



**Washington State Fair Grounds
Tensile Structure Entry Canopy**

PUYALLUP, WA

"PRELIMINARY REACTION LOADS" DATED 14 MARCH 2023

**(115 mph Cat III WIND LRFD)
(Ground Snow = 25 psf)**

(NOT TO BE USED FOR CONSTRUCTION)

BIRDAIR, INC.



**Need final reaction
loading, sealed by
registered engineer,
for construction.**



WASHINGTON STATE FAIR FIELDS
TENSILE MEMBRANE ENTRY STRUCTURE

PUYALLUP, Washington

LOADING CRITERIA - IBC 2018 W/ASCE 7-16 - OPEN STRUCTURE

- A. LOADS ARE CALCULATED PER ASCE 7-16
- B. DESIGN FABRIC PRESTRESS IS 12.5 POUNDS PER LINEAR INCH IN BOTH THE WARP AND FILL DIRECTIONS.
- C. SNOW LOAD FOR THE CANOPY IS 21 PSF UNIFORM, GROUND SNOW IS 25 PSF. SNOW LOAD WAS CALCULATED AS FOLLOWS:

$$P = 0.7 \times C_e \times C_t \times I \times P_g$$

$C_e = 1.0$ (Snow exposure factor - Partially exposed, Cat. B)
 $C_t = 1.2$ (unheated)
 $I = 1.0$
 $P_g = 25 \text{ psf}$ (Ground Snow Load)

$$P = 0.7 \times 1.0 \times 1.2 \times 1.0 \times 25 = 21 \text{ psf Uniform}$$

- D. "LRFD" WIND LOADS FOR THE CANOPY ARE BASED ON A WIND VELOCITY OF 115 MPH.

BUILDING RISK CATEGORY = III
WIND SPEED $V = 115 \text{ MPH}$ (3 Sec Gust, Risk Category III)
MEAN HEIGHT = 35 FEET, EXPOSURE "C"
 $K_z = 1.01$ (35 feet high, exposure C)
 $K_{zt} = 1.0$
 $K_d = 1.0$
 $I = 1.0$
 $q_z = 0.00256 \times K_d \times K_z \times K_{zt} \times I \times V^{2.0}$
 $q_z = 0.00256 \times 1.0 \times 1.01 \times 1.0 \times 1.0 \times 115^{2.0}$
 $q_z = 34.2 \text{ psf}$
 $G_h = 0.85$
 $P = q_z \times G_h \times C_p$ for LRFD Load
 $P = 34.2 \times 0.85 = 29.1 \text{ psf} \times C_p$ (LRFD)
 $P = 0.6 \times (q_z \times G_h \times C_p)$ for ASD Load
 $P = 0.6 \times (34.2 \times 0.85 \times C_p) = 17.4 \text{ psf} \times C_p$ (USE 18 psf)



VALUES FOR C_p WERE APPLIED TO THE STRUCTURE ON AN ELEMENT BY ELEMENT BASIS AS TABULATED BELOW (Figure 27.4-5).

LOAD CASE A:

Windward side	slope	coefficient
	90 to 45 deg.	1.1 inward
	45 to 38	1.3 inward
	38 to 30	1.3 inward
	30 to 15	1.1 inward
	15 to 0	1.1 inward
Leeward side	slope	coefficient
	90 to 45 deg.	0.9 inward
	45 to 38	0.6 inward
	38 to 30	0.2 inward
	30 to 15	0.4 outward
	15 to 0	0.3 outward

LOAD CASE B:

Windward side	slope	coefficient
	90 to 45 deg.	0.3 outward
	45 to 38	0.2 outward
	38 to 30	0.1 outward
	30 to 15	0.1 inward
	15 to 0	0.2 inward
Leeward side	slope	coefficient
	90 to 45 deg.	0.5 outward
	45 to 38	0.9 outward
	38 to 30	0.8 outward
	30 to 15	1.1 outward
	15 to 0	1.2 outward

E. LOADCASE DESCRIPTIONS:

- 1) PRESTRESS + DEADLOAD
- 2) 21.0 UNIFORM SNOW LOAD + PS + DL
- 3) UNIFORM WIND UPLIFT 18.0 PSF + PS + DL
- 4) 75% Wind Down + 75% Snow
- 5) WIND +X CASE A - 18.0 PSF X C_p + PS + DL
- 6) WIND +X CASE B - 18.0 PSF X C_p + PS + DL
- 7) WIND +Y CASE A - 18.0 PSF X C_p + PS + DL
- 8) WIND +Y CASE B - 18.0 PSF X C_p + PS + DL
- 9) WIND +XY CASE A - 18.0 PSF X C_p + PS + DL
- 10) WIND +XY CASE B - 18.0 PSF X C_p + PS + DL



- F. SEISMIC LOADING: THE STRUCTURE IS LIGHTWEIGHT, THEREFORE SEISMIC WILL NOT BE A GOVERNING LOAD CASE AND HAS NOT BEEN EVALUATED.
- G. SIGN CONVENTION: POSITIVE FORCES ARE DEFINED TO BE IN THE DIRECTION OF THE X-Y AXIS SHOWN ON THE REACTION NODE MAP WITH Z ACTING UP AND OUT OF THE PAGE. A POSITIVE "Z" FORCE MEANS THE FOUNDATION IS SEEING UPLIFT.
- H. THE EFFECTS OF MEMBRANE PRESTRESS AND DEAD LOAD ARE INCLUDED IN ALL LOAD CASES.
- I. THE FORCES TABULATED ARE UNFACTORED WORKING LOADS.
- J. THE LOADS TABULATED REPRESENT FORCES THAT ARE APPLIED TO THE BUILDING OR FOUNDATION AT THAT LOCATION.

