90	-2.96	0.03	-----	Vehicle	-2.96	-0.35	-0.13	Pedestrian	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	4784.24	7973.74	420.63	525.78
	U_{16} - L_{16}	-2.84	-2.84	0.04	0.04	-0.43	-0.43	0.03	0.03	-0.16	-0.16	1.17	0.90	-2.84	0.05	0.03	Pedestrian	-2.84	-0.45	-0.16	Pedestrian	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	3274.10	4092.62	401.45	501.82
	U_{17} - L_{17}	-3.71	-3.71	0.07	0.07	-0.51	-0.51	0.02	0.02	-0.19	-0.19	1.17	0.90	-3.71	0.07	0.02	Vehicle	-3.71	-0.54	-0.19	Pedestrian	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	2407.89	4013.15	308.40	385.50
	U_{18} - L_{18}	-3.92	-3.92	0.10	0.10	-0.60	-0.60	0.02	0.02	-0.22	-0.22	1.17	0.90	-3.92	0.11	0.02	Vehicle	-3.92	-0.63	-0.22	Pedestrian	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	1488.59	2480.98	237.89	297.36
	U_{19} - L_{19}	-2.44	-2.44	0.08	0.08	-0.39	-0.39	0.01	0.01	-0.14	-0.14	1.17	0.90	-2.44	0.08	0.01	Vehicle	-2.44	-0.41	-0.14	Pedestrian	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	1670.42	2784.03	331.74	414.68
	U_{20} - L_{20}	-1.76	-1.76	0.09	0.09	-0.33	-0.33	0.00	0.00	-0.12	-0.12	1.17	0.90	-1.76	0.09	0.00	Vehicle	-1.76	-0.34	-0.12	Pedestrian	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	1333.65	2222.74	359.16	448.95
	U_{21} - L_{21}	-1.05	-1.05	0.12	0.12	-0.32	-0.32	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.05	0.13	-----	Vehicle	-1.05	-0.33	-0.09	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	886.17	1476.94	341.13	568.55
	U_{22} - L_{22}	0.13	0.13	0.20	0.20	-0.16	-0.16	0.05	0.05	-0.03	-0.03	1.17	0.90	0.13	0.21	0.05	Vehicle	0.13	-0.17	-0.03	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	536.24	893.74	686.55	1144.24
	U_{23} - L_{23}	1.36	1.36	0.34	0.34	-0.10	-0.10	0.11	0.11	-0.02	-0.02	1.17	0.90	1.36	0.36	0.11	Vehicle	1.36	-0.11	-0.02	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	316.54	527.57	1080.90	1801.50
	U_{24} - L_{24}	2.07	2.07	0.37	0.37	-0.10	-0.10	0.14	0.14	-0.02	-0.02	1.17	0.90	2.07	0.39	0.14	Pedestrian	2.07	-0.11	-0.02	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	314.78	393.48	1190.17	1983.62
	U_{25} - L_{25}	2.70	2.70	0.40	0.40	-0.08	-0.08	0.16	0.16	-0.02	-0.02	1.17	0.90	2.70	0.42	0.16	Pedestrian	2.70	-0.09	-0.02	Vehicle	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	316.18	395.23	1592.63	2654.39
	U_{26} - L_{26}	4.21	4.21	0.57	0.57	-0.10	-0.10	0.23	0.23	-0.03	-0.03	1.17	0.90	4.21	0.60	0.23	Pedestrian	4.21	-0.11	-0.03	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	242.95	303.69	1446.79	2411.31
	U_{27} - L_{27}	3.88	3.88	0.48	0.48	-0.07	-0.07	0.20	0.20	-0.01	-0.01	1.17	0.90	3.88	0.51	0.20	Pedestrian	3.88	-0.07	-0.01	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	317.59	396.98	2445.24	4075.41
	U_{28} - L_{28}	2.75	2.75	0.36	0.36	-0.08	-0.08	0.14	0.14	-0.02	-0.02	1.17	0.90	2.75	0.38	0.14	Pedestrian	2.75	-0.09	-0.02	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	466.14	582.67	2117.71	3529.52
	U_{29} - L_{29}	2.82	2.82	0.24	0.24	-0.09	-0.09	0.13	0.13	0.00	0.00	1.17	0.90	2.82	0.25	0.13	Pedestrian	2.82	-0.10	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	533.37	666.71	1628.88	2714.79
	U_{30} - L_{30}	-0.53	-0.53	0.19	0.19	-0.25	-0.25	0.09	0.09	-0.10	-0.10	1.18	0.90	-0.53	0.20	0.09	Pedestrian	-0.53	-0.27	-0.10	Pedestrian	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	1061.53	1326.91	834.67	1043.33
	U_{31} - L_{31}	-3.70	-3.70	0.03	0.03	-0.32	-0.32	0.00	0.00	-0.15	-0.15	1.18	0.90	-3.70	0.03	-----	Vehicle	-3.70	-0.34	-0.15	Pedestrian	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	6926.46	11544.10	639.91	799.89
	U_{32} - L_{32}	-3.62	-3.62	0.05	0.05	-0.39	-0.39	0.02	0.02	-0.16	-0.16	1.18	0.90	-3.62	0.06	0.02	Vehicle	-3.62	-0.41	-0.16	Pedestrian	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	4785.88	7976.47	607.54	759.42
	U_{33} - L_{33}	-4.59	-4.59	0.02	0.02	-0.48	-0.48	0.00	0.00	-0.18	-0.18	1.18	0.90	-4.59	0.02	-----	Vehicle	-4.59	-0.51	-0.18	Pedestrian	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	11225.96	18709.93	449.38	561.73
	U_{34} - L_{34}	-5.33	-5.33	0.01	0.01	-0.56	-0.56	0.00	0.00	-0.22	-0.22	1.18	0.90	-5.33	0.01	-----	Vehicle	-5.33	-0.59	-0.22	Pedestrian	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	32133.74	53556.24	383.68	479.60
	U_{35} - L_{35}	-6.23	-6.23	0.01	0.01	-0.65	-0.65	0.00	0.00	-0.25	-0.25	1.18	0.90	-6.23	0.01	-----	Vehicle	-6.23	-0.69	-0.25	Pedestrian	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	12696.29	21160.48	259.23	324.03
	U_{36} - L_{36}	-3.53	-3.53	0.04	0.04	-0.47	-0.47	0.00	0.00	-0.15	-0.15	1.18	0.90	-3.53	0.04	-----	Vehicle	-3.53	-0.50	-0.15	Vehicle	15.75	0.44	2	18.00	5	73.85	92.32	1	263.77313	263.8	2982.89	4971.48	238.54	397.57
	U_{37} - L_{37}	-1.47	-1.47	0.08	0.08	-0.20	-0.20	0.00	0.00	-0.06	-0.06	1.18	0.90	-1.47	0.09	-----	Vehicle	-1.47	-0.22	-0.06	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	1285.06	2141.77	521.00	868.34
	U_{38} - L_{38}	-0.52	-0.52	0.23	0.23	-0.19	-0.19	0.03	0.03	-0.04	-0.04	1.18	0.90	-0.52	0.25	0.03	Vehicle	-0.52	-0.21	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	462.97	771.61	550.63	917.71
	U_{39} - L_{39}	0.56	0.56	0.29	0.29	-0.13	-0.13	0.07	0.07	-0.04	-0.04	1.18	0.90	0.56	0.31	0.07	Vehicle	0.56	-0.14	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	367.00	611.67	832.81	1388.02
	U_{40} - L_{40}	1.79	1.79	0.35	0.35	-0.10	-0.10	0.11	0.11	-0.04	-0.04	1.18	0.90	1.79	0.37	0.11	Vehicle	1.79	-0.11	-0.04	Pedestrian	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	305.79	509.64	1040.82	1301.03
	U_{41} - L_{41}	2.59	2.59	0.34	0.34	-0.08	-0.08	0.13	0.13	-0.03	-0.03	1.18	0.90	2.59	0.36	0.13	Pedestrian	2.59	-0.09	-0.03	Pedestrian	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	409.05	511.31	1706.76	2133.45
	U_{42} - L_{42}	4.23	4.23	0.49	0.49	-0.11	-0.11	0.21	0.21	-0.04	-0.04	1.18	0.90	4.23	0.52	0.21	Pedestrian	4.23	-0.11	-0.04	Pedestrian	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	277.33	346.66	1358.81	1698.51
	U_{43} - L_{43}	3.86	3.86	0.37	0.37	-0.07	-0.07	0.19	0.19	-0.03	-0.03	1.18	0.90	3.86	0.39	0.19	Pedestrian	3.86	-0.08	-0.03	Pedestrian	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	419.73	524.66	2417.45	3021.81
	U_{44} - L_{44}	3.42	3.42	0.25	0.25	-0.04	-0.04	0.14	0.14	-0.01	-0.01	1.18	0.90	3.42	0.26	0.14	Pedestrian	3.42	-0.04	-0.01	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	606.91	758.64	4516.91	7528.18
Structure 2	U_0 - L_0	-1.97	-1.97	0.02	0.02	-0.33	-0.33	0.01	0.01	-0.09	-0.09	1.20	0.90	-1.97	0.03	0.01	Pedestrian	-1.97	-0.35	-0.09	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	6545.77	8182.21	477.47	795.79
	U_1 - L_1	-3.42	-3.42	0.06	0.06	-0.46	-0.46	0.02	0.02	-0.24	-0.24	1.20	0.90	-3.42	0.06	0.02	Vehicle	-3.42	-0.49	-0.24	Pedestrian	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	2800.

