



STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: [siting.council@ct.gov](mailto:siting.council@ct.gov)

Web Site: [portal.ct.gov/csc](http://portal.ct.gov/csc)

VIA ELECTRONIC MAIL

May 20, 2024

Jeffrey Barbadora  
Permitting Specialist  
Crown Castle  
1800 West Park Drive  
Westborough, MA 01581  
[Jeff.Barbadora@crowncastle.com](mailto:Jeff.Barbadora@crowncastle.com)

RE: **EM-VER-119-230908** - Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 901 France Street, Rocky Hill, Connecticut.  
**Request for Project Change.**

Dear Jeffrey Barbadora:

The Connecticut Siting Council (Council) is in receipt of the correspondence dated May 13, 2024 including the associated Mount Analysis, dated May 9, 2024 and Structural Analysis dated October 24, 2023, regarding a project change for the above-referenced exempt modification request acknowledged by the Council on October 2, 2023.

Pursuant to Condition No. 1 of the Council's October 2, 2023 exempt modification approval, the request to increase the number of Kaelus interference mitigation filters to be installed from one to two is hereby approved with the following conditions:

1. Antennas and equipment shall be installed in accordance with the Mount Analysis prepared by Colliers Engineering and Design dated May 9, 2024 and stamped and signed by Dejian Xu;
2. Within 45 days following completion of equipment installation, Verizon shall provide documentation certified by a Professional Engineer that its installation complied with the recommendations of the Mount Analysis;

This approval applies only to the project change in the correspondence dated May 13, 2024.

Thank you for your attention and cooperation.

Sincerely,

Melanie A. Bachman  
Executive Director

MAB/ANM/laf

c: The Honorable Lisa J. Marotta, Mayor, Town of Rocky Hill ([lmарotta@rockyhillct.gov](mailto:lmарotta@rockyhillct.gov))  
Ray Carpentino, Town Manager, Town of Rocky Hill ([rcarpentino@rockyhillct.gov](mailto:rcarpentino@rockyhillct.gov))

**From:** Barbadora, Jeff <Jeff.Barbadora@crowncastle.com>  
**Sent:** Monday, May 13, 2024 11:26 AM  
**To:** CSC-DL Siting Council <Siting.Council@ct.gov>  
**Subject:** EM-VER-119-230908 - North Street a.k.a. 901 France Street Rocky Hill CT - 806374

Good morning,

Would the CSC please update the approval for EM-VER-119-230908 to include a total of 2 filters?

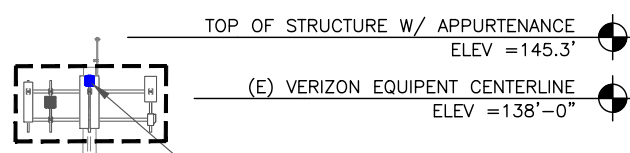
The original MA and SA submitted with the application and dated 9/5/2023 stated only 1 filters and should have stated 2 filters.

Please see updated MA, SA and CD stating a total of 2 filters and let me know if you have any questions.

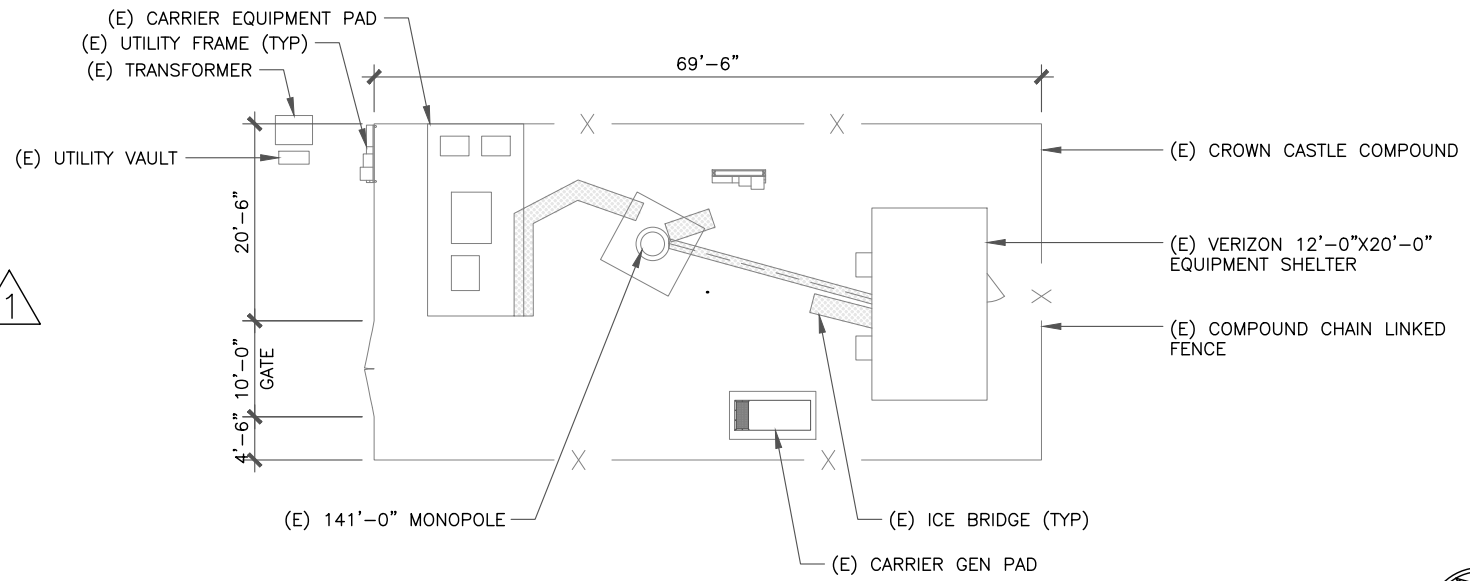
Thanks,

**Jeffrey Barbadora**  
Permitting Specialist  
781-970-0053

**Crown Castle**  
1800 W. Park Drive, Suite 250  
Westborough, MA 01581



(N) VERIZON EQUIPMENT TO INSTALL  
 (2) Kaelus - BSF0020F3V1 FILTER  
 (ON GAMMA SECTOR)



3 FINAL SITE PLAN  
 SCALE: 1"=20'

NOTE:  
 AN ANALYSIS OF THE CAPACITY OF THE STRUCTURE TO SUPPORT THE PROPOSED LOADING HAS NOT BEEN COMPLETED BY CROWN CASTLE. DRAWINGS ARE SUBJECT TO CHANGE PENDING OUTCOME OF A STRUCTURAL ANALYSIS.

LEASE EXHIBIT:  
 THIS LEASE EXHIBIT IS DIAGRAMMATIC IN NATURE AND IS INTENDED TO PROVIDE GENERAL INFORMATION REGARDING THE LOCATION AND SIZE OF THE PROPOSED WIRELESS COMMUNICATION FACILITY. THE SITE LAYOUT WILL BE FINALIZED UPON COMPLETION OF THE SITE SURVEY AND FACILITY DESIGN.



VERIZON SITE NUMBER:  
**5000103482**

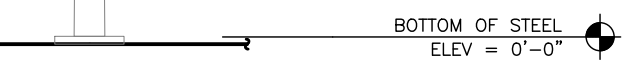
BU #: **806374**

CROWN CASTLE SITE NAME  
**HRT 081 943236**

VERIZON SITE NAME  
**ROCKY HILL CT**

NORTH STREET  
 ROCKY HILL,, CT 06067

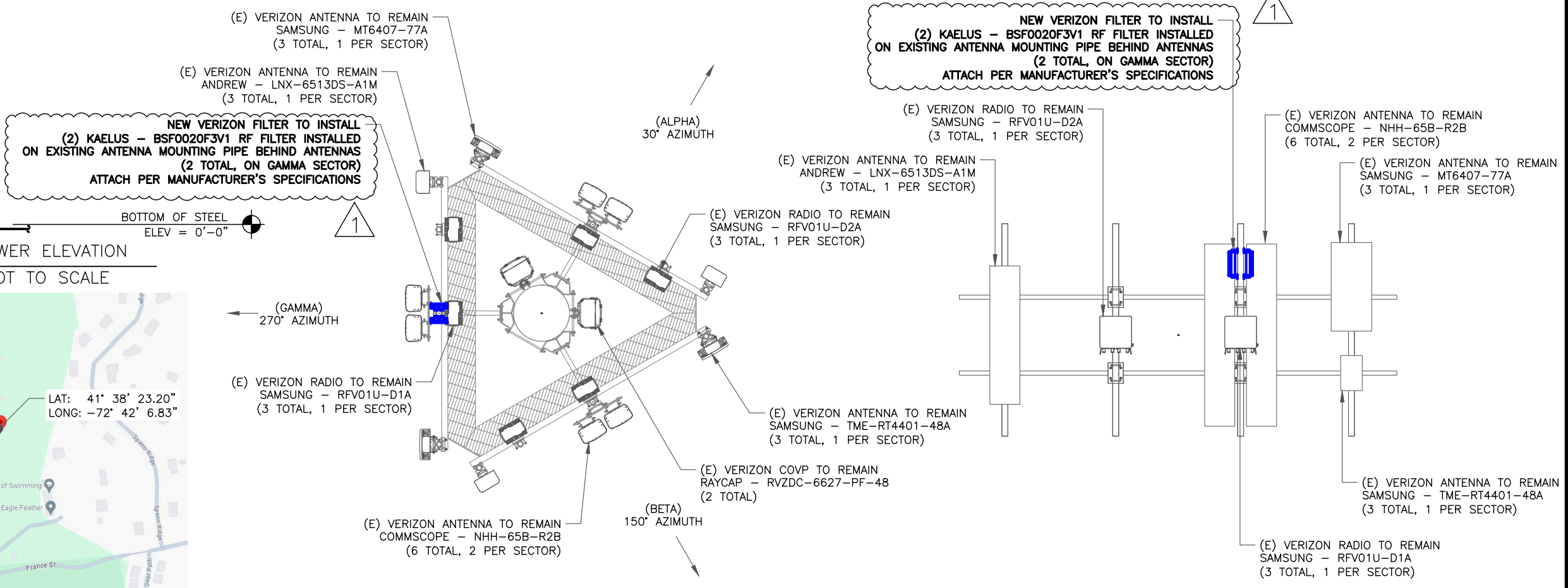
EXISTING 141'-0"  
 MONOPOLE



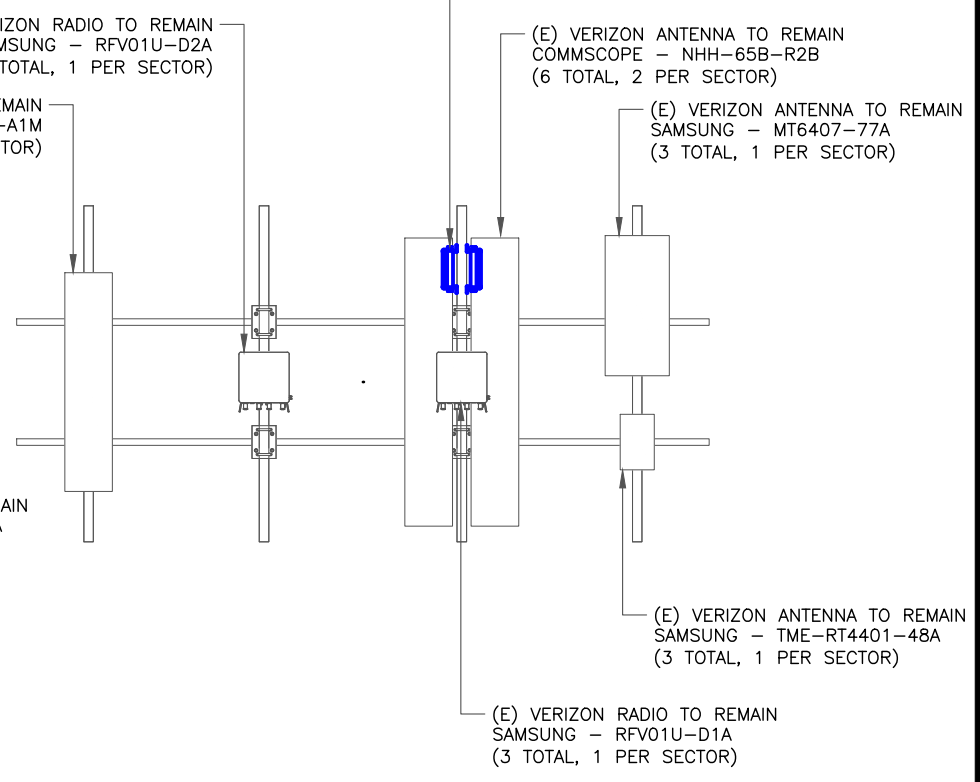
1 FINAL TOWER ELEVATION  
 SCALE: NOT TO SCALE



2 LOCATION MAP  
 SCALE: NOT TO SCALE



4 FINAL ANTENNA PLAN  
 SCALE: 1"=16'



5 FINAL RF FILTER ELEVATION  
 SCALE: 1"=10'

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	04/01/2024	WS	LEASE EXHIBIT	MD
1	04/12/2024	WS	LEASE EXHIBIT	MD

DocuSigned by:  
*Harbel Dentinger*  
 014341534668

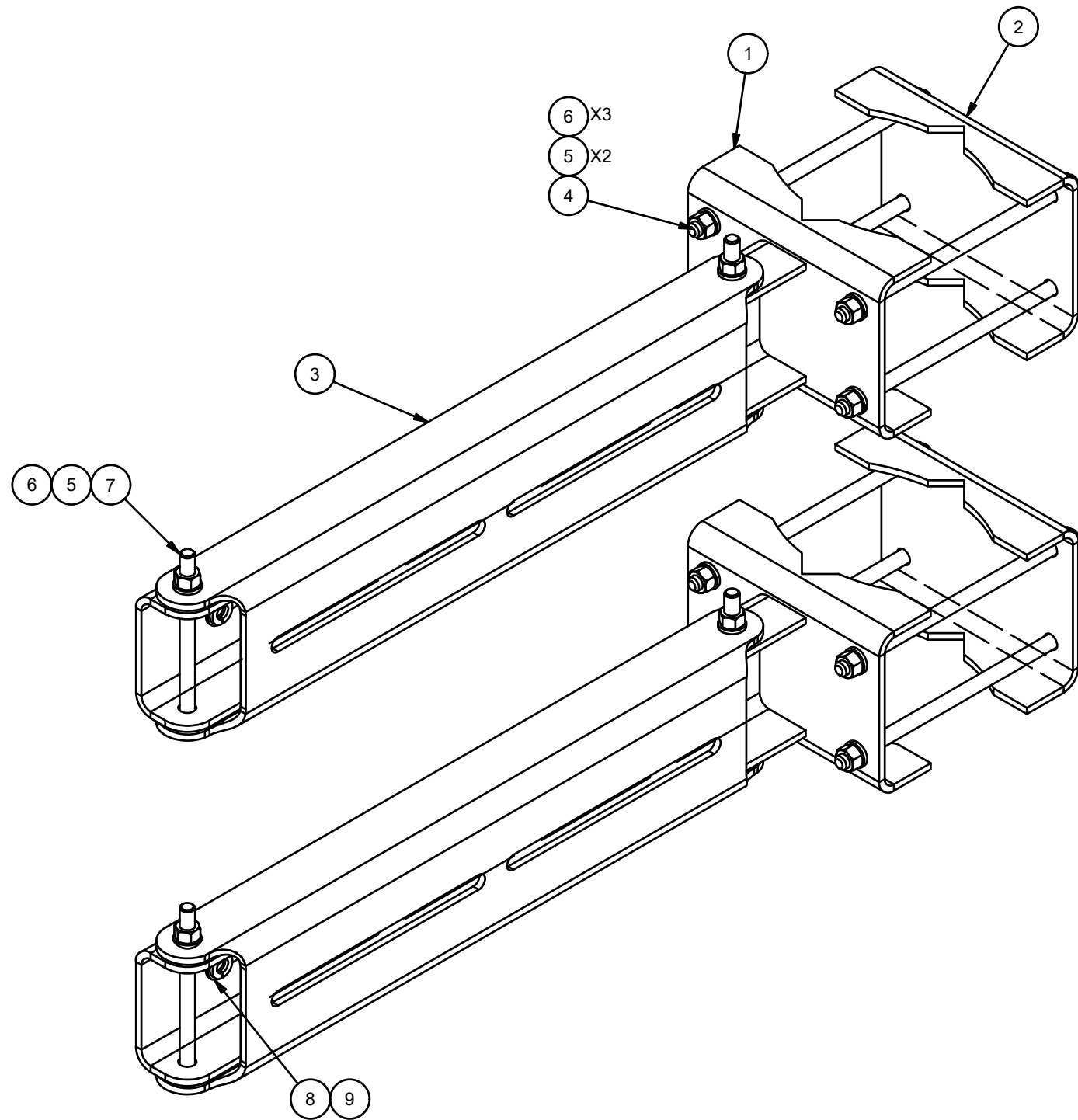
4/12/2024 | 2:13:36 PM CDT

CROWN CASTLE USA INC.  
 CERTIFICATE OF REGISTRATION #PEC.0001101  
 IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

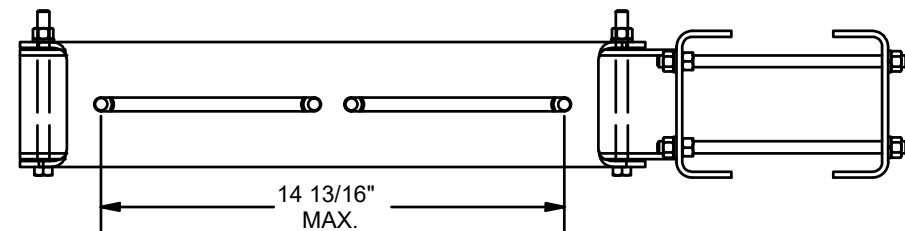
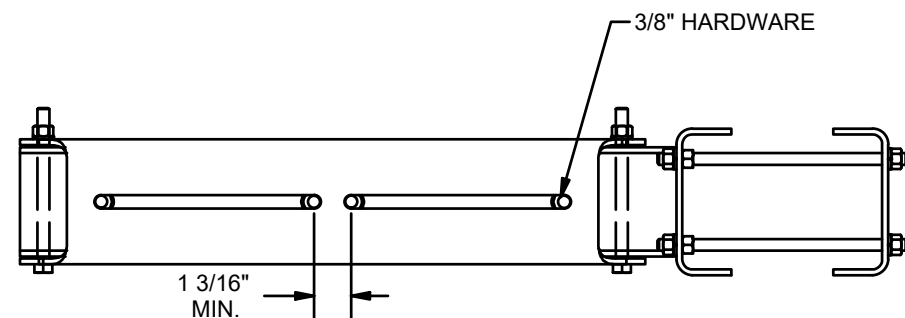
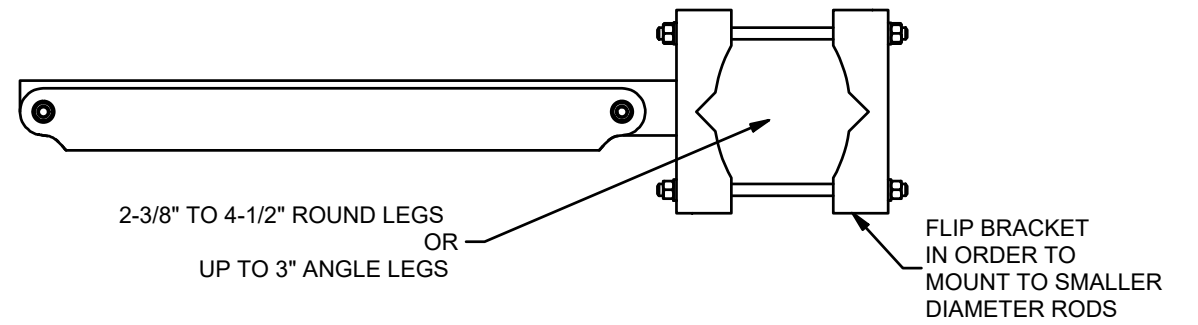
SHEET NUMBER:  
**LE-1**

REVISION:  
**1**

VERIZON\_WBV\_SOVA\_TRIST\_ANTENNA\_AMENDMENT



PARTS LIST					
ITEM	QTY	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	2	MOUNTING ARM		8.99	17.97
2	2	CLAMP PLATE		2.35	4.69
3	2	SWIVEL MOUNT		6.65	13.30
4	8	3/8"-16 UNC X 8" GALV. THREADED ROD		0.25	2.00
5	20	3/8" GALV LOCK WASHER		0.01	0.13
6	28	3/8"-16 UNC GALV HEX NUT		0.02	0.52
7	4	3/8" X 5" GALV BOLT		0.18	0.71
8	8	3/8" SS FLAT WASHER		0.01	0.06
9	8	3/8" SS LOCK WASHER		0.01	0.05
				TOTAL WT. #	39.43



**TOLERANCE NOTES**

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:  
 SAWED, SHEARED AND GAS CUT EDGES ( $\pm 0.030"$ )  
 DRILLED AND GAS CUT HOLES ( $\pm 0.030"$ ) - NO CONING OF HOLES  
 LASER CUT EDGES AND HOLES ( $\pm 0.010"$ ) - NO CONING OF HOLES  
 BENDS ARE  $\pm 1/2$  DEGREE  
 ALL OTHER MACHINING ( $\pm 0.030"$ )  
 ALL OTHER ASSEMBLY ( $\pm 0.060"$ )

PROPRIETARY NOTE:  
 THE DATA AND TECHNIQUES CONTAINED IN THIS DRAWING ARE PROPRIETARY INFORMATION OF VALMONT INDUSTRIES AND CONSIDERED A TRADE SECRET. ANY USE OR DISCLOSURE WITHOUT THE CONSENT OF VALMONT INDUSTRIES IS STRICTLY PROHIBITED.

DESCRIPTION  
**RRU  
 DUAL SWIVEL MOUNT**

**SITE PRO 1**  
 Engineering Support Team:  
 1-888-753-7446  
 Locations:  
 New York, NY  
 Atlanta, GA  
 Los Angeles, CA  
 Plymouth, IN  
 Salem, OR  
 Dallas, TX

CPD NO.	DRAWN BY CEK 1/12/2015	ENG. APPROVAL
CLASS 81	SUB 01	DRAWING USAGE SHOP
	CHECKED BY BMC 2/3/2015	

PART NO. <b>RRUDSM</b>	PAGE 1 OF 1
DWG. NO. <b>RRUDSM</b>	

**Certificate Of Completion**

Envelope Id: 31729A8314114073B13D9607CD32ECDD	Status: Completed
Subject: Complete with DocuSign: ROCKY HILL CT_LE_04122024.pdf	
Source Envelope:	
Document Pages: 2	Signatures: 1
Certificate Pages: 3	Initials: 0
AutoNav: Enabled	Envelope Originator:
Envelope Stamping: Enabled	Trista Bonomi
Time Zone: (UTC-06:00) Central Time (US & Canada)	2000 Corporate Drive
	Canonsburg, PA 15317
	Trista.Bonomi@crowncastle.com
	IP Address: 64.213.130.18

**Record Tracking**

Status: Original	Holder: Trista Bonomi	Location: DocuSign
4/12/2024 2:09:48 PM	Trista.Bonomi@crowncastle.com	

**Signer Events**

Maribel Dentinger  
 maribel.dentinger@crowncastle.com  
 Crown Castle International Corp.  
 Security Level: Email, Account Authentication (None)

**Signature**

DocuSigned by:  
  
 01434153466B482...  
 Signature Adoption: Drawn on Device  
 Using IP Address: 64.213.130.18

**Timestamp**

Sent: 4/12/2024 2:10:40 PM  
 Viewed: 4/12/2024 2:13:32 PM  
 Signed: 4/12/2024 2:13:36 PM

**Electronic Record and Signature Disclosure:**  
 Accepted: 9/20/2018 7:56:27 AM  
 ID: 50d48a2f-ee52-4b02-9a1f-3c3a14f58c3b

In Person Signer Events	Signature	Timestamp
<b>Editor Delivery Events</b>	<b>Status</b>	<b>Timestamp</b>
<b>Agent Delivery Events</b>	<b>Status</b>	<b>Timestamp</b>
<b>Intermediary Delivery Events</b>	<b>Status</b>	<b>Timestamp</b>
<b>Certified Delivery Events</b>	<b>Status</b>	<b>Timestamp</b>
<b>Carbon Copy Events</b>	<b>Status</b>	<b>Timestamp</b>
<b>Witness Events</b>	<b>Signature</b>	<b>Timestamp</b>
<b>Notary Events</b>	<b>Signature</b>	<b>Timestamp</b>
<b>Envelope Summary Events</b>	<b>Status</b>	<b>Timestamps</b>
Envelope Sent	Hashed/Encrypted	4/12/2024 2:10:40 PM
Certified Delivered	Security Checked	4/12/2024 2:13:32 PM
Signing Complete	Security Checked	4/12/2024 2:13:36 PM
Completed	Security Checked	4/12/2024 2:13:36 PM
<b>Payment Events</b>	<b>Status</b>	<b>Timestamps</b>
<b>Electronic Record and Signature Disclosure</b>		

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You may contact us to let us know of any changes related to contacting you electronically, to request paper copies of documents for execution and other documents and records from us, and to withdraw your prior consent to receive documents for execution and other documents and records electronically as follows:

To contact us by phone call: 724-416-2000

To contact us by email, send messages to: [esignature@CrownCastle.com](mailto:esignature@CrownCastle.com)

To contact us by paper mail, send correspondence to

Crown Castle  
2000 Corporate Drive  
Canonsburg, PA 15317

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Browsers:	Internet Explorer® 11 (Windows only); Windows Edge Current Version; Mozilla Firefox Current Version; Safari™ (Mac OS only) 6.2 or above; Google Chrome Current Version; <b>Note</b> : Pre-release (e.g., beta) versions of operating systems and browsers are not supported.
Mobile Signing:	Apple iOS 7.0 or above; Android 4.0 or above
PDF Reader:	Acrobat® Reader or similar software may be required to view and print PDF files
Screen Resolution:	1024 x 768

Enabled Security Settings:	Allow per session cookies
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Please confirm that you were able to access this disclosure electronically (which is similar to the manner in which we will deliver documents for execution and other documents and records) and that you were able to print this disclosure on paper or electronically save it for your future reference and access or that you were able to e-mail this disclosure to an address where you will be able to print it on paper or save it for your future reference and access. Further, if you consent to receiving documents for execution and other documents and records in electronic format on the terms described above, please let us know by clicking the "I agree" button below.

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Colliers Engineering & Design  
2000 Midlantic Drive, Suite 100  
Mt. Laurel, NJ 08054  
856.797.0412  
peter.albano@collierseng.com

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## Antenna Mount Analysis Report and PMI Requirements

Mount ReAnalysis-VZW

SMART Tool Project #: 10232607  
Colliers Engineering & Design Project #: 23777073 (Rev. 1)

May 9, 2024

### Site Information

Site ID: 5000103482-VZW / ROCKY HILL CT  
Site Name: ROCKY HILL CT  
Carrier Name: Verizon Wireless  
Address: North Street  
Rocky Hill, Connecticut 06067  
Hartford County  
Latitude: 41.639778°  
Longitude: -72.701889°

### Structure Information

Tower Type: 142-Ft Monopole  
Mount Type: 14.25-Ft Platform

FUZE ID # 17123736

### Analysis Results

Platform: 93.0% Pass\*

**\*Antennas and equipment to be installed in compliance with PMI Requirements of this mount analysis.**

### \*\*\*Contractor PMI Requirements:

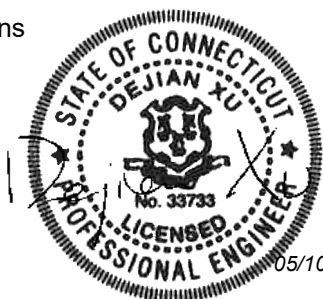
Included at the end of this MA report

Available & Submitted via portal at <https://pmi.vzwsmart.com>

For additional questions and support, please reach out to:

[pmisupport@colliersengineering.com](mailto:pmisupport@colliersengineering.com)

Report Prepared By: Daulton Hopkins



05/10/2024



**Executive Summary:**

The objective of this report is to determine the capacity of the antenna support mount at the subject facility for the final wireless telecommunications configuration, per the applicable codes and standards. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

This analysis is inclusive of the mount structure only and does not address the structural capacity of the supporting structure. This mounting frame was not analyzed as an anchor attachment point for fall protection. All climbing activities are required to have a fall protection plan completed by a competent person.

**Sources of Information:**

Document Type	Remarks
Radio Frequency Data Sheet (RFDS)	Verizon RFDS, Site ID: 324787, dated January 18, 2024
Post-Modification Inspection Report	Colliers Engineering & Design, Project #: 21777029, dated March 6, 2023

**Analysis Criteria:**

Codes and Standards:	ANSI/TIA-222-H Connecticut State Building Code, Effective October 1, 2022	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), $V_{ULT}$ : Ice Wind Speed (3-sec. Gust): Design Ice Thickness: Risk Category: Exposure Category: Topographic Category: Topographic Feature Considered: Topographic Method: Ground Elevation Factor, $K_e$ :	120 mph 50 mph 1.50 in II C 1 N/A N/A 0.993
Seismic Parameters:	$S_s$ : $S_1$ :	0.200 g 0.055 g
Maintenance Parameters:	Wind Speed (3-sec. Gust): Maintenance Load, $L_v$ : Maintenance Load, $L_m$ :	30 mph 250 lbs. 500 lbs.
Analysis Software:	RISA-3D (V17)	

**Final Loading Configuration:**

The following equipment has been considered for the analysis of the mount:

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
135.50	135.00	3	Samsung	XXDWMM-12.5-65-8T-CBRS	Added
	137.10	3	Andrew	LNx-6513DS-A1M	
		6	Commscope	NHH-65B-R2B	
	138.50	3	Samsung	MT6407-77A	
		3	Samsung	B2/B66A RRH-BR049	
		3	Samsung	B5/B13 RRH-BR04C	
		2	KAelus	BSF0020F3V1-1	
	2	Raycap	RRFDC-3315-PF-48*	Retained	

\* Equipment is flush mounted directly to the Monopole. They are not mounted on platform mount and are not included in this mount analysis.

It is acceptable to install up to any three (3) of the OVP model numbers listed below as required at any location other than the mount face without affecting the structural capacity of the mount. If OVP units are installed on the mount face, a mount re-analysis may be required unless replacing an existing OVP.

Model Number	Ports	AKA
DB-B1-6C-12AB-0Z	6	OVP-6
RVZDC-6627-PF-48	12	OVP-12

**Standard Conditions:**

1. All engineering services are performed on the basis that the information provided to Colliers Engineering & Design CT, P.C. and used in this analysis is current and correct. The existing equipment loading has been applied at locations determined from the supplied documentation. Any deviation from the loading locations specified in this report shall be communicated to Colliers Engineering & Design to verify deviation will not adversely impact the analysis.

2. Mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer’s specifications.

Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping and reported in the Mount Mapping Report are assumed to be corrected and documented as part of the PMI process and are not considered in the mount analysis.

The mount analysis and the mount mapping are not a condition assessment of the mount. Proper maintenance and condition assessments are still required post analysis.

3. For mount analyses completed from other data sources (including new replacement mounts) and not specifically mapped in accordance with the NSTD-446 Standard, the mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer’s specifications.
4. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.

5. The mount was checked up to, and including, the bolts that fasten it to the mount collar/attachment and threaded rod connections in collar members if applicable. Local deformation and interaction between the mount collar/attachment and the supporting tower structure are outside the scope of this analysis.
6. All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. Colliers Engineering & Design is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.
7. Structural Steel Grades have been assumed as follows, if applicable, unless otherwise noted in this analysis:
  - o Channel, Solid Round, Angle, Plate      ASTM A36 (Gr. 36)
  - o HSS (Rectangular)                              ASTM 500 (Gr. B-46)
  - o Pipe    ASTM A53 (Gr. B-35)
  - o Threaded Rod                                      F1554 (Gr. 36)
  - o Bolts    ASTM A325

**Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by Colliers Engineering & Design.**

**Analysis Results:**

Component	Utilization %	Pass/Fail
Platform Angle	93.0 %	Pass
Standoff HSS Back	62.7 %	Pass
Standoff HSS Front	27.4 %	Pass
Mount Pipe	42.3 %	Pass
Dual Mount Pipe	17.9 %	Pass
V-Brace	13.0 %	Pass
Mount Connection	25.9 %	Pass

<b>Structure Rating – (Controlling Utilization of all Components)</b>	<b>93.0%</b>
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**Mount Connection Envelope Reactions:**

Connection Description	Elev. AGL (Ft)	Node Label	Envelope Wind Reactions				Envelope Wind + Ice Reactions			
			Axial (Lbs)	Lateral (Lbs)	Moment (K-Ft)	Torsion (K-Ft)	Axial (Lbs)	Lateral (Lbs)	Moment (K-Ft)	Torsion (K-Ft)
Sector A Standoff	135.5	N7	1853	1246	5.280	1.298	2812	416	7.641	0.443
Sector C Standoff	135.5	N17	1715	1263	4.875	1.329	2667	459	7.202	0.492
Sector B Standoff	135.5	N27	1725	1220	4.900	1.270	2658	394	7.179	0.422
Sector A Reinforcement	136.8	N127	1092	1306	0.000	0.000	840	938	0.000	0.000
Sector C Reinforcement	136.8	N133	1036	1240	0.000	0.000	854	958	0.000	0.000
Sector B Reinforcement	136.8	N137A	1041	1248	0.000	0.000	848	949	0.000	0.000

Notes:

- Axial loads act along the axis of the tower
- Lateral reactions act perpendicular to the tower
- Moment loads introduce bending moment to the tower
- Torsion loads introduce twisting moment to the tower
- Batch solutions by individual load cases are included at the end of this document

**Mount Steel (EPA)a per ANSI/TIA-222-H Section 2.6.11.2:**

Ice Thickness (In)	Mount Pipes Excluded		Mount Pipes Included	
	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)
0	36.1	36.1	49.6	49.6
0.5	45.2	45.2	64.1	64.1
1	53.9	53.9	78.2	78.2

Notes:

- (EPA)a values listed above may be used in the absence of more precise information
- (EPA)a values in the table above include 3 sectors.
- Ka factors included in (EPA)a calculations

**Requirements:**

The existing mount is **SUFFICIENT** for the final loading configuration shown in attachment 2 and do not require modifications. Additional requirements are noted below.

Contractor shall install the proposed BSF0020F3V1-1 filters on new Rosenburger D215RRU/D218RRUDSM (or EOR approved equivalent) RRU mounting kits in the location shown in the placement diagrams.

If required, ANSI/ASSP rigging plan review services compliant with the requirements of ANSI/TIA 322 are available for a Construction Class IV site or other. Separate review fees will apply.

**Attachments:**

1. **Contractor Required Post Installation Inspection (PMI) Report Deliverables**
2. Antenna Placement Diagrams
3. Mount Photos
4. Analysis Calculations

# Mount Desktop – Post Modification Inspection (PMI) Report Requirements

## Documents & Photos Required from Contractor – **Passing Mount Analysis**

Passing Mount Analysis requires a PMI due to a modification in loading.

Electronic pdf version of this can be downloaded at <https://pmi.vzwsmart.com>.

For additional questions and support, please reach out to [pmisupport@colliersengineering.com](mailto:pmisupport@colliersengineering.com)

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MDG #: 5000103482

SMART Project #: 10232607

Fuze Project ID: 17123736

**Purpose** – to provide SMART Tool structural vendor the proper documentation in order to complete the required Mount Desktop review of the Post Modification Inspection Report.

- Contractor is responsible for making certain the photos provided as noted below provide confirmation that the installation was completed in accordance with this Passing Mount Analysis.
- Contractor shall relay any data that can impact the performance of the mount, this includes safety issues.

### **Base Requirements:**

- If installation will cause damage to the structure, the climbing facility, or safety climb if present or any installed system, SMART Tool vendor to be notified prior to install. Any special photos outside of the standard requirements will be indicated on the drawings.
- Provide “as built mount drawings” showing contractor’s name, contact information, preparer’s signature, and date. Any deviations from the drawings (Proposed modification) shall be shown. NOTE: If loading is different than what is conveyed in the passing mount analysis (MA) contact the SMART Tool vendor immediately.
- Each photo should be time and date stamped
- Photos should be high resolution.
- Contractor shall ensure that the safety climb wire rope is supported and not adversely impacted by the install of the modification components. This may involve the install of wire rope guides, or other items to protect the wire rope. If there is conflict, contact the SMART Tool engineer for recommendations.
- The PMI can be accessed at the following portal: <https://pmi.vzwsmart.com>

### **Photo Requirements:**

- Photos taken at ground level
  - Photo of Gate Signs showing the tower owner, site name, and number.
  - Overall tower structure after installation.
  - Photos of the mount after installation; if the mounts are at different rad elevations, pictures must be provided for all elevations that equipment was installed.
- Photos taken at Mount Elevation
  - Photos showing the safety climb wire rope above and below the mount prior to installation.
  - Photos showing the climbing facility and safety climb if present.
  - Photos showing each individual sector after installation. Each entire sector shall be in one photo to show the interconnection of members.

- These photos shall also certify that the placement and geometry of the equipment on the mount is as depicted in the antenna placement diagram in this form.
- Photos that show the model number of each antenna and piece of equipment installed per sector.

**Antenna & equipment placement and Geometry Confirmation:**

- The contractor shall certify that the antenna & equipment placement and geometry is in accordance with the sketch and table as included in the mount analysis and noted below.
  - The contractor certifies that the photos support and the equipment on the mount is as depicted on the sketch and table included in this form and with the mount analysis provided.

OR

- The contractor notes that the equipment on the mount is not in accordance with the sketch and has noted the differences below and provided photo documentation of any alterations.

**Special Instructions / Validation as required from the MA or any other information the contractor deems necessary to share that was identified:**

**Issue:**

Contractor shall install the proposed BSF0020F3V1-1 filters on new Rosenburger D215RRU/D218RRUDSM (or EOR approved equivalent) RRU mounting kits in the location shown in the placement diagrams.

**Response:**

**Special Instruction Confirmation:**

- The contractor has read and acknowledges the above special instructions.
- All hardware listed in the Special Instructions above (if applicable) has been properly installed, and the existing hardware was inspected.
- The material utilized was as specified in the SMART Tool engineering vendor Special Instructions above (if applicable) and included in the material certification folder is a packing list or invoice for these materials.

OR

- The material utilized was approved by a SMART Tool engineering vendor as an “equivalent” and this approval is included as part of the contractor submission.

Comments:

**Contractor certifies that the climbing facility / safety climb was not damaged prior to starting work:**

Yes       No

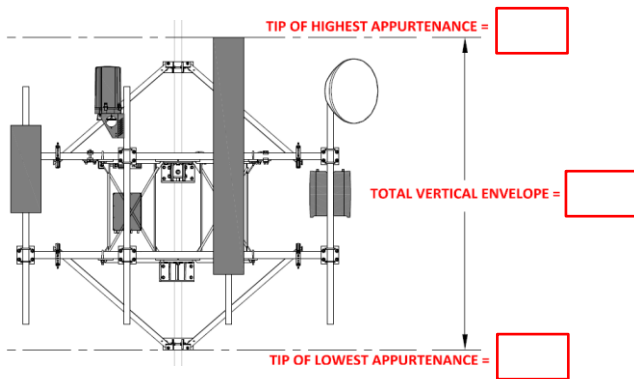
**Contractor certifies no new damage created during the current installation:**

Yes       No

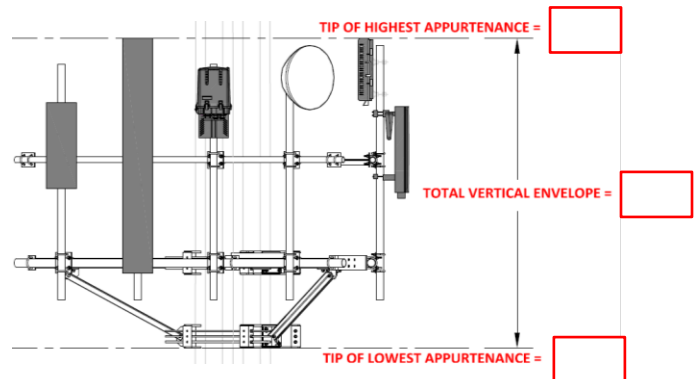
**Contractor to certify the condition of the safety climb and verify no damage when leaving the site:**

Safety Climb in Good Condition       Safety Climb Damaged

**Contractor to provide measurement from top of the highest equipment/steel to the bottom of the lowest equipment/steel by documenting it using the most appropriate illustration below along with supporting photos:**



**Illustration #1**



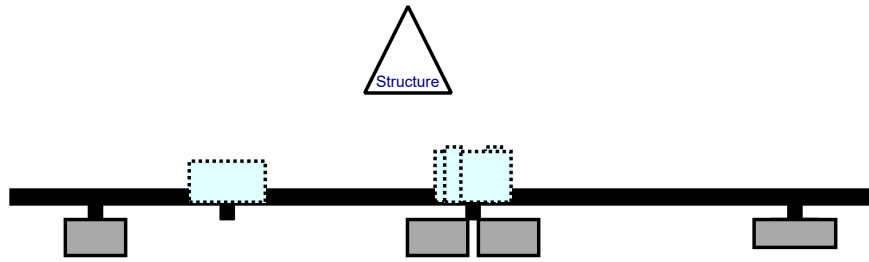
**Illustration #2**

**Certifying Individual:**

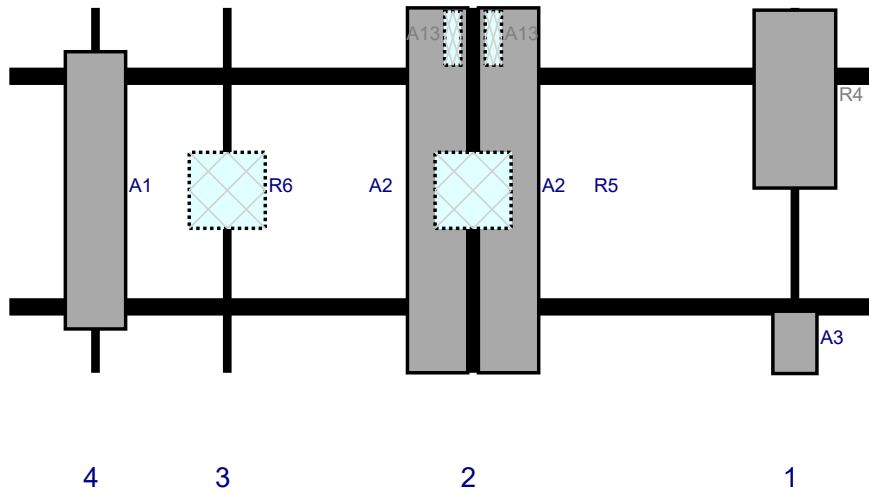
Company:	
Employee Name:	
Contact Phone:	
Email:	
Date:	



Plan View

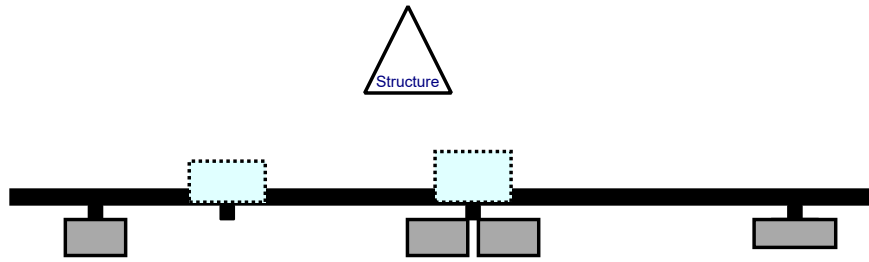


Front View - Looking at Structure

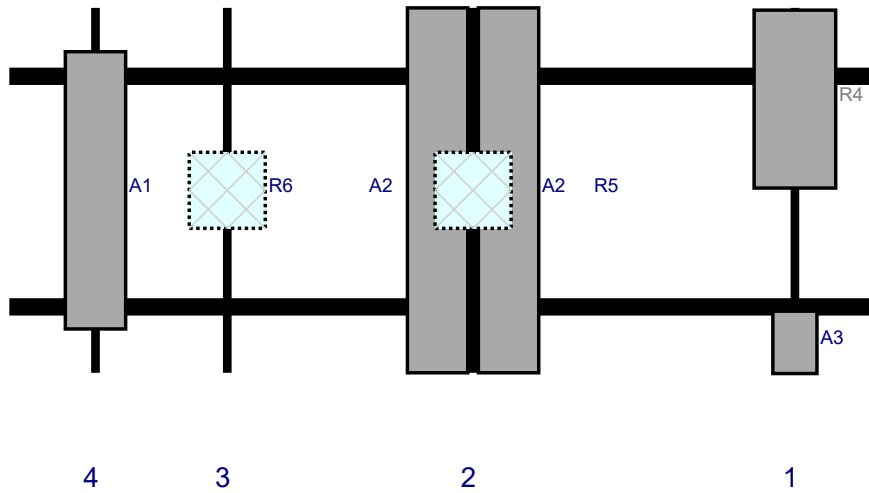


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A3	XXDWMM-12.5-65-8T-CBRS	12.3	8.7	155	1	a	Front	66	0	Retained	08/07/2022
R4	MT6407-77A	35.1	16.1	155	1	a	Front	18	0	Retained	08/07/2022
A2	NHH-65B-R2B	72	11.9	91.5	2	a	Front	36	7	Retained	08/07/2022
A2	NHH-65B-R2B	72	11.9	91.5	2	b	Front	36	-7	Retained	08/07/2022
R5	B2/B66A RRH-BR049	15	15	91.5	2	a	Behind	36	0	Retained	08/07/2022
A13	BSF0020F3V1-1	10.6	3.2	91.5	2	a	Behind	6	-4	Added	
A13	BSF0020F3V1-1	10.6	3.2	91.5	2	b	Behind	6	4	Added	
R6	B5/B13 RRH-BR04C	15	15	43	3	a	Behind	36	0	Retained	08/07/2022
A1	LNx-6513DS-A1M	54.7	11.9	17	4	a	Front	36	0	Retained	08/07/2022

Plan View

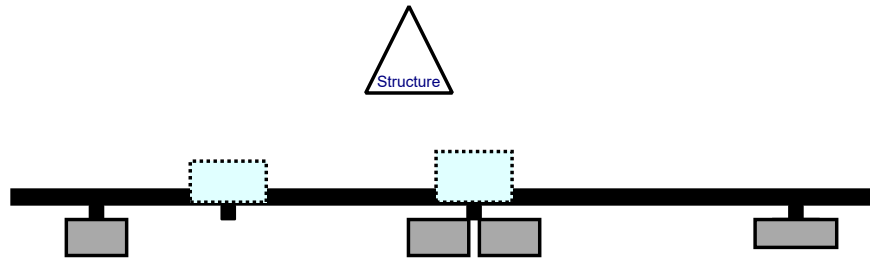


Front View - Looking at Structure

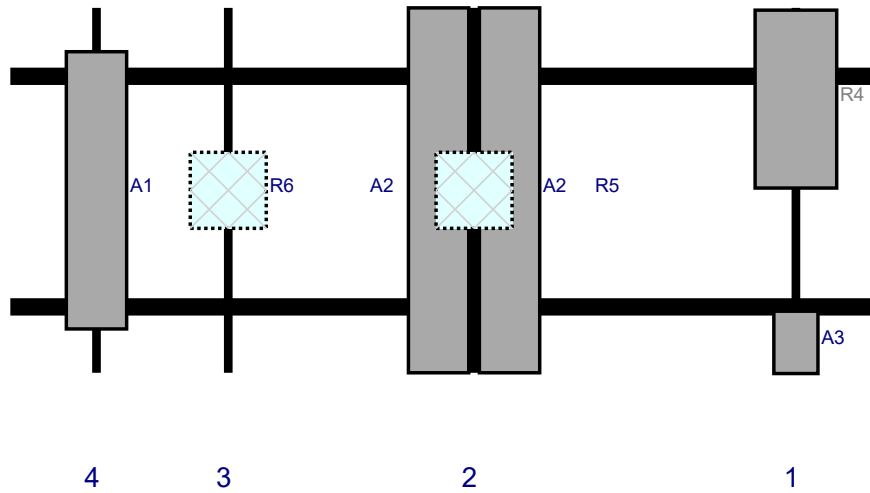


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A3	XXDWMM-12.5-65-8T-CBRS	12.3	8.7	155	1	a	Front	66	0	Retained	08/07/2022
R4	MT6407-77A	35.1	16.1	155	1	a	Front	18	0	Retained	08/07/2022
A2	NHH-65B-R2B	72	11.9	91.5	2	a	Front	36	7	Retained	08/07/2022
A2	NHH-65B-R2B	72	11.9	91.5	2	b	Front	36	-7	Retained	08/07/2022
R5	B2/B66A RRH-BR049	15	15	91.5	2	a	Behind	36	0	Retained	08/07/2022
R6	B5/B13 RRH-BR04C	15	15	43	3	a	Behind	36	0	Retained	08/07/2022
A1	LNx-6513DS-A1M	54.7	11.9	17	4	a	Front	36	0	Retained	08/07/2022

Plan View

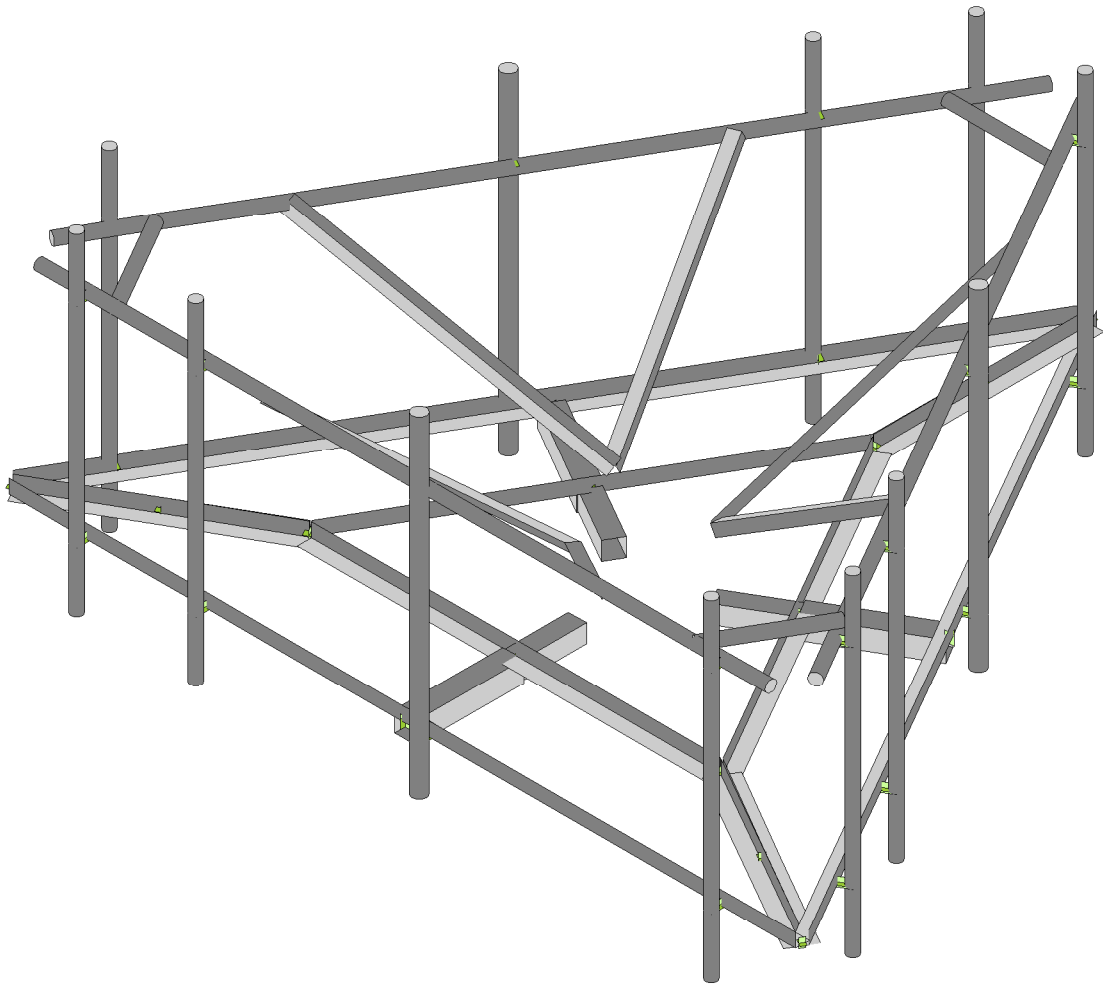
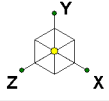


Front View - Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A3	XXDWMM-12.5-65-8T-CBRS	12.3	8.7	155	1	a	Front	66	0	Retained	08/07/2022
R4	MT6407-77A	35.1	16.1	155	1	a	Front	18	0	Retained	08/07/2022
A2	NHH-65B-R2B	72	11.9	91.5	2	a	Front	36	7	Retained	08/07/2022
A2	NHH-65B-R2B	72	11.9	91.5	2	b	Front	36	-7	Retained	08/07/2022
R5	B2/B66A RRH-BR049	15	15	91.5	2	a	Behind	36	0	Retained	08/07/2022
R6	B5/B13 RRH-BR04C	15	15	43	3	a	Behind	36	0	Retained	08/07/2022
A1	LNx-6513DS-A1M	54.7	11.9	17	4	a	Front	36	0	Retained	08/07/2022





Envelope Only Solution

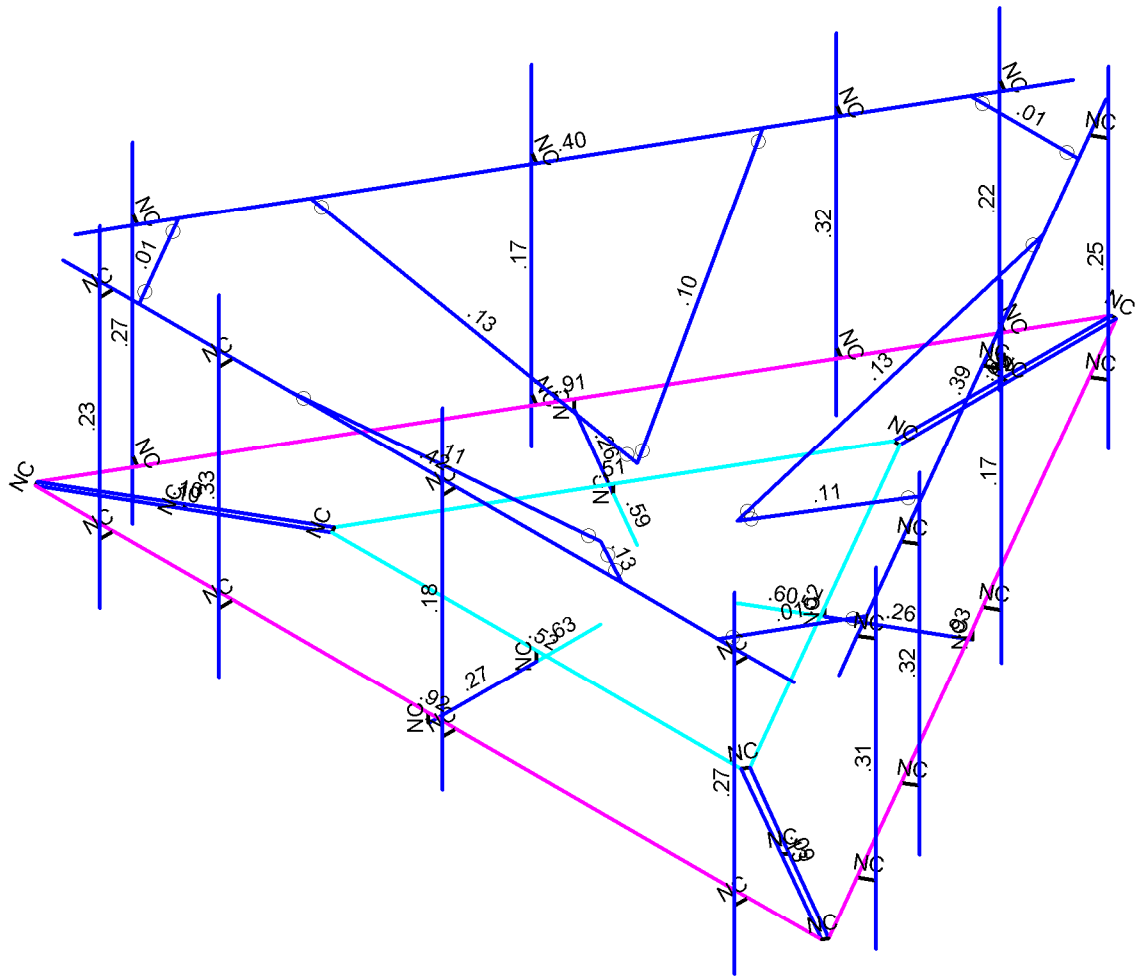
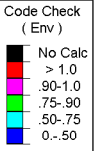
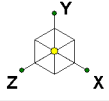
Colliers Engineering & Des...

5000103482-VZW\_MT\_LO\_H

SK - 1

May 9, 2024 at 11:14 AM

5000103482-VZW\_MT\_LO\_H.r3d



Member Code Checks Displayed (Enveloped)  
Envelope Only Solution

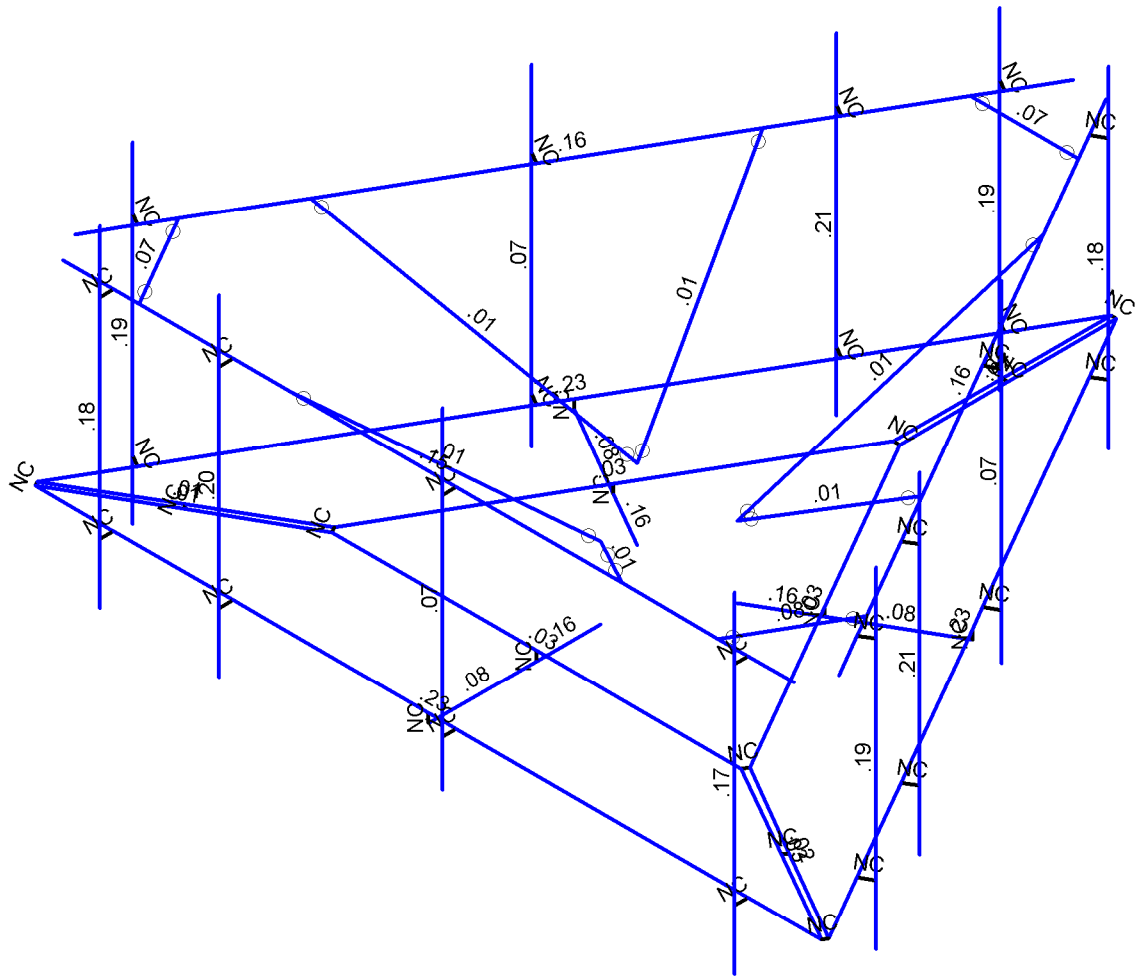
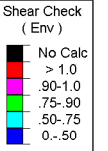
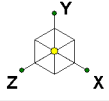
Colliers Engineering & Des..

5000103482-VZW\_MT\_LO\_H

SK - 2

May 9, 2024 at 11:15 AM

5000103482-VZW\_MT\_LO\_H.r3d



Member Shear Checks Displayed (Enveloped)  
Envelope Only Solution

Colliers Engineering & Des...

