CORE ONE CONSULTING USA

CORE ONE CONSULTING US LTD.
13555 SE 36th St, Suite 100
Bellevue, WA 98006

Structural Analysis Report
AT&T

August 16, 2024

Site Name	DOWNTOWN PUYALLUP
Site ID	TA48
FA #	10102328
PTN #	3801A1DEJN
Pace #	MRWOR082373
Client	Mastec
Proposed Carrier	AT&T
Site Location	110 9TH Avenue, Southwest, Puyallup WA 98371 47.18472° N NAD83 122.29611° W NAD83
Structure Type	Rooftop
Structure Usage Ratio	**58.8%**
Overall Result	**Pass**
Recommendation	--

Upon reviewing the results of this analysis, it is our opinion that the structure does meet the specified IBC/TIA/ASCE code and minimum design requirements. The existing structure is therefore deemed adequate to support the proposed loading as listed in this report.

PRCTI20241635

Calculations required to be provided by the Permittee on site for all Inspections

THOMAS CRAWFORD
STATE OF WASHINGTON
24005804
REGISTERED
PROFESSIONAL ENGINEER

8-16-24

Thomas Crawford

Digitally signed by Thomas Crawford
DN: C=US, E=thomas.crawford@coreoneconsulting.com, O=Core One Consulting, CN=Thomas Crawford
Reason: I am approving this document
Date: 2024.08.16 17:02:25-04'00'

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning
Engineering | Public Works
Fire | Traffic

City of Puyallup
Building
REVIEWED
FOR
COMPLIANCE
SKinnear
10/29/2024
2:49:41 PM

CITY OF PUYALLUP
STATE OF WASHINGTON

Summary of Contents

Assumptions and Limitations

Our structural calculations are completed assuming all information provided to CORE ONE CONSULTING USA is accurate and applicable to this site. For the purposes of calculations, we assume an overall structure condition of “like new” and all members and connections to be free of corrosion and/or structural defects. The structure owner and/or contractor shall verify the structure’s condition prior to installation of any proposed equipment. If actual conditions differ from those described in this report CORE ONE CONSULTING USA should be notified immediately to complete a revised evaluation.

Our evaluation is completed using standard TIA, AISC, ACI, and ASCE methods and procedures. Our structural results are proprietary and should not be used by others as their own. CORE ONE CONSULTING USA is not responsible for decisions made by others that are or are not based on our supplied assumptions and conclusions.

This report is an evaluation of the rooftop only and does not reflect adequacy of the existing mounts, or coax mounting attachments. These elements are assumed to be adequate for the purposes of this analysis and are assumed to have been installed per their manufacturer requirements.

INTRODUCTION

At the request of **AT&T**, CORE ONE CONSULTING USA has performed a structural analysis on the existing antenna mount supporting structure. All supporting documents have been obtained from the client and are assumed to be accurate and applicable to this site. The structure was analyzed using RISA engineering software.

Supporting Documentation

Antenna Loading	DE130, dated 04/30/2024
Photos	Provided by Mastec
Previous Analysis	Mastec Structural Analysis, dated 10/28/2022

Analysis Code Requirements

Wind Speed	98 mph (3-Second Gust)
Wind Speed w/ ice	30 mph wind w/ 1.0" Ice
TIA Revision	ANSI/TIA-222-H
Adopted IBC	2018 IBC
Structure Class	II
Exposure Category	C
Topographic Category	Kzt=1
Calculated Crest Height	0 ft
Site Class	D - Default
Spectral Response	S_s=1.271g, S_1=0.438g

CONCLUSION

Upon reviewing the results of this analysis, it is our opinion that the structure does meet the specified IBC/TIA/ASCE code and minimum design requirements. The existing structure is therefore deemed adequate to support the proposed loading as listed in this report.

Performed by,

Alexander Bazeley
Structural Lead | **Core One Consulting USA**
2875 W Ray Road, Suite 6, Chandler, AZ 85224
(O) 1+(855) 708-2195 |
alex.bazeley@coreoneconsulting.com

Final Configuration

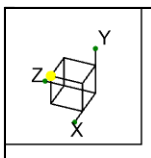
RAD Height (ft)	Qty.	Appurtenance	Mount type	Carrier
56.5	1	Cellmax 120716	Rooftop	AT&T
60.0	2	Cellmax 120726		
60.0	3	Kathrein 80010992		
62.5	3	Ericsson AIR6472 B77G B77M		
60.0	3	Ericsson 4471 B30		
	3	Ericsson 4490 B5/B12A		
	3	Ericsson 4890 B25/B66		
	3	4494 B14/B29		

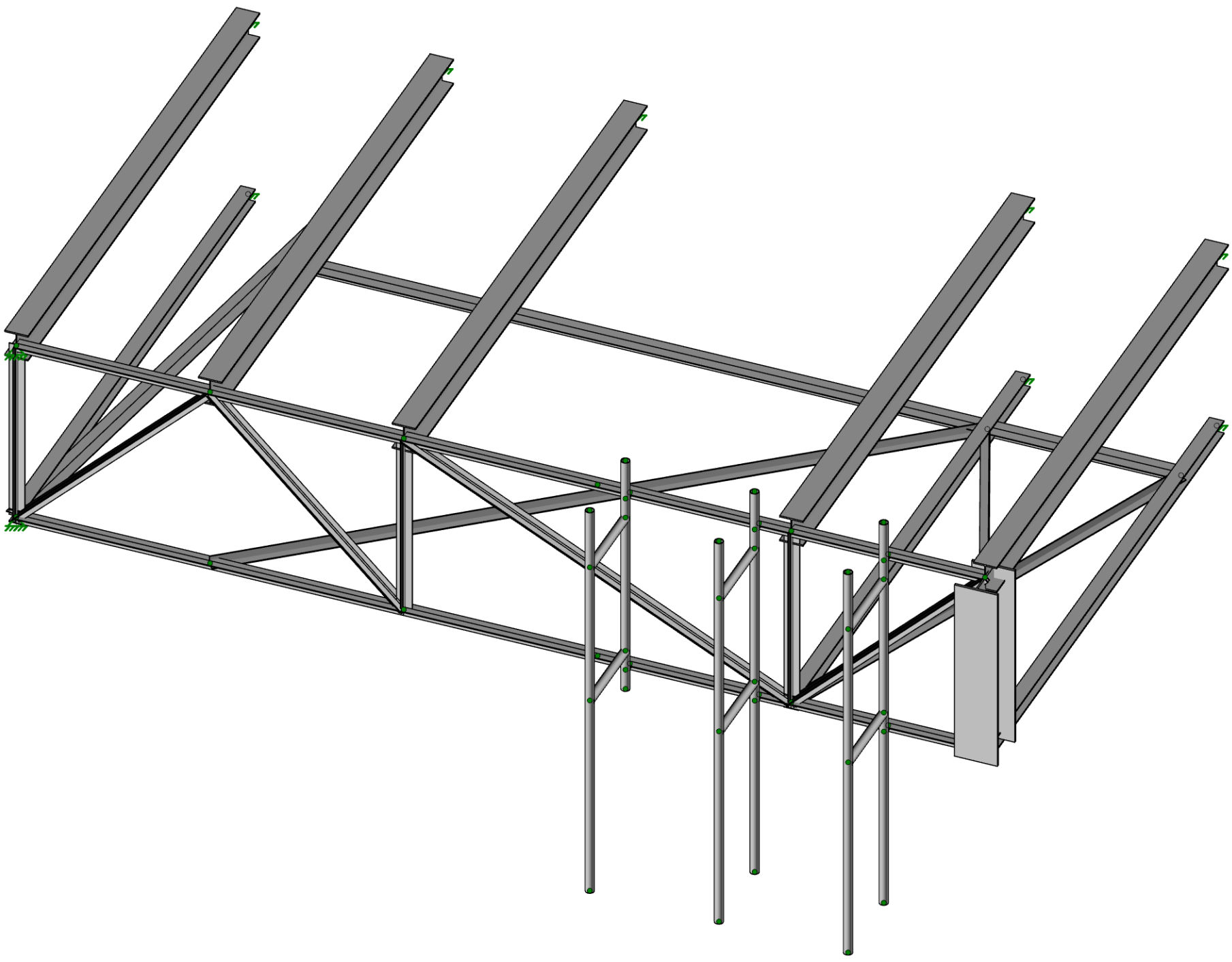
Structure Usages

Summary		
Angle Brace	58.8%	Pass
Ibeam	7.6%	Pass
RATING =	**58.8%**	**Pass**

ANSI/TIA-222H - WIND, ICE & SEISMIC LOAD CALCULATIONS

Site Code/Name		TA48 - DOWNTOTOWN PUYALLUP		
State		Washington		
County		Pierce		*Reference*
Structure Class		II		*Table 2-1*
Exposure Category		C		*Section 2.6.5.1.2*
Topographic Factor	K_{zt}	1.00		*Section 2.6.6.2.2*
Mean Elevation of base of structure	z_s	41.7	ft	*ASCE7 Hazard Tool or Site Specific*
Height Above Ground	z	62.5	ft	
Rooftop Wind Speed-Up Factor	K_s	1.00		*Section 2.6.7*
Wind Parameters				
Basic wind speed	V	98	mph	*ASCE7-16 Hazards Tool*
Wind direction probability factor	K_d	0.95		*Section 16.6*
Gust effect factor	G_h	1.00		*Section 16.6*
Velocity Pressure (Ka = 0.9)		24.06	psf	*Section 2.6.11.6*
Wind & Ice Parameters				
Base windspeed in conjunction with ice, V		30	mph	*ASCE7 Hazards Tool*
Base Ice thickness	t_i	1.00	in	*ASCE7 Hazards Tool*
Ice Velocity Pressure (Ka = 0.9)	q_{ice}	2.25	psf	*Section 2.6.11.6*
Design Ice Thickness	t_{iz}	1.07	in	*Section 2.6.10*
Seismic Parameters				
Site Soil Class		D - Default		*Table 2-10*
Seismic Design Category		B		*ASCE7 Hazards Tool*
Spectral Response at Short Periods	S_s	1.271		*ASCE7 Hazards Tool*
Spectral Response at 1sec	S_1	0.438		*ASCE7 Hazards Tool*
Long Period Transition Period	T_L	6		*ASCE7 Hazards Tool*
Seismic Importance Factor	I_s	1		*Table 2-3*
Response modification coefficient	R	2		*Section 16.7*
Short-Period Site Coefficient	F_a	1.2		*Table 2-11*
Design Spectral Response at Short Periods	S_{DS}	1.017		*Section 2.7.5*
Seismic Response Coefficient	C_s	0.508		*Section 2.7.7.1*





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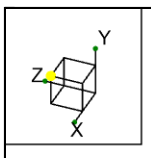
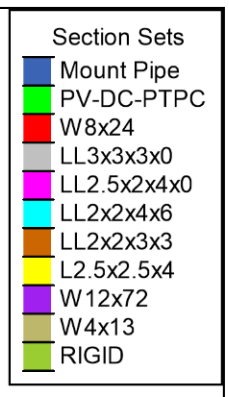
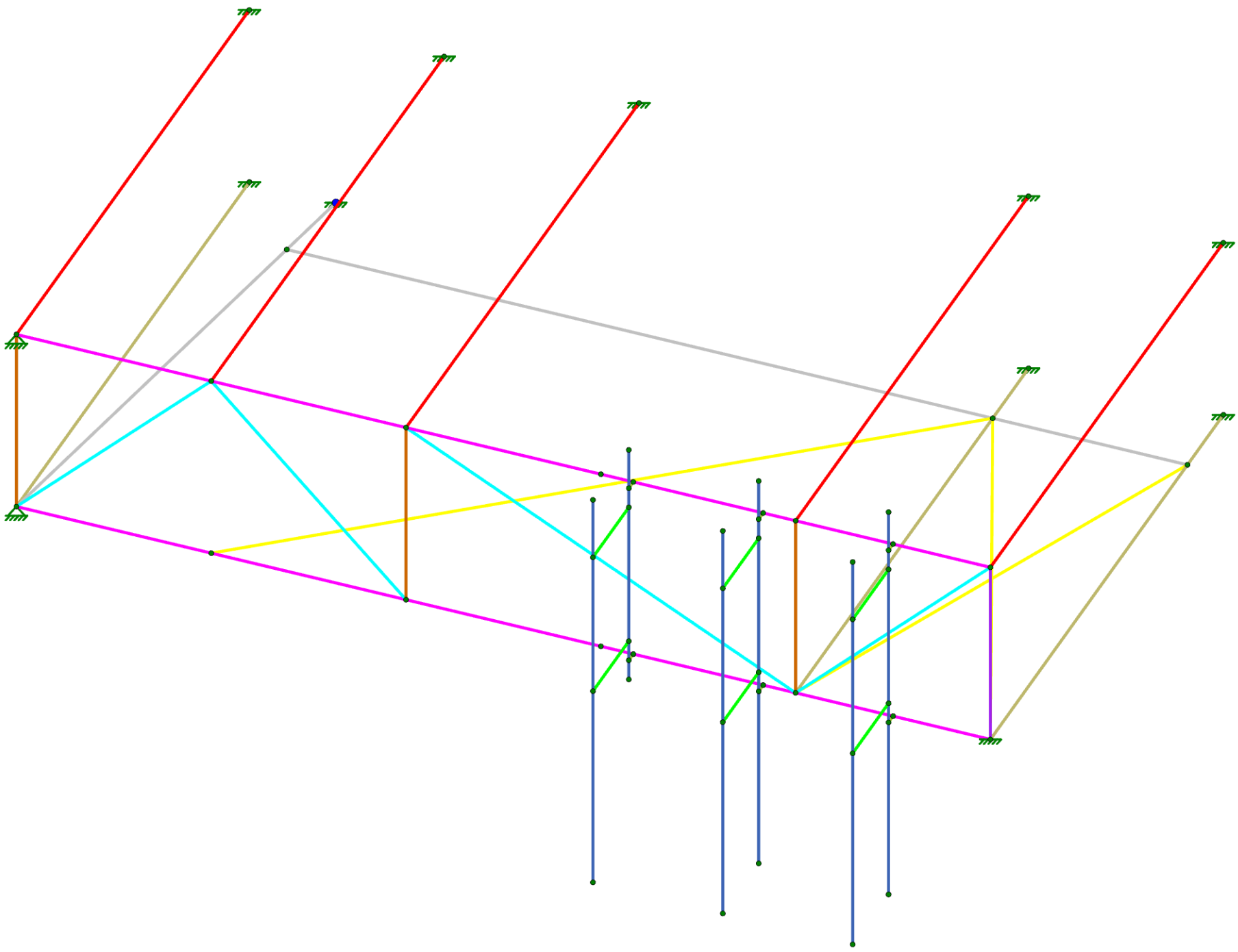
	TA48		GAMMA-BETA Building.r3d







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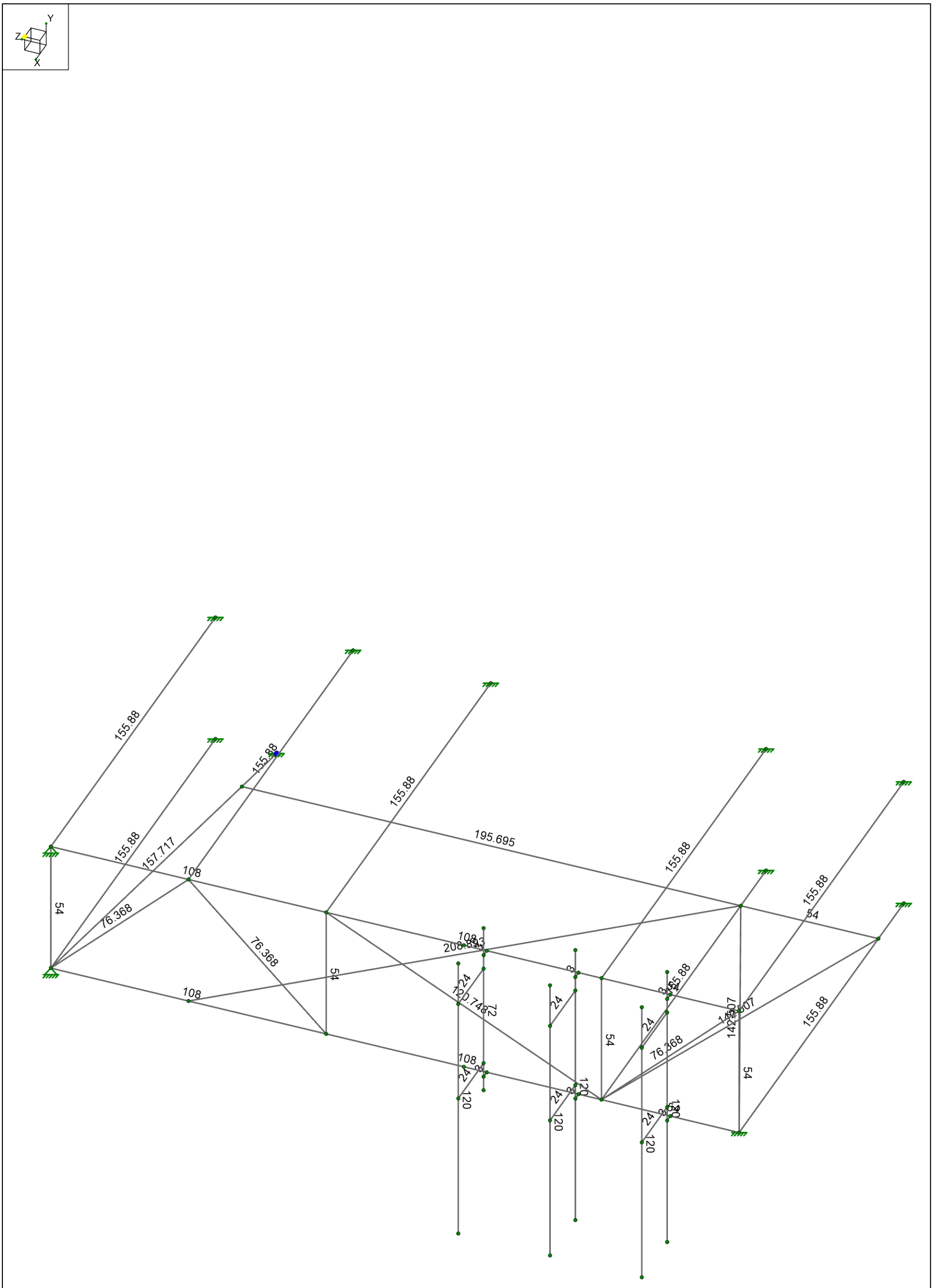

Member Length (in) Displayed

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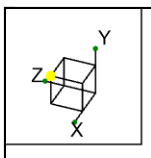

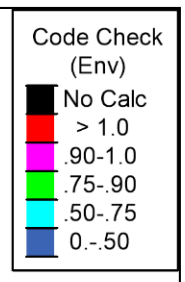

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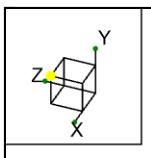

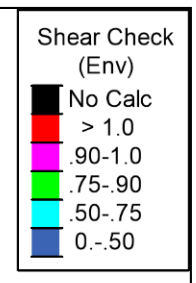

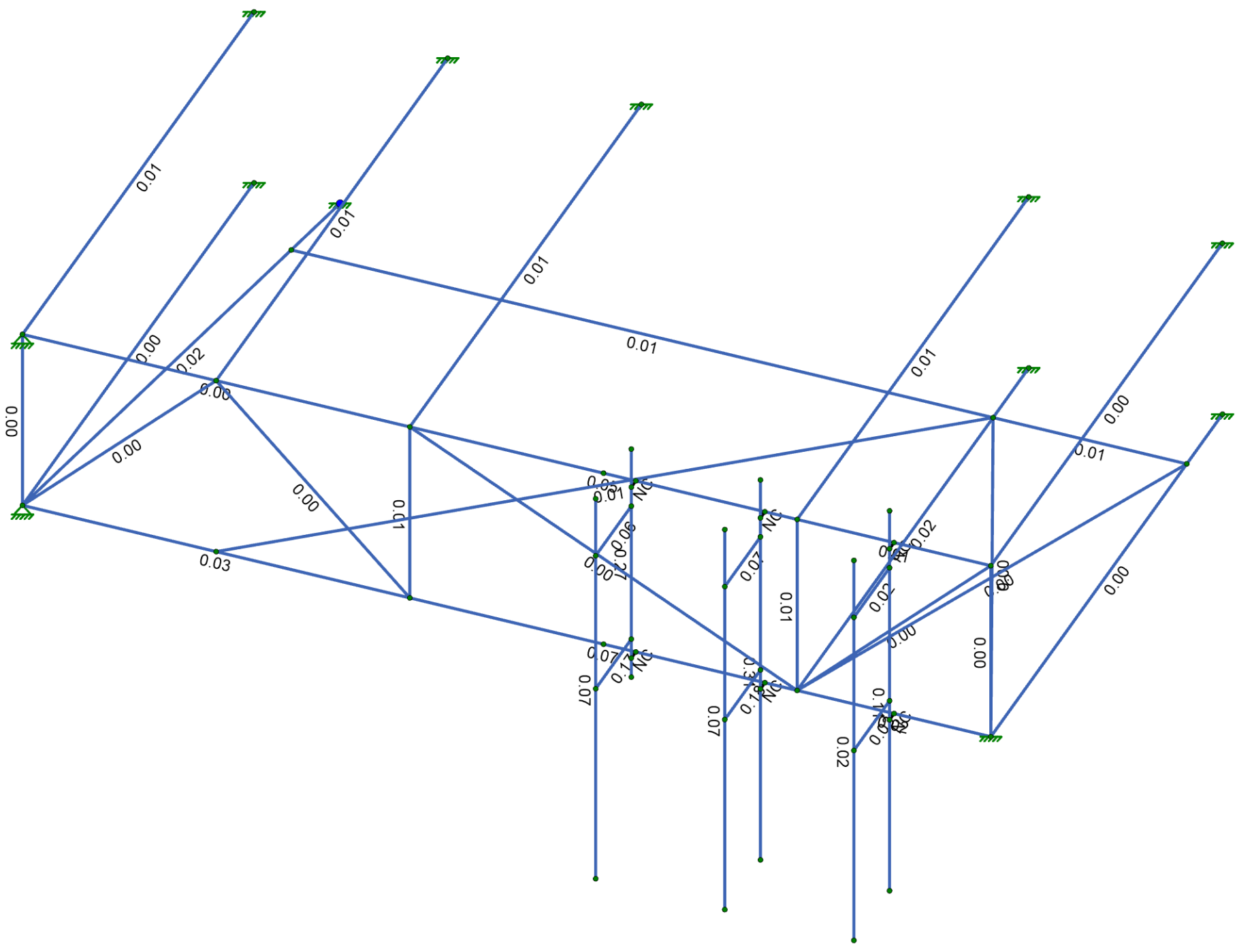

Member Shear Checks Displayed (Enveloped)

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	TA48		GAMMA-BETA Building.r3d

