Robinson+Cole

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Also admitted in Massachusetts
and New York

October 10, 2023

Melanie A. Bachman, Esq.
Executive Director/Staff Attorney
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **Notice of Exempt Modification – Facility Modification**
135 (a/k/a 99) East Street, Southington, Connecticut

Dear Attorney Bachman:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains a wireless telecommunications facility at the above-referenced address (the "Property"). Cellco's facility consists of antennas and remote radio heads attached to a tower. Equipment associated with the facility is located on the ground adjacent to the tower. The tower and Cellco's use of the tower were approved by the Siting Council ("Council") in May of 2015 (Docket No. 455). A copy of the Council's Docket No. 455 Decision and Order is included in Attachment 1.

Cellco's proposed modification involves the installation of four (4) interference mitigation filters ("Filters") on its existing antenna platform and antenna mounting assembly. The specification sheet for the Filter is included in Attachment 2.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Southington's Town Manager and Land Use Officer. The Town of Southington is the owner of the Property.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The proposed modifications will not result in an increase in the height of the existing tower. The Filters will be installed on Cellco's existing antenna platform and antenna mounting assembly.

2. The proposed modifications will not involve any change to ground-mounted equipment and, therefore, will not require the extension of the site boundary.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

4. The installation of the Filters will not result in a change to radio frequency (RF) emissions from the facility. Therefore, no new RF emissions information is included in this filing.

5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.

6. According to the attached Structural Analysis Report ("SA") and Antenna Mount Analysis Report ("MA"), the existing tower, foundation, antenna platform and mounting assembly can support Cellco's proposed modifications. A copy of the SA and MA are included in Attachment 3.

A copy of the parcel map and Property owner information is included in Attachment 4. A Certificate of Mailing verifying that this filing was sent to municipal officials and the property owner is included in Attachment 5.

For the foregoing reasons, Cellco respectfully submits that the proposed modifications to the above-referenced telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:
Mark Sciota, Town Manger
Jeremy DeCarli, Director of Planning and Community Development
Alex Tyurin, Verizon Wireless

ATTACHMENT 1

DOCKET NO. 455 – Cellco Partnership d/b/a Verizon Wireless application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a telecommunications facility located at Southington Tax Assessor Map/Lot 066053, 99 East Street, Southington, Connecticut.	}	Connecticut
	}	Siting
	}	Council

May 14, 2015

Decision and Order

Pursuant to Connecticut General Statutes §16-50p and the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate, either alone or cumulatively with other effects, when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application, and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to Cellco Partnership, hereinafter referred to as the Certificate Holder, for a telecommunications facility at the approved site, located at 99 East Street, Southington, Connecticut.

Unless otherwise approved by the Council, the facility shall be constructed, operated, and maintained substantially as specified in the Council's record in this matter, and subject to the following conditions:

1. The tower shall be constructed as a monopine at a height of 90 feet (97-feet with faux tree branches) above ground level to provide the proposed wireless services, sufficient to accommodate the antennas of Cellco and the Town of Southington and other entities, both public and private. The height of the tower may be extended after the date of this Decision and Order pursuant to regulations of the Federal Communications Commission.

2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of Southington for comment, and all parties and intervenors as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:
    a) final site plan(s) for development of the facility to include specifications for the monopine structure, structure foundation, antennas, and equipment compound including, but not limited to, fence with less than two inch mesh, radio equipment, access road, utility line, and emergency backup generator that employ the governing standard in the State of Connecticut for tower design in accordance with the currently adopted International Building Code;
    b) construction plans for site clearing, grading, landscaping, water drainage, and erosion and sedimentation controls consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended;
    c) incorporation of Department of Public Health recommendations per its letter dated February 4, 2015 to protect the aquifer protection area; and
    d) Spotted Turtle Protection Plan.

3. Prior to the commencement of operation, the Certificate Holder shall provide the Council worst-case modeling of the electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of the electromagnetic radio frequency power density be submitted to the Council if and when circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.

4. Upon the establishment of any new federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.

5. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.

6. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed with at least one fully operational wireless telecommunications carrier providing wireless service within eighteen months from the date of the mailing of the Council's Findings of Fact, Opinion, and Decision and Order (collectively called "Final Decision"), this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's Final Decision shall not be counted in calculating this deadline. Authority to monitor and modify this schedule, as necessary, is delegated to the Executive Director. The Certificate Holder shall provide written notice to the Executive Director of any schedule changes as soon as is practicable.

7. Any request for extension of the time period referred to in Condition 6 shall be filed with the Council not later than 60 days prior to the expiration date of this Certificate and shall be served on all parties and intervenors, as listed in the service list, and the Town of Southington Any proposed modifications to this Decision and Order shall likewise be so served.

8. If the facility ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council within 90 days from the one year period of cessation of service. The Certificate Holder may submit a written request to the Council for an extension of the 90 day period not later than 60 days prior to the expiration of the 90 day period.

9. Any nonfunctioning antenna, and associated antenna mounting equipment, on this facility shall be removed within 60 days of the date the antenna ceased to function.

10. In accordance with Section 16-50j-77 of the Regulations of Connecticut State Agencies, the Certificate Holder shall provide the Council with written notice two weeks prior to the commencement of site construction activities. In addition, the Certificate Holder shall provide the Council with written notice of the completion of site construction, and the commencement of site operation.

11. The Certificate Holder shall remit timely payments associated with annual assessments and invoices submitted by the Council for expenses attributable to the facility under Conn. Gen. Stat. §16-50v.

12. This Certificate may be transferred in accordance with Conn. Gen. Stat. §16-50k(b), provided both the Certificate Holder/transferor and the transferee are current with payments to the Council for their respective annual assessments and invoices under Conn. Gen. Stat. §16-50v. In addition, both the Certificate Holder/transferor and the transferee shall provide the Council a written agreement as to the entity responsible for any quarterly assessment charges under Conn. Gen. Stat. §16-50v(b)(2) that may be associated with this facility.

13. The Certificate Holder shall maintain the facility and associated equipment, including but not limited to, the tower, tower foundation, antennas, equipment compound, radio equipment, access road, utility line and landscaping in a reasonable physical and operational condition that is consistent with this Decision and Order and a Development and Management Plan to be approved by the Council.

14. If the Certificate Holder is a wholly-owned subsidiary of a corporation or other entity and is sold/transferred to another corporation or other entity, the Council shall be notified of such sale and/or transfer and of any change in contact information for the individual or representative responsible for management and operations of the Certificate Holder within 30 days of the sale and/or transfer.

15. This Certificate may be surrendered by the Certificate Holder upon written notification and approval by the Council.

We hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed in the Service List, dated December 31, 2014 and notice of issuance published in the Record-Journal.

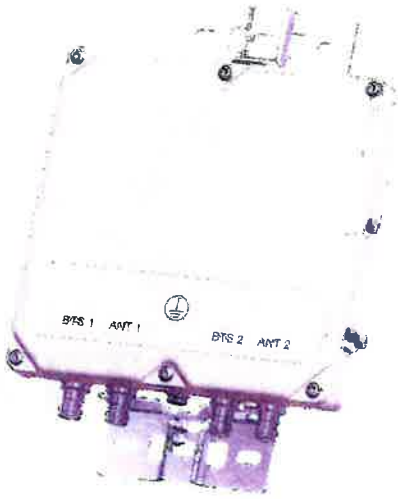
By this Decision and Order, the Council disposes of the legal rights, duties, and privileges of each party named or admitted to the proceeding in accordance with Section 16-50j-17 of the Regulations of Connecticut State Agencies.

ATTACHMENT 2

BSF0020F3V1-1

TWIN BANDSTOP 900MHZ INTERFERENCE FILTER

The BSF0020 is ideal for co-located 700, 850 and 900 networks. Utilising a 2.6MHz guardband the BSF0020 provides rejection of the 900 UL band while passing 700/850 UL and DL bands. Capable of being used in an outdoor environment the BSF0020 contains two identical bandstop filters, suitable for 2x2 MIMO configuration, offering excellent insertion loss, group delay and rejection.



FEATURES

- Passes full 700 and 850 bands
- Low insertion loss
- Rejection of 900MHz uplink
- DC/AISG pass
- Twin unit
- Dual twin mounting available

TECHNICAL SPECIFICATIONS

Band Pass	698 - 849MHz	869 - 891.5MHz
Passband	698 - 849MHz	869 - 891.5MHz
Insertion loss	0.1dB typical / 0.3dB maximum	0.5dB typical, 1.45dB maximum
Return loss	24dB typical, 18dB minimum	
Maximum input power (Per Port)	100W average	200W average and 66W per 5MHz
Rejection	53dB minimum @ 894.1 - 896.5MHz	

ELECTRICAL	
Impedance	50Ohms
Intermodulation products	-160dBc maximum in UL Band (assuming 20MHz Signal), with 2 x 43dBm carriers -153dBc maximum with 2 x 43dBm

DC / AISG	
Passband	0 - 13MHz
Insertion loss	0.3dB maximum
Return loss	15dB minimum
Input voltage range	± 33V
DC current rating	2A continuous, 4A peak*
Compliance	3GPP TS 25.461

ENVIRONMENTAL	
For further details of environmental compliance, please contact Kaelus.	
Temperature range	-20°C to +60°C ¦ -4°F to +140°F
Ingress protection	IP67
Altitude	2600m ¦ 8530ft
Lightning protection	RF port: ±5kA maximum (8/20us), IEC 61000-4-5 – Unit must be terminated with some lightning protection circuits.
MTBF	>1,000,000 hours
Compliance	ETSI EN 300 019 class 4.1H, RoHS, NEBS GR-487-CORE

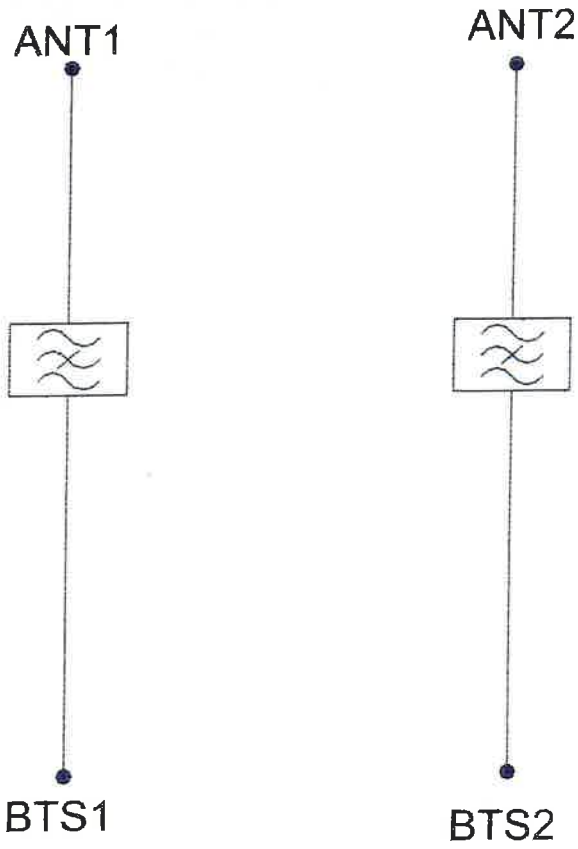
MECHANICAL	
Dimensions H x D x W	269 x 277 x 80mm ¦ 10.60 x 10.90 x 3.15in (Excluding brackets and connectors)
Weight	8.0 kg ¦ 17.6 lbs (no bracket)
Finish	Powder coated, light grey (RAL7035)
Connectors	RF: 4.3-10 (F) x 4
Mounting	Optional pole/wall bracket supplied with two metal clamps 45-178mm diameter poles or custom bracket. See ordering information.

Contact Us: +1 303 768 8080 ¦ +61 (0) 7 3907 1200 ¦ www.kaelus.com

ORDERING INFORMATION

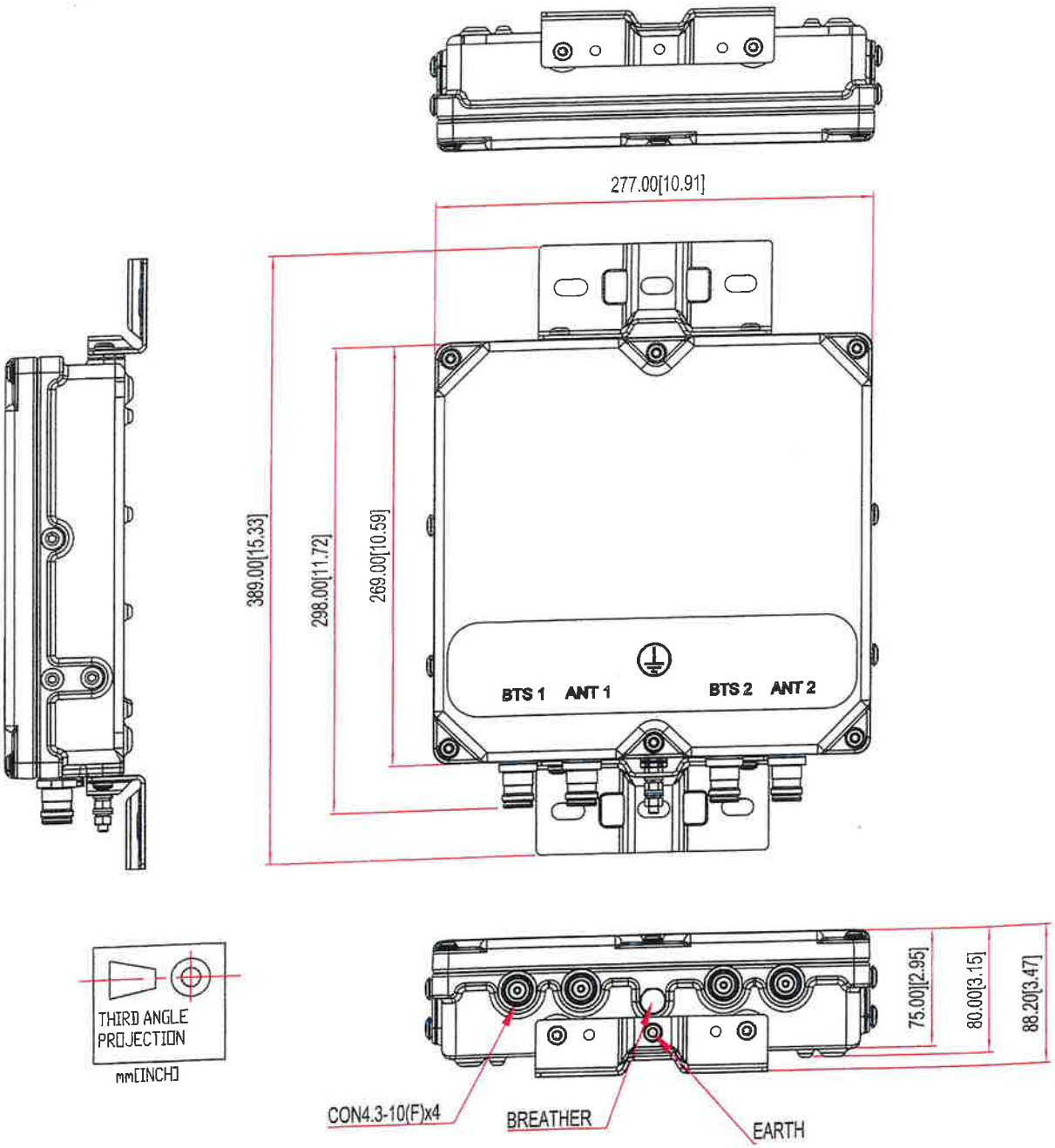
PART NUMBER	CONFIGURATION	OPTIONAL FEATURES	CONNECTORS
BSF0020F3V1	TWIN, 2 in / 2 out	DC/AISG PASS NO BRACKET	4.3-10 (F)
BSF0020F3V1-1	TWIN, 2 in / 2 out	DC/AISG PASS	4.3-10 (F)
BSF0020F3V1-2	QUAD, 4 in / 4 out	DC/AISG PASS	4.3-10 (F)

ELECTRICAL BLOCK DIAGRAM



Contact Us: +1 303 768 8080 | +61 (0) 7 3907 1200 | www.kaelus.com

MECHANICAL BLOCK DIAGRAM



ATTACHMENT 3

CENTEK engineering

Centered on Solutions℠

Structural Analysis Report

90-ft Existing EEI Monopine

Proposed Verizon
Equipment Upgrade

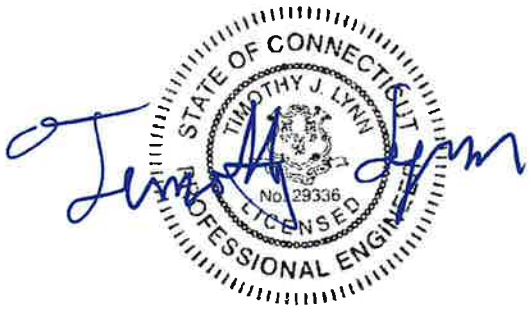
Site Ref: Southington East CT

99 East Street
Southington, CT

CENTEK Project No. 23032.05

Date: July 31, 2023

Max Stress Ratio = 44.3%



Prepared for:

Verizon Wireless
20 Alexander Drive
Wallingford, CT 06492

63-2 North Branford Road, Branford, CT 06405 203.488.0580 Fax 203.488.8587 www.CentekEng.com

Table of Contents

Introduction

The purpose of this report is to summarize the results of the non-linear, P-Δ structural analysis of the equipment upgrade proposed by Verizon on the existing monopole (tower) located in Southington, Connecticut.

The host tower is a 90-ft tall, two-section, eighteen sided, tapered monopole, originally designed and manufactured by Engineered Endeavors; dated April 1, 2015. The tower geometry and structure member sizes were obtained from the aforementioned documents.

Antenna and appurtenance information were obtained from a previous structural analysis report prepared by Centek job no; 21007.35 dated July 12, 2021.

The tower is made up of two (2) tapered vertical sections consisting of A572-65 pole sections. The vertical tower sections are slip joint connected. The diameter of the pole (flat-flat) is 31.0-in at the top and 52.5-in at the base.

Antenna and Appurtenance Summary

The existing, proposed and future loads considered in this analysis consist of the following:

- VERIZON (EXISTING TO REMAIN):
  Antennas: Six (6) Andrew SBNHH-1D65B panel antennas, three (3) Samsung MT6407-77A panel antennas, three (3) Samsung XXDWMM-12.5-65-8T-CBRS, three (3) Samsung B2/B66A RRH-BR049 remote radio heads. three (3) Samsung B5/B13 RRH-BR04C remote radio heads and two (2) OVP Boxes on a low profile platform with a RAD center elevation of 80-ft above grade.
  Coax Cables: Two (2) 6x12 Hybrid flex cables running on the inside of the existing tower.
- **VERIZON (PROPOSED):**
  Antennas: Four (4) Kaelus BSF0020F3V1-1 filters on a low profile platform with a RAD center elevation of 80-ft above grade.

Primary Assumptions Used in the Analysis

- The tower structure's theoretical capacity not including any assessment of the condition of the tower.
- The tower carries the horizontal and vertical loads due to the weight of antennas, ice load and wind.
- Tower is properly installed and maintained.
- Tower is in plumb condition.
- Tower loading for antennas and mounts as listed in this report.
- All bolts are appropriately tightened providing the necessary connection continuity.
- All welds are fabricated with ER-70S-6 electrodes.
- All members are assumed to be as specified in the original tower design documents or reinforcement drawings.
- All members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
- All member protective coatings are in good condition.
- All tower members were properly designed, detailed, fabricated, installed and have been properly maintained since erection.
- Any deviation from the analyzed antenna loading will require a new analysis for verification of structural adequacy.
- All coax cables to be installed as indicated in this report.

Analysis

The existing tower was analyzed using a comprehensive computer program entitled tnxTower. The program analyzes the tower, considering the worst case loading condition. The tower is considered as loaded by concentric forces along the tower, and the model assumes that the tower members are subjected to bending, axial, and shear forces.

The existing tower was analyzed for the controlling basic wind speed (3-second gust) with no ice and the applicable wind and ice combination to determine stresses in members as per guidelines of TIA-222-H entitled "Structural Standard for Antenna Support Structures and Antennas", the American Institute of Steel Construction (AISC) and the Manual of Steel Construction; Load and Resistance Factor Design (LRFD).

The controlling wind speed is determined by evaluating the local available wind speed data as provided in Appendix P of the CSBC[1] and the wind speed data available in the TIA-222-H Standard.

Tower Loading

Tower loading was determined by the basic wind speed as applied to projected surface areas with modification factors per TIA-222-H, gravity loads of the tower structure and its components, and the application of 1.50" radial ice on the tower structure and its components.

Load Cases:	Load Case 1; 120 mph (Ultimate) wind speed w/ no ice plus gravity load – used in calculation of tower stresses and rotation.	*[Appendix P of the 2022 CT Building Code]*
	Load Case 2; 50 mph wind speed w/ 1.50" radial ice plus gravity load – used in calculation of tower stresses.	*[Annex B of TIA-222-H]*
	Load Case 3; 60 mph wind speed used for deflection calculation.	

[1] The 2021 International Building Code as amended by the 2022 Connecticut State Building Code (CSBC).

Tower Capacity

- Calculated stresses were found to be within allowable limits. This tower was found to be at **27.2%** of its total capacity.

Tower Section	Elevation	Stress Ratio (percentage of capacity)	Result
Pole Shaft (L2)	48.16'-1.00'	27.2%	**PASS**

Foundation and Anchors

The existing foundation consists of a one (1) 7-ft square x 3.0-ft tall pier on a 36-ft square x 3.0-ft thick reinforced concrete mat. The existing foundation properties were obtained from the aforementioned design documents. The base of the tower is connected to the foundation by means of (24) 2.25"∅, ASTM A615-75 anchor bolts embedded approximately 5-ft into the concrete foundation structure.

- The tower base reactions developed from the governing Load Case were used in the verification of the foundation and its anchors:

Location	Vector	Proposed Reactions
Base	Shear	31 kips
	Compression	35 kips
	Moment	1945 kip-ft

- The foundation was found to be within allowable limits.

Foundation	Design Limit	TIA-222-H (FS)[1]	Proposed Loading (FS)[1]	Result
Reinforced Concrete Pad and Pier	OTM[2]	1.0	7.5	**PASS**

Note 1: FS denotes Factor of Safety.
Note 2: OTM denotes Overturning Moment

- The anchor bolts and base plate were found to be within allowable limits.

Tower Component	Design Limit	Stress Ratio (percentage of capacity)	Result
Anchor Bolts	Tension	20.3%	**PASS**
Base Plate	Bending	44.3%	**PASS**

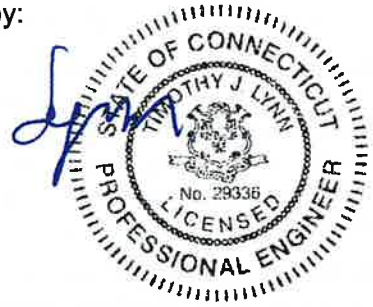
Conclusion

This analysis shows that the subject tower **is adequate** to support the proposed modified antenna configuration.

The analysis is based, in part, on the information provided to this office by Verizon. If the existing conditions are different than the information in this report, Centek Engineering, Inc. must be contacted for resolution of any potential issues.

Please feel free to call with any questions or comments.

Respectfully Submitted by:



Timothy J. Lynn, PE
Structural Engineer

Standard Conditions for Furnishing of Professional Engineering Services on Existing Structures

All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessarily limited to:

- Information supplied by the client regarding the structure itself, its foundations, the soil conditions, the antenna and feed line loading on the structure and its components, or other relevant information.
- Information from the field and/or drawings in the possession of Centek Engineering, Inc. or generated by field inspections or measurements of the structure.
- It is the responsibility of the client to ensure that the information provided to Centek Engineering, Inc. and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and are in an un-corroded condition and have not deteriorated. It is therefore assumed that its capacity has not significantly changed from the "as new" condition.
- All services will be performed to the codes specified by the client, and we do not imply to meet any other codes or requirements unless explicitly agreed in writing. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement. In the absence of information to the contrary, all work will be performed in accordance with the latest revision of ANSI/ASCE10 & ANSI/EIA-222
- All services performed, results obtained, and recommendations made are in accordance with generally accepted engineering principles and practices. Centek Engineering, Inc. is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.

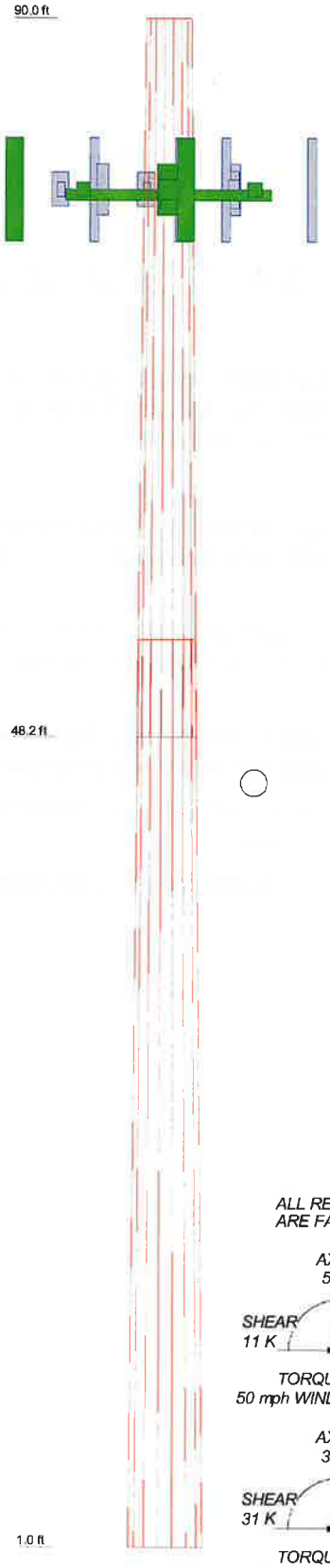
GENERAL DESCRIPTION OF STRUCTURAL ANALYSIS PROGRAM

TnxTower, is an integrated structural analysis and design software package for Designed specifically for the telecommunications industry, TnxTower, formerly ERITower, automates much of the tower analysis and design required by the TIA/EIA 222 Standard.

TnxTower Features:

- TnxTower can analyze and design 3- and 4-sided guyed towers, 3- and 4-sided self-supporting towers and either round or tapered ground mounted poles with or without guys.
- The program analyzes towers using the TIA-222-H standard or any of the previous TIA/EIA standards back to RS-222 (1959). Steel design is checked using the AISC ASD or the AISC LRFD specifications.
- Linear and non-linear (P-delta) analyses can be used in determining displacements and forces in the structure. Wind pressures and forces are automatically calculated.
- Extensive graphics plots include material take-off, shear-moment, leg compression, displacement, twist, feed line, guy anchor and stress plots.
- TnxTower contains unique features such as True Cable behavior, hog rod take-up, foundation stiffness and much more.

Section	1	2
Length (ft)	41.845	52.845
Number of Sides	18	18
Thickness (in)	0.375	0.563
Socket Length (ft)	5.690	
Top Dia (in)	31.000	39.365
Bot Dia (in)	41.550	52.500
Grade	A572-65	
Weight (K)	6.1	14.6



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Pine Branches	88	(2) BSF0020F3V1-1 (Verizon - Proposed)	80
Pine Branches	83	(2) BSF0020F3V1-1 (Verizon - Proposed)	80
(2) SBNHH-1D65B (Verizon - Existing)	80	EEI Low Profile Platform (Verizon - Existing)	80
B2/B66A RRH (Verizon - Existing)	80	XXDWMM-12.5-65-8T-CBRS (Verizon - Existing)	80
B5/B13 RRH (Verizon - Existing)	80	MT6407-77A (Verizon - Existing)	80
XXDWMM-12.5-65-8T-CBRS (Verizon - Existing)	80	Pine Branches	78
MT6407-77A (Verizon - Existing)	80	Pine Branches	73
(2) SBNHH-1D65B (Verizon - Existing)	80	Pine Branches	68
B2/B66A RRH (Verizon - Existing)	80	Pine Branches	63
B5/B13 RRH (Verizon - Existing)	80	Pine Branches	58
XXDWMM-12.5-65-8T-CBRS (Verizon - Existing)	80	Pine Branches	53
MT6407-77A (Verizon - Existing)	80	Pine Branches	48
(2) SBNHH-1D65B (Verizon - Existing)	80		
B2/B66A RRH (Verizon - Existing)	80		
B5/B13 RRH (Verizon - Existing)	80		
(2) DB-T1-6Z-8AB-0Z (Verizon - Existing)	80		

MATERIAL STRENGTH

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

TOWER DESIGN NOTES

1. Tower designed for Exposure C to the TIA-222-H Standard.
2. Tower designed for a 120 mph basic wind in accordance with the TIA-222-H Standard.
3. Tower is also designed for a 50 mph basic wind with 1.50 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 60 mph wind.
5. Tower Risk Category II.
6. Topographic Category 1 with Crest Height of 0.000 ft
7. TOWER RATING: 27.2%

ALL REACTIONS ARE FACTORED

AXIAL 53 K

SHEAR 11 K *MOMENT 728 kip-ft*

TORQUE 0 kip-ft
50 mph WIND - 1.500 in ICE

AXIAL 35 K

SHEAR 31 K *MOMENT 1945 kip-ft*

TORQUE 1 kip-ft
REACTIONS - 120 mph WIND

Centek Engineering Inc.
63-2 North Branford Rd.
Branford, CT 06405
Phone: (203) 488-0580
FAX: (203) 488-8587

Job: *23032.05 - Southington East*		
Project: *90' EEI Monopine - 99 East St., Southington, CT*		
Client: Verizon Wireless	Drawn by: TJL	App'd:
Code: TIA-222-H	Date: 07/31/23	Scale: NTS
Path:		Dwg No. E-1

Tower Input Data

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

Tower base elevation above sea level: 1.000 ft.
Basic wind speed of 120 mph.
Risk Category II.
Exposure Category C.
Simplified Topographic Factor Procedure for wind speed-up calculations is used.
Topographic Category: 1.
Crest Height: 0.000 ft.
Nominal ice thickness of 1.500 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.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

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

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

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	90.000-48.155	41.845	5.690	18	31.000	41.550	0.375	1.500	A572-65 (65 ksi)
L2	48.155-1.000	52.845		18	39.365	52.500	0.563	2.250	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	31.420	36.451	4319.206	10.872	15.748	274.270	8644.096	18.229	4.796	12.789
	42.133	49.009	10497.272	14.617	21.107	497.327	21008.357	24.509	6.653	17.741
L2	41.322	69.278	13178.335	13.775	19.998	658.995	26374.009	34.645	5.938	10.557
	53.223	92.728	31601.669	18.438	26.670	1184.914	63244.921	46.373	8.250	14.667

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L1 90.000-48.155				1	1	1			
L2 48.155-1.000				1	1	1			

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight klf
HYBRIFLEX 1-5/8" (Verizon - Existing)	C	No	Yes	Inside Pole	80.000 - 4.000	2	No Ice	0.000	0.002
							1/2" Ice	0.000	0.002
							1" Ice	0.000	0.002
							2" Ice	0.000	0.002

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	90.000-48.155	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.000	0.121
L2	48.155-1.000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.000	0.168

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	90.000-48.155	A	1.613	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	0.000	0.121
L2	48.155-1.000	A	1.457	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	0.000	0.168

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
XXDWMM-12.5-65-8T-CBRS (Verizon - Existing)	A	From Face	3.000 -4.000 0.000	0.000	80.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.539 1.696 1.860 2.212	0.755 0.874 1.001 1.284	0.043 0.055 0.069 0.106
MT6407-77A (Verizon - Existing)	A	From Face	3.000 0.000 0.000	0.000	80.000	No Ice 1/2" Ice 1" Ice 2" Ice	4.709 4.997 5.293 5.906	1.840 2.063 2.292 2.772	0.087 0.116 0.149 0.228
(2) SBNHH-1D65B (Verizon - Existing)	A	From Face	3.000 4.000 0.000	0.000	80.000	No Ice 1/2" Ice 1" Ice 2" Ice	8.079 8.535 8.998 9.945	5.342 5.795 6.255 7.199	0.042 0.092 0.148 0.280
B2/B66A RRH (Verizon - Existing)	A	From Face	3.000 0.000 0.000	0.000	80.000	No Ice 1/2" Ice 1" Ice 2" Ice	2.537 2.750 2.970 3.432	1.610 1.791 1.978 2.374	0.060 0.080 0.103 0.160
B5/B13 RRH (Verizon - Existing)	A	From Face	3.000 0.000 0.000	0.000	80.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.865 2.035 2.212 2.589	1.016 1.148 1.288 1.589	0.070 0.086 0.106 0.152
XXDWMM-12.5-65-8T-CBRS (Verizon - Existing)	B	From Face	3.000 -4.000 0.000	0.000	80.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.539 1.696 1.860 2.212	0.755 0.874 1.001 1.284	0.043 0.055 0.069 0.106
MT6407-77A (Verizon - Existing)	B	From Face	3.000 0.000 0.000	0.000	80.000	No Ice 1/2" Ice 1" Ice 2" Ice	4.709 4.997 5.293 5.906	1.840 2.063 2.292 2.772	0.087 0.116 0.149 0.228
(2) SBNHH-1D65B (Verizon - Existing)	B	From Face	3.000 4.000 0.000	0.000	80.000	No Ice 1/2" Ice 1" Ice 2" Ice	8.079 8.535 8.998 9.945	5.342 5.795 6.255 7.199	0.042 0.092 0.148 0.280
B2/B66A RRH (Verizon - Existing)	B	From Face	3.000 0.000 0.000	0.000	80.000	No Ice 1/2" Ice 1" Ice	2.537 2.750 2.970	1.610 1.791 1.978	0.060 0.080 0.103

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft	Offsets: Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
							2" Ice	3.432	2.374	0.160
B5/B13 RRH (Verizon - Existing)	B	From Face	3.000	0.000	0.000	80.000	No Ice	1.865	1.016	0.070
			0.000				1/2" Ice	2.035	1.148	0.086
			0.000				1" Ice	2.212	1.288	0.106
							2" Ice	2.589	1.589	0.152
XXDWMM-12.5-65-8T-CBR S (Verizon - Existing)	C	From Face	3.000	0.000	0.000	80.000	No Ice	1.539	0.755	0.043
			-4.000				1/2" Ice	1.696	0.874	0.055
			0.000				1" Ice	1.860	1.001	0.069
							2" Ice	2.212	1.284	0.106
MT6407-77A (Verizon - Existing)	C	From Face	3.000	0.000	0.000	80.000	No Ice	4.709	1.840	0.087
			0.000				1/2" Ice	4.997	2.063	0.116
			0.000				1" Ice	5.293	2.292	0.149
							2" Ice	5.906	2.772	0.228
(2) SBNHH-1D65B (Verizon - Existing)	C	From Face	3.000	0.000	0.000	80.000	No Ice	8.079	5.342	0.042
			4.000				1/2" Ice	8.535	5.795	0.092
			0.000				1" Ice	8.998	6.255	0.148
							2" Ice	9.945	7.199	0.280
B2/B66A RRH (Verizon - Existing)	C	From Face	3.000	0.000	0.000	80.000	No Ice	2.537	1.610	0.060
			0.000				1/2" Ice	2.750	1.791	0.080
			0.000				1" Ice	2.970	1.978	0.103
							2" Ice	3.432	2.374	0.160
B5/B13 RRH (Verizon - Existing)	C	From Face	3.000	0.000	0.000	80.000	No Ice	1.865	1.016	0.070
			0.000				1/2" Ice	2.035	1.148	0.086
			0.000				1" Ice	2.212	1.288	0.106
							2" Ice	2.589	1.589	0.152
(2) DB-T1-6Z-8AB-0Z (Verizon - Existing)	A	From Face	3.000	0.000	0.000	80.000	No Ice	4.800	2.000	0.044
			0.000				1/2" Ice	5.070	2.193	0.080
			0.000				1" Ice	5.348	2.393	0.120
							2" Ice	5.926	2.815	0.213
(2) BSF0020F3V1-1 (Verizon - Proposed)	A	From Face	3.000	0.000	0.000	80.000	No Ice	0.963	0.287	0.020
			0.000				1/2" Ice	1.086	0.364	0.027
			0.000				1" Ice	1.217	0.449	0.035
							2" Ice	1.500	0.643	0.059
(2) BSF0020F3V1-1 (Verizon - Proposed)	C	From Face	3.000	0.000	0.000	80.000	No Ice	0.963	0.287	0.020
			0.000				1/2" Ice	1.086	0.364	0.027
			0.000				1" Ice	1.217	0.449	0.035
							2" Ice	1.500	0.643	0.059
EEI Low Profile Platform (Verizon - Existing)	A	None			0.000	80.000	No Ice	22.500	22.500	1.500
							1/2" Ice	28.200	28.200	2.250
							1" Ice	33.900	33.900	3.000
							2" Ice	45.300	45.300	4.500
Pine Branches	C	None			0.000	88.000	No Ice	45.000	45.000	0.600
							1/2" Ice	65.000	65.000	0.800
							1" Ice	85.000	85.000	1.000
							2" Ice	125.000	125.000	1.400
Pine Branches	C	None			0.000	83.000	No Ice	45.000	45.000	0.600
							1/2" Ice	65.000	65.000	0.800
							1" Ice	85.000	85.000	1.000
							2" Ice	125.000	125.000	1.400
Pine Branches	C	None			0.000	78.000	No Ice	45.000	45.000	0.600
							1/2" Ice	65.000	65.000	0.800
							1" Ice	85.000	85.000	1.000
							2" Ice	125.000	125.000	1.400
Pine Branches	C	None			0.000	73.000	No Ice	45.000	45.000	0.600
							1/2" Ice	65.000	65.000	0.800
							1" Ice	85.000	85.000	1.000
							2" Ice	125.000	125.000	1.400

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Pine Branches	C	None		0.000	68.000	No Ice	45.000	45.000	0.600
						1/2" Ice	65.000	65.000	0.800
						1" Ice	85.000	85.000	1.000
						2" Ice	125.000	125.000	1.400
Pine Branches	C	None		0.000	63.000	No Ice	45.000	45.000	0.600
						1/2" Ice	65.000	65.000	0.800
						1" Ice	85.000	85.000	1.000
						2" Ice	125.000	125.000	1.400
Pine Branches	C	None		0.000	58.000	No Ice	45.000	45.000	0.600
						1/2" Ice	65.000	65.000	0.800
						1" Ice	85.000	85.000	1.000
						2" Ice	125.000	125.000	1.400
Pine Branches	C	None		0.000	53.000	No Ice	45.000	45.000	0.600
						1/2" Ice	65.000	65.000	0.800
						1" Ice	85.000	85.000	1.000
						2" Ice	125.000	125.000	1.400
Pine Branches	C	None		0.000	48.000	No Ice	45.000	45.000	0.600
						1/2" Ice	65.000	65.000	0.800
						1" Ice	85.000	85.000	1.000
						2" Ice	125.000	125.000	1.400

Tower Pressures - No Ice

$G_H = 1.100$

Section Elevation ft	z ft	K_Z	q_z ksf	A_G ft^2	Face	A_F ft^2	A_R ft^2	A_{leg} ft^2	Leg %	C_AA_A In Face ft^2	C_AA_A Out Face ft^2
L1 90.000-48.155	68.397	1.168	0.041	128.244	A	0.000	128.244	128.244	100.00	0.000	0.000
					B	0.000	128.244		100.00	0.000	0.000
					C	0.000	128.244		100.00	0.000	0.000
L2 48.155-1.000	24.668	0.943	0.033	185.761	A	0.000	185.761	185.761	100.00	0.000	0.000
					B	0.000	185.761		100.00	0.000	0.000
					C	0.000	185.761		100.00	0.000	0.000

Tower Pressure - With Ice

$G_H = 1.100$

Section Elevation ft	z ft	K_Z	q_z ksf	t_Z in	A_G ft^2	Face	A_F ft^2	A_R ft^2	A_{leg} ft^2	Leg %	C_AA_A In Face ft^2	C_AA_A Out Face ft^2
L1 90.000-48.155	68.397	1.168	0.007	1.613	139.496	A	0.000	139.496	139.496	100.00	0.000	0.000
						B	0.000	139.496		100.00	0.000	0.000
						C	0.000	139.496		100.00	0.000	0.000

Section Elevation ft	z ft	K_Z	q_z ksf	t_Z in	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
L2 48.155-1.000	24.668	0.943	0.006	1.457	198.441	A	0.000	198.441	198.441	100.00	0.000	0.000
						B	0.000	198.441		100.00	0.000	0.000
						C	0.000	198.441		100.00	0.000	0.000

Tower Pressure - Service

$G_H = 1.100$

Section Elevation ft	z ft	K_Z	q_z ksf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
L1	68.397	1.168	0.009	128.244	A	0.000	128.244	128.244	100.00	0.000	0.000
90.000-48.155					B	0.000	128.244		100.00	0.000	0.000
					C	0.000	128.244		100.00	0.000	0.000
L2	24.668	0.943	0.007	185.761	A	0.000	185.761	185.761	100.00	0.000	0.000
48.155-1.000					B	0.000	185.761		100.00	0.000	0.000
					C	0.000	185.761		100.00	0.000	0.000

Tower Forces - No Ice - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
L1	0.121	6.084	A	1	0.73	0.041	1	1	128.244	4.201	0.100	C
90.000-48.155			B	1	0.73		1	1	128.244			
			C	1	0.73		1	1	128.244			
L2	0.168	14.566	A	1	0.73	0.033	1	1	185.761	4.860	0.103	C
48.155-1.000			B	1	0.73		1	1	185.761			
			C	1	0.73		1	1	185.761			
Sum Weight:	0.289	20.650						OTM	398.154 kip-ft	9.061		

Tower Forces - No Ice - Wind 45 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
L1	0.121	6.084	A	1	0.73	0.041	1	1	128.244	4.201	0.100	C
90.000-48.155			B	1	0.73		1	1	128.244			
			C	1	0.73		1	1	128.244			
L2	0.168	14.566	A	1	0.73	0.033	1	1	185.761	4.860	0.103	C
48.155-1.000			B	1	0.73		1	1	185.761			
			C	1	0.73		1	1	185.761			
Sum Weight:	0.289	20.650						OTM	398.154	9.061		

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
									kip-ft			

Tower Forces - No Ice - Wind 60 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
L1	0.121	6.084	A	1	0.73	0.041	1	1	128.244	4.201	0.100	C
90.000-48.155			B	1	0.73		1	1	128.244			
			C	1	0.73		1	1	128.244			
L2	0.168	14.566	A	1	0.73	0.033	1	1	185.761	4.860	0.103	C
48.155-1.000			B	1	0.73		1	1	185.761			
			C	1	0.73		1	1	185.761			
Sum Weight:	0.289	20.650						OTM	398.154 kip-ft	9.061		

Tower Forces - No Ice - Wind 90 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
L1	0.121	6.084	A	1	0.73	0.041	1	1	128.244	4.201	0.100	C
90.000-48.155			B	1	0.73		1	1	128.244			
			C	1	0.73		1	1	128.244			
L2	0.168	14.566	A	1	0.73	0.033	1	1	185.761	4.860	0.103	C
48.155-1.000			B	1	0.73		1	1	185.761			
			C	1	0.73		1	1	185.761			
Sum Weight:	0.289	20.650						OTM	398.154 kip-ft	9.061		