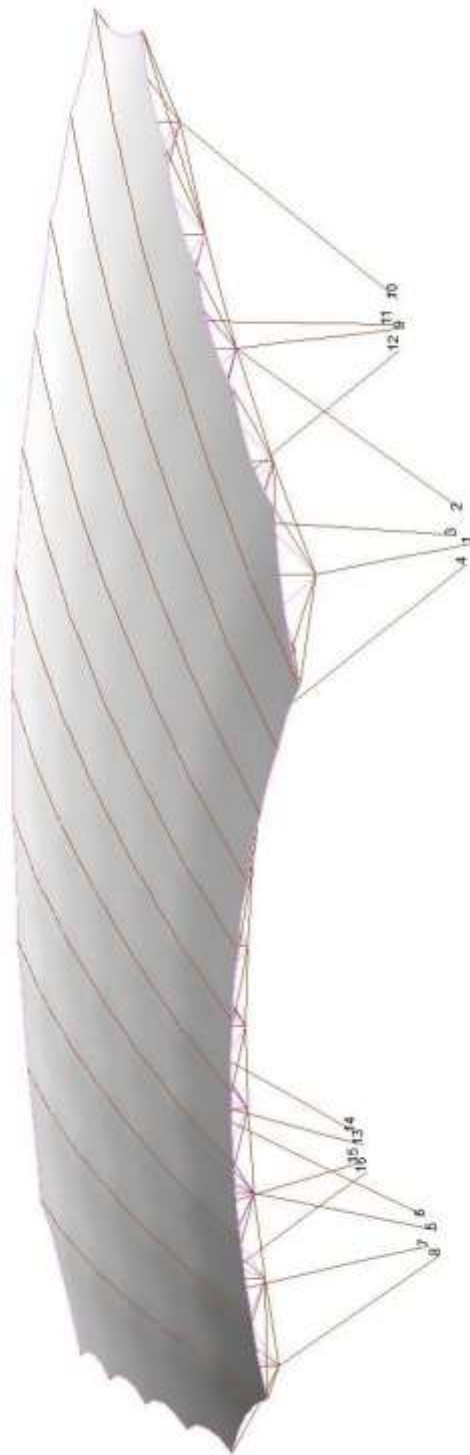


REACTION NODE COORDINATES

Model Units: FT

Node	-X-	-Y-	-Z-
1	-17.896	-13.726	13.198
2	-15.335	-12.071	13.626
3	-16.411	-10.569	13.877
4	-18.800	-12.441	13.444
5	-51.542	17.804	13.444
6	-49.866	20.334	13.877
7	-51.447	21.288	13.626
8	-52.895	18.604	13.198
9	-0.648	-1.505	15.754
10	1.638	-0.021	15.955
11	0.521	1.557	16.195
12	-1.628	-0.125	15.982
13	-40.625	35.897	15.982
14	-39.118	38.173	16.195
15	-40.779	39.162	15.955
16	-42.078	36.765	15.754

