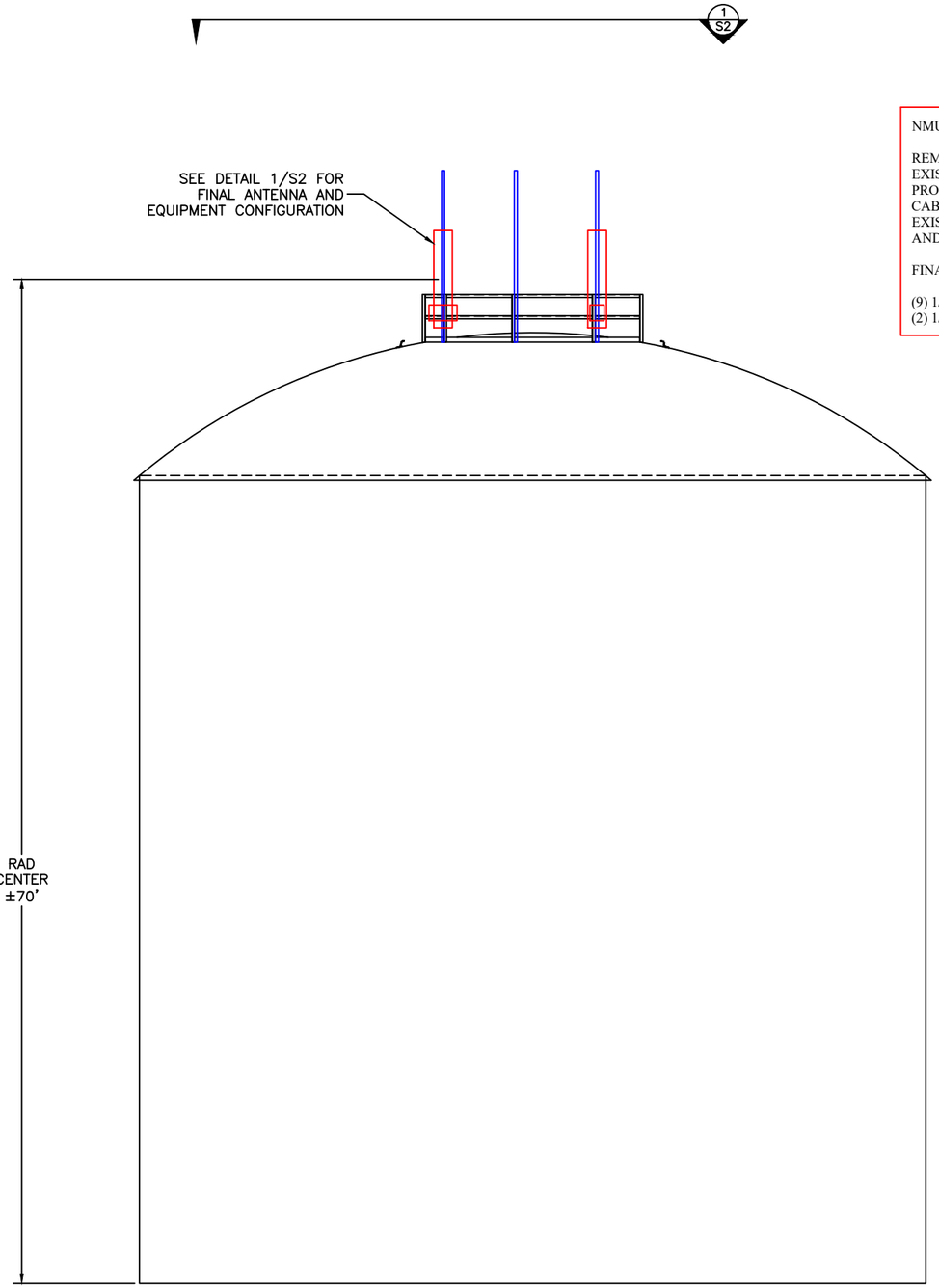

NMU CABLING:

REMOVE AND DISPOSE OF ALL EXISTING CABLING AND MOUNT PROPOSED (9) 1/4" POWER CABLES AND (2) 1/8" FIBERS TO EXISTING BRACKETS USING ANDREWS SNAP-IN HANGERS.

FINAL CABLE QUANTITIES:

(9) 1/4" POWER CABLES
(2) 1/8" FIBERS

SOUTH ELEVATION
SCALE: 11x17 : 3/32"=1'
22x34 : 3/16"=1'

DIXON ENGINEERING INC.
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MARQUETTE W.T.
500 JACKSON STREET
MARQUETTE, MI

NO.	REVISION/DESCRIPTION	DATE
#1.	SUBMITTED FOR REVIEW/BIDDING	11/06/23

CARRIER SITE NO.
SCL0019340

DIXON PROJECT NO.
MI2023CMK-5667

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SHEET TITLE
STRUCTURAL DRAWINGS

S1

STATE OF MICHIGAN
JAMES ROWLEY
ENGINEER
No. 6201060475
LICENSED PROFESSIONAL ENGINEER

STRUCTURAL SHEETS S1-S3

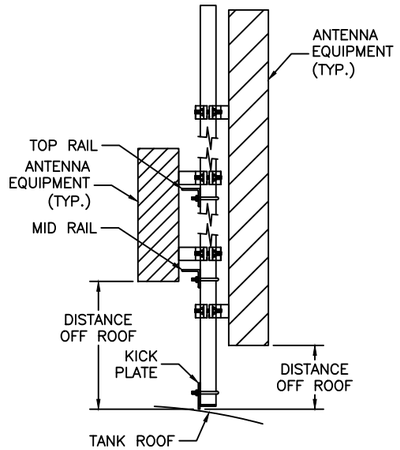
NOTE:

1. PROPOSED ANTENNAS ARE TO BE INSTALLED NO MORE THAN 12" FROM TANK ROOF.

2. PROPOSED REMOTE RADIO HEADS ARE TO BE INSTALLED NO MORE THAN 18" OFF TANK ROOF.

3. IF ANGLE ADAPTER CLAMPS ARE USED, A 1/8" NEOPRENE GASKET MUST BE PLACED BETWEEN THE TANK AND THE CLAMP TO PROTECT THE COATING SYSTEM.

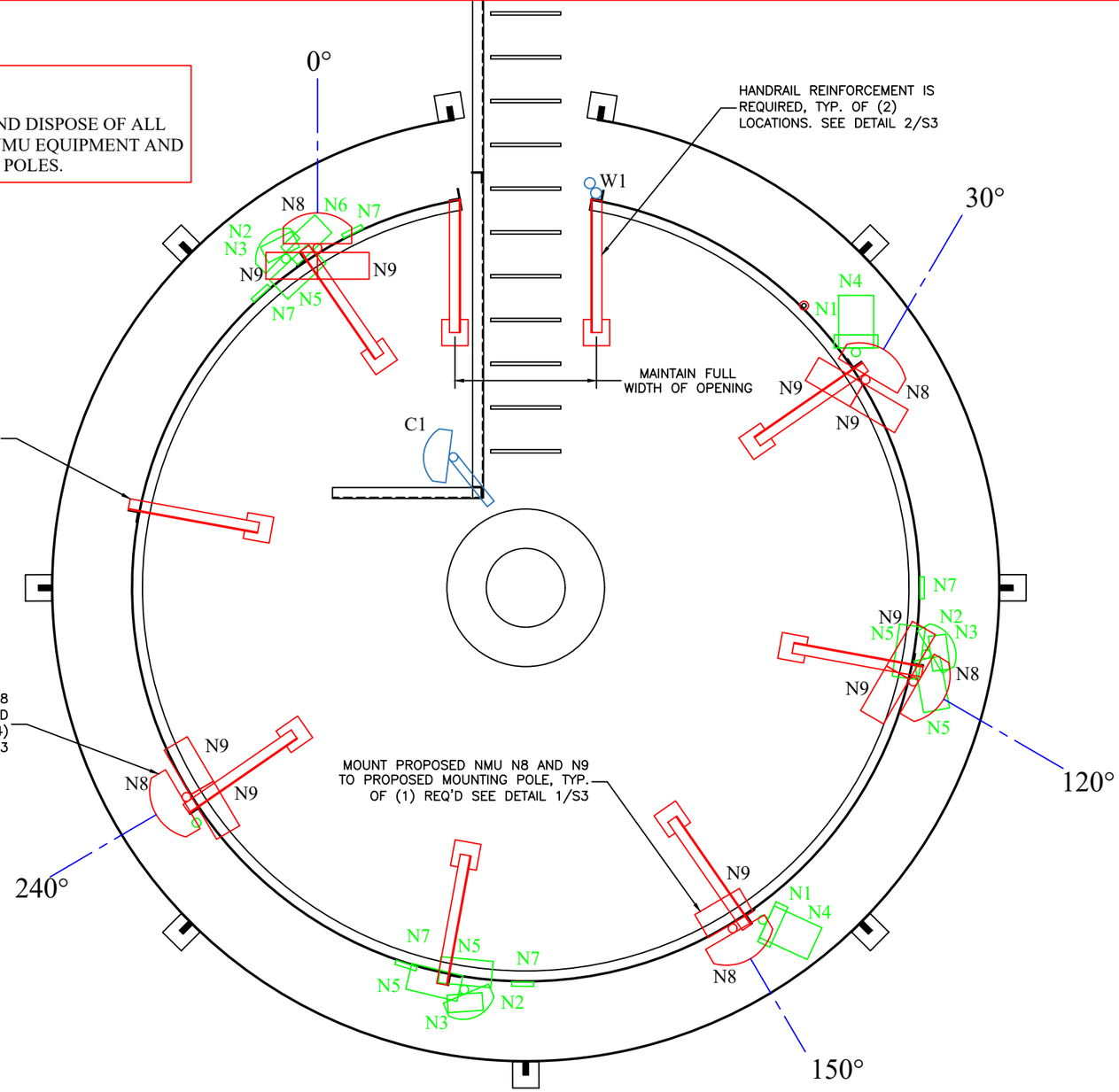
4. ATTACH PROPOSED EQUIPMENT TO POLES PER MFR'S. RECOMMENDATION.



2 / S2 MOUNTING HEIGHT
SCALE: 11x17 : 1/2"=1'
22x34 : 1"=1'

NOTE:

REMOVE AND DISPOSE OF ALL EXISTING NMU EQUIPMENT AND MOUNTING POLES.



1 / S2 ROOF PLAN
SCALE: 11x17 : 3/8"=1'
22x34 : 3/4"=1'

Item							
Mount	Quantity	Status	Location	Carrier	Description	Manufacture	Model
N1	2	Remove	Roof	NMU	Panel	Agisson	ADU451816V01
N2	3	Remove	Roof	NMU	Panel	CCI	BSA-S65R-V-H3
N3	3	Remove	Roof	NMU	Panel	Unknown	Unknown
N4	2	Remove	Roof	NMU	RRH	Huawei	3276
N5	5	Remove	Roof	NMU	RRH	Huawei	3268
N6	1	Remove	Roof	NMU	RRH	Huawei	3240
N7	5	Remove	Roof	NMU	TMA	Unknown	DP2502
N8	5	Proposed	Roof	NMU	Panel	Rosenberger	4WME-01L
N9	9	Proposed	Roof	NMU	RRH	Nokia	RRH 4T4R B41 160 W AZHA
W1	1	Existing	Roof	Unknown	Whip	Unknown	Unknown
C1	1	Existing	Roof	Unknown	Panel	Unknown	Unknown

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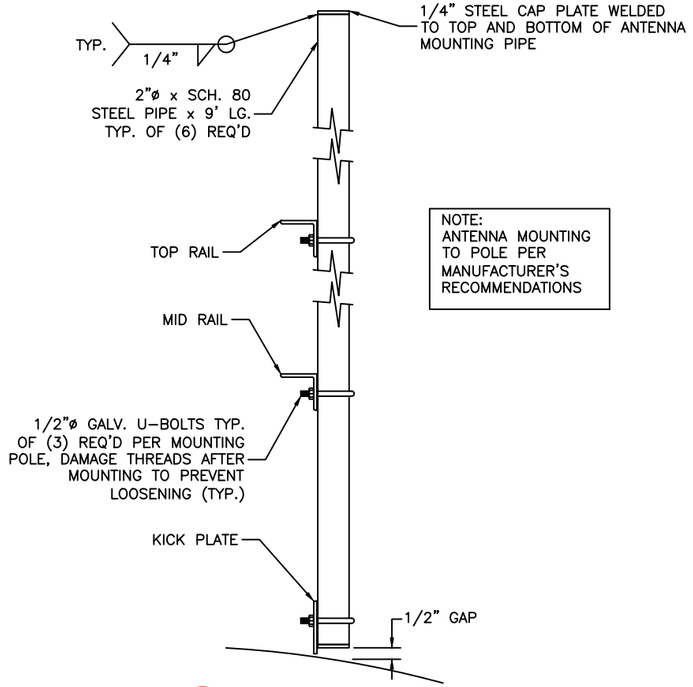
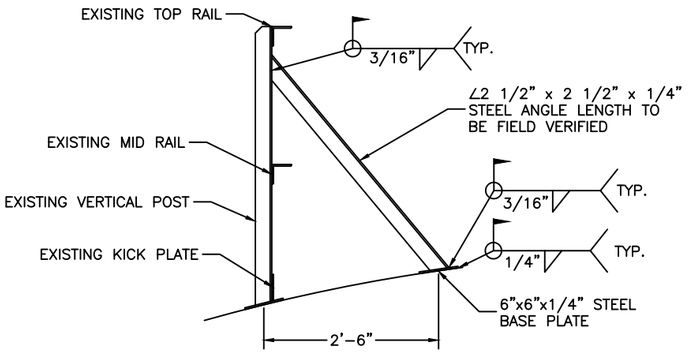
STRUCTURAL DRAWINGS

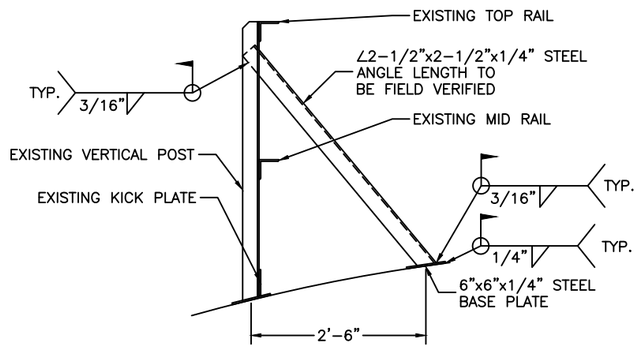
S2



1 S3 ANTENNA MOUNT
SCALE: 11x17 : 1"=1'
22x34 : 2"=1'



2 S3 HANDRAIL KICKER DETAIL
SCALE: 11x17 : 1/2"=1'
22x34 : 1"=1'



3 S3 HANDRAIL KICKER DETAIL
SCALE: 11x17 : 1/2"=1'
22x34 : 1"=1'

GENERAL WELDING:

1. ALL WELDING SHALL BE PERFORMED BY A CERTIFIED WELDER.
2. COMPLY WITH THE AWS D1.1 STRUCTURAL WELDING CODE, ANSI/AWWA D100-21 (LATEST EDITION THEREOF), "AWWA STANDARD FOR WELDED STEEL TANKS FOR WATER STORAGE" AND FEDERAL, STATE, AND LOCAL CODES, DURING CONSTRUCTION DESIGN AND FABRICATION.
3. MAKE ALL WELDS TO THE TANK WALL WITH E7018 LOW HYDROGEN ROD. WELD SMOOTH AND AVOID UNDERCUTS AND BURRS. GRIND SMOOTH ALL WELDS SO THAT NO SHARP PROTRUSIONS REMAIN. SMOOTH IS DEFINED AS: "NO CUTS OR ABRASIONS OCCUR WHEN RUBBING YOUR HAND OVER THE WELD."
4. BEFORE WELDING, REMOVE ALL COATINGS WITHIN 6" OF THE AREA TO BE WELDED.
5. USE ASTM A-36 CARBON STEEL FOR ALL STRUCTURAL STEEL; USE A-307 BOLTS UNLESS OTHERWISE SPECIFIED.
6. FIELD FIT UP PROBLEMS OR CHANGES TO THE PLAN SHEETS ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

GENERAL PAINTING INSTRUCTIONS:

1. SHOP PAINTING:
   ABRASIVE BLAST CLEAN ALL NEW STEEL TO COMMERCIAL GRADE (SSPC-SP6) CONDITION AND APPLY A THREE COAT EPOXY/URETHANE SYSTEM AS FOLLOWS:

COAT	TNEMEC SERIES	MINIMUM DFT	MAXIMUM DFT
PRIMER	V69	2.0	3.0
INTERMEDIATE	V69	2.0	3.0
TOP COAT*	1094	2.0	3.0

2. EDGES TO BE WELDED IN THE FIELD SHALL NOT BE COATED (LEAVE A MINIMUM OF TWO INCHES BARE METAL.)
3. FIELD PAINTING:
   EXTERIOR-SOLVENT CLEAN, SPOT POWER TOOL CLEAN ALL ABRADED AND WELDED AREAS TO A SSPC-SP11 GRAY METAL CONDITION AND SPOT COAT IN ACCORDANCE WITH COATINGS AS SPECIFIED ABOVE.
   DRY INTERIOR-SPOT POWER TOOL CLEAN ALL AREAS OF BURNED COATING TO A SSPC-SP11 GRAY METAL CONDITION AND APPLY A TWO COAT EPOXY POLYAMIDE SYSTEM AS FOLLOWS:

COAT	TNEMEC SERIES	MINIMUM DFT	MAXIMUM DFT
PRIMER	21	3.0	5.0
TOP COAT*	21	3.0	5.0

   WET INTERIOR-SPOT POWER TOOL CLEAN ALL AREAS OF BURNED COATING TO A SSPC-SP11 GRAY METAL CONDITION AND COAT IN ACCORDANCE WITH COATINGS AS SPECIFIED BELOW:

COAT	RAVEN SERIES	MINIMUM DFT	MAXIMUM DFT
PRIMER	AQUATAPOXY A-61	3.0	5.0
TOP COAT	AQUATAPOXY A-61	3.0	5.0
TOTAL		6.0	10.0

4. PREPARATION OF GALVANIZED MATERIAL:
   APPLY ONE COAT OF CLEAN 'N' ETCH AS PER MANUFACTURER'S RECOMMENDATIONS AND COAT IN ACCORDANCE WITH COATINGS AS SPECIFIED BELOW:

COAT	TNEMEC SERIES	MINIMUM DFT	MAXIMUM DFT
PRIMER	V69 HI-BUILD EPOXOLINEII	2.0	3.0
TOP COAT*	1094 ENDURA-SHIELD	2.0	3.0
TOTAL		4.0	6.0

5. PREPARATION OF ALL MISCELLANEOUS ANTENNA EQUIPMENT:
   (ANTENNAS, COAX, MOUNTING BRACKETS)

COAT	TNEMEC SERIES	MINIMUM DFT	MAXIMUM DFT
PRIMER	135 CHEMBUILD EPOXY	3.0	4.0
TOP COAT*	1094 ENDURA-SHIELD	2.0	3.0
TOTAL		5.0	7.0

6. APPLY ALL COATINGS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

*TOP COAT COLOR TO MATCH EXISTING COLOR. (SEE TANK OWNER FOR RECORDS)

GENERAL NOTES

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SHEET TITLE
STRUCTURAL DRAWINGS

S3

DIXON ENGINEERING, INC.
Engineering and Inspection Services for the Coating Industry

Water Tower Antenna Installation Analysis

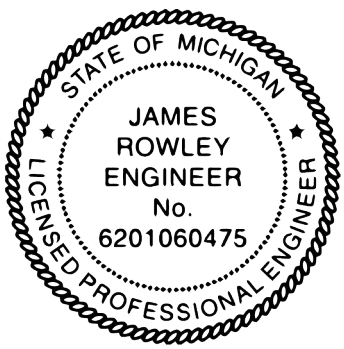
Prepared For
NMU

Prepared By:
Dixon Engineering, Inc.
11/28/23

Location:
500 Jackson Street
Marquette, Michigan
1,000,000 Gallon Elevated Water Tank
Project Number: MI2023CMK-5667

Antenna Provider:
NMU

Site #:
SCL0019340



These calculations are only valid for the proposed and existing equipment, as well as the layout and mounting of said equipment, as shown on Dixon Engineering, Inc. drawings for this project dated 11/06/23. Dixon Engineering, Inc. drawings must be included in the Construction Documents provided to the contractors and local municipality for construction and permitting of this project. Deviation from the drawings renders these calculations void.

Dixon Engineering, Inc. has completed structural calculations for the proposed antenna installation with consideration for affect the antennas will have on the tank with respect to wind loading.

1. The extra weight of the antennas and cables is insignificant in comparison to the weight of water in the tank.

2. The increase in overturning moment is conservatively calculated and is within AWWA D100 design allowances. This installation will not have any adverse structural effect on the tank.

Applicable Codes:
ANSI/AWWA D100-11
ASCE 7-05 (Referenced by AWWA D100-11)
2015 International Building Code
ANSI/TIA-222 Rev. H

Design Wind Loads

Double-Curved Surfaces (Tank)

Pw = qz x G x Cf >/= 30Cf		
G (gust effect factor, take as 1 or calculate using ASCE 7)	1.00	
Cf (force coefficient, per D100-11 Table 2)	0.50	
qz (velocity pressure @ centroid of projected area)		
Avg of high and low water line	28.25	
Kz (Vel. pres. Exp. coef @ centroid per D100-11 Table 3)	0.97	
I (importance factor)	1.15	
V (wind velocity, mph)	90.00	mph
qz = 0.00256 x Kz x I x V^2	23.13	
qz x G x Cf	11.56	
30 x Cf	15.00	
Pw (wind pressure)	**15.00**	psf

Cylindrical Surfaces (Riser, Handrails, Antenna Posts)

Pw = qz x G x Cf >/= 30Cf		
G (gust effect factor, take as 1 or calculate using ASCE 7)	1.00	
Cf (force coefficient, per D100-11 Table 2)	0.60	
qz (velocity pressure @ centroid of projected area)		
Kz (Vel. pres. Exp. coef @ centroid per D100-11 Table 3)	0.97	
I (importance factor)	1.15	
V (wind velocity, mph)	90.00	mph
qz = 0.00256 x Kz x I x V^2	23.13	
qz x G x Cf	13.88	
30 x Cf	18.00	
Pw (wind pressure)	**18.00**	psf

Flat Surfaces (Antennas)

Pw = qz x G x Cf >/= 30Cf		
G (gust effect factor, take as 1 or calculate using ASCE 7)	1.00	
Cf (force coefficient, per D100-11 Table 2)	1.00	
qz (velocity pressure @ centroid of projected area)		
Kz (Vel. pres. Exp. coef @ centroid per D100-11 Table 3)	0.97	
I (importance factor)	1.15	
V (wind velocity, mph)	90.00	mph
qz = 0.00256 x Kz x I x V^2	23.13	
qz x G x Cf	23.13	
30 x Cf	30.00	
Pw (wind pressure)	**30.00**	psf

Tank Specifications:

Type of Tank:	Flat Bottom	
Height to LWL:	0.0	feet
Height to HWL:	56.5	feet
Diameter of Tank:	55.0	feet
Height from HWL to Roof:	10.0	feet
Top of Tank Elevation	66.5	feet

Areas of Tank Sections & Moment Arm Lengths:

Area of Sidewall:	3107.5	feet^2
Moment Arm of Sidewall:	28.3	feet
Area of Roof:	432.0	feet^2
Moment Arm of Roof:	63.2	feet

Total Overturn Moment of Tank: **1,807,952** Foot-lbs

Increase in overturn moment with the proposed addition of (5) antennas and associated equipment mounted on the roof.

SUMMARY			
Item		Overturn Moment	% Increase
Structure		1,807,952	
Antennas & Misc Equipment -	NMU	115,181	6.37%
Antennas & Misc Equipment -	Unknown	14,319	0.79%
Guardrail		129,296	7.15%
Totals		**2,066,747**	**14.31%**

FOR DIXON ENGINEERING, INC.

