VECTOR
ENGINEERS

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STRUCTURAL CALCULATIONS
for
BRANFORD SOUTH
at
723 LEETES ISLAND ROAD
BRANFORD , CT 06405
for
STEALTH® CONCEALMENT SOLUTIONS (VZ12-00120W-33R0)

STATE OF CONNECTICUT
ROGER T. ALWORTH
No. 26467
LICENSED
PROFESSIONAL ENGINEER

VALID WET SIGNATURE IN RED

BY: ROGER T. ALWORTH, S.E.
PRINCIPAL

PROJECT #: U0142-542-121

DATE: March 12, 2012

NOTE: The calculations presented in this package are intended for a single use at the location indicated above, for the client listed above. These calculations shall not be reproduced, reused, "card filed", sold to a third party, or altered in any way without the written authorization of Vector Structural Engineers, PC.

Design Criteria:

Code: Structural design is based on the International Building Code, 2009 Edition

Wind: Basic wind speed = 114 mph (3-second gust) per the TIA-222-G standard

Wind importance factor, I = 1
Structure class: II
Wind exposure: C
Topographic category: 1
Crest height: 0 ft

Ice: 0.75" radial ice @ 50 mph basic wind speed (3-second gust) per the TIA-222-G standard

Seismic: Seismic loads are based on the International Building Code, 2009 Edition and the TIA-222-G standard
Seismic importance factor, I = 1
Structure Class: II
Mapped spectral response accelerations: S_S = 0.23g S_1 = 0.06g
Site class: D
Spectral response coefficients: S_{DS} = 0.245g S_{D1} = 0.096g
Seismic design category: B
Basic seismic-force-resisting-system: Telecommunication Tower: Steel Frame
Seismic base shear, V = 2.8 k
Seismic response coefficient, Cs = 0.048
Response modification factor, R = 3
Analysis procedure: Equivalent lateral force

General Notes:

1. The contractor shall verify dimensions, conditions and elevations before starting work. The engineer shall be notified immediately if any discrepancies are found.
2. The typical notes and details shall apply in all cases unless specifically detailed elsewhere. Where no detail is shown, the construction shall be as shown for other similar work and as required by the building code.
3. These calculations are limited to the structural members shown in these calculations only. The connection of the members shown in these calculations to the existing structure shall be by others.
4. The contractor shall be responsible for compliance with local construction safety orders. Approval of shop drawings by the architect or structural engineer shall not be construed as accepting this responsibility.
5. All structural framing members shall be adequately shored and braced during erection and until full lateral and vertical support is provided by adjoining members.

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JOB NO.: U0142-542-121 DESIGNED: JSP
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SHEET OF

PROJECT: BRANFORD SOUTH

Structural Steel:

1 All structural steel code checks based on the AISC-LRFD, 3rd Edition per the TIA-222-G standard
2 All steel round tubes (HSS) to be per ASTM A500 GR. B (42 KSI), U.N.O.
3 All steel rectangular tubes (HSS) to be per ASTM A500 GR. B (46 KSI), U.N.O.
4 All steel wide flange shapes to be per ASTM A992 (50 KSI), U.N.O.
5 All other structural steel shapes & plates shall be per ASTM A36, U.N.O.
6 All anchor bolts shall be per ASTM F1554 GR. 55, U.N.O.
7 All bolts for steel-to-steel connections shall be per ASTM A325N, U.N.O.
8 All bolted connections shall be tightened to "snug tight" condition as defined by AISC
9 All welding shall be performed by certified welders in accordance with the latest edition of the American Welding Society (AWS) D1.1
10 All steel surfaces shall be galvanized in accordance with the ASTM A123 and ASTM A153 standards, U.N.O.

Fiberglass Reinforced Plastic (FRP):

1 All structural shapes shall be Bedford FRP Series 1525 produced using the pultrusion process.
2 All cut edges and holes shall be sealed with a resin compatible with the resin matrix used in the structural shape.
3 The fabricator and contractor shall exercise precautions necessary to protect the fiberglass pultruded structural shapes from abuse to prevent breakage, nicks, gouges, etc. during fabrication, handling, and installation.
4 Structural shapes shall be fabricated and assembled as indicated on the design drawings.
5 Isoplast bolts and nuts shall be tightened to snug tight and turned an additional 1/2 turn and locked with epoxy.

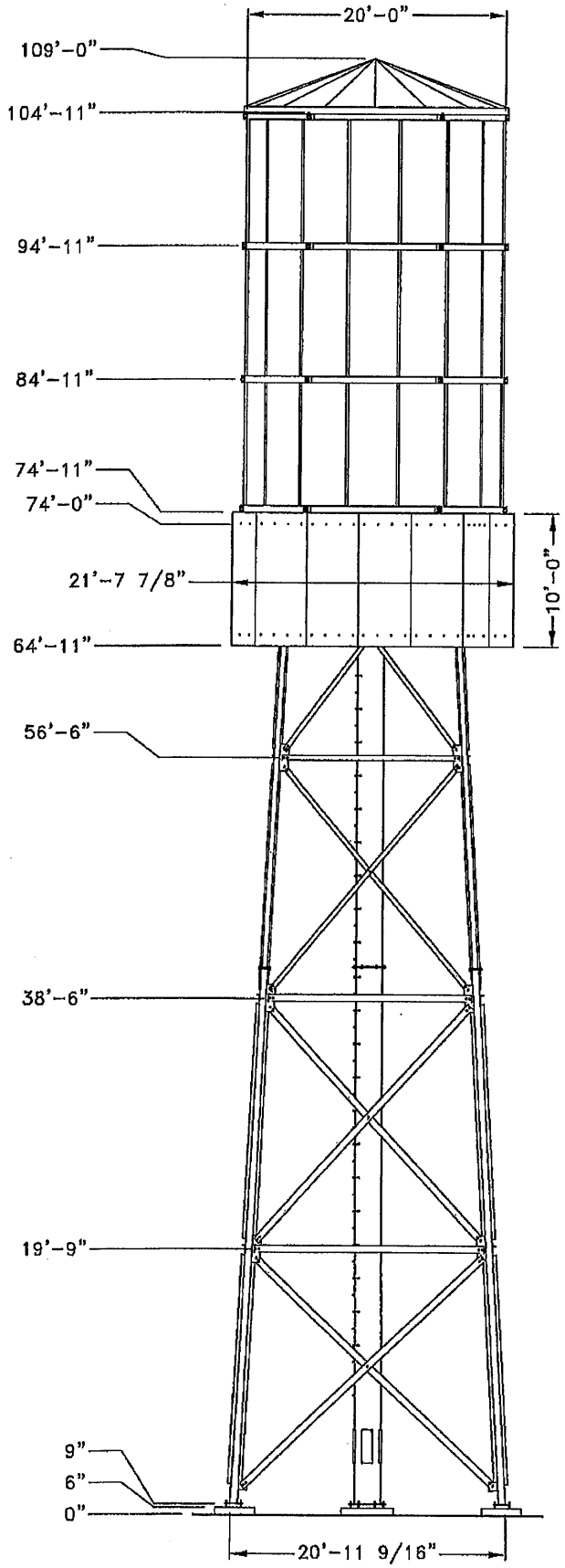
Foundation / Concrete:

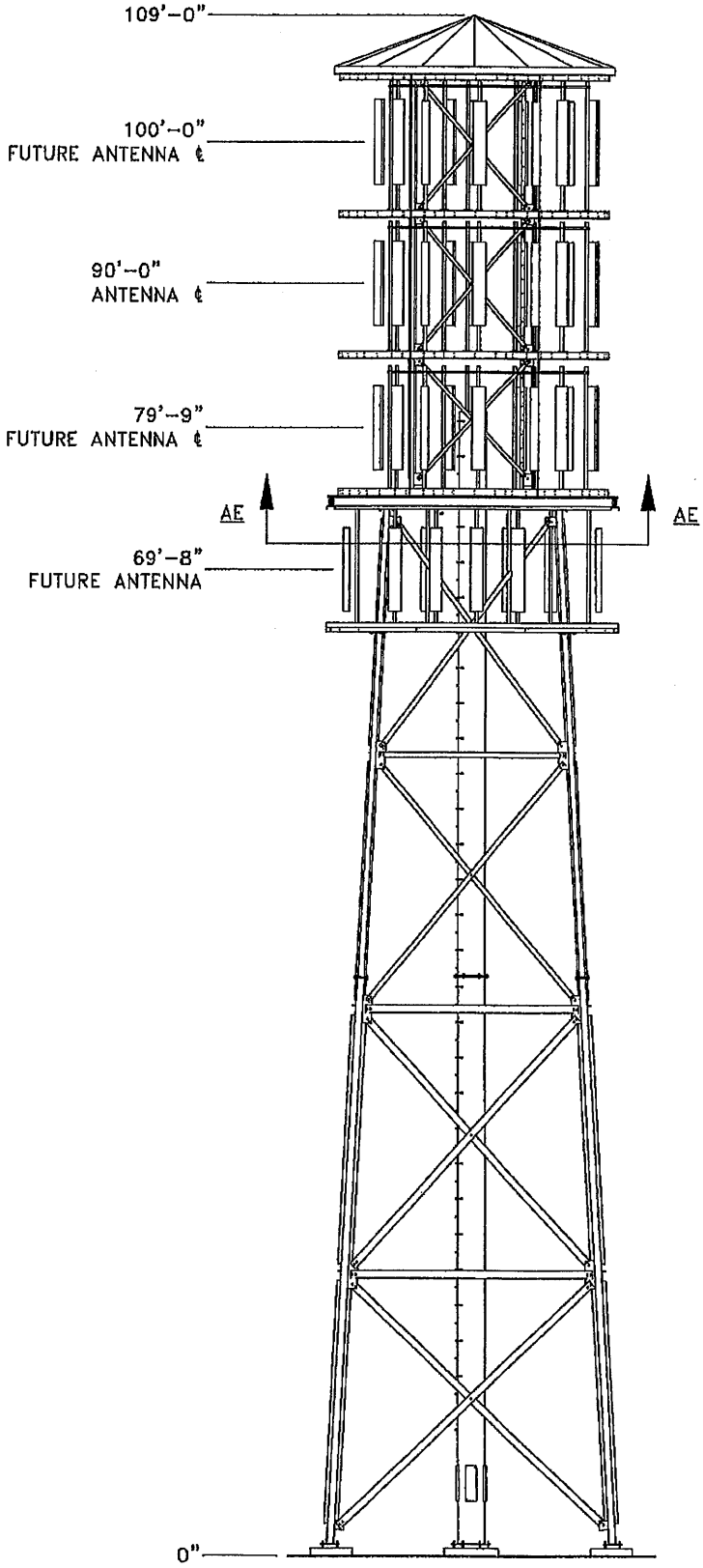
1 All concrete mixing, placement, forming, and reinforcing installation shall be performed in accordance with the requirements of "Building Code Requirements for Reinforced Concrete", ACI 318-05. Foundation installation shall be in accordance with the requirements of "Standard Specifications for the Construction of Drilled Piers", ACI 336, latest edition

2 All concrete shall have a minimum compressive strength of 4000 psi at 28 days.
3 Cement for all concrete shall be Type II with a minimum of 6% entrained air. Maximum aggregate size shall be ¾".
4 Reinforcing steel shall be per ASTM A615 Gr. 60, U.N.O.
5 Foundation design is based upon the project soils report prepared by:

Geotech: DESIGN EARTH TECHNOLOGY
Report No: 2010.19
Date: 28-Jan-12

6 Approximate concrete volume for mat foundation = 81.9 cubic yards





PROPOSED FUTURE EXTENSION

VECTOR ENGINEERS

JOB NO.: U0142-542 DESIGNED: JSP
DATE: 03/12/12 CHECKED: BDV

SHEET _____ OF _____

PROJECT: BRANFORD SOUTH

SUBJECT:

TIA/EIA-222-G WIND

VELOCITY PRESSURES, $q_z = 0.00256 K_z K_{zt} K_d V^2 I$

General Project Information

Basic wind speed, V (mph):	114	
Exposure category:	C	(See Sec. 2.6.5.1)
Topographic category:	1	(See Sec. 2.6.6.2)
Height of crest above surrounding terrain, H (ft):	0	(If other than Topo Cat. 1)
Structure Type: Type 1: Triangular, square, or rect. Lattices Type 2: Tubular pole or other lattice structures	Type 2	
Importance factor, I:	1.00	(See Table 2-3)

HEIGHT (ft)	K_z	K_{zt}	K_d	q_z (psf)
15	0.85	1.00	0.95	26.9
20	0.90	1.00	0.95	28.5
25	0.95	1.00	0.95	29.9
30	0.98	1.00	0.95	31.0
35	1.01	1.00	0.95	32.1
40	1.04	1.00	0.95	33.0
45	1.07	1.00	0.95	33.8
50	1.09	1.00	0.95	34.6
55	1.12	1.00	0.95	35.3
60	1.14	1.00	0.95	35.9
65	1.16	1.00	0.95	36.5
70	1.17	1.00	0.95	37.1
75	1.19	1.00	0.95	37.7
160	1.40	1.00	0.95	44.2
180	1.43	1.00	0.95	45.3
200	1.46	1.00	0.95	46.3
250	1.53	1.00	0.95	48.5
300	1.59	1.00	0.95	50.4
350	1.65	1.00	0.95	52.1
400	1.69	1.00	0.95	53.6
450	1.74	1.00	0.95	54.9
500	1.78	1.00	0.95	56.1
600	1.85	1.00	0.95	58.3
700	1.91	1.00	0.95	60.3
800	1.96	1.00	0.95	62.0
900	2.01	1.00	0.95	63.5
1000	2.01	1.00	0.95	63.5
1100	2.01	1.00	0.95	63.5
1200	2.01	1.00	0.95	63.5
1300	2.01	1.00	0.95	63.5
1400	2.01	1.00	0.95	63.5
1500	2.01	1.00	0.95	63.5
1600	2.01	1.00	0.95	63.5
1700	2.01	1.00	0.95	63.5
1800	2.01	1.00	0.95	63.5
1900	2.01	1.00	0.95	63.5
2000	2.01	1.00	0.95	63.5

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JOB NO.: U0142-542-121
DATE: 03/12/12
DESIGNED: JSP
CHECKED: BDV
SHEET _____ OF _____
PROJECT: BRANFORD SOUTH
SUBJECT:

TIA/EIA-222-G WIND
DESIGN PRESSURES ON STRUCTURE

Structure Information

Overall structure height, h (ft):	109	
Structure Type: Type 1: Self-supporting or bracketed latticed structures Type 2: Guyed masts Type 3: Pole Structures Type 4: Lattice spines on other structures Type 5: Tubular spines on other structures	Type 1	(See Sec. 2.6.7)
Latticed cross-section (if applicable):	Square	
Solidarity ratio, $\varepsilon = (A_r + A_f)/A_g$ (Lattices only):	0.35	(See Sec. 2.6.9.1.1)
Wind direction:	Normal	
Pole structure cross-section (if applicable):	Round	
Ice Conditions:	Ice	

HEIGHT (ft)	q_z (psf)	G_h	Input Outside Dia., D (ft)[1]	Velocity Coeff., C	Force Coeff., C_f	Pressures on Latticed Structures: Design Press. On Round Components (psf)	Pressures on Latticed Structures: Design Press. On Flat Components (psf)	Design Press. On Pole Structures (psf)
15	26.87	0.85	1	105.1	2.43	34.1	55.4	NA
20	28.51	0.85	1	108.3	2.43	36.2	58.8	NA
25	29.88	0.85	1	110.8	2.43	37.9	61.6	NA
30	31.05	0.85	1	113.0	2.43	39.4	64.0	NA
35	32.07	0.85	1	114.8	2.43	40.7	66.1	NA
40	32.98	0.85	1	116.5	2.43	41.9	68.0	NA
45	33.81	0.85	1	117.9	2.43	42.9	69.7	NA
50	34.57	0.85	1	119.2	2.43	43.9	71.3	NA
55	35.27	0.85	1	120.4	2.43	44.8	72.7	NA
60	35.92	0.85	1	121.5	2.43	45.6	74.0	NA
65	36.53	0.85	1	122.6	2.43	46.4	75.3	NA
70	37.11	0.85	1	123.5	2.43	47.1	76.5	NA
75	37.65	0.85	1	124.4	2.43	47.8	77.6	NA
160	44.16	0.85	1	134.8	2.43	56.1	91.0	NA
180	45.27	0.85	1	136.4	2.43	57.5	93.3	NA
200	46.29	0.85	1	138.0	2.43	58.8	95.4	NA
250	48.51	0.85	1	141.2	2.43	61.6	100.0	NA
300	50.41	0.85	1	144.0	2.43	64.0	103.9	NA
350	52.07	0.85	1	146.3	2.43	66.1	107.3	NA
400	53.56	0.85	1	148.4	2.43	68.0	110.4	NA
450	54.90	0.85	1	150.3	2.43	69.7	113.2	NA
500	56.13	0.85	1	151.9	2.43	71.3	115.7	NA
600	58.33	0.85	1	154.9	2.43	74.1	120.2	NA
700	60.25	0.85	1	157.4	2.43	76.5	124.2	NA
800	61.97	0.85	1	159.6	2.43	78.7	127.7	NA
900	63.53	0.85	1	161.6	2.43	80.7	130.9	NA
1000	63.53	0.85	1	161.6	2.43	80.7	130.9	NA
1100	63.53	0.85	1	161.6	2.43	80.7	130.9	NA
1200	63.53	0.85	1	161.6	2.43	80.7	130.9	NA
1300	63.53	0.85	1	161.6	2.43	80.7	130.9	NA
1400	63.53	0.85	1	161.6	2.43	80.7	130.9	NA
1500	63.53	0.85	1	161.6	2.43	80.7	130.9	NA
1600	63.53	0.85	1	161.6	2.43	80.7	130.9	NA
1700	63.53	0.85	1	161.6	2.43	80.7	130.9	NA
1800	63.53	0.85	1	161.6	2.43	80.7	130.9	NA
1900	63.53	0.85	1	161.6	2.43	80.7	130.9	NA
2000	63.53	0.85	1	161.6	2.43	80.7	130.9	NA

1. Outside diameter of round structural component of lattices or pole outside diameter for pole structures.

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JOB NO.: U0142-542-1 DESIGNED: JSP
DATE: 03/12/12 CHECKED: BDV

SHEET _____ OF _____

PROJECT: BRANFORD SOUTH

SUBJECT:

TIA/EIA-222-G WIND
DESIGN PRESSURES ON APPURTENANCES

Design Wind Pressure on Generic Appurtenances

Appurtenance Elev. (ft)	Member Shape	Appurt. Overall Width (ft)	Appurt. Overall Length (ft)	Ice Condition	Appurt. Outside Dia. (ft)	q_z (psf)	G_h	Force Coeff., C_a	Appurt. Design Pressure (psf)
100	Round	20	10	Ice	20	40.0	0.85	0.50	17.0
90	Round	20	10	Ice	20	39.1	0.85	0.50	16.6
80	Round	20	10	Ice	20	38.2	0.85	0.50	16.2
90	Round	20	10	Ice	20	39.1	0.85	0.50	16.6
70	Flat	20	10	Ice	20	37.1	0.85	1.20	37.8
						26.9	0.85	#DIV/0!	#DIV/0!
						26.9	0.85	#DIV/0!	#DIV/0!
						26.9	0.85	#DIV/0!	#DIV/0!
						26.9	0.85	#DIV/0!	#DIV/0!

Design Wind Pressure on Mounting Frames (See Figure 2-5 in code)

Frame Elev. (ft)	Component Shape	Frame Cross-Section	Solidarity Ratio, ε[1]	Round Reduction Factor, R_{rf}	q_z (psf)	G_h	Force Coeff., C_{as}	Component Design Pressure (psf)
				0.6	26.9	0.85	3.40	46.6
				0.6	26.9	0.85	3.40	46.6
				0.6	26.9	0.85	3.40	46.6
				0.6	26.9	0.85	3.40	46.6
				0.6	26.9	0.85	3.40	46.6

1. Solidarity ratio of mounting frame without antennas and mounting pipes, $(A_f + A_r)/A_g$.

Design Wind Pressure on Platforms[1] (See Figures 2-7, 2-8, and 2-9 in code)

Platform Elev. (ft)	Platform Type	Member Shape	Platform Shape	Solidarity Ratio, ε	q_z (psf)	G_h	Drag Factor, C_d	Force Coeff., C_a	Platform Design Pressure (psf)
					26.9	0.85	1.2	1.00	27.4
					26.9	0.85	1.2	1.00	27.4
					26.9	0.85	1.2	1.00	27.4
					26.9	0.85	1.2	1.00	27.4
					26.9	0.85	1.2	1.00	27.4

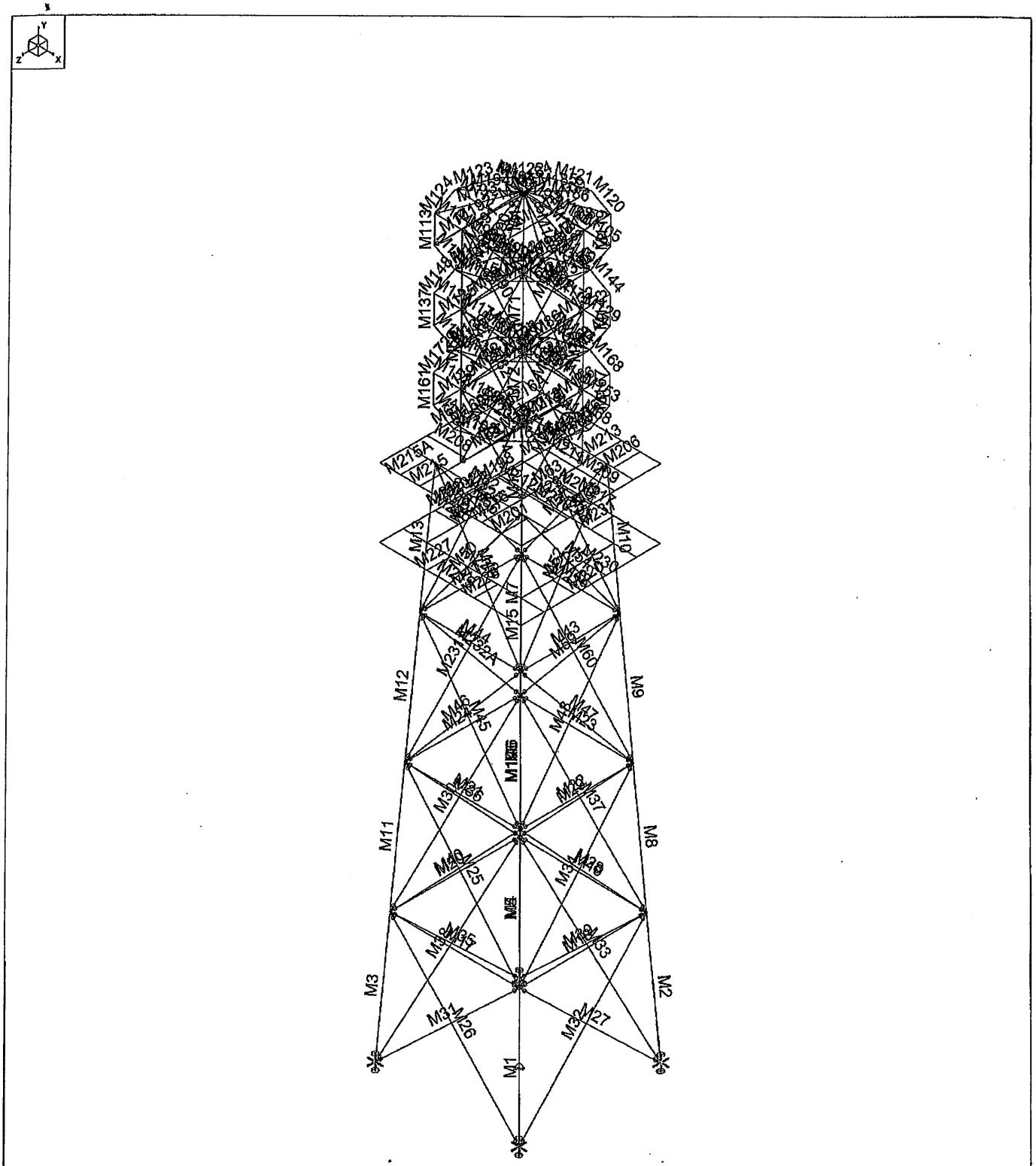
1. Effective projected areas, $(EPA)_A$, are subject to additional factors as indicated in sections 2.6.9.2.3, 2.6.9.2.4, and 2.6.9.2.5.

Design Wind Pressure on Transmission Lines

Line Elev. (ft)	Individual Line or Cluster	Cluster Shape	q_z (psf)	G_h	Force Coeff., C_{as}	Line Design Press. (psf)
			26.9	0.85	1.50	34.3
			26.9	0.85	1.50	34.3
			26.9	0.85	1.50	34.3
			26.9	0.85	1.50	34.3
			26.9	0.85	1.50	34.3

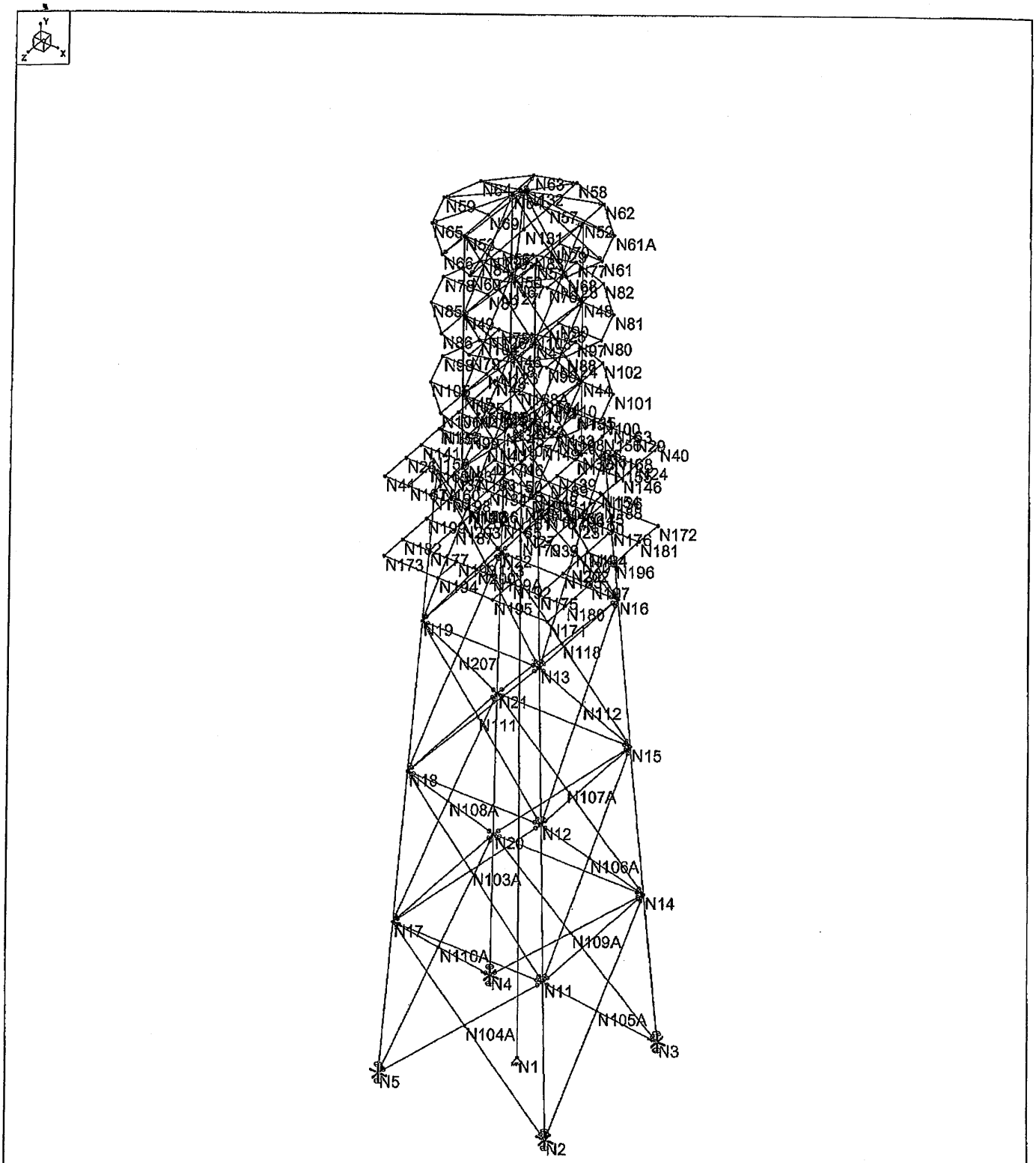
Design Wind Force on Guys

Guy Elev. (ft)	True Angle of Wind Incidence to Guy Chord, θ_G	Length of Guy, L_G (ft)	Guy Diameter, d (ft)	q_z (psf)	G_h	Drag Factor, C_d	Guy Design Pressure (psf)	Guy Design Force (lbs)
				26.9	0.85	1.20	27.40	0.0
				26.9	0.85	1.20	27.40	0.0
				26.9	0.85	1.20	27.40	0.0
				26.9	0.85	1.20	27.40	0.0
				26.9	0.85	1.20	27.40	0.0



Results for LC 1, Dead

Vector Structural Engineers	Branford South	SK - 1
JSP		Mar 12, 2012 at 9:18 AM
U0142.542.121		Branford.r3d



Results for LC 1, Dead

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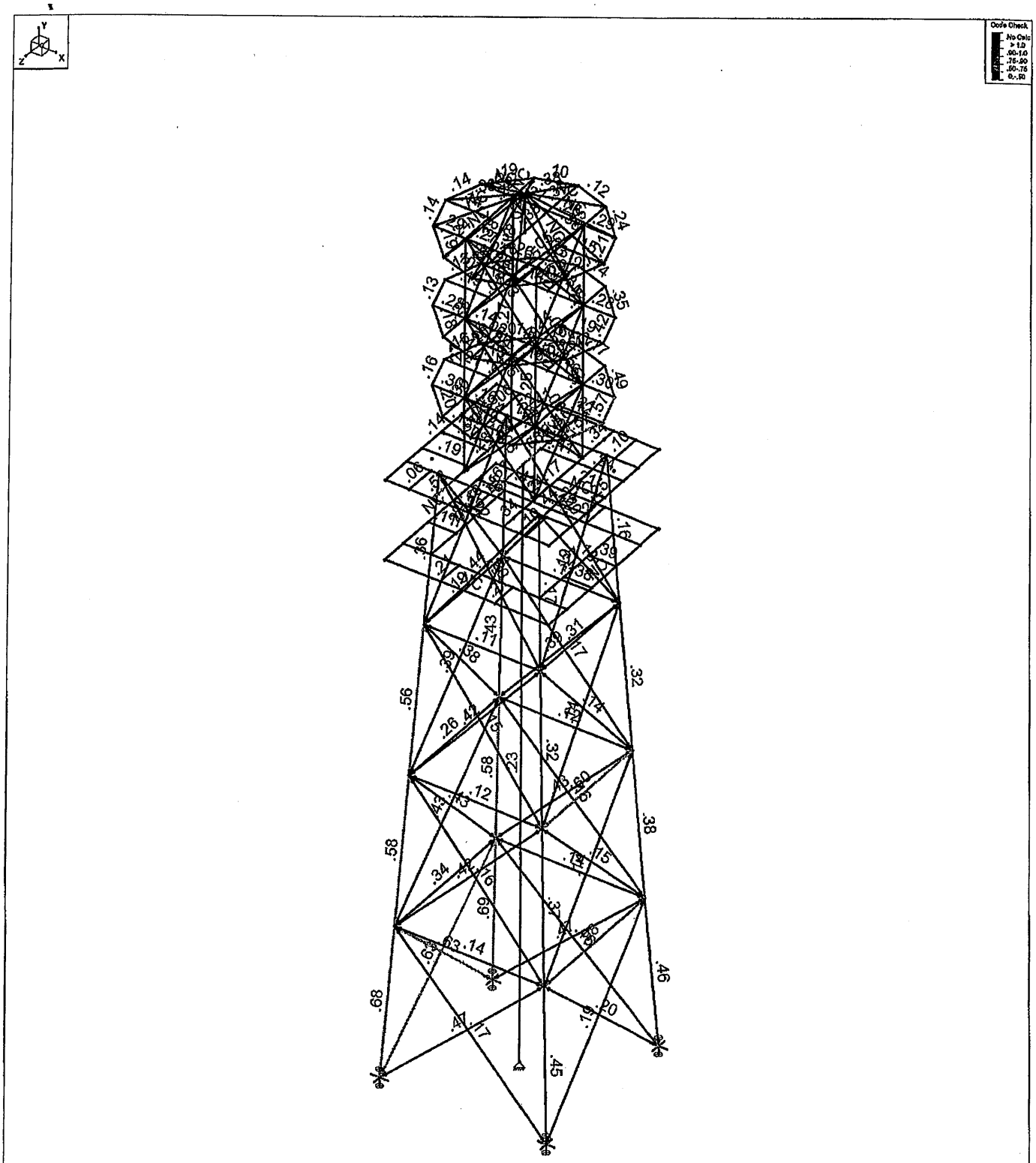
JSP		Mar 12, 2012 at 9:18 AM
U0142.542.121		Branford.r3d



Member Code Checks Displayed
Solution: Envelope

Vector Structural Engineers	Branford South	SK - 3
JSP		Mar 12, 2012 at 9:19 AM
U0142.542.121		Branford.r3d

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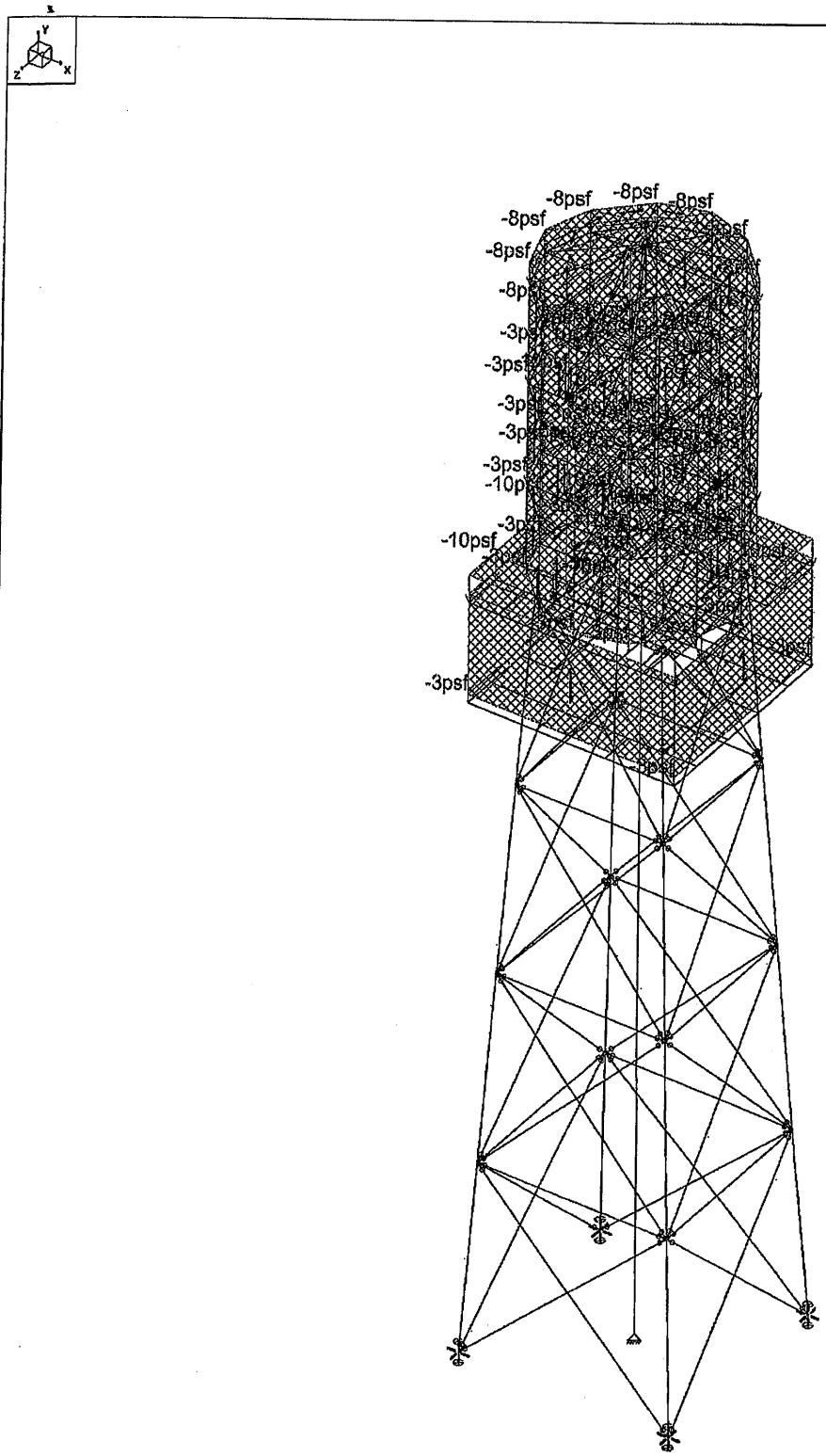

Loads: LC 1, Dead
Solution: Envelope

Vector Structural Engineers	Branford South	SK - 4
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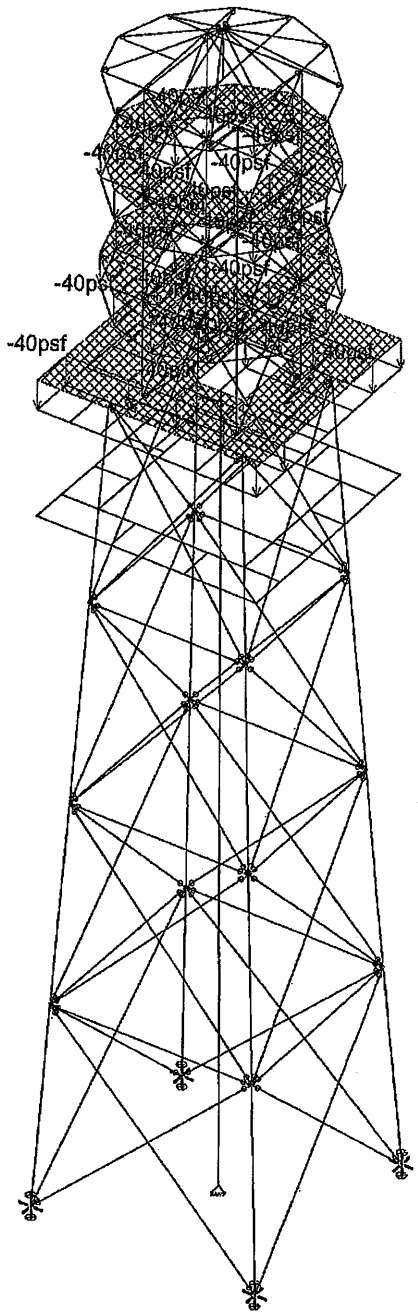
U0142.542.121		Branford.r3d



Loads: LL - Live Load
Solution: Envelope

Vector Structural Engineers	Branford South	SK - 5
JSP		Mar 12, 2012 at 9:20 AM
U0142.542.121		Branford.r3d

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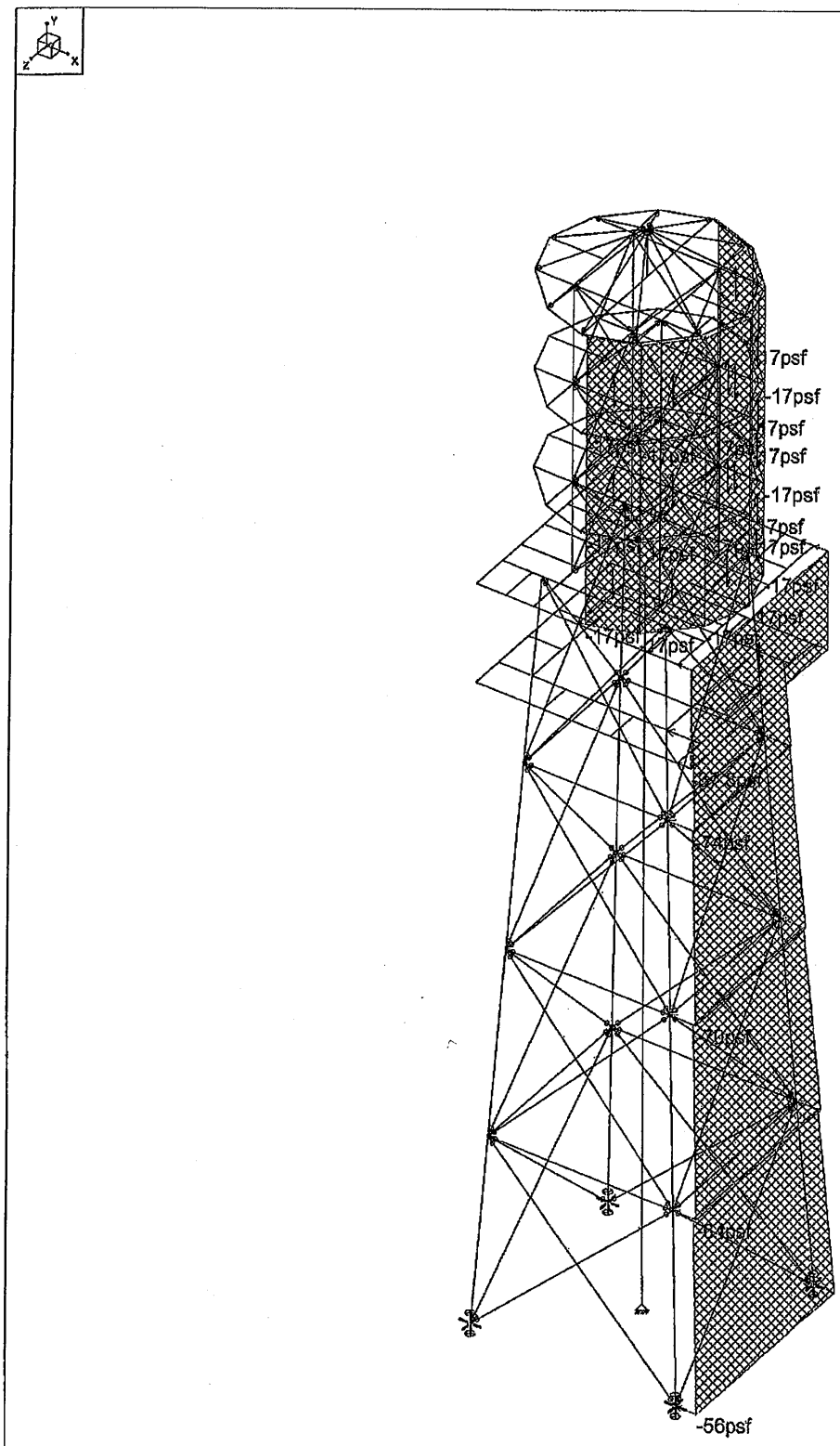
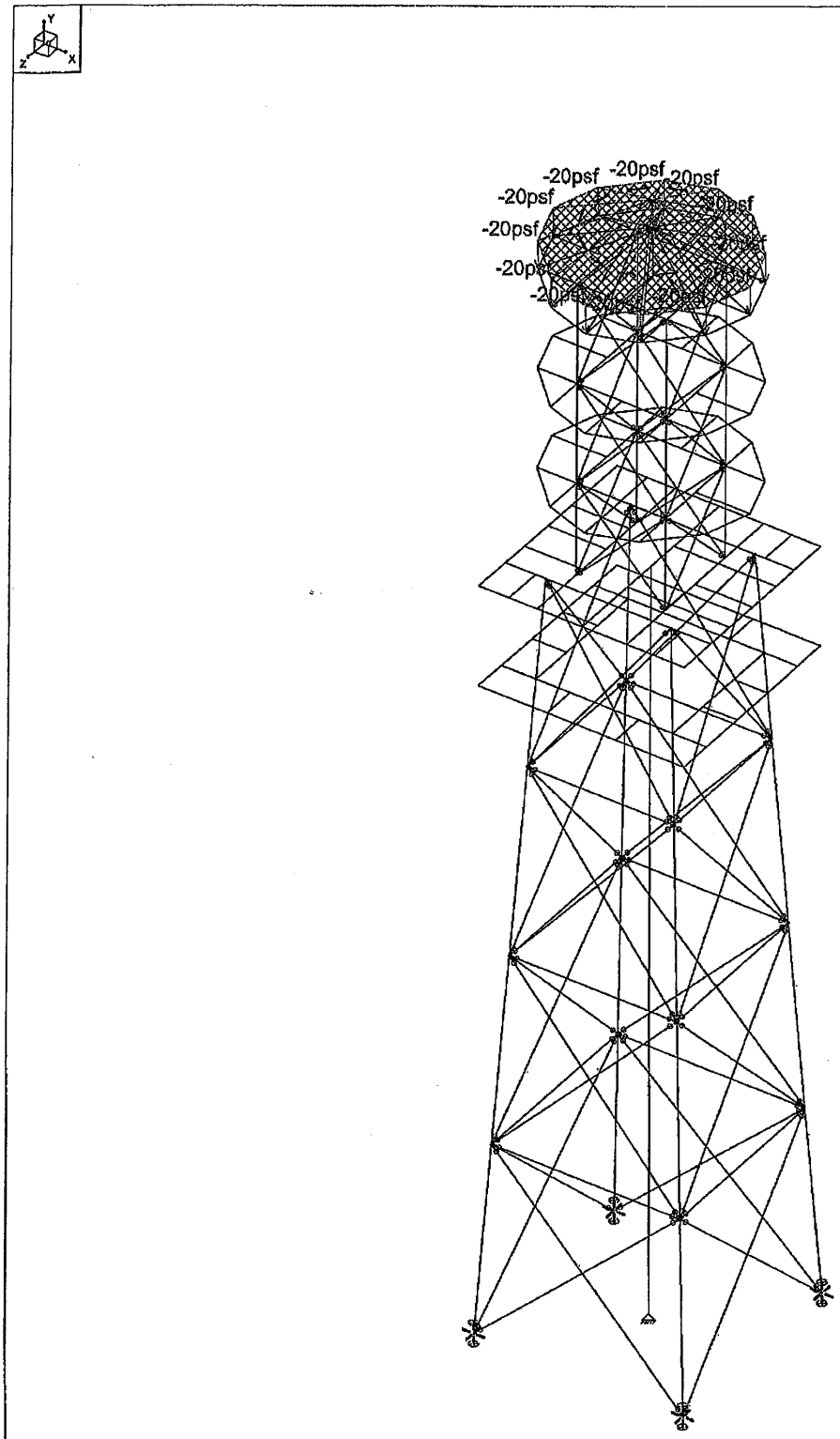


Loads: WL - Wind Load
Solution: Envelope

Vector Structural Engineers	Branford South	SK - 6
JSP		Mar 12, 2012 at 9:20 AM
U0142.542.121		Branford.r3d



Loads: RLL - Roof Live Load
Solution: Envelope

Vector Structural Engineers	Branford South	SK - 7
JSP		Mar 12, 2012 at 9:20 AM
U0142.542.121		Branford.r3d

Global

Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	97
Include Shear Deformation?	Yes
Include Warping?	Yes
Trans Load Btwn Intersecting Wood Wall?	No
Increase Nailing Capacity for Wind?	Yes
Area Load Mesh (in^2)	144
Merge Tolerance (in)	1/12
P-Delta Analysis Tolerance	0.50%
Include P-Delta for Walls?	Yes
Gravity Acceleration (ft/sec^2)	32.2
Wall Mesh Size (in)	12
Eigensolution Convergence Tol. (1.E-)	4
Vertical Axis	Y
Global Member Orientation Plane	XZ
Solver	Sparse Accelerated

Hot Rolled Steel Code	AISC 13th(360-05): LRFD
Adjust Stiffness?	Yes(Iterative)
Cold Formed Steel Code	AISI NAS-07: ASD
Wood Code	AF&PA NDS 05/08: ASD
Wood Temperature	< 100F
Concrete Code	ACI 318-08
Masonry Code	ACI 530-05/08: ASD
Aluminum Code	AA ADM1-05: ASD

Number of Shear Regions	4
Region Spacing Increment (in)	4
Biaxial Column Method	Exact Integration
Parme Beta Factor (PCA)	65
Concrete Stress Block	Rectangular
Use Cracked Sections?	Yes
Bad Framing Warnings?	No
Unused Force Warnings?	Yes
Min 1 Bar Diam. Spacing?	No
Concrete Rebar Set	REBAR SET: ASTMA615
Min % Steel for Column	1
Max % Steel for Column	8

Global, Continued

Seismic Code	ASCE 7-05
Seismic Base Elevation (ft)	Not Entered
Add Base Weight?	Yes
Cs X	.02
Ct Z	.02
T X (sec)	Not Entered
T Z (sec)	Not Entered
R X	3
R Z	3
Ct Exp. X	.75
Ct Exp. Z	.75
SDS	1
SDS	1
S1	1
TL (sec)	5
Occupancy Cat	Cat II
Seismic Detailing Code	ASCE 7-05
Om X	1
Om Z	1
Rho X	1
Rho Z	1

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(de...	Section/Shape	Type	Design List	Material	Design Rul...
1	M1	N2	N11			Lower Leg	Column	None	A500 Gr.42	Typical
2	M2	N3	N14			Lower Leg	Column	None	A500 Gr.42	Typical
3	M3	N5	N17			Lower Leg	Column	None	A500 Gr.42	Typical
4	M4	N4	N20			Lower Leg	Column	None	A500 Gr.42	Typical
5	M5	N11	N12			Lower Leg	Column	None	A500 Gr.42	Typical
6	M6	N12	N13			Upper Leg	Column	None	A500 Gr.42	Typical
7	M7	N13	N7			Upper Leg	Column	None	A500 Gr.42	Typical
8	M8	N14	N15			Lower Leg	Column	None	A500 Gr.42	Typical
9	M9	N15	N16			Upper Leg	Column	None	A500 Gr.42	Typical
10	M10	N16	N3			Upper Leg	Column	None	A500 Gr.42	Typical
11	M11	N17	N18			Lower Leg	Column	None	A500 Gr.42	Typical
12	M12	N18	N19			Upper Leg	Column	None	A500 Gr.42	Typical
13	M13	N19	N10			Upper Leg	Column	None	A500 Gr.42	Typical
14	M14	N20	N21			Lower Leg	Column	None	A500 Gr.42	Typical
15	M15	N21	N22			Lower Leg	Column	None	A500 Gr.42	Typical
16	M16	N22	N9			Upper Leg	Column	None	A500 Gr.42	Typical
17	M17	N17	N11		180	Lower Girts	HBrace	None	A36 Gr.36	Typical
18	M18	N11	N14		180	Lower Girts	HBrace	None	A36 Gr.36	Typical
19	M19	N14	N20		180	Lower Girts	HBrace	None	A36 Gr.36	Typical
20	M20	N20	N17		180	Lower Girts	HBrace	None	A36 Gr.36	Typical
21	M21	N18	N12		180	Lower Girts	HBrace	None	A36 Gr.36	Typical
22	M22	N12	N15		180	Lower Girts	HBrace	None	A36 Gr.36	Typical
23	M23	N15	N21		180	Lower Girts	HBrace	None	A36 Gr.36	Typical
24	M24	N21	N18		180	Lower Girts	HBrace	None	A36 Gr.36	Typical
25	M25	N18	N11		180	Lower Diago...	VBrace	None	A36 Gr.36	Typical
26	M26	N17	N2		180	Lower Diago...	VBrace	None	A36 Gr.36	Typical
27	M27	N11	N3		180	Lower Diago...	VBrace	None	A36 Gr.36	Typical
28	M28	N2	N14		180	Lower Diago...	VBrace	None	A36 Gr.36	Typical
29	M29	N15	N20		180	Lower Diago...	VBrace	None	A36 Gr.36	Typical
30	M30	N21	N17		180	Lower Diago...	VBrace	None	A36 Gr.36	Typical
31	M31	N5	N11			Lower Diago...	VBrace	None	A36 Gr.36	Typical
32	M32	N2	N14			Lower Diago...	VBrace	None	A36 Gr.36	Typical
33	M33	N3	N20			Lower Diago...	VBrace	None	A36 Gr.36	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(de...	Section/Shape	Type	Design List	Material	Design Rul...
34	M34	N11	N15			Lower Diago...	VBrace	None	A36 Gr.36	Typical
35	M35	N4	N17			Lower Diago...	VBrace	None	A36 Gr.36	Typical
36	M36	N20	N18			Lower Diago...	VBrace	None	A36 Gr.36	Typical
37	M37	N14	N21			Lower Diago...	VBrace	None	A36 Gr.36	Typical
38	M38	N20	N5		180	Lower Diago...	VBrace	None	A36 Gr.36	Typical
39	M39	N14	N4		180	Lower Diago...	VBrace	None	A36 Gr.36	Typical
40	M40	N17	N12		180	Lower Diago...	VBrace	None	A36 Gr.36	Typical
41	M41	N19	N22		90	Upper Girts	HBrace	None	A36 Gr.36	Typical
42	M42	N22	N16		90	Upper Girts	HBrace	None	A36 Gr.36	Typical
43	M43	N16	N13		90	Upper Girts	HBrace	None	A36 Gr.36	Typical
44	M44	N13	N19		90	Upper Girts	HBrace	None	A36 Gr.36	Typical
45	M45	N19	N12		180	Upper Diago...	VBrace	None	A36 Gr.36	Typical
46	M46	N13	N18		180	Upper Diago...	VBrace	None	A36 Gr.36	Typical
47	M47	N13	N15		180	Upper Diago...	VBrace	None	A36 Gr.36	Typical
48	M48	N18	N12		180	Upper Diago...	VBrace	None	A36 Gr.36	Typical
49	M49	N10	N13		180	Upper Diago...	VBrace	None	A36 Gr.36	Typical
50	M50	N19	N7		180	Upper Diago...	VBrace	None	A36 Gr.36	Typical
51	M51	N7	N16		180	Upper Diago...	VBrace	None	A36 Gr.36	Typical
52	M52	N16	N13		180	Upper Diago...	VBrace	None	A36 Gr.36	Typical
53	M55	N9	N19		180	Upper Diago...	VBrace	None	A36 Gr.36	Typical
54	M56	N22	N10		180	Upper Diago...	VBrace	None	A36 Gr.36	Typical
55	M57	N8	N22		180	Upper Diago...	VBrace	None	A36 Gr.36	Typical
56	M58	N16	N9		180	Upper Diago...	VBrace	None	A36 Gr.36	Typical
57	M59	N16	N21		180	Upper Diago...	VBrace	None	A36 Gr.36	Typical
58	M60	N15	N22		180	Upper Diago...	VBrace	None	A36 Gr.36	Typical
59	M61	N25	N24		180	Platform Bea...	Beam	None	A992	Typical
60	M62	N26	N25		180	Platform Bea...	Beam	None	A992	Typical
61	M63	N36	N35		180	Platform Bea...	Beam	None	A992	Typical
62	M64	N33	N37		180	Platform Bea...	Beam	None	A992	Typical
63	M65	N40	N39		180	Exterior Platf...	Beam	None	A992	Typical
64	M66	N39	N41		180	Exterior Platf...	Beam	None	A992	Typical
65	M67	N41	N42		180	Exterior Platf...	Beam	None	A992	Typical
66	M68	N42	N40		180	Exterior Platf...	Beam	None	A992	Typical
67	M69	N53	N33		180	Tank Legs	Column	None	A500 Gr.42	Typical
68	M70	N52	N32		180	Tank Legs	Column	None	A500 Gr.42	Typical
69	M71	N54	N34		180	Tank Legs	Column	None	A500 Gr.42	Typical
70	M72	N51	N31		180	Tank Legs	Column	None	A500 Gr.42	Typical
71	M73	N33	N43		180	Tank Diagon...	Beam	None	A36 Gr.36	Typical
72	M74	N31	N45		180	Tank Diagon...	Beam	None	A36 Gr.36	Typical
73	M75	N31	N44		180	Tank Diagon...	Beam	None	A36 Gr.36	Typical
74	M76	N32	N46		180	Tank Diagon...	Beam	None	A36 Gr.36	Typical
75	M77	N32	N46		180	Tank Diagon...	Beam	None	A36 Gr.36	Typical
76	M78	N34	N44		180	Tank Diagon...	Beam	None	A36 Gr.36	Typical
77	M79	N34	N45		180	Tank Diagon...	Beam	None	A36 Gr.36	Typical
78	M80	N33	N46		180	Tank Diagon...	Beam	None	A36 Gr.36	Typical
79	M81	N45	N47		180	Tank Diagon...	Beam	None	A36 Gr.36	Typical
80	M82	N43	N49		180	Tank Diagon...	Beam	None	A36 Gr.36	Typical
81	M83	N43	N48		180	Tank Diagon...	Beam	None	A36 Gr.36	Typical
82	M84	N44	N47		180	Tank Diagon...	Beam	None	A36 Gr.36	Typical
83	M85	N44	N50		180	Tank Diagon...	Beam	None	A36 Gr.36	Typical
84	M86	N46	N48		180	Tank Diagon...	Beam	None	A36 Gr.36	Typical
85	M87	N46	N49		180	Tank Diagon...	Beam	None	A36 Gr.36	Typical
86	M88	N45	N50		180	Tank Diagon...	Beam	None	A36 Gr.36	Typical
87	M89	N49	N51		180	Tank Diagon...	Beam	None	A36 Gr.36	Typical
88	M90	N47	N53		180	Tank Diagon...	Beam	None	A36 Gr.36	Typical
89	M91	N47	N52		180	Tank Diagon...	Beam	None	A36 Gr.36	Typical
90	M92	N51	N48		180	Tank Diagon...	Beam	None	A36 Gr.36	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(de...	Section/Shape	Type	Design List	Material	Design Rul...
91	M93	N48	N54		180	Tank Diagon...	Beam	None	A36 Gr.36	Typical
92	M94	N50	N52		180	Tank Diagon...	Beam	None	A36 Gr.36	Typical
93	M95	N50	N53		180	Tank Diagon...	Beam	None	A36 Gr.36	Typical
94	M96	N49	N54		180	Tank Diagon...	Beam	None	A36 Gr.36	Typical
95	M97	N54	N57		180	Tank Support...	Beam	None	A500 Gr.42	Typical
96	M98	N53	N56		180	Tank Support...	Beam	None	A500 Gr.42	Typical
97	M99	N56	N51		180	Tank Support...	Beam	None	A500 Gr.42	Typical
98	M100	N57	N52		180	Tank Support...	Beam	None	A500 Gr.42	Typical
99	M101	N66	N69		180	Tank Support...	Beam	None	A500 Gr.42	Typical
100	M102	N67	N70		180	Tank Support...	Beam	None	A500 Gr.42	Typical
101	M103	N54	N64		180	Tank Support...	Beam	None	A500 Gr.42	Typical
102	M104	N53	N65		180	Tank Support...	Beam	None	A500 Gr.42	Typical
103	M105	N52	N61A		180	Tank Support...	Beam	None	A500 Gr.42	Typical
104	M106	N51	N68		180	Tank Support...	Beam	None	A500 Gr.42	Typical
105	M107	N69	N63		180	Tank Support...	Beam	None	A500 Gr.42	Typical
106	M108	N70	N62		180	Tank Support...	Beam	None	A500 Gr.42	Typical
107	M109	N57	N58		180	Interior Chan...	Beam	None	A36 Gr.36	Typical
108	M110	N70	N67		180	Interior Chan...	Beam	None	A36 Gr.36	Typical
109	M111	N69	N59		180	Interior Chan...	Beam	None	A36 Gr.36	Typical
110	M112	N56	N60		180	Interior Chan...	Beam	None	A36 Gr.36	Typical
111	M113	N65	N66		180	Tank Support...	Beam	None	A36 Gr.36	Typical
112	M114	N66	N60		180	Tank Support...	Beam	None	A36 Gr.36	Typical
113	M115	N60	N67		180	Tank Support...	Beam	None	A36 Gr.36	Typical
114	M116	N67	N68		180	Tank Support...	Beam	None	A36 Gr.36	Typical
115	M117	N68	N61		180	Tank Support...	Beam	None	A36 Gr.36	Typical
116	M118	N61	N61A		180	Tank Support...	Beam	None	A36 Gr.36	Typical
117	M119	N61A	N62		180	Tank Support...	Beam	None	A36 Gr.36	Typical
118	M120	N62	N58		180	Tank Support...	Beam	None	A36 Gr.36	Typical
119	M121	N58	N63		180	Tank Support...	Beam	None	A36 Gr.36	Typical
120	M122	N63	N64		180	Tank Support...	Beam	None	A36 Gr.36	Typical
121	M123	N64	N59		180	Tank Support...	Beam	None	A36 Gr.36	Typical
122	M124	N59	N65		180	Tank Support...	Beam	None	A36 Gr.36	Typical
123	M125	N86	N89		180	Tank Support...	Beam	None	A500 Gr.42	Typical
124	M126	N87	N90		180	Tank Support...	Beam	None	A500 Gr.42	Typical
125	M127	N50	N84		180	Tank Support...	Beam	None	A500 Gr.42	Typical
126	M128	N49	N85		180	Tank Support...	Beam	None	A500 Gr.42	Typical
127	M129	N48	N81		180	Tank Support...	Beam	None	A500 Gr.42	Typical
128	M130	N47	N88		180	Tank Support...	Beam	None	A500 Gr.42	Typical
129	M131	N89	N83		180	Tank Support...	Beam	None	A500 Gr.42	Typical
130	M132	N90	N82		180	Tank Support...	Beam	None	A500 Gr.42	Typical
131	M133	N76	N77		180	Interior Chan...	Beam	None	A36 Gr.36	Typical
132	M134	N80	N80		180	Interior Chan...	Beam	None	A36 Gr.36	Typical
133	M135	N89	N78		180	Interior Chan...	Beam	None	A36 Gr.36	Typical
134	M136	N75	N79		180	Interior Chan...	Beam	None	A36 Gr.36	Typical
135	M137	N85	N86		180	Tank Support...	Beam	None	A36 Gr.36	Typical
136	M138	N86	N79		180	Tank Support...	Beam	None	A36 Gr.36	Typical
137	M139	N79	N87		180	Tank Support...	Beam	None	A36 Gr.36	Typical
138	M140	N87	N88		180	Tank Support...	Beam	None	A36 Gr.36	Typical
139	M141	N88	N80		180	Tank Support...	Beam	None	A36 Gr.36	Typical
140	M142	N80	N81		180	Tank Support...	Beam	None	A36 Gr.36	Typical
141	M143	N81	N82		180	Tank Support...	Beam	None	A36 Gr.36	Typical
142	M144	N82	N77		180	Tank Support...	Beam	None	A36 Gr.36	Typical
143	M145	N77	N83		180	Tank Support...	Beam	None	A36 Gr.36	Typical
144	M146	N83	N84		180	Tank Support...	Beam	None	A36 Gr.36	Typical
145	M147	N84	N78		180	Tank Support...	Beam	None	A36 Gr.36	Typical
146	M148	N78	N85		180	Tank Support...	Beam	None	A36 Gr.36	Typical
147	M149	N106	N109		180	Tank Support...	Beam	None	A500 Gr.42	Typical