REACTION NODES





NODAL SUMMARY

Node No.	Load Case	R e a c t i o n F o r c e s				R e a c t i o n M o m e n t s		
		Fx	Fy	Fz	Force Resultant	Mx	My	Mz
1	1	1138.50	2164.20	-2835.10	3744.03	0.00	0.00	0.00
	2	1661.10	3158.60	-3991.80	5354.48	0.00	0.00	0.00
	3	-162.67	-309.23	43.98	352.16	0.00	0.00	0.00
	4	1871.50	3558.60	-4457.20	6002.73	0.00	0.00	0.00
	5	-103.07	-196.71	-87.51	238.70	0.00	0.00	0.00
	6	-873.80	-1666.50	1620.30	2483.17	0.00	0.00	0.00
	7	2494.60	4724.00	-5826.40	7904.82	0.00	0.00	0.00
	8	1812.30	3433.80	-4320.30	5808.65	0.00	0.00	0.00
	9	672.46	1278.30	-1804.00	2310.99	0.00	0.00	0.00
	10	-331.56	-630.27	417.67	825.60	0.00	0.00	0.00
2	1	-2003.40	-123.02	-2926.30	3548.52	0.00	0.00	0.00
	2	-3946.90	-241.58	-5407.80	6699.30	0.00	0.00	0.00
	3	-1552.90	-95.46	-2351.00	2819.19	0.00	0.00	0.00
	4	-4172.20	-255.22	-5695.40	7064.70	0.00	0.00	0.00
	5	-2079.50	-123.98	-3017.90	3667.07	0.00	0.00	0.00
	6	-1682.40	-101.24	-2513.20	3026.04	0.00	0.00	0.00
	7	-3137.70	-197.92	-4383.30	5394.22	0.00	0.00	0.00
	8	-2251.60	-141.15	-3247.80	3954.47	0.00	0.00	0.00
	9	-1790.90	-110.00	-2654.90	3204.36	0.00	0.00	0.00
	10	-1520.70	-93.50	-2309.90	2767.11	0.00	0.00	0.00
3	1	-1605.10	-3851.50	-6333.60	7584.52	0.00	0.00	0.00
	2	-2618.80	-6279.70	-10081.00	12162.21	0.00	0.00	0.00
	3	-1770.30	-4249.40	-6946.90	8333.71	0.00	0.00	0.00
	4	-2233.70	-5355.40	-8655.00	10420.11	0.00	-0.01	0.01
	5	-1406.40	-3355.40	-5583.50	6664.24	0.00	0.00	0.00
	6	-1622.30	-3877.90	-6386.60	7645.82	0.00	0.00	0.00
	7	-1549.90	-3738.80	-6143.50	7356.86	0.00	0.00	0.00
	8	-1677.30	-4041.40	-6613.50	7929.98	0.00	0.00	0.00
	9	-1647.70	-3954.00	-6491.50	7777.44	0.00	0.00	0.00
	10	-1813.10	-4352.30	-7105.70	8527.65	0.00	0.00	0.00
4	1	7244.40	1109.50	-8976.00	11587.96	0.00	0.00	0.00
	2	14689.00	2251.70	-17851.00	23227.03	0.00	0.00	0.00
	3	2260.20	346.16	-3035.00	3799.94	0.00	0.00	0.00
	4	17510.00	2683.80	-21214.00	27637.60	0.00	0.00	0.00
	5	8941.30	1386.10	-11017.00	14256.31	0.00	0.00	0.00
	6	4186.30	647.71	-5337.80	6814.45	0.00	0.00	0.00
	7	10616.00	1606.40	-12975.00	16841.34	0.00	0.00	0.00
	8	5255.10	796.63	-6596.00	8471.00	0.00	0.00	0.00
	9	5714.20	875.13	-7152.00	9196.14	0.00	0.00	0.00
	10	1279.10	195.90	-1865.60	2270.45	0.00	0.00	0.00
5	1	532.41	7310.20	-8976.80	11589.02	0.00	0.00	0.00
	2	1081.80	14825.00	-17855.00	23232.56	0.00	0.00	0.00
	3	166.06	2280.00	-3034.40	3799.15	0.00	0.00	0.00
	4	1289.30	17672.00	-21219.00	27644.31	0.00	0.00	0.00
	5	751.94	10587.00	-12829.00	16650.32	0.00	0.00	0.00
	6	369.95	5188.70	-6462.80	8296.22	0.00	0.00	0.00
	7	681.25	9123.30	-11135.00	14411.35	0.00	0.00	0.00
	8	320.82	4313.70	-5443.30	6952.73	0.00	0.00	0.00
	9	419.98	5766.30	-7152.80	9197.24	0.00	0.00	0.00
	10	93.98	1290.30	-1865.10	2269.87	0.00	0.00	0.00