DIXON ENGINEERING, INC.
Engineering and Inspection Services for the Coating Industry

OVERTURNING MOMENTS OF MISC EQUIPMENT

Wind Pressure = 18.00 psf (Round Surfaces)

Wind Pressure = 30.00 psf (Flat Surfaces)

Rooftop Guardrail & Coax								
Item	Quantity	Elevation (ft)	Dimensions		Shape	Wind Force @ 90mph (lbs)	OTM (ft-lb) (total)	% Increase in OTM
			Width/Ht (in)	Length (ft)				
Coax	11	67.58	1.625	30	Round	73.1	54,362	3.007%
Top Rail	1	69.33	2.5	30	Flat	187.5	13,000	0.719%
Mid Rail	1	67.58	2.5	30	Flat	187.5	12,672	0.701%
Kick Plate	1	66.00	4	30	Flat	300.0	19,800	1.095%
Posts	9	67.58	2.5	3.5	Flat	21.9	13,305	0.736%
Braces	9	67.58	2.5	4.25	Flat	26.6	16,157	0.894%
						Total	**129,296**	**7.15%**

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Engineering and Inspection Services for the Coating Industry

OVERTURNING MOMENTS OF ANTENNAS AND ACCESSORIES

Wind Pressure = 18.00 psf (Round Surfaces)
Wind Pressure = 30.00 psf (Flat Surfaces)

Item								Elevation	Physical Properties			Wind Force @	50% Red. on	# Shielded	Panel OTM	Post?	Post	Exposed Post	Post OTM (ft	Total Additional	% Increase
Key to Plan	Quantity	Status	Carrier	Description	Manuf.	Model	Location	(ft)	Height (in)	Width (in)	Shape	90mph (lbs)	Leeward?		(ft-lb)		Dia. (in)	Length (ft)	lb)	OTM	in OTM
N1	2	Remove	NMU	Panel	Agisson	ADU451816V01	Roof	73.3	54	12	Flat	0.0			0					0	0.000%
N2	3	Remove	NMU	Panel	CCI	BSA-S65R-V-H3	Roof	72.1	31	11.2	Flat	0.0			0					0	0.000%
N3	3	Remove	NMU	Panel	Unknown	Unknown	Roof	68.2	38	8	Flat	0.0			0					0	0.000%
N4	2	Remove	NMU	RRH	Huawei	3276	Roof	69.2	15.8	11.9	Flat	0.0			0					0	0.000%
N5	5	Remove	NMU	RRH	Huawei	3268	Roof	70.2	15.8	11.9	Flat	0.0			0					0	0.000%
N6	1	Remove	NMU	RRH	Huawei	3240	Roof	69.8	18.9	10.7	Flat	0.0			0					0	0.000%
N7	5	Remove	NMU	TMA	Unknown	DP2502	Roof	69.1	8	5	Flat	0.0			0					0	0.000%
N8	5	Proposed	NMU	Panel	Rosenberger	4WME-01L	Roof	70.2	81.7	15.6	Flat	265.5	N	0	93,249	Y	1.900	2.25	2,107	95,355	5.274%
N9	9	Proposed	NMU	RRH	Nokia	RRH 4T4R B41 160 W AZHA	Roof	67.9	13.2	11.8	Flat	32.5	N	0	19,825	N				19,825	1.097%
																			NMU Total	**115,181**	**6.371%**
W1	1	Existing	Unknown	Whip	Unknown	Unknown	Roof	76.7	180	2	Round	45.0	N	0	3,450	Y	2.375	5.00	1,187	4,637	0.257%
C1	1	Existing	Unknown	Panel	Unknown	Unknown	Roof	70.8	48	12	Flat	120.0	N	0	8,500	Y	2.375	5.00	1,182	9,682	0.535%
																			Unknown Total	**14,319**	**0.792%**

DIXON ENGINEERING, INC.
Engineering and Inspection Services for the Coating Industry

Anchor Bolts

Number of Anchor Bolts	8		
Anchor Bolt Diameter	1.25	in	
Anchor Bolt Root Area	0.942	in^2	(per AISC)
Allowable Stress	15,000	psi	
Allowable Stress for Wind Loads per AWWA D100	20,000	psi	(1/3 Increase)
Allowable Tension	**18,840**	**lbs**	
Bolt Circle Diameter	55.46	feet	
Dead Load of Existing Tank			
Sidewall Surface Area	9,762	ft^2	
Sidewall Thickness	0.45	in (avg)	
Roof Surface Area	2,376	ft^2	
Roof Thickness	0.25	in (avg)	
Tank Weight	24,253	lb	
Misc. Weight (~10%)	20,364		
Total Tank Weight	224,003	lb (est)	
Bolt Tension = $4M_w/ND_{ac}$ - W/N			
Mw = moment due to wind	2,066,747	ft-lb	
Original Bolt Tension			
Mw = moment due to wind	1,807,952	ft-lb	
Original Bolt Tension	-11,700	lb	
Increase in bolt tension from antennas	-19.9%		
Bolt Tension w/ proposed antennas	**-9,367**	**lb**	**OK**

A negative value indicates that the tank bottom is in compression at the anchor bolt and no tensile loading is applied ot the anchor bolt.

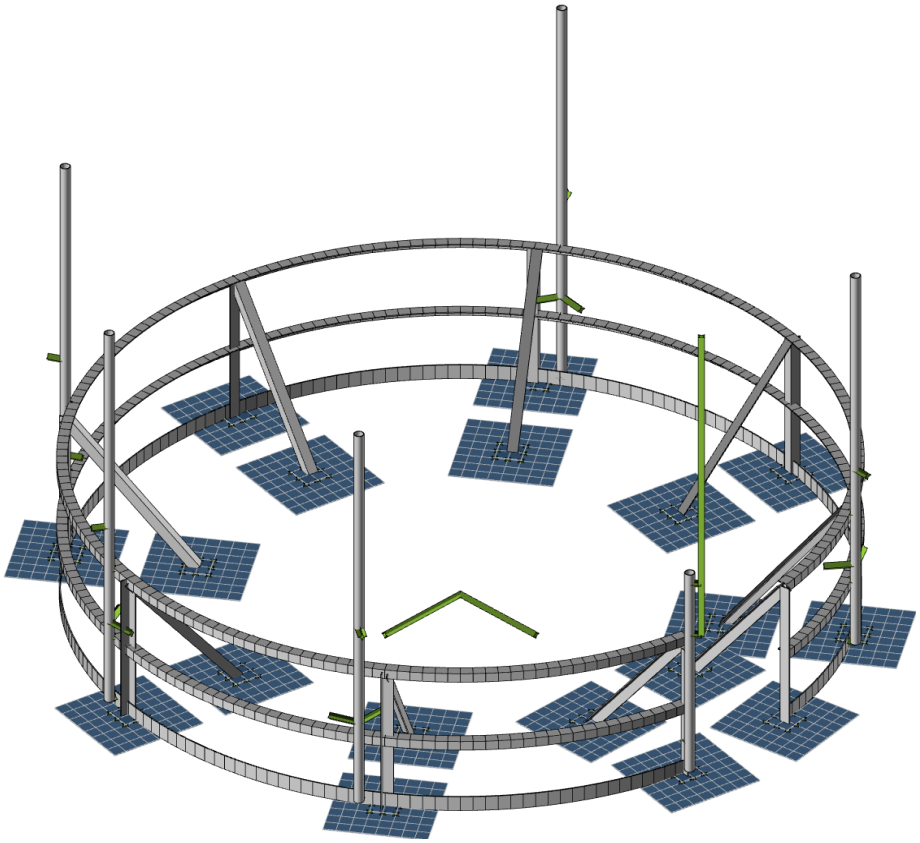
DIXON ENGINEERING, INC.
Engineering and Inspection Services for the Coating Industry

Water Tower Guardrail - Structural Calculations
500 Jackson Street
Marquette, Michigan
11/28/23

Purpose of Report:

Verify that the existing water tank rooftop guardrail is adequate to support the existing and proposed cellular antennas, according to the applicable Codes.

The existing guardrail is a 15'-0" diameter circle and is constructed with L2½x2½x¼ top rail, mid rail, and posts, and a ¼"x4" toe kick plate. The guardrail and posts must support the proposed antennas, loading from maintenance personnel, as well as ice and wind loads.



Applicable Codes:
ANSI/AWWA D100-11
AISC Manual of Steel Construction, 15th Edition (LRFD)
2015 International Building Code
ANSI/TIA-222 Rev. H
ASCE 7-16 (Referenced by TIA-222 Rev. H)

Results: With installation conforming to and modifications as shown on Dixon Engineering, Inc. drawings dated 11/06/23, all mount members meet the requirements of the applicable Codes.

Wind Load Calculation for Analysis of Mount Components:

Velocity pressure at height, z, $q_z = \lambda_w[0.00256K_zK_{zt}K_dV^2]$		
Risk Category for Mount Components	II	
Height of Antenna Above Grade (z)	77	ft
z_g, Nominal height of the atmospheric boundary layer	900	ft
α, 3-second gust-speed power law exponent	9.5	
Velocity Pressure Coefficient (K_z)	1.20	
K_{zt}, Topographic Factor (see Wind Topographic Factor calculation)	1.51	
K_d, Directionality factor	0.95	
V, Basic wind speed	104	mph
Wind exposure category	C	
Ka, Shielding factor for appurtenances	0.9	(TIA 16.6.1)
q_z, Velocity pressure at height z	42.8	*C_f psf
Wind design pressure, $p_w = q_zGC_f$		
G, Gust-effect factor (1.00 per TIA for mounting systems)	1.00	
p_w/C_f, Wind design pressure without respect to shape	**42.8**	psf

Wind Load Calculation for Analysis of Tank Components:

λ_w, Strength-level to service-level factor for wind load	0.6	
Service level wind design pressure, $p_w/C_f*\lambda_w$	25.7	psf
Risk Category for Tank Components	IV	
V, Basic wind speed	116	mph
Load adjustment factor, $(V_{IV}/V_{II})2$	1.24	
Wind pressure for mount component analysis	31.9	psf
Wind pressure for mount component analysis, $30C_f$ min.	31.9	*C_f psf
Wind pressure ratio between tank and mount loads	**0.746**	

Ice Load Calculation per TIA-222-H:

Unit Weight of Ice	56	pcf
Base Ice Thickness (t_i)	1.50	in
Height Escalation Factor (K_{iz})	1.09	(TIA 2.6.10)
Basic wind speed (3 sec gust) (V) (Ice Case)	50	mph
Ice Load for Mount Components:		
Risk Category (mount components)	II	
Importance Factor for Ice Thickness, I_i	1.00	(TIA Table 2-3)
Factored Ice Thicness $t_{iz} = (t_i)(I_i)(K_{iz})(K_{zt})^{0.35}$	**2.46**	**in**
Importance Factor for Ice Wind, I_w	1.00	(TIA Table 2-3)
Strength wind on ice design pressure, $q_h = 0.00256\ (K_z)(K_{zt})(K_s)(K_e)(K_d)(V^2)/C_f$	**11.0**	**psf**

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Engineering and Inspection Services for the Coating Industry

Wind Topographic Factor

Wind exposure category	C	
Hill Shape	3D axisymmetrical hill	
Structure location	upwind of crest	
Elevation at bottom of hill or escarpment	760	ft
Elevation at top of hill or escarpment	920	ft
Height of hill or escarpment, H	160	ft
Half height of hill or escarpment, H/2	80	ft
Elevation at half height	840	ft
Distance to half height of hill or escarpment, L_h	325	ft
Distance from crest to structure, x	0	ft
Height of structure above ground surface, z	66.5	ft
Horizontal attenuation factor, μ	1.5	
Height attenuation factor, γ	4	
$K_1/(H/L_h)$	1.05	
K_1	0.52	
K_2	1.00	
K_3	0.44	
K_{zt}	**1.51**	

DIXON ENGINEERING, INC.
Engineering and Inspection Services for the Coating Industry

Item							Elev to	Physical Properties						Ice				Wind Force	Wind Force
Key to Plan	Qty	Status	Carrier	Description	Manufacturer	Model	Center (in)	H (in)	W (in)	D (in)	Wt (lbs)	Shape	C_a	Dc	$\pi(t_d)(D_c$	Wt (plf)	Total Wt (lbs)	(lbs)	on Ice (lbs)
N8	5	Proposed	NMU	Panel	Rosenberger	4WME-01L	53	81.7	15.6	7.5	66.1	Flat	1.34	17.31	152.9	59.5	404.9	508.7	182.2
N9	9	Proposed	NMU	RRH	Nokia	RRH 4T4R B41 160 W AZHA	25	13.2	11.8	6.1	28.7	Flat	1.20	13.28	121.8	47.4	52.1	55.5	27.7
W1	1	Existing	Unknown	Whip	Unknown	Unknown	130	180	2	2	40	Round	1.20	2.00	34.5	13.4	201.3	128.3	117.2
Guardrail & Misc Equip																			
Antenna Post 1								12	2.375			Round	1.20	2.38	37.4	14.5		10.2	8.0
Top Rail, Mid Rail, Braces, and Posts								12	2.5	2.5		Flat	2.00	3.54	46.4	18.0		17.8	13.6
Kick Plate								12	4	0.25		Flat	2.00	4.01	50.0	19.5		28.5	16.3

*Note: All wind and ice loads are calculated based on TIA strength design loading for the appropriate risk category. Loads are adjusted using load combinations in RISA 3d to correctly apply the AWWA service level loading for the appropriate risk category. Strength design loads are analyzed in accordance with TIA LRFD, service design loads are compared to allowable stresses per AWWA.

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in²]	Iyy [in⁴]	Izz [in⁴]	J [in⁴]
1	BRACE	L2.5X2.5X4	Column	None	A53 Gr.B	Typical	1.19	0.692	0.692	0.026
2	POST	L2.5X2.5X4	Column	None	A36 Gr.36	Typical	1.19	0.692	0.692	0.026
3	AP1	PIPE_2.0	Column	None	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
4	KICKPLATE	.25X4	Beam	None	A36 Gr.36	Typical	1	0.005	1.333	0.02
5	MIDRAIL	L2.5X2.5X4	Beam	None	A36 Gr.36	Typical	1.19	0.692	0.692	0.026
6	TOPRAIL	L2.5X2.5X4	Beam	None	A36 Gr.36	Typical	1.19	0.692	0.692	0.026

Node Loads and Enforced Displacements (BLC 1 : DL)

	Node Label	L, D, M	Direction	Magnitude [(lb, lb-ft), (in, rad), (lb*s²/in, lb*s²*in)]
1	N46	L	Y	-66.1
2	N48	L	Y	-28.7
3	N49	L	Y	-28.7
4	N51	L	Y	-40
5	N52	L	Y	-66.1
6	N54	L	Y	-28.7
7	N55	L	Y	-28.7
8	N57	L	Y	-66.1
9	N59	L	Y	-28.7
10	N60	L	Y	-28.7
11	N62	L	Y	-66.1
12	N65	L	Y	-28.7
13	N69	L	Y	-66.1
14	N66	L	Y	-28.7
15	N68	L	Y	-28.7

Node Loads and Enforced Displacements (BLC 2 : Ice)

	Node Label	L, D, M	Direction	Magnitude [(lb, lb-ft), (in, rad), (lb*s²/in, lb*s²*in)]
1	N46	L	Y	-404.903
2	N48	L	Y	-52.098
3	N49	L	Y	-52.098
4	N51	L	Y	-201.327
5	N52	L	Y	-404.903
6	N54	L	Y	-52.098
7	N55	L	Y	-52.098
8	N57	L	Y	-404.903
9	N59	L	Y	-52.098
10	N60	L	Y	-52.098
11	N62	L	Y	-404.903
12	N65	L	Y	-52.098
13	N69	L	Y	-404.903
14	N66	L	Y	-52.098
15	N68	L	Y	-52.098

Node Loads and Enforced Displacements (BLC 3 : WLx)

	Node Label	L, D, M	Direction	Magnitude [(lb, lb-ft), (in, rad), (lb*s²/in, lb*s²*in)]
1	N46	L	X	508.666
2	N48	L	X	55.509
3	N49	L	X	55.509
4	N51	L	X	128.295
5	N52	L	X	508.666
6	N54	L	X	55.509

Node Loads and Enforced Displacements (BLC 3 : WLx) (Continued)

	Node Label	L, D, M	Direction	Magnitude [(lb, lb-ft), (in, rad), (lb*s²/in, lb*s²*in)]
7	N55	L	X	55.509
8	N57	L	X	508.666
9	N59	L	X	55.509
10	N60	L	X	55.509
11	N62	L	X	508.666
12	N65	L	X	55.509
13	N69	L	X	508.666
14	N66	L	X	55.509
15	N68	L	X	55.509

Node Loads and Enforced Displacements (BLC 4 : WLz)

	Node Label	L, D, M	Direction	Magnitude [(lb, lb-ft), (in, rad), (lb*s²/in, lb*s²*in)]
1	N46	L	Z	508.666
2	N48	L	Z	55.509
3	N49	L	Z	55.509
4	N51	L	Z	128.295
5	N52	L	Z	508.666
6	N54	L	Z	55.509
7	N55	L	Z	55.509
8	N57	L	Z	508.666
9	N59	L	Z	55.509
10	N60	L	Z	55.509
11	N62	L	Z	508.666
12	N65	L	Z	55.509
13	N69	L	Z	508.666
14	N66	L	Z	55.509
15	N68	L	Z	55.509

Node Loads and Enforced Displacements (BLC 5 : WLx (Ice))

	Node Label	L, D, M	Direction	Magnitude [(lb, lb-ft), (in, rad), (lb*s²/in, lb*s²*in)]
1	N46	L	X	182.23
2	N48	L	X	27.742
3	N49	L	X	27.742
4	N51	L	X	117.192
5	N52	L	X	182.23
6	N54	L	X	27.742
7	N55	L	X	27.742
8	N57	L	X	182.23
9	N59	L	X	27.742
10	N60	L	X	27.742
11	N62	L	X	182.23
12	N65	L	X	27.742
13	N69	L	X	182.23
14	N66	L	X	27.742
15	N68	L	X	27.742

Node Loads and Enforced Displacements (BLC 6 : WLz (Ice))

	Node Label	L, D, M	Direction	Magnitude [(lb, lb-ft), (in, rad), (lb*s²/in, lb*s²*in)]
1	N46	L	Z	182.23
2	N48	L	Z	27.742
3	N49	L	Z	27.742
4	N51	L	Z	117.192

Node Loads and Enforced Displacements (BLC 6 : WLz (Ice)) (Continued)

	Node Label	L, D, M	Direction	Magnitude [(lb, lb-ft), (in, rad), (lb*s²/in, lb*s²*in)]
5	N52	L	Z	182.23
6	N54	L	Z	27.742
7	N55	L	Z	27.742
8	N57	L	Z	182.23
9	N59	L	Z	27.742
10	N60	L	Z	27.742
11	N62	L	Z	182.23
12	N65	L	Z	27.742
13	N69	L	Z	182.23
14	N66	L	Z	27.742
15	N68	L	Z	27.742

Basic Load Cases

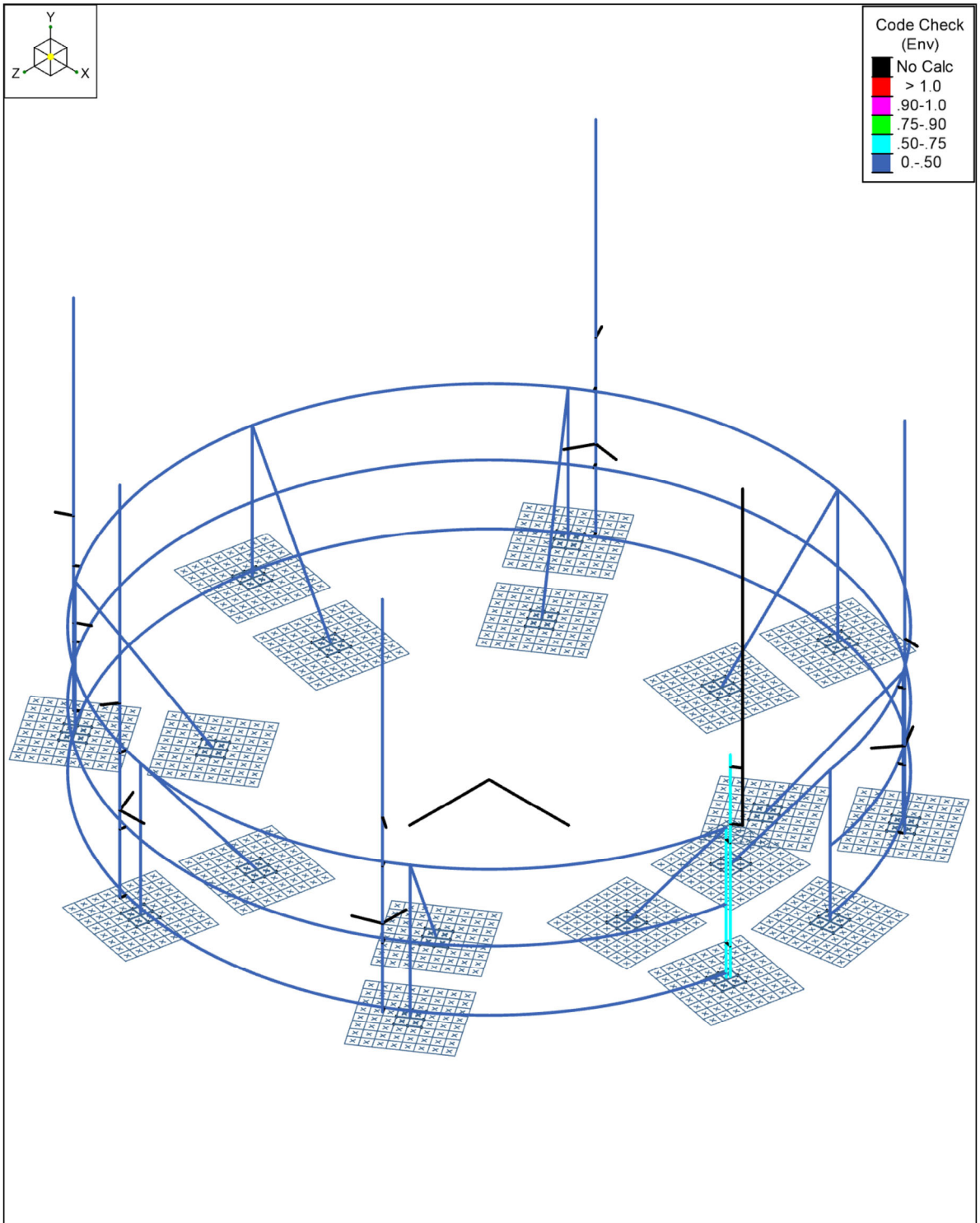
	BLC Description	Category	Y Gravity	Nodal	Distributed
1	DL	DL	-1	15	
2	Ice	LL		15	582
3	WLx	WL		15	582
4	WLz	WL		15	582
5	WLx (Ice)	WL		15	582
6	WLz (Ice)	WL		15	582

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	DL+WLx	Yes	C	1	1.2	3	1				
2	DL-WLx	Yes	C	1	1.2	3	-1				
3	DL+WLz	Yes	C	1	1.2	4	1				
4	DL-WLz	Yes	C	1	1.2	4	-1				
5	DL+WLx 45	Yes	C	1	1.2	3	0.707	4	0.707		
6	DL-WLx 45	Yes	C	1	1.2	3	-0.707	4	0.707		
7	DL+WLz 45	Yes	C	1	1.2	3	0.707	4	-0.707		
8	DL-WLz 45	Yes	C	1	1.2	3	-0.707	4	-0.707		
9	DL+Ice+WLx (Ice)	Yes	C	1	1.2	2	1	5	1		
10	DL+Ice-WLx (Ice)	Yes	C	1	1.2	2	1	5	-1		
11	DL+Ice+WLz (Ice)	Yes	C	1	1.2	2	1	6	1		
12	DL+Ice-WLz (Ice)	Yes	C	1	1.2	2	1	6	-1		
13	DL+Ice+WLx 45 (Ice)	Yes	C	1	1.2	2	1	5	0.707	6	0.707
14	DL+Ice-WLx 45 (Ice)	Yes	C	1	1.2	2	1	5	-0.707	6	0.707
15	DL+Ice+WLz 45 (Ice)	Yes	C	1	1.2	2	1	5	0.707	6	-0.707
16	DL+Ice-WLz 45 (Ice)	Yes	C	1	1.2	2	1	5	-0.707	6	-0.707
17	Service DL+WLx		C	1	1	3	0.746				
18	Service DL-WLx		C	1	1	3	-0.746				
19	Service DL+WLz		C	1	1	4	0.746				
20	Service DL-WLz		C	1	1	4	-0.746				
21	Service DL+WLx 45		C	1	1	3	0.528	4	0.528		
22	Service DL-WLx 45		C	1	1	3	-0.528	4	0.528		
23	Service DL+WLz 45		C	1	1	3	0.528	4	-0.528		
24	Service DL-WLz 45		C	1	1	3	-0.528	4	-0.528		
25	Service DL+Ice+WLx (Ice)		C	1	1	2	0.7	5	0.7		
26	Service DL+Ice-WLx (Ice)		C	1	1	2	0.7	5	-0.7		
27	Service DL+Ice+WLz (Ice)		C	1	1	2	0.7	6	0.7		
28	Service DL+Ice-WLz (Ice)		C	1	1	2	0.7	6	-0.7		
29	Service DL+Ice+WLx 45 (Ice)		C	1	1	2	0.7	5	0.495	6	0.495
30	Service DL+Ice-WLx 45 (Ice)		C	1	1	2	0.7	5	-0.495	6	0.495