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in²]	Iyy [in⁴]	Izz [in⁴]	J [in⁴]
1	Mount Pipe	PIPE_2.0	None	None	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
2	Angle	L5X3X1/4	None	None	A36 Gr.36	Typical	1.938	1.438	5.11	0.039
3	PV-DC-PTPC	PIPE_2.0	None	None	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
4	RRU pipe	PIPE_2.0	None	None	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
5	W8x24	W8X24	VBrace	Wide Flange	A992	Typical	7.08	18.3	82.7	0.346
6	LL3x3x3x0	LL3X3X3X0	Column	Double Angle (No Gap)	A36 Gr.36	Typical	2.18	3.35	1.9	0.027
7	LL2.5x2x4x0	LL2.5X2X4X0	Column	Double Angle (No Gap)	A36 Gr.36	Typical	2.14	1.35	1.31	0.047
8	LL2x2x4x6	LL2X2X4X6	Column	Double Angle (No Gap)	A36 Gr.36	Typical	1.89	2.46	0.692	0.042
9	LL2x2x3x3	LL2X2X3X3	Column	Double Angle (No Gap)	A36 Gr.36	Typical	1.44	1.35	0.542	0.018
10	L2.5x2.5x4	L2.5X2.5X4	HBrace	Single Angle	A36 Gr.36	Typical	1.19	0.692	0.692	0.026
11	W12x72	W12X72	HBrace	Wide Flange	A992	Typical	21.1	195	597	2.93
12	W4x13	W4X13	HBrace	Wide Flange	A992	Typical	3.83	3.86	11.3	0.151

Member Advanced Data

	Label	Physical	Deflection Ratio Options	Seismic DR
1	M1	Yes	** NA **	None
2	M2	Yes	** NA **	None
3	M3	Yes	** NA **	None
4	M4	Yes	** NA **	None
5	M5	Yes	** NA **	None
6	M6	Yes	** NA **	None
7	M7	Yes	** NA **	None
8	M8	Yes	** NA **	None
9	M9	Yes	** NA **	None
10	M10	Yes	** NA **	None
11	M11	Yes	** NA **	None
12	M12	Yes	** NA **	None
13	M13	Yes	** NA **	None
14	M14	Yes	** NA **	None
15	M15	Yes	** NA **	None
16	M16	Yes	** NA **	None
17	M17	Yes	** NA **	None
18	M18	Yes	** NA **	None
19	M19	Yes	** NA **	None
20	M20	Yes	** NA **	None
21	M21	Yes	** NA **	None
22	M22	Yes	** NA **	None
23	M23	Yes	** NA **	None
24	M24	Yes	** NA **	None
25	M25	Yes	** NA **	None
26	M26	Yes	** NA **	None
27	M27	Yes	** NA **	None
28	M28	Yes	** NA **	None
29	M29	Yes	** NA **	None
30	M30	Yes	** NA **	None
31	M31	Yes	** NA **	None
32	M32	Yes	** NA **	None
33	M33	Yes	** NA **	None
34	M34	Yes	** NA **	None
35	M35	Yes	** NA **	None
36	M36	Yes	** NA **	None
37	M37	Yes	** NA **	None
38	M38	Yes	** NA **	None
39	M39	Yes	** NA **	None
40	M40	Yes	** NA **	None
41	M41	Yes	** NA **	None
42	M42	Yes	** NA **	None
43	M43	Yes	** NA **	None
44	M44	Yes	** NA **	None
45	M45	Yes	** NA **	None
46	M46	Yes	** NA **	None

Hot Rolled Steel Design Parameters

	Label	Shape	Length [in]	Lcomp top [in]	Channel Conn.	a [in]	Function
1	M1	Mount Pipe	120	Lbyy	N/A	N/A	Lateral
2	M2	Mount Pipe	120	Lbyy	N/A	N/A	Lateral
3	M3	Mount Pipe	120	Lbyy	N/A	N/A	Lateral
4	M4	Mount Pipe	72	Lbyy	N/A	N/A	Lateral
5	M5	PV-DC-PTPC	24	Lbyy	N/A	N/A	Lateral
6	M6	PV-DC-PTPC	24	Lbyy	N/A	N/A	Lateral
7	M13	Mount Pipe	120	Lbyy	N/A	N/A	Lateral
8	M14	PV-DC-PTPC	24	Lbyy	N/A	N/A	Lateral
9	M15	PV-DC-PTPC	24	Lbyy	N/A	N/A	Lateral
10	M16	Mount Pipe	120	Lbyy	N/A	N/A	Lateral
11	M17	PV-DC-PTPC	24	Lbyy	N/A	N/A	Lateral
12	M18	PV-DC-PTPC	24	Lbyy	N/A	N/A	Lateral
13	M19	LL2.5x2x4x0	54	Lbyy	N/A	N/A	Lateral
14	M20	LL2.5x2x4x0	54	Lbyy	N/A	N/A	Lateral
15	M21	LL2x2x4x6	76.368	Lbyy	N/A	N/A	Lateral
16	M22	LL2.5x2x4x0	108	Lbyy	N/A	N/A	Lateral
17	M23	LL2.5x2x4x0	108	Lbyy	N/A	N/A	Lateral
18	M24	LL2x2x4x6	120.748	Lbyy	N/A	N/A	Lateral
19	M25	LL2.5x2x4x0	108	Lbyy	N/A	N/A	Lateral
20	M26	LL2.5x2x4x0	108	Lbyy	N/A	N/A	Lateral
21	M27	LL2x2x4x6	76.368	Lbyy	N/A	N/A	Lateral
22	M28	LL2x2x4x6	76.368	Lbyy	N/A	N/A	Lateral
23	M29	LL2x2x3x3	54	Lbyy	N/A	N/A	Lateral
24	M30	LL2x2x3x3	54	Lbyy	N/A	N/A	Lateral
25	M31	LL2x2x3x3	54	Lbyy	N/A	N/A	Lateral
26	M32	W12x72	54	Lbyy	N/A	N/A	Lateral
27	M33	W4x13	155.88	Lbyy	N/A	N/A	Lateral
28	M34	W8x24	155.88	Lbyy	N/A	N/A	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [in]	Lcomp top [in]	Channel Conn.	a [in]	Function
29	M35	W8x24	155.88	Lbyy	N/A	N/A	Lateral
30	M36	W4x13	155.88	Lbyy	N/A	N/A	Lateral
31	M37	W8x24	155.88	Lbyy	N/A	N/A	Lateral
32	M38	W4x13	155.88	Lbyy	N/A	N/A	Lateral
33	M39	W8x24	155.88	Lbyy	N/A	N/A	Lateral
34	M40	W8x24	155.88	Lbyy	N/A	N/A	Lateral
35	M41	L2.5x2.5x4	208.893	Lbyy	N/A	N/A	Lateral
36	M42	L2.5x2.5x4	142.507	Lbyy	N/A	N/A	Lateral
37	M43	LL3x3x3x0	157.717	Lbyy	N/A	N/A	Lateral
38	M44	LL3x3x3x0	195.695	Lbyy	N/A	N/A	Lateral
39	M45	LL3x3x3x0	54	Lbyy	N/A	N/A	Lateral
40	M46	L2.5x2.5x4	142.507	Lbyy	N/A	N/A	Lateral

Design Size and Code Check Parameters

	Label	Max Axial/Bending Chk	Max Shear Chk
1	Typical	1	1

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	Dead	Yes	Y	1	1.4	2	1.4				
2	Dead + Wind 0	Yes	Y	1	1.2	2	1.2	4	1		
3	Dead + Wind 30	Yes	Y	1	1.2	2	1.2	5	1		
4	Dead + Wind 45	Yes	Y	1	1.2	2	1.2	6	1		
5	Dead + Wind 60	Yes	Y	1	1.2	2	1.2	7	1		
6	Dead + Wind 90	Yes	Y	1	1.2	2	1.2	8	1		
7	Dead + Wind 120	Yes	Y	1	1.2	2	1.2	9	1		
8	Dead + Wind 135	Yes	Y	1	1.2	2	1.2	10	1		
9	Dead + Wind 150	Yes	Y	1	1.2	2	1.2	11	1		
10	Dead + Wind 180	Yes	Y	1	1.2	2	1.2	4	-1		
11	Dead + Wind 210	Yes	Y	1	1.2	2	1.2	5	-1		
12	Dead + Wind 225	Yes	Y	1	1.2	2	1.2	6	-1		
13	Dead + Wind 240	Yes	Y	1	1.2	2	1.2	7	-1		
14	Dead + Wind 270	Yes	Y	1	1.2	2	1.2	8	-1		
15	Dead + Wind 300	Yes	Y	1	1.2	2	1.2	9	-1		
16	Dead + Wind 315	Yes	Y	1	1.2	2	1.2	10	-1		
17	Dead + Wind 330	Yes	Y	1	1.2	2	1.2	11	-1		
18	Dead + Ice + Wind Ice 0	Yes	Y	1	1.2	2	1.2	12	1	3	1
19	Dead + Ice + Wind Ice 30	Yes	Y	1	1.2	2	1.2	13	1	3	1
20	Dead + Ice + Wind Ice 45	Yes	Y	1	1.2	2	1.2	14	1	3	1
21	Dead + Ice + Wind Ice 60	Yes	Y	1	1.2	2	1.2	15	1	3	1
22	Dead + Ice + Wind Ice 90	Yes	Y	1	1.2	2	1.2	16	1	3	1
23	Dead + Ice + Wind Ice 120	Yes	Y	1	1.2	2	1.2	17	1	3	1
24	Dead + Ice + Wind Ice 135	Yes	Y	1	1.2	2	1.2	18	1	3	1
25	Dead + Ice + Wind Ice 150	Yes	Y	1	1.2	2	1.2	19	1	3	1
26	Dead + Ice + Wind Ice 180	Yes	Y	1	1.2	2	1.2	12	-1	3	1
27	Dead + Ice + Wind Ice 210	Yes	Y	1	1.2	2	1.2	13	-1	3	1
28	Dead + Ice + Wind Ice 225	Yes	Y	1	1.2	2	1.2	14	-1	3	1
29	Dead + Ice + Wind Ice 240	Yes	Y	1	1.2	2	1.2	15	-1	3	1
30	Dead + Ice + Wind Ice 270	Yes	Y	1	1.2	2	1.2	16	-1	3	1
31	Dead + Ice + Wind Ice 300	Yes	Y	1	1.2	2	1.2	17	-1	3	1
32	Dead + Ice + Wind Ice 315	Yes	Y	1	1.2	2	1.2	18	-1	3	1
33	Dead + Ice + Wind Ice 330	Yes	Y	1	1.2	2	1.2	19	-1	3	1
34	Dead + LM2501 + Wred 0	Yes	Y	1	1.2	2	1.2	20	1.5	4	0.094
35	Dead + LM2501 + Wred 30	Yes	Y	1	1.2	2	1.2	20	1.5	5	0.094
36	Dead + LM2501 + Wred 45	Yes	Y	1	1.2	2		20	1.5	6	0.094
37	Dead + LM2501 + Wred 60	Yes	Y	1	1.2	2	1.2	20	1.5	7	0.094
38	Dead + LM2501 + Wred 90	Yes	Y	1	1.2	2	1.2	20	1.5	8	0.094
39	Dead + LM2501 + Wred 120	Yes	Y	1	1.2	2	1.2	20	1.5	9	0.094
40	Dead + LM2501 + Wred 135	Yes	Y	1	1.2	2		20	1.5	10	0.094
41	Dead + LM2501 + Wred 150	Yes	Y	1	1.2	2	1.2	20	1.5	11	0.094
42	Dead + LM2501 + Wred 180	Yes	Y	1	1.2	2	1.2	20	1.5	4	-0.094
43	Dead + LM2501 + Wred 210	Yes	Y	1	1.2	2	1.2	20	1.5	5	-0.094
44	Dead + LM2501 + Wred 225	Yes	Y	1	1.2	2		20	1.5	6	-0.094
45	Dead + LM2501 + Wred 240	Yes	Y	1	1.2	2	1.2	20	1.5	7	-0.094
46	Dead + LM2501 + Wred 270	Yes	Y	1	1.2	2	1.2	20	1.5	8	-0.094
47	Dead + LM2501 + Wred 300	Yes	Y	1	1.2	2	1.2	20	1.5	9	-0.094
48	Dead + LM2501 + Wred 315	Yes	Y	1	1.2	2		20	1.5	10	-0.094
49	Dead + LM2501 + Wred 330	Yes	Y	1	1.2	2	1.2	20	1.5	11	-0.094
50	Dead + LM2502 + Wred 0	Yes	Y	1	1.2	2	1.2	21	1.5	4	0.094
51	Dead + LM2502 + Wred 30	Yes	Y	1	1.2	2	1.2	21	1.5	5	0.094
52	Dead + LM2502 + Wred 45	Yes	Y	1	1.2	2		21	1.5	6	0.094
53	Dead + LM2502 + Wred 60	Yes	Y	1	1.2	2	1.2	21	1.5	7	0.094
54	Dead + LM2502 + Wred 90	Yes	Y	1	1.2	2	1.2	21	1.5	8	0.094
55	Dead + LM2502 + Wred 120	Yes	Y	1	1.2	2	1.2	21	1.5	9	0.094
56	Dead + LM2502 + Wred 135	Yes	Y	1	1.2	2		21	1.5	10	0.094
57	Dead + LM2502 + Wred 150	Yes	Y	1	1.2	2	1.2	21	1.5	11	0.094
58	Dead + LM2502 + Wred 180	Yes	Y	1	1.2	2	1.2	21	1.5	4	-0.094
59	Dead + LM2502 + Wred 210	Yes	Y	1	1.2	2	1.2	21	1.5	5	-0.094
60	Dead + LM2502 + Wred 225	Yes	Y	1	1.2	2		21	1.5	6	-0.094
61	Dead + LM2502 + Wred 240	Yes	Y	1	1.2	2	1.2	21	1.5	7	-0.094
62	Dead + LM2502 + Wred 270	Yes	Y	1	1.2	2	1.2	21	1.5	8	-0.094
63	Dead + LM2502 + Wred 300	Yes	Y	1	1.2	2	1.2	21	1.5	9	-0.094
64	Dead + LM2502 + Wred 315	Yes	Y	1	1.2	2		21	1.5	10	-0.094
65	Dead + LM2502 + Wred 330	Yes	Y	1	1.2	2	1.2	21	1.5	11	-0.094
66	Dead + LM2503 + Wred 0	Yes	Y	1	1.2	2	1.2	22	1.5	4	0.094
67	Dead + LM2503 + Wred 30	Yes	Y	1	1.2	2	1.2	22	1.5	5	0.094
68	Dead + LM2503 + Wred 45	Yes	Y	1	1.2	2		22	1.5	6	0.094
69	Dead + LM2503 + Wred 60	Yes	Y	1	1.2	2	1.2	22	1.5	7	0.094
70	Dead + LM2503 + Wred 90	Yes	Y	1	1.2	2	1.2	22	1.5	8	0.094
71	Dead + LM2503 + Wred 120	Yes	Y	1	1.2	2	1.2	22	1.5	9	0.094
72	Dead + LM2503 + Wred 135	Yes	Y	1	1.2	2		22	1.5	10	0.094
73	Dead + LM2503 + Wred 150	Yes	Y	1	1.2	2	1.2	22	1.5	11	0.094
74	Dead + LM2503 + Wred 180	Yes	Y	1	1.2	2	1.2	22	1.5	4	-0.094

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
75	Dead + LM2503 + Wred 210	Yes	Y	1	1.2	2	1.2	22	1.5	5	-0.094
76	Dead + LM2503 + Wred 225	Yes	Y	1	1.2	2		22	1.5	6	-0.094
77	Dead + LM2503 + Wred 240	Yes	Y	1	1.2	2	1.2	22	1.5	7	-0.094
78	Dead + LM2503 + Wred 270	Yes	Y	1	1.2	2	1.2	22	1.5	8	-0.094
79	Dead + LM2503 + Wred 300	Yes	Y	1	1.2	2	1.2	22	1.5	9	-0.094
80	Dead + LM2503 + Wred 315	Yes	Y	1	1.2	2		22	1.5	10	-0.094
81	Dead + LM2503 + Wred 330	Yes	Y	1	1.2	2	1.2	22	1.5	11	-0.094
82	Dead + LM2504 + Wred 0	Yes	Y	1	1.2	2	1.2	23	1.5	4	0.094
83	Dead + LM2504 + Wred 30	Yes	Y	1	1.2	2	1.2	23	1.5	5	0.094
84	Dead + LM2504 + Wred 45	Yes	Y	1	1.2	2		23	1.5	6	0.094
85	Dead + LM2504 + Wred 60	Yes	Y	1	1.2	2	1.2	23	1.5	7	0.094
86	Dead + LM2504 + Wred 90	Yes	Y	1	1.2	2	1.2	23	1.5	8	0.094
87	Dead + LM2504 + Wred 120	Yes	Y	1	1.2	2	1.2	23	1.5	9	0.094
88	Dead + LM2504 + Wred 135	Yes	Y	1	1.2	2		23	1.5	10	0.094
89	Dead + LM2504 + Wred 150	Yes	Y	1	1.2	2	1.2	23	1.5	11	0.094
90	Dead + LM2504 + Wred 180	Yes	Y	1	1.2	2	1.2	23	1.5	4	-0.094
91	Dead + LM2504 + Wred 210	Yes	Y	1	1.2	2	1.2	23	1.5	5	-0.094
92	Dead + LM2504 + Wred 225	Yes	Y	1	1.2	2		23	1.5	6	-0.094
93	Dead + LM2504 + Wred 240	Yes	Y	1	1.2	2	1.2	23	1.5	7	-0.094
94	Dead + LM2504 + Wred 270	Yes	Y	1	1.2	2	1.2	23	1.5	8	-0.094
95	Dead + LM2504 + Wred 300	Yes	Y	1	1.2	2	1.2	23	1.5	9	-0.094
96	Dead + LM2504 + Wred 315	Yes	Y	1	1.2	2		23	1.5	10	-0.094
97	Dead + LM2504 + Wred 330	Yes	Y	1	1.2	2	1.2	23	1.5	11	-0.094
98	Dead + LV2505	Yes	Y	1	1.2	2	1.2	24	1.5		
99	Dead + LV2506	Yes	Y	1	1.2	2	1.2	25	1.5		
100	Service 60mph Wind 0	Yes	Y	1	1	2	1	4	0.375		
101	(1.2 + 0.2SDS)Dead + 1.0E 0	Yes	Y	1	1.403	2	1.403	22	1	23	
102	(1.2 + 0.2SDS)Dead + 1.0E 30	Yes	Y	1	1.403	2	1.403	22	0.866	23	0.5
103	(1.2 + 0.2SDS)Dead + 1.0E 45	Yes	Y	1	1.403	2	1.403	22	0.707	23	0.707
104	(1.2 + 0.2SDS)Dead + 1.0E 60	Yes	Y	1	1.403	2	1.403	22	0.5	23	0.866
105	(1.2 + 0.2SDS)Dead + 1.0E 90	Yes	Y	1	1.403	2	1.403	22		23	1
106	(1.2 + 0.2SDS)Dead + 1.0E 120	Yes	Y	1	1.403	2	1.403	22	-0.5	23	0.866
107	(1.2 + 0.2SDS)Dead + 1.0E 135	Yes	Y	1	1.403	2	1.403	22	-0.707	23	0.707
108	(1.2 + 0.2SDS)Dead + 1.0E 150	Yes	Y	1	1.403	2	1.403	22	-0.866	23	0.5
109	(1.2 + 0.2SDS)Dead + 1.0E 180	Yes	Y	1	1.403	2	1.403	22	-1	23	
110	(1.2 + 0.2SDS)Dead + 1.0E 210	Yes	Y	1	1.403	2	1.403	22	-0.866	23	-0.5
111	(1.2 + 0.2SDS)Dead + 1.0E 225	Yes	Y	1	1.403	2	1.403	22	-0.707	23	-0.707
112	(1.2 + 0.2SDS)Dead + 1.0E 240	Yes	Y	1	1.403	2	1.403	22	-0.5	23	-0.866
113	(1.2 + 0.2SDS)Dead + 1.0E 270	Yes	Y	1	1.403	2	1.403	22		23	-1
114	(1.2 + 0.2SDS)Dead + 1.0E 300	Yes	Y	1	1.403	2	1.403	22	0.5	23	-0.866
115	(1.2 + 0.2SDS)Dead + 1.0E 315	Yes	Y	1	1.403	2	1.403	22	0.707	23	-0.707
116	(1.2 + 0.2SDS)Dead + 1.0E 330	Yes	Y	1	1.403	2	1.403	22	0.866	23	-0.5