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Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(de...	Section/Shape	Type	Design List	Material	Design Rul...
148	M150	N107	N110		180	Tank Support...	Beam	None	A500 Gr.42	Typical
149	M151	N46	N104		180	Tank Support...	Beam	None	A500 Gr.42	Typical
150	M152	N45	N105		180	Tank Support...	Beam	None	A500 Gr.42	Typical
151	M153	N44	N101		180	Tank Support...	Beam	None	A500 Gr.42	Typical
152	M154	N43	N108		180	Tank Support...	Beam	None	A500 Gr.42	Typical
153	M155	N109	N103		180	Tank Support...	Beam	None	A500 Gr.42	Typical
154	M156	N110	N102		180	Tank Support...	Beam	None	A500 Gr.42	Typical
155	M157	N96	N97		180	Interior Chan...	Beam	None	A36 Gr.36	Typical
156	M158	N110	N100		180	Interior Chan...	Beam	None	A36 Gr.36	Typical
157	M159	N109	N98		180	Interior Chan...	Beam	None	A36 Gr.36	Typical
158	M160	N95	N99		180	Interior Chan...	Beam	None	A36 Gr.36	Typical
159	M161	N105	N106		180	Tank Support...	Beam	None	A36 Gr.36	Typical
160	M162	N106	N99		180	Tank Support...	Beam	None	A36 Gr.36	Typical
161	M163	N99	N107		180	Tank Support...	Beam	None	A36 Gr.36	Typical
162	M164	N107	N108		180	Tank Support...	Beam	None	A36 Gr.36	Typical
163	M165	N108	N100		180	Tank Support...	Beam	None	A36 Gr.36	Typical
164	M166	N100	N101		180	Tank Support...	Beam	None	A36 Gr.36	Typical
165	M167	N101	N102		180	Tank Support...	Beam	None	A36 Gr.36	Typical
166	M168	N102	N97		180	Tank Support...	Beam	None	A36 Gr.36	Typical
167	M169	N97	N103		180	Tank Support...	Beam	None	A36 Gr.36	Typical
168	M170	N103	N104		180	Tank Support...	Beam	None	A36 Gr.36	Typical
169	M171	N104	N98		180	Tank Support...	Beam	None	A36 Gr.36	Typical
170	M172	N98	N105		180	Tank Support...	Beam	None	A36 Gr.36	Typical
171	M173	N50	N76		180	Tank Support...	Beam	None	A500 Gr.42	Typical
172	M174	N49	N75		180	Tank Support...	Beam	None	A500 Gr.42	Typical
173	M175	N75	N47		180	Tank Support...	Beam	None	A500 Gr.42	Typical
174	M176	N76	N48		180	Tank Support...	Beam	None	A500 Gr.42	Typical
175	M177	N46	N96		180	Tank Support...	Beam	None	A500 Gr.42	Typical
176	M178	N45	N95		180	Tank Support...	Beam	None	A500 Gr.42	Typical
177	M179	N95	N43		180	Tank Support...	Beam	None	A500 Gr.42	Typical
178	M180	N96	N44		180	Tank Support...	Beam	None	A500 Gr.42	Typical
179	M181	N57	N131		180	Roof Support	Column	None	A500 Gr.42	Typical
180	M182	N132	N56		180	Roof Support	Column	None	A500 Gr.42	Typical
181	M183	N131	N132		180	Roof Support	Column	None	A500 Gr.42	Typical
182	M184	N132	N63		180	Roof	Beam	Rectangular	DF/SPine	Typical
183	M185	N132	N58		180	Roof	Beam	Rectangular	DF/SPine	Typical
184	M186	N132	N62		180	Roof	Beam	Rectangular	DF/SPine	Typical
185	M187	N132	N61A		180	Roof	Beam	Rectangular	DF/SPine	Typical
186	M188	N132	N61		180	Roof	Beam	Rectangular	DF/SPine	Typical
187	M189	N132	N68		180	Roof	Beam	Rectangular	DF/SPine	Typical
188	M190	N132	N67		180	Roof	Beam	Rectangular	DF/SPine	Typical
189	M191	N132	N60		180	Roof	Beam	Rectangular	DF/SPine	Typical
190	M192	N132	N66		180	Roof	Beam	Rectangular	DF/SPine	Typical
191	M193	N132	N65		180	Roof	Beam	Rectangular	DF/SPine	Typical
192	M194	N132	N59		180	Roof	Beam	Rectangular	DF/SPine	Typical
193	M195	N132	N64		180	Roof	Beam	Rectangular	DF/SPine	Typical
194	M196	N1	N6			Center Pipe	Column	None	A500 Gr.42	Typical
195	M197	N133	N6			Tank Support...	Beam	None	A500 Gr.42	Typical
196	M198	N6	N134			Tank Support...	Beam	None	A500 Gr.42	Typical
197	M199	N140	N138			Interior Chan...	Beam	None	A36 Gr.36	Typical
198	M200	N139	N136			Interior Chan...	Beam	None	A36 Gr.36	Typical
199	M201	N167	N27			Interior Chan...	Beam	None	A36 Gr.36	Typical
200	M202	N134	N137			Interior Chan...	Beam	None	A36 Gr.36	Typical
201	M205	N133	N135			Interior Chan...	Beam	None	A36 Gr.36	Typical
202	M206	N168	N29			Interior Chan...	Beam	None	A36 Gr.36	Typical
203	M207	N143	N142			Interior Chan...	Beam	None	A36 Gr.36	Typical
204	M208	N144	N141			Interior Chan...	Beam	None	A36 Gr.36	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(de...	Section/Shape	Type	Design List	Material	Design Rul...
205	M209	N147	N146			Interior Chan...	Beam	None	A36 Gr.36	Typical
206	M210	N148	N145			Interior Chan...	Beam	None	A36 Gr.36	Typical
207	M211	N147	N149			Tank Support...	Beam	None	A500 Gr.42	Typical
208	M212	N148	N150			Tank Support...	Beam	None	A500 Gr.42	Typical
209	M213	N36	N163			Tank Support...	Beam	None	A36 Gr.36	Typical
210	M214	N35	N164			Tank Support...	Beam	None	A36 Gr.36	Typical
211	M215	N37	N166			Tank Support...	Beam	None	A36 Gr.36	Typical
212	M216	N35	N165			Tank Support...	Beam	None	A36 Gr.36	Typical
213	M215A	N169	N167A			Interior Chan...	Beam	None	A36 Gr.36	Typical
214	M216A	N170	N168A			Interior Chan...	Beam	None	A36 Gr.36	Typical
215	M217	N172	N174			FRP	Beam	None	FRP	Typical
216	M218	N174	N173			FRP	Beam	None	FRP	Typical
217	M219	N173	N171			FRP	Beam	None	FRP	Typical
218	M220	N171	N172			FRP	Beam	None	FRP	Typical
219	M221	N181	N183			Tank Support...	Beam	None	A500 Gr.42	Typical
220	M222	N180	N182			Tank Support...	Beam	None	A500 Gr.42	Typical
221	M223	N176	N175			Tank Support...	Beam	None	A500 Gr.42	Typical
222	M224	N178	N177			Tank Support...	Beam	None	A500 Gr.42	Typical
223	M225	N186	N198			Outrigger	HBrace	None	A36 Gr.36	Typical
224	M226	N187	N199			Outrigger	HBrace	None	A36 Gr.36	Typical
225	M227	N193	N194			Outrigger	HBrace	None	A36 Gr.36	Typical
226	M228	N192	N195			Outrigger	HBrace	None	A36 Gr.36	Typical
227	M229	N185	N197			Outrigger	HBrace	None	A36 Gr.36	Typical
228	M230	N184	N196			Outrigger	HBrace	None	A36 Gr.36	Typical
229	M231	N190	N188			Outrigger	HBrace	None	A36 Gr.36	Typical
230	M232	N191	N189			Outrigger	HBrace	None	A36 Gr.36	Typical
231	M231A	N18	N22			Upper Diago...	VBracel	None	A36 Gr.36	Typical
232	M232A	N19	N21			Upper Diago...	VBracel	None	A36 Gr.36	Typical

Joint Boundary Conditions

	Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]	Footing
1	N158	SlaveN142	SlaveN142	SlaveN142				
2	N159	SlaveN141	SlaveN141	SlaveN141				
3	N162	SlaveN145	SlaveN145	SlaveN145				
4	N155	SlaveN146	SlaveN146	SlaveN146				
5	N5	Reaction	Reaction	Reaction		Reaction		
6	N7	Reaction	Reaction	Reaction				
7	N2	Reaction	Reaction	Reaction		Reaction		
8	N8	Reaction	Reaction	Reaction		Reaction		
9	N4	Reaction	Reaction	Reaction		Reaction		

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	0	0	0	0	
2	N2	10.5	0	10.5	0	
3	N3	10.5	0	-10.5	0	
4	N4	-10.5	0	-10.5	0	
5	N5	-10.5	0	10.5	0	
6	N6	0	74.92	0	0	
7	N7	6.33	74.92	6.33	0	
8	N8	6.33	74.92	-6.33	0	
9	N9	-6.33	74.92	-6.33	0	
10	N10	-6.33	74.92	6.33	0	
11	N11	9.4575	18.73	9.4575	0	
12	N12	9.4575	37.46	9.4575	0	

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Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
13	N13	7.3725	56.19	7.3725	0	
14	N14	9.4575	18.73	9.4575	0	
15	N15	8.415	37.46	-8.415	0	
16	N16	7.3725	56.19	7.3725	0	
17	N17	-9.4575	18.73	9.4575	0	
18	N18	-8.415	37.46	-8.415	0	
19	N19	-7.3725	56.19	7.3725	0	
20	N20	9.4575	18.73	9.4575	0	
21	N21	-8.415	37.46	-8.415	0	
22	N22	7.3725	56.19	7.3725	0	
23	N23	10.33	74.92	6.33	0	
24	N24	10.33	74.92	-6.33	0	
25	N25	-10.33	74.92	-6.33	0	
26	N26	-10.33	74.92	6.33	0	
27	N27	7.33	74.92	10.33	0	
28	N28	7.33	74.92	-10.33	0	
29	N31	4.5	74.92	4.5	0	
30	N32	4.5	74.92	-4.5	0	
31	N33	-4.5	74.92	4.5	0	
32	N34	-4.5	74.92	-4.5	0	
33	N35	4.5	74.92	6.33	0	
34	N36	4.5	74.92	-6.33	0	
35	N37	-4.5	74.92	6.33	0	
36	N38	-4.5	74.92	-6.33	0	
37	N39	10.33	74.92	10.33	0	
38	N40	10.33	74.92	-10.33	0	
39	N41	-10.33	74.92	10.33	0	
40	N42	-10.33	74.92	-10.33	0	
41	N43	4.5	84.17	4.5	0	
42	N44	4.5	84.17	-4.5	0	
43	N45	-4.5	84.17	4.5	0	
44	N46	-4.5	84.17	-4.5	0	
45	N47	4.5	94.17	4.5	0	
46	N48	4.5	94.17	-4.5	0	
47	N49	-4.5	94.17	4.5	0	
48	N50	-4.5	94.17	-4.5	0	
49	N51	4.5	104.17	4.5	0	
50	N52	4.5	104.17	-4.5	0	
51	N53	-4.5	104.17	4.5	0	
52	N54	-4.5	104.17	-4.5	0	
53	N56	0	104.17	4.5	0	
54	N57	0	104.17	-4.5	0	
55	N58	0	104.17	-10	0	
56	N59	-10	104.17	0	0	
57	N60	0.	104.17	10	0	
58	N61	10	104.17	0	0	
59	N61A	8.5	104.17	-4.5	0	
60	N62	4.5	104.17	-8.5	0	
61	N63	-4.5	104.17	-8.5	0	
62	N64	-4.5	104.17	-4.5	0	
63	N65	-8.5	104.17	4.5	0	
64	N66	-4.5	104.17	8.5	0	
65	N67	4.5	104.17	8.5	0	
66	N68	8.5	104.17	4.5	0	
67	N69	-4.5	104.17	0.	0	
68	N70	4.5	104.17	0	0	
69	N75	0	94.17	4.5	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
70	N76	0	94.17	-4.5	0	
71	N77	0	94.17	-10	0	
72	N78	10	94.17	0	0	
73	N79	0.	94.17	10	0	
74	N80	10	94.17	0	0	
75	N81	8.5	94.17	-4.5	0	
76	N82	4.5	94.17	-8.5	0	
77	N83	-4.5	94.17	-8.5	0	
78	N84	-8.5	94.17	-4.5	0	
79	N85	-8.5	94.17	4.5	0	
80	N86	-4.5	94.17	8.5	0	
81	N87	4.5	94.17	8.5	0	
82	N88	8.5	94.17	4.5	0	
83	N89	-4.5	94.17	0.	0	
84	N90	4.5	94.17	0	0	
85	N95	0	84.17	4.5	0	
86	N96	0	84.17	-4.5	0	
87	N97	0	84.17	-10	0	
88	N98	10	84.17	0	0	
89	N99	0.	84.17	10	0	
90	N100	10	84.17	0	0	
91	N101	8.5	84.17	-4.5	0	
92	N102	4.5	84.17	-8.5	0	
93	N103	-4.5	84.17	-8.5	0	
94	N104	-8.5	84.17	-4.5	0	
95	N105	-8.5	84.17	4.5	0	
96	N106	-4.5	84.17	8.5	0	
97	N107	4.5	84.17	8.5	0	
98	N108	8.5	84.17	4.5	0	
99	N109	-4.5	84.17	0.	0	
100	N110	4.5	84.17	0	0	
101	N103A	0	28.641259	8.905846	0	
102	N104A	0	9.85419	9.951522	0	
103	N105A	9.951522	9.85419	-0	0	
104	N106A	8.905846	28.641259	0	0	
105	N107A	0	28.641259	-8.905846	0	
106	N108A	8.905846	28.641259	0	0	
107	N109A	0	9.85419	-9.951522	0	
108	N110A	9.951522	9.85419	0	0	
109	N111	0	47.443401	7.85933	0	
110	N112	7.85933	47.443401	0	0	
111	N113	0	66.267499	6.811593	0	
112	N114	6.811593	66.267499	0	0	
113	N116	-6.811593	66.267499	0	0	
114	N117	0	66.267499	-6.811593	0	
115	N118	0.	47.443401	-7.85933	0	
116	N119	0	79.545	4.5	0	
117	N120	4.5	79.545	0.	0	
118	N121	0	79.545	4.5	0	
119	N122	-4.5	79.545	-0.	0	
120	N123	0	89.17	4.5	0	
121	N124	4.5	89.17	0	0	
122	N125	0	89.17	4.5	0	
123	N126	-4.5	89.17	0	0	
124	N127	0	99.17	4.5	0	
125	N128	4.5	99.17	0	0	
126	N129	0	99.17	4.5	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
127	N130	-4.5	99.17	0	0	
128	N131	0	104.17	0	0	
129	N132	0	109	0	0	
130	N133	0	74.92	-6.33	0	
131	N134	0	74.92	6.33	0	
132	N135	0	74.92	-10.33	0	
133	N136	10.33	74.92	0	0	
134	N137	0	74.92	10.33	0	
135	N138	-10.33	74.92	0	0	
136	N139	4.5	74.92	0	0	
137	N140	-4.5	74.92	0	0	
138	N141	-10.33	74.92	3.5	0	
139	N142	-10.33	74.92	-3.5	0	
140	N143	-4.5	74.92	-3.5	0	
141	N144	-4.5	74.92	3.5	0	
142	N145	10.33	74.92	3.5	0	
143	N146	10.33	74.92	-3.5	0	
144	N147	4.5	74.92	-3.5	0	
145	N148	4.5	74.92	3.5	0	
146	N149	0	74.92	3.5	0	
147	N150	0	74.92	3.5	0	
148	N151	0	74.92	-10	0	
149	N152	-10	74.92	0	0	
150	N153	0	74.92	10	0	
151	N154	10	74.92	-0.	0	
152	N155	8.5	74.92	-4.5	0	
153	N156	4.5	74.92	-8.5	0	
154	N157	4.5	74.92	-8.5	0	
155	N158	-8.5	74.92	-4.5	0	
156	N159	8.5	74.92	4.5	0	
157	N160	-4.5	74.92	8.5	0	
158	N161	4.5	74.92	8.5	0	
159	N162	8.5	74.92	4.5	0	
160	N163	4.5	74.92	-10.33	0	
161	N164	-4.5	74.92	-10.33	0	
162	N165	4.5	74.92	10.33	0	
163	N166	-4.5	74.92	10.33	0	
164	N167	7.33	74.92	6.33	0	
165	N168	7.33	74.92	-6.33	0	
166	N167A	7.33	74.92	-10.33	0	
167	N168A	-7.33	74.92	-10.33	0	
168	N169	7.33	74.92	6.33	0	
169	N170	-7.33	74.92	-6.33	0	
170	N171	7.33	64.92	10.33	0	
171	N172	10.33	64.92	-10.33	0	
172	N173	10.33	64.92	10.33	0	
173	N174	-10.33	64.92	-10.33	0	
174	N175	6.886594	64.92	6.886594	0	
175	N176	6.886594	64.92	-6.886594	0	
176	N177	-6.886594	64.92	6.886594	0	
177	N178	-6.886594	64.92	-6.886594	0	
178	N179	0	64.92	0	0	
179	N180	10.33	64.92	6.886594	0	
180	N181	10.33	64.92	-6.886594	0	
181	N182	-10.33	64.92	6.886594	0	
182	N183	-10.33	64.92	-6.886594	0	
183	N184	6.886594	64.92	-2.295531	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
184	N185	6.886594	64.92	2.295531	0	
185	N186	-6.886594	64.92	-2.295531	0	
186	N187	-6.886594	64.92	2.295531	0	
187	N188	3.443198	64.92	-10.33	0	
188	N189	3.443198	64.92	10.33	0	
189	N190	3.443198	64.92	-6.886594	0	
190	N191	3.443198	64.92	6.886594	0	
191	N192	3.443198	64.92	6.886594	0	
192	N193	3.443198	64.92	-6.886594	0	
193	N194	-3.443198	64.92	10.33	0	
194	N195	-3.443198	64.92	-10.33	0	
195	N196	10.33	64.92	-2.295531	0	
196	N197	10.33	64.92	2.295531	0	
197	N198	-10.33	64.92	-2.295531	0	
198	N199	-10.33	64.92	2.295531	0	
199	N199A	0.985804	64.92	6.886594	0	
200	N200	0.985804	64.92	-6.886594	0	
201	N201	6.886594	64.92	-0.985804	0	
202	N202	6.886594	64.92	0.985804	0	
203	N203	-6.886594	64.92	0.985804	0	
204	N204	-6.886594	64.92	-0.985804	0	
205	N205	-0.985804	64.92	-6.886594	0	
206	N206	0.985804	64.92	6.886594	0	
207	N207	-7.85933	47.443401	0	0	

Member Distributed Loads (BLC 8 : BLC 2 Transient Area Loads)

	Member Label	Direction	Start Magnitude[k/ft,d...	End Magnitude[k/ft,d...	Start Location[ft,%]	End Location[ft,%]
1	M170	Y	-.028	-.028	2.515e-14	5.657
2	M171	Y	-.028	-.028	2.748e-14	4.743
3	M172	Y	-.028	-.028	8.715e-15	4.743
4	M173	Y	-.028	-.028	2.515e-14	5.657
5	M165	Y	-.043	-.043	0	4.743
6	M164	Y	-.028	-.028	2.748e-14	5.657
7	M163	Y	-.043	-.043	0	4.743
8	M162	Y	-.028	-.028	3.872e-14	4.743
9	M166	Y	-.028	-.028	9.548e-15	4.743
10	M167	Y	-.028	-.028	2.515e-14	5.657
11	M168	Y	-.028	-.028	8.715e-15	4.743
12	M169	Y	-.028	-.028	8.715e-15	4.743
13	M141	Y	-.015	-.015	1.399e-14	4.743
14	M142	Y	-.03	-.03	0	4.743
15	M166	Y	-.015	-.015	0	4.743
16	M143	Y	-.015	-.015	1.571e-14	5.657
17	M167	Y	-.015	-.015	4.718e-15	5.657
18	M144	Y	-.015	-.015	1.99e-14	4.743
19	M168	Y	-.015	-.015	0	4.743
20	M145	Y	-.03	-.03	0	5.657
21	M170	Y	-.015	-.015	0	5.657
22	M146	Y	-.015	-.015	5.82e-15	4.743
23	M169	Y	-.015	-.015	6.217e-15	4.743
24	M140	Y	-.015	-.015	1.571e-14	5.657
25	M164	Y	-.015	-.015	4.718e-15	5.657
26	M147	Y	-.015	-.015	1.571e-14	5.657
27	M161	Y	-.015	-.015	4.718e-15	5.657
28	M148	Y	-.03	-.03	0	4.743
29	M172	Y	-.015	-.015	0	4.743

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Member Distributed Loads (BLC 8 : BLC 2 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,d...	End Magnitude[k/ft,d...	Start Location[ft,%]	End Location[ft,%]
30	M139	Y	-.03	-.03	0	4.743
31	M138	Y	-.015	-.015	1.779e-14	4.743
32	M142	Y	-.015	-.015	0	4.743
33	M147	Y	-.015	-.015	1.718e-14	4.743
34	M117	Y	-.015	-.015	0	4.743
35	M116	Y	-.015	-.015	1.571e-14	5.657
36	M146	Y	-.015	-.015	1.718e-15	5.657
37	M117	Y	-.015	-.015	1.399e-14	4.743
38	M141	Y	-.015	-.015	0	4.743
39	M118	Y	-.015	-.015	0	4.743
40	M119	Y	-.015	-.015	1.571e-14	5.657
41	M143	Y	-.015	-.015	4.718e-15	5.657
42	M123	Y	-.015	-.015	1.249e-16	4.743
43	M147	Y	-.015	-.015	6.217e-15	4.743
44	M122	Y	-.015	-.015	0	5.657
45	M121	Y	-.015	-.015	1.582e-15	4.743
46	M145	Y	-.015	-.015	6.217e-15	4.743
47	M120	Y	-.015	-.015	1.471e-15	4.743
48	M145	Y	-.015	-.015	1.249e-16	4.743
49	M124	Y	-.015	-.015	0	4.743
50	M113	Y	-.015	-.015	1.571e-14	5.657
51	M137	Y	-.015	-.015	4.718e-15	5.657
52	M114	Y	-.015	-.015	1.571e-14	4.743
53	M138	Y	-.015	-.015	0	4.743
54	M115	Y	-.015	-.015	0	4.743
55	M65	Y	-.015	-.015	4.441e-15	20.66
56	M226	Y	-.015	-.015	5.329e-15	20.66
57	M68	Y	-.015	-.015	4.441e-15	20.66
58	M217	Y	-.015	-.015	5.329e-15	20.66
59	M67	Y	-.015	-.015	4.441e-15	20.66
60	M218	Y	-.015	-.015	5.329e-15	20.66
61	M66	Y	-.015	-.015	4.441e-15	20.66
62	M219	Y	-.015	-.015	5.329e-15	20.66

Member Distributed Loads (BLC 9 : BLC 3 Transient Area Loads)

	Member Label	Direction	Start Magnitude[k/ft,d...	End Magnitude[k/ft,d...	Start Location[ft,%]	End Location[ft,%]
1	M129	Y	-.042	-.039	0	.8
2	M129	Y	-.039	-.035	.8	1.6
3	M129	Y	-.035	-.03	1.6	2.4
4	M129	Y	-.03	-.027	2.4	3.2
5	M129	Y	-.027	-.024	3.2	4
6	M134	Y	-.048	-.05	0	1.1
7	M134	Y	-.05	-.045	1.1	2.2
8	M134	Y	-.045	-.042	2.2	3.3
9	M134	Y	-.042	-.031	3.3	4.4
10	M132	Y	-.031	-.002	4.4	5.5
11	M142	Y	-.000464	-.002	.474	1.328
12	M142	Y	-.002	-.004	1.328	2.182
13	M142	Y	-.004	-.004	2.182	3.036
14	M142	Y	-.004	-.006	3.036	3.89
15	M142	Y	-.006	-.008	3.89	4.743
16	M130	Y	-.044	-.039	0	.8
17	M130	Y	-.039	-.034	.8	1.6
18	M130	Y	-.034	-.029	1.6	2.4
19	M130	Y	-.029	-.027	2.4	3.2
20	M130	Y	-.027	-.025	3.2	4
21	M141	Y	-.008	-.005	0	.854

Member Distributed Loads (BLC 9 : BLC 3 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,d...	End Magnitude[k/ft,d...	Start Location[ft,%]	End Location[ft,%]
22	M141	Y	-.005	-.004	.854	1.708
23	M141	Y	-.004	-.004	1.708	2.561
24	M141	Y	-.004	-.002	2.561	3.415
25	M141	Y	-.002	-.0004239	3.415	4.269
26	M140	Y	-.011	-.01	0	1.131
27	M140	Y	-.01	-.009	1.131	2.263
28	M140	Y	-.009	-.006	2.263	3.394
29	M140	Y	-.006	-.002	3.394	4.525
30	M140	Y	-.002	-4.588e-5	4.525	5.657
31	M143	Y	-4.588e-5	-.002	0	1.131
32	M143	Y	-.002	-.006	1.131	2.263
33	M143	Y	-.006	-.009	2.263	3.394
34	M143	Y	-.009	-.01	3.394	4.525
35	M143	Y	-.01	-.011	4.525	5.657
36	M126	Y	-.023	-.022	0	1.02
37	M126	Y	-.022	-.021	1.02	2.04
38	M126	Y	-.021	-.021	2.04	3.06
39	M126	Y	-.021	-.009	3.06	4.08
40	M126	Y	-.009	-.0004508	4.08	5.1
41	M136	Y	-.048	-.05	0	1.1
42	M136	Y	-.05	-.045	1.1	2.2
43	M136	Y	-.045	-.042	2.2	3.3
44	M136	Y	-.042	-.031	3.3	4.4
45	M136	Y	-.031	-.002	4.4	5.5
46	M139	Y	-.000464	-.002	.474	1.328
47	M139	Y	-.002	-.004	1.328	2.182
48	M139	Y	-.004	-.004	2.182	3.036
49	M139	Y	-.004	-.006	3.036	3.89
50	M139	Y	-.006	-.008	3.89	4.743
51	M125	Y	-.023	-.022	0	1.02
52	M125	Y	-.022	-.024	1.02	2.04
53	M125	Y	-.024	-.022	2.04	3.06
54	M125	Y	-.022	-.009	3.06	4.08
55	M125	Y	-.009	3.123e-5	4.08	5.1
56	M138	Y	-.005	-.005	0	.854
57	M138	Y	-.005	-.004	.854	1.708
58	M138	Y	-.004	-.004	1.708	2.561
59	M138	Y	-.004	-.002	2.561	3.415
60	M138	Y	-.002	-.0004239	3.415	4.269
61	M128	Y	-.044	-.039	0	.8
62	M128	Y	-.039	-.034	.8	1.6
63	M128	Y	-.034	-.029	1.6	2.4
64	M128	Y	-.029	-.027	2.4	3.2
65	M128	Y	-.027	-.025	3.2	4
66	M137	Y	-4.588e-5	-.002	0	1.131
67	M137	Y	-.002	-.006	1.131	2.263
68	M137	Y	-.006	-.009	2.263	3.394
69	M137	Y	-.009	-.01	3.394	4.525
70	M137	Y	-.01	-.011	4.525	5.657
71	M127	Y	-.042	-.039	0	.8
72	M127	Y	-.039	-.035	.8	1.6
73	M127	Y	-.035	-.03	1.6	2.4
74	M127	Y	-.03	-.027	2.4	3.2
75	M127	Y	-.027	-.024	3.2	4
76	M146	Y	-.011	-.01	0	1.131
77	M146	Y	-.01	-.009	1.131	2.263
78	M146	Y	-.009	-.006	2.263	3.394

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Member Distributed Loads (BLC 9 : BLC 3 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,d...	End Magnitude[k/ft,d...	Start Location[ft,%]	End Location[ft,%]
79	M146	Y	-.006	-.002	3.394	4.525
80	M146	Y	-.002	-4.588e-5	4.525	5.657
81	M135	Y	-.048	-.05	0	1.1
82	M135	Y	-.05	-.045	1.1	2.2
83	M135	Y	-.045	-.042	2.2	3.3
84	M135	Y	-.042	-.031	3.3	4.4
85	M135	Y	-.031	-.002	4.4	5.5
86	M147	Y	-.008	-.006	0	.854
87	M147	Y	-.006	-.004	.854	1.708
88	M147	Y	-.004	-.004	1.708	2.561
89	M147	Y	-.004	-.002	2.561	3.415
90	M147	Y	-.002	-.000464	3.415	4.269
91	M148	Y	-.0004239	-.002	.474	1.328
92	M148	Y	-.002	-.004	1.328	2.182
93	M148	Y	-.004	-.004	2.182	3.036
94	M148	Y	-.004	-.005	3.036	3.89
95	M148	Y	-.005	-.008	3.89	4.743
96	M131	Y	.0004508	-.009	3.4	4.42
97	M131	Y	-.009	-.021	4.42	5.44
98	M131	Y	-.021	-.021	5.44	6.46
99	M131	Y	-.021	-.022	6.46	7.48
100	M131	Y	-.022	-.031	7.48	8.5
101	M133	Y	-.048	-.05	0	1.1
102	M133	Y	-.05	-.045	1.1	2.2
103	M133	Y	-.045	-.042	2.2	3.3
104	M133	Y	-.042	-.031	3.3	4.4
105	M133	Y	-.031	-.002	4.4	5.5
106	M145	Y	-.0004464	.002	.474	1.328
107	M145	Y	-.002	-.004	1.328	2.182
108	M145	Y	-.004	-.004	2.182	3.036
109	M145	Y	-.004	-.006	3.036	3.89
110	M145	Y	-.006	-.008	3.89	4.743
111	M132	Y	3.123e-5	-.009	3.4	4.42
112	M132	Y	-.009	-.022	4.42	5.44
113	M132	Y	-.022	-.024	5.44	6.46
114	M132	Y	-.024	-.022	6.46	7.48
115	M132	Y	-.022	-.023	7.48	8.5
116	M144	Y	-.008	-.006	0	.854
117	M144	Y	-.005	-.004	.854	1.708
118	M144	Y	-.004	-.004	1.708	2.561
119	M144	Y	-.004	-.002	2.561	3.415
120	M144	Y	-.002	-.0004239	3.415	4.269
121	M154	Y	-.041	-.039	0	.8
122	M154	Y	-.039	-.034	.8	1.6
123	M154	Y	-.034	-.03	1.6	2.4
124	M154	Y	-.03	-.027	2.4	3.2
125	M154	Y	-.027	-.023	3.2	4
126	M164	Y	-.012	-.011	0	1.131
127	M164	Y	-.011	-.009	1.131	2.263
128	M164	Y	-.009	-.006	2.263	3.394
129	M164	Y	-.006	-.003	3.394	4.525
130	M164	Y	-.003	4.281e-5	4.525	5.657
131	M153	Y	-.043	-.039	0	.8
132	M153	Y	-.039	-.033	.8	1.6
133	M153	Y	-.033	-.029	1.6	2.4
134	M153	Y	-.029	-.027	2.4	3.2
135	M153	Y	-.027	-.024	3.2	4

Member Distributed Loads (BLC 9 : BLC 3 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,d...	End Magnitude[k/ft,d...	Start Location[ft,%]	End Location[ft,%]
136	M167	Y	4.281e-5	-.002	0	1.131
137	M167	Y	-.003	-.006	1.131	2.263
138	M167	Y	-.006	-.009	2.263	3.394
139	M167	Y	-.009	-.011	3.394	4.525
140	M167	Y	-.011	-.013	4.525	5.657
141	M151	Y	-.042	-.039	0	.8
142	M151	Y	-.039	-.035	.8	1.6
143	M151	Y	-.035	-.03	1.6	2.4
144	M151	Y	-.03	-.027	2.4	3.2
145	M151	Y	-.027	-.024	3.2	4
146	M170	Y	-.011	-.01	0	1.131
147	M170	Y	-.01	-.009	1.131	2.263
148	M170	Y	-.009	-.006	2.263	3.394
149	M170	Y	-.006	-.002	3.394	4.525
150	M170	Y	-.002	-4.588e-5	4.525	5.657
151	M152	Y	-.043	-.039	0	.8
152	M152	Y	-.039	-.033	.8	1.6
153	M152	Y	-.033	-.029	1.6	2.4
154	M152	Y	-.029	-.027	2.4	3.2
155	M152	Y	-.027	-.024	3.2	4
156	M161	Y	4.281e-5	-.003	0	1.131
157	M161	Y	-.003	-.006	1.131	2.263
158	M161	Y	-.006	-.009	2.263	3.394
159	M161	Y	-.009	-.011	3.394	4.525
160	M161	Y	-.011	-.013	4.525	5.657
161	M158	Y	-.048	-.05	0	1.1
162	M158	Y	-.05	-.045	1.1	2.2
163	M158	Y	-.045	-.042	2.2	3.3
164	M158	Y	-.042	-.031	3.3	4.4
165	M158	Y	-.031	-.002	4.4	5.5
166	M165	Y	-.008	-.006	0	.854
167	M165	Y	-.006	-.004	.854	1.708
168	M165	Y	-.004	-.004	1.708	2.561
169	M165	Y	-.004	-.002	2.561	3.415
170	M165	Y	-.002	-.000464	3.415	4.269
171	M166	Y	-.0004239	-.002	.474	1.328
172	M166	Y	-.002	-.004	1.328	2.182
173	M166	Y	-.004	-.004	2.182	3.036
174	M166	Y	-.004	-.005	3.036	3.89
175	M166	Y	-.005	-.008	3.89	4.743
176	M156	Y	.0004508	-.009	3.4	4.42
177	M156	Y	-.009	-.021	4.42	5.44
178	M156	Y	-.021	-.021	5.44	6.46
179	M156	Y	-.021	-.022	6.46	7.48
180	M156	Y	-.022	-.031	7.48	8.5
181	M157	Y	-.048	-.05	0	1.1
182	M157	Y	-.05	-.045	1.1	2.2
183	M157	Y	-.045	-.042	2.2	3.3
184	M157	Y	-.042	-.031	3.3	4.4
185	M157	Y	-.031	-.002	4.4	5.5
186	M168	Y	-.008	-.006	0	.854
187	M168	Y	-.006	-.004	.854	1.708
188	M168	Y	-.004	-.004	1.708	2.561
189	M168	Y	-.004	-.002	2.561	3.415
190	M168	Y	-.002	-.000464	3.415	4.269
191	M155	Y	3.123e-5	-.009	3.4	4.42
192	M155	Y	-.009	-.022	4.42	5.44

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Member Distributed Loads (BLC 9 : BLC 3 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,d...	End Magnitude[k/ft,d...	Start Location[ft,%]	End Location[ft,%]
193	M155	Y	-.022	-.024	5.44	6.46
194	M155	Y	-.024	-.022	6.46	7.48
195	M155	Y	-.022	-.023	7.48	8.5
196	M169	Y	-.0004239	-.002	.474	1.328
197	M169	Y	-.002	-.004	1.328	2.182
198	M169	Y	-.004	-.004	2.182	3.036
199	M169	Y	-.004	-.005	3.036	3.89
200	M169	Y	-.005	-.006	3.89	4.743
201	M159	Y	-.048	-.05	0	1.1
202	M159	Y	-.05	-.045	1.1	2.2
203	M159	Y	-.045	-.042	2.2	3.3
204	M159	Y	-.042	-.031	3.3	4.4
205	M159	Y	-.031	-.002	4.4	5.5
206	M171	Y	-.008	-.006	0	.854
207	M171	Y	-.006	-.004	.854	1.708
208	M171	Y	-.004	-.004	1.708	2.561
209	M171	Y	-.004	-.002	2.561	3.415
210	M171	Y	-.002	-.0004239	3.415	4.269
211	M172	Y	-.0004239	-.002	.474	1.328
212	M172	Y	-.002	-.004	1.328	2.182
213	M172	Y	-.004	-.004	2.182	3.036
214	M172	Y	-.004	-.005	3.036	3.89
215	M172	Y	-.005	-.008	3.89	4.743
216	M150	Y	-.023	-.022	0	1.02
217	M150	Y	-.022	-.024	1.02	2.04
218	M150	Y	-.024	-.022	2.04	3.06
219	M150	Y	-.022	-.009	3.06	4.08
220	M150	Y	-.009	3.123e-5	4.08	5.1
221	M160	Y	-.05	-.05	0	1.1
222	M160	Y	-.05	-.045	1.1	2.2
223	M160	Y	-.045	-.043	2.2	3.3
224	M160	Y	-.043	-.032	3.3	4.4
225	M160	Y	-.032	-.002	4.4	5.5
226	M163	Y	-.0004239	-.002	.474	1.328
227	M163	Y	-.002	-.004	1.328	2.182
228	M163	Y	-.004	-.004	2.182	3.036
229	M163	Y	-.004	-.005	3.036	3.89
230	M163	Y	-.005	-.008	3.89	4.743
231	M149	Y	-.023	-.022	0	1.02
232	M149	Y	-.022	-.024	1.02	2.04
233	M149	Y	-.024	-.022	2.04	3.06
234	M149	Y	-.022	-.009	3.06	4.08
235	M149	Y	-.009	3.123e-5	4.08	5.1
236	M162	Y	-.006	-.005	0	.854
237	M162	Y	-.005	-.004	.854	1.708
238	M162	Y	-.004	-.004	1.708	2.561
239	M162	Y	-.004	-.002	2.561	3.415
240	M162	Y	-.002	-.0004239	3.415	4.269
241	M61	Y	-.012	-.012	14.83	20.66
242	M62	Y	-.012	-.012	14.83	20.66
243	M200	Y	-.035	-.035	1.11e-15	5.83
244	M209	Y	-.035	-.035	7.216e-16	5.83
245	M210	Y	-.035	-.035	8.882e-16	5.83
246	M61	Y	-.012	-.012	1.776e-15	5.83
247	M62	Y	-.012	-.012	1.721e-15	5.83
248	M199	Y	-.035	-.035	1.11e-15	5.83
249	M207	Y	-.035	-.035	7.216e-16	5.83

Member Distributed Loads (BLC 9 : BLC 3 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,d...	End Magnitude[k/ft,d...	Start Location[ft,%]	End Location[ft,%]
250	M202	Y	-.035	-.035	8.882e-16	5.83
251	M65	Y	-.016	-.016	16.66	20.66
252	M67	Y	-.016	-.016	2.359e-15	4
253	M201	Y	-.028	-.028	8.604e-16	4
254	M202	Y	-.028	-.028	1.582e-15	4
255	M215	Y	-.036	-.036	0	4
256	M216	Y	-.036	-.036	8.049e-16	4
257	M215A	Y	-.028	-.028	4.718e-16	4
258	M65	Y	-.016	-.016	2.359e-15	4
259	M67	Y	-.016	-.016	16.66	20.66
260	M202	Y	-.028	-.028	1.582e-15	4
261	M206	Y	-.028	-.028	4.718e-16	4
262	M214	Y	-.036	-.036	0	4
263	M214	Y	-.036	-.036	8.049e-16	4
264	M215A	Y	-.028	-.028	8.604e-16	4
265	M64	Y	-.022	-.022	0	12.66
266	M197	Y	-.023	-.023	0	6.33
267	M198	Y	-.023	-.023	1.638e-15	6.33
268	M63	Y	-.023	-.023	0	2.83
269	M197	Y	-.023	-.023	1.305e-15	2.83
270	M63	Y	-.023	-.023	2.83	12.66
271	M198	Y	-.023	-.023	3.5	6.33

Member Distributed Loads (BLC 10 : BLC 4 Transient Area Loads)

	Member Label	Direction	Start Magnitude[k/ft,d...	End Magnitude[k/ft,d...	Start Location[ft,%]	End Location[ft,%]
1	M187	Y	-3.555e-5	-.008	0	2.152
2	M187	Y	-.008	-.016	2.152	4.305
3	M187	Y	-.016	-.024	4.305	6.457
4	M187	Y	-.024	-.032	6.457	8.61
5	M187	Y	-.032	-.039	8.61	10.762
6	M188	Y	-.001	-.007	0	2.221
7	M188	Y	-.007	-.014	2.221	4.442
8	M188	Y	-.014	-.023	4.442	6.663
9	M188	Y	-.023	-.029	6.663	8.884
10	M188	Y	-.029	-.037	8.884	11.105
11	M189	Y	-.0001092	-.009	0	2.152
12	M189	Y	-.009	-.017	2.152	4.305
13	M189	Y	-.017	-.025	4.305	6.457
14	M189	Y	-.025	-.032	6.457	8.61
15	M189	Y	-.032	-.037	8.61	10.762
16	M190	Y	-.0002461	-.009	0	2.152
17	M190	Y	-.009	-.017	2.152	4.305
18	M190	Y	-.017	-.024	4.305	6.457
19	M190	Y	-.024	-.032	6.457	8.61
20	M190	Y	-.032	-.039	8.61	10.762
21	M191	Y	-.001	-.007	0	2.221
22	M191	Y	-.007	-.014	2.221	4.442
23	M191	Y	-.014	-.023	4.442	6.663
24	M191	Y	-.023	-.029	6.663	8.884
25	M191	Y	-.029	-.037	8.884	11.105
26	M192	Y	-.0001458	-.009	0	2.152
27	M192	Y	-.009	-.017	2.152	4.305
28	M192	Y	-.017	-.025	4.305	6.457
29	M192	Y	-.025	-.032	6.457	8.61
30	M192	Y	-.032	-.037	8.61	10.762
31	M193	Y	-3.555e-5	-.008	0	2.152
32	M193	Y	-.008	-.016	2.152	4.305

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Member Distributed Loads (BLC 10 : BLC 4 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,d...	End Magnitude[k/ft,d...	Start Location[ft,%]	End Location[ft,%]
33	M193	Y	-.016	-.024	4.305	6.457
34	M193	Y	-.024	-.032	6.457	8.61
35	M193	Y	-.032	-.039	8.61	10.762
36	M194	Y	-.001	-.007	0	2.221
37	M194	Y	-.007	-.014	2.221	4.442
38	M194	Y	-.014	-.023	4.442	6.663
39	M194	Y	-.023	-.029	6.663	8.884
40	M194	Y	-.029	-.037	8.884	11.105
41	M195	Y	-.0001092	-.009	0	2.152
42	M195	Y	-.009	-.017	2.152	4.305
43	M195	Y	-.017	-.025	4.305	6.457
44	M195	Y	-.025	-.032	6.457	8.61
45	M195	Y	-.032	-.037	8.61	10.762
46	M184	Y	.0002461	-.009	0	2.152
47	M184	Y	-.009	-.017	2.152	4.305
48	M184	Y	-.017	-.024	4.305	6.457
49	M184	Y	-.024	-.032	6.457	8.61
50	M184	Y	-.032	-.039	8.61	10.762
51	M185	Y	-.001	-.007	0	2.221
52	M185	Y	-.007	-.014	2.221	4.442
53	M185	Y	-.014	-.023	4.442	6.663
54	M185	Y	-.023	-.029	6.663	8.884
55	M185	Y	-.029	-.037	8.884	11.105
56	M186	Y	.0001458	-.009	0	2.152
57	M186	Y	-.009	-.017	2.152	4.305
58	M186	Y	-.017	-.025	4.305	6.457
59	M186	Y	-.025	-.032	6.457	8.61
60	M186	Y	-.032	-.037	8.61	10.762

Member Distributed Loads (BLC 11 : BLC 6 Transient Area Loads)

	Member Label	Direction	Start Magnitude[k/ft,d...	End Magnitude[k/ft,d...	Start Location[ft,%]	End Location[ft,%]
1	M129	Y	-.168	-.157	0	.8
2	M129	Y	-.157	-.139	.8	1.6
3	M129	Y	-.139	-.121	1.6	2.4
4	M129	Y	-.121	-.11	2.4	3.2
5	M129	Y	-.11	-.097	3.2	4
6	M134	Y	-.195	-.201	0	1.1
7	M134	Y	-.201	-.181	1.1	2.2
8	M134	Y	-.181	-.17	2.2	3.3
9	M134	Y	-.17	-.126	3.3	4.4
10	M134	Y	-.126	-.009	4.4	5.5
11	M142	Y	-.002	-.01	.474	1.328
12	M142	Y	-.01	-.015	1.328	2.182
13	M142	Y	-.015	-.018	2.182	3.036
14	M142	Y	-.018	-.023	3.036	3.89
15	M142	Y	-.023	-.032	3.89	4.743
16	M130	Y	-.175	-.157	0	.8
17	M130	Y	-.157	-.135	.8	1.6
18	M130	Y	-.135	-.118	1.6	2.4
19	M130	Y	-.118	-.11	2.4	3.2
20	M130	Y	-.11	-.1	3.2	4
21	M141	Y	-.03	-.02	0	.854
22	M141	Y	-.02	-.016	.854	1.708
23	M141	Y	-.016	-.016	1.708	2.561
24	M141	Y	-.016	-.01	2.561	3.415
25	M141	Y	-.01	-.002	3.415	4.269
26	M140	Y	-.044	-.042	0	1.131

Member Distributed Loads (BLC 11 : BLC 6 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,d...	End Magnitude[k/ft,d...	Start Location[ft,%]	End Location[ft,%]
27	M140	Y	-.042	-.036	1.131	2.263
28	M140	Y	-.036	-.024	2.263	3.394
29	M140	Y	-.024	-.01	3.394	4.525
30	M140	Y	-.01	.0001835	4.525	5.657
31	M143	Y	-.0001835	-.01	0	1.131
32	M143	Y	-.01	-.024	1.131	2.263
33	M143	Y	-.024	-.036	2.263	3.394
34	M143	Y	-.036	-.042	3.394	4.525
35	M143	Y	-.042	-.044	4.525	5.657
36	M126	Y	-.123	-.087	0	1.02
37	M126	Y	-.087	-.084	1.02	2.04
38	M126	Y	-.084	-.085	2.04	3.06
39	M126	Y	-.085	-.036	3.06	4.08
40	M126	Y	-.036	-.002	4.08	5.1
41	M136	Y	-.191	-.201	0	1.1
42	M136	Y	-.201	-.181	1.1	2.2
43	M136	Y	-.181	-.17	2.2	3.3
44	M136	Y	-.17	-.126	3.3	4.4
45	M136	Y	-.126	-.009	4.4	5.5
46	M136	Y	-.002	-.01	.474	1.328
47	M139	Y	-.01	-.015	1.328	2.182
48	M139	Y	-.015	-.018	2.182	3.036
49	M139	Y	-.018	-.023	3.036	3.89
50	M139	Y	-.023	-.032	3.89	4.743
51	M125	Y	-.091	-.088	0	1.02
52	M125	Y	-.088	-.095	1.02	2.04
53	M125	Y	-.095	-.087	2.04	3.06
54	M125	Y	-.087	-.035	3.06	4.08
55	M125	Y	-.035	.0001249	4.08	5.1
56	M138	Y	-.03	-.02	0	.854
57	M138	Y	-.02	-.016	.854	1.708
58	M138	Y	-.016	-.016	1.708	2.561
59	M138	Y	-.016	-.01	2.561	3.415
60	M138	Y	-.01	.002	3.415	4.269
61	M128	Y	-.175	-.157	0	.8
62	M128	Y	-.157	-.135	.8	1.6
63	M128	Y	-.135	-.118	1.6	2.4
64	M128	Y	-.118	-.11	2.4	3.2
65	M128	Y	-.11	-.1	3.2	4
66	M137	Y	.0001835	-.01	0	1.131
67	M137	Y	-.01	-.024	1.131	2.263
68	M137	Y	-.024	-.036	2.263	3.394
69	M137	Y	-.036	-.042	3.394	4.525
70	M137	Y	-.042	-.044	4.525	5.657
71	M127	Y	-.168	-.157	0	.8
72	M127	Y	-.157	-.139	.8	1.6
73	M127	Y	-.139	-.121	1.6	2.4
74	M127	Y	-.121	-.11	2.4	3.2
75	M127	Y	-.11	-.097	3.2	4
76	M146	Y	-.044	-.042	0	1.131
77	M146	Y	-.042	-.036	1.131	2.263
78	M146	Y	-.036	-.024	2.263	3.394
79	M146	Y	-.024	-.01	3.394	4.525
80	M146	Y	-.01	.0001835	4.525	5.657
81	M135	Y	-.191	-.201	0	1.1
82	M135	Y	-.201	-.181	1.1	2.2
83	M135	Y	-.181	-.17	2.2	3.3

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Member Distributed Loads (BLC 11 : BLC 6 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,d...	End Magnitude[k/ft,d...	Start Location[ft,%]	End Location[ft,%]
84	M135	Y	-.117	-.126	3.3	4.4
85	M135	Y	-.126	-.009	4.4	5.5
86	M147	Y	-.032	-.023	0	.854
87	M147	Y	-.023	-.018	.854	1.708
88	M147	Y	-.018	-.015	1.708	2.561
89	M147	Y	-.015	-.01	2.561	3.415
90	M147	Y	-.01	-.002	3.415	4.269
91	M148	Y	-.002	-.01	.474	1.328
92	M148	Y	-.01	-.016	1.328	2.182
93	M148	Y	-.016	-.016	2.182	3.036
94	M148	Y	-.016	-.02	3.036	3.89
95	M148	Y	-.02	-.03	3.89	4.743
96	M134	Y	.002	-.036	3.4	4.42
97	M131	Y	-.036	-.085	4.42	5.44
98	M131	Y	-.085	-.084	5.44	6.46
99	M131	Y	-.084	-.087	6.46	7.48
100	M131	Y	-.087	-.123	7.48	8.5
101	M133	Y	-.191	-.201	0	1.1
102	M133	Y	-.201	-.181	1.1	2.2
103	M133	Y	-.181	-.17	2.2	3.3
104	M133	Y	-.17	-.126	3.3	4.4
105	M133	Y	-.126	-.009	4.4	5.5
106	M145	Y	.002	-.01	.474	1.328
107	M145	Y	-.01	-.015	1.328	2.182
108	M145	Y	-.015	-.018	2.182	3.036
109	M145	Y	-.018	-.023	3.036	3.89
110	M145	Y	-.023	-.032	3.89	4.743
111	M132	Y	.0001249	-.035	3.4	4.42
112	M132	Y	-.035	-.087	4.42	5.44
113	M132	Y	-.087	-.095	5.44	6.46
114	M132	Y	-.095	-.088	6.46	7.48
115	M132	Y	-.088	-.091	7.48	8.5
116	M144	Y	.03	.02	0	.854
117	M144	Y	-.02	-.016	.854	1.708
118	M144	Y	-.016	-.015	1.708	2.561
119	M144	Y	-.016	-.01	2.561	3.415
120	M144	Y	-.01	.002	3.415	4.269
121	M154	Y	-.165	-.155	0	.8
122	M154	Y	-.155	-.137	.8	1.6
123	M154	Y	-.137	-.119	1.6	2.4
124	M154	Y	-.119	-.107	2.4	3.2
125	M154	Y	-.107	-.094	3.2	4
126	M154	Y	-.094	-.045	4	4.131
127	M164	Y	-.045	-.035	1.131	2.263
128	M164	Y	-.035	-.025	2.263	3.394
129	M164	Y	-.025	-.011	3.394	4.525
130	M164	Y	-.011	.0001713	4.525	5.657
131	M163	Y	-.172	-.156	0	.8
132	M153	Y	-.156	-.133	.8	1.6
133	M153	Y	-.133	-.116	1.6	2.4
134	M153	Y	-.116	-.107	2.4	3.2
135	M153	Y	-.107	-.097	3.2	4
136	M167	Y	.0001713	-.011	0	1.131
137	M167	Y	-.011	-.025	1.131	2.263
138	M167	Y	-.025	-.035	2.263	3.394
139	M167	Y	-.035	-.045	3.394	4.525
140	M167	Y	-.045	-.054	4.525	5.657