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
31	Service DL+Ice+WLz 45 (Ice)		C	1	1	2	0.7	5	0.495	6	-0.495
32	Service DL+Ice-WLz 45 (Ice)		C	1	1	2	0.7	5	-0.495	6	-0.495



Dixon Engineering, Inc.		Marquette, MI NMU	SK-1
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Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [lb-ft]	phi*Mn z-z [lb-ft]	Cb	Eqn
0	M18	L2.5X2.5X4	0.567	36.852	6	0.229	39.75	z	4	26952.359	38556	1113.554	2537.388	1.5	H2-1
1	M26	PIPE 2.0	0.55	35.042	7	0.032	35.042		8	24281.005	32130	1871.625	1871.625	1	H1-1b
2	M566	L2.5X2.5X4	0.431	2.827	4	0.166	2.827	z	3	38486.224	38556	1113.554	2537.388	1.216	H2-1
3	M541	L2.5X2.5X4	0.413	2.827	7	0.161	2.827	z	6	38486.224	38556	1113.554	2537.388	1.216	H2-1
4	M591	L2.5X2.5X4	0.407	2.827	8	0.163	2.827	z	5	38486.224	38556	1113.554	2537.388	1.236	H2-1
5	M540	L2.5X2.5X4	0.388	0	8	0.166	2.827	z	6	38486.224	38556	1113.554	2537.388	1.104	H2-1
6	M565	L2.5X2.5X4	0.385	0	2	0.171	2.827	z	3	38486.224	38556	1113.554	2537.388	1.082	H2-1
7	M27	PIPE 2.0	0.381	38.25	5	0.16	38.25		6	12143.947	32130	1871.625	1871.625	1	H1-1b
8	M28	PIPE 2.0	0.381	38.25	1	0.162	38.25		4	12143.947	32130	1871.625	1871.625	1	H1-1b
9	M32	PIPE 2.0	0.381	38.25	6	0.16	38.25		8	12143.947	32130	1871.625	1871.625	1	H1-1b
10	M31	PIPE 2.0	0.381	38.25	6	0.157	38.25		5	12143.947	32130	1871.625	1871.625	1	H1-1b
11	M29	PIPE 2.0	0.381	38.25	8	0.157	38.25		6	12143.947	32130	1871.625	1871.625	1	H1-1b
12	M590	L2.5X2.5X4	0.38	0	7	0.165	2.827	z	5	38486.224	38556	1113.554	2537.388	1.063	H2-1
13	M491	L2.5X2.5X4	0.378	2.827	5	0.17	2.827	z	8	38486.224	38556	1113.554	2537.388	1.384	H2-1
14	M490	L2.5X2.5X4	0.362	0	6	0.16	2.827	z	8	38486.224	38556	1113.554	2537.388	1.214	H2-1
15	M440	L2.5X2.5X4	0.351	0	5	0.144	2.827	z	7	38486.224	38556	1113.554	2537.388	1.34	H2-1
16	M589	L2.5X2.5X4	0.338	2.827	1	0.197	0	y	2	38486.224	38556	1113.554	2537.388	1.031	H2-1
17	M564	L2.5X2.5X4	0.324	2.827	1	0.177	0	y	8	38486.224	38556	1113.554	2537.388	1.019	H2-1
18	M403	L2.5X2.5X4	0.32	0	14	0.193	0	y	6	38486.224	38556	1113.554	2537.388	1.037	H2-1
19	M439	L2.5X2.5X4	0.315	2.827	4	0.122	0	y	5	38486.224	38556	1113.554	2537.388	1.159	H2-1
20	M567	L2.5X2.5X4	0.313	0	4	0.21	0	z	6	38486.224	38556	1113.554	2537.388	1.063	H2-1
21	M517	L2.5X2.5X4	0.313	0	1	0.143	0	z	8	38486.224	38556	1113.554	2537.388	1.068	H2-1
22	M542	L2.5X2.5X4	0.313	0	7	0.184	0	z	2	38486.224	38556	1113.554	2537.388	1.064	H2-1
23	M516	L2.5X2.5X4	0.308	2.827	5	0.098	2.827	z	2	38486.224	38556	1113.554	2537.388	1.074	H2-1
24	M22	L2.5X2.5X4	0.308	2.07	4	0.069	0	z	4	26952.359	38556	1113.554	2537.388	1.5	H2-1
25	M588	L2.5X2.5X4	0.308	2.827	2	0.15	0	y	2	38486.224	38556	1113.554	2537.388	1.037	H2-1
26	M539	L2.5X2.5X4	0.307	2.827	5	0.173	2.827	z	5	38486.224	38556	1113.554	2537.388	1.054	H2-1
27	M592	L2.5X2.5X4	0.304	0	14	0.22	0	y	6	38486.224	38556	1113.554	2537.388	1.05	H2-1
28	M25	L2.5X2.5X4	0.297	2.07	5	0.037	0	z	5	26952.359	38556	1113.554	2537.388	1.5	H2-1
29	M616	L2.5X2.5X4	0.294	2.827	7	0.224	0	y	6	38486.224	38556	1113.554	2537.388	1.028	H2-1
30	M378	L2.5X2.5X4	0.292	0	2	0.185	0	y	2	38486.224	38556	1113.554	2537.388	1.035	H2-1
31	M563	L2.5X2.5X4	0.287	2.827	1	0.137	0	y	8	38486.224	38556	1113.554	2537.388	1.011	H2-1
32	M404	L2.5X2.5X4	0.285	0	14	0.149	0	y	6	38486.224	38556	1113.554	2537.388	1.039	H2-1
33	M239	L2.5X2.5X4	0.282	0	5	0.097	2.827	y	8	38486.224	38556	1113.554	2537.388	1.073	H2-1
34	M587	L2.5X2.5X4	0.281	2.827	2	0.107	0	y	2	38486.224	38556	1113.554	2537.388	1.042	H2-1
35	M568	L2.5X2.5X4	0.278	0	2	0.16	0	z	6	38486.224	38556	1113.554	2537.388	1.045	H2-1
36	M593	L2.5X2.5X4	0.277	0	14	0.167	0	y	6	38486.224	38556	1113.554	2537.388	1.054	H2-1
37	M400	L2.5X2.5X4	0.274	2.827	6	0.148	0	y	2	38486.224	38556	1113.554	2537.388	1.019	H2-1
38	M615	L2.5X2.5X4	0.272	2.827	6	0.174	0	y	6	38486.224	38556	1113.554	2537.388	1.028	H2-1
39	M250	L2.5X2.5X4	0.271	2.827	8	0.075	0	y	5	38486.224	38556	1113.554	2537.388	1.079	H2-1
40	M467	L2.5X2.5X4	0.269	0	3	0.111	0	z	7	38486.224	38556	1113.554	2537.388	1.064	H2-1
41	M538	L2.5X2.5X4	0.268	2.827	5	0.133	2.827	z	8	38486.224	38556	1113.554	2537.388	1.039	H2-1
42	M438	L2.5X2.5X4	0.267	2.827	4	0.078	0	y	5	38486.224	38556	1113.554	2537.388	1.263	H2-1
43	M379	L2.5X2.5X4	0.266	0	2	0.141	0	y	2	38486.224	38556	1113.554	2537.388	1.037	H2-1
44	M441	L2.5X2.5X4	0.263	2.827	6	0.156	2.827	z	7	38486.224	38556	1113.554	2537.388	1.5	H2-1
45	M543	L2.5X2.5X4	0.256	0	7	0.138	0	z	2	38486.224	38556	1113.554	2537.388	1.072	H2-1
46	M466	L2.5X2.5X4	0.256	2.827	3	0.11	2.827	z	8	38486.224	38556	1113.554	2537.388	1.061	H2-1
47	M515	L2.5X2.5X4	0.255	2.827	5	0.078	2.827	z	2	38486.224	38556	1113.554	2537.388	1.084	H2-1
48	M492	L2.5X2.5X4	0.255	0	5	0.106	2.827	z	7	38486.224	38556	1113.554	2537.388	1.081	H2-1
49	M586	L2.5X2.5X4	0.254	2.827	2	0.068	0	y	2	38486.224	38556	1113.554	2537.388	1.048	H2-1
50	M518	L2.5X2.5X4	0.253	0	1	0.103	0	z	8	38486.224	38556	1113.554	2537.388	1.076	H2-1
51	M569	L2.5X2.5X4	0.253	0	2	0.113	0	z	6	38486.224	38556	1113.554	2537.388	1.048	H2-1
52	M405	L2.5X2.5X4	0.252	0	14	0.109	0	y	6	38486.224	38556	1113.554	2537.388	1.041	H2-1
53	M399	L2.5X2.5X4	0.25	2.827	6	0.11	0	y	2	38486.224	38556	1113.554	2537.388	1.022	H2-1
54	M562	L2.5X2.5X4	0.25	2.827	1	0.1	0	y	8	38486.224	38556	1113.554	2537.388	1.004	H2-1

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

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [lb-ft]	phi*Mn z-z [lb-ft]	Cb	Eqn
55	M17	L2.5X2.5X4	0.25	39.75	6	0.086	0	z	6	26952.359	38556	1113.554	2537.388	1.5	H2-1
56	M614	L2.5X2.5X4	0.25	2.827	6	0.128	2.827	z	11	38486.224	38556	1113.554	2537.388	1.031	H2-1
57	M594	L2.5X2.5X4	0.249	0	14	0.118	0	y	6	38486.224	38556	1113.554	2537.388	1.059	H2-1
58	M428	L2.5X2.5X4	0.245	0	4	0.086	2.827	y	4	38486.224	38556	1113.554	2537.388	1.053	H2-1
59	M427	L2.5X2.5X4	0.245	2.827	6	0.154	0	y	6	38486.224	38556	1113.554	2537.388	1.055	H2-1
60	M353	L2.5X2.5X4	0.244	0	8	0.155	0	y	2	38486.224	38556	1113.554	2537.388	1.032	H2-1
61	M375	L2.5X2.5X4	0.243	2.827	2	0.139	0	y	2	38486.224	38556	1113.554	2537.388	1.014	H2-1
62	M380	L2.5X2.5X4	0.239	0	2	0.1	0	y	2	38486.224	38556	1113.554	2537.388	1.04	H2-1
63	M240	L2.5X2.5X4	0.237	0	5	0.058	2.827	y	8	38486.224	38556	1113.554	2537.388	1.087	H2-1
64	M24	L2.5X2.5X4	0.234	39.75	6	0.084	0	z	2	26952.359	38556	1113.554	2537.388	1.5	H2-1
65	M426	L2.5X2.5X4	0.232	2.827	6	0.116	0	y	6	38486.224	38556	1113.554	2537.388	1.06	H2-1
66	M537	L2.5X2.5X4	0.232	2.827	5	0.1	0	z	4	38486.224	38556	1113.554	2537.388	1.027	H2-1
67	M20	L2.5X2.5X4	0.231	2.07	1	0.062	0	z	1	26952.359	38556	1113.554	2537.388	1.5	H2-1
68	M23	L2.5X2.5X4	0.231	39.75	2	0.07	0	z	8	26952.359	38556	1113.554	2537.388	1.5	H2-1
69	M489	L2.5X2.5X4	0.228	2.827	6	0.126	2.827	z	6	38486.224	38556	1113.554	2537.388	1.034	H2-1
70	M585	L2.5X2.5X4	0.227	2.827	2	0.034	0	y	2	38486.224	38556	1113.554	2537.388	1.057	H2-1
71	M613	L2.5X2.5X4	0.227	2.827	6	0.092	0	y	11	38486.224	38556	1113.554	2537.388	1.034	H2-1
72	M570	L2.5X2.5X4	0.226	0	2	0.072	0	z	6	38486.224	38556	1113.554	2537.388	1.053	H2-1
73	M398	L2.5X2.5X4	0.226	2.827	6	0.075	0	y	2	38486.224	38556	1113.554	2537.388	1.026	H2-1
74	M249	L2.5X2.5X4	0.223	2.827	8	0.04	0	y	5	38486.224	38556	1113.554	2537.388	1.098	H2-1
75	M595	L2.5X2.5X4	0.222	0	14	0.074	0	y	6	38486.224	38556	1113.554	2537.388	1.066	H2-1
76	M561	L2.5X2.5X4	0.221	2.827	8	0.067	0	y	8	38486.224	38556	1113.554	2537.388	1.034	H2-1
77	M374	L2.5X2.5X4	0.221	2.827	2	0.104	0	y	2	38486.224	38556	1113.554	2537.388	1.017	H2-1
78	M354	L2.5X2.5X4	0.221	0	8	0.116	0	y	2	38486.224	38556	1113.554	2537.388	1.034	H2-1
79	M437	L2.5X2.5X4	0.22	2.827	7	0.041	0	y	5	38486.224	38556	1113.554	2537.388	1.025	H2-1
80	M468	L2.5X2.5X4	0.22	0	3	0.08	0	z	7	38486.224	38556	1113.554	2537.388	1.072	H2-1
81	M406	L2.5X2.5X4	0.219	0	6	0.073	0	y	6	38486.224	38556	1113.554	2537.388	1.027	H2-1
82	M425	L2.5X2.5X4	0.219	2.827	6	0.082	0	y	6	38486.224	38556	1113.554	2537.388	1.067	H2-1
83	M350	L2.5X2.5X4	0.217	2.827	5	0.124	0	y	8	38486.224	38556	1113.554	2537.388	1.024	H2-1
84	M381	L2.5X2.5X4	0.213	0	2	0.064	0	y	2	38486.224	38556	1113.554	2537.388	1.043	H2-1
85	M544	L2.5X2.5X4	0.212	0	8	0.096	0	z	2	38486.224	38556	1113.554	2537.388	1.057	H2-1
86	M328	L2.5X2.5X4	0.211	0	4	0.138	0	y	8	38486.224	38556	1113.554	2537.388	1.029	H2-1
87	M465	L2.5X2.5X4	0.209	2.827	3	0.084	2.827	z	8	38486.224	38556	1113.554	2537.388	1.068	H2-1
88	M514	L2.5X2.5X4	0.206	2.827	5	0.06	2.827	z	2	38486.224	38556	1113.554	2537.388	1.097	H2-1
89	M493	L2.5X2.5X4	0.205	0	5	0.085	0	z	3	38486.224	38556	1113.554	2537.388	1.093	H2-1
90	M61	.25X4	0.204	2.827	5	0.156	0	y	5	29884.945	32400	168.75	2700	1.069	H1-1b
91	M424	L2.5X2.5X4	0.204	2.827	6	0.053	0	y	11	38486.224	38556	1113.554	2537.388	1.077	H2-1
92	M612	L2.5X2.5X4	0.204	2.827	6	0.06	0	y	11	38486.224	38556	1113.554	2537.388	1.039	H2-1
93	M760	L2.5X2.5X4	0.203	49.8	8	0.015	49.8	y	6	21705.62	37485	1082.622	2335.676	1.279	H2-1
94	M429	L2.5X2.5X4	0.203	0	4	0.061	0	z	7	38486.224	38556	1113.554	2537.388	1.059	H2-1
95	M397	L2.5X2.5X4	0.201	2.827	6	0.043	0	y	2	38486.224	38556	1113.554	2537.388	1.031	H2-1
96	M488	L2.5X2.5X4	0.2	2.827	6	0.096	2.827	z	7	38486.224	38556	1113.554	2537.388	1.025	H2-1
97	M571	L2.5X2.5X4	0.2	0	2	0.037	0	z	7	38486.224	38556	1113.554	2537.388	1.058	H2-1
98	M584	L2.5X2.5X4	0.2	2.827	2	0.03	0	y	6	38486.224	38556	1113.554	2537.388	1.068	H2-1
99	M596	L2.5X2.5X4	0.2	0	6	0.035	0	y	6	38486.224	38556	1113.554	2537.388	1.061	H2-1
100	M373	L2.5X2.5X4	0.2	2.827	2	0.073	0	y	2	38486.224	38556	1113.554	2537.388	1.02	H2-1
101	M355	L2.5X2.5X4	0.198	0	8	0.081	0	y	2	38486.224	38556	1113.554	2537.388	1.037	H2-1
102	M759	L2.5X2.5X4	0.198	49.8	4	0.018	0	z	2	21705.62	37485	1082.622	2309.65	1.202	H2-1
103	M560	L2.5X2.5X4	0.197	2.827	8	0.037	0	y	8	38486.224	38556	1113.554	2537.388	1.04	H2-1
104	M536	L2.5X2.5X4	0.197	2.827	5	0.071	0	y	4	38486.224	38556	1113.554	2537.388	1.017	H2-1
105	M519	L2.5X2.5X4	0.197	0	1	0.068	0	z	8	38486.224	38556	1113.554	2537.388	1.088	H2-1
106	M349	L2.5X2.5X4	0.196	2.827	8	0.093	0	y	8	38486.224	38556	1113.554	2537.388	1.018	H2-1
107	M189	.25X4	0.194	0	6	0.386	0	y	2	29884.945	32400	168.75	2700	1.037	H1-1b
108	M407	L2.5X2.5X4	0.193	0	6	0.04	0	y	6	38486.224	38556	1113.554	2537.388	1.029	H2-1
109	M436	L2.5X2.5X4	0.192	2.827	7	0.025	2.827	y	8	38486.224	38556	1113.554	2537.388	1.03	H2-1

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

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [lb-ft]	phi*Mn z-z [lb-ft]	Cb	Eqn
110	M241	L2.5X2.5X4	0.191	0	5	0.027	2.827	y	4	38486.224	38556	1113.554	2537.388	1.108	H2-1
111	M545	L2.5X2.5X4	0.191	0	8	0.059	0	z	1	38486.224	38556	1113.554	2537.388	1.063	H2-1
112	M212	.25X4	0.191	0	6	0.117	2.827	y	14	29884.945	32400	168.75	2700	1.595	H1-1b
113	M329	L2.5X2.5X4	0.19	0	4	0.102	0	y	8	38486.224	38556	1113.554	2537.388	1.031	H2-1
114	M423	L2.5X2.5X4	0.189	2.827	6	0.031	0	y	11	38486.224	38556	1113.554	2537.388	1.09	H2-1
115	M756	L2.5X2.5X4	0.189	49.8	5	0.013	49.8	y	4	21705.62	37485	1082.622	2337.761	1.286	H2-1
116	M351	L2.5X2.5X4	0.187	0	6	0.034	2.827	y	11	38486.224	38556	1113.554	2537.388	1.007	H2-1
117	M382	L2.5X2.5X4	0.187	0	2	0.032	0	y	2	38486.224	38556	1113.554	2537.388	1.048	H2-1
118	M376	L2.5X2.5X4	0.184	0	3	0.041	2.827	y	13	38486.224	38556	1113.554	2537.388	1.049	H2-1
119	M611	L2.5X2.5X4	0.181	2.827	6	0.029	0	y	11	38486.224	38556	1113.554	2537.388	1.044	H2-1
120	M187	.25X4	0.179	0	2	0.116	2.827	y	2	29884.945	32400	168.75	2700	2.144	H1-1b
121	M162	.25X4	0.179	0	8	0.108	2.827	y	8	29884.945	32400	168.75	2700	1.973	H1-1b
122	M211	.25X4	0.179	2.827	2	0.334	0	y	2	29884.945	32400	168.75	2700	1.035	H1-1b
123	M597	L2.5X2.5X4	0.178	0	6	0.045	0	y	11	38486.224	38556	1113.554	2537.388	1.069	H2-1
124	M396	L2.5X2.5X4	0.178	2.827	2	0.019	0	y	14	38486.224	38556	1113.554	2537.388	1.073	H2-1
125	M356	L2.5X2.5X4	0.178	0	2	0.05	0	y	2	38486.224	38556	1113.554	2537.388	1.071	H2-1
126	M372	L2.5X2.5X4	0.178	2.827	2	0.044	0	y	2	38486.224	38556	1113.554	2537.388	1.025	H2-1
127	M348	L2.5X2.5X4	0.177	2.827	8	0.064	0	y	8	38486.224	38556	1113.554	2537.388	1.021	H2-1
128	M19	L2.5X2.5X4	0.177	39.75	8	0.062	0	z	8	26952.359	38556	1113.554	2537.388	1.5	H2-1
129	M248	L2.5X2.5X4	0.176	2.827	8	0.025	2.827	y	8	38486.224	38556	1113.554	2537.388	1.13	H2-1
130	M469	L2.5X2.5X4	0.174	0	4	0.053	0	z	7	38486.224	38556	1113.554	2537.388	1.077	H2-1
131	M487	L2.5X2.5X4	0.174	2.827	6	0.069	2.827	z	7	38486.224	38556	1113.554	2537.388	1.016	H2-1
132	M559	L2.5X2.5X4	0.173	2.827	8	0.022	2.827	z	7	38486.224	38556	1113.554	2537.388	1.048	H2-1
133	M572	L2.5X2.5X4	0.173	0	2	0.025	0	y	10	38486.224	38556	1113.554	2537.388	1.065	H2-1
134	M758	L2.5X2.5X4	0.173	0	7	0.014	49.8	z	5	21705.62	37485	1082.622	2274.095	1.107	H2-1
135	M422	L2.5X2.5X4	0.173	2.827	6	0.025	2.827	y	15	38486.224	38556	1113.554	2537.388	1.111	H2-1
136	M583	L2.5X2.5X4	0.172	2.827	2	0.053	0	y	6	38486.224	38556	1113.554	2537.388	1.085	H2-1
137	M164	.25X4	0.171	0	2	0.331	0	y	2	29884.945	32400	168.75	2700	1.037	H1-1b
138	M546	L2.5X2.5X4	0.17	0	8	0.029	0	z	1	38486.224	38556	1113.554	2537.388	1.07	H2-1
139	M330	L2.5X2.5X4	0.169	0	4	0.07	0	y	8	38486.224	38556	1113.554	2537.388	1.034	H2-1
140	M753	L2.5X2.5X4	0.168	49.8	2	0.026	49.8	y	11	21705.62	37485	1082.622	2395.446	1.488	H2-1
141	M408	L2.5X2.5X4	0.167	0	6	0.024	0	y	13	38486.224	38556	1113.554	2537.388	1.032	H2-1
142	M535	L2.5X2.5X4	0.166	2.827	4	0.045	0	y	4	38486.224	38556	1113.554	2537.388	1.009	H2-1
143	M464	L2.5X2.5X4	0.166	2.827	3	0.061	2.827	z	4	38486.224	38556	1113.554	2537.388	1.076	H2-1
144	M442	L2.5X2.5X4	0.166	0	14	0.092	2.827	y	8	38486.224	38556	1113.554	2537.388	1.082	H2-1
145	M214	.25X4	0.164	0	6	0.342	0	y	6	29884.945	32400	168.75	2700	1.034	H1-1b
146	M435	L2.5X2.5X4	0.163	2.827	7	0.045	2.827	y	8	38486.224	38556	1113.554	2537.388	1.035	H2-1
147	M60	.25X4	0.162	2.827	5	0.083	0	y	5	29884.945	32400	168.75	2700	1.084	H1-1b
148	M112	.25X4	0.162	0	7	0.089	2.827	y	12	29884.945	32400	168.75	2700	1.612	H1-1b
149	M513	L2.5X2.5X4	0.16	2.827	5	0.045	2.827	z	1	38486.224	38556	1113.554	2537.388	1.114	H2-1
150	M383	L2.5X2.5X4	0.16	0	2	0.028	0	y	14	38486.224	38556	1113.554	2537.388	1.054	H2-1
151	M357	L2.5X2.5X4	0.16	0	2	0.024	2.827	y	5	38486.224	38556	1113.554	2537.388	1.081	H2-1
152	M430	L2.5X2.5X4	0.16	0	8	0.052	0	z	1	38486.224	38556	1113.554	2537.388	1.182	H2-1
153	M191	.25X4	0.159	0	2	0.199	0	y	2	29884.945	32400	168.75	2700	1.044	H1-1b
154	M186	.25X4	0.159	2.827	8	0.288	0	y	2	29884.945	32400	168.75	2700	1.035	H1-1b
155	M190	.25X4	0.159	2.827	2	0.288	0	y	2	29884.945	32400	168.75	2700	1.04	H1-1b
156	M303	L2.5X2.5X4	0.159	0	7	0.104	0	y	4	38486.224	38556	1113.554	2537.388	1.025	H2-1
157	M192	.25X4	0.159	0	2	0.12	0	y	2	29884.945	32400	168.75	2700	1.049	H1-1b
158	M494	L2.5X2.5X4	0.159	0	5	0.069	0	z	3	38486.224	38556	1113.554	2537.388	1.108	H2-1
159	M277	L2.5X2.5X4	0.159	2.827	10	0.11	2.827	z	8	38486.224	38556	1113.554	2537.388	1.048	H2-1
160	M610	L2.5X2.5X4	0.158	2.827	6	0.039	2.827	y	7	38486.224	38556	1113.554	2537.388	1.051	H2-1
161	M347	L2.5X2.5X4	0.157	2.827	8	0.038	0	y	8	38486.224	38556	1113.554	2537.388	1.025	H2-1
162	M395	L2.5X2.5X4	0.157	2.827	2	0.027	2.827	y	1	38486.224	38556	1113.554	2537.388	1.087	H2-1
163	M238	.25X4	0.157	2.827	6	0.263	0	y	6	29884.945	32400	168.75	2700	1.032	H1-1b
164	M598	L2.5X2.5X4	0.156	0	6	0.07	0	y	11	38486.224	38556	1113.554	2537.388	1.081	H2-1