Tower Forces - With Ice - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
L1	0.121	9.242	A	1	1.2	0.007	1	1	139.496	1.304	0.031	C
90.000-48.155			B	1	1.2		1	1	139.496			
			C	1	1.2		1	1	139.496			
L2	0.168	18.645	A	1	1.2	0.006	1	1	197.212	1.472	0.031	C
48.155-1.000			B	1	1.2		1	1	197.212			
			C	1	1.2		1	1	197.212			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
Sum Weight:	0.289	27.886						OTM	122.742 kip-ft	2.776		

Tower Forces - With Ice - Wind 45 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
L1	0.121	9.242	A	1	1.2	0.007	1	1	139.496	1.304	0.031	C
90.000-48.155			B	1	1.2		1	1	139.496			
			C	1	1.2		1	1	139.496			
L2	0.168	18.645	A	1	1.2	0.006	1	1	197.212	1.472	0.031	C
48.155-1.000			B	1	1.2		1	1	197.212			
			C	1	1.2		1	1	197.212			
Sum Weight:	0.289	27.886						OTM	122.742 kip-ft	2.776		

Tower Forces - With Ice - Wind 60 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
L1	0.121	9.242	A	1	1.2	0.007	1	1	139.496	1.304	0.031	C
90.000-48.155			B	1	1.2		1	1	139.496			
			C	1	1.2		1	1	139.496			
L2	0.168	18.645	A	1	1.2	0.006	1	1	197.212	1.472	0.031	C
48.155-1.000			B	1	1.2		1	1	197.212			
			C	1	1.2		1	1	197.212			
Sum Weight:	0.289	27.886						OTM	122.742 kip-ft	2.776		

Tower Forces - With Ice - Wind 90 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
L1	0.121	9.242	A	1	1.2	0.007	1	1	139.496	1.304	0.031	C
90.000-48.155			B	1	1.2		1	1	139.496			
			C	1	1.2		1	1	139.496			
L2	0.168	18.645	A	1	1.2	0.006	1	1	197.212	1.472	0.031	C
48.155-1.000			B	1	1.2		1	1	197.212			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
Sum Weight:	0.289	27.886	C	1	1.2		1	1 OTM	197.212 122.742 kip-ft	2.776		

Tower Forces - Service - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
L1	0.121	6.084	A	1	0.73	0.009	1	1	128.244	0.940	0.022	C
90.000-48.155			B	1	0.73		1	1	128.244			
			C	1	0.73		1	1	128.244			
L2	0.168	14.566	A	1	0.73	0.007	1	1	185.761	1.087	0.023	C
48.155-1.000			B	1	0.73		1	1	185.761			
			C	1	0.73		1	1	185.761			
Sum Weight:	0.289	20.650						OTM	89.061 kip-ft	2.027		

Tower Forces - Service - Wind 45 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
L1	0.121	6.084	A	1	0.73	0.009	1	1	128.244	0.940	0.022	C
90.000-48.155			B	1	0.73		1	1	128.244			
			C	1	0.73		1	1	128.244			
L2	0.168	14.566	A	1	0.73	0.007	1	1	185.761	1.087	0.023	C
48.155-1.000			B	1	0.73		1	1	185.761			
			C	1	0.73		1	1	185.761			
Sum Weight:	0.289	20.650						OTM	89.061 kip-ft	2.027		

Tower Forces - Service - Wind 60 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
L1	0.121	6.084	A	1	0.73	0.009	1	1	128.244	0.940	0.022	C
90.000-48.155			B	1	0.73		1	1	128.244			
			C	1	0.73		1	1	128.244			
L2	0.168	14.566	A	1	0.73	0.007	1	1	185.761	1.087	0.023	C

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
48.155-1.000			B	1	0.73		1	1	185.761			
			C	1	0.73		1	1	185.761			
Sum Weight:	0.289	20.650						OTM	89.061 kip-ft	2.027		

Tower Forces - Service - Wind 90 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
L1	0.121	6.084	A	1	0.73	0.009	1	1	128.244	0.940	0.022	C
90.000-48.155			B	1	0.73		1	1	128.244			
			C	1	0.73		1	1	128.244			
L2	0.168	14.566	A	1	0.73	0.007	1	1	185.761	1.087	0.023	C
48.155-1.000			B	1	0.73		1	1	185.761			
			C	1	0.73		1	1	185.761			
Sum Weight:	0.289	20.650						OTM	89.061 kip-ft	2.027		

Force Totals

Load Case	Vertical Forces K	Sum of Forces X K	Sum of Forces Z K	Sum of Overturning Moments, M_x kip-ft	Sum of Overturning Moments, M_z kip-ft	Sum of Torques kip-ft
Leg Weight	20.650					
Bracing Weight	0.000					
Total Member Self-Weight	20.650			-0.106	0.487	
Total Weight	29.039			-0.106	0.487	
Wind 0 deg - No Ice		-0.112	-30.948	-1919.111	9.337	-0.648
Wind 30 deg - No Ice		15.417	-26.746	-1657.588	-954.474	-0.701
Wind 45 deg - No Ice		21.860	-21.804	-1350.790	-1354.613	-0.657
Wind 60 deg - No Ice		26.814	-15.377	-951.945	-1662.404	-0.567
Wind 90 deg - No Ice		31.027	0.112	8.744	-1924.764	-0.280
Wind 120 deg - No Ice		26.926	15.571	967.061	-1671.253	0.081
Wind 135 deg - No Ice		22.019	21.963	1363.094	-1367.128	0.260
Wind 150 deg - No Ice		15.611	26.858	1666.227	-969.802	0.421
Wind 180 deg - No Ice		0.112	30.948	1918.900	-8.362	0.648
Wind 210 deg - No Ice		-15.417	26.746	1657.377	955.449	0.701
Wind 225 deg - No Ice		-21.860	21.804	1350.579	1355.588	0.657
Wind 240 deg - No Ice		-26.814	15.377	951.734	1663.379	0.567
Wind 270 deg - No Ice		-31.027	-0.112	-8.955	1925.738	0.280
Wind 300 deg - No Ice		-26.926	-15.571	-967.272	1672.228	-0.081
Wind 315 deg - No Ice		-22.019	-21.963	-1363.305	1368.103	-0.260
Wind 330 deg - No Ice		-15.611	-26.858	-1666.438	970.776	-0.421
Member Ice	7.236					
Total Weight Ice	46.984			-0.569	1.749	
Wind 0 deg - Ice		-0.022	-11.367	-715.173	3.464	-0.159

Load Case	Vertical Forces K	Sum of Forces X K	Sum of Forces Z K	Sum of Overturning Moments, M_x kip-ft	Sum of Overturning Moments, M_z kip-ft	Sum of Torques kip-ft
Wind 30 deg - Ice		5.672	-9.834	-618.577	-354.637	-0.168
Wind 45 deg - Ice		8.033	-8.023	-504.658	-503.145	-0.155
Wind 60 deg - Ice		9.846	-5.665	-356.386	-617.245	-0.131
Wind 90 deg - Ice		11.382	0.022	1.146	-713.993	-0.059
Wind 120 deg - Ice		9.868	5.702	358.219	-618.959	0.028
Wind 135 deg - Ice		8.063	8.053	505.946	-505.570	0.071
Wind 150 deg - Ice		5.710	9.855	619.155	-357.607	0.108
Wind 180 deg - Ice		0.022	11.367	714.036	0.035	0.159
Wind 210 deg - Ice		-5.672	9.834	617.440	358.136	0.168
Wind 225 deg - Ice		-8.033	8.023	503.521	506.643	0.155
Wind 240 deg - Ice		-9.846	5.665	355.249	620.743	0.131
Wind 270 deg - Ice		-11.382	-0.022	-2.283	717.492	0.059
Wind 300 deg - Ice		-9.868	-5.702	-359.356	622.458	-0.028
Wind 315 deg - Ice		-8.063	-8.053	-507.083	509.069	-0.071
Wind 330 deg - Ice		-5.710	-9.855	-620.292	361.106	-0.108
Total Weight	29.039			-0.106	0.487	
Wind 0 deg - Service		-0.025	-6.923	-429.357	2.467	-0.145
Wind 30 deg - Service		3.448	-5.983	-370.858	-213.122	-0.157
Wind 45 deg - Service		4.890	-4.877	-302.232	-302.627	-0.147
Wind 60 deg - Service		5.998	-3.440	-213.017	-371.475	-0.127
Wind 90 deg - Service		6.940	0.025	1.874	-430.161	-0.063
Wind 120 deg - Service		6.023	3.483	216.234	-373.455	0.018
Wind 135 deg - Service		4.925	4.913	304.821	-305.427	0.058
Wind 150 deg - Service		3.492	6.008	372.627	-216.551	0.094
Wind 180 deg - Service		0.025	6.923	429.146	-1.492	0.145
Wind 210 deg - Service		-3.448	5.983	370.647	214.097	0.157
Wind 225 deg - Service		-4.890	4.877	302.021	303.602	0.147
Wind 240 deg - Service		-5.998	3.440	212.806	372.450	0.127
Wind 270 deg - Service		-6.940	-0.025	-2.085	431.136	0.063
Wind 300 deg - Service		-6.023	-3.483	-216.445	374.429	-0.018
Wind 315 deg - Service		-4.925	-4.913	-305.032	306.401	-0.058
Wind 330 deg - Service		-3.492	-6.008	-372.838	217.526	-0.094

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 45 deg - No Ice
7	0.9 Dead+1.0 Wind 45 deg - No Ice
8	1.2 Dead+1.0 Wind 60 deg - No Ice
9	0.9 Dead+1.0 Wind 60 deg - No Ice
10	1.2 Dead+1.0 Wind 90 deg - No Ice
11	0.9 Dead+1.0 Wind 90 deg - No Ice
12	1.2 Dead+1.0 Wind 120 deg - No Ice
13	0.9 Dead+1.0 Wind 120 deg - No Ice
14	1.2 Dead+1.0 Wind 135 deg - No Ice
15	0.9 Dead+1.0 Wind 135 deg - No Ice
16	1.2 Dead+1.0 Wind 150 deg - No Ice
17	0.9 Dead+1.0 Wind 150 deg - No Ice
18	1.2 Dead+1.0 Wind 180 deg - No Ice
19	0.9 Dead+1.0 Wind 180 deg - No Ice

Comb. No.	Description
20	1.2 Dead+1.0 Wind 210 deg - No Ice
21	0.9 Dead+1.0 Wind 210 deg - No Ice
22	1.2 Dead+1.0 Wind 225 deg - No Ice
23	0.9 Dead+1.0 Wind 225 deg - No Ice
24	1.2 Dead+1.0 Wind 240 deg - No Ice
25	0.9 Dead+1.0 Wind 240 deg - No Ice
26	1.2 Dead+1.0 Wind 270 deg - No Ice
27	0.9 Dead+1.0 Wind 270 deg - No Ice
28	1.2 Dead+1.0 Wind 300 deg - No Ice
29	0.9 Dead+1.0 Wind 300 deg - No Ice
30	1.2 Dead+1.0 Wind 315 deg - No Ice
31	0.9 Dead+1.0 Wind 315 deg - No Ice
32	1.2 Dead+1.0 Wind 330 deg - No Ice
33	0.9 Dead+1.0 Wind 330 deg - No Ice
34	1.2 Dead+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 45 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
39	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
40	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
41	1.2 Dead+1.0 Wind 135 deg+1.0 Ice+1.0 Temp
42	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
43	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
44	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
45	1.2 Dead+1.0 Wind 225 deg+1.0 Ice+1.0 Temp
46	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
47	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
48	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
49	1.2 Dead+1.0 Wind 315 deg+1.0 Ice+1.0 Temp
50	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
51	Dead+Wind 0 deg - Service
52	Dead+Wind 30 deg - Service
53	Dead+Wind 45 deg - Service
54	Dead+Wind 60 deg - Service
55	Dead+Wind 90 deg - Service
56	Dead+Wind 120 deg - Service
57	Dead+Wind 135 deg - Service
58	Dead+Wind 150 deg - Service
59	Dead+Wind 180 deg - Service
60	Dead+Wind 210 deg - Service
61	Dead+Wind 225 deg - Service
62	Dead+Wind 240 deg - Service
63	Dead+Wind 270 deg - Service
64	Dead+Wind 300 deg - Service
65	Dead+Wind 315 deg - Service
66	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	90 - 48.155	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	34	-26.772	1.847	0.590
			Max. Mx	26	-14.293	446.771	3.079
			Max. My	2	-14.295	3.538	444.227
			Max. Vy	26	-21.944	446.771	3.079
			Max. Vx	2	-21.864	3.538	444.227

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Torque	21			-0.700
L2	48.155 - 1	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	34	-53.284	1.847	0.590
			Max. Mx	26	-34.835	1939.022	9.044
			Max. My	2	-34.835	9.508	1932.267
			Max. Vy	26	-31.040	1939.022	9.044
			Max. Vx	2	-30.961	9.508	1932.267
			Max. Torque	21			-0.700

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	48	53.284	9.868	5.702
	Max. H_x	27	26.135	31.027	0.112
	Max. H_z	2	34.847	0.112	30.948
	Max. M_x	2	1932.267	0.112	30.948
	Max. M_z	10	1937.839	-31.027	-0.112
	Max. Torsion	5	0.700	-15.417	26.746
	Min. Vert	7	26.135	-21.860	21.804
	Min. H_x	10	34.847	-31.027	-0.112
	Min. H_z	18	34.847	-0.112	-30.948
	Min. M_x	18	-1932.010	-0.112	-30.948
	Min. M_z	26	-1939.022	31.027	0.112
	Min. Torsion	21	-0.700	15.417	-26.746

Tower Mast Reaction Summary

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
Dead Only	29.039	0.000	0.000	-0.106	0.487	0.000
1.2 Dead+1.0 Wind 0 deg - No Ice	34.847	-0.112	-30.948	-1932.267	9.508	-0.646
0.9 Dead+1.0 Wind 0 deg - No Ice	26.135	-0.112	-30.948	-1928.905	9.342	-0.647
1.2 Dead+1.0 Wind 30 deg - No Ice	34.847	15.417	-26.746	-1668.952	-960.902	-0.700
0.9 Dead+1.0 Wind 30 deg - No Ice	26.135	15.417	-26.746	-1666.045	-959.396	-0.700
1.2 Dead+1.0 Wind 45 deg - No Ice	34.847	21.860	-21.804	-1360.052	-1363.782	-0.655
0.9 Dead+1.0 Wind 45 deg - No Ice	26.135	21.860	-21.804	-1357.678	-1361.581	-0.655
1.2 Dead+1.0 Wind 60 deg - No Ice	34.847	26.814	-15.377	-958.476	-1673.681	-0.566
0.9 Dead+1.0 Wind 60 deg - No Ice	26.135	26.814	-15.377	-956.794	-1670.946	-0.566
1.2 Dead+1.0 Wind 90 deg - No Ice	34.847	31.027	0.112	8.788	-1937.839	-0.280
0.9 Dead+1.0 Wind 90 deg - No Ice	26.135	31.027	0.112	8.804	-1934.647	-0.280

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
1.2 Dead+1.0 Wind 120 deg - No Ice	34.847	26.926	15.571	973.662	-1682.596	0.081
0.9 Dead+1.0 Wind 120 deg - No Ice	26.135	26.926	15.571	972.015	-1679.843	0.081
1.2 Dead+1.0 Wind 135 deg - No Ice	34.847	22.019	21.963	1372.404	-1376.390	0.259
0.9 Dead+1.0 Wind 135 deg - No Ice	26.135	22.019	21.963	1370.070	-1374.165	0.260
1.2 Dead+1.0 Wind 150 deg - No Ice	34.847	15.611	26.858	1677.610	-976.345	0.420
0.9 Dead+1.0 Wind 150 deg - No Ice	26.135	15.611	26.858	1674.751	-974.809	0.420
1.2 Dead+1.0 Wind 180 deg - No Ice	34.847	0.112	30.948	1932.010	-8.325	0.647
0.9 Dead+1.0 Wind 180 deg - No Ice	26.135	0.112	30.948	1928.714	-8.457	0.647
1.2 Dead+1.0 Wind 210 deg - No Ice	34.847	-15.417	26.746	1668.695	962.086	0.700
0.9 Dead+1.0 Wind 210 deg - No Ice	26.135	-15.417	26.746	1665.853	960.281	0.700
1.2 Dead+1.0 Wind 225 deg - No Ice	34.847	-21.860	21.804	1359.796	1364.965	0.655
0.9 Dead+1.0 Wind 225 deg - No Ice	26.135	-21.860	21.804	1357.486	1362.466	0.655
1.2 Dead+1.0 Wind 240 deg - No Ice	34.847	-26.814	15.377	958.220	1674.865	0.566
0.9 Dead+1.0 Wind 240 deg - No Ice	26.135	-26.814	15.377	956.602	1671.830	0.566
1.2 Dead+1.0 Wind 270 deg - No Ice	34.847	-31.027	-0.112	-9.044	1939.022	0.280
0.9 Dead+1.0 Wind 270 deg - No Ice	26.135	-31.027	-0.112	-8.995	1935.532	0.280
1.2 Dead+1.0 Wind 300 deg - No Ice	34.847	-26.926	-15.571	-973.918	1683.779	-0.081
0.9 Dead+1.0 Wind 300 deg - No Ice	26.135	-26.926	-15.571	-972.207	1680.728	-0.081
1.2 Dead+1.0 Wind 315 deg - No Ice	34.847	-22.019	-21.963	-1372.660	1377.573	-0.259
0.9 Dead+1.0 Wind 315 deg - No Ice	26.135	-22.019	-21.963	-1370.262	1375.050	-0.259
1.2 Dead+1.0 Wind 330 deg - No Ice	34.847	-15.611	-26.858	-1677.866	977.529	-0.420
0.9 Dead+1.0 Wind 330 deg - No Ice	26.135	-15.611	-26.858	-1674.943	975.694	-0.420
1.2 Dead+1.0 Ice+1.0 Temp	53.284	0.000	0.000	-0.590	1.847	0.000
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	53.284	-0.022	-11.367	-723.935	3.626	-0.158
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	53.284	5.672	-9.834	-626.157	-358.850	-0.166
1.2 Dead+1.0 Wind 45 deg+1.0 Ice+1.0 Temp	53.284	8.033	-8.023	-510.847	-509.172	-0.153
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	53.284	9.846	-5.665	-360.763	-624.666	-0.130
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	53.284	11.382	0.022	1.135	-722.598	-0.059
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	53.284	9.868	5.702	362.569	-626.404	0.028
1.2 Dead+1.0 Wind 135 deg+1.0 Ice+1.0 Temp	53.284	8.063	8.053	512.099	-511.630	0.070
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	53.284	5.710	9.855	626.690	-361.860	0.107

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	53.284	0.022	11.367	722.729	0.150	0.158
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	53.284	-5.672	9.834	624.952	362.625	0.166
1.2 Dead+1.0 Wind 225 deg+1.0 Ice+1.0 Temp	53.284	-8.033	8.023	509.641	512.948	0.153
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	53.284	-9.846	5.665	359.558	628.442	0.130
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	53.284	-11.382	-0.022	-2.341	726.374	0.059
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	53.284	-9.868	-5.702	-363.774	630.180	-0.028
1.2 Dead+1.0 Wind 315 deg+1.0 Ice+1.0 Temp	53.284	-8.063	-8.053	-513.305	515.406	-0.070
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	53.284	-5.710	-9.855	-627.896	365.636	-0.107
Dead+Wind 0 deg - Service	29.039	-0.025	-6.923	-431.814	2.484	-0.145
Dead+Wind 30 deg - Service	29.039	3.448	-5.983	-372.980	-214.339	-0.157
Dead+Wind 45 deg - Service	29.039	4.890	-4.877	-303.961	-304.357	-0.147
Dead+Wind 60 deg - Service	29.039	5.998	-3.440	-214.235	-373.599	-0.127
Dead+Wind 90 deg - Service	29.039	6.940	0.025	1.885	-432.621	-0.063
Dead+Wind 120 deg - Service	29.039	6.023	3.483	217.472	-375.591	0.018
Dead+Wind 135 deg - Service	29.039	4.925	4.913	306.565	-307.174	0.058
Dead+Wind 150 deg - Service	29.039	3.492	6.008	374.759	-217.790	0.094
Dead+Wind 180 deg - Service	29.039	0.025	6.923	431.601	-1.500	0.145
Dead+Wind 210 deg - Service	29.039	-3.448	5.983	372.767	215.324	0.157
Dead+Wind 225 deg - Service	29.039	-4.890	4.877	303.748	305.341	0.147
Dead+Wind 240 deg - Service	29.039	-5.998	3.440	214.022	374.584	0.127
Dead+Wind 270 deg - Service	29.039	-6.940	-0.025	-2.099	433.606	0.063
Dead+Wind 300 deg - Service	29.039	-6.023	-3.483	-217.686	376.576	-0.018
Dead+Wind 315 deg - Service	29.039	-4.925	-4.913	-306.779	308.158	-0.058
Dead+Wind 330 deg - Service	29.039	-3.492	-6.008	-374.972	218.774	-0.094

Solution Summary

Load Comb.	Sum of Applied Forces PX K	PY K	PZ K	Sum of Reactions PX K	PY K	PZ K	% Error
1	0.000	-29.039	0.000	0.000	29.039	0.000	0.000%
2	-0.112	-34.847	-30.948	0.112	34.847	30.948	0.000%
3	-0.112	-26.135	-30.948	0.112	26.135	30.948	0.000%
4	15.417	-34.847	-26.746	-15.417	34.847	26.746	0.000%
5	15.417	-26.135	-26.746	-15.417	26.135	26.746	0.000%
6	21.860	-34.847	-21.804	-21.860	34.847	21.804	0.000%
7	21.860	-26.135	-21.804	-21.860	26.135	21.804	0.000%
8	26.814	-34.847	-15.377	-26.814	34.847	15.377	0.000%
9	26.814	-26.135	-15.377	-26.814	26.135	15.377	0.000%
10	31.027	-34.847	0.112	-31.027	34.847	-0.112	0.000%
11	31.027	-26.135	0.112	-31.027	26.135	-0.112	0.000%
12	26.926	-34.847	15.571	-26.926	34.847	-15.571	0.000%
13	26.926	-26.135	15.571	-26.926	26.135	-15.571	0.000%
14	22.019	-34.847	21.963	-22.019	34.847	-21.963	0.000%
15	22.019	-26.135	21.963	-22.019	26.135	-21.963	0.000%
16	15.611	-34.847	26.858	-15.611	34.847	-26.858	0.000%
17	15.611	-26.135	26.858	-15.611	26.135	-26.858	0.000%
18	0.112	-34.847	30.948	-0.112	34.847	-30.948	0.000%
19	0.112	-26.135	30.948	-0.112	26.135	-30.948	0.000%
20	-15.417	-34.847	26.746	15.417	34.847	-26.746	0.000%

Load Comb.	Sum of Applied Forces PX K	PY K	PZ K	Sum of Reactions PX K	PY K	PZ K	% Error
21	-15.417	-26.135	26.746	15.417	26.135	-26.746	0.000%
22	-21.860	-34.847	21.804	21.860	34.847	-21.804	0.000%
23	-21.860	-26.135	21.804	21.860	26.135	-21.804	0.000%
24	-26.814	-34.847	15.377	26.814	34.847	-15.377	0.000%
25	-26.814	-26.135	15.377	26.814	26.135	-15.377	0.000%
26	-31.027	-34.847	-0.112	31.027	34.847	0.112	0.000%
27	-31.027	-26.135	-0.112	31.027	26.135	0.112	0.000%
28	-26.926	-34.847	-15.571	26.926	34.847	15.571	0.000%
29	-26.926	-26.135	-15.571	26.926	26.135	15.571	0.000%
30	-22.019	-34.847	-21.963	22.019	34.847	21.963	0.000%
31	-22.019	-26.135	-21.963	22.019	26.135	21.963	0.000%
32	-15.611	-34.847	-26.858	15.611	34.847	26.858	0.000%
33	-15.611	-26.135	-26.858	15.611	26.135	26.858	0.000%
34	0.000	-53.284	0.000	0.000	53.284	0.000	0.000%
35	-0.022	-53.284	-11.367	0.022	53.284	11.367	0.000%
36	5.672	-53.284	-9.834	-5.672	53.284	9.834	0.000%
37	8.033	-53.284	-8.023	-8.033	53.284	8.023	0.000%
38	9.846	-53.284	-5.665	-9.846	53.284	5.665	0.000%
39	11.382	-53.284	0.022	-11.382	53.284	-0.022	0.000%
40	9.868	-53.284	5.702	-9.868	53.284	-5.702	0.000%
41	8.063	-53.284	8.053	-8.063	53.284	-8.053	0.000%
42	5.710	-53.284	9.855	-5.710	53.284	-9.855	0.000%
43	0.022	-53.284	11.367	-0.022	53.284	-11.367	0.000%
44	-5.672	-53.284	9.834	5.672	53.284	-9.834	0.000%
45	-8.033	-53.284	8.023	8.033	53.284	-8.023	0.000%
46	-9.846	-53.284	5.665	9.846	53.284	-5.665	0.000%
47	-11.382	-53.284	-0.022	11.382	53.284	0.022	0.000%
48	-9.868	-53.284	-5.702	9.868	53.284	5.702	0.000%
49	-8.063	-53.284	-8.053	8.063	53.284	8.053	0.000%
50	-5.710	-53.284	-9.855	5.710	53.284	9.855	0.000%
51	-0.025	-29.039	-6.923	0.025	29.039	6.923	0.000%
52	3.448	-29.039	-5.983	-3.448	29.039	5.983	0.000%
53	4.890	-29.039	-4.877	-4.890	29.039	4.877	0.000%
54	5.998	-29.039	-3.440	-5.998	29.039	3.440	0.000%
55	6.940	-29.039	0.025	-6.940	29.039	-0.025	0.000%
56	6.023	-29.039	3.483	-6.023	29.039	-3.483	0.000%
57	4.925	-29.039	4.913	-4.925	29.039	-4.913	0.000%
58	3.492	-29.039	6.008	-3.492	29.039	-6.008	0.000%
59	0.025	-29.039	6.923	-0.025	29.039	-6.923	0.000%
60	-3.448	-29.039	5.983	3.448	29.039	-5.983	0.000%
61	-4.890	-29.039	4.877	4.890	29.039	-4.877	0.000%
62	-5.998	-29.039	3.440	5.998	29.039	-3.440	0.000%
63	-6.940	-29.039	-0.025	6.940	29.039	0.025	0.000%
64	-6.023	-29.039	-3.483	6.023	29.039	3.483	0.000%
65	-4.925	-29.039	-4.913	4.925	29.039	4.913	0.000%
66	-3.492	-29.039	-6.008	3.492	29.039	6.008	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000001
2	Yes	4	0.00000001	0.00000001
3	Yes	4	0.00000001	0.00000001
4	Yes	4	0.00000001	0.00001250
5	Yes	4	0.00000001	0.00000762

6	Yes	4	0.00000001	0.00001572
7	Yes	4	0.00000001	0.00000960
8	Yes	4	0.00000001	0.00001458
9	Yes	4	0.00000001	0.00000894
10	Yes	4	0.00000001	0.00000001
11	Yes	4	0.00000001	0.00000001
12	Yes	4	0.00000001	0.00001401
13	Yes	4	0.00000001	0.00000856
14	Yes	4	0.00000001	0.00001595
15	Yes	4	0.00000001	0.00000973
16	Yes	4	0.00000001	0.00001323
17	Yes	4	0.00000001	0.00000806
18	Yes	4	0.00000001	0.00000001
19	Yes	4	0.00000001	0.00000001
20	Yes	4	0.00000001	0.00001487
21	Yes	4	0.00000001	0.00000912
22	Yes	4	0.00000001	0.00001573
23	Yes	4	0.00000001	0.00000960
24	Yes	4	0.00000001	0.00001269
25	Yes	4	0.00000001	0.00000773
26	Yes	4	0.00000001	0.00000001
27	Yes	4	0.00000001	0.00000001
28	Yes	4	0.00000001	0.00001379
29	Yes	4	0.00000001	0.00000841
30	Yes	4	0.00000001	0.00001600
31	Yes	4	0.00000001	0.00000975
32	Yes	4	0.00000001	0.00001467
33	Yes	4	0.00000001	0.00000897
34	Yes	4	0.00000001	0.00000001
35	Yes	4	0.00000001	0.00005259
36	Yes	4	0.00000001	0.00005384
37	Yes	4	0.00000001	0.00005430
38	Yes	4	0.00000001	0.00005379
39	Yes	4	0.00000001	0.00005231
40	Yes	4	0.00000001	0.00005394
41	Yes	4	0.00000001	0.00005446
42	Yes	4	0.00000001	0.00005394
43	Yes	4	0.00000001	0.00005241
44	Yes	4	0.00000001	0.00005404
45	Yes	4	0.00000001	0.00005460
46	Yes	4	0.00000001	0.00005417
47	Yes	4	0.00000001	0.00005286
48	Yes	4	0.00000001	0.00005455
49	Yes	4	0.00000001	0.00005504
50	Yes	4	0.00000001	0.00005446
51	Yes	4	0.00000001	0.00000001
52	Yes	4	0.00000001	0.00000001
53	Yes	4	0.00000001	0.00000001
54	Yes	4	0.00000001	0.00000001
55	Yes	4	0.00000001	0.00000001
56	Yes	4	0.00000001	0.00000001
57	Yes	4	0.00000001	0.00000001
58	Yes	4	0.00000001	0.00000001
59	Yes	4	0.00000001	0.00000001
60	Yes	4	0.00000001	0.00000001
61	Yes	4	0.00000001	0.00000001
62	Yes	4	0.00000001	0.00000001
63	Yes	4	0.00000001	0.00000001
64	Yes	4	0.00000001	0.00000001
65	Yes	4	0.00000001	0.00000001
66	Yes	4	0.00000001	0.00000001

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	90 - 48.155	2.599	64	0.217	0.000
L2	53.845 - 1	1.055	64	0.171	0.000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
88.000	Pine Branches	64	2.505	0.215	0.000	113193
83.000	Pine Branches	64	2.269	0.211	0.000	80852
80.000	XXDWMM-12.5-65-8T-CBRS	64	2.130	0.208	0.000	56596
78.000	Pine Branches	64	2.038	0.206	0.000	47164
73.000	Pine Branches	64	1.812	0.200	0.000	33292
68.000	Pine Branches	64	1.596	0.194	0.000	25725
63.000	Pine Branches	64	1.391	0.187	0.000	20961
58.000	Pine Branches	64	1.201	0.179	0.000	17690
53.000	Pine Branches	64	1.027	0.169	0.000	16276
48.000	Pine Branches	64	0.872	0.158	0.000	17600

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	90 - 48.155	11.615	28	0.968	0.002
L2	53.845 - 1	4.718	28	0.764	0.001

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
88.000	Pine Branches	28	11.193	0.960	0.002	25378
83.000	Pine Branches	28	10.141	0.940	0.001	18127
80.000	XXDWMM-12.5-65-8T-CBRS	28	9.517	0.928	0.001	12689
78.000	Pine Branches	28	9.106	0.919	0.001	10574
73.000	Pine Branches	28	8.099	0.896	0.001	7464
68.000	Pine Branches	28	7.133	0.869	0.001	5767
63.000	Pine Branches	28	6.218	0.837	0.001	4699
58.000	Pine Branches	28	5.368	0.800	0.001	3965
53.000	Pine Branches	28	4.593	0.756	0.001	3648
48.000	Pine Branches	28	3.900	0.705	0.001	3945

Compression Checks

Pole Design Data

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u	ϕP_n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in^2	K	K	
L1	90 - 48.155 (1)	TP41.55x31x0.375	41.845	0.000	0.0	47.301	-14.291	2767.110	0.005
L2	48.155 - 1 (2)	TP52.5x39.365x0.563	52.845	0.000	0.0	92.728	-34.835	5424.580	0.006

Pole Bending Design Data

Section No.	Elevation	Size	M_{ux}	ϕM_{nx}	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy}	ϕM_{ny}	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
	ft		kip-ft	kip-ft		kip-ft	kip-ft	
L1	90 - 48.155 (1)	TP41.55x31x0.375	448.793	2788.858	0.161	0.000	2788.858	0.000
L2	48.155 - 1 (2)	TP52.5x39.365x0.563	1945.158	7336.100	0.265	0.000	7336.100	0.000

Pole Shear Design Data

Section No.	Elevation	Size	Actual V_u	ϕV_n	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u	ϕT_n	Ratio $\frac{T_u}{\phi T_n}$
	ft		K	K		kip-ft	kip-ft	
L1	90 - 48.155 (1)	TP41.55x31x0.375	22.022	830.133	0.027	0.081	2889.083	0.000
L2	48.155 - 1 (2)	TP52.5x39.365x0.563	31.118	1627.370	0.019	0.081	7401.991	0.000

Pole Interaction Design Data

Section No.	Elevation	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
	ft								
L1	90 - 48.155 (1)	0.005	0.161	0.000	0.027	0.000	0.167 ✔	1.000	4.8.2 ✔
L2	48.155 - 1 (2)	0.006	0.265	0.000	0.019	0.000	0.272 ✔	1.000	4.8.2 ✔

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	90 - 48.155	Pole	TP41.55x31x0.375	1	-14.291	2767.110	16.7	Pass
L2	48.155 - 1	Pole	TP52.5x39.365x0.563	2	-34.835	5424.580	27.2	Pass
							Summary	
						Pole (L2)	27.2	Pass
						RATING =	**27.2**	**Pass**

Program Version 8.1.1.0 - 6/3/2021 File:J:/Jobs/2303200.WI/05_Southington East CT/05_Structural/Tower/Backup Documentation/tnxTower/90' EEI Monopine_Southington.eri

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Subject: Anchor Bolt and Baseplate Analysis

Location: 90-FT Monopole
Southington, CT

Rev. 0: 7/31/23

Prepafred by: T.J.L. Checked by: C.F.C.
Job No. 23032.04

Anchor Bolt and Base Plate Analysis:

Input Data:

Tower Reactions:

Overturning Moment =	$M_u := 1945 \cdot ft \cdot kips$	(Input From tnxTower)
Shear Force =	$Shear := 31 \cdot kips$	(Input From tnxTower)
Axial Force =	$R_u := 35 \cdot kips$	(Input From tnxTower)

Anchor Bolt Data:

ASTMA615 Grade 75

Number of Anchor Bolts =	$N := 24$	(User Input)
Diameter of Bolt Circle =	$D_{BC} := 60 \cdot in$	(User Input)
Bolt Ultimate Strength =	$F_u := 100 \cdot ksi$	(User Input)
Bolt Yield Strength =	$F_y := 75 \cdot ksi$	(User Input)
Bolt Modulus =	$E := 29000 \cdot ksi$	(User Input)
Diameter of Anchor Bolts =	$D := 2.25 \cdot in$	(User Input)
Threads per Inch =	$n := 4.5$	(User Input)
Top of Concrete to Bot Leveling Nut =	$l_{ar} := 2 \cdot in$	(User Input)
Anchor Rod Force Correction Factor =	$n_c = 1$	Table 2-1 Addendum 3

Base Plate Data:

ASTMA572 Grade 50

Plate Yield Strength =	$F_{yf} := 50 \cdot ksi$	(User Input)
Base Plate Thickness =	$t_{TP} := 3.0 \cdot in$	(User Input)
Base Plate Diameter =	$D_{OD} := 66 \cdot in$	(User Input)
Outer Pole Diameter =	$D_T := 52.5 \cdot in$	(User Input)
Pole Wall Thickness =	$t_T := 0.5625 \cdot in$	(User Input)
Pole Design Yield Strength =	$F_{yp} := 65 \cdot ksi$	(User Input)

Anchor Bolt Analysis:

Gross Area of Bolt = $A_g := \frac{\pi}{4} \cdot D^2 = 3.976 \cdot in^2$

Net Area of Bolt = $A_n := \frac{\pi}{4} \cdot \left(D - \frac{0.9743 \cdot in}{n} \right)^2 = 3.248 \cdot in^2$

Tensile Root Diameter = $d_{rt} := D - \frac{0.9743 \cdot in}{n} = 2.033 \cdot in$

Plastic Section Modulus = $Z := \frac{d_{rt}^3}{6} = 1.401 \cdot in^3$

Maximum Anchor Rod Force = $P_{ut} := \frac{n_c \cdot \pi \cdot M_u}{N \cdot D_{BC}} - \frac{R_u}{N} = 49.5 \cdot kips$

Maximum Anchor Rod Force = $P_{uc} := \frac{n_c \cdot \pi \cdot M_u}{N \cdot D_{BC}} + \frac{R_u}{N} = 52.4 \cdot kips$

Maximum Shear Force = $V_u := \frac{Shear}{N} = 1.3 \cdot kips$

$\Phi_t := 0.75 \quad \Phi_v := 0.75 \quad \Phi_c := 1.0$

Design Tensile Strength = $\Phi R_{nt} := \Phi_t \cdot F_u \cdot A_n = 243.576 \cdot k$

Design Compression Strength = $\Phi R_{nc} := \Phi_c \cdot F_y \cdot A_n = 243.576 \cdot k$

Design Shear Rupture Strength = $\Phi R_{nv} := \Phi_v \cdot 0.5 \cdot F_u \cdot A_g = 149.103 \cdot k$

Design Shear Yield Strength = $\Phi R_{nvc} := \Phi_c \cdot 0.6 \cdot F_y \cdot \frac{A_n}{2} = 73.073 \cdot k$

Bolt % of Capacity = $\left[\left(\frac{P_{ut}}{\Phi R_{nt}} \right)^2 + \left(\frac{V_u}{\Phi R_{nv}} \right)^2 \right] \cdot 100 = 4.1$ $\quad \frac{P_{ut}}{\Phi R_{nt}} = 0.203$

Condition1 = $Condition1 := if\left[\left(\frac{P_{ut}}{\Phi R_{nt}} \right)^2 + \left(\frac{V_u}{\Phi R_{nv}} \right)^2 \le 1.00, "OK", "Overstressed" \right]$

Condition1 = "OK"

Bolt % of Capacity = $\left[\left(\frac{P_{uc}}{\Phi R_{nc}} \right)^2 + \left(\frac{V_u}{\Phi R_{nvc}} \right)^2 \right] \cdot 100 = 4.7$

Condition2 = $Condition2 := if\left[\left(\frac{P_{uc}}{\Phi R_{nc}} \right)^2 + \left(\frac{V_u}{\Phi R_{nvc}} \right)^2 \le 1.00, "OK", "Overstressed" \right]$

Condition2 = "OK"

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Subject: Anchor Bolt and Baseplate Analysis

Location: 90-FT Monopole
Southington, CT

Rev. 0: 7/31/23

Prepafred by: T.J.L. Checked by: C.F.C.
Job No. 23032.04

Base Plate Analysis:

Strength Resistance Factor for Yielding due to Bending = $\phi_b := 0.9$

Strength Resistance Factor for Yielding due to Shear = $\phi_v := 1.0$

Outside Fillet Horizontal Leg Dimension = $w_1 := 0.25 \cdot in$

Effective Pole Outside Diameter = $D_e := D_T + w_1 = 52.75 \cdot in$

Effective Base Plate Outside Diameter = $D_{oe} := \begin{cases} D_{OD} & \text{if } D_{OD} \le (D_{BC} + 6 \cdot t_{TP}) \\ (D_{BC} + 6 \cdot t_{TP}) & \text{otherwise} \end{cases} = 66 \cdot in$

Half-Angle Between Radial Lines Extending from Pole Centerline Through Midpoints Between Adjacent Anchor Rods = $\theta_1 := \frac{\pi}{N} = 0.131$

Angle Defining Limiting Effective Base Plate Width Based on Plate Thickness = $\theta_2 := \operatorname{asin}\left(\frac{12 \cdot t_{TP}}{D_{BC}}\right) = 0.644$

Angle Defining Limiting Effective Base Plate Width Based on Distance Between Anchor Rod Bolt Circle and Effective Pole Outside Diameter = $\theta_3 := \operatorname{acos}\left(\frac{D_{BC} + D_e}{2 \cdot D_{BC}}\right) = 0.349$

Governing Angle Defining Effective Base Plate Width Resisting Bending = $\theta := \min(\theta_1, \theta_2, \theta_3) = 0.131$

Effective Moment Arm of Anchor Rod Force = $x := 0.5 \cdot (D_{BC} - D_e) = 3.625 \cdot in$

Effective Base Plate Width Resisting Bending from Transverse Bend Line = $B_{et} := D_{BC} \cdot \sin(\theta) = 7.832 \cdot in$

Effective Base Plate Width Resisting Bending from Radial Bend Lines = $B_{er} := (D_{oe} - D_e) \cdot \sin(\theta) = 1.729 \cdot in$

Total Effective Base Plate Width Resisting Bending = $B_{eff} := B_{et} + B_{er} = 9.561 \cdot in$

Required Base Plate Thickness = $t_{TP.Req} := \sqrt{\frac{4 \cdot P_{uc} \cdot x}{\phi_b \cdot F_{yf} \cdot B_{eff}}} = 1.329 \cdot in$

Plate Bending Stress % of Capacity = $\frac{t_{TP.Req}}{t_{TP}} = 44.3 \cdot \%$

Condition2 = $Condition3 := if\left(\frac{t_{TP.Req}}{t_{TP}} < 1.00, "Ok", "Overstressed"\right)$

Condition3 = "Ok"

Required Base Plate Thickness = $t_{TP.Req} := \frac{\phi_b \cdot t_T \cdot F_{yp}}{\phi_v \cdot 0.6 \cdot F_{yf}} = 1.097 \cdot in$

Plate Bending Stress % of Capacity = $\frac{t_{TP.Req}}{t_{TP}} = 36.6 \cdot \%$

Condition2 = $Condition4 := if\left(\frac{t_{TP.Req}}{t_{TP}} < 1.00, "Ok", "Overstressed"\right)$

Condition4 = "Ok"

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Subject: FOUNDATION ANALYSIS

Location: 90-ft EEI Monopine
Southington, CT

Rev. 0: 7/31/23

Prepared by: T.J.L Checked by: C.F.C.
Job no. 23032.05

Standard Monopole Foundation:

Input Data:

Tower Data

Overturning Moment =	$OM := 1945 \cdot ft \cdot kips$	(User Input)	
Shear Force =	$Shear := 31 \cdot kip$	(User Input)	
Axial Force =	$Axial := 35 \cdot kip$	(User Input)	
Tower Height =	$H_t := 90 \cdot ft$	(User Input)	

Footing Data:

Overall Depth of Footing =	$D_f := 6.0 \cdot ft$	(User Input)	
Length of Pier =	$L_p := 3.0 \cdot ft$	(User Input)	
Extension of Pier Above Grade =	$L_{pag} := 1.0 \cdot ft$	(User Input)	
Diameter of Pier =	$d_p := 7.0 \cdot ft$	(User Input)	
Thickness of Footing =	$T_f := 3.0 \cdot ft$	(User Input)	
Width of Footing =	$W_f := 36.0 \cdot ft$	(User Input)	

Anchor Bolt Data:

Length of Anchor Bolts =	$L_{st} := 72 \cdot in$	(User Input)	
Projection of Anchor Bolts Above Pier =	$A_{BP} := 12.0 \cdot in$	(User Input)	
Anchor Bolt Diameter =	$d_{anchor} := 2.25 \cdot in$	(User Input)	
Base Plate Bolt Circle =	$MP := 60 \cdot in$	(User Input)	

Material Properties:

Concrete Compressive Strength =	$f_c := 4000 \cdot psi$	(User Input)	
Steel Reinforcment Yield Strength =	$f_y := 60000 \cdot psi$	(User Input)	
Anchor Bolt Yield Strength =	$f_{ya} := 75000 \cdot psi$	(User Input)	
Internal Friction Angle of Soil =	$\Phi_s := 30 \cdot deg$	(User Input)	
Ultimate Soil Bearing Capacity =	$q_u := 4000 \cdot psf$	(User Input)	
Allowable Soil Bearing Capacity =	$q_a := \frac{q_u}{2} = 2000 \cdot psf$	(User Input)	
Unit Weight of Soil =	$\gamma_{soil} := 120 \cdot pcf$	(User Input)	
Unit Weight of Concrete =	$\gamma_{conc} := 150 \cdot pcf$	(User Input)	
Foundation Bouyancy =	$Bouyancy := 0$	(User Input)	(Yes=1 / No=0)
Depth to Neglect =	$n := 0 \cdot ft$	(User Input)	
Cohesion of Clay Type Soil =	$c := 0 \cdot ksf$	(User Input)	(Use 0 for Sandy Soil)
Seismic Zone Factor =	$Z := 2$	(User Input)	(UBC-1997 Fig 23-2)
Coefficient of Friction Between Concrete =	$\mu := 0.45$	(User Input)	

Pier Reinforcement:

Bar Size =	$BS_{pier} := 9$	(User Input)	
Bar Diameter =	$d_{bpier} := 1.128 \cdot in$	(User Input)	
Number of Bars =	$NB_{pier} := 44$	(User Input)	
Clear Cover of Reinforcement =	$Cvr_{pier} := 3 \cdot in$	(User Input)	
Reinforcement Location Factor =	$\alpha_{pier} := 1.0$	(User Input)	(ACI-2008 12.2.4)
Coating Factor =	$\beta_{pier} := 1.0$	(User Input)	(ACI-2008 12.2.4)
Concrete Strength Factor =	$\lambda_{pier} := 1.0$	(User Input)	(ACI-2008 12.2.4)
Reinforcement Size Factor =	$\gamma_{pier} := 1.0$	(User Input)	(ACI-2008 12.2.4)
Diameter of Tie =	$d_{Tie} := 0.5 \cdot in$	(User Input)	

Pad Reinforcement:

Bar Size =	$BS_{top} := 9$	(User Input)	(Top of Pad)
Bar Diameter =	$d_{btop} := 1.128 \cdot in$	(User Input)	(Top of Pad)
Number of Bars =	$NB_{top} := 25$	(User Input)	(Top of Pad)
Bar Size =	$BS_{bot} := 9$	(User Input)	(Bottom of Pad)
Bar Diameter =	$d_{bbot} := 1.128 \cdot in$	(User Input)	(Bottom of Pad)
Number of Bars =	$NB_{bot} := 57$	(User Input)	(Bottom of Pad)
Clear Cover of Reinforcement =	$Cvr_{pad} := 3.0 \cdot in$	(User Input)	
Reinforcement Location Factor =	$\alpha_{pad} := 1.0$	(User Input)	(ACI-2008 12.2.4)
Coating Factor =	$\beta_{pad} := 1.0$	(User Input)	(ACI-2008 12.2.4)
Concrete Strength Factor =	$\lambda_{pad} := 1.0$	(User Input)	(ACI-2008 12.2.4)
Reinforcement Size Factor =	$\gamma_{pad} := 1.0$	(User Input)	(ACI-2008 12.2.4)

Calculated Factors:

Pier Reinforcement Bar Area = $A_{bpier} := \frac{\pi \cdot d_{bpier}^2}{4} = 0.999 \cdot in^2$

Pad Top Reinforcement Bar Area = $A_{btop} := \frac{\pi \cdot d_{btop}^2}{4} = 0.999 \cdot in^2$

Pad Bottom Reinforcement Bar Area = $A_{bbot} := \frac{\pi \cdot d_{bbot}^2}{4} = 0.999 \cdot in^2$

Coefficient of Lateral Soil Pressure = $K_p := \frac{1 + \sin(\Phi_s)}{1 - \sin(\Phi_s)} = 3$

Stability of Footing:

Adjusted Concrete Unit Weight =
$$\gamma_c := \text{if}\left(\text{Bouyancy} = 1, \gamma_{conc} - 62.4\text{pcf}, \gamma_{conc}\right) = 150\cdot\text{pcf}$$

Adjusted Soil Unit Weight =
$$\gamma_s := \text{if}\left(\text{Bouyancy} = 1, \gamma_{soil} - 62.4\text{pcf}, \gamma_{soil}\right) = 120\cdot\text{pcf}$$

Passive Pressure =
$$P_{pn} := K_p\cdot\gamma_s\cdot n + c\cdot 2\cdot\sqrt{K_p} = 0\cdot\text{ksf}$$

$$P_{pt} := K_p\cdot\gamma_s\cdot\left(D_f - T_f\right) + c\cdot 2\cdot\sqrt{K_p} = 1.08\cdot\text{ksf}$$

$$P_{top} := \text{if}\left[n < \left(D_f - T_f\right), P_{pt}, P_{pn}\right] = 1.08\cdot\text{ksf}$$

$$P_{bot} := K_p\cdot\gamma_s\cdot D_f + c\cdot 2\cdot\sqrt{K_p} = 2.16\cdot\text{ksf}$$

$$P_{ave} := \frac{P_{top} + P_{bot}}{2} = 1.62\cdot\text{ksf}$$

$$T_p := \text{if}\left[n < \left(D_f - T_f\right), T_f, \left(D_f - n\right)\right] = 3$$

$$A_p := W_f\cdot T_p = 108$$

Ultimate Shear =
$$S_u := P_{ave}\cdot A_p = 174.96\cdot\text{kip}$$

Weight of Concrete Pad =
$$WT_c := \left[\left(W_f^{\,2}\cdot T_f\right) + d_p^{\,2} L_p\right]\cdot\gamma_c = 605.25\cdot\text{kip}$$

Weight of Soil Above Footing =
$$WT_{s1} := \left[\left(W_f^{\,2} - d_p^{\,2}\right)\cdot\left(\left|L_p - L_{pag} - n\right|\right)\right]\cdot\gamma_s = 299.28\cdot\text{kip}$$

Weight of Soil Wedge at Back Face =
$$WT_{s2} := \left(\frac{D_f^{\,2}\cdot\tan\left(\Phi_s\right)}{2}\cdot W_f\right)\cdot\gamma_s = 44.895\cdot\text{kip}$$

Weight of Soil Wedge at back face Corners =
$$WT_{s3} := 2\cdot\left[\left(D_f\right)^3\cdot\frac{\tan\left(\Phi_s\right)}{3}\right]\cdot\gamma_s = 9.977\cdot\text{kips}$$

Total Weight =
$$WT_{tot} := WT_c + WT_{s1} + \text{Axial} = 939.53\cdot\text{kip}$$

Resisting Weight =
$$WT_R := 0.9\cdot WT_c + 0.75\cdot WT_{s1} + 0.75\cdot\text{Axial} = 795.435\cdot\text{kip}$$

Resisting Moment =
$$M_r := \left(WT_R\right)\cdot\frac{W_f}{2} + 0.75\cdot S_u\cdot\frac{T_f}{3} + 0.75\cdot\left[\left(WT_{s2} + WT_{s3}\right)\cdot\left(W_f + \frac{D_f\tan\left(\Phi_s\right)}{3}\right)\right] = 15978\cdot\text{kip}\cdot\text{ft}$$

Overturning Moment =
$$M_{ot} := \text{OM} + \text{Shear}\cdot\left(L_p + T_f\right) = 2131\cdot\text{kip}\cdot\text{ft}$$

Factor of Safety Actual =
$$FS := \frac{M_r}{M_{ot}} = 7.5$$

Factor of Safety Required =
$$FS_{req} := 1$$

$$\text{OverTurning\_Moment\_Check} := \text{if}\left(FS \geq FS_{req}, \text{"Okay"}, \text{"No Good"}\right)$$

$$\text{OverTurning\_Moment\_Check} = \text{"Okay"}$$

Shear Capacity in Pier:

Shear Resistance of Pier =

$$S_p := \frac{P_{ave} \cdot A_p + \mu \cdot WT_{tot}}{FS_{req}} = 597.749 \cdot kips$$

$$Shear\_Check := if(S_p > Shear, "Okay", "No Good")$$

Shear_Check = "Okay"

Bearing Pressure Caused by Footing:

Area of the Mat =

$$A_{mat} := W_f^2 = 1.296 \times 10^3$$

Section Modulus of Mat =

$$S := \frac{W_f^3}{6} = 7776 \cdot ft^3$$

Maximum Pressure in Mat =

$$P_{max} := \frac{WT_{tot}}{A_{mat}} + \frac{M_{ot}}{S} = 0.999 \cdot ksf$$

$$Max\_Pressure\_Check := if(P_{max} < .75 \cdot q_u, "Okay", "No Good")$$

Max_Pressure_Check = "Okay"

Minimum Pressure in Mat =

$$P_{min} := \frac{WT_{tot}}{A_{mat}} - \frac{M_{ot}}{S} = 0.451 \cdot ksf$$

$$Min\_Pressure\_Check := if\left[(P_{min} \geq 0) \cdot (P_{min} < .75 \cdot q_u), "Okay", "No Good"\right]$$

Min_Pressure_Check = "Okay"

Distance to Resultant of Pressure Distribution =

$$X_p := \frac{P_{max}}{\frac{P_{max} - P_{min}}{W_f}} \cdot \frac{1}{3} = 21.872$$

Distance to Kern =

$$X_k := \frac{W_f}{6} = 6$$

Since Resultant Force is Not in Kern, Area to which Pressure is Applied Must be Reduced.

Eccentricity =

$$e := \frac{M_{ot}}{WT_{tot}} = 2.268$$

Adjusted Soil Pressure =

$$P_a := \frac{2 \cdot WT_{tot}}{3 \cdot W_f \cdot \left(\frac{W_f}{2} - e\right)} = 1.106 \cdot ksf$$

$$q_{adj} := if(P_{min} < 0, P_a, P_{max}) = 0.999 \cdot ksf$$

$$Pressure\_Check := if(q_{adj} < .75 \cdot q_u, "Okay", "No Good")$$

Pressure_Check = "Okay"

Concrete Bearing Capacity:

Strength Reduction Factor = $\Phi_c := 0.65$ (ACI-2008 9.3.2.2)

Bearing Strength Between Pier and Pad = $P_b := \Phi_c \cdot 0.85 \cdot f_c \cdot \frac{\pi \cdot d_p^2}{4} = 1.225 \times 10^4 \cdot kips$ (ACI-2008 10.14)

$Bearing\_Check := if(P_b > Axial, "Okay", "No Good")$

Bearing_Check = "Okay"

Shear Strength of Concrete:

Beam Shear: (Critical section located at a distance d from the face of Pier) (ACI 11.3.1.1)

$\phi_c := 0.85$ (ACI 9.3.2.5)

$d := T_f - Cvr_{pad} - d_{bbot} = 2.656$

$d_1 := \frac{W_f}{2} - \frac{d_p}{2}$

$d_2 := d_1 - d$

$L := \left(\frac{W_f}{2} - e\right) \cdot 3$

$Slope := if\left(L > W_f, \frac{P_{max} - P_{min}}{W_f}, \frac{q_{adj}}{L}\right)$

$V_{req} := \left[\left(q_{adj} - Slope \cdot d_1\right) + \left(\frac{Slope \cdot d_1}{2}\right)\right] \cdot W_f \cdot d_1$

$V_{Avail} := \phi_c \cdot 2 \cdot \sqrt{f_c \cdot psi} \cdot W_f \cdot d$ (ACI-2008 11.2.1.1)

$Beam\_Shear\_Check := if(V_{req} < V_{Avail}, "Okay", "No Good")$

Beam_Shear_Check = "Okay"

Punching Shear: (Critical Section Located at a distance of d/2 from the face of pier) (ACI 11.11.1.2)

Critical Perimeter of Punching Shear = $b_o := \left(d_p + d\right) \cdot \pi = 30.3$

Area Included Inside Perimeter = $A_{bo} := \frac{\pi \cdot \left(d_p + d\right)^2}{4} = 73.2$

Area Outside of Perimeter = $A_{out} := A_{mat} - A_{bo} = 1.2 \times 10^3$

Guess Value = $v_u := 1ksf$ (From "Foundation Analysis and design", By Joseph Bowles, Eq. 8-9)

Given $d^2 + d_p \cdot d = \frac{WT_{tot}}{\pi \cdot v_u}$

$v_u := Find(v_u) = 11.7 \cdot ksf$

$V_u := v_u \cdot d \cdot W_f = 1.1 \times 10^3 \cdot kips$

Required Shear Strength = $V_{req} := V_u = 1.1 \times 10^3 \cdot kips$

Available Shear Strength = $V_{Avail} := \phi_c \cdot 4 \cdot \sqrt{f_c \cdot psi} \cdot b_o \cdot d = 2494.9 \cdot kip$ (ACI-2008 11.11.2.1)

$Punching\_Shear\_Check := if(V_{req} < V_{Avail}, "Okay", "No Good")$

$Punching\_Shear\_Check = "Okay"$

Steel Reinforcement in Pad:

Required Reinforcement for Bending:

Strength Reduction Factor = $\phi_m := .90$ (ACI-2008 9.3.2.1)

$q_b := q_{adj} - d_1 \cdot Slope = 0.778 \cdot ksf$

Maximum Bending at Face of Pier = $M_n := \frac{1}{\phi_m} \cdot \left[(q_{adj} - q_b) \cdot \frac{d_1^2}{3} + q_b \cdot \frac{d_1^2}{2} \right] \cdot W_f = 3891.3 \cdot kip \cdot ft$

$$\beta := \begin{cases} 0.85 & \text{if } 2500 \cdot psi \le f_c \le 4000 \cdot psi \\ 0.65 & \text{if } f_c > 8000 \cdot psi \\ \left[0.85 - \left[\frac{\left(\frac{f_c}{psi} - 4000 \right)}{1000} \right] \cdot 0.5 \right] & \text{otherwise} \end{cases} = 0.85$$

(ACI-200810.2.7.3)

$R_n := \frac{M_n}{W_f d^2} = 106.4 \cdot psi$

$\rho := \frac{0.85 \cdot f_c}{f_y} \left(1 - \sqrt{1 - \frac{2 \cdot R_n}{0.85 \cdot f_c}} \right) = 0.0018$

$\rho_{min} := \rho = 0.0018$

Required Reinforcement for Temperature and Shrinkage:

$$\rho_{sh} := \begin{cases} .0018 & \text{if } f_y \geq 60000 \cdot psi \\ .0020 & \text{otherwise} \end{cases}$$ (ACI-2008 7.12.2.1)

Check Bottom Bars:

$$As := \begin{cases} \rho_{min} \cdot W_f \cdot d & \text{if } \rho_{min} > \frac{\rho_{sh}}{2} \\ \rho_{sh} \cdot W_f \cdot \frac{d}{2} & \text{otherwise} \end{cases} = 24.813 \cdot in^2$$

$$As_{prov} := A_{bbot} \cdot NB_{bot} = 57 \cdot in^2$$

$$Pad\_Reinforcement\_Bot := if\left(As_{prov} > As, "Okay", "No Good"\right)$$

Pad_Reinforcement_Bot = "Okay"

Check top Bars:

$$As := \rho_{sh} \cdot \left(W_f \cdot \frac{d}{2}\right) = 12.4 \cdot in^2$$

$$As_{prov} := A_{btop} \cdot NB_{top} = 25 \cdot in^2$$

$$Pad\_Reinforcement\_Top := if\left(As_{prov} > As, "Okay", "No Good"\right)$$

Pad_Reinforcement_Top = "Okay"

Developement Length Pad Reinforcement:

Bar Spacing =

$$B_{sPad} := \frac{W_f - 2 \cdot Cvr_{pad} - NB_{bot} \cdot d_{bbot}}{NB_{bot} - 1} = 6.46 \cdot in$$

Spacing or Cover Dimension =

$$c := if\left(Cvr_{pad} < \frac{B_{sPad}}{2}, Cvr_{pad}, \frac{B_{sPad}}{2}\right) = 3 \cdot in$$

Transverse Reinforcement Index =

$$k_{tr} := 0$$ (ACI-2008 12.2.3)

$$L_{dbt} := \frac{3 \cdot f_y \alpha_{pad} \cdot \beta_{pad} \cdot \gamma_{pad} \cdot \lambda_{pad}}{40 \cdot \sqrt{f_c \cdot psi} \cdot \frac{c + k_{tr}}{d_{bbot}}} \cdot d_{bbot} = 30.2 \cdot in$$

Minimum Development Length =

$$L_{dbmin} := 12 \cdot in$$ (ACI-2008 12.2.1)

$$L_{dbtCheck} := if\left(L_{dbt} \geq L_{dbmin}, "Use L.dbt", "Use L.dbmin"\right)$$

Available Length in Pad =

$$L_{Pad} := \frac{W_f}{2} - \frac{d_p}{2} - Cvr_{pad} = 171 \cdot in$$

$$Lpad\_Check := if\left(L_{Pad} > L_{dbt}, "Okay", "No Good"\right)$$

Lpad_Check = "Okay"

Steel Reinforcement in Pier:

Area of Pier =

$A_p := d_p^2 = 7056 \cdot in^2$

$A_{smin} := 0.01 \cdot 0.5 \cdot A_p = 35.28 \cdot in^2$ (ACI-2008 10.8.4 & 10.9.1)

$A_{sprov} := NB_{pier} \cdot A_{bpier} = 43.97 \cdot in^2$

Steel_Area_Check := if($A_{sprov} > A_{smin}$, "Okay", "No Good")

Steel_Area_Check = "Okay"

NOTE: Anchor Bolts are not accounted for in reinforcement calculation and will provide additional reinforcement to satisfy minimum requirement of steel.

Bar Spacing In Pier =

$B_{sPier} := \frac{d_p \cdot \pi}{NB_{pier}} - d_{bpier} = 4.87 \cdot in$

Diameter of Reinforcement Cage =

$Diam_{cage} := d_p - 2 \cdot Cvr_{pier} = 78 \cdot in$

Maximum Moment in Pier =

$M_p := \left[OM + Shear \cdot \left(L_p + \frac{A_{BP}}{2} \right) \right] = 24642 \cdot in \cdot kips$

Pier Check evaluated from outside program and results are listed below;

$(D \; N \; n \; P_u \; M_{xu}) := \left(d_p \cdot 12 \;\; NB_{pier} \;\; BS_{pier} \;\; \frac{Axial \cdot 1.333}{kips} \;\; \frac{M_p}{in \cdot kips} \right)$

$(D \; N \; n \; P_u \; M_{xu}) = (84 \;\; 44 \;\; 9 \;\; 46.7 \;\; 24642)$

$(\phi P_n \;\; \phi M_{xn} \;\; f_{sp} \;\; \rho) := (0 \;\; 0 \;\; 0 \;\; 0)$

$(\phi P_n \;\; \phi M_{xn} \;\; f_{sp} \;\; \rho) := \phi P'_n(D, N, n, P_u, M_{xu})^T$

$(\phi P_n \;\; \phi M_{xn} \;\; f_{sp} \;\; \rho) = (159.5 \;\; 84220.2 \;\; -60 \;\; 0)$

Axial_Load_Check := if($\phi P_n \geq P_u$, "Okay", "No Good")

Axial_Load_Check = "Okay"

Bending_Check := if($\phi M_{xn} \geq M_{xu}$, "Okay", "No Good")

Bending_Check = "Okay"

Development Length Pier Reinforcement:

Available Length in Foundation:

$L_{pier} := L_p - Cvr_{pier} = 33 \cdot in$

$L_{pad} := T_f - Cvr_{pad} = 33 \cdot in$

Tension: (ACI-2008 12.2.3)

Spacing or Cover Dimension =

$c := if\left(Cvr_{pier} < \frac{B_{sPier}}{2}, Cvr_{pier}, \frac{B_{sPier}}{2}\right) = 2.435 \cdot in$

Transverse Reinforcement =

$k_{tr} := 0$ (ACI-2008 12.2.3)

$L_{dbt} := \frac{3 \cdot f_y \alpha_{pier} \cdot \beta_{pier} \cdot \gamma_{pier} \cdot \lambda_{pier}}{40 \cdot \sqrt{f_c \cdot psi} \cdot \left(\frac{c + k_{tr}}{d_{bpier}}\right)} \cdot d_{bpier} = 37.18 \cdot in$

Minimum Development Length =

$L_{dh} := \frac{1200 \cdot d_{bpier}}{\sqrt{\frac{f_c}{psi}}} \cdot .7 = 14.982 \cdot in$ (ACI 12.2.1)

Pier reinforcement bars are standard 90 degree hooks and therefore developement in the pad is computed as follows:

$L_{db} := \max\left(L_{dbt}, L_{dbmin}\right)$

$L_{tension\_Check} := if\left(L_{pier} + L_{pad} > L_{dbt}, "Okay", "No Good"\right)$

$L_{tension\_Check} = "Okay"$

Compression: (ACI-2008 12.3.2)

$L_{dbc1} := \frac{.02 \cdot d_{bpier} \cdot f_y}{\sqrt{f_c \cdot psi}} = 21.402 \cdot in$

$L_{dbmin} := 0.0003 \cdot \frac{in^2}{lb} \cdot \left(d_{bpier} \cdot f_y\right) = 20.304 \cdot in$

$L_{dbc} := if\left(L_{dbc1} \geq L_{dbmin}, L_{dbc1}, L_{dbmin}\right) = 21.402 \cdot in$

$L_{compression\_Check} := if\left(L_{pier} + L_{pad} > L_{dbc}, "Okay", "No Good"\right)$

$L_{compression\_Check} = "Okay"$

BSF0020F3V1-1

TWIN BANDSTOP 900MHZ INTERFERENCE MITIGATION FILTER

The BSF0020 is ideal for co-located 700, 850 and 900 networks. Utilising a 2.6MHz guardband the BSF0020 provides rejection of the 900 UL band while passing 700/850 UL and DL bands. Capable of being used in an outdoor environment the BSF0020 contains two identical bandstop filters, suitable for 2x2 MIMO configuration, offering excellent insertion loss, group delay and rejection.

FEATURES

- Passes full 700 and 850 bands
- Low insertion loss
- Rejection of 900MHz uplink
- DC/AISG pass
- Twin unit
- Dual twin mounting available

TECHNICAL SPECIFICATIONS

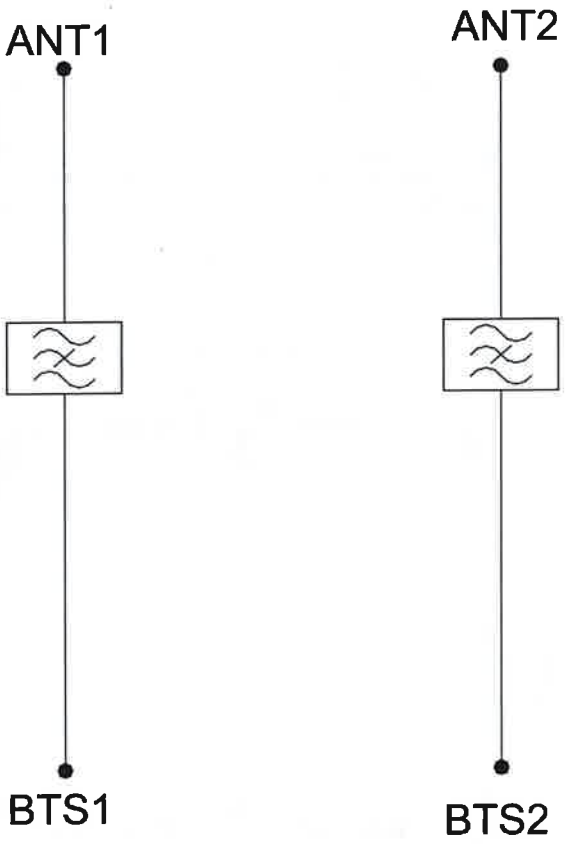
BAND NAME	700 PATH / 850 UPLINK PATH	850 DOWNLINK PATH
Passband	698 - 849MHz	869 - 891.5MHz
Insertion loss	0.1dB typical / 0.3dB maximum	0.5dB typical, 1.45dB maximum
Return loss	24dB typical, 18dB minimum	
Maximum input power (Per Port)	100W average	200W average and 66W per 5MHz
Rejection	53dB minimum @ 894.1 - 896.5MHz	
ELECTRICAL		
Impedance	50Ohms	
Intermodulation products	-160dBc maximum in UL Band (assuming 20MHz Signal), with 2 x 43dBm carriers -153dBc maximum with 2 x 43dBm	
DC / AISG		
Passband	0 - 13MHz	
Insertion loss	0.3dB maximum	
Return loss	15dB minimum	
Input voltage range	± 33V	
DC current rating	2A continuous, 4A peak	
Compliance	3GPP TS 25.461	
ENVIRONMENTAL		
For further details of environmental compliance, please contact Kaelus.		
Temperature range	-20°C to +60°C | -4°F to +140°F	
Ingress protection	IP67	
Altitude	2600m | 8530ft	
Lightning protection	RF port: ±5kA maximum (8/20us), IEC 61000-4-5 – Unit must be terminated with some lightning protection circuits.	
MTBF	>1,000,000 hours	
Compliance	ETSI EN 300 019 class 4.1H, RoHS, NEBS GR-487-CORE	
MECHANICAL		
Dimensions H x D x W	269 x 277 x 80mm | 10.60 x 10.90 x 3.15in (Excluding brackets and connectors)	
Weight	8.0 kg | 17.6 lbs (no bracket)	
Finish	Powder coated, light grey (RAL7035)	
Connectors	RF: 4.3-10 (F) x 4	
Mounting	Optional pole/wall bracket supplied with two metal clamps 45-178mm diameter poles or custom bracket. See ordering information.	

Contact Us: +1 303 768 8080 | +61 (0) 7 3907 1200 | www.kaelus.com

ORDERING INFORMATION

PART NUMBER	CONFIGURATION	OPTIONAL FEATURES	CONNECTORS
BSF0020F3V1	TWIN, 2 in / 2 out	DC/AISG PASS NO BRACKET	4.3-10 (F)
BSF0020F3V1-1	TWIN, 2 in / 2 out	DC/AISG PASS	4.3-10 (F)
BSF0020F3V1-2	QUAD, 4 in / 4 out	DC/AISG PASS	4.3-10 (F)

ELECTRICAL BLOCK DIAGRAM



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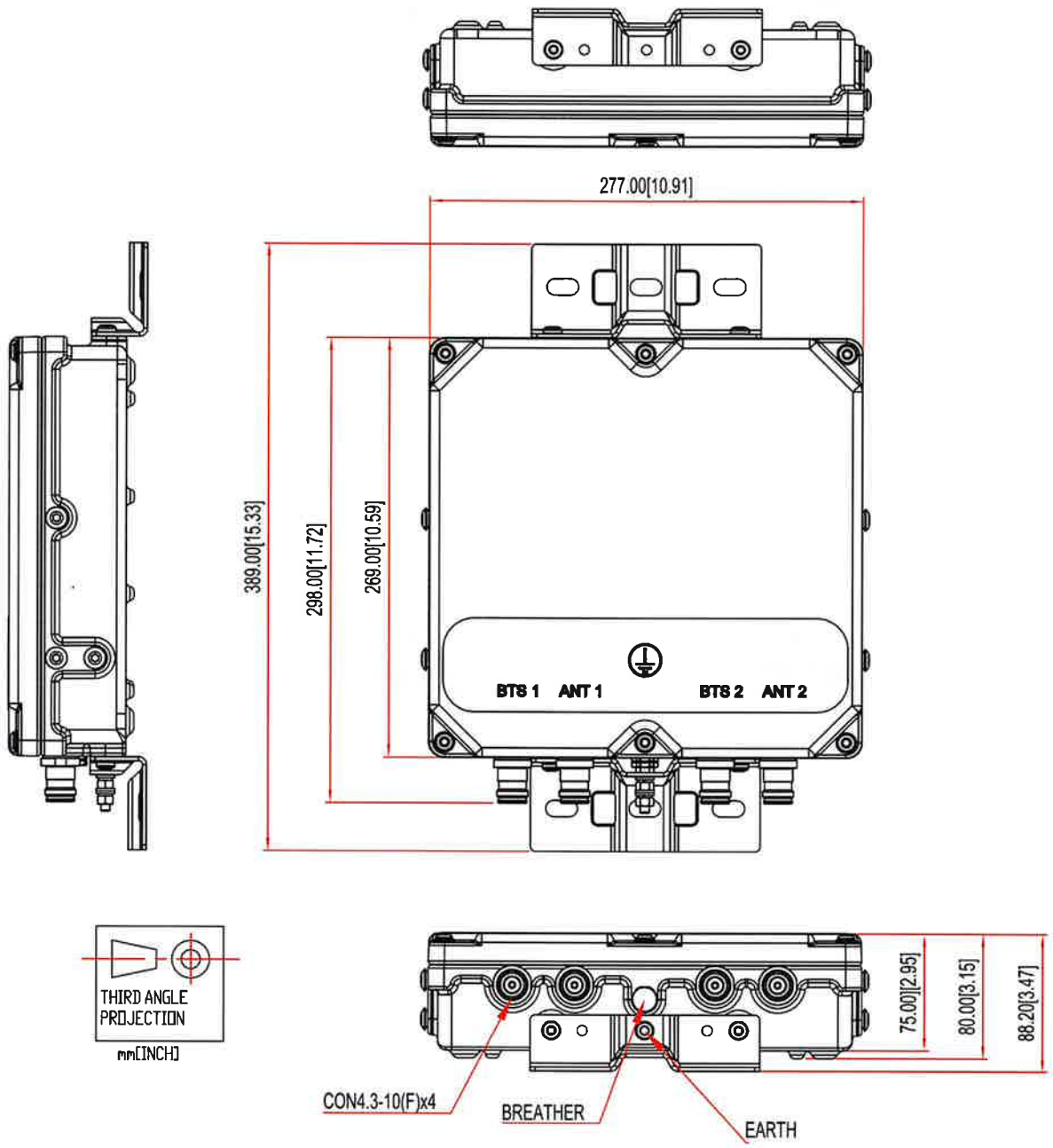
MECHANICAL BLOCK DIAGRAM



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Antenna Mount Analysis Report and PMI Requirements

Mount ReAnalysis

SMART Tool Project #: 10207533
Colliers Engineering & Design CT, PC Project #: 23777194

July 24, 2023

Site Information	*Site ID:*	*5000384425-VZW/SOUTHINGTON EAST CT*
	Site Name:	*SOUTHINGTON EAST CT - A*
	Carrier Name:	*Verizon Wireless*
	Address:	*99 East Street* *Southington, Connecticut 06489* *Hartford County*
	Latitude:	*41.583644°*
	Longitude:	*-72.864686°*
Structure Information	*Tower Type:*	*90-Ft Monopole*
	Mount Type:	*12.33-Ft Platform*

FUZE ID # 17123884

Analysis Results

Platform: **37.5% 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

Report Prepared By: Lauren Luzier

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: 2358807, dated June 4, 2021*
Mount Mapping Report	*Hudson Design Group, LLC., Site ID: 468340, dated May 26, 2021*
Previous Mount Analysis Report	*Maser Consulting Connecticut Project #: 21777816A, dated June 23, 2021*
Filter Add Scope	*Provided by Verizon Wireless*

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H 2022 Connecticut State Building Code (CSBC),	 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 1.00 in II C 1 N/A N/A 0.993
Seismic Parameters:	S_S: S_1:	0.196 g 0.055 g
Maintenance Parameters:	Wind Speed (3-sec. Gust): Maintenance Live Load, Lv: Maintenance Live Load, Lm:	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
81.00	80.00	4	KAelus	KA-6030	Added
		6	Andrew	SBNHH-1D65B	Retained
		3	Samsung	XXDWMM-12.5-65	
		3	Samsung	MT6407-77A	
		3	Samsung	B2/B66A RRH-BR049	
		3	Samsung	B5/B13 RRH-BR04C	
		1	Raycap	RVZDC-6627-PF-48	

The recent mount mapping reported existing OVP units. 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 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:
   - Channel, Solid Round, Angle, Plate — ASTM A36 (Gr. 36)
   - HSS (Rectangular) — ASTM 500 (Gr. B-46)
   - Pipe — ASTM A53 (Gr. B-35)
   - Threaded Rod — F1554 (Gr. 36)
   - 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
Standoff Horizontal	37.5 %	Pass
Face Horizontal	15.6 %	Pass
Mount Pipe	15.8 %	Pass
Antenna Pipe	24.6 %	Pass
Mount Connection	18.5 %	Pass

Structure Rating – *(Controlling Utilization of all Components)*	**37.5%**

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	12.8	12.8	33.2	33.2
0.5	16.1	16.1	44.6	44.6
1	19.3	19.3	56.0	56.0

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 sector(s).
- 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 verify previous project by Maser Consulting Connecticut dated June 23, 2021 has been installed prior to installation of equipment. **Escalate any discrepancies to EOR immediately as it may render the results of this analysis invalid and require additional modifications.**

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. Mount Mapping Report (for reference only)
5. 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

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MDG #: 5000384425 SMART Project #: 10207533 Fuze Project ID: 17123884

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 verify previous project by Maser Consulting Connecticut dated June 23, 2021 has been installed prior to installation of equipment. **Escalate any discrepancies to EOR immediately as it may render the results of this analysis invalid and require additional modifications.**

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

Certifying Individual:

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

Structure: 5000384425-VZW - SOUTHINGTON EAST CT - A

Sector: A

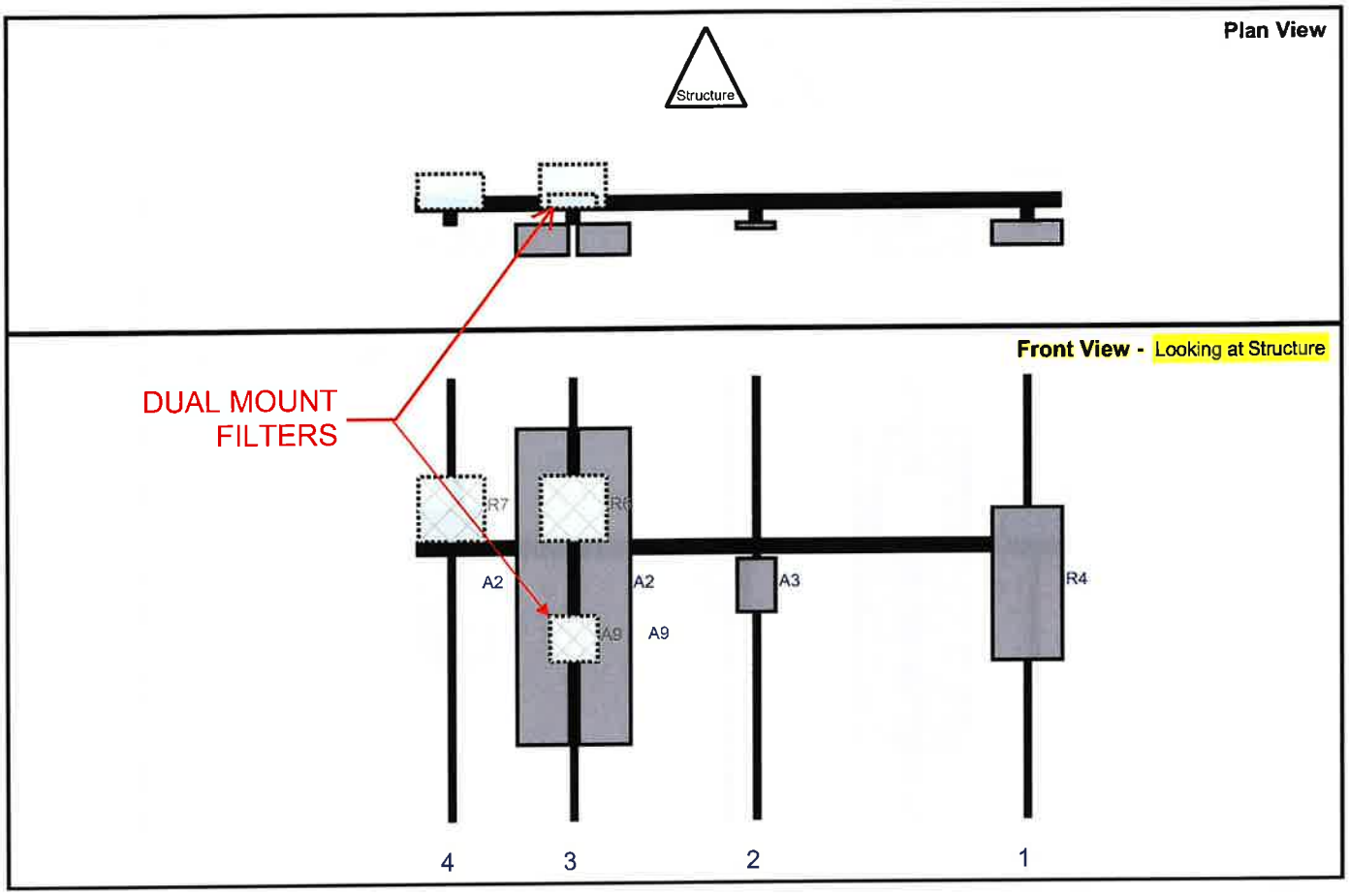
Structure Type: Monopole

Mount Elev: 81.00

10207533

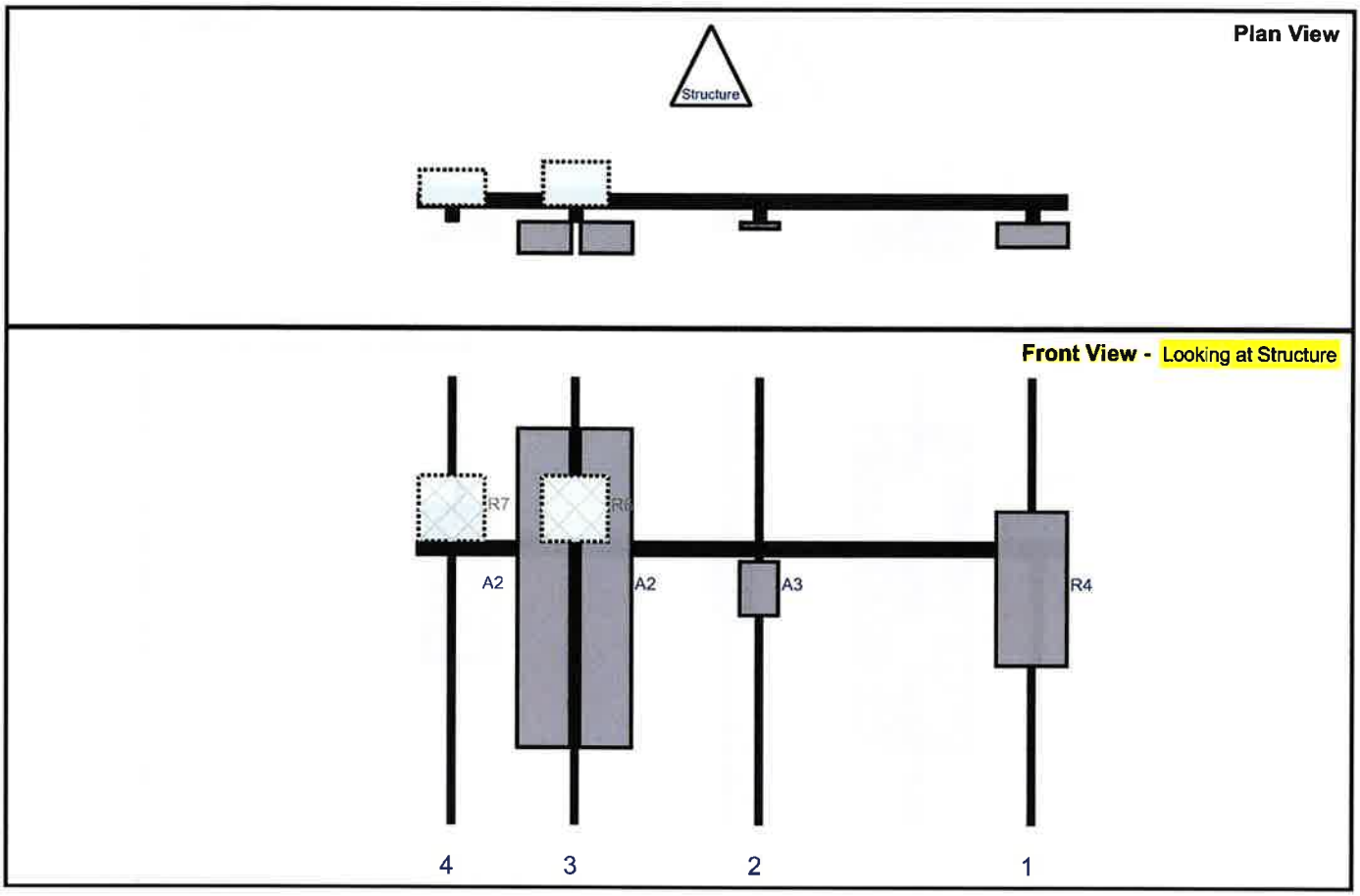
7/20/2023

Colliers Engineering & Design

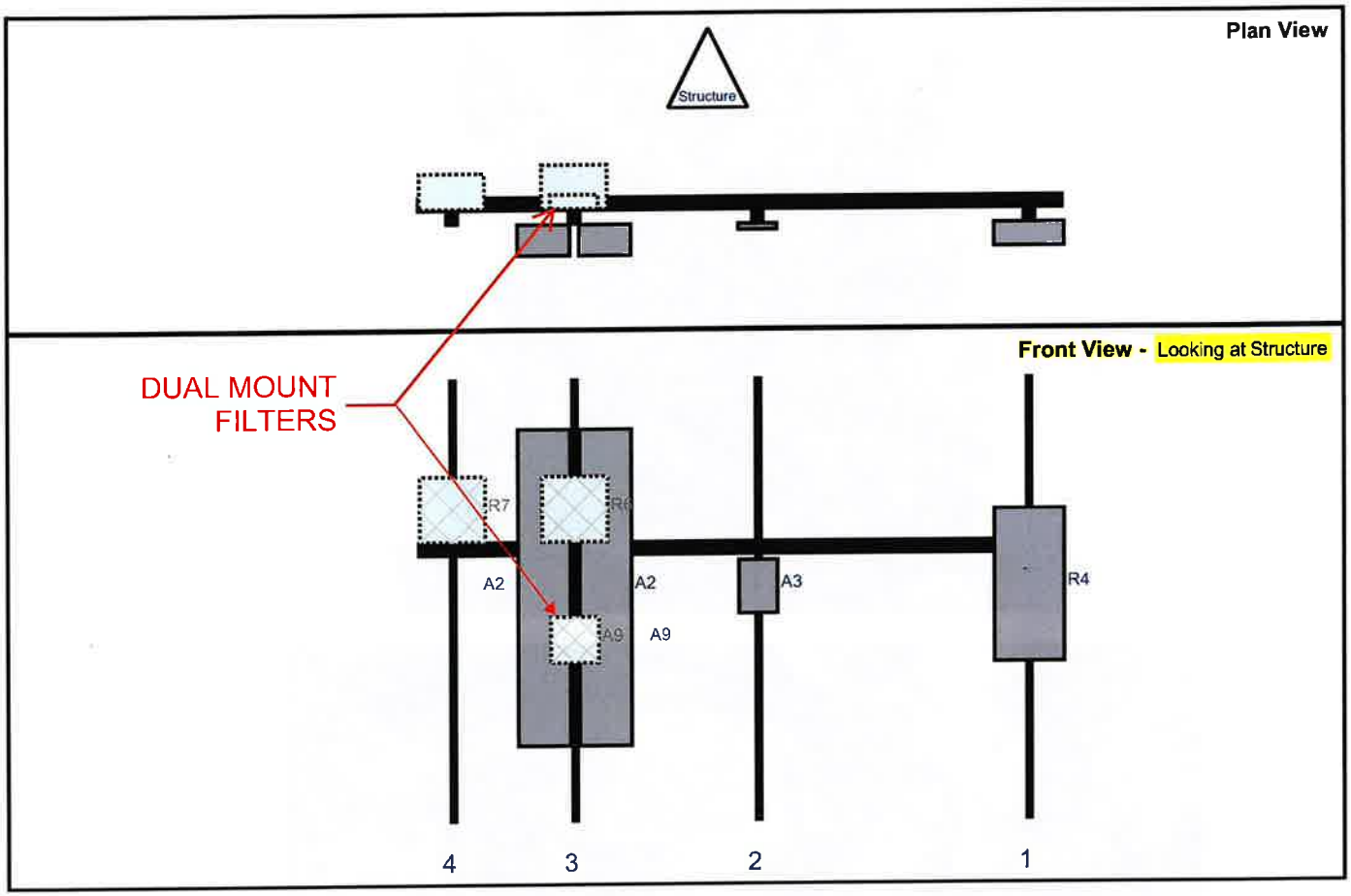


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
R4	MT6407-77A	35.1	16.1	140	1	a	Front	48	0	Retained	
A3	XXDWMM-12.5-65	12.3	8.7	78	2	a	Front	48	0	Retained	
A2	SBNHH-1D65B	72.6	11.9	36	3	a	Front	48	-7	Retained	05/26/2021
A2	SBNHH-1D65B	72.6	11.9	36	3	b	Front	48	7	Retained	05/26/2021
R6	B2/B66A RRH-BR049 (RFV01U-D1A)	15	15	36	3	a	Behind	30	0	Retained	
A9	KA-6030	10.6	10.9	36	3	a	Behind	60	0	Added	
A9	KA-6030	10.6	10.9	36	3	b	Behind	60	0	Added	
R7	B5/B13 RRH-BR04C (RFV01U-D2A)	15	15	8	4	a	Behind	30	0	Retained	
OVP	RVZDC-6627-PF-48	29.5	16.5		Member					Retained	

Colliers Engineering & Design



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
R4	MT6407-77A	35.1	16.1	140	1	a	Front	48	0	Retained	
A3	XXDWMM-12.5-65	12.3	8.7	78	2	a	Front	48	0	Retained	
A2	SBNHH-1D65B	72.6	11.9	36	3	a	Front	48	-7	Retained	05/26/2021
A2	SBNHH-1D65B	72.6	11.9	36	3	b	Front	48	7	Retained	05/26/2021
R6	B2/B66A RRH-BR049 (RFV01U-D1A)	15	15	36	3	a	Behind	30	0	Retained	
R7	B5/B13 RRH-BR04C (RFV01U-D2A)	15	15	8	4	a	Behind	30	0	Retained	



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
R4	MT6407-77A	35.1	16.1	140	1	a	Front	48	0	Retained	
A3	XXDWMM-12.5-65	12.3	8.7	78	2	a	Front	48	0	Retained	
A2	SBNHH-1D65B	72.6	11.9	36	3	a	Front	48	-7	Retained	05/26/2021
A2	SBNHH-1D65B	72.6	11.9	36	3	b	Front	48	7	Retained	05/26/2021
R6	B2/B66A RRH-BR049 (RFV01U-D1A)	15	15	36	3	a	Behind	30	0	Retained	
A9	KA-6030	10.6	10.9	36	3	a	Behind	60	0	Added	
A9	KA-6030	10.6	10.9	36	3	b	Behind	60	0	Added	
R7	B5/B13 RRH-BR04C (RFV01U-D2A)	15	15	8	4	a	Behind	30	0	Retained	

V4.0 Updated on 3.31.2021

Antenna Mount Mapping Form (PATENT PENDING)

FCC #

Tower Owner:	VERION WIRELESS	**Mapping Date:**	5/26/2021
Site Name:	SOUTHINGTON EAST CT	**Tower Type:**	Monopole
Site Number or ID:	468340	**Tower Height (Ft.):**	89.75
Mapping Contractor:	HUDSON DESIGN GROUP, LLC.	**Mount Elevation (Ft.):**	81.16

Please insert the sketches of the antenna mount from the "Sketches" tab with dimensions and members here.