5000103482-VZW\_MT\_LO\_H

SK - 3

May 9, 2024 at 11:15 AM

5000103482-VZW\_MT\_LO\_H.r3d



Company : Colliers Engineering & Design  
 Designer :  
 Job Number :  
 Model Name : 5000103482-VZW\_MT\_LO\_H

May 9, 2024  
 11:16 AM  
 Checked By: \_\_\_\_\_

**Basic Load Cases**

BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...	Surface(P...
1 Antenna D	None					111		
2 Antenna Di	None					111		
3 Antenna Wo (0 Deg)	None					111		
4 Antenna Wo (30 Deg)	None					111		
5 Antenna Wo (60 Deg)	None					111		
6 Antenna Wo (90 Deg)	None					111		
7 Antenna Wo (120 Deg)	None					111		
8 Antenna Wo (150 Deg)	None					111		
9 Antenna Wo (180 Deg)	None					111		
10 Antenna Wo (210 Deg)	None					111		
11 Antenna Wo (240 Deg)	None					111		
12 Antenna Wo (270 Deg)	None					111		
13 Antenna Wo (300 Deg)	None					111		
14 Antenna Wo (330 Deg)	None					111		
15 Antenna Wi (0 Deg)	None					111		
16 Antenna Wi (30 Deg)	None					111		
17 Antenna Wi (60 Deg)	None					111		
18 Antenna Wi (90 Deg)	None					111		
19 Antenna Wi (120 Deg)	None					111		
20 Antenna Wi (150 Deg)	None					111		
21 Antenna Wi (180 Deg)	None					111		
22 Antenna Wi (210 Deg)	None					111		
23 Antenna Wi (240 Deg)	None					111		
24 Antenna Wi (270 Deg)	None					111		
25 Antenna Wi (300 Deg)	None					111		
26 Antenna Wi (330 Deg)	None					111		
27 Antenna Wm (0 Deg)	None					111		
28 Antenna Wm (30 Deg)	None					111		
29 Antenna Wm (60 Deg)	None					111		
30 Antenna Wm (90 Deg)	None					111		
31 Antenna Wm (120 Deg)	None					111		
32 Antenna Wm (150 Deg)	None					111		
33 Antenna Wm (180 Deg)	None					111		
34 Antenna Wm (210 Deg)	None					111		
35 Antenna Wm (240 Deg)	None					111		
36 Antenna Wm (270 Deg)	None					111		
37 Antenna Wm (300 Deg)	None					111		
38 Antenna Wm (330 Deg)	None					111		
39 Structure D	None		-1				3	
40 Structure Di	None						42	3
41 Structure Wo (0 Deg)	None						84	
42 Structure Wo (30 Deg)	None						84	
43 Structure Wo (60 Deg)	None						84	
44 Structure Wo (90 Deg)	None						84	
45 Structure Wo (120 D...	None						84	
46 Structure Wo (150 D...	None						84	
47 Structure Wo (180 D...	None						84	
48 Structure Wo (210 D...	None						84	
49 Structure Wo (240 D...	None						84	
50 Structure Wo (270 D...	None						84	
51 Structure Wo (300 D...	None						84	
52 Structure Wo (330 D...	None						84	
53 Structure Wi (0 Deg)	None						84	





**Basic Load Cases (Continued)**

BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...	Surface(P...
54 Structure Wi (30 Deg)	None						84	
55 Structure Wi (60 Deg)	None						84	
56 Structure Wi (90 Deg)	None						84	
57 Structure Wi (120 De..)	None						84	
58 Structure Wi (150 De..)	None						84	
59 Structure Wi (180 De..)	None						84	
60 Structure Wi (210 De..)	None						84	
61 Structure Wi (240 De..)	None						84	
62 Structure Wi (270 De..)	None						84	
63 Structure Wi (300 De..)	None						84	
64 Structure Wi (330 De..)	None						84	
65 Structure Wm (0 Deg)	None						84	
66 Structure Wm (30 De..)	None						84	
67 Structure Wm (60 De..)	None						84	
68 Structure Wm (90 De..)	None						84	
69 Structure Wm (120 D..)	None						84	
70 Structure Wm (150 D..)	None						84	
71 Structure Wm (180 D..)	None						84	
72 Structure Wm (210 D..)	None						84	
73 Structure Wm (240 D..)	None						84	
74 Structure Wm (270 D..)	None						84	
75 Structure Wm (300 D..)	None						84	
76 Structure Wm (330 D..)	None						84	
77 Lm1	None					1		
78 Lm2	None					1		
79 Lv1	None					1		
80 Lv2	None					1		
81 Antenna Ev	None					111		
82 Antenna Eh (0 Deg)	None					74		
83 Antenna Eh (90 Deg)	None					74		
84 Structure Ev	ELY		-.043					3
85 Structure Eh (0 Deg)	ELZ			-.107				3
86 Structure Eh (90 Deg)	ELX	.107						3
87 BLC 39 Transient Are..	None						36	
88 BLC 40 Transient Are..	None						36	

**Load Combinations**

Description	S...	PDelta	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1 1.2D+1.0Wo (0 Deg)	Yes	Y		1	1.2	39	1.2	3	1	41	1								
2 1.2D+1.0Wo (30 Deg)	Yes	Y		1	1.2	39	1.2	4	1	42	1								
3 1.2D+1.0Wo (60 Deg)	Yes	Y		1	1.2	39	1.2	5	1	43	1								
4 1.2D+1.0Wo (90 Deg)	Yes	Y		1	1.2	39	1.2	6	1	44	1								
5 1.2D+1.0Wo (120 Deg)	Yes	Y		1	1.2	39	1.2	7	1	45	1								
6 1.2D+1.0Wo (150 Deg)	Yes	Y		1	1.2	39	1.2	8	1	46	1								
7 1.2D+1.0Wo (180 Deg)	Yes	Y		1	1.2	39	1.2	9	1	47	1								
8 1.2D+1.0Wo (210 Deg)	Yes	Y		1	1.2	39	1.2	10	1	48	1								
9 1.2D+1.0Wo (240 Deg)	Yes	Y		1	1.2	39	1.2	11	1	49	1								
10 1.2D+1.0Wo (270 Deg)	Yes	Y		1	1.2	39	1.2	12	1	50	1								
11 1.2D+1.0Wo (300 Deg)	Yes	Y		1	1.2	39	1.2	13	1	51	1								
12 1.2D+1.0Wo (330 Deg)	Yes	Y		1	1.2	39	1.2	14	1	52	1								
13 1.2D + 1.0Di + 1.0Wi (0 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1				
14 1.2D + 1.0Di + 1.0Wi (30 D...	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1				
15 1.2D + 1.0Di + 1.0Wi (60 D...	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1				
16 1.2D + 1.0Di + 1.0Wi (90 D...	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1				
17 1.2D + 1.0Di + 1.0Wi (120 ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1				



**Load Combinations (Continued)**

	Description	S...	PDelta	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
18	1.2D + 1.0Di + 1.0Wi (150 ...	Yes	Y			1	1.2	39	1.2	2	1	40	1	20	1	58	1							
19	1.2D + 1.0Di + 1.0Wi (180 ...	Yes	Y			1	1.2	39	1.2	2	1	40	1	21	1	59	1							
20	1.2D + 1.0Di + 1.0Wi (210 ...	Yes	Y			1	1.2	39	1.2	2	1	40	1	22	1	60	1							
21	1.2D + 1.0Di + 1.0Wi (240 ...	Yes	Y			1	1.2	39	1.2	2	1	40	1	23	1	61	1							
22	1.2D + 1.0Di + 1.0Wi (270 ...	Yes	Y			1	1.2	39	1.2	2	1	40	1	24	1	62	1							
23	1.2D + 1.0Di + 1.0Wi (300 ...	Yes	Y			1	1.2	39	1.2	2	1	40	1	25	1	63	1							
24	1.2D + 1.0Di + 1.0Wi (330 ...	Yes	Y			1	1.2	39	1.2	2	1	40	1	26	1	64	1							
25	1.2D + 1.5Lm1 + 1.0Wm (0 ...	Yes	Y			1	1.2	39	1.2	77	1.5	27	1	65	1									
26	1.2D + 1.5Lm1 + 1.0Wm (3...)	Yes	Y			1	1.2	39	1.2	77	1.5	28	1	66	1									
27	1.2D + 1.5Lm1 + 1.0Wm (6...)	Yes	Y			1	1.2	39	1.2	77	1.5	29	1	67	1									
28	1.2D + 1.5Lm1 + 1.0Wm (9...)	Yes	Y			1	1.2	39	1.2	77	1.5	30	1	68	1									
29	1.2D + 1.5Lm1 + 1.0Wm (1...)	Yes	Y			1	1.2	39	1.2	77	1.5	31	1	69	1									
30	1.2D + 1.5Lm1 + 1.0Wm (1...)	Yes	Y			1	1.2	39	1.2	77	1.5	32	1	70	1									
31	1.2D + 1.5Lm1 + 1.0Wm (1...)	Yes	Y			1	1.2	39	1.2	77	1.5	33	1	71	1									
32	1.2D + 1.5Lm1 + 1.0Wm (2...)	Yes	Y			1	1.2	39	1.2	77	1.5	34	1	72	1									
33	1.2D + 1.5Lm1 + 1.0Wm (2...)	Yes	Y			1	1.2	39	1.2	77	1.5	35	1	73	1									
34	1.2D + 1.5Lm1 + 1.0Wm (2...)	Yes	Y			1	1.2	39	1.2	77	1.5	36	1	74	1									
35	1.2D + 1.5Lm1 + 1.0Wm (3...)	Yes	Y			1	1.2	39	1.2	77	1.5	37	1	75	1									
36	1.2D + 1.5Lm1 + 1.0Wm (3...)	Yes	Y			1	1.2	39	1.2	77	1.5	38	1	76	1									
37	1.2D + 1.5Lm2 + 1.0Wm (0 ...)	Yes	Y			1	1.2	39	1.2	78	1.5	27	1	65	1									
38	1.2D + 1.5Lm2 + 1.0Wm (3...)	Yes	Y			1	1.2	39	1.2	78	1.5	28	1	66	1									
39	1.2D + 1.5Lm2 + 1.0Wm (6...)	Yes	Y			1	1.2	39	1.2	78	1.5	29	1	67	1									
40	1.2D + 1.5Lm2 + 1.0Wm (9...)	Yes	Y			1	1.2	39	1.2	78	1.5	30	1	68	1									
41	1.2D + 1.5Lm2 + 1.0Wm (1...)	Yes	Y			1	1.2	39	1.2	78	1.5	31	1	69	1									
42	1.2D + 1.5Lm2 + 1.0Wm (1...)	Yes	Y			1	1.2	39	1.2	78	1.5	32	1	70	1									
43	1.2D + 1.5Lm2 + 1.0Wm (1...)	Yes	Y			1	1.2	39	1.2	78	1.5	33	1	71	1									
44	1.2D + 1.5Lm2 + 1.0Wm (2...)	Yes	Y			1	1.2	39	1.2	78	1.5	34	1	72	1									
45	1.2D + 1.5Lm2 + 1.0Wm (2...)	Yes	Y			1	1.2	39	1.2	78	1.5	35	1	73	1									
46	1.2D + 1.5Lm2 + 1.0Wm (2...)	Yes	Y			1	1.2	39	1.2	78	1.5	36	1	74	1									
47	1.2D + 1.5Lm2 + 1.0Wm (3...)	Yes	Y			1	1.2	39	1.2	78	1.5	37	1	75	1									
48	1.2D + 1.5Lm2 + 1.0Wm (3...)	Yes	Y			1	1.2	39	1.2	78	1.5	38	1	76	1									
49	1.2D + 1.5Lv1	Yes	Y			1	1.2	39	1.2	79	1.5													
50	1.2D + 1.5Lv2	Yes	Y			1	1.2	39	1.2	80	1.5													
51	1.4D	Yes	Y			1	1.4	39	1.4															
52	1.2D + 1.0Ev + 1.0Eh (0 De...		Y			1	1.2	39	1.2	81	1	E...	1	82	1	83	E...	1	E...					
53	1.2D + 1.0Ev + 1.0Eh (30 D...		Y			1	1.2	39	1.2	81	1	E...	1	82	.866	83	.5	E...	.866	E...	.5			
54	1.2D + 1.0Ev + 1.0Eh (60 D...		Y			1	1.2	39	1.2	81	1	E...	1	82	.5	83	.866	E...	.5	E...	.866			
55	1.2D + 1.0Ev + 1.0Eh (90 D...		Y			1	1.2	39	1.2	81	1	E...	1	82		83	1	E...		E...	1			
56	1.2D + 1.0Ev + 1.0Eh (120 ...)		Y			1	1.2	39	1.2	81	1	E...	1	82	-.5	83	.866	E...	-.5	E...	.866			
57	1.2D + 1.0Ev + 1.0Eh (150 ...)		Y			1	1.2	39	1.2	81	1	E...	1	82	-.8...	83	.5	E...	-.8...	E...	.5			
58	1.2D + 1.0Ev + 1.0Eh (180 ...)		Y			1	1.2	39	1.2	81	1	E...	1	82	-1	83	E...	-1	E...					
59	1.2D + 1.0Ev + 1.0Eh (210 ...)		Y			1	1.2	39	1.2	81	1	E...	1	82	-.8...	83	-.5	E...	-.8...	E...	-.5			
60	1.2D + 1.0Ev + 1.0Eh (240 ...)		Y			1	1.2	39	1.2	81	1	E...	1	82	-.5	83	-.8...	E...	-.5	E...	-.8...			
61	1.2D + 1.0Ev + 1.0Eh (270 ...)		Y			1	1.2	39	1.2	81	1	E...	1	82		83	-1	E...		E...	-1			
62	1.2D + 1.0Ev + 1.0Eh (300 ...)		Y			1	1.2	39	1.2	81	1	E...	1	82	.5	83	-.8...	E...	.5	E...	-.8...			
63	1.2D + 1.0Ev + 1.0Eh (330 ...)		Y			1	1.2	39	1.2	81	1	E...	1	82	.866	83	-.5	E...	.866	E...	-.5			
64	0.9D - 1.0Ev + 1.0Eh (0 Deg)		Y			1	.9	39	.9	81	-1	E...	-1	82	1	83	E...	1	E...					
65	0.9D - 1.0Ev + 1.0Eh (30 D...		Y			1	.9	39	.9	81	-1	E...	-1	82	.866	83	.5	E...	.866	E...	.5			
66	0.9D - 1.0Ev + 1.0Eh (60 D...		Y			1	.9	39	.9	81	-1	E...	-1	82	.5	83	.866	E...	.5	E...	.866			
67	0.9D - 1.0Ev + 1.0Eh (90 D...		Y			1	.9	39	.9	81	-1	E...	-1	82		83	1	E...		E...	1			
68	0.9D - 1.0Ev + 1.0Eh (120 ...)		Y			1	.9	39	.9	81	-1	E...	-1	82	-.5	83	.866	E...	-.5	E...	.866			
69	0.9D - 1.0Ev + 1.0Eh (150 ...)		Y			1	.9	39	.9	81	-1	E...	-1	82	-.8...	83	.5	E...	-.8...	E...	.5			
70	0.9D - 1.0Ev + 1.0Eh (180 ...)		Y			1	.9	39	.9	81	-1	E...	-1	82	-1	83	E...	-1	E...					
71	0.9D - 1.0Ev + 1.0Eh (210 ...)		Y			1	.9	39	.9	81	-1	E...	-1	82	-.8...	83	-.5	E...	-.8...	E...	-.5			
72	0.9D - 1.0Ev + 1.0Eh (240 ...)		Y			1	.9	39	.9	81	-1	E...	-1	82	-.5	83	-.8...	E...	-.5	E...	-.8...			
73	0.9D - 1.0Ev + 1.0Eh (270 ...)		Y			1	.9	39	.9	81	-1	E...	-1	82		83	-1	E...		E...	-1			
74	0.9D - 1.0Ev + 1.0Eh (300 ...)		Y			1	.9	39	.9	81	-1	E...	-1	82	.5	83	-.8...	E...	.5	E...	-.8...			



### Load Combinations (Continued)

Description	S...	PDelta	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	
75 0.9D - 1.0Ev + 1.0Eh (330 ...		Y		1	.9	.39	.9	.81	-1	E...	-1	.82	.866	.83	-5	E...	.866	E...	-5				

### Hot Rolled Steel Section Sets

Label	Shape	Type	Design List	Material	Design ... A [in2]	Iyy [in4]	Izz [in4]	J [in4]	
1 Standoff HSS Back	HSS4X4X3	Beam	Tube	A500 Gr. B 46	Typical	2.58	6.21	6.21	10
2 Platform Angle	L3X3X4	Beam	Single Angle	A36 Gr.36	Typical	1.44	1.23	1.23	.031
3 Mounp Pipe	PIPE 2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
4 Standoff HSS Front	HSS4.5X4.5X3	Beam	Tube	A500 Gr. B 46	Typical	2.93	9.02	9.02	14.4
5 V-Brace	L2.5x2.5x3	Column	Single Angle	A36 Gr.36	Typical	.901	.535	.535	.011
6 Dual Mount Pipe	PIPE_2.5	Column	Pipe	A53 Gr. B	Typical	1.61	1.45	1.45	2.89

### Hot Rolled Steel Properties

Label	E [ksi]	G [ksi]	Nu	Therm (/1E...	Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt
1 A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
2 A53 Gr. B	29000	11154	.3	.65	.49	35	1.5	60	1.2
3 A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4 A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
5 A500 Gr. B 42	29000	11154	.3	.65	.49	42	1.4	58	1.3
6 A500 Gr. B 46	29000	11154	.3	.65	.49	46	1.4	58	1.3

### Member Primary Data

Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1 M1	N3	N2		270	Platform Angle	Beam	Single Angle	A36 Gr.36	Typical
2 M2	N2	N5		270	Platform Angle	Beam	Single Angle	A36 Gr.36	Typical
3 M3	N5	N6		270	Platform Angle	Beam	Single Angle	A36 Gr.36	Typical
4 M4	N6	N3		270	Platform Angle	Beam	Single Angle	A36 Gr.36	Typical
5 M5	N7	N26			Standoff HSS Back	Beam	Tube	A500 Gr. ...	Typical
6 M22	N23A	N1			RIGID	None	None	RIGID	Typical
7 M23	N4	N26			RIGID	None	None	RIGID	Typical
8 M8	N13	N12		270	Platform Angle	Beam	Single Angle	A36 Gr.36	Typical
9 M9	N12	N15		270	Platform Angle	Beam	Single Angle	A36 Gr.36	Typical
10 M10	N15	N16		270	Platform Angle	Beam	Single Angle	A36 Gr.36	Typical
11 M11	N16	N13		270	Platform Angle	Beam	Single Angle	A36 Gr.36	Typical
12 M12	N17	N19			Standoff HSS Back	Beam	Tube	A500 Gr. ...	Typical
13 M13	N18	N11			RIGID	None	None	RIGID	Typical
14 M14	N14	N19			RIGID	None	None	RIGID	Typical
15 M15	N23	N22		270	Platform Angle	Beam	Single Angle	A36 Gr.36	Typical
16 M16	N22	N25		270	Platform Angle	Beam	Single Angle	A36 Gr.36	Typical
17 M17	N25	N26A		270	Platform Angle	Beam	Single Angle	A36 Gr.36	Typical
18 M18	N26A	N23		270	Platform Angle	Beam	Single Angle	A36 Gr.36	Typical
19 M19	N27	N29			Standoff HSS Back	Beam	Tube	A500 Gr. ...	Typical
20 M20	N28	N21			RIGID	None	None	RIGID	Typical
21 M21	N24	N29			RIGID	None	None	RIGID	Typical
22 M22A	N22	N3			RIGID	None	None	RIGID	Typical
23 M23A	N25	N6			RIGID	None	None	RIGID	Typical
24 M24	N5	N16			RIGID	None	None	RIGID	Typical
25 M25	N26A	N15			RIGID	None	None	RIGID	Typical
26 M26	N23	N12			RIGID	None	None	RIGID	Typical
27 M27	N2	N13			RIGID	None	None	RIGID	Typical
28 M28	N26	N1			Standoff HSS Front	Beam	Tube	A500 Gr. ...	Typical
29 M29	N19	N11			Standoff HSS Front	Beam	Tube	A500 Gr. ...	Typical
30 M30	N29	N21			Standoff HSS Front	Beam	Tube	A500 Gr. ...	Typical



**Member Primary Data (Continued)**

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
31	M31	N31	N30			Mounp Pipe	Column	Pipe	A53 Gr. B	Typical
32	M32	N36	N35			Mounp Pipe	Column	Pipe	A53 Gr. B	Typical
33	M33	N41	N40			Mounp Pipe	Column	Pipe	A53 Gr. B	Typical
34	M34	N43	N32			Mounp Pipe	Column	Pipe	A53 Gr. B	Typical
35	M35	N33	N37			Mounp Pipe	Column	Pipe	A53 Gr. B	Typical
36	M36	N38	N42			Mounp Pipe	Column	Pipe	A53 Gr. B	Typical
37	M37	N43A	N45			RIGID	None	None	RIGID	Typical
38	M38	N42A	N44			RIGID	None	None	RIGID	Typical
39	MP1A	N46	N47			Mounp Pipe	Column	Pipe	A53 Gr. B	Typical
40	M40	N49	N51			RIGID	None	None	RIGID	Typical
41	M41	N48	N50			RIGID	None	None	RIGID	Typical
42	MP2A	N52	N53			Dual Mount Pipe	Column	Pipe	A53 Gr. B	Typical
43	M43	N55	N57			RIGID	None	None	RIGID	Typical
44	M44	N54	N56			RIGID	None	None	RIGID	Typical
45	MP3A	N58	N59			Mounp Pipe	Column	Pipe	A53 Gr. B	Typical
46	M46	N61	N63			RIGID	None	None	RIGID	Typical
47	M47	N60	N62			RIGID	None	None	RIGID	Typical
48	MP4A	N64	N65			Mounp Pipe	Column	Pipe	A53 Gr. B	Typical
49	M49	N68	N70			RIGID	None	None	RIGID	Typical
50	M50	N67	N69			RIGID	None	None	RIGID	Typical
51	MP1C	N71	N72			Mounp Pipe	Column	Pipe	A53 Gr. B	Typical
52	M52	N74	N76			RIGID	None	None	RIGID	Typical
53	M53	N73	N75			RIGID	None	None	RIGID	Typical
54	MP2C	N77	N78			Dual Mount Pipe	Column	Pipe	A53 Gr. B	Typical
55	M55	N80	N82			RIGID	None	None	RIGID	Typical
56	M56	N79	N81			RIGID	None	None	RIGID	Typical
57	MP3C	N83	N84			Mounp Pipe	Column	Pipe	A53 Gr. B	Typical
58	M58	N86	N88			RIGID	None	None	RIGID	Typical
59	M59	N85	N87			RIGID	None	None	RIGID	Typical
60	MP4C	N89	N90			Mounp Pipe	Column	Pipe	A53 Gr. B	Typical
61	M61	N93	N95			RIGID	None	None	RIGID	Typical
62	M62	N92	N94			RIGID	None	None	RIGID	Typical
63	MP1B	N96	N97			Mounp Pipe	Column	Pipe	A53 Gr. B	Typical
64	M64	N99	N101			RIGID	None	None	RIGID	Typical
65	M65	N98	N100			RIGID	None	None	RIGID	Typical
66	MP2B	N102	N103			Dual Mount Pipe	Column	Pipe	A53 Gr. B	Typical
67	M67	N105	N107			RIGID	None	None	RIGID	Typical
68	M68	N104	N106			RIGID	None	None	RIGID	Typical
69	MP3B	N108	N109			Mounp Pipe	Column	Pipe	A53 Gr. B	Typical
70	M70	N111	N113			RIGID	None	None	RIGID	Typical
71	M71	N110	N112			RIGID	None	None	RIGID	Typical
72	MP4B	N114	N115			Mounp Pipe	Column	Pipe	A53 Gr. B	Typical
73	M73	N118	N115A			RIGID	None	None	RIGID	Typical
74	M74	N114A	N117			RIGID	None	None	RIGID	Typical
75	M75	N116	N119			RIGID	None	None	RIGID	Typical
76	M76	N130	N127		90	V-Brace	Column	Single Angle	A36 Gr.36	Typical
77	M77	N131	N127		180	V-Brace	Column	Single Angle	A36 Gr.36	Typical
78	M78	N134A	N133		90	V-Brace	Column	Single Angle	A36 Gr.36	Typical
79	M79	N135A	N133		180	V-Brace	Column	Single Angle	A36 Gr.36	Typical
80	M80	N138A	N137A		90	V-Brace	Column	Single Angle	A36 Gr.36	Typical
81	M81	N139A	N137A		180	V-Brace	Column	Single Angle	A36 Gr.36	Typical



Company : Colliers Engineering & Design  
 Designer :  
 Job Number :  
 Model Name : 5000103482-VZW\_MT\_LO\_H

May 9, 2024  
 11:16 AM  
 Checked By: \_\_\_\_\_

**Member Advanced Data**

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M1						Yes				None
2	M2						Yes				None
3	M3						Yes				None
4	M4						Yes				None
5	M5						Yes				None
6	M22						Yes	** NA **			None
7	M23						Yes	** NA **			None
8	M8						Yes				None
9	M9						Yes				None
10	M10						Yes				None
11	M11						Yes				None
12	M12						Yes				None
13	M13						Yes	** NA **			None
14	M14						Yes	** NA **			None
15	M15						Yes				None
16	M16						Yes				None
17	M17						Yes				None
18	M18						Yes				None
19	M19						Yes				None
20	M20						Yes	** NA **			None
21	M21						Yes	** NA **			None
22	M22A						Yes	** NA **			None
23	M23A						Yes	** NA **			None
24	M24						Yes	** NA **			None
25	M25						Yes	** NA **			None
26	M26						Yes	** NA **			None
27	M27						Yes	** NA **			None
28	M28						Yes				None
29	M29						Yes				None
30	M30						Yes				None
31	M31						Yes	** NA **			None
32	M32						Yes	** NA **			None
33	M33						Yes	** NA **			None
34	M34	BenPIN	BenPIN				Yes	** NA **			None
35	M35	BenPIN	BenPIN				Yes	** NA **			None
36	M36	BenPIN	BenPIN				Yes	** NA **			None
37	M37						Yes	** NA **			None
38	M38						Yes	** NA **			None
39	MP1A						Yes	** NA **			None
40	M40						Yes	** NA **			None
41	M41						Yes	** NA **			None
42	MP2A						Yes	** NA **			None
43	M43						Yes	** NA **			None
44	M44						Yes	** NA **			None
45	MP3A						Yes	** NA **			None
46	M46						Yes	** NA **			None
47	M47						Yes	** NA **			None
48	MP4A						Yes	** NA **			None
49	M49						Yes	** NA **			None
50	M50						Yes	** NA **			None
51	MP1C						Yes	** NA **			None
52	M52						Yes	** NA **			None
53	M53						Yes	** NA **			None
54	MP2C						Yes	** NA **			None
55	M55						Yes	** NA **			None
56	M56						Yes	** NA **			None
57	MP3C						Yes	** NA **			None



**Member Advanced Data (Continued)**

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
58	M58						Yes	** NA **			None
59	M59						Yes	** NA **			None
60	MP4C						Yes	** NA **			None
61	M61						Yes	** NA **			None
62	M62						Yes	** NA **			None
63	MP1B						Yes	** NA **			None
64	M64						Yes	** NA **			None
65	M65						Yes	** NA **			None
66	MP2B						Yes	** NA **			None
67	M67						Yes	** NA **			None
68	M68						Yes	** NA **			None
69	MP3B						Yes	** NA **			None
70	M70						Yes	** NA **			None
71	M71						Yes	** NA **			None
72	MP4B						Yes	** NA **			None
73	M73						Yes	** NA **			None
74	M74						Yes	** NA **			None
75	M75						Yes	** NA **			None
76	M76	BenPIN	BenPIN				Yes	** NA **			None
77	M77	BenPIN	BenPIN				Yes	** NA **			None
78	M78	BenPIN	BenPIN				Yes	** NA **			None
79	M79	BenPIN	BenPIN				Yes	** NA **			None
80	M80	BenPIN	BenPIN				Yes	** NA **			None
81	M81	BenPIN	BenPIN				Yes	** NA **			None

**Member Point Loads (BLC 1 : Antenna D)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	Y	-15.2	1.25
2	MP4A	My	-.008	1.25
3	MP4A	Mz	0	1.25
4	MP4A	Y	-15.2	4.75
5	MP4A	My	-.008	4.75
6	MP4A	Mz	0	4.75
7	MP4B	Y	-15.2	1.25
8	MP4B	My	.004	1.25
9	MP4B	Mz	-.007	1.25
10	MP4B	Y	-15.2	4.75
11	MP4B	My	.004	4.75
12	MP4B	Mz	-.007	4.75
13	MP4C	Y	-15.2	1.25
14	MP4C	My	.004	1.25
15	MP4C	Mz	.007	1.25
16	MP4C	Y	-15.2	4.75
17	MP4C	My	.004	4.75
18	MP4C	Mz	.007	4.75
19	MP2A	Y	-21.85	1
20	MP2A	My	-.011	1
21	MP2A	Mz	.013	1
22	MP2A	Y	-21.85	5
23	MP2A	My	-.011	5
24	MP2A	Mz	.013	5
25	MP2B	Y	-21.85	1
26	MP2B	My	-.006	1
27	MP2B	Mz	-.016	1
28	MP2B	Y	-21.85	5



**Member Point Loads (BLC 1 : Antenna D) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
29	MP2B	My	-.006	5
30	MP2B	Mz	-.016	5
31	MP2C	Y	-21.85	1
32	MP2C	My	.017	1
33	MP2C	Mz	.003	1
34	MP2C	Y	-21.85	5
35	MP2C	My	.017	5
36	MP2C	Mz	.003	5
37	MP2A	Y	-21.85	1
38	MP2A	My	-.011	1
39	MP2A	Mz	-.013	1
40	MP2A	Y	-21.85	5
41	MP2A	My	-.011	5
42	MP2A	Mz	-.013	5
43	MP2B	Y	-21.85	1
44	MP2B	My	.017	1
45	MP2B	Mz	-.003	1
46	MP2B	Y	-21.85	5
47	MP2B	My	.017	5
48	MP2B	Mz	-.003	5
49	MP2C	Y	-21.85	1
50	MP2C	My	-.006	1
51	MP2C	Mz	.016	1
52	MP2C	Y	-21.85	5
53	MP2C	My	-.006	5
54	MP2C	Mz	.016	5
55	MP1A	Y	-4.4	5.5
56	MP1A	My	-.002	5.5
57	MP1A	Mz	0	5.5
58	MP1B	Y	-4.4	5.5
59	MP1B	My	.001	5.5
60	MP1B	Mz	-.002	5.5
61	MP1C	Y	-4.4	5.5
62	MP1C	My	.001	5.5
63	MP1C	Mz	.002	5.5
64	MP1A	Y	-43.55	.5
65	MP1A	My	-.022	.5
66	MP1A	Mz	0	.5
67	MP1A	Y	-43.55	2.5
68	MP1A	My	-.022	2.5
69	MP1A	Mz	0	2.5
70	MP1B	Y	-43.55	.5
71	MP1B	My	-.019	.5
72	MP1B	Mz	.011	.5
73	MP1B	Y	-43.55	2.5
74	MP1B	My	-.019	2.5
75	MP1B	Mz	.011	2.5
76	MP1C	Y	-43.55	.5
77	MP1C	My	-.022	.5
78	MP1C	Mz	0	.5
79	MP1C	Y	-43.55	2.5
80	MP1C	My	-.022	2.5
81	MP1C	Mz	0	2.5
82	MP2A	Y	-84.4	3
83	MP2A	My	.042	3
84	MP2A	Mz	0	3
85	MP2B	Y	-84.4	3



**Member Point Loads (BLC 1 : Antenna D) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
86	MP2B	My	-.021	3
87	MP2B	Mz	.037	3
88	MP2C	Y	-84.4	3
89	MP2C	My	-.021	3
90	MP2C	Mz	-.037	3
91	MP3A	Y	-70.3	3
92	MP3A	My	.035	3
93	MP3A	Mz	0	3
94	MP3B	Y	-70.3	3
95	MP3B	My	-.018	3
96	MP3B	Mz	.03	3
97	MP3C	Y	-70.3	3
98	MP3C	My	-.018	3
99	MP3C	Mz	-.03	3
100	MP2A	Y	-8.8	0
101	MP2A	My	.009	0
102	MP2A	Mz	-.003	0
103	MP2A	Y	-8.8	1
104	MP2A	My	.009	1
105	MP2A	Mz	-.003	1
106	MP2A	Y	-8.8	0
107	MP2A	My	.009	0
108	MP2A	Mz	.003	0
109	MP2A	Y	-8.8	1
110	MP2A	My	.009	1
111	MP2A	Mz	.003	1

**Member Point Loads (BLC 2 : Antenna Di)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	Y	-74.463	1.25
2	MP4A	My	-.037	1.25
3	MP4A	Mz	0	1.25
4	MP4A	Y	-74.463	4.75
5	MP4A	My	-.037	4.75
6	MP4A	Mz	0	4.75
7	MP4B	Y	-74.463	1.25
8	MP4B	My	.019	1.25
9	MP4B	Mz	-.032	1.25
10	MP4B	Y	-74.463	4.75
11	MP4B	My	.019	4.75
12	MP4B	Mz	-.032	4.75
13	MP4C	Y	-74.463	1.25
14	MP4C	My	.019	1.25
15	MP4C	Mz	.032	1.25
16	MP4C	Y	-74.463	4.75
17	MP4C	My	.019	4.75
18	MP4C	Mz	.032	4.75
19	MP2A	Y	-95.494	1
20	MP2A	My	-.048	1
21	MP2A	Mz	.056	1
22	MP2A	Y	-95.494	5
23	MP2A	My	-.048	5
24	MP2A	Mz	.056	5
25	MP2B	Y	-95.494	1
26	MP2B	My	-.024	1
27	MP2B	Mz	-.069	1





**Member Point Loads (BLC 2 : Antenna Di) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
28	MP2B	Y	-95.494	5
29	MP2B	My	-.024	5
30	MP2B	Mz	-.069	5
31	MP2C	Y	-95.494	1
32	MP2C	My	.072	1
33	MP2C	Mz	.013	1
34	MP2C	Y	-95.494	5
35	MP2C	My	.072	5
36	MP2C	Mz	.013	5
37	MP2A	Y	-95.494	1
38	MP2A	My	-.048	1
39	MP2A	Mz	-.056	1
40	MP2A	Y	-95.494	5
41	MP2A	My	-.048	5
42	MP2A	Mz	-.056	5
43	MP2B	Y	-95.494	1
44	MP2B	My	.072	1
45	MP2B	Mz	-.013	1
46	MP2B	Y	-95.494	5
47	MP2B	My	.072	5
48	MP2B	Mz	-.013	5
49	MP2C	Y	-95.494	1
50	MP2C	My	-.024	1
51	MP2C	Mz	.069	1
52	MP2C	Y	-95.494	5
53	MP2C	My	-.024	5
54	MP2C	Mz	.069	5
55	MP1A	Y	-22.78	5.5
56	MP1A	My	-.011	5.5
57	MP1A	Mz	0	5.5
58	MP1B	Y	-22.78	5.5
59	MP1B	My	.006	5.5
60	MP1B	Mz	-.01	5.5
61	MP1C	Y	-22.78	5.5
62	MP1C	My	.006	5.5
63	MP1C	Mz	.01	5.5
64	MP1A	Y	-56.368	.5
65	MP1A	My	-.028	.5
66	MP1A	Mz	0	.5
67	MP1A	Y	-56.368	2.5
68	MP1A	My	-.028	2.5
69	MP1A	Mz	0	2.5
70	MP1B	Y	-56.368	.5
71	MP1B	My	-.024	.5
72	MP1B	Mz	.014	.5
73	MP1B	Y	-56.368	2.5
74	MP1B	My	-.024	2.5
75	MP1B	Mz	.014	2.5
76	MP1C	Y	-56.368	.5
77	MP1C	My	-.028	.5
78	MP1C	Mz	0	.5
79	MP1C	Y	-56.368	2.5
80	MP1C	My	-.028	2.5
81	MP1C	Mz	0	2.5
82	MP2A	Y	-71.639	3
83	MP2A	My	.036	3
84	MP2A	Mz	0	3



**Member Point Loads (BLC 2 : Antenna Di) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
85	MP2B	Y	-71.639	3
86	MP2B	My	-.018	3
87	MP2B	Mz	.031	3
88	MP2C	Y	-71.639	3
89	MP2C	My	-.018	3
90	MP2C	Mz	-.031	3
91	MP3A	Y	-64.679	3
92	MP3A	My	.032	3
93	MP3A	Mz	0	3
94	MP3B	Y	-64.679	3
95	MP3B	My	-.016	3
96	MP3B	Mz	.028	3
97	MP3C	Y	-64.679	3
98	MP3C	My	-.016	3
99	MP3C	Mz	-.028	3
100	MP2A	Y	-14.423	0
101	MP2A	My	.014	0
102	MP2A	Mz	-.005	0
103	MP2A	Y	-14.423	1
104	MP2A	My	.014	1
105	MP2A	Mz	-.005	1
106	MP2A	Y	-14.423	0
107	MP2A	My	.014	0
108	MP2A	Mz	.005	0
109	MP2A	Y	-14.423	1
110	MP2A	My	.014	1
111	MP2A	Mz	.005	1

**Member Point Loads (BLC 3 : Antenna Wo (0 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP4A	X	0	1.25
2	MP4A	Z	-123.151	1.25
3	MP4A	Mx	0	1.25
4	MP4A	X	0	4.75
5	MP4A	Z	-123.151	4.75
6	MP4A	Mx	0	4.75
7	MP4B	X	0	1.25
8	MP4B	Z	-91.61	1.25
9	MP4B	Mx	.04	1.25
10	MP4B	X	0	4.75
11	MP4B	Z	-91.61	4.75
12	MP4B	Mx	.04	4.75
13	MP4C	X	0	1.25
14	MP4C	Z	-91.61	1.25
15	MP4C	Mx	-.04	1.25
16	MP4C	X	0	4.75
17	MP4C	Z	-91.61	4.75
18	MP4C	Mx	-.04	4.75
19	MP2A	X	0	1
20	MP2A	Z	-114.701	1
21	MP2A	Mx	-.067	1
22	MP2A	X	0	5
23	MP2A	Z	-114.701	5
24	MP2A	Mx	-.067	5
25	MP2B	X	0	1
26	MP2B	Z	-65.589	1



**Member Point Loads (BLC 3 : Antenna Wo (0 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
27	MP2B	Mx	.048	1
28	MP2B	X	0	5
29	MP2B	Z	-65.589	5
30	MP2B	Mx	.048	5
31	MP2C	X	0	1
32	MP2C	Z	-65.589	1
33	MP2C	Mx	-.009	1
34	MP2C	X	0	5
35	MP2C	Z	-65.589	5
36	MP2C	Mx	-.009	5
37	MP2A	X	0	1
38	MP2A	Z	-114.701	1
39	MP2A	Mx	.067	1
40	MP2A	X	0	5
41	MP2A	Z	-114.701	5
42	MP2A	Mx	.067	5
43	MP2B	X	0	1
44	MP2B	Z	-65.589	1
45	MP2B	Mx	.009	1
46	MP2B	X	0	5
47	MP2B	Z	-65.589	5
48	MP2B	Mx	.009	5
49	MP2C	X	0	1
50	MP2C	Z	-65.589	1
51	MP2C	Mx	-.048	1
52	MP2C	X	0	5
53	MP2C	Z	-65.589	5
54	MP2C	Mx	-.048	5
55	MP1A	X	0	5.5
56	MP1A	Z	-37.6	5.5
57	MP1A	Mx	0	5.5
58	MP1B	X	0	5.5
59	MP1B	Z	-14.93	5.5
60	MP1B	Mx	.006	5.5
61	MP1C	X	0	5.5
62	MP1C	Z	-14.93	5.5
63	MP1C	Mx	-.006	5.5
64	MP1A	X	0	.5
65	MP1A	Z	-82.805	.5
66	MP1A	Mx	0	.5
67	MP1A	X	0	2.5
68	MP1A	Z	-82.805	2.5
69	MP1A	Mx	0	2.5
70	MP1B	X	0	.5
71	MP1B	Z	-69.233	.5
72	MP1B	Mx	-.017	.5
73	MP1B	X	0	2.5
74	MP1B	Z	-69.233	2.5
75	MP1B	Mx	-.017	2.5
76	MP1C	X	0	.5
77	MP1C	Z	-82.805	.5
78	MP1C	Mx	0	.5
79	MP1C	X	0	2.5
80	MP1C	Z	-82.805	2.5
81	MP1C	Mx	0	2.5
82	MP2A	X	0	3
83	MP2A	Z	-65.483	3



**Member Point Loads (BLC 3 : Antenna Wo (0 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
84	MP2A	Mx	0	3
85	MP2B	X	0	3
86	MP2B	Z	-49.324	3
87	MP2B	Mx	-.021	3
88	MP2C	X	0	3
89	MP2C	Z	-49.324	3
90	MP2C	Mx	.021	3
91	MP3A	X	0	3
92	MP3A	Z	-65.483	3
93	MP3A	Mx	0	3
94	MP3B	X	0	3
95	MP3B	Z	-43.303	3
96	MP3B	Mx	-.019	3
97	MP3C	X	0	3
98	MP3C	Z	-43.303	3
99	MP3C	Mx	.019	3
100	MP2A	X	0	0
101	MP2A	Z	-6.126	0
102	MP2A	Mx	.002	0
103	MP2A	X	0	1
104	MP2A	Z	-6.126	1
105	MP2A	Mx	.002	1
106	MP2A	X	0	0
107	MP2A	Z	-6.126	0
108	MP2A	Mx	-.002	0
109	MP2A	X	0	1
110	MP2A	Z	-6.126	1
111	MP2A	Mx	-.002	1

**Member Point Loads (BLC 4 : Antenna Wo (30 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	X	56.319	1.25
2	MP4A	Z	-97.547	1.25
3	MP4A	Mx	-.028	1.25
4	MP4A	X	56.319	4.75
5	MP4A	Z	-97.547	4.75
6	MP4A	Mx	-.028	4.75
7	MP4B	X	40.548	1.25
8	MP4B	Z	-70.231	1.25
9	MP4B	Mx	.041	1.25
10	MP4B	X	40.548	4.75
11	MP4B	Z	-70.231	4.75
12	MP4B	Mx	.041	4.75
13	MP4C	X	56.319	1.25
14	MP4C	Z	-97.547	1.25
15	MP4C	Mx	-.028	1.25
16	MP4C	X	56.319	4.75
17	MP4C	Z	-97.547	4.75
18	MP4C	Mx	-.028	4.75
19	MP2A	X	49.165	1
20	MP2A	Z	-85.157	1
21	MP2A	Mx	-.074	1
22	MP2A	X	49.165	5
23	MP2A	Z	-85.157	5
24	MP2A	Mx	-.074	5
25	MP2B	X	24.609	1



**Member Point Loads (BLC 4 : Antenna Wo (30 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
26	MP2B	Z	-42.624	1
27	MP2B	Mx	.025	1
28	MP2B	X	24.609	5
29	MP2B	Z	-42.624	5
30	MP2B	Mx	.025	5
31	MP2C	X	49.165	1
32	MP2C	Z	-85.157	1
33	MP2C	Mx	.025	1
34	MP2C	X	49.165	5
35	MP2C	Z	-85.157	5
36	MP2C	Mx	.025	5
37	MP2A	X	49.165	1
38	MP2A	Z	-85.157	1
39	MP2A	Mx	.025	1
40	MP2A	X	49.165	5
41	MP2A	Z	-85.157	5
42	MP2A	Mx	.025	5
43	MP2B	X	24.609	1
44	MP2B	Z	-42.624	1
45	MP2B	Mx	.025	1
46	MP2B	X	24.609	5
47	MP2B	Z	-42.624	5
48	MP2B	Mx	.025	5
49	MP2C	X	49.165	1
50	MP2C	Z	-85.157	1
51	MP2C	Mx	-.074	1
52	MP2C	X	49.165	5
53	MP2C	Z	-85.157	5
54	MP2C	Mx	-.074	5
55	MP1A	X	15.022	5.5
56	MP1A	Z	-26.018	5.5
57	MP1A	Mx	-.008	5.5
58	MP1B	X	3.687	5.5
59	MP1B	Z	-6.386	5.5
60	MP1B	Mx	.004	5.5
61	MP1C	X	15.022	5.5
62	MP1C	Z	-26.018	5.5
63	MP1C	Mx	-.008	5.5
64	MP1A	X	34.616	.5
65	MP1A	Z	-59.957	.5
66	MP1A	Mx	-.017	.5
67	MP1A	X	34.616	2.5
68	MP1A	Z	-59.957	2.5
69	MP1A	Mx	-.017	2.5
70	MP1B	X	21.044	.5
71	MP1B	Z	-36.45	.5
72	MP1B	Mx	-.018	.5
73	MP1B	X	21.044	2.5
74	MP1B	Z	-36.45	2.5
75	MP1B	Mx	-.018	2.5
76	MP1C	X	34.616	.5
77	MP1C	Z	-59.957	.5
78	MP1C	Mx	-.017	.5
79	MP1C	X	34.616	2.5
80	MP1C	Z	-59.957	2.5
81	MP1C	Mx	-.017	2.5
82	MP2A	X	30.048	3



**Member Point Loads (BLC 4 : Antenna Wo (30 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
83	MP2A	Z	-52.045	3
84	MP2A	Mx	.015	3
85	MP2B	X	21.969	3
86	MP2B	Z	-38.051	3
87	MP2B	Mx	-.022	3
88	MP2C	X	30.048	3
89	MP2C	Z	-52.045	3
90	MP2C	Mx	.015	3
91	MP3A	X	29.045	3
92	MP3A	Z	-50.307	3
93	MP3A	Mx	.015	3
94	MP3B	X	17.955	3
95	MP3B	Z	-31.099	3
96	MP3B	Mx	-.018	3
97	MP3C	X	29.045	3
98	MP3C	Z	-50.307	3
99	MP3C	Mx	.015	3
100	MP2A	X	4.84	0
101	MP2A	Z	-8.382	0
102	MP2A	Mx	.008	0
103	MP2A	X	4.84	1
104	MP2A	Z	-8.382	1
105	MP2A	Mx	.008	1
106	MP2A	X	4.84	0
107	MP2A	Z	-8.382	0
108	MP2A	Mx	.002	0
109	MP2A	X	4.84	1
110	MP2A	Z	-8.382	1
111	MP2A	Mx	.002	1

**Member Point Loads (BLC 5 : Antenna Wo (60 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	79.337	1.25
2	MP4A	Z	-45.805	1.25
3	MP4A	Mx	-.04	1.25
4	MP4A	X	79.337	4.75
5	MP4A	Z	-45.805	4.75
6	MP4A	Mx	-.04	4.75
7	MP4B	X	79.337	1.25
8	MP4B	Z	-45.805	1.25
9	MP4B	Mx	.04	1.25
10	MP4B	X	79.337	4.75
11	MP4B	Z	-45.805	4.75
12	MP4B	Mx	.04	4.75
13	MP4C	X	106.652	1.25
14	MP4C	Z	-61.575	1.25
15	MP4C	Mx	0	1.25
16	MP4C	X	106.652	4.75
17	MP4C	Z	-61.575	4.75
18	MP4C	Mx	0	4.75
19	MP2A	X	56.802	1
20	MP2A	Z	-32.794	1
21	MP2A	Mx	-.048	1
22	MP2A	X	56.802	5
23	MP2A	Z	-32.794	5
24	MP2A	Mx	-.048	5



**Member Point Loads (BLC 5 : Antenna Wo (60 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
25	MP2B	X	56.802	1
26	MP2B	Z	-32.794	1
27	MP2B	Mx	.009	1
28	MP2B	X	56.802	5
29	MP2B	Z	-32.794	5
30	MP2B	Mx	.009	5
31	MP2C	X	99.334	1
32	MP2C	Z	-57.351	1
33	MP2C	Mx	.067	1
34	MP2C	X	99.334	5
35	MP2C	Z	-57.351	5
36	MP2C	Mx	.067	5
37	MP2A	X	56.802	1
38	MP2A	Z	-32.794	1
39	MP2A	Mx	-.009	1
40	MP2A	X	56.802	5
41	MP2A	Z	-32.794	5
42	MP2A	Mx	-.009	5
43	MP2B	X	56.802	1
44	MP2B	Z	-32.794	1
45	MP2B	Mx	.048	1
46	MP2B	X	56.802	5
47	MP2B	Z	-32.794	5
48	MP2B	Mx	.048	5
49	MP2C	X	99.334	1
50	MP2C	Z	-57.351	1
51	MP2C	Mx	-.067	1
52	MP2C	X	99.334	5
53	MP2C	Z	-57.351	5
54	MP2C	Mx	-.067	5
55	MP1A	X	12.93	5.5
56	MP1A	Z	-7.465	5.5
57	MP1A	Mx	-.006	5.5
58	MP1B	X	12.93	5.5
59	MP1B	Z	-7.465	5.5
60	MP1B	Mx	.006	5.5
61	MP1C	X	32.563	5.5
62	MP1C	Z	-18.8	5.5
63	MP1C	Mx	0	5.5
64	MP1A	X	36.45	.5
65	MP1A	Z	-21.044	.5
66	MP1A	Mx	-.018	.5
67	MP1A	X	36.45	2.5
68	MP1A	Z	-21.044	2.5
69	MP1A	Mx	-.018	2.5
70	MP1B	X	24.696	.5
71	MP1B	Z	-14.258	.5
72	MP1B	Mx	-.014	.5
73	MP1B	X	24.696	2.5
74	MP1B	Z	-14.258	2.5
75	MP1B	Mx	-.014	2.5
76	MP1C	X	36.45	.5
77	MP1C	Z	-21.044	.5
78	MP1C	Mx	-.018	.5
79	MP1C	X	36.45	2.5
80	MP1C	Z	-21.044	2.5
81	MP1C	Mx	-.018	2.5



**Member Point Loads (BLC 5 : Antenna Wo (60 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
82	MP2A	X	42.716	3
83	MP2A	Z	-24.662	3
84	MP2A	Mx	.021	3
85	MP2B	X	42.716	3
86	MP2B	Z	-24.662	3
87	MP2B	Mx	-.021	3
88	MP2C	X	56.71	3
89	MP2C	Z	-32.742	3
90	MP2C	Mx	0	3
91	MP3A	X	37.502	3
92	MP3A	Z	-21.652	3
93	MP3A	Mx	.019	3
94	MP3B	X	37.502	3
95	MP3B	Z	-21.652	3
96	MP3B	Mx	-.019	3
97	MP3C	X	56.71	3
98	MP3C	Z	-32.742	3
99	MP3C	Mx	0	3
100	MP2A	X	14.537	0
101	MP2A	Z	-8.393	0
102	MP2A	Mx	.017	0
103	MP2A	X	14.537	1
104	MP2A	Z	-8.393	1
105	MP2A	Mx	.017	1
106	MP2A	X	14.537	0
107	MP2A	Z	-8.393	0
108	MP2A	Mx	.012	0
109	MP2A	X	14.537	1
110	MP2A	Z	-8.393	1
111	MP2A	Mx	.012	1

**Member Point Loads (BLC 6 : Antenna Wo (90 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	81.096	1.25
2	MP4A	Z	0	1.25
3	MP4A	Mx	-.041	1.25
4	MP4A	X	81.096	4.75
5	MP4A	Z	0	4.75
6	MP4A	Mx	-.041	4.75
7	MP4B	X	112.637	1.25
8	MP4B	Z	0	1.25
9	MP4B	Mx	.028	1.25
10	MP4B	X	112.637	4.75
11	MP4B	Z	0	4.75
12	MP4B	Mx	.028	4.75
13	MP4C	X	112.637	1.25
14	MP4C	Z	0	1.25
15	MP4C	Mx	.028	1.25
16	MP4C	X	112.637	4.75
17	MP4C	Z	0	4.75
18	MP4C	Mx	.028	4.75
19	MP2A	X	49.218	1
20	MP2A	Z	0	1
21	MP2A	Mx	-.025	1
22	MP2A	X	49.218	5
23	MP2A	Z	0	5





**Member Point Loads (BLC 6 : Antenna Wo (90 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
24	MP2A	Mx	-.025	5
25	MP2B	X	98.33	1
26	MP2B	Z	0	1
27	MP2B	Mx	-.025	1
28	MP2B	X	98.33	5
29	MP2B	Z	0	5
30	MP2B	Mx	-.025	5
31	MP2C	X	98.33	1
32	MP2C	Z	0	1
33	MP2C	Mx	.074	1
34	MP2C	X	98.33	5
35	MP2C	Z	0	5
36	MP2C	Mx	.074	5
37	MP2A	X	49.218	1
38	MP2A	Z	0	1
39	MP2A	Mx	-.025	1
40	MP2A	X	49.218	5
41	MP2A	Z	0	5
42	MP2A	Mx	-.025	5
43	MP2B	X	98.33	1
44	MP2B	Z	0	1
45	MP2B	Mx	.074	1
46	MP2B	X	98.33	5
47	MP2B	Z	0	5
48	MP2B	Mx	.074	5
49	MP2C	X	98.33	1
50	MP2C	Z	0	1
51	MP2C	Mx	-.025	1
52	MP2C	X	98.33	5
53	MP2C	Z	0	5
54	MP2C	Mx	-.025	5
55	MP1A	X	7.374	5.5
56	MP1A	Z	0	5.5
57	MP1A	Mx	-.004	5.5
58	MP1B	X	30.043	5.5
59	MP1B	Z	0	5.5
60	MP1B	Mx	.008	5.5
61	MP1C	X	30.043	5.5
62	MP1C	Z	0	5.5
63	MP1C	Mx	.008	5.5
64	MP1A	X	28.517	.5
65	MP1A	Z	0	.5
66	MP1A	Mx	-.014	.5
67	MP1A	X	28.517	2.5
68	MP1A	Z	0	2.5
69	MP1A	Mx	-.014	2.5
70	MP1B	X	42.089	.5
71	MP1B	Z	0	.5
72	MP1B	Mx	-.018	.5
73	MP1B	X	42.089	2.5
74	MP1B	Z	0	2.5
75	MP1B	Mx	-.018	2.5
76	MP1C	X	28.517	.5
77	MP1C	Z	0	.5
78	MP1C	Mx	-.014	.5
79	MP1C	X	28.517	2.5
80	MP1C	Z	0	2.5



**Member Point Loads (BLC 6 : Antenna Wo (90 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
81	MP1C	Mx	-.014	2.5
82	MP2A	X	43.937	3
83	MP2A	Z	0	3
84	MP2A	Mx	.022	3
85	MP2B	X	60.097	3
86	MP2B	Z	0	3
87	MP2B	Mx	-.015	3
88	MP2C	X	60.097	3
89	MP2C	Z	0	3
90	MP2C	Mx	-.015	3
91	MP3A	X	35.91	3
92	MP3A	Z	0	3
93	MP3A	Mx	.018	3
94	MP3B	X	58.09	3
95	MP3B	Z	0	3
96	MP3B	Mx	-.015	3
97	MP3C	X	58.09	3
98	MP3C	Z	0	3
99	MP3C	Mx	-.015	3
100	MP2A	X	20.339	0
101	MP2A	Z	0	0
102	MP2A	Mx	.02	0
103	MP2A	X	20.339	1
104	MP2A	Z	0	1
105	MP2A	Mx	.02	1
106	MP2A	X	20.339	0
107	MP2A	Z	0	0
108	MP2A	Mx	.02	0
109	MP2A	X	20.339	1
110	MP2A	Z	0	1
111	MP2A	Mx	.02	1

**Member Point Loads (BLC 7 : Antenna Wo (120 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	79.337	1.25
2	MP4A	Z	45.805	1.25
3	MP4A	Mx	-.04	1.25
4	MP4A	X	79.337	4.75
5	MP4A	Z	45.805	4.75
6	MP4A	Mx	-.04	4.75
7	MP4B	X	106.652	1.25
8	MP4B	Z	61.575	1.25
9	MP4B	Mx	0	1.25
10	MP4B	X	106.652	4.75
11	MP4B	Z	61.575	4.75
12	MP4B	Mx	0	4.75
13	MP4C	X	79.337	1.25
14	MP4C	Z	45.805	1.25
15	MP4C	Mx	.04	1.25
16	MP4C	X	79.337	4.75
17	MP4C	Z	45.805	4.75
18	MP4C	Mx	.04	4.75
19	MP2A	X	56.802	1
20	MP2A	Z	32.794	1
21	MP2A	Mx	-.009	1
22	MP2A	X	56.802	5



**Member Point Loads (BLC 7 : Antenna Wo (120 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
23	MP2A	Z	32.794	5
24	MP2A	Mx	-.009	5
25	MP2B	X	99.334	1
26	MP2B	Z	57.351	1
27	MP2B	Mx	-.067	1
28	MP2B	X	99.334	5
29	MP2B	Z	57.351	5
30	MP2B	Mx	-.067	5
31	MP2C	X	56.802	1
32	MP2C	Z	32.794	1
33	MP2C	Mx	.048	1
34	MP2C	X	56.802	5
35	MP2C	Z	32.794	5
36	MP2C	Mx	.048	5
37	MP2A	X	56.802	1
38	MP2A	Z	32.794	1
39	MP2A	Mx	-.048	1
40	MP2A	X	56.802	5
41	MP2A	Z	32.794	5
42	MP2A	Mx	-.048	5
43	MP2B	X	99.334	1
44	MP2B	Z	57.351	1
45	MP2B	Mx	.067	1
46	MP2B	X	99.334	5
47	MP2B	Z	57.351	5
48	MP2B	Mx	.067	5
49	MP2C	X	56.802	1
50	MP2C	Z	32.794	1
51	MP2C	Mx	.009	1
52	MP2C	X	56.802	5
53	MP2C	Z	32.794	5
54	MP2C	Mx	.009	5
55	MP1A	X	12.93	5.5
56	MP1A	Z	7.465	5.5
57	MP1A	Mx	-.006	5.5
58	MP1B	X	32.563	5.5
59	MP1B	Z	18.8	5.5
60	MP1B	Mx	0	5.5
61	MP1C	X	12.93	5.5
62	MP1C	Z	7.465	5.5
63	MP1C	Mx	.006	5.5
64	MP1A	X	36.45	.5
65	MP1A	Z	21.044	.5
66	MP1A	Mx	-.018	.5
67	MP1A	X	36.45	2.5
68	MP1A	Z	21.044	2.5
69	MP1A	Mx	-.018	2.5
70	MP1B	X	59.957	.5
71	MP1B	Z	34.616	.5
72	MP1B	Mx	-.017	.5
73	MP1B	X	59.957	2.5
74	MP1B	Z	34.616	2.5
75	MP1B	Mx	-.017	2.5
76	MP1C	X	36.45	.5
77	MP1C	Z	21.044	.5
78	MP1C	Mx	-.018	.5
79	MP1C	X	36.45	2.5



**Member Point Loads (BLC 7 : Antenna Wo (120 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
80	MP1C	Z	21.044	2.5
81	MP1C	Mx	-.018	2.5
82	MP2A	X	42.716	3
83	MP2A	Z	24.662	3
84	MP2A	Mx	.021	3
85	MP2B	X	56.71	3
86	MP2B	Z	32.742	3
87	MP2B	Mx	0	3
88	MP2C	X	42.716	3
89	MP2C	Z	24.662	3
90	MP2C	Mx	-.021	3
91	MP3A	X	37.502	3
92	MP3A	Z	21.652	3
93	MP3A	Mx	.019	3
94	MP3B	X	56.71	3
95	MP3B	Z	32.742	3
96	MP3B	Mx	0	3
97	MP3C	X	37.502	3
98	MP3C	Z	21.652	3
99	MP3C	Mx	-.019	3
100	MP2A	X	14.537	0
101	MP2A	Z	8.393	0
102	MP2A	Mx	.012	0
103	MP2A	X	14.537	1
104	MP2A	Z	8.393	1
105	MP2A	Mx	.012	1
106	MP2A	X	14.537	0
107	MP2A	Z	8.393	0
108	MP2A	Mx	.017	0
109	MP2A	X	14.537	1
110	MP2A	Z	8.393	1
111	MP2A	Mx	.017	1

**Member Point Loads (BLC 8 : Antenna Wo (150 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	56.319	1.25
2	MP4A	Z	97.547	1.25
3	MP4A	Mx	-.028	1.25
4	MP4A	X	56.319	4.75
5	MP4A	Z	97.547	4.75
6	MP4A	Mx	-.028	4.75
7	MP4B	X	56.319	1.25
8	MP4B	Z	97.547	1.25
9	MP4B	Mx	-.028	1.25
10	MP4B	X	56.319	4.75
11	MP4B	Z	97.547	4.75
12	MP4B	Mx	-.028	4.75
13	MP4C	X	40.548	1.25
14	MP4C	Z	70.231	1.25
15	MP4C	Mx	.041	1.25
16	MP4C	X	40.548	4.75
17	MP4C	Z	70.231	4.75
18	MP4C	Mx	.041	4.75
19	MP2A	X	49.165	1
20	MP2A	Z	85.157	1
21	MP2A	Mx	.025	1



**Member Point Loads (BLC 8 : Antenna Wo (150 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
22	MP2A	X	49.165	5
23	MP2A	Z	85.157	5
24	MP2A	Mx	.025	5
25	MP2B	X	49.165	1
26	MP2B	Z	85.157	1
27	MP2B	Mx	-.074	1
28	MP2B	X	49.165	5
29	MP2B	Z	85.157	5
30	MP2B	Mx	-.074	5
31	MP2C	X	24.609	1
32	MP2C	Z	42.624	1
33	MP2C	Mx	.025	1
34	MP2C	X	24.609	5
35	MP2C	Z	42.624	5
36	MP2C	Mx	.025	5
37	MP2A	X	49.165	1
38	MP2A	Z	85.157	1
39	MP2A	Mx	-.074	1
40	MP2A	X	49.165	5
41	MP2A	Z	85.157	5
42	MP2A	Mx	-.074	5
43	MP2B	X	49.165	1
44	MP2B	Z	85.157	1
45	MP2B	Mx	.025	1
46	MP2B	X	49.165	5
47	MP2B	Z	85.157	5
48	MP2B	Mx	.025	5
49	MP2C	X	24.609	1
50	MP2C	Z	42.624	1
51	MP2C	Mx	.025	1
52	MP2C	X	24.609	5
53	MP2C	Z	42.624	5
54	MP2C	Mx	.025	5
55	MP1A	X	15.022	5.5
56	MP1A	Z	26.018	5.5
57	MP1A	Mx	-.008	5.5
58	MP1B	X	15.022	5.5
59	MP1B	Z	26.018	5.5
60	MP1B	Mx	-.008	5.5
61	MP1C	X	3.687	5.5
62	MP1C	Z	6.386	5.5
63	MP1C	Mx	.004	5.5
64	MP1A	X	34.616	.5
65	MP1A	Z	59.957	.5
66	MP1A	Mx	-.017	.5
67	MP1A	X	34.616	2.5
68	MP1A	Z	59.957	2.5
69	MP1A	Mx	-.017	2.5
70	MP1B	X	41.402	.5
71	MP1B	Z	71.711	.5
72	MP1B	Mx	0	.5
73	MP1B	X	41.402	2.5
74	MP1B	Z	71.711	2.5
75	MP1B	Mx	0	2.5
76	MP1C	X	34.616	.5
77	MP1C	Z	59.957	.5
78	MP1C	Mx	-.017	.5



