Temecula Valley Wine Country Archway

Temecula Valley Area

Project No. D2-0111

Structural Calculations for Sign Structure Analysis for Temecula Winery Gateway Arch Sign Dated July 10, 2023

Notice regarding this Report:

This report is provided for reference only.

Although this information represents the latest information available, the County of Riverside Transportation Department does not guarantee the accuracy of this data.

Structural Calculations

For

SIGN STRUCTURE ANALYSIS FOR TEMECULA WINERY GATEWAY ARCH SIGN

TEMECULA, CALIFORNIA

Prepared for:

South Coast Lighting & Design

1101 Via Callejon, Suite 100
San Clemente, CA 93673

Original Sealed By

Date Original Signed:

An original document is kept on file at the office of Leavitt & Associates Engineers, Inc

Leavitt & Associates Engineers, Inc.
1324 First Street South – Nampa, ID 83651
(208) 463-0333
http://www.leavittengineers.com

Revision #	Prepared by	Reviewed by:	Project #
3	Jimmy Church	J. Reese Leavitt, PE/SE	23073.001

DESIGN CRITERIA:

CODE:	**2022 CALIFORNIA BUILDING CODE**
WIND LOAD:	**96 MPH, EXPOSURE C**
SEISMIC:	**Ss=1.481, S1=0.549, SITE CLASS=D, I=1.0**
SNOW LOAD:	**NONE**

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LEAVITT & ASSOCIATES
ENGINEERS, INC. Structural - Civil - Materials Handling - Planners - Surveyors

July 10, 2023

South Coast Lighting & Design
1101 Via Callejon, Suite 100
San Clemente, California 92673

Reference: ***Sign Structure Analysis for Temecula Winery Gateway Arch Sign, Temecula, California***

Attention: Kenn Nicol

Leavitt & Associates Engineers, Inc. has prepared structural calculations to analyze the proposed structure for an arched gateway sign that is to be constructed near Temecula, California. The calculations have been prepared based on drawings and information provided by South Coast Lighting & Design. A copy of the drawings and information received from South Coast Lighting & Design is included in the appendix of the attached calculations.

The calculations show the sign structure that has been proposed should be adequate to resist the code required loads if it is constructed as shown. The calculations assume the following materials will be used:

Tube – A500 Grade C (Fy=50 ksi)
Pipe – A53 Grade B (Fy=35 ksi)
Plate – A36 (Fy=36 ksi except where noted otherwise)
Weld – E70XX

Please call if you have any questions.

Sincerely,

Jimmy Church
Leavitt & Associates Engineers, Inc.

Enclosure: Calculations

File: 23073.001

⚠ This is a beta release of the new ATC Hazards by Location website. Please contact us with feedback.

ℹ The ATC Hazards by Location website will not be updated to support ASCE 7-22. Find out why.

ATC Hazards by Location

Search Information

Coordinates:	33.520421, -117.091267
Elevation:	1261 ft
Timestamp:	2023-06-21T18:54:43.398Z
Hazard Type:	Seismic
Reference Document:	ASCE7-16
Risk Category:	II
Site Class:	D

Basic Parameters

Name	Value	Description
S_S	1.481	MCE_R ground motion (period=0.2s)
S_1	0.549	MCE_R ground motion (period=1.0s)
S_{MS}	1.481	Site-modified spectral acceleration value
S_{M1}	* null	Site-modified spectral acceleration value
S_{DS}	0.987	Numeric seismic design value at 0.2s SA
S_{D1}	* null	Numeric seismic design value at 1.0s SA

* See Section 11.4.8

Additional Information

Name	Value	Description
SDC	* null	Seismic design category
F_a	1	Site amplification factor at 0.2s
F_v	* null	Site amplification factor at 1.0s
CR_S	0.902	Coefficient of risk (0.2s)
CR_1	0.9	Coefficient of risk (1.0s)
PGA	0.652	MCE_G peak ground acceleration
F_{PGA}	1.1	Site amplification factor at PGA
PGA_M	0.717	Site modified peak ground acceleration
T_L	8	Long-period transition period (s)
SsRT	1.481	Probabilistic risk-targeted ground motion (0.2s)
SsUH	1.642	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
SsD	1.917	Factored deterministic acceleration value (0.2s)
S1RT	0.549	Probabilistic risk-targeted ground motion (1.0s)
S1UH	0.61	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
S1D	0.752	Factored deterministic acceleration value (1.0s)
PGAd	0.81	Factored deterministic acceleration value (PGA)

* See Section 11.4.8

The results indicated here DO NOT reflect any state or local amendments to the values or any delineation lines made during the building code adoption process. Users should confirm any output obtained from this tool with the local Authority Having Jurisdiction before proceeding with design.

Please note that the ATC Hazards by Location website will not be updated to support ASCE 7-22. Find out why.

Disclaimer

Hazard loads are provided by the U.S. Geological Survey Seismic Design Web Services.

LEAVITT & ASSOCIATES ENGINEERS, INC.
1324 FIRST STREET SOUTH
NAMPA, IDAHO 83651
(208) 463-7670

CLIENT: South Coast Lighting&Design
JOB: Temecula Winery Sign
DESIGNER: Jimmy Church

MINIMUM SEISMIC FORCE FOR NONBUILDING STRUCTURES NOT SIMILAR TO BUILDINGS

REFERENCE: 2021 INTERNATIONAL BUILDING CODE, SECTION 1613
AND ASCE 7-16, CHAPTERS 11, 12, 15, 20

Mapped spectral accelerations:	S_S =	1.481	Short periods
	S_1 =	0.549	1-second period
Site Class =		D	Chapter 20, Table 20.3.1
Site Coefficient, Fa =		1.00	Table 11.4-1
Site Coefficient, Fv =		1.75	Table 11.4-2
		SEE SECTION 11.4.8	
$S_{MS} = FaS_S$ =		1.48	Equation 11.4-1
$S_{M1} = FvS_1$ =		0.96	Equation 11.4-2
$S_{DS} = 2S_{MS}/3$ =		0.99	Equation 11.4-3
$S_{D1} = 2S_{M1}/3$ =		0.64	Equation 11.4-4
Risk Category		II	Table 1.5-1
Importance Factor, I_E =		1.00	Table 1.5-2
Seismic Design Category =		D	Table 11.6-1
		D	Table 11.6-2
		D	Most Severe
R =		3	Table 15.4-2
Long-periond transition period, T_L (sec) =		8	Section 11.4.5, Tables 22-14 to 22-17
Fundamental period, T (sec) =		0.65	Section 15.4.4, must be determined (selected to provide max. force)
$C_S = S_{DS}/(R/I_E)$ =		0.329	Equation 12.8-2
But Need Not Exceed:			
$C_S = S_{D1}/((R/I_E)T)$ =		0.329	If $T \le T_L$, Equation 12.8-3
$C_S = S_{D1}*T_L/((R/I_E)T^2)$ =		4.045	If $T \ge T_L$, Equation 12.8-4
Shall Not be Less Than:			
C_S = 0.044S_{DS}I, but not less than 0.03 =		0.043	Equation 15.4-1
$C_S = 0.8S_1I_E/R$ =		0.146	or where $S_1 \ge 0.6g$, Equation 15.4-2
C_S =		0.329	Controlling case
Effective seismic weight, W =		1000 lbs.	Section 12.8
$V = C_SW$ =		**329** lbs.	Equation 12.8-1
When T < 0.06 second:			
$V = 0.3S_{DS}WI$ =		**N/A**	Equation 15.4.2
Vertical Seismic Load Effect			
$E_v = 0.2S_{DS}D$ =		**197** lbs	Equation 12.4-4

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ATC Hazards by Location

Search Information

Coordinates: 33.520421, -117.091267

Elevation: 1261 ft

Timestamp: 2023-06-21T18:51:36.360Z

Hazard Type: Wind

ASCE 7-16		ASCE 7-10		ASCE 7-05	
MRI 10-Year	67 mph	MRI 10-Year	72 mph	ASCE 7-05 Wind Speed	85 mph
MRI 25-Year	72 mph	MRI 25-Year	79 mph		
MRI 50-Year	77 mph	MRI 50-Year	85 mph		
MRI 100-Year	82 mph	MRI 100-Year	91 mph		
Risk Category I	90 mph	Risk Category I	100 mph		
Risk Category II	96 mph	Risk Category II	110 mph		
Risk Category III	103 mph	Risk Category III-IV	115 mph		
Risk Category IV	107 mph				

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Please note that the ATC Hazards by Location website will not be updated to support ASCE 7-22. Find out why.

Disclaimer

Hazard loads are interpolated from data provided in ASCE 7 and rounded up to the nearest whole integer. Per ASCE 7, islands and coastal areas outside the last contour should use the last wind speed contour of the coastal area – in some cases, this website will extrapolate past the last wind speed contour and therefore, provide a wind speed that is slightly higher. NOTE: For queries near wind-borne debris region boundaries, the resulting determination is sensitive to rounding which may affect whether or not it is considered to be within a wind-borne debris region.

Mountainous terrain, gorges, ocean promontories, and special wind regions shall be examined for unusual wind conditions.

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MecaWind v2432

Calculations Prepared by:
Date: Jun 23, 2023
Designer: Jimmy Church

Calculations Prepared For:
Client: South Coast Lighting & Design
Project #: 23073.001
Location: Temecula, California
Description: Temecula Winery Arch Sign

File Location: S:\STRUCTURAL - 2023\South Coast Lighting - 23073\001 - Sign Structure and Foundation - Temecula\Calculations\Wind.wnd

General:

Wind Load Standard	= ASCE 7-16	Basic Wind Speed	= 96.0 mph
Exposure Classification	= C	Risk Category	= II
Structure Type	= Solid Sign	Design Basis for Wind Pressures	= LRFD
MWFRS Analysis Method	= Ch 29	C&C Analysis Method	= None
Dynamic Type of Structure	= Rigid	Show Advanced Options	= False

Solid Sign Inputs:

h	= Height from Grade to Top of Solid Sign	= 23.300 ft
S	= Height of Solid Sign	= 7.330 ft
B	= Width of Solid Sign	= 75.000 ft
T	= Thickness of Solid Sign	= 0.000 ft
L_r	= Dimension of return corner L_r	= 1.330 ft
e	= Solidity Ratio	= 1.0000
AttachWall	= Attached to Wall	= False
Dbl	= Double Faced & All Sides Enclosed	= False
IsCol	= Supported on Columns	= True
Nc	= Quantity of Support Columns	= 2
Dc	= Width of Column	= 16.0000 in
Oc	= Offset of Columns from Centerline	= 0.000 ft
Sc	= Column Spacing	= 75.000 ft
Shape	= Shape of Column	= Round Moderately Smooth

Exposure Constants [Table 26.11-1]:

α = 3-s Gust-speed exponent	= 9.500	Z_g = Nominal Ht of Boundary Layer	= 900.000 ft
$\hat{a}$ = Recipicol of α	= 0.105 ft	b = 3 sec gust speed factor	= 1.000
α_m = Mean hourly Wind-Speed Exponent	= 0.154	b_m = Mean hourly Windspeed Exponent	= 0.650
c = Turbulence Intensity Factor	= 0.200	ε = Integral Length Scale Exponent	= 0.2000

Gust Factor Calculation for Wind:

Gust Factor Category I Rigid Structures - Simplified Method

G_1 = For Rigid Structures (Natural Frequency > 1 Hz) use 0.85 = 0.85

* See next page

Gust Factor Category II Rigid Structures - Complete Analysis

Z_m	= Equiv Height of Struc: Max(0.6*Ht, Z_{min})	= 15.000 ft
I_{zm}	= Intensity of Turbulence at height Z_m: $c \cdot (33/Z_m)^{1/6}$ [Eqn 26.11-1]	= 0.228
L_{zm}	= Integeral Length Scale of Turbulence [Eqn 26.11-9]	= 427.057 ft
B	= Avg Structure Width Normal to Wind Direction	= 75.000 ft
Q	= $1/(1+0.63 \cdot [(B+Ht)/L_{zm}]^{0.63})$ [Eqn 26.11-8]	= 0.895
G_2	= $0.925 \cdot ((1+1.7 \cdot 3.4 \cdot I_{zm} \cdot Q)/(1+1.7 \cdot 3.4 \cdot I_{zm}))$	= 0.870

Gust Factor Used in Analysis

G = Gust Factor: Min(G_1, G_2) = 0.850

Main Wind Force Resisting System (MWFRS) Wind Calculations for Solid Sign per Sec 29.4

h	= Mean structure height	= 23.300 ft
K_z	= $2.01 \cdot (z/Z_g)^{2/\alpha}$ [Table 26.10-1]	= 0.931
K_{zt}	= No Topographic feature specified	= 1.000
K_d	= Wind Directionality Factor per Table 26.6-1	= 0.85
$+GC_{pi}$	= Enclosed Positive Internal Pressure Table 26.13-1	= +0.18
$-GC_{pi}$	= Enclosed Negative Internal Pressure Table 26.13-1	= -0.18
LF	= Load Factor based upon STRENGTH Design	= 1.00

Response Spectra Data

X Direction Spectra	ASCE 2016, Parametric Design Spectra
Modes Used	All 8 modes
Mode No. for Signs	
Modal Combination Method	CQC
Damping Ratio	5 Percent

Y Direction Spectra	ASCE 2016, Parametric Design Spectra
Modes Used	All 8 modes
Mode No. for Signs	
Modal Combination Method	CQC
Damping Ratio	5 Percent

Z Direction Spectra	ASCE 2016, Parametric Design Spectra
Modes Used	All 8 modes
Mode No. for Signs	
Modal Combination Method	CQC
Damping Ratio	5 Percent

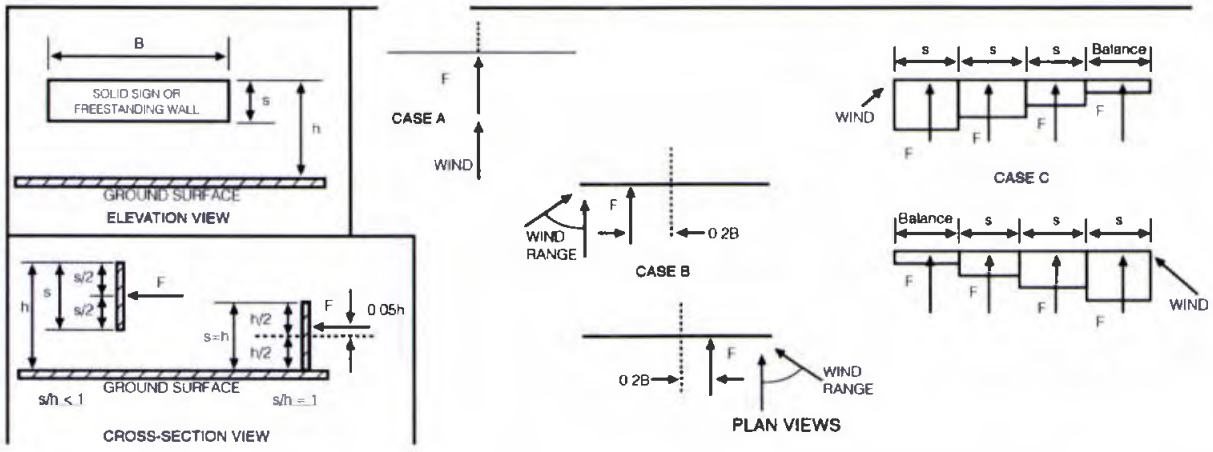
Frequencies / Participation

Mode Number	Frequency (Hz)	Period (Sec)	Percent Modal Participation X Spectra	Y Spectra	Z Spectra
1	1.428	.7			79.974
2	2.489	.402	.329	50.854	
3	2.507	.399	83.42	.205	
4	2.88	.347			.758
5	2.986	.335			
6	4.744	.211			9.964
7	6.085	.164	6.814		
8	7.393	.135			
Totals :			90.563	51.059	90.697

q_h = $0.00256 \cdot K_h \cdot K_{zt} \cdot K_d \cdot K_e \cdot V^2 \cdot LF$ [Eqn 26.10-1] = 18.68 psf

K_e = Ground Elevation Factor: $e^{-0.0000362 \cdot z_g}$ [Table 26.9-1] = 1.000

MWFRS Wind Pressures on Solid Sign per Fig 29.3-1



R = Reduction factor to account for openings: (1-(1-e)^1.5) = 1.000

Rc = Reduction factor for Case C not applicable since s/h <= 0.8 = 1.000

As = Gross Area of Solid Sign: B * s = 549.75 ft^2

B/s = Aspect Ratio: B / s = 10.232

s/h = Clearance Ratio: s / h = 0.315

Cf = Net Force Coefficient for Case A and B per Fig 29.3-1 = 1.794

e = Not Double Faced, Case B eccentricity is 0.2 = 0.2000

Case A: Resultant force acts normal to face through geometric center

F = Wind Force: $q_z \cdot G \cdot C_f \cdot A_s \cdot Qty$ [Eqn 29.3-1] = 15656 lb

Case C: Since B/s >= 2 then B need not be considered and Case C must be considered
Forces act normal to the face and through the geometric center of each region

$p_w = F/A_s$
$= 15656/550$
$= 28.5 psf$

MWFRS Pressures per Fig 29.3-1 on Solid Sign
All wind pressures include a Load Factor (LF) of 1.0

Range	Start Dist ft	End Dist ft	Xl ft	Cf	Rlr	A ft^2	Fc lb	Fc1 lb	M lb•ft	
0 to s	0.000	7.330	3.665	3.769	0.940	53.73	3,215	3,021	-102,206.4	56 psf
s to 2s	7.330	14.660	10.995	2.462	1.000	53.73	2,100	2,100	-55,652.9	39 psf
2s to 3s	14.660	21.990	18.325	1.862	1.000	53.73	1,588	1,588	-30,448.3	30 psf
3s to 4s	21.990	29.320	25.655	0.993	1.000	53.73	847	847	-10,028.1	16 psf
4s to 5s	29.320	36.650	32.985	0.104	1.000	53.73	89	89	-401.9	2 psf
5s to 10s	36.650	73.300	54.975	0.070	1.000	268.64	297	297	5,185.6	1 psf
>10s	73.300	75.000	74.150	0.043	1.000	12.46	8	8	308.3	1 psf
Total						**549.75**	**8,144**	**7,949**	**-193,243.7**	

Notes:
Cf = Force Coefficient from Fig 29.3-1
A = Area Of Region: (End Dist - Start Dist) * s
Fc = Wind Force: $q_h \cdot G \cdot C_f \cdot A \cdot Qty$ [Eqn 29.3-1]
Fc1 = Reduced Force acting on Region: Fc*R*Rlr*Rc
Xc = Horizontal Distance from windward edge to geometric center: B/2 = 37.500 ft
Xl = Horizontal distance from windward edge to load: 0.5*(Start_Dist + End_Dist)
M = Moment about geometric center due to force: F * (Load_Dist - Xc)
Rlr = Reduction factor for return corner per Fig 29.3-1 which applies for 0 to s for B/s ≥ 5

Wind Load Acting on Column(s):

D_c = Width Of Column = 1.333 ft

h_c = Height of Column: h - s = 15.970 ft

h_c/D_c = Ratio: h_c / D_c = 17.475

z = Height to top of columns: h_c = 15.970 ft

q_z	= $0.00256 \cdot K_z \cdot K_{zt} \cdot K_d \cdot K_e \cdot V^2 \cdot LF$ [Eqn 26.10-1]	= 17.25 psf
Dq_z	= Parameter for Shape Fac: $D_c * q_z^{0.5}$	= 5.762
C_{fc}	= Shape Factor of Column Fig 29.4-1	= 0.658
A_c	= Area of a Column: $h_c \cdot D_c$	= 21.29 ft^2
F_c	= Force on Column(s): Wind Force: $q_z \cdot G \cdot C_{fc} \cdot A_c \cdot Qty$ [Eqn 29.3-1]	= 205 lb

$w = F/h_c = 205/15.92 = 13\ \#/ft$

Load on C "Pipe Top & Bottom Chord"

$w = 28psf\ (6.625/1) = 15\ \#/ft$

Load on HSS 3x3

$w = 28psf\ (3/12) = 7\ \#/ft$

Load on HSS 8x8

$w = 28psf\ (8/12) = 19\ \#/ft$

Load on Temecula sign

$P = (26' * 2.5')(28psf) = 1820\ \#$

Acting on (5) HSS 3x3's

$P' = P/5 = 364\ \#$

LEAVITT & ASSOCIATES
ENGINEERS, INC.
1324 1st Street S., Nampa, ID 83651
Ph: (208) 463-0333 Fx: (208) 463-9040

JOB South Coast Lighting - Temecula
SHEET NO. 7 OF
CALCULATED BY J. Church DATE 6/23/23
CHECKED BY DATE
SCALE

Distribution of Sign Weights

(From Loads Reported by South Coast Lighting & Design, See Appendix)

Temecula Sign

$W_T = 348.62 + 23.23 + 22.87$

$= 395\ \#$

Place at 5 points

$W_T' = W_T/5 = 79$

Seismic

$W_{T\epsilon_H} = 0.329\, W_T' = 26\ \#$

$W_{T\epsilon_V}' = 0.197\, W_T' = 16\ \#$

Wine Country Sign

$W_W = 1127.5 + 60.98 + 64.03 + 100 + 114.4$

$= 1467\ \#$

Place at 18 places

$W_W' = W_W/18 = 82\ \#$

Seismic

$W_{W\epsilon_H}' = 0.329\, W_W' = 27\ \#$

$W_{W\epsilon_V}' = 0.197\, W_W' = 16\ \#$

LEAVITT & ASSOCIATES
ENGINEERS, INC.
1324 1st Street S., Nampa, ID 83651
Ph: (208) 463-0333 Fx: (208) 463-9040

JOB South Coast Lighting - Temecula
SHEET NO. 8 OF
CALCULATED BY JS. Chan DATE 6/23/23
CHECKED BY DATE
SCALE

Distribution of Sign Weights Cont.

Deco Pieces

$W_D = 519$

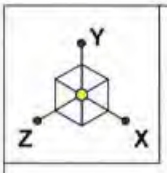
Place at 2 points

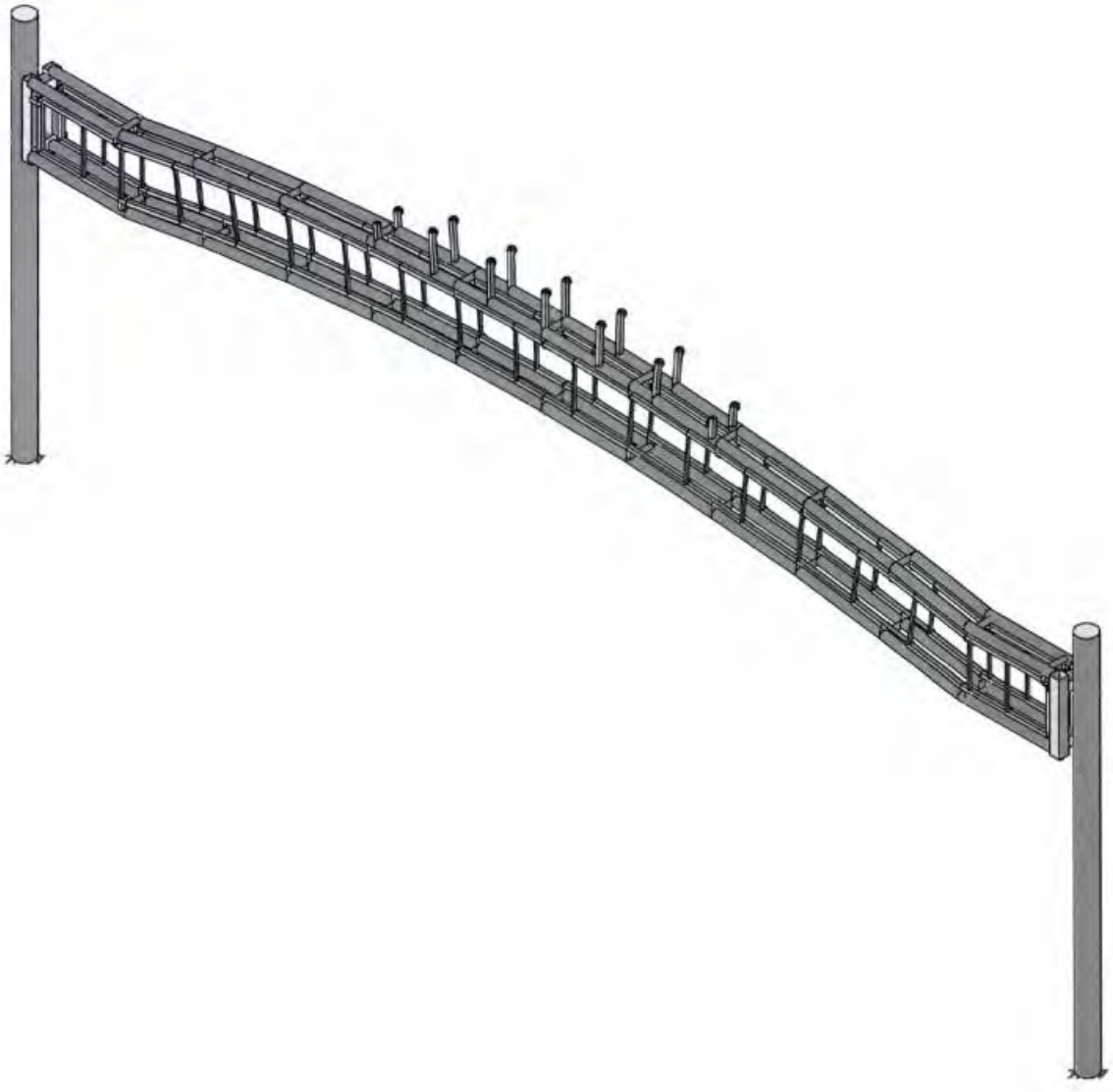
$W_D' = W_D/2 = 260$ #

Seismic

$W'_{pE_H} = 0.329 W_D' = 86$ #

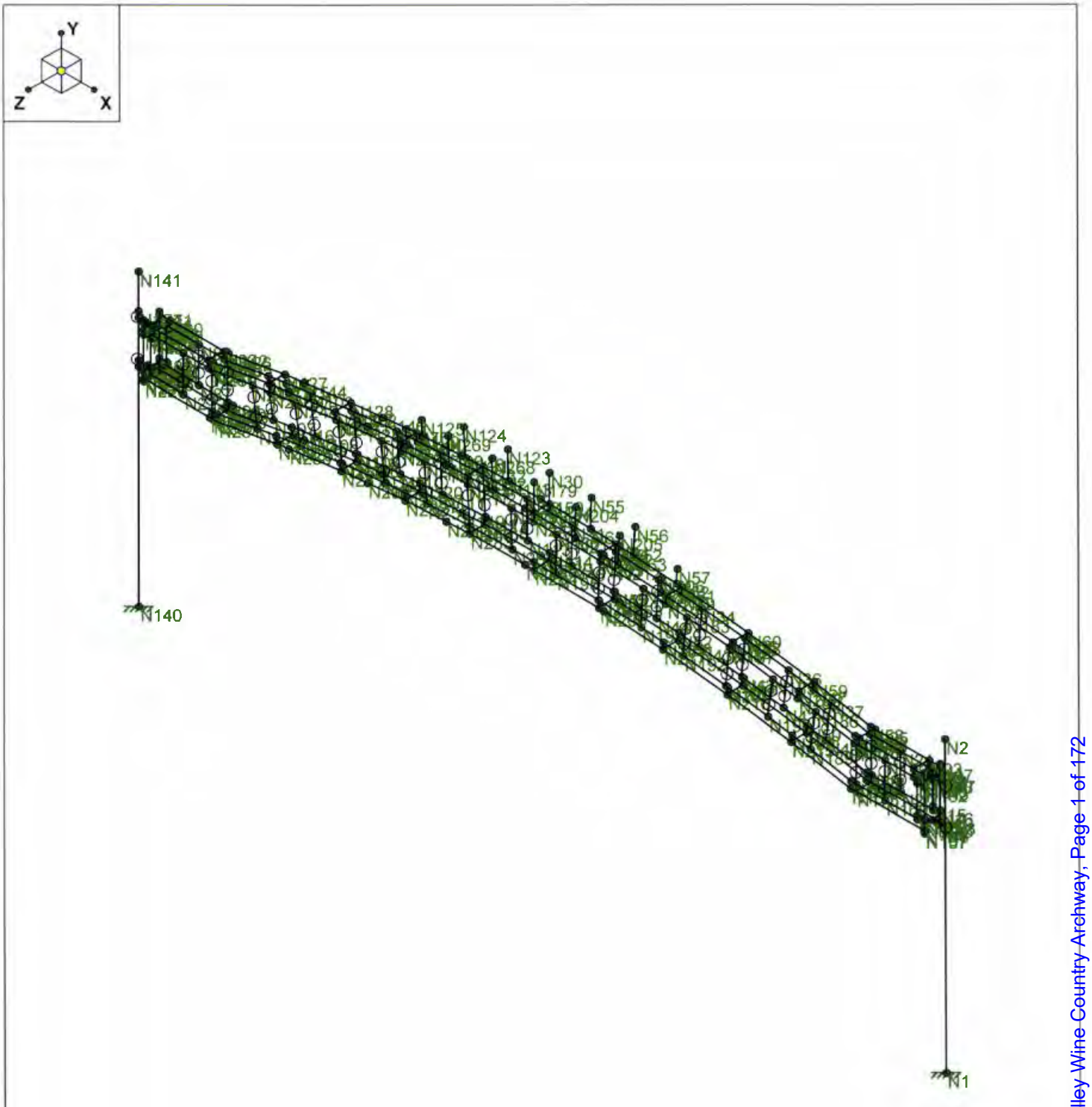
$W'_{DE_V} = 0.197 W_D' = 51$ #





Envelope Only Solution

Leavitt & Associates Engin...	Temecula Winery Gateway Arch Sign	SK - 1
Jimmy Church		July 3, 2023 at 7:47 AM
23073.001		Sign Frame-Revised - Double Sign



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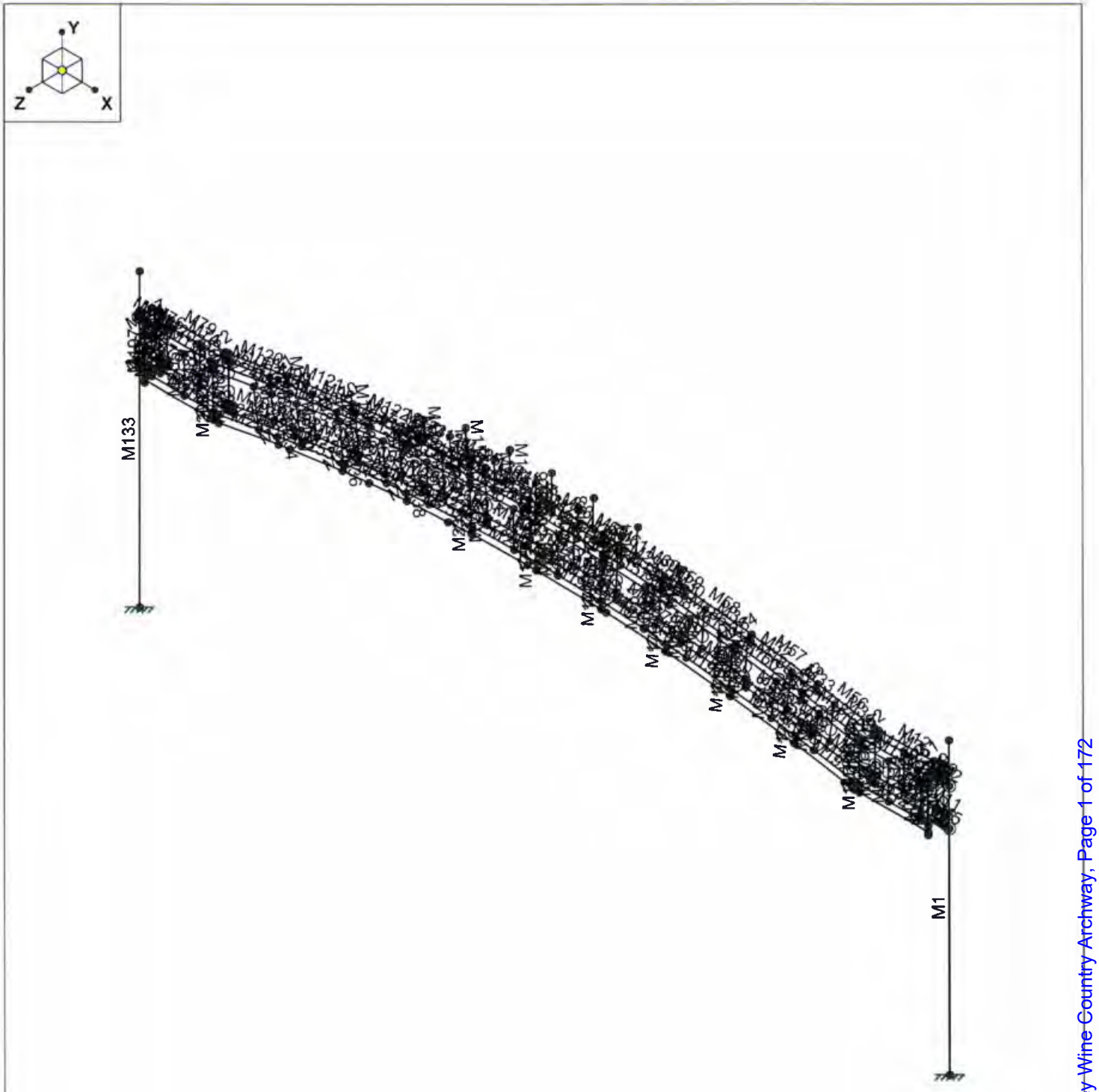
Leavitt & Associates Engin...	Temecula Winery Gateway Arch Sign	SK - 2
Jimmy Church		July 3, 2023 at 7:47 AM
23073.001		Sign Frame-Revised - Double Sign...



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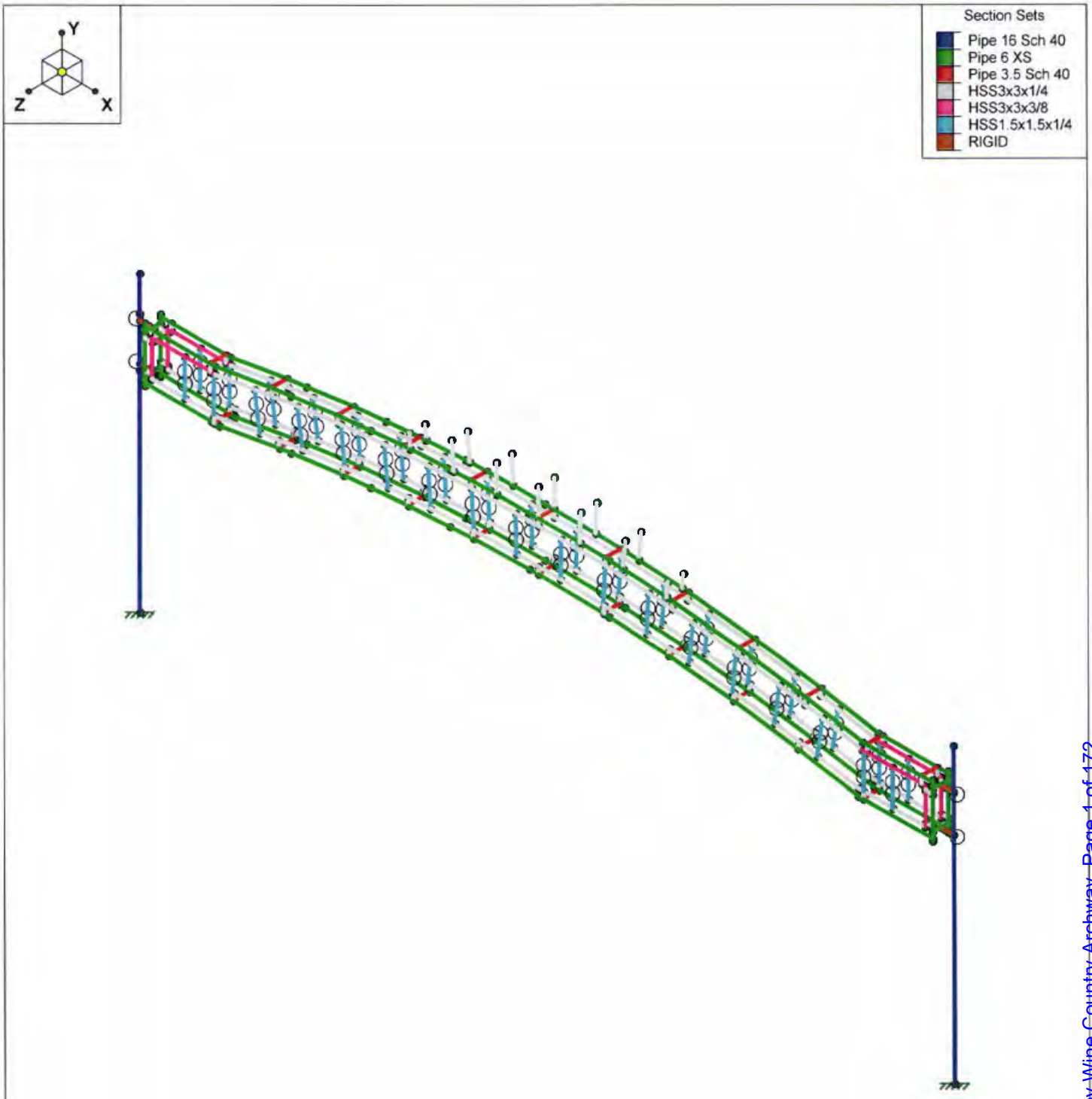
Leavitt & Associates Engin...	Temecula Winery Gateway Arch Sign	SK - 3
Jimmy Church		July 3, 2023 at 7:47 AM
23073.001		Sign Frame-Revised - Double Sign



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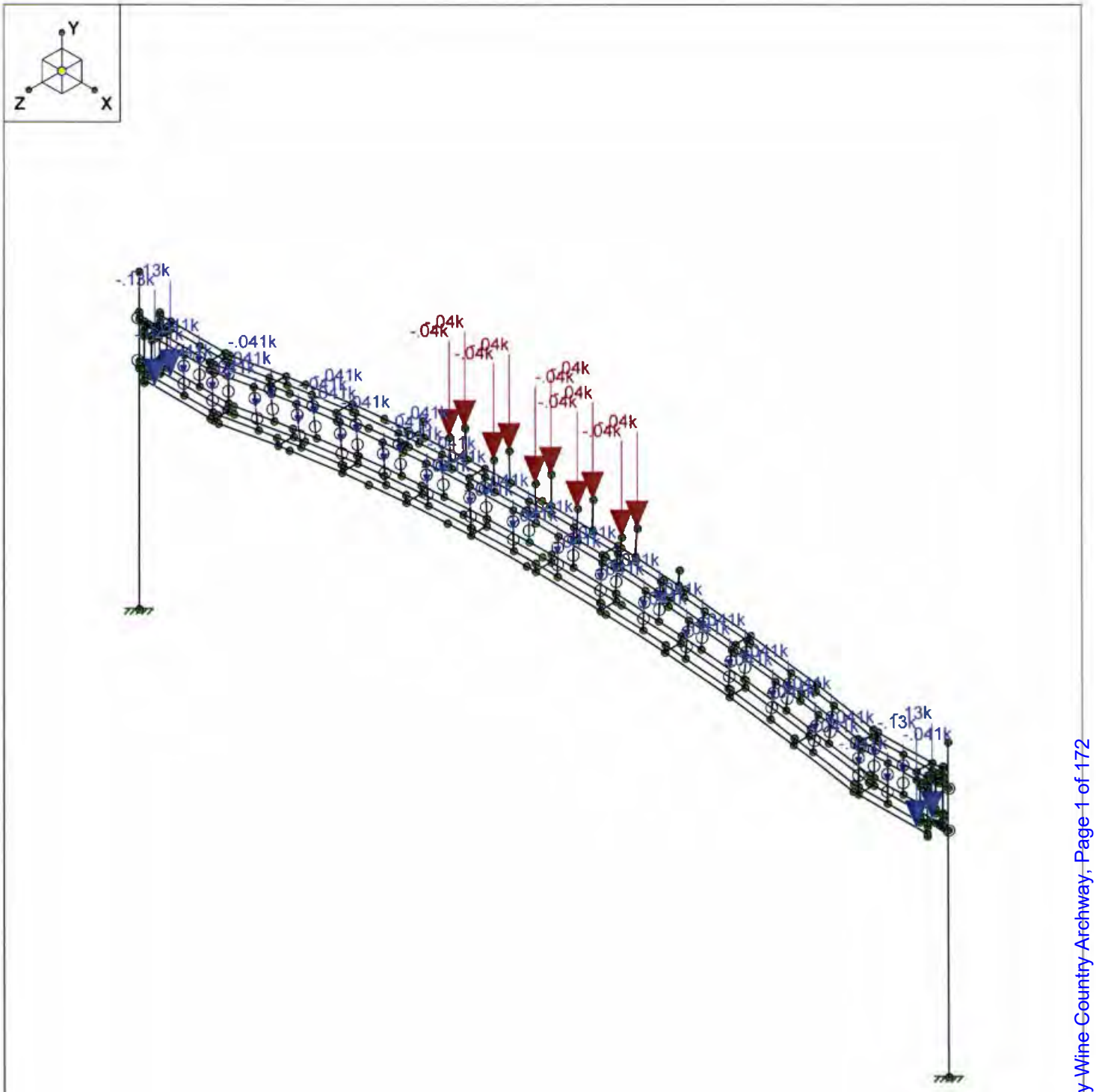
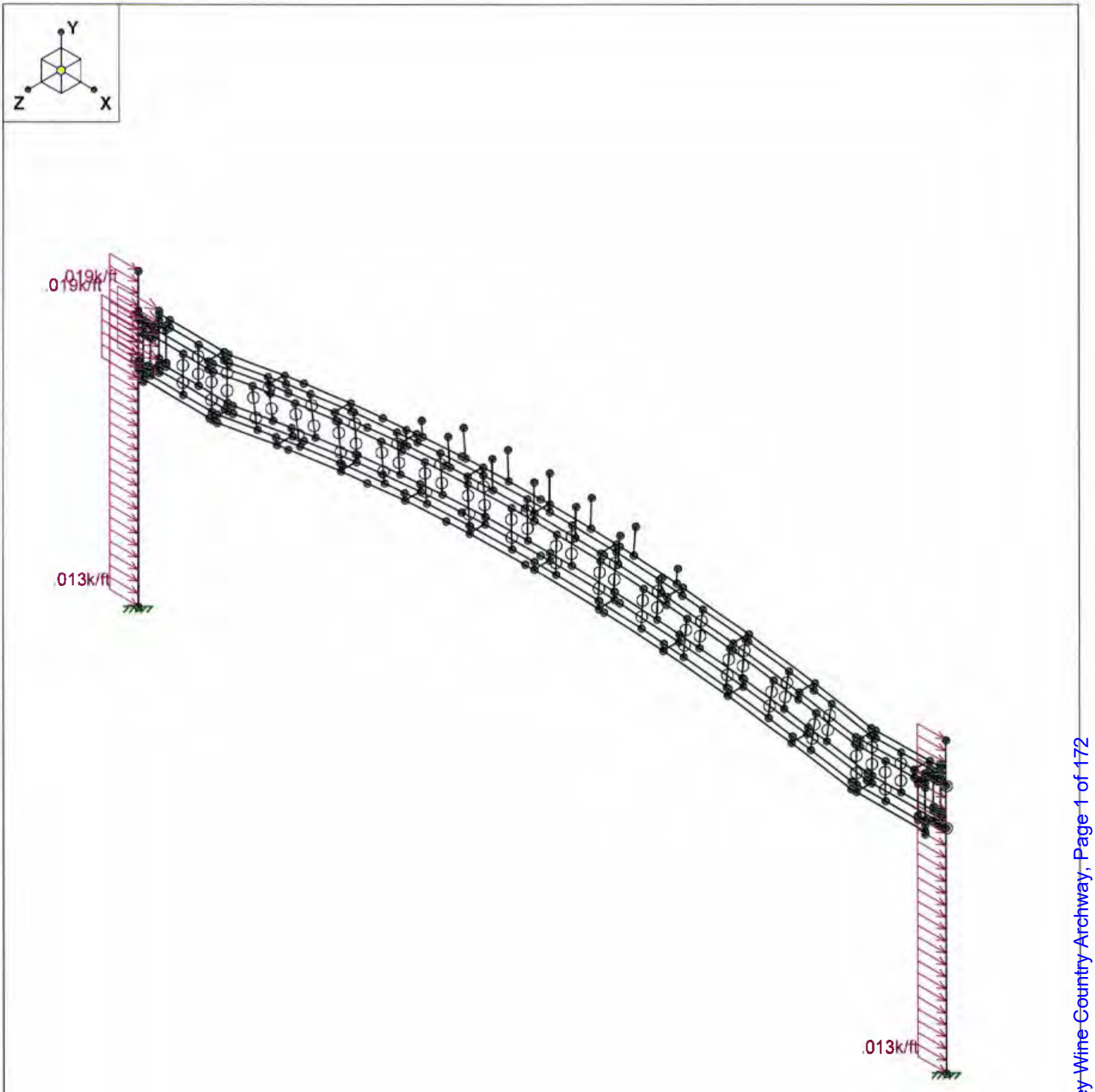
Leavitt & Associates Engin...	Temecula Winery Gateway Arch Sign	SK - 4
Jimmy Church		July 3, 2023 at 11:21 AM
23073.001		Sign Frame-Revised - Double Sign



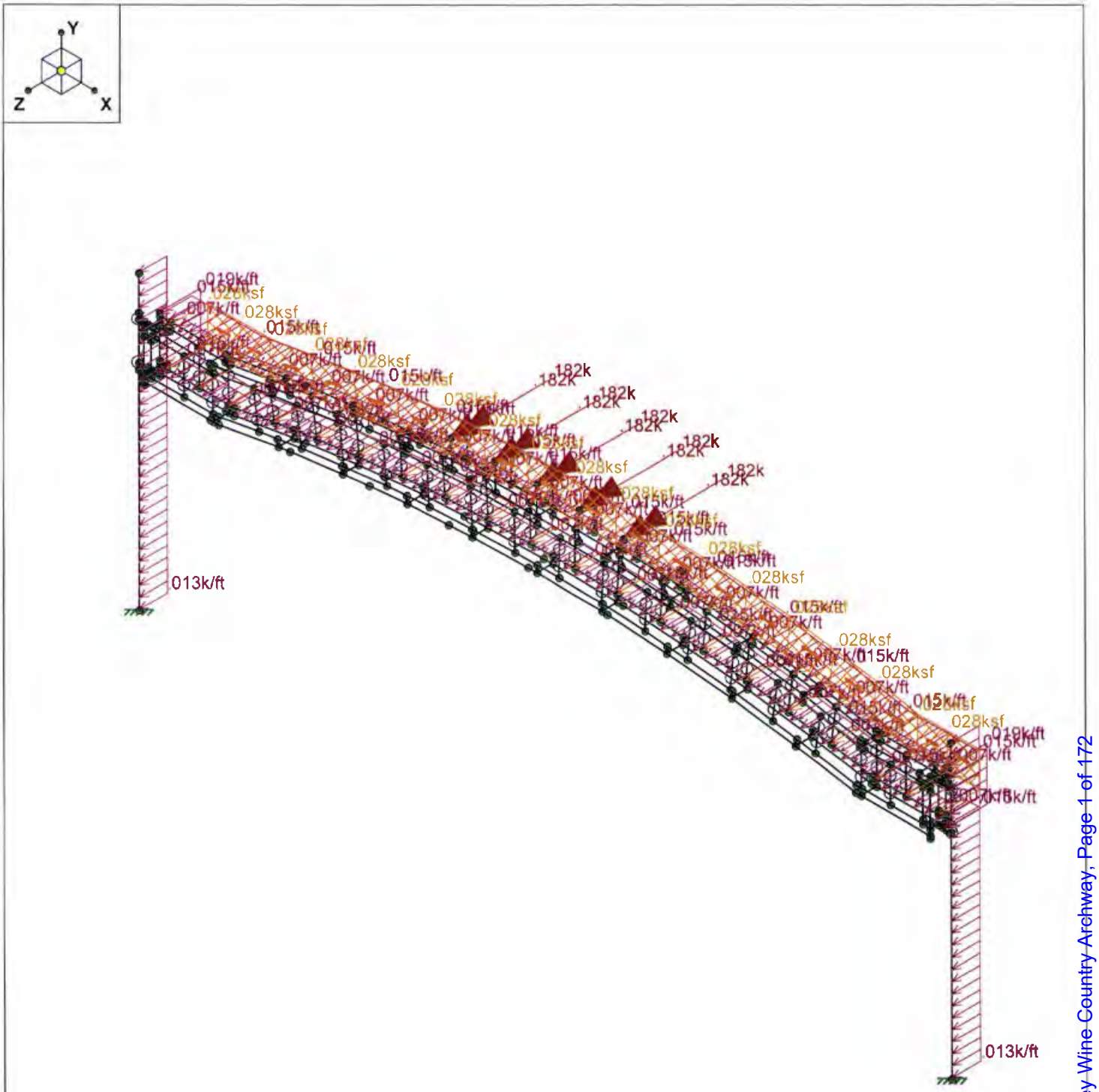
Loads: BLC 1, Dead
Envelope Only Solution

Leavitt & Associates Engin...	Temecula Winery Gateway Arch Sign	SK - 5
Jimmy Church		July 3, 2023 at 8:25 AM
23073.001		Sign Frame-Revised - Double Sign



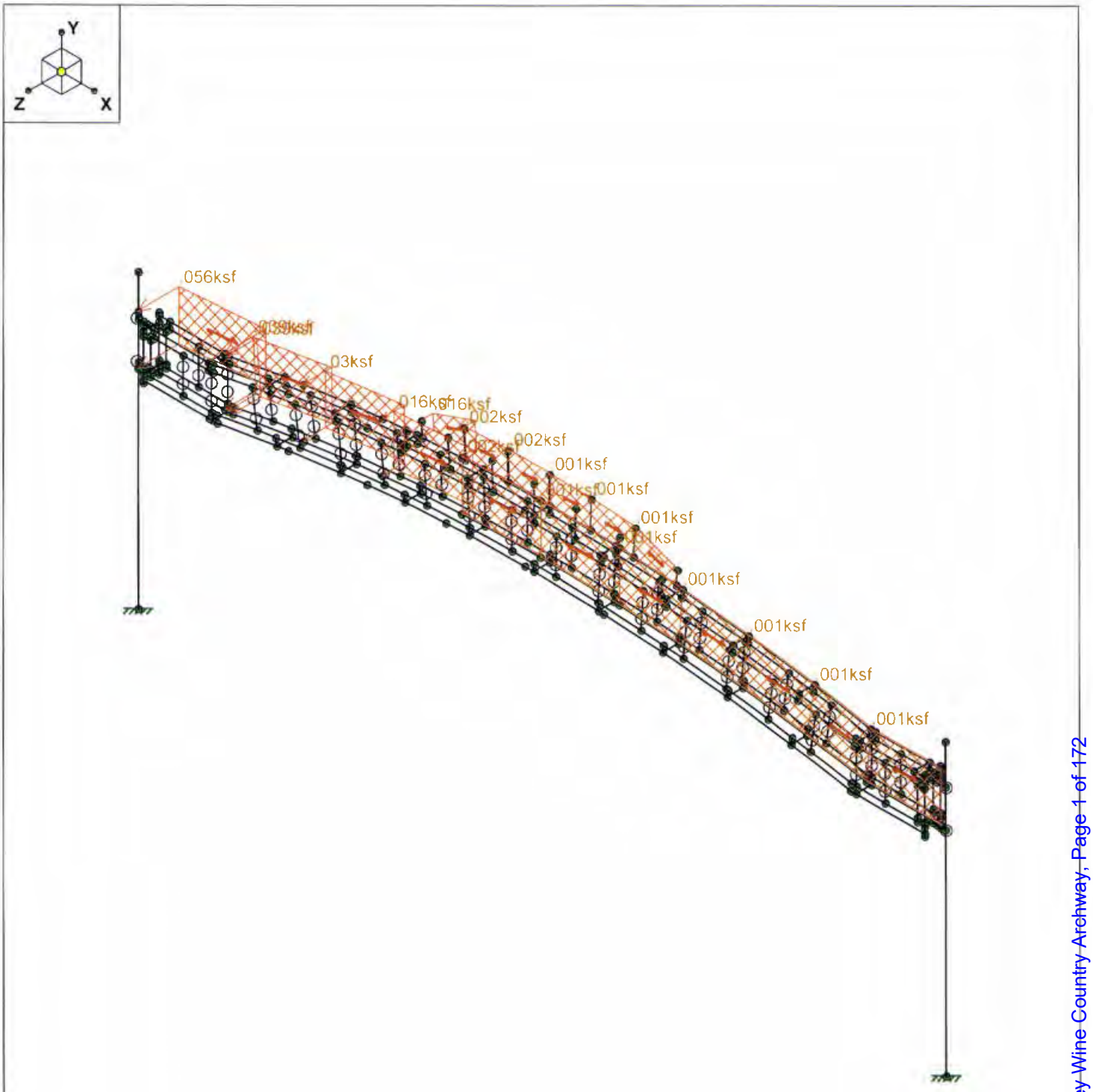
Loads: BLC 2, Wind X
Envelope Only Solution

Leavitt & Associates Engin...	Temecula Winery Gateway Arch Sign	SK - 6
Jimmy Church		July 3, 2023 at 8:26 AM
23073.001		Sign Frame-Revised - Double Sign



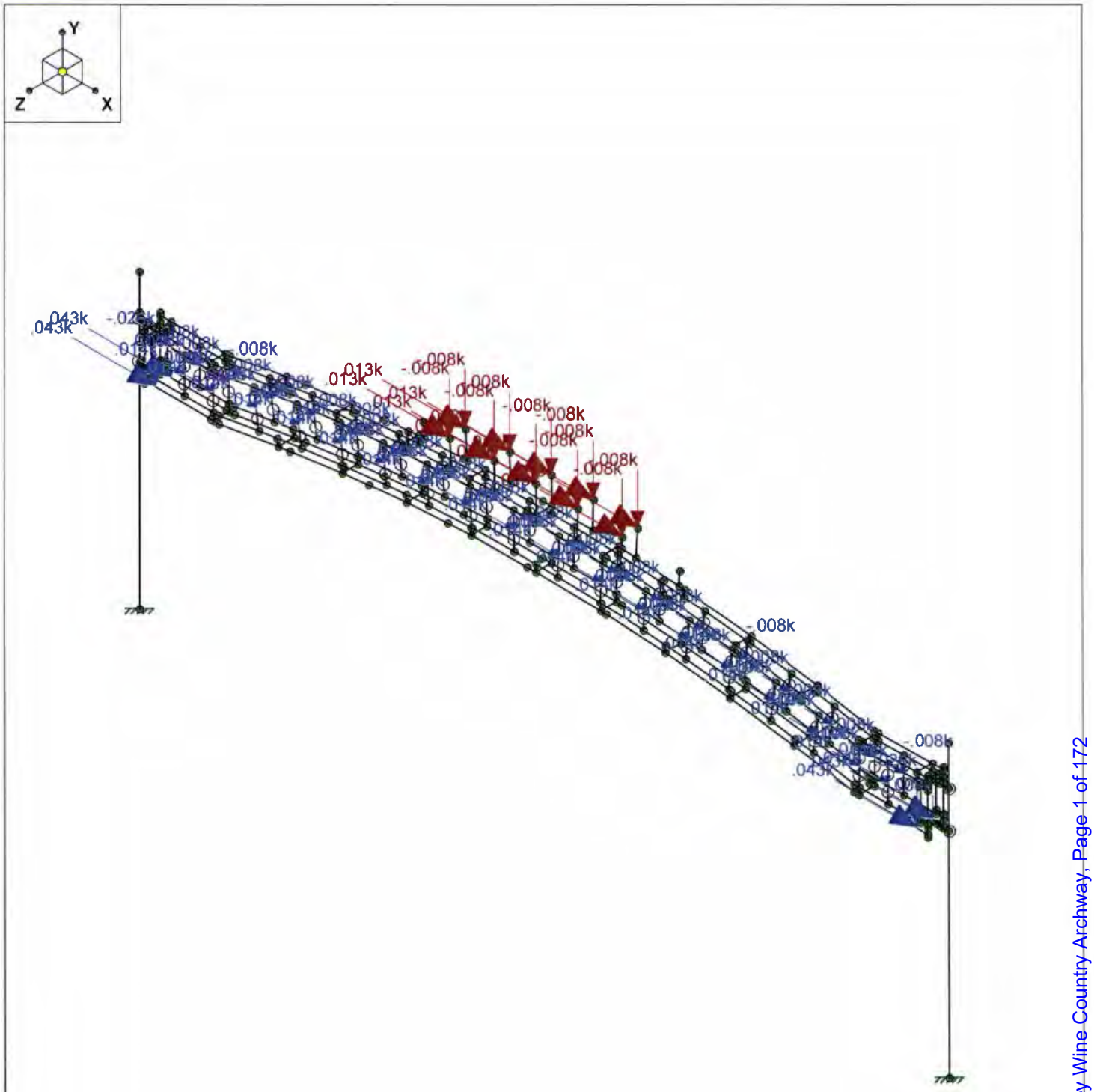
Loads: BLC 3, Wind Z
Envelope Only Solution

Leavitt & Associates Engin...	Temecula Winery Gateway Arch Sign	SK - 7
Jimmy Church		July 3, 2023 at 8:26 AM
23073.001		Sign Frame-Revised - Double Sign



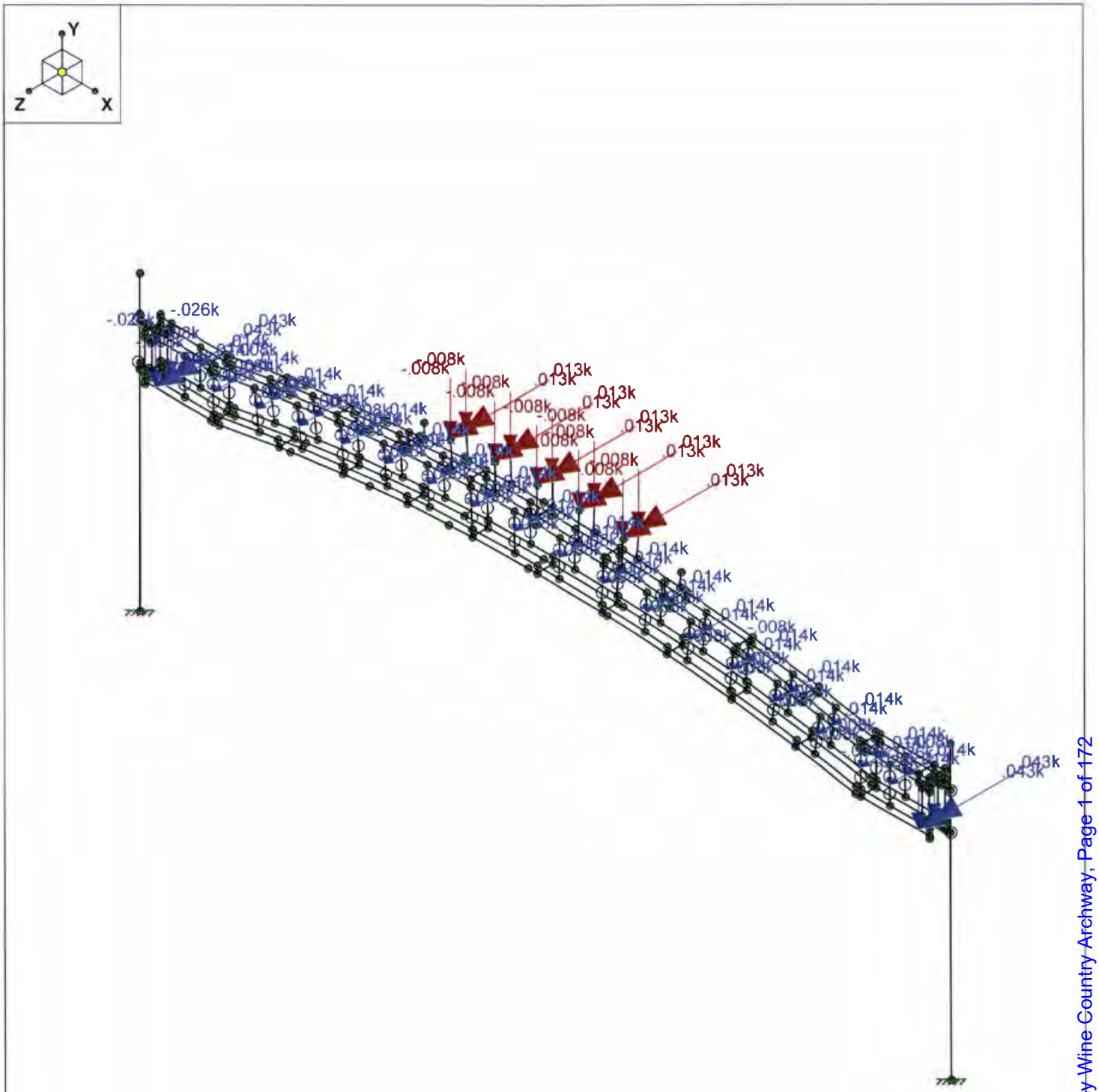
Loads: BLC 4, Wind Z - Case C
Envelope Only Solution

Leavitt & Associates Engin...	Temecula Winery Gateway Arch Sign	SK - 8
Jimmy Church		July 3, 2023 at 8:26 AM
23073.001		Sign Frame-Revised - Double Sign



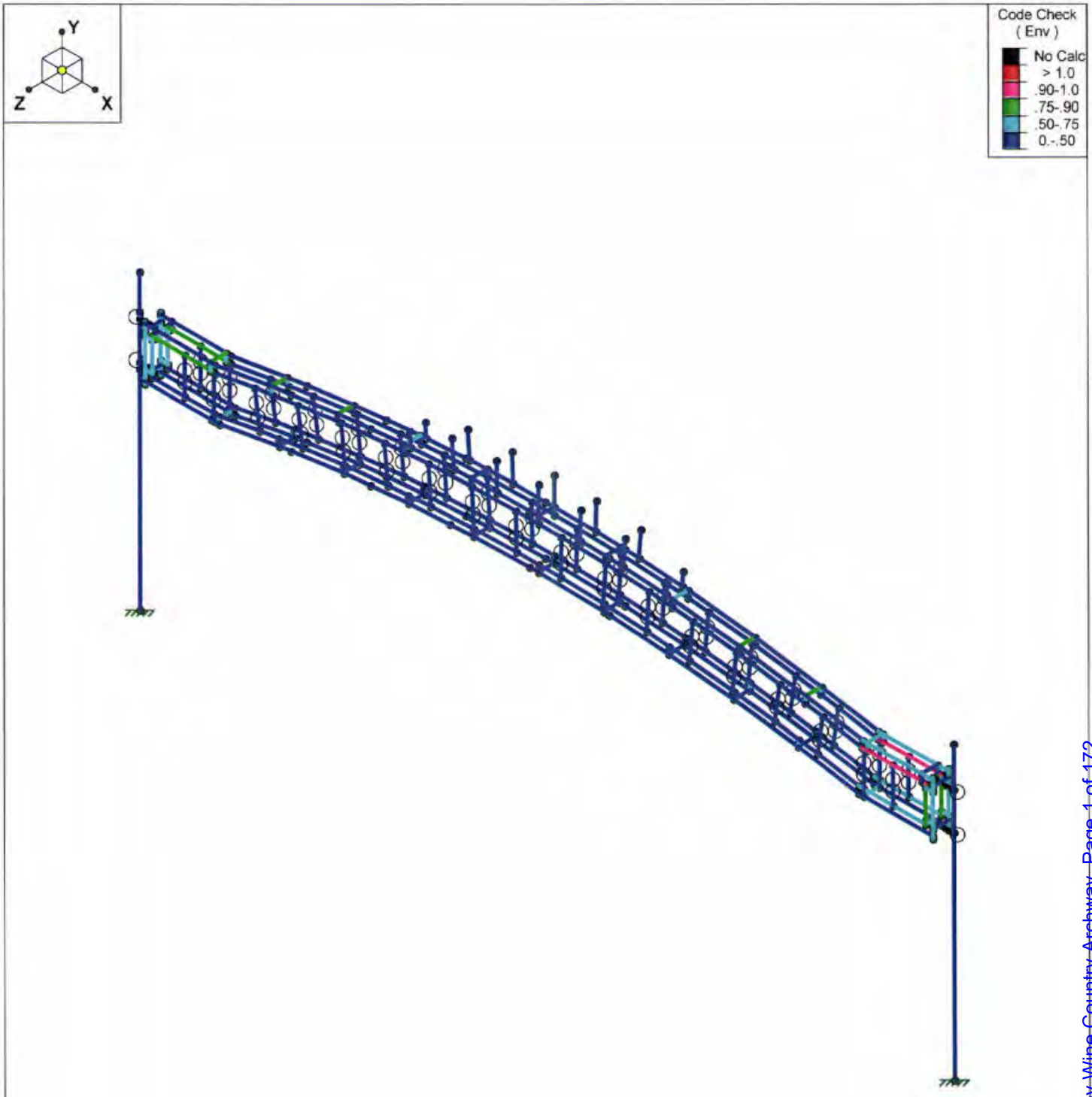
Loads: BLC 5, Seismic X
Envelope Only Solution

Leavitt & Associates Engin...	Temecula Winery Gateway Arch Sign	SK - 9
Jimmy Church		July 3, 2023 at 8:26 AM
23073.001		Sign Frame-Revised - Double Sign



Loads: BLC 6, Seismic Z
Envelope Only Solution

Leavitt & Associates Engin...	Temecula Winery Gateway Arch Sign	SK - 10
Jimmy Church		July 3, 2023 at 8:26 AM
23073.001		Sign Frame-Revised - Double Sign



Envelope Only Solution

Leavitt & Associates Engin...	Temecula Winery Gateway Arch Sign	SK - 19
Jimmy Church		July 3, 2023 at 11:21 AM
23073.001		Sign Frame-Revised - Double Sign...

(Global) Model Settings

Display Sections for Member Calcs	3
Max Internal Sections for Member Calcs	99
Include Shear Deformation?	Yes
Increase Nailing Capacity for Wind?	Yes
Include Warping?	Yes
Trans Load Btwn Intersecting Wood Wall?	Yes
Area Load Mesh (in^2)	144
Merge Tolerance (in)	.12
P-Delta Analysis Tolerance	0.50%
Include P-Delta for Walls?	Yes
Automatically Iterate Stiffness for Walls?	Yes
Max Iterations for Wall Stiffness	3
Gravity Acceleration (ft/sec^2)	32.2
Wall Mesh Size (in)	24
Eigensolution Convergence Tol. (1.E-)	4
Vertical Axis	Y
Global Member Orientation Plane	XZ
Static Solver	Sparse Accelerated
Dynamic Solver	Accelerated Solver

Hot Rolled Steel Code	AISC 15th(360-16): ASD
Adjust Stiffness?	Yes(Iterative)
RISAConnection Code	AISC 14th(360-10): ASD
Cold Formed Steel Code	AISI S100-16: ASD
Wood Code	AWC NDS-18: ASD
Wood Temperature	< 100F
Concrete Code	ACI 318-08
Masonry Code	TMS 402-16: ASD
Aluminum Code	AA ADM1-15: ASD - Building
Stainless Steel Code	AISC 14th(360-10): ASD
Adjust Stiffness?	Yes(Iterative)

Number of Shear Regions	4
Region Spacing Increment (in)	4
Biaxial Column Method	Exact Integration
Parme Beta Factor (PCA)	.65
Concrete Stress Block	Rectangular
Use Cracked Sections?	Yes
Use Cracked Sections Slab?	Yes
Bad Framing Warnings?	No
Unused Force Warnings?	Yes
Min 1 Bar Diam. Spacing?	No
Concrete Rebar Set	REBAR_SET_ASTMA615
Min % Steel for Column	1
Max % Steel for Column	8

(Global) Model Settings, Continued

Seismic Code	ASCE 7-16
Seismic Base Elevation (ft)	Not Entered
Add Base Weight?	Yes
Ct X	.02
Ct Z	.02
T X (sec)	Not Entered
T Z (sec)	Not Entered
R X	3
R Z	3
Ct Exp. X	.75
Ct Exp. Z	.75
SD1	1
SDS	1
S1	1
TL (sec)	5
Risk Cat	I or II
Drift Cat	Other
Om Z	1
Om X	1
Cd Z	4
Cd X	4
Rho Z	1
Rho X	1

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (\1E...	Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	.3	.65	.527	42	1.4	58	1.3
5	A500 Gr.B RECT	29000	11154	.3	.65	.527	46	1.4	58	1.3
6	A500 Gr.C RND	29000	11154	.3	.65	.527	46	1.4	62	1.3
7	A500 Gr.C RECT	29000	11154	.3	.65	.527	50	1.4	62	1.3
8	A53 Gr.B	29000	11154	.3	.65	.49	35	1.6	60	1.2
9	A1085	29000	11154	.3	.65	.49	50	1.4	65	1.3
10	A913 Gr.65	29000	11154	.3	.65	.49	65	1.1	80	1.1

General Material Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (\1E5 F)	Density[k/ft^3]
1	gen_Conc3NW	3155	1372	.15	.6	.251
2	gen_Conc4NW	3644	1584	.15	.6	.251
3	gen_Conc3LW	2085	906	.15	.6	.19
4	gen_Conc4LW	2408	1047	.15	.6	.19
5	gen_Alum	10100	4077	.3	1.29	.299
6	gen_Steel	29000	11154	.3	.65	.847
7	gen_Plywood	1800	38	0	.3	.06
8	RIGID	1e+6		.3	0	0
9	gen_Ortho	29000	11154	.3	.65	.847

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Pipe 16 Sch 40	PIPE 16 SCH 40	Column	Pipe	A53 Gr.B	Typical	24.347	731.942	731.942	1463.884
2	Pipe 6 XS	PIPE_6.0X	Column	Wide Flange	A53 Gr.B	Typical	7.83	38.3	38.3	76.6

Hot Rolled Steel Section Sets (Continued)

	Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
3	Pipe 3.5 Sch 40	PIPE 3.5	Beam	Pipe	A53 Gr.B	Typical	2.5	4.52	4.52	9.04
4	HSS8x8x3/8	HSS8X8X6	Column	Tube	A500 Gr.C RECT	Typical	10.4	100	100	160
5	HSS3x3x1/4	HSS3X3X4	Column	Tube	A500 Gr.C RECT	Typical	2.44	3.02	3.02	5.08
6	HSS3x3x3/8	HSS3X3X6	Column	Tube	A500 Gr.C RECT	Typical	3.39	3.78	3.78	6.64
7	HSS1.5x1.5x1/4	HSS1.5x1.5x1/4	Column	Tube	A500 Gr.C RECT	Typical	1.25	.339	.339	.488

General Section Sets

	Label	Shape	Type	Material	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	GEN1	RE4X4	Beam	gen_Conc3NW	16	21.333	21.333	31.573
2	RIGID		None	RIGID	1e+6	1e+6	1e+6	1e+6

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Di...
1	N1	75.	-0.	0	0	
2	N2	75.	26.833333	0	0	
3	N3	75.	23.125	0	0	
4	N4	73.791667	23.875	-0.723985	0	
5	N5	73.791667	18.958333	-0.723985	0	
6	N6	74.166667	23.125	0	0	
7	N7	73.791667	23.125	-0.723985	0	
8	N8	75.	19.708333	0	0	
9	N9	74.166667	19.708333	0	0	
10	N10	73.791667	19.708333	-0.723985	0	
11	N11	73.125	23.041667	-0.723985	0	
12	N12	73.125	22.708333	-0.723985	0	
13	N13	73.791667	22.708333	-0.723985	0	
14	N14	73.125	19.791667	-0.723985	0	
15	N15	73.125	20.125	-0.723985	0	
16	N16	73.791667	20.125	-0.723985	0	
17	N17	73.791667	23.666667	-0.723985	0	
18	N18	73.791667	19.166667	-0.723985	0	
19	N19	66.91666	19.166667	-0.723985	0	
20	N20	70.1153	19.791667	-0.723985	0	
21	N21	70.1153	23.041667	-0.723985	0	
22	N22	72.791667	23.041667	-0.723985	0	
23	N23	72.791667	23.666667	-0.723985	0	
24	N24	67.750652	23.041667	-0.723985	0	
25	N25	67.750652	23.666667	-0.723985	0	
26	N26	67.403871	19.166667	-0.723985	0	
27	N27	67.403871	19.791667	-0.723985	0	
28	N28	67.433429	19.791667	-0.723985	0	
29	N29	67.433429	23.041667	-0.723985	0	
30	N30	37.5	29.103449	-0.723985	0	
31	N31	39.597372	25.961902	-0.723985	0	
32	N32	43.662759	25.8518	-0.723985	0	
33	N33	47.65756	25.63781	-0.723985	0	
34	N34	51.704215	25.311972	-0.723985	0	
35	N35	55.683752	24.907747	-0.723985	0	
36	N36	59.716724	24.348443	-0.723985	0	
37	N37	63.666723	23.715643	-0.723985	0	
38	N38	67.280001	23.041667	-0.723985	0	
39	N39	66.95799	19.791667	-0.723985	0	
40	N40	63.195881	20.498704	-0.723985	0	
41	N41	59.245883	21.131504	-0.723985	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Di...
42	N42	55.353366	21.65514	-0.723985	0	
43	N43	51.375727	22.07806	-0.723985	0	
44	N44	47.448614	22.394525	-0.723985	0	
45	N45	43.454051	22.607562	-0.723985	0	
46	N46	39.533841	22.712467	-0.723985	0	
47	N47	62.006986	23.981537	-0.723985	0	
48	N48	55.918598	24.875178	-0.723985	0	
49	N49	49.793402	25.465831	-0.723985	0	
50	N50	61.48474	20.772833	-0.723985	0	
51	N51	55.524238	21.632153	-0.723985	0	
52	N52	49.531523	22.226675	-0.723985	0	
53	N53	43.521191	22.603981	-0.723985	0	
54	N54	43.652278	25.852083	-0.723985	0	
55	N55	41.381608	29.046582	-0.723985	0	
56	N56	45.483534	28.795409	-0.723985	0	
57	N57	49.385805	27.396441	-0.723985	0	
58	N58	67.343129	23.666667	-0.723985	0	
59	N59	62.10955	24.611693	-0.723985	0	
60	N60	55.992278	25.481092	-0.723985	0	
61	N61	49.844924	26.103103	-0.723985	0	
62	N62	49.289364	26.147001	-0.723985	0	
63	N63	45.295243	26.402858	-0.723985	0	
64	N64	43.677487	26.476714	-0.723985	0	
65	N65	41.319435	26.553698	-0.723985	0	
66	N66	61.386663	20.170246	-0.723985	0	
67	N67	55.449127	21.014482	-0.723985	0	
68	N68	49.482384	21.618869	-0.723985	0	
69	N69	43.496106	21.982425	-0.723985	0	
70	N70	0.	23.125	0	0	
71	N71	1.208334	23.875	-0.723985	0	
72	N72	1.208334	18.958333	-0.723985	0	
73	N73	0.833334	23.125	0	0	
74	N74	1.208334	23.125	-0.723985	0	
75	N75	0.	19.708333	0	0	
76	N76	0.833334	19.708333	0	0	
77	N77	1.208334	19.708333	-0.723985	0	
78	N78	1.875001	23.041667	-0.723985	0	
79	N79	1.875001	22.708333	-0.723985	0	
80	N80	1.208334	22.708333	-0.723985	0	
81	N81	1.875001	19.791667	-0.723985	0	
82	N82	1.875001	20.125	-0.723985	0	
83	N83	1.208334	20.125	-0.723985	0	
84	N84	1.208334	23.666667	-0.723985	0	
85	N85	1.208334	19.166667	-0.723985	0	
86	N86	8.0833	19.166667	-0.723985	0	
87	N87	4.884701	19.791667	-0.723985	0	
88	N88	4.884701	23.041667	-0.723985	0	
89	N89	2.208334	23.041667	-0.723985	0	
90	N90	2.208334	23.666667	-0.723985	0	
91	N91	7.249349	23.041667	-0.723985	0	
92	N92	7.249349	23.666667	-0.723985	0	
93	N93	7.59613	19.166667	-0.723985	0	
94	N94	7.59613	19.791667	-0.723985	0	
95	N95	7.566572	19.791667	-0.723985	0	
96	N96	7.566572	23.041667	-0.723985	0	
97	N97	37.5	25.976319	-0.723985	0	
98	N98	35.402629	25.961902	-0.723985	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Di...
99	N99	31.337242	25.8518	-0.723985	0	
100	N100	27.342441	25.63781	-0.723985	0	
101	N101	23.295786	25.311972	-0.723985	0	
102	N102	19.316248	24.907747	-0.723985	0	
103	N103	15.283277	24.348443	-0.723985	0	
104	N104	11.333278	23.715643	-0.723985	0	
105	N105	7.72	23.041667	-0.723985	0	
106	N106	8.04201	19.791667	-0.723985	0	
107	N107	11.804119	20.498704	-0.723985	0	
108	N108	15.754118	21.131504	-0.723985	0	
109	N109	19.646634	21.65514	-0.723985	0	
110	N110	23.624273	22.07806	-0.723985	0	
111	N111	27.551386	22.394525	-0.723985	0	
112	N112	31.54595	22.607562	-0.723985	0	
113	N113	35.466159	22.712467	-0.723985	0	
114	N114	37.5	22.726319	-0.723985	0	
115	N115	12.993014	23.981537	-0.723985	0	
116	N116	13.515261	20.772833	-0.723985	0	
117	N117	19.081403	24.875178	-0.723985	0	
118	N118	19.475763	21.632153	-0.723985	0	
119	N119	25.206599	25.465831	-0.723985	0	
120	N120	25.468477	22.226675	-0.723985	0	
121	N121	31.47881	22.603981	-0.723985	0	
122	N122	31.347723	25.852083	-0.723985	0	
123	N123	33.618393	29.046582	-0.723985	0	
124	N124	29.516466	28.795409	-0.723985	0	
125	N125	25.614196	27.396441	-0.723985	0	
126	N126	7.656871	23.666667	-0.723985	0	
127	N127	12.890451	24.611693	-0.723985	0	
128	N128	19.007722	25.481092	-0.723985	0	
129	N129	25.155077	26.103103	-0.723985	0	
130	N130	25.710636	26.147001	-0.723985	0	
131	N131	29.704758	26.402858	-0.723985	0	
132	N132	31.322514	26.476714	-0.723985	0	
133	N133	33.680566	26.553698	-0.723985	0	
134	N134	37.5	26.601319	-0.723985	0	
135	N135	13.613337	20.170246	-0.723985	0	
136	N136	19.550873	21.014482	-0.723985	0	
137	N137	25.517617	21.618869	-0.723985	0	
138	N138	31.503894	21.982425	-0.723985	0	
139	N139	37.5	22.104556	-0.723985	0	
140	N140	0.	-0.	0	0	
141	N141	0.	26.833333	0	0	
142	N142	7.33	23.666667	-0.723985	0	
143	N143	7.33	19.166667	-0.723985	0	
144	N144	14.66	24.865	-0.723985	0	
145	N145	14.66	20.32	-0.723985	0	
146	N146	21.99	25.781	-0.723985	0	
147	N147	21.99	21.26	-0.723985	0	
148	N148	29.32	26.38	-0.723985	0	
149	N149	29.32	21.849	-0.723985	0	
150	N150	36.65	26.589	-0.723985	0	
151	N151	36.65	22.089	-0.723985	0	
152	N152	43.98	26.464	-0.723985	0	
153	N153	43.98	21.953	-0.723985	0	
154	N154	0	23.666667	0	0	
155	N155	0	19.166667	0	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Di...
156	N156	73.791667	23.875	0.723931	0	
157	N157	73.791667	18.958333	0.723931	0	
158	N158	73.791667	23.125	0.723931	0	
159	N159	73.791667	19.708333	0.723931	0	
160	N160	73.125	23.041667	0.723931	0	
161	N161	73.125	22.708333	0.723931	0	
162	N162	73.791667	22.708333	0.723931	0	
163	N163	73.125	19.791667	0.723931	0	
164	N164	73.125	20.125	0.723931	0	
165	N165	73.791667	20.125	0.723931	0	
166	N166	73.791667	23.666667	0.723931	0	
167	N167	73.791667	19.166667	0.723931	0	
168	N168	66.91666	19.166667	0.723931	0	
169	N169	70.1153	19.791667	0.723931	0	
170	N170	70.1153	23.041667	0.723931	0	
171	N171	72.791667	23.041667	0.723931	0	
172	N172	72.791667	23.666667	0.723931	0	
173	N173	67.750652	23.041667	0.723931	0	
174	N174	67.750652	23.666667	0.723931	0	
175	N175	67.403871	19.166667	0.723931	0	
176	N176	67.403871	19.791667	0.723931	0	
177	N177	67.433429	19.791667	0.723931	0	
178	N178	67.433429	23.041667	0.723931	0	
179	N179	37.5	29.103449	0.723931	0	
180	N180	39.597372	25.961902	0.723931	0	
181	N181	43.662759	25.8518	0.723931	0	
182	N182	47.65756	25.63781	0.723931	0	
183	N183	51.704215	25.311972	0.723931	0	
184	N184	55.683752	24.907747	0.723931	0	
185	N185	59.716724	24.348443	0.723931	0	
186	N186	63.666723	23.715643	0.723931	0	
187	N187	67.280001	23.041667	0.723931	0	
188	N188	66.95799	19.791667	0.723931	0	
189	N189	63.195881	20.498704	0.723931	0	
190	N190	59.245883	21.131504	0.723931	0	
191	N191	55.353366	21.65514	0.723931	0	
192	N192	51.375727	22.07806	0.723931	0	
193	N193	47.448614	22.394525	0.723931	0	
194	N194	43.454051	22.607562	0.723931	0	
195	N195	39.533841	22.712467	0.723931	0	
196	N196	62.006986	23.981537	0.723931	0	
197	N197	55.918598	24.875178	0.723931	0	
198	N198	49.793402	25.465831	0.723931	0	
199	N199	61.48474	20.772833	0.723931	0	
200	N200	55.524238	21.632153	0.723931	0	
201	N201	49.531523	22.226675	0.723931	0	
202	N202	43.521191	22.603981	0.723931	0	
203	N203	43.652278	25.852083	0.723931	0	
204	N204	41.381608	29.046582	0.723931	0	
205	N205	45.483534	28.795409	0.723931	0	
206	N206	49.385805	27.396441	0.723931	0	
207	N207	67.343129	23.666667	0.723931	0	
208	N208	62.10955	24.611693	0.723931	0	
209	N209	55.992278	25.481092	0.723931	0	
210	N210	49.844924	26.103103	0.723931	0	
211	N211	49.289364	26.147001	0.723931	0	
212	N212	45.295243	26.402858	0.723931	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Di...
213	N213	43.677487	26.476714	0.723931	0	
214	N214	41.319435	26.553698	0.723931	0	
215	N215	61.386663	20.170246	0.723931	0	
216	N216	55.449127	21.014482	0.723931	0	
217	N217	49.482384	21.618869	0.723931	0	
218	N218	43.496106	21.982425	0.723931	0	
219	N219	1.208334	23.875	0.723931	0	
220	N220	1.208334	18.958333	0.723931	0	
221	N221	1.208334	23.125	0.723931	0	
222	N222	1.208334	19.708333	0.723931	0	
223	N223	1.875001	23.041667	0.723931	0	
224	N224	1.875001	22.708333	0.723931	0	
225	N225	1.208334	22.708333	0.723931	0	
226	N226	1.875001	19.791667	0.723931	0	
227	N227	1.875001	20.125	0.723931	0	
228	N228	1.208334	20.125	0.723931	0	
229	N229	1.208334	23.666667	0.723931	0	
230	N230	1.208334	19.166667	0.723931	0	
231	N231	8.0833	19.166667	0.723931	0	
232	N232	4.884701	19.791667	0.723931	0	
233	N233	4.884701	23.041667	0.723931	0	
234	N234	2.208334	23.041667	0.723931	0	
235	N235	2.208334	23.666667	0.723931	0	
236	N236	7.249349	23.041667	0.723931	0	
237	N237	7.249349	23.666667	0.723931	0	
238	N238	7.59613	19.166667	0.723931	0	
239	N239	7.59613	19.791667	0.723931	0	
240	N240	7.566572	19.791667	0.723931	0	
241	N241	7.566572	23.041667	0.723931	0	
242	N242	37.5	25.976319	0.723931	0	
243	N243	35.402629	25.961902	0.723931	0	
244	N244	31.337242	25.8518	0.723931	0	
245	N245	27.342441	25.63781	0.723931	0	
246	N246	23.295786	25.311972	0.723931	0	
247	N247	19.316248	24.907747	0.723931	0	
248	N248	15.283277	24.348443	0.723931	0	
249	N249	11.333278	23.715643	0.723931	0	
250	N250	7.72	23.041667	0.723931	0	
251	N251	8.04201	19.791667	0.723931	0	
252	N252	11.804119	20.498704	0.723931	0	
253	N253	15.754118	21.131504	0.723931	0	
254	N254	19.646634	21.65514	0.723931	0	
255	N255	23.624273	22.07806	0.723931	0	
256	N256	27.551386	22.394525	0.723931	0	
257	N257	31.54595	22.607562	0.723931	0	
258	N258	35.466159	22.712467	0.723931	0	
259	N259	37.5	22.726319	0.723931	0	
260	N260	12.993014	23.981537	0.723931	0	
261	N261	13.515261	20.772833	0.723931	0	
262	N262	19.081403	24.875178	0.723931	0	
263	N263	19.475763	21.632153	0.723931	0	
264	N264	25.206599	25.465831	0.723931	0	
265	N265	25.468477	22.226675	0.723931	0	
266	N266	31.47881	22.603981	0.723931	0	
267	N267	31.347723	25.852083	0.723931	0	
268	N268	33.618393	29.046582	0.723931	0	
269	N269	29.516466	28.795409	0.723931	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Di...
270	N270	25.614196	27.396441	0.723931	0	
271	N271	7.656871	23.666667	0.723931	0	
272	N272	12.890451	24.611693	0.723931	0	
273	N273	19.007722	25.481092	0.723931	0	
274	N274	25.155077	26.103103	0.723931	0	
275	N275	25.710636	26.147001	0.723931	0	
276	N276	29.704758	26.402858	0.723931	0	
277	N277	31.322514	26.476714	0.723931	0	
278	N278	33.680566	26.553698	0.723931	0	
279	N279	37.5	26.601319	0.723931	0	
280	N280	13.613337	20.170246	0.723931	0	
281	N281	19.550873	21.014482	0.723931	0	
282	N282	25.517617	21.618869	0.723931	0	
283	N283	31.503894	21.982425	0.723931	0	
284	N284	37.5	22.104556	0.723931	0	
285	N285	7.33	23.666667	0.723931	0	
286	N286	7.33	19.166667	0.723931	0	
287	N287	14.66	24.865	0.723931	0	
288	N288	14.66	20.32	0.723931	0	
289	N289	21.99	25.781	0.723931	0	
290	N290	21.99	21.26	0.723931	0	
291	N291	29.32	26.38	0.723931	0	
292	N292	29.32	21.849	0.723931	0	
293	N293	36.65	26.589	0.723931	0	
294	N294	36.65	22.089	0.723931	0	
295	N295	43.98	26.464	0.723931	0	
296	N296	43.98	21.953	0.723931	0	
297	N297	73.791667	23.125	0	0	
298	N298	73.791667	19.708333	0	0	
299	N299	1.208334	23.125	0	0	
300	N300	1.208334	19.708333	0	0	