Mount Pipe Configuration and Geometries [Unit = Inches]

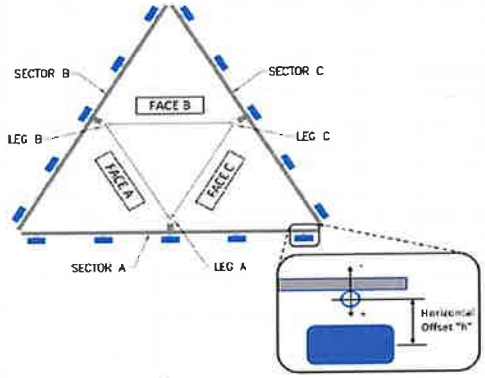
Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "d"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "d"	Horizontal Offset "C1, C2, C3, etc."
A1	2" STD. PIPE X 102" LONG	39.00	8.00	C1	2" STD. PIPE X 102" LONG	39.00	8.00
A2	2" STD. PIPE X 102" LONG	39.00	70.00	C2	2" STD. PIPE X 102" LONG	39.00	7.00
A3	2" STD. PIPE X 102" LONG	39.00	112.00	C3	2" STD. PIPE X 102" LONG	39.00	112.00
A4	2" STD. PIPE X 102" LONG	39.00	140.00	C4	2" STD. PIPE X 102" LONG	39.00	140.00
A5				C5			
A6				C6			
B1	2" STD. PIPE X 102" LONG	39.00	8.00	D1			
B2	2" STD. PIPE X 102" LONG	39.00	70.00	D2			
B3	2" STD. PIPE X 102" LONG	39.00	112.00	D3			
B4	2" STD. PIPE X 102" LONG	39.00	140.00	D4			
B5				D5			
B6				D6			

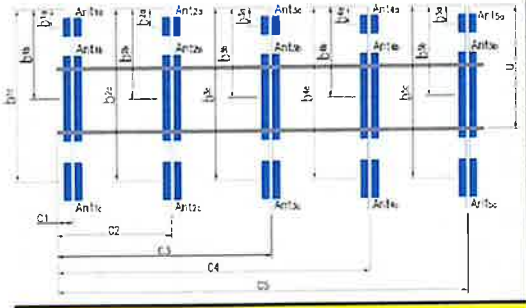
Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :	
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :	
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :	

Please enter additional infomation or comments below.

TOWER IS A MONOPINE MODEL W/ .375" WALL THICKNESS

Tower Face Width at Mount Elev. (ft.):		Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):	31
For T-Arms/Platforms on monopoles, report the weld size from the main standoff to the plate bolting into the collar mount.			0.438





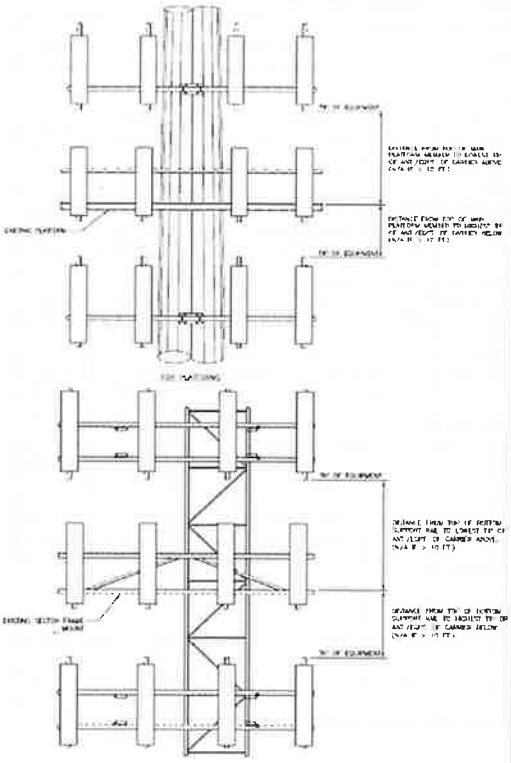
Antenna Layout (Looking Out From Tower)

Ants. Items	Enter antenna model. If not labeled, enter "Unknown". Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Mounting Locations [Units are inches and degrees] Vertical Distances"b_{1a}, b_{2a}, b_{3a}, b_{1b}..." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photos of antennas Photo Numbers
Sector A										
Ant_{1a}	B4 RRH	11.00	6.00	36.00		82.3267	25.00	-7.00		139,143
Ant_{1b}	SBNHH-1D65B	12.00	7.50	73.00		80.2433	50.00	10.00	30.00	71,79
Ant_{1c}										
Ant_{2a}	B13 RRH4X30	12.00	8.00	21.00		83.2433	14.00	-6.00		173
Ant_{2b}	SBNHH-1D65B	12.00	7.50	73.00		80.2433	50.00	10.00	30.00	79
Ant_{2c}										
Ant_{3a}										
Ant_{3b}	SBNHH-1D65B	12.00	7.50	73.00		80.2433	50.00	10.00	30.00	79,138
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	SBNHH-1D65B	12.00	7.50	73.00		80.2433	50.00	10.00	30.00	79,138
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

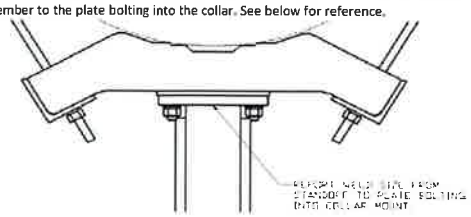
Mount Azimuth (Degree) for Each Sector			Tower Leg Azimuth (Degree) for Each Sector		
Sector A:	30.00	Deg	Leg A:		Deg
Sector B:	150.00	Deg	Leg B:		Deg
Sector C:	270.00	Deg	Leg C:		Deg
Sector D:		Deg	Leg D:		Deg

Climbing Facility Information		
Location:	225.00 Deg	N/A
Climbing Facility	Corrosion Type:	Good condition.
	Access:	Climbing path was unobstructed.
	Condition:	Good condition.

Please insert a photo of the mount centerline measurement here.



For T-Arms/Platforms on monopoles, record the weld size from the main standoff member to the plate bolting into the collar. See below for reference.



Sector B										
Ant_{1a}	B4 RRH	11.00	6.00	36.00		82.3267	25.00	-7.00		138,143
Ant_{1b}	SBNHH-1D65B	12.00	7.50	73.00		80.2433	50.00	10.00	130.00	79,138
Ant_{1c}										
Ant_{2a}	B13 RRH4X30	12.00	8.00	21.00		83.2433	14.00	-6.00		173,198
Ant_{2b}	SBNHH-1D65B	12.00	7.50	73.00		80.2433	50.00	10.00	130.00	79,198
Ant_{2c}										
Ant_{3a}										
Ant_{3b}	SBNHH-1D65B	12.00	7.50	73.00		80.2433	50.00	10.00	130.00	79,159
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	SBNHH-1D65B	12.00	7.50	73.00		80.2433	50.00	10.00	130.00	79,159
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff	RRFD-3315-PF-48	15.00	10.00	28.00			3.50	9.00		176,194
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector C										
Ant_{1a}	B4 RRH	11.00	6.00	36.00		82.3267	25.00	-7.00		141,143
Ant_{1b}	SBNHH-1D65B	12.00	7.50	73.00		80.2433	50.00	10.00	280.00	79,141
Ant_{1c}										
Ant_{2a}	B13 RRH4X30	12.00	8.00	21.00		83.2433	14.00	-6.00		140,173
Ant_{2b}	SBNHH-1D65B	12.00	7.50	73.00		80.2433	50.00	10.00	280.00	79,140
Ant_{2c}										
Ant_{3a}										
Ant_{3b}	SBNHH-1D65B	12.00	7.50	73.00		80.2433	50.00	10.00	280.00	79,139
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	SBNHH-1D65B	12.00	7.50	73.00		80.2433	50.00	10.00	280.00	79,139
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff	RRFD-3315-PF-48	15.00	10.00	28.00			3.50	9.00		139,176
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector D										
Ant_{1a}										
Ant_{1b}										
Ant_{1c}										
Ant_{2a}										
Ant_{2b}										
Ant_{2c}										
Ant_{3a}										
Ant_{3b}										
Ant_{3c}										
Ant_{4a}										
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Observed Safety and Structural Issues During the Mount Mapping		
Issue #	Description of Issue	Photo #
1		
2		
3		
4		
5		
6		
7		
8		

Observed Obstructions to Tower Lighting System					
If the tower lighting system is being obstructed by the carrier's equipment (for example: a light nested by the antennas), please provide photos and fill in the information below.					Photo #
Description of Obstruction:					
Type of Light:		Photo #		Additional Comments:	
Lighting Technology:		Photo #			
Elevation (AGL) at base of light (Ft.):		Photo #			
Is a service loop available?		Photo #			
Is beacon installed on an extension?		Photo #			

Mapping Notes
1. Please report any visible structural or safety issues observed on the antenna mounts (Damaged members, loose connections, tilting mounts, safety climb issues, etc.)
2. If the thickness of the existing pipes or tubing can't be obtained from a general tool (such as Caliper), please use an ultrasonic measurement tool (thickness gauge) to measure the thickness.
3. Please create all required detail sketches of the mounts and insert them into the "Sketches" tab.
4. Please measure and enter the bolt sizes and types under the Members Box in the spreadsheet of the mount type.
5. Take and label the photos of the tower, mounts, connections, antennas and all measurements. Minimum 50 photos are required.
6. Please measure and report the size and length of all existing antenna mounting pipes.
7. Please measure and report the antenna information for all sectors.
8. Don't delete or rearrange any sheet or contents of any sheet from this mapping form.

Standard Conditions
1. Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping are to be reported in this mapping. However, this mount mapping is not a condition assessment of the mount.

V4.0 Updated on 3-31-2021

MASER CONSULTING P.A.

Antenna Mount Mapping Form (PATENT PENDING)

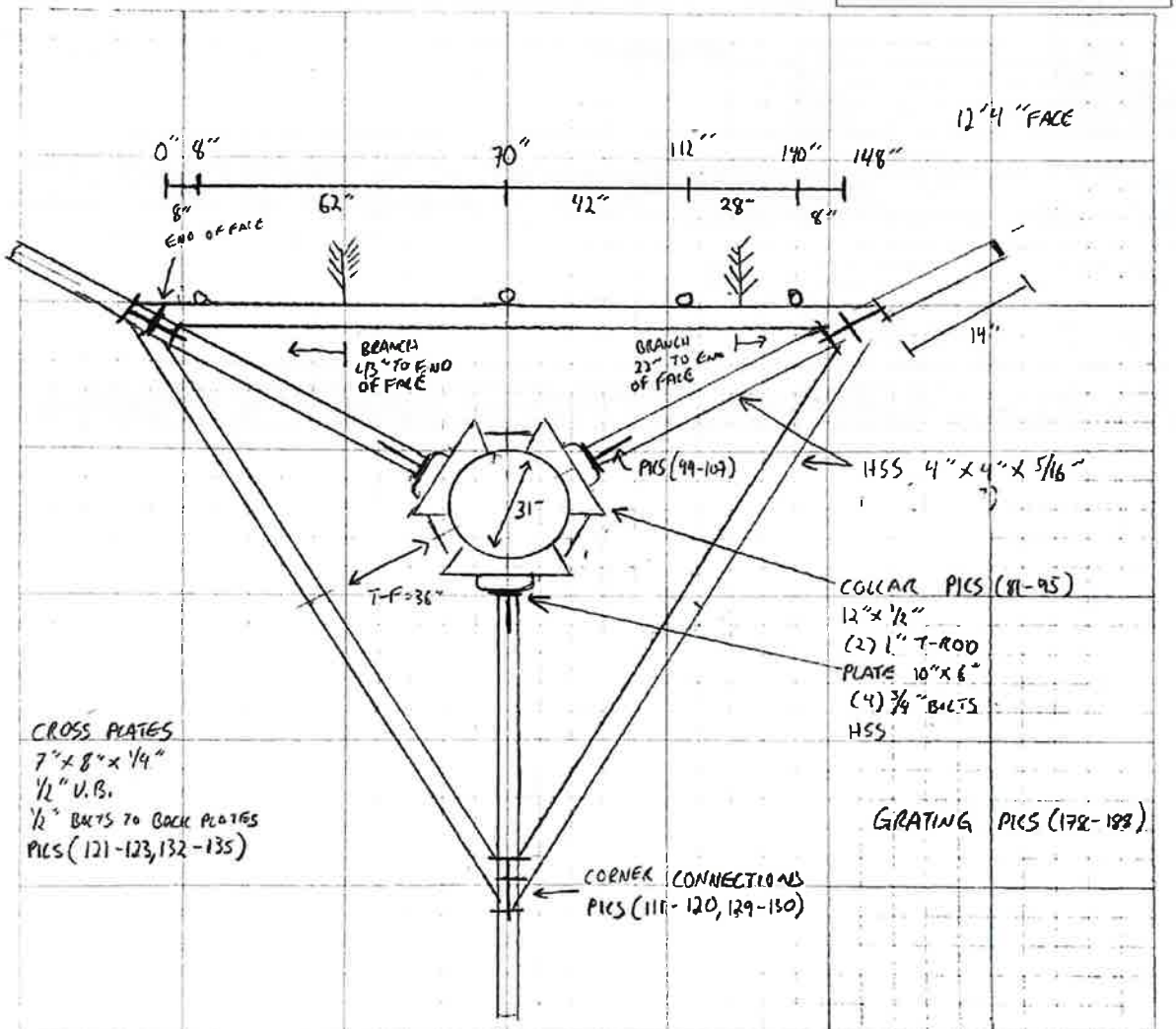
FCC #

Tower Owner:	VERION WIRELESS	Mapping Date:	5/26/2021
Site Name:	SOUTHINGTON EAST CT	Tower Type:	Monopole
Site Number or ID:	468340	Tower Height (Ft.):	89.75
Mapping Contractor:	HUDSON DESIGN GROUP, LLC.	Mount Elevation (Ft.):	81.16

Please Insert Sketches of the Antenna Mount

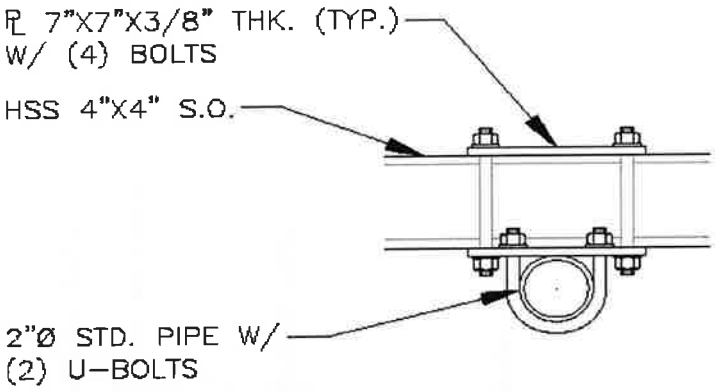
DATE: 05262021
Project Name:
Project No.: SOUTHINGTON EAST
Design By: _____ Chk'd By: _____ Page ____ of ____

HDG HUDSON Design Group LLC
45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
TEL (978) 557-5553
FAX (978) 336-5586

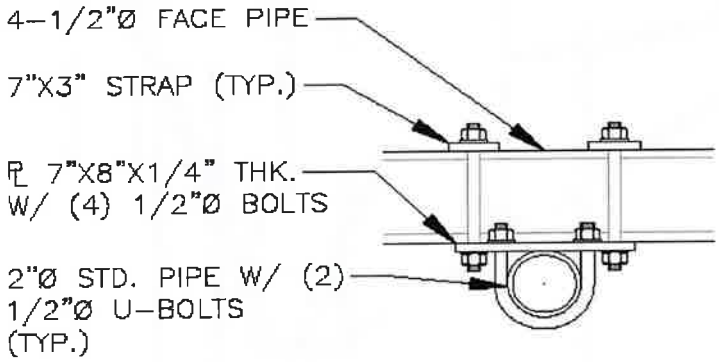


157132

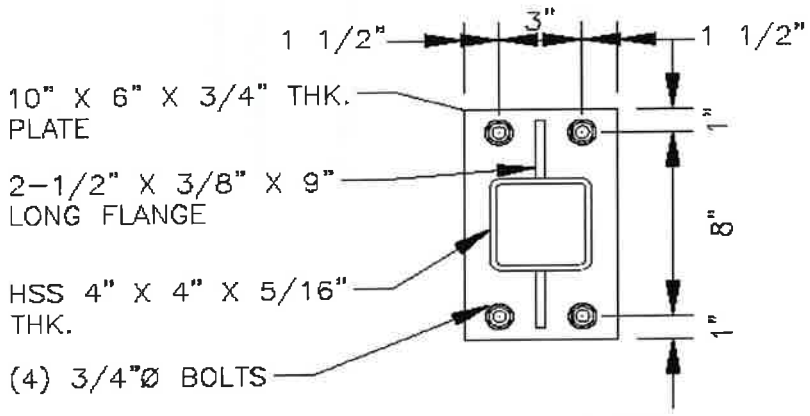
Please Insert Sketches of the Antenna Mount, cont'd



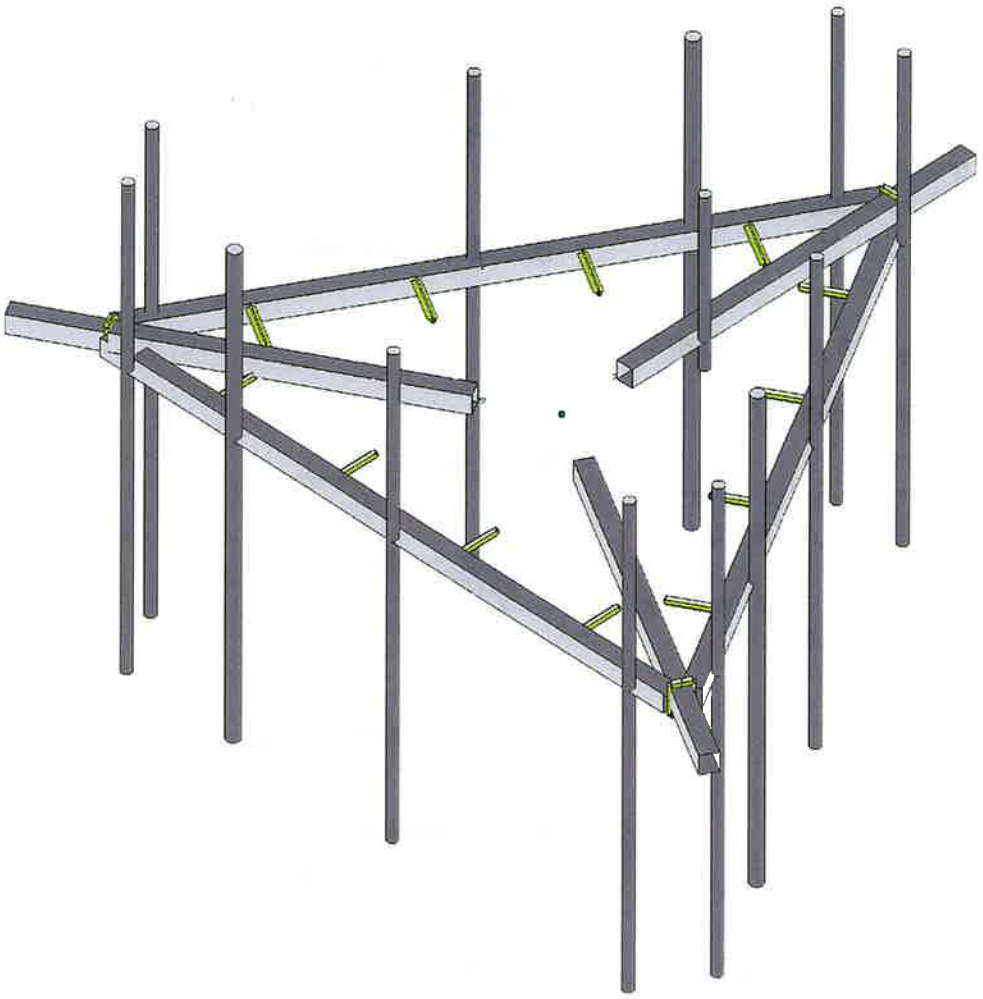
S.O. MOUNT DETAIL



CROSSOVER PLATE DETAIL

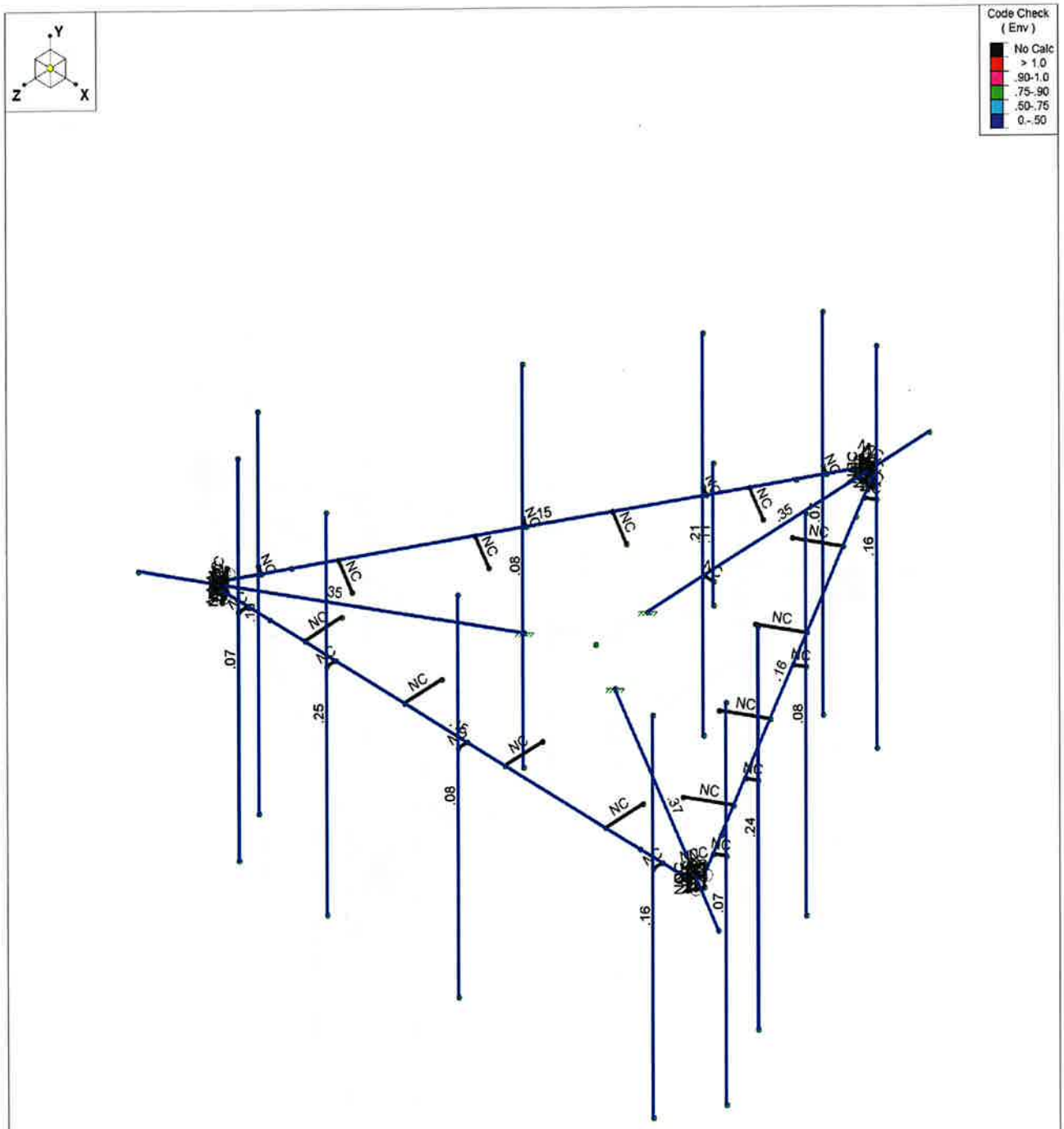


STANDOFF TO RING MOUNT CONNECTION



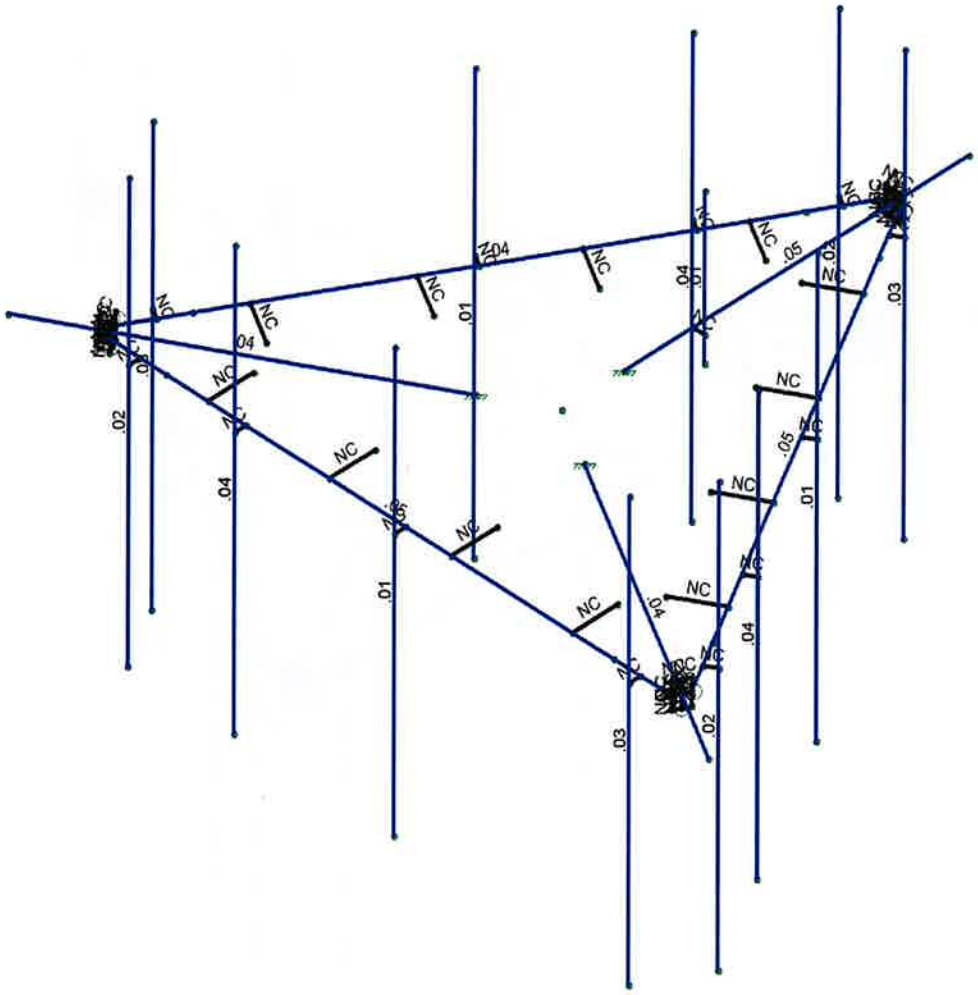
Envelope Only Solution

		SK - 1
		July 20, 2023 at 2:47 PM
		5000384425-VZW_MT_LO_H.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

		SK - 2
		July 20, 2023 at 2:47 PM
		5000384425-VZW_MT_LO_H.r3d



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

		SK - 3
		July 20, 2023 at 2:47 PM
		5000384425-VZW_MT_LO_H.r3d

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distribut...	Area(Me...	Surface(...
1	Antenna D	None					96			
2	Antenna Di	None					96			
3	Antenna Wo (0 Deg)	None					96			
4	Antenna Wo (30 Deg)	None					96			
5	Antenna Wo (60 Deg)	None					96			
6	Antenna Wo (90 Deg)	None					96			
7	Antenna Wo (120 Deg)	None					96			
8	Antenna Wo (150 Deg)	None					96			
9	Antenna Wo (180 Deg)	None					96			
10	Antenna Wo (210 Deg)	None					96			
11	Antenna Wo (240 Deg)	None					96			
12	Antenna Wo (270 Deg)	None					96			
13	Antenna Wo (300 Deg)	None					96			
14	Antenna Wo (330 Deg)	None					96			
15	Antenna Wi (0 Deg)	None					96			
16	Antenna Wi (30 Deg)	None					96			
17	Antenna Wi (60 Deg)	None					96			
18	Antenna Wi (90 Deg)	None					96			
19	Antenna Wi (120 Deg)	None					96			
20	Antenna Wi (150 Deg)	None					96			
21	Antenna Wi (180 Deg)	None					96			
22	Antenna Wi (210 Deg)	None					96			
23	Antenna Wi (240 Deg)	None					96			
24	Antenna Wi (270 Deg)	None					96			
25	Antenna Wi (300 Deg)	None					96			
26	Antenna Wi (330 Deg)	None					96			
27	Antenna Wm (0 Deg)	None					96			
28	Antenna Wm (30 Deg)	None					96			
29	Antenna Wm (60 Deg)	None					96			
30	Antenna Wm (90 Deg)	None					96			
31	Antenna Wm (120 Deg)	None					96			
32	Antenna Wm (150 Deg)	None					96			
33	Antenna Wm (180 Deg)	None					96			
34	Antenna Wm (210 Deg)	None					96			
35	Antenna Wm (240 Deg)	None					96			
36	Antenna Wm (270 Deg)	None					96			
37	Antenna Wm (300 Deg)	None					96			
38	Antenna Wm (330 Deg)	None					96			
39	Structure D	None		-1					3	
40	Structure Di	None						19	3	
41	Structure Wo (0 Deg)	None						38		
42	Structure Wo (30 Deg)	None						38		
43	Structure Wo (60 Deg)	None						38		
44	Structure Wo (90 Deg)	None						38		
45	Structure Wo (120 Deg)	None						38		
46	Structure Wo (150 Deg)	None						38		
47	Structure Wo (180 Deg)	None						38		
48	Structure Wo (210 Deg)	None						38		
49	Structure Wo (240 Deg)	None						38		
50	Structure Wo (270 Deg)	None						38		
51	Structure Wo (300 Deg)	None						38		
52	Structure Wo (330 Deg)	None						38		
53	Structure Wi (0 Deg)	None						38		
54	Structure Wi (30 Deg)	None						38		
55	Structure Wi (60 Deg)	None						38		

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distribut...	Area(Me...	Surface(...
56	Structure Wi (90 Deg)	None						38		
57	Structure Wi (120 Deg)	None						38		
58	Structure Wi (150 Deg)	None						38		
59	Structure Wi (180 Deg)	None						38		
60	Structure Wi (210 Deg)	None						38		
61	Structure Wi (240 Deg)	None						38		
62	Structure Wi (270 Deg)	None						38		
63	Structure Wi (300 Deg)	None						38		
64	Structure Wi (330 Deg)	None						38		
65	Structure Wm (0 Deg)	None						38		
66	Structure Wm (30 Deg)	None						38		
67	Structure Wm (60 Deg)	None						38		
68	Structure Wm (90 Deg)	None						38		
69	Structure Wm (120 Deg)	None						38		
70	Structure Wm (150 Deg)	None						38		
71	Structure Wm (180 Deg)	None						38		
72	Structure Wm (210 Deg)	None						38		
73	Structure Wm (240 Deg)	None						38		
74	Structure Wm (270 Deg)	None						38		
75	Structure Wm (300 Deg)	None						38		
76	Structure Wm (330 Deg)	None						38		
77	Lm1	None					1			
78	Lm2	None					1			
79	Lv1	None					1			
80	Lv2	None					1			
81	Antenna Ev	None					96			
82	Antenna Eh (0 Deg)	None					64			
83	Antenna Eh (90 Deg)	None					64			
84	Structure Ev	ELY							3	
85	Structure Eh (0 Deg)	ELZ			-.03				3	
86	Structure Eh (90 Deg)	ELX	.03						3	
87	BLC 39 Transient Area Loads	None						24		
88	BLC 40 Transient Area Loads	None						36		
89	BLC 84 Transient Area Loads	None								
90	BLC 85 Transient Area Loads	None						36		
91	BLC 86 Transient Area Loads	None						36		

Load Combinations

	Description	S...	PDelta	S...	B...	Fa...	BLC	Fa...	BLC	Fa...	BLC	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	1.2D+1.0Wo (0 D...	Y...	Y		1	1.2	39	1.2	3	1	41	1										
2	1.2D+1.0Wo (30 ...	Y...	Y		1	1.2	39	1.2	4	1	42	1										
3	1.2D+1.0Wo (60 ...	Y...	Y		1	1.2	39	1.2	5	1	43	1										
4	1.2D+1.0Wo (90 ...	Y...	Y		1	1.2	39	1.2	6	1	44	1										
5	1.2D+1.0Wo (120...	Y...	Y		1	1.2	39	1.2	7	1	45	1										
6	1.2D+1.0Wo (150...	Y...	Y		1	1.2	39	1.2	8	1	46	1										
7	1.2D+1.0Wo (180...	Y...	Y		1	1.2	39	1.2	9	1	47	1										
8	1.2D+1.0Wo (210...	Y...	Y		1	1.2	39	1.2	10	1	48	1										
9	1.2D+1.0Wo (240...	Y...	Y		1	1.2	39	1.2	11	1	49	1										
10	1.2D+1.0Wo (270...	Y...	Y		1	1.2	39	1.2	12	1	50	1										
11	1.2D+1.0Wo (300...	Y...	Y		1	1.2	39	1.2	13	1	51	1										
12	1.2D+1.0Wo (330...	Y...	Y		1	1.2	39	1.2	14	1	52	1										
13	1.2D + 1.0Di + 1.0...	Y...	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1						
14	1.2D + 1.0Di + 1.0...	Y...	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1						
15	1.2D + 1.0Di + 1.0...	Y...	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1						
16	1.2D + 1.0Di + 1.0...	Y...	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1						
17	1.2D + 1.0Di + 1.0...	Y...	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1						
18	1.2D + 1.0Di + 1.0...	Y...	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1						

Load Combinations (Continued)

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

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N3	0	0	-1.385417	0	
2	N27	0	0	-8.885417	0	
3	CP	0	0	0	0	
4	N5	0	0	-7.21875	0	
5	N6	0.166667	0	-7.21875	0	
6	N7	-0.166667	0	-7.21875	0	
7	N8	0	.25	-7.21875	0	
8	N9	0.166667	.25	-7.21875	0	
9	N10	-0.166667	.25	-7.21875	0	
10	N11	0	-.25	-7.21875	0	
11	N12	0.166667	-.25	-7.21875	0	
12	N13	-0.166667	-.25	-7.21875	0	
13	N15	-6.251621	0	3.609375	0	
14	N16	-6.334954	0	3.465037	0	
15	N17	-6.168288	0	3.753713	0	
16	N18	-6.251621	.25	3.609375	0	
17	N19	-6.334954	.25	3.465037	0	
18	N20	-6.168288	.25	3.753713	0	
19	N21	-6.251621	-.25	3.609375	0	
20	N22	-6.334954	-.25	3.465037	0	
21	N23	-6.168288	-.25	3.753713	0	
22	N26	6.251621	0	3.609375	0	
23	N27A	6.168288	0	3.753713	0	
24	N28	6.334954	0	3.465037	0	
25	N29	6.251621	.25	3.609375	0	
26	N30	6.168288	.25	3.753713	0	
27	N31	6.334954	.25	3.465037	0	
28	N32	6.251621	-.25	3.609375	0	
29	N33	6.168288	-.25	3.753713	0	
30	N34	6.334954	-.25	3.465037	0	
31	N35	5.501621	0	3.753713	0	
32	N36	5.501621	0	4.003713	0	
33	N37	5.501621	3.25	4.003713	0	
34	N38	5.501621	-5.25	4.003713	0	
35	N39	0.334954	0	3.753713	0	
36	N40	0.334954	0	4.003713	0	
37	N41	0.334954	3.25	4.003713	0	
38	N42	0.334954	-5.25	4.003713	0	
39	N43	-3.165046	0	3.753713	0	
40	N44	-3.165046	0	4.003713	0	
41	N45	-3.165046	3.25	4.003713	0	
42	N46	-3.165046	-5.25	4.003713	0	
43	N47	-5.498379	0	3.753713	0	
44	N48	-5.498379	0	4.003713	0	
45	N49	-5.498379	3.25	4.003713	0	
46	N50	-5.498379	-5.25	4.003713	0	
47	N51	.5	0	-6.6414	0	
48	N52	0.716506	0	-6.7664	0	
49	N53	0.716506	3.25	-6.7664	0	
50	N54	0.716506	-5.25	-6.7664	0	
51	N55	3.083333	0	-2.166935	0	
52	N56	3.29984	0	-2.291935	0	
53	N57	3.29984	3.25	-2.291935	0	
54	N58	3.29984	-5.25	-2.291935	0	
55	N59	4.833333	0	0.864154	0	
56	N60	5.04984	0	0.739154	0	
57	N61	5.04984	3.25	0.739154	0	
58	N62	5.04984	-5.25	0.739154	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
59	N63	6	0	2.88488	0	
60	N64	6.216506	0	2.75988	0	
61	N65	6.216506	3.25	2.75988	0	
62	N66	6.216506	-5.25	2.75988	0	
63	N67	-6.001621	0	2.887687	0	
64	N68	-6.218127	0	2.762687	0	
65	N69	-6.218127	3.25	2.762687	0	
66	N70	-6.218127	-5.25	2.762687	0	
67	N71	-3.418288	0	-1.586777	0	
68	N72	-3.634794	0	-1.711777	0	
69	N73	-3.634794	3.25	-1.711777	0	
70	N74	-3.634794	-5.25	-1.711777	0	
71	N75	-1.668288	0	-4.617866	0	
72	N76	-1.884794	0	-4.742866	0	
73	N77	-1.884794	3.25	-4.742866	0	
74	N78	-1.884794	-5.25	-4.742866	0	
75	N79	-0.501621	0	-6.638592	0	
76	N80	-0.718127	0	-6.763592	0	
77	N81	-0.718127	3.25	-6.763592	0	
78	N82	-0.718127	-5.25	-6.763592	0	
79	N83	1.333333	0	3.753713	0	
80	N84	-1.333333	0	3.753713	0	
81	N85	4	0	3.753713	0	
82	N87	1.333333	0	2.753713	0	
83	N88	-1.333333	0	2.753713	0	
84	N89	4	0	2.753713	0	
85	N89A	-4	0	3.753713	0	
86	N90	-4	0	2.753713	0	
87	N91	-4.918288	0	3.753713	0	
88	N92	4.918288	0	3.753713	0	
89	N93	2.584144	0	-3.031557	0	
90	N94	3.917477	0	-0.722156	0	
91	N95	1.25081	0	-5.340958	0	
92	N96	1.718118	0	-2.531557	0	
93	N97	3.051452	0	-0.222156	0	
94	N98	0.384785	0	-4.840958	0	
95	N99	5.25081	0	1.587245	0	
96	N100	4.384785	0	2.087245	0	
97	N101	5.709954	0	2.382506	0	
98	N102	0.791667	0	-6.136218	0	
99	N103	-3.917477	0	-0.722156	0	
100	N104	-2.584144	0	-3.031557	0	
101	N105	-5.25081	0	1.587245	0	
102	N106	-3.051452	0	-0.222156	0	
103	N107	-1.718118	0	-2.531557	0	
104	N108	-4.384785	0	2.087245	0	
105	N109	-1.25081	0	-5.340958	0	
106	N110	-0.384785	0	-4.840958	0	
107	N111	-0.791667	0	-6.136218	0	
108	N112	-5.709954	0	2.382506	0	
109	N109A	-1.199806	0	0.692708	0	
110	N110A	-7.694997	0	4.442708	0	
111	N111A	1.199806	0	0.692708	0	
112	N112A	7.694997	0	4.442708	0	
113	N113	0	0	-2.885417	0	
114	N114	.25	0	-2.885417	0	
115	N115	.25	2.5	-2.885417	0	
116	N116	.25	-.5	-2.885417	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design L...	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Face Horizontal	HSS4X4X5	Beam	SquareT...	A500 Gr.B Rect	Typical	4.1	9.14	9.14	15.3
2	Standoff Horizontal	HSS4X4X5	Beam	SquareT...	A500 Gr.B Rect	Typical	4.1	9.14	9.14	15.3
3	Mount Pipe	PIPE 2.0	Column	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
4	Pipe 2.5	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	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	.3	.65	.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	.3	.65	.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	.3	.65	.49	35	1.6	60	1.2
7	A1085	29000	11154	.3	.65	.49	50	1.4	65	1.3
8	Q235	29000	11154	.3	.65	.49	35	1.5	58	1.2