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 2F1
Condition: As-Built

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

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

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

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

			Member Forces from STAAD												Maximum Positive Shear				Minimum Negative Shear												Shear Force Rating			
			D		LL_{max}		LL_{min}		Pedestrian $Load_{max}$		Pedestrian $Load_{min}$		Impact (1+I)	Lane Reduction	Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Positive Shear Member Inventory RF	Positive Shear Member Operating RF	Negative Shear Member Inventory RF	Negative Shear Member Operating RF
Location	Member	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)																						
South Truss - Diagonals	Structure 1	U_0 - L_1	0.34	-0.17	0.03	0.03	-0.29	-0.29	0.03	0.03	0.00	0.00	1.24	0.90	0.34	0.03	0.03	Pedestrian	-0.17	-0.32	0.00	Vehicle	10.00	0.31	2	16.00	5	73.85	92.32	1	119.625	119.6	1237.17	1546.46	171.29	285.48
	U_1 - L_2	0.05	-0.25	0.04	0.04	-0.08	-0.08	0.02	0.02	-0.05	-0.05	1.24	0.90	0.05	0.04	0.02	Pedestrian	-0.25	-0.09	-0.05	Pedestrian	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	2617.54	3271.93	1081.59	1351.99
	U_2 - L_3	0.29	-0.01	0.03	0.03	-0.05	-0.05	0.02	0.02	-0.01	-0.01	1.24	0.90	0.29	0.04	0.02	Pedestrian	-0.01	-0.06	-0.01	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	2718.35	3397.94	2008.51	3347.52
	U_3 - L_4	0.44	0.13	0.05	0.05	-0.01	-0.01	0.01	0.01	0.00	0.00	1.24	0.90	0.44	0.05	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	2174.46	3624.10	14644.22	24407.04
	U_4 - L_4	-0.36	-0.70	0.02	0.02	-0.08	-0.08	0.00	0.00	-0.04	-0.04	1.24	0.90	-0.36	0.02	-----	Vehicle	-0.70	-0.08	-0.04	Pedestrian	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	6569.97	10949.95	1518.17	1897.72
	U_5 - L_5	-1.05	-1.50	0.03	0.03	-0.19	-0.19	0.00	0.00	-0.10	-0.10	1.24	0.90	-1.05	0.03	-----	Vehicle	-1.50	-0.21	-0.10	Pedestrian	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	4187.70	6979.49	613.55	766.93
	U_6 - L_6	-1.37	-1.84	0.06	0.06	-0.22	-0.22	0.00	0.00	-0.13	-0.13	1.24	0.90	-1.37	0.06	-----	Vehicle	-1.84	-0.24	-0.13	Pedestrian	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	2363.47	3939.12	508.43	635.54
	U_7 - L_7	-0.71	-1.20	0.04	0.04	-0.13	-0.13	0.00	0.00	-0.08	-0.08	1.24	0.90	-0.71	0.05	-----	Vehicle	-1.20	-0.14	-0.08	Pedestrian	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	2946.22	4910.37	853.72	1067.15
	U_8 - L_9	-1.25	-2.17	0.02	0.02	-0.20	-0.20	0.01	0.01	-0.11	-0.11	1.20	0.90	-1.25	0.02	0.01	Pedestrian	-2.17	-0.21	-0.11	Pedestrian	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	6904.04	8630.05	748.30	935.37
	U_9 - L_{10}	-2.11	-2.95	0.01	0.01	-0.28	-0.28	0.00	0.00	-0.16	-0.16	1.20	0.90	-2.11	0.01	-----	Vehicle	-2.95	-0.30	-0.16	Pedestrian	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	16759.46	27932.43	515.28	644.09
	U_{10} - L_{11}	-1.43	-2.28	0.01	0.01	-0.20	-0.20	0.00	0.00	-0.10	-0.10	1.20	0.90	-1.43	0.01	-----	Vehicle	-2.28	-0.22	-0.10	Pedestrian	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	16742.00	27903.33	587.14	733.93
	U_{11} - L_{12}	-1.21	-1.69	0.01	0.01	-0.19	-0.19	0.00	0.00	-0.09	-0.09	1.20	0.90	-1.21	0.01	-----	Vehicle	-1.69	-0.21	-0.09	Pedestrian	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	22625.82	37709.70	751.19	938.99
	U_{12} - L_{13}	-0.93	-1.64	0.01	0.01	-0.16	-0.16	0.00	0.00	-0.07	-0.07	1.20	0.90	-0.93	0.01	-----	Vehicle	-1.64	-0.17	-0.07	Pedestrian	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	10474.58	17457.64	686.30	857.87
	U_{13} - L_{14}	-0.18	-0.52	0.04	0.04	-0.06	-0.06	0.00	0.00	-0.02	-0.02	1.20	0.90	-0.18	0.04	-----	Vehicle	-0.52	-0.06	-0.02	Pedestrian	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	3025.02	5041.70	1793.90	2242.37
	U_{15} - L_{14}	0.33	0.00	0.06	0.06	-0.05	-0.05	0.01	0.01	-0.01	-0.01	1.20	0.90	0.33	0.06	0.01	Vehicle	0.00	-0.05	-0.01	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	1919.78	3199.63	2074.01	3456.68
	U_{16} - L_{15}	-0.23	-0.58	0.03	0.03	-0.10	-0.10	0.01	0.01	-0.03	-0.03	1.20	0.90	-0.23	0.03	0.01	Vehicle	-0.58	-0.11	-0.03	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	3309.50	5515.83	1044.06	1740.10
	U_{17} - L_{16}	-0.54	-0.93	0.02	0.02	-0.14	-0.14	0.01	0.01	-0.06	-0.06	1.20	0.90	-0.54	0.03	0.01	Pedestrian	-0.93	-0.15	-0.06	Pedestrian	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	5168.87	6461.08	914.21	1142.77
	U_{18} - L_{17}	-1.69	-2.17	0.03	0.03	-0.24	-0.24	0.01	0.01	-0.11	-0.11	1.20	0.90	-1.69	0.04	0.01	Vehicle	-2.17	-0.26	-0.11	Pedestrian	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	3952.97	6588.28	512.58	640.73
	U_{19} - L_{18}	-1.52	-2.05	0.03	0.03	-0.20	-0.20	0.01	0.01	-0.11	-0.11	1.20	0.90	-1.52	0.03	0.01	Pedestrian	-2.05	-0.22	-0.11	Pedestrian	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	5754.27	7192.83	625.99	782.49
	U_{20} - L_{19}	-1.60	-2.18	0.02	0.02	-0.17	-0.17	0.01	0.01	-0.12	-0.12	1.20	0.90	-1.60	0.02	0.01	Pedestrian	-2.18	-0.18	-0.12	Pedestrian	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	8930.95	11163.69	672.24	840.30
	Structure 2	U_0 - L_1	-1.42	-1.97	0.03	0.03	-0.29	-0.29	0.01	0.01	-0.05	-0.05	1.18	0.90	-1.42	0.03	0.01	Vehicle	-1.97	-0.31	-0.05	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	5177.62	8629.36	541.28	902.13
		U_1 - L_2	-2.23	-2.78	0.06	0.06	-0.30	-0.30	0.02	0.02	-0.14	-0.14	1.18	0.90	-2.23	0.07	0.02	Pedestrian	-2.78	-0.32	-0.14	Pedestrian	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	2508.96	3136.20	490.67	613.33
		U_2 - L_3	-1.76	-2.23	0.07	0.07	-0.29	-0.29	0.03	0.03	-0.11	-0.11	1.18	0.90	-1.76	0.07	0.03	Pedestrian	-2.23	-0.30	-0.11	Pedestrian	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	2006.21	2507.77	461.98	577.48
		U_3 - L_4	-0.78	-1.19	0.05	0.05	-0.16	-0.16	0.02	0.02	-0.06	-0.06	1.18	0.90	-0.78	0.05	0.02	Pedestrian	-1.19	-0.17	-0.06	Pedestrian	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	2998.14	3747.67	866.74	1083.43
		U_4 - L_5	-0.13	-0.47	0.04	0.04	-0.10	-0.10	0.01	0.01	-0.03	-0.03	1.18	0.90	-0.13	0.04	0.01	Pedestrian	-0.47	-0.11	-0.03	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	2849.77	3562.21	1027.38	1712.31
		U_5 - L_6	0.36	0.01	0.07	0.07	-0.07	-0.07	0.01	0.01	-0.01	-0.01	1.18	0.90	0.36	0.07	0.01	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	1572.25	2620.42	1487.82	2479.70
		U_6 - L_7	0.65	0.25	0.08	0.08	-0.03	-0.03	0.02	0.02	0.00	0.00	1.18	0.90	0.65	0.08	0.02	Vehicle	0.25	-0.03	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	1484.24	2473.74	3680.04	6133.40
		U_7 - L_7	-0.66	-1.45	0.03	0.03	-0.12	-0.12	0.00	0.00	-0.04	-0.04	1.18	0.90	-0.66	0.03	-----	Vehicle	-1.45	-0.13	-0.04	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	3643.73	6072.88	816.74	1361.23
		U_8 - L_8	-2.06	-2.57	0.02	0.02	-0.24	-0.24	0.00	0.00	-0.09	-0.09	1.18	0.90	-2.06	0.02	-----	Vehicle	-2.57	-0.25	-0.09	Pedestrian	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	6638.37	11063.95	591.35	739.19
		U_9 - L_9	-2.06	-2.56	0.02	0.02	-0.23	-0.23	0.00	0.00	-0.09	-0.09	1.18	0.90	-2.06	0.02	-----	Vehicle	-2.56	-0.25	-0.09	Pedestrian	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	10054.11	16756.85	666.53	833.16
		U_{10} - L_{10}	-2.31	-2.86	0.03	0.03	-0.24	-0.24	0.00	0.00	-0.10	-0.10	1.18	0.90	-2.31	0.03	-----	Vehicle	-2.86	-0.26	-0.10	Pedestrian	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	6269.07	10448.45	687.08	858.85
		U_{11} - L_{11}	-2.13	-2.73	0.04	0.04	-0.22	-0.22	0.00	0.00	-0.10	-0.10	1.18	0.90	-2.13	0.05	-----	Vehicle	-2.73	-0.23	-0.10	Pedestrian	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	4079.84	6799.73	744.65	930.81
		U_{12} - L_{12}	-2.09	-2.70	0.06	0.06	-0.20	-0.20	0.01	0.01	-0.10	-0.10	1.18	0.90	-2.09	0.07	0.01	Vehicle	-2.70	-0.21	-0.10	Pedestrian	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	2513.78	4189.64	722.65	903.32
		U_{13} - L_{13}	-1.09	-1.71	0.05	0.05	-0.12	-0.12	0.01	0.01	-0.07	-0.07	1.18	0.90	-1.09	0.05	0.01	Vehicle	-1.71	-0.13	-0.07	Pedestrian	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	3271.79	5452.99	1126.61	1408.27
		U_{14} - L_{15}	-0.80	-1.36	0.03	0.03	-0.16	-0.16	0.02	0.02	-0.06	-0.06	1.17	0.90	-0.80	0.03	0.02	Pedestrian	-1.36	-0.17	-0.06	Pedestrian	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	4545.08	5681.35	835.70	1044.62
		U_{15} - L_{16}	-1.69	-2.23	0.02	0.02	-0.26	-0.26	0.01	0.01	-0.10	-0.10	1.17	0.90	-1.69	0.02	0.01	Pedestrian	-2.23	-0.27	-0.10	Pedestrian	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	5201.55	6501.94	518.87	648.59
		U_{16} - L_{17}	-1.71	-2.26	0.03	0.03	-0.26	-0.26	0.01	0.01	-0.10	-0.10	1.17	0.90	-1.71	0.03	0.01	Vehicle	-2.26	-0.27	-0.10	Pedestrian	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	4919.90	8199.83	547.24	684.05
		U_{17} - L_{18}	-1.67	-2.16	0.04	0.04	-0.25	-0.25	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.67	0.04	0.00	Vehicle	-2.16	-0.26	-0.09	Pedestrian	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	3825.58	6375.96	538.91	673.64
		U_{18} - L_{19}	-1.45	-1.93	0.04	0.04	-0.24	-0.24	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.45	0.05	0.00	Vehicle	-1.93	-0.26	-0.09	Pedestrian	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	3199.94	5333.24	553.80	692.25
		U_{19} - L_{20}	-0.63	-1.37	0.04	0.04	-0.16	-0.16	0.00	0.00	-0.06	-0.06	1.17	0.90	-0.63	0.04	-----	Vehicle	-1.37	-0.16	-0.06	Pedestrian	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	2690.24	4483.73	621.56	776.95
		U_{20} - L_{21}	-0.36	-0.70	0.04	0.04	-0.10	-0.10	0.00	0.00	-0.04	-0.04	1.17	0.90	-0.36	0.04	-----	Vehicle	-0.70	-0.11	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	2858.01	4763.34	1038.44	1730.73
		U_{21} - L_{22}	0.02	-0.31	0.06	0.06	-0.06	-0.06	0.01	0.01	-0.02	-0.02	1.17	0.90	0.02	0.07	0.01	Vehicle	-0.31	-0.06	-0.02	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	1748.14	2913.57	1932.50	3220.83
		U_{22} - L_{23}	-0.05	-0.39	0.05	0.05	-0.07	-0.07	0.00	0.00	-0.02	-0.02	1.17	0.90	-0.05	0.05	0.00	Vehicle	-0.39	-0.07	-0.02	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	2306.97	3844.94	1567.73	2612.88
		U_{23} - L_{24}	-0.39	-0.74	0.03	0.03	-0.11	-0.11	0.00	0.00	-0.04	-0.04	1.17	0.90	-0.39	0.03	0.00	Vehicle	-0.74	-0.11	-0.04	Pedestrian	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	3291.52	5485.87	992.42	1240.53
		U_{24} - L_{25}	-0.62	-1.39	0.04	0.04	-0.16	-0.16	0.00	0.00	-0.06	-0.06	1.17	0.90	-0.62	0.04	0.00	Vehicle	-1.39	-0.17	-0.06	Pedestrian	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	2690.18	4483.63	601.97	752.47
		U_{25} - L_{25}	-1.40	-1.89	0.04	0.04	-0.22	-0.22	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.40	0.04	0.00	Vehicle	-1.89	-0.23	-0.09	Pedestrian	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	3275.47	5459.11	592.03	740.04
		U_{27} - L_{26}	-1.57	-2.07	0.04	0.04	-0.22	-0.22	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.57	0.04	0.00	Vehicle	-2.07	-0.23	-0.09	Pedestrian	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	3933.25	6555.41	589.95	737.44
		U_{28} - L_{27}	-1.53	-2.09	0.04	0.04	-0.22	-0.22	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.53	0.04	-----	Vehicle	-2.09	-0.23	-0.09	Pedestrian	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	3597.46	5995.77	639.11	798.89
		U_{29} - L_{28}	-1.40	-1.95	0.06	0.06	-0.18	-0.18	0.00	0.00	-0.08	-0.08	1.17	0.90	-1.40	0.06	-----	Vehicle	-1.95	-0.19	-0.08	Pedestrian	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	2255.26	3758.76	714.98	893.72
		U_{30} - L_{29}	-0.59	-1.15	0.05	0.05	-0.11	-0.11	0.00	0.00	-0.04	-0.04	1.17	0.90	-0.59	0.05	0.00	Vehicle	-1.15	-0.11	-0.04	Pedestrian	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	3046.80	5078.00	1236.11	1545.13
		U_{30} - L_{31}	-1.35	-1.98	0.03	0.03	-0.18	-0.18	0.01	0.01	-0.08	-0.08	1.18	0.90	-1.35	0.04	0.01	Vehicle	-1.98	-0.19	-0.08	Pedestrian	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	4719.58	7865.96	851.74	1064.68
		U_{31} - L_{32}	-2.47	-3.07	0.03	0.03	-0.26	-0.26	0.01	0.01	-0.12	-0.12	1.18	0.90	-2.47	0.04	0.01	Vehicle	-3.07	-0.28	-0.12	Pedestrian	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	4881.79	8136.31	570.90	713.62
		U_{32} - L_{33}	-2.33	-2.91	0.02	0.02	-0.26	-0.26	0.00	0.00	-0.11	-0.11	1.18	0.90	-2.33	0.02	-----	Vehicle	-2.91	-0.27	-0.11	Pedestrian	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	8777.37	14628.95	645.41	806.76
		U_{33} - L_{34}	-2.44	-2.97	0.02	0.02	-0.26	-0.26	0.00	0.00	-0.11	-0.11	1.18	0.90	-2.44	0.02	-----	Vehicle	-2.97	-0.28	-0.11	Pedestrian	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	9756.14	16260.24	631.43	789.29
		U_{34} - L_{35}	-2.15	-2.63	0.01	0.01	-0.24	-0.24	0.00	0.00	-0.10	-0.10	1.18	0.90	-2.15	0.01	-----	Vehicle	-2.63	-0.26	-0.10	Pedestrian	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	17879.54	29799.23	638.84	798.56
		U_{35} - L_{36}	-2.05	-2.55	0.02	0.02	-0.24	-0.24	0.00	0.00	-0.09	-0.09	1.18	0.90	-2.05	0.02	-----	Vehicle	-2.55	-0.25	-0.09	Pedestrian	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	9736.09	16226.81	586.18	732.73
		U_{36} - L_{37}	-0.66	-1.43	0.03	0.03	-0.12	-0.12	0.00	0.00	-0.04	-0.04	1.18	0.90	-0.66	0.04	-----	Vehicle	-1.43	-0.12	-0.04	Pedestrian	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	2893.48	4822.47	829.07	1036.34
		U_{38} - L_{37}	0.55	0.15	0.07	0.07	-0.04	-0.04	0.02	0.02	0.00	0.00	1.18	0.90	0.55	0.07	0.02	Vehicle	0.15	-0.04	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	1750.88	2918.14	3181.15	5301.92
		U_{39} - L_{38}	0.25	-0.10	0.06	0.06	-0.08	-0.08	0.01	0.01	-0.01	-0.01	1.18	0.90	0.25	0.07	0.01	Vehicle	-0.10	-0.08	-0.01	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	1671.44	2785.74	1408.67	2347.79
		U_{40} - L_{39}	-0.19	-0.54	0.03	0.03	-0.10	-0.10	0.01	0.01	-0.03	-0.03	1.18	0.90	-0.19	0.03	0.01	Pedestrian	-0.54	-0.11	-0.03	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	3233.63	4042.04	1027.01	1711.69
		U_{41} - L_{40}	-0.79	-1.21	0.04	0.04	-0.15	-0.15	0.02	0.02	-0.05	-0.05	1.18	0.90	-0.79	0.04	0.02	Pedestrian	-1.21	-0.16	-0.05	Pedestrian	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	3482.04	4352.54	966.08	1207.60
		U_{42} - L_{41}	-1.71	-2.19	0.05	0.05	-0.24	-0.24	0.02	0.02	-0.09	-0.09	1.18	0.90	-1.71	0.06	0.02	Pedestrian	-2.19	-0.25	-0.09	Pedestrian	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	2493.48	3116.85	547.23	684.04
		U_{43} - L_{42}	-1.87	-2.42	0.05	0.05	-0.23	-0.23	0.02	0.02	-0.11	-0.11	1.18	0.90	-1.87	0.05	0.02	Pedestrian	-2.42	-0.24	-0.11	Pedestrian	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	3459.01	4323.76	646.38	807.98
		U_{44} - L_{43}	-2.06	-2.63	0.03	0.03	-0.19	-0.19	0.01	0.01	-0.09	-0.09	1.18	0.90	-2.06	0.04	0.01	Vehicle	-2.63	-0.20	-0.09	Pedestrian	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	4731.46	7885.77	769.13	961.42
	Structure 3	U_0 - L_1	-0.86	-1.43	0.02	0.02	-0.27	-0.27	0.00	0.00	-0.04	-0.04	1.20	0.90	-0.86	0.02	0.00	Vehicle	-1.43	-0.29	-0.04	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	8444.02	14073.36	523.08	871.80
		U_1 - L_2	-1.89	-2.41	0.04	0.04	-0.27	-0.27	0.01	0.01	-0.14	-0.14	1.20	0.90	-1.89	0.04	0.01	Vehicle	-2.41	-0.30	-0.14	Pedestrian	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	3895.26	6492.11	463.68	579.61
		U_2 - L_3	-1.74	-2.20	0.05	0.05	-0.29	-0.29	0.02	0.02	-0.12	-0.12	1.20	0.90	-1.74	0.05	0.02	Vehicle	-2.20	-0.31	-0.12	Pedestrian	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	2922.35	4870.58	439.68	549.60
		U_3 - L_4	-0.53	-0.91	0.03	0.03	-0.15	-0.15	0.01	0.01	-0.06	-0.06

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 2F1

Controlling As-Built Rating

	Operating
Maximum Axial Force	1.87
Maximum Moment (Start)	1.92
Maximum Moment (End)	2.21
	Operating
Maximum Shear Force	56.04