Joint Boundary Conditions

	Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	N140	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N1	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N1	N2			Pipe 16 Sch 40	Column	Pipe	A53 Gr.B	Typical
2	M2	N6	N3			RIGID	None	None	RIGID	Typical
3	M3	N4	N5			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
4	M4	N6	N297			RIGID	None	None	RIGID	Typical
5	M5	N9	N8			RIGID	None	None	RIGID	Typical
6	M6	N9	N298			RIGID	None	None	RIGID	Typical
7	M7	N11	N38			HSS3x3x3/8	Column	Tube	A500 Gr....	Typical
8	M8	N11	N14			HSS3x3x3/8	Column	Tube	A500 Gr....	Typical
9	M9	N12	N13			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
10	M10	N14	N39			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
11	M11	N15	N16			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
12	M12	N17	N58			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
13	M13	N18	N19			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
14	M14	N20	N21			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
15	M15	N22	N23			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
16	M16	N24	N25			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
17	M17	N26	N27			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
18	M18	N28	N29			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
19	M19	N40	N37			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
20	M20	N41	N36			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
21	M21	N42	N35			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
22	M22	N43	N34			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
23	M23	N44	N33			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
24	M24	N45	N32			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
25	M25	N46	N31			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
26	M26	N30	N134			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
27	M27	N97	N31			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
28	M28	N31	N32			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
29	M29	N32	N33			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
30	M30	N33	N34			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
31	M31	N34	N35			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
32	M32	N35	N36			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
33	M33	N36	N37			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
34	M34	N37	N38			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
35	M35	N39	N40			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
36	M36	N40	N41			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
37	M37	N41	N42			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
38	M38	N42	N43			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
39	M39	N43	N44			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
40	M40	N44	N45			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
41	M41	N45	N46			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
42	M42	N46	N114			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
43	M43	N59	N47			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
44	M44	N60	N48			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
45	M45	N61	N49			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
46	M46	N50	N66			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
47	M47	N51	N67			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
48	M48	N52	N68			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
49	M49	N69	N53			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
50	M50	N54	N64			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
51	M51	N114	N139			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
52	M52	N134	N97			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
53	M53	N55	N65			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
54	M54	N56	N63			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
55	M55	N57	N62			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
56	M56	N58	N59			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
57	M57	N59	N60			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
58	M58	N60	N61			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
59	M59	N61	N62			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
60	M60	N62	N63			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
61	M61	N63	N64			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
62	M62	N64	N65			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
63	M63	N65	N134			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
64	M64	N19	N66			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
65	M65	N66	N67			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
66	M66	N67	N68			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
67	M67	N68	N69			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
68	M68	N69	N139			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
69	M69	N73	N70			RIGID	None	None	RIGID	Typical
70	M70	N71	N72			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
71	M71	N73	N299			RIGID	None	None	RIGID	Typical
72	M72	N76	N75			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
73	M73	N76	N300			RIGID	None	None	RIGID	Typical
74	M74	N78	N105			HSS3x3x3/8	Column	Tube	A500 Gr....	Typical
75	M75	N78	N81			HSS3x3x3/8	Column	Tube	A500 Gr....	Typical
76	M76	N79	N80			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
77	M77	N81	N106			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
78	M78	N82	N83			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
79	M79	N84	N126			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
80	M80	N85	N86			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
81	M81	N87	N88			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
82	M82	N89	N90			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
83	M83	N91	N92			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
84	M84	N93	N94			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
85	M85	N95	N96			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
86	M86	N107	N104			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
87	M87	N108	N103			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
88	M88	N109	N102			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
89	M89	N110	N101			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
90	M90	N111	N100			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
91	M91	N112	N99			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
92	M92	N113	N98			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
93	M93	N97	N98			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
94	M94	N98	N99			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
95	M95	N99	N100			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
96	M96	N100	N101			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
97	M97	N101	N102			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
98	M98	N102	N103			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
99	M99	N103	N104			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
100	M100	N104	N105			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
101	M101	N106	N107			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
102	M102	N107	N108			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
103	M103	N108	N109			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
104	M104	N109	N110			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
105	M105	N110	N111			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
106	M106	N111	N112			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
107	M107	N112	N113			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
108	M108	N113	N114			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
109	M109	N127	N115			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
110	M110	N116	N135			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
111	M111	N128	N117			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
112	M112	N118	N136			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
113	M113	N129	N119			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
114	M114	N120	N137			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
115	M115	N138	N121			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
116	M116	N122	N132			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
117	M117	N123	N133			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
118	M118	N124	N131			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
119	M119	N125	N130			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
120	M120	N126	N127			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
121	M121	N127	N128			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
122	M122	N128	N129			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
123	M123	N129	N130			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
124	M124	N130	N131			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
125	M125	N131	N132			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
126	M126	N132	N133			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
127	M127	N133	N134			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
128	M128	N86	N135			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
129	M129	N135	N136			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
130	M130	N136	N137			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
131	M131	N137	N138			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
132	M132	N138	N139			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
133	M133	N140	N141			Pipe 16 Sch 40	Column	Pipe	A53 Gr.B	Typical
134	M134	N156	N157			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
135	M135	N160	N187			HSS3x3x3/8	Column	Tube	A500 Gr....	Typical
136	M136	N160	N163			HSS3x3x3/8	Column	Tube	A500 Gr....	Typical
137	M137	N161	N162			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
138	M138	N163	N188			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
139	M139	N164	N165			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
140	M140	N166	N207			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
141	M141	N167	N168			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
142	M142	N169	N170			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
143	M143	N171	N172			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
144	M144	N173	N174			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
145	M145	N175	N176			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
146	M146	N177	N178			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
147	M147	N189	N186			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
148	M148	N190	N185			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
149	M149	N191	N184			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
150	M150	N192	N183			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
151	M151	N193	N182			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
152	M152	N194	N181			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
153	M153	N195	N180			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
154	M154	N179	N279			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
155	M155	N242	N180			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
156	M156	N180	N181			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
157	M157	N181	N182			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
158	M158	N182	N183			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
159	M159	N183	N184			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
160	M160	N184	N185			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
161	M161	N185	N186			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
162	M162	N186	N187			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
163	M163	N188	N189			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
164	M164	N189	N190			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
165	M165	N190	N191			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
166	M166	N191	N192			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
167	M167	N192	N193			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
168	M168	N193	N194			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
169	M169	N194	N195			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
170	M170	N195	N259			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
171	M171	N208	N196			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
172	M172	N209	N197			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
173	M173	N210	N198			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
174	M174	N199	N215			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
175	M175	N200	N216			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
176	M176	N201	N217			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
177	M177	N218	N202			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
178	M178	N203	N213			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
179	M179	N259	N284			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
180	M180	N279	N242			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
181	M181	N204	N214			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
182	M182	N205	N212			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
183	M183	N206	N211			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
184	M184	N207	N208			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
185	M185	N208	N209			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
186	M186	N209	N210			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
187	M187	N210	N211			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
188	M188	N211	N212			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
189	M189	N212	N213			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
190	M190	N213	N214			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
191	M191	N214	N279			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
192	M192	N168	N215			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
193	M193	N215	N216			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
194	M194	N216	N217			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
195	M195	N217	N218			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
196	M196	N218	N284			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
197	M197	N219	N220			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
198	M198	N223	N250			HSS3x3x3/8	Column	Tube	A500 Gr....	Typical
199	M199	N223	N226			HSS3x3x3/8	Column	Tube	A500 Gr....	Typical
200	M200	N224	N225			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
201	M201	N226	N251			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
202	M202	N227	N228			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
203	M203	N229	N271			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
204	M204	N230	N231			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
205	M205	N232	N233			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
206	M206	N234	N235			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
207	M207	N236	N237			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
208	M208	N238	N239			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
209	M209	N240	N241			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
210	M210	N252	N249			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
211	M211	N253	N248			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
212	M212	N254	N247			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
213	M213	N255	N246			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
214	M214	N256	N245			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
215	M215	N257	N244			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
216	M216	N258	N243			HSS1.5x1.5x1/4	Column	Tube	A500 Gr....	Typical
217	M217	N242	N243			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
218	M218	N243	N244			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
219	M219	N244	N245			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
220	M220	N245	N246			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
221	M221	N246	N247			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
222	M222	N247	N248			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
223	M223	N248	N249			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
224	M224	N249	N250			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
225	M225	N251	N252			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
226	M226	N252	N253			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
227	M227	N253	N254			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
228	M228	N254	N255			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
229	M229	N255	N256			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
230	M230	N256	N257			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
231	M231	N257	N258			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
232	M232	N258	N259			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
233	M233	N272	N260			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
234	M234	N261	N280			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
235	M235	N273	N262			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
236	M236	N263	N281			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
237	M237	N274	N264			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
238	M238	N265	N282			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
239	M239	N283	N266			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
240	M240	N267	N277			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
241	M241	N268	N278			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
242	M242	N269	N276			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical
243	M243	N270	N275			HSS3x3x1/4	Column	Tube	A500 Gr....	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
244	M244	N271	N272			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
245	M245	N272	N273			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
246	M246	N273	N274			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
247	M247	N274	N275			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
248	M248	N275	N276			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
249	M249	N276	N277			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
250	M250	N277	N278			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
251	M251	N278	N279			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
252	M252	N231	N280			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
253	M253	N280	N281			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
254	M254	N281	N282			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
255	M255	N282	N283			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
256	M256	N283	N284			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
257	M257	N74	N221			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
258	M258	N77	N222			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
259	M259	N7	N158			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
260	M260	N10	N159			Pipe 6 XS	Column	Wide Flange	A53 Gr.B	Typical
261	M261	N23	N172			Pipe 3.5 Sch 40	Beam	Pipe	A53 Gr.B	Typical
262	M262	N25	N174			Pipe 3.5 Sch 40	Beam	Pipe	A53 Gr.B	Typical
263	M263	N59	N208			Pipe 3.5 Sch 40	Beam	Pipe	A53 Gr.B	Typical
264	M264	N60	N209			Pipe 3.5 Sch 40	Beam	Pipe	A53 Gr.B	Typical
265	M265	N61	N210			Pipe 3.5 Sch 40	Beam	Pipe	A53 Gr.B	Typical
266	M266	N64	N213			Pipe 3.5 Sch 40	Beam	Pipe	A53 Gr.B	Typical
267	M267	N132	N277			Pipe 3.5 Sch 40	Beam	Pipe	A53 Gr.B	Typical
268	M268	N134	N279			Pipe 3.5 Sch 40	Beam	Pipe	A53 Gr.B	Typical
269	M269	N129	N274			Pipe 3.5 Sch 40	Beam	Pipe	A53 Gr.B	Typical
270	M270	N128	N273			Pipe 3.5 Sch 40	Beam	Pipe	A53 Gr.B	Typical
271	M271	N127	N272			Pipe 3.5 Sch 40	Beam	Pipe	A53 Gr.B	Typical
272	M272	N92	N237			Pipe 3.5 Sch 40	Beam	Pipe	A53 Gr.B	Typical
273	M273	N93	N238			Pipe 3.5 Sch 40	Beam	Pipe	A53 Gr.B	Typical
274	M274	N135	N280			Pipe 3.5 Sch 40	Beam	Pipe	A53 Gr.B	Typical
275	M275	N136	N281			Pipe 3.5 Sch 40	Beam	Pipe	A53 Gr.B	Typical
276	M276	N137	N282			Pipe 3.5 Sch 40	Beam	Pipe	A53 Gr.B	Typical
277	M277	N138	N283			Pipe 3.5 Sch 40	Beam	Pipe	A53 Gr.B	Typical
278	M278	N139	N284			Pipe 3.5 Sch 40	Beam	Pipe	A53 Gr.B	Typical
279	M279	N69	N218			Pipe 3.5 Sch 40	Beam	Pipe	A53 Gr.B	Typical
280	M280	N68	N217			Pipe 3.5 Sch 40	Beam	Pipe	A53 Gr.B	Typical
281	M281	N67	N216			Pipe 3.5 Sch 40	Beam	Pipe	A53 Gr.B	Typical
282	M282	N66	N215			Pipe 3.5 Sch 40	Beam	Pipe	A53 Gr.B	Typical
283	M283	N26	N175			Pipe 3.5 Sch 40	Beam	Pipe	A53 Gr.B	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M1						Yes	** NA **			None
2	M2	BenPIN					Yes	** NA **			None
3	M3						Yes	** NA **			None
4	M4						Yes	** NA **			None
5	M5	BenPIN					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

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
13	M13						Yes	** NA **			None
14	M14	BenPIN	BenPIN				Yes	** NA **			None
15	M15						Yes	** NA **			None
16	M16						Yes	** NA **			None
17	M17						Yes	** NA **			None
18	M18	BenPIN	BenPIN				Yes	** NA **			None
19	M19	BenPIN	BenPIN				Yes	** NA **			None
20	M20	BenPIN	BenPIN				Yes	** NA **			None
21	M21	BenPIN	BenPIN				Yes	** NA **			None
22	M22	BenPIN	BenPIN				Yes	** NA **			None
23	M23	BenPIN	BenPIN				Yes	** NA **			None
24	M24	BenPIN	BenPIN				Yes	** NA **			None
25	M25	BenPIN	BenPIN				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
47	M47						Yes	** NA **			None
48	M48						Yes	** NA **			None
49	M49						Yes	** NA **			None
50	M50						Yes	** NA **			None
51	M51						Yes	** NA **			None
52	M52						Yes	** NA **			None
53	M53						Yes	** NA **			None
54	M54						Yes	** NA **			None
55	M55						Yes	** NA **			None
56	M56						Yes	** NA **			None
57	M57						Yes	** NA **			None
58	M58						Yes	** NA **			None
59	M59						Yes	** NA **			None
60	M60						Yes	** NA **			None
61	M61						Yes	** NA **			None
62	M62						Yes	** NA **			None
63	M63						Yes	** NA **			None
64	M64						Yes	** NA **			None
65	M65						Yes	** NA **			None
66	M66						Yes	** NA **			None
67	M67						Yes	** NA **			None
68	M68						Yes	** NA **			None
69	M69	BenPIN					Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
70	M70						Yes	** NA **			None
71	M71						Yes	** NA **			None
72	M72	BenPIN					Yes	** NA **			None
73	M73						Yes	** NA **			None
74	M74						Yes	** NA **			None
75	M75						Yes	** NA **			None
76	M76						Yes	** NA **			None
77	M77						Yes	** NA **			None
78	M78						Yes	** NA **			None
79	M79						Yes	** NA **			None
80	M80						Yes	** NA **			None
81	M81	BenPIN	BenPIN				Yes	** NA **			None
82	M82						Yes	** NA **			None
83	M83						Yes	** NA **			None
84	M84						Yes	** NA **			None
85	M85	BenPIN	BenPIN				Yes	** NA **			None
86	M86	BenPIN	BenPIN				Yes	** NA **			None
87	M87	BenPIN	BenPIN				Yes	** NA **			None
88	M88	BenPIN	BenPIN				Yes	** NA **			None
89	M89	BenPIN	BenPIN				Yes	** NA **			None
90	M90	BenPIN	BenPIN				Yes	** NA **			None
91	M91	BenPIN	BenPIN				Yes	** NA **			None
92	M92	BenPIN	BenPIN				Yes	** NA **			None
93	M93						Yes	** NA **			None
94	M94						Yes	** NA **			None
95	M95						Yes	** NA **			None
96	M96						Yes	** NA **			None
97	M97						Yes	** NA **			None
98	M98						Yes	** NA **			None
99	M99						Yes	** NA **			None
100	M100						Yes	** NA **			None
101	M101						Yes	** NA **			None
102	M102						Yes	** NA **			None
103	M103						Yes	** NA **			None
104	M104						Yes	** NA **			None
105	M105						Yes	** NA **			None
106	M106						Yes	** NA **			None
107	M107						Yes	** NA **			None
108	M108						Yes	** NA **			None
109	M109						Yes	** NA **			None
110	M110						Yes	** NA **			None
111	M111						Yes	** NA **			None
112	M112						Yes	** NA **			None
113	M113						Yes	** NA **			None
114	M114						Yes	** NA **			None
115	M115						Yes	** NA **			None
116	M116						Yes	** NA **			None
117	M117						Yes	** NA **			None
118	M118						Yes	** NA **			None
119	M119						Yes	** NA **			None
120	M120						Yes	** NA **			None
121	M121						Yes	** NA **			None
122	M122						Yes	** NA **			None
123	M123						Yes	** NA **			None
124	M124						Yes	** NA **			None
125	M125						Yes	** NA **			None
126	M126						Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
127	M127						Yes	** NA **			None
128	M128						Yes	** NA **			None
129	M129						Yes	** NA **			None
130	M130						Yes	** NA **			None
131	M131						Yes	** NA **			None
132	M132						Yes	** NA **			None
133	M133						Yes	** NA **			None
134	M134						Yes	** NA **			None
135	M135						Yes	** NA **			None
136	M136						Yes	** NA **			None
137	M137						Yes	** NA **			None
138	M138						Yes	** NA **			None
139	M139						Yes	** NA **			None
140	M140						Yes	** NA **			None
141	M141						Yes	** NA **			None
142	M142	BenPIN	BenPIN				Yes	** NA **			None
143	M143						Yes	** NA **			None
144	M144						Yes	** NA **			None
145	M145						Yes	** NA **			None
146	M146	BenPIN	BenPIN				Yes	** NA **			None
147	M147	BenPIN	BenPIN				Yes	** NA **			None
148	M148	BenPIN	BenPIN				Yes	** NA **			None
149	M149	BenPIN	BenPIN				Yes	** NA **			None
150	M150	BenPIN	BenPIN				Yes	** NA **			None
151	M151	BenPIN	BenPIN				Yes	** NA **			None
152	M152	BenPIN	BenPIN				Yes	** NA **			None
153	M153	BenPIN	BenPIN				Yes	** NA **			None
154	M154						Yes	** NA **			None
155	M155						Yes	** NA **			None
156	M156						Yes	** NA **			None
157	M157						Yes	** NA **			None
158	M158						Yes	** NA **			None
159	M159						Yes	** NA **			None
160	M160						Yes	** NA **			None
161	M161						Yes	** NA **			None
162	M162						Yes	** NA **			None
163	M163						Yes	** NA **			None
164	M164						Yes	** NA **			None
165	M165						Yes	** NA **			None
166	M166						Yes	** NA **			None
167	M167						Yes	** NA **			None
168	M168						Yes	** NA **			None
169	M169						Yes	** NA **			None
170	M170						Yes	** NA **			None
171	M171						Yes	** NA **			None
172	M172						Yes	** NA **			None
173	M173						Yes	** NA **			None
174	M174						Yes	** NA **			None
175	M175						Yes	** NA **			None
176	M176						Yes	** NA **			None
177	M177						Yes	** NA **			None
178	M178						Yes	** NA **			None
179	M179						Yes	** NA **			None
180	M180						Yes	** NA **			None
181	M181						Yes	** NA **			None
182	M182						Yes	** NA **			None
183	M183						Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
184	M184						Yes	** NA **			None
185	M185						Yes	** NA **			None
186	M186						Yes	** NA **			None
187	M187						Yes	** NA **			None
188	M188						Yes	** NA **			None
189	M189						Yes	** NA **			None
190	M190						Yes	** NA **			None
191	M191						Yes	** NA **			None
192	M192						Yes	** NA **			None
193	M193						Yes	** NA **			None
194	M194						Yes	** NA **			None
195	M195						Yes	** NA **			None
196	M196						Yes	** NA **			None
197	M197						Yes	** NA **			None
198	M198						Yes	** NA **			None
199	M199						Yes	** NA **			None
200	M200						Yes	** NA **			None
201	M201						Yes	** NA **			None
202	M202						Yes	** NA **			None
203	M203						Yes	** NA **			None
204	M204						Yes	** NA **			None
205	M205	BenPIN	BenPIN				Yes	** NA **			None
206	M206						Yes	** NA **			None
207	M207						Yes	** NA **			None
208	M208						Yes	** NA **			None
209	M209	BenPIN	BenPIN				Yes	** NA **			None
210	M210	BenPIN	BenPIN				Yes	** NA **			None
211	M211	BenPIN	BenPIN				Yes	** NA **			None
212	M212	BenPIN	BenPIN				Yes	** NA **			None
213	M213	BenPIN	BenPIN				Yes	** NA **			None
214	M214	BenPIN	BenPIN				Yes	** NA **			None
215	M215	BenPIN	BenPIN				Yes	** NA **			None
216	M216	BenPIN	BenPIN				Yes	** NA **			None
217	M217						Yes	** NA **			None
218	M218						Yes	** NA **			None
219	M219						Yes	** NA **			None
220	M220						Yes	** NA **			None
221	M221						Yes	** NA **			None
222	M222						Yes	** NA **			None
223	M223						Yes	** NA **			None
224	M224						Yes	** NA **			None
225	M225						Yes	** NA **			None
226	M226						Yes	** NA **			None
227	M227						Yes	** NA **			None
228	M228						Yes	** NA **			None
229	M229						Yes	** NA **			None
230	M230						Yes	** NA **			None
231	M231						Yes	** NA **			None
232	M232						Yes	** NA **			None
233	M233						Yes	** NA **			None
234	M234						Yes	** NA **			None
235	M235						Yes	** NA **			None
236	M236						Yes	** NA **			None
237	M237						Yes	** NA **			None
238	M238						Yes	** NA **			None
239	M239						Yes	** NA **			None
240	M240						Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
241	M241						Yes	** NA **			None
242	M242						Yes	** NA **			None
243	M243						Yes	** NA **			None
244	M244						Yes	** NA **			None
245	M245						Yes	** NA **			None
246	M246						Yes	** NA **			None
247	M247						Yes	** NA **			None
248	M248						Yes	** NA **			None
249	M249						Yes	** NA **			None
250	M250						Yes	** NA **			None
251	M251						Yes	** NA **			None
252	M252						Yes	** NA **			None
253	M253						Yes	** NA **			None
254	M254						Yes	** NA **			None
255	M255						Yes	** NA **			None
256	M256						Yes	** NA **			None
257	M257						Yes	** NA **			None
258	M258						Yes	** NA **			None
259	M259						Yes	** NA **			None
260	M260						Yes	** NA **			None
261	M261						Yes				None
262	M262						Yes				None
263	M263						Yes				None
264	M264						Yes				None
265	M265						Yes				None
266	M266						Yes				None
267	M267						Yes				None
268	M268						Yes				None
269	M269						Yes				None
270	M270						Yes				None
271	M271						Yes				None
272	M272						Yes				None
273	M273						Yes				None
274	M274						Yes				None
275	M275						Yes				None
276	M276						Yes				None
277	M277						Yes				None
278	M278						Yes				None
279	M279						Yes				None
280	M280						Yes				None
281	M281						Yes				None
282	M282						Yes				None
283	M283						Yes				None

Hot Rolled Steel Design Parameters

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
1	M1	Pipe 16 Sch...	26.833			Lbyy						Lateral
2	M3	Pipe 6 XS	4.917			Lbyy						Lateral
3	M7	HSS3x3x3/8	5.845	5.9		Lbyy						Lateral
4	M8	HSS3x3x3/8	3.25			Lbyy						Lateral
5	M9	HSS3x3x1/4	.667			Lbyy						Lateral
6	M10	HSS3x3x1/4	6.167	5.9		Lbyy						Lateral
7	M11	HSS3x3x1/4	.667			Lbyy						Lateral
8	M12	Pipe 6 XS	6.449	6		Lbyy						Lateral
9	M13	Pipe 6 XS	6.875	6		Lbyy						Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
10	M14	HSS1.5x1.5...	3.25			Lbyy						Lateral
11	M15	HSS3x3x1/4	.625			Lbyy						Lateral
12	M16	HSS3x3x1/4	.625			Lbyy						Lateral
13	M17	HSS3x3x1/4	.625			Lbyy						Lateral
14	M18	HSS1.5x1.5...	3.25			Lbyy						Lateral
15	M19	HSS1.5x1.5...	3.251			Lbyy						Lateral
16	M20	HSS1.5x1.5...	3.251			Lbyy						Lateral
17	M21	HSS1.5x1.5...	3.269			Lbyy						Lateral
18	M22	HSS1.5x1.5...	3.251			Lbyy						Lateral
19	M23	HSS1.5x1.5...	3.25			Lbyy						Lateral
20	M24	HSS1.5x1.5...	3.251			Lbyy						Lateral
21	M25	HSS1.5x1.5...	3.25			Lbyy						Lateral
22	M26	HSS3x3x1/4	2.502			Lbyy						Lateral
23	M27	HSS3x3x1/4	2.097	5.9		Lbyy						Lateral
24	M28	HSS3x3x1/4	4.067	5.9		Lbyy						Lateral
25	M29	HSS3x3x1/4	4.001	5.9		Lbyy						Lateral
26	M30	HSS3x3x1/4	4.06	5.9		Lbyy						Lateral
27	M31	HSS3x3x1/4	4	5.9		Lbyy						Lateral
28	M32	HSS3x3x1/4	4.072	5.9		Lbyy						Lateral
29	M33	HSS3x3x1/4	4	5.9		Lbyy						Lateral
30	M34	HSS3x3x1/4	3.676	5.9		Lbyy						Lateral
31	M35	HSS3x3x1/4	3.828	5.9		Lbyy						Lateral
32	M36	HSS3x3x1/4	4	5.9		Lbyy						Lateral
33	M37	HSS3x3x1/4	3.928	5.9		Lbyy						Lateral
34	M38	HSS3x3x1/4	4			Lbyy						Lateral
35	M39	HSS3x3x1/4	3.94	5.9		Lbyy						Lateral
36	M40	HSS3x3x1/4	4	5.9		Lbyy						Lateral
37	M41	HSS3x3x1/4	3.922	5.9		Lbyy						Lateral
38	M42	HSS3x3x1/4	2.034	5.9		Lbyy						Lateral
39	M43	HSS3x3x1/4	.638			Lbyy						Lateral
40	M44	HSS3x3x1/4	.61			Lbyy						Lateral
41	M45	HSS3x3x1/4	.639			Lbyy						Lateral
42	M46	HSS3x3x1/4	.611			Lbyy						Lateral
43	M47	HSS3x3x1/4	.622			Lbyy						Lateral
44	M48	HSS3x3x1/4	.61			Lbyy						Lateral
45	M49	HSS3x3x1/4	.622			Lbyy						Lateral
46	M50	HSS3x3x1/4	.625			Lbyy						Lateral
47	M51	HSS3x3x1/4	.622			Lbyy						Lateral
48	M52	HSS3x3x1/4	.625			Lbyy						Lateral
49	M53	HSS3x3x1/4	2.494			Lbyy						Lateral
50	M54	HSS3x3x1/4	2.4			Lbyy						Lateral
51	M55	HSS3x3x1/4	1.253			Lbyy						Lateral
52	M56	Pipe 6 XS	5.318	6		Lbyy						Lateral
53	M57	Pipe 6 XS	6.179	6		Lbyy						Lateral
54	M58	Pipe 6 XS	6.179	6		Lbyy						Lateral
55	M59	Pipe 6 XS	.557	6		Lbyy						Lateral
56	M60	Pipe 6 XS	4.002	6		Lbyy						Lateral
57	M61	Pipe 6 XS	1.619	6		Lbyy						Lateral
58	M62	Pipe 6 XS	2.359	6		Lbyy						Lateral
59	M63	Pipe 6 XS	3.82	6		Lbyy						Lateral
60	M64	Pipe 6 XS	5.62	6		Lbyy						Lateral
61	M65	Pipe 6 XS	5.997	6		Lbyy						Lateral
62	M66	Pipe 6 XS	5.997	6		Lbyy						Lateral
63	M67	Pipe 6 XS	5.997	6		Lbyy						Lateral
64	M68	Pipe 6 XS	5.997	6		Lbyy						Lateral
65	M70	Pipe 6 XS	4.917			Lbyy						Lateral
66	M74	HSS3x3x3/8	5.845	5.9		Lbyy						Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
67	M75	HSS3x3x3/8	3.25			Lbyy						Lateral
68	M76	HSS3x3x1/4	.667			Lbyy						Lateral
69	M77	HSS3x3x1/4	6.167	5.9		Lbyy						Lateral
70	M78	HSS3x3x1/4	.667			Lbyy						Lateral
71	M79	Pipe 6 XS	6.449	6		Lbyy						Lateral
72	M80	Pipe 6 XS	6.875	6		Lbyy						Lateral
73	M81	HSS1.5x1.5...	3.25			Lbyy						Lateral
74	M82	HSS3x3x1/4	.625			Lbyy						Lateral
75	M83	HSS3x3x1/4	.625			Lbyy						Lateral
76	M84	HSS3x3x1/4	.625			Lbyy						Lateral
77	M85	HSS1.5x1.5...	3.25			Lbyy						Lateral
78	M86	HSS1.5x1.5...	3.251			Lbyy						Lateral
79	M87	HSS1.5x1.5...	3.251			Lbyy						Lateral
80	M88	HSS1.5x1.5...	3.269			Lbyy						Lateral
81	M89	HSS1.5x1.5...	3.251			Lbyy						Lateral
82	M90	HSS1.5x1.5...	3.25			Lbyy						Lateral
83	M91	HSS1.5x1.5...	3.251			Lbyy						Lateral
84	M92	HSS1.5x1.5...	3.25			Lbyy						Lateral
85	M93	HSS3x3x1/4	2.097	5.9		Lbyy						Lateral
86	M94	HSS3x3x1/4	4.067	5.9		Lbyy						Lateral
87	M95	HSS3x3x1/4	4.001	5.9		Lbyy						Lateral
88	M96	HSS3x3x1/4	4.06	5.9		Lbyy						Lateral
89	M97	HSS3x3x1/4	4	5.9		Lbyy						Lateral
90	M98	HSS3x3x1/4	4.072	5.9		Lbyy						Lateral
91	M99	HSS3x3x1/4	4	5.9		Lbyy						Lateral
92	M100	HSS3x3x1/4	3.676	5.9		Lbyy						Lateral
93	M101	HSS3x3x1/4	3.828	5.9		Lbyy						Lateral
94	M102	HSS3x3x1/4	4	5.9		Lbyy						Lateral
95	M103	HSS3x3x1/4	3.928	5.9		Lbyy						Lateral
96	M104	HSS3x3x1/4	4	5.9		Lbyy						Lateral
97	M105	HSS3x3x1/4	3.94	5.9		Lbyy						Lateral
98	M106	HSS3x3x1/4	4	5.9		Lbyy						Lateral
99	M107	HSS3x3x1/4	3.922	5.9		Lbyy						Lateral
100	M108	HSS3x3x1/4	2.034			Lbyy						Lateral
101	M109	HSS3x3x1/4	.638			Lbyy						Lateral
102	M110	HSS3x3x1/4	.611			Lbyy						Lateral
103	M111	HSS3x3x1/4	.61			Lbyy						Lateral
104	M112	HSS3x3x1/4	.622			Lbyy						Lateral
105	M113	HSS3x3x1/4	.639			Lbyy						Lateral
106	M114	HSS3x3x1/4	.61			Lbyy						Lateral
107	M115	HSS3x3x1/4	.622			Lbyy						Lateral
108	M116	HSS3x3x1/4	.625			Lbyy						Lateral
109	M117	HSS3x3x1/4	2.494			Lbyy						Lateral
110	M118	HSS3x3x1/4	2.4			Lbyy						Lateral
111	M119	HSS3x3x1/4	1.253			Lbyy						Lateral
112	M120	Pipe 6 XS	5.318	6		Lbyy						Lateral
113	M121	Pipe 6 XS	6.179	6		Lbyy						Lateral
114	M122	Pipe 6 XS	6.179	6		Lbyy						Lateral
115	M123	Pipe 6 XS	.557	6		Lbyy						Lateral
116	M124	Pipe 6 XS	4.002	6		Lbyy						Lateral
117	M125	Pipe 6 XS	1.619	6		Lbyy						Lateral
118	M126	Pipe 6 XS	2.359	6		Lbyy						Lateral
119	M127	Pipe 6 XS	3.82	6		Lbyy						Lateral
120	M128	Pipe 6 XS	5.62	6		Lbyy						Lateral
121	M129	Pipe 6 XS	5.997	6		Lbyy						Lateral
122	M130	Pipe 6 XS	5.997	6		Lbyy						Lateral
123	M131	Pipe 6 XS	5.997	6		Lbyy						Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
124	M132	Pipe 6 XS	5.997	6		Lbyy						Lateral
125	M133	Pipe 16 Sch...	26.833			Lbyy						Lateral
126	M134	Pipe 6 XS	4.917			Lbyy						Lateral
127	M135	HSS3x3x3/8	5.845	5.9		Lbyy						Lateral
128	M136	HSS3x3x3/8	3.25			Lbyy						Lateral
129	M137	HSS3x3x1/4	.667			Lbyy						Lateral
130	M138	HSS3x3x1/4	6.167	5.9		Lbyy						Lateral
131	M139	HSS3x3x1/4	.667			Lbyy						Lateral
132	M140	Pipe 6 XS	6.449	6		Lbyy						Lateral
133	M141	Pipe 6 XS	6.875	6		Lbyy						Lateral
134	M142	HSS1.5x1.5...	3.25			Lbyy						Lateral
135	M143	HSS3x3x1/4	.625			Lbyy						Lateral
136	M144	HSS3x3x1/4	.625			Lbyy						Lateral
137	M145	HSS3x3x1/4	.625			Lbyy						Lateral
138	M146	HSS1.5x1.5...	3.25			Lbyy						Lateral
139	M147	HSS1.5x1.5...	3.251			Lbyy						Lateral
140	M148	HSS1.5x1.5...	3.251			Lbyy						Lateral
141	M149	HSS1.5x1.5...	3.269			Lbyy						Lateral
142	M150	HSS1.5x1.5...	3.251			Lbyy						Lateral
143	M151	HSS1.5x1.5...	3.25			Lbyy						Lateral
144	M152	HSS1.5x1.5...	3.251			Lbyy						Lateral
145	M153	HSS1.5x1.5...	3.25			Lbyy						Lateral
146	M154	HSS3x3x1/4	2.502			Lbyy						Lateral
147	M155	HSS3x3x1/4	2.097	5.9		Lbyy						Lateral
148	M156	HSS3x3x1/4	4.067	5.9		Lbyy						Lateral
149	M157	HSS3x3x1/4	4.001	5.9		Lbyy						Lateral
150	M158	HSS3x3x1/4	4.06	5.9		Lbyy						Lateral
151	M159	HSS3x3x1/4	4	5.9		Lbyy						Lateral
152	M160	HSS3x3x1/4	4.072	5.9		Lbyy						Lateral
153	M161	HSS3x3x1/4	4	5.9		Lbyy						Lateral
154	M162	HSS3x3x1/4	3.676	5.9		Lbyy						Lateral
155	M163	HSS3x3x1/4	3.828	5.9		Lbyy						Lateral
156	M164	HSS3x3x1/4	4	5.9		Lbyy						Lateral
157	M165	HSS3x3x1/4	3.928	5.9		Lbyy						Lateral
158	M166	HSS3x3x1/4	4			Lbyy						Lateral
159	M167	HSS3x3x1/4	3.94	5.9		Lbyy						Lateral
160	M168	HSS3x3x1/4	4	5.9		Lbyy						Lateral
161	M169	HSS3x3x1/4	3.922	5.9		Lbyy						Lateral
162	M170	HSS3x3x1/4	2.034	5.9		Lbyy						Lateral
163	M171	HSS3x3x1/4	.638			Lbyy						Lateral
164	M172	HSS3x3x1/4	.61			Lbyy						Lateral
165	M173	HSS3x3x1/4	.639			Lbyy						Lateral
166	M174	HSS3x3x1/4	.611			Lbyy						Lateral
167	M175	HSS3x3x1/4	.622			Lbyy						Lateral
168	M176	HSS3x3x1/4	.61			Lbyy						Lateral
169	M177	HSS3x3x1/4	.622			Lbyy						Lateral
170	M178	HSS3x3x1/4	.625			Lbyy						Lateral
171	M179	HSS3x3x1/4	.622			Lbyy						Lateral
172	M180	HSS3x3x1/4	.625			Lbyy						Lateral
173	M181	HSS3x3x1/4	2.494			Lbyy						Lateral
174	M182	HSS3x3x1/4	2.4			Lbyy						Lateral
175	M183	HSS3x3x1/4	1.253			Lbyy						Lateral
176	M184	Pipe 6 XS	5.318	6		Lbyy						Lateral
177	M185	Pipe 6 XS	6.179	6		Lbyy						Lateral
178	M186	Pipe 6 XS	6.179	6		Lbyy						Lateral
179	M187	Pipe 6 XS	.557	6		Lbyy						Lateral
180	M188	Pipe 6 XS	4.002	6		Lbyy						Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
181	M189	Pipe 6 XS	1.619	6		Lbyy						Lateral
182	M190	Pipe 6 XS	2.359	6		Lbyy						Lateral
183	M191	Pipe 6 XS	3.82	6		Lbyy						Lateral
184	M192	Pipe 6 XS	5.62	6		Lbyy						Lateral
185	M193	Pipe 6 XS	5.997	6		Lbyy						Lateral
186	M194	Pipe 6 XS	5.997	6		Lbyy						Lateral
187	M195	Pipe 6 XS	5.997	6		Lbyy						Lateral
188	M196	Pipe 6 XS	5.997	6		Lbyy						Lateral
189	M197	Pipe 6 XS	4.917			Lbyy						Lateral
190	M198	HSS3x3x3/8	5.845	5.9		Lbyy						Lateral
191	M199	HSS3x3x3/8	3.25			Lbyy						Lateral
192	M200	HSS3x3x1/4	.667			Lbyy						Lateral
193	M201	HSS3x3x1/4	6.167	5.9		Lbyy						Lateral
194	M202	HSS3x3x1/4	.667			Lbyy						Lateral
195	M203	Pipe 6 XS	6.449	6		Lbyy						Lateral
196	M204	Pipe 6 XS	6.875	6		Lbyy						Lateral
197	M205	HSS1.5x1.5...	3.25			Lbyy						Lateral
198	M206	HSS3x3x1/4	.625			Lbyy						Lateral
199	M207	HSS3x3x1/4	.625			Lbyy						Lateral
200	M208	HSS3x3x1/4	.625			Lbyy						Lateral
201	M209	HSS1.5x1.5...	3.25			Lbyy						Lateral
202	M210	HSS1.5x1.5...	3.251			Lbyy						Lateral
203	M211	HSS1.5x1.5...	3.251			Lbyy						Lateral
204	M212	HSS1.5x1.5...	3.269			Lbyy						Lateral
205	M213	HSS1.5x1.5...	3.251			Lbyy						Lateral
206	M214	HSS1.5x1.5...	3.25			Lbyy						Lateral
207	M215	HSS1.5x1.5...	3.251			Lbyy						Lateral
208	M216	HSS1.5x1.5...	3.25			Lbyy						Lateral
209	M217	HSS3x3x1/4	2.097	5.9		Lbyy						Lateral
210	M218	HSS3x3x1/4	4.067	5.9		Lbyy						Lateral
211	M219	HSS3x3x1/4	4.001	5.9		Lbyy						Lateral
212	M220	HSS3x3x1/4	4.06	5.9		Lbyy						Lateral
213	M221	HSS3x3x1/4	4	5.9		Lbyy						Lateral
214	M222	HSS3x3x1/4	4.072	5.9		Lbyy						Lateral
215	M223	HSS3x3x1/4	4	5.9		Lbyy						Lateral
216	M224	HSS3x3x1/4	3.676	5.9		Lbyy						Lateral
217	M225	HSS3x3x1/4	3.828	5.9		Lbyy						Lateral
218	M226	HSS3x3x1/4	4	5.9		Lbyy						Lateral
219	M227	HSS3x3x1/4	3.928	5.9		Lbyy						Lateral
220	M228	HSS3x3x1/4	4	5.9		Lbyy						Lateral
221	M229	HSS3x3x1/4	3.94	5.9		Lbyy						Lateral
222	M230	HSS3x3x1/4	4	5.9		Lbyy						Lateral
223	M231	HSS3x3x1/4	3.922	5.9		Lbyy						Lateral
224	M232	HSS3x3x1/4	2.034			Lbyy						Lateral
225	M233	HSS3x3x1/4	.638			Lbyy						Lateral
226	M234	HSS3x3x1/4	.611			Lbyy						Lateral
227	M235	HSS3x3x1/4	.61			Lbyy						Lateral
228	M236	HSS3x3x1/4	.622			Lbyy						Lateral
229	M237	HSS3x3x1/4	.639			Lbyy						Lateral
230	M238	HSS3x3x1/4	.61			Lbyy						Lateral
231	M239	HSS3x3x1/4	.622			Lbyy						Lateral
232	M240	HSS3x3x1/4	.625			Lbyy						Lateral
233	M241	HSS3x3x1/4	2.494			Lbyy						Lateral
234	M242	HSS3x3x1/4	2.4			Lbyy						Lateral
235	M243	HSS3x3x1/4	1.253			Lbyy						Lateral
236	M244	Pipe 6 XS	5.318	6		Lbyy						Lateral
237	M245	Pipe 6 XS	6.179	6		Lbyy						Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
238	M246	Pipe 6 XS	6.179	6		Lbyy						Lateral
239	M247	Pipe 6 XS	.557	6		Lbyy						Lateral
240	M248	Pipe 6 XS	4.002	6		Lbyy						Lateral
241	M249	Pipe 6 XS	1.619	6		Lbyy						Lateral
242	M250	Pipe 6 XS	2.359	6		Lbyy						Lateral
243	M251	Pipe 6 XS	3.82	6		Lbyy						Lateral
244	M252	Pipe 6 XS	5.62	6		Lbyy						Lateral
245	M253	Pipe 6 XS	5.997	6		Lbyy						Lateral
246	M254	Pipe 6 XS	5.997	6		Lbyy						Lateral
247	M255	Pipe 6 XS	5.997	6		Lbyy						Lateral
248	M256	Pipe 6 XS	5.997	6		Lbyy						Lateral
249	M257	Pipe 6 XS	1.448									Lateral
250	M258	Pipe 6 XS	1.448									Lateral
251	M259	Pipe 6 XS	1.448									Lateral
252	M260	Pipe 6 XS	1.448									Lateral
253	M261	Pipe 3.5 Sc...	1.448									Lateral
254	M262	Pipe 3.5 Sc...	1.448									Lateral
255	M263	Pipe 3.5 Sc...	1.448									Lateral
256	M264	Pipe 3.5 Sc...	1.448									Lateral
257	M265	Pipe 3.5 Sc...	1.448									Lateral
258	M266	Pipe 3.5 Sc...	1.448									Lateral
259	M267	Pipe 3.5 Sc...	1.448									Lateral
260	M268	Pipe 3.5 Sc...	1.448									Lateral
261	M269	Pipe 3.5 Sc...	1.448									Lateral
262	M270	Pipe 3.5 Sc...	1.448									Lateral
263	M271	Pipe 3.5 Sc...	1.448									Lateral
264	M272	Pipe 3.5 Sc...	1.448									Lateral
265	M273	Pipe 3.5 Sc...	1.448									Lateral
266	M274	Pipe 3.5 Sc...	1.448									Lateral
267	M275	Pipe 3.5 Sc...	1.448									Lateral
268	M276	Pipe 3.5 Sc...	1.448									Lateral
269	M277	Pipe 3.5 Sc...	1.448									Lateral
270	M278	Pipe 3.5 Sc...	1.448									Lateral
271	M279	Pipe 3.5 Sc...	1.448									Lateral
272	M280	Pipe 3.5 Sc...	1.448									Lateral
273	M281	Pipe 3.5 Sc...	1.448									Lateral
274	M282	Pipe 3.5 Sc...	1.448									Lateral
275	M283	Pipe 3.5 Sc...	1.448									Lateral

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(...
1	Dead	DL		-1		10	40			
2	Wind X	WLX						4		
3	Wind Z	WLZ				10		70	19	
4	Wind Z - Case C	None							18	
5	Seismic X	ELX	.329	-.197		20	80			
6	Seismic Z	ELZ		-.197	.329	20	80			
7	BLC 3 Transient Area Loads	None						96		
8	BLC 4 Transient Area Loads	None						358		

Joint Loads and Enforced Displacements (BLC 1 : Dead)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft...
1	N124	L	Y	-.04
2	N123	L	Y	-.04

Joint Loads and Enforced Displacements (BLC 1 : Dead) (Continued)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft...
3	N30	L	Y	-.04
4	N55	L	Y	-.04
5	N56	L	Y	-.04
6	N179	L	Y	-.04
7	N204	L	Y	-.04
8	N205	L	Y	-.04
9	N268	L	Y	-.04
10	N269	L	Y	-.04

Joint Loads and Enforced Displacements (BLC 3 : Wind Z)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft...
1	N124	L	Z	.182
2	N123	L	Z	.182
3	N30	L	Z	.182
4	N55	L	Z	.182
5	N56	L	Z	.182
6	N179	L	Z	.182
7	N204	L	Z	.182
8	N205	L	Z	.182
9	N268	L	Z	.182
10	N269	L	Z	.182

Joint Loads and Enforced Displacements (BLC 5 : Seismic X)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft...
1	N124	L	X	.013
2	N123	L	X	.013
3	N30	L	X	.013
4	N55	L	X	.013
5	N56	L	X	.013
6	N124	L	Y	-.008
7	N123	L	Y	-.008
8	N30	L	Y	-.008
9	N55	L	Y	-.008
10	N56	L	Y	-.008
11	N179	L	X	.013
12	N179	L	Y	-.008
13	N204	L	X	.013
14	N204	L	Y	-.008
15	N205	L	X	.013
16	N205	L	Y	-.008
17	N268	L	X	.013
18	N268	L	Y	-.008
19	N269	L	X	.013
20	N269	L	Y	-.008

Joint Loads and Enforced Displacements (BLC 6 : Seismic Z)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft...
1	N124	L	Z	.013
2	N123	L	Z	.013
3	N30	L	Z	.013
4	N55	L	Z	.013
5	N56	L	Z	.013
6	N124	L	Y	-.008
7	N123	L	Y	-.008
8	N30	L	Y	-.008

Joint Loads and Enforced Displacements (BLC 6 : Seismic Z) (Continued)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft,..
9	N55	L	Y	-.008
10	N56	L	Y	-.008
11	N179	L	Z	.013
12	N179	L	Y	-.008
13	N204	L	Z	.013
14	N204	L	Y	-.008
15	N205	L	Z	.013
16	N205	L	Y	-.008
17	N268	L	Z	.013
18	N268	L	Y	-.008
19	N269	L	Z	.013
20	N269	L	Y	-.008

Member Point Loads (BLC 1 : Dead)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	M81	Y	-.041	%50
2	M85	Y	-.041	%50
3	M86	Y	-.041	%50
4	M87	Y	-.041	%50
5	M88	Y	-.041	%50
6	M89	Y	-.041	%50
7	M90	Y	-.041	%50
8	M91	Y	-.041	%50
9	M92	Y	-.041	%50
10	M25	Y	-.041	%50
11	M24	Y	-.041	%50
12	M23	Y	-.041	%50
13	M22	Y	-.041	%50
14	M21	Y	-.041	%50
15	M20	Y	-.041	%50
16	M19	Y	-.041	%50
17	M18	Y	-.041	%50
18	M14	Y	-.041	%50
19	M80	Y	-.13	1
20	M13	Y	-.13	1
21	M141	Y	-.13	1
22	M142	Y	-.041	%50
23	M146	Y	-.041	%50
24	M147	Y	-.041	%50
25	M148	Y	-.041	%50
26	M149	Y	-.041	%50
27	M150	Y	-.041	%50
28	M151	Y	-.041	%50
29	M152	Y	-.041	%50
30	M153	Y	-.041	%50
31	M204	Y	-.13	1
32	M205	Y	-.041	%50
33	M209	Y	-.041	%50
34	M210	Y	-.041	%50
35	M211	Y	-.041	%50
36	M212	Y	-.041	%50
37	M213	Y	-.041	%50
38	M214	Y	-.041	%50
39	M215	Y	-.041	%50
40	M216	Y	-.041	%50

Member Point Loads (BLC 5 : Seismic X)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	M81	X	.014	%50
2	M85	X	.014	%50
3	M86	X	.014	%50
4	M87	X	.014	%50
5	M88	X	.014	%50
6	M89	X	.014	%50
7	M90	X	.014	%50
8	M91	X	.014	%50
9	M92	X	.014	%50
10	M25	X	.014	%50
11	M24	X	.014	%50
12	M23	X	.014	%50
13	M22	X	.014	%50
14	M21	X	.014	%50
15	M20	X	.014	%50
16	M19	X	.014	%50
17	M18	X	.014	%50
18	M14	X	.014	%50
19	M80	X	.043	1
20	M13	X	.043	1
21	M81	Y	-.008	%50
22	M85	Y	-.008	%50
23	M86	Y	-.008	%50
24	M87	Y	-.008	%50
25	M88	Y	-.008	%50
26	M89	Y	-.008	%50
27	M90	Y	-.008	%50
28	M91	Y	-.008	%50
29	M92	Y	-.008	%50
30	M25	Y	-.008	%50
31	M24	Y	-.008	%50
32	M23	Y	-.008	%50
33	M22	Y	-.008	%50
34	M21	Y	-.008	%50
35	M20	Y	-.008	%50
36	M19	Y	-.008	%50
37	M18	Y	-.008	%50
38	M14	Y	-.008	%50
39	M80	Y	-.008	1
40	M13	Y	-.008	1
41	M141	X	.043	1
42	M141	Y	-.026	1
43	M142	X	.014	%50
44	M142	Y	-.008	%50
45	M146	X	.014	%50
46	M146	Y	-.008	%50
47	M147	X	.014	%50
48	M147	Y	-.008	%50
49	M148	X	.014	%50
50	M148	Y	-.008	%50
51	M149	X	.014	%50
52	M149	Y	-.008	%50
53	M150	X	.014	%50
54	M150	Y	-.008	%50
55	M151	X	.014	%50
56	M151	Y	-.008	%50
57	M152	X	.014	%50

Member Point Loads (BLC 5 : Seismic X) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
58	M152	Y	-.008	%50
59	M153	X	.014	%50
60	M153	Y	-.008	%50
61	M204	X	.043	1
62	M204	Y	-.026	1
63	M205	X	.014	%50
64	M205	Y	-.008	%50
65	M209	X	.014	%50
66	M209	Y	-.008	%50
67	M210	X	.014	%50
68	M210	Y	-.008	%50
69	M211	X	.014	%50
70	M211	Y	-.008	%50
71	M212	X	.014	%50
72	M212	Y	-.008	%50
73	M213	X	.014	%50
74	M213	Y	-.008	%50
75	M214	X	.014	%50
76	M214	Y	-.008	%50
77	M215	X	.014	%50
78	M215	Y	-.008	%50
79	M216	X	.014	%50
80	M216	Y	-.008	%50

Member Point Loads (BLC 6 : Seismic Z)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	M81	Z	.014	%50
2	M85	Z	.014	%50
3	M86	Z	.014	%50
4	M87	Z	.014	%50
5	M88	Z	.014	%50
6	M89	Z	.014	%50
7	M90	Z	.014	%50
8	M91	Z	.014	%50
9	M92	Z	.014	%50
10	M25	Z	.014	%50
11	M24	Z	.014	%50
12	M23	Z	.014	%50
13	M22	Z	.014	%50
14	M21	Z	.014	%50
15	M20	Z	.014	%50
16	M19	Z	.014	%50
17	M18	Z	.014	%50
18	M14	Z	.014	%50
19	M80	Z	.043	1
20	M13	Z	.043	1
21	M81	Y	-.008	%50
22	M85	Y	-.008	%50
23	M86	Y	-.008	%50
24	M87	Y	-.008	%50
25	M88	Y	-.008	%50
26	M89	Y	-.008	%50
27	M90	Y	-.008	%50
28	M91	Y	-.008	%50
29	M92	Y	-.008	%50
30	M25	Y	-.008	%50

Member Point Loads (BLC 6 : Seismic Z) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
31	M24	Y	-.008	%50
32	M23	Y	-.008	%50
33	M22	Y	-.008	%50
34	M21	Y	-.008	%50
35	M20	Y	-.008	%50
36	M19	Y	-.008	%50
37	M18	Y	-.008	%50
38	M14	Y	-.008	%50
39	M80	Y	-.026	1
40	M13	Y	-.026	1
41	M141	Z	.043	1
42	M141	Y	-.026	1
43	M142	Z	.014	%50
44	M142	Y	-.008	%50
45	M146	Z	.014	%50
46	M146	Y	-.008	%50
47	M147	Z	.014	%50
48	M147	Y	-.008	%50
49	M148	Z	.014	%50
50	M148	Y	-.008	%50
51	M149	Z	.014	%50
52	M149	Y	-.008	%50
53	M150	Z	.014	%50
54	M150	Y	-.008	%50
55	M151	Z	.014	%50
56	M151	Y	-.008	%50
57	M152	Z	.014	%50
58	M152	Y	-.008	%50
59	M153	Z	.014	%50
60	M153	Y	-.008	%50
61	M204	Z	.043	1
62	M204	Y	-.026	1
63	M205	Z	.014	%50
64	M205	Y	-.008	%50
65	M209	Z	.014	%50
66	M209	Y	-.008	%50
67	M210	Z	.014	%50
68	M210	Y	-.008	%50
69	M211	Z	.014	%50
70	M211	Y	-.008	%50
71	M212	Z	.014	%50
72	M212	Y	-.008	%50
73	M213	Z	.014	%50
74	M213	Y	-.008	%50
75	M214	Z	.014	%50
76	M214	Y	-.008	%50
77	M215	Z	.014	%50
78	M215	Y	-.008	%50
79	M216	Z	.014	%50
80	M216	Y	-.008	%50

Member Distributed Loads (BLC 2 : Wind X)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	M133	X	.013	.013	0	0
2	M1	X	.013	.013	0	0

Member Distributed Loads (BLC 2 : Wind X) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
3	M70	X	.019	.019	0	0
4	M197	X	.019	.019	0	0

Member Distributed Loads (BLC 3 : Wind Z)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	M133	Z	.013	.013	0	0
2	M1	Z	.013	.013	0	0
3	M79	Z	.015	.015	0	0
4	M120	Z	.015	.015	0	0
5	M121	Z	.015	.015	0	0
6	M122	Z	.015	.015	0	0
7	M124	Z	.015	.015	0	0
8	M123	Z	.015	.015	0	0
9	M125	Z	.015	.015	0	0
10	M126	Z	.015	.015	0	0
11	M127	Z	.015	.015	0	0
12	M63	Z	.015	.015	0	0
13	M62	Z	.015	.015	0	0
14	M61	Z	.015	.015	0	0
15	M60	Z	.015	.015	0	0
16	M59	Z	.015	.015	0	0
17	M58	Z	.015	.015	0	0
18	M57	Z	.015	.015	0	0
19	M56	Z	.015	.015	0	0
20	M12	Z	.015	.015	0	0
21	M13	Z	.015	.015	0	0
22	M64	Z	.015	.015	0	0
23	M65	Z	.015	.015	0	0
24	M66	Z	.015	.015	0	0
25	M67	Z	.015	.015	0	0
26	M68	Z	.015	.015	0	0
27	M132	Z	.015	.015	0	0
28	M131	Z	.015	.015	0	0
29	M130	Z	.015	.015	0	0
30	M129	Z	.015	.015	0	0
31	M128	Z	.015	.015	0	0
32	M80	Z	.015	.015	0	0
33	M77	Z	.007	.007	0	0
34	M101	Z	.007	.007	0	0
35	M102	Z	.007	.007	0	0
36	M103	Z	.007	.007	0	0
37	M104	Z	.007	.007	0	0
38	M105	Z	.007	.007	0	0
39	M106	Z	.007	.007	0	0
40	M107	Z	.007	.007	0	0
41	M108	Z	.007	.007	0	0
42	M42	Z	.007	.007	0	0
43	M41	Z	.007	.007	0	0
44	M40	Z	.007	.007	0	0
45	M39	Z	.007	.007	0	0
46	M38	Z	.007	.007	0	0
47	M37	Z	.007	.007	0	0
48	M36	Z	.007	.007	0	0
49	M35	Z	.007	.007	0	0
50	M10	Z	.007	.007	0	0
51	M7	Z	.007	.007	0	0

Member Distributed Loads (BLC 3 : Wind Z) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
52	M34	Z	.007	.007	0	0
53	M33	Z	.007	.007	0	0
54	M32	Z	.007	.007	0	0
55	M31	Z	.007	.007	0	0
56	M30	Z	.007	.007	0	0
57	M29	Z	.007	.007	0	0
58	M28	Z	.007	.007	0	0
59	M27	Z	.007	.007	0	0
60	M93	Z	.007	.007	0	0
61	M94	Z	.007	.007	0	0
62	M95	Z	.007	.007	0	0
63	M96	Z	.007	.007	0	0
64	M97	Z	.007	.007	0	0
65	M98	Z	.007	.007	0	0
66	M99	Z	.007	.007	0	0
67	M100	Z	.007	.007	0	0
68	M74	Z	.007	.007	0	0
69	M70	Z	.019	.019	0	0
70	M3	Z	.019	.019	0	0

Member Distributed Loads (BLC 7 : BLC 3 Transient Area Loads)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	M75	Z	.042	.042	1.665e-16	3.25
2	M81	Z	.042	.042	7.272e-15	3.25
3	M81	Z	.033	.036	0	.65
4	M81	Z	.036	.04	.65	1.3
5	M81	Z	.04	.039	1.3	1.95
6	M81	Z	.039	.036	1.95	2.6
7	M81	Z	.036	.033	2.6	3.25
8	M85	Z	.069	.099	0	.65
9	M85	Z	.099	.1	.65	1.3
10	M85	Z	.1	.091	1.3	1.95
11	M85	Z	.091	.094	1.95	2.6
12	M85	Z	.094	.095	2.6	3.25
13	M74	Z	-.0001635	-.0001635	4.676	4.91
14	M74	Z	-.0001635	-.0001635	4.91	5.144
15	M74	Z	-.0001635	-.0001635	5.144	5.377
16	M74	Z	-.0001635	.001	5.377	5.611
17	M74	Z	.001	.005	5.611	5.845
18	M86	Z	.031	.063	0	.65
19	M86	Z	.063	.068	.65	1.3
20	M86	Z	.068	.058	1.3	1.951
21	M86	Z	.058	.056	1.951	2.601
22	M86	Z	.056	.052	2.601	3.251
23	M100	Z	.000486	.0002992	0	.735
24	M100	Z	.0002992	.0003242	.735	1.47
25	M100	Z	.0003242	.0004187	1.47	2.205
26	M100	Z	.0004187	.0003738	2.205	2.94
27	M100	Z	.0003738	.0003318	2.94	3.676
28	M86	Z	.056	.056	0	3.251
29	M87	Z	.056	.056	8.382e-15	3.251
30	M87	Z	.056	.056	0	3.249
31	M88	Z	.056	.056	.007	3.268
32	M88	Z	.056	.056	.004	3.268
33	M89	Z	.056	.056	0	3.25
34	M89	Z	.056	.056	5.1e-5	3.251

Member Distributed Loads (BLC 7 : BLC 3 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
35	M90	Z	.112	.112	0	3.25
36	M91	Z	.056	.056	.0004252	3.251
37	M91	Z	.056	.056	0	3.251
38	M92	Z	.056	.056	.0005733	3.25
39	M25	Z	.053	.062	0	.65
40	M25	Z	.062	.062	.65	1.3
41	M25	Z	.062	.066	1.3	1.95
42	M25	Z	.066	.06	1.95	2.6
43	M25	Z	.06	.029	2.6	3.25
44	M42	Z	.0002323	.0001457	0	.407
45	M42	Z	.0001457	.000173	.407	.814
46	M42	Z	.000173	.0002205	.814	1.22
47	M42	Z	.0002205	.0001884	1.22	1.627
48	M42	Z	.0001884	.0001704	1.627	2.034
49	M51	Z	.025	.025	0	.016
50	M92	Z	.062	.06	0	.65
51	M92	Z	.06	.057	.65	1.3
52	M92	Z	.057	.065	1.3	1.95
53	M92	Z	.065	.059	1.95	2.6
54	M92	Z	.059	.029	2.6	3.25
55	M108	Z	.0002334	.0001451	0	.407
56	M108	Z	.0001451	.0001654	.407	.814
57	M108	Z	.0001654	.0002151	.814	1.22
58	M108	Z	.0002151	.0001879	1.22	1.627
59	M108	Z	.0001879	.0001628	1.627	2.034
60	M24	Z	.056	.056	0	3.251
61	M25	Z	.056	.056	.000257	3.25
62	M23	Z	.112	.112	0	3.25
63	M24	Z	.056	.056	.0001906	3.251
64	M22	Z	.056	.056	.0001138	3.251
65	M21	Z	.056	.056	.009	3.267
66	M22	Z	.056	.056	0	3.248
67	M20	Z	.056	.056	0	3.25
68	M21	Z	.056	.056	.003	3.269
69	M19	Z	.056	.056	0	3.251
70	M20	Z	.056	.056	2.028e-12	3.251
71	M7	Z	-.0001635	-.0001635	4.676	4.968
72	M7	Z	-.0001635	-.0001635	4.968	5.26
73	M7	Z	-.0001635	.001	5.26	5.553
74	M7	Z	.001	.004	5.553	5.845
75	M18	Z	.073	.094	0	.65
76	M18	Z	.094	.096	.65	1.3
77	M18	Z	.096	.09	1.3	1.95
78	M18	Z	.09	.095	1.95	2.6
79	M18	Z	.095	.096	2.6	3.25
80	M19	Z	.03	.064	0	.65
81	M19	Z	.064	.066	.65	1.3
82	M19	Z	.066	.057	1.3	1.951
83	M19	Z	.057	.059	1.951	2.601
84	M19	Z	.059	.052	2.601	3.251
85	M34	Z	.0004861	.0002993	0	.735
86	M34	Z	.0002993	.0003156	.735	1.47
87	M34	Z	.0003156	.0004232	1.47	2.205
88	M34	Z	.0004232	.0003986	2.205	2.94
89	M34	Z	.0003986	.0003538	2.94	3.676
90	M14	Z	.031	.039	0	.65
91	M14	Z	.039	.042	.65	1.3

Member Distributed Loads (BLC 7 : BLC 3 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
92	M14	Z	.042	.039	1.3	1.95
93	M14	Z	.039	.036	1.95	2.6
94	M14	Z	.036	.034	2.6	3.25
95	M8	Z	.042	.042	3.419e-14	3.25
96	M14	Z	.042	.042	1.704e-14	3.25

Member Distributed Loads (BLC 8 : BLC 4 Transient Area Loads)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	M83	Z	.216	.148	0	.125
2	M83	Z	.148	.318	.125	.25
3	M83	Z	.318	.37	.25	.375
4	M83	Z	.37	.153	.375	.5
5	M83	Z	.153	.02	.5	.625
6	M133	Z	.313	.396	18.783	19.857
7	M133	Z	.396	.418	19.857	20.93
8	M133	Z	.418	.369	20.93	22.003
9	M133	Z	.369	.243	22.003	23.077
10	M133	Z	.243	.05	23.077	24.15
11	M84	Z	.094	.122	0	.125
12	M84	Z	.122	.124	.125	.25
13	M84	Z	.124	.106	.25	.375
14	M84	Z	.106	.096	.375	.5
15	M84	Z	.096	.09	.5	.625
16	M85	Z	.066	.085	0	.65
17	M85	Z	.085	.092	.65	1.3
18	M85	Z	.092	.082	1.3	1.95
19	M85	Z	.082	.082	1.95	2.6
20	M85	Z	.082	.095	2.6	3.25
21	M100	Z	.0006053	.0006053	2.975	3.676
22	M101	Z	.0003564	.0003564	0	.746
23	M128	Z	.0004694	.0004694	0	.802
24	M77	Z	.0003213	.0003213	4.934	5.18
25	M77	Z	.0003213	.0003213	5.18	5.427
26	M77	Z	.0003213	.006	5.427	5.674
27	M77	Z	.006	.008	5.674	5.92
28	M77	Z	.008	.0003213	5.92	6.167
29	M80	Z	.0003561	.0003561	5.5	5.775
30	M80	Z	.0003561	.0003561	5.775	6.05
31	M80	Z	.0003561	.007	6.05	6.325
32	M80	Z	.007	.011	6.325	6.6
33	M80	Z	.011	.004	6.6	6.875
34	M83	Z	.187	.0003561	0	.625
35	M86	Z	.154	.177	0	.65
36	M86	Z	.177	.15	.65	1.3
37	M86	Z	.15	.146	1.3	1.951
38	M86	Z	.146	.162	1.951	2.601
39	M86	Z	.162	.125	2.601	3.251
40	M87	Z	.121	.125	0	.65
41	M87	Z	.125	.129	.65	1.3
42	M87	Z	.129	.131	1.3	1.951
43	M87	Z	.131	.132	1.951	2.601
44	M87	Z	.132	.136	2.601	3.251
45	M109	Z	.072	.239	0	.128
46	M109	Z	.239	.245	.128	.255
47	M109	Z	.245	.248	.255	.383
48	M109	Z	.248	.23	.383	.511

Member Distributed Loads (BLC 8 : BLC 4 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
49	M109	Z	.23	.007	.511	.638
50	M110	Z	.157	.222	0	.122
51	M110	Z	.222	.234	.122	.244
52	M110	Z	.234	.225	.244	.366
53	M110	Z	.225	.213	.366	.488
54	M110	Z	.213	.165	.488	.611
55	M121	Z	.0007704	.0002101	1.854	2.78
56	M121	Z	.0002101	-7.004e-5	2.78	3.707
57	M128	Z	3.985e-5	.0008012	0	1.124
58	M128	Z	.0008012	.001	1.124	2.248
59	M128	Z	.001	.001	2.248	3.372
60	M128	Z	.001	.001	3.372	4.496
61	M128	Z	.001	.001	4.496	5.62
62	M129	Z	.002	.001	0	.36
63	M129	Z	.001	.002	.36	.72
64	M129	Z	.002	.001	.72	1.08
65	M129	Z	.001	-6.431e-6	1.08	1.439
66	M129	Z	-6.431e-6	-6.431e-6	1.439	1.799
67	M88	Z	.126	.119	0	.654
68	M88	Z	.119	.12	.654	1.308
69	M88	Z	.12	.125	1.308	1.962
70	M88	Z	.125	.124	1.962	2.615
71	M88	Z	.124	.12	2.615	3.269
72	M89	Z	.062	.062	0	.65
73	M89	Z	.062	.074	.65	1.3
74	M89	Z	.074	.067	1.3	1.95
75	M89	Z	.067	.065	1.95	2.6
76	M89	Z	.065	.097	2.6	3.251
77	M102	Z	-4.336e-19	.001	1.2	1.6
78	M102	Z	.001	.007	1.6	2
79	M102	Z	.007	.006	2	2.4
80	M102	Z	.006	.0006358	2.4	2.8
81	M102	Z	.0006358	-4.336e-19	2.8	3.2
82	M111	Z	-.003	.19	0	.122
83	M111	Z	.19	.215	.122	.244
84	M111	Z	.215	.108	.244	.366
85	M111	Z	.108	.198	.366	.488
86	M111	Z	.198	.259	.488	.61
87	M112	Z	.155	.172	0	.124
88	M112	Z	.172	.165	.124	.249
89	M112	Z	.165	.163	.249	.373
90	M112	Z	.163	.17	.373	.498
91	M112	Z	.17	.161	.498	.622
92	M121	Z	.000868	.0002367	0	.618
93	M121	Z	.0002367	-7.891e-5	.618	1.236
94	M129	Z	4.598e-5	.001	.6	1.679
95	M129	Z	.001	.002	1.679	2.759
96	M129	Z	.002	.002	2.759	3.838
97	M129	Z	.002	.002	3.838	4.918
98	M129	Z	.002	.001	4.918	5.997
99	M130	Z	.0005587	.002	0	.6
100	M130	Z	.002	.002	.6	1.199
101	M130	Z	.002	.002	1.199	1.799
102	M130	Z	.002	.002	1.799	2.399
103	M130	Z	.002	6.896e-5	2.399	2.999
104	M90	Z	.062	.058	0	.65
105	M90	Z	.058	.067	.65	1.3

Member Distributed Loads (BLC 8 : BLC 4 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
106	M90	Z	.067	.066	1.3	1.95
107	M90	Z	.066	.059	1.95	2.6
108	M90	Z	.059	.072	2.6	3.25
109	M103	Z	.003	.003	3.758	3.928
110	M104	Z	.003	.001	0	.6
111	M104	Z	.001	-6.034e-5	.6	1.2
112	M106	Z	6.867e-5	.001	2	2.4
113	M106	Z	.001	.002	2.4	2.8
114	M106	Z	.002	.002	2.8	3.2
115	M106	Z	.002	.001	3.2	3.6
116	M106	Z	.001	9.939e-5	3.6	4
117	M113	Z	.173	.007	0	.639
118	M114	Z	.069	.088	0	.122
119	M114	Z	.088	.088	.122	.244
120	M114	Z	.088	.095	.244	.366
121	M114	Z	.095	.104	.366	.488
122	M114	Z	.104	.091	.488	.61
123	M115	Z	.01	.019	0	.124
124	M115	Z	.019	.022	.124	.249
125	M115	Z	.022	.022	.249	.373
126	M115	Z	.022	.024	.373	.498
127	M115	Z	.024	.024	.498	.622
128	M116	Z	.005	.026	0	.125
129	M116	Z	.026	.035	.125	.25
130	M116	Z	.035	.028	.25	.375
131	M116	Z	.028	.03	.375	.5
132	M116	Z	.03	.034	.5	.625
133	M125	Z	1.662e-5	.0001857	0	.81
134	M125	Z	.0001857	.0003547	.81	1.619
135	M130	Z	2.963e-5	.0007364	1.799	2.639
136	M130	Z	.0007364	.001	2.639	3.478
137	M130	Z	.001	.001	3.478	4.318
138	M130	Z	.001	.001	4.318	5.158
139	M130	Z	.001	.000672	5.158	5.997
140	M131	Z	.000684	.001	0	.96
141	M131	Z	.001	.001	.96	1.919
142	M131	Z	.001	.001	1.919	2.879
143	M131	Z	.001	.0004408	2.879	3.838
144	M131	Z	.0004408	2.146e-5	3.838	4.798
145	M51	Z	.012	.009	0	.124
146	M51	Z	.009	.008	.124	.249
147	M51	Z	.008	.008	.249	.373
148	M51	Z	.008	.007	.373	.497
149	M51	Z	.007	.007	.497	.622
150	M52	Z	.007	.009	0	.625
151	M91	Z	.008	.008	0	.65
152	M91	Z	.008	.009	.65	1.3
153	M91	Z	.009	.009	1.3	1.951
154	M91	Z	.009	.008	1.951	2.601
155	M91	Z	.008	.008	2.601	3.251
156	M92	Z	.006	.007	0	.65
157	M92	Z	.007	.008	.65	1.3
158	M92	Z	.008	.007	1.3	1.95
159	M92	Z	.007	.007	1.95	2.6
160	M92	Z	.007	.01	2.6	3.25
161	M106	Z	.0002818	.0002818	3.842	4
162	M124	Z	2.822e-21	9.153e-6	1.601	2.081

Member Distributed Loads (BLC 8 : BLC 4 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
163	M124	Z	9.153e-6	4.895e-5	2.081	2.561
164	M124	Z	4.895e-5	4.957e-5	2.561	3.042
165	M124	Z	4.957e-5	9.775e-6	3.042	3.522
166	M124	Z	9.775e-6	2.822e-21	3.522	4.002
167	M131	Z	-2.568e-6	1.45e-5	2.999	3.598
168	M131	Z	1.45e-5	.0001749	3.598	4.198
169	M131	Z	.0001749	.0002382	4.198	4.798
170	M131	Z	.0002382	.000184	4.798	5.398
171	M131	Z	.000184	.0002353	5.398	5.997
172	M132	Z	3.088e-5	4.759e-5	0	1.199
173	M132	Z	4.759e-5	5.505e-5	1.199	2.399
174	M132	Z	5.505e-5	4.059e-5	2.399	3.598
175	M132	Z	4.059e-5	3.666e-5	3.598	4.798
176	M132	Z	3.666e-5	5.593e-5	4.798	5.997
177	M24	Z	.005	.004	0	.65
178	M24	Z	.004	.004	.65	1.3
179	M24	Z	.004	.004	1.3	1.951
180	M24	Z	.004	.004	1.951	2.601
181	M24	Z	.004	.004	2.601	3.251
182	M25	Z	.003	.005	0	.65
183	M25	Z	.005	.004	.65	1.3
184	M25	Z	.004	.004	1.3	1.95
185	M25	Z	.004	.005	1.95	2.6
186	M25	Z	.005	.003	2.6	3.25
187	M49	Z	.003	.003	0	.124
188	M49	Z	.003	.004	.124	.249
189	M49	Z	.004	.004	.249	.373
190	M49	Z	.004	.004	.373	.498
191	M49	Z	.004	.004	.498	.622
192	M50	Z	.0009077	.007	0	.125
193	M50	Z	.007	.007	.125	.25
194	M50	Z	.007	.008	.25	.375
195	M50	Z	.008	.008	.375	.5
196	M50	Z	.008	.0008188	.5	.625
197	M67	Z	1.526e-7	1.526e-7	4.798	5.038
198	M67	Z	1.526e-7	2.197e-7	5.038	5.278
199	M67	Z	2.197e-7	7.187e-5	5.278	5.518
200	M67	Z	7.187e-5	.0001419	5.518	5.757
201	M67	Z	.0001419	.0001389	5.757	5.997
202	M68	Z	1.543e-5	1.305e-5	0	1.199
203	M68	Z	1.305e-5	7.642e-6	1.199	2.399
204	M68	Z	7.642e-6	6.413e-6	2.399	3.598
205	M68	Z	6.413e-6	9.538e-6	3.598	4.798
206	M68	Z	9.538e-6	9.825e-6	4.798	5.997
207	M132	Z	-2.56e-7	-2.56e-7	4.198	4.558
208	M132	Z	-2.56e-7	2.355e-5	4.558	4.918
209	M132	Z	2.355e-5	7.358e-5	4.918	5.278
210	M132	Z	7.358e-5	.0001024	5.278	5.638
211	M132	Z	.0001024	.0001075	5.638	5.997
212	M23	Z	.005	.004	0	.65
213	M23	Z	.004	.004	.65	1.3
214	M23	Z	.004	.004	1.3	1.95
215	M23	Z	.004	.003	1.95	2.6
216	M23	Z	.003	.005	2.6	3.25
217	M45	Z	.005	.002	0	.213
218	M45	Z	.002	.002	.213	.426
219	M45	Z	.002	.006	.426	.639

Member Distributed Loads (BLC 8 : BLC 4 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
220	M48	Z	.008	.005	0	.61
221	M49	Z	.003	.002	0	.622
222	M21	Z	.004	.004	0	.654
223	M21	Z	.004	.004	.654	1.308
224	M21	Z	.004	.004	1.308	1.962
225	M21	Z	.004	.004	1.962	2.615
226	M21	Z	.004	.005	2.615	3.269
227	M22	Z	.004	.003	0	.65
228	M22	Z	.003	.004	.65	1.3
229	M22	Z	.004	.004	1.3	1.95
230	M22	Z	.004	.003	1.95	2.6
231	M22	Z	.003	.004	2.6	3.251
232	M44	Z	.0002515	.003	0	.122
233	M44	Z	.003	.004	.122	.244
234	M44	Z	.004	.004	.244	.366
235	M44	Z	.004	.004	.366	.488
236	M44	Z	.004	.0002515	.488	.61
237	M45	Z	.002	.003	0	.639
238	M47	Z	.0002808	.004	0	.124
239	M47	Z	.004	.004	.124	.249
240	M47	Z	.004	.003	.249	.373
241	M47	Z	.003	.003	.373	.498
242	M47	Z	.003	.0002808	.498	.622
243	M19	Z	.0001164	.0004057	0	1.084
244	M19	Z	.0004057	.0005465	1.084	2.167
245	M19	Z	.0005465	.0005388	2.167	3.251
246	M20	Z	.004	.003	0	.65
247	M20	Z	.003	.004	.65	1.3
248	M20	Z	.004	.004	1.3	1.951
249	M20	Z	.004	.003	1.951	2.601
250	M20	Z	.003	.004	2.601	3.251
251	M43	Z	.006	.005	0	.638
252	M44	Z	.003	.003	.001	.601
253	M46	Z	.003	.003	0	.305
254	M46	Z	.003	.003	.305	.611
255	M47	Z	.003	.003	0	.622
256	M10	Z	3.934e-6	3.934e-6	4.934	5.18
257	M10	Z	3.934e-6	3.934e-6	5.18	5.427
258	M10	Z	3.934e-6	9.484e-5	5.427	5.674
259	M10	Z	9.484e-5	.0001464	5.674	5.92
260	M10	Z	.0001464	6.772e-5	5.92	6.167
261	M13	Z	-1.82e-5	5.461e-5	5.5	6.188
262	M13	Z	5.461e-5	.0002002	6.188	6.875
263	M16	Z	.003	.003	0	.555
264	M17	Z	.005	.007	0	.125
265	M17	Z	.007	.006	.125	.25
266	M17	Z	.006	.007	.25	.375
267	M17	Z	.007	.006	.375	.5
268	M17	Z	.006	.0007528	.5	.625
269	M18	Z	.004	.003	0	.65
270	M18	Z	.003	.004	.65	1.3
271	M18	Z	.004	.004	1.3	1.95
272	M18	Z	.004	.003	1.95	2.6
273	M18	Z	.003	.004	2.6	3.25
274	M19	Z	.004	.003	0	.65
275	M19	Z	.003	.004	.65	1.3
276	M19	Z	.004	.004	1.3	1.951

Member Distributed Loads (BLC 8 : BLC 4 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
277	M19	Z	.004	.003	1.951	2.601
278	M19	Z	.003	.004	2.601	3.251
279	M46	Z	.003	.003	0	.611
280	M3	Z	.0002902	.0002874	0	.983
281	M3	Z	.0002874	.0002723	.983	1.967
282	M3	Z	.0002723	.000268	1.967	2.95
283	M3	Z	.000268	.001	2.95	3.933
284	M3	Z	.001	.003	3.933	4.917
285	M8	Z	.002	.002	0	.65
286	M8	Z	.002	.002	.65	1.3
287	M8	Z	.002	.002	1.3	1.95
288	M8	Z	.002	.002	1.95	2.6
289	M8	Z	.002	.002	2.6	3.25
290	M14	Z	.003	.003	0	.65
291	M14	Z	.003	.003	.65	1.3
292	M14	Z	.003	.003	1.3	1.95
293	M14	Z	.003	.003	1.95	2.6
294	M14	Z	.003	.003	2.6	3.25
295	M15	Z	.005	.002	0	.208
296	M15	Z	.002	.002	.208	.417
297	M15	Z	.002	.006	.417	.625
298	M16	Z	.0002568	.004	0	.125
299	M16	Z	.004	.004	.125	.25
300	M16	Z	.004	.003	.25	.375
301	M16	Z	.003	.003	.375	.5
302	M16	Z	.003	.0002568	.5	.625
303	M34	Z	.0003149	.0003149	3.512	3.536
304	M35	Z	.0001117	.0001117	.132	.223
305	M118	Z	.048	.0001117	0	2.4
306	M119	Z	.034	.034	0	.627
307	M119	Z	.034	.034	.627	1.253
308	M124	Z	.016	.016	.14	1.14
309	M116	Z	.0005867	.0005867	.606	.625
310	M117	Z	.002	.004	0	.499
311	M117	Z	.004	.005	.499	.997
312	M117	Z	.005	.004	.997	1.496
313	M117	Z	.004	.004	1.496	1.995
314	M117	Z	.004	.003	1.995	2.494
315	M118	Z	.005	.004	0	.48
316	M118	Z	.004	.004	.48	.96
317	M118	Z	.004	.004	.96	1.44
318	M118	Z	.004	.004	1.44	1.92
319	M118	Z	.004	.003	1.92	2.4
320	M125	Z	5.514e-5	6.057e-5	0	.324
321	M125	Z	6.057e-5	5.785e-5	.324	.648
322	M125	Z	5.785e-5	5.441e-5	.648	.972
323	M125	Z	5.441e-5	5.624e-5	.972	1.296
324	M125	Z	5.624e-5	5.59e-5	1.296	1.619
325	M126	Z	7.087e-5	6.862e-5	0	.472
326	M126	Z	6.862e-5	5.731e-5	.472	.944
327	M126	Z	5.731e-5	3.9e-5	.944	1.416
328	M126	Z	3.9e-5	2.055e-5	1.416	1.887
329	M126	Z	2.055e-5	8.275e-7	1.887	2.359
330	M26	Z	.004	.004	.0007814	2.499
331	M117	Z	.004	.004	.0007814	2.494
332	M26	Z	.002	.002	0	2.501
333	M53	Z	.002	.002	0	2.494

Member Distributed Loads (BLC 8 : BLC 4 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
334	M50	Z	.0002905	.0002905	.604	.625
335	M53	Z	.0009858	.002	0	.499
336	M53	Z	.002	.002	.499	.997
337	M53	Z	.002	.002	.997	1.496
338	M53	Z	.002	.002	1.496	1.995
339	M53	Z	.002	.002	1.995	2.494
340	M54	Z	.002	.002	0	.48
341	M54	Z	.002	.002	.48	.96
342	M54	Z	.002	.002	.96	1.44
343	M54	Z	.002	.002	1.44	1.92
344	M54	Z	.002	.002	1.92	2.4
345	M61	Z	2.805e-5	3.056e-5	0	.324
346	M61	Z	3.056e-5	2.931e-5	.324	.648
347	M61	Z	2.931e-5	2.7e-5	.648	.972
348	M61	Z	2.7e-5	2.735e-5	.972	1.296
349	M61	Z	2.735e-5	2.766e-5	1.296	1.619
350	M62	Z	3.584e-5	3.409e-5	0	.472
351	M62	Z	3.409e-5	2.88e-5	.472	.944
352	M62	Z	2.88e-5	1.965e-5	.944	1.416
353	M62	Z	1.965e-5	1e-5	1.416	1.887
354	M62	Z	1e-5	3.818e-7	1.887	2.359
355	M54	Z	.003	3.409e-5	0	2.4
356	M55	Z	.002	.002	0	.627
357	M55	Z	.002	.002	.627	1.253
358	M60	Z	.001	.001	.14	1.14

Member Area Loads (BLC 3 : Wind Z)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N78	N88	N87	N81	Z	A-B	.028
2	N88	N96	N94	N87	Z	A-B	.028
3	N96	N104	N107	N94	Z	A-B	.028
4	N104	N103	N108	N107	Z	A-B	.028
5	N103	N102	N109	N108	Z	A-B	.028
6	N102	N101	N110	N109	Z	A-B	.028
7	N101	N100	N111	N110	Z	A-B	.028
8	N100	N99	N112	N111	Z	A-B	.028
9	N99	N98	N113	N112	Z	A-B	.028
10	N98	N31	N46	N113	Z	A-B	.028
11	N31	N32	N45	N46	Z	A-B	.028
12	N32	N33	N44	N45	Z	A-B	.028
13	N33	N34	N43	N44	Z	A-B	.028
14	N34	N35	N42	N43	Z	A-B	.028
15	N35	N36	N41	N42	Z	A-B	.028
16	N36	N37	N40	N41	Z	A-B	.028
17	N37	N29	N27	N40	Z	A-B	.028
18	N29	N21	N20	N27	Z	A-B	.028
19	N21	N11	N14	N20	Z	A-B	.028

Member Area Loads (BLC 4 : Wind Z - Case C)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N154	N142	N143	N155	Z	A-B	.056
2	N142	N126	N86	N93	Z	A-B	.039
3	N126	N144	N145	N86	Z	A-B	.039
4	N144	N146	N147	N145	Z	A-B	.03
5	N146	N148	N149	N147	Z	A-B	.016

Member Area Loads (BLC 4 : Wind Z - Case C) (Continued)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
6	N148	N150	N151	N149	Z	A-B	.002
7	N150	N152	N153	N151	Z	A-B	.001
8	N152	N61	N68	N153	Z	A-B	.001
9	N61	N60	N67	N68	Z	A-B	.001
10	N60	N59	N66	N67	Z	A-B	.001
11	N59	N58	N19	N66	Z	A-B	.001
12	N58	N17	N18	N19	Z	A-B	.001
13	N125	N124	N131	N130	Z	A-B	.016
14	N124	N123	N133	N131	Z	A-B	.002
15	N123	N30	N134	N133	Z	A-B	.002
16	N30	N55	N65	N134	Z	A-B	.001
17	N55	N56	N63	N65	Z	A-B	.001
18	N56	N57	N62	N63	Z	A-B	.001

Moving Loads

Tag	Pattern	Increm..	Both ..	1st Joint	2nd Jo..	3rd Joi..	4th Joint	5th Joint	6th Joint	7th Joint	8th Joint	9th Joint	10th J...
No Data to Print ...													