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

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [lb-ft]	phi*Mn z-z [lb-ft]	Cb	Eqn
165	M371	L2.5X2.5X4	0.156	2.827	2	0.019	0	y	2	38486.224	38556	1113.554	2537.388	1.03	H2-1
166	M421	L2.5X2.5X4	0.155	2.827	6	0.041	2.827	y	7	38486.224	38556	1113.554	2537.388	1.146	H2-1
167	M331	L2.5X2.5X4	0.155	0	8	0.041	0	y	8	38486.224	38556	1113.554	2537.388	1.07	H2-1
168	M193	.25X4	0.153	0	2	0.049	0	y	2	29884.945	32400	168.75	2700	1.056	H1-1b
169	M139	.25X4	0.152	0	8	0.259	0	y	8	29884.945	32400	168.75	2700	1.038	H1-1b
170	M278	L2.5X2.5X4	0.151	0	1	0.101	0	y	7	38486.224	38556	1113.554	2537.388	1.022	H2-1
171	M252	L2.5X2.5X4	0.151	2.827	12	0.055	2.827	y	16	38486.224	38556	1113.554	2537.388	1.5	H2-1
172	M300	L2.5X2.5X4	0.151	2.827	6	0.081	0	y	7	38486.224	38556	1113.554	2537.388	1.031	H2-1
173	M50	.25X4	0.151	0	5	0.141	0	y	5	29884.945	32400	168.75	2700	1.074	H1-1b
174	M486	L2.5X2.5X4	0.15	2.827	2	0.048	0	y	1	38486.224	38556	1113.554	2537.388	1.031	H2-1
175	M520	L2.5X2.5X4	0.149	0	4	0.036	0	z	5	38486.224	38556	1113.554	2537.388	1.097	H2-1
176	M558	L2.5X2.5X4	0.149	2.827	8	0.042	2.827	y	1	38486.224	38556	1113.554	2537.388	1.06	H2-1
177	M547	L2.5X2.5X4	0.148	0	8	0.028	0	z	2	38486.224	38556	1113.554	2537.388	1.081	H2-1
178	M302	L2.5X2.5X4	0.148	2.827	16	0.053	2.827	y	16	38486.224	38556	1113.554	2537.388	1.277	H2-1
179	M242	L2.5X2.5X4	0.147	0	8	0.036	0	y	5	38486.224	38556	1113.554	2537.388	1.128	H2-1
180	M62	.25X4	0.147	0	1	0.076	2.827	y	9	29884.945	32400	168.75	2700	1.321	H1-1b
181	M327	L2.5X2.5X4	0.146	2.827	3	0.101	2.827	z	6	38486.224	38556	1113.554	2537.388	1.042	H2-1
182	M209	.25X4	0.146	2.827	6	0.162	0	y	2	29884.945	32400	168.75	2700	1.043	H1-1b
183	M210	.25X4	0.146	0	6	0.244	0	y	2	29884.945	32400	168.75	2700	1.039	H1-1b
184	M401	L2.5X2.5X4	0.146	0	5	0.043	2.827	y	1	38486.224	38556	1113.554	2537.388	1.153	H2-1
185	M573	L2.5X2.5X4	0.146	0	2	0.047	0	y	2	38486.224	38556	1113.554	2537.388	1.075	H2-1
186	M21	L2.5X2.5X4	0.145	0	8	0.058	0	z	6	26952.359	38556	1113.554	2537.388	1.5	H2-1
187	M253	L2.5X2.5X4	0.145	0	5	0.084	2.827	y	8	38486.224	38556	1113.554	2537.388	1.035	H2-1
188	M534	L2.5X2.5X4	0.145	2.827	4	0.026	2.827	y	6	38486.224	38556	1113.554	2537.388	1.014	H2-1
189	M582	L2.5X2.5X4	0.144	2.827	2	0.072	0	y	6	38486.224	38556	1113.554	2537.388	1.113	H2-1
190	M304	L2.5X2.5X4	0.143	0	7	0.08	0	y	4	38486.224	38556	1113.554	2537.388	1.026	H2-1
191	M605	L2.5X2.5X4	0.143	2.827	12	0.123	0	y	6	38486.224	38556	1113.554	2537.388	1.052	H2-1
192	M606	L2.5X2.5X4	0.143	0	12	0.115	0	y	6	38486.224	38556	1113.554	2537.388	1.04	H2-1
193	M194	.25X4	0.143	0	2	0.055	0	y	14	29884.945	32400	168.75	2700	1.064	H1-1b
194	M251	L2.5X2.5X4	0.142	0	12	0.055	2.827	y	16	38486.224	38556	1113.554	2537.388	1.5	H2-1
195	M358	L2.5X2.5X4	0.142	0	2	0.025	0	y	10	38486.224	38556	1113.554	2537.388	1.095	H2-1
196	M208	.25X4	0.142	2.827	6	0.089	0	y	2	29884.945	32400	168.75	2700	1.048	H1-1b
197	M604	L2.5X2.5X4	0.142	2.827	12	0.127	0	y	6	38486.224	38556	1113.554	2537.388	1.068	H2-1
198	M215	.25X4	0.142	0	14	0.263	0	y	6	29884.945	32400	168.75	2700	1.046	H1-1b
199	M409	L2.5X2.5X4	0.141	0	6	0.044	0	y	14	38486.224	38556	1113.554	2537.388	1.036	H2-1
200	M607	L2.5X2.5X4	0.141	0	12	0.102	0	y	6	38486.224	38556	1113.554	2537.388	1.031	H2-1
201	M443	L2.5X2.5X4	0.14	0	3	0.071	2.827	y	8	38486.224	38556	1113.554	2537.388	1.206	H2-1
202	M188	.25X4	0.14	2.827	10	0.106	2.827	y	2	29884.945	32400	168.75	2700	1.36	H1-1b
203	M332	L2.5X2.5X4	0.14	0	8	0.018	2.827	y	3	38486.224	38556	1113.554	2537.388	1.08	H2-1
204	M218	.25X4	0.14	0	6	0.067	0	y	6	29884.945	32400	168.75	2700	1.049	H1-1b
205	M217	.25X4	0.14	2.827	6	0.126	0	y	6	29884.945	32400	168.75	2700	1.044	H1-1b
206	M769	L2.5X2.5X4	0.139	50.602	6	0.009	0	z	8	21324.074	37485	1082.622	2336.767	1.303	H2-1
207	M216	.25X4	0.139	0	14	0.191	0	y	6	29884.945	32400	168.75	2700	1.05	H1-1b
208	M301	L2.5X2.5X4	0.139	0	8	0.051	2.827	y	12	38486.224	38556	1113.554	2537.388	1.093	H2-1
209	M529	L2.5X2.5X4	0.139	2.827	1	0.085	0	y	8	38486.224	38556	1113.554	2537.388	1.056	H2-1
210	M530	L2.5X2.5X4	0.139	0	1	0.077	0	y	8	38486.224	38556	1113.554	2537.388	1.038	H2-1
211	M352	L2.5X2.5X4	0.138	0	6	0.045	2.827	y	11	38486.224	38556	1113.554	2537.388	1.003	H2-1
212	M346	L2.5X2.5X4	0.138	2.827	8	0.015	0	y	8	38486.224	38556	1113.554	2537.388	1.031	H2-1
213	M276	L2.5X2.5X4	0.138	2.827	10	0.084	2.827	y	8	38486.224	38556	1113.554	2537.388	1.051	H2-1
214	M531	L2.5X2.5X4	0.138	0	1	0.065	0	y	8	38486.224	38556	1113.554	2537.388	1.025	H2-1
215	M165	.25X4	0.138	0	2	0.246	0	y	2	29884.945	32400	168.75	2700	1.04	H1-1b
216	M420	L2.5X2.5X4	0.137	2.827	6	0.058	0	y	6	38486.224	38556	1113.554	2537.388	1.218	H2-1
217	M384	L2.5X2.5X4	0.137	0	6	0.048	0	y	14	38486.224	38556	1113.554	2537.388	1.096	H2-1
218	M603	L2.5X2.5X4	0.136	2.827	12	0.126	0	y	6	38486.224	38556	1113.554	2537.388	1.093	H2-1
219	M485	L2.5X2.5X4	0.136	2.827	8	0.031	0	y	1	38486.224	38556	1113.554	2537.388	1.008	H2-1

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

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [lb-ft]	phi*Mn z-z [lb-ft]	Cb	Eqn
220	M377	L2.5X2.5X4	0.136	2.827	13	0.051	2.827	y	13	38486.224	38556	1113.554	2537.388	1.179	H2-1
221	M470	L2.5X2.5X4	0.136	0	4	0.029	0	z	6	38486.224	38556	1113.554	2537.388	1.089	H2-1
222	M279	L2.5X2.5X4	0.136	0	1	0.075	0	y	7	38486.224	38556	1113.554	2537.388	1.023	H2-1
223	M527	L2.5X2.5X4	0.136	2.827	5	0.091	0	y	8	38486.224	38556	1113.554	2537.388	1.121	H2-1
224	M521	L2.5X2.5X4	0.135	0	8	0.022	0	z	8	38486.224	38556	1113.554	2537.388	1.117	H2-1
225	M528	L2.5X2.5X4	0.135	0.383	5	0.09	0	y	8	38486.224	38556	1113.554	2537.388	1.08	H2-1
226	M299	L2.5X2.5X4	0.135	2.827	6	0.06	0	y	7	38486.224	38556	1113.554	2537.388	1.034	H2-1
227	M207	.25X4	0.135	2.827	2	0.029	0	y	10	29884.945	32400	168.75	2700	1.055	H1-1b
228	M394	L2.5X2.5X4	0.135	2.827	2	0.046	0	y	2	38486.224	38556	1113.554	2537.388	1.109	H2-1
229	M219	.25X4	0.135	0	6	0.032	0	y	15	29884.945	32400	168.75	2700	1.055	H1-1b
230	M609	L2.5X2.5X4	0.134	2.827	6	0.063	0	y	6	38486.224	38556	1113.554	2537.388	1.061	H2-1
231	M434	L2.5X2.5X4	0.134	2.827	7	0.059	0	y	5	38486.224	38556	1113.554	2537.388	1.041	H2-1
232	M370	L2.5X2.5X4	0.134	2.827	2	0.022	2.827	y	1	38486.224	38556	1113.554	2537.388	1.036	H2-1
233	M608	L2.5X2.5X4	0.134	0	12	0.085	0	y	6	38486.224	38556	1113.554	2537.388	1.024	H2-1
234	M599	L2.5X2.5X4	0.134	0	6	0.09	0	y	11	38486.224	38556	1113.554	2537.388	1.098	H2-1
235	M326	L2.5X2.5X4	0.133	2.827	3	0.077	2.827	z	6	38486.224	38556	1113.554	2537.388	1.045	H2-1
236	M532	L2.5X2.5X4	0.132	0	1	0.05	0	y	8	38486.224	38556	1113.554	2537.388	1.013	H2-1
237	M548	L2.5X2.5X4	0.132	0	2	0.049	0	z	2	38486.224	38556	1113.554	2537.388	1.135	H2-1
238	M167	.25X4	0.132	0	8	0.099	0	y	2	29884.945	32400	168.75	2700	1.05	H1-1b
239	M166	.25X4	0.132	2.827	8	0.169	0	y	2	29884.945	32400	168.75	2700	1.045	H1-1b
240	M254	L2.5X2.5X4	0.132	0	5	0.064	2.827	y	8	38486.224	38556	1113.554	2537.388	1.038	H2-1
241	M161	.25X4	0.131	2.827	5	0.235	0	y	8	29884.945	32400	168.75	2700	1.038	H1-1b
242	M526	L2.5X2.5X4	0.131	2.827	5	0.088	0	y	8	38486.224	38556	1113.554	2537.388	1.205	H2-1
243	M484	L2.5X2.5X4	0.13	2.827	8	0.02	0	z	8	38486.224	38556	1113.554	2537.388	1.015	H2-1
244	M247	L2.5X2.5X4	0.13	2.827	5	0.045	2.827	y	8	38486.224	38556	1113.554	2537.388	1.167	H2-1
245	M213	.25X4	0.129	2.827	14	0.11	2.827	y	6	29884.945	32400	168.75	2700	1.501	H1-1b
246	M554	L2.5X2.5X4	0.129	2.827	15	0.095	0	y	2	38486.224	38556	1113.554	2537.388	1.027	H2-1
247	M555	L2.5X2.5X4	0.129	0	15	0.088	0	y	2	38486.224	38556	1113.554	2537.388	1.014	H2-1
248	M168	.25X4	0.128	0	8	0.038	0	y	8	29884.945	32400	168.75	2700	1.056	H1-1b
249	M305	L2.5X2.5X4	0.128	0	7	0.059	0	y	4	38486.224	38556	1113.554	2537.388	1.029	H2-1
250	M522	L2.5X2.5X4	0.128	0	8	0.043	0	z	8	38486.224	38556	1113.554	2537.388	1.152	H2-1
251	M195	.25X4	0.128	0	2	0.101	0	y	14	29884.945	32400	168.75	2700	1.076	H1-1b
252	M463	L2.5X2.5X4	0.128	2.827	4	0.042	2.827	z	4	38486.224	38556	1113.554	2537.388	1.08	H2-1
253	M553	L2.5X2.5X4	0.127	2.827	15	0.098	0	y	2	38486.224	38556	1113.554	2537.388	1.043	H2-1
254	M602	L2.5X2.5X4	0.127	2.827	12	0.12	0	y	6	38486.224	38556	1113.554	2537.388	1.137	H2-1
255	M206	.25X4	0.126	2.827	2	0.057	0	y	6	29884.945	32400	168.75	2700	1.065	H1-1b
256	M556	L2.5X2.5X4	0.126	0	15	0.077	0	y	2	38486.224	38556	1113.554	2537.388	1.002	H2-1
257	M184	.25X4	0.126	2.827	2	0.14	0	y	2	29884.945	32400	168.75	2700	1.043	H1-1b
258	M220	.25X4	0.126	0	6	0.066	0	y	14	29884.945	32400	168.75	2700	1.063	H1-1b
259	M185	.25X4	0.126	0	2	0.211	0	y	2	29884.945	32400	168.75	2700	1.038	H1-1b
260	M483	L2.5X2.5X4	0.125	2.827	5	0.028	2.827	y	3	38486.224	38556	1113.554	2537.388	1.014	H2-1
261	M183	.25X4	0.125	2.827	2	0.076	0	y	2	29884.945	32400	168.75	2700	1.048	H1-1b
262	M402	L2.5X2.5X4	0.124	2.827	1	0.052	2.827	y	1	38486.224	38556	1113.554	2537.388	1.175	H2-1
263	M557	L2.5X2.5X4	0.124	2.827	8	0.061	0	y	2	38486.224	38556	1113.554	2537.388	1.076	H2-1
264	M333	L2.5X2.5X4	0.124	0	8	0.025	0	y	16	38486.224	38556	1113.554	2537.388	1.094	H2-1
265	M579	L2.5X2.5X4	0.124	0.766	12	0.104	0	y	6	38486.224	38556	1113.554	2537.388	1.003	H2-1
266	M578	L2.5X2.5X4	0.124	2.827	12	0.105	0	y	6	38486.224	38556	1113.554	2537.388	1.018	H2-1
267	M533	L2.5X2.5X4	0.124	2.827	4	0.034	0	y	2	38486.224	38556	1113.554	2537.388	1.021	H2-1
268	M580	L2.5X2.5X4	0.124	0	12	0.098	0	y	6	38486.224	38556	1113.554	2537.388	1.013	H2-1
269	M359	L2.5X2.5X4	0.124	0	2	0.038	0	y	2	38486.224	38556	1113.554	2537.388	1.117	H2-1
270	M505	L2.5X2.5X4	0.123	0	9	0.054	2.827	y	6	38486.224	38556	1113.554	2537.388	1.025	H2-1
271	M504	L2.5X2.5X4	0.123	2.827	9	0.054	2.827	y	6	38486.224	38556	1113.554	2537.388	1.011	H2-1
272	M503	L2.5X2.5X4	0.122	2.827	9	0.051	2.827	y	6	38486.224	38556	1113.554	2537.388	1.003	H2-1
273	M88	.25X4	0.121	2.827	8	0.165	2.827	y	8	29884.945	32400	168.75	2700	1.037	H1-1b
274	M59	.25X4	0.121	2.827	5	0.024	0	y	5	29884.945	32400	168.75	2700	1.106	H1-1b

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

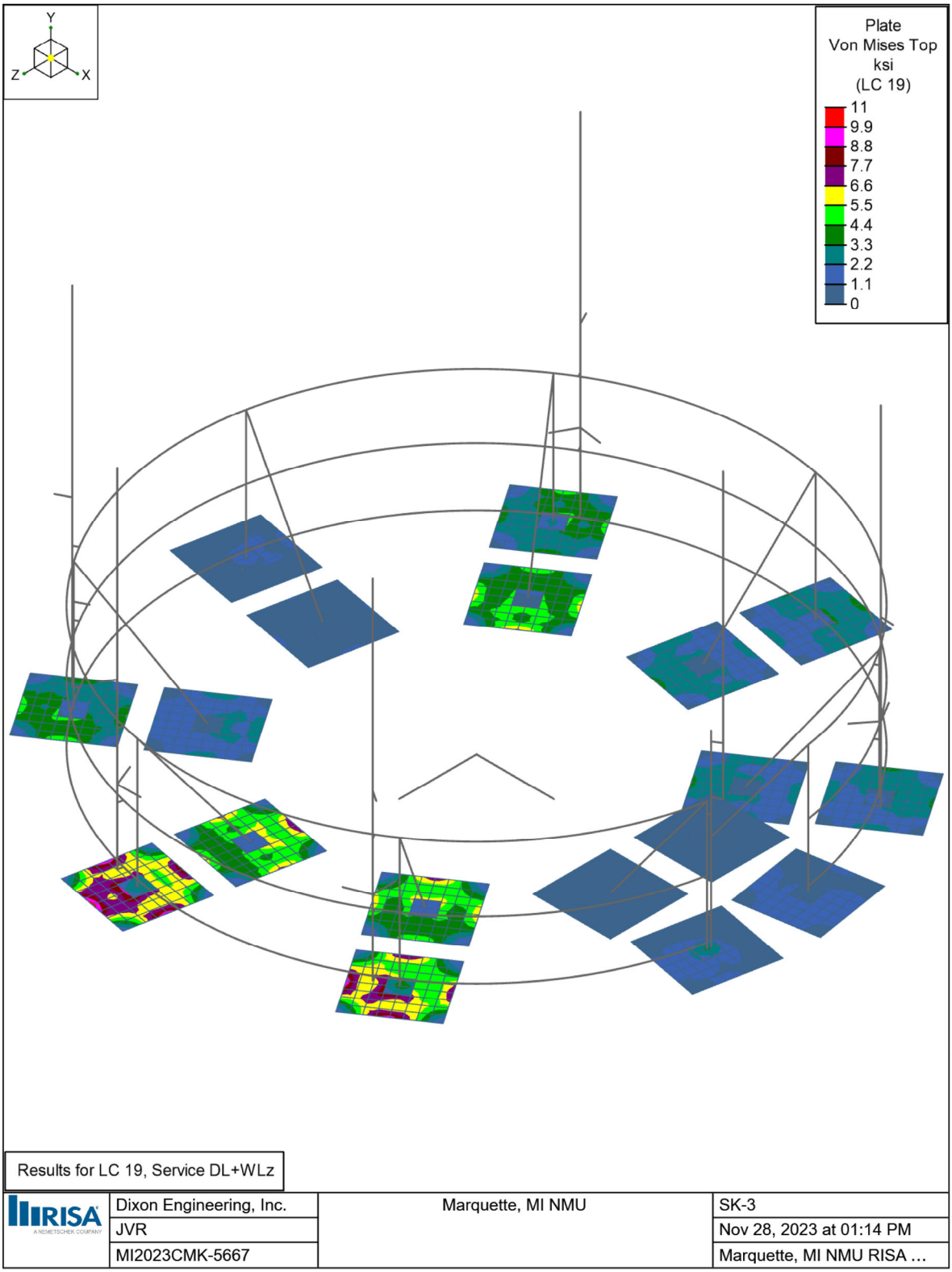
	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [lb-ft]	phi*Mn z-z [lb-ft]	Cb	Eqn
275	M138	.25X4	0.121	2.827	6	0.155	2.827	y	6	29884.945	32400	168.75	2700	1.037	H1-1b
276	M552	L2.5X2.5X4	0.121	2.827	15	0.097	0	y	2	38486.224	38556	1113.554	2537.388	1.064	H2-1
277	M525	L2.5X2.5X4	0.121	2.827	5	0.081	0	y	8	38486.224	38556	1113.554	2537.388	1.5	H2-1
278	M574	L2.5X2.5X4	0.121	0	6	0.068	0	y	2	38486.224	38556	1113.554	2537.388	1.126	H2-1
279	M480	L2.5X2.5X4	0.121	2.827	3	0.059	0	y	7	38486.224	38556	1113.554	2537.388	1.048	H2-1
280	M325	L2.5X2.5X4	0.121	2.827	3	0.055	2.827	z	6	38486.224	38556	1113.554	2537.388	1.048	H2-1
281	M481	L2.5X2.5X4	0.121	0.059	3	0.05	0	y	7	38486.224	38556	1113.554	2537.388	1.035	H2-1
282	M512	L2.5X2.5X4	0.12	2.827	8	0.033	2.827	z	1	38486.224	38556	1113.554	2537.388	1.115	H2-1
283	M280	L2.5X2.5X4	0.12	0	1	0.052	0	y	7	38486.224	38556	1113.554	2537.388	1.025	H2-1
284	M234	.25X4	0.12	2.297	6	0.038	0	y	11	29884.945	32400	168.75	2700	1.049	H1-1b
285	M482	L2.5X2.5X4	0.12	2.827	5	0.039	0	y	7	38486.224	38556	1113.554	2537.388	1.022	H2-1
286	M235	.25X4	0.12	0	6	0.076	0	y	14	29884.945	32400	168.75	2700	1.043	H1-1b
287	M169	.25X4	0.12	0	8	0.046	0	y	10	29884.945	32400	168.75	2700	1.065	H1-1b
288	M298	L2.5X2.5X4	0.12	2.827	6	0.041	0	y	7	38486.224	38556	1113.554	2537.388	1.037	H2-1
289	M163	.25X4	0.12	2.827	16	0.102	2.827	y	8	29884.945	32400	168.75	2700	1.387	H1-1b
290	M140	.25X4	0.12	0	8	0.191	0	y	8	29884.945	32400	168.75	2700	1.041	H1-1b
291	M506	L2.5X2.5X4	0.119	0	9	0.053	2.827	y	6	38486.224	38556	1113.554	2537.388	1.041	H2-1
292	M444	L2.5X2.5X4	0.119	0	5	0.052	2.827	y	8	38486.224	38556	1113.554	2537.388	1.013	H2-1
293	M182	.25X4	0.119	2.827	2	0.023	0	y	10	29884.945	32400	168.75	2700	1.055	H1-1b
294	M577	L2.5X2.5X4	0.119	2.827	12	0.103	0	y	2	38486.224	38556	1113.554	2537.388	1.036	H2-1
295	M89	.25X4	0.119	0	7	0.189	0	y	7	29884.945	32400	168.75	2700	1.038	H1-1b
296	M233	.25X4	0.119	2.827	6	0.039	2.827	y	7	29884.945	32400	168.75	2700	1.056	H1-1b
297	M523	L2.5X2.5X4	0.119	0	8	0.059	0	z	8	38486.224	38556	1113.554	2537.388	1.22	H2-1
298	M345	L2.5X2.5X4	0.119	2.827	8	0.021	2.827	y	5	38486.224	38556	1113.554	2537.388	1.037	H2-1
299	M275	L2.5X2.5X4	0.119	2.827	10	0.061	2.827	y	8	38486.224	38556	1113.554	2537.388	1.055	H2-1
300	M581	L2.5X2.5X4	0.118	0	12	0.087	0	y	6	38486.224	38556	1113.554	2537.388	1.029	H2-1
301	M431	L2.5X2.5X4	0.118	0	8	0.057	0	y	5	38486.224	38556	1113.554	2537.388	1.318	H2-1
302	M255	L2.5X2.5X4	0.118	0	5	0.046	2.827	y	8	38486.224	38556	1113.554	2537.388	1.041	H2-1
303	M419	L2.5X2.5X4	0.118	2.827	6	0.073	0	y	6	38486.224	38556	1113.554	2537.388	1.455	H2-1
304	M479	L2.5X2.5X4	0.118	2.827	3	0.065	0	y	7	38486.224	38556	1113.554	2537.388	1.067	H2-1
305	M237	.25X4	0.118	2.827	6	0.195	0	y	6	29884.945	32400	168.75	2700	1.035	H1-1b
306	M495	L2.5X2.5X4	0.117	0	5	0.053	0	z	3	38486.224	38556	1113.554	2537.388	1.131	H2-1
307	M549	L2.5X2.5X4	0.116	0	2	0.068	0	y	2	38486.224	38556	1113.554	2537.388	1.185	H2-1
308	M236	.25X4	0.116	0	6	0.133	0	y	6	29884.945	32400	168.75	2700	1.039	H1-1b
309	M502	L2.5X2.5X4	0.116	2.827	9	0.047	2.827	y	6	38486.224	38556	1113.554	2537.388	1.016	H2-1
310	M410	L2.5X2.5X4	0.115	0	6	0.062	0	y	14	38486.224	38556	1113.554	2537.388	1.04	H2-1
311	M385	L2.5X2.5X4	0.115	0	6	0.063	0	y	14	38486.224	38556	1113.554	2537.388	1.118	H2-1
312	M64	.25X4	0.113	0	5	0.159	2.827	y	8	29884.945	32400	168.75	2700	1.037	H1-1b
313	M306	L2.5X2.5X4	0.113	0	7	0.04	2.827	y	3	38486.224	38556	1113.554	2537.388	1.032	H2-1
314	M232	.25X4	0.113	2.827	6	0.075	0	y	6	29884.945	32400	168.75	2700	1.066	H1-1b
315	M601	L2.5X2.5X4	0.113	2.827	12	0.114	0	y	11	38486.224	38556	1113.554	2537.388	1.235	H2-1
316	M205	.25X4	0.113	2.827	2	0.104	0	y	6	29884.945	32400	168.75	2700	1.078	H1-1b
317	M393	L2.5X2.5X4	0.113	2.827	2	0.063	0	y	2	38486.224	38556	1113.554	2537.388	1.147	H2-1
318	M221	.25X4	0.113	0	6	0.1	0	y	14	29884.945	32400	168.75	2700	1.074	H1-1b
319	M369	L2.5X2.5X4	0.112	2.827	2	0.039	2.827	y	1	38486.224	38556	1113.554	2537.388	1.045	H2-1
320	M507	L2.5X2.5X4	0.112	0	9	0.049	2.827	y	6	38486.224	38556	1113.554	2537.388	1.064	H2-1
321	M51	.25X4	0.112	0	5	0.07	0	y	5	29884.945	32400	168.75	2700	1.09	H1-1b
322	M478	L2.5X2.5X4	0.111	2.827	3	0.069	0	y	7	38486.224	38556	1113.554	2537.388	1.095	H2-1
323	M600	L2.5X2.5X4	0.111	0	6	0.105	0	y	11	38486.224	38556	1113.554	2537.388	1.126	H2-1
324	M181	.25X4	0.11	2.827	2	0.049	0	y	2	29884.945	32400	168.75	2700	1.064	H1-1b
325	M757	L2.5X2.5X4	0.11	49.8	1	0.012	49.8	z	7	21705.62	37485	1082.622	2398.581	1.5	H2-1
326	M196	.25X4	0.11	0	2	0.138	0	y	14	29884.945	32400	168.75	2700	1.094	H1-1b
327	M551	L2.5X2.5X4	0.11	2.827	15	0.092	0	y	2	38486.224	38556	1113.554	2537.388	1.095	H2-1
328	M114	.25X4	0.11	0	7	0.171	0	y	4	29884.945	32400	168.75	2700	1.036	H1-1b
329	M576	L2.5X2.5X4	0.11	2.827	12	0.096	0	y	2	38486.224	38556	1113.554	2537.388	1.058	H2-1