**Member Point Loads (BLC 8 : Antenna Wo (150 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
79	MP1C	X	34.616	2.5
80	MP1C	Z	59.957	2.5
81	MP1C	Mx	-.017	2.5
82	MP2A	X	30.048	3
83	MP2A	Z	52.045	3
84	MP2A	Mx	.015	3
85	MP2B	X	30.048	3
86	MP2B	Z	52.045	3
87	MP2B	Mx	.015	3
88	MP2C	X	21.969	3
89	MP2C	Z	38.051	3
90	MP2C	Mx	-.022	3
91	MP3A	X	29.045	3
92	MP3A	Z	50.307	3
93	MP3A	Mx	.015	3
94	MP3B	X	29.045	3
95	MP3B	Z	50.307	3
96	MP3B	Mx	.015	3
97	MP3C	X	17.955	3
98	MP3C	Z	31.099	3
99	MP3C	Mx	-.018	3
100	MP2A	X	4.84	0
101	MP2A	Z	8.382	0
102	MP2A	Mx	.002	0
103	MP2A	X	4.84	1
104	MP2A	Z	8.382	1
105	MP2A	Mx	.002	1
106	MP2A	X	4.84	0
107	MP2A	Z	8.382	0
108	MP2A	Mx	.008	0
109	MP2A	X	4.84	1
110	MP2A	Z	8.382	1
111	MP2A	Mx	.008	1

**Member Point Loads (BLC 9 : Antenna Wo (180 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	0	1.25
2	MP4A	Z	123.151	1.25
3	MP4A	Mx	0	1.25
4	MP4A	X	0	4.75
5	MP4A	Z	123.151	4.75
6	MP4A	Mx	0	4.75
7	MP4B	X	0	1.25
8	MP4B	Z	91.61	1.25
9	MP4B	Mx	-.04	1.25
10	MP4B	X	0	4.75
11	MP4B	Z	91.61	4.75
12	MP4B	Mx	-.04	4.75
13	MP4C	X	0	1.25
14	MP4C	Z	91.61	1.25
15	MP4C	Mx	.04	1.25
16	MP4C	X	0	4.75
17	MP4C	Z	91.61	4.75
18	MP4C	Mx	.04	4.75
19	MP2A	X	0	1
20	MP2A	Z	114.701	1



**Member Point Loads (BLC 9 : Antenna Wo (180 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
21	MP2A	Mx	.067	1
22	MP2A	X	0	5
23	MP2A	Z	114.701	5
24	MP2A	Mx	.067	5
25	MP2B	X	0	1
26	MP2B	Z	65.589	1
27	MP2B	Mx	-.048	1
28	MP2B	X	0	5
29	MP2B	Z	65.589	5
30	MP2B	Mx	-.048	5
31	MP2C	X	0	1
32	MP2C	Z	65.589	1
33	MP2C	Mx	.009	1
34	MP2C	X	0	5
35	MP2C	Z	65.589	5
36	MP2C	Mx	.009	5
37	MP2A	X	0	1
38	MP2A	Z	114.701	1
39	MP2A	Mx	-.067	1
40	MP2A	X	0	5
41	MP2A	Z	114.701	5
42	MP2A	Mx	-.067	5
43	MP2B	X	0	1
44	MP2B	Z	65.589	1
45	MP2B	Mx	-.009	1
46	MP2B	X	0	5
47	MP2B	Z	65.589	5
48	MP2B	Mx	-.009	5
49	MP2C	X	0	1
50	MP2C	Z	65.589	1
51	MP2C	Mx	.048	1
52	MP2C	X	0	5
53	MP2C	Z	65.589	5
54	MP2C	Mx	.048	5
55	MP1A	X	0	5.5
56	MP1A	Z	37.6	5.5
57	MP1A	Mx	0	5.5
58	MP1B	X	0	5.5
59	MP1B	Z	14.93	5.5
60	MP1B	Mx	-.006	5.5
61	MP1C	X	0	5.5
62	MP1C	Z	14.93	5.5
63	MP1C	Mx	.006	5.5
64	MP1A	X	0	.5
65	MP1A	Z	82.805	.5
66	MP1A	Mx	0	.5
67	MP1A	X	0	2.5
68	MP1A	Z	82.805	2.5
69	MP1A	Mx	0	2.5
70	MP1B	X	0	.5
71	MP1B	Z	69.233	.5
72	MP1B	Mx	.017	.5
73	MP1B	X	0	2.5
74	MP1B	Z	69.233	2.5
75	MP1B	Mx	.017	2.5
76	MP1C	X	0	.5
77	MP1C	Z	82.805	.5



**Member Point Loads (BLC 9 : Antenna Wo (180 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
78	MP1C	Mx	0	.5
79	MP1C	X	0	2.5
80	MP1C	Z	82.805	2.5
81	MP1C	Mx	0	2.5
82	MP2A	X	0	3
83	MP2A	Z	65.483	3
84	MP2A	Mx	0	3
85	MP2B	X	0	3
86	MP2B	Z	49.324	3
87	MP2B	Mx	.021	3
88	MP2C	X	0	3
89	MP2C	Z	49.324	3
90	MP2C	Mx	-.021	3
91	MP3A	X	0	3
92	MP3A	Z	65.483	3
93	MP3A	Mx	0	3
94	MP3B	X	0	3
95	MP3B	Z	43.303	3
96	MP3B	Mx	.019	3
97	MP3C	X	0	3
98	MP3C	Z	43.303	3
99	MP3C	Mx	-.019	3
100	MP2A	X	0	0
101	MP2A	Z	6.126	0
102	MP2A	Mx	-.002	0
103	MP2A	X	0	1
104	MP2A	Z	6.126	1
105	MP2A	Mx	-.002	1
106	MP2A	X	0	0
107	MP2A	Z	6.126	0
108	MP2A	Mx	.002	0
109	MP2A	X	0	1
110	MP2A	Z	6.126	1
111	MP2A	Mx	.002	1

**Member Point Loads (BLC 10 : Antenna Wo (210 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	-56.319	1.25
2	MP4A	Z	97.547	1.25
3	MP4A	Mx	.028	1.25
4	MP4A	X	-56.319	4.75
5	MP4A	Z	97.547	4.75
6	MP4A	Mx	.028	4.75
7	MP4B	X	-40.548	1.25
8	MP4B	Z	70.231	1.25
9	MP4B	Mx	-.041	1.25
10	MP4B	X	-40.548	4.75
11	MP4B	Z	70.231	4.75
12	MP4B	Mx	-.041	4.75
13	MP4C	X	-56.319	1.25
14	MP4C	Z	97.547	1.25
15	MP4C	Mx	.028	1.25
16	MP4C	X	-56.319	4.75
17	MP4C	Z	97.547	4.75
18	MP4C	Mx	.028	4.75
19	MP2A	X	-49.165	1





**Member Point Loads (BLC 10 : Antenna Wo (210 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
20	MP2A	Z	85.157	1
21	MP2A	Mx	.074	1
22	MP2A	X	-49.165	5
23	MP2A	Z	85.157	5
24	MP2A	Mx	.074	5
25	MP2B	X	-24.609	1
26	MP2B	Z	42.624	1
27	MP2B	Mx	-.025	1
28	MP2B	X	-24.609	5
29	MP2B	Z	42.624	5
30	MP2B	Mx	-.025	5
31	MP2C	X	-49.165	1
32	MP2C	Z	85.157	1
33	MP2C	Mx	-.025	1
34	MP2C	X	-49.165	5
35	MP2C	Z	85.157	5
36	MP2C	Mx	-.025	5
37	MP2A	X	-49.165	1
38	MP2A	Z	85.157	1
39	MP2A	Mx	-.025	1
40	MP2A	X	-49.165	5
41	MP2A	Z	85.157	5
42	MP2A	Mx	-.025	5
43	MP2B	X	-24.609	1
44	MP2B	Z	42.624	1
45	MP2B	Mx	-.025	1
46	MP2B	X	-24.609	5
47	MP2B	Z	42.624	5
48	MP2B	Mx	-.025	5
49	MP2C	X	-49.165	1
50	MP2C	Z	85.157	1
51	MP2C	Mx	.074	1
52	MP2C	X	-49.165	5
53	MP2C	Z	85.157	5
54	MP2C	Mx	.074	5
55	MP1A	X	-15.022	5.5
56	MP1A	Z	26.018	5.5
57	MP1A	Mx	.008	5.5
58	MP1B	X	-3.687	5.5
59	MP1B	Z	6.386	5.5
60	MP1B	Mx	-.004	5.5
61	MP1C	X	-15.022	5.5
62	MP1C	Z	26.018	5.5
63	MP1C	Mx	.008	5.5
64	MP1A	X	-34.616	.5
65	MP1A	Z	59.957	.5
66	MP1A	Mx	.017	.5
67	MP1A	X	-34.616	2.5
68	MP1A	Z	59.957	2.5
69	MP1A	Mx	.017	2.5
70	MP1B	X	-21.044	.5
71	MP1B	Z	36.45	.5
72	MP1B	Mx	.018	.5
73	MP1B	X	-21.044	2.5
74	MP1B	Z	36.45	2.5
75	MP1B	Mx	.018	2.5
76	MP1C	X	-34.616	.5



**Member Point Loads (BLC 10 : Antenna Wo (210 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
77	MP1C	Z	59.957	.5
78	MP1C	Mx	.017	.5
79	MP1C	X	-34.616	2.5
80	MP1C	Z	59.957	2.5
81	MP1C	Mx	.017	2.5
82	MP2A	X	-30.048	3
83	MP2A	Z	52.045	3
84	MP2A	Mx	-.015	3
85	MP2B	X	-21.969	3
86	MP2B	Z	38.051	3
87	MP2B	Mx	.022	3
88	MP2C	X	-30.048	3
89	MP2C	Z	52.045	3
90	MP2C	Mx	-.015	3
91	MP3A	X	-29.045	3
92	MP3A	Z	50.307	3
93	MP3A	Mx	-.015	3
94	MP3B	X	-17.955	3
95	MP3B	Z	31.099	3
96	MP3B	Mx	.018	3
97	MP3C	X	-29.045	3
98	MP3C	Z	50.307	3
99	MP3C	Mx	-.015	3
100	MP2A	X	-4.84	0
101	MP2A	Z	8.382	0
102	MP2A	Mx	-.008	0
103	MP2A	X	-4.84	1
104	MP2A	Z	8.382	1
105	MP2A	Mx	-.008	1
106	MP2A	X	-4.84	0
107	MP2A	Z	8.382	0
108	MP2A	Mx	-.002	0
109	MP2A	X	-4.84	1
110	MP2A	Z	8.382	1
111	MP2A	Mx	-.002	1

**Member Point Loads (BLC 11 : Antenna Wo (240 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	-79.337	1.25
2	MP4A	Z	45.805	1.25
3	MP4A	Mx	.04	1.25
4	MP4A	X	-79.337	4.75
5	MP4A	Z	45.805	4.75
6	MP4A	Mx	.04	4.75
7	MP4B	X	-79.337	1.25
8	MP4B	Z	45.805	1.25
9	MP4B	Mx	-.04	1.25
10	MP4B	X	-79.337	4.75
11	MP4B	Z	45.805	4.75
12	MP4B	Mx	-.04	4.75
13	MP4C	X	-106.652	1.25
14	MP4C	Z	61.575	1.25
15	MP4C	Mx	0	1.25
16	MP4C	X	-106.652	4.75
17	MP4C	Z	61.575	4.75
18	MP4C	Mx	0	4.75



**Member Point Loads (BLC 11 : Antenna Wo (240 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
19	MP2A	X	-56.802	1
20	MP2A	Z	32.794	1
21	MP2A	Mx	.048	1
22	MP2A	X	-56.802	5
23	MP2A	Z	32.794	5
24	MP2A	Mx	.048	5
25	MP2B	X	-56.802	1
26	MP2B	Z	32.794	1
27	MP2B	Mx	-.009	1
28	MP2B	X	-56.802	5
29	MP2B	Z	32.794	5
30	MP2B	Mx	-.009	5
31	MP2C	X	-99.334	1
32	MP2C	Z	57.351	1
33	MP2C	Mx	-.067	1
34	MP2C	X	-99.334	5
35	MP2C	Z	57.351	5
36	MP2C	Mx	-.067	5
37	MP2A	X	-56.802	1
38	MP2A	Z	32.794	1
39	MP2A	Mx	.009	1
40	MP2A	X	-56.802	5
41	MP2A	Z	32.794	5
42	MP2A	Mx	.009	5
43	MP2B	X	-56.802	1
44	MP2B	Z	32.794	1
45	MP2B	Mx	-.048	1
46	MP2B	X	-56.802	5
47	MP2B	Z	32.794	5
48	MP2B	Mx	-.048	5
49	MP2C	X	-99.334	1
50	MP2C	Z	57.351	1
51	MP2C	Mx	.067	1
52	MP2C	X	-99.334	5
53	MP2C	Z	57.351	5
54	MP2C	Mx	.067	5
55	MP1A	X	-12.93	5.5
56	MP1A	Z	7.465	5.5
57	MP1A	Mx	.006	5.5
58	MP1B	X	-12.93	5.5
59	MP1B	Z	7.465	5.5
60	MP1B	Mx	-.006	5.5
61	MP1C	X	-32.563	5.5
62	MP1C	Z	18.8	5.5
63	MP1C	Mx	0	5.5
64	MP1A	X	-36.45	.5
65	MP1A	Z	21.044	.5
66	MP1A	Mx	.018	.5
67	MP1A	X	-36.45	2.5
68	MP1A	Z	21.044	2.5
69	MP1A	Mx	.018	2.5
70	MP1B	X	-24.696	.5
71	MP1B	Z	14.258	.5
72	MP1B	Mx	.014	.5
73	MP1B	X	-24.696	2.5
74	MP1B	Z	14.258	2.5
75	MP1B	Mx	.014	2.5

**Member Point Loads (BLC 11 : Antenna Wo (240 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
76	MP1C	X	-36.45	.5
77	MP1C	Z	21.044	.5
78	MP1C	Mx	.018	.5
79	MP1C	X	-36.45	2.5
80	MP1C	Z	21.044	2.5
81	MP1C	Mx	.018	2.5
82	MP2A	X	-42.716	3
83	MP2A	Z	24.662	3
84	MP2A	Mx	-.021	3
85	MP2B	X	-42.716	3
86	MP2B	Z	24.662	3
87	MP2B	Mx	.021	3
88	MP2C	X	-56.71	3
89	MP2C	Z	32.742	3
90	MP2C	Mx	0	3
91	MP3A	X	-37.502	3
92	MP3A	Z	21.652	3
93	MP3A	Mx	-.019	3
94	MP3B	X	-37.502	3
95	MP3B	Z	21.652	3
96	MP3B	Mx	.019	3
97	MP3C	X	-56.71	3
98	MP3C	Z	32.742	3
99	MP3C	Mx	0	3
100	MP2A	X	-14.537	0
101	MP2A	Z	8.393	0
102	MP2A	Mx	-.017	0
103	MP2A	X	-14.537	1
104	MP2A	Z	8.393	1
105	MP2A	Mx	-.017	1
106	MP2A	X	-14.537	0
107	MP2A	Z	8.393	0
108	MP2A	Mx	-.012	0
109	MP2A	X	-14.537	1
110	MP2A	Z	8.393	1
111	MP2A	Mx	-.012	1

**Member Point Loads (BLC 12 : Antenna Wo (270 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	-81.096	1.25
2	MP4A	Z	0	1.25
3	MP4A	Mx	.041	1.25
4	MP4A	X	-81.096	4.75
5	MP4A	Z	0	4.75
6	MP4A	Mx	.041	4.75
7	MP4B	X	-112.637	1.25
8	MP4B	Z	0	1.25
9	MP4B	Mx	-.028	1.25
10	MP4B	X	-112.637	4.75
11	MP4B	Z	0	4.75
12	MP4B	Mx	-.028	4.75
13	MP4C	X	-112.637	1.25
14	MP4C	Z	0	1.25
15	MP4C	Mx	-.028	1.25
16	MP4C	X	-112.637	4.75
17	MP4C	Z	0	4.75



**Member Point Loads (BLC 12 : Antenna Wo (270 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
18	MP4C	Mx	-.028	4.75
19	MP2A	X	-49.218	1
20	MP2A	Z	0	1
21	MP2A	Mx	.025	1
22	MP2A	X	-49.218	5
23	MP2A	Z	0	5
24	MP2A	Mx	.025	5
25	MP2B	X	-98.33	1
26	MP2B	Z	0	1
27	MP2B	Mx	.025	1
28	MP2B	X	-98.33	5
29	MP2B	Z	0	5
30	MP2B	Mx	.025	5
31	MP2C	X	-98.33	1
32	MP2C	Z	0	1
33	MP2C	Mx	-.074	1
34	MP2C	X	-98.33	5
35	MP2C	Z	0	5
36	MP2C	Mx	-.074	5
37	MP2A	X	-49.218	1
38	MP2A	Z	0	1
39	MP2A	Mx	.025	1
40	MP2A	X	-49.218	5
41	MP2A	Z	0	5
42	MP2A	Mx	.025	5
43	MP2B	X	-98.33	1
44	MP2B	Z	0	1
45	MP2B	Mx	-.074	1
46	MP2B	X	-98.33	5
47	MP2B	Z	0	5
48	MP2B	Mx	-.074	5
49	MP2C	X	-98.33	1
50	MP2C	Z	0	1
51	MP2C	Mx	.025	1
52	MP2C	X	-98.33	5
53	MP2C	Z	0	5
54	MP2C	Mx	.025	5
55	MP1A	X	-7.374	5.5
56	MP1A	Z	0	5.5
57	MP1A	Mx	.004	5.5
58	MP1B	X	-30.043	5.5
59	MP1B	Z	0	5.5
60	MP1B	Mx	-.008	5.5
61	MP1C	X	-30.043	5.5
62	MP1C	Z	0	5.5
63	MP1C	Mx	-.008	5.5
64	MP1A	X	-28.517	.5
65	MP1A	Z	0	.5
66	MP1A	Mx	.014	.5
67	MP1A	X	-28.517	2.5
68	MP1A	Z	0	2.5
69	MP1A	Mx	.014	2.5
70	MP1B	X	-42.089	.5
71	MP1B	Z	0	.5
72	MP1B	Mx	.018	.5
73	MP1B	X	-42.089	2.5
74	MP1B	Z	0	2.5



**Member Point Loads (BLC 12 : Antenna Wo (270 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
75	MP1B	Mx	.018	2.5
76	MP1C	X	-28.517	.5
77	MP1C	Z	0	.5
78	MP1C	Mx	.014	.5
79	MP1C	X	-28.517	2.5
80	MP1C	Z	0	2.5
81	MP1C	Mx	.014	2.5
82	MP2A	X	-43.937	3
83	MP2A	Z	0	3
84	MP2A	Mx	-.022	3
85	MP2B	X	-60.097	3
86	MP2B	Z	0	3
87	MP2B	Mx	.015	3
88	MP2C	X	-60.097	3
89	MP2C	Z	0	3
90	MP2C	Mx	.015	3
91	MP3A	X	-35.91	3
92	MP3A	Z	0	3
93	MP3A	Mx	-.018	3
94	MP3B	X	-58.09	3
95	MP3B	Z	0	3
96	MP3B	Mx	.015	3
97	MP3C	X	-58.09	3
98	MP3C	Z	0	3
99	MP3C	Mx	.015	3
100	MP2A	X	-20.339	0
101	MP2A	Z	0	0
102	MP2A	Mx	-.02	0
103	MP2A	X	-20.339	1
104	MP2A	Z	0	1
105	MP2A	Mx	-.02	1
106	MP2A	X	-20.339	0
107	MP2A	Z	0	0
108	MP2A	Mx	-.02	0
109	MP2A	X	-20.339	1
110	MP2A	Z	0	1
111	MP2A	Mx	-.02	1

**Member Point Loads (BLC 13 : Antenna Wo (300 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	-79.337	1.25
2	MP4A	Z	-45.805	1.25
3	MP4A	Mx	.04	1.25
4	MP4A	X	-79.337	4.75
5	MP4A	Z	-45.805	4.75
6	MP4A	Mx	.04	4.75
7	MP4B	X	-106.652	1.25
8	MP4B	Z	-61.575	1.25
9	MP4B	Mx	0	1.25
10	MP4B	X	-106.652	4.75
11	MP4B	Z	-61.575	4.75
12	MP4B	Mx	0	4.75
13	MP4C	X	-79.337	1.25
14	MP4C	Z	-45.805	1.25
15	MP4C	Mx	-.04	1.25
16	MP4C	X	-79.337	4.75



**Member Point Loads (BLC 13 : Antenna Wo (300 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
17	MP4C	Z	-45.805	4.75
18	MP4C	Mx	-.04	4.75
19	MP2A	X	-56.802	1
20	MP2A	Z	-32.794	1
21	MP2A	Mx	.009	1
22	MP2A	X	-56.802	5
23	MP2A	Z	-32.794	5
24	MP2A	Mx	.009	5
25	MP2B	X	-99.334	1
26	MP2B	Z	-57.351	1
27	MP2B	Mx	.067	1
28	MP2B	X	-99.334	5
29	MP2B	Z	-57.351	5
30	MP2B	Mx	.067	5
31	MP2C	X	-56.802	1
32	MP2C	Z	-32.794	1
33	MP2C	Mx	-.048	1
34	MP2C	X	-56.802	5
35	MP2C	Z	-32.794	5
36	MP2C	Mx	-.048	5
37	MP2A	X	-56.802	1
38	MP2A	Z	-32.794	1
39	MP2A	Mx	.048	1
40	MP2A	X	-56.802	5
41	MP2A	Z	-32.794	5
42	MP2A	Mx	.048	5
43	MP2B	X	-99.334	1
44	MP2B	Z	-57.351	1
45	MP2B	Mx	-.067	1
46	MP2B	X	-99.334	5
47	MP2B	Z	-57.351	5
48	MP2B	Mx	-.067	5
49	MP2C	X	-56.802	1
50	MP2C	Z	-32.794	1
51	MP2C	Mx	-.009	1
52	MP2C	X	-56.802	5
53	MP2C	Z	-32.794	5
54	MP2C	Mx	-.009	5
55	MP1A	X	-12.93	5.5
56	MP1A	Z	-7.465	5.5
57	MP1A	Mx	.006	5.5
58	MP1B	X	-32.563	5.5
59	MP1B	Z	-18.8	5.5
60	MP1B	Mx	0	5.5
61	MP1C	X	-12.93	5.5
62	MP1C	Z	-7.465	5.5
63	MP1C	Mx	-.006	5.5
64	MP1A	X	-36.45	.5
65	MP1A	Z	-21.044	.5
66	MP1A	Mx	.018	.5
67	MP1A	X	-36.45	2.5
68	MP1A	Z	-21.044	2.5
69	MP1A	Mx	.018	2.5
70	MP1B	X	-59.957	.5
71	MP1B	Z	-34.616	.5
72	MP1B	Mx	.017	.5
73	MP1B	X	-59.957	2.5



**Member Point Loads (BLC 13 : Antenna Wo (300 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
74	MP1B	Z	-34.616	2.5
75	MP1B	Mx	.017	2.5
76	MP1C	X	-36.45	.5
77	MP1C	Z	-21.044	.5
78	MP1C	Mx	.018	.5
79	MP1C	X	-36.45	2.5
80	MP1C	Z	-21.044	2.5
81	MP1C	Mx	.018	2.5
82	MP2A	X	-42.716	3
83	MP2A	Z	-24.662	3
84	MP2A	Mx	-.021	3
85	MP2B	X	-56.71	3
86	MP2B	Z	-32.742	3
87	MP2B	Mx	0	3
88	MP2C	X	-42.716	3
89	MP2C	Z	-24.662	3
90	MP2C	Mx	.021	3
91	MP3A	X	-37.502	3
92	MP3A	Z	-21.652	3
93	MP3A	Mx	-.019	3
94	MP3B	X	-56.71	3
95	MP3B	Z	-32.742	3
96	MP3B	Mx	0	3
97	MP3C	X	-37.502	3
98	MP3C	Z	-21.652	3
99	MP3C	Mx	.019	3
100	MP2A	X	-14.537	0
101	MP2A	Z	-8.393	0
102	MP2A	Mx	-.012	0
103	MP2A	X	-14.537	1
104	MP2A	Z	-8.393	1
105	MP2A	Mx	-.012	1
106	MP2A	X	-14.537	0
107	MP2A	Z	-8.393	0
108	MP2A	Mx	-.017	0
109	MP2A	X	-14.537	1
110	MP2A	Z	-8.393	1
111	MP2A	Mx	-.017	1

**Member Point Loads (BLC 14 : Antenna Wo (330 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	-56.319	1.25
2	MP4A	Z	-97.547	1.25
3	MP4A	Mx	.028	1.25
4	MP4A	X	-56.319	4.75
5	MP4A	Z	-97.547	4.75
6	MP4A	Mx	.028	4.75
7	MP4B	X	-56.319	1.25
8	MP4B	Z	-97.547	1.25
9	MP4B	Mx	.028	1.25
10	MP4B	X	-56.319	4.75
11	MP4B	Z	-97.547	4.75
12	MP4B	Mx	.028	4.75
13	MP4C	X	-40.548	1.25
14	MP4C	Z	-70.231	1.25
15	MP4C	Mx	-.041	1.25





**Member Point Loads (BLC 14 : Antenna Wo (330 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
16	MP4C	X	-40.548	4.75
17	MP4C	Z	-70.231	4.75
18	MP4C	Mx	-.041	4.75
19	MP2A	X	-49.165	1
20	MP2A	Z	-85.157	1
21	MP2A	Mx	-.025	1
22	MP2A	X	-49.165	5
23	MP2A	Z	-85.157	5
24	MP2A	Mx	-.025	5
25	MP2B	X	-49.165	1
26	MP2B	Z	-85.157	1
27	MP2B	Mx	.074	1
28	MP2B	X	-49.165	5
29	MP2B	Z	-85.157	5
30	MP2B	Mx	.074	5
31	MP2C	X	-24.609	1
32	MP2C	Z	-42.624	1
33	MP2C	Mx	-.025	1
34	MP2C	X	-24.609	5
35	MP2C	Z	-42.624	5
36	MP2C	Mx	-.025	5
37	MP2A	X	-49.165	1
38	MP2A	Z	-85.157	1
39	MP2A	Mx	.074	1
40	MP2A	X	-49.165	5
41	MP2A	Z	-85.157	5
42	MP2A	Mx	.074	5
43	MP2B	X	-49.165	1
44	MP2B	Z	-85.157	1
45	MP2B	Mx	-.025	1
46	MP2B	X	-49.165	5
47	MP2B	Z	-85.157	5
48	MP2B	Mx	-.025	5
49	MP2C	X	-24.609	1
50	MP2C	Z	-42.624	1
51	MP2C	Mx	-.025	1
52	MP2C	X	-24.609	5
53	MP2C	Z	-42.624	5
54	MP2C	Mx	-.025	5
55	MP1A	X	-15.022	5.5
56	MP1A	Z	-26.018	5.5
57	MP1A	Mx	.008	5.5
58	MP1B	X	-15.022	5.5
59	MP1B	Z	-26.018	5.5
60	MP1B	Mx	.008	5.5
61	MP1C	X	-3.687	5.5
62	MP1C	Z	-6.386	5.5
63	MP1C	Mx	-.004	5.5
64	MP1A	X	-34.616	.5
65	MP1A	Z	-59.957	.5
66	MP1A	Mx	.017	.5
67	MP1A	X	-34.616	2.5
68	MP1A	Z	-59.957	2.5
69	MP1A	Mx	.017	2.5
70	MP1B	X	-41.402	.5
71	MP1B	Z	-71.711	.5
72	MP1B	Mx	0	.5



**Member Point Loads (BLC 14 : Antenna Wo (330 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
73	MP1B	X	-41.402	2.5
74	MP1B	Z	-71.711	2.5
75	MP1B	Mx	0	2.5
76	MP1C	X	-34.616	.5
77	MP1C	Z	-59.957	.5
78	MP1C	Mx	.017	.5
79	MP1C	X	-34.616	2.5
80	MP1C	Z	-59.957	2.5
81	MP1C	Mx	.017	2.5
82	MP2A	X	-30.048	3
83	MP2A	Z	-52.045	3
84	MP2A	Mx	-.015	3
85	MP2B	X	-30.048	3
86	MP2B	Z	-52.045	3
87	MP2B	Mx	-.015	3
88	MP2C	X	-21.969	3
89	MP2C	Z	-38.051	3
90	MP2C	Mx	.022	3
91	MP3A	X	-29.045	3
92	MP3A	Z	-50.307	3
93	MP3A	Mx	-.015	3
94	MP3B	X	-29.045	3
95	MP3B	Z	-50.307	3
96	MP3B	Mx	-.015	3
97	MP3C	X	-17.955	3
98	MP3C	Z	-31.099	3
99	MP3C	Mx	.018	3
100	MP2A	X	-4.84	0
101	MP2A	Z	-8.382	0
102	MP2A	Mx	-.002	0
103	MP2A	X	-4.84	1
104	MP2A	Z	-8.382	1
105	MP2A	Mx	-.002	1
106	MP2A	X	-4.84	0
107	MP2A	Z	-8.382	0
108	MP2A	Mx	-.008	0
109	MP2A	X	-4.84	1
110	MP2A	Z	-8.382	1
111	MP2A	Mx	-.008	1

**Member Point Loads (BLC 15 : Antenna Wi (0 Deg))**

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	0	1.25
2	MP4A	Z	-25.333	1.25
3	MP4A	Mx	0	1.25
4	MP4A	X	0	4.75
5	MP4A	Z	-25.333	4.75
6	MP4A	Mx	0	4.75
7	MP4B	X	0	1.25
8	MP4B	Z	-19.53	1.25
9	MP4B	Mx	.008	1.25
10	MP4B	X	0	4.75
11	MP4B	Z	-19.53	4.75
12	MP4B	Mx	.008	4.75
13	MP4C	X	0	1.25
14	MP4C	Z	-19.53	1.25



**Member Point Loads (BLC 15 : Antenna Wi (0 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
15	MP4C	Mx	-.008	1.25
16	MP4C	X	0	4.75
17	MP4C	Z	-19.53	4.75
18	MP4C	Mx	-.008	4.75
19	MP2A	X	0	1
20	MP2A	Z	-34.319	1
21	MP2A	Mx	-.02	1
22	MP2A	X	0	5
23	MP2A	Z	-34.319	5
24	MP2A	Mx	-.02	5
25	MP2B	X	0	1
26	MP2B	Z	-26.674	1
27	MP2B	Mx	.019	1
28	MP2B	X	0	5
29	MP2B	Z	-26.674	5
30	MP2B	Mx	.019	5
31	MP2C	X	0	1
32	MP2C	Z	-26.674	1
33	MP2C	Mx	-.004	1
34	MP2C	X	0	5
35	MP2C	Z	-26.674	5
36	MP2C	Mx	-.004	5
37	MP2A	X	0	1
38	MP2A	Z	-34.319	1
39	MP2A	Mx	.02	1
40	MP2A	X	0	5
41	MP2A	Z	-34.319	5
42	MP2A	Mx	.02	5
43	MP2B	X	0	1
44	MP2B	Z	-26.674	1
45	MP2B	Mx	.004	1
46	MP2B	X	0	5
47	MP2B	Z	-26.674	5
48	MP2B	Mx	.004	5
49	MP2C	X	0	1
50	MP2C	Z	-26.674	1
51	MP2C	Mx	-.019	1
52	MP2C	X	0	5
53	MP2C	Z	-26.674	5
54	MP2C	Mx	-.019	5
55	MP1A	X	0	5.5
56	MP1A	Z	-9.553	5.5
57	MP1A	Mx	0	5.5
58	MP1B	X	0	5.5
59	MP1B	Z	-4.822	5.5
60	MP1B	Mx	.002	5.5
61	MP1C	X	0	5.5
62	MP1C	Z	-4.822	5.5
63	MP1C	Mx	-.002	5.5
64	MP1A	X	0	.5
65	MP1A	Z	-20.637	.5
66	MP1A	Mx	0	.5
67	MP1A	X	0	2.5
68	MP1A	Z	-20.637	2.5
69	MP1A	Mx	0	2.5
70	MP1B	X	0	.5
71	MP1B	Z	-17.768	.5



**Member Point Loads (BLC 15 : Antenna Wi (0 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
72	MP1B	Mx	-.004	.5
73	MP1B	X	0	2.5
74	MP1B	Z	-17.768	2.5
75	MP1B	Mx	-.004	2.5
76	MP1C	X	0	.5
77	MP1C	Z	-20.637	.5
78	MP1C	Mx	0	.5
79	MP1C	X	0	2.5
80	MP1C	Z	-20.637	2.5
81	MP1C	Mx	0	2.5
82	MP2A	X	0	3
83	MP2A	Z	-17.874	3
84	MP2A	Mx	0	3
85	MP2B	X	0	3
86	MP2B	Z	-13.974	3
87	MP2B	Mx	-.006	3
88	MP2C	X	0	3
89	MP2C	Z	-13.974	3
90	MP2C	Mx	.006	3
91	MP3A	X	0	3
92	MP3A	Z	-17.874	3
93	MP3A	Mx	0	3
94	MP3B	X	0	3
95	MP3B	Z	-12.492	3
96	MP3B	Mx	-.005	3
97	MP3C	X	0	3
98	MP3C	Z	-12.492	3
99	MP3C	Mx	.005	3
100	MP2A	X	0	0
101	MP2A	Z	-2.099	0
102	MP2A	Mx	.0007	0
103	MP2A	X	0	1
104	MP2A	Z	-2.099	1
105	MP2A	Mx	.0007	1
106	MP2A	X	0	0
107	MP2A	Z	-2.099	0
108	MP2A	Mx	-.0007	0
109	MP2A	X	0	1
110	MP2A	Z	-2.099	1
111	MP2A	Mx	-.0007	1

**Member Point Loads (BLC 16 : Antenna Wi (30 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	11.699	1.25
2	MP4A	Z	-20.264	1.25
3	MP4A	Mx	-.006	1.25
4	MP4A	X	11.699	4.75
5	MP4A	Z	-20.264	4.75
6	MP4A	Mx	-.006	4.75
7	MP4B	X	8.798	1.25
8	MP4B	Z	-15.238	1.25
9	MP4B	Mx	.009	1.25
10	MP4B	X	8.798	4.75
11	MP4B	Z	-15.238	4.75
12	MP4B	Mx	.009	4.75
13	MP4C	X	11.699	1.25



**Member Point Loads (BLC 16 : Antenna Wi (30 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
14	MP4C	Z	-20.264	1.25
15	MP4C	Mx	-.006	1.25
16	MP4C	X	11.699	4.75
17	MP4C	Z	-20.264	4.75
18	MP4C	Mx	-.006	4.75
19	MP2A	X	15.885	1
20	MP2A	Z	-27.514	1
21	MP2A	Mx	-.024	1
22	MP2A	X	15.885	5
23	MP2A	Z	-27.514	5
24	MP2A	Mx	-.024	5
25	MP2B	X	12.063	1
26	MP2B	Z	-20.894	1
27	MP2B	Mx	.012	1
28	MP2B	X	12.063	5
29	MP2B	Z	-20.894	5
30	MP2B	Mx	.012	5
31	MP2C	X	15.885	1
32	MP2C	Z	-27.514	1
33	MP2C	Mx	.008	1
34	MP2C	X	15.885	5
35	MP2C	Z	-27.514	5
36	MP2C	Mx	.008	5
37	MP2A	X	15.885	1
38	MP2A	Z	-27.514	1
39	MP2A	Mx	.008	1
40	MP2A	X	15.885	5
41	MP2A	Z	-27.514	5
42	MP2A	Mx	.008	5
43	MP2B	X	12.063	1
44	MP2B	Z	-20.894	1
45	MP2B	Mx	.012	1
46	MP2B	X	12.063	5
47	MP2B	Z	-20.894	5
48	MP2B	Mx	.012	5
49	MP2C	X	15.885	1
50	MP2C	Z	-27.514	1
51	MP2C	Mx	-.024	1
52	MP2C	X	15.885	5
53	MP2C	Z	-27.514	5
54	MP2C	Mx	-.024	5
55	MP1A	X	3.988	5.5
56	MP1A	Z	-6.908	5.5
57	MP1A	Mx	-.002	5.5
58	MP1B	X	1.622	5.5
59	MP1B	Z	-2.81	5.5
60	MP1B	Mx	.002	5.5
61	MP1C	X	3.988	5.5
62	MP1C	Z	-6.908	5.5
63	MP1C	Mx	-.002	5.5
64	MP1A	X	8.884	.5
65	MP1A	Z	-15.388	.5
66	MP1A	Mx	-.004	.5
67	MP1A	X	8.884	2.5
68	MP1A	Z	-15.388	2.5
69	MP1A	Mx	-.004	2.5
70	MP1B	X	6.016	.5



**Member Point Loads (BLC 16 : Antenna Wi (30 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
71	MP1B	Z	-10.42	.5
72	MP1B	Mx	-.005	.5
73	MP1B	X	6.016	2.5
74	MP1B	Z	-10.42	2.5
75	MP1B	Mx	-.005	2.5
76	MP1C	X	8.884	.5
77	MP1C	Z	-15.388	.5
78	MP1C	Mx	-.004	.5
79	MP1C	X	8.884	2.5
80	MP1C	Z	-15.388	2.5
81	MP1C	Mx	-.004	2.5
82	MP2A	X	8.287	3
83	MP2A	Z	-14.353	3
84	MP2A	Mx	.004	3
85	MP2B	X	6.337	3
86	MP2B	Z	-10.976	3
87	MP2B	Mx	-.006	3
88	MP2C	X	8.287	3
89	MP2C	Z	-14.353	3
90	MP2C	Mx	.004	3
91	MP3A	X	8.04	3
92	MP3A	Z	-13.925	3
93	MP3A	Mx	.004	3
94	MP3B	X	5.349	3
95	MP3B	Z	-9.264	3
96	MP3B	Mx	-.005	3
97	MP3C	X	8.04	3
98	MP3C	Z	-13.925	3
99	MP3C	Mx	.004	3
100	MP2A	X	1.421	0
101	MP2A	Z	-2.461	0
102	MP2A	Mx	.002	0
103	MP2A	X	1.421	1
104	MP2A	Z	-2.461	1
105	MP2A	Mx	.002	1
106	MP2A	X	1.421	0
107	MP2A	Z	-2.461	0
108	MP2A	Mx	.000601	0
109	MP2A	X	1.421	1
110	MP2A	Z	-2.461	1
111	MP2A	Mx	.000601	1

**Member Point Loads (BLC 17 : Antenna Wi (60 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	16.913	1.25
2	MP4A	Z	-9.765	1.25
3	MP4A	Mx	-.008	1.25
4	MP4A	X	16.913	4.75
5	MP4A	Z	-9.765	4.75
6	MP4A	Mx	-.008	4.75
7	MP4B	X	16.913	1.25
8	MP4B	Z	-9.765	1.25
9	MP4B	Mx	.008	1.25
10	MP4B	X	16.913	4.75
11	MP4B	Z	-9.765	4.75
12	MP4B	Mx	.008	4.75



**Member Point Loads (BLC 17 : Antenna Wi (60 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
13	MP4C	X	21.939	1.25
14	MP4C	Z	-12.666	1.25
15	MP4C	Mx	0	1.25
16	MP4C	X	21.939	4.75
17	MP4C	Z	-12.666	4.75
18	MP4C	Mx	0	4.75
19	MP2A	X	23.101	1
20	MP2A	Z	-13.337	1
21	MP2A	Mx	-.019	1
22	MP2A	X	23.101	5
23	MP2A	Z	-13.337	5
24	MP2A	Mx	-.019	5
25	MP2B	X	23.101	1
26	MP2B	Z	-13.337	1
27	MP2B	Mx	.004	1
28	MP2B	X	23.101	5
29	MP2B	Z	-13.337	5
30	MP2B	Mx	.004	5
31	MP2C	X	29.721	1
32	MP2C	Z	-17.159	1
33	MP2C	Mx	.02	1
34	MP2C	X	29.721	5
35	MP2C	Z	-17.159	5
36	MP2C	Mx	.02	5
37	MP2A	X	23.101	1
38	MP2A	Z	-13.337	1
39	MP2A	Mx	-.004	1
40	MP2A	X	23.101	5
41	MP2A	Z	-13.337	5
42	MP2A	Mx	-.004	5
43	MP2B	X	23.101	1
44	MP2B	Z	-13.337	1
45	MP2B	Mx	.019	1
46	MP2B	X	23.101	5
47	MP2B	Z	-13.337	5
48	MP2B	Mx	.019	5
49	MP2C	X	29.721	1
50	MP2C	Z	-17.159	1
51	MP2C	Mx	-.02	1
52	MP2C	X	29.721	5
53	MP2C	Z	-17.159	5
54	MP2C	Mx	-.02	5
55	MP1A	X	4.176	5.5
56	MP1A	Z	-2.411	5.5
57	MP1A	Mx	-.002	5.5
58	MP1B	X	4.176	5.5
59	MP1B	Z	-2.411	5.5
60	MP1B	Mx	.002	5.5
61	MP1C	X	8.273	5.5
62	MP1C	Z	-4.777	5.5
63	MP1C	Mx	0	5.5
64	MP1A	X	10.42	.5
65	MP1A	Z	-6.016	.5
66	MP1A	Mx	-.005	.5
67	MP1A	X	10.42	2.5
68	MP1A	Z	-6.016	2.5
69	MP1A	Mx	-.005	2.5



**Member Point Loads (BLC 17 : Antenna Wi (60 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
70	MP1B	X	7.936	.5
71	MP1B	Z	-4.582	.5
72	MP1B	Mx	-.005	.5
73	MP1B	X	7.936	2.5
74	MP1B	Z	-4.582	2.5
75	MP1B	Mx	-.005	2.5
76	MP1C	X	10.42	.5
77	MP1C	Z	-6.016	.5
78	MP1C	Mx	-.005	.5
79	MP1C	X	10.42	2.5
80	MP1C	Z	-6.016	2.5
81	MP1C	Mx	-.005	2.5
82	MP2A	X	12.102	3
83	MP2A	Z	-6.987	3
84	MP2A	Mx	.006	3
85	MP2B	X	12.102	3
86	MP2B	Z	-6.987	3
87	MP2B	Mx	-.006	3
88	MP2C	X	15.479	3
89	MP2C	Z	-8.937	3
90	MP2C	Mx	0	3
91	MP3A	X	10.818	3
92	MP3A	Z	-6.246	3
93	MP3A	Mx	.005	3
94	MP3B	X	10.818	3
95	MP3B	Z	-6.246	3
96	MP3B	Mx	-.005	3
97	MP3C	X	15.479	3
98	MP3C	Z	-8.937	3
99	MP3C	Mx	0	3
100	MP2A	X	3.746	0
101	MP2A	Z	-2.163	0
102	MP2A	Mx	.004	0
103	MP2A	X	3.746	1
104	MP2A	Z	-2.163	1
105	MP2A	Mx	.004	1
106	MP2A	X	3.746	0
107	MP2A	Z	-2.163	0
108	MP2A	Mx	.003	0
109	MP2A	X	3.746	1
110	MP2A	Z	-2.163	1
111	MP2A	Mx	.003	1

**Member Point Loads (BLC 18 : Antenna Wi (90 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	X	17.595	1.25
2	MP4A	Z	0	1.25
3	MP4A	Mx	-.009	1.25
4	MP4A	X	17.595	4.75
5	MP4A	Z	0	4.75
6	MP4A	Mx	-.009	4.75
7	MP4B	X	23.398	1.25
8	MP4B	Z	0	1.25
9	MP4B	Mx	.006	1.25
10	MP4B	X	23.398	4.75
11	MP4B	Z	0	4.75





**Member Point Loads (BLC 18 : Antenna Wi (90 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
12	MP4B	Mx	.006	4.75
13	MP4C	X	23.398	1.25
14	MP4C	Z	0	1.25
15	MP4C	Mx	.006	1.25
16	MP4C	X	23.398	4.75
17	MP4C	Z	0	4.75
18	MP4C	Mx	.006	4.75
19	MP2A	X	24.126	1
20	MP2A	Z	0	1
21	MP2A	Mx	-.012	1
22	MP2A	X	24.126	5
23	MP2A	Z	0	5
24	MP2A	Mx	-.012	5
25	MP2B	X	31.771	1
26	MP2B	Z	0	1
27	MP2B	Mx	-.008	1
28	MP2B	X	31.771	5
29	MP2B	Z	0	5
30	MP2B	Mx	-.008	5
31	MP2C	X	31.771	1
32	MP2C	Z	0	1
33	MP2C	Mx	.024	1
34	MP2C	X	31.771	5
35	MP2C	Z	0	5
36	MP2C	Mx	.024	5
37	MP2A	X	24.126	1
38	MP2A	Z	0	1
39	MP2A	Mx	-.012	1
40	MP2A	X	24.126	5
41	MP2A	Z	0	5
42	MP2A	Mx	-.012	5
43	MP2B	X	31.771	1
44	MP2B	Z	0	1
45	MP2B	Mx	.024	1
46	MP2B	X	31.771	5
47	MP2B	Z	0	5
48	MP2B	Mx	.024	5
49	MP2C	X	31.771	1
50	MP2C	Z	0	1
51	MP2C	Mx	-.008	1
52	MP2C	X	31.771	5
53	MP2C	Z	0	5
54	MP2C	Mx	-.008	5
55	MP1A	X	3.245	5.5
56	MP1A	Z	0	5.5
57	MP1A	Mx	-.002	5.5
58	MP1B	X	7.976	5.5
59	MP1B	Z	0	5.5
60	MP1B	Mx	.002	5.5
61	MP1C	X	7.976	5.5
62	MP1C	Z	0	5.5
63	MP1C	Mx	.002	5.5
64	MP1A	X	9.163	.5
65	MP1A	Z	0	.5
66	MP1A	Mx	-.005	.5
67	MP1A	X	9.163	2.5
68	MP1A	Z	0	2.5



**Member Point Loads (BLC 18 : Antenna Wi (90 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
69	MP1A	Mx	-0.005	2.5
70	MP1B	X	12.032	.5
71	MP1B	Z	0	.5
72	MP1B	Mx	-0.005	.5
73	MP1B	X	12.032	2.5
74	MP1B	Z	0	2.5
75	MP1B	Mx	-0.005	2.5
76	MP1C	X	9.163	.5
77	MP1C	Z	0	.5
78	MP1C	Mx	-0.005	.5
79	MP1C	X	9.163	2.5
80	MP1C	Z	0	2.5
81	MP1C	Mx	-0.005	2.5
82	MP2A	X	12.674	3
83	MP2A	Z	0	3
84	MP2A	Mx	.006	3
85	MP2B	X	16.574	3
86	MP2B	Z	0	3
87	MP2B	Mx	-0.004	3
88	MP2C	X	16.574	3
89	MP2C	Z	0	3
90	MP2C	Mx	-0.004	3
91	MP3A	X	10.698	3
92	MP3A	Z	0	3
93	MP3A	Mx	.005	3
94	MP3B	X	16.08	3
95	MP3B	Z	0	3
96	MP3B	Mx	-0.004	3
97	MP3C	X	16.08	3
98	MP3C	Z	0	3
99	MP3C	Mx	-0.004	3
100	MP2A	X	5.068	0
101	MP2A	Z	0	0
102	MP2A	Mx	.005	0
103	MP2A	X	5.068	1
104	MP2A	Z	0	1
105	MP2A	Mx	.005	1
106	MP2A	X	5.068	0
107	MP2A	Z	0	0
108	MP2A	Mx	.005	0
109	MP2A	X	5.068	1
110	MP2A	Z	0	1
111	MP2A	Mx	.005	1

**Member Point Loads (BLC 19 : Antenna Wi (120 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	16.913	1.25
2	MP4A	Z	9.765	1.25
3	MP4A	Mx	-0.008	1.25
4	MP4A	X	16.913	4.75
5	MP4A	Z	9.765	4.75
6	MP4A	Mx	-0.008	4.75
7	MP4B	X	21.939	1.25
8	MP4B	Z	12.666	1.25
9	MP4B	Mx	0	1.25
10	MP4B	X	21.939	4.75



**Member Point Loads (BLC 19 : Antenna Wi (120 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
11	MP4B	Z	12.666	4.75
12	MP4B	Mx	0	4.75
13	MP4C	X	16.913	1.25
14	MP4C	Z	9.765	1.25
15	MP4C	Mx	.008	1.25
16	MP4C	X	16.913	4.75
17	MP4C	Z	9.765	4.75
18	MP4C	Mx	.008	4.75
19	MP2A	X	23.101	1
20	MP2A	Z	13.337	1
21	MP2A	Mx	-.004	1
22	MP2A	X	23.101	5
23	MP2A	Z	13.337	5
24	MP2A	Mx	-.004	5
25	MP2B	X	29.721	1
26	MP2B	Z	17.159	1
27	MP2B	Mx	-.02	1
28	MP2B	X	29.721	5
29	MP2B	Z	17.159	5
30	MP2B	Mx	-.02	5
31	MP2C	X	23.101	1
32	MP2C	Z	13.337	1
33	MP2C	Mx	.019	1
34	MP2C	X	23.101	5
35	MP2C	Z	13.337	5
36	MP2C	Mx	.019	5
37	MP2A	X	23.101	1
38	MP2A	Z	13.337	1
39	MP2A	Mx	-.019	1
40	MP2A	X	23.101	5
41	MP2A	Z	13.337	5
42	MP2A	Mx	-.019	5
43	MP2B	X	29.721	1
44	MP2B	Z	17.159	1
45	MP2B	Mx	.02	1
46	MP2B	X	29.721	5
47	MP2B	Z	17.159	5
48	MP2B	Mx	.02	5
49	MP2C	X	23.101	1
50	MP2C	Z	13.337	1
51	MP2C	Mx	.004	1
52	MP2C	X	23.101	5
53	MP2C	Z	13.337	5
54	MP2C	Mx	.004	5
55	MP1A	X	4.176	5.5
56	MP1A	Z	2.411	5.5
57	MP1A	Mx	-.002	5.5
58	MP1B	X	8.273	5.5
59	MP1B	Z	4.777	5.5
60	MP1B	Mx	0	5.5
61	MP1C	X	4.176	5.5
62	MP1C	Z	2.411	5.5
63	MP1C	Mx	.002	5.5
64	MP1A	X	10.42	.5
65	MP1A	Z	6.016	.5
66	MP1A	Mx	-.005	.5
67	MP1A	X	10.42	2.5



**Member Point Loads (BLC 19 : Antenna Wi (120 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
68	MP1A	Z	6.016	2.5
69	MP1A	Mx	-0.005	2.5
70	MP1B	X	15.388	.5
71	MP1B	Z	8.884	.5
72	MP1B	Mx	-0.004	.5
73	MP1B	X	15.388	2.5
74	MP1B	Z	8.884	2.5
75	MP1B	Mx	-0.004	2.5
76	MP1C	X	10.42	.5
77	MP1C	Z	6.016	.5
78	MP1C	Mx	-0.005	.5
79	MP1C	X	10.42	2.5
80	MP1C	Z	6.016	2.5
81	MP1C	Mx	-0.005	2.5
82	MP2A	X	12.102	3
83	MP2A	Z	6.987	3
84	MP2A	Mx	.006	3
85	MP2B	X	15.479	3
86	MP2B	Z	8.937	3
87	MP2B	Mx	0	3
88	MP2C	X	12.102	3
89	MP2C	Z	6.987	3
90	MP2C	Mx	-0.006	3
91	MP3A	X	10.818	3
92	MP3A	Z	6.246	3
93	MP3A	Mx	.005	3
94	MP3B	X	15.479	3
95	MP3B	Z	8.937	3
96	MP3B	Mx	0	3
97	MP3C	X	10.818	3
98	MP3C	Z	6.246	3
99	MP3C	Mx	-0.005	3
100	MP2A	X	3.746	0
101	MP2A	Z	2.163	0
102	MP2A	Mx	.003	0
103	MP2A	X	3.746	1
104	MP2A	Z	2.163	1
105	MP2A	Mx	.003	1
106	MP2A	X	3.746	0
107	MP2A	Z	2.163	0
108	MP2A	Mx	.004	0
109	MP2A	X	3.746	1
110	MP2A	Z	2.163	1
111	MP2A	Mx	.004	1

**Member Point Loads (BLC 20 : Antenna Wi (150 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	11.699	1.25
2	MP4A	Z	20.264	1.25
3	MP4A	Mx	-0.006	1.25
4	MP4A	X	11.699	4.75
5	MP4A	Z	20.264	4.75
6	MP4A	Mx	-0.006	4.75
7	MP4B	X	11.699	1.25
8	MP4B	Z	20.264	1.25
9	MP4B	Mx	-0.006	1.25



**Member Point Loads (BLC 20 : Antenna Wi (150 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
10	MP4B	X	11.699	4.75
11	MP4B	Z	20.264	4.75
12	MP4B	Mx	-.006	4.75
13	MP4C	X	8.798	1.25
14	MP4C	Z	15.238	1.25
15	MP4C	Mx	.009	1.25
16	MP4C	X	8.798	4.75
17	MP4C	Z	15.238	4.75
18	MP4C	Mx	.009	4.75
19	MP2A	X	15.885	1
20	MP2A	Z	27.514	1
21	MP2A	Mx	.008	1
22	MP2A	X	15.885	5
23	MP2A	Z	27.514	5
24	MP2A	Mx	.008	5
25	MP2B	X	15.885	1
26	MP2B	Z	27.514	1
27	MP2B	Mx	-.024	1
28	MP2B	X	15.885	5
29	MP2B	Z	27.514	5
30	MP2B	Mx	-.024	5
31	MP2C	X	12.063	1
32	MP2C	Z	20.894	1
33	MP2C	Mx	.012	1
34	MP2C	X	12.063	5
35	MP2C	Z	20.894	5
36	MP2C	Mx	.012	5
37	MP2A	X	15.885	1
38	MP2A	Z	27.514	1
39	MP2A	Mx	-.024	1
40	MP2A	X	15.885	5
41	MP2A	Z	27.514	5
42	MP2A	Mx	-.024	5
43	MP2B	X	15.885	1
44	MP2B	Z	27.514	1
45	MP2B	Mx	.008	1
46	MP2B	X	15.885	5
47	MP2B	Z	27.514	5
48	MP2B	Mx	.008	5
49	MP2C	X	12.063	1
50	MP2C	Z	20.894	1
51	MP2C	Mx	.012	1
52	MP2C	X	12.063	5
53	MP2C	Z	20.894	5
54	MP2C	Mx	.012	5
55	MP1A	X	3.988	5.5
56	MP1A	Z	6.908	5.5
57	MP1A	Mx	-.002	5.5
58	MP1B	X	3.988	5.5
59	MP1B	Z	6.908	5.5
60	MP1B	Mx	-.002	5.5
61	MP1C	X	1.622	5.5
62	MP1C	Z	2.81	5.5
63	MP1C	Mx	.002	5.5
64	MP1A	X	8.884	.5
65	MP1A	Z	15.388	.5
66	MP1A	Mx	-.004	.5



**Member Point Loads (BLC 20 : Antenna Wi (150 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
67	MP1A	X	8.884	2.5
68	MP1A	Z	15.388	2.5
69	MP1A	Mx	-.004	2.5
70	MP1B	X	10.318	.5
71	MP1B	Z	17.872	.5
72	MP1B	Mx	0	.5
73	MP1B	X	10.318	2.5
74	MP1B	Z	17.872	2.5
75	MP1B	Mx	0	2.5
76	MP1C	X	8.884	.5
77	MP1C	Z	15.388	.5
78	MP1C	Mx	-.004	.5
79	MP1C	X	8.884	2.5
80	MP1C	Z	15.388	2.5
81	MP1C	Mx	-.004	2.5
82	MP2A	X	8.287	3
83	MP2A	Z	14.353	3
84	MP2A	Mx	.004	3
85	MP2B	X	8.287	3
86	MP2B	Z	14.353	3
87	MP2B	Mx	.004	3
88	MP2C	X	6.337	3
89	MP2C	Z	10.976	3
90	MP2C	Mx	-.006	3
91	MP3A	X	8.04	3
92	MP3A	Z	13.925	3
93	MP3A	Mx	.004	3
94	MP3B	X	8.04	3
95	MP3B	Z	13.925	3
96	MP3B	Mx	.004	3
97	MP3C	X	5.349	3
98	MP3C	Z	9.264	3
99	MP3C	Mx	-.005	3
100	MP2A	X	1.421	0
101	MP2A	Z	2.461	0
102	MP2A	Mx	.000601	0
103	MP2A	X	1.421	1
104	MP2A	Z	2.461	1
105	MP2A	Mx	.000601	1
106	MP2A	X	1.421	0
107	MP2A	Z	2.461	0
108	MP2A	Mx	.002	0
109	MP2A	X	1.421	1
110	MP2A	Z	2.461	1
111	MP2A	Mx	.002	1

**Member Point Loads (BLC 21 : Antenna Wi (180 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	0	1.25
2	MP4A	Z	25.333	1.25
3	MP4A	Mx	0	1.25
4	MP4A	X	0	4.75
5	MP4A	Z	25.333	4.75
6	MP4A	Mx	0	4.75
7	MP4B	X	0	1.25
8	MP4B	Z	19.53	1.25



**Member Point Loads (BLC 21 : Antenna Wi (180 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
9	MP4B	Mx	-.008	1.25
10	MP4B	X	0	4.75
11	MP4B	Z	19.53	4.75
12	MP4B	Mx	-.008	4.75
13	MP4C	X	0	1.25
14	MP4C	Z	19.53	1.25
15	MP4C	Mx	.008	1.25
16	MP4C	X	0	4.75
17	MP4C	Z	19.53	4.75
18	MP4C	Mx	.008	4.75
19	MP2A	X	0	1
20	MP2A	Z	34.319	1
21	MP2A	Mx	.02	1
22	MP2A	X	0	5
23	MP2A	Z	34.319	5
24	MP2A	Mx	.02	5
25	MP2B	X	0	1
26	MP2B	Z	26.674	1
27	MP2B	Mx	-.019	1
28	MP2B	X	0	5
29	MP2B	Z	26.674	5
30	MP2B	Mx	-.019	5
31	MP2C	X	0	1
32	MP2C	Z	26.674	1
33	MP2C	Mx	.004	1
34	MP2C	X	0	5
35	MP2C	Z	26.674	5
36	MP2C	Mx	.004	5
37	MP2A	X	0	1
38	MP2A	Z	34.319	1
39	MP2A	Mx	-.02	1
40	MP2A	X	0	5
41	MP2A	Z	34.319	5
42	MP2A	Mx	-.02	5
43	MP2B	X	0	1
44	MP2B	Z	26.674	1
45	MP2B	Mx	-.004	1
46	MP2B	X	0	5
47	MP2B	Z	26.674	5
48	MP2B	Mx	-.004	5
49	MP2C	X	0	1
50	MP2C	Z	26.674	1
51	MP2C	Mx	.019	1
52	MP2C	X	0	5
53	MP2C	Z	26.674	5
54	MP2C	Mx	.019	5
55	MP1A	X	0	5.5
56	MP1A	Z	9.553	5.5
57	MP1A	Mx	0	5.5
58	MP1B	X	0	5.5
59	MP1B	Z	4.822	5.5
60	MP1B	Mx	-.002	5.5
61	MP1C	X	0	5.5
62	MP1C	Z	4.822	5.5
63	MP1C	Mx	.002	5.5
64	MP1A	X	0	.5
65	MP1A	Z	20.637	.5



**Member Point Loads (BLC 21 : Antenna Wi (180 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
66	MP1A	Mx	0	.5
67	MP1A	X	0	2.5
68	MP1A	Z	20.637	2.5
69	MP1A	Mx	0	2.5
70	MP1B	X	0	.5
71	MP1B	Z	17.768	.5
72	MP1B	Mx	.004	.5
73	MP1B	X	0	2.5
74	MP1B	Z	17.768	2.5
75	MP1B	Mx	.004	2.5
76	MP1C	X	0	.5
77	MP1C	Z	20.637	.5
78	MP1C	Mx	0	.5
79	MP1C	X	0	2.5
80	MP1C	Z	20.637	2.5
81	MP1C	Mx	0	2.5
82	MP2A	X	0	3
83	MP2A	Z	17.874	3
84	MP2A	Mx	0	3
85	MP2B	X	0	3
86	MP2B	Z	13.974	3
87	MP2B	Mx	.006	3
88	MP2C	X	0	3
89	MP2C	Z	13.974	3
90	MP2C	Mx	-.006	3
91	MP3A	X	0	3
92	MP3A	Z	17.874	3
93	MP3A	Mx	0	3
94	MP3B	X	0	3
95	MP3B	Z	12.492	3
96	MP3B	Mx	.005	3
97	MP3C	X	0	3
98	MP3C	Z	12.492	3
99	MP3C	Mx	-.005	3
100	MP2A	X	0	0
101	MP2A	Z	2.099	0
102	MP2A	Mx	-.0007	0
103	MP2A	X	0	1
104	MP2A	Z	2.099	1
105	MP2A	Mx	-.0007	1
106	MP2A	X	0	0
107	MP2A	Z	2.099	0
108	MP2A	Mx	.0007	0
109	MP2A	X	0	1
110	MP2A	Z	2.099	1
111	MP2A	Mx	.0007	1

**Member Point Loads (BLC 22 : Antenna Wi (210 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	-11.699	1.25
2	MP4A	Z	20.264	1.25
3	MP4A	Mx	.006	1.25
4	MP4A	X	-11.699	4.75
5	MP4A	Z	20.264	4.75
6	MP4A	Mx	.006	4.75
7	MP4B	X	-8.798	1.25