Member Distributed Loads (BLC 11 : BLC 6 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,d...	End Magnitude[k/ft,d...	Start Location[ft,%]	End Location[ft,%]
141	M151	Y	-.168	-.157	0	.8
142	M151	Y	-.157	-.139	.8	1.6
143	M151	Y	-.139	-.121	1.6	2.4
144	M151	Y	-.121	-.11	2.4	3.2
145	M151	Y	-.11	-.097	3.2	4
146	M170	Y	-.044	-.042	0	1.131
147	M170	Y	-.042	-.036	1.131	2.263
148	M170	Y	-.036	-.024	2.263	3.394
149	M170	Y	-.024	-.01	3.394	4.525
150	M170	Y	-.01	.0001836	4.525	5.657
151	M152	Y	-.172	-.156	0	.8
152	M152	Y	-.156	-.133	.8	1.6
153	M152	Y	-.133	-.116	1.6	2.4
154	M152	Y	-.116	-.107	2.4	3.2
155	M152	Y	-.107	-.097	3.2	4
156	M161	Y	.0001713	-.011	0	1.131
157	M161	Y	-.011	-.025	1.131	2.263
158	M161	Y	-.025	-.035	2.263	3.394
159	M161	Y	-.035	-.045	3.394	4.525
160	M161	Y	-.045	-.054	4.525	5.657
161	M158	Y	-.191	-.201	0	1.1
162	M158	Y	-.201	-.181	1.1	2.2
163	M158	Y	-.181	-.17	2.2	3.3
164	M158	Y	-.17	-.126	3.3	4.4
165	M158	Y	-.126	-.009	4.4	5.5
166	M165	Y	-.032	-.023	0	.854
167	M165	Y	-.023	-.018	.854	1.708
168	M165	Y	-.018	-.015	1.708	2.561
169	M165	Y	-.015	-.01	2.561	3.415
170	M165	Y	-.01	-.002	3.415	4.269
171	M166	Y	-.002	-.01	.474	1.328
172	M166	Y	-.01	-.016	1.328	2.182
173	M166	Y	-.016	-.016	2.182	3.036
174	M166	Y	-.016	-.02	3.036	3.89
175	M166	Y	-.02	-.03	3.89	4.743
176	M156	Y	.002	-.036	3.4	4.42
177	M156	Y	-.036	-.085	4.42	5.44
178	M156	Y	-.085	-.084	5.44	6.46
179	M156	Y	-.084	-.087	6.46	7.48
180	M156	Y	-.087	-.123	7.48	8.5
181	M157	Y	-.191	-.201	0	1.1
182	M157	Y	-.201	-.181	1.1	2.2
183	M157	Y	-.181	-.17	2.2	3.3
184	M157	Y	-.17	-.126	3.3	4.4
185	M157	Y	-.126	-.009	4.4	5.5
186	M168	Y	-.032	-.023	0	.854
187	M168	Y	-.023	-.018	.854	1.708
188	M168	Y	-.018	-.015	1.708	2.561
189	M168	Y	-.015	-.01	2.561	3.415
190	M168	Y	-.01	-.002	3.415	4.269
191	M155	Y	.0001249	-.035	3.4	4.42
192	M155	Y	-.035	-.087	4.42	5.44
193	M155	Y	-.087	-.095	5.44	6.46
194	M155	Y	-.095	-.088	6.46	7.48
195	M155	Y	-.088	-.091	7.48	8.5
196	M169	Y	-.002	-.01	.474	1.328
197	M169	Y	-.01	-.016	1.328	2.182

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Member Distributed Loads (BLC 11 : BLC 6 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,d...	End Magnitude[k/ft,d...	Start Location[ft,%]	End Location[ft,%]
198	M169	Y	-.016	-.015	2.182	3.036
199	M169	Y	-.016	-.02	3.036	3.89
200	M169	Y	-.02	-.03	3.89	4.743
201	M159	Y	-.191	-.201	0	1.1
202	M159	Y	-.201	-.18	1.1	2.2
203	M159	Y	-.181	-.17	2.2	3.3
204	M159	Y	-.17	-.126	3.3	4.4
205	M159	Y	-.126	-.009	4.4	5.5
206	M171	Y	-.002	-.023	0	.854
207	M171	Y	-.023	-.018	.854	1.708
208	M171	Y	-.018	-.015	1.708	2.561
209	M171	Y	-.015	-.01	2.561	3.415
210	M171	Y	-.01	-.002	3.415	4.269
211	M172	Y	-.002	-.01	.474	1.328
212	M172	Y	-.01	-.016	1.328	2.182
213	M172	Y	-.016	-.016	2.182	3.036
214	M172	Y	-.016	-.02	3.036	3.89
215	M172	Y	-.02	-.03	3.89	4.743
216	M150	Y	-.091	-.088	0	1.02
217	M150	Y	-.088	-.095	1.02	2.04
218	M150	Y	-.095	-.087	2.04	3.06
219	M150	Y	-.087	-.035	3.06	4.08
220	M150	Y	-.035	.0001249	4.08	5.1
221	M160	Y	-.199	-.201	0	1.1
222	M160	Y	-.201	-.18	1.1	2.2
223	M160	Y	-.18	-.172	2.2	3.3
224	M160	Y	-.172	-.126	3.3	4.4
225	M160	Y	-.126	-.007	4.4	5.5
226	M163	Y	-.002	-.01	.474	1.328
227	M163	Y	-.01	-.016	1.328	2.182
228	M163	Y	-.016	-.016	2.182	3.036
229	M163	Y	-.016	-.02	3.036	3.89
230	M163	Y	-.02	-.03	3.89	4.743
231	M149	Y	-.091	-.088	0	1.02
232	M149	Y	-.088	-.095	1.02	2.04
233	M149	Y	-.095	-.087	2.04	3.06
234	M149	Y	-.087	-.035	3.06	4.08
235	M149	Y	-.035	.0001249	4.08	5.1
236	M162	Y	-.03	-.02	0	.854
237	M162	Y	-.02	-.016	.854	1.708
238	M162	Y	-.016	-.016	1.708	2.561
239	M162	Y	-.016	-.01	2.561	3.415
240	M162	Y	-.01	-.002	3.415	4.269
241	M61	Y	-.046	-.046	14.83	20.66
242	M62	Y	-.046	-.046	14.83	20.66
243	M200	Y	-.138	-.138	1.11e-15	5.83
244	M209	Y	-.138	-.138	7.216e-16	5.83
245	M210	Y	-.138	-.138	8.882e-16	5.83
246	M61	Y	-.046	-.046	1.616e-15	5.83
247	M62	Y	-.046	-.046	1.721e-15	5.83
248	M199	Y	-.138	-.138	1.116e-15	5.83
249	M207	Y	-.138	-.138	7.216e-16	5.83
250	M208	Y	-.138	-.138	8.882e-16	5.83
251	M65	Y	-.064	-.064	16.66	20.66
252	M67	Y	-.064	-.064	2.359e-15	4
253	M201	Y	-.111	-.111	8.604e-16	4
254	M202	Y	-.197	-.191	1.582e-15	4

Member Distributed Loads (BLC 11 : BLC 6 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,d...	End Magnitude[k/ft,d...	Start Location[ft,%]	End Location[ft,%]
255	M215	Y	-.143	-.143	0	4
256	M216	Y	-.143	-.143	8.049e-16	4
257	M215A	Y	-.111	-.111	4.718e-16	4
258	M65	Y	-.064	-.064	2.359e-15	4
259	M67	Y	-.064	-.064	16.66	20.66
260	M205	Y	-.191	-.191	1.582e-15	4
261	M206	Y	-.111	-.111	4.718e-16	4
262	M213	Y	-.143	-.143	0	4
263	M214	Y	-.143	-.143	8.049e-16	4
264	M216A	Y	-.111	-.111	8.604e-16	4
265	M64	Y	-.09	-.09	0	12.66
266	M197	Y	-.09	-.09	0	6.33
267	M198	Y	-.09	-.09	1.638e-15	6.33
268	M63	Y	-.09	-.09	0	2.83
269	M197	Y	-.09	-.09	1.305e-15	2.83
270	M63	Y	-.09	-.09	2.83	12.66
271	M198	Y	-.09	-.09	3.5	6.33

Member Distributed Loads (BLC 12 : BLC 5 Transient Area Loads)

	Member Label	Direction	Start Magnitude[k/ft,d...	End Magnitude[k/ft,d...	Start Location[ft,%]	End Location[ft,%]
1	M187	Y	-8.888e-5	-.021	0	2.152
2	M187	Y	-.021	-.041	2.152	4.305
3	M187	Y	-.041	-.061	4.305	6.457
4	M187	Y	-.061	-.081	6.457	8.61
5	M187	Y	-.081	-.097	8.61	10.762
6	M188	Y	-.003	-.017	0	2.221
7	M188	Y	-.017	-.036	2.221	4.442
8	M188	Y	-.036	-.056	4.442	6.663
9	M188	Y	-.056	-.074	6.663	8.884
10	M188	Y	-.074	-.092	8.884	11.105
11	M189	Y	-.0002731	-.022	0	2.152
12	M189	Y	-.022	-.041	2.152	4.305
13	M189	Y	-.041	-.061	4.305	6.457
14	M189	Y	-.061	-.081	6.457	8.61
15	M189	Y	-.081	-.093	8.61	10.762
16	M190	Y	-.0006152	-.021	0	2.152
17	M190	Y	-.021	-.041	2.152	4.305
18	M190	Y	-.041	-.061	4.305	6.457
19	M190	Y	-.061	-.081	6.457	8.61
20	M190	Y	-.081	-.097	8.61	10.762
21	M191	Y	-.003	-.017	0	2.221
22	M191	Y	-.017	-.036	2.221	4.442
23	M191	Y	-.036	-.056	4.442	6.663
24	M191	Y	-.056	-.074	6.663	8.884
25	M191	Y	-.074	-.092	8.884	11.105
26	M192	Y	-.0008645	-.022	0	2.152
27	M192	Y	-.022	-.042	2.152	4.305
28	M192	Y	-.042	-.061	4.305	6.457
29	M192	Y	-.061	-.081	6.457	8.61
30	M192	Y	-.081	-.093	8.61	10.762
31	M193	Y	-8.888e-5	-.021	0	2.152
32	M193	Y	-.021	-.041	2.152	4.305
33	M193	Y	-.041	-.061	4.305	6.457
34	M193	Y	-.061	-.081	6.457	8.61
35	M193	Y	-.081	-.097	8.61	10.762
36	M194	Y	-.003	-.017	0	2.221
37	M194	Y	-.017	-.036	2.221	4.442

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Member Distributed Loads (BLC 12 : BLC 5 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,d...	End Magnitude[k/ft,d...	Start Location[ft,%]	End Location[ft,%]
38	M194	Y	-.085	-.056	4.442	6.663
39	M194	Y	-.056	-.074	6.663	8.884
40	M194	Y	-.074	-.092	8.884	11.105
41	M195	Y	-.0002731	-.022	0	2.152
42	M195	Y	-.022	-.041	2.152	4.305
43	M195	Y	-.041	-.061	4.305	6.457
44	M195	Y	-.061	-.081	6.457	8.61
45	M195	Y	-.081	-.093	8.61	10.762
46	M184	Y	-.0006152	-.021	0	2.152
47	M184	Y	-.021	-.041	2.152	4.305
48	M184	Y	-.041	-.061	4.305	6.457
49	M184	Y	-.061	-.081	6.457	8.61
50	M184	Y	-.081	-.092	8.61	10.762
51	M185	Y	-.003	-.017	0	2.221
52	M185	Y	-.017	-.036	2.221	4.442
53	M185	Y	-.036	-.056	4.442	6.663
54	M185	Y	-.056	-.074	6.663	8.884
55	M185	Y	-.074	-.092	8.884	11.105
56	M186	Y	-.0003845	-.022	0	2.152
57	M186	Y	-.022	-.042	2.152	4.305
58	M186	Y	-.042	-.061	4.305	6.457
59	M186	Y	-.061	-.081	6.457	8.61
60	M186	Y	-.081	-.093	8.61	10.762

Member Distributed Loads (BLC 13 : BLC 7 Transient Area Loads)

	Member Label	Direction	Start Magnitude[k/ft,d...	End Magnitude[k/ft,d...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.04	-.04	0	18.788
2	M2	X	-.04	-.04	0	18.788
3	M3	X	-.04	-.04	0	18.788
4	M4	X	-.04	-.04	0	18.788
5	M196	X	-.112	-.112	0	18.73
6	M5	X	-.045	-.045	0	18.788
7	M8	X	-.045	-.045	0	18.788
8	M11	X	-.045	-.045	0	18.788
9	M14	X	-.045	-.045	0	18.788
10	M196	X	-.128	-.128	18.73	37.46
11	M6	X	-.041	-.041	0	18.788
12	M9	X	-.041	-.041	0	18.788
13	M12	X	-.041	-.041	0	18.788
14	M15	X	-.041	-.041	0	18.788
15	M196	X	-.14	-.14	37.46	56.19
16	M7	X	-.044	-.044	0	8.757
17	M10	X	-.044	-.044	0	8.757
18	M13	X	-.044	-.044	0	8.757
19	M16	X	-.044	-.044	0	8.757
20	M196	X	-.148	-.148	56.19	64.92
21	M218	X	-.025	-.025	3.443	17.217
22	M220	X	-.025	-.025	3.443	17.217
23	M223	X	-.025	-.025	0	13.773
24	M224	X	-.025	-.025	0	13.773
25	M65	X	-.189	-.189	4.441e-15	20.66
26	M220	X	-.189	-.189	5.329e-15	20.66
27	M166	X	-.157	-.157	9.548e-15	4.743
28	M165	X	-.157	-.157	6.772e-15	4.743
29	M167	X	-.157	-.157	2.515e-14	5.657
30	M168	X	-.157	-.157	8.715e-15	4.743
31	M164	X	-.157	-.157	2.515e-14	5.657

Member Distributed Loads (BLC 13 : BLC 7 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,d...	End Magnitude[k/ft,d...	Start Location[ft,%]	End Location[ft,%]
32	M163	X	-.242	-.242	0	4.743
33	M140	X	-.085	-.085	1.571e-14	5.657
34	M164	X	-.085	-.085	4.718e-15	5.657
35	M139	X	-.17	-.17	0	4.743
36	M141	X	-.085	-.085	1.399e-14	4.743
37	M165	X	-.085	-.085	0	4.743
38	M142	X	-.17	-.17	0	4.743
39	M166	X	-.085	-.085	0	4.743
40	M145	X	-.085	-.085	1.571e-14	5.657
41	M167	X	-.085	-.085	4.718e-15	5.657
42	M144	X	-.085	-.085	1.996e-14	4.743
43	M168	X	-.085	-.085	0	4.743
44	M120	X	-.085	-.085	1.996e-14	4.743
45	M144	X	-.085	-.085	0	4.743
46	M119	X	-.085	-.085	1.571e-14	5.657
47	M143	X	-.085	-.085	4.718e-15	5.657
48	M118	X	-.085	-.085	0	4.743
49	M117	X	-.085	-.085	1.399e-14	4.743
50	M141	X	-.085	-.085	0	4.743
51	M116	X	-.085	-.085	1.571e-14	5.657
52	M140	X	-.085	-.085	4.718e-15	5.657
53	M115	X	-.085	-.085	0	4.743

Member Point Loads

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
No Data to Print ...			

Basic Load Cases

	BLC Description	Category	X Gra...	Y Gra...	Z Gra...	Joint	Point	Distributed	Area(Memb...	Surface(Plate/...
1	Structure Dead Load	DL		-1						
2	FRP Tank Dead Load	DL							44	
3	Bar Grating/ Misc Dead Lo...	DL							31	
4	Roof Dead Load	DL							12	
5	Roof Live Load	RLL							12	
6	Platform Live Load	LL							31	
7	Wind Load	WL							23	
8	BLC 2 Transient Area Loads	None						62		
9	BLC 3 Transient Area Loads	None						271		
10	BLC 4 Transient Area Loads	None						60		
11	BLC 6 Transient Area Loads	None						271		
12	BLC 5 Transient Area Loads	None						60		
13	BLC 7 Transient Area Loads	None						53		

Load Combinations

	Description	Solve	PD...	SRSS	B...	Fa...	B...	Fa...	BLC	Fa...	BLC	Factor	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	Dead	Yes	Y		DL	1														
2	Dead + Live	Yes	Y		DL	1	LL	1.6												
3	IBC 16-1	Yes	Y		DL	1.4														
4	IBC 16-2 (a)	Yes	Y		DL	1.2	LL	1.6			RLL	.5								
5	IBC 16-2 (b)	Yes	Y		DL	1.2	LL	1.6												
6	IBC 16-3 (a)	Yes	Y		DL	1.2	RLL	1.6	WL	.8										
7	IBC 16-3 (b)	Yes	Y		DL	1.2	WL	1.6	LL	.5										
8	IBC 16-4 (a)	Yes	Y		DL	1.2	WL	1.6	LL	.5										

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Load Combinations (Continued)

	Description	Solve	PD...	SRSS	B...	Fa...	B...	Fa...	BLC	Fa...	BLC	Factor	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
9	IBC 16-6	Yes	Y		DL	.9	WL	1.6												
10	Live Load	Yes	Y		LL	1														
11	Wind Load	Yes	Y		WL	1														
12	Roof Live Load	Yes	Y		RLL	1														
13	1.2 Dead + 1.6 Wind	Yes	Y		DL	1.2	WL	1.6												

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Ru...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Lower Leg	HSS6X6X4	Column	None	A500 Gr.42	Typical	5.24	28.6	28.6	45.6
2	Upper Leg	HSS6X6X4	Column	None	A500 Gr.42	Typical	5.3	16	16	25.8
3	Lower Diagonal	L6X6X5	VBrace	None	A36 Gr.36	Typical	3.67	13	13	.129
4	Upper Diagonal	L6X6X5	VBrace	None	A36 Gr.36	Typical	3.67	13	13	.129
5	Platform Beams	W10X49	Beam	None	A992	Typical	14.4	93.4	272	1.39
6	Exterior Platform	W8X18	Beam	None	A992	Typical	5.26	7.97	61.9	.172
7	Tank Legs	HSS4X4X4	Column	None	A500 Gr.42	Typical	3.37	7.8	7.8	12.8
8	Tank Diagonals	HSS3X3X4	Beam	None	A36 Gr.36	Typical	2.44	3.02	3.02	5.08
9	Tank Support Tube	HSS4X4X4	Beam	None	A500 Gr.42	Typical	3.37	7.8	7.8	12.8
10	Tank Support Channel	C6X8.2	Beam	None	A36 Gr.36	Typical	2.39	68.7	13.1	.074
11	Interior Channel	C4X5.4	Beam	None	A36 Gr.36	Typical	1.58	.312	3.85	.04
12	Roof Support	HSS4X4X4	Column	None	A500 Gr.42	Typical	3.37	7.8	7.8	12.8
13	Center Pipe	P24x3/8	Column	None	A500 Gr.42	Typical	27.833	1942.299	1942.299	3884.597
14	FRP	L4X4X4	Beam	None	FRP	Typical	1.94	3	3	.044
15	Outrigger	L4X4X4	HBrace	None	A36 Gr.36	Typical	1.94	3	3	.044
16	Lower Girts	L6X6X5	HBrace	None	A36 Gr.36	Typical	3.67	13	13	.129
17	Upper Girts	L6X6X5	HBrace	None	A36 Gr.36	Typical	3.67	13	13	.129

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (1...	Density[k/...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
2	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
3	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A500 Gr.42	29000	11154	.3	.65	.49	42	1.4	58	1.3
5	A500 Gr.46	29000	11154	.3	.65	.49	46	1.4	58	1.3
6	FRP	2800	450	.3	.65	.1	30	1.2	30	1

Envelope Joint Reactions

	Joint		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N5	max	19.198	8	120.052	8	-.288	12	0	1	0	12	0	1
2		min	-.287	12	1.512	12	-23.773	8	0	1	-.013	8	0	1
3	N1	max	7.22	9	12.413	4	0	8	0	1	0	1	0	1
4		min	-.067	12	.809	12	0	12	0	1	0	1	0	1
5	N2	max	13.481	9	27.899	4	17.929	9	0	1	0	10	0	1
6		min	-5.341	4	-89.924	9	-51.316	4	0	1	-.056	8	0	1
7	N3	max	13.678	9	27.516	4	5.284	4	0	1	.077	9	0	1
8		min	-5.312	4	-90.936	9	-18.035	9	0	1	-.003	3	0	1
9	N4	max	19.404	8	121.623	8	23.888	8	0	1	.007	11	0	1
10		min	-.29	12	1.539	12	-.29	12	0	1	-.005	3	0	1
11	Totals:	max	70.1	9	123.793	4	0	8						
12		min	0	10	0	11	0	12						

Envelope Joint Displacements

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation...	LC	Y Rotation...	LC	Z Rotation [...	LC
1	N1	max	0	12	0	11	0	12	1.397e-5	8	-4.86e-7	12	1.369e-2	8
2		min	0	8	0	4	0	8	-2.826e-7	12	-1.266e-5	8	-2.675e-6	12
3	N2	max	0	4	0	9	0	4	9.697e-6	10	0	8	2.72e-3	13
4		min	0	9	0	4	0	9	-1.458e-4	13	0	10	-1.09e-5	10
5	N3	max	0	4	0	9	0	9	1.505e-4	13	0	3	2.726e-3	13
6		min	0	9	0	4	0	4	-9.161e-6	10	0	9	-1.058e-5	10
7	N4	max	0	12	0	12	0	12	3.195e-5	3	0	3	2.744e-3	9
8		min	0	8	0	8	0	8	-1.032e-4	9	0	11	-2.875e-5	3
9	N5	max	0	12	0	12	0	8	9.845e-5	9	0	9	2.681e-3	9
10		min	0	8	0	4	0	12	-3.287e-5	3	0	12	-3.676e-5	3
11	N6	max	.009	4	.001	11	.014	8	1.819e-5	8	-4.86e-7	12	-9.574e-6	12
12		min	-2.353	8	-.011	4	0	12	-3.375e-7	12	-1.255e-5	8	-2.162e-3	8
13	N7	max	.002	3	.222	9	.008	4	3.104e-4	9	1.981e-4	9	3.845e-3	8
14		min	-2.141	8	-.195	4	-.002	11	-1.11e-4	8	-6.849e-5	4	-2.693e-4	12
15	N8	max	.002	6	.224	9	.024	8	1.402e-4	6	7.827e-5	4	3.784e-3	8
16		min	-2.14	8	-.186	4	0	6	-3.298e-4	9	1.742e-4	9	-2.62e-4	12
17	N9	max	.001	3	-.008	12	.002	8	6.565e-4	8	-5.342e-6	12	1.598e-3	9
18		min	-2.144	8	-.352	3	0	12	8.271e-6	10	-2.16e-4	8	-2.216e-3	4
19	N10	max	0	3	-.008	12	.028	8	4.466e-6	10	2.452e-4	8	1.658e-3	9
20		min	-2.141	8	-.362	6	0	12	-3.318e-4	13	-5.744e-6	12	-2.196e-3	4
21	N11	max	.007	4	.117	9	.007	4	1.512e-6	10	3.876e-4	8	9.193e-4	8
22		min	-.191	9	-.037	4	-.022	9	-4.207e-5	13	-5.597e-7	10	-5.628e-7	12
23	N12	max	.007	4	.193	9	.007	4	1.309e-5	11	9.574e-4	8	2.551e-3	13
24		min	-.539	9	-.072	4	-.011	9	-2.794e-5	3	-1.81e-6	10	-5.017e-6	10
25	N13	max	.006	4	.232	9	.008	4	5.375e-5	11	1.791e-3	8	2.65e-3	8
26		min	-1.307	8	-.107	4	-.007	4	-1.388e-4	4	-9.978e-7	10	-1.887e-5	12
27	N14	max	.007	4	.119	9	.025	9	5.83e-5	8	1.849e-5	3	9.509e-4	8
28		min	-.197	9	-.036	4	-.007	4	-2.391e-7	12	-5.403e-7	9	-1.019e-6	12
29	N15	max	.004	4	.196	9	.02	9	3.663e-5	8	4.102e-5	3	2.589e-3	8
30		min	-.6	9	-.021	4	-.005	4	-9.686e-8	12	-3.599e-4	9	-2.472e-6	10
31	N16	max	.004	4	.234	9	.017	9	1.512e-4	4	7.556e-5	3	2.616e-3	8
32		min	-.3	9	-.107	4	-.003	4	-5.036e-5	11	-1.622e-6	9	-1.866e-5	12
33	N17	max	0	12	-.002	12	.03	8	-3.104e-7	12	2.314e-5	3	8.878e-4	9
34		min	-.201	9	-.156	3	0	12	-3.598e-5	3	-1.415e-5	9	-3.317e-5	3
35	N18	max	0	12	-.004	12	.016	8	0	12	1.601e-4	8	2.589e-3	8
36		min	-.045	8	-.27	3	0	12	-8.924e-6	8	-1.679e-7	12	-1.955e-5	3
37	N19	max	0	12	-.006	12	.014	8	-5.41e-6	12	2.641e-4	8	2.35e-3	9
38		min	-.374	8	-.346	3	0	12	-2.088e-4	8	-1.221e-7	12	-2.808e-4	4
39	N20	max	0	12	-.002	12	0	12	2.798e-5	3	5.889e-5	8	8.013e-4	9
40		min	-.264	8	-.159	3	-.033	8	-3.739e-6	11	-3.904e-7	10	-3.66e-5	3
41	N21	max	0	12	-.004	12	0	12	5.692e-5	13	4.982e-5	3	3.016e-3	8
42		min	-.656	8	-.278	3	-.026	8	-5.264e-7	12	-1.201e-5	9	-3.844e-7	1
43	N22	max	0	12	-.006	12	0	12	2.759e-4	8	8.115e-5	3	2.206e-3	9
44		min	-1.324	8	-.333	3	-.024	8	-6.492e-6	12	-5.283e-4	9	-2.254e-4	4
45	N23	max	.002	3	.373	9	.011	8	1.243e-3	13	1.056e-4	4	3.541e-3	8
46		min	-2.141	8	-.059	3	0	12	-3.195e-5	10	-2.782e-7	9	-2.548e-4	12
47	N24	max	.002	6	.372	9	.013	8	8.296e-5	10	2.975e-4	9	3.48e-3	8
48		min	-2.141	8	-.059	3	0	12	-1.247e-3	12	-9.876e-5	4	-2.567e-4	12
49	N25	max	.001	3	.005	12	.014	8	8.579e-4	8	3.646e-4	8	1.702e-3	9
50		min	-2.141	8	-.111	3	0	12	-2.003e-4	9	-8.065e-6	12	-1.706e-3	4
51	N26	max	0	3	.005	12	.017	8	2.269e-4	3	-7.807e-6	12	1.762e-3	9
52		min	-2.141	8	-.124	3	0	12	-6.899e-4	9	-5.427e-4	8	-1.636e-3	4
53	N27	max	.001	3	.169	9	.008	4	2.081e-3	13	7.025e-5	8	3.98e-3	8
54		min	-2.147	8	-.149	5	-.001	11	-2.388e-4	10	-1.252e-6	12	-5.e-5	12
55	N29	max	.002	3	.171	9	.023	8	1.393e-4	12	-9.996e-7	12	3.895e-3	8
56		min	-2.147	8	-.148	5	0	6	-2.063e-3	13	-4.622e-5	8	-1.845e-5	12

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Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
57	N31	max	.005	6	.223	9	.012	8	2.428e-3	9	1.329e-3	9	6.211e-3	8
58		min	-2.166	8	-.263	4	0	12	-2.244e-3	7	-6.647e-4	7	-2.836e-3	12
59	N32	max	.005	4	.227	9	.014	8	2.259e-3	4	1.593e-4	4	6.197e-3	8
60		min	-2.167	8	-.267	4	0	12	-2.338e-3	9	-5.628e-3	9	-2.832e-3	12
61	N33	max	0	12	-.023	12	.016	8	-2.691e-4	12	9.597e-4	8	4.404e-3	9
62		min	-2.164	8	-.495	3	0	12	-4.949e-3	3	-2.407e-5	12	-1.053e-3	4
63	N34	max	0	12	-.023	12	.013	8	5.07e-3	8	-2.45e-5	12	4.384e-3	9
64		min	-2.163	8	-.49	3	0	12	-2.778e-4	12	-9.694e-4	8	-1.759e-3	4
65	N35	max	.001	3	.152	9	.012	8	2.937e-3	9	7.687e-4	9	4.322e-3	8
66		min	-2.141	8	-.197	4	0	12	-2.85e-3	4	-1.654e-4	4	-2.243e-4	10
67	N36	max	.002	3	.156	9	.014	8	2.611e-3	4	1.601e-4	4	4.269e-3	8
68		min	-2.141	8	-.196	4	0	12	-2.51e-3	9	-7.521e-4	9	-2.238e-4	12
69	N37	max	0	3	-.015	12	.016	8	-3.244e-4	12	7.027e-4	8	2.305e-3	9
70		min	-2.141	8	-.352	3	0	12	-6.855e-3	3	-1.807e-5	12	-2.073e-3	4
71	N38	max	.001	3	-.015	12	.013	8	5.97e-3	8	-1.78e-5	12	2.253e-3	9
72		min	-2.141	8	-.344	3	0	12	-5.271e-4	12	-6.821e-4	8	-2.209e-3	4
73	N39	max	.001	3	.3	9	.011	8	1.795e-3	8	5.235e-5	4	4.239e-3	8
74		min	-2.17	8	-.081	5	0	12	-7.627e-6	12	-2.433e-4	9	-5.782e-5	12
75	N40	max	.002	3	.299	9	.013	8	-7.507e-6	12	4.646e-4	9	4.154e-3	8
76		min	-2.171	8	-.108	5	0	12	-1.799e-3	8	-7.655e-5	4	-8.027e-5	12
77	N41	max	.001	3	.003	12	.017	8	6.582e-4	4	-4.577e-6	12	2.612e-3	9
78		min	-2.17	8	-.395	8	0	12	-7.442e-4	9	-6.112e-4	8	-1.91e-3	4
79	N42	max	.001	3	.004	12	.014	8	8.982e-4	9	6.349e-4	8	2.531e-3	9
80		min	-2.17	8	-.374	8	0	12	-6.473e-4	4	-4.866e-8	9	-1.936e-3	4
81	N43	max	0	12	.237	9	.016	8	2.735e-3	4	4.432e-4	9	5.58e-3	9
82		min	-2.876	8	-.276	4	0	12	-2.558e-3	11	-4.263e-6	4	-2.148e-3	4
83	N44	max	0	12	.241	9	.019	8	2.97e-4	11	2.125e-6	4	5.577e-3	9
84		min	-2.874	8	-.274	4	0	12	-2.728e-3	4	-4.86e-4	4	-2.929e-6	4
85	N45	max	0	12	-.024	12	.023	8	2.79e-3	4	2.738e-6	4	8.279e-3	8
86		min	-2.877	8	-.519	3	0	12	-7.624e-5	12	-1.238e-4	9	-4.738e-5	12
87	N46	max	0	12	-.024	12	.016	8	-7.459e-5	12	1.11e-4	9	8.281e-3	8
88		min	-2.875	8	-.515	3	0	12	-2.261e-3	4	-4.351e-4	4	-4.576e-5	12
89	N47	max	-.001	12	.241	9	.022	8	1.933e-3	5	3.053e-4	9	5.893e-3	9
90		min	-3.653	8	-.264	4	0	12	-1.866e-4	12	-8.561e-7	5	-1.941e-3	5
91	N48	max	-.001	12	.246	9	.023	8	1.884e-4	12	-1.837e-7	10	5.895e-3	9
92		min	-3.657	8	-.282	4	0	12	-1.889e-3	5	-1.978e-5	13	-1.932e-3	5
93	N49	max	-.002	12	-.026	12	.026	8	1.902e-3	5	-1.632e-7	10	7.584e-3	8
94		min	-3.658	8	-.535	3	0	12	-1.875e-4	12	-3.145e-5	8	-1.309e-4	12
95	N50	max	-.002	12	-.026	12	.023	8	1.892e-4	12	8.879e-5	9	7.598e-3	8
96		min	-3.657	8	-.527	3	0	12	-1.908e-4	8	-5.282e-7	5	-1.307e-4	12
97	N51	max	-.002	12	.242	9	.028	8	2.557e-3	7	5.966e-5	7	6.026e-3	9
98		min	-2.480	8	-.286	4	0	12	-1.107e-4	10	-9.731e-7	10	-1.707e-3	5
99	N52	max	-.002	12	.246	9	.027	8	1.192e-4	10	-5.78e-7	10	6.047e-3	9
100		min	-2.478	8	-.285	4	0	12	-2.495e-3	7	-5.968e-5	7	-1.765e-3	5
101	N53	max	-.003	12	-.028	12	.029	8	2.561e-3	7	8.278e-6	11	7.024e-3	13
102		min	-2.44	8	-.534	3	0	12	-1.106e-4	10	-4.457e-5	6	-6.416e-5	10
103	N54	max	-.003	12	-.028	12	.028	8	1.187e-4	10	3.93e-5	6	7.045e-3	13
104		min	-2.439	8	-.53	3	0	12	-2.528e-3	7	-1.233e-6	11	-6.457e-5	10
105	N55	max	-.002	12	-.003	11	.028	8	1.949e-5	11	-1.883e-6	11	6.475e-3	8
106		min	-2.439	8	-.328	4	0	12	-2.738e-3	6	-4.158e-6	11	-6.666e-5	12
107	N57	max	-.002	12	0	11	.028	8	2.22e-3	7	2.126e-5	13	6.473e-3	8
108		min	-2.439	8	-.326	4	0	12	-1.864e-4	10	-2.203e-7	10	-7.107e-5	12
109	N58	max	-.002	12	.001	11	.028	8	4.718e-5	11	2.244e-6	6	6.477e-3	8
110		min	-2.44	8	-.520	3	0	12	-5.104e-3	8	-8.767e-4	9	-9.848e-5	12
111	N59	max	.001	12	-.093	10	.029	8	1.884e-5	8	3.331e-7	12	8.784e-3	7
112		min	-2.442	8	-.063	8	0	12	-2.773e-6	10	-5.85e-6	8	-3.476e-6	10
113	N60	max	-.002	12	-.004	11	.029	8	5.136e-3	7	4.061e-4	8	6.429e-3	8

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
114		min	-2.444	8	-.526	3	0	12	-3.892e-5	10	-4.708e-7	10	-4.176e-6	12
115	N61	max	-.006	12	.574	9	.028	8	6.339e-5	8	3.331e-7	12	4.453e-3	9
116		min	-3.456	8	-.534	6	0	12	-1.48e-5	12	-5.86e-5	8	-5.175e-6	6
117	N61A	max	-.002	12	.489	9	.022	8	2.01e-4	11	1.524e-4	8	4.896e-3	9
118		min	-2.490	8	-.49	6	0	12	-2.841e-3	8	-1.351e-4	10	-9.655e-3	6
119	N62	max	-.002	12	.216	11	.027	8	5.033e-5	10	6.849e-5	8	5.764e-3	9
120		min	-2.445	8	-.491	6	0	12	-6.44e-3	7	-1.899e-4	10	-2.766e-3	6
121	N63	max	-.002	12	-.089	10	.028	8	4.788e-5	10	1.376e-4	9	7.453e-3	8
122		min	-2.443	8	-.629	3	0	12	-9.499e-3	6	-3.889e-5	12	-5.412e-6	10
123	N64	max	-.003	12	-.091	10	.031	8	5.44e-5	10	5.657e-5	9	1.007e-2	7
124		min	-2.439	8	-.557	3	0	12	-2.931e-3	7	-6.978e-5	6	-4.505e-6	10
125	N65	max	-.003	12	-.092	10	.028	8	2.953e-3	7	5.32e-5	6	1.006e-2	7
126		min	-2.44	8	-.939	8	.002	12	-4.876e-5	10	-3.197e-5	9	-6.628e-6	10
127	N66	max	-.002	12	-.09	10	.03	8	6.435e-3	6	2.622e-5	6	7.4e-3	8
128		min	-2.444	8	-.632	7	.001	12	-4.173e-5	10	-1.3e-4	9	-7.616e-6	10
129	N67	max	-.002	12	.21	11	.028	8	6.53e-3	7	-4.161e-7	10	5.714e-3	9
130		min	-2.445	8	-.494	6	.001	12	-3.962e-5	10	-6.171e-5	8	-2.78e-3	6
131	N68	max	-.002	12	.483	9	.033	8	2.864e-3	6	-8.593e-7	10	4.85e-3	9
132		min	-2.44	8	-.491	6	.002	12	-2.322e-4	11	-1.489e-4	8	-6.65e-3	6
133	N69	max	.001	12	-.001	12	.029	8	4.211e-5	8	2.076e-7	12	7.721e-3	13
134		min	-2.442	8	-.515	6	0	12	-1.041e-6	12	-1.038e-5	8	-8.216e-5	10
135	N70	max	-.006	12	.255	9	.028	8	3.952e-5	8	2.077e-7	12	5.512e-3	9
136		min	-3.455	8	-.265	4	0	12	-7.093e-7	12	-1.039e-5	8	-3.782e-3	6
137	N75	max	-.001	12	-.004	11	.043	8	4.659e-3	5	6.756e-6	4	6.446e-3	8
138		min	-3.653	8	-.282	4	0	12	-1.965e-4	12	-1.628e-5	9	-7.302e-6	12
139	N76	max	-.001	12	-.002	11	.008	4	1.982e-4	12	6.627e-5	8	6.446e-3	8
140		min	-3.657	8	-.29	4	0	11	-5.647e-3	5	-8.676e-7	12	-7.885e-6	10
141	N77	max	-.001	12	0	11	.008	4	1.206e-4	12	5.158e-5	4	6.437e-3	8
142		min	-3.676	8	-.592	4	.001	11	-3.581e-3	5	-8.561e-4	9	-6.624e-6	12
143	N78	max	-.001	12	-.023	12	.024	8	3.235e-5	13	-3.576e-7	12	8.939e-3	8
144		min	-3.676	8	-.314	3	0	12	-2.488e-5	5	-1.463e-5	8	-3.973e-5	12
145	N79	max	-.001	12	-.004	11	.043	8	3.615e-3	5	8.979e-4	8	6.398e-3	8
146		min	-3.676	8	-.595	4	0	12	-1.489e-4	12	-6.017e-7	12	-6.467e-6	12
147	N80	max	-.002	12	.576	9	.022	8	4.287e-5	8	-3.576e-7	12	5.037e-3	9
148		min	-2.725	8	-.582	4	0	12	-9.021e-7	12	-4.465e-5	8	-3.556e-3	5
149	N81	max	-.001	12	.48	9	.006	4	1.216e-4	12	6.539e-4	9	4.73e-3	9
150		min	-3.658	8	-.533	4	-.002	11	-1.382e-3	5	-7.872e-5	4	-5.741e-3	5
151	N82	max	-.001	12	.214	11	.023	8	1.583e-4	12	5.659e-4	8	5.834e-3	9
152		min	-2.662	8	-.534	4	0	12	-5.889e-3	5	-1.624e-8	10	-2.613e-3	5
153	N83	max	-.002	12	-.018	12	.022	8	1.592e-4	12	3.39e-4	9	7.659e-3	8
154		min	-3.668	8	-.671	3	0	12	-5.989e-3	5	-9.075e-6	6	-2.52e-5	12
155	N84	max	-.002	12	-.02	12	.031	8	1.221e-4	12	1.666e-4	8	9.855e-3	8
156		min	-3.668	8	-.986	6	0	12	-2.085e-3	5	-1.229e-8	10	-1.031e-4	12
157	N85	max	-.002	12	-.021	12	.018	8	1.979e-3	5	-1.629e-6	12	9.825e-3	8
158		min	-3.659	8	-.989	8	0	12	-1.205e-4	12	-1.616e-4	8	-1.832e-4	12
159	N86	max	-.002	12	-.018	12	.026	8	5.893e-3	5	7.747e-6	6	7.614e-3	8
160		min	-3.669	8	-.678	8	0	12	-1.575e-4	12	-3.296e-4	9	-7.587e-5	12
161	N87	max	-.001	12	.21	11	.022	8	6.011e-3	5	-1.733e-6	10	5.825e-3	9
162		min	-3.663	8	-.54	4	0	12	-1.865e-4	12	-3.568e-7	10	-2.976e-3	5
163	N88	max	-.001	12	.476	9	.044	8	2.04e-3	5	5.431e-6	6	4.729e-3	9
164		min	-3.653	8	-.535	4	0	12	-1.498e-3	12	-5.481e-4	9	-5.746e-3	5
165	N89	max	-.001	12	-.031	12	.024	8	4.171e-5	8	-4.216e-7	12	8.985e-3	8
166		min	-3.676	8	-.524	8	0	12	-7.369e-7	12	-4.904e-5	8	-1.475e-4	12
167	N90	max	-.002	12	.25	9	.022	8	4.117e-5	8	-4.216e-7	12	5.267e-3	9
168		min	-3.72	8	-.275	4	0	12	-9.335e-7	12	-1.905e-5	8	-4.613e-3	5
169	N95	max	0	12	-.002	11	.046	8	5.674e-3	4	8.754e-6	4	6.18e-3	8
170		min	-2.876	8	-.262	4	0	12	-3.76e-3	11	-5.285e-6	11	-3.792e-6	12

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Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
171	N96	max	0	12	0	11	.007	4	1.019e-5	11	5.843e-5	8	6.176e-3	8
172		min	-2.875	8	-.26	4	-.011	9	-5.561e-5	4	-5.232e-7	12	-9.758e-6	12
173	N97	max	0	12	.002	11	.008	4	5.037e-5	11	7.31e-6	4	6.627e-3	8
174		min	-2.901	8	-.657	4	-.012	9	-4.681e-5	4	-1.266e-6	9	-9.886e-6	12
175	N98	max	0	12	-.025	12	.019	8	3.858e-5	13	-4.602e-7	12	9.557e-3	8
176		min	-2.902	8	-.167	8	0	12	-2.859e-6	12	-1.666e-5	8	-9.931e-6	12
177	N99	max	0	12	-.003	11	.046	8	4.671e-3	4	1.31e-3	8	6.652e-3	8
178		min	-2.902	8	-.656	4	0	12	-9.309e-5	12	-5.254e-7	12	-9.555e-6	12
179	N100	max	0	12	.539	9	.017	8	3.932e-5	8	-4.599e-7	12	4.483e-3	9
180		min	-2.958	8	-.005	4	0	12	-8.654e-7	12	-1.656e-5	8	-3.989e-3	8
181	N101	max	0	12	.454	9	.004	4	2.143e-4	11	9.705e-4	9	4.274e-3	9
182		min	-2.876	8	-.559	4	-.015	9	-2.698e-3	4	-9.328e-5	4	-6.390e-3	4
183	N102	max	0	12	.22	11	.019	8	2.193e-4	11	8.436e-4	8	5.724e-3	9
184		min	-2.911	8	-.588	4	0	12	-7.117e-3	4	-1.273e-6	12	-2.055e-3	4
185	N103	max	0	12	-.028	12	.015	8	-6.511e-5	12	5.11e-4	9	8.245e-3	8
186		min	-2.892	8	-.72	8	0	12	-7.025e-3	4	-5.355e-6	4	-2.897e-5	12
187	N104	max	0	12	-.026	12	.029	8	-4.944e-5	12	2.74e-4	8	1.084e-2	8
188		min	-2.876	8	-1.102	8	0	12	-2.628e-3	4	-2.810e-6	12	-9.843e-5	12
189	N105	max	0	12	-.026	12	.01	8	2.652e-3	4	-2.951e-6	12	1.083e-2	8
190		min	-2.877	8	-1.002	8	0	12	-5.114e-5	12	-2.695e-4	8	-3.638e-5	12
191	N106	max	0	12	-.028	12	.024	8	7.085e-3	4	5.14e-6	4	8.259e-3	8
192		min	-2.893	8	-.726	8	0	12	-6.676e-5	12	-5.017e-4	9	-2.903e-5	12
193	N107	max	0	12	.216	11	.015	8	7.041e-3	4	-1.312e-6	12	5.732e-3	9
194		min	-2.913	8	-.535	4	0	12	-4.733e-4	4	-9.346e-5	8	-2.307e-5	4
195	N108	max	0	12	.45	9	.048	8	2.635e-3	4	1.826e-5	4	4.274e-3	9
196		min	-2.867	8	-.56	4	0	12	-1.746e-4	11	-9.656e-5	9	-5.392e-3	4
197	N109	max	0	12	-.022	12	.02	8	4.322e-5	8	-5.602e-7	12	9.953e-3	8
198		min	-2.904	8	-.482	8	0	12	-8.881e-7	12	-2.111e-5	8	-9.285e-5	12
199	N110	max	0	12	.244	9	.017	8	4.017e-5	8	-5.602e-7	12	4.896e-3	9
200		min	-2.965	8	-.216	4	0	12	-3.326e-7	12	-2.112e-5	8	-5.241e-3	4
201	N103A	max	0	4	0	11	.002	10	1.357e-4	4	1.787e-4	9	1.88e-3	8
202		min	-.373	8	-.052	4	-.025	3	-2.685e-6	11	-9.208e-6	4	-4.566e-6	8
203	N104A	max	0	4	0	11	.002	10	1.684e-4	4	1.269e-4	9	7.373e-4	8
204		min	-.039	10	-.017	4	-.031	3	-1.921e-5	11	-1.518e-6	4	-7.924e-7	6
205	N105A	max	.002	10	.047	9	0	8	5.457e-6	8	6.888e-6	8	1.18e-3	9
206		min	-.152	12	-.077	4	0	12	-1.027e-7	12	-1.998e-7	12	-7.673e-4	4
207	N106A	max	.002	10	.16	9	.003	8	1.402e-5	8	3.694e-5	8	2.305e-3	9
208		min	-.448	12	-.057	4	0	12	-1.727e-7	12	-6.286e-5	12	-1.223e-4	4
209	N107A	max	0	12	0	11	.025	3	1.076e-6	11	-5.609e-7	12	1.908e-3	8
210		min	-.381	8	-.057	4	-.002	12	-2.357e-4	4	-2.408e-4	8	-2.757e-7	12
211	N108A	max	.025	3	-.003	12	0	12	-2.652e-7	12	2.979e-5	8	2.475e-3	8
212		min	-.402	9	-.222	8	-.003	8	-5.452e-5	8	-5.475e-7	12	-6.726e-3	12
213	N109A	max	0	5	0	11	.031	3	-2.479e-6	11	-1.246e-7	12	7.501e-4	8
214		min	-.038	9	-.017	4	-.002	10	-1.689e-5	4	-1.363e-7	4	-1.028e-7	12
215	N110A	max	.031	3	0	12	0	12	-1.032e-7	12	8.355e-6	8	1.375e-3	8
216		min	-.038	9	-.067	4	0	8	-5.538e-6	8	-1.166e-7	12	-7.733e-5	12
217	N111	max	0	6	0	11	.039	9	3.059e-5	3	1.709e-4	8	2.897e-3	8
218		min	-.948	8	-.092	4	-.016	3	-2.057e-5	11	-9.676e-6	12	-1.645e-5	5
219	N112	max	.001	10	.216	9	.007	8	7.112e-6	4	1.329e-4	4	2.955e-3	8
220		min	-1.018	8	-.092	4	0	12	-3.703e-6	9	-1.169e-4	9	-3.129e-5	8
221	N113	max	.001	3	0	11	.039	8	3.37e-4	4	2.252e-4	9	2.492e-3	8
222		min	-1.735	8	-.126	4	0	12	-3.158e-5	11	-1.087e-5	8	-5.166e-7	12
223	N114	max	.001	6	.211	9	.011	8	-1.054e-6	12	5.931e-5	4	2.782e-3	9
224		min	-2.032	8	-.124	4	0	12	-4.476e-7	8	-4.598e-5	9	-2.645e-4	4
225	N116	max	.002	3	-.007	12	.008	8	6.407e-5	8	1.547e-5	11	4.01e-3	8
226		min	-.816	8	-.346	8	0	12	-1.048e-5	11	-3.948e-5	9	-9.324e-5	12
227	N117	max	0	3	.003	11	.003	4	7.342e-5	11	-9.306e-7	12	2.43e-3	9

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
228		min	-1.739	8	-.124	4	-.016	9	-3.095e-4	4	-2.217e-7	8	-2.265e-5	4
229	N118	max	0	12	.001	11	.019	3	1.146e-5	11	-8.726e-7	12	2.878e-3	8
230		min	-.904	8	-.091	4	-.002	10	-1.221e-4	4	-1.965e-4	8	-1.534e-6	6
231	N119	max	0	12	-.002	11	.017	8	7.772e-5	5	-1.216e-6	12	6.285e-3	8
232		min	-.5612	8	-.277	4	0	12	-4.708e-5	12	-2.349e-4	8	-5.929e-6	12
233	N120	max	0	3	.231	9	.015	8	3.708e-5	8	-3.121e-7	12	6.121e-3	8
234		min	-.2522	8	-.268	4	0	12	-8.612e-7	12	-1.729e-5	8	-4.305e-5	5
235	N121	max	0	12	0	11	.015	8	2.886e-5	11	2.655e-4	8	6.277e-3	8
236		min	-.251	8	-.276	4	0	12	-5.41e-5	5	-1.697e-6	12	-6.832e-5	12
237	N122	max	0	12	-.024	12	.017	8	4.489e-5	8	-3.208e-7	12	6.268e-3	8
238		min	-.252	8	-.504	8	0	12	-9.09e-7	12	-8.739e-5	8	-9.466e-5	12
239	N123	max	0	12	-.003	11	.022	8	4.213e-4	5	1.342e-4	8	6.458e-3	8
240		min	-.262	8	-.286	4	0	12	-8.869e-5	12	-5.435e-7	12	-6.922e-5	12
241	N124	max	0	12	.242	9	.02	8	4.127e-5	8	-2.91e-7	12	6.327e-3	9
242		min	-.267	8	-.279	4	0	12	-8.996e-7	12	-9.267e-5	8	-2.933e-4	5
243	N125	max	0	12	-.001	11	.02	8	2.516e-5	11	2.842e-6	5	6.459e-3	8
244		min	-.267	8	-.284	4	0	12	-3.984e-7	5	-1.023e-4	9	-6.083e-6	12
245	N126	max	-.001	12	-.025	12	.022	8	4.061e-5	8	-2.901e-7	12	6.771e-3	8
246		min	-.263	8	-.524	8	0	12	-8.266e-7	12	-9.327e-5	8	-1.374e-5	12
247	N127	max	-.002	12	-.003	11	.026	8	3.051e-4	6	2.857e-5	13	6.489e-3	8
248		min	-.043	8	-.291	4	0	12	-7.681e-5	11	-1.844e-7	10	-6.874e-5	12
249	N128	max	-.002	12	.244	9	.025	8	4.341e-5	8	-2.662e-7	12	6.348e-3	9
250		min	-.049	8	-.284	4	0	12	-8.295e-7	12	-5.737e-5	8	-1.73e-4	6
251	N129	max	-.002	12	-.001	11	.025	8	3.338e-5	11	1.079e-6	6	6.494e-3	8
252		min	-.0407	8	-.29	4	0	12	-2.872e-7	6	-1.844e-5	9	-7.812e-5	12
253	N130	max	-.002	12	-.027	12	.027	8	3.844e-5	8	3.775e-8	10	6.661e-3	8
254		min	-.049	8	-.531	8	0	12	-7.907e-7	12	-6.16e-6	8	-6.705e-5	12
255	N131	max	-.002	12	-.002	11	.028	8	4.084e-5	8	-3.911e-7	12	6.516e-3	8
256		min	-.439	8	-.506	8	0	12	-8.609e-7	12	-1.371e-5	8	-6.969e-6	12
257	N132	max	-.003	12	-.002	11	.031	8	4.119e-5	8	-3.931e-7	12	6.549e-3	8
258		min	-.316	8	-.509	8	0	12	-8.185e-7	12	-1.32e-5	8	-7.042e-6	12
259	N133	max	.002	3	0	11	.013	8	-5.922e-5	12	2.625e-4	8	4.414e-3	8
260		min	-.141	8	-.254	4	0	12	-2.099e-3	4	-2.288e-5	12	-2.509e-6	8
261	N134	max	.001	3	-.003	11	.014	8	2.128e-3	4	-1.733e-6	12	4.447e-3	8
262		min	-.144	8	-.256	4	0	12	-5.118e-3	12	-2.343e-4	8	-5.454e-7	12
263	N135	max	.001	3	.003	11	.013	8	2.398e-3	4	1.035e-4	8	2.15e-3	9
264		min	-.127	8	-.234	4	0	12	-2.399e-3	11	-4.096e-7	12	-6.556e-4	4
265	N136	max	.009	4	.416	9	.012	8	1.405e-6	4	-3.961e-7	12	7.242e-3	4
266		min	-.208	8	-.036	5	0	12	-1.037e-6	9	-3.968e-8	8	-5.702e-5	11
267	N137	max	.001	3	-.002	11	.014	8	-1.99e-4	11	2.846e-6	4	2.229e-3	9
268		min	-.117	8	-.230	4	0	12	-2.273e-3	4	-7.789e-5	9	-4.057e-3	4
269	N138	max	-.001	12	.005	12	.015	8	8.55e-5	8	-3.868e-7	12	-1.674e-4	11
270		min	-.089	8	-.461	8	0	12	-5.644e-7	12	-5.729e-6	8	-7.453e-3	4
271	N139	max	.009	4	.288	9	.013	8	3.713e-5	8	-4.156e-7	12	2.579e-3	13
272		min	-.205	8	-.024	4	0	12	-3.125e-7	12	-9.815e-6	8	-9.262e-4	10
273	N140	max	-.001	12	-.03	12	.015	8	4.473e-5	8	-3.937e-7	12	6.195e-4	10
274		min	-.189	8	-.68	8	0	12	-9.06e-7	12	-9.17e-6	8	-1.558e-3	7
275	N141	max	0	12	.005	12	.016	8	8.37e-6	12	1.094e-3	8	-1.142e-5	11
276		min	-.172	8	-.449	8	0	12	-5.037e-6	8	-2.695e-5	12	-6.669e-3	4
277	N142	max	0	12	.005	12	.015	8	7.643e-4	8	-2.745e-5	12	-3.86e-5	11
278		min	-.077	8	-.442	8	0	12	-5.087e-3	12	-1.105e-3	8	-6.686e-3	4
279	N143	max	0	12	-.026	12	.014	8	3.972e-3	8	-1.883e-5	12	1.47e-3	9
280		min	-.173	8	-.545	8	0	12	-2.112e-4	12	-7.359e-4	8	-1.788e-3	6
281	N144	max	0	12	-.026	12	.016	8	-2.091e-4	12	7.283e-4	8	1.501e-3	9
282		min	-.174	8	-.549	8	0	12	-3.368e-3	8	-1.834e-5	12	-1.18e-3	5
283	N145	max	.006	4	.404	9	.012	8	6.326e-4	9	1.52e-3	9	7.237e-3	4
284		min	-.182	8	-.073	5	0	12	-1.882e-4	4	-2.008e-4	4	-6.306e-4	11