Envelope Member Section Forces

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-in]	LC	y-y Moment[k-in]	LC	z-z Moment[k-in]	LC
0	M1	1	max	0	116	0.002	10	-0.001	84	0	116	0	116	0	116
1			min	0	1	-0.008	18	-0.008	26	0	1	0	1	0	1
2		2	max	431.693	2	147.816	26	90.496	24	0.689	11	-0.006	4	2.07	2
3			min	-427.701	10	13.296	48	20.925	36	-1.182	3	-0.835	28	-0.927	10
4		3	max	533.044	2	669.962	2	341.2	15	3.988	7	3.228	4	1.797	2
5			min	-326.35	10	-401.793	10	-222.938	7	-5.213	15	0.516	48	-3.138	24
6		4	max	-9.545	100	14.174	10	14.166	6	0	116	0.212	14	0.213	10
7			min	-22.597	24	-14.157	2	-14.147	14	0	1	-0.213	6	-0.212	2
8		5	max	0	116	0.041	24	0.038	30	0	116	0	116	0	116
9			min	0	1	-0.006	16	0.002	6	0	1	0	1	0	1
10	M2	1	max	0	116	0	10	0	9	0	116	0	116	0	116
11			min	0	1	-0.004	18	-0.001	31	0	1	0	1	0	1
12		2	max	35.611	2	97.517	10	36.025	8	0.115	8	0.431	7	1.424	2
13			min	-77.41	10	-2.205	2	-29.101	16	-0.08	16	-0.496	15	-0.597	10
14		3	max	347.037	18	270.357	2	130.734	14	1.826	6	0.449	16	-0.243	10
15			min	41.002	40	-83.757	10	-123.372	6	-1.782	14	-0.298	8	-1.917	18
16		4	max	-9.545	100	14.167	10	14.16	6	0	116	0.212	14	0.213	10
17			min	-22.597	18	-14.155	2	-14.157	14	0	1	-0.212	6	-0.212	2
18		5	max	0	116	0.024	24	0.008	14	0	116	0	116	0	116
19			min	0	1	-0.005	16	-0.005	6	0	1	0	1	0	1
20	M3	1	max	0	116	0.01	11	0.064	16	0	116	0	116	0	116
21			min	0	1	-0.498	19	-0.052	8	0	1	0	1	0	1
22		2	max	167.241	10	248.16	2	78.565	15	0.841	12	1.415	12	1.345	26
23			min	-194.444	2	-123.696	10	-66.9	7	-0.926	4	-1.546	4	0.122	36
24		3	max	178.695	10	262.324	2	139.137	7	0.841	12	6.414	15	12.214	10
25			min	-259.364	18	-194.986	3	-139.154	15	-0.926	4	-6.413	7	-12.203	2
26		4	max	-11.454	96	243.527	10	126.87	7	0	116	2.424	12	4.696	10
27			min	-236.767	18	-243.334	2	-126.887	15	0	1	-2.423	4	-4.69	2
28		5	max	0	116	1.348	2	0.724	12	0	116	0	116	0	116
29			min	0	1	-1.156	10	-0.742	4	0	1	0	1	0	1
30	M4	1	max	0	116	0.007	10	0	96	0	116	0	116	0	116
31			min	0	1	-0.02	18	-0.002	24	0	1	0	1	0	1
32		2	max	177.275	2	280.305	26	81.658	5	2.995	12	-0.183	88	2.705	18
33			min	-279.148	32	24.092	36	-44.121	13	-3.708	4	-0.989	16	-0.731	10
34		3	max	184.147	2	125.643	32	30.279	12	0.731	12	0.215	16	1.336	2
35			min	-155.948	10	14.038	36	-5.086	4	-1.051	4	-0.338	8	-1.036	10
36		4	max	191.019	2	126.272	18	42.033	13	0.731	12	0.744	12	0.323	2
37			min	-149.076	10	13.671	48	-16.727	5	-1.051	4	-0.412	4	-2.017	26
38		5	max	0	116	0.009	20	0.001	27	0	116	0	116	0	116
39			min	0	1	0	44	0	3	0	1	0	1	0	1
40	M5	1	max	520.368	2	70.29	2	231.644	15	2.972	4	0.926	4	4.816	2
41			min	-397.038	10	-288.942	10	-218.609	7	-2.738	12	-0.841	12	-7.432	10
42		2	max	520.368	2	67.999	2	232.976	15	2.972	4	0.694	17	4.401	2
43			min	-397.038	10	-291.233	10	-219.941	7	-2.738	12	-0.543	9	-5.692	10
44		3	max	520.368	2	65.709	2	234.309	15	2.972	4	2.09	15	4	2
45			min	-397.038	10	-293.524	10	-221.274	7	-2.738	12	-1.863	7	-3.937	10
46		4	max	520.368	2	63.418	2	235.641	15	2.972	4	3.5	15	3.612	2
47			min	-397.038	10	-295.814	10	-222.606	7	-2.738	12	-3.194	7	-2.169	10
48		5	max	520.368	2	61.127	2	236.974	15	2.972	4	4.918	15	3.557	18
49			min	-397.038	10	-298.105	10	-223.939	7	-2.738	12	-4.534	7	-0.388	10

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-in]	LC	y-y Moment[k-in]	LC	z-z Moment[k-in]	LC
50	M6	1	max	-2.674	2	68.979	10	57.863	12	0.621	17	0.841	12	2.42	10
51			min	-151.584	26	-292.462	2	-70.674	4	-0.356	9	-0.926	4	-5.04	2
52		2	max	-2.674	2	66.688	10	58.589	12	0.621	17	1.19	12	2.013	10
53			min	-151.608	26	-294.752	2	-71.399	4	-0.356	9	-1.352	4	-3.278	2
54		3	max	-2.674	2	64.398	10	59.314	12	0.621	17	1.544	12	1.62	10
55			min	-151.632	26	-297.043	2	-72.125	4	-0.356	9	-1.783	4	-1.503	2
56		4	max	-2.674	2	62.107	10	60.039	12	0.621	17	1.902	12	1.823	26
57			min	-151.655	26	-299.334	2	-72.85	4	-0.356	9	-2.218	4	0.154	36
58		5	max	-2.674	2	59.816	10	61.349	13	0.621	17	2.264	12	3.483	18
59			min	-151.679	26	-301.625	2	-73.679	5	-0.356	9	-2.657	4	0.33	40
60	M7	1	max	-22.74	84	-32.665	88	57.021	14	1.1	32	2.995	12	-0.089	84
61			min	-281.551	26	-291.623	32	-94.294	6	0.062	8	-3.708	4	-0.813	28
62		2	max	-22.74	84	-32.665	88	57.021	14	1.1	32	3.033	12	-0.063	84
63			min	-281.551	26	-291.623	32	-94.294	6	0.062	8	-3.775	4	-0.596	28
64		3	max	-22.74	84	-32.665	88	57.021	14	1.1	32	3.071	12	-0.038	84
65			min	-281.551	26	-291.623	32	-94.294	6	0.062	8	-3.841	4	-0.378	27
66		4	max	-22.74	84	-32.665	88	57.021	14	1.1	32	3.109	12	0.012	3
67			min	-281.551	26	-291.623	32	-94.294	6	0.062	8	-3.908	4	-0.161	27
68		5	max	-22.74	84	-32.665	88	57.021	14	1.1	32	3.147	12	0.109	2
69			min	-281.551	26	-291.623	32	-94.294	6	0.062	8	-3.974	4	-0.055	10
70	M8	1	max	598.694	2	-55.584	96	289.547	15	1.111	4	4.639	15	-0.16	96
71			min	-366.615	10	-321.738	24	-252.294	7	-0.169	16	-3.946	7	-0.91	24
72		2	max	598.694	2	-55.584	96	289.547	15	1.111	4	4.856	15	-0.118	96
73			min	-366.615	10	-321.738	24	-252.294	7	-0.169	16	-4.136	7	-0.669	24
74		3	max	598.694	2	-55.584	96	289.547	15	1.111	4	5.074	15	-0.077	96
75			min	-366.615	10	-321.738	24	-252.294	7	-0.169	16	-4.325	7	-0.427	24
76		4	max	598.694	2	-55.584	96	289.547	15	1.111	4	5.291	15	-0.035	96
77			min	-366.615	10	-321.738	24	-252.294	7	-0.169	16	-4.514	7	-0.186	24
78		5	max	598.694	2	-55.584	96	289.547	15	1.111	4	5.508	15	0.058	19
79			min	-366.615	10	-321.738	24	-252.294	7	-0.169	16	-4.703	7	0.003	11
80	M9	1	max	99.3	2	-35.634	96	123.997	15	0.923	5	1.541	14	-0.1	96
81			min	-286.01	10	-334.918	26	-131.368	7	-0.718	13	-1.497	6	-0.974	26
82		2	max	99.3	2	-35.634	96	123.997	15	0.923	5	1.633	14	-0.073	96
83			min	-286.01	10	-334.918	26	-131.368	7	-0.718	13	-1.595	6	-0.723	26
84		3	max	99.3	2	-35.634	96	123.997	15	0.923	5	1.725	14	-0.046	96
85			min	-286.01	10	-334.918	26	-131.368	7	-0.718	13	-1.693	6	-0.472	26
86		4	max	99.3	2	-35.634	96	123.997	15	0.923	5	1.818	14	-0.019	84
87			min	-286.01	10	-334.918	26	-131.368	7	-0.718	13	-1.79	6	-0.221	26
88		5	max	99.3	2	-35.634	96	123.997	15	0.923	5	1.91	14	0.045	2
89			min	-286.01	10	-334.918	26	-131.368	7	-0.718	13	-1.888	6	-0.005	10
90	M10	1	max	298.693	2	-63.917	88	159.073	14	0.977	16	1.782	14	-0.173	88
91			min	-111.983	10	-392.429	18	-151.659	6	-0.781	8	-1.826	6	-1.13	18
92		2	max	298.693	2	-63.917	88	159.073	14	0.977	16	1.902	14	-0.125	88
93			min	-111.983	10	-392.429	18	-151.659	6	-0.781	8	-1.94	6	-0.836	18
94		3	max	298.693	2	-63.917	88	159.073	14	0.977	16	2.021	14	-0.078	88
95			min	-111.983	10	-392.429	18	-151.659	6	-0.781	8	-2.054	6	-0.541	18
96		4	max	298.693	2	-63.917	88	159.073	14	0.977	16	2.14	14	-0.03	88
97			min	-111.983	10	-392.429	18	-151.659	6	-0.781	8	-2.167	6	-0.247	18
98		5	max	298.693	2	-63.917	88	159.073	14	0.977	16	2.26	14	0.051	24
99			min	-111.983	10	-392.429	18	-151.659	6	-0.781	8	-2.281	6	0.014	16
100	M11	1	max	698.181	2	10.097	10	365.84	15	3.378	20	5.213	15	0.155	10
101			min	-430.174	10	-531.678	18	-247.355	7	0.649	44	-3.988	7	-1.543	2
102		2	max	698.181	2	10.097	10	365.84	15	3.378	20	5.487	15	0.147	10
103			min	-430.174	10	-531.678	18	-247.355	7	0.649	44	-4.173	7	-1.158	2
104		3	max	698.181	2	10.097	10	365.84	15	3.378	20	5.762	15	0.14	10
105			min	-430.174	10	-531.678	18	-247.355	7	0.649	44	-4.359	7	-0.772	2
106		4	max	698.181	2	10.097	10	365.84	15	3.378	20	6.036	15	0.132	10
107			min	-430.174	10	-531.678	18	-247.355	7	0.649	44	-4.544	7	-0.387	2
108		5	max	698.181	2	10.097	10	365.84	15	3.378	20	6.31	15	0.125	10
109			min	-430.174	10	-531.678	18	-247.355	7	0.649	44	-4.73	7	-0.001	2
110	M12	1	max	2.428	2	54.758	2	39.518	13	3.247	20	2.77	12	0.256	2
111			min	-320.635	26	-468.965	10	-158.661	5	0.665	44	-4.017	4	-1.436	10
112		2	max	2.428	2	54.758	2	39.518	13	3.247	20	2.798	12	0.215	2
113			min	-320.635	26	-468.965	10	-158.661	5	0.665	44	-4.135	4	-1.085	10
114		3	max	2.428	2	54.758	2	39.518	13	3.247	20	2.826	12	0.174	2
115			min	-320.635	26	-468.965	10	-158.661	5	0.665	44	-4.252	4	-0.733	10
116		4	max	2.428	2	54.758	2	39.518	13	3.247	20	2.854	12	0.133	2
117			min	-320.635	26	-468.965	10	-158.661	5	0.665	44	-4.37	4	-0.381	10
118		5	max	2.428	2	54.758	2	39.518	13	3.247	20	2.882	12	0.092	2
119			min	-320.635	26	-468.965	10	-158.661	5	0.665	44	-4.487	4	-0.029	10
120	M13	1	max	0	116	0	84	0	9	0	116	0	116	0	116
121			min	0	1	-0.041	26	-0.008	31	0	1	0	1	0	1
122		2	max	28.247	16	86.029	24	13.065	8	0.202	8	0.224	8	0.768	24
123			min	-54.933	8	12.757	48	-12.582	16	-0.182	16	-0.23	16	0.127	48
124		3	max	95.397	32	109.522	2	44.334	14	0.202	8	0.849	14	0.849	10
125			min	-22.907	44	-6.269	11	-43.863	6	-0.182	16	-0.849	6	-1.863	18
126		4	max	-9.545	100	14.157	10	14.152	6	0	116	0.212	14	0.212	10
127			min	-22.597	20	-14.148	2	-14.15	14	0	1	-0.212	6	-0.212	2
128		5	max	0	116	0.021	24	0.018	8	0	116	0	116	0	116
129			min	0	1	-0.01	16	-0.016	16	0	1	0	1	0	1
130	M14	1	max	137.837	2	-17.739	88	72.756	14	0.327	16	0.182	16	-0.258	88
131			min	-46.414	10	-140.682	32	-72.278	6	-0.318	8	-0.202	8	-1.815	32
132		2	max	137.837	2	-20.03	88	76.305	14	0.327	16	0.361	14	-0.145	88
133			min	-46.414	10	-145.201	32	-75.828	6	-0.318	8	-0.378	6	-0.957	32
134		3	max	137.837	2	-22.321	88	79.854	14	0.327	16	0.829	14	0.377	2
135			min	-46.414	10	-149.72	32	-79.377	6	-0.318	8	-0.843	6	-0.452	10
136		4	max	137.837	2	-24.611	88	83.404	14	0.327	16	1.319	14	1.081	2
137			min	-46.414	10	-154.24	32	-82.927	6	-0.318	8	-1.33	6	-0.197	10
138		5	max	137.837	2	-26.902	88	86.953	14	0.327	16	1.83	14	1.825	18
139			min	-46.414	10	-158.759	32	-86.476	6	-0.318	8	-1.839	6	0.073	10
140	M15	1	max	32.842	2	-20.266	96	54.517	14	0.152	16	0.202	8	-0.286	96
141			min	-124.265	10	-146.029	24	-54.99	6	-0.14	8	-0.182	16	-1.795	24
142		2	max	32.842	2	-22.556	96	56.568	14	0.152	16	0.42	14	-0.142	92
143			min	-124.265	10	-150.548	24	-57.042	6	-0.14	8	-0.403	6	-0.934	18
144		3	max	32.842	2	-24.847	96	58.62	14	0.152	16	0.765	14	0.533	10

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-in]	LC	y-y Moment[k-in]	LC	z-z Moment[k-in]	LC
145			min	-124.265	10	-155.067	24	-59.093	6	-0.14	8	-0.751	6	-0.538	2
146		4	max	32.842	2	-27.138	96	60.671	14	0.152	16	1.123	14	1.259	10
147			min	-124.265	10	-159.587	24	-61.145	6	-0.14	8	-1.112	6	-0.26	2
148		5	max	32.842	2	-29.429	96	62.723	14	0.152	16	1.493	14	1.998	10
149			min	-124.265	10	-164.106	24	-63.196	6	-0.14	8	-1.485	6	0.032	2
150	M16	1	max	0	116	0	96	0.085	33	0	116	0	116	0	116
151			min	0	1	-0.218	25	-0.036	9	0	1	0	1	0	1
152		2	max	154.508	10	268.689	2	91.778	15	0.878	12	0.989	12	1.453	18
153			min	-181.435	2	-131.215	10	-64.162	7	-0.945	4	-1.226	4	0.128	44
154		3	max	165.962	10	282.854	2	141.514	7	0.878	12	6.005	12	11.665	10
155			min	-279.627	18	-148.726	4	-141.515	13	-0.945	4	-6.004	4	-11.66	2
156		4	max	-11.454	96	254.849	10	130.317	4	0	116	1.945	12	3.807	10
157			min	-257.031	18	-254.763	2	-130.343	12	0	1	-1.944	4	-3.804	2
158		5	max	0	116	1.144	2	0.707	12	0	116	0	116	0	116
159			min	0	1	-1.058	10	-0.732	4	0	1	0	1	0	1
160	M17	1	max	552.846	2	49.56	2	247.202	15	3.058	4	0.945	4	4.087	2
161			min	-415.513	10	-293.505	26	-218.283	7	-2.452	12	-0.878	12	-6.971	10
162		2	max	552.846	2	47.27	2	248.534	15	3.058	4	0.826	17	3.797	2
163			min	-415.513	10	-298.025	26	-219.615	7	-2.452	12	-0.599	9	-5.254	10
164		3	max	552.846	2	44.979	2	249.867	15	3.058	4	2.285	15	3.52	2
165			min	-415.513	10	-302.544	26	-220.948	7	-2.452	12	-1.886	7	-3.523	10
166		4	max	552.846	2	42.688	2	251.199	15	3.058	4	3.788	15	3.257	2
167			min	-415.513	10	-307.063	26	-222.28	7	-2.452	12	-3.216	7	-1.778	10
168		5	max	552.846	2	40.397	2	252.532	15	3.058	4	5.3	15	3.662	18
169			min	-415.513	10	-311.583	26	-223.613	7	-2.452	12	-4.553	7	-0.02	10
170	M18	1	max	-12.131	84	47.004	10	50.041	12	0.656	33	0.878	12	1.799	10
171			min	-164.873	26	-301.43	18	-78.811	4	-0.088	9	-0.945	4	-4.692	2
172		2	max	-12.035	84	44.713	10	50.766	12	0.656	33	1.181	12	1.523	10
173			min	-164.897	26	-305.95	18	-79.536	4	-0.088	9	-1.42	4	-2.952	2
174		3	max	-11.938	84	42.422	10	51.492	12	0.656	33	1.487	12	1.262	10
175			min	-164.921	26	-310.469	18	-80.262	4	-0.088	9	-1.9	4	-1.199	2
176		4	max	-11.842	84	40.131	10	52.217	12	0.656	33	1.799	12	1.911	26
177			min	-164.944	26	-314.989	18	-80.987	4	-0.088	9	-2.383	4	0.157	36
178		5	max	-11.746	84	37.841	10	52.942	12	0.656	33	2.114	12	3.757	18
179			min	-164.968	26	-319.508	18	-81.712	4	-0.088	9	-2.872	4	0.317	44
180	M19	1	max	1533.263	24	213.502	27	64.43	3	0.002	10	2.555	11	3.512	26
181			min	581.343	48	37.742	36	-170.058	11	-0.023	2	-0.858	3	0.528	36
182		2	max	1533.263	24	202.688	27	64.43	3	0.002	10	0.403	25	0.71	26
183			min	581.343	48	26.929	36	-170.058	11	-0.023	2	-0.074	2	-0.07	2
184		3	max	1535.537	30	191.875	27	147.553	9	0.019	18	1.088	17	-0.275	96
185			min	586.129	48	-127.535	9	-170.058	11	-0.023	2	-2.218	9	-2.069	25
186		4	max	1535.537	30	-27.05	96	147.553	9	0.022	2	0.247	15	0.153	15
187			min	576.361	36	-156.538	25	-66.507	17	-0.002	10	-0.283	7	-0.136	7
188		5	max	1535.537	30	-37.864	96	147.553	9	0.022	2	1.766	9	2.158	25
189			min	576.361	36	-167.351	25	-66.507	17	-0.002	10	-0.708	17	0.456	48
190	M20	1	max	998.854	12	235.881	18	273.649	3	-0.012	16	3.366	11	3.837	18
191			min	137.841	4	53.632	44	-144.571	11	-0.029	24	-5.91	3	0.801	44
192		2	max	998.854	12	225.067	18	273.649	3	-0.012	16	1.549	10	0.733	32
193			min	137.841	4	42.818	44	-144.571	11	-0.029	24	-2.35	2	0.059	8
194		3	max	1144.713	13	214.253	18	273.649	3	-0.012	16	2.063	15	-0.406	88
195			min	137.841	4	-153.143	16	-144.571	11	-0.029	24	-1.137	7	-2.373	32
196		4	max	1144.713	13	-40.485	88	70.106	7	0.021	24	0.388	2	0.261	8
197			min	-0.634	5	-191.416	32	-128.965	15	0.003	16	-0.254	10	-0.036	16
198		5	max	1144.713	13	-51.299	88	70.106	7	0.021	24	0.755	7	2.796	32
199			min	-0.634	5	-202.23	32	-128.965	15	0.003	16	-1.419	15	0.697	40
200	M21	1	max	-1025.114	84	29.287	18	45.017	3	0.003	11	3.091	11	0.773	18
201			min	-2714.584	31	21.04	10	-60.022	11	-0.01	3	-2.357	3	0.349	10
202		2	max	-1034.664	84	19.737	18	45.017	3	0.003	11	1.945	11	0.305	18
203			min	-2724.134	31	11.49	10	-60.022	11	-0.01	3	-1.498	3	0.038	10
204		3	max	-1044.214	84	10.187	18	45.017	3	0.003	11	0.799	11	0.019	33
205			min	-2733.685	31	1.939	10	-60.022	11	-0.01	3	-0.638	3	-0.09	10
206		4	max	-1053.765	84	0.636	18	45.017	3	0.003	11	0.235	2	-0.036	10
207			min	-2743.235	31	-7.611	10	-60.022	11	-0.01	3	-0.361	10	-0.084	19
208		5	max	-1063.315	84	-8.914	18	45.017	3	0.003	11	1.09	2	0.201	10
209			min	-2752.785	31	-17.162	10	-60.022	11	-0.01	3	-1.502	10	-0.005	18
210	M22	1	max	1770.681	21	137.855	27	53.581	4	0.025	10	3.473	12	3.174	27
211			min	620.956	44	47.446	36	-130.29	12	-0.053	2	-1.223	4	0.708	36
212		2	max	1770.681	21	116.228	27	53.581	4	0.025	10	0.227	5	-0.233	100
213			min	620.956	44	25.818	36	-130.29	12	-0.053	2	-0.049	13	-0.314	101
214		3	max	1770.681	21	94.601	27	53.581	4	0.025	10	1.671	4	-0.687	84
215			min	620.956	44	4.191	36	-130.29	12	-0.053	2	-3.563	12	-3.103	28
216		4	max	1722.877	21	-49.545	88	190.773	25	0.056	2	0.071	2	-0.149	2
217			min	617.774	44	-227.267	32	4.231	17	-0.03	10	-0.77	26	-1.026	26
218		5	max	1590.672	24	-95.037	2	506.977	25	0.148	2	5.953	11	6.01	26
219			min	599.957	48	-679.751	26	32.573	17	-0.059	10	-1.544	3	1.105	36
220	M23	1	max	-322.778	7	153.866	28	162.753	3	-0.002	84	0.888	10	3.933	31
221			min	-767.253	31	64.666	36	-112.578	11	-0.026	26	-1.286	2	1.526	36
222		2	max	-322.778	7	132.239	28	162.753	3	-0.002	84	3.121	3	0.139	3
223			min	-767.253	31	43.039	36	-112.578	11	-0.026	26	-2.161	11	0.007	11
224		3	max	-322.778	7	111.709	28	164.697	3	-0.002	84	7.515	3	-0.798	84
225			min	-767.253	31	21.521	36	-114.789	11	-0.026	26	-5.2	11	-3.21	28
226		4	max	-333.842	92	-54.344	96	270.404	10	0.039	3	1.07	17	-0.316	92
227			min	-717.096	21	-230.409	24	-451.175	2	-0.013	11	-0.817	9	-1.185	18
228		5	max	-28.106	15	-127.152	88	701.286	10	0.137	24	10.05	11	6.694	18
229			min	-822.559	7	-780.119	18	-1150.638	2	0.032	16	-15.591	3	1.265	40
230	M24	1	max	-36.103	84	44.17	116	38.716	2	0.003	11	0.372	10	0.726	116
231			min	-658.55	26	32.041	100	-14.461	10	-0.001	3	-1.454	2	0.545	100
232		2	max	-26.553	84	21.838	116	38.716	2	0.003	11	-0.065	10	-0.182	100
233			min	-648.999	26	16.124	100	-14.461	10	-0.001	3	-0.34	33	-0.304	26
234		3	max	-17.002	84	1.064	2	38.716	2	0.003	11	0.912	3	-0.429	100
235			min	-639.449	26	-1.906	10	-14.461	10	-0.001	3	-0.529	11	-0.598	33
236		4	max	-7.452	84	-15.711	100	38.716	2	0.003	11	2.053	3	-0.144	10
237			min	-629.899	26	-22.826	101	-14.461	10	-0.001	3	-0.939	11	-0.323	18
238		5	max	2.099	84	-31.628	100	38.716	2	0.003	11	3.221	2	0.786	116
239			min	-620.348	26	-45.158	101	-14.461	10	-0.001	3	-1.375	10	0.52	100