6	1	-3712.10	-1904.90	-6333.20	7584.05	0.00	0.00	0.00
	2	-6050.40	-3106.60	-10077.00	12157.48	0.00	0.00	0.00
	3	-4093.80	-2100.10	-6943.70	8329.74	0.00	0.00	0.00
	4	-5160.20	-2650.00	-8652.80	10417.35	-0.01	0.00	0.00
	5	-3599.90	-1838.70	-6136.40	7348.16	0.00	0.00	0.00
	6	-3894.10	-1991.00	-6610.50	7926.34	0.00	0.00	0.00
	7	-3226.20	-1663.90	-5572.00	6650.12	-0.01	0.00	0.00
	8	-3729.80	-1920.40	-6374.80	7631.34	0.00	0.00	0.00
	9	-3810.30	-1955.10	-6490.20	7775.83	0.00	0.00	0.00
	10	-4192.80	-2150.80	-7102.00	8523.14	0.00	0.00	0.00
7	1	35.98	-2007.10	-2926.60	3548.91	0.00	0.00	0.00
	2	71.70	-3955.70	-5410.60	6702.78	0.00	0.00	0.00
	3	27.78	-1555.80	-2351.40	2819.64	0.00	0.00	0.00
	4	75.95	-4181.40	-5698.10	7068.11	0.00	0.00	0.00
	5	51.16	-3148.30	-4389.50	5402.05	0.00	0.00	0.00
	6	37.55	-2256.80	-3249.30	3956.32	0.00	0.00	0.00
	7	41.04	-2082.30	-3017.30	3666.30	0.00	0.00	0.00
	8	32.28	-1685.70	-2514.00	3027.02	0.00	0.00	0.00
	9	32.12	-1794.00	-2655.00	3204.45	0.00	0.00	0.00
	10	27.18	-1523.30	-2309.90	2767.10	0.00	0.00	0.00
8	1	2066.30	1305.60	-2834.00	3742.42	0.00	0.00	0.00
	2	3015.30	1904.70	-3989.40	5351.19	0.00	0.00	0.00
	3	-295.50	-186.72	44.13	352.32	0.00	0.00	0.00
	4	3396.70	2145.70	-4454.10	5998.38	0.00	0.00	0.00
	5	4539.90	2878.60	-5860.90	7952.81	0.00	0.00	0.00
	6	3301.40	2092.30	-4347.00	5845.80	0.00	0.00	0.00
	7	-207.76	-130.81	-63.41	253.57	0.00	0.00	0.00
	8	-1604.10	-1010.60	1634.90	2503.47	0.00	0.00	0.00
	9	1220.40	771.11	-1803.10	2309.80	0.00	0.00	0.00
	10	-602.00	-380.39	417.62	825.53	0.00	0.00	0.00
9	1	787.23	1828.30	-2395.90	3114.92	0.00	0.00	0.00
	2	1598.70	3715.00	-4518.80	6064.37	0.00	0.00	0.00
	3	-155.14	-360.22	68.17	398.09	0.00	0.00	0.00
	4	2186.60	5081.70	-6056.70	8202.96	0.00	0.00	0.00
	5	-282.82	-660.16	403.82	823.94	0.00	0.00	0.00
	6	-1002.10	-2335.30	2287.00	3418.80	0.00	0.00	0.00
	7	2871.30	6636.90	-7828.60	10657.38	0.00	0.00	0.00
	8	1746.70	4041.90	-4897.00	6585.48	0.00	0.00	0.00
	9	527.47	1224.90	-1716.60	2173.78	0.00	0.00	0.00
	10	-368.84	-856.35	626.85	1123.53	0.00	0.00	0.00
10	1	-2936.40	37.30	-3768.30	4777.44	0.00	0.00	0.00
	2	-5214.90	67.49	-6402.80	8258.06	0.00	0.00	0.00
	3	1025.90	-12.88	818.01	1312.17	0.00	0.00	0.00
	4	-6306.40	81.99	-7664.50	9925.82	0.00	0.00	0.00
	5	241.05	-3.52	-91.41	257.82	0.00	0.00	0.00
	6	3331.20	-47.33	3478.60	4816.62	0.00	0.00	0.00
	7	-7421.70	80.89	-8979.60	11649.95	0.00	0.00	0.00
	8	-5029.00	55.50	-6203.00	7985.68	0.00	0.00	0.00
	9	-1748.30	22.12	-2393.30	2963.94	0.00	0.00	0.00
	10	1787.20	-22.38	1699.50	2466.35	0.00	0.00	0.00
11	1	-2855.30	-8531.90	-12097.00	15075.92	0.00	0.00	0.00
	2	-6651.80	-19852.00	-27629.00	34665.69	0.00	0.00	0.00
	3	222.35	665.04	517.29	871.38	0.00	0.00	0.00
	4	-8217.70	-24515.00	-34024.00	42733.46	0.01	-0.02	0.01
	5	-3347.60	-9929.20	-14061.00	17535.88	0.00	0.00	0.00
	6	-505.10	-1501.20	-2459.90	2925.72	0.00	0.00	0.00
	7	-5078.60	-15276.00	-21275.00	26679.09	0.00	-0.01	0.00
	8	-2142.40	-6442.50	-9206.20	11438.96	0.00	0.00	0.00
	9	-1934.70	-5782.80	-8326.80	10320.83	0.00	0.00	0.00
	10	843.94	2524.60	3068.00	4061.83	0.00	0.00	0.00



12	1	7575.70	582.26	-9308.70	12015.91	0.00	0.00	0.00
	2	17613.00	1357.10	-21166.00	27569.17	0.00	0.00	0.00
	3	-3484.00	-267.62	3751.50	5126.76	0.00	0.00	0.00
	4	23736.00	1829.30	-28401.00	37058.88	0.00	0.01	0.00
	5	10342.00	816.59	-12601.00	16322.04	0.00	0.00	0.00
	6	-448.61	-35.14	168.16	480.38	0.00	0.00	0.00
	7	13930.00	1042.80	-16780.00	21833.48	0.00	0.00	0.00
	8	4422.40	333.27	-5577.00	7125.42	0.00	0.00	0.00
	9	4277.50	328.72	-5413.60	6907.40	0.00	0.00	0.00
	10	-5727.00	-439.88	6399.90	8599.46	0.00	0.00	0.00
13	1	-19.33	7596.60	-9307.00	12013.70	0.00	0.00	0.00
	2	-41.53	17664.00	-21165.00	27567.66	0.00	0.00	0.00
	3	9.05	-3494.00	3751.10	5126.29	0.00	0.00	0.00
	4	-55.50	23804.00	-28398.00	37055.09	0.01	0.00	0.00
	5	-62.28	13711.00	-16478.00	21436.41	0.00	0.00	0.00
	6	-16.92	4182.10	-5279.70	6735.39	0.00	0.00	0.00
	7	-4.80	10618.00	-12889.00	16699.35	0.00	0.00	0.00
	8	0.23	-210.20	-114.54	239.38	0.00	0.00	0.00
	9	-10.97	4288.70	-5412.00	6905.27	0.00	0.00	0.00
	10	14.93	-5744.00	6400.00	8599.64	0.00	0.00	0.00
14	1	-8278.80	-3521.70	-12097.00	15075.75	0.00	0.00	0.00
	2	-19263.00	-8202.60	-27629.00	34665.65	0.00	0.00	0.00
	3	644.50	273.95	516.08	869.92	0.00	0.00	0.00
	4	-23787.00	-10133.00	-34024.00	42733.26	-0.01	0.01	0.01
	5	-14645.00	-6195.40	-21021.00	26357.95	0.00	0.00	0.00
	6	-6078.70	-2572.00	-8961.00	11129.48	0.00	0.00	0.00
	7	-9802.00	-4195.60	-14301.00	17838.19	-0.01	0.00	0.00
	8	-1619.20	-691.91	-2690.70	3215.65	0.00	0.00	0.00
	9	-5611.90	-2386.60	-8327.40	10321.57	0.00	0.00	0.00
	10	2448.60	1040.60	3066.20	4059.57	0.00	0.00	0.00
15	1	269.58	-2923.50	-3767.40	4776.28	0.00	0.00	0.00
	2	480.08	-5192.40	-6401.80	8256.79	0.00	0.00	0.00
	3	-94.14	1022.60	819.10	1313.58	0.00	0.00	0.00
	4	580.96	-6279.40	-7663.60	9924.67	0.00	0.00	0.00
	5	671.69	-7430.90	-9024.90	11709.75	0.00	0.00	0.00
	6	456.30	-5040.40	-6239.80	8034.24	0.00	0.00	0.00
	7	-25.83	274.20	-51.77	280.24	0.00	-0.01	0.00
	8	-313.29	3342.20	3507.70	4855.14	0.00	0.00	0.00
	9	160.40	-1740.20	-2392.40	2962.70	0.00	0.00	0.00
	10	-163.89	1780.70	1700.60	2467.75	0.00	0.00	0.00
16	1	1760.40	929.60	-2396.10	3115.20	0.00	0.00	0.00
	2	3576.00	1887.40	-4517.90	6063.12	0.00	0.00	0.00
	3	-347.08	-183.32	68.49	398.45	0.00	0.00	0.00
	4	4892.10	2581.70	-6056.00	8202.01	0.00	0.00	0.00
	5	6423.20	3406.00	-7869.00	10713.52	0.00	0.00	0.00
	6	3917.90	2075.50	-4928.60	6629.38	0.00	0.00	0.00
	7	-662.77	-348.43	435.39	866.16	0.00	0.00	0.00
	8	-2269.90	-1195.00	2311.80	3453.24	0.00	0.00	0.00
	9	1179.40	622.84	-1716.70	2173.93	0.00	0.00	0.00
	10	-824.68	-435.59	627.11	1123.88	0.00	0.00	0.00



