

October 16, 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**  
**917 Exeter Road, Lebanon, 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 was approved by the Siting Council (“Council”) in June of 2018 (Docket No. 482). A copy of the Council’s Docket No. 482 Decision and Order is included in Attachment 1.

Cellco’s proposed modification involves the installation of two (2) 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 Lebanon’s Chief Elected Official and Land Use Officer. The Town of Lebanon 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.

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Melanie A. Bachman, Esq.  
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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:

Kevin Cwikla, First Selectman  
Philip Chester, Town Planner  
Alex Tyurin, Verizon Wireless

# **ATTACHMENT 1**

<b>DOCKET NO. 482</b> - 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 on town-owned property behind Lyman Memorial High School located at 917 Exeter Road, Lebanon, Connecticut.	} } }	Connecticut  Siting  Council
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June 21, 2018

**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, maintenance, and operation of a telecommunications facility, including effects on the natural environment, ecological balance, public health and safety, scenic, historic, and recreational values, agriculture, forests and parks, air and water purity, and fish, aquaculture 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 d/b/a Verizon Wireless, hereinafter referred to as the Certificate Holder, for a telecommunications facility at 917 Exeter Road, Lebanon, 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 monopole at a height of 150 feet above ground level to provide the proposed wireless services, sufficient to accommodate the antennas of Cellco Partnership d/b/a Verizon Wireless, the Town of Lebanon 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 Lebanon 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 that employ the governing standard in the State of Connecticut for tower design in accordance with the currently adopted International Building Code and include specifications for the tower, tower foundation, antennas and equipment compound including, but not limited to, fencing, radio equipment, access road, utility installation and emergency backup source(s);
  - b) construction plans for site clearing, grading, landscaping, water drainage and stormwater control, and erosion and sedimentation controls consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended;
  - c) Eastern box turtle protection measures, in accordance with standard Department of Energy and Environmental Protection protocols; and
  - d) hours of construction.



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 Lebanon.
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 acknowledgment 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 March 20, 2018, and notice of issuance published in the Norwich Bulletin.

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 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



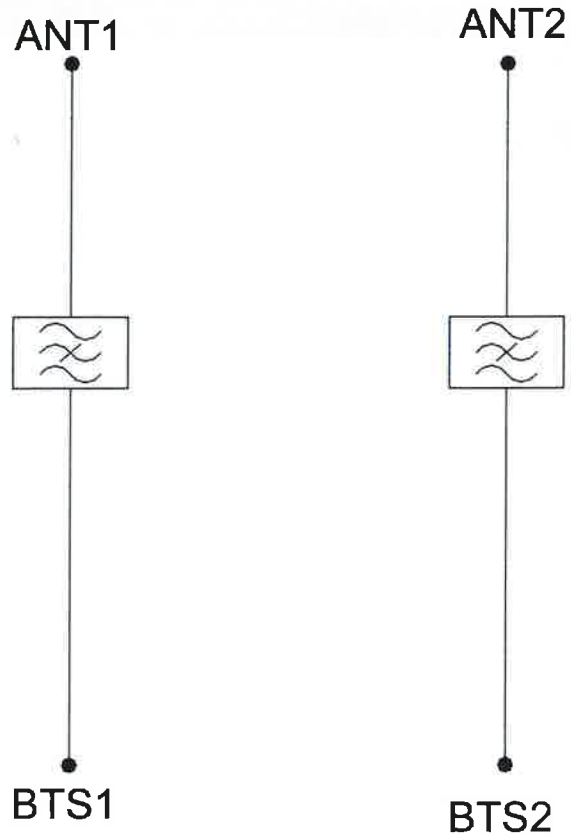
### TECHNICAL SPECIFICATIONS

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	
<b>ELECTRICAL</b>		
Impedance	50Ohms	
Intermodulation products	-160dBc maximum in UL Band (assuming 20MHz Signal), with 2 x 43dBm carriers -153dBc maximum with 2 x 43dBm	
<b>DC / AISG</b>		
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	
<b>ENVIRONMENTAL</b>		
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	
<b>MECHANICAL</b>		
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.	