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(de...	Section/Shape	Type	Design List	Material	Design Rules
1	M4	N3	N27			Standoff Hori...	Beam	SquareTube	A500 Gr.B Rect	Typical
2	M2	N7	N5			RIGID	None	None	RIGID	Typical
3	M3	N6	N5			RIGID	None	None	RIGID	Typical
4	M4A	N10	N8			RIGID	None	None	RIGID	Typical
5	M5	N9	N8			RIGID	None	None	RIGID	Typical
6	M6	N13	N11			RIGID	None	None	RIGID	Typical
7	M7	N12	N11			RIGID	None	None	RIGID	Typical
8	M8	N8	N5			RIGID	None	None	RIGID	Typical
9	M9	N11	N5			RIGID	None	None	RIGID	Typical
10	M10	N7	N10			RIGID	None	None	RIGID	Typical
11	M11	N6	N9			RIGID	None	None	RIGID	Typical
12	M12	N7	N13			RIGID	None	None	RIGID	Typical
13	M13	N6	N12			RIGID	None	None	RIGID	Typical
14	M15	N17	N15			RIGID	None	None	RIGID	Typical
15	M16	N16	N15			RIGID	None	None	RIGID	Typical
16	M17	N20	N18			RIGID	None	None	RIGID	Typical
17	M18	N19	N18			RIGID	None	None	RIGID	Typical
18	M19	N23	N21			RIGID	None	None	RIGID	Typical
19	M20	N22	N21			RIGID	None	None	RIGID	Typical
20	M21	N18	N15			RIGID	None	None	RIGID	Typical
21	M22	N21	N15			RIGID	None	None	RIGID	Typical
22	M23	N17	N20			RIGID	None	None	RIGID	Typical
23	M24	N16	N19			RIGID	None	None	RIGID	Typical
24	M25	N17	N23			RIGID	None	None	RIGID	Typical
25	M26	N16	N22			RIGID	None	None	RIGID	Typical
26	M28	N28	N26			RIGID	None	None	RIGID	Typical
27	M29	N27A	N26			RIGID	None	None	RIGID	Typical
28	M30	N31	N29			RIGID	None	None	RIGID	Typical
29	M31	N30	N29			RIGID	None	None	RIGID	Typical
30	M32	N34	N32			RIGID	None	None	RIGID	Typical
31	M33	N33	N32			RIGID	None	None	RIGID	Typical
32	M34	N29	N26			RIGID	None	None	RIGID	Typical
33	M35	N32	N26			RIGID	None	None	RIGID	Typical
34	M36	N28	N31			RIGID	None	None	RIGID	Typical
35	M37	N27A	N30			RIGID	None	None	RIGID	Typical
36	M38	N28	N34			RIGID	None	None	RIGID	Typical
37	M39	N27A	N33			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(de...	Section/Shape	Type	Design List	Material	Design Rules
38	M40	N17	N27A			Face Horizont...	Beam	SquareTube	A500 Gr.B Rect	Typical
39	M41	N28	N6			Face Horizont...	Beam	SquareTube	A500 Gr.B Rect	Typical
40	M42	N7	N16			Face Horizont...	Beam	SquareTube	A500 Gr.B Rect	Typical
41	M43	N36	N35			RIGID	None	None	RIGID	Typical
42	MP1A	N37	N38			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
43	M45	N40	N39			RIGID	None	None	RIGID	Typical
44	MP2A	N41	N42			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
45	M47	N44	N43			RIGID	None	None	RIGID	Typical
46	MP3A	N45	N46			Pipe 2.5	Column	Pipe	A53 Gr.B	Typical
47	M49	N48	N47			RIGID	None	None	RIGID	Typical
48	MP4A	N49	N50			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
49	M51	N52	N51			RIGID	None	None	RIGID	Typical
50	MP1C	N53	N54			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
51	M53	N56	N55			RIGID	None	None	RIGID	Typical
52	MP2C	N57	N58			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
53	M55	N60	N59			RIGID	None	None	RIGID	Typical
54	MP3C	N61	N62			Pipe 2.5	Column	Pipe	A53 Gr.B	Typical
55	M57	N64	N63			RIGID	None	None	RIGID	Typical
56	MP4C	N65	N66			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
57	M59	N68	N67			RIGID	None	None	RIGID	Typical
58	MP1B	N69	N70			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
59	M61	N72	N71			RIGID	None	None	RIGID	Typical
60	MP2B	N73	N74			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
61	M63	N76	N75			RIGID	None	None	RIGID	Typical
62	MP3B	N77	N78			Pipe 2.5	Column	Pipe	A53 Gr.B	Typical
63	M65	N80	N79			RIGID	None	None	RIGID	Typical
64	MP4B	N81	N82			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
65	M67	N84	N88			RIGID	None	None	RIGID	Typical
66	M68	N83	N87			RIGID	None	None	RIGID	Typical
67	M69	N85	N89			RIGID	None	None	RIGID	Typical
68	M70	N89A	N90			RIGID	None	None	RIGID	Typical
69	M71	N94	N97			RIGID	None	None	RIGID	Typical
70	M72	N93	N96			RIGID	None	None	RIGID	Typical
71	M73	N95	N98			RIGID	None	None	RIGID	Typical
72	M74	N99	N100			RIGID	None	None	RIGID	Typical
73	M75	N104	N107			RIGID	None	None	RIGID	Typical
74	M76	N103	N106			RIGID	None	None	RIGID	Typical
75	M77	N105	N108			RIGID	None	None	RIGID	Typical
76	M78	N109	N110			RIGID	None	None	RIGID	Typical
77	M77A	N109A	N110A			Standoff Hori...	Beam	SquareTube	A500 Gr.B Rect	Typical
78	M78A	N111A	N112A			Standoff Hori...	Beam	SquareTube	A500 Gr.B Rect	Typical
79	M79	N113	N114			RIGID	None	None	RIGID	Typical
80	OVP	N115	N116			Mount Pipe	Column	Pipe	A53 Gr.B	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Ratio Options	Analysis ...	Inactive	Seismi...
1	M4						Yes				None
2	M2		BenPIN				Yes	** NA **			None
3	M3		BenPIN				Yes	** NA **			None
4	M4A						Yes	** NA **			None
5	M5						Yes	** NA **			None
6	M6						Yes	** NA **			None
7	M7						Yes	** NA **			None
8	M8		BenPIN				Yes	** NA **			None
9	M9		BenPIN				Yes	** NA **			None
10	M10						Yes	** NA **			None
11	M11						Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Ratio Options	Analysis ...	Inactive	Seismi...
12	M12						Yes	** NA **			None
13	M13						Yes	** NA **			None
14	M15		BenPIN				Yes	** NA **			None
15	M16		BenPIN				Yes	** NA **			None
16	M17						Yes	** NA **			None
17	M18						Yes	** NA **			None
18	M19						Yes	** NA **			None
19	M20						Yes	** NA **			None
20	M21		BenPIN				Yes	** NA **			None
21	M22		BenPIN				Yes	** NA **			None
22	M23						Yes	** NA **			None
23	M24						Yes	** NA **			None
24	M25						Yes	** NA **			None
25	M26						Yes	** NA **			None
26	M28		BenPIN				Yes	** NA **			None
27	M29		BenPIN				Yes	** NA **			None
28	M30						Yes	** NA **			None
29	M31						Yes	** NA **			None
30	M32						Yes	** NA **			None
31	M33						Yes	** NA **			None
32	M34		BenPIN				Yes	** NA **			None
33	M35		BenPIN				Yes	** NA **			None
34	M36						Yes	** NA **			None
35	M37						Yes	** NA **			None
36	M38						Yes	** NA **			None
37	M39						Yes	** NA **			None
38	M40						Yes				None
39	M41						Yes				None
40	M42						Yes				None
41	M43						Yes	** NA **			None
42	MP1A						Yes	** NA **			None
43	M45						Yes	** NA **			None
44	MP2A						Yes	** NA **			None
45	M47						Yes	** NA **			None
46	MP3A						Yes	** NA **			None
47	M49						Yes	** NA **			None
48	MP4A						Yes	** NA **			None
49	M51						Yes	** NA **			None
50	MP1C						Yes	** NA **			None
51	M53						Yes	** NA **			None
52	MP2C						Yes	** NA **			None
53	M55						Yes	** NA **			None
54	MP3C						Yes	** NA **			None
55	M57						Yes	** NA **			None
56	MP4C						Yes	** NA **			None
57	M59						Yes	** NA **			None
58	MP1B						Yes	** NA **			None
59	M61						Yes	** NA **			None
60	MP2B						Yes	** NA **			None
61	M63						Yes	** NA **			None
62	MP3B						Yes	** NA **			None
63	M65						Yes	** NA **			None
64	MP4B						Yes	** NA **			None
65	M67						Yes	** NA **			None
66	M68						Yes	** NA **			None
67	M69						Yes	** NA **			None
68	M70						Yes	** NA **			None
69	M71						Yes	** NA **			None
70	M72						Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Ratio Options	Analysis ...	Inactive	Seismi...
71	M73						Yes	** NA **			None
72	M74						Yes	** NA **			None
73	M75						Yes	** NA **			None
74	M76						Yes	** NA **			None
75	M77						Yes	** NA **			None
76	M78						Yes	** NA **			None
77	M77A						Yes				None
78	M78A						Yes				None
79	M79						Yes	** NA **			None
80	OVP						Yes	** NA **			None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Y	-20	2
2	MP3A	My	-.017	2
3	MP3A	Mz	-.012	2
4	MP3A	Y	-20	6
5	MP3A	My	-.017	6
6	MP3A	Mz	-.012	6
7	MP3B	Y	-20	2
8	MP3B	My	.014	2
9	MP3B	Mz	-.014	2
10	MP3B	Y	-20	6
11	MP3B	My	.014	6
12	MP3B	Mz	-.014	6
13	MP3C	Y	-20	2
14	MP3C	My	-.009	2
15	MP3C	Mz	.018	2
16	MP3C	Y	-20	6
17	MP3C	My	-.009	6
18	MP3C	Mz	.018	6
19	MP3A	Y	-20	2
20	MP3A	My	-.017	2
21	MP3A	Mz	.012	2
22	MP3A	Y	-20	6
23	MP3A	My	-.017	6
24	MP3A	Mz	.012	6
25	MP3B	Y	-20	2
26	MP3B	My	-.009	2
27	MP3B	Mz	-.018	2
28	MP3B	Y	-20	6
29	MP3B	My	-.009	6
30	MP3B	Mz	-.018	6
31	MP3C	Y	-20	2
32	MP3C	My	.014	2
33	MP3C	Mz	.014	2
34	MP3C	Y	-20	6
35	MP3C	My	.014	6
36	MP3C	Mz	.014	6
37	MP2A	Y	-4.4	4
38	MP2A	My	-.001	4
39	MP2A	Mz	0	4
40	MP2B	Y	-4.4	4
41	MP2B	My	.000191	4
42	MP2B	Mz	-.001	4
43	MP2C	Y	-4.4	4
44	MP2C	My	.000191	4

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
45	MP2C	Mz	.001	4
46	MP1A	Y	-43.55	3
47	MP1A	My	-.036	3
48	MP1A	Mz	0	3
49	MP1A	Y	-43.55	5
50	MP1A	My	-.036	5
51	MP1A	Mz	0	5
52	MP1B	Y	-43.55	3
53	MP1B	My	.006	3
54	MP1B	Mz	-.036	3
55	MP1B	Y	-43.55	5
56	MP1B	My	.006	5
57	MP1B	Mz	-.036	5
58	MP1C	Y	-43.55	3
59	MP1C	My	.006	3
60	MP1C	Mz	.036	3
61	MP1C	Y	-43.55	5
62	MP1C	My	.006	5
63	MP1C	Mz	.036	5
64	MP3A	Y	-84.4	2.5
65	MP3A	My	.042	2.5
66	MP3A	Mz	0	2.5
67	MP3B	Y	-84.4	2.5
68	MP3B	My	-.021	2.5
69	MP3B	Mz	.037	2.5
70	MP3C	Y	-84.4	2.5
71	MP3C	My	-.021	2.5
72	MP3C	Mz	-.037	2.5
73	MP4A	Y	-70.3	2.5
74	MP4A	My	.035	2.5
75	MP4A	Mz	0	2.5
76	MP4B	Y	-70.3	2.5
77	MP4B	My	-.018	2.5
78	MP4B	Mz	.03	2.5
79	MP4C	Y	-70.3	2.5
80	MP4C	My	-.018	2.5
81	MP4C	Mz	-.03	2.5
82	OVP	Y	-32	1
83	OVP	My	0	1
84	OVP	Mz	0	1
85	MP3A	Y	-17.6	5
86	MP3A	My	-.004	5
87	MP3A	Mz	0	5
88	MP3C	Y	-17.6	5
89	MP3C	My	.000764	5
90	MP3C	Mz	.004	5
91	MP3A	Y	-17.6	5
92	MP3A	My	.004	5
93	MP3A	Mz	0	5
94	MP3C	Y	-17.6	5
95	MP3C	My	-.000764	5
96	MP3C	Mz	-.004	5

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Y	-57.567	2
2	MP3A	My	-.048	2
3	MP3A	Mz	-.034	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
4	MP3A	Y	-57.567	6
5	MP3A	My	-.048	6
6	MP3A	Mz	-.034	6
7	MP3B	Y	-57.567	2
8	MP3B	My	.041	2
9	MP3B	Mz	-.041	2
10	MP3B	Y	-57.567	6
11	MP3B	My	.041	6
12	MP3B	Mz	-.041	6
13	MP3C	Y	-57.567	2
14	MP3C	My	-.025	2
15	MP3C	Mz	.053	2
16	MP3C	Y	-57.567	6
17	MP3C	My	-.025	6
18	MP3C	Mz	.053	6
19	MP3A	Y	-57.567	2
20	MP3A	My	-.048	2
21	MP3A	Mz	.034	2
22	MP3A	Y	-57.567	6
23	MP3A	My	-.048	6
24	MP3A	Mz	.034	6
25	MP3B	Y	-57.567	2
26	MP3B	My	-.025	2
27	MP3B	Mz	-.053	2
28	MP3B	Y	-57.567	6
29	MP3B	My	-.025	6
30	MP3B	Mz	-.053	6
31	MP3C	Y	-57.567	2
32	MP3C	My	.041	2
33	MP3C	Mz	.041	2
34	MP3C	Y	-57.567	6
35	MP3C	My	.041	6
36	MP3C	Mz	.041	6
37	MP2A	Y	-12.579	4
38	MP2A	My	-.003	4
39	MP2A	Mz	0	4
40	MP2B	Y	-12.579	4
41	MP2B	My	.000546	4
42	MP2B	Mz	-.003	4
43	MP2C	Y	-12.579	4
44	MP2C	My	.000546	4
45	MP2C	Mz	.003	4
46	MP1A	Y	-33.561	3
47	MP1A	My	-.028	3
48	MP1A	Mz	0	3
49	MP1A	Y	-33.561	5
50	MP1A	My	-.028	5
51	MP1A	Mz	0	5
52	MP1B	Y	-33.561	3
53	MP1B	My	.005	3
54	MP1B	Mz	-.028	3
55	MP1B	Y	-33.561	5
56	MP1B	My	.005	5
57	MP1B	Mz	-.028	5
58	MP1C	Y	-33.561	3
59	MP1C	My	.005	3
60	MP1C	Mz	.028	3
61	MP1C	Y	-33.561	5
62	MP1C	My	.005	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
63	MP1C	Mz	.028	5
64	MP3A	Y	-42.276	2.5
65	MP3A	My	.021	2.5
66	MP3A	Mz	0	2.5
67	MP3B	Y	-42.276	2.5
68	MP3B	My	-.011	2.5
69	MP3B	Mz	.018	2.5
70	MP3C	Y	-42.276	2.5
71	MP3C	My	-.011	2.5
72	MP3C	Mz	-.018	2.5
73	MP4A	Y	-38.003	2.5
74	MP4A	My	.019	2.5
75	MP4A	Mz	0	2.5
76	MP4B	Y	-38.003	2.5
77	MP4B	My	-.01	2.5
78	MP4B	Mz	.016	2.5
79	MP4C	Y	-38.003	2.5
80	MP4C	My	-.01	2.5
81	MP4C	Mz	-.016	2.5
82	OVP	Y	-82.926	1
83	OVP	My	0	1
84	OVP	Mz	0	1
85	MP3A	Y	6.6	5
86	MP3A	My	.002	5
87	MP3A	Mz	0	5
88	MP3C	Y	6.6	5
89	MP3C	My	-.000287	5
90	MP3C	Mz	-.002	5
91	MP3A	Y	6.6	5
92	MP3A	My	-.002	5
93	MP3A	Mz	0	5
94	MP3C	Y	6.6	5
95	MP3C	My	.000287	5
96	MP3C	Mz	.002	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	2
2	MP3A	Z	-104.378	2
3	MP3A	Mx	.061	2
4	MP3A	X	0	6
5	MP3A	Z	-104.378	6
6	MP3A	Mx	.061	6
7	MP3B	X	0	2
8	MP3B	Z	-46.69	2
9	MP3B	Mx	.034	2
10	MP3B	X	0	6
11	MP3B	Z	-46.69	6
12	MP3B	Mx	.034	6
13	MP3C	X	0	2
14	MP3C	Z	-46.69	2
15	MP3C	Mx	-.043	2
16	MP3C	X	0	6
17	MP3C	Z	-46.69	6
18	MP3C	Mx	-.043	6
19	MP3A	X	0	2
20	MP3A	Z	-104.378	2
21	MP3A	Mx	-.061	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
22	MP3A	X	0	6
23	MP3A	Z	-104.378	6
24	MP3A	Mx	-.061	6
25	MP3B	X	0	2
26	MP3B	Z	-46.69	2
27	MP3B	Mx	.043	2
28	MP3B	X	0	6
29	MP3B	Z	-46.69	6
30	MP3B	Mx	.043	6
31	MP3C	X	0	2
32	MP3C	Z	-46.69	2
33	MP3C	Mx	-.034	2
34	MP3C	X	0	6
35	MP3C	Z	-46.69	6
36	MP3C	Mx	-.034	6
37	MP2A	X	0	4
38	MP2A	Z	-33.719	4
39	MP2A	Mx	0	4
40	MP2B	X	0	4
41	MP2B	Z	-7.43	4
42	MP2B	Mx	.002	4
43	MP2C	X	0	4
44	MP2C	Z	-7.43	4
45	MP2C	Mx	-.002	4
46	MP1A	X	0	3
47	MP1A	Z	-74.258	3
48	MP1A	Mx	0	3
49	MP1A	X	0	5
50	MP1A	Z	-74.258	5
51	MP1A	Mx	0	5
52	MP1B	X	0	3
53	MP1B	Z	-27.042	3
54	MP1B	Mx	.022	3
55	MP1B	X	0	5
56	MP1B	Z	-27.042	5
57	MP1B	Mx	.022	5
58	MP1C	X	0	3
59	MP1C	Z	-27.042	3
60	MP1C	Mx	-.022	3
61	MP1C	X	0	5
62	MP1C	Z	-27.042	5
63	MP1C	Mx	-.022	5
64	MP3A	X	0	2.5
65	MP3A	Z	-58.725	2.5
66	MP3A	Mx	0	2.5
67	MP3B	X	0	2.5
68	MP3B	Z	-44.233	2.5
69	MP3B	Mx	-.019	2.5
70	MP3C	X	0	2.5
71	MP3C	Z	-44.233	2.5
72	MP3C	Mx	.019	2.5
73	MP4A	X	0	2.5
74	MP4A	Z	-58.725	2.5
75	MP4A	Mx	0	2.5
76	MP4B	X	0	2.5
77	MP4B	Z	-38.834	2.5
78	MP4B	Mx	-.017	2.5
79	MP4C	X	0	2.5
80	MP4C	Z	-38.834	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
81	MP4C	Mx	.017	2.5
82	OVP	X	0	1
83	OVP	Z	-116.733	1
84	OVP	Mx	0	1
85	MP3A	X	0	5
86	MP3A	Z	-36.371	5
87	MP3A	Mx	0	5
88	MP3C	X	0	5
89	MP3C	Z	-11.796	5
90	MP3C	Mx	-.003	5
91	MP3A	X	0	5
92	MP3A	Z	-36.371	5
93	MP3A	Mx	0	5
94	MP3C	X	0	5
95	MP3C	Z	-11.796	5
96	MP3C	Mx	.003	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	44.754	2
2	MP3A	Z	-77.516	2
3	MP3A	Mx	.008	2
4	MP3A	X	44.754	6
5	MP3A	Z	-77.516	6
6	MP3A	Mx	.008	6
7	MP3B	X	25.927	2
8	MP3B	Z	-44.907	2
9	MP3B	Mx	.051	2
10	MP3B	X	25.927	6
11	MP3B	Z	-44.907	6
12	MP3B	Mx	.051	6
13	MP3C	X	34.736	2
14	MP3C	Z	-60.165	2
15	MP3C	Mx	-.07	2
16	MP3C	X	34.736	6
17	MP3C	Z	-60.165	6
18	MP3C	Mx	-.07	6
19	MP3A	X	44.754	2
20	MP3A	Z	-77.516	2
21	MP3A	Mx	-.083	2
22	MP3A	X	44.754	6
23	MP3A	Z	-77.516	6
24	MP3A	Mx	-.083	6
25	MP3B	X	25.927	2
26	MP3B	Z	-44.907	2
27	MP3B	Mx	.03	2
28	MP3B	X	25.927	6
29	MP3B	Z	-44.907	6
30	MP3B	Mx	.03	6
31	MP3C	X	34.736	2
32	MP3C	Z	-60.165	2
33	MP3C	Mx	-.018	2
34	MP3C	X	34.736	6
35	MP3C	Z	-60.165	6
36	MP3C	Mx	-.018	6
37	MP2A	X	13.471	4
38	MP2A	Z	-23.333	4
39	MP2A	Mx	-.003	4

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
40	MP2B	X	4.892	4
41	MP2B	Z	-8.473	4
42	MP2B	Mx	.002	4
43	MP2C	X	8.906	4
44	MP2C	Z	-15.426	4
45	MP2C	Mx	-.003	4
46	MP1A	X	31.044	3
47	MP1A	Z	-53.769	3
48	MP1A	Mx	-.026	3
49	MP1A	X	31.044	5
50	MP1A	Z	-53.769	5
51	MP1A	Mx	-.026	5
52	MP1B	X	15.634	3
53	MP1B	Z	-27.079	3
54	MP1B	Mx	.024	3
55	MP1B	X	15.634	5
56	MP1B	Z	-27.079	5
57	MP1B	Mx	.024	5
58	MP1C	X	22.844	3
59	MP1C	Z	-39.568	3
60	MP1C	Mx	-.029	3
61	MP1C	X	22.844	5
62	MP1C	Z	-39.568	5
63	MP1C	Mx	-.029	5
64	MP3A	X	26.947	2.5
65	MP3A	Z	-46.674	2.5
66	MP3A	Mx	.013	2.5
67	MP3B	X	19.701	2.5
68	MP3B	Z	-34.123	2.5
69	MP3B	Mx	-.02	2.5
70	MP3C	X	26.947	2.5
71	MP3C	Z	-46.674	2.5
72	MP3C	Mx	.013	2.5
73	MP4A	X	26.047	2.5
74	MP4A	Z	-45.115	2.5
75	MP4A	Mx	.013	2.5
76	MP4B	X	16.102	2.5
77	MP4B	Z	-27.889	2.5
78	MP4B	Mx	-.016	2.5
79	MP4C	X	26.047	2.5
80	MP4C	Z	-45.115	2.5
81	MP4C	Mx	.013	2.5
82	OVP	X	51.602	1
83	OVP	Z	-89.378	1
84	OVP	Mx	0	1
85	MP3A	X	15.018	5
86	MP3A	Z	-26.012	5
87	MP3A	Mx	-.004	5
88	MP3C	X	10.751	5
89	MP3C	Z	-18.621	5
90	MP3C	Mx	-.004	5
91	MP3A	X	15.018	5
92	MP3A	Z	-26.012	5
93	MP3A	Mx	.004	5
94	MP3C	X	10.751	5
95	MP3C	Z	-18.621	5
96	MP3C	Mx	.004	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	51.759	2
2	MP3A	Z	-29.883	2
3	MP3A	Mx	-.026	2
4	MP3A	X	51.759	6
5	MP3A	Z	-29.883	6
6	MP3A	Mx	-.026	6
7	MP3B	X	69.11	2
8	MP3B	Z	-39.901	2
9	MP3B	Mx	.078	2
10	MP3B	X	69.11	6
11	MP3B	Z	-39.901	6
12	MP3B	Mx	.078	6
13	MP3C	X	84.368	2
14	MP3C	Z	-48.71	2
15	MP3C	Mx	-.081	2
16	MP3C	X	84.368	6
17	MP3C	Z	-48.71	6
18	MP3C	Mx	-.081	6
19	MP3A	X	51.759	2
20	MP3A	Z	-29.883	2
21	MP3A	Mx	-.061	2
22	MP3A	X	51.759	6
23	MP3A	Z	-29.883	6
24	MP3A	Mx	-.061	6
25	MP3B	X	69.11	2
26	MP3B	Z	-39.901	2
27	MP3B	Mx	.007	2
28	MP3B	X	69.11	6
29	MP3B	Z	-39.901	6
30	MP3B	Mx	.007	6
31	MP3C	X	84.368	2
32	MP3C	Z	-48.71	2
33	MP3C	Mx	.026	2
34	MP3C	X	84.368	6
35	MP3C	Z	-48.71	6
36	MP3C	Mx	.026	6
37	MP2A	X	11.595	4
38	MP2A	Z	-6.695	4
39	MP2A	Mx	-.003	4
40	MP2B	X	19.502	4
41	MP2B	Z	-11.26	4
42	MP2B	Mx	.004	4
43	MP2C	X	26.456	4
44	MP2C	Z	-15.274	4
45	MP2C	Mx	-.003	4
46	MP1A	X	32.688	3
47	MP1A	Z	-18.872	3
48	MP1A	Mx	-.027	3
49	MP1A	X	32.688	5
50	MP1A	Z	-18.872	5
51	MP1A	Mx	-.027	5
52	MP1B	X	46.889	3
53	MP1B	Z	-27.071	3
54	MP1B	Mx	.029	3
55	MP1B	X	46.889	5
56	MP1B	Z	-27.071	5
57	MP1B	Mx	.029	5
58	MP1C	X	59.377	3
59	MP1C	Z	-34.282	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
60	MP1C	Mx	-.02	3
61	MP1C	X	59.377	5
62	MP1C	Z	-34.282	5
63	MP1C	Mx	-.02	5
64	MP3A	X	38.307	2.5
65	MP3A	Z	-22.116	2.5
66	MP3A	Mx	.019	2.5
67	MP3B	X	38.307	2.5
68	MP3B	Z	-22.116	2.5
69	MP3B	Mx	-.019	2.5
70	MP3C	X	50.857	2.5
71	MP3C	Z	-29.362	2.5
72	MP3C	Mx	0	2.5
73	MP4A	X	33.631	2.5
74	MP4A	Z	-19.417	2.5
75	MP4A	Mx	.017	2.5
76	MP4B	X	33.631	2.5
77	MP4B	Z	-19.417	2.5
78	MP4B	Mx	-.017	2.5
79	MP4C	X	50.857	2.5
80	MP4C	Z	-29.362	2.5
81	MP4C	Mx	0	2.5
82	OVP	X	79.826	1
83	OVP	Z	-46.088	1
84	OVP	Mx	0	1
85	MP3A	X	15.04	5
86	MP3A	Z	-8.683	5
87	MP3A	Mx	-.004	5
88	MP3C	X	28.931	5
89	MP3C	Z	-16.704	5
90	MP3C	Mx	-.003	5
91	MP3A	X	15.04	5
92	MP3A	Z	-8.683	5
93	MP3A	Mx	.004	5
94	MP3C	X	28.931	5
95	MP3C	Z	-16.704	5
96	MP3C	Mx	.003	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	44.896	2
2	MP3A	Z	0	2
3	MP3A	Mx	-.037	2
4	MP3A	X	44.896	6
5	MP3A	Z	0	6
6	MP3A	Mx	-.037	6
7	MP3B	X	102.585	2
8	MP3B	Z	0	2
9	MP3B	Mx	.074	2
10	MP3B	X	102.585	6
11	MP3B	Z	0	6
12	MP3B	Mx	.074	6
13	MP3C	X	102.585	2
14	MP3C	Z	0	2
15	MP3C	Mx	-.044	2
16	MP3C	X	102.585	6
17	MP3C	Z	0	6
18	MP3C	Mx	-.044	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
19	MP3A	X	44.896	2
20	MP3A	Z	0	2
21	MP3A	Mx	-.037	2
22	MP3A	X	44.896	6
23	MP3A	Z	0	6
24	MP3A	Mx	-.037	6
25	MP3B	X	102.585	2
26	MP3B	Z	0	2
27	MP3B	Mx	-.044	2
28	MP3B	X	102.585	6
29	MP3B	Z	0	6
30	MP3B	Mx	-.044	6
31	MP3C	X	102.585	2
32	MP3C	Z	0	2
33	MP3C	Mx	.074	2
34	MP3C	X	102.585	6
35	MP3C	Z	0	6
36	MP3C	Mx	.074	6
37	MP2A	X	6.613	4
38	MP2A	Z	0	4
39	MP2A	Mx	-.002	4
40	MP2B	X	32.902	4
41	MP2B	Z	0	4
42	MP2B	Mx	.001	4
43	MP2C	X	32.902	4
44	MP2C	Z	0	4
45	MP2C	Mx	.001	4
46	MP1A	X	25.574	3
47	MP1A	Z	0	3
48	MP1A	Mx	-.021	3
49	MP1A	X	25.574	5
50	MP1A	Z	0	5
51	MP1A	Mx	-.021	5
52	MP1B	X	72.79	3
53	MP1B	Z	0	3
54	MP1B	Mx	.011	3
55	MP1B	X	72.79	5
56	MP1B	Z	0	5
57	MP1B	Mx	.011	5
58	MP1C	X	72.79	3
59	MP1C	Z	0	3
60	MP1C	Mx	.011	3
61	MP1C	X	72.79	5
62	MP1C	Z	0	5
63	MP1C	Mx	.011	5
64	MP3A	X	39.402	2.5
65	MP3A	Z	0	2.5
66	MP3A	Mx	.02	2.5
67	MP3B	X	53.894	2.5
68	MP3B	Z	0	2.5
69	MP3B	Mx	-.013	2.5
70	MP3C	X	53.894	2.5
71	MP3C	Z	0	2.5
72	MP3C	Mx	-.013	2.5
73	MP4A	X	32.204	2.5
74	MP4A	Z	0	2.5
75	MP4A	Mx	.016	2.5
76	MP4B	X	52.094	2.5
77	MP4B	Z	0	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
78	MP4B	Mx	-.013	2.5
79	MP4C	X	52.094	2.5
80	MP4C	Z	0	2.5
81	MP4C	Mx	-.013	2.5
82	OVP	X	94.676	1
83	OVP	Z	0	1
84	OVP	Mx	0	1
85	MP3A	X	11.032	5
86	MP3A	Z	0	5
87	MP3A	Mx	-.003	5
88	MP3C	X	35.607	5
89	MP3C	Z	0	5
90	MP3C	Mx	.002	5
91	MP3A	X	11.032	5
92	MP3A	Z	0	5
93	MP3A	Mx	.003	5
94	MP3C	X	35.607	5
95	MP3C	Z	0	5
96	MP3C	Mx	-.002	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	51.759	2
2	MP3A	Z	29.883	2
3	MP3A	Mx	-.061	2
4	MP3A	X	51.759	6
5	MP3A	Z	29.883	6
6	MP3A	Mx	-.061	6
7	MP3B	X	84.368	2
8	MP3B	Z	48.71	2
9	MP3B	Mx	.026	2
10	MP3B	X	84.368	6
11	MP3B	Z	48.71	6
12	MP3B	Mx	.026	6
13	MP3C	X	69.11	2
14	MP3C	Z	39.901	2
15	MP3C	Mx	.007	2
16	MP3C	X	69.11	6
17	MP3C	Z	39.901	6
18	MP3C	Mx	.007	6
19	MP3A	X	51.759	2
20	MP3A	Z	29.883	2
21	MP3A	Mx	-.026	2
22	MP3A	X	51.759	6
23	MP3A	Z	29.883	6
24	MP3A	Mx	-.026	6
25	MP3B	X	84.368	2
26	MP3B	Z	48.71	2
27	MP3B	Mx	-.081	2
28	MP3B	X	84.368	6
29	MP3B	Z	48.71	6
30	MP3B	Mx	-.081	6
31	MP3C	X	69.11	2
32	MP3C	Z	39.901	2
33	MP3C	Mx	.078	2
34	MP3C	X	69.11	6
35	MP3C	Z	39.901	6
36	MP3C	Mx	.078	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
37	MP2A	X	11.595	4
38	MP2A	Z	6.695	4
39	MP2A	Mx	-.003	4
40	MP2B	X	26.456	4
41	MP2B	Z	15.274	4
42	MP2B	Mx	-.003	4
43	MP2C	X	19.502	4
44	MP2C	Z	11.26	4
45	MP2C	Mx	.004	4
46	MP1A	X	32.688	3
47	MP1A	Z	18.872	3
48	MP1A	Mx	-.027	3
49	MP1A	X	32.688	5
50	MP1A	Z	18.872	5
51	MP1A	Mx	-.027	5
52	MP1B	X	59.377	3
53	MP1B	Z	34.282	3
54	MP1B	Mx	-.02	3
55	MP1B	X	59.377	5
56	MP1B	Z	34.282	5
57	MP1B	Mx	-.02	5
58	MP1C	X	46.889	3
59	MP1C	Z	27.071	3
60	MP1C	Mx	.029	3
61	MP1C	X	46.889	5
62	MP1C	Z	27.071	5
63	MP1C	Mx	.029	5
64	MP3A	X	38.307	2.5
65	MP3A	Z	22.116	2.5
66	MP3A	Mx	.019	2.5
67	MP3B	X	50.857	2.5
68	MP3B	Z	29.362	2.5
69	MP3B	Mx	0	2.5
70	MP3C	X	38.307	2.5
71	MP3C	Z	22.116	2.5
72	MP3C	Mx	-.019	2.5
73	MP4A	X	33.631	2.5
74	MP4A	Z	19.417	2.5
75	MP4A	Mx	.017	2.5
76	MP4B	X	50.857	2.5
77	MP4B	Z	29.362	2.5
78	MP4B	Mx	0	2.5
79	MP4C	X	33.631	2.5
80	MP4C	Z	19.417	2.5
81	MP4C	Mx	-.017	2.5
82	OVP	X	93.708	1
83	OVP	Z	54.102	1
84	OVP	Mx	0	1
85	MP3A	X	15.04	5
86	MP3A	Z	8.683	5
87	MP3A	Mx	-.004	5
88	MP3C	X	22.431	5
89	MP3C	Z	12.951	5
90	MP3C	Mx	.004	5
91	MP3A	X	15.04	5
92	MP3A	Z	8.683	5
93	MP3A	Mx	.004	5
94	MP3C	X	22.431	5
95	MP3C	Z	12.951	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
96	MP3C	Mx	-.004	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	44.754	2
2	MP3A	Z	77.516	2
3	MP3A	Mx	-.083	2
4	MP3A	X	44.754	6
5	MP3A	Z	77.516	6
6	MP3A	Mx	-.083	6
7	MP3B	X	34.736	2
8	MP3B	Z	60.165	2
9	MP3B	Mx	-.018	2
10	MP3B	X	34.736	6
11	MP3B	Z	60.165	6
12	MP3B	Mx	-.018	6
13	MP3C	X	25.927	2
14	MP3C	Z	44.907	2
15	MP3C	Mx	.03	2
16	MP3C	X	25.927	6
17	MP3C	Z	44.907	6
18	MP3C	Mx	.03	6
19	MP3A	X	44.754	2
20	MP3A	Z	77.516	2
21	MP3A	Mx	.008	2
22	MP3A	X	44.754	6
23	MP3A	Z	77.516	6
24	MP3A	Mx	.008	6
25	MP3B	X	34.736	2
26	MP3B	Z	60.165	2
27	MP3B	Mx	-.07	2
28	MP3B	X	34.736	6
29	MP3B	Z	60.165	6
30	MP3B	Mx	-.07	6
31	MP3C	X	25.927	2
32	MP3C	Z	44.907	2
33	MP3C	Mx	.051	2
34	MP3C	X	25.927	6
35	MP3C	Z	44.907	6
36	MP3C	Mx	.051	6
37	MP2A	X	13.471	4
38	MP2A	Z	23.333	4
39	MP2A	Mx	-.003	4
40	MP2B	X	8.906	4
41	MP2B	Z	15.426	4
42	MP2B	Mx	-.003	4
43	MP2C	X	4.892	4
44	MP2C	Z	8.473	4
45	MP2C	Mx	.002	4
46	MP1A	X	31.044	3
47	MP1A	Z	53.769	3
48	MP1A	Mx	-.026	3
49	MP1A	X	31.044	5
50	MP1A	Z	53.769	5
51	MP1A	Mx	-.026	5
52	MP1B	X	22.844	3
53	MP1B	Z	39.568	3
54	MP1B	Mx	-.029	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
55	MP1B	X	22.844	5
56	MP1B	Z	39.568	5
57	MP1B	Mx	-.029	5
58	MP1C	X	15.634	3
59	MP1C	Z	27.079	3
60	MP1C	Mx	.024	3
61	MP1C	X	15.634	5
62	MP1C	Z	27.079	5
63	MP1C	Mx	.024	5
64	MP3A	X	26.947	2.5
65	MP3A	Z	46.674	2.5
66	MP3A	Mx	.013	2.5
67	MP3B	X	26.947	2.5
68	MP3B	Z	46.674	2.5
69	MP3B	Mx	.013	2.5
70	MP3C	X	19.701	2.5
71	MP3C	Z	34.123	2.5
72	MP3C	Mx	-.02	2.5
73	MP4A	X	26.047	2.5
74	MP4A	Z	45.115	2.5
75	MP4A	Mx	.013	2.5
76	MP4B	X	26.047	2.5
77	MP4B	Z	45.115	2.5
78	MP4B	Mx	.013	2.5
79	MP4C	X	16.102	2.5
80	MP4C	Z	27.889	2.5
81	MP4C	Mx	-.016	2.5
82	OVP	X	59.617	1
83	OVP	Z	103.259	1
84	OVP	Mx	0	1
85	MP3A	X	15.018	5
86	MP3A	Z	26.012	5
87	MP3A	Mx	-.004	5
88	MP3C	X	6.998	5
89	MP3C	Z	12.121	5
90	MP3C	Mx	.003	5
91	MP3A	X	15.018	5
92	MP3A	Z	26.012	5
93	MP3A	Mx	.004	5
94	MP3C	X	6.998	5
95	MP3C	Z	12.121	5
96	MP3C	Mx	-.003	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	2
2	MP3A	Z	104.378	2
3	MP3A	Mx	-.061	2
4	MP3A	X	0	6
5	MP3A	Z	104.378	6
6	MP3A	Mx	-.061	6
7	MP3B	X	0	2
8	MP3B	Z	46.69	2
9	MP3B	Mx	-.034	2
10	MP3B	X	0	6
11	MP3B	Z	46.69	6
12	MP3B	Mx	-.034	6
13	MP3C	X	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
14	MP3C	Z	46.69	2
15	MP3C	Mx	.043	2
16	MP3C	X	0	6
17	MP3C	Z	46.69	6
18	MP3C	Mx	.043	6
19	MP3A	X	0	2
20	MP3A	Z	104.378	2
21	MP3A	Mx	.061	2
22	MP3A	X	0	6
23	MP3A	Z	104.378	6
24	MP3A	Mx	.061	6
25	MP3B	X	0	2
26	MP3B	Z	46.69	2
27	MP3B	Mx	-.043	2
28	MP3B	X	0	6
29	MP3B	Z	46.69	6
30	MP3B	Mx	-.043	6
31	MP3C	X	0	2
32	MP3C	Z	46.69	2
33	MP3C	Mx	.034	2
34	MP3C	X	0	6
35	MP3C	Z	46.69	6
36	MP3C	Mx	.034	6
37	MP2A	X	0	4
38	MP2A	Z	33.719	4
39	MP2A	Mx	0	4
40	MP2B	X	0	4
41	MP2B	Z	7.43	4
42	MP2B	Mx	-.002	4
43	MP2C	X	0	4
44	MP2C	Z	7.43	4
45	MP2C	Mx	.002	4
46	MP1A	X	0	3
47	MP1A	Z	74.258	3
48	MP1A	Mx	0	3
49	MP1A	X	0	5
50	MP1A	Z	74.258	5
51	MP1A	Mx	0	5
52	MP1B	X	0	3
53	MP1B	Z	27.042	3
54	MP1B	Mx	-.022	3
55	MP1B	X	0	5
56	MP1B	Z	27.042	5
57	MP1B	Mx	-.022	5
58	MP1C	X	0	3
59	MP1C	Z	27.042	3
60	MP1C	Mx	.022	3
61	MP1C	X	0	5
62	MP1C	Z	27.042	5
63	MP1C	Mx	.022	5
64	MP3A	X	0	2.5
65	MP3A	Z	58.725	2.5
66	MP3A	Mx	0	2.5
67	MP3B	X	0	2.5
68	MP3B	Z	44.233	2.5
69	MP3B	Mx	.019	2.5
70	MP3C	X	0	2.5
71	MP3C	Z	44.233	2.5
72	MP3C	Mx	-.019	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
73	MP4A	X	0	2.5
74	MP4A	Z	58.725	2.5
75	MP4A	Mx	0	2.5
76	MP4B	X	0	2.5
77	MP4B	Z	38.834	2.5
78	MP4B	Mx	.017	2.5
79	MP4C	X	0	2.5
80	MP4C	Z	38.834	2.5
81	MP4C	Mx	-.017	2.5
82	OVP	X	0	1
83	OVP	Z	116.733	1
84	OVP	Mx	0	1
85	MP3A	X	0	5
86	MP3A	Z	36.371	5
87	MP3A	Mx	0	5
88	MP3C	X	0	5
89	MP3C	Z	11.796	5
90	MP3C	Mx	.003	5
91	MP3A	X	0	5
92	MP3A	Z	36.371	5
93	MP3A	Mx	0	5
94	MP3C	X	0	5
95	MP3C	Z	11.796	5
96	MP3C	Mx	-.003	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-44.754	2
2	MP3A	Z	77.516	2
3	MP3A	Mx	-.008	2
4	MP3A	X	-44.754	6
5	MP3A	Z	77.516	6
6	MP3A	Mx	-.008	6
7	MP3B	X	-25.927	2
8	MP3B	Z	44.907	2
9	MP3B	Mx	-.051	2
10	MP3B	X	-25.927	6
11	MP3B	Z	44.907	6
12	MP3B	Mx	-.051	6
13	MP3C	X	-34.736	2
14	MP3C	Z	60.165	2
15	MP3C	Mx	.07	2
16	MP3C	X	-34.736	6
17	MP3C	Z	60.165	6
18	MP3C	Mx	.07	6
19	MP3A	X	-44.754	2
20	MP3A	Z	77.516	2
21	MP3A	Mx	.083	2
22	MP3A	X	-44.754	6
23	MP3A	Z	77.516	6
24	MP3A	Mx	.083	6
25	MP3B	X	-25.927	2
26	MP3B	Z	44.907	2
27	MP3B	Mx	-.03	2
28	MP3B	X	-25.927	6
29	MP3B	Z	44.907	6
30	MP3B	Mx	-.03	6
31	MP3C	X	-34.736	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
32	MP3C	Z	60.165	2
33	MP3C	Mx	.018	2
34	MP3C	X	-34.736	6
35	MP3C	Z	60.165	6
36	MP3C	Mx	.018	6
37	MP2A	X	-13.471	4
38	MP2A	Z	23.333	4
39	MP2A	Mx	.003	4
40	MP2B	X	-4.892	4
41	MP2B	Z	8.473	4
42	MP2B	Mx	-.002	4
43	MP2C	X	-8.906	4
44	MP2C	Z	15.426	4
45	MP2C	Mx	.003	4
46	MP1A	X	-31.044	3
47	MP1A	Z	53.769	3
48	MP1A	Mx	.026	3
49	MP1A	X	-31.044	5
50	MP1A	Z	53.769	5
51	MP1A	Mx	.026	5
52	MP1B	X	-15.634	3
53	MP1B	Z	27.079	3
54	MP1B	Mx	-.024	3
55	MP1B	X	-15.634	5
56	MP1B	Z	27.079	5
57	MP1B	Mx	-.024	5
58	MP1C	X	-22.844	3
59	MP1C	Z	39.568	3
60	MP1C	Mx	.029	3
61	MP1C	X	-22.844	5
62	MP1C	Z	39.568	5
63	MP1C	Mx	.029	5
64	MP3A	X	-26.947	2.5
65	MP3A	Z	46.674	2.5
66	MP3A	Mx	-.013	2.5
67	MP3B	X	-19.701	2.5
68	MP3B	Z	34.123	2.5
69	MP3B	Mx	.02	2.5
70	MP3C	X	-26.947	2.5
71	MP3C	Z	46.674	2.5
72	MP3C	Mx	-.013	2.5
73	MP4A	X	-26.047	2.5
74	MP4A	Z	45.115	2.5
75	MP4A	Mx	-.013	2.5
76	MP4B	X	-16.102	2.5
77	MP4B	Z	27.889	2.5
78	MP4B	Mx	.016	2.5
79	MP4C	X	-26.047	2.5
80	MP4C	Z	45.115	2.5
81	MP4C	Mx	-.013	2.5
82	OVP	X	-51.602	1
83	OVP	Z	89.378	1
84	OVP	Mx	0	1
85	MP3A	X	-15.018	5
86	MP3A	Z	26.012	5
87	MP3A	Mx	.004	5
88	MP3C	X	-10.751	5
89	MP3C	Z	18.621	5
90	MP3C	Mx	.004	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
91	MP3A	X	-15.018	5
92	MP3A	Z	26.012	5
93	MP3A	Mx	-.004	5
94	MP3C	X	-10.751	5
95	MP3C	Z	18.621	5
96	MP3C	Mx	-.004	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-51.759	2
2	MP3A	Z	29.883	2
3	MP3A	Mx	.026	2
4	MP3A	X	-51.759	6
5	MP3A	Z	29.883	6
6	MP3A	Mx	.026	6
7	MP3B	X	-69.11	2
8	MP3B	Z	39.901	2
9	MP3B	Mx	-.078	2
10	MP3B	X	-69.11	6
11	MP3B	Z	39.901	6
12	MP3B	Mx	-.078	6
13	MP3C	X	-84.368	2
14	MP3C	Z	48.71	2
15	MP3C	Mx	.081	2
16	MP3C	X	-84.368	6
17	MP3C	Z	48.71	6
18	MP3C	Mx	.081	6
19	MP3A	X	-51.759	2
20	MP3A	Z	29.883	2
21	MP3A	Mx	.061	2
22	MP3A	X	-51.759	6
23	MP3A	Z	29.883	6
24	MP3A	Mx	.061	6
25	MP3B	X	-69.11	2
26	MP3B	Z	39.901	2
27	MP3B	Mx	-.007	2
28	MP3B	X	-69.11	6
29	MP3B	Z	39.901	6
30	MP3B	Mx	-.007	6
31	MP3C	X	-84.368	2
32	MP3C	Z	48.71	2
33	MP3C	Mx	-.026	2
34	MP3C	X	-84.368	6
35	MP3C	Z	48.71	6
36	MP3C	Mx	-.026	6
37	MP2A	X	-11.595	4
38	MP2A	Z	6.695	4
39	MP2A	Mx	.003	4
40	MP2B	X	-19.502	4
41	MP2B	Z	11.26	4
42	MP2B	Mx	-.004	4
43	MP2C	X	-26.456	4
44	MP2C	Z	15.274	4
45	MP2C	Mx	.003	4
46	MP1A	X	-32.688	3
47	MP1A	Z	18.872	3
48	MP1A	Mx	.027	3
49	MP1A	X	-32.688	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
50	MP1A	Z	18.872	5
51	MP1A	Mx	.027	5
52	MP1B	X	-46.889	3
53	MP1B	Z	27.071	3
54	MP1B	Mx	-.029	3
55	MP1B	X	-46.889	5
56	MP1B	Z	27.071	5
57	MP1B	Mx	-.029	5
58	MP1C	X	-59.377	3
59	MP1C	Z	34.282	3
60	MP1C	Mx	.02	3
61	MP1C	X	-59.377	5
62	MP1C	Z	34.282	5
63	MP1C	Mx	.02	5
64	MP3A	X	-38.307	2.5
65	MP3A	Z	22.116	2.5
66	MP3A	Mx	-.019	2.5
67	MP3B	X	-38.307	2.5
68	MP3B	Z	22.116	2.5
69	MP3B	Mx	.019	2.5
70	MP3C	X	-50.857	2.5
71	MP3C	Z	29.362	2.5
72	MP3C	Mx	0	2.5
73	MP4A	X	-33.631	2.5
74	MP4A	Z	19.417	2.5
75	MP4A	Mx	-.017	2.5
76	MP4B	X	-33.631	2.5
77	MP4B	Z	19.417	2.5
78	MP4B	Mx	.017	2.5
79	MP4C	X	-50.857	2.5
80	MP4C	Z	29.362	2.5
81	MP4C	Mx	0	2.5
82	OVP	X	-79.826	1
83	OVP	Z	46.088	1
84	OVP	Mx	0	1
85	MP3A	X	-15.04	5
86	MP3A	Z	8.683	5
87	MP3A	Mx	.004	5
88	MP3C	X	-28.931	5
89	MP3C	Z	16.704	5
90	MP3C	Mx	.003	5
91	MP3A	X	-15.04	5
92	MP3A	Z	8.683	5
93	MP3A	Mx	-.004	5
94	MP3C	X	-28.931	5
95	MP3C	Z	16.704	5
96	MP3C	Mx	-.003	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-44.896	2
2	MP3A	Z	0	2
3	MP3A	Mx	.037	2
4	MP3A	X	-44.896	6
5	MP3A	Z	0	6
6	MP3A	Mx	.037	6
7	MP3B	X	-102.585	2
8	MP3B	Z	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
9	MP3B	Mx	-.074	2
10	MP3B	X	-102.585	6
11	MP3B	Z	0	6
12	MP3B	Mx	-.074	6
13	MP3C	X	-102.585	2
14	MP3C	Z	0	2
15	MP3C	Mx	.044	2
16	MP3C	X	-102.585	6
17	MP3C	Z	0	6
18	MP3C	Mx	.044	6
19	MP3A	X	-44.896	2
20	MP3A	Z	0	2
21	MP3A	Mx	.037	2
22	MP3A	X	-44.896	6
23	MP3A	Z	0	6
24	MP3A	Mx	.037	6
25	MP3B	X	-102.585	2
26	MP3B	Z	0	2
27	MP3B	Mx	.044	2
28	MP3B	X	-102.585	6
29	MP3B	Z	0	6
30	MP3B	Mx	.044	6
31	MP3C	X	-102.585	2
32	MP3C	Z	0	2
33	MP3C	Mx	-.074	2
34	MP3C	X	-102.585	6
35	MP3C	Z	0	6
36	MP3C	Mx	-.074	6
37	MP2A	X	-6.613	4
38	MP2A	Z	0	4
39	MP2A	Mx	.002	4
40	MP2B	X	-32.902	4
41	MP2B	Z	0	4
42	MP2B	Mx	-.001	4
43	MP2C	X	-32.902	4
44	MP2C	Z	0	4
45	MP2C	Mx	-.001	4
46	MP1A	X	-25.574	3
47	MP1A	Z	0	3
48	MP1A	Mx	.021	3
49	MP1A	X	-25.574	5
50	MP1A	Z	0	5
51	MP1A	Mx	.021	5
52	MP1B	X	-72.79	3
53	MP1B	Z	0	3
54	MP1B	Mx	-.011	3
55	MP1B	X	-72.79	5
56	MP1B	Z	0	5
57	MP1B	Mx	-.011	5
58	MP1C	X	-72.79	3
59	MP1C	Z	0	3
60	MP1C	Mx	-.011	3
61	MP1C	X	-72.79	5
62	MP1C	Z	0	5
63	MP1C	Mx	-.011	5
64	MP3A	X	-39.402	2.5
65	MP3A	Z	0	2.5
66	MP3A	Mx	-.02	2.5
67	MP3B	X	-53.894	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
68	MP3B	Z	0	2.5
69	MP3B	Mx	.013	2.5
70	MP3C	X	-53.894	2.5
71	MP3C	Z	0	2.5
72	MP3C	Mx	.013	2.5
73	MP4A	X	-32.204	2.5
74	MP4A	Z	0	2.5
75	MP4A	Mx	-.016	2.5
76	MP4B	X	-52.094	2.5
77	MP4B	Z	0	2.5
78	MP4B	Mx	.013	2.5
79	MP4C	X	-52.094	2.5
80	MP4C	Z	0	2.5
81	MP4C	Mx	.013	2.5
82	OVP	X	-94.676	1
83	OVP	Z	0	1
84	OVP	Mx	0	1
85	MP3A	X	-11.032	5
86	MP3A	Z	0	5
87	MP3A	Mx	.003	5
88	MP3C	X	-35.607	5
89	MP3C	Z	0	5
90	MP3C	Mx	-.002	5
91	MP3A	X	-11.032	5
92	MP3A	Z	0	5
93	MP3A	Mx	-.003	5
94	MP3C	X	-35.607	5
95	MP3C	Z	0	5
96	MP3C	Mx	.002	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-51.759	2
2	MP3A	Z	-29.883	2
3	MP3A	Mx	.061	2
4	MP3A	X	-51.759	6
5	MP3A	Z	-29.883	6
6	MP3A	Mx	.061	6
7	MP3B	X	-84.368	2
8	MP3B	Z	-48.71	2
9	MP3B	Mx	-.026	2
10	MP3B	X	-84.368	6
11	MP3B	Z	-48.71	6
12	MP3B	Mx	-.026	6
13	MP3C	X	-69.11	2
14	MP3C	Z	-39.901	2
15	MP3C	Mx	-.007	2
16	MP3C	X	-69.11	6
17	MP3C	Z	-39.901	6
18	MP3C	Mx	-.007	6
19	MP3A	X	-51.759	2
20	MP3A	Z	-29.883	2
21	MP3A	Mx	.026	2
22	MP3A	X	-51.759	6
23	MP3A	Z	-29.883	6
24	MP3A	Mx	.026	6
25	MP3B	X	-84.368	2
26	MP3B	Z	-48.71	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
27	MP3B	Mx	.081	2
28	MP3B	X	-84.368	6
29	MP3B	Z	-48.71	6
30	MP3B	Mx	.081	6
31	MP3C	X	-69.11	2
32	MP3C	Z	-39.901	2
33	MP3C	Mx	-.078	2
34	MP3C	X	-69.11	6
35	MP3C	Z	-39.901	6
36	MP3C	Mx	-.078	6
37	MP2A	X	-11.595	4
38	MP2A	Z	-6.695	4
39	MP2A	Mx	.003	4
40	MP2B	X	-26.456	4
41	MP2B	Z	-15.274	4
42	MP2B	Mx	.003	4
43	MP2C	X	-19.502	4
44	MP2C	Z	-11.26	4
45	MP2C	Mx	-.004	4
46	MP1A	X	-32.688	3
47	MP1A	Z	-18.872	3
48	MP1A	Mx	.027	3
49	MP1A	X	-32.688	5
50	MP1A	Z	-18.872	5
51	MP1A	Mx	.027	5
52	MP1B	X	-59.377	3
53	MP1B	Z	-34.282	3
54	MP1B	Mx	.02	3
55	MP1B	X	-59.377	5
56	MP1B	Z	-34.282	5
57	MP1B	Mx	.02	5
58	MP1C	X	-46.889	3
59	MP1C	Z	-27.071	3
60	MP1C	Mx	-.029	3
61	MP1C	X	-46.889	5
62	MP1C	Z	-27.071	5
63	MP1C	Mx	-.029	5
64	MP3A	X	-38.307	2.5
65	MP3A	Z	-22.116	2.5
66	MP3A	Mx	-.019	2.5
67	MP3B	X	-50.857	2.5
68	MP3B	Z	-29.362	2.5
69	MP3B	Mx	0	2.5
70	MP3C	X	-38.307	2.5
71	MP3C	Z	-22.116	2.5
72	MP3C	Mx	.019	2.5
73	MP4A	X	-33.631	2.5
74	MP4A	Z	-19.417	2.5
75	MP4A	Mx	-.017	2.5
76	MP4B	X	-50.857	2.5
77	MP4B	Z	-29.362	2.5
78	MP4B	Mx	0	2.5
79	MP4C	X	-33.631	2.5
80	MP4C	Z	-19.417	2.5
81	MP4C	Mx	.017	2.5
82	OVP	X	-93.708	1
83	OVP	Z	-54.102	1
84	OVP	Mx	0	1
85	MP3A	X	-15.04	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
86	MP3A	Z	-8.683	5
87	MP3A	Mx	.004	5
88	MP3C	X	-22.431	5
89	MP3C	Z	-12.951	5
90	MP3C	Mx	-.004	5
91	MP3A	X	-15.04	5
92	MP3A	Z	-8.683	5
93	MP3A	Mx	-.004	5
94	MP3C	X	-22.431	5
95	MP3C	Z	-12.951	5
96	MP3C	Mx	.004	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-44.754	2
2	MP3A	Z	-77.516	2
3	MP3A	Mx	.083	2
4	MP3A	X	-44.754	6
5	MP3A	Z	-77.516	6
6	MP3A	Mx	.083	6
7	MP3B	X	-34.736	2
8	MP3B	Z	-60.165	2
9	MP3B	Mx	.018	2
10	MP3B	X	-34.736	6
11	MP3B	Z	-60.165	6
12	MP3B	Mx	.018	6
13	MP3C	X	-25.927	2
14	MP3C	Z	-44.907	2
15	MP3C	Mx	-.03	2
16	MP3C	X	-25.927	6
17	MP3C	Z	-44.907	6
18	MP3C	Mx	-.03	6
19	MP3A	X	-44.754	2
20	MP3A	Z	-77.516	2
21	MP3A	Mx	-.008	2
22	MP3A	X	-44.754	6
23	MP3A	Z	-77.516	6
24	MP3A	Mx	-.008	6
25	MP3B	X	-34.736	2
26	MP3B	Z	-60.165	2
27	MP3B	Mx	.07	2
28	MP3B	X	-34.736	6
29	MP3B	Z	-60.165	6
30	MP3B	Mx	.07	6
31	MP3C	X	-25.927	2
32	MP3C	Z	-44.907	2
33	MP3C	Mx	-.051	2
34	MP3C	X	-25.927	6
35	MP3C	Z	-44.907	6
36	MP3C	Mx	-.051	6
37	MP2A	X	-13.471	4
38	MP2A	Z	-23.333	4
39	MP2A	Mx	.003	4
40	MP2B	X	-8.906	4
41	MP2B	Z	-15.426	4
42	MP2B	Mx	.003	4
43	MP2C	X	-4.892	4
44	MP2C	Z	-8.473	4