Model title: Washington State Fair
Load case: 1. PRESTRESS + DEAD LOAD
Post Units: FT,LBS

Load Case No.	Node No.	R e a c t i o n F o r c e s				R e a c t i o n M o m e n t s		
		Fx	Fy	Fz	Force Resultant	Mx	My	Mz
1	1	1138.50	2164.20	-2835.10	3744.03	0.00	0.00	0.00
1	2	-2003.40	-123.02	-2926.30	3548.52	0.00	0.00	0.00
1	3	-1605.10	-3851.50	-6333.60	7584.52	0.00	0.00	0.00
1	4	7244.40	1109.50	-8976.00	11587.96	0.00	0.00	0.00
1	5	532.41	7310.20	-8976.80	11589.02	0.00	0.00	0.00
1	6	-3712.10	-1904.90	-6333.20	7584.05	0.00	0.00	0.00
1	7	35.98	-2007.10	-2926.60	3548.91	0.00	0.00	0.00
1	8	2066.30	1305.60	-2834.00	3742.42	0.00	0.00	0.00
1	9	787.23	1828.30	-2395.90	3114.92	0.00	0.00	0.00
1	10	-2936.40	37.30	-3768.30	4777.44	0.00	0.00	0.00
1	11	-2855.30	-8531.90	-12097.00	15075.92	0.00	0.00	0.00
1	12	7575.70	582.26	-9308.70	12015.91	0.00	0.00	0.00
1	13	-19.33	7596.60	-9307.00	12013.70	0.00	0.00	0.00
1	14	-8278.80	-3521.70	-12097.00	15075.75	0.00	0.00	0.00
1	15	269.58	-2923.50	-3767.40	4776.28	0.00	0.00	0.00
1	16	1760.40	929.60	-2396.10	3115.20	0.00	0.00	0.00
Sum:		0.07	-0.06	-97279.00	122894.55			

Model title: Washington State Fair
Load case: 2. Uniform Snow Load + PS + DL
Post Units: FT,LBS

Load Case No.	Node No.	R e a c t i o n F o r c e s				R e a c t i o n M o m e n t s		
		Fx	Fy	Fz	Force Resultant	Mx	My	Mz
2	1	1661.10	3158.60	-3991.80	5354.48	0.00	0.00	0.00
2	2	-3946.90	-241.58	-5407.80	6699.30	0.00	0.00	0.00
2	3	-2618.80	-6279.70	-10081.00	12162.21	0.00	0.00	0.00
2	4	14689.00	2251.70	-17851.00	23227.03	0.00	0.00	0.00
2	5	1081.80	14825.00	-17855.00	23232.56	0.00	0.00	0.00
2	6	-6050.40	-3106.60	-10077.00	12157.48	0.00	0.00	0.00
2	7	71.70	-3955.70	-5410.60	6702.78	0.00	0.00	0.00
2	8	3015.30	1904.70	-3989.40	5351.19	0.00	0.00	0.00
2	9	1598.70	3715.00	-4518.80	6064.37	0.00	0.00	0.00
2	10	-5214.90	67.49	-6402.80	8258.06	0.00	0.00	0.00
2	11	-6651.80	-19852.00	-27629.00	34665.69	0.00	0.00	0.00
2	12	17613.00	1357.10	-21166.00	27569.17	0.00	0.00	0.00
2	13	-41.53	17664.00	-21165.00	27567.66	0.00	0.00	0.00
2	14	-19263.00	-8202.60	-27629.00	34665.65	0.00	0.00	0.00
2	15	480.08	-5192.40	-6401.80	8256.79	0.00	0.00	0.00
2	16	3576.00	1887.40	-4517.90	6063.12	0.00	0.00	0.00
Sum:		-0.64	0.41	-194093.89	247997.55			