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-in]	LC	y-y Moment[k-in]	LC	z-z Moment[k-in]	LC
240	M25	1	max	-552.305	84	37.648	116	4.963	11	0	11	0.118	3	0.554	116
241			min	-1045.681	30	26.668	100	-7.337	3	-0.001	3	-0.081	11	0.393	100
242		2	max	-552.305	84	13.84	28	4.963	11	0	11	0.053	11	-0.083	84
243			min	-1045.681	30	8.645	100	-7.337	3	-0.001	3	-0.08	3	-0.146	28
244		3	max	1144.295	21	4.825	2	21.893	11	0	11	0.47	3	-0.028	84
245			min	-941.958	13	-12.924	101	-18.261	3	-0.001	3	-0.484	11	-0.228	28
246		4	max	1144.295	21	-13.372	84	21.893	11	0	11	0.127	28	0.383	26
247			min	589.068	13	-31.16	27	-18.261	3	-0.001	19	-0.026	4	0.09	36
248		5	max	1144.295	21	-33.2	100	21.893	11	0	11	0.698	11	1.516	27
249			min	589.068	13	-52.787	27	-18.261	3	-0.001	19	-0.516	3	0.743	36
250	M26	1	max	497.387	4	63.58	116	35.94	11	0.09	116	0.766	3	0.996	116
251			min	-55.595	12	45.152	100	-70.245	3	0.067	100	-0.574	11	0.708	100
252		2	max	497.387	4	38.294	116	35.94	11	0.09	116	0.396	11	-0.267	100
253			min	-55.595	12	27.129	100	-70.245	3	0.067	100	-1.13	3	-0.379	101
254		3	max	497.387	4	11.447	6	23.787	19	0.071	13	2.361	11	-0.95	100
255			min	-55.595	12	-32.212	101	-70.245	3	-0.114	3	-3.027	3	-1.322	101
256		4	max	367.618	7	-41.289	100	59.448	3	-0.059	11	0.934	11	0.1	31
257			min	12.584	15	-57.498	101	-52.836	11	-0.114	3	-0.997	3	-0.196	36
258		5	max	367.618	7	-59.312	100	59.448	3	-0.059	11	0.608	3	1.826	33
259			min	12.584	15	-82.784	101	-52.836	11	-0.114	3	-0.492	11	1.28	100
260	M27	1	max	1676.59	19	15.982	116	-13.131	100	-0.001	11	0.972	11	0.003	29
261			min	1019.636	44	11.353	100	-19.572	101	-0.004	3	0.572	3	-0.093	36
262		2	max	1667.04	19	5.803	28	-13.131	100	-0.001	11	0.604	11	-0.191	100
263			min	1010.086	44	3.256	36	-19.572	101	-0.004	3	0.301	3	-0.269	101
264		3	max	1657.489	19	-3.747	28	-13.131	100	-0.001	11	0.237	11	-0.18	100
265			min	1000.535	44	-6.35	101	-19.572	101	-0.004	3	0.03	3	-0.254	101
266		4	max	1647.939	19	-12.523	100	-13.131	100	-0.001	11	-0.131	11	-0.006	84
267			min	990.985	44	-17.516	101	-19.572	101	-0.004	3	-0.241	3	-0.056	28
268		5	max	1638.388	19	-20.482	100	-13.131	100	-0.001	11	-0.424	100	0.415	116
269			min	981.435	44	-28.682	101	-19.572	101	-0.004	3	-0.591	101	0.289	28
270	M28	1	max	-684.713	96	23.656	116	10.271	3	0.003	3	1.884	11	0.349	116
271			min	-1371.504	24	16.279	33	0.52	11	-0.004	11	-3.425	3	0.222	33
272		2	max	-675.163	96	12.787	88	10.271	3	0.003	3	1.894	11	0.011	9
273			min	-1361.954	24	6.728	33	0.52	11	-0.004	11	-3.229	3	-0.004	17
274		3	max	-665.612	96	3.237	88	10.271	3	0.003	3	1.904	11	-0.034	31
275			min	-1352.403	24	-2.822	33	0.52	11	-0.004	11	-3.032	3	-0.149	36
276		4	max	-656.062	96	-6.313	88	10.271	3	0.003	3	1.914	11	0.111	31
277			min	-1342.853	24	-12.373	33	0.52	11	-0.004	11	-2.836	3	-0.119	40
278		5	max	-646.511	96	-15.084	100	10.271	3	0.003	3	1.924	11	0.438	31
279			min	-1333.303	24	-21.923	33	0.52	11	-0.004	11	-2.64	3	0.093	40
280	M29	1	max	669.975	24	60.799	11	-12.204	84	0.012	3	2.182	28	1.968	11
281			min	282.052	48	-94.081	3	-71.37	28	-0.008	11	0.597	36	-3.106	3
282		2	max	677.252	24	60.799	11	-12.204	84	0.012	3	1.218	27	1.147	11
283			min	289.329	48	-94.081	3	-71.37	28	-0.008	11	0.432	36	-1.836	3
284		3	max	684.528	24	60.799	11	-12.204	84	0.012	3	0.308	116	0.326	11
285			min	296.605	48	-94.081	3	-71.37	28	-0.008	11	0.206	100	-0.566	3
286		4	max	691.805	24	60.799	11	-12.204	84	0.012	3	0.103	84	0.704	3
287			min	303.882	48	-94.081	3	-71.37	28	-0.008	11	-0.71	31	-0.494	11
288		5	max	699.081	24	60.799	11	-12.204	84	0.012	3	-0.062	84	1.974	3
289			min	311.158	48	-94.081	3	-71.37	28	-0.008	11	-1.672	28	-1.315	11
290	M30	1	max	1026.037	26	-9.187	10	90.603	28	0.003	10	-0.568	84	-0.164	10
291			min	295.948	36	-15.769	2	22.33	36	-0.006	2	-2.455	26	-0.308	2
292		2	max	1033.314	26	-9.187	10	90.603	28	0.003	10	-0.265	2	-0.04	10
293			min	303.225	36	-15.769	2	22.33	36	-0.006	2	-1.235	26	-0.095	2
294		3	max	1040.59	26	-9.187	10	90.603	28	0.003	10	0.272	2	0.118	3
295			min	310.501	36	-15.769	2	22.33	36	-0.006	2	-0.229	10	0.084	11
296		4	max	1047.867	26	-9.187	10	90.603	28	0.003	10	1.244	33	0.331	2
297			min	317.778	36	-15.769	2	22.33	36	-0.006	2	0.322	40	0.208	10
298		5	max	1055.143	26	-9.187	10	90.603	28	0.003	10	2.456	33	0.544	2
299			min	325.054	36	-15.769	2	22.33	36	-0.006	2	0.633	40	0.332	10
300	M31	1	max	-12.128	100	-12.683	100	-22.517	100	0	11	0.555	116	-0.268	100
301			min	-17.015	101	-17.594	101	-31.724	101	-0.001	3	0.393	100	-0.373	101
302		2	max	-6.064	100	-12.683	100	-22.517	100	0	11	0.15	29	-0.097	100
303			min	-8.507	101	-17.594	101	-31.724	101	-0.001	3	0.085	36	-0.135	101
304		3	max	0	116	-12.683	100	-22.517	100	0	11	-0.214	100	0.102	116
305			min	0	1	-17.594	101	-31.724	101	-0.001	3	-0.302	101	0.074	100
306		4	max	8.507	116	-12.683	100	-22.517	100	0	11	-0.518	100	0.34	116
307			min	6.064	100	-17.594	101	-31.724	101	-0.001	3	-0.73	101	0.245	100
308		5	max	17.015	116	-12.683	100	-22.517	100	0	11	-0.822	100	0.577	116
309			min	12.127	100	-17.594	101	-31.724	101	-0.001	3	-1.158	101	0.417	100
310	M32	1	max	2318.31	24	-70.668	12	-148.643	92	0.433	15	-0.633	96	-3.865	11
311			min	1003.105	48	-111.088	4	-413.773	21	-0.449	7	-2.158	25	-5.549	3
312		2	max	2424.931	24	-70.668	12	-148.643	92	0.433	15	-2.686	92	-2.791	10
313			min	1109.726	48	-111.088	4	-413.773	21	-0.449	7	-7.706	23	-4.169	2
314		3	max	2531.552	24	-70.668	12	-148.643	92	0.433	15	-4.693	92	-1.677	10
315			min	1216.347	48	-111.088	4	-413.773	21	-0.449	7	-13.283	22	-2.829	2
316		4	max	2638.173	24	-70.668	12	-148.643	92	0.433	15	-6.699	92	-0.397	9
317			min	1322.968	48	-111.088	4	-413.773	21	-0.449	7	-18.867	21	-1.656	17
318		5	max	2744.794	24	-70.668	12	-148.643	92	0.433	15	-8.706	92	0.934	7
319			min	1429.589	48	-111.088	4	-413.773	21	-0.449	7	-24.452	21	-0.536	15
320	M33	1	max	17.218	10	133.473	116	2.086	10	-0.005	100	0.211	2	3.522	116
321			min	-37.277	2	95.474	100	-4.181	2	-0.007	101	-0.106	10	2.527	100
322		2	max	17.218	10	68.156	116	2.086	10	-0.005	100	0.049	2	-0.287	100
323			min	-37.277	2	48.918	100	-4.181	2	-0.007	101	-0.024	10	-0.406	101
324		3	max	17.218	10	3.381	3	2.086	10	-0.005	100	0.057	10	-1.286	100
325			min	-37.277	2	1.481	11	-4.181	2	-0.007	101	-0.114	2	-1.79	101
326		4	max	17.218	10	-44.194	100	2.086	10	-0.005	100	0.138	10	-0.471	100
327			min	-37.277	2	-62.48	101	-4.181	2	-0.007	101	-0.277	2	-0.628	101
328		5	max	204.837	2	-72.212	100	114.983	2	0.041	116	1.733	2	3.352	116
329			min	-94.612	10	-100.163	101	-59.81	10	0.028	100	-0.892	10	2.433	100
330	M34	1	max	131.681	17	235.523	116	-0.646	15	-0.003	92	0.768	23	5.683	116
331			min	-15.641	9	167.495	100	-9.263	23	-0.008	22	-0.027	15	4.011	100
332		2	max	131.681	17	114.779	116	-0.646	15	-0.003	92	0.424	7	-0.84	100
333			min	-15.641	9	81.434	100	-9.263	23	-0.008	22	-0.052	15	-1.143	101
334		3	max	131.681	17	-4.103	10	-0.646	15	-0.003	92	0.081	7	-2.336	100

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-in]	LC	y-y Moment[k-in]	LC	z-z Moment[k-in]	LC
335			min	-15.641	9	-6.105	2	-9.263	23	-0.008	22	-0.078	15	-3.263	101
336		4	max	131.681	17	-90.689	100	-0.646	15	-0.003	92	-0.087	92	-0.479	100
337			min	-15.641	9	-126.71	101	-9.263	23	-0.008	22	-0.315	23	-0.678	101
338		5	max	131.681	17	-176.751	100	-0.646	15	-0.003	92	-0.128	15	6.612	116
339			min	-15.641	9	-247.454	101	-9.263	23	-0.008	22	-0.676	23	4.732	100
340	M35	1	max	26.35	2	168.241	116	5.739	4	-0.007	2	3.653	28	0.479	2
341			min	-608.709	26	120.821	100	-36.371	28	-0.043	26	-0.711	4	0.102	10
342		2	max	26.35	2	47.497	116	5.739	4	-0.007	2	2.235	28	-2.719	100
343			min	-608.709	26	32.408	26	-36.371	28	-0.043	26	-0.487	4	-3.864	101
344		3	max	26.35	2	-51.302	100	5.739	4	-0.007	2	0.818	28	-2.232	24
345			min	-608.709	26	-73.247	101	-36.371	28	-0.043	26	-0.263	4	-3.363	101
346		4	max	26.35	2	-137.363	100	5.739	4	-0.007	2	-0.036	3	2.536	24
347			min	-608.709	26	-193.992	101	-36.371	28	-0.043	26	-0.599	28	0.898	48
348		5	max	26.35	2	-223.425	100	5.739	4	-0.007	2	0.184	4	11.757	116
349			min	-608.709	26	-314.736	101	-36.371	28	-0.043	26	-2.017	28	8.309	100
350	M36	1	max	1198.037	2	121.355	116	46.247	3	0.021	88	2.877	11	1.199	11
351			min	-793.137	10	84.751	100	-31.089	11	0.011	18	-4.324	3	0.219	3
352		2	max	1198.037	2	56.038	116	46.247	3	0.021	88	1.666	11	-1.942	11
353			min	-793.137	10	38.195	100	-31.089	11	0.011	18	-2.521	3	-2.626	101
354		3	max	1198.037	2	-3.213	11	46.247	3	0.021	88	0.454	11	-2.567	100
355			min	-793.137	10	-12.695	3	-31.089	11	0.011	18	-0.719	3	-3.537	101
356		4	max	1198.037	2	-54.917	100	46.247	3	0.021	88	1.083	3	-1.334	100
357			min	-793.137	10	-74.598	101	-31.089	11	0.011	18	-0.757	11	-1.903	101
358		5	max	1393.801	2	-336.893	100	50.186	2	-0.112	100	1.239	2	12.448	116
359			min	-899.146	10	-469.827	101	-24.935	10	-0.158	101	-0.629	10	8.968	100
360	M37	1	max	0	116	185.396	116	1.146	3	0.001	29	0.081	11	0.373	116
361			min	0	1	132.168	100	-0.777	11	-0.001	36	-0.119	3	0.269	100
362		2	max	0	116	64.652	116	1.146	3	0.001	29	0.051	11	-3.205	100
363			min	0	1	46.107	100	-0.777	11	-0.001	36	-0.075	3	-4.499	101
364		3	max	0	116	-39.955	100	1.146	3	0.001	29	0.02	11	-3.325	100
365			min	0	1	-56.092	101	-0.777	11	-0.001	36	-0.03	3	-4.666	101
366		4	max	0	116	-126.016	100	1.146	3	0.001	29	0.015	3	-0.091	100
367			min	0	1	-176.836	101	-0.777	11	-0.001	36	-0.01	11	-0.127	101
368		5	max	0	116	-212.078	100	1.146	3	0.001	29	0.059	3	9.117	116
369			min	0	1	-297.581	101	-0.777	11	-0.001	36	-0.04	11	6.497	100
370	M38	1	max	0	116	94.592	116	6.563	3	0.007	116	-0.013	11	-0.197	11
371			min	0	1	67.06	100	0.124	11	0.005	100	-0.682	3	-0.425	3
372		2	max	0	116	29.274	116	6.563	3	0.007	116	-0.008	11	-2.003	100
373			min	0	1	20.504	100	0.124	11	0.005	100	-0.427	3	-2.777	101
374		3	max	0	116	-26.052	100	6.563	3	0.007	116	-0.003	11	-1.895	100
375			min	0	1	-36.044	101	0.124	11	0.005	100	-0.171	3	-2.645	101
376		4	max	0	116	-72.608	100	6.563	3	0.007	116	0.085	3	0.042	3
377			min	0	1	-101.362	101	0.124	11	0.005	100	0.002	11	0.014	11
378		5	max	0	116	-119.163	100	6.563	3	0.007	116	0.341	3	5.255	116
379			min	0	1	-166.68	101	0.124	11	0.005	100	0.006	11	3.764	100
380	M39	1	max	35.402	11	184.874	116	10.106	11	0	84	1.311	3	2.778	3
381			min	15.605	3	137.608	100	-12.384	3	-0.003	27	-1.017	11	-0.979	11
382		2	max	35.402	11	72.908	3	10.106	11	0	84	0.828	3	-2.075	3
383			min	15.605	3	36.963	11	-12.384	3	-0.003	27	-0.623	11	-4.431	11
384		3	max	35.402	11	-30.366	3	10.106	11	0	84	0.346	3	-2.657	100
385			min	15.605	3	-66.31	11	-12.384	3	-0.003	27	-0.23	11	-3.957	101
386		4	max	35.402	11	-120.577	100	10.106	11	0	84	0.164	11	0.737	11
387			min	15.605	3	-177.359	101	-12.384	3	-0.003	27	-0.137	3	0.292	3
388		5	max	35.402	11	-206.638	100	10.106	11	0	84	0.558	11	9.867	116
389			min	15.605	3	-298.103	101	-12.384	3	-0.003	27	-0.619	3	6.741	100
390	M40	1	max	198.016	3	178.74	3	28.506	11	0.042	26	1.856	3	3.768	3
391			min	-220.81	11	123.315	11	-17.992	3	0.018	36	-2.955	11	-2.122	11
392		2	max	198.016	3	75.466	3	28.506	11	0.042	26	1.155	3	-1.185	3
393			min	-220.81	11	20.041	11	-17.992	3	0.018	36	-1.844	11	-4.915	11
394		3	max	198.016	3	-27.808	3	28.506	11	0.042	26	0.454	3	-2.114	3
395			min	-220.81	11	-83.233	11	-17.992	3	0.018	36	-0.733	11	-3.684	11
396		4	max	198.016	3	-122.865	100	28.506	11	0.042	26	0.378	11	1.779	27
397			min	-220.81	11	-186.507	11	-17.992	3	0.018	36	-0.247	3	0.939	36
398		5	max	198.016	3	-208.927	100	28.506	11	0.042	26	1.489	11	11.088	116
399			min	-220.81	11	-306.545	101	-17.992	3	0.018	36	-0.948	3	7.429	100
400	M41	1	max	206.356	3	44.97	116	6.284	11	-0.007	100	-0.524	100	-0.068	3
401			min	-132.683	11	32.228	100	1.865	3	-0.01	101	-0.852	11	-0.554	11
402		2	max	206.356	3	17.774	116	6.284	11	-0.007	100	0.547	3	-0.914	100
403			min	-132.683	11	12.844	100	1.865	3	-0.01	101	0.352	11	-1.347	101
404		3	max	206.356	3	-6.541	100	6.284	11	-0.007	100	0.855	116	-0.932	100
405			min	-132.683	11	-9.423	101	1.865	3	-0.01	101	0.621	100	-1.325	101
406		4	max	206.356	3	-25.925	100	6.284	11	-0.007	100	0.183	11	-0.197	11
407			min	-132.683	11	-36.619	101	1.865	3	-0.01	101	0.12	100	-0.314	3
408		5	max	206.356	3	-45.31	100	6.284	11	-0.007	100	-1.097	100	1.732	116
409			min	-132.683	11	-63.816	101	1.865	3	-0.01	101	-1.497	101	1.18	100
410	M42	1	max	136.805	3	36.998	116	0.573	10	0.004	116	-0.429	100	0.641	116
411			min	-62.851	11	26.491	100	-0.768	2	0.003	100	-0.614	101	0.481	100
412		2	max	136.805	3	18.445	116	0.573	10	0.004	116	0.084	2	-0.013	2
413			min	-62.851	11	13.267	100	-0.768	2	0.003	100	0.056	10	-0.09	10
414		3	max	136.805	3	0.228	2	0.573	10	0.004	116	0.31	116	-0.204	100
415			min	-62.851	11	-0.411	10	-0.768	2	0.003	100	0.223	100	-0.294	101
416		4	max	136.805	3	-13.181	100	0.573	10	0.004	116	0.071	116	-0.04	10
417			min	-62.851	11	-18.662	101	-0.768	2	0.003	100	0.049	100	-0.063	2
418		5	max	136.805	3	-26.406	100	0.573	10	0.004	116	-0.458	100	0.641	116
419			min	-62.851	11	-37.216	101	-0.768	2	0.003	100	-0.636	101	0.443	100
420	M43	1	max	0.712	10	73.358	116	3.672	4	-0.006	100	-0.099	11	1.511	116
421			min	-0.818	2	52.228	100	1.799	12	-0.009	101	-0.485	3	1.071	100
422		2	max	0.712	10	35.742	116	3.672	4	-0.006	100	-0.026	11	-0.46	100
423			min	-0.818	2	25.417	100	1.799	12	-0.009	101	-0.342	3	-0.64	101
424		3	max	0.712	10	-1.395	100	3.672	4	-0.006	100	0.047	11	-0.933	100
425			min	-0.818	2	-1.874	101	1.799	12	-0.009	101	-0.2	3	-1.307	101
426		4	max	0.712	10	-28.206	100	3.672	4	-0.006	100	0.135	10	-0.35	100
427			min	-0.818	2	-39.491	101	1.799	12	-0.009	101	-0.073	2	-0.492	101
428		5	max	4.495	2	-109.605	100	60.334	2	0.055	116	1.121	2	3.656	116
429			min	-3.912	10	-153.729	101	-38.202	10	0.039	100	-0.617	10	2.608	100

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-in]	LC	y-y Moment[k-in]	LC	z-z Moment[k-in]	LC
430	M44	1	max	40.771	10	76.622	116	1.599	10	0.002	116	0.319	2	0.065	116
431			min	-57.357	2	54.587	100	-3.456	2	0.001	100	-0.14	10	0.046	100
432		2	max	40.771	10	29.947	116	1.599	10	0.002	116	0.149	2	-1.811	100
433			min	-57.357	2	21.32	100	-3.456	2	0.001	100	-0.062	10	-2.542	101
434		3	max	40.771	10	-11.948	100	1.599	10	0.002	116	0.016	10	-2.04	100
435			min	-57.357	2	-16.727	101	-3.456	2	0.001	100	-0.02	2	-2.866	101
436		4	max	40.771	10	-45.215	100	1.599	10	0.002	116	0.094	10	-0.642	100
437			min	-57.357	2	-63.402	101	-3.456	2	0.001	100	-0.189	2	-0.906	101
438		5	max	40.771	10	-78.483	100	1.599	10	0.002	116	0.173	10	3.338	116
439			min	-57.357	2	-110.076	101	-3.456	2	0.001	100	-0.358	2	2.384	100
440	M45	1	max	53.327	4	118.892	116	22.203	10	0.002	116	1.271	2	4.596	116
441			min	-45.766	12	84.931	100	-43.028	2	0.002	100	-0.659	10	3.266	100
442		2	max	53.327	4	106.013	116	22.203	10	0.002	116	0.691	2	3.078	116
443			min	-45.766	12	75.751	100	-43.028	2	0.002	100	-0.359	10	2.181	100
444		3	max	53.327	4	93.134	116	22.203	10	0.002	116	0.11	3	1.734	116
445			min	-45.766	12	66.572	100	-43.028	2	0.002	100	-0.06	11	1.22	100
446		4	max	53.327	4	80.254	116	22.203	10	0.002	116	0.24	10	0.564	116
447			min	-45.766	12	57.392	100	-43.028	2	0.002	100	-0.471	2	0.384	100
448		5	max	53.327	4	67.375	116	22.203	10	0.002	116	0.54	10	-0.312	11
449			min	-45.766	12	48.212	100	-43.028	2	0.002	100	-1.052	2	-0.433	101
450	M46	1	max	220.665	17	34.478	116	8.374	3	-0.002	88	-0.357	10	0.934	11
451			min	-100.401	9	23.227	100	-4.074	11	-0.003	18	-0.701	2	-0.461	3
452		2	max	220.665	17	17.356	11	8.374	3	-0.002	88	0.177	10	0.195	11
453			min	-100.401	9	9.855	3	-4.074	11	-0.003	18	-0.041	2	-0.699	3
454		3	max	220.665	17	1.487	11	8.374	3	-0.002	88	0.312	10	-0.145	11
455			min	-100.401	9	-6.014	3	-4.074	11	-0.003	18	0.204	100	-0.536	3
456		4	max	220.665	17	-14.382	11	8.374	3	-0.002	88	0.079	2	0.026	3
457			min	-100.401	9	-21.883	3	-4.074	11	-0.003	18	0.046	10	-0.086	11
458		5	max	220.665	17	-29.67	100	8.374	3	-0.002	88	-0.42	100	0.988	3
459			min	-100.401	9	-39.736	101	-4.074	11	-0.003	18	-0.632	101	0.374	11