Load Combinations

	Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	Deflection 1	Yes	Y		DL	1																				
2	IBC 16-9	Yes	Y		DL	1	LL	1	L...	1																
3	IBC 16-12 (a) (b)	Yes	Y		DL	1	W...	.6																		
4	IBC 16-12 (a) (c)	Yes	Y		DL	1	W...	-.6																		
5	IBC 16-12 (a) (d)	Yes	Y		DL	1	W...	-.6																		
6	DL - Wind Case C	Yes	Y		DL	1	4	-.6																		
7	IBC 16-13 (a) (a)	Yes	Y		DL	1	W...	.45	LL	.75	L...	.75														
8	IBC 16-13 (a) (b)	Yes	Y		DL	1	W...	.45	LL	.75	L...	.75														
9	IBC 16-13 (a) (c)	Yes	Y		DL	1	W...	-.45	LL	.75	L...	.75														
10	IBC 16-13 (a) (d)	Yes	Y		DL	1	W...	-.45	LL	.75	L...	.75														
11	IBC 16-15 (a)	Yes	Y		DL	.6	W...	.6																		
12	IBC 16-15 (b)	Yes	Y		DL	.6	W...	.6																		
13	DL + Wind Case C	Yes	Y		DL	.6	4	.6																		
14	IBC 16-15 (c)	Yes	Y		DL	.6	W...	-.6																		
15	IBC 16-15 (d)	Yes	Y		DL	.6	W...	-.6																		
16	IBC 16-12 (b) (a)	Yes	Y		DL	1	E...	.7	E...	.21																
17	IBC 16-12 (b) (b)	Yes	Y		DL	1	E...	.7	E...	.21																
18	IBC 16-12 (b) (c)	Yes	Y		DL	1	E...	.7	E...	-.21																
19	IBC 16-12 (b) (d)	Yes	Y		DL	1	E...	.7	E...	-.21																
20	IBC 16-12 (b) (e)	Yes	Y		DL	1	E...	-.7	E...	-.21																
21	IBC 16-12 (b) (f)	Yes	Y		DL	1	E...	-.7	E...	-.21																
22	IBC 16-12 (b) (g)	Yes	Y		DL	1	E...	-.7	E...	.21																
23	IBC 16-12 (b) (h)	Yes	Y		DL	1	E...	-.7	E...	.21																
24	IBC 16-14 (a)	Yes	Y		DL	1	E...	.525	E...	.158	LL	.75	L...	.75												
25	IBC 16-14 (b)	Yes	Y		DL	1	E...	.525	E...	.158	LL	.75	L...	.75												
26	IBC 16-14 (c)	Yes	Y		DL	1	E...	.525	E...	-.1...	LL	.75	L...	.75												
27	IBC 16-14 (d)	Yes	Y		DL	1	E...	.525	E...	-.1...	LL	.75	L...	.75												
28	IBC 16-14 (e)	Yes	Y		DL	1	E...	-.5...	E...	-.1...	LL	.75	L...	.75												
29	IBC 16-14 (f)	Yes	Y		DL	1	E...	-.5...	E...	-.1...	LL	.75	L...	.75												
30	IBC 16-14 (g)	Yes	Y		DL	1	E...	-.5...	E...	.158	LL	.75	L...	.75												
31	IBC 16-14 (h)	Yes	Y		DL	1	E...	-.5	E...	.158	LL	.75	L...	.75												
32	IBC 16-16 (a)	Yes	Y		DL	.6	E...	.7	E...	.21																
33	IBC 16-16 (b)	Yes	Y		DL	.6	E...	.7	E...	.21																
34	IBC 16-16 (c)	Yes	Y		DL	.6	E...	.7	E...	-.21																

Load Combinations (Continued)

	Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
35	IBC 16-16 (d)	Yes	Y		DL	.6	E...	.7	E...	-.21																
36	IBC 16-16 (e)	Yes	Y		DL	.6	E...	-.7	E...	-.21																
37	IBC 16-16 (f)	Yes	Y		DL	.6	E...	-.7	E...	-.21																
38	IBC 16-16 (g)	Yes	Y		DL	.6	E...	-.7	E...	.21																
39	IBC 16-16 (h)	Yes	Y		DL	.6	E...	-.7	E...	.21																
40	Dead		Y		DL	1																				
41	Wind X		Y		W...	1																				
42	Wind Z		Y		W...	1																				
43	Wind Case C		Y		4	1																				
44	Seismic X		Y		E...	1																				
45	Seismic Z		Y		E...	1																				

Envelope Joint Reactions

	Joint		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N140	max	5.099	22	11.372	17	3.724	5	88.61	5	2.931	3	9.869	34
2		min	-.059	34	4.217	37	-3.724	3	-88.712	3	-2.931	5	-62.731	22
3	N1	max	.929	36	11.867	16	3.724	15	88.657	5	2.931	5	72.019	16
4		min	-5.973	16	3.736	36	-3.724	12	-88.76	3	-2.931	3	-18.905	36
5	Totals:	max	4.502	22	22.984	17	7.448	5						
6		min	-4.502	34	8.21	37	-7.448	3						

Envelope Joint Displacements

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
1	N1	max	0	39	0	39	0	39	0	39	0	39	0	39
2		min	0	1	0	1	0	1	0	1	0	1	0	1
3	N2	max	.824	16	-.001	36	2.024	3	8.824e-03	3	5.72e-04	12	1.896e-03	22
4		min	-.425	36	-.005	16	-2.021	5	-8.806e-03	5	-5.717e-04	15	-1.841e-03	34
5	N3	max	.742	16	-.001	36	1.632	3	8.823e-03	3	5.72e-04	12	1.894e-03	22
6		min	-.342	36	-.005	16	-1.629	5	-8.805e-03	5	-5.717e-04	15	-1.84e-03	34
7	N4	max	.732	16	.071	12	1.741	3	9.04e-03	3	5.224e-03	3	3.092e-03	22
8		min	-.357	36	-.086	5	-1.738	5	-9.018e-03	5	-5.15e-03	5	-4.288e-04	34
9	N5	max	.671	16	.07	12	1.216	3	8.917e-03	3	4.482e-03	12	3.559e-03	22
10		min	-.24	36	-.087	5	-1.212	5	-9.069e-03	5	-4.616e-03	5	1.371e-04	34
11	N6	max	.742	16	.016	34	1.637	3	8.823e-03	3	4.891e-03	3	2.788e-03	22
12		min	-.342	36	-.022	22	-1.635	5	-8.805e-03	5	-4.882e-03	5	-8.238e-04	34
13	N7	max	.735	16	.071	12	1.659	3	8.938e-03	3	5.025e-03	3	2.772e-03	22
14		min	-.337	36	-.086	5	-1.657	5	-8.903e-03	5	-4.892e-03	5	-8.036e-04	34
15	N8	max	.663	16	-.001	36	1.272	3	8.659e-03	3	5.094e-04	3	1.826e-03	36
16		min	-.266	36	-.005	16	-1.27	5	-8.642e-03	5	-5.094e-04	5	-2.326e-03	16
17	N9	max	.663	16	.019	34	1.277	3	8.659e-03	3	4.137e-03	12	3.132e-03	22
18		min	-.266	36	-.02	22	-1.275	5	-8.642e-03	5	-4.13e-03	15	-3.141e-04	34
19	N10	max	.662	16	.07	12	1.295	3	8.793e-03	3	4.26e-03	12	3.009e-03	22
20		min	-.261	36	-.087	5	-1.293	5	-8.954e-03	5	-4.444e-03	5	-4.704e-04	34
21	N11	max	.745	16	.064	12	1.692	3	9.138e-03	3	5.367e-03	3	2.77e-03	22
22		min	-.333	36	-.097	5	-1.689	5	-9.093e-03	5	-5.361e-03	5	-8.243e-04	34
23	N12	max	.736	16	.064	12	1.655	3	9.067e-03	3	5.202e-03	3	2.129e-03	22
24		min	-.326	36	-.097	5	-1.653	5	-9.008e-03	5	-5.192e-03	5	-1.567e-03	34
25	N13	max	.733	16	.07	12	1.615	3	8.929e-03	3	4.94e-03	3	2.341e-03	22
26		min	-.326	36	-.086	5	-1.612	5	-8.873e-03	5	-4.858e-03	5	-1.323e-03	34
27	N14	max	.649	16	.065	12	1.34	3	9.024e-03	3	4.939e-03	12	1.987e-03	22
28		min	-.265	36	-.095	5	-1.34	5	-9.003e-03	5	-4.973e-03	15	-1.953e-03	18
29	N15	max	.661	16	.065	12	1.376	3	8.975e-03	3	4.801e-03	12	1.889e-03	38
30		min	-.272	36	-.095	5	-1.376	5	-8.956e-03	5	-4.858e-03	5	-2.071e-03	18
31	N16	max	.662	16	.07	12	1.339	3	8.824e-03	3	4.368e-03	12	2.449e-03	22

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
32		min	-.272	36	-.087	5	-1.338	5	-8.913e-03	5	-4.517e-03	5	-1.146e-03	34
33	N17	max	.733	16	.071	12	1.718	3	9.04e-03	3	5.224e-03	3	3.092e-03	22
34		min	-.352	36	-.086	5	-1.715	5	-9.018e-03	5	-5.15e-03	5	-4.288e-04	34
35	N18	max	.668	16	.07	12	1.238	3	8.917e-03	3	4.482e-03	12	3.559e-03	22
36		min	-.246	36	-.087	5	-1.235	5	-9.069e-03	5	-4.616e-03	5	1.371e-04	34
37	N19	max	.672	16	-.159	12	1.649	3	1.083e-02	3	4.896e-03	12	7.554e-03	17
38		min	-.246	36	-.505	5	-1.646	5	-1.085e-02	5	-4.873e-03	15	3.114e-03	37
39	N20	max	.64	16	-.023	12	1.531	3	9.929e-03	3	5.425e-03	12	7.353e-03	17
40		min	-.267	36	-.255	5	-1.53	5	-9.93e-03	5	-5.391e-03	15	3.1e-03	37
41	N21	max	.756	16	-.023	12	1.903	3	9.92e-03	3	6.108e-03	3	6.79e-03	19
42		min	-.331	36	-.256	5	-1.9	5	-9.872e-03	5	-6.105e-03	5	2.757e-03	39
43	N22	max	.747	16	.058	12	1.714	3	9.225e-03	3	5.507e-03	3	3.883e-03	22
44		min	-.333	36	-.108	5	-1.711	5	-9.19e-03	5	-5.502e-03	5	4.625e-04	34
45	N23	max	.732	16	.058	12	1.783	3	9.205e-03	3	5.518e-03	3	3.848e-03	22
46		min	-.352	36	-.109	5	-1.78	5	-9.179e-03	5	-5.501e-03	5	3.71e-04	34
47	N24	max	.765	16	-.123	12	2.078	3	1.053e-02	3	6.239e-03	3	6.682e-03	17
48		min	-.33	36	-.441	5	-2.075	5	-1.048e-02	5	-6.24e-03	5	2.692e-03	37
49	N25	max	.727	16	-.123	12	2.157	3	1.058e-02	3	6.176e-03	3	7.783e-03	17
50		min	-.352	36	-.441	5	-2.153	5	-1.052e-02	5	-6.174e-03	5	3.153e-03	37
51	N26	max	.672	16	-.138	12	1.62	3	1.062e-02	3	4.849e-03	12	7.234e-03	17
52		min	-.246	36	-.465	5	-1.618	5	-1.064e-02	5	-4.821e-03	15	3.006e-03	37
53	N27	max	.632	16	-.138	12	1.701	3	1.074e-02	3	5.114e-03	12	6.167e-03	19
54		min	-.269	36	-.465	5	-1.698	5	-1.076e-02	5	-5.09e-03	15	2.561e-03	39
55	N28	max	.632	16	-.137	12	1.699	3	1.074e-02	3	5.118e-03	12	6.198e-03	19
56		min	-.269	36	-.463	5	-1.697	5	-1.076e-02	5	-5.094e-03	15	2.574e-03	39
57	N29	max	.766	16	-.137	12	2.102	3	1.064e-02	3	6.268e-03	3	7.503e-03	17
58		min	-.33	36	-.465	5	-2.099	5	-1.058e-02	5	-6.27e-03	5	2.953e-03	37
59	N30	max	.43	16	-1.046	36	4.683	3	1.946e-02	12	1.19e-03	13	7.372e-04	16
60		min	-.429	22	-2.874	16	-4.674	5	-1.937e-02	15	-1.206e-03	6	-7.364e-04	22
61	N31	max	.463	16	-1.061	36	3.96	3	1.844e-02	12	1.295e-03	13	2.117e-03	16
62		min	-.453	22	-2.839	16	-3.953	5	-1.837e-02	15	-1.317e-03	6	-4.213e-04	36
63	N32	max	.477	18	-1.058	36	3.872	3	1.811e-02	12	1.82e-03	3	3.942e-03	16
64		min	-.449	38	-2.68	16	-3.866	5	-1.804e-02	15	-1.82e-03	5	4.841e-04	36
65	N33	max	.498	18	-.989	37	3.713	3	1.734e-02	12	3.03e-03	3	6.959e-03	16
66		min	-.442	38	-2.423	17	-3.707	5	-1.726e-02	15	-3.013e-03	5	1.581e-03	36
67	N34	max	.53	16	-.88	37	3.48	3	1.635e-02	12	3.847e-03	3	8.3e-03	16
68		min	-.43	36	-2.1	17	-3.474	5	-1.627e-02	15	-3.853e-03	5	2.246e-03	36
69	N35	max	.577	16	-.736	37	3.193	3	1.519e-02	12	4.754e-03	3	8.181e-03	16
70		min	-.414	36	-1.687	17	-3.188	5	-1.51e-02	15	-4.749e-03	5	2.725e-03	36
71	N36	max	.637	16	-.549	12	2.849	3	1.372e-02	12	5.587e-03	3	1.038e-02	16
72		min	-.39	36	-1.248	5	-2.844	5	-1.363e-02	15	-5.581e-03	5	3.762e-03	36
73	N37	max	.7	16	-.342	12	2.475	3	1.216e-02	3	5.943e-03	3	9.466e-03	17
74		min	-.362	36	-.858	5	-2.472	5	-1.208e-02	5	-5.943e-03	5	3.734e-03	37
75	N38	max	.766	16	-.145	12	2.113	3	1.069e-02	3	6.28e-03	3	7.794e-03	17
76		min	-.33	36	-.477	5	-2.11	5	-1.063e-02	5	-6.282e-03	5	3.064e-03	37
77	N39	max	.631	16	-.155	12	1.728	3	1.095e-02	3	5.197e-03	12	6.602e-03	19
78		min	-.269	36	-.496	5	-1.726	5	-1.096e-02	5	-5.175e-03	15	2.736e-03	39
79	N40	max	.553	16	-.339	12	2.057	3	1.248e-02	12	4.764e-03	12	9.644e-03	17
80		min	-.302	36	-.849	5	-2.054	5	-1.245e-02	5	-4.755e-03	15	3.771e-03	37
81	N41	max	.48	16	-.546	12	2.366	3	1.399e-02	12	4.255e-03	12	1.014e-02	16
82		min	-.329	36	-1.238	5	-2.361	5	-1.393e-02	15	-4.244e-03	15	3.651e-03	36
83	N42	max	.417	18	-.736	37	2.63	12	1.531e-02	12	3.304e-03	12	8.244e-03	16
84		min	-.35	38	-1.677	17	-2.624	15	-1.524e-02	15	-3.295e-03	15	2.694e-03	36
85	N43	max	.377	18	-.881	37	2.858	12	1.645e-02	12	2.603e-03	12	8.941e-03	16
86		min	-.363	38	-2.091	17	-2.852	15	-1.636e-02	15	-2.609e-03	15	2.466e-03	36
87	N44	max	.358	34	-.989	37	3.029	12	1.738e-02	12	2.012e-03	12	6.805e-03	16
88		min	-.372	22	-2.418	17	-3.022	15	-1.727e-02	15	-2.002e-03	15	1.378e-03	36

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
89	N45	max	.352	34	-1.064	36	3.144	12	1.81e-02	12	1.164e-03	13	4.027e-03	16
90		min	-.371	22	-2.672	16	-3.138	15	-1.799e-02	15	-1.166e-03	6	4.513e-04	36
91	N46	max	.355	34	-1.063	36	3.206	12	1.833e-02	12	1.07e-03	13	2.589e-03	16
92		min	-.364	22	-2.837	16	-3.199	15	-1.822e-02	15	-1.074e-03	6	-4.16e-04	36
93	N47	max	.677	16	-.426	12	2.631	3	1.282e-02	3	5.803e-03	3	7.908e-03	17
94		min	-.373	36	-1.012	5	-2.628	5	-1.274e-02	5	-5.795e-03	5	2.989e-03	37
95	N48	max	.58	16	-.728	37	3.173	3	1.512e-02	12	4.764e-03	3	7.873e-03	16
96		min	-.412	36	-1.664	17	-3.168	5	-1.503e-02	15	-4.761e-03	5	2.662e-03	36
97	N49	max	.516	16	-.933	37	3.593	3	1.69e-02	12	3.44e-03	3	6.397e-03	16
98		min	-.436	38	-2.258	17	-3.587	5	-1.682e-02	15	-3.428e-03	5	1.668e-03	36
99	N50	max	.52	16	-.429	12	2.191	3	1.313e-02	12	4.324e-03	12	8.064e-03	17
100		min	-.315	36	-1.019	5	-2.187	5	-1.308e-02	15	-4.317e-03	15	3.179e-03	37
101	N51	max	.419	18	-.73	37	2.619	12	1.526e-02	12	3.287e-03	12	8.101e-03	16
102		min	-.35	38	-1.661	17	-2.614	15	-1.519e-02	15	-3.28e-03	15	2.681e-03	36
103	N52	max	.365	18	-.937	37	2.939	12	1.696e-02	12	2.181e-03	12	6.715e-03	16
104		min	-.368	22	-2.261	17	-2.933	15	-1.686e-02	15	-2.179e-03	15	1.706e-03	36
105	N53	max	.353	34	-1.063	36	3.143	12	1.81e-02	12	1.163e-03	13	4.035e-03	16
106		min	-.372	22	-2.669	16	-3.136	15	-1.799e-02	15	-1.165e-03	6	4.693e-04	36
107	N54	max	.477	18	-1.058	36	3.872	3	1.811e-02	12	1.818e-03	3	3.929e-03	16
108		min	-.449	38	-2.68	16	-3.866	5	-1.804e-02	15	-1.817e-03	5	4.818e-04	36
109	N55	max	.387	34	-1.065	36	4.632	3	1.921e-02	12	1.429e-03	13	2.971e-03	16
110		min	-.484	22	-2.782	16	-4.623	5	-1.913e-02	15	-1.454e-03	6	5.329e-05	36
111	N56	max	.352	34	-1.034	37	4.472	3	1.865e-02	12	2.405e-03	3	5.4e-03	16
112		min	-.541	22	-2.574	17	-4.462	5	-1.856e-02	15	-2.409e-03	5	1.009e-03	36
113	N57	max	.395	34	-.944	37	4.004	3	1.715e-02	12	3.345e-03	3	7.175e-03	16
114		min	-.516	22	-2.292	17	-3.996	5	-1.706e-02	15	-3.337e-03	5	1.751e-03	36
115	N58	max	.727	16	-.143	12	2.188	3	1.077e-02	3	6.296e-03	3	8.134e-03	17
116		min	-.352	36	-.476	5	-2.184	5	-1.072e-02	5	-6.294e-03	5	3.278e-03	37
117	N59	max	.623	16	-.421	12	2.721	3	1.293e-02	3	5.71e-03	3	9.384e-03	17
118		min	-.396	36	-1.004	5	-2.717	5	-1.285e-02	5	-5.705e-03	5	3.573e-03	37
119	N60	max	.527	18	-.726	37	3.279	3	1.523e-02	12	4.669e-03	3	8.927e-03	16
120		min	-.432	38	-1.658	17	-3.273	5	-1.515e-02	15	-4.667e-03	5	2.926e-03	36
121	N61	max	.471	18	-.932	37	3.72	3	1.702e-02	12	3.365e-03	3	7.298e-03	16
122		min	-.451	38	-2.255	17	-3.714	5	-1.694e-02	15	-3.358e-03	5	1.837e-03	36
123	N62	max	.468	18	-.947	37	3.751	3	1.715e-02	12	3.345e-03	3	7.177e-03	16
124		min	-.452	38	-2.3	17	-3.745	5	-1.706e-02	15	-3.337e-03	5	1.75e-03	36
125	N63	max	.453	18	-1.038	37	3.95	3	1.8e-02	12	2.456e-03	3	5.486e-03	16
126		min	-.457	22	-2.585	17	-3.943	5	-1.791e-02	15	-2.46e-03	5	9.546e-04	36
127	N64	max	.45	18	-1.058	36	4.007	3	1.825e-02	12	1.785e-03	3	4.377e-03	16
128		min	-.458	22	-2.679	16	-4	5	-1.816e-02	15	-1.784e-03	5	5.417e-04	36
129	N65	max	.449	18	-1.065	36	4.068	3	1.851e-02	12	1.43e-03	13	3.047e-03	16
130		min	-.456	22	-2.784	16	-4.061	5	-1.843e-02	15	-1.454e-03	6	-1.261e-05	36
131	N66	max	.574	16	-.433	12	2.101	3	1.305e-02	12	4.055e-03	12	9.105e-03	17
132		min	-.292	36	-1.027	5	-2.097	5	-1.3e-02	5	-4.05e-03	15	3.509e-03	37
133	N67	max	.475	16	-.733	37	2.508	12	1.52e-02	12	3.056e-03	12	9.269e-03	16
134		min	-.329	36	-1.668	17	-2.504	15	-1.513e-02	15	-3.052e-03	15	2.99e-03	36
135	N68	max	.409	18	-.939	37	2.817	12	1.692e-02	12	2.023e-03	12	7.426e-03	16
136		min	-.351	38	-2.265	17	-2.812	15	-1.683e-02	15	-2.022e-03	15	1.856e-03	36
137	N69	max	.377	18	-1.063	36	3.008	12	1.808e-02	12	1.106e-03	13	4.56e-03	16
138		min	-.361	38	-2.67	16	-3.002	15	-1.797e-02	15	-1.108e-03	6	4.961e-04	36
139	N70	max	.274	34	-.002	37	1.631	3	8.818e-03	3	5.745e-04	15	1.844e-03	36
140		min	-.672	22	-.004	17	-1.628	5	-8.8e-03	5	-5.749e-04	12	-1.905e-03	16
141	N71	max	.295	34	.071	12	1.74	3	9.118e-03	3	5.276e-03	5	8.786e-04	36
142		min	-.666	22	-.086	5	-1.737	5	-9.067e-03	5	-5.395e-03	3	-3.554e-03	16
143	N72	max	.167	34	.07	12	1.215	3	8.908e-03	3	4.621e-03	5	4.943e-04	36
144		min	-.596	22	-.086	5	-1.212	5	-9.061e-03	5	-4.489e-03	12	-4.202e-03	16
145	N73	max	.274	34	.017	36	1.637	3	8.818e-03	3	4.848e-03	5	1.156e-03	36

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
146		min	-.672	22	-.023	16	-1.634	5	-8.8e-03	5	-4.857e-03	3	-3.132e-03	16
147	N74	max	.27	34	.07	12	1.658	3	8.961e-03	3	4.917e-03	5	1.133e-03	36
148		min	-.665	22	-.086	5	-1.656	5	-8.908e-03	5	-5.076e-03	3	-3.114e-03	16
149	N75	max	.198	34	-.002	37	1.271	3	8.653e-03	3	5.094e-04	5	2.238e-03	22
150		min	-.594	22	-.004	17	-1.269	5	-8.636e-03	5	-5.094e-04	3	-1.747e-03	34
151	N76	max	.198	34	.019	36	1.276	3	8.653e-03	3	4.131e-03	15	7.967e-04	36
152		min	-.594	22	-.02	16	-1.274	5	-8.636e-03	5	-4.139e-03	12	-3.621e-03	16
153	N77	max	.193	34	.07	12	1.295	3	8.78e-03	3	4.449e-03	5	9.026e-04	36
154		min	-.591	22	-.086	5	-1.293	5	-8.943e-03	5	-4.268e-03	12	-3.451e-03	16
155	N78	max	.263	34	.064	12	1.692	3	9.249e-03	3	5.551e-03	5	1.149e-03	36
156		min	-.673	22	-.097	5	-1.689	5	-9.165e-03	5	-5.6e-03	3	-3.106e-03	16
157	N79	max	.256	34	.064	12	1.655	3	9.144e-03	3	5.327e-03	5	1.659e-03	38
158		min	-.664	22	-.096	5	-1.652	5	-9.055e-03	5	-5.379e-03	3	-2.226e-03	16
159	N80	max	.257	34	.07	12	1.614	3	8.942e-03	3	4.886e-03	5	1.489e-03	36
160		min	-.662	22	-.086	5	-1.611	5	-8.875e-03	5	-4.993e-03	3	-2.519e-03	16
161	N81	max	.201	34	.065	12	1.339	3	9.017e-03	3	4.997e-03	15	1.95e-03	20
162		min	-.582	22	-.094	5	-1.339	5	-8.998e-03	5	-4.967e-03	12	-1.993e-03	16
163	N82	max	.206	34	.065	12	1.375	3	8.967e-03	3	4.884e-03	5	2.035e-03	20
164		min	-.592	22	-.094	5	-1.375	5	-8.949e-03	5	-4.834e-03	12	-1.864e-03	32
165	N83	max	.206	34	.07	12	1.339	3	8.809e-03	3	4.526e-03	5	1.364e-03	36
166		min	-.594	22	-.086	5	-1.337	5	-8.902e-03	5	-4.382e-03	12	-2.678e-03	16
167	N84	max	.288	34	.071	12	1.717	3	9.118e-03	3	5.276e-03	5	8.786e-04	36
168		min	-.666	22	-.086	5	-1.714	5	-9.067e-03	5	-5.395e-03	3	-3.554e-03	16
169	N85	max	.175	34	.07	12	1.237	3	8.908e-03	3	4.621e-03	5	4.943e-04	36
170		min	-.594	22	-.086	5	-1.234	5	-9.061e-03	5	-4.489e-03	12	-4.202e-03	16
171	N86	max	.174	34	-.07	36	1.648	3	1.086e-02	3	4.875e-03	15	-2.046e-03	36
172		min	-.598	22	-.598	16	-1.646	5	-1.088e-02	5	-4.897e-03	12	-8.63e-03	16
173	N87	max	.204	34	.01	38	1.53	3	9.944e-03	3	5.399e-03	15	-1.869e-03	36
174		min	-.575	22	-.29	18	-1.53	5	-9.945e-03	5	-5.431e-03	12	-8.594e-03	16
175	N88	max	.26	34	.01	38	1.912	3	1.004e-02	3	6.324e-03	5	-1.494e-03	36
176		min	-.682	22	-.29	18	-1.908	5	-9.963e-03	5	-6.303e-03	3	-8.065e-03	16
177	N89	max	.263	34	.058	12	1.715	3	9.367e-03	3	5.735e-03	5	2.78e-04	36
178		min	-.674	22	-.108	5	-1.711	5	-9.288e-03	5	-5.778e-03	3	-4.636e-03	16
179	N90	max	.288	34	.058	12	1.785	3	9.381e-03	3	5.827e-03	5	3.504e-04	36
180		min	-.665	22	-.109	5	-1.781	5	-9.323e-03	5	-5.887e-03	3	-4.582e-03	16
181	N91	max	.257	34	-.051	36	2.091	3	1.064e-02	3	6.334e-03	5	-1.682e-03	36
182		min	-.689	22	-.516	16	-2.088	5	-1.056e-02	5	-6.31e-03	3	-7.696e-03	16
183	N92	max	.29	34	-.051	36	2.171	3	1.068e-02	3	6.23e-03	5	-2.105e-03	36
184		min	-.661	22	-.516	16	-2.167	5	-1.061e-02	5	-6.209e-03	3	-8.839e-03	16
185	N93	max	.174	34	-.059	36	1.62	3	1.065e-02	3	4.824e-03	15	-1.894e-03	36
186		min	-.598	22	-.548	16	-1.618	5	-1.068e-02	5	-4.851e-03	12	-8.355e-03	16
187	N94	max	.208	34	-.059	36	1.701	3	1.078e-02	3	5.093e-03	15	-1.465e-03	36
188		min	-.568	22	-.548	16	-1.698	5	-1.08e-02	5	-5.116e-03	12	-7.273e-03	16
189	N95	max	.208	34	-.058	36	1.699	3	1.077e-02	3	5.097e-03	15	-1.477e-03	36
190		min	-.568	22	-.546	16	-1.696	5	-1.079e-02	5	-5.12e-03	12	-7.305e-03	16
191	N96	max	.256	34	-.059	36	2.115	3	1.074e-02	3	6.354e-03	5	-2.071e-03	36
192		min	-.689	22	-.547	16	-2.112	5	-1.066e-02	5	-6.331e-03	3	-8.39e-03	16
193	N97	max	.458	16	-1.046	36	3.969	3	1.86e-02	12	1.202e-03	13	7.239e-04	16
194		min	-.457	22	-2.874	16	-3.963	5	-1.853e-02	15	-1.218e-03	6	-7.253e-04	22
195	N98	max	.453	16	-1.021	36	3.961	3	1.844e-02	12	1.113e-03	13	1.256e-04	34
196		min	-.461	22	-2.88	16	-3.954	5	-1.837e-02	15	-1.124e-03	6	-1.816e-03	22
197	N99	max	.445	32	-.938	36	3.876	3	1.812e-02	12	1.761e-03	5	-1.178e-03	39
198		min	-.471	20	-2.799	16	-3.87	5	-1.805e-02	15	-1.762e-03	3	-3.241e-03	19
199	N100	max	.434	32	-.816	36	3.72	3	1.736e-02	12	2.956e-03	5	-2.542e-03	37
200		min	-.488	22	-2.598	16	-3.714	5	-1.728e-02	15	-2.973e-03	3	-5.982e-03	17
201	N101	max	.414	34	-.677	36	3.49	3	1.638e-02	12	3.798e-03	5	-2.981e-03	37
202		min	-.513	22	-2.306	16	-3.484	5	-1.629e-02	15	-3.792e-03	3	-7.547e-03	17

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
203	N102	max	.387	34	-.51	36	3.205	3	1.523e-02	12	4.698e-03	5	-2.929e-03	37
204		min	-.548	22	-1.915	16	-3.2	5	-1.514e-02	15	-4.703e-03	3	-7.968e-03	17
205	N103	max	.349	34	-.345	36	2.863	3	1.377e-02	12	5.542e-03	5	-3.735e-03	36
206		min	-.594	22	-1.465	16	-2.858	5	-1.368e-02	15	-5.548e-03	3	-1.04e-02	16
207	N104	max	.305	34	-.196	36	2.49	3	1.223e-02	3	5.922e-03	5	-3.121e-03	36
208		min	-.641	22	-1.011	16	-2.487	5	-1.214e-02	5	-5.928e-03	3	-1.009e-02	16
209	N105	max	.256	34	-.063	36	2.127	3	1.079e-02	3	6.361e-03	5	-2.204e-03	36
210		min	-.689	22	-.563	16	-2.124	5	-1.071e-02	5	-6.34e-03	3	-8.659e-03	16
211	N106	max	.208	34	-.066	36	1.728	3	1.098e-02	3	5.178e-03	15	-1.599e-03	36
212		min	-.567	22	-.588	16	-1.726	5	-1.1e-02	5	-5.199e-03	12	-7.75e-03	16
213	N107	max	.26	34	-.181	36	2.057	3	1.252e-02	12	4.754e-03	15	-3.156e-03	36
214		min	-.509	22	-1.015	16	-2.054	5	-1.249e-02	5	-4.763e-03	12	-1.027e-02	16
215	N108	max	.305	34	-.329	36	2.366	3	1.402e-02	12	4.241e-03	15	-3.62e-03	36
216		min	-.453	22	-1.468	16	-2.362	5	-1.397e-02	15	-4.252e-03	12	-1.016e-02	16
217	N109	max	.34	32	-.498	36	2.63	12	1.535e-02	12	3.291e-03	15	-3.057e-03	37
218		min	-.405	20	-1.917	16	-2.625	15	-1.527e-02	15	-3.3e-03	12	-7.869e-03	17
219	N110	max	.362	32	-.665	36	2.858	12	1.648e-02	12	2.604e-03	15	-3.17e-03	37
220		min	-.374	20	-2.309	16	-2.852	15	-1.639e-02	15	-2.598e-03	12	-8.215e-03	17
221	N111	max	.375	16	-.809	36	3.029	12	1.739e-02	12	1.997e-03	15	-2.398e-03	39
222		min	-.359	36	-2.601	16	-3.022	15	-1.729e-02	15	-2.007e-03	12	-5.765e-03	19
223	N112	max	.375	16	-.931	36	3.145	12	1.811e-02	12	1.09e-03	15	-1.224e-03	34
224		min	-.355	36	-2.804	16	-3.138	15	-1.8e-02	15	-1.094e-03	12	-3.245e-03	22
225	N113	max	.366	16	-1.019	36	3.206	12	1.834e-02	12	9.172e-04	13	4.155e-05	34
226		min	-.356	36	-2.881	16	-3.199	15	-1.823e-02	15	-9.255e-04	6	-2.22e-03	22
227	N114	max	.36	16	-1.048	36	3.211	12	1.845e-02	12	9.557e-04	13	8.089e-04	16
228		min	-.359	22	-2.881	16	-3.204	15	-1.833e-02	15	-9.614e-04	6	-8.114e-04	22
229	N115	max	.322	34	-.253	36	2.646	3	1.289e-02	3	5.761e-03	5	-2.53e-03	36
230		min	-.624	22	-1.195	16	-2.642	5	-1.279e-02	5	-5.772e-03	3	-8.371e-03	16
231	N116	max	.281	34	-.244	36	2.191	3	1.317e-02	12	4.315e-03	15	-2.703e-03	36
232		min	-.484	22	-1.215	16	-2.187	5	-1.312e-02	15	-4.323e-03	12	-8.545e-03	16
233	N117	max	.385	34	-.502	36	3.185	3	1.515e-02	12	4.71e-03	5	-2.795e-03	37
234		min	-.551	22	-1.893	16	-3.18	5	-1.507e-02	15	-4.712e-03	3	-7.733e-03	17
235	N118	max	.339	32	-.492	36	2.619	12	1.529e-02	12	3.276e-03	15	-3.009e-03	37
236		min	-.407	20	-1.901	16	-2.614	15	-1.522e-02	15	-3.284e-03	12	-7.762e-03	17
237	N119	max	.423	32	-.744	36	3.601	3	1.692e-02	12	3.371e-03	5	-2.257e-03	37
238		min	-.501	22	-2.45	16	-3.596	5	-1.684e-02	15	-3.382e-03	3	-5.801e-03	17
239	N120	max	.369	16	-.736	36	2.94	12	1.698e-02	12	2.175e-03	15	-2.452e-03	37
240		min	-.365	20	-2.465	16	-2.934	15	-1.689e-02	15	-2.177e-03	12	-5.957e-03	17
241	N121	max	.375	16	-.93	36	3.143	12	1.811e-02	12	1.091e-03	15	-1.244e-03	39
242		min	-.355	36	-2.802	16	-3.136	15	-1.8e-02	15	-1.093e-03	12	-3.253e-03	19
243	N122	max	.445	32	-.938	36	3.877	3	1.813e-02	12	1.759e-03	5	-1.174e-03	39
244		min	-.471	20	-2.8	16	-3.87	5	-1.805e-02	15	-1.76e-03	3	-3.23e-03	19
245	N123	max	.502	16	-.988	36	4.635	3	1.922e-02	12	1.159e-03	5	-5.769e-04	34
246		min	-.402	36	-2.858	16	-4.626	5	-1.914e-02	15	-1.165e-03	3	-2.442e-03	22
247	N124	max	.574	16	-.889	36	4.478	3	1.866e-02	12	2.35e-03	5	-1.837e-03	39
248		min	-.383	36	-2.722	16	-4.468	5	-1.857e-02	15	-2.346e-03	3	-4.557e-03	19
249	N125	max	.538	16	-.758	36	4.012	3	1.717e-02	12	3.278e-03	5	-2.574e-03	37
250		min	-.415	36	-2.481	16	-4.005	5	-1.708e-02	15	-3.285e-03	3	-6.337e-03	17
251	N126	max	.29	34	-.062	36	2.202	3	1.087e-02	3	6.343e-03	5	-2.288e-03	36
252		min	-.661	22	-.56	16	-2.198	5	-1.08e-02	5	-6.327e-03	3	-9.132e-03	16
253	N127	max	.359	34	-.25	36	2.737	3	1.299e-02	3	5.669e-03	5	-3.183e-03	36
254		min	-.583	22	-1.185	16	-2.732	5	-1.291e-02	5	-5.677e-03	3	-9.78e-03	16
255	N128	max	.417	32	-.499	36	3.291	3	1.526e-02	12	4.614e-03	5	-3.221e-03	37
256		min	-.51	20	-1.886	16	-3.286	5	-1.518e-02	15	-4.616e-03	3	-8.62e-03	17
257	N129	max	.449	32	-.742	36	3.729	3	1.705e-02	12	3.3e-03	5	-2.613e-03	37
258		min	-.467	20	-2.447	16	-3.722	5	-1.696e-02	15	-3.304e-03	3	-6.506e-03	17
259	N130	max	.45	32	-.762	36	3.76	3	1.717e-02	12	3.278e-03	5	-2.575e-03	37

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
260		min	-.465	20	-2.488	16	-3.753	5	-1.708e-02	15	-3.285e-03	3	-6.337e-03	17
261	N131	max	.459	16	-.894	36	3.955	3	1.801e-02	12	2.402e-03	5	-1.828e-03	39
262		min	-.453	20	-2.731	16	-3.948	5	-1.792e-02	15	-2.397e-03	3	-4.598e-03	19
263	N132	max	.46	16	-.938	36	4.012	3	1.826e-02	12	1.725e-03	5	-1.339e-03	39
264		min	-.45	20	-2.799	16	-4.005	5	-1.817e-02	15	-1.726e-03	3	-3.571e-03	19
265	N133	max	.458	16	-.99	36	4.07	3	1.852e-02	12	1.177e-03	5	-5.129e-04	34
266		min	-.449	20	-2.859	16	-4.063	5	-1.843e-02	15	-1.182e-03	3	-2.517e-03	22
267	N134	max	.453	16	-1.046	36	4.108	3	1.875e-02	12	1.19e-03	13	8.063e-04	16
268		min	-.452	22	-2.874	16	-4.101	5	-1.867e-02	15	-1.206e-03	6	-8.057e-04	22
269	N135	max	.245	34	-.247	36	2.101	3	1.309e-02	12	4.049e-03	15	-3.068e-03	36
270		min	-.525	22	-1.224	16	-2.097	5	-1.304e-02	5	-4.054e-03	12	-9.553e-03	16
271	N136	max	.305	34	-.495	36	2.509	12	1.524e-02	12	3.049e-03	15	-3.367e-03	37
272		min	-.45	22	-1.908	16	-2.504	15	-1.516e-02	15	-3.054e-03	12	-8.873e-03	17
273	N137	max	.343	32	-.738	36	2.817	12	1.694e-02	12	2.02e-03	15	-2.667e-03	37
274		min	-.398	20	-2.468	16	-2.812	15	-1.685e-02	15	-2.021e-03	12	-6.599e-03	17
275	N138	max	.359	32	-.931	36	3.008	12	1.809e-02	12	1.002e-03	15	-1.365e-03	39
276		min	-.374	20	-2.803	16	-3.002	15	-1.799e-02	15	-1.001e-03	12	-3.682e-03	19
277	N139	max	.365	16	-1.048	36	3.073	12	1.842e-02	12	9.112e-04	13	9.249e-04	32
278		min	-.365	22	-2.881	16	-3.067	15	-1.831e-02	15	-9.167e-04	6	-9.315e-04	22
279	N140	max	0	39	0	39	0	39	0	39	0	39	0	39
280		min	0	1	0	1	0	1	0	1	0	1	0	1
281	N141	max	.358	34	-.002	37	2.023	3	8.819e-03	3	5.745e-04	15	1.845e-03	36
282		min	-.754	22	-.004	17	-2.02	5	-8.8e-03	5	-5.749e-04	12	-1.906e-03	16
283	N142	max	.29	34	-.053	36	2.177	3	1.071e-02	3	6.255e-03	5	-2.141e-03	36
284		min	-.661	22	-.525	16	-2.173	5	-1.064e-02	5	-6.234e-03	3	-8.9e-03	16
285	N143	max	.174	34	-.053	36	1.605	3	1.058e-02	3	4.888e-03	15	-1.838e-03	36
286		min	-.598	22	-.522	16	-1.602	5	-1.061e-02	5	-4.919e-03	12	-8.299e-03	16
287	N144	max	.376	34	-.32	36	2.9	3	1.371e-02	3	5.842e-03	5	-3.404e-03	36
288		min	-.561	22	-1.395	16	-2.895	5	-1.363e-02	5	-5.845e-03	3	-9.88e-03	16
289	N145	max	.256	34	-.287	36	2.175	3	1.349e-02	12	4.037e-03	15	-3.316e-03	36
290		min	-.512	22	-1.346	16	-2.171	5	-1.344e-02	15	-4.042e-03	12	-9.791e-03	16
291	N146	max	.434	32	-.62	36	3.514	3	1.618e-02	12	4.453e-03	5	-3.112e-03	37
292		min	-.488	20	-2.181	16	-3.508	5	-1.609e-02	15	-4.455e-03	3	-7.976e-03	17
293	N147	max	.322	34	-.597	36	2.642	12	1.595e-02	12	2.823e-03	15	-3.264e-03	37
294		min	-.428	22	-2.158	16	-2.637	15	-1.587e-02	15	-2.825e-03	12	-8.418e-03	17
295	N148	max	.458	16	-.883	36	3.939	3	1.793e-02	12	2.54e-03	5	-1.934e-03	39
296		min	-.454	20	-2.712	16	-3.932	5	-1.785e-02	15	-2.538e-03	3	-4.804e-03	19
297	N149	max	.354	32	-.868	36	2.947	12	1.768e-02	12	1.485e-03	15	-1.949e-03	39
298		min	-.382	20	-2.709	16	-2.941	15	-1.758e-02	15	-1.484e-03	12	-4.88e-03	19
299	N150	max	.454	16	-1.036	36	4.105	3	1.87e-02	12	1.185e-03	13	5.212e-04	34
300		min	-.451	22	-2.879	16	-4.098	5	-1.861e-02	15	-1.2e-03	6	-1.209e-03	22
301	N151	max	.365	16	-1.038	36	3.068	12	1.837e-02	12	9.052e-04	13	5.744e-04	34
302		min	-.366	22	-2.887	16	-3.062	15	-1.827e-02	15	-9.114e-04	6	-1.421e-03	22
303	N152	max	.451	18	-1.056	36	3.998	3	1.82e-02	12	1.92e-03	3	4.607e-03	16
304		min	-.458	22	-2.663	16	-3.991	5	-1.812e-02	15	-1.922e-03	5	6.233e-04	36
305	N153	max	.379	18	-1.057	37	2.995	12	1.798e-02	12	1.138e-03	13	4.861e-03	16
306		min	-.36	38	-2.643	17	-2.99	15	-1.788e-02	15	-1.14e-03	6	6.107e-04	36
307	N154	max	.287	34	-.002	37	1.688	3	8.818e-03	3	5.745e-04	15	1.844e-03	36
308		min	-.684	22	-.004	17	-1.685	5	-8.8e-03	5	-5.749e-04	12	-1.905e-03	16
309	N155	max	.187	34	-.002	37	1.215	3	8.578e-03	3	4.954e-04	5	2.391e-03	22
310		min	-.578	22	-.004	17	-1.213	5	-8.561e-03	5	-4.954e-04	3	-1.691e-03	34
311	N156	max	.742	16	.071	15	1.741	3	9.051e-03	3	5.153e-03	3	3.11e-03	22
312		min	-.367	36	-.086	3	-1.738	5	-9.032e-03	5	-5.209e-03	5	-4.475e-04	34
313	N157	max	.68	16	.07	15	1.214	3	9.079e-03	3	4.613e-03	3	3.531e-03	22
314		min	-.249	36	-.087	3	-1.214	5	-8.886e-03	5	-4.463e-03	15	1.642e-04	34
315	N158	max	.746	16	.07	15	1.659	3	8.929e-03	3	4.895e-03	3	2.777e-03	22
316		min	-.347	36	-.086	3	-1.657	5	-8.926e-03	5	-5.011e-03	5	-8.09e-04	34

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
317	N159	max	.671	16	.07	15	1.295	3	8.967e-03	3	4.442e-03	3	2.987e-03	22
318		min	-.27	36	-.087	3	-1.293	5	-8.768e-03	5	-4.243e-03	15	-4.499e-04	34
319	N160	max	.755	16	.064	15	1.692	3	9.15e-03	3	5.323e-03	3	2.809e-03	22
320		min	-.343	36	-.097	3	-1.689	5	-9.156e-03	5	-5.315e-03	5	-8.648e-04	34
321	N161	max	.746	16	.064	15	1.655	3	9.058e-03	3	5.158e-03	3	2.152e-03	22
322		min	-.336	36	-.097	3	-1.652	5	-9.08e-03	5	-5.153e-03	5	-1.592e-03	34
323	N162	max	.743	16	.07	15	1.615	3	8.898e-03	3	4.857e-03	3	2.331e-03	22
324		min	-.336	36	-.087	3	-1.612	5	-8.918e-03	5	-4.923e-03	5	-1.315e-03	34
325	N163	max	.658	16	.065	15	1.341	3	9.013e-03	3	4.87e-03	12	1.984e-03	20
326		min	-.274	36	-.095	3	-1.337	5	-8.995e-03	5	-4.818e-03	15	-1.954e-03	16
327	N164	max	.67	16	.065	15	1.377	3	8.966e-03	3	4.778e-03	3	1.896e-03	36
328		min	-.281	36	-.095	3	-1.373	5	-8.948e-03	5	-4.704e-03	15	-2.082e-03	16
329	N165	max	.672	16	.07	15	1.34	3	8.926e-03	3	4.51e-03	3	2.431e-03	22
330		min	-.281	36	-.087	3	-1.337	5	-8.799e-03	5	-4.346e-03	15	-1.129e-03	34
331	N166	max	.743	16	.071	15	1.718	3	9.051e-03	3	5.153e-03	3	3.11e-03	22
332		min	-.362	36	-.086	3	-1.715	5	-9.032e-03	5	-5.209e-03	5	-4.475e-04	34
333	N167	max	.677	16	.07	15	1.237	3	9.079e-03	3	4.613e-03	3	3.531e-03	22
334		min	-.255	36	-.087	3	-1.236	5	-8.886e-03	5	-4.463e-03	15	1.642e-04	34
335	N168	max	.681	16	-.131	39	1.649	3	1.081e-02	3	4.89e-03	12	7.737e-03	17
336		min	-.255	36	-.537	19	-1.646	5	-1.071e-02	5	-4.899e-03	15	2.925e-03	37
337	N169	max	.648	16	-.022	39	1.528	3	9.878e-03	3	5.421e-03	12	7.542e-03	17
338		min	-.276	36	-.258	19	-1.524	5	-9.815e-03	5	-5.435e-03	15	2.91e-03	37
339	N170	max	.766	16	-.022	39	1.901	3	9.992e-03	3	6.119e-03	3	6.937e-03	19
340		min	-.341	36	-.259	19	-1.898	5	-9.978e-03	5	-6.11e-03	5	2.609e-03	39
341	N171	max	.757	16	.058	15	1.713	3	9.255e-03	3	5.46e-03	3	3.902e-03	22
342		min	-.343	36	-.108	3	-1.71	5	-9.247e-03	5	-5.451e-03	5	4.421e-04	34
343	N172	max	.742	16	.058	15	1.783	3	9.225e-03	3	5.504e-03	3	3.864e-03	22
344		min	-.362	36	-.11	3	-1.78	5	-9.206e-03	5	-5.504e-03	5	3.534e-04	34
345	N173	max	.775	16	-.102	39	2.077	3	1.064e-02	3	6.228e-03	3	6.689e-03	17
346		min	-.339	36	-.465	19	-2.074	5	-1.062e-02	5	-6.215e-03	5	2.667e-03	37
347	N174	max	.736	16	-.102	39	2.157	3	1.063e-02	3	6.176e-03	3	7.9e-03	17
348		min	-.362	36	-.465	19	-2.153	5	-1.061e-02	5	-6.163e-03	5	3.03e-03	37
349	N175	max	.681	16	-.113	39	1.62	3	1.061e-02	3	4.839e-03	12	7.401e-03	17
350		min	-.255	36	-.493	19	-1.618	5	-1.05e-02	5	-4.852e-03	15	2.833e-03	37
351	N176	max	.64	16	-.113	39	1.7	3	1.066e-02	3	5.136e-03	12	6.323e-03	19
352		min	-.277	36	-.493	19	-1.697	5	-1.055e-02	5	-5.144e-03	15	2.394e-03	39
353	N177	max	.64	16	-.113	39	1.698	3	1.065e-02	3	5.143e-03	12	6.352e-03	19
354		min	-.277	36	-.49	19	-1.695	5	-1.055e-02	5	-5.152e-03	15	2.409e-03	39
355	N178	max	.775	16	-.113	39	2.101	3	1.075e-02	3	6.226e-03	3	7.531e-03	17
356		min	-.339	36	-.492	19	-2.097	5	-1.073e-02	5	-6.211e-03	5	2.91e-03	37
357	N179	max	.43	16	-.951	37	4.687	3	1.959e-02	12	1.191e-03	13	7.37e-04	18
358		min	-.429	22	-2.964	17	-4.677	5	-1.948e-02	15	-1.207e-03	6	-7.364e-04	22
359	N180	max	.464	16	-.952	37	3.955	3	1.866e-02	12	1.298e-03	13	2.12e-03	16
360		min	-.453	20	-2.944	17	-3.949	5	-1.853e-02	15	-1.32e-03	6	-4.231e-04	36
361	N181	max	.478	16	-.923	37	3.87	3	1.833e-02	12	1.815e-03	3	3.938e-03	16
362		min	-.45	36	-2.81	17	-3.865	5	-1.821e-02	15	-1.815e-03	5	4.845e-04	36
363	N182	max	.501	16	-.851	37	3.708	3	1.753e-02	12	2.925e-03	3	7.022e-03	16
364		min	-.444	36	-2.559	17	-3.703	5	-1.743e-02	15	-2.94e-03	5	1.514e-03	36
365	N183	max	.535	16	-.75	37	3.476	3	1.654e-02	12	3.926e-03	3	8.348e-03	16
366		min	-.435	36	-2.229	17	-3.471	5	-1.646e-02	15	-3.919e-03	5	2.198e-03	36
367	N184	max	.583	16	-.615	37	3.191	3	1.536e-02	12	4.692e-03	3	8.201e-03	16
368		min	-.419	36	-1.807	17	-3.186	5	-1.529e-02	15	-4.692e-03	5	2.698e-03	36
369	N185	max	.644	16	-.46	37	2.844	3	1.386e-02	12	5.493e-03	3	1.062e-02	17
370		min	-.397	36	-1.348	17	-2.84	5	-1.381e-02	15	-5.493e-03	5	3.506e-03	37
371	N186	max	.708	16	-.288	39	2.473	3	1.23e-02	3	5.997e-03	3	9.799e-03	17
372		min	-.37	36	-.918	19	-2.469	5	-1.227e-02	5	-5.988e-03	5	3.396e-03	37
373	N187	max	.775	16	-.119	39	2.112	3	1.08e-02	3	6.228e-03	3	7.85e-03	17

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
374		min	-.339	36	-.506	19	-2.109	5	-1.078e-02	5	-6.213e-03	5	2.993e-03	37
375	N188	max	.639	16	-.127	39	1.727	3	1.085e-02	3	5.178e-03	12	6.741e-03	19
376		min	-.277	36	-.527	19	-1.724	5	-1.074e-02	5	-5.182e-03	15	2.588e-03	39
377	N189	max	.56	16	-.281	39	2.054	3	1.235e-02	3	4.867e-03	12	9.931e-03	17
378		min	-.309	36	-.914	19	-2.05	5	-1.227e-02	15	-4.861e-03	15	3.476e-03	37
379	N190	max	.485	16	-.459	39	2.361	3	1.38e-02	12	4.213e-03	12	1.027e-02	17
380		min	-.335	36	-1.335	19	-2.357	5	-1.373e-02	15	-4.211e-03	15	3.491e-03	37
381	N191	max	.421	16	-.616	37	2.628	12	1.513e-02	12	3.297e-03	12	8.328e-03	16
382		min	-.353	36	-1.797	17	-2.623	15	-1.505e-02	15	-3.298e-03	15	2.607e-03	36
383	N192	max	.378	16	-.751	37	2.854	12	1.626e-02	12	2.715e-03	12	8.961e-03	16
384		min	-.363	36	-2.22	17	-2.848	15	-1.618e-02	15	-2.704e-03	15	2.442e-03	36
385	N193	max	.357	32	-.852	37	3.024	12	1.716e-02	12	1.944e-03	12	6.853e-03	16
386		min	-.371	20	-2.554	17	-3.018	15	-1.708e-02	15	-1.949e-03	15	1.328e-03	36
387	N194	max	.352	32	-.924	37	3.143	12	1.789e-02	12	1.163e-03	13	4.06e-03	16
388		min	-.37	20	-2.807	17	-3.137	15	-1.781e-02	15	-1.165e-03	6	4.161e-04	36
389	N195	max	.355	32	-.952	37	3.201	12	1.812e-02	12	1.072e-03	13	2.576e-03	16
390		min	-.363	22	-2.943	17	-3.195	15	-1.804e-02	15	-1.075e-03	6	-4.042e-04	36
391	N196	max	.685	16	-.359	39	2.63	3	1.296e-02	3	5.768e-03	3	7.978e-03	17
392		min	-.381	36	-1.087	19	-2.626	5	-1.293e-02	5	-5.765e-03	5	2.9e-03	37
393	N197	max	.586	16	-.608	37	3.172	3	1.529e-02	12	4.734e-03	3	7.879e-03	16
394		min	-.418	36	-1.784	17	-3.167	5	-1.522e-02	15	-4.732e-03	5	2.65e-03	36
395	N198	max	.52	16	-.801	37	3.592	3	1.71e-02	12	3.416e-03	3	6.407e-03	16
396		min	-.439	36	-2.39	17	-3.586	5	-1.701e-02	15	-3.425e-03	5	1.654e-03	36
397	N199	max	.526	16	-.358	39	2.19	3	1.297e-02	12	4.348e-03	12	8.367e-03	17
398		min	-.321	36	-1.098	19	-2.185	5	-1.29e-02	15	-4.343e-03	15	2.862e-03	37
399	N200	max	.423	16	-.61	37	2.617	12	1.508e-02	12	3.303e-03	12	8.185e-03	16
400		min	-.353	36	-1.78	17	-2.612	15	-1.5e-02	15	-3.303e-03	15	2.594e-03	36
401	N201	max	.365	16	-.806	37	2.938	12	1.676e-02	12	2.197e-03	12	6.773e-03	16
402		min	-.368	20	-2.392	17	-2.932	15	-1.668e-02	15	-2.195e-03	15	1.645e-03	36
403	N202	max	.352	32	-.924	37	3.141	12	1.789e-02	12	1.163e-03	13	4.067e-03	16
404		min	-.37	20	-2.804	17	-3.135	15	-1.781e-02	15	-1.165e-03	6	4.352e-04	36
405	N203	max	.478	16	-.923	37	3.871	3	1.833e-02	12	1.812e-03	3	3.926e-03	16
406		min	-.45	36	-2.81	17	-3.865	5	-1.821e-02	15	-1.812e-03	5	4.821e-04	36
407	N204	max	.386	34	-.944	37	4.636	3	1.934e-02	12	1.429e-03	13	2.989e-03	16
408		min	-.483	22	-2.898	17	-4.626	5	-1.923e-02	15	-1.454e-03	6	3.424e-05	36
409	N205	max	.35	34	-.895	37	4.475	3	1.877e-02	12	2.407e-03	3	5.422e-03	16
410		min	-.539	22	-2.711	17	-4.465	5	-1.867e-02	15	-2.401e-03	5	9.843e-04	36
411	N206	max	.392	34	-.811	37	4.006	3	1.727e-02	12	3.328e-03	3	7.214e-03	16
412		min	-.513	22	-2.424	17	-3.998	5	-1.718e-02	15	-3.332e-03	5	1.709e-03	36
413	N207	max	.736	16	-.118	39	2.188	3	1.083e-02	3	6.293e-03	3	8.286e-03	17
414		min	-.362	36	-.504	19	-2.184	5	-1.08e-02	5	-6.28e-03	5	3.121e-03	37
415	N208	max	.631	16	-.355	39	2.721	3	1.301e-02	3	5.692e-03	3	9.611e-03	17
416		min	-.404	36	-1.078	19	-2.717	5	-1.296e-02	5	-5.686e-03	5	3.336e-03	37
417	N209	max	.532	16	-.605	37	3.279	3	1.533e-02	12	4.657e-03	3	8.969e-03	16
418		min	-.437	36	-1.778	17	-3.273	5	-1.526e-02	15	-4.652e-03	5	2.88e-03	36
419	N210	max	.473	16	-.799	37	3.72	3	1.714e-02	12	3.35e-03	3	7.334e-03	16
420		min	-.451	36	-2.386	17	-3.714	5	-1.705e-02	15	-3.354e-03	5	1.799e-03	36
421	N211	max	.469	16	-.814	37	3.751	3	1.727e-02	12	3.328e-03	3	7.216e-03	16
422		min	-.452	36	-2.432	17	-3.745	5	-1.718e-02	15	-3.332e-03	5	1.708e-03	36
423	N212	max	.453	16	-.899	37	3.95	3	1.812e-02	12	2.458e-03	3	5.509e-03	16
424		min	-.457	20	-2.722	17	-3.943	5	-1.802e-02	15	-2.452e-03	5	9.299e-04	36
425	N213	max	.45	16	-.923	37	4.007	3	1.838e-02	12	1.78e-03	3	4.394e-03	16
426		min	-.457	20	-2.809	17	-4	5	-1.827e-02	15	-1.779e-03	5	5.234e-04	36
427	N214	max	.45	16	-.944	37	4.067	3	1.864e-02	12	1.429e-03	13	3.065e-03	16
428		min	-.456	20	-2.9	17	-4.061	5	-1.853e-02	15	-1.454e-03	6	-3.166e-05	36
429	N215	max	.581	16	-.362	39	2.101	3	1.297e-02	3	4.072e-03	12	9.366e-03	17
430		min	-.299	36	-1.107	19	-2.097	5	-1.289e-02	15	-4.066e-03	15	3.239e-03	37

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
431	N216	max	.48	16	-.613	37	2.508	12	1.509e-02	12	3.068e-03	12	9.325e-03	16
432		min	-.334	36	-1.787	17	-2.504	15	-1.501e-02	15	-3.066e-03	15	2.93e-03	36
433	N217	max	.412	16	-.807	37	2.817	12	1.68e-02	12	2.033e-03	12	7.468e-03	16
434		min	-.354	36	-2.395	17	-2.811	15	-1.672e-02	15	-2.031e-03	15	1.811e-03	36
435	N218	max	.378	16	-.924	37	3.008	12	1.795e-02	12	1.106e-03	13	4.581e-03	16
436		min	-.361	36	-2.805	17	-3.002	15	-1.786e-02	15	-1.108e-03	6	4.73e-04	36
437	N219	max	.304	34	.07	15	1.74	3	9.099e-03	3	5.375e-03	5	9.067e-04	36
438		min	-.676	22	-.086	3	-1.737	5	-9.11e-03	5	-5.274e-03	3	-3.578e-03	16
439	N220	max	.176	34	.07	15	1.213	3	9.071e-03	3	4.47e-03	15	4.713e-04	36
440		min	-.605	22	-.087	3	-1.213	5	-8.877e-03	5	-4.617e-03	3	-4.174e-03	16
441	N221	max	.28	34	.07	15	1.658	3	8.934e-03	3	5.059e-03	5	1.147e-03	36
442		min	-.676	22	-.086	3	-1.656	5	-8.948e-03	5	-4.917e-03	3	-3.124e-03	16
443	N222	max	.203	34	.07	15	1.295	3	8.955e-03	3	4.25e-03	15	8.85e-04	36
444		min	-.601	22	-.087	3	-1.293	5	-8.755e-03	5	-4.446e-03	3	-3.429e-03	16
445	N223	max	.273	34	.064	15	1.691	3	9.219e-03	3	5.542e-03	5	1.199e-03	36
446		min	-.683	22	-.097	3	-1.689	5	-9.263e-03	5	-5.507e-03	3	-3.152e-03	16
447	N224	max	.266	34	.064	15	1.655	3	9.102e-03	3	5.325e-03	5	1.686e-03	36
448		min	-.674	22	-.096	3	-1.652	5	-9.154e-03	5	-5.287e-03	3	-2.253e-03	16
449	N225	max	.268	34	.07	15	1.614	3	8.9e-03	3	4.973e-03	5	1.488e-03	36
450		min	-.672	22	-.086	3	-1.611	5	-8.93e-03	5	-4.883e-03	3	-2.512e-03	16
451	N226	max	.209	34	.064	15	1.341	3	9.008e-03	3	4.846e-03	15	1.951e-03	22
452		min	-.591	22	-.095	3	-1.337	5	-8.988e-03	5	-4.894e-03	12	-1.99e-03	18
453	N227	max	.216	34	.064	15	1.376	3	8.959e-03	3	4.736e-03	15	2.046e-03	22
454		min	-.602	22	-.095	3	-1.373	5	-8.939e-03	5	-4.804e-03	3	-1.871e-03	34
455	N228	max	.215	34	.07	15	1.339	3	8.914e-03	3	4.359e-03	15	1.35e-03	36
456		min	-.603	22	-.087	3	-1.336	5	-8.784e-03	5	-4.518e-03	3	-2.658e-03	16
457	N229	max	.297	34	.07	15	1.717	3	9.099e-03	3	5.375e-03	5	9.067e-04	36
458		min	-.676	22	-.086	3	-1.714	5	-9.11e-03	5	-5.274e-03	3	-3.578e-03	16
459	N230	max	.184	34	.07	15	1.236	3	9.071e-03	3	4.47e-03	15	4.713e-04	36
460		min	-.603	22	-.087	3	-1.235	5	-8.877e-03	5	-4.617e-03	3	-4.174e-03	16
461	N231	max	.183	34	-.044	36	1.648	3	1.085e-02	3	4.9e-03	15	-1.989e-03	36
462		min	-.606	22	-.624	16	-1.646	5	-1.074e-02	5	-4.892e-03	12	-8.685e-03	16
463	N232	max	.213	34	.024	36	1.528	3	9.893e-03	3	5.441e-03	15	-1.809e-03	36
464		min	-.583	22	-.305	16	-1.524	5	-9.829e-03	5	-5.429e-03	12	-8.654e-03	16
465	N233	max	.269	34	.024	36	1.909	3	1.008e-02	3	6.309e-03	5	-1.448e-03	36
466		min	-.692	22	-.305	16	-1.907	5	-1.01e-02	5	-6.34e-03	3	-8.111e-03	16
467	N234	max	.273	34	.058	15	1.714	3	9.351e-03	3	5.717e-03	5	3.08e-04	36
468		min	-.684	22	-.108	3	-1.712	5	-9.386e-03	5	-5.688e-03	3	-4.662e-03	16
469	N235	max	.298	34	.057	15	1.784	3	9.372e-03	3	5.867e-03	5	3.725e-04	36
470		min	-.675	22	-.109	3	-1.782	5	-9.382e-03	5	-5.825e-03	3	-4.6e-03	16
471	N236	max	.266	34	-.026	36	2.09	3	1.073e-02	3	6.288e-03	5	-1.673e-03	36
472		min	-.698	22	-.542	16	-2.087	5	-1.072e-02	5	-6.325e-03	3	-7.699e-03	16
473	N237	max	.299	34	-.026	36	2.171	3	1.072e-02	3	6.198e-03	5	-2.066e-03	36
474		min	-.671	22	-.542	16	-2.167	5	-1.071e-02	5	-6.235e-03	3	-8.876e-03	16
475	N238	max	.183	34	-.033	36	1.62	3	1.064e-02	3	4.854e-03	15	-1.841e-03	36
476		min	-.606	22	-.574	16	-1.618	5	-1.053e-02	5	-4.841e-03	12	-8.405e-03	16
477	N239	max	.216	34	-.033	36	1.7	3	1.069e-02	3	5.145e-03	15	-1.414e-03	36
478		min	-.576	22	-.574	16	-1.697	5	-1.059e-02	5	-5.138e-03	12	-7.32e-03	16
479	N240	max	.216	34	-.032	36	1.698	3	1.068e-02	3	5.153e-03	15	-1.427e-03	36
480		min	-.576	22	-.571	16	-1.695	5	-1.058e-02	5	-5.146e-03	12	-7.351e-03	16
481	N241	max	.266	34	-.033	36	2.114	3	1.083e-02	3	6.276e-03	5	-2.058e-03	36
482		min	-.699	22	-.573	16	-2.111	5	-1.082e-02	5	-6.312e-03	3	-8.397e-03	16
483	N242	max	.458	16	-.951	37	3.968	3	1.882e-02	12	1.202e-03	13	7.238e-04	18
484		min	-.457	22	-2.964	17	-3.961	5	-1.869e-02	15	-1.219e-03	6	-7.251e-04	20
485	N243	max	.453	18	-.939	37	3.956	3	1.866e-02	12	1.114e-03	13	1.284e-04	34
486		min	-.461	22	-2.956	17	-3.951	5	-1.854e-02	15	-1.127e-03	6	-1.818e-03	22
487	N244	max	.446	34	-.887	37	3.875	3	1.834e-02	12	1.758e-03	5	-1.182e-03	39

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
488		min	-.473	22	-2.846	17	-3.869	5	-1.822e-02	15	-1.757e-03	3	-3.23e-03	19
489	N245	max	.436	34	-.775	36	3.715	3	1.755e-02	12	2.883e-03	5	-2.32e-03	37
490		min	-.491	22	-2.639	16	-3.71	5	-1.745e-02	15	-2.868e-03	3	-6.191e-03	17
491	N246	max	.419	34	-.637	36	3.486	3	1.657e-02	12	3.863e-03	5	-2.823e-03	37
492		min	-.517	22	-2.345	16	-3.48	5	-1.649e-02	15	-3.87e-03	3	-7.709e-03	17
493	N247	max	.393	34	-.474	36	3.203	3	1.54e-02	12	4.641e-03	5	-2.841e-03	37
494		min	-.554	22	-1.951	16	-3.198	5	-1.533e-02	15	-4.64e-03	3	-8.033e-03	17
495	N248	max	.356	34	-.311	36	2.858	3	1.39e-02	12	5.454e-03	5	-3.499e-03	37
496		min	-.601	22	-1.499	16	-2.854	5	-1.386e-02	15	-5.455e-03	3	-1.062e-02	17
497	N249	max	.313	34	-.166	36	2.488	3	1.236e-02	3	5.973e-03	5	-3.019e-03	36
498		min	-.649	22	-1.041	16	-2.483	5	-1.235e-02	5	-5.975e-03	3	-1.019e-02	16
499	N250	max	.266	34	-.037	36	2.126	3	1.088e-02	3	6.275e-03	5	-2.183e-03	36
500		min	-.699	22	-.589	16	-2.122	5	-1.087e-02	5	-6.308e-03	3	-8.675e-03	16
501	N251	max	.216	34	-.04	36	1.727	3	1.088e-02	3	5.184e-03	15	-1.554e-03	36
502		min	-.575	22	-.614	16	-1.724	5	-1.078e-02	5	-5.18e-03	12	-7.791e-03	16
503	N252	max	.267	34	-.152	36	2.054	3	1.239e-02	3	4.861e-03	15	-3.068e-03	36
504		min	-.516	22	-1.045	16	-2.051	5	-1.231e-02	15	-4.867e-03	12	-1.035e-02	16
505	N253	max	.31	34	-.295	36	2.362	3	1.384e-02	12	4.208e-03	15	-3.48e-03	37
506		min	-.459	22	-1.501	16	-2.357	5	-1.376e-02	15	-4.21e-03	12	-1.028e-02	17
507	N254	max	.343	34	-.462	36	2.629	12	1.516e-02	12	3.295e-03	15	-2.767e-03	37
508		min	-.409	22	-1.953	16	-2.624	15	-1.508e-02	15	-3.293e-03	12	-8.148e-03	17
509	N255	max	.362	34	-.626	36	2.854	12	1.629e-02	12	2.699e-03	15	-3.093e-03	37
510		min	-.375	22	-2.348	16	-2.849	15	-1.621e-02	15	-2.71e-03	12	-8.282e-03	17
511	N256	max	.374	18	-.768	36	3.024	12	1.718e-02	12	1.944e-03	15	-2.235e-03	39
512		min	-.359	38	-2.642	16	-3.019	15	-1.71e-02	15	-1.939e-03	12	-5.925e-03	19
513	N257	max	.374	18	-.885	37	3.143	12	1.791e-02	12	1.086e-03	15	-1.119e-03	39
514		min	-.354	38	-2.846	17	-3.137	15	-1.782e-02	15	-1.084e-03	12	-3.347e-03	19
515	N258	max	.365	16	-.939	37	3.201	12	1.813e-02	12	9.166e-04	13	2.914e-05	34
516		min	-.355	38	-2.956	17	-3.195	15	-1.804e-02	15	-9.258e-04	6	-2.207e-03	22
517	N259	max	.36	16	-.954	37	3.209	12	1.824e-02	12	9.557e-04	13	8.089e-04	18
518		min	-.359	22	-2.97	17	-3.203	15	-1.815e-02	15	-9.615e-04	6	-8.11e-04	20
519	N260	max	.33	34	-.222	36	2.645	3	1.302e-02	3	5.734e-03	5	-2.503e-03	36
520		min	-.632	22	-1.226	16	-2.641	5	-1.3e-02	5	-5.732e-03	3	-8.392e-03	16
521	N261	max	.287	34	-.212	36	2.19	3	1.301e-02	12	4.341e-03	15	-2.608e-03	36
522		min	-.49	22	-1.246	16	-2.186	5	-1.294e-02	15	-4.346e-03	12	-8.636e-03	16
523	N262	max	.391	34	-.466	36	3.184	3	1.533e-02	12	4.681e-03	5	-2.756e-03	37
524		min	-.556	22	-1.929	16	-3.179	5	-1.526e-02	15	-4.683e-03	3	-7.748e-03	17
525	N263	max	.342	34	-.456	36	2.618	12	1.511e-02	12	3.3e-03	15	-2.718e-03	37
526		min	-.41	22	-1.937	16	-2.613	15	-1.503e-02	15	-3.299e-03	12	-8.041e-03	17
527	N264	max	.427	34	-.704	36	3.6	3	1.712e-02	12	3.366e-03	5	-2.211e-03	37
528		min	-.505	22	-2.49	16	-3.594	5	-1.703e-02	15	-3.358e-03	3	-5.832e-03	17
529	N265	max	.369	18	-.697	36	2.938	12	1.679e-02	12	2.191e-03	15	-2.249e-03	37
530		min	-.365	22	-2.504	16	-2.932	15	-1.67e-02	15	-2.194e-03	12	-6.151e-03	17
531	N266	max	.374	18	-.884	37	3.142	12	1.79e-02	12	1.095e-03	15	-1.133e-03	39
532		min	-.354	38	-2.844	16	-3.135	15	-1.782e-02	15	-1.094e-03	12	-3.36e-03	19
533	N267	max	.446	34	-.887	37	3.875	3	1.834e-02	12	1.755e-03	5	-1.178e-03	39
534		min	-.473	22	-2.846	17	-3.869	5	-1.822e-02	15	-1.754e-03	3	-3.219e-03	19
535	N268	max	.501	16	-.921	37	4.639	3	1.935e-02	12	1.16e-03	5	-5.583e-04	34
536		min	-.402	36	-2.921	17	-4.629	5	-1.924e-02	15	-1.155e-03	3	-2.46e-03	22
537	N269	max	.573	16	-.847	36	4.481	3	1.879e-02	12	2.342e-03	5	-1.757e-03	39
538		min	-.381	36	-2.764	16	-4.471	5	-1.868e-02	15	-2.348e-03	3	-4.632e-03	19
539	N270	max	.535	16	-.718	36	4.014	3	1.729e-02	12	3.272e-03	5	-2.435e-03	37
540		min	-.412	36	-2.52	16	-4.006	5	-1.72e-02	15	-3.269e-03	3	-6.467e-03	17
541	N271	max	.299	34	-.036	36	2.202	3	1.091e-02	3	6.312e-03	5	-2.24e-03	36
542		min	-.671	22	-.586	16	-2.198	5	-1.09e-02	5	-6.344e-03	3	-9.178e-03	16
543	N272	max	.366	34	-.219	36	2.737	3	1.307e-02	3	5.654e-03	5	-3.112e-03	36
544		min	-.591	22	-1.217	16	-2.732	5	-1.303e-02	5	-5.656e-03	3	-9.847e-03	16

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation ...	LC	Y Rotation ...	LC	Z Rotation [...	LC
545	N273	max	.422	34	-.463	36	3.291	3	1.537e-02	12	4.599e-03	5	-3.071e-03	37
546		min	-.515	22	-1.922	16	-3.286	5	-1.53e-02	15	-4.603e-03	3	-8.759e-03	17
547	N274	max	.449	34	-.702	36	3.729	3	1.717e-02	12	3.293e-03	5	-2.485e-03	37
548		min	-.469	22	-2.486	16	-3.722	5	-1.707e-02	15	-3.292e-03	3	-6.626e-03	17
549	N275	max	.451	34	-.722	36	3.76	3	1.729e-02	12	3.272e-03	5	-2.436e-03	37
550		min	-.466	22	-2.527	16	-3.753	5	-1.72e-02	15	-3.269e-03	3	-6.467e-03	17
551	N276	max	.458	18	-.852	36	3.955	3	1.814e-02	12	2.393e-03	5	-1.748e-03	39
552		min	-.453	22	-2.773	16	-3.948	5	-1.803e-02	15	-2.399e-03	3	-4.672e-03	19
553	N277	max	.459	18	-.887	37	4.012	3	1.839e-02	12	1.721e-03	5	-1.279e-03	39
554		min	-.45	22	-2.845	17	-4.005	5	-1.828e-02	15	-1.721e-03	3	-3.626e-03	19
555	N278	max	.457	18	-.921	37	4.07	3	1.865e-02	12	1.177e-03	5	-4.943e-04	34
556		min	-.45	22	-2.922	17	-4.063	5	-1.854e-02	15	-1.173e-03	3	-2.535e-03	22
557	N279	max	.453	16	-.951	37	4.108	3	1.888e-02	12	1.191e-03	13	8.061e-04	18
558		min	-.452	22	-2.964	17	-4.101	5	-1.877e-02	15	-1.207e-03	6	-8.056e-04	22
559	N280	max	.252	34	-.215	36	2.101	3	1.301e-02	3	4.065e-03	15	-2.987e-03	36
560		min	-.531	22	-1.256	16	-2.097	5	-1.293e-02	15	-4.07e-03	12	-9.631e-03	16
561	N281	max	.311	34	-.458	36	2.509	12	1.513e-02	12	3.064e-03	15	-3.169e-03	37
562		min	-.455	22	-1.944	16	-2.504	15	-1.505e-02	15	-3.065e-03	12	-9.059e-03	17
563	N282	max	.345	34	-.698	36	2.817	12	1.682e-02	12	2.029e-03	15	-2.52e-03	37
564		min	-.402	22	-2.507	16	-2.812	15	-1.674e-02	15	-2.03e-03	12	-6.738e-03	17
565	N283	max	.359	34	-.884	37	3.008	12	1.797e-02	12	1.005e-03	15	-1.29e-03	39
566		min	-.375	22	-2.845	16	-3.002	15	-1.788e-02	15	-1.007e-03	12	-3.753e-03	19
567	N284	max	.365	16	-.954	37	3.073	12	1.83e-02	12	9.115e-04	13	9.252e-04	34
568		min	-.365	22	-2.97	17	-3.067	15	-1.82e-02	15	-9.172e-04	6	-9.316e-04	22
569	N285	max	.299	34	-.028	36	2.177	3	1.076e-02	3	6.222e-03	5	-2.101e-03	36
570		min	-.671	22	-.551	16	-2.173	5	-1.074e-02	5	-6.259e-03	3	-8.939e-03	16
571	N286	max	.183	34	-.027	36	1.605	3	1.058e-02	3	4.922e-03	15	-1.785e-03	36
572		min	-.606	22	-.547	16	-1.602	5	-1.047e-02	5	-4.906e-03	12	-8.351e-03	16
573	N287	max	.383	34	-.287	36	2.9	3	1.379e-02	3	5.822e-03	5	-3.3e-03	37
574		min	-.569	22	-1.428	16	-2.895	5	-1.375e-02	5	-5.829e-03	3	-9.966e-03	17
575	N288	max	.263	34	-.255	36	2.175	3	1.34e-02	12	4.051e-03	15	-3.24e-03	36
576		min	-.518	22	-1.378	16	-2.171	5	-1.333e-02	15	-4.055e-03	12	-9.863e-03	16
577	N289	max	.437	34	-.582	36	3.514	3	1.629e-02	12	4.441e-03	5	-2.931e-03	37
578		min	-.491	22	-2.218	16	-3.508	5	-1.621e-02	15	-4.444e-03	3	-8.149e-03	17
579	N290	max	.326	34	-.56	36	2.642	12	1.584e-02	12	2.834e-03	15	-3.085e-03	37
580		min	-.432	22	-2.195	16	-2.637	15	-1.576e-02	15	-2.836e-03	12	-8.586e-03	17
581	N291	max	.458	18	-.841	36	3.938	3	1.806e-02	12	2.533e-03	5	-1.84e-03	39
582		min	-.454	22	-2.753	16	-3.932	5	-1.796e-02	15	-2.537e-03	3	-4.892e-03	19
583	N292	max	.355	34	-.827	36	2.947	12	1.756e-02	12	1.492e-03	15	-1.846e-03	39
584		min	-.383	22	-2.75	16	-2.941	15	-1.747e-02	15	-1.493e-03	12	-4.98e-03	19
585	N293	max	.454	16	-.947	37	4.105	3	1.883e-02	12	1.186e-03	13	5.21e-04	34
586		min	-.451	22	-2.963	17	-4.098	5	-1.872e-02	15	-1.201e-03	6	-1.208e-03	22
587	N294	max	.364	18	-.95	37	3.068	12	1.825e-02	12	9.057e-04	13	5.775e-04	34
588		min	-.366	22	-2.969	17	-3.062	15	-1.816e-02	15	-9.12e-04	6	-1.423e-03	22
589	N295	max	.451	16	-.919	37	3.997	3	1.833e-02	12	1.919e-03	3	4.623e-03	16
590		min	-.457	20	-2.795	17	-3.991	5	-1.822e-02	15	-1.915e-03	5	6.055e-04	36
591	N296	max	.38	16	-.918	37	2.995	12	1.786e-02	12	1.138e-03	13	4.884e-03	16
592		min	-.361	36	-2.781	17	-2.99	15	-1.777e-02	15	-1.14e-03	6	5.857e-04	36
593	N297	max	.742	16	.019	34	1.659	3	8.823e-03	3	4.891e-03	3	2.788e-03	22
594		min	-.342	36	-.035	22	-1.657	5	-8.805e-03	5	-4.882e-03	5	-8.238e-04	34
595	N298	max	.663	16	.02	34	1.295	3	8.659e-03	3	4.137e-03	12	3.132e-03	22
596		min	-.266	36	-.034	22	-1.293	5	-8.642e-03	5	-4.13e-03	15	-3.141e-04	34
597	N299	max	.274	34	.022	36	1.658	3	8.818e-03	3	4.848e-03	5	1.156e-03	36
598		min	-.672	22	-.037	16	-1.656	5	-8.8e-03	5	-4.857e-03	3	-3.132e-03	16
599	N300	max	.198	34	.023	36	1.295	3	8.653e-03	3	4.131e-03	15	7.967e-04	36
600		min	-.594	22	-.037	16	-1.293	5	-8.636e-03	5	-4.139e-03	12	-3.621e-03	16

Envelope Member Section Deflections Service

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1	M1	1	max	0	39	0	39	0	39	0	39	NC	39	NC	39
2			min	0	1	0	1	0	1	0	1	NC	1	NC	1
3		2	max	0	36	.138	36	.662	3	3.468e-04	3	NC	39	NC	14
4			min	-.003	16	-.422	16	-.662	5	-3.468e-04	5	920.226	32	486.053	3
5		3	max	-.001	36	.425	36	2.024	3	5.72e-04	12	NC	39	NC	14
6			min	-.005	16	-.824	16	-2.021	5	-5.717e-04	15	446.114	32	159.063	3
7	M2	1	max	.742	16	.016	34	1.637	3	8.823e-03	3	NC	39	NC	39
8			min	-.342	36	-.022	22	-1.635	5	-8.805e-03	5	NC	1	NC	1
9		2	max	.742	16	.006	34	1.635	3	8.823e-03	3	NC	39	NC	39
10			min	-.342	36	-.013	22	-1.632	5	-8.805e-03	5	NC	1	NC	1
11		3	max	.742	16	-.001	36	1.632	3	8.823e-03	3	NC	39	NC	39
12			min	-.342	36	-.005	16	-1.629	5	-8.805e-03	5	NC	1	NC	1
13	M3	1	max	.086	5	.357	36	1.738	5	5.15e-03	5	NC	38	NC	39
14			min	-.071	12	-.732	16	-1.741	3	-5.224e-03	3	753.343	34	112.396	3
15		2	max	.087	5	.299	36	1.475	5	4.687e-03	5	NC	39	NC	39
16			min	-.07	12	-.697	16	-1.477	3	-4.629e-03	3	1630.058	34	225.999	3
17		3	max	.087	5	.24	36	1.212	5	4.616e-03	5	NC	39	NC	39
18			min	-.07	12	-.671	16	-1.216	3	-4.482e-03	12	813.068	19	NC	1
19	M4	1	max	.342	36	.016	34	1.635	5	8.805e-03	5	NC	39	NC	39
20			min	-.742	16	-.022	22	-1.637	3	-8.823e-03	3	NC	1	NC	1
21		2	max	.342	36	.018	34	1.646	5	8.805e-03	5	NC	39	NC	39
22			min	-.742	16	-.029	22	-1.648	3	-8.823e-03	3	NC	1	NC	1
23		3	max	.342	36	.019	34	1.657	5	8.805e-03	5	NC	39	NC	39
24			min	-.742	16	-.035	22	-1.659	3	-8.823e-03	3	NC	1	NC	1
25	M5	1	max	.663	16	.019	34	1.277	3	8.659e-03	3	NC	39	NC	39
26			min	-.266	36	-.02	22	-1.275	5	-8.642e-03	5	NC	1	NC	1
27		2	max	.663	16	.008	34	1.274	3	8.659e-03	3	NC	39	NC	39
28			min	-.266	36	-.012	22	-1.272	5	-8.642e-03	5	NC	1	NC	1
29		3	max	.663	16	-.001	36	1.272	3	8.659e-03	3	NC	39	NC	39
30			min	-.266	36	-.005	16	-1.27	5	-8.642e-03	5	NC	1	NC	1
31	M6	1	max	.266	36	.019	34	1.275	5	8.642e-03	5	NC	39	NC	39
32			min	-.663	16	-.02	22	-1.277	3	-8.659e-03	3	NC	1	NC	1
33		2	max	.266	36	.02	34	1.284	5	8.642e-03	5	NC	39	NC	39
34			min	-.663	16	-.027	22	-1.286	3	-8.659e-03	3	NC	1	NC	1
35		3	max	.266	36	.02	34	1.293	5	8.642e-03	5	NC	39	NC	39
36			min	-.663	16	-.034	22	-1.295	3	-8.659e-03	3	NC	1	NC	1
37	M7	1	max	.333	36	.064	12	1.689	5	9.093e-03	5	NC	39	NC	39
38			min	-.745	16	-.097	5	-1.692	3	-9.138e-03	3	NC	1	NC	1
39		2	max	.331	36	-.02	12	1.893	5	9.85e-03	5	1199.174	34	NC	14
40			min	-.756	16	-.25	5	-1.896	3	-9.898e-03	3	391.989	22	342.75	3
41		3	max	.33	36	-.145	12	2.11	5	1.063e-02	5	420.574	39	NC	14
42			min	-.766	16	-.477	5	-2.113	3	-1.069e-02	3	165.024	19	166.368	3
43	M8	1	max	.097	5	.333	36	1.689	5	5.361e-03	5	NC	39	NC	34
44			min	-.064	12	-.745	16	-1.692	3	-5.367e-03	3	577.44	36	110.845	3
45		2	max	.096	5	.298	36	1.514	5	5.025e-03	5	NC	39	NC	34
46			min	-.064	12	-.701	16	-1.515	3	-4.984e-03	3	1178.606	38	222.357	3
47		3	max	.095	5	.265	36	1.34	5	4.973e-03	15	NC	39	NC	39
48			min	-.065	12	-.649	16	-1.34	3	-4.939e-03	12	NC	1	NC	1
49	M9	1	max	.736	16	.064	12	1.655	3	9.067e-03	3	NC	39	NC	32
50			min	-.326	36	-.097	5	-1.653	5	-9.008e-03	5	1292.546	34	196.811	3
51		2	max	.735	16	.067	12	1.635	3	8.998e-03	3	NC	39	NC	32
52			min	-.326	36	-.092	5	-1.632	5	-8.941e-03	5	1092.305	19	398.757	3
53		3	max	.733	16	.07	12	1.615	3	8.929e-03	3	NC	39	NC	39
54			min	-.326	36	-.086	5	-1.612	5	-8.873e-03	5	521.262	19	NC	1
55	M10	1	max	.265	36	.065	12	1.34	5	9.003e-03	5	NC	39	NC	39
56			min	-.649	16	-.095	5	-1.34	3	-9.024e-03	3	NC	1	NC	1

Envelope Member Section Deflections Service (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
57		2	max	.267	36	-.026	12	1.535	5	9.952e-03	5	1116.31	34	NC	34
58			min	-.64	16	-.261	5	-1.535	3	-9.951e-03	3	383.991	22	840.961	37
59		3	max	.269	36	-.155	12	1.726	5	1.096e-02	5	420.396	39	NC	34
60			min	-.631	16	-.496	5	-1.728	3	-1.095e-02	3	165.361	19	415.32	37
61	M11	1	max	.661	16	.065	12	1.376	3	8.975e-03	3	NC	39	NC	34
62			min	-.272	36	-.095	5	-1.376	5	-8.956e-03	5	1030.971	34	213.149	5
63		2	max	.661	16	.067	12	1.357	3	8.899e-03	3	NC	39	NC	34
64			min	-.272	36	-.092	5	-1.356	5	-8.935e-03	5	1362.905	19	434.185	5
65		3	max	.662	16	.07	12	1.339	3	8.824e-03	3	NC	39	NC	39
66			min	-.272	36	-.087	5	-1.338	5	-8.913e-03	5	594.045	19	NC	1
67	M12	1	max	.352	36	.071	12	1.715	5	9.018e-03	5	NC	39	NC	39
68			min	-.733	16	-.086	5	-1.718	3	-9.04e-03	3	NC	1	NC	1
69		2	max	.352	36	-.004	12	1.939	5	9.773e-03	5	1945.825	34	NC	14
70			min	-.73	16	-.223	5	-1.942	3	-9.81e-03	3	448.786	22	344.792	3
71		3	max	.352	36	-.143	12	2.184	5	1.072e-02	5	461.317	39	NC	14
72			min	-.727	16	-.476	5	-2.188	3	-1.077e-02	3	176.372	19	164.795	3
73	M13	1	max	.246	36	.07	12	1.235	5	9.069e-03	5	NC	39	NC	39
74			min	-.668	16	-.087	5	-1.238	3	-8.917e-03	3	NC	1	NC	1
75		2	max	.246	36	-.022	12	1.44	5	9.915e-03	5	1403.762	34	NC	34
76			min	-.67	16	-.249	5	-1.441	3	-9.832e-03	3	417.168	22	400.489	15
77		3	max	.246	36	-.159	12	1.646	5	1.085e-02	5	456.061	39	NC	34
78			min	-.672	16	-.505	5	-1.649	3	-1.083e-02	3	175.388	19	199.158	15
79	M14	1	max	-.023	12	.267	36	1.531	3	5.425e-03	12	NC	39	NC	39
80			min	-.255	5	-.64	16	-1.53	5	-5.391e-03	15	NC	1	NC	1
81		2	max	-.023	12	.301	36	1.732	3	5.744e-03	3	NC	39	NC	39
82			min	-.256	5	-.7	16	-1.731	5	-5.718e-03	5	5327.584	27	2504.811	3
83		3	max	-.023	12	.331	36	1.903	3	6.108e-03	3	NC	39	NC	39
84			min	-.256	5	-.756	16	-1.9	5	-6.105e-03	5	2518.372	27	NC	1
85	M15	1	max	.058	12	.333	36	1.714	3	5.507e-03	3	NC	38	NC	39
86			min	-.108	5	-.747	16	-1.711	5	-5.502e-03	5	283.11	19	NC	1
87		2	max	.058	12	.342	36	1.748	3	5.513e-03	3	NC	38	NC	33
88			min	-.109	5	-.739	16	-1.745	5	-5.502e-03	5	569.106	19	219.561	15
89		3	max	.058	12	.352	36	1.783	3	5.518e-03	3	NC	39	NC	33
90			min	-.109	5	-.732	16	-1.78	5	-5.501e-03	5	393.639	36	109.769	15
91	M16	1	max	-.123	12	.33	36	2.078	3	6.239e-03	3	NC	39	NC	39
92			min	-.441	5	-.765	16	-2.075	5	-6.24e-03	5	NC	1	NC	1
93		2	max	-.123	12	.341	36	2.117	3	6.207e-03	3	NC	39	NC	39
94			min	-.441	5	-.747	16	-2.114	5	-6.207e-03	5	381.067	22	190.242	3
95		3	max	-.123	12	.352	36	2.157	3	6.176e-03	3	NC	39	NC	39
96			min	-.441	5	-.727	16	-2.153	5	-6.174e-03	5	182.926	22	95.028	3
97	M17	1	max	-.138	12	.246	36	1.62	3	4.849e-03	12	NC	38	NC	39
98			min	-.465	5	-.672	16	-1.618	5	-4.821e-03	15	168.113	19	NC	1
99		2	max	-.138	12	.258	36	1.66	3	4.982e-03	12	NC	38	NC	14
100			min	-.465	5	-.651	16	-1.658	5	-4.956e-03	15	351.284	19	187.07	5
101		3	max	-.138	12	.269	36	1.701	3	5.114e-03	12	NC	39	NC	14
102			min	-.465	5	-.632	16	-1.698	5	-5.09e-03	15	NC	1	93.265	5
103	M18	1	max	-.137	12	.269	36	1.699	3	5.118e-03	12	NC	39	NC	39
104			min	-.463	5	-.632	16	-1.697	5	-5.094e-03	15	NC	1	NC	1
105		2	max	-.137	12	.301	36	1.918	3	5.673e-03	3	NC	39	NC	39
106			min	-.464	5	-.7	16	-1.916	5	-5.654e-03	5	2829.731	27	2184.078	3
107		3	max	-.137	12	.33	36	2.102	3	6.268e-03	3	NC	39	NC	39
108			min	-.465	5	-.766	16	-2.099	5	-6.27e-03	5	1372.762	27	NC	1
109	M19	1	max	-.313	34	.23	36	2.057	3	6.521e-03	12	NC	39	NC	39
110			min	-.833	22	-.652	16	-2.054	5	-6.507e-03	15	NC	1	NC	1
111		2	max	-.313	34	.262	36	2.289	3	7.053e-03	3	NC	39	NC	39
112			min	-.832	22	-.729	16	-2.285	5	-7.041e-03	5	NC	1	1745.79	3
113		3	max	-.313	34	.291	36	2.475	3	7.641e-03	3	NC	39	NC	39