Location	Member	Axial Load Case			Moment (Start)			Moment (End)			Controlling Tonnages	Maximum Shear Force Operating	
		North Truss	Center Truss	South Truss	North Truss	Center Truss	South Truss	North Truss	Center Truss	South Truss			
		Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Tonnage	Rating	Tonnage
Truss - Upper Chord	Structure 1	$U_0 - U_1$	7.59	6.99	11.04	7.34	8.96	10.93	7.43	6.99	11.04	251.53	99.88	3596
		$U_1 - U_2$	3.87	4.99	4.99	4.79	6.53	6.12	3.86	4.99	4.95	138.90	86.24	3105
		$U_2 - U_3$	4.02	5.62	5.55	4.60	6.91	5.85	4.04	5.62	5.44	144.59	136.57	4916
		$U_3 - U_4$	5.39	7.25	7.34	6.21	8.77	7.39	5.41	7.21	7.32	194.14	154.65	5567
		$U_4 - U_5$	5.34	7.10	7.12	5.34	7.10	7.32	8.11	10.70	8.78	192.28	118.97	4283
		$U_5 - U_6$	7.65	9.66	7.87	7.44	8.69	7.81	11.97	15.14	11.64	267.81	108.70	3913
		$U_6 - U_7$	7.67	9.90	7.68	7.59	16.33	7.52	8.82	35.08	7.36	265.03	304.78	10972
		$U_7 - U_8$	7.42	9.42	6.07	7.68	11.55	12.70	17.64	20.94	9.48	218.61	129.29	4654
		$U_8 - U_9$	7.35	10.52	7.40	24.32	25.91	10.28	21.04	13.82	8.96	264.70	72.91	2625
		$U_9 - U_{10}$	8.76	12.32	11.18	22.02	20.95	20.84	9.03	12.65	11.25	315.38	149.59	5385
		$U_{10} - U_{11}$	6.00	6.62	5.59	11.23	8.48	9.53	5.95	6.67	5.59	201.18	85.56	3080
		$U_{11} - U_{12}$	4.49	6.20	4.01	5.37	8.06	4.86	4.51	6.20	4.01	144.28	141.99	5112
		$U_{12} - U_{13}$	5.08	6.67	4.35	6.05	8.06	4.61	4.79	6.62	4.35	156.66	436.72	15722
		$U_{13} - U_{14}$	4.21	6.09	4.26	5.94	7.20	4.75	4.21	6.08	4.27	151.52	260.82	9389
		$U_{14} - U_{15}$	4.10	5.93	4.03	4.10	5.92	4.06	5.08	7.66	5.31	145.03	434.19	15631
		$U_{15} - U_{16}$	4.39	6.06	4.83	4.39	6.48	4.84	5.02	8.48	5.63	157.98	426.71	15361
		$U_{16} - U_{17}$	5.06	6.74	4.98	5.06	6.56	5.14	7.25	8.88	6.72	179.10	396.55	14276
		$U_{17} - U_{18}$	5.03	5.44	4.87	4.72	5.45	5.08	6.11	6.47	5.66	170.07	306.30	11027
		$U_{18} - U_{19}$	5.13	5.95	4.73	4.91	5.51	4.68	7.55	9.20	6.02	168.46	144.34	5196
		$U_{19} - U_{20}$	11.96	13.66	13.74	11.58	12.39	13.95	13.65	16.31	17.87	416.74	78.73	2834
	Structure 2	$U_0 - U_1$	12.88	10.60	13.92	12.59	15.78	18.01	12.00	10.53	14.08	379.04	113.23	4076
		$U_1 - U_2$	6.55	5.96	7.28	7.93	8.09	6.66	6.53	5.93	7.27	213.59	236.11	8500
		$U_2 - U_3$	5.58	6.44	5.29	8.10	7.82	6.31	5.66	6.42	5.39	190.35	101.30	3647
		$U_3 - U_4$	4.73	6.64	4.35	5.46	7.22	5.45	4.94	6.45	4.39	156.64	338.73	12194
		$U_4 - U_5$	5.18	6.19	4.50	5.94	7.42	4.95	5.06	6.24	4.50	162.17	306.77	11044
		$U_5 - U_6$	5.08	6.92	4.91	5.41	6.91	4.89	5.12	7.37	4.89	175.97	395.27	14230
		$U_6 - U_7$	4.55	5.75	5.21	5.14	7.01	5.29	4.55	5.75	5.03	163.72	271.81	9785
		$U_7 - U_8$	4.71	5.93	5.21	4.71	5.93	5.05	5.58	9.16	6.05	169.58	253.94	9142
		$U_8 - U_9$	5.17	6.66	5.21	5.23	6.66	5.23	6.74	9.21	5.99	186.16	340.13	12245
		$U_9 - U_{10}$	5.39	7.12	6.47	5.40	7.14	6.62	7.51	10.34	9.40	194.17	120.07	4322
		$U_{10} - U_{11}$	7.40	9.71	11.05	7.40	9.71	10.48	9.33	16.65	11.95	266.57	138.92	5001
		$U_{11} - U_{12}$	9.99	12.12	8.52	9.99	12.31	8.55	22.41	27.35	37.94	306.56	128.34	4620
		$U_{12} - U_{13}$	10.78	13.12	10.90	10.73	29.09	10.56	12.05	21.53	17.57	380.30	443.31	15959
		$U_{13} - U_{14}$	15.38	15.63	6.94	12.13	14.77	14.45	23.92	29.75	10.11	249.93	168.48	6065
		$U_{14} - U_{15}$	10.33	11.87	7.66	24.43	29.39	9.58	23.60	15.35	8.73	275.93	149.76	5391
		$U_{15} - U_{16}$	11.98	14.30	10.75	16.45	17.30	16.62	12.06	15.94	11.61	387.03	467.49	16830
		$U_{16} - U_{17}$	11.21	13.01	10.18	32.00	32.68	28.94	11.02	13.87	10.28	366.49	146.80	5285
		$U_{17} - U_{18}$	7.82	11.83	8.61	17.00	18.00	12.00	7.66	12.32	8.83	274.16	91.98	3311
		$U_{18} - U_{19}$	10.10	14.35	10.59	9.62	12.97	14.42	7.80	9.72	10.52	280.92	108.15	3893
		$U_{19} - U_{20}$	6.32	7.92	6.36	7.35	10.14	9.18	6.33	7.97	6.36	227.64	155.36	5593
		$U_{20} - U_{21}$	6.02	7.84	6.34	7.67	8.33	8.79	6.01	7.85	6.30	216.38	202.61	7294
		$U_{21} - U_{22}$	5.10	6.94	5.43	5.60	7.74	6.49	5.10	6.94	5.46	183.61	225.94	8134
		$U_{22} - U_{23}$	5.02	6.81	5.58	5.02	6.74	5.58	6.01	10.09	6.59	180.64	251.86	9067
		$U_{23} - U_{24}$	6.07	6.85	6.73	6.08	7.47	6.66	7.45	9.72	10.70	218.64	222.64	8015
		$U_{24} - U_{25}$	5.70	6.99	7.78	5.72	6.99	10.54	7.40	8.79	10.26	205.21	146.36	5269
		$U_{25} - U_{26}$	7.06	8.75	11.53	7.06	8.72	11.21	11.84	12.03	18.16	254.05	114.40	4118
		$U_{26} - U_{27}$	9.02	12.46	8.77	9.02	12.16	8.94	14.58	19.15	28.78	315.61	112.78	4060
		$U_{27} - U_{28}$	11.03	14.04	11.36	10.97	14.11	12.28	27.56	32.90	21.86	394.97	163.42	5883
		$U_{28} - U_{29}$	12.65	15.12	11.52	12.66	32.87	24.42	19.10	20.79	12.38	414.78	438.05	15770
		$U_{29} - U_{30}$	17.75	15.05	6.85	12.90	16.91	22.99	25.22	24.36	9.40	246.56	162.88	5864
		$U_{30} - U_{31}$	14.76	12.74	7.70	35.35	17.78	11.16	26.64	15.81	9.00	277.22	182.58	6573
		$U_{31} - U_{32}$	11.81	12.52	9.99	18.66	14.89	10.54	11.91	14.17	10.38	359.46	429.29	15454
		$U_{32} - U_{33}$	9.19	11.34	9.63	19.29	20.60	28.99	9.20	12.44	9.83	330.96	101.08	3639
		$U_{33} - U_{34}$	9.09	11.00	8.95	10.92	13.49	11.26	9.10	10.99	8.95	322.14	146.23	5264
		$U_{34} - U_{35}$	7.38	7.70	5.79	9.18	11.22	6.30	7.42	7.70	5.83	208.51	108.75	3915
		$U_{35} - U_{36}$	6.16	7.60	4.93	8.62	8.54	5.57	6.18	7.61	4.93	177.52	244.43	8800
		$U_{36} - U_{37}$	5.83	6.65	4.53	6.83	8.69	5.26	5.80	6.65	4.58	163.21	241.83	8706
		$U_{37} - U_{38}$	5.69	6.37	4.59	5.69	7.33	4.60	6.88	9.71	5.02	165.31	331.31	11927
		$U_{38} - U_{39}$	6.55	7.43	5.12	6.48	7.38	5.10	7.28	8.35	5.23	183.71	249.62	8986
		$U_{39} - U_{40}$	5.55	5.95	4.88	5.55	6.07	4.88	6.93	7.78	6.82	175.56	392.16	14118
		$U_{40} - U_{41}$	5.58	5.89	5.27	5.58	5.89	5.16	6.79	8.21	6.13	185.64	323.15	11634
		$U_{41} - U_{42}$	6.49	6.79	5.79	6.49	6.53	5.82	8.79	9.01	6.18	208.39	131.40	4730
		$U_{42} - U_{43}$	6.93	7.03	6.04	6.61	6.69	6.36	12.00	14.40	8.21	217.48	260.08	9363
		$U_{43} - U_{44}$	11.73	12.02	12.98	11.88	11.00	12.69	13.76	14.76	15.57	395.99	68.81	2477
	Structure 3	$U_0 - U_1$	12.00	12.47	16.94	12.11	14.09	18.29	12.91	12.47	16.93	432.14	109.18	3930
		$U_1 - U_2$	5.78	5.51	4.57	5.92	6.01	5.59	5.98	5.47	4.59	164.42	144.66	5208
		$U_2 - U_3$	5.44	5.75	4.76	6.66	6.53	5.78	5.51	5.73	4.75	171.04	278.98	10043
		$U_3 - U_4$	5.09	7.06	5.27	5.93	8.20	6.22	5.22	6.93	5.24	183.19	313.17	11274
		$U_4 - U_5$	4.90	6.97	4.60	5.34	7.12	4.94	4.97	7.08	4.62	165.53	544.47	19601
		$U_5 - U_6$	4.74	6.13	4.37	5.66	7.66	4.83	4.93	6.11	4.33	155.76	342.99	12348
		$U_6 - U_7$	4.80	6.17	4.22	4.79	6.12	4.24	6.09	9.24	4.89	151.78	349.74	12591
		$U_7 - U_8$	4.53	5.91	4.89	4.50	5.87	5.23	5.92	8.22	6.93	162.04	385.08	13863
		$U_8 - U_9$	4.36	6.06	4.70	4.36	6.05	4.53	7.66	10.30	6.13	156.83	141.51	5094
		$U_9 - U_{10}$	5.22	6.61	6.51	5.22	6.59	6.53	9.61	12.78	18.10	187.88	94.98	3419
		$U_{10} - U_{11}$	9.27	12.47	10.91	9.31	12.71	10.89	19.81	24.23	25.24	333.88	134.60	4846
		$U_{11} - U_{12}$	9.38	10.95	6.37	9.46	14.99	16.11	27.14	27.41	9.73	229.34	68.37	2461
		$U_{12} - U_{13}$	8.35	9.24	6.98	20.72	20.45	11.11	8.83	11.25	7.68	251.22	125.02	4501
		$U_{13} - U_{14}$	8.23	10.33	8.27	8.48	18.81	8.34	8.23	11.32	8.35	296.15	374.95	13498
		$U_{14} - U_{15}$	8.03	9.96	8.53	14.36	12.33	11.70	8.11	9.36	8.53	288.95	100.11	3604
		$U_{15} - U_{16}$	5.94	6.82	6.57	6.44	8.34	7.27	5.94	6.82	6.56	213.75	92.83	3342
		$U_{16} - U_{17}$	5.96	7.14	6.85	5.97	7.15	6.85	7.31	9.48	8.46	214.67	144.78	5212
		$U_{17} - U_{18}$	4.82	5.69	5.42	4.82	5.66	5.63	5.66	8.84	6.32	173.42	126.07	4539
		$U_{18} - U_{19}$	4.42	5.47	4.76	4.42	5.14	4.77	9.45	11.85	6.89	159.03	123.41	4443
		$U_{19} - U_{20}$	7.43	9.04	10.03	7.59	7.57	10.06	9.05	11.36	10.81	267.55	56.04	2018

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 2F1

Controlling As-Built Rating

	Operating
Maximum Axial Force	1.87
Maximum Moment (Start)	1.92
Maximum Moment (End)	2.21
	Operating
Maximum Shear Force	56.04