Envelope Maximum Member Section Forces

	Member		Axial[lb]	Loc[in]	LC	y Shear[lb]	Loc[in]	LC	z Shear[lb]	Loc[in]	LC	Torque[k-in]	Loc[in]	LC	y-y Moment[k-in]	Loc[in]	LC	z-z Moment[k-in]	Loc[in]	LC
0	M1	max	533.044	60	2	672.323	65	2	343.244	65	15	3.988	65	7	3.228	60	4	2.99	18.75	18
1		min	-499.419	18.75	10	-404.154	65	10	-224.982	65	7	-5.213	60	15	-3.186	12.5	21	-3.138	60	24
2	M2	max	350.803	65	18	280.043	12.5	10	133.094	65	14	1.826	65	6	0.777	65	13	1.745	18.75	24
3		min	-325.655	12.5	26	-93.307	12.5	2	-125.732	65	6	-1.782	60	14	-0.89	12.5	5	-1.917	60	18
4	M3	max	227.352	17.5	32	262.324	60	2	139.137	60	7	0.841	60	12	6.414	60	15	12.214	60	10
5		min	-259.364	60	18	-256.908	61.25	2	-139.154	60	15	-0.926	18.75	4	-6.413	60	7	-12.203	60	2
6	M4	max	316.171	66	24	593.652	66	2	285.296	66	15	3.946	66	7	2.46	60	4	3.167	60	2
7		min	-283.667	12	32	-362.021	66	10	-248.267	66	7	-4.639	60	15	-1.743	60	12	-2.756	60	26
8	M5	max	520.368	24	2	70.29	0	2	236.974	24	15	2.972	24	4	4.918	24	15	4.816	0	2
9		min	-397.038	0	10	-298.105	24	10	-223.939	24	7	-2.738	0	12	-4.534	24	7	-7.432	0	10
10	M6	max	-2.674	24	2	68.979	0	10	61.349	24	13	0.621	24	17	2.264	24	12	3.483	24	18
11		min	-151.679	24	26	-301.625	24	2	-73.679	24	5	-0.356	0	9	-2.657	24	4	-5.04	0	2
12	M7	max	-22.74	3	84	-32.665	3	88	57.021	3	14	1.1	3	32	3.147	3	12	0.109	3	2
13		min	-281.551	0	26	-291.623	0	32	-94.294	0	6	0.062	0	8	-3.974	3	4	-0.813	0	28
14	M8	max	598.694	3	2	-55.584	3	96	289.547	3	15	1.111	3	4	5.508	3	15	0.058	3	19
15		min	-366.615	0	10	-321.738	0	24	-252.294	0	7	-0.169	0	16	-4.703	3	7	-0.91	0	24
16	M9	max	99.3	3	2	-35.634	3	96	123.997	3	15	0.923	3	5	1.91	3	14	0.045	3	2
17		min	-286.01	0	10	-334.918	0	26	-131.368	0	7	-0.718	0	13	-1.888	3	6	-0.974	0	26
18	M10	max	298.693	3	2	-63.917	3	88	159.073	3	14	0.977	3	16	2.26	3	14	0.051	3	24
19		min	-111.983	0	10	-392.429	0	18	-151.659	0	6	-0.781	0	8	-2.281	3	6	-1.13	0	18
20	M11	max	698.181	3	2	10.097	3	10	365.84	3	15	3.378	3	20	6.31	3	15	0.155	0	10
21		min	-430.174	0	10	-531.678	0	18	-247.355	0	7	0.649	0	44	-4.73	3	7	-1.543	0	2
22	M12	max	2.428	3	2	54.758	3	2	39.518	3	13	3.247	3	20	2.882	3	12	0.256	0	2
23		min	-320.635	0	26	-468.965	0	10	-158.661	0	5	0.665	0	44	-4.487	3	4	-1.436	0	10
24	M13	max	105.503	17.5	33	109.522	60	2	44.334	60	14	0.202	60	8	0.849	60	14	1.73	18.75	24
25		min	-59.228	18.75	8	-65.297	17.5	10	-43.863	60	6	-0.182	18.75	16	-0.849	60	6	-1.863	60	18
26	M14	max	137.837	24	2	-17.739	0	88	86.953	24	14	0.327	24	16	1.83	24	14	1.825	24	18
27		min	-46.414	0	10	-158.759	24	32	-86.476	24	6	-0.318	0	8	-1.839	24	6	-1.815	0	32
28	M15	max	32.842	24	2	-20.266	0	96	62.723	24	14	0.152	24	16	1.493	24	14	1.998	24	10
29		min	-124.265	0	10	-164.106	24	24	-63.196	24	6	-0.14	0	8	-1.485	24	6	-1.795	0	24
30	M16	max	247.615	17.5	31	282.854	60	2	141.514	60	7	0.878	60	12	6.005	60	12	11.665	60	10
31		min	-279.627	60	18	-268.337	61.25	2	-141.515	60	13	-0.945	18.75	4	-6.004	60	4	-11.66	60	2
32	M17	max	552.846	24	2	49.56	0	2	252.532	24	15	3.058	24	4	5.3	24	15	4.087	0	2
33		min	-415.513	0	10	-311.583	24	26	-223.613	24	7	-2.452	0	12	-4.553	24	7	-6.971	0	10
34	M18	max	-11.746	24	84	47.004	0	10	52.942	24	12	0.656	24	33	2.114	24	12	3.757	24	18
35		min	-164.968	24	26	-319.508	24	18	-81.712	24	4	-0.088	0	9	-2.872	24	4	-4.692	0	2
36	M19	max	1535.537	54	30	213.502	0	27	147.553	54	9	0.022	54	2	2.555	0	11	3.512	0	26
37		min	576.361	27.563	36	-167.351	54	25	-170.058	0	11	-0.023	0	2	-2.218	27	9	-2.069	27	25
38	M20	max	1144.713	54	13	235.881	0	18	273.649	27	3	0.021	54	24	3.366	0	11	3.837	0	18
39		min	-0.634	27.563	5	-202.23	54	32	-144.571	0	11	-0.029	0	24	-5.91	0	3	-2.373	27	32
40	M21	max	-1025.114	0	84	29.287	0	18	45.017	76.368	3	0.003	76.368	11	3.091	0	11	0.773	0	18
41		min	-2752.785	76.368	31	-17.162	76.368	10	-60.022	0	11	-0.01	0	3	-2.357	0	3	-0.094	42.957	9
42	M22	max	1770.681	54	21	137.855	0	27	506.977	108	25	0.148	108	2	5.953	108	11	6.01	108	26
43		min	599.957	100.125	48	-679.751	108	26	-130.29	0	12	-0.059	99	10	-4.723	63	12	-4.942	63	32
44	M23	max	-28.106	108	15	153.866	0	28	701.286	108	10	0.137	108	24	10.05	108	11	6.694	108	18
45		min	-822.559	99	7	-780.119	108	18	-1150.638	99	2	-0.026	54	26	-15.591	108	3	-5.178	63	24
46	M24	max	2.099	120.748	84	44.17	0	116	38.716	120.748	2	0.003	120.748	11	3.221	120.748	2	0.786	120.748	116
47		min	-658.55	0	26	-45.158	120.748	101	-14.461	0	10	-0.001	0	3	-1.454	0	2	-0.598	60.374	33
48	M25	max	1144.295	108	21	37.648	0	116	21.893	108	11	0	52.875	11	0.698	108	11	1.516	108	27
49		min	-1045.681	0	30	-52.787	108	27	-18.261	54	3	-0.001	0	3	-0.516	108	3	-0.265	43.875	28
50	M26	max	497.387	54	4	63.58	0	116	59.448	108	3	0.09	52.875	116	2.361	54	11	1.826	108	33
51		min	-55.595	0	12	-82.784	108	101	-70.245	0	3	-0.114	54	3	-3.027	54	3	-1.322	54	101
52	M27	max	1676.59	0	19	15.982	0	116	-13.131	76.368	100	-0.001	76.368	11	0.972	0	11	0.415	76.368	116
53		min	981.435	76.368	44	-28.682	76.368	101	-19.572	0	101	-0.004	0	3	-0.591	76.368	101	-0.288	27.047	101
54	M28	max	-646.511	76.368	96	23.656	0	116	10.271	76.368	3	0.003	76.368	3	1.924	76.368	11	0.438	76.368	31
55		min	-1371.504	0	24	-21.923	76.368	33	0.52	0	11	-0.004	0	11	-3.425	0	3	-0.159	44.548	36
56	M29	max	699.081	54	24	60.799	54	11	-12.204	54	84	0.012	54	3	2.182	0	28	1.974	54	3
57		min	282.052	0	48	-94.081	0	3	-71.37	0	28	-0.008	0	11	-1.672	54	28	-3.106	0	3
58	M30	max	1055.143	54	26	-9.187	54	10	90.603	54	28	0.003	54	10	2.456	54	33	0.544	54	2
59		min	295.948	0	36	-15.769	0	2	22.33	0	36	-0.006	0	2	-2.455	0	26	-0.308	0	2
60	M31	max	17.015	54	116	-12.683	54	100	-22.517	54	100	0	54	11	0.555	0	116	0.577	54	116
61		min	-17.015	0	101	-17.594	0	101	-31.724	0	101	-0.001	0	3	-1.158	54	101	-0.373	0	101

Envelope Maximum Member Section Forces (Continued)

	Member		Axial[lb]	Loc[in]	LC	y Shear[lb]	Loc[in]	LC	z Shear[lb]	Loc[in]	LC	Torque[k-in]	Loc[in]	LC	y-y Moment[k-in]	Loc[in]	LC	z-z Moment[k-in]	Loc[in]	LC
62	M32	max	2744.794	54	24	-70.668	54	12	-148.643	54	92	0.433	54	15	-0.633	0	96	0.934	54	7
63		min	1003.105	0	48	-111.088	0	4	-413.773	0	21	-0.449	0	7	-24.452	54	21	-5.549	0	3
64	M33	max	204.837	155.88	2	133.473	0	116	114.983	155.88	2	0.041	155.88	116	1.733	155.88	2	3.522	0	116
65		min	-94.612	133.148	10	-100.163	155.88	101	-59.81	133.148	10	-0.007	0	101	-0.892	155.88	10	-1.792	79.564	101
66	M34	max	131.681	155.88	17	235.523	0	116	-0.646	155.88	15	-0.003	155.88	92	0.768	0	23	6.612	155.88	116
67		min	-15.641	0	9	-247.454	155.88	101	-9.263	0	23	-0.008	0	22	-0.676	155.88	23	-3.269	76.316	101
68	M35	max	26.35	155.88	2	168.241	0	116	5.739	155.88	4	-0.007	155.88	2	3.653	0	28	11.757	155.88	116
69		min	-608.709	0	26	-314.736	155.88	101	-36.371	0	28	-0.043	0	26	-2.017	155.88	28	-4.228	53.584	101
70	M36	max	1393.801	155.88	2	121.355	0	116	50.186	155.88	2	0.021	131.524	88	2.877	0	11	12.448	155.88	116
71		min	-899.146	133.148	10	-469.827	155.88	101	-31.089	0	11	-0.158	133.148	101	-4.324	0	3	-3.562	73.069	101
72	M37	max	0	155.88	116	185.396	0	116	1.146	155.88	3	0.001	155.88	29	0.081	0	11	9.117	155.88	116
73		min	0	0	1	-297.581	155.88	101	-0.777	0	11	-0.001	0	36	-0.119	0	3	-5.173	60.079	101
74	M38	max	0	155.88	116	94.592	0	116	6.563	155.88	3	0.007	155.88	116	0.341	155.88	3	5.255	155.88	116
75		min	0	0	1	-166.68	155.88	101	0.124	0	11	0.005	0	100	-0.682	0	3	-3.032	56.831	101
76	M39	max	35.402	155.88	11	184.874	0	116	10.106	155.88	11	0	155.88	84	1.311	0	3	9.867	155.88	116
77		min	15.605	0	3	-298.103	155.88	101	-12.384	0	3	-0.003	0	27	-1.017	0	11	-4.688	53.584	11
78	M40	max	198.016	155.88	3	178.74	0	3	28.506	155.88	11	0.042	155.88	26	1.856	0	3	11.088	155.88	116
79		min	-220.81	0	11	-306.545	155.88	101	-17.992	0	3	0.018	0	36	-2.955	0	11	-4.991	47.089	11
80	M41	max	206.356	208.893	3	44.97	0	116	6.284	198.013	11	-0.007	208.893	100	0.87	95.743	116	1.732	208.893	116
81		min	-132.683	0	11	-63.816	208.893	101	1.865	200.189	3	-0.01	0	101	-1.497	208.893	101	-1.462	76.159	101
82	M42	max	136.805	142.507	3	36.998	0	116	0.573	142.507	10	0.004	142.507	116	0.31	71.254	116	0.641	0	116
83		min	-62.851	0	11	-37.216	142.507	101	-0.768	106.88	2	0.003	0	100	-0.636	142.507	101	-0.294	71.254	101
84	M43	max	4.495	157.717	2	73.358	0	116	60.334	157.717	2	0.055	157.717	116	1.121	157.717	2	3.656	157.717	116
85		min	-3.912	134.716	10	-153.729	157.717	101	-38.202	134.716	10	-0.009	0	101	-0.617	157.717	10	-1.309	77.215	101
86	M44	max	40.771	195.695	10	76.622	0	116	1.599	195.695	10	0.002	195.695	116	0.319	0	2	3.338	195.695	116
87		min	-57.357	0	2	-110.076	195.695	101	-3.456	0	2	0.001	0	100	-0.358	195.695	2	-3.012	79.501	101
88	M45	max	53.327	54	4	118.892	0	116	22.203	54	10	0.002	54	116	1.271	0	2	4.596	0	116
89		min	-45.766	0	12	48.212	54	100	-43.028	0	2	0.002	0	100	-1.052	54	2	-0.433	54	101
90	M46	max	220.665	142.507	17	34.478	0	116	8.374	142.507	3	-0.002	142.507	88	0.317	65.316	10	0.988	142.507	3
91		min	-100.401	0	9	-39.736	142.507	101	-4.074	106.88	11	-0.003	0	18	-0.701	0	2	-0.7	38.596	3

Envelope Member End Reactions

	Member	Member End		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-in]	LC	y-y Moment[k-in]	LC	z-z Moment[k-in]	LC
0	M1	I	max	0	116	0.002	10	-0.001	84	0	116	0	116	0	116
1			min	0	1	-0.008	18	-0.008	26	0	1	0	1	0	1
2		J	max	0	116	0.041	24	0.038	30	0	116	0	116	0	116
3			min	0	1	-0.006	16	0.002	6	0	1	0	1	0	1
4	M2	I	max	0	116	0	10	0	9	0	116	0	116	0	116
5			min	0	1	-0.004	18	-0.001	31	0	1	0	1	0	1
6		J	max	0	116	0.024	24	0.008	14	0	116	0	116	0	116
7			min	0	1	-0.005	16	-0.005	6	0	1	0	1	0	1
8	M3	I	max	0	116	0.01	11	0.064	16	0	116	0	116	0	116
9			min	0	1	-0.498	19	-0.052	8	0	1	0	1	0	1
10		J	max	0	116	1.348	2	0.724	12	0	116	0	116	0	116
11			min	0	1	-1.156	10	-0.742	4	0	1	0	1	0	1
12	M4	I	max	0	116	0.007	10	0	96	0	116	0	116	0	116
13			min	0	1	-0.02	18	-0.002	24	0	1	0	1	0	1
14		J	max	0	116	0.009	20	0.001	27	0	116	0	116	0	116
15			min	0	1	0	44	0	3	0	1	0	1	0	1
16	M5	I	max	520.368	2	70.29	2	231.644	15	2.972	4	0.926	4	4.816	2
17			min	-397.038	10	-288.942	10	-218.609	7	-2.738	12	-0.841	12	-7.432	10
18		J	max	520.368	2	61.127	2	236.974	15	2.972	4	4.918	15	3.557	18
19			min	-397.038	10	-298.105	10	-223.939	7	-2.738	12	-4.534	7	-0.388	10
20	M6	I	max	-2.674	2	68.979	10	57.863	12	0.621	17	0.841	12	2.42	10
21			min	-151.584	26	-292.462	2	-70.674	4	-0.356	9	-0.926	4	-5.04	2
22		J	max	-2.674	2	59.816	10	61.349	13	0.621	17	2.264	12	3.483	18
23			min	-151.679	26	-301.625	2	-73.679	5	-0.356	9	-2.657	4	0.33	40
24	M7	I	max	-22.74	84	-32.665	88	57.021	14	1.1	32	2.995	12	-0.089	84
25			min	-281.551	26	-291.623	32	-94.294	6	0.062	8	-3.708	4	-0.813	28
26		J	max	-22.74	84	-32.665	88	57.021	14	1.1	32	3.147	12	0.109	2
27			min	-281.551	26	-291.623	32	-94.294	6	0.062	8	-3.974	4	-0.055	10
28	M8	I	max	598.694	2	-55.584	96	289.547	15	1.111	4	4.639	15	-0.16	96
29			min	-366.615	10	-321.738	24	-252.294	7	-0.169	16	-3.946	7	-0.91	24
30		J	max	598.694	2	-55.584	96	289.547	15	1.111	4	5.508	15	0.058	19
31			min	-366.615	10	-321.738	24	-252.294	7	-0.169	16	-4.703	7	0.003	11
32	M9	I	max	99.3	2	-35.634	96	123.997	15	0.923	5	1.541	14	-0.1	96
33			min	-286.01	10	-334.918	26	-131.368	7	-0.718	13	-1.497	6	-0.974	26
34		J	max	99.3	2	-35.634	96	123.997	15	0.923	5	1.91	14	0.045	2
35			min	-286.01	10	-334.918	26	-131.368	7	-0.718	13	-1.888	6	-0.005	10
36	M10	I	max	298.693	2	-63.917	88	159.073	14	0.977	16	1.782	14	-0.173	88
37			min	-111.983	10	-392.429	18	-151.659	6	-0.781	8	-1.826	6	-1.13	18
38		J	max	298.693	2	-63.917	88	159.073	14	0.977	16	2.26	14	0.051	24
39			min	-111.983	10	-392.429	18	-151.659	6	-0.781	8	-2.281	6	0.014	16
40	M11	I	max	698.181	2	10.097	10	365.84	15	3.378	20	5.213	15	0.155	10
41			min	-430.174	10	-531.678	18	-247.355	7	0.649	44	-3.988	7	-1.543	2
42		J	max	698.181	2	10.097	10	365.84	15	3.378	20	6.31	15	0.125	10
43			min	-430.174	10	-531.678	18	-247.355	7	0.649	44	-4.73	7	-0.001	2
44	M12	I	max	2.428	2	54.758	2	39.518	13	3.247	20	2.77	12	0.256	2
45			min	-320.635	26	-468.965	10	-158.661	5	0.665	44	-4.017	4	-1.436	10
46		J	max	2.428	2	54.758	2	39.518	13	3.247	20	2.882	12	0.092	2
47			min	-320.635	26	-468.965	10	-158.661	5	0.665	44	-4.487	4	-0.029	10
48	M13	I	max	0	116	0	84	0	9	0	116	0	116	0	116
49			min	0	1	-0.041	26	-0.008	31	0	1	0	1	0	1
50		J	max	0	116	0.021	24	0.018	8	0	116	0	116	0	116
51			min	0	1	-0.01	16	-0.016	16	0	1	0	1	0	1
52	M14	I	max	137.837	2	-17.739	88	72.756	14	0.327	16	0.182	16	-0.258	88
53			min	-46.414	10	-140.682	32	-72.278	6	-0.318	8	-0.202	8	-1.815	32
54		J	max	137.837	2	-26.902	88	86.953	14	0.327	16	1.83	14	1.825	18
55			min	-46.414	10	-158.759	32	-86.476	6	-0.318	8	-1.839	6	0.073	10
56	M15	I	max	32.842	2	-20.266	96	54.517	14	0.152	16	0.202	8	-0.286	96
57			min	-124.265	10	-146.029	24	-54.99	6	-0.14	8	-0.182	16	-1.795	24
58		J	max	32.842	2	-29.429	96	62.723	14	0.152	16	1.493	14	1.998	10
59			min	-124.265	10	-164.106	24	-63.196	6	-0.14	8	-1.485	6	0.032	2
60	M16	I	max	0	116	0	96	0.085	33	0	116	0	116	0	116
61			min	0	1	-0.218	25	-0.036	9	0	1	0	1	0	1