Model title: Washington State Fair
Load case: 3. Uniform Wind Uplift + PS + DL
Post Units: FT,LBS

Load Case No.	Node No.	R e a c t i o n F o r c e s				R e a c t i o n M o m e n t s		
		Fx	Fy	Fz	Force Resultant	Mx	My	Mz
3	1	-162.67	-309.23	43.98	352.16	0.00	0.00	0.00
3	2	-1552.90	-95.46	-2351.00	2819.19	0.00	0.00	0.00
3	3	-1770.30	-4249.40	-6946.90	8333.71	0.00	0.00	0.00
3	4	2260.20	346.16	-3035.00	3799.94	0.00	0.00	0.00
3	5	166.06	2280.00	-3034.40	3799.15	0.00	0.00	0.00
3	6	-4093.80	-2100.10	-6943.70	8329.74	0.00	0.00	0.00
3	7	27.78	-1555.80	-2351.40	2819.64	0.00	0.00	0.00
3	8	-295.50	-186.72	44.13	352.32	0.00	0.00	0.00
3	9	-155.14	-360.22	68.17	398.09	0.00	0.00	0.00
3	10	1025.90	-12.88	818.01	1312.17	0.00	0.00	0.00
3	11	222.35	665.04	517.29	871.38	0.00	0.00	0.00
3	12	-3484.00	-267.62	3751.50	5126.76	0.00	0.00	0.00
3	13	9.05	-3494.00	3751.10	5126.29	0.00	0.00	0.00
3	14	644.50	273.95	516.08	869.92	0.00	0.00	0.00
3	15	-94.14	1022.60	819.10	1313.58	0.00	0.00	0.00
3	16	-347.08	-183.32	68.49	398.45	0.00	0.00	0.00
Sum:		-7599.69	-8227.00	-14264.56	46022.51			

Model title: Washington State Fair
Load case: 4. 75% Snow + 75% Wind Down + PS + DL
Post Units: FT,LBS

Load Case No.	Node No.	R e a c t i o n F o r c e s				R e a c t i o n M o m e n t s		
		Fx	Fy	Fz	Force Resultant	Mx	My	Mz
4	1	1871.50	3558.60	-4457.20	6002.73	0.00	0.00	0.00
4	2	-4172.20	-255.22	-5695.40	7064.70	0.00	0.00	0.00
4	3	-2233.70	-5355.40	-8655.00	10420.11	0.00	-0.01	0.01
4	4	17510.00	2683.80	-21214.00	27637.60	0.00	0.00	0.00
4	5	1289.30	17672.00	-21219.00	27644.31	0.00	0.00	0.00
4	6	-5160.20	-2650.00	-8652.80	10417.35	-0.01	0.00	0.00
4	7	75.95	-4181.40	-5698.10	7068.11	0.00	0.00	0.00
4	8	3396.70	2145.70	-4454.10	5998.38	0.00	0.00	0.00
4	9	2186.60	5081.70	-6056.70	8202.96	0.00	0.00	0.00
4	10	-6306.40	81.99	-7664.50	9925.82	0.00	0.00	0.00
4	11	-8217.70	-24515.00	-34024.00	42733.46	0.01	-0.02	0.01
4	12	23736.00	1829.30	-28401.00	37058.88	0.00	0.01	0.00
4	13	-55.50	23804.00	-28398.00	37055.09	0.01	0.00	0.00
4	14	-23787.00	-10133.00	-34024.00	42733.26	-0.01	0.01	0.01
4	15	580.96	-6279.40	-7663.60	9924.67	0.00	0.00	0.00
4	16	4892.10	2581.70	-6056.00	8202.01	0.00	0.00	0.00
Sum:		5606.41	6069.37	-232333.41	298089.44			



Model title: Washington State Fair
 Load case: 5. CASE A, (ASD) WIND DIR (+X) + DL + PS
 Post Units: FT,LBS