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 - Lower Chord	L_2 - L_1	33.52	19.31	37.45	40.05	19.32	21.22	41.05	32.08	23.25	695.19	128.29	4618
Structure 1	L_1 - L_2	5.28	6.60	6.60	5.80	8.50	8.41	6.08	8.14	8.11	190.04	105.18	3786
	L_2 - L_3	5.16	6.70	8.07	5.16	6.70	7.99	5.89	9.33	7.89	185.77	268.98	9683
	L_3 - L_4	4.94	6.86	6.32	4.93	6.85	6.35	5.72	10.44	8.08	177.41	212.36	7645
	L_4 - L_5	6.99	10.11	5.07	6.02	8.04	4.87	7.60	11.03	5.12	175.32	123.80	4457
	L_5 - L_6	6.72	10.35	4.73	6.44	9.19	4.85	6.89	21.51	5.19	170.27	298.57	10749
	L_6 - L_7	9.06	12.23	6.72	8.65	11.78	6.63	22.34	27.87	14.22	238.59	371.57	13377
	L_7 - L_8	8.42	12.76	5.15	10.39	20.72	7.99	10.12	14.05	6.02	185.52	250.30	9011
	L_8 - L_9	9.78	12.52	3.71	12.71	15.50	5.52	11.51	21.68	6.46	133.62	302.85	10903
	L_9 - L_{10}	11.40	16.00	8.67	30.08	35.82	15.53	11.06	17.70	10.85	312.21	480.09	17283
	L_{10} - L_{11}	8.02	12.07	7.04	8.07	12.97	9.36	7.58	11.89	8.61	253.54	165.13	5945
	L_{11} - L_{12}	6.33	7.16	7.08	7.47	8.34	8.26	7.87	9.71	7.78	227.96	183.60	6610
	L_{12} - L_{13}	7.05	8.12	7.77	7.02	8.71	9.21	7.64	8.53	7.89	252.64	544.33	19596
	L_{13} - L_{14}	6.54	7.73	5.57	5.97	7.83	6.16	7.09	8.75	6.25	200.53	234.79	8453
	L_{14} - L_{15}	7.19	8.69	6.86	6.63	8.63	7.14	7.20	8.40	9.37	238.85	420.80	15149
	L_{15} - L_{16}	8.34	9.74	11.30	8.92	10.35	9.19	8.51	9.52	12.20	300.06	764.16	27510
	L_{16} - L_{17}	8.32	8.54	11.37	7.84	8.60	12.18	8.38	9.55	11.91	282.13	358.40	12902
	L_{17} - L_{18}	10.48	10.09	14.77	9.73	9.25	13.90	10.44	10.05	16.29	332.90	315.03	11341
	L_{18} - L_{19}	12.27	8.84	11.74	11.12	8.35	14.11	11.48	9.49	14.63	300.43	125.52	4519
	L_{19} - L_{20}	10.18	30.60	13.62	16.39	28.55	15.83	15.31	18.55	17.21	366.48	147.23	5300
Structure 2	L_2 - L_1	43.94	37.45	26.47	37.38	35.77	25.87	40.73	50.41	27.11	931.40	189.27	6814
	L_1 - L_2	10.67	8.86	10.33	12.05	13.24	15.96	12.38	10.70	13.39	318.95	195.63	7043
	L_2 - L_3	9.45	9.94	10.63	10.88	10.59	13.10	9.44	10.12	10.84	339.67	283.67	10213
	L_3 - L_4	7.54	9.20	9.03	9.61	11.85	9.63	7.57	9.54	9.03	271.29	406.65	14639
	L_4 - L_5	8.83	10.29	9.54	9.74	11.73	8.04	9.06	10.81	9.54	289.29	623.54	22447
	L_5 - L_6	8.01	9.69	7.13	8.45	10.72	7.34	7.95	9.80	7.77	256.70	461.09	16599
	L_6 - L_7	7.23	9.67	7.22	7.26	9.67	7.22	8.41	11.36	8.57	260.01	631.81	22745
	L_7 - L_8	7.05	9.58	7.54	7.06	9.23	7.07	7.88	9.20	7.75	253.85	324.40	11679
	L_8 - L_9	7.85	10.95	8.53	7.79	10.19	9.23	7.82	10.95	9.54	280.43	336.35	12108
	L_9 - L_{10}	9.98	12.94	10.15	9.42	12.26	9.04	9.95	12.21	13.62	325.33	259.51	9342
	L_{10} - L_{11}	7.99	11.73	6.02	7.68	10.06	5.81	15.39	18.68	25.37	208.99	200.70	7225
	L_{11} - L_{12}	10.51	13.72	5.60	10.08	12.09	6.46	21.00	40.47	5.82	201.60	404.88	14576
	L_{12} - L_{13}	16.02	16.42	7.43	11.52	14.26	9.21	12.11	20.20	10.65	267.31	620.07	22322
	L_{13} - L_{14}	10.42	14.74	5.94	15.76	21.13	9.34	14.78	16.89	8.73	213.87	212.51	7650
	L_{14} - L_{15}	13.44	13.33	3.65	20.33	17.97	7.00	13.42	18.77	5.30	131.42	231.85	8346
	L_{15} - L_{16}	13.05	18.30	7.72	12.71	16.14	12.58	11.98	18.69	11.79	278.02	629.41	22659
	L_{16} - L_{17}	10.90	14.82	5.97	36.76	42.42	8.43	10.90	15.22	9.90	215.09	412.10	14836
	L_{17} - L_{18}	8.15	10.88	5.59	26.66	26.68	15.69	7.57	10.59	7.04	201.39	214.87	7735
	L_{18} - L_{19}	7.41	10.59	6.93	7.95	18.00	8.32	7.63	10.46	8.13	249.65	220.88	7952
	L_{19} - L_{20}	9.79	13.46	8.58	10.71	12.62	11.34	9.53	11.67	10.26	308.94	228.90	8240
	L_{20} - L_{21}	10.93	11.36	11.58	10.99	12.78	12.62	10.14	11.27	12.16	365.12	271.55	9776
	L_{21} - L_{22}	7.30	9.33	9.02	8.87	9.70	9.31	8.43	10.17	10.66	262.74	201.37	7249
	L_{22} - L_{23}	7.90	8.99	9.56	8.07	9.49	9.07	8.80	8.98	9.39	284.26	221.73	7982
	L_{23} - L_{24}	9.93	11.12	13.50	9.98	10.88	13.66	9.86	10.99	16.72	355.01	345.54	12439
	L_{24} - L_{25}	13.59	11.20	16.12	10.28	10.71	13.39	10.03	13.11	13.30	360.98	187.43	6748
	L_{25} - L_{26}	11.89	11.94	7.65	10.25	10.78	10.92	16.68	16.20	7.97	275.52	220.68	7944
	L_{26} - L_{27}	9.93	13.23	7.05	11.25	10.69	10.69	19.67	28.13	15.70	253.97	227.68	8196
	L_{27} - L_{28}	10.62	16.89	7.48	15.50	14.74	10.74	11.22	32.55	9.25	269.34	392.16	14118
	L_{28} - L_{29}	11.44	20.21	9.33	18.32	16.22	10.93	9.26	18.85	9.22	331.94	687.92	24765
	L_{29} - L_{30}	9.45	13.44	6.55	31.45	24.03	8.66	14.05	14.79	9.40	235.89	213.15	7673
	L_{30} - L_{31}	15.15	14.47	2.42	28.06	17.28	5.61	17.60	19.76	3.88	87.00	248.28	8938
	L_{31} - L_{32}	19.82	19.31	6.68	15.24	18.12	12.50	23.39	15.89	8.22	240.54	622.10	22396
	L_{32} - L_{33}	15.08	13.85	4.87	43.31	44.05	6.90	13.86	13.33	7.54	175.42	365.00	13140
	L_{33} - L_{34}	11.00	10.77	5.91	19.90	22.59	26.19	10.75	10.31	8.61	212.72	239.50	8622
	L_{34} - L_{35}	11.62	12.71	14.54	15.71	15.05	17.23	12.24	15.12	15.84	418.44	253.88	9140
	L_{35} - L_{36}	9.26	10.67	10.63	9.41	11.98	12.01	9.29	10.67	12.85	333.44	309.81	11153
	L_{36} - L_{37}	7.81	9.66	10.67	9.67	10.62	10.71	8.69	10.60	9.77	281.19	154.82	5573
	L_{37} - L_{38}	8.40	9.44	9.80	9.37	11.10	8.17	8.44	9.34	8.05	289.85	443.88	15980
	L_{38} - L_{39}	8.45	10.12	10.60	8.45	9.96	9.09	8.37	9.99	9.61	301.47	594.07	21386
	L_{39} - L_{40}	8.59	10.03	12.14	8.71	10.09	10.01	8.63	10.06	13.51	309.08	682.84	24582
	L_{40} - L_{41}	8.31	9.41	12.00	8.54	9.76	12.20	9.68	10.37	12.42	299.17	352.27	12682
	L_{41} - L_{42}	9.31	9.89	14.77	9.32	9.88	15.57	10.93	11.17	19.58	335.24	311.64	11219
	L_{42} - L_{43}	9.66	9.51	17.50	9.66	9.60	17.53	12.15	11.27	18.30	342.27	79.83	2874
	L_{43} - L_{44}	36.41	57.96	32.48	23.02	31.98	24.41	30.95	31.73	41.12	828.58	165.78	5968
Structure 3	L_2 - L_1	21.04	22.06	8.56	23.14	28.76	14.56	23.30	31.39	14.44	308.27	156.84	5646
	L_1 - L_2	14.03	7.61	10.95	16.24	12.82	15.55	13.79	8.94	14.16	273.90	164.65	5927
	L_2 - L_3	10.78	8.79	10.91	13.71	9.64	13.96	10.59	10.47	10.95	316.59	349.97	12599
	L_3 - L_4	8.19	8.94	9.75	8.78	10.28	11.27	8.13	8.83	11.24	292.75	357.34	12864
	L_4 - L_5	8.53	10.29	11.50	8.63	10.38	11.60	10.03	11.65	11.31	307.25	811.24	29204
	L_5 - L_6	7.23	9.21	6.74	6.82	8.31	7.62	7.25	10.18	8.22	242.66	378.62	13630
	L_6 - L_7	6.52	8.86	6.75	6.04	7.90	7.17	6.24	8.58	7.21	217.55	281.18	10123
	L_7 - L_8	6.73	8.61	8.11	6.45	8.03	8.09	6.72	8.40	9.29	232.11	436.57	15716
	L_8 - L_9	5.57	7.85	10.01	6.41	8.04	10.86	5.92	7.38	10.50	200.50	182.94	6586
	L_9 - L_{10}	9.81	12.92	7.04	8.93	11.15	7.31	9.80	13.09	7.49	253.42	176.87	6367
	L_{10} - L_{11}	13.93	16.53	10.40	12.93	15.17	10.92	19.93	34.67	13.10	374.46	406.58	14637
	L_{11} - L_{12}	8.70	12.99	6.50	14.26	18.30	11.56	10.17	15.56	7.64	234.07	267.62	9634
	L_{12} - L_{13}	9.35	12.44	4.56	14.53	14.49	6.77	13.37	16.11	4.58	164.12	273.67	9852
	L_{13} - L_{14}	7.99	11.63	6.67	29.49	31.91	14.13	8.82	13.70	7.85	240.04	461.10	16600
	L_{14} - L_{15}	6.56	9.88	4.99	6.52	23.61	6.59	6.50	10.66	5.99	179.59	291.36	10489
	L_{15} - L_{16}	5.51	8.83	4.92	8.73	10.26	11.15	5.33	8.24	6.10	177.28	116.05	4178
	L_{16} - L_{17}	5.30	6.64	6.54	6.11	7.82	6.61	5.34	6.65	6.02	190.76	244.14	8789
	L_{17} - L_{18}	5.75	7.04	6.63	6.22	7.88	6.66	6.34	6.44	7.06	206.63	269.77	9712
	L_{18} - L_{19}	5.62	6.63	6.90	5.63	6.66	6.90	6.41	7.06	10.02	202.29	120.74	4347
	L_{19} - L_{20}	44.53	31.71	55.51	20.23	22.33	48.99	23.71	29.99	96.61	728.25	108.35	3901

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 2F1

Controlling As-Built Rating

	Operating
Maximum Axial Force	1.87
Maximum Moment (Start)	1.92
Maximum Moment (End)	2.21
	Operating
Maximum Shear Force	56.04

			Axial Load Case			Moment (Start)			Moment (End)			Controlling	Maximum Shear Force	
			North Truss	Center Truss	South Truss	North Truss	Center Truss	South Truss	North Truss	Center Truss	South Truss	Tonnages	Operating	
	Location	Member	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Tonnage	Rating	Tonnage
Truss - Vehicals	Structure 1	$U_1 - L_1$	3.05	2.90	2.95	3.22	3.00	2.95	3.22	2.78	3.01	100.05	134.42	4839
		$U_1 - L_1$	5.62	6.30	4.81	6.00	7.03	5.60	5.99	7.05	6.06	173.27	129.18	4650
		$U_2 - L_2$	7.66	9.17	8.01	8.60	10.31	9.83	8.60	10.31	10.18	275.62	166.64	5999
		$U_3 - L_3$	12.75	12.15	7.60	15.53	14.87	12.87	13.76	14.87	16.05	273.56	259.91	9357
		$U_4 - L_4$	7.43	7.08	6.74	11.06	13.00	17.88	10.95	16.58	13.42	242.52	205.03	7381
		$U_5 - L_5$	4.91	5.85	3.72	4.94	6.66	4.55	4.94	5.87	3.71	133.62	208.85	7519
		$U_6 - L_6$	4.54	5.99	3.50	4.53	6.20	4.44	4.59	6.25	3.63	126.16	180.90	6512
		$U_7 - L_7$	3.34	4.11	2.56	3.38	4.14	3.76	3.35	4.11	2.72	92.14	220.90	7952
		$U_8 - L_8$	7.40	9.01	6.63	8.21	9.90	8.76	8.26	9.90	8.80	238.50	414.14	14909
		$U_9 - L_9$	5.61	5.41	2.71	6.32	6.35	2.70	5.67	5.41	4.19	97.31	251.86	9067
		$U_{10} - L_{10}$	7.33	8.36	4.77	7.22	9.46	4.62	7.21	9.43	6.70	166.36	373.68	13452
		$U_{11} - L_{11}$	6.45	7.83	6.17	6.88	8.79	6.22	6.82	8.76	6.44	222.14	229.33	8256
		$U_{12} - L_{12}$	6.17	7.36	4.01	6.59	8.03	4.30	6.55	8.03	6.84	144.40	230.77	8308
		$U_{13} - L_{13}$	4.81	5.71	4.26	5.00	6.32	3.46	4.96	6.32	6.53	124.64	227.88	8204
		$U_{14} - L_{14}$	6.57	7.26	7.39	16.07	24.08	12.32	18.16	24.08	26.29	236.37	362.08	13035
		$U_{15} - L_{15}$	7.43	8.73	12.91	8.46	8.62	12.90	8.41	8.62	12.90	267.60	292.33	10524
		$U_{16} - L_{16}$	5.32	6.95	5.00	5.36	6.89	6.62	5.35	6.89	4.06	146.25	282.41	10167
		$U_{17} - L_{17}$	4.16	5.61	2.75	4.41	6.01	4.00	4.41	6.01	2.70	97.14	324.84	11694
		$U_{18} - L_{18}$	4.54	6.16	3.47	5.01	6.31	5.75	4.55	6.31	3.47	125.06	239.03	8605
		$U_{19} - L_{19}$	5.23	6.94	4.18	5.30	6.93	6.68	5.27	6.95	4.15	149.58	323.60	11649
		$U_{20} - L_{20}$	4.14	4.50	5.46	3.89	4.45	4.66	3.89	4.48	5.46	139.88	538.76	19396
	Structure 2	$U_0 - L_0$	4.60	4.57	3.44	4.60	5.76	3.37	6.06	5.19	4.36	121.40	549.91	19797
		$U_1 - L_1$	7.43	6.29	3.98	7.95	8.54	4.23	7.41	8.54	5.79	143.32	433.80	15617
		$U_2 - L_2$	6.32	6.96	3.87	6.64	8.29	3.79	6.59	7.67	5.47	136.35	271.35	9769
		$U_3 - L_3$	5.04	6.31	3.20	5.62	7.04	2.99	5.69	7.04	4.29	107.60	432.59	15573
		$U_4 - L_4$	5.74	6.59	5.09	6.14	7.13	8.06	6.13	7.13	7.84	183.27	309.67	11148
		$U_5 - L_5$	6.92	8.44	9.46	7.71	9.45	14.86	7.72	9.45	14.90	249.20	331.28	11926
		$U_6 - L_6$	7.47	10.17	7.87	10.13	11.12	14.89	10.18	11.15	14.89	268.81	396.67	14280
		$U_7 - L_7$	6.27	7.08	7.28	21.36	31.17	17.70	21.21	31.12	14.20	225.67	495.82	17849
		$U_8 - L_8$	6.09	6.96	4.36	6.05	6.97	6.27	6.05	6.97	3.96	142.59	224.41	8079
		$U_9 - L_9$	7.85	8.55	5.53	7.72	9.39	7.76	7.73	8.49	5.08	183.00	254.72	9170
		$U_{10} - L_{10}$	7.71	9.11	4.88	8.15	9.38	7.02	8.20	9.38	4.88	175.62	376.63	13559
		$U_{11} - L_{11}$	6.90	8.21	4.00	6.94	8.21	5.76	6.95	8.21	4.00	144.15	453.03	16309
		$U_{12} - L_{12}$	7.36	8.24	3.86	7.32	8.78	5.47	7.34	8.25	3.90	139.11	593.23	21356
		$U_{13} - L_{13}$	5.86	6.19	3.09	5.86	6.17	5.31	5.84	6.21	3.33	111.34	627.35	22592
		$U_{14} - L_{14}$	8.70	9.40	7.27	11.73	11.62	10.16	11.70	11.62	8.92	261.83	845.13	30425
		$U_{15} - L_{15}$	7.93	7.76	4.07	9.52	8.15	4.00	9.54	8.15	6.09	144.01	527.64	18995
		$U_{16} - L_{16}$	7.92	7.83	4.29	8.04	8.67	4.65	7.99	8.65	5.78	154.33	478.45	17224
		$U_{17} - L_{17}$	7.00	7.13	4.53	7.46	7.96	4.33	7.47	8.00	6.64	155.98	334.53	12043
		$U_{18} - L_{18}$	6.56	7.18	4.57	6.77	7.88	4.25	6.78	7.88	6.51	153.07	264.02	9505
		$U_{19} - L_{19}$	5.90	6.61	4.24	6.35	7.27	4.70	6.33	7.27	6.21	152.49	344.96	12419
		$U_{20} - L_{20}$	5.85	6.40	4.59	6.05	7.25	4.35	6.04	7.25	6.37	156.55	302.45	10888
		$U_{21} - L_{21}$	6.12	6.86	7.39	6.51	7.53	6.50	6.55	7.53	9.49	220.44	306.43	11031
		$U_{22} - L_{22}$	6.70	8.07	6.81	26.24	28.98	23.62	26.26	28.98	18.83	241.28	484.25	17433
		$U_{23} - L_{23}$	6.70	7.82	8.64	6.63	7.87	7.91	6.66	7.87	4.92	177.19	302.36	10885
		$U_{24} - L_{24}$	6.24	6.78	3.77	5.89	7.80	5.35	5.90	7.47	3.76	135.35	312.78	11260
		$U_{25} - L_{25}$	5.62	6.49	3.90	5.58	6.71	5.93	5.62	6.71	3.90	140.46	300.67	10824
		$U_{26} - L_{26}$	6.41	7.24	4.44	6.42	7.23	6.77	6.43	7.23	3.98	143.21	227.50	8190
		$U_{27} - L_{27}$	7.07	6.99	4.26	7.02	7.62	6.89	6.98	6.99	4.26	153.22	293.74	10575
		$U_{28} - L_{28}$	7.12	7.21	4.66	7.66	7.58	5.90	7.12	7.22	4.76	167.91	383.25	13797
		$U_{29} - L_{29}$	8.03	7.61	5.09	7.98	7.61	8.00	8.02	7.60	5.57	183.10	418.79	15077
		$U_{30} - L_{30}$	8.98	9.65	7.00	14.84	11.70	8.88	14.80	11.70	9.29	252.11	817.83	29442
		$U_{31} - L_{31}$	8.57	7.27	2.44	8.98	8.26	2.47	8.61	7.27	4.84	88.02	827.85	29802
		$U_{32} - L_{32}$	8.67	8.67	4.10	8.67	9.74	3.97	8.69	9.77	5.95	142.82	701.55	25256
		$U_{33} - L_{33}$	7.70	8.60	4.34	8.91	9.69	4.28	8.92	9.12	6.61	154.13	531.95	19150
		$U_{34} - L_{34}$	9.32	9.75	4.41	9.80	10.70	5.38	9.85	10.64	7.33	158.76	420.19	15127
		$U_{35} - L_{35}$	8.27	8.64	5.71	8.53	10.16	5.84	8.61	9.57	7.95	205.39	255.08	9183
		$U_{36} - L_{36}$	6.56	7.01	4.75	6.58	7.26	4.60	6.54	7.26	6.63	165.60	229.36	8257
		$U_{37} - L_{37}$	6.49	7.02	6.30	20.08	28.75	15.32	20.09	28.85	27.65	226.76	428.12	15412
		$U_{38} - L_{38}$	8.39	8.37	10.70	8.41	8.21	15.94	9.10	8.21	15.94	295.53	377.34	13584
		$U_{39} - L_{39}$	8.70	9.07	11.27	8.47	10.39	13.44	8.47	10.39	13.44	304.76	373.95	13462
		$U_{40} - L_{40}$	5.87	6.99	7.99	6.39	7.08	7.71	6.41	7.08	7.99	211.15	296.29	10667
		$U_{41} - L_{41}$	5.82	6.80	3.39	5.80	6.82	4.88	5.81	6.81	2.89	103.89	374.01	13464
		$U_{42} - L_{42}$	6.69	7.07	4.14	6.49	7.61	6.41	6.46	7.61	4.14	149.15	251.72	9062
		$U_{43} - L_{43}$	6.76	7.30	4.72	7.29	7.23	6.85	6.75	7.23	4.17	150.06	337.69	12157
		$U_{44} - L_{44}$	5.86	5.56	4.81	5.42	5.41	5.59	5.42	5.39	4.81	173.01	532.84	19182
	Structure 3	$U_0 - L_0$	4.53	4.16	3.54	4.53	5.68	3.94	4.53	5.12	3.54	127.48	492.66	17736
		$U_1 - L_1$	6.37	6.47	3.75	7.27	8.67	3.43	7.31	7.72	5.24	123.61	429.12	15448
		$U_2 - L_2$	5.79	6.55	3.31	6.41	7.42	3.16	6.39	7.42	4.62	113.82	275.02	9901
		$U_3 - L_3$	4.82	5.59	2.75	5.17	6.84	2.60	5.21	6.85	3.84	93.75	353.42	12723
		$U_4 - L_4$	5.42	6.72	4.77	5.88	7.40	4.56	5.90	7.40	6.16	164.23	311.35	11209
		$U_5 - L_5$	7.39	8.45	6.63	8.22	9.44	11.26	8.21	9.44	11.26	238.56	286.76	10324
		$U_6 - L_6$	7.44	6.91	6.94	25.15	21.33	23.15	25.14	23.24	13.67	248.76	396.97	14291
		$U_7 - L_7$	5.69	5.90	3.25	5.59	5.85	5.28	5.58	6.81	3.27	117.11	244.90	8816
		$U_8 - L_8$	6.22	7.34	3.77	6.19	7.35	5.91	6.18	7.35	3.77	135.68	210.10	7563
		$U_9 - L_9$	6.74	8.54	6.22	6.83	8.26	6.07	6.75	8.26	5.51	198.36	200.67	7224
		$U_{10} - L_{10}$	6.92	8.49	4.11	7.50	9.27	5.97	7.50	8.50	4.27	148.10	320.23	11528
		$U_{11} - L_{11}$	4.98	5.19	2.64	4.95	5.15	4.01	4.96	5.15	2.65	94.88	188.32	6779
		$U_{12} - L_{12}$	8.30	9.29	6.40	10.50	9.51	9.93	10.42	9.51	7.93	230.49	429.26	15453
		$U_{13} - L_{13}$	4.96	4.22	1.87	5.43	4.53	1.92	5.44	4.53	3.23	67.39	289.71	10430
		$U_{14} - L_{14}$	6.05	6.24	3.35	6.38	7.50	3.64	6.21	7.50	4.78	120.76	226.99	8172
		$U_{15} - L_{15}$	5.35	5.69	4.05	6.09	7.35	3.90	6.07	7.34	4.84	140.56	219.43	7899
		$U_{16} - L_{16}$	5.95	6.02	6.99	13.49	17.27	8.56	13.53	17.28	24.17	214.14	207.52	7471
		$U_{17} - L_{17}$	10.79	9.07	11.64	10.87	8.73	21.55	10.87	8.73	17.64	314.13	245.67	8844
		$U_{18} - L_{18}$	8.12	10.00	12.60	8.14	9.67	10.55	8.11	9.67	9.45	292.08	161.89	5828
		$U_{19} - L_{19}$	5.34	6.34	5.42	5.63	6.31	6.35	5.63	6.31	5.42	192.22	112.24	4041
		$U_{20} - L_{20}$	3.22	3.08	2.63	2.82	3.15	4.19	3.16	3.15	2.21	79.64	137.48	4949