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-in]	LC	y-y Moment[k-in]	LC	z-z Moment[k-in]	LC
62		J	max	0	116	1.144	2	0.707	12	0	116	0	116	0	116
63			min	0	1	-1.058	10	-0.732	4	0	1	0	1	0	1
64	M17	I	max	552.846	2	49.56	2	247.202	15	3.058	4	0.945	4	4.087	2
65			min	-415.513	10	-293.505	26	-218.283	7	-2.452	12	-0.878	12	-6.971	10
66		J	max	552.846	2	40.397	2	252.532	15	3.058	4	5.3	15	3.662	18
67			min	-415.513	10	-311.583	26	-223.613	7	-2.452	12	-4.553	7	-0.02	10
68	M18	I	max	-12.131	84	47.004	10	50.041	12	0.656	33	0.878	12	1.799	10
69			min	-164.873	26	-301.43	18	-78.811	4	-0.088	9	-0.945	4	-4.692	2
70		J	max	-11.746	84	37.841	10	52.942	12	0.656	33	2.114	12	3.757	18
71			min	-164.968	26	-319.508	18	-81.712	4	-0.088	9	-2.872	4	0.317	44
72	M19	I	max	1533.263	24	213.502	27	64.43	3	0.002	10	2.555	11	3.512	26
73			min	581.343	48	37.742	36	-170.058	11	-0.023	2	-0.858	3	0.528	36
74		J	max	1535.537	30	-37.864	96	147.553	9	0.022	2	1.766	9	2.158	25
75			min	576.361	36	-167.351	25	-66.507	17	-0.002	10	-0.708	17	0.456	48
76	M20	I	max	998.854	12	235.881	18	273.649	3	-0.012	16	3.366	11	3.837	18
77			min	137.841	4	53.632	44	-144.571	11	-0.029	24	-5.91	3	0.801	44
78		J	max	1144.713	13	-51.299	88	70.106	7	0.021	24	0.755	7	2.796	32
79			min	-0.634	5	-202.23	32	-128.965	15	0.003	16	-1.419	15	0.697	40
80	M21	I	max	-1025.114	84	29.287	18	45.017	3	0.003	11	3.091	11	0.773	18
81			min	-2714.584	31	21.04	10	-60.022	11	-0.01	3	-2.357	3	0.349	10
82		J	max	-1063.315	84	-8.914	18	45.017	3	0.003	11	1.09	2	0.201	10
83			min	-2752.785	31	-17.162	10	-60.022	11	-0.01	3	-1.502	10	-0.005	18
84	M22	I	max	1770.681	21	137.855	27	53.581	4	0.025	10	3.473	12	3.174	27
85			min	620.956	44	47.446	36	-130.29	12	-0.053	2	-1.223	4	0.708	36
86		J	max	1590.672	24	-95.037	2	506.977	25	0.148	2	5.953	11	6.01	26
87			min	599.957	48	-679.751	26	32.573	17	-0.059	10	-1.544	3	1.105	36
88	M23	I	max	-322.778	7	153.866	28	162.753	3	-0.002	84	0.888	10	3.933	31
89			min	-767.253	31	64.666	36	-112.578	11	-0.026	26	-1.286	2	1.526	36
90		J	max	-28.106	15	-127.152	88	701.286	10	0.137	24	10.05	11	6.694	18
91			min	-822.559	7	-780.119	18	-1150.638	2	0.032	16	-15.591	3	1.265	40
92	M24	I	max	-36.103	84	44.17	116	38.716	2	0.003	11	0.372	10	0.726	116
93			min	-658.55	26	32.041	100	-14.461	10	-0.001	3	-1.454	2	0.545	100
94		J	max	2.099	84	-31.628	100	38.716	2	0.003	11	3.221	2	0.786	116
95			min	-620.348	26	-45.158	101	-14.461	10	-0.001	3	-1.375	10	0.52	100
96	M25	I	max	-552.305	84	37.648	116	4.963	11	0	11	0.118	3	0.554	116
97			min	-1045.681	30	26.668	100	-7.337	3	-0.001	3	-0.081	11	0.393	100
98		J	max	1144.295	21	-33.2	100	21.893	11	0	11	0.698	11	1.516	27
99			min	589.068	13	-52.787	27	-18.261	3	-0.001	19	-0.516	3	0.743	36
100	M26	I	max	497.387	4	63.58	116	35.94	11	0.09	116	0.766	3	0.996	116
101			min	-55.595	12	45.152	100	-70.245	3	0.067	100	-0.574	11	0.708	100
102		J	max	367.618	7	-59.312	100	59.448	3	-0.059	11	0.608	3	1.826	33
103			min	12.584	15	-82.784	101	-52.836	11	-0.114	3	-0.492	11	1.28	100
104	M27	I	max	1676.59	19	15.982	116	-13.131	100	-0.001	11	0.972	11	0.003	29
105			min	1019.636	44	11.353	100	-19.572	101	-0.004	3	0.572	3	-0.093	36
106		J	max	1638.388	19	-20.482	100	-13.131	100	-0.001	11	-0.424	100	0.415	116
107			min	981.435	44	-28.682	101	-19.572	101	-0.004	3	-0.591	101	0.289	28
108	M28	I	max	-684.713	96	23.656	116	10.271	3	0.003	3	1.884	11	0.349	116
109			min	-1371.504	24	16.279	33	0.52	11	-0.004	11	-3.425	3	0.222	33
110		J	max	-646.511	96	-15.084	100	10.271	3	0.003	3	1.924	11	0.438	31
111			min	-1333.303	24	-21.923	33	0.52	11	-0.004	11	-2.64	3	0.093	40
112	M29	I	max	669.975	24	60.799	11	-12.204	84	0.012	3	2.182	28	1.968	11
113			min	282.052	48	-94.081	3	-71.37	28	-0.008	11	0.597	36	-3.106	3
114		J	max	699.081	24	60.799	11	-12.204	84	0.012	3	-0.062	84	1.974	3
115			min	311.158	48	-94.081	3	-71.37	28	-0.008	11	-1.672	28	-1.315	11
116	M30	I	max	1026.037	26	-9.187	10	90.603	28	0.003	10	-0.568	84	-0.164	10
117			min	295.948	36	-15.769	2	22.33	36	-0.006	2	-2.455	26	-0.308	2
118		J	max	1055.143	26	-9.187	10	90.603	28	0.003	10	2.456	33	0.544	2
119			min	325.054	36	-15.769	2	22.33	36	-0.006	2	0.633	40	0.332	10
120	M31	I	max	-12.128	100	-12.683	100	-22.517	100	0	11	0.555	116	-0.268	100
121			min	-17.015	101	-17.594	101	-31.724	101	-0.001	3	0.393	100	-0.373	101
122		J	max	17.015	116	-12.683	100	-22.517	100	0	11	-0.822	100	0.577	116
123			min	12.127	100	-17.594	101	-31.724	101	-0.001	3	-1.158	101	0.417	100
124	M32	I	max	2318.31	24	-70.668	12	-148.643	92	0.433	15	-0.633	96	-3.865	11
125			min	1003.105	48	-111.088	4	-413.773	21	-0.449	7	-2.158	25	-5.549	3
126		J	max	2744.794	24	-70.668	12	-148.643	92	0.433	15	-8.706	92	0.934	7
127			min	1429.589	48	-111.088	4	-413.773	21	-0.449	7	-24.452	21	-0.536	15
128	M33	I	max	17.218	10	133.473	116	2.086	10	-0.005	100	0.211	2	3.522	116
129			min	-37.277	2	95.474	100	-4.181	2	-0.007	101	-0.106	10	2.527	100
130		J	max	204.837	2	-72.212	100	114.983	2	0.041	116	1.733	2	3.352	116
131			min	-94.612	10	-100.163	101	-59.81	10	0.028	100	-0.892	10	2.433	100
132	M34	I	max	131.681	17	235.523	116	-0.646	15	-0.003	92	0.768	23	5.683	116
133			min	-15.641	9	167.495	100	-9.263	23	-0.008	22	-0.027	15	4.011	100
134		J	max	131.681	17	-176.751	100	-0.646	15	-0.003	92	-0.128	15	6.612	116
135			min	-15.641	9	-247.454	101	-9.263	23	-0.008	22	-0.676	23	4.732	100
136	M35	I	max	26.35	2	168.241	116	5.739	4	-0.007	2	3.653	28	0.479	2
137			min	-608.709	26	120.821	100	-36.371	28	-0.043	26	-0.711	4	0.102	10
138		J	max	26.35	2	-223.425	100	5.739	4	-0.007	2	0.184	4	11.757	116
139			min	-608.709	26	-314.736	101	-36.371	28	-0.043	26	-2.017	28	8.309	100
140	M36	I	max	1198.037	2	121.355	116	46.247	3	0.021	88	2.877	11	1.199	11
141			min	-793.137	10	84.751	100	-31.089	11	0.011	18	-4.324	3	0.219	3
142		J	max	1393.801	2	-336.893	100	50.186	2	-0.112	100	1.239	2	12.448	116
143			min	-899.146	10	-469.827	101	-24.935	10	-0.158	101	-0.629	10	8.968	100
144	M37	I	max	0	116	185.396	116	1.146	3	0.001	29	0.081	11	0.373	116
145			min	0	1	132.168	100	-0.777	11	-0.001	36	-0.119	3	0.269	100
146		J	max	0	116	-212.078	100	1.146	3	0.001	29	0.059	3	9.117	116
147			min	0	1	-297.581	101	-0.777	11	-0.001	36	-0.04	11	6.497	100
148	M38	I	max	0	116	94.592	116	6.563	3	0.007	116	-0.013	11	-0.197	11
149			min	0	1	67.06	100	0.124	11	0.005	100	-0.682	3	-0.425	3
150		J	max	0	116	-119.163	100	6.563	3	0.007	116	0.341	3	5.255	116
151			min	0	1	-166.68	101	0.124	11	0.005	100	0.006	11	3.764	100
152	M39	I	max	35.402	11	184.874	116	10.106	11	0	84	1.311	3	2.778	3
153			min	15.605	3	137.608	100	-12.384	3	-0.003	27	-1.017	11	-0.979	11
154		J	max	35.402	11	-206.638	100	10.106	11	0	84	0.558	11	9.867	116
155			min	15.605	3	-298.103	101	-12.384	3	-0.003	27	-0.619	3	6.741	100
156	M40	I	max	198.016	3	178.74	3	28.506	11	0.042	26	1.856	3	3.768	3

Envelope Member End Reactions (Continued)

	Member	Member End		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-in]	LC	y-y Moment[k-in]	LC	z-z Moment[k-in]	LC
157			min	-220.81	11	123.315	11	-17.992	3	0.018	36	-2.955	11	-2.122	11
158		J	max	198.016	3	-208.927	100	28.506	11	0.042	26	1.489	11	11.088	116
159			min	-220.81	11	-306.545	101	-17.992	3	0.018	36	-0.948	3	7.429	100
160	M41	I	max	206.356	3	44.97	116	6.284	11	-0.007	100	-0.524	100	-0.068	3
161			min	-132.683	11	32.228	100	1.865	3	-0.01	101	-0.852	11	-0.554	11
162		J	max	206.356	3	-45.31	100	6.284	11	-0.007	100	-1.097	100	1.732	116
163			min	-132.683	11	-63.816	101	1.865	3	-0.01	101	-1.497	101	1.18	100
164	M42	I	max	136.805	3	36.998	116	0.573	10	0.004	116	-0.429	100	0.641	116
165			min	-62.851	11	26.491	100	-0.768	2	0.003	100	-0.614	101	0.481	100
166		J	max	136.805	3	-26.406	100	0.573	10	0.004	116	-0.458	100	0.641	116
167			min	-62.851	11	-37.216	101	-0.768	2	0.003	100	-0.636	101	0.443	100
168	M43	I	max	0.712	10	73.358	116	3.672	4	-0.006	100	-0.099	11	1.511	116
169			min	-0.818	2	52.228	100	1.799	12	-0.009	101	-0.485	3	1.071	100
170		J	max	4.495	2	-109.605	100	60.334	2	0.055	116	1.121	2	3.656	116
171			min	-3.912	10	-153.729	101	-38.202	10	0.039	100	-0.617	10	2.608	100
172	M44	I	max	40.771	10	76.622	116	1.599	10	0.002	116	0.319	2	0.065	116
173			min	-57.357	2	54.587	100	-3.456	2	0.001	100	-0.14	10	0.046	100
174		J	max	40.771	10	-78.483	100	1.599	10	0.002	116	0.173	10	3.338	116
175			min	-57.357	2	-110.076	101	-3.456	2	0.001	100	-0.358	2	2.384	100
176	M45	I	max	53.327	4	118.892	116	22.203	10	0.002	116	1.271	2	4.596	116
177			min	-45.766	12	84.931	100	-43.028	2	0.002	100	-0.659	10	3.266	100
178		J	max	53.327	4	67.375	116	22.203	10	0.002	116	0.54	10	-0.312	11
179			min	-45.766	12	48.212	100	-43.028	2	0.002	100	-1.052	2	-0.433	101
180	M46	I	max	220.665	17	34.478	116	8.374	3	-0.002	88	-0.357	10	0.934	11
181			min	-100.401	9	23.227	100	-4.074	11	-0.003	18	-0.701	2	-0.461	3
182		J	max	220.665	17	-29.67	100	8.374	3	-0.002	88	-0.42	100	0.988	3
183			min	-100.401	9	-39.736	101	-4.074	11	-0.003	18	-0.632	101	0.374	11

Envelope Member Section Deflections - Service

No Data to Print...

Envelope Member Section Deflections - Strength

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
0	M1	1	max	0.033	18	0.004	10	-0.005	96	0.001	4	NC	116	NC	116
1			min	0.009	44	-0.03	18	-0.02	24	-0.002	12	NC	1	NC	1
2		2	max	0.033	18	0.039	2	0.012	11	0.003	4	NC	116	NC	116
3			min	0.009	44	-0.033	10	-0.008	3	-0.003	12	2806.419	10	8269.747	17
4		3	max	0.033	24	0.035	2	0.007	11	0.006	4	NC	100	NC	96
5			min	0.009	48	-0.032	10	-0.018	3	-0.005	12	1876.867	8	2418.637	31
6		4	max	0.033	24	0.062	20	0.04	29	0.005	3	NC	116	NC	96
7			min	0.009	48	-0.006	12	0.001	5	-0.003	11	3023.598	8	4045.876	14
8		5	max	0.033	24	0.124	8	0.097	30	0.005	3	NC	116	NC	116
9			min	0.009	48	-0.023	16	0.001	6	-0.003	11	NC	1	NC	1
10	M2	1	max	0.016	20	-0.002	92	-0.003	88	0	6	NC	116	NC	116
11			min	0.004	44	-0.014	18	-0.007	32	0	15	NC	1	NC	1
12		2	max	0.016	20	0.015	2	0.005	15	0.001	6	NC	116	NC	116
13			min	0.004	44	-0.013	10	-0.008	7	-0.001	14	5656.708	8	8801.386	16
14		3	max	0.016	20	0.001	15	0.002	15	0.001	6	NC	96	NC	116
15			min	0.004	44	-0.005	7	-0.002	7	-0.001	14	2658.167	8	6376.976	8
16		4	max	0.016	20	0.038	8	0.014	14	0	10	NC	116	NC	116
17			min	0.004	44	-0.008	16	-0.007	6	0	2	3948.43	8	7446.294	14
18		5	max	0.016	20	0.095	8	0.041	14	0	10	NC	116	NC	116
19			min	0.004	44	-0.029	16	-0.027	6	0	2	NC	1	NC	1
20	M3	1	max	0.239	18	-0.008	84	0.107	12	0.005	4	NC	116	NC	116
21			min	0.005	10	-0.113	27	-0.11	4	-0.005	12	NC	1	NC	1
22		2	max	0.239	18	0.091	3	0.092	12	0.006	4	NC	116	NC	116
23			min	0.005	10	-0.087	11	-0.104	4	-0.006	12	357.796	10	521.391	5
24		3	max	0.239	18	0.227	3	0.167	12	0.008	4	NC	93	NC	116
25			min	0.004	10	-0.16	11	-0.193	4	-0.007	12	193.675	2	324.771	15
26		4	max	0.239	18	0.813	2	0.488	12	0.008	4	NC	116	NC	116
27			min	0.005	10	-0.641	10	-0.523	4	-0.007	12	262.312	2	459.062	15
28		5	max	0.239	18	1.7	2	0.961	12	0.008	4	NC	116	NC	116
29			min	0.005	10	-1.422	10	-1.006	4	-0.007	12	NC	1	NC	1
30	M4	1	max	0.109	18	-0.008	88	-0.001	12	0.001	4	NC	116	NC	116
31			min	0.027	44	-0.107	32	-0.008	4	-0.001	12	NC	1	NC	1
32		2	max	0.109	18	0.052	3	0.003	12	0.002	4	NC	116	NC	116
33			min	0.027	44	-0.08	11	-0.003	4	-0.002	12	2092.151	2	NC	1
34		3	max	0.109	18	0.141	3	0.003	8	0.004	4	NC	116	NC	116
35			min	0.027	44	-0.127	11	-0.004	16	-0.003	12	1518.429	2	8898.728	8
36		4	max	0.109	18	0.206	3	0.004	11	0.005	4	NC	116	NC	116
37			min	0.027	44	-0.157	11	-0.009	3	-0.004	12	1762.079	10	NC	1
38		5	max	0.109	18	0.263	3	0.012	11	0.004	3	NC	116	NC	116
39			min	0.027	44	-0.156	11	-0.013	3	-0.003	11	NC	1	NC	1
40	M5	1	max	0.227	3	-0.004	10	0.167	12	0.006	4	NC	116	NC	116
41			min	-0.16	11	-0.239	18	-0.193	4	-0.005	12	NC	1	NC	1
42		2	max	0.227	3	-0.032	92	0.122	12	0.005	4	NC	116	NC	116
43			min	-0.16	11	-0.206	18	-0.143	4	-0.004	12	1430.701	10	3979.471	15
44		3	max	0.227	3	-0.031	92	0.078	12	0.003	4	NC	116	NC	116
45			min	-0.16	11	-0.171	19	-0.095	4	-0.003	12	1210.913	2	2317.167	15
46		4	max	0.227	3	-0.029	92	0.039	12	0.002	4	NC	116	NC	116
47			min	-0.16	11	-0.138	19	-0.05	4	-0.002	12	1668.844	2	2523.604	15
48		5	max	0.227	3	-0.027	92	0.007	11	0.001	4	NC	116	NC	116
49			min	-0.16	11	-0.109	18	-0.012	3	-0.001	12	NC	1	NC	1
50	M6	1	max	0.052	3	-0.005	10	0.094	12	0.001	16	NC	116	NC	116
51			min	-0.08	11	-0.239	18	-0.101	4	-0.001	8	NC	1	NC	1
52		2	max	0.052	3	-0.01	10	0.066	12	0.001	16	NC	116	NC	116
53			min	-0.08	11	-0.209	18	-0.071	4	-0.001	8	3091.793	2	3941.24	4
54		3	max	0.052	3	-0.019	10	0.041	12	0.001	16	NC	116	NC	116
55			min	-0.08	11	-0.174	18	-0.044	4	-0.001	8	2984.552	10	2717.556	4
56		4	max	0.052	3	-0.028	92	0.02	12	0	16	NC	116	NC	116
57			min	-0.08	11	-0.14	18	-0.021	4	-0.001	8	4318.733	10	3351.752	4
58		5	max	0.052	3	-0.027	92	0.003	12	0	16	NC	116	NC	116
59			min	-0.08	11	-0.109	18	-0.003	4	0	8	NC	1	NC	1
60	M7	1	max	0.017	4	-0.027	92	0.002	12	0	96	NC	116	NC	116

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
61			min	-0.064	12	-0.109	18	-0.004	4	-0.001	24	NC	1	NC	1
62		2	max	0.017	4	-0.027	92	0.002	12	0	96	NC	116	NC	116
63			min	-0.064	12	-0.106	18	-0.004	4	-0.001	24	NC	1	NC	1
64		3	max	0.017	4	-0.027	84	0.001	12	0	96	NC	116	NC	116
65			min	-0.064	12	-0.103	28	-0.003	4	-0.001	24	NC	1	NC	1
66		4	max	0.017	4	-0.026	84	0	12	0	96	NC	116	NC	116
67			min	-0.064	12	-0.1	27	-0.003	4	-0.001	24	NC	1	NC	1
68		5	max	0.017	4	-0.026	84	-0.001	13	0	96	NC	116	NC	116
69			min	-0.064	12	-0.098	27	-0.002	21	-0.001	24	NC	1	NC	1
70	M8	1	max	0.245	3	-0.027	92	0.01	11	0	3	NC	116	NC	116
71			min	-0.158	11	-0.109	18	-0.014	3	0	27	NC	1	NC	1
72		2	max	0.245	3	-0.027	92	0.008	11	0	3	NC	116	NC	116
73			min	-0.158	11	-0.106	18	-0.01	3	0	27	NC	1	NC	1
74		3	max	0.245	3	-0.027	92	0.005	11	0	3	NC	116	NC	116
75			min	-0.158	11	-0.103	33	-0.007	3	0	27	NC	1	NC	1
76		4	max	0.245	3	-0.026	88	0.003	12	0	3	NC	116	NC	116
77			min	-0.158	11	-0.1	33	-0.004	4	0	27	NC	1	NC	1
78		5	max	0.245	3	-0.026	88	0.001	13	0	3	NC	116	NC	116
79			min	-0.158	11	-0.097	33	0	5	0	27	NC	1	NC	1
80	M9	1	max	0.003	2	-0.004	92	-0.002	14	0	9	NC	116	NC	116
81			min	-0.007	10	-0.016	20	-0.005	22	0	17	NC	1	NC	1
82		2	max	0.003	2	-0.004	96	-0.002	92	0	9	NC	116	NC	116
83			min	-0.007	10	-0.015	24	-0.005	22	0	17	NC	1	NC	1
84		3	max	0.003	2	-0.004	96	-0.002	92	0	9	NC	116	NC	116
85			min	-0.007	10	-0.015	24	-0.005	22	0	17	NC	1	NC	1
86		4	max	0.003	2	-0.004	96	-0.002	92	0	9	NC	116	NC	116
87			min	-0.007	10	-0.014	24	-0.005	22	0	17	NC	1	NC	1
88		5	max	0.003	2	-0.004	96	-0.002	92	0	9	NC	116	NC	116
89			min	-0.007	10	-0.013	26	-0.005	21	0	17	NC	1	NC	1
90	M10	1	max	0.005	11	-0.004	92	0.002	17	0	16	NC	116	NC	116
91			min	-0.003	3	-0.016	20	-0.001	9	0	8	NC	1	NC	1
92		2	max	0.005	11	-0.004	92	0.001	17	0	16	NC	116	NC	116
93			min	-0.003	3	-0.015	20	0	9	0	8	NC	1	NC	1
94		3	max	0.005	11	-0.004	92	0.001	15	0	16	NC	116	NC	116
95			min	-0.003	3	-0.014	18	0	7	0	8	NC	1	NC	1
96		4	max	0.005	11	-0.004	92	0.001	15	0	16	NC	116	NC	116
97			min	-0.003	3	-0.014	18	0	7	0	8	NC	1	NC	1
98		5	max	0.005	11	-0.004	92	0.001	13	0	16	NC	116	NC	116
99			min	-0.003	3	-0.013	18	0	5	0	8	NC	1	NC	1
100	M11	1	max	0.035	3	-0.009	96	0.011	11	0	88	NC	116	NC	116
101			min	-0.023	11	-0.033	24	-0.015	3	-0.002	33	NC	1	NC	1
102		2	max	0.035	3	-0.009	92	0.009	11	0	88	NC	116	NC	116
103			min	-0.023	11	-0.031	18	-0.011	3	-0.002	33	NC	1	NC	1
104		3	max	0.035	3	-0.009	92	0.006	11	0	88	NC	116	NC	116
105			min	-0.023	11	-0.03	18	-0.008	3	-0.002	33	NC	1	NC	1
106		4	max	0.035	3	-0.009	92	0.004	11	0	88	NC	116	NC	116
107			min	-0.023	11	-0.029	18	-0.004	3	-0.002	33	NC	1	NC	1
108		5	max	0.035	3	-0.009	88	0.001	13	0	88	NC	116	NC	116
109			min	-0.023	11	-0.027	18	0	5	-0.002	33	NC	1	NC	1
110	M12	1	max	0.003	3	-0.009	92	0.003	12	0	84	NC	116	NC	116
111			min	-0.01	11	-0.033	18	-0.005	4	-0.002	26	NC	1	NC	1
112		2	max	0.003	3	-0.009	96	0.002	12	0	84	NC	116	NC	116
113			min	-0.01	11	-0.032	24	-0.005	4	-0.002	26	NC	1	NC	1
114		3	max	0.003	3	-0.009	96	0.001	12	0	84	NC	116	NC	116
115			min	-0.01	11	-0.031	24	-0.004	4	-0.002	26	NC	1	NC	1
116		4	max	0.003	3	-0.009	96	0	12	0	84	NC	116	NC	116
117			min	-0.01	11	-0.029	26	-0.004	4	-0.002	26	NC	1	NC	1
118		5	max	0.003	3	-0.009	84	-0.001	92	0	84	NC	116	NC	116
119			min	-0.01	11	-0.028	26	-0.004	21	-0.002	26	NC	1	NC	1
120	M13	1	max	0.047	24	0.008	2	0.039	14	0.002	6	NC	116	NC	116
121			min	0.009	48	-0.022	10	-0.046	6	-0.002	14	NC	1	NC	1
122		2	max	0.047	24	0.007	17	0.043	14	0.002	6	NC	116	NC	116
123			min	0.009	48	-0.004	9	-0.046	6	-0.002	14	5069.481	10	4741.444	16
124		3	max	0.046	24	0.001	15	0.049	14	0.002	6	NC	116	NC	116
125			min	0.009	48	-0.005	7	-0.047	6	-0.002	14	2427.825	2	3273.376	8
126		4	max	0.047	24	0.039	8	0.079	14	0.002	6	NC	116	NC	116
127			min	0.009	48	-0.019	16	-0.073	6	-0.002	14	3707.579	2	4965.593	14
128		5	max	0.047	24	0.097	8	0.125	14	0.002	6	NC	116	NC	116
129			min	0.009	48	-0.052	16	-0.114	6	-0.002	14	NC	1	NC	1
130	M14	1	max	0.001	15	-0.009	96	0.049	14	0.001	16	NC	116	NC	116
131			min	-0.005	7	-0.046	24	-0.047	6	-0.001	8	NC	1	NC	1
132		2	max	0.001	15	-0.008	96	0.034	14	0.001	16	NC	116	NC	116
133			min	-0.005	7	-0.04	24	-0.033	6	-0.001	8	NC	1	9321.275	6
134		3	max	0.001	15	-0.007	96	0.021	14	0	16	NC	116	NC	116
135			min	-0.005	7	-0.031	24	-0.02	6	-0.001	8	NC	1	5700.706	6
136		4	max	0.001	15	-0.005	96	0.01	14	0	16	NC	116	NC	116
137			min	-0.005	7	-0.023	24	-0.009	6	-0.001	8	NC	1	6394.154	6
138		5	max	0.001	15	-0.004	92	0.002	15	0	16	NC	116	NC	116
139			min	-0.005	7	-0.016	20	-0.002	7	0	8	NC	1	NC	1
140	M15	1	max	0.009	2	-0.009	96	0.041	14	0	9	NC	116	NC	116
141			min	-0.008	10	-0.047	24	-0.046	6	0	17	NC	1	NC	1
142		2	max	0.009	2	-0.008	96	0.028	14	0	7	NC	116	NC	116
143			min	-0.008	10	-0.04	24	-0.033	6	0	15	NC	1	9900.73	14
144		3	max	0.009	2	-0.007	92	0.017	14	0	7	NC	116	NC	116
145			min	-0.008	10	-0.031	18	-0.022	6	0	15	9012.705	10	6303.671	14
146		4	max	0.009	2	-0.005	92	0.007	14	0	7	NC	116	NC	116
147			min	-0.008	10	-0.023	18	-0.012	6	0	15	8302.998	10	7284.845	14
148		5	max	0.009	2	-0.004	92	0.001	15	0	7	NC	116	NC	116
149			min	-0.008	10	-0.016	20	-0.005	7	0	15	NC	1	NC	1
150	M16	1	max	0.101	18	0.006	2	0.112	12	0.006	4	NC	116	NC	116
151			min	0.007	10	-0.033	26	-0.1	4	-0.005	12	NC	1	NC	1
152		2	max	0.101	18	0.014	4	0.111	12	0.006	4	NC	116	NC	116
153			min	0.007	10	-0.007	12	-0.116	4	-0.006	12	406.633	10	607.296	15
154		3	max	0.101	18	0.036	2	0.178	12	0.008	4	NC	93	NC	116
155			min	0.007	10	-0.033	10	-0.205	4	-0.008	12	213.299	2	365.714	15