**Member Point Loads (BLC 22 : Antenna Wi (210 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
8	MP4B	Z	15.238	1.25
9	MP4B	Mx	-.009	1.25
10	MP4B	X	-8.798	4.75
11	MP4B	Z	15.238	4.75
12	MP4B	Mx	-.009	4.75
13	MP4C	X	-11.699	1.25
14	MP4C	Z	20.264	1.25
15	MP4C	Mx	.006	1.25
16	MP4C	X	-11.699	4.75
17	MP4C	Z	20.264	4.75
18	MP4C	Mx	.006	4.75
19	MP2A	X	-15.885	1
20	MP2A	Z	27.514	1
21	MP2A	Mx	.024	1
22	MP2A	X	-15.885	5
23	MP2A	Z	27.514	5
24	MP2A	Mx	.024	5
25	MP2B	X	-12.063	1
26	MP2B	Z	20.894	1
27	MP2B	Mx	-.012	1
28	MP2B	X	-12.063	5
29	MP2B	Z	20.894	5
30	MP2B	Mx	-.012	5
31	MP2C	X	-15.885	1
32	MP2C	Z	27.514	1
33	MP2C	Mx	-.008	1
34	MP2C	X	-15.885	5
35	MP2C	Z	27.514	5
36	MP2C	Mx	-.008	5
37	MP2A	X	-15.885	1
38	MP2A	Z	27.514	1
39	MP2A	Mx	-.008	1
40	MP2A	X	-15.885	5
41	MP2A	Z	27.514	5
42	MP2A	Mx	-.008	5
43	MP2B	X	-12.063	1
44	MP2B	Z	20.894	1
45	MP2B	Mx	-.012	1
46	MP2B	X	-12.063	5
47	MP2B	Z	20.894	5
48	MP2B	Mx	-.012	5
49	MP2C	X	-15.885	1
50	MP2C	Z	27.514	1
51	MP2C	Mx	.024	1
52	MP2C	X	-15.885	5
53	MP2C	Z	27.514	5
54	MP2C	Mx	.024	5
55	MP1A	X	-3.988	5.5
56	MP1A	Z	6.908	5.5
57	MP1A	Mx	.002	5.5
58	MP1B	X	-1.622	5.5
59	MP1B	Z	2.81	5.5
60	MP1B	Mx	-.002	5.5
61	MP1C	X	-3.988	5.5
62	MP1C	Z	6.908	5.5
63	MP1C	Mx	.002	5.5
64	MP1A	X	-8.884	.5



**Member Point Loads (BLC 22 : Antenna Wi (210 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
65	MP1A	Z	15.388	.5
66	MP1A	Mx	.004	.5
67	MP1A	X	-8.884	2.5
68	MP1A	Z	15.388	2.5
69	MP1A	Mx	.004	2.5
70	MP1B	X	-6.016	.5
71	MP1B	Z	10.42	.5
72	MP1B	Mx	.005	.5
73	MP1B	X	-6.016	2.5
74	MP1B	Z	10.42	2.5
75	MP1B	Mx	.005	2.5
76	MP1C	X	-8.884	.5
77	MP1C	Z	15.388	.5
78	MP1C	Mx	.004	.5
79	MP1C	X	-8.884	2.5
80	MP1C	Z	15.388	2.5
81	MP1C	Mx	.004	2.5
82	MP2A	X	-8.287	3
83	MP2A	Z	14.353	3
84	MP2A	Mx	-.004	3
85	MP2B	X	-6.337	3
86	MP2B	Z	10.976	3
87	MP2B	Mx	.006	3
88	MP2C	X	-8.287	3
89	MP2C	Z	14.353	3
90	MP2C	Mx	-.004	3
91	MP3A	X	-8.04	3
92	MP3A	Z	13.925	3
93	MP3A	Mx	-.004	3
94	MP3B	X	-5.349	3
95	MP3B	Z	9.264	3
96	MP3B	Mx	.005	3
97	MP3C	X	-8.04	3
98	MP3C	Z	13.925	3
99	MP3C	Mx	-.004	3
100	MP2A	X	-1.421	0
101	MP2A	Z	2.461	0
102	MP2A	Mx	-.002	0
103	MP2A	X	-1.421	1
104	MP2A	Z	2.461	1
105	MP2A	Mx	-.002	1
106	MP2A	X	-1.421	0
107	MP2A	Z	2.461	0
108	MP2A	Mx	-.000601	0
109	MP2A	X	-1.421	1
110	MP2A	Z	2.461	1
111	MP2A	Mx	-.000601	1

**Member Point Loads (BLC 23 : Antenna Wi (240 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	X	-16.913	1.25
2	MP4A	Z	9.765	1.25
3	MP4A	Mx	.008	1.25
4	MP4A	X	-16.913	4.75
5	MP4A	Z	9.765	4.75
6	MP4A	Mx	.008	4.75



**Member Point Loads (BLC 23 : Antenna Wi (240 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
7	MP4B	X	-16.913	1.25
8	MP4B	Z	9.765	1.25
9	MP4B	Mx	-.008	1.25
10	MP4B	X	-16.913	4.75
11	MP4B	Z	9.765	4.75
12	MP4B	Mx	-.008	4.75
13	MP4C	X	-21.939	1.25
14	MP4C	Z	12.666	1.25
15	MP4C	Mx	0	1.25
16	MP4C	X	-21.939	4.75
17	MP4C	Z	12.666	4.75
18	MP4C	Mx	0	4.75
19	MP2A	X	-23.101	1
20	MP2A	Z	13.337	1
21	MP2A	Mx	.019	1
22	MP2A	X	-23.101	5
23	MP2A	Z	13.337	5
24	MP2A	Mx	.019	5
25	MP2B	X	-23.101	1
26	MP2B	Z	13.337	1
27	MP2B	Mx	-.004	1
28	MP2B	X	-23.101	5
29	MP2B	Z	13.337	5
30	MP2B	Mx	-.004	5
31	MP2C	X	-29.721	1
32	MP2C	Z	17.159	1
33	MP2C	Mx	-.02	1
34	MP2C	X	-29.721	5
35	MP2C	Z	17.159	5
36	MP2C	Mx	-.02	5
37	MP2A	X	-23.101	1
38	MP2A	Z	13.337	1
39	MP2A	Mx	.004	1
40	MP2A	X	-23.101	5
41	MP2A	Z	13.337	5
42	MP2A	Mx	.004	5
43	MP2B	X	-23.101	1
44	MP2B	Z	13.337	1
45	MP2B	Mx	-.019	1
46	MP2B	X	-23.101	5
47	MP2B	Z	13.337	5
48	MP2B	Mx	-.019	5
49	MP2C	X	-29.721	1
50	MP2C	Z	17.159	1
51	MP2C	Mx	.02	1
52	MP2C	X	-29.721	5
53	MP2C	Z	17.159	5
54	MP2C	Mx	.02	5
55	MP1A	X	-4.176	5.5
56	MP1A	Z	2.411	5.5
57	MP1A	Mx	.002	5.5
58	MP1B	X	-4.176	5.5
59	MP1B	Z	2.411	5.5
60	MP1B	Mx	-.002	5.5
61	MP1C	X	-8.273	5.5
62	MP1C	Z	4.777	5.5
63	MP1C	Mx	0	5.5



**Member Point Loads (BLC 23 : Antenna Wi (240 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
64	MP1A	X	-10.42	.5
65	MP1A	Z	6.016	.5
66	MP1A	Mx	.005	.5
67	MP1A	X	-10.42	2.5
68	MP1A	Z	6.016	2.5
69	MP1A	Mx	.005	2.5
70	MP1B	X	-7.936	.5
71	MP1B	Z	4.582	.5
72	MP1B	Mx	.005	.5
73	MP1B	X	-7.936	2.5
74	MP1B	Z	4.582	2.5
75	MP1B	Mx	.005	2.5
76	MP1C	X	-10.42	.5
77	MP1C	Z	6.016	.5
78	MP1C	Mx	.005	.5
79	MP1C	X	-10.42	2.5
80	MP1C	Z	6.016	2.5
81	MP1C	Mx	.005	2.5
82	MP2A	X	-12.102	3
83	MP2A	Z	6.987	3
84	MP2A	Mx	-.006	3
85	MP2B	X	-12.102	3
86	MP2B	Z	6.987	3
87	MP2B	Mx	.006	3
88	MP2C	X	-15.479	3
89	MP2C	Z	8.937	3
90	MP2C	Mx	0	3
91	MP3A	X	-10.818	3
92	MP3A	Z	6.246	3
93	MP3A	Mx	-.005	3
94	MP3B	X	-10.818	3
95	MP3B	Z	6.246	3
96	MP3B	Mx	.005	3
97	MP3C	X	-15.479	3
98	MP3C	Z	8.937	3
99	MP3C	Mx	0	3
100	MP2A	X	-3.746	0
101	MP2A	Z	2.163	0
102	MP2A	Mx	-.004	0
103	MP2A	X	-3.746	1
104	MP2A	Z	2.163	1
105	MP2A	Mx	-.004	1
106	MP2A	X	-3.746	0
107	MP2A	Z	2.163	0
108	MP2A	Mx	-.003	0
109	MP2A	X	-3.746	1
110	MP2A	Z	2.163	1
111	MP2A	Mx	-.003	1

**Member Point Loads (BLC 24 : Antenna Wi (270 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	-17.595	1.25
2	MP4A	Z	0	1.25
3	MP4A	Mx	.009	1.25
4	MP4A	X	-17.595	4.75
5	MP4A	Z	0	4.75



**Member Point Loads (BLC 24 : Antenna Wi (270 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
6	MP4A	Mx	.009	4.75
7	MP4B	X	-23.398	1.25
8	MP4B	Z	0	1.25
9	MP4B	Mx	-.006	1.25
10	MP4B	X	-23.398	4.75
11	MP4B	Z	0	4.75
12	MP4B	Mx	-.006	4.75
13	MP4C	X	-23.398	1.25
14	MP4C	Z	0	1.25
15	MP4C	Mx	-.006	1.25
16	MP4C	X	-23.398	4.75
17	MP4C	Z	0	4.75
18	MP4C	Mx	-.006	4.75
19	MP2A	X	-24.126	1
20	MP2A	Z	0	1
21	MP2A	Mx	.012	1
22	MP2A	X	-24.126	5
23	MP2A	Z	0	5
24	MP2A	Mx	.012	5
25	MP2B	X	-31.771	1
26	MP2B	Z	0	1
27	MP2B	Mx	.008	1
28	MP2B	X	-31.771	5
29	MP2B	Z	0	5
30	MP2B	Mx	.008	5
31	MP2C	X	-31.771	1
32	MP2C	Z	0	1
33	MP2C	Mx	-.024	1
34	MP2C	X	-31.771	5
35	MP2C	Z	0	5
36	MP2C	Mx	-.024	5
37	MP2A	X	-24.126	1
38	MP2A	Z	0	1
39	MP2A	Mx	.012	1
40	MP2A	X	-24.126	5
41	MP2A	Z	0	5
42	MP2A	Mx	.012	5
43	MP2B	X	-31.771	1
44	MP2B	Z	0	1
45	MP2B	Mx	-.024	1
46	MP2B	X	-31.771	5
47	MP2B	Z	0	5
48	MP2B	Mx	-.024	5
49	MP2C	X	-31.771	1
50	MP2C	Z	0	1
51	MP2C	Mx	.008	1
52	MP2C	X	-31.771	5
53	MP2C	Z	0	5
54	MP2C	Mx	.008	5
55	MP1A	X	-3.245	5.5
56	MP1A	Z	0	5.5
57	MP1A	Mx	.002	5.5
58	MP1B	X	-7.976	5.5
59	MP1B	Z	0	5.5
60	MP1B	Mx	-.002	5.5
61	MP1C	X	-7.976	5.5
62	MP1C	Z	0	5.5



**Member Point Loads (BLC 24 : Antenna Wi (270 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
63	MP1C	Mx	-.002	5.5
64	MP1A	X	-9.163	.5
65	MP1A	Z	0	.5
66	MP1A	Mx	.005	.5
67	MP1A	X	-9.163	2.5
68	MP1A	Z	0	2.5
69	MP1A	Mx	.005	2.5
70	MP1B	X	-12.032	.5
71	MP1B	Z	0	.5
72	MP1B	Mx	.005	.5
73	MP1B	X	-12.032	2.5
74	MP1B	Z	0	2.5
75	MP1B	Mx	.005	2.5
76	MP1C	X	-9.163	.5
77	MP1C	Z	0	.5
78	MP1C	Mx	.005	.5
79	MP1C	X	-9.163	2.5
80	MP1C	Z	0	2.5
81	MP1C	Mx	.005	2.5
82	MP2A	X	-12.674	3
83	MP2A	Z	0	3
84	MP2A	Mx	-.006	3
85	MP2B	X	-16.574	3
86	MP2B	Z	0	3
87	MP2B	Mx	.004	3
88	MP2C	X	-16.574	3
89	MP2C	Z	0	3
90	MP2C	Mx	.004	3
91	MP3A	X	-10.698	3
92	MP3A	Z	0	3
93	MP3A	Mx	-.005	3
94	MP3B	X	-16.08	3
95	MP3B	Z	0	3
96	MP3B	Mx	.004	3
97	MP3C	X	-16.08	3
98	MP3C	Z	0	3
99	MP3C	Mx	.004	3
100	MP2A	X	-5.068	0
101	MP2A	Z	0	0
102	MP2A	Mx	-.005	0
103	MP2A	X	-5.068	1
104	MP2A	Z	0	1
105	MP2A	Mx	-.005	1
106	MP2A	X	-5.068	0
107	MP2A	Z	0	0
108	MP2A	Mx	-.005	0
109	MP2A	X	-5.068	1
110	MP2A	Z	0	1
111	MP2A	Mx	-.005	1

**Member Point Loads (BLC 25 : Antenna Wi (300 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	-16.913	1.25
2	MP4A	Z	-9.765	1.25
3	MP4A	Mx	.008	1.25
4	MP4A	X	-16.913	4.75



**Member Point Loads (BLC 25 : Antenna Wi (300 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
5	MP4A	Z	-9.765	4.75
6	MP4A	Mx	.008	4.75
7	MP4B	X	-21.939	1.25
8	MP4B	Z	-12.666	1.25
9	MP4B	Mx	0	1.25
10	MP4B	X	-21.939	4.75
11	MP4B	Z	-12.666	4.75
12	MP4B	Mx	0	4.75
13	MP4C	X	-16.913	1.25
14	MP4C	Z	-9.765	1.25
15	MP4C	Mx	-.008	1.25
16	MP4C	X	-16.913	4.75
17	MP4C	Z	-9.765	4.75
18	MP4C	Mx	-.008	4.75
19	MP2A	X	-23.101	1
20	MP2A	Z	-13.337	1
21	MP2A	Mx	.004	1
22	MP2A	X	-23.101	5
23	MP2A	Z	-13.337	5
24	MP2A	Mx	.004	5
25	MP2B	X	-29.721	1
26	MP2B	Z	-17.159	1
27	MP2B	Mx	.02	1
28	MP2B	X	-29.721	5
29	MP2B	Z	-17.159	5
30	MP2B	Mx	.02	5
31	MP2C	X	-23.101	1
32	MP2C	Z	-13.337	1
33	MP2C	Mx	-.019	1
34	MP2C	X	-23.101	5
35	MP2C	Z	-13.337	5
36	MP2C	Mx	-.019	5
37	MP2A	X	-23.101	1
38	MP2A	Z	-13.337	1
39	MP2A	Mx	.019	1
40	MP2A	X	-23.101	5
41	MP2A	Z	-13.337	5
42	MP2A	Mx	.019	5
43	MP2B	X	-29.721	1
44	MP2B	Z	-17.159	1
45	MP2B	Mx	-.02	1
46	MP2B	X	-29.721	5
47	MP2B	Z	-17.159	5
48	MP2B	Mx	-.02	5
49	MP2C	X	-23.101	1
50	MP2C	Z	-13.337	1
51	MP2C	Mx	-.004	1
52	MP2C	X	-23.101	5
53	MP2C	Z	-13.337	5
54	MP2C	Mx	-.004	5
55	MP1A	X	-4.176	5.5
56	MP1A	Z	-2.411	5.5
57	MP1A	Mx	.002	5.5
58	MP1B	X	-8.273	5.5
59	MP1B	Z	-4.777	5.5
60	MP1B	Mx	0	5.5
61	MP1C	X	-4.176	5.5



**Member Point Loads (BLC 25 : Antenna Wi (300 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
62	MP1C	Z	-2.411	5.5
63	MP1C	Mx	-.002	5.5
64	MP1A	X	-10.42	.5
65	MP1A	Z	-6.016	.5
66	MP1A	Mx	.005	.5
67	MP1A	X	-10.42	2.5
68	MP1A	Z	-6.016	2.5
69	MP1A	Mx	.005	2.5
70	MP1B	X	-15.388	.5
71	MP1B	Z	-8.884	.5
72	MP1B	Mx	.004	.5
73	MP1B	X	-15.388	2.5
74	MP1B	Z	-8.884	2.5
75	MP1B	Mx	.004	2.5
76	MP1C	X	-10.42	.5
77	MP1C	Z	-6.016	.5
78	MP1C	Mx	.005	.5
79	MP1C	X	-10.42	2.5
80	MP1C	Z	-6.016	2.5
81	MP1C	Mx	.005	2.5
82	MP2A	X	-12.102	3
83	MP2A	Z	-6.987	3
84	MP2A	Mx	-.006	3
85	MP2B	X	-15.479	3
86	MP2B	Z	-8.937	3
87	MP2B	Mx	0	3
88	MP2C	X	-12.102	3
89	MP2C	Z	-6.987	3
90	MP2C	Mx	.006	3
91	MP3A	X	-10.818	3
92	MP3A	Z	-6.246	3
93	MP3A	Mx	-.005	3
94	MP3B	X	-15.479	3
95	MP3B	Z	-8.937	3
96	MP3B	Mx	0	3
97	MP3C	X	-10.818	3
98	MP3C	Z	-6.246	3
99	MP3C	Mx	.005	3
100	MP2A	X	-3.746	0
101	MP2A	Z	-2.163	0
102	MP2A	Mx	-.003	0
103	MP2A	X	-3.746	1
104	MP2A	Z	-2.163	1
105	MP2A	Mx	-.003	1
106	MP2A	X	-3.746	0
107	MP2A	Z	-2.163	0
108	MP2A	Mx	-.004	0
109	MP2A	X	-3.746	1
110	MP2A	Z	-2.163	1
111	MP2A	Mx	-.004	1

**Member Point Loads (BLC 26 : Antenna Wi (330 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	-11.699	1.25
2	MP4A	Z	-20.264	1.25
3	MP4A	Mx	.006	1.25





**Member Point Loads (BLC 26 : Antenna Wi (330 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
4	MP4A	X	-11.699	4.75
5	MP4A	Z	-20.264	4.75
6	MP4A	Mx	.006	4.75
7	MP4B	X	-11.699	1.25
8	MP4B	Z	-20.264	1.25
9	MP4B	Mx	.006	1.25
10	MP4B	X	-11.699	4.75
11	MP4B	Z	-20.264	4.75
12	MP4B	Mx	.006	4.75
13	MP4C	X	-8.798	1.25
14	MP4C	Z	-15.238	1.25
15	MP4C	Mx	-.009	1.25
16	MP4C	X	-8.798	4.75
17	MP4C	Z	-15.238	4.75
18	MP4C	Mx	-.009	4.75
19	MP2A	X	-15.885	1
20	MP2A	Z	-27.514	1
21	MP2A	Mx	-.008	1
22	MP2A	X	-15.885	5
23	MP2A	Z	-27.514	5
24	MP2A	Mx	-.008	5
25	MP2B	X	-15.885	1
26	MP2B	Z	-27.514	1
27	MP2B	Mx	.024	1
28	MP2B	X	-15.885	5
29	MP2B	Z	-27.514	5
30	MP2B	Mx	.024	5
31	MP2C	X	-12.063	1
32	MP2C	Z	-20.894	1
33	MP2C	Mx	-.012	1
34	MP2C	X	-12.063	5
35	MP2C	Z	-20.894	5
36	MP2C	Mx	-.012	5
37	MP2A	X	-15.885	1
38	MP2A	Z	-27.514	1
39	MP2A	Mx	.024	1
40	MP2A	X	-15.885	5
41	MP2A	Z	-27.514	5
42	MP2A	Mx	.024	5
43	MP2B	X	-15.885	1
44	MP2B	Z	-27.514	1
45	MP2B	Mx	-.008	1
46	MP2B	X	-15.885	5
47	MP2B	Z	-27.514	5
48	MP2B	Mx	-.008	5
49	MP2C	X	-12.063	1
50	MP2C	Z	-20.894	1
51	MP2C	Mx	-.012	1
52	MP2C	X	-12.063	5
53	MP2C	Z	-20.894	5
54	MP2C	Mx	-.012	5
55	MP1A	X	-3.988	5.5
56	MP1A	Z	-6.908	5.5
57	MP1A	Mx	.002	5.5
58	MP1B	X	-3.988	5.5
59	MP1B	Z	-6.908	5.5
60	MP1B	Mx	.002	5.5



**Member Point Loads (BLC 26 : Antenna Wi (330 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
61	MP1C	X	-1.622	5.5
62	MP1C	Z	-2.81	5.5
63	MP1C	Mx	-.002	5.5
64	MP1A	X	-8.884	.5
65	MP1A	Z	-15.388	.5
66	MP1A	Mx	.004	.5
67	MP1A	X	-8.884	2.5
68	MP1A	Z	-15.388	2.5
69	MP1A	Mx	.004	2.5
70	MP1B	X	-10.318	.5
71	MP1B	Z	-17.872	.5
72	MP1B	Mx	0	.5
73	MP1B	X	-10.318	2.5
74	MP1B	Z	-17.872	2.5
75	MP1B	Mx	0	2.5
76	MP1C	X	-8.884	.5
77	MP1C	Z	-15.388	.5
78	MP1C	Mx	.004	.5
79	MP1C	X	-8.884	2.5
80	MP1C	Z	-15.388	2.5
81	MP1C	Mx	.004	2.5
82	MP2A	X	-8.287	3
83	MP2A	Z	-14.353	3
84	MP2A	Mx	-.004	3
85	MP2B	X	-8.287	3
86	MP2B	Z	-14.353	3
87	MP2B	Mx	-.004	3
88	MP2C	X	-6.337	3
89	MP2C	Z	-10.976	3
90	MP2C	Mx	.006	3
91	MP3A	X	-8.04	3
92	MP3A	Z	-13.925	3
93	MP3A	Mx	-.004	3
94	MP3B	X	-8.04	3
95	MP3B	Z	-13.925	3
96	MP3B	Mx	-.004	3
97	MP3C	X	-5.349	3
98	MP3C	Z	-9.264	3
99	MP3C	Mx	.005	3
100	MP2A	X	-1.421	0
101	MP2A	Z	-2.461	0
102	MP2A	Mx	-.000601	0
103	MP2A	X	-1.421	1
104	MP2A	Z	-2.461	1
105	MP2A	Mx	-.000601	1
106	MP2A	X	-1.421	0
107	MP2A	Z	-2.461	0
108	MP2A	Mx	-.002	0
109	MP2A	X	-1.421	1
110	MP2A	Z	-2.461	1
111	MP2A	Mx	-.002	1

**Member Point Loads (BLC 27 : Antenna Wm (0 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	0	1.25
2	MP4A	Z	-7.697	1.25



**Member Point Loads (BLC 27 : Antenna Wm (0 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
3	MP4A	Mx	0	1.25
4	MP4A	X	0	4.75
5	MP4A	Z	-7.697	4.75
6	MP4A	Mx	0	4.75
7	MP4B	X	0	1.25
8	MP4B	Z	-5.726	1.25
9	MP4B	Mx	.002	1.25
10	MP4B	X	0	4.75
11	MP4B	Z	-5.726	4.75
12	MP4B	Mx	.002	4.75
13	MP4C	X	0	1.25
14	MP4C	Z	-5.726	1.25
15	MP4C	Mx	-.002	1.25
16	MP4C	X	0	4.75
17	MP4C	Z	-5.726	4.75
18	MP4C	Mx	-.002	4.75
19	MP2A	X	0	1
20	MP2A	Z	-7.169	1
21	MP2A	Mx	-.004	1
22	MP2A	X	0	5
23	MP2A	Z	-7.169	5
24	MP2A	Mx	-.004	5
25	MP2B	X	0	1
26	MP2B	Z	-4.099	1
27	MP2B	Mx	.003	1
28	MP2B	X	0	5
29	MP2B	Z	-4.099	5
30	MP2B	Mx	.003	5
31	MP2C	X	0	1
32	MP2C	Z	-4.099	1
33	MP2C	Mx	-.000579	1
34	MP2C	X	0	5
35	MP2C	Z	-4.099	5
36	MP2C	Mx	-.000579	5
37	MP2A	X	0	1
38	MP2A	Z	-7.169	1
39	MP2A	Mx	.004	1
40	MP2A	X	0	5
41	MP2A	Z	-7.169	5
42	MP2A	Mx	.004	5
43	MP2B	X	0	1
44	MP2B	Z	-4.099	1
45	MP2B	Mx	.000579	1
46	MP2B	X	0	5
47	MP2B	Z	-4.099	5
48	MP2B	Mx	.000579	5
49	MP2C	X	0	1
50	MP2C	Z	-4.099	1
51	MP2C	Mx	-.003	1
52	MP2C	X	0	5
53	MP2C	Z	-4.099	5
54	MP2C	Mx	-.003	5
55	MP1A	X	0	5.5
56	MP1A	Z	-2.35	5.5
57	MP1A	Mx	0	5.5
58	MP1B	X	0	5.5
59	MP1B	Z	-.933	5.5



**Member Point Loads (BLC 27 : Antenna Wm (0 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
60	MP1B	Mx	.000404	5.5
61	MP1C	X	0	5.5
62	MP1C	Z	-.933	5.5
63	MP1C	Mx	-.000404	5.5
64	MP1A	X	0	.5
65	MP1A	Z	-5.175	.5
66	MP1A	Mx	0	.5
67	MP1A	X	0	2.5
68	MP1A	Z	-5.175	2.5
69	MP1A	Mx	0	2.5
70	MP1B	X	0	.5
71	MP1B	Z	-4.327	.5
72	MP1B	Mx	-.001	.5
73	MP1B	X	0	2.5
74	MP1B	Z	-4.327	2.5
75	MP1B	Mx	-.001	2.5
76	MP1C	X	0	.5
77	MP1C	Z	-5.175	.5
78	MP1C	Mx	0	.5
79	MP1C	X	0	2.5
80	MP1C	Z	-5.175	2.5
81	MP1C	Mx	0	2.5
82	MP2A	X	0	3
83	MP2A	Z	-4.093	3
84	MP2A	Mx	0	3
85	MP2B	X	0	3
86	MP2B	Z	-3.083	3
87	MP2B	Mx	-.001	3
88	MP2C	X	0	3
89	MP2C	Z	-3.083	3
90	MP2C	Mx	.001	3
91	MP3A	X	0	3
92	MP3A	Z	-4.093	3
93	MP3A	Mx	0	3
94	MP3B	X	0	3
95	MP3B	Z	-2.706	3
96	MP3B	Mx	-.001	3
97	MP3C	X	0	3
98	MP3C	Z	-2.706	3
99	MP3C	Mx	.001	3
100	MP2A	X	0	0
101	MP2A	Z	-.383	0
102	MP2A	Mx	.000128	0
103	MP2A	X	0	1
104	MP2A	Z	-.383	1
105	MP2A	Mx	.000128	1
106	MP2A	X	0	0
107	MP2A	Z	-.383	0
108	MP2A	Mx	-.000128	0
109	MP2A	X	0	1
110	MP2A	Z	-.383	1
111	MP2A	Mx	-.000128	1

**Member Point Loads (BLC 28 : Antenna Wm (30 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	X	3.52	1.25



**Member Point Loads (BLC 28 : Antenna Wm (30 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
2	MP4A	Z	-6.097	1.25
3	MP4A	Mx	-.002	1.25
4	MP4A	X	3.52	4.75
5	MP4A	Z	-6.097	4.75
6	MP4A	Mx	-.002	4.75
7	MP4B	X	2.534	1.25
8	MP4B	Z	-4.389	1.25
9	MP4B	Mx	.003	1.25
10	MP4B	X	2.534	4.75
11	MP4B	Z	-4.389	4.75
12	MP4B	Mx	.003	4.75
13	MP4C	X	3.52	1.25
14	MP4C	Z	-6.097	1.25
15	MP4C	Mx	-.002	1.25
16	MP4C	X	3.52	4.75
17	MP4C	Z	-6.097	4.75
18	MP4C	Mx	-.002	4.75
19	MP2A	X	3.073	1
20	MP2A	Z	-5.322	1
21	MP2A	Mx	-.005	1
22	MP2A	X	3.073	5
23	MP2A	Z	-5.322	5
24	MP2A	Mx	-.005	5
25	MP2B	X	1.538	1
26	MP2B	Z	-2.664	1
27	MP2B	Mx	.002	1
28	MP2B	X	1.538	5
29	MP2B	Z	-2.664	5
30	MP2B	Mx	.002	5
31	MP2C	X	3.073	1
32	MP2C	Z	-5.322	1
33	MP2C	Mx	.002	1
34	MP2C	X	3.073	5
35	MP2C	Z	-5.322	5
36	MP2C	Mx	.002	5
37	MP2A	X	3.073	1
38	MP2A	Z	-5.322	1
39	MP2A	Mx	.002	1
40	MP2A	X	3.073	5
41	MP2A	Z	-5.322	5
42	MP2A	Mx	.002	5
43	MP2B	X	1.538	1
44	MP2B	Z	-2.664	1
45	MP2B	Mx	.002	1
46	MP2B	X	1.538	5
47	MP2B	Z	-2.664	5
48	MP2B	Mx	.002	5
49	MP2C	X	3.073	1
50	MP2C	Z	-5.322	1
51	MP2C	Mx	-.005	1
52	MP2C	X	3.073	5
53	MP2C	Z	-5.322	5
54	MP2C	Mx	-.005	5
55	MP1A	X	.939	5.5
56	MP1A	Z	-1.626	5.5
57	MP1A	Mx	-.00047	5.5
58	MP1B	X	.23	5.5



**Member Point Loads (BLC 28 : Antenna Wm (30 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
59	MP1B	Z	-.399	5.5
60	MP1B	Mx	.00023	5.5
61	MP1C	X	.939	5.5
62	MP1C	Z	-1.626	5.5
63	MP1C	Mx	-.000469	5.5
64	MP1A	X	2.164	.5
65	MP1A	Z	-3.747	.5
66	MP1A	Mx	-.001	.5
67	MP1A	X	2.164	2.5
68	MP1A	Z	-3.747	2.5
69	MP1A	Mx	-.001	2.5
70	MP1B	X	1.315	.5
71	MP1B	Z	-2.278	.5
72	MP1B	Mx	-.001	.5
73	MP1B	X	1.315	2.5
74	MP1B	Z	-2.278	2.5
75	MP1B	Mx	-.001	2.5
76	MP1C	X	2.164	.5
77	MP1C	Z	-3.747	.5
78	MP1C	Mx	-.001	.5
79	MP1C	X	2.164	2.5
80	MP1C	Z	-3.747	2.5
81	MP1C	Mx	-.001	2.5
82	MP2A	X	1.878	3
83	MP2A	Z	-3.253	3
84	MP2A	Mx	.000939	3
85	MP2B	X	1.373	3
86	MP2B	Z	-2.378	3
87	MP2B	Mx	-.001	3
88	MP2C	X	1.878	3
89	MP2C	Z	-3.253	3
90	MP2C	Mx	.000939	3
91	MP3A	X	1.815	3
92	MP3A	Z	-3.144	3
93	MP3A	Mx	.000908	3
94	MP3B	X	1.122	3
95	MP3B	Z	-1.944	3
96	MP3B	Mx	-.001	3
97	MP3C	X	1.815	3
98	MP3C	Z	-3.144	3
99	MP3C	Mx	.000908	3
100	MP2A	X	.302	0
101	MP2A	Z	-.524	0
102	MP2A	Mx	.000477	0
103	MP2A	X	.302	1
104	MP2A	Z	-.524	1
105	MP2A	Mx	.000477	1
106	MP2A	X	.302	0
107	MP2A	Z	-.524	0
108	MP2A	Mx	.000127	0
109	MP2A	X	.302	1
110	MP2A	Z	-.524	1
111	MP2A	Mx	.000127	1

**Member Point Loads (BLC 29 : Antenna Wm (60 Deg))**

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
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**Member Point Loads (BLC 29 : Antenna Wm (60 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	4.959	1.25
2	MP4A	Z	-2.863	1.25
3	MP4A	Mx	-.002	1.25
4	MP4A	X	4.959	4.75
5	MP4A	Z	-2.863	4.75
6	MP4A	Mx	-.002	4.75
7	MP4B	X	4.959	1.25
8	MP4B	Z	-2.863	1.25
9	MP4B	Mx	.002	1.25
10	MP4B	X	4.959	4.75
11	MP4B	Z	-2.863	4.75
12	MP4B	Mx	.002	4.75
13	MP4C	X	6.666	1.25
14	MP4C	Z	-3.848	1.25
15	MP4C	Mx	0	1.25
16	MP4C	X	6.666	4.75
17	MP4C	Z	-3.848	4.75
18	MP4C	Mx	0	4.75
19	MP2A	X	3.55	1
20	MP2A	Z	-2.05	1
21	MP2A	Mx	-.003	1
22	MP2A	X	3.55	5
23	MP2A	Z	-2.05	5
24	MP2A	Mx	-.003	5
25	MP2B	X	3.55	1
26	MP2B	Z	-2.05	1
27	MP2B	Mx	.00058	1
28	MP2B	X	3.55	5
29	MP2B	Z	-2.05	5
30	MP2B	Mx	.00058	5
31	MP2C	X	6.208	1
32	MP2C	Z	-3.584	1
33	MP2C	Mx	.004	1
34	MP2C	X	6.208	5
35	MP2C	Z	-3.584	5
36	MP2C	Mx	.004	5
37	MP2A	X	3.55	1
38	MP2A	Z	-2.05	1
39	MP2A	Mx	-.000579	1
40	MP2A	X	3.55	5
41	MP2A	Z	-2.05	5
42	MP2A	Mx	-.000579	5
43	MP2B	X	3.55	1
44	MP2B	Z	-2.05	1
45	MP2B	Mx	.003	1
46	MP2B	X	3.55	5
47	MP2B	Z	-2.05	5
48	MP2B	Mx	.003	5
49	MP2C	X	6.208	1
50	MP2C	Z	-3.584	1
51	MP2C	Mx	-.004	1
52	MP2C	X	6.208	5
53	MP2C	Z	-3.584	5
54	MP2C	Mx	-.004	5
55	MP1A	X	.808	5.5
56	MP1A	Z	-.467	5.5
57	MP1A	Mx	-.000404	5.5



**Member Point Loads (BLC 29 : Antenna Wm (60 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
58	MP1B	X	.808	5.5
59	MP1B	Z	-467	5.5
60	MP1B	Mx	.000404	5.5
61	MP1C	X	2.035	5.5
62	MP1C	Z	-1.175	5.5
63	MP1C	Mx	0	5.5
64	MP1A	X	2.278	.5
65	MP1A	Z	-1.315	.5
66	MP1A	Mx	-.001	.5
67	MP1A	X	2.278	2.5
68	MP1A	Z	-1.315	2.5
69	MP1A	Mx	-.001	2.5
70	MP1B	X	1.544	.5
71	MP1B	Z	-.891	.5
72	MP1B	Mx	-.000891	.5
73	MP1B	X	1.544	2.5
74	MP1B	Z	-.891	2.5
75	MP1B	Mx	-.000891	2.5
76	MP1C	X	2.278	.5
77	MP1C	Z	-1.315	.5
78	MP1C	Mx	-.001	.5
79	MP1C	X	2.278	2.5
80	MP1C	Z	-1.315	2.5
81	MP1C	Mx	-.001	2.5
82	MP2A	X	2.67	3
83	MP2A	Z	-1.541	3
84	MP2A	Mx	.001	3
85	MP2B	X	2.67	3
86	MP2B	Z	-1.541	3
87	MP2B	Mx	-.001	3
88	MP2C	X	3.544	3
89	MP2C	Z	-2.046	3
90	MP2C	Mx	0	3
91	MP3A	X	2.344	3
92	MP3A	Z	-1.353	3
93	MP3A	Mx	.001	3
94	MP3B	X	2.344	3
95	MP3B	Z	-1.353	3
96	MP3B	Mx	-.001	3
97	MP3C	X	3.544	3
98	MP3C	Z	-2.046	3
99	MP3C	Mx	0	3
100	MP2A	X	.909	0
101	MP2A	Z	-.525	0
102	MP2A	Mx	.001	0
103	MP2A	X	.909	1
104	MP2A	Z	-.525	1
105	MP2A	Mx	.001	1
106	MP2A	X	.909	0
107	MP2A	Z	-.525	0
108	MP2A	Mx	.000734	0
109	MP2A	X	.909	1
110	MP2A	Z	-.525	1
111	MP2A	Mx	.000734	1

**Member Point Loads (BLC 30 : Antenna Wm (90 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
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**Member Point Loads (BLC 30 : Antenna Wm (90 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	5.069	1.25
2	MP4A	Z	0	1.25
3	MP4A	Mx	-.003	1.25
4	MP4A	X	5.069	4.75
5	MP4A	Z	0	4.75
6	MP4A	Mx	-.003	4.75
7	MP4B	X	7.04	1.25
8	MP4B	Z	0	1.25
9	MP4B	Mx	.002	1.25
10	MP4B	X	7.04	4.75
11	MP4B	Z	0	4.75
12	MP4B	Mx	.002	4.75
13	MP4C	X	7.04	1.25
14	MP4C	Z	0	1.25
15	MP4C	Mx	.002	1.25
16	MP4C	X	7.04	4.75
17	MP4C	Z	0	4.75
18	MP4C	Mx	.002	4.75
19	MP2A	X	3.076	1
20	MP2A	Z	0	1
21	MP2A	Mx	-.002	1
22	MP2A	X	3.076	5
23	MP2A	Z	0	5
24	MP2A	Mx	-.002	5
25	MP2B	X	6.146	1
26	MP2B	Z	0	1
27	MP2B	Mx	-.002	1
28	MP2B	X	6.146	5
29	MP2B	Z	0	5
30	MP2B	Mx	-.002	5
31	MP2C	X	6.146	1
32	MP2C	Z	0	1
33	MP2C	Mx	.005	1
34	MP2C	X	6.146	5
35	MP2C	Z	0	5
36	MP2C	Mx	.005	5
37	MP2A	X	3.076	1
38	MP2A	Z	0	1
39	MP2A	Mx	-.002	1
40	MP2A	X	3.076	5
41	MP2A	Z	0	5
42	MP2A	Mx	-.002	5
43	MP2B	X	6.146	1
44	MP2B	Z	0	1
45	MP2B	Mx	.005	1
46	MP2B	X	6.146	5
47	MP2B	Z	0	5
48	MP2B	Mx	.005	5
49	MP2C	X	6.146	1
50	MP2C	Z	0	1
51	MP2C	Mx	-.002	1
52	MP2C	X	6.146	5
53	MP2C	Z	0	5
54	MP2C	Mx	-.002	5
55	MP1A	X	.461	5.5
56	MP1A	Z	0	5.5
57	MP1A	Mx	-.00023	5.5



**Member Point Loads (BLC 30 : Antenna Wm (90 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
58	MP1B	X	1.878	5.5
59	MP1B	Z	0	5.5
60	MP1B	Mx	.00047	5.5
61	MP1C	X	1.878	5.5
62	MP1C	Z	0	5.5
63	MP1C	Mx	.00047	5.5
64	MP1A	X	1.782	.5
65	MP1A	Z	0	.5
66	MP1A	Mx	-.000891	.5
67	MP1A	X	1.782	2.5
68	MP1A	Z	0	2.5
69	MP1A	Mx	-.000891	2.5
70	MP1B	X	2.631	.5
71	MP1B	Z	0	.5
72	MP1B	Mx	-.001	.5
73	MP1B	X	2.631	2.5
74	MP1B	Z	0	2.5
75	MP1B	Mx	-.001	2.5
76	MP1C	X	1.782	.5
77	MP1C	Z	0	.5
78	MP1C	Mx	-.000891	.5
79	MP1C	X	1.782	2.5
80	MP1C	Z	0	2.5
81	MP1C	Mx	-.000891	2.5
82	MP2A	X	2.746	3
83	MP2A	Z	0	3
84	MP2A	Mx	.001	3
85	MP2B	X	3.756	3
86	MP2B	Z	0	3
87	MP2B	Mx	-.000939	3
88	MP2C	X	3.756	3
89	MP2C	Z	0	3
90	MP2C	Mx	-.000939	3
91	MP3A	X	2.244	3
92	MP3A	Z	0	3
93	MP3A	Mx	.001	3
94	MP3B	X	3.631	3
95	MP3B	Z	0	3
96	MP3B	Mx	-.000908	3
97	MP3C	X	3.631	3
98	MP3C	Z	0	3
99	MP3C	Mx	-.000908	3
100	MP2A	X	1.271	0
101	MP2A	Z	0	0
102	MP2A	Mx	.001	0
103	MP2A	X	1.271	1
104	MP2A	Z	0	1
105	MP2A	Mx	.001	1
106	MP2A	X	1.271	0
107	MP2A	Z	0	0
108	MP2A	Mx	.001	0
109	MP2A	X	1.271	1
110	MP2A	Z	0	1
111	MP2A	Mx	.001	1

**Member Point Loads (BLC 31 : Antenna Wm (120 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
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**Member Point Loads (BLC 31 : Antenna Wm (120 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	4.959	1.25
2	MP4A	Z	2.863	1.25
3	MP4A	Mx	-.002	1.25
4	MP4A	X	4.959	4.75
5	MP4A	Z	2.863	4.75
6	MP4A	Mx	-.002	4.75
7	MP4B	X	6.666	1.25
8	MP4B	Z	3.848	1.25
9	MP4B	Mx	0	1.25
10	MP4B	X	6.666	4.75
11	MP4B	Z	3.848	4.75
12	MP4B	Mx	0	4.75
13	MP4C	X	4.959	1.25
14	MP4C	Z	2.863	1.25
15	MP4C	Mx	.002	1.25
16	MP4C	X	4.959	4.75
17	MP4C	Z	2.863	4.75
18	MP4C	Mx	.002	4.75
19	MP2A	X	3.55	1
20	MP2A	Z	2.05	1
21	MP2A	Mx	-.000579	1
22	MP2A	X	3.55	5
23	MP2A	Z	2.05	5
24	MP2A	Mx	-.000579	5
25	MP2B	X	6.208	1
26	MP2B	Z	3.584	1
27	MP2B	Mx	-.004	1
28	MP2B	X	6.208	5
29	MP2B	Z	3.584	5
30	MP2B	Mx	-.004	5
31	MP2C	X	3.55	1
32	MP2C	Z	2.05	1
33	MP2C	Mx	.003	1
34	MP2C	X	3.55	5
35	MP2C	Z	2.05	5
36	MP2C	Mx	.003	5
37	MP2A	X	3.55	1
38	MP2A	Z	2.05	1
39	MP2A	Mx	-.003	1
40	MP2A	X	3.55	5
41	MP2A	Z	2.05	5
42	MP2A	Mx	-.003	5
43	MP2B	X	6.208	1
44	MP2B	Z	3.584	1
45	MP2B	Mx	.004	1
46	MP2B	X	6.208	5
47	MP2B	Z	3.584	5
48	MP2B	Mx	.004	5
49	MP2C	X	3.55	1
50	MP2C	Z	2.05	1
51	MP2C	Mx	.00058	1
52	MP2C	X	3.55	5
53	MP2C	Z	2.05	5
54	MP2C	Mx	.00058	5
55	MP1A	X	.808	5.5
56	MP1A	Z	.467	5.5
57	MP1A	Mx	-.000404	5.5



**Member Point Loads (BLC 31 : Antenna Wm (120 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
58	MP1B	X	2.035	5.5
59	MP1B	Z	1.175	5.5
60	MP1B	Mx	0	5.5
61	MP1C	X	.808	5.5
62	MP1C	Z	.467	5.5
63	MP1C	Mx	.000404	5.5
64	MP1A	X	2.278	.5
65	MP1A	Z	1.315	.5
66	MP1A	Mx	-.001	.5
67	MP1A	X	2.278	2.5
68	MP1A	Z	1.315	2.5
69	MP1A	Mx	-.001	2.5
70	MP1B	X	3.747	.5
71	MP1B	Z	2.164	.5
72	MP1B	Mx	-.001	.5
73	MP1B	X	3.747	2.5
74	MP1B	Z	2.164	2.5
75	MP1B	Mx	-.001	2.5
76	MP1C	X	2.278	.5
77	MP1C	Z	1.315	.5
78	MP1C	Mx	-.001	.5
79	MP1C	X	2.278	2.5
80	MP1C	Z	1.315	2.5
81	MP1C	Mx	-.001	2.5
82	MP2A	X	2.67	3
83	MP2A	Z	1.541	3
84	MP2A	Mx	.001	3
85	MP2B	X	3.544	3
86	MP2B	Z	2.046	3
87	MP2B	Mx	0	3
88	MP2C	X	2.67	3
89	MP2C	Z	1.541	3
90	MP2C	Mx	-.001	3
91	MP3A	X	2.344	3
92	MP3A	Z	1.353	3
93	MP3A	Mx	.001	3
94	MP3B	X	3.544	3
95	MP3B	Z	2.046	3
96	MP3B	Mx	0	3
97	MP3C	X	2.344	3
98	MP3C	Z	1.353	3
99	MP3C	Mx	-.001	3
100	MP2A	X	.909	0
101	MP2A	Z	.525	0
102	MP2A	Mx	.000734	0
103	MP2A	X	.909	1
104	MP2A	Z	.525	1
105	MP2A	Mx	.000734	1
106	MP2A	X	.909	0
107	MP2A	Z	.525	0
108	MP2A	Mx	.001	0
109	MP2A	X	.909	1
110	MP2A	Z	.525	1
111	MP2A	Mx	.001	1

**Member Point Loads (BLC 32 : Antenna Wm (150 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
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**Member Point Loads (BLC 32 : Antenna Wm (150 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	3.52	1.25
2	MP4A	Z	6.097	1.25
3	MP4A	Mx	-.002	1.25
4	MP4A	X	3.52	4.75
5	MP4A	Z	6.097	4.75
6	MP4A	Mx	-.002	4.75
7	MP4B	X	3.52	1.25
8	MP4B	Z	6.097	1.25
9	MP4B	Mx	-.002	1.25
10	MP4B	X	3.52	4.75
11	MP4B	Z	6.097	4.75
12	MP4B	Mx	-.002	4.75
13	MP4C	X	2.534	1.25
14	MP4C	Z	4.389	1.25
15	MP4C	Mx	.003	1.25
16	MP4C	X	2.534	4.75
17	MP4C	Z	4.389	4.75
18	MP4C	Mx	.003	4.75
19	MP2A	X	3.073	1
20	MP2A	Z	5.322	1
21	MP2A	Mx	.002	1
22	MP2A	X	3.073	5
23	MP2A	Z	5.322	5
24	MP2A	Mx	.002	5
25	MP2B	X	3.073	1
26	MP2B	Z	5.322	1
27	MP2B	Mx	-.005	1
28	MP2B	X	3.073	5
29	MP2B	Z	5.322	5
30	MP2B	Mx	-.005	5
31	MP2C	X	1.538	1
32	MP2C	Z	2.664	1
33	MP2C	Mx	.002	1
34	MP2C	X	1.538	5
35	MP2C	Z	2.664	5
36	MP2C	Mx	.002	5
37	MP2A	X	3.073	1
38	MP2A	Z	5.322	1
39	MP2A	Mx	-.005	1
40	MP2A	X	3.073	5
41	MP2A	Z	5.322	5
42	MP2A	Mx	-.005	5
43	MP2B	X	3.073	1
44	MP2B	Z	5.322	1
45	MP2B	Mx	.002	1
46	MP2B	X	3.073	5
47	MP2B	Z	5.322	5
48	MP2B	Mx	.002	5
49	MP2C	X	1.538	1
50	MP2C	Z	2.664	1
51	MP2C	Mx	.002	1
52	MP2C	X	1.538	5
53	MP2C	Z	2.664	5
54	MP2C	Mx	.002	5
55	MP1A	X	.939	5.5
56	MP1A	Z	1.626	5.5
57	MP1A	Mx	-.00047	5.5



**Member Point Loads (BLC 32 : Antenna Wm (150 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
58	MP1B	X	.939	5.5
59	MP1B	Z	1.626	5.5
60	MP1B	Mx	-.000469	5.5
61	MP1C	X	.23	5.5
62	MP1C	Z	.399	5.5
63	MP1C	Mx	.00023	5.5
64	MP1A	X	2.164	.5
65	MP1A	Z	3.747	.5
66	MP1A	Mx	-.001	.5
67	MP1A	X	2.164	2.5
68	MP1A	Z	3.747	2.5
69	MP1A	Mx	-.001	2.5
70	MP1B	X	2.588	.5
71	MP1B	Z	4.482	.5
72	MP1B	Mx	0	.5
73	MP1B	X	2.588	2.5
74	MP1B	Z	4.482	2.5
75	MP1B	Mx	0	2.5
76	MP1C	X	2.164	.5
77	MP1C	Z	3.747	.5
78	MP1C	Mx	-.001	.5
79	MP1C	X	2.164	2.5
80	MP1C	Z	3.747	2.5
81	MP1C	Mx	-.001	2.5
82	MP2A	X	1.878	3
83	MP2A	Z	3.253	3
84	MP2A	Mx	.000939	3
85	MP2B	X	1.878	3
86	MP2B	Z	3.253	3
87	MP2B	Mx	.000939	3
88	MP2C	X	1.373	3
89	MP2C	Z	2.378	3
90	MP2C	Mx	-.001	3
91	MP3A	X	1.815	3
92	MP3A	Z	3.144	3
93	MP3A	Mx	.000908	3
94	MP3B	X	1.815	3
95	MP3B	Z	3.144	3
96	MP3B	Mx	.000908	3
97	MP3C	X	1.122	3
98	MP3C	Z	1.944	3
99	MP3C	Mx	-.001	3
100	MP2A	X	.302	0
101	MP2A	Z	.524	0
102	MP2A	Mx	.000127	0
103	MP2A	X	.302	1
104	MP2A	Z	.524	1
105	MP2A	Mx	.000127	1
106	MP2A	X	.302	0
107	MP2A	Z	.524	0
108	MP2A	Mx	.000477	0
109	MP2A	X	.302	1
110	MP2A	Z	.524	1
111	MP2A	Mx	.000477	1

**Member Point Loads (BLC 33 : Antenna Wm (180 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
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**Member Point Loads (BLC 33 : Antenna Wm (180 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	0	1.25
2	MP4A	Z	7.697	1.25
3	MP4A	Mx	0	1.25
4	MP4A	X	0	4.75
5	MP4A	Z	7.697	4.75
6	MP4A	Mx	0	4.75
7	MP4B	X	0	1.25
8	MP4B	Z	5.726	1.25
9	MP4B	Mx	-.002	1.25
10	MP4B	X	0	4.75
11	MP4B	Z	5.726	4.75
12	MP4B	Mx	-.002	4.75
13	MP4C	X	0	1.25
14	MP4C	Z	5.726	1.25
15	MP4C	Mx	.002	1.25
16	MP4C	X	0	4.75
17	MP4C	Z	5.726	4.75
18	MP4C	Mx	.002	4.75
19	MP2A	X	0	1
20	MP2A	Z	7.169	1
21	MP2A	Mx	.004	1
22	MP2A	X	0	5
23	MP2A	Z	7.169	5
24	MP2A	Mx	.004	5
25	MP2B	X	0	1
26	MP2B	Z	4.099	1
27	MP2B	Mx	-.003	1
28	MP2B	X	0	5
29	MP2B	Z	4.099	5
30	MP2B	Mx	-.003	5
31	MP2C	X	0	1
32	MP2C	Z	4.099	1
33	MP2C	Mx	.000579	1
34	MP2C	X	0	5
35	MP2C	Z	4.099	5
36	MP2C	Mx	.000579	5
37	MP2A	X	0	1
38	MP2A	Z	7.169	1
39	MP2A	Mx	-.004	1
40	MP2A	X	0	5
41	MP2A	Z	7.169	5
42	MP2A	Mx	-.004	5
43	MP2B	X	0	1
44	MP2B	Z	4.099	1
45	MP2B	Mx	-.000579	1
46	MP2B	X	0	5
47	MP2B	Z	4.099	5
48	MP2B	Mx	-.000579	5
49	MP2C	X	0	1
50	MP2C	Z	4.099	1
51	MP2C	Mx	.003	1
52	MP2C	X	0	5
53	MP2C	Z	4.099	5
54	MP2C	Mx	.003	5
55	MP1A	X	0	5.5
56	MP1A	Z	2.35	5.5
57	MP1A	Mx	0	5.5



**Member Point Loads (BLC 33 : Antenna Wm (180 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
58	MP1B	X	0	5.5
59	MP1B	Z	.933	5.5
60	MP1B	Mx	-.000404	5.5
61	MP1C	X	0	5.5
62	MP1C	Z	.933	5.5
63	MP1C	Mx	.000404	5.5
64	MP1A	X	0	.5
65	MP1A	Z	5.175	.5
66	MP1A	Mx	0	.5
67	MP1A	X	0	2.5
68	MP1A	Z	5.175	2.5
69	MP1A	Mx	0	2.5
70	MP1B	X	0	.5
71	MP1B	Z	4.327	.5
72	MP1B	Mx	.001	.5
73	MP1B	X	0	2.5
74	MP1B	Z	4.327	2.5
75	MP1B	Mx	.001	2.5
76	MP1C	X	0	.5
77	MP1C	Z	5.175	.5
78	MP1C	Mx	0	.5
79	MP1C	X	0	2.5
80	MP1C	Z	5.175	2.5
81	MP1C	Mx	0	2.5
82	MP2A	X	0	3
83	MP2A	Z	4.093	3
84	MP2A	Mx	0	3
85	MP2B	X	0	3
86	MP2B	Z	3.083	3
87	MP2B	Mx	.001	3
88	MP2C	X	0	3
89	MP2C	Z	3.083	3
90	MP2C	Mx	-.001	3
91	MP3A	X	0	3
92	MP3A	Z	4.093	3
93	MP3A	Mx	0	3
94	MP3B	X	0	3
95	MP3B	Z	2.706	3
96	MP3B	Mx	.001	3
97	MP3C	X	0	3
98	MP3C	Z	2.706	3
99	MP3C	Mx	-.001	3
100	MP2A	X	0	0
101	MP2A	Z	.383	0
102	MP2A	Mx	-.000128	0
103	MP2A	X	0	1
104	MP2A	Z	.383	1
105	MP2A	Mx	-.000128	1
106	MP2A	X	0	0
107	MP2A	Z	.383	0
108	MP2A	Mx	.000128	0
109	MP2A	X	0	1
110	MP2A	Z	.383	1
111	MP2A	Mx	.000128	1

**Member Point Loads (BLC 34 : Antenna Wm (210 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
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**Member Point Loads (BLC 34 : Antenna Wm (210 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	-3.52	1.25
2	MP4A	Z	6.097	1.25
3	MP4A	Mx	.002	1.25
4	MP4A	X	-3.52	4.75
5	MP4A	Z	6.097	4.75
6	MP4A	Mx	.002	4.75
7	MP4B	X	-2.534	1.25
8	MP4B	Z	4.389	1.25
9	MP4B	Mx	-.003	1.25
10	MP4B	X	-2.534	4.75
11	MP4B	Z	4.389	4.75
12	MP4B	Mx	-.003	4.75
13	MP4C	X	-3.52	1.25
14	MP4C	Z	6.097	1.25
15	MP4C	Mx	.002	1.25
16	MP4C	X	-3.52	4.75
17	MP4C	Z	6.097	4.75
18	MP4C	Mx	.002	4.75
19	MP2A	X	-3.073	1
20	MP2A	Z	5.322	1
21	MP2A	Mx	.005	1
22	MP2A	X	-3.073	5
23	MP2A	Z	5.322	5
24	MP2A	Mx	.005	5
25	MP2B	X	-1.538	1
26	MP2B	Z	2.664	1
27	MP2B	Mx	-.002	1
28	MP2B	X	-1.538	5
29	MP2B	Z	2.664	5
30	MP2B	Mx	-.002	5
31	MP2C	X	-3.073	1
32	MP2C	Z	5.322	1
33	MP2C	Mx	-.002	1
34	MP2C	X	-3.073	5
35	MP2C	Z	5.322	5
36	MP2C	Mx	-.002	5
37	MP2A	X	-3.073	1
38	MP2A	Z	5.322	1
39	MP2A	Mx	-.002	1
40	MP2A	X	-3.073	5
41	MP2A	Z	5.322	5
42	MP2A	Mx	-.002	5
43	MP2B	X	-1.538	1
44	MP2B	Z	2.664	1
45	MP2B	Mx	-.002	1
46	MP2B	X	-1.538	5
47	MP2B	Z	2.664	5
48	MP2B	Mx	-.002	5
49	MP2C	X	-3.073	1
50	MP2C	Z	5.322	1
51	MP2C	Mx	.005	1
52	MP2C	X	-3.073	5
53	MP2C	Z	5.322	5
54	MP2C	Mx	.005	5
55	MP1A	X	-.939	5.5
56	MP1A	Z	1.626	5.5
57	MP1A	Mx	.00047	5.5



**Member Point Loads (BLC 34 : Antenna Wm (210 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
58	MP1B	X	-.23	5.5
59	MP1B	Z	.399	5.5
60	MP1B	Mx	-.00023	5.5
61	MP1C	X	-.939	5.5
62	MP1C	Z	1.626	5.5
63	MP1C	Mx	.000469	5.5
64	MP1A	X	-2.164	.5
65	MP1A	Z	3.747	.5
66	MP1A	Mx	.001	.5
67	MP1A	X	-2.164	2.5
68	MP1A	Z	3.747	2.5
69	MP1A	Mx	.001	2.5
70	MP1B	X	-1.315	.5
71	MP1B	Z	2.278	.5
72	MP1B	Mx	.001	.5
73	MP1B	X	-1.315	2.5
74	MP1B	Z	2.278	2.5
75	MP1B	Mx	.001	2.5
76	MP1C	X	-2.164	.5
77	MP1C	Z	3.747	.5
78	MP1C	Mx	.001	.5
79	MP1C	X	-2.164	2.5
80	MP1C	Z	3.747	2.5
81	MP1C	Mx	.001	2.5
82	MP2A	X	-1.878	3
83	MP2A	Z	3.253	3
84	MP2A	Mx	-.000939	3
85	MP2B	X	-1.373	3
86	MP2B	Z	2.378	3
87	MP2B	Mx	.001	3
88	MP2C	X	-1.878	3
89	MP2C	Z	3.253	3
90	MP2C	Mx	-.000939	3
91	MP3A	X	-1.815	3
92	MP3A	Z	3.144	3
93	MP3A	Mx	-.000908	3
94	MP3B	X	-1.122	3
95	MP3B	Z	1.944	3
96	MP3B	Mx	.001	3
97	MP3C	X	-1.815	3
98	MP3C	Z	3.144	3
99	MP3C	Mx	-.000908	3
100	MP2A	X	-.302	0
101	MP2A	Z	.524	0
102	MP2A	Mx	-.000477	0
103	MP2A	X	-.302	1
104	MP2A	Z	.524	1
105	MP2A	Mx	-.000477	1
106	MP2A	X	-.302	0
107	MP2A	Z	.524	0
108	MP2A	Mx	-.000127	0
109	MP2A	X	-.302	1
110	MP2A	Z	.524	1
111	MP2A	Mx	-.000127	1

**Member Point Loads (BLC 35 : Antenna Wm (240 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
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**Member Point Loads (BLC 35 : Antenna Wm (240 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	-4.959	1.25
2	MP4A	Z	2.863	1.25
3	MP4A	Mx	.002	1.25
4	MP4A	X	-4.959	4.75
5	MP4A	Z	2.863	4.75
6	MP4A	Mx	.002	4.75
7	MP4B	X	-4.959	1.25
8	MP4B	Z	2.863	1.25
9	MP4B	Mx	-.002	1.25
10	MP4B	X	-4.959	4.75
11	MP4B	Z	2.863	4.75
12	MP4B	Mx	-.002	4.75
13	MP4C	X	-6.666	1.25
14	MP4C	Z	3.848	1.25
15	MP4C	Mx	0	1.25
16	MP4C	X	-6.666	4.75
17	MP4C	Z	3.848	4.75
18	MP4C	Mx	0	4.75
19	MP2A	X	-3.55	1
20	MP2A	Z	2.05	1
21	MP2A	Mx	.003	1
22	MP2A	X	-3.55	5
23	MP2A	Z	2.05	5
24	MP2A	Mx	.003	5
25	MP2B	X	-3.55	1
26	MP2B	Z	2.05	1
27	MP2B	Mx	-.00058	1
28	MP2B	X	-3.55	5
29	MP2B	Z	2.05	5
30	MP2B	Mx	-.00058	5
31	MP2C	X	-6.208	1
32	MP2C	Z	3.584	1
33	MP2C	Mx	-.004	1
34	MP2C	X	-6.208	5
35	MP2C	Z	3.584	5
36	MP2C	Mx	-.004	5
37	MP2A	X	-3.55	1
38	MP2A	Z	2.05	1
39	MP2A	Mx	.000579	1
40	MP2A	X	-3.55	5
41	MP2A	Z	2.05	5
42	MP2A	Mx	.000579	5
43	MP2B	X	-3.55	1
44	MP2B	Z	2.05	1
45	MP2B	Mx	-.003	1
46	MP2B	X	-3.55	5
47	MP2B	Z	2.05	5
48	MP2B	Mx	-.003	5
49	MP2C	X	-6.208	1
50	MP2C	Z	3.584	1
51	MP2C	Mx	.004	1
52	MP2C	X	-6.208	5
53	MP2C	Z	3.584	5
54	MP2C	Mx	.004	5
55	MP1A	X	-.808	5.5
56	MP1A	Z	.467	5.5
57	MP1A	Mx	.000404	5.5