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

As-Built Load Rating 2F1

Controlling As-Built Rating

	Operating
Maximum Axial Force	1.87
Maximum Moment (Start)	1.92
Maximum Moment (End)	2.21
	Operating
Maximum Shear Force	56.04

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	$U_0 - L_1$	6.93	7.58	7.29	6.98	8.55	7.25	7.49	8.57	6.94	249.65	317.72	11438
	$U_1 - L_2$	6.13	7.69	9.70	7.41	7.69	7.77	6.77	8.37	6.89	220.64	1273.54	45847
	$U_2 - L_3$	10.56	8.55	9.91	11.25	17.61	11.57	11.53	8.59	11.86	307.95	1796.56	64676
	$U_3 - L_4$	4.77	5.23	6.43	14.80	8.40	8.19	4.75	5.60	6.41	171.11	2156.57	77636
	$U_3 - L_4$	5.03	7.66	8.19	5.83	12.29	10.12	7.23	10.48	16.25	181.25	1593.82	57378
	$U_4 - L_5$	5.60	7.65	6.42	7.06	9.32	7.95	5.71	8.74	6.70	201.51	594.61	21406
	$U_7 - L_6$	4.58	6.10	6.64	5.23	6.83	7.30	4.73	6.05	6.63	165.05	415.20	14947
	$U_1 - L_7$	4.94	6.09	7.67	4.91	6.34	9.15	5.11	6.09	7.92	176.62	653.36	23521
	$U_8 - L_8$	8.87	8.78	7.06	9.13	9.29	7.32	8.92	8.78	7.04	253.42	1024.71	36890
	$U_9 - L_{10}$	8.39	8.78	6.89	10.09	13.80	7.26	9.83	10.52	7.43	248.05	727.85	26203
	$U_{10} - L_{11}$	7.60	9.48	7.29	7.50	9.95	8.04	8.43	11.25	6.82	245.61	760.74	27386
	$U_{11} - L_{12}$	7.26	8.50	6.42	7.43	9.21	6.54	7.84	10.26	5.97	214.91	865.74	31167
	$U_{12} - L_{13}$	5.83	6.61	6.35	5.90	6.61	6.72	6.41	8.02	6.78	209.77	689.77	24832
	$U_{13} - L_{14}$	5.18	5.59	6.89	5.14	6.35	7.91	6.63	7.27	9.71	185.11	1583.92	57021
	$U_{14} - L_{14}$	6.87	6.83	9.70	7.49	8.28	16.90	8.86	8.33	16.57	245.74	1490.95	53674
	$U_{14} - L_{15}$	5.44	7.86	10.65	6.18	7.84	9.00	7.05	7.97	10.67	195.80	971.40	34970
	$U_{17} - L_{16}$	4.58	6.53	7.44	4.90	7.09	5.94	4.60	6.72	5.12	164.86	851.73	30662
	$U_{18} - L_{17}$	5.07	6.51	5.30	5.07	8.70	5.88	5.19	7.12	5.30	182.63	499.25	17973
	$U_{19} - L_{18}$	4.74	7.09	5.82	4.76	7.96	5.82	4.75	6.97	5.82	170.73	530.57	19101
	$U_{20} - L_{19}$	5.35	7.26	6.29	5.15	7.50	6.63	5.21	6.85	6.33	185.32	716.51	25794
Structure 2	$U_0 - L_1$	7.91	7.89	5.77	7.80	9.05	5.74	7.58	7.77	5.74	206.60	629.25	22653
	$U_1 - L_2$	7.32	7.91	5.56	7.37	7.91	5.45	8.10	9.44	6.08	196.17	624.97	22499
	$U_2 - L_3$	5.91	6.95	5.22	5.91	6.95	5.22	6.67	7.59	5.96	187.94	518.76	18675
	$U_3 - L_4$	6.25	6.90	6.75	7.19	6.90	6.53	6.97	7.95	8.01	225.11	932.73	33578
	$U_4 - L_5$	6.65	7.04	10.49	6.64	7.00	10.36	7.22	8.46	11.05	239.21	973.24	35037
	$U_5 - L_6$	8.69	8.63	12.25	8.54	9.12	15.42	9.46	8.94	14.80	307.36	1197.65	43115
	$U_6 - L_7$	5.87	5.26	6.73	5.87	6.30	7.51	5.80	5.29	6.58	189.43	1540.08	55443
	$U_3 - L_7$	6.16	7.77	8.15	9.14	11.17	7.98	7.46	9.14	10.25	221.71	906.81	32645
	$U_8 - L_8$	5.27	7.56	7.68	6.64	8.11	7.76	6.63	8.08	8.24	189.80	617.83	22242
	$U_{10} - L_9$	6.62	7.91	6.26	6.52	10.26	7.04	6.62	7.88	6.26	225.34	703.32	25319
	$U_{11} - L_{10}$	6.10	8.06	6.24	6.13	9.98	7.20	6.83	8.56	6.32	219.77	673.75	24265
	$U_{12} - L_{11}$	6.22	6.87	5.81	6.61	8.18	6.57	6.21	7.59	5.89	209.15	689.76	24832
	$U_{13} - L_{12}$	5.35	5.00	5.87	5.39	6.18	6.76	5.51	5.96	5.87	179.92	614.14	22109
	$U_{14} - L_{13}$	6.50	6.08	9.56	6.76	6.84	10.30	6.54	6.88	9.45	218.75	876.69	31561
	$U_{14} - L_{15}$	8.18	7.33	5.81	8.14	7.31	5.81	8.08	7.33	5.70	205.29	954.50	34362
	$U_{15} - L_{16}$	7.59	6.71	5.69	7.89	6.51	5.42	7.64	6.71	4.75	171.09	658.91	23721
	$U_{16} - L_{17}$	7.01	7.34	5.96	7.03	7.45	6.58	7.76	7.54	5.96	214.42	634.26	22833
	$U_{17} - L_{18}$	6.06	7.23	7.20	6.06	7.23	7.20	6.96	7.94	5.85	210.46	585.26	21069
	$U_{18} - L_{18}$	6.91	7.79	6.25	7.33	8.78	7.69	6.97	9.37	7.00	225.18	604.17	21750
	$U_{19} - L_{20}$	6.70	7.51	9.37	6.80	7.53	7.48	7.74	9.16	7.70	241.28	610.88	21992
	$U_{20} - L_{21}$	5.85	6.27	7.96	5.84	6.27	9.06	6.59	7.35	10.07	210.39	948.01	34128
	$U_{21} - L_{22}$	8.80	8.92	12.32	10.57	10.88	12.85	11.64	10.16	14.75	316.97	1596.26	57466
	$U_{22} - L_{22}$	7.61	8.85	10.49	9.26	10.96	13.85	10.95	11.82	14.99	274.08	1492.55	53732
	$U_{24} - L_{23}$	5.25	7.57	8.48	6.19	8.14	8.48	6.82	8.10	6.33	188.89	1012.19	36439
	$U_{25} - L_{24}$	6.58	8.26	8.92	6.77	8.26	8.96	6.98	9.33	9.07	236.99	641.78	23104
	$U_{26} - L_{25}$	6.57	7.73	6.53	6.51	10.00	7.21	6.55	7.73	6.53	234.32	571.35	20568
	$U_{27} - L_{26}$	6.58	7.41	5.62	6.88	7.97	6.32	6.54	7.41	5.81	202.37	590.44	21256
	$U_{28} - L_{27}$	7.11	6.17	5.86	7.11	7.54	6.55	7.26	7.14	5.82	209.53	598.90	21560
	$U_{29} - L_{28}$	6.27	5.78	6.49	6.12	6.93	7.61	6.27	5.78	6.49	207.98	559.98	20159
	$U_{30} - L_{29}$	7.30	6.24	9.75	7.62	7.31	10.84	7.70	6.99	9.60	224.61	894.50	32202
	$U_{32} - L_{31}$	9.80	8.35	5.88	10.03	8.32	5.89	9.79	8.35	6.33	211.59	1052.09	37875
	$U_{31} - L_{32}$	8.17	7.10	4.68	8.13	7.10	4.92	8.63	7.10	4.58	164.87	709.35	25537
	$U_{32} - L_{33}$	7.80	8.20	5.89	7.77	8.15	5.98	8.79	8.90	6.32	212.19	740.37	26653
	$U_{33} - L_{34}$	8.22	8.60	5.87	8.67	9.71	7.25	9.35	10.31	6.77	211.46	714.44	25720
	$U_{34} - L_{35}$	7.57	7.74	6.22	7.69	7.78	6.33	8.68	9.10	6.47	224.08	682.11	24556
	$U_{35} - L_{36}$	6.89	7.17	7.45	6.88	7.17	7.45	7.55	8.28	6.30	226.96	589.60	21226
	$U_{36} - L_{37}$	7.57	7.45	8.58	8.95	8.79	8.18	8.18	8.36	7.43	267.36	784.38	28238
	$U_{38} - L_{37}$	4.60	5.01	6.90	5.36	5.88	9.11	5.71	5.93	8.92	165.47	1262.28	45442
	$U_{39} - L_{38}$	6.67	7.29	10.99	8.50	8.72	16.59	8.53	8.70	17.57	240.27	1330.37	47893
	$U_{40} - L_{39}$	7.02	8.10	7.68	7.57	8.10	8.40	7.68	8.07	10.14	252.55	1073.47	38645
	$U_{41} - L_{40}$	5.99	7.41	7.82	6.03	7.45	7.13	5.97	7.79	7.82	214.87	901.85	32466
	$U_{42} - L_{41}$	6.25	7.25	5.48	6.74	8.40	5.43	6.25	7.56	5.71	195.47	506.88	18248
	$U_{43} - L_{42}$	6.78	8.07	6.71	6.78	8.22	6.73	7.05	8.07	6.71	241.73	560.95	20194
	$U_{44} - L_{43}$	6.98	7.58	7.64	6.98	7.43	7.66	6.98	7.40	7.61	251.11	721.26	25965
Structure 3	$U_0 - L_1$	6.68	7.70	5.64	6.23	7.46	5.47	6.23	6.93	5.54	197.04	548.47	19745
	$U_1 - L_2$	6.81	7.66	4.67	6.81	7.66	5.00	6.81	9.51	5.35	167.98	633.42	22803
	$U_2 - L_3$	6.10	6.75	5.65	6.10	6.79	5.91	7.23	8.24	5.65	203.28	507.55	18272
	$U_3 - L_4$	5.42	6.09	5.25	5.46	6.09	5.39	6.03	7.39	6.35	188.93	879.87	31675
	$U_4 - L_5$	6.88	7.25	9.28	6.88	7.25	9.10	7.96	8.87	9.91	247.76	945.44	34036
	$U_5 - L_6$	8.50	6.83	14.18	9.38	8.78	15.68	8.44	7.10	12.61	245.77	1585.30	57071
	$U_7 - L_6$	5.16	6.72	6.51	6.81	11.87	10.10	6.83	8.16	10.31	185.81	1871.35	67368
	$U_8 - L_7$	5.97	7.31	5.30	6.37	7.37	6.91	6.13	8.62	6.65	190.65	753.79	27136
	$U_9 - L_8$	5.99	8.68	6.93	7.63	10.85	7.28	6.70	10.90	6.93	215.68	838.76	30195
	$U_{10} - L_9$	7.60	10.03	7.38	7.97	12.59	9.17	8.35	12.35	8.31	265.83	705.94	25414
	$U_{11} - L_{10}$	7.35	7.21	8.40	8.21	10.51	9.18	7.78	9.54	8.37	259.55	638.94	23002
	$U_{12} - L_{11}$	7.73	7.34	9.17	7.71	9.64	10.61	7.67	8.02	8.94	264.11	878.37	31621
	$U_{12} - L_{13}$	7.03	6.31	5.27	7.03	6.25	5.06	7.85	6.82	5.44	182.14	737.78	26560
	$U_{13} - L_{14}$	7.25	6.78	4.67	7.59	8.56	4.77	7.25	9.02	5.44	168.20	489.34	17616
	$U_{14} - L_{15}$	6.96	7.32	7.15	6.96	7.27	7.34	7.93	9.50	7.59	250.62	604.17	21750
	$U_{15} - L_{16}$	5.96	6.48	6.10	12.13	33.73	8.23	9.63	9.02	10.07	214.60	1459.47	52541
	$U_{17} - L_{16}$	5.53	5.36	6.29	7.14	7.88	15.29	8.16	8.11	14.92	193.09	2028.74	73035
	$U_{18} - L_{17}$	7.54	7.24	14.48	12.35	14.79	12.63	7.58	7.33	18.75	260.64	1816.05	65378
	$U_{19} - L_{18}$	6.47	7.40	11.28	6.42	10.60	9.40	7.24	13.24	8.35	231.12	1079.94	38878
	$U_{20} - L_{19}$	6.40	7.86	8.21	18.66	12.68	8.95	6.38	12.68	8.54	229.66	470.48	16937

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 2F1

Controlling As-Inspected F

	Operating
Maximum Axial Force	1.85
Maximum Moment (Start)	1.92
Maximum Moment (End)	2.21
	Operating
Maximum Shear Force	56.04