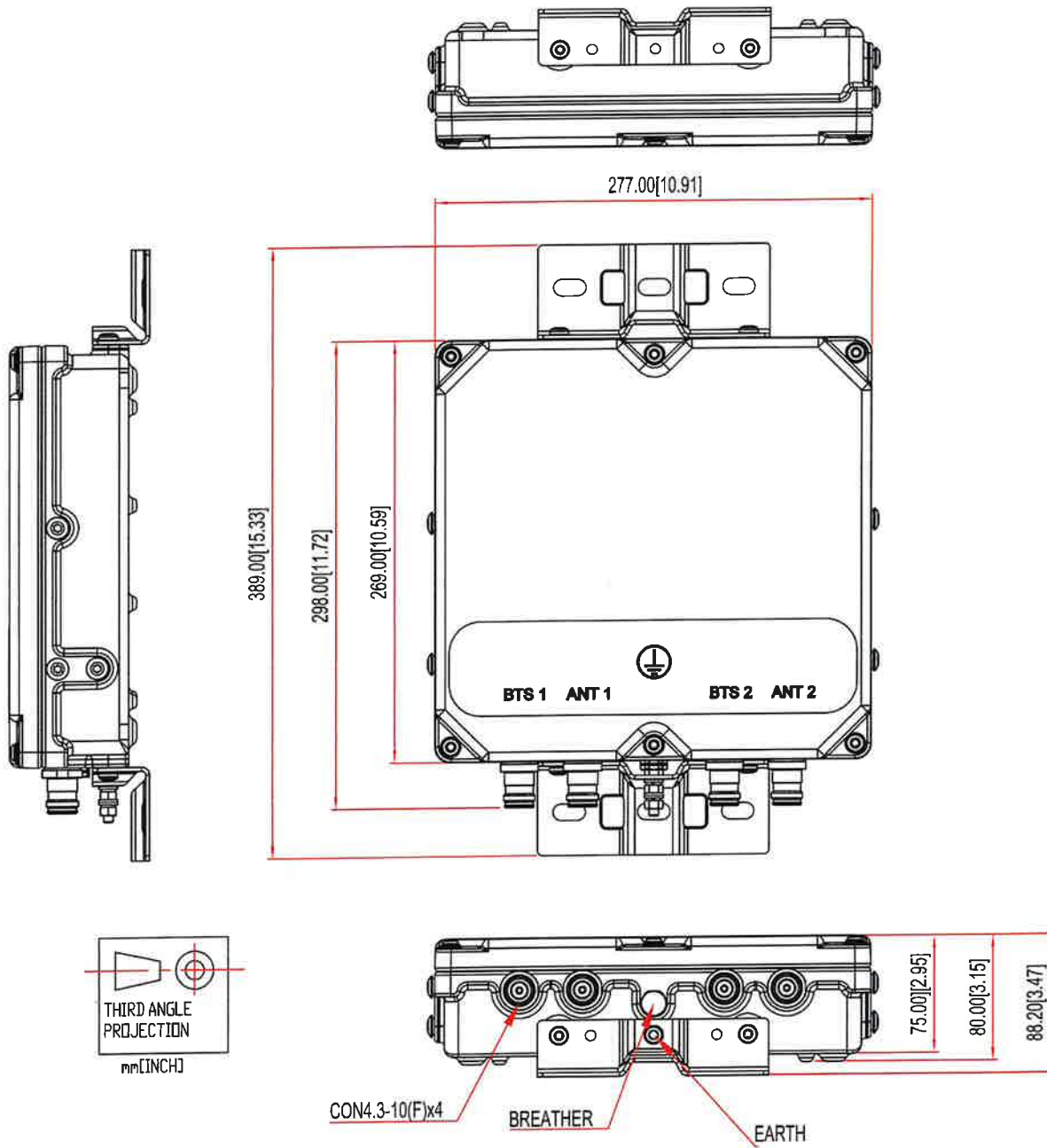
## ORDERING INFORMATION

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



**MECHANICAL BLOCK DIAGRAM**





# **ATTACHMENT 3**



**STRUCTURAL ANALYSIS REPORT  
FOR PROPOSED ANTENNA AND APPURTENANCE  
MODIFICATION ON A 150'± MONOPOLE TOWER  
LEBANON, CONNECTICUT**

Prepared for  
Verizon Wireless



**Verizon Site Ref:  
469950; Lebanon Center CT**

Site Address: 917 Exeter Road, Lebanon, CT 06249

FUZE ID: 17123863

Location Code: 469950

Project Type: Filter Add

MDG Location ID: 5000093356

APT Filing No. CT141\_14050

~~Rev 0 August 29, 2023~~

~~Rev 1 September 21, 2023~~

Rev 2 October 11, 2023



**STRUCTURAL ANALYSIS REPORT**  
**150'± MONOPOLE TOWER**  
**LEBANON, CONNECTICUT**  
**prepared for**  
**Verizon Wireless**

**EXECUTIVE SUMMARY:**

All-Points Technology Corporation, P.C. (APT) performed a structural analysis of an existing 150'± monopole tower structure to support a proposed Verizon equipment modification.

Details of the proposed equipment configuration are included within the table on the following page.

The results of this analysis indicate that the existing monopole tower structure meets the requirements of the 2021 International Building Code (IBC), as amended by the 2022 Connecticut State Building Code, and the ANSI/TIA-222-H standard with Verizon's proposed equipment modification.

Evaluation of the existing base foundation was limited to a comparison of the calculated base reactions under the existing and proposed loading against the design reactions indicated within original design documents prepared by Valmont. Reactions imposed by the proposed installation are less than the published design reactions, indicating that the foundation is adequately sized.

The tower steel component usage is summarized in the table below:

Elevation/Component	Usage (%)
106.5'±-150'±	15%
61.167'± - 106.5'±	19%
30.417'± - 61.167'±	20%
1'±-30.417'±	24%
Anchor Bolts	28%
Base Plate	19%

**INTRODUCTION:**

A structural analysis of the subject communications tower was performed by APT for Verizon Wireless. The tower is located at 917 Exeter Road in Lebanon, Connecticut.

The following information was utilized in the preparation of this analysis:

- Construction Drawings prepared by APT (Project No. CT141\_14050), Marked Rev. 2, dated 10/11/23.
- RFDS detailing Verizon's proposed equipment changes, latest version.
- Municipal Antenna Mount Detail Drawing SK-S2, prepared by APT (Project No. CT141NB7950), marked Rev. 0, dated 09/29/2020.
- Slab Foundation Design Calculations and Drawing prepared by Valmont Structures (Order No. 455836-P1), marked Rev B, dated 12/11/19.
- Communication Structure Calculations prepared by Valmont Structures (Order No. 455836-P1), marked Rev B, dated 12/11/19.

- Communication Pole Record Drawings prepared by Valmont Structures (Order No. 455836-P1), dated 10/30/19.

The structure is a 150'±, galvanized steel, 18-sided monopole tower structure designed and manufactured by Valmont.