**Member Point Loads (BLC 35 : Antenna Wm (240 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
58	MP1B	X	- .808	5.5
59	MP1B	Z	.467	5.5
60	MP1B	Mx	-.000404	5.5
61	MP1C	X	-2.035	5.5
62	MP1C	Z	1.175	5.5
63	MP1C	Mx	0	5.5
64	MP1A	X	-2.278	.5
65	MP1A	Z	1.315	.5
66	MP1A	Mx	.001	.5
67	MP1A	X	-2.278	2.5
68	MP1A	Z	1.315	2.5
69	MP1A	Mx	.001	2.5
70	MP1B	X	-1.544	.5
71	MP1B	Z	.891	.5
72	MP1B	Mx	.000891	.5
73	MP1B	X	-1.544	2.5
74	MP1B	Z	.891	2.5
75	MP1B	Mx	.000891	2.5
76	MP1C	X	-2.278	.5
77	MP1C	Z	1.315	.5
78	MP1C	Mx	.001	.5
79	MP1C	X	-2.278	2.5
80	MP1C	Z	1.315	2.5
81	MP1C	Mx	.001	2.5
82	MP2A	X	-2.67	3
83	MP2A	Z	1.541	3
84	MP2A	Mx	-.001	3
85	MP2B	X	-2.67	3
86	MP2B	Z	1.541	3
87	MP2B	Mx	.001	3
88	MP2C	X	-3.544	3
89	MP2C	Z	2.046	3
90	MP2C	Mx	0	3
91	MP3A	X	-2.344	3
92	MP3A	Z	1.353	3
93	MP3A	Mx	-.001	3
94	MP3B	X	-2.344	3
95	MP3B	Z	1.353	3
96	MP3B	Mx	.001	3
97	MP3C	X	-3.544	3
98	MP3C	Z	2.046	3
99	MP3C	Mx	0	3
100	MP2A	X	-.909	0
101	MP2A	Z	.525	0
102	MP2A	Mx	-.001	0
103	MP2A	X	-.909	1
104	MP2A	Z	.525	1
105	MP2A	Mx	-.001	1
106	MP2A	X	-.909	0
107	MP2A	Z	.525	0
108	MP2A	Mx	-.000734	0
109	MP2A	X	-.909	1
110	MP2A	Z	.525	1
111	MP2A	Mx	-.000734	1

**Member Point Loads (BLC 36 : Antenna Wm (270 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
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**Member Point Loads (BLC 36 : Antenna Wm (270 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	-5.069	1.25
2	MP4A	Z	0	1.25
3	MP4A	Mx	.003	1.25
4	MP4A	X	-5.069	4.75
5	MP4A	Z	0	4.75
6	MP4A	Mx	.003	4.75
7	MP4B	X	-7.04	1.25
8	MP4B	Z	0	1.25
9	MP4B	Mx	-.002	1.25
10	MP4B	X	-7.04	4.75
11	MP4B	Z	0	4.75
12	MP4B	Mx	-.002	4.75
13	MP4C	X	-7.04	1.25
14	MP4C	Z	0	1.25
15	MP4C	Mx	-.002	1.25
16	MP4C	X	-7.04	4.75
17	MP4C	Z	0	4.75
18	MP4C	Mx	-.002	4.75
19	MP2A	X	-3.076	1
20	MP2A	Z	0	1
21	MP2A	Mx	.002	1
22	MP2A	X	-3.076	5
23	MP2A	Z	0	5
24	MP2A	Mx	.002	5
25	MP2B	X	-6.146	1
26	MP2B	Z	0	1
27	MP2B	Mx	.002	1
28	MP2B	X	-6.146	5
29	MP2B	Z	0	5
30	MP2B	Mx	.002	5
31	MP2C	X	-6.146	1
32	MP2C	Z	0	1
33	MP2C	Mx	-.005	1
34	MP2C	X	-6.146	5
35	MP2C	Z	0	5
36	MP2C	Mx	-.005	5
37	MP2A	X	-3.076	1
38	MP2A	Z	0	1
39	MP2A	Mx	.002	1
40	MP2A	X	-3.076	5
41	MP2A	Z	0	5
42	MP2A	Mx	.002	5
43	MP2B	X	-6.146	1
44	MP2B	Z	0	1
45	MP2B	Mx	-.005	1
46	MP2B	X	-6.146	5
47	MP2B	Z	0	5
48	MP2B	Mx	-.005	5
49	MP2C	X	-6.146	1
50	MP2C	Z	0	1
51	MP2C	Mx	.002	1
52	MP2C	X	-6.146	5
53	MP2C	Z	0	5
54	MP2C	Mx	.002	5
55	MP1A	X	-.461	5.5
56	MP1A	Z	0	5.5
57	MP1A	Mx	.00023	5.5



**Member Point Loads (BLC 36 : Antenna Wm (270 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
58	MP1B	X	-1.878	5.5
59	MP1B	Z	0	5.5
60	MP1B	Mx	-0.0047	5.5
61	MP1C	X	-1.878	5.5
62	MP1C	Z	0	5.5
63	MP1C	Mx	-0.0047	5.5
64	MP1A	X	-1.782	.5
65	MP1A	Z	0	.5
66	MP1A	Mx	.000891	.5
67	MP1A	X	-1.782	2.5
68	MP1A	Z	0	2.5
69	MP1A	Mx	.000891	2.5
70	MP1B	X	-2.631	.5
71	MP1B	Z	0	.5
72	MP1B	Mx	.001	.5
73	MP1B	X	-2.631	2.5
74	MP1B	Z	0	2.5
75	MP1B	Mx	.001	2.5
76	MP1C	X	-1.782	.5
77	MP1C	Z	0	.5
78	MP1C	Mx	.000891	.5
79	MP1C	X	-1.782	2.5
80	MP1C	Z	0	2.5
81	MP1C	Mx	.000891	2.5
82	MP2A	X	-2.746	3
83	MP2A	Z	0	3
84	MP2A	Mx	-.001	3
85	MP2B	X	-3.756	3
86	MP2B	Z	0	3
87	MP2B	Mx	.000939	3
88	MP2C	X	-3.756	3
89	MP2C	Z	0	3
90	MP2C	Mx	.000939	3
91	MP3A	X	-2.244	3
92	MP3A	Z	0	3
93	MP3A	Mx	-.001	3
94	MP3B	X	-3.631	3
95	MP3B	Z	0	3
96	MP3B	Mx	.000908	3
97	MP3C	X	-3.631	3
98	MP3C	Z	0	3
99	MP3C	Mx	.000908	3
100	MP2A	X	-1.271	0
101	MP2A	Z	0	0
102	MP2A	Mx	-.001	0
103	MP2A	X	-1.271	1
104	MP2A	Z	0	1
105	MP2A	Mx	-.001	1
106	MP2A	X	-1.271	0
107	MP2A	Z	0	0
108	MP2A	Mx	-.001	0
109	MP2A	X	-1.271	1
110	MP2A	Z	0	1
111	MP2A	Mx	-.001	1

**Member Point Loads (BLC 37 : Antenna Wm (300 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
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**Member Point Loads (BLC 37 : Antenna Wm (300 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	-4.959	1.25
2	MP4A	Z	-2.863	1.25
3	MP4A	Mx	.002	1.25
4	MP4A	X	-4.959	4.75
5	MP4A	Z	-2.863	4.75
6	MP4A	Mx	.002	4.75
7	MP4B	X	-6.666	1.25
8	MP4B	Z	-3.848	1.25
9	MP4B	Mx	0	1.25
10	MP4B	X	-6.666	4.75
11	MP4B	Z	-3.848	4.75
12	MP4B	Mx	0	4.75
13	MP4C	X	-4.959	1.25
14	MP4C	Z	-2.863	1.25
15	MP4C	Mx	-.002	1.25
16	MP4C	X	-4.959	4.75
17	MP4C	Z	-2.863	4.75
18	MP4C	Mx	-.002	4.75
19	MP2A	X	-3.55	1
20	MP2A	Z	-2.05	1
21	MP2A	Mx	.000579	1
22	MP2A	X	-3.55	5
23	MP2A	Z	-2.05	5
24	MP2A	Mx	.000579	5
25	MP2B	X	-6.208	1
26	MP2B	Z	-3.584	1
27	MP2B	Mx	.004	1
28	MP2B	X	-6.208	5
29	MP2B	Z	-3.584	5
30	MP2B	Mx	.004	5
31	MP2C	X	-3.55	1
32	MP2C	Z	-2.05	1
33	MP2C	Mx	-.003	1
34	MP2C	X	-3.55	5
35	MP2C	Z	-2.05	5
36	MP2C	Mx	-.003	5
37	MP2A	X	-3.55	1
38	MP2A	Z	-2.05	1
39	MP2A	Mx	.003	1
40	MP2A	X	-3.55	5
41	MP2A	Z	-2.05	5
42	MP2A	Mx	.003	5
43	MP2B	X	-6.208	1
44	MP2B	Z	-3.584	1
45	MP2B	Mx	-.004	1
46	MP2B	X	-6.208	5
47	MP2B	Z	-3.584	5
48	MP2B	Mx	-.004	5
49	MP2C	X	-3.55	1
50	MP2C	Z	-2.05	1
51	MP2C	Mx	-.00058	1
52	MP2C	X	-3.55	5
53	MP2C	Z	-2.05	5
54	MP2C	Mx	-.00058	5
55	MP1A	X	-.808	5.5
56	MP1A	Z	-.467	5.5
57	MP1A	Mx	.000404	5.5



**Member Point Loads (BLC 37 : Antenna Wm (300 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
58	MP1B	X	-2.035	5.5
59	MP1B	Z	-1.175	5.5
60	MP1B	Mx	0	5.5
61	MP1C	X	-.808	5.5
62	MP1C	Z	-.467	5.5
63	MP1C	Mx	-.000404	5.5
64	MP1A	X	-2.278	.5
65	MP1A	Z	-1.315	.5
66	MP1A	Mx	.001	.5
67	MP1A	X	-2.278	2.5
68	MP1A	Z	-1.315	2.5
69	MP1A	Mx	.001	2.5
70	MP1B	X	-3.747	.5
71	MP1B	Z	-2.164	.5
72	MP1B	Mx	.001	.5
73	MP1B	X	-3.747	2.5
74	MP1B	Z	-2.164	2.5
75	MP1B	Mx	.001	2.5
76	MP1C	X	-2.278	.5
77	MP1C	Z	-1.315	.5
78	MP1C	Mx	.001	.5
79	MP1C	X	-2.278	2.5
80	MP1C	Z	-1.315	2.5
81	MP1C	Mx	.001	2.5
82	MP2A	X	-2.67	3
83	MP2A	Z	-1.541	3
84	MP2A	Mx	-.001	3
85	MP2B	X	-3.544	3
86	MP2B	Z	-2.046	3
87	MP2B	Mx	0	3
88	MP2C	X	-2.67	3
89	MP2C	Z	-1.541	3
90	MP2C	Mx	.001	3
91	MP3A	X	-2.344	3
92	MP3A	Z	-1.353	3
93	MP3A	Mx	-.001	3
94	MP3B	X	-3.544	3
95	MP3B	Z	-2.046	3
96	MP3B	Mx	0	3
97	MP3C	X	-2.344	3
98	MP3C	Z	-1.353	3
99	MP3C	Mx	.001	3
100	MP2A	X	-.909	0
101	MP2A	Z	-.525	0
102	MP2A	Mx	-.000734	0
103	MP2A	X	-.909	1
104	MP2A	Z	-.525	1
105	MP2A	Mx	-.000734	1
106	MP2A	X	-.909	0
107	MP2A	Z	-.525	0
108	MP2A	Mx	-.001	0
109	MP2A	X	-.909	1
110	MP2A	Z	-.525	1
111	MP2A	Mx	-.001	1

**Member Point Loads (BLC 38 : Antenna Wm (330 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
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**Member Point Loads (BLC 38 : Antenna Wm (330 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	-3.52	1.25
2	MP4A	Z	-6.097	1.25
3	MP4A	Mx	.002	1.25
4	MP4A	X	-3.52	4.75
5	MP4A	Z	-6.097	4.75
6	MP4A	Mx	.002	4.75
7	MP4B	X	-3.52	1.25
8	MP4B	Z	-6.097	1.25
9	MP4B	Mx	.002	1.25
10	MP4B	X	-3.52	4.75
11	MP4B	Z	-6.097	4.75
12	MP4B	Mx	.002	4.75
13	MP4C	X	-2.534	1.25
14	MP4C	Z	-4.389	1.25
15	MP4C	Mx	-.003	1.25
16	MP4C	X	-2.534	4.75
17	MP4C	Z	-4.389	4.75
18	MP4C	Mx	-.003	4.75
19	MP2A	X	-3.073	1
20	MP2A	Z	-5.322	1
21	MP2A	Mx	-.002	1
22	MP2A	X	-3.073	5
23	MP2A	Z	-5.322	5
24	MP2A	Mx	-.002	5
25	MP2B	X	-3.073	1
26	MP2B	Z	-5.322	1
27	MP2B	Mx	.005	1
28	MP2B	X	-3.073	5
29	MP2B	Z	-5.322	5
30	MP2B	Mx	.005	5
31	MP2C	X	-1.538	1
32	MP2C	Z	-2.664	1
33	MP2C	Mx	-.002	1
34	MP2C	X	-1.538	5
35	MP2C	Z	-2.664	5
36	MP2C	Mx	-.002	5
37	MP2A	X	-3.073	1
38	MP2A	Z	-5.322	1
39	MP2A	Mx	.005	1
40	MP2A	X	-3.073	5
41	MP2A	Z	-5.322	5
42	MP2A	Mx	.005	5
43	MP2B	X	-3.073	1
44	MP2B	Z	-5.322	1
45	MP2B	Mx	-.002	1
46	MP2B	X	-3.073	5
47	MP2B	Z	-5.322	5
48	MP2B	Mx	-.002	5
49	MP2C	X	-1.538	1
50	MP2C	Z	-2.664	1
51	MP2C	Mx	-.002	1
52	MP2C	X	-1.538	5
53	MP2C	Z	-2.664	5
54	MP2C	Mx	-.002	5
55	MP1A	X	-.939	5.5
56	MP1A	Z	-1.626	5.5
57	MP1A	Mx	.00047	5.5



**Member Point Loads (BLC 38 : Antenna Wm (330 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
58	MP1B	X	-.939	5.5
59	MP1B	Z	-1.626	5.5
60	MP1B	Mx	.000469	5.5
61	MP1C	X	-.23	5.5
62	MP1C	Z	-.399	5.5
63	MP1C	Mx	-.00023	5.5
64	MP1A	X	-2.164	.5
65	MP1A	Z	-3.747	.5
66	MP1A	Mx	.001	.5
67	MP1A	X	-2.164	2.5
68	MP1A	Z	-3.747	2.5
69	MP1A	Mx	.001	2.5
70	MP1B	X	-2.588	.5
71	MP1B	Z	-4.482	.5
72	MP1B	Mx	0	.5
73	MP1B	X	-2.588	2.5
74	MP1B	Z	-4.482	2.5
75	MP1B	Mx	0	2.5
76	MP1C	X	-2.164	.5
77	MP1C	Z	-3.747	.5
78	MP1C	Mx	.001	.5
79	MP1C	X	-2.164	2.5
80	MP1C	Z	-3.747	2.5
81	MP1C	Mx	.001	2.5
82	MP2A	X	-1.878	3
83	MP2A	Z	-3.253	3
84	MP2A	Mx	-.000939	3
85	MP2B	X	-1.878	3
86	MP2B	Z	-3.253	3
87	MP2B	Mx	-.000939	3
88	MP2C	X	-1.373	3
89	MP2C	Z	-2.378	3
90	MP2C	Mx	.001	3
91	MP3A	X	-1.815	3
92	MP3A	Z	-3.144	3
93	MP3A	Mx	-.000908	3
94	MP3B	X	-1.815	3
95	MP3B	Z	-3.144	3
96	MP3B	Mx	-.000908	3
97	MP3C	X	-1.122	3
98	MP3C	Z	-1.944	3
99	MP3C	Mx	.001	3
100	MP2A	X	-.302	0
101	MP2A	Z	-.524	0
102	MP2A	Mx	-.000127	0
103	MP2A	X	-.302	1
104	MP2A	Z	-.524	1
105	MP2A	Mx	-.000127	1
106	MP2A	X	-.302	0
107	MP2A	Z	-.524	0
108	MP2A	Mx	-.000477	0
109	MP2A	X	-.302	1
110	MP2A	Z	-.524	1
111	MP2A	Mx	-.000477	1

**Member Point Loads (BLC 77 : Lm1)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
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**Member Point Loads (BLC 77 : Lm1) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	M1	Y	-500	%91

**Member Point Loads (BLC 78 : Lm2)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	M1	Y	-500	%54

**Member Point Loads (BLC 79 : Lv1)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	M1	Y	-250	0

**Member Point Loads (BLC 80 : Lv2)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	M1	Y	-250	%50

**Member Point Loads (BLC 81 : Antenna Ev)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	Y	-.649	1.25
2	MP4A	My	-.000324	1.25
3	MP4A	Mz	0	1.25
4	MP4A	Y	-.649	4.75
5	MP4A	Mv	-.000324	4.75
6	MP4A	Mz	0	4.75
7	MP4B	Y	-.649	1.25
8	MP4B	My	.000162	1.25
9	MP4B	Mz	-.000281	1.25
10	MP4B	Y	-.649	4.75
11	MP4B	Mv	.000162	4.75
12	MP4B	Mz	-.000281	4.75
13	MP4C	Y	-.649	1.25
14	MP4C	My	.000162	1.25
15	MP4C	Mz	.000281	1.25
16	MP4C	Y	-.649	4.75
17	MP4C	Mv	.000162	4.75
18	MP4C	Mz	.000281	4.75
19	MP2A	Y	-.932	1
20	MP2A	My	-.000466	1
21	MP2A	Mz	.000544	1
22	MP2A	Y	-.932	5
23	MP2A	Mv	-.000466	5
24	MP2A	Mz	.000544	5
25	MP2B	Y	-.932	1
26	MP2B	My	-.000238	1
27	MP2B	Mz	-.000676	1
28	MP2B	Y	-.932	5
29	MP2B	Mv	-.000238	5
30	MP2B	Mz	-.000676	5
31	MP2C	Y	-.932	1
32	MP2C	My	.000704	1
33	MP2C	Mz	.000132	1
34	MP2C	Y	-.932	5
35	MP2C	Mv	.000704	5
36	MP2C	Mz	.000132	5
37	MP2A	Y	-.932	1
38	MP2A	My	-.000466	1
39	MP2A	Mz	-.000544	1



**Member Point Loads (BLC 81 : Antenna Ev) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
40	MP2A	Y	-.932	5
41	MP2A	My	-.000466	5
42	MP2A	Mz	-.000544	5
43	MP2B	Y	-.932	1
44	MP2B	My	.000704	1
45	MP2B	Mz	-.000132	1
46	MP2B	Y	-.932	5
47	MP2B	My	.000704	5
48	MP2B	Mz	-.000132	5
49	MP2C	Y	-.932	1
50	MP2C	My	-.000238	1
51	MP2C	Mz	.000676	1
52	MP2C	Y	-.932	5
53	MP2C	My	-.000238	5
54	MP2C	Mz	.000676	5
55	MP1A	Y	-.188	5.5
56	MP1A	My	-9.4e-5	5.5
57	MP1A	Mz	0	5.5
58	MP1B	Y	-.188	5.5
59	MP1B	My	4.7e-5	5.5
60	MP1B	Mz	-8.1e-5	5.5
61	MP1C	Y	-.188	5.5
62	MP1C	My	4.7e-5	5.5
63	MP1C	Mz	8.1e-5	5.5
64	MP1A	Y	-1.858	.5
65	MP1A	My	-.000929	.5
66	MP1A	Mz	0	.5
67	MP1A	Y	-1.858	2.5
68	MP1A	My	-.000929	2.5
69	MP1A	Mz	0	2.5
70	MP1B	Y	-1.858	.5
71	MP1B	My	-.000805	.5
72	MP1B	Mz	.000465	.5
73	MP1B	Y	-1.858	2.5
74	MP1B	My	-.000805	2.5
75	MP1B	Mz	.000465	2.5
76	MP1C	Y	-1.858	.5
77	MP1C	My	-.000929	.5
78	MP1C	Mz	0	.5
79	MP1C	Y	-1.858	2.5
80	MP1C	My	-.000929	2.5
81	MP1C	Mz	0	2.5
82	MP2A	Y	-3.601	3
83	MP2A	My	.002	3
84	MP2A	Mz	0	3
85	MP2B	Y	-3.601	3
86	MP2B	My	-.0009	3
87	MP2B	Mz	.002	3
88	MP2C	Y	-3.601	3
89	MP2C	My	-.0009	3
90	MP2C	Mz	-.002	3
91	MP3A	Y	-2.999	3
92	MP3A	My	.002	3
93	MP3A	Mz	0	3
94	MP3B	Y	-2.999	3
95	MP3B	My	-.00075	3
96	MP3B	Mz	.001	3



**Member Point Loads (BLC 81 : Antenna Ev) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
97	MP3C	Y	-2.999	3
98	MP3C	My	-.00075	3
99	MP3C	Mz	-.001	3
100	MP2A	Y	-.375	0
101	MP2A	My	.000375	0
102	MP2A	Mz	-.000125	0
103	MP2A	Y	-.375	1
104	MP2A	My	.000375	1
105	MP2A	Mz	-.000125	1
106	MP2A	Y	-.375	0
107	MP2A	My	.000375	0
108	MP2A	Mz	.000125	0
109	MP2A	Y	-.375	1
110	MP2A	My	.000375	1
111	MP2A	Mz	.000125	1

**Member Point Loads (BLC 82 : Antenna Eh (0 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	Z	-1.621	1.25
2	MP4A	Mx	0	1.25
3	MP4A	Z	-1.621	4.75
4	MP4A	Mx	0	4.75
5	MP4B	Z	-1.621	1.25
6	MP4B	Mx	.000702	1.25
7	MP4B	Z	-1.621	4.75
8	MP4B	Mx	.000702	4.75
9	MP4C	Z	-1.621	1.25
10	MP4C	Mx	-.000702	1.25
11	MP4C	Z	-1.621	4.75
12	MP4C	Mx	-.000702	4.75
13	MP2A	Z	-2.331	1
14	MP2A	Mx	-.001	1
15	MP2A	Z	-2.331	5
16	MP2A	Mx	-.001	5
17	MP2B	Z	-2.331	1
18	MP2B	Mx	.002	1
19	MP2B	Z	-2.331	5
20	MP2B	Mx	.002	5
21	MP2C	Z	-2.331	1
22	MP2C	Mx	-.000329	1
23	MP2C	Z	-2.331	5
24	MP2C	Mx	-.000329	5
25	MP2A	Z	-2.331	1
26	MP2A	Mx	.001	1
27	MP2A	Z	-2.331	5
28	MP2A	Mx	.001	5
29	MP2B	Z	-2.331	1
30	MP2B	Mx	.000329	1
31	MP2B	Z	-2.331	5
32	MP2B	Mx	.000329	5
33	MP2C	Z	-2.331	1
34	MP2C	Mx	-.002	1
35	MP2C	Z	-2.331	5
36	MP2C	Mx	-.002	5
37	MP1A	Z	-4.469	5.5
38	MP1A	Mx	0	5.5



**Member Point Loads (BLC 82 : Antenna Eh (0 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
39	MP1B	Z	-469	5.5
40	MP1B	Mx	.000203	5.5
41	MP1C	Z	-469	5.5
42	MP1C	Mx	-.000203	5.5
43	MP1A	Z	-4.645	.5
44	MP1A	Mx	0	.5
45	MP1A	Z	-4.645	2.5
46	MP1A	Mx	0	2.5
47	MP1B	Z	-4.645	.5
48	MP1B	Mx	-.001	.5
49	MP1B	Z	-4.645	2.5
50	MP1B	Mx	-.001	2.5
51	MP1C	Z	-4.645	.5
52	MP1C	Mx	0	.5
53	MP1C	Z	-4.645	2.5
54	MP1C	Mx	0	2.5
55	MP2A	Z	-9.003	3
56	MP2A	Mx	0	3
57	MP2B	Z	-9.003	3
58	MP2B	Mx	-.004	3
59	MP2C	Z	-9.003	3
60	MP2C	Mx	.004	3
61	MP3A	Z	-7.499	3
62	MP3A	Mx	0	3
63	MP3B	Z	-7.499	3
64	MP3B	Mx	-.003	3
65	MP3C	Z	-7.499	3
66	MP3C	Mx	.003	3
67	MP2A	Z	-.939	0
68	MP2A	Mx	.000313	0
69	MP2A	Z	-.939	1
70	MP2A	Mx	.000313	1
71	MP2A	Z	-.939	0
72	MP2A	Mx	-.000313	0
73	MP2A	Z	-.939	1
74	MP2A	Mx	-.000313	1

**Member Point Loads (BLC 83 : Antenna Eh (90 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	1.621	1.25
2	MP4A	Mx	-.000811	1.25
3	MP4A	X	1.621	4.75
4	MP4A	Mx	-.000811	4.75
5	MP4B	X	1.621	1.25
6	MP4B	Mx	.000405	1.25
7	MP4B	X	1.621	4.75
8	MP4B	Mx	.000405	4.75
9	MP4C	X	1.621	1.25
10	MP4C	Mx	.000405	1.25
11	MP4C	X	1.621	4.75
12	MP4C	Mx	.000405	4.75
13	MP2A	X	2.331	1
14	MP2A	Mx	-.001	1
15	MP2A	X	2.331	5
16	MP2A	Mx	-.001	5
17	MP2B	X	2.331	1



Company : Colliers Engineering & Design  
 Designer :  
 Job Number :  
 Model Name : 5000103482-VZW\_MT\_LO\_H

May 9, 2024  
 11:16 AM  
 Checked By: \_\_\_\_\_

**Member Point Loads (BLC 83 : Antenna Eh (90 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
18	MP2B	Mx	-.000595	1
19	MP2B	X	2.331	5
20	MP2B	Mx	-.000595	5
21	MP2C	X	2.331	1
22	MP2C	Mx	.002	1
23	MP2C	X	2.331	5
24	MP2C	Mx	.002	5
25	MP2A	X	2.331	1
26	MP2A	Mx	-.001	1
27	MP2A	X	2.331	5
28	MP2A	Mx	-.001	5
29	MP2B	X	2.331	1
30	MP2B	Mx	.002	1
31	MP2B	X	2.331	5
32	MP2B	Mx	.002	5
33	MP2C	X	2.331	1
34	MP2C	Mx	-.000595	1
35	MP2C	X	2.331	5
36	MP2C	Mx	-.000595	5
37	MP1A	X	.469	5.5
38	MP1A	Mx	-.000235	5.5
39	MP1B	X	.469	5.5
40	MP1B	Mx	.000117	5.5
41	MP1C	X	.469	5.5
42	MP1C	Mx	.000117	5.5
43	MP1A	X	4.645	.5
44	MP1A	Mx	-.002	.5
45	MP1A	X	4.645	2.5
46	MP1A	Mx	-.002	2.5
47	MP1B	X	4.645	.5
48	MP1B	Mx	-.002	.5
49	MP1B	X	4.645	2.5
50	MP1B	Mx	-.002	2.5
51	MP1C	X	4.645	.5
52	MP1C	Mx	-.002	.5
53	MP1C	X	4.645	2.5
54	MP1C	Mx	-.002	2.5
55	MP2A	X	9.003	3
56	MP2A	Mx	.005	3
57	MP2B	X	9.003	3
58	MP2B	Mx	-.002	3
59	MP2C	X	9.003	3
60	MP2C	Mx	-.002	3
61	MP3A	X	7.499	3
62	MP3A	Mx	.004	3
63	MP3B	X	7.499	3
64	MP3B	Mx	-.002	3
65	MP3C	X	7.499	3
66	MP3C	Mx	-.002	3
67	MP2A	X	.939	0
68	MP2A	Mx	.000939	0
69	MP2A	X	.939	1
70	MP2A	Mx	.000939	1
71	MP2A	X	.939	0
72	MP2A	Mx	.000939	0
73	MP2A	X	.939	1
74	MP2A	Mx	.000939	1

**Member Area Loads (BLC 39 : Structure D)**

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N23	N26A	N25	N22	Y	Two Way	-.005
2	N3	N6	N5	N2	Y	Two Way	-.005
3	N13	N16	N15	N12	Y	Two Way	-.005

**Member Area Loads (BLC 40 : Structure Di)**

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N23	N26A	N25	N22	Y	Two Way	-.013
2	N3	N6	N5	N2	Y	Two Way	-.013
3	N13	N16	N15	N12	Y	Two Way	-.013

**Member Area Loads (BLC 84 : Structure Ev)**

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N23	N26A	N25	N22	Y	Two Way	-.000222
2	N3	N6	N5	N2	Y	Two Way	-.000222
3	N13	N16	N15	N12	Y	Two Way	-.000222

**Member Area Loads (BLC 85 : Structure Eh (0 Deg))**

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N23	N26A	N25	N22	Z	Two Way	-.000555
2	N3	N6	N5	N2	Z	Two Way	-.000555
3	N13	N16	N15	N12	Z	Two Way	-.000555

**Member Area Loads (BLC 86 : Structure Eh (90 Deg))**

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N23	N26A	N25	N22	X	Two Way	.000555
2	N3	N6	N5	N2	X	Two Way	.000555
3	N13	N16	N15	N12	X	Two Way	.000555

**Envelope Joint Reactions**

Joint	X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC	
1	N7	max 1186.4...	12	2811.597	19	411.565	1	.828	1	1.246	12	1.294	4
2		min -1188....	6	-187.337	1	-499.694	7	-7.641	19	-1.298	6	-1.28	10
3	N17	max 775.827	10	2666.71	15	1234.566	2	3.649	14	1.232	8	6.295	15
4		min -838.1...	4	-159.77	9	-1146.2...	8	-.779	8	-1.329	2	-.702	9
5	N27	max 878.962	10	2657.854	23	1190.799	12	3.748	24	1.215	12	.638	5
6		min -793.3...	4	-178.383	5	-1146.1...	6	-.979	6	-1.27	6	-6.211	23
7	N127	max 476.429	10	1091.767	1	1303.957	1	0	30	0	28	0	28
8		min -409.7...	4	-684.973	7	-897.005	7	0	23	0	10	0	10
9	N133	max 1053.9...	9	1035.752	9	501.675	2	0	12	0	12	0	18
10		min -717.9...	3	-599.304	3	-808.392	8	0	6	0	6	0	1
11	N137A	max 697.025	11	1041.381	5	526.693	12	0	2	0	8	0	1
12		min -1116....	5	-611.899	11	-671.177	6	0	8	0	2	0	19
13	Totals:	max 4545.2...	10	8949.587	13	4759.895	1						
14		min -4545....	4	3024.046	7	-4759.9...	7						

**Joint Reactions (By Combination)**

LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]	
1	1	N7	-1.213	-187.337	411.565	.828	-.024	.122
2	1	N17	437.082	1201.695	1084.887	2.657	-.823	2.264
3	1	N27	-440.845	1219.046	1054.03	2.799	.732	-2.27
4	1	N127	73.254	1091.767	1303.957	0	0	0



**Joint Reactions (By Combination) (Continued)**

LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]	
5	1	N133	-39.191	-174.987	448.195	0	0	0
6	1	N137A	-29.08	-126.083	457.26	0	0	0
7	1	Totals:	.006	3024.101	4759.895			
8	1	COG (ft):	X: .007	Y: 1.641	Z: -4.063			
9	2	N7	-1185.542	20.529	270.049	.206	-1.296	.89
10	2	N17	267.958	1585.641	1234.566	2.785	-1.329	3.542
11	2	N27	-342.968	800.259	672.473	2.189	.013	-1.206
12	2	N127	-170.234	901.581	1081.502	0	0	0
13	2	N133	-475.709	-498.964	501.675	0	0	0
14	2	N137A	-426.248	215.045	280.185	0	0	0
15	2	Totals:	-2332.743	3024.09	4040.45			
16	2	COG (ft):	X: .007	Y: 1.641	Z: -4.063			
17	3	N7	-1156.16	412.494	39.471	-.966	-.866	1.247
18	3	N17	-403.397	1715.433	352.58	2.296	-.177	4.301
19	3	N27	-579.021	404.105	849.796	1.422	.615	-.302
20	3	N127	-347.821	558.674	662.563	0	0	0
21	3	N133	-717.921	-599.304	343.453	0	0	0
22	3	N137A	-743.189	532.673	31.231	0	0	0
23	3	Totals:	-3947.51	3024.075	2279.095			
24	3	COG (ft):	X: .007	Y: 1.641	Z: -4.063			
25	4	N7	-821.199	816.726	-67.709	-2.157	-.21	1.294
26	4	N17	-838.134	1559.302	-684.024	1.435	1.012	4.246
27	4	N27	-793.399	26.364	774.307	.462	1.078	.469
28	4	N127	-409.756	194.802	205.636	0	0	0
29	4	N133	-655.226	-435.916	52.314	0	0	0
30	4	N137A	-1027.526	862.789	-280.543	0	0	0
31	4	Totals:	-4545.24	3024.068	-.019			
32	4	COG (ft):	X: .007	Y: 1.641	Z: -4.063			
33	5	N7	-1161.65	1262.337	-163.985	-3.477	-.865	1.169
34	5	N17	-636.657	1231.746	-811.011	.593	.602	3.586
35	5	N27	-344.562	-178.383	-236.693	-.509	-.088	.638
36	5	N127	-367.042	-202.247	-290.413	0	0	0
37	5	N133	-391.654	-130.773	-260.028	0	0	0
38	5	N137A	-1116.461	1041.381	-557.737	0	0	0
39	5	Totals:	-4018.025	3024.062	-2319.867			
40	5	COG (ft):	X: .007	Y: 1.641	Z: -4.063			
41	6	N7	-1188.509	1689.217	-373.035	-4.769	-1.298	.71
42	6	N17	-411.338	822.748	-636.15	-.105	.015	2.6
43	6	N27	354.614	-41.882	-1146.196	-.979	-1.27	-.113
44	6	N127	-230.483	-562.922	-739.885	0	0	0
45	6	N133	-43.427	220.055	-544.601	0	0	0
46	6	N137A	-854.311	896.835	-671.177	0	0	0
47	6	Totals:	-2373.454	3024.051	-4111.044			
48	6	COG (ft):	X: .007	Y: 1.641	Z: -4.063			
49	7	N7	-5.849	1853.24	-499.694	-5.279	-.032	-.105
50	7	N17	-505.062	367.054	-994.109	-.642	.726	1.358
51	7	N27	532.675	340.038	-1006.181	-.758	-.785	-1.308
52	7	N127	-6.435	-684.973	-897.005	0	0	0
53	7	N133	382.206	602.881	-757.302	0	0	0
54	7	N137A	-397.528	545.805	-605.658	0	0	0
55	7	Totals:	.008	3024.046	-4759.948			
56	7	COG (ft):	X: .007	Y: 1.641	Z: -4.063			
57	8	N7	1174.129	1653.951	-360.745	-4.679	1.236	-.872
58	8	N17	-332.728	-22.709	-1146.216	-.779	1.232	.073
59	8	N27	434.006	757.108	-621.229	-.153	-.064	-2.369
60	8	N127	242.237	-500.609	-671.03	0	0	0
61	8	N133	815.51	932.093	-808.392	0	0	0



**Joint Reactions (By Combination) (Continued)**

LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]	
62	8	N137A	-396	204.222	-432.891	0	0	0
63	8	Totals:	2332.757	3024.056	-4040.502			
64	8	COG (ft):	X: .007	Y: 1.641	Z: -4.063			
65	9	N7	1146.906	1268.352	-133.709	-3.521	.807	-1.235
66	9	N17	341.321	-159.77	-261.502	-.297	.077	-.702
67	9	N27	667.882	1155.391	-797.775	.617	-.664	-3.282
68	9	N127	418.394	-163.011	-247.265	0	0	0
69	9	N133	1053.916	1035.752	-653.702	0	0	0
70	9	N137A	319.105	-112.643	-185.195	0	0	0
71	9	Totals:	3947.524	3024.071	-2279.147			
72	9	COG (ft):	X: .007	Y: 1.641	Z: -4.063			
73	10	N7	815.391	862.528	-27.759	-2.324	.154	-1.28
74	10	N17	775.827	3.484	779.095	.575	-1.115	-.633
75	10	N27	878.962	1528.206	-723.392	1.576	-1.126	-4.043
76	10	N127	476.429	200.263	211.722	0	0	0
77	10	N133	991.099	867.719	-367.322	0	0	0
78	10	N137A	607.545	-438.121	127.622	0	0	0
79	10	Totals:	4545.254	3024.079	-.033			
80	10	COG (ft):	X: .007	Y: 1.641	Z: -4.063			
81	11	N7	1158.566	418.59	70.241	-1.01	.812	-1.152
82	11	N17	571.133	336.213	906.702	1.416	-.704	.039
83	11	N27	430.499	1724.63	283.848	2.533	.037	-4.194
84	11	N127	429.598	598.626	705.294	0	0	0
85	11	N133	731.219	557.925	-56.15	0	0	0
86	11	N137A	697.025	-611.899	409.878	0	0	0
87	11	Totals:	4018.04	3024.085	2319.814			
88	11	COG (ft):	X: .007	Y: 1.641	Z: -4.063			
89	12	N7	1186.425	-14.831	283.596	.297	1.246	-.697
90	12	N17	343.238	743.748	729.961	2.113	-.114	1.017
91	12	N27	-264.972	1594.891	1190.799	3.009	1.215	-3.457
92	12	N127	291.563	965.505	1149.22	0	0	0
93	12	N133	386.504	206.538	230.722	0	0	0
94	12	N137A	430.71	-471.755	526.693	0	0	0
95	12	Totals:	2373.468	3024.096	4110.991			
96	12	COG (ft):	X: .007	Y: 1.641	Z: -4.063			
97	13	N7	-21.606	2172.304	41.054	-5.735	-.091	.047
98	13	N17	81.163	2501.534	435.857	3.612	-.378	5.649
99	13	N27	-41.034	2498.48	344.867	3.691	.134	-5.606
100	13	N127	137.16	840.184	928.155	0	0	0
101	13	N133	381.124	462.531	-251.563	0	0	0
102	13	N137A	-536.787	474.554	-7.585	0	0	0
103	13	Totals:	.019	8949.587	1490.786			
104	13	COG (ft):	X: .006	Y: 1.576	Z: -4.076			
105	14	N7	-356.1	2230.601	2.301	-5.909	-.434	.29
106	14	N17	22.649	2622.899	458.298	3.649	-.492	6.051
107	14	N27	-33.135	2361.811	252.376	3.503	-.039	-5.252
108	14	N127	56.751	783.787	860.507	0	0	0
109	14	N133	245.276	361.247	-234.004	0	0	0
110	14	N137A	-670.855	589.239	-65.734	0	0	0
111	14	Totals:	-735.414	8949.584	1273.744			
112	14	COG (ft):	X: .006	Y: 1.576	Z: -4.076			
113	15	N7	-374.792	2351.174	-63.551	-6.268	-.343	.416
114	15	N17	-165.278	2666.71	203.958	3.499	-.178	6.295
115	15	N27	-100.934	2228.398	289.255	3.248	.112	-4.945
116	15	N127	-.323	675.475	726.124	0	0	0
117	15	N133	169.149	329.173	-283.055	0	0	0
118	15	N137A	-781.917	698.65	-148.744	0	0	0



**Joint Reactions (By Combination) (Continued)**

LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]	
119	15	Totals:	-1254.094	8949.58	723.987			
120	15	COG (ft):	X: .006	Y: 1.576	Z: -4.076			
121	16	N7	-301.41	2486.224	-102.879	-6.666	-.185	.439
122	16	N17	-290.83	2619.343	-91.66	3.226	.145	6.287
123	16	N27	-148.661	2109.914	248.092	2.937	.215	-4.711
124	16	N127	-20.342	554.215	573.146	0	0	0
125	16	N133	185.23	379.632	-377.912	0	0	0
126	16	N137A	-869.319	800.249	-248.868	0	0	0
127	16	Totals:	-1445.332	8949.577	-.082			
128	16	COG (ft):	X: .006	Y: 1.576	Z: -4.076			
129	17	N7	-381.64	2630.86	-138.959	-7.094	-.348	.389
130	17	N17	-245.019	2512.715	-148.153	2.95	.057	6.077
131	17	N27	-18.024	2052.317	-39.244	2.639	-.102	-4.679
132	17	N127	-6.675	426.5	413.034	0	0	0
133	17	N133	269.184	479.185	-482.181	0	0	0
134	17	N137A	-886.823	847.998	-337.255	0	0	0
135	17	Totals:	-1268.997	8949.575	-732.758			
136	17	COG (ft):	X: .006	Y: 1.576	Z: -4.076			
137	18	N7	-365.452	2761.17	-197.995	-7.486	-.443	.234
138	18	N17	-181.511	2377.717	-117.835	2.721	-.084	5.751
139	18	N27	178.385	2095.367	-298.083	2.491	-.422	-4.914
140	18	N127	38.84	316.869	276.472	0	0	0
141	18	N133	386.431	596.355	-575.419	0	0	0
142	18	N137A	-800.71	802.093	-375.96	0	0	0
143	18	Totals:	-744.017	8949.571	-1288.819			
144	18	COG (ft):	X: .006	Y: 1.576	Z: -4.076			
145	19	N7	-31.38	2811.597	-230.531	-7.641	-.101	-.022
146	19	N17	-192.598	2231.09	-210.152	2.552	.093	5.349
147	19	N27	242.416	2212.852	-279.753	2.549	-.316	-5.285
148	19	N127	112.979	280.342	229.731	0	0	0
149	19	N133	525.457	719.874	-643.475	0	0	0
150	19	N137A	-656.854	693.816	-356.773	0	0	0
151	19	Totals:	.02	8949.57	-1490.953			
152	19	COG (ft):	X: .006	Y: 1.576	Z: -4.076			
153	20	N7	302.699	2754.031	-192.03	-7.469	.241	-.264
154	20	N17	-133.759	2109.17	-232.812	2.515	.207	4.946
155	20	N27	234.444	2349.415	-186.911	2.737	-.143	-5.639
156	20	N127	193.885	336.215	297.711	0	0	0
157	20	N133	660.96	821.685	-660.8	0	0	0
158	20	N137A	-522.774	579.057	-299.068	0	0	0
159	20	Totals:	735.454	8949.573	-1273.911			
160	20	COG (ft):	X: .006	Y: 1.576	Z: -4.076			
161	21	N7	321.553	2634.052	-126.539	-7.111	.15	-.391
162	21	N17	54.451	2064.693	21.785	2.665	-.108	4.701
163	21	N27	301.992	2482.983	-223.684	2.992	-.294	-5.947
164	21	N127	250.837	444.003	432.583	0	0	0
165	21	N133	736.701	854.079	-612.092	0	0	0
166	21	N137A	-411.402	469.767	-216.207	0	0	0
167	21	Totals:	1254.134	8949.578	-724.154			
168	21	COG (ft):	X: .006	Y: 1.576	Z: -4.076			
169	22	N7	248.532	2498.912	-87.342	-6.713	-.007	-.413
170	22	N17	179.98	2112.681	317.806	2.938	-.432	4.71
171	22	N27	349.394	2600.976	-182.656	3.302	-.397	-6.18
172	22	N127	270.447	565.177	585.767	0	0	0
173	22	N133	720.614	803.185	-517.72	0	0	0
174	22	N137A	-323.594	368.649	-115.94	0	0	0
175	22	Totals:	1445.372	8949.58	-.085			



**Joint Reactions (By Combination) (Continued)**

LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
176	22	COG (ft):	X: .006	Y: 1.576	Z: -4.076		
177	23	N7	329.054	2354.393	-51.079	-6.285	.156
178	23	N17	133.847	2219.817	374.387	3.214	-.343
179	23	N27	218.794	2657.854	104.305	3.6	-.08
180	23	N127	256.368	693.057	745.611	0	0
181	23	N133	637.049	703.154	-413.583	0	0
182	23	N137A	-306.076	321.309	-27.05	0	0
183	23	Totals:	1269.036	8949.583	732.591		
184	23	COG (ft):	X: .006	Y: 1.576	Z: -4.076		
185	24	N7	312.926	2223.469	8.375	-5.892	.25
186	24	N17	70.067	2354.739	343.865	3.443	-.201
187	24	N27	22.756	2615.408	362.912	3.748	.24
188	24	N127	210.753	803.284	881.637	0	0
189	24	N133	520.166	585.894	-320.097	0	0
190	24	N137A	-392.611	366.792	11.961	0	0
191	24	Totals:	744.057	8949.586	1288.652		
192	24	COG (ft):	X: .006	Y: 1.576	Z: -4.076		
193	25	N7	189.212	1292.655	22.158	-3.508	.202
194	25	N17	92.14	1225.325	313.469	.828	-.465
195	25	N27	13.969	427.039	157.596	.573	.026
196	25	N127	-67.908	268.123	299.013	0	0
197	25	N133	97.009	238.533	-347.625	0	0
198	25	N137A	-324.394	322.359	-147.151	0	0
199	25	Totals:	.028	3774.035	297.46		
200	25	COG (ft):	X: 1.167	Y: 1.315	Z: -3.248		
201	26	N7	115.366	1305.455	13.419	-3.546	.122
202	26	N17	81.496	1249.278	322.903	.836	-.496
203	26	N27	20.078	400.919	133.608	.535	-.019
204	26	N127	-83.333	256.45	284.857	0	0
205	26	N133	69.73	218.21	-344.285	0	0
206	26	N137A	-349.105	343.723	-158.01	0	0
207	26	Totals:	-145.768	3774.034	252.493		
208	26	COG (ft):	X: 1.167	Y: 1.315	Z: -3.248		
209	27	N7	117.185	1329.566	-.837	-3.618	.149
210	27	N17	39.442	1257.627	267.655	.805	-.424
211	27	N27	5.352	376.071	144.647	.487	.019
212	27	N127	-94.422	235.297	258.421	0	0
213	27	N133	54.639	211.877	-353.994	0	0
214	27	N137A	-368.888	363.595	-173.48	0	0
215	27	Totals:	-246.693	3774.033	142.412		
216	27	COG (ft):	X: 1.167	Y: 1.315	Z: -3.248		
217	28	N7	138.12	1354.673	-7.458	-3.692	.19
218	28	N17	12.216	1247.815	202.704	.751	-.35
219	28	N27	-8.005	352.522	139.962	.427	.048
220	28	N127	-98.247	212.677	229.709	0	0
221	28	N133	58.542	222.202	-371.993	0	0
222	28	N137A	-386.679	384.144	-192.957	0	0
223	28	Totals:	-284.054	3774.033	-.033		
224	28	COG (ft):	X: 1.167	Y: 1.315	Z: -3.248		
225	29	N7	116.901	1382.411	-13.487	-3.774	.15
226	29	N17	24.824	1227.245	194.68	.699	-.375
227	29	N27	19.99	339.913	76.913	.366	-.025
228	29	N127	-95.58	187.895	198.686	0	0
229	29	N133	74.957	241.391	-391.422	0	0
230	29	N137A	-392.191	395.178	-210.396	0	0
231	29	Totals:	-251.099	3774.032	-145.026		
232	29	COG (ft):	X: 1.167	Y: 1.315	Z: -3.248		



**Joint Reactions (By Combination) (Continued)**

LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]	
233	30	N7	115.268	1409.176	-26.639	-3.855	.123	1.047
234	30	N17	38.913	1201.767	205.558	.655	-.412	3.369
235	30	N27	63.573	348.269	20.19	.337	-.099	-.806
236	30	N127	-87.067	165.255	170.739	0	0	0
237	30	N133	96.717	263.319	-409.22	0	0	0
238	30	N137A	-375.718	386.245	-217.598	0	0	0
239	30	Totals:	-148.314	3774.032	-256.969			
240	30	COG (ft):	X: 1.167	Y: 1.315	Z: -3.248			
241	31	N7	189.31	1419.467	-34.581	-3.888	.202	.996
242	31	N17	33.005	1173.429	183.187	.622	-.367	3.292
243	31	N27	74.665	371.997	28.9	.35	-.068	-.881
244	31	N127	-73.198	157.562	161.087	0	0	0
245	31	N133	123.428	287.153	-422.657	0	0	0
246	31	N137A	-347.182	364.424	-213.463	0	0	0
247	31	Totals:	.028	3774.031	-297.528			
248	31	COG (ft):	X: 1.167	Y: 1.315	Z: -3.248			
249	32	N7	263.139	1406.7	-25.852	-3.85	.281	.949
250	32	N17	43.663	1149.453	173.744	.614	-.336	3.213
251	32	N27	68.552	398.11	52.902	.388	-.023	-.947
252	32	N127	-57.753	169.213	175.256	0	0	0
253	32	N133	150.696	307.497	-425.988	0	0	0
254	32	N137A	-322.471	343.059	-202.622	0	0	0
255	32	Totals:	145.825	3774.032	-252.56			
256	32	COG (ft):	X: 1.167	Y: 1.315	Z: -3.248			
257	33	N7	261.329	1382.614	-11.61	-3.778	.254	.926
258	33	N17	85.727	1141.075	229.002	.644	-.408	3.165
259	33	N27	83.27	422.966	41.866	.437	-.061	-1.004
260	33	N127	-46.669	190.345	201.711	0	0	0
261	33	N133	165.772	313.844	-416.292	0	0	0
262	33	N137A	-302.678	323.189	-187.156	0	0	0
263	33	Totals:	246.75	3774.033	-142.479			
264	33	COG (ft):	X: 1.167	Y: 1.315	Z: -3.248			
265	34	N7	240.407	1357.501	-4.993	-3.704	.213	.923
266	34	N17	112.952	1150.915	293.969	.698	-.483	3.169
267	34	N27	96.615	446.496	46.546	.497	-.09	-1.052
268	34	N127	-42.859	212.963	230.431	0	0	0
269	34	N133	161.868	303.5	-398.313	0	0	0
270	34	N137A	-284.872	302.659	-167.675	0	0	0
271	34	Totals:	284.11	3774.033	-.034			
272	34	COG (ft):	X: 1.167	Y: 1.315	Z: -3.248			
273	35	N7	261.637	1329.77	1.042	-3.622	.254	.931
274	35	N17	100.331	1171.506	301.995	.751	-.457	3.211
275	35	N27	68.62	459.073	109.58	.557	-.017	-1.063
276	35	N127	-45.543	237.749	261.444	0	0	0
277	35	N133	145.468	284.293	-378.888	0	0	0
278	35	N137A	-279.358	291.643	-150.216	0	0	0
279	35	Totals:	251.155	3774.034	144.958			
280	35	COG (ft):	X: 1.167	Y: 1.315	Z: -3.248			
281	36	N7	263.274	1302.98	14.21	-3.541	.281	.96
282	36	N17	86.231	1196.978	291.11	.794	-.42	3.272
283	36	N27	25.052	450.743	166.294	.586	.057	-1.016
284	36	N127	-54.061	260.413	289.37	0	0	0
285	36	N133	123.721	262.362	-361.081	0	0	0
286	36	N137A	-295.847	300.558	-143.001	0	0	0
287	36	Totals:	148.37	3774.035	256.902			
288	36	COG (ft):	X: 1.167	Y: 1.315	Z: -3.248			
289	37	N7	32.306	1454.463	-21.16	-4.154	.004	.192



**Joint Reactions (By Combination) (Continued)**

LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]	
290	37	N17	-8.102	824.255	138.208	.983	-.147	1.948
291	37	N27	31.618	766.066	91.275	.975	.025	-1.778
292	37	N127	13.847	281.158	313.878	0	0	0
293	37	N133	177.818	218.433	-159.766	0	0	0
294	37	N137A	-247.479	229.689	-64.977	0	0	0
295	37	Totals:	.009	3774.064	297.458			
296	37	COG (ft):	X: .119	Y: 1.315	Z: -3.248			
297	38	N7	-41.602	1467.187	-29.923	-4.192	-.076	.24
298	38	N17	-18.761	848.4	147.647	.992	-.179	2.028
299	38	N27	37.763	739.952	67.303	.937	-.02	-1.712
300	38	N127	-1.517	269.466	299.848	0	0	0
301	38	N133	150.623	198.027	-156.488	0	0	0
302	38	N137A	-272.294	251.033	-75.897	0	0	0
303	38	Totals:	-145.788	3774.063	252.491			
304	38	COG (ft):	X: .119	Y: 1.315	Z: -3.248			
305	39	N7	-39.839	1491.444	-44.219	-4.265	-.049	.262
306	39	N17	-60.799	856.72	92.439	.961	-.106	2.076
307	39	N27	23.076	715.129	78.342	.889	.017	-1.655
308	39	N127	-12.578	248.241	273.498	0	0	0
309	39	N133	135.596	191.659	-166.253	0	0	0
310	39	N137A	-292.169	270.869	-91.397	0	0	0
311	39	Totals:	-246.713	3774.063	142.41			
312	39	COG (ft):	X: .119	Y: 1.315	Z: -3.248			
313	40	N7	-19.001	1516.712	-50.871	-4.339	-.008	.265
314	40	N17	-87.972	846.758	27.527	.907	-.032	2.072
315	40	N27	9.777	691.657	73.637	.829	.046	-1.607
316	40	N127	-16.345	225.56	244.844	0	0	0
317	40	N133	139.517	202.006	-184.283	0	0	0
318	40	N137A	-310.05	291.37	-110.889	0	0	0
319	40	Totals:	-284.073	3774.062	-.035			
320	40	COG (ft):	X: .119	Y: 1.315	Z: -3.248			
321	41	N7	-40.34	1544.478	-56.925	-4.422	-.049	.257
322	41	N17	-75.29	826.13	19.56	.855	-.058	2.031
323	41	N27	37.823	679.102	10.552	.769	-.027	-1.597
324	41	N127	-13.573	200.747	213.871	0	0	0
325	41	N133	155.879	221.216	-203.748	0	0	0
326	41	N137A	-315.618	302.389	-128.337	0	0	0
327	41	Totals:	-251.118	3774.062	-145.027			
328	41	COG (ft):	X: .119	Y: 1.315	Z: -3.248			
329	42	N7	-42.021	1571.3	-70.105	-4.503	-.076	.229
330	42	N17	-61.136	800.614	30.526	.811	-.094	1.969
331	42	N27	81.41	687.437	-46.212	.74	-.1	-1.644
332	42	N127	-5.008	178.07	185.918	0	0	0
333	42	N133	177.537	243.161	-221.582	0	0	0
334	42	N137A	-299.115	293.478	-135.517	0	0	0
335	42	Totals:	-148.333	3774.061	-256.971			
336	42	COG (ft):	X: .119	Y: 1.315	Z: -3.248			
337	43	N7	32.065	1581.765	-78.058	-4.535	.003	.178
338	43	N17	-67.005	772.092	8.218	.777	-.05	1.891
339	43	N27	92.469	711.128	-37.532	.753	-.07	-1.718
340	43	N127	8.816	170.341	176.168	0	0	0
341	43	N133	204.145	267.054	-235.005	0	0	0
342	43	N137A	-270.481	271.681	-131.32	0	0	0
343	43	Totals:	.009	3774.061	-297.53			
344	43	COG (ft):	X: .119	Y: 1.315	Z: -3.248			
345	44	N7	105.956	1569.075	-69.305	-4.497	.083	.13
346	44	N17	-56.333	747.924	-1.23	.769	-.018	1.811

**Joint Reactions (By Combination) (Continued)**

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
347	44	N27	86.321	737.235	-13.547	.791	-.025	-1.784
348	44	N127	24.201	182.011	190.211	0	0	0
349	44	N133	231.327	287.481	-238.274	0	0	0
350	44	N137A	-245.666	250.336	-120.416	0	0	0
351	44	Totals:	145.805	3774.061	-252.562			
352	44	COG (ft):	X: .119	Y: 1.315	Z: -3.248			
353	45	N7	104.201	1544.842	-55.023	-4.424	.056	.107
354	45	N17	-14.284	739.575	53.988	.799	-.09	1.764
355	45	N27	100.999	762.066	-24.582	.839	-.063	-1.841
356	45	N127	35.257	203.216	216.58	0	0	0
357	45	N133	246.339	293.861	-228.523	0	0	0
358	45	N137A	-225.782	230.503	-104.921	0	0	0
359	45	Totals:	246.73	3774.062	-142.481			
360	45	COG (ft):	X: .119	Y: 1.315	Z: -3.248			
361	46	N7	83.376	1519.568	-48.376	-4.35	.015	.104
362	46	N17	12.888	749.566	118.916	.853	-.165	1.768
363	46	N27	114.285	785.519	-19.882	.899	-.091	-1.889
364	46	N127	39.008	225.894	245.243	0	0	0
365	46	N133	242.418	283.496	-210.512	0	0	0
366	46	N137A	-207.884	210.019	-85.425	0	0	0
367	46	Totals:	284.091	3774.063	-.036			
368	46	COG (ft):	X: .119	Y: 1.315	Z: -3.248			
369	47	N7	104.726	1491.808	-42.314	-4.268	.056	.112
370	47	N17	.193	770.214	126.885	.906	-.139	1.809
371	47	N27	86.24	798.041	43.189	.959	-.019	-1.899
372	47	N127	36.22	250.712	276.206	0	0	0
373	47	N133	226.07	264.268	-191.051	0	0	0
374	47	N137A	-202.314	199.019	-67.957	0	0	0
375	47	Totals:	251.136	3774.063	144.956			
376	47	COG (ft):	X: .119	Y: 1.315	Z: -3.248			
377	48	N7	106.411	1464.961	-29.118	-4.187	.083	.141
378	48	N17	-13.971	795.724	115.911	.95	-.102	1.871
379	48	N27	42.668	789.732	99.942	.989	.055	-1.853
380	48	N127	27.649	273.413	304.137	0	0	0
381	48	N133	204.426	242.32	-173.209	0	0	0
382	48	N137A	-218.833	207.913	-60.764	0	0	0
383	48	Totals:	148.351	3774.064	256.9			
384	48	COG (ft):	X: .119	Y: 1.315	Z: -3.248			
385	49	N7	-173.472	1109.162	-33.604	-3.037	-.246	-.596
386	49	N17	-79.362	553.551	9.577	.713	-.007	1.255
387	49	N27	-8.423	1005.256	105.709	.883	.12	-2.622
388	49	N127	176.161	227.052	246.108	0	0	0
389	49	N133	265.39	293.282	-185.913	0	0	0
390	49	N137A	-180.296	210.751	-141.912	0	0	0
391	49	Totals:	-.002	3399.053	-.036			
392	49	COG (ft):	X: -.78	Y: 1.46	Z: -3.61			
393	50	N7	-1.057	1180.454	-48.435	-3.304	-.029	.008
394	50	N17	-38.964	776.611	52.723	.943	-.063	1.828
395	50	N27	52.462	772.42	29.185	.95	-.017	-1.811
396	50	N127	33.547	212.325	228.76	0	0	0
397	50	N133	187.04	230.181	-174.586	0	0	0
398	50	N137A	-233.02	227.077	-87.678	0	0	0
399	50	Totals:	.007	3399.068	-.031			
400	50	COG (ft):	X: .006	Y: 1.46	Z: -3.61			
401	51	N7	-3.633	980.753	-54.878	-2.631	-.033	.009
402	51	N17	-38.884	915.237	54.451	1.181	-.058	2.125
403	51	N27	52.498	909.842	29.348	1.196	-.03	-2.101



**Joint Reactions (By Combination) (Continued)**

LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
404	51 N127	39.259	229.828	245.628	0	0	0
405	51 N133	201.928	248.301	-184.872	0	0	0
406	51 N137A	-251.16	244.125	-89.707	0	0	0
407	51 Totals:	.008	3528.085	-.031			
408	51 COG (ft):	X: .007	Y: 1.641	Z: -4.063			

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

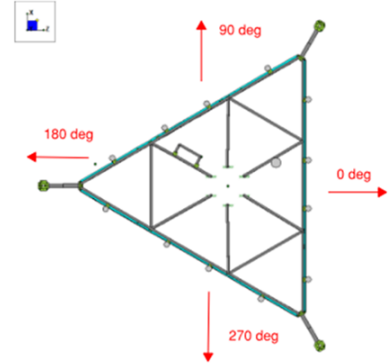
Member	Shape	Code	Loc[ft]	LC	Shear...	Loc[ft]	Dir	LC	phi*Pnc [lb]	phi*Pnt...	phi*Mn...	phi*Mn...Cb	Eqn	
1	M1	L3X3X4	.923	7.125	20	.232	7.125	z	19	3807.342	46656	1.688	2.787	1...H2-1
2	M2	L3X3X4	.127	0	31	.027	3.938	z	31	33090.986	46656	1.688	3.756	2...H2-1
3	M3	L3X3X4	.523	3.708	18	.026	3.708	z	17	14055.104	46656	1.688	3.137	1...H2-1
4	M4	L3X3X4	.097	3.938	7	.014	1.969	y	1	33090.986	46656	1.688	3.756	1...H2-1
5	M5	HSS4X4X3	.627	0	18	.159	0	y	9	106228.524	106812	12.662	12.662	1...H1-1b
6	M8	L3X3X4	.930	7.125	16	.227	7.125	z	15	3807.342	46656	1.688	2.779	1...H2-1
7	M9	L3X3X4	.091	0	14	.013	1.969	z	3	33090.986	46656	1.688	3.725	1...H2-1
8	M10	L3X3X4	.518	3.708	14	.025	3.708	z	17	14055.104	46656	1.688	3.134	1...H2-1
9	M11	L3X3X4	.095	3.938	3	.019	0	z	30	33090.986	46656	1.688	3.756	1...H2-1
10	M12	HSS4X4X3	.598	0	14	.162	0	y	5	106228.524	106812	12.662	12.662	1...H1-1b
11	M15	L3X3X4	.911	7.125	24	.225	7.125	z	23	3807.342	46656	1.688	2.782	1...H2-1
12	M16	L3X3X4	.098	0	12	.014	1.969	y	12	33090.986	46656	1.688	3.756	1...H2-1
13	M17	L3X3X4	.509	3.708	22	.025	3.708	z	21	14055.104	46656	1.688	3.14	1...H2-1
14	M18	L3X3X4	.094	3.938	12	.013	1.969	y	5	33090.986	46656	1.688	3.756	2...H2-1
15	M19	HSS4X4X3	.585	0	22	.163	0	y	1	106228.524	106812	12.662	12.662	1...H1-1b
16	M28	HSS4.5X4...	.274	0	19	.081	0	y	29	119847.027	121302	16.25	16.25	1...H1-1b
17	M29	HSS4.5X4...	.258	0	15	.082	0	y	29	119847.027	121302	16.25	16.25	1...H1-1b
18	M30	HSS4.5X4...	.257	0	23	.080	0	y	1	119847.027	121302	16.25	16.25	1...H1-1b
19	M31	PIPE 2.0	.423	7.177	7	.151	1.242		13	5602.903	32130	1.872	1.872	1...H1-1b
20	M32	PIPE 2.0	.389	7.177	15	.163	1.242		22	5602.903	32130	1.872	1.872	1...H1-1b
21	M33	PIPE 2.0	.396	7.177	11	.159	1.242		18	5602.903	32130	1.872	1.872	1...H1-1b
22	M34	PIPE 2.0	.011	.983	15	.066	0		13	30673.717	32130	1.872	1.872	1...H1-1b
23	M35	PIPE 2.0	.011	.983	23	.078	1.967		22	30673.717	32130	1.872	1.872	1...H1-1b
24	M36	PIPE 2.0	.011	.983	19	.068	0		18	30673.717	32130	1.872	1.872	1...H1-1b
25	MP1A	PIPE 2.0	.269	4.875	20	.169	4.875		13	20866.733	32130	1.872	1.872	1...H1-1b
26	MP2A	PIPE 2.5	.179	4.938	20	.066	5.125		3	37773.818	50715	3.596	3.596	1...H1-1b
27	MP3A	PIPE 2.0	.328	4.875	19	.199	4.875		14	20866.733	32130	1.872	1.872	1...H1-1b
28	MP4A	PIPE 2.0	.228	4.875	18	.185	4.875		13	20866.733	32130	1.872	1.872	1...H1-1b
29	MP1C	PIPE 2.0	.253	4.875	16	.180	2.438		20	20866.733	32130	1.872	1.872	1...H1-1b
30	MP2C	PIPE 2.5	.169	4.938	16	.068	5.125		5	37773.818	50715	3.596	3.596	1...H1-1b
31	MP3C	PIPE 2.0	.324	4.875	15	.210	4.875		23	20866.733	32130	1.872	1.872	1...H1-1b
32	MP4C	PIPE 2.0	.306	4.875	26	.193	4.875		21	20866.733	32130	1.872	1.872	1...H1-1b
33	MP1B	PIPE 2.0	.266	4.875	24	.186	4.875		16	20866.733	32130	1.872	1.872	1...H1-1b
34	MP2B	PIPE 2.5	.167	4.938	24	.073	5.125		7	37773.818	50715	3.596	3.596	1...H1-1b
35	MP3B	PIPE 2.0	.320	4.875	23	.208	4.875		18	20866.733	32130	1.872	1.872	1...H1-1b
36	MP4B	PIPE 2.0	.222	4.875	22	.190	4.875		17	20866.733	32130	1.872	1.872	1...H1-1b
37	M76	L2.5x2.5x3	.108	2.455	12	.011	0	z	16	13721.806	29192.4	.873	1.635	1...H2-1
38	M77	L2.5x2.5x3	.129	2.699	2	.010	0	y	22	11271.244	29192.4	.873	1.582	1...H2-1
39	M78	L2.5x2.5x3	.106	2.455	8	.011	0	z	23	13721.806	29192.4	.873	1.635	1...H2-1
40	M79	L2.5x2.5x3	.130	2.755	20	.011	5.398	y	18	11271.244	29192.4	.873	1.582	1...H2-1
41	M80	L2.5x2.5x3	.102	2.455	4	.012	0	z	19	13721.806	29192.4	.873	1.635	1...H2-1
42	M81	L2.5x2.5x3	.130	2.699	6	.010	5.398	y	14	11271.244	29192.4	.873	1.582	1...H2-1



**I. Mount-to-Tower Connection Check**

Custom Orientation Required

Nodes (labeled per Risa)	Orientation (per graphic of typical platform)
N7	0
N27	240
N47	120
N127	0
N137A	240
N133	120



Tower Connection Bolt Checks

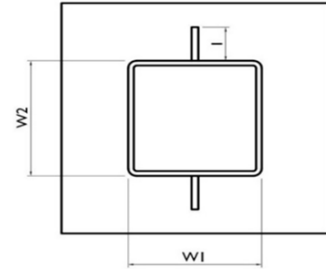
Tower Connection Baseplate Checks

Tower Connection Weld Checks

Yes

Weld Shape:  
 Weld Stiffener Configuration:  
 Stiffener Notch Present?  
 Stiffener Length, l (in):  
 Stiffener Spacing/Width, s (in):  
 Weld Size (1/16 in):  
 W1 (in):  
 W2 (in):  
 Weld Total Length (in):  
 $Z_x$  (in<sup>3</sup>/in):  
 $Z_y$  (in<sup>3</sup>/in):  
 $J_p$  (in<sup>4</sup>/in):  
 $c_x$  (in)  
 $c_y$  (in)  
 Required combined strength (kip/in):  
 Weld Capacity (kip/in):  
 Weld Utilization:

Rectangle
(1) Stiffener on top/bottom
No
3.75
4
4
4
31.00
63.56
21.33
328.15
5.75
5.75
1.44
5.57
<b>25.9%</b>



Date: **October 24, 2023**



Crown Castle  
2000 Corporate Drive  
Canonsburg, PA 15317  
(724) 416-2000

**Subject:** **Structural Analysis Report**

**Carrier Designation:** **Verizon Wireless Co-Locate**  
**Site Number:** 5000103482  
**Site Name:** ROCKY HILL CT

**Crown Castle Designation:** **BU Number:** 806374  
**Site Name:** HRT 081 943236  
**JDE Job Number:** 2103532  
**Work Order Number:** 2265260  
**Order Number:** 658824 Rev. 0

**Engineering Firm Designation:** **Crown Castle Project Number:** 2265260

**Site Data:** **NORTH STREET, ROCKY HILL, HARTFORD County, CT**  
**Latitude 41° 38' 23.2", Longitude -72° 42' 6.83"**  
**140 Foot - Monopole Tower**

Crown Castle is pleased to submit this “**Structural Analysis Report**” to determine the structural integrity of the above-mentioned tower.