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Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
285	N146	max	.006	4	.404	9	.013	8	4.704e-4	4	1.9e-4	4	7.219e-3	4
286		min	-2.161	6	.073	5	0	12	-3.834e-4	9	-1.526e-3	9	-5.615e-4	11
287	N147	max	.007	4	.251	9	.014	8	1.763e-3	4	1.064e-4	4	5.294e-3	9
288		min	-2.162	6	.286	4	0	12	-1.828e-3	9	-1.103e-4	9	-5.576e-3	4
289	N148	max	.006	4	.249	9	.013	8	1.879e-3	9	1.048e-3	9	5.302e-3	9
290		min	-2.162	6	.287	4	0	12	-1.744e-3	4	-1.155e-4	4	-1.877e-3	4
291	N149	max	.007	4	.014	11	.013	8	-1.191e-4	11	1.271e-4	4	2.794e-3	9
292		min	-2.163	6	.149	4	0	12	-3.753e-3	4	-2.372e-3	9	-1.871e-3	4
293	N150	max	.006	4	.012	11	.014	8	3.78e-3	4	2.677e-3	9	2.797e-3	9
294		min	-2.164	6	.15	4	0	12	-1.635e-4	11	-1.306e-4	4	-1.82e-3	4
295	N151	max	.002	3	.002	11	.013	8	2.343e-3	4	3.145e-4	8	2.336e-3	9
296		min	-2.17	6	.242	4	0	12	-2.367e-4	11	-.099e-7	12	-5.049e-5	4
297	N152	max	-.001	12	.003	12	.016	8	8.319e-5	8	5.66e-7	11	-1.665e-4	11
298		min	-2.169	6	.473	3	0	12	-1.602e-6	6	-1.943e-6	4	-7.401e-6	4
299	N153	max	.001	3	-.003	11	.014	8	-1.958e-4	11	4.192e-6	4	2.411e-3	9
300		min	-2.169	6	.247	4	0	12	-2.318e-3	4	-2.008e-4	9	-3.582e-5	4
301	N154	max	.009	4	.409	9	.012	8	1.996e-6	4	3.915e-7	11	7.173e-3	4
302		min	-2.207	6	.114	5	0	12	-3.76e-4	12	-1.854e-5	4	-4.931e-5	11
303	N155	max	0	1	0	1	0	1	0	1	0	1	0	1
304		min	0	1	0	1	0	1	0	1	0	1	0	1
305	N156	max	.002	3	.098	11	.014	8	2.704e-4	12	1.171e-3	9	3.731e-3	8
306		min	-2.155	6	.073	4	0	12	-1.976e-3	5	-2.13e-5	4	-1.341e-4	12
307	N157	max	.002	3	-.007	12	.013	8	1.817e-3	9	1.153e-3	8	2.218e-3	9
308		min	-2.153	6	.256	6	0	12	-1.366e-4	5	-1.583e-3	12	-1.653e-3	4
309	N158	max	0	1	0	1	0	1	0	1	0	1	0	1
310		min	0	1	0	1	0	1	0	1	0	1	0	1
311	N159	max	0	1	0	1	0	1	0	1	0	1	0	1
312		min	0	1	0	1	0	1	0	1	0	1	0	1
313	N160	max	.001	3	-.007	12	.016	8	4.773e-4	5	-5.646e-6	12	2.286e-3	9
314		min	-2.155	6	.267	4	0	12	-1.69e-3	5	-1.13e-3	6	-1.038e-3	4
315	N161	max	.001	3	.096	11	.012	8	2.005e-3	8	4.975e-5	4	3.802e-3	8
316		min	-2.155	6	.179	4	0	12	-2.679e-4	12	-1.495e-5	9	-3.555e-4	12
317	N162	max	0	1	0	1	0	1	0	1	0	1	0	1
318		min	0	1	0	1	0	1	0	1	0	1	0	1
319	N163	max	.002	3	.08	11	.014	8	2.634e-4	12	1.03e-4	4	3.278e-3	8
320		min	-2.171	6	.197	4	0	12	-3.112e-3	8	-2.221e-4	9	-5.876e-5	12
321	N164	max	.001	3	-.001	12	.013	8	9.702e-4	9	-8.371e-6	12	2.189e-3	9
322		min	-2.171	6	.236	3	0	12	-1.097e-3	5	-2.138e-4	4	-1.206e-3	4
323	N165	max	.001	3	.077	11	.012	8	1.841e-3	8	2.446e-4	9	3.363e-3	8
324		min	-2.171	6	.199	4	0	12	-1.672e-4	12	-1.455e-5	4	-6.032e-5	12
325	N166	max	.001	3	-.002	12	.016	8	1.138e-3	5	2.641e-4	8	2.269e-3	9
326		min	-2.171	6	.261	3	0	12	-3.427e-4	9	-3.821e-5	12	-2.01e-3	4
327	N167	max	.002	3	.26	9	.008	4	1.775e-3	8	4.145e-5	4	3.707e-3	8
328		min	-2.141	6	.115	4	0.002	11	-3.758e-5	12	-1.049e-4	9	-2.594e-4	12
329	N168	max	.002	6	.262	9	.023	9	8.785e-5	12	1.277e-4	9	3.646e-3	8
330		min	-2.14	3	.114	4	0	4	-1.775e-3	5	-3.211e-8	4	-2.584e-4	12
331	N167A	max	.001	3	0	12	.028	8	2.548e-4	3	9.872e-5	9	2.544e-3	9
332		min	-2.17	6	.321	3	0	12	-1.579e-3	9	-5.731e-8	4	-1.685e-3	4
333	N168A	max	.001	3	0	12	.002	8	1.722e-3	8	1.511e-5	4	2.463e-3	9
334		min	-2.17	6	.302	3	0	12	-2.563e-4	3	-7.506e-5	9	-4.711e-3	4
335	N169	max	0	3	-.005	12	.029	8	9.865e-4	5	-3.655e-6	12	1.706e-3	9
336		min	-2.141	6	.376	3	0	12	-1.76e-4	9	-1.059e-4	3	-1.664e-3	4
337	N170	max	.001	3	-.005	12	.002	8	1.11e-3	9	1.333e-4	8	1.646e-3	9
338		min	-2.141	6	.366	3	0	12	-1.442e-4	6	-1.019e-6	12	-1.324e-3	4
339	N171	max	.031	3	.249	11	.001	10	1.24e-2	3	3.745e-3	9	1.582e-3	13
340		min	-1.769	6	.485	4	0	13	-1.525e-3	11	-2.798e-3	3	-6.597e-5	10
341	N172	max	0	12	.253	11	.017	9	1.332e-3	11	1.316e-3	3	2.851e-3	13

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
342		min	-1.816	6	.496	4	.005	3	-1.218e-3	3	-1.133e-3	10	-6.759e-5	10
343	N173	max	.033	3	-.009	12	.015	8	1.251e-2	3	1.319e-3	3	4.592e-3	9
344		min	-1.752	6	-.857	3	0	12	-5.063e-4	11	-9.76e-4	11	-2.837e-4	3
345	N174	max	0	12	-.009	12	.014	8	5.858e-4	11	1.335e-3	9	3.88e-3	8
346		min	-1.884	6	-.826	3	0	12	-3.254e-2	3	-2.743e-4	3	-2.35e-2	3
347	N175	max	.001	6	.228	9	.014	8	2.287e-4	3	2.081e-3	13	3.677e-3	9
348		min	-1.898	3	-.122	4	0	12	-3.076e-4	11	-1.117e-5	10	-5.492e-4	4
349	N176	max	0	3	.23	9	.013	8	1.611e-4	11	1.067e-4	4	3.608e-3	9
350		min	-1.703	6	-.121	4	0	12	-1.783e-4	3	-5.895e-5	9	-5.603e-4	4
351	N177	max	.001	3	-.007	12	.007	8	3.517e-4	8	3.653e-4	8	4.482e-3	8
352		min	-1.896	6	-.354	3	0	12	-2.463e-6	10	-2.998e-6	12	-4.47e-5	12
353	N178	max	0	3	-.007	12	.007	8	6.858e-6	10	8.877e-5	3	4.47e-3	8
354		min	-1.705	6	-.343	6	0	12	-1.966e-4	3	-2.018e-4	9	-4.604e-5	12
355	N179	max	.001	6	0	11	.012	8	1.713e-5	8	-4.86e-7	12	-6.522e-6	12
356		min	-1.908	3	-.011	4	0	12	-3.522e-7	12	-4.235e-5	8	-7.35e-5	3
357	N180	max	.001	6	.366	9	.001	10	1.124e-3	8	3.994e-4	3	3.211e-3	9
358		min	-1.698	3	-.17	4	-.01	3	-4.089e-6	10	-3.884e-5	4	-1.488e-6	3
359	N181	max	0	3	.359	9	.017	9	1.28e-4	11	4.254e-4	8	2.915e-3	9
360		min	-1.705	6	-.17	4	-.005	3	-1.035e-5	3	-1.96e-6	10	-1.496e-3	3
361	N182	max	.001	3	-.009	12	.015	8	1.08e-3	8	1.348e-4	3	5.371e-3	8
362		min	-1.606	6	-.565	3	0	12	-9.83e-6	12	-2.63e-5	11	-4.387e-5	12
363	N183	max	0	3	-.009	12	.014	8	1.932e-5	11	4.012e-4	3	5.406e-3	8
364		min	-1.701	6	-.554	6	0	12	-1.037e-3	3	1.409e-5	12	4.254e-5	12
365	N184	max	0	12	.211	9	.013	8	1.814e-4	8	5.257e-6	10	2.954e-3	9
366		min	-1.943	6	-.126	4	0	12	-2.38e-6	3	-2.979e-3	8	-3.43e-4	12
367	N185	max	0	12	.216	9	.014	8	-2.998e-6	12	2.923e-3	8	2.58e-3	9
368		min	-1.948	3	-.12	4	0	12	-1.924e-4	3	-2.81e-7	10	-3.516e-6	3
369	N186	max	.006	3	-.007	12	.007	8	6.801e-6	8	3.739e-5	3	4.538e-3	8
370		min	-1.744	6	-.344	3	0	12	-2.780e-6	12	-5.522e-4	9	-2.029e-5	12
371	N187	max	.003	3	-.007	12	.007	8	6.811e-5	8	5.222e-4	9	4.632e-3	8
372		min	-1.744	6	-.348	3	0	12	-1.106e-6	12	-1.803e-4	3	-2.084e-5	12
373	N188	max	0	12	.051	11	.007	4	-1.314e-6	10	3.394e-3	8	2.799e-3	11
374		min	-1.896	3	-.232	4	-.016	9	-4.183e-3	8	-1.076e-5	12	-2.857e-5	3
375	N189	max	0	12	-.007	12	.003	4	6.779e-6	10	3.102e-3	13	6.933e-3	8
376		min	-1.896	3	-.323	3	-.007	9	-4.264e-3	3	-1.267e-6	10	-1.236e-5	12
377	N190	max	0	3	.073	11	.007	4	7.113e-5	11	3.019e-4	13	3.6e-3	8
378		min	-1.702	6	-.121	4	-.016	3	-1.402e-3	9	-6.459e-6	10	-1.272e-5	12
379	N191	max	0	3	-.007	12	.003	4	3.412e-5	11	6.659e-4	9	3.411e-3	9
380		min	-1.701	6	-.123	4	-.007	3	-1.591e-3	3	-1.479e-5	12	-1.805e-4	4
381	N192	max	.001	6	.07	11	.042	8	1.426e-3	3	7.725e-7	12	3.654e-3	8
382		min	-1.697	3	-.122	4	0	12	-5.533e-6	11	-4.716e-4	13	-1.578e-5	12
383	N193	max	.001	3	-.007	12	.022	8	1.432e-3	3	1.848e-5	3	3.468e-3	9
384		min	-1.696	6	-.19	3	-.002	12	-5.852e-6	12	-5.416e-4	9	-1.698e-4	4
385	N194	max	.033	3	-.007	12	.022	8	3.894e-3	3	9.954e-4	3	6.779e-3	8
386		min	-1.756	6	-.28	3	-.002	3	-4.677e-4	11	-4.572e-3	9	-1.404e-5	12
387	N195	max	.032	3	.097	11	.042	8	4.012e-3	3	1.07e-3	3	2.613e-3	11
388		min	-1.756	6	-.236	4	0	12	-5.687e-4	3	-1.89e-3	9	-3.81e-3	3
389	N196	max	0	12	.251	9	.01	9	4.853e-4	3	1.002e-3	8	1.059e-3	11
390		min	-1.85	3	-.19	4	-.005	3	-1.534e-3	9	-1.367e-4	12	-2.536e-3	3
391	N197	max	0	12	.35	9	.002	11	6.024e-4	11	2.519e-4	3	3.318e-3	9
392		min	-1.946	3	-.183	4	-.006	3	-3.098e-4	3	-3.247e-4	9	-2.903e-3	3
393	N198	max	.006	3	-.008	12	.014	8	9.451e-4	13	3.75e-4	8	5.824e-3	8
394		min	-1.744	6	-.571	3	0	12	-2.365e-5	10	-3.636e-7	12	-2.192e-5	12
395	N199	max	.003	3	-.008	12	.015	8	3.954e-5	10	3.269e-4	3	5.321e-3	8
396		min	-1.744	6	-.550	6	0	12	-7.506e-4	3	-1.001e-4	11	-2.265e-6	12
397	N199A	max	.001	3	.015	11	.032	8	6.64e-4	8	5.624e-5	11	2.351e-3	8
398		min	-1.696	3	-.124	4	-.004	3	-9.946e-6	12	-1.897e-4	3	-5.137e-5	3

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Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
399	N200	max	.001	3	-.007	12	.035	9	6.249e-4	3	1.383e-4	3	2.443e-3	13
400		min	-.005	8	-.125	4	.004	9	5.692e-5	12	-4.314e-5	9	-2.328e-5	10
401	N201	max	0	12	.211	9	.014	8	1.022e-5	10	5.885e-6	10	2.928e-3	9
402		min	-1.981	8	-.123	4	0	12	-1.739e-4	10	-2.416e-8	8	-5.276e-4	3
403	N202	max	0	12	.214	9	.014	8	-5.483e-6	12	1.294e-3	8	2.871e-3	9
404		min	-1.983	8	-.121	4	0	12	-7.91e-4	8	-3.327e-6	12	-4.623e-4	3
405	N203	max	.006	3	-.007	12	.007	8	6.914e-5	13	1.779e-4	11	4.23e-3	8
406		min	-1.740	8	-.047	8	0	12	-5.821e-5	10	-1.73e-4	8	-1.335e-5	12
407	N204	max	.007	3	-.007	12	.007	8	7.112e-5	9	9.859e-5	3	4.198e-3	8
408		min	-1.175	8	-.345	8	0	12	-5.498e-5	8	-1.673e-4	9	-8.314e-5	12
409	N205	max	0	3	-.007	12	.008	4	1.084e-4	11	-3.5e-7	12	2.377e-3	13
410		min	-1.7	8	-.122	4	-.016	9	-6.043e-4	9	-2.172e-4	13	-3.035e-5	10
411	N206	max	0	3	.018	11	.008	4	2.915e-6	10	1.326e-4	3	2.287e-3	8
412		min	-1.701	8	-.123	4	-.011	9	-6.015e-4	3	-1.066e-4	11	-7.021e-5	3
413	N207	max	.014	3	-.005	12	0	12	3.128e-5	8	5.817e-5	8	2.736e-3	9
414		min	-.994	8	-.317	3	-.007	9	6.173e-7	9	-5.403e-7	12	-6.857e-5	4

Envelope Member Section Forces

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1	M1	1	max	20.293	4	.323	13	.313	13	0	10	0	10	.003	11
2			min	-69.154	9	0	10	0	10	-.006	3	-.017	3	-.004	3
3		2	max	20.193	4	.105	9	.102	13	0	10	.958	9	.002	10
4			min	-69.245	9	-.001	4	0	10	-.005	3	0	4	-.029	13
5		3	max	20.093	4	0	12	0	3	0	10	.945	9	.004	10
6			min	-69.271	9	-.113	8	-.108	8	-.006	3	0	4	-.012	13
7		4	max	19.993	4	0	12	0	3	0	10	.001	3	.043	4
8			min	-69.33	9	-.32	4	-.318	8	-.005	3	-.057	8	-.005	3
9		5	max	19.892	4	0	12	0	3	0	10	.001	3	2.092	8
10			min	-69.389	9	-.548	8	-.529	8	-.009	3	-2.047	8	.002	12
11	M2	1	max	19.93	4	.322	13	0	4	.081	9	.016	8	.004	11
12			min	-70.425	9	0	10	-.322	13	-.003	3	0	3	-.034	3
13		2	max	19.83	4	.105	9	0	4	.081	9	0	10	.002	10
14			min	-70.483	9	-.001	4	-.102	13	-.003	3	-.958	4	-.026	13
15		3	max	19.73	4	0	12	.108	8	.081	9	0	10	.004	10
16			min	-70.542	9	-.113	8	0	3	-.003	3	-.944	4	-.006	13
17		4	max	19.63	4	0	12	.319	8	.081	9	.06	8	.046	4
18			min	-70.601	9	-.33	8	0	3	-.003	3	-.001	3	0	11
19		5	max	19.53	4	0	12	.529	8	.081	9	2.051	8	2.105	8
20			min	-70.659	9	-.549	8	0	3	-.003	3	-.001	3	-.002	12
21	M3	1	max	91.172	8	.009	3	.312	13	0	12	0	12	0	12
22			min	1.113	12	-.34	9	0	12	-.015	13	-.017	13	-.054	8
23		2	max	91.055	8	0	12	.102	13	0	12	.962	9	.951	9
24			min	1.113	12	-.107	4	0	12	-.015	13	0	12	-.055	9
25		3	max	90.938	8	.098	9	0	4	0	12	.947	9	.971	9
26			min	1.113	12	-.01	3	-.108	8	-.015	13	0	12	-.029	9
27		4	max	90.822	8	.301	9	0	4	0	12	.002	4	.045	8
28			min	1.113	12	-.016	3	-.316	8	-.005	13	-.057	9	-.001	12
29		5	max	90.705	8	.505	9	0	4	0	12	.003	4	.148	3
30			min	1.113	12	-.028	3	-.529	8	-.015	13	-2.049	9	-.086	9
31	M4	1	max	92.601	8	.009	3	0	12	.01	9	.011	13	0	12
32			min	1.138	12	-.318	9	-.325	8	-.005	3	0	3	-.035	8
33		2	max	92.484	8	0	12	0	12	.01	9	0	12	.963	9
34			min	1.138	12	-.109	8	-.105	8	-.005	3	-.97	9	-.053	3
35		3	max	92.368	8	.095	9	.105	9	.01	9	0	12	.995	9
36			min	1.138	12	-.01	3	0	4	-.005	3	-.976	3	-.029	3
37		4	max	92.251	8	.299	9	.316	9	.01	9	.014	9	.08	8

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
38			min	-1.138	12	-.019	3	0	4	-.005	3	-.003	4	-.004	12
39		5	max	92.134	8	.503	9	.526	9	.01	9	1.992	9	.148	3
40			min	-1.138	12	-.028	3	0	4	-.005	3	-.004	4	-.012	9
41	M5	1	max	19.335	4	.51	8	.508	8	0	10	0	12	1.966	8
42			min	-53.811	9	0	12	0	12	-.089	3	-2.06	8	-.002	12
43		2	max	19.235	4	.262	8	.268	8	0	10	0	12	.156	9
44			min	-53.867	9	0	12	0	12	-.089	3	-.239	8	-.031	3
45		3	max	19.135	4	.015	9	.027	8	0	10	.453	8	0	12
46			min	-53.923	9	-.004	3	0	12	-.089	3	0	12	-.499	8
47		4	max	19.035	4	0	10	.001	4	0	10	.015	8	.015	13
48			min	-53.98	9	-.238	13	-.214	9	-.089	3	-.001	12	-.005	10
49		5	max	18.935	4	0	10	.001	4	0	10	.018	4	1.692	13
50			min	-54.036	9	-.481	13	-.454	9	-.089	3	-1.558	9	-.01	10
51	M6	1	max	15.7	4	.468	13	.457	9	0	10	.016	4	1.594	9
52			min	-35.479	9	-.002	10	-.003	4	-.088	3	-1.558	9	-.037	4
53		2	max	15.617	4	.244	9	.238	9	0	10	.073	9	0	12
54			min	-35.524	9	-.006	4	-.003	4	-.088	3	0	10	-.082	3
55		3	max	15.535	4	.021	9	.018	9	0	10	.675	9	.018	4
56			min	-35.568	9	-.016	4	-.003	4	-.088	3	-.016	4	-.097	9
57		4	max	15.453	4	0	12	0	12	0	10	.247	9	.09	4
58			min	-35.612	9	-.208	3	-.202	3	-.088	3	-.032	4	-.269	9
59		5	max	15.371	4	0	12	0	12	0	10	-.004	12	1.258	8
60			min	-35.657	9	-.433	3	-.42	3	-.088	3	-1.224	3	-.005	12
61	M7	1	max	13.414	4	.36	8	.367	8	0	10	-.005	12	1.105	8
62			min	-15.182	9	-.006	12	-.003	12	-.054	13	-1.18	9	-.009	12
63		2	max	13.331	4	.123	8	.136	8	0	10	.111	4	.116	11
64			min	-15.225	9	-.006	12	-.003	12	-.054	13	-.043	11	-.227	4
65		3	max	12.736	4	.099	9	.009	11	.384	8	.323	4	.3	13
66			min	-15.796	9	-.157	4	-.171	4	-.003	12	.039	12	-.168	4
67		4	max	12.654	4	.094	9	.009	11	.384	8	.116	11	.591	4
68			min	-15.838	9	-.164	4	-.17	4	-.003	12	-.46	4	-.278	11
69		5	max	12.572	4	.089	9	.009	11	.384	8	.16	11	1.376	4
70			min	-15.919	9	-.17	4	-.171	4	-.003	12	-1.282	4	-.543	11
71	M8	1	max	18.997	4	.511	8	0	12	.08	9	2.063	8	1.978	8
72			min	-54.827	9	0	12	-.369	8	-.004	3	0	12	-.002	12
73		2	max	18.897	4	.263	8	0	12	.08	9	.239	8	.164	9
74			min	-54.884	9	0	12	-.268	8	-.004	3	0	12	-.03	3
75		3	max	18.797	4	.016	9	0	12	.08	9	0	12	0	12
76			min	-54.94	9	-.007	3	-.128	8	-.004	3	-.456	8	-.495	3
77		4	max	18.697	4	0	10	.213	9	.08	9	-.001	12	.015	13
78			min	-54.996	9	-.232	13	-.001	4	-.004	3	-.022	8	-.005	10
79		5	max	18.597	4	0	10	.454	9	.08	9	1.547	9	1.689	13
80			min	-55.052	9	-.48	13	-.001	4	-.004	3	-.017	4	-.01	10
81	M9	1	max	15.825	4	.469	13	.003	4	.081	9	1.552	9	1.59	9
82			min	-38.042	9	-.002	10	-.457	9	-.004	3	-.017	4	-.036	4
83		2	max	15.742	4	.244	9	.003	4	.081	9	0	12	0	12
84			min	-38.086	9	-.006	4	-.238	9	-.004	3	-.079	8	-.089	9
85		3	max	15.66	4	.021	9	.003	4	.081	9	.012	4	.016	4
86			min	-38.131	9	-.017	4	-.018	9	-.004	3	-.58	9	-.206	9
87		4	max	15.578	4	0	12	.202	8	.081	9	.026	4	.089	4
88			min	-38.175	9	-.207	3	0	12	-.004	3	-.251	9	-.284	9
89		5	max	15.496	4	0	12	.421	8	.081	9	1.218	8	1.244	8
90			min	-38.22	9	-.432	3	0	12	-.004	3	-.004	12	-.009	12
91	M10	1	max	13.284	4	.363	8	-.003	12	.05	9	1.143	8	1.136	8
92			min	-15.361	9	-.006	12	-.367	8	-.003	3	-.004	12	-.009	12
93		2	max	13.202	4	.126	8	-.003	12	.05	9	.028	11	.121	11
94			min	-15.404	9	-.006	12	-.135	8	-.003	3	-.12	4	-.261	4

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Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
95		3	max	12.557	4	.09	9	.165	4	0	1	-.019	11	.232	13
96			min	-16.068	9	-.162	4	-.019	11	-.35	8	-.279	4	-.12	4
97		4	max	12.475	4	.085	9	.165	4	0	1	.497	4	.574	4
98			min	-16.13	9	-.168	4	-.019	11	-.35	8	-.108	11	-.254	11
99		5	max	12.393	4	.081	11	.165	4	0	1	1.273	4	1.379	4
100			min	-16.192	9	-.175	4	-.019	11	-.35	8	-.197	11	-.632	11
101	M11	1	max	74.067	8	.015	3	.507	9	0	12	.003	4	.033	4
102			min	-1.122	12	-.487	9	0	4	-.014	13	-.01054	8	-.032	3
103		2	max	73.948	8	.007	4	.266	9	0	12	0	12	.004	10
104			min	-1.122	12	-.253	9	0	4	-.014	13	-.24	8	-.199	10
105		3	max	73.829	8	.001	10	.026	9	0	12	.447	9	.447	9
106			min	-1.122	12	-.02	13	0	4	-.014	13	-.006	4	-.031	3
107		4	max	73.71	8	.214	9	0	12	0	12	.005	11	.008	3
108			min	-1.122	12	-.015	4	-.215	8	-.014	13	-.01	4	-.013	8
109		5	max	73.591	8	.448	9	0	12	0	12	-.001	12	.09	3
110			min	-1.122	12	-.022	3	-.455	8	-.014	13	-1.573	8	-1.567	9
111	M12	1	max	50.138	8	.005	3	.461	8	0	12	-.001	12	-.003	12
112			min	.989	12	-.462	8	0	12	-.012	8	-1.573	8	-1.646	8
113		2	max	50.039	8	0	12	.242	8	0	12	.08	8	.035	9
114			min	.989	12	-.26	3	0	12	-.012	8	0	12	-.03	3
115		3	max	49.939	8	0	12	.023	8	0	12	.703	8	.705	8
116			min	.989	12	-.036	3	0	12	-.012	8	.002	12	.002	1
117		4	max	49.84	8	.179	9	.003	4	0	12	.297	8	.387	8
118			min	.989	12	-.040	4	-.197	9	-.012	8	.003	12	.005	12
119		5	max	49.74	8	.392	9	.003	4	0	12	.05	4	.193	4
120			min	.989	12	-.026	3	-.416	9	-.012	8	-.152	9	-.977	9
121	M13	1	max	28.019	8	.085	4	.327	9	.002	11	.054	4	.11	4
122			min	.881	12	-.253	9	-.037	4	-.004	3	-.113	9	-.024	9
123		2	max	27.918	8	.078	4	.095	9	.002	11	-.012	12	-.018	12
124			min	.881	12	-.044	11	-.037	4	-.004	3	-.155	6	-.416	8
125		3	max	27.459	8	-.028	12	.17	4	.002	13	.017	11	.044	3
126			min	.875	12	-.243	3	-.02	12	-.02	4	-.002	4	-.303	3
127		4	max	27.376	8	-.028	12	.17	4	.002	13	.502	8	.852	8
128			min	.875	12	-.249	3	-.02	12	-.02	4	-.055	12	-.023	12
129		5	max	27.294	8	-.028	12	.17	4	.002	13	1.294	4	2.038	8
130			min	.875	12	-.256	3	-.02	12	-.02	4	-.149	12	-.266	12
131	M14	1	max	75.073	8	.015	3	.001	4	.008	9	1.997	9	.032	4
132			min	-1.141	12	-.472	9	.492	11	-.005	3	-.004	4	-1.887	9
133		2	max	74.953	8	.007	4	.001	4	.008	9	.254	8	.003	10
134			min	-1.141	12	-.230	9	.251	9	-.005	3	-.007	12	-.22	12
135		3	max	74.834	8	0	10	.001	4	.008	9	.007	4	.357	9
136			min	-1.141	12	-.005	13	-.011	9	-.005	3	-.262	3	-.085	3
137		4	max	74.715	8	.229	9	.23	8	.008	9	.157	8	.002	3
138			min	-1.141	12	-.012	3	0	12	-.005	3	-.001	12	-.174	8
139		5	max	74.596	8	.463	9	.471	8	.008	9	1.803	8	.081	3
140			min	-1.141	12	-.022	3	0	12	-.005	3	-.002	12	-.296	9
141	M15	1	max	52.081	8	.004	3	0	12	.008	9	1.807	8	-.003	12
142			min	-1.029	12	-.558	8	-.555	8	-.005	3	-.002	12	-.872	8
143		2	max	51.961	8	0	12	0	12	.008	9	0	12	.159	9
144			min	-1.029	12	-.304	3	-.292	8	-.005	3	-.162	8	-.031	3
145		3	max	51.84	8	0	12	0	12	.008	9	-.002	12	.984	8
146			min	-1.029	12	-.05	3	-.029	8	-.005	3	-.935	8	-.005	12
147		4	max	51.719	8	.211	9	.235	9	.008	9	-.004	12	.62	8
148			min	-1.029	12	-.025	4	-.004	4	-.005	3	-.452	8	-.009	12
149		5	max	51.598	8	.467	9	.498	9	.008	9	1.282	9	.269	4
150			min	-1.029	12	-.035	4	-.004	4	-.005	3	-.864	4	-1.008	9
151	M16	1	max	28.351	8	.096	4	.039	4	0	10	1.242	9	.185	4

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
152			min	.886	12	-.26	9	-.346	9	-.006	13	-.067	4	-.049	9
153		2	max	28.25	8	.09	4	.039	4	0	10	.192	8	-.017	12
154			min	.886	12	-.05	11	-.11	9	-.006	13	-.011	12	-.427	8
155		3	max	27.782	8	-.028	12	-.02	12	.054	4	.302	4	.033	3
156			min	.882	12	-.244	8	-.17	4	-.002	11	-.03	11	-.306	10
157		4	max	27.7	8	-.028	12	-.02	12	.054	4	-.055	12	.857	8
158			min	.882	12	-.25	3	-.17	4	-.002	11	-.514	8	.075	12
159		5	max	27.618	8	-.028	12	-.02	12	.054	4	-.149	12	2.05	8
160			min	.882	12	-.257	8	-.17	4	-.002	11	-.209	4	.208	12
161	M17	1	max	-.022	11	0	11	0	4	0	3	0	1	0	1
162			min	-6.961	4	-.16	3	0	1	0	10	0	9	0	1
163		2	max	-.022	11	0	11	0	6	0	3	0	11	.386	3
164			min	-6.961	4	-.08	3	0	1	0	10	-.386	3	0	11
165		3	max	-.022	11	0	8	0	8	0	3	0	11	.515	3
166			min	-6.961	4	0	6	0	1	0	10	-.514	3	0	11
167		4	max	-.022	11	.08	3	0	6	0	3	0	11	.386	3
168			min	-6.961	4	0	10	0	1	0	10	-.386	3	0	11
169		5	max	-.022	11	.16	3	0	6	0	3	0	8	0	12
170			min	-6.961	4	0	10	0	1	0	10	0	12	0	1
171	M18	1	max	22.98	9	0	10	0	4	0	8	0	1	0	1
172			min	-6.93	4	-.168	3	0	6	0	12	0	1	0	1
173		2	max	22.98	9	0	10	0	3	0	8	0	10	.379	3
174			min	-6.93	4	-.679	3	0	6	0	12	-.379	3	0	10
175		3	max	22.98	9	0	1	0	1	0	8	0	10	.505	3
176			min	-6.93	4	0	6	0	6	0	12	-.505	3	0	10
177		4	max	22.98	9	.079	3	0	3	0	8	0	10	.379	3
178			min	-6.93	4	0	10	0	1	0	12	-.379	3	0	10
179		5	max	22.98	9	.158	3	0	3	0	8	0	1	0	1
180			min	-6.93	4	0	10	0	6	0	12	0	1	0	1
181	M19	1	max	-.043	11	0	10	0	5	0	12	0	8	0	1
182			min	-6.991	4	-.16	3	0	1	0	8	0	1	0	1
183		2	max	-.043	11	0	10	0	4	0	12	0	10	.386	3
184			min	-6.991	4	-.08	3	0	1	0	8	-.386	3	0	10
185		3	max	-.043	11	0	1	0	8	0	12	0	10	.515	3
186			min	-6.991	4	0	3	0	11	0	8	-.514	3	0	10
187		4	max	-.043	11	.08	3	0	5	0	12	0	10	.386	3
188			min	-6.991	4	0	11	0	1	0	8	-.386	3	0	10
189		5	max	-.043	11	.16	3	0	4	0	12	0	4	0	9
190			min	-6.991	4	0	11	0	2	0	8	0	6	0	4
191	M20	1	max	-.405	12	0	10	0	4	0	4	0	1	0	8
192			min	-30.427	8	-.16	3	0	2	0	9	0	3	0	11
193		2	max	-.405	12	0	10	0	5	0	4	0	10	.386	3
194			min	-30.427	8	-.08	3	0	2	0	9	-.386	3	0	10
195		3	max	-.405	12	0	1	0	1	0	4	0	10	.515	3
196			min	-30.427	8	0	11	0	6	0	9	-.514	3	0	10
197		4	max	-.405	12	.08	3	0	4	0	4	0	10	.386	3
198			min	-30.427	8	0	10	0	12	0	9	-.386	3	0	10
199		5	max	-.405	12	.16	3	0	6	0	4	0	1	0	8
200			min	-30.427	8	0	10	0	12	0	9	0	8	0	1
201	M21	1	max	-.08	11	0	11	0	4	0	12	0	1	0	9
202			min	-6.782	4	-.141	3	0	13	0	8	0	6	0	11
203		2	max	-.08	11	0	11	0	3	0	12	0	11	.303	3
204			min	-6.782	4	-.07	3	0	13	0	8	-.303	3	0	11
205		3	max	-.08	11	0	8	0	4	0	12	0	11	.404	3
206			min	-6.782	4	0	6	0	13	0	8	-.404	3	0	11
207		4	max	-.08	11	.071	3	0	2	0	12	0	11	.303	3
208			min	-6.782	4	0	10	0	9	0	8	-.303	3	0	11

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
209		5	max	-.08	11	.141	3	0	3	0	12	0	8	0	12
210			min	-6.782	4	0	10	0	8	0	8	0	12	0	8
211	M22	1	max	17.161	9	0	10	0	4	0	8	0	9	0	4
212			min	-6.751	4	-.141	3	0	8	0	12	0	4	0	9
213		2	max	17.161	9	0	10	0	2	0	8	0	11	.303	3
214			min	-6.751	4	-.071	3	0	8	0	12	-.303	3	0	11
215		3	max	17.161	9	0	1	0	1	0	8	0	11	.404	3
216			min	-6.751	4	0	1	0	1	0	12	-.404	3	0	1
217		4	max	17.161	9	.071	3	0	2	0	8	0	11	.303	3
218			min	-6.751	4	0	10	0	9	0	12	-.303	3	0	11
219		5	max	17.161	9	.141	3	0	2	0	8	0	1	0	4
220			min	-6.751	4	0	10	0	9	0	12	0	4	0	9
221	M23	1	max	.292	11	0	10	0	8	0	13	0	8	0	1
222			min	-6.537	4	-.141	3	0	4	0	4	0	4	0	13
223		2	max	.292	11	0	10	0	8	0	13	0	10	.303	3
224			min	-6.537	4	-.071	3	0	4	0	4	-.303	3	0	10
225		3	max	.292	11	0	4	0	13	0	13	0	10	.404	3
226			min	-6.537	4	0	9	0	4	0	4	-.404	3	0	10
227		4	max	.292	11	.071	3	0	8	0	13	0	10	.303	3
228			min	-6.537	4	0	3	0	8	0	4	-.303	3	0	10
229		5	max	.292	11	.141	3	0	8	0	13	0	4	0	9
230			min	-6.537	4	0	11	0	4	0	4	0	9	0	4
231	M24	1	max	-.404	12	0	10	0	8	0	8	0	1	0	8
232			min	-23.346	8	-.141	3	0	6	0	12	0	8	0	12
233		2	max	-.404	12	0	10	0	8	0	8	0	10	.303	3
234			min	-23.346	8	-.071	3	0	6	0	12	-.303	3	0	12
235		3	max	-.404	12	0	1	0	1	0	8	0	10	.404	3
236			min	-23.346	8	0	1	0	6	0	12	-.404	3	0	12
237		4	max	-.404	12	.071	3	0	8	0	8	0	10	.303	3
238			min	-23.346	8	0	10	0	6	0	12	-.303	3	0	12
239		5	max	-.404	12	.141	3	0	8	0	8	0	1	0	8
240			min	-23.346	8	0	10	0	6	0	12	0	3	0	12
241	M25	1	max	4.446	4	.016	11	0	12	0	11	0	4	0	8
242			min	-12.488	9	-.046	3	-.026	8	0	4	0	9	0	11
243		2	max	4.515	4	.053	8	0	12	0	11	.024	11	0	12
244			min	-12.435	9	0	12	-.025	8	0	4	-.076	3	-.207	8
245		3	max	4.75	4	0	10	.023	8	0	8	.15	13	.009	10
246			min	-12.299	9	-.105	13	0	10	0	12	-.007	10	-.56	12
247		4	max	4.818	4	0	10	.023	8	0	8	.021	11	.049	3
248			min	-12.248	9	-.04	13	0	10	0	12	-.121	3	-.114	9
249		5	max	4.886	4	.057	3	.023	8	0	8	0	1	0	1
250			min	-12.196	9	-.015	11	0	10	0	12	0	11	0	1
251	M26	1	max	5.083	4	.02	11	0	12	0	11	0	8	0	8
252			min	-11.851	9	-.052	3	-.032	8	0	4	0	1	0	1
253		2	max	5.152	4	.06	8	0	12	0	11	.023	11	0	1
254			min	-11.8	9	0	12	-.032	8	0	4	-.041	3	-.26	8
255		3	max	5.429	4	0	10	.028	8	0	4	.178	13	.005	10
256			min	-11.685	9	-.021	13	0	10	0	11	-.004	10	.713	10
257		4	max	5.497	4	0	10	.028	8	0	4	.021	11	.053	3
258			min	-11.634	9	-.047	13	0	10	0	11	-.136	3	-.195	9
259		5	max	5.566	4	.063	3	.028	8	0	4	0	1	0	1
260			min	-11.583	9	-.013	11	0	10	0	11	0	11	0	1
261	M27	1	max	5.031	4	.001	10	.001	11	0	11	0	1	0	1
262			min	-19.036	9	-.062	3	-.001	3	0	4	0	9	0	9
263		2	max	5.099	4	.033	3	.001	11	0	11	.005	10	.105	13
264			min	-18.985	9	-.01	11	-.01	3	0	4	-.136	3	-.014	4
265		3	max	5.376	4	0	10	.009	3	0	8	.179	13	.004	10

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
266			min	-16.738	9	-.108	3	0	11	0	12	-.064	10	-.208	13
267		4	max	5.445	4	0	10	.009	3	0	8	.018	11	.053	3
268			min	-16.742	9	-.023	13	0	11	0	12	-.135	3	-.065	11
269		5	max	5.513	4	.063	3	.009	3	0	8	0	1	0	1
270			min	-16.696	9	-.004	11	0	11	0	12	0	11	0	11
271	M28	1	max	4.381	4	.001	10	0	11	0	12	0	1	0	9
272			min	-13.272	9	-.061	13	-.009	3	0	8	0	8	0	4
273		2	max	4.45	4	.03	3	0	11	0	12	.005	10	.056	13
274			min	-13.225	9	-.007	11	-.009	3	0	8	-.11	13	-.019	4
275		3	max	4.684	4	0	10	.008	3	0	4	.172	13	.007	10
276			min	-13.064	9	-.095	3	0	12	0	9	-.007	10	-.295	13
277		4	max	4.752	4	0	10	.008	3	0	4	.026	11	.048	3
278			min	-13.065	9	-.026	13	0	12	0	9	-.121	3	-.085	11
279		5	max	4.821	4	.057	3	.008	3	0	4	0	1	0	1
280			min	-12.951	9	-.002	11	0	12	0	9	0	11	0	11
281	M29	1	max	17.25	8	.001	10	.012	9	0	9	0	8	0	4
282			min	-276	12	-.066	13	-.005	3	0	4	0	10	0	9
283		2	max	17.319	8	.03	3	.012	9	0	9	.005	10	.199	9
284			min	-276	12	-.017	11	-.009	3	0	4	-.104	13	-.014	4
285		3	max	17.621	8	.015	11	.008	3	0	8	.098	3	.221	11
286			min	-276	12	-.095	3	-.01	9	0	12	-.042	11	-.241	3
287		4	max	17.689	8	.015	11	.008	3	0	8	0	12	.221	8
288			min	-276	12	-.015	3	-.01	9	0	12	-.14	3	0	12
289		5	max	17.758	8	.073	8	.008	3	0	8	0	1	0	1
290			min	-276	12	0	12	-.011	9	0	12	0	1	0	11
291	M30	1	max	17.762	8	.008	11	0	12	0	9	0	9	0	1
292			min	-276	12	-.045	3	-.015	3	0	4	0	4	0	8
293		2	max	17.831	8	.042	8	0	12	0	9	.028	11	-.001	12
294			min	-275	12	0	12	-.016	3	0	4	-.076	3	-.107	8
295		3	max	18.072	8	.006	11	.011	8	0	8	.097	3	.054	11
296			min	-275	12	-.093	3	0	10	0	12	-.036	11	-.245	3
297		4	max	18.141	8	.006	11	.011	8	0	8	0	12	.055	13
298			min	-276	12	-.019	3	0	10	0	12	-.57	8	0	12
299		5	max	18.209	8	.057	3	.011	8	0	8	0	1	0	1
300			min	-276	12	0	12	0	10	0	12	0	1	0	1
301	M31	1	max	17.727	8	.083	8	.009	3	0	12	0	1	0	1
302			min	-294	12	0	12	-.017	9	0	8	0	1	0	1
303		2	max	17.658	8	.018	11	.009	3	0	12	.149	8	0	12
304			min	-294	12	-.023	3	-.017	9	0	8	0	1	-.29	8
305		3	max	17.59	8	.018	11	.009	3	0	12	.039	11	.298	3
306			min	-294	12	-.108	3	-.017	9	0	8	-.429	3	-.3	11
307		4	max	17.242	8	.033	3	.019	9	0	4	.112	13	.014	4
308			min	-294	12	-.02	11	-.01	3	0	11	-.605	10	-.271	9
309		5	max	17.173	8	.001	10	.019	9	0	4	0	1	0	1
310			min	-294	12	-.017	13	-.01	3	0	11	0	11	0	11
311	M32	1	max	5.532	4	.063	3	.009	3	0	12	0	1	0	1
312			min	-18.606	9	-.005	11	0	11	0	8	0	11	0	11
313		2	max	5.464	4	0	10	.009	3	0	12	.136	3	.013	11
314			min	-18.707	9	-.023	13	0	11	0	8	-.018	11	-.053	3
315		3	max	5.395	4	0	10	.009	3	0	12	.004	10	.296	3
316			min	-18.769	9	-.108	3	0	11	0	8	-.129	13	-.015	10
317		4	max	5.118	4	.033	3	.002	11	0	4	.136	13	.013	4
318			min	-18.947	9	-.01	11	-.01	3	0	11	-.105	10	-.112	13
319		5	max	5.05	4	.001	10	.002	11	0	4	0	1	0	1
320			min	-19.998	9	-.053	13	-.01	3	0	11	0	1	0	11
321	M33	1	max	5.554	4	.063	3	.029	8	0	11	0	1	0	1
322			min	-11.702	9	-.018	11	0	12	0	4	0	1	0	11

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Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
323		2	max	5.485	4	0	10	.029	8	0	11	.136	3	.2	9
324			min	-11.753	9	.048	3	0	12	0	4	-.021	11	.052	3
325		3	max	5.417	4	0	10	.029	8	0	11	.004	10	.724	8
326			min	-11.804	9	-.023	3	0	12	0	4	-.179	3	-.004	10
327		4	max	5.14	4	.061	8	0	12	0	4	.091	3	.267	8
328			min	-11.968	9	0	12	.032	8	0	11	-.026	11	0	1
329		5	max	5.072	4	.02	11	0	12	0	4	0	1	0	1
330			min	-12.019	9	-.052	3	-.032	8	0	11	0	1	0	1
331	M34	1	max	4.843	4	.057	3	.008	3	0	9	0	9	0	4
332			min	-12.306	9	-.006	11	0	10	0	4	0	4	0	9
333		2	max	4.774	4	0	10	.008	3	0	9	.121	3	.028	11
334			min	-12.357	9	-.025	13	-.0	10	0	4	-.027	11	-.049	3
335		3	max	4.706	4	0	10	.008	3	0	9	.007	10	.274	13
336			min	-12.409	9	-.095	3	0	10	0	4	-.175	13	-.01	10
337		4	max	4.471	4	.03	3	0	11	0	8	.108	13	.015	4
338			min	-13.158	9	-.007	11	-.009	3	0	12	-.066	10	-.07	13
339		5	max	4.402	4	.001	10	0	11	0	8	0	1	0	1
340			min	-13.235	9	-.053	13	-.005	3	0	12	0	1	0	1
341	M35	1	max	24.843	8	.063	3	.009	13	0	9	0	1	0	1
342			min	.296	12	0	12	-.002	11	0	4	0	11	0	11
343		2	max	24.775	8	.005	11	.009	13	0	9	.149	8	0	12
344			min	.296	12	-.023	3	-.002	11	0	4	0	12	-.068	3
345		3	max	24.706	8	.005	11	.009	13	0	9	.03	11	.296	3
346			min	.296	12	-.106	3	-.002	11	0	4	-.129	3	-.063	11
347		4	max	24.425	8	.045	8	0	11	0	8	.091	3	.096	8
348			min	.296	12	0	12	-.012	8	0	12	-.044	11	0	1
349		5	max	24.356	8	.008	11	0	11	0	8	0	1	0	1
350			min	.296	12	-.052	3	-.012	8	0	12	0	1	0	1
351	M36	1	max	18.26	8	.057	8	.01	8	0	12	0	1	0	8
352			min	.277	12	0	12	0	11	0	8	0	8	0	10
353		2	max	18.191	8	.007	11	.01	8	0	12	.156	8	0	12
354			min	.277	12	-.016	3	0	11	0	8	0	12	-.065	13
355		3	max	18.123	8	.007	11	.01	8	0	12	.054	11	.242	3
356			min	.277	12	-.095	3	0	11	0	8	-.098	13	-.064	11
357		4	max	17.879	8	.041	8	0	12	0	4	.076	3	.095	8
358			min	.277	12	0	12	-.012	8	0	8	-.026	11	0	12
359		5	max	17.811	8	.007	11	0	12	0	4	0	1	0	1
360			min	.277	12	-.046	3	-.013	8	0	8	0	11	0	1
361	M37	1	max	4.91	4	.057	3	.024	8	0	12	0	9	0	8
362			min	-12.612	9	-.015	11	0	12	0	8	0	4	0	11
363		2	max	4.842	4	0	10	.024	8	0	12	.121	3	.151	9
364			min	-12.363	9	-.041	13	0	12	0	8	-.09	11	-.047	3
365		3	max	4.773	4	0	10	.024	8	0	12	.007	10	.575	13
366			min	-12.115	9	-.105	3	0	12	0	8	-.143	13	-.007	10
367		4	max	4.539	4	.054	8	0	12	0	4	.076	3	.214	8
368			min	-12.65	9	0	12	-.027	8	0	9	-.022	11	0	12
369		5	max	4.471	4	.017	11	0	12	0	4	0	1	0	1
370			min	-12.607	9	-.046	3	-.027	8	0	9	0	1	0	1
371	M38	1	max	24.314	8	.009	11	0	11	0	12	0	9	0	8
372			min	.295	12	-.057	3	-.012	8	0	8	0	11	0	1
373		2	max	24.383	8	.046	8	0	11	0	12	.044	11	0	1
374			min	.295	12	0	12	-.012	8	0	8	-.091	13	-.004	8
375		3	max	24.664	8	.005	11	.01	13	0	4	.129	3	.056	11
376			min	.295	12	-.133	3	-.004	11	0	8	-.03	11	-.298	3
377		4	max	24.732	8	.005	11	.01	13	0	4	0	12	.062	9
378			min	.295	12	-.023	3	-.004	11	0	9	-.149	8	0	12
379		5	max	24.8	8	.063	3	.01	13	0	4	0	1	0	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
380			min	.295	12	0	12	.001	11	0	9	0	12	0	12
381	M39	1	max	17.341	8	.001	10	.02	9	0	11	0	1	0	1
382			min	.295	12	-.078	13	-.01	3	0	4	0	9	0	10
383		2	max	17.409	8	.033	3	.02	9	0	11	.005	10	.278	9
384			min	.295	12	-.02	11	-.01	3	0	4	-.141	13	-.012	10
385		3	max	17.759	8	.018	11	.009	3	0	8	.129	3	.312	9
386			min	.295	12	-.108	3	-.013	9	0	12	-.039	11	-.296	3
387		4	max	17.828	8	.018	11	.009	3	0	8	0	12	.297	8
388			min	.295	12	-.022	3	-.016	9	0	12	-.149	8	0	12
389		5	max	17.896	8	.084	8	.009	3	0	8	0	1	0	1
390			min	.295	12	0	12	-.018	9	0	12	0	1	0	1
391	M40	1	max	17.428	8	0	12	.009	9	0	12	0	8	0	9
392			min	.273	12	-.072	8	-.008	3	0	8	0	1	0	1
393		2	max	17.36	8	.019	3	.009	9	0	12	0	12	.209	8
394			min	.273	12	-.014	11	-.005	3	0	8	-.142	8	0	12
395		3	max	17.292	8	.095	3	.009	9	0	12	.097	3	.21	11
396			min	.273	12	-.014	11	-.002	3	0	8	-.044	11	-.245	3
397		4	max	16.992	8	.016	11	.009	3	0	4	.005	10	.184	9
398			min	.273	12	-.03	3	-.011	9	0	9	-.105	13	-.013	4
399		5	max	16.923	8	.065	13	.009	3	0	4	0	1	0	1
400			min	.273	12	-.003	10	-.011	9	0	9	0	1	0	1
401	M41	1	max	-.433	12	0	10	0	11	0	4	0	1	0	1
402			min	-17.572	8	0	8	-.23	3	0	9	0	1	0	11
403		2	max	-.433	12	0	10	0	11	0	4	0	12	0	11
404			min	-17.572	8	0	8	-.062	3	0	9	-.23	3	-.23	3
405		3	max	-.433	12	0	1	0	9	0	4	0	12	0	11
406			min	-17.572	8	0	8	0	1	0	9	-.306	3	-.306	3
407		4	max	-.433	12	0	10	.062	3	0	4	0	12	0	11
408			min	-17.572	8	0	8	0	10	0	9	-.23	3	-.23	3
409		5	max	-.433	12	0	10	.123	3	0	4	0	12	0	8
410			min	-17.572	8	0	8	0	10	0	9	0	8	0	12
411	M42	1	max	.392	11	0	9	0	10	0	9	0	1	0	9
412			min	-6.998	4	0	4	-.123	3	0	3	0	1	0	1
413		2	max	.392	11	0	9	0	10	0	9	0	10	0	11
414			min	-6.998	4	0	4	-.062	3	0	3	-.23	3	-.23	3
415		3	max	.392	11	0	1	0	1	0	9	0	10	0	11
416			min	-6.998	4	0	1	0	1	0	3	-.306	3	-.306	3
417		4	max	.392	11	0	9	.062	3	0	9	0	10	0	11
418			min	-6.998	4	0	4	0	10	0	3	-.23	3	-.23	3
419		5	max	.392	11	0	9	.123	3	0	9	0	1	0	9
420			min	-6.998	4	0	4	0	3	0	3	0	1	0	1
421	M43	1	max	11.369	9	0	8	0	10	0	1	0	9	0	1
422			min	-6.969	4	0	4	-.123	3	0	8	0	1	0	1
423		2	max	11.369	9	0	8	0	10	0	1	0	11	0	10
424			min	-6.969	4	0	4	-.062	3	0	8	-.23	3	-.23	3
425		3	max	11.369	9	0	8	0	1	0	1	0	11	0	10
426			min	-6.969	4	0	1	0	1	0	8	-.306	3	-.306	3
427		4	max	11.369	9	0	8	.062	3	0	1	0	11	0	10
428			min	-6.969	4	0	4	0	11	0	8	-.23	3	-.23	3
429		5	max	11.369	9	0	8	.123	3	0	1	0	8	0	4
430			min	-6.969	4	0	4	0	11	0	8	0	4	0	8
431	M44	1	max	-.038	11	0	10	0	10	0	4	0	1	0	1
432			min	-7.316	4	0	3	-.123	3	0	9	0	1	0	8
433		2	max	-.038	11	0	10	0	10	0	4	0	10	0	10
434			min	-7.316	4	0	4	-.062	3	0	9	-.23	3	-.23	3
435		3	max	-.038	11	0	1	0	1	0	4	0	10	0	10
436			min	-7.316	4	0	4	0	1	0	9	-.306	3	-.306	3

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Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
437		4	max	-.038	11	0	10	.062	3	0	4	0	10	0	10
438			min	-7.316	4	0	3	0	10	0	9	-.23	3	-.22	3
439		5	max	-.038	11	0	10	.123	3	0	4	0	1	0	1
440			min	-7.316	4	0	3	0	10	0	9	0	4	0	9
441	M45	1	max	5.652	4	.01	11	0	12	0	10	0	12	0	12
442			min	-12.877	9	-.041	3	-.005	3	0	13	0	8	0	8
443		2	max	5.721	4	.04	8	0	12	0	10	.04	11	-.001	12
444			min	-12.826	9	0	12	-.003	3	0	13	-.059	3	-.08	3
445		3	max	5.9	4	0	10	.007	3	0	13	.18	13	.007	10
446			min	-12.709	9	-.036	13	0	10	0	10	-.087	10	-.292	10
447		4	max	5.968	4	0	10	.007	3	0	13	.034	11	.045	3
448			min	-12.657	9	-.028	13	0	10	0	10	-.103	3	-.042	11
449		5	max	6.036	4	.051	3	.007	3	0	13	0	1	0	1
450			min	-12.666	9	-.009	13	0	10	0	10	0	4	0	10
451	M46	1	max	18.62	8	.001	10	.009	3	0	4	0	12	0	9
452			min	.36	12	-.057	13	0	11	-.001	9	0	8	0	4
453		2	max	18.688	8	.016	3	.009	3	0	4	.006	10	.142	13
454			min	.36	12	-.008	11	0	11	-.001	9	-.002	13	-.005	10
455		3	max	18.932	8	.007	11	0	11	0	11	.117	3	.092	8
456			min	.361	12	-.074	3	-.002	3	0	4	-.066	11	-.001	12
457		4	max	19	8	.007	11	0	11	0	11	0	12	.168	8
458			min	.361	12	-.006	3	-.003	3	0	4	-.127	8	0	12
459		5	max	19.068	8	.064	8	0	11	0	11	0	1	0	1
460			min	.361	12	-.1	12	-.003	3	0	4	0	4	0	10
461	M47	1	max	5.595	4	.001	10	0	11	0	10	0	9	0	8
462			min	-12.701	9	-.043	13	-.003	3	-.001	8	0	4	0	12
463		2	max	5.663	4	.027	3	0	11	0	10	.005	10	.039	13
464			min	-12.649	9	-.005	12	-.003	3	-.001	8	-.004	13	-.012	4
465		3	max	5.842	4	0	10	.007	3	0	3	.127	13	.008	10
466			min	-12.513	9	-.083	3	0	10	0	8	-.067	10	-.229	13
467		4	max	5.911	4	0	10	.007	3	0	3	.018	11	.046	3
468			min	-12.492	9	-.027	13	0	10	0	8	-.103	3	-.025	11
469		5	max	5.979	4	.051	3	.007	3	0	3	0	1	0	1
470			min	-12.47	9	-.005	11	0	10	0	8	0	4	0	11
471	M48	1	max	5.612	4	.001	10	.009	3	0	8	0	8	0	11
472			min	-12.682	9	-.051	3	-.001	11	0	12	0	12	0	4
473		2	max	5.68	4	.016	3	.009	3	0	8	.006	10	.11	13
474			min	-12.631	9	-.005	11	-.001	11	0	12	-.075	13	-.005	10
475		3	max	5.881	4	0	10	0	11	0	9	.166	13	.025	4
476			min	-12.482	9	-.074	3	-.006	3	0	4	-.008	10	-.081	13
477		4	max	5.95	4	0	10	0	11	0	9	.021	11	.147	3
478			min	-12.431	9	-.015	13	-.008	3	0	4	-.003	3	-.026	11
479		5	max	6.018	4	.061	3	0	11	0	9	0	1	0	1
480			min	-12.38	9	-.005	11	-.008	3	0	4	0	4	0	11
481	M49	1	max	6.255	4	.064	9	.012	3	0	12	0	9	0	4
482			min	-10.909	9	-.045	3	-.054	3	0	8	0	4	0	8
483		2	max	6.323	4	.106	8	.012	3	0	12	.125	9	.109	3
484			min	-10.858	9	0	12	-.053	3	0	8	-.047	3	-.535	9
485		3	max	6.231	4	.268	4	.664	13	0	10	.123	13	.124	3
486			min	-12.436	9	-.35	9	-.006	4	-.003	13	-.018	10	-.051	11
487		4	max	6.596	4	.074	9	.024	3	.002	8	0	12	.583	9
488			min	-14.469	9	-.028	3	-.054	3	0	12	-.176	8	-.098	3
489		5	max	6.664	4	.118	8	.024	3	.002	8	0	1	0	1
490			min	-14.417	9	0	12	-.054	3	0	12	0	4	0	8
491	M50	1	max	20.785	8	.056	9	0	12	0	11	0	12	0	9
492			min	.423	12	-.03	3	-.065	3	0	3	0	3	0	4
493		2	max	20.717	8	.099	8	0	12	0	11	.078	11	-.002	12