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
45	MP2C	Mx	-.002	4
46	MP1A	X	-31.044	3
47	MP1A	Z	-53.769	3
48	MP1A	Mx	.026	3
49	MP1A	X	-31.044	5
50	MP1A	Z	-53.769	5
51	MP1A	Mx	.026	5
52	MP1B	X	-22.844	3
53	MP1B	Z	-39.568	3
54	MP1B	Mx	.029	3
55	MP1B	X	-22.844	5
56	MP1B	Z	-39.568	5
57	MP1B	Mx	.029	5
58	MP1C	X	-15.634	3
59	MP1C	Z	-27.079	3
60	MP1C	Mx	-.024	3
61	MP1C	X	-15.634	5
62	MP1C	Z	-27.079	5
63	MP1C	Mx	-.024	5
64	MP3A	X	-26.947	2.5
65	MP3A	Z	-46.674	2.5
66	MP3A	Mx	-.013	2.5
67	MP3B	X	-26.947	2.5
68	MP3B	Z	-46.674	2.5
69	MP3B	Mx	-.013	2.5
70	MP3C	X	-19.701	2.5
71	MP3C	Z	-34.123	2.5
72	MP3C	Mx	.02	2.5
73	MP4A	X	-26.047	2.5
74	MP4A	Z	-45.115	2.5
75	MP4A	Mx	-.013	2.5
76	MP4B	X	-26.047	2.5
77	MP4B	Z	-45.115	2.5
78	MP4B	Mx	-.013	2.5
79	MP4C	X	-16.102	2.5
80	MP4C	Z	-27.889	2.5
81	MP4C	Mx	.016	2.5
82	OVP	X	-59.617	1
83	OVP	Z	-103.259	1
84	OVP	Mx	0	1
85	MP3A	X	-15.018	5
86	MP3A	Z	-26.012	5
87	MP3A	Mx	.004	5
88	MP3C	X	-6.998	5
89	MP3C	Z	-12.121	5
90	MP3C	Mx	-.003	5
91	MP3A	X	-15.018	5
92	MP3A	Z	-26.012	5
93	MP3A	Mx	-.004	5
94	MP3C	X	-6.998	5
95	MP3C	Z	-12.121	5
96	MP3C	Mx	.003	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	2
2	MP3A	Z	-29.443	2
3	MP3A	Mx	.017	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
4	MP3A	X	0	6
5	MP3A	Z	-29.443	6
6	MP3A	Mx	.017	6
7	MP3B	X	0	2
8	MP3B	Z	-20.54	2
9	MP3B	Mx	.015	2
10	MP3B	X	0	6
11	MP3B	Z	-20.54	6
12	MP3B	Mx	.015	6
13	MP3C	X	0	2
14	MP3C	Z	-20.54	2
15	MP3C	Mx	-.019	2
16	MP3C	X	0	6
17	MP3C	Z	-20.54	6
18	MP3C	Mx	-.019	6
19	MP3A	X	0	2
20	MP3A	Z	-29.443	2
21	MP3A	Mx	-.017	2
22	MP3A	X	0	6
23	MP3A	Z	-29.443	6
24	MP3A	Mx	-.017	6
25	MP3B	X	0	2
26	MP3B	Z	-20.54	2
27	MP3B	Mx	.019	2
28	MP3B	X	0	6
29	MP3B	Z	-20.54	6
30	MP3B	Mx	.019	6
31	MP3C	X	0	2
32	MP3C	Z	-20.54	2
33	MP3C	Mx	-.015	2
34	MP3C	X	0	6
35	MP3C	Z	-20.54	6
36	MP3C	Mx	-.015	6
37	MP2A	X	0	4
38	MP2A	Z	-7.488	4
39	MP2A	Mx	0	4
40	MP2B	X	0	4
41	MP2B	Z	-2.324	4
42	MP2B	Mx	.000572	4
43	MP2C	X	0	4
44	MP2C	Z	-2.324	4
45	MP2C	Mx	-.000572	4
46	MP1A	X	0	3
47	MP1A	Z	-17.355	3
48	MP1A	Mx	0	3
49	MP1A	X	0	5
50	MP1A	Z	-17.355	5
51	MP1A	Mx	0	5
52	MP1B	X	0	3
53	MP1B	Z	-7.661	3
54	MP1B	Mx	.006	3
55	MP1B	X	0	5
56	MP1B	Z	-7.661	5
57	MP1B	Mx	.006	5
58	MP1C	X	0	3
59	MP1C	Z	-7.661	3
60	MP1C	Mx	-.006	3
61	MP1C	X	0	5
62	MP1C	Z	-7.661	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
63	MP1C	Mx	-.006	5
64	MP3A	X	0	2.5
65	MP3A	Z	-14.585	2.5
66	MP3A	Mx	0	2.5
67	MP3B	X	0	2.5
68	MP3B	Z	-11.239	2.5
69	MP3B	Mx	-.005	2.5
70	MP3C	X	0	2.5
71	MP3C	Z	-11.239	2.5
72	MP3C	Mx	.005	2.5
73	MP4A	X	0	2.5
74	MP4A	Z	-14.585	2.5
75	MP4A	Mx	0	2.5
76	MP4B	X	0	2.5
77	MP4B	Z	-9.968	2.5
78	MP4B	Mx	-.004	2.5
79	MP4C	X	0	2.5
80	MP4C	Z	-9.968	2.5
81	MP4C	Mx	.004	2.5
82	OVP	X	0	1
83	OVP	Z	-29.282	1
84	OVP	Mx	0	1
85	MP3A	X	0	5
86	MP3A	Z	-7.99	5
87	MP3A	Mx	0	5
88	MP3C	X	0	5
89	MP3C	Z	-3.129	5
90	MP3C	Mx	-.00077	5
91	MP3A	X	0	5
92	MP3A	Z	-7.99	5
93	MP3A	Mx	0	5
94	MP3C	X	0	5
95	MP3C	Z	-3.129	5
96	MP3C	Mx	.00077	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	13.574	2
2	MP3A	Z	-23.511	2
3	MP3A	Mx	.002	2
4	MP3A	X	13.574	6
5	MP3A	Z	-23.511	6
6	MP3A	Mx	.002	6
7	MP3B	X	10.669	2
8	MP3B	Z	-18.479	2
9	MP3B	Mx	.021	2
10	MP3B	X	10.669	6
11	MP3B	Z	-18.479	6
12	MP3B	Mx	.021	6
13	MP3C	X	12.028	2
14	MP3C	Z	-20.833	2
15	MP3C	Mx	-.024	2
16	MP3C	X	12.028	6
17	MP3C	Z	-20.833	6
18	MP3C	Mx	-.024	6
19	MP3A	X	13.574	2
20	MP3A	Z	-23.511	2
21	MP3A	Mx	-.025	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
22	MP3A	X	13.574	6
23	MP3A	Z	-23.511	6
24	MP3A	Mx	-.025	6
25	MP3B	X	10.669	2
26	MP3B	Z	-18.479	2
27	MP3B	Mx	.012	2
28	MP3B	X	10.669	6
29	MP3B	Z	-18.479	6
30	MP3B	Mx	.012	6
31	MP3C	X	12.028	2
32	MP3C	Z	-20.833	2
33	MP3C	Mx	-.006	2
34	MP3C	X	12.028	6
35	MP3C	Z	-20.833	6
36	MP3C	Mx	-.006	6
37	MP2A	X	3.078	4
38	MP2A	Z	-5.332	4
39	MP2A	Mx	-.00077	4
40	MP2B	X	1.393	4
41	MP2B	Z	-2.413	4
42	MP2B	Mx	.000655	4
43	MP2C	X	2.182	4
44	MP2C	Z	-3.779	4
45	MP2C	Mx	-.000836	4
46	MP1A	X	7.428	3
47	MP1A	Z	-12.866	3
48	MP1A	Mx	-.006	3
49	MP1A	X	7.428	5
50	MP1A	Z	-12.866	5
51	MP1A	Mx	-.006	5
52	MP1B	X	4.264	3
53	MP1B	Z	-7.386	3
54	MP1B	Mx	.007	3
55	MP1B	X	4.264	5
56	MP1B	Z	-7.386	5
57	MP1B	Mx	.007	5
58	MP1C	X	5.745	3
59	MP1C	Z	-9.95	3
60	MP1C	Mx	-.007	3
61	MP1C	X	5.745	5
62	MP1C	Z	-9.95	5
63	MP1C	Mx	-.007	5
64	MP3A	X	6.735	2.5
65	MP3A	Z	-11.665	2.5
66	MP3A	Mx	.003	2.5
67	MP3B	X	5.062	2.5
68	MP3B	Z	-8.768	2.5
69	MP3B	Mx	-.005	2.5
70	MP3C	X	6.735	2.5
71	MP3C	Z	-11.665	2.5
72	MP3C	Mx	.003	2.5
73	MP4A	X	6.523	2.5
74	MP4A	Z	-11.298	2.5
75	MP4A	Mx	.003	2.5
76	MP4B	X	4.214	2.5
77	MP4B	Z	-7.3	2.5
78	MP4B	Mx	-.004	2.5
79	MP4C	X	6.523	2.5
80	MP4C	Z	-11.298	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
81	MP4C	Mx	.003	2.5
82	OVP	X	13.095	1
83	OVP	Z	-22.682	1
84	OVP	Mx	0	1
85	MP3A	X	3.369	5
86	MP3A	Z	-5.835	5
87	MP3A	Mx	-.000842	5
88	MP3C	X	2.524	5
89	MP3C	Z	-4.372	5
90	MP3C	Mx	-.000967	5
91	MP3A	X	3.369	5
92	MP3A	Z	-5.835	5
93	MP3A	Mx	.000842	5
94	MP3C	X	2.524	5
95	MP3C	Z	-4.372	5
96	MP3C	Mx	.000967	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	19.536	2
2	MP3A	Z	-11.279	2
3	MP3A	Mx	-.01	2
4	MP3A	X	19.536	6
5	MP3A	Z	-11.279	6
6	MP3A	Mx	-.01	6
7	MP3B	X	22.214	2
8	MP3B	Z	-12.825	2
9	MP3B	Mx	.025	2
10	MP3B	X	22.214	6
11	MP3B	Z	-12.825	6
12	MP3B	Mx	.025	6
13	MP3C	X	24.569	2
14	MP3C	Z	-14.185	2
15	MP3C	Mx	-.024	2
16	MP3C	X	24.569	6
17	MP3C	Z	-14.185	6
18	MP3C	Mx	-.024	6
19	MP3A	X	19.536	2
20	MP3A	Z	-11.279	2
21	MP3A	Mx	-.023	2
22	MP3A	X	19.536	6
23	MP3A	Z	-11.279	6
24	MP3A	Mx	-.023	6
25	MP3B	X	22.214	2
26	MP3B	Z	-12.825	2
27	MP3B	Mx	.002	2
28	MP3B	X	22.214	6
29	MP3B	Z	-12.825	6
30	MP3B	Mx	.002	6
31	MP3C	X	24.569	2
32	MP3C	Z	-14.185	2
33	MP3C	Mx	.007	2
34	MP3C	X	24.569	6
35	MP3C	Z	-14.185	6
36	MP3C	Mx	.007	6
37	MP2A	X	3.026	4
38	MP2A	Z	-1.747	4
39	MP2A	Mx	-.000756	4