The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

LC5: Proposed Equipment Configuration

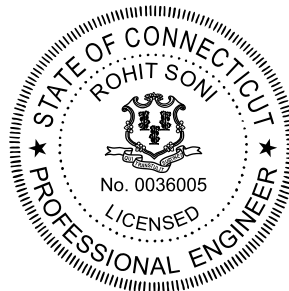
**Sufficient Capacity - 95.3%**

This analysis utilizes an ultimate 3-second gust wind speed of 118 mph as required by the 2022 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Structural analysis prepared by: Matthew Schmitt

Respectfully submitted by:

Rohit Soni, P.E.  
Senior Project Engineer



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## 1) INTRODUCTION

This tower is a 140 ft Monopole tower designed by Valmont. The tower has been modified multiple times to accommodate additional loading.

## 2) ANALYSIS CRITERIA

<b>TIA-222 Revision:</b>	TIA-222-H
<b>Risk Category:</b>	II
<b>Wind Speed:</b>	118 mph
<b>Exposure Category:</b>	C
<b>Topographic Factor:</b>	1
<b>Ice Thickness:</b>	1.5 in
<b>Wind Speed with Ice:</b>	50 mph
<b>Service Wind Speed:</b>	60 mph

**Table 1 - Proposed Equipment Configuration**

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
140.0	144.0	1	gps	GPS_A w/ Mount Pipe	-	-
135.0	138.0	1	raycap	RVZDC-6627-PF-48	8	1-5/8
		1	rfs celwave	DB-T1-6Z-8AB-0Z		
		3	samsung telecommunications	MT6407-77A w/ Mount Pipe		
	137.0	3	andrew	LNx-6513DS-A1M w/ Mount Pipe		
		6	commscope	NHH-65B-R2B w/ Mount Pipe		
	136.0	2	kaelus	BSF0020F3V1		
		3	samsung telecommunications	RFV01U-D1A		
		3	samsung telecommunications	RFV01U-D2A		
	135.0	3	samsung telecommunications	TME-RT4401-48A w/ Mount Pipe		
		1	tower mounts	Platform Mount [LP 1201-1_KCKR-HR-1]		

**Table 2 - Other Considered Equipment**

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
123.0	124.0	3	ericsson	AIR6449 B41_T-MOBILE w/ Mount Pipe	3	1-5/8
		3	ericsson	RADIO 4460 B2/B25 B66_TMO		
		3	ericsson	Radio 4480_TMOV2		
		3	rfs celwave	APXVAALL24_43-U-NA20_TMO w/ Mount Pipe		
	123.0	1		RMPQ-396		
		1	tower mounts	Miscellaneous [NA 507-1]		

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
112.0	112.0	3	kathrein	742 213		
		1	tower mounts	Pipe Mount [PM 602-3]		

### 3) ANALYSIS PROCEDURE

**Table 3 - Documents Provided**

Document	Reference	Source
4-GEOTECHNICAL REPORTS	1072833	CCISITES
4-POST-MODIFICATION INSPECTION	7022189	CCISITES
4-POST-MODIFICATION INSPECTION	3676411	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	1072832	CCISITES
4-TOWER MANUFACTURER DRAWINGS	262409	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	6720736	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	3306335	CCISITES

#### 3.1) Analysis Method

tnxTower (version 8.1.4.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A. When applicable, Crown Castle has calculated and provided the effective area for panel antennas using approved methods following the intent of the TIA-222 standard.

tnxTower was used to determine the loads on the modified structure. Additional calculations were performed to determine the stresses in the reinforcing elements. These calculations are presented in Appendix C.

#### 3.2) Assumptions

- 1) Tower and structures were maintained in accordance with the TIA-222 Standard.
- 2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.

This analysis may be affected if any assumptions are not valid or have been made in error. Crown Castle should be notified to determine the effect on the structural integrity of the tower.

#### 4) ANALYSIS RESULTS

**Table 4 - Section Capacity (Summary)**

Section No.	Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
L1	140 - 135	Pole	TP16.937x16x0.1875	Pole	0.4%	Pass
L2	135 - 130	Pole	TP17.875x16.937x0.1875	Pole	14.7%	Pass
L3	130 - 125	Pole	TP18.812x17.875x0.1875	Pole	24.7%	Pass
L4	125 - 120	Pole	TP19.75x18.812x0.1875	Pole	39.1%	Pass
L5	120 - 115	Pole	TP20.687x19.75x0.1875	Pole	52.7%	Pass
L6	115 - 110	Pole	TP21.625x20.687x0.1875	Pole	65.3%	Pass
L7	110 - 105	Pole	TP22.562x21.625x0.1875	Pole	77.2%	Pass
L8	105 - 100	Pole	TP23.5x22.562x0.1875	Pole	88.1%	Pass
L9	100 - 96.5	Pole	TP24.156x23.5x0.1875	Pole	95.3%	Pass
L10	96.5 - 96.25	Pole + Reinf.	TP24.203x24.156x0.3188	Reinf. 1 Bolt-Shaft Bearing	89.4%	Pass
L11	96.25 - 95	Pole + Reinf.	TP24.437x24.203x0.3125	Reinf. 1 Tension Rupture	89.5%	Pass
L12	95 - 94.75	Pole + Reinf.	TP24.484x24.437x0.45	Reinf. 1 Tension Rupture	64.5%	Pass
L13	94.75 - 89.75	Pole + Reinf.	TP25.421x24.484x0.4375	Reinf. 1 Tension Rupture	70.7%	Pass
L14	89.75 - 89.5	Pole + Reinf.	TP26.28x25.421x0.4375	Reinf. 1 Bolt-Shaft Bearing	72.7%	Pass
L15	89.5 - 84.17	Pole	TP26.093x25.093x0.3125	Pole	59.0%	Pass
L16	84.17 - 79.17	Pole	TP27.031x26.093x0.3125	Pole	62.5%	Pass
L17	79.17 - 74.17	Pole	TP27.969x27.031x0.3125	Pole	65.7%	Pass
L18	74.17 - 69.17	Pole	TP28.907x27.969x0.3125	Pole	68.7%	Pass
L19	69.17 - 64.17	Pole	TP29.845x28.907x0.3125	Pole	71.5%	Pass
L20	64.17 - 59.17	Pole	TP30.783x29.845x0.3125	Pole	74.2%	Pass
L21	59.17 - 54.17	Pole	TP31.722x30.783x0.3125	Pole	76.7%	Pass
L22	54.17 - 49.17	Pole	TP32.66x31.722x0.3125	Pole	79.1%	Pass
L23	49.17 - 44.17	Pole	TP33.598x32.66x0.3125	Pole	81.4%	Pass
L24	44.17 - 40	Pole	TP35.38x33.598x0.3125	Pole	83.2%	Pass
L25	40 - 33.67	Pole	TP34.941x33.755x0.375	Pole	69.0%	Pass
L26	33.67 - 28.67	Pole	TP35.878x34.941x0.375	Pole	70.4%	Pass
L27	28.67 - 23.67	Pole	TP36.815x35.878x0.375	Pole	71.7%	Pass
L28	23.67 - 18.67	Pole	TP37.752x36.815x0.375	Pole	73.0%	Pass
L29	18.67 - 13.67	Pole	TP38.689x37.752x0.375	Pole	74.2%	Pass
L30	13.67 - 8.67	Pole	TP39.625x38.689x0.375	Pole	75.4%	Pass
L31	8.67 - 3.67	Pole	TP40.562x39.625x0.375	Pole	76.6%	Pass
L32	3.67 - 0	Pole	TP41.25x40.562x0.375	Pole	77.4%	Pass
					Summary	
				Pole	95.3%	Pass
				Reinforcement	89.5%	Pass
				Overall	95.3%	Pass

**Table 5 - Tower Component Stresses vs. Capacity - LC5**

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Anchor Rods	0	82.0	Pass
1	Base Plate	0	74.0	Pass
1	Base Foundation (Structure)	0	32.6	Pass
1	Base Foundation (Soil Interaction)	0	91.5	Pass
<b>Structure Rating (max from all components) =</b>				<b>95.3%</b>

Notes:

- 1) See additional documentation in "Appendix C – Additional Calculations" for calculations supporting the % capacity consumed.

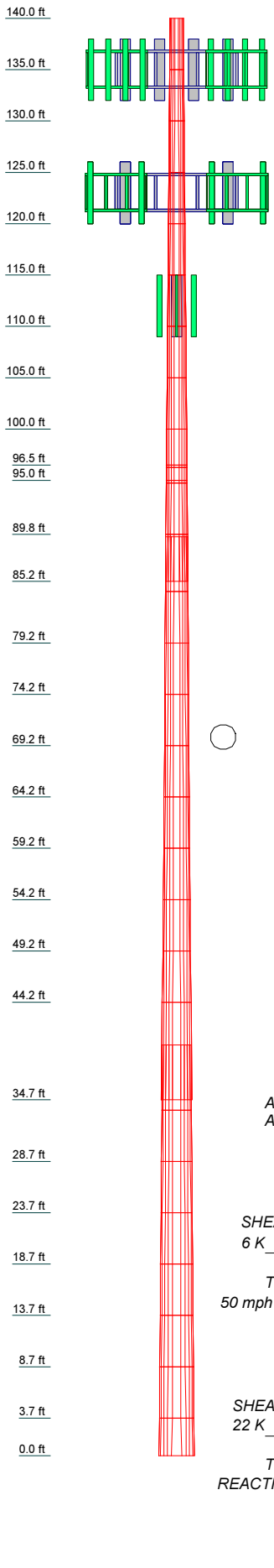
#### 4.1) Recommendations

The tower and its foundation have sufficient capacity to carry the proposed load configuration. No modifications are required at this time.



**APPENDIX A**  
**TNXTOWER OUTPUT**

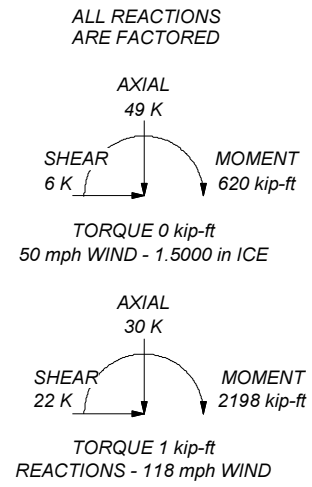
Section	Length (ft)	Number of Sides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (K)
1	5.00	12	0.1875	4.33	16.0000	16.9374	A572-65	0.2
2	5.00	12	0.1875	4.33	16.9374	17.8749	A572-65	0.2
3	5.00	12	0.1875	4.33	17.8749	18.8123	A572-65	0.2
4	5.00	12	0.1875	4.33	18.8123	19.7498	A572-65	0.2
5	5.00	12	0.1875	4.33	19.7498	20.6872	A572-65	0.2
6	5.00	12	0.1875	4.33	20.6872	21.6247	A572-65	0.2
7	5.00	12	0.1875	4.33	21.6247	22.5621	A572-65	0.2
8	5.00	12	0.1875	4.33	22.5621	23.4995	A572-65	0.2
9	5.00	12	0.1875	4.33	23.4995	24.4369	A572-65	0.2
10	5.00	12	0.1875	4.33	24.4369	25.3743	A572-65	0.2
11	5.00	12	0.1875	4.33	25.3743	26.3117	A572-65	0.2
12	5.00	12	0.1875	4.33	26.3117	27.2491	A572-65	0.2
13	5.00	12	0.1875	4.33	27.2491	28.1865	A572-65	0.2
14	5.00	12	0.1875	4.33	28.1865	29.1239	A572-65	0.2
15	5.00	12	0.1875	4.33	29.1239	30.0613	A572-65	0.2
16	5.00	12	0.1875	4.33	30.0613	31.0000	A572-65	0.2
17	5.00	12	0.1875	4.33	31.0000	31.9387	A572-65	0.2
18	5.00	12	0.1875	4.33	31.9387	32.8774	A572-65	0.2
19	5.00	12	0.1875	4.33	32.8774	33.8161	A572-65	0.2
20	5.00	12	0.1875	4.33	33.8161	34.7548	A572-65	0.2
21	5.00	12	0.1875	4.33	34.7548	35.6935	A572-65	0.2
22	5.00	12	0.1875	4.33	35.6935	36.6322	A572-65	0.2
23	5.00	12	0.1875	4.33	36.6322	37.5709	A572-65	0.2
24	5.00	12	0.1875	4.33	37.5709	38.5096	A572-65	0.2
25	5.00	12	0.1875	4.33	38.5096	39.4483	A572-65	0.2
26	5.00	12	0.1875	4.33	39.4483	40.3870	A572-65	0.2
27	5.00	12	0.1875	4.33	40.3870	41.3257	A572-65	0.2
28	5.00	12	0.1875	4.33	41.3257	42.2644	A572-65	0.2
29	5.00	12	0.1875	4.33	42.2644	43.2031	A572-65	0.2
30	5.00	12	0.1875	4.33	43.2031	44.1418	A572-65	0.2
31	5.00	12	0.1875	4.33	44.1418	45.0805	A572-65	0.2
32	3.67	12	0.3750	5.33	45.0805	46.0192	A572-65	0.6



MATERIAL STRENGTH					
GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

**TOWER DESIGN NOTES**

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for Exposure C to the TIA-222-H Standard.
3. Tower designed for a 118 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 mph basic wind with 1.50 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING 95.3%



**Crown Castle**  
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 Canonsburg, PA 15317  
 Phone: (724) 416-2000  
 FAX:

Job: <b>BU 806374</b>			
Project:			
Client: Crown Castle	Drawn by: Matthew Schmitt	App'd:	
Code: TIA-222-H	Date: 10/24/23	Scale: NTS	
Path:		Dwg No. E-1	

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## Tower Input Data

The tower is a monopole.  
 This tower is designed using the TIA-222-H standard.  
 The following design criteria apply:

- Tower is located in Hartford County, Connecticut.
- Tower base elevation above sea level: 181.00 ft.
- Basic wind speed of 118 mph.
- Risk Category II.
- Exposure Category C.
- Simplified Topographic Factor Procedure for wind speed-up calculations is used.
- Topographic Category: 1.
- Crest Height: 0.00 ft.
- Nominal ice thickness of 1.5000 in.
- Ice thickness is considered to increase with height.
- Ice density of 56 pcf.
- A wind speed of 50 mph is used in combination with ice.
- Temperature drop of 50 °F.
- Deflections calculated using a wind speed of 60 mph.
- TOWER RATING 95.3%.
- A non-linear (P-delta) analysis was used.
- Pressures are calculated at each section.
- Stress ratio used in pole design is 1.
- Tower analysis based on target reliabilities in accordance with Annex S.
- Load Modification Factors used:  $K_{es}(F_w) = 0.95$ ,  $K_{es}(t_i) = 0.85$ .
- Maximum demand-capacity ratio is: 1.05.
- Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

## Options

Consider Moments - Legs Consider Moments - Horizontals  Consider Moments - Diagonals Use Moment Magnification ✓ Use Code Stress Ratios ✓ Use Code Safety Factors - Guys Escalate Ice Always Use Max Kz Use Special Wind Profile Include Bolts In Member Capacity Leg Bolts Are At Top Of Section Secondary Horizontal Braces Leg Use Diamond Inner Bracing (4 Sided) SR Members Have Cut Ends SR Members Are Concentric	Distribute Leg Loads As Uniform Assume Legs Pinned  ✓ Assume Rigid Index Plate ✓ Use Clear Spans For Wind Area Use Clear Spans For KL/r Retension Guys To Initial Tension ✓ Bypass Mast Stability Checks ✓ Use Azimuth Dish Coefficients ✓ Project Wind Area of Appurt. Autocalc Torque Arm Areas Add IBC .6D+W Combination ✓ Sort Capacity Reports By Component Triangulate Diamond Inner Bracing Treat Feed Line Bundles As Cylinder Ignore KL/ry For 60 Deg. Angle Legs	Use ASCE 10 X-Brace Ly Rules Calculate Forces in Supporting Bracing Members Ignore Redundant Members in FEA SR Leg Bolts Resist Compression All Leg Panels Have Same Allowable Offset Girt At Foundation ✓ Consider Feed Line Torque Include Angle Block Shear Check Use TIA-222-H Bracing Resist. Exemption Use TIA-222-H Tension Splice Exemption <div style="background-color: #e0e0e0; text-align: center; padding: 2px;">Poles</div> ✓ Include Shear-Torsion Interaction Always Use Sub-Critical Flow Use Top Mounted Sockets Pole Without Linear Attachments Pole With Shroud Or No Appurtenances Outside and Inside Corner Radii Are Known
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## Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	140.00-135.00	5.00	0.00	12	16.0000	16.9374	0.1875	0.7500	A572-65

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L2	135.00-130.00	5.00	0.00	12	16.9374	17.8749	0.1875	0.7500	(65 ksi) A572-65
L3	130.00-125.00	5.00	0.00	12	17.8749	18.8123	0.1875	0.7500	(65 ksi) A572-65
L4	125.00-120.00	5.00	0.00	12	18.8123	19.7498	0.1875	0.7500	(65 ksi) A572-65
L5	120.00-115.00	5.00	0.00	12	19.7498	20.6872	0.1875	0.7500	(65 ksi) A572-65
L6	115.00-110.00	5.00	0.00	12	20.6872	21.6247	0.1875	0.7500	(65 ksi) A572-65
L7	110.00-105.00	5.00	0.00	12	21.6247	22.5621	0.1875	0.7500	(65 ksi) A572-65
L8	105.00-100.00	5.00	0.00	12	22.5621	23.4995	0.1875	0.7500	(65 ksi) A572-65
L9	100.00-96.50	3.50	0.00	12	23.4995	24.1558	0.1875	0.7500	(65 ksi) A572-65
L10	96.50-96.25	0.25	0.00	12	24.1558	24.2026	0.3187	1.2750	(65 ksi) A572-65
L11	96.25-95.00	1.25	0.00	12	24.2026	24.4370	0.3125	1.2500	(65 ksi) A572-65
L12	95.00-94.75	0.25	0.00	12	24.4370	24.4839	0.4500	1.8000	(65 ksi) A572-65
L13	94.75-89.75	5.00	0.00	12	24.4839	25.4213	0.4375	1.7500	(65 ksi) A572-65
L14	89.75-85.17	4.58	4.33	12	25.4213	26.2800	0.4375	1.7500	(65 ksi) A572-65
L15	85.17-84.17	5.33	0.00	12	25.0932	26.0932	0.3125	1.2500	(65 ksi) A572-65
L16	84.17-79.17	5.00	0.00	12	26.0932	27.0312	0.3125	1.2500	(65 ksi) A572-65
L17	79.17-74.17	5.00	0.00	12	27.0312	27.9693	0.3125	1.2500	(65 ksi) A572-65
L18	74.17-69.17	5.00	0.00	12	27.9693	28.9073	0.3125	1.2500	(65 ksi) A572-65
L19	69.17-64.17	5.00	0.00	12	28.9073	29.8454	0.3125	1.2500	(65 ksi) A572-65
L20	64.17-59.17	5.00	0.00	12	29.8454	30.7835	0.3125	1.2500	(65 ksi) A572-65
L21	59.17-54.17	5.00	0.00	12	30.7835	31.7215	0.3125	1.2500	(65 ksi) A572-65
L22	54.17-49.17	5.00	0.00	12	31.7215	32.6596	0.3125	1.2500	(65 ksi) A572-65
L23	49.17-44.17	5.00	0.00	12	32.6596	33.5977	0.3125	1.2500	(65 ksi) A572-65
L24	44.17-34.67	9.50	5.33	12	33.5977	35.3800	0.3125	1.2500	(65 ksi) A572-65
L25	34.67-33.67	6.33	0.00	12	33.7550	34.9411	0.3750	1.5000	(65 ksi) A572-65
L26	33.67-28.67	5.00	0.00	12	34.9411	35.8780	0.3750	1.5000	(65 ksi) A572-65
L27	28.67-23.67	5.00	0.00	12	35.8780	36.8148	0.3750	1.5000	(65 ksi) A572-65
L28	23.67-18.67	5.00	0.00	12	36.8148	37.7517	0.3750	1.5000	(65 ksi) A572-65
L29	18.67-13.67	5.00	0.00	12	37.7517	38.6886	0.3750	1.5000	(65 ksi) A572-65
L30	13.67-8.67	5.00	0.00	12	38.6886	39.6255	0.3750	1.5000	(65 ksi) A572-65
L31	8.67-3.67	5.00	0.00	12	39.6255	40.5623	0.3750	1.5000	(65 ksi) A572-65
L32	3.67-0.00	3.67		12	40.5623	41.2500	0.3750	1.5000	(65 ksi) A572-65

**Tapered Pole Properties**

Section	Tip Dia. in	Area in <sup>2</sup>	I in <sup>4</sup>	r in	C in	I/C in <sup>3</sup>	J in <sup>4</sup>	I/Q in <sup>2</sup>	w in	w/t
L1	16.4983	9.5468	304.6805	5.6609	8.2880	36.7616	617.3654	4.6986	3.7855	20.189
	17.4688	10.1128	362.1455	5.9965	8.7736	41.2767	733.8050	4.9772	4.0367	21.529
L2	17.4688	10.1128	362.1455	5.9965	8.7736	41.2767	733.8050	4.9772	4.0367	21.529
	18.4393	10.6788	426.4166	6.3321	9.2592	46.0533	864.0355	5.2558	4.2880	22.869
L3	18.4393	10.6788	426.4166	6.3321	9.2592	46.0533	864.0355	5.2558	4.2880	22.869
	19.4098	11.2447	497.8746	6.6677	9.7448	51.0914	1008.8289	5.5343	4.5392	24.209
L4	19.4098	11.2447	497.8746	6.6677	9.7448	51.0914	1008.8289	5.5343	4.5392	24.209
	20.3803	11.8107	576.9006	7.0033	10.2304	56.3909	1168.9570	5.8129	4.7904	25.549
L5	20.3803	11.8107	576.9006	7.0033	10.2304	56.3909	1168.9570	5.8129	4.7904	25.549
	21.3508	12.3767	663.8754	7.3389	10.7160	61.9519	1345.1915	6.0914	5.0417	26.889
L6	21.3508	12.3767	663.8754	7.3389	10.7160	61.9519	1345.1915	6.0914	5.0417	26.889
	22.3214	12.9427	759.1799	7.6745	11.2016	67.7744	1538.3044	6.3700	5.2929	28.229
L7	22.3214	12.9427	759.1799	7.6745	11.2016	67.7744	1538.3044	6.3700	5.2929	28.229
	23.2919	13.5087	863.1952	8.0101	11.6872	73.8584	1749.0674	6.6486	5.5441	29.569
L8	23.2919	13.5087	863.1952	8.0101	11.6872	73.8584	1749.0674	6.6486	5.5441	29.569
	24.2624	14.0746	976.3019	8.3457	12.1728	80.2038	1978.2524	6.9271	5.7954	30.909
L9	24.2624	14.0746	976.3019	8.3457	12.1728	80.2038	1978.2524	6.9271	5.7954	30.909
	24.9417	14.4708	1061.0902	8.5806	12.5127	84.8012	2150.0564	7.1221	5.9712	31.847
L10	24.8954	24.4657	1774.3816	8.5336	12.5127	141.8067	3595.3782	12.0413	5.6195	17.63
	24.9440	24.5138	1784.8694	8.5504	12.5370	142.3686	3616.6293	12.0650	5.6321	17.669
L11	24.9462	24.0394	1751.2460	8.5527	12.5370	139.6867	3548.4992	11.8315	5.6488	18.076
	25.1888	24.2753	1803.2922	8.6366	12.6584	142.4586	3653.9589	11.9475	5.7116	18.277
L12	25.1403	34.7571	2552.5922	8.5873	12.6584	201.6527	5172.2438	17.1064	5.3431	11.874
	25.1888	34.8251	2567.5852	8.6041	12.6826	202.4488	5202.6237	17.1398	5.3557	11.901
L13	25.1932	33.8753	2500.1603	8.6086	12.6826	197.1325	5066.0026	16.6724	5.3892	12.318
	26.1637	35.1959	2804.1127	8.9442	13.1682	212.9452	5681.8926	17.3224	5.6404	12.892
L14	26.1637	35.1959	2804.1127	8.9442	13.1682	212.9452	5681.8926	17.3224	5.6404	12.892
	27.0527	36.4056	3103.2978	9.2516	13.6130	227.9651	6288.1227	17.9177	5.8705	13.418
L15	26.7091	24.9356	1954.4798	8.8715	12.9983	150.3647	3960.3060	12.2725	5.8875	18.84
	26.9034	25.9418	2200.7643	9.2295	13.5163	162.8236	4459.3451	12.7678	6.1555	19.697
L16	26.9034	25.9418	2200.7643	9.2295	13.5163	162.8236	4459.3451	12.7678	6.1555	19.697
	27.8745	26.8857	2449.8455	9.5653	14.0022	174.9618	4964.0511	13.2323	6.4069	20.502
L17	27.8745	26.8857	2449.8455	9.5653	14.0022	174.9618	4964.0511	13.2323	6.4069	20.502
	28.8457	27.8296	2717.0450	9.9011	14.4881	187.5365	5505.4698	13.6969	6.6583	21.306
L18	28.8457	27.8296	2717.0450	9.9011	14.4881	187.5365	5505.4698	13.6969	6.6583	21.306
	29.8169	28.7736	3002.9992	10.2370	14.9740	200.5475	6084.8906	14.1615	6.9097	22.111
L19	29.8169	28.7736	3002.9992	10.2370	14.9740	200.5475	6084.8906	14.1615	6.9097	22.111
	30.7880	29.7175	3308.3446	10.5728	15.4599	213.9949	6703.6032	14.6260	7.1611	22.915
L20	30.7880	29.7175	3308.3446	10.5728	15.4599	213.9949	6703.6032	14.6260	7.1611	22.915
	31.7592	30.6614	3633.7167	10.9086	15.9458	227.8786	7362.8952	15.0906	7.4125	23.72
L21	31.7592	30.6614	3633.7167	10.9086	15.9458	227.8786	7362.8952	15.0906	7.4125	23.72
	32.7303	31.6054	3979.7523	11.2444	16.4318	242.1988	8064.0571	15.5552	7.6639	24.524
L22	32.7303	31.6054	3979.7523	11.2444	16.4318	242.1988	8064.0571	15.5552	7.6639	24.524
	33.7015	32.5493	4347.0867	11.5803	16.9177	256.9553	8808.3762	16.0198	7.9153	25.329
L23	33.7015	32.5493	4347.0867	11.5803	16.9177	256.9553	8808.3762	16.0198	7.9153	25.329
	34.6726	33.4932	4736.3569	11.9161	17.4036	272.1482	9597.1431	16.4843	8.1667	26.133
L24	34.6726	33.4932	4736.3569	11.9161	17.4036	272.1482	9597.1431	16.4843	8.1667	26.133
	36.5178	35.2867	5538.6798	12.5542	18.3268	302.2168	11222.8669	17.3670	8.6443	27.662
L25	35.8474	40.3064	5732.3532	11.9500	17.4851	327.8422	11615.3018	19.8376	8.0413	21.444
	36.0414	41.7386	6365.3796	12.3747	18.0995	351.6883	12897.9849	20.5425	8.3592	22.291
L26	36.0414	41.7386	6365.3796	12.3747	18.0995	351.6883	12897.9849	20.5425	8.3592	22.291
	37.0113	42.8698	6897.1128	12.7101	18.5848	371.1160	13975.4205	21.0992	8.6103	22.961
L27	37.0113	42.8698	6897.1128	12.7101	18.5848	371.1160	13975.4205	21.0992	8.6103	22.961
	37.9812	44.0011	7457.6625	13.0455	19.0701	391.0659	15111.2461	21.6560	8.8614	23.63
L28	37.9812	44.0011	7457.6625	13.0455	19.0701	391.0659	15111.2461	21.6560	8.8614	23.63
	38.9512	45.1324	8047.7896	13.3809	19.5554	411.5382	16307.0037	22.2128	9.1125	24.3
L29	38.9512	45.1324	8047.7896	13.3809	19.5554	411.5382	16307.0037	22.2128	9.1125	24.3
	39.9211	46.2637	8668.2547	13.7163	20.0407	432.5327	17564.2342	22.7696	9.3635	24.969

Section	Tip Dia. in	Area in <sup>2</sup>	I in <sup>4</sup>	r in	C in	I/C in <sup>3</sup>	J in <sup>4</sup>	It/Q in <sup>2</sup>	w in	w/t
L30	39.9211	46.2637	8668.2547	13.7163	20.0407	432.5327	17564.234	22.7696	9.3635	24.969
	40.8910	47.3949	9319.8189	14.0517	20.5260	454.0497	18884.479	23.3263	9.6146	25.639
L31	40.8910	47.3949	9319.8189	14.0517	20.5260	454.0497	18884.479	23.3263	9.6146	25.639
	41.8609	48.5262	10003.241	14.3871	21.0113	476.0889	20269.278	23.8831	9.8657	26.309
L32	41.8609	48.5262	10003.241	14.3871	21.0113	476.0889	20269.278	23.8831	9.8657	26.309
	42.5729	49.3566	10525.588	14.6333	21.3675	492.5980	21327.695	24.2918	10.0500	26.8

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A <sub>r</sub>	Adjust. Factor A <sub>r</sub>	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals	Double Angle Stitch Bolt Spacing Horizontals	Double Angle Stitch Bolt Spacing Redundants
ft	ft <sup>2</sup>	in					in	in	in
L1 140.00-135.00				1	1	1			
L2 135.00-130.00				1	1	1			
L3 130.00-125.00				1	1	1			
L4 125.00-120.00				1	1	1			
L5 120.00-115.00				1	1	1			
L6 115.00-110.00				1	1	1			
L7 110.00-105.00				1	1	1			
L8 105.00-100.00				1	1	1			
L9 100.00-96.50				1	1	1			
L10 96.50-96.25				1	1	0.959134			
L11 96.25-95.00				1	1	0.974388			
L12 95.00-94.75				1	1	0.938828			
L13 94.75-89.75				1	1	0.945016			
L14 89.75-85.17				1	1	0.944049			
L15 85.17-84.17				1	1	1			
L16 84.17-79.17				1	1	1			
L17 79.17-74.17				1	1	1			
L18 74.17-69.17				1	1	1			
L19 69.17-64.17				1	1	1			
L20 64.17-59.17				1	1	1			
L21 59.17-54.17				1	1	1			
L22 54.17-49.17				1	1	1			
L23 49.17-44.17				1	1	1			
L24 44.17-34.67				1	1	1			
L25 34.67-33.67				1	1	1			
L26 33.67-				1	1	1			

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A <sub>r</sub>	Adjust. Factor A <sub>r</sub>	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
ft	ft <sup>2</sup>	in							
28.67									
L27 28.67-23.67				1	1	1			
L28 23.67-18.67				1	1	1			
L29 18.67-13.67				1	1	1			
L30 13.67-8.67				1	1	1			
L31 8.67-3.67				1	1	1			
L32 3.67-0.00				1	1	1			

**Feed Line/Linear Appurtenances - Entered As Round Or Flat**

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
Safety Line 3/8	A	No	Surface Ar (CaAa)	140.00 - 0.00	1	1	0.500 - 0.500	0.3750		0.22
**MOD**										
(Area) Sabre MS400 (0.75x4.00)	A	No	Surface Af (CaAa)	97.50 - 87.50	1	1	0.000 - 0.000	4.0000	9.5000	0.00
(Area) Sabre MS400 (0.75x4.00)	B	No	Surface Af (CaAa)	97.50 - 87.50	1	1	0.000 - 0.000	4.0000	9.5000	0.00
(Area) Sabre MS400 (0.75x4.00)	C	No	Surface Af (CaAa)	97.50 - 87.50	1	1	0.000 - 0.000	4.0000	9.5000	0.00
****										
(Area) CCI-65FP-040075 (H)	A	No	Surface Af (CaAa)	96.50 - 86.50	1	1	0.500 - 0.500	4.0000	9.5000	0.00
(Area) CCI-65FP-040075 (H)	B	No	Surface Af (CaAa)	96.50 - 86.50	1	1	0.500 - 0.500	4.0000	9.5000	0.00
(Area) CCI-65FP-040075 (H)	C	No	Surface Af (CaAa)	96.50 - 86.50	1	1	0.500 - 0.500	4.0000	9.5000	0.00
****										
*****										
*****										

**Feed Line/Linear Appurtenances - Entered As Area**

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	CAAA	Weight
							ft <sup>2</sup> /ft	plf
****								
**135**								
AL7-50(1-5/8)	B	No	No	Inside Pole	135.00 - 0.00	6	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00
								0.52 0.52 0.52 0.52
HB158-21U6S12-XXXM-01(1-5/8)	B	No	No	Inside Pole	135.00 - 0.00	2	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00
								1.90 1.90 1.90 1.90
**124**								
HB158-21U6S24-xxM_TMO(1-5/8)	A	No	No	Inside Pole	123.00 - 0.00	3	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00
								2.50 2.50 2.50 2.50
*****								

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Componen t Type	Placement ft	Total Number	C <sub>AA</sub> A ft <sup>2</sup> /ft	Weight plf
*****								

**Feed Line/Linear Appurtenances Section Areas**

Tower Sectio n	Tower Elevation ft	Face	A <sub>R</sub> ft <sup>2</sup>	A <sub>F</sub> ft <sup>2</sup>	C <sub>AA</sub> A In Face ft <sup>2</sup>	C <sub>AA</sub> A Out Face ft <sup>2</sup>	Weight K
L1	140.00-135.00	A	0.000	0.000	0.188	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
L2	135.00-130.00	A	0.000	0.000	0.188	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.03
		C	0.000	0.000	0.000	0.000	0.00
L3	130.00-125.00	A	0.000	0.000	0.188	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.03
		C	0.000	0.000	0.000	0.000	0.00
L4	125.00-120.00	A	0.000	0.000	0.188	0.000	0.02
		B	0.000	0.000	0.000	0.000	0.03
		C	0.000	0.000	0.000	0.000	0.00
L5	120.00-115.00	A	0.000	0.000	0.188	0.000	0.04
		B	0.000	0.000	0.000	0.000	0.03
		C	0.000	0.000	0.000	0.000	0.00
L6	115.00-110.00	A	0.000	0.000	0.188	0.000	0.04
		B	0.000	0.000	0.000	0.000	0.03
		C	0.000	0.000	0.000	0.000	0.00
L7	110.00-105.00	A	0.000	0.000	0.188	0.000	0.04
		B	0.000	0.000	0.000	0.000	0.03
		C	0.000	0.000	0.000	0.000	0.00
L8	105.00-100.00	A	0.000	0.000	0.188	0.000	0.04
		B	0.000	0.000	0.000	0.000	0.03
		C	0.000	0.000	0.000	0.000	0.00
L9	100.00-96.50	A	0.000	0.000	0.798	0.000	0.03
		B	0.000	0.000	0.667	0.000	0.02
		C	0.000	0.000	0.667	0.000	0.00
L10	96.50-96.25	A	0.000	0.000	0.343	0.000	0.00
		B	0.000	0.000	0.333	0.000	0.00
		C	0.000	0.000	0.333	0.000	0.00
L11	96.25-95.00	A	0.000	0.000	1.714	0.000	0.01
		B	0.000	0.000	1.667	0.000	0.01
		C	0.000	0.000	1.667	0.000	0.00
L12	95.00-94.75	A	0.000	0.000	0.343	0.000	0.00
		B	0.000	0.000	0.333	0.000	0.00
		C	0.000	0.000	0.333	0.000	0.00
L13	94.75-89.75	A	0.000	0.000	6.854	0.000	0.04
		B	0.000	0.000	6.667	0.000	0.03
		C	0.000	0.000	6.667	0.000	0.00
L14	89.75-85.17	A	0.000	0.000	3.838	0.000	0.04
		B	0.000	0.000	3.667	0.000	0.03
		C	0.000	0.000	3.667	0.000	0.00
L15	85.17-84.17	A	0.000	0.000	0.037	0.000	0.01
		B	0.000	0.000	0.000	0.000	0.01
		C	0.000	0.000	0.000	0.000	0.00
L16	84.17-79.17	A	0.000	0.000	0.188	0.000	0.04
		B	0.000	0.000	0.000	0.000	0.03
		C	0.000	0.000	0.000	0.000	0.00
L17	79.17-74.17	A	0.000	0.000	0.188	0.000	0.04
		B	0.000	0.000	0.000	0.000	0.03
		C	0.000	0.000	0.000	0.000	0.00
L18	74.17-69.17	A	0.000	0.000	0.188	0.000	0.04
		B	0.000	0.000	0.000	0.000	0.03
		C	0.000	0.000	0.000	0.000	0.00
L19	69.17-64.17	A	0.000	0.000	0.188	0.000	0.04



Tower Section	Tower Elevation	Face	A <sub>R</sub>	A <sub>F</sub>	C <sub>AA</sub> <sub>A</sub> In Face	C <sub>AA</sub> <sub>A</sub> Out Face	Weight
n	ft		ft <sup>2</sup>	ft <sup>2</sup>	ft <sup>2</sup>	ft <sup>2</sup>	K
		B	0.000	0.000	0.000	0.000	0.03
		C	0.000	0.000	0.000	0.000	0.00
L20	64.17-59.17	A	0.000	0.000	0.188	0.000	0.04
		B	0.000	0.000	0.000	0.000	0.03
		C	0.000	0.000	0.000	0.000	0.00
L21	59.17-54.17	A	0.000	0.000	0.188	0.000	0.04
		B	0.000	0.000	0.000	0.000	0.03
		C	0.000	0.000	0.000	0.000	0.00
L22	54.17-49.17	A	0.000	0.000	0.188	0.000	0.04
		B	0.000	0.000	0.000	0.000	0.03
		C	0.000	0.000	0.000	0.000	0.00
L23	49.17-44.17	A	0.000	0.000	0.188	0.000	0.04
		B	0.000	0.000	0.000	0.000	0.03
		C	0.000	0.000	0.000	0.000	0.00
L24	44.17-34.67	A	0.000	0.000	0.356	0.000	0.07
		B	0.000	0.000	0.000	0.000	0.07
		C	0.000	0.000	0.000	0.000	0.00
L25	34.67-33.67	A	0.000	0.000	0.037	0.000	0.01
		B	0.000	0.000	0.000	0.000	0.01
		C	0.000	0.000	0.000	0.000	0.00
L26	33.67-28.67	A	0.000	0.000	0.188	0.000	0.04
		B	0.000	0.000	0.000	0.000	0.03
		C	0.000	0.000	0.000	0.000	0.00
L27	28.67-23.67	A	0.000	0.000	0.188	0.000	0.04
		B	0.000	0.000	0.000	0.000	0.03
		C	0.000	0.000	0.000	0.000	0.00
L28	23.67-18.67	A	0.000	0.000	0.188	0.000	0.04
		B	0.000	0.000	0.000	0.000	0.03
		C	0.000	0.000	0.000	0.000	0.00
L29	18.67-13.67	A	0.000	0.000	0.188	0.000	0.04
		B	0.000	0.000	0.000	0.000	0.03
		C	0.000	0.000	0.000	0.000	0.00
L30	13.67-8.67	A	0.000	0.000	0.188	0.000	0.04
		B	0.000	0.000	0.000	0.000	0.03
		C	0.000	0.000	0.000	0.000	0.00
L31	8.67-3.67	A	0.000	0.000	0.188	0.000	0.04
		B	0.000	0.000	0.000	0.000	0.03
		C	0.000	0.000	0.000	0.000	0.00
L32	3.67-0.00	A	0.000	0.000	0.138	0.000	0.03
		B	0.000	0.000	0.000	0.000	0.03
		C	0.000	0.000	0.000	0.000	0.00

**Feed Line/Linear Appurtenances Section Areas - With Ice**

Tower Section	Tower Elevation	Face or Leg	Ice Thickness	A <sub>R</sub>	A <sub>F</sub>	C <sub>AA</sub> <sub>A</sub> In Face	C <sub>AA</sub> <sub>A</sub> Out Face	Weight
n	ft		in	ft <sup>2</sup>	ft <sup>2</sup>	ft <sup>2</sup>	ft <sup>2</sup>	K
L1	140.00-135.00	A	1.471	0.000	0.000	1.658	0.000	0.02
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
L2	135.00-130.00	A	1.465	0.000	0.000	1.653	0.000	0.02
		B		0.000	0.000	0.000	0.000	0.03
		C		0.000	0.000	0.000	0.000	0.00
L3	130.00-125.00	A	1.459	0.000	0.000	1.647	0.000	0.02
		B		0.000	0.000	0.000	0.000	0.03
		C		0.000	0.000	0.000	0.000	0.00
L4	125.00-120.00	A	1.454	0.000	0.000	1.641	0.000	0.04
		B		0.000	0.000	0.000	0.000	0.03
		C		0.000	0.000	0.000	0.000	0.00
L5	120.00-115.00	A	1.448	0.000	0.000	1.635	0.000	0.05
		B		0.000	0.000	0.000	0.000	0.03
		C		0.000	0.000	0.000	0.000	0.00
L6	115.00-110.00	A	1.441	0.000	0.000	1.629	0.000	0.05
		B		0.000	0.000	0.000	0.000	0.03
		C		0.000	0.000	0.000	0.000	0.00
L7	110.00-105.00	A	1.435	0.000	0.000	1.622	0.000	0.05

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A <sub>R</sub> ft <sup>2</sup>	A <sub>F</sub> ft <sup>2</sup>	C <sub>A</sub> A <sub>A</sub> In Face ft <sup>2</sup>	C <sub>A</sub> A <sub>A</sub> Out Face ft <sup>2</sup>	Weight K
		B		0.000	0.000	0.000	0.000	0.03
		C		0.000	0.000	0.000	0.000	0.00
L8	105.00-100.00	A	1.428	0.000	0.000	1.615	0.000	0.05
		B		0.000	0.000	0.000	0.000	0.03
		C		0.000	0.000	0.000	0.000	0.00
L9	100.00-96.50	A	1.422	0.000	0.000	1.989	0.000	0.05
		B		0.000	0.000	0.862	0.000	0.03
		C		0.000	0.000	0.862	0.000	0.01
L10	96.50-96.25	A	1.419	0.000	0.000	0.511	0.000	0.01
		B		0.000	0.000	0.431	0.000	0.01
		C		0.000	0.000	0.431	0.000	0.00
L11	96.25-95.00	A	1.418	0.000	0.000	2.556	0.000	0.03
		B		0.000	0.000	2.155	0.000	0.03
		C		0.000	0.000	2.155	0.000	0.02
L12	95.00-94.75	A	1.417	0.000	0.000	0.511	0.000	0.01
		B		0.000	0.000	0.431	0.000	0.01
		C		0.000	0.000	0.431	0.000	0.00
L13	94.75-89.75	A	1.413	0.000	0.000	10.214	0.000	0.14
		B		0.000	0.000	8.613	0.000	0.12
		C		0.000	0.000	8.613	0.000	0.08
L14	89.75-85.17	A	1.406	0.000	0.000	6.192	0.000	0.09
		B		0.000	0.000	4.733	0.000	0.08
		C		0.000	0.000	4.733	0.000	0.04
L15	85.17-84.17	A	1.401	0.000	0.000	0.319	0.000	0.01
		B		0.000	0.000	0.000	0.000	0.01
		C		0.000	0.000	0.000	0.000	0.00
L16	84.17-79.17	A	1.396	0.000	0.000	1.583	0.000	0.05
		B		0.000	0.000	0.000	0.000	0.03
		C		0.000	0.000	0.000	0.000	0.00
L17	79.17-74.17	A	1.387	0.000	0.000	1.575	0.000	0.05
		B		0.000	0.000	0.000	0.000	0.03
		C		0.000	0.000	0.000	0.000	0.00
L18	74.17-69.17	A	1.378	0.000	0.000	1.565	0.000	0.05
		B		0.000	0.000	0.000	0.000	0.03
		C		0.000	0.000	0.000	0.000	0.00
L19	69.17-64.17	A	1.368	0.000	0.000	1.555	0.000	0.05
		B		0.000	0.000	0.000	0.000	0.03
		C		0.000	0.000	0.000	0.000	0.00
L20	64.17-59.17	A	1.357	0.000	0.000	1.545	0.000	0.05
		B		0.000	0.000	0.000	0.000	0.03
		C		0.000	0.000	0.000	0.000	0.00
L21	59.17-54.17	A	1.346	0.000	0.000	1.533	0.000	0.05
		B		0.000	0.000	0.000	0.000	0.03
		C		0.000	0.000	0.000	0.000	0.00
L22	54.17-49.17	A	1.333	0.000	0.000	1.521	0.000	0.05
		B		0.000	0.000	0.000	0.000	0.03
		C		0.000	0.000	0.000	0.000	0.00
L23	49.17-44.17	A	1.320	0.000	0.000	1.507	0.000	0.05
		B		0.000	0.000	0.000	0.000	0.03
		C		0.000	0.000	0.000	0.000	0.00
L24	44.17-34.67	A	1.298	0.000	0.000	2.822	0.000	0.10
		B		0.000	0.000	0.000	0.000	0.07
		C		0.000	0.000	0.000	0.000	0.00
L25	34.67-33.67	A	1.279	0.000	0.000	0.297	0.000	0.01
		B		0.000	0.000	0.000	0.000	0.01
		C		0.000	0.000	0.000	0.000	0.00
L26	33.67-28.67	A	1.268	0.000	0.000	1.455	0.000	0.05
		B		0.000	0.000	0.000	0.000	0.03
		C		0.000	0.000	0.000	0.000	0.00
L27	28.67-23.67	A	1.246	0.000	0.000	1.433	0.000	0.05
		B		0.000	0.000	0.000	0.000	0.03
		C		0.000	0.000	0.000	0.000	0.00
L28	23.67-18.67	A	1.220	0.000	0.000	1.407	0.000	0.05
		B		0.000	0.000	0.000	0.000	0.03
		C		0.000	0.000	0.000	0.000	0.00
L29	18.67-13.67	A	1.187	0.000	0.000	1.375	0.000	0.05
		B		0.000	0.000	0.000	0.000	0.03
		C		0.000	0.000	0.000	0.000	0.00
L30	13.67-8.67	A	1.144	0.000	0.000	1.331	0.000	0.05

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A <sub>R</sub> ft <sup>2</sup>	A <sub>F</sub> ft <sup>2</sup>	C <sub>A</sub> A <sub>A</sub> In Face ft <sup>2</sup>	C <sub>A</sub> A <sub>A</sub> Out Face ft <sup>2</sup>	Weight K
L31	8.67-3.67	B	1.078	0.000	0.000	0.000	0.000	0.03
		C		0.000	0.000	0.000	0.000	0.00
		A		0.000	0.000	1.265	0.000	0.05
L32	3.67-0.00	B	0.955	0.000	0.000	0.000	0.000	0.03
		C		0.000	0.000	0.000	0.000	0.00
		A		0.000	0.000	0.838	0.000	0.03
		B		0.000	0.000	0.000	0.000	0.03
		C		0.000	0.000	0.000	0.000	0.00

### Feed Line Center of Pressure

Section	Elevation ft	CP <sub>x</sub> in	CP <sub>z</sub> in	CP <sub>x</sub> Ice in	CP <sub>z</sub> Ice in
L1	140.00-135.00	0.0000	-0.2285	0.0000	-1.2017
L2	135.00-130.00	0.0000	-0.2285	0.0000	-1.2148
L3	130.00-125.00	0.0000	-0.2285	0.0000	-1.2264
L4	125.00-120.00	0.0000	-0.2286	0.0000	-1.2367
L5	120.00-115.00	0.0000	-0.2286	0.0000	-1.2457
L6	115.00-110.00	0.0000	-0.2286	0.0000	-1.2536
L7	110.00-105.00	0.0000	-0.2286	0.0000	-1.2604
L8	105.00-100.00	0.0000	-0.2286	0.0000	-1.2661
L9	100.00-96.50	0.0000	-0.1775	0.0000	-1.0236
L10	96.50-96.25	0.0000	-0.0766	0.0000	-0.4771
L11	96.25-95.00	0.0000	-0.0769	0.0000	-0.4787
L12	95.00-94.75	0.0000	-0.0772	0.0000	-0.4806
L13	94.75-89.75	0.0000	-0.0782	0.0000	-0.4861
L14	89.75-85.17	0.0000	-0.1082	0.0000	-0.6568
L15	85.17-84.17	0.0000	-0.2290	0.0000	-1.2812
L16	84.17-79.17	0.0000	-0.2290	0.0000	-1.2790
L17	79.17-74.17	0.0000	-0.2290	0.0000	-1.2803
L18	74.17-69.17	0.0000	-0.2290	0.0000	-1.2807
L19	69.17-64.17	0.0000	-0.2290	0.0000	-1.2801
L20	64.17-59.17	0.0000	-0.2290	0.0000	-1.2786
L21	59.17-54.17	0.0000	-0.2289	0.0000	-1.2761
L22	54.17-49.17	0.0000	-0.2289	0.0000	-1.2725
L23	49.17-44.17	0.0000	-0.2289	0.0000	-1.2676
L24	44.17-34.67	0.0000	-0.2289	0.0000	-1.2580
L25	34.67-33.67	0.0000	-0.2291	0.0000	-1.2614
L26	33.67-28.67	0.0000	-0.2291	0.0000	-1.2407
L27	28.67-23.67	0.0000	-0.2291	0.0000	-1.2281
L28	23.67-18.67	0.0000	-0.2290	0.0000	-1.2120
L29	18.67-13.67	0.0000	-0.2290	0.0000	-1.1906
L30	13.67-8.67	0.0000	-0.2290	0.0000	-1.1605
L31	8.67-3.67	0.0000	-0.2290	0.0000	-1.1118
L32	3.67-0.00	0.0000	-0.2290	0.0000	-1.0160

Note: For pole sections, center of pressure calculations do not consider feed line shielding.

### Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K <sub>a</sub> No Ice	K <sub>a</sub> Ice
L1	1	Safety Line 3/8	135.00 - 140.00	1.0000	1.0000
L2	1	Safety Line 3/8	130.00 - 135.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K <sub>a</sub> No Ice	K <sub>a</sub> Ice
L3	1	Safety Line 3/8	125.00 - 130.00	1.0000	1.0000
L4	1	Safety Line 3/8	120.00 - 125.00	1.0000	1.0000
L5	1	Safety Line 3/8	115.00 - 120.00	1.0000	1.0000
L6	1	Safety Line 3/8	110.00 - 115.00	1.0000	1.0000
L7	1	Safety Line 3/8	105.00 - 110.00	1.0000	1.0000
L8	1	Safety Line 3/8	100.00 - 105.00	1.0000	1.0000
L9	1	Safety Line 3/8	96.50 - 100.00	1.0000	1.0000
L9	3	(Area) Sabre MS400 (0.75x4.00)	96.50 - 97.50	1.0000	1.0000
L9	4	(Area) Sabre MS400 (0.75x4.00)	96.50 - 97.50	1.0000	1.0000
L9	5	(Area) Sabre MS400 (0.75x4.00)	96.50 - 97.50	1.0000	1.0000
L10	1	Safety Line 3/8	96.25 - 96.50	1.0000	1.0000
L10	3	(Area) Sabre MS400 (0.75x4.00)	96.25 - 96.50	1.0000	1.0000
L10	4	(Area) Sabre MS400 (0.75x4.00)	96.25 - 96.50	1.0000	1.0000
L10	5	(Area) Sabre MS400 (0.75x4.00)	96.25 - 96.50	1.0000	1.0000
L10	7	(Area) CCI-65FP-040075 (H)	96.25 - 96.50	1.0000	1.0000
L10	8	(Area) CCI-65FP-040075 (H)	96.25 - 96.50	1.0000	1.0000
L10	9	(Area) CCI-65FP-040075 (H)	96.25 - 96.50	1.0000	1.0000
L11	1	Safety Line 3/8	95.00 - 96.25	1.0000	1.0000
L11	3	(Area) Sabre MS400 (0.75x4.00)	95.00 - 96.25	1.0000	1.0000
L11	4	(Area) Sabre MS400 (0.75x4.00)	95.00 - 96.25	1.0000	1.0000
L11	5	(Area) Sabre MS400 (0.75x4.00)	95.00 - 96.25	1.0000	1.0000
L11	7	(Area) CCI-65FP-040075 (H)	95.00 - 96.25	1.0000	1.0000
L11	8	(Area) CCI-65FP-040075 (H)	95.00 - 96.25	1.0000	1.0000
L11	9	(Area) CCI-65FP-040075 (H)	95.00 - 96.25	1.0000	1.0000
L12	1	Safety Line 3/8	94.75 - 95.00	1.0000	1.0000
L12	3	(Area) Sabre MS400 (0.75x4.00)	94.75 - 95.00	1.0000	1.0000
L12	4	(Area) Sabre MS400 (0.75x4.00)	94.75 - 95.00	1.0000	1.0000
L12	5	(Area) Sabre MS400 (0.75x4.00)	94.75 - 95.00	1.0000	1.0000
L12	7	(Area) CCI-65FP-040075 (H)	94.75 - 95.00	1.0000	1.0000
L12	8	(Area) CCI-65FP-040075 (H)	94.75 - 95.00	1.0000	1.0000
L12	9	(Area) CCI-65FP-040075 (H)	94.75 - 95.00	1.0000	1.0000
L13	1	Safety Line 3/8	89.75 - 94.75	1.0000	1.0000
L13	3	(Area) Sabre MS400 (0.75x4.00)	89.75 - 94.75	1.0000	1.0000
L13	4	(Area) Sabre MS400 (0.75x4.00)	89.75 - 94.75	1.0000	1.0000
L13	5	(Area) Sabre MS400 (0.75x4.00)	89.75 - 94.75	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K <sub>a</sub> No Ice	K <sub>a</sub> Ice
L13	7	(0.75x4.00) (Area) CCI-65FP-040075 (H)	94.75 89.75 - 94.75	1.0000	1.0000
L13	8	(Area) CCI-65FP-040075 (H)	89.75 - 94.75	1.0000	1.0000
L13	9	(Area) CCI-65FP-040075 (H)	89.75 - 94.75	1.0000	1.0000
L14	1	Safety Line 3/8	85.17 - 89.75	1.0000	1.0000
L14	3	(Area) Sabre MS400 (0.75x4.00)	87.50 - 89.75	1.0000	1.0000
L14	4	(Area) Sabre MS400 (0.75x4.00)	87.50 - 89.75	1.0000	1.0000
L14	5	(Area) Sabre MS400 (0.75x4.00)	87.50 - 89.75	1.0000	1.0000
L14	7	(Area) CCI-65FP-040075 (H)	86.50 - 89.75	1.0000	1.0000
L14	8	(Area) CCI-65FP-040075 (H)	86.50 - 89.75	1.0000	1.0000
L14	9	(Area) CCI-65FP-040075 (H)	86.50 - 89.75	1.0000	1.0000
L15	1	Safety Line 3/8	84.17 - 85.17	1.0000	1.0000
L16	1	Safety Line 3/8	79.17 - 84.17	1.0000	1.0000
L17	1	Safety Line 3/8	74.17 - 79.17	1.0000	1.0000
L18	1	Safety Line 3/8	69.17 - 74.17	1.0000	1.0000
L19	1	Safety Line 3/8	64.17 - 69.17	1.0000	1.0000
L20	1	Safety Line 3/8	59.17 - 64.17	1.0000	1.0000
L21	1	Safety Line 3/8	54.17 - 59.17	1.0000	1.0000
L22	1	Safety Line 3/8	49.17 - 54.17	1.0000	1.0000
L23	1	Safety Line 3/8	44.17 - 49.17	1.0000	1.0000
L24	1	Safety Line 3/8	34.67 - 44.17	1.0000	1.0000
L25	1	Safety Line 3/8	33.67 - 34.67	1.0000	1.0000
L26	1	Safety Line 3/8	28.67 - 33.67	1.0000	1.0000
L27	1	Safety Line 3/8	23.67 - 28.67	1.0000	1.0000
L28	1	Safety Line 3/8	18.67 - 23.67	1.0000	1.0000
L29	1	Safety Line 3/8	13.67 - 18.67	1.0000	1.0000
L30	1	Safety Line 3/8	8.67 - 13.67	1.0000	1.0000
L31	1	Safety Line 3/8	3.67 - 8.67	1.0000	1.0000
L32	1	Safety Line 3/8	0.00 - 3.67	1.0000	1.0000

**Effective Width of Flat Linear Attachments / Feed Lines**

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L9	3	(Area) Sabre MS400 (0.75x4.00)	96.50 - 97.50	Auto	0.0000
L9	4	(Area) Sabre MS400 (0.75x4.00)	96.50 - 97.50	Auto	0.0000
L9	5	(Area) Sabre MS400 (0.75x4.00)	96.50 - 97.50	Auto	0.0000
L10	3	(Area) Sabre MS400 (0.75x4.00)	96.25 - 96.50	Auto	0.0000
L10	4	(Area) Sabre MS400 (0.75x4.00)	96.25 - 96.50	Auto	0.0000
L10	5	(Area) Sabre MS400 (0.75x4.00)	96.25 - 96.50	Auto	0.0000
L10	7	(Area) CCI-65FP-040075 (H)	96.25 - 96.50	Auto	0.0000
L10	8	(Area) CCI-65FP-040075 (H)	96.25 - 96.50	Auto	0.0000
L10	9	(Area) CCI-65FP-040075 (H)	96.25 - 96.50	Auto	0.0000
L11	3	(Area) Sabre MS400 (0.75x4.00)	95.00 - 96.25	Auto	0.0000
L11	4	(Area) Sabre MS400 (0.75x4.00)	95.00 - 96.25	Auto	0.0000
L11	5	(Area) Sabre MS400 (0.75x4.00)	95.00 - 96.25	Auto	0.0000
L11	7	(Area) CCI-65FP-040075 (H)	95.00 - 96.25	Auto	0.0000
L11	8	(Area) CCI-65FP-040075 (H)	95.00 - 96.25	Auto	0.0000
L11	9	(Area) CCI-65FP-040075 (H)	95.00 - 96.25	Auto	0.0000
L12	3	(Area) Sabre MS400 (0.75x4.00)	94.75 - 95.00	Auto	0.0000
L12	4	(Area) Sabre MS400 (0.75x4.00)	94.75 - 95.00	Auto	0.0000
L12	5	(Area) Sabre MS400 (0.75x4.00)	94.75 - 95.00	Auto	0.0000
L12	7	(Area) CCI-65FP-040075 (H)	94.75 - 95.00	Auto	0.0000
L12	8	(Area) CCI-65FP-040075 (H)	94.75 - 95.00	Auto	0.0000
L12	9	(Area) CCI-65FP-040075 (H)	94.75 - 95.00	Auto	0.0000
L13	3	(Area) Sabre MS400 (0.75x4.00)	89.75 - 94.75	Auto	0.0000
L13	4	(Area) Sabre MS400 (0.75x4.00)	89.75 - 94.75	Auto	0.0000
L13	5	(Area) Sabre MS400 (0.75x4.00)	89.75 - 94.75	Auto	0.0000
L13	7	(Area) CCI-65FP-040075 (H)	89.75 - 94.75	Auto	0.0000
L13	8	(Area) CCI-65FP-040075 (H)	89.75 - 94.75	Auto	0.0000
L13	9	(Area) CCI-65FP-040075 (H)	89.75 - 94.75	Auto	0.0000
L14	3	(Area) Sabre MS400 (0.75x4.00)	87.50 - 89.75	Auto	0.0000
L14	4	(Area) Sabre MS400 (0.75x4.00)	87.50 - 89.75	Auto	0.0000
L14	5	(Area) Sabre MS400 (0.75x4.00)	87.50 - 89.75	Auto	0.0000
L14	7	(Area) CCI-65FP-040075 (H)	86.50 - 89.75	Auto	0.0000
L14	8	(Area) CCI-65FP-040075 (H)	86.50 - 89.75	Auto	0.0000
L14	9	(Area) CCI-65FP-040075 (H)	86.50 - 89.75	Auto	0.0000

### Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment  °	Placement  ft
GPS_A w/ Mount Pipe	C	From Leg	1.00 0.00 4.00	0.0000	140.00
***					
BSF0020F3V1	A	From Leg	4.00 0.00 1.00	0.0000	135.00
BSF0020F3V1	B	From Leg	4.00 0.00 1.00	0.0000	135.00
LNx-6513DS-A1M w/ Mount Pipe	A	From Leg	4.00 0.00 2.00	0.0000	135.00
LNx-6513DS-A1M w/ Mount Pipe	B	From Leg	4.00 0.00 2.00	0.0000	135.00
LNx-6513DS-A1M w/ Mount Pipe	C	From Leg	4.00 0.00 2.00	0.0000	135.00
(2) NHH-65B-R2B w/ Mount Pipe	A	From Leg	4.00 0.00 2.00	0.0000	135.00
(2) NHH-65B-R2B w/ Mount Pipe	B	From Leg	4.00 0.00 2.00	0.0000	135.00
(2) NHH-65B-R2B w/ Mount Pipe	C	From Leg	4.00 0.00 2.00	0.0000	135.00
MT6407-77A w/ Mount Pipe	A	From Leg	4.00 0.00 3.00	0.0000	135.00
MT6407-77A w/ Mount Pipe	B	From Leg	4.00 0.00 3.00	0.0000	135.00
MT6407-77A w/ Mount Pipe	C	From Leg	4.00 0.00 3.00	0.0000	135.00
TME-RT4401-48A w/ Mount Pipe	A	From Leg	4.00 0.00 0.00	0.0000	135.00
TME-RT4401-48A w/ Mount Pipe	B	From Leg	4.00 0.00 0.00	0.0000	135.00
TME-RT4401-48A w/ Mount Pipe	C	From Leg	4.00 0.00 0.00	0.0000	135.00
RVZDC-6627-PF-48	A	From Leg	4.00 0.00 3.00	0.0000	135.00
DB-T1-6Z-8AB-0Z	C	From Leg	4.00 0.00 3.00	0.0000	135.00
RFV01U-D1A	A	From Leg	4.00 0.00 1.00	0.0000	135.00
RFV01U-D1A	B	From Leg	4.00 0.00	0.0000	135.00

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft
RFV01U-D1A	C	From Leg	1.00 4.00 0.00	0.0000	135.00
RFV01U-D2A	A	From Leg	1.00 4.00 0.00	0.0000	135.00
(2) RFV01U-D2A	B	From Leg	1.00 4.00 0.00	0.0000	135.00
Platform Mount [LP 1201-1_KCKR-HR-1] 8' x 2" Mount Pipe	C A	None From Leg	1.00 4.00 0.00	0.0000 0.0000	135.00 135.00
8' x 2" Mount Pipe	B	From Leg	0.00 4.00 0.00	0.0000	135.00
8' x 2" Mount Pipe	C	From Leg	0.00 4.00 0.00	0.0000	135.00
(2) Side Arm Mount [SO 103-1]	A	From Leg	0.00 4.00 0.00	0.0000	135.00
(2) Side Arm Mount [SO 103-1]	B	From Leg	0.00 4.00 0.00	0.0000	135.00
(2) Side Arm Mount [SO 103-1]	C	From Leg	0.00 4.00 0.00	0.0000	135.00
*			0.00		
AIR6449 B41_T-MOBILE w/ Mount Pipe	A	From Leg	4.00 0.00 1.00	0.0000	123.00
AIR6449 B41_T-MOBILE w/ Mount Pipe	B	From Leg	4.00 0.00 1.00	0.0000	123.00
AIR6449 B41_T-MOBILE w/ Mount Pipe	C	From Leg	4.00 0.00 1.00	0.0000	123.00
APXVAALL24_43-U-NA20_TMO w/ Mount Pipe	A	From Leg	4.00 0.00 1.00	0.0000	123.00
APXVAALL24_43-U-NA20_TMO w/ Mount Pipe	B	From Leg	4.00 0.00 1.00	0.0000	123.00
APXVAALL24_43-U-NA20_TMO w/ Mount Pipe	C	From Leg	4.00 0.00 1.00	0.0000	123.00
(2) RADIO 4460 B2/B25 B66_TMO	A	From Leg	4.00 0.00 1.00	0.0000	123.00
RADIO 4460 B2/B25 B66_TMO	B	From Leg	4.00 0.00 1.00	0.0000	123.00
Radio 4480_TMOV2	A	From Leg	4.00 0.00 1.00	0.0000	123.00
(2) Radio 4480_TMOV2	B	From Leg	4.00 0.00 1.00	0.0000	123.00
2.4" Dia x 8-ft Mount Pipe	A	From Centroid-Face	4.00 0.00	0.0000	123.00
2.4" Dia x 8-ft Mount Pipe	B	From Centroid-Face	4.00 0.00	0.0000	123.00



Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement
			Horz Lateral	Vert ft ft		
2.4" Dia x 8-ft Mount Pipe	C	From Centroid-Face	0.00	4.00	0.0000	123.00
			0.00			
Miscellaneous [NA 507-1]	C	None			0.0000	123.00
RMPQ-396	C	None			0.0000	123.00
*						
742 213	A	From Leg	1.00	0.00	0.0000	112.00
			0.00			
742 213	B	From Leg	1.00	0.00	0.0000	112.00
			0.00			
742 213	C	From Leg	1.00	0.00	0.0000	112.00
			0.00			
Pipe Mount [PM 602-3]	C	None	0.00		0.0000	112.00
****						

## Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp

Comb. No.	Description
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

### Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	140 - 135	Pole	Max Tension	30	0.00	0.00	-0.00
			Max. Compression	26	-0.42	0.06	-0.02
			Max. Mx	20	-0.15	1.02	-0.00
			Max. My	14	-0.15	0.01	-1.02
			Max. Vy	8	0.37	-1.00	-0.00
			Max. Vx	2	-0.37	0.01	1.01
			Max. Torque	12			-0.03
L2	135 - 130	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-13.65	-0.65	0.42
			Max. Mx	8	-5.14	-39.12	0.20
			Max. My	2	-5.14	-0.71	38.70
			Max. Vy	8	6.70	-39.12	0.20
			Max. Vx	2	-6.71	-0.71	38.70
			Max. Torque	10			0.32
L3	130 - 125	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-14.11	-0.70	0.47
			Max. Mx	8	-5.37	-73.54	0.24
			Max. My	2	-5.37	-0.76	73.16
			Max. Vy	8	7.07	-73.54	0.24
			Max. Vx	2	-7.08	-0.76	73.16
			Max. Torque	10			0.32
L4	125 - 120	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-21.82	-3.05	2.02
			Max. Mx	8	-8.70	-125.84	0.93
			Max. My	2	-8.69	-1.81	125.21
			Max. Vy	8	11.64	-125.84	0.93
			Max. Vx	2	-11.68	-1.81	125.21
			Max. Torque	24			-1.32
L5	120 - 115	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-22.37	-3.13	2.09
			Max. Mx	8	-9.04	-184.95	0.69
			Max. My	2	-9.04	-1.59	184.50
			Max. Vy	8	12.01	-184.95	0.69
			Max. Vx	2	-12.05	-1.59	184.50
			Max. Torque	24			-1.32
L6	115 - 110	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-23.85	-3.19	2.15
			Max. Mx	8	-9.75	-247.19	0.45
			Max. My	2	-9.74	-1.36	246.91
			Max. Vy	8	13.02	-247.19	0.45
			Max. Vx	2	-13.06	-1.36	246.91
			Max. Torque	24			-1.32
L7	110 - 105	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-24.44	-3.25	2.21
			Max. Mx	8	-10.16	-313.18	0.21
			Max. My	2	-10.15	-1.12	313.08
			Max. Vy	8	13.39	-313.18	0.21

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L8	105 - 100	Pole	Max. Vx	2	-13.43	-1.12	313.08
			Max. Torque	24			-1.32
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-25.04	-3.29	2.26
			Max. Mx	8	-10.60	-381.01	-0.04
			Max. My	2	-10.59	-0.88	381.08
			Max. Vy	8	13.76	-381.01	-0.04
			Max. Vx	2	-13.79	-0.88	381.08
L9	100 - 96.5	Pole	Max. Torque	24			-1.31
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-25.50	-3.32	2.29
			Max. Mx	8	-10.92	-429.57	-0.21
			Max. My	2	-10.92	-0.71	429.77
			Max. Vy	8	14.02	-429.57	-0.21
			Max. Vx	2	-14.05	-0.71	429.77
			Max. Torque	24			-1.31
L10	96.5 - 96.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-25.56	-3.32	2.30
			Max. Mx	8	-10.97	-433.08	-0.22
			Max. My	2	-10.96	-0.70	433.28
			Max. Vy	8	14.03	-433.08	-0.22
			Max. Vx	2	-14.06	-0.70	433.28
			Max. Torque	24			-1.31
			Max Tension	1	0.00	0.00	0.00
L11	96.25 - 95	Pole	Max. Compression	26	-25.82	-3.33	2.31
			Max. Mx	8	-11.11	-450.68	-0.29
			Max. My	2	-11.10	-0.64	450.92
			Max. Vy	8	14.14	-450.68	-0.29
			Max. Vx	2	-14.18	-0.64	450.92
			Max. Torque	24			-1.31
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-25.88	-3.33	2.31
L12	95 - 94.75	Pole	Max. Mx	8	-11.16	-454.21	-0.30
			Max. My	2	-11.15	-0.63	454.47
			Max. Vy	8	14.16	-454.21	-0.30
			Max. Vx	2	-14.19	-0.63	454.47
			Max. Torque	24			-1.31
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-27.13	-3.36	2.35
			Max. Mx	8	-11.92	-526.17	-0.55
L13	94.75 - 89.75	Pole	Max. My	2	-11.91	-0.38	526.60
			Max. Vy	8	14.63	-526.17	-0.55
			Max. Vx	2	-14.67	-0.38	526.60
			Max. Torque	24			-1.31
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-27.19	-3.37	2.36
			Max. Mx	8	-11.96	-529.83	-0.56
			Max. My	2	-11.96	-0.37	530.27
L14	89.75 - 85.17	Pole	Max. Vy	8	14.65	-529.83	-0.56
			Max. Vx	2	-14.69	-0.37	530.27
			Max. Torque	24			-1.31
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-29.04	-3.40	2.40
			Max. Mx	8	-13.20	-609.49	-0.82
			Max. My	2	-13.19	-0.11	610.12
			Max. Vy	8	15.23	-609.49	-0.82
L15	85.17 - 84.17	Pole	Max. Vx	2	-15.26	-0.11	610.12
			Max. Torque	24			-1.31
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-29.93	-3.42	2.44
			Max. Mx	8	-13.88	-686.64	-1.08
			Max. My	2	-13.88	0.14	687.45
			Max. Vy	8	15.66	-686.64	-1.08
			Max. Vx	2	-15.69	0.14	687.45
L16	84.17 - 79.17	Pole	Max. Torque	24			-1.31
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-29.93	-3.42	2.44
			Max. Mx	8	-13.88	-686.64	-1.08
			Max. My	2	-13.88	0.14	687.45
			Max. Vy	8	15.66	-686.64	-1.08
Max. Vx	2	-15.69	0.14	687.45			
Max. Torque	24			-1.31			

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L17	79.17 - 74.17	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-30.84	-3.45	2.48
			Max. Mx	8	-14.59	-765.94	-1.33
			Max. My	2	-14.59	0.39	766.93
			Max. Vy	8	16.09	-765.94	-1.33
			Max. Vx	2	-16.12	0.39	766.93
L18	74.17 - 69.17	Pole	Max. Torque	24			-1.31
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-31.78	-3.46	2.52
			Max. Mx	8	-15.33	-847.40	-1.58
			Max. My	2	-15.32	0.63	848.57
			Max. Vy	8	16.52	-847.40	-1.58
L19	69.17 - 64.17	Pole	Max. Vx	2	-16.55	0.63	848.57
			Max. Torque	24			-1.31
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-32.74	-3.48	2.55
			Max. Mx	8	-16.09	-931.01	-1.83
			Max. My	2	-16.09	0.88	932.36
L20	64.17 - 59.17	Pole	Max. Vy	8	16.95	-931.01	-1.83
			Max. Vx	2	-16.99	0.88	932.36
			Max. Torque	24			-1.30
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-33.73	-3.49	2.58
			Max. Mx	8	-16.88	-1016.78	-2.08
L21	59.17 - 54.17	Pole	Max. My	2	-16.87	1.13	1018.31
			Max. Vy	8	17.38	-1016.78	-2.08
			Max. Vx	2	-17.42	1.13	1018.31
			Max. Torque	24			-1.30
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-34.74	-3.50	2.61
L22	54.17 - 49.17	Pole	Max. Mx	8	-17.69	-1104.70	-2.33
			Max. My	2	-17.68	1.38	1106.41
			Max. Vy	8	17.81	-1104.70	-2.33
			Max. Vx	2	-17.85	1.38	1106.41
			Max. Torque	24			-1.30
			Max Tension	1	0.00	0.00	0.00
L23	49.17 - 44.17	Pole	Max. Compression	26	-35.78	-3.50	2.64
			Max. Mx	8	-18.52	-1194.77	-2.59
			Max. My	2	-18.52	1.63	1196.65
			Max. Vy	8	18.24	-1194.77	-2.59
			Max. Vx	2	-18.27	1.63	1196.65
			Max. Torque	24			-1.30
L24	44.17 - 34.67	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-36.84	-3.50	2.67
			Max. Mx	8	-19.38	-1286.95	-2.84
			Max. My	2	-19.38	1.88	1289.01
			Max. Vy	8	18.66	-1286.95	-2.84
			Max. Vx	2	-18.70	1.88	1289.01
L25	34.67 - 33.67	Pole	Max. Torque	24			-1.30
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-37.74	-3.50	2.69
			Max. Mx	8	-20.12	-1365.43	-3.05
			Max. My	2	-20.12	2.09	1367.64
			Max. Vy	8	19.00	-1365.43	-3.05
			Max. Vx	2	-19.04	2.09	1367.64
			Max. Torque	24			-1.30
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-40.36	-3.48	2.70
			Max. Mx	8	-22.11	-1487.70	-3.36
			Max. My	2	-22.11	2.41	1490.14

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L26	33.67 - 28.67	Pole	Max. Vy	8	19.64	-1487.70	-3.36
			Max. Vx	2	-19.67	2.41	1490.14
			Max. Torque	24			-1.30
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-41.62	-3.46	2.71
L27	28.67 - 23.67	Pole	Max. Mx	8	-23.16	-1586.85	-3.61
			Max. My	2	-23.16	2.66	1589.46
			Max. Vy	8	20.05	-1586.85	-3.61
			Max. Vx	2	-20.08	2.66	1589.46
			Max. Torque	24			-1.30
L28	23.67 - 18.67	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-42.90	-3.44	2.72
			Max. Mx	8	-24.23	-1687.98	-3.86
			Max. My	2	-24.23	2.91	1690.77
			Max. Vy	8	20.44	-1687.98	-3.86
L29	18.67 - 13.67	Pole	Max. Vx	2	-20.47	2.91	1690.77
			Max. Torque	24			-1.30
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-44.20	-3.42	2.73
			Max. Mx	8	-25.33	-1791.02	-4.11
L30	13.67 - 8.67	Pole	Max. My	2	-25.33	3.16	1793.99
			Max. Vy	8	20.81	-1791.02	-4.11
			Max. Vx	2	-20.84	3.16	1793.99
			Max. Torque	24			-1.30
			Max Tension	1	0.00	0.00	0.00
L31	8.67 - 3.67	Pole	Max. Compression	26	-45.53	-3.41	2.74
			Max. Mx	8	-26.46	-1895.87	-4.35
			Max. My	2	-26.46	3.41	1899.01
			Max. Vy	8	21.16	-1895.87	-4.35
			Max. Vx	2	-21.19	3.41	1899.01
L32	3.67 - 0	Pole	Max. Torque	24			-1.30
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-46.87	-3.39	2.75
			Max. Mx	8	-27.61	-2002.46	-4.60
			Max. My	2	-27.61	3.65	2005.77
L31	8.67 - 3.67	Pole	Max. Vy	8	21.50	-2002.46	-4.60
			Max. Vx	2	-21.54	3.65	2005.77
			Max. Torque	24			-1.30
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-48.22	-3.37	2.76
L32	3.67 - 0	Pole	Max. Mx	8	-28.79	-2110.77	-4.84
			Max. My	2	-28.79	3.90	2114.25
			Max. Vy	8	21.85	-2110.77	-4.84
			Max. Vx	2	-21.89	3.90	2114.25
			Max. Torque	24			-1.30
L32	3.67 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-49.21	-3.36	2.77
			Max. Mx	8	-29.67	-2191.38	-5.02
			Max. My	2	-29.67	4.08	2194.98
			Max. Vy	8	22.11	-2191.38	-5.02
L32	3.67 - 0	Pole	Max. Vx	2	-22.15	4.08	2194.98
			Max. Torque	24			-1.30

### Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	30	49.21	-5.64	-0.01
	Max. H <sub>x</sub>	20	29.68	22.09	0.05
	Max. H <sub>z</sub>	2	29.68	0.05	22.13

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
	Max. M <sub>x</sub>	2	2194.98	0.05	22.13
	Max. M <sub>z</sub>	8	2191.38	-22.09	-0.05
	Max. Torsion	12	1.28	-11.09	-19.19
	Min. Vert	11	22.26	-19.16	-11.11
	Min. H <sub>x</sub>	8	29.68	-22.09	-0.05
	Min. H <sub>z</sub>	14	29.68	-0.05	-22.13
	Min. M <sub>x</sub>	14	-2192.52	-0.05	-22.13
	Min. M <sub>z</sub>	20	-2187.07	22.09	0.05
	Min. Torsion	24	-1.30	11.09	19.19

### Tower Mast Reaction Summary

Load Combination	Vertical K	Shear <sub>x</sub> K	Shear <sub>z</sub> K	Overturning Moment, M <sub>x</sub> kip-ft	Overturning Moment, M <sub>z</sub> kip-ft	Torque kip-ft
Dead Only	24.74	0.00	-0.00	-0.99	-1.74	0.00
1.2 Dead+1.0 Wind 0 deg - No Ice	29.68	-0.05	-22.13	-2194.98	4.08	1.00
0.9 Dead+1.0 Wind 0 deg - No Ice	22.26	-0.05	-22.13	-2155.97	4.56	0.92
1.2 Dead+1.0 Wind 30 deg - No Ice	29.68	11.00	-19.14	-1897.99	-1091.37	0.42
0.9 Dead+1.0 Wind 30 deg - No Ice	22.26	11.00	-19.14	-1864.22	-1071.58	0.38
1.2 Dead+1.0 Wind 60 deg - No Ice	29.68	19.11	-11.02	-1092.72	-1894.99	-0.27
0.9 Dead+1.0 Wind 60 deg - No Ice	22.26	19.11	-11.02	-1073.15	-1861.03	-0.27
1.2 Dead+1.0 Wind 90 deg - No Ice	29.68	22.09	0.05	5.02	-2191.38	-0.88
0.9 Dead+1.0 Wind 90 deg - No Ice	22.26	22.09	0.05	5.24	-2152.20	-0.84
1.2 Dead+1.0 Wind 120 deg - No Ice	29.68	19.16	11.11	1101.05	-1901.16	-1.25
0.9 Dead+1.0 Wind 120 deg - No Ice	22.26	19.16	11.11	1081.95	-1867.09	-1.18
1.2 Dead+1.0 Wind 150 deg - No Ice	29.68	11.09	19.19	1901.71	-1102.14	-1.28
0.9 Dead+1.0 Wind 150 deg - No Ice	22.26	11.09	19.19	1868.51	-1082.16	-1.20
1.2 Dead+1.0 Wind 180 deg - No Ice	29.68	0.05	22.13	2192.52	-8.41	-0.98
0.9 Dead+1.0 Wind 180 deg - No Ice	22.26	0.05	22.13	2154.20	-7.69	-0.90
1.2 Dead+1.0 Wind 210 deg - No Ice	29.68	-11.00	19.14	1895.54	1087.05	-0.41
0.9 Dead+1.0 Wind 210 deg - No Ice	22.26	-11.00	19.14	1862.45	1068.46	-0.37
1.2 Dead+1.0 Wind 240 deg - No Ice	29.68	-19.11	11.02	1090.28	1890.67	0.26
0.9 Dead+1.0 Wind 240 deg - No Ice	22.26	-19.11	11.02	1071.38	1857.91	0.26
1.2 Dead+1.0 Wind 270 deg - No Ice	29.68	-22.09	-0.05	-7.47	2187.07	0.86
0.9 Dead+1.0 Wind 270 deg - No Ice	22.26	-22.09	-0.05	-7.01	2149.09	0.82
1.2 Dead+1.0 Wind 300 deg - No Ice	29.68	-19.16	-11.11	-1103.51	1896.85	1.24
0.9 Dead+1.0 Wind 300 deg - No Ice	22.26	-19.16	-11.11	-1083.73	1863.98	1.17
1.2 Dead+1.0 Wind 330 deg - No Ice	29.68	-11.09	-19.19	-1904.17	1097.83	1.30
0.9 Dead+1.0 Wind 330 deg - No Ice	22.26	-11.09	-19.19	-1870.29	1079.04	1.21
1.2 Dead+1.0 Ice+1.0 Temp	49.21	0.00	-0.00	-2.77	-3.36	0.00

Load Combination	Vertical	Shear <sub>x</sub>	Shear <sub>z</sub>	Overturning Moment, M <sub>x</sub>	Overturning Moment, M <sub>z</sub>	Torque
	K	K	K	kip-ft	kip-ft	kip-ft
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	49.21	-0.01	-5.64	-619.84	-2.00	0.31
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	49.21	2.81	-4.88	-536.47	-310.18	0.14
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	49.21	4.88	-2.81	-310.10	-536.17	-0.06
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	49.21	5.64	0.01	-1.39	-619.41	-0.25
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	49.21	4.89	2.83	306.93	-537.60	-0.37
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	49.21	2.83	4.89	532.26	-312.66	-0.39
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	49.21	0.01	5.64	614.21	-4.86	-0.31
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	49.21	-2.81	4.88	530.83	303.33	-0.14
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	49.21	-4.88	2.81	304.46	529.32	0.06
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	49.21	-5.64	-0.01	-4.25	612.55	0.25
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	49.21	-4.89	-2.83	-312.57	530.75	0.37
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	49.21	-2.83	-4.89	-537.89	305.80	0.39
Dead+Wind 0 deg - Service	24.74	-0.01	-5.39	-530.63	-0.27	0.23
Dead+Wind 30 deg - Service	24.74	2.68	-4.66	-458.92	-264.73	0.10
Dead+Wind 60 deg - Service	24.74	4.65	-2.68	-264.52	-458.73	-0.07
Dead+Wind 90 deg - Service	24.74	5.38	0.01	0.49	-530.29	-0.21
Dead+Wind 120 deg - Service	24.74	4.67	2.70	265.10	-460.24	-0.30
Dead+Wind 150 deg - Service	24.74	2.70	4.67	458.40	-267.34	-0.31
Dead+Wind 180 deg - Service	24.74	0.01	5.39	528.60	-3.29	-0.23
Dead+Wind 210 deg - Service	24.74	-2.68	4.66	456.89	261.17	-0.10
Dead+Wind 240 deg - Service	24.74	-4.65	2.68	262.49	455.17	0.07
Dead+Wind 270 deg - Service	24.74	-5.38	-0.01	-2.52	526.73	0.21
Dead+Wind 300 deg - Service	24.74	-4.67	-2.70	-267.13	456.68	0.30
Dead+Wind 330 deg - Service	24.74	-2.70	-4.67	-460.43	263.78	0.31

## Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
1	0.00	-24.74	0.00	-0.00	24.74	0.00	0.000%
2	-0.05	-29.68	-22.13	0.05	29.68	22.13	0.000%
3	-0.05	-22.26	-22.13	0.05	22.26	22.13	0.000%
4	11.00	-29.68	-19.14	-11.00	29.68	19.14	0.000%
5	11.00	-22.26	-19.14	-11.00	22.26	19.14	0.000%
6	19.11	-29.68	-11.02	-19.11	29.68	11.02	0.000%
7	19.11	-22.26	-11.02	-19.11	22.26	11.02	0.000%
8	22.09	-29.68	0.05	-22.09	29.68	-0.05	0.000%
9	22.09	-22.26	0.05	-22.09	22.26	-0.05	0.000%
10	19.16	-29.68	11.11	-19.16	29.68	-11.11	0.000%
11	19.16	-22.26	11.11	-19.16	22.26	-11.11	0.000%
12	11.09	-29.68	19.19	-11.09	29.68	-19.19	0.000%
13	11.09	-22.26	19.19	-11.09	22.26	-19.19	0.000%
14	0.05	-29.68	22.13	-0.05	29.68	-22.13	0.000%
15	0.05	-22.26	22.13	-0.05	22.26	-22.13	0.000%
16	-11.00	-29.68	19.14	11.00	29.68	-19.14	0.000%

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
17	-11.00	-22.26	19.14	11.00	22.26	-19.14	0.000%
18	-19.11	-29.68	11.02	19.11	29.68	-11.02	0.000%
19	-19.11	-22.26	11.02	19.11	22.26	-11.02	0.000%
20	-22.09	-29.68	-0.05	22.09	29.68	0.05	0.000%
21	-22.09	-22.26	-0.05	22.09	22.26	0.05	0.000%
22	-19.16	-29.68	-11.11	19.16	29.68	11.11	0.000%
23	-19.16	-22.26	-11.11	19.16	22.26	11.11	0.000%
24	-11.09	-29.68	-19.19	11.09	29.68	19.19	0.000%
25	-11.09	-22.26	-19.19	11.09	22.26	19.19	0.000%
26	0.00	-49.21	0.00	-0.00	49.21	0.00	0.000%
27	-0.01	-49.21	-5.64	0.01	49.21	5.64	0.000%
28	2.81	-49.21	-4.88	-2.81	49.21	4.88	0.000%
29	4.88	-49.21	-2.81	-4.88	49.21	2.81	0.000%
30	5.64	-49.21	0.01	-5.64	49.21	-0.01	0.000%
31	4.89	-49.21	2.83	-4.89	49.21	-2.83	0.000%
32	2.83	-49.21	4.89	-2.83	49.21	-4.89	0.000%
33	0.01	-49.21	5.64	-0.01	49.21	-5.64	0.000%
34	-2.81	-49.21	4.88	2.81	49.21	-4.88	0.000%
35	-4.88	-49.21	2.81	4.88	49.21	-2.81	0.000%
36	-5.64	-49.21	-0.01	5.64	49.21	0.01	0.000%
37	-4.89	-49.21	-2.83	4.89	49.21	2.83	0.000%
38	-2.83	-49.21	-4.89	2.83	49.21	4.89	0.000%
39	-0.01	-24.74	-5.39	0.01	24.74	5.39	0.000%
40	2.68	-24.74	-4.66	-2.68	24.74	4.66	0.000%
41	4.65	-24.74	-2.68	-4.65	24.74	2.68	0.000%
42	5.38	-24.74	0.01	-5.38	24.74	-0.01	0.000%
43	4.67	-24.74	2.70	-4.67	24.74	-2.70	0.000%
44	2.70	-24.74	4.67	-2.70	24.74	-4.67	0.000%
45	0.01	-24.74	5.39	-0.01	24.74	-5.39	0.000%
46	-2.68	-24.74	4.66	2.68	24.74	-4.66	0.000%
47	-4.65	-24.74	2.68	4.65	24.74	-2.68	0.000%
48	-5.38	-24.74	-0.01	5.38	24.74	0.01	0.000%
49	-4.67	-24.74	-2.70	4.67	24.74	2.70	0.000%
50	-2.70	-24.74	-4.67	2.70	24.74	4.67	0.000%

### Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00001622
2	Yes	6	0.00000001	0.00036989
3	Yes	6	0.00000001	0.00010744
4	Yes	8	0.00000001	0.00009356
5	Yes	7	0.00000001	0.00024536
6	Yes	8	0.00000001	0.00009328
7	Yes	7	0.00000001	0.00024484
8	Yes	6	0.00000001	0.00029586
9	Yes	6	0.00000001	0.00009051
10	Yes	8	0.00000001	0.00009035
11	Yes	7	0.00000001	0.00023639
12	Yes	8	0.00000001	0.00009564
13	Yes	7	0.00000001	0.00025092
14	Yes	6	0.00000001	0.00059387
15	Yes	6	0.00000001	0.00017818
16	Yes	8	0.00000001	0.00009117
17	Yes	7	0.00000001	0.00023962
18	Yes	8	0.00000001	0.00009140
19	Yes	7	0.00000001	0.00024005
20	Yes	6	0.00000001	0.00051853
21	Yes	6	0.00000001	0.00016102
22	Yes	8	0.00000001	0.00009533
23	Yes	7	0.00000001	0.00025034
24	Yes	8	0.00000001	0.00009010
25	Yes	7	0.00000001	0.00023591
26	Yes	5	0.00000001	0.00043614



27	Yes	7	0.00000001	0.00097585
28	Yes	8	0.00000001	0.00042581
29	Yes	8	0.00000001	0.00042359
30	Yes	7	0.00000001	0.00097434
31	Yes	8	0.00000001	0.00040643
32	Yes	8	0.00000001	0.00042498
33	Yes	7	0.00000001	0.00095909
34	Yes	8	0.00000001	0.00039200
35	Yes	8	0.00000001	0.00039368
36	Yes	7	0.00000001	0.00094968
37	Yes	8	0.00000001	0.00041988
38	Yes	8	0.00000001	0.00040191
39	Yes	5	0.00000001	0.00036796
40	Yes	6	0.00000001	0.00026993
41	Yes	6	0.00000001	0.00026793
42	Yes	5	0.00000001	0.00032325
43	Yes	6	0.00000001	0.00024907
44	Yes	6	0.00000001	0.00028262
45	Yes	5	0.00000001	0.00040507
46	Yes	6	0.00000001	0.00024633
47	Yes	6	0.00000001	0.00024779
48	Yes	5	0.00000001	0.00035720
49	Yes	6	0.00000001	0.00027798
50	Yes	6	0.00000001	0.00024514

### Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	140 - 135	33.920	42	2.2367	0.0065
L2	135 - 130	31.579	42	2.2363	0.0065
L3	130 - 125	29.246	42	2.2156	0.0062
L4	125 - 120	26.949	43	2.1731	0.0060
L5	120 - 115	24.710	43	2.1092	0.0054
L6	115 - 110	22.550	43	2.0211	0.0046
L7	110 - 105	20.490	43	1.9152	0.0039
L8	105 - 100	18.548	43	1.7952	0.0033
L9	100 - 96.5	16.736	43	1.6645	0.0028
L10	96.5 - 96.25	15.551	43	1.5685	0.0024
L11	96.25 - 95	15.469	43	1.5643	0.0024
L12	95 - 94.75	15.062	43	1.5432	0.0023
L13	94.75 - 89.75	14.982	43	1.5402	0.0023
L14	89.75 - 85.17	13.402	43	1.4765	0.0021
L15	89.5 - 84.17	13.325	43	1.4733	0.0021
L16	84.17 - 79.17	11.705	43	1.4208	0.0020
L17	79.17 - 74.17	10.267	43	1.3248	0.0017
L18	74.17 - 69.17	8.931	43	1.2280	0.0015
L19	69.17 - 64.17	7.696	43	1.1309	0.0013
L20	64.17 - 59.17	6.562	43	1.0340	0.0012
L21	59.17 - 54.17	5.530	43	0.9374	0.0010
L22	54.17 - 49.17	4.599	43	0.8415	0.0009
L23	49.17 - 44.17	3.767	43	0.7465	0.0007
L24	44.17 - 34.67	3.035	43	0.6524	0.0006
L25	40 - 33.67	2.499	43	0.5749	0.0005
L26	33.67 - 28.67	1.774	43	0.5128	0.0005
L27	28.67 - 23.67	1.279	43	0.4330	0.0004
L28	23.67 - 18.67	0.866	43	0.3544	0.0003
L29	18.67 - 13.67	0.536	43	0.2771	0.0002
L30	13.67 - 8.67	0.286	43	0.2011	0.0002
L31	8.67 - 3.67	0.114	43	0.1264	0.0001
L32	3.67 - 0	0.020	43	0.0530	0.0000

### Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
140.00	GPS_A w/ Mount Pipe	42	33.920	2.2367	0.0065	33612
135.00	BSF0020F3V1	42	31.579	2.2363	0.0065	33612
123.00	AIR6449 B41_T-MOBILE w/ Mount Pipe	43	26.045	2.1503	0.0058	4628
112.00	742 213	43	21.300	1.9596	0.0042	2668

### Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	140 - 135	139.867	2	9.2134	0.0270
L2	135 - 130	130.269	2	9.2118	0.0272
L3	130 - 125	120.705	2	9.1320	0.0259
L4	125 - 120	111.272	2	8.9606	0.0250
L5	120 - 115	102.057	2	8.7053	0.0226
L6	115 - 110	93.160	2	8.3512	0.0194
L7	110 - 105	84.670	2	7.9212	0.0165
L8	105 - 100	76.668	12	7.4303	0.0139
L9	100 - 96.5	69.200	12	6.8933	0.0116
L10	96.5 - 96.25	64.311	12	6.4968	0.0101
L11	96.25 - 95	63.972	12	6.4796	0.0101
L12	95 - 94.75	62.293	12	6.3924	0.0098
L13	94.75 - 89.75	61.960	12	6.3799	0.0097
L14	89.75 - 85.17	55.439	12	6.1168	0.0089
L15	89.5 - 84.17	55.120	12	6.1035	0.0089
L16	84.17 - 79.17	48.427	12	5.8866	0.0083
L17	79.17 - 74.17	42.487	12	5.4894	0.0073
L18	74.17 - 69.17	36.962	12	5.0887	0.0065
L19	69.17 - 64.17	31.854	12	4.6865	0.0057
L20	64.17 - 59.17	27.165	12	4.2846	0.0050
L21	59.17 - 54.17	22.895	12	3.8844	0.0043
L22	54.17 - 49.17	19.040	12	3.4869	0.0037
L23	49.17 - 44.17	15.598	12	3.0929	0.0031
L24	44.17 - 34.67	12.566	12	2.7030	0.0026
L25	40 - 33.67	10.348	12	2.3814	0.0022
L26	33.67 - 28.67	7.344	12	2.1241	0.0019
L27	28.67 - 23.67	5.294	12	1.7932	0.0016
L28	23.67 - 18.67	3.587	12	1.4676	0.0013
L29	18.67 - 13.67	2.219	12	1.1474	0.0010
L30	13.67 - 8.67	1.182	12	0.8326	0.0007
L31	8.67 - 3.67	0.473	12	0.5233	0.0004
L32	3.67 - 0	0.084	12	0.2195	0.0002

### Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
140.00	GPS_A w/ Mount Pipe	2	139.867	9.2134	0.0270	9190
135.00	BSF0020F3V1	2	130.269	9.2118	0.0272	9190
123.00	AIR6449 B41_T-MOBILE w/ Mount Pipe	2	107.555	8.8695	0.0244	1205
112.00	742 213	2	88.012	8.1020	0.0176	682

### Compression Checks

### Pole Design Data

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio P <sub>u</sub> φP <sub>n</sub>
L1	140 - 139	TP16.9374x16x0.1875	5.00	0.00	0.0	9.6600	-0.11	565.11	0.000
	139 - 138					9.7732	-0.06	571.73	0.000
	138 - 137					9.8864	-0.09	578.35	0.000
	137 - 136					9.9996	-0.12	584.98	0.000
	136 - 135					10.112	-0.15	591.60	0.000
L2	135 - 134	TP17.8749x16.9374x0.1875	5.00	0.00	0.0	10.226	-4.97	598.22	0.008
	134 - 133					10.339	-5.01	604.84	0.008
	133 - 132					10.452	-5.05	611.46	0.008
	132 - 131					10.565	-5.10	618.09	0.008
	131 - 130					10.678	-5.14	624.71	0.008
L3	130 - 129	TP18.8123x17.8749x0.1875	5.00	0.00	0.0	10.792	-5.18	631.33	0.008
	129 - 128					10.905	-5.23	637.95	0.008
	128 - 127					11.018	-5.27	644.57	0.008
	127 - 126					11.131	-5.32	651.20	0.008
	126 - 125					11.244	-5.37	657.82	0.008
L4	125 - 124	TP19.7498x18.8123x0.1875	5.00	0.00	0.0	11.357	-5.42	664.44	0.008
	124 - 123					11.471	-5.48	671.06	0.008
	123 - 122					11.584	-8.58	677.68	0.013
	122 - 121					11.697	-8.64	684.30	0.013
	121 - 120					11.810	-8.70	690.93	0.013
L5	120 - 119	TP20.6872x19.7498x0.1875	5.00	0.00	0.0	11.923	-8.77	697.55	0.013
	119 - 118					12.037	-8.84	704.17	0.013
	118 - 117					12.150	-8.91	710.79	0.013
	117 - 116					12.263	-8.98	717.41	0.013
	116 - 115					12.376	-9.05	724.04	0.012
L6	115 - 114	TP21.6247x20.6872x0.1875	5.00	0.00	0.0	12.489	-9.12	730.66	0.012
	114 - 113					12.603	-9.19	737.28	0.012
	113 - 112					12.716	-9.27	743.90	0.012
	112 - 111					12.829	-9.67	750.52	0.013
	111 - 110					12.942	-9.75	757.15	0.013
L7	110 - 109	TP22.5621x21.6247x0.1875	5.00	0.00	0.0	13.055	-9.83	763.77	0.013
	109 - 108					13.169	-9.91	770.39	0.013
	108 - 107					13.282	-9.98	777.01	0.013
	107 - 106					13.395	-10.07	783.63	0.013

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio P <sub>u</sub> / φP <sub>n</sub>
	106 - 105					13.508	-10.15	790.26	0.013
L8	105 - 104	TP23.4995x22.5621x0.18	5.00	0.00	0.0	13.621	-10.24	796.88	0.013
	104 - 103	75				13.735	-10.32	803.50	0.013
	103 - 102					13.848	-10.41	810.12	0.013
	102 - 101					13.961	-10.50	816.75	0.013
	101 - 100					14.074	-10.59	823.37	0.013
L9	100 - 98.8333	TP24.1558x23.4995x0.18	3.50	0.00	0.0	14.206	-10.70	831.09	0.013
	98.8333 - 97.6667	75				14.338	-10.80	838.82	0.013
	97.6667 - 96.5					14.470	-10.91	846.54	0.013
L10	96.5 - 96.25	TP24.2026x24.1558x0.31	0.25	0.00	0.0	24.513	-10.96	1434.06	0.008
	(10)	88				24.275	-11.10	1420.10	0.008
L11	96.25 - 95	TP24.437x24.2026x0.312	1.25	0.00	0.0	34.825	-11.15	2037.27	0.005
	(11)	5				34.139	-11.29	1997.16	0.006
L12	95 - 94.75	TP24.4839x24.437x0.45	0.25	0.00	0.0	34.139	-11.29	1997.16	0.006
	(12)	75				34.403	-11.44	2012.61	0.006
L13	94.75 - 93.75	TP25.4213x24.4839x0.43	5.00	0.00	0.0	34.403	-11.44	2012.61	0.006
	93.75 - 92.75					34.667	-11.60	2028.06	0.006
	92.75 - 91.75					34.931	-11.75	2043.51	0.006
	91.75 - 90.75					35.195	-11.91	2058.96	0.006
	90.75 - 89.75					35.262	-11.95	2062.82	0.006
L14	89.75 - 89.5	TP26.28x25.4213x0.4375	4.58	0.00	0.0	36.405	-7.64	2129.73	0.004
	89.5 - 85.17					25.753	-5.41	1506.55	0.004
L15	89.5 - 85.17	TP26.0932x25.0932x0.31	5.33	0.00	0.0	25.941	-13.19	1517.59	0.009
	85.17 - 84.17	25				26.130	-13.32	1528.64	0.009
L16	84.17 - 83.17	TP27.0312x26.0932x0.31	5.00	0.00	0.0	26.319	-13.46	1539.68	0.009
	83.17 - 82.17	25				26.508	-13.60	1550.73	0.009
	82.17 - 81.17					26.696	-13.73	1561.77	0.009
	81.17 - 80.17					26.885	-13.87	1572.81	0.009
	80.17 - 79.17					27.074	-14.01	1583.86	0.009
L17	79.17 - 78.17	TP27.9693x27.0312x0.31	5.00	0.00	0.0	27.263	-14.16	1594.90	0.009
	78.17 - 77.17	25				27.452	-14.30	1605.95	0.009
	77.17 - 76.17					27.640	-14.44	1616.99	0.009
	76.17 - 75.17					27.829	-14.58	1628.03	0.009
	75.17 - 74.17					28.018	-14.73	1639.08	0.009
L18	74.17 - 73.17	TP28.9073x27.9693x0.31	5.00	0.00	0.0	28.207	-14.88	1650.12	0.009
	73.17 - 72.17	25				28.396	-15.02	1661.17	0.009
	72.17 - 71.17					28.584	-15.17	1672.21	0.009
	71.17 - 70.17								

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio P <sub>u</sub> / φP <sub>n</sub>
	70.17 - 69.17					8 28.773	-15.32	1683.25	0.009
L19	69.17 - 68.17	TP29.8454x28.9073x0.31	5.00	0.00	0.0	6 28.962	-15.47	1694.30	0.009
	68.17 - 67.17	25				4 29.151	-15.62	1705.34	0.009
	67.17 - 66.17					1 29.339	-15.78	1716.39	0.009
	66.17 - 65.17					9 29.528	-15.93	1727.43	0.009
	65.17 - 64.17					7 29.717	-16.08	1738.47	0.009
L20	64.17 - 63.17	TP30.7835x29.8454x0.31	5.00	0.00	0.0	5 29.906	-16.24	1749.52	0.009
	63.17 - 62.17	25				3 30.095	-16.40	1760.56	0.009
	62.17 - 61.17					1 30.283	-16.55	1771.61	0.009
	61.17 - 60.17					9 30.472	-16.71	1782.65	0.009
	60.17 - 59.17					6 30.661	-16.87	1793.69	0.009
L21	59.17 - 58.17	TP31.7215x30.7835x0.31	5.00	0.00	0.0	4 30.850	-17.03	1804.74	0.009
	58.17 - 57.17	25				2 31.039	-17.19	1815.78	0.009
	57.17 - 56.17					0 31.227	-17.35	1826.83	0.009
	56.17 - 55.17					8 31.416	-17.52	1837.87	0.010
	55.17 - 54.17					6 31.605	-17.68	1848.91	0.010
L22	54.17 - 53.17	TP32.6596x31.7215x0.31	5.00	0.00	0.0	4 31.794	-17.85	1859.96	0.010
	53.17 - 52.17	25				1 31.982	-18.01	1871.00	0.010
	52.17 - 51.17					9 32.171	-18.18	1882.04	0.010
	51.17 - 50.17					7 32.360	-18.35	1893.09	0.010
	50.17 - 49.17					5 32.549	-18.52	1904.13	0.010
L23	49.17 - 48.17	TP33.5977x32.6596x0.31	5.00	0.00	0.0	3 32.738	-18.69	1915.18	0.010
	48.17 - 47.17	25				1 32.926	-18.86	1926.22	0.010
	47.17 - 46.17					8 33.115	-19.03	1937.26	0.010
	46.17 - 45.17					6 33.304	-19.20	1948.31	0.010
	45.17 - 44.17					4 33.493	-19.38	1959.35	0.010
L24	44.17 - 43.1275	TP35.38x33.5977x0.3125	9.50	0.00	0.0	2 33.690	-19.56	1970.87	0.010
	43.1275 - 42.085					0 33.886	-19.74	1982.38	0.010
	42.085 - 41.0425					8 34.083	-19.93	1993.89	0.010
	41.0425 - 40					6 34.280	-20.11	2005.41	0.010
	40 - 34.67					4 35.286	-10.07	2064.27	0.005
L25	40 - 34.67	TP34.9411x33.755x0.375	6.33	0.00	0.0	7 41.512	-11.80	2428.47	0.005
	34.67 - 33.67					3 41.738	-22.10	2441.71	0.009
L26	33.67 - 32.67	TP35.878x34.9411x0.375	5.00	0.00	0.0	6 41.964	-22.31	2454.94	0.009
						8			

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio P <sub>u</sub> / φP <sub>n</sub>
	32.67 - 31.67					42.191	-22.52	2468.18	0.009
	31.67 - 30.67					42.417	-22.73	2481.41	0.009
	30.67 - 29.67					42.643	-22.94	2494.65	0.009
	29.67 - 28.67					42.869	-23.15	2507.89	0.009
L27	28.67 - 27.67	TP36.8148x35.878x0.375	5.00	0.00	0.0	43.096	-23.37	2521.12	0.009
	27.67 - 26.67					43.322	-23.58	2534.36	0.009
	26.67 - 25.67					43.548	-23.80	2547.59	0.009
	25.67 - 24.67					43.774	-24.01	2560.83	0.009
	24.67 - 23.67					44.001	-24.23	2574.07	0.009
L28	23.67 - 22.67	TP37.7517x36.8148x0.375	5.00	0.00	0.0	44.227	-24.45	2587.30	0.009
	22.67 - 21.67					44.453	-24.67	2600.54	0.009
	21.67 - 20.67					44.679	-24.89	2613.77	0.010
	20.67 - 19.67					44.906	-25.11	2627.01	0.010
	19.67 - 18.67					45.132	-25.33	2640.24	0.010
L29	18.67 - 17.67	TP38.6886x37.7517x0.375	5.00	0.00	0.0	45.358	-25.55	2653.48	0.010
	17.67 - 16.67					45.584	-25.78	2666.72	0.010
	16.67 - 15.67					45.811	-26.00	2679.95	0.010
	15.67 - 14.67					46.037	-26.23	2693.19	0.010
	14.67 - 13.67					46.263	-26.46	2706.42	0.010
L30	13.67 - 12.67	TP39.6255x38.6886x0.375	5.00	0.00	0.0	46.489	-26.69	2719.66	0.010
	12.67 - 11.67					46.716	-26.92	2732.90	0.010
	11.67 - 10.67					46.942	-27.15	2746.13	0.010
	10.67 - 9.67					47.168	-27.38	2759.37	0.010
	9.67 - 8.67					47.394	-27.61	2772.60	0.010
L31	8.67 - 7.67	TP40.5623x39.6255x0.375	5.00	0.00	0.0	47.621	-27.85	2785.84	0.010
	7.67 - 6.67					47.847	-28.08	2799.08	0.010
	6.67 - 5.67					48.073	-28.32	2812.31	0.010
	5.67 - 4.67					48.300	-28.55	2825.55	0.010
	4.67 - 3.67					48.526	-28.79	2838.78	0.010
L32	3.67 - 2.44667	TP41.25x40.5623x0.375	3.67	0.00	0.0	48.803	-29.08	2854.98	0.010
	2.44667 - 1.22333					49.079	-29.38	2871.17	0.010
	1.22333 - 0					49.356	-29.67	2887.36	0.010

### Pole Bending Design Data

Section No.	Elevation ft	Size	$M_{ux}$	$\phi M_{nx}$	Ratio	$M_{uy}$	$\phi M_{ny}$	Ratio
			kip-ft	kip-ft	$\frac{M_{ux}}{\phi M_{nx}}$	kip-ft	kip-ft	$\frac{M_{uy}}{\phi M_{ny}}$
L1	140 - 139	TP16.9374x16x0.1875	0.11	228.52	0.000	0.00	228.52	0.000
	139 - 138		0.25	233.09	0.001	0.00	233.09	0.000
	138 - 137		0.44	237.69	0.002	0.00	237.69	0.000
	137 - 136		0.69	242.31	0.003	0.00	242.31	0.000
	136 - 135		1.02	246.96	0.004	0.00	246.96	0.000
L2	135 - 134	TP17.8749x16.9374x0.1875	12.99	251.62	0.052	0.00	251.62	0.000
	134 - 133		19.44	256.31	0.076	0.00	256.31	0.000
	133 - 132		25.96	261.01	0.099	0.00	261.01	0.000
	132 - 131		32.55	265.74	0.122	0.00	265.74	0.000
	131 - 130		39.22	270.49	0.145	0.00	270.49	0.000
L3	130 - 129	TP18.8123x17.8749x0.1875	45.96	275.25	0.167	0.00	275.25	0.000
	129 - 128		52.78	280.03	0.188	0.00	280.03	0.000
	128 - 127		59.67	284.83	0.209	0.00	284.83	0.000
	127 - 126		66.63	289.65	0.230	0.00	289.65	0.000
	126 - 125		73.67	294.48	0.250	0.00	294.48	0.000
L4	125 - 124	TP19.7498x18.8123x0.1875	80.79	299.32	0.270	0.00	299.32	0.000
	124 - 123		87.98	304.18	0.289	0.00	304.18	0.000
	123 - 122		103.08	309.06	0.334	0.00	309.06	0.000
	122 - 121		114.57	313.94	0.365	0.00	313.94	0.000
	121 - 120		126.14	318.84	0.396	0.00	318.84	0.000
L5	120 - 119	TP20.6872x19.7498x0.1875	137.78	323.75	0.426	0.00	323.75	0.000
	119 - 118		149.49	328.67	0.455	0.00	328.67	0.000
	118 - 117		161.28	333.60	0.483	0.00	333.60	0.000
	117 - 116		173.14	338.54	0.511	0.00	338.54	0.000
	116 - 115		185.07	343.49	0.539	0.00	343.49	0.000
L6	115 - 114	TP21.6247x20.6872x0.1875	197.08	348.45	0.566	0.00	348.45	0.000
	114 - 113		209.12	353.42	0.592	0.00	353.42	0.000
	113 - 112		221.31	358.39	0.618	0.00	358.39	0.000
	112 - 111		234.21	363.37	0.645	0.00	363.37	0.000
	111 - 110		247.19	368.35	0.671	0.00	368.35	0.000
L7	110 - 109	TP22.5621x21.6247x0.1875	260.24	373.33	0.697	0.00	373.33	0.000
	109 - 108		273.37	378.33	0.723	0.00	378.33	0.000
	108 - 107		286.56	383.32	0.748	0.00	383.32	0.000
	107 - 106		299.88	388.32	0.772	0.00	388.32	0.000
	106 - 105		313.28	393.32	0.796	0.00	393.32	0.000
L8	105 - 104	TP23.4995x22.5621x0.1875	326.75	398.32	0.820	0.00	398.32	0.000
	104 - 103		340.29	403.32	0.844	0.00	403.32	0.000
	103 - 102		353.91	408.32	0.867	0.00	408.32	0.000
	102 - 101		367.60	413.32	0.889	0.00	413.32	0.000
	101 - 100		381.36	418.32	0.912	0.00	418.32	0.000
L9	100 - 98.8333	TP24.1558x23.4995x0.1875	397.51	424.15	0.937	0.00	424.15	0.000
	98.8333 - 97.6667		413.76	429.97	0.962	0.00	429.97	0.000
	97.6667 - 96.5		430.11	435.79	0.987	0.00	435.79	0.000
L10	96.5 - 96.25	TP24.2026x24.1558x0.3188	433.63	874.50	0.496	0.00	874.50	0.000
L11	96.25 - 95	TP24.437x24.2026x0.3125	451.30	875.05	0.516	0.00	875.05	0.000
L12	95 - 94.75	TP24.4839x24.437x0.4512	454.85	1243.54	0.366	0.00	1243.54	0.000
L13	94.75 - 93.75	TP25.4213x24.4839x0.4375	469.10	1230.02	0.381	0.00	1230.02	0.000
	93.75 - 92.75		483.45	1249.29	0.387	0.00	1249.29	0.000
	92.75 - 91.75		497.90	1268.72	0.392	0.00	1268.72	0.000
	91.75 - 90.75		512.44	1288.29	0.398	0.00	1288.29	0.000
	90.75 - 89.75		527.07	1308.02	0.403	0.00	1308.02	0.000
L14	89.75 - 89.5	TP26.28x25.4213x0.4375	530.74	1312.97	0.404	0.00	1312.97	0.000

Section No.	Elevation ft	Size	$M_{ux}$	$\phi M_{nx}$	Ratio	$M_{uy}$	$\phi M_{ny}$	Ratio
			kip-ft	kip-ft	$\frac{M_{ux}}{\phi M_{nx}}$	kip-ft	kip-ft	$\frac{M_{uy}}{\phi M_{ny}}$
L15	89.5 - 85.17	TP26.0932x25.0932x0.31 25	351.68	1400.28	0.251	0.00	1400.28	0.000
	89.5 - 85.17		243.78	985.55	0.247	0.00	985.55	0.000
L16	85.17 - 84.17	TP27.0312x26.0932x0.31 25	610.68	998.56	0.612	0.00	998.56	0.000
	84.17 - 83.17		625.99	1011.06	0.619	0.00	1011.06	0.000
	83.17 - 82.17		641.39	1023.60	0.627	0.00	1023.60	0.000
	82.17 - 81.17		656.88	1036.19	0.634	0.00	1036.19	0.000
	81.17 - 80.17		672.45	1048.82	0.641	0.00	1048.82	0.000
L17	80.17 - 79.17	TP27.9693x27.0312x0.31 25	688.10	1061.48	0.648	0.00	1061.48	0.000
	79.17 - 78.17		703.84	1074.20	0.655	0.00	1074.20	0.000
	78.17 - 77.17		719.67	1086.95	0.662	0.00	1086.95	0.000
	77.17 - 76.17		735.58	1099.74	0.669	0.00	1099.74	0.000
	76.17 - 75.17		751.58	1112.57	0.676	0.00	1112.57	0.000
L18	75.17 - 74.17	TP28.9073x27.9693x0.31 25	767.67	1125.43	0.682	0.00	1125.43	0.000
	74.17 - 73.17		783.84	1138.34	0.689	0.00	1138.34	0.000
	73.17 - 72.17		800.10	1151.28	0.695	0.00	1151.28	0.000
	72.17 - 71.17		816.44	1164.26	0.701	0.00	1164.26	0.000
	71.17 - 70.17		832.87	1177.28	0.707	0.00	1177.28	0.000
L19	70.17 - 69.17	TP29.8454x28.9073x0.31 25	849.39	1190.32	0.714	0.00	1190.32	0.000
	69.17 - 68.17		865.99	1203.40	0.720	0.00	1203.40	0.000
	68.17 - 67.17		882.68	1216.52	0.726	0.00	1216.52	0.000
	67.17 - 66.17		899.46	1229.67	0.731	0.00	1229.67	0.000
	66.17 - 65.17		916.32	1242.84	0.737	0.00	1242.84	0.000
L20	65.17 - 64.17	TP30.7835x29.8454x0.31 25	933.27	1256.05	0.743	0.00	1256.05	0.000
	64.17 - 63.17		950.30	1269.29	0.749	0.00	1269.29	0.000
	63.17 - 62.17		967.42	1282.57	0.754	0.00	1282.57	0.000
	62.17 - 61.17		984.63	1295.87	0.760	0.00	1295.87	0.000
	61.17 - 60.17		1001.93	1309.19	0.765	0.00	1309.19	0.000
L21	60.17 - 59.17	TP31.7215x30.7835x0.31 25	1019.33	1322.55	0.771	0.00	1322.55	0.000
	59.17 - 58.17		1036.81	1335.93	0.776	0.00	1335.93	0.000
	58.17 - 57.17		1054.38	1349.34	0.781	0.00	1349.34	0.000
	57.17 - 56.17		1072.03	1362.78	0.787	0.00	1362.78	0.000
	56.17 - 55.17		1089.78	1376.23	0.792	0.00	1376.23	0.000
L22	55.17 - 54.17	TP32.6596x31.7215x0.31 25	1107.60	1389.72	0.797	0.00	1389.72	0.000
	54.17 - 53.17		1125.52	1403.22	0.802	0.00	1403.22	0.000
	53.17 - 52.17		1143.51	1416.76	0.807	0.00	1416.76	0.000
	52.17 - 51.17		1161.59	1430.31	0.812	0.00	1430.31	0.000
	51.17 - 50.17		1179.76	1443.88	0.817	0.00	1443.88	0.000
L23	50.17 - 49.17	TP33.5977x32.6596x0.31 25	1198.02	1457.48	0.822	0.00	1457.48	0.000
	49.17 - 48.17		1216.35	1471.10	0.827	0.00	1471.10	0.000
	48.17 - 47.17		1234.78	1484.73	0.832	0.00	1484.73	0.000
	47.17 - 46.17		1253.28	1498.39	0.836	0.00	1498.39	0.000
	46.17 - 45.17		1271.88	1512.06	0.841	0.00	1512.06	0.000
L24	45.17 - 44.17	TP35.38x33.5977x0.3125	1290.55	1525.75	0.846	0.00	1525.75	0.000
	44.17 - 43.1275		1310.11	1540.04	0.851	0.00	1540.04	0.000
	43.1275 - 42.085		1329.75	1554.34	0.856	0.00	1554.34	0.000
	42.085 - 41.0425		1349.48	1568.67	0.860	0.00	1568.67	0.000
	41.0425 - 40		1369.31	1583.01	0.865	0.00	1583.01	0.000
L25	40 - 34.67	TP34.9411x33.755x0.375	691.46	1656.53	0.417	0.00	1656.53	0.000
	34.67 - 33.67		780.92	2063.38	0.378	0.00	2063.38	0.000
L26	33.67 - 32.67	TP35.878x34.9411x0.375	1492.03	2082.21	0.717	0.00	2082.21	0.000
	32.67 - 31.67		1511.77	2101.07	0.720	0.00	2101.07	0.000
	31.67 - 30.67		1531.58	2119.97	0.722	0.00	2119.97	0.000
	30.67 - 29.67		1551.48	2138.91	0.725	0.00	2138.91	0.000
	29.67 - 28.67		1571.46	2157.89	0.728	0.00	2157.89	0.000
L27	28.67 - 27.67	TP36.8148x35.878x0.375	1591.52	2176.91	0.731	0.00	2176.91	0.000
	27.67 - 26.67		1611.66	2195.96	0.734	0.00	2195.96	0.000
			1631.88	2215.04	0.737	0.00	2215.04	0.000