Envelope Member Section Deflections Service (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
114			min	-.832	22	-.8	16	-2.472	5	-7.63e-03	5	NC	1	NC	1
115	M20	1	max	-.535	12	.232	36	2.366	3	6.236e-03	12	NC	39	NC	39
116			min	-1.214	19	-.642	16	-2.361	5	-6.216e-03	15	NC	1	NC	1
117		2	max	-.535	12	.264	36	2.629	3	6.847e-03	3	NC	39	NC	39
118			min	-1.214	19	-.724	16	-2.624	5	-6.828e-03	5	NC	1	1812.608	3
119		3	max	-.535	12	.294	36	2.849	3	7.514e-03	3	NC	39	NC	39
120			min	-1.214	19	-.8	16	-2.844	5	-7.495e-03	5	NC	1	NC	1
121	M21	1	max	-.741	37	.266	36	2.63	12	4.834e-03	12	NC	39	NC	39
122			min	-1.653	17	-.577	16	-2.624	15	-4.818e-03	15	NC	1	NC	1
123		2	max	-.741	37	.3	36	2.933	3	5.525e-03	3	NC	39	NC	39
124			min	-1.653	17	-.661	16	-2.928	5	-5.51e-03	5	6691.243	35	1782.863	3
125		3	max	-.741	37	.331	36	3.193	3	6.262e-03	3	NC	39	NC	39
126			min	-1.653	17	-.739	16	-3.188	5	-6.248e-03	5	3343.12	35	NC	1
127	M22	1	max	-.886	37	.264	36	2.858	12	4.252e-03	12	NC	39	NC	39
128			min	-2.069	17	-.58	16	-2.852	15	-4.249e-03	15	NC	1	NC	1
129		2	max	-.886	37	.301	36	3.189	3	4.84e-03	3	NC	39	NC	39
130			min	-2.068	17	-.661	16	-3.183	5	-4.838e-03	5	NC	1	1813.257	3
131		3	max	-.886	37	.335	36	3.48	3	5.475e-03	3	NC	39	NC	39
132			min	-2.068	17	-.736	16	-3.474	5	-5.473e-03	5	5760.838	35	NC	1
133	M23	1	max	-.994	37	.298	36	3.029	12	3.125e-03	12	NC	39	NC	39
134			min	-2.407	17	-.507	16	-3.022	15	-3.108e-03	15	NC	1	NC	1
135		2	max	-.994	37	.338	36	3.39	3	3.616e-03	3	NC	39	NC	39
136			min	-2.407	17	-.581	16	-3.383	5	-3.597e-03	5	5121.425	19	1815.86	3
137		3	max	-.994	37	.375	36	3.713	3	4.135e-03	3	NC	39	NC	39
138			min	-2.407	17	-.651	16	-3.707	5	-4.113e-03	5	2559.043	19	NC	1
139	M24	1	max	-1.069	37	.294	36	3.144	12	2.257e-03	12	NC	39	NC	39
140			min	-2.657	17	-.518	16	-3.138	15	-2.247e-03	15	6493.77	21	NC	1
141		2	max	-1.069	37	.338	36	3.527	3	2.606e-03	3	NC	39	NC	39
142			min	-2.657	17	-.585	16	-3.52	5	-2.598e-03	5	NC	1	1816.065	3
143		3	max	-1.069	37	.379	36	3.872	3	2.974e-03	3	NC	39	NC	39
144			min	-2.656	17	-.647	16	-3.866	5	-2.969e-03	5	NC	1	NC	1
145	M25	1	max	-1.07	36	.338	36	3.206	12	1.17e-03	13	NC	39	NC	39
146			min	-2.829	16	-.41	16	-3.199	15	-1.173e-03	6	NC	1	NC	1
147		2	max	-1.07	36	.387	36	3.602	3	1.283e-03	13	NC	39	NC	39
148			min	-2.829	16	-.466	16	-3.595	5	-1.295e-03	6	NC	1	1732.763	3
149		3	max	-1.07	36	.431	36	3.96	3	1.395e-03	13	NC	39	NC	39
150			min	-2.829	16	-.518	16	-3.953	5	-1.416e-03	6	NC	1	NC	1
151	M26	1	max	2.874	16	.429	22	4.674	5	1.206e-03	6	NC	39	NC	14
152			min	1.046	36	-.43	16	-4.683	3	-1.19e-03	13	NC	1	52	12
153		2	max	2.874	16	.44	22	4.385	5	1.206e-03	6	NC	31	NC	14
154			min	1.046	36	-.441	16	-4.393	3	-1.19e-03	13	2697.332	16	104.968	12
155		3	max	2.874	16	.452	22	4.101	5	1.206e-03	6	NC	15	NC	39
156			min	1.046	36	-.453	16	-4.108	3	-1.19e-03	13	1318.555	16	NC	1
157	M27	1	max	.478	16	-1.049	36	3.969	3	1.86e-02	12	NC	39	NC	39
158			min	-.447	36	-2.87	16	-3.963	5	-1.853e-02	15	NC	1	NC	1
159		2	max	.48	16	-1.058	36	3.966	3	1.852e-02	12	NC	39	NC	39
160			min	-.446	36	-2.857	16	-3.96	5	-1.845e-02	15	5727.352	16	NC	1
161		3	max	.482	16	-1.065	36	3.96	3	1.844e-02	12	NC	39	NC	39
162			min	-.445	36	-2.836	16	-3.953	5	-1.837e-02	15	NC	1	NC	1
163	M28	1	max	.54	16	-1.073	36	3.96	3	1.842e-02	12	NC	39	NC	39
164			min	-.423	36	-2.825	16	-3.953	5	-1.835e-02	15	NC	1	NC	1
165		2	max	.544	16	-1.077	36	3.924	3	1.824e-02	12	NC	37	NC	39
166			min	-.421	36	-2.757	16	-3.917	5	-1.817e-02	15	4032.54	17	6471.447	3
167		3	max	.549	16	-1.066	37	3.872	3	1.806e-02	12	NC	39	NC	39
168			min	-.419	36	-2.666	17	-3.866	5	-1.798e-02	15	NC	1	NC	1
169	M29	1	max	.619	16	-1.068	37	3.872	3	1.799e-02	12	NC	39	NC	39
170			min	-.39	36	-2.659	17	-3.866	5	-1.792e-02	15	NC	1	NC	1

Envelope Member Section Deflections Service (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
171		2	max	.622	16	-1.038	37	3.8	3	1.758e-02	12	7225.008	36	NC	39
172			min	-.388	36	-2.553	17	-3.793	5	-1.75e-02	15	2626.562	16	6780.57	3
173		3	max	.626	16	-.994	37	3.713	3	1.716e-02	12	NC	39	NC	39
174			min	-.386	36	-2.41	17	-3.707	5	-1.708e-02	15	NC	1	NC	1
175	M30	1	max	.689	16	-.995	37	3.713	3	1.705e-02	12	NC	39	NC	39
176			min	-.358	36	-2.401	17	-3.707	5	-1.697e-02	15	NC	1	NC	1
177		2	max	.693	16	-.941	37	3.6	3	1.66e-02	12	NC	39	NC	39
178			min	-.356	36	-2.244	17	-3.594	5	-1.652e-02	15	8694.023	19	NC	1
179		3	max	.694	16	-.886	37	3.48	3	1.6e-02	12	NC	39	NC	39
180			min	-.355	36	-2.077	17	-3.474	5	-1.591e-02	15	NC	1	NC	1
181	M31	1	max	.736	16	-.886	37	3.48	3	1.589e-02	12	NC	38	NC	39
182			min	-.335	36	-2.068	17	-3.474	5	-1.581e-02	15	110.949	16	NC	1
183		2	max	.737	16	-.815	37	3.341	3	1.527e-02	12	NC	38	NC	39
184			min	-.333	36	-1.862	17	-3.336	5	-1.518e-02	15	222.458	16	NC	1
185		3	max	.739	16	-.741	37	3.193	3	1.464e-02	12	NC	39	NC	39
186			min	-.331	36	-1.653	17	-3.188	5	-1.456e-02	15	NC	1	NC	1
187	M32	1	max	.795	16	-.741	37	3.193	3	1.441e-02	12	NC	39	NC	39
188			min	-.301	36	-1.637	17	-3.188	5	-1.432e-02	15	NC	1	NC	1
189		2	max	.794	16	-.65	39	3.025	3	1.363e-02	12	8064.415	12	NC	39
190			min	-.3	36	-1.441	19	-3.02	5	-1.355e-02	15	2727.386	5	NC	1
191		3	max	.792	16	-.536	12	2.849	3	1.284e-02	12	NC	39	NC	39
192			min	-.299	36	-1.215	19	-2.844	5	-1.275e-02	15	NC	1	NC	1
193	M33	1	max	.815	16	-.533	12	2.849	3	1.268e-02	12	284.032	37	NC	39
194			min	-.284	36	-1.211	19	-2.844	5	-1.26e-02	15	109.111	17	128.468	3
195		2	max	.813	16	-.42	34	2.661	3	1.189e-02	12	601.885	37	NC	39
196			min	-.284	36	-1.003	22	-2.657	5	-1.18e-02	15	232.724	17	258.352	3
197		3	max	.808	16	-.304	34	2.475	3	1.107e-02	12	NC	39	NC	39
198			min	-.284	36	-.834	22	-2.472	5	-1.1e-02	15	NC	1	NC	1
199	M34	1	max	.824	16	-.287	34	2.475	3	1.087e-02	12	262.817	37	NC	39
200			min	-.27	36	-.838	22	-2.472	5	-1.08e-02	15	104.428	17	399.763	6
201		2	max	.819	16	-.161	34	2.295	3	1.011e-02	3	549.507	37	NC	39
202			min	-.271	36	-.656	22	-2.292	5	-1.004e-02	5	218.264	17	802.933	6
203		3	max	.814	16	-.05	34	2.113	3	9.36e-03	3	NC	39	NC	39
204			min	-.271	36	-.485	22	-2.11	5	-9.299e-03	5	NC	1	NC	1
205	M35	1	max	.209	36	-.078	34	1.726	5	9.828e-03	5	NC	39	NC	39
206			min	-.685	16	-.498	22	-1.728	3	-9.806e-03	3	NC	1	NC	1
207		2	max	.209	36	-.172	34	1.89	5	1.06e-02	5	618.875	37	NC	39
208			min	-.681	16	-.657	22	-1.894	3	-1.06e-02	3	256.387	17	866.204	13
209		3	max	.209	36	-.291	34	2.054	5	1.137e-02	5	287.435	37	NC	39
210			min	-.677	16	-.837	22	-2.057	3	-1.139e-02	12	116.792	17	431.785	13
211	M36	1	max	.223	36	-.306	34	2.054	5	1.155e-02	5	NC	39	NC	39
212			min	-.66	16	-.834	22	-2.057	3	-1.157e-02	12	NC	1	NC	1
213		2	max	.224	36	-.428	12	2.207	5	1.234e-02	15	NC	38	NC	39
214			min	-.657	16	-1.011	22	-2.211	3	-1.238e-02	12	220.584	17	309.408	12
215		3	max	.223	36	-.533	12	2.361	5	1.308e-02	15	NC	38	NC	39
216			min	-.656	16	-1.212	19	-2.366	3	-1.314e-02	12	109.198	17	154.273	12
217	M37	1	max	.24	36	-.536	12	2.361	5	1.324e-02	15	NC	39	NC	39
218			min	-.629	16	-1.216	19	-2.366	3	-1.33e-02	12	NC	1	NC	1
219		2	max	.24	36	-.65	39	2.497	5	1.396e-02	15	8822.195	37	NC	39
220			min	-.628	16	-1.441	19	-2.502	3	-1.402e-02	12	3180.364	17	9797.109	12
221		3	max	.239	36	-.741	37	2.624	15	1.466e-02	15	NC	39	NC	39
222			min	-.628	16	-1.642	17	-2.63	12	-1.474e-02	12	NC	1	NC	1
223	M38	1	max	.262	36	-.741	37	2.624	15	1.48e-02	15	NC	39	NC	39
224			min	-.585	16	-1.652	17	-2.63	12	-1.488e-02	12	NC	1	NC	1
225		2	max	.261	36	-.814	37	2.742	15	1.54e-02	15	NC	38	NC	39
226			min	-.587	16	-1.856	17	-2.747	12	-1.548e-02	12	225.97	16	NC	1
227		3	max	.26	36	-.887	37	2.852	15	1.6e-02	15	NC	38	NC	39

Envelope Member Section Deflections Service (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
228			min	-.589	16	-2.067	17	-2.858	12	-1.609e-02	12	110.889	16	NC	1
229	M39	1	max	.284	36	-.886	37	2.852	15	1.61e-02	15	NC	39	NC	39
230			min	-.538	16	-2.075	17	-2.858	12	-1.619e-02	12	NC	1	NC	1
231		2	max	.283	36	-.946	37	2.938	15	1.666e-02	15	8800.713	39	NC	39
232			min	-.54	16	-2.255	17	-2.944	12	-1.675e-02	12	2925.926	19	NC	1
233		3	max	.281	36	-.995	37	3.022	15	1.706e-02	15	NC	39	NC	39
234			min	-.545	16	-2.402	17	-3.029	12	-1.716e-02	12	NC	1	NC	1
235	M40	1	max	.309	36	-.994	37	3.022	15	1.714e-02	15	NC	39	NC	39
236			min	-.48	16	-2.409	17	-3.029	12	-1.724e-02	12	NC	1	NC	1
237		2	max	.307	36	-1.037	37	3.085	15	1.753e-02	15	8466.846	36	NC	39
238			min	-.485	16	-2.551	17	-3.092	12	-1.763e-02	12	2772.321	16	8968.359	12
239		3	max	.305	36	-1.069	37	3.138	15	1.791e-02	15	NC	39	NC	39
240			min	-.489	16	-2.66	17	-3.144	12	-1.802e-02	12	NC	1	NC	1
241	M41	1	max	.334	36	-1.067	37	3.138	15	1.796e-02	15	NC	39	NC	39
242			min	-.419	16	-2.665	17	-3.144	12	-1.806e-02	12	NC	1	NC	1
243		2	max	.332	36	-1.078	36	3.173	15	1.808e-02	15	NC	39	NC	39
244			min	-.424	16	-2.753	16	-3.18	12	-1.819e-02	12	4713.541	5	NC	1
245		3	max	.33	36	-1.072	36	3.199	15	1.821e-02	15	NC	39	NC	39
246			min	-.43	16	-2.826	16	-3.206	12	-1.832e-02	12	NC	1	NC	1
247	M42	1	max	.352	38	-1.066	36	3.199	15	1.822e-02	15	NC	39	NC	39
248			min	-.373	16	-2.834	16	-3.206	12	-1.833e-02	12	NC	1	NC	1
249		2	max	.351	36	-1.059	36	3.202	15	1.828e-02	15	NC	39	NC	39
250			min	-.376	16	-2.862	16	-3.209	12	-1.839e-02	12	4484.783	16	NC	1
251		3	max	.35	36	-1.051	36	3.204	15	1.833e-02	15	NC	39	NC	39
252			min	-.379	16	-2.878	16	-3.211	12	-1.845e-02	12	NC	1	NC	1
253	M43	1	max	.978	22	.305	36	2.717	5	7.695e-03	5	NC	39	NC	14
254			min	.401	34	-.759	16	-2.721	3	-7.712e-03	3	160.664	30	85.051	12
255		2	max	.978	22	.293	36	2.672	5	7.731e-03	5	NC	39	NC	14
256			min	.401	34	-.789	16	-2.676	3	-7.75e-03	3	336.293	30	170.47	12
257		3	max	.978	22	.282	36	2.628	5	7.766e-03	5	NC	39	NC	39
258			min	.401	34	-.815	16	-2.631	3	-7.787e-03	3	NC	1	NC	1
259	M44	1	max	1.622	17	.333	36	3.273	5	6.459e-03	5	NC	39	NC	14
260			min	.733	37	-.715	16	-3.279	3	-6.47e-03	3	175.077	30	69.088	12
261		2	max	1.622	17	.323	36	3.221	5	6.498e-03	5	NC	39	NC	14
262			min	.733	37	-.744	16	-3.226	3	-6.51e-03	3	360.871	30	138.467	12
263		3	max	1.622	17	.315	36	3.168	5	6.537e-03	5	NC	39	NC	39
264			min	.733	37	-.77	16	-3.173	3	-6.55e-03	3	NC	1	NC	1
265	M45	1	max	2.236	17	.368	36	3.714	5	4.707e-03	5	NC	39	NC	14
266			min	.939	37	-.646	16	-3.72	3	-4.722e-03	3	239.639	30	60.2	12
267		2	max	2.236	17	.362	36	3.65	5	4.738e-03	5	NC	39	NC	14
268			min	.939	37	-.671	16	-3.656	3	-4.754e-03	3	494.621	30	120.631	12
269		3	max	2.236	17	.356	36	3.587	5	4.768e-03	5	NC	39	NC	39
270			min	.939	37	-.693	16	-3.593	3	-4.787e-03	3	NC	1	NC	1
271	M46	1	max	.99	22	.222	36	2.187	5	6.363e-03	15	NC	39	NC	39
272			min	.414	34	-.659	16	-2.191	3	-6.378e-03	12	NC	1	81.519	12
273		2	max	.99	22	.211	36	2.142	5	6.225e-03	15	NC	38	NC	39
274			min	.414	34	-.685	16	-2.146	3	-6.238e-03	12	274.732	17	163.158	12
275		3	max	.99	22	.2	36	2.097	5	6.087e-03	15	NC	38	NC	39
276			min	.414	34	-.714	16	-2.101	3	-6.099e-03	12	132.623	17	NC	1
277	M47	1	max	1.63	17	.25	36	2.614	15	5.089e-03	15	NC	39	NC	39
278			min	.735	37	-.608	16	-2.619	12	-5.105e-03	12	NC	1	67.751	12
279		2	max	1.63	17	.24	36	2.559	15	4.972e-03	15	NC	38	NC	39
280			min	.735	37	-.636	16	-2.563	12	-4.987e-03	12	271.003	16	135.573	12
281		3	max	1.63	17	.23	36	2.504	15	4.856e-03	15	NC	38	NC	39
282			min	.735	37	-.665	16	-2.508	12	-4.869e-03	12	130.344	16	NC	1
283	M48	1	max	2.246	17	.283	36	2.933	15	3.53e-03	15	NC	39	NC	39
284			min	.943	37	-.541	16	-2.939	12	-3.54e-03	12	NC	1	59.74	12

Envelope Member Section Deflections Service (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
285		2	max	2.246	17	.277	36	2.872	15	3.451e-03	15	NC	38	NC	39
286			min	.943	37	-.563	16	-2.878	12	-3.46e-03	12	325.165	16	119.53	12
287		3	max	2.246	17	.271	36	2.812	15	3.371e-03	15	NC	38	NC	39
288			min	.943	37	-.587	16	-2.817	12	-3.38e-03	12	158.015	16	NC	1
289	M49	1	max	-1.067	37	.316	36	3.008	12	1.731e-03	12	NC	38	NC	39
290			min	-2.66	17	-.484	16	-3.002	15	-1.728e-03	15	258.4	16	NC	1
291		2	max	-1.067	37	.318	36	3.075	12	1.778e-03	12	NC	38	NC	39
292			min	-2.66	17	-.469	16	-3.069	15	-1.773e-03	15	534.933	16	110.783	12
293		3	max	-1.067	37	.32	36	3.143	12	1.826e-03	12	NC	39	NC	39
294			min	-2.66	17	-.455	16	-3.136	15	-1.819e-03	15	NC	1	55.38	12
295	M50	1	max	-1.067	37	.405	36	3.872	3	2.544e-03	3	NC	39	NC	39
296			min	-2.664	17	-.584	16	-3.866	5	-2.54e-03	5	NC	1	NC	1
297		2	max	-1.067	37	.406	36	3.94	3	2.53e-03	3	NC	39	NC	14
298			min	-2.664	17	-.57	16	-3.933	5	-2.526e-03	5	756.109	19	110.899	12
299		3	max	-1.067	37	.408	36	4.007	3	2.516e-03	3	NC	39	NC	14
300			min	-2.663	17	-.556	16	-4	5	-2.512e-03	5	367.947	19	55.346	12
301	M51	1	max	2.881	16	.359	22	3.204	15	9.614e-04	6	NC	39	NC	39
302			min	1.048	36	-.36	16	-3.211	12	-9.557e-04	13	NC	1	54.162	12
303		2	max	2.881	16	.362	22	3.135	15	9.391e-04	6	NC	31	NC	39
304			min	1.048	36	-.362	16	-3.142	12	-9.334e-04	13	2697.177	22	108.363	12
305		3	max	2.881	16	.365	22	3.067	15	9.167e-04	6	NC	15	NC	39
306			min	1.048	36	-.365	16	-3.073	12	-9.112e-04	13	1296.118	22	NC	1
307	M52	1	max	2.874	16	.452	22	4.101	5	1.206e-03	6	NC	39	NC	14
308			min	1.046	36	-.453	16	-4.108	3	-1.19e-03	13	NC	1	53.621	12
309		2	max	2.874	16	.454	22	4.032	5	1.212e-03	6	NC	39	NC	14
310			min	1.046	36	-.455	16	-4.039	3	-1.196e-03	13	NC	1	107.458	12
311		3	max	2.874	16	.457	22	3.963	5	1.218e-03	6	NC	39	NC	39
312			min	1.046	36	-.458	16	-3.969	3	-1.202e-03	13	NC	1	NC	1
313	M53	1	max	2.772	16	.429	22	4.623	5	1.692e-03	5	NC	39	NC	14
314			min	1.076	36	-.429	18	-4.632	3	-1.698e-03	3	545.118	27	52.764	12
315		2	max	2.772	16	.424	38	4.339	5	1.692e-03	5	NC	38	NC	14
316			min	1.076	36	-.472	16	-4.347	3	-1.698e-03	3	672.083	16	106.517	12
317		3	max	2.772	16	.424	36	4.061	5	1.692e-03	5	NC	38	NC	39
318			min	1.076	36	-.518	16	-4.068	3	-1.698e-03	3	333.949	16	NC	1
319	M54	1	max	2.567	17	.397	38	4.462	5	3.852e-03	5	NC	39	NC	14
320			min	1.045	37	-.496	16	-4.472	3	-3.855e-03	3	314.126	30	54.958	12
321		2	max	2.567	17	.382	36	4.2	5	3.852e-03	5	NC	19	NC	14
322			min	1.045	37	-.573	16	-4.208	3	-3.855e-03	3	370.003	16	110.909	12
323		3	max	2.567	17	.368	36	3.943	5	3.852e-03	5	NC	38	NC	39
324			min	1.045	37	-.652	16	-3.95	3	-3.855e-03	3	184.281	16	NC	1
325	M55	1	max	2.282	17	.398	36	3.996	5	4.636e-03	5	NC	39	NC	14
326			min	.954	37	-.531	16	-4.004	3	-4.65e-03	3	212.656	30	59.357	12
327		2	max	2.282	17	.385	36	3.871	5	4.636e-03	5	NC	29	NC	14
328			min	.954	37	-.585	16	-3.878	3	-4.65e-03	3	278.732	16	118.715	12
329		3	max	2.282	17	.372	36	3.745	5	4.636e-03	5	NC	38	NC	39
330			min	.954	37	-.639	16	-3.751	3	-4.65e-03	3	139.358	16	NC	1
331	M56	1	max	.295	36	-.056	34	2.184	5	9.427e-03	5	NC	39	NC	39
332			min	-.774	16	-.49	22	-2.188	3	-9.48e-03	3	NC	1	NC	1
333		2	max	.295	36	-.213	34	2.452	5	1.053e-02	5	NC	38	NC	39
334			min	-.773	16	-.733	22	-2.456	3	-1.059e-02	3	222.728	17	776.935	6
335		3	max	.295	36	-.39	34	2.717	5	1.164e-02	15	NC	38	NC	39
336			min	-.773	16	-.981	22	-2.721	3	-1.171e-02	12	107.666	17	387.604	6
337	M57	1	max	.317	36	-.41	12	2.717	5	1.192e-02	5	NC	39	NC	39
338			min	-.743	16	-.974	22	-2.721	3	-1.199e-02	3	NC	1	NC	1
339		2	max	.317	36	-.579	12	3.002	5	1.314e-02	15	NC	39	NC	39
340			min	-.745	16	-1.298	19	-3.007	3	-1.321e-02	12	7476.812	22	NC	1
341		3	max	.316	36	-.731	39	3.273	5	1.435e-02	15	NC	39	NC	39

Envelope Member Section Deflections Service (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
342			min	-.746	16	-1.615	19	-3.279	3	-1.443e-02	12	NC	1	NC	1
343	M58	1	max	.35	36	-.732	37	3.273	5	1.461e-02	15	NC	39	NC	39
344			min	-.684	16	-1.63	17	-3.279	3	-1.469e-02	12	NC	1	NC	1
345		2	max	.349	36	-.844	37	3.504	5	1.557e-02	15	NC	39	NC	39
346			min	-.687	16	-1.947	17	-3.51	3	-1.565e-02	12	4023.51	19	7060.55	5
347		3	max	.348	36	-.939	37	3.714	5	1.652e-02	15	NC	39	NC	39
348			min	-.69	16	-2.229	17	-3.72	3	-1.661e-02	12	NC	1	NC	1
349	M59	1	max	.37	36	-.939	37	3.714	5	1.663e-02	15	NC	39	NC	39
350			min	-.642	16	-2.236	17	-3.72	3	-1.671e-02	12	NC	1	NC	1
351		2	max	.37	36	-.946	37	3.729	5	1.669e-02	15	NC	39	NC	39
352			min	-.643	16	-2.259	17	-3.736	3	-1.678e-02	12	NC	1	985.896	6
353		3	max	.37	36	-.954	37	3.745	5	1.675e-02	15	NC	39	NC	39
354			min	-.643	16	-2.282	17	-3.751	3	-1.684e-02	12	NC	1	491.898	6
355	M60	1	max	.385	36	-.953	37	3.745	5	1.682e-02	15	NC	39	NC	39
356			min	-.61	16	-2.286	17	-3.751	3	-1.691e-02	12	NC	1	NC	1
357		2	max	.384	36	-1.003	37	3.849	5	1.727e-02	15	NC	39	NC	39
358			min	-.612	16	-2.439	17	-3.856	3	-1.736e-02	12	4509.535	17	9576.44	3
359		3	max	.384	36	-1.044	37	3.943	5	1.772e-02	15	NC	39	NC	39
360			min	-.615	16	-2.571	17	-3.95	3	-1.781e-02	12	NC	1	NC	1
361	M61	1	max	.403	36	-1.043	37	3.943	5	1.778e-02	15	NC	39	NC	39
362			min	-.568	16	-2.576	17	-3.95	3	-1.787e-02	12	NC	1	NC	1
363		2	max	.403	36	-1.056	37	3.973	5	1.792e-02	15	NC	39	NC	39
364			min	-.569	16	-2.622	17	-3.98	3	-1.801e-02	12	7207.313	16	NC	1
365		3	max	.403	36	-1.068	37	4	5	1.806e-02	15	NC	39	NC	39
366			min	-.57	16	-2.662	17	-4.007	3	-1.815e-02	12	NC	1	NC	1
367	M62	1	max	.417	36	-1.067	37	4	5	1.81e-02	15	NC	39	NC	39
368			min	-.535	16	-2.665	17	-4.007	3	-1.818e-02	12	NC	1	NC	1
369		2	max	.416	36	-1.077	36	4.032	5	1.824e-02	15	NC	39	NC	39
370			min	-.537	16	-2.72	16	-4.039	3	-1.832e-02	12	5821.127	17	NC	1
371		3	max	.416	36	-1.079	36	4.061	5	1.838e-02	15	NC	39	NC	39
372			min	-.539	16	-2.768	16	-4.068	3	-1.846e-02	12	NC	1	NC	1
373	M63	1	max	.438	38	-1.071	36	4.061	5	1.841e-02	15	NC	39	NC	39
374			min	-.483	16	-2.778	16	-4.068	3	-1.849e-02	12	NC	1	NC	1
375		2	max	.437	36	-1.065	36	4.088	5	1.854e-02	15	NC	36	NC	39
376			min	-.486	16	-2.836	16	-4.095	3	-1.862e-02	12	3560.533	16	6632.011	3
377		3	max	.436	36	-1.051	36	4.101	5	1.866e-02	15	NC	39	NC	39
378			min	-.488	16	-2.868	16	-4.108	3	-1.875e-02	12	NC	1	NC	1
379	M64	1	max	.188	36	-.084	34	1.646	5	9.813e-03	5	NC	39	NC	39
380			min	-.726	16	-.497	22	-1.649	3	-9.787e-03	3	NC	1	NC	1
381		2	max	.188	36	-.232	34	1.875	5	1.095e-02	5	594.382	37	NC	39
382			min	-.727	16	-.739	22	-1.878	3	-1.095e-02	3	242.672	17	NC	1
383		3	max	.189	36	-.404	34	2.097	5	1.208e-02	5	288.855	37	NC	39
384			min	-.728	16	-.991	22	-2.101	3	-1.212e-02	12	115.945	17	NC	1
385	M65	1	max	.211	36	-.418	12	2.097	5	1.231e-02	5	NC	39	NC	39
386			min	-.697	16	-.989	22	-2.101	3	-1.235e-02	12	NC	1	NC	1
387		2	max	.213	36	-.583	12	2.307	5	1.343e-02	15	NC	39	NC	39
388			min	-.697	16	-1.305	19	-2.31	3	-1.348e-02	12	208.295	16	NC	1
389		3	max	.214	36	-.734	37	2.504	15	1.455e-02	15	NC	39	NC	39
390			min	-.696	16	-1.622	17	-2.508	12	-1.462e-02	12	103.518	16	NC	1
391	M66	1	max	.247	36	-.735	37	2.504	15	1.474e-02	15	NC	39	NC	39
392			min	-.635	16	-1.638	17	-2.508	12	-1.482e-02	12	NC	1	NC	1
393		2	max	.249	36	-.847	37	2.665	15	1.564e-02	15	9269.402	39	NC	39
394			min	-.633	16	-1.957	17	-2.67	12	-1.572e-02	12	3734.877	19	9293.583	12
395		3	max	.25	36	-.943	37	2.812	15	1.654e-02	15	NC	39	NC	39
396			min	-.631	16	-2.239	17	-2.817	12	-1.663e-02	12	NC	1	NC	1
397	M67	1	max	.291	36	-.942	37	2.812	15	1.667e-02	15	NC	39	NC	39
398			min	-.543	16	-2.252	17	-2.817	12	-1.676e-02	12	NC	1	NC	1

Envelope Member Section Deflections Service (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
399		2	max	.292	36	-1.016	37	2.915	15	1.728e-02	15	6567.639	37	NC	39
400			min	-.54	16	-2.481	17	-2.921	12	-1.737e-02	12	2637.43	17	8375.146	12
401		3	max	.294	36	-1.068	37	3.002	15	1.788e-02	15	NC	39	NC	39
402			min	-.537	16	-2.655	17	-3.008	12	-1.798e-02	12	NC	1	NC	1
403	M68	1	max	.338	36	-1.066	37	3.002	15	1.795e-02	15	NC	39	NC	39
404			min	-.431	16	-2.664	17	-3.008	12	-1.805e-02	12	NC	1	NC	1
405		2	max	.339	36	-1.076	36	3.044	15	1.813e-02	15	5751.254	37	NC	39
406			min	-.427	16	-2.8	16	-3.049	12	-1.823e-02	12	2165.703	17	7969	15
407		3	max	.341	36	-1.056	36	3.067	15	1.831e-02	15	NC	39	NC	39
408			min	-.424	16	-2.873	16	-3.073	12	-1.842e-02	12	NC	1	NC	1
409	M69	1	max	.672	22	.017	36	1.634	5	8.8e-03	5	NC	39	NC	39
410			min	-.274	34	-.023	16	-1.637	3	-8.818e-03	3	NC	1	NC	1
411		2	max	.672	22	.008	36	1.631	5	8.8e-03	5	NC	39	NC	39
412			min	-.274	34	-.014	16	-1.634	3	-8.818e-03	3	NC	1	NC	1
413		3	max	.672	22	-.002	37	1.628	5	8.8e-03	5	NC	39	NC	39
414			min	-.274	34	-.004	17	-1.631	3	-8.818e-03	3	NC	1	NC	1
415	M70	1	max	.086	5	.666	22	1.737	5	5.395e-03	3	NC	39	NC	39
416			min	-.071	12	-.295	34	-1.74	3	-5.276e-03	5	672.068	36	112.355	3
417		2	max	.086	5	.627	22	1.474	5	4.663e-03	3	NC	35	NC	39
418			min	-.07	12	-.232	34	-1.476	3	-4.706e-03	5	1409.653	36	226.357	3
419		3	max	.086	5	.596	22	1.212	5	4.489e-03	12	NC	38	NC	39
420			min	-.07	12	-.167	34	-1.215	3	-4.621e-03	5	785.216	17	NC	1
421	M71	1	max	.274	34	.017	36	1.637	3	8.818e-03	3	NC	39	NC	39
422			min	-.672	22	-.023	16	-1.634	5	-8.8e-03	5	NC	1	NC	1
423		2	max	.274	34	.019	36	1.647	3	8.818e-03	3	NC	39	NC	39
424			min	-.672	22	-.03	16	-1.645	5	-8.8e-03	5	NC	1	NC	1
425		3	max	.274	34	.022	36	1.658	3	8.818e-03	3	NC	39	NC	39
426			min	-.672	22	-.037	16	-1.656	5	-8.8e-03	5	NC	1	NC	1
427	M72	1	max	.594	22	.019	36	1.274	5	8.636e-03	5	NC	39	NC	39
428			min	-.198	34	-.02	16	-1.276	3	-8.653e-03	3	NC	1	NC	1
429		2	max	.594	22	.009	36	1.272	5	8.636e-03	5	NC	39	NC	39
430			min	-.198	34	-.012	16	-1.274	3	-8.653e-03	3	NC	1	NC	1
431		3	max	.594	22	-.002	37	1.269	5	8.636e-03	5	NC	39	NC	39
432			min	-.198	34	-.004	17	-1.271	3	-8.653e-03	3	NC	1	NC	1
433	M73	1	max	.198	34	.019	36	1.276	3	8.653e-03	3	NC	39	NC	39
434			min	-.594	22	-.02	16	-1.274	5	-8.636e-03	5	NC	1	NC	1
435		2	max	.198	34	.021	36	1.285	3	8.653e-03	3	NC	39	NC	39
436			min	-.594	22	-.028	16	-1.283	5	-8.636e-03	5	NC	1	NC	1
437		3	max	.198	34	.023	36	1.295	3	8.653e-03	3	NC	39	NC	39
438			min	-.594	22	-.037	16	-1.293	5	-8.636e-03	5	NC	1	NC	1
439	M74	1	max	.263	34	.064	12	1.692	3	9.249e-03	3	NC	39	NC	39
440			min	-.673	22	-.097	5	-1.689	5	-9.165e-03	5	NC	1	NC	1
441		2	max	.26	34	.012	38	1.905	3	1.002e-02	3	3950.804	36	NC	30
442			min	-.682	22	-.282	18	-1.902	5	-9.941e-03	5	318.611	16	328.958	3
443		3	max	.256	34	-.063	36	2.127	3	1.079e-02	3	858.026	36	NC	30
444			min	-.689	22	-.563	16	-2.124	5	-1.071e-02	5	137.31	16	161.171	5
445	M75	1	max	.097	5	.673	22	1.689	5	5.6e-03	3	NC	39	NC	36
446			min	-.064	12	-.263	34	-1.692	3	-5.551e-03	5	620.935	34	110.537	3
447		2	max	.095	5	.63	22	1.513	5	5.09e-03	3	NC	39	NC	36
448			min	-.064	12	-.23	34	-1.515	3	-5.106e-03	5	1301.256	32	222.422	3
449		3	max	.094	5	.582	22	1.339	5	4.967e-03	12	NC	39	NC	39
450			min	-.065	12	-.201	34	-1.339	3	-4.997e-03	15	NC	1	NC	1
451	M76	1	max	.664	22	.064	12	1.652	5	9.055e-03	5	NC	39	NC	14
452			min	-.256	34	-.096	5	-1.655	3	-9.144e-03	3	889.56	36	191.864	3
453		2	max	.663	22	.067	12	1.631	5	8.965e-03	5	NC	39	NC	14
454			min	-.257	34	-.091	5	-1.634	3	-9.043e-03	3	1034.808	17	390.965	3
455		3	max	.662	22	.07	12	1.611	5	8.875e-03	5	NC	39	NC	39

Envelope Member Section Deflections Service (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
456			min	-.257	34	-.086	5	-1.614	3	-8.942e-03	3	493.398	17	NC	1
457	M77	1	max	.201	34	.065	12	1.339	3	9.017e-03	3	NC	39	NC	39
458			min	-.582	22	-.094	5	-1.339	5	-8.998e-03	5	NC	1	NC	1
459		2	max	.204	34	.008	38	1.535	3	9.966e-03	3	3391.374	36	NC	36
460			min	-.574	22	-.297	18	-1.535	5	-9.968e-03	5	311.336	16	837.388	37
461		3	max	.208	34	-.066	36	1.728	3	1.098e-02	3	855.661	36	NC	36
462			min	-.567	22	-.588	16	-1.726	5	-1.1e-02	5	137.589	16	414.545	37
463	M78	1	max	.592	22	.065	12	1.375	5	8.949e-03	5	NC	39	NC	28
464			min	-.206	34	-.094	5	-1.375	3	-8.967e-03	3	795.489	36	212.427	5
465		2	max	.593	22	.067	12	1.356	5	8.925e-03	5	NC	39	NC	28
466			min	-.206	34	-.092	5	-1.356	3	-8.888e-03	3	1301.063	17	433.094	5
467		3	max	.594	22	.07	12	1.337	5	8.902e-03	5	NC	39	NC	39
468			min	-.206	34	-.086	5	-1.339	3	-8.809e-03	3	564.313	17	NC	1
469	M79	1	max	.288	34	.071	12	1.717	3	9.118e-03	3	NC	39	NC	39
470			min	-.666	22	-.086	5	-1.714	5	-9.067e-03	5	NC	1	NC	1
471		2	max	.289	34	.02	38	1.953	3	9.952e-03	3	NC	36	NC	30
472			min	-.663	22	-.247	18	-1.948	5	-9.89e-03	5	369.652	16	328.995	3
473		3	max	.29	34	-.062	36	2.202	3	1.087e-02	3	NC	38	NC	30
474			min	-.661	22	-.56	16	-2.198	5	-1.08e-02	5	144.711	16	159.819	3
475	M80	1	max	.175	34	.07	12	1.237	3	8.908e-03	3	NC	39	NC	39
476			min	-.594	22	-.086	5	-1.234	5	-9.061e-03	5	NC	1	NC	1
477		2	max	.174	34	.005	38	1.44	3	9.847e-03	3	5603.303	36	NC	36
478			min	-.596	22	-.278	18	-1.44	5	-9.93e-03	5	340.408	16	400.031	15
479		3	max	.174	34	-.07	36	1.648	3	1.086e-02	3	1025.064	36	NC	36
480			min	-.598	22	-.598	16	-1.646	5	-1.088e-02	5	144.319	16	198.975	15
481	M81	1	max	.01	38	.575	22	1.53	3	5.399e-03	15	NC	38	NC	39
482			min	-.29	18	-.204	34	-1.53	5	-5.431e-03	12	7091.499	39	NC	1
483		2	max	.01	38	.63	22	1.737	3	5.831e-03	5	NC	39	NC	39
484			min	-.29	18	-.234	34	-1.734	5	-5.845e-03	3	4610.086	25	2540.736	3
485		3	max	.01	38	.682	22	1.912	3	6.324e-03	5	NC	39	NC	39
486			min	-.29	18	-.26	34	-1.908	5	-6.303e-03	3	2195.348	25	NC	1
487	M82	1	max	.058	12	.674	22	1.715	3	5.735e-03	5	NC	38	NC	39
488			min	-.108	5	-.263	34	-1.711	5	-5.778e-03	3	266.872	17	NC	1
489		2	max	.058	12	.67	22	1.75	3	5.781e-03	5	NC	38	NC	38
490			min	-.108	5	-.275	34	-1.746	5	-5.833e-03	3	536.232	17	213	3
491		3	max	.058	12	.665	22	1.785	3	5.827e-03	5	NC	39	NC	38
492			min	-.109	5	-.288	34	-1.781	5	-5.887e-03	3	5823.267	36	106.461	3
493	M83	1	max	-.051	36	.689	22	2.091	3	6.334e-03	5	NC	39	NC	39
494			min	-.516	16	-.257	34	-2.088	5	-6.31e-03	3	NC	1	NC	1
495		2	max	-.051	36	.676	22	2.131	3	6.282e-03	5	NC	39	NC	39
496			min	-.516	16	-.272	34	-2.128	5	-6.259e-03	3	303.423	16	188.438	3
497		3	max	-.051	36	.661	22	2.171	3	6.23e-03	5	NC	39	NC	39
498			min	-.516	16	-.29	34	-2.167	5	-6.209e-03	3	145.408	16	94.132	3
499	M84	1	max	-.059	36	.598	22	1.62	3	4.824e-03	15	NC	34	NC	39
500			min	-.548	16	-.174	34	-1.618	5	-4.851e-03	12	156.433	17	NC	1
501		2	max	-.059	36	.582	22	1.66	3	4.958e-03	15	NC	34	NC	14
502			min	-.548	16	-.191	34	-1.658	5	-4.983e-03	12	326.901	17	186.447	5
503		3	max	-.059	36	.568	22	1.701	3	5.093e-03	15	NC	39	NC	14
504			min	-.548	16	-.208	34	-1.698	5	-5.116e-03	12	NC	1	92.96	5
505	M85	1	max	-.058	36	.568	22	1.699	3	5.097e-03	15	NC	39	NC	39
506			min	-.546	16	-.208	34	-1.696	5	-5.12e-03	12	NC	1	NC	1
507		2	max	-.058	36	.631	22	1.925	3	5.697e-03	5	NC	39	NC	39
508			min	-.546	16	-.234	34	-1.923	5	-5.705e-03	3	2544.736	25	2140.141	3
509		3	max	-.059	36	.689	22	2.115	3	6.354e-03	5	NC	39	NC	39
510			min	-.547	16	-.256	34	-2.112	5	-6.331e-03	3	1238.216	25	NC	1
511	M86	1	max	-.116	36	.159	34	2.054	5	6.512e-03	15	NC	39	NC	39
512			min	-1.033	16	-.578	22	-2.057	3	-6.526e-03	12	9186.423	26	NC	1

Envelope Member Section Deflections Service (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
513		2	max	-.116	36	.183	34	2.293	5	7.038e-03	5	NC	39	NC	39
514			min	-1.032	16	-.647	22	-2.296	3	-7.053e-03	3	NC	1	1311.242	6
515		3	max	-.115	36	.205	34	2.487	5	7.618e-03	5	NC	39	NC	39
516			min	-1.032	16	-.711	22	-2.49	3	-7.637e-03	3	NC	1	NC	1
517	M87	1	max	-.266	36	.163	34	2.362	5	6.218e-03	15	NC	39	NC	39
518			min	-1.491	16	-.57	22	-2.366	3	-6.238e-03	12	NC	1	NC	1
519		2	max	-.266	36	.187	34	2.632	5	6.813e-03	5	NC	39	NC	39
520			min	-1.491	16	-.644	22	-2.636	3	-6.833e-03	3	NC	1	1572.899	6
521		3	max	-.266	36	.208	34	2.858	5	7.463e-03	5	NC	39	NC	39
522			min	-1.491	16	-.712	22	-2.863	3	-7.483e-03	3	NC	1	NC	1
523	M88	1	max	-.457	36	.214	34	2.625	15	4.817e-03	15	NC	39	NC	39
524			min	-1.94	16	-.523	22	-2.63	12	-4.834e-03	12	NC	1	NC	1
525		2	max	-.457	36	.24	34	2.934	5	5.485e-03	5	NC	39	NC	39
526			min	-1.94	16	-.598	22	-2.939	3	-5.502e-03	3	NC	1	1637.216	6
527		3	max	-.457	36	.263	34	3.2	5	6.201e-03	5	NC	38	NC	39
528			min	-1.94	16	-.667	22	-3.205	3	-6.215e-03	3	8539.033	39	NC	1
529	M89	1	max	-.624	36	.211	34	2.852	15	4.247e-03	15	NC	39	NC	39
530			min	-2.334	16	-.524	22	-2.858	12	-4.25e-03	12	NC	1	NC	1
531		2	max	-.624	36	.24	34	3.188	5	4.81e-03	5	NC	39	NC	39
532			min	-2.334	16	-.598	22	-3.194	3	-4.813e-03	3	NC	1	1813.607	3
533		3	max	-.624	36	.267	34	3.484	5	5.421e-03	5	NC	39	NC	39
534			min	-2.334	16	-.666	22	-3.49	3	-5.423e-03	3	NC	1	NC	1
535	M90	1	max	-.784	36	.263	34	3.022	15	3.105e-03	15	NC	39	NC	39
536			min	-2.619	16	-.47	22	-3.029	12	-3.121e-03	12	NC	1	NC	1
537		2	max	-.784	36	.298	34	3.387	5	3.567e-03	5	NC	39	NC	39
538			min	-2.62	16	-.539	22	-3.394	3	-3.587e-03	3	7746.907	23	1815.848	3
539		3	max	-.784	36	.329	34	3.714	5	4.057e-03	5	NC	39	NC	39
540			min	-2.62	16	-.603	22	-3.72	3	-4.08e-03	3	3796.218	23	NC	1
541	M91	1	max	-.907	36	.256	34	3.138	15	2.244e-03	15	NC	39	NC	39
542			min	-2.823	16	-.479	22	-3.145	12	-2.254e-03	12	9964.587	23	NC	1
543		2	max	-.907	36	.297	34	3.522	5	2.567e-03	5	NC	39	NC	39
544			min	-2.822	16	-.542	22	-3.529	3	-2.576e-03	3	NC	1	1815.961	3
545		3	max	-.906	36	.334	34	3.87	5	2.911e-03	5	NC	39	NC	39
546			min	-2.822	16	-.6	22	-3.876	3	-2.917e-03	3	NC	1	NC	1
547	M92	1	max	-1.012	36	.327	34	3.199	15	8.122e-04	13	NC	39	NC	39
548			min	-2.888	16	-.397	22	-3.206	12	-8.212e-04	6	NC	1	NC	1
549		2	max	-1.012	36	.374	34	3.595	5	9.103e-04	13	NC	39	NC	39
550			min	-2.888	16	-.452	22	-3.602	3	-9.208e-04	6	NC	1	1765.874	3
551		3	max	-1.012	36	.418	34	3.954	5	1.008e-03	13	NC	39	NC	39
552			min	-2.888	16	-.503	22	-3.961	3	-1.02e-03	6	NC	1	NC	1
553	M93	1	max	.472	22	-1.043	36	3.963	5	1.853e-02	15	NC	39	NC	39
554			min	-.444	34	-2.877	16	-3.969	3	-1.86e-02	12	NC	1	NC	1
555		2	max	.474	22	-1.032	36	3.96	5	1.845e-02	15	NC	39	NC	39
556			min	-.442	34	-2.883	16	-3.967	3	-1.852e-02	12	6573.724	17	NC	1
557		3	max	.476	22	-1.018	36	3.954	5	1.837e-02	15	NC	39	NC	39
558			min	-.44	34	-2.883	16	-3.961	3	-1.844e-02	12	NC	1	NC	1
559	M94	1	max	.519	22	-1.008	36	3.954	5	1.835e-02	15	NC	39	NC	39
560			min	-.405	34	-2.891	16	-3.961	3	-1.842e-02	12	NC	1	NC	1
561		2	max	.522	22	-.97	36	3.919	5	1.818e-02	15	NC	38	NC	39
562			min	-.402	34	-2.864	16	-3.926	3	-1.825e-02	12	3603.191	16	6486.478	3
563		3	max	.526	22	-.925	36	3.87	5	1.8e-02	15	NC	39	NC	39
564			min	-.398	34	-2.81	16	-3.876	3	-1.807e-02	12	NC	1	NC	1
565	M95	1	max	.579	22	-.912	36	3.87	5	1.793e-02	15	NC	39	NC	39
566			min	-.353	34	-2.819	16	-3.876	3	-1.801e-02	12	NC	1	NC	1
567		2	max	.581	22	-.858	36	3.799	5	1.752e-02	15	7062.2	36	NC	39
568			min	-.35	34	-2.736	16	-3.805	3	-1.759e-02	12	2658.299	16	6772.419	3
569		3	max	.584	22	-.79	36	3.714	5	1.71e-02	15	NC	39	NC	39

Envelope Member Section Deflections Service (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
570			min	-.347	34	-2.617	16	-3.72	3	-1.718e-02	12	NC	1	NC	1
571	M96	1	max	.631	22	-.776	36	3.714	5	1.699e-02	15	NC	39	NC	39
572			min	-.303	34	-2.623	16	-3.72	3	-1.707e-02	12	NC	1	NC	1
573		2	max	.634	22	-.706	36	3.602	5	1.655e-02	15	NC	39	NC	39
574			min	-.3	34	-2.483	16	-3.608	3	-1.663e-02	12	8060.01	16	NC	1
575		3	max	.635	22	-.635	36	3.484	5	1.595e-02	15	NC	39	NC	39
576			min	-.298	34	-2.33	16	-3.49	3	-1.603e-02	12	NC	1	NC	1
577	M97	1	max	.666	22	-.624	36	3.484	5	1.584e-02	15	NC	39	NC	39
578			min	-.267	34	-2.334	16	-3.49	3	-1.592e-02	12	141.739	30	NC	1
579		2	max	.666	22	-.539	36	3.347	5	1.522e-02	15	NC	39	NC	39
580			min	-.265	34	-2.141	16	-3.352	3	-1.53e-02	12	284.011	30	9953.427	3
581		3	max	.667	22	-.457	36	3.2	5	1.46e-02	15	NC	39	NC	39
582			min	-.263	34	-1.94	16	-3.205	3	-1.469e-02	12	NC	1	NC	1
583	M98	1	max	.709	22	-.436	36	3.2	5	1.437e-02	15	NC	39	NC	39
584			min	-.217	34	-1.944	16	-3.205	3	-1.445e-02	12	NC	1	NC	1
585		2	max	.707	22	-.359	36	3.033	5	1.359e-02	15	8308.121	36	NC	39
586			min	-.216	34	-1.735	16	-3.038	3	-1.368e-02	12	2687.541	16	NC	1
587		3	max	.706	22	-.27	36	2.858	5	1.281e-02	15	NC	39	NC	39
588			min	-.215	34	-1.49	16	-2.863	3	-1.289e-02	12	NC	1	NC	1
589	M99	1	max	.722	22	-.258	36	2.858	5	1.265e-02	15	319.488	36	NC	39
590			min	-.195	34	-1.492	16	-2.863	3	-1.274e-02	12	104.568	16	128.796	3
591		2	max	.721	22	-.175	36	2.672	5	1.186e-02	15	714.629	36	NC	39
592			min	-.194	34	-1.252	16	-2.676	3	-1.195e-02	12	219.157	16	258.81	3
593		3	max	.717	22	-.108	36	2.487	5	1.106e-02	15	NC	39	NC	39
594			min	-.195	34	-1.033	16	-2.49	3	-1.114e-02	3	NC	1	NC	1
595	M100	1	max	.727	22	-.093	36	2.487	5	1.086e-02	15	326.279	36	NC	39
596			min	-.177	34	-1.034	16	-2.49	3	-1.094e-02	12	96.877	16	NC	1
597		2	max	.723	22	-.02	36	2.306	5	1.011e-02	15	704.874	36	NC	39
598			min	-.178	34	-.798	16	-2.309	3	-1.019e-02	3	200.588	16	NC	1
599		3	max	.719	22	.042	36	2.124	5	9.364e-03	5	NC	39	NC	39
600			min	-.179	34	-.578	16	-2.127	3	-9.445e-03	3	NC	1	NC	1
601	M101	1	max	.128	34	.021	36	1.728	3	9.839e-03	3	NC	39	NC	39
602			min	-.601	22	-.598	16	-1.726	5	-9.861e-03	5	NC	1	NC	1
603		2	max	.129	34	-.029	36	1.894	3	1.063e-02	3	918.232	36	NC	39
604			min	-.598	22	-.801	16	-1.891	5	-1.063e-02	5	225.735	16	2014.601	20
605		3	max	.13	34	-.097	36	2.057	3	1.142e-02	12	389.824	36	NC	39
606			min	-.595	22	-1.033	16	-2.054	5	-1.141e-02	5	105.451	16	1006.846	20
607	M102	1	max	.149	34	-.11	36	2.057	3	1.161e-02	12	NC	39	NC	39
608			min	-.584	22	-1.033	16	-2.054	5	-1.159e-02	5	NC	1	NC	1
609		2	max	.15	34	-.182	36	2.211	3	1.242e-02	12	NC	39	NC	39
610			min	-.581	22	-1.263	16	-2.208	5	-1.237e-02	15	215.983	17	309.167	12
611		3	max	.15	34	-.26	36	2.366	3	1.317e-02	12	NC	39	NC	39
612			min	-.58	22	-1.492	16	-2.362	5	-1.312e-02	15	107.582	17	154.17	12
613	M103	1	max	.175	34	-.271	36	2.366	3	1.333e-02	12	NC	39	NC	39
614			min	-.561	22	-1.49	16	-2.362	5	-1.328e-02	15	NC	1	NC	1
615		2	max	.174	34	-.361	36	2.502	3	1.406e-02	12	NC	37	NC	39
616			min	-.56	22	-1.733	16	-2.498	5	-1.399e-02	15	2926.067	16	9784.387	15
617		3	max	.173	34	-.442	36	2.63	12	1.477e-02	12	NC	39	NC	39
618			min	-.56	22	-1.943	16	-2.625	15	-1.47e-02	15	NC	1	NC	1
619	M104	1	max	.208	34	-.455	36	2.63	12	1.491e-02	12	NC	39	NC	39
620			min	-.528	22	-1.941	16	-2.625	15	-1.484e-02	15	NC	1	NC	1
621		2	max	.206	34	-.536	36	2.748	12	1.551e-02	12	NC	39	NC	39
622			min	-.53	22	-2.137	16	-2.742	15	-1.543e-02	15	240.188	17	NC	1
623		3	max	.204	34	-.622	36	2.858	12	1.611e-02	12	NC	39	NC	39
624			min	-.531	22	-2.334	16	-2.852	15	-1.602e-02	15	118.964	17	NC	1
625	M105	1	max	.242	34	-.633	36	2.858	12	1.622e-02	12	NC	39	NC	39
626			min	-.493	22	-2.331	16	-2.852	15	-1.613e-02	15	NC	1	NC	1

Envelope Member Section Deflections Service (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
627		2	max	.24	34	-.709	36	2.945	12	1.678e-02	12	NC	37	NC	39
628			min	-.495	22	-2.495	16	-2.939	15	-1.668e-02	15	2629.09	16	NC	1
629		3	max	.237	34	-.778	36	3.029	12	1.718e-02	12	NC	39	NC	39
630			min	-.498	22	-2.622	16	-3.022	15	-1.708e-02	15	NC	1	NC	1
631	M106	1	max	.281	34	-.789	36	3.029	12	1.726e-02	12	NC	39	NC	39
632			min	-.45	22	-2.617	16	-3.022	15	-1.716e-02	15	NC	1	NC	1
633		2	max	.278	34	-.856	36	3.092	12	1.765e-02	12	7729.533	37	NC	39
634			min	-.454	22	-2.735	16	-3.086	15	-1.755e-02	15	2869.398	17	8977.679	12
635		3	max	.275	34	-.911	36	3.145	12	1.803e-02	12	NC	39	NC	39
636			min	-.457	22	-2.82	16	-3.138	15	-1.792e-02	15	NC	1	NC	1
637	M107	1	max	.321	34	-.922	36	3.145	12	1.808e-02	12	NC	39	NC	39
638			min	-.404	22	-2.813	16	-3.138	15	-1.797e-02	15	NC	1	NC	1
639		2	max	.318	34	-.967	36	3.18	12	1.82e-02	12	NC	38	NC	39
640			min	-.408	22	-2.863	16	-3.173	15	-1.809e-02	15	4079.511	16	NC	1
641		3	max	.315	34	-1.009	36	3.206	12	1.832e-02	12	NC	39	NC	39
642			min	-.412	22	-2.89	16	-3.199	15	-1.821e-02	15	NC	1	NC	1
643	M108	1	max	.349	32	-1.016	36	3.206	12	1.834e-02	12	NC	39	NC	39
644			min	-.369	22	-2.884	16	-3.199	15	-1.823e-02	15	NC	1	NC	1
645		2	max	.348	34	-1.033	36	3.209	12	1.839e-02	12	NC	39	NC	39
646			min	-.372	22	-2.888	16	-3.202	15	-1.828e-02	15	5091.549	17	NC	1
647		3	max	.346	34	-1.046	36	3.211	12	1.845e-02	12	NC	39	NC	39
648			min	-.374	22	-2.883	16	-3.204	15	-1.833e-02	15	NC	1	NC	1
649	M109	1	max	1.218	16	.229	34	2.737	3	7.691e-03	3	NC	39	NC	14
650			min	.163	36	-.68	22	-2.732	5	-7.669e-03	5	125.799	16	84.581	12
651		2	max	1.218	16	.209	34	2.691	3	7.729e-03	3	NC	39	NC	14
652			min	.163	36	-.702	22	-2.687	5	-7.705e-03	5	263.257	16	169.528	12
653		3	max	1.218	16	.192	34	2.646	3	7.768e-03	3	NC	39	NC	39
654			min	.163	36	-.722	22	-2.642	5	-7.741e-03	5	NC	1	NC	1
655	M110	1	max	1.235	16	.148	34	2.191	3	6.382e-03	12	NC	39	NC	39
656			min	.172	36	-.583	22	-2.187	5	-6.367e-03	15	NC	1	81.267	12
657		2	max	1.235	16	.131	34	2.146	3	6.243e-03	12	NC	34	NC	39
658			min	.172	36	-.602	22	-2.142	5	-6.229e-03	15	267.974	17	162.652	12
659		3	max	1.235	16	.112	34	2.101	3	6.104e-03	12	NC	34	NC	39
660			min	.172	36	-.624	22	-2.097	5	-6.091e-03	15	129.508	17	NC	1
661	M111	1	max	1.92	16	.269	34	3.291	3	6.423e-03	3	NC	39	NC	14
662			min	.437	36	-.648	22	-3.286	5	-6.41e-03	5	137.398	16	68.881	12
663		2	max	1.92	16	.253	34	3.238	3	6.464e-03	3	NC	39	NC	14
664			min	.437	36	-.67	22	-3.233	5	-6.451e-03	5	283.208	16	138.05	12
665		3	max	1.92	16	.238	34	3.185	3	6.504e-03	3	NC	39	NC	39
666			min	.437	36	-.69	22	-3.18	5	-6.491e-03	5	NC	1	NC	1
667	M112	1	max	1.926	16	.189	34	2.619	12	5.106e-03	12	NC	39	NC	39
668			min	.441	36	-.545	22	-2.614	15	-5.089e-03	15	NC	1	67.598	12
669		2	max	1.926	16	.174	34	2.564	12	4.988e-03	12	NC	34	NC	39
670			min	.441	36	-.567	22	-2.559	15	-4.973e-03	15	281.608	17	135.264	12
671		3	max	1.926	16	.157	34	2.509	12	4.871e-03	12	NC	34	NC	39
672			min	.441	36	-.589	22	-2.504	15	-4.856e-03	15	135.504	17	NC	1
673	M113	1	max	2.475	16	.322	34	3.729	3	4.663e-03	3	NC	38	NC	14
674			min	.703	36	-.598	22	-3.722	5	-4.651e-03	5	188.629	16	60.101	12
675		2	max	2.475	16	.31	34	3.665	3	4.697e-03	3	NC	38	NC	14
676			min	.703	36	-.617	22	-3.659	5	-4.682e-03	5	389.203	16	120.432	12
677		3	max	2.475	16	.299	34	3.601	3	4.73e-03	3	NC	39	NC	39
678			min	.703	36	-.634	22	-3.596	5	-4.713e-03	5	NC	1	NC	1
679	M114	1	max	2.486	16	.239	34	2.94	12	3.539e-03	12	NC	39	NC	39
680			min	.705	36	-.495	22	-2.934	15	-3.529e-03	15	NC	1	59.656	12
681		2	max	2.486	16	.229	34	2.878	12	3.459e-03	12	NC	39	NC	39
682			min	.705	36	-.513	22	-2.873	15	-3.45e-03	15	365.78	17	119.361	12
683		3	max	2.487	16	.217	34	2.817	12	3.38e-03	12	NC	39	NC	39

Envelope Member Section Deflections Service (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
684			min	.705	36	-.531	22	-2.812	15	-3.371e-03	15	177.68	17	NC	1
685	M115	1	max	-.915	36	.289	34	3.002	15	1.727e-03	15	NC	39	NC	39
686			min	-2.815	16	-.454	22	-3.008	12	-1.73e-03	12	320.762	19	NC	1
687		2	max	-.915	36	.293	34	3.069	15	1.771e-03	15	NC	39	NC	39
688			min	-2.815	16	-.442	22	-3.076	12	-1.776e-03	12	664.373	19	110.707	12
689		3	max	-.915	36	.298	34	3.136	15	1.816e-03	15	NC	39	NC	39
690			min	-2.815	16	-.431	22	-3.143	12	-1.823e-03	12	NC	1	55.342	12
691	M116	1	max	-.919	36	.375	34	3.87	5	2.482e-03	5	NC	39	NC	39
692			min	-2.815	16	-.553	22	-3.877	3	-2.486e-03	3	NC	1	NC	1
693		2	max	-.919	36	.38	34	3.937	5	2.467e-03	5	NC	38	NC	14
694			min	-2.815	16	-.542	22	-3.944	3	-2.472e-03	3	698.869	17	110.817	12
695		3	max	-.919	36	.385	34	4.005	5	2.453e-03	5	NC	38	NC	14
696			min	-2.815	16	-.53	22	-4.012	3	-2.458e-03	3	339.963	17	55.305	12
697	M117	1	max	2.87	16	.431	16	4.635	3	1.642e-03	3	NC	38	NC	14
698			min	.978	36	-.429	20	-4.626	5	-1.634e-03	5	504.698	17	52.742	12
699		2	max	2.87	16	.418	32	4.35	3	1.642e-03	3	NC	11	NC	14
700			min	.978	36	-.464	22	-4.342	5	-1.634e-03	5	817.442	22	106.472	12
701		3	max	2.87	16	.41	34	4.07	3	1.642e-03	3	NC	39	NC	39
702			min	.978	36	-.501	22	-4.063	5	-1.634e-03	5	405.686	22	NC	1
703	M118	1	max	2.759	16	.381	32	4.478	3	3.797e-03	3	NC	38	NC	14
704			min	.856	36	-.478	22	-4.468	5	-3.795e-03	5	248.362	16	54.903	12
705		2	max	2.759	16	.351	34	4.214	3	3.797e-03	3	NC	17	NC	14
706			min	.856	36	-.54	22	-4.206	5	-3.795e-03	5	438.652	19	110.797	12
707		3	max	2.759	16	.321	34	3.955	3	3.797e-03	3	NC	39	NC	39
708			min	.856	36	-.602	22	-3.948	5	-3.795e-03	5	218.848	19	NC	1
709	M119	1	max	2.515	16	.377	34	4.012	3	4.592e-03	3	NC	38	NC	14
710			min	.724	36	-.508	22	-4.005	5	-4.579e-03	5	167.629	16	59.266	12
711		2	max	2.515	16	.352	34	3.886	3	4.592e-03	3	NC	31	NC	14
712			min	.724	36	-.55	22	-3.879	5	-4.579e-03	5	320.977	19	118.532	12
713		3	max	2.515	16	.327	34	3.76	3	4.592e-03	3	NC	39	NC	39
714			min	.724	36	-.592	22	-3.753	5	-4.579e-03	5	160.484	19	NC	1
715	M120	1	max	.214	34	.038	36	2.202	3	9.57e-03	3	NC	39	NC	39
716			min	-.69	22	-.585	16	-2.198	5	-9.498e-03	5	NC	1	NC	1
717		2	max	.214	34	-.051	36	2.471	3	1.067e-02	3	721.007	36	NC	39
718			min	-.69	22	-.897	16	-2.467	5	-1.06e-02	5	204.165	16	NC	1
719		3	max	.214	34	-.153	36	2.737	3	1.178e-02	3	333.758	36	NC	39
720			min	-.689	22	-1.22	16	-2.732	5	-1.17e-02	15	100.463	16	NC	1
721	M121	1	max	.245	34	-.174	36	2.737	3	1.206e-02	3	NC	39	NC	39
722			min	-.669	22	-1.216	16	-2.732	5	-1.198e-02	5	NC	1	NC	1
723		2	max	.244	34	-.299	36	3.021	3	1.327e-02	12	NC	39	NC	39
724			min	-.67	22	-1.581	16	-3.016	5	-1.319e-02	15	503.001	38	NC	1
725		3	max	.244	34	-.426	36	3.291	3	1.448e-02	12	NC	39	NC	39
726			min	-.671	22	-1.923	16	-3.286	5	-1.44e-02	15	250.165	38	NC	1
727	M122	1	max	.294	34	-.448	36	3.291	3	1.473e-02	12	NC	39	NC	39
728			min	-.626	22	-1.917	16	-3.286	5	-1.465e-02	15	NC	1	NC	1
729		2	max	.292	34	-.573	36	3.521	3	1.568e-02	12	NC	38	NC	39
730			min	-.628	22	-2.221	16	-3.515	5	-1.56e-02	15	3301.007	16	6986.502	3
731		3	max	.291	34	-.692	36	3.729	3	1.664e-02	12	NC	39	NC	39
732			min	-.63	22	-2.48	16	-3.722	5	-1.655e-02	15	NC	1	NC	1
733	M123	1	max	.325	34	-.703	36	3.729	3	1.674e-02	12	NC	39	NC	39
734			min	-.595	22	-2.475	16	-3.722	5	-1.665e-02	15	NC	1	NC	1
735		2	max	.325	34	-.713	36	3.744	3	1.68e-02	12	NC	39	NC	39
736			min	-.595	22	-2.495	16	-3.738	5	-1.672e-02	15	NC	1	NC	1
737		3	max	.324	34	-.723	36	3.76	3	1.686e-02	12	NC	39	NC	39
738			min	-.595	22	-2.515	16	-3.753	5	-1.678e-02	15	NC	1	NC	1
739	M124	1	max	.348	34	-.731	36	3.76	3	1.693e-02	12	NC	39	NC	39
740			min	-.57	22	-2.511	16	-3.753	5	-1.685e-02	15	NC	1	NC	1

Envelope Member Section Deflections Service (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
741		2	max	.346	34	-.8	36	3.862	3	1.738e-02	12	NC	38	NC	39
742			min	-.572	22	-2.645	16	-3.856	5	-1.729e-02	15	4052.893	16	9571.898	3
743		3	max	.345	34	-.863	36	3.955	3	1.782e-02	12	NC	39	NC	39
744			min	-.574	22	-2.755	16	-3.948	5	-1.774e-02	15	NC	1	NC	1
745	M125	1	max	.376	34	-.872	36	3.955	3	1.788e-02	12	NC	39	NC	39
746			min	-.539	22	-2.749	16	-3.948	5	-1.78e-02	15	NC	1	NC	1
747		2	max	.376	34	-.895	36	3.985	3	1.802e-02	12	NC	39	NC	39
748			min	-.54	22	-2.786	16	-3.978	5	-1.794e-02	15	7104.944	16	NC	1
749		3	max	.375	34	-.916	36	4.012	3	1.816e-02	12	NC	39	NC	39
750			min	-.541	22	-2.817	16	-4.005	5	-1.808e-02	15	NC	1	NC	1
751	M126	1	max	.398	34	-.923	36	4.012	3	1.819e-02	12	NC	39	NC	39
752			min	-.514	22	-2.812	16	-4.005	5	-1.811e-02	15	NC	1	NC	1
753		2	max	.397	34	-.95	36	4.043	3	1.833e-02	12	NC	39	NC	39
754			min	-.516	22	-2.848	16	-4.036	5	-1.825e-02	15	5524.766	16	NC	1
755		3	max	.396	34	-.974	36	4.07	3	1.847e-02	12	NC	39	NC	39
756			min	-.517	22	-2.873	16	-4.063	5	-1.839e-02	15	NC	1	NC	1
757	M127	1	max	.431	34	-.984	36	4.07	3	1.85e-02	12	NC	39	NC	39
758			min	-.475	22	-2.865	16	-4.063	5	-1.842e-02	15	NC	1	NC	1
759		2	max	.43	34	-1.017	36	4.096	3	1.863e-02	12	9893.903	36	NC	39
760			min	-.477	22	-2.885	16	-4.089	5	-1.854e-02	15	3567.594	16	6585.679	3
761		3	max	.429	34	-1.04	36	4.108	3	1.875e-02	12	NC	39	NC	39
762			min	-.479	22	-2.879	16	-4.101	5	-1.867e-02	15	NC	1	NC	1
763	M128	1	max	.096	34	.016	36	1.648	3	9.823e-03	3	NC	39	NC	39
764			min	-.632	22	-.598	16	-1.646	5	-9.849e-03	5	NC	1	NC	1
765		2	max	.097	34	-.065	36	1.878	3	1.099e-02	3	832.032	36	NC	39
766			min	-.633	22	-.909	16	-1.875	5	-1.098e-02	5	217.156	16	NC	1
767		3	max	.097	34	-.163	36	2.101	3	1.216e-02	12	376.269	36	NC	39
768			min	-.634	22	-1.235	16	-2.097	5	-1.212e-02	5	105.977	16	NC	1
769	M129	1	max	.129	34	-.182	36	2.101	3	1.239e-02	12	NC	39	NC	39
770			min	-.612	22	-1.236	16	-2.097	5	-1.235e-02	5	NC	1	NC	1
771		2	max	.13	34	-.303	36	2.311	3	1.352e-02	12	NC	39	NC	39
772			min	-.612	22	-1.588	16	-2.307	5	-1.346e-02	15	265.36	30	NC	1
773		3	max	.132	34	-.432	36	2.509	12	1.465e-02	12	NC	39	NC	39
774			min	-.612	22	-1.927	16	-2.504	15	-1.458e-02	15	131.973	30	NC	1
775	M130	1	max	.182	34	-.451	36	2.509	12	1.485e-02	12	NC	39	NC	39
776			min	-.567	22	-1.925	16	-2.504	15	-1.478e-02	15	NC	1	NC	1
777		2	max	.184	34	-.577	36	2.671	12	1.575e-02	12	NC	38	NC	39
778			min	-.566	22	-2.23	16	-2.666	15	-1.567e-02	15	3132.074	16	9256.814	12
779		3	max	.186	34	-.696	36	2.817	12	1.665e-02	12	NC	39	NC	39
780			min	-.564	22	-2.489	16	-2.812	15	-1.656e-02	15	NC	1	NC	1
781	M131	1	max	.248	34	-.713	36	2.817	12	1.679e-02	12	NC	39	NC	39
782			min	-.499	22	-2.483	16	-2.812	15	-1.67e-02	15	NC	1	NC	1
783		2	max	.251	34	-.818	36	2.921	12	1.739e-02	12	9137.983	36	NC	39
784			min	-.497	22	-2.682	16	-2.916	15	-1.729e-02	15	2376.289	16	8360.486	12
785		3	max	.254	34	-.906	36	3.008	12	1.799e-02	12	NC	39	NC	39
786			min	-.495	22	-2.82	16	-3.002	15	-1.789e-02	15	NC	1	NC	1
787	M132	1	max	.323	34	-.923	36	3.008	12	1.806e-02	12	NC	39	NC	39
788			min	-.414	22	-2.81	16	-3.002	15	-1.796e-02	15	NC	1	NC	1
789		2	max	.326	34	-.993	36	3.049	12	1.824e-02	12	6409.185	36	NC	39
790			min	-.412	22	-2.883	16	-3.044	15	-1.814e-02	15	2088.223	16	7982.301	12
791		3	max	.328	34	-1.041	36	3.073	12	1.842e-02	12	NC	39	NC	39
792			min	-.409	22	-2.887	16	-3.067	15	-1.831e-02	15	NC	1	NC	1
793	M133	1	max	0	39	0	39	0	39	0	39	NC	39	NC	39
794			min	0	1	0	1	0	1	0	1	NC	1	NC	1
795		2	max	-.001	37	.372	22	.662	3	3.468e-04	5	NC	37	NC	14
796			min	-.003	17	-.09	34	-.661	5	-3.468e-04	3	864.558	22	486.328	3
797		3	max	-.002	37	.754	22	2.023	3	5.745e-04	15	NC	39	NC	14

Envelope Member Section Deflections Service (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
798			min	-.004	17	-.358	34	-2.02	5	-5.749e-04	12	427.102	22	159.155	3
799	M134	1	max	.086	3	.367	36	1.738	5	5.209e-03	5	NC	38	NC	38
800			min	-.071	15	-.742	16	-1.741	3	-5.153e-03	3	762.602	34	112.627	5
801		2	max	.087	3	.309	36	1.474	5	4.609e-03	5	NC	39	NC	38
802			min	-.07	15	-.707	16	-1.478	3	-4.684e-03	3	1667.011	34	226.245	12
803		3	max	.087	3	.249	36	1.214	5	4.463e-03	15	NC	39	NC	39
804			min	-.07	15	-.68	16	-1.214	3	-4.613e-03	3	858.561	19	NC	1
805	M135	1	max	.343	36	.064	15	1.689	5	9.156e-03	5	NC	39	NC	39
806			min	-.755	16	-.097	3	-1.692	3	-9.15e-03	3	NC	1	NC	1
807		2	max	.341	36	-.019	39	1.891	5	9.954e-03	5	1217.259	34	NC	14
808			min	-.766	16	-.252	19	-1.894	3	-9.968e-03	3	390.164	22	345.878	3
809		3	max	.339	36	-.119	39	2.109	5	1.078e-02	5	440.097	39	NC	14
810			min	-.775	16	-.506	19	-2.112	3	-1.08e-02	3	162.335	19	166.699	3
811	M136	1	max	.097	3	.343	36	1.689	5	5.315e-03	5	NC	39	NC	32
812			min	-.064	15	-.755	16	-1.692	3	-5.323e-03	3	569.581	36	110.938	5
813		2	max	.096	3	.308	36	1.512	5	4.911e-03	5	NC	39	NC	32
814			min	-.064	15	-.711	16	-1.516	3	-4.968e-03	3	1146.906	36	222.917	5
815		3	max	.095	3	.274	36	1.337	5	4.818e-03	15	NC	39	NC	39
816			min	-.065	15	-.658	16	-1.341	3	-4.87e-03	12	NC	1	NC	1
817	M137	1	max	.746	16	.064	15	1.655	3	9.058e-03	3	NC	39	NC	34
818			min	-.336	36	-.097	3	-1.652	5	-9.08e-03	5	1287.922	34	198.245	5
819		2	max	.745	16	.067	15	1.635	3	8.978e-03	3	NC	39	NC	34
820			min	-.336	36	-.092	3	-1.632	5	-8.999e-03	5	1342.915	21	401.067	5
821		3	max	.743	16	.07	15	1.615	3	8.898e-03	3	NC	38	NC	39
822			min	-.336	36	-.087	3	-1.612	5	-8.918e-03	5	642.404	21	NC	1
823	M138	1	max	.274	36	.065	15	1.337	5	8.995e-03	5	NC	39	NC	39
824			min	-.658	16	-.095	3	-1.341	3	-9.013e-03	3	NC	1	NC	1
825		2	max	.276	36	-.024	39	1.529	5	9.835e-03	5	1133.65	34	NC	32
826			min	-.648	16	-.265	19	-1.533	3	-9.899e-03	3	382.045	22	382.868	12
827		3	max	.277	36	-.127	39	1.724	5	1.074e-02	5	441.095	39	NC	32
828			min	-.639	16	-.527	19	-1.727	3	-1.085e-02	3	162.506	19	189.721	15
829	M139	1	max	.67	16	.065	15	1.377	3	8.966e-03	3	NC	39	NC	32
830			min	-.281	36	-.095	3	-1.373	5	-8.948e-03	5	1034.34	34	215.738	3
831		2	max	.671	16	.067	15	1.358	3	8.946e-03	3	NC	39	NC	32
832			min	-.281	36	-.092	3	-1.355	5	-8.873e-03	5	1621.312	21	437.799	3
833		3	max	.672	16	.07	15	1.34	3	8.926e-03	3	NC	39	NC	39
834			min	-.281	36	-.087	3	-1.337	5	-8.799e-03	5	721.74	21	NC	1
835	M140	1	max	.362	36	.071	15	1.715	5	9.032e-03	5	NC	39	NC	39
836			min	-.743	16	-.086	3	-1.718	3	-9.051e-03	3	NC	1	NC	1
837		2	max	.362	36	-.004	15	1.939	5	9.824e-03	5	1993.229	34	NC	14
838			min	-.739	16	-.223	3	-1.942	3	-9.847e-03	3	446.43	22	345.361	3
839		3	max	.362	36	-.118	39	2.184	5	1.08e-02	5	484.482	39	NC	14
840			min	-.736	16	-.504	19	-2.188	3	-1.083e-02	3	173.357	19	164.858	3
841	M141	1	max	.255	36	.07	15	1.236	5	8.886e-03	5	NC	39	NC	39
842			min	-.677	16	-.087	3	-1.237	3	-9.079e-03	3	NC	1	NC	1
843		2	max	.255	36	-.022	39	1.438	5	9.754e-03	5	1415.473	34	NC	32
844			min	-.679	16	-.251	19	-1.442	3	-9.9e-03	3	416.228	22	400.511	12
845		3	max	.255	36	-.131	39	1.646	5	1.071e-02	5	478.875	39	NC	32
846			min	-.681	16	-.537	19	-1.649	3	-1.081e-02	3	172.404	19	198.877	12
847	M142	1	max	-.022	39	.276	36	1.528	3	5.421e-03	12	NC	39	NC	39
848			min	-.258	19	-.648	16	-1.524	5	-5.435e-03	15	NC	1	NC	1
849		2	max	-.022	39	.31	36	1.715	3	5.739e-03	3	NC	39	NC	39
850			min	-.258	19	-.709	16	-1.711	5	-5.75e-03	5	4302.837	27	NC	1
851		3	max	-.022	39	.341	36	1.901	3	6.119e-03	3	NC	39	NC	39
852			min	-.259	19	-.766	16	-1.898	5	-6.11e-03	5	2055.554	27	NC	1
853	M143	1	max	.058	15	.343	36	1.713	3	5.46e-03	3	NC	38	NC	39
854			min	-.108	3	-.757	16	-1.71	5	-5.451e-03	5	285.9	19	NC	1

Envelope Member Section Deflections Service (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
855		2	max	.058	15	.352	36	1.748	3	5.482e-03	3	NC	38	NC	34
856			min	-.109	3	-.749	16	-1.745	5	-5.477e-03	5	575.092	19	429.169	17
857		3	max	.058	15	.362	36	1.783	3	5.504e-03	3	NC	39	NC	34
858			min	-.11	3	-.742	16	-1.78	5	-5.504e-03	5	392.652	36	214.546	17
859	M144	1	max	-.102	39	.339	36	2.077	3	6.228e-03	3	NC	39	NC	39
860			min	-.465	19	-.775	16	-2.074	5	-6.215e-03	5	NC	1	NC	1
861		2	max	-.102	39	.35	36	2.117	3	6.202e-03	3	NC	39	NC	39
862			min	-.465	19	-.757	16	-2.114	5	-6.189e-03	5	382.113	22	390.426	17
863		3	max	-.102	39	.362	36	2.157	3	6.176e-03	3	NC	39	NC	39
864			min	-.465	19	-.736	16	-2.153	5	-6.163e-03	5	183.143	22	195.177	17
865	M145	1	max	-.113	39	.255	36	1.62	3	4.839e-03	12	NC	38	NC	39
866			min	-.493	19	-.681	16	-1.618	5	-4.852e-03	15	161.932	19	NC	1
867		2	max	-.113	39	.266	36	1.66	3	4.987e-03	12	NC	38	NC	14
868			min	-.493	19	-.659	16	-1.657	5	-4.998e-03	15	337.975	19	188.466	3
869		3	max	-.113	39	.277	36	1.7	3	5.136e-03	12	NC	39	NC	14
870			min	-.493	19	-.64	16	-1.697	5	-5.144e-03	15	NC	1	94.12	3
871	M146	1	max	-.113	39	.277	36	1.698	3	5.143e-03	12	NC	39	NC	39
872			min	-.49	19	-.64	16	-1.695	5	-5.152e-03	15	NC	1	NC	1
873		2	max	-.113	39	.31	36	1.9	3	5.656e-03	3	NC	39	NC	39
874			min	-.491	19	-.709	16	-1.896	5	-5.661e-03	5	2479.595	27	NC	1
875		3	max	-.113	39	.339	36	2.101	3	6.226e-03	3	NC	39	NC	39
876			min	-.492	19	-.775	16	-2.097	5	-6.211e-03	5	1207.349	27	NC	1
877	M147	1	max	-.252	39	.241	36	2.054	3	6.604e-03	12	NC	39	NC	39
878			min	-.894	19	-.663	16	-2.05	5	-6.587e-03	15	NC	1	NC	1
879		2	max	-.252	39	.274	36	2.263	3	7.132e-03	3	NC	39	NC	39
880			min	-.894	19	-.741	16	-2.259	5	-7.116e-03	5	NC	1	NC	1
881		3	max	-.252	39	.303	36	2.473	3	7.715e-03	3	NC	39	NC	39
882			min	-.893	19	-.812	16	-2.469	5	-7.703e-03	5	NC	1	NC	1
883	M148	1	max	-.433	39	.243	36	2.361	3	6.168e-03	12	NC	39	NC	39
884			min	-1.321	19	-.652	16	-2.357	5	-6.155e-03	15	NC	1	NC	1
885		2	max	-.433	39	.275	36	2.603	3	6.777e-03	3	NC	39	NC	39
886			min	-1.321	19	-.735	16	-2.599	5	-6.768e-03	5	NC	1	NC	1
887		3	max	-.433	39	.306	36	2.844	3	7.441e-03	3	NC	39	NC	39
888			min	-1.321	19	-.812	16	-2.84	5	-7.434e-03	5	NC	1	NC	1
889	M149	1	max	-.623	37	.274	36	2.628	12	4.808e-03	12	NC	39	NC	39
890			min	-1.771	17	-.585	16	-2.623	15	-4.802e-03	15	NC	1	NC	1
891		2	max	-.623	37	.309	36	2.909	3	5.489e-03	3	NC	39	NC	39
892			min	-1.771	17	-.67	16	-2.904	5	-5.484e-03	5	4782.662	35	NC	1
893		3	max	-.623	37	.341	36	3.191	3	6.217e-03	3	NC	39	NC	39
894			min	-1.771	17	-.748	16	-3.186	5	-6.211e-03	5	2390.053	35	NC	1
895	M150	1	max	-.758	37	.271	36	2.854	12	4.345e-03	12	NC	39	NC	39
896			min	-2.196	17	-.587	16	-2.848	15	-4.325e-03	15	NC	1	NC	1
897		2	max	-.758	37	.309	36	3.163	3	4.936e-03	3	NC	39	NC	39
898			min	-2.196	17	-.668	16	-3.158	5	-4.918e-03	5	7231.318	35	NC	1
899		3	max	-.758	37	.343	36	3.476	3	5.573e-03	3	NC	39	NC	39
900			min	-2.196	17	-.744	16	-3.471	5	-5.558e-03	5	3612.761	35	NC	1
901	M151	1	max	-.857	37	.303	36	3.024	12	3.044e-03	12	NC	39	NC	39
902			min	-2.542	17	-.512	16	-3.018	15	-3.043e-03	15	NC	1	NC	1
903		2	max	-.858	37	.343	36	3.364	3	3.529e-03	3	NC	39	NC	39
904			min	-2.542	17	-.587	16	-3.358	5	-3.533e-03	5	4194.261	19	NC	1
905		3	max	-.858	37	.381	36	3.708	3	4.042e-03	3	NC	39	NC	39
906			min	-2.542	17	-.657	16	-3.703	5	-4.05e-03	5	2096.01	19	NC	1
907	M152	1	max	-.93	37	.298	36	3.143	12	2.234e-03	12	NC	39	NC	39
908			min	-2.795	17	-.522	16	-3.137	15	-2.23e-03	15	NC	1	NC	1
909		2	max	-.93	37	.342	36	3.504	3	2.599e-03	3	NC	39	NC	39
910			min	-2.794	17	-.59	16	-3.497	5	-2.593e-03	5	NC	1	NC	1
911		3	max	-.93	37	.384	36	3.87	3	2.983e-03	3	NC	39	NC	39