The analysis was conducted using the following antenna inventory (proposed equipment changes shown in **bold text**):

Carrier	Antenna and Appurtenance Make/Model	Elevation	Status	Mount Type	Coax/Feed-Line
Municipal	(1) Commander 1142-2AN Omni whip, (1) DB Spectra DS4C06F36D-N Omni whip, (1) Telewave ANT150F6-3 Omni whip, (1) Telewave ANT150F6-3 Omni whip	148'±	ETR	(4) SitePRO1 HS6-K Heavy Duty Stand-off Mounts	(5) 7/8"
Verizon Wireless	<b>(2) Kaelus KA-6030 mitigation filters (Beta sector),</b> (6) Quintel QS6656-5 antennas, <b>(3) Samsung MT6407-77A antennas w/ integrated RRHs,</b> (3) Samsung RFV01U-D1A RRHs, (3) Samsung RFV01U-D2A RRHs, (1) Raycap RVZDC-6627-PF-48 12OVP	140'±	P ETR P ETR ETR ETR	(1) SitePRO1 12' Fortress™ Tri-Cornered Telescoping Platform Mount w/ Walkways (P/N F3P-12W) w/ SitePRO1 Handrail Kit (P/N F3P-HRK12)	(1) 12x24 hybrid

Notes:

1. Elevations are measured above ground level (AGL). Tower is approximately 1' above grade.
2. ETR = Existing to Remain; ERL= Existing to be Relocated; P = Proposed; F = Future; R= Reserved.
3. All feed-lines noted above are routed within interior of the pole unless otherwise noted.
4. Omni-whip antenna elevations indicated above are base elevations.

**STRUCTURAL ANALYSIS:**

**Methodology:**

This structural analysis has been prepared in accordance with the ANSI/TIA-222-H standard entitled "Structural Standard for Antenna Supporting Structures, Antennas and Small Wind Turbine Support Structures"; American Institute of Steel Construction (AISC) Manual of Steel Construction, and the 2021 International Building Code (IBC), as amended by the 2022 Connecticut State Building Code utilizing the following criteria:

- o Load Case 1: 125 mph (3-second gust) Ultimate wind speed, 0" ice
- o Load Case 2: 50 mph (3-second gust) w/ 1.00" ice thickness required
- o Load Case 3: 60 mph (3-second gust) (Service Load)
- o Risk Category: II
- o Exposure Category: C
- o Topographic Category: 1

**Analysis Results:**

The following table summarizes the capacity of the monopole based on combined axial and bending stresses:

Elevation/Component	Usage (%)
106.5'±-150'±	15%
61.167'±- 106.5'±	19%
30.417'±- 61.167'±	20%
1'±-30.417'±	24%
Anchor Bolts	28%
Base Plate	19%

**Foundation:**

Evaluation of the existing base foundation was performed by comparing reactions calculated with the existing and proposed loading against the design reactions indicated within the aforementioned design drawings. Factored base reactions imposed by the existing and proposed loading are less than the published design reactions, indicating that the foundation is adequately sized.

The calculated base reactions with the proposed equipment loading are indicated within the table below:

Load Effect	Original Design (TIA-222-G)	Calculated Reactions	Result
Compression	72.8 k	51 k	PASS
Base Shear	63.9 k	21 k	PASS
Overturning Moment	8,376 ft-k	2,028 ft-k	PASS

**CONCLUSIONS:**

In conclusion, our analysis indicates that the existing 150'± monopole tower structure located at 917 Exeter Road in Lebanon, Connecticut meets the requirements of the 2021 International Building Code (IBC), as amended by the 2022 Connecticut State Building Code, and the ANSI/TIA-222-H standard with Verizon's proposed equipment modification.

Sincerely,  
 All-Points Technology Corp. P.C.



Michael S. Trodden, P.E.  
 Senior Structural Engineer



Prepared By:  
 All-Points Technology Corp. P.C.



Jason R. Mead  
 Department Manager –  
 Structural Services

**LIMITATIONS:**

This report is based on the following:

1. Tower/structure is properly installed and maintained.
2. All members and components are in a non-deteriorated condition.
3. All required members are in place.
4. All bolts are in place and are properly tightened.
5. Tower/structure is in plumb condition.
6. All tower members were properly designed, detailed, fabricated, and installed and have been properly maintained since erection.
7. Material yield stress values as follows:
  - Pole: ASTM A572 Gr. 65
  - Base Plate: ASTM A572 Gr. 50
  - Anchor Bolts: ASTM A615 Gr. 75

All-Points Technology Corporation, P.C. (APT) is not responsible for any modifications completed prior to or hereafter which APT is not or was not directly involved. Modifications include but are not limited to:

1. Replacing or reinforcing bracing members.
2. Reinforcing members in any manner.
3. Adding or relocating antennas.
4. Installing antenna mounts or waveguide cables.
5. Extending tower.

APT hereby states that this document represents the entire report and that it assumes no liability for any factual changes that may occur after the date of this report. All representations, recommendations, and conclusions are based upon the information contained and set forth herein. If you are aware of any information which conflicts with that which is contained herein, or you are aware of any defects arising from original design, material, fabrication, or erection deficiencies, you should disregard this report and immediately contact APT. APT disclaims all liability for any representation, recommendation, or conclusion not expressly stated herein.