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
156		4	max	0.101	18	0.49	2	0.471	12	0.008	4	NC	116	NC	116
157			min	0.007	10	-0.443	10	-0.512	4	-0.008	12	296.478	2	528.726	15
158		5	max	0.101	18	1.19	2	0.892	12	0.008	4	NC	116	NC	116
159			min	0.007	10	-1.1	10	-0.945	4	-0.008	12	NC	1	NC	1
160	M17	1	max	0.036	2	-0.007	10	0.178	12	0.005	4	NC	116	NC	116
161			min	-0.033	10	-0.101	18	-0.205	4	-0.005	12	NC	1	NC	1
162		2	max	0.036	2	-0.013	92	0.13	12	0.004	4	NC	116	NC	116
163			min	-0.033	10	-0.084	18	-0.154	4	-0.004	12	1578.129	10	3614.311	15
164		3	max	0.036	2	-0.012	92	0.083	12	0.003	4	NC	116	NC	116
165			min	-0.032	10	-0.065	20	-0.103	4	-0.003	12	1375.646	2	2119.408	15
166		4	max	0.035	2	-0.01	96	0.04	11	0.001	4	NC	116	NC	116
167			min	-0.032	10	-0.047	24	-0.057	3	-0.002	12	1881.605	2	2318.717	15
168		5	max	0.035	2	-0.009	96	0.007	11	0	4	NC	116	NC	116
169			min	-0.032	10	-0.033	24	-0.018	3	-0.001	12	NC	1	NC	1
170	M18	1	max	0.017	2	-0.007	10	0.11	12	0.001	17	NC	116	NC	116
171			min	-0.016	10	-0.101	18	-0.107	4	-0.001	9	NC	1	NC	1
172		2	max	0.017	2	-0.005	10	0.08	12	0.001	2	NC	116	NC	116
173			min	-0.016	10	-0.086	18	-0.075	4	-0.001	9	3632.567	2	3713.388	4
174		3	max	0.017	2	-0.006	10	0.052	12	0.001	2	NC	116	NC	116
175			min	-0.016	10	-0.067	18	-0.046	4	-0.001	10	3828.33	10	2550.422	4
176		4	max	0.017	2	-0.01	92	0.028	12	0	2	NC	116	NC	116
177			min	-0.016	10	-0.048	18	-0.022	4	-0.001	10	5465.629	10	3135.244	4
178		5	max	0.017	2	-0.009	92	0.009	11	0	2	NC	116	NC	116
179			min	-0.016	10	-0.033	18	-0.004	3	-0.001	10	NC	1	NC	1
180	M19	1	max	-0.001	92	-0.006	96	0.001	26	0	24	NC	116	NC	116
181			min	-0.004	21	-0.015	24	0	2	0	48	NC	1	NC	1
182		2	max	-0.002	92	-0.004	92	0.003	10	0.001	2	NC	116	NC	116
183			min	-0.004	21	-0.012	18	-0.001	2	0	10	NC	1	NC	1
184		3	max	-0.002	92	-0.004	96	0.007	10	0.001	2	NC	116	NC	116
185			min	-0.005	21	-0.013	26	-0.003	2	0	10	9341.259	26	8504.232	10
186		4	max	-0.002	92	-0.002	96	0.004	9	0.001	2	NC	116	NC	116
187			min	-0.005	21	-0.007	25	-0.002	17	0	10	NC	1	NC	1
188		5	max	-0.002	92	0	96	0	9	0	10	NC	116	NC	116
189			min	-0.006	21	0	24	0	17	0	2	NC	1	NC	1
190	M20	1	max	0.001	13	-0.005	92	0.001	10	0	10	NC	116	NC	116
191			min	0	5	-0.013	20	-0.002	2	-0.001	101	NC	1	NC	1
192		2	max	0.001	13	-0.004	92	0.007	3	0	24	NC	116	NC	116
193			min	0	5	-0.011	20	-0.006	11	0	16	NC	1	6298.751	3
194		3	max	0.001	13	-0.004	92	0.003	3	0.001	24	NC	116	NC	116
195			min	0	5	-0.013	18	-0.005	11	0	16	8592.885	18	9749.755	11
196		4	max	0	13	-0.002	88	0.001	7	0.001	24	NC	116	NC	116
197			min	0	5	-0.006	32	-0.003	15	0	16	NC	1	NC	1
198		5	max	0	116	0	116	0	116	0	116	NC	116	NC	116
199			min	0	1	0	1	0	1	0	1	NC	1	NC	1
200	M21	1	max	-0.003	92	-0.004	84	0.001	10	0.001	11	NC	100	NC	116
201			min	-0.009	21	-0.01	30	-0.002	2	-0.002	3	5529.835	21	NC	1
202		2	max	-0.003	92	-0.001	2	0.007	3	0	11	NC	116	NC	116
203			min	-0.008	21	-0.004	10	-0.01	11	-0.001	3	NC	1	6748.836	11
204		3	max	-0.002	92	0	18	0.007	3	0	10	NC	116	NC	116
205			min	-0.007	21	-0.003	10	-0.01	11	-0.001	2	NC	1	7480.845	11
206		4	max	-0.002	92	0.001	18	0.003	3	0	10	NC	116	NC	116
207			min	-0.005	21	-0.001	44	-0.004	11	0	2	NC	1	NC	1
208		5	max	-0.002	92	0.004	21	0	9	0	7	NC	116	NC	116
209			min	-0.004	21	0.001	44	0	17	0	15	NC	1	NC	1
210	M22	1	max	0	13	-0.006	92	0	11	0	3	NC	116	NC	116
211			min	-0.001	5	-0.011	19	0	3	0	11	NC	1	NC	1
212		2	max	0	13	-0.019	84	0.035	12	0.003	2	8252.908	84	NC	100
213			min	-0.001	5	-0.057	26	-0.013	4	-0.001	10	2416.599	27	3152.898	12
214		3	max	-0.001	13	-0.027	84	0.068	12	0.005	2	5245.768	84	NC	100
215			min	-0.002	21	-0.098	27	-0.021	4	-0.003	10	1279.656	27	1601.015	12
216		4	max	-0.001	92	-0.018	84	0.04	11	0.004	2	8915.56	84	NC	100
217			min	-0.003	21	-0.068	26	-0.01	3	-0.002	10	1988.121	26	2714.96	11
218		5	max	-0.001	92	-0.006	96	0.001	26	0	24	NC	116	NC	116
219			min	-0.004	21	-0.015	24	0	2	0	48	NC	1	NC	1
220	M23	1	max	0	12	-0.006	92	0.107	11	0.002	3	NC	116	NC	116
221			min	-0.001	4	-0.01	18	-0.168	3	-0.001	11	NC	1	NC	1
222		2	max	0	13	-0.014	88	0.167	11	0.003	3	NC	96	NC	96
223			min	-0.001	5	-0.052	31	-0.257	3	-0.001	11	2668.833	31	826.263	3
224		3	max	0.001	13	-0.026	88	0.178	11	0.004	20	5361.523	88	NC	96
225			min	-0.001	5	-0.096	33	-0.274	3	0	11	1288.1	31	572.09	3
226		4	max	0.001	13	-0.019	88	0.092	11	0.003	20	7953.265	88	NC	96
227			min	0	5	-0.068	33	-0.143	3	0	44	1934.722	33	1064.754	2
228		5	max	0.001	13	-0.005	92	0.001	10	0	10	NC	116	NC	116
229			min	0	5	-0.013	20	-0.002	2	-0.001	101	NC	1	NC	1
230	M24	1	max	0.005	30	-0.005	92	0	11	0	28	NC	116	NC	116
231			min	0.003	36	-0.01	20	0	3	0	36	NC	1	NC	1
232		2	max	0.005	30	-0.025	92	0.01	11	0	2	6263.526	100	NC	116
233			min	0.003	36	-0.041	18	-0.013	3	0	10	4000.824	30	9481.536	3
234		3	max	0.006	30	-0.035	88	0.018	11	0	2	3979.961	88	NC	116
235			min	0.003	36	-0.057	18	-0.03	3	0	10	2619.062	33	4145.666	3
236		4	max	0.006	30	-0.023	88	0.017	11	0	3	6728.398	88	NC	116
237			min	0.003	36	-0.042	18	-0.032	3	-0.001	11	3915.16	18	3900.833	3
238		5	max	0.007	30	-0.004	92	0.001	10	0	3	NC	116	NC	116
239			min	0.003	36	-0.012	21	-0.002	2	-0.001	11	NC	1	NC	1
240	M25	1	max	0	116	0	116	0	116	0	100	NC	116	NC	116
241			min	0	1	0	1	0	1	0	101	NC	1	NC	1
242		2	max	0.001	30	-0.002	84	0.001	3	0	100	NC	116	NC	116
243			min	0	36	-0.004	29	-0.001	11	0	11	NC	1	NC	1
244		3	max	0.001	30	-0.003	84	0	3	0	3	NC	116	NC	116
245			min	0.001	36	-0.005	31	0	11	0	11	NC	1	NC	1
246		4	max	0.001	13	-0.003	10	0	4	0	3	NC	116	NC	116
247			min	0	5	-0.004	101	-0.001	28	0	11	NC	1	NC	1
248		5	max	0	13	-0.006	92	0	11	0	3	NC	116	NC	116
249			min	-0.001	5	-0.011	19	0	3	0	11	9449.654	19	NC	1
250	M26	1	max	0	116	0	116	0	116	0	100	NC	116	NC	116

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
251			min	0	1	0	1	0	1	-0.001	101	NC	1	NC	1
252		2	max	0	12	-0.014	100	0.01	3	-0.004	100	8695.714	100	NC	116
253			min	0	4	-0.02	101	-0.003	11	-0.005	101	6172.117	101	NC	1
254		3	max	0	12	-0.023	100	0.003	11	-0.007	100	5796.347	31	NC	116
255			min	-0.001	4	-0.032	101	-0.007	3	-0.01	101	3959.931	101	NC	1
256		4	max	0	12	-0.015	100	0.044	11	-0.003	100	NC	100	NC	96
257			min	-0.001	4	-0.021	101	-0.076	3	-0.005	101	7366.334	36	1429.351	3
258		5	max	0	12	-0.006	92	0.107	11	0.002	3	NC	116	NC	96
259			min	-0.001	4	-0.01	18	-0.168	3	-0.001	11	NC	1	644.388	3
260	M27	1	max	0	116	0	116	0	116	0	11	NC	116	NC	116
261			min	0	1	0	1	0	1	-0.001	3	NC	1	NC	1
262		2	max	0	92	-0.006	100	-0.001	3	0	11	NC	116	NC	116
263			min	-0.001	19	-0.008	101	-0.003	11	0	3	NC	1	NC	1
264		3	max	-0.001	92	-0.007	100	0	3	0	100	NC	100	NC	116
265			min	-0.001	19	-0.01	101	-0.003	11	0	101	9191.059	101	NC	1
266		4	max	-0.001	92	-0.005	100	0.001	3	0	3	NC	116	NC	116
267			min	-0.002	19	-0.007	29	-0.001	11	0	11	NC	1	NC	1
268		5	max	-0.002	92	-0.003	84	0	3	0	3	NC	116	NC	116
269			min	-0.003	19	-0.004	31	0	11	0	11	NC	1	NC	1
270	M28	1	max	0.004	31	-0.002	92	0	3	0	11	NC	116	NC	116
271			min	0.003	36	-0.003	19	0	11	0	3	NC	1	NC	1
272		2	max	0.005	31	-0.003	28	0.008	11	0	11	NC	116	NC	116
273			min	0.003	36	-0.005	101	-0.012	3	0	3	NC	1	6249.571	3
274		3	max	0.006	31	-0.004	29	0.029	11	0	11	NC	116	NC	96
275			min	0.003	36	-0.007	101	-0.045	3	0	3	NC	1	1694.842	3
276		4	max	0.006	31	-0.004	29	0.062	11	0	11	NC	116	NC	96
277			min	0.003	36	-0.007	101	-0.097	3	-0.001	3	NC	1	785.149	3
278		5	max	0.007	31	-0.004	92	0.107	11	0.001	11	NC	116	NC	92
279			min	0.004	36	-0.008	20	-0.168	3	-0.001	3	NC	1	455.691	3
280	M29	1	max	0.011	19	0	3	0	13	0	11	NC	116	NC	116
281			min	0.006	44	0	11	-0.001	5	0	3	NC	1	NC	1
282		2	max	0.011	19	0.021	3	-0.003	96	0.001	11	NC	116	NC	116
283			min	0.006	44	-0.014	11	-0.005	25	-0.001	3	2653.861	3	NC	1
284		3	max	0.011	19	0.067	3	-0.003	17	0.001	11	NC	96	NC	116
285			min	0.006	44	-0.044	11	-0.004	9	-0.002	3	802.321	3	NC	1
286		4	max	0.011	19	0.123	3	0	31	0.002	11	NC	92	NC	116
287			min	0.006	44	-0.079	11	-0.002	36	-0.003	3	440.951	3	NC	1
288		5	max	0.01	18	0.168	3	0	12	0.002	11	NC	92	NC	116
289			min	0.006	44	-0.107	11	-0.001	4	-0.003	3	322.556	3	NC	1
290	M30	1	max	0.015	24	0	2	-0.001	92	0	4	NC	116	NC	116
291			min	0.006	48	-0.001	26	-0.004	21	0	28	NC	1	NC	1
292		2	max	0.015	24	0.002	2	0.002	10	0	3	NC	116	NC	116
293			min	0.006	48	0	10	-0.003	2	-0.001	11	NC	1	NC	1
294		3	max	0.014	24	0.005	2	0.002	10	0.001	3	NC	116	NC	116
295			min	0.005	48	0.001	10	-0.004	2	-0.001	11	NC	1	NC	1
296		4	max	0.014	24	0.006	2	0	10	0.001	3	NC	116	NC	116
297			min	0.005	48	0.002	10	-0.004	2	-0.001	11	NC	1	NC	1
298		5	max	0.013	20	0.002	2	0.001	13	0.002	3	NC	116	NC	116
299			min	0.005	44	-0.001	10	0	5	-0.001	11	NC	1	NC	1
300	M31	1	max	0	116	0	116	0	116	0	3	NC	116	NC	116
301			min	0	1	0	1	0	1	0	11	NC	1	NC	1
302		2	max	0	116	0.001	116	0.001	116	0	3	NC	116	NC	116
303			min	0	1	0	100	0.001	31	0	11	NC	1	NC	1
304		3	max	0	116	0.003	116	0.004	116	0	3	NC	116	NC	116
305			min	0	1	0.002	100	0.002	100	0	11	NC	1	NC	1
306		4	max	0	116	0.004	116	0.004	116	0	3	NC	116	NC	116
307			min	0	1	0.003	100	0.003	100	0	11	NC	1	NC	1
308		5	max	0	116	0	116	0	116	0	3	NC	116	NC	116
309			min	0	1	0	1	0	1	0	11	NC	1	NC	1
310	M32	1	max	0	24	0	17	-0.002	92	0	15	NC	116	NC	116
311			min	0	48	0	9	-0.006	21	0	7	NC	1	NC	1
312		2	max	0	24	0	15	-0.001	92	0	15	NC	116	NC	116
313			min	0	48	0	7	-0.004	21	0	7	NC	1	NC	1
314		3	max	0	24	0	15	-0.001	92	0	15	NC	116	NC	116
315			min	0	48	0	7	-0.002	21	0	7	NC	1	NC	1
316		4	max	0	24	0	15	0	92	0	15	NC	116	NC	116
317			min	0	48	0	7	0	21	0	7	NC	1	NC	1
318		5	max	0	116	0	116	0	116	0	116	NC	116	NC	116
319			min	0	1	0	1	0	1	0	1	NC	1	NC	1
320	M33	1	max	0	116	0	116	0	116	0	116	NC	116	NC	116
321			min	0	1	0	1	0	1	0	1	NC	1	NC	1
322		2	max	0	2	-0.004	100	0.001	2	0	116	NC	116	NC	116
323			min	0	10	-0.006	101	-0.001	10	0	100	NC	1	NC	1
324		3	max	0	2	-0.008	100	0.003	2	0	116	NC	116	NC	116
325			min	0	10	-0.011	101	-0.002	10	0	100	NC	1	NC	1
326		4	max	0	2	-0.005	100	0.004	2	0	116	NC	116	NC	116
327			min	0	10	-0.006	101	-0.002	10	0	100	NC	1	NC	1
328		5	max	0	116	0	116	0	116	0	116	NC	116	NC	116
329			min	0	1	0	1	0	1	0	1	NC	1	NC	1
330	M34	1	max	0	17	0	96	-0.002	92	0	92	NC	116	NC	116
331			min	0	9	0	24	-0.006	21	0	22	NC	1	NC	1
332		2	max	0	17	-0.001	100	-0.001	92	0	92	NC	116	NC	116
333			min	0	9	-0.002	101	-0.005	23	0	22	NC	1	NC	1
334		3	max	0	17	-0.002	100	-0.001	92	0	92	NC	116	NC	116
335			min	0	9	-0.003	101	-0.003	23	0	22	NC	1	NC	1
336		4	max	0	17	-0.001	100	0	15	0	92	NC	116	NC	116
337			min	0	9	-0.002	101	-0.001	23	0	22	NC	1	NC	1
338		5	max	0	116	0	116	0	116	0	116	NC	116	NC	116
339			min	0	1	0	1	0	1	0	1	NC	1	NC	1
340	M35	1	max	0	2	-0.006	96	-0.001	92	0	2	NC	116	NC	116
341			min	-0.001	26	-0.015	24	-0.004	21	-0.001	26	NC	1	NC	1
342		2	max	0	2	-0.007	96	-0.001	3	0	2	NC	116	NC	116
343			min	0	26	-0.013	24	-0.01	28	-0.001	26	NC	1	NC	1
344		3	max	0	2	-0.006	100	0	3	0	2	NC	116	NC	116
345			min	0	26	-0.009	26	-0.008	28	0	26	NC	1	NC	1