Envelope Member Section Deflections Service (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
912			min	-2.794	17	-.652	16	-3.865	5	-2.975e-03	5	NC	1	NC	1
913	M153	1	max	-.954	37	.339	36	3.201	12	1.172e-03	13	NC	39	NC	39
914			min	-2.94	17	-.411	16	-3.195	15	-1.174e-03	6	NC	1	NC	1
915		2	max	-.954	37	.388	36	3.575	3	1.285e-03	13	NC	39	NC	39
916			min	-2.94	17	-.467	16	-3.569	5	-1.296e-03	6	NC	1	NC	1
917		3	max	-.954	37	.433	36	3.955	3	1.398e-03	13	NC	39	NC	39
918			min	-2.94	17	-.52	16	-3.949	5	-1.419e-03	6	NC	1	NC	1
919	M154	1	max	2.964	17	.429	22	4.677	5	1.207e-03	6	NC	39	NC	14
920			min	.951	37	-.43	16	-4.687	3	-1.191e-03	13	NC	1	51.645	12
921		2	max	2.964	17	.44	22	4.386	5	1.207e-03	6	NC	31	NC	14
922			min	.951	37	-.441	16	-4.395	3	-1.191e-03	13	2698.105	18	104.244	12
923		3	max	2.964	17	.452	22	4.101	5	1.207e-03	6	NC	15	NC	39
924			min	.951	37	-.453	16	-4.108	3	-1.191e-03	13	1318.91	18	NC	1
925	M155	1	max	.478	16	-.952	37	3.968	3	1.882e-02	12	NC	39	NC	39
926			min	-.448	36	-2.963	17	-3.961	5	-1.869e-02	15	NC	1	NC	1
927		2	max	.481	16	-.953	37	3.963	3	1.874e-02	12	NC	39	NC	39
928			min	-.447	36	-2.957	17	-3.957	5	-1.861e-02	15	5711.403	16	NC	1
929		3	max	.483	16	-.953	37	3.955	3	1.865e-02	12	NC	39	NC	39
930			min	-.446	36	-2.943	17	-3.949	5	-1.853e-02	15	NC	1	NC	1
931	M156	1	max	.541	16	-.955	37	3.955	3	1.863e-02	12	NC	39	NC	39
932			min	-.425	36	-2.939	17	-3.949	5	-1.851e-02	15	NC	1	NC	1
933		2	max	.547	16	-.945	37	3.92	3	1.845e-02	12	NC	37	NC	39
934			min	-.424	36	-2.884	17	-3.914	5	-1.833e-02	15	4086.335	17	6999.003	5
935		3	max	.552	16	-.926	37	3.87	3	1.828e-02	12	NC	39	NC	39
936			min	-.422	36	-2.805	17	-3.865	5	-1.816e-02	15	NC	1	NC	1
937	M157	1	max	.623	16	-.929	37	3.87	3	1.821e-02	12	NC	39	NC	39
938			min	-.395	36	-2.797	17	-3.865	5	-1.809e-02	15	NC	1	NC	1
939		2	max	.627	16	-.899	37	3.796	3	1.778e-02	12	8270.017	37	NC	39
940			min	-.393	36	-2.691	17	-3.79	5	-1.767e-02	15	2519.561	17	7390.778	5
941		3	max	.631	16	-.857	37	3.708	3	1.736e-02	12	NC	39	NC	39
942			min	-.392	36	-2.546	17	-3.703	5	-1.726e-02	15	NC	1	NC	1
943	M158	1	max	.696	16	-.859	37	3.708	3	1.725e-02	12	NC	39	NC	39
944			min	-.365	36	-2.536	17	-3.703	5	-1.715e-02	15	NC	1	NC	1
945		2	max	.7	16	-.811	37	3.598	3	1.68e-02	12	NC	39	NC	39
946			min	-.363	36	-2.374	17	-3.592	5	-1.671e-02	15	8754.84	5	8344.525	3
947		3	max	.702	16	-.757	37	3.476	3	1.619e-02	12	NC	39	NC	39
948			min	-.362	36	-2.204	17	-3.471	5	-1.61e-02	15	NC	1	NC	1
949	M159	1	max	.744	16	-.758	37	3.476	3	1.607e-02	12	NC	39	NC	39
950			min	-.343	36	-2.196	17	-3.471	5	-1.599e-02	15	110.2	16	NC	1
951		2	max	.746	16	-.692	37	3.337	3	1.545e-02	12	NC	39	NC	39
952			min	-.342	36	-1.984	17	-3.332	5	-1.537e-02	15	221.124	16	NC	1
953		3	max	.748	16	-.623	37	3.191	3	1.482e-02	12	NC	39	NC	39
954			min	-.341	36	-1.771	17	-3.186	5	-1.475e-02	15	NC	1	NC	1
955	M160	1	max	.806	16	-.624	37	3.191	3	1.459e-02	12	NC	39	NC	39
956			min	-.311	36	-1.753	17	-3.186	5	-1.452e-02	15	NC	1	NC	1
957		2	max	.805	16	-.536	39	3.022	3	1.38e-02	12	8934.362	37	NC	39
958			min	-.311	36	-1.555	19	-3.017	5	-1.374e-02	15	2617.371	17	NC	1
959		3	max	.804	16	-.435	39	2.844	3	1.299e-02	12	NC	39	NC	39
960			min	-.31	36	-1.322	19	-2.84	5	-1.294e-02	15	NC	1	NC	1
961	M161	1	max	.827	16	-.429	39	2.844	3	1.283e-02	12	308.393	37	NC	39
962			min	-.297	36	-1.317	19	-2.84	5	-1.279e-02	15	106.002	17	404.365	6
963		2	max	.826	16	-.333	39	2.66	3	1.203e-02	12	642.069	37	NC	39
964			min	-.296	36	-1.091	19	-2.656	5	-1.2e-02	15	227.541	17	808.872	6
965		3	max	.821	16	-.248	39	2.473	3	1.12e-02	12	NC	39	NC	39
966			min	-.297	36	-.89	19	-2.469	5	-1.118e-02	15	NC	1	NC	1
967	M162	1	max	.838	16	-.241	39	2.473	3	1.1e-02	12	287.886	37	NC	39
968			min	-.284	36	-.883	19	-2.469	5	-1.097e-02	15	100.977	17	122.441	3

Envelope Member Section Deflections Service (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
969		2	max	.833	16	-.136	34	2.292	3	1.023e-02	3	592.583	37	NC	39
970			min	-.285	36	-.681	22	-2.288	5	-1.021e-02	5	212.283	17	245.25	3
971		3	max	.828	16	-.026	34	2.112	3	9.471e-03	3	NC	39	NC	39
972			min	-.285	36	-.509	22	-2.109	5	-9.454e-03	5	NC	1	NC	1
973	M163	1	max	.221	36	-.054	34	1.724	5	9.609e-03	5	NC	39	NC	39
974			min	-.697	16	-.521	22	-1.727	3	-9.713e-03	3	NC	1	NC	1
975		2	max	.222	36	-.146	34	1.888	5	1.038e-02	5	672.052	37	NC	39
976			min	-.693	16	-.682	22	-1.891	3	-1.048e-02	3	248.454	17	869.91	13
977		3	max	.222	36	-.244	39	2.05	5	1.116e-02	15	313.812	37	NC	39
978			min	-.689	16	-.885	19	-2.054	3	-1.125e-02	3	113.012	17	432.674	13
979	M164	1	max	.235	36	-.25	39	2.05	5	1.135e-02	15	NC	39	NC	39
980			min	-.672	16	-.891	19	-2.054	3	-1.143e-02	3	NC	1	NC	1
981		2	max	.235	36	-.338	39	2.206	5	1.215e-02	15	NC	38	NC	39
982			min	-.668	16	-1.104	19	-2.21	3	-1.222e-02	12	214.133	17	NC	1
983		3	max	.234	36	-.43	39	2.357	5	1.289e-02	15	NC	38	NC	39
984			min	-.667	16	-1.318	19	-2.361	3	-1.296e-02	12	106.072	17	NC	1
985	M165	1	max	.25	36	-.435	39	2.357	5	1.304e-02	15	NC	39	NC	39
986			min	-.639	16	-1.323	19	-2.361	3	-1.312e-02	12	NC	1	NC	1
987		2	max	.249	36	-.538	39	2.494	5	1.377e-02	15	7999.044	37	NC	39
988			min	-.638	16	-1.552	19	-2.499	3	-1.384e-02	12	3296.421	17	NC	1
989		3	max	.248	36	-.624	37	2.623	15	1.447e-02	15	NC	39	NC	39
990			min	-.637	16	-1.759	17	-2.628	12	-1.455e-02	12	NC	1	NC	1
991	M166	1	max	.271	36	-.623	37	2.623	15	1.462e-02	15	NC	39	NC	39
992			min	-.593	16	-1.769	17	-2.628	12	-1.469e-02	12	NC	1	NC	1
993		2	max	.269	36	-.69	37	2.739	15	1.521e-02	15	NC	38	NC	39
994			min	-.595	16	-1.98	17	-2.744	12	-1.529e-02	12	224.032	16	NC	1
995		3	max	.267	36	-.758	37	2.848	15	1.581e-02	15	NC	38	NC	39
996			min	-.596	16	-2.194	17	-2.854	12	-1.589e-02	12	110.149	16	NC	1
997	M167	1	max	.291	36	-.757	37	2.848	15	1.591e-02	15	NC	39	NC	39
998			min	-.544	16	-2.203	17	-2.854	12	-1.599e-02	12	NC	1	NC	1
999		2	max	.289	36	-.815	37	2.937	15	1.648e-02	15	8263.266	12	NC	39
1000			min	-.546	16	-2.384	17	-2.943	12	-1.656e-02	12	2995.428	5	NC	1
1001		3	max	.287	36	-.858	37	3.018	15	1.687e-02	15	NC	39	NC	39
1002			min	-.55	16	-2.537	17	-3.024	12	-1.695e-02	12	NC	1	NC	1
1003	M168	1	max	.314	36	-.857	37	3.018	15	1.695e-02	15	NC	39	NC	39
1004			min	-.485	16	-2.545	17	-3.024	12	-1.704e-02	12	NC	1	NC	1
1005		2	max	.311	36	-.899	37	3.082	15	1.734e-02	15	8580.54	36	NC	39
1006			min	-.489	16	-2.688	17	-3.088	12	-1.743e-02	12	2759.58	16	9674.4	15
1007		3	max	.309	36	-.929	37	3.137	15	1.773e-02	15	NC	39	NC	39
1008			min	-.493	16	-2.797	17	-3.143	12	-1.781e-02	12	NC	1	NC	1
1009	M169	1	max	.337	36	-.927	37	3.137	15	1.777e-02	15	NC	39	NC	39
1010			min	-.421	16	-2.803	17	-3.143	12	-1.786e-02	12	NC	1	NC	1
1011		2	max	.334	36	-.944	37	3.17	15	1.79e-02	15	NC	39	NC	39
1012			min	-.426	16	-2.881	17	-3.176	12	-1.798e-02	12	4541.835	19	NC	1
1013		3	max	.332	36	-.955	37	3.195	15	1.802e-02	15	NC	39	NC	39
1014			min	-.432	16	-2.939	17	-3.201	12	-1.811e-02	12	NC	1	NC	1
1015	M170	1	max	.352	36	-.953	37	3.195	15	1.804e-02	15	NC	39	NC	39
1016			min	-.374	16	-2.942	17	-3.201	12	-1.812e-02	12	NC	1	NC	1
1017		2	max	.351	36	-.955	37	3.2	15	1.809e-02	15	NC	39	NC	39
1018			min	-.377	16	-2.961	17	-3.206	12	-1.818e-02	12	4517.807	16	NC	1
1019		3	max	.35	36	-.955	37	3.203	15	1.815e-02	15	NC	39	NC	39
1020			min	-.38	16	-2.969	17	-3.209	12	-1.824e-02	12	NC	1	NC	1
1021	M171	1	max	1.06	19	.318	36	2.717	5	7.695e-03	5	NC	39	NC	14
1022			min	.319	39	-.772	16	-2.721	3	-7.708e-03	3	160.764	30	84.054	12
1023		2	max	1.06	19	.306	36	2.671	5	7.732e-03	5	NC	39	NC	14
1024			min	.319	39	-.802	16	-2.676	3	-7.742e-03	3	337.003	30	168.249	12
1025		3	max	1.06	19	.295	36	2.626	5	7.768e-03	5	NC	39	NC	39

Envelope Member Section Deflections Service (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1026			min	.319	39	-.828	16	-2.63	3	-7.776e-03	3	NC	1	NC	1
1027	M172	1	max	1.739	17	.343	36	3.273	5	6.458e-03	5	NC	39	NC	14
1028			min	.616	37	-.726	16	-3.279	3	-6.471e-03	3	175.334	30	68.306	12
1029		2	max	1.739	17	.334	36	3.22	5	6.495e-03	5	NC	39	NC	14
1030			min	.616	37	-.754	16	-3.225	3	-6.506e-03	3	361.86	30	136.733	12
1031		3	max	1.739	17	.325	36	3.167	5	6.532e-03	5	NC	39	NC	39
1032			min	.616	37	-.78	16	-3.172	3	-6.542e-03	3	NC	1	NC	1
1033	M173	1	max	2.366	17	.375	36	3.714	5	4.713e-03	5	NC	39	NC	14
1034			min	.808	37	-.654	16	-3.72	3	-4.716e-03	3	239.899	30	59.523	12
1035		2	max	2.366	17	.369	36	3.65	5	4.747e-03	5	NC	39	NC	14
1036			min	.808	37	-.678	16	-3.656	3	-4.747e-03	3	495.761	30	119.13	12
1037		3	max	2.366	17	.363	36	3.586	5	4.78e-03	5	NC	39	NC	39
1038			min	.808	37	-.701	16	-3.592	3	-4.778e-03	3	NC	1	NC	1
1039	M174	1	max	1.078	19	.234	36	2.185	5	6.358e-03	15	NC	39	NC	39
1040			min	.327	39	-.67	16	-2.19	3	-6.375e-03	12	NC	1	NC	1
1041		2	max	1.078	19	.223	36	2.141	5	6.221e-03	15	NC	38	NC	39
1042			min	.327	39	-.697	16	-2.145	3	-6.238e-03	12	262.827	17	NC	1
1043		3	max	1.078	19	.211	36	2.097	5	6.084e-03	15	NC	38	NC	39
1044			min	.327	39	-.725	16	-2.101	3	-6.102e-03	12	127.238	17	NC	1
1045	M175	1	max	1.747	17	.259	36	2.612	15	5.089e-03	15	NC	39	NC	39
1046			min	.618	37	-.617	16	-2.617	12	-5.099e-03	12	NC	1	NC	1
1047		2	max	1.747	17	.25	36	2.558	15	4.973e-03	15	NC	38	NC	39
1048			min	.618	37	-.645	16	-2.563	12	-4.983e-03	12	266.995	17	NC	1
1049		3	max	1.747	17	.24	36	2.504	15	4.856e-03	15	NC	38	NC	39
1050			min	.618	37	-.675	16	-2.508	12	-4.868e-03	12	128.877	16	NC	1
1051	M176	1	max	2.375	17	.289	36	2.932	15	3.532e-03	15	NC	39	NC	39
1052			min	.812	37	-.547	16	-2.938	12	-3.54e-03	12	NC	1	NC	1
1053		2	max	2.375	17	.283	36	2.872	15	3.452e-03	15	NC	38	NC	39
1054			min	.812	37	-.569	16	-2.877	12	-3.46e-03	12	321.604	16	NC	1
1055		3	max	2.375	17	.277	36	2.811	15	3.372e-03	15	NC	38	NC	39
1056			min	.812	37	-.593	16	-2.817	12	-3.38e-03	12	156.432	16	NC	1
1057	M177	1	max	-.928	37	.32	36	3.008	12	1.732e-03	12	NC	38	NC	39
1058			min	-2.798	17	-.487	16	-3.002	15	-1.726e-03	15	256.16	16	NC	1
1059		2	max	-.928	37	.321	36	3.075	12	1.775e-03	12	NC	38	NC	39
1060			min	-2.798	17	-.472	16	-3.069	15	-1.771e-03	15	529.768	16	NC	1
1061		3	max	-.928	37	.323	36	3.141	12	1.818e-03	12	NC	39	NC	39
1062			min	-2.798	17	-.458	16	-3.135	15	-1.815e-03	15	NC	1	NC	1
1063	M178	1	max	-.928	37	.408	36	3.871	3	2.546e-03	3	NC	39	NC	39
1064			min	-2.802	17	-.588	16	-3.865	5	-2.541e-03	5	NC	1	NC	1
1065		2	max	-.928	37	.41	36	3.939	3	2.531e-03	3	NC	39	NC	14
1066			min	-2.802	17	-.574	16	-3.933	5	-2.526e-03	5	767.059	19	109.513	12
1067		3	max	-.928	37	.412	36	4.007	3	2.516e-03	3	NC	39	NC	14
1068			min	-2.802	17	-.56	16	-4	5	-2.511e-03	5	370.846	19	54.722	12
1069	M179	1	max	2.97	17	.359	22	3.203	15	9.615e-04	6	NC	39	NC	39
1070			min	.954	37	-.36	16	-3.209	12	-9.557e-04	13	NC	1	NC	1
1071		2	max	2.97	17	.362	22	3.135	15	9.394e-04	6	NC	31	NC	39
1072			min	.954	37	-.362	16	-3.141	12	-9.336e-04	13	2698.503	20	NC	1
1073		3	max	2.97	17	.365	22	3.067	15	9.172e-04	6	NC	15	NC	39
1074			min	.954	37	-.365	16	-3.073	12	-9.115e-04	13	1296.809	22	NC	1
1075	M180	1	max	2.964	17	.452	22	4.101	5	1.207e-03	6	NC	39	NC	14
1076			min	.951	37	-.453	16	-4.108	3	-1.191e-03	13	NC	1	53.027	12
1077		2	max	2.964	17	.454	22	4.031	5	1.213e-03	6	NC	39	NC	14
1078			min	.951	37	-.455	16	-4.038	3	-1.196e-03	13	NC	1	106.139	12
1079		3	max	2.964	17	.457	22	3.961	5	1.219e-03	6	NC	39	NC	39
1080			min	.951	37	-.458	16	-3.968	3	-1.202e-03	13	NC	1	NC	1
1081	M181	1	max	2.896	17	.429	20	4.626	5	1.693e-03	5	NC	39	NC	14
1082			min	.947	37	-.43	16	-4.636	3	-1.693e-03	3	531.637	27	52.404	12

Envelope Member Section Deflections Service (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1083		2	max	2.896	17	.426	36	4.341	5	1.693e-03	5	NC	38	NC	14
1084			min	.947	37	-.475	16	-4.349	3	-1.693e-03	3	668.012	16	105.783	12
1085		3	max	2.896	17	.426	36	4.061	5	1.693e-03	5	NC	38	NC	39
1086			min	.947	37	-.52	16	-4.067	3	-1.693e-03	3	331.939	16	NC	1
1087	M182	1	max	2.703	17	.402	36	4.465	5	3.853e-03	5	NC	39	NC	14
1088			min	.907	37	-.501	16	-4.475	3	-3.866e-03	3	312.406	30	54.579	12
1089		2	max	2.703	17	.387	36	4.202	5	3.853e-03	5	NC	29	NC	14
1090			min	.907	37	-.579	16	-4.21	3	-3.866e-03	3	368.49	16	110.136	12
1091		3	max	2.703	17	.374	36	3.943	5	3.853e-03	5	NC	38	NC	39
1092			min	.907	37	-.658	16	-3.95	3	-3.866e-03	3	183.53	16	NC	1
1093	M183	1	max	2.413	17	.404	36	3.998	5	4.64e-03	5	NC	39	NC	14
1094			min	.822	37	-.537	16	-4.006	3	-4.642e-03	3	211.305	30	58.936	12
1095		2	max	2.413	17	.391	36	3.871	5	4.64e-03	5	NC	29	NC	14
1096			min	.822	37	-.592	16	-3.878	3	-4.642e-03	3	277.228	16	117.873	12
1097		3	max	2.413	17	.379	36	3.745	5	4.64e-03	5	NC	38	NC	39
1098			min	.822	37	-.646	16	-3.751	3	-4.642e-03	3	138.606	16	NC	1
1099	M184	1	max	.309	36	-.032	34	2.184	5	9.512e-03	5	NC	39	NC	39
1100			min	-.788	16	-.513	22	-2.188	3	-9.539e-03	3	NC	1	NC	1
1101		2	max	.309	36	-.187	34	2.452	5	1.063e-02	5	NC	36	NC	39
1102			min	-.787	16	-.759	22	-2.456	3	-1.066e-02	3	216.357	17	777.053	6
1103		3	max	.308	36	-.315	39	2.717	5	1.175e-02	15	NC	36	NC	39
1104			min	-.786	16	-1.056	19	-2.721	3	-1.179e-02	12	104.479	17	387.573	6
1105	M185	1	max	.329	36	-.324	39	2.717	5	1.204e-02	5	NC	39	NC	39
1106			min	-.756	16	-1.064	19	-2.721	3	-1.208e-02	3	NC	1	NC	1
1107		2	max	.328	36	-.471	39	3.002	5	1.325e-02	15	NC	39	NC	39
1108			min	-.756	16	-1.406	19	-3.007	3	-1.331e-02	12	7303.006	22	NC	1
1109		3	max	.327	36	-.615	39	3.273	5	1.447e-02	15	NC	39	NC	39
1110			min	-.757	16	-1.73	19	-3.279	3	-1.454e-02	12	NC	1	NC	1
1111	M186	1	max	.359	36	-.615	37	3.273	5	1.473e-02	15	NC	39	NC	39
1112			min	-.694	16	-1.747	17	-3.279	3	-1.48e-02	12	NC	1	NC	1
1113		2	max	.358	36	-.72	37	3.504	5	1.568e-02	15	NC	39	NC	39
1114			min	-.696	16	-2.07	17	-3.51	3	-1.576e-02	12	3977.435	19	7135.105	3
1115		3	max	.356	36	-.809	37	3.714	5	1.664e-02	15	NC	39	NC	39
1116			min	-.698	16	-2.358	17	-3.72	3	-1.673e-02	12	NC	1	NC	1
1117	M187	1	max	.377	36	-.808	37	3.714	5	1.674e-02	15	NC	39	NC	39
1118			min	-.65	16	-2.366	17	-3.72	3	-1.683e-02	12	NC	1	NC	1
1119		2	max	.377	36	-.815	37	3.729	5	1.68e-02	15	NC	39	NC	39
1120			min	-.65	16	-2.389	17	-3.736	3	-1.69e-02	12	NC	1	985.966	6
1121		3	max	.377	36	-.822	37	3.745	5	1.687e-02	15	NC	39	NC	39
1122			min	-.65	16	-2.412	17	-3.751	3	-1.696e-02	12	NC	1	491.936	6
1123	M188	1	max	.391	36	-.821	37	3.745	5	1.693e-02	15	NC	39	NC	39
1124			min	-.616	16	-2.417	17	-3.751	3	-1.703e-02	12	NC	1	NC	1
1125		2	max	.39	36	-.867	37	3.849	5	1.738e-02	15	NC	39	NC	39
1126			min	-.618	16	-2.574	17	-3.855	3	-1.748e-02	12	4373.3	17	9690.009	5
1127		3	max	.389	36	-.906	37	3.943	5	1.783e-02	15	NC	39	NC	39
1128			min	-.62	16	-2.708	17	-3.95	3	-1.793e-02	12	NC	1	NC	1
1129	M189	1	max	.408	36	-.904	37	3.943	5	1.789e-02	15	NC	39	NC	39
1130			min	-.572	16	-2.713	17	-3.95	3	-1.8e-02	12	NC	1	NC	1
1131		2	max	.407	36	-.917	37	3.973	5	1.803e-02	15	NC	39	NC	39
1132			min	-.573	16	-2.759	17	-3.98	3	-1.814e-02	12	7091.692	17	NC	1
1133		3	max	.407	36	-.928	37	4	5	1.817e-02	15	NC	39	NC	39
1134			min	-.574	16	-2.8	17	-4.007	3	-1.828e-02	12	NC	1	NC	1
1135	M190	1	max	.42	36	-.927	37	4	5	1.82e-02	15	NC	39	NC	39
1136			min	-.539	16	-2.803	17	-4.007	3	-1.831e-02	12	NC	1	NC	1
1137		2	max	.419	36	-.939	37	4.032	5	1.834e-02	15	NC	39	NC	39
1138			min	-.54	16	-2.854	17	-4.039	3	-1.845e-02	12	5846.754	17	NC	1
1139		3	max	.418	36	-.948	37	4.061	5	1.848e-02	15	NC	39	NC	39

Envelope Member Section Deflections Service (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1140			min	-.542	16	-2.894	17	-4.067	3	-1.859e-02	12	NC	1	NC	1
1141	M191	1	max	.439	36	-.946	37	4.061	5	1.851e-02	15	NC	39	NC	39
1142			min	-.485	16	-2.898	17	-4.067	3	-1.862e-02	12	NC	1	NC	1
1143		2	max	.438	36	-.953	37	4.088	5	1.864e-02	15	NC	37	NC	39
1144			min	-.487	16	-2.943	17	-4.095	3	-1.875e-02	12	3508.012	17	6669.721	5
1145		3	max	.437	36	-.952	37	4.101	5	1.877e-02	15	NC	39	NC	39
1146			min	-.489	16	-2.962	17	-4.108	3	-1.888e-02	12	NC	1	NC	1
1147	M192	1	max	.201	36	-.06	34	1.646	5	9.668e-03	5	NC	39	NC	39
1148			min	-.739	16	-.521	22	-1.649	3	-9.776e-03	3	NC	1	NC	1
1149		2	max	.201	36	-.2	39	1.875	5	1.081e-02	5	NC	36	NC	39
1150			min	-.74	16	-.773	19	-1.878	3	-1.091e-02	3	235.345	17	NC	1
1151		3	max	.201	36	-.323	39	2.097	5	1.196e-02	15	NC	36	NC	39
1152			min	-.741	16	-1.073	19	-2.101	3	-1.204e-02	3	112.348	17	NC	1
1153	M193	1	max	.223	36	-.332	39	2.097	5	1.219e-02	15	NC	39	NC	39
1154			min	-.708	16	-1.083	19	-2.101	3	-1.227e-02	3	NC	1	NC	1
1155		2	max	.223	36	-.475	39	2.306	5	1.331e-02	15	NC	38	NC	39
1156			min	-.707	16	-1.414	19	-2.31	3	-1.339e-02	12	206.772	16	NC	1
1157		3	max	.224	36	-.618	37	2.504	15	1.443e-02	15	NC	38	NC	39
1158			min	-.706	16	-1.737	17	-2.508	12	-1.451e-02	12	102.824	16	NC	1
1159	M194	1	max	.256	36	-.618	37	2.504	15	1.463e-02	15	NC	39	NC	39
1160			min	-.643	16	-1.755	17	-2.508	12	-1.471e-02	12	NC	1	NC	1
1161		2	max	.257	36	-.723	37	2.665	15	1.553e-02	15	9843.929	39	NC	39
1162			min	-.641	16	-2.081	17	-2.67	12	-1.561e-02	12	3652.915	19	9322.631	15
1163		3	max	.258	36	-.813	37	2.811	15	1.643e-02	15	NC	39	NC	39
1164			min	-.638	16	-2.367	17	-2.817	12	-1.651e-02	12	NC	1	NC	1
1165	M195	1	max	.296	36	-.811	37	2.811	15	1.656e-02	15	NC	39	NC	39
1166			min	-.549	16	-2.382	17	-2.817	12	-1.665e-02	12	NC	1	NC	1
1167		2	max	.297	36	-.88	37	2.915	15	1.717e-02	15	6977.687	37	NC	39
1168			min	-.545	16	-2.615	17	-2.921	12	-1.725e-02	12	2580.529	17	8391.467	15
1169		3	max	.298	36	-.929	37	3.002	15	1.777e-02	15	NC	39	NC	39
1170			min	-.542	16	-2.792	17	-3.008	12	-1.786e-02	12	NC	1	NC	1
1171	M196	1	max	.34	36	-.926	37	3.002	15	1.784e-02	15	NC	39	NC	39
1172			min	-.433	16	-2.802	17	-3.008	12	-1.793e-02	12	NC	1	NC	1
1173		2	max	.341	36	-.953	37	3.044	15	1.802e-02	15	6085.676	37	NC	39
1174			min	-.429	16	-2.918	17	-3.049	12	-1.811e-02	12	2122.717	17	7983.367	12
1175		3	max	.342	36	-.956	37	3.067	15	1.82e-02	15	NC	39	NC	39
1176			min	-.425	16	-2.967	17	-3.073	12	-1.829e-02	12	NC	1	NC	1
1177	M197	1	max	.086	3	.676	22	1.737	5	5.274e-03	3	NC	39	NC	38
1178			min	-.07	15	-.304	34	-1.74	3	-5.375e-03	5	676.294	36	112.058	3
1179		2	max	.087	3	.637	22	1.473	5	4.701e-03	3	NC	39	NC	38
1180			min	-.07	15	-.242	34	-1.477	3	-4.642e-03	5	1432.856	36	224.17	3
1181		3	max	.087	3	.605	22	1.213	5	4.617e-03	3	NC	39	NC	39
1182			min	-.07	15	-.176	34	-1.213	3	-4.47e-03	15	819.518	17	NC	1
1183	M198	1	max	.273	34	.064	15	1.691	3	9.219e-03	3	NC	39	NC	39
1184			min	-.683	22	-.097	3	-1.689	5	-9.263e-03	5	NC	1	NC	1
1185		2	max	.269	34	.026	36	1.903	3	1.006e-02	3	3058.601	36	NC	28
1186			min	-.691	22	-.297	16	-1.9	5	-1.007e-02	5	317.22	16	332.309	3
1187		3	max	.266	34	-.037	36	2.126	3	1.088e-02	3	NC	36	NC	28
1188			min	-.699	22	-.589	16	-2.122	5	-1.087e-02	5	136.702	16	161.4	3
1189	M199	1	max	.097	3	.683	22	1.689	5	5.507e-03	3	NC	39	NC	38
1190			min	-.064	15	-.273	34	-1.691	3	-5.542e-03	5	612.237	34	110.648	5
1191		2	max	.095	3	.64	22	1.512	5	5.045e-03	3	NC	39	NC	38
1192			min	-.064	15	-.24	34	-1.515	3	-5.014e-03	5	1262.209	34	223	5
1193		3	max	.095	3	.591	22	1.337	5	4.894e-03	12	NC	39	NC	39
1194			min	-.064	15	-.209	34	-1.341	3	-4.846e-03	15	NC	1	NC	1
1195	M200	1	max	.674	22	.064	15	1.652	5	9.154e-03	5	NC	39	NC	14
1196			min	-.266	34	-.096	3	-1.655	3	-9.102e-03	3	886.429	36	193.438	5

Envelope Member Section Deflections Service (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1197		2	max	.673	22	.067	15	1.631	5	9.042e-03	5	NC	37	NC	14
1198			min	-.267	34	-.092	3	-1.634	3	-9.001e-03	3	1257.197	23	393.572	5
1199		3	max	.672	22	.07	15	1.611	5	8.93e-03	5	NC	38	NC	39
1200			min	-.268	34	-.086	3	-1.614	3	-8.9e-03	3	600.696	23	NC	1
1201	M201	1	max	.209	34	.064	15	1.341	3	9.008e-03	3	NC	39	NC	39
1202			min	-.591	22	-.095	3	-1.337	5	-8.988e-03	5	NC	1	NC	1
1203		2	max	.213	34	.023	36	1.533	3	9.914e-03	3	3481.329	36	NC	38
1204			min	-.583	22	-.312	16	-1.529	5	-9.849e-03	5	309.895	16	381.905	12
1205		3	max	.216	34	-.04	36	1.727	3	1.088e-02	3	NC	36	NC	38
1206			min	-.575	22	-.614	16	-1.724	5	-1.078e-02	5	136.955	16	189.439	15
1207	M202	1	max	.602	22	.064	15	1.373	5	8.939e-03	5	NC	39	NC	30
1208			min	-.216	34	-.095	3	-1.376	3	-8.959e-03	3	796.794	36	215.03	3
1209		2	max	.603	22	.067	15	1.354	5	8.862e-03	5	NC	37	NC	30
1210			min	-.215	34	-.092	3	-1.358	3	-8.936e-03	3	1534.476	23	436.757	3
1211		3	max	.603	22	.07	15	1.336	5	8.784e-03	5	NC	38	NC	39
1212			min	-.215	34	-.087	3	-1.339	3	-8.914e-03	3	678.338	23	NC	1
1213	M203	1	max	.297	34	.07	15	1.717	3	9.099e-03	3	NC	39	NC	39
1214			min	-.676	22	-.086	3	-1.714	5	-9.11e-03	5	NC	1	NC	1
1215		2	max	.298	34	.032	36	1.951	3	9.966e-03	3	5417.373	38	NC	28
1216			min	-.673	22	-.259	16	-1.949	5	-9.966e-03	5	367.944	16	329.784	5
1217		3	max	.299	34	-.036	36	2.202	3	1.091e-02	3	NC	36	NC	28
1218			min	-.671	22	-.586	16	-2.198	5	-1.09e-02	5	144.048	16	159.758	3
1219	M204	1	max	.184	34	.07	15	1.236	3	9.071e-03	3	NC	39	NC	39
1220			min	-.603	22	-.087	3	-1.235	5	-8.877e-03	5	NC	1	NC	1
1221		2	max	.183	34	.019	36	1.442	3	9.916e-03	3	3328.997	36	NC	38
1222			min	-.605	22	-.293	16	-1.438	5	-9.769e-03	5	339.671	16	400.066	12
1223		3	max	.183	34	-.044	36	1.648	3	1.085e-02	3	NC	36	NC	38
1224			min	-.606	22	-.624	16	-1.646	5	-1.074e-02	5	143.676	16	198.696	12
1225	M205	1	max	.024	36	.583	22	1.528	3	5.441e-03	15	NC	39	NC	39
1226			min	-.305	16	-.213	34	-1.524	5	-5.429e-03	12	NC	1	NC	1
1227		2	max	.024	36	.639	22	1.719	3	5.852e-03	5	NC	39	NC	39
1228			min	-.305	16	-.243	34	-1.715	5	-5.854e-03	3	3885.58	25	NC	1
1229		3	max	.024	36	.692	22	1.909	3	6.309e-03	5	NC	39	NC	39
1230			min	-.305	16	-.269	34	-1.907	5	-6.34e-03	3	1864.277	25	NC	1
1231	M206	1	max	.058	15	.684	22	1.714	3	5.717e-03	5	NC	39	NC	39
1232			min	-.108	3	-.273	34	-1.712	5	-5.688e-03	3	266.342	17	NC	1
1233		2	max	.058	15	.679	22	1.749	3	5.792e-03	5	NC	39	NC	36
1234			min	-.109	3	-.285	34	-1.747	5	-5.756e-03	3	536.098	17	213.272	3
1235		3	max	.057	15	.675	22	1.784	3	5.867e-03	5	NC	39	NC	36
1236			min	-.109	3	-.298	34	-1.782	5	-5.825e-03	3	5600.59	36	106.577	3
1237	M207	1	max	-.026	36	.698	22	2.09	3	6.288e-03	5	NC	39	NC	39
1238			min	-.542	16	-.266	34	-2.087	5	-6.325e-03	3	NC	1	NC	1
1239		2	max	-.026	36	.685	22	2.131	3	6.243e-03	5	NC	38	NC	39
1240			min	-.542	16	-.282	34	-2.127	5	-6.28e-03	3	304.037	16	388.9	17
1241		3	max	-.026	36	.671	22	2.171	3	6.198e-03	5	NC	38	NC	39
1242			min	-.542	16	-.299	34	-2.167	5	-6.235e-03	3	145.511	16	194.419	17
1243	M208	1	max	-.033	36	.606	22	1.62	3	4.854e-03	15	NC	39	NC	39
1244			min	-.574	16	-.183	34	-1.618	5	-4.841e-03	12	150.298	24	NC	1
1245		2	max	-.033	36	.59	22	1.66	3	4.999e-03	15	NC	39	NC	14
1246			min	-.574	16	-.2	34	-1.657	5	-4.99e-03	12	312.95	24	187.839	3
1247		3	max	-.033	36	.576	22	1.7	3	5.145e-03	15	NC	39	NC	14
1248			min	-.574	16	-.216	34	-1.697	5	-5.138e-03	12	NC	1	93.814	3
1249	M209	1	max	-.032	36	.576	22	1.698	3	5.153e-03	15	NC	39	NC	39
1250			min	-.571	16	-.216	34	-1.695	5	-5.146e-03	12	NC	1	NC	1
1251		2	max	-.033	36	.639	22	1.906	3	5.694e-03	5	NC	39	NC	39
1252			min	-.572	16	-.243	34	-1.903	5	-5.7e-03	3	2280.682	25	NC	1
1253		3	max	-.033	36	.699	22	2.114	3	6.276e-03	5	NC	39	NC	39

Envelope Member Section Deflections Service (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1254			min	-.573	16	-.266	34	-2.111	5	-6.312e-03	3	1112.832	25	NC	1
1255	M210	1	max	-.087	36	.17	34	2.051	5	6.592e-03	15	NC	39	NC	39
1256			min	-1.061	16	-.589	22	-2.054	3	-6.609e-03	12	7217.588	26	NC	1
1257		2	max	-.087	36	.195	34	2.267	5	7.117e-03	5	NC	39	NC	39
1258			min	-1.061	16	-.659	22	-2.271	3	-7.128e-03	3	NC	1	NC	1
1259		3	max	-.087	36	.217	34	2.483	5	7.698e-03	5	NC	39	NC	39
1260			min	-1.06	16	-.723	22	-2.488	3	-7.702e-03	3	NC	1	NC	1
1261	M211	1	max	-.234	36	.173	34	2.357	5	6.157e-03	15	NC	39	NC	39
1262			min	-1.523	16	-.58	22	-2.362	3	-6.17e-03	12	NC	1	NC	1
1263		2	max	-.233	36	.198	34	2.606	5	6.753e-03	5	NC	39	NC	39
1264			min	-1.523	16	-.655	22	-2.61	3	-6.762e-03	3	NC	1	NC	1
1265		3	max	-.233	36	.22	34	2.854	5	7.404e-03	5	NC	39	NC	39
1266			min	-1.523	16	-.723	22	-2.858	3	-7.41e-03	3	NC	1	NC	1
1267	M212	1	max	-.421	36	.222	34	2.624	15	4.802e-03	15	NC	39	NC	39
1268			min	-1.976	16	-.531	22	-2.629	12	-4.808e-03	12	NC	1	NC	1
1269		2	max	-.421	36	.248	34	2.91	5	5.46e-03	5	NC	39	NC	39
1270			min	-1.975	16	-.606	22	-2.915	3	-5.465e-03	3	NC	1	NC	1
1271		3	max	-.421	36	.272	34	3.198	5	6.164e-03	5	NC	39	NC	39
1272			min	-1.975	16	-.677	22	-3.203	3	-6.17e-03	3	NC	1	NC	1
1273	M213	1	max	-.586	36	.218	34	2.849	15	4.323e-03	15	NC	39	NC	39
1274			min	-2.372	16	-.532	22	-2.854	12	-4.343e-03	12	NC	1	NC	1
1275		2	max	-.586	36	.248	34	3.163	5	4.891e-03	5	NC	39	NC	39
1276			min	-2.372	16	-.605	22	-3.168	3	-4.908e-03	3	NC	1	NC	1
1277		3	max	-.585	36	.275	34	3.48	5	5.505e-03	5	NC	39	NC	39
1278			min	-2.372	16	-.674	22	-3.486	3	-5.52e-03	3	NC	1	NC	1
1279	M214	1	max	-.743	36	.268	34	3.019	15	3.04e-03	15	NC	39	NC	39
1280			min	-2.66	16	-.475	22	-3.024	12	-3.04e-03	12	NC	1	NC	1
1281		2	max	-.743	36	.303	34	3.362	5	3.503e-03	5	NC	39	NC	39
1282			min	-2.66	16	-.544	22	-3.367	3	-3.499e-03	3	NC	1	NC	1
1283		3	max	-.743	36	.335	34	3.71	5	3.995e-03	5	NC	39	NC	39
1284			min	-2.66	16	-.609	22	-3.715	3	-3.987e-03	3	5178.817	23	NC	1
1285	M215	1	max	-.865	36	.26	34	3.137	15	2.228e-03	15	NC	39	NC	39
1286			min	-2.864	16	-.483	22	-3.143	12	-2.232e-03	12	5341.458	33	NC	1
1287		2	max	-.865	36	.301	34	3.5	5	2.564e-03	5	NC	39	NC	39
1288			min	-2.864	16	-.546	22	-3.506	3	-2.569e-03	3	NC	1	NC	1
1289		3	max	-.865	36	.339	34	3.869	5	2.919e-03	5	NC	39	NC	39
1290			min	-2.863	16	-.605	22	-3.875	3	-2.926e-03	3	NC	1	NC	1
1291	M216	1	max	-.936	37	.328	34	3.195	15	8.123e-04	13	NC	39	NC	39
1292			min	-2.958	17	-.398	22	-3.201	12	-8.222e-04	6	NC	1	NC	1
1293		2	max	-.936	37	.376	34	3.569	5	9.109e-04	13	NC	39	NC	39
1294			min	-2.958	17	-.453	22	-3.575	3	-9.225e-04	6	NC	1	NC	1
1295		3	max	-.936	37	.42	34	3.951	5	1.009e-03	13	NC	39	NC	39
1296			min	-2.958	17	-.504	22	-3.956	3	-1.023e-03	6	NC	1	NC	1
1297	M217	1	max	.472	22	-.95	37	3.961	5	1.869e-02	15	NC	39	NC	39
1298			min	-.444	34	-2.964	17	-3.968	3	-1.882e-02	12	NC	1	NC	1
1299		2	max	.474	22	-.946	37	3.958	5	1.861e-02	15	NC	39	NC	39
1300			min	-.443	34	-2.964	17	-3.964	3	-1.874e-02	12	6499.159	17	NC	1
1301		3	max	.476	22	-.938	37	3.951	5	1.853e-02	15	NC	39	NC	39
1302			min	-.441	34	-2.957	17	-3.956	3	-1.866e-02	12	NC	1	NC	1
1303	M218	1	max	.521	22	-.935	37	3.951	5	1.851e-02	15	NC	39	NC	39
1304			min	-.407	34	-2.958	17	-3.956	3	-1.864e-02	12	NC	1	NC	1
1305		2	max	.525	22	-.913	37	3.917	5	1.834e-02	15	NC	38	NC	39
1306			min	-.404	34	-2.916	17	-3.922	3	-1.846e-02	12	3616.129	16	7002.821	5
1307		3	max	.529	22	-.883	37	3.869	5	1.817e-02	15	NC	39	NC	39
1308			min	-.401	34	-2.852	16	-3.875	3	-1.829e-02	12	NC	1	NC	1
1309	M219	1	max	.583	22	-.87	36	3.869	5	1.811e-02	15	NC	39	NC	39
1310			min	-.357	34	-2.86	16	-3.875	3	-1.822e-02	12	NC	1	NC	1

Envelope Member Section Deflections Service (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1311		2	max	.586	22	-.816	36	3.796	5	1.769e-02	15	8210.625	37	NC	39
1312			min	-.354	34	-2.777	16	-3.801	3	-1.78e-02	12	2529.707	17	7389.432	5
1313		3	max	.589	22	-.749	36	3.71	5	1.728e-02	15	NC	39	NC	39
1314			min	-.352	34	-2.657	16	-3.715	3	-1.738e-02	12	NC	1	NC	1
1315	M220	1	max	.638	22	-.735	36	3.71	5	1.717e-02	15	NC	39	NC	39
1316			min	-.31	34	-2.664	16	-3.715	3	-1.727e-02	12	NC	1	NC	1
1317		2	max	.641	22	-.667	36	3.601	5	1.674e-02	15	NC	39	NC	39
1318			min	-.307	34	-2.522	16	-3.606	3	-1.683e-02	12	8620.361	18	8326.297	3
1319		3	max	.642	22	-.597	36	3.48	5	1.613e-02	15	NC	39	NC	39
1320			min	-.305	34	-2.368	16	-3.486	3	-1.622e-02	12	NC	1	NC	1
1321	M221	1	max	.674	22	-.585	36	3.48	5	1.602e-02	15	NC	39	NC	39
1322			min	-.275	34	-2.372	16	-3.486	3	-1.611e-02	12	140.81	30	NC	1
1323		2	max	.675	22	-.502	36	3.343	5	1.541e-02	15	NC	39	NC	39
1324			min	-.274	34	-2.177	16	-3.348	3	-1.548e-02	12	282.341	30	NC	1
1325		3	max	.677	22	-.421	36	3.198	5	1.48e-02	15	NC	39	NC	39
1326			min	-.272	34	-1.975	16	-3.203	3	-1.486e-02	12	NC	1	NC	1
1327	M222	1	max	.719	22	-.401	36	3.198	5	1.456e-02	15	NC	39	NC	39
1328			min	-.228	34	-1.979	16	-3.203	3	-1.463e-02	12	NC	1	NC	1
1329		2	max	.719	22	-.324	36	3.03	5	1.379e-02	15	9679.09	37	NC	39
1330			min	-.227	34	-1.77	16	-3.035	3	-1.384e-02	12	2560.39	17	NC	1
1331		3	max	.717	22	-.237	36	2.854	5	1.3e-02	15	NC	39	NC	39
1332			min	-.227	34	-1.523	16	-2.858	3	-1.304e-02	12	NC	1	NC	1
1333	M223	1	max	.734	22	-.226	36	2.854	5	1.285e-02	15	328.254	36	NC	39
1334			min	-.207	34	-1.524	16	-2.858	3	-1.289e-02	12	103.7	16	NC	1
1335		2	max	.733	22	-.145	36	2.67	5	1.206e-02	15	731.002	36	NC	39
1336			min	-.206	34	-1.281	16	-2.675	3	-1.209e-02	12	217.74	16	NC	1
1337		3	max	.729	22	-.079	36	2.483	5	1.125e-02	5	NC	39	NC	39
1338			min	-.208	34	-1.061	16	-2.488	3	-1.127e-02	12	NC	1	NC	1
1339	M224	1	max	.741	22	-.065	36	2.483	5	1.104e-02	15	NC	36	NC	39
1340			min	-.19	34	-1.061	16	-2.488	3	-1.107e-02	12	95.977	16	NC	1
1341		2	max	.737	22	.005	36	2.303	5	1.029e-02	5	9646.31	36	NC	39
1342			min	-.191	34	-.823	16	-2.307	3	-1.03e-02	12	199.076	16	NC	1
1343		3	max	.733	22	.066	36	2.122	5	9.538e-03	5	NC	39	NC	39
1344			min	-.193	34	-.602	16	-2.126	3	-9.536e-03	3	NC	1	NC	1
1345	M225	1	max	.141	34	.045	36	1.727	3	9.745e-03	3	NC	39	NC	39
1346			min	-.614	22	-.622	16	-1.724	5	-9.642e-03	5	NC	1	NC	1
1347		2	max	.141	34	-.004	36	1.891	3	1.052e-02	3	952.101	36	NC	39
1348			min	-.611	22	-.827	16	-1.888	5	-1.042e-02	5	223.849	16	2020.693	22
1349		3	max	.142	34	-.069	36	2.054	3	1.128e-02	3	403.706	36	NC	39
1350			min	-.607	22	-1.061	16	-2.051	5	-1.12e-02	15	104.508	16	1009.706	22
1351	M226	1	max	.161	34	-.081	36	2.054	3	1.147e-02	3	NC	39	NC	39
1352			min	-.595	22	-1.061	16	-2.051	5	-1.138e-02	15	NC	1	NC	1
1353		2	max	.161	34	-.152	36	2.21	3	1.226e-02	12	NC	34	NC	39
1354			min	-.592	22	-1.293	16	-2.206	5	-1.219e-02	15	209.873	17	NC	1
1355		3	max	.16	34	-.227	36	2.362	3	1.3e-02	12	NC	34	NC	39
1356			min	-.591	22	-1.524	16	-2.357	5	-1.292e-02	15	104.562	17	NC	1
1357	M227	1	max	.184	34	-.239	36	2.362	3	1.315e-02	12	NC	39	NC	39
1358			min	-.571	22	-1.523	16	-2.357	5	-1.308e-02	15	NC	1	NC	1
1359		2	max	.184	34	-.327	36	2.499	3	1.388e-02	12	NC	36	NC	39
1360			min	-.57	22	-1.767	16	-2.495	5	-1.38e-02	15	2954.546	16	NC	1
1361		3	max	.183	34	-.407	36	2.629	12	1.458e-02	12	NC	39	NC	39
1362			min	-.569	22	-1.978	16	-2.624	15	-1.451e-02	15	NC	1	NC	1
1363	M228	1	max	.216	34	-.419	36	2.629	12	1.473e-02	12	NC	39	NC	39
1364			min	-.536	22	-1.976	16	-2.624	15	-1.465e-02	15	NC	1	NC	1
1365		2	max	.214	34	-.498	36	2.744	12	1.532e-02	12	NC	34	NC	39
1366			min	-.538	22	-2.175	16	-2.739	15	-1.524e-02	15	233.072	17	NC	1
1367		3	max	.212	34	-.584	36	2.854	12	1.591e-02	12	NC	34	NC	39

Envelope Member Section Deflections Service (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1368			min	-.539	22	-2.372	16	-2.849	15	-1.583e-02	15	116.181	17	NC	1
1369	M229	1	max	.248	34	-.594	36	2.854	12	1.602e-02	12	NC	39	NC	39
1370			min	-.5	22	-2.369	16	-2.849	15	-1.594e-02	15	NC	1	NC	1
1371		2	max	.246	34	-.669	36	2.943	12	1.658e-02	12	NC	38	NC	39
1372			min	-.501	22	-2.533	16	-2.938	15	-1.65e-02	15	2706.213	16	NC	1
1373		3	max	.242	34	-.736	36	3.024	12	1.697e-02	12	NC	39	NC	39
1374			min	-.504	22	-2.663	16	-3.019	15	-1.689e-02	15	NC	1	NC	1
1375	M230	1	max	.285	34	-.748	36	3.024	12	1.706e-02	12	NC	39	NC	39
1376			min	-.455	22	-2.658	16	-3.019	15	-1.697e-02	15	NC	1	NC	1
1377		2	max	.282	34	-.815	36	3.089	12	1.744e-02	12	8070.344	37	NC	39
1378			min	-.458	22	-2.776	16	-3.083	15	-1.736e-02	15	2825.701	17	9690.097	15
1379		3	max	.279	34	-.869	36	3.143	12	1.782e-02	12	NC	39	NC	39
1380			min	-.461	22	-2.862	16	-3.137	15	-1.774e-02	15	NC	1	NC	1
1381	M231	1	max	.323	34	-.88	36	3.143	12	1.787e-02	12	NC	39	NC	39
1382			min	-.406	22	-2.855	16	-3.137	15	-1.779e-02	15	NC	1	NC	1
1383		2	max	.32	34	-.911	37	3.176	12	1.799e-02	12	NC	39	NC	39
1384			min	-.41	22	-2.914	17	-3.17	15	-1.791e-02	15	3985.118	16	NC	1
1385		3	max	.316	34	-.936	37	3.201	12	1.811e-02	12	NC	39	NC	39
1386			min	-.414	22	-2.958	17	-3.195	15	-1.803e-02	15	NC	1	NC	1
1387	M232	1	max	.35	34	-.938	37	3.201	12	1.812e-02	12	NC	39	NC	39
1388			min	-.37	22	-2.957	17	-3.195	15	-1.804e-02	15	NC	1	NC	1
1389		2	max	.348	34	-.948	37	3.206	12	1.818e-02	12	NC	39	NC	39
1390			min	-.372	22	-2.968	17	-3.2	15	-1.81e-02	15	5238.903	17	NC	1
1391		3	max	.346	34	-.953	37	3.209	12	1.824e-02	12	NC	39	NC	39
1392			min	-.374	22	-2.971	17	-3.203	15	-1.815e-02	15	NC	1	NC	1
1393	M233	1	max	1.248	16	.241	34	2.737	3	7.681e-03	3	NC	39	NC	14
1394			min	.134	36	-.693	22	-2.732	5	-7.673e-03	5	125.913	16	83.63	12
1395		2	max	1.248	16	.222	34	2.691	3	7.715e-03	3	NC	39	NC	14
1396			min	.134	36	-.715	22	-2.686	5	-7.71e-03	5	263.905	16	167.404	12
1397		3	max	1.248	16	.204	34	2.645	3	7.749e-03	3	NC	39	NC	39
1398			min	.134	36	-.734	22	-2.641	5	-7.747e-03	5	NC	1	NC	1
1399	M234	1	max	1.265	16	.159	34	2.19	3	6.38e-03	12	NC	39	NC	39
1400			min	.142	36	-.594	22	-2.186	5	-6.363e-03	15	NC	1	NC	1
1401		2	max	1.265	16	.142	34	2.145	3	6.243e-03	12	NC	34	NC	39
1402			min	.142	36	-.614	22	-2.142	5	-6.226e-03	15	253.307	16	NC	1
1403		3	max	1.265	16	.124	34	2.101	3	6.106e-03	12	NC	34	NC	39
1404			min	.142	36	-.636	22	-2.097	5	-6.089e-03	15	122.784	16	NC	1
1405	M235	1	max	1.955	16	.279	34	3.291	3	6.422e-03	3	NC	38	NC	14
1406			min	.402	36	-.659	22	-3.286	5	-6.411e-03	5	137.66	16	68.109	12
1407		2	max	1.955	16	.263	34	3.238	3	6.459e-03	3	NC	38	NC	14
1408			min	.402	36	-.68	22	-3.232	5	-6.448e-03	5	284.139	16	136.337	12
1409		3	max	1.955	16	.248	34	3.184	3	6.495e-03	3	NC	39	NC	39
1410			min	.402	36	-.7	22	-3.179	5	-6.486e-03	5	NC	1	NC	1
1411	M236	1	max	1.961	16	.198	34	2.618	12	5.099e-03	12	NC	39	NC	39
1412			min	.406	36	-.554	22	-2.613	15	-5.09e-03	15	NC	1	NC	1
1413		2	max	1.961	16	.183	34	2.563	12	4.984e-03	12	NC	34	NC	39
1414			min	.406	36	-.576	22	-2.558	15	-4.974e-03	15	269.742	17	NC	1
1415		3	max	1.961	16	.166	34	2.509	12	4.868e-03	12	NC	34	NC	39
1416			min	.406	36	-.599	22	-2.504	15	-4.858e-03	15	130.396	17	NC	1
1417	M237	1	max	2.514	16	.329	34	3.729	3	4.66e-03	3	NC	38	NC	14
1418			min	.663	36	-.605	22	-3.722	5	-4.654e-03	5	188.913	16	59.427	12
1419		2	max	2.514	16	.317	34	3.664	3	4.692e-03	3	NC	38	NC	14
1420			min	.663	36	-.624	22	-3.658	5	-4.689e-03	5	390.312	16	118.938	12
1421		3	max	2.514	16	.306	34	3.6	3	4.723e-03	3	NC	39	NC	39
1422			min	.663	36	-.641	22	-3.594	5	-4.724e-03	5	NC	1	NC	1
1423	M238	1	max	2.525	16	.246	34	2.938	12	3.539e-03	12	NC	39	NC	39
1424			min	.665	36	-.501	22	-2.932	15	-3.53e-03	15	NC	1	NC	1

Envelope Member Section Deflections Service (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1425		2	max	2.525	16	.235	34	2.878	12	3.459e-03	12	NC	39	NC	39
1426			min	.665	36	-.519	22	-2.872	15	-3.451e-03	15	351.251	17	NC	1
1427		3	max	2.525	16	.224	34	2.817	12	3.38e-03	12	NC	39	NC	39
1428			min	.665	36	-.538	22	-2.812	15	-3.371e-03	15	171.211	17	NC	1
1429	M239	1	max	-.873	36	.292	34	3.002	15	1.725e-03	15	NC	39	NC	39
1430			min	-2.857	16	-.458	22	-3.008	12	-1.731e-03	12	309.512	19	NC	1
1431		2	max	-.873	36	.296	34	3.069	15	1.769e-03	15	NC	39	NC	39
1432			min	-2.857	16	-.445	22	-3.075	12	-1.773e-03	12	638.483	19	NC	1
1433		3	max	-.873	36	.301	34	3.135	15	1.813e-03	15	NC	39	NC	39
1434			min	-2.856	16	-.434	22	-3.142	12	-1.815e-03	12	NC	1	NC	1
1435	M240	1	max	-.877	36	.379	34	3.869	5	2.485e-03	5	NC	39	NC	39
1436			min	-2.857	16	-.556	22	-3.875	3	-2.489e-03	3	NC	1	NC	1
1437		2	max	-.877	36	.383	34	3.937	5	2.469e-03	5	NC	38	NC	14
1438			min	-2.857	16	-.545	22	-3.943	3	-2.473e-03	3	708.666	17	109.436	12
1439		3	max	-.877	36	.388	34	4.005	5	2.454e-03	5	NC	38	NC	14
1440			min	-2.857	16	-.534	22	-4.012	3	-2.458e-03	3	342.647	17	54.684	12
1441	M241	1	max	2.925	17	.43	18	4.639	3	1.635e-03	3	NC	38	NC	14
1442			min	.918	37	-.429	22	-4.629	5	-1.637e-03	5	489.814	17	52.382	12
1443		2	max	2.925	17	.42	34	4.352	3	1.635e-03	3	NC	11	NC	14
1444			min	.918	37	-.466	22	-4.343	5	-1.637e-03	5	811.541	22	105.739	12
1445		3	max	2.925	17	.412	34	4.07	3	1.635e-03	3	NC	39	NC	39
1446			min	.918	37	-.503	22	-4.063	5	-1.637e-03	5	402.779	22	NC	1
1447	M242	1	max	2.8	16	.386	34	4.481	3	3.809e-03	3	NC	38	NC	14
1448			min	.814	36	-.483	22	-4.471	5	-3.795e-03	5	246.969	16	54.525	12
1449		2	max	2.8	16	.356	34	4.216	3	3.809e-03	3	1141.59	39	NC	14
1450			min	.814	36	-.545	22	-4.208	5	-3.795e-03	5	431.56	19	110.027	12
1451		3	max	2.8	16	.326	34	3.955	3	3.809e-03	3	NC	39	NC	39
1452			min	.814	36	-.608	22	-3.948	5	-3.795e-03	5	215.318	19	NC	1
1453	M243	1	max	2.554	16	.383	34	4.014	3	4.586e-03	3	NC	38	NC	14
1454			min	.685	36	-.514	22	-4.006	5	-4.582e-03	5	166.534	16	58.847	12
1455		2	max	2.554	16	.358	34	3.887	3	4.586e-03	3	NC	33	NC	14
1456			min	.685	36	-.556	22	-3.88	5	-4.582e-03	5	314.366	19	117.694	12
1457		3	max	2.554	16	.334	34	3.76	3	4.586e-03	3	NC	39	NC	39
1458			min	.685	36	-.599	22	-3.753	5	-4.582e-03	5	157.179	19	NC	1
1459	M244	1	max	.228	34	.062	36	2.202	3	9.611e-03	3	NC	39	NC	39
1460			min	-.704	22	-.609	16	-2.198	5	-9.602e-03	5	NC	1	NC	1
1461		2	max	.228	34	-.024	36	2.471	3	1.073e-02	3	742.74	36	NC	39
1462			min	-.703	22	-.924	16	-2.467	5	-1.071e-02	5	202.534	16	NC	1
1463		3	max	.228	34	-.124	36	2.737	3	1.186e-02	12	343.694	36	NC	39
1464			min	-.703	22	-1.249	16	-2.732	5	-1.182e-02	5	99.622	16	NC	1
1465	M245	1	max	.257	34	-.144	36	2.737	3	1.214e-02	3	NC	39	NC	39
1466			min	-.681	22	-1.246	16	-2.732	5	-1.21e-02	5	NC	1	NC	1
1467		2	max	.256	34	-.266	36	3.021	3	1.336e-02	12	NC	39	NC	39
1468			min	-.681	22	-1.614	16	-3.016	5	-1.331e-02	15	493.335	38	NC	1
1469		3	max	.254	34	-.391	36	3.291	3	1.458e-02	12	NC	39	NC	39
1470			min	-.682	22	-1.958	16	-3.286	5	-1.452e-02	15	245.768	38	NC	1
1471	M246	1	max	.303	34	-.413	36	3.291	3	1.484e-02	12	NC	39	NC	39
1472			min	-.635	22	-1.952	16	-3.286	5	-1.477e-02	15	NC	1	NC	1
1473		2	max	.301	34	-.536	36	3.52	3	1.58e-02	12	NC	38	NC	39
1474			min	-.637	22	-2.258	16	-3.514	5	-1.572e-02	15	3296.501	16	7069.458	5
1475		3	max	.299	34	-.653	36	3.729	3	1.676e-02	12	NC	39	NC	39
1476			min	-.638	22	-2.518	16	-3.722	5	-1.666e-02	15	NC	1	NC	1
1477	M247	1	max	.332	34	-.664	36	3.729	3	1.686e-02	12	NC	39	NC	39
1478			min	-.602	22	-2.514	16	-3.722	5	-1.677e-02	15	NC	1	NC	1
1479		2	max	.331	34	-.674	36	3.744	3	1.692e-02	12	NC	39	NC	39
1480			min	-.602	22	-2.534	16	-3.738	5	-1.683e-02	15	NC	1	NC	1
1481		3	max	.331	34	-.684	36	3.76	3	1.698e-02	12	NC	39	NC	39

Envelope Member Section Deflections Service (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1482			min	-.602	22	-2.554	16	-3.753	5	-1.689e-02	15	NC	1	NC	1
1483	M248	1	max	.354	34	-.691	36	3.76	3	1.705e-02	12	NC	39	NC	39
1484			min	-.577	22	-2.55	16	-3.753	5	-1.696e-02	15	NC	1	NC	1
1485		2	max	.352	34	-.76	36	3.862	3	1.75e-02	12	NC	39	NC	39
1486			min	-.578	22	-2.685	16	-3.856	5	-1.74e-02	15	4019.465	16	9688.333	5
1487		3	max	.35	34	-.822	36	3.955	3	1.795e-02	12	NC	39	NC	39
1488			min	-.579	22	-2.796	16	-3.948	5	-1.785e-02	15	NC	1	NC	1
1489	M249	1	max	.381	34	-.831	36	3.955	3	1.801e-02	12	NC	39	NC	39
1490			min	-.543	22	-2.791	16	-3.948	5	-1.791e-02	15	NC	1	NC	1
1491		2	max	.38	34	-.854	36	3.985	3	1.815e-02	12	NC	39	NC	39
1492			min	-.544	22	-2.827	16	-3.978	5	-1.805e-02	15	7066.744	16	NC	1
1493		3	max	.379	34	-.874	36	4.012	3	1.829e-02	12	NC	39	NC	39
1494			min	-.544	22	-2.858	16	-4.005	5	-1.818e-02	15	NC	1	NC	1
1495	M250	1	max	.401	34	-.881	36	4.012	3	1.832e-02	12	NC	39	NC	39
1496			min	-.518	22	-2.854	16	-4.005	5	-1.822e-02	15	NC	1	NC	1
1497		2	max	.4	34	-.901	37	4.043	3	1.846e-02	12	NC	39	NC	39
1498			min	-.519	22	-2.892	17	-4.036	5	-1.835e-02	15	5531.168	16	NC	1
1499		3	max	.399	34	-.917	37	4.07	3	1.86e-02	12	NC	39	NC	39
1500			min	-.52	22	-2.925	17	-4.063	5	-1.849e-02	15	NC	1	NC	1
1501	M251	1	max	.433	34	-.92	37	4.07	3	1.863e-02	12	NC	39	NC	39
1502			min	-.476	22	-2.924	17	-4.063	5	-1.852e-02	15	NC	1	NC	1
1503		2	max	.431	34	-.939	37	4.096	3	1.876e-02	12	NC	37	NC	39
1504			min	-.478	22	-2.958	17	-4.089	5	-1.864e-02	15	3505.943	17	6623.198	5
1505		3	max	.429	34	-.949	37	4.108	3	1.888e-02	12	NC	39	NC	39
1506			min	-.48	22	-2.965	17	-4.101	5	-1.877e-02	15	NC	1	NC	1
1507	M252	1	max	.109	34	.04	36	1.648	3	9.811e-03	3	NC	39	NC	39
1508			min	-.645	22	-.622	16	-1.646	5	-9.703e-03	5	NC	1	NC	1
1509		2	max	.109	34	-.038	36	1.878	3	1.094e-02	3	860.425	36	NC	39
1510			min	-.646	22	-.935	16	-1.875	5	-1.085e-02	5	215.369	16	NC	1
1511		3	max	.109	34	-.134	36	2.101	3	1.208e-02	3	388.745	36	NC	39
1512			min	-.646	22	-1.264	16	-2.097	5	-1.2e-02	15	105.062	16	NC	1
1513	M253	1	max	.14	34	-.151	36	2.101	3	1.231e-02	3	NC	39	NC	39
1514			min	-.623	22	-1.266	16	-2.097	5	-1.223e-02	15	NC	1	NC	1
1515		2	max	.141	34	-.27	36	2.311	3	1.342e-02	12	NC	39	NC	39
1516			min	-.623	22	-1.621	16	-2.307	5	-1.335e-02	15	263.485	30	NC	1
1517		3	max	.142	34	-.397	36	2.509	12	1.455e-02	12	NC	39	NC	39
1518			min	-.622	22	-1.962	16	-2.504	15	-1.447e-02	15	131.117	30	NC	1
1519	M254	1	max	.19	34	-.415	36	2.509	12	1.474e-02	12	NC	39	NC	39
1520			min	-.575	22	-1.96	16	-2.504	15	-1.466e-02	15	NC	1	NC	1
1521		2	max	.192	34	-.54	36	2.67	12	1.564e-02	12	NC	38	NC	39
1522			min	-.574	22	-2.267	16	-2.666	15	-1.556e-02	15	3117.481	16	9295.726	15
1523		3	max	.193	34	-.656	36	2.817	12	1.653e-02	12	NC	39	NC	39
1524			min	-.572	22	-2.527	16	-2.812	15	-1.645e-02	15	NC	1	NC	1
1525	M255	1	max	.254	34	-.674	36	2.817	12	1.667e-02	12	NC	39	NC	39
1526			min	-.504	22	-2.522	16	-2.812	15	-1.659e-02	15	NC	1	NC	1
1527		2	max	.256	34	-.777	36	2.921	12	1.727e-02	12	9363.694	36	NC	39
1528			min	-.502	22	-2.722	16	-2.916	15	-1.718e-02	15	2364.02	16	8382.977	15
1529		3	max	.258	34	-.865	36	3.008	12	1.787e-02	12	NC	39	NC	39
1530			min	-.499	22	-2.861	16	-3.002	15	-1.778e-02	15	NC	1	NC	1
1531	M256	1	max	.325	34	-.881	36	3.008	12	1.794e-02	12	NC	39	NC	39
1532			min	-.417	22	-2.851	16	-3.002	15	-1.785e-02	15	NC	1	NC	1
1533		2	max	.327	34	-.928	37	3.049	12	1.812e-02	12	6524.691	36	NC	39
1534			min	-.413	22	-2.943	17	-3.044	15	-1.803e-02	15	2077.293	16	8006.035	15
1535		3	max	.329	34	-.952	37	3.073	12	1.829e-02	12	NC	39	NC	39
1536			min	-.41	22	-2.972	17	-3.067	15	-1.82e-02	15	NC	1	NC	1
1537	M257	1	max	1.658	3	.07	12	.665	22	1.133e-03	36	NC	39	NC	39
1538			min	-1.656	5	-.086	5	-.27	34	-3.114e-03	16	223.899	35	1707.915	16

Envelope Member Section Deflections Service (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1539		2	max	1.658	3	.022	36	.672	22	1.156e-03	36	NC	39	NC	38
1540			min	-1.656	5	-.037	16	-.274	34	-3.132e-03	16	448.94	35	1069.063	39
1541		3	max	1.658	3	.07	15	.676	22	1.147e-03	36	NC	39	NC	38
1542			min	-1.656	5	-.086	3	-.28	34	-3.124e-03	16	225.107	37	519.856	39
1543	M258	1	max	1.295	3	.07	12	.591	22	9.026e-04	36	NC	38	NC	38
1544			min	-1.293	5	-.086	5	-.193	34	-3.451e-03	16	113.654	5	244.921	15
1545		2	max	1.295	3	.023	36	.594	22	7.967e-04	36	NC	38	NC	34
1546			min	-1.293	5	-.037	16	-.198	34	-3.621e-03	16	230.796	3	503.574	12
1547		3	max	1.295	3	.07	15	.601	22	8.85e-04	36	NC	39	NC	39
1548			min	-1.293	5	-.087	3	-.203	34	-3.429e-03	16	113.419	3	244.461	12
1549	M259	1	max	1.659	3	.071	12	.337	36	2.772e-03	22	NC	39	NC	39
1550			min	-1.657	5	-.086	5	-.735	16	-8.036e-04	34	222.928	33	1702.353	22
1551		2	max	1.659	3	.019	34	.342	36	2.788e-03	22	NC	35	NC	39
1552			min	-1.657	5	-.035	22	-.742	16	-8.238e-04	34	446.735	33	1053.446	37
1553		3	max	1.659	3	.07	15	.347	36	2.777e-03	22	NC	37	NC	39
1554			min	-1.657	5	-.086	3	-.746	16	-8.09e-04	34	224.229	39	515.929	37
1555	M260	1	max	1.295	3	.07	12	.261	36	3.009e-03	22	NC	39	NC	38
1556			min	-1.293	5	-.087	5	-.662	16	-4.704e-04	34	113.472	5	245.053	15
1557		2	max	1.295	3	.02	34	.266	36	3.132e-03	22	NC	39	NC	38
1558			min	-1.293	5	-.034	22	-.663	16	-3.141e-04	34	230.425	3	503.924	12
1559		3	max	1.295	3	.07	15	.27	36	2.987e-03	22	NC	39	NC	39
1560			min	-1.293	5	-.087	3	-.671	16	-4.499e-04	34	113.236	3	244.587	12
1561	M261	1	max	1.783	3	.058	12	.352	36	3.848e-03	22	NC	39	NC	39
1562			min	-1.78	5	-.109	5	-.732	16	3.71e-04	34	NC	1	NC	1
1563		2	max	1.783	3	.023	34	.357	36	3.856e-03	22	NC	39	NC	39
1564			min	-1.78	5	-.074	22	-.737	16	3.622e-04	34	NC	1	NC	1
1565		3	max	1.783	3	.058	15	.362	36	3.864e-03	22	NC	39	NC	39
1566			min	-1.78	5	-.11	3	-.742	16	3.534e-04	34	NC	1	NC	1
1567	M262	1	max	2.157	3	-.123	12	.352	36	7.783e-03	17	NC	39	NC	39
1568			min	-2.153	5	-.441	5	-.727	16	3.153e-03	37	NC	1	NC	1
1569		2	max	2.157	3	-.136	34	.357	36	7.841e-03	17	NC	39	NC	39
1570			min	-2.153	5	-.43	22	-.732	16	3.092e-03	37	NC	1	NC	1
1571		3	max	2.157	3	-.102	39	.362	36	7.9e-03	17	NC	39	NC	39
1572			min	-2.153	5	-.465	19	-.736	16	3.03e-03	37	NC	1	NC	1
1573	M263	1	max	2.721	3	-.421	12	.396	36	9.384e-03	17	NC	39	NC	39
1574			min	-2.717	5	-1.004	5	-.623	16	3.573e-03	37	NC	1	NC	1
1575		2	max	2.721	3	-.407	39	.4	36	9.497e-03	17	NC	39	NC	39
1576			min	-2.717	5	-1.026	19	-.627	16	3.454e-03	37	NC	1	NC	1
1577		3	max	2.721	3	-.355	39	.404	36	9.611e-03	17	NC	39	NC	39
1578			min	-2.717	5	-1.078	19	-.631	16	3.336e-03	37	NC	1	NC	1
1579	M264	1	max	3.279	3	-.726	37	.432	38	8.927e-03	16	NC	39	NC	39
1580			min	-3.273	5	-1.658	17	-.527	18	2.926e-03	36	NC	1	NC	1
1581		2	max	3.279	3	-.665	37	.434	36	8.948e-03	16	NC	39	NC	39
1582			min	-3.273	5	-1.718	17	-.529	16	2.903e-03	36	NC	1	NC	1
1583		3	max	3.279	3	-.605	37	.437	36	8.969e-03	16	NC	39	NC	39
1584			min	-3.273	5	-1.778	17	-.532	16	2.88e-03	36	NC	1	NC	1
1585	M265	1	max	3.72	3	-.932	37	.451	38	7.298e-03	16	NC	39	NC	39
1586			min	-3.714	5	-2.255	17	-.471	18	1.837e-03	36	NC	1	NC	1
1587		2	max	3.72	3	-.866	37	.449	36	7.316e-03	16	NC	39	NC	39
1588			min	-3.714	5	-2.32	17	-.471	16	1.818e-03	36	NC	1	NC	1
1589		3	max	3.72	3	-.799	37	.451	36	7.334e-03	16	NC	39	NC	39
1590			min	-3.714	5	-2.386	17	-.473	16	1.799e-03	36	NC	1	NC	1
1591	M266	1	max	4.007	3	-1.058	36	.458	22	4.377e-03	16	NC	39	NC	39
1592			min	-4	5	-2.679	16	-.45	18	5.417e-04	36	NC	1	NC	1
1593		2	max	4.007	3	-.993	37	.457	22	4.386e-03	16	NC	39	NC	39
1594			min	-4	5	-2.74	17	-.449	16	5.326e-04	36	NC	1	NC	1
1595		3	max	4.007	3	-.923	37	.457	20	4.394e-03	16	NC	39	NC	39

Envelope Member Section Deflections Service (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1596			min	-4	5	-2.809	17	-.45	16	5.234e-04	36	NC	1	NC	1
1597	M267	1	max	4.012	3	-.938	36	.45	20	-1.339e-03	39	NC	39	NC	39
1598			min	-4.005	5	-2.799	16	-.46	16	-3.571e-03	19	NC	1	NC	1
1599		2	max	4.012	3	-.917	36	.45	22	-1.309e-03	39	NC	39	NC	39
1600			min	-4.005	5	-2.82	16	-.459	16	-3.599e-03	19	NC	1	NC	1
1601		3	max	4.012	3	-.887	37	.45	22	-1.279e-03	39	NC	39	NC	39
1602			min	-4.005	5	-2.845	17	-.459	18	-3.626e-03	19	NC	1	NC	1
1603	M268	1	max	4.108	3	-1.046	36	.452	22	8.063e-04	16	NC	39	NC	39
1604			min	-4.101	5	-2.874	16	-.453	16	-8.057e-04	22	NC	1	NC	1
1605		2	max	4.108	3	-1.022	37	.452	22	8.059e-04	16	NC	39	NC	39
1606			min	-4.101	5	-2.895	16	-.453	16	-8.056e-04	22	NC	1	NC	1
1607		3	max	4.108	3	-.951	37	.452	22	8.061e-04	18	NC	39	NC	39
1608			min	-4.101	5	-2.964	17	-.453	16	-8.056e-04	22	NC	1	NC	1
1609	M269	1	max	3.729	3	-.742	36	.467	20	-2.613e-03	37	NC	39	NC	39
1610			min	-3.722	5	-2.447	16	-.449	32	-6.506e-03	17	NC	1	NC	1
1611		2	max	3.729	3	-.722	36	.467	22	-2.549e-03	37	NC	39	NC	39
1612			min	-3.722	5	-2.467	16	-.447	34	-6.566e-03	17	NC	1	NC	1
1613		3	max	3.729	3	-.702	36	.469	22	-2.485e-03	37	NC	39	NC	39
1614			min	-3.722	5	-2.486	16	-.449	34	-6.626e-03	17	NC	1	NC	1
1615	M270	1	max	3.291	3	-.499	36	.51	20	-3.221e-03	37	NC	39	NC	39
1616			min	-3.286	5	-1.886	16	-.417	32	-8.62e-03	17	NC	1	NC	1
1617		2	max	3.291	3	-.481	36	.512	22	-3.146e-03	37	NC	39	NC	39
1618			min	-3.286	5	-1.904	16	-.419	34	-8.69e-03	17	NC	1	NC	1
1619		3	max	3.291	3	-.463	36	.515	22	-3.071e-03	37	NC	39	NC	39
1620			min	-3.286	5	-1.922	16	-.422	34	-8.759e-03	17	NC	1	NC	1
1621	M271	1	max	2.737	3	-.25	36	.583	22	-3.183e-03	36	NC	39	NC	39
1622			min	-2.732	5	-1.185	16	-.359	34	-9.78e-03	16	NC	1	NC	1
1623		2	max	2.737	3	-.234	36	.587	22	-3.147e-03	36	NC	39	NC	39
1624			min	-2.732	5	-1.201	16	-.362	34	-9.813e-03	16	NC	1	NC	1
1625		3	max	2.737	3	-.219	36	.591	22	-3.112e-03	36	NC	39	NC	39
1626			min	-2.732	5	-1.217	16	-.366	34	-9.847e-03	16	NC	1	NC	1
1627	M272	1	max	2.171	3	-.051	36	.661	22	-2.105e-03	36	NC	39	NC	39
1628			min	-2.167	5	-.516	16	-.29	34	-8.839e-03	16	NC	1	NC	1
1629		2	max	2.171	3	-.038	36	.666	22	-2.085e-03	36	NC	39	NC	39
1630			min	-2.167	5	-.529	16	-.294	34	-8.858e-03	16	NC	1	NC	1
1631		3	max	2.171	3	-.026	36	.671	22	-2.066e-03	36	NC	39	NC	39
1632			min	-2.167	5	-.542	16	-.299	34	-8.876e-03	16	NC	1	NC	1
1633	M273	1	max	1.62	3	-.059	36	.598	22	-1.894e-03	36	NC	39	NC	39
1634			min	-1.618	5	-.548	16	-.174	34	-8.355e-03	16	NC	1	NC	1
1635		2	max	1.62	3	-.046	36	.602	22	-1.868e-03	36	NC	39	NC	39
1636			min	-1.618	5	-.561	16	-.178	34	-8.38e-03	16	NC	1	NC	1
1637		3	max	1.62	3	-.033	36	.606	22	-1.841e-03	36	NC	39	NC	39
1638			min	-1.618	5	-.574	16	-.183	34	-8.405e-03	16	NC	1	NC	1
1639	M274	1	max	2.101	3	-.247	36	.525	22	-3.068e-03	36	NC	39	NC	39
1640			min	-2.097	5	-1.224	16	-.245	34	-9.553e-03	16	NC	1	NC	1
1641		2	max	2.101	3	-.231	36	.528	22	-3.028e-03	36	NC	39	NC	39
1642			min	-2.097	5	-1.24	16	-.249	34	-9.592e-03	16	NC	1	NC	1
1643		3	max	2.101	3	-.215	36	.531	22	-2.987e-03	36	NC	39	NC	39
1644			min	-2.097	5	-1.256	16	-.252	34	-9.631e-03	16	NC	1	NC	1
1645	M275	1	max	2.509	12	-.495	36	.45	22	-3.367e-03	37	NC	39	NC	39
1646			min	-2.504	15	-1.908	16	-.305	34	-8.873e-03	17	NC	1	NC	1
1647		2	max	2.509	12	-.476	36	.452	22	-3.268e-03	37	NC	39	NC	39
1648			min	-2.504	15	-1.926	16	-.308	34	-8.966e-03	17	NC	1	NC	1
1649		3	max	2.509	12	-.458	36	.455	22	-3.169e-03	37	NC	39	NC	39
1650			min	-2.504	15	-1.944	16	-.311	34	-9.059e-03	17	NC	1	NC	1
1651	M276	1	max	2.817	12	-.738	36	.398	20	-2.667e-03	37	NC	39	NC	39
1652			min	-2.812	15	-2.468	16	-.343	32	-6.599e-03	17	NC	1	NC	1

Envelope Member Section Deflections Service (Continued)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
1653		2	max	2.817	12	-.718	36	.4	22	-2.594e-03	37	NC	39	NC	39
1654			min	-2.812	15	-2.488	16	-.344	34	-6.668e-03	17	NC	1	NC	1
1655		3	max	2.817	12	-.698	36	.402	22	-2.52e-03	37	NC	39	NC	39
1656			min	-2.812	15	-2.507	16	-.345	34	-6.738e-03	17	NC	1	NC	1
1657	M277	1	max	3.008	12	-.931	36	.374	20	-1.365e-03	39	NC	39	NC	39
1658			min	-3.002	15	-2.803	16	-.359	32	-3.682e-03	19	NC	1	NC	1
1659		2	max	3.008	12	-.91	36	.374	22	-1.328e-03	39	NC	39	NC	39
1660			min	-3.002	15	-2.824	16	-.359	34	-3.718e-03	19	NC	1	NC	1
1661		3	max	3.008	12	-.884	37	.375	22	-1.29e-03	39	NC	39	NC	39
1662			min	-3.002	15	-2.845	16	-.359	34	-3.753e-03	19	NC	1	NC	1
1663	M278	1	max	3.073	12	-1.048	36	.365	22	9.249e-04	32	NC	39	NC	39
1664			min	-3.067	15	-2.881	16	-.365	16	-9.315e-04	22	NC	1	NC	1
1665		2	max	3.073	12	-1.025	37	.365	22	9.248e-04	34	NC	39	NC	39
1666			min	-3.067	15	-2.902	16	-.365	16	-9.315e-04	22	NC	1	NC	1
1667		3	max	3.073	12	-.954	37	.365	22	9.252e-04	34	NC	39	NC	39
1668			min	-3.067	15	-2.97	17	-.365	16	-9.316e-04	22	NC	1	NC	1
1669	M279	1	max	3.008	12	-1.063	36	.361	38	4.56e-03	16	NC	39	NC	39
1670			min	-3.002	15	-2.67	16	-.377	18	4.961e-04	36	NC	1	NC	1
1671		2	max	3.008	12	-.994	37	.36	36	4.571e-03	16	NC	39	NC	39
1672			min	-3.002	15	-2.736	17	-.377	16	4.846e-04	36	NC	1	NC	1
1673		3	max	3.008	12	-.924	37	.361	36	4.581e-03	16	NC	39	NC	39
1674			min	-3.002	15	-2.805	17	-.378	16	4.73e-04	36	NC	1	NC	1
1675	M280	1	max	2.817	12	-.939	37	.351	38	7.426e-03	16	NC	39	NC	39
1676			min	-2.812	15	-2.265	17	-.409	18	1.856e-03	36	NC	1	NC	1
1677		2	max	2.817	12	-.873	37	.352	36	7.447e-03	16	NC	39	NC	39
1678			min	-2.811	15	-2.33	17	-.41	16	1.833e-03	36	NC	1	NC	1
1679		3	max	2.817	12	-.807	37	.354	36	7.468e-03	16	NC	39	NC	39
1680			min	-2.811	15	-2.395	17	-.412	16	1.811e-03	36	NC	1	NC	1
1681	M281	1	max	2.508	12	-.733	37	.329	36	9.269e-03	16	NC	39	NC	39
1682			min	-2.504	15	-1.668	17	-.475	16	2.99e-03	36	NC	1	NC	1
1683		2	max	2.508	12	-.673	37	.332	36	9.297e-03	16	NC	39	NC	39
1684			min	-2.504	15	-1.727	17	-.478	16	2.96e-03	36	NC	1	NC	1
1685		3	max	2.508	12	-.613	37	.334	36	9.325e-03	16	NC	39	NC	39
1686			min	-2.504	15	-1.787	17	-.48	16	2.93e-03	36	NC	1	NC	1
1687	M282	1	max	2.101	3	-.433	12	.292	36	9.105e-03	17	NC	39	NC	39
1688			min	-2.097	5	-1.027	5	-.574	16	3.509e-03	37	NC	1	NC	1
1689		2	max	2.101	3	-.414	39	.296	36	9.236e-03	17	NC	39	NC	39
1690			min	-2.097	5	-1.055	19	-.577	16	3.374e-03	37	NC	1	NC	1
1691		3	max	2.101	3	-.362	39	.299	36	9.366e-03	17	NC	39	NC	39
1692			min	-2.097	5	-1.107	19	-.581	16	3.239e-03	37	NC	1	NC	1
1693	M283	1	max	1.62	3	-.138	12	.246	36	7.234e-03	17	NC	39	NC	39
1694			min	-1.618	5	-.465	5	-.672	16	3.006e-03	37	NC	1	NC	1
1695		2	max	1.62	3	-.15	34	.25	36	7.317e-03	17	NC	39	NC	39
1696			min	-1.618	5	-.455	22	-.677	16	2.92e-03	37	NC	1	NC	1
1697		3	max	1.62	3	-.113	39	.255	36	7.401e-03	17	NC	39	NC	39
1698			min	-1.618	5	-.493	19	-.681	16	2.833e-03	37	NC	1	NC	1

Envelope Member Section Forces

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
1	M1	1	max	11.867	16	6.022	16	3.801	5	2.931	5	88.76	3	72.019	16
2			min	3.736	36	-.935	36	-3.801	3	-2.931	3	-88.657	5	-18.905	36
3		2	max	10.556	16	5.766	16	3.696	5	2.931	5	38.464	3	-2.467	34
4			min	3.268	36	-.679	36	-3.696	3	-2.931	3	-38.362	5	-12.689	22
5		3	max	0	39	0	16	.002	5	0	39	0	39	0	39
6			min	0	1	0	22	-.002	3	0	1	0	1	0	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
7	M2	1	max	-.397	36	.811	16	2.5	12	1.321	3	0	39	0	39
8			min	-10.465	16	-.657	36	-2.486	15	-1.306	5	0	1	0	1
9		2	max	-.397	36	.811	16	2.5	12	1.321	3	1.042	12	.274	36
10			min	-10.465	16	-.657	36	-2.486	15	-1.306	5	-1.036	15	-.338	16
11		3	max	-.397	36	.811	16	2.5	12	1.321	3	2.083	12	.547	36
12			min	-10.465	16	-.657	36	-2.486	15	-1.306	5	-2.072	15	-.676	16
13	M3	1	max	0	39	0	22	0	5	0	39	0	39	0	39
14			min	0	1	0	34	0	3	0	1	0	1	0	1
15		2	max	-.289	15	-2.384	36	.061	12	.807	15	-.016	37	.653	16
16			min	-2.719	3	-12.59	16	-.388	5	-1.429	3	-.266	17	.032	36
17		3	max	0	39	0	34	0	3	0	39	0	39	0	39
18			min	0	1	0	19	0	5	0	1	0	1	0	1
19	M4	1	max	-.397	36	.657	36	2.472	12	1.321	3	0	35	0	36
20			min	-10.465	16	-.838	16	-2.459	15	-1.306	5	0	37	0	34
21		2	max	-.397	36	.657	36	2.472	12	1.321	3	.464	12	.157	16
22			min	-10.465	16	-.838	16	-2.459	15	-1.306	5	-.461	15	-.123	36
23		3	max	-.397	36	.657	36	2.472	12	1.321	3	.927	12	.314	16
24			min	-10.465	16	-.838	16	-2.459	15	-1.306	5	-.922	15	-.246	36
25	M5	1	max	15.926	16	-2.142	36	1.043	3	5.345	3	0	39	0	39
26			min	-.02	36	-10.028	16	-1.056	5	-5.303	5	0	1	0	1
27		2	max	15.926	16	-2.142	36	1.043	3	5.345	3	.435	3	4.179	16
28			min	-.02	36	-10.028	16	-1.056	5	-5.303	5	-.44	5	.893	36
29		3	max	15.926	16	-2.142	36	1.043	3	5.345	3	.869	3	8.357	16
30			min	-.02	36	-10.028	16	-1.056	5	-5.303	5	-.88	5	1.785	36
31	M6	1	max	15.926	16	10.101	16	1.1	3	5.345	3	0	5	0	34
32			min	-.02	36	2.142	36	-1.113	5	-5.303	5	0	12	0	18
33		2	max	15.926	16	10.101	16	1.1	3	5.345	3	.206	3	-.402	36
34			min	-.02	36	2.142	36	-1.113	5	-5.303	5	-.209	5	-1.894	16
35		3	max	15.926	16	10.101	16	1.1	3	5.345	3	.413	3	-.803	36
36			min	-.02	36	2.142	36	-1.113	5	-5.303	5	-.418	5	-3.788	16
37	M7	1	max	21.857	16	12.132	16	.007	6	.138	12	.26	5	5.749	16
38			min	3.966	36	2.556	36	-.04	13	-.15	5	-.255	3	1.094	36
39		2	max	23.817	16	.165	19	.078	3	.139	12	.032	5	.781	16
40			min	3.681	36	.046	39	-.081	5	-.136	15	-.034	3	.125	36
41		3	max	12.413	16	2.72	16	.027	12	.174	12	.046	5	1.052	16
42			min	.648	36	.272	36	-.041	15	-.172	15	-.047	3	.318	36
43	M8	1	max	12.078	16	-3.958	36	.056	13	.26	5	.15	5	-1.094	36
44			min	2.539	36	-21.902	16	-.034	6	-.255	3	-.138	12	-5.749	16
45		2	max	5.074	16	-.183	36	.023	12	.067	5	.006	37	.017	12
46			min	1.161	36	-.744	16	-.043	15	-.087	3	-.019	17	-.186	5
47		3	max	-.218	36	-2.972	36	.17	3	.212	12	.122	12	2.656	16
48			min	-.933	16	-14.323	16	-.204	5	-.191	15	-.123	15	.588	36
49	M9	1	max	21.138	16	-1.401	36	.079	12	.081	3	.172	12	-.497	36
50			min	3.775	36	-7.023	16	-.153	5	-.08	5	-.193	5	-2.647	16
51		2	max	21.139	16	-1.402	36	.079	12	.081	3	.198	12	-.03	36
52			min	3.774	36	-7.027	16	-.153	5	-.08	5	-.244	5	-.306	16
53		3	max	21.139	16	-1.403	36	.079	12	.081	3	.224	12	2.037	16
54			min	3.773	36	-7.03	16	-.153	5	-.08	5	-.295	5	.438	36
55	M10	1	max	-2.972	36	.846	16	.093	12	.122	12	.191	15	2.656	16
56			min	-14.328	16	.203	36	-.086	15	-.123	15	-.212	12	.588	36
57		2	max	-2.959	36	.285	16	.026	17	.122	12	.056	12	.137	16
58			min	-14.339	16	.066	36	-.023	37	-.123	15	-.059	5	-.012	36
59		3	max	-.775	38	-.059	38	.081	3	.181	12	.072	15	.808	16
60			min	-9.498	18	-1.541	18	-.098	5	-.178	15	-.074	12	.217	36
61	M11	1	max	-2.79	36	-1.378	36	.099	12	.089	3	.294	3	-.604	36
62			min	-13.599	16	-6.041	16	-.05	15	-.037	15	-.251	15	-2.943	16
63		2	max	-2.791	36	-1.379	36	.099	12	.089	3	.327	3	-.144	36