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
494			min	.423	12	0	10	-.065	3	0	3	-.108	3	-.557	10
495		3	max	18.109	8	-.003	12	.652	8	.002	3	-.1	13	.485	8
496			min	.431	12	-.197	3	0	12	0	11	-.017	10	-.003	12
497		4	max	16.568	8	.098	9	0	10	0	4	.006	10	.85	13
498			min	.432	12	-.014	4	-.092	13	0	11	-.114	3	-.01	10
499		5	max	16.499	8	.146	13	0	10	0	4	0	1	0	1
500			min	.432	12	-.002	10	-.092	13	0	11	0	4	0	1
501	M51	1	max	5.384	4	.038	11	.006	3	0	11	0	8	0	10
502			min	-5.248	9	-.030	3	-.095	9	-.001	4	0	12	0	8
503		2	max	5.452	4	.078	8	.006	3	0	11	.005	10	.065	3
504			min	-5.196	9	0	12	-.095	9	-.002	4	-.184	13	-.007	9
505		3	max	5.436	4	.144	4	.021	4	0	12	.066	3	.091	4
506			min	-5.192	9	-.068	11	-.104	9	-.006	8	-.311	9	-.402	9
507		4	max	5.818	4	0	10	.137	8	0	3	-.002	12	0	10
508			min	-5.184	9	-.096	13	0	12	0	11	-.265	8	-.827	8
509		5	max	5.886	4	.038	3	.137	8	0	3	0	1	0	1
510			min	-5.135	9	-.054	9	0	12	0	11	0	4	0	4
511	M52	1	max	5.444	4	.001	10	.124	9	.001	4	0	1	0	8
512			min	-5.318	9	-.135	13	-.01	3	0	11	0	8	0	11
513		2	max	5.512	4	.025	3	.124	9	.001	4	.062	11	.931	9
514			min	-5.265	9	-.09	9	-.01	3	0	11	-.061	13	-.034	4
515		3	max	5.536	4	.174	4	.037	8	.006	8	.29	9	1.593	9
516			min	-5.061	9	-.061	11	-.002	12	0	10	-.047	4	-.148	8
517		4	max	5.882	4	.091	8	0	12	0	9	.171	9	1.094	8
518			min	-4.851	9	-.002	3	-.158	3	0	4	-.051	3	-.065	12
519		5	max	5.95	4	.141	8	0	12	0	9	.051	1	0	1
520			min	-4.8	9	0	12	-.158	3	0	4	0	4	0	11
521	M55	1	max	10.684	8	.001	10	.031	8	0	12	0	4	0	9
522			min	.375	12	-.045	13	0	10	-.002	8	0	9	0	4
523		2	max	10.752	8	.015	4	.031	8	0	12	.052	9	.203	13
524			min	.375	12	-.004	11	0	10	-.002	8	-.025	3	-.005	10
525		3	max	10.563	8	.39	8	.009	9	0	11	.115	13	.437	8
526			min	.368	12	-.01	12	-.01	4	-.002	8	-.005	10	-.003	12
527		4	max	11.097	8	.011	11	.02	3	.001	8	.009	11	.118	9
528			min	.374	12	-.026	3	-.014	11	0	12	-.099	3	-.066	12
529		5	max	11.165	8	.046	8	.02	3	.001	8	0	1	0	1
530			min	.374	12	0	12	-.014	11	0	12	0	4	0	1
531	M56	1	max	11.252	8	0	12	.013	11	0	12	0	8	0	1
532			min	.377	12	-.045	13	-.026	3	-.001	8	0	4	0	8
533		2	max	11.184	8	.027	3	.013	11	0	12	.009	11	.102	9
534			min	.377	12	-.014	11	-.023	3	-.001	8	-.1	3	-.08	4
535		3	max	10.667	8	-.01	12	.023	8	.002	3	.102	13	.413	8
536			min	.371	12	-.398	8	0	12	0	11	-.006	10	-.002	12
537		4	max	10.841	8	.004	11	0	10	.001	8	.051	9	.202	13
538			min	.377	12	-.014	4	-.031	8	0	12	-.02	3	-.006	10
539		5	max	10.773	8	.045	13	0	10	.001	8	0	1	0	1
540			min	.377	12	-.005	10	-.031	8	0	12	0	4	0	11
541	M57	1	max	16.766	8	.002	10	.086	13	0	11	0	12	0	8
542			min	.435	12	-.142	13	0	10	0	4	0	8	0	12
543		2	max	16.834	8	.015	4	.086	13	0	11	.005	10	.81	13
544			min	.436	12	-.095	9	0	10	0	4	-.125	13	-.012	10
545		3	max	18.355	8	1.183	8	0	12	0	11	.086	13	.437	8
546			min	.486	12	-.004	12	-.626	8	-.002	3	-.012	10	-.003	12
547		4	max	20.948	8	0	10	.066	8	0	3	.078	11	-.002	12
548			min	.429	12	-.101	8	0	12	0	11	-.101	3	-.564	8
549		5	max	21.016	8	.03	3	.066	8	0	3	0	1	0	1
550			min	.429	12	-.057	9	0	12	0	11	0	4	0	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
551	M58	1	max	6.647	4	0	12	.052	9	0	12	0	9	0	12
552			min	-14.378	9	-.116	8	-.025	3	-.002	8	0	4	0	8
553		2	max	6.579	4	.028	3	.052	9	0	12	0	12	.57	9
554			min	-14.429	9	-.072	9	-.025	3	-.002	8	-.178	8	-.097	3
555		3	max	6.22	4	.839	9	.012	4	.003	13	.121	13	.124	3
556			min	-12.461	9	-.266	4	-.037	9	0	10	-.014	10	-.053	11
557		4	max	6.315	4	0	12	.049	9	0	8	.13	8	.11	3
558			min	-10.85	9	-.105	8	-.012	3	0	12	-.014	3	-.524	9
559		5	max	6.247	4	.045	3	.049	9	0	8	0	1	0	1
560			min	-10.901	9	-.093	9	-.012	3	0	12	0	1	0	1
561	M59	1	max	17.227	8	.002	10	.011	9	0	9	0	9	0	9
562			min	.332	12	-.059	13	-.009	3	0	4	0	4	0	4
563		2	max	17.296	8	.028	3	.011	9	0	9	.006	10	.171	9
564			min	.332	12	-.016	11	-.009	3	0	4	-.003	3	-.05	4
565		3	max	17.562	8	.014	11	.008	3	0	8	.076	3	.193	11
566			min	.332	12	-.084	3	-.01	9	0	12	-.006	11	-.2	3
567		4	max	17.63	8	.014	11	.008	3	0	8	0	12	.187	8
568			min	.332	12	-.017	3	-.01	9	0	12	-.12	3	0	12
569		5	max	17.698	8	.065	8	.008	3	0	8	0	1	0	1
570			min	.332	12	0	12	-.01	9	0	12	0	1	0	1
571	M60	1	max	5.554	4	.014	11	0	10	0	12	0	8	0	10
572			min	-14.13	9	-.051	3	-.022	8	0	8	0	4	0	8
573		2	max	5.485	4	.037	13	0	10	0	12	.019	11	.044	4
574			min	-14.181	9	-.001	10	-.022	8	0	8	-.193	3	-.134	8
575		3	max	5.417	4	.094	13	0	10	0	12	.124	13	.011	10
576			min	-14.232	9	-.004	10	-.022	8	0	8	-.006	10	-.496	13
577		4	max	5.216	4	0	12	.025	8	0	8	.02	11	0	12
578			min	-14.332	9	-.05	8	0	10	0	12	-.061	3	-.192	8
579		5	max	5.148	4	.04	3	.025	8	0	8	0	1	0	1
580			min	-14.383	9	-.016	11	0	10	0	12	0	1	0	1
581	M61	1	max	-.017	12	2.587	4	-.056	12	.066	5	1.726	8	.037	4
582			min	-1.088	9	-.118	11	-.924	8	-.015	9	-.064	12	0	12
583		2	max	7.258	9	-1.516	12	2.757	8	-.033	12	-.084	12	23.115	8
584			min	-2.648	4	-26.56	8	-.073	12	-.605	8	-3.145	8	-1.435	12
585		3	max	1.186	11	6.58	13	.498	4	.362	8	.868	9	21.559	4
586			min	-3.866	4	-.089	12	-1.834	9	-.018	12	-.275	8	-.15	11
587		4	max	-.172	12	17.687	4	.603	11	.288	4	4.62	9	6.217	4
588			min	-5.351	9	-9.601	9	-1.446	4	-.294	9	-.311	4	-14.003	9
589		5	max	2.398	9	.019	11	.617	4	.006	12	.593	4	.042	4
590			min	-.109	4	-2.748	4	-1.718	9	-.073	5	-.726	9	-.014	11
591	M62	1	max	-.017	12	2.585	4	1.925	8	.02	9	-.063	12	.037	4
592			min	-1.082	9	-.119	11	-.056	12	-.065	5	-1.703	8	0	12
593		2	max	7.257	9	-1.511	12	-.075	12	.604	8	3.054	8	22.841	8
594			min	-2.659	4	-26.556	8	-2.851	8	-.033	12	-.083	12	-1.43	12
595		3	max	1.217	11	6.494	13	1.872	9	-.018	12	.662	4	21.544	4
596			min	-3.848	4	-.087	12	-.506	4	-.36	8	-.87	9	-.4	11
597		4	max	-.169	12	17.756	4	1.417	4	.299	9	.361	4	6.293	4
598			min	-8.209	8	-9.38	9	-.838	11	-.283	4	-4.644	9	-14.069	9
599		5	max	2.392	9	.018	11	1.718	9	.072	5	1.709	9	.042	4
600			min	-.112	4	-2.747	4	-.617	4	-.006	12	-.603	4	-.014	11
601	M63	1	max	2.726	9	15.536	9	8.023	9	.159	4	.947	4	2.008	11
602			min	-2.052	4	-1.804	4	-1.043	4	-.261	9	-12.674	9	-5.084	4
603		2	max	6.84	9	.002	12	.699	9	.17	9	3.496	9	21.19	4
604			min	-4.559	4	-.382	5	-.021	4	-.002	8	-.462	4	-23.635	9
605		3	max	6.84	9	-.005	12	.699	9	-.002	10	5.71	9	22.732	4
606			min	-4.559	4	-.396	5	.004	12	.17	9	-.538	4	-22.083	9
607		4	max	6.84	9	.545	5	.045	4	.102	6	3.587	9	21.312	4

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
608			min	-4.559	4	-.014	11	-.67	9	-.07	5	-.394	4	-33.252	9
609		5	max	2.781	9	15.002	4	1.067	4	.257	9	1.052	4	2.008	11
610			min	-2.05	4	-15.226	9	-2.968	9	-.63	4	-11.838	9	-5.077	4
611	M64	1	max	-.127	12	-1.587	12	6.824	8	-.013	12	-.207	12	-.122	12
612			min	-4.826	8	-31.197	8	-.165	12	-.277	8	-8.538	8	-6.924	8
613		2	max	-.431	12	.048	11	.157	8	.106	13	2.903	8	48.69	8
614			min	-9.62	8	-21.092	5	-.004	12	-.011	10	-.024	12	-2.637	12
615		3	max	-.431	12	.409	5	.157	8	0	4	3.399	8	49.549	8
616			min	-9.52	8	-.003	12	-.004	12	-.108	13	-.086	12	-2.629	12
617		4	max	-.431	12	1.137	5	-.003	12	.011	10	2.987	8	48.255	8
618			min	-9.52	8	0	12	-.13	8	-.108	13	-.076	12	-2.623	12
619		5	max	-.128	12	30.852	8	-.164	12	.273	8	-.201	12	-.122	12
620			min	-4.669	8	-1.58	12	-6.76	8	-.013	12	-8.299	8	-6.924	8
621	M65	1	max	.144	9	.616	8	.376	9	.003	8	.152	4	.004	4
622			min	-.112	4	-.017	12	-.085	4	0	12	-.029	11	-.003	9
623		2	max	1.861	9	.185	11	1.214	9	.016	11	.18	4	-.026	12
624			min	-.729	4	-1.477	4	-.394	4	-.041	4	-1.02	9	-2.612	8
625		3	max	1.885	9	-.004	12	.681	9	0	2	-.002	12	2.126	4
626			min	-.73	4	-.405	4	-.003	12	-.005	8	-.017	9	-2.702	9
627		4	max	1.862	9	1.476	4	.197	4	.041	4	.188	4	-.026	12
628			min	-.729	4	-.184	11	-1.209	9	-.016	11	-1.008	9	-2.605	8
629		5	max	.145	9	-.017	12	.084	4	0	12	.152	4	.004	4
630			min	-.111	4	-.515	8	-.376	9	-.004	8	-.029	11	-.003	9
631	M66	1	max	.376	9	-.017	12	.145	9	.003	9	.152	4	0	12
632			min	-.084	4	-.016	9	-.111	4	-.004	4	-.029	11	-.004	8
633		2	max	.354	9	.024	3	.092	4	.007	5	.018	4	2.43	8
634			min	-.088	4	-.8	8	-.283	9	-.004	9	-.131	9	-.079	12
635		3	max	.263	9	.661	8	.043	8	.015	4	0	12	3.89	4
636			min	-.076	4	-.027	12	-.001	12	-.016	8	-.034	8	-.074	12
637		4	max	.161	9	.009	12	-.008	12	0	12	.155	8	1.459	4
638			min	-.088	4	-.379	13	-.008	8	-.008	8	-.002	12	-1.228	9
639		5	max	.138	9	.539	4	.118	4	.007	8	.156	4	.004	13
640			min	-.066	4	-.181	11	-.009	12	-.011	12	-.088	9	-.002	9
641	M67	1	max	-.009	12	.539	4	.138	9	.002	5	.156	4	.007	8
642			min	-.116	4	-.191	11	-.036	4	-.004	13	-.186	9	-.003	12
643		2	max	-.066	12	-.008	12	-.023	12	-.002	12	.893	8	.814	11
644			min	-2.032	8	-2.353	4	-.066	8	-.036	4	-.022	12	-1.884	4
645		3	max	-.066	12	.393	4	.149	8	0	12	-.004	12	2.345	8
646			min	-2.048	8	-.001	12	-.003	12	-.005	4	-.145	8	-.017	12
647		4	max	-.065	12	1.36	4	.972	8	.036	4	.909	8	.812	11
648			min	-2.031	8	-.009	12	-.024	12	-.002	12	-.022	12	-1.886	4
649		5	max	-.009	12	.18	11	.087	4	.004	13	.157	4	.007	8
650			min	-.112	4	-.539	4	-.133	9	-.002	5	-.185	9	-.001	12
651	M68	1	max	.138	9	.181	11	-.009	12	-.001	12	.157	4	.004	13
652			min	-.087	4	-.539	4	-.116	4	-.007	8	-.185	9	-.002	9
653		2	max	.16	9	.378	13	.307	8	.008	8	.156	8	1.461	4
654			min	-.088	4	-.009	12	-.008	12	0	12	-.002	12	-1.224	9
655		3	max	.263	9	-.027	12	-.001	12	.016	8	0	12	3.891	4
656			min	-.077	4	-.661	8	-.044	8	-.011	6	-.036	8	-.074	12
657		4	max	.354	9	.309	8	.282	9	.004	9	.019	4	2.432	8
658			min	-.088	4	-.625	9	-.092	4	-.007	5	-.131	9	-.079	12
659		5	max	.376	9	.617	8	.112	4	.004	4	.152	4	0	12
660			min	-.085	4	-.017	12	-.114	9	-.003	9	-.029	11	-.003	9
661	M69	1	max	3.297	7	.205	4	.002	11	.004	6	1.428	6	1.131	6
662			min	-.052	10	-.003	11	-.242	6	-.008	9	-.007	11	-.011	11
663		2	max	3.397	7	.205	4	.002	11	.004	6	.011	11	.011	11
664			min	-.052	10	-.003	11	-.242	6	-.008	9	-.594	6	-.621	5

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
665		3	max	7.684	8	.337	5	.008	12	0	4	.029	10	.067	5
666			min	-1.034	12	-.007	12	-.347	5	-.005	9	-.199	5	-.058	12
667		4	max	16.703	8	.127	5	.251	9	.114	8	.763	4	.829	4
668			min	-1.106	12	-.023	9	-.010	3	-.003	12	-.167	11	-.038	11
669		5	max	16.804	8	.127	5	.251	9	.114	8	2.121	8	.776	13
670			min	-1.106	12	-.023	9	-.010	3	-.003	12	-.327	12	-.51	5
671	M70	1	max	2.851	6	-.001	11	.243	6	.004	6	.007	11	-.005	11
672			min	-.698	11	-.206	4	0	11	-.025	9	-.424	6	-.133	6
673		2	max	2.951	6	-.001	11	.243	6	.004	6	.597	5	.627	5
674			min	-.698	11	-.206	4	0	11	-.025	9	-.004	12	-.082	12
675		3	max	5.046	4	.008	12	.346	5	0	4	.062	6	.037	7
676			min	-.913	9	-.394	5	-.02	11	-.012	9	-.042	8	-.077	5
677		4	max	9.065	4	0	12	.272	8	.017	4	-.001	12	.002	11
678			min	-1.066	9	-.172	4	-.016	12	-.006	9	-.133	4	-.065	4
679		5	max	9.166	4	0	12	.272	8	.017	4	1.451	9	.481	8
680			min	-.999	9	-.172	4	-.015	12	-.006	9	-.487	4	-.002	12
681	M71	1	max	3.344	7	.207	4	.243	6	.008	9	.003	11	1.133	6
682			min	-.058	10	-.002	11	-.002	11	-.004	6	-1.432	6	-.055	11
683		2	max	3.444	7	.207	4	.243	6	.008	9	.602	5	.012	11
684			min	-.058	10	-.002	11	-.002	11	-.004	6	-.01	11	-.55	5
685		3	max	7.917	8	.34	5	.349	5	.002	9	.108	7	.071	5
686			min	-1.038	12	-.007	12	-.006	12	0	4	-.002	10	-.057	12
687		4	max	17.101	8	.127	5	.018	3	-.003	12	.107	11	.832	4
688			min	-1.114	12	-.024	9	-.258	9	-.115	3	-.761	4	-.037	10
689		5	max	17.202	8	.127	5	.018	3	-.003	12	-.127	12	.782	13
690			min	-1.114	12	-.024	9	-.258	9	-.115	3	-2.136	8	-.098	5
691	M72	1	max	2.867	6	-.002	11	0	11	.025	9	1.433	6	-.009	11
692			min	-.655	11	.207	4	.243	6	-.004	6	-.003	11	-1.134	6
693		2	max	2.967	6	-.002	11	0	11	.025	9	.004	12	.629	5
694			min	-.655	11	.207	4	.243	6	-.004	6	-.002	5	-.002	12
695		3	max	5.116	4	.008	12	.02	11	.014	9	.046	8	.037	7
696			min	-2.956	11	-.334	5	-.346	5	0	4	-.006	6	-.079	5
697		4	max	9.183	4	0	12	.015	12	.095	9	.781	4	.001	11
698			min	-9.707	9	-.171	4	-.27	8	-.017	4	-.001	12	-.861	4
699		5	max	9.283	4	0	12	.015	12	.095	9	.496	4	.477	8
700			min	-9.631	9	-.171	4	-.27	8	-.017	4	-1.487	9	-.002	12
701	M73	1	max	11.341	8	0	12	0	12	-.01	12	0	1	0	1
702			min	-.26	12	-.002	8	-.007	8	-.164	8	-.01	12	-.01	7
703		2	max	11.318	8	.004	3	0	12	-.01	12	.001	12	.036	8
704			min	-.26	12	-.002	11	-.007	8	-.164	8	-.029	9	-.002	12
705		3	max	11.294	8	.017	9	0	12	-.01	12	.052	8	.02	11
706			min	-.26	12	-.034	3	-.006	8	-.162	8	-.003	12	-.049	8
707		4	max	11.201	8	.003	11	0	12	-.004	12	.026	8	.032	13
708			min	-.26	12	-.008	3	-.008	8	-.142	4	-.007	12	-.002	10
709		5	max	11.178	8	.021	13	0	12	-.004	12	0	1	0	1
710			min	-.26	12	0	10	-.008	8	-.114	4	0	11	0	7
711	M74	1	max	2.319	4	.005	11	0	5	.092	4	0	1	0	1
712			min	-6.349	9	-.022	3	-.006	9	-.039	11	0	11	0	11
713		2	max	2.296	4	.012	13	0	5	.092	4	.003	5	.032	4
714			min	-6.367	9	-.004	11	-.006	9	-.039	11	-.02	9	-.016	11
715		3	max	2.273	4	.028	9	0	5	.115	4	.044	9	.009	10
716			min	-6.418	9	-.035	3	-.007	9	-.039	11	0	6	-.082	3
717		4	max	2.198	4	0	12	0	5	.115	4	.022	9	.018	3
718			min	-6.435	9	-.013	3	-.007	9	-.004	12	-.003	5	-.012	11
719		5	max	2.175	4	.019	3	0	5	.115	4	0	1	0	1
720			min	-6.452	9	-.004	11	-.007	9	-.004	12	0	11	0	11
721	M75	1	max	3.595	4	.002	11	0	12	.063	9	0	1	0	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
722			min	-3.615	9	-.024	3	-.007	8	-.036	4	0	11	0	1
723		2	max	3.572	4	.008	13	0	12	.063	9	0	12	.025	4
724			min	-3.632	9	0	10	-.007	8	-.036	4	-.02	8	-.006	11
725		3	max	3.549	4	.03	13	0	12	.063	9	0	12	.016	11
726			min	-3.69	9	-.034	3	-.007	8	-.096	4	-.043	8	-.034	4
727		4	max	3.471	4	.002	11	0	12	.019	11	.019	8	.027	13
728			min	-3.707	9	-.008	4	-.005	8	-.096	4	0	12	-.003	10
729		5	max	3.448	4	.02	13	0	12	.019	11	0	1	0	1
730			min	-3.724	9	0	10	-.005	8	-.096	4	0	11	0	1
731	M76	1	max	3.58	4	.002	11	.007	8	.036	4	0	1	0	1
732			min	-3.668	9	-.021	3	0	12	-.063	9	0	6	0	1
733		2	max	3.557	4	.008	13	.007	8	.036	4	.021	8	.025	4
734			min	-3.685	9	0	10	0	12	-.063	9	0	12	-.006	11
735		3	max	3.534	4	.03	13	.007	8	.097	4	.042	8	.016	11
736			min	-3.743	9	-.034	3	0	12	-.063	9	-.03	5	-.034	4
737		4	max	3.456	4	.002	11	.006	8	.097	4	0	12	.027	13
738			min	-3.76	9	-.008	4	0	12	-.02	11	-.02	8	-.003	10
739		5	max	3.433	4	.019	13	.006	8	.097	4	0	1	0	1
740			min	-3.777	9	0	10	0	12	-.02	11	0	11	0	1
741	M77	1	max	2.305	4	.005	11	.006	9	.039	11	0	1	0	1
742			min	-6.404	9	-.022	3	0	5	-.092	4	0	11	0	1
743		2	max	2.282	4	.012	13	.006	9	.039	11	.02	9	.032	4
744			min	-6.421	9	-.001	10	0	5	-.092	4	-.003	5	-.017	11
745		3	max	2.259	4	.028	9	.007	9	.039	11	.006	5	.008	10
746			min	-6.472	9	-.035	3	0	5	-.114	4	-.043	9	-.083	8
747		4	max	2.184	4	0	12	.007	9	-.004	12	.003	5	.018	3
748			min	-6.49	9	-.013	3	0	5	-.114	4	-.022	9	-.012	11
749		5	max	2.161	4	.019	3	.007	9	-.004	12	0	1	0	1
750			min	-6.507	9	-.004	11	0	5	-.114	4	0	11	0	1
751	M78	1	max	11.402	8	0	12	.007	8	.162	8	0	1	0	1
752			min	-.261	12	-.022	3	0	12	-.01	12	0	11	0	1
753		2	max	11.379	8	.004	3	.007	8	.162	8	.023	8	.036	8
754			min	-.261	12	-.002	11	0	12	-.01	12	-.001	12	-.002	12
755		3	max	11.356	8	.017	9	.008	8	.162	8	.012	5	.021	11
756			min	-.261	12	-.034	3	0	12	-.01	12	-.051	3	-.049	3
757		4	max	11.263	8	.003	11	.008	8	.115	4	.001	12	.032	13
758			min	-.261	12	-.008	3	0	12	-.004	12	-.028	3	-.002	10
759		5	max	11.24	8	.021	13	.008	8	.115	4	0	1	0	1
760			min	-.261	12	0	10	0	12	-.004	12	0	11	0	1
761	M79	1	max	6.427	8	0	12	.005	9	-.006	12	0	1	0	1
762			min	-.411	12	-.002	3	.003	5	-.133	8	0	11	0	1
763		2	max	6.404	8	.005	3	.005	9	-.006	12	.016	9	.031	8
764			min	-.411	12	-.002	11	-.005	5	-.133	8	0	5	0	12
765		3	max	6.381	8	0	12	.005	9	-.006	12	.032	9	-.002	12
766			min	-.411	12	-.034	3	-.003	5	-.133	8	-.023	11	-.07	8
767		4	max	6.303	8	0	12	.005	9	-.002	12	.01	5	.016	3
768			min	-.411	12	-.011	3	-.002	5	-.103	4	-.015	9	-.007	11
769		5	max	6.279	8	.018	3	.005	9	-.002	12	0	1	0	1
770			min	-.411	12	-.002	11	-.003	5	-.103	4	0	11	0	1
771	M80	1	max	6.371	8	0	12	.003	5	.132	8	0	1	0	1
772			min	-.4	12	-.021	3	-.005	9	-.066	12	0	11	0	1
773		2	max	6.348	8	.005	3	.003	5	.132	8	.01	5	.03	8
774			min	-.4	12	-.002	11	-.005	9	-.066	12	-.016	9	-.01	12
775		3	max	6.325	8	0	12	.003	5	.132	8	-.002	12	-.002	12
776			min	-.4	12	-.034	3	-.005	9	-.066	12	-.033	9	-.071	8
777		4	max	6.246	8	0	12	.003	5	.103	4	.014	9	.016	3
778			min	-.4	12	-.011	3	-.004	10	-.002	12	-.01	5	-.007	11

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Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
779		5	max	6.223	8	.018	3	.003	5	.103	4	0	1	0	1
780			min	.382	12	-.002	11	-.004	5	.002	12	0	1	0	1
781	M81	1	max	6.039	8	0	12	0	11	.093	4	0	1	0	1
782			min	.382	12	-.02	3	-.01	5	.003	12	0	1	0	1
783		2	max	6.014	8	.006	3	0	11	.093	4	.003	11	.029	8
784			min	.382	12	-.001	11	-.01	5	.005	12	-.003	5	0	12
785		3	max	5.989	8	.001	11	.001	11	.093	4	-.002	12	.01	11
786			min	.382	12	-.033	3	0	5	-.006	11	-.057	5	-.045	3
787		4	max	5.909	8	.001	11	.001	11	.007	12	.033	5	.025	13
788			min	.382	12	-.007	3	-.01	5	-.059	5	-.005	11	-.001	10
789		5	max	5.884	8	.019	3	.001	11	.007	12	0	1	0	1
790			min	.382	12	0	10	-.01	5	-.059	5	0	1	0	1
791	M82	1	max	1.956	4	.001	11	.01	5	.019	11	0	1	0	1
792			min	-3.723	9	-.02	3	0	12	-.091	4	0	1	0	1
793		2	max	1.932	4	.007	13	.01	5	.019	11	.034	5	.025	3
794			min	-3.722	9	0	10	0	12	-.091	4	0	12	-.005	11
795		3	max	1.907	4	.001	11	.01	5	.038	8	-.002	12	.003	10
796			min	-3.722	9	-.033	3	0	12	-.091	4	-.063	5	-.056	8
797		4	max	1.832	4	0	12	.01	5	.058	5	0	12	.02	3
798			min	-3.812	9	-.006	3	0	12	-.007	12	-.032	5	-.004	11
799		5	max	1.807	4	.019	3	.01	5	.058	5	0	1	0	1
800			min	-3.831	9	-.001	11	0	12	-.007	12	0	1	0	1
801	M83	1	max	1.859	4	.001	11	0	12	.08	4	0	1	0	1
802			min	-.875	11	-.02	3	-.01	5	-.001	12	0	1	0	1
803		2	max	1.834	4	.007	13	0	12	.08	4	0	12	.025	3
804			min	-.875	11	0	10	-.01	5	-.001	12	-.032	5	-.004	11
805		3	max	1.809	4	.029	13	0	12	.08	4	.065	5	.003	10
806			min	-.876	11	-.033	3	-.01	5	-.026	10	-.043	8	-.045	3
807		4	max	1.734	4	0	11	0	12	.008	11	.032	5	.021	13
808			min	-.876	11	-.007	3	-.01	5	-.064	5	0	12	0	10
809		5	max	1.709	4	.019	3	0	12	.008	11	0	1	0	1
810			min	-.876	11	0	10	-.01	5	-.064	5	0	1	0	1
811	M84	1	max	1.845	4	.001	11	.01	5	-.001	12	0	1	0	1
812			min	-.902	11	-.021	3	0	12	-.08	4	0	1	0	1
813		2	max	1.82	4	.007	13	.01	5	-.001	12	.032	5	.025	3
814			min	-.902	11	0	10	0	12	-.08	4	0	12	-.004	11
815		3	max	1.795	4	.029	13	.01	5	.026	10	.065	5	.003	10
816			min	-.902	11	-.036	3	0	12	-.08	4	-.002	12	-.049	3
817		4	max	1.72	4	0	11	.01	5	.064	5	0	12	.02	13
818			min	-.902	11	-.007	3	0	12	-.008	11	-.032	5	0	10
819		5	max	1.695	4	.019	3	.01	5	.064	5	0	1	0	1
820			min	-.902	11	0	10	0	12	-.008	11	0	1	0	1
821	M85	1	max	1.943	4	.001	11	0	12	.091	4	0	1	0	1
822			min	-3.77	9	-.02	3	-.01	5	-.024	11	0	1	0	1
823		2	max	1.918	4	.007	13	0	12	.091	4	0	12	.025	3
824			min	-3.79	9	0	10	-.01	5	-.02	11	-.034	5	-.005	11
825		3	max	1.894	4	.001	11	0	12	.091	4	.054	8	.003	10
826			min	-3.34	9	-.033	3	-.01	5	-.048	8	-.058	5	-.057	8
827		4	max	1.818	4	0	12	0	12	.007	12	.034	5	.02	3
828			min	-.382	9	-.006	3	-.01	5	-.059	5	0	12	-.004	11
829		5	max	1.794	4	.019	3	0	12	.007	12	0	1	0	1
830			min	-3.879	9	-.001	11	-.01	5	-.059	5	0	1	0	1
831	M86	1	max	6.093	8	0	12	.01	5	-.003	12	0	1	0	1
832			min	.383	12	-.02	3	-.01	11	-.093	4	0	1	0	1
833		2	max	6.068	8	.006	3	.01	5	-.003	12	.033	5	.029	8
834			min	.383	12	-.001	11	-.01	11	-.093	4	-.004	11	0	12
835		3	max	6.043	8	.001	11	.01	5	.007	11	.029	8	.01	11

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
836			min	.383	12	-.033	3	-.002	11	-.093	4	-.067	5	-.049	3
837		4	max	5.962	8	.001	11	.01	5	.059	5	.005	11	.025	13
838			min	.383	12	-.007	3	-.002	11	-.007	12	-.033	5	-.001	10
839		5	max	5.937	8	.019	3	.01	5	.059	5	0	1	0	1
840			min	.383	12	0	10	-.002	11	-.007	12	0	1	0	1
841	M87	1	max	2.482	8	0	12	0	12	.083	4	0	1	0	1
842			min	-.374	12	-.021	3	-.01	5	-.002	12	0	1	0	1
843		2	max	2.457	8	.006	3	0	12	.083	4	0	12	.029	8
844			min	-.374	12	-.001	11	-.01	5	-.002	12	-.003	5	-.001	10
845		3	max	2.432	8	0	12	0	12	.083	4	.065	5	.008	11
846			min	-.374	12	-.023	3	0	5	-.026	10	0	11	-.049	8
847		4	max	2.357	8	0	12	0	12	.005	12	.033	5	.02	3
848			min	-.374	12	-.007	3	-.01	5	-.063	5	0	12	-.002	11
849		5	max	2.333	8	.019	3	0	12	.005	12	0	1	0	1
850			min	-.374	12	0	11	-.01	5	-.063	5	0	1	0	1
851	M88	1	max	2.429	8	0	12	.01	5	-.002	12	0	1	0	1
852			min	-.378	12	-.021	3	0	12	-.082	4	0	1	0	1
853		2	max	2.404	8	.006	3	.01	5	-.002	12	.033	5	.029	8
854			min	-.378	12	-.001	11	0	12	-.082	4	0	12	-.001	12
855		3	max	2.379	8	0	12	.01	5	.026	10	.065	5	.008	11
856			min	-.378	12	-.033	3	0	12	-.082	4	-.044	8	-.05	3
857		4	max	2.305	8	0	12	.01	5	.064	5	0	12	.02	3
858			min	-.378	12	-.007	3	0	12	-.008	12	-.033	5	-.002	11
859		5	max	2.28	8	.019	3	.01	5	.064	5	0	1	0	1
860			min	-.378	12	0	11	0	12	-.008	12	0	1	0	1
861	M89	1	max	2.141	13	0	10	0	11	.065	5	0	1	0	1
862			min	-.04	10	-.02	3	-.007	6	-.011	12	0	1	0	1
863		2	max	2.116	13	.006	3	0	11	.065	5	0	11	.024	3
864			min	-.04	10	0	12	-.007	6	-.011	12	-.024	6	0	10
865		3	max	2.091	13	0	11	0	11	.065	5	-.003	11	.002	11
866			min	-.04	10	-.033	3	-.007	6	-.091	7	-.049	6	-.046	3
867		4	max	2.014	13	0	11	0	11	.007	10	.024	6	.021	3
868			min	-.04	10	-.007	3	-.007	6	-.091	7	-.002	11	-.001	12
869		5	max	1.989	13	.019	3	0	11	.007	10	0	1	0	1
870			min	-.04	10	0	12	-.007	6	-.091	7	0	1	0	1
871	M90	1	max	1.047	6	0	11	.007	6	.011	12	0	1	0	1
872			min	-1.034	9	-.02	3	0	12	-.066	5	0	1	0	1
873		2	max	1.022	6	.006	3	.007	6	.011	12	.024	6	.024	3
874			min	-1.052	9	0	12	0	11	-.066	5	-.006	11	-.004	11
875		3	max	.997	6	0	11	.007	6	.091	7	-.002	11	0	10
876			min	-1.107	9	-.033	3	0	11	-.066	5	-.048	6	-.046	3
877		4	max	.922	6	0	10	.007	6	.091	7	0	11	.021	3
878			min	-1.126	9	-.007	3	0	11	-.007	10	-.024	6	-.001	12
879		5	max	.897	6	.019	3	.007	6	.091	7	0	1	0	1
880			min	-1.145	9	0	12	0	11	-.007	10	0	1	0	1
881	M91	1	max	1.012	6	0	11	0	11	.072	5	0	1	0	1
882			min	-.133	11	-.02	3	-.006	4	-.062	12	0	1	0	1
883		2	max	.987	6	.006	3	0	11	.072	5	-.001	11	.024	3
884			min	-.133	11	0	12	-.006	4	-.062	12	-.02	4	-.001	11
885		3	max	.963	6	.028	13	0	11	.072	5	.04	4	0	10
886			min	-.133	11	-.033	3	-.006	4	-.062	7	-.037	7	-.046	3
887		4	max	.887	6	0	11	0	11	.007	10	.02	4	.021	3
888			min	-.133	11	-.007	3	-.006	4	-.062	7	-.001	11	-.001	12
889		5	max	.862	6	.019	3	0	11	.007	10	0	1	0	1
890			min	-.133	11	0	12	-.006	4	-.062	7	0	1	0	1
891	M92	1	max	.853	6	0	12	.006	4	.082	7	0	1	0	1
892			min	-.16	11	-.016	3	0	11	-.007	10	0	1	0	1

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Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	v Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
893		2	max	.878	6	.007	3	.006	4	.062	7	.02	4	.021	3
894			min	-.16	11	0	1	0	11	-.007	10	-.001	11	-.001	10
895		3	max	.953	6	.033	3	.006	4	.062	7	-.003	11	0	10
896			min	-.16	11	-.028	13	0	11	-.071	5	-.04	4	-.046	3
897		4	max	.978	6	0	12	.006	4	.008	12	-.002	11	.024	3
898			min	-.16	11	-.006	3	0	11	-.071	5	-.02	4	-.001	11
899		5	max	1.003	6	.02	3	.006	4	.008	12	0	1	0	1
900			min	-.16	11	0	1	0	11	-.071	5	0	1	0	1
901	M93	1	max	1.038	6	0	11	0	11	.066	5	0	1	0	1
902			min	-.074	6	-.02	3	-.007	6	-.011	12	0	1	0	1
903		2	max	1.013	6	.006	3	0	11	.066	5	0	11	.024	3
904			min	-.093	6	0	12	-.007	6	-.011	12	-.024	4	-.001	11
905		3	max	.988	6	0	11	0	11	.066	5	.042	7	0	10
906			min	-.148	6	-.026	3	-.007	6	-.091	7	-.048	6	-.046	3
907		4	max	.913	6	0	10	0	11	.007	10	.024	6	.021	3
908			min	-.166	6	-.007	3	-.007	6	-.091	7	0	1	-.001	12
909		5	max	.888	6	.019	3	0	11	.007	10	0	1	0	1
910			min	-.185	6	0	12	-.007	6	-.091	7	0	1	0	1
911	M94	1	max	2.183	13	0	10	.007	6	.011	12	0	1	0	1
912			min	-.036	10	-.02	3	0	11	-.066	5	0	1	0	1
913		2	max	2.158	13	.006	3	.007	6	.011	12	.024	6	.024	3
914			min	-.036	10	0	12	0	11	-.066	5	-.001	11	0	10
915		3	max	2.133	13	0	11	.007	6	.091	7	.041	7	.002	11
916			min	-.036	10	-.032	3	0	11	-.066	5	-.043	6	-.046	3
917		4	max	2.056	13	0	11	.007	6	.091	7	.002	11	.021	3
918			min	-.036	10	-.007	3	0	11	-.007	10	-.024	6	-.001	12
919		5	max	2.031	13	.019	3	.007	6	.091	7	0	1	0	1
920			min	-.036	10	0	12	0	11	-.007	10	0	1	0	1
921	M95	1	max	1.101	7	0	10	0	11	.072	5	0	1	0	1
922			min	-.034	10	-.02	3	-.006	4	-.008	12	0	1	0	1
923		2	max	1.076	7	.006	3	0	11	.072	5	0	11	.024	3
924			min	-.034	10	0	11	-.005	4	-.008	12	-.019	4	0	10
925		3	max	1.051	7	0	10	0	11	.072	5	.039	4	.003	11
926			min	-.034	10	-.033	3	-.006	4	-.008	7	0	1	-.046	3
927		4	max	.976	7	0	10	0	11	.007	10	.02	4	.021	3
928			min	-.034	10	-.007	3	-.006	4	-.008	7	0	1	-.001	12
929		5	max	.951	7	.019	3	0	11	.007	10	0	1	0	1
930			min	-.034	10	0	12	-.006	4	-.008	7	0	1	0	1
931	M96	1	max	1.075	7	0	10	.006	4	.008	12	0	1	0	1
932			min	-.038	10	-.02	3	0	11	-.071	5	0	1	0	1
933		2	max	1.05	7	.006	3	.006	4	.008	12	.02	4	.024	3
934			min	-.038	10	0	10	0	11	-.071	5	0	1	0	10
935		3	max	1.026	7	0	10	.006	4	.063	7	.04	4	.002	11
936			min	-.038	10	-.033	3	0	11	-.071	5	-.025	7	-.046	3
937		4	max	.95	7	0	10	.006	4	.063	7	0	11	.021	3
938			min	-.038	10	-.007	3	0	11	-.002	10	-.02	4	-.001	12
939		5	max	.926	7	.019	3	.006	4	.063	7	0	1	0	1
940			min	-.038	10	0	12	0	11	-.007	10	0	1	0	1
941	M97	1	max	.163	11	.025	10	.029	6	.029	10	.009	11	.086	10
942			min	-1.347	6	-1.456	7	-.002	11	-1.046	7	-.076	6	-5.777	7
943		2	max	.163	11	.025	10	.029	6	.029	10	.006	11	.058	10
944			min	-1.347	6	-1.445	7	-.002	11	-1.046	7	-.043	6	-2.557	7
945		3	max	.163	11	.025	10	.029	6	.029	10	.004	9	.03	10
946			min	-1.347	6	-1.435	7	-.002	11	-1.046	7	-.014	6	-.612	7
947		4	max	.163	11	.025	10	.029	6	.029	10	.027	7	1.095	6
948			min	-1.347	6	-1.419	7	-.002	11	-1.046	7	0	10	.005	11
949		5	max	.163	11	.025	10	.029	6	.029	10	.059	7	2.679	7

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	v Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
950			min	-1.347	6	-1.464	7	-.002	11	-1.046	7	-.002	11	-.026	10
951	M98	1	max	.162	11	.025	10	0	10	1.043	7	.086	7	.085	10
952			min	-1.347	6	-1.464	7	-.034	7	-.028	10	-.002	11	-5.77	7
953		2	max	.162	11	.025	10	0	10	1.043	7	.048	6	.058	10
954			min	-1.347	6	-1.449	7	-.034	7	-.028	10	0	11	-2.557	7
955		3	max	.162	11	.025	10	0	10	1.043	7	.013	6	.03	10
956			min	-1.347	6	-1.435	7	-.034	7	-.028	10	-.002	11	-.611	7
957		4	max	.162	11	.025	10	0	10	1.043	7	0	10	1.095	6
958			min	-1.347	6	-1.419	7	-.034	7	-.028	10	-.025	7	-.003	11
959		5	max	.162	11	.025	10	0	10	1.043	7	-.002	10	2.679	7
960			min	-1.347	6	-1.402	7	-.034	7	-.028	10	-.063	7	-.026	10
961	M99	1	max	.159	11	1.398	7	.029	6	.028	10	.005	11	2.674	7
962			min	-1.347	6	-.025	10	0	10	-1.042	7	-.054	6	-.026	10
963		2	max	.159	11	1.414	7	.029	6	.028	10	.006	11	1.095	6
964			min	-1.347	6	-.025	10	0	10	-1.042	7	-.022	6	-.003	11
965		3	max	.159	11	1.429	7	.029	6	.028	10	.018	7	.03	10
966			min	-1.347	6	-.025	10	0	10	-1.042	7	0	10	-.507	7
967		4	max	.159	11	1.445	7	.029	6	.028	10	.048	7	.058	10
968			min	-1.347	6	-.025	10	0	10	-1.042	7	0	10	-2.124	7
969		5	max	.159	11	1.46	7	.029	6	.028	10	.079	7	.086	10
970			min	-1.347	6	-.025	10	0	10	-1.042	7	0	10	-3.758	7
971	M100	1	max	.157	11	1.397	7	0	10	1.039	7	.057	6	2.674	7
972			min	-1.348	6	-.025	10	-.032	7	-.029	10	-.002	10	-.026	10
973		2	max	.157	11	1.412	7	0	10	1.039	7	.022	6	1.095	6
974			min	-1.348	6	-.025	10	-.032	7	-.029	10	-.003	11	0	11
975		3	max	.157	11	1.428	7	0	10	1.039	7	0	10	.03	10
976			min	-1.348	6	-.025	10	-.032	7	-.029	10	-.021	7	-.504	7
977		4	max	.157	11	1.443	7	0	10	1.039	7	-.001	10	.058	10
978			min	-1.348	6	-.025	10	-.032	7	-.029	10	-.058	7	-2.119	7
979		5	max	.157	11	1.459	7	0	10	1.039	7	-.002	10	.086	10
980			min	-1.348	6	-.025	10	-.032	7	-.029	10	-.094	7	-3.752	7
981	M101	1	max	-.022	10	1.091	6	.02	9	.003	11	0	9	.987	7
982			min	-.967	7	0	11	-.011	6	-.255	6	0	6	-.006	10
983		2	max	-.022	10	1.12	6	.02	9	.003	11	.044	9	.016	11
984			min	-.967	7	0	11	-.011	6	-.255	6	-.024	6	-1.37	6
985		3	max	-.049	10	.001	10	.115	6	.434	7	.097	11	.034	10
986			min	-1.843	7	-.167	7	-.05	11	0	10	-.219	6	-1.044	7
987		4	max	-.049	10	.001	10	.115	6	.434	7	.026	6	.032	10
988			min	-1.843	7	-.158	7	-.05	11	0	10	-.01	11	-.677	7
989		5	max	-.049	10	.001	10	.115	6	.434	7	.271	6	.029	10
990			min	-1.843	7	-.120	7	-.05	11	0	10	-.116	11	-.372	7
991	M102	1	max	.134	11	1.091	6	.1	8	.259	6	0	10	.975	6
992			min	-1.832	6	-.004	11	0	10	.002	11	-.154	13	-.025	11
993		2	max	.134	11	1.121	6	.1	8	.259	6	.049	8	-.018	11
994			min	-1.832	6	-.004	11	0	10	.002	11	0	10	-1.378	7
995		3	max	.216	11	.006	11	-.001	10	0	11	.379	8	.035	10
996			min	-1.67	6	-.185	6	-.199	8	.433	7	.002	10	-.103	7
997		4	max	.216	11	.006	11	-.001	10	0	11	0	10	.032	10
998			min	-1.67	6	-.153	6	-.199	8	.433	7	-.043	8	-.677	7
999		5	max	.216	11	.006	11	-.001	10	0	11	-.003	10	.029	10
1000			min	-1.67	6	-.120	6	-.199	8	.433	7	-.455	8	-.367	7
1001	M103	1	max	-.023	10	.003	11	.034	6	-.016	10	.048	9	-.012	11
1002			min	-.938	7	-1.347	6	-.016	9	-.1	7	-.1	6	-4.204	6
1003		2	max	-.023	10	.003	11	.034	6	-.016	10	.032	9	-.015	11
1004			min	-.938	7	-1.339	6	-.016	9	-.1	7	-.056	6	-2.864	6
1005		3	max	-.023	10	.003	11	.034	6	-.016	10	.015	9	-.018	11
1006			min	-.938	7	-1.339	6	-.016	9	-.1	7	-.032	6	-1.539	7

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Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1007		4	max	-.023	10	.003	11	.034	6	-.016	10	.001	6	-.007	10
1008			min	-.958	7	-1.306	6	-.016	9	-.1	7	0	9	-.285	7
1009		5	max	-.023	10	.003	11	.034	6	-.016	10	.035	6	1.077	6
1010			min	-.958	7	-1.292	6	-.016	9	-.1	7	-.017	9	-.024	11
1011	M104	1	max	-.022	10	.006	11	.016	9	.097	7	.096	6	0	11
1012			min	-.923	7	-.345	6	-.032	6	-.015	10	-.045	9	-.2202	6
1013		2	max	-.022	10	.006	11	.016	9	.097	7	.063	6	-.007	11
1014			min	-.923	7	-.332	6	-.032	6	-.015	10	-.083	9	-.2562	6
1015		3	max	-.022	10	.006	11	.016	9	.097	7	.031	6	-.013	11
1016			min	-.923	7	-.319	6	-.032	6	-.015	10	-.077	9	-.1533	7
1017		4	max	-.022	10	.006	11	.016	9	.097	7	0	11	-.006	10
1018			min	-.923	7	-.305	6	-.032	6	-.016	10	-.062	7	-.237	7
1019		5	max	-.022	10	.006	11	.016	9	.097	7	.016	9	1.073	6
1020			min	-.923	7	-.292	6	-.032	6	-.015	10	-.034	6	-.025	11
1021	M105	1	max	.995	9	-.007	11	0	10	.092	6	.169	8	.012	11
1022			min	-.652	6	-.347	7	-.053	7	-.038	11	-.001	10	-.2202	6
1023		2	max	.995	9	-.007	11	0	10	.092	6	.115	8	.019	11
1024			min	-.652	6	-.333	7	-.053	7	-.038	11	0	10	-.2562	6
1025		3	max	.995	9	-.007	11	0	10	.092	6	.062	8	.027	11
1026			min	-.652	6	-.32	7	-.053	7	-.038	11	0	10	-.1537	6
1027		4	max	.995	9	-.007	11	0	10	.092	6	.009	9	.034	11
1028			min	-.652	6	-.306	7	-.053	7	-.038	11	-.002	6	-.218	6
1029		5	max	.995	9	-.007	11	0	10	.092	6	0	10	1.104	7
1030			min	-.652	6	-.292	7	-.053	7	-.038	11	-.05	7	-.006	10
1031	M106	1	max	.974	9	-.01	11	.054	7	.034	11	-.001	10	.001	11
1032			min	-.658	6	-.35	7	0	10	-.091	6	-.17	8	-.42	6
1033		2	max	.974	9	-.01	11	.054	7	.034	11	0	10	.012	11
1034			min	-.658	6	-.336	7	0	10	-.091	6	-.117	8	-.285	6
1035		3	max	.974	9	-.01	11	.054	7	.034	11	0	10	.022	11
1036			min	-.658	6	-.323	7	0	10	-.091	6	-.064	8	-.1534	6
1037		4	max	.974	9	-.01	11	.054	7	.034	11	.001	6	.032	11
1038			min	-.658	6	-.309	7	0	10	-.091	6	-.011	9	-.222	6
1039		5	max	.974	9	-.01	11	.054	7	.034	11	.05	7	1.109	7
1040			min	-.658	6	-.295	7	0	10	-.091	6	0	10	-.006	10
1041	M107	1	max	-.049	10	.131	7	.052	9	.002	11	.271	6	.029	10
1042			min	-.843	7	-.001	10	-.115	6	-.433	6	-.117	11	-.372	7
1043		2	max	-.049	10	.16	7	.052	9	.002	11	.026	6	.032	10
1044			min	-.843	7	-.001	10	-.115	6	-.433	6	-.006	11	-.381	7
1045		3	max	-.049	10	.189	7	.052	9	.002	11	.109	9	.035	10
1046			min	-.843	7	-.001	10	-.115	6	-.433	6	-.219	6	-.1.053	7
1047		4	max	-.023	10	-.002	11	.012	6	.259	6	.043	9	.011	11
1048			min	-.897	7	-1.121	6	-.001	9	0	11	-.035	6	-1.875	6
1049		5	max	-.023	10	-.002	11	.012	6	.259	6	.002	13	.985	7
1050			min	-.897	7	-1.091	6	-.02	9	0	11	0	10	-.006	10
1051	M108	1	max	.216	11	.126	6	.202	8	.436	7	-.003	10	.029	10
1052			min	-1.67	6	-.008	11	.002	10	0	10	-.465	9	-.387	7
1053		2	max	.216	11	.155	6	.202	8	.436	7	0	10	.032	10
1054			min	-1.67	6	-.008	11	.002	10	0	10	-.539	7	-.678	7
1055		3	max	.216	11	.184	6	.202	8	.436	7	.395	8	.035	10
1056			min	-1.67	6	-.008	11	.002	10	0	10	-.003	10	-.622	6
1057		4	max	.145	11	.007	11	0	10	.001	11	.048	8	-.013	11
1058			min	-.83	6	-.132	6	-.009	8	-.256	6	0	10	-.1.57	8
1059		5	max	.145	11	.007	11	0	10	.001	11	0	6	.979	6
1060			min	-.83	6	-.091	6	-.009	8	-.256	6	-.162	13	-.026	11
1061	M109	1	max	.366	6	.009	10	0	6	0	6	.011	9	.031	10
1062			min	-.221	9	-.555	7	-.005	9	0	11	0	6	-.2.347	7
1063		2	max	.366	6	.009	10	0	6	0	6	.004	9	.019	10

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1064			min	-.221	9	-.546	7	-.005	9	0	11	0	6	-1.56	7
1065		3	max	.366	6	.009	10	0	6	0	6	0	4	.006	10
1066			min	-.221	9	-.537	7	-.005	9	0	11	-.004	13	-.816	7
1067		4	max	.366	6	.009	10	0	6	0	6	0	6	.004	11
1068			min	-.221	9	-.528	7	-.005	9	0	11	-.004	12	-.03	6
1069		5	max	.366	6	.009	10	0	6	0	6	0	6	.636	7
1070			min	-.221	9	-.519	7	-.005	9	0	11	-.018	9	-.018	10
1071	M110	1	max	.401	8	.015	11	0	6	0	12	0	8	0	10
1072			min	-.003	10	-.25	6	0	8	0	8	0	6	-.869	7
1073		2	max	.401	8	.015	11	0	6	0	12	0	8	-.004	10
1074			min	-.003	10	-.24	6	0	8	0	8	0	12	-.545	7
1075		3	max	.401	8	.015	11	0	6	0	12	0	8	-.008	10
1076			min	-.003	10	-.232	6	0	8	0	8	0	12	-.234	7
1077		4	max	.401	8	.015	11	0	6	0	12	0	6	.11	6
1078			min	-.003	10	-.223	6	0	8	0	8	0	8	-.068	9
1079		5	max	.401	8	.015	11	0	6	0	12	0	6	.411	6
1080			min	-.003	10	-.215	6	0	8	0	8	0	8	-.034	11
1081	M111	1	max	.231	6	.003	10	0	6	0	12	0	8	0	11
1082			min	-.102	11	-.257	7	0	8	0	8	0	8	-.866	6
1083		2	max	.231	6	.003	10	0	6	0	12	0	8	.011	11
1084			min	-.102	11	-.249	7	0	8	0	8	0	12	-.529	6
1085		3	max	.231	6	.003	10	0	6	0	12	0	8	.022	11
1086			min	-.102	11	-.24	7	0	8	0	8	0	12	-.203	6
1087		4	max	.231	6	.003	10	0	6	0	12	0	6	.142	7
1088			min	-.102	11	-.231	7	0	8	0	8	0	12	-.012	10
1089		5	max	.231	6	.003	10	0	6	0	12	0	6	.453	7
1090			min	-.102	11	-.222	7	0	8	0	8	0	8	-.015	10
1091	M112	1	max	.366	6	.009	10	.005	8	0	13	0	10	.031	10
1092			min	-.221	9	-.555	7	0	10	0	10	-.011	3	-2.347	7
1093		2	max	.366	6	.009	10	.005	8	0	13	0	10	.019	10
1094			min	-.221	9	-.546	7	0	10	0	10	-.004	3	-1.56	7
1095		3	max	.366	6	.009	10	.005	8	0	13	.004	13	.006	10
1096			min	-.221	9	-.537	7	0	10	0	10	0	10	-.816	7
1097		4	max	.366	6	.009	10	.005	8	0	13	.011	8	.004	11
1098			min	-.221	9	-.528	7	0	10	0	10	0	10	-.03	6
1099		5	max	.366	6	.009	10	.005	8	0	13	.019	8	.636	7
1100			min	-.221	9	-.519	7	0	10	0	10	0	10	-.018	10
1101	M113	1	max	1.212	7	.018	11	0	6	0	7	.002	9	.067	11
1102			min	-.002	10	-.134	6	-.004	9	0	10	-.003	6	-2.208	6
1103		2	max	1.212	7	.018	11	0	6	0	7	0	11	.042	11
1104			min	-.002	10	-.095	6	-.001	9	0	10	-.002	6	-2.033	6
1105		3	max	1.212	7	.018	11	0	6	0	7	0	10	.017	11
1106			min	-.002	10	-.056	6	-.001	9	0	10	-.002	8	-1.922	6
1107		4	max	1.212	7	.049	8	0	6	0	7	0	6	-.002	10
1108			min	-.002	10	-.028	12	-.001	9	0	10	-.003	9	-1.887	7
1109		5	max	1.212	7	.088	8	0	6	0	7	.002	6	-.003	10
1110			min	-.002	10	-.023	12	-.001	9	0	10	-.005	9	-1.911	7
1111	M114	1	max	.858	13	-.003	10	.007	9	.005	6	.003	6	.013	10
1112			min	-.009	10	-.097	3	-.001	6	0	10	-.005	9	-1.165	7
1113		2	max	.858	13	-.003	10	.007	9	.005	6	.004	8	.017	10
1114			min	-.009	10	-.064	3	-.001	6	0	10	0	10	-1.07	7
1115		3	max	.858	13	-.003	10	.007	9	.005	6	.012	9	.02	10
1116			min	-.009	10	-.031	7	-.001	6	0	10	0	6	-1.014	7
1117		4	max	.858	13	.018	3	.007	9	.005	6	.021	9	.024	10
1118			min	-.009	10	-.005	12	-.001	6	0	10	-.002	6	-.997	7
1119		5	max	.858	13	.056	3	.007	9	.005	6	.03	9	.028	10
1120			min	-.009	10	-.005	12	-.001	6	0	10	-.004	6	-1.039	7