# *Appendix A*

## *Design Criteria*



Municipality	Basic Design Wind Speeds, $V$ (mph)				Allowable Stress Design Wind Speeds, $V_{asd}$ (mph)				Ground Snow Load $P_g$ (psf)	MCE Ground Accelerations		Wind-Borne Debris Region <sup>1</sup>		Hurricane- Prone Region
	Risk Cat. I	Risk Cat. II	Risk Cat. III	Risk Cat. IV	Risk Cat. I	Risk Cat. II	Risk Cat. III	Risk Cat. IV		$S_S$ (g)	$S_I$ (g)	Risk Cat. III Occup. 1-2	Risk Cat. IV	
Hampton	115	125	130	135	89	97	101	105	35	0.184	0.054		Yes	
Hartford	110	120	130	135	85	93	101	105	30	0.189	0.055		Yes	
Hartland	110	115	125	130	85	89	97	101	35	0.167	0.054			
Harwinton	110	120	125	130	85	93	97	101	35	0.177	0.054		Yes	
Hebron	115	125	130	135	89	97	101	105	30	0.200	0.055		Yes	
Kent	105	115	125	130	81	89	97	101	40	0.184	0.054			
Killingly	115	125	135	140	89	97	105	108	35	0.186	0.055		Yes	
Killingworth	115	125	135	140	89	97	105	108	30	0.210	0.055		Yes	
Lebanon	115	125	135	135	89	97	105	105	30	0.196	0.055		Yes	
Ledyard	120	130	140	140	93	101	108	108	30	0.190	0.053		Yes	
Lisbon	115	125	135	140	89	97	105	108	30	0.190	0.054		Yes	
Litchfield	110	115	125	130	85	89	97	101	35	0.178	0.054			
Lyme	115	125	135	140	89	97	105	108	30	0.207	0.054		Yes	
Madison	115	125	135	140	89	97	105	108	30	0.206	0.054	Type B	Yes	
Manchester	110	120	130	135	85	93	101	105	30	0.190	0.055		Yes	
Mansfield	110	120	130	135	85	93	101	105	35	0.186	0.055		Yes	
Marlborough	110	125	130	135	85	97	101	105	30	0.205	0.056		Yes	
Meriden	110	120	130	135	85	93	101	105	30	0.203	0.055		Yes	
Middlebury	110	120	130	130	85	93	101	101	35	0.194	0.054		Yes	
Middlefield	110	120	130	135	85	93	101	105	30	0.209	0.055		Yes	
Middletown	110	120	130	135	85	93	101	105	30	0.209	0.056		Yes	
Milford	110	120	130	135	85	93	101	105	30	0.202	0.053	Type B	Yes	
Monroe	110	120	130	135	85	93	101	105	30	0.208	0.055		Yes	
Montville	120	125	135	140	93	97	105	108	30	0.198	0.054		Yes	
Morris	110	115	125	130	85	89	97	101	35	0.182	0.054			
Naugatuck	110	120	130	135	85	93	101	105	30	0.197	0.054		Yes	
New Britain	110	120	130	135	85	93	101	105	30	0.195	0.055		Yes	
New Canaan	110	120	130	135	85	93	101	105	30	0.252	0.058		Yes	
New Fairfield	110	115	125	130	85	89	97	101	30	0.219	0.056			
New Hartford	110	115	125	130	85	89	97	101	35	0.172	0.054			
New Haven	110	125	130	135	85	97	101	105	30	0.201	0.054	Type B	Yes	
New London	120	130	140	140	93	101	108	108	30	0.191	0.053	Type B Type A	Yes Yes	



## Ice

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### Results:

Ice Thickness: 1.00 in.  
Concurrent Temperature: 15 F  
Gust Speed 50 mph

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

**Date Accessed:** Mon Jun 26 2023

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

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

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The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided "as is" and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE 7 standard.

In using this Tool, you expressly assume all risks associated with your use. Under no circumstances shall ASCE or its officers, directors, employees, members, affiliates, or agents be liable to you or any other person for any direct, indirect, special, incidental, or consequential damages arising from or related to your use of, or reliance on, the Tool or any information obtained therein. To the fullest extent permitted by law, you agree to release and hold harmless ASCE from any and all liability of any nature arising out of or resulting from any use of data provided by the ASCE 7 Hazard Tool.

# *Appendix B*

## *Tower Schematic*

Section	Length (ft)	Number of Slides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (K)
1	43.50	18	0.3125	5.50	27.0800	38.1600	4.7	
2	50.83	18	0.4375	6.83	36.1353	48.0715	10.1	A572-65
3	37.58	18	0.5000	7.58	46.4576	56.0219	10.3	
4	37.00	18	0.5000	53.0921	62.5079		11.4	
							10.0 ft	
							61.2 ft	
							30.4 ft	
							106.5 ft	
							150.0 ft	



### DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
1142-2AN (Municipal)	148	B5/B13 RRHBR04C (RFV01UD2A) (Verizon)	141.5
HS6-K (Municipal)	148	B5/B13 RRHBR04C (RFV01UD2A) (Verizon)	141.5
Telewave ANT150F6 (Municipal)	148	B5/B13 RRHBR04C (RFV01UD2A) (Verizon)	141.5
HS6-K (Municipal)	148	(2) Quintel QS6656-5 (Verizon)	140
Telewave ANT150F6 (Municipal)	148	(2) Quintel QS6656-5 (Verizon)	140
HS6-K (Municipal)	148	(2) Quintel QS6656-5 (Verizon)	140
DS4C06F36D-N (Municipal)	148	MT6407-77A (Verizon)	140
HS6-K (Municipal)	148	MT6407-77A (Verizon)	140
RVZDC-6627-PF-4B (12OVP) (Verizon)	145.5	(2) KA-6030 mitigation filter (Verizon)	140
B2/B66A RRHBR04S (RFV01U-D1A) (Verizon)	141.5	F3P-12[W] 12' Tri Cnr Platform w Walkway (Verizon)	140
B2/B66A RRHBR049 (RFV01U-D1A) (Verizon)	141.5	F3P-HRK12 Hand Rail Kit (Verizon)	140
B2/B66A RRHBR049 (RFV01U-D1A) (Verizon)	141.5		