Section No.	Elevation ft	Size	$M_{ux}$	$\phi M_{nx}$	Ratio	$M_{uy}$	$\phi M_{ny}$	Ratio
			kip-ft	kip-ft	$\frac{M_{ux}}{\phi M_{nx}}$	kip-ft	kip-ft	$\frac{M_{uy}}{\phi M_{ny}}$
L28	26.67 - 25.67	TP37.7517x36.8148x0.37 5	1652.18	2234.17	0.740	0.00	2234.17	0.000
	25.67 - 24.67		1672.55	2253.32	0.742	0.00	2253.32	0.000
	24.67 - 23.67		1693.00	2272.51	0.745	0.00	2272.51	0.000
	23.67 - 22.67		1713.53	2291.73	0.748	0.00	2291.73	0.000
	22.67 - 21.67		1734.13	2310.98	0.750	0.00	2310.98	0.000
L29	21.67 - 20.67	TP38.6886x37.7517x0.37 5	1754.81	2330.28	0.753	0.00	2330.28	0.000
	20.67 - 19.67		1775.56	2349.59	0.756	0.00	2349.59	0.000
	19.67 - 18.67		1796.38	2368.93	0.758	0.00	2368.93	0.000
	18.67 - 17.67		1817.28	2388.31	0.761	0.00	2388.31	0.000
	17.67 - 16.67		1838.25	2407.72	0.763	0.00	2407.72	0.000
L30	16.67 - 15.67	TP39.6255x38.6886x0.37 5	1859.29	2427.15	0.766	0.00	2427.15	0.000
	15.67 - 14.67		1880.40	2446.61	0.769	0.00	2446.61	0.000
	14.67 - 13.67		1901.58	2466.10	0.771	0.00	2466.10	0.000
	13.67 - 12.67		1922.83	2485.61	0.774	0.00	2485.61	0.000
	12.67 - 11.67		1944.14	2505.15	0.776	0.00	2505.15	0.000
L31	11.67 - 10.67	TP40.5623x39.6255x0.37 5	1965.53	2524.71	0.779	0.00	2524.71	0.000
	10.67 - 9.67		1986.97	2544.30	0.781	0.00	2544.30	0.000
	9.67 - 8.67		2008.50	2563.91	0.783	0.00	2563.91	0.000
	8.67 - 7.67		2030.09	2583.54	0.786	0.00	2583.54	0.000
	7.67 - 6.67		2051.75	2603.19	0.788	0.00	2603.19	0.000
L32	6.67 - 5.67	TP41.25x40.5623x0.375	2073.48	2622.88	0.791	0.00	2622.88	0.000
	5.67 - 4.67		2095.28	2642.57	0.793	0.00	2642.57	0.000
	4.67 - 3.67		2117.15	2662.28	0.795	0.00	2662.28	0.000
	3.67 - 2.44667		2143.99	2686.43	0.798	0.00	2686.43	0.000
	2.44667 - 1.22333		2170.95	2710.60	0.801	0.00	2710.60	0.000
1.22333 - 0	2198.00	2734.80	0.804	0.00	2734.80	0.000		

### Pole Shear Design Data

Section No.	Elevation ft	Size	Actual	$\phi V_n$	Ratio	Actual	$\phi T_n$	Ratio
			$V_u$ K	K	$\frac{V_u}{\phi V_n}$	$T_u$ kip-ft	kip-ft	$\frac{T_u}{\phi T_n}$
L1	140 - 139	TP16.9374x16x0.1875	0.03	169.53	0.000	0.00	238.60	0.000
	139 - 138		0.15	171.52	0.001	0.00	244.23	0.000
	138 - 137		0.22	173.51	0.001	0.00	249.92	0.000
	137 - 136		0.29	175.49	0.002	0.00	255.67	0.000
	136 - 135		0.36	177.48	0.002	0.00	261.49	0.000
L2	135 - 134	TP17.8749x16.9374x0.18 75	6.41	179.47	0.036	0.21	267.38	0.001
	134 - 133		6.49	181.45	0.036	0.21	273.33	0.001
	133 - 132		6.56	183.44	0.036	0.21	279.35	0.001
	132 - 131		6.63	185.43	0.036	0.21	285.43	0.001
	131 - 130		6.71	187.41	0.036	0.21	291.58	0.001
L3	130 - 129	TP18.8123x17.8749x0.18 75	6.78	189.40	0.036	0.21	297.80	0.001
	129 - 128		6.85	191.38	0.036	0.21	304.08	0.001
	128 - 127		6.93	193.37	0.036	0.21	310.42	0.001
	127 - 126		7.00	195.36	0.036	0.21	316.83	0.001
	126 - 125		7.08	197.35	0.036	0.21	323.31	0.001
L4	125 - 124	TP19.7498x18.8123x0.18 75	7.16	199.33	0.036	0.21	329.85	0.001
	124 - 123		7.23	201.32	0.036	0.21	336.46	0.001
	123 - 122		11.46	203.31	0.056	0.27	343.13	0.001
	122 - 121		11.53	205.29	0.056	0.27	349.87	0.001
	121 - 120		11.61	207.28	0.056	0.27	356.68	0.001
L5	120 - 119	TP20.6872x19.7498x0.18 75	11.68	209.26	0.056	0.27	363.55	0.001
	119 - 118		11.76	211.25	0.056	0.27	370.48	0.001
	118 - 117		11.83	213.24	0.055	0.27	377.48	0.001

Section No.	Elevation ft	Size	Actual $V_u$ K	$\phi V_n$ K	Ratio $V_u$ $\phi V_n$	Actual $T_u$ kip-ft	$\phi T_n$ kip-ft	Ratio $T_u$ $\phi T_n$
L6	117 - 116		11.90	215.22	0.055	0.27	384.55	0.001
	116 - 115		11.98	217.21	0.055	0.27	391.68	0.001
	115 - 114	TP21.6247x20.6872x0.18 75	12.05	219.20	0.055	0.27	398.88	0.001
L7	114 - 113		12.16	221.18	0.055	0.90	406.14	0.002
	113 - 112		12.24	223.17	0.055	0.90	413.47	0.002
	112 - 111		12.95	225.16	0.058	0.90	420.86	0.002
	111 - 110		13.02	227.14	0.057	0.90	428.32	0.002
	110 - 109	TP22.5621x21.6247x0.18 75	13.10	229.13	0.057	0.90	435.85	0.002
L8	109 - 108		13.17	231.12	0.057	0.90	443.44	0.002
	108 - 107		13.30	233.10	0.057	1.27	451.09	0.003
	107 - 106		13.37	235.09	0.057	1.27	458.81	0.003
	106 - 105		13.44	237.08	0.057	1.27	466.60	0.003
	105 - 104	TP23.4995x22.5621x0.18 75	13.52	239.06	0.057	1.27	474.45	0.003
L9	104 - 103		13.59	241.05	0.056	1.27	482.37	0.003
	103 - 102		13.66	243.04	0.056	1.27	490.35	0.003
	102 - 101		13.74	245.02	0.056	1.27	498.40	0.003
	101 - 100		13.81	247.01	0.056	1.27	506.52	0.003
	100 - 98.8333	TP24.1558x23.4995x0.18 75	13.90	249.33	0.056	1.27	516.07	0.002
L10	98.8333 - 97.6667		13.98	251.65	0.056	1.27	525.71	0.002
	97.6667 - 96.5		14.07	253.96	0.055	1.27	535.43	0.002
L11	96.5 - 96.25 (10)	TP24.2026x24.1558x0.31 88	14.08	430.22	0.033	1.27	903.84	0.001
L12	96.25 - 95 (11)	TP24.437x24.2026x0.312 5	14.20	426.03	0.033	1.27	904.07	0.001
L13	95 - 94.75 (12)	TP24.4839x24.437x0.45	14.21	611.18	0.023	1.27	1292.09	0.001
L14	94.75 - 93.75	TP25.4213x24.4839x0.43 75	14.31	599.15	0.024	1.27	1277.19	0.001
	93.75 - 92.75		14.40	603.78	0.024	1.27	1297.03	0.001
	92.75 - 91.75		14.50	608.42	0.024	1.27	1317.03	0.001
	91.75 - 90.75		14.59	613.05	0.024	1.27	1337.17	0.001
	90.75 - 89.75		14.69	617.69	0.024	1.27	1357.47	0.001
L15	89.75 - 89.5	TP26.28x25.4213x0.4375	14.71	618.85	0.024	1.27	1362.56	0.001
	89.5 - 85.17		9.06	638.92	0.014	0.75	1452.38	0.001
L16	89.5 - 85.17	TP26.0932x25.0932x0.31 25	6.14	451.96	0.014	0.52	1017.48	0.001
	85.17 - 84.17		15.28	455.28	0.034	1.27	1032.45	0.001
	84.17 - 83.17	TP27.0312x26.0932x0.31 25	15.37	458.59	0.034	1.27	1047.53	0.001
	83.17 - 82.17		15.45	461.90	0.033	1.27	1062.72	0.001
	82.17 - 81.17		15.54	465.22	0.033	1.27	1078.03	0.001
L17	81.17 - 80.17		15.62	468.53	0.033	1.26	1093.43	0.001
	80.17 - 79.17		15.71	471.84	0.033	1.26	1108.96	0.001
	79.17 - 78.17	TP27.9693x27.0312x0.31 25	15.79	475.16	0.033	1.26	1124.58	0.001
	78.17 - 77.17		15.88	478.47	0.033	1.26	1140.33	0.001
	77.17 - 76.17		15.97	481.78	0.033	1.26	1156.17	0.001
L18	76.17 - 75.17		16.05	485.10	0.033	1.26	1172.13	0.001
	75.17 - 74.17		16.14	488.41	0.033	1.26	1188.19	0.001
	74.17 - 73.17	TP28.9073x27.9693x0.31 25	16.23	491.72	0.033	1.26	1204.37	0.001
	73.17 - 72.17		16.31	495.04	0.033	1.26	1220.65	0.001
	72.17 - 71.17		16.40	498.35	0.033	1.26	1237.04	0.001
L19	71.17 - 70.17		16.48	501.66	0.033	1.26	1253.55	0.001
	70.17 - 69.17		16.57	504.98	0.033	1.26	1270.16	0.001
	69.17 - 68.17	TP29.8454x28.9073x0.31 25	16.66	508.29	0.033	1.26	1286.88	0.001
	68.17 - 67.17		16.74	511.60	0.033	1.26	1303.72	0.001
	67.17 - 66.17		16.83	514.92	0.033	1.26	1320.65	0.001
L20	66.17 - 65.17		16.92	518.23	0.033	1.26	1337.70	0.001
	65.17 - 64.17		17.00	521.54	0.033	1.26	1354.87	0.001
	64.17 - 63.17	TP30.7835x29.8454x0.31 25	17.09	524.86	0.033	1.26	1372.13	0.001

Section No.	Elevation ft	Size	Actual $V_u$ K	$\phi V_n$ K	Ratio $V_u$ $\phi V_n$	Actual $T_u$ kip-ft	$\phi T_n$ kip-ft	Ratio $T_u$ $\phi T_n$
	63.17 - 62.17		17.18	528.17	0.033	1.26	1389.51	0.001
	62.17 - 61.17		17.26	531.48	0.032	1.26	1407.00	0.001
	61.17 - 60.17		17.37	534.79	0.032	1.29	1424.59	0.001
	60.17 - 59.17		17.45	538.11	0.032	1.29	1442.30	0.001
L21	59.17 - 58.17	TP31.7215x30.7835x0.31 25	17.54	541.42	0.032	1.29	1460.12	0.001
	58.17 - 57.17		17.62	544.73	0.032	1.29	1478.04	0.001
	57.17 - 56.17		17.71	548.05	0.032	1.29	1496.08	0.001
	56.17 - 55.17		17.80	551.36	0.032	1.29	1514.22	0.001
	55.17 - 54.17		17.88	554.67	0.032	1.29	1532.47	0.001
L22	54.17 - 53.17	TP32.6596x31.7215x0.31 25	17.97	557.99	0.032	1.29	1550.83	0.001
	53.17 - 52.17		18.05	561.30	0.032	1.29	1569.31	0.001
	52.17 - 51.17		18.14	564.61	0.032	1.29	1587.88	0.001
	51.17 - 50.17		18.22	567.93	0.032	1.29	1606.58	0.001
	50.17 - 49.17		18.31	571.24	0.032	1.29	1625.38	0.001
L23	49.17 - 48.17	TP33.5977x32.6596x0.31 25	18.39	574.55	0.032	1.29	1644.28	0.001
	48.17 - 47.17		18.48	577.87	0.032	1.29	1663.30	0.001
	47.17 - 46.17		18.56	581.18	0.032	1.29	1682.43	0.001
	46.17 - 45.17		18.65	584.49	0.032	1.29	1701.67	0.001
	45.17 - 44.17		18.73	587.81	0.032	1.29	1721.02	0.001
L24	44.17 - 43.1275	TP35.38x33.5977x0.3125	18.82	591.26	0.032	1.29	1741.30	0.001
	43.1275 - 42.085		18.90	594.71	0.032	1.29	1761.70	0.001
	42.085 - 41.0425		18.99	598.17	0.032	1.29	1782.22	0.001
	41.0425 - 40		19.07	601.62	0.032	1.29	1802.87	0.001
	40 - 34.67		9.38	619.28	0.015	0.60	1910.26	0.000
L25	40 - 34.67	TP34.9411x33.755x0.375	10.28	728.54	0.014	0.68	2203.15	0.000
	34.67 - 33.67		19.71	732.51	0.027	1.29	2227.23	0.001
L26	33.67 - 32.67	TP35.878x34.9411x0.375	19.79	736.48	0.027	1.29	2251.44	0.001
	32.67 - 31.67		19.87	740.45	0.027	1.29	2275.78	0.001
	31.67 - 30.67		19.95	744.42	0.027	1.29	2300.26	0.001
	30.67 - 29.67		20.03	748.39	0.027	1.29	2324.87	0.001
	29.67 - 28.67		20.11	752.37	0.027	1.29	2349.60	0.001
L27	28.67 - 27.67	TP36.8148x35.878x0.375	20.19	756.34	0.027	1.29	2374.47	0.001
	27.67 - 26.67		20.27	760.31	0.027	1.29	2399.46	0.001
	26.67 - 25.67		20.35	764.28	0.027	1.29	2424.59	0.001
	25.67 - 24.67		20.43	768.25	0.027	1.29	2449.85	0.001
	24.67 - 23.67		20.51	772.22	0.027	1.29	2475.24	0.001
L28	23.67 - 22.67	TP37.7517x36.8148x0.37 5	20.58	776.19	0.027	1.29	2500.76	0.001
	22.67 - 21.67		20.65	780.16	0.026	1.29	2526.41	0.001
	21.67 - 20.67		20.73	784.13	0.026	1.29	2552.19	0.001
	20.67 - 19.67		20.80	788.10	0.026	1.29	2578.11	0.000
	19.67 - 18.67		20.88	792.07	0.026	1.29	2604.15	0.000
L29	18.67 - 17.67	TP38.6886x37.7517x0.37 5	20.95	796.04	0.026	1.29	2630.32	0.000
	17.67 - 16.67		21.02	800.01	0.026	1.29	2656.63	0.000
	16.67 - 15.67		21.09	803.99	0.026	1.29	2683.07	0.000
	15.67 - 14.67		21.16	807.96	0.026	1.29	2709.64	0.000
	14.67 - 13.67		21.23	811.93	0.026	1.29	2736.34	0.000
L30	13.67 - 12.67	TP39.6255x38.6886x0.37 5	21.30	815.90	0.026	1.29	2763.17	0.000
	12.67 - 11.67		21.36	819.87	0.026	1.29	2790.13	0.000
	11.67 - 10.67		21.43	823.84	0.026	1.29	2817.22	0.000
	10.67 - 9.67		21.50	827.81	0.026	1.29	2844.44	0.000
	9.67 - 8.67		21.57	831.78	0.026	1.28	2871.80	0.000
L31	8.67 - 7.67	TP40.5623x39.6255x0.37 5	21.64	835.75	0.026	1.28	2899.28	0.000
	7.67 - 6.67		21.71	839.72	0.026	1.28	2926.90	0.000
	6.67 - 5.67		21.78	843.69	0.026	1.28	2954.64	0.000
	5.67 - 4.67		21.85	847.66	0.026	1.28	2982.52	0.000
	4.67 - 3.67		21.92	851.63	0.026	1.28	3010.53	0.000
L32	3.67 - 2.44667	TP41.25x40.5623x0.375	22.01	856.49	0.026	1.28	3044.97	0.000
	2.44667 -		22.09	861.35	0.026	1.28	3079.61	0.000

Section No.	Elevation ft	Size	Actual $V_u$ K	$\phi V_n$ K	Ratio $\frac{V_u}{\phi V_n}$	Actual $T_u$ kip-ft	$\phi T_n$ kip-ft	Ratio $\frac{T_u}{\phi T_n}$
	1.22333							
	1.22333 - 0		22.18	866.21	0.026	1.28	3114.44	0.000

**Pole Interaction Design Data**

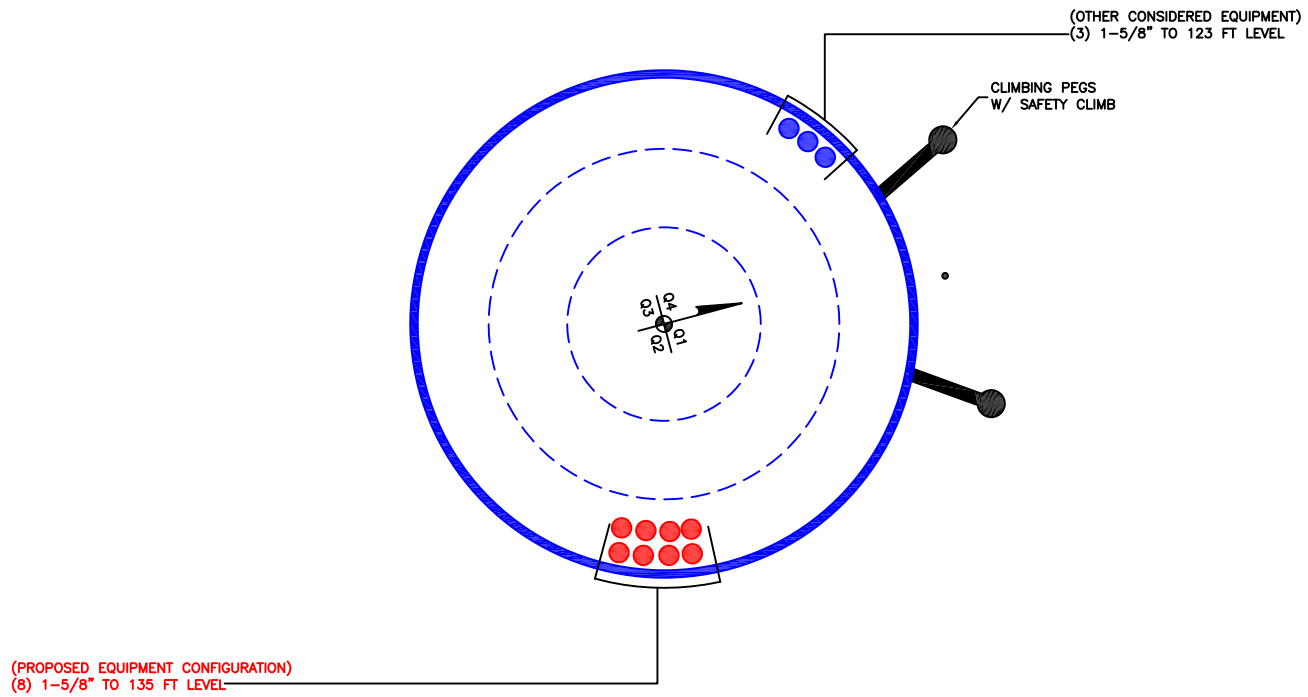
Section No.	Elevation ft	Ratio $P_u$ $\phi P_n$	Ratio $M_{ux}$ $\phi M_{nx}$	Ratio $M_{uy}$ $\phi M_{ny}$	Ratio $V_u$ $\phi V_n$	Ratio $T_u$ $\phi T_n$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	140 - 139	0.000	0.000	0.000	0.000	0.000	0.001	1.050	4.8.2
	139 - 138	0.000	0.001	0.000	0.001	0.000	0.001	1.050	4.8.2
	138 - 137	0.000	0.002	0.000	0.001	0.000	0.002	1.050	4.8.2
	137 - 136	0.000	0.003	0.000	0.002	0.000	0.003	1.050	4.8.2
	136 - 135	0.000	0.004	0.000	0.002	0.000	0.004	1.050	4.8.2
L2	135 - 134	0.008	0.052	0.000	0.036	0.001	0.061	1.050	4.8.2
	134 - 133	0.008	0.076	0.000	0.036	0.001	0.085	1.050	4.8.2
	133 - 132	0.008	0.099	0.000	0.036	0.001	0.109	1.050	4.8.2
	132 - 131	0.008	0.122	0.000	0.036	0.001	0.132	1.050	4.8.2
	131 - 130	0.008	0.145	0.000	0.036	0.001	0.155	1.050	4.8.2
L3	130 - 129	0.008	0.167	0.000	0.036	0.001	0.177	1.050	4.8.2
	129 - 128	0.008	0.188	0.000	0.036	0.001	0.198	1.050	4.8.2
	128 - 127	0.008	0.209	0.000	0.036	0.001	0.219	1.050	4.8.2
	127 - 126	0.008	0.230	0.000	0.036	0.001	0.240	1.050	4.8.2
	126 - 125	0.008	0.250	0.000	0.036	0.001	0.260	1.050	4.8.2
L4	125 - 124	0.008	0.270	0.000	0.036	0.001	0.279	1.050	4.8.2
	124 - 123	0.008	0.289	0.000	0.036	0.001	0.299	1.050	4.8.2
	123 - 122	0.013	0.334	0.000	0.056	0.001	0.349	1.050	4.8.2
	122 - 121	0.013	0.365	0.000	0.056	0.001	0.381	1.050	4.8.2
	121 - 120	0.013	0.396	0.000	0.056	0.001	0.411	1.050	4.8.2
L5	120 - 119	0.013	0.426	0.000	0.056	0.001	0.441	1.050	4.8.2
	119 - 118	0.013	0.455	0.000	0.056	0.001	0.471	1.050	4.8.2
	118 - 117	0.013	0.483	0.000	0.055	0.001	0.499	1.050	4.8.2
	117 - 116	0.013	0.511	0.000	0.055	0.001	0.527	1.050	4.8.2
	116 - 115	0.012	0.539	0.000	0.055	0.001	0.554	1.050	4.8.2
L6	115 - 114	0.012	0.566	0.000	0.055	0.001	0.581	1.050	4.8.2
	114 - 113	0.012	0.592	0.000	0.055	0.002	0.607	1.050	4.8.2
	113 - 112	0.012	0.618	0.000	0.055	0.002	0.633	1.050	4.8.2
	112 - 111	0.013	0.645	0.000	0.058	0.002	0.661	1.050	4.8.2
	111 - 110	0.013	0.671	0.000	0.057	0.002	0.687	1.050	4.8.2
L7	110 - 109	0.013	0.697	0.000	0.057	0.002	0.713	1.050	4.8.2
	109 - 108	0.013	0.723	0.000	0.057	0.002	0.739	1.050	4.8.2
	108 - 107	0.013	0.748	0.000	0.057	0.003	0.764	1.050	4.8.2
	107 - 106	0.013	0.772	0.000	0.057	0.003	0.789	1.050	4.8.2
	106 - 105	0.013	0.796	0.000	0.057	0.003	0.813	1.050	4.8.2
L8	105 - 104	0.013	0.820	0.000	0.057	0.003	0.837	1.050	4.8.2
	104 - 103	0.013	0.844	0.000	0.056	0.003	0.860	1.050	4.8.2
	103 - 102	0.013	0.867	0.000	0.056	0.003	0.883	1.050	4.8.2
	102 - 101	0.013	0.889	0.000	0.056	0.003	0.906	1.050	4.8.2
	101 - 100	0.013	0.912	0.000	0.056	0.003	0.928	1.050	4.8.2
L9	100 - 98.8333	0.013	0.937	0.000	0.056	0.002	0.953	1.050	4.8.2
	98.8333 - 97.6667	0.013	0.962	0.000	0.056	0.002	0.979	1.050	4.8.2
	97.6667 - 96.5	0.013	0.987	0.000	0.055	0.002	1.003	1.050	4.8.2
L10	96.5 - 96.25 (10)	0.008	0.496	0.000	0.033	0.001	0.505	1.050	4.8.2
L11	96.25 - 95 (11)	0.008	0.516	0.000	0.033	0.001	0.525	1.050	4.8.2
L12	95 - 94.75 (12)	0.005	0.366	0.000	0.023	0.001	0.372	1.050	4.8.2
L13	94.75 - 93.75	0.006	0.381	0.000	0.024	0.001	0.388	1.050	4.8.2
	93.75 - 92.75	0.006	0.387	0.000	0.024	0.001	0.393	1.050	4.8.2
	92.75 - 91.75	0.006	0.392	0.000	0.024	0.001	0.399	1.050	4.8.2
	91.75 - 90.75	0.006	0.398	0.000	0.024	0.001	0.404	1.050	4.8.2

Section No.	Elevation ft	Ratio	Ratio	Ratio	Ratio	Ratio	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
		$P_u$	$M_{ux}$	$M_{uy}$	$V_u$	$T_u$			
		$\phi P_n$	$\phi M_{nx}$	$\phi M_{ny}$	$\phi V_n$	$\phi T_n$			
L14	90.75 - 89.75	0.006	0.403	0.000	0.024	0.001	0.409	1.050	4.8.2
	89.75 - 89.5	0.006	0.404	0.000	0.024	0.001	0.411	1.050	4.8.2
	89.5 - 85.17	0.004	0.251	0.000	0.014	0.001	0.255	1.050	4.8.2
L15	89.5 - 85.17	0.004	0.247	0.000	0.014	0.001	0.251	1.050	4.8.2
	85.17 - 84.17	0.009	0.612	0.000	0.034	0.001	0.621	1.050	4.8.2
L16	84.17 - 83.17	0.009	0.619	0.000	0.034	0.001	0.629	1.050	4.8.2
	83.17 - 82.17	0.009	0.627	0.000	0.033	0.001	0.637	1.050	4.8.2
	82.17 - 81.17	0.009	0.634	0.000	0.033	0.001	0.644	1.050	4.8.2
	81.17 - 80.17	0.009	0.641	0.000	0.033	0.001	0.651	1.050	4.8.2
	80.17 - 79.17	0.009	0.648	0.000	0.033	0.001	0.658	1.050	4.8.2
L17	79.17 - 78.17	0.009	0.655	0.000	0.033	0.001	0.665	1.050	4.8.2
	78.17 - 77.17	0.009	0.662	0.000	0.033	0.001	0.672	1.050	4.8.2
	77.17 - 76.17	0.009	0.669	0.000	0.033	0.001	0.679	1.050	4.8.2
	76.17 - 75.17	0.009	0.676	0.000	0.033	0.001	0.686	1.050	4.8.2
	75.17 - 74.17	0.009	0.682	0.000	0.033	0.001	0.692	1.050	4.8.2
L18	74.17 - 73.17	0.009	0.689	0.000	0.033	0.001	0.699	1.050	4.8.2
	73.17 - 72.17	0.009	0.695	0.000	0.033	0.001	0.705	1.050	4.8.2
	72.17 - 71.17	0.009	0.701	0.000	0.033	0.001	0.711	1.050	4.8.2
	71.17 - 70.17	0.009	0.707	0.000	0.033	0.001	0.718	1.050	4.8.2
	70.17 - 69.17	0.009	0.714	0.000	0.033	0.001	0.724	1.050	4.8.2
L19	69.17 - 68.17	0.009	0.720	0.000	0.033	0.001	0.730	1.050	4.8.2
	68.17 - 67.17	0.009	0.726	0.000	0.033	0.001	0.736	1.050	4.8.2
	67.17 - 66.17	0.009	0.731	0.000	0.033	0.001	0.742	1.050	4.8.2
	66.17 - 65.17	0.009	0.737	0.000	0.033	0.001	0.748	1.050	4.8.2
	65.17 - 64.17	0.009	0.743	0.000	0.033	0.001	0.753	1.050	4.8.2
L20	64.17 - 63.17	0.009	0.749	0.000	0.033	0.001	0.759	1.050	4.8.2
	63.17 - 62.17	0.009	0.754	0.000	0.033	0.001	0.765	1.050	4.8.2
	62.17 - 61.17	0.009	0.760	0.000	0.032	0.001	0.770	1.050	4.8.2
	61.17 - 60.17	0.009	0.765	0.000	0.032	0.001	0.776	1.050	4.8.2
	60.17 - 59.17	0.009	0.771	0.000	0.032	0.001	0.781	1.050	4.8.2
L21	59.17 - 58.17	0.009	0.776	0.000	0.032	0.001	0.787	1.050	4.8.2
	58.17 - 57.17	0.009	0.781	0.000	0.032	0.001	0.792	1.050	4.8.2
	57.17 - 56.17	0.009	0.787	0.000	0.032	0.001	0.797	1.050	4.8.2
	56.17 - 55.17	0.010	0.792	0.000	0.032	0.001	0.802	1.050	4.8.2
	55.17 - 54.17	0.010	0.797	0.000	0.032	0.001	0.808	1.050	4.8.2
L22	54.17 - 53.17	0.010	0.802	0.000	0.032	0.001	0.813	1.050	4.8.2
	53.17 - 52.17	0.010	0.807	0.000	0.032	0.001	0.818	1.050	4.8.2
	52.17 - 51.17	0.010	0.812	0.000	0.032	0.001	0.823	1.050	4.8.2
	51.17 - 50.17	0.010	0.817	0.000	0.032	0.001	0.828	1.050	4.8.2
	50.17 - 49.17	0.010	0.822	0.000	0.032	0.001	0.833	1.050	4.8.2
L23	49.17 - 48.17	0.010	0.827	0.000	0.032	0.001	0.838	1.050	4.8.2
	48.17 - 47.17	0.010	0.832	0.000	0.032	0.001	0.843	1.050	4.8.2
	47.17 - 46.17	0.010	0.836	0.000	0.032	0.001	0.847	1.050	4.8.2
	46.17 - 45.17	0.010	0.841	0.000	0.032	0.001	0.852	1.050	4.8.2
	45.17 - 44.17	0.010	0.846	0.000	0.032	0.001	0.857	1.050	4.8.2
L24	44.17 - 43.1275	0.010	0.851	0.000	0.032	0.001	0.862	1.050	4.8.2
	43.1275 - 42.085	0.010	0.856	0.000	0.032	0.001	0.867	1.050	4.8.2
	42.085 - 41.0425	0.010	0.860	0.000	0.032	0.001	0.871	1.050	4.8.2
	41.0425 - 40	0.010	0.865	0.000	0.032	0.001	0.876	1.050	4.8.2
	40 - 34.67	0.005	0.417	0.000	0.015	0.000	0.423	1.050	4.8.2
L25	40 - 34.67	0.005	0.378	0.000	0.014	0.000	0.384	1.050	4.8.2
	34.67 - 33.67	0.009	0.717	0.000	0.027	0.001	0.726	1.050	4.8.2
L26	33.67 - 32.67	0.009	0.720	0.000	0.027	0.001	0.729	1.050	4.8.2
	32.67 - 31.67	0.009	0.722	0.000	0.027	0.001	0.732	1.050	4.8.2
	31.67 - 30.67	0.009	0.725	0.000	0.027	0.001	0.735	1.050	4.8.2
	30.67 - 29.67	0.009	0.728	0.000	0.027	0.001	0.738	1.050	4.8.2
	29.67 - 28.67	0.009	0.731	0.000	0.027	0.001	0.741	1.050	4.8.2
L27	28.67 - 27.67	0.009	0.734	0.000	0.027	0.001	0.744	1.050	4.8.2
	27.67 - 26.67	0.009	0.737	0.000	0.027	0.001	0.747	1.050	4.8.2
	26.67 - 25.67	0.009	0.740	0.000	0.027	0.001	0.750	1.050	4.8.2
	25.67 - 24.67	0.009	0.742	0.000	0.027	0.001	0.752	1.050	4.8.2
	24.67 - 23.67	0.009	0.745	0.000	0.027	0.001	0.755	1.050	4.8.2
L28	23.67 - 22.67	0.009	0.748	0.000	0.027	0.001	0.758	1.050	4.8.2
	22.67 - 21.67	0.009	0.750	0.000	0.026	0.001	0.761	1.050	4.8.2
	21.67 - 20.67	0.010	0.753	0.000	0.026	0.001	0.763	1.050	4.8.2
	20.67 - 19.67	0.010	0.756	0.000	0.026	0.000	0.766	1.050	4.8.2

Section No.	Elevation ft	Ratio	Ratio	Ratio	Ratio	Ratio	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
		$P_u$	$M_{ux}$	$M_{uy}$	$V_u$	$T_u$			
		$\phi P_n$	$\phi M_{nx}$	$\phi M_{ny}$	$\phi V_n$	$\phi T_n$			
L29	19.67 - 18.67	0.010	0.758	0.000	0.026	0.000	0.769	1.050	4.8.2
	18.67 - 17.67	0.010	0.761	0.000	0.026	0.000	0.771	1.050	4.8.2
	17.67 - 16.67	0.010	0.763	0.000	0.026	0.000	0.774	1.050	4.8.2
	16.67 - 15.67	0.010	0.766	0.000	0.026	0.000	0.776	1.050	4.8.2
	15.67 - 14.67	0.010	0.769	0.000	0.026	0.000	0.779	1.050	4.8.2
L30	14.67 - 13.67	0.010	0.771	0.000	0.026	0.000	0.782	1.050	4.8.2
	13.67 - 12.67	0.010	0.774	0.000	0.026	0.000	0.784	1.050	4.8.2
	12.67 - 11.67	0.010	0.776	0.000	0.026	0.000	0.787	1.050	4.8.2
	11.67 - 10.67	0.010	0.779	0.000	0.026	0.000	0.789	1.050	4.8.2
	10.67 - 9.67	0.010	0.781	0.000	0.026	0.000	0.792	1.050	4.8.2
L31	9.67 - 8.67	0.010	0.783	0.000	0.026	0.000	0.794	1.050	4.8.2
	8.67 - 7.67	0.010	0.786	0.000	0.026	0.000	0.796	1.050	4.8.2
	7.67 - 6.67	0.010	0.788	0.000	0.026	0.000	0.799	1.050	4.8.2
	6.67 - 5.67	0.010	0.791	0.000	0.026	0.000	0.801	1.050	4.8.2
	5.67 - 4.67	0.010	0.793	0.000	0.026	0.000	0.804	1.050	4.8.2
L32	4.67 - 3.67	0.010	0.795	0.000	0.026	0.000	0.806	1.050	4.8.2
	3.67 - 2.44667	0.010	0.798	0.000	0.026	0.000	0.809	1.050	4.8.2
	2.44667 - 1.22333	0.010	0.801	0.000	0.026	0.000	0.812	1.050	4.8.2
	1.22333 - 0	0.010	0.804	0.000	0.026	0.000	0.815	1.050	4.8.2

**\*NOTE: Above stress ratios for reinforced sections are approximate. More exact calculations are presented in Appendix C.**

**APPENDIX B**  
**BASE LEVEL DRAWING**





**APPENDIX C**  
**ADDITIONAL CALCULATIONS**

Site BU: 806374  
Work Order: 2265260



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**Pole Geometry**

	Pole Height Above Base (ft)	Section Length (ft)	Lap Splice Length (ft)	Number of Sides	Top Diameter (in)	Bottom Diameter (in)	Wall Thickness (in)	Bend Radius (in)	Pole Material
1	140	54.83	4.33	12	16	26.28	0.1875	Auto	A572-65
2	89.5	54.83	5.33	12	25.09	35.38	0.3125	Auto	A572-65
3	40	40	0	12	33.76	41.25	0.375	Auto	A572-65

**Reinforcement Configuration**

	Bottom Effective Elevation (ft)	Top Effective Elevation (ft)	Type	Model	Number														
						1	2	3	4	5	6	7	8	9	10	11	12		
1	88.5	96.5	plate	MS-400 (1.25")	3	x					x				x				
2	88	95	plate	CCI-AFP-040075	3		x					x					x		
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

**Reinforcement Details**

	B (in)	H (in)	Gross Area (in <sup>2</sup> )	Pole Face to Centroid (in)	Bottom Termination Type	Bottom Termination Length (in)	Top Termination Type	Top Termination Length (in)	Lu (in)	Net Area (in <sup>2</sup> )	Bolt Hole Size (in)	Reinforcement Material
1	4	0.75	3	0.375	PC 8.8 - M20 (100)	12	PC 8.8 - M20 (100)	12.000	16.875	2.016	1.2500	A572-65
2	4	0.75	3	0.375	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	16.000	2.063	1.1875	A572-65

# TNX Geometry Input

Increment (ft):  [Export to TNX](#)

	Section Height (ft)	Section Length (ft)	Lap Splice Length (ft)	Number of Sides	Top Diameter (in)	Bottom Diameter (in)	Wall Thickness (in)	Tapered Pole Grade	Weight Multiplier
1	140 - 135	5		12	16.000	16.937	0.1875	A572-65	1.000
2	135 - 130	5		12	16.937	17.875	0.1875	A572-65	1.000
3	130 - 125	5		12	17.875	18.812	0.1875	A572-65	1.000
4	125 - 120	5		12	18.812	19.750	0.1875	A572-65	1.000
5	120 - 115	5		12	19.750	20.687	0.1875	A572-65	1.000
6	115 - 110	5		12	20.687	21.625	0.1875	A572-65	1.000
7	110 - 105	5		12	21.625	22.562	0.1875	A572-65	1.000
8	105 - 100	5		12	22.562	23.500	0.1875	A572-65	1.000
9	100 - 96.5	3.5		12	23.500	24.156	0.1875	A572-65	1.000
10	96.5 - 96.25	0.25		12	24.156	24.203	0.31875	A572-65	0.959
11	96.25 - 95	1.25		12	24.203	24.437	0.3125	A572-65	0.974
12	95 - 94.75	0.25		12	24.437	24.484	0.45	A572-65	0.939
13	94.75 - 89.75	5		12	24.484	25.421	0.4375	A572-65	0.945
14	89.75 - 89.5	4.58	4.33	12	25.421	26.280	0.4375	A572-65	0.944
15	89.5 - 84.17	5.33		12	25.093	26.093	0.3125	A572-65	1.000
16	84.17 - 79.17	5		12	26.093	27.031	0.3125	A572-65	1.000
17	79.17 - 74.17	5		12	27.031	27.969	0.3125	A572-65	1.000
18	74.17 - 69.17	5		12	27.969	28.907	0.3125	A572-65	1.000
19	69.17 - 64.17	5		12	28.907	29.845	0.3125	A572-65	1.000
20	64.17 - 59.17	5		12	29.845	30.783	0.3125	A572-65	1.000
21	59.17 - 54.17	5		12	30.783	31.722	0.3125	A572-65	1.000
22	54.17 - 49.17	5		12	31.722	32.660	0.3125	A572-65	1.000
23	49.17 - 44.17	5		12	32.660	33.598	0.3125	A572-65	1.000
24	44.17 - 40	9.5	5.33	12	33.598	35.380	0.3125	A572-65	1.000
25	40 - 33.67	6.33		12	33.755	34.941	0.375	A572-65	1.000
26	33.67 - 28.67	5		12	34.941	35.878	0.375	A572-65	1.000
27	28.67 - 23.67	5		12	35.878	36.815	0.375	A572-65	1.000
28	23.67 - 18.67	5		12	36.815	37.752	0.375	A572-65	1.000
29	18.67 - 13.67	5		12	37.752	38.689	0.375	A572-65	1.000
30	13.67 - 8.67	5		12	38.689	39.625	0.375	A572-65	1.000
31	8.67 - 3.67	5		12	39.625	40.562	0.375	A572-65	1.000
32	3.67 - 0	3.67		12	40.562	41.250	0.375	A572-65	1.000

## TNX Section Forces

Increment (ft):		TNX Output				
	5	Section Height (ft)		$P_u$ (K)	$M_{ux}$ (kip-ft)	$V_u$ (K)
1		140 - 135		0.15	1.02	0.36
2		135 - 130		5.14	39.22	6.71
3		130 - 125		5.37	73.67	7.08
4		125 - 120		8.70	126.14	11.61
5		120 - 115		9.05	185.07	11.98
6		115 - 110		9.75	247.19	13.02
7		110 - 105		10.15	313.28	13.44
8		105 - 100		10.59	381.36	13.81
9		100 - 96.5		10.91	430.11	14.07
10		96.5 - 96.25		10.96	433.63	14.08
11		96.25 - 95		11.10	451.30	14.20
12		95 - 94.75		11.15	454.85	14.21
13		94.75 - 89.75		11.91	527.07	14.69
14		89.75 - 89.5		11.95	530.74	14.71
15		89.5 - 84.17		13.19	610.68	15.28
16		84.17 - 79.17		13.87	688.10	15.71
17		79.17 - 74.17		14.58	767.67	16.14
18		74.17 - 69.17		15.32	849.39	16.57
19		69.17 - 64.17		16.08	933.27	17.00
20		64.17 - 59.17		16.87	1019.33	17.45
21		59.17 - 54.17		17.68	1107.60	17.88
22		54.17 - 49.17		18.52	1198.01	18.31
23		49.17 - 44.17		19.38	1290.55	18.73
24		44.17 - 40		20.11	1369.31	19.07
25		40 - 33.67		22.10	1492.03	19.71
26		33.67 - 28.67		23.15	1591.52	20.11
27		28.67 - 23.67		24.23	1693.00	20.51
28		23.67 - 18.67		25.33	1796.39	20.88
29		18.67 - 13.67		26.46	1901.58	21.23
30		13.67 - 8.67		27.61	2008.50	21.57
31		8.67 - 3.67		28.79	2117.15	21.92
32		3.67 - 0		29.67	2198.00	22.18

# Analysis Results

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
140 - 135	Pole	TP16.937x16x0.1875	Pole	0.4%	Pass
135 - 130	Pole	TP17.875x16.937x0.1875	Pole	14.7%	Pass
130 - 125	Pole	TP18.812x17.875x0.1875	Pole	24.7%	Pass
125 - 120	Pole	TP19.75x18.812x0.1875	Pole	39.1%	Pass
120 - 115	Pole	TP20.687x19.75x0.1875	Pole	52.7%	Pass
115 - 110	Pole	TP21.625x20.687x0.1875	Pole	65.3%	Pass
110 - 105	Pole	TP22.562x21.625x0.1875	Pole	77.2%	Pass
105 - 100	Pole	TP23.5x22.562x0.1875	Pole	88.1%	Pass
100 - 96.5	Pole	TP24.156x23.5x0.1875	Pole	95.3%	Pass
96.5 - 96.25	Pole + Reinf.	TP24.203x24.156x0.3188	Reinf. 1 Bolt-Shaft Bearing	89.4%	Pass
96.25 - 95	Pole + Reinf.	TP24.437x24.203x0.3125	Reinf. 1 Tension Rupture	89.5%	Pass
95 - 94.75	Pole + Reinf.	TP24.484x24.437x0.45	Reinf. 1 Tension Rupture	64.5%	Pass
94.75 - 89.75	Pole + Reinf.	TP25.421x24.484x0.4375	Reinf. 1 Tension Rupture	70.7%	Pass
89.75 - 89.5	Pole + Reinf.	TP26.28x25.421x0.4375	Reinf. 1 Bolt-Shaft Bearing	72.7%	Pass
89.5 - 84.17	Pole	TP26.093x25.093x0.3125	Pole	59.0%	Pass
84.17 - 79.17	Pole	TP27.031x26.093x0.3125	Pole	62.5%	Pass
79.17 - 74.17	Pole	TP27.969x27.031x0.3125	Pole	65.7%	Pass
74.17 - 69.17	Pole	TP28.907x27.969x0.3125	Pole	68.7%	Pass
69.17 - 64.17	Pole	TP29.845x28.907x0.3125	Pole	71.5%	Pass
64.17 - 59.17	Pole	TP30.783x29.845x0.3125	Pole	74.2%	Pass
59.17 - 54.17	Pole	TP31.722x30.783x0.3125	Pole	76.7%	Pass
54.17 - 49.17	Pole	TP32.66x31.722x0.3125	Pole	79.1%	Pass
49.17 - 44.17	Pole	TP33.598x32.66x0.3125	Pole	81.4%	Pass
44.17 - 40	Pole	TP35.38x33.598x0.3125	Pole	83.2%	Pass
40 - 33.67	Pole	TP34.941x33.755x0.375	Pole	69.0%	Pass
33.67 - 28.67	Pole	TP35.878x34.941x0.375	Pole	70.4%	Pass
28.67 - 23.67	Pole	TP36.815x35.878x0.375	Pole	71.7%	Pass
23.67 - 18.67	Pole	TP37.752x36.815x0.375	Pole	73.0%	Pass
18.67 - 13.67	Pole	TP38.689x37.752x0.375	Pole	74.2%	Pass
13.67 - 8.67	Pole	TP39.625x38.689x0.375	Pole	75.4%	Pass
8.67 - 3.67	Pole	TP40.562x39.625x0.375	Pole	76.6%	Pass
3.67 - 0	Pole	TP41.25x40.562x0.375	Pole	77.4%	Pass
				Summary	
			Pole	95.3%	Pass
			Reinforcement	89.5%	Pass
			Overall	95.3%	Pass

## Additional Calculations

Section Elevation (ft)	Moment of Inertia (in <sup>4</sup> )			Area (in <sup>2</sup> )			% Capacity* (100% Max. Allowable)		
	Pole	Reinf.	Total	Pole	Reinf.	Total	Pole	R1	R2
140 - 135	363	n/a	363	10.10	n/a	10.10	0.4%		
135 - 130	427	n/a	427	10.66	n/a	10.66	14.7%		
130 - 125	499	n/a	499	11.23	n/a	11.23	24.7%		
125 - 120	578	n/a	578	11.79	n/a	11.79	39.1%		
120 - 115	665	n/a	665	12.36	n/a	12.36	52.7%		
115 - 110	760	n/a	760	12.92	n/a	12.92	65.3%		
110 - 105	864	n/a	864	13.49	n/a	13.49	77.2%		
105 - 100	978	n/a	978	14.05	n/a	14.05	88.1%		
100 - 96.5	1063	n/a	1063	14.45	n/a	14.45	95.3%		
96.5 - 96.25	1069	707	1775	14.48	9.00	23.48	55.8%	89.4%	
96.25 - 95	1100	720	1820	14.62	9.00	23.62	57.4%	89.5%	
95 - 94.75	1107	1445	2552	14.65	18.00	32.65	41.4%	64.5%	63.0%
94.75 - 89.75	1240	1554	2793	15.21	18.00	33.21	46.5%	70.7%	69.1%
89.75 - 89.5	1247	1559	2806	15.24	18.00	33.24	46.7%	72.7%	69.4%
89.5 - 84.17	2204	n/a	2204	25.90	n/a	25.90	59.0%		
84.17 - 79.17	2453	n/a	2453	26.85	n/a	26.85	62.5%		
79.17 - 74.17	2721	n/a	2721	27.79	n/a	27.79	65.7%		
74.17 - 69.17	3007	n/a	3007	28.73	n/a	28.73	68.7%		
69.17 - 64.17	3313	n/a	3313	29.67	n/a	29.67	71.5%		
64.17 - 59.17	3639	n/a	3639	30.62	n/a	30.62	74.2%		
59.17 - 54.17	3985	n/a	3985	31.56	n/a	31.56	76.7%		
54.17 - 49.17	4353	n/a	4353	32.50	n/a	32.50	79.1%		
49.17 - 44.17	4743	n/a	4743	33.45	n/a	33.45	81.4%		
44.17 - 40	5085	n/a	5085	34.23	n/a	34.23	83.2%		
40 - 33.67	6374	n/a	6374	41.68	n/a	41.68	69.0%		
33.67 - 28.67	6906	n/a	6906	42.81	n/a	42.81	70.4%		
28.67 - 23.67	7468	n/a	7468	43.94	n/a	43.94	71.7%		
23.67 - 18.67	8059	n/a	8059	45.07	n/a	45.07	73.0%		
18.67 - 13.67	8680	n/a	8680	46.20	n/a	46.20	74.2%		
13.67 - 8.67	9332	n/a	9332	47.33	n/a	47.33	75.4%		
8.67 - 3.67	10017	n/a	10017	48.46	n/a	48.46	76.6%		
3.67 - 0	10540	n/a	10540	49.29	n/a	49.29	77.4%		

Note: Section capacity checked using 5 degree increments.

\*Rating per TIA-222-H Section 15.5.

# Monopole Base Plate Connection

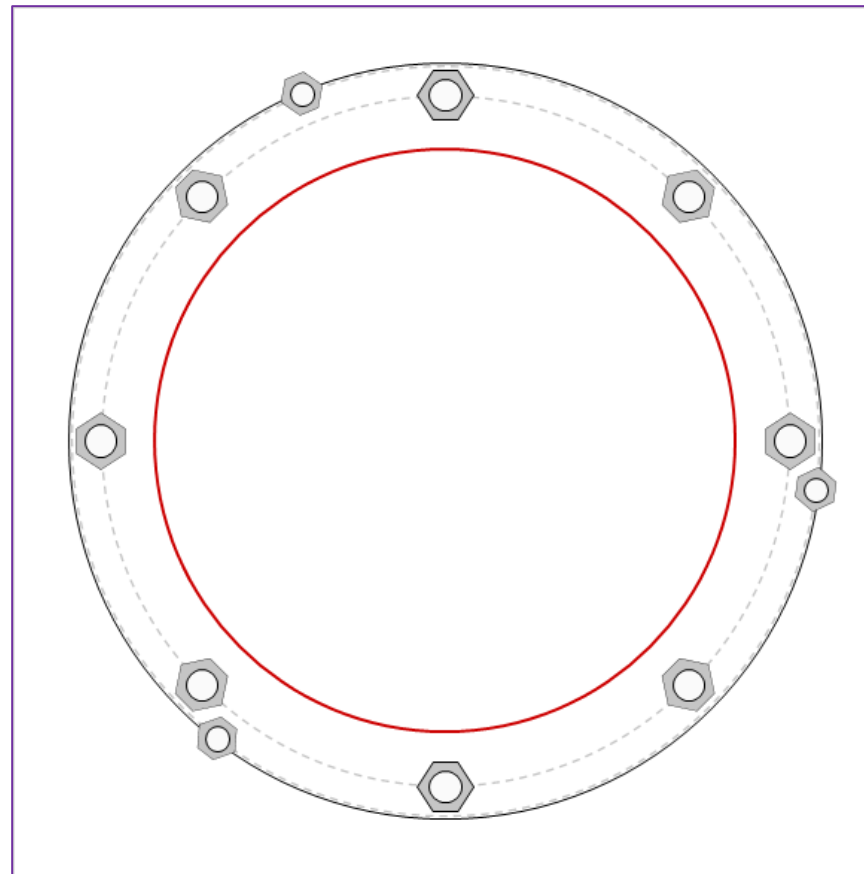


Site Info	
BU #	806374
Site Name	Rocky Hill
Order #	658824 Rev 0

Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	See Custom Sheet
$l_{ar}$ (in)	See Custom Sheet

Applied Loads	
Moment (kip-ft)	2198.00
Axial Force (kips)	29.67
Shear Force (kips)	22.18

\*TIA-222-H Section 15.5 Applied



Connection Properties	Analysis Results
-----------------------	------------------

Anchor Rod Data
GROUP 1: (8) 2-1/4" $\phi$ bolts (A615-75 N; $F_y=75$ ksi, $F_u=100$ ksi) on 49" BC
GROUP 2: (3) 1-3/4" $\phi$ bolts (A193 Gr. B7 N; $F_y=105$ ksi, $F_u=125$ ksi) on 53.25" BC
Base Plate Data
53.625" OD x 2.25" Plate (A36; $F_y=36$ ksi, $F_u=58$ ksi)
Stiffener Data
N/A
Pole Data
41.25" x 0.375" 12-sided pole (A572-65; $F_y=65$ ksi, $F_u=80$ ksi)

Anchor Rod Summary <span style="float: right;">(units of kips, kip-in)</span>		
GROUP 1:		
$P_{u,t} = 209.92$	$\phi P_{n,t} = 243.75$	<b>Stress Rating</b>
$V_u = 2.77$	$\phi V_n = 149.1$	<b>82.0%</b>
$M_u = n/a$	$\phi M_n = n/a$	<b>Pass</b>
GROUP 2:		
$P_{u,t} = 135.59$	$\phi P_{n,t} = 178.13$	<b>Stress Rating</b>
$V_u = 0$	$\phi V_n = 112.75$	<b>72.5%</b>
$M_u = n/a$	$\phi M_n = n/a$	<b>Pass</b>
Base Plate Summary		
Max Stress (ksi):	25.16	(Flexural)
Allowable Stress (ksi):	32.4	
Stress Rating:	<b>74.0%</b>	<b>Pass</b>

# CCiplate

Elevation (ft) 0 (Base)

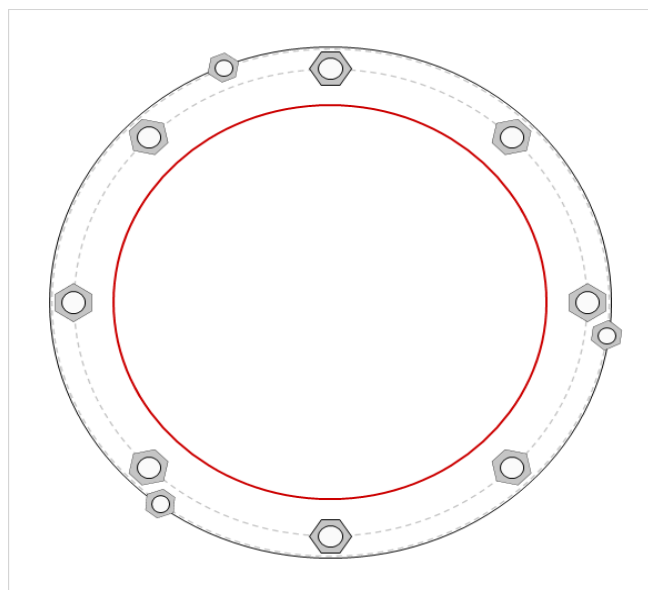
note: Bending interaction not considered when Grout Considered = "Yes"

Bolt Group	Resist Axial	Resist Shear	Induce Plate Bending	Grout Considered	Apply at BARB Elevation	BARB CL Elevation (ft)
1	Yes	Yes	Yes	Yes	No	
2	No	No	No	Yes	No	

## Custom Bolt Connection

Bolt	Bolt Group ID	Location (deg.)	Diameter (in)	Material	Bolt Circle (in)	Eta Factor, $\eta$ :	$I_{ar}$ (in):	Thread Type	Area Override, in <sup>2</sup>	Tension Only
1	1	0	2.25	A615-75	49	0.5	1.5	N-Included		No
2	1	45	2.25	A615-75	49	0.5	1.5	N-Included		No
3	1	90	2.25	A615-75	49	0.5	1.5	N-Included		No
4	1	135	2.25	A615-75	49	0.5	1.5	N-Included		No
5	1	180	2.25	A615-75	49	0.5	1.5	N-Included		No
6	1	225	2.25	A615-75	49	0.5	1.5	N-Included		No
7	1	270	2.25	A615-75	49	0.5	1.5	N-Included		No
8	1	315	2.25	A615-75	49	0.5	1.5	N-Included		No
9	2	112.5	1.75	A193 Gr. B7	53.25	0.5	0	N-Included		No
10	2	232.5	1.75	A193 Gr. B7	53.25	0.5	0	N-Included		No
11	2	352.5	1.75	A193 Gr. B7	53.25	0.5	0	N-Included		No

## Plot Graphic





# Pier and Pad Foundation



BU #:	806374
Site Name:	HTR 081 943236
App. Number:	658824 Rev 0

TIA-222 Revision:	H
Tower Type:	Monopole

Top & Bot. Pad Rein. Different?:	<input type="checkbox"/>
Block Foundation?:	<input type="checkbox"/>
Rectangular Pad?:	<input type="checkbox"/>

Superstructure Analysis Reactions		
Compression, $P_{comp}$ :	29.68	kips
Base Shear, $V_u_{comp}$ :	22.16	kips
Moment, $M_u$ :	2198	ft-kips
Tower Height, $H$ :	140	ft
BP Dist. Above Fdn, $bp_{dist}$ :	3.75	in

Foundation Analysis Checks				
	Capacity	Demand	Rating*	Check
<i>Lateral (Sliding) (kips)</i>	272.00	22.16	7.8%	Pass
<i>Bearing Pressure (ksf)</i>	20.77	9.92	47.8%	Pass
<i>Overturning (kip*ft)</i>	2707.64	2478.38	91.5%	Pass
<i>Pier Flexure (Comp.) (kip*ft)</i>	8415.42	2348.69	26.6%	Pass
<i>Pier Compression (kip)</i>	28641.60	108.02	0.4%	Pass
<i>Pad Flexure (kip*ft)</i>	2987.03	1023.08	32.6%	Pass
<i>Pad Shear - 1-way (kips)</i>	919.36	0.00	0.0%	Pass
<i>Pad Shear - 2-way (Comp) (ksi)</i>	0.164	0.000	0.0%	Pass
<i>Flexural 2-way (Comp) (kip*ft)</i>	5974.07	1409.21	22.5%	Pass

Pier Properties		
Pier Shape:	Square	
Pier Diameter, $dpier$ :	8	ft
Ext. Above Grade, $E$ :	0.92	ft
Pier Rebar Size, $Sc$ :	11	
Pier Rebar Quantity, $mc$ :	30	
Pier Tie/Spiral Size, $St$ :	4	
Pier Tie/Spiral Quantity, $mt$ :	8	
Pier Reinforcement Type:	Tie	
Pier Clear Cover, $cc_{pier}$ :	3	in

\*Rating per TIA-222-H Section 15.5

Structural Rating*:	32.6%
Soil Rating*:	91.5%

Pad Properties		
Depth, $D$ :	11.42	ft
Pad Width, $W_1$ :	15	ft
Pad Thickness, $T$ :	5.54	ft
Pad Rebar Size (Bottom dir. 2), $Sp_2$ :	7	
Pad Rebar Quantity (Bottom dir. 2), $mp_2$ :	18	
Pad Clear Cover, $cc_{pad}$ :	3	in

Material Properties		
Rebar Grade, $F_y$ :	60	ksi
Concrete Compressive Strength, $F'_c$ :	3	ksi
Dry Concrete Density, $\delta_c$ :	150	pcf

Soil Properties		
Total Soil Unit Weight, $\gamma$ :	100	pcf
Ultimate Net Bearing, $Q_{net}$ :	26.550	ksf
Cohesion, $C_u$ :	0.000	ksf
Friction Angle, $\phi$ :	25	degrees
SPT Blow Count, $N_{blows}$ :		
Base Friction, $\mu$ :	0.5	
Neglected Depth, $N$ :	4.00	ft
Foundation Bearing on Rock?	No	
Groundwater Depth, $gw$ :	N/A	ft

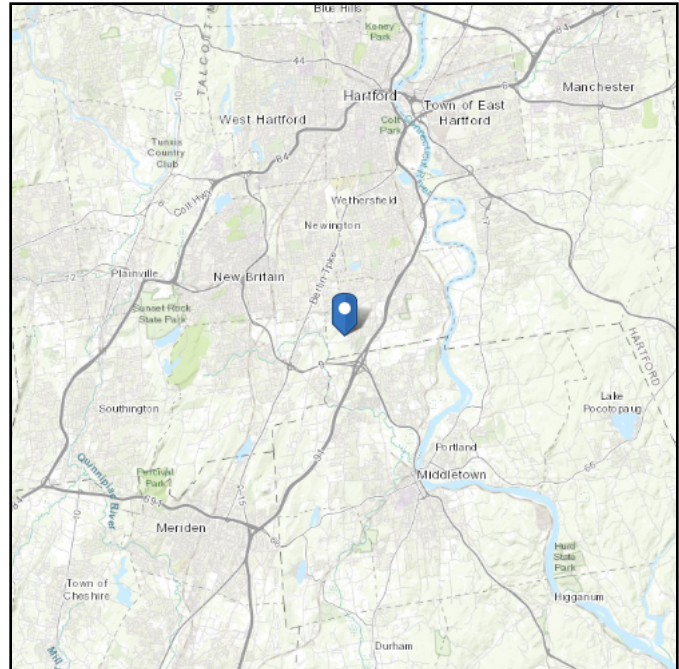
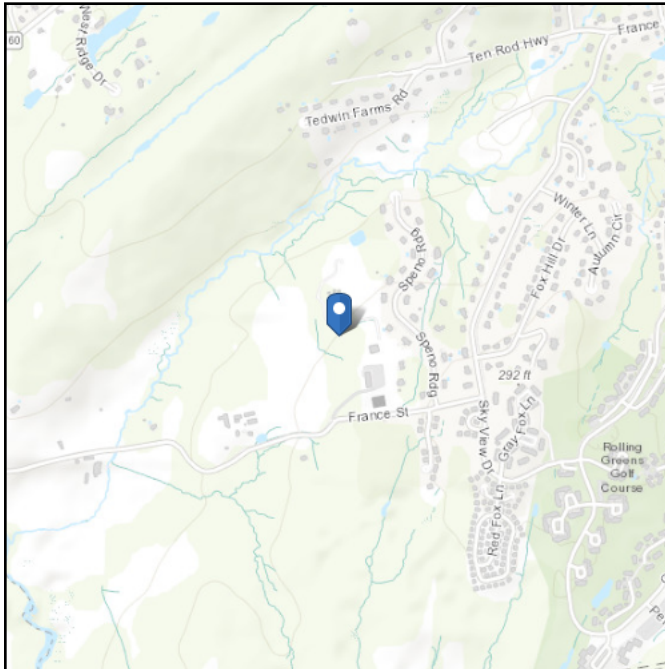
<--Toggle between Gross and Net

# ASCE 7 Hazards Report

**Address:**  
No Address at This Location

**Standard:** ASCE/SEI 7-16  
**Risk Category:** II  
**Soil Class:** D - Default (see Section 11.4.3)

**Latitude:** 41.639778  
**Longitude:** -72.701897  
**Elevation:** 180.73651999616686 ft (NAVD 88)



## Wind

### Results:

Wind Speed	118 Vmph
10-year MRI	75 Vmph
25-year MRI	84 Vmph
50-year MRI	90 Vmph
100-year MRI	98 Vmph

Data Source: ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2  
Date Accessed: Wed Aug 02 2023

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

Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

## Ice

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**Results:**

Ice Thickness: 1.50 in.  
Concurrent Temperature: 15 F  
Gust Speed 50 mph

**Data Source:** Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8

**Date Accessed:** Wed Aug 02 2023

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

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

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