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

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [lb-ft]	phi*Mn z-z [lb-ft]	Cb	Eqn
330	M524	L2.5X2.5X4	0.109	0	5	0.072	0	z	8	38486.224	38556	1113.554	2537.388	1.5	H2-1
331	M111	.25X4	0.109	2.827	6	0.163	0	y	7	29884.945	32400	168.75	2700	1.04	H1-1b
332	M324	L2.5X2.5X4	0.108	2.827	3	0.037	2.827	z	7	38486.224	38556	1113.554	2537.388	1.052	H2-1
333	M170	.25X4	0.108	0	8	0.082	0	y	2	29884.945	32400	168.75	2700	1.077	H1-1b
334	M334	L2.5X2.5X4	0.108	0	8	0.039	0	y	8	38486.224	38556	1113.554	2537.388	1.115	H2-1
335	M501	L2.5X2.5X4	0.106	2.827	9	0.041	0	y	7	38486.224	38556	1113.554	2537.388	1.031	H2-1
336	M281	L2.5X2.5X4	0.105	0	1	0.034	0	y	1	38486.224	38556	1113.554	2537.388	1.027	H2-1
337	M52	.25X4	0.105	0	5	0.029	0	y	1	29884.945	32400	168.75	2700	1.115	H1-1b
338	M256	L2.5X2.5X4	0.105	0	5	0.029	2.827	y	8	38486.224	38556	1113.554	2537.388	1.045	H2-1
339	M158	.25X4	0.105	2.827	8	0.065	0	y	8	29884.945	32400	168.75	2700	1.047	H1-1b
340	M159	.25X4	0.104	0	8	0.117	0	y	8	29884.945	32400	168.75	2700	1.042	H1-1b
341	M297	L2.5X2.5X4	0.104	2.827	6	0.024	0	y	7	38486.224	38556	1113.554	2537.388	1.041	H2-1
342	M360	L2.5X2.5X4	0.104	0	2	0.054	0	y	2	38486.224	38556	1113.554	2537.388	1.154	H2-1
343	M433	L2.5X2.5X4	0.104	2.827	7	0.066	0	y	5	38486.224	38556	1113.554	2537.388	1.049	H2-1
344	M550	L2.5X2.5X4	0.104	0	1	0.082	0	y	2	38486.224	38556	1113.554	2537.388	1.418	H2-1
345	M445	L2.5X2.5X4	0.104	0	5	0.034	2.827	y	8	38486.224	38556	1113.554	2537.388	1.016	H2-1
346	M160	.25X4	0.104	0	8	0.173	0	y	8	29884.945	32400	168.75	2700	1.037	H1-1b
347	M231	.25X4	0.103	2.827	6	0.108	0	y	6	29884.945	32400	168.75	2700	1.08	H1-1b
348	M243	L2.5X2.5X4	0.103	0	8	0.053	0	y	5	38486.224	38556	1113.554	2537.388	1.187	H2-1
349	M142	.25X4	0.102	1.09	8	0.074	0	y	8	29884.945	32400	168.75	2700	1.051	H1-1b
350	M141	.25X4	0.102	2.651	8	0.129	0	y	8	29884.945	32400	168.75	2700	1.045	H1-1b
351	M575	L2.5X2.5X4	0.102	0	7	0.085	0	y	2	38486.224	38556	1113.554	2537.388	1.204	H2-1
352	M157	.25X4	0.101	2.827	8	0.023	0	y	12	29884.945	32400	168.75	2700	1.054	H1-1b
353	M143	.25X4	0.101	0	8	0.026	2.827	y	5	29884.945	32400	168.75	2700	1.057	H1-1b
354	M471	L2.5X2.5X4	0.101	0	8	0.023	0	z	4	38486.224	38556	1113.554	2537.388	1.107	H2-1
355	M477	L2.5X2.5X4	0.101	2.827	3	0.069	0	y	7	38486.224	38556	1113.554	2537.388	1.146	H2-1
356	M274	L2.5X2.5X4	0.1	2.827	16	0.041	2.827	y	8	38486.224	38556	1113.554	2537.388	1.064	H2-1
357	M508	L2.5X2.5X4	0.1	0	9	0.043	2.827	y	6	38486.224	38556	1113.554	2537.388	1.097	H2-1

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	DL+WLx		C	1	1.2	3	1				
2	DL-WLx		C	1	1.2	3	-1				
3	DL+WLz		C	1	1.2	4	1				
4	DL-WLz		C	1	1.2	4	-1				
5	DL+WLx 45		C	1	1.2	3	0.707	4	0.707		
6	DL-WLx 45		C	1	1.2	3	-0.707	4	0.707		
7	DL+WLz 45		C	1	1.2	3	0.707	4	-0.707		
8	DL-WLz 45		C	1	1.2	3	-0.707	4	-0.707		
9	DL+Ice+WLx (Ice)		C	1	1.2	2	1	5	1		
10	DL+Ice-WLx (Ice)		C	1	1.2	2	1	5	-1		
11	DL+Ice+WLz (Ice)		C	1	1.2	2	1	6	1		
12	DL+Ice-WLz (Ice)		C	1	1.2	2	1	6	-1		
13	DL+Ice+WLx 45 (Ice)		C	1	1.2	2	1	5	0.707	6	0.707
14	DL+Ice-WLx 45 (Ice)		C	1	1.2	2	1	5	-0.707	6	0.707
15	DL+Ice+WLz 45 (Ice)		C	1	1.2	2	1	5	0.707	6	-0.707
16	DL+Ice-WLz 45 (Ice)		C	1	1.2	2	1	5	-0.707	6	-0.707
17	Service DL+WLx	Yes	C	1	1	3	0.746				
18	Service DL-WLx	Yes	C	1	1	3	-0.746				
19	Service DL+WLz	Yes	C	1	1	4	0.746				
20	Service DL-WLz	Yes	C	1	1	4	-0.746				
21	Service DL+WLx 45	Yes	C	1	1	3	0.528	4	0.528		
22	Service DL-WLx 45	Yes	C	1	1	3	-0.528	4	0.528		
23	Service DL+WLz 45	Yes	C	1	1	3	0.528	4	-0.528		
24	Service DL-WLz 45	Yes	C	1	1	3	-0.528	4	-0.528		
25	Service DL+Ice+WLx (Ice)	Yes	C	1	1	2	0.7	5	0.7		
26	Service DL+Ice-WLx (Ice)	Yes	C	1	1	2	0.7	5	-0.7		
27	Service DL+Ice+WLz (Ice)	Yes	C	1	1	2	0.7	6	0.7		
28	Service DL+Ice-WLz (Ice)	Yes	C	1	1	2	0.7	6	-0.7		
29	Service DL+Ice+WLx 45 (Ice)	Yes	C	1	1	2	0.7	5	0.495	6	0.495
30	Service DL+Ice-WLx 45 (Ice)	Yes	C	1	1	2	0.7	5	-0.495	6	0.495
31	Service DL+Ice+WLz 45 (Ice)	Yes	C	1	1	2	0.7	5	0.495	6	-0.495
32	Service DL+Ice-WLz 45 (Ice)	Yes	C	1	1	2	0.7	5	-0.495	6	-0.495


Y
Z
X
Plate
Von Mises Top
ksi
(LC 19)
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Results for LC 19, Service DL+WLz
Dixon Engineering, Inc.
JVR
MI2023CMK-5667
Marquette, MI NMU
SK-3
Nov 28, 2023 at 01:14 PM
Marquette, MI NMU RISA ...

Envelope Plate Principal Stresses

	Plate		Surface	Sigma1 [ksi]	LC	Sigma2 [ksi]	LC	Tau Max [ksi]	LC	Angle [rad]	LC	Von Mises [ksi]	LC
0	P604	max	T	8.217	20	1.732	20	4.487	19	1.907	24	10.377	19
1		min		-2.388	19	-11.363	19	0.323	28	0.19	28	0.73	28
2		max	B	10.5	19	2.306	19	4.097	19	1.863	21	9.558	19
3		min		-1.674	20	-7.586	20	0.298	28	0.162	17	0.676	28
4	P605	max	T	8.229	20	1.723	20	4.467	19	1.731	24	10.355	19
5		min		-2.416	19	-11.35	19	0.266	28	0.048	18	0.665	28
6		max	B	10.486	19	2.334	19	4.076	19	1.731	31	9.536	19
7		min		-1.665	20	-7.594	20	0.246	28	-0.067	17	0.619	28
8	P33	max	T	7.076	20	1.365	20	4.489	27	0.924	17	10.293	27
9		min		-2.256	27	-11.234	27	0.435	28	-0.676	23	1.048	28
10		max	B	10.343	27	2.17	27	4.086	27	0.958	18	9.446	27
11		min		-1.31	20	-6.49	20	0.408	28	-0.709	32	0.993	28
12	P60	max	T	7.623	24	1.642	24	4.421	27	1.144	18	10.144	29
13		min		-2.301	21	-11.093	29	0.399	28	-0.612	32	0.946	32
14		max	B	10.251	29	2.223	21	4.039	27	1.082	17	9.345	29
15		min		-1.588	24	-7.048	24	0.368	28	-0.648	23	0.872	32
16	P25	max	T	6.939	20	1.576	20	4.313	27	1.077	22	10.091	27
17		min		-2.47	27	-11.096	27	0.493	28	-0.521	18	1.116	28
18		max	B	10.221	27	2.383	27	3.919	27	1.094	23	9.262	27
19		min		-1.52	20	-6.369	20	0.462	28	-0.558	28	1.052	28
20	P61	max	T	7.688	24	1.582	24	4.304	29	0.962	18	10.033	29
21		min		-2.451	27	-11.018	29	0.322	32	-0.764	32	0.816	32
22		max	B	10.183	29	2.371	27	3.928	29	2.227	23	9.241	29
23		min		-1.527	24	-7.092	24	0.296	32	-0.696	20	0.761	32
24	P536	max	T	8.294	23	1.739	23	4.311	22	1.092	25	9.97	22
25		min		-2.296	22	-10.918	22	0.146	31	-0.595	21	0.337	31
26		max	B	10.089	22	2.217	22	3.936	22	1.102	20	9.183	22
27		min		-1.68	23	-7.655	23	0.138	31	-0.611	31	0.317	31
28	P577	max	T	7.703	23	1.468	23	4.366	22	1.709	21	9.968	22
29		min		-2.136	27	-10.859	22	0.436	31	0.115	17	1.062	31
30		max	B	9.964	22	2.053	27	3.962	22	1.734	24	9.117	22
31		min		-1.405	23	-7.042	23	0.414	31	0.062	28	1.015	31
32	P537	max	T	8.289	23	1.747	17	4.291	22	2.348	21	9.947	22
33		min		-2.324	18	-10.902	22	0.118	31	-0.698	17	0.307	31
34		max	B	10.075	22	2.251	18	3.916	22	0.935	20	9.162	22
35		min		-1.694	17	-7.651	23	0.111	31	-0.72	24	0.289	31
36	P569	max	T	7.533	23	1.723	23	4.124	22	1.863	18	9.686	22
37		min		-2.418	22	-10.666	22	0.508	31	0.28	24	1.147	31
38		max	B	9.796	22	2.331	22	3.733	22	1.879	17	8.864	22
39		min		-1.659	23	-6.894	23	0.48	31	0.218	31	1.089	31
40	P509	max	T	7.877	17	1.511	17	4.215	18	0.948	20	9.63	18
41		min		-2.064	18	-10.495	18	0.273	31	-0.777	31	0.676	31
42		max	B	9.632	18	1.979	18	3.826	18	0.921	19	8.811	18
43		min		-1.446	17	-7.206	17	0.252	31	-0.668	21	0.634	31
44	P580	max	T	9.955	22	9.221	22	0.567	24	2.174	27	9.609	22
45		min		-6.967	23	-7.576	23	0.091	31	-0.688	22	0.215	31
46		max	B	3.946	23	1.804	23	1.291	22	2.253	20	4.172	22
47		min		-2.231	22	-4.814	22	0.147	25	-0.758	31	0.303	25
48	P584	max	T	7.513	20	1.46	20	4.171	19	1.9	28	9.551	19
49		min		-2.076	19	-10.419	19	0.105	17	-0.296	17	0.192	17
50		max	B	9.584	19	1.987	19	3.799	19	1.83	24	8.761	19
51		min		-1.396	20	-6.899	20	0.107	17	0.221	18	0.206	17
52	P36	max	T	9.741	27	9.088	27	0.628	18	2.331	26	9.432	27
53		min		-6.29	20	-6.808	20	0.096	28	-0.69	18	0.352	28
54		max	B	3.448	20	1.594	20	1.192	19	2.005	23	3.879	19

Envelope Plate Principal Stresses (Continued)

	Plate		Surface	Sigma1 [ksi]	LC	Sigma2 [ksi]	LC	Tau Max [ksi]	LC	Angle [rad]	LC	Von Mises [ksi]	LC
55		min		-2.091	19	-4.476	19	0.14	28	-0.658	17	0.302	31
56	P501	max	T	7.709	17	1.765	17	3.985	18	1.093	21	9.363	18
57		min		-2.342	18	-10.312	18	0.355	31	-0.602	25	0.773	31
58		max	B	9.472	18	2.256	18	3.608	18	1.07	24	8.57	18
59		min		-1.699	17	-7.059	17	0.328	31	-0.504	20	0.719	31
60	P40	max	T	7.32	24	1.437	24	4.078	21	1.45	23	9.352	21
61		min		-2.061	29	-10.207	21	0.122	23	-0.552	20	0.243	23
62		max	B	9.362	21	1.969	29	3.701	21	1.05	18	8.552	21
63		min		-1.372	24	-6.695	24	0.082	23	-0.568	22	0.162	23
64	P589	max	T	10.258	19	7.8	19	1.581	22	2.236	18	9.277	19
65		min		-5.759	20	-7.508	20	0.105	28	-0.42	24	0.462	28
66		max	B	8.729	20	4.465	20	2.908	19	2.133	17	10.296	19
67		min		-6.072	19	-11.888	19	0.143	28	-0.126	31	0.491	28
68	P576	max	T	7.338	20	1.717	20	3.925	19	1.818	17	9.265	19
69		min		-2.37	19	-10.22	19	0.035	17	0.081	24	0.1	17
70		max	B	9.413	19	2.279	19	3.567	19	1.663	23	8.506	19
71		min		-1.652	20	-6.749	20	0.006	17	0.097	21	0.113	17
72	P27	max	T	10.389	27	7.392	27	1.499	27	2.311	25	9.261	27
73		min		-4.579	20	-6.81	20	0.138	32	-0.591	31	0.72	18
74		max	B	7.561	20	3.874	20	2.873	27	1.228	28	10.188	27
75		min		-6.016	27	-11.763	27	0.171	18	-0.676	23	0.583	18
76	P43	max	T	10.573	27	6.406	27	2.083	27	2.314	18	9.225	27
77		min		-4.279	20	-6.964	20	0.212	28	-0.318	32	0.672	28
78		max	B	6.618	20	5.953	20	0.708	17	2.283	17	9.559	27
79		min		-8.957	27	-10.064	27	0.104	28	-0.577	23	0.666	28
80	P588	max	T	10.142	19	7.862	19	1.14	19	2.323	18	9.216	19
81		min		-5.727	20	-7.538	20	0.122	31	-0.634	28	0.542	28
82		max	B	8.721	20	4.465	20	2.908	19	2.19	17	10.262	19
83		min		-6.032	19	-11.849	19	0.202	28	0.161	21	0.507	28
84	P587	max	T	10.513	22	6.445	22	2.108	19	2.135	17	9.182	22
85		min		-4.743	23	-7.675	23	0.207	31	-0.58	23	0.614	31
86		max	B	7.294	23	6.606	23	0.706	19	2.34	31	9.536	22
87		min		-8.993	22	-10	22	0.104	31	-0.6	30	0.599	31
88	P516	max	T	7.506	23	1.461	23	4.005	22	1.041	20	9.171	22
89		min		-1.994	22	-10.004	22	0.196	31	-0.562	24	0.505	31
90		max	B	9.214	22	1.911	22	3.652	22	1.159	31	8.423	22
91		min		-1.399	23	-6.905	23	0.176	31	-0.633	21	0.463	31
92	P512	max	T	9.454	18	8.758	18	0.491	19	2.215	21	9.126	18
93		min		-6.979	17	-7.586	17	0.091	25	-0.684	29	0.241	25
94		max	B	3.811	17	1.749	17	1.18	18	2.128	28	3.826	18
95		min		-2.054	18	-4.415	18	0.154	29	-0.688	20	0.269	29
96	P32	max	T	7.179	24	1.649	24	3.87	21	0.984	32	9.111	21
97		min		-2.302	21	-10.041	21	0.148	23	-0.702	18	0.277	23
98		max	B	9.217	21	2.209	21	3.504	21	0.881	20	8.335	21
99		min		-1.582	24	-6.572	24	0.104	23	-0.692	23	0.191	23
100	P571	max	T	10.232	22	7.007	22	1.612	22	2.041	24	9.061	22
101		min		-4.938	23	-7.482	23	0.087	28	-0.273	18	0.857	31
102		max	B	8.282	23	4.225	23	2.806	22	2.078	31	9.923	22
103		min		-5.846	22	-11.457	22	0.278	24	0.111	17	0.895	31
104	P45	max	T	10.154	27	7.47	21	1.512	27	1.813	18	9.03	27
105		min		-5.409	24	-6.827	24	0.128	28	-0.359	24	0.697	28
106		max	B	8.061	24	4.103	24	2.793	29	2.305	28	9.911	29
107		min		-5.857	29	-11.443	29	0.224	32	-0.781	17	0.738	32
108	P521	max	T	9.871	18	7.492	22	1.465	18	2.057	31	8.903	22
109		min		-5.78	23	-7.628	17	0.08	31	-0.768	29	0.165	31

Envelope Plate Principal Stresses (Continued)