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Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1121	M115	1	max	.834	13	.005	12	.001	6	0	10	.049	9	.028	10
1122			min	-.009	10	-.067	3	-.093	9	-.005	7	-.004	6	-1.02	7
1123		2	max	.681	13	.005	12	.001	6	0	10	0	10	.024	10
1124			min	-.009	10	-.054	3	-.042	9	-.005	7	-.032	8	-.995	7
1125		3	max	.543	7	.026	6	.009	8	0	10	0	10	.021	10
1126			min	-.009	10	-.011	11	0	10	-.005	7	-.051	8	-.984	6
1127		4	max	.466	7	.059	6	.06	8	0	10	0	6	.032	11
1128			min	-.009	10	-.011	11	0	10	-.005	7	0	9	-1.035	6
1129		5	max	.39	7	.096	3	.111	8	0	10	.091	8	.045	11
1130			min	-.009	10	-.011	11	0	10	-.005	7	0	10	-1.125	6
1131	M116	1	max	.781	6	.031	11	0	10	0	9	.255	8	.056	11
1132			min	-.006	11	-.068	3	-.272	8	0	6	0	10	-1.875	6
1133		2	max	.781	6	.045	7	0	10	0	9	0	6	.013	11
1134			min	-.001	11	-.022	3	-.136	8	0	6	-.034	9	-1.876	6
1135		3	max	.781	6	.084	7	0	11	0	9	0	10	-.002	10
1136			min	.176	11	0	10	0	6	0	6	-.13	3	-1.956	7
1137		4	max	.781	6	.123	7	.136	9	0	9	0	10	-.002	10
1138			min	.261	11	0	10	0	6	0	6	-.034	8	-2.103	7
1139		5	max	.781	6	.162	7	.272	9	0	9	.255	9	-.001	10
1140			min	.346	11	0	10	0	6	0	6	-.063	8	-2.304	7
1141	M117	1	max	.508	7	-.002	10	0	10	.004	6	.298	8	.016	10
1142			min	-.008	10	-.236	7	-.328	8	-.001	11	0	10	-1.558	7
1143		2	max	.482	7	-.002	10	0	10	.004	6	.017	6	.018	10
1144			min	-.008	10	-.262	7	-.175	8	-.001	11	-.064	9	-1.327	7
1145		3	max	.472	6	-.002	10	0	10	.004	6	.001	6	.02	10
1146			min	-.029	11	-.123	7	-.022	8	-.004	11	-.118	9	-1.034	7
1147		4	max	.472	6	-.002	10	.132	9	.004	6	0	10	.071	11
1148			min	-.06	11	-.197	7	-.013	5	-.001	11	-.055	9	-.826	6
1149		5	max	.472	6	-.002	10	.285	9	.004	6	.195	9	.136	11
1150			min	-.092	11	-.154	7	-.013	5	-.001	11	-.02	9	-.608	6
1151	M118	1	max	.472	6	.164	7	.013	6	.001	11	.195	9	.136	11
1152			min	-.092	11	-.002	10	-.285	9	-.004	6	-.025	10	-.663	6
1153		2	max	.472	6	.196	7	.013	6	.001	11	0	10	.07	11
1154			min	-.06	11	-.003	10	-.152	9	-.004	6	-.053	8	-.624	6
1155		3	max	.472	6	.229	7	.023	8	.001	11	.001	6	.02	10
1156			min	-.029	11	-.002	10	0	10	-.004	6	-.117	9	-1.033	7
1157		4	max	.482	7	.262	7	.176	8	.001	11	.017	6	.017	10
1158			min	-.008	10	-.002	10	0	10	-.004	6	-.004	11	-1.324	7
1159		5	max	.508	7	.295	7	.329	8	.001	11	.299	8	.015	10
1160			min	-.008	10	-.002	10	0	10	-.004	6	0	10	-1.655	7
1161	M119	1	max	.779	6	0	10	0	6	0	6	.255	9	-.001	10
1162			min	-.353	11	-.159	7	-.272	9	0	9	-.003	8	-2.296	7
1163		2	max	.779	6	0	10	0	6	0	6	0	10	-.002	10
1164			min	-.267	11	-.12	7	-.136	9	0	9	-.034	8	-2.009	7
1165		3	max	.779	6	0	10	0	6	0	6	0	10	-.002	10
1166			min	-.182	11	-.08	7	0	11	0	9	-.3	8	-1.957	7
1167		4	max	.779	6	.023	3	.136	8	0	6	0	6	.012	11
1168			min	-.097	11	-.041	7	0	10	0	9	-.032	9	-1.824	6
1169		5	max	.779	6	.069	3	.272	8	0	6	.255	8	.056	11
1170			min	-.072	11	-.031	11	0	10	0	9	0	10	-1.886	6
1171	M120	1	max	.39	7	.01	11	0	10	.005	7	.092	8	.04	11
1172			min	-.008	10	-.097	3	-.111	8	0	10	0	10	-1.156	6
1173		2	max	.466	7	.01	11	0	10	.005	7	.001	6	.029	11
1174			min	-.009	10	-.062	3	-.08	8	0	10	-.009	9	-1.023	6
1175		3	max	.543	7	.01	11	0	10	.005	7	0	10	.021	10
1176			min	-.009	10	-.029	3	-.009	8	0	10	-.051	8	-.99	6
1177		4	max	.681	13	.031	13	.042	9	.005	7	0	10	.025	10

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1178			min	-.009	10	-.006	12	-.001	6	0	10	-.038	8	-.984	7
1179		5	max	.834	13	.064	13	.093	9	.005	7	.048	9	.028	10
1180			min	-.009	10	-.006	12	-.001	6	0	10	-.004	6	-1.02	7
1181	M121	1	max	.858	13	.005	12	.001	6	0	10	.03	9	.028	10
1182			min	-.009	10	-.057	3	-.008	9	-.005	7	-.004	6	-1.019	7
1183		2	max	.858	13	.005	12	.001	6	0	10	.021	9	.025	10
1184			min	-.009	10	-.015	3	-.008	9	-.005	7	-.002	6	-.994	7
1185		3	max	.858	13	.028	7	.001	6	0	10	.012	9	.021	10
1186			min	-.009	10	-.003	10	-.008	9	-.005	7	0	9	-.007	7
1187		4	max	.858	13	.061	7	.001	6	0	10	.003	8	.017	10
1188			min	-.009	10	-.003	10	-.008	9	-.005	7	0	10	-.106	7
1189		5	max	.858	13	.096	3	.001	6	0	10	.002	6	.013	10
1190			min	-.009	10	-.003	10	-.008	9	-.005	7	-.006	9	-1.151	7
1191	M122	1	max	1.218	7	.025	12	.001	9	0	10	.002	6	-.003	10
1192			min	-.002	10	-.057	6	0	6	0	7	-.005	9	-1.901	7
1193		2	max	1.218	7	.025	12	.001	9	0	10	0	6	-.002	10
1194			min	-.002	10	-.043	6	0	6	0	7	-.005	9	-1.881	7
1195		3	max	1.218	7	.059	6	.001	9	0	10	0	10	.017	11
1196			min	-.002	10	-.013	11	0	6	0	7	-.002	6	-1.932	6
1197		4	max	1.218	7	.098	6	.001	9	0	10	0	11	.043	11
1198			min	-.002	10	-.013	11	0	6	0	7	-.002	6	-2.042	6
1199		5	max	1.218	7	.138	6	.001	9	0	10	.001	9	.068	11
1200			min	-.002	10	-.013	11	0	6	0	7	-.002	6	-2.21	6
1201	M123	1	max	.752	7	.03	11	.006	9	.005	7	.032	6	.073	11
1202			min	-.008	10	-.255	6	-.013	6	0	10	-.015	9	-1.155	6
1203		2	max	.752	7	.03	11	.006	9	.005	7	.017	6	.037	11
1204			min	-.008	10	-.22	6	-.013	6	0	10	-.008	9	-1.27	6
1205		3	max	.752	7	.03	11	.006	9	.005	7	.001	6	.02	10
1206			min	-.008	10	-.187	6	-.013	6	0	10	-.001	9	-1.037	7
1207		4	max	.752	7	.03	11	.006	9	.005	7	.006	11	.022	10
1208			min	-.008	10	-.154	6	-.013	6	0	10	-.014	6	-.864	7
1209		5	max	.752	7	.044	9	.006	9	.005	7	.013	11	.024	10
1210			min	-.008	10	-.121	6	-.013	6	0	10	-.03	6	-.73	7
1211	M124	1	max	.752	7	.12	6	.013	6	0	10	.012	11	.024	10
1212			min	-.008	10	-.045	3	-.006	11	-.005	7	-.029	6	-.73	7
1213		2	max	.752	7	.153	6	.013	6	0	10	.006	11	.022	10
1214			min	-.008	10	-.029	11	-.006	11	-.005	7	-.014	6	-.863	7
1215		3	max	.752	7	.186	6	.013	6	0	10	.001	6	.02	10
1216			min	-.008	10	-.029	11	-.006	11	-.005	7	-.001	6	-1.035	7
1217		4	max	.752	7	.219	6	.013	6	0	10	.017	6	.034	11
1218			min	-.008	10	-.029	11	-.006	11	-.005	7	-.008	9	-1.285	6
1219		5	max	.752	7	.251	6	.013	6	0	10	.032	6	.068	11
1220			min	-.008	10	-.029	11	-.006	11	-.005	7	-.014	11	-1.543	6
1221	M125	1	max	.064	6	.93	4	.015	8	.003	11	.048	9	1.097	5
1222			min	-.659	9	-.004	12	0	12	-.034	6	-.005	6	-.001	12
1223		2	max	.064	6	1.326	4	.015	8	.003	11	.08	9	-.008	11
1224			min	-.659	9	-.004	12	0	12	-.034	6	-.003	6	-1.298	6
1225		3	max	-.343	10	.004	12	.028	6	.593	5	.554	9	.06	12
1226			min	-2.821	3	-.659	5	-.268	9	-.004	12	-.053	6	-1.744	5
1227		4	max	-.343	10	.004	12	.028	6	.593	5	.002	6	.052	12
1228			min	-2.821	3	-.596	5	-.268	9	-.004	12	-.015	9	-1.439	5
1229		5	max	-.343	10	.004	12	.028	6	.593	5	.063	6	.819	4
1230			min	-2.821	3	-.557	5	-.268	9	-.004	12	-.585	9	-1.016	11
1231	M126	1	max	.857	8	.923	4	.351	9	.04	6	.004	6	1.093	5
1232			min	.043	10	-.01	11	0	6	-.005	11	-.431	9	-.009	11
1233		2	max	.857	8	1.335	4	.351	9	.04	6	.314	8	.012	11
1234			min	.043	10	-.01	11	0	6	-.005	11	0	10	-1.335	4

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Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1235		3	max	.953	11	.004	12	-.005	10	.004	12	1.352	8	.06	12
1236			min	-1.609	6	-.552	5	-.721	8	-.589	5	-.91	10	-.765	5
1237		4	max	.953	11	.004	12	-.005	10	.004	12	0	12	.052	12
1238			min	-1.609	6	-.601	5	-.721	8	-.589	5	-.173	8	-.445	5
1239		5	max	.953	11	.004	12	-.005	10	.004	12	-.013	10	.818	4
1240			min	-1.609	6	-.571	5	-.721	8	-.589	5	-.1743	8	-.003	11
1241	M127	1	max	.064	6	.002	11	.001	6	-.004	11	.115	9	.005	11
1242			min	-.665	9	-.396	4	-.046	9	-.046	6	0	9	-.199	4
1243		2	max	.064	6	.002	11	.001	6	-.004	11	.07	8	.004	11
1244			min	-.665	9	-.527	4	-.046	9	-.046	6	0	12	-2.464	4
1245		3	max	.064	6	.002	11	.001	6	-.004	11	.025	8	.002	11
1246			min	-.665	9	-.295	4	-.046	9	-.046	6	0	10	-.084	4
1247		4	max	.064	6	.002	11	.001	6	-.004	11	.003	6	.143	5
1248			min	-.665	9	-.063	4	-.046	9	-.046	6	-.022	9	-.067	12
1249		5	max	.064	6	.002	11	.001	6	-.004	11	.004	6	1.086	5
1250			min	-.665	9	-.339	4	-.046	9	-.046	6	-.067	9	-.065	12
1251	M128	1	max	.064	6	.001	11	.045	9	.041	7	0	6	.005	11
1252			min	-.664	9	-.1088	4	-.001	6	-.004	6	-.114	9	-4.165	4
1253		2	max	.064	6	.001	11	.045	9	.041	7	0	12	.004	11
1254			min	-.664	9	-.558	4	-.001	6	-.004	6	-.07	8	-2.439	4
1255		3	max	.064	6	.001	11	.045	9	.041	7	0	12	.002	11
1256			min	-.664	9	-.282	4	-.001	6	-.004	6	-.025	8	-.028	4
1257		4	max	.064	6	.001	11	.045	9	.041	7	.02	9	.141	5
1258			min	-.664	9	-.044	4	-.001	6	-.004	6	-.004	9	-.007	12
1259		5	max	.064	6	.001	11	.045	9	.041	7	.065	9	1.075	5
1260			min	-.664	9	-.829	4	-.001	6	-.004	6	-.005	5	-.005	12
1261	M129	1	max	2.103	8	.002	11	0	10	.042	6	.81	9	.007	11
1262			min	.013	10	-.1887	4	-.256	8	-.003	11	0	10	-4.176	4
1263		2	max	2.103	8	.002	11	0	10	.042	6	.555	9	.005	11
1264			min	.013	10	-.558	4	-.256	8	-.003	11	0	8	-2.145	4
1265		3	max	2.103	8	.002	11	0	10	.042	6	.299	9	.002	11
1266			min	.013	10	-.288	4	-.256	8	-.003	11	-.002	4	-.028	4
1267		4	max	2.103	8	.002	11	0	10	.042	6	.043	9	.139	5
1268			min	.013	10	-.043	4	-.256	8	-.003	11	-.002	8	-.007	12
1269		5	max	2.103	8	.002	11	0	10	.042	6	-.001	10	1.072	5
1270			min	.013	10	-.30	4	-.256	8	-.003	11	-.214	8	-.005	12
1271	M130	1	max	2.101	8	.002	11	.255	8	.003	11	0	10	.007	11
1272			min	.013	10	-.892	4	0	10	-.044	6	-.809	9	-4.179	4
1273		2	max	2.101	8	.002	11	.255	8	.003	11	0	4	.005	11
1274			min	.013	10	-.567	4	0	10	-.044	6	-.654	9	-2.493	4
1275		3	max	2.101	8	.002	11	.255	8	.003	11	.002	6	.002	11
1276			min	.013	10	-.291	4	0	10	-.044	6	-.5	9	-.828	4
1277		4	max	2.101	8	.002	11	.255	8	.003	11	.003	6	.146	5
1278			min	.013	10	-.054	4	0	10	-.044	6	-.345	9	-.007	12
1279		5	max	2.101	8	.002	11	.255	8	.003	11	.211	8	1.089	5
1280			min	.013	10	-.838	4	0	10	-.044	6	0	10	-.005	12
1281	M131	1	max	-.343	10	.572	5	.274	9	.004	12	.062	6	.819	4
1282			min	-2.821	8	-.004	12	-.027	6	-.586	5	-.536	9	-.011	11
1283		2	max	-.343	10	.601	5	.274	9	.004	12	.005	4	.052	12
1284			min	-2.821	8	-.004	12	-.027	6	-.586	5	-.065	9	-.145	5
1285		3	max	-.343	10	.653	5	.274	9	.004	12	.576	9	.06	12
1286			min	-2.821	8	-.004	12	-.027	6	-.586	5	-.652	6	-.765	5
1287		4	max	.063	6	-.004	12	0	10	.042	4	.08	9	-.008	11
1288			min	.66	9	-.338	4	-.015	8	-.003	11	-.003	6	-.336	4
1289		5	max	.063	6	-.004	12	0	10	.042	4	.05	9	1.098	5
1290			min	.66	9	-.926	4	-.015	8	-.003	11	-.002	6	-.007	12
1291	M132	1	max	.953	11	.568	5	.727	8	.591	5	-.013	10	.818	4

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1292			min	-1.609	6	-.004	12	-.006	10	-.004	12	-.714	8	-.003	11
1293		2	max	.953	11	.597	5	.727	8	.591	5	0	10	.052	12
1294			min	-1.609	6	-.004	12	-.006	10	-.004	12	-.169	8	-.443	5
1295		3	max	.953	11	.65	5	.727	8	.591	5	1.377	8	.059	12
1296			min	-1.609	6	-.004	12	-.006	10	-.004	12	-.013	10	-.175	5
1297		4	max	.859	8	.01	11	.001	4	-.004	11	.315	8	.012	11
1298			min	-.013	10	-.329	5	-.35	9	-.036	7	0	10	-.299	4
1299		5	max	.859	8	.01	11	.001	4	-.004	11	.005	6	1.102	5
1300			min	-.013	10	-.533	4	-.35	9	-.036	7	-.429	9	-.009	12
1301	M133	1	max	.056	6	.005	12	0	4	0	5	.028	9	.004	12
1302			min	-.371	9	-.151	5	-.013	9	0	13	0	4	-.200	5
1303		2	max	.056	6	.005	12	0	4	0	5	.01	9	.08	10
1304			min	-.371	9	-.620	5	-.013	9	0	13	0	4	-.128	3
1305		3	max	.056	6	.005	12	0	4	0	5	0	12	.539	5
1306			min	-.371	9	-.139	5	-.013	9	0	13	-.003	8	-.009	12
1307		4	max	.056	6	.294	4	0	4	0	5	0	4	.421	5
1308			min	-.37	9	0	11	-.013	9	0	13	-.027	9	-.015	12
1309		5	max	.056	6	.512	4	0	4	0	5	0	4	.02	3
1310			min	-.371	9	0	11	-.013	9	0	13	-.045	9	-.187	4
1311	M134	1	max	1.447	8	.007	12	0	12	0	11	0	8	.007	12
1312			min	.012	10	-.114	5	0	8	0	4	0	12	-.179	5
1313		2	max	1.447	8	.007	12	0	12	0	11	0	8	.087	10
1314			min	.012	10	-.618	5	0	8	0	4	0	12	-.126	3
1315		3	max	1.447	8	.007	12	0	12	0	11	0	8	.538	5
1316			min	.012	10	-.128	5	0	8	0	4	0	12	.012	12
1317		4	max	1.447	8	.306	4	0	12	0	11	0	12	.406	5
1318			min	.012	10	-.054	11	0	8	0	4	0	8	-.022	12
1319		5	max	1.447	8	.524	4	0	12	0	11	0	12	.013	13
1320			min	.012	10	.007	11	0	8	0	4	0	8	-.217	4
1321	M135	1	max	.056	6	.007	12	0	12	0	11	0	8	.007	12
1322			min	-.543	9	-.139	5	0	8	0	4	0	12	-.179	5
1323		2	max	.056	6	.007	12	0	12	0	11	0	8	.087	10
1324			min	-.543	9	-.618	5	0	8	0	4	0	12	-.126	3
1325		3	max	.056	6	.007	12	0	12	0	11	0	8	.538	5
1326			min	-.543	9	-.127	5	0	8	0	4	0	12	.012	12
1327		4	max	.056	6	.306	4	0	12	0	11	0	12	.405	5
1328			min	-.543	9	.002	11	0	8	0	4	0	8	-.022	12
1329		5	max	.056	6	.525	4	0	12	0	11	0	12	.005	3
1330			min	-.543	9	.002	11	0	8	0	4	0	8	-.218	4
1331	M136	1	max	.056	6	.005	12	.014	8	0	4	0	12	.004	12
1332			min	-.371	9	-.115	5	0	12	0	12	-.03	8	-.208	5
1333		2	max	.056	6	.005	12	.014	8	0	4	0	12	.079	10
1334			min	-.371	9	-.628	5	0	12	0	12	-.011	8	-.128	3
1335		3	max	.056	6	.005	12	.014	8	0	4	.008	9	.537	5
1336			min	-.37	9	-.138	5	0	12	0	12	0	12	-.009	12
1337		4	max	.056	6	.295	4	.014	8	0	4	.028	8	.418	5
1338			min	-.371	9	0	11	0	12	0	12	0	12	-.015	12
1339		5	max	.056	6	.513	4	.014	8	0	4	.047	8	.019	3
1340			min	-.371	9	0	11	0	12	0	12	0	12	-.185	4
1341	M137	1	max	1.325	9	.003	11	0	6	0	12	.002	8	.022	12
1342			min	-.13	6	-.222	5	.002	9	0	5	0	12	-.254	5
1343		2	max	1.325	9	.003	11	0	6	0	12	0	6	.02	12
1344			min	-.13	6	-.144	5	.002	9	0	5	0	9	-.093	5
1345		3	max	1.325	9	.004	7	0	6	0	12	0	6	.017	12
1346			min	-.13	6	-.016	5	.002	9	0	5	-.003	9	-.078	5
1347		4	max	1.325	9	.147	4	0	6	0	12	0	6	.015	12
1348			min	-.13	6	.002	12	.002	9	0	5	-.006	9	-.067	5

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1349		5	max	1.325	9	.326	4	0	6	0	12	0	6	.012	12
1350			min	-.13	6	-.002	12	-.002	9	0	5	-.009	9	-2.229	5
1351	M138	1	max	.99	9	-.002	12	.036	9	.006	5	.005	6	.024	12
1352			min	-.095	6	-.004	4	-.002	6	0	12	-.057	9	-.693	5
1353		2	max	.99	9	-.002	12	.036	9	.006	5	.003	6	.026	12
1354			min	-.095	6	-.007	4	-.002	6	0	12	-.014	9	-1.044	5
1355		3	max	.99	9	-.002	12	.036	9	.006	5	.029	9	.029	12
1356			min	-.095	6	-.004	4	-.002	6	0	12	0	6	-.511	5
1357		4	max	.99	9	-.002	12	.036	9	.006	5	.071	9	.032	12
1358			min	-.095	6	-.321	4	-.002	6	0	12	-.005	6	.111	3
1359		5	max	.99	9	-.002	12	.036	9	.006	5	.114	9	.275	4
1360			min	-.095	6	-.26	4	-.002	6	0	12	-.005	6	-.085	3
1361	M139	1	max	.944	9	.253	4	.002	6	0	12	.161	9	.275	4
1362			min	-.095	6	-.004	11	-.216	9	-.006	5	-.006	6	-.035	3
1363		2	max	.638	9	.314	4	.002	6	0	12	0	10	.032	12
1364			min	-.095	6	-.004	11	-.116	9	-.006	5	-.038	8	-.109	3
1365		3	max	.332	9	.396	4	.002	6	0	12	0	12	.029	12
1366			min	-.095	6	-.004	11	-.014	9	-.006	5	-.118	6	-.494	3
1367		4	max	.039	11	.491	4	.088	8	0	12	.002	6	.026	12
1368			min	-.095	5	-.004	11	0	10	-.006	5	-.071	9	-1.017	5
1369		5	max	-.02	10	.604	4	.19	8	0	12	.095	8	.023	12
1370			min	-.302	8	-.004	11	0	10	-.006	5	0	10	-1.682	5
1371	M140	1	max	-.027	10	.003	11	0	10	0	5	.525	8	.022	11
1372			min	-.543	8	-.318	4	-.549	9	0	12	0	10	-2.281	5
1373		2	max	-.027	10	.003	11	0	10	0	5	0	6	.018	11
1374			min	-.815	8	-.24	4	-.277	9	0	12	-.059	9	-1.559	5
1375		3	max	-.027	10	.023	5	0	10	0	5	0	6	.017	12
1376			min	-1.087	8	-.082	12	-.005	9	0	12	-.258	9	-.881	5
1377		4	max	-.027	10	.148	5	.267	8	0	5	0	6	.019	12
1378			min	-1.359	8	-.002	12	0	6	0	12	-.013	9	-2.007	5
1379		5	max	-.027	10	.23	5	.539	8	0	5	.497	8	.022	12
1380			min	-1.63	8	-.002	12	0	6	0	12	0	10	-2.279	5
1381	M141	1	max	-.02	10	.002	11	0	10	.006	5	.708	8	.034	12
1382			min	-3.12	8	-.509	4	-7	8	0	12	0	10	-1.669	5
1383		2	max	-.02	10	.002	11	0	10	.006	5	.059	8	.038	12
1384			min	-.414	8	-.501	4	-.394	8	0	12	0	10	-1.016	5
1385		3	max	-.02	10	.002	11	0	10	.006	5	0	12	.042	12
1386			min	-.516	8	-.409	4	-.088	8	0	12	-.227	8	-.478	5
1387		4	max	-.02	10	.002	11	.218	9	.006	5	0	10	.046	12
1388			min	-.618	8	-.325	4	-.002	6	0	12	-.151	8	-.009	3
1389		5	max	-.02	10	.002	11	.524	9	.006	5	.29	9	.325	4
1390			min	-.72	8	-.263	4	-.002	6	0	12	-.005	6	-.020	13
1391	M142	1	max	-.02	10	.259	4	.002	6	0	12	.289	9	.325	4
1392			min	-.72	6	-.002	11	-.523	9	-.006	5	-.005	6	-.025	13
1393		2	max	-.02	10	.321	4	.002	6	0	12	0	10	.046	12
1394			min	-.618	8	-.002	11	-.217	9	-.006	5	-.150	8	-.09	3
1395		3	max	-.02	10	.403	4	.089	8	0	12	0	10	.042	12
1396			min	-.516	8	-.002	11	0	10	-.006	5	-.226	13	-.465	5
1397		4	max	-.02	10	.497	4	.395	8	0	12	.061	8	.038	12
1398			min	-.414	8	-.002	11	0	10	-.006	5	0	10	-.995	5
1399		5	max	-.02	10	.611	4	.701	8	0	12	.711	8	.034	12
1400			min	-.312	8	-.002	11	0	10	-.006	5	.061	10	-1.648	5
1401	M143	1	max	-.027	10	.002	12	0	6	0	12	.497	8	.022	12
1402			min	-1.633	8	-.219	5	-.535	8	0	5	0	12	-2.245	5
1403		2	max	-.027	10	.002	12	0	6	0	12	0	6	.019	12
1404			min	-1.361	8	-.137	5	-.262	8	0	5	-.073	9	-1.989	5
1405		3	max	-.027	10	.002	12	.005	9	0	12	0	6	.017	12

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1406			min	-.028	8	-.016	5	0	10	0	5	-.258	9	-1.878	5
1407		4	max	-.027	10	.15	4	.277	9	0	12	0	6	.017	11
1408			min	-.817	8	-.003	11	0	10	0	5	-.053	9	-1.972	5
1409		5	max	-.027	10	.329	4	.549	9	0	12	.525	8	.022	11
1410			min	-.545	8	-.003	11	0	10	0	5	0	10	-2.309	5
1411	M144	1	max	-.02	10	.004	11	0	10	.006	5	.097	8	.023	12
1412			min	-.302	8	-.004	4	-.19	8	0	12	-.004	10	-1.697	5
1413		2	max	.039	11	.004	11	0	10	.006	5	.003	6	.026	12
1414			min	-.095	6	-.496	4	-.089	8	0	12	-.003	9	-1.049	5
1415		3	max	.332	9	.004	11	.013	9	.006	5	0	10	.029	12
1416			min	-.095	6	-.404	4	-.002	6	0	12	-.114	12	-.517	5
1417		4	max	.638	9	.004	11	.115	9	.006	5	0	10	.032	12
1418			min	-.095	6	-.321	4	-.002	6	0	12	-.038	8	-.112	3
1419		5	max	.944	9	.004	11	.217	9	.006	5	.16	9	.268	4
1420			min	-.095	6	-.26	4	-.002	6	0	12	-.005	6	-.036	3
1421	M145	1	max	.99	9	.252	4	.002	6	0	12	.115	9	.268	4
1422			min	-.095	6	-.002	12	-.037	9	-.006	5	-.065	6	-.036	3
1423		2	max	.99	9	.314	4	.002	6	0	12	.071	9	.032	12
1424			min	-.095	6	-.002	12	-.037	9	-.006	5	-.003	6	-.11	3
1425		3	max	.99	9	.396	4	.002	6	0	12	.028	9	.029	12
1426			min	-.095	6	-.002	12	-.037	9	-.006	5	0	4	-.499	5
1427		4	max	.99	9	.49	4	.002	6	0	12	.002	6	.026	12
1428			min	-.095	6	-.002	12	-.037	9	-.006	5	-.016	9	-1.022	5
1429		5	max	.99	9	.604	4	.002	6	0	12	.005	6	.024	12
1430			min	-.095	6	-.002	12	-.037	9	-.006	5	-.059	9	-1.667	5
1431	M146	1	max	1.327	9	-.002	12	.002	9	0	5	0	6	.012	12
1432			min	-.129	6	-.322	4	0	6	0	12	-.009	9	-2.29	5
1433		2	max	1.327	9	-.002	12	.002	9	0	5	0	6	.015	12
1434			min	-.129	6	-.143	4	0	6	0	12	-.006	9	-1.065	5
1435		3	max	1.327	9	.02	5	.002	9	0	5	0	6	.017	12
1436			min	-.129	6	-.005	7	0	6	0	12	-.003	9	-.88	5
1437		4	max	1.327	9	.145	5	.002	9	0	5	0	6	.02	12
1438			min	-.129	6	-.003	11	0	6	0	12	0	9	-2.002	5
1439		5	max	1.327	9	.227	5	.002	9	0	5	.002	8	.022	12
1440			min	-.129	6	-.003	11	0	6	0	12	0	10	-2.268	5
1441	M147	1	max	.934	9	-.001	11	.026	9	.006	5	.005	6	.034	12
1442			min	-.094	6	-.613	4	-.002	6	0	12	-.065	9	-1.656	5
1443		2	max	.934	9	-.001	11	.026	9	.006	5	.002	6	.038	12
1444			min	-.094	6	-.499	4	-.002	6	0	12	-.036	9	-1.001	5
1445		3	max	.934	9	-.001	11	.026	9	.006	5	0	12	.042	12
1446			min	-.094	6	-.405	4	-.002	6	0	12	-.064	8	-.468	5
1447		4	max	.934	9	-.001	11	.026	9	.006	5	.026	9	.046	12
1448			min	-.094	6	-.323	4	-.002	6	0	12	-.003	6	-.089	3
1449		5	max	.934	9	-.001	11	.026	9	.006	5	.057	9	.327	4
1450			min	-.094	6	-.262	4	-.002	6	0	12	-.005	6	-.012	3
1451	M148	1	max	.934	9	.263	4	.002	6	0	12	.056	9	.327	4
1452			min	-.094	6	-.001	11	-.025	9	-.006	5	-.005	6	-.012	3
1453		2	max	.934	9	.324	4	.002	6	0	12	.026	9	.046	12
1454			min	-.094	6	-.001	11	-.025	9	-.006	5	-.003	6	-.089	3
1455		3	max	.934	9	.407	4	.002	6	0	12	0	10	.042	12
1456			min	-.094	6	-.001	11	-.025	9	-.006	5	-.003	10	-.472	5
1457		4	max	.934	9	.5	4	.002	6	0	12	.003	6	.038	12
1458			min	-.094	6	-.001	11	-.025	9	-.006	5	-.003	9	-1.007	5
1459		5	max	.934	9	.607	4	.002	6	0	12	.005	6	.034	12
1460			min	-.094	6	-.001	11	-.025	9	-.006	5	-.003	9	-1.008	5
1461	M149	1	max	.109	4	1.026	5	.033	8	.024	3	.062	9	1.195	5
1462			min	-.018	9	-.026	11	0	12	-.009	10	-.009	4	-.038	11

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Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1463		2	max	.109	4	1.422	5	.033	8	.024	3	.129	9	.037	11
1464			min	.018	12	.026	12	0	12	-.009	10	0	6	-1.402	5
1465		3	max	-.501	12	-.001	12	.049	4	.638	4	.763	9	-.024	12
1466			min	-6.576	8	-.675	4	.37	9	.002	12	-.102	4	-2.945	4
1467		4	max	-.501	12	-.001	12	.049	4	.638	4	.002	6	-.021	12
1468			min	-6.576	8	-.622	4	.37	9	.002	12	-.022	9	-.685	4
1469		5	max	-.501	12	-.001	12	.049	4	.638	4	.107	4	.614	5
1470			min	-6.576	8	-.593	4	.37	9	.002	12	-.308	9	-.106	12
1471	M150	1	max	1.228	8	1.029	5	.51	9	.01	10	.008	4	1.198	5
1472			min	.018	12	.002	12	.004	4	.041	13	.62	9	0	12
1473		2	max	1.228	8	1.425	5	.51	9	.01	10	.465	9	.004	12
1474			min	.018	12	.002	12	.004	4	.041	13	0	10	-1.196	5
1475		3	max	3.507	9	.004	11	-.008	12	.013	11	1.935	8	.084	11
1476			min	-3.171	4	-.672	4	-.032	8	-.637	4	-.015	12	-2.028	4
1477		4	max	3.507	9	.004	11	-.008	12	.013	11	-.001	12	.076	11
1478			min	-3.171	4	-.621	4	-.032	8	-.637	4	-.288	8	-.669	4
1479		5	max	3.507	9	.004	11	-.008	12	.013	11	-.017	12	.624	5
1480			min	-3.171	4	-.56	4	-.032	8	-.637	4	-2.451	8	-.016	12
1481	M151	1	max	.106	4	0	12	0	12	.068	8	.2	8	.003	12
1482			min	-.933	9	-1.993	4	-.074	8	-.002	10	0	12	-4.487	5
1483		2	max	.106	4	0	12	0	12	.068	8	.126	8	.003	12
1484			min	-.933	9	-.674	4	-.074	8	-.002	10	0	12	-2.636	5
1485		3	max	.106	4	0	12	0	12	.068	8	.052	8	.003	12
1486			min	-.933	9	-.392	4	-.074	8	-.002	10	0	12	-1.105	5
1487		4	max	.106	4	0	12	0	12	.068	8	.007	4	.163	4
1488			min	-.933	9	-1.49	4	-.074	8	-.002	10	-.024	9	.001	11
1489		5	max	.106	4	0	12	0	12	.068	8	.006	4	1.203	4
1490			min	-.933	9	-.986	4	-.074	8	-.002	10	-.026	9	.003	12
1491	M152	1	max	.107	4	0	12	.073	8	-.003	10	0	12	.003	12
1492			min	-.931	9	-1.982	4	0	6	-.068	8	-.799	8	-2.45	5
1493		2	max	.107	4	0	12	.073	8	-.003	10	0	12	.003	12
1494			min	-.931	9	-1.663	4	0	6	-.068	8	-.126	8	-2.63	5
1495		3	max	.107	4	0	12	.073	8	-.003	10	-.001	12	.003	12
1496			min	-.931	9	-1.339	4	0	6	-.068	8	-.032	8	-1.107	5
1497		4	max	.107	4	0	12	.073	8	-.003	10	.023	9	.166	4
1498			min	-.931	9	-1.158	4	0	6	-.068	8	-.007	4	-.001	11
1499		5	max	.107	4	0	12	.073	8	-.003	10	.096	9	1.217	4
1500			min	-.931	9	-.978	4	0	6	-.068	8	-.007	4	-.003	12
1501	M153	1	max	3.012	8	.017	11	0	10	.02	11	1.192	9	.054	11
1502			min	.018	12	-1.99	4	-.375	9	-.032	6	-1.007	4	-2.463	5
1503		2	max	3.012	8	.017	11	0	10	.02	11	.817	9	.037	11
1504			min	.018	12	-1.669	4	-.375	9	-.032	6	-.005	4	-2.637	5
1505		3	max	3.012	8	.017	11	0	10	.02	11	.442	9	.019	11
1506			min	.018	12	-1.397	4	-.375	9	-.032	6	-.007	4	-1.108	5
1507		4	max	3.012	8	.017	11	0	10	.02	11	.067	9	.171	4
1508			min	.018	12	-1.164	4	-.375	9	-.032	6	-.007	4	-.002	11
1509		5	max	3.012	8	.017	11	0	10	.02	11	-.001	12	1.227	4
1510			min	.018	12	-.935	4	-.375	9	-.032	6	-.331	8	-.015	11
1511	M154	1	max	3.01	8	.017	11	.374	9	.033	6	.008	4	.053	11
1512			min	.018	12	-1.986	4	0	5	-.02	11	-.064	9	-2.463	5
1513		2	max	3.01	8	.017	11	.374	9	.033	6	.008	4	.036	11
1514			min	.018	12	-1.671	4	0	5	-.02	11	-.617	9	-2.637	5
1515		3	max	3.01	8	.017	11	.374	9	.033	6	.007	4	.019	11
1516			min	.018	12	-1.358	4	0	5	-.02	11	-.445	9	-1.109	5
1517		4	max	3.01	8	.017	11	.374	9	.033	6	.007	4	.163	4
1518			min	.018	12	-1.154	4	0	5	-.02	11	-.568	9	-.002	11
1519		5	max	3.01	8	.017	11	.374	9	.033	6	.308	8	1.211	4

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1520			min	.018	12	.046	4	0	5	-.02	11	.007	12	-.015	11
1521	M155	1	max	-.501	12	.592	4	.376	9	-.002	12	.106	4	.614	5
1522			min	-6.576	8	.001	12	.046	4	-.637	4	-.309	9	-.106	12
1523		2	max	-.501	12	.621	4	.376	9	-.002	12	.008	4	-.021	12
1524			min	-6.576	8	.001	12	.046	4	-.637	4	-.011	9	-.684	4
1525		3	max	-.501	12	.674	4	.376	9	-.002	12	.787	9	-.024	12
1526			min	-6.576	8	.001	12	.046	4	-.637	4	-.001	4	-2.942	4
1527		4	max	.108	4	.026	11	0	12	.007	11	.13	8	.037	11
1528			min	-.32	9	-1.428	5	.032	8	-.026	6	0	6	-1.332	5
1529		5	max	.108	4	.026	11	0	12	.007	11	.064	9	1.206	5
1530			min	-.32	9	-1.027	5	.032	8	-.026	6	-.008	4	-.012	11
1531	M156	1	max	3.507	9	.594	4	1.039	8	.635	4	-.017	12	.624	5
1532			min	-3.17	4	-.004	11	.008	12	.013	11	-2.452	8	-.016	12
1533		2	max	3.507	9	.623	4	1.039	8	.635	4	0	10	.077	11
1534			min	-3.17	4	-.004	11	.008	12	.013	11	-.245	8	-.678	4
1535		3	max	3.507	9	.674	4	1.039	8	.635	4	1.962	8	.086	11
1536			min	-3.17	4	-.004	11	.008	12	.013	11	.016	12	-.057	4
1537		4	max	1.23	8	.002	12	.004	4	.04	13	.466	9	.004	12
1538			min	.018	12	-1.432	5	-.51	9	-.015	10	0	10	-1.444	5
1539		5	max	1.23	8	.002	12	.004	4	.04	13	.009	4	1.192	5
1540			min	.018	12	-1.02	5	-.51	9	-.015	10	-.617	9	0	12
1541	M157	1	max	.092	4	0	12	0	4	0	9	.043	9	0	12
1542			min	-.519	9	-1.075	4	.02	9	0	10	0	4	-1.285	4
1543		2	max	.092	4	0	12	0	4	0	9	.015	9	.078	10
1544			min	-.519	9	-.653	4	.02	9	0	10	0	4	-.176	3
1545		3	max	.092	4	0	12	0	4	0	9	0	12	.529	4
1546			min	-.519	9	-.163	4	.02	9	0	10	-.012	9	.002	12
1547		4	max	.092	4	.267	5	0	4	0	9	0	4	.446	4
1548			min	-.519	9	-.017	7	.02	9	0	10	-.004	9	.003	12
1549		5	max	.092	4	.486	5	0	4	0	9	0	4	.1	13
1550			min	-.519	9	-.002	11	.02	9	0	10	-.067	9	-.128	10
1551	M158	1	max	2.062	8	.014	11	0	12	0	5	.001	8	.026	11
1552			min	.016	12	-1.18	4	0	8	0	11	0	12	-1.271	4
1553		2	max	2.062	8	.014	11	0	12	0	5	0	8	.09	10
1554			min	.016	12	-.85	4	0	8	0	11	0	12	-.172	3
1555		3	max	2.062	8	.014	11	0	12	0	5	0	8	.561	4
1556			min	.016	12	-.52	4	0	8	0	11	0	12	.012	11
1557		4	max	2.062	8	.262	5	0	12	0	5	0	12	.486	4
1558			min	.016	12	-.02	3	0	8	0	11	0	8	.03	11
1559		5	max	2.062	8	.48	5	0	12	0	5	0	12	.117	3
1560			min	.016	12	-.003	12	0	8	0	11	0	8	-.105	10
1561	M159	1	max	.096	4	-.003	12	0	12	0	12	0	8	-.003	12
1562			min	-.75	9	-1.183	4	0	8	0	4	0	12	-1.276	4
1563		2	max	.096	4	-.003	12	0	12	0	12	0	8	.089	10
1564			min	-.75	9	-.561	4	0	8	0	4	0	12	-.172	3
1565		3	max	.096	4	-.003	12	0	12	0	12	0	8	.56	4
1566			min	-.75	9	-.17	4	0	8	0	4	0	12	-.005	12
1567		4	max	.096	4	.261	5	0	12	0	12	0	12	.487	4
1568			min	-.75	9	-.037	13	0	8	0	4	0	8	.009	12
1569		5	max	.096	4	.479	5	0	12	0	12	0	12	.18	13
1570			min	-.75	9	-.013	11	0	8	0	4	0	8	-.106	10
1571	M160	1	max	.092	4	0	12	.021	8	0	12	0	12	0	12
1572			min	-.519	9	-1.188	4	0	12	0	13	-.045	8	-1.288	4
1573		2	max	.092	4	0	12	.021	8	0	12	0	12	.081	10
1574			min	-.519	9	-.553	4	0	12	0	13	-.016	8	-.175	3
1575		3	max	.092	4	0	12	.021	8	0	12	.012	9	.534	4
1576			min	-.519	9	-.163	4	0	12	0	13	0	4	.002	12

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Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1577		4	max	.092	4	.272	5	.021	8	0	12	.04	8	.447	4
1578			min	-.519	9	-.017	12	0	12	0	13	0	12	-.005	12
1579		5	max	.092	4	.489	5	.021	8	0	12	.089	8	.1	13
1580			min	-.519	9	-.0020	11	0	12	0	13	0	12	-.126	10
1581	M161	1	max	1.852	9	-.001	12	0	12	0	11	.005	8	-.01	12
1582			min	-.219	4	-.268	4	-.003	8	0	4	0	12	-2.591	4
1583		2	max	1.852	9	-.001	12	0	12	0	11	0	4	-.008	12
1584			min	-.219	4	-.184	4	-.003	8	0	4	0	11	-2.263	4
1585		3	max	1.852	9	-.001	12	0	12	0	11	0	4	.005	11
1586			min	-.219	4	-.035	8	-.003	8	0	4	.005	8	-2.092	4
1587		4	max	1.852	9	.148	5	0	12	0	11	0	4	.025	11
1588			min	-.219	4	-.044	4	-.003	8	0	4	.009	9	-2.162	4
1589		5	max	1.852	9	.364	5	0	12	0	11	0	6	.044	11
1590			min	-.219	4	-.014	11	-.003	8	0	4	.014	9	-2.525	4
1591	M162	1	max	1.395	9	.012	11	.05	9	.007	4	.01	4	.041	11
1592			min	-.157	4	-.56	5	-.004	4	0	12	-.076	9	-1.888	4
1593		2	max	1.395	9	.012	11	.05	9	.007	4	.005	4	.027	11
1594			min	-.157	4	-.526	5	-.004	4	0	12	-.017	9	-1.134	4
1595		3	max	1.395	9	.012	11	.05	9	.007	4	.042	8	.013	11
1596			min	-.157	4	-.425	5	-.004	4	0	12	0	12	-.382	4
1597		4	max	1.395	9	.012	11	.05	9	.007	4	.101	9	.018	10
1598			min	-.157	4	-.324	5	-.004	4	0	12	.005	4	.228	3
1599		5	max	1.395	9	.012	11	.05	9	.007	4	.161	9	.19	10
1600			min	-.157	4	-.245	5	-.004	4	0	12	.009	4	.165	13
1601	M163	1	max	1.329	9	.244	5	.004	4	0	11	.229	9	.19	10
1602			min	-.157	4	0	12	-.012	9	-.007	4	-.009	4	-.168	13
1603		2	max	.893	9	.323	5	.004	4	0	11	0	12	.018	10
1604			min	-.157	4	0	12	-.160	9	-.007	4	-.053	4	-.236	13
1605		3	max	.457	9	.425	5	.004	4	0	11	0	12	-.006	12
1606			min	-.157	4	0	12	-.021	9	-.007	4	-.165	4	-.67	4
1607		4	max	.047	11	.535	5	.125	8	0	11	.004	4	-.005	12
1608			min	-.157	4	0	12	-.1	12	-.007	4	-.105	9	-1.78	4
1609		5	max	-.026	12	.66	5	.271	8	0	11	.133	8	-.004	12
1610			min	-.157	4	0	12	0	12	-.007	4	.001	12	-1.884	4
1611	M164	1	max	-.036	12	.001	12	0	4	0	4	.75	13	0	12
1612			min	-.795	8	-.368	5	-.763	9	0	11	0	11	-2.527	4
1613		2	max	-.036	12	.001	12	0	4	0	4	0	4	-.003	12
1614			min	-.183	8	-.52	5	-.395	9	0	11	-.082	9	-2.164	4
1615		3	max	-.036	12	.033	4	0	4	0	4	0	4	0	11
1616			min	-.157	4	-.024	9	-.006	9	0	11	-.368	9	-2.084	4
1617		4	max	-.036	12	.18	4	.38	8	0	4	0	4	.023	11
1618			min	-.158	8	-.016	11	0	12	0	11	-.136	9	-2.239	4
1619		5	max	-.036	12	.285	4	.768	8	0	4	.707	8	.046	11
1620			min	-.246	8	-.016	11	0	12	0	11	0	12	-2.502	4
1621	M165	1	max	-.026	12	.001	12	0	12	.007	4	1.014	8	.056	11
1622			min	-.45	8	-.56	5	0	8	0	11	.001	12	-1.941	4
1623		2	max	-.026	12	.001	12	0	12	.007	4	.087	8	.061	11
1624			min	-.595	8	-.53	5	-.564	8	0	11	0	12	-1.238	4
1625		3	max	-.026	12	.001	12	0	12	.007	4	0	12	.067	11
1626			min	-.74	8	-.417	5	-.628	8	0	11	.325	9	-.679	4
1627		4	max	-.026	12	.001	12	.309	9	.007	4	0	12	.073	11
1628			min	-.886	8	-.317	5	-.003	4	0	11	-.216	8	-.258	3
1629		5	max	-.026	12	.001	12	.745	9	.007	4	.411	9	.158	10
1630			min	-.031	8	-.207	5	-.003	4	0	11	-.008	4	-.190	3
1631	M166	1	max	-.026	12	.243	5	.004	4	0	11	.41	9	.158	10
1632			min	-.001	8	-.001	12	-.74	9	-.007	4	-.009	4	-.195	13
1633		2	max	-.026	12	.322	5	.004	4	0	11	0	12	.073	11

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1634			min	-.296	8	-.001	12	-.308	9	-.007	4	-.216	8	-.259	3
1635		3	max	-.026	12	.424	5	.128	8	0	11	0	12	.067	11
1636			min	-.241	8	-.001	12	0	12	-.007	4	-.322	9	-.693	4
1637		4	max	-.026	12	.534	5	.564	8	0	11	.089	8	.062	11
1638			min	-.695	8	-.001	12	0	12	-.007	4	0	12	-1.259	4
1639		5	max	-.026	12	.659	5	1.001	8	0	11	1.017	8	.057	11
1640			min	-.45	8	-.001	12	0	12	-.007	4	-.001	12	-1.935	4
1641	M167	1	max	-.036	12	.017	11	0	12	0	11	.707	8	.047	11
1642			min	-2.547	8	-.294	4	-.768	8	0	4	0	12	-2.605	4
1643		2	max	-.036	12	.017	11	0	12	0	11	0	4	.024	11
1644			min	-1.96	8	-.189	4	-.38	8	0	4	-.105	9	-2.259	4
1645		3	max	-.036	12	.02	9	.008	9	0	11	0	4	0	11
1646			min	-1.572	8	-.042	4	0	4	0	4	-.362	9	-2.09	4
1647		4	max	-.036	12	.143	5	.395	9	0	11	0	4	-.003	12
1648			min	-1.185	8	-.001	12	0	4	0	4	-.083	9	-2.157	4
1649		5	max	-.036	12	.359	5	.783	9	0	11	.75	8	0	12
1650			min	-.797	8	-.001	12	0	4	0	4	0	10	-2.508	4
1651	M168	1	max	-.026	12	0	12	0	12	.007	4	.135	8	-.004	12
1652			min	-.466	8	-.66	5	-.272	8	0	11	-.001	12	-1.86	4
1653		2	max	.047	11	0	12	0	12	.007	4	.005	4	-.005	12
1654			min	-.157	4	-.529	5	-.126	8	0	11	-.102	9	-1.488	4
1655		3	max	.457	9	0	12	.02	9	.007	4	0	5	-.006	12
1656			min	-.157	4	-.416	5	-.002	4	0	11	-.164	9	-.599	4
1657		4	max	.893	9	0	12	.166	9	.007	4	0	12	.019	10
1658			min	-.157	4	-.316	5	-.002	4	0	11	-.055	8	-.236	13
1659		5	max	1.329	9	0	12	.311	9	.007	4	.229	9	.186	10
1660			min	-.157	4	-.226	5	-.004	4	0	11	-.009	4	-.165	13
1661	M169	1	max	1.395	9	.25	5	.004	4	0	12	.161	9	.186	10
1662			min	-.157	4	-.012	11	-.051	9	-.006	4	-.009	4	-.164	13
1663		2	max	1.395	9	.329	5	.004	4	0	12	.101	9	.011	10
1664			min	-.157	4	-.012	11	-.05	9	-.006	4	-.005	4	-.26	13
1665		3	max	1.395	9	.43	5	.004	4	0	12	.041	9	.012	11
1666			min	-.157	4	-.012	11	-.051	9	-.006	4	0	4	-.632	4
1667		4	max	1.395	9	.54	5	.004	4	0	12	.004	4	.026	11
1668			min	-.157	4	-.012	11	-.051	9	-.006	4	-.016	9	-1.206	4
1669		5	max	1.395	9	.666	5	.004	4	0	12	.008	4	.04	11
1670			min	-.157	4	-.012	11	-.05	9	-.006	4	-.078	9	-1.979	4
1671	M170	1	max	1.854	9	.014	11	.003	8	0	4	0	6	.044	11
1672			min	-.218	4	-.36	5	0	12	0	11	-.054	9	-2.554	4
1673		2	max	1.854	9	.014	11	.003	8	0	4	0	4	.024	11
1674			min	-.218	4	-.159	5	0	12	0	11	-.009	9	-2.189	4
1675		3	max	1.854	9	.033	8	.003	8	0	4	0	4	.004	11
1676			min	-.218	4	-.001	12	0	12	0	11	-.005	9	-2.097	4
1677		4	max	1.854	9	.172	4	.003	8	0	4	0	4	-.008	12
1678			min	-.218	4	-.001	12	0	12	0	11	0	11	-2.245	4
1679		5	max	1.854	9	.275	4	.003	8	0	4	.005	8	-.01	12
1680			min	-.218	4	-.001	12	0	12	0	11	0	12	-2.562	4
1681	M171	1	max	1.294	9	.006	11	.037	9	.007	4	.007	4	-.014	12
1682			min	-.162	4	-.06	5	-.003	4	0	12	-.092	9	-.942	4
1683		2	max	1.294	9	.006	11	.037	9	.007	4	.003	4	-.016	12
1684			min	-.162	4	-.329	5	-.006	4	0	12	-.05	9	-.124	4
1685		3	max	1.294	9	.006	11	.037	9	.007	4	0	12	-.017	12
1686			min	-.162	4	-.416	5	-.003	4	0	12	-.007	8	-.681	4
1687		4	max	1.294	9	.006	11	.037	9	.007	4	.037	9	-.009	10
1688			min	-.162	4	-.316	5	-.003	4	0	12	-.004	4	-.341	8
1689		5	max	1.294	9	.006	11	.037	9	.007	4	.08	9	.159	10
1690			min	-.162	4	-.237	5	-.003	4	0	12	-.008	4	-.292	13

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1691	M172	1	max	1.294	9	.243	5	.004	4	0	12	.08	9	.159	10
1692			min	-.162	4	-.007	11	-.036	9	-.007	4	-.093	4	-.292	15
1693		2	max	1.294	9	.322	5	.004	4	0	12	.037	9	-.013	10
1694			min	-.162	4	-.007	11	-.036	9	-.007	4	-.004	4	-.343	8
1695		3	max	1.294	9	.423	5	.004	4	0	12	0	12	-.017	12
1696			min	-.162	4	-.007	11	-.036	9	-.007	4	-.006	6	-.695	4
1697		4	max	1.294	9	.534	5	.004	4	0	12	.004	4	-.016	12
1698			min	-.162	4	-.007	11	-.036	9	-.007	4	-.049	9	-1.262	4
1699		5	max	1.294	9	.659	5	.004	4	0	12	.008	4	-.014	12
1700			min	-.162	4	-.007	11	-.036	9	-.007	4	-.094	9	-1.966	4
1701	M173	1	max	.533	11	.003	12	.027	6	.602	5	.444	9	.044	12
1702			min	-1.719	6	-.533	5	-.2	9	-.002	12	-.06	6	-1.962	5
1703		2	max	.533	11	.003	12	.027	6	.602	5	.219	9	.041	12
1704			min	-1.719	6	-.623	5	-.2	9	-.002	12	-.029	6	-1.252	5
1705		3	max	.533	11	.003	12	.027	6	.602	5	.002	4	.039	12
1706			min	-1.719	6	-.607	5	-.2	9	-.002	12	-.007	9	-.501	5
1707		4	max	.533	11	.003	12	.027	6	.602	5	.032	6	.132	4
1708			min	-1.719	6	-.592	5	-.2	9	-.002	12	-.232	9	-.041	3
1709		5	max	.533	11	.003	12	.027	6	.602	5	.063	6	.787	4
1710			min	-1.719	6	-.576	5	-.2	9	-.002	12	-.457	9	-.006	11
1711	M174	1	max	.534	11	.003	12	.195	9	.002	12	.066	6	.044	12
1712			min	-1.718	6	-.634	5	-.029	6	-.607	5	-.042	9	-1.942	5
1713		2	max	.534	11	.003	12	.195	9	.002	12	.034	6	.041	12
1714			min	-1.718	6	-.610	5	-.029	6	-.607	5	-.201	9	-1.237	5
1715		3	max	.534	11	.003	12	.195	9	.002	12	.019	8	.039	12
1716			min	-1.718	6	-.583	5	-.029	6	-.607	5	0	12	-.549	5
1717		4	max	.534	11	.003	12	.195	9	.002	12	.237	9	.138	4
1718			min	-1.718	6	-.588	5	-.029	6	-.607	5	-.032	6	-.04	3
1719		5	max	.534	11	.003	12	.195	9	.002	12	.457	9	.79	4
1720			min	-1.718	6	-.572	5	-.029	6	-.607	5	-.063	6	-.003	11
1721	M175	1	max	.525	11	.578	5	.027	6	.601	5	.487	9	.79	4
1722			min	-1.718	6	-.003	11	-.176	9	-.009	11	-.003	6	-.003	11
1723		2	max	.525	11	.593	5	.027	6	.601	5	.288	9	.132	4
1724			min	-1.718	6	-.003	11	-.176	9	-.009	11	-.032	6	-.042	3
1725		3	max	.525	11	.608	5	.027	6	.601	5	.09	9	.038	12
1726			min	-1.718	6	-.003	11	-.176	9	-.009	11	-.002	4	-.561	5
1727		4	max	.525	11	.624	5	.027	6	.601	5	.029	6	.04	12
1728			min	-1.718	6	-.003	11	-.176	9	-.009	11	-.009	9	-1.254	5
1729		5	max	.525	11	.639	5	.027	6	.601	5	.06	6	.043	12
1730			min	-1.718	6	-.003	11	-.176	9	-.009	11	-.307	9	-1.965	5
1731	M176	1	max	.525	11	.575	5	.171	9	.009	11	.063	6	.787	4
1732			min	-1.719	6	-.003	11	-.029	6	-.606	5	-.468	9	-.003	11
1733		2	max	.525	11	.59	5	.171	9	.009	11	.031	6	.134	4
1734			min	-1.719	6	-.003	11	-.029	6	-.606	5	-.263	9	-.042	3
1735		3	max	.525	11	.605	5	.171	9	.009	11	0	12	.038	12
1736			min	-1.719	6	-.003	11	-.029	6	-.606	5	-.102	6	-.557	5
1737		4	max	.525	11	.621	5	.171	9	.009	11	.091	9	.04	12
1738			min	-1.719	6	-.003	11	-.029	6	-.606	5	-.034	6	-1.246	5
1739		5	max	.525	11	.636	5	.171	9	.009	11	.284	9	.043	12
1740			min	-1.719	6	-.003	11	-.029	6	-.606	5	-.066	6	-1.934	5
1741	M177	1	max	.327	11	-.002	12	.044	4	.639	5	.608	9	-.016	12
1742			min	-2.454	4	-.657	4	-.277	9	-.062	11	-.095	4	-2.139	4
1743		2	max	.327	11	-.002	12	.044	4	.639	5	.296	9	-.014	12
1744			min	-2.454	4	-.642	4	-.277	9	-.062	11	-.045	4	-1.408	4
1745		3	max	.327	11	-.002	12	.044	4	.639	5	.004	4	-.012	12
1746			min	-2.454	4	-.626	4	-.277	9	-.062	11	-.015	6	-.695	4
1747		4	max	.327	11	-.002	12	.044	4	.639	5	.054	4	.098	10