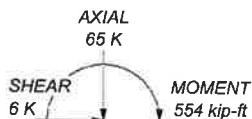
### MATERIAL STRENGTH

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

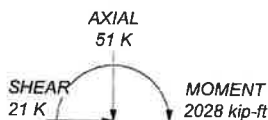
### TOWER DESIGN NOTES

1. Tower designed for Exposure C to the TIA-222-H Standard.
2. Tower designed for a 125 mph basic wind in accordance with the TIA-222-H Standard.
3. Tower is also designed for a 50 mph basic wind with 1.00 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 0.00 ft
7. TOWER RATING: 24.4%

ALL REACTIONS  
ARE FACTORED



TORQUE 1 kip-ft  
50 mph WIND - 1.0000 in ICE



TORQUE 3 kip-ft  
REACTIONS - 125 mph WIND

<b>All-Points Technology Corporation, P.C.</b> 567 Vauxhall Street Ext. Suite 311 Waterford, CT 06385 Phone: (860) 663-1697 FAX:	Job: <b>150' Monopole Tower</b>
	Project: <b>CT141_14050 Lebanon Center</b>
	Client: <b>VzW Site #469950; Lebanon Center CT</b>
	Code: <b>TIA-222-H</b>
	Path:
Drawn by: <b>DJA</b>	App'd:
Date: <b>10/11/23</b>	Scale: <b>NTS</b>
Dwg No. <b>E-1</b>	

# *Appendix C*

## *Calculations*

<b>tnxTower</b>  <b>All-Points Technology Corporation, P.C.</b> 567 Vauxhall Street Ext. Suite 311 Waterford, CT 06385 Phone: (860) 663-1697 FAX:	<b>Job</b> 150' Monopole Tower	<b>Page</b> 1 of 4
	<b>Project</b> CT141_14050 Lebanon Center	<b>Date</b> 12:30:52 10/11/23
	<b>Client</b> VzW Site #469950; Lebanon Center CT	<b>Designed by</b> DJA

## 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: 507.00 ft.

Basic wind speed of 125 mph.

Risk Category II.

Exposure Category C.

Simplified Topographic Factor Procedure for wind speed-up calculations is used.

Topographic Category: 1.

Crest Height: 0.00 ft.

Nominal ice thickness of 1.0000 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.

## Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	$A_R$ ft <sup>2</sup>	$A_F$ ft <sup>2</sup>	$C_A A_A$ In Face ft <sup>2</sup>	$C_A A_A$ Out Face ft <sup>2</sup>	Weight K
L1	150.00-106.50	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	1.631	0.23
L2	106.50-61.17	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	1.700	0.27
L3	61.17-30.42	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	1.153	0.18
L4	30.42-1.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.916	0.15

<b>tnxTower</b>  <b>All-Points Technology Corporation, P.C.</b> 567 Vauxhall Street Ext. Suite 311 Waterford, CT 06385 Phone: (860) 663-1697 FAX:	<b>Job</b> 150' Monopole Tower	<b>Page</b> 2 of 4
	<b>Project</b> CT141_14050 Lebanon Center	<b>Date</b> 12:30:52 10/11/23
	<b>Client</b> VzW Site #469950; Lebanon Center CT	<b>Designed by</b> DJA

### Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C <sub>A</sub> A <sub>Front</sub>	C <sub>A</sub> A <sub>Side</sub>	Weight
			Horz	Lateral					
			ft	ft	°	ft	ft <sup>2</sup>	ft <sup>2</sup>	K
1142-2AN (Municipal)	A	From Leg	6.00	0.0000	148.00	No Ice	2.66	2.66	0.01
			0.00			1/2" Ice	4.28	4.28	0.03
			8.00			1" Ice	5.92	5.92	0.06
HS6-K (Municipal)	A	From Leg	3.00	0.0000	148.00	No Ice	4.40	8.59	0.29
			0.00			1/2" Ice	6.25	11.51	0.33
			0.00			1" Ice	8.04	14.51	0.38
Telewave ANT150F6 (Municipal)	C	From Leg	6.00	0.0000	148.00	No Ice	5.87	5.87	0.04
			0.00			1/2" Ice	8.03	8.03	0.08
			10.00			1" Ice	10.21	10.21	0.13
HS6-K (Municipal)	C	From Leg	3.00	0.0000	148.00	No Ice	4.40	8.59	0.29
			0.00			1/2" Ice	6.25	11.51	0.33
			0.00			1" Ice	8.04	14.51	0.38
Telewave ANT150F6 (Municipal)	B	From Leg	6.00	0.0000	148.00	No Ice	5.87	5.87	0.04
			0.00			1/2" Ice	8.03	8.03	0.08
			10.00			1" Ice	10.21	10.21	0.13
HS6-K (Municipal)	B	From Leg	3.00	0.0000	148.00	No Ice	4.40	8.59	0.29
			0.00			1/2" Ice	6.25	11.51	0.33
			0.00			1" Ice	8.04	14.51	0.38
DS4C06F36D-N (Municipal)	A	From Leg	6.00	0.0000	148.00	No Ice	6.21	6.21	0.05
			0.00			1/2" Ice	8.18	8.18	0.09
			10.00			1" Ice	10.17	10.17	0.15
HS6-K (Municipal)	A	From Leg	3.00	0.0000	148.00	No Ice	4.40	8.59	0.29
			0.00			1/2" Ice	6.25	11.51	0.33
			0.00			1" Ice	8.04	14.51	0.38
(2) KA-6030 mitigation filter (Verizon)	B	From Face	4.00	0.0000	140.00	No Ice	0.96	0.29	0.02
			0.00			1/2" Ice	1.09	0.36	0.02
			0.00			1" Ice	1.22	0.45	0.03
(2) Quintel QS6656-5 (Verizon)	A	From Face	4.00	0.0000	140.00	No Ice	8.13	6.80	0.07
			0.00			1/2" Ice	8.59	7.27	0.13
			0.00			1" Ice	9.05	7.72	0.19
(2) Quintel QS6656-5 (Verizon)	B	From Face	4.00	0.0000	140.00	No Ice	8.13	6.80	0.07
			0.00			1/2" Ice	8.59	7.27	0.13
			0.00			1" Ice	9.05	7.72	0.19
(2) Quintel QS6656-5 (Verizon)	C	From Face	4.00	0.0000	140.00	No Ice	8.13	6.80	0.07
			0.00			1/2" Ice	8.59	7.27	0.13
			0.00			1" Ice	9.05	7.72	0.19
MT6407-77A (Verizon)	A	From Face	4.00	0.0000	140.00	No Ice	4.71	1.84	0.09
			0.00			1/2" Ice	5.00	2.07	0.12
			0.00			1" Ice	5.29	2.30	0.15
MT6407-77A (Verizon)	B	From Face	4.00	0.0000	140.00	No Ice	4.71	1.84	0.09
			0.00			1/2" Ice	5.00	2.07	0.12
			0.00			1" Ice	5.29	2.30	0.15
MT6407-77A (Verizon)	C	From Face	4.00	0.0000	140.00	No Ice	4.71	1.84	0.09
			0.00			1/2" Ice	5.00	2.07	0.12
			0.00			1" Ice	5.29	2.30	0.15
B2/B66A RRHBRO49 (RFV01U-D1A) (Verizon)	A	From Face	3.50	0.0000	141.50	No Ice	1.88	1.25	0.09
			0.00			1/2" Ice	2.05	1.39	0.10
			0.00			1" Ice	2.22	1.54	0.12
B2/B66A RRHBRO49 (RFV01U-D1A) (Verizon)	B	From Face	3.50	0.0000	141.50	No Ice	1.88	1.25	0.09
			0.00			1/2" Ice	2.05	1.39	0.10
			0.00			1" Ice	2.22	1.54	0.12
B2/B66A RRHBRO49 (RFV01U-D1A) (Verizon)	C	From Face	3.50	0.0000	141.50	No Ice	1.88	1.25	0.09
			0.00			1/2" Ice	2.05	1.39	0.10
			0.00			1" Ice	2.22	1.54	0.12



<b>tnxTower</b>  <b>All-Points Technology Corporation, P.C.</b> 567 Vauxhall Street Ext. Suite 311 Waterford, CT 06385 Phone: (860) 663-1697 FAX:	<b>Job</b> 150' Monopole Tower	<b>Page</b> 3 of 4
	<b>Project</b> CT141_14050 Lebanon Center	<b>Date</b> 12:30:52 10/11/23
	<b>Client</b> VzW Site #469950; Lebanon Center CT	<b>Designed by</b> DJA

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C <sub>AA</sub> Front	C <sub>AA</sub> Side	Weight
			Horz	Vert					
			ft	ft	°	ft	ft <sup>2</sup>	ft <sup>2</sup>	K
B5/B13 RRHBR04C (RFV01UD2A) (Verizon)	A	From Face	3.50	0.00	0.0000	141.50	No Ice 1.88 1/2" Ice 2.05 1" Ice 2.22	1.01 1.14 1.28	0.08 0.10 0.12
B5/B13 RRHBR04C (RFV01UD2A) (Verizon)	B	From Face	3.50	0.00	0.0000	141.50	No Ice 1.88 1/2" Ice 2.05 1" Ice 2.22	1.01 1.14 1.28	0.08 0.10 0.12
B5/B13 RRHBR04C (RFV01UD2A) (Verizon)	C	From Face	3.50	0.00	0.0000	141.50	No Ice 1.88 1/2" Ice 2.05 1" Ice 2.22	1.01 1.14 1.28	0.08 0.10 0.12
RVZDC-6627-PF-48 (12OVP) (Verizon)	A	None			0.0000	145.50	No Ice 4.06 1/2" Ice 4.32 1" Ice 4.58	2.86 3.08 3.32	0.03 0.07 0.11
F3P-12[W] 12' Tri Cnr Platform w Walkway (Verizon)	C	None			0.0000	140.00	No Ice 38.09 1/2" Ice 47.38 1" Ice 59.85	37.93 48.17 59.23	2.00 2.60 3.41
F3P-HRK12 Hand Rail Kit (Verizon)	C	None			0.0000	140.00	No Ice 8.07 1/2" Ice 10.84 1" Ice 13.32	6.95 9.53 12.19	0.41 0.50 0.62

### Maximum Tower Deflections - Service Wind

Section No.	Elevation	Horz. Deflection	Gov. Load Comb.	Tilt	Twist
ft		in		°	°
L1	150 - 106.5	5.301	54	0.3073	0.0028
L2	112 - 61.1667	3.005	55	0.2519	0.0010
L3	68 - 30.4167	1.112	55	0.1503	0.0004
L4	38 - 1	0.355	55	0.0843	0.0002