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
64			min	-13.599	16	-6.044	16	-.05	15	-.037	15	-.267	15	-.929	16
65		3	max	-2.791	36	-1.38	36	.099	12	.089	3	.36	3	1.11	5
66			min	-13.598	16	-6.048	16	-.05	15	-.037	15	-.284	15	.293	12
67	M12	1	max	-2.013	36	-1.78	36	.819	12	.992	12	2.828	5	2.916	16
68			min	-13.36	16	-9.889	16	-1.321	5	-.971	15	-2.228	12	.857	36
69		2	max	-1.88	38	2.034	16	.933	3	1.643	12	1.092	5	7.486	16
70			min	-15.118	18	.559	36	-.941	5	-1.613	15	-1.072	3	1.47	36
71		3	max	6.269	12	1.996	3	.874	3	2.839	12	1.629	5	5.884	16
72			min	-8.788	5	-.423	15	-.921	5	-2.815	15	-1.642	3	1.028	36
73	M13	1	max	9.635	16	1.166	5	.682	3	1.593	12	2.064	15	8.401	16
74			min	-.256	36	.442	12	-.597	15	-1.515	15	-2.494	3	2.28	36
75		2	max	9.584	16	.944	5	.651	3	1.593	12	.084	37	4.973	16
76			min	-.205	36	.309	12	-.566	15	-1.515	15	-.229	17	.963	36
77		3	max	8.094	3	2.013	3	.492	12	2.611	12	.521	15	4.072	16
78			min	-5.816	15	-.482	15	-.543	15	-2.573	15	-.475	12	.981	36
79	M14	1	max	.508	5	.007	34	.078	15	.009	5	0	39	0	39
80			min	.1	12	-.007	20	-.078	3	-.008	3	0	1	0	1
81		2	max	.5	5	.005	34	.005	39	.009	5	.064	15	.009	38
82			min	.096	12	-.005	20	-.005	17	-.008	3	-.064	3	-.009	16
83		3	max	.452	5	.007	38	.078	12	.009	5	0	39	0	39
84			min	.067	12	-.007	16	-.078	5	-.008	3	0	1	0	1
85	M15	1	max	12.055	16	.283	36	.084	5	.018	6	0	35	.103	15
86			min	2.47	36	-2.007	16	-.049	3	-.023	13	-.02	23	-.531	3
87		2	max	12.052	16	.283	36	.084	5	.018	6	.008	5	.099	16
88			min	2.469	36	-2.007	16	-.049	3	-.023	13	-.015	3	0	36
89		3	max	12.049	16	.284	36	.084	5	.018	6	.034	5	.726	16
90			min	2.468	36	-2.008	16	-.049	3	-.023	13	-.031	3	-.089	36
91	M16	1	max	.21	36	11.385	16	.226	3	.04	3	.039	5	2.672	16
92			min	-1.177	16	3.055	36	-.248	5	-.041	5	-.039	3	.62	36
93		2	max	.209	36	11.384	16	.226	3	.04	3	.032	3	-.334	36
94			min	-1.18	16	3.055	36	-.248	5	-.041	5	-.038	5	-.885	16
95		3	max	.208	36	11.383	16	.226	3	.04	3	.103	3	-1.289	36
96			min	-1.184	16	3.056	36	-.248	5	-.041	5	-.116	5	-4.442	16
97	M17	1	max	.279	38	5.345	17	.151	15	.169	15	.148	12	2.539	17
98			min	-.758	18	1.659	37	-.142	12	-.167	12	-.149	15	.822	37
99		2	max	.278	38	5.344	17	.151	15	.169	15	.104	12	.888	16
100			min	-.762	18	1.659	37	-.142	12	-.167	12	-.102	15	.284	36
101		3	max	.276	38	5.344	17	.151	15	.169	15	.06	3	-.212	39
102			min	-.765	18	1.659	37	-.142	12	-.167	12	-.055	15	-.802	19
103	M18	1	max	1.125	16	.007	34	.088	15	.014	5	0	39	0	39
104			min	.363	36	-.007	20	-.088	3	-.014	3	0	1	0	1
105		2	max	1.116	16	.005	34	.005	39	.014	5	.074	15	.009	38
106			min	.36	36	-.005	20	-.005	17	-.014	3	-.074	3	-.009	16
107		3	max	1.059	16	.007	38	.091	12	.014	5	0	39	0	39
108			min	.34	36	-.007	16	-.091	5	-.014	3	0	1	0	1
109	M19	1	max	-.129	36	.011	16	.11	15	.014	5	0	39	0	39
110			min	-.697	16	-.005	36	-.11	3	-.014	3	0	1	0	1
111		2	max	-.15	36	.004	36	.005	35	.014	5	.092	15	.007	36
112			min	-.752	16	-.008	16	-.005	21	-.014	3	-.092	3	-.016	16
113		3	max	-.154	36	.005	36	.112	12	.014	5	0	39	0	39
114			min	-.76	16	-.011	16	-.112	5	-.014	3	0	1	0	1
115	M20	1	max	-.027	36	.011	16	.109	15	.016	5	0	39	0	39
116			min	-.361	16	-.005	36	-.109	3	-.015	3	0	1	0	1
117		2	max	-.049	36	.004	36	.005	35	.016	5	.089	15	.007	36
118			min	-.416	16	-.008	16	-.005	21	-.015	3	-.089	3	-.016	16
119		3	max	-.053	36	.005	36	.109	12	.016	5	0	39	0	39
120			min	-.424	16	-.011	16	-.109	5	-.015	3	0	1	0	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
121	M21	1	max	.039	32	.01	16	.11	15	.017	5	0	39	0	39
122			min	-.125	20	-.005	36	-.11	3	-.017	3	0	1	0	1
123		2	max	.003	32	.004	36	.005	35	.017	5	.09	15	.008	36
124			min	-.166	20	-.007	16	-.005	21	-.017	3	-.09	3	-.014	16
125		3	max	-.003	32	.005	36	.11	12	.017	5	0	39	0	39
126			min	-.172	20	-.01	16	-.11	5	-.017	3	0	1	0	1
127	M22	1	max	-.009	36	.01	16	.109	15	.015	5	0	39	0	39
128			min	-.166	16	-.005	36	-.109	3	-.015	3	0	1	0	1
129		2	max	-.012	36	.007	16	.005	39	.015	5	.089	15	.008	36
130			min	-.174	16	-.004	36	-.005	17	-.015	3	-.089	3	-.014	16
131		3	max	-.034	36	.005	36	.109	12	.015	5	0	39	0	39
132			min	-.23	16	-.01	16	-.109	5	-.015	3	0	1	0	1
133	M23	1	max	.156	16	.009	16	.109	15	.012	5	0	39	0	39
134			min	.03	36	-.006	36	-.109	3	-.012	3	0	1	0	1
135		2	max	.148	16	.006	16	.005	39	.012	5	.089	15	.008	36
136			min	.027	36	-.004	36	-.005	17	-.012	3	-.089	3	-.012	16
137		3	max	.091	16	.006	36	.109	12	.012	5	0	39	0	39
138			min	.006	36	-.009	16	-.109	5	-.012	3	0	1	0	1
139	M24	1	max	.146	15	.009	16	.109	15	.009	5	0	39	0	39
140			min	-.881	3	-.006	36	-.109	3	-.009	3	0	1	0	1
141		2	max	.141	15	.006	16	.005	39	.009	5	.089	15	.008	36
142			min	-.889	3	-.004	36	-.005	17	-.009	3	-.089	3	-.012	16
143		3	max	.112	15	.006	36	.109	12	.009	5	0	39	0	39
144			min	-.937	3	-.009	16	-.109	5	-.009	3	0	1	0	1
145	M25	1	max	.192	5	.007	16	.113	15	.003	5	0	39	0	39
146			min	.005	12	-.006	36	-.113	3	-.003	3	0	1	0	1
147		2	max	.185	5	.005	16	.005	39	.003	5	.093	15	.009	36
148			min	0	12	-.005	36	-.005	17	-.003	3	-.093	3	-.01	16
149		3	max	.136	5	.006	36	.109	12	.003	5	0	39	0	39
150			min	-.028	12	-.007	16	-.109	5	-.003	3	0	1	0	1
151	M26	1	max	.047	17	.009	36	.111	5	0	39	0	39	0	39
152			min	.017	36	-.009	34	-.111	3	0	1	0	1	0	1
153		2	max	.06	17	.012	36	.111	5	0	39	.139	5	.013	34
154			min	.021	36	-.012	34	-.111	3	0	1	-.139	3	-.013	36
155		3	max	.074	17	.014	36	.111	5	0	39	.277	5	.029	34
156			min	.026	36	-.014	34	-.111	3	0	1	-.277	3	-.029	36
157	M27	1	max	.44	12	.1	5	.072	15	.031	12	.066	5	-.002	36
158			min	-16.31	5	.029	12	-.09	12	-.031	15	-.047	17	-.263	16
159		2	max	.44	12	.091	21	.068	15	.031	12	.133	5	-.071	36
160			min	-16.31	5	.024	12	-.085	12	-.031	15	-.13	3	-.325	16
161		3	max	.44	12	.084	21	.064	15	.031	12	.197	15	-.135	36
162			min	-16.31	5	.018	12	-.081	12	-.031	15	-.212	12	-.375	16
163	M28	1	max	.44	12	-.002	12	.029	12	.035	12	.199	15	-.135	36
164			min	-16.309	5	-.068	18	-.022	15	-.035	15	-.214	12	-.375	16
165		2	max	.44	12	-.013	38	.037	12	.035	12	.148	5	-.094	37
166			min	-16.308	5	-.088	18	-.031	15	-.035	15	-.149	3	-.241	17
167		3	max	1.087	12	.93	3	.121	15	.08	12	.1	5	-.107	36
168			min	-13.905	5	.139	15	-.123	12	-.08	15	-.088	3	-.572	16
169	M29	1	max	1.062	12	.018	36	.025	15	.082	12	.106	5	-.107	36
170			min	-13.907	5	-.089	16	-.032	12	-.082	15	-.094	3	-.572	16
171		2	max	1.063	12	.011	36	.017	15	.082	12	.143	5	-.136	36
172			min	-13.906	5	-.11	16	-.024	12	-.082	15	-.145	3	-.374	16
173		3	max	1.063	12	.003	36	.008	15	.082	12	.164	15	-.043	12
174			min	-13.905	5	-.13	16	-.015	12	-.082	15	-.18	12	-.234	5
175	M30	1	max	1.065	12	-.023	12	.097	12	.087	12	.173	15	-.043	12
176			min	-13.895	5	-.324	5	-.081	15	-.087	15	-.189	12	-.234	5
177		2	max	1.066	12	-.034	12	.105	12	.087	12	.032	23	.442	5

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
178			min	-13.894	5	-.342	5	-.089	15	-.087	15	-.031	17	.014	12
179		3	max	2.233	12	.064	20	.065	15	.119	12	.156	5	-.194	36
180			min	-9.305	5	.016	32	-.076	12	-.12	15	-.163	3	-.521	16
181	M31	1	max	2.234	12	-.063	36	.034	3	.123	12	.168	5	-.194	36
182			min	-9.3	5	-.254	16	-.031	5	-.123	15	-.175	3	-.521	16
183		2	max	2.235	12	-.071	36	.043	3	.123	12	.097	5	.026	34
184			min	-9.298	5	-.274	16	-.04	5	-.123	15	-.099	3	-.079	22
185		3	max	2.236	12	-.079	36	.051	3	.123	12	.021	37	.577	16
186			min	-9.296	5	-.295	16	-.048	5	-.123	15	-.02	35	.088	36
187	M32	1	max	2.239	12	-.026	12	.163	12	.123	12	.022	23	.577	16
188			min	-9.268	5	-.773	5	-.146	15	-.124	15	-.022	17	.088	36
189		2	max	4.846	3	-.043	36	.022	15	.154	12	.079	5	-.123	12
190			min	-2.978	15	-.141	16	-.026	12	-.153	15	-.079	3	-.363	5
191		3	max	4.849	3	-.051	36	.013	15	.154	12	.113	15	.024	12
192			min	-2.976	15	-.161	16	-.017	12	-.153	15	-.121	12	-.108	5
193	M33	1	max	4.856	3	-.121	12	.096	3	.156	12	.123	15	.024	12
194			min	-2.968	15	-.522	5	-.089	5	-.156	15	-.131	12	-.108	5
195		2	max	4.859	3	-.131	12	.105	3	.156	12	.07	3	.997	16
196			min	-2.967	15	-.54	5	-.098	5	-.156	15	-.065	5	.244	36
197		3	max	12.633	16	.048	16	.075	15	.161	12	.076	15	-.178	12
198			min	.69	36	.002	36	-.078	12	-.159	15	-.076	12	-.533	5
199	M34	1	max	12.66	16	-.131	12	.036	3	.164	12	.084	5	-.178	12
200			min	.691	36	-.407	5	-.036	5	-.162	15	-.084	3	-.533	5
201		2	max	12.667	16	-.14	12	.044	3	.164	12	.014	15	.253	16
202			min	.689	36	-.426	16	-.044	5	-.162	15	-.013	12	.05	36
203		3	max	12.674	16	-.15	36	.052	3	.164	12	.078	3	1.052	16
204			min	.687	36	-.444	16	-.052	5	-.162	15	-.076	5	.318	36
205	M35	1	max	-.772	38	.21	5	.07	12	.165	12	.104	15	.808	16
206			min	-9.605	18	.073	12	-.068	15	-.162	15	-.106	12	.217	36
207		2	max	-.769	38	.193	5	.062	12	.165	12	.023	3	.433	16
208			min	-9.612	18	.062	12	-.06	15	-.162	15	-.02	5	.076	36
209		3	max	-.767	38	.176	5	.054	12	.165	12	.131	12	.093	16
210			min	-9.619	18	.052	12	-.052	15	-.162	15	-.127	15	-.05	36
211	M36	1	max	-.762	38	.598	16	.057	5	.161	12	.148	3	.093	16
212			min	-9.63	18	.165	36	-.062	3	-.158	15	-.144	5	-.05	36
213		2	max	2.779	12	.083	5	.116	3	.149	12	.107	15	.522	16
214			min	-3.245	5	.03	12	-.111	5	-.147	15	-.112	3	.113	36
215		3	max	2.777	12	.065	5	.107	3	.149	12	.111	3	.394	16
216			min	-3.248	5	.019	12	-.103	5	-.147	15	-.108	5	.042	36
217	M37	1	max	2.772	12	.363	16	.011	35	.146	12	.13	3	.394	16
218			min	-3.258	5	.094	36	-.012	37	-.144	15	-.127	5	.042	36
219		2	max	2.771	12	.343	16	.017	5	.146	12	.103	12	-.115	37
220			min	-3.26	5	.087	36	-.018	3	-.144	15	-.103	15	-.319	17
221		3	max	8.5	3	.083	34	.176	3	.117	12	.05	5	.401	16
222			min	-.226	15	-.19	22	-.169	5	-.116	15	-.054	3	.049	36
223	M38	1	max	8.5	3	.172	16	.058	3	.119	12	.03	5	.401	16
224			min	-.227	15	.044	36	-.055	5	-.117	15	-.034	3	.049	36
225		2	max	8.498	3	.151	16	.049	3	.119	12	.073	3	.078	16
226			min	-.229	15	.036	36	-.046	5	-.117	15	-.071	5	-.03	36
227		3	max	8.496	3	.131	16	.041	3	.119	12	.163	3	-.044	12
228			min	-.23	15	.028	36	-.038	5	-.117	15	-.156	5	-.25	5
229	M39	1	max	8.487	3	.442	3	.077	5	.114	12	.181	3	-.044	12
230			min	-.234	15	.09	15	-.088	3	-.113	15	-.173	5	-.25	5
231		2	max	12.707	3	.111	5	.117	3	.081	12	.064	5	.101	34
232			min	1.782	15	-.07	12	-.107	5	-.08	15	-.076	3	-.125	22
233		3	max	12.705	3	.093	5	.109	3	.081	12	.147	3	.06	12
234			min	1.781	15	-.08	12	-.098	5	-.08	15	-.138	5	-.141	5

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
235	M40	1	max	12.704	3	.171	17	.017	5	.077	12	.161	3	.06	12
236			min	1.778	15	.036	37	-.022	3	-.076	15	-.152	5	-.141	5
237		2	max	12.704	3	.151	3	.026	5	.077	12	.11	12	-.116	36
238			min	1.778	15	.026	15	-.03	3	-.076	15	-.109	15	-.354	16
239		3	max	14.864	17	.134	15	.206	3	.029	13	.023	35	.017	34
240			min	2.811	15	-1.239	3	-.165	5	-.029	6	-.025	37	-.173	22
241	M41	1	max	14.858	17	.089	18	.051	3	.029	13	.025	35	.017	34
242			min	2.811	15	-.003	38	-.047	5	-.029	6	-.027	37	-.173	22
243		2	max	14.856	17	.069	18	.043	3	.029	13	.1	12	-.078	12
244			min	2.811	15	-.012	38	-.038	5	-.029	6	-.098	15	-.213	5
245		3	max	14.854	17	.05	18	.035	3	.029	13	.175	3	-.046	12
246			min	2.81	15	-.022	12	-.03	5	-.029	6	-.165	5	-.325	5
247	M42	1	max	14.851	17	.201	3	.091	5	.028	13	.179	3	-.046	12
248			min	2.811	15	-.05	15	-.104	3	-.028	6	-.169	5	-.325	5
249		2	max	14.851	17	.192	3	.095	5	.028	13	.074	12	-.095	36
250			min	2.811	15	-.056	15	-.108	3	-.028	6	-.077	15	-.428	16
251		3	max	14.85	17	.183	3	.099	5	.028	13	.029	35	-.101	36
252			min	2.81	15	-.061	15	-.113	3	-.028	6	-.041	3	-.547	16
253	M43	1	max	-.186	36	-2.646	36	.264	3	.046	3	.193	5	-1.201	36
254			min	-.734	16	-8.774	16	-.298	5	-.044	5	-.173	3	-4.019	16
255		2	max	-.185	36	-2.646	36	.264	3	.046	3	.098	5	-.357	36
256			min	-.731	16	-8.775	16	-.298	5	-.044	5	-.089	3	-1.218	16
257		3	max	-.184	36	-2.646	36	.264	3	.046	3	.004	15	1.616	5
258			min	-.727	16	-8.777	16	-.298	5	-.044	5	-.005	12	.448	12
259	M44	1	max	.045	12	-1.971	36	.244	3	.051	3	.186	5	-.812	36
260			min	-.634	5	-6.887	16	-.258	5	-.05	5	-.178	3	-2.942	16
261		2	max	.047	12	-1.97	36	.244	3	.051	3	.107	5	-.211	36
262			min	-.631	5	-6.888	16	-.258	5	-.05	5	-.104	3	-.84	16
263		3	max	.048	12	-1.97	36	.244	3	.051	3	.029	15	1.262	16
264			min	-.629	5	-6.889	16	-.258	5	-.05	5	-.03	12	.386	12
265	M45	1	max	-.078	12	-1.057	36	.208	3	.04	3	.158	5	-.466	36
266			min	-.456	5	-4.757	16	-.196	5	-.037	5	-.165	3	-2.207	16
267		2	max	-.076	12	-1.056	36	.208	3	.04	3	.095	5	-.128	36
268			min	-.453	5	-4.758	16	-.196	5	-.037	5	-.099	3	-.686	16
269		3	max	-.074	12	-1.056	36	.208	3	.04	3	.033	15	.866	5
270			min	-.45	5	-4.759	16	-.196	5	-.037	5	-.033	12	.169	12
271	M46	1	max	-.137	36	-2.368	36	.135	15	.178	15	.013	12	-.453	36
272			min	-.631	16	-7.523	16	-.137	12	-.18	12	-.012	15	-1.47	16
273		2	max	-.135	36	-2.367	36	.135	15	.178	15	.029	15	.83	17
274			min	-.628	16	-7.524	16	-.137	12	-.18	12	-.029	12	.263	37
275		3	max	-.134	36	-2.367	36	.135	15	.178	15	.07	15	3.124	16
276			min	-.625	16	-7.525	16	-.137	12	-.18	12	-.071	12	.99	37
277	M47	1	max	-.09	39	-1.763	36	.16	15	.147	15	.027	12	-.307	36
278			min	-.398	19	-7.132	16	-.162	12	-.15	12	-.026	15	-1.305	16
279		2	max	-.089	39	-1.762	36	.16	15	.147	15	.024	15	.913	16
280			min	-.395	19	-7.133	16	-.162	12	-.15	12	-.024	12	.241	36
281		3	max	-.087	39	-1.762	36	.16	15	.147	15	.074	15	3.133	16
282			min	-.392	19	-7.134	16	-.162	12	-.15	12	-.074	12	.789	36
283	M48	1	max	.005	15	-1.018	36	.172	15	.103	15	.033	12	-.191	36
284			min	-.496	3	-5.323	16	-.181	12	-.103	12	-.033	15	-1.056	16
285		2	max	.007	15	-1.018	36	.172	15	.103	15	.019	15	.567	16
286			min	-.493	3	-5.324	16	-.181	12	-.103	12	-.022	12	.119	36
287		3	max	.009	15	-1.017	36	.172	15	.103	15	.072	15	2.191	16
288			min	-.49	3	-5.325	16	-.181	12	-.103	12	-.077	12	.429	36
289	M49	1	max	.134	15	3.014	16	.193	5	.058	15	.079	3	1.348	16
290			min	-1.315	3	.183	36	-.206	3	-.06	12	-.071	5	.078	36
291		2	max	.133	15	3.013	16	.193	5	.058	15	.015	3	.41	16

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
292			min	-1.318	3	.183	36	-.206	3	-.06	12	-.011	5	.021	36
293		3	max	.131	15	3.012	16	.193	5	.058	15	.05	15	-.036	36
294			min	-1.321	3	.184	36	-.206	3	-.06	12	-.05	12	-.527	16
295	M50	1	max	-.233	15	2.825	16	.192	12	.018	3	.045	12	.534	16
296			min	-1.008	3	.252	36	-.163	15	-.018	5	-.045	15	.032	36
297		2	max	-.235	15	2.824	16	.192	12	.018	3	.105	12	-.047	36
298			min	-1.01	3	.253	36	-.163	15	-.018	5	-.096	15	-.349	16
299		3	max	-.236	15	2.823	16	.192	12	.018	3	.165	12	-.126	36
300			min	-1.013	3	.254	36	-.163	15	-.018	5	-.147	15	-1.231	16
301	M51	1	max	.087	15	.704	20	.203	5	.028	6	.044	12	.125	36
302			min	-.526	3	-.693	34	-.218	3	-.028	13	-.043	15	-.125	34
303		2	max	.089	15	.704	20	.203	5	.028	6	.021	5	.091	32
304			min	-.523	3	-.694	34	-.219	3	-.028	13	-.025	3	-.094	20
305		3	max	.09	15	.705	20	.203	5	.028	6	.084	5	.307	32
306			min	-.52	3	-.695	34	-.219	3	-.028	13	-.093	3	-.313	20
307	M52	1	max	.056	12	.545	36	.181	12	.007	13	.148	15	.234	36
308			min	-.405	5	-.544	32	-.14	15	-.007	6	-.173	12	-.234	16
309		2	max	.054	12	.545	36	.181	12	.007	13	.104	15	.063	36
310			min	-.402	5	-.545	32	-.14	15	-.007	6	-.116	12	-.064	16
311		3	max	.053	12	.546	36	.181	12	.007	13	.061	15	.107	32
312			min	-.399	5	-.546	32	-.14	15	-.007	6	-.06	12	-.107	22
313	M53	1	max	.047	17	.009	36	.111	5	0	39	0	39	0	39
314			min	.017	37	-.01	16	-.111	3	0	1	0	1	0	1
315		2	max	.06	17	.011	36	.111	5	0	39	.138	5	.014	16
316			min	.021	37	-.013	16	-.111	3	0	1	-.138	3	-.012	36
317		3	max	.073	17	.014	36	.111	5	0	39	.276	5	.032	16
318			min	.026	37	-.016	16	-.111	3	0	1	-.276	3	-.028	36
319	M54	1	max	.047	17	.008	36	.111	5	0	39	0	39	0	39
320			min	.017	37	-.012	16	-.111	3	0	1	0	1	0	1
321		2	max	.059	17	.01	36	.111	5	0	39	.133	5	.017	16
322			min	.021	37	-.016	16	-.111	3	0	1	-.133	3	-.011	36
323		3	max	.072	17	.012	36	.111	5	0	39	.266	5	.038	16
324			min	.026	37	-.019	16	-.111	3	0	1	-.266	3	-.024	36
325	M55	1	max	0	39	0	16	0	5	0	39	0	39	0	39
326			min	0	1	0	36	0	3	0	1	0	1	0	1
327		2	max	.007	17	.001	36	.001	23	0	39	0	23	0	16
328			min	.002	37	-.002	16	-.001	17	0	1	0	17	0	36
329		3	max	.013	17	.002	36	.003	23	0	39	.002	23	.002	16
330			min	.005	37	-.004	16	-.003	17	0	1	-.002	17	-.001	36
331	M56	1	max	6.447	12	1.559	16	.897	3	2.516	12	2.1	5	5.884	16
332			min	-8.635	5	.438	36	-.893	5	-2.494	15	-2.117	3	1.028	36
333		2	max	6.439	12	1.48	16	.873	3	2.516	12	.245	12	1.843	16
334			min	-8.648	5	.405	36	-.869	5	-2.494	15	-.252	15	-.093	36
335		3	max	6.432	12	1.401	16	.849	3	2.516	12	2.525	3	-.53	12
336			min	-8.661	5	.373	36	-.845	5	-2.494	15	-2.523	5	-2.59	5
337	M57	1	max	17.399	3	.83	16	.78	3	2.345	12	1.647	5	1.999	16
338			min	-8.125	15	.298	36	-.78	5	-2.335	15	-1.644	3	.107	36
339		2	max	17.387	3	.739	5	.752	3	2.345	12	.723	3	-.092	34
340			min	-8.132	15	.249	12	-.752	5	-2.335	15	-.72	5	-1.088	22
341		3	max	17.376	3	.657	5	.725	3	2.345	12	3.004	3	-1.048	12
342			min	-8.139	15	.2	12	-.725	5	-2.335	15	-3.002	5	-2.991	5
343	M58	1	max	27.11	3	.708	16	.645	3	1.84	12	.82	5	.497	34
344			min	-8.997	15	.158	36	-.648	5	-1.837	15	-.817	3	-.806	22
345		2	max	27.101	3	.614	16	.617	3	1.84	12	1.132	3	-.769	39
346			min	-9.002	15	.122	36	-.62	5	-1.837	15	-1.139	5	-2.009	19
347		3	max	27.093	3	.519	16	.589	3	1.84	12	2.996	3	-1.395	37
348			min	-9.007	15	.086	36	-.592	5	-1.837	15	-3.012	5	-3.445	17

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
349	M59	1	max	33.986	3	.645	5	.546	3	1.34	12	.23	6	-.453	39
350			min	-10.067	15	-.188	12	-.504	5	-1.34	15	-.224	13	-1.721	19
351		2	max	33.986	3	.637	5	.544	3	1.34	12	.192	6	-.539	39
352			min	-10.068	15	-.192	12	-.502	5	-1.34	15	-.187	13	-1.766	19
353		3	max	33.985	3	.63	5	.541	3	1.34	12	.268	3	-.624	39
354			min	-10.068	15	-.196	12	-.499	5	-1.34	15	-.264	5	-1.808	19
355	M60	1	max	33.986	3	.621	16	.51	3	1.336	12	.288	3	-.623	39
356			min	-10.076	15	.136	36	-.503	5	-1.336	15	-.284	5	-1.808	19
357		2	max	33.983	3	.559	16	.492	3	1.336	12	1.291	3	-1.114	37
358			min	-10.078	15	.112	36	-.485	5	-1.336	15	-1.273	5	-2.746	17
359		3	max	33.979	3	.497	16	.474	3	1.336	12	2.258	3	-1.436	36
360			min	-10.08	15	.089	36	-.467	5	-1.336	15	-2.225	5	-3.685	16
361	M61	1	max	33.971	3	.773	3	.305	3	1.031	12	2.273	3	-1.46	36
362			min	-10.086	15	.096	15	-.366	5	-1.032	15	-2.24	5	-3.647	16
363		2	max	33.97	3	.751	3	.297	3	1.031	12	2.517	3	-1.57	37
364			min	-10.087	15	.083	15	-.359	5	-1.032	15	-2.533	5	-4.229	16
365		3	max	33.969	3	.704	3	.272	12	1.031	12	2.749	3	-1.659	37
366			min	-10.088	15	.075	15	-.354	5	-1.032	15	-2.822	5	-4.793	17
367	M62	1	max	37.762	3	.256	15	.312	3	.704	12	1.046	3	-1.283	37
368			min	-10.798	15	-.382	3	-.256	5	-.704	15	-1.119	5	-3.817	17
369		2	max	37.761	3	.237	15	.301	3	.704	12	1.407	3	-1.336	37
370			min	-10.799	15	-.413	3	-.246	5	-.704	15	-1.415	5	-3.598	17
371		3	max	37.76	3	.219	15	.29	3	.704	12	1.756	3	-1.343	36
372			min	-10.8	15	-.445	3	-.235	5	-.704	15	-1.698	5	-3.368	16
373	M63	1	max	37.764	3	.189	16	.114	13	.402	13	1.766	3	-1.371	36
374			min	-10.803	15	-.034	36	-.135	5	-.404	6	-1.708	5	-3.335	16
375		2	max	37.763	3	.129	16	.114	13	.402	13	1.951	3	-1.286	36
376			min	-10.803	15	-.055	36	-.118	5	-.404	6	-1.95	5	-3.639	16
377		3	max	37.762	3	.075	12	.114	13	.402	13	2.104	3	-1.161	36
378			min	-10.804	15	-.081	15	-.117	6	-.404	6	-2.158	5	-3.829	16
379	M64	1	max	8.309	3	.837	5	.516	12	2.485	12	.972	15	4.072	16
380			min	-5.802	15	.269	12	-.526	15	-2.439	15	-.933	12	.981	36
381		2	max	8.295	3	.763	5	.491	12	2.485	12	.493	3	2.086	16
382			min	-5.81	15	.225	12	-.5	15	-2.439	15	-.47	15	.004	36
383		3	max	8.282	3	.69	5	.466	12	2.485	12	1.826	12	.473	32
384			min	-5.818	15	.181	12	-.475	15	-2.439	15	-1.84	15	-1.014	20
385	M65	1	max	7.287	12	1.114	16	.416	12	2.246	12	.48	15	3.422	16
386			min	-14.705	5	.288	36	-.415	15	-2.219	15	-.488	12	.155	36
387		2	max	7.28	12	1.023	16	.389	12	2.246	12	.72	12	.328	34
388			min	-14.716	5	.253	36	-.388	15	-2.219	15	-.723	15	-.77	22
389		3	max	7.273	12	.933	16	.362	12	2.246	12	1.846	12	-1.164	37
390			min	-14.728	5	.217	36	-.361	15	-2.219	15	-1.844	15	-2.907	17
391	M66	1	max	6.447	12	.824	16	.303	12	1.793	12	.12	6	.43	32
392			min	-22.688	5	.232	36	-.304	15	-1.775	15	-.12	13	-.584	20
393		2	max	6.442	12	.732	16	.276	12	1.793	12	.892	12	-.898	39
394			min	-22.696	5	.197	36	-.277	15	-1.775	15	-.892	15	-2.226	19
395		3	max	6.438	12	.64	16	.249	12	1.793	12	1.68	12	-1.591	37
396			min	-22.704	5	.162	36	-.25	15	-1.775	15	-1.683	15	-4.123	17
397	M67	1	max	5.736	12	.435	16	.196	12	1.205	12	.443	12	-.876	39
398			min	-28.242	5	.065	36	-.194	15	-1.194	15	-.444	15	-2.221	19
399		2	max	5.733	12	.343	16	.169	12	1.205	12	.989	12	-1.262	37
400			min	-28.247	5	.031	36	-.167	15	-1.194	15	-.987	15	-3.144	17
401		3	max	5.73	12	.284	16	.138	3	1.205	12	1.453	12	-1.445	37
402			min	-28.251	5	.006	36	-.161	5	-1.194	15	-1.458	15	-3.905	17
403	M68	1	max	5.406	12	.456	16	.081	12	.436	13	.833	12	-1.163	39
404			min	-31.071	5	.054	36	-.082	15	-.436	6	-.835	15	-2.763	17
405		2	max	5.405	12	.362	16	.077	13	.436	13	1.037	12	-1.44	37

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
406			min	-31.072	5	.02	36	-.076	6	-.436	6	-1.04	15	-3.824	17
407		3	max	5.405	12	.268	16	.077	13	.436	13	1.16	12	-1.489	36
408			min	-31.074	5	-.014	36	-.076	6	-.436	6	-1.164	15	-4.735	16
409	M69	1	max	-2.262	34	.717	22	2.6	15	1.112	5	0	39	0	39
410			min	-8.555	22	-.624	34	-2.614	12	-1.126	3	0	1	0	1
411		2	max	-2.262	34	.717	22	2.6	15	1.112	5	1.083	15	.26	34
412			min	-8.555	22	-.624	34	-2.614	12	-1.126	3	-1.089	12	-.299	22
413		3	max	-2.262	34	.717	22	2.6	15	1.112	5	2.166	15	.52	34
414			min	-8.555	22	-.624	34	-2.614	12	-1.126	3	-2.178	12	-.597	22
415	M70	1	max	0	39	0	38	0	5	0	39	0	39	0	39
416			min	0	1	0	16	0	3	0	1	0	1	0	1
417		2	max	-.409	15	10.565	19	.117	12	1.517	3	.008	15	-.121	39
418			min	-2.638	3	4.362	39	-.414	5	-.86	15	-.315	3	-.559	19
419		3	max	0	39	0	16	0	3	0	39	0	39	0	39
420			min	0	1	0	36	0	5	0	1	0	1	0	1
421	M71	1	max	-2.262	34	.622	34	2.573	15	1.112	5	0	3	0	26
422			min	-8.555	22	-.734	22	-2.587	12	-1.126	3	0	15	0	34
423		2	max	-2.262	34	.622	34	2.573	15	1.112	5	.482	15	.138	22
424			min	-8.555	22	-.734	22	-2.587	12	-1.126	3	-.485	12	-.117	34
425		3	max	-2.262	34	.622	34	2.573	15	1.112	5	.965	15	.275	22
426			min	-8.555	22	-.734	22	-2.587	12	-1.126	3	-.97	12	-.233	34
427	M72	1	max	13.142	22	3.495	39	.941	5	5.06	5	0	39	0	39
428			min	2.716	34	-8.627	17	-.927	3	-5.101	3	0	1	0	1
429		2	max	13.142	22	-3.495	39	.941	5	5.06	5	.392	5	3.595	17
430			min	2.716	34	-8.627	17	-.927	3	-5.101	3	-.386	3	1.456	39
431		3	max	13.142	22	-3.495	39	.941	5	5.06	5	.784	5	7.189	17
432			min	2.716	34	-8.627	17	-.927	3	-5.101	3	-.772	3	2.913	39
433	M73	1	max	13.142	22	8.667	19	.998	5	5.06	5	0	23	0	20
434			min	2.716	34	3.501	39	-.984	3	-5.101	3	0	13	0	18
435		2	max	13.142	22	8.667	19	.998	5	5.06	5	.187	5	-.656	39
436			min	2.716	34	3.501	39	-.984	3	-5.101	3	-.184	3	-1.625	19
437		3	max	13.142	22	8.667	19	.998	5	5.06	5	.374	5	-1.313	39
438			min	2.716	34	3.501	39	-.984	3	-5.101	3	-.369	3	-3.25	19
439	M74	1	max	18.968	19	10.246	19	.08	6	.191	5	.34	3	4.918	19
440			min	6.81	39	4.404	39	-.106	13	-.184	12	-.345	5	1.908	39
441		2	max	20.523	19	.181	16	.094	5	.134	15	.02	13	.63	5
442			min	6.909	39	.03	36	-.086	3	-.136	12	-.026	6	.26	12
443		3	max	10.662	19	2.345	19	.038	15	.168	15	.033	3	1.023	5
444			min	2.368	39	.648	39	-.028	13	-.17	12	-.026	5	.339	12
445	M75	1	max	10.176	19	18.985	19	.135	6	.34	3	.191	5	4.918	19
446			min	4.384	39	6.806	39	-.137	13	-.345	5	-.184	12	1.908	39
447		2	max	4.78	5	.655	17	.037	12	.115	3	.019	15	.191	5
448			min	1.44	12	.269	37	-.053	15	-.088	5	-.035	3	-.021	12
449		3	max	-.294	12	13.128	5	.168	3	.185	15	.125	12	-.927	12
450			min	-.864	5	4.062	12	-.202	5	-.205	12	-.126	15	-2.306	5
451	M76	1	max	18.332	19	-2.27	39	.196	5	.106	5	.257	5	-.806	39
452			min	6.528	39	-6.13	19	-.17	3	-.119	3	-.228	12	-2.329	19
453		2	max	18.332	19	-2.271	39	.196	5	.106	5	.322	5	-.036	15
454			min	6.527	39	-6.134	19	-.17	3	-.119	3	-.284	12	-.295	3
455		3	max	18.332	19	-2.273	39	.196	5	.106	5	.387	5	1.76	19
456			min	6.527	39	-6.137	19	-.17	3	-.119	3	-.341	12	.708	39
457	M77	1	max	-4.062	12	.77	5	.084	15	.126	15	.205	12	2.306	5
458			min	-13.13	5	.278	12	-.091	12	-.125	12	-.185	15	.927	12
459		2	max	-4.062	12	.269	17	.021	39	.126	15	.061	5	.136	3
460			min	-13.129	5	.081	37	-.025	19	-.125	12	-.058	12	-.014	15
461		3	max	-1.09	12	-.13	12	.098	5	.178	15	.074	12	.729	5
462			min	-9.082	5	-1.457	5	-.081	3	-.182	12	-.072	15	.291	12

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
463	M78	1	max	-3.76	12	-1.742	12	.038	15	.04	15	.267	15	-.838	12
464			min	-12.509	5	-5.644	5	-.081	12	-.093	3	-.315	3	-2.688	5
465		2	max	-3.76	12	-1.744	12	.038	15	.04	15	.28	15	-.257	12
466			min	-12.509	5	-5.647	5	-.081	12	-.093	3	-.341	3	-.806	5
467		3	max	-3.76	12	-1.746	12	.038	15	.04	15	.293	15	1.077	5
468			min	-12.509	5	-5.65	5	-.081	12	-.093	3	-.368	3	.324	12
469	M79	1	max	-2.392	12	-3.475	39	1.052	5	1.523	15	3.497	3	2.903	17
470			min	-12.791	5	-8.17	19	-.928	3	-1.555	3	-3.927	5	.863	37
471		2	max	-3.58	12	1.844	17	.965	5	1.541	15	.647	3	6.358	19
472			min	-13.196	5	.746	37	-.887	3	-1.56	12	-.769	5	2.577	39
473		3	max	6.088	12	1.976	3	.916	5	2.785	15	1.602	3	5.041	5
474			min	-8.611	5	-.403	15	-.888	3	-2.809	12	-1.521	5	1.787	12
475	M80	1	max	9.413	3	1.173	5	.598	15	1.555	15	2.487	3	7.55	5
476			min	-.094	15	.435	12	-.682	3	-1.634	12	-2.064	15	3.11	12
477		2	max	9.413	3	.951	5	.567	15	1.555	15	.218	19	4.142	19
478			min	-.094	15	.302	12	-.651	3	-1.634	12	-.071	39	1.781	39
479		3	max	8.143	3	2.025	3	.542	15	2.576	15	.47	12	3.608	5
480			min	-5.861	15	-.494	15	-.491	12	-2.615	12	-.514	15	1.384	12
481	M81	1	max	.513	5	.007	34	.077	15	.011	3	0	39	0	39
482			min	.095	12	-.007	20	-.077	3	-.011	5	0	1	0	1
483		2	max	.506	5	.005	34	.005	39	.011	3	.064	15	.009	38
484			min	.091	12	-.005	20	-.005	17	-.011	5	-.064	3	-.009	16
485		3	max	.457	5	.007	38	.077	12	.011	3	0	39	0	39
486			min	.062	12	-.007	16	-.077	5	-.011	5	0	1	0	1
487	M82	1	max	10.131	19	1.667	22	.133	6	.068	3	.053	3	.474	3
488			min	4.339	39	.025	15	-.136	3	-.058	5	-.061	5	-.046	15
489		2	max	10.128	19	1.668	22	.133	6	.068	3	.027	12	-.018	32
490			min	4.338	39	.025	15	-.136	3	-.058	5	-.036	13	-.081	20
491		3	max	10.125	19	1.668	22	.133	6	.068	3	.067	6	-.029	34
492			min	4.336	39	.025	15	-.136	3	-.058	5	-.077	13	-.601	22
493	M83	1	max	.192	15	-4.286	37	.224	3	.089	6	.037	5	-.98	37
494			min	-1.16	3	-10.12	17	-.238	5	-.088	13	-.039	3	-2.305	17
495		2	max	.191	15	-4.286	37	.224	3	.089	6	.031	3	.89	16
496			min	-1.162	3	-10.12	17	-.238	5	-.088	13	-.037	5	.33	36
497		3	max	.189	15	-4.285	37	.226	13	.089	6	.101	3	4.02	17
498			min	-1.165	3	-10.12	17	-.238	5	-.088	13	-.112	5	1.698	37
499	M84	1	max	.176	32	-1.53	37	.153	15	.167	12	.147	12	-.798	37
500			min	-.658	20	-5.475	17	-.144	12	-.17	15	-.148	15	-2.566	17
501		2	max	.174	32	-1.53	37	.153	15	.167	12	.102	12	-.319	37
502			min	-.66	20	-5.475	17	-.144	12	-.17	15	-.1	15	-.855	17
503		3	max	.172	32	-1.53	37	.153	15	.167	12	.058	3	.866	16
504			min	-.662	20	-5.475	17	-.144	12	-.17	15	-.052	15	.149	36
505	M85	1	max	1.048	16	.007	34	.09	15	.015	3	0	39	0	39
506			min	.435	36	-.007	20	-.09	3	-.015	5	0	1	0	1
507		2	max	1.039	16	.005	34	.005	39	.015	3	.075	15	.009	38
508			min	.432	36	-.005	20	-.005	17	-.015	5	-.075	3	-.009	16
509		3	max	.99	5	.007	38	.092	12	.015	3	0	39	0	39
510			min	.412	12	-.007	16	-.092	5	-.015	5	0	1	0	1
511	M86	1	max	-.226	39	.01	22	.155	13	.014	3	0	39	0	39
512			min	-.596	19	-.004	34	-.155	6	-.014	5	0	1	0	1
513		2	max	-.23	39	.008	22	.005	35	.014	3	.122	13	.005	34
514			min	-.604	19	-.003	34	-.005	21	-.014	5	-.122	6	-.014	22
515		3	max	-.255	39	.004	34	.146	6	.014	3	0	39	0	39
516			min	-.656	19	-.01	22	-.146	13	-.014	5	0	1	0	1
517	M87	1	max	-.093	34	.01	22	.124	13	.015	3	0	39	0	39
518			min	-.293	22	-.004	34	-.124	6	-.015	5	0	1	0	1
519		2	max	-.128	34	.003	34	.005	39	.015	3	.102	13	.005	34

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
520			min	-.335	22	-.008	22	-.005	17	-.015	5	-.102	6	-.014	22
521		3	max	-.134	34	.004	34	.128	6	.015	3	0	39	0	39
522			min	-.341	22	-.01	22	-.128	13	-.015	5	0	1	0	1
523	M88	1	max	.054	38	.009	22	.119	13	.017	3	0	39	0	39
524			min	-.129	18	-.005	34	-.119	6	-.017	5	0	1	0	1
525		2	max	.031	38	.003	34	.005	39	.017	3	.098	13	.007	34
526			min	-.183	18	-.007	22	-.005	17	-.017	5	-.098	6	-.013	22
527		3	max	.027	38	.005	34	.12	6	.017	3	0	39	0	39
528			min	-.192	18	-.009	22	-.12	13	-.017	5	0	1	0	1
529	M89	1	max	-.02	15	.009	22	.109	12	.014	3	0	39	0	39
530			min	-.155	3	-.005	34	-.109	5	-.014	5	0	1	0	1
531		2	max	-.024	15	.007	22	.005	35	.014	3	.089	12	.007	34
532			min	-.162	3	-.003	34	-.005	21	-.014	5	-.089	5	-.013	22
533		3	max	-.053	15	.005	34	.109	15	.014	3	0	39	0	39
534			min	-.21	3	-.009	22	-.109	3	-.014	5	0	1	0	1
535	M90	1	max	.144	5	.008	22	.109	12	.011	3	0	39	0	39
536			min	.043	12	-.005	34	-.109	5	-.011	5	0	1	0	1
537		2	max	.095	5	.004	34	.005	39	.011	3	.089	12	.008	34
538			min	.014	12	-.006	22	-.005	17	-.011	5	-.089	5	-.012	22
539		3	max	.088	5	.005	34	.109	15	.011	3	0	39	0	39
540			min	.009	12	-.008	22	-.109	3	-.011	5	0	1	0	1
541	M91	1	max	.149	15	.008	22	.109	12	.008	3	0	39	0	39
542			min	-.885	3	-.005	34	-.109	5	-.008	5	0	1	0	1
543		2	max	.145	15	.006	22	.005	35	.008	3	.089	12	.008	34
544			min	-.892	3	-.004	34	-.005	21	-.008	5	-.089	5	-.012	22
545		3	max	.116	15	.005	34	.109	15	.008	3	0	39	0	39
546			min	-.94	3	-.008	22	-.109	3	-.008	5	0	1	0	1
547	M92	1	max	.192	5	.007	22	.113	12	.003	3	0	39	0	39
548			min	.005	12	-.006	34	-.113	5	-.003	5	0	1	0	1
549		2	max	.185	5	.005	22	.005	35	.003	3	.091	12	.009	34
550			min	0	12	-.005	34	-.005	21	-.003	5	-.091	5	-.01	22
551		3	max	.136	5	.006	34	.108	15	.003	3	0	39	0	39
552			min	-.028	12	-.007	22	-.108	3	-.003	5	0	1	0	1
553	M93	1	max	.437	12	.114	18	.089	12	.03	15	.047	17	-.036	39
554			min	-16.306	5	.016	38	-.071	15	-.03	12	-.067	5	-.225	19
555		2	max	.437	12	.104	18	.084	12	.03	15	.13	3	-.112	37
556			min	-16.306	5	.012	38	-.067	15	-.03	12	-.133	5	-.283	17
557		3	max	.437	12	.094	18	.08	12	.03	15	.211	12	-.15	12
558			min	-16.306	5	.007	38	-.063	15	-.03	12	-.196	15	-.357	16
559	M94	1	max	.437	12	-.002	12	.022	15	.034	15	.213	12	-.15	12
560			min	-16.304	5	-.068	5	-.028	12	-.034	12	-.197	15	-.357	16
561		2	max	.438	12	-.013	12	.03	15	.034	15	.149	3	-.065	36
562			min	-16.304	5	-.086	5	-.037	12	-.034	12	-.147	5	-.269	16
563		3	max	1.087	12	.934	3	.123	12	.079	15	.089	3	-.184	39
564			min	-13.899	5	.135	15	-.121	15	-.079	12	-.101	5	-.491	19
565	M95	1	max	1.061	12	.006	34	.032	12	.082	15	.094	3	-.184	39
566			min	-13.9	5	-.076	22	-.025	15	-.081	12	-.107	5	-.491	19
567		2	max	1.062	12	-.007	34	.024	12	.082	15	.145	3	-.139	36
568			min	-13.899	5	-.092	22	-.017	6	-.081	12	-.143	5	-.37	16
569		3	max	1.063	12	-.02	39	.018	13	.082	15	.181	12	-.016	38
570			min	-13.898	5	-.107	22	-.017	6	-.081	12	-.165	15	-.264	18
571	M96	1	max	1.065	12	-.023	12	.081	15	.086	15	.189	12	-.016	38
572			min	-13.888	5	-.323	5	-.097	12	-.086	12	-.173	15	-.264	18
573		2	max	1.066	12	-.034	12	.089	15	.086	15	.032	17	.441	5
574			min	-13.887	5	-.342	5	-.105	12	-.086	12	-.033	23	.014	12
575		3	max	2.227	12	.073	6	.077	12	.119	15	.164	3	-.199	36
576			min	-9.299	5	.003	38	-.065	15	-.118	12	-.157	5	-.513	16

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
577	M97	1	max	2.227	12	-.077	12	.031	5	.122	15	.176	3	-.199	36
578			min	-9.293	5	-.235	5	-.034	3	-.122	12	-.169	5	-.513	16
579		2	max	2.228	12	-.087	12	.04	5	.122	15	.099	3	.034	36
580			min	-9.291	5	-.253	5	-.042	3	-.122	12	-.098	5	-.087	16
581		3	max	2.229	12	-.098	12	.048	5	.122	15	.02	33	.512	5
582			min	-9.29	5	-.271	5	-.051	3	-.122	12	-.021	37	.145	12
583	M98	1	max	2.233	12	-.033	12	.146	15	.123	15	.022	17	.512	5
584			min	-9.262	5	-.764	5	-.163	12	-.122	12	-.022	23	.145	12
585		2	max	4.847	3	-.047	37	.036	13	.152	15	.081	3	-.12	36
586			min	-2.973	15	-.135	17	-.034	6	-.152	12	-.081	5	-.368	16
587		3	max	4.849	3	-.055	37	.036	13	.152	15	.124	13	.022	12
588			min	-2.971	15	-.157	17	-.034	6	-.152	12	-.12	6	-.107	5
589	M99	1	max	4.857	3	-.123	12	.091	6	.155	15	.132	12	.022	12
590			min	-2.963	15	-.52	5	-.096	3	-.155	12	-.124	15	-.107	5
591		2	max	4.859	3	-.134	12	.098	5	.155	15	.064	5	.95	5
592			min	-2.962	15	-.537	5	-.104	3	-.155	12	-.068	3	.279	12
593		3	max	10.858	19	.044	19	.113	13	.159	15	.113	13	-.181	12
594			min	2.435	39	.002	15	-.113	6	-.16	12	-.114	6	-.531	5
595	M100	1	max	10.88	19	-.132	12	.035	6	.161	15	.112	13	-.181	12
596			min	2.444	39	-.407	5	-.035	13	-.163	12	-.113	6	-.531	5
597		2	max	10.884	19	-.141	12	.04	5	.161	15	.047	13	.231	5
598			min	2.444	39	-.423	5	-.042	3	-.163	12	-.05	6	.07	12
599		3	max	10.889	19	-.151	12	.048	5	.161	15	.056	5	1.023	5
600			min	2.444	39	-.439	5	-.05	3	-.163	12	-.064	3	.339	12
601	M101	1	max	-1.094	12	.21	5	.068	15	.162	15	.106	12	.729	5
602			min	-9.18	5	.072	12	-.07	12	-.165	12	-.104	15	.291	12
603		2	max	-1.096	12	.194	5	.06	15	.162	15	.042	6	.358	19
604			min	-9.183	5	.062	12	-.062	12	-.165	12	-.044	13	.151	39
605		3	max	-1.098	12	.177	5	.052	15	.162	15	.128	15	.087	22
606			min	-9.187	5	.052	12	-.054	12	-.165	12	-.131	12	-.042	34
607	M102	1	max	-1.098	12	.58	17	.112	13	.159	15	.144	5	.087	22
608			min	-9.19	5	.185	37	-.11	6	-.161	12	-.149	3	-.042	34
609		2	max	2.781	12	.088	16	.111	5	.147	15	.112	3	.454	17
610			min	-3.247	5	.025	36	-.116	3	-.148	12	-.107	15	.176	37
611		3	max	2.779	12	.067	5	.103	5	.147	15	.115	6	.338	19
612			min	-3.25	5	.017	12	-.108	3	-.148	12	-.115	13	.098	39
613	M103	1	max	2.774	12	.343	17	.031	13	.144	15	.127	5	.338	19
614			min	-3.26	5	.113	37	-.032	6	-.145	12	-.131	3	.098	39
615		2	max	2.773	12	.323	17	.031	13	.144	15	.103	15	-.088	36
616			min	-3.262	5	.106	37	-.032	6	-.145	12	-.103	12	-.346	16
617		3	max	8.5	3	.101	36	.169	5	.115	15	.053	3	.331	19
618			min	-.232	15	-.202	16	-.176	3	-.117	12	-.049	5	.117	39
619	M104	1	max	8.501	3	.151	5	.055	5	.117	15	.034	3	.331	19
620			min	-.234	15	.061	12	-.058	3	-.118	12	-.03	5	.117	39
621		2	max	8.499	3	.133	5	.046	5	.117	15	.071	5	.07	22
622			min	-.235	15	.051	12	-.049	3	-.118	12	-.073	3	-.023	34
623		3	max	8.497	3	.116	5	.038	5	.117	15	.156	5	-.043	12
624			min	-.236	15	.04	12	-.041	3	-.118	12	-.164	3	-.251	5
625	M105	1	max	8.488	3	.442	3	.088	3	.112	15	.173	5	-.043	12
626			min	-.24	15	.089	15	-.077	5	-.114	12	-.181	3	-.251	5
627		2	max	12.807	17	.111	5	.107	5	.079	15	.076	3	.105	36
628			min	1.775	15	-.07	12	-.117	3	-.08	12	-.064	5	-.124	32
629		3	max	12.806	17	.094	5	.098	5	.079	15	.138	5	.06	12
630			min	1.774	15	-.08	12	-.109	3	-.08	12	-.147	3	-.141	5
631	M106	1	max	12.807	17	.169	3	.022	3	.075	15	.151	5	.06	12
632			min	1.771	15	.037	15	-.02	6	-.076	12	-.161	3	-.141	5
633		2	max	12.807	17	.151	3	.03	3	.075	15	.109	15	-.127	37

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
634			min	1.771	15	.026	15	-.026	5	-.076	12	-.11	12	-.342	17
635		3	max	15.048	17	.138	15	.165	5	.025	15	.026	37	.044	36
636			min	2.706	37	-1.242	3	-.206	3	-.025	12	-.026	13	-.198	16
637	M107	1	max	15.047	17	.083	5	.046	5	.024	15	.027	37	.044	36
638			min	2.702	37	0	12	-.051	3	-.025	12	-.025	35	-.198	16
639		2	max	15.048	17	.066	5	.038	5	.024	15	.098	15	-.048	36
640			min	2.7	37	-.011	12	-.043	3	-.025	12	-.1	12	-.247	16
641		3	max	15.048	17	.048	5	.03	5	.024	15	.164	5	-.046	12
642			min	2.699	37	-.022	12	-.034	3	-.025	12	-.175	3	-.325	5
643	M108	1	max	15.049	17	.201	3	.104	3	.021	15	.167	5	-.046	12
644			min	2.696	37	-.05	15	-.09	5	-.021	12	-.178	3	-.325	5
645		2	max	15.05	17	.192	3	.108	3	.021	15	.076	15	-.145	37
646			min	2.696	37	-.056	15	-.095	5	-.021	12	-.074	12	-.377	17
647		3	max	15.051	17	.183	3	.112	3	.021	15	.041	3	-.114	15
648			min	2.695	37	-.061	15	-.099	5	-.021	12	-.029	35	-.536	3
649	M109	1	max	-.199	12	-2.762	12	.303	6	.044	5	.174	3	-1.315	12
650			min	-.708	5	-8.603	5	-.293	13	-.047	3	-.195	5	-3.878	5
651		2	max	-.197	12	-2.763	12	.301	5	.044	5	.089	3	-.433	12
652			min	-.705	5	-8.603	5	-.266	3	-.047	3	-.099	5	-1.132	5
653		3	max	-.196	12	-2.763	12	.301	5	.044	5	.006	6	1.615	5
654			min	-.702	5	-8.604	5	-.266	3	-.047	3	-.006	13	.449	12
655	M110	1	max	-.163	37	-2.485	37	.199	13	.18	12	.013	15	-.489	37
656			min	-.611	17	-7.382	17	-.189	6	-.178	15	-.014	12	-1.431	17
657		2	max	-.162	37	-2.486	37	.238	13	.18	12	.056	13	.823	17
658			min	-.608	17	-7.382	17	-.228	6	-.178	15	-.054	6	.27	37
659		3	max	-.16	37	-2.486	37	.276	13	.18	12	.134	13	3.076	17
660			min	-.605	17	-7.383	17	-.266	6	-.178	15	-.13	6	1.029	37
661	M111	1	max	.037	12	-2.08	12	.257	5	.052	5	.178	3	-.884	12
662			min	-.625	5	-6.711	5	-.244	3	-.052	3	-.185	5	-2.845	5
663		2	max	.039	12	-2.08	12	.257	5	.052	5	.103	3	-.249	12
664			min	-.622	5	-6.711	5	-.244	3	-.052	3	-.107	5	-.797	5
665		3	max	.041	12	-2.081	12	.257	5	.052	5	.029	12	1.252	5
666			min	-.62	5	-6.712	5	-.244	3	-.052	3	-.029	15	.386	12
667	M112	1	max	-.003	36	-2.254	37	.164	13	.149	12	.026	15	-.422	37
668			min	-.471	16	-6.604	17	-.161	6	-.147	15	-.027	12	-1.186	17
669		2	max	-.002	36	-2.254	37	.195	13	.149	12	.044	13	.869	17
670			min	-.468	16	-6.604	17	-.192	6	-.147	15	-.044	6	.279	37
671		3	max	0	36	-2.255	37	.226	13	.149	12	.109	13	2.923	17
672			min	-.465	16	-6.604	17	-.222	6	-.147	15	-.108	6	.981	37
673	M113	1	max	-.078	12	-1.16	12	.196	5	.038	5	.165	3	-.573	12
674			min	-.454	5	-4.59	5	-.207	3	-.041	3	-.158	5	-2.069	5
675		2	max	-.076	12	-1.161	12	.196	5	.038	5	.098	3	-.202	12
676			min	-.451	5	-4.59	5	-.207	3	-.041	3	-.095	5	-.601	5
677		3	max	-.074	12	-1.161	12	.196	5	.038	5	.032	12	.866	5
678			min	-.449	5	-4.59	5	-.207	3	-.041	3	-.033	15	.169	12
679	M114	1	max	.006	15	-1.627	39	.181	12	.103	12	.033	15	-.321	39
680			min	-.495	3	-4.683	19	-.172	15	-.102	15	-.033	12	-.92	19
681		2	max	.008	15	-1.627	39	.181	12	.103	12	.022	12	.512	17
682			min	-.493	3	-4.683	19	-.172	15	-.102	15	-.022	6	.171	37
683		3	max	.01	15	-1.627	39	.181	12	.103	12	.077	12	1.936	19
684			min	-.49	3	-4.684	19	-.172	15	-.102	15	-.072	15	.671	39
685	M115	1	max	.138	15	2.463	19	.206	3	.059	12	.071	5	1.101	19
686			min	-1.318	3	.72	39	-.193	5	-.057	15	-.079	3	.319	39
687		2	max	.136	15	2.462	19	.206	3	.059	12	.011	5	.336	22
688			min	-1.321	3	.72	39	-.193	5	-.057	15	-.015	3	.095	39
689		3	max	.135	15	2.462	19	.206	3	.059	12	.05	12	-.129	39
690			min	-1.324	3	.72	39	-.193	5	-.057	15	-.05	15	-.43	19

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
691	M116	1	max	-.229	15	2.401	5	.163	15	.02	13	.045	15	.436	22
692			min	-1.011	3	.641	12	-.191	12	-.019	6	-.045	12	.131	34
693		2	max	-.231	15	2.4	5	.163	15	.02	13	.096	15	-.064	12
694			min	-1.014	3	.641	12	-.191	12	-.019	6	-.105	12	-.326	5
695		3	max	-.233	15	2.4	5	.163	15	.02	13	.147	15	-.265	12
696			min	-1.017	3	.641	12	-.191	12	-.019	6	-.165	12	-1.076	5
697	M117	1	max	.047	16	.008	34	.111	3	0	39	0	39	0	39
698			min	.016	36	-.01	22	-.111	5	0	1	0	1	0	1
699		2	max	.061	16	.011	34	.111	3	0	39	.138	3	.014	22
700			min	.021	36	-.013	22	-.111	5	0	1	-.138	5	-.012	34
701		3	max	.074	16	.013	34	.111	3	0	39	.276	3	.031	22
702			min	.026	36	-.015	22	-.111	5	0	1	-.276	5	-.027	34
703	M118	1	max	.048	16	.007	34	.111	3	0	39	0	39	0	39
704			min	.016	36	-.012	22	-.111	5	0	1	0	1	0	1
705		2	max	.061	16	.009	34	.111	3	0	39	.133	3	.016	22
706			min	.02	36	-.015	22	-.111	5	0	1	-.133	5	-.01	34
707		3	max	.073	16	.011	34	.111	3	0	39	.266	3	.036	22
708			min	.025	36	-.018	22	-.111	5	0	1	-.266	5	-.021	34
709	M119	1	max	0	39	0	17	0	3	0	39	0	39	0	39
710			min	0	1	0	37	0	5	0	1	0	1	0	1
711		2	max	.007	16	.001	34	.013	13	0	39	.004	13	0	22
712			min	.002	36	-.002	22	-.013	6	0	1	-.004	6	0	34
713		3	max	.013	16	.002	34	.026	13	0	39	.016	13	.002	22
714			min	.004	36	-.003	22	-.026	6	0	1	-.016	6	-.001	34
715	M120	1	max	6.265	12	1.502	5	.89	5	2.481	15	2.072	3	5.041	5
716			min	-8.459	5	.481	12	-.909	3	-2.496	12	-1.989	5	1.787	12
717		2	max	6.257	12	1.432	5	.866	5	2.481	15	.386	6	1.534	22
718			min	-8.472	5	.439	12	-.885	3	-2.496	12	-.362	13	.206	34
719		3	max	6.25	12	1.362	5	.842	5	2.481	15	2.615	5	-.546	12
720			min	-8.484	5	.397	12	-.861	3	-2.496	12	-2.636	3	-2.574	5
721	M121	1	max	17.347	3	.819	5	.782	5	2.318	15	1.618	3	1.628	22
722			min	-8.072	15	.299	12	-.782	3	-2.325	12	-1.635	5	.47	34
723		2	max	17.335	3	.74	5	.756	5	2.318	15	.741	5	.111	36
724			min	-8.079	15	.247	12	-.748	3	-2.325	12	-.748	3	-1.292	16
725		3	max	17.323	3	.659	5	.728	5	2.318	15	3.034	5	-.723	36
726			min	-8.086	15	.198	12	-.721	3	-2.325	12	-3.017	3	-3.32	16
727	M122	1	max	27.101	3	.621	5	.646	5	1.825	15	.83	3	.548	36
728			min	-8.981	15	.242	12	-.659	3	-1.827	12	-.812	5	-.837	16
729		2	max	27.092	3	.546	5	.623	5	1.825	15	1.141	5	-.356	36
730			min	-8.986	15	.175	12	-.606	3	-1.827	12	-1.16	3	-2.455	16
731		3	max	27.084	3	.464	5	.595	5	1.825	15	3.022	5	-1.158	36
732			min	-8.991	15	.126	12	-.579	3	-1.827	12	-2.991	3	-3.674	16
733	M123	1	max	33.975	3	.643	5	.504	5	1.329	15	.581	6	-.129	36
734			min	-10.06	15	-.186	12	-.548	3	-1.328	12	-.572	13	-2.038	16
735		2	max	33.974	3	.636	5	.501	5	1.329	15	.578	6	-.197	36
736			min	-10.06	15	-.191	12	-.545	3	-1.328	12	-.57	13	-2.101	16
737		3	max	33.974	3	.629	5	.499	5	1.329	15	.576	6	-.265	36
738			min	-10.06	15	-.195	12	-.543	3	-1.328	12	-.567	13	-2.162	16
739	M124	1	max	33.975	3	.554	5	.502	5	1.325	15	.575	6	-.263	36
740			min	-10.068	15	.192	12	-.514	3	-1.324	12	-.567	13	-2.163	16
741		2	max	33.972	3	.501	5	.484	5	1.325	15	1.274	5	-.808	36
742			min	-10.07	15	.16	12	-.496	3	-1.324	12	-1.291	3	-3.053	16
743		3	max	33.968	3	.454	5	.47	5	1.325	15	2.227	5	-1.308	36
744			min	-10.072	15	.108	12	-.451	3	-1.324	12	-2.256	3	-3.802	16
745	M125	1	max	33.959	3	.77	3	.366	5	1.021	15	2.242	5	-1.277	36
746			min	-10.079	15	.096	15	-.303	3	-1.02	12	-2.271	3	-3.819	16
747		2	max	33.958	3	.748	3	.359	5	1.021	15	2.535	5	-1.492	36

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
748			min	-10.079	15	.084	15	-.295	3	-1.02	12	-2.513	3	-4.292	16
749		3	max	33.957	3	.727	3	.351	5	1.021	15	2.823	5	-1.664	37
750			min	-10.08	15	.071	15	-.288	3	-1.02	12	-2.749	3	-4.776	17
751	M126	1	max	37.764	3	.257	15	.257	5	.694	15	1.115	5	-1.07	36
752			min	-10.798	15	-.381	3	-.312	3	-.693	12	-1.04	3	-4.017	16
753		2	max	37.763	3	.238	15	.247	5	.694	15	1.412	5	-1.133	36
754			min	-10.799	15	-.412	3	-.302	3	-.693	12	-1.402	3	-3.791	16
755		3	max	37.762	3	.219	15	.236	5	.694	15	1.697	5	-1.182	36
756			min	-10.799	15	-.444	3	-.291	3	-.693	12	-1.752	3	-3.52	16
757	M127	1	max	37.765	3	.182	3	.135	5	.386	15	1.707	5	-1.152	36
758			min	-10.803	15	-.021	15	-.115	3	-.384	12	-1.762	3	-3.546	16
759		2	max	37.765	3	.131	3	.118	5	.386	15	1.948	5	-1.309	36
760			min	-10.803	15	-.052	15	-.105	6	-.384	12	-1.964	3	-3.63	16
761		3	max	37.764	3	.068	38	.108	15	.386	15	2.16	5	-1.309	37
762			min	-10.803	15	-.098	18	-.106	6	-.384	12	-2.102	3	-3.665	17
763	M128	1	max	8.359	3	.859	16	.525	15	2.443	15	.929	12	3.608	5
764			min	-5.848	15	.252	36	-.515	12	-2.489	12	-.966	15	1.384	12
765		2	max	8.345	3	.769	16	.499	15	2.443	15	.473	5	1.719	22
766			min	-5.856	15	.224	36	-.49	12	-2.489	12	-.495	3	.362	34
767		3	max	8.332	3	.686	5	.474	15	2.443	15	1.84	15	.565	38
768			min	-5.864	15	.184	12	-.465	12	-2.489	12	-1.825	12	-1.109	18
769	M129	1	max	7.32	12	1.019	17	.41	15	2.214	15	.482	12	2.796	22
770			min	-14.739	5	.382	37	-.417	12	-2.241	12	-.473	15	.77	34
771		2	max	7.313	12	.925	17	.388	15	2.214	15	.725	15	.403	36
772			min	-14.75	5	.348	37	-.387	12	-2.241	12	-.722	12	-.852	16
773		3	max	7.307	12	.831	17	.361	15	2.214	15	1.847	15	-.777	36
774			min	-14.761	5	.316	37	-.36	12	-2.241	12	-1.842	12	-3.308	16
775	M130	1	max	6.469	12	.755	17	.296	15	1.765	15	.414	6	.456	38
776			min	-22.702	5	.288	37	-.304	12	-1.783	12	-.415	13	-.63	18
777		2	max	6.464	12	.672	17	.281	15	1.765	15	.886	15	-.468	36
778			min	-22.71	5	.261	37	-.273	12	-1.783	12	-.896	12	-2.643	16
779		3	max	6.459	12	.578	17	.254	15	1.765	15	1.689	15	-1.294	36
780			min	-22.718	5	.228	37	-.246	12	-1.783	12	-1.674	12	-4.433	16
781	M131	1	max	5.748	12	.357	19	.188	15	1.183	15	.501	6	-.382	36
782			min	-28.241	5	.131	39	-.196	12	-1.194	12	-.501	13	-2.73	16
783		2	max	5.745	12	.27	19	.161	15	1.183	15	.98	15	-.907	36
784			min	-28.246	5	.09	34	-.169	12	-1.194	12	-.991	12	-3.478	16
785		3	max	5.743	12	.222	5	.152	15	1.183	15	1.462	15	-1.346	36
786			min	-28.251	5	.054	12	-.137	12	-1.194	12	-1.448	12	-4.035	16
787	M132	1	max	5.41	12	.371	19	.077	15	.344	15	.845	15	-.693	36
788			min	-31.06	5	.131	39	-.082	12	-.348	12	-.834	12	-3.261	16
789		2	max	5.409	12	.295	22	.074	13	.344	15	1.036	15	-1.292	36
790			min	-31.062	5	.08	34	-.074	6	-.348	12	-1.038	12	-3.964	16
791		3	max	5.408	12	.252	22	.073	13	.344	15	1.163	15	-1.709	37
792			min	-31.063	5	.05	34	-.072	6	-.348	12	-1.157	12	-4.514	17
793	M133	1	max	11.372	17	.066	34	3.8	5	2.931	3	88.712	3	9.869	34
794			min	4.217	37	-5.133	22	-3.8	3	-2.931	5	-88.61	5	-62.731	22
795		2	max	10.061	17	-.19	34	3.695	5	2.931	3	38.435	3	15.321	16
796			min	3.749	37	-4.877	22	-3.695	3	-2.931	5	-38.333	5	-.145	36
797		3	max	0	39	0	16	.002	5	0	39	0	39	0	39
798			min	0	1	0	22	-.002	3	0	1	0	1	0	1
799	M134	1	max	0	39	0	22	0	5	0	39	0	39	0	39
800			min	0	1	0	34	0	3	0	1	0	1	0	1
801		2	max	-.253	12	-2.295	36	.393	3	1.441	5	.283	5	.632	16
802			min	-2.743	5	-12.7	16	-.056	15	-.821	12	-.004	12	.053	36
803		3	max	0	39	0	34	0	3	0	39	0	39	0	39
804			min	0	1	0	19	0	5	0	1	0	1	0	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
805	M135	1	max	21.659	16	12.33	16	.044	6	.161	3	.25	5	5.746	16
806			min	4.177	36	2.378	36	-.018	13	-.146	15	-.254	3	1.102	36
807		2	max	23.423	16	.157	5	.051	3	.147	12	.089	5	.797	16
808			min	4.077	36	.055	12	-.049	5	-.146	15	-.086	3	.107	36
809		3	max	11.827	16	2.628	16	.017	5	.169	12	.009	5	1.099	17
810			min	1.22	36	.362	36	-.006	37	-.168	15	-.008	3	.272	37
811	M136	1	max	12.275	16	-4.17	36	.034	13	.25	5	.146	15	-1.102	36
812			min	2.361	36	-21.703	16	-.072	6	-.254	3	-.161	3	-5.746	16
813		2	max	5.299	16	-.179	36	.046	12	.096	5	.031	5	.016	15
814			min	.943	36	-.75	16	-.024	15	-.076	3	-.022	3	-.186	3
815		3	max	-.191	36	-2.401	36	.161	3	.157	12	.115	12	2.718	16
816			min	-.963	16	-14.91	16	-.127	5	-.176	15	-.111	15	.529	36
817	M137	1	max	20.934	16	-1.44	36	.124	3	.094	3	.178	3	-.534	36
818			min	3.991	36	-6.994	16	-.053	15	-.096	5	-.157	15	-2.613	16
819		2	max	20.935	16	-1.442	36	.124	3	.094	3	.22	3	-.036	12
820			min	3.99	36	-6.997	16	-.053	15	-.096	5	-.175	15	-.295	5
821		3	max	20.935	16	-1.443	36	.124	3	.094	3	.261	3	2.051	16
822			min	3.989	36	-7.001	16	-.053	15	-.096	5	-.193	15	.427	36
823	M138	1	max	-2.4	36	.872	16	.045	12	.115	12	.176	15	2.718	16
824			min	-14.915	16	.179	36	-.051	15	-.111	15	-.157	12	.529	36
825		2	max	-2.387	36	.274	16	.048	12	.115	12	.013	15	.132	5
826			min	-14.925	16	.075	36	-.051	15	-.111	15	-.011	12	-.011	12
827		3	max	-.246	36	.024	36	.064	3	.17	12	.034	15	.83	16
828			min	-10.04	16	-1.622	16	-.046	5	-.171	15	-.033	12	.196	36
829	M139	1	max	-2.223	36	-1.135	36	-.002	38	.036	12	.226	12	-.488	36
830			min	-14.181	16	-6.297	16	-.058	3	-.088	5	-.268	5	-3.064	16
831		2	max	-2.224	36	-1.136	36	-.002	38	.036	12	.213	12	-.109	36
832			min	-14.18	16	-6.301	16	-.058	3	-.088	5	-.273	5	-.964	16
833		3	max	-2.224	36	-1.137	36	-.001	38	.036	12	.201	12	1.142	17
834			min	-14.179	16	-6.304	16	-.058	3	-.088	5	-.277	5	.267	37
835	M140	1	max	-1.433	36	-1.786	36	1.321	3	1.049	12	2.226	15	2.919	16
836			min	-13.912	16	-9.879	16	-.814	15	-1.043	15	-2.827	3	.864	36
837		2	max	-1.005	36	2.051	16	.953	3	1.69	12	1.087	5	7.514	16
838			min	-16.013	16	.544	36	-.945	5	-1.678	15	-1.105	3	1.443	36
839		3	max	6.272	15	1.997	5	.894	3	2.857	12	1.603	5	6.097	16
840			min	-8.788	3	-.423	12	-.847	5	-2.842	15	-1.587	3	.816	36
841	M141	1	max	9.367	5	1.233	17	.567	12	1.473	12	2.481	5	8.583	16
842			min	-.052	12	.374	37	-.652	5	-1.512	15	-2.049	12	2.108	36
843		2	max	9.367	5	.971	17	.567	12	1.473	12	.239	5	5.04	16
844			min	-.052	12	.282	37	-.652	5	-1.512	15	-.101	12	.898	36
845		3	max	8.093	5	2.013	5	.523	12	2.568	12	.475	15	4.2	16
846			min	-5.816	12	-.482	12	-.472	15	-2.569	15	-.516	12	.851	36
847	M142	1	max	.508	3	.007	34	.007	39	.008	5	0	39	0	39
848			min	.091	36	-.007	20	-.007	17	-.009	3	0	1	0	1
849		2	max	.5	3	.005	34	.005	39	.008	5	.009	39	.009	38
850			min	.088	36	-.005	20	-.005	17	-.009	3	-.009	17	-.009	16
851		3	max	.452	3	.007	38	.007	35	.008	5	0	39	0	39
852			min	.067	15	-.007	16	-.007	21	-.009	3	0	1	0	1
853	M143	1	max	12.258	16	.211	12	.106	5	.033	5	.024	17	.104	12
854			min	2.284	36	-1.911	18	-.136	3	-.028	3	-.003	37	-.53	5
855		2	max	12.255	16	.211	12	.106	5	.033	5	.032	5	.1	16
856			min	2.282	36	-1.912	18	-.136	3	-.028	3	-.023	3	-.003	36
857		3	max	12.252	16	.211	12	.106	5	.033	5	.065	5	.691	18
858			min	2.281	36	-1.912	18	-.136	3	-.028	3	-.065	3	-.057	38
859	M144	1	max	.159	38	11.574	16	.061	3	.032	3	.026	5	2.706	16
860			min	-1.12	18	2.878	36	-.042	23	-.033	5	-.025	3	.588	36
861		2	max	.158	38	11.574	16	.061	3	.032	3	.02	15	-.283	37

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
862			min	-1.123	18	2.879	36	-.043	23	-.033	5	-.014	12	-.942	17
863		3	max	.156	38	11.573	16	.061	3	.032	3	.02	17	-1.211	36
864			min	-1.126	18	2.88	36	-.044	23	-.033	5	-.016	6	-4.527	16
865	M145	1	max	.307	36	4.901	16	.045	3	.184	15	.035	12	2.422	16
866			min	-.788	16	2.126	36	-.058	5	-.187	12	-.034	15	.948	36
867		2	max	.306	36	4.9	16	.045	3	.184	15	.045	12	.891	16
868			min	-.791	16	2.127	36	-.058	5	-.187	12	-.047	15	.284	36
869		3	max	.305	36	4.899	16	.045	3	.184	15	.055	12	-.239	12
870			min	-.794	16	2.128	36	-.058	5	-.187	12	-.06	5	-.776	5
871	M146	1	max	1.136	16	.007	34	.007	39	.013	5	0	39	0	39
872			min	.356	36	-.007	20	-.007	17	-.013	3	0	1	0	1
873		2	max	1.128	16	.005	34	.005	39	.013	5	.009	39	.009	38
874			min	.353	36	-.005	20	-.005	17	-.013	3	-.009	17	-.009	16
875		3	max	1.07	16	.007	38	.007	35	.013	5	0	39	0	39
876			min	.332	36	-.007	16	-.007	21	-.013	3	0	1	0	1
877	M147	1	max	-.131	36	.011	16	.007	39	.014	5	0	39	0	39
878			min	-.695	16	-.005	36	-.007	17	-.014	3	0	1	0	1
879		2	max	-.153	36	.004	36	.005	35	.014	5	.009	39	.007	36
880			min	-.75	16	-.008	16	-.005	21	-.014	3	-.009	17	-.016	16
881		3	max	-.156	36	.005	36	.007	35	.014	5	0	39	0	39
882			min	-.758	16	-.011	16	-.007	21	-.014	3	0	1	0	1
883	M148	1	max	-.018	36	.011	16	.007	39	.016	5	0	39	0	39
884			min	-.37	16	-.005	36	-.007	17	-.015	3	0	1	0	1
885		2	max	-.04	36	.004	36	.005	35	.016	5	.009	39	.007	36
886			min	-.425	16	-.008	16	-.005	21	-.015	3	-.009	17	-.016	16
887		3	max	-.043	36	.005	36	.007	35	.016	5	0	39	0	39
888			min	-.434	16	-.011	16	-.007	21	-.015	3	0	1	0	1
889	M149	1	max	.044	34	.01	16	.007	39	.017	5	0	39	0	39
890			min	-.127	22	-.005	36	-.007	17	-.017	3	0	1	0	1
891		2	max	.011	34	.004	36	.005	35	.017	5	.009	39	.008	36
892			min	-.172	22	-.007	16	-.005	21	-.017	3	-.009	17	-.014	16
893		3	max	.006	34	.005	36	.007	35	.017	5	0	39	0	39
894			min	-.179	22	-.01	16	-.007	21	-.017	3	0	1	0	1
895	M150	1	max	-.014	36	.01	16	.007	39	.015	5	0	39	0	39
896			min	-.16	16	-.005	36	-.007	17	-.015	3	0	1	0	1
897		2	max	-.017	36	.007	16	.005	39	.015	5	.009	39	.008	36
898			min	-.168	16	-.004	36	-.005	17	-.015	3	-.009	17	-.014	16
899		3	max	-.039	36	.005	36	.007	35	.015	5	0	39	0	39
900			min	-.224	16	-.01	16	-.007	21	-.015	3	0	1	0	1
901	M151	1	max	.157	16	.009	16	.007	39	.012	5	0	39	0	39
902			min	.031	36	-.006	36	-.007	17	-.012	3	0	1	0	1
903		2	max	.148	16	.006	16	.005	39	.012	5	.009	39	.008	36
904			min	.028	36	-.004	36	-.005	17	-.012	3	-.009	17	-.012	16
905		3	max	.092	16	.006	36	.007	35	.012	5	0	39	0	39
906			min	.007	36	-.009	16	-.007	21	-.012	3	0	1	0	1
907	M152	1	max	.146	12	.009	16	.007	39	.009	5	0	39	0	39
908			min	-.881	5	-.006	36	-.007	17	-.009	3	0	1	0	1
909		2	max	.142	12	.006	16	.005	39	.009	5	.009	39	.008	36
910			min	-.889	5	-.004	36	-.005	17	-.009	3	-.009	17	-.012	16
911		3	max	.113	12	.006	36	.007	35	.009	5	0	39	0	39
912			min	-.937	5	-.009	16	-.007	21	-.009	3	0	1	0	1
913	M153	1	max	.192	3	.007	16	.007	39	.003	5	0	39	0	39
914			min	.005	15	-.006	36	-.007	17	-.003	3	0	1	0	1
915		2	max	.185	3	.005	16	.005	39	.003	5	.009	39	.009	36
916			min	0	15	-.005	36	-.005	17	-.003	3	-.009	17	-.01	16
917		3	max	.136	3	.006	36	.007	35	.003	5	0	39	0	39
918			min	-.028	15	-.007	16	-.007	21	-.003	3	0	1	0	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
919	M154	1	max	.047	17	.009	36	.111	5	0	39	0	39	0	39
920			min	.017	36	-.009	34	-.111	3	0	1	0	1	0	1
921		2	max	.06	17	.012	36	.111	5	0	39	.139	5	.013	34
922			min	.021	36	-.012	34	-.111	3	0	1	-.139	3	-.013	36
923		3	max	.074	17	.014	36	.111	5	0	39	.277	5	.029	34
924			min	.026	36	-.014	34	-.111	3	0	1	-.277	3	-.029	36
925	M155	1	max	.435	15	.115	19	.023	3	.032	12	.155	5	-.016	38
926			min	-16.314	3	.013	39	-.008	5	-.031	15	-.174	3	-.25	16
927		2	max	.435	15	.105	19	.023	3	.032	12	.147	5	-.07	36
928			min	-16.314	3	.009	39	-.008	5	-.031	15	-.149	3	-.326	16
929		3	max	.435	15	.095	19	.023	3	.032	12	.138	15	-.105	37
930			min	-16.314	3	.004	39	-.008	5	-.031	15	-.125	12	-.4	17
931	M156	1	max	.435	15	0	36	.002	13	.034	12	.141	5	-.105	37
932			min	-16.312	3	-.071	16	-.004	3	-.034	15	-.128	3	-.4	17
933		2	max	.435	15	-.008	36	.003	35	.034	12	.137	5	-.095	37
934			min	-16.312	3	-.093	16	-.004	37	-.034	15	-.135	3	-.238	17
935		3	max	1.083	15	.93	5	.044	3	.08	12	.152	5	-.11	36
936			min	-13.909	3	.139	12	-.045	5	-.079	15	-.162	3	-.57	16
937	M157	1	max	1.058	15	.015	38	.02	3	.084	12	.159	5	-.11	36
938			min	-13.911	3	-.085	18	-.014	5	-.082	15	-.169	3	-.57	16
939		2	max	1.059	15	.005	38	.02	3	.084	12	.132	5	-.119	37
940			min	-13.91	3	-.104	16	-.014	5	-.082	15	-.13	3	-.39	17
941		3	max	1.059	15	-.003	36	.02	3	.084	12	.106	15	-.037	39
942			min	-13.909	3	-.125	16	-.014	5	-.082	15	-.092	12	-.242	19
943	M158	1	max	1.061	15	-.023	15	.005	33	.086	12	.114	5	-.037	39
944			min	-13.899	3	-.324	3	-.014	15	-.085	15	-.1	12	-.242	19
945		2	max	1.062	15	-.034	15	.009	33	.086	12	.091	5	.442	3
946			min	-13.897	3	-.342	3	-.014	15	-.085	15	-.106	3	.014	15
947		3	max	2.23	15	.067	19	.028	3	.122	12	.096	5	-.159	37
948			min	-9.308	3	.007	39	-.018	5	-.12	15	-.091	3	-.551	17
949	M159	1	max	2.231	15	-.053	36	.012	3	.124	12	.109	5	-.159	37
950			min	-9.303	3	-.263	16	-.015	5	-.122	15	-.103	3	-.551	17
951		2	max	2.232	15	-.061	36	.012	3	.124	12	.079	5	.023	32
952			min	-9.301	3	-.284	16	-.015	5	-.122	15	-.078	3	-.077	20
953		3	max	2.233	15	-.069	36	.012	3	.124	12	.051	15	.6	16
954			min	-9.299	3	-.305	16	-.015	5	-.122	15	-.054	12	.067	36
955	M160	1	max	2.236	15	-.026	15	.014	33	.126	12	.063	5	.6	16
956			min	-9.271	3	-.773	3	-.018	39	-.124	15	-.066	3	.067	36
957		2	max	4.845	5	-.044	36	.021	3	.156	12	.074	5	-.111	37
958			min	-2.979	12	-.14	16	-.018	5	-.154	15	-.073	3	-.379	17
959		3	max	4.847	5	-.052	36	.021	3	.156	12	.039	15	.024	15
960			min	-2.978	12	-.16	16	-.018	5	-.154	15	-.033	12	-.108	3
961	M161	1	max	4.855	5	-.111	37	.013	3	.157	12	.049	15	.024	15
962			min	-2.97	12	-.539	17	-.018	5	-.155	15	-.043	12	-.108	3
963		2	max	4.857	5	-.118	37	.015	17	.157	12	.013	15	1.04	16
964			min	-2.968	12	-.559	17	-.018	5	-.155	15	-.018	12	.203	36
965		3	max	12.041	16	.044	16	.023	3	.165	12	.018	37	-.157	37
966			min	1.269	36	.004	38	-.021	5	-.164	15	-.018	35	-.56	17
967	M162	1	max	12.068	16	-.11	37	.017	3	.165	12	.026	5	-.157	37
968			min	1.27	36	-.433	17	-.018	5	-.164	15	-.025	3	-.56	17
969		2	max	12.075	16	-.117	37	.017	3	.165	12	.006	3	.264	16
970			min	1.267	36	-.451	17	-.018	5	-.164	15	-.007	5	.039	36
971		3	max	12.083	16	-.124	37	.017	3	.165	12	.038	3	1.099	17
972			min	1.265	36	-.47	17	-.018	5	-.164	15	-.04	5	.272	37
973	M163	1	max	-.237	36	.223	17	.035	12	.161	12	.065	15	.83	16
974			min	-10.15	16	.06	37	-.036	15	-.161	15	-.064	12	.196	36
975		2	max	-.235	36	.204	17	.035	12	.161	12	.006	35	.438	16