	Plate		Surface	Sigma1 [ksi]	LC	Sigma2 [ksi]	LC	Tau Max [ksi]	LC	Angle [rad]	LC	Von Mises [ksi]	LC
110		max	B	8.795	23	4.502	23	2.791	22	2.326	20	9.881	22
111		min		-5.825	22	-11.408	22	0.043	31	-0.653	23	0.116	31
112	P508	max	T	7.331	23	1.719	23	3.77	22	0.873	17	8.898	22
113		min		-2.275	22	-9.815	22	0.224	21	-0.693	19	0.604	31
114		max	B	9.051	22	2.19	22	3.43	22	0.995	31	8.179	22
115		min		-1.655	23	-6.754	23	0.228	21	-0.7	20	0.549	31
116	P4	max	T	6.235	24	1.408	24	3.851	27	1.104	23	8.872	29
117		min		-2.055	29	-9.719	29	0.493	23	-0.706	17	0.972	23
118		max	B	8.935	29	1.961	29	3.501	27	0.967	22	8.134	29
119		min		-1.343	24	-5.727	24	0.436	23	-0.773	18	0.856	23
120	P35	max	T	9.596	27	7.869	27	0.863	27	2.354	21	8.86	27
121		min		-5.066	20	-6.013	20	0.193	28	-0.692	25	0.929	28
122		max	B	7.376	20	3.644	20	2.9	27	1.967	18	10.027	27
123		min		-5.778	27	-11.578	27	0.264	28	-0.778	24	0.697	18
124	P520	max	T	9.748	22	7.551	22	1.098	22	2.343	30	8.856	22
125		min		-5.797	23	-7.567	23	0.1	25	-0.707	26	0.322	31
126		max	B	8.791	23	4.496	23	2.794	22	1.613	31	9.862	22
127		min		-5.798	22	-11.387	22	0.1	31	-0.706	20	0.181	31
128	P400	max	T	6.882	21	1.428	21	3.828	24	1.085	17	8.843	24
129		min		-2.024	24	-9.68	24	0.163	22	-0.566	23	0.285	22
130		max	B	8.954	24	1.956	24	3.499	24	2.262	22	8.154	24
131		min		-1.381	21	-6.359	21	0.146	22	-0.535	19	0.253	22
132	P519	max	T	10.115	18	6.165	18	2.026	22	2.048	19	8.83	18
133		min		-4.787	17	-7.8	17	0.134	25	-0.126	21	0.314	25
134		max	B	7.416	17	6.684	17	0.672	22	2.142	23	9.165	18
135		min		-8.623	18	-9.625	18	0.081	25	-0.766	20	0.286	25
136	P401	max	T	6.87	21	1.46	21	3.796	24	0.917	17	8.812	24
137		min		-2.072	24	-9.663	24	0.13	22	-0.733	23	0.23	22
138		max	B	8.932	24	2.002	24	3.465	24	1.476	22	8.118	24
139		min		-1.412	21	-6.344	21	0.113	22	-0.697	19	0.205	22
140	P44	max	T	9.662	21	7.691	27	1.112	21	2.21	24	8.764	21
141		min		-5.227	24	-7.041	24	0.106	28	-0.653	20	0.682	28
142		max	B	8.054	24	4.132	24	2.811	27	1.47	23	9.815	29
143		min		-5.727	21	-11.333	29	0.226	28	-0.643	17	0.742	32
144	P5	max	T	6.302	24	1.346	24	3.732	29	1.486	23	8.759	29
145		min		-2.219	27	-9.642	29	0.236	23	-0.557	17	0.639	23
146		max	B	8.866	29	2.125	27	3.391	29	1.123	22	8.029	29
147		min		-1.28	24	-5.773	24	0.205	23	-0.605	18	0.582	23
148	P590	max	T	10.012	19	5.77	19	2.123	22	2.326	30	8.705	19
149		min		-4.305	20	-7.433	20	0.135	28	-0.755	27	0.32	28
150		max	B	7.148	20	6.046	20	1.058	22	2.163	20	8.976	19
151		min		-8.138	19	-9.627	19	0.071	28	-0.006	24	0.303	28
152	P503	max	T	9.775	18	6.749	18	1.513	18	2.203	23	8.668	18
153		min		-5.04	17	-7.546	17	0.13	31	-0.542	20	0.611	25
154		max	B	8.387	17	4.279	17	2.691	18	1.035	20	9.511	18
155		min		-5.6	18	-10.982	18	0.216	25	-0.604	24	0.569	25
156	P548	max	T	6.508	20	1.442	20	3.735	27	1.86	17	8.661	27
157		min		-2.059	19	-9.493	27	0.563	17	0.083	31	1.143	17
158		max	B	8.731	27	1.964	19	3.4	27	1.747	18	7.944	27
159		min		-1.373	20	-5.975	20	0.501	17	0.038	24	1.014	17
160	P549	max	T	6.521	20	1.432	20	3.664	19	2.15	17	8.567	27
161		min		-2.119	27	-9.428	27	0.293	17	0.232	21	0.801	17
162		max	B	8.675	27	2.027	27	3.331	19	1.898	18	7.86	27
163		min		-1.363	20	-5.983	20	0.26	17	0.194	24	0.734	17
164	P579	max	T	9.172	22	7.648	22	0.792	30	2.255	17	8.513	22

Envelope Plate Principal Stresses (Continued)

	Plate		Surface	Sigma1 [ksi]	LC	Sigma2 [ksi]	LC	Tau Max [ksi]	LC	Angle [rad]	LC	Von Mises [ksi]	LC
165		min		-5.527	23	-6.529	23	0.194	31	-0.287	21	0.903	31
166		max	B	8.068	23	3.954	23	2.844	22	1.881	28	9.715	22
167		min		-5.529	22	-11.217	22	0.25	31	-0.253	24	0.92	31
168	P46	max	T	9.661	21	5.627	21	2.093	27	2.1	28	8.404	21
169		min		-4.2	24	-7.093	24	0.177	32	-0.548	23	0.348	32
170		max	B	6.776	24	5.939	24	0.967	19	1.5	24	8.689	21
171		min		-7.981	21	-9.256	21	0.121	32	-0.714	18	0.302	32
172	P522	max	T	9.612	22	5.542	22	2.041	18	1.91	20	8.357	22
173		min		-4.271	23	-7.428	23	0.15	31	-0.244	24	0.264	31
174		max	B	7.152	23	5.993	23	0.968	18	2.134	29	8.613	22
175		min		-7.804	22	-9.241	22	0.116	31	-0.756	31	0.215	31
176	P581	max	T	8.859	19	7.698	19	0.929	22	2.101	24	8.339	19
177		min		-5.95	20	-6.864	20	0.084	28	-0.372	28	0.269	28
178		max	B	2.808	20	1.186	20	0.976	22	2.005	17	2.832	19
179		min		-1.358	19	-3.255	19	0.208	31	-0.781	25	0.362	31
180	P373	max	T	6.318	21	1.226	21	3.636	24	0.919	18	8.328	24
181		min		-1.813	24	-9.085	24	0.316	22	-0.689	22	0.69	22
182		max	B	8.405	24	1.745	24	3.33	24	0.932	17	7.682	24
183		min		-1.178	21	-5.832	21	0.261	22	-0.704	29	0.576	22
184	P753	max	T	8.506	19	1.785	19	3.59	20	1.853	29	8.312	20
185		min		-1.927	20	-9.106	20	0.308	26	0.259	25	0.695	26
186		max	B	8.226	20	1.829	20	3.198	20	1.839	24	7.481	20
187		min		-1.695	19	-7.675	19	0.276	26	0.263	18	0.63	26
188	P752	max	T	8.504	19	1.785	19	3.59	20	1.679	21	8.312	20
189		min		-1.925	20	-9.105	20	0.296	26	0.105	17	0.681	26
190		max	B	8.226	20	1.827	20	3.199	20	1.688	32	7.482	20
191		min		-1.695	19	-7.674	19	0.265	26	0.079	26	0.617	26
192	P480	max	T	6.586	23	1.449	23	3.545	22	0.952	24	8.261	22
193		min		-1.982	22	-9.071	22	0.422	31	-0.733	20	0.956	31
194		max	B	8.34	22	1.891	22	3.225	22	1.014	21	7.574	22
195		min		-1.379	23	-6.044	23	0.385	31	-0.716	25	0.88	31
196	P1092	max	T	8.369	22	1.756	22	3.558	23	0.9	28	8.237	23
197		min		-1.907	23	-9.024	23	0.218	32	-0.714	32	0.499	32
198		max	B	8.151	23	1.81	23	3.17	23	0.896	19	7.414	23
199		min		-1.667	22	-7.55	22	0.195	32	-0.677	21	0.452	32
200	P481	max	T	6.581	23	1.465	17	3.524	22	1.103	24	8.237	22
201		min		-2.018	18	-9.055	22	0.398	31	-0.582	20	0.929	31
202		max	B	8.325	22	1.929	18	3.205	22	1.202	21	7.552	22
203		min		-1.398	17	-6.04	23	0.362	31	-0.551	19	0.855	31
204	P1093	max	T	8.368	22	1.759	22	3.556	23	1.057	20	8.236	23
205		min		-1.91	23	-9.023	23	0.226	32	-0.52	24	0.508	32
206		max	B	8.15	23	1.813	23	3.168	23	1.067	27	7.412	23
207		min		-1.67	22	-7.549	22	0.203	32	-0.528	29	0.461	32
208	P511	max	T	8.796	18	7.327	18	0.735	18	2.243	23	8.161	18
209		min		-5.596	17	-6.625	17	0.158	25	-0.645	17	0.594	25
210		max	B	8.178	17	4.003	17	2.732	18	2.334	19	9.315	18
211		min		-5.291	18	-10.755	18	0.159	25	-0.754	22	0.574	25
212	P41	max	T	5.749	20	1.424	20	3.414	27	2.344	18	8.151	27
213		min		-2.195	27	-9.024	27	0.337	28	0.744	32	0.78	28
214		max	B	8.192	27	2.085	27	3.054	27	2.338	22	7.374	27
215		min		-1.352	20	-5.202	20	0.314	28	0.758	18	0.73	28
216	P380	max	T	6.173	21	1.202	21	3.548	24	1.121	22	8.133	24
217		min		-1.779	24	-8.875	24	0.31	22	-0.554	19	0.709	22
218		max	B	8.147	24	1.699	24	3.224	24	1.035	17	7.444	24
219		min		-1.147	21	-5.658	21	0.258	22	-0.555	23	0.603	22

Envelope Plate Principal Stresses (Continued)

	Plate		Surface	Sigma1 [ksi]	LC	Sigma2 [ksi]	LC	Tau Max [ksi]	LC	Angle [rad]	LC	Von Mises [ksi]	LC
220	P365	max	T	6.174	21	1.441	21	3.439	24	1.071	23	8.1	24
221		min		-2.051	24	-8.929	24	0.291	22	-0.495	17	0.661	22
222		max	B	8.268	24	1.981	24	3.143	24	1.127	22	7.477	24
223		min		-1.392	21	-5.707	21	0.237	22	-0.55	29	0.548	22
224	P603	max	T	6.431	20	1.56	23	3.401	19	2.007	24	8.09	19
225		min		-2.158	22	-8.946	19	0.269	28	0.379	28	0.628	28
226		max	B	8.152	19	2.053	22	3.056	19	1.985	31	7.348	19
227		min		-1.484	23	-5.856	20	0.242	28	0.366	17	0.57	28
228	P574	max	T	9.058	19	6.456	19	1.301	19	2.239	24	8.078	19
229		min		-4.638	20	-6.709	20	0.118	31	-0.57	28	0.615	17
230		max	B	7.527	20	3.843	20	2.528	19	1.811	17	8.911	19
231		min		-5.233	19	-10.289	19	0.195	17	0.17	23	0.622	17
232	P59	max	T	5.902	24	1.418	20	3.38	27	1.231	18	8.068	27
233		min		-2.172	27	-8.931	27	0.318	28	-0.413	32	0.735	28
234		max	B	8.124	27	2.065	27	3.029	27	1.195	17	7.313	27
235		min		-1.35	20	-5.389	24	0.291	28	-0.426	23	0.675	28
236	P606	max	T	6.47	20	1.558	20	3.387	19	1.559	24	8.045	19
237		min		-2.118	19	-8.892	19	0.222	28	-0.053	18	0.494	28
238		max	B	8.095	19	2.013	19	3.041	19	1.573	31	7.3	19
239		min		-1.481	20	-5.883	20	0.203	28	-0.085	17	0.452	28
240	P820	max	T	8.339	21	1.75	21	3.467	24	0.894	17	8.026	24
241		min		-1.857	24	-8.792	24	0.587	25	-0.679	23	1.343	25
242		max	B	7.943	24	1.763	24	3.09	24	0.904	26	7.225	24
243		min		-1.661	21	-7.525	21	0.525	25	-0.687	30	1.214	25
244	P37	max	T	8.454	21	7.512	21	0.857	19	2.245	24	8.025	21
245		min		-5.864	24	-6.503	24	0.115	31	-0.671	28	0.425	32
246		max	B	2.801	18	1.228	24	0.903	22	2.186	29	2.669	21
247		min		-1.346	21	-3.074	21	0.144	28	-0.751	19	0.268	28
248	P19	max	T	9.258	27	4.977	27	2.14	27	2.19	22	8.025	27
249		min		-2.814	20	-5.697	20	0.299	28	-0.298	18	1.102	18
250		max	B	5.591	20	4.125	20	0.942	19	2.316	20	8.236	27
251		min		-7.159	27	-9.001	27	0.108	32	-0.604	23	0.956	18
252	P821	max	T	8.339	21	1.753	21	3.464	24	1.068	25	8.023	24
253		min		-1.863	24	-8.791	24	0.583	25	-0.525	31	1.339	25
254		max	B	7.941	24	1.768	24	3.086	24	1.054	18	7.221	24
255		min		-1.664	21	-7.524	21	0.521	25	-0.522	22	1.21	25
256	P513	max	T	8.512	22	7.411	22	0.83	18	2.153	27	8.018	22
257		min		-5.882	23	-6.835	23	0.125	31	-0.778	22	0.4	31
258		max	B	2.739	23	1.138	23	0.908	22	2.347	17	2.725	22
259		min		-1.318	22	-3.133	22	0.232	31	-0.627	25	0.411	25
260	P30	max	T	8.902	21	6.409	21	1.247	21	2.171	28	7.954	21
261		min		-4.628	24	-6.62	24	0.115	28	-0.626	30	0.557	32
262		max	B	7.503	24	3.81	24	2.519	21	1.041	23	8.834	21
263		min		-5.161	21	-10.2	21	0.2	32	-0.631	20	0.449	32
264	P585	max	T	6.286	23	1.563	23	3.322	22	1.55	21	7.949	22
265		min		-2.163	22	-8.806	22	0.342	31	-0.029	17	0.783	31
266		max	B	7.968	22	2.051	22	2.959	22	1.555	17	7.166	22
267		min		-1.481	23	-5.668	23	0.316	28	-0.033	31	0.741	31
268	P372	max	T	6.029	21	1.418	21	3.35	24	0.935	29	7.905	24
269		min		-2.018	24	-8.718	24	0.335	22	-0.704	17	0.739	22
270		max	B	8.009	24	1.936	24	3.037	24	0.879	19	7.238	24
271		min		-1.361	21	-5.533	21	0.283	22	-0.688	18	0.631	22
272	P385	max	T	8.752	24	6.606	24	1.15	20	1.433	23	7.9	24
273		min		-4.77	21	-6.36	21	0.124	29	-0.598	17	0.772	22
274		max	B	7.315	21	3.759	21	2.467	24	2.331	27	8.752	24

Envelope Plate Principal Stresses (Continued)

	Plate		Surface	Sigma1 [ksi]	LC	Sigma2 [ksi]	LC	Tau Max [ksi]	LC	Angle [rad]	LC	Von Mises [ksi]	LC
275		min		-5.171	24	-10.105	24	0.276	29	-0.739	30	0.542	22
276	P384	max	T	8.557	24	6.701	24	0.928	24	2.26	21	7.797	24
277		min		-4.84	21	-6.225	21	0.145	29	-0.671	19	0.582	22
278		max	B	7.267	21	3.713	21	2.466	24	1.723	22	8.688	24
279		min		-5.1	24	-10.031	24	0.262	22	-0.583	18	0.462	22
280	P265	max	T	5.227	22	1.1	22	3.363	31	0.951	24	7.782	31
281		min		-1.797	31	-8.524	31	0.173	21	-0.719	18	0.452	21
282		max	B	7.877	31	1.734	31	3.072	31	2.183	21	7.17	31
283		min		-1.064	22	-4.832	22	0.163	21	-0.69	17	0.434	21
284	P535	max	T	6.512	23	1.593	17	3.27	22	1.205	25	7.776	22
285		min		-2.086	18	-8.598	22	0.132	31	-0.406	21	0.298	31
286		max	B	7.833	22	1.984	18	2.937	22	1.202	20	7.06	22
287		min		-1.516	17	-5.925	23	0.122	31	-0.398	24	0.275	31
288	P506	max	T	8.701	22	6.204	22	1.248	22	2	21	7.76	22
289		min		-4.62	23	-6.659	23	0.096	25	-0.352	17	0.311	21
290		max	B	7.464	23	3.819	23	2.42	22	2.353	28	8.547	22
291		min		-5.028	22	-9.868	22	0.03	21	-0.699	24	0.08	21
292	P62	max	T	6.112	24	1.475	24	3.275	29	2.339	28	7.744	29
293		min		-2.036	21	-8.556	21	0.236	23	0.628	23	0.506	23
294		max	B	7.78	21	1.933	21	2.942	29	2.353	18	7.027	29
295		min		-1.4	24	-5.546	24	0.229	23	0.74	32	0.497	23
296	P264	max	T	5.222	22	1.095	22	3.331	31	1.11	24	7.738	31
297		min		-1.826	31	-8.487	31	0.308	21	-0.544	18	0.629	21
298		max	B	7.854	31	1.764	31	3.045	31	1.076	19	7.138	31
299		min		-1.06	22	-4.831	22	0.282	21	-0.671	21	0.575	21
300	P957	max	T	7.761	24	1.629	24	3.338	21	1.068	26	7.729	21
301		min		-1.792	21	-8.467	21	0.035	31	-0.589	31	0.098	31
302		max	B	7.646	21	1.7	21	2.973	21	1.052	17	6.954	21
303		min		-1.546	24	-7.001	24	0.029	31	-0.523	23	0.083	31
304	P538	max	T	6.496	23	1.561	23	3.253	22	2.34	20	7.726	22
305		min		-2.034	22	-8.539	22	0.113	31	0.737	24	0.241	31
306		max	B	7.779	22	1.934	22	2.922	22	2.355	25	7.015	22
307		min		-1.485	23	-5.911	23	0.104	31	0.726	21	0.221	31
308	P956	max	T	7.757	24	1.632	24	3.335	21	0.893	18	7.724	21
309		min		-1.794	21	-8.463	21	0.046	31	-0.679	22	0.11	31
310		max	B	7.644	21	1.702	21	2.971	21	1.073	31	6.951	21
311		min		-1.549	24	-6.998	24	0.039	31	-0.686	23	0.093	31
312	P17	max	T	5.244	20	1.211	20	3.268	27	1.2	22	7.719	27
313		min		-1.981	27	-8.517	27	0.387	28	-0.373	18	0.923	28
314		max	B	7.726	27	1.875	27	2.925	27	1.204	18	6.98	27
315		min		-1.143	20	-4.737	20	0.356	28	-0.396	32	0.855	28
316	P517	max	T	6.423	17	1.588	17	3.214	18	2.335	19	7.682	18
317		min		-2.08	18	-8.507	18	0.198	31	0.757	21	0.454	31
318		max	B	7.699	18	1.971	18	2.864	18	2.339	21	6.927	18
319		min		-1.504	17	-5.793	17	0.184	31	0.747	31	0.425	31
320	P592	max	T	6.151	20	1.482	20	3.23	19	1.997	28	7.67	19
321		min		-2.019	19	-8.478	19	0.101	17	0.303	17	0.197	17
322		max	B	7.679	19	1.908	19	2.886	19	1.989	17	6.925	19
323		min		-1.401	20	-5.562	20	0.113	17	0.396	21	0.222	17
324	P582	max	T	8.328	19	6.773	19	0.882	22	2.339	23	7.67	19
325		min		-4.947	20	-6.041	20	0.158	28	-0.499	17	0.603	28
326		max	B	7.357	20	3.54	20	2.609	19	2.14	18	8.746	19
327		min		-4.879	19	-10.098	19	0.188	28	0.275	24	0.633	28
328	P38	max	T	8.221	21	6.728	21	0.828	27	2.343	31	7.586	21
329		min		-4.971	24	-5.975	24	0.1	32	-0.553	25	0.386	32

Envelope Plate Principal Stresses (Continued)

	Plate		Surface	Sigma1 [ksi]	LC	Sigma2 [ksi]	LC	Tau Max [ksi]	LC	Angle [rad]	LC	Von Mises [ksi]	LC
330		max	B	7.348	24	3.563	24	2.583	21	1.398	22	8.682	21
331		min		-4.857	21	-10.023	21	0.115	32	-0.535	18	0.391	32
332	P780	max	T	7.568	19	1.48	19	3.301	20	1.703	24	7.568	20
333		min		-1.657	20	-8.26	20	0.237	26	0.133	18	0.501	26
334		max	B	7.581	20	1.585	20	2.998	20	1.772	26	6.925	20
335		min		-1.413	19	-6.934	19	0.214	26	0.112	25	0.453	26
336	P773	max	T	7.555	19	1.478	19	3.3	20	1.842	25	7.565	20
337		min		-1.657	20	-8.256	20	0.197	26	0.137	26	0.41	26
338		max	B	7.587	20	1.586	20	3.001	20	1.809	22	6.931	20
339		min		-1.412	19	-6.93	19	0.176	26	0.242	20	0.366	26
340	P383	max	T	8.685	24	5.112	24	1.787	24	2.118	17	7.561	24
341		min		-3.654	21	-6.256	21	0.312	29	-0.136	29	0.989	22
342		max	B	6.003	21	5.09	21	0.585	24	2.2	18	7.792	24
343		min		-7.141	24	-8.312	24	0.138	27	-0.646	22	0.988	29
344	P244	max	T	4.78	22	0.932	22	3.282	31	1.29	21	7.552	31
345		min		-1.69	31	-8.254	31	0.1	21	-0.548	17	0.217	21
346		max	B	7.58	31	1.618	31	2.981	31	1.06	30	6.914	31
347		min		-0.89	22	-4.382	22	0.063	21	-0.569	18	0.138	21
348	P563	max	T	8.707	22	4.639	30	2.127	22	2.151	31	7.542	22
349		min		-2.94	23	-6.136	23	0.253	28	-0.701	25	1.078	24
350		max	B	6.049	23	4.34	23	1.025	22	2.063	24	7.712	22
351		min		-6.713	30	-8.53	22	0.064	28	-0.223	20	0.989	24
352	P1113	max	T	7.467	22	1.466	22	3.275	23	1.028	18	7.51	23
353		min		-1.647	23	-8.197	23	0.138	32	-0.54	23	0.28	32
354		max	B	7.531	23	1.576	23	2.978	23	1.047	29	6.88	23
355		min		-1.401	22	-6.849	22	0.123	32	-0.66	32	0.249	32
356	P1120	max	T	7.46	22	1.465	22	3.271	23	1.015	32	7.501	23
357		min		-1.645	23	-8.188	23	0.166	32	-0.679	29	0.343	32
358		max	B	7.515	23	1.573	23	2.971	23	0.921	20	6.865	23
359		min		-1.399	22	-6.836	22	0.148	32	-0.65	24	0.308	32
360	P48	max	T	5.951	24	1.438	24	3.15	21	1.969	23	7.481	21
361		min		-1.968	21	-8.268	21	0.018	23	-0.388	20	0.081	23
362		max	B	7.468	21	1.857	21	2.806	21	1.306	23	6.735	21
363		min		-1.357	24	-5.362	24	0.024	23	-0.389	17	0.064	23
364	P376	max	T	7.803	24	7.043	24	0.399	18	2.242	23	7.452	24
365		min		-5.159	21	-5.857	21	0.047	27	-0.736	25	0.69	29
366		max	B	2.817	19	1.296	19	0.908	20	2.037	22	2.969	20
367		min		-1.61	20	-3.426	20	0.131	27	-0.489	30	0.296	29
368	P236	max	T	4.677	22	1.092	22	3.165	31	0.888	21	7.418	31
369		min		-1.834	31	-8.163	31	0.123	21	-0.693	17	0.245	21
370		max	B	7.499	31	1.76	31	2.869	31	0.909	30	6.792	31
371		min		-1.048	22	-4.291	22	0.083	21	-0.706	18	0.163	21
372	P344	max	T	5.472	21	1.189	21	3.187	24	1.555	22	7.414	24
373		min		-1.763	24	-8.137	24	0.12	22	-0.694	27	0.225	22
374		max	B	7.479	24	1.681	24	2.899	24	0.955	23	6.797	24
375		min		-1.13	21	-5.018	21	0.104	22	-0.702	17	0.205	22
376	P345	max	T	5.46	21	1.221	21	3.156	32	2.296	22	7.383	24
377		min		-1.811	24	-8.119	24	0.18	22	-0.541	18	0.32	22
378		max	B	7.457	24	1.728	24	2.868	32	1.106	23	6.761	24
379		min		-1.162	21	-5.003	21	0.164	22	-0.561	17	0.292	22
380	P514	max	T	8	22	6.511	22	0.822	18	2.28	20	7.369	22
381		min		-4.904	23	-6.017	23	0.191	31	-0.279	23	0.527	31
382		max	B	7.297	23	3.513	23	2.497	22	2.282	31	8.388	22
383		min		-4.69	22	-9.684	22	0.164	31	-0.687	25	0.458	21
384	P524	max	T	6.146	23	1.477	23	3.1	22	1.189	20	7.364	22