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

Elevation	Appurtenance	Gov. Load Comb.	Deflection	Tilt	Twist	Radius of Curvature
ft			in	°	°	ft
148.00	1142-2AN	54	5.173	0.3048	0.0027	175741
145.50	RVZDC-6627-PF-48 (12OVP)	54	5.014	0.3018	0.0026	175741
141.50	B2/B66A RRHBR049 (RFV01U-D1A)	54	4.760	0.2967	0.0024	103377
140.00	(2) KA-6030 mitigation filter	54	4.665	0.2948	0.0023	87870

### Maximum Tower Deflections - Design Wind

Section No.	Elevation	Horz. Deflection	Gov. Load Comb.	Tilt	Twist
ft		in		°	°
L1	150 - 106.5	25.762	10	1.4875	0.0138
L2	112 - 61.1667	14.616	10	1.2249	0.0051
L3	68 - 30.4167	5.410	10	0.7311	0.0018
L4	38 - 1	1.727	10	0.4102	0.0008

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	<b>Client</b> VzW Site #469950; Lebanon Center CT	<b>Designed by</b> DJA

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

Elevation <i>ft</i>	Appurtenance	Gov. Load Comb.	Deflection <i>in</i>	Tilt <i>°</i>	Twist <i>°</i>	Radius of Curvature <i>ft</i>
148.00	1142-2AN	10	25.144	1.4759	0.0132	36616
145.50	RVZDC-6627-PF-48 (12OVP)	10	24.372	1.4614	0.0126	36616
141.50	B2/B66A RRHBRO49 (RFV01U-D1A)	10	23.142	1.4379	0.0115	21539
140.00	(2) KA-6030 mitigation filter	10	22.682	1.4290	0.0111	18308

### Section Capacity Table

Section No.	Elevation <i>ft</i>	Component Type	Size	Critical Element	P K	$\phi P_{allow}$ K	% Capacity	Pass Fail	
L1	150 - 106.5	Pole	TP38.16x27.09x0.3125	1	-10.89	2114.87	15.1	Pass	
L2	106.5 - 61.1667	Pole	TP49.0715x36.1353x0.4375	2	-22.36	3809.50	18.6	Pass	
L3	61.1667 - 30.4167	Pole	TP56.0219x46.4576x0.5	3	-34.16	4975.46	20.0	Pass	
L4	30.4167 - 1	Pole	TP62.5079x53.0921x0.5	4	-50.93	5756.79	24.4	Pass	
							Summary		
							Pole (L4)	24.4	Pass
							RATING =	24.4	Pass

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567 Vauxhall Street Extension, Suite 311  
 Waterford, CT 06385  
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Verizon - Lebanon Center CT

917 Exeter Road,  
 Lebanon, CT 06249

APT FILING No. CT141\_14050

Anchor Bolt and Base Plate Analysis  
 (Circular Pattern)

Prepared by: JRM: Checked by: MST, P.E.

10.11.23 - Rev 2

**Anchor Bolt and Base Plate Analysis (Non-Grouted Base Plate)**

Note: The following rational circular base analysis methodology shall be utilized when base plate design does not conform to conditions 1 thru 10 of TIA-222-H Annex Q, Section Q3.0.

**Input Data:**

**Tower Reactions (1.2DL +1.0WL):**

Overturning Moment =	$M_o := 2028 \cdot \text{ft} \cdot \text{kip}$	(Input From tnxTower)
Axial Force =	$R_u := 51.0 \cdot \text{kip}$	(Input From tnxTower)
Shear Force =	$V_u := 21.0 \cdot \text{kip}$	(Input From tnxTower)

**Anchor Bolt Data:**

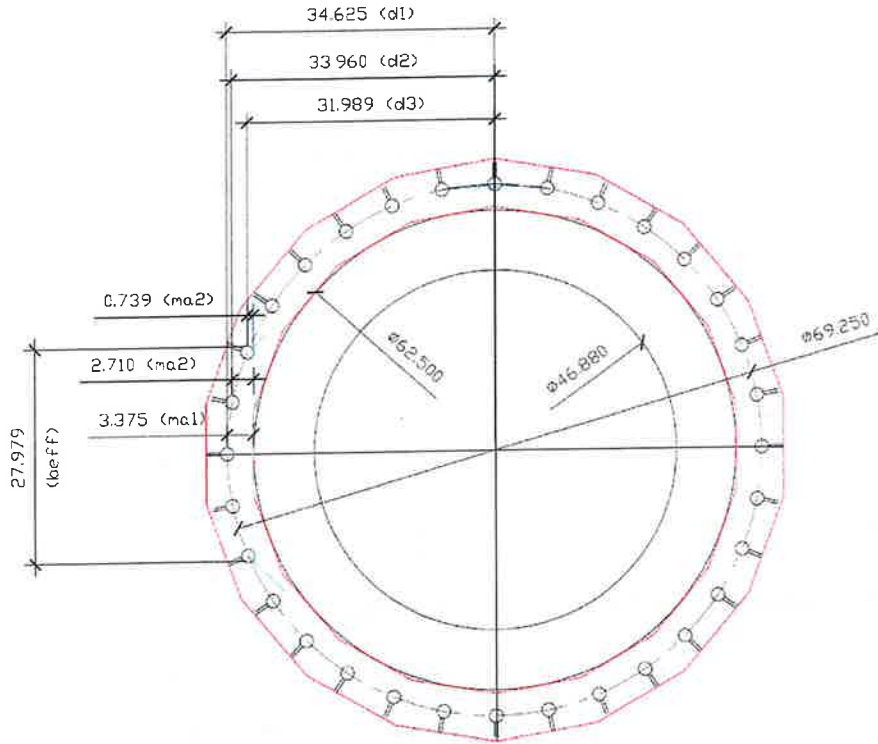
Anchor Bolt Grade =	ASTM A615 Gr. 75	(User Input)
Number of Anchor Bolts =	$N := 32$	(User Input)
Diameter of Bolt Circle =	$D_{BC} := 69.25 \cdot \text{in}$	(User Input)
Bolt "Column" Distance =	$l_{ar} := 1.0 \text{ in}$	(Defined as anchor rod projection from supporting structure to bottom of leveling nut)
Bolt Ultimate Stress =	$F_{ub} := 100 \cdot \text{ksi}$	(User Input)
Bolt Yield Stress =	$F_{yb} := 75 \cdot \text{ksi}$	(User Input)
Bolt Modulus of Elasticity =	$E := 29000 \cdot \text{ksi}$	(User Input)
Nominal Diameter of Anchor Bolts =	$D := 1.75 \text{ in}$	(User Input)
Threads per Inch =	$n := 5.0$	(User Input)