Load Case No.	Node No.	R e a c t i o n F o r c e s				R e a c t i o n M o m e n t s		
		-----	-----	-----	Force Resultant	-----	-----	-----
		Fx	Fy	Fz		Mx	My	Mz
5	1	-103.07	-196.71	-87.51	238.70	0.00	0.00	0.00
5	2	-2079.50	-123.98	-3017.90	3667.07	0.00	0.00	0.00
5	3	-1406.40	-3355.40	-5583.50	6664.24	0.00	0.00	0.00
5	4	8941.30	1386.10	-11017.00	14256.31	0.00	0.00	0.00
5	5	751.94	10587.00	-12829.00	16650.32	0.00	0.00	0.00
5	6	-3599.90	-1838.70	-6136.40	7348.16	0.00	0.00	0.00
5	7	51.16	-3148.30	-4389.50	5402.05	0.00	0.00	0.00
5	8	4539.90	2878.60	-5860.90	7952.81	0.00	0.00	0.00
5	9	-282.82	-660.16	403.82	823.94	0.00	0.00	0.00
5	10	241.05	-3.52	-91.41	257.82	0.00	0.00	0.00
5	11	-3347.60	-9929.20	-14061.00	17535.88	0.00	0.00	0.00
5	12	10342.00	816.59	-12601.00	16322.04	0.00	0.00	0.00
5	13	-62.28	13711.00	-16478.00	21436.41	0.00	0.00	0.00
5	14	-14645.00	-6195.40	-21021.00	26357.95	0.00	0.00	0.00
5	15	671.69	-7430.90	-9024.90	11709.75	0.00	0.00	0.00
5	16	6423.20	3406.00	-7869.00	10713.52	0.00	0.00	0.00
Sum:		6435.67	-96.99	-129664.19	167336.97			

Model title: Washington State Fair
 Load case: 6. CASE B, (ASD) WIND DIR (+X) + DL + PS
 Post Units: FT,LBS

Load Case No.	Node No.	R e a c t i o n F o r c e s				R e a c t i o n M o m e n t s		
		-----	-----	-----	Force Resultant	-----	-----	-----
		Fx	Fy	Fz		Mx	My	Mz
6	1	-873.80	-1666.50	1620.30	2483.17	0.00	0.00	0.00
6	2	-1682.40	-101.24	-2513.20	3026.04	0.00	0.00	0.00
6	3	-1622.30	-3877.90	-6386.60	7645.82	0.00	0.00	0.00
6	4	4186.30	647.71	-5337.80	6814.45	0.00	0.00	0.00
6	5	369.95	5188.70	-6462.80	8296.22	0.00	0.00	0.00
6	6	-3894.10	-1991.00	-6610.50	7926.34	0.00	0.00	0.00
6	7	37.55	-2256.80	-3249.30	3956.32	0.00	0.00	0.00
6	8	3301.40	2092.30	-4347.00	5845.80	0.00	0.00	0.00
6	9	-1002.10	-2335.30	2287.00	3418.80	0.00	0.00	0.00
6	10	3331.20	-47.33	3478.60	4816.62	0.00	0.00	0.00
6	11	-505.10	-1501.20	-2459.90	2925.72	0.00	0.00	0.00
6	12	-448.61	-35.14	168.16	480.38	0.00	0.00	0.00
6	13	-16.92	4182.10	-5279.70	6735.39	0.00	0.00	0.00
6	14	-6078.70	-2572.00	-8961.00	11129.48	0.00	0.00	0.00
6	15	456.30	-5040.40	-6239.80	8034.24	0.00	0.00	0.00
6	16	3917.90	2075.50	-4928.60	6629.38	0.00	0.00	0.00
Sum:		-523.43	-7238.50	-55222.14	90164.16			



Model title: Washington State Fair
Load case: 7. CASE A, (ASD) WIND DIR (+Y) + DL + PS
Post Units: FT,LBS

Load Case No.	Node No.	R e a c t i o n F o r c e s				R e a c t i o n M o m e n t s		
		Fx	Fy	Fz	Force Resultant	Mx	My	Mz
7	1	2494.60	4724.00	-5826.40	7904.82	0.00	0.00	0.00
7	2	-3137.70	-197.92	-4383.30	5394.22	0.00	0.00	0.00
7	3	-1549.90	-3738.80	-6143.50	7356.86	0.00	0.00	0.00
7	4	10616.00	1606.40	-12975.00	16841.34	0.00	0.00	0.00
7	5	681.25	9123.30	-11135.00	14411.35	0.00	0.00	0.00
7	6	-3226.20	-1663.90	-5572.00	6650.12	-0.01	0.00	0.00
7	7	41.04	-2082.30	-3017.30	3666.30	0.00	0.00	0.00
7	8	-207.76	-130.81	-63.41	253.57	0.00	0.00	0.00
7	9	2871.30	6636.90	-7828.60	10657.38	0.00	0.00	0.00
7	10	-7421.70	80.89	-8979.60	11649.95	0.00	0.00	0.00
7	11	-5078.60	-15276.00	-21275.00	26679.09	0.00	-0.01	0.00
7	12	13930.00	1042.80	-16780.00	21833.48	0.00	0.00	0.00
7	13	-4.80	10618.00	-12889.00	16699.35	0.00	0.00	0.00
7	14	-9802.00	-4195.60	-14301.00	17838.19	-0.01	0.00	0.00
7	15	-25.83	274.20	-51.77	280.24	0.00	-0.01	0.00
7	16	-662.77	-348.43	435.39	866.16	0.00	0.00	0.00
Sum:		-483.07	6472.73	-130785.48	168982.39			

Model title: Washington State Fair
Load case: 8. CASE B, (ASD) WIND DIR (+Y) + DL + PS
Post Units: FT,LBS