Envelope Plate Principal Stresses (Continued)

	Plate		Surface	Sigma1 [ksi]	LC	Sigma2 [ksi]	LC	Tau Max [ksi]	LC	Angle [rad]	LC	Von Mises [ksi]	LC
385		min		-1.939	22	-8.139	22	0.15	31	-0.392	24	0.33	31
386		max	B	7.382	22	1.834	22	2.774	22	1.208	31	6.657	22
387		min		-1.397	23	-5.567	23	0.137	31	-0.39	20	0.3	31
388	P386	max	T	8.462	24	4.846	24	1.808	24	2.017	27	7.354	24
389		min		-3.466	21	-6.111	21	0.263	29	-0.673	22	0.856	29
390		max	B	5.894	21	4.894	21	0.737	20	1.884	17	7.584	24
391		min		-6.87	24	-8.138	24	0.125	29	-0.406	23	0.87	29
392	P561	max	T	5.664	23	1.304	23	3.116	22	1.986	18	7.346	22
393		min		-1.868	22	-8.1	22	0.405	31	0.416	24	0.961	31
394		max	B	7.325	22	1.763	22	2.781	22	1.987	24	6.622	22
395		min		-1.228	23	-5.102	23	0.371	28	0.386	28	0.896	31
396	P769	max	T	8.092	20	6.213	20	0.94	20	1.82	25	7.335	20
397		min		-5.889	19	-7.705	19	0.129	26	-0.375	26	0.762	26
398		max	B	9.229	19	4.562	19	2.47	20	1.849	18	8.423	20
399		min		-4.786	20	-9.725	20	0.228	26	0.252	24	0.829	26
400	P768	max	T	8.083	20	6.214	20	0.934	20	2.012	23	7.329	20
401		min		-5.887	19	-7.702	19	0.185	26	0.476	19	0.806	26
402		max	B	9.223	19	4.559	19	2.469	20	1.814	26	8.417	20
403		min		-4.78	20	-9.718	20	0.235	26	0.082	32	0.849	26
404	P841	max	T	7.437	21	1.459	21	3.195	24	1.055	31	7.327	24
405		min		-1.608	24	-7.998	24	0.47	25	-0.589	25	1.029	25
406		max	B	7.351	24	1.539	24	2.906	24	1.025	19	6.715	24
407		min		-1.395	21	-6.823	21	0.426	25	-0.543	18	0.937	25
408	P848	max	T	7.433	21	1.459	21	3.187	24	0.919	18	7.31	24
409		min		-1.605	24	-7.979	24	0.458	25	-0.656	22	1.003	25
410		max	B	7.322	24	1.534	24	2.894	24	0.965	25	6.688	24
411		min		-1.393	21	-6.809	21	0.414	25	-0.671	31	0.909	25
412	P788	max	T	7.32	19	1.708	19	3.092	20	1.856	20	7.286	20
413		min		-1.847	20	-8.031	20	0.164	26	0.29	22	0.413	26
414		max	B	7.433	20	1.779	20	2.827	20	1.986	26	6.722	20
415		min		-1.645	19	-6.766	19	0.146	26	0.261	25	0.377	26
416	P781	max	T	7.307	19	1.705	19	3.091	20	1.693	25	7.283	20
417		min		-1.846	20	-8.028	20	0.123	26	-0.093	26	0.321	26
418		max	B	7.439	20	1.78	20	2.829	20	1.658	22	6.728	20
419		min		-1.644	19	-6.762	19	0.107	26	0.091	20	0.289	26
420	P237	max	T	4.756	22	0.927	22	3.156	31	0.922	19	7.268	31
421		min		-1.635	31	-7.947	31	0.451	21	-0.683	30	1.009	21
422		max	B	7.355	31	1.573	31	2.891	31	0.914	20	6.709	31
423		min		-0.89	22	-4.389	22	0.387	21	-0.653	22	0.874	21
424	P1109	max	T	8.013	23	6.151	23	0.931	23	2.315	17	7.263	23
425		min		-5.782	22	-7.564	22	0.104	32	-0.782	31	0.584	32
426		max	B	9.065	22	4.478	22	2.447	23	1.095	29	8.341	23
427		min		-4.738	23	-9.631	23	0.173	32	-0.593	27	0.631	32
428	P1108	max	T	7.999	23	6.156	23	0.922	23	1.559	32	7.255	23
429		min		-5.787	22	-7.551	22	0.146	32	-0.536	29	0.617	32
430		max	B	9.058	22	4.473	22	2.446	23	0.905	21	8.335	23
431		min		-4.732	23	-9.625	23	0.177	32	-0.668	19	0.643	32
432	P495	max	T	8.362	18	4.32	18	2.021	18	2.288	21	7.243	18
433		min		-3.041	17	-6.232	17	0.216	31	-0.307	25	0.96	31
434		max	B	6.129	17	4.494	17	0.935	18	2.27	18	7.418	18
435		min		-6.304	18	-8.174	18	0.115	31	-0.734	24	0.973	25
436	P1121	max	T	7.229	22	1.681	22	3.071	23	0.874	18	7.233	23
437		min		-1.831	23	-7.972	23	0.079	32	-0.693	23	0.208	32
438		max	B	7.386	23	1.765	23	2.811	23	2.205	32	6.681	23
439		min		-1.62	22	-6.689	22	0.067	32	-0.762	27	0.186	32

Envelope Plate Principal Stresses (Continued)

	Plate		Surface	Sigma1 [ksi]	LC	Sigma2 [ksi]	LC	Tau Max [ksi]	LC	Angle [rad]	LC	Von Mises [ksi]	LC
440	P1128	max	T	7.221	22	1.68	22	3.067	23	1.268	32	7.224	23
441		min		-1.83	23	-7.963	23	0.106	32	-0.526	29	0.271	32
442		max	B	7.371	23	1.763	23	2.804	23	1.071	23	6.666	23
443		min		-1.618	22	-6.675	22	0.092	32	-0.496	18	0.244	32
444	P367	max	T	8.059	24	5.731	24	1.173	20	2.343	18	7.183	24
445		min		-3.93	21	-5.706	21	0.127	29	-0.622	30	1.104	22
446		max	B	6.344	21	3.268	21	2.205	24	1.179	27	7.856	24
447		min		-4.659	24	-9.07	24	0.336	22	-0.724	22	1.128	22
448	P3	max	T	4.838	24	1.075	20	3.024	27	2.353	22	7.139	27
449		min		-1.827	27	-7.875	27	0.392	23	0.711	18	0.967	23
450		max	B	7.102	27	1.716	27	2.693	27	2.337	20	6.418	27
451		min		-1.003	20	-4.373	24	0.324	23	-0.755	23	0.821	23
452	P229	max	T	4.653	22	1.087	22	3.038	31	1.093	18	7.135	31
453		min		-1.779	31	-7.856	31	0.42	21	-0.546	24	0.973	21
454		max	B	7.274	31	1.715	31	2.779	31	1.095	21	6.586	31
455		min		-1.048	22	-4.298	22	0.356	21	-0.51	19	0.84	21
456	P493	max	T	5.807	17	1.331	17	3.02	18	1.209	21	7.112	18
457		min		-1.8	18	-7.839	18	0.272	31	-0.41	31	0.666	31
458		max	B	7.088	18	1.698	18	2.695	18	1.191	19	6.41	18
459		min		-1.253	17	-5.232	17	0.245	31	-0.383	21	0.609	31
460	P984	max	T	6.951	24	1.367	24	3.086	21	0.916	17	7.084	21
461		min		-1.561	21	-7.734	21	0.088	31	-0.652	20	0.235	31
462		max	B	7.099	21	1.494	21	2.803	21	2.322	31	6.483	21
463		min		-1.306	24	-6.368	24	0.079	31	-0.679	30	0.219	31
464	P837	max	T	7.807	24	5.988	24	0.91	24	2.334	22	7.075	24
465		min		-5.764	21	-7.542	21	0.195	30	0.694	18	1.387	25
466		max	B	9.035	21	4.465	21	2.382	24	1.065	22	8.123	24
467		min		-4.615	24	-9.38	24	0.43	25	-0.535	18	1.527	25
468	P21	max	T	7.879	27	5.993	29	1.049	27	1.991	23	7.068	27
469		min		-3.785	24	-4.835	24	0.158	28	-0.78	20	1.174	23
470		max	B	5.812	24	2.793	24	2.303	29	1.394	18	7.956	29
471		min		-4.581	29	-9.187	29	0.405	28	-0.763	22	0.932	23
472	P568	max	T	5.523	20	1.222	20	3.021	19	1.574	28	7.064	19
473		min		-1.724	19	-7.766	19	0.033	17	-0.143	17	0.091	17
474		max	B	7.035	19	1.62	19	2.708	19	1.545	24	6.381	19
475		min		-1.148	20	-4.995	20	0.057	17	-0.032	18	0.109	17
476	P836	max	T	7.783	24	5.998	24	0.892	24	1.216	24	7.061	24
477		min		-5.769	21	-7.527	21	0.18	26	-0.316	21	1.373	25
478		max	B	9.027	21	4.458	21	2.382	24	0.952	30	8.113	24
479		min		-4.605	24	-9.368	24	0.43	25	-0.711	26	1.521	25
480	P849	max	T	7.199	21	1.675	21	2.998	24	0.905	31	7.06	24
481		min		-1.786	24	-7.781	24	0.368	25	-0.767	25	0.905	25
482		max	B	7.211	24	1.722	24	2.745	24	0.875	22	6.523	24
483		min		-1.615	21	-6.663	21	0.333	25	-0.695	18	0.831	25
484	P977	max	T	6.915	24	1.361	24	3.075	21	1.2	31	7.057	21
485		min		-1.556	21	-7.705	21	0.116	31	-0.592	26	0.298	31
486		max	B	7.081	21	1.49	21	2.796	21	1.025	20	6.466	21
487		min		-1.301	24	-6.344	24	0.104	31	-0.542	21	0.276	31
488	P856	max	T	7.194	21	1.675	21	2.99	24	1.071	18	7.042	24
489		min		-1.783	24	-7.762	24	0.356	25	-0.497	22	0.878	25
490		max	B	7.182	24	1.717	24	2.732	24	1.137	25	6.496	24
491		min		-1.612	21	-6.649	21	0.321	25	-0.523	31	0.804	25
492	P28	max	T	7.702	27	6.104	27	0.857	19	1.32	17	7.04	27
493		min		-3.368	20	-4.748	20	0.095	31	-0.702	21	0.856	18
494		max	B	2.013	23	0.423	17	1.03	22	2.175	28	2.398	22

Envelope Plate Principal Stresses (Continued)

	Plate		Surface	Sigma1 [ksi]	LC	Sigma2 [ksi]	LC	Tau Max [ksi]	LC	Angle [rad]	LC	Von Mises [ksi]	LC
495		min		-0.736	26	-2.633	22	0.107	31	-0.469	20	0.197	31
496	P24	max	T	5.441	24	1.225	24	2.975	21	2.318	24	6.969	21
497		min		-1.717	21	-7.668	21	0.052	23	0.75	21	0.222	23
498		max	B	6.92	21	1.611	21	2.654	21	2.344	32	6.272	21
499		min		-1.149	24	-4.897	24	0.027	23	-0.531	23	0.176	23
500	P767	max	T	7.997	20	4.658	20	1.669	20	0.814	19	6.957	20
501		min		-4.368	19	-7.56	19	0.243	26	-0.729	23	0.691	26
502		max	B	7.359	19	6.239	19	0.56	19	2.073	19	7.278	20
503		min		-6.685	20	-7.752	20	0.09	25	0.55	23	0.679	26
504	P770	max	T	7.996	20	4.654	20	1.671	20	1.127	24	6.956	20
505		min		-4.375	19	-7.569	19	0.2	26	-0.492	18	0.736	26
506		max	B	7.367	19	6.258	19	0.554	19	2.319	25	7.28	20
507		min		-6.69	20	-7.753	20	0.098	25	-0.413	17	0.748	26
508	P209	max	T	4.206	22	0.927	22	2.988	31	1.65	21	6.946	31
509		min		-1.645	31	-7.621	31	0.094	21	-0.55	19	0.247	21
510		max	B	6.999	31	1.571	31	2.714	31	1.091	18	6.361	31
511		min		-0.881	22	-3.846	22	0.086	21	-0.572	24	0.235	21
512	P20	max	T	7.58	29	6.017	29	0.841	27	2.021	20	6.932	29
513		min		-3.787	24	-4.866	24	0.132	32	-0.617	24	1.141	32
514		max	B	5.775	24	2.85	24	2.374	27	2.355	27	7.886	29
515		min		-4.412	29	-9.105	29	0.399	28	-0.745	29	1.026	23
516	P377	max	T	7.384	24	6.363	24	0.641	20	2.322	29	6.93	24
517		min		-4.701	21	-5.58	21	0.099	29	-0.744	21	0.437	29
518		max	B	2.154	21	0.847	17	0.771	24	2.334	20	2.249	24
519		min		-1.064	18	-2.581	24	0.151	29	-0.657	31	0.367	25
520	P399	max	T	5.42	21	1.311	21	2.901	24	1.207	17	6.904	24
521		min		-1.833	24	-7.636	24	0.109	22	-0.397	23	0.297	22
522		max	B	6.97	24	1.746	24	2.612	24	1.195	27	6.282	24
523		min		-1.25	21	-4.942	21	0.084	22	-0.519	22	0.247	22
524	P208	max	T	4.202	22	0.923	22	2.955	31	1.148	21	6.901	31
525		min		-1.674	31	-7.584	31	0.212	21	-0.697	19	0.409	21
526		max	B	6.975	31	1.601	31	2.687	31	0.954	18	6.329	31
527		min		-0.877	22	-3.846	22	0.191	21	-0.73	24	0.365	21
528	P1107	max	T	7.926	23	4.62	23	1.653	23	1.606	22	6.895	23
529		min		-4.303	22	-7.436	22	0.195	32	0.06	17	0.534	32
530		max	B	7.23	22	6.157	22	0.537	22	1.774	29	7.214	23
531		min		-6.635	23	-7.68	23	0.087	29	-0.538	32	0.519	32
532	P1110	max	T	7.914	23	4.604	23	1.655	23	1.909	20	6.884	23
533		min		-4.289	22	-7.426	22	0.163	32	0.3	24	0.561	32
534		max	B	7.225	22	6.146	22	0.539	22	2.328	30	7.205	23
535		min		-6.622	23	-7.673	23	0.093	29	-0.708	27	0.564	32
536	P547	max	T	5.12	20	1.139	23	2.927	27	1.599	17	6.879	27
537		min		-1.722	27	-7.576	27	0.426	28	-0.04	21	1.037	28
538		max	B	6.851	27	1.617	27	2.617	27	1.564	18	6.202	27
539		min		-1.062	23	-4.617	20	0.38	17	-0.053	24	0.942	28
540	P565	max	T	7.548	27	5.847	27	0.942	22	2.255	21	6.857	27
541		min		-3.872	20	-4.97	20	0.145	31	-0.343	17	1.185	17
542		max	B	5.937	20	2.878	20	2.242	27	2.145	24	7.728	27
543		min		-4.439	27	-8.924	27	0.387	28	0.054	18	0.997	17
544	P402	max	T	5.367	21	1.283	21	2.883	24	2.338	27	6.841	24
545		min		-1.791	24	-7.558	24	0.078	22	-0.573	22	0.202	22
546		max	B	6.88	24	1.702	24	2.589	24	2.341	17	6.206	24
547		min		-1.22	21	-4.881	21	0.055	22	0.747	23	0.155	22
548	P992	max	T	6.733	24	1.562	24	2.904	21	1.069	21	6.835	21
549		min		-1.723	21	-7.532	21	0.14	31	-0.496	20	0.294	31

Envelope Plate Principal Stresses (Continued)

	Plate		Surface	Sigma1 [ksi]	LC	Sigma2 [ksi]	LC	Tau Max [ksi]	LC	Angle [rad]	LC	Von Mises [ksi]	LC
550		max	B	6.97	21	1.659	21	2.655	21	1.142	26	6.307	21
551		min		-1.504	24	-6.222	24	0.13	31	-0.633	31	0.274	31
552	P370	max	T	7.64	24	5.494	24	1.073	24	2.263	25	6.825	24
553		min		-3.774	21	-5.417	21	0.162	29	-0.582	27	0.976	22
554		max	B	6.118	21	3.111	21	2.16	24	0.977	22	7.574	24
555		min		-4.425	24	-8.746	24	0.326	22	-0.621	19	1.098	22
556	P6	max	T	5.048	24	1.13	24	2.919	29	1.441	23	6.818	29
557		min		-1.656	29	-7.493	29	0.117	23	-0.392	17	0.209	23
558		max	B	6.767	29	1.55	29	2.609	29	1.209	22	6.141	29
559		min		-1.054	24	-4.53	24	0.113	23	-0.407	18	0.202	23
560	P22	max	T	7.866	21	4.188	21	1.839	21	1.752	20	6.817	21
561		min		-2.904	24	-5.647	24	0.284	28	-0.619	23	0.937	32
562		max	B	5.494	24	4.345	24	0.667	17	2.297	26	7.02	21
563		min		-6.263	29	-7.589	21	0.085	28	-0.704	32	0.866	32
564	P375	max	T	7.37	24	6.078	24	0.646	24	2.19	18	6.816	24
565		min		-4.223	21	-5.108	21	0.213	27	-0.754	24	0.963	22
566		max	B	6.189	21	3.016	21	2.258	24	2.27	17	7.703	24
567		min		-4.379	24	-8.894	24	0.318	22	-0.766	21	1.08	22
568	P985	max	T	6.697	24	1.556	24	2.892	21	1.003	31	6.808	21
569		min		-1.718	21	-7.502	21	0.167	31	-0.772	26	0.356	31
570		max	B	6.952	21	1.656	21	2.648	21	0.873	20	6.289	21
571		min		-1.5	24	-6.198	24	0.154	31	-0.692	21	0.33	31
572	P566	max	T	7.858	19	4.116	19	1.871	19	2.347	20	6.808	19
573		min		-2.8	20	-5.58	20	0.321	31	-0.62	23	0.987	17
574		max	B	5.408	20	4.245	20	0.695	19	2.254	29	6.983	19
575		min		-6.183	19	-7.573	19	0.068	31	-0.768	27	0.922	17
576	P972	max	T	7.483	21	5.755	21	0.864	21	1.215	21	6.786	21
577		min		-5.356	24	-7.001	24	0.106	31	-0.314	24	0.19	31
578		max	B	8.391	24	4.144	24	2.29	21	1.777	31	7.798	21
579		min		-4.424	21	-9.004	21	0.051	31	-0.713	30	0.098	31
580	P500	max	T	5.518	23	1.217	23	2.901	22	2.343	25	6.785	22
581		min		-1.657	22	-7.46	22	0.222	21	-0.774	31	0.456	21
582		max	B	6.766	22	1.559	22	2.604	22	2.329	20	6.137	22
583		min		-1.144	23	-5	23	0.198	31	0.756	24	0.447	21
584	P973	max	T	7.478	21	5.763	21	0.858	21	2.288	23	6.785	21
585		min		-5.366	24	-6.993	24	0.065	31	0.726	17	0.122	31
586		max	B	8.395	24	4.145	24	2.291	21	1.065	23	7.802	21
587		min		-4.425	21	-9.008	21	0.021	31	-0.526	17	0.053	31
588	P248	max	T	7.484	31	5.738	31	0.88	28	2.347	25	6.782	31
589		min		-3.653	22	-4.76	22	0.153	18	-0.723	17	0.613	21
590		max	B	5.513	22	2.829	22	2.133	31	1.503	21	7.528	31
591		min		-4.427	31	-8.692	31	0.278	21	-0.619	19	0.647	21
592	P564	max	T	7.397	27	5.862	27	0.884	22	2.19	31	6.761	27
593		min		-3.872	20	-4.967	20	0.094	28	-0.701	17	1.158	28
594		max	B	5.923	20	2.884	20	2.28	27	1.927	24	7.684	27
595		min		-4.311	27	-8.872	27	0.383	28	-0.166	18	1.106	17
596	P249	max	T	7.398	31	5.82	31	0.814	23	2.3	26	6.749	31
597		min		-3.652	22	-4.784	22	0.175	30	-0.753	30	0.855	21
598		max	B	5.535	22	2.844	22	2.146	31	1.461	21	7.544	31
599		min		-4.419	31	-8.711	31	0.284	21	-0.749	19	0.704	21
600	P550	max	T	5.159	20	1.135	20	2.885	19	2.129	17	6.74	19
601		min		-1.639	19	-7.408	19	0.18	17	0.395	21	0.351	17
602		max	B	6.688	19	1.532	19	2.578	19	1.993	18	6.068	19
603		min		-1.058	20	-4.643	20	0.173	17	0.384	24	0.336	17
604	P50	max	T	3.236	24	-0.331	18	3.826	27	1.936	18	6.729	27

Envelope Plate Principal Stresses (Continued)

	Plate		Surface	Sigma1 [ksi]	LC	Sigma2 [ksi]	LC	Tau Max [ksi]	LC	Angle [rad]	LC	Von Mises [ksi]	LC
605		min		0.199	28	-4.998	27	0.327	28	0.071	32	0.581	28
606		max	B	4.088	27	-0.205	28	3.413	27	1.82	17	5.95	27
607		min		0.338	18	-2.737	27	0.298	28	0.089	23	0.524	28
608	P835	max	T	7.725	24	4.506	24	1.61	24	1.804	31	6.721	24
609		min		-4.289	21	-7.411	21	0.342	25	-0.177	25	1.271	25
610		max	B	7.207	21	6.133	21	0.537	21	1.3	19	7.03	24
611		min		-6.472	24	-7.48	24	0.089	26	-0.219	20	1.303	25
612	P838	max	T	7.702	24	4.478	24	1.612	24	2.149	25	6.699	24
613		min		-4.275	21	-7.403	21	0.346	30	0.117	31	1.253	25
614		max	B	7.203	21	6.125	21	0.539	21	2.23	18	7.012	24
615		min		-6.444	24	-7.467	24	0.092	26	0.536	22	1.28	25
616	P381	max	T	5.167	21	1.25	21	2.8	24	2.338	17	6.663	24
617		min		-1.768	24	-7.369	24	0.203	22	0.745	29	0.528	22
618		max	B	6.717	24	1.68	24	2.518	24	2.338	23	6.054	24
619		min		-1.187	21	-4.698	21	0.161	22	0.763	17	0.439	22
620	P594	max	T	3.531	20	-0.428	24	3.766	22	1.03	21	6.619	22
621		min		0.181	31	-4.899	19	0.324	31	-0.673	17	0.58	31
622		max	B	4.024	19	-0.187	31	3.354	22	1.105	24	5.842	22
623		min		0.364	28	-2.9	20	0.297	31	-0.722	28	0.522	28
624	P250	max	T	7.593	31	4.453	31	1.57	31	1.799	19	6.609	31
625		min		-2.703	22	-4.701	22	0.414	21	-0.589	21	0.741	21
626		max	B	4.518	22	3.81	22	0.516	17	2.195	26	6.838	31
627		min		-6.34	31	-7.245	31	0.157	30	-0.726	24	0.649	21
628	P498	max	T	7.555	22	3.959	22	1.798	22	2.283	31	6.545	22
629		min		-2.79	23	-5.551	23	0.261	25	-0.222	20	0.699	21
630		max	B	5.368	23	4.236	23	0.668	22	2.344	21	6.708	22
631		min		-5.94	22	-7.276	22	0.045	25	-0.358	19	0.588	21
632	P809	max	T	6.364	19	1.407	19	2.797	20	1.863	26	6.531	20
633		min		-1.584	20	-7.178	20	0.054	26	0.11	32	0.123	26
634		max	B	6.788	20	1.543	20	2.623	20	1.692	17	6.163	20
635		min		-1.369	19	-6.015	19	0.048	26	0.117	21	0.11	26
636	P808	max	T	6.362	19	1.407	19	2.797	20	1.839	18	6.531	20
637		min		-1.582	20	-7.177	20	0.037	26	0.255	24	0.105	26
638		max	B	6.789	20	1.542	20	2.624	20	1.838	25	6.164	20
639		min		-1.369	19	-6.014	19	0.034	26	0.232	29	0.095	26
640	P479	max	T	5.202	23	1.177	17	2.79	22	2.335	17	6.53	22
641		min		-1.634	18	-7.181	22	0.308	31	-0.776	21	0.754	31
642		max	B	6.487	22	1.528	18	2.494	22	2.347	24	5.883	22
643		min		-1.097	17	-4.686	23	0.278	31	0.739	20	0.689	31
644	P388	max	T	5.057	21	1.21	21	2.75	24	1.212	22	6.525	24
645		min		-1.709	24	-7.21	24	0.2	22	-0.389	19	0.505	22
646		max	B	6.517	24	1.612	24	2.452	24	1.184	19	5.879	24
647		min		-1.141	21	-4.564	21	0.162	22	-0.402	22	0.424	22
648	P378	max	T	7.069	24	5.723	24	0.673	24	2.213	29	6.501	24
649		min		-3.965	21	-4.92	21	0.231	29	-0.78	30	1.115	22
650		max	B	5.976	21	2.846	21	2.228	24	1.298	23	7.437	24
651		min		-4.13	24	-8.585	24	0.344	22	-0.463	17	1.146	22
652	P1148	max	T	6.314	22	1.393	22	2.781	23	1.772	32	6.491	23
653		min		-1.571	23	-7.132	23	0.002	32	-0.563	27	0.021	32
654		max	B	6.747	23	1.531	23	2.608	23	1.05	24	6.126	23
655		min		-1.356	22	-5.969	22	0.002	32	-0.53	20	0.017	32
656	P1149	max	T	6.313	22	1.396	22	2.779	23	0.906	21	6.489	23
657		min		-1.574	23	-7.132	23	0.017	32	-0.67	19	0.035	32
658		max	B	6.745	23	1.534	23	2.606	23	1.594	32	6.124	23
659		min		-1.359	22	-5.968	22	0.014	32	-0.672	28	0.028	32