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
976			min	-10.157	16	.053	37	-.036	15	-.161	15	-.009	23	.071	36
977		3	max	-.232	36	.184	17	.035	12	.161	12	.069	12	.091	18
978			min	-10.165	16	.046	37	-.036	15	-.161	15	-.073	15	-.047	38
979	M164	1	max	-.227	36	.584	16	.036	12	.159	12	.086	3	.091	18
980			min	-10.176	16	.178	36	-.032	15	-.16	15	-.09	5	-.047	38
981		2	max	2.778	15	.088	17	.026	3	.146	12	.026	5	.52	16
982			min	-3.243	3	.026	37	-.03	5	-.146	15	-.022	12	.117	36
983		3	max	2.776	15	.068	17	.026	3	.146	12	.031	3	.383	16
984			min	-3.246	3	.018	39	-.03	5	-.146	15	-.033	5	.053	36
985	M165	1	max	2.772	15	.355	16	.026	12	.145	12	.05	3	.383	16
986			min	-3.256	3	.102	36	-.024	15	-.145	15	-.052	5	.053	36
987		2	max	2.77	15	.336	16	.026	12	.145	12	.097	12	-.126	37
988			min	-3.258	3	.094	36	-.024	15	-.145	15	-.097	15	-.308	17
989		3	max	8.5	5	.078	32	.026	19	.117	12	.014	6	.399	16
990			min	-.224	12	-.186	20	-.03	5	-.117	15	-.014	13	.051	36
991	M166	1	max	8.5	5	.175	16	.019	3	.117	12	.019	12	.399	16
992			min	-.226	12	.041	36	-.021	5	-.117	15	-.015	15	.051	36
993		2	max	8.499	5	.154	16	.019	3	.117	12	.056	12	.076	18
994			min	-.227	12	.033	36	-.021	5	-.117	15	-.057	5	-.028	38
995		3	max	8.497	5	.134	16	.019	3	.117	12	.093	3	-.044	15
996			min	-.228	12	.025	36	-.021	5	-.117	15	-.099	5	-.25	3
997	M167	1	max	8.488	5	.442	5	.018	12	.115	12	.11	3	-.044	15
998			min	-.232	12	.09	12	-.008	15	-.114	15	-.117	5	-.25	3
999		2	max	12.708	5	.111	3	.02	19	.079	12	.04	12	.1	32
1000			min	1.783	12	-.07	15	-.024	5	-.079	15	-.03	15	-.125	20
1001		3	max	12.707	5	.093	3	.016	19	.079	12	.065	3	.06	15
1002			min	1.782	12	-.08	15	-.024	5	-.079	15	-.073	5	-.141	3
1003	M168	1	max	12.706	5	.169	5	.012	12	.077	12	.079	3	.06	15
1004			min	1.779	12	.037	12	-.008	15	-.077	15	-.087	5	-.141	3
1005		2	max	12.705	5	.151	5	.012	12	.077	12	.1	12	-.114	36
1006			min	1.779	12	.026	12	-.008	15	-.077	15	-.101	15	-.356	16
1007		3	max	14.79	5	.134	12	.029	17	.028	13	.069	12	.012	34
1008			min	2.812	12	-1.239	5	-.054	5	-.028	6	-.063	15	-.168	22
1009	M169	1	max	14.783	5	.093	16	.011	17	.028	13	.078	12	.012	34
1010			min	2.812	12	-.008	36	-.011	23	-.028	6	-.072	15	-.168	22
1011		2	max	14.783	5	.073	16	.007	17	.028	13	.084	12	-.072	39
1012			min	2.811	12	-.015	36	-.008	5	-.028	6	-.086	15	-.222	19
1013		3	max	14.782	5	.052	16	.005	13	.028	13	.091	3	-.046	15
1014			min	2.811	12	-.023	36	-.008	5	-.028	6	-.101	5	-.325	3
1015	M170	1	max	14.781	5	.201	5	.013	5	.028	13	.095	3	-.046	15
1016			min	2.811	12	-.05	12	-.01	17	-.028	6	-.104	5	-.325	3
1017		2	max	14.781	5	.192	5	.013	5	.028	13	.096	12	-.098	36
1018			min	2.811	12	-.056	12	-.012	17	-.028	6	-.094	15	-.425	16
1019		3	max	14.781	5	.183	5	.015	23	.028	13	.099	12	-.114	12
1020			min	2.811	12	-.061	12	-.015	17	-.028	6	-.085	15	-.536	5
1021	M171	1	max	-.159	37	-2.262	37	.111	3	.042	3	.057	5	-1.054	37
1022			min	-.772	17	-9.178	17	-.077	5	-.045	5	-.078	3	-4.174	17
1023		2	max	-.158	37	-2.262	37	.111	3	.042	3	.032	5	-.323	36
1024			min	-.769	17	-9.179	17	-.077	5	-.045	5	-.042	3	-1.254	16
1025		3	max	-.157	37	-2.262	37	.111	3	.042	3	.009	15	1.686	17
1026			min	-.766	17	-9.18	17	-.077	5	-.045	5	-.008	12	.39	37
1027	M172	1	max	.044	15	-1.719	36	.062	3	.045	3	.059	5	-.708	36
1028			min	-.634	3	-7.154	16	-.048	5	-.048	5	-.067	3	-3.053	16
1029		2	max	.046	15	-1.718	36	.062	3	.045	3	.044	5	-.184	36
1030			min	-.632	3	-7.155	16	-.048	5	-.048	5	-.048	3	-.87	16
1031		3	max	.048	15	-1.718	36	.062	3	.045	3	.029	15	1.325	17
1032			min	-.629	3	-7.156	16	-.048	5	-.048	5	-.03	12	.328	37

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
1033	M173	1	max	-.078	15	-.859	36	.029	17	.038	3	.046	5	-.384	36
1034			min	-.46	17	-4.966	16	-.03	23	-.041	5	-.04	3	-2.293	16
1035		2	max	-.076	15	-.859	36	.028	17	.038	3	.04	5	-.11	36
1036			min	-.456	17	-4.967	16	-.029	23	-.041	5	-.037	3	-.705	16
1037		3	max	-.074	15	-.858	36	.028	17	.038	3	.034	15	.882	16
1038			min	-.453	17	-4.968	16	-.028	23	-.041	5	-.035	12	.165	36
1039	M174	1	max	-.154	36	-2.456	36	.078	3	.177	15	.014	12	-.469	36
1040			min	-.612	16	-7.443	16	-.075	5	-.176	12	-.014	15	-1.455	16
1041		2	max	-.153	36	-2.456	36	.078	3	.177	15	.037	3	.817	16
1042			min	-.609	16	-7.444	16	-.075	5	-.176	12	-.037	5	.281	36
1043		3	max	-.152	36	-2.455	36	.078	3	.177	15	.061	3	3.089	16
1044			min	-.606	16	-7.445	16	-.075	5	-.176	12	-.06	5	1.03	36
1045	M175	1	max	-.104	12	-1.889	36	.051	3	.147	15	.026	12	-.324	36
1046			min	-.386	5	-7.012	16	-.049	5	-.146	12	-.026	15	-1.29	16
1047		2	max	-.102	12	-1.888	36	.051	3	.147	15	.041	3	.892	16
1048			min	-.383	5	-7.013	16	-.049	5	-.146	12	-.041	5	.263	36
1049		3	max	-.101	12	-1.888	36	.051	3	.147	15	.057	3	3.074	16
1050			min	-.38	5	-7.014	16	-.049	5	-.146	12	-.056	5	.851	36
1051	M176	1	max	.005	12	-1.123	36	.02	3	.103	15	.036	12	-.209	36
1052			min	-.496	5	-5.223	16	-.016	35	-.104	12	-.035	15	-1.038	16
1053		2	max	.007	12	-1.122	36	.02	3	.103	15	.041	3	.554	16
1054			min	-.493	5	-5.224	16	-.016	35	-.104	12	-.038	5	.133	36
1055		3	max	.009	12	-1.122	36	.02	3	.103	15	.047	3	2.147	16
1056			min	-.49	5	-5.225	16	-.017	35	-.104	12	-.041	5	.475	36
1057	M177	1	max	.135	12	2.963	16	.025	21	.056	15	.046	15	1.324	16
1058			min	-1.315	5	.236	36	-.025	19	-.054	12	-.054	12	.103	36
1059		2	max	.133	12	2.962	16	.025	21	.056	15	.048	15	.402	16
1060			min	-1.318	5	.236	36	-.024	19	-.054	12	-.052	12	.03	36
1061		3	max	.131	12	2.961	16	.024	21	.056	15	.049	15	-.044	36
1062			min	-1.321	5	.237	36	-.024	19	-.054	12	-.05	12	-.519	16
1063	M178	1	max	-.233	12	2.918	16	.016	33	.019	3	.046	12	.548	16
1064			min	-1.008	5	.163	36	-.04	3	-.019	5	-.045	15	.019	36
1065		2	max	-.234	12	2.917	16	.017	33	.019	3	.036	12	-.032	36
1066			min	-1.01	5	.164	36	-.04	3	-.019	5	-.044	15	-.364	16
1067		3	max	-.236	12	2.916	16	.018	33	.019	3	.027	33	-.083	36
1068			min	-1.013	5	.165	36	-.04	3	-.019	5	-.043	15	-1.276	16
1069	M179	1	max	.087	12	.705	22	.031	23	.028	6	.044	12	.125	38
1070			min	-.526	5	-.694	34	-.031	17	-.028	13	-.044	15	-.125	32
1071		2	max	.089	12	.706	22	.032	23	.028	6	.044	12	.091	34
1072			min	-.523	5	-.695	34	-.032	17	-.028	13	-.039	15	-.094	22
1073		3	max	.09	12	.706	22	.032	23	.028	6	.044	12	.307	34
1074			min	-.52	5	-.695	34	-.032	17	-.028	13	-.034	15	-.314	22
1075	M180	1	max	-.05	37	.545	36	.016	10	.007	13	.057	15	.234	36
1076			min	-.405	3	-.544	34	-.059	3	-.007	6	-.033	12	-.234	18
1077		2	max	-.048	37	.545	36	.016	10	.007	13	.058	15	.063	36
1078			min	-.402	3	-.545	34	-.059	3	-.007	6	-.047	12	-.064	18
1079		3	max	-.047	37	.546	36	.016	10	.007	13	.059	15	.107	34
1080			min	-.399	3	-.546	34	-.059	3	-.007	6	-.061	12	-.107	20
1081	M181	1	max	.047	17	.009	36	.111	5	0	39	0	39	0	39
1082			min	.017	37	-.01	16	-.111	3	0	1	0	1	0	1
1083		2	max	.06	17	.011	36	.111	5	0	39	.138	5	.014	16
1084			min	.021	37	-.013	16	-.111	3	0	1	-.138	3	-.012	36
1085		3	max	.073	17	.014	36	.111	5	0	39	.276	5	.032	16
1086			min	.026	37	-.016	16	-.111	3	0	1	-.276	3	-.028	36
1087	M182	1	max	.047	17	.008	36	.111	5	0	39	0	39	0	39
1088			min	.017	37	-.012	16	-.111	3	0	1	0	1	0	1
1089		2	max	.059	17	.01	36	.111	5	0	39	.133	5	.017	16

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
1090			min	.021	37	-.016	16	-.111	3	0	1	-.133	3	-.011	36
1091		3	max	.072	17	.012	36	.111	5	0	39	.266	5	.038	16
1092			min	.026	37	-.019	16	-.111	3	0	1	-.266	3	-.024	36
1093	M183	1	max	0	39	0	16	0	5	0	39	0	39	0	39
1094			min	0	1	0	36	0	3	0	1	0	1	0	1
1095		2	max	.007	17	.001	36	.001	23	0	39	0	23	0	16
1096			min	.002	37	-.002	16	-.001	17	0	1	0	17	0	36
1097		3	max	.013	17	.002	36	.003	23	0	39	.002	23	.002	16
1098			min	.005	37	-.004	16	-.003	17	0	1	-.002	17	-.001	36
1099	M184	1	max	6.45	15	1.629	16	.866	3	2.543	12	2.079	5	6.097	16
1100			min	-8.636	3	.368	36	-.869	5	-2.525	15	-2.066	3	.816	36
1101		2	max	6.443	15	1.55	16	.866	3	2.543	12	.245	12	1.869	16
1102			min	-8.648	3	.336	36	-.869	5	-2.525	15	-.241	15	-.121	36
1103		3	max	6.435	15	1.471	16	.866	3	2.543	12	2.539	3	-.531	15
1104			min	-8.661	3	.304	36	-.869	5	-2.525	15	-2.542	5	-2.592	3
1105	M185	1	max	17.401	5	.879	17	.754	3	2.364	12	1.626	5	2.055	16
1106			min	-8.127	12	.248	37	-.754	5	-2.341	15	-1.63	3	.053	36
1107		2	max	17.389	5	.784	17	.754	3	2.364	12	.7	3	-.066	34
1108			min	-8.134	12	.213	37	-.754	5	-2.341	15	-.703	5	-1.114	22
1109		3	max	17.378	5	.689	17	.754	3	2.364	12	3.03	3	-.978	39
1110			min	-8.141	12	.178	37	-.754	5	-2.341	15	-3.031	5	-3.078	19
1111	M186	1	max	27.109	5	.725	16	.621	3	1.854	12	.793	5	.482	32
1112			min	-9.001	12	.142	36	-.617	5	-1.833	15	-.797	3	-.791	20
1113		2	max	27.101	5	.63	16	.621	3	1.854	12	1.12	3	-.746	39
1114			min	-9.006	12	.106	36	-.617	5	-1.833	15	-1.113	5	-2.032	19
1115		3	max	27.093	5	.536	16	.621	3	1.854	12	3.037	3	-1.207	37
1116			min	-9.011	12	.07	36	-.617	5	-1.833	15	-3.018	5	-3.644	17
1117	M187	1	max	33.985	5	.645	3	.476	3	1.35	12	.229	6	-.533	12
1118			min	-10.073	12	-.187	15	-.518	5	-1.334	15	-.222	13	-1.63	5
1119		2	max	33.984	5	.638	3	.476	3	1.35	12	.191	6	-.635	34
1120			min	-10.074	12	-.192	15	-.518	5	-1.334	15	-.186	13	-1.668	22
1121		3	max	33.983	5	.63	3	.476	3	1.35	12	.275	3	-.675	39
1122			min	-10.074	12	-.196	15	-.518	5	-1.334	15	-.279	5	-1.757	19
1123	M188	1	max	33.984	5	.642	16	.48	3	1.345	12	.295	3	-.674	39
1124			min	-10.082	12	.114	36	-.487	5	-1.33	15	-.298	5	-1.756	19
1125		2	max	33.981	5	.58	16	.48	3	1.345	12	1.255	3	-1.024	37
1126			min	-10.084	12	.091	36	-.487	5	-1.33	15	-1.273	5	-2.831	17
1127		3	max	33.978	5	.518	16	.48	3	1.345	12	2.216	3	-1.237	37
1128			min	-10.086	12	.068	36	-.487	5	-1.33	15	-2.248	5	-3.868	17
1129	M189	1	max	33.969	5	.773	5	.379	3	1.042	12	2.231	3	-1.242	37
1130			min	-10.092	12	.096	12	-.318	5	-1.026	15	-2.262	5	-3.85	17
1131		2	max	33.968	5	.751	5	.379	3	1.042	12	2.538	3	-1.489	37
1132			min	-10.093	12	.084	12	-.318	5	-1.026	15	-2.52	5	-4.298	17
1133		3	max	33.967	5	.704	5	.381	3	1.042	12	2.846	3	-1.701	36
1134			min	-10.094	12	.075	12	-.3	15	-1.026	15	-2.772	5	-4.764	16
1135	M190	1	max	37.76	5	.256	12	.228	3	.705	12	1.143	3	-1.492	12
1136			min	-10.805	12	-.382	5	-.283	5	-.7	15	-1.07	5	-3.582	5
1137		2	max	37.759	5	.238	12	.228	3	.705	12	1.413	3	-1.342	37
1138			min	-10.806	12	-.413	5	-.283	5	-.7	15	-1.404	5	-3.582	17
1139		3	max	37.758	5	.219	12	.228	3	.705	12	1.682	3	-1.117	37
1140			min	-10.807	12	-.444	5	-.283	5	-.7	15	-1.739	5	-3.576	17
1141	M191	1	max	37.761	5	.181	18	.128	3	.404	13	1.692	3	-1.124	37
1142			min	-10.81	12	-.025	38	-.117	6	-.405	6	-1.749	5	-3.564	17
1143		2	max	37.76	5	.125	18	.128	3	.404	13	1.938	3	-1.224	37
1144			min	-10.81	12	-.051	38	-.117	6	-.405	6	-1.938	5	-3.694	17
1145		3	max	37.76	5	.075	15	.128	3	.404	13	2.183	3	-1.177	36
1146			min	-10.811	12	-.081	12	-.117	6	-.405	6	-2.127	5	-3.817	16

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
1147	M192	1	max	8.308	5	.866	17	.505	12	2.435	12	.926	15	4.2	16
1148			min	-5.802	12	.246	37	-.496	15	-2.443	15	-.966	12	.851	36
1149		2	max	8.294	5	.78	17	.505	12	2.435	12	.453	12	2.112	16
1150			min	-5.81	12	.214	37	-.496	15	-2.443	15	-.479	5	-.023	36
1151		3	max	8.281	5	.694	17	.505	12	2.435	12	1.873	12	.501	34
1152			min	-5.818	12	.181	15	-.496	15	-2.443	15	-1.862	15	-1.043	22
1153	M193	1	max	7.282	15	1.11	16	.388	12	2.224	12	.457	15	3.386	16
1154			min	-14.706	3	.293	36	-.39	15	-2.22	15	-.448	12	.19	36
1155		2	max	7.275	15	1.019	16	.388	12	2.224	12	.714	12	.351	34
1156			min	-14.717	3	.257	36	-.39	15	-2.22	15	-.711	15	-.792	22
1157		3	max	7.269	15	.928	16	.388	12	2.224	12	1.876	12	-1.135	37
1158			min	-14.728	3	.221	36	-.39	15	-2.22	15	-1.879	15	-2.938	17
1159	M194	1	max	6.44	15	.824	16	.277	12	1.783	12	.115	6	.438	34
1160			min	-22.69	3	.231	36	-.276	15	-1.777	15	-.124	13	-.594	22
1161		2	max	6.435	15	.732	16	.277	12	1.783	12	.883	12	-.846	39
1162			min	-22.698	3	.196	36	-.276	15	-1.777	15	-.883	15	-2.275	19
1163		3	max	6.43	15	.64	16	.277	12	1.783	12	1.715	12	-1.528	37
1164			min	-22.706	3	.161	36	-.276	15	-1.777	15	-1.712	15	-4.177	17
1165	M195	1	max	5.727	15	.436	16	.168	12	1.2	12	.477	12	-.806	39
1166			min	-28.245	3	.065	36	-.169	15	-1.195	15	-.473	15	-2.284	19
1167		2	max	5.724	15	.343	16	.168	12	1.2	12	.979	12	-1.188	37
1168			min	-28.249	3	.03	36	-.169	15	-1.195	15	-.981	15	-3.213	17
1169		3	max	5.721	15	.295	16	.188	3	1.2	12	1.491	12	-1.361	37
1170			min	-28.254	3	.001	36	-.166	5	-1.195	15	-1.486	15	-3.997	17
1171	M196	1	max	5.396	15	.454	16	.077	13	.428	13	.865	12	-1.068	39
1172			min	-31.074	3	.055	36	-.076	6	-.429	6	-.863	15	-2.864	17
1173		2	max	5.395	15	.36	16	.077	13	.428	13	1.031	12	-1.361	37
1174			min	-31.076	3	.021	36	-.076	6	-.429	6	-1.027	15	-3.901	17
1175		3	max	5.394	15	.266	16	.077	13	.428	13	1.197	12	-1.47	36
1176			min	-31.077	3	-.013	36	-.076	6	-.429	6	-1.192	15	-4.75	16
1177	M197	1	max	0	39	0	36	0	5	0	39	0	39	0	39
1178			min	0	1	0	16	0	3	0	1	0	1	0	1
1179		2	max	-.374	12	10.919	19	.419	3	.869	12	.348	5	-.142	12
1180			min	-2.66	5	4.059	39	-.111	15	-1.523	5	-.042	12	-.533	5
1181		3	max	0	39	0	16	0	3	0	39	0	39	0	39
1182			min	0	1	0	36	0	5	0	1	0	1	0	1
1183	M198	1	max	18.068	19	10.722	19	.089	6	.192	15	.339	3	4.88	19
1184			min	7.737	39	3.962	39	-.081	13	-.204	3	-.335	5	1.957	39
1185		2	max	19.151	19	.171	16	.057	5	.143	15	.067	3	.683	19
1186			min	8.286	39	.041	36	-.065	3	-.145	12	-.063	5	.215	39
1187		3	max	10.276	5	2.197	5	.006	3	.164	15	.011	15	1.062	17
1188			min	2.655	12	.781	12	-.018	5	-.165	12	-.016	12	.307	37
1189	M199	1	max	10.651	19	18.082	19	.141	6	.339	3	.192	15	4.88	19
1190			min	3.942	39	7.735	39	-.114	13	-.335	5	-.204	3	1.957	39
1191		2	max	4.808	19	.675	17	.056	12	.096	3	.051	5	.191	3
1192			min	1.437	39	.255	37	-.038	15	-.124	5	-.035	12	-.02	15
1193		3	max	-.267	37	13.393	19	.16	3	.17	15	.118	12	-.827	39
1194			min	-.911	17	3.893	39	-.125	5	-.152	12	-.114	15	-2.419	19
1195	M200	1	max	17.414	19	-2.529	39	.136	5	.132	5	.215	15	-.975	39
1196			min	7.47	39	-5.89	19	-.157	3	-.119	3	-.243	3	-2.166	19
1197		2	max	17.414	19	-2.53	39	.136	5	.132	5	.26	15	-.036	12
1198			min	7.47	39	-5.893	19	-.157	3	-.119	3	-.295	3	-.295	5
1199		3	max	17.414	19	-2.532	39	.136	5	.132	5	.304	15	1.763	19
1200			min	7.469	39	-5.897	19	-.157	3	-.119	3	-.348	3	.712	39
1201	M201	1	max	-3.893	39	.794	17	.049	15	.114	15	.152	12	2.419	19
1202			min	-13.395	19	.258	37	-.043	12	-.118	12	-.17	15	.827	39
1203		2	max	-3.889	39	.249	5	.049	15	.114	15	.014	13	.136	5

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
1204			min	-13.398	19	.1	12	-.047	12	-.118	12	-.019	6	-.014	12
1205		3	max	-1.093	15	-.13	15	.047	5	.171	15	.033	12	.775	17
1206			min	-9.081	3	-1.457	3	-.064	3	-.171	12	-.034	15	.251	37
1207	M202	1	max	-3.628	39	-1.718	39	.068	3	.091	5	.289	5	-.803	39
1208			min	-12.738	19	-5.702	19	-.005	5	-.039	12	-.242	12	-2.742	19
1209		2	max	-3.629	39	-1.72	39	.068	3	.091	5	.287	5	-.23	39
1210			min	-12.737	19	-5.705	19	-.005	5	-.039	12	-.226	12	-.841	19
1211		3	max	-3.629	39	-1.721	39	.068	3	.091	5	.286	5	1.089	17
1212			min	-12.737	19	-5.708	19	-.005	5	-.039	12	-.211	12	.316	37
1213	M203	1	max	-2.394	15	-3.061	39	.872	5	1.617	5	3.902	3	2.623	6
1214			min	-12.801	3	-8.593	19	-1.003	3	-1.62	12	-3.469	5	1.146	13
1215		2	max	-3.066	39	1.906	17	.907	5	1.593	15	.794	3	6.451	19
1216			min	-13.867	19	.694	37	-.985	3	-1.615	12	-.674	5	2.491	39
1217		3	max	6.091	15	1.977	5	.858	5	2.811	15	1.471	3	5.338	19
1218			min	-8.612	3	-.403	12	-.887	3	-2.826	12	-1.555	5	1.549	39
1219	M204	1	max	9.416	5	1.238	17	.652	5	1.553	15	2.051	12	8.002	17
1220			min	-.094	12	.37	37	-.568	12	-1.514	12	-2.475	5	2.694	37
1221		2	max	9.416	5	.976	17	.652	5	1.553	15	.097	12	4.371	19
1222			min	-.094	12	.277	37	-.568	12	-1.514	12	-.239	6	1.557	39
1223		3	max	8.142	5	2.025	5	.471	15	2.572	15	.51	12	3.812	17
1224			min	-5.861	12	-.494	12	-.522	12	-2.571	12	-.47	15	1.221	37
1225	M205	1	max	.513	3	.007	34	.007	39	.011	3	0	39	0	39
1226			min	.096	15	-.007	20	-.007	17	-.011	5	0	1	0	1
1227		2	max	.505	3	.005	34	.005	39	.011	3	.009	39	.009	38
1228			min	.091	15	-.005	20	-.005	17	-.011	5	-.009	17	-.009	16
1229		3	max	.457	3	.007	38	.007	35	.011	3	0	39	0	39
1230			min	.062	15	-.007	16	-.007	21	-.011	5	0	1	0	1
1231	M206	1	max	10.632	19	1.653	5	.182	5	.086	3	.063	3	.473	5
1232			min	3.866	39	.021	12	-.15	3	-.094	5	-.054	5	-.047	12
1233		2	max	10.629	19	1.653	5	.182	5	.086	3	.042	6	-.012	39
1234			min	3.864	39	.021	12	-.15	3	-.094	5	-.021	13	-.086	22
1235		3	max	10.626	19	1.653	5	.182	5	.086	3	.087	6	-.06	12
1236			min	3.863	39	.021	12	-.15	3	-.094	5	-.051	13	-.567	20
1237	M207	1	max	.192	12	-3.751	37	.049	3	.056	5	.026	5	-.892	37
1238			min	-1.158	5	-10.702	17	-.041	23	-.057	3	-.023	3	-2.399	17
1239		2	max	.19	12	-3.751	37	.049	3	.056	5	.023	6	.945	17
1240			min	-1.161	5	-10.702	17	-.041	23	-.057	3	-.022	13	.28	37
1241		3	max	.188	12	-3.751	37	.049	3	.056	5	.024	6	4.289	17
1242			min	-1.164	5	-10.702	17	-.042	23	-.057	3	-.027	13	1.452	37
1243	M208	1	max	.204	34	-1.693	36	.044	3	.187	12	.033	12	-.862	36
1244			min	-.684	22	-5.33	16	-.056	5	-.183	15	-.032	15	-2.511	16
1245		2	max	.202	34	-1.692	36	.044	3	.187	12	.043	12	-.313	37
1246			min	-.687	22	-5.331	16	-.056	5	-.183	15	-.045	15	-.866	17
1247		3	max	.201	34	-1.692	36	.044	3	.187	12	.053	12	.821	16
1248			min	-.689	22	-5.332	16	-.056	5	-.183	15	-.058	5	.196	36
1249	M209	1	max	1.135	17	.007	34	.007	39	.014	3	0	39	0	39
1250			min	.358	37	-.007	20	-.007	17	-.014	5	0	1	0	1
1251		2	max	1.126	17	.005	34	.005	39	.014	3	.009	39	.009	38
1252			min	.355	37	-.005	20	-.005	17	-.014	5	-.009	17	-.009	16
1253		3	max	1.069	17	.007	38	.007	35	.014	3	0	39	0	39
1254			min	.334	37	-.007	16	-.007	21	-.014	5	0	1	0	1
1255	M210	1	max	-.236	39	.01	22	.007	35	.013	3	0	39	0	39
1256			min	-.587	19	-.004	34	-.007	21	-.014	5	0	1	0	1
1257		2	max	-.24	39	.008	22	.005	35	.013	3	.009	35	.005	34
1258			min	-.595	19	-.003	34	-.005	21	-.014	5	-.009	21	-.014	22
1259		3	max	-.265	39	.004	34	.007	39	.013	3	0	39	0	39
1260			min	-.647	19	-.01	22	-.007	17	-.014	5	0	1	0	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
1261	M211	1	max	-.082	39	.01	22	.007	35	.015	3	0	39	0	39
1262			min	-.304	19	-.004	34	-.007	21	-.015	5	0	1	0	1
1263		2	max	-.106	39	.003	34	.005	39	.015	3	.009	35	.005	34
1264			min	-.356	19	-.008	22	-.005	17	-.015	5	-.009	21	-.014	22
1265		3	max	-.11	39	.004	34	.007	39	.015	3	0	39	0	39
1266			min	-.364	19	-.01	22	-.007	17	-.015	5	0	1	0	1
1267	M212	1	max	.059	36	.009	22	.007	35	.016	3	0	39	0	39
1268			min	-.131	16	-.005	34	-.007	21	-.016	5	0	1	0	1
1269		2	max	.04	36	.003	34	.005	39	.016	3	.009	35	.007	34
1270			min	-.189	16	-.007	22	-.005	17	-.016	5	-.009	21	-.013	22
1271		3	max	.037	36	.005	34	.007	39	.016	3	0	39	0	39
1272			min	-.198	16	-.009	22	-.007	17	-.016	5	0	1	0	1
1273	M213	1	max	-.02	12	.009	22	.007	35	.014	3	0	39	0	39
1274			min	-.155	5	-.005	34	-.007	21	-.014	5	0	1	0	1
1275		2	max	-.024	12	.007	22	.005	35	.014	3	.009	35	.007	34
1276			min	-.162	5	-.003	34	-.005	21	-.014	5	-.009	21	-.013	22
1277		3	max	-.053	12	.005	34	.007	39	.014	3	0	39	0	39
1278			min	-.21	5	-.009	22	-.007	17	-.014	5	0	1	0	1
1279	M214	1	max	.144	3	.008	22	.007	35	.011	3	0	39	0	39
1280			min	.043	15	-.005	34	-.007	21	-.011	5	0	1	0	1
1281		2	max	.095	3	.004	34	.005	39	.011	3	.009	35	.008	34
1282			min	.014	15	-.006	22	-.005	17	-.011	5	-.009	21	-.012	22
1283		3	max	.088	3	.005	34	.007	39	.011	3	0	39	0	39
1284			min	.009	15	-.008	22	-.007	17	-.011	5	0	1	0	1
1285	M215	1	max	.149	12	.008	22	.007	35	.008	3	0	39	0	39
1286			min	-.884	5	-.005	34	-.007	21	-.008	5	0	1	0	1
1287		2	max	.145	12	.006	22	.005	35	.008	3	.009	35	.008	34
1288			min	-.892	5	-.004	34	-.005	21	-.008	5	-.009	21	-.012	22
1289		3	max	.116	12	.005	34	.007	39	.008	3	0	39	0	39
1290			min	-.94	5	-.008	22	-.007	17	-.008	5	0	1	0	1
1291	M216	1	max	.192	3	.007	22	.007	35	.003	3	0	39	0	39
1292			min	.005	15	-.006	34	-.007	21	-.003	5	0	1	0	1
1293		2	max	.185	3	.005	22	.005	35	.003	3	.009	35	.009	34
1294			min	0	15	-.005	34	-.005	21	-.003	5	-.009	21	-.01	22
1295		3	max	.136	3	.006	34	.007	39	.003	3	0	39	0	39
1296			min	-.028	15	-.007	22	-.007	17	-.003	5	0	1	0	1
1297	M217	1	max	.433	15	.119	17	.008	5	.03	15	.174	3	-.058	13
1298			min	-16.31	3	.006	37	-.023	3	-.031	12	-.156	5	-.204	6
1299		2	max	.433	15	.108	17	.008	5	.03	15	.15	3	-.111	37
1300			min	-16.31	3	.002	37	-.023	3	-.031	12	-.147	5	-.287	17
1301		3	max	.433	15	.097	17	.008	5	.03	15	.126	12	-.111	37
1302			min	-16.31	3	-.002	37	-.023	3	-.031	12	-.139	15	-.394	17
1303	M218	1	max	.433	15	-.002	15	.004	13	.033	15	.127	3	-.111	37
1304			min	-16.308	3	-.068	3	-.004	6	-.034	12	-.141	5	-.394	17
1305		2	max	.433	15	-.013	15	.004	37	.033	15	.135	3	-.065	36
1306			min	-16.308	3	-.086	3	-.004	6	-.034	12	-.137	5	-.268	16
1307		3	max	1.083	15	.934	5	.045	5	.078	15	.163	3	-.197	39
1308			min	-13.902	3	.135	12	-.044	3	-.079	12	-.152	5	-.483	19
1309	M219	1	max	1.057	15	.002	32	.013	5	.081	15	.169	3	-.197	39
1310			min	-13.904	3	-.072	20	-.02	3	-.083	12	-.159	5	-.483	19
1311		2	max	1.058	15	-.012	32	.013	5	.081	15	.13	3	-.12	37
1312			min	-13.903	3	-.086	20	-.02	3	-.083	12	-.132	5	-.388	17
1313		3	max	1.058	15	-.025	34	.013	5	.081	15	.092	12	0	36
1314			min	-13.902	3	-.102	22	-.02	3	-.083	12	-.106	15	-.277	16
1315	M220	1	max	1.061	15	-.023	15	.014	15	.084	15	.1	12	0	36
1316			min	-13.892	3	-.323	3	-.005	35	-.086	12	-.114	5	-.277	16
1317		2	max	1.061	15	-.034	15	.014	15	.084	15	.106	3	.441	3

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
1318			min	-13.891	3	-.342	3	-.01	35	-.086	12	-.091	5	.014	15
1319		3	max	2.224	15	.074	16	.018	5	.119	15	.092	3	-.16	37
1320			min	-9.302	3	-.001	36	-.028	3	-.121	12	-.097	5	-.548	17
1321	M221	1	max	2.224	15	-.074	37	.014	5	.121	15	.103	3	-.16	37
1322			min	-9.296	3	-.24	17	-.012	3	-.123	12	-.109	5	-.548	17
1323		2	max	2.225	15	-.081	37	.014	5	.121	15	.079	3	.032	36
1324			min	-9.294	3	-.262	17	-.012	3	-.123	12	-.08	5	-.085	18
1325		3	max	2.226	15	-.089	37	.014	5	.121	15	.055	12	.522	19
1326			min	-9.293	3	-.283	17	-.012	3	-.123	12	-.051	15	.142	39
1327	M222	1	max	2.23	15	-.033	15	.018	37	.123	15	.066	3	.522	19
1328			min	-9.265	3	-.765	3	-.014	35	-.125	12	-.063	5	.142	39
1329		2	max	4.845	5	-.051	37	.018	5	.153	15	.075	3	-.103	37
1330			min	-2.975	12	-.134	17	-.021	3	-.155	12	-.075	5	-.387	17
1331		3	max	4.848	5	-.058	37	.018	5	.153	15	.035	13	.022	15
1332			min	-2.973	12	-.155	17	-.021	3	-.155	12	-.041	15	-.107	3
1333	M223	1	max	4.855	5	-.123	15	.018	5	.154	15	.044	12	.022	15
1334			min	-2.965	12	-.52	3	-.013	3	-.156	12	-.051	15	-.107	3
1335		2	max	4.858	5	-.134	15	.018	5	.154	15	.029	13	.955	17
1336			min	-2.964	12	-.538	3	-.015	19	-.156	12	-.029	6	.28	15
1337		3	max	10.461	5	.044	5	.018	5	.162	15	.038	13	-.152	37
1338			min	2.732	12	.002	12	-.019	3	-.164	12	-.038	6	-.564	17
1339	M224	1	max	10.478	5	-.118	37	.016	5	.163	15	.036	13	-.152	37
1340			min	2.746	12	-.423	17	-.014	3	-.165	12	-.037	6	-.564	17
1341		2	max	10.481	5	-.125	37	.016	5	.163	15	.024	13	.237	19
1342			min	2.748	12	-.442	17	-.014	3	-.165	12	-.021	6	.066	39
1343		3	max	10.484	5	-.131	37	.016	5	.163	15	.025	5	1.062	17
1344			min	2.75	12	-.462	17	-.014	3	-.165	12	-.018	3	.307	37
1345	M225	1	max	-1.097	15	.223	17	.036	15	.162	15	.064	12	.775	17
1346			min	-9.178	3	.06	37	-.035	12	-.161	12	-.065	15	.251	37
1347		2	max	-1.099	15	.203	17	.036	15	.162	15	.019	6	.376	19
1348			min	-9.182	3	.053	37	-.035	12	-.161	12	-.015	13	.133	39
1349		3	max	-1.101	15	.183	17	.036	15	.162	15	.073	15	.084	20
1350			min	-9.185	3	.046	37	-.035	12	-.161	12	-.07	12	-.04	32
1351	M226	1	max	-1.101	15	.532	17	.032	15	.16	15	.09	5	.084	20
1352			min	-9.188	3	.233	37	-.036	12	-.16	12	-.087	3	-.04	32
1353		2	max	2.78	15	.093	16	.03	5	.145	15	.022	6	.448	17
1354			min	-3.245	3	.02	37	-.026	3	-.146	12	-.025	5	.184	37
1355		3	max	2.779	15	.072	17	.03	5	.145	15	.036	6	.306	5
1356			min	-3.248	3	.013	37	-.026	3	-.146	12	-.036	13	.126	12
1357	M227	1	max	2.774	15	.319	17	.024	15	.144	15	.053	5	.306	5
1358			min	-3.258	3	.138	37	-.026	12	-.145	12	-.05	3	.126	12
1359		2	max	2.773	15	.298	17	.024	15	.144	15	.097	15	-.092	36
1360			min	-3.26	3	.131	37	-.026	12	-.145	12	-.097	12	-.342	16
1361		3	max	8.501	5	.096	38	.03	5	.116	15	.036	6	.326	19
1362			min	-.231	12	-.198	18	-.027	17	-.117	12	-.037	13	.123	39
1363	M228	1	max	8.501	5	.16	17	.021	5	.117	15	.036	6	.326	19
1364			min	-.233	12	.055	37	-.019	3	-.117	12	-.036	13	.123	39
1365		2	max	8.499	5	.139	17	.021	5	.117	15	.058	5	.068	20
1366			min	-.234	12	.047	37	-.019	3	-.117	12	-.056	12	-.02	32
1367		3	max	8.498	5	.118	19	.021	5	.117	15	.1	5	-.043	15
1368			min	-.235	12	.04	39	-.019	3	-.117	12	-.093	3	-.251	3
1369	M229	1	max	8.489	5	.442	5	.008	15	.114	15	.117	5	-.043	15
1370			min	-.239	12	.089	12	-.018	12	-.114	12	-.11	3	-.251	3
1371		2	max	12.705	5	.111	3	.024	5	.078	15	.034	6	.103	38
1372			min	1.776	12	-.07	15	-.02	17	-.078	12	-.04	12	-.124	18
1373		3	max	12.704	5	.094	3	.024	5	.078	15	.073	5	.06	15
1374			min	1.775	12	-.08	15	-.016	17	-.078	12	-.066	3	-.141	3

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
1375	M230	1	max	12.703	5	.169	5	.008	15	.076	15	.087	5	.06	15
1376			min	1.772	12	.037	12	-.012	12	-.076	12	-.079	3	-.141	3
1377		2	max	12.702	5	.151	5	.008	15	.076	15	.1	15	-.122	37
1378			min	1.772	12	.026	12	-.012	12	-.076	12	-.1	12	-.348	17
1379		3	max	14.786	5	.138	12	.054	5	.026	15	.064	15	.039	36
1380			min	2.805	12	-1.242	5	-.029	17	-.026	12	-.07	12	-.193	16
1381	M231	1	max	14.78	5	.083	3	.011	23	.024	15	.072	15	.039	36
1382			min	2.806	12	0	15	-.011	17	-.024	12	-.078	12	-.193	16
1383		2	max	14.779	5	.066	3	.008	5	.024	15	.086	15	-.042	36
1384			min	2.805	12	-.011	15	-.007	17	-.024	12	-.084	12	-.252	16
1385		3	max	14.779	5	.048	3	.008	5	.024	15	.101	5	-.046	15
1386			min	2.805	12	-.021	15	-.004	3	-.024	12	-.091	3	-.325	3
1387	M232	1	max	14.777	5	.201	5	.01	17	.022	15	.104	5	-.046	15
1388			min	2.805	12	-.05	12	-.013	5	-.022	12	-.095	3	-.325	3
1389		2	max	14.777	5	.192	5	.012	17	.022	15	.093	15	-.155	37
1390			min	2.805	12	-.056	12	-.013	5	-.022	12	-.096	12	-.366	17
1391		3	max	14.777	5	.183	5	.015	17	.022	15	.085	15	-.114	12
1392			min	2.805	12	-.061	12	-.015	23	-.022	12	-.098	12	-.536	5
1393	M233	1	max	-.187	37	-2.572	37	.079	5	.046	5	.08	3	-1.197	37
1394			min	-.742	17	-8.861	17	-.114	3	-.042	3	-.058	5	-4.028	17
1395		2	max	-.186	37	-2.572	37	.079	5	.046	5	.044	3	-.376	37
1396			min	-.738	17	-8.861	17	-.114	3	-.042	3	-.033	5	-1.199	17
1397		3	max	-.185	37	-2.573	37	.079	5	.046	5	.008	12	1.63	17
1398			min	-.735	17	-8.862	17	-.114	3	-.042	3	-.009	15	.446	37
1399	M234	1	max	-.214	12	-2.78	37	.075	5	.176	12	.015	15	-.542	37
1400			min	-.546	17	-7.115	17	-.078	3	-.176	15	-.015	12	-1.383	17
1401		2	max	-.213	12	-2.78	37	.075	5	.176	12	.038	5	.793	16
1402			min	-.543	17	-7.115	17	-.078	3	-.176	15	-.038	3	.302	36
1403		3	max	-.211	12	-2.78	37	.075	5	.176	12	.06	5	2.962	17
1404			min	-.54	17	-7.116	17	-.078	3	-.176	15	-.061	3	1.155	37
1405	M235	1	max	.037	15	-2.026	37	.048	5	.049	5	.066	3	-.869	37
1406			min	-.625	3	-6.842	17	-.061	3	-.047	3	-.058	5	-2.894	17
1407		2	max	.038	15	-2.026	37	.048	5	.049	5	.048	3	-.249	15
1408			min	-.623	3	-6.842	17	-.061	3	-.047	3	-.043	5	-.806	17
1409		3	max	.04	15	-2.027	37	.048	5	.049	5	.029	12	1.283	17
1410			min	-.62	3	-6.842	17	-.061	3	-.047	3	-.029	15	.368	37
1411	M236	1	max	-.016	36	-2.673	37	.048	5	.146	12	.026	15	-.479	37
1412			min	-.453	16	-6.203	17	-.051	3	-.147	15	-.026	12	-1.134	17
1413		2	max	-.015	36	-2.673	37	.048	5	.146	12	.041	5	.796	17
1414			min	-.449	16	-6.203	17	-.051	3	-.147	15	-.042	3	.346	12
1415		3	max	-.014	36	-2.674	37	.048	5	.146	12	.056	5	2.726	17
1416			min	-.446	16	-6.204	17	-.051	3	-.147	15	-.057	3	1.185	37
1417	M237	1	max	-.067	37	-1.162	15	.029	21	.043	5	.039	3	-.574	15
1418			min	-.466	17	-4.59	3	-.028	19	-.039	3	-.045	5	-2.069	3
1419		2	max	-.065	37	-1.162	15	.028	21	.043	5	.037	3	-.194	39
1420			min	-.463	17	-4.591	3	-.028	19	-.039	3	-.04	5	-.618	19
1421		3	max	-.064	37	-1.162	15	.028	21	.043	5	.035	12	.866	3
1422			min	-.459	17	-4.591	3	-.027	19	-.039	3	-.034	15	.169	15
1423	M238	1	max	.006	12	-1.971	39	.015	33	.103	12	.035	15	-.381	39
1424			min	-.495	5	-4.35	19	-.02	3	-.103	15	-.036	12	-.862	19
1425		2	max	.008	12	-1.97	39	.016	33	.103	12	.038	5	.469	17
1426			min	-.493	5	-4.35	19	-.02	3	-.103	15	-.041	3	.212	12
1427		3	max	.01	12	-1.97	39	.017	33	.103	12	.041	5	1.791	19
1428			min	-.49	5	-4.351	19	-.02	3	-.103	15	-.047	3	.821	39
1429	M239	1	max	.138	12	2.4	22	.026	17	.054	12	.054	12	1.074	22
1430			min	-1.318	5	.788	34	-.026	23	-.055	15	-.046	15	.35	34
1431		2	max	.137	12	2.399	22	.025	17	.054	12	.052	12	.327	22

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
1432			min	-1.321	5	.789	34	-.025	23	-.055	15	-.048	15	.104	34
1433		3	max	.135	12	2.398	22	.024	17	.054	12	.05	12	-.141	34
1434			min	-1.324	5	.79	34	-.025	23	-.055	15	-.049	15	-.419	22
1435	M240	1	max	-.229	12	2.448	19	.04	3	.02	5	.045	15	.449	22
1436			min	-1.011	5	.631	39	-.017	35	-.02	3	-.046	12	.117	34
1437		2	max	-.231	12	2.448	19	.04	3	.02	5	.044	15	-.064	15
1438			min	-1.014	5	.631	39	-.017	35	-.02	3	-.036	12	-.326	3
1439		3	max	-.233	12	2.447	19	.04	3	.02	5	.043	15	-.265	15
1440			min	-1.017	5	.631	39	-.018	35	-.02	3	-.027	35	-1.082	19
1441	M241	1	max	.047	16	.008	34	.111	3	0	39	0	39	0	39
1442			min	.016	36	-.01	22	-.111	5	0	1	0	1	0	1
1443		2	max	.061	16	.011	34	.111	3	0	39	.138	3	.014	22
1444			min	.021	36	-.013	22	-.111	5	0	1	-.138	5	-.012	34
1445		3	max	.074	16	.013	34	.111	3	0	39	.276	3	.031	22
1446			min	.026	36	-.015	22	-.111	5	0	1	-.276	5	-.027	34
1447	M242	1	max	.048	16	.007	34	.111	3	0	39	0	39	0	39
1448			min	.016	36	-.012	22	-.111	5	0	1	0	1	0	1
1449		2	max	.061	16	.009	34	.111	3	0	39	.133	3	.016	22
1450			min	.02	36	-.015	22	-.111	5	0	1	-.133	5	-.01	34
1451		3	max	.073	16	.011	34	.111	3	0	39	.266	3	.036	22
1452			min	.025	36	-.018	22	-.111	5	0	1	-.266	5	-.021	34
1453	M243	1	max	0	39	0	17	0	3	0	39	0	39	0	39
1454			min	0	1	0	37	0	5	0	1	0	1	0	1
1455		2	max	.007	16	.001	34	.001	17	0	39	0	17	0	22
1456			min	.002	36	-.002	22	-.001	23	0	1	0	23	0	34
1457		3	max	.013	16	.002	34	.003	17	0	39	.002	17	.002	22
1458			min	.004	36	-.003	22	-.003	23	0	1	-.002	23	-.001	34
1459	M244	1	max	6.268	15	1.55	17	.88	5	2.506	15	1.946	3	5.338	19
1460			min	-8.459	3	.444	37	-.86	3	-2.53	12	-2.026	5	1.549	39
1461		2	max	6.26	15	1.467	17	.88	5	2.506	15	.355	6	1.559	22
1462			min	-8.472	3	.415	37	-.86	3	-2.53	12	-.376	13	.181	34
1463		3	max	6.253	15	1.384	17	.88	5	2.506	15	2.651	5	-.49	37
1464			min	-8.485	3	.387	37	-.86	3	-2.53	12	-2.63	3	-2.632	17
1465	M245	1	max	17.348	5	.873	17	.756	5	2.321	15	1.62	3	1.684	22
1466			min	-8.074	12	.254	37	-.757	3	-2.346	12	-1.601	5	.416	34
1467		2	max	17.336	5	.775	17	.75	5	2.321	15	.727	5	.137	36
1468			min	-8.081	12	.22	37	-.758	3	-2.346	12	-.72	3	-1.316	16
1469		3	max	17.325	5	.678	17	.75	5	2.321	15	3.045	5	-.617	36
1470			min	-8.088	12	.187	37	-.758	3	-2.346	12	-3.062	3	-3.429	16
1471	M246	1	max	27.1	5	.652	17	.63	5	1.819	15	.789	3	.533	38
1472			min	-8.985	12	.223	37	-.619	3	-1.842	12	-.805	5	-.825	18
1473		2	max	27.092	5	.552	19	.606	5	1.819	15	1.141	5	-.349	36
1474			min	-8.99	12	.174	39	-.623	3	-1.842	12	-1.123	3	-2.455	16
1475		3	max	27.083	5	.464	3	.606	5	1.819	15	3.013	5	-1.101	36
1476			min	-8.995	12	.126	15	-.623	3	-1.842	12	-3.047	3	-3.738	16
1477	M247	1	max	33.973	5	.644	3	.519	5	1.323	15	.602	6	-.191	36
1478			min	-10.066	12	-.186	15	-.476	3	-1.338	12	-.599	13	-1.98	16
1479		2	max	33.972	5	.636	3	.519	5	1.323	15	.589	6	-.236	36
1480			min	-10.066	12	-.19	15	-.476	3	-1.338	12	-.584	13	-2.066	16
1481		3	max	33.972	5	.629	3	.519	5	1.323	15	.576	6	-.279	36
1482			min	-10.066	12	-.195	15	-.476	3	-1.338	12	-.568	13	-2.149	16
1483	M248	1	max	33.973	5	.574	19	.491	5	1.318	15	.575	6	-.277	36
1484			min	-10.074	12	.181	39	-.479	3	-1.334	12	-.567	13	-2.15	16
1485		2	max	33.969	5	.516	19	.491	5	1.318	15	1.273	5	-.78	36
1486			min	-10.076	12	.154	39	-.479	3	-1.334	12	-1.257	3	-3.078	16
1487		3	max	33.966	5	.454	3	.464	5	1.318	15	2.245	5	-1.198	37
1488			min	-10.078	12	.108	15	-.483	3	-1.334	12	-2.218	3	-3.899	17

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
1489	M249	1	max	33.957	5	.77	5	.316	5	1.014	15	2.26	5	-1.186	37
1490			min	-10.085	12	.096	12	-.379	3	-1.03	12	-2.233	3	-3.898	17
1491		2	max	33.956	5	.748	5	.316	5	1.014	15	2.516	5	-1.464	37
1492			min	-10.085	12	.084	12	-.379	3	-1.03	12	-2.539	3	-4.315	16
1493		3	max	33.955	5	.727	5	.316	5	1.014	15	2.771	5	-1.722	36
1494			min	-10.086	12	.071	12	-.379	3	-1.03	12	-2.846	3	-4.724	16
1495	M250	1	max	37.761	5	.257	12	.284	5	.69	15	1.065	5	-1.15	36
1496			min	-10.805	12	-.381	5	-.229	3	-.695	12	-1.14	3	-3.936	16
1497		2	max	37.76	5	.238	12	.284	5	.69	15	1.4	5	-1.135	36
1498			min	-10.806	12	-.412	5	-.229	3	-.695	12	-1.41	3	-3.786	16
1499		3	max	37.759	5	.219	12	.284	5	.69	15	1.735	5	-1.067	37
1500			min	-10.806	12	-.444	5	-.229	3	-.695	12	-1.681	3	-3.619	17
1501	M251	1	max	37.763	5	.182	5	.108	5	.381	15	1.745	5	-1.057	37
1502			min	-10.81	12	-.021	12	-.128	3	-.388	12	-1.691	3	-3.624	17
1503		2	max	37.762	5	.131	5	.108	5	.381	15	1.951	5	-1.234	37
1504			min	-10.81	12	-.052	12	-.128	3	-.388	12	-1.936	3	-3.694	17
1505		3	max	37.761	5	.07	36	.104	13	.381	15	2.126	5	-1.362	37
1506			min	-10.81	12	-.101	16	-.136	12	-.388	12	-2.185	3	-3.631	17
1507	M252	1	max	8.358	5	.897	17	.495	15	2.447	15	.96	12	3.812	17
1508			min	-5.848	12	.214	37	-.504	12	-2.439	12	-.922	15	1.221	37
1509		2	max	8.344	5	.81	17	.495	15	2.447	15	.481	5	1.744	22
1510			min	-5.856	12	.184	37	-.504	12	-2.439	12	-.456	3	.337	34
1511		3	max	8.331	5	.722	17	.495	15	2.447	15	1.861	15	.593	36
1512			min	-5.864	12	.153	37	-.504	12	-2.439	12	-1.873	12	-1.138	16
1513	M253	1	max	7.316	15	1.007	17	.39	15	2.215	15	.441	12	2.763	22
1514			min	-14.74	3	.394	37	-.383	12	-2.22	12	-.451	15	.805	34
1515		2	max	7.309	15	.913	17	.387	15	2.215	15	.713	15	.426	36
1516			min	-14.751	3	.363	37	-.388	12	-2.22	12	-.716	12	-.874	16
1517		3	max	7.302	15	.818	17	.387	15	2.215	15	1.875	15	-.768	36
1518			min	-14.762	3	.33	37	-.388	12	-2.22	12	-1.879	12	-3.32	16
1519	M254	1	max	6.462	15	.745	17	.278	15	1.767	15	.427	6	.463	36
1520			min	-22.704	3	.288	37	-.269	12	-1.774	12	-.424	13	-.642	16
1521		2	max	6.457	15	.683	17	.273	15	1.767	15	.886	15	-.453	36
1522			min	-22.712	3	.254	37	-.281	12	-1.774	12	-.877	12	-2.654	16
1523		3	max	6.452	15	.589	17	.273	15	1.767	15	1.706	15	-1.274	36
1524			min	-22.72	3	.221	37	-.281	12	-1.774	12	-1.72	12	-4.454	16
1525	M255	1	max	5.739	15	.35	19	.169	15	1.184	15	.506	6	-.359	36
1526			min	-28.244	3	.134	39	-.161	12	-1.189	12	-.511	13	-2.754	16
1527		2	max	5.736	15	.268	22	.169	15	1.184	15	.983	15	-.886	36
1528			min	-28.249	3	.091	34	-.161	12	-1.189	12	-.973	12	-3.494	16
1529		3	max	5.733	15	.227	19	.165	15	1.184	15	1.481	15	-1.319	36
1530			min	-28.253	3	.05	34	-.179	12	-1.189	12	-1.495	12	-4.068	16
1531	M256	1	max	5.399	15	.363	22	.076	13	.345	15	.863	15	-.663	36
1532			min	-31.063	3	.139	34	-.076	6	-.346	12	-.875	12	-3.296	16
1533		2	max	5.398	15	.291	22	.076	13	.345	15	1.028	15	-1.269	36
1534			min	-31.065	3	.083	34	-.076	6	-.346	12	-1.027	12	-3.985	16
1535		3	max	5.397	15	.258	22	.074	13	.345	15	1.189	15	-1.644	37
1536			min	-31.067	3	.045	34	-.074	6	-.346	12	-1.196	12	-4.573	17
1537	M257	1	max	1.154	12	1.535	5	2.622	12	.237	13	3.486	5	1.497	15
1538			min	-1.666	5	-1.438	12	-7.989	5	-.243	6	-2.557	12	-1.731	3
1539		2	max	-.152	11	1.515	5	7.993	3	.259	13	-.695	34	.122	34
1540			min	-1.666	5	-1.546	3	-7.989	5	-.243	6	-2.456	19	-.737	5
1541		3	max	1.03	15	1.46	15	7.993	3	.259	13	3.412	3	1.569	12
1542			min	-1.557	3	-1.565	3	-2.622	15	-.22	6	-2.487	15	-1.782	5
1543	M258	1	max	.779	3	-.321	12	10.207	3	2.35	5	3.217	15	.761	15
1544			min	-.388	15	-5.717	5	-2.27	15	-.001	12	-4.371	3	-1.737	3
1545		2	max	.779	3	3.843	4	10.207	3	2.35	5	3.875	22	4.688	5

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
1546			min	.162	11	-3.741	30	-10.207	5	-2.356	3	.827	34	1.259	11
1547		3	max	.652	6	5.756	3	2.264	12	.014	15	3.131	12	.71	12
1548			min	-.239	12	.309	15	-10.207	5	-2.356	3	-4.284	5	-1.665	5
1549	M259	1	max	.915	12	.829	5	6.248	5	.199	3	1.26	12	1.128	5
1550			min	-1.85	5	-.718	12	-.903	12	-.166	5	-2.341	5	-1.222	3
1551		2	max	-.25	36	.81	5	6.248	5	.199	3	2.765	16	.178	36
1552			min	-1.85	5	-.837	3	-6.251	3	-.193	5	.175	36	-.771	5
1553		3	max	.851	15	.746	15	.905	15	.152	3	1.215	15	1.203	3
1554			min	-1.801	3	-.856	3	-6.251	3	-.193	5	-2.292	3	-1.283	5
1555	M260	1	max	.864	3	-.156	12	2.203	15	.019	12	4.283	3	.743	15
1556			min	-.43	15	-5.921	5	-10.139	3	-2.381	5	-3.155	15	-1.742	3
1557		2	max	.864	3	4.467	18	10.14	5	2.389	3	.043	36	4.811	5
1558			min	.171	36	-4.775	16	-10.139	3	-2.381	5	-4.716	16	.87	36
1559		3	max	.726	5	5.963	3	10.14	5	2.389	3	4.199	5	.691	12
1560			min	-.279	12	.143	15	-2.197	12	-.032	15	-3.072	12	-1.669	5
1561	M261	1	max	.496	16	.935	5	2.343	5	.066	15	1.704	3	.66	5
1562			min	.009	36	-.929	3	-2.344	3	-.067	12	-1.695	5	-.666	3
1563		2	max	.496	16	.928	5	2.343	5	.066	15	.007	3	.01	12
1564			min	.008	36	-.935	3	-2.344	3	-.067	12	0	15	-.014	5
1565		3	max	.496	16	.922	5	2.343	5	.066	15	1.697	5	.689	3
1566			min	.008	36	-.942	3	-2.344	3	-.067	12	-1.69	3	-.684	5
1567	M262	1	max	.055	8	1.582	15	4.919	5	.174	15	3.56	3	1.103	15
1568			min	-.206	5	-1.572	12	-4.918	3	-.177	12	-3.567	5	-1.109	12
1569		2	max	.055	8	1.579	15	4.919	5	.174	15	0	12	.03	12
1570			min	-.206	5	-1.576	12	-4.918	3	-.177	12	-.006	5	-.042	5
1571		3	max	.055	8	1.575	15	4.919	5	.174	15	3.555	5	1.172	12
1572			min	-.206	5	-1.58	12	-4.918	3	-.177	12	-3.561	3	-1.182	15
1573	M263	1	max	.061	12	.574	15	5.929	5	.282	15	4.302	3	.359	15
1574			min	-.177	5	-.562	12	-5.931	3	-.284	12	-4.301	5	-.366	12
1575		2	max	.061	12	.57	15	5.929	5	.282	15	.009	12	.042	12
1576			min	-.177	5	-.566	12	-5.931	3	-.284	12	-.009	5	-.057	5
1577		3	max	.061	12	.567	15	5.929	5	.282	15	4.283	5	.453	12
1578			min	-.177	5	-.569	12	-5.931	3	-.284	12	-4.285	3	-.467	15
1579	M264	1	max	.115	12	.15	12	5.518	5	.192	15	4.003	3	.159	12
1580			min	-.14	5	-.136	15	-5.521	3	-.193	12	-4.003	5	-.159	15
1581		2	max	.115	12	.146	12	5.518	5	.192	15	.006	12	.052	12
1582			min	-.14	5	-.14	15	-5.521	3	-.193	12	-.008	5	-.06	5
1583		3	max	.115	12	.142	12	5.518	5	.192	15	3.987	5	.077	39
1584			min	-.14	5	-.144	15	-5.521	3	-.193	12	-3.991	3	-.075	33
1585	M265	1	max	.161	3	.415	12	4.335	5	.163	15	3.147	3	.359	12
1586			min	-.085	15	-.401	15	-4.337	3	-.164	12	-3.14	5	-.349	15
1587		2	max	.161	3	.412	12	4.335	5	.163	15	.007	3	.059	12
1588			min	-.085	15	-.405	15	-4.337	3	-.164	12	-.002	10	-.058	5
1589		3	max	.161	3	.408	12	4.335	5	.163	15	3.136	5	.237	15
1590			min	-.085	15	-.409	15	-4.337	3	-.164	12	-3.132	3	-.237	12
1591	M266	1	max	.211	3	.469	12	2.41	5	.088	15	1.748	3	.403	12
1592			min	-.046	10	-.454	15	-2.411	3	-.088	12	-1.747	5	-.384	15
1593		2	max	.211	3	.465	12	2.41	5	.088	15	.002	12	.065	12
1594			min	-.046	10	-.458	15	-2.411	3	-.088	12	-.002	5	-.055	5
1595		3	max	.211	3	.462	12	2.41	5	.088	15	1.742	5	.279	15
1596			min	-.046	10	-.462	15	-2.411	3	-.088	12	-1.743	3	-.271	12
1597	M267	1	max	.21	3	.466	12	2.418	3	.087	12	1.752	5	.401	12
1598			min	-.046	10	-.452	15	-2.417	5	-.086	15	-1.754	3	-.382	15
1599		2	max	.21	3	.463	12	2.418	3	.087	12	.003	13	.065	12
1600			min	-.046	10	-.455	15	-2.417	5	-.086	15	-.003	6	-.055	5
1601		3	max	.21	3	.459	12	2.418	3	.087	12	1.748	3	.277	15
1602			min	-.046	10	-.459	15	-2.417	5	-.086	15	-1.748	5	-.269	12

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
1603	M268	1	max	.232	3	.774	12	.872	6	.032	6	.621	13	.625	12
1604			min	-.026	10	-.759	15	-.858	13	-.032	13	-.631	6	-.602	15
1605		2	max	.232	3	.77	12	.872	6	.032	6	.001	5	.066	12
1606			min	-.026	10	-.762	15	-.858	13	-.032	13	0	13	-.052	5
1607		3	max	.232	3	.766	12	.872	6	.032	6	.632	6	.502	15
1608			min	-.026	10	-.766	15	-.858	13	-.032	13	-.621	13	-.49	12
1609	M269	1	max	.162	3	.412	12	4.345	3	.164	12	3.147	5	.356	12
1610			min	-.084	15	-.398	15	-4.343	5	-.163	15	-3.151	3	-.347	15
1611		2	max	.162	3	.408	12	4.345	3	.164	12	.004	6	.059	12
1612			min	-.084	15	-.402	15	-4.343	5	-.163	15	-.006	3	-.058	5
1613		3	max	.162	3	.405	12	4.345	3	.164	12	3.139	3	.235	15
1614			min	-.084	15	-.405	15	-4.343	5	-.163	15	-3.141	5	-.235	12
1615	M270	1	max	.125	13	.239	13	5.555	3	.191	12	4.027	5	.215	13
1616			min	-.137	5	-.221	6	-5.552	5	-.19	15	-4.028	3	-.212	6
1617		2	max	.125	13	.235	13	5.555	3	.191	12	.007	5	.051	12
1618			min	-.137	5	-.228	6	-5.552	5	-.19	15	-.007	12	-.062	5
1619		3	max	.125	13	.232	13	5.555	3	.191	12	4.015	3	.118	6
1620			min	-.137	5	-.234	6	-5.552	5	-.19	15	-4.012	5	-.125	13
1621	M271	1	max	.137	13	.589	15	6.044	3	.28	12	4.382	5	.367	15
1622			min	-.187	5	-.577	12	-6.042	5	-.278	15	-4.386	3	-.379	12
1623		2	max	.137	13	.585	15	6.044	3	.28	12	.008	15	.047	13
1624			min	-.187	5	-.58	12	-6.042	5	-.278	15	-.011	3	-.061	5
1625		3	max	.137	13	.582	15	6.044	3	.28	12	4.365	3	.461	12
1626			min	-.187	5	-.584	12	-6.042	5	-.278	15	-4.366	5	-.48	15
1627	M272	1	max	.145	13	1.655	15	5.328	3	.188	12	3.874	5	1.151	15
1628			min	-.188	15	-1.645	12	-5.329	5	-.185	15	-3.844	3	-1.167	12
1629		2	max	.145	13	1.651	15	5.328	3	.188	12	.02	6	.03	13
1630			min	-.188	15	-1.649	12	-5.329	5	-.185	15	.002	13	-.05	5
1631		3	max	.145	13	1.647	15	5.328	3	.188	12	3.871	3	1.221	12
1632			min	-.188	15	-1.653	12	-5.329	5	-.185	15	-3.842	5	-1.239	15
1633	M273	1	max	.024	13	1.538	15	3.501	12	.23	12	2.522	15	1.169	15
1634			min	-.241	5	-1.528	12	-3.504	15	-.228	15	-2.539	12	-1.127	12
1635		2	max	.024	13	1.534	15	3.501	12	.23	12	-.004	34	.071	5
1636			min	-.241	5	-1.532	12	-3.504	15	-.228	15	-.027	22	-.02	12
1637		3	max	.024	13	1.53	15	3.501	12	.23	12	2.53	12	1.091	12
1638			min	-.241	5	-1.535	12	-3.504	15	-.228	15	-2.552	15	-1.052	15
1639	M274	1	max	.163	13	.312	15	3.558	12	.319	12	2.568	15	.281	15
1640			min	-.141	6	-.3	12	-3.558	15	-.317	15	-2.567	12	-.262	12
1641		2	max	.163	13	.309	15	3.558	12	.319	12	.01	13	.065	6
1642			min	-.141	6	-.304	12	-3.558	15	-.317	15	-.009	6	-.045	13
1643		3	max	.163	13	.305	15	3.558	12	.319	12	2.584	12	.178	12
1644			min	-.141	6	-.308	12	-3.558	15	-.317	15	-2.584	15	-.166	15
1645	M275	1	max	.132	12	.235	3	2.869	12	.239	12	2.069	15	.115	3
1646			min	-.117	5	-.218	5	-2.869	15	-.238	15	-2.072	12	-.102	5
1647		2	max	.132	12	.229	3	2.869	12	.239	12	.006	13	.057	5
1648			min	-.117	5	-.224	5	-2.869	15	-.238	15	-.008	5	-.055	12
1649		3	max	.132	12	.223	3	2.869	12	.239	12	2.083	12	.222	5
1650			min	-.117	5	-.23	5	-2.869	15	-.238	15	-2.085	15	-.217	3
1651	M276	1	max	.158	3	.575	12	1.977	12	.19	12	1.426	15	.355	12
1652			min	-.086	15	-.561	15	-1.976	15	-.189	15	-1.427	12	-.352	15
1653		2	max	.158	3	.571	12	1.977	12	.19	12	.005	3	.055	15
1654			min	-.086	15	-.564	15	-1.976	15	-.189	15	-.005	15	-.06	3
1655		3	max	.158	3	.567	12	1.977	12	.19	12	1.436	12	.465	15
1656			min	-.086	15	-.568	15	-1.976	15	-.189	15	-1.436	15	-.472	12
1657	M277	1	max	.186	3	1.051	12	1.016	12	.095	12	.734	15	.697	12
1658			min	-.063	15	-1.036	15	-1.016	15	-.094	15	-.733	12	-.697	15
1659		2	max	.186	3	1.048	12	1.016	12	.095	12	.003	12	.055	15

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-ft]	LC	y-y Mom...	LC	z-z Mom...	LC
1660			min	-.063	15	-1.04	15	-1.016	15	-.094	15	-.002	6	-.063	3
1661		3	max	.186	3	1.044	12	1.016	12	.095	12	.739	12	.809	15
1662			min	-.063	15	-1.044	15	-1.016	15	-.094	15	-.737	15	-.819	12
1663	M278	1	max	.182	12	.884	12	.613	6	.045	6	.447	13	.576	12
1664			min	-.067	5	-.869	15	-.618	13	-.045	13	-.443	6	-.576	15
1665		2	max	.182	12	.881	12	.613	6	.045	6	0	15	.055	15
1666			min	-.067	5	-.873	15	-.618	13	-.045	13	0	13	-.064	3
1667		3	max	.182	12	.877	12	.613	6	.045	6	.444	6	.688	15
1668			min	-.067	5	-.877	15	-.618	13	-.045	13	-.447	13	-.7	12
1669	M279	1	max	.186	3	1.049	12	1.025	15	.096	15	.74	12	.695	12
1670			min	-.063	15	-1.034	15	-1.026	12	-.096	12	-.741	15	-.695	15
1671		2	max	.186	3	1.045	12	1.025	15	.096	15	.001	5	.055	15
1672			min	-.063	15	-1.037	15	-1.026	12	-.096	12	-.003	12	-.063	3
1673		3	max	.186	3	1.041	12	1.025	15	.096	15	.744	15	.807	15
1674			min	-.063	15	-1.041	15	-1.026	12	-.096	12	-.746	12	-.818	12
1675	M280	1	max	.157	3	.572	12	1.987	15	.19	15	1.435	12	.353	12
1676			min	-.086	15	-.558	15	-1.988	12	-.192	12	-1.434	15	-.351	15
1677		2	max	.157	3	.569	12	1.987	15	.19	15	.005	15	.055	15
1678			min	-.086	15	-.562	15	-1.988	12	-.192	12	-.005	3	-.06	3
1679		3	max	.157	3	.565	12	1.987	15	.19	15	1.444	15	.463	15
1680			min	-.086	15	-.566	15	-1.988	12	-.192	12	-1.444	12	-.47	12
1681	M281	1	max	.131	12	.226	3	2.88	15	.24	15	2.079	12	.108	3
1682			min	-.117	5	-.208	5	-2.88	12	-.241	12	-2.078	15	-.096	5
1683		2	max	.131	12	.22	3	2.88	15	.24	15	.008	5	.057	5
1684			min	-.117	5	-.215	5	-2.88	12	-.241	12	-.006	12	-.055	12
1685		3	max	.131	12	.214	3	2.88	15	.24	15	2.092	15	.215	5
1686			min	-.117	5	-.221	5	-2.88	12	-.241	12	-2.091	12	-.211	3
1687	M282	1	max	.116	3	.326	15	3.566	15	.318	15	2.573	12	.291	15
1688			min	-.133	15	-.314	12	-3.565	12	-.32	12	-2.573	15	-.272	12
1689		2	max	.116	3	.323	15	3.566	15	.318	15	.008	15	.061	5
1690			min	-.133	15	-.318	12	-3.565	12	-.32	12	-.009	3	-.043	12
1691		3	max	.116	3	.319	15	3.566	15	.318	15	2.589	15	.188	12
1692			min	-.133	15	-.322	12	-3.565	12	-.32	12	-2.59	12	-.176	15
1693	M283	1	max	.021	12	1.591	15	3.503	15	.225	15	2.539	12	1.208	15
1694			min	-.243	5	-1.582	12	-3.5	12	-.227	12	-2.521	15	-1.166	12
1695		2	max	.021	12	1.588	15	3.503	15	.225	15	.033	16	.071	5
1696			min	-.243	5	-1.586	12	-3.5	12	-.227	12	-.001	36	-.02	12
1697		3	max	.021	12	1.584	15	3.503	15	.225	15	2.551	15	1.13	12
1698			min	-.243	5	-1.59	12	-3.5	12	-.227	12	-2.529	12	-1.091	15

Envelope AISC 15th(360-16): ASD Steel Code Checks

	Member	Shape	Code Check	Loc...	LC	Shea...	Loc...		L...	Pnc/o...	Pnt/om...	Mnyy/o...	Mnzz/...	...	Eqn
1	M1	PIPE 16 ...	.462	0	3	.069	23		16	427.7	510.274	209.872	209.872	1	H1-1b
2	M3	PIPE_6.0X	.611	3.713	16	.348	.702		5	158.232	164.102	27.246	27.246	1	H1-1b
3	M7	HSS3X3X6	.932	0	16	.496	0	y	16	73.064	101.497	8.109	8.109	3	H1-1a
4	M8	HSS3X3X6	.775	0	16	.898	.332	y	16	91.862	101.497	8.109	8.109	3	H1-1b
5	M9	HSS3X3X4	.671	0	16	.367	.667	y	16	72.778	73.054	6.188	6.188	2	H1-1a
6	M10	HSS3X3X4	.536	0	16	.108	6.167	y	5	52.861	73.054	6.188	6.188	2	H1-1b
7	M11	HSS3X3X4	.581	0	16	.322	.667	y	16	72.778	73.054	6.188	6.188	2	H1-1b
8	M12	PIPE_6.0X	.507	.987	16	.206	.987		16	154.135	164.102	27.246	27.246	1	H1-1b
9	M13	PIPE_6.0X	.341	0	16	.149	6.454		3	152.821	164.102	27.246	27.246	1	H1-1b
10	M14	HSS1.5x...	.054	1.625	5	.019	0	z	5	24.822	37.425	1.481	1.481	1	H1-1b
11	M15	HSS3X3X4	.201	.625	16	.105	.625	y	16	72.812	73.054	6.188	6.188	2	H1-1b
12	M16	HSS3X3X4	.727	.625	16	.592	0	y	16	72.812	73.054	6.188	6.188	2	H1-1b
13	M17	HSS3X3X4	.416	0	17	.293	0	y	17	72.812	73.054	6.188	6.188	2	H1-1b

Envelope AISC 15th(360-16): ASD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc...	LC	Shea...	Loc...	...	L...	Pnc/o...	Pnt/om...	Mnyy/o...	Mnzz/...	...	Eqn
14	M18	HSS1.5x...	.069	1.625	5	.026	3.25	z	5	24.822	37.425	1.481	1.481	1	H1-1b
15	M19	HSS1.5x...	.074	1.626	5	.028	3.251	z	5	24.814	37.425	1.481	1.481	1	H1-1b
16	M20	HSS1.5x...	.068	1.626	5	.029	0	z	5	24.814	37.425	1.481	1.481	1	H1-1b
17	M21	HSS1.5x...	.065	1.635	5	.031	3.269	z	5	24.7	37.425	1.481	1.481	1	H1-1b
18	M22	HSS1.5x...	.065	1.658	3	.029	0	z	5	24.818	37.425	1.481	1.481	1	H1-1b
19	M23	HSS1.5x...	.064	1.625	5	.027	0	z	3	24.822	37.425	1.481	1.481	1	H1-1b
20	M24	HSS1.5x...	.074	1.659	3	.024	3.251	z	5	24.816	37.425	1.481	1.481	1	H1-1b
21	M25	HSS1.5x...	.067	1.625	5	.020	0	z	5	24.821	37.425	1.481	1.481	1	H1-1b
22	M26	HSS3X3X4	.045	2.502	3	.006	0	z	3	69.265	73.054	6.188	6.188	1	H1-1b
23	M27	HSS3X3X4	.302	2.097	5	.011	0	y	5	54.33	73.054	6.188	6.188	1	H1-1a
24	M28	HSS3X3X4	.302	0	5	.063	4.067	y	3	54.33	73.054	6.188	6.188	1	H1-1a
25	M29	HSS3X3X4	.182	0	5	.020	4.001	y	3	54.33	73.054	6.188	6.188	1	H1-1b
26	M30	HSS3X3X4	.171	2.113	5	.034	2.113	y	5	54.33	73.054	6.188	6.188	1	H1-1b
27	M31	HSS3X3X4	.172	0	5	.037	4	y	5	54.33	73.054	6.188	6.188	1	H1-1b
28	M32	HSS3X3X4	.173	.208	5	.063	.208	y	5	54.33	73.054	6.188	6.188	1	H1-1b
29	M33	HSS3X3X4	.307	4	16	.057	2.286	y	5	54.33	73.054	6.188	6.188	1	H1-1a
30	M34	HSS3X3X4	.385	3.676	16	.053	3.676	y	5	54.33	73.054	6.188	6.188	2	H1-1a
31	M35	HSS3X3X4	.197	0	5	.041	0	y	5	54.33	73.054	6.188	6.188	1	H1-1b
32	M36	HSS3X3X4	.215	1.714	16	.056	0	y	3	54.33	73.054	6.188	6.188	1	H1-1b
33	M37	HSS3X3X4	.160	3.727	3	.043	0	y	3	54.33	73.054	6.188	6.188	1	H1-1b
34	M38	HSS3X3X4	.133	0	3	.029	0	y	5	63.757	73.054	6.188	6.188	2	H1-1b*
35	M39	HSS3X3X4	.260	3.94	3	.044	0	y	3	54.33	73.054	6.188	6.188	2	H1-1a
36	M40	HSS3X3X4	.320	3.919	3	.069	4	y	3	54.33	73.054	6.188	6.188	1	H1-1a
37	M41	HSS3X3X4	.319	3.922	17	.009	0	y	5	54.33	73.054	6.188	6.188	1	H1-1a
38	M42	HSS3X3X4	.355	2.034	3	.014	0	y	3	54.33	73.054	6.188	6.188	1	H1-1a
39	M43	HSS3X3X4	.664	0	5	.457	.638	y	16	72.801	73.054	6.188	6.188	2	H1-1b
40	M44	HSS3X3X4	.494	0	5	.359	.61	y	16	72.823	73.054	6.188	6.188	2	H1-1b
41	M45	HSS3X3X4	.363	0	5	.248	.639	y	16	72.8	73.054	6.188	6.188	2	H1-1b
42	M46	HSS3X3X4	.511	.611	17	.403	.611	y	17	72.823	73.054	6.188	6.188	2	H1-1b
43	M47	HSS3X3X4	.509	.622	16	.374	.622	y	16	72.814	73.054	6.188	6.188	2	H1-1b
44	M48	HSS3X3X4	.357	.61	16	.279	.61	y	16	72.823	73.054	6.188	6.188	2	H1-1b
45	M49	HSS3X3X4	.224	0	16	.158	0	y	16	72.814	73.054	6.188	6.188	2	H1-1b
46	M50	HSS3X3X4	.206	.625	16	.147	0	y	16	72.811	73.054	6.188	6.188	2	H1-1b
47	M51	HSS3X3X4	.053	.622	22	.037	.622	y	20	72.814	73.054	6.188	6.188	2	H1-1b
48	M52	HSS3X3X4	.041	0	16	.028	.625	y	32	72.812	73.054	6.188	6.188	2	H1-1b
49	M53	HSS3X3X4	.046	2.494	3	.006	0	z	3	69.29	73.054	6.188	6.188	1	H1-1b
50	M54	HSS3X3X4	.045	2.4	3	.006	0	z	3	69.561	73.054	6.188	6.188	1	H1-1b
51	M55	HSS3X3X4	.001	1.253	17	.000	1.253	y	16	72.084	73.054	6.188	6.188	2	H1-1b
52	M56	PIPE_6.0X	.228	0	5	.137	0		5	155.437	164.102	27.246	27.246	2	H1-1b
53	M57	PIPE_6.0X	.190	6.179	3	.118	0		5	154.928	164.102	27.246	27.246	1	H1-1b
54	M58	PIPE_6.0X	.236	6.179	3	.093	0		5	154.928	164.102	27.246	27.246	1	H1-1b
55	M59	PIPE_6.0X	.272	0	3	.071	0		5	155.437	164.102	27.246	27.246	1	H1-1a
56	M60	PIPE_6.0X	.338	4.002	3	.069	0		5	155.437	164.102	27.246	27.246	1	H1-1a
57	M61	PIPE_6.0X	.379	1.619	3	.058	0		3	155.437	164.102	27.246	27.246	1	H1-1a
58	M62	PIPE_6.0X	.365	0	3	.040	2.359		3	155.437	164.102	27.246	27.246	1	H1-1a
59	M63	PIPE_6.0X	.364	3.82	3	.020	0		3	155.437	164.102	27.246	27.246	1	H1-1a
60	M64	PIPE_6.0X	.166	0	16	.119	0		5	155.437	164.102	27.246	27.246	1	H1-1b
61	M65	PIPE_6.0X	.161	5.997	5	.111	0		3	155.437	164.102	27.246	27.246	1	H1-1b
62	M66	PIPE_6.0X	.215	5.997	5	.087	0		3	155.437	164.102	27.246	27.246	1	H1-1b
63	M67	PIPE_6.0X	.226	5.997	5	.056	0		5	155.437	164.102	27.246	27.246	1	H1-1b
64	M68	PIPE_6.0X	.243	5.997	5	.025	0		6	155.437	164.102	27.246	27.246	1	H1-1b
65	M70	PIPE_6.0X	.515	3.713	19	.422	.702		5	158.232	164.102	27.246	27.246	1	H1-1b
66	M74	HSS3X3X6	.812	0	19	.431	0	y	5	73.064	101.497	8.109	8.109	3	H1-1a
67	M75	HSS3X3X6	.670	0	19	.792	.332	y	19	91.862	101.497	8.109	8.109	3	H1-1b
68	M76	HSS3X3X4	.598	0	19	.328	.667	y	19	72.778	73.054	6.188	6.188	2	H1-1a
69	M77	HSS3X3X4	.490	0	5	.108	6.167	y	5	52.861	73.054	6.188	6.188	2	H1-1b
70	M78	HSS3X3X4	.561	0	5	.299	.667	y	5	72.778	73.054	6.188	6.188	2	H1-1b

Envelope AISC 15th(360-16): ASD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc...	LC	Shea...	Loc...		L...	Pnc/o...	Pnt/om...	Mnyy/o...	Mnzz/...	...	Eqn
71	M79	PIPE_6.0X	.430	.987	19	.225	.987		5	154.135	164.102	27.246	27.246	1	H1-1b
72	M80	PIPE_6.0X	.302	0	17	.149	6.454		3	152.821	164.102	27.246	27.246	1	H1-1b
73	M81	HSS1.5x...	.053	1.625	5	.021	3.25	z	5	24.822	37.425	1.481	1.481	1	H1-1b
74	M82	HSS3X3X4	.166	.625	19	.099	0	y	3	72.812	73.054	6.188	6.188	2	H1-1b
75	M83	HSS3X3X4	.662	.625	5	.530	.625	y	17	72.812	73.054	6.188	6.188	2	H1-1b
76	M84	HSS3X3X4	.419	0	17	.300	.625	y	17	72.812	73.054	6.188	6.188	2	H1-1b
77	M85	HSS1.5x...	.072	1.592	5	.027	3.25	z	5	24.822	37.425	1.481	1.481	1	H1-1b
78	M86	HSS1.5x...	.094	1.659	6	.028	3.251	z	3	24.814	37.425	1.481	1.481	1	H1-1b
79	M87	HSS1.5x...	.077	1.626	6	.029	0	z	5	24.814	37.425	1.481	1.481	1	H1-1b
80	M88	HSS1.5x...	.071	1.635	6	.030	3.269	z	5	24.7	37.425	1.481	1.481	1	H1-1b
81	M89	HSS1.5x...	.065	1.658	3	.028	0	z	5	24.818	37.425	1.481	1.481	1	H1-1b
82	M90	HSS1.5x...	.064	1.592	5	.026	0	z	3	24.822	37.425	1.481	1.481	1	H1-1b
83	M91	HSS1.5x...	.074	1.659	3	.023	3.251	z	5	24.816	37.425	1.481	1.481	1	H1-1b
84	M92	HSS1.5x...	.066	1.625	5	.019	0	z	5	24.821	37.425	1.481	1.481	1	H1-1b
85	M93	HSS3X3X4	.302	2.097	5	.011	0	y	5	54.33	73.054	6.188	6.188	1	H1-1a
86	M94	HSS3X3X4	.302	0	5	.063	4.067	y	3	54.33	73.054	6.188	6.188	1	H1-1a
87	M95	HSS3X3X4	.182	0	5	.020	4.001	y	3	54.33	73.054	6.188	6.188	1	H1-1b
88	M96	HSS3X3X4	.171	2.113	5	.034	2.113	y	5	54.33	73.054	6.188	6.188	1	H1-1b
89	M97	HSS3X3X4	.172	0	5	.037	4	y	5	54.33	73.054	6.188	6.188	1	H1-1b
90	M98	HSS3X3X4	.173	.208	5	.062	.208	y	5	54.33	73.054	6.188	6.188	1	H1-1b
91	M99	HSS3X3X4	.211	2.286	5	.057	2.286	y	5	54.33	73.054	6.188	6.188	1	H1-1b
92	M100	HSS3X3X4	.330	3.676	19	.053	3.676	y	5	54.33	73.054	6.188	6.188	2	H1-1a
93	M101	HSS3X3X4	.197	0	5	.041	0	y	5	54.33	73.054	6.188	6.188	1	H1-1b
94	M102	HSS3X3X4	.201	1.714	17	.057	0	y	3	54.33	73.054	6.188	6.188	1	H1-1b
95	M103	HSS3X3X4	.166	3.727	17	.043	0	y	3	54.33	73.054	6.188	6.188	1	H1-1b
96	M104	HSS3X3X4	.156	0	3	.029	0	y	5	54.33	73.054	6.188	6.188	2	H1-1b*
97	M105	HSS3X3X4	.260	3.94	3	.044	0	y	3	54.33	73.054	6.188	6.188	2	H1-1a
98	M106	HSS3X3X4	.328	3.919	17	.069	4	y	3	54.33	73.054	6.188	6.188	1	H1-1a
99	M107	HSS3X3X4	.321	3.922	17	.009	0	y	5	54.33	73.054	6.188	6.188	1	H1-1a
100	M108	HSS3X3X4	.292	2.034	3	.014	0	y	3	70.528	73.054	6.188	6.188	1	H1-1a
101	M109	HSS3X3X4	.663	0	5	.455	.638	y	5	72.801	73.054	6.188	6.188	2	H1-1b
102	M110	HSS3X3X4	.504	.611	17	.398	.611	y	17	72.823	73.054	6.188	6.188	2	H1-1b
103	M111	HSS3X3X4	.494	0	5	.358	.61	y	5	72.823	73.054	6.188	6.188	2	H1-1b
104	M112	HSS3X3X4	.477	.622	17	.354	.622	y	17	72.814	73.054	6.188	6.188	2	H1-1b
105	M113	HSS3X3X4	.363	0	5	.245	.639	y	5	72.8	73.054	6.188	6.188	2	H1-1b
106	M114	HSS3X3X4	.316	.61	19	.251	.61	y	19	72.823	73.054	6.188	6.188	2	H1-1b
107	M115	HSS3X3X4	.184	0	19	.132	0	y	19	72.814	73.054	6.188	6.188	2	H1-1b
108	M116	HSS3X3X4	.200	.625	5	.128	0	y	5	72.811	73.054	6.188	6.188	2	H1-1b
109	M117	HSS3X3X4	.046	2.494	3	.006	0	z	3	69.29	73.054	6.188	6.188	1	H1-1b
110	M118	HSS3X3X4	.045	2.4	3	.006	0	z	3	69.561	73.054	6.188	6.188	1	H1-1b
111	M119	HSS3X3X4	.003	1.253	6	.001	1.253	z	6	72.084	73.054	6.188	6.188	2	H1-1b
112	M120	PIPE_6.0X	.225	0	5	.137	0		5	155.437	164.102	27.246	27.246	2	H1-1b
113	M121	PIPE_6.0X	.190	6.179	3	.117	0		5	154.928	164.102	27.246	27.246	1	H1-1b
114	M122	PIPE_6.0X	.235	6.179	3	.092	0		5	154.928	164.102	27.246	27.246	1	H1-1b
115	M123	PIPE_6.0X	.271	0	3	.070	0		5	155.437	164.102	27.246	27.246	1	H1-1a
116	M124	PIPE_6.0X	.338	4.002	3	.069	0		5	155.437	164.102	27.246	27.246	1	H1-1a
117	M125	PIPE_6.0X	.379	1.619	3	.058	0		3	155.437	164.102	27.246	27.246	1	H1-1a
118	M126	PIPE_6.0X	.364	0	3	.039	2.359		3	155.437	164.102	27.246	27.246	1	H1-1a
119	M127	PIPE_6.0X	.364	3.82	3	.020	0		3	155.437	164.102	27.246	27.246	1	H1-1a
120	M128	PIPE_6.0X	.153	0	5	.119	0		5	155.437	164.102	27.246	27.246	1	H1-1b
121	M129	PIPE_6.0X	.162	5.997	5	.111	0		3	155.437	164.102	27.246	27.246	1	H1-1b
122	M130	PIPE_6.0X	.216	5.997	5	.087	0		3	155.437	164.102	27.246	27.246	1	H1-1b
123	M131	PIPE_6.0X	.226	5.997	5	.055	0		5	155.437	164.102	27.246	27.246	1	H1-1b
124	M132	PIPE_6.0X	.244	5.997	5	.021	0		3	155.437	164.102	27.246	27.246	1	H1-1b
125	M133	PIPE 16 ...	.462	0	3	.059	23		19	427.7	510.274	209.872	209.872	1	H1-1b
126	M134	PIPE_6.0X	.615	3.713	16	.348	.251		3	158.232	164.102	27.246	27.246	1	H1-1b
127	M135	HSS3X3X6	.930	0	16	.508	0	y	16	73.064	101.497	8.109	8.109	3	H1-1a