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1748			min	-2.454	4	-.611	4	-.277	9	-.062	11	-.327	9	-.228	13
1749		5	max	.327	11	-.002	12	.044	4	.639	5	.104	4	.683	5
1750			min	-2.454	4	-.595	4	-.277	9	-.062	11	-.639	9	-.012	11
1751	M178	1	max	.327	11	-.002	12	.271	9	.062	11	.108	4	-.016	12
1752			min	-2.451	4	-.661	4	-.047	4	-.636	5	-.682	9	-2.147	4
1753		2	max	.327	11	-.002	12	.271	9	.062	11	.055	4	-.014	12
1754			min	-2.451	4	-.646	4	-.047	4	-.636	5	-.277	9	-1.411	4
1755		3	max	.327	11	-.002	12	.271	9	.062	11	.028	8	-.012	12
1756			min	-2.451	4	-.63	4	-.047	4	-.636	5	0	12	-.693	4
1757		4	max	.327	11	-.002	12	.271	9	.062	11	.333	9	.102	10
1758			min	-2.451	4	-.615	4	-.047	4	-.636	5	-.051	4	-.227	13
1759		5	max	.327	11	-.002	12	.271	9	.062	11	.638	9	.694	5
1760			min	-2.451	4	-.599	4	-.047	4	-.636	5	-.104	4	-.012	11
1761	M179	1	max	.314	11	.585	5	.045	4	.647	4	.683	9	.694	5
1762			min	-2.451	4	-.03	11	-.248	9	0	12	-.104	4	-.012	11
1763		2	max	.314	11	.6	5	.045	4	.647	4	.404	9	.105	10
1764			min	-2.451	4	-.03	11	-.248	9	0	12	-.054	4	-.164	3
1765		3	max	.314	11	.616	5	.045	4	.647	4	.125	9	.055	11
1766			min	-2.451	4	-.03	11	-.248	9	0	12	-.004	4	.66	4
1767		4	max	.314	11	.631	5	.045	4	.647	4	.047	4	.089	11
1768			min	-2.451	4	-.03	11	-.248	9	0	12	-.164	9	-1.36	4
1769		5	max	.314	11	.647	5	.045	4	.647	4	.097	4	.123	11
1770			min	-2.451	4	-.03	11	-.248	9	0	12	-.432	9	-2.08	4
1771	M180	1	max	.314	11	.581	5	.242	9	0	12	.105	4	.683	5
1772			min	-2.454	4	-.03	11	-.047	4	-.646	4	-.682	9	-.012	11
1773		2	max	.314	11	.597	5	.242	9	0	12	.051	4	.101	10
1774			min	-2.454	4	-.03	11	-.047	4	-.646	4	-.144	9	-.166	3
1775		3	max	.314	11	.612	5	.242	9	0	12	0	12	.056	11
1776			min	-2.454	4	-.03	11	-.047	4	-.646	4	-.138	8	-.664	4
1777		4	max	.314	11	.628	5	.242	9	0	12	.135	9	.09	11
1778			min	-2.454	4	-.03	11	-.047	4	-.646	4	-.055	4	-1.361	4
1779		5	max	.314	11	.643	5	.242	9	0	12	.407	9	.124	11
1780			min	-2.454	4	-.03	11	-.047	4	-.646	4	-.109	4	-2.075	4
1781	M181	1	max	.306	6	.041	10	.003	11	0	5	.002	7	.088	10
1782			min	.241	9	-2.26	7	-.004	7	-.009	8	-.013	9	-4.492	7
1783		2	max	.306	6	.041	10	.003	11	0	5	0	12	.042	10
1784			min	.241	9	-2.254	7	-.004	7	-.009	8	-.011	9	-1.88	7
1785		3	max	.306	6	.041	10	.003	11	0	5	0	12	.625	7
1786			min	.241	9	-2.219	7	-.004	7	-.009	8	-.01	8	-.004	10
1787		4	max	.306	6	.041	10	.003	11	0	5	0	12	3.112	7
1788			min	.241	9	-2.203	7	-.004	7	-.009	8	-.012	7	-.05	10
1789		5	max	.306	6	.041	10	.003	11	0	5	.001	11	5.582	7
1790			min	.241	9	-2.188	7	-.004	7	-.009	8	-.016	7	-.096	10
1791	M182	1	max	.306	6	2.188	7	.008	7	.009	8	.001	11	5.583	7
1792			min	.241	9	.041	10	0	12	0	12	-.016	7	-.096	10
1793		2	max	.306	6	2.203	7	.008	7	.009	8	.002	11	3.112	7
1794			min	.241	9	.041	10	0	12	0	12	-.008	7	-.05	10
1795		3	max	.306	6	2.219	7	.008	7	.009	8	.004	8	.625	7
1796			min	.241	9	.041	10	0	12	0	12	0	12	-.004	10
1797		4	max	.306	6	2.234	7	.008	7	.009	8	.01	7	.042	10
1798			min	.241	9	.04	10	0	12	0	12	0	12	1.88	7
1799		5	max	.306	6	2.25	7	.008	7	.009	8	.019	7	.088	10
1800			min	.241	9	.041	10	0	12	0	12	0	12	4.492	7
1801	M183	1	max	4.375	7	.004	8	0	4	0	12	0	12	.018	8
1802			min	.082	10	0	12	0	12	0	8	0	4	0	12
1803		2	max	4.358	7	.004	8	0	4	0	12	0	12	.013	8
1804			min	.089	10	0	12	0	12	0	8	0	4	0	12

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Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1805		3	max	4.341	7	.004	8	0	4	0	12	0	12	.009	8
1806			min	-.092	10	0	12	0	12	0	8	0	4	0	12
1807		4	max	4.325	7	.004	8	0	4	0	12	0	12	.004	8
1808			min	-.092	10	0	12	0	12	0	8	0	4	0	12
1809		5	max	4.308	7	.004	8	0	4	0	12	0	4	0	10
1810			min	-.092	10	0	12	0	12	0	8	0	12	.001	13
1811	M184	1	max	.091	2	-.076	1	0	1	0	1	0	1	0	1
1812			min	.067	1	-.076	2	0	1	0	2	0	1	0	1
1813		2	max	.1	2	-.058	1	0	1	0	1	0	1	.186	2
1814			min	.076	1	-.058	2	0	1	0	2	0	1	.186	1
1815		3	max	.121	2	-.016	1	0	1	0	1	0	1	.29	2
1816			min	.097	1	-.016	2	0	1	0	2	0	1	.29	1
1817		4	max	.154	2	.05	1	0	1	0	1	0	1	.249	2
1818			min	.13	1	.05	2	0	1	0	2	0	1	.249	1
1819		5	max	.198	2	.138	1	0	1	0	1	0	1	0	1
1820			min	.174	1	.138	2	0	1	0	2	0	1	0	1
1821	M185	1	max	-.255	1	-.071	1	0	1	0	2	0	1	0	1
1822			min	-.26	2	-.071	2	0	1	0	1	0	1	0	1
1823		2	max	-.247	1	-.054	1	0	1	0	2	0	1	.178	2
1824			min	-.252	2	-.054	2	0	1	0	1	0	1	.178	1
1825		3	max	-.228	1	-.016	1	0	1	0	2	0	1	.282	2
1826			min	-.234	2	-.016	2	0	1	0	1	0	1	.282	1
1827		4	max	-.198	1	.047	1	0	1	0	2	0	1	.244	2
1828			min	-.203	2	.047	2	0	1	0	1	0	1	.244	1
1829		5	max	-.156	1	.133	1	0	1	0	2	0	1	0	1
1830			min	-.162	2	.133	2	0	1	0	1	0	1	0	1
1831	M186	1	max	.088	2	-.076	1	0	1	0	2	0	1	0	1
1832			min	.065	1	-.076	2	0	1	0	1	0	1	0	1
1833		2	max	.097	2	-.058	1	0	1	0	2	0	1	.187	2
1834			min	.075	1	-.058	2	0	1	0	1	0	1	.187	1
1835		3	max	.119	2	-.016	1	0	1	0	2	0	1	.291	2
1836			min	.096	1	-.016	2	0	1	0	1	0	1	.291	1
1837		4	max	.152	2	.051	1	0	1	0	2	0	1	.249	2
1838			min	.129	1	.051	2	0	1	0	1	0	1	.249	1
1839		5	max	.195	2	.137	1	0	1	0	2	0	1	0	1
1840			min	.173	1	.137	2	0	1	0	1	0	1	0	1
1841	M187	1	max	.041	2	-.075	1	0	1	0	1	0	1	0	1
1842			min	.018	1	-.075	2	0	1	0	2	0	1	0	1
1843		2	max	.05	2	-.058	1	0	1	0	1	0	1	.185	2
1844			min	.027	1	-.058	2	0	1	0	2	0	1	.185	1
1845		3	max	.071	2	-.016	1	0	1	0	1	0	1	.289	2
1846			min	.048	1	-.016	2	0	1	0	2	0	1	.289	1
1847		4	max	.104	2	.05	1	0	1	0	1	0	1	.249	2
1848			min	.081	1	.05	2	0	1	0	2	0	1	.249	1
1849		5	max	.149	2	.138	1	0	1	0	1	0	1	0	1
1850			min	.126	1	.138	2	0	1	0	2	0	1	0	1
1851	M188	1	max	-.233	2	-.071	1	0	1	0	1	0	1	0	1
1852			min	-.235	1	-.071	2	0	1	0	2	0	1	0	1
1853		2	max	-.225	2	-.054	1	0	1	0	1	0	1	.178	2
1854			min	-.227	1	-.054	2	0	1	0	2	0	1	.178	1
1855		3	max	-.206	2	-.016	1	0	1	0	1	0	1	.282	2
1856			min	-.209	1	-.016	2	0	1	0	2	0	1	.282	1
1857		4	max	-.176	2	.047	1	0	1	0	1	0	1	.244	2
1858			min	-.178	1	.047	2	0	1	0	2	0	1	.244	1
1859		5	max	-.134	2	.133	1	0	1	0	1	0	1	0	1
1860			min	-.137	1	.133	2	0	1	0	2	0	1	0	1
1861	M189	1	max	.044	2	-.076	2	0	1	0	2	0	1	0	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1862			min	.021	1	-.076	1	0	1	0	2	0	1	0	1
1863		2	max	.053	2	-.058	2	0	1	0	2	0	1	.186	1
1864			min	.029	1	-.058	1	0	1	0	1	0	1	.186	2
1865		3	max	.075	2	-.016	2	0	1	0	2	0	1	.29	1
1866			min	.051	1	-.016	1	0	1	0	1	0	1	.29	2
1867		4	max	.108	2	.05	2	0	1	0	2	0	1	.249	1
1868			min	.084	1	.05	1	0	1	0	1	0	1	.249	2
1869		5	max	.151	2	.137	2	0	1	0	2	0	1	0	1
1870			min	.127	1	.137	1	0	1	0	1	0	1	0	1
1871	M190	1	max	.091	2	-.076	1	0	1	0	1	0	1	0	1
1872			min	.067	1	-.076	2	0	1	0	2	0	1	0	1
1873		2	max	.1	2	-.058	1	0	1	0	1	0	1	.186	2
1874			min	.076	1	-.058	2	0	1	0	2	0	1	.186	1
1875		3	max	.121	2	-.016	1	0	1	0	1	0	1	.29	2
1876			min	.097	1	-.016	2	0	1	0	2	0	1	.29	1
1877		4	max	.154	2	.05	1	0	1	0	1	0	1	.249	2
1878			min	.13	1	.05	2	0	1	0	2	0	1	.249	1
1879		5	max	.198	2	.138	1	0	1	0	1	0	1	0	1
1880			min	.174	1	.138	2	0	1	0	2	0	1	0	1
1881	M191	1	max	-.255	1	-.071	2	0	1	0	2	0	1	0	1
1882			min	-.26	2	-.071	1	0	1	0	1	0	1	0	1
1883		2	max	-.247	1	-.054	2	0	1	0	2	0	1	.178	1
1884			min	-.252	2	-.054	1	0	1	0	1	0	1	.178	2
1885		3	max	-.228	1	-.016	2	0	1	0	2	0	1	.282	1
1886			min	-.233	2	-.016	1	0	1	0	1	0	1	.282	2
1887		4	max	-.198	1	.047	2	0	1	0	2	0	1	.244	1
1888			min	-.203	2	.047	1	0	1	0	1	0	1	.244	2
1889		5	max	-.156	1	.133	2	0	1	0	2	0	1	0	1
1890			min	-.162	2	.133	1	0	1	0	1	0	1	0	1
1891	M192	1	max	.088	2	-.076	1	0	1	0	2	0	1	0	1
1892			min	.065	1	-.076	2	0	1	0	1	0	1	0	1
1893		2	max	.097	2	-.058	1	0	1	0	2	0	1	.187	2
1894			min	.074	1	-.058	2	0	1	0	1	0	1	.187	1
1895		3	max	.119	2	-.016	1	0	1	0	2	0	1	.291	2
1896			min	.096	1	-.016	2	0	1	0	1	0	1	.291	1
1897		4	max	.152	2	.051	1	0	1	0	2	0	1	.249	2
1898			min	.129	1	.051	2	0	1	0	1	0	1	.249	1
1899		5	max	.195	2	.137	1	0	1	0	2	0	1	0	1
1900			min	.173	1	.137	2	0	1	0	1	0	1	0	1
1901	M193	1	max	.041	2	-.075	1	0	1	0	1	0	1	0	1
1902			min	.018	1	-.075	2	0	1	0	2	0	1	0	1
1903		2	max	.05	2	-.058	1	0	1	0	1	0	1	.185	2
1904			min	.027	1	-.058	2	0	1	0	2	0	1	.185	1
1905		3	max	.071	2	-.016	1	0	1	0	1	0	1	.289	2
1906			min	.048	1	-.016	2	0	1	0	2	0	1	.289	1
1907		4	max	.104	2	.05	1	0	1	0	1	0	1	.249	2
1908			min	.081	1	.05	2	0	1	0	2	0	1	.249	1
1909		5	max	.148	2	.138	1	0	1	0	1	0	1	0	1
1910			min	.126	1	.138	2	0	1	0	2	0	1	0	1
1911	M194	1	max	-.233	2	-.071	1	0	1	0	1	0	1	0	1
1912			min	-.235	1	-.071	2	0	1	0	2	0	1	0	1
1913		2	max	-.225	2	-.054	1	0	1	0	1	0	1	.178	2
1914			min	-.227	1	-.054	2	0	1	0	2	0	1	.178	1
1915		3	max	-.206	2	-.016	1	0	1	0	1	0	1	.282	2
1916			min	-.209	1	-.016	2	0	1	0	2	0	1	.282	1
1917		4	max	-.176	2	.047	1	0	1	0	1	0	1	.244	2
1918			min	-.178	1	.047	2	0	1	0	2	0	1	.244	1

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Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1919		5	max	-.134	2	.133	1	0	1	0	1	0	1	0	1
1920			min	-.137	1	-.133	2	0	1	0	2	0	1	0	1
1921	M195	1	max	.045	2	-.076	1	0	1	0	2	0	1	0	1
1922			min	.02	1	-.076	2	0	1	0	1	0	1	0	1
1923		2	max	.054	2	-.058	1	0	1	0	2	0	1	.186	2
1924			min	.03	1	-.058	2	0	1	0	1	0	1	.186	1
1925		3	max	.075	2	-.016	1	0	1	0	2	0	1	.29	2
1926			min	.053	1	-.016	2	0	1	0	1	0	1	.29	1
1927		4	max	.108	2	.05	1	0	1	0	2	0	1	.249	2
1928			min	.084	1	.05	2	0	1	0	1	0	1	.249	1
1929		5	max	.152	2	.137	1	0	1	0	2	0	1	0	1
1930			min	.127	1	.137	2	0	1	0	1	0	1	0	1
1931	M196	1	max	12.413	4	-.001	12	0	8	0	1	0	1	0	1
1932			min	.809	11	-7.241	8	0	12	0	1	0	1	0	1
1933		2	max	10.284	4	-.001	12	0	8	0	1	.009	8	104.13	8
1934			min	.809	11	-5.876	8	0	12	0	1	0	1	-.026	12
1935		3	max	8.155	4	-.001	12	0	8	0	1	.018	8	140.806	8
1936			min	.809	11	-.934	8	0	12	0	1	0	1	-.051	12
1937		4	max	6.027	4	4.171	9	0	8	0	1	.026	8	102.162	8
1938			min	.809	11	.073	4	0	12	0	1	0	1	-.077	12
1939		5	max	3.898	4	6.271	8	0	8	0	1	.036	8	.981	4
1940			min	.809	11	.013	4	0	12	0	1	0	1	-6.194	9
1941	M197	1	max	1.001	4	.257	5	.174	4	.732	8	1.514	9	-.112	10
1942			min	.369	11	-.506	13	-.151	9	-.067	12	-.292	4	-1.161	12
1943		2	max	1.001	4	-.055	10	.174	4	.732	8	1.275	9	.151	11
1944			min	.369	11	-.641	9	-.151	9	-.067	12	-.017	4	-.3	4
1945		3	max	1.069	4	.407	11	.005	4	3.095	9	3.481	8	.741	9
1946			min	-1.598	9	-1.356	4	-3.127	8	-.491	4	-.004	12	-.363	12
1947		4	max	1.069	4	.407	11	.005	4	3.095	9	.05	4	1.53	4
1948			min	-1.598	9	-1.650	4	-3.127	8	-.491	4	-1.470	9	-.022	11
1949		5	max	1.069	4	.407	11	.005	4	3.095	9	.058	4	4.387	4
1950			min	-1.598	9	-1.951	4	-3.127	8	-.491	4	-5.226	9	-.366	11
1951	M198	1	max	1.069	4	1.954	4	3.122	8	.49	4	.058	4	4.398	4
1952			min	-1.597	9	-.402	11	-.008	4	-3.096	9	-.004	12	-.359	11
1953		2	max	1.069	4	1.662	4	3.122	8	.49	4	.045	4	1.537	4
1954			min	-1.597	9	-.402	11	-.008	4	-3.096	9	-4.487	9	-.012	11
1955		3	max	1.069	4	1.369	4	3.122	8	.49	4	3.463	8	.745	9
1956			min	-1.597	9	-.402	11	-.008	4	-3.096	9	-.004	12	-.351	4
1957		4	max	.991	4	.646	8	.134	9	-.067	12	1.269	9	.152	11
1958			min	.376	11	-.255	13	-.185	4	-.273	8	-.021	4	-.3	4
1959		5	max	.991	4	.511	13	.134	9	-.067	12	1.48	9	-.112	10
1960			min	.376	11	-.255	9	-.185	4	-.273	8	-.314	4	-1.164	7
1961	M199	1	max	-.007	12	.784	5	0	8	0	8	0	12	.023	10
1962			min	-.293	8	-.02	4	0	12	0	12	-.001	8	-.264	13
1963		2	max	-.007	12	.392	5	0	8	0	8	0	12	-.011	12
1964			min	-.293	8	-.02	4	0	12	0	12	0	8	-.854	4
1965		3	max	-.007	12	.003	10	0	8	0	8	0	12	-.008	12
1966			min	-.293	8	-.038	13	0	12	0	12	0	8	-1.157	4
1967		4	max	-.007	12	-.003	12	0	8	0	8	0	8	-.004	12
1968			min	-.293	8	-.395	4	0	12	0	12	0	12	-.05	4
1969		5	max	-.007	12	-.003	12	0	8	0	8	.001	8	.009	4
1970			min	-.293	8	-.785	4	0	12	0	12	0	12	0	12
1971	M200	1	max	1.362	9	.762	5	0	8	0	8	0	12	.34	9
1972			min	.307	4	-.007	12	0	12	0	12	-.001	8	-.204	8
1973		2	max	1.362	9	.37	5	0	8	0	8	0	12	.208	11
1974			min	.307	4	-.007	12	0	12	0	12	0	8	-.659	4
1975		3	max	1.362	9	.057	9	0	8	0	8	0	12	.141	11

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1976			min	.07	4	-.034	6	0	12	0	12	0	8	-1.217	4
1977		4	max	1.362	9	.046	11	0	8	0	8	0	8	.074	11
1978			min	.07	4	-.116	6	0	12	0	12	0	12	-.834	4
1979		5	max	1.362	9	.046	11	0	8	0	8	.001	8	.009	8
1980			min	.07	4	-.309	6	0	12	0	12	0	12	-.062	6
1981	M201	1	max	.203	4	.51	5	0	12	0	6	.043	8	.349	8
1982			min	.426	9	-.004	12	-.022	8	0	9	0	12	-.016	12
1983		2	max	.203	4	.292	5	0	12	0	6	.02	8	.15	13
1984			min	.426	9	-.004	12	-.022	8	0	9	0	12	-.101	4
1985		3	max	.203	4	.088	8	0	12	0	6	0	4	.067	9
1986			min	.426	9	-.004	12	-.022	8	0	9	-.062	9	-.282	4
1987		4	max	.203	4	.036	9	0	12	0	6	0	12	.026	11
1988			min	.426	9	-.146	4	-.022	8	0	9	-.025	8	-.245	4
1989		5	max	.203	4	.031	11	0	12	0	6	0	12	.01	4
1990			min	.426	9	-.364	4	-.022	8	0	9	-.047	9	-.006	9
1991	M202	1	max	.032	4	.644	5	0	4	.002	8	.031	9	.042	10
1992			min	.001	11	-.096	7	-.017	9	0	12	0	4	-.877	7
1993		2	max	.032	4	.275	5	0	4	.002	8	.015	9	-.144	11
1994			min	.001	11	-.16	7	-.017	9	0	12	0	4	-.678	4
1995		3	max	.032	4	.008	10	0	4	.002	8	0	12	-.095	11
1996			min	.001	11	-.224	7	-.017	9	0	12	-.002	8	-.544	4
1997		4	max	.032	4	-.049	11	0	4	.002	8	0	3	-.046	12
1998			min	.001	11	-.483	7	-.017	9	0	12	-.019	8	-.641	4
1999		5	max	.032	4	-.049	11	0	4	.002	8	0	6	.031	4
2000			min	.001	11	-.856	4	-.017	9	0	12	-.025	9	-.002	11
2001	M205	1	max	.032	4	.644	5	.016	9	0	12	0	4	.042	10
2002			min	.002	11	-.096	7	0	4	-.002	8	-.031	9	-.875	7
2003		2	max	.032	4	.275	5	.016	9	0	12	0	4	-.142	11
2004			min	.002	11	-.159	7	0	4	-.002	8	-.015	9	-.677	4
2005		3	max	.032	4	.008	10	.016	9	0	12	.002	8	-.094	11
2006			min	.002	11	-.225	7	0	4	-.002	8	0	12	-.543	4
2007		4	max	.032	4	-.048	11	.016	9	0	12	.018	13	-.046	11
2008			min	.002	11	-.487	7	0	4	-.002	8	0	4	-.641	4
2009		5	max	.032	4	-.048	11	.016	9	0	12	.035	9	.031	4
2010			min	.002	11	-.856	4	0	4	-.002	8	0	4	-.002	11
2011	M206	1	max	.204	4	.508	5	.022	8	0	9	0	12	.343	8
2012			min	.426	9	-.004	12	0	12	0	6	-.043	8	-.016	12
2013		2	max	.204	4	.29	5	.022	8	0	9	0	12	.146	13
2014			min	.426	9	-.004	12	0	12	0	6	-.02	8	-.105	4
2015		3	max	.204	4	.087	8	.022	8	0	9	.002	9	.064	9
2016			min	.426	9	-.004	12	0	12	0	6	0	4	-.265	4
2017		4	max	.204	4	.035	9	.022	8	0	9	.024	8	.026	11
2018			min	.426	9	-.147	4	0	12	0	6	0	12	-.246	4
2019		5	max	.204	4	.031	11	.022	8	0	9	.047	8	.01	4
2020			min	.426	9	-.365	4	0	12	0	6	0	12	-.006	9
2021	M207	1	max	1.119	8	.807	5	.017	8	0	12	-.001	12	.164	5
2022			min	.027	12	-.053	11	0	12	-.002	8	-.045	6	-.513	13
2023		2	max	1.119	8	.415	5	.017	8	0	12	0	12	-.027	12
2024			min	.027	12	-.053	11	0	12	-.002	8	-.021	8	-.78	4
2025		3	max	1.119	8	.023	5	.017	8	0	12	.003	8	-.018	12
2026			min	.027	12	-.092	13	0	12	-.002	8	0	12	-1.054	4
2027		4	max	1.119	8	-.006	12	.017	8	0	12	.027	8	-.008	12
2028			min	.027	12	-.622	4	0	12	-.002	8	0	12	-.797	4
2029		5	max	1.119	8	-.006	12	.017	8	0	12	.052	8	.032	8
2030			min	.027	12	-.704	4	0	12	-.002	8	.001	12	.001	12
2031	M208	1	max	1.116	8	.807	5	0	12	.002	8	.044	8	.165	5
2032			min	.027	12	-.053	11	.016	8	0	12	.001	12	.509	13

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Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
2033		2	max	1.116	8	.415	5	0	12	.002	8	.02	8	-.027	12
2034			min	.027	12	-.053	11	-.016	8	0	12	0	12	-.036	4
2035		3	max	1.116	8	.023	5	0	12	.002	8	0	12	-.017	12
2036			min	.027	12	-.091	11	-.016	8	0	12	-.069	8	-.053	4
2037		4	max	1.116	8	-.006	12	0	12	.002	8	0	12	-.008	12
2038			min	.027	12	-.372	4	-.016	8	0	12	-.026	8	-.092	4
2039		5	max	1.116	8	-.006	12	0	12	.002	8	-.001	12	.031	8
2040			min	.027	12	-.764	4	-.016	8	0	12	-.05	8	-.001	12
2041	M209	1	max	.23	4	.712	5	.023	9	0	4	.007	4	1.148	9
2042			min	.33	9	-.026	12	-.003	4	0	9	-.058	9	-.66	4
2043		2	max	.23	4	.354	8	.023	9	0	4	.003	4	.742	9
2044			min	.33	9	-.025	12	-.003	4	0	9	-.05	9	-.186	4
2045		3	max	.23	4	.2	9	.023	9	0	4	.004	9	.45	11
2046			min	.33	9	-.018	7	-.003	4	0	9	0	4	-1.343	4
2047		4	max	.23	4	.161	11	.023	9	0	4	.038	9	.215	11
2048			min	.33	9	-.477	4	-.003	4	0	9	-.005	4	-.94	4
2049		5	max	.23	4	.161	11	.023	9	0	4	.071	9	.04	4
2050			min	.33	9	-.866	4	-.002	4	0	9	-.066	4	-.02	9
2051	M210	1	max	.231	4	.711	5	.003	4	0	9	.062	9	1.138	9
2052			min	.327	9	-.026	12	-.023	9	0	4	-.004	4	-.562	4
2053		2	max	.231	4	.352	8	.003	4	0	9	.029	9	.734	9
2054			min	.327	9	-.026	12	-.023	9	0	4	-.004	4	-1.169	4
2055		3	max	.231	4	.198	9	.003	4	0	9	0	4	.448	11
2056			min	.327	9	-.118	7	-.023	9	0	4	-.004	4	-1.35	4
2057		4	max	.231	4	.16	11	.003	4	0	9	.005	4	.214	11
2058			min	.327	9	-.477	4	-.023	9	0	4	-.032	9	-.94	4
2059		5	max	.231	4	.16	11	.003	4	0	9	.009	4	.041	4
2060			min	.327	9	-.869	4	-.023	9	0	4	-.07	9	-.02	9
2061	M211	1	max	-.019	12	.846	9	1.32	9	.302	11	.148	4	1.17	9
2062			min	-3.03	8	-.452	4	-.068	4	-1.215	4	-.016	9	-.088	6
2063		2	max	-.019	12	.834	9	1.32	9	.302	11	.071	4	.332	11
2064			min	-3.03	8	-.402	4	-.068	4	-1.215	4	-.082	9	-.644	6
2065		3	max	-.019	12	.823	9	1.32	9	.302	11	.453	9	.079	10
2066			min	-3.03	8	-.485	4	-.068	4	-1.215	4	-.006	4	-.755	13
2067		4	max	-.019	12	.811	9	1.32	9	.302	11	1.938	9	.559	4
2068			min	-3.03	8	-.507	4	-.068	4	-1.215	4	-.083	4	-1.626	9
2069		5	max	-.019	12	.799	9	1.32	9	.302	11	3.424	9	1.131	4
2070			min	-3.03	8	-.516	4	-.068	4	-1.215	4	-.16	4	-2.532	9
2071	M212	1	max	-.02	12	.841	9	.079	4	1.217	4	2.481	9	1.159	9
2072			min	-3.044	8	-.456	4	-.305	9	-.298	11	-.173	4	-1.094	6
2073		2	max	-.02	12	.83	9	.079	4	1.217	4	1.013	9	.329	11
2074			min	-3.044	8	-.47	4	-.305	9	-.298	11	-.084	4	-.615	6
2075		3	max	-.02	12	.818	9	.079	4	1.217	4	.004	4	.079	10
2076			min	-3.044	8	-.487	4	-.305	9	-.298	11	-.455	4	-.435	13
2077		4	max	-.02	12	.807	9	.079	4	1.217	4	.093	4	.56	4
2078			min	-3.044	8	-.502	4	-.305	9	-.298	11	-.928	9	-1.622	9
2079		5	max	-.02	12	.795	9	.079	4	1.217	4	.181	4	1.134	4
2080			min	-3.044	8	-.518	4	-.305	9	-.298	11	-2.29	4	-2.528	9
2081	M213	1	max	.308	9	1.713	4	.091	9	0	12	.021	4	4.577	4
2082			min	.107	4	.419	11	-.003	4	-.002	8	-.197	9	-1.678	11
2083		2	max	.308	9	1.431	4	.091	9	0	12	.011	4	3.005	4
2084			min	.107	4	.419	11	-.003	4	-.002	8	-.106	9	-1.259	11
2085		3	max	.308	9	1.15	4	.091	9	0	12	.002	4	1.714	4
2086			min	.107	4	.419	11	-.003	4	-.002	8	-.015	9	-.84	11
2087		4	max	.308	9	.868	4	.091	9	0	12	.077	9	.706	4
2088			min	.107	4	.419	11	-.003	4	-.002	8	-.008	4	-.421	11
2089		5	max	.308	9	.587	4	.091	9	0	12	.168	9	0	12

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
2090			min	.107	4	-.426	9	-.000	4	-.002	8	-.072	4	-.022	4
2091	M214	1	max	-.009	12	1.82	4	.089	8	.001	4	-.002	12	5.954	8
2092			min	-.351	8	-.016	12	-.001	12	0	11	-.19	8	-.072	12
2093		2	max	-.009	12	1.616	8	.089	8	.001	4	-.001	12	4.276	8
2094			min	-.351	8	-.016	12	-.001	12	0	11	-.106	8	-.054	12
2095		3	max	-.009	12	1.492	8	.089	8	.001	4	0	12	2.722	8
2096			min	-.351	8	-.016	12	-.001	12	0	11	-.072	8	-.036	12
2097		4	max	-.009	12	1.367	8	.089	8	.001	4	.076	8	1.292	8
2098			min	-.351	8	-.016	12	-.001	12	0	11	0	12	-.018	12
2099		5	max	-.009	12	1.243	8	.089	8	.001	4	.165	8	0	11
2100			min	-.351	8	-.016	12	-.001	12	0	11	-.002	12	-.022	4
2101	M215	1	max	-.009	12	1.821	4	-.001	12	0	11	.19	8	5.96	8
2102			min	-.354	8	-.018	12	-.089	8	-.001	4	-.002	12	-.072	12
2103		2	max	-.009	12	1.618	8	-.001	12	0	11	.101	8	4.28	8
2104			min	-.354	8	-.018	12	-.089	8	-.001	4	-.001	12	-.054	12
2105		3	max	-.009	12	1.493	8	-.001	12	0	11	.012	8	2.724	8
2106			min	-.354	8	-.018	12	-.089	8	-.001	4	0	12	-.036	12
2107		4	max	-.009	12	1.368	8	-.001	12	0	11	0	12	1.294	8
2108			min	-.354	8	-.018	12	-.089	8	-.001	4	-.077	8	-.018	12
2109		5	max	-.009	12	1.244	8	-.001	12	0	11	-.002	12	0	11
2110			min	-.354	8	-.018	12	-.089	8	-.002	4	-.166	8	-.022	4
2111	M216	1	max	.309	9	1.712	4	.01	4	.002	8	.197	9	4.576	4
2112			min	.107	4	-.419	11	-.091	9	0	12	-.021	4	-.678	11
2113		2	max	.309	9	1.431	4	.01	4	.002	8	.106	9	3.004	4
2114			min	.107	4	-.419	11	-.091	9	0	12	-.011	4	-.259	11
2115		3	max	.309	9	1.149	4	.01	4	.002	8	.015	9	1.714	4
2116			min	.107	4	-.419	11	-.091	9	0	12	-.002	4	-.84	11
2117		4	max	.309	9	.868	4	.01	4	.002	8	.008	4	.705	4
2118			min	.107	4	-.419	11	-.091	9	0	12	-.077	9	-.421	11
2119		5	max	.309	9	.586	4	.01	4	.002	8	.018	4	0	12
2120			min	.107	4	-.427	9	-.091	9	0	12	-.168	9	-.022	4
2121	M215A	1	max	.415	8	.506	5	.001	4	0	10	.043	9	.293	5
2122			min	.017	12	-.103	11	-.023	9	-.001	7	-.003	4	-.418	9
2123		2	max	.415	8	.288	5	.001	4	0	10	.02	9	.006	3
2124			min	.017	12	-.03	11	-.023	9	-.001	7	-.002	4	-.164	8
2125		3	max	.415	8	.07	5	.001	4	0	10	0	12	-.008	12
2126			min	.017	12	-.032	9	-.023	9	-.001	7	-.005	8	-.288	4
2127		4	max	.415	8	-.004	12	.001	4	0	10	0	4	-.004	12
2128			min	.017	12	-.43	4	-.023	9	-.001	7	-.025	9	-.247	4
2129		5	max	.415	8	-.004	12	.001	4	0	10	.002	4	.014	8
2130			min	.017	12	-.567	4	-.023	9	-.001	7	-.048	9	0	12
2131	M216A	1	max	.414	8	.506	5	.023	9	.001	7	.003	4	.292	5
2132			min	.017	12	-.03	11	-.001	4	0	10	-.043	9	-.121	9
2133		2	max	.414	8	.288	5	.023	9	.001	7	.002	4	.006	3
2134			min	.017	12	-.03	11	-.001	4	0	10	-.02	9	-.166	8
2135		3	max	.414	8	.07	5	.023	9	.001	7	.003	8	-.008	12
2136			min	.017	12	-.032	9	-.001	4	0	10	0	12	-.286	4
2137		4	max	.414	8	-.004	12	.023	9	.001	7	.025	9	-.004	12
2138			min	.017	12	-.15	4	-.001	4	0	10	0	4	-.247	4
2139		5	max	.414	8	-.004	12	.023	9	.001	7	.048	9	.014	8
2140			min	.017	12	-.368	4	-.001	4	0	10	-.002	4	0	12
2141	M221	1	max	1.486	9	0	10	.751	8	.247	3	0	12	0	9
2142			min	.046	6	-.207	9	-.002	10	0	12	-.458	8	0	3
2143		2	max	3.18	9	.337	8	.146	13	0	12	.039	4	.256	4
2144			min	.001	4	-.003	12	-.002	10	-.352	3	-.801	9	-.092	11
2145		3	max	1.445	13	0	12	.009	3	.107	9	.204	3	.067	3
2146			min	.08	10	-.061	8	-.368	9	-.001	3	-.045	11	-.034	10

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Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
2147		4	max	-.041	12	.08	11	.128	8	.35	3	.317	9	.394	8
2148			min	-.032	8	-.213	3	0	12	-.116	11	-.038	3	-.021	12
2149		5	max	0	10	.207	3	.078	9	.014	11	.027	11	0	12
2150			min	-.215	11	0	10	-.013	3	-.288	3	-.146	3	0	3
2151	M222	1	max	1.49	9	.028	11	.003	10	0	12	.502	8	0	9
2152			min	-.078	3	-.206	3	-.089	13	-.317	8	0	10	0	3
2153		2	max	3.177	9	.334	8	.005	4	.345	3	.932	13	.259	4
2154			min	.33	4	-.008	12	-.156	9	0	12	-.094	10	-.097	11
2155		3	max	1.435	13	0	5	.393	8	0	10	.046	11	.067	13
2156			min	-.081	10	-.206	3	0	12	-.109	13	-.293	3	-.034	11
2157		4	max	-.041	12	.085	11	.003	3	.023	11	-.002	12	.377	8
2158			min	-.041	8	-.218	3	-.133	9	-.35	3	-.44	8	-.022	12
2159		5	max	0	10	.207	3	.075	3	.247	3	.122	3	0	11
2160			min	-.164	8	-.003	11	-.053	11	-.002	11	-.022	11	0	3
2161	M223	1	max	-.003	10	.168	13	0	10	.162	13	3.579	8	.356	13
2162			min	-.173	8	-.002	10	-.488	8	-.013	10	0	12	-.004	10
2163		2	max	-.003	10	.12	13	0	10	.162	13	.061	3	.002	10
2164			min	-.173	8	-.002	10	-1.352	8	-.013	10	-1.321	9	-.14	13
2165		3	max	.315	4	.047	3	.031	4	.032	11	-.002	12	.004	3
2166			min	-.764	9	-.063	9	-.042	9	-.038	3	-1.622	8	-.043	8
2167		4	max	.007	3	.004	10	1.357	8	.013	10	.006	10	.021	4
2168			min	-.383	8	-.067	13	-.102	10	-.257	13	-2.989	13	-.072	9
2169		5	max	.007	3	.004	10	1.494	8	.013	10	3.52	8	.273	13
2170			min	-.383	8	-.115	13	-.102	10	-.257	13	-3.002	10	-.008	10
2171	M224	1	max	-.004	1	.12	3	.024	3	.04	11	.826	9	.27	3
2172			min	-.164	8	-.006	11	-.378	9	-.099	3	-.042	3	-.005	10
2173		2	max	-.004	1	.065	3	.024	3	.04	11	.042	3	.024	11
2174			min	-.164	8	-.006	10	-.242	9	-.099	3	-.248	9	-.022	3
2175		3	max	.519	8	0	4	.025	8	0	12	.176	3	.067	3
2176			min	-.004	12	-.004	10	0	12	-.015	3	-.226	9	-.034	11
2177		4	max	-.006	10	.002	10	.265	8	.098	3	-.001	12	.018	11
2178			min	-.207	8	-.063	3	-.006	3	-.028	11	-.53	8	-.04	3
2179		5	max	-.006	10	.002	10	.401	8	.098	3	.831	9	.272	3
2180			min	-.207	8	-.115	3	-.006	3	-.028	11	-.099	2	-.003	10
2181	M225	1	max	.005	3	.124	3	.058	9	0	3	0	12	.364	3
2182			min	-.154	9	-.008	11	-.035	3	0	10	-.273	8	-.121	11
2183		2	max	.005	3	.116	3	.058	9	0	3	0	12	.269	3
2184			min	-.154	9	-.008	11	-.035	3	0	10	-.187	8	-.086	11
2185		3	max	.005	3	.108	3	.058	9	0	3	0	12	.18	3
2186			min	-.154	9	-.008	11	-.035	3	0	10	-.166	8	-.051	11
2187		4	max	.005	3	.1	3	.058	9	0	3	0	12	.096	3
2188			min	-.154	9	-.008	11	-.035	3	0	10	-.029	8	-.016	11
2189		5	max	.005	3	.092	3	.058	9	0	3	.044	8	.044	8
2190			min	-.154	9	-.008	11	-.035	3	0	10	0	12	0	12
2191	M226	1	max	.009	3	.121	3	0	12	0	10	.094	11	.451	8
2192			min	-.161	9	0	12	-.095	3	0	13	-.21	3	0	12
2193		2	max	.009	3	.113	3	0	12	0	10	.065	11	.328	8
2194			min	-.161	9	0	12	-.095	3	0	13	-.145	3	0	12
2195		3	max	.009	3	.106	3	0	12	0	10	.037	11	.209	8
2196			min	-.161	9	0	12	-.095	3	0	13	-.085	3	0	12
2197		4	max	.009	3	.098	3	0	12	0	10	.008	11	.094	8
2198			min	-.161	9	0	12	-.095	3	0	13	-.05	3	0	12
2199		5	max	.009	3	.09	3	0	12	0	10	.021	3	.02	3
2200			min	-.161	9	0	12	-.095	3	0	13	-.027	9	-.027	9
2201	M227	1	max	.001	11	.212	3	0	10	0	12	.184	11	.796	13
2202			min	-.011	3	0	12	-.173	13	-.003	3	-.399	3	0	10
2203		2	max	.001	11	.204	3	0	10	0	12	.125	11	.579	13

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
2204			min	-.011	3	0	12	-.173	13	-.003	3	-.277	3	0	10
2205		3	max	.001	11	.196	3	0	10	0	12	.066	11	.366	13
2206			min	-.011	3	0	12	-.173	13	-.003	3	-.165	3	0	10
2207		4	max	.001	11	.188	3	0	10	0	12	.007	11	.165	3
2208			min	-.011	3	0	12	-.173	13	-.003	3	-.108	3	0	10
2209		5	max	.001	11	.18	3	0	10	0	12	.042	3	.042	3
2210			min	-.011	3	0	12	-.173	13	-.003	3	-.056	9	-.056	9
2211	M228	1	max	0	12	.209	3	0	12	.004	3	.264	11	.853	8
2212			min	-.021	13	-.002	11	-.204	8	0	11	-.422	3	0	12
2213		2	max	0	12	.202	3	0	12	.004	3	.188	11	.624	8
2214			min	-.021	13	-.002	11	-.204	8	0	11	-.301	3	0	12
2215		3	max	0	12	.194	3	0	12	.004	3	.111	11	.399	8
2216			min	-.021	13	-.002	11	-.204	8	0	11	-.184	3	0	12
2217		4	max	0	12	.186	3	0	12	.004	3	.034	11	.179	8
2218			min	-.021	13	-.002	11	-.204	8	0	11	-.072	3	0	12
2219		5	max	0	12	.178	3	0	12	.004	3	.034	3	.035	3
2220			min	-.021	13	-.002	11	-.204	8	0	11	-.046	9	-.045	9
2221	M229	1	max	1.452	13	.171	8	0	12	0	3	.537	9	1.27	8
2222			min	0	12	0	12	-.425	8	0	11	-.163	3	0	12
2223		2	max	1.452	13	.164	8	0	12	0	3	.371	9	.91	8
2224			min	0	12	0	12	-.425	8	0	11	-.111	3	0	12
2225		3	max	1.452	13	.157	8	0	12	0	3	.202	9	.555	8
2226			min	0	12	0	12	-.425	8	0	11	-.064	3	0	12
2227		4	max	1.452	13	.15	8	0	12	0	3	.03	9	.204	8
2228			min	0	12	0	12	-.425	8	0	11	-.022	3	0	12
2229		5	max	1.452	13	.144	8	0	12	0	3	.015	3	.015	3
2230			min	0	12	0	12	-.425	8	0	11	-.146	9	-.146	9
2231	M230	1	max	1.505	13	.12	3	.373	9	.002	9	0	10	.301	3
2232			min	0	10	-.02	11	-.012	3	0	3	-.669	9	-.647	9
2233		2	max	1.505	13	.112	3	.373	9	.002	9	0	10	.223	3
2234			min	0	10	-.02	11	-.012	3	0	3	-.501	9	-.447	9
2235		3	max	1.505	13	.104	3	.373	9	.002	9	0	10	.151	3
2236			min	0	10	-.02	11	-.012	3	0	3	-.334	9	-.243	9
2237		4	max	1.505	13	.096	3	.373	9	.002	9	0	12	.083	3
2238			min	0	10	-.02	11	-.012	3	0	3	-.077	8	-.057	11
2239		5	max	1.505	13	.088	3	.373	9	.002	9	.178	8	.178	8
2240			min	0	10	-.02	11	-.012	3	0	3	0	10	0	10
2241	M231	1	max	0	12	.212	3	.193	9	0	11	0	12	.56	3
2242			min	-.027	13	-.004	11	-.017	3	-.003	3	-.753	13	-.278	11
2243		2	max	0	12	.204	3	.193	9	0	11	0	12	.424	3
2244			min	-.027	13	-.004	11	-.017	3	-.003	3	-.539	3	-.198	11
2245		3	max	0	12	.196	3	.193	9	0	11	0	12	.292	3
2246			min	-.027	13	-.004	11	-.017	3	-.003	3	-.317	3	-.118	11
2247		4	max	0	12	.188	3	.193	9	0	11	0	12	.165	3
2248			min	-.027	13	-.004	11	-.017	3	-.003	3	-.195	3	-.066	11
2249		5	max	0	12	.18	3	.193	9	0	11	.103	8	.103	8
2250			min	-.027	13	-.004	11	-.017	3	-.003	3	0	12	0	12
2251	M232	1	max	.001	11	.21	3	.153	9	.004	3	0	10	.522	3
2252			min	-.003	3	0	12	-.007	3	0	12	-.674	13	-.179	11
2253		2	max	.001	11	.202	3	.153	9	.004	3	0	10	.393	3
2254			min	-.003	3	0	12	-.007	3	0	12	-.471	13	-.121	11
2255		3	max	.001	11	.194	3	.153	9	.004	3	0	10	.269	3
2256			min	-.003	3	0	12	-.007	3	0	12	-.272	13	-.063	11
2257		4	max	.001	11	.186	3	.153	9	.004	3	0	10	.149	3
2258			min	-.003	3	0	12	-.007	3	0	12	-.078	13	-.006	11
2259		5	max	.001	11	.178	3	.153	9	.004	3	.113	13	.113	13
2260			min	-.003	3	0	12	-.007	3	0	12	0	10	0	10

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Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k...	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
2261	M231A	1	max	17.35	8	.062	8	0	12	0	13	0	8	0	12
2262			min	-385	12	0	12	-.003	8	0	10	0	12	0	8
2263		2	max	17.281	8	.005	11	0	12	0	13	.106	8	0	12
2264			min	-385	12	-.007	3	-.003	8	0	10	0	12	0	8
2265		3	max	17.213	8	.005	11	0	12	0	13	.041	11	0	1
2266			min	-385	12	-.074	3	-.008	8	0	10	-.115	3	-.092	8
2267		4	max	17.026	8	.019	8	.01	8	0	12	.04	3	.01	11
2268			min	-385	12	0	12	0	12	0	8	-.010	11	-.107	3
2269		5	max	16.958	8	.003	11	.01	8	0	12	0	1	0	1
2270			min	-385	12	-.051	3	0	12	0	8	0	11	0	1
2271	M232A	1	max	16.98	8	.05	3	0	11	0	8	0	1	0	9
2272			min	-337	12	-.006	11	-.007	3	0	12	0	9	0	4
2273		2	max	17.048	8	0	12	0	11	0	8	.039	3	.028	11
2274			min	-337	12	-.022	3	-.007	8	0	12	-.023	11	-.101	3
2275		3	max	17.228	8	.075	3	.007	3	0	4	.035	11	.007	3
2276			min	-337	12	-.003	11	-.001	11	0	11	-.113	3	-.035	8
2277		4	max	17.296	8	.007	3	.007	3	0	4	.099	8	0	12
2278			min	-337	12	-.003	11	-.001	11	0	12	0	12	-.135	8
2279		5	max	17.364	8	0	12	.007	3	0	4	0	1	0	1
2280			min	-337	12	-.06	3	-.001	11	0	11	0	1	0	11

Hot Rolled Steel Design Parameters

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp to...	Lcomp b...	Kyy	Kzz	Cm-yy	Cm-zz	Cb	y sway	z sway	Function
1	M1	Lower Leg	18.788					.65	.65						Lateral
2	M2	Lower Leg	18.788					.65	.65						Lateral
3	M3	Lower Leg	18.788					.65	.65						Lateral
4	M4	Lower Leg	18.788					.65	.65						Lateral
5	M5	Lower Leg	18.788					.65	.65						Lateral
6	M6	Upper Leg	18.788					.65	.65						Lateral
7	M7	Upper Leg	18.788					.65	.65						Lateral
8	M8	Lower Leg	18.788					.65	.65						Lateral
9	M9	Upper Leg	18.788					.65	.65						Lateral
10	M10	Upper Leg	18.788					.65	.65						Lateral
11	M11	Lower Leg	18.788					.65	.65						Lateral
12	M12	Upper Leg	18.788					.65	.65						Lateral
13	M13	Upper Leg	18.788					.65	.65						Lateral
14	M14	Lower Leg	18.788					.65	.65						Lateral
15	M15	Lower Leg	18.788					.65	.65						Lateral
16	M16	Upper Leg	18.788					.65	.65						Lateral
17	M17	Lower Gi...	18.915	Segment	Segment	Segment	Segment	1	1						Lateral
18	M18	Lower Gi...	18.915	Segment	Segment	Segment	Segment	1	1						Lateral
19	M19	Lower Gi...	18.915	Segment	Segment	Segment	Segment	1	1						Lateral
20	M20	Lower Gi...	18.915	Segment	Segment	Segment	Segment	1	1						Lateral
21	M21	Lower Gi...	16.83	Segment	Segment	Segment	Segment	1	1						Lateral
22	M22	Lower Gi...	16.83	Segment	Segment	Segment	Segment	1	1						Lateral
23	M23	Lower Gi...	16.83	Segment	Segment	Segment	Segment	1	1						Lateral
24	M24	Lower Gi...	16.83	Segment	Segment	Segment	Segment	1	1						Lateral
25	M25	Lower Di...	25.91	Segment	Segment	Segment	Segment	1	1						Lateral
26	M26	Lower Di...	27.39	Segment	Segment	Segment	Segment	1	1						Lateral
27	M27	Lower Di...	27.39	Segment	Segment	Segment	Segment	1	1						Lateral
28	M28	Lower Di...	25.91	Segment	Segment	Segment	Segment	1	1						Lateral
29	M29	Lower Di...	25.91	Segment	Segment	Segment	Segment	1	1						Lateral
30	M30	Lower Di...	25.91	Segment	Segment	Segment	Segment	1	1						Lateral
31	M31	Lower Di...	27.39	Segment	Segment	Segment	Segment	1	1						Lateral
32	M32	Lower Di...	27.39	Segment	Segment	Segment	Segment	1	1						Lateral
33	M33	Lower Di...	27.39	Segment	Segment	Segment	Segment	1	1						Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp to...	Lcomp b...	Kyy	Kzz	Cm-yy	Cm-zz	Cb	y sway	z sway	Function
34	M34	Lower Di...	25.91	Segment	Segment	Segment	Segment	1	1						Lateral
35	M35	Lower Di...	27.39	Segment	Segment	Segment	Segment	1	1						Lateral
36	M36	Lower Di...	25.91	Segment	Segment	Segment	Segment	1	1						Lateral
37	M37	Lower Di...	25.91	Segment	Segment	Segment	Segment	1	1						Lateral
38	M38	Lower Di...	27.39	Segment	Segment	Segment	Segment	1	1						Lateral
39	M39	Lower Di...	27.39	Segment	Segment	Segment	Segment	1	1						Lateral
40	M40	Lower Di...	25.91	Segment	Segment	Segment	Segment	1	1						Lateral
41	M41	Upper Gi...	14.745	Segment	Segment	Segment	Segment	1	1						Lateral
42	M42	Upper Gi...	14.745	Segment	Segment	Segment	Segment	1	1						Lateral
43	M43	Upper Gi...	14.745	Segment	Segment	Segment	Segment	1	1						Lateral
44	M44	Upper Gi...	14.745	Segment	Segment	Segment	Segment	1	1						Lateral
45	M45	Upper Di...	24.518	Segment	Segment	Segment	Segment	1	1						Lateral
46	M46	Upper Di...	24.518	Segment	Segment	Segment	Segment	1	1						Lateral
47	M47	Upper Di...	24.518	Segment	Segment	Segment	Segment	1	1						Lateral
48	M48	Upper Di...	24.518	Segment	Segment	Segment	Segment	1	1						Lateral
49	M49	Upper Di...	23.231	Segment	Segment	Segment	Segment	1	1						Lateral
50	M50	Upper Di...	23.231	Segment	Segment	Segment	Segment	1	1						Lateral
51	M51	Upper Di...	23.231	Segment	Segment	Segment	Segment	1	1						Lateral
52	M52	Upper Di...	23.231	Segment	Segment	Segment	Segment	1	1						Lateral
53	M55	Upper Di...	23.231	Segment	Segment	Segment	Segment	1	1						Lateral
54	M56	Upper Di...	23.231	Segment	Segment	Segment	Segment	1	1						Lateral
55	M57	Upper Di...	23.231	Segment	Segment	Segment	Segment	1	1						Lateral
56	M58	Upper Di...	23.231	Segment	Segment	Segment	Segment	1	1						Lateral
57	M59	Upper Di...	24.518	Segment	Segment	Segment	Segment	1	1						Lateral
58	M60	Upper Di...	24.518	Segment	Segment	Segment	Segment	1	1						Lateral
59	M61	Platform ...	20.66					.65	.65						Lateral
60	M62	Platform ...	20.66					.65	.65						Lateral
61	M63	Platform ...	12.66					.65	.65						Lateral
62	M64	Platform ...	12.66					.65	.65						Lateral
63	M65	Exterior ...	20.66					.65	.65						Lateral
64	M66	Exterior ...	20.66					.65	.65						Lateral
65	M67	Exterior ...	20.66					.65	.65						Lateral
66	M68	Exterior ...	20.66					.65	.65						Lateral
67	M69	Tank Legs	29.25	Segment	Segment	Segment	Segment	.65	.65						Lateral
68	M70	Tank Legs	29.25	Segment	Segment	Segment	Segment	.65	.65						Lateral
69	M71	Tank Legs	29.25	Segment	Segment	Segment	Segment	.65	.65						Lateral
70	M72	Tank Legs	29.25	Segment	Segment	Segment	Segment	.65	.65						Lateral
71	M73	Tank Dia...	12.906					1	1						Lateral
72	M74	Tank Dia...	12.906					1	1						Lateral
73	M75	Tank Dia...	12.906					1	1						Lateral
74	M76	Tank Dia...	12.906					1	1						Lateral
75	M77	Tank Dia...	12.906					1	1						Lateral
76	M78	Tank Dia...	12.906					1	1						Lateral
77	M79	Tank Dia...	12.906					1	1						Lateral
78	M80	Tank Dia...	12.906					1	1						Lateral
79	M81	Tank Dia...	13.454					1	1						Lateral
80	M82	Tank Dia...	13.454					1	1						Lateral
81	M83	Tank Dia...	13.454					1	1						Lateral
82	M84	Tank Dia...	13.454					1	1						Lateral
83	M85	Tank Dia...	13.454					1	1						Lateral
84	M86	Tank Dia...	13.454					1	1						Lateral
85	M87	Tank Dia...	13.454					1	1						Lateral
86	M88	Tank Dia...	13.454					1	1						Lateral
87	M89	Tank Dia...	13.454					1	1						Lateral
88	M90	Tank Dia...	13.454					1	1						Lateral
89	M91	Tank Dia...	13.454					1	1						Lateral
90	M92	Tank Dia...	13.454					1	1						Lateral