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	7.59	7.00	11.04	7.33	8.96	10.93	7.43	7.00	11.15	251.94	99.88	3596
		U_1 - U_2	3.87	4.99	4.99	4.78	6.53	6.12	3.86	4.99	4.95	138.83	86.24	3105
		U_2 - U_3	4.02	5.66	5.58	4.60	6.91	5.85	4.04	5.62	5.44	144.86	136.57	4916
		U_3 - U_4	5.37	7.25	7.34	6.21	8.81	7.38	5.39	7.25	7.32	193.27	154.65	5567
		U_4 - U_5	5.38	7.12	7.12	5.34	7.12	7.32	8.12	10.64	8.79	192.33	118.97	4283
		U_5 - U_6	7.67	9.58	7.87	7.44	8.72	7.84	12.02	15.08	11.62	267.81	108.70	3913
		U_6 - U_7	7.61	9.87	7.69	7.61	16.33	7.51	8.80	34.97	7.36	265.03	304.78	10972
		U_7 - U_8	7.43	9.30	6.13	7.64	11.60	12.71	17.39	21.12	9.44	220.68	129.29	4654
		U_8 - U_9	7.30	10.52	7.41	23.95	25.85	10.40	20.83	13.81	8.81	262.72	72.91	2625
		U_9 - U_{10}	8.74	12.38	11.17	21.95	20.87	20.91	8.99	12.70	11.17	314.73	149.59	5385
		U_{10} - U_{11}	5.95	6.62	5.59	11.23	8.48	9.56	5.95	6.67	5.59	201.15	85.56	3080
		U_{11} - U_{12}	4.49	6.20	4.01	5.37	8.00	4.88	4.52	6.20	4.01	144.28	141.99	5112
		U_{12} - U_{13}	5.07	6.67	4.35	6.03	8.05	4.63	4.80	6.62	4.35	156.66	436.72	15722
		U_{13} - U_{14}	4.21	6.09	4.24	5.93	7.20	4.75	4.20	6.08	4.27	151.28	260.82	9389
		U_{14} - U_{15}	4.12	5.93	4.05	4.12	5.94	4.06	5.07	7.66	5.26	145.68	434.19	15631
		U_{15} - U_{16}	4.36	6.06	4.86	4.36	6.48	4.84	5.02	8.48	5.61	156.79	426.71	15361
		U_{16} - U_{17}	5.05	6.75	4.93	5.05	6.56	5.15	7.26	8.87	6.64	177.57	396.55	14276
		U_{17} - U_{18}	5.04	5.42	4.90	4.72	5.43	5.09	6.09	6.44	5.67	170.07	306.30	11027
		U_{18} - U_{19}	5.13	6.00	4.76	4.87	5.51	4.71	7.50	9.28	5.96	169.51	144.34	5196
		U_{19} - U_{20}	11.97	13.72	13.74	11.58	12.51	13.95	13.63	16.31	14.67	416.74	78.73	2834
	Structure 2	U_0 - U_1	12.88	10.60	13.96	12.44	15.88	18.12	12.00	10.53	13.95	379.04	113.23	4076
		U_1 - U_2	6.52	6.01	7.27	7.86	8.11	6.76	6.53	5.93	7.27	213.59	236.11	8500
		U_2 - U_3	5.59	6.44	5.29	8.17	7.82	6.29	5.66	6.42	5.40	190.62	101.30	3647
		U_3 - U_4	4.73	6.58	4.35	5.47	7.22	5.45	4.94	6.46	4.39	156.64	338.73	12194
		U_4 - U_5	5.24	6.23	4.51	5.98	7.42	4.93	5.06	6.18	4.51	162.36	306.77	11044
		U_5 - U_6	5.08	6.92	4.89	5.41	6.91	4.88	5.12	7.37	4.89	175.84	395.27	14230
		U_6 - U_7	4.96	5.75	5.30	5.17	7.01	5.21	4.55	5.75	4.98	163.72	271.81	9785
		U_7 - U_8	4.71	5.93	5.23	4.71	5.93	5.04	5.58	9.16	6.05	169.58	253.94	9142
		U_8 - U_9	5.15	6.66	5.17	5.24	6.66	5.21	6.74	9.28	5.93	185.48	340.13	12245
		U_9 - U_{10}	5.39	7.12	6.47	5.40	7.14	6.62	7.54	10.34	9.40	194.17	120.07	4322
		U_{10} - U_{11}	7.40	9.71	11.05	7.40	9.69	10.56	9.33	16.65	11.86	266.57	138.92	5001
		U_{11} - U_{12}	9.99	12.12	8.49	9.99	12.21	8.57	22.32	27.22	37.94	305.54	128.34	4620
		U_{12} - U_{13}	10.78	13.12	10.90	10.73	29.09	10.67	12.05	21.46	17.41	384.12	443.31	15959
		U_{13} - U_{14}	15.42	15.61	6.94	12.13	14.95	14.52	23.93	29.75	10.16	249.83	168.48	6065
		U_{14} - U_{15}	10.33	11.87	7.64	24.34	29.39	9.57	23.60	15.30	8.73	275.20	149.76	5391
		U_{15} - U_{16}	11.98	14.36	10.81	16.38	17.27	16.62	11.99	15.94	11.61	389.07	467.49	16830
		U_{16} - U_{17}	11.21	13.08	10.19	31.91	32.83	28.71	11.00	13.87	10.29	366.90	146.80	5285
		U_{17} - U_{18}	7.81	11.83	8.80	17.05	16.00	11.96	7.68	12.21	8.73	274.00	91.98	3311
		U_{18} - U_{19}	10.01	14.40	10.52	9.61	12.97	14.30	7.81	9.74	10.55	281.27	108.15	3893
		U_{19} - U_{20}	6.32	7.92	6.36	7.35	10.10	9.18	6.34	7.96	6.36	227.64	155.36	5593
		U_{20} - U_{21}	6.01	7.84	6.31	7.67	8.33	8.81	6.01	7.85	6.33	216.36	202.61	7294
		U_{21} - U_{22}	5.10	6.98	5.43	5.60	7.74	6.49	5.10	6.98	5.46	183.61	225.94	8134
		U_{22} - U_{23}	5.02	6.81	5.58	5.02	6.74	5.58	6.01	10.09	6.59	180.64	251.86	9067
		U_{23} - U_{24}	6.07	6.90	6.74	6.08	7.45	6.66	7.46	9.72	10.76	218.64	222.64	8015
		U_{24} - U_{25}	5.70	6.99	7.75	5.72	6.99	10.54	7.40	8.79	10.26	205.21	146.36	5269
		U_{25} - U_{26}	7.06	8.71	11.53	7.06	8.70	11.17	11.82	12.14	18.23	254.05	114.40	4118
		U_{26} - U_{27}	9.02	12.46	8.77	9.03	12.19	8.94	14.58	19.15	28.77	315.61	112.78	4060
		U_{27} - U_{28}	11.07	13.95	11.36	11.00	14.14	12.22	27.62	32.90	21.84	395.85	163.42	5883
		U_{28} - U_{29}	12.65	14.96	11.57	12.66	32.87	24.19	19.10	20.79	12.37	416.58	438.05	15770
		U_{29} - U_{30}	17.74	15.03	6.91	12.95	16.77	23.23	25.50	24.57	9.41	248.78	162.88	5864
		U_{30} - U_{31}	14.76	12.74	7.69	35.35	17.57	11.16	26.61	15.77	8.89	277.01	182.58	6573
		U_{31} - U_{32}	11.74	12.38	9.98	18.55	14.78	10.43	11.78	14.23	10.35	359.27	429.29	15454
		U_{32} - U_{33}	9.19	11.34	9.65	19.27	20.60	28.93	9.20	12.44	9.73	330.96	101.08	3639
		U_{33} - U_{34}	9.13	10.92	8.94	10.92	13.49	11.25	9.12	10.99	8.95	321.83	146.23	5264
		U_{34} - U_{35}	7.43	7.70	5.84	9.18	11.21	6.33	7.42	7.70	5.83	209.98	108.75	3915
		U_{35} - U_{36}	6.17	7.63	4.93	8.59	8.54	5.57	6.17	7.61	4.94	177.52	244.43	8800
		U_{36} - U_{37}	5.83	6.65	4.59	6.83	8.69	5.26	5.80	6.65	4.58	165.03	241.83	8706
		U_{37} - U_{38}	5.69	6.37	4.59	5.68	7.33	4.60	6.86	9.76	5.04	165.33	331.31	11927
		U_{38} - U_{39}	6.55	7.43	5.15	6.48	7.38	5.15	7.31	8.35	5.23	185.28	249.62	8986
		U_{39} - U_{40}	5.55	5.95	4.88	5.57	6.07	4.89	6.94	7.78	6.82	175.56	392.16	14118
		U_{40} - U_{41}	5.58	5.95	5.25	5.58	5.89	5.14	6.76	8.18	6.13	185.14	323.15	11634
		U_{41} - U_{42}	6.48	6.79	5.87	6.54	6.53	5.82	8.79	9.01	6.13	209.52	131.40	4730
		U_{42} - U_{43}	6.94	7.02	6.04	6.62	6.71	6.42	11.85	14.40	8.27	217.50	260.08	9363
		U_{43} - U_{44}	11.58	12.02	12.89	11.74	11.00	12.67	13.76	14.76	15.57	395.99	68.81	2477
	Structure 3	U_0 - U_1	12.00	12.47	17.00	12.11	14.07	18.28	12.88	12.47	16.97	432.14	109.18	3930
		U_1 - U_2	5.76	5.49	4.59	5.97	6.01	5.61	5.94	5.49	4.58	165.03	144.66	5208
		U_2 - U_3	5.44	5.75	4.82	6.69	6.54	5.78	5.45	5.67	4.78	172.08	278.98	10043
		U_3 - U_4	5.17	7.00	5.24	5.93	8.10	6.22	5.24	6.93	5.25	186.11	313.17	11274
		U_4 - U_5	4.91	6.97	4.63	5.35	7.08	4.94	4.97	7.07	4.61	166.01	544.47	19601
		U_5 - U_6	4.74	6.13	4.37	5.66	7.66	4.83	4.88	6.09	4.32	155.55	342.99	12348
		U_6 - U_7	4.80	6.19	4.22	4.79	6.12	4.24	6.09	9.24	4.89	151.76	349.74	12591
		U_7 - U_8	4.52	5.91	4.89	4.52	5.87	5.19	5.89	8.22	6.93	162.56	385.08	13863
		U_8 - U_9	4.36	6.04	4.70	4.36	6.05	4.53	7.66	10.22	6.17	156.80	141.51	5094
		U_9 - U_{10}	5.22	6.61	6.51	5.22	6.59	6.53	9.62	12.78	17.95	187.88	94.98	3419
		U_{10} - U_{11}	9.27	12.47	10.94	9.25	12.71	10.91	19.82	24.15	25.35	333.15	134.60	4846
		U_{11} - U_{12}	9.47	10.95	6.35	9.46	15.03	16.04	27.36	27.35	9.78	228.71	68.37	2461
		U_{12} - U_{13}	8.35	9.24	6.98	20.58	20.51	11.13	8.80	11.36	7.63	251.20	125.02	4501
		U_{13} - U_{14}	8.22	10.25	8.27	8.52	18.81	8.34	8.23	11.32	8.27	295.95	374.95	13498
		U_{14} - U_{15}	8.02	9.96	8.57	14.36	12.33	11.72	8.11	9.36	8.50	288.74	100.11	3604
		U_{15} - U_{16}	5.94	6.77	6.57	6.44	8.31	7.31	5.93	6.77	6.58	213.57	92.83	3342
		U_{16} - U_{17}	5.94	7.14	6.85	5.97	7.15	6.86	7.32	9.48	8.46	213.89	144.78	5212
		U_{17} - U_{18}	4.81	5.69	5.41	4.81	5.64	5.61	5.67	8.84	6.27	173.19	126.07	4539
		U_{18} - U_{19}	4.46	5.47	4.74	4.46	5.14	4.75	9.44	11.85	6.86	160.46	123.41	4443
		U_{19} - U_{20}	7.43	9.07	10.03	7.59	7.57	10.04	9.05	11.40	10.73	267.55	56.04	2018

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 2F1

Controlling As-Inspected F

	Operating
Maximum Axial Force	1.85
Maximum Moment (Start)	1.92
Maximum Moment (End)	2.21
	Operating
Maximum Shear Force	56.04