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
40	MP2B	X	4.579	4
41	MP2B	Z	-2.644	4
42	MP2B	Mx	.00085	4
43	MP2C	X	5.945	4
44	MP2C	Z	-3.432	4
45	MP2C	Mx	-.000587	4
46	MP1A	X	8.538	3
47	MP1A	Z	-4.929	3
48	MP1A	Mx	-.007	3
49	MP1A	X	8.538	5
50	MP1A	Z	-4.929	5
51	MP1A	Mx	-.007	5
52	MP1B	X	11.453	3
53	MP1B	Z	-6.613	3
54	MP1B	Mx	.007	3
55	MP1B	X	11.453	5
56	MP1B	Z	-6.613	5
57	MP1B	Mx	.007	5
58	MP1C	X	14.017	3
59	MP1C	Z	-8.093	3
60	MP1C	Mx	-.005	3
61	MP1C	X	14.017	5
62	MP1C	Z	-8.093	5
63	MP1C	Mx	-.005	5
64	MP3A	X	9.733	2.5
65	MP3A	Z	-5.62	2.5
66	MP3A	Mx	.005	2.5
67	MP3B	X	9.733	2.5
68	MP3B	Z	-5.62	2.5
69	MP3B	Mx	-.005	2.5
70	MP3C	X	12.631	2.5
71	MP3C	Z	-7.292	2.5
72	MP3C	Mx	0	2.5
73	MP4A	X	8.632	2.5
74	MP4A	Z	-4.984	2.5
75	MP4A	Mx	.004	2.5
76	MP4B	X	8.632	2.5
77	MP4B	Z	-4.984	2.5
78	MP4B	Mx	-.004	2.5
79	MP4C	X	12.631	2.5
80	MP4C	Z	-7.292	2.5
81	MP4C	Mx	0	2.5
82	OVP	X	20.499	1
83	OVP	Z	-11.835	1
84	OVP	Mx	0	1
85	MP3A	X	3.664	5
86	MP3A	Z	-2.115	5
87	MP3A	Mx	-.000916	5
88	MP3C	X	6.412	5
89	MP3C	Z	-3.702	5
90	MP3C	Mx	-.000633	5
91	MP3A	X	3.664	5
92	MP3A	Z	-2.115	5
93	MP3A	Mx	.000916	5
94	MP3C	X	6.412	5
95	MP3C	Z	-3.702	5
96	MP3C	Mx	.000633	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	20.264	2
2	MP3A	Z	0	2
3	MP3A	Mx	-.017	2
4	MP3A	X	20.264	6
5	MP3A	Z	0	6
6	MP3A	Mx	-.017	6
7	MP3B	X	29.166	2
8	MP3B	Z	0	2
9	MP3B	Mx	.021	2
10	MP3B	X	29.166	6
11	MP3B	Z	0	6
12	MP3B	Mx	.021	6
13	MP3C	X	29.166	2
14	MP3C	Z	0	2
15	MP3C	Mx	-.013	2
16	MP3C	X	29.166	6
17	MP3C	Z	0	6
18	MP3C	Mx	-.013	6
19	MP3A	X	20.264	2
20	MP3A	Z	0	2
21	MP3A	Mx	-.017	2
22	MP3A	X	20.264	6
23	MP3A	Z	0	6
24	MP3A	Mx	-.017	6
25	MP3B	X	29.166	2
26	MP3B	Z	0	2
27	MP3B	Mx	-.013	2
28	MP3B	X	29.166	6
29	MP3B	Z	0	6
30	MP3B	Mx	-.013	6
31	MP3C	X	29.166	2
32	MP3C	Z	0	2
33	MP3C	Mx	.021	2
34	MP3C	X	29.166	6
35	MP3C	Z	0	6
36	MP3C	Mx	.021	6
37	MP2A	X	2.163	4
38	MP2A	Z	0	4
39	MP2A	Mx	-.000541	4
40	MP2B	X	7.327	4
41	MP2B	Z	0	4
42	MP2B	Mx	.000318	4
43	MP2C	X	7.327	4
44	MP2C	Z	0	4
45	MP2C	Mx	.000318	4
46	MP1A	X	7.36	3
47	MP1A	Z	0	3
48	MP1A	Mx	-.006	3
49	MP1A	X	7.36	5
50	MP1A	Z	0	5
51	MP1A	Mx	-.006	5
52	MP1B	X	17.054	3
53	MP1B	Z	0	3
54	MP1B	Mx	.002	3
55	MP1B	X	17.054	5
56	MP1B	Z	0	5
57	MP1B	Mx	.002	5
58	MP1C	X	17.054	3
59	MP1C	Z	0	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
60	MP1C	Mx	.002	3
61	MP1C	X	17.054	5
62	MP1C	Z	0	5
63	MP1C	Mx	.002	5
64	MP3A	X	10.124	2.5
65	MP3A	Z	0	2.5
66	MP3A	Mx	.005	2.5
67	MP3B	X	13.47	2.5
68	MP3B	Z	0	2.5
69	MP3B	Mx	-.003	2.5
70	MP3C	X	13.47	2.5
71	MP3C	Z	0	2.5
72	MP3C	Mx	-.003	2.5
73	MP4A	X	8.429	2.5
74	MP4A	Z	0	2.5
75	MP4A	Mx	.004	2.5
76	MP4B	X	13.046	2.5
77	MP4B	Z	0	2.5
78	MP4B	Mx	-.003	2.5
79	MP4C	X	13.046	2.5
80	MP4C	Z	0	2.5
81	MP4C	Mx	-.003	2.5
82	OVP	X	24.242	1
83	OVP	Z	0	1
84	OVP	Mx	0	1
85	MP3A	X	2.978	5
86	MP3A	Z	0	5
87	MP3A	Mx	-.000744	5
88	MP3C	X	7.839	5
89	MP3C	Z	0	5
90	MP3C	Mx	.00034	5
91	MP3A	X	2.978	5
92	MP3A	Z	0	5
93	MP3A	Mx	.000744	5
94	MP3C	X	7.839	5
95	MP3C	Z	0	5
96	MP3C	Mx	-.00034	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	19.536	2
2	MP3A	Z	11.279	2
3	MP3A	Mx	-.023	2
4	MP3A	X	19.536	6
5	MP3A	Z	11.279	6
6	MP3A	Mx	-.023	6
7	MP3B	X	24.569	2
8	MP3B	Z	14.185	2
9	MP3B	Mx	.007	2
10	MP3B	X	24.569	6
11	MP3B	Z	14.185	6
12	MP3B	Mx	.007	6
13	MP3C	X	22.214	2
14	MP3C	Z	12.825	2
15	MP3C	Mx	.002	2
16	MP3C	X	22.214	6
17	MP3C	Z	12.825	6
18	MP3C	Mx	.002	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
19	MP3A	X	19.536	2
20	MP3A	Z	11.279	2
21	MP3A	Mx	-.01	2
22	MP3A	X	19.536	6
23	MP3A	Z	11.279	6
24	MP3A	Mx	-.01	6
25	MP3B	X	24.569	2
26	MP3B	Z	14.185	2
27	MP3B	Mx	-.024	2
28	MP3B	X	24.569	6
29	MP3B	Z	14.185	6
30	MP3B	Mx	-.024	6
31	MP3C	X	22.214	2
32	MP3C	Z	12.825	2
33	MP3C	Mx	.025	2
34	MP3C	X	22.214	6
35	MP3C	Z	12.825	6
36	MP3C	Mx	.025	6
37	MP2A	X	3.026	4
38	MP2A	Z	1.747	4
39	MP2A	Mx	-.000756	4
40	MP2B	X	5.945	4
41	MP2B	Z	3.432	4
42	MP2B	Mx	-.000587	4
43	MP2C	X	4.579	4
44	MP2C	Z	2.644	4
45	MP2C	Mx	.00085	4
46	MP1A	X	8.538	3
47	MP1A	Z	4.929	3
48	MP1A	Mx	-.007	3
49	MP1A	X	8.538	5
50	MP1A	Z	4.929	5
51	MP1A	Mx	-.007	5
52	MP1B	X	14.017	3
53	MP1B	Z	8.093	3
54	MP1B	Mx	-.005	3
55	MP1B	X	14.017	5
56	MP1B	Z	8.093	5
57	MP1B	Mx	-.005	5
58	MP1C	X	11.453	3
59	MP1C	Z	6.613	3
60	MP1C	Mx	.007	3
61	MP1C	X	11.453	5
62	MP1C	Z	6.613	5
63	MP1C	Mx	.007	5
64	MP3A	X	9.733	2.5
65	MP3A	Z	5.62	2.5
66	MP3A	Mx	.005	2.5
67	MP3B	X	12.631	2.5
68	MP3B	Z	7.292	2.5
69	MP3B	Mx	0	2.5
70	MP3C	X	9.733	2.5
71	MP3C	Z	5.62	2.5
72	MP3C	Mx	-.005	2.5
73	MP4A	X	8.632	2.5
74	MP4A	Z	4.984	2.5
75	MP4A	Mx	.004	2.5
76	MP4B	X	12.631	2.5
77	MP4B	Z	7.292	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
78	MP4B	Mx	0	2.5
79	MP4C	X	8.632	2.5
80	MP4C	Z	4.984	2.5
81	MP4C	Mx	-.004	2.5
82	OVP	X	23.671	1
83	OVP	Z	13.667	1
84	OVP	Mx	0	1
85	MP3A	X	3.664	5
86	MP3A	Z	2.115	5
87	MP3A	Mx	-.000916	5
88	MP3C	X	5.126	5
89	MP3C	Z	2.96	5
90	MP3C	Mx	.000951	5
91	MP3A	X	3.664	5
92	MP3A	Z	2.115	5
93	MP3A	Mx	.000916	5
94	MP3C	X	5.126	5
95	MP3C	Z	2.96	5
96	MP3C	Mx	-.000951	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	13.574	2
2	MP3A	Z	23.511	2
3	MP3A	Mx	-.025	2
4	MP3A	X	13.574	6
5	MP3A	Z	23.511	6
6	MP3A	Mx	-.025	6
7	MP3B	X	12.028	2
8	MP3B	Z	20.833	2
9	MP3B	Mx	-.006	2
10	MP3B	X	12.028	6
11	MP3B	Z	20.833	6
12	MP3B	Mx	-.006	6
13	MP3C	X	10.669	2
14	MP3C	Z	18.479	2
15	MP3C	Mx	.012	2
16	MP3C	X	10.669	6
17	MP3C	Z	18.479	6
18	MP3C	Mx	.012	6
19	MP3A	X	13.574	2
20	MP3A	Z	23.511	2
21	MP3A	Mx	.002	2
22	MP3A	X	13.574	6
23	MP3A	Z	23.511	6
24	MP3A	Mx	.002	6
25	MP3B	X	12.028	2
26	MP3B	Z	20.833	2
27	MP3B	Mx	-.024	2
28	MP3B	X	12.028	6
29	MP3B	Z	20.833	6
30	MP3B	Mx	-.024	6
31	MP3C	X	10.669	2
32	MP3C	Z	18.479	2
33	MP3C	Mx	.021	2
34	MP3C	X	10.669	6
35	MP3C	Z	18.479	6
36	MP3C	Mx	.021	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
37	MP2A	X	3.078	4
38	MP2A	Z	5.332	4
39	MP2A	Mx	-.00077	4
40	MP2B	X	2.182	4
41	MP2B	Z	3.779	4
42	MP2B	Mx	-.000836	4
43	MP2C	X	1.393	4
44	MP2C	Z	2.413	4
45	MP2C	Mx	.000655	4
46	MP1A	X	7.428	3
47	MP1A	Z	12.866	3
48	MP1A	Mx	-.006	3
49	MP1A	X	7.428	5
50	MP1A	Z	12.866	5
51	MP1A	Mx	-.006	5
52	MP1B	X	5.745	3
53	MP1B	Z	9.95	3
54	MP1B	Mx	-.007	3
55	MP1B	X	5.745	5
56	MP1B	Z	9.95	5
57	MP1B	Mx	-.007	5
58	MP1C	X	4.264	3
59	MP1C	Z	7.386	3
60	MP1C	Mx	.007	3
61	MP1C	X	4.264	5
62	MP1C	Z	7.386	5
63	MP1C	Mx	.007	5
64	MP3A	X	6.735	2.5
65	MP3A	Z	11.665	2.5
66	MP3A	Mx	.003	2.5
67	MP3B	X	6.735	2.5
68	MP3B	Z	11.665	2.5
69	MP3B	Mx	.003	2.5
70	MP3C	X	5.062	2.5
71	MP3C	Z	8.768	2.5
72	MP3C	Mx	-.005	2.5
73	MP4A	X	6.523	2.5
74	MP4A	Z	11.298	2.5
75	MP4A	Mx	.003	2.5
76	MP4B	X	6.523	2.5
77	MP4B	Z	11.298	2.5
78	MP4B	Mx	.003	2.5
79	MP4C	X	4.214	2.5
80	MP4C	Z	7.3	2.5
81	MP4C	Mx	-.004	2.5
82	OVP	X	14.926	1
83	OVP	Z	25.853	1
84	OVP	Mx	0	1
85	MP3A	X	3.369	5
86	MP3A	Z	5.835	5
87	MP3A	Mx	-.000842	5
88	MP3C	X	1.782	5
89	MP3C	Z	3.087	5
90	MP3C	Mx	.000837	5
91	MP3A	X	3.369	5
92	MP3A	Z	5.835	5
93	MP3A	Mx	.000842	5
94	MP3C	X	1.782	5
95	MP3C	Z	3.087	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
96	MP3C	Mx	-.000837	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	2
2	MP3A	Z	29.443	2
3	MP3A	Mx	-.017	2
4	MP3A	X	0	6
5	MP3A	Z	29.443	6
6	MP3A	Mx	-.017	6
7	MP3B	X	0	2
8	MP3B	Z	20.54	2
9	MP3B	Mx	-.015	2
10	MP3B	X	0	6
11	MP3B	Z	20.54	6
12	MP3B	Mx	-.015	6
13	MP3C	X	0	2
14	MP3C	Z	20.54	2
15	MP3C	Mx	.019	2
16	MP3C	X	0	6
17	MP3C	Z	20.54	6
18	MP3C	Mx	.019	6
19	MP3A	X	0	2
20	MP3A	Z	29.443	2
21	MP3A	Mx	.017	2
22	MP3A	X	0	6
23	MP3A	Z	29.443	6
24	MP3A	Mx	.017	6
25	MP3B	X	0	2
26	MP3B	Z	20.54	2
27	MP3B	Mx	-.019	2
28	MP3B	X	0	6
29	MP3B	Z	20.54	6
30	MP3B	Mx	-.019	6
31	MP3C	X	0	2
32	MP3C	Z	20.54	2
33	MP3C	Mx	.015	2
34	MP3C	X	0	6
35	MP3C	Z	20.54	6
36	MP3C	Mx	.015	6
37	MP2A	X	0	4
38	MP2A	Z	7.488	4
39	MP2A	Mx	0	4
40	MP2B	X	0	4
41	MP2B	Z	2.324	4
42	MP2B	Mx	-.000572	4
43	MP2C	X	0	4
44	MP2C	Z	2.324	4
45	MP2C	Mx	.000572	4
46	MP1A	X	0	3
47	MP1A	Z	17.355	3
48	MP1A	Mx	0	3
49	MP1A	X	0	5
50	MP1A	Z	17.355	5
51	MP1A	Mx	0	5
52	MP1B	X	0	3
53	MP1B	Z	7.661	3
54	MP1B	Mx	-.006	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
55	MP1B	X	0	5
56	MP1B	Z	7.661	5
57	MP1B	Mx	-.006	5
58	MP1C	X	0	3
59	MP1C	Z	7.661	3
60	MP1C	Mx	.006	3
61	MP1C	X	0	5
62	MP1C	Z	7.661	5
63	MP1C	Mx	.006	5
64	MP3A	X	0	2.5
65	MP3A	Z	14.585	2.5
66	MP3A	Mx	0	2.5
67	MP3B	X	0	2.5
68	MP3B	Z	11.239	2.5
69	MP3B	Mx	.005	2.5
70	MP3C	X	0	2.5
71	MP3C	Z	11.239	2.5
72	MP3C	Mx	-.005	2.5
73	MP4A	X	0	2.5
74	MP4A	Z	14.585	2.5
75	MP4A	Mx	0	2.5
76	MP4B	X	0	2.5
77	MP4B	Z	9.968	2.5
78	MP4B	Mx	.004	2.5
79	MP4C	X	0	2.5
80	MP4C	Z	9.968	2.5
81	MP4C	Mx	-.004	2.5
82	OVP	X	0	1
83	OVP	Z	29.282	1
84	OVP	Mx	0	1
85	MP3A	X	0	5
86	MP3A	Z	7.99	5
87	MP3A	Mx	0	5
88	MP3C	X	0	5
89	MP3C	Z	3.129	5
90	MP3C	Mx	.00077	5
91	MP3A	X	0	5
92	MP3A	Z	7.99	5
93	MP3A	Mx	0	5
94	MP3C	X	0	5
95	MP3C	Z	3.129	5
96	MP3C	Mx	-.00077	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-13.574	2
2	MP3A	Z	23.511	2
3	MP3A	Mx	-.002	2
4	MP3A	X	-13.574	6
5	MP3A	Z	23.511	6
6	MP3A	Mx	-.002	6
7	MP3B	X	-10.669	2
8	MP3B	Z	18.479	2
9	MP3B	Mx	-.021	2
10	MP3B	X	-10.669	6
11	MP3B	Z	18.479	6
12	MP3B	Mx	-.021	6
13	MP3C	X	-12.028	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
14	MP3C	Z	20.833	2
15	MP3C	Mx	.024	2
16	MP3C	X	-12.028	6
17	MP3C	Z	20.833	6
18	MP3C	Mx	.024	6
19	MP3A	X	-13.574	2
20	MP3A	Z	23.511	2
21	MP3A	Mx	.025	2
22	MP3A	X	-13.574	6
23	MP3A	Z	23.511	6
24	MP3A	Mx	.025	6
25	MP3B	X	-10.669	2
26	MP3B	Z	18.479	2
27	MP3B	Mx	-.012	2
28	MP3B	X	-10.669	6
29	MP3B	Z	18.479	6
30	MP3B	Mx	-.012	6
31	MP3C	X	-12.028	2
32	MP3C	Z	20.833	2
33	MP3C	Mx	.006	2
34	MP3C	X	-12.028	6
35	MP3C	Z	20.833	6
36	MP3C	Mx	.006	6
37	MP2A	X	-3.078	4
38	MP2A	Z	5.332	4
39	MP2A	Mx	.00077	4
40	MP2B	X	-1.393	4
41	MP2B	Z	2.413	4
42	MP2B	Mx	-.000655	4
43	MP2C	X	-2.182	4
44	MP2C	Z	3.779	4
45	MP2C	Mx	.000836	4
46	MP1A	X	-7.428	3
47	MP1A	Z	12.866	3
48	MP1A	Mx	.006	3
49	MP1A	X	-7.428	5
50	MP1A	Z	12.866	5
51	MP1A	Mx	.006	5
52	MP1B	X	-4.264	3
53	MP1B	Z	7.386	3
54	MP1B	Mx	-.007	3
55	MP1B	X	-4.264	5
56	MP1B	Z	7.386	5
57	MP1B	Mx	-.007	5
58	MP1C	X	-5.745	3
59	MP1C	Z	9.95	3
60	MP1C	Mx	.007	3
61	MP1C	X	-5.745	5
62	MP1C	Z	9.95	5
63	MP1C	Mx	.007	5
64	MP3A	X	-6.735	2.5
65	MP3A	Z	11.665	2.5
66	MP3A	Mx	-.003	2.5
67	MP3B	X	-5.062	2.5
68	MP3B	Z	8.768	2.5
69	MP3B	Mx	.005	2.5
70	MP3C	X	-6.735	2.5
71	MP3C	Z	11.665	2.5
72	MP3C	Mx	-.003	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
73	MP4A	X	-6.523	2.5
74	MP4A	Z	11.298	2.5
75	MP4A	Mx	-.003	2.5
76	MP4B	X	-4.214	2.5
77	MP4B	Z	7.3	2.5
78	MP4B	Mx	.004	2.5
79	MP4C	X	-6.523	2.5
80	MP4C	Z	11.298	2.5
81	MP4C	Mx	-.003	2.5
82	OVP	X	-13.095	1
83	OVP	Z	22.682	1
84	OVP	Mx	0	1
85	MP3A	X	-3.369	5
86	MP3A	Z	5.835	5
87	MP3A	Mx	.000842	5
88	MP3C	X	-2.524	5
89	MP3C	Z	4.372	5
90	MP3C	Mx	.000967	5
91	MP3A	X	-3.369	5
92	MP3A	Z	5.835	5
93	MP3A	Mx	-.000842	5
94	MP3C	X	-2.524	5
95	MP3C	Z	4.372	5
96	MP3C	Mx	-.000967	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-19.536	2
2	MP3A	Z	11.279	2
3	MP3A	Mx	.01	2
4	MP3A	X	-19.536	6
5	MP3A	Z	11.279	6
6	MP3A	Mx	.01	6
7	MP3B	X	-22.214	2
8	MP3B	Z	12.825	2
9	MP3B	Mx	-.025	2
10	MP3B	X	-22.214	6
11	MP3B	Z	12.825	6
12	MP3B	Mx	-.025	6
13	MP3C	X	-24.569	2
14	MP3C	Z	14.185	2
15	MP3C	Mx	.024	2
16	MP3C	X	-24.569	6
17	MP3C	Z	14.185	6
18	MP3C	Mx	.024	6
19	MP3A	X	-19.536	2
20	MP3A	Z	11.279	2
21	MP3A	Mx	.023	2
22	MP3A	X	-19.536	6
23	MP3A	Z	11.279	6
24	MP3A	Mx	.023	6
25	MP3B	X	-22.214	2
26	MP3B	Z	12.825	2
27	MP3B	Mx	-.002	2
28	MP3B	X	-22.214	6
29	MP3B	Z	12.825	6
30	MP3B	Mx	-.002	6
31	MP3C	X	-24.569	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
32	MP3C	Z	14.185	2
33	MP3C	Mx	-.007	2
34	MP3C	X	-24.569	6
35	MP3C	Z	14.185	6
36	MP3C	Mx	-.007	6
37	MP2A	X	-3.026	4
38	MP2A	Z	1.747	4
39	MP2A	Mx	.000756	4
40	MP2B	X	-4.579	4
41	MP2B	Z	2.644	4
42	MP2B	Mx	-.00085	4
43	MP2C	X	-5.945	4
44	MP2C	Z	3.432	4
45	MP2C	Mx	.000587	4
46	MP1A	X	-8.538	3
47	MP1A	Z	4.929	3
48	MP1A	Mx	.007	3
49	MP1A	X	-8.538	5
50	MP1A	Z	4.929	5
51	MP1A	Mx	.007	5
52	MP1B	X	-11.453	3
53	MP1B	Z	6.613	3
54	MP1B	Mx	-.007	3
55	MP1B	X	-11.453	5
56	MP1B	Z	6.613	5
57	MP1B	Mx	-.007	5
58	MP1C	X	-14.017	3
59	MP1C	Z	8.093	3
60	MP1C	Mx	.005	3
61	MP1C	X	-14.017	5
62	MP1C	Z	8.093	5
63	MP1C	Mx	.005	5
64	MP3A	X	-9.733	2.5
65	MP3A	Z	5.62	2.5
66	MP3A	Mx	-.005	2.5
67	MP3B	X	-9.733	2.5
68	MP3B	Z	5.62	2.5
69	MP3B	Mx	.005	2.5
70	MP3C	X	-12.631	2.5
71	MP3C	Z	7.292	2.5
72	MP3C	Mx	0	2.5
73	MP4A	X	-8.632	2.5
74	MP4A	Z	4.984	2.5
75	MP4A	Mx	-.004	2.5
76	MP4B	X	-8.632	2.5
77	MP4B	Z	4.984	2.5
78	MP4B	Mx	.004	2.5
79	MP4C	X	-12.631	2.5
80	MP4C	Z	7.292	2.5
81	MP4C	Mx	0	2.5
82	OVP	X	-20.499	1
83	OVP	Z	11.835	1
84	OVP	Mx	0	1
85	MP3A	X	-3.664	5
86	MP3A	Z	2.115	5
87	MP3A	Mx	.000916	5
88	MP3C	X	-6.412	5
89	MP3C	Z	3.702	5
90	MP3C	Mx	.000633	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
91	MP3A	X	-3.664	5
92	MP3A	Z	2.115	5
93	MP3A	Mx	-.000916	5
94	MP3C	X	-6.412	5
95	MP3C	Z	3.702	5
96	MP3C	Mx	-.000633	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-20.264	2
2	MP3A	Z	0	2
3	MP3A	Mx	.017	2
4	MP3A	X	-20.264	6
5	MP3A	Z	0	6
6	MP3A	Mx	.017	6
7	MP3B	X	-29.166	2
8	MP3B	Z	0	2
9	MP3B	Mx	-.021	2
10	MP3B	X	-29.166	6
11	MP3B	Z	0	6
12	MP3B	Mx	-.021	6
13	MP3C	X	-29.166	2
14	MP3C	Z	0	2
15	MP3C	Mx	.013	2
16	MP3C	X	-29.166	6
17	MP3C	Z	0	6
18	MP3C	Mx	.013	6
19	MP3A	X	-20.264	2
20	MP3A	Z	0	2
21	MP3A	Mx	.017	2
22	MP3A	X	-20.264	6
23	MP3A	Z	0	6
24	MP3A	Mx	.017	6
25	MP3B	X	-29.166	2
26	MP3B	Z	0	2
27	MP3B	Mx	.013	2
28	MP3B	X	-29.166	6
29	MP3B	Z	0	6
30	MP3B	Mx	.013	6
31	MP3C	X	-29.166	2
32	MP3C	Z	0	2
33	MP3C	Mx	-.021	2
34	MP3C	X	-29.166	6
35	MP3C	Z	0	6
36	MP3C	Mx	-.021	6
37	MP2A	X	-2.163	4
38	MP2A	Z	0	4
39	MP2A	Mx	.000541	4
40	MP2B	X	-7.327	4
41	MP2B	Z	0	4
42	MP2B	Mx	-.000318	4
43	MP2C	X	-7.327	4
44	MP2C	Z	0	4
45	MP2C	Mx	-.000318	4
46	MP1A	X	-7.36	3
47	MP1A	Z	0	3
48	MP1A	Mx	.006	3
49	MP1A	X	-7.36	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
50	MP1A	Z	0	5
51	MP1A	Mx	.006	5
52	MP1B	X	-17.054	3
53	MP1B	Z	0	3
54	MP1B	Mx	-.002	3
55	MP1B	X	-17.054	5
56	MP1B	Z	0	5
57	MP1B	Mx	-.002	5
58	MP1C	X	-17.054	3
59	MP1C	Z	0	3
60	MP1C	Mx	-.002	3
61	MP1C	X	-17.054	5
62	MP1C	Z	0	5
63	MP1C	Mx	-.002	5
64	MP3A	X	-10.124	2.5
65	MP3A	Z	0	2.5
66	MP3A	Mx	-.005	2.5
67	MP3B	X	-13.47	2.5
68	MP3B	Z	0	2.5
69	MP3B	Mx	.003	2.5
70	MP3C	X	-13.47	2.5
71	MP3C	Z	0	2.5
72	MP3C	Mx	.003	2.5
73	MP4A	X	-8.429	2.5
74	MP4A	Z	0	2.5
75	MP4A	Mx	-.004	2.5
76	MP4B	X	-13.046	2.5
77	MP4B	Z	0	2.5
78	MP4B	Mx	.003	2.5
79	MP4C	X	-13.046	2.5
80	MP4C	Z	0	2.5
81	MP4C	Mx	.003	2.5
82	OVP	X	-24.242	1
83	OVP	Z	0	1
84	OVP	Mx	0	1
85	MP3A	X	-2.978	5
86	MP3A	Z	0	5
87	MP3A	Mx	.000744	5
88	MP3C	X	-7.839	5
89	MP3C	Z	0	5
90	MP3C	Mx	-.00034	5
91	MP3A	X	-2.978	5
92	MP3A	Z	0	5
93	MP3A	Mx	-.000744	5
94	MP3C	X	-7.839	5
95	MP3C	Z	0	5
96	MP3C	Mx	.00034	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-19.536	2
2	MP3A	Z	-11.279	2
3	MP3A	Mx	.023	2
4	MP3A	X	-19.536	6
5	MP3A	Z	-11.279	6
6	MP3A	Mx	.023	6
7	MP3B	X	-24.569	2
8	MP3B	Z	-14.185	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
9	MP3B	Mx	-.007	2
10	MP3B	X	-24.569	6
11	MP3B	Z	-14.185	6
12	MP3B	Mx	-.007	6
13	MP3C	X	-22.214	2
14	MP3C	Z	-12.825	2
15	MP3C	Mx	-.002	2
16	MP3C	X	-22.214	6
17	MP3C	Z	-12.825	6
18	MP3C	Mx	-.002	6
19	MP3A	X	-19.536	2
20	MP3A	Z	-11.279	2
21	MP3A	Mx	.01	2
22	MP3A	X	-19.536	6
23	MP3A	Z	-11.279	6
24	MP3A	Mx	.01	6
25	MP3B	X	-24.569	2
26	MP3B	Z	-14.185	2
27	MP3B	Mx	.024	2
28	MP3B	X	-24.569	6
29	MP3B	Z	-14.185	6
30	MP3B	Mx	.024	6
31	MP3C	X	-22.214	2
32	MP3C	Z	-12.825	2
33	MP3C	Mx	-.025	2
34	MP3C	X	-22.214	6
35	MP3C	Z	-12.825	6
36	MP3C	Mx	-.025	6
37	MP2A	X	-3.026	4
38	MP2A	Z	-1.747	4
39	MP2A	Mx	.000756	4
40	MP2B	X	-5.945	4
41	MP2B	Z	-3.432	4
42	MP2B	Mx	.000587	4
43	MP2C	X	-4.579	4
44	MP2C	Z	-2.644	4
45	MP2C	Mx	-.00085	4
46	MP1A	X	-8.538	3
47	MP1A	Z	-4.929	3
48	MP1A	Mx	.007	3
49	MP1A	X	-8.538	5
50	MP1A	Z	-4.929	5
51	MP1A	Mx	.007	5
52	MP1B	X	-14.017	3
53	MP1B	Z	-8.093	3
54	MP1B	Mx	.005	3
55	MP1B	X	-14.017	5
56	MP1B	Z	-8.093	5
57	MP1B	Mx	.005	5
58	MP1C	X	-11.453	3
59	MP1C	Z	-6.613	3
60	MP1C	Mx	-.007	3
61	MP1C	X	-11.453	5
62	MP1C	Z	-6.613	5
63	MP1C	Mx	-.007	5
64	MP3A	X	-9.733	2.5
65	MP3A	Z	-5.62	2.5
66	MP3A	Mx	-.005	2.5
67	MP3B	X	-12.631	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
68	MP3B	Z	-7.292	2.5
69	MP3B	Mx	0	2.5
70	MP3C	X	-9.733	2.5
71	MP3C	Z	-5.62	2.5
72	MP3C	Mx	.005	2.5
73	MP4A	X	-8.632	2.5
74	MP4A	Z	-4.984	2.5
75	MP4A	Mx	-.004	2.5
76	MP4B	X	-12.631	2.5
77	MP4B	Z	-7.292	2.5
78	MP4B	Mx	0	2.5
79	MP4C	X	-8.632	2.5
80	MP4C	Z	-4.984	2.5
81	MP4C	Mx	.004	2.5
82	OVP	X	-23.671	1
83	OVP	Z	-13.667	1
84	OVP	Mx	0	1
85	MP3A	X	-3.664	5
86	MP3A	Z	-2.115	5
87	MP3A	Mx	.000916	5
88	MP3C	X	-5.126	5
89	MP3C	Z	-2.96	5
90	MP3C	Mx	-.000951	5
91	MP3A	X	-3.664	5
92	MP3A	Z	-2.115	5
93	MP3A	Mx	-.000916	5
94	MP3C	X	-5.126	5
95	MP3C	Z	-2.96	5
96	MP3C	Mx	.000951	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-13.574	2
2	MP3A	Z	-23.511	2
3	MP3A	Mx	.025	2
4	MP3A	X	-13.574	6
5	MP3A	Z	-23.511	6
6	MP3A	Mx	.025	6
7	MP3B	X	-12.028	2
8	MP3B	Z	-20.833	2
9	MP3B	Mx	.006	2
10	MP3B	X	-12.028	6
11	MP3B	Z	-20.833	6
12	MP3B	Mx	.006	6
13	MP3C	X	-10.669	2
14	MP3C	Z	-18.479	2
15	MP3C	Mx	-.012	2
16	MP3C	X	-10.669	6
17	MP3C	Z	-18.479	6
18	MP3C	Mx	-.012	6
19	MP3A	X	-13.574	2
20	MP3A	Z	-23.511	2
21	MP3A	Mx	-.002	2
22	MP3A	X	-13.574	6
23	MP3A	Z	-23.511	6
24	MP3A	Mx	-.002	6
25	MP3B	X	-12.028	2
26	MP3B	Z	-20.833	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
27	MP3B	Mx	.024	2
28	MP3B	X	-12.028	6
29	MP3B	Z	-20.833	6
30	MP3B	Mx	.024	6
31	MP3C	X	-10.669	2
32	MP3C	Z	-18.479	2
33	MP3C	Mx	-.021	2
34	MP3C	X	-10.669	6
35	MP3C	Z	-18.479	6
36	MP3C	Mx	-.021	6
37	MP2A	X	-3.078	4
38	MP2A	Z	-5.332	4
39	MP2A	Mx	.00077	4
40	MP2B	X	-2.182	4
41	MP2B	Z	-3.779	4
42	MP2B	Mx	.000836	4
43	MP2C	X	-1.393	4
44	MP2C	Z	-2.413	4
45	MP2C	Mx	-.000655	4
46	MP1A	X	-7.428	3
47	MP1A	Z	-12.866	3
48	MP1A	Mx	.006	3
49	MP1A	X	-7.428	5
50	MP1A	Z	-12.866	5
51	MP1A	Mx	.006	5
52	MP1B	X	-5.745	3
53	MP1B	Z	-9.95	3
54	MP1B	Mx	.007	3
55	MP1B	X	-5.745	5
56	MP1B	Z	-9.95	5
57	MP1B	Mx	.007	5
58	MP1C	X	-4.264	3
59	MP1C	Z	-7.386	3
60	MP1C	Mx	-.007	3
61	MP1C	X	-4.264	5
62	MP1C	Z	-7.386	5
63	MP1C	Mx	-.007	5
64	MP3A	X	-6.735	2.5
65	MP3A	Z	-11.665	2.5
66	MP3A	Mx	-.003	2.5
67	MP3B	X	-6.735	2.5
68	MP3B	Z	-11.665	2.5
69	MP3B	Mx	-.003	2.5
70	MP3C	X	-5.062	2.5
71	MP3C	Z	-8.768	2.5
72	MP3C	Mx	.005	2.5
73	MP4A	X	-6.523	2.5
74	MP4A	Z	-11.298	2.5
75	MP4A	Mx	-.003	2.5
76	MP4B	X	-6.523	2.5
77	MP4B	Z	-11.298	2.5
78	MP4B	Mx	-.003	2.5
79	MP4C	X	-4.214	2.5
80	MP4C	Z	-7.3	2.5
81	MP4C	Mx	.004	2.5
82	OVP	X	-14.926	1
83	OVP	Z	-25.853	1
84	OVP	Mx	0	1
85	MP3A	X	-3.369	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
86	MP3A	Z	-5.835	5
87	MP3A	Mx	.000842	5
88	MP3C	X	-1.782	5
89	MP3C	Z	-3.087	5
90	MP3C	Mx	-.000837	5
91	MP3A	X	-3.369	5
92	MP3A	Z	-5.835	5
93	MP3A	Mx	-.000842	5
94	MP3C	X	-1.782	5
95	MP3C	Z	-3.087	5
96	MP3C	Mx	.000837	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	2
2	MP3A	Z	-6.524	2
3	MP3A	Mx	.004	2
4	MP3A	X	0	6
5	MP3A	Z	-6.524	6
6	MP3A	Mx	.004	6
7	MP3B	X	0	2
8	MP3B	Z	-2.918	2
9	MP3B	Mx	.002	2
10	MP3B	X	0	6
11	MP3B	Z	-2.918	6
12	MP3B	Mx	.002	6
13	MP3C	X	0	2
14	MP3C	Z	-2.918	2
15	MP3C	Mx	-.003	2
16	MP3C	X	0	6
17	MP3C	Z	-2.918	6
18	MP3C	Mx	-.003	6
19	MP3A	X	0	2
20	MP3A	Z	-6.524	2
21	MP3A	Mx	-.004	2
22	MP3A	X	0	6
23	MP3A	Z	-6.524	6
24	MP3A	Mx	-.004	6
25	MP3B	X	0	2
26	MP3B	Z	-2.918	2
27	MP3B	Mx	.003	2
28	MP3B	X	0	6
29	MP3B	Z	-2.918	6
30	MP3B	Mx	.003	6
31	MP3C	X	0	2
32	MP3C	Z	-2.918	2
33	MP3C	Mx	-.002	2
34	MP3C	X	0	6
35	MP3C	Z	-2.918	6
36	MP3C	Mx	-.002	6
37	MP2A	X	0	4
38	MP2A	Z	-2.107	4
39	MP2A	Mx	0	4
40	MP2B	X	0	4
41	MP2B	Z	-.464	4
42	MP2B	Mx	.000114	4
43	MP2C	X	0	4
44	MP2C	Z	-.464	4

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
45	MP2C	Mx	-.000114	4
46	MP1A	X	0	3
47	MP1A	Z	-4.641	3
48	MP1A	Mx	0	3
49	MP1A	X	0	5
50	MP1A	Z	-4.641	5
51	MP1A	Mx	0	5
52	MP1B	X	0	3
53	MP1B	Z	-1.69	3
54	MP1B	Mx	.001	3
55	MP1B	X	0	5
56	MP1B	Z	-1.69	5
57	MP1B	Mx	.001	5
58	MP1C	X	0	3
59	MP1C	Z	-1.69	3
60	MP1C	Mx	-.001	3
61	MP1C	X	0	5
62	MP1C	Z	-1.69	5
63	MP1C	Mx	-.001	5
64	MP3A	X	0	2.5
65	MP3A	Z	-3.67	2.5
66	MP3A	Mx	0	2.5
67	MP3B	X	0	2.5
68	MP3B	Z	-2.765	2.5
69	MP3B	Mx	-.001	2.5
70	MP3C	X	0	2.5
71	MP3C	Z	-2.765	2.5
72	MP3C	Mx	.001	2.5
73	MP4A	X	0	2.5
74	MP4A	Z	-3.67	2.5
75	MP4A	Mx	0	2.5
76	MP4B	X	0	2.5
77	MP4B	Z	-2.427	2.5
78	MP4B	Mx	-.001	2.5
79	MP4C	X	0	2.5
80	MP4C	Z	-2.427	2.5
81	MP4C	Mx	.001	2.5
82	OVP	X	0	1
83	OVP	Z	-7.296	1
84	OVP	Mx	0	1
85	MP3A	X	0	5
86	MP3A	Z	-2.273	5
87	MP3A	Mx	0	5
88	MP3C	X	0	5
89	MP3C	Z	-.737	5
90	MP3C	Mx	-.000181	5
91	MP3A	X	0	5
92	MP3A	Z	-2.273	5
93	MP3A	Mx	0	5
94	MP3C	X	0	5
95	MP3C	Z	-.737	5
96	MP3C	Mx	.000181	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	2.797	2
2	MP3A	Z	-4.845	2
3	MP3A	Mx	.000495	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
4	MP3A	X	2.797	6
5	MP3A	Z	-4.845	6
6	MP3A	Mx	.000495	6
7	MP3B	X	1.62	2
8	MP3B	Z	-2.807	2
9	MP3B	Mx	.003	2
10	MP3B	X	1.62	6
11	MP3B	Z	-2.807	6
12	MP3B	Mx	.003	6
13	MP3C	X	2.171	2
14	MP3C	Z	-3.76	2
15	MP3C	Mx	-.004	2
16	MP3C	X	2.171	6
17	MP3C	Z	-3.76	6
18	MP3C	Mx	-.004	6
19	MP3A	X	2.797	2
20	MP3A	Z	-4.845	2
21	MP3A	Mx	-.005	2
22	MP3A	X	2.797	6
23	MP3A	Z	-4.845	6
24	MP3A	Mx	-.005	6
25	MP3B	X	1.62	2
26	MP3B	Z	-2.807	2
27	MP3B	Mx	.002	2
28	MP3B	X	1.62	6
29	MP3B	Z	-2.807	6
30	MP3B	Mx	.002	6
31	MP3C	X	2.171	2
32	MP3C	Z	-3.76	2
33	MP3C	Mx	-.001	2
34	MP3C	X	2.171	6
35	MP3C	Z	-3.76	6
36	MP3C	Mx	-.001	6
37	MP2A	X	.842	4
38	MP2A	Z	-1.458	4
39	MP2A	Mx	-.00021	4
40	MP2B	X	.306	4
41	MP2B	Z	-.53	4
42	MP2B	Mx	.000144	4
43	MP2C	X	.557	4
44	MP2C	Z	-.964	4
45	MP2C	Mx	-.000213	4
46	MP1A	X	1.94	3
47	MP1A	Z	-3.361	3
48	MP1A	Mx	-.002	3
49	MP1A	X	1.94	5
50	MP1A	Z	-3.361	5
51	MP1A	Mx	-.002	5
52	MP1B	X	.977	3
53	MP1B	Z	-1.692	3
54	MP1B	Mx	.002	3
55	MP1B	X	.977	5
56	MP1B	Z	-1.692	5
57	MP1B	Mx	.002	5
58	MP1C	X	1.428	3
59	MP1C	Z	-2.473	3
60	MP1C	Mx	-.002	3
61	MP1C	X	1.428	5
62	MP1C	Z	-2.473	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
63	MP1C	Mx	-.002	5
64	MP3A	X	1.684	2.5
65	MP3A	Z	-2.917	2.5
66	MP3A	Mx	.000842	2.5
67	MP3B	X	1.231	2.5
68	MP3B	Z	-2.133	2.5
69	MP3B	Mx	-.001	2.5
70	MP3C	X	1.684	2.5
71	MP3C	Z	-2.917	2.5
72	MP3C	Mx	.000842	2.5
73	MP4A	X	1.628	2.5
74	MP4A	Z	-2.82	2.5
75	MP4A	Mx	.000814	2.5
76	MP4B	X	1.006	2.5
77	MP4B	Z	-1.743	2.5
78	MP4B	Mx	-.001	2.5
79	MP4C	X	1.628	2.5
80	MP4C	Z	-2.82	2.5
81	MP4C	Mx	.000814	2.5
82	OVP	X	3.225	1
83	OVP	Z	-5.586	1
84	OVP	Mx	0	1
85	MP3A	X	.939	5
86	MP3A	Z	-1.626	5
87	MP3A	Mx	-.000235	5
88	MP3C	X	.672	5
89	MP3C	Z	-1.164	5
90	MP3C	Mx	-.000257	5
91	MP3A	X	.939	5
92	MP3A	Z	-1.626	5
93	MP3A	Mx	.000235	5
94	MP3C	X	.672	5
95	MP3C	Z	-1.164	5
96	MP3C	Mx	.000257	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	3.235	2
2	MP3A	Z	-1.868	2
3	MP3A	Mx	-.002	2
4	MP3A	X	3.235	6
5	MP3A	Z	-1.868	6
6	MP3A	Mx	-.002	6
7	MP3B	X	4.319	2
8	MP3B	Z	-2.494	2
9	MP3B	Mx	.005	2
10	MP3B	X	4.319	6
11	MP3B	Z	-2.494	6
12	MP3B	Mx	.005	6
13	MP3C	X	5.273	2
14	MP3C	Z	-3.044	2
15	MP3C	Mx	-.005	2
16	MP3C	X	5.273	6
17	MP3C	Z	-3.044	6
18	MP3C	Mx	-.005	6
19	MP3A	X	3.235	2
20	MP3A	Z	-1.868	2
21	MP3A	Mx	-.004	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
22	MP3A	X	3.235	6
23	MP3A	Z	-1.868	6
24	MP3A	Mx	-.004	6
25	MP3B	X	4.319	2
26	MP3B	Z	-2.494	2
27	MP3B	Mx	.000443	2
28	MP3B	X	4.319	6
29	MP3B	Z	-2.494	6
30	MP3B	Mx	.000443	6
31	MP3C	X	5.273	2
32	MP3C	Z	-3.044	2
33	MP3C	Mx	.002	2
34	MP3C	X	5.273	6
35	MP3C	Z	-3.044	6
36	MP3C	Mx	.002	6
37	MP2A	X	.725	4
38	MP2A	Z	-.418	4
39	MP2A	Mx	-.000181	4
40	MP2B	X	1.219	4
41	MP2B	Z	-.704	4
42	MP2B	Mx	.000226	4
43	MP2C	X	1.653	4
44	MP2C	Z	-.955	4
45	MP2C	Mx	-.000163	4
46	MP1A	X	2.043	3
47	MP1A	Z	-1.18	3
48	MP1A	Mx	-.002	3
49	MP1A	X	2.043	5
50	MP1A	Z	-1.18	5
51	MP1A	Mx	-.002	5
52	MP1B	X	2.931	3
53	MP1B	Z	-1.692	3
54	MP1B	Mx	.002	3
55	MP1B	X	2.931	5
56	MP1B	Z	-1.692	5
57	MP1B	Mx	.002	5
58	MP1C	X	3.711	3
59	MP1C	Z	-2.143	3
60	MP1C	Mx	-.001	3
61	MP1C	X	3.711	5
62	MP1C	Z	-2.143	5
63	MP1C	Mx	-.001	5
64	MP3A	X	2.394	2.5
65	MP3A	Z	-1.382	2.5
66	MP3A	Mx	.001	2.5
67	MP3B	X	2.394	2.5
68	MP3B	Z	-1.382	2.5
69	MP3B	Mx	-.001	2.5
70	MP3C	X	3.179	2.5
71	MP3C	Z	-1.835	2.5
72	MP3C	Mx	0	2.5
73	MP4A	X	2.102	2.5
74	MP4A	Z	-1.214	2.5
75	MP4A	Mx	.001	2.5
76	MP4B	X	2.102	2.5
77	MP4B	Z	-1.214	2.5
78	MP4B	Mx	-.001	2.5
79	MP4C	X	3.179	2.5
80	MP4C	Z	-1.835	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
81	MP4C	Mx	0	2.5
82	OVP	X	4.989	1
83	OVP	Z	-2.88	1
84	OVP	Mx	0	1
85	MP3A	X	.94	5
86	MP3A	Z	-.543	5
87	MP3A	Mx	-.000235	5
88	MP3C	X	1.808	5
89	MP3C	Z	-1.044	5
90	MP3C	Mx	-.000179	5
91	MP3A	X	.94	5
92	MP3A	Z	-.543	5
93	MP3A	Mx	.000235	5
94	MP3C	X	1.808	5
95	MP3C	Z	-1.044	5
96	MP3C	Mx	.000179	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	2.806	2
2	MP3A	Z	0	2
3	MP3A	Mx	-.002	2
4	MP3A	X	2.806	6
5	MP3A	Z	0	6
6	MP3A	Mx	-.002	6
7	MP3B	X	6.412	2
8	MP3B	Z	0	2
9	MP3B	Mx	.005	2
10	MP3B	X	6.412	6
11	MP3B	Z	0	6
12	MP3B	Mx	.005	6
13	MP3C	X	6.412	2
14	MP3C	Z	0	2
15	MP3C	Mx	-.003	2
16	MP3C	X	6.412	6
17	MP3C	Z	0	6
18	MP3C	Mx	-.003	6
19	MP3A	X	2.806	2
20	MP3A	Z	0	2
21	MP3A	Mx	-.002	2
22	MP3A	X	2.806	6
23	MP3A	Z	0	6
24	MP3A	Mx	-.002	6
25	MP3B	X	6.412	2
26	MP3B	Z	0	2
27	MP3B	Mx	-.003	2
28	MP3B	X	6.412	6
29	MP3B	Z	0	6
30	MP3B	Mx	-.003	6
31	MP3C	X	6.412	2
32	MP3C	Z	0	2
33	MP3C	Mx	.005	2
34	MP3C	X	6.412	6
35	MP3C	Z	0	6
36	MP3C	Mx	.005	6
37	MP2A	X	.413	4
38	MP2A	Z	0	4
39	MP2A	Mx	-.000103	4