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Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp to...	Lcomp b...	Kyy	Kzz	Cm-yy	Cm-zz	Cb	y sway	z sway	Function
91	M93	Tank Dia...	13.454					1	1						Lateral
92	M94	Tank Dia...	13.454					1	1						Lateral
93	M95	Tank Dia...	13.454					1	1						Lateral
94	M96	Tank Dia...	13.454					1	1						Lateral
95	M97	Tank Su...	4.5					.65	.65						Lateral
96	M98	Tank Su...	4.5					.65	.65						Lateral
97	M99	Tank Su...	4.5					.65	.65						Lateral
98	M100	Tank Su...	4.5					.65	.65						Lateral
99	M101	Tank Su...	8.5					.65	.65						Lateral
100	M102	Tank Su...	8.5					.65	.65						Lateral
101	M103	Tank Su...	4					.65	.65						Lateral
102	M104	Tank Su...	4					.65	.65						Lateral
103	M105	Tank Su...	4					.65	.65						Lateral
104	M106	Tank Su...	4					.65	.65						Lateral
105	M107	Tank Su...	8.5					.65	.65						Lateral
106	M108	Tank Su...	8.5					.65	.65						Lateral
107	M109	Interior C...	5.5					.65	.65						Lateral
108	M110	Interior C...	5.5					.65	.65						Lateral
109	M111	Interior C...	5.5					.65	.65						Lateral
110	M112	Interior C...	5.5					.65	.65						Lateral
111	M113	Tank Su...	5.657					.65	.65						Lateral
112	M114	Tank Su...	4.743					.65	.65						Lateral
113	M115	Tank Su...	4.743					.65	.65						Lateral
114	M116	Tank Su...	5.657					.65	.65						Lateral
115	M117	Tank Su...	4.743					.65	.65						Lateral
116	M118	Tank Su...	4.743					.65	.65						Lateral
117	M119	Tank Su...	5.657					.65	.65						Lateral
118	M120	Tank Su...	4.743					.65	.65						Lateral
119	M121	Tank Su...	4.743					.65	.65						Lateral
120	M122	Tank Su...	5.657					.65	.65						Lateral
121	M123	Tank Su...	4.743					.65	.65						Lateral
122	M124	Tank Su...	4.743					.65	.65						Lateral
123	M125	Tank Su...	8.5					.65	.65						Lateral
124	M126	Tank Su...	8.5					.65	.65						Lateral
125	M127	Tank Su...	4					.65	.65						Lateral
126	M128	Tank Su...	4					.65	.65						Lateral
127	M129	Tank Su...	4					.65	.65						Lateral
128	M130	Tank Su...	4					.65	.65						Lateral
129	M131	Tank Su...	8.5					.65	.65						Lateral
130	M132	Tank Su...	8.5					.65	.65						Lateral
131	M133	Interior C...	5.5					.65	.65						Lateral
132	M134	Interior C...	5.5					.65	.65						Lateral
133	M135	Interior C...	5.5					.65	.65						Lateral
134	M136	Interior C...	5.5					.65	.65						Lateral
135	M137	Tank Su...	5.657					.65	.65						Lateral
136	M138	Tank Su...	4.743					.65	.65						Lateral
137	M139	Tank Su...	4.743					.65	.65						Lateral
138	M140	Tank Su...	5.657					.65	.65						Lateral
139	M141	Tank Su...	4.743					.65	.65						Lateral
140	M142	Tank Su...	4.743					.65	.65						Lateral
141	M143	Tank Su...	5.657					.65	.65						Lateral
142	M144	Tank Su...	4.743					.65	.65						Lateral
143	M145	Tank Su...	4.743					.65	.65						Lateral
144	M146	Tank Su...	5.657					.65	.65						Lateral
145	M147	Tank Su...	4.743					.65	.65						Lateral
146	M148	Tank Su...	4.743					.65	.65						Lateral
147	M149	Tank Su...	8.5					.65	.65						Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp to...	Lcomp b...	Kyy	Kzz	Cm-yy	Cm-zz	Cb	y sway	z sway	Function
148	M150	Tank Su...	8.5					.65	.65						Lateral
149	M151	Tank Su...	4					.65	.65						Lateral
150	M152	Tank Su...	4					.65	.65						Lateral
151	M153	Tank Su...	4					.65	.65						Lateral
152	M154	Tank Su...	4					.65	.65						Lateral
153	M155	Tank Su...	8.5					.65	.65						Lateral
154	M156	Tank Su...	8.5					.65	.65						Lateral
155	M157	Interior C...	5.5					.65	.65						Lateral
156	M158	Interior C...	5.5					.65	.65						Lateral
157	M159	Interior C...	5.5					.65	.65						Lateral
158	M160	Interior C...	5.5					.65	.65						Lateral
159	M161	Tank Su...	5.657					.65	.65						Lateral
160	M162	Tank Su...	4.743					.65	.65						Lateral
161	M163	Tank Su...	4.743					.65	.65						Lateral
162	M164	Tank Su...	5.657					.65	.65						Lateral
163	M165	Tank Su...	4.743					.65	.65						Lateral
164	M166	Tank Su...	4.743					.65	.65						Lateral
165	M167	Tank Su...	5.657					.65	.65						Lateral
166	M168	Tank Su...	4.743					.65	.65						Lateral
167	M169	Tank Su...	4.743					.65	.65						Lateral
168	M170	Tank Su...	5.657					.65	.65						Lateral
169	M171	Tank Su...	4.743					.65	.65						Lateral
170	M172	Tank Su...	4.743					.65	.65						Lateral
171	M173	Tank Su...	4.5					.65	.65						Lateral
172	M174	Tank Su...	4.5					.65	.65						Lateral
173	M175	Tank Su...	4.5					.65	.65						Lateral
174	M176	Tank Su...	4.5					.65	.65						Lateral
175	M177	Tank Su...	4.5					.65	.65						Lateral
176	M178	Tank Su...	4.5					.65	.65						Lateral
177	M179	Tank Su...	4.5					.65	.65						Lateral
178	M180	Tank Su...	4.5					.65	.65						Lateral
179	M181	Roof Sup...	4.5					.65	.65						Lateral
180	M182	Roof Sup...	4.5					.65	.65						Lateral
181	M183	Roof Sup...	4.83					.65	.65						Lateral
182	M196	Column C...	74.92					.8	.8						Lateral
183	M197	Tank Su...	6.33					.65	.65						Lateral
184	M198	Tank Su...	5.83					.65	.65						Lateral
185	M199	Interior C...	5.83					.65	.65						Lateral
186	M200	Interior C...	5.83					.65	.65						Lateral
187	M201	Interior C...	4					.65	.65						Lateral
188	M202	Interior C...	4					.65	.65						Lateral
189	M205	Interior C...	4					.65	.65						Lateral
190	M206	Interior C...	4					.65	.65						Lateral
191	M207	Interior C...	5.83					.65	.65						Lateral
192	M208	Interior C...	5.83					.65	.65						Lateral
193	M209	Interior C...	5.83					.65	.65						Lateral
194	M210	Interior C...	5.83					.65	.65						Lateral
195	M211	Tank Su...	4.5					.65	.65						Lateral
196	M212	Tank Su...	4.5					.65	.65						Lateral
197	M213	Tank Su...	4					.65	.65						Lateral
198	M214	Tank Su...	4					.65	.65						Lateral
199	M215	Tank Su...	4					.65	.65						Lateral
200	M216	Tank Su...	4					.65	.65						Lateral
201	M215A	Interior C...	4					.65	.65						Lateral
202	M216A	Interior C...	4					.65	.65						Lateral
203	M217	FRP	20.66					.65	.65						Lateral
204	M218	FRP	20.66					.65	.65						Lateral

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Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp to...	Lcomp b...	Kyy	Kzz	Cm-yy	Cm-zz	Cb	y sway	z sway	Function
205	M219	FRP	20.66					.65	.65						Lateral
206	M220	FRP	20.66					.65	.65						Lateral
207	M221	Tank Su...	20.66					.65	.65						Lateral
208	M222	Tank Su...	20.66					.65	.65						Lateral
209	M223	Tank Su...	13.773					.65	.65						Lateral
210	M224	Tank Su...	13.773					.65	.65						Lateral
211	M225	Outrigger	3.443					.65	.65						Lateral
212	M226	Outrigger	3.443					.65	.65						Lateral
213	M227	Outrigger	3.443					.65	.65						Lateral
214	M228	Outrigger	3.443					.65	.65						Lateral
215	M229	Outrigger	3.443					.65	.65						Lateral
216	M230	Outrigger	3.443					.65	.65						Lateral
217	M231	Outrigger	3.443					.65	.65						Lateral
218	M232	Outrigger	3.443					.65	.65						Lateral
219	M231A	Upper Di...	24.518	Segment	Segment	Segment	Segment	1	1						Lateral
220	M232A	Upper Di...	24.518	Segment	Segment	Segment	Segment	1	1						Lateral

Envelope AISC 13th(360-05): LRFD Steel Code Checks

	Memb...	Shape	Code Check	Loc[ft]	LC	She...	Loc...	Dir	...	phi*...	phi*...	phi*Mn y-y [k-ft]	phi*.....	Eqn
1	M1	HSS6...	.454	18.7...	9	.013	18....	y	8	155....	198....	35.28	35.28...	H1-1a
2	M2	HSS6...	.460	18.7...	9	.013	18....	y	8	155....	198....	35.28	35.28...	H1-1a
3	M3	HSS6...	.681	18.7...	8	.010	18....	z	8	155....	198....	35.28	35.28...	H1-1a
4	M4	HSS6...	.667	18.7...	8	.010	18....	z	8	155....	198....	35.28	35.28...	H1-1a
5	M5	HSS6...	.373	0	9	.013	0	y	8	155....	198....	35.28	35.28...	H1-1a
6	M6	HSS6...	.323	0	9	.015	0	y	8	114....	162....	23.972	23.9...	H1-1b
7	M7	HSS5...	.166	18.7...	4	.024	8.8...	z	8	114....	162....	23.972	23.9...	H1-1b
8	M8	HSS5...	.378	0	8	.012	0	y	8	155....	198....	35.28	35.28...	H1-1a
9	M9	HSS5...	.320	0	9	.015	0	y	9	114....	162....	23.972	23.9...	H1-1a
10	M10	HSS5...	.165	18.7...	4	.022	8.8...	y	9	114....	162....	23.972	23.9...	H1-1b
11	M11	HSS6...	.576	0	8	.010	0	z	8	155....	198....	35.28	35.28...	H1-1a
12	M12	HSS5...	.550	0	8	.011	0	y	8	114....	162....	23.972	23.9...	H1-1a
13	M13	HSS5...	.357	18.7...	8	.007	0	z	9	114....	162....	23.972	23.9...	H1-1a
14	M14	HSS6...	.680	0	8	.009	0	z	8	155....	198....	35.28	35.28...	H1-1a
15	M15	HSS6...	.428	0	8	.010	0	y	9	155....	198....	35.28	35.28...	H1-1a
16	M16	HSS5...	.360	18.7...	8	.008	0	z	9	114....	162....	23.972	23.9...	H1-1a
17	M17	L6X6X5	.142	9.124	4	.004	18....	y	3	24.4....	118....	9.302	12.2....	H2-1
18	M18	L6X6X5	.083	9.124	8	.004	18....	y	3	24.4....	118....	9.302	12.2....	H2-1
19	M19	L6X6X5	.142	9.124	4	.004	18....	y	3	24.4....	118....	9.302	12.2....	H2-1
20	M20	L6X6X5	.083	9.124	8	.004	18....	y	3	24.4....	118....	9.302	12.2....	H2-1
21	M21	L6X6X5	.121	8.082	4	.004	16....	y	3	31.2....	118....	9.302	13.0....	H2-1
22	M22	L6X6X5	.069	8.082	8	.004	16....	y	3	31.2....	118....	9.302	13.0....	H2-1
23	M23	L6X6X5	.119	8.082	4	.004	16....	y	3	31.2....	118....	9.302	13.0....	H2-1
24	M24	L6X6X5	.069	8.082	8	.004	16....	y	3	31.2....	118....	9.302	13.0....	H2-1
25	M25	L6X6X5	.160	11.8...	13	.003	12....	y	8	52.6....	118....	8.069	16.7....	H2-1
26	M26	L6X6X5	.187	12.8...	13	.003	12....	y	8	52.6....	118....	8.069	16.7....	H2-1
27	M27	L6X6X5	.197	12.8...	13	.004	12....	y	8	40.8....	118....	8.069	16.7....	H2-1
28	M28	L6X6X5	.156	12.8...	13	.004	12....	y	8	52.6....	118....	8.069	16.7....	H2-1
29	M29	L6X6X5	.428	18.67	8	.003	12....	y	3	44.5....	118....	9.302	14.0....	H2-1
30	M30	L6X6X5	.428	18.67	8	.003	12....	y	3	44.5....	118....	9.302	14.0....	H2-1
31	M31	L6X6X5	.471	6.959	8	.003	13....	y	3	40.8....	118....	8.069	13.8....	H2-1
32	M32	L6X6X5	.510	6.959	8	.003	13....	y	3	40.8....	118....	8.069	13.8....	H2-1
33	M33	L6X6X5	.183	13.9...	4	.004	13....	y	8	40.8....	118....	9.302	18.0....	H2-1
34	M34	L6X6X5	.144	13.9...	4	.004	13....	y	8	44.5....	118....	9.302	18.0....	H2-1
35	M35	L6X6X5	.629	5.567	8	.003	13....	y	8	40.8....	118....	8.069	16.7....	H2-1
36	M36	L6X6X5	.632	5.785	8	.003	13....	y	8	44.5....	118....	8.069	16.7....	H2-1
37	M37	L6X6X5	.156	13.41	13	.003	13....	y	8	52.6....	118....	9.302	17.6....	H2-1

Envelope AISC 13th(360-05): LRFD Steel Code Checks (Continued)

	Memb...	Shape	Code Check	Loc[ft]	LC	She...	Loc...	Dir	...	phi*...	phi*...	phi*Mn y-y [k-ft]	phi*.....	Eqn
38	M38	L6X6X5	.629	8.286...	8	.003	12....	y	8	40.8....	118....	8.069	16.7....	H2-1
39	M39	L6X6X5	.474	19.4...	8	.003	12....	y	3	40.8....	118....	9.302	13.7....	H2-1
40	M40	L6X6X5	.420	6.574	8	.003	12....	y	3	44.5....	118....	9.302	14.0....	H2-1
41	M41	L6X6X5	.195	7.039	8	.003	14....	z	3	40.8....	118....	9.302	13.83....	H2-1
42	M42	L6X6X5	.106	7.039	4	.003	14....	z	8	40.8....	118....	9.302	13.83....	H2-1
43	M43	L6X6X5	.313	7.039	9	.003	14....	z	3	40.8....	118....	9.302	13.83....	H2-1
44	M44	L6X6X5	.109	7.039	4	.003	14....	z	3	40.8....	118....	9.302	13.83....	H2-1
45	M45	L6X6X5	.149	11.18	13	.003	11....	y	8	47.9....	118....	8.069	16.7....	H2-1
46	M46	L6X6X5	.422	17.59...	8	.003	11....	y	8	47.9....	118....	9.302	14.3....	H2-1
47	M47	L6X6X5	.145	11.18	4	.003	10....	y	8	47.9....	118....	8.069	16.7....	H2-1
48	M48	L6X6X5	.142	18.5...	4	.003	11....	y	8	47.9....	118....	9.302	14.3....	H2-1
49	M49	L6X6X5	.199	10.3...	9	.027	10....	y	9	60.8....	118....	8.069	16.7....	H2-1
50	M50	L6X6X5	.439	10.3...	8	.028	10....	y	8	60.8....	118....	8.069	16.7....	H2-1
51	M51	L6X6X5	.178	11.9...	9	.012	10....	z	8	96.9....	118....	9.302	16.7....	H2-1
52	M52	L6X6X5	.195	12.2...	13	.009	10....	y	9	60.8....	118....	9.302	15.73....	H2-1
53	M55	L6X6X5	.217	10.3...	8	.011	11....	y	8	60.8....	118....	9.302	15.73....	H2-1
54	M56	L6X6X5	.219	12.2...	8	.011	10....	y	8	60.8....	118....	9.302	16.7....	H2-1
55	M57	L6X6X5	.445	12.2...	8	.033	11....	y	8	60.3....	118....	8.069	16.7....	H2-1
56	M58	L6X6X5	.199	12.2...	8	.026	11....	y	8	60.8....	118....	8.069	16.7....	H2-1
57	M59	L6X6X5	.394	17.3...	8	.003	0	y	8	47.9....	118....	9.302	14.3....	H2-1
58	M60	L6X6X5	.158	12.9...	13	.003	12....	y	8	47.9....	118....	8.069	16.7....	H2-1
59	M61	W10X...	.249	6.026	8	.323	5.8...	y	8	483....	648	106.125	226.5....	H1-1b
60	M62	W10X...	.246	6.026	8	.321	5.8...	y	8	483....	648	106.125	226.5....	H1-1b
61	M63	W10X...	.167	2.765	9	.179	1.7....	y	9	580....	648	106.125	226.5....	H1-1b
62	M64	W10X...	.283	1.346	8	.331	1.7....	y	8	580....	648	106.125	226.5....	H1-1b
63	M65	W8X18	.248	4.089	8	.051	6.6....	y	4	69.3....	236.7	17.475	32.4....	H1-1b
64	M66	W8X18	.122	10.33...	4	.022	10....	y	8	69.3....	236.7	17.475	32.4....	H1-1b
65	M67	W8X18	.141	16.5...	8	.046	6.6....	y	4	69.3....	236.7	17.475	41.5....	H1-1b
66	M68	W8X18	.123	10.33...	4	.023	10....	y	8	69.3....	236.7	17.475	32.4....	H1-1b
67	M69	HSS4...	.269	29.25	8	.018	20....	z	8	110....	127....	14.774	14.7....	H1-1b
68	M70	HSS4...	.254	19.5...	8	.017	20....	z	8	110....	127....	14.774	14.7....	H1-1b
69	M71	HSS4...	.272	29.25	8	.018	20....	z	8	110....	127....	14.774	14.7....	H1-1b
70	M72	HSS4...	.254	19.5...	4	.017	20....	z	8	110....	127....	14.774	14.7....	H1-1b
71	M73	HSS3...	.406	3.899	8	.038	6.4....	y	8	28.4....	79.0....	6.696	5.696....	H1-1a
72	M74	HSS3...	.058	6.453	8	.027	6.4....	y	8	28.4....	79.0....	6.696	5.696....	H1-1b
73	M75	HSS3...	.075	6.453	4	.023	6.4....	y	4	28.4....	79.0....	6.696	5.696....	H1-1b
74	M76	HSS3...	.075	6.453	4	.023	6.4....	y	4	28.4....	79.0....	6.696	5.696....	H1-1b
75	M77	HSS3...	.058	6.453	9	.027	6.4....	y	4	28.4....	79.0....	6.696	5.696....	H1-1b
76	M78	HSS3...	.408	2.033	8	.038	6.4....	y	8	28.4....	79.0....	6.696	5.696....	H1-1a
77	M79	HSS3...	.237	6.453	8	.032	6.4....	y	8	28.4....	79.0....	6.696	5.696....	H1-1a
78	M80	HSS3...	.238	6.453	8	.031	6.4....	y	8	28.4....	79.0....	6.696	5.696....	H1-1a
79	M81	HSS3...	.236	6.727	8	.022	6.7....	y	4	26.1....	79.0....	6.696	5.696....	H1-1a
80	M82	HSS3...	.063	6.727	4	.022	6.7....	y	4	26.1....	79.0....	6.696	5.696....	H1-1b
81	M83	HSS3...	.051	6.727	4	.019	6.7....	y	4	26.1....	79.0....	6.696	5.696....	H1-1b
82	M84	HSS3...	.054	6.727	4	.019	6.7....	y	4	26.1....	79.0....	6.696	5.696....	H1-1b
83	M85	HSS3...	.053	6.727	4	.022	6.7....	y	4	26.1....	79.0....	6.696	5.696....	H1-1b
84	M86	HSS3...	.238	6.727	8	.022	6.7....	y	4	26.1....	79.0....	6.696	5.696....	H1-1b
85	M87	HSS3...	.060	6.727	8	.020	6.7....	y	4	26.1....	79.0....	6.696	5.696....	H1-1b
86	M88	HSS3...	.059	6.727	8	.020	6.7....	y	4	26.1....	79.0....	6.696	5.696....	H1-1b
87	M89	HSS3...	.049	6.727	8	.022	6.7....	y	7	26.1....	79.0....	6.696	5.696....	H1-1b
88	M90	HSS3...	.063	6.727	8	.022	6.7....	y	7	26.1....	79.0....	6.696	5.696....	H1-1b
89	M91	HSS3...	.031	6.727	6	.018	6.7....	y	5	26.1....	79.0....	6.696	5.696....	H1-1b
90	M92	HSS3...	.030	6.727	6	.017	6.7....	y	5	26.1....	79.0....	6.696	5.696....	H1-1b
91	M93	HSS3...	.032	6.727	6	.022	6.7....	y	7	26.1....	79.0....	6.696	5.696....	H1-1b
92	M94	HSS3...	.049	6.727	8	.022	6.7....	y	7	26.1....	79.0....	6.696	5.696....	H1-1b
93	M95	HSS3...	.032	6.727	7	.018	6.7....	y	5	26.1....	79.0....	6.696	5.696....	H1-1b
94	M96	HSS3...	.031	6.727	7	.017	6.7....	y	5	26.1....	79.0....	6.696	5.696....	H1-1b

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Envelope AISC 13th(360-05): LRFD Steel Code Checks (Continued)

	Memb...	Shape	Code Check	Loc[ft]	LC	She...	Loc...	Dir	...phi*	...phi*...	phi*Mn y-y [k-ft]	phi*...	Eqn
95	M97	HSS4...	.265	0	7	.143	0	y	7	123...	127...	14.774	14.7...	H1-1b
96	M98	HSS4...	.265	0	7	.143	0	y	7	123...	127...	14.774	14.7...	H1-1b
97	M99	HSS4...	.264	4.5	7	.143	4.5	y	7	123...	127...	14.774	14.7...	H1-1b
98	M100	HSS4...	.265	4.5	7	.143	4.5	y	7	123...	127...	14.774	14.7...	H1-1b
99	M101	HSS4...	.241	3.984	6	.058	3.9...	y	6	113...	127...	14.774	14.7...	H1-1b
100	M102	HSS4...	.248	3.984	7	.058	3.9...	y	6	113...	127...	14.774	14.7...	H1-1b
101	M103	HSS4...	.294	0	6	.048	0	y	7	124...	127...	14.774	14.7...	H1-1b
102	M104	HSS4...	.293	0	6	.048	0	y	7	124...	127...	14.774	14.7...	H1-1b
103	M105	HSS4...	.294	0	7	.047	0	y	6	124...	127...	14.774	14.7...	H1-1b
104	M106	HSS4...	.295	0	7	.047	0	y	6	124...	127...	14.774	14.7...	H1-1b
105	M107	HSS4...	.242	4.516	6	.058	4.5...	y	6	113...	127...	14.774	14.7...	H1-1b
106	M108	HSS4...	.247	4.516	7	.058	4.5...	y	6	113...	127...	14.774	14.7...	H1-1b
107	M109	C4X5.4	.382	0	7	.039	0	y	7	31.3...	51.1...	1.2	6.183...	H1-1b
108	M110	C4X5.4	.142	0	7	.017	0	y	6	31.3...	51.1...	1.2	6.183...	H1-1b
109	M111	C4X5.4	.144	0	6	.018	0	y	7	31.3...	51.1...	1.2	6.183...	H1-1b
110	M112	C4X5.4	.388	0	7	.039	0	y	7	31.3...	51.1...	1.2	6.183...	H1-1b
111	M113	C6X8.2	.185	0	7	.006	0	y	6	54.2...	77.4...	2.108	12.4...	H1-1b
112	M114	C6X8.2	.102	0	7	.012	0	y	6	60.2...	77.4...	2.108	13.1...	H1-1b
113	M115	C6X8.2	.118	4.743	7	.012	2.8...	y	6	60.2...	77.4...	2.108	13.1...	H1-1b
114	M116	C6X8.2	.242	5.657	7	.011	5.6...	z	9	54.2...	77.4...	2.108	12.9...	H1-1b
115	M117	C6X8.2	.213	0	7	.018	1.7...	y	7	60.2...	77.4...	2.108	13.9...	H1-1b
116	M118	C6X8.2	.213	4.743	7	.018	3.0...	y	7	60.2...	77.4...	2.108	13.9...	H1-1b
117	M119	C6X8.2	.242	0	7	.011	0	z	9	54.2...	77.4...	2.108	12.9...	H1-1b
118	M120	C6X8.2	.120	0	7	.012	2.8...	y	6	60.2...	77.4...	2.108	13.1...	H1-1b
119	M121	C6X8.2	.102	4.743	7	.012	2.8...	y	7	60.2...	77.4...	2.108	13.3...	H1-1b
120	M122	C6X8.2	.185	5.657	7	.006	5.6...	y	6	54.2...	77.4...	2.108	12.5...	H1-1b
121	M123	C6X8.2	.139	0	6	.018	1.8...	y	7	60.2...	77.4...	2.108	13.9...	H1-1b
122	M124	C6X8.2	.139	2.743	6	.018	2.9...	y	6	60.2...	77.4...	2.108	13.9...	H1-1b
123	M125	HSS4...	.276	3.984	4	.076	4.0...	y	5	113...	127...	14.774	14.7...	H1-1b
124	M126	HSS4...	.278	3.984	4	.076	4.0...	y	5	113...	127...	14.774	14.7...	H1-1b
125	M127	HSS4...	.284	0	4	.058	0	y	4	124...	127...	14.774	14.7...	H1-1b
126	M128	HSS4...	.282	0	4	.059	0	y	4	124...	127...	14.774	14.7...	H1-1b
127	M129	HSS4...	.283	0	4	.057	0	y	4	124...	127...	14.774	14.7...	H1-1b
128	M130	HSS4...	.283	0	4	.058	0	y	4	124...	127...	14.774	14.7...	H1-1b
129	M131	HSS4...	.279	4.516	4	.076	4.4...	y	5	113...	127...	14.774	14.7...	H1-1b
130	M132	HSS4...	.276	4.516	4	.076	4.4...	y	5	113...	127...	14.774	14.7...	H1-1b
131	M133	C4X5.4	.197	0	5	.080	0	y	5	31.3...	51.1...	1.2	6.183...	H1-1b
132	M134	C4X5.4	.192	0	5	.080	0	y	5	31.3...	51.1...	1.2	6.183...	H1-1b
133	M135	C4X5.4	.192	0	5	.080	0	y	5	31.3...	51.1...	1.2	6.183...	H1-1b
134	M136	C4X5.4	.197	0	5	.080	0	y	5	31.3...	51.1...	1.2	6.183...	H1-1b
135	M137	C6X8.2	.177	5.657	5	.014	5.6...	y	4	54.2...	77.4...	2.108	13.1...	H1-1b
136	M138	C6X8.2	.136	0	5	.033	2.4...	y	5	60.2...	77.4...	2.108	13.9...	H1-1b
137	M139	C6X8.2	.134	4.743	5	.033	3.3...	y	5	60.2...	77.4...	2.108	13.9...	H1-1b
138	M140	C6X8.2	.353	0	8	.021	0	z	8	54.2...	77.4...	2.108	13.4...	H1-1b
139	M141	C6X8.2	.415	0	8	.032	1.3...	y	5	60.2...	77.4...	2.108	13.9...	H1-1b
140	M142	C6X8.2	.218	4.743	8	.032	3.4...	y	5	60.2...	77.4...	2.108	13.9...	H1-1b
141	M143	C6X8.2	.354	5.657	8	.021	5.6...	z	8	54.2...	77.4...	2.108	13.3...	H1-1b
142	M144	C6X8.2	.137	0	5	.033	2.4...	y	5	60.2...	77.4...	2.108	13.9...	H1-1b
143	M145	C6X8.2	.134	4.743	5	.033	3.3...	y	5	60.2...	77.4...	2.108	13.9...	H1-1b
144	M146	C6X8.2	.177	0	5	.014	0	y	4	54.2...	77.4...	2.108	13.1...	H1-1b
145	M147	C6X8.2	.133	0	5	.032	1.3...	y	5	60.2...	77.4...	2.108	13.9...	H1-1b
146	M148	C6X8.2	.133	4.743	5	.032	3.3...	y	5	60.2...	77.4...	2.108	13.9...	H1-1b
147	M149	HSS4...	.296	3.984	5	.082	4.0...	y	4	113...	127...	14.774	14.7...	H1-1b
148	M150	HSS4...	.296	3.984	5	.082	4.0...	y	4	113...	127...	14.774	14.7...	H1-1b
149	M151	HSS4...	.303	0	5	.060	0	y	4	124...	127...	14.774	14.7...	H1-1b
150	M152	HSS4...	.302	0	5	.060	0	y	4	124...	127...	14.774	14.7...	H1-1b
151	M153	HSS4...	.303	0	4	.059	0	y	4	124...	127...	14.774	14.7...	H1-1b

Envelope AISC 13th(360-05): LRFD Steel Code Checks (Continued)

	Memb...	Shape	Code Check	Loc[ft]	LC	She...	Loc...	Dir	...phi*	...phi*...	phi*Mn y-y [k-ft]	phi*...	Eqn
152	M154	HSS4...	.302	0	4	.059	0	y	4	124...	127...	14.774	14.7...	H1-1b
153	M155	HSS4...	.295	4.516	5	.081	4.4...	y	4	113...	127...	14.774	14.7...	H1-1b
154	M156	HSS4...	.298	4.516	5	.081	4.4...	y	4	113...	127...	14.774	14.7...	H1-1b
155	M157	C4X5.4	.210	0	4	.082	0	y	4	31.3...	51.1...	1.2	6.183...	H1-1b
156	M158	C4X5.4	.208	0	4	.083	0	y	4	31.3...	51.1...	1.2	6.183...	H1-1b
157	M159	C4X5.4	.208	0	4	.083	0	y	4	31.3...	51.1...	1.2	6.183...	H1-1b
158	M160	C4X5.4	.209	0	4	.083	0	y	4	31.3...	51.1...	1.2	6.183...	H1-1b
159	M161	C6X8.2	.199	0	4	.016	5.6...	y	5	54.2...	77.4...	2.108	13.2...	H1-1b
160	M162	C6X8.2	.164	0	4	.035	4.3...	y	4	60.2...	77.4...	2.108	13.9...	H1-1b
161	M163	C6X8.2	.165	4.743	8	.035	3.4...	y	4	60.2...	77.4...	2.108	13.9...	H1-1b
162	M164	C6X8.2	.465	0	8	.031	0	z	8	54.2...	77.4...	2.108	13.7...	H1-1b
163	M165	C6X8.2	.573	0	8	.040	0	z	8	60.2...	77.4...	2.108	13.9...	H1-1b
164	M166	C6X8.2	.575	4.743	8	.040	4.7...	z	8	60.2...	77.4...	2.108	13.9...	H1-1b
165	M167	C6X8.2	.485	5.657	8	.031	5.6...	z	8	54.2...	77.4...	2.108	13.67...	H1-1b
166	M168	C6X8.2	.165	0	8	.035	4.3...	y	4	60.2...	77.4...	2.108	13.9...	H1-1b
167	M169	C6X8.2	.155	4.743	4	.035	3.4...	y	4	60.2...	77.4...	2.108	13.9...	H1-1b
168	M170	C6X8.2	.108	5.657	4	.015	0	y	5	54.2...	77.4...	2.108	13.0...	H1-1b
169	M171	C6X8.2	.157	0	4	.035	1.3...	y	4	60.2...	77.4...	2.108	13.9...	H1-1b
170	M172	C6X8.2	.159	4.743	4	.036	3.36...	y	4	60.2...	77.4...	2.108	13.9...	H1-1b
171	M173	HSS4...	.142	0	5	.077	0	y	5	123...	127...	14.774	14.7...	H1-1b
172	M174	HSS4...	.141	0	5	.077	0	y	5	123...	127...	14.774	14.7...	H1-1b
173	M175	HSS4...	.142	4.5	5	.077	4.5	y	5	123...	127...	14.774	14.7...	H1-1b
174	M176	HSS4...	.142	4.5	5	.077	4.5	y	5	123...	127...	14.774	14.7...	H1-1b
175	M177	HSS4...	.161	0	4	.081	0	y	4	123...	127...	14.774	14.7...	H1-1b
176	M178	HSS4...	.162	0	4	.081	0	y	4	123...	127...	14.774	14.7...	H1-1b
177	M179	HSS4...	.157	4.5	4	.081	4.5	y	4	123...	127...	14.774	14.7...	H1-1b
178	M180	HSS4...	.157	4.5	4	.081	4.5	y	4	123...	127...	14.774	14.7...	H1-1b
179	M181	HSS4...	.380	4.5	7	.065	0	y	7	123...	127...	14.774	14.7...	H1-1b
180	M182	HSS4...	.380	0	7	.065	4.5	y	7	123...	127...	14.774	14.7...	H1-1b
181	M183	HSS4...	.019	0	7	.000	0	y	8	122...	127...	14.774	14.7...	H1-1b
182	M196	C4X5.4	.229	37.46	8	.025	0	z	8	56.3...	70.4...	5.25.367...	5.25...	H1-1b
183	M197	HSS4...	.664	6.33	8	.390	2.8...	z	9	119...	127...	14.774	14.7...	H3-6
184	M198	HSS4...	.666	0	8	.390	0	z	9	119...	127...	14.774	14.7...	H3-6
185	M199	C4X5.4	.198	2.915	4	.055	5.83	y	4	29.4...	51.1...	1.2	5.775...	H1-1b
186	M200	C4X5.4	.213	2.774	4	.057	5.83	y	4	29.4...	51.1...	1.2	5.727...	H1-1b
187	M201	C4X5.4	.097	0	8	.036	0	y	5	39.4...	51.1...	1.2	6.183...	H1-1b
188	M202	C4X5.4	.156	1.667	4	.060	0	y	4	39.4...	51.1...	1.2	6.183...	H1-1b
189	M205	C4X5.4	.156	1.667	4	.060	4.7	y	4	39.4...	51.1...	1.2	6.183...	H1-1b
190	M206	C4X5.4	.096	0	8	.036	0	y	5	39.4...	51.1...	1.2	6.183...	H1-1b
191	M207	C4X5.4	.186	3.036	4	.057	0	y	5	29.4...	51.1...	1.2	5.841...	H1-1b
192	M208	C4X5.4	.186	3.036	4	.056	0	y	5	29.4...	51.1...	1.2	5.841...	H1-1b
193	M209	C4X5.4	.243	2.551	4	.061	5.83	y	4	29.4...	51.1...	1.2	5.696...	H1-1b
194	M210	C4X5.4	.242	2.551	4	.061	5.83	y	4	29.4...	51.1...	1.2	5.696...	H1-1b
195	M211	HSS4...	.415	4.5	9	.133	4.5	y	4	123...	127...	14.774	14.7...	H1-1b
196	M212	HSS4...	.415	4.5	9	.133	4.5	y	4	123...	127...	14.774	14.7...	H1-1b
197	M213	C6X8.2	.339	0	4	.077	0	y	4	64.7...	77.4...	2.108	13.9...	H1-1b
198	M214	C6X8.2	.520	0	8	.082	0	y	4	64.7...	77.4...	2.108	13.9...	H1-1b
199	M215	C6X8.2	.520	0	8	.082	0	y	4	64.7...	77.4...	2.108	13.9...	H1-1b
200	M216	C6X8.2	.339	0	4	.077	0	y	4	64.7...	77.4...	2.108	13.9...	H1-1b
201	M215A	C4X5.4	.063	0	9	.035	0	y	5	39.4...	51.1...	1.2	6.183...	H1-1b
202	M216A	C4X5.4	.063	0	9	.035	0	y	5	39.4...	51.1...	1.2	6.183...	H1-1b
203	M221	HSS4...	.216	3.443	13	.055	3.4...	z	8	63.9...	127...	14.774	14.7...	H1-1b
204	M222	HSS4...	.192	3.443	8	.053	3.4...	z	8	63.9...	127...	14.774	14.7...	H1-1b
205	M223	HSS4...	.268	0	8	.068	13....	z	8	93.7...	127...	14.774	14.7...	H1-1b
206	M224	HSS4...	.073	0	8	.036	9....	z	8	93.7...	127...	14.774	14.7...	H1-1b
207	M225	L4X4X4	.105	0	8	.009	0	y	3	54.1...	62.8...	3.154	6.848...	H2-1
208	M226	L4X4X4	.111	0	8	.009	0	y	3	54.1...	62.8...	3.154	6.848...	H2-1

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Envelope AISC 13th(360-05): LRFD Steel Code Checks (Continued)

	Memb...	Shape	Code Check	Loc[ft]	LC	She...	Loc...	Dir	...phi*...	phi*...	phi*Mn y-y [k-ft]	phi*.....	Eqn
209	M227	L4X4X4	.206	0	3	.020	0	y	3 54.1...	62.8...	3.154	6.887...	H2-1
210	M228	L4X4X4	.210	0	3	.022	0	y	3 54.1...	62.8...	3.154	6.887...	H2-1
211	M229	L4X4X4	.376	0	8	.023	0	z	8 54.1...	62.8...	3.154	6.708...	H2-1
212	M230	L4X4X4	.391	0	8	.025	0	z	8 54.1...	62.8...	3.154	6.705...	H2-1
213	M231	L4X4X4	.244	0	8	.019	0	y	3 54.1...	62.8...	3.154	6.887...	H2-1
214	M232	L4X4X4	.238	0	13	.022	0	y	3 54.1...	62.8...	3.154	6.664...	H2-1
215	M231A	L6X6X5	.385	5.963	8	.002	12....	y	3 47.9...	118....	8.069	14.3...	H2-1
216	M232A	L6X6X5	.383	13.3	8	.002	11....	y	3 47.9...	118....	8.069	14.4...	H2-1

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VECTOR ENGINEERS

JOB NO. U0142-542-121 DATE 3/12/12
PROJECT Brandford South.
SUBJECT DIAGONAL CONNECTION
SHEET OF
DESIGNED CHECKED

MAX DIAGONAL FORCE - LOWER DIAGONALS (FACTORED)

M35 ≈ 25 kips - (SEE RISA 3d results)

3/4" ϕ BOLT CAPACITY = 15.9 kips

∴ USE (2) 3/4" ϕ BOLTS @ LOWER TWO BAYS

MAX DIAGONAL FORCE - UPPER BAYS (FACTORED)

M57 ≈ 21 kips (SEE RISA 3d)

∴ USE (2) 3/4" ϕ BOLTS @ UPPER BAYS.

MAXIMUM GIRT FORCE

M20 ≈ 31 kips (SEE RISA 3d)

∴ USE (2) 3/4" ϕ BOLTS.

- CHECK BREAK-OUT OF PLATE

$R_n = 0.6 F_u A_{nv} + U_{bs} F_u A_{nt}$

$0.6(58)(5/16)(4) + 1(58)(3)(5/16) = 98$ kips

∴ CONN = O.K.

VECTOR ENGINEERS

JOB NO.: U0142-542-121 DESIGNED: JSP
DATE: 03/08/12 CHECKED: BDV
SHEET: OF

PROJECT: BRANFORD SOUTH SUBJECT: Enclosure Calculations

FRP Beam Design:

Label: FRP Girt

Beam assumed to be simply supported.
Note: The force is horizontal.

INPUT:

Notes:
Area load from Tower ouput

Area Load [psf]:	38.0
Span, L [ft]:	6.0
Tributary Width [ft]:	5.0
Distributed Load, w [plf]:	190.0
Beam:	L4x4x3/8

I [in^4]:	4.35	A_w [in^2]:	2.84
S [in^3]:	1.52	E [psi]:	2,800,000
A [in^2]:	2.84	G [psi]:	450,000

OUTPUT:

Moment, M [lb-ft]:	855				
Shear, V [lb]:	570				
Deflection, Δ [in]:	0.46	=	L / 156		
f_b [psi]:	6,750	<	F_b [psi]:	10,000	OK
f_v [psi]:	201	<	F_v [psi]:	1,500	OK

Select L4x4x3/8 FRP beam

FRP Shear Connection w/ Steel Bolts:

Label: Typical Girt Connection

Bearing stress of FRP member controls.

INPUT:

Notes:
Double shear reaction from girts

Design Force, P [lb]:	570
Steel Bolt Diameter, d_b [in]:	5/8
# Bolts, n_b:	(1)
FRP Web Thickness, t_w [in]:	3/8
Double Shear:	No
Bearing Stress:	Crosswise
Factor of Safety, FS:	4

OUTPUT:

f_{brg} [psi]:	2,432	<	F_{brg} [psi]:	3,750	OK

Select (1) 5/8" diameter steel bolt

See attached FRP material and section properties.

VECTOR ENGINEERS

JOB NO.: U0142-542-121 DESIGNED: JSP
DATE: 03/08/12 CHECKED: BDV
SHEET: OF

PROJECT: BRANFORD SOUTH SUBJECT: Enclosure Calculations

Square Plate Design

Label: Upper Splice Plate @ 75'-0" A.G.L.

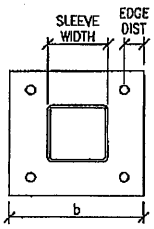
INPUT:

Max Tension [kip]:	11
b [in]:	10
Edge Dist. [in]:	1.5
Leg Width [in]:	4.0
Plate Grade [ksi]:	36

Notes:
Max tension from Risa3D output

OUTPUT:

Bolt Tension/side [k]:	2.8
Bolt Tension (diagonal) [k]:	2.8
Muplate [k-in]:	4.1
Muplate (diagonal) [k-in]:	5.8
Req'd Thickness [in]:	0.291



Select 10 in square x 0.5 thick, Gr.36 ksi steel plate

Square Plate Design

Label: Lower Splice Plate @ 40'-1" A.G.L.

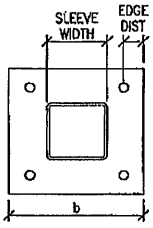
INPUT:

Max Tension [kip]:	34
b [in]:	12
Edge Dist. [in]:	1.5
Leg Width [in]:	5.0
Plate Grade [ksi]:	36

Notes:
Max tension from Risa3D output

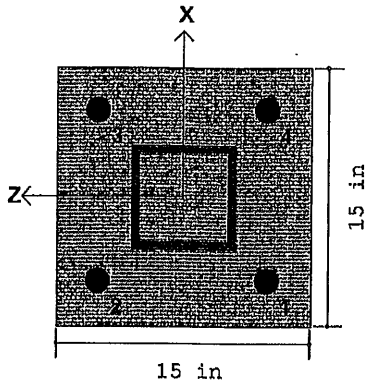
OUTPUT:

Bolt Tension/side [k]:	8.5
Bolt Tension (diagonal) [k]:	8.5
Muplate [k-in]:	17.0
Muplate (diagonal) [k-in]:	24.0
Req'd Thickness [in]:	0.548



Select 12 in square x 0.75 thick, Gr.36 ksi steel plate

See attached FRP material and section properties.



Bolt	X (in)	Z (in)
1	-5.	-5.
2	-5.	5.
3	5.	5.
4	5.	-5.

Geometry and Materials

Length 15. in
Width 15. in
Thickness 1.5 in
Base Plate Fy 36. ksi
Base Plate E 29000. ksi
Bearing Fp 4.08 ksi
Bearing Fc' 4. ksi
Pedestal Length 36 in
Pedestal Width 36 in
Pedestal Heigh 78 in
Analyze Base Plate as Flexible
Pp Based on AISC J8 Criteria
Base Plate: **AISC LRFD 13th**
AB Pullout: **ACI 2005**
AB Head: **Heavy Hex**
Seismic Reduction %: 25.
Square Base Plate Required

Column Shape HSS6X6X4
Column eX 0. in
Column eZ 0. in
Column to Edge Min (X) 1.5 in
Column to Edge Min (Z) 1.5 in
HSS Tube X-sides welded
HSS Tube Z-sides welded
Plain Base Plate Connection
Vx Shear Lug NOT present
Vz Shear Lug NOT present

NW Concrete
Concrete Cracked
ABs NOT Welded to Base Plate
Built-up Grout Pads are used

Anchor Bolt Diameter 1.5 in
Anchor Bolt Material F1554-55
Anchor Bolt Fu 75. ksi
Anchor Bolt Fy 55. ksi
Anchor Bolt E 29000. ksi
AB Projected Length 6. in
AB to AB Min Spacing 10 in
AB to Stiffner Min Spacing 1.5 in
AB to Column Min Spacing 1.5 in
AB to Edge Min Spacing 1.5 in
AB Row Min Spacing 10 in
Priority is AB to Edge Spacing
Include Threads for AB Design
AB Fv, Ft based on AISC Criteria
Total AB Length: 31. in
Supp. Reinforcement Present
Tension Pedestal Bar Fy: 60. ksi
Shear Pedestal Bar Fy: 60. ksi

Loads

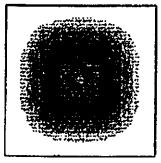
	P (k)	Vx (k)	Vz (k)	Mx (k-ft)	Mz (k-ft)	Reverse
DL	12.5	2.4	2.4			No
LL	7.8	1.5	1.5			No
WL	64.	9.9	12.6			Yes
OL1	1.5	.28	.28			No

Base Plate Stress and Bearing Result

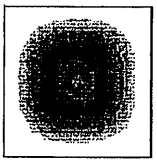
Combination	Load Sets	Base Plate Stress (ksi) Allowable	ASIF	U.C.	Bearing Pressure (ksi) Allowable	ABIF	U.C.
IBC 16-1 (1)	1.4DL	48.6	1.	.007	4.08	1.	.069
IBC 16-2 (a) (2)	1.2DL+1.6LL+.5OL1	48.6	1.	.012	4.08	1.	.11
IBC 16-3 (b) (3)	1.2DL+.8WL	48.6	1.	.028	4.08	1.	.257
IBC 16-3 (b) (4)	1.2DL-.8WL	48.6	1.	.165	4.08	1.	.477
IBC 16-4 (a) (5)	1.2DL+.5LL+1.6WL	48.6	1.	.052	4.08	1.	.469
IBC 16-4 (a) (6)	1.2DL+.5LL-1.6WL	48.6	1.	.332	4.08	1.	.902
IBC 16-5 (7)	1.2DL+.5LL+1EL	48.6	1.	.007	4.08	1.	.074
IBC 16-6 (a) (8)	.9DL+1EL	48.6	1.	.004	4.08	1.	.044
IBC 16-6 (b) (9)	.9DL+1.6WL	48.6	1.	.045	4.08	1.	.434
IBC 16-6 (b) (10)	.9DL-1.6WL	48.6	1.	.362	4.08	1.	.984

Bearing Contours

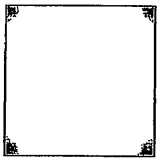
1.4DL
Allowable : 4.08 ksi
U.C. : .069



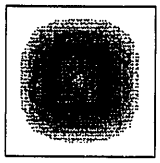
1.2DL+1.6LL+.5OL1
Allowable : 4.08 ksi
U.C. : .11



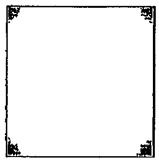
1.2DL+.8WL
Allowable : 4.08 ksi
U.C. : .257



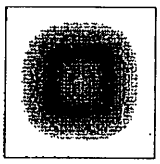
1.2DL-.8WL
Allowable : 4.08 ksi
U.C. : .477



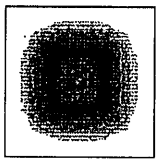
1.2DL+.5LL+1.6WL
Allowable : 4.08 ksi
U.C. : .469



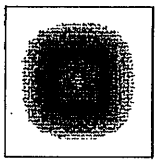
1.2DL+.5LL-1.6WL
Allowable : 4.08 ksi
U.C. : .902



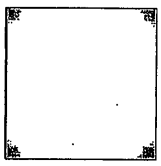
1.2DL+.5LL+1EL
Allowable : 4.08 ksi
U.C. : .074



.9DL+1EL
Allowable : 4.08 ksi
U.C. : .044

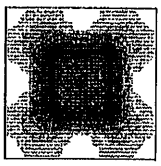


.9DL+1.6WL
Allowable : 4.08 ksi
U.C. : .434

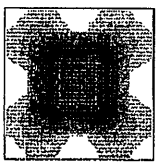


.9DL-1.6WL
Allowable : 4.08 ksi
U.C. : .984

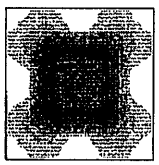
Base Plate Stress Contour



1.4DL
Allowable : 48.6 ksi
U.C. : .007

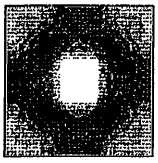


1.2DL+1.6LL+.5OL1
Allowable : 48.6 ksi
U.C. : .012

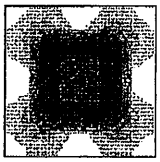


1.2DL+.8WL
Allowable : 48.6 ksi
U.C. : .028

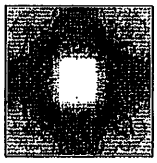
Base Plate Stress Contours (continued)



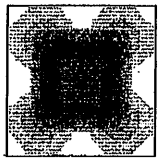
1.2DL-.8WL
Allowable : 48.6 ksi
U.C. : .165



1.2DL+.5LL+1.6WL
Allowable : 48.6 ksi
U.C. : .052

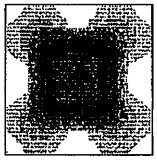
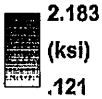


1.2DL+.5LL-1.6WL
Allowable : 48.6 ksi
U.C. : .332

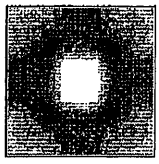
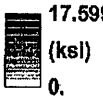


1.2DL+.5LL+1EL
Allowable : 48.6 ksi
U.C. : .007

.9DL+1EL
Allowable : 48.6 ksi
U.C. : .004

.9DL+1.6WL
Allowable : 48.6 ksi
U.C. : .045

.9DL-1.6WL
Allowable : 48.6 ksi
U.C. : .362

Anchor Bolt Results

Combination	Load Sets	Bolt	Tens.(k)	Vx (k)	Vz (k)	Fnt (ksi)	ft (ksi)	Fnv (ksi)	fv (ksi)	Unity
IBC 16-1 (1)	1.4DL	1	.012	-.84	-.84	56.25	.007	30.	.672	.03 (S)
		2	.012	-.84	-.84	56.25	.007	30.	.672	.03 (S)
		3	.012	-.84	-.84	56.25	.007	30.	.672	.03 (S)
		4	.012	-.84	-.84	56.25	.007	30.	.672	.03 (S)
IBC 16-2 (a) (2)	1.2DL+1.6LL+.5OL1	1	.031	-1.355	-1.355	56.25	.017	30.	1.084	.048 (S)
		2	.031	-1.355	-1.355	56.25	.017	30.	1.084	.048 (S)
		3	.031	-1.355	-1.355	56.25	.017	30.	1.084	.048 (S)
		4	.031	-1.355	-1.355	56.25	.017	30.	1.084	.048 (S)
IBC 16-3 (b) (3)	1.2DL+.8WL	1	.097	-2.7	-3.24	56.25	.055	30.	2.387	.106 (S)
		2	.097	-2.7	-3.24	56.25	.055	30.	2.387	.106 (S)
		3	.097	-2.7	-3.24	56.25	.055	30.	2.387	.106 (S)
		4	.097	-2.7	-3.24	56.25	.055	30.	2.387	.106 (S)
IBC 16-3 (b) (4)	1.2DL-.8WL	1	9.835	1.26	1.8	56.25	5.566	30.	1.243	.132 (T)
		2	9.835	1.26	1.8	56.25	5.566	30.	1.243	.132 (T)
		3	9.835	1.26	1.8	56.25	5.566	30.	1.243	.132 (T)
		4	9.835	1.26	1.8	56.25	5.566	30.	1.243	.132 (T)
IBC 16-4 (a) (5)	1.2DL+.5LL+1.6WL	1	.192	-4.867	-5.947	56.25	.109	30.	4.349	.193 (S)
		2	.192	-4.867	-5.947	56.25	.109	30.	4.349	.193 (S)
		3	.192	-4.867	-5.947	56.25	.109	30.	4.349	.193 (S)
		4	.192	-4.867	-5.947	56.25	.109	30.	4.349	.193 (S)
IBC 16-4 (a) (6)	1.2DL+.5LL-1.6WL	1	22.923	3.052	4.132	56.25	12.973	30.	2.908	.308 (T)
		2	22.923	3.052	4.132	56.25	12.973	30.	2.908	.308 (T)
		3	22.923	3.052	4.132	56.25	12.973	30.	2.908	.308 (T)
		4	22.923	3.052	4.132	56.25	12.973	30.	2.908	.308 (T)

Anchor Bolt Results (continued)

Combination	Load Sets	Bolt	Tens.(k)	Vx (k)	Vz (k)	Fnt (ksi)	ft (ksi)	Fnv (ksi)	fv (ksi)	Unity
IBC 16-5 (7)	1.2DL+.5LL+1EL	1	.017	-.907	-.907	56.25	.01	30.	.726	.032 (S)
		2	.017	-.907	-.907	56.25	.01	30.	.726	.032 (S)
		3	.017	-.907	-.907	56.25	.01	30.	.726	.032 (S)
		4	.017	-.907	-.907	56.25	.01	30.	.726	.032 (S)
IBC 16-6 (a) (8)	.9DL+1EL	1	.004	-.54	-.54	56.25	.002	30.	.432	.019 (S)
		2	.004	-.54	-.54	56.25	.002	30.	.432	.019 (S)
		3	.004	-.54	-.54	56.25	.002	30.	.432	.019 (S)
		4	.004	-.54	-.54	56.25	.002	30.	.432	.019 (S)
IBC 16-6 (b) (9)	.9DL+1.6WL	1	.183	-4.5	-5.58	56.25	.104	30.	4.057	.18 (S)
		2	.183	-4.5	-5.58	56.25	.104	30.	4.057	.18 (S)
		3	.183	-4.5	-5.58	56.25	.104	30.	4.057	.18 (S)
		4	.183	-4.5	-5.58	56.25	.104	30.	4.057	.18 (S)
IBC 16-6 (b) (10)	.9DL-1.6WL	1	25.025	3.42	4.5	56.25	14.162	30.	3.199	.336 (T)
		2	25.025	3.42	4.5	56.25	14.162	30.	3.199	.336 (T)
		3	25.025	3.42	4.5	56.25	14.162	30.	3.199	.336 (T)
		4	25.025	3.42	4.5	56.25	14.162	30.	3.199	.336 (T)

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VECTOR ENGINEERS

JOB NO.: U0142-542-121
DATE: 03/12/12

DESIGNED: JSP
CHECKED: BDV

SHEET OF

PROJECT: BRANFORD SOUTH

Foundation Design

VECTOR ENGINEERS

JOB NO.: U0142-542-121 DESIGNED: JSP
DATE: 03/12/12 CHECKED: BDV

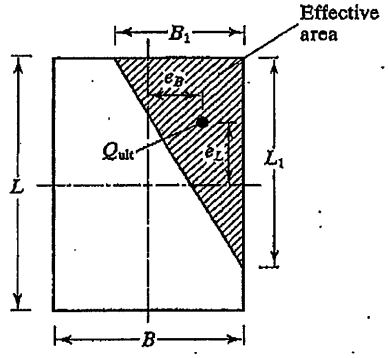
SHEET OF

PROJECT: BRANFORD SOUTH

Square Mat Foundation Design (Resultant Lies Outside Footing Kern)

Design Loads (Factored / ϕ_s):

Max. Base Shear, V_u / 0.75:	93.3	k
Max. Overturning Moment, M_u / 0.75:	6,776.0	k-ft
Max. Down, $P_{u\text{-down}}$ / 0.75:	114.7	k
Structure Weight:	58.0	k
Moment Components, $M_y = M_x$:	4791.4	k-ft



Mat Properties:

Mat Width, L = B:	26.0	ft
Mat Thickness, t:	3.0	ft
Pier Diameter, b:	3.0	ft
Height of Pier:	6.5	ft
Depth of Soil Above Mat:	6.0	ft
Unit Weight of Soil:	110.0	pcf
Number of Legs:	4	

Volume of Concrete:	2212	ft^3
Volume of Concrete:	81.9	yd^3
Weight of Concrete:	331.8	k
Weight of Soil:	441.5	k

Soil Properties:

Allow. Bearing Pressure:	30,000	psf
Factor of Safety:	1	
1/3 Increase for short term loads?	NO	
Passive Pressure:	100	pcf
Factor of Safety:	2	
Max. Passive Pressure (opt'l):	1,000	psf
1/3 Increase for short term loads?	No	
Top Depth to Ignore:	0.0	ft

Eff. Bearing Pressure:	30000	psf
Coefficient of Friction:	0.30	
Factor of Safety:	2	
% Passive for Sliding:	50.00	
% Friction for Sliding:	100.00	

Check Bearing:

Total Moment, $M_y = M_x$:	5,418.3	k-ft
Total Axial Load, Q:	1,351.9	k
Load eccentricity, $e_L = e_B$:	4.01	ft
Effective Mat Brg Width, $B_1 = L_1$:	26.98	ft
Effective Area, $A' = 1/2(B_1)(L_1)$:	363.85	ft^2
Allowable axial load:	10916	k

Bearing Capacity OK.

VECTOR ENGINEERS

JOB NO.: U0142-542-121 DESIGNED: JSP
DATE: 03/12/12 CHECKED: BDV

SHEET OF

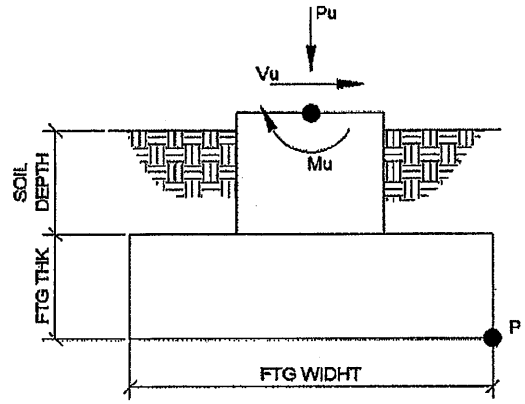
PROJECT: BRANFORD SOUTH

Square Mat Foundation Design (cont.)

Check Overturning:

Base Shear (1.6W), V_u:	70.0	k
Overturning Moment (1.6W), M_u :	5,082.0	k-ft
Down (0.9 D), P_u:	52.2	k
OTM about point P (1.6W):	5747	k-ft
Resisting Moment (0.9D):	9725.8	k-ft

Overturning OK.



Check Sliding:

Sliding Resistance from Friction:	448.9	k
Sliding Resistance from Passive:	11.7	k
Total Sliding Resistance:	460.6	k

Sliding resistance OK.