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	33.01	19.35	37.45	38.76	19.34	21.11	40.01	32.09	23.29	696.25	128.29	4618
		L_1 - L_2	5.27	6.60	6.62	5.82	8.52	8.37	6.07	8.14	8.15	189.73	105.18	3786
		L_2 - L_3	5.15	6.74	8.06	5.16	6.76	7.99	5.88	9.35	7.88	185.29	268.98	9683
		L_3 - L_4	4.94	6.83	6.31	4.91	6.85	6.35	5.69	10.39	8.07	176.81	212.36	7645
		L_4 - L_5	6.98	10.10	5.10	6.02	7.99	4.88	7.60	11.04	5.13	175.69	123.80	4457
		L_5 - L_6	6.69	10.29	4.74	6.41	9.17	4.92	6.91	21.49	5.11	170.58	298.57	10749
		L_6 - L_7	9.05	12.20	6.83	8.62	11.83	6.60	22.28	27.84	14.11	237.76	371.57	13377
		L_7 - L_8	8.38	12.76	5.15	10.37	20.72	7.98	10.14	13.96	6.07	185.36	250.30	9011
		L_8 - L_9	9.85	12.67	3.69	12.76	15.45	5.55	11.49	21.73	6.52	132.67	302.85	10903
		L_9 - L_{10}	11.42	15.85	8.69	30.09	35.82	15.56	11.12	17.85	10.78	312.98	480.09	17283
		L_{10} - L_{11}	8.00	12.11	7.07	7.99	12.93	9.34	7.56	11.91	8.61	254.60	165.13	5945
		L_{11} - L_{12}	6.31	7.17	7.15	7.42	8.34	8.25	7.89	9.74	7.83	227.19	183.60	6610
		L_{12} - L_{13}	7.06	8.16	7.79	7.09	8.71	9.28	7.61	8.53	7.69	254.13	544.33	19596
		L_{13} - L_{14}	6.53	7.73	5.57	5.99	7.91	6.18	7.05	8.75	6.23	200.40	234.79	8453
		L_{14} - L_{15}	7.18	8.77	6.93	6.60	8.63	7.07	7.17	8.39	9.33	237.46	420.80	15149
		L_{15} - L_{16}	8.33	9.74	11.19	8.92	10.35	9.21	8.51	9.50	12.14	299.90	764.16	27510
		L_{16} - L_{17}	8.33	8.54	11.40	7.85	8.60	12.27	8.28	9.48	11.91	282.48	358.40	12902
		L_{17} - L_{18}	10.47	10.09	14.77	9.72	9.17	13.90	10.56	9.98	16.36	330.09	315.03	11341
		L_{18} - L_{19}	12.36	8.91	11.77	11.24	8.35	14.11	11.45	9.51	14.72	300.71	125.52	4519
		L_{19} - L_{20}	10.13	30.29	11.91	16.06	28.55	13.89	15.14	18.50	15.47	364.75	147.23	5300
	Structure 2	L_2 - L_1	43.39	30.85	26.41	36.69	30.27	25.79	39.75	40.14	27.03	928.44	189.27	6814
		L_1 - L_2	10.58	8.96	10.29	12.13	13.26	16.03	12.22	10.68	13.30	322.41	195.63	7043
		L_2 - L_3	9.30	9.97	10.58	10.64	10.53	13.20	9.29	10.04	10.79	334.61	283.67	10213
		L_3 - L_4	7.46	9.19	9.10	9.46	11.88	9.69	7.50	9.53	9.10	268.69	406.65	14639
		L_4 - L_5	8.88	10.41	9.57	9.64	11.73	8.03	9.12	10.81	9.57	289.06	623.54	22447
		L_5 - L_6	8.03	9.70	7.05	8.47	10.72	7.28	7.94	9.80	7.76	253.83	461.09	16599
		L_6 - L_7	7.21	9.63	7.22	7.21	9.63	7.22	8.38	11.34	8.57	259.48	631.81	22745
		L_7 - L_8	7.13	9.58	7.53	7.13	9.23	7.00	7.92	9.20	7.78	251.89	324.40	11679
		L_8 - L_9	7.85	10.95	8.58	7.79	10.19	9.22	7.77	10.95	9.55	279.88	336.35	12108
		L_9 - L_{10}	9.97	12.94	10.21	9.37	12.26	9.03	9.96	12.21	13.73	325.17	259.51	9342
		L_{10} - L_{11}	7.96	11.73	6.02	7.65	10.03	5.76	15.30	18.71	25.46	207.23	200.70	7225
		L_{11} - L_{12}	10.50	13.59	5.61	9.95	12.09	6.42	20.99	40.47	5.83	201.95	404.88	14576
		L_{12} - L_{13}	15.90	16.57	7.30	11.57	14.09	9.21	12.11	20.15	10.46	262.65	620.07	22322
		L_{13} - L_{14}	10.42	14.74	6.01	15.81	21.11	9.38	14.75	16.91	8.64	216.30	212.51	7650
		L_{14} - L_{15}	13.43	13.38	3.66	20.31	17.96	7.00	13.40	18.58	5.31	131.80	231.85	8346
		L_{15} - L_{16}	13.00	18.30	7.71	12.68	16.16	12.59	11.89	18.69	11.67	277.69	629.41	22659
		L_{16} - L_{17}	10.83	14.82	6.02	36.73	42.42	8.44	10.94	15.21	9.99	216.81	412.10	14836
		L_{17} - L_{18}	8.18	10.98	5.55	26.73	26.57	15.72	7.55	10.55	7.06	199.76	214.87	7735
		L_{18} - L_{19}	7.36	10.59	6.95	7.94	18.00	8.33	7.67	10.44	8.14	250.10	220.88	7952
		L_{19} - L_{20}	9.82	13.46	8.57	10.70	12.67	11.34	9.43	11.67	10.31	308.39	228.90	8240
		L_{20} - L_{21}	10.81	11.36	11.57	10.78	12.78	12.61	10.07	11.27	12.22	362.34	271.55	9776
		L_{21} - L_{22}	7.22	9.33	9.04	8.77	9.70	9.29	8.31	10.15	10.65	260.09	201.37	7249
		L_{22} - L_{23}	7.81	9.01	9.48	8.00	9.49	9.09	8.72	8.98	9.38	281.12	221.73	7982
		L_{23} - L_{24}	9.79	11.12	13.50	9.94	10.88	13.66	9.82	10.99	16.68	352.49	345.54	12439
		L_{24} - L_{25}	13.67	11.20	16.13	10.29	10.72	13.39	10.01	13.05	13.25	360.50	187.43	6748
		L_{25} - L_{26}	11.90	11.95	7.63	10.36	10.87	10.91	16.65	16.23	7.97	274.68	220.68	7944
		L_{26} - L_{27}	9.91	13.21	7.05	11.30	10.69	10.72	19.58	28.13	15.68	253.78	227.68	8196
		L_{27} - L_{28}	10.59	17.02	7.49	15.47	14.68	10.69	11.16	32.63	9.24	269.82	392.16	14118
		L_{28} - L_{29}	11.46	20.21	9.26	18.36	16.25	10.95	9.30	18.83	9.16	329.87	687.92	24765
		L_{29} - L_{30}	9.50	13.64	6.50	31.45	24.31	8.61	13.98	14.80	9.52	234.09	213.15	7673
		L_{30} - L_{31}	15.03	14.38	2.43	27.91	17.11	5.48	17.63	19.62	3.74	87.34	248.28	8938
		L_{31} - L_{32}	19.56	19.31	6.59	15.09	18.12	12.35	22.59	15.89	8.19	237.18	622.10	22396
		L_{32} - L_{33}	15.22	13.78	4.79	20.40	43.90	6.93	13.82	13.30	7.49	172.36	365.00	13140
		L_{33} - L_{34}	10.95	10.77	5.85	20.03	22.45	26.21	10.77	10.41	8.61	210.46	239.50	8622
		L_{34} - L_{35}	11.66	12.71	14.50	15.76	15.03	17.15	12.26	15.08	15.73	419.67	253.88	9140
		L_{35} - L_{36}	9.25	10.66	10.64	9.43	12.00	11.98	9.30	10.66	12.81	333.07	309.81	11153
		L_{36} - L_{37}	7.82	9.66	10.69	9.77	10.62	10.66	8.73	10.60	9.78	281.43	154.82	5573
		L_{37} - L_{38}	8.35	9.44	9.69	9.41	11.10	8.17	8.44	9.34	8.03	289.18	443.88	15980
		L_{38} - L_{39}	8.45	10.07	10.69	8.54	10.07	9.02	8.38	9.99	9.74	301.65	594.07	21386
		L_{39} - L_{40}	8.61	10.09	12.14	8.71	10.09	10.01	8.59	10.03	13.62	309.17	682.84	24582
		L_{40} - L_{41}	8.23	9.39	11.80	8.60	9.75	11.96	9.67	10.44	12.19	296.15	352.27	12682
		L_{41} - L_{42}	9.36	9.87	14.55	9.36	9.77	15.25	10.81	11.22	19.23	337.01	311.64	11219
		L_{42} - L_{43}	9.08	9.51	17.40	9.08	9.58	17.50	11.24	11.30	18.25	326.73	79.83	2874
		L_{43} - L_{44}	36.46	57.96	32.43	23.18	31.76	24.45	30.98	31.75	40.98	834.56	165.78	5968
	Structure 3	L_2 - L_1	20.34	22.16	8.52	22.41	28.82	14.30	22.60	31.23	14.21	306.82	156.84	5646
		L_1 - L_2	14.09	7.52	11.02	16.23	12.78	15.47	13.88	8.93	14.16	270.73	164.65	5927
		L_2 - L_3	10.78	8.79	10.98	13.77	9.60	13.87	10.66	10.47	10.98	316.59	349.97	12599
		L_3 - L_4	8.23	8.90	9.74	8.84	10.33	11.16	8.25	8.81	11.23	296.29	357.34	12864
		L_4 - L_5	8.56	10.30	11.61	8.56	10.29	11.49	10.07	11.65	11.25	307.98	811.24	29204
		L_5 - L_6	7.23	9.22	6.71	6.79	8.31	7.64	7.28	10.29	8.24	241.63	378.62	13630
		L_6 - L_7	6.55	8.76	6.74	6.08	7.90	7.21	6.25	8.56	7.16	218.82	281.18	10123
		L_7 - L_8	6.73	8.61	8.11	6.45	8.03	8.13	6.77	8.40	9.29	232.04	436.57	15716
		L_8 - L_9	5.57	7.86	9.95	6.41	8.01	10.81	5.87	7.38	10.45	200.60	182.94	6586
		L_9 - L_{10}	9.80	12.94	7.03	8.88	11.23	7.23	9.81	13.06	7.49	253.21	176.87	6367
		L_{10} - L_{11}	13.82	16.34	10.38	12.99	14.96	10.87	19.97	34.41	13.12	373.80	406.58	14637
		L_{11} - L_{12}	8.72	12.99	6.49	14.22	18.33	11.71	10.06	15.45	7.72	233.68	267.62	9634
		L_{12} - L_{13}	9.33	12.44	4.55	14.37	14.47	6.75	13.25	15.90	4.54	163.59	273.67	9852
		L_{13} - L_{14}	8.01	11.65	6.61	29.49	31.82	14.07	8.74	13.56	7.88	237.93	461.10	16600
		L_{14} - L_{15}	6.57	9.99	4.80	6.58	23.63	6.45	6.49	10.54	5.88	172.66	291.36	10489
		L_{15} - L_{16}	5.50	8.80	4.93	8.75	10.28	11.21	5.33	8.25	6.09	177.42	116.05	4178
		L_{16} - L_{17}	5.30	6.64	6.51	6.11	7.79	6.61	5.32	6.65	6.01	190.76	244.14	8789
		L_{17} - L_{18}	5.75	7.08	6.63	6.26	7.89	6.70	6.28	6.44	7.07	206.90	269.77	9712
		L_{18} - L_{19}	5.63	6.65	6.91	5.63	6.61	6.89	6.39	7.06	9.97	202.61	120.74	4347
		L_{19} - L_{20}	44.59	31.71	55.38	20.24	22.33	48.85	23.92	29.86	97.10	728.66	108.35	3901

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Controlling As-Inspected F

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Maximum Axial Force	1.85
Maximum Moment (Start)	1.92
Maximum Moment (End)	2.21
	Operating
Maximum Shear Force	56.04

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	2.60	2.91	2.95	2.73	3.00	2.95	2.74	2.81	3.01	93.49	134.42	4839
	U_1 - L_1	5.62	6.29	4.78	6.04	7.02	5.63	6.01	7.04	6.06	171.90	129.18	4650
	U_2 - L_2	7.66	9.18	8.02	8.60	10.31	9.85	8.62	10.31	10.21	275.86	166.64	5999
	U_3 - L_3	12.81	12.15	7.56	15.57	14.87	12.99	13.83	14.87	15.96	272.23	259.91	9357
	U_4 - L_4	7.42	7.07	6.74	11.03	12.97	17.81	11.01	16.55	13.41	242.52	205.03	7381
	U_5 - L_5	4.86	5.83	3.72	4.94	6.67	4.56	4.95	5.83	3.71	133.62	208.85	7519
	U_6 - L_6	4.12	5.98	3.51	4.13	6.21	4.38	4.18	6.24	3.65	126.41	180.90	6512
	U_7 - L_7	3.01	4.15	2.56	3.05	4.16	3.79	3.00	4.15	2.72	92.14	220.90	7952
	U_8 - L_8	7.38	9.01	6.59	8.24	9.90	8.61	8.23	9.90	8.77	237.23	414.14	14909
	U_9 - L_9	5.40	5.39	2.65	6.02	6.35	2.72	5.39	5.39	4.27	95.44	251.86	9067
	U_{10} - L_{10}	6.75	8.36	4.78	6.55	9.46	4.56	6.61	9.46	6.71	164.30	373.68	13452
	U_{11} - L_{11}	6.45	7.77	6.15	6.85	8.79	6.18	6.85	8.75	6.46	221.34	229.33	8256
	U_{12} - L_{12}	6.16	7.36	4.01	6.53	8.05	4.27	6.55	8.05	6.87	144.39	230.77	8308
	U_{13} - L_{13}	4.82	5.68	4.33	4.97	6.32	3.49	5.01	6.32	6.62	125.71	227.88	8204
	U_{14} - L_{14}	6.61	7.26	7.36	16.07	23.97	12.47	18.19	23.97	26.32	238.11	362.08	13035
	U_{15} - L_{15}	7.43	8.76	12.92	8.46	8.64	12.96	8.46	8.64	12.96	267.49	292.33	10524
	U_{16} - L_{16}	5.34	6.95	5.03	5.35	6.89	6.63	5.37	6.89	4.07	146.52	282.41	10167
	U_{17} - L_{17}	4.16	5.61	2.76	4.38	6.01	4.00	4.42	6.01	2.70	97.14	324.84	11694
	U_{18} - L_{18}	4.55	6.10	3.45	5.03	6.31	5.74	4.60	6.31	3.45	124.13	239.03	8605
	U_{19} - L_{19}	5.31	6.93	4.17	5.28	6.93	6.88	5.23	6.92	4.21	150.03	323.60	11649
	U_{20} - L_{20}	3.89	4.48	3.66	3.64	4.47	3.50	3.62	4.48	3.69	126.11	538.76	19396
Structure 2	U_0 - L_0	4.22	4.53	3.43	4.22	5.74	3.43	5.56	5.20	4.37	123.39	549.91	19797
	U_1 - L_1	7.46	6.33	4.01	7.91	8.54	4.23	7.37	8.54	5.78	144.46	433.80	15617
	U_2 - L_2	6.41	6.94	3.91	6.56	8.27	3.80	6.65	7.68	5.47	136.78	271.35	9769
	U_3 - L_3	5.04	6.31	3.18	5.70	7.06	3.02	5.66	7.06	4.34	108.63	432.59	15573
	U_4 - L_4	5.76	6.59	5.10	6.10	7.13	8.01	6.13	7.13	7.93	183.56	309.67	11148
	U_5 - L_5	6.93	8.44	9.50	7.72	9.45	14.88	7.72	9.45	14.87	249.62	331.28	11926
	U_6 - L_6	7.50	10.22	7.94	10.19	11.17	14.95	10.19	11.15	14.95	270.17	396.67	14280
	U_7 - L_7	6.27	7.10	7.25	21.37	30.89	17.75	21.24	31.12	14.04	225.65	495.82	17849
	U_8 - L_8	6.01	6.96	4.38	6.05	6.97	6.28	6.06	6.97	3.98	143.36	224.41	8079
	U_9 - L_9	7.83	8.55	5.54	7.71	9.39	7.76	7.72	8.49	5.09	183.19	264.72	9170
	U_{10} - L_{10}	7.72	9.11	4.91	8.20	9.38	7.02	8.25	9.38	4.88	175.61	376.63	13559
	U_{11} - L_{11}	6.90	8.21	4.00	6.86	8.20	5.76	6.94	8.20	4.00	144.15	453.03	16309
	U_{12} - L_{12}	7.29	8.23	3.92	7.32	8.78	5.47	7.31	8.18	3.88	139.72	593.23	21356
	U_{13} - L_{13}	5.85	6.19	3.08	5.86	6.17	5.27	5.84	6.21	3.33	110.79	627.55	22592
	U_{14} - L_{14}	8.70	9.33	7.26	11.74	11.61	10.03	11.68	11.61	8.79	261.21	845.13	30425
	U_{15} - L_{15}	7.94	7.76	4.07	9.52	8.18	4.00	9.53	8.18	6.09	144.01	527.64	18995
	U_{16} - L_{16}	7.94	7.85	4.28	8.03	8.67	4.64	8.04	8.68	5.79	154.14	478.45	17224
	U_{17} - L_{17}	7.00	7.05	4.52	7.38	7.96	4.34	7.46	7.99	6.65	156.38	334.53	12043
	U_{18} - L_{18}	6.52	7.24	4.53	6.81	7.88	4.24	6.80	7.88	6.53	152.75	264.02	9505
	U_{19} - L_{19}	5.92	6.63	4.19	6.33	7.27	4.71	6.30	7.27	6.23	150.93	344.96	12419
	U_{20} - L_{20}	5.85	6.40	4.60	6.03	7.25	4.36	6.07	7.25	6.38	156.83	302.45	10888
	U_{21} - L_{21}	6.10	6.86	7.39	6.51	7.53	6.55	6.54	7.53	9.56	219.54	306.43	11031
	U_{22} - L_{22}	6.74	8.06	6.81	26.22	28.98	23.59	26.23	28.98	18.80	242.52	484.25	17433
	U_{23} - L_{23}	6.66	7.88	8.63	6.67	7.85	7.91	6.71	7.85	4.89	176.20	302.36	10885
	U_{24} - L_{24}	6.23	6.80	3.76	5.92	7.80	5.37	5.89	7.47	3.69	132.90	312.78	11260
	U_{25} - L_{25}	5.63	6.49	3.90	5.57	6.71	5.93	5.62	6.71	3.90	140.46	300.67	10824
	U_{26} - L_{26}	6.40	7.32	4.45	6.40	7.25	6.72	6.41	7.25	3.93	141.40	227.50	8190
	U_{27} - L_{27}	7.08	6.99	4.26	7.03	7.62	6.96	7.03	6.99	4.26	153.47	293.74	10575
	U_{28} - L_{28}	7.10	7.21	4.66	7.72	7.58	5.87	7.14	7.22	4.82	167.94	383.25	13797
	U_{29} - L_{29}	8.03	7.56	5.08	7.98	7.61	7.99	8.02	7.60	5.48	182.82	418.79	15077
	U_{30} - L_{30}	8.82	9.73	6.55	14.44	11.81	8.17	14.48	11.81	8.44	235.82	817.83	29442
	U_{31} - L_{31}	8.66	7.26	2.44	8.99	8.26	2.53	8.59	7.26	4.78	88.02	827.85	29802
	U_{32} - L_{32}	8.67	8.67	4.04	8.63	9.69	3.95	8.69	9.77	5.95	142.37	701.55	25256
	U_{33} - L_{33}	7.64	8.60	4.34	8.74	9.67	4.26	8.78	9.12	6.63	153.21	531.95	19150
	U_{34} - L_{34}	9.25	9.69	4.39	9.84	10.65	5.41	9.85	10.64	7.32	158.10	420.19	15127
	U_{35} - L_{35}	8.28	8.64	5.70	8.61	10.03	5.82	8.61	9.57	8.09	205.08	255.08	9183
	U_{36} - L_{36}	6.57	7.01	4.74	6.54	7.26	4.68	6.54	7.26	6.63	168.39	229.36	8257
	U_{37} - L_{37}	6.51	6.98	6.30	20.20	28.75	15.35	20.09	28.85	27.86	226.76	428.12	15412
	U_{38} - L_{38}	8.37	8.32	10.70	8.40	8.30	15.92	9.09	8.30	15.92	298.79	377.34	13584
	U_{39} - L_{39}	8.73	9.07	11.29	8.50	10.39	13.44	8.48	10.39	11.34	305.28	373.95	13462
	U_{40} - L_{40}	5.90	6.94	7.97	6.38	7.08	7.78	6.41	7.08	7.97	212.31	296.29	10667
	U_{41} - L_{41}	5.80	6.77	3.39	5.80	6.82	4.88	5.81	6.81	2.89	103.89	374.01	13464
	U_{42} - L_{42}	6.67	7.07	4.15	6.51	7.64	6.42	6.49	7.64	4.15	149.40	251.72	9062
	U_{43} - L_{43}	6.77	7.30	4.69	7.29	7.27	6.77	6.76	7.27	4.22	151.91	337.69	12157
	U_{44} - L_{44}	5.82	5.56	4.82	5.41	5.45	5.52	5.42	5.38	4.82	173.39	532.84	19182
Structure 3	U_0 - L_0	4.36	4.15	3.02	4.36	5.66	3.01	4.37	5.05	3.01	108.35	492.66	17736
	U_1 - L_1	6.33	6.48	3.69	7.26	8.67	3.39	7.25	7.72	5.30	121.96	429.12	15448
	U_2 - L_2	5.79	6.56	3.27	6.41	7.48	3.17	6.39	7.48	4.61	114.28	275.02	9901
	U_3 - L_3	4.78	5.59	2.71	5.18	6.84	2.61	5.17	6.82	3.84	93.78	353.42	12723
	U_4 - L_4	5.42	6.72	4.73	5.92	7.40	4.54	5.92	7.40	6.12	163.34	311.35	11209
	U_5 - L_5	7.42	8.45	6.67	8.22	9.44	11.25	8.21	9.44	11.25	240.03	286.76	10324
	U_6 - L_6	7.43	6.93	6.94	25.10	21.33	23.15	25.28	23.24	13.60	249.40	396.97	14291
	U_7 - L_7	5.74	5.87	3.22	5.59	5.86	5.30	5.58	6.79	3.26	115.85	244.90	8816
	U_8 - L_8	6.22	7.31	3.78	6.18	7.35	5.83	6.20	7.35	3.78	136.12	210.10	7563
	U_9 - L_9	6.73	8.57	6.22	6.74	8.34	6.03	6.75	8.34	5.49	197.71	200.67	7224
	U_{10} - L_{10}	6.92	8.49	4.17	7.48	9.27	5.97	7.53	8.50	4.24	150.06	320.23	11528
	U_{11} - L_{11}	4.98	5.19	2.66	4.95	5.15	4.01	4.96	5.15	2.65	95.49	188.32	6779
	U_{12} - L_{12}	8.20	9.29	6.41	10.52	9.55	9.95	10.40	10.78	7.85	230.70	429.26	15453
	U_{13} - L_{13}	4.97	4.19	1.85	5.44	4.55	1.92	5.43	4.55	3.19	66.78	289.71	10430
	U_{14} - L_{14}	6.01	6.24	3.31	6.39	7.50	3.64	6.25	7.50	4.80	119.16	226.99	8172
	U_{15} - L_{15}	5.35	5.69	4.08	6.03	7.35	3.91	6.08	7.34	4.94	140.62	219.43	7899
	U_{16} - L_{16}	5.95	6.06	6.98	13.47	17.39	8.56	13.56	17.34	23.93	214.12	207.52	7471
	U_{17} - L_{17}	10.87	9.07	11.64	10.86	8.83	21.68	10.86	8.83	17.70	317.85	245.67	8844
	U_{18} - L_{18}	8.12	9.98	12.55	8.12	9.63	10.55	8.13	9.63	9.39	292.19	161.89	5828
	U_{19} - L_{19}	5.34	6.34	5.41	5.63	6.31	6.37	5.62	6.31	5.40	192.09	112.24	4041
	U_{20} - L_{20}	3.22	3.10	2.62	2.82	3.15	4.19	3.15	3.15	2.21	79.69	137.48	4949