Envelope Plate Principal Stresses (Continued)

	Plate		Surface	Sigma1 [ksi]	LC	Sigma2 [ksi]	LC	Tau Max [ksi]	LC	Angle [rad]	LC	Von Mises [ksi]	LC
660	P482	max	T	5.185	23	1.138	23	2.773	22	1.212	24	6.48	22
661		min		-1.577	22	-7.122	22	0.289	31	-0.398	20	0.696	31
662		max	B	6.433	22	1.475	22	2.479	22	1.244	21	5.837	22
663		min		-1.062	23	-4.672	23	0.26	31	-0.403	25	0.633	31
664	P754	max	T	6.68	19	1.597	19	2.73	20	1.986	29	6.479	20
665		min		-1.699	20	-7.159	20	0.218	26	0.404	25	0.536	26
666		max	B	6.364	20	1.587	20	2.388	20	1.969	28	5.737	20
667		min		-1.493	19	-5.932	19	0.192	26	0.399	22	0.48	26
668	P751	max	T	6.675	19	1.596	19	2.729	20	1.539	21	6.477	20
669		min		-1.7	20	-7.158	20	0.207	26	-0.031	17	0.504	26
670		max	B	6.366	20	1.589	20	2.389	20	1.55	32	5.739	20
671		min		-1.493	19	-5.93	19	0.182	26	-0.029	26	0.451	26
672	P599	max	T	3.563	20	-0.147	17	3.671	19	1.01	24	6.468	19
673		min		0.092	28	-4.86	19	0.199	28	-0.716	18	0.361	28
674		max	B	3.977	19	-0.101	28	3.272	19	2.092	17	5.71	19
675		min		0.124	17	-2.912	20	0.177	28	-0.657	23	0.316	28
676	P974	max	T	7.425	21	4.329	21	1.548	21	2.155	26	6.46	21
677		min		-3.995	24	-6.899	24	0.11	31	-0.503	31	0.192	31
678		max	B	6.705	24	5.73	24	0.487	24	2.181	17	6.764	21
679		min		-6.24	21	-7.188	21	0.077	23	0.594	23	0.142	31
680	P234	max	T	7.174	31	5.297	31	0.938	31	1.343	24	6.444	31
681		min		-2.959	22	-4.244	22	0.145	21	-0.336	18	0.524	21
682		max	B	4.791	22	2.441	22	2.051	31	1.009	18	7.186	31
683		min		-4.195	31	-8.297	31	0.186	21	-0.721	30	0.6	21
684	P971	max	T	7.402	21	4.307	21	1.547	21	1.869	30	6.439	21
685		min		-3.965	24	-6.87	24	0.15	31	-0.693	31	0.264	31
686		max	B	6.682	24	5.679	24	0.501	24	1.297	24	6.736	21
687		min		-6.199	21	-7.168	21	0.077	30	-0.218	21	0.206	31
688	P776	max	T	6.717	20	6.09	20	0.38	19	1.655	17	6.427	20
689		min		-5.857	19	-6.616	19	0.044	32	-0.051	21	0.816	26
690		max	B	2.548	19	1.03	19	0.759	19	1.588	25	2.22	19
691		min		-0.999	20	-2.382	20	0.045	25	-0.723	32	0.079	25
692	P1162	max	T	6.63	23	1.393	23	2.774	22	0.905	32	6.425	22
693		min		-1.493	22	-7.04	22	0.183	29	-0.707	29	0.418	29
694		max	B	6.361	22	1.417	22	2.472	22	0.895	23	5.785	22
695		min		-1.322	23	-5.982	23	0.164	29	-0.674	18	0.377	29
696	P1193	max	T	6.63	23	1.396	23	2.773	22	1.056	19	6.425	22
697		min		-1.495	22	-7.041	22	0.187	29	-0.524	21	0.422	29
698		max	B	6.361	22	1.418	22	2.471	22	1.068	29	5.784	22
699		min		-1.325	23	-5.981	23	0.167	29	-0.542	32	0.381	29
700	P1091	max	T	6.572	22	1.57	22	2.706	23	2.324	22	6.421	23
701		min		-1.684	23	-7.095	23	0.15	32	0.754	17	0.367	32
702		max	B	6.31	23	1.574	23	2.368	23	2.335	28	5.688	23
703		min		-1.468	22	-5.837	22	0.132	32	0.754	32	0.329	32
704	P1094	max	T	6.569	22	1.568	22	2.705	23	1.194	20	6.419	23
705		min		-1.682	23	-7.092	23	0.157	32	-0.377	24	0.389	32
706		max	B	6.304	23	1.571	23	2.366	23	1.188	32	5.684	23
707		min		-1.466	22	-5.832	22	0.138	32	-0.388	29	0.349	32
708	P572	max	T	7.081	22	5.587	30	0.926	22	2.222	21	6.409	30
709		min		-3.456	23	-5.058	23	0.101	28	0.074	29	0.551	24
710		max	B	1.895	17	0.406	21	0.962	18	2.325	24	2.185	18
711		min		-0.635	32	-2.377	18	0.12	25	-0.535	28	0.222	25
712	P497	max	T	7.037	22	5.5	22	0.882	18	2.302	32	6.408	22
713		min		-3.921	23	-5.027	23	0.102	25	-0.734	25	1.031	31
714		max	B	5.999	23	2.92	23	2.136	22	2.214	21	7.261	22

Envelope Plate Principal Stresses (Continued)

	Plate		Surface	Sigma1 [ksi]	LC	Sigma2 [ksi]	LC	Tau Max [ksi]	LC	Angle [rad]	LC	Von Mises [ksi]	LC
715		min		-4.112	22	-8.384	22	0.304	31	-0.551	17	1.084	31
716	P777	max	T	6.702	20	6.063	20	0.381	19	2.305	32	6.406	20
717		min		-5.854	19	-6.617	19	0.003	32	-0.598	17	0.966	26
718		max	B	2.545	19	1.025	19	0.76	19	2.322	22	2.218	19
719		min		-0.982	20	-2.361	20	0.066	32	-0.737	18	0.16	25
720	P526	max	T	3.61	17	-0.231	31	3.64	18	1.812	19	6.4	18
721		min		0.091	25	-4.739	18	0.17	31	0.135	21	0.301	31
722		max	B	3.863	22	-0.095	25	3.242	18	1.865	20	5.65	18
723		min		0.198	31	-2.936	23	0.154	31	0.007	31	0.27	31
724	P496	max	T	7.008	22	5.492	22	0.819	18	2.295	26	6.387	22
725		min		-3.917	23	-5.023	23	0.122	31	-0.748	22	0.943	31
726		max	B	5.997	23	2.911	23	2.147	22	2.313	17	7.25	22
727		min		-4.077	22	-8.371	22	0.298	31	-0.739	23	1.049	31
728	P247	max	T	7.321	31	4.203	31	1.559	31	2.15	24	6.363	31
729		min		-2.703	22	-4.691	22	0.3	21	0.187	18	1.134	21
730		max	B	4.506	22	3.776	22	0.562	20	2.249	19	6.544	31
731		min		-5.944	31	-7.012	31	0.108	18	-0.626	21	1.176	24
732	P1116	max	T	6.643	23	6.037	23	0.354	22	2.34	17	6.362	23
733		min		-5.765	22	-6.474	22	0.035	28	-0.738	21	0.659	32
734		max	B	2.465	22	1.006	22	0.73	22	2.182	32	2.147	22
735		min		-0.988	23	-2.346	23	0.031	29	-0.526	29	0.067	29
736	P876	max	T	6.286	21	1.387	21	2.716	24	1.053	22	6.339	24
737		min		-1.532	24	-6.965	24	0.233	25	-0.531	18	0.551	25
738		max	B	6.588	24	1.493	24	2.547	24	1.051	31	5.983	24
739		min		-1.35	21	-5.942	21	0.217	25	-0.553	25	0.516	25
740	P877	max	T	6.286	21	1.39	21	2.713	24	0.923	25	6.336	24
741		min		-1.538	24	-6.964	24	0.229	25	-0.677	26	0.547	25
742		max	B	6.585	24	1.499	24	2.543	24	0.905	23	5.979	24
743		min		-1.353	21	-5.941	21	0.213	25	-0.668	17	0.512	25
744	P783	max	T	7.079	20	5.108	20	0.985	20	2.304	26	6.328	20
745		min		-4.618	19	-6.581	19	0.162	25	0.073	25	0.434	26
746		max	B	7.373	19	3.743	19	1.979	20	1.757	24	6.944	20
747		min		-4.061	20	-8.018	20	0.132	26	0.195	18	0.385	26
748	P1117	max	T	6.614	23	5.99	23	0.363	22	1.294	24	6.325	23
749		min		-5.723	22	-6.449	22	0.014	28	-0.431	20	0.759	32
750		max	B	2.434	22	0.991	18	0.726	22	2.27	29	2.121	22
751		min		-0.968	17	-2.31	23	0.073	29	-0.18	27	0.179	29
752	P786	max	T	7.072	20	5.105	20	0.983	20	1.43	19	6.322	20
753		min		-4.625	19	-6.592	19	0.165	25	-0.099	20	0.583	26
754		max	B	7.398	19	3.749	19	1.985	20	1.862	25	6.952	20
755		min		-4.057	20	-8.027	20	0.169	26	-0.13	26	0.529	26
756	P1123	max	T	7.024	23	5.077	23	0.974	23	1.272	20	6.281	23
757		min		-4.582	22	-6.495	22	0.152	32	-0.296	24	0.334	32
758		max	B	7.292	22	3.701	22	1.966	23	1.415	32	6.897	23
759		min		-4.032	23	-7.963	23	0.103	32	-0.701	29	0.278	32
760	P55	max	T	3.402	24	-0.113	23	3.553	21	1.824	28	6.262	21
761		min		0.08	32	-4.706	21	0.199	32	-0.489	23	0.364	32
762		max	B	3.835	21	-0.087	32	3.161	21	1.815	18	5.517	21
763		min		0.075	23	-2.765	24	0.18	32	0.056	22	0.325	32
764	P1126	max	T	7.001	23	5.064	23	0.968	23	2.222	22	6.261	23
765		min		-4.571	22	-6.474	22	0.169	29	0.689	23	0.434	32
766		max	B	7.282	22	3.69	22	1.966	23	0.967	18	6.886	23
767		min		-4.019	23	-7.951	23	0.127	32	-0.59	23	0.375	32
768	P819	max	T	6.548	21	1.565	21	2.637	24	2.33	26	6.257	24
769		min		-1.642	24	-6.915	24	0.427	25	0.747	30	1.032	25

Envelope Plate Principal Stresses (Continued)

	Plate		Surface	Sigma1 [ksi]	LC	Sigma2 [ksi]	LC	Tau Max [ksi]	LC	Angle [rad]	LC	Von Mises [ksi]	LC
770		max	B	6.151	24	1.534	24	2.308	24	2.333	21	5.545	24
771		min		-1.464	21	-5.817	21	0.374	25	0.763	20	0.921	25
772	P822	max	T	6.546	21	1.563	21	2.635	24	1.201	25	6.252	24
773		min		-1.637	24	-6.908	24	0.424	25	-0.381	31	1.023	25
774		max	B	6.14	24	1.529	24	2.306	24	1.184	32	5.536	24
775		min		-1.461	21	-5.812	21	0.372	25	-0.386	19	0.912	25
776	P241	max	T	6.461	31	5.974	31	0.444	17	2.321	23	6.232	31
777		min		-3.726	22	-4.326	22	0.059	27	-0.761	25	0.726	21
778		max	B	1.759	19	0.803	19	0.648	23	2.044	22	2.064	20
779		min		-1.118	20	-2.382	20	0.062	27	-0.685	18	0.183	27
780	P242	max	T	6.745	31	5.511	31	0.634	28	1.872	21	6.22	31
781		min		-3.135	22	-3.833	22	0.222	27	-0.715	19	0.72	21
782		max	B	4.673	22	2.244	22	2.083	31	1.333	18	7.088	31
783		min		-4.018	31	-8.184	31	0.217	21	-0.565	24	0.664	21
784	P531	max	T	3.571	23	-0.17	31	3.524	22	1.783	20	6.21	22
785		min		0.043	31	-4.666	22	0.107	31	0.093	24	0.195	31
786		max	B	3.824	22	-0.048	31	3.144	22	1.942	31	5.488	22
787		min		0.141	31	-2.926	23	0.094	31	-0.057	21	0.17	31
788	P844	max	T	6.474	24	5.897	24	0.355	21	2.338	21	6.205	24
789		min		-5.752	21	-6.462	21	0.051	28	-0.777	19	1.28	31
790		max	B	2.468	21	1.008	21	0.73	21	2.048	23	2.15	21
791		min		-0.97	24	-2.289	24	0.046	31	0.42	17	0.102	31
792	P357	max	T	4.648	21	1.034	21	2.635	24	1.199	20	6.179	24
793		min		-1.53	24	-6.801	24	0.181	22	-0.369	21	0.46	22
794		max	B	6.198	24	1.447	24	2.375	24	1.197	17	5.616	24
795		min		-0.976	21	-4.227	21	0.14	22	-0.395	29	0.374	22
796	P1013	max	T	5.886	24	1.297	24	2.64	21	0.926	26	6.162	21
797		min		-1.489	21	-6.77	21	0.196	26	-0.704	31	0.469	31
798		max	B	6.402	21	1.451	21	2.475	21	0.906	22	5.814	21
799		min		-1.262	24	-5.562	24	0.183	26	-0.667	18	0.438	26
800	P775	max	T	6.674	20	5.462	20	0.606	20	2.313	30	6.158	20
801		min		-4.995	19	-6.09	19	0.177	18	-0.607	29	0.394	26
802		max	B	7.453	19	3.596	19	2.086	20	1.933	20	7.047	20
803		min		-3.966	20	-8.137	20	0.163	26	0.381	19	0.37	26
804	P1012	max	T	5.881	24	1.3	24	2.637	21	1.056	23	6.157	21
805		min		-1.491	21	-6.766	21	0.199	26	-0.527	17	0.473	26
806		max	B	6.4	21	1.454	21	2.473	21	1.053	30	5.811	21
807		min		-1.265	24	-5.56	24	0.186	26	-0.554	26	0.442	26
808	P778	max	T	6.671	20	5.455	20	0.608	20	1.608	18	6.154	20
809		min		-5.003	19	-6.101	19	0.134	26	-0.026	24	0.444	26
810		max	B	7.479	19	3.602	19	2.093	20	1.687	25	7.056	20
811		min		-3.961	20	-8.147	20	0.177	26	-0.226	26	0.48	26
812	P845	max	T	6.422	24	5.813	24	0.365	21	1.908	23	6.14	24
813		min		-5.704	21	-6.435	21	0.003	26	-0.572	31	1.165	26
814		max	B	2.433	21	0.98	21	0.727	21	1.631	22	2.121	21
815		min		-0.923	24	-2.225	24	0.03	26	-0.126	18	0.112	26
816	P851	max	T	6.858	24	4.96	24	0.956	21	1.476	25	6.133	24
817		min		-4.562	21	-6.473	21	0.184	31	-0.654	31	0.989	25
818		max	B	7.263	21	3.688	21	1.918	24	0.976	18	6.732	24
819		min		-3.938	24	-7.773	24	0.291	25	-0.607	22	0.984	25
820	P772	max	T	6.246	19	1.488	19	2.583	20	1.55	24	6.124	20
821		min		-1.599	20	-6.765	20	0.179	26	-0.023	18	0.442	26
822		max	B	6.068	20	1.5	20	2.284	20	1.571	29	5.475	20
823		min		-1.396	19	-5.591	19	0.155	26	-0.017	25	0.393	26
824	P765	max	T	6.235	19	1.486	19	2.582	20	1.977	25	6.121	20

Envelope Plate Principal Stresses (Continued)

	Plate		Surface	Sigma1 [ksi]	LC	Sigma2 [ksi]	LC	Tau Max [ksi]	LC	Angle [rad]	LC	Von Mises [ksi]	LC
825		min		-1.599	20	-6.762	20	0.152	26	0.37	26	0.373	26
826		max	B	6.073	20	1.502	20	2.286	20	1.963	18	5.479	20
827		min		-1.395	19	-5.588	19	0.131	26	0.39	24	0.327	26
828	P1115	max	T	6.631	23	5.427	23	0.602	23	1.135	23	6.119	23
829		min		-4.953	22	-6.027	22	0.15	32	-0.353	18	0.304	32
830		max	B	7.379	22	3.569	22	2.071	23	1.547	32	7.002	23
831		min		-3.943	23	-8.085	23	0.125	32	-0.506	29	0.264	32
832	P266	max	T	4.102	22	0.984	22	2.572	31	2.333	19	6.102	31
833		min		-1.598	31	-6.742	31	0.09	21	0.609	21	0.19	21
834		max	B	6.132	31	1.516	31	2.308	31	2.352	24	5.532	31
835		min		-0.937	22	-3.734	22	0.096	21	0.749	18	0.206	21
836	P1118	max	T	6.614	23	5.407	23	0.603	23	2.337	18	6.101	23
837		min		-4.934	22	-6.013	22	0.12	32	-0.752	24	0.324	32
838		max	B	7.37	22	3.556	22	2.073	23	0.797	24	6.993	23
839		min		-3.928	23	-8.073	23	0.133	32	-0.776	20	0.334	32
840	P854	max	T	6.812	24	4.935	24	0.95	21	2.353	32	6.095	24
841		min		-4.552	21	-6.453	21	0.17	26	-0.782	28	0.943	25
842		max	B	7.258	21	3.677	21	1.917	24	2.346	25	6.708	24
843		min		-3.912	24	-7.746	24	0.28	25	-0.708	30	0.943	25
844	P359	max	T	7.029	24	3.84	32	1.659	24	2.14	23	6.09	24
845		min		-2.377	21	-4.747	21	0.331	29	0.164	17	0.998	22
846		max	B	4.593	21	3.576	21	0.718	20	2.33	19	6.236	32
847		min		-5.607	32	-6.774	24	0.126	29	-0.554	22	0.935	22
848	P231	max	T	6.759	31	5.036	31	0.907	23	2.203	22	6.084	31
849		min		-2.953	22	-4.243	22	0.172	30	-0.743	19	1.001	24
850		max	B	4.74	22	2.441	22	1.9	31	1.03	19	6.722	31
851		min		-3.963	31	-7.762	31	0.295	24	-0.675	21	0.982	24
852	P1105	max	T	6.154	22	1.465	22	2.562	23	1.185	24	6.074	23
853		min		-1.586	23	-6.71	23	0.105	32	-0.387	20	0.26	32
854		max	B	6.026	23	1.49	23	2.268	23	1.179	29	5.436	23
855		min		-1.375	22	-5.515	22	0.09	32	-0.404	32	0.227	32
856	P1112	max	T	6.149	22	1.462	22	2.56	23	2.335	20	6.069	23
857		min		-1.583	23	-6.703	23	0.124	32	0.762	24	0.308	32
858		max	B	6.013	23	1.486	23	2.264	23	2.351	32	5.425	23
859		min		-1.372	22	-5.504	22	0.106	32	0.769	29	0.272	32
860	P10	max	T	2.842	20	-0.165	18	3.435	27	1.847	22	6.065	27
861		min		0.332	28	-4.615	27	0.46	28	0.042	18	0.808	28
862		max	B	3.753	27	-0.339	28	3.048	27	1.944	23	5.327	27
863		min		0.175	18	-2.343	27	0.418	28	0.135	28	0.728	28
864	P598	max	T	3.59	19	-0.266	28	3.49	19	1.336	24	6.045	19
865		min		0.168	28	-3.389	19	0.217	28	-0.503	18	0.378	28
866		max	B	2.493	20	-0.169	28	2.915	19	1.293	31	5.074	19
867		min		0.216	28	-3.419	19	0.193	28	-0.689	17	0.334	28
868	P364	max	T	4.539	21	0.994	21	2.585	24	2.317	21	6.042	24
869		min		-1.472	24	-6.642	24	0.222	22	0.749	24	0.573	22
870		max	B	5.998	24	1.38	24	2.309	24	2.343	29	5.441	24
871		min		-0.93	21	-4.092	21	0.182	22	-0.785	22	0.489	22
872	P595	max	T	3.6	19	-0.262	28	3.487	19	2.319	20	6.041	19
873		min		0.225	28	-3.374	19	0.243	28	-0.683	24	0.422	28
874		max	B	2.481	20	-0.207	28	2.912	19	2.353	29	5.07	19
875		min		0.182	28	-3.424	19	0.195	28	-0.763	25	0.337	28
876	P958	max	T	6.099	24	1.456	24	2.542	21	1.201	26	6.029	21
877		min		-1.578	21	-6.661	21	0.042	31	-0.413	31	0.084	31
878		max	B	5.92	21	1.474	21	2.223	21	1.184	21	5.338	21
879		min		-1.361	24	-5.413	24	0.035	31	-0.386	20	0.07	31

Envelope Plate Principal Stresses (Continued)

	Plate		Surface	Sigma1 [ksi]	LC	Sigma2 [ksi]	LC	Tau Max [ksi]	LC	Angle [rad]	LC	Von Mises [ksi]	LC
880	P955	max	T	6.085	24	1.452	24	2.538	21	2.329	30	6.019	21
881		min		-1.575	21	-6.65	21	0.05	31	-0.755	31	0.106	31
882		max	B	5.913	21	1.471	21	2.221	21	2.333	24	5.332	21
883		min		-1.357	24	-5.405	24	0.042	31	0.763	19	0.088	31
884	P504	max	T	6.666	18	5.015	18	0.826	18	2.226	31	6.013	18
885		min		-3.533	17	-5.041	17	0.134	31	-0.721	23	0.383	20
886		max	B	1.625	21	0.351	19	0.836	18	2.279	27	1.81	24
887		min		-0.558	28	-1.967	24	0.133	27	-0.738	22	0.244	27
888	P263	max	T	4.093	22	0.985	22	2.534	31	1.214	24	6.003	31
889		min		-1.561	31	-6.629	31	0.241	21	-0.387	18	0.604	21
890		max	B	6.052	31	1.484	31	2.284	31	1.196	19	5.464	31
891		min		-0.939	22	-3.736	22	0.206	21	-0.448	21	0.531	21