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
346		4	max	0	2	-0.002	100	0	4	0	2	NC	116	NC	116
347			min	0	26	-0.003	101	-0.003	28	0	26	NC	1	NC	1
348		5	max	0	116	0	116	0	116	0	116	NC	116	NC	116
349			min	0	1	0	1	0	1	0	1	NC	1	NC	1
350	M36	1	max	0.002	2	-0.005	92	0.001	13	0	88	NC	116	NC	116
351			min	-0.001	10	-0.013	20	0	5	-0.001	18	NC	1	NC	1
352		2	max	0.002	2	-0.021	100	0.035	2	-0.001	88	9798.454	100	NC	116
353			min	-0.001	10	-0.029	101	-0.022	10	-0.001	18	7256.023	101	4461.647	3
354		3	max	0.001	2	-0.025	100	0.027	2	-0.001	100	7355.849	100	NC	116
355			min	-0.001	10	-0.034	101	-0.017	10	-0.001	101	5378.12	101	5745.819	3
356		4	max	0.001	2	-0.014	100	0.007	2	-0.001	100	NC	100	NC	116
357			min	0	10	-0.02	101	-0.004	10	-0.002	101	9048.945	101	NC	1
358		5	max	0	116	0	116	0	116	0	116	NC	116	NC	116
359			min	0	1	0	1	0	1	0	1	NC	1	NC	1
360	M37	1	max	0	116	0	116	0	116	0	29	NC	116	NC	116
361			min	0	1	0	1	0	1	0	36	NC	1	NC	1
362		2	max	0	116	-0.003	100	0	3	0	29	NC	116	NC	116
363			min	0	1	-0.004	101	0	11	0	36	NC	1	NC	1
364		3	max	0	116	-0.003	100	0	3	0	29	NC	116	NC	116
365			min	0	1	-0.005	101	0	11	0	36	NC	1	NC	1
366		4	max	0	116	-0.002	100	0	3	0	29	NC	116	NC	116
367			min	0	1	-0.002	101	0	11	0	36	NC	1	NC	1
368		5	max	0	116	0	116	0	116	0	116	NC	116	NC	116
369			min	0	1	0	1	0	1	0	1	NC	1	NC	1
370	M38	1	max	0	116	0	116	0	116	0.001	116	NC	116	NC	116
371			min	0	1	0	1	0	1	0	100	NC	1	NC	1
372		2	max	0	116	-0.013	100	0.007	3	0	116	NC	100	NC	116
373			min	0	1	-0.018	101	0	11	0	100	8740.289	101	NC	1
374		3	max	0	116	-0.015	100	0.006	3	0	116	NC	100	NC	116
375			min	0	1	-0.021	101	0	11	0	100	7489.713	101	NC	1
376		4	max	0	116	-0.007	100	0.002	3	0	116	NC	116	NC	116
377			min	0	1	-0.01	101	0	11	0	100	NC	1	NC	1
378		5	max	0	116	0	116	0	116	0	116	NC	116	NC	116
379			min	0	1	0	1	0	1	0	1	NC	1	NC	1
380	M39	1	max	0	11	-0.003	84	0.001	30	0	84	NC	116	NC	116
381			min	0	3	-0.005	31	0.001	36	0	27	NC	1	NC	1
382		2	max	0	11	-0.004	100	0.003	11	0	84	NC	116	NC	116
383			min	0	3	-0.007	101	-0.002	3	0	27	NC	1	NC	1
384		3	max	0	11	-0.004	100	0.002	11	0	84	NC	116	NC	116
385			min	0	3	-0.006	101	-0.002	3	0	27	NC	1	NC	1
386		4	max	0	11	-0.002	100	0.001	11	0	84	NC	116	NC	116
387			min	0	3	-0.003	101	-0.001	3	0	27	NC	1	NC	1
388		5	max	0	116	0	116	0	116	0	116	NC	116	NC	116
389			min	0	1	0	1	0	1	0	1	NC	1	NC	1
390	M40	1	max	0	3	-0.006	92	0	13	0.001	26	NC	116	NC	116
391			min	0	11	-0.011	19	-0.001	5	0	36	NC	1	NC	1
392		2	max	0	3	-0.007	100	0.006	11	0.001	26	NC	116	NC	116
393			min	0	11	-0.01	27	-0.004	3	0	36	NC	1	NC	1
394		3	max	0	3	-0.005	100	0.005	11	0	26	NC	116	NC	116
395			min	0	11	-0.008	11	-0.003	3	0	36	NC	1	NC	1
396		4	max	0	3	-0.002	100	0.002	11	0	26	NC	116	NC	116
397			min	0	11	-0.003	11	-0.001	3	0	36	NC	1	NC	1
398		5	max	0	116	0	116	0	116	0	116	NC	116	NC	116
399			min	0	1	0	1	0	1	0	1	NC	1	NC	1
400	M41	1	max	0.004	3	-0.023	100	0.003	11	-0.006	100	NC	116	NC	116
401			min	-0.002	11	-0.032	101	-0.006	3	-0.008	101	NC	1	NC	1
402		2	max	0.003	3	-0.27	100	-0.051	11	-0.004	100	831.893	100	3819.259	11
403			min	-0.002	11	-0.371	101	-0.124	3	-0.006	101	606.335	101	1789.868	3
404		3	max	0.003	3	-0.349	100	-0.112	11	-0.003	100	625.563	100	1787.091	11
405			min	-0.002	11	-0.483	101	-0.17	3	-0.004	101	452.527	101	1287.336	101
406		4	max	0.003	2	-0.194	100	-0.066	100	-0.002	100	1144.31	100	3449.166	100
407			min	-0.001	10	-0.269	101	-0.089	101	-0.002	101	823.804	101	2437.202	101
408		5	max	0.002	2	-0.008	100	0.001	2	0	100	NC	116	NC	116
409			min	-0.001	10	-0.011	101	-0.001	10	-0.001	101	NC	1	NC	1
410	M42	1	max	0.001	3	-0.008	100	0.001	10	0.002	116	NC	116	NC	116
411			min	0	11	-0.011	101	-0.003	2	0.001	100	NC	1	NC	1
412		2	max	0.001	3	-0.027	100	-0.013	10	0.001	116	6648.448	100	NC	100
413			min	0	11	-0.038	101	-0.021	2	0.001	100	4780.622	101	7477.66	101
414		3	max	0	3	-0.042	100	-0.025	100	0.001	116	3767.032	100	6064.021	100
415			min	0	11	-0.058	101	-0.034	101	0.001	100	2696.319	101	4341.501	101
416		4	max	0	3	-0.023	100	-0.014	100	0	116	6868.762	100	NC	100
417			min	0	11	-0.032	101	-0.019	101	0	100	4907.775	101	8125.695	101
418		5	max	0	116	0	116	0	116	0	116	NC	116	NC	116
419			min	0	1	0	1	0	1	0	1	NC	1	NC	1
420	M43	1	max	0	116	0	116	0	116	0	116	NC	116	NC	116
421			min	0	1	0	1	0	1	0	100	NC	1	NC	1
422		2	max	0	2	-0.026	100	0.007	3	0.002	116	5969.429	100	NC	116
423			min	0	10	-0.037	101	-0.001	11	0.001	100	4273.96	101	NC	1
424		3	max	0	2	-0.04	100	0.008	3	0.003	116	3969.952	100	NC	116
425			min	0	10	-0.056	101	-0.002	11	0.002	100	2837.041	101	NC	1
426		4	max	0	2	-0.023	100	0.004	2	0.004	116	6791.673	100	NC	116
427			min	0	10	-0.033	101	-0.002	10	0.003	100	4848.659	101	NC	1
428		5	max	0	116	0	116	0	116	0	116	NC	116	NC	116
429			min	0	1	0	1	0	1	0	1	NC	1	NC	1
430	M44	1	max	0.003	2	-0.012	100	0	2	0.002	116	NC	116	NC	116
431			min	-0.001	10	-0.017	101	0	10	0.001	100	NC	1	NC	1
432		2	max	0.003	2	-0.138	100	0	11	0.001	116	1543.356	100	NC	116
433			min	-0.001	10	-0.193	101	-0.002	3	0.001	100	1098.614	101	NC	1
434		3	max	0.003	2	-0.173	100	0.001	2	0.001	116	1203.284	100	NC	116
435			min	-0.001	10	-0.242	101	-0.001	10	0.001	100	856.26	101	NC	1
436		4	max	0.003	2	-0.104	100	0.003	2	0.001	116	2058.681	100	NC	116
437			min	-0.001	10	-0.146	101	-0.002	10	0.001	100	1463.773	101	NC	1
438		5	max	0.003	2	-0.008	100	0	10	0.001	116	NC	116	NC	116
439			min	-0.001	10	-0.011	101	0	2	0	100	NC	1	NC	1
440	M45	1	max	0.003	2	-0.008	100	0	10	0.001	116	NC	116	NC	116

Envelope Member Section Deflections - Strength (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
441			min	-0.001	10	-0.011	101	0	2	0	100	NC	1	NC	1
442		2	max	0.003	2	0.005	116	0.001	10	0.001	116	5540.487	100	NC	116
443			min	-0.001	10	0.003	100	-0.001	2	0	100	3912.162	101	NC	1
444		3	max	0.003	2	0.008	116	0	10	0	116	5176.046	100	NC	116
445			min	-0.001	10	0.005	100	-0.001	2	0	100	3644.028	101	NC	1
446		4	max	0.003	2	0.004	116	0	3	0	116	8954.229	100	NC	116
447			min	-0.001	10	0.002	100	0	11	0	100	6275.599	101	NC	1
448		5	max	0.003	2	-0.002	100	0	10	0	116	NC	116	NC	116
449			min	-0.001	10	-0.003	101	0	2	0	100	NC	1	NC	1
450	M46	1	max	0.002	2	-0.005	92	0.001	11	0	10	NC	116	NC	116
451			min	-0.001	10	-0.013	20	-0.001	3	-0.001	18	NC	1	NC	1
452		2	max	0.002	2	-0.033	100	0.019	3	0	10	5341.67	100	NC	116
453			min	-0.001	10	-0.046	101	-0.038	11	-0.001	18	3813.193	101	3583.614	11
454		3	max	0.002	2	-0.048	100	0.005	3	0	10	3316.05	100	NC	100
455			min	-0.001	10	-0.067	101	-0.049	11	0	18	2370.574	101	2764.674	11
456		4	max	0.001	2	-0.027	100	0	2	0	10	6137.065	100	NC	100
457			min	-0.001	10	-0.037	101	-0.025	10	0	18	4402.711	101	5024.274	11
458		5	max	0.001	2	-0.002	100	0.002	2	0.001	116	NC	116	NC	116
459			min	-0.001	10	-0.003	101	-0.001	10	0	100	NC	1	NC	1

Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [k-in]	phi*Mn z-z [k-in]	Cb	Eqn
0	M23	LL2.5X2X4X0	0.588	108	2	0.067	99	z	2	25372.522	69336	34.992	32.211	1	H1-1b
1	M3	PIPE_2.0	0.553	60	10	0.067	60		4	9836.597	32130	22.459	22.459	1	H1-1b
2	M16	PIPE_2.0	0.528	60	10	0.069	60		4	9836.597	32130	22.459	22.459	1	H1-1b
3	M22	LL2.5X2X4X0	0.378	108	27	0.05	108	y	18	25372.522	69336	34.992	32.211	1	H1-1b
4	M5	PIPE_2.0	0.337	0	10	0.171	24		5	30625.434	32130	22.459	22.459	1	H1-1b
5	M17	PIPE_2.0	0.317	0	10	0.175	24		4	30625.434	32130	22.459	22.459	1	H1-1b
6	M41	L2.5X2.5X4	0.316	208.893	3	0.009	208.893	y	116	1431.306	38556	13.363	18.966	1.419	H2-1
7	M20	LL2.5X2X4X0	0.26	0	2	0.018	27	z	4	52429.952	69336	34.992	35.147	1	H1-1b
8	M1	PIPE_2.0	0.23	60	17	0.314	65		17	9836.597	32130	22.459	22.459	1	H3-6
9	M6	PIPE_2.0	0.225	0	2	0.058	24		17	30625.434	32130	22.459	22.459	1	H1-1b
10	M29	LL2X2X3X3	0.215	0	3	0.012	54	y	3	31029.829	46656	31.993	17.693	1	H1-1b
11	M18	PIPE_2.0	0.209	0	2	0.066	24		33	30625.434	32130	22.459	22.459	1	H1-1b
12	M4	PIPE_2.0	0.196	60	17	0.273	66		15	20866.733	32130	22.459	22.459	1	H3-6
13	M19	LL2.5X2X4X0	0.171	0	27	0.012	0	y	31	52429.952	69336	34.992	35.147	1	H1-1b
14	M46	L2.5X2.5X4	0.148	142.507	2	0.004	142.507	y	116	3075.435	38556	13.363	22.901	1.5	H2-1
15	M45	LL3X3X3X0	0.135	0	116	0.006	0	y	116	50281.54	70632	57.879	35.638	1	H1-1b
16	M26	LL2.5X2X4X0	0.132	54	3	0.03	54	z	3	25372.522	69336	34.992	32.211	1	H1-1b
17	M43	LL3X3X3X0	0.121	157.717	116	0.023	157.717	y	116	17255.907	70632	57.879	31.662	1	H1-1b
18	M30	LL2X2X3X3	0.117	54	33	0.008	54	z	18	31029.829	46656	31.993	17.693	1	H1-1b
19	M44	LL3X3X3X0	0.113	195.695	116	0.006	195.695	y	116	11208.134	70632	57.879	30.166	1	H1-1b
20	M42	L2.5X2.5X4	0.109	0	3	0.005	142.507	y	116	3075.435	38556	13.363	22.901	1.5	H2-1
21	M2	PIPE_2.0	0.103	60	18	0.108	65		6	9836.597	32130	22.459	22.459	1	H1-1b
22	M14	PIPE_2.0	0.093	24	5	0.029	24		16	30625.434	32130	22.459	22.459	1	H1-1b
23	M15	PIPE_2.0	0.091	24	10	0.021	24		8	30625.434	32130	22.459	22.459	1	H1-1b
24	M21	LL2X2X4X6	0.089	0	11	0.005	76.368	z	3	26474.753	61236	53.695	23.784	1	H1-1b
25	M13	PIPE_2.0	0.088	60	18	0.018	45		8	9836.597	32130	22.459	22.459	1	H1-1b
26	M24	LL2X2X4X6	0.088	120.748	3	0.003	120.748	y	10	10722.311	61236	53.695	23.105	1	H1-1b
27	M28	LL2X2X4X6	0.084	0	3	0.002	0	y	10	26474.753	61236	53.695	23.784	1	H1-1b
28	M25	LL2.5X2X4X0	0.078	108	27	0.002	108	y	28	25372.522	69336	34.992	32.211	1	H1-1b
29	M36	W4X13	0.076	155.88	2	0.022	133.148	y	116	35887.76	172350	131.4	282.6	2.611	H1-1b
30	M31	LL2X2X3X3	0.069	54	116	0.002	54	z	116	31029.829	46656	31.993	17.693	1	H1-1b
31	M27	LL2X2X4X6	0.063	0	19	0.002	76.368	y	3	26474.753	61236	53.695	23.784	1	H1-1b*
32	M33	W4X13	0.029	155.88	2	0.004	133.148	y	116	35887.76	172350	131.4	282.6	2.288	H1-1b
33	M38	W4X13	0.021	155.88	116	0.005	155.88	y	116	35887.76	172350	131.4	282.6	2.044	H1-1b
34	M35	W8X24	0.018	155.88	27	0.005	155.88	y	116	160224.907	318600	385.65	1039.5	2.63	H1-1b
35	M40	W8X24	0.015	155.88	11	0.005	155.88	y	116	160224.907	318600	385.65	1039.5	2.212	H1-1b
36	M32	W12X72	0.013	54	23	0.001	27	z	23	927845.396	949500	2214	4860	1.826	H1-1b
37	M39	W8X24	0.011	155.88	11	0.005	155.88	y	116	160224.907	318600	385.65	1039.5	2.153	H1-1b
38	M37	W8X24	0.009	155.88	116	0.005	155.88	y	116	160224.907	318600	385.65	1039.5	2.06	H1-1b
39	M34	W8X24	0.008	155.88	116	0.004	155.88	y	116	160224.907	318600	385.65	1039.5	2.358	H1-1b

Envelope Node Reactions

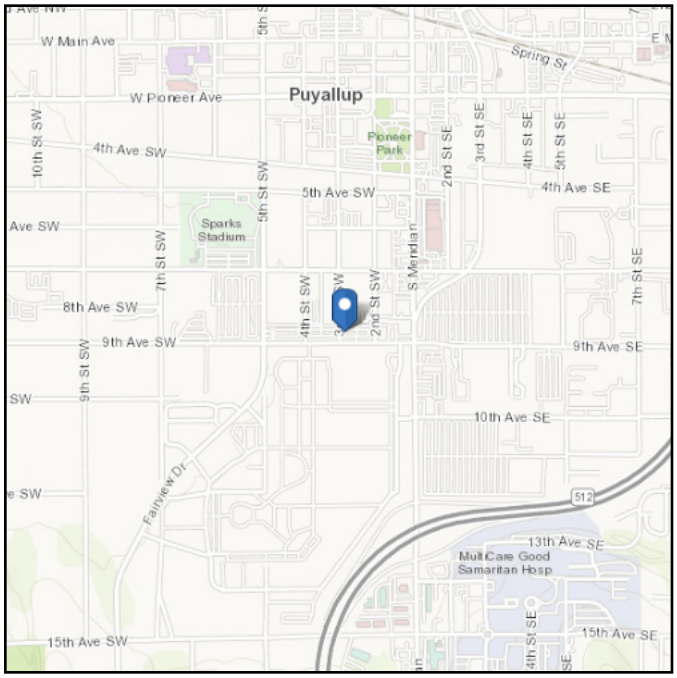
	Node Label		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-in]	LC	MY [k-in]	LC	MZ [k-in]	LC
0	N40	max	53.994	13	3083.428	19	951.897	13	-9.717	92	1.915	15	-2.782	7
1		min	-225.198	5	1633.319	44	-281.305	5	-27.496	21	-1.17	7	-4.248	15
2	N47	max	19.582	11	240.133	116	1072.498	30	0	116	0	116	0	116
3		min	8.147	3	171.001	100	578.697	5	0	1	0	1	0	1
4	N48	max	1.704	11	1404.544	19	-847.188	12	0	116	0	116	0	116
5		min	-98.688	3	944.693	44	-1591.386	20	0	1	0	1	0	1
6	N52	max	204.837	2	100.155	116	114.96	2	0.041	116	0.892	10	3.352	116
7		min	-94.612	10	72.202	100	-59.815	10	0.028	100	-1.733	2	2.433	100
8	N54	max	1393.801	2	469.7	116	50.027	2	-0.112	100	0.629	10	12.448	116
9		min	-899.146	10	336.689	100	-24.988	10	-0.158	101	-1.239	2	8.968	100
10	N51	max	131.681	17	247.454	116	-0.644	15	-0.003	92	0.676	23	6.612	116
11		min	-15.641	9	176.75	100	-9.262	23	-0.008	22	0.128	15	4.732	100
12	N53	max	26.35	2	314.757	116	5.737	4	-0.007	2	2.017	28	11.757	116
13		min	-608.709	26	223.43	100	-36.386	28	-0.043	26	-0.184	4	8.309	100
14	N55	max	0	11	297.581	116	1.146	3	0.001	29	0.04	11	9.117	116
15		min	0	3	212.078	100	-0.777	11	-0.001	36	-0.059	3	6.497	100
16	N56	max	0	11	166.68	116	6.563	3	0.007	116	-0.006	11	5.255	116
17		min	0	3	119.163	100	0.124	11	0.005	100	-0.341	3	3.764	100
18	N57	max	35.402	11	298.102	116	10.105	11	0	84	0.619	3	9.867	116
19		min	15.605	3	206.638	100	-12.384	3	-0.003	27	-0.558	11	6.741	100
20	N58	max	198.016	3	306.546	116	28.507	11	0.042	26	0.948	3	11.088	116
21		min	-220.81	11	208.924	100	-17.991	3	0.018	36	-1.489	11	7.429	100
22	N61	max	1.947	10	153.729	116	60.314	2	-0.358	100	0.617	10	3.621	116
23		min	-4.738	2	109.604	100	-38.352	10	-0.502	101	-1.121	2	2.584	100
24	Totals:	max	1672.935	2	6711.689	18	1007.269	13						
25		min	-1672.945	10	4678.257	100	-1007.269	5						

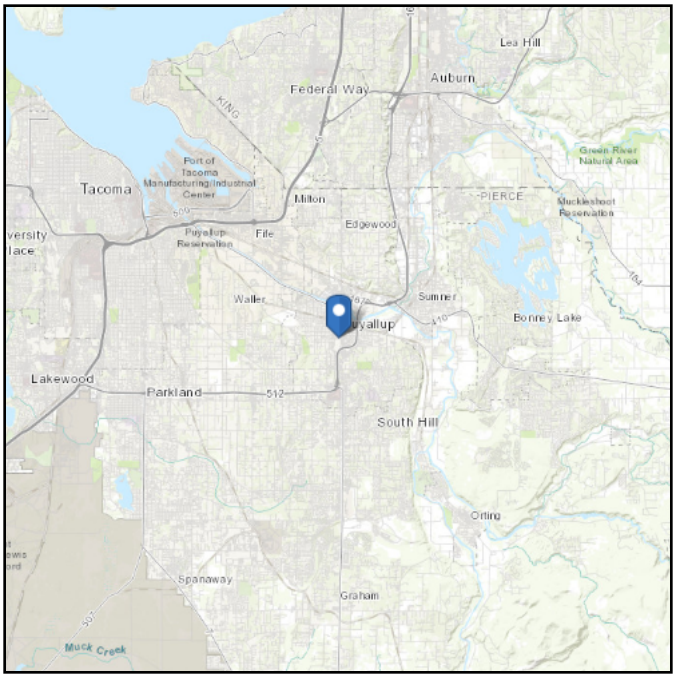
APPENDIX A
Design Tables & Resources

ASCE Hazards Report

Address:
No Address at This Location

Standard:	ASCE/SEI 7-16	**Latitude:**	47.18472
Risk Category:	II	**Longitude:**	-122.29611
Soil Class:	D - Default (see Section 11.4.3)	**Elevation:**	41.66737136616424 ft (NAVD 88)





Wind

Results:

Wind Speed	98 Vmph
10-year MRI	67 Vmph
25-year MRI	73 Vmph
50-year MRI	78 Vmph
100-year MRI	83 Vmph

Data Source:	ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2
Date Accessed:	Mon May 27 2024

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is not in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2.

Seismic

Site Soil Class: D - Default (see Section 11.4.3)

Results:

S_S :	1.271	S_{D1} :	N/A
S_1 :	0.438	T_L :	6
F_a :	1.2	PGA :	0.5
F_v :	N/A	PGA_M :	0.6
S_{MS} :	1.525	F_{PGA} :	1.2
S_{M1} :	N/A	I_e :	1
S_{DS} :	1.017	C_v :	1.354

Ground motion hazard analysis may be required. See ASCE/SEI 7-16 Section 11.4.8.

Data Accessed: Mon May 27 2024

Date Source: USGS Seismic Design Maps

Ice

Results:

Ice Thickness:	1.00 in.
Concurrent Temperature:	25 F
Gust Speed	30 mph
Data Source:	Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8
Date Accessed:	Mon May 27 2024

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.