Load Case No.	Node No.	R e a c t i o n F o r c e s				R e a c t i o n M o m e n t s		
		Fx	Fy	Fz	Force Resultant	Mx	My	Mz
8	1	1812.30	3433.80	-4320.30	5808.65	0.00	0.00	0.00
8	2	-2251.60	-141.15	-3247.80	3954.47	0.00	0.00	0.00
8	3	-1677.30	-4041.40	-6613.50	7929.98	0.00	0.00	0.00
8	4	5255.10	796.63	-6596.00	8471.00	0.00	0.00	0.00
8	5	320.82	4313.70	-5443.30	6952.73	0.00	0.00	0.00
8	6	-3729.80	-1920.40	-6374.80	7631.34	0.00	0.00	0.00
8	7	32.28	-1685.70	-2514.00	3027.02	0.00	0.00	0.00
8	8	-1604.10	-1010.60	1634.90	2503.47	0.00	0.00	0.00
8	9	1746.70	4041.90	-4897.00	6585.48	0.00	0.00	0.00
8	10	-5029.00	55.50	-6203.00	7985.68	0.00	0.00	0.00
8	11	-2142.40	-6442.50	-9206.20	11438.96	0.00	0.00	0.00
8	12	4422.40	333.27	-5577.00	7125.42	0.00	0.00	0.00
8	13	0.23	-210.20	-114.54	239.38	0.00	0.00	0.00
8	14	-1619.20	-691.91	-2690.70	3215.65	0.00	0.00	0.00
8	15	-313.29	3342.20	3507.70	4855.14	0.00	0.00	0.00
8	16	-2269.90	-1195.00	2311.80	3453.24	0.00	0.00	0.00
Sum:		-7046.77	-1021.86	-56343.74	91177.62			



Model title: Washington State Fair
 Load case: 9. CASE A, (ASD) WIND DIR (-XY) + DL + PS
 Post Units: FT,LBS

Load Case No.	Node No.	R e a c t i o n F o r c e s				R e a c t i o n M o m e n t s		
		-----	-----	-----	Force Resultant	-----	-----	-----
		Fx	Fy	Fz		Mx	My	Mz
9	1	672.46	1278.30	-1804.00	2310.99	0.00	0.00	0.00
9	2	-1790.90	-110.00	-2654.90	3204.36	0.00	0.00	0.00
9	3	-1647.70	-3954.00	-6491.50	7777.44	0.00	0.00	0.00
9	4	5714.20	875.13	-7152.00	9196.14	0.00	0.00	0.00
9	5	419.98	5766.30	-7152.80	9197.24	0.00	0.00	0.00
9	6	-3810.30	-1955.10	-6490.20	7775.83	0.00	0.00	0.00
9	7	32.12	-1794.00	-2655.00	3204.45	0.00	0.00	0.00
9	8	1220.40	771.11	-1803.10	2309.80	0.00	0.00	0.00
9	9	527.47	1224.90	-1716.60	2173.78	0.00	0.00	0.00
9	10	-1748.30	22.12	-2393.30	2963.94	0.00	0.00	0.00
9	11	-1934.70	-5782.80	-8326.80	10320.83	0.00	0.00	0.00
9	12	4277.50	328.72	-5413.60	6907.40	0.00	0.00	0.00
9	13	-10.97	4288.70	-5412.00	6905.27	0.00	0.00	0.00
9	14	-5611.90	-2386.60	-8327.40	10321.57	0.00	0.00	0.00
9	15	160.40	-1740.20	-2392.40	2962.70	0.00	0.00	0.00
9	16	1179.40	622.84	-1716.70	2173.93	0.00	0.00	0.00
Sum:		-2350.84	-2544.58	-71902.30	89705.66			

Model title: Washington State Fair
 Load case: 10. CASE B, (ASD) WIND DIR (-XY) + DL + PS
 Post Units: FT,LBS

Load Case No.	Node No.	R e a c t i o n F o r c e s				R e a c t i o n M o m e n t s		
		-----	-----	-----	Force Resultant	-----	-----	-----
		Fx	Fy	Fz		Mx	My	Mz
10	1	-331.56	-630.27	417.67	825.60	0.00	0.00	0.00
10	2	-1520.70	-93.50	-2309.90	2767.11	0.00	0.00	0.00
10	3	-1813.10	-4352.30	-7105.70	8527.65	0.00	0.00	0.00
10	4	1279.10	195.90	-1865.60	2270.45	0.00	0.00	0.00
10	5	93.98	1290.30	-1865.10	2269.87	0.00	0.00	0.00
10	6	-4192.80	-2150.80	-7102.00	8523.14	0.00	0.00	0.00
10	7	27.18	-1523.30	-2309.90	2767.10	0.00	0.00	0.00
10	8	-602.00	-380.39	417.62	825.53	0.00	0.00	0.00
10	9	-368.84	-856.35	626.85	1123.53	0.00	0.00	0.00
10	10	1787.20	-22.38	1699.50	2466.35	0.00	0.00	0.00
10	11	843.94	2524.60	3068.00	4061.83	0.00	0.00	0.00
10	12	-5727.00	-439.88	6399.90	8599.46	0.00	0.00	0.00
10	13	14.93	-5744.00	6400.00	8599.64	0.00	0.00	0.00
10	14	2448.60	1040.60	3066.20	4059.57	0.00	0.00	0.00
10	15	-163.89	1780.70	1700.60	2467.75	0.00	0.00	0.00
10	16	-824.68	-435.59	627.11	1123.88	0.00	0.00	0.00
Sum:		-9049.64	-9796.67	1865.25	61278.46			