Envelope AISC 15th(360-16): ASD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc	LC	Shea	Loc		L	Pnc/o	Pnt/om	Mnyy/o	Mnzz/		Eqn
128	M136	HSS3X3X6	.780	0	16	.890	.332	y	16	91.862	101.497	8.109	8.109	3	H1-1b
129	M137	HSS3X3X4	.669	0	16	.364	.667	y	16	72.778	73.054	6.188	6.188	2	H1-1a
130	M138	HSS3X3X4	.595	0	16	.107	6.167	y	3	52.861	73.054	6.188	6.188	2	H1-1a
131	M139	HSS3X3X4	.594	0	16	.335	.667	y	16	72.778	73.054	6.188	6.188	2	H1-1b
132	M140	PIPE_6.0X	.508	.987	16	.206	.987		16	154.135	164.102	27.246	27.246	1	H1-1b
133	M141	PIPE_6.0X	.344	0	16	.147	6.454		5	152.821	164.102	27.246	27.246	1	H1-1b
134	M142	HSS1.5x...	.020	0	3	.008	0	y	3	24.822	37.425	1.481	1.481	1	H1-1b*
135	M143	HSS3X3X4	.193	.625	16	.104	0	y	5	72.812	73.054	6.188	6.188	2	H1-1b
136	M144	HSS3X3X4	.740	.625	16	.602	0	y	16	72.812	73.054	6.188	6.188	2	H1-1b
137	M145	HSS3X3X4	.398	0	16	.279	0	y	5	72.812	73.054	6.188	6.188	2	H1-1b
138	M146	HSS1.5x...	.046	0	16	.011	0	y	3	24.822	37.425	1.481	1.481	1	H1-1b*
139	M147	HSS1.5x...	.023	1.626	16	.012	3.251	y	5	24.814	37.425	1.481	1.481	1	H1-1b
140	M148	HSS1.5x...	.018	1.626	16	.014	3.251	y	5	24.814	37.425	1.481	1.481	1	H1-1b
141	M149	HSS1.5x...	.013	1.635	17	.015	0	y	3	24.7	37.425	1.481	1.481	1	H1-1b
142	M150	HSS1.5x...	.014	1.658	16	.013	0	y	5	24.818	37.425	1.481	1.481	1	H1-1b
143	M151	HSS1.5x...	.013	1.625	16	.011	3.25	y	5	24.822	37.425	1.481	1.481	1	H1-1b
144	M152	HSS1.5x...	.018	1.659	16	.008	3.251	y	3	24.816	37.425	1.481	1.481	1	H1-1b
145	M153	HSS1.5x...	.012	1.625	17	.003	3.25	y	3	24.821	37.425	1.481	1.481	1	H1-1b
146	M154	HSS3X3X4	.045	2.502	3	.006	0	z	3	69.265	73.054	6.188	6.188	1	H1-1b
147	M155	HSS3X3X4	.292	2.097	3	.011	0	y	3	54.33	73.054	6.188	6.188	1	H1-1a
148	M156	HSS3X3X4	.292	0	3	.063	4.067	y	5	54.33	73.054	6.188	6.188	1	H1-1a
149	M157	HSS3X3X4	.192	0	3	.020	4.001	y	5	54.33	73.054	6.188	6.188	1	H1-1b
150	M158	HSS3X3X4	.188	2.113	3	.034	2.113	y	3	54.33	73.054	6.188	6.188	1	H1-1b
151	M159	HSS3X3X4	.161	0	3	.037	4	y	3	54.33	73.054	6.188	6.188	1	H1-1b
152	M160	HSS3X3X4	.183	.208	3	.064	.208	y	3	54.33	73.054	6.188	6.188	1	H1-1b
153	M161	HSS3X3X4	.299	4	16	.057	2.286	y	3	54.33	73.054	6.188	6.188	1	H1-1a
154	M162	HSS3X3X4	.380	3.676	16	.053	3.676	y	3	54.33	73.054	6.188	6.188	2	H1-1a
155	M163	HSS3X3X4	.206	0	16	.040	0	y	3	54.33	73.054	6.188	6.188	1	H1-1b
156	M164	HSS3X3X4	.218	1.714	17	.056	0	y	5	54.33	73.054	6.188	6.188	1	H1-1b
157	M165	HSS3X3X4	.172	3.727	5	.043	0	y	5	54.33	73.054	6.188	6.188	1	H1-1b
158	M166	HSS3X3X4	.133	0	5	.029	0	y	3	63.757	73.054	6.188	6.188	2	H1-1b*
159	M167	HSS3X3X4	.251	1.89	5	.044	0	y	5	54.33	73.054	6.188	6.188	1	H1-1a
160	M168	HSS3X3X4	.330	3.919	5	.069	4	y	5	54.33	73.054	6.188	6.188	1	H1-1a
161	M169	HSS3X3X4	.308	3.401	5	.009	0	y	3	54.33	73.054	6.188	6.188	1	H1-1a
162	M170	HSS3X3X4	.360	2.034	5	.015	0	y	5	54.33	73.054	6.188	6.188	1	H1-1a
163	M171	HSS3X3X4	.688	0	17	.480	.638	y	17	72.801	73.054	6.188	6.188	2	H1-1b
164	M172	HSS3X3X4	.500	0	17	.373	.61	y	17	72.823	73.054	6.188	6.188	2	H1-1b
165	M173	HSS3X3X4	.375	0	16	.259	.639	y	16	72.8	73.054	6.188	6.188	2	H1-1b
166	M174	HSS3X3X4	.504	.611	16	.391	.611	y	16	72.823	73.054	6.188	6.188	2	H1-1b
167	M175	HSS3X3X4	.499	.622	16	.368	.622	y	16	72.814	73.054	6.188	6.188	2	H1-1b
168	M176	HSS3X3X4	.350	.61	16	.274	.61	y	16	72.823	73.054	6.188	6.188	2	H1-1b
169	M177	HSS3X3X4	.219	0	16	.155	0	y	16	72.814	73.054	6.188	6.188	2	H1-1b
170	M178	HSS3X3X4	.214	.625	16	.152	0	y	16	72.811	73.054	6.188	6.188	2	H1-1b
171	M179	HSS3X3X4	.052	.622	22	.037	.622	y	22	72.814	73.054	6.188	6.188	2	H1-1b
172	M180	HSS3X3X4	.041	0	16	.028	.625	y	34	72.812	73.054	6.188	6.188	2	H1-1b
173	M181	HSS3X3X4	.046	2.494	5	.006	0	z	3	69.29	73.054	6.188	6.188	1	H1-1b
174	M182	HSS3X3X4	.045	2.4	5	.006	0	z	3	69.561	73.054	6.188	6.188	1	H1-1b
175	M183	HSS3X3X4	.001	1.253	17	.000	1.253	y	16	72.084	73.054	6.188	6.188	2	H1-1b
176	M184	PIPE_6.0X	.239	0	16	.139	0		3	155.437	164.102	27.246	27.246	2	H1-1b
177	M185	PIPE_6.0X	.191	6.179	5	.119	0		3	154.928	164.102	27.246	27.246	1	H1-1b
178	M186	PIPE_6.0X	.236	6.179	5	.093	0		3	154.928	164.102	27.246	27.246	1	H1-1b
179	M187	PIPE_6.0X	.272	0	5	.071	0		3	155.437	164.102	27.246	27.246	1	H1-1a
180	M188	PIPE_6.0X	.338	4.002	5	.069	0		3	155.437	164.102	27.246	27.246	1	H1-1a
181	M189	PIPE_6.0X	.380	1.619	5	.058	0		5	155.437	164.102	27.246	27.246	1	H1-1a
182	M190	PIPE_6.0X	.365	0	5	.039	2.359		5	155.437	164.102	27.246	27.246	1	H1-1a
183	M191	PIPE_6.0X	.364	3.82	5	.020	0		6	155.437	164.102	27.246	27.246	1	H1-1a
184	M192	PIPE_6.0X	.165	0	16	.118	0		3	155.437	164.102	27.246	27.246	1	H1-1b

Envelope AISC 15th(360-16): ASD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc...	LC	Shea...	Loc...	...	L...	Pnc/o...	Pnt/om...	Mnyy/o...	Mnzz/...	...	Eqn
185	M193	PIPE_6.0X	.162	5.997	3	.110	0		5	155.437	164.102	27.246	27.246	1	H1-1b
186	M194	PIPE_6.0X	.216	5.997	3	.087	0		3	155.437	164.102	27.246	27.246	1	H1-1b
187	M195	PIPE_6.0X	.226	5.997	3	.056	0		3	155.437	164.102	27.246	27.246	1	H1-1b
188	M196	PIPE_6.0X	.251	5.997	17	.024	0		6	155.437	164.102	27.246	27.246	1	H1-1b
189	M197	PIPE_6.0X	.525	3.713	19	.421	.251		3	158.232	164.102	27.246	27.246	1	H1-1b
190	M198	HSS3X3X6	.796	0	19	.449	0	y	19	73.064	101.497	8.109	8.109	3	H1-1a
191	M199	HSS3X3X6	.670	0	19	.756	.332	y	19	91.862	101.497	8.109	8.109	3	H1-1b
192	M200	HSS3X3X4	.568	0	19	.312	.667	y	19	72.778	73.054	6.188	6.188	2	H1-1a
193	M201	HSS3X3X4	.495	0	19	.107	6.167	y	3	52.861	73.054	6.188	6.188	2	H1-1b
194	M202	HSS3X3X4	.557	0	3	.301	.667	y	19	72.778	73.054	6.188	6.188	2	H1-1b
195	M203	PIPE_6.0X	.444	.987	19	.229	.987		3	154.135	164.102	27.246	27.246	1	H1-1b
196	M204	PIPE_6.0X	.311	0	17	.147	6.454		5	152.821	164.102	27.246	27.246	1	H1-1b
197	M205	HSS1.5x...	.021	0	3	.010	0	y	3	24.822	37.425	1.481	1.481	1	H1-1b*
198	M206	HSS3X3X4	.160	.625	22	.103	0	y	5	72.812	73.054	6.188	6.188	2	H1-1b
199	M207	HSS3X3X4	.699	.625	17	.561	.625	y	17	72.812	73.054	6.188	6.188	2	H1-1b
200	M208	HSS3X3X4	.407	0	16	.281	.625	y	16	72.812	73.054	6.188	6.188	2	H1-1b
201	M209	HSS1.5x...	.046	0	17	.012	0	y	3	24.822	37.425	1.481	1.481	1	H1-1b*
202	M210	HSS1.5x...	.021	1.659	19	.012	0	y	5	24.814	37.425	1.481	1.481	1	H1-1b
203	M211	HSS1.5x...	.017	1.626	19	.014	0	y	5	24.814	37.425	1.481	1.481	1	H1-1b
204	M212	HSS1.5x...	.013	1.635	19	.014	0	y	3	24.7	37.425	1.481	1.481	1	H1-1b
205	M213	HSS1.5x...	.013	1.658	19	.013	3.251	y	5	24.818	37.425	1.481	1.481	1	H1-1b
206	M214	HSS1.5x...	.012	1.592	19	.010	3.25	y	5	24.822	37.425	1.481	1.481	1	H1-1b
207	M215	HSS1.5x...	.016	1.659	19	.007	3.251	y	3	24.816	37.425	1.481	1.481	1	H1-1b
208	M216	HSS1.5x...	.012	1.625	19	.002	3.25	y	3	24.821	37.425	1.481	1.481	1	H1-1b
209	M217	HSS3X3X4	.292	2.097	3	.011	0	y	3	54.33	73.054	6.188	6.188	1	H1-1a
210	M218	HSS3X3X4	.292	0	3	.063	4.067	y	5	54.33	73.054	6.188	6.188	1	H1-1a
211	M219	HSS3X3X4	.192	0	3	.020	4.001	y	5	54.33	73.054	6.188	6.188	1	H1-1b
212	M220	HSS3X3X4	.188	2.113	3	.034	2.113	y	3	54.33	73.054	6.188	6.188	1	H1-1b
213	M221	HSS3X3X4	.161	0	3	.037	4	y	3	54.33	73.054	6.188	6.188	1	H1-1b
214	M222	HSS3X3X4	.183	.208	3	.063	.208	y	3	54.33	73.054	6.188	6.188	1	H1-1b
215	M223	HSS3X3X4	.198	2.286	3	.057	2.286	y	3	54.33	73.054	6.188	6.188	1	H1-1b
216	M224	HSS3X3X4	.249	3.676	19	.053	3.676	y	3	54.33	73.054	6.188	6.188	2	H1-1b
217	M225	HSS3X3X4	.191	0	3	.041	0	y	3	54.33	73.054	6.188	6.188	1	H1-1b
218	M226	HSS3X3X4	.210	1.714	17	.056	0	y	5	54.33	73.054	6.188	6.188	1	H1-1b
219	M227	HSS3X3X4	.172	3.727	5	.043	0	y	5	54.33	73.054	6.188	6.188	1	H1-1b
220	M228	HSS3X3X4	.156	0	5	.029	0	y	3	54.33	73.054	6.188	6.188	2	H1-1b*
221	M229	HSS3X3X4	.251	1.89	5	.044	0	y	5	54.33	73.054	6.188	6.188	1	H1-1a
222	M230	HSS3X3X4	.330	3.919	5	.069	4	y	5	54.33	73.054	6.188	6.188	1	H1-1a
223	M231	HSS3X3X4	.308	3.401	5	.009	0	y	3	54.33	73.054	6.188	6.188	1	H1-1a
224	M232	HSS3X3X4	.298	2.034	5	.014	0	y	5	70.528	73.054	6.188	6.188	1	H1-1a
225	M233	HSS3X3X4	.664	0	17	.463	.638	y	17	72.801	73.054	6.188	6.188	2	H1-1b
226	M234	HSS3X3X4	.485	.611	17	.383	.611	y	17	72.823	73.054	6.188	6.188	2	H1-1b
227	M235	HSS3X3X4	.479	0	17	.359	.61	y	17	72.823	73.054	6.188	6.188	2	H1-1b
228	M236	HSS3X3X4	.445	.622	17	.334	.622	y	17	72.814	73.054	6.188	6.188	2	H1-1b
229	M237	HSS3X3X4	.344	0	3	.246	.639	y	3	72.8	73.054	6.188	6.188	2	H1-1b
230	M238	HSS3X3X4	.293	.61	5	.238	.61	y	5	72.823	73.054	6.188	6.188	2	H1-1b
231	M239	HSS3X3X4	.178	0	22	.126	0	y	22	72.814	73.054	6.188	6.188	2	H1-1b
232	M240	HSS3X3X4	.185	.625	19	.128	0	y	3	72.811	73.054	6.188	6.188	2	H1-1b
233	M241	HSS3X3X4	.046	2.494	5	.006	0	z	3	69.29	73.054	6.188	6.188	1	H1-1b
234	M242	HSS3X3X4	.045	2.4	5	.006	0	z	3	69.561	73.054	6.188	6.188	1	H1-1b
235	M243	HSS3X3X4	.001	1.253	19	.000	1.253	y	22	72.084	73.054	6.188	6.188	2	H1-1b
236	M244	PIPE_6.0X	.224	0	3	.138	0		3	155.437	164.102	27.246	27.246	2	H1-1b
237	M245	PIPE_6.0X	.191	6.179	5	.118	0		3	154.928	164.102	27.246	27.246	1	H1-1b
238	M246	PIPE_6.0X	.236	6.179	5	.093	0		3	154.928	164.102	27.246	27.246	1	H1-1b
239	M247	PIPE_6.0X	.271	0	5	.070	0		3	155.437	164.102	27.246	27.246	1	H1-1a
240	M248	PIPE_6.0X	.338	4.002	5	.069	0		3	155.437	164.102	27.246	27.246	1	H1-1a
241	M249	PIPE_6.0X	.380	1.619	5	.058	0		5	155.437	164.102	27.246	27.246	1	H1-1a

Envelope AISC 15th(360-16): ASD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc...	LC	Shea...	Loc...	L...	Pnc/o...	Pnt/om...	Mnyy/o...	Mnzz/...	...	Eqn
242	M250	PIPE_6.0X	.365	0	5	.039	2.359	5	155.437	164.102	27.246	27.246	1	H1-1a
243	M251	PIPE_6.0X	.364	3.82	5	.020	0	5	155.437	164.102	27.246	27.246	1	H1-1a
244	M252	PIPE_6.0X	.153	0	3	.119	0	3	155.437	164.102	27.246	27.246	1	H1-1b
245	M253	PIPE_6.0X	.163	5.997	3	.109	0	5	155.437	164.102	27.246	27.246	1	H1-1b
246	M254	PIPE_6.0X	.218	5.997	17	.086	0	5	155.437	164.102	27.246	27.246	1	H1-1b
247	M255	PIPE_6.0X	.227	5.997	3	.055	0	3	155.437	164.102	27.246	27.246	1	H1-1b
248	M256	PIPE_6.0X	.249	5.997	17	.021	0	5	155.437	164.102	27.246	27.246	1	H1-1b
249	M257	PIPE_6.0X	.144	0	5	.167	1.448	3	163.584	164.102	27.246	27.246	1	H1-1b
250	M258	PIPE_6.0X	.208	.724	5	.308	.724	3	163.584	164.102	27.246	27.246	1	H1-1b
251	M259	PIPE_6.0X	.105	.724	16	.136	.724	3	163.584	164.102	27.246	27.246	1	H1-1b
252	M260	PIPE_6.0X	.213	.724	5	.307	.724	3	163.584	164.102	27.246	27.246	1	H1-1b
253	M261	PIPE_3.5	.349	0	3	.174	1.448	3	51.949	52.395	5.292	5.292	2	H1-1b
254	M262	PIPE_3.5	.710	1.448	5	.365	1.448	3	51.949	52.395	5.292	5.292	2	H1-1b
255	M263	PIPE_3.5	.817	0	5	.438	1.448	3	51.949	52.395	5.292	5.292	2	H1-1b
256	M264	PIPE_3.5	.758	0	5	.391	0	3	51.949	52.395	5.292	5.292	1	H1-1b
257	M265	PIPE_3.5	.600	0	3	.311	0	3	51.949	52.395	5.292	5.292	2	H1-1b
258	M266	PIPE_3.5	.340	0	3	.174	0	3	51.949	52.395	5.292	5.292	2	H1-1b
259	M267	PIPE_3.5	.341	0	3	.174	0	3	51.949	52.395	5.292	5.292	2	H1-1b
260	M268	PIPE_3.5	.122	1.448	6	.064	1.448	6	51.949	52.395	5.292	5.292	2	H1-1b
261	M269	PIPE_3.5	.601	0	3	.311	0	3	51.949	52.395	5.292	5.292	2	H1-1b
262	M270	PIPE_3.5	.763	0	3	.393	0	3	51.949	52.395	5.292	5.292	2	H1-1b
263	M271	PIPE_3.5	.833	0	5	.444	1.448	3	51.949	52.395	5.292	5.292	2	H1-1b
264	M272	PIPE_3.5	.767	1.448	3	.394	1.448	3	51.949	52.395	5.292	5.292	2	H1-1b
265	M273	PIPE_3.5	.527	0	15	.292	1.448	12	51.949	52.395	5.292	5.292	2	H1-1b
266	M274	PIPE_3.5	.491	1.448	15	.295	1.448	12	51.949	52.395	5.292	5.292	2	H1-1b
267	M275	PIPE_3.5	.397	1.448	15	.234	0	12	51.949	52.395	5.292	5.292	2	H1-1b
268	M276	PIPE_3.5	.287	1.448	12	.171	0	12	51.949	52.395	5.292	5.292	2	H1-1b
269	M277	PIPE_3.5	.210	1.448	12	.113	0	12	51.949	52.395	5.292	5.292	2	H1-1b
270	M278	PIPE_3.5	.134	1.448	12	.056	0	12	51.949	52.395	5.292	5.292	2	H1-1b
271	M279	PIPE_3.5	.211	1.448	12	.114	0	12	51.949	52.395	5.292	5.292	2	H1-1b
272	M280	PIPE_3.5	.288	1.448	12	.172	0	12	51.949	52.395	5.292	5.292	2	H1-1b
273	M281	PIPE_3.5	.398	1.448	12	.235	0	12	51.949	52.395	5.292	5.292	2	H1-1b
274	M282	PIPE_3.5	.492	1.448	12	.295	1.448	12	51.949	52.395	5.292	5.292	2	H1-1b
275	M283	PIPE_3.5	.530	0	15	.292	1.448	12	51.949	52.395	5.292	5.292	2	H1-1b

All < 1.0 ok

Dead

Joint Reactions (By Combination)

	LC	Joint Label	X [k]	Y [k]	Z [k]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1	40	N140	3.155	9.742	0	0	0	-33.061
2	40	N1	-3.155	9.754	0	0	0	33.042
3	40	Totals:	0	19.496	0			
4	40	COG (ft):	X: 37.522	Y: 20.838	Z: 0			

Wind K

Joint Reactions (By Combination)

	LC	Joint Label	X [k]	Y [k]	Z [k]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1	41	N140	-.45	-.042	0	0	0	5.185
2	41	N1	-.434	.042	0	0	0	5.012
3	41	Totals:	-.884	0	0			
4	41	COG (ft):	NC	NC	NC			

wind Z

Joint Reactions (By Combination)

	LC	Joint Label	X [k]	Y [k]	Z [k]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1	42	N140	-.046	0	-6.207	-144.983	4.882	.497
2	42	N1	.046	0	-6.207	-145.056	-4.882	-.5
3	42	Totals:	0	0	-12.414			
4	42	COG (ft):	NC	NC	NC			

Wind Z Case C

Joint Reactions (By Combination)

	LC	Joint Label	X [k]	Y [k]	Z [k]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1	43	N140	-.002	-.002	-4.246	-90.893	2.1	.015
2	43	N1	.002	.002	-.833	-22.832	-.694	-.03
3	43	Totals:	0	0	-5.079			
4	43	COG (ft):	NC	NC	NC			

Seismic X

Joint Reactions (By Combination)

	LC	Joint Label	X [k]	Y [k]	Z [k]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1	44	N140	-2.6	1.356	0	-.013	0	40.18
2	44	N1	-3.832	2.449	0	-.013	0	53.081
3	44	Totals:	-6.432	3.805	0			
4	44	COG (ft):	X: 37.523	Y: 20.854	Z: .007			

Seismic Z

Joint Reactions (By Combination)

	LC	Joint Label	X [k]	Y [k]	Z [k]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1	45	N140	.613	1.919	-3.214	-67.228	2.069	-6.398
2	45	N1	-.613	1.922	-3.218	-67.33	-2.072	6.395
3	45	Totals:	0	3.841	-6.432			
4	45	COG (ft):	X: 37.522	Y: 20.838	Z: 0			

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Client: South Coast Lighting & Design
Job Number: 23073.001
Designer: Jimmy Church
Date: 9/8/2023

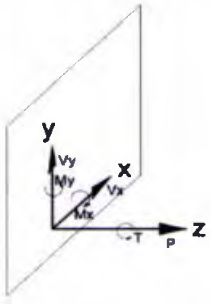
FILLET WELD ANALYSIS

Reference: Design of Fillet Welds – Steel Plate Engineering Data – Volume 2 – Useful

Welding part (location): Weld of Column to Base Plate

Type of Loading

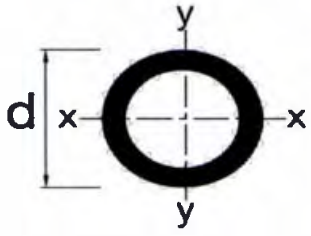
				Applicable Formula For Force on Weld
Tension	P =	0	kips	$W_z = P/A_w$
Vertical Shear	Vy =	5.973	kips	$W_y = V_y/A_w$
Horizontal Shear	Vx =	3.724	kips	$W_x = V_x/A_w$
Bending	Mx =	1065.12	kip-in	$W_z = M_x/S_{wx}$
Bending	My =	864.228	kip-in	$W_z = M_y/S_{wy}$
Torsion	T =	35.172	kip-in	$W_x = Tc_v/J_w$, $W_y = Tc_h/J_w$



Base Metal Thickness = 1/2 in

Weld Size, w_s = 1/2 in (Assume using E70 electrode, F_{E70} = 70 ksi)

Weld Shape: Circle Weld



d = 16 in

$A_w = \pi d$ = 50.27 in
$S_{wx} = \pi d^2/4$ = 201.06 in^2
$S_{wy} = \pi d^2/4$ = 201.06 in^2

$J_w = \pi d^3/4$ = 3216.99 in^3
$C_v = d/2$ = 8.00 in
$C_h = d/2$ = 8.00 in

W_x =	Vx/Aw + Tcv/Jw	=	3.724/50.27	+	35.172*8.00/3,216.99	=	0.162 k/in
W_y =	Vy/Aw + Tch/Jw	=	5.973/50.27	+	35.172*8.00/3,216.99	=	0.206 k/in
W_z =	Mx/Swx +My/Swy	=	1065.12/20	+	864.228/201.06	=	9.596 k/in

Resultant Force on Weld

$W = (w_x^2 + w_y^2 + w_z^2)^{1/2}$ = (0.162^2 +0.206^2 +9.596^2)^ 0.5 = 9.599 k/in
$\theta = \tan^{-1}[w_z/(wx^2+wy^2)^{1/2}]$ = arctan [9.596/ (0.162^2+0.206^2)^.5] = 88.4 °

Weld Strength (Safety Factor: $\Omega = 2.0$)

$F_w = (1/\Omega)*0.6*(70ksi)(1+0.5*\sin^{1.5}\theta)*0.707 * w_s$ = (1/2.0)*42 ksi * [1+ 0.5*sin(88.4)^1.5]*0.707 *1/2 in. = 11.133 k/in.

W/F_w = 0.86 < 1.0 **OK**

Leavitt & Associates Engineers, Inc
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Project Title: Temecula Winery Gateway Arch Sign
Engineer: Jimmy Church
Project ID: 23073.001
Project Descr: South Coast Lighting & Design

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Steel Base Plate

Project File: South Coast.ec6

DESCRIPTION: Column Base Plate

Code Reference:

Calculations per AISC Design Guide # 1, IBC 2021, ASCE 7-16, AISC 360-16
Load Combination Set : ASCE 7-16

General Information

Material Properties

AISC Design Method	Allowable Strength Design			
Steel Plate Fy	=	36 ksi		
Concrete Support f'c	=	3 ksi	Ω c : ASD Safety Facto	2.5
Assumed Bearing Area	Full Bearing		Nominal Bearing Fp per J8	2.550 ksi

Column & Plate

Column Properties

Steel Section	Pipe16 x-Strong		
Depth	16 in	Area	9413930225 in^2
Width	16 in	Ixx	in^4
Flange Thickness	0.465 in	Iyy	in^4
Web Thicknes	in		

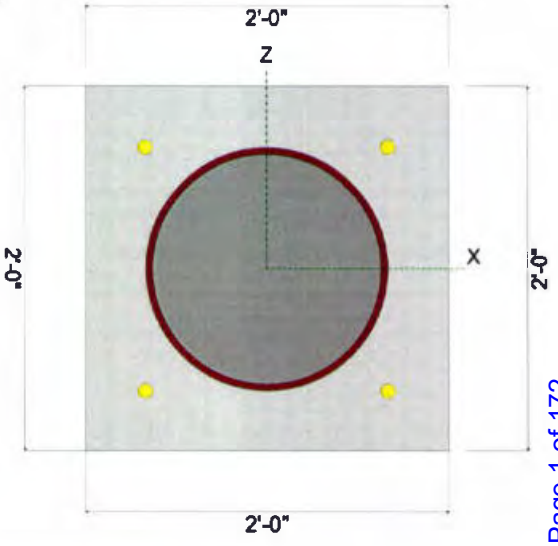
Plate Dimensions

N : Length	24.0 in
B : Width	24.0 in
Thickness	2.0 in

Support Dimensions

Width along "X"	24.0 in
Length along "Z"	24.0 in

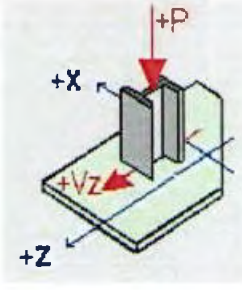
Column assumed welded to base plat

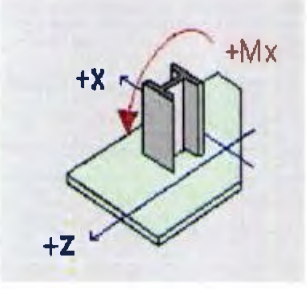


Applied Loads

	P-Y	V-Z	M-X
D : Dead Load	9.80 k	k	k-ft
L : Live	k	k	k-ft
Lr : Roof Live	k	k	k-ft
S : Snow	k	k	k-ft
W : Wind	k	6.20 k	145.0 k-ft
E : Earthquake	k	3.20 k	67.30 k-ft
H : Lateral Earth	k	k	k-ft

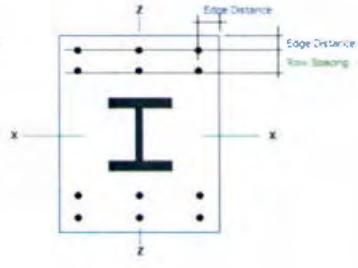
" P " = Gravity load, "+" sign is downward "+" Moments create higher soil pressure at +Z ed
"+" Shears push plate towards +Z edge





Anchor Bolts

Anchor Bolt or Rod Description	3	
Max of Tension or Pullout Capacity.....		k
Shear Capacity.....		k
Edge distance : bolt to plate.....	4.0	in
Number of Bolts in each Row.....	2	
Number of Bolt Rows.....	1	



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Steel Base Plate

Project File: South Coast.ec6

DESCRIPTION: Column Base Plate

GOVERNING DESIGN LOAD CASE SUMMARY

Plate Design Summary

Design Method	**Allowable Strength Design**
Governing Load Combinat	**+D+0.60W**
Governing Load Case Typ	**Axial + Moment, L/2 < Eccentricity, Tensio**
Governing STRESS RATI	**1.0**
Design Plate Size	**2'-0" x 2'-0" x 2"**
Pa : Axial Load	0.000 k
Ma : Moment	0.000 k-ft
Ma : Max. Moment	13.367 k-in
fb : Max. Bending Stress	20.051 ksi
Fb : Allowable : Fy / Omega	21.557 ksi
Bending Stress Rati	0.930
	Bending Stress OK
fu : Max. Plate Bearing Stress	1.020 ksi
Fp : Allowable :	1.020 ksi
Bearing Stress Ratio	1.000
	Bearing Stress OK

Load Comb. : D Only

Axial Load Only, No Moment

Loading	
Pa : Axial Load	9.800 k
Design Plate Height	24.000 in
Design Plate Width	24.000 in
Will be different from entry if partial bearing used	
A1 : Plate Area	576.000 in^2
A2: Support Area	576.000 in^2
sqrt(A2/A1)	1.000

Distance for Moment Calculation	
" m "	5.600 in
" n "	5.600 in
X	0.000 in^2
Lambda	0.000
n'	0.840 in
n' * Lambda	0.000 in
L = max(m, n, n")	5.600 in

Bearing Stresses	
Fp : Allowable	1.020 ksi
fa : Max. Bearing Pressure	0.017 ksi
Stress Ratio	**0.017**

Plate Bending Stresses	
Mmax = Fu * L^2 / 2	0.267 k-in on 1" strip
fb : Actual	0.267 ksi
Fb : Allowable	21.557 ksi
Stress Ratio	**0.012**

Load Comb. : +D+0.60W

Axial Load + Moment, Ecc. > L/2

Loading	
Pa : Axial Load	9.800 k
Ma : Moment	87.000 k-ft
Eccentricity	106.531 in
A1 : Plate Area	576.000 in^2
A2 : Support Area	576.000 in^2
sqrt(A2/A1)	1.000

Calculate plate moment from bearing . . .	
max(m, n)	5.600 in
"A" : Bearing Length	5.002 in
Mpl : Plate Moment	0.836 k-in

Calculate plate moment from bolt tension . . .	
Tension per Bolt	25.712 k
Tension : Allowable	0.000 k
Stress Ratio	**0.000**
Dist. from Bolt to Col. Edge	1.600 in
Effective Bolt Width for Bending	6.400 in
Plate Moment from Bolt Tension	12.856 k-in

Bearing Stresses	
Fp : Allowable	1.020 ksi
fa : Max. Bearing Pressure	*(set equal to Fp)*
Stress Ratio	**1.000**

Plate Bending Stresses	
Mmax	12.856 k-in on 1" strip
fb : Actual	19.284 ksi
Fb : Allowable	21.557 ksi
Stress Ratio	**0.895**

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Steel Base Plate

Project File: South Coast.ec6

DESCRIPTION: Column Base Plate

Load Comb. : +D-0.60W

Axial Load + Moment, Ecc. > L/2

Loading	
Pa : Axial Load	9.800 k
Ma : Moment	87.000 k-ft
Eccentricity	106.531 in
A1 : Plate Area	576.000 in^2
A2 : Support Area	576.000 in^2
sqrt(A2/A1)	1.000

Calculate plate moment from bearing . . .	
max(m, n)	5.600 in
"A" : Bearing Length	5.002 in
Mpl : Plate Moment	0.836 k-in

Calculate plate moment from bolt tension . . .	
Tension per Bolt	25.712 k
Tension : Allowable	0.000 k
Stress Ratio	**0.000**
Dist. from Bolt to Col. Edge	1.600 in
Effective Bolt Width for Bending	6.400 in
Plate Moment from Bolt Tension	12.856 k-in

Bearing Stresses		
Fp : Allowable		1.020 ksi
fa : Max. Bearing Pressure	*(set equal to Fp)*	
Stress Ratio		**1.000**

Plate Bending Stresses	
Mmax	12.856 k-in on 1" strip
fb : Actual	19.284 ksi
Fb : Allowable	21.557 ksi
Stress Ratio	**0.895**

Load Comb. : +D+0.450W

Axial Load + Moment, Ecc. > L/2

Loading	
Pa : Axial Load	9.800 k
Ma : Moment	65.250 k-ft
Eccentricity	79.898 in
A1 : Plate Area	576.000 in^2
A2 : Support Area	576.000 in^2
sqrt(A2/A1)	1.000

Calculate plate moment from bearing . . .	
max(m, n)	5.600 in
"A" : Bearing Length	3.754 in
Mpl : Plate Moment	0.694 k-in

Calculate plate moment from bolt tension . . .	
Tension per Bolt	18.072 k
Tension : Allowable	0.000 k
Stress Ratio	**0.000**
Dist. from Bolt to Col. Edge	1.600 in
Effective Bolt Width for Bending	6.400 in
Plate Moment from Bolt Tension	9.036 k-in

Bearing Stresses		
Fp : Allowable		1.020 ksi
fa : Max. Bearing Pressure	*(set equal to Fp)*	
Stress Ratio		**1.000**

Plate Bending Stresses	
Mmax	9.036 k-in on 1" strip
fb : Actual	13.554 ksi
Fb : Allowable	21.557 ksi
Stress Ratio	**0.629**

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Steel Base Plate

Project File: South Coast.ec6

DESCRIPTION: Column Base Plate

Load Comb. : +D-0.450W

Axial Load + Moment, Ecc. > L/2

Loading	
Pa : Axial Load	9.800 k
Ma : Moment	65.250 k-ft
Eccentricity	79.898 in
A1 : Plate Area	576.000 in^2
A2 : Support Area	576.000 in^2
sqrt(A2/A1)	1.000

Calculate plate moment from bearing . . .	
max(m, n)	5.600 in
"A" : Bearing Length	3.754 in
Mpl : Plate Moment	0.694 k-in

Calculate plate moment from bolt tension . . .	
Tension per Bolt	18.072 k
Tension : Allowable	0.000 k
Stress Ratio	**0.000**
Dist. from Bolt to Col. Edge	1.600 in
Effective Bolt Width for Bending	6.400 in
Plate Moment from Bolt Tension	9.036 k-in

Bearing Stresses	
Fp : Allowable	1.020 ksi
fa : Max. Bearing Pressure	*(set equal to Fp)*
Stress Ratio	**1.000**

Plate Bending Stresses	
Mmax	9.036 k-in on 1" strip
fb : Actual	13.554 ksi
Fb : Allowable	21.557 ksi
Stress Ratio	**0.629**

Load Comb. : +0.60D+0.60W

Axial Load + Moment, Ecc. > L/2

Loading	
Pa : Axial Load	5.880 k
Ma : Moment	87.000 k-ft
Eccentricity	177.551 in
A1 : Plate Area	576.000 in^2
A2 : Support Area	576.000 in^2
sqrt(A2/A1)	1.000

Calculate plate moment from bearing . . .	
max(m, n)	5.600 in
"A" : Bearing Length	4.849 in
Mpl : Plate Moment	0.821 k-in

Calculate plate moment from bolt tension . . .	
Tension per Bolt	26.734 k
Tension : Allowable	0.000 k
Stress Ratio	**0.000**
Dist. from Bolt to Col. Edge	1.600 in
Effective Bolt Width for Bending	6.400 in
Plate Moment from Bolt Tension	13.367 k-in

Bearing Stresses	
Fp : Allowable	1.020 ksi
fa : Max. Bearing Pressure	*(set equal to Fp)*
Stress Ratio	**1.000**

Plate Bending Stresses	
Mmax	13.367 k-in on 1" strip
fb : Actual	20.051 ksi
Fb : Allowable	21.557 ksi
Stress Ratio	**0.930**

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Steel Base Plate

Project File: South Coast.ec6

DESCRIPTION: Column Base Plate

Load Comb. : +0.60D-0.60W

Axial Load + Moment, Ecc. > L/2

Loading	
Pa : Axial Load	5.880 k
Ma : Moment	87.000 k-ft
Eccentricity	177.551 in
A1 : Plate Area	576.000 in^2
A2 : Support Area	576.000 in^2
sqrt(A2/A1)	1.000

Calculate plate moment from bearing . . .	
max(m, n)	5.600 in
"A" : Bearing Length	4.849 in
Mpl : Plate Moment	0.821 k-in

Calculate plate moment from bolt tension . . .	
Tension per Bolt	26.734 k
Tension : Allowable	0.000 k
Stress Ratio	**0.000**
Dist. from Bolt to Col. Edge	1.600 in
Effective Bolt Width for Bending	6.400 in
Plate Moment from Bolt Tension	13.367 k-in

Bearing Stresses		
Fp : Allowable		1.020 ksi
fa : Max. Bearing Pressure	*(set equal to Fp)*	
Stress Ratio		**1.000**

Plate Bending Stresses	
Mmax	13.367 k-in on 1" strip
fb : Actual	20.051 ksi
Fb : Allowable	21.557 ksi
Stress Ratio	**0.930**

Load Comb. : +D+0.70E

Axial Load + Moment, Ecc. > L/2

Loading	
Pa : Axial Load	9.800 k
Ma : Moment	47.110 k-ft
Eccentricity	57.686 in
A1 : Plate Area	576.000 in^2
A2 : Support Area	576.000 in^2
sqrt(A2/A1)	1.000

Calculate plate moment from bearing . . .	
max(m, n)	5.600 in
"A" : Bearing Length	2.756 in
Mpl : Plate Moment	0.548 k-in

Calculate plate moment from bolt tension . . .	
Tension per Bolt	11.968 k
Tension : Allowable	0.000 k
Stress Ratio	**0.000**
Dist. from Bolt to Col. Edge	1.600 in
Effective Bolt Width for Bending	6.400 in
Plate Moment from Bolt Tension	5.984 k-in

Bearing Stresses		
Fp : Allowable		1.020 ksi
fa : Max. Bearing Pressure	*(set equal to Fp)*	
Stress Ratio		**1.000**

Plate Bending Stresses	
Mmax	6.580 k-in on 1" strip
fb : Actual	9.870 ksi
Fb : Allowable	21.557 ksi
Stress Ratio	**0.458**

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DESCRIPTION: Column Base Plate

Load Comb. : +D-0.70E

Axial Load + Moment, Ecc. > L/2

Loading	
Pa : Axial Load	9.800 k
Ma : Moment	47.110 k-ft
Eccentricity	57.686 in
A1 : Plate Area	576.000 in^2
A2 : Support Area	576.000 in^2
sqrt(A2/A1)	1.000

Calculate plate moment from bearing . . .	
max(m, n)	5.600 in
"A" : Bearing Length	2.756 in
Mpl : Plate Moment	0.548 k-in

Calculate plate moment from bolt tension . . .	
Tension per Bolt	11.968 k
Tension : Allowable	0.000 k
Stress Ratio	**0.000**
Dist. from Bolt to Col. Edge	1.600 in
Effective Bolt Width for Bending	6.400 in
Plate Moment from Bolt Tension	5.984 k-in

Bearing Stresses		
Fp : Allowable		1.020 ksi
fa : Max. Bearing Pressure	*(set equal to Fp)*	
Stress Ratio		**1.000**

Plate Bending Stresses	
Mmax	6.580 k-in on 1" strip
fb : Actual	9.870 ksi
Fb : Allowable	21.557 ksi
Stress Ratio	**0.458**

Load Comb. : +D+0.5250E

Axial Load + Moment, Ecc. > L/2

Loading	
Pa : Axial Load	9.800 k
Ma : Moment	35.333 k-ft
Eccentricity	43.264 in
A1 : Plate Area	576.000 in^2
A2 : Support Area	576.000 in^2
sqrt(A2/A1)	1.000

Calculate plate moment from bearing . . .	
max(m, n)	5.600 in
"A" : Bearing Length	2.128 in
Mpl : Plate Moment	0.442 k-in

Calculate plate moment from bolt tension . . .	
Tension per Bolt	8.122 k
Tension : Allowable	0.000 k
Stress Ratio	**0.000**
Dist. from Bolt to Col. Edge	1.600 in
Effective Bolt Width for Bending	6.400 in
Plate Moment from Bolt Tension	4.061 k-in

Bearing Stresses		
Fp : Allowable		1.020 ksi
fa : Max. Bearing Pressure	*(set equal to Fp)*	
Stress Ratio		**1.000**

Plate Bending Stresses	
Mmax	5.307 k-in on 1" strip
fb : Actual	7.961 ksi
Fb : Allowable	21.557 ksi
Stress Ratio	**0.369**

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Steel Base Plate

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DESCRIPTION: Column Base Plate

Load Comb. : +D-0.5250E

Axial Load + Moment, Ecc. > L/2

Loading	
Pa : Axial Load	9.800 k
Ma : Moment	35.333 k-ft
Eccentricity	43.264 in
A1 : Plate Area	576.000 in^2
A2 : Support Area	576.000 in^2
sqrt(A2/A1)	1.000

Calculate plate moment from bearing . . .	
max(m, n)	5.600 in
"A" : Bearing Length	2.128 in
Mpl : Plate Moment	0.442 k-in

Calculate plate moment from bolt tension . . .	
Tension per Bolt	8.122 k
Tension : Allowable	0.000 k
Stress Ratio	**0.000**
Dist. from Bolt to Col. Edge	1.600 in
Effective Bolt Width for Bending	6.400 in
Plate Moment from Bolt Tension	4.061 k-in

Bearing Stresses	
Fp : Allowable	1.020 ksi
fa : Max. Bearing Pressure	*(set equal to Fp)*
Stress Ratio	**1.000**

Plate Bending Stresses	
Mmax	5.307 k-in on 1" strip
fb : Actual	7.961 ksi
Fb : Allowable	21.557 ksi
Stress Ratio	**0.369**

Load Comb. : +0.60D+0.70E

Axial Load + Moment, Ecc. > L/2

Loading	
Pa : Axial Load	5.880 k
Ma : Moment	47.110 k-ft
Eccentricity	96.143 in
A1 : Plate Area	576.000 in^2
A2 : Support Area	576.000 in^2
sqrt(A2/A1)	1.000

Calculate plate moment from bearing . . .	
max(m, n)	5.600 in
"A" : Bearing Length	2.615 in
Mpl : Plate Moment	0.526 k-in

Calculate plate moment from bolt tension . . .	
Tension per Bolt	13.067 k
Tension : Allowable	0.000 k
Stress Ratio	**0.000**
Dist. from Bolt to Col. Edge	1.600 in
Effective Bolt Width for Bending	6.400 in
Plate Moment from Bolt Tension	6.533 k-in

Bearing Stresses	
Fp : Allowable	1.020 ksi
fa : Max. Bearing Pressure	*(set equal to Fp)*
Stress Ratio	**1.000**

Plate Bending Stresses	
Mmax	6.533 k-in on 1" strip
fb : Actual	9.800 ksi
Fb : Allowable	21.557 ksi
Stress Ratio	**0.455**

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Steel Base Plate

Project File: South Coast.ec6

DESCRIPTION: Column Base Plate

Load Comb. : +0.60D-0.70E

Axial Load + Moment, Ecc. > L/2

Loading

Pa : Axial Load	5.880 k
Ma : Moment	47.110 k-ft
Eccentricity	96.143 in
A1 : Plate Area	576.000 in^2
A2 : Support Area	576.000 in^2
sqrt(A2/A1)	1.000

Calculate plate moment from bearing . . .

max(m, n)	5.600 in
"A" : Bearing Length	2.615 in
Mpl : Plate Moment	0.526 k-in

Calculate plate moment from bolt tension . . .

Tension per Bolt	13.067 k
Tension : Allowable	0.000 k
Stress Ratio	**0.000**
Dist. from Bolt to Col. Edge	1.600 in
Effective Bolt Width for Bending	6.400 in
Plate Moment from Bolt Tension	6.533 k-in

Bearing Stresses

Fp : Allowable	1.020 ksi
fa : Max. Bearing Pressure	*(set equal to Fp)*
Stress Ratio	**1.000**

Plate Bending Stresses

Mmax	6.533 k-in on 1" strip
fb : Actual	9.800 ksi
Fb : Allowable	21.557 ksi
Stress Ratio	**0.455**

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Project ID: 23073.001
Project Descr: South Coast Lighting & Design

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Steel Base Plate by FEM

Project File: South Coast.ec6

DESCRIPTION: Column Base Plate

Code References

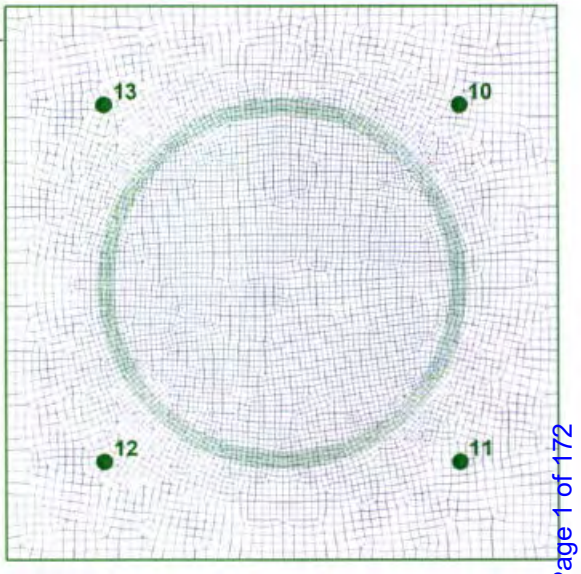
Calculations per AISC Design Guide # 1, IBC 2021, ASCE 7-16, AISC 360-16
Load Combination Set : ASCE 7-16

General Information

Material Properties

AISC Design Method	Allowable Strength Design			
Steel Plate Fy	=	36 ksi		
Concrete Support f'c	=	3.0 ksi	Ω c : ASD Safety Facto	2.310
			Nominal Bearing Fp per J8	2.550 ksi

Column, Plate & Pedestal



Column Properties

Steel Sectior	Pipe16 x-Strong		
Depth	16 in	Area	9413930225 in^2
Width	16 in	Ixx	731.941 in^4
Flange Thickness	0.465 in	Iyy	731.941 in^4
Web Thicknes	in		

Column Rotation & Offset

Column Rotation	0 deg
Offset from "X" Plate Center	in
Offset from "Z" Plate Center	in

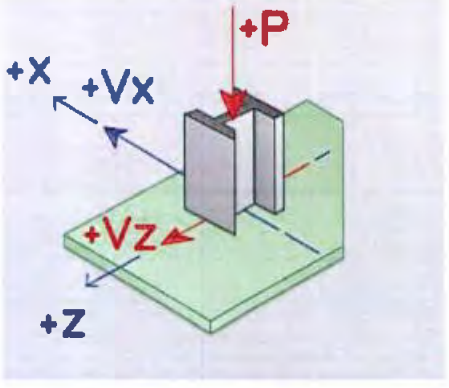
Plate Dimensions		Support Dimensions	
N : Length	24.0 in	Width along "X"	24.0 in
B : Width	24.0 in	Length along "Z'	24.0 in
Thickness	2.0 in		

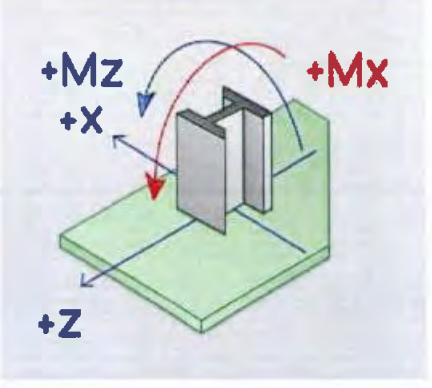
Column fully welded to base plate

Applied Loads

	P-Y	V-X	V-Z	M-X	M-Z
D : Dead Load	9.80 k	k	k	k-ft	k-ft
L : Live	k	k	k	k-ft	k-ft
Lr : Roof Live	k	k	k	k-ft	k-ft
S : Snow	k	k	k	k-ft	k-ft
W : Wind	k	0.450 k	6.20 k	5.185 k-ft	145.0 k-ft
E : Earthquake	k	3.80 k	3.20 k	67.30 k-ft	53.10 k-ft
H : Lateral Earth	k	k	k	k-ft	k-ft

" P " = Gravity load, "+" sign is downwar" Moments create higher soil pressure at +Z ec
"+" Shears push plate towards +Z edge





Leavitt & Associates Engineers, Inc
1324 1st Street South
Nampa, Idaho 83651
(208)463-0333

Project Title: Temecula Winery Gateway Arch Sign
Engineer: Jimmy Church
Project ID: 23073.001
Project Descr: South Coast Lighting & Design

149B

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Steel Base Plate by FEM

Project File: South Coast.ec6

DESCRIPTION: Column Base Plate

Anchors

Anchor Diameter	3 in	Tension Cap. in Concrete	k	Phi:	0.70
Anchor Length	12 in	Steel Strength in Tension	58.0 ksi	Phi:	0.75
		Shear Cap. in Concrete	k	Phi:	0.70
			ksi	Phi:	0.65

Anchor Bolt Placements

Number of Anchors 4

X,Z Datum @ Center of Plate	X	Z			X	Z			Add Anchor Symmetric about X	Add Anchor Symmetric about Z
# 1	7.750	7.750	in		# 2	7.750	-7.750	in	☐	☐
# 3	-7.750	-7.750	in		# 4	-7.750	7.750	in	☐	☐

Add Anchor Symmetric about X
Add Anchor Symmetric about Z

Governing Conditions

Design Method						
Governing Stress Ratio	0.763					
Design Plate Size						
Bending Stress Ratio	**0.274**					
fb : Max. Bending Stress		0.00 ksi	Location from Plate Center:			
Fb : Allowable		0.00 ksi	X:	-6.801 in	Z:	-4.604 in
Plate Bearing Stress Ratio	**0.763**					
fu : Max. Bearing Stress		0.00 ksi	Location from Plate Center:			
Fp : Allowable		0.00 ksi	X:	9.548 in	Z:	-0.572 in
Bolt Tension Stress Ratio		**0.000**				
+0.60D+0.70E						
Maximum Bolt Tension		0.00 k	Location from Plate Center:			
Allowable Tension/Pullout		k	X:	-7.750 in	Z:	7.750 in

Calculations | 3D | Mesh | Stress Plots

149C

Summary | Plate Bending Stresses | Plate Bearing Stresses | Anchor Forces | Plate Deflections

Design Method	**Allowable Strength Design**					
Governing Stress Ratio	**0.763**					
Design Plate Size	**2'-0" x 2'-0" x 2"**					
✔ **Bending Stress Ratio**	**0.274**	Location of critical element with respect to plate center:				
+0.60D+0.60W						
fb : Max. Bending Stress	9.876 ksi		X:	-6.801 in	Z:	-4.604 in
Fb/Omega	36.0 ksi					
✔ **Plate Bearing Stress Ratio**	**0.763**	Location of critical element with respect to plate center:				
+D+0.60W						
fu : Max. Bearing Stress	0.7161 ksi		X:	9.548 in	Z:	-0.572 in
Fp/Omega	0.9383 ksi					
✔ **Bolt Tension Stress Ratio**	**0.000**	Location of critical anchor with respect to plate center:				
+0.60D+0.70E						
Tu - Maximum Bolt Tension	0.000 k		X:	-7.750 in	Z:	7.750 in
Phi Tn - Steel	259.695 k					
Phi Tn - Concrete	0.000 k					
✔ **Bolt Shear Stress Ratio**	**0.000**	Location of critical anchor with respect to plate center:				
+0.60D+0.70E						
Vu - Maximum Bolt Shear	0.770 k		X:	-7.750 in	Z:	7.750 in
Phi Vn - Steel	135.041 k					
Phi Vn - Concrete	0.000 k					

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(208)463-0333

Project Title: Temecula Winery Gateway Arch Sign
Engineer: Jimmy Church
Project ID: 23073.001
Project Descr: South Coast Lighting & Design

149D

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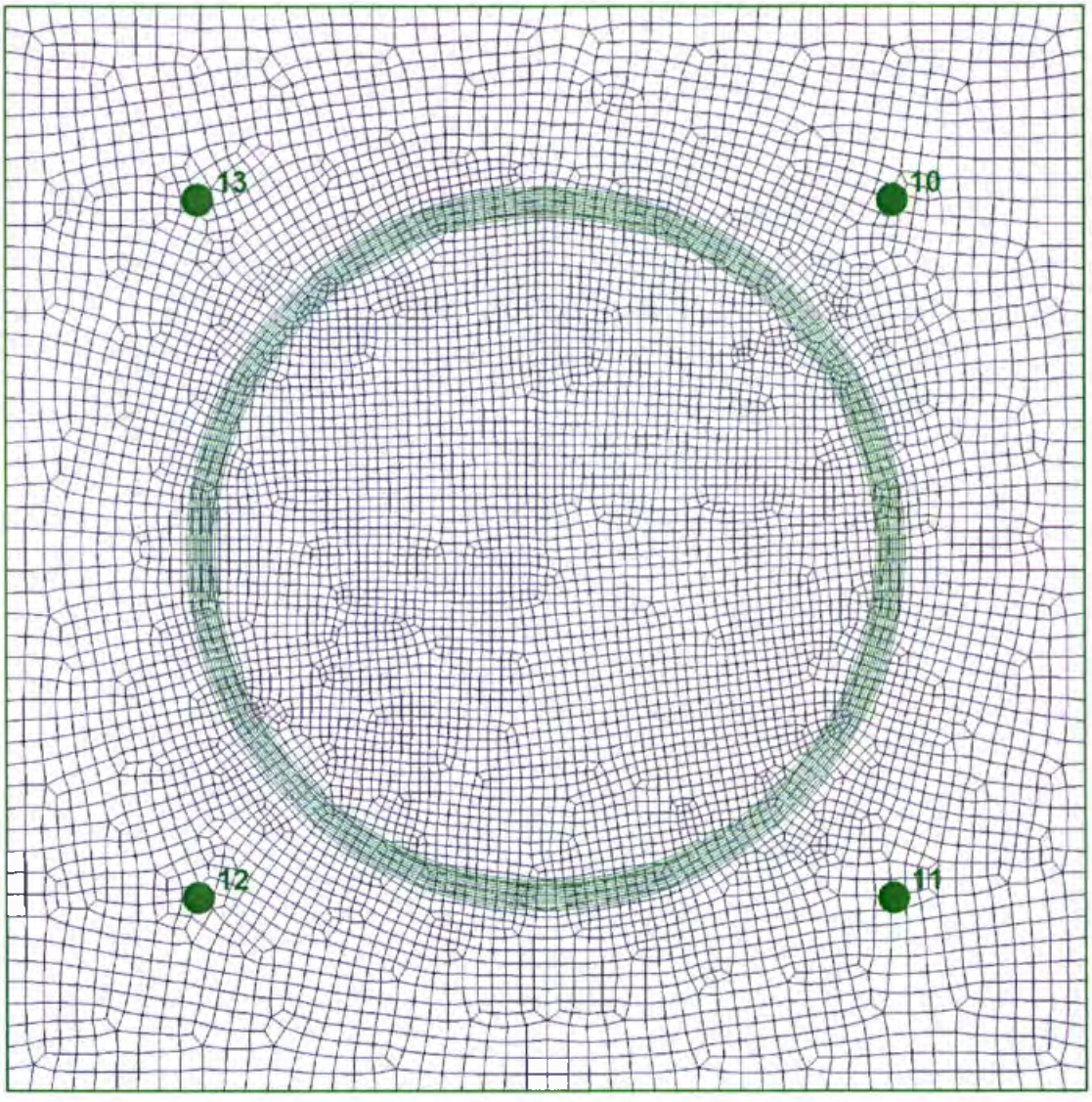
Steel Base Plate by FEM

Project File: South Coast.ec6

DESCRIPTION: Column Base Plate

Generated Mesh



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Project Title: Temecula Winery Gateway Arch Sign
Engineer: Jimmy Church
Project ID: 23073.001
Project Descr: South Coast Lighting & Design

149E

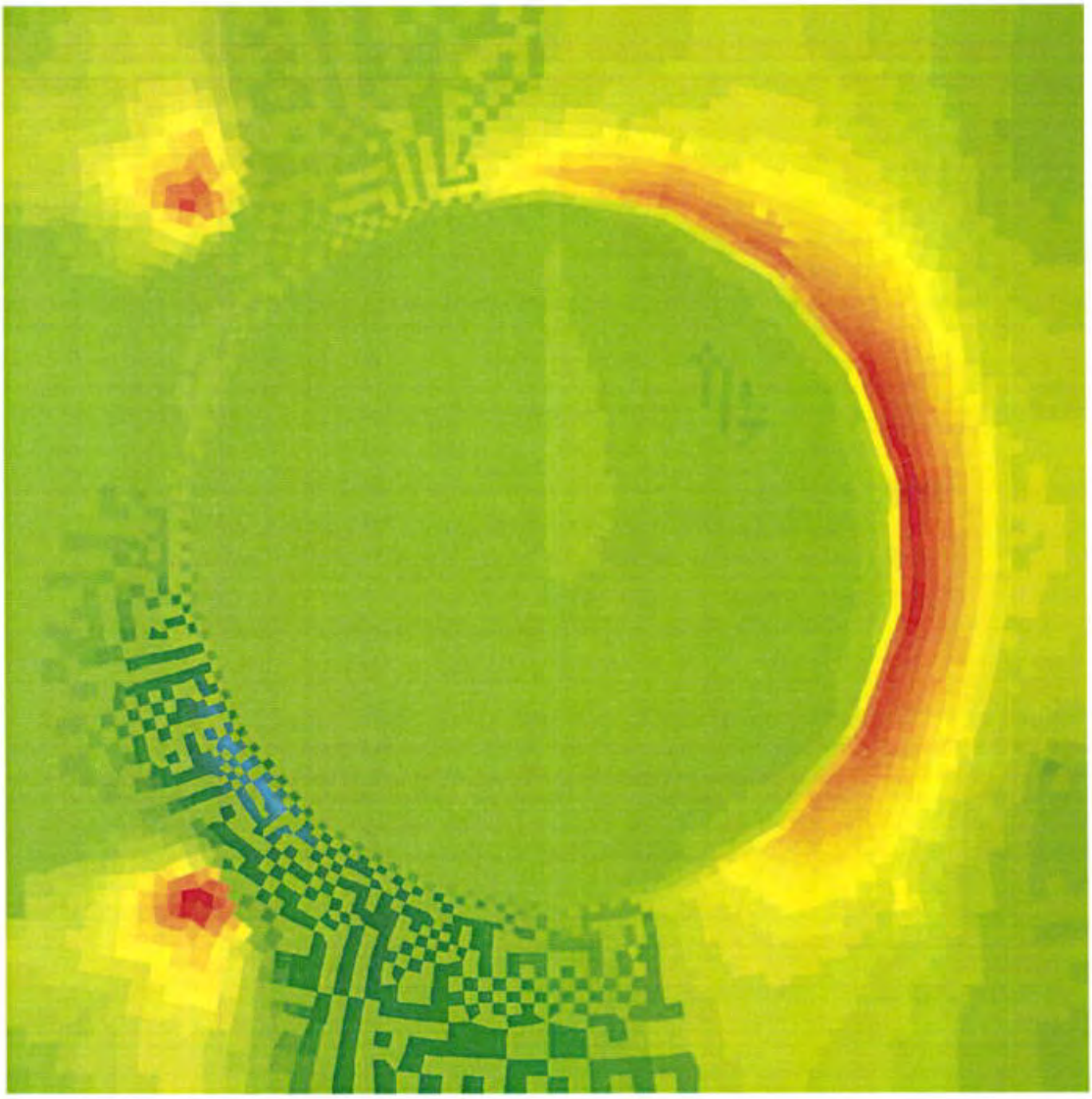
Printed: 30 OCT 2023, 9:14AM

Steel Base Plate by FEM

Project File: South Coast.ec6

DESCRIPTION: Column Base Plate

Maximum Bending Stress from all Load Combinations



LEAVITT & ASSOCIATES
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1324 1st Street S., Nampa, ID 83651
Ph: (208) 463-0333 Fx: (208) 463-9040

JOB South Const - Temecula
SHEET NO. 150 OF
CALCULATED BY JJ Church DATE 7/3/23
CHECKED BY DATE
SCALE

Bolts of Sign to Column

Maximum Reactions (From Risa)

$F_x = 15.9\ k$

$F_z = 2.5\ k$

$F = \sqrt{F_x^2 + F_z^2}$

$= 16.1\ k$

From Table 7-1

1" Ø A325 Bolt

$r_n/\Omega_v = 21.2\ k > F$ F

OK

LEAVITT & ASSOCIATES ENGINEERS
1324 First Street South
Nampa, ID 83651
(208) 463-7670

CLIENT:	**South Coast Lighting & Design**
JOB:	Temecula Winery Arch Sign
DESCRIPTION:	Connector Plate Bending - Weak Axis
DESIGNER:	Jimmy Church
DATE:	Jul. 3, 2023
FILE:	Rectangular Bar Bending
COMMENTS:	

ANALYSIS OF SOLID RECTANGULAR BARS IN BENDING

SECTION PROPERTIES:

width, b:	5 in	area:	7.50 in^2
depth, d:	1.5 in	Ixx:	1.406 in^4
Fy:	50 ksi	Sx:	1.875 in^3
E:	29000 ksi	Zx:	2.813 in^3
Lb:	3.5 in	My = Fy*Sx =	93.750 kip-in
Cb:	1		
Cv:	1		

LOADING:

MOMENT = Mx = V*Lb =	35.35 k-in
SHEAR = V =	10.10 k

ALLOWABLE BENDING (AISC F11)

L_b*d/t^2 =		0	
0.08E/Fy =		46	
1.9E/Fy =		1102	
	L_b*d/t^2 < 0.08E/Fy		
	Yielding Controls, Use F11-1		
Mn =	Mp = Fy*Zx =	140.63 k-in	
	but <= 1.6 My =	150.00	
Mn/Ω_b =	Mn/1.67 =	84.21 k-in	**Mn > Mx O.K.**

ALLOWABLE SHEAR: (AISC G4)

Vn/Ωv = 0.6*Fy*Area*Cv/1.5 =	150.00 k	
V =	10.10 k	**O.K.**

LEAVITT & ASSOCIATES ENGINEERS
1324 First Street South
Nampa, ID 83651
(208) 463-7670

CLIENT:	**South Coast Lighting & Design**
JOB:	Temecula Winery Arch Sign
DESCRIPTION:	Connector Plate Bending - Strong Axis
DESIGNER:	Jimmy Church
DATE:	Jul. 3, 2023
FILE:	Rectangular Bar Bending
COMMENTS:	

ANALYSIS OF SOLID RECTANGULAR BARS IN BENDING

SECTION PROPERTIES:

width, b:	1.5 in	area:	7.50 in^2
depth, d:	5 in	Ixx:	15.625 in^4
Fy:	50 ksi	Sx:	6.250 in^3
E:	29000 ksi	Zx:	9.375 in^3
Lb:	3.5 in	My = Fy*Sx =	312.500 kip-in
Cb:	1		
Cv:	1		

LOADING:

MOMENT = Mx = V*Lb =	8.75 k-in
SHEAR = V =	2.50 k

ALLOWABLE BENDING (AISC F11)

L_b*d/t^2 =		8	
0.08E/Fy =		46	
1.9E/Fy =		1102	
	L_b*d/t^2 < 0.08E/Fy		
	Yielding Controls, Use F11-1		
Mn =	Mp = Fy*Zx =	468.75 k-in	
	but <= 1.6 My =	500.00	
Mn/Ω_b =	Mn/1.67 =	280.69 k-in	**Mn > Mx O.K.**

ALLOWABLE SHEAR: (AISC G4)

Vn/Ωv = 0.6*Fy*Area*Cv/1.5 =	150.00 k	
V =	2.50 k	**O.K.**

LEAVITT & ASSOCIATES ENGINEERS, INC.
1324 FIRST STREET SOUTH
NAMPA, IDAHO 83651
(208) 463-0333

CLIENT: South Coast Lighting & Design
JOB: **Temecula Winery Arch Sign**
Part **Connection Plate**
DESIGNER: Jimmy Church
Date: 3-Jul-23

Eye PL1 1/2 With 1 1/8 in. Dia. Hole (1)

Force:

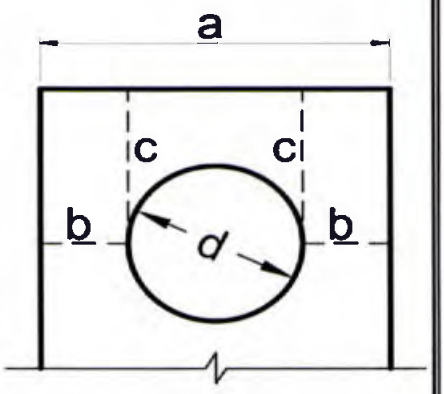
F =	15.9	Kips
V=	0.000	Kips

Plate - A-572 Gr 50

F_y =	50	ksi
F_u =	65	ksi

Dimensions:

a =	5	in.
c =	1 3/4	in.
d =	1 1/8	in.
Plate thickness t =	1 1/2	in.
Bolt Dia. D_b =	1	in.
b =	2	in.



Tension Strength -

F= 15.900 Kips

(a) Yielding-

$R_n = F_y * A_g$ Ω = 1.67 (ASD) AISC 15th Equation (J4-1) P. 16.1-137

= 50ksi x (5 "x1 1/2")

= 375.0 Kips

R_n / Ω = 224.6 Kips > 15.900 Kips ---------- **OK**

(b) Rupture

$R_n = F_u * A_e$ Ω = 2.00 (ASD) AISC 15th Equation (J4-2) P. 16.1-137 ($A_e = A_n \leq 0.85A_g$)

= 65ksi x [(5 " -1 1/8" - 1/16") x1 1/2"]

= 371.72 Kips

Rn / Ω = 185.859 Kips > 15.900 Kips ---------- **OK**

LEAVITT & ASSOCIATES ENGINEERS, INC.
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(208) 463-0333

CLIENT: South Coast Lighting & Design
JOB: **Temecula Winery Arch Sign**
Part **Connection Plate**
DESIGNER: Jimmy Church
Date: 3-Jul-23

Eye PL1 1/2 With 1 1/8 in. Dia. Hole (1)

Plate - A-572 Gr 50 F_y = 50 ksi F_u = 65 ksi

Shear Strength -

V= 0.000 Kips

(a) Yielding-

$R_n = 0.6F_yA_g$ Ω = 1.50 (ASD)

AISC 15th
Equation (J4-3)
P. 16.1-137

= 0.6 x 50ksi x (5 "x1 1/2")

= 225.00 Kips

Rn / Ω = 150.00 Kips > 0.000 Kips ---------- **OK**

(b) Rupture

$R_n = 0.6F_uA_{nv}$ Ω = 2.00 (ASD)

AISC 15th
Equation (J4-4)
P. 16.1-137

= 0.6 x 65ksi x [(5 " -1 1/8" - 1/16") x1 1/2"]

= 199.01 Kips

Rn / Ω = 99.51 Kips > 0.000 Kips ---------- **OK**

LEAVITT & ASSOCIATES ENGINEERS, INC.
1324 FIRST STREET SOUTH
NAMPA, IDAHO 83651
(208) 463-0333

CLIENT: South Coast Lighting & Design
JOB: **Temecula Winery Arch Sign**
Part **Connection Plate**
DESIGNER: Jimmy Church
Date: 3-Jul-23

Eye PL1 1/2 With 1 1/8 in. Dia. Hole (1)

F = 15.9 Kips

Plate - A-572 Gr 50 F_y = 50 ksi F_u = 65 ksi

Block Shear -

$R_n = 0.6F_uA_{nv} + U_{bs}F_uA_{nt} \leq 0.6F_yA_{gv} + U_{bs}F_uA_{nt}$

AISC 15th
Equation (J4-5)
P. 16.1-138

Ω = 2.00 (ASD)

Path 1 = 0 + 0.5 x 65ksi x [(5 " -1 1/8" - 1/16") x1 1/2"]
≤ 0 + 0.5 x 65ksi x [(5 " -1 1/8" - 1/16") x1 1/2"]

= 185.86 Kips ≤ 185.86 Kips

R_n / Ω = 92.93 Kips > 15.9 Kips ---------- **OK**

Path 2 = 0.6 x 65ksi x { [1 3/4" - (1 1/8" + 1/16")/2] x 3/2"} + 0.5 x 65ksi x (2 " x1 1/2")
≤ 0.6 x 50ksi x (1 3/4" x 3/2") + 0.5 x 65ksi x (2 " x1 1/2")

= 160.57 Kips ≤ 171.68 Kips

R_n / Ω = 80.29 Kips > 15.9 Kips ---------- **OK**

Path 3 = 0.6 x 65ksi x { [1 3/4" - (1 1/8" + 1/16")/2] x 3/2" x 2 } + 0
≤ 0.6 x 50ksi x (1 3/4" x 3/2" x 2) + 0

= 135.28 Kips ≤ 157.50 Kips

R_n / Ω = 67.64 Kips > 15.9 Kips ---------- **OK**

LEAVITT & ASSOCIATES ENGINEERS, INC.
1324 FIRST STREET SOUTH
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(208) 463-0333

CLIENT: South Coast Lighting & Design
JOB: **Temecula Winery Arch Sign**
Part **Connection Plate**
DESIGNER: Jimmy Church
Date: 3-Jul-23

Eye PL1 1/2 With 1 1/8 in. Dia. Hole (1)

F = 15.9 Kips

Plate - A-572 Gr 50 F_y = 50 ksi F_u = 65 ksi

Bearing Strength -

$R_n = 1.8F_yA_{pb}$ $\Omega = 2.00$ (ASD) AISC 15th Equation (J7-1)

= 1.8 x 50ksi x [1 " x1 1/2"] P. 16.1-140

= 135.00 Kips

R_n / Ω = 67.50 Kips > 15.9 Kips ---------- **OK**

LEAVITT & ASSOCIATES ENGINEERS
1324 First Street South
Nampa, ID 83651
(208)-463-7670

JOB:	**Temecula Winery Arch Sign**
DESCRIPTION:	Connection Plate Column to Sign
DESIGNER:	Jimmy Church
DATE:	July 3, 2023
FILE:	Compplate-15th
COMMENT:	

ANALYSIS OF A STEEL PLATE IN COMPRESSION

Design Load = Pa = 15.90 k

Compression in Plate (AISC 360-16 Chapter E p 16.1-35)

Fy	50 ksi
Thickness, t =	1.000 in
Width, b =	3.00 in
L,unsupport =	2.00 in
r = t/sqrt(12) =	0.29
K	1.00
Lc = KL =	2.00
Kl/r	6.93
E =	29,000 ksi
Fe = Pi^2*E/(Kl/r)^2 =	5962.88 ksi
Fy/Fe =	0.01
Fy/Fe < or = 2.25	
Thus, Fcr = (0.658^Fy/Fe)Fy =	49.82 ksi
Ag = b*t =	3.00
Pn = Fcr * Ag =	149.47
Ωc =	1.67
Pn/Ωc =	89.51 k

Pn/Ωc >= Pa, Okay

Combined

$P_a/P_{n/\Omega} = 15.9/89.51 = 0.18 < 0.2$

∴ Use (H 1-1b)

$P_r/2P_c + (M_{rx}/M_{cx} + M_{ry}/M_{cy}) \leq 1.0$

$15.9/(2(89.51)) + (35.35/84.21 + 8.75/281) = 0.45 < 1.0$ OK

LEAVITT & ASSOCIATES ENGINEERS, INC.
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Client: South Coast Lighting & Design
Job Number: 23073.001
Designer: Jimmy Church
Date: 9/8/2023

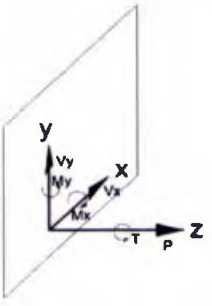
FILLET WELD ANALYSIS

Reference: Design of Fillet Welds – Steel Plate Engineering Data – Volume 2 – Useful

Welding part (location): Weld of Vang to Column or Horizontal Pipe

Type of Loading

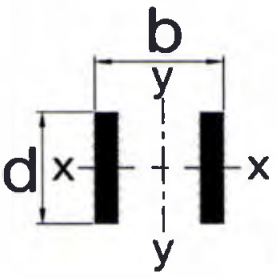
				Applicable Formula For Force on Weld
Tension	P =	15.9	kips	$W_z = P/A_w$
Vertical Shear	Vy =	2.5	kips	$W_y = V_y/A_w$
Horizontal Shear	Vx =	10.1	kips	$W_x = V_x/A_w$
Bending	Mx =	0	kip-in	$W_z = M_x/S_{wx}$
Bending	My =	0	kip-in	$W_z = M_y/S_{wy}$
Torsion	T =	0	kip-in	$W_x = Tc_v/J_w$, $W_y = Tc_h/J_w$



Base Metal Thickness = 0.40 in

Weld Size, w_s = 3/8 in (Assume using E70 electrode, F_{E70} = 70 ksi)

Weld Shape: Two Vertical Straight Line



b= 1.5 in
d = 5 in

A_w= 2d = 10.00 in

W_x = Vx/Aw = 10.1/10.00 = 1.010 k/in
W_y = Vy/Aw = 2.5/10.00 = 0.250 k/in
W_z = P/Aw = 15.9/10.00 = 1.590 k/in

Resultant Force on Weld

$W = (w_x^2 + w_y^2 + w_z^2)^{1/2}$ = (1.010^2 +0.250^2 +1.590^2)^ 0.5 = 1.900

$\theta = \tan^{-1}[w_z/(wx^2+wy^2)^{1/2}]$ = arctan [1.590/ (1.010^2+0.250^2)^.5] = 56.8 °

Weld Strength (Safety Factor: Ω = 2.0)

$F_w = (1/\Omega)*0.6*(70ksi)(1+0.5*\sin^{1.5}\theta)*0.707*w_s$ = (1/2.0)*42 ksi * [1+ 0.5*sin(56.8)^1.5]*0.707 *3/8 in. = 7.698 k/in.

W/F_w = 0.25 < 1.0 OK

LEAVITT & ASSOCIATES ENGINEERS, INC.
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Ph: (208)463-0333 Fax: (208)463-9040

Client: South Coast Lighting & Design
Job Number: 23073.001
Designer: Jimmy Church
Date: 7/3/2023

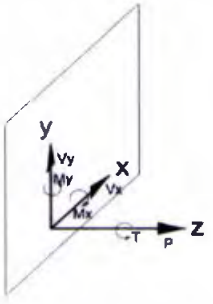
FILLET WELD ANALYSIS

Reference: Design of Fillet Welds – Steel Plate Engineering Data – Volume 2 – Useful

Welding part (location): Weld of 3.5" Pipe to 6" Pipe

Type of Loading

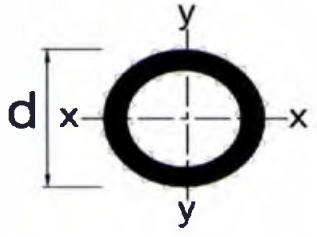
				Applicable Formula For Force on Weld
Tension	P =	0.2	kips	$W_z = P/A_w$
Vertical Shear	Vy =	6.04	kips	$W_y = V_y/A_w$
Horizontal Shear	Vx =	0	kips	$W_x = V_x/A_w$
Bending	Mx =	52.68	kip-in	$W_z = M_x/S_{wx}$
Bending	My =	0	kip-in	$W_z = M_y/S_{wy}$
Torsion	T =	0	kip-in	$W_x = Tc_y/J_w$, $W_y = Tc_h/J_w$



Base Metal Thickness = 0.32 in

Weld Size, w_s = 1/4 in (Assume using E70 electrode, F_{E70} = 70 ksi)

Weld Shape: Circle Weld



d = 16 in

$A_w = \pi d$ = 50.27 in

$S_{wx} = \pi d^2/4$ = 201.06 in^2

W_x =		=	0			=	0.000 k/in
W_y =	Vy/Aw	=	6.04/50.27			=	0.120 k/in
W_z =	P/Aw + Mx/Swx	=	0.2/50.27	+	52.68/201.06	=	0.266 k/in

Resultant Force on Weld

$W = (w_x^2 + w_y^2 + w_z^2)^{1/2}$ = (0.000^2 +0.120^2 +0.266^2)^ 0.5 = 0.292

$\theta = \tan^{-1}[w_z/(wx^2+wy^2)^{1/2}]$ = arctan [0.266/ (0.000^2+0.120^2)^.5] = 65.7 °

Weld Strength (Safety Factor: Ω = 2.0)

$F_w = (1/\Omega)*0.6*(70ksi)(1+0.5*\sin^{1.5}\theta)*0.707*w_s$ = (1/2.0)*42 ksi * [1+ 0.5*sin(65.7)^1.5]*0.707 *1/4 in. = 5.326 k/in.

W/F_w = 0.05 < 1.0 **OK**

APPENDIX

Information Provided by South Coast Lighting & Design

Item	Length/inches	Length/Ft	Weight/FT	QTY	Total Weight LBS.
ASTM A53 Gr.B - 16" SCH 40 Pipe Upright	294	24.5	82.77	2	4055.73
ASTM A36 Steel Base Plate	24x24x2		.282 LB/in3	2	649.73
A356 Cast Aluminum Finial	515.4 in/3	2.3333	.0965LB/in3	2	90
A572 GR.50 Steel Vang-pole	20 x 3 x 1	60in3	.282 LB/in3	4	67.68
A572 GR.50 Steel Vang-arch	9.5 x 3 x 1	28.5in3	.282 LB/in3	4	32.15
ASTM-A500 GR.B arch vertical	5" x 5" x .375"	4.92	22.37 LB/FT	2	220.12
ASTM-A53 3.5" SCH 80 Pipe	1741.4	145.125	12.5 LB/FT	2	1814.1
ASTM-A500 GR.B 3" x 3" x .25" arch Horizontal	1725.5	143.95	8.81 LB/FT	2	1268.2
ASTM-A500 GR.B 3" x 3" x .25" arch Veritcals	120	10	8.81 LB/FT	30	88
ASTM-A500 GR.B 1.5" x 1.5" x .25" arch Veritcals	720	60	4.247 LB/FT	20	254.82
ASTM-A500 GR.B 3" x 3" x .25" arch Vertical(top)	174	14.5	8.81 LB/FT	7	127.75
5052-H32 Alum Panels .1875" thk. (Wine Countrly)	1725.5	143.95	.0968 LB/in3	1	1127.5
5052-H32 Alum Panels .1875" thk. (Temecula)	640.25	53.35	.0968 LB/in3	1	348.62
5052-H32 Alum Lettering .125" thk. (Wine)	2520		.0968 LB/in3	1	60.98
5052-H32 Alum Lettering .125" thk. (Temecula)	1920		.0968 LB/in3	1	23.23
5052-H32 Alum Lettering .125" thk. (Wine Face)	1512		.0968 LB/in3	1	64.03
5052-H32 Alum Lettering .125" thk. (Temecula face)	1080		.0968 LB/in3	1	22.87
2" THK HDU Deco Pieces			15 LB/ft3	1	519.1
Hardware					100
Up lights					114.4

Total Weight of entire Gateway	**11049.01**

Total Weight overhead span only	**6185.87**

APPENDIX

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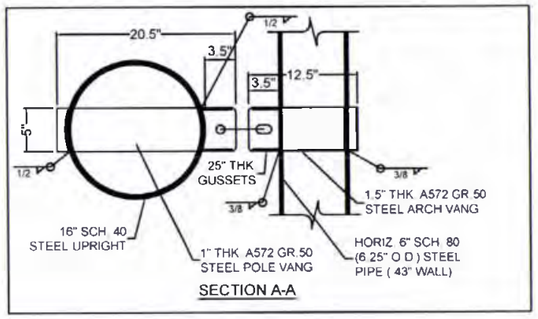
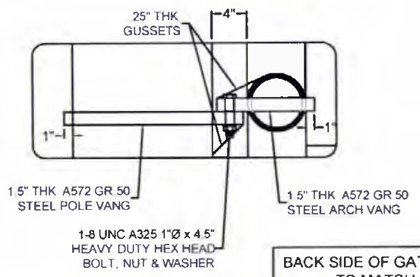
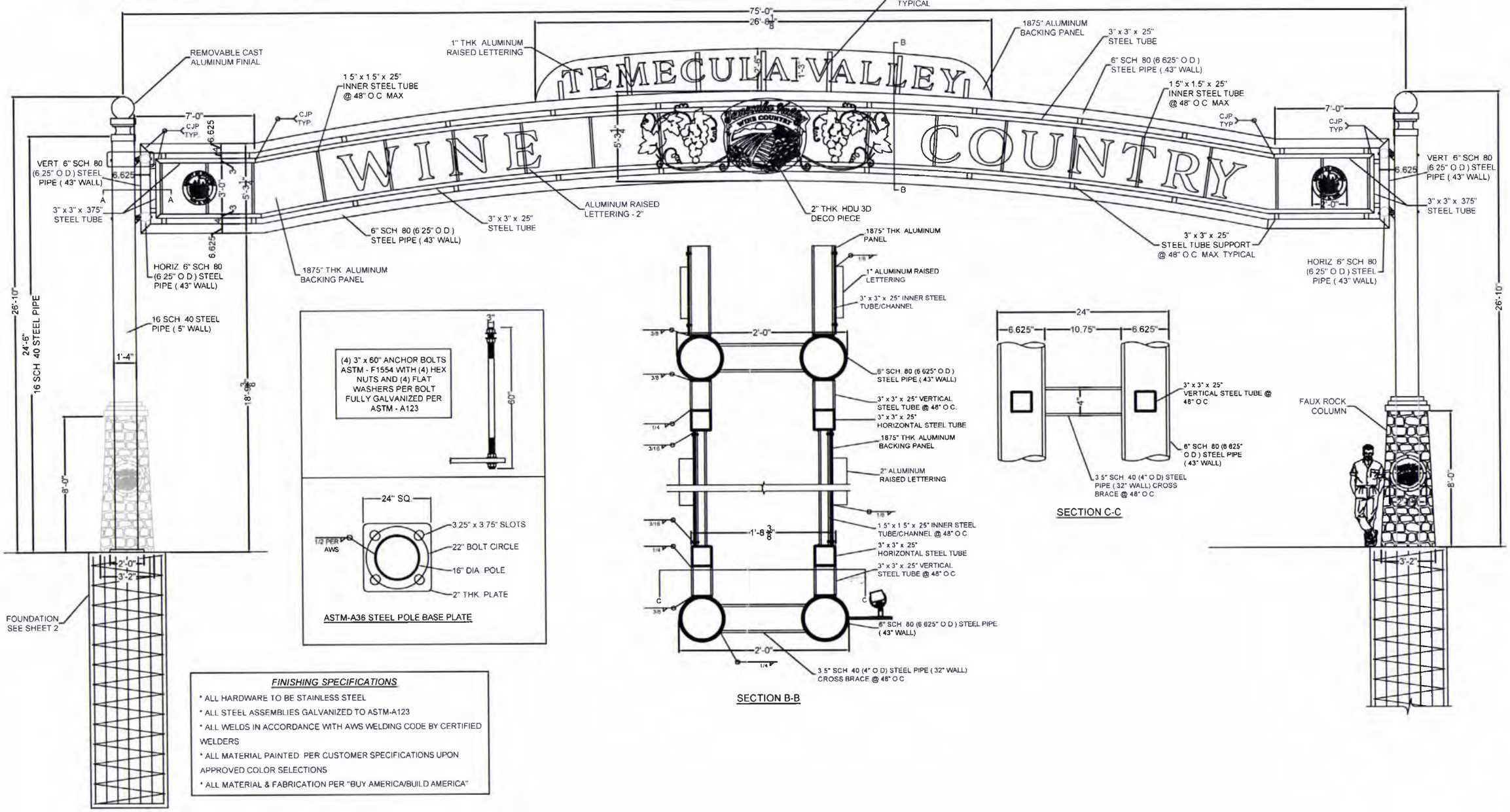


SECTION A-A



BACK SIDE OF GATEWAY MONUMENT TO MATCH FRONT SIDE



FINISHING SPECIFICATIONS

* ALL HARDWARE TO BE STAINLESS STEEL
* ALL STEEL ASSEMBLIES GALVANIZED TO ASTM-A123
* ALL WELDS IN ACCORDANCE WITH AWS WELDING CODE BY CERTIFIED WELDERS
* ALL MATERIAL PAINTED PER CUSTOMER SPECIFICATIONS UPON APPROVED COLOR SELECTIONS
* ALL MATERIAL & FABRICATION PER "BUY AMERICA/BUILD AMERICA"