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 2F1

Controlling As-Inspected F

	Operating
Maximum Axial Force	1.85
Maximum Moment (Start)	1.92
Maximum Moment (End)	2.21
	Operating
Maximum Shear Force	56.04

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	$U_0 - L_1$	6.85	7.60	7.29	6.95	8.55	7.27	7.50	8.57	6.92	246.55	317.72	11438
	$U_1 - L_2$	6.17	7.68	9.74	7.34	7.67	7.80	6.80	8.37	6.88	222.21	1273.54	45847
	$U_2 - L_3$	10.48	8.55	9.86	11.19	17.53	11.53	11.54	8.59	11.87	307.95	1796.56	64676
	$U_3 - L_4$	4.76	5.23	6.49	14.75	8.36	8.10	4.74	5.59	6.39	170.79	2156.57	77636
	$U_3 - L_4$	4.98	7.66	8.19	5.74	12.29	10.11	7.13	10.48	16.35	179.11	1593.82	57378
	$U_4 - L_5$	5.59	7.65	6.48	7.03	9.32	8.83	5.65	8.76	6.67	201.41	594.61	21406
	$U_5 - L_6$	4.56	6.00	6.63	5.20	6.92	7.30	4.70	6.06	6.63	164.11	415.20	14947
	$U_6 - L_7$	4.97	8.09	7.67	4.89	6.34	9.14	5.10	6.09	7.90	176.00	653.36	23521
	$U_6 - L_8$	8.91	8.72	7.02	9.12	9.29	7.34	8.92	8.72	7.05	252.54	1024.71	36890
	$U_8 - L_{10}$	8.39	8.78	6.91	10.07	13.80	7.20	9.83	10.51	7.49	248.65	727.85	26203
	$U_{10} - L_{11}$	7.55	9.48	7.24	7.60	9.95	7.99	8.46	11.25	6.82	245.61	760.74	27386
	$U_{11} - L_{12}$	7.22	8.48	6.43	7.45	9.21	6.53	7.73	10.24	6.02	216.70	865.74	31167
	$U_{12} - L_{13}$	5.82	6.61	6.34	5.91	6.61	6.73	6.37	8.12	6.78	209.59	689.77	24832
	$U_{13} - L_{14}$	5.16	5.59	6.89	5.14	6.35	7.87	6.63	7.27	9.69	184.96	1583.92	57021
	$U_{15} - L_{14}$	6.81	6.82	9.72	7.45	8.30	16.91	8.86	8.33	16.49	245.29	1490.95	53674
	$U_{15} - L_{15}$	5.45	7.86	10.63	6.19	7.84	9.02	7.05	8.02	10.61	196.18	971.40	34970
	$U_{17} - L_{16}$	4.58	6.51	7.40	4.90	7.08	5.95	4.60	6.71	5.12	164.86	851.73	30662
	$U_{18} - L_{17}$	5.07	6.51	5.29	5.07	8.70	5.88	5.19	7.12	5.29	182.63	499.25	17973
	$U_{19} - L_{19}$	4.78	7.04	5.82	4.71	7.94	5.82	4.77	6.94	5.82	169.48	530.57	19101
	$U_{20} - L_{19}$	5.34	7.28	6.23	5.19	7.49	6.57	5.17	6.80	6.24	186.09	716.51	25794
Structure 2	$U_0 - L_1$	7.93	7.81	5.81	7.73	9.09	5.72	7.59	7.84	5.72	205.91	629.25	22653
	$U_1 - L_2$	7.35	7.91	5.55	7.37	7.91	5.44	8.14	9.44	6.07	195.94	624.97	22499
	$U_2 - L_3$	5.89	6.95	5.22	5.89	6.95	5.22	6.71	7.59	5.97	187.94	518.76	18675
	$U_3 - L_4$	6.22	6.92	6.74	7.20	6.92	6.51	7.01	7.96	7.93	223.75	932.73	33578
	$U_4 - L_5$	6.65	7.05	10.54	6.64	7.00	10.34	7.22	8.42	11.07	239.21	973.24	35037
	$U_5 - L_6$	8.69	8.63	12.24	8.57	9.06	15.41	9.49	8.94	14.85	308.65	1197.65	43115
	$U_6 - L_7$	5.85	5.26	6.72	5.84	6.22	7.45	5.83	5.34	6.58	189.43	1540.08	55443
	$U_8 - L_7$	6.16	7.77	8.11	9.14	11.17	7.98	7.46	9.14	10.29	221.71	906.81	32645
	$U_8 - L_8$	5.27	7.56	7.67	6.65	8.15	7.74	6.63	8.09	8.28	189.80	617.83	22242
	$U_{10} - L_9$	6.62	7.91	6.26	6.52	10.26	7.04	6.62	7.88	6.26	225.34	703.32	25319
	$U_{11} - L_{10}$	6.10	8.06	6.24	6.14	10.10	7.19	6.83	8.56	6.32	219.77	673.75	24265
	$U_{12} - L_{11}$	6.21	6.87	5.81	6.61	8.18	6.57	6.21	7.59	5.89	209.15	689.76	24832
	$U_{13} - L_{12}$	5.36	5.00	5.92	5.36	6.18	6.76	5.41	5.92	5.92	179.92	614.14	22109
	$U_{14} - L_{13}$	6.43	6.08	9.54	6.72	6.84	10.40	6.44	6.84	9.45	218.75	876.69	31561
	$U_{14} - L_{15}$	8.18	7.33	5.81	8.13	7.31	5.81	8.13	7.33	5.89	204.86	954.50	34362
	$U_{15} - L_{16}$	7.59	6.71	5.74	7.88	6.51	5.49	7.63	6.71	4.79	172.32	658.91	23721
	$U_{16} - L_{17}$	7.02	7.34	5.98	7.03	7.45	6.52	7.76	7.54	5.98	215.39	634.26	22833
	$U_{17} - L_{18}$	6.07	7.25	7.22	6.01	7.25	7.22	6.99	8.00	5.82	209.65	585.26	21069
	$U_{18} - L_{18}$	6.91	7.79	6.28	7.56	8.78	7.71	6.95	9.37	7.03	226.09	604.17	21750
	$U_{19} - L_{20}$	6.73	7.51	9.33	6.79	7.53	7.44	7.75	9.16	7.61	242.45	610.88	21992
	$U_{20} - L_{21}$	5.86	6.27	7.92	5.84	6.27	9.02	6.57	7.35	10.04	210.39	948.01	34128
	$U_{21} - L_{22}$	8.71	8.92	12.36	10.59	10.88	12.77	11.60	10.18	14.72	313.73	1598.26	57466
	$U_{21} - L_{22}$	7.61	8.86	10.46	9.26	10.90	13.85	10.96	11.82	14.99	274.08	1492.55	53732
	$U_{24} - L_{23}$	5.25	7.57	8.48	6.26	8.14	8.48	6.84	8.10	6.33	189.16	1012.19	36439
	$U_{25} - L_{24}$	6.57	8.26	8.92	6.77	8.26	8.98	6.97	9.29	9.07	236.40	641.78	23104
	$U_{26} - L_{25}$	6.54	7.77	6.53	6.51	10.00	7.21	6.55	7.73	6.53	234.32	571.35	20568
	$U_{27} - L_{26}$	6.58	7.41	5.62	6.92	7.93	6.32	6.54	7.41	5.81	202.37	590.44	21256
	$U_{28} - L_{27}$	7.10	6.15	5.86	7.12	7.53	6.55	7.27	7.14	5.82	209.67	598.90	21560
	$U_{29} - L_{28}$	6.20	5.76	6.49	6.14	6.91	7.60	6.20	5.76	6.49	207.42	559.98	20159
	$U_{30} - L_{29}$	7.25	6.24	9.63	7.65	7.25	10.83	7.64	6.99	9.49	224.61	894.50	32202
	$U_{30} - L_{31}$	9.78	8.35	5.81	9.93	8.25	5.90	9.85	8.35	6.30	209.23	1052.09	37875
	$U_{31} - L_{32}$	7.61	7.04	4.65	7.63	7.04	4.93	7.61	7.04	4.60	165.72	709.35	25537
	$U_{32} - L_{33}$	7.78	8.20	5.79	7.78	8.15	5.98	8.81	8.97	6.29	208.44	740.37	26653
	$U_{33} - L_{34}$	8.31	8.60	5.85	8.77	9.71	7.27	9.36	10.31	6.65	210.64	714.44	25720
	$U_{34} - L_{35}$	7.57	7.73	6.21	7.69	7.78	6.34	8.70	9.10	6.47	223.65	682.11	24556
	$U_{35} - L_{36}$	6.88	7.17	7.46	6.93	7.17	7.45	7.55	8.20	6.30	226.68	589.60	21226
	$U_{36} - L_{37}$	7.62	7.45	8.53	8.94	8.79	8.18	8.18	8.36	7.37	265.40	784.38	28238
	$U_{38} - L_{37}$	4.60	5.01	6.91	5.34	5.88	9.06	5.72	5.98	8.97	165.66	1262.28	45442
	$U_{39} - L_{38}$	6.87	7.28	11.07	8.50	8.70	16.73	8.58	8.74	17.57	240.26	1330.37	47893
	$U_{40} - L_{39}$	7.01	8.08	7.72	7.58	8.10	8.37	7.62	8.07	10.05	252.44	1073.47	38645
	$U_{41} - L_{40}$	5.99	7.41	7.82	5.99	7.45	7.11	6.01	7.79	7.82	215.58	901.85	32466
	$U_{42} - L_{41}$	6.24	7.25	5.48	6.70	8.40	5.43	6.27	7.54	5.71	195.47	506.88	18248
	$U_{43} - L_{42}$	6.78	8.07	6.71	6.78	8.22	6.73	7.05	8.07	6.71	241.73	560.95	20194
	$U_{44} - L_{43}$	6.98	7.56	7.68	6.97	7.43	7.69	6.98	7.40	7.64	250.89	721.26	25965
Structure 3	$U_0 - L_1$	6.68	7.67	5.63	6.19	7.53	5.49	6.19	6.89	5.43	195.49	548.47	19745
	$U_1 - L_2$	6.81	7.69	4.73	6.81	7.69	4.99	6.82	9.55	5.43	170.24	633.42	22803
	$U_2 - L_3$	6.12	6.75	5.65	6.12	6.80	5.91	7.18	8.33	5.65	203.28	507.55	18272
	$U_3 - L_4$	5.43	6.09	5.25	5.45	6.08	5.42	6.04	7.39	6.29	188.93	879.87	31675
	$U_4 - L_5$	6.87	7.25	9.28	6.87	7.25	9.13	7.97	8.87	9.91	247.20	945.44	34036
	$U_5 - L_6$	8.51	6.83	14.26	9.35	8.78	15.69	8.49	7.09	12.64	245.77	1585.30	57071
	$U_7 - L_6$	5.15	6.73	6.54	6.81	11.87	10.15	6.80	8.14	10.19	185.27	1671.35	67368
	$U_8 - L_7$	5.97	7.36	5.36	6.36	7.37	6.91	6.07	8.62	6.63	192.88	753.79	27136
	$U_8 - L_8$	6.01	8.68	6.89	7.64	10.86	7.21	6.67	10.95	6.93	216.33	838.76	30195
	$U_{10} - L_9$	7.60	10.03	7.38	8.03	12.64	9.19	8.35	12.35	8.35	265.83	705.94	25414
	$U_{11} - L_{10}$	7.34	7.19	8.38	8.18	10.51	9.20	7.83	9.46	8.37	258.91	638.94	23002
	$U_{12} - L_{11}$	7.74	7.34	9.17	7.74	9.60	10.60	7.71	8.02	8.92	264.11	878.37	31621
	$U_{12} - L_{13}$	7.00	6.30	5.28	7.03	6.25	5.07	7.80	6.82	5.43	182.43	737.78	26560
	$U_{13} - L_{14}$	7.21	6.78	4.66	7.58	8.60	4.77	7.22	9.01	5.37	167.88	489.34	17616
	$U_{14} - L_{15}$	6.97	7.27	7.20	6.98	7.29	7.30	7.90	9.50	7.60	251.08	604.17	21750
	$U_{15} - L_{16}$	5.96	6.48	6.09	12.17	33.92	8.26	9.60	9.02	10.20	214.72	1459.47	52541
	$U_{17} - L_{16}$	5.59	5.35	6.28	7.16	7.83	15.35	8.19	8.10	15.06	192.51	2028.74	73035
	$U_{18} - L_{17}$	7.54	7.21	14.46	12.31	14.79	12.63	7.58	7.33	18.60	259.65	1816.05	65378
	$U_{19} - L_{18}$	6.46	7.40	11.27	6.40	10.68	9.39	7.21	13.24	8.36	230.41	1079.94	38878
	$U_{20} - L_{19}$	6.38	7.85	8.14	18.66	12.64	8.97	6.41	12.64	8.55	229.58	470.48	16937