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
40	MP2B	X	2.056	4
41	MP2B	Z	0	4
42	MP2B	Mx	8.9e-5	4
43	MP2C	X	2.056	4
44	MP2C	Z	0	4
45	MP2C	Mx	8.9e-5	4
46	MP1A	X	1.598	3
47	MP1A	Z	0	3
48	MP1A	Mx	-.001	3
49	MP1A	X	1.598	5
50	MP1A	Z	0	5
51	MP1A	Mx	-.001	5
52	MP1B	X	4.549	3
53	MP1B	Z	0	3
54	MP1B	Mx	.000658	3
55	MP1B	X	4.549	5
56	MP1B	Z	0	5
57	MP1B	Mx	.000658	5
58	MP1C	X	4.549	3
59	MP1C	Z	0	3
60	MP1C	Mx	.000658	3
61	MP1C	X	4.549	5
62	MP1C	Z	0	5
63	MP1C	Mx	.000658	5
64	MP3A	X	2.463	2.5
65	MP3A	Z	0	2.5
66	MP3A	Mx	.001	2.5
67	MP3B	X	3.368	2.5
68	MP3B	Z	0	2.5
69	MP3B	Mx	-.000842	2.5
70	MP3C	X	3.368	2.5
71	MP3C	Z	0	2.5
72	MP3C	Mx	-.000842	2.5
73	MP4A	X	2.013	2.5
74	MP4A	Z	0	2.5
75	MP4A	Mx	.001	2.5
76	MP4B	X	3.256	2.5
77	MP4B	Z	0	2.5
78	MP4B	Mx	-.000814	2.5
79	MP4C	X	3.256	2.5
80	MP4C	Z	0	2.5
81	MP4C	Mx	-.000814	2.5
82	OVP	X	5.917	1
83	OVP	Z	0	1
84	OVP	Mx	0	1
85	MP3A	X	.689	5
86	MP3A	Z	0	5
87	MP3A	Mx	-.000172	5
88	MP3C	X	2.225	5
89	MP3C	Z	0	5
90	MP3C	Mx	9.7e-5	5
91	MP3A	X	.689	5
92	MP3A	Z	0	5
93	MP3A	Mx	.000172	5
94	MP3C	X	2.225	5
95	MP3C	Z	0	5
96	MP3C	Mx	-9.7e-5	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	3.235	2
2	MP3A	Z	1.868	2
3	MP3A	Mx	-.004	2
4	MP3A	X	3.235	6
5	MP3A	Z	1.868	6
6	MP3A	Mx	-.004	6
7	MP3B	X	5.273	2
8	MP3B	Z	3.044	2
9	MP3B	Mx	.002	2
10	MP3B	X	5.273	6
11	MP3B	Z	3.044	6
12	MP3B	Mx	.002	6
13	MP3C	X	4.319	2
14	MP3C	Z	2.494	2
15	MP3C	Mx	.000443	2
16	MP3C	X	4.319	6
17	MP3C	Z	2.494	6
18	MP3C	Mx	.000443	6
19	MP3A	X	3.235	2
20	MP3A	Z	1.868	2
21	MP3A	Mx	-.002	2
22	MP3A	X	3.235	6
23	MP3A	Z	1.868	6
24	MP3A	Mx	-.002	6
25	MP3B	X	5.273	2
26	MP3B	Z	3.044	2
27	MP3B	Mx	-.005	2
28	MP3B	X	5.273	6
29	MP3B	Z	3.044	6
30	MP3B	Mx	-.005	6
31	MP3C	X	4.319	2
32	MP3C	Z	2.494	2
33	MP3C	Mx	.005	2
34	MP3C	X	4.319	6
35	MP3C	Z	2.494	6
36	MP3C	Mx	.005	6
37	MP2A	X	.725	4
38	MP2A	Z	.418	4
39	MP2A	Mx	-.000181	4
40	MP2B	X	1.653	4
41	MP2B	Z	.955	4
42	MP2B	Mx	-.000163	4
43	MP2C	X	1.219	4
44	MP2C	Z	.704	4
45	MP2C	Mx	.000226	4
46	MP1A	X	2.043	3
47	MP1A	Z	1.18	3
48	MP1A	Mx	-.002	3
49	MP1A	X	2.043	5
50	MP1A	Z	1.18	5
51	MP1A	Mx	-.002	5
52	MP1B	X	3.711	3
53	MP1B	Z	2.143	3
54	MP1B	Mx	-.001	3
55	MP1B	X	3.711	5
56	MP1B	Z	2.143	5
57	MP1B	Mx	-.001	5
58	MP1C	X	2.931	3
59	MP1C	Z	1.692	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
60	MP1C	Mx	.002	3
61	MP1C	X	2.931	5
62	MP1C	Z	1.692	5
63	MP1C	Mx	.002	5
64	MP3A	X	2.394	2.5
65	MP3A	Z	1.382	2.5
66	MP3A	Mx	.001	2.5
67	MP3B	X	3.179	2.5
68	MP3B	Z	1.835	2.5
69	MP3B	Mx	0	2.5
70	MP3C	X	2.394	2.5
71	MP3C	Z	1.382	2.5
72	MP3C	Mx	-.001	2.5
73	MP4A	X	2.102	2.5
74	MP4A	Z	1.214	2.5
75	MP4A	Mx	.001	2.5
76	MP4B	X	3.179	2.5
77	MP4B	Z	1.835	2.5
78	MP4B	Mx	0	2.5
79	MP4C	X	2.102	2.5
80	MP4C	Z	1.214	2.5
81	MP4C	Mx	-.001	2.5
82	OVP	X	5.857	1
83	OVP	Z	3.381	1
84	OVP	Mx	0	1
85	MP3A	X	.94	5
86	MP3A	Z	.543	5
87	MP3A	Mx	-.000235	5
88	MP3C	X	1.402	5
89	MP3C	Z	.809	5
90	MP3C	Mx	.00026	5
91	MP3A	X	.94	5
92	MP3A	Z	.543	5
93	MP3A	Mx	.000235	5
94	MP3C	X	1.402	5
95	MP3C	Z	.809	5
96	MP3C	Mx	-.00026	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	2.797	2
2	MP3A	Z	4.845	2
3	MP3A	Mx	-.005	2
4	MP3A	X	2.797	6
5	MP3A	Z	4.845	6
6	MP3A	Mx	-.005	6
7	MP3B	X	2.171	2
8	MP3B	Z	3.76	2
9	MP3B	Mx	-.001	2
10	MP3B	X	2.171	6
11	MP3B	Z	3.76	6
12	MP3B	Mx	-.001	6
13	MP3C	X	1.62	2
14	MP3C	Z	2.807	2
15	MP3C	Mx	.002	2
16	MP3C	X	1.62	6
17	MP3C	Z	2.807	6
18	MP3C	Mx	.002	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
19	MP3A	X	2.797	2
20	MP3A	Z	4.845	2
21	MP3A	Mx	.000495	2
22	MP3A	X	2.797	6
23	MP3A	Z	4.845	6
24	MP3A	Mx	.000495	6
25	MP3B	X	2.171	2
26	MP3B	Z	3.76	2
27	MP3B	Mx	-.004	2
28	MP3B	X	2.171	6
29	MP3B	Z	3.76	6
30	MP3B	Mx	-.004	6
31	MP3C	X	1.62	2
32	MP3C	Z	2.807	2
33	MP3C	Mx	.003	2
34	MP3C	X	1.62	6
35	MP3C	Z	2.807	6
36	MP3C	Mx	.003	6
37	MP2A	X	.842	4
38	MP2A	Z	1.458	4
39	MP2A	Mx	-.00021	4
40	MP2B	X	.557	4
41	MP2B	Z	.964	4
42	MP2B	Mx	-.000213	4
43	MP2C	X	.306	4
44	MP2C	Z	.53	4
45	MP2C	Mx	.000144	4
46	MP1A	X	1.94	3
47	MP1A	Z	3.361	3
48	MP1A	Mx	-.002	3
49	MP1A	X	1.94	5
50	MP1A	Z	3.361	5
51	MP1A	Mx	-.002	5
52	MP1B	X	1.428	3
53	MP1B	Z	2.473	3
54	MP1B	Mx	-.002	3
55	MP1B	X	1.428	5
56	MP1B	Z	2.473	5
57	MP1B	Mx	-.002	5
58	MP1C	X	.977	3
59	MP1C	Z	1.692	3
60	MP1C	Mx	.002	3
61	MP1C	X	.977	5
62	MP1C	Z	1.692	5
63	MP1C	Mx	.002	5
64	MP3A	X	1.684	2.5
65	MP3A	Z	2.917	2.5
66	MP3A	Mx	.000842	2.5
67	MP3B	X	1.684	2.5
68	MP3B	Z	2.917	2.5
69	MP3B	Mx	.000842	2.5
70	MP3C	X	1.231	2.5
71	MP3C	Z	2.133	2.5
72	MP3C	Mx	-.001	2.5
73	MP4A	X	1.628	2.5
74	MP4A	Z	2.82	2.5
75	MP4A	Mx	.000814	2.5
76	MP4B	X	1.628	2.5
77	MP4B	Z	2.82	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
78	MP4B	Mx	.000814	2.5
79	MP4C	X	1.006	2.5
80	MP4C	Z	1.743	2.5
81	MP4C	Mx	-.001	2.5
82	OVP	X	3.726	1
83	OVP	Z	6.454	1
84	OVP	Mx	0	1
85	MP3A	X	.939	5
86	MP3A	Z	1.626	5
87	MP3A	Mx	-.000235	5
88	MP3C	X	.437	5
89	MP3C	Z	.758	5
90	MP3C	Mx	.000206	5
91	MP3A	X	.939	5
92	MP3A	Z	1.626	5
93	MP3A	Mx	.000235	5
94	MP3C	X	.437	5
95	MP3C	Z	.758	5
96	MP3C	Mx	-.000206	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	2
2	MP3A	Z	6.524	2
3	MP3A	Mx	-.004	2
4	MP3A	X	0	6
5	MP3A	Z	6.524	6
6	MP3A	Mx	-.004	6
7	MP3B	X	0	2
8	MP3B	Z	2.918	2
9	MP3B	Mx	-.002	2
10	MP3B	X	0	6
11	MP3B	Z	2.918	6
12	MP3B	Mx	-.002	6
13	MP3C	X	0	2
14	MP3C	Z	2.918	2
15	MP3C	Mx	.003	2
16	MP3C	X	0	6
17	MP3C	Z	2.918	6
18	MP3C	Mx	.003	6
19	MP3A	X	0	2
20	MP3A	Z	6.524	2
21	MP3A	Mx	.004	2
22	MP3A	X	0	6
23	MP3A	Z	6.524	6
24	MP3A	Mx	.004	6
25	MP3B	X	0	2
26	MP3B	Z	2.918	2
27	MP3B	Mx	-.003	2
28	MP3B	X	0	6
29	MP3B	Z	2.918	6
30	MP3B	Mx	-.003	6
31	MP3C	X	0	2
32	MP3C	Z	2.918	2
33	MP3C	Mx	.002	2
34	MP3C	X	0	6
35	MP3C	Z	2.918	6
36	MP3C	Mx	.002	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
37	MP2A	X	0	4
38	MP2A	Z	2.107	4
39	MP2A	Mx	0	4
40	MP2B	X	0	4
41	MP2B	Z	.464	4
42	MP2B	Mx	-.000114	4
43	MP2C	X	0	4
44	MP2C	Z	.464	4
45	MP2C	Mx	.000114	4
46	MP1A	X	0	3
47	MP1A	Z	4.641	3
48	MP1A	Mx	0	3
49	MP1A	X	0	5
50	MP1A	Z	4.641	5
51	MP1A	Mx	0	5
52	MP1B	X	0	3
53	MP1B	Z	1.69	3
54	MP1B	Mx	-.001	3
55	MP1B	X	0	5
56	MP1B	Z	1.69	5
57	MP1B	Mx	-.001	5
58	MP1C	X	0	3
59	MP1C	Z	1.69	3
60	MP1C	Mx	.001	3
61	MP1C	X	0	5
62	MP1C	Z	1.69	5
63	MP1C	Mx	.001	5
64	MP3A	X	0	2.5
65	MP3A	Z	3.67	2.5
66	MP3A	Mx	0	2.5
67	MP3B	X	0	2.5
68	MP3B	Z	2.765	2.5
69	MP3B	Mx	.001	2.5
70	MP3C	X	0	2.5
71	MP3C	Z	2.765	2.5
72	MP3C	Mx	-.001	2.5
73	MP4A	X	0	2.5
74	MP4A	Z	3.67	2.5
75	MP4A	Mx	0	2.5
76	MP4B	X	0	2.5
77	MP4B	Z	2.427	2.5
78	MP4B	Mx	.001	2.5
79	MP4C	X	0	2.5
80	MP4C	Z	2.427	2.5
81	MP4C	Mx	-.001	2.5
82	OVP	X	0	1
83	OVP	Z	7.296	1
84	OVP	Mx	0	1
85	MP3A	X	0	5
86	MP3A	Z	2.273	5
87	MP3A	Mx	0	5
88	MP3C	X	0	5
89	MP3C	Z	.737	5
90	MP3C	Mx	.000181	5
91	MP3A	X	0	5
92	MP3A	Z	2.273	5
93	MP3A	Mx	0	5
94	MP3C	X	0	5
95	MP3C	Z	.737	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
96	MP3C	Mx	-.000181	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-2.797	2
2	MP3A	Z	4.845	2
3	MP3A	Mx	-.000495	2
4	MP3A	X	-2.797	6
5	MP3A	Z	4.845	6
6	MP3A	Mx	-.000495	6
7	MP3B	X	-1.62	2
8	MP3B	Z	2.807	2
9	MP3B	Mx	-.003	2
10	MP3B	X	-1.62	6
11	MP3B	Z	2.807	6
12	MP3B	Mx	-.003	6
13	MP3C	X	-2.171	2
14	MP3C	Z	3.76	2
15	MP3C	Mx	.004	2
16	MP3C	X	-2.171	6
17	MP3C	Z	3.76	6
18	MP3C	Mx	.004	6
19	MP3A	X	-2.797	2
20	MP3A	Z	4.845	2
21	MP3A	Mx	.005	2
22	MP3A	X	-2.797	6
23	MP3A	Z	4.845	6
24	MP3A	Mx	.005	6
25	MP3B	X	-1.62	2
26	MP3B	Z	2.807	2
27	MP3B	Mx	-.002	2
28	MP3B	X	-1.62	6
29	MP3B	Z	2.807	6
30	MP3B	Mx	-.002	6
31	MP3C	X	-2.171	2
32	MP3C	Z	3.76	2
33	MP3C	Mx	.001	2
34	MP3C	X	-2.171	6
35	MP3C	Z	3.76	6
36	MP3C	Mx	.001	6
37	MP2A	X	-.842	4
38	MP2A	Z	1.458	4
39	MP2A	Mx	.00021	4
40	MP2B	X	-.306	4
41	MP2B	Z	.53	4
42	MP2B	Mx	-.000144	4
43	MP2C	X	-.557	4
44	MP2C	Z	.964	4
45	MP2C	Mx	.000213	4
46	MP1A	X	-1.94	3
47	MP1A	Z	3.361	3
48	MP1A	Mx	.002	3
49	MP1A	X	-1.94	5
50	MP1A	Z	3.361	5
51	MP1A	Mx	.002	5
52	MP1B	X	-.977	3
53	MP1B	Z	1.692	3
54	MP1B	Mx	-.002	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
55	MP1B	X	-.977	5
56	MP1B	Z	1.692	5
57	MP1B	Mx	-.002	5
58	MP1C	X	-1.428	3
59	MP1C	Z	2.473	3
60	MP1C	Mx	.002	3
61	MP1C	X	-1.428	5
62	MP1C	Z	2.473	5
63	MP1C	Mx	.002	5
64	MP3A	X	-1.684	2.5
65	MP3A	Z	2.917	2.5
66	MP3A	Mx	-.000842	2.5
67	MP3B	X	-1.231	2.5
68	MP3B	Z	2.133	2.5
69	MP3B	Mx	.001	2.5
70	MP3C	X	-1.684	2.5
71	MP3C	Z	2.917	2.5
72	MP3C	Mx	-.000842	2.5
73	MP4A	X	-1.628	2.5
74	MP4A	Z	2.82	2.5
75	MP4A	Mx	-.000814	2.5
76	MP4B	X	-1.006	2.5
77	MP4B	Z	1.743	2.5
78	MP4B	Mx	.001	2.5
79	MP4C	X	-1.628	2.5
80	MP4C	Z	2.82	2.5
81	MP4C	Mx	-.000814	2.5
82	OVP	X	-3.225	1
83	OVP	Z	5.586	1
84	OVP	Mx	0	1
85	MP3A	X	-.939	5
86	MP3A	Z	1.626	5
87	MP3A	Mx	.000235	5
88	MP3C	X	-.672	5
89	MP3C	Z	1.164	5
90	MP3C	Mx	.000257	5
91	MP3A	X	-.939	5
92	MP3A	Z	1.626	5
93	MP3A	Mx	-.000235	5
94	MP3C	X	-.672	5
95	MP3C	Z	1.164	5
96	MP3C	Mx	-.000257	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-3.235	2
2	MP3A	Z	1.868	2
3	MP3A	Mx	.002	2
4	MP3A	X	-3.235	6
5	MP3A	Z	1.868	6
6	MP3A	Mx	.002	6
7	MP3B	X	-4.319	2
8	MP3B	Z	2.494	2
9	MP3B	Mx	-.005	2
10	MP3B	X	-4.319	6
11	MP3B	Z	2.494	6
12	MP3B	Mx	-.005	6
13	MP3C	X	-5.273	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
14	MP3C	Z	3.044	2
15	MP3C	Mx	.005	2
16	MP3C	X	-5.273	6
17	MP3C	Z	3.044	6
18	MP3C	Mx	.005	6
19	MP3A	X	-3.235	2
20	MP3A	Z	1.868	2
21	MP3A	Mx	.004	2
22	MP3A	X	-3.235	6
23	MP3A	Z	1.868	6
24	MP3A	Mx	.004	6
25	MP3B	X	-4.319	2
26	MP3B	Z	2.494	2
27	MP3B	Mx	-.000443	2
28	MP3B	X	-4.319	6
29	MP3B	Z	2.494	6
30	MP3B	Mx	-.000443	6
31	MP3C	X	-5.273	2
32	MP3C	Z	3.044	2
33	MP3C	Mx	-.002	2
34	MP3C	X	-5.273	6
35	MP3C	Z	3.044	6
36	MP3C	Mx	-.002	6
37	MP2A	X	-.725	4
38	MP2A	Z	.418	4
39	MP2A	Mx	.000181	4
40	MP2B	X	-1.219	4
41	MP2B	Z	.704	4
42	MP2B	Mx	-.000226	4
43	MP2C	X	-1.653	4
44	MP2C	Z	.955	4
45	MP2C	Mx	.000163	4
46	MP1A	X	-2.043	3
47	MP1A	Z	1.18	3
48	MP1A	Mx	.002	3
49	MP1A	X	-2.043	5
50	MP1A	Z	1.18	5
51	MP1A	Mx	.002	5
52	MP1B	X	-2.931	3
53	MP1B	Z	1.692	3
54	MP1B	Mx	-.002	3
55	MP1B	X	-2.931	5
56	MP1B	Z	1.692	5
57	MP1B	Mx	-.002	5
58	MP1C	X	-3.711	3
59	MP1C	Z	2.143	3
60	MP1C	Mx	.001	3
61	MP1C	X	-3.711	5
62	MP1C	Z	2.143	5
63	MP1C	Mx	.001	5
64	MP3A	X	-2.394	2.5
65	MP3A	Z	1.382	2.5
66	MP3A	Mx	-.001	2.5
67	MP3B	X	-2.394	2.5
68	MP3B	Z	1.382	2.5
69	MP3B	Mx	.001	2.5
70	MP3C	X	-3.179	2.5
71	MP3C	Z	1.835	2.5
72	MP3C	Mx	0	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
73	MP4A	X	-2.102	2.5
74	MP4A	Z	1.214	2.5
75	MP4A	Mx	-.001	2.5
76	MP4B	X	-2.102	2.5
77	MP4B	Z	1.214	2.5
78	MP4B	Mx	.001	2.5
79	MP4C	X	-3.179	2.5
80	MP4C	Z	1.835	2.5
81	MP4C	Mx	0	2.5
82	OVP	X	-4.989	1
83	OVP	Z	2.88	1
84	OVP	Mx	0	1
85	MP3A	X	-.94	5
86	MP3A	Z	.543	5
87	MP3A	Mx	.000235	5
88	MP3C	X	-1.808	5
89	MP3C	Z	1.044	5
90	MP3C	Mx	.000179	5
91	MP3A	X	-.94	5
92	MP3A	Z	.543	5
93	MP3A	Mx	-.000235	5
94	MP3C	X	-1.808	5
95	MP3C	Z	1.044	5
96	MP3C	Mx	-.000179	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-2.806	2
2	MP3A	Z	0	2
3	MP3A	Mx	.002	2
4	MP3A	X	-2.806	6
5	MP3A	Z	0	6
6	MP3A	Mx	.002	6
7	MP3B	X	-6.412	2
8	MP3B	Z	0	2
9	MP3B	Mx	-.005	2
10	MP3B	X	-6.412	6
11	MP3B	Z	0	6
12	MP3B	Mx	-.005	6
13	MP3C	X	-6.412	2
14	MP3C	Z	0	2
15	MP3C	Mx	.003	2
16	MP3C	X	-6.412	6
17	MP3C	Z	0	6
18	MP3C	Mx	.003	6
19	MP3A	X	-2.806	2
20	MP3A	Z	0	2
21	MP3A	Mx	.002	2
22	MP3A	X	-2.806	6
23	MP3A	Z	0	6
24	MP3A	Mx	.002	6
25	MP3B	X	-6.412	2
26	MP3B	Z	0	2
27	MP3B	Mx	.003	2
28	MP3B	X	-6.412	6
29	MP3B	Z	0	6
30	MP3B	Mx	.003	6
31	MP3C	X	-6.412	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
32	MP3C	Z	0	2
33	MP3C	Mx	-.005	2
34	MP3C	X	-6.412	6
35	MP3C	Z	0	6
36	MP3C	Mx	-.005	6
37	MP2A	X	-.413	4
38	MP2A	Z	0	4
39	MP2A	Mx	.000103	4
40	MP2B	X	-2.056	4
41	MP2B	Z	0	4
42	MP2B	Mx	-8.9e-5	4
43	MP2C	X	-2.056	4
44	MP2C	Z	0	4
45	MP2C	Mx	-8.9e-5	4
46	MP1A	X	-1.598	3
47	MP1A	Z	0	3
48	MP1A	Mx	.001	3
49	MP1A	X	-1.598	5
50	MP1A	Z	0	5
51	MP1A	Mx	.001	5
52	MP1B	X	-4.549	3
53	MP1B	Z	0	3
54	MP1B	Mx	-.000658	3
55	MP1B	X	-4.549	5
56	MP1B	Z	0	5
57	MP1B	Mx	-.000658	5
58	MP1C	X	-4.549	3
59	MP1C	Z	0	3
60	MP1C	Mx	-.000658	3
61	MP1C	X	-4.549	5
62	MP1C	Z	0	5
63	MP1C	Mx	-.000658	5
64	MP3A	X	-2.463	2.5
65	MP3A	Z	0	2.5
66	MP3A	Mx	-.001	2.5
67	MP3B	X	-3.368	2.5
68	MP3B	Z	0	2.5
69	MP3B	Mx	.000842	2.5
70	MP3C	X	-3.368	2.5
71	MP3C	Z	0	2.5
72	MP3C	Mx	.000842	2.5
73	MP4A	X	-2.013	2.5
74	MP4A	Z	0	2.5
75	MP4A	Mx	-.001	2.5
76	MP4B	X	-3.256	2.5
77	MP4B	Z	0	2.5
78	MP4B	Mx	.000814	2.5
79	MP4C	X	-3.256	2.5
80	MP4C	Z	0	2.5
81	MP4C	Mx	.000814	2.5
82	OVP	X	-5.917	1
83	OVP	Z	0	1
84	OVP	Mx	0	1
85	MP3A	X	-.689	5
86	MP3A	Z	0	5
87	MP3A	Mx	.000172	5
88	MP3C	X	-2.225	5
89	MP3C	Z	0	5
90	MP3C	Mx	-9.7e-5	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
91	MP3A	X	-.689	5
92	MP3A	Z	0	5
93	MP3A	Mx	-.000172	5
94	MP3C	X	-2.225	5
95	MP3C	Z	0	5
96	MP3C	Mx	9.7e-5	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-3.235	2
2	MP3A	Z	-1.868	2
3	MP3A	Mx	.004	2
4	MP3A	X	-3.235	6
5	MP3A	Z	-1.868	6
6	MP3A	Mx	.004	6
7	MP3B	X	-5.273	2
8	MP3B	Z	-3.044	2
9	MP3B	Mx	-.002	2
10	MP3B	X	-5.273	6
11	MP3B	Z	-3.044	6
12	MP3B	Mx	-.002	6
13	MP3C	X	-4.319	2
14	MP3C	Z	-2.494	2
15	MP3C	Mx	-.000443	2
16	MP3C	X	-4.319	6
17	MP3C	Z	-2.494	6
18	MP3C	Mx	-.000443	6
19	MP3A	X	-3.235	2
20	MP3A	Z	-1.868	2
21	MP3A	Mx	.002	2
22	MP3A	X	-3.235	6
23	MP3A	Z	-1.868	6
24	MP3A	Mx	.002	6
25	MP3B	X	-5.273	2
26	MP3B	Z	-3.044	2
27	MP3B	Mx	.005	2
28	MP3B	X	-5.273	6
29	MP3B	Z	-3.044	6
30	MP3B	Mx	.005	6
31	MP3C	X	-4.319	2
32	MP3C	Z	-2.494	2
33	MP3C	Mx	-.005	2
34	MP3C	X	-4.319	6
35	MP3C	Z	-2.494	6
36	MP3C	Mx	-.005	6
37	MP2A	X	-.725	4
38	MP2A	Z	-.418	4
39	MP2A	Mx	.000181	4
40	MP2B	X	-1.653	4
41	MP2B	Z	-.955	4
42	MP2B	Mx	.000163	4
43	MP2C	X	-1.219	4
44	MP2C	Z	-.704	4
45	MP2C	Mx	-.000226	4
46	MP1A	X	-2.043	3
47	MP1A	Z	-1.18	3
48	MP1A	Mx	.002	3
49	MP1A	X	-2.043	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
50	MP1A	Z	-1.18	5
51	MP1A	Mx	.002	5
52	MP1B	X	-3.711	3
53	MP1B	Z	-2.143	3
54	MP1B	Mx	.001	3
55	MP1B	X	-3.711	5
56	MP1B	Z	-2.143	5
57	MP1B	Mx	.001	5
58	MP1C	X	-2.931	3
59	MP1C	Z	-1.692	3
60	MP1C	Mx	-.002	3
61	MP1C	X	-2.931	5
62	MP1C	Z	-1.692	5
63	MP1C	Mx	-.002	5
64	MP3A	X	-2.394	2.5
65	MP3A	Z	-1.382	2.5
66	MP3A	Mx	-.001	2.5
67	MP3B	X	-3.179	2.5
68	MP3B	Z	-1.835	2.5
69	MP3B	Mx	0	2.5
70	MP3C	X	-2.394	2.5
71	MP3C	Z	-1.382	2.5
72	MP3C	Mx	.001	2.5
73	MP4A	X	-2.102	2.5
74	MP4A	Z	-1.214	2.5
75	MP4A	Mx	-.001	2.5
76	MP4B	X	-3.179	2.5
77	MP4B	Z	-1.835	2.5
78	MP4B	Mx	0	2.5
79	MP4C	X	-2.102	2.5
80	MP4C	Z	-1.214	2.5
81	MP4C	Mx	.001	2.5
82	OVP	X	-5.857	1
83	OVP	Z	-3.381	1
84	OVP	Mx	0	1
85	MP3A	X	-.94	5
86	MP3A	Z	-.543	5
87	MP3A	Mx	.000235	5
88	MP3C	X	-1.402	5
89	MP3C	Z	-.809	5
90	MP3C	Mx	-.00026	5
91	MP3A	X	-.94	5
92	MP3A	Z	-.543	5
93	MP3A	Mx	-.000235	5
94	MP3C	X	-1.402	5
95	MP3C	Z	-.809	5
96	MP3C	Mx	.00026	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-2.797	2
2	MP3A	Z	-4.845	2
3	MP3A	Mx	.005	2
4	MP3A	X	-2.797	6
5	MP3A	Z	-4.845	6
6	MP3A	Mx	.005	6
7	MP3B	X	-2.171	2
8	MP3B	Z	-3.76	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
9	MP3B	Mx	.001	2
10	MP3B	X	-2.171	6
11	MP3B	Z	-3.76	6
12	MP3B	Mx	.001	6
13	MP3C	X	-1.62	2
14	MP3C	Z	-2.807	2
15	MP3C	Mx	-.002	2
16	MP3C	X	-1.62	6
17	MP3C	Z	-2.807	6
18	MP3C	Mx	-.002	6
19	MP3A	X	-2.797	2
20	MP3A	Z	-4.845	2
21	MP3A	Mx	-.000495	2
22	MP3A	X	-2.797	6
23	MP3A	Z	-4.845	6
24	MP3A	Mx	-.000495	6
25	MP3B	X	-2.171	2
26	MP3B	Z	-3.76	2
27	MP3B	Mx	.004	2
28	MP3B	X	-2.171	6
29	MP3B	Z	-3.76	6
30	MP3B	Mx	.004	6
31	MP3C	X	-1.62	2
32	MP3C	Z	-2.807	2
33	MP3C	Mx	-.003	2
34	MP3C	X	-1.62	6
35	MP3C	Z	-2.807	6
36	MP3C	Mx	-.003	6
37	MP2A	X	-.842	4
38	MP2A	Z	-1.458	4
39	MP2A	Mx	.00021	4
40	MP2B	X	-.557	4
41	MP2B	Z	-.964	4
42	MP2B	Mx	.000213	4
43	MP2C	X	-.306	4
44	MP2C	Z	-.53	4
45	MP2C	Mx	-.000144	4
46	MP1A	X	-1.94	3
47	MP1A	Z	-3.361	3
48	MP1A	Mx	.002	3
49	MP1A	X	-1.94	5
50	MP1A	Z	-3.361	5
51	MP1A	Mx	.002	5
52	MP1B	X	-1.428	3
53	MP1B	Z	-2.473	3
54	MP1B	Mx	.002	3
55	MP1B	X	-1.428	5
56	MP1B	Z	-2.473	5
57	MP1B	Mx	.002	5
58	MP1C	X	-.977	3
59	MP1C	Z	-1.692	3
60	MP1C	Mx	-.002	3
61	MP1C	X	-.977	5
62	MP1C	Z	-1.692	5
63	MP1C	Mx	-.002	5
64	MP3A	X	-1.684	2.5
65	MP3A	Z	-2.917	2.5
66	MP3A	Mx	-.000842	2.5
67	MP3B	X	-1.684	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
68	MP3B	Z	-2.917	2.5
69	MP3B	Mx	-.000842	2.5
70	MP3C	X	-1.231	2.5
71	MP3C	Z	-2.133	2.5
72	MP3C	Mx	.001	2.5
73	MP4A	X	-1.628	2.5
74	MP4A	Z	-2.82	2.5
75	MP4A	Mx	-.000814	2.5
76	MP4B	X	-1.628	2.5
77	MP4B	Z	-2.82	2.5
78	MP4B	Mx	-.000814	2.5
79	MP4C	X	-1.006	2.5
80	MP4C	Z	-1.743	2.5
81	MP4C	Mx	.001	2.5
82	OVP	X	-3.726	1
83	OVP	Z	-6.454	1
84	OVP	Mx	0	1
85	MP3A	X	-.939	5
86	MP3A	Z	-1.626	5
87	MP3A	Mx	.000235	5
88	MP3C	X	-.437	5
89	MP3C	Z	-.758	5
90	MP3C	Mx	-.000206	5
91	MP3A	X	-.939	5
92	MP3A	Z	-1.626	5
93	MP3A	Mx	-.000235	5
94	MP3C	X	-.437	5
95	MP3C	Z	-.758	5
96	MP3C	Mx	.000206	5

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M47	Y	-500	%100

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M40	Y	-500	%95

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M40	Y	-250	0

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M40	Y	-250	%50

Member Point Loads (BLC 81 : Antenna Ev)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Y	0	2
2	MP3A	My	0	2
3	MP3A	Mz	0	2
4	MP3A	Y	0	6
5	MP3A	My	0	6
6	MP3A	Mz	0	6
7	MP3B	Y	0	2
8	MP3B	My	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
9	MP3B	Mz	0	2
10	MP3B	Y	0	6
11	MP3B	My	0	6
12	MP3B	Mz	0	6
13	MP3C	Y	0	2
14	MP3C	My	0	2
15	MP3C	Mz	0	2
16	MP3C	Y	0	6
17	MP3C	My	0	6
18	MP3C	Mz	0	6
19	MP3A	Y	0	2
20	MP3A	My	0	2
21	MP3A	Mz	0	2
22	MP3A	Y	0	6
23	MP3A	My	0	6
24	MP3A	Mz	0	6
25	MP3B	Y	0	2
26	MP3B	My	0	2
27	MP3B	Mz	0	2
28	MP3B	Y	0	6
29	MP3B	My	0	6
30	MP3B	Mz	0	6
31	MP3C	Y	0	2
32	MP3C	My	0	2
33	MP3C	Mz	0	2
34	MP3C	Y	0	6
35	MP3C	My	0	6
36	MP3C	Mz	0	6
37	MP2A	Y	0	4
38	MP2A	My	0	4
39	MP2A	Mz	0	4
40	MP2B	Y	0	4
41	MP2B	My	0	4
42	MP2B	Mz	0	4
43	MP2C	Y	0	4
44	MP2C	My	0	4
45	MP2C	Mz	0	4
46	MP1A	Y	0	3
47	MP1A	My	0	3
48	MP1A	Mz	0	3
49	MP1A	Y	0	5
50	MP1A	My	0	5
51	MP1A	Mz	0	5
52	MP1B	Y	0	3
53	MP1B	My	0	3
54	MP1B	Mz	0	3
55	MP1B	Y	0	5
56	MP1B	My	0	5
57	MP1B	Mz	0	5
58	MP1C	Y	0	3
59	MP1C	My	0	3
60	MP1C	Mz	0	3
61	MP1C	Y	0	5
62	MP1C	My	0	5
63	MP1C	Mz	0	5
64	MP3A	Y	0	2.5
65	MP3A	My	0	2.5
66	MP3A	Mz	0	2.5
67	MP3B	Y	0	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
68	MP3B	My	0	2.5
69	MP3B	Mz	0	2.5
70	MP3C	Y	0	2.5
71	MP3C	My	0	2.5
72	MP3C	Mz	0	2.5
73	MP4A	Y	0	2.5
74	MP4A	My	0	2.5
75	MP4A	Mz	0	2.5
76	MP4B	Y	0	2.5
77	MP4B	My	0	2.5
78	MP4B	Mz	0	2.5
79	MP4C	Y	0	2.5
80	MP4C	My	0	2.5
81	MP4C	Mz	0	2.5
82	OVP	Y	0	1
83	OVP	My	0	1
84	OVP	Mz	0	1
85	MP3A	Y	0	5
86	MP3A	My	0	5
87	MP3A	Mz	0	5
88	MP3C	Y	0	5
89	MP3C	My	0	5
90	MP3C	Mz	0	5
91	MP3A	Y	0	5
92	MP3A	My	0	5
93	MP3A	Mz	0	5
94	MP3C	Y	0	5
95	MP3C	My	0	5
96	MP3C	Mz	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Z	-.6	2
2	MP3A	Mx	.00035	2
3	MP3A	Z	-.6	6
4	MP3A	Mx	.00035	6
5	MP3B	Z	-.6	2
6	MP3B	Mx	.000432	2
7	MP3B	Z	-.6	6
8	MP3B	Mx	.000432	6
9	MP3C	Z	-.6	2
10	MP3C	Mx	-.000553	2
11	MP3C	Z	-.6	6
12	MP3C	Mx	-.000553	6
13	MP3A	Z	-.6	2
14	MP3A	Mx	-.00035	2
15	MP3A	Z	-.6	6
16	MP3A	Mx	-.00035	6
17	MP3B	Z	-.6	2
18	MP3B	Mx	.000553	2
19	MP3B	Z	-.6	6
20	MP3B	Mx	.000553	6
21	MP3C	Z	-.6	2
22	MP3C	Mx	-.000432	2
23	MP3C	Z	-.6	6
24	MP3C	Mx	-.000432	6
25	MP2A	Z	-.132	4
26	MP2A	Mx	0	4

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
27	MP2B	Z	-.132	4
28	MP2B	Mx	3.2e-5	4
29	MP2C	Z	-.132	4
30	MP2C	Mx	-3.2e-5	4
31	MP1A	Z	-1.306	3
32	MP1A	Mx	0	3
33	MP1A	Z	-1.306	5
34	MP1A	Mx	0	5
35	MP1B	Z	-1.306	3
36	MP1B	Mx	.001	3
37	MP1B	Z	-1.306	5
38	MP1B	Mx	.001	5
39	MP1C	Z	-1.306	3
40	MP1C	Mx	-.001	3
41	MP1C	Z	-1.306	5
42	MP1C	Mx	-.001	5
43	MP3A	Z	-2.532	2.5
44	MP3A	Mx	0	2.5
45	MP3B	Z	-2.532	2.5
46	MP3B	Mx	-.001	2.5
47	MP3C	Z	-2.532	2.5
48	MP3C	Mx	.001	2.5
49	MP4A	Z	-2.109	2.5
50	MP4A	Mx	0	2.5
51	MP4B	Z	-2.109	2.5
52	MP4B	Mx	-.000913	2.5
53	MP4C	Z	-2.109	2.5
54	MP4C	Mx	.000913	2.5
55	OVP	Z	-.96	1
56	OVP	Mx	0	1
57	MP3A	Z	-.528	5
58	MP3A	Mx	0	5
59	MP3C	Z	-.528	5
60	MP3C	Mx	-.00013	5
61	MP3A	Z	-.528	5
62	MP3A	Mx	0	5
63	MP3C	Z	-.528	5
64	MP3C	Mx	.00013	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	.6	2
2	MP3A	Mx	-.0005	2
3	MP3A	X	.6	6
4	MP3A	Mx	-.0005	6
5	MP3B	X	.6	2
6	MP3B	Mx	.000432	2
7	MP3B	X	.6	6
8	MP3B	Mx	.000432	6
9	MP3C	X	.6	2
10	MP3C	Mx	-.000258	2
11	MP3C	X	.6	6
12	MP3C	Mx	-.000258	6
13	MP3A	X	.6	2
14	MP3A	Mx	-.0005	2
15	MP3A	X	.6	6
16	MP3A	Mx	-.0005	6
17	MP3B	X	.6	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
18	MP3B	Mx	-.000258	2
19	MP3B	X	.6	6
20	MP3B	Mx	-.000258	6
21	MP3C	X	.6	2
22	MP3C	Mx	.000432	2
23	MP3C	X	.6	6
24	MP3C	Mx	.000432	6
25	MP2A	X	.132	4
26	MP2A	Mx	-3.3e-5	4
27	MP2B	X	.132	4
28	MP2B	Mx	6e-6	4
29	MP2C	X	.132	4
30	MP2C	Mx	6e-6	4
31	MP1A	X	1.306	3
32	MP1A	Mx	-.001	3
33	MP1A	X	1.306	5
34	MP1A	Mx	-.001	5
35	MP1B	X	1.306	3
36	MP1B	Mx	.000189	3
37	MP1B	X	1.306	5
38	MP1B	Mx	.000189	5
39	MP1C	X	1.306	3
40	MP1C	Mx	.000189	3
41	MP1C	X	1.306	5
42	MP1C	Mx	.000189	5
43	MP3A	X	2.532	2.5
44	MP3A	Mx	.001	2.5
45	MP3B	X	2.532	2.5
46	MP3B	Mx	-.000633	2.5
47	MP3C	X	2.532	2.5
48	MP3C	Mx	-.000633	2.5
49	MP4A	X	2.109	2.5
50	MP4A	Mx	.001	2.5
51	MP4B	X	2.109	2.5
52	MP4B	Mx	-.000527	2.5
53	MP4C	X	2.109	2.5
54	MP4C	Mx	-.000527	2.5
55	OVP	X	.96	1
56	OVP	Mx	0	1
57	MP3A	X	.528	5
58	MP3A	Mx	-.000132	5
59	MP3C	X	.528	5
60	MP3C	Mx	2.3e-5	5
61	MP3A	X	.528	5
62	MP3A	Mx	.000132	5
63	MP3C	X	.528	5
64	MP3C	Mx	-2.3e-5	5

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	N3	max	631.101	10	2013.358	19	1655.528	1	6.609	19	1.448	4	.177	4
2		min	-631.131	4	784.561	64	-1654.641	7	2.591	64	-1.448	10	-.151	10
3	N109A	max	1460.479	9	1934.872	15	883.638	3	-1.304	9	1.194	12	-2.259	9
4		min	-1459.722	3	781.192	72	-884.157	9	-3.373	15	-1.194	6	-5.842	15
5	N111A	max	1504.625	11	1946.845	23	831.528	11	-1.337	5	1.181	8	6.239	47
6		min	-1505.324	5	795.885	68	-832.177	5	-3.602	47	-1.18	2	2.316	5
7	Totals:	max	3337.504	10	5686.702	14	3043.934	1						

Envelope Joint Reactions (Continued)

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
8		min	-3337.506	4	2367.643	71	-3043.94	7						

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

	Member	Shape	Code Check	Lo...	LC	Shear Check	Lo...	...	...	phi*P...	phi*P...	phi*M...	phi*M...	...	Eqn
1	M78A	HSS4X4...	.375	0	45	.043	0	y	23	1329...	169740	19.285	19.285	...	H1-1b
2	M77A	HSS4X4...	.353	0	13	.043	0	y	15	1329...	169740	19.285	19.285	...	H1-1b
3	M4	HSS4X4...	.350	0	17	.049	0	y	17	1329...	169740	19.285	19.285	...	H1-1b
4	MP3A	PIPE_2.5	.246	3.2...	1	.043	3.2...		8	2807...	50715	3.596	3.596	...	H1-1b
5	MP3C	PIPE_2.5	.242	3.2...	10	.045	3.2...		5	2807...	50715	3.596	3.596	...	H1-1b
6	MP3B	PIPE_2.5	.208	3.2...	4	.041	3.2...		9	2807...	50715	3.596	3.596	...	H1-1b
7	MP1A	PIPE_2.0	.158	3.2...	1	.027	3.2...		6	1351...	32130	1.872	1.872	...	H1-1b
8	MP1C	PIPE_2.0	.156	3.2...	10	.028	3.2...		11	1351...	32130	1.872	1.872	...	H1-1b
9	MP1B	PIPE_2.0	.156	3.2...	4	.028	3.2...		9	1351...	32130	1.872	1.872	...	H1-1b
10	M41	HSS4X4...	.156	0	15	.045	0	z	9	8761...	169740	19.285	19.285	...	H1-1b
11	M40	HSS4X4...	.154	0	19	.046	0	z	1	8761...	169740	19.285	19.285	...	H1-1b
12	M42	HSS4X4...	.151	0	23	.041	12...	y	16	8761...	169740	19.285	19.285	...	H1-1b
13	OVP	PIPE_2.0	.109	2.5	12	.014	2.5		12	2884...	32130	1.872	1.872	...	H1-1b
14	MP2A	PIPE_2.0	.080	3.2...	1	.010	3.2...		8	1351...	32130	1.872	1.872	1	H1-1b
15	MP2B	PIPE_2.0	.079	3.2...	4	.010	3.2...		11	1351...	32130	1.872	1.872	...	H1-1b
16	MP2C	PIPE_2.0	.079	3.2...	10	.010	3.2...		3	1351...	32130	1.872	1.872	...	H1-1b
17	MP4B	PIPE_2.0	.072	3.1...	5	.017	3.1...		1	1351...	32130	1.872	1.872	...	H1-1b
18	MP4C	PIPE_2.0	.072	3.1...	9	.017	3.1...		5	1351...	32130	1.872	1.872	...	H1-1b
19	MP4A	PIPE_2.0	.072	3.1...	1	.017	3.1...		9	1351...	32130	1.872	1.872	...	H1-1b

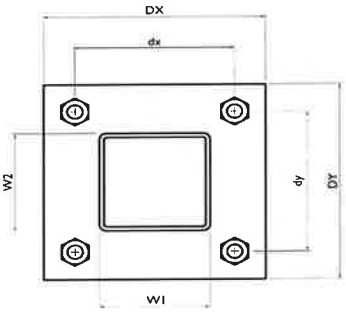
VzW SMART Tool© Vendor

Client:	Verizon	Date:	7/24/2023
Site Name:	SOUTHINGTON EAST CT - A		
MDG #:	5000384425		
Fuze ID #:	17123884	Page:	1

Version 1.01

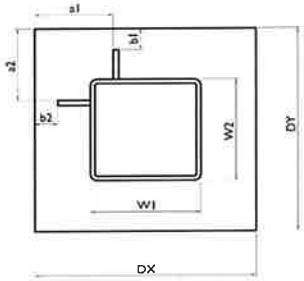
I. Mount-to-Tower Connection Check

Custom Orientation Required	No
Tower Connection Bolt Checks	Yes
Bolt Orientation	Parallel



Bolt Quantity per Reaction:	4
d_x (in) *(Delta X of typ. bolt config. sketch)* :	3
d_y (in) *(Delta Y of typ. bolt config. sketch)* :	8
Bolt Type:	A325N
Bolt Diameter (in):	0.75
Required Tensile Strength / bolt (kips):	5.5
Required Shear Strength / bolt (kips):	0.5
Tensile Capacity / bolt (kips):	29.8
Shear Capacity / bolt (kips):	17.9
Bolt Overall Utilization:	18.5%

Tower Connection Baseplate Checks	Yes



Connecting Standoff Member Shape:	Rect Tube
Weld Stiffener Configuration:	Has Stiffeners
Plate Width, D_x (in):	6
Plate Height, D_y (in):	10
W1(in):	4
W2 (in):	4
Member Thickness (in):	0.3125
Stiffener location a_1 (in):	3
Stiffener location b_1 (in):	0.5
Stiffener location a_2 (in):	5
Stiffener location b_2 (in):	1.5
F_y (ksi, plate):	36
Plate Thickness (in):	0.75
Length of Yield Line, L_y (in):	4.63
Bolt Eccentricity, e (in):	0.00
M_u (kip-in):	0.00
Phi*M_n (kip-in):	21.09
Plate Bending Utilization:	Sufficient

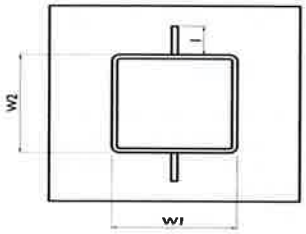
VzW SMART Tool© Vendor

Client:	Verizon	Date:	7/24/2023
Site Name:	SOUTHINGTON EAST CT - A		
PSLC #:	5000384425		
Fuze ID #:	17123884	Page:	2

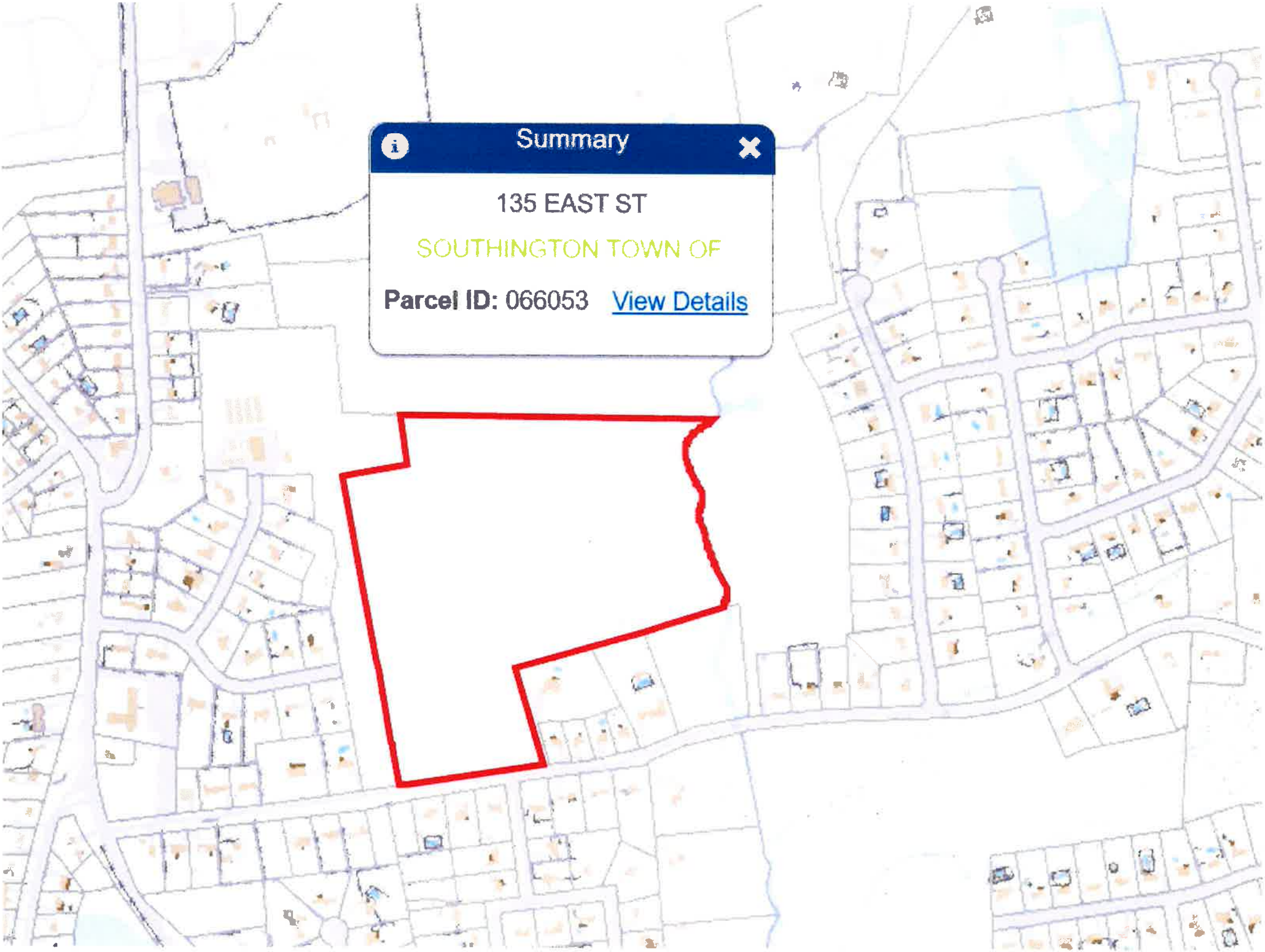
Version 1.01

Tower Connection Weld Checks

	Yes
Weld Shape:	Rectangle
Weld Stiffener Configuration:	(1) Stiffener on top/bottom
Stiffener Notch Present?	No
Stiffener Length, l (in):	2.5
Stiffener Spacing/Width, s (in):	
Weld Size (1/16 in):	7
W1 (in):	4
W2 (in):	4
Weld Total Length (in):	26.00
Z_x (in^3/in):	45.96
Z_y (in^3/in):	21.33
J_p (in^4/in):	196.17
c_x (in)	4.5
c_y (in)	4.5
Required combined strength (kip/in):	1.27
Weld Capacity (kip/in):	9.74
Weld Utilization:	**13.1%**



ATTACHMENT 4


Summary
135 EAST ST
SOUTHINGTON TOWN OF
Parcel ID: 066053 View Details

SOUTHINGTON,CT

VISION
GOVERNMENT SOLUTIONS

135 EAST ST

Sales Print Map It

Location	135 EAST ST	**Mblu**	066/ / 053/ /
Acct#	1482	**Owner**	SOUTHINGTON TOWN OF
Assessment	$442,800	**Appraisal**	$632,570
PID	5182	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2020	$0	$632,570	$632,570
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2020	$0	$442,800	$442,800

Owner of Record

Owner	SOUTHINGTON TOWN OF
Co-Owner	
Address	75 MAIN ST SOUTHINGTON, CT 06489

Sale Price	$0
Certificate	
Book & Page	0950/0192
Sale Date	01/29/2004
Instrument	29

ATTACHMENT 5

Verizon/Southington East

UNITED STATES POSTAL SERVICE®

Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here *Postmark with Date of Receipt.*
Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103	2	2	neopost 10/10/2023 US POSTAGE $003.19⁰ ZIP 06103 041L12203937
	Postmaster, per *(name of receiving employee)*		

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Mark Sciota, Town Manger Town of Southington 75 Main Street Southington, CT 06489				
2.	Jeremy DeCarli, Director of Planning and Community Development Town of Southington Municipal Center 196 North Main Street Southington, CT 06489				
3.					
4.					
5.					
6.					

OLD STATE HOUSE STATION 06103
OCT 10 2023
USPS