**Base Plate Data:**

**ASTM A572-50**

Plate Yield Strength =	$F_{yf} := 50 \cdot \text{ksi}$	(User Input)
Base Plate Thickness =	$t_{bp} := 2.750 \text{ in}$	(User Input)
Base Plate Diameter =	$D_{bp} := 74.76 \cdot \text{in}$	(User Input)
Outer Pole Diameter =	$D_T := 62.50 \cdot \text{in}$	(User Input)

**Geometric Layout Data:**



**ANCHOR BOLT AND PLATE GEOMETRY**



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Distance from Bolts to Centroid of Pole:

Radius of Bolt Circle =:

$$R_{bc} := \frac{D_{BC}}{2} = 34.625 \text{ in}$$

Distance to Bolts =

$$i := 1 .. N$$

$$d_i := \begin{cases} \theta \leftarrow 2 \cdot \pi \cdot \left(\frac{i}{N}\right) \\ d \leftarrow R_{bc} \cdot \sin(\theta) \end{cases}$$

$$d_1 = 6.76 \text{ in}$$

$$d_2 = 13.25 \text{ in}$$

$$d_3 = 19.24 \text{ in}$$

$$d_4 = 24.48 \text{ in}$$

$$d_5 = 28.79 \text{ in}$$

$$d_6 = 31.99 \text{ in}$$

Outer Pole Radius =

$$R_{pole} := \frac{D_T}{2} = 31.3 \text{ in}$$

Moment Arms of Bolts about Neutral Axis =

$$MA_i := \text{If}(d_i \geq R_{pole}, d_i - R_{pole}, 0 \cdot \text{in})$$

$$MA_1 = 0.00 \text{ in} \quad MA_7 = 2.71 \text{ in}$$

$$MA_2 = 0.00 \text{ in} \quad MA_8 = 3.38 \text{ in}$$

$$MA_3 = 0.00 \text{ in} \quad MA_9 = 2.71 \text{ in}$$

$$MA_4 = 0.00 \text{ in} \quad MA_{10} = 0.74 \text{ in}$$

$$MA_5 = 0.00 \text{ in} \quad MA_{11} = 0.00 \text{ in}$$

$$MA_6 = 0.74 \text{ in} \quad \text{etc.}$$

Effective Width of Baseplate for Bending =

$$B_{eff} := 27.979 \text{ in} \quad (\text{User Input})$$



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10.11.23 - Rev 2

**Anchor Bolt Properties:**

Polar Moment of Inertia =  $I_p := \sum_i (d_i)^2 = (1.918 \cdot 10^4) \text{ in}^2$

Nominal Unthreaded Area of Bolt =  $A_g := \frac{\pi}{4} \cdot D^2 = 2.405 \text{ in}^2$

Net Area of Bolt =  $A_n := \frac{\pi}{4} \cdot \left( D - \frac{0.9743 \cdot \text{in}}{n} \right)^2 = 1.899 \text{ in}^2$

Tensile Root Diameter =  $D_{rt} := D - \frac{0.9743 \cdot \text{in}}{n} = 1.555 \text{ in}$

Plastic Section Modulus of Bolt =  $Z_x := \frac{D_{rt}^3}{6} = 0.627 \text{ in}^3$

Bolt Radius of Gyration =  $r := \frac{D_{rt}}{4} = 0.389 \text{ in}$

Bolt Critical Compression Stress =  $F_{cr} = 74.92 \text{ ksi}$

**Anchor Bolt Forces:**

Maximum Bolt Tension Force =  $P_{ut} := M_u \cdot \frac{R_{bc}}{I_p} - \frac{R_u}{N} = 42.3 \text{ kip}$

Maximum Bolt Compression Force =  $P_{uc} := M_u \cdot \frac{R_{bc}}{I_p} + \frac{R_u}{N} = 45.5 \text{ kip}$

Maximum Bolt Shear Force =  $V_u := \frac{V_u}{N} = 0.66 \text{ kip}$

Bolt Bending Moment =  $M_{ub} := 0.65 \cdot V_u \cdot l_{br} = 0.427 \text{ in} \cdot \text{kip}$

**Anchor Bolt Strengths:**

Bolt Design Tension Strength =  $\phi_t R_{nt} := 0.75 \cdot F_{ub} \cdot A_n = 142.46 \text{ kip}$

Bolt Design Compression Yield Strength =  $\phi_c R_{nc} := 0.90 \cdot F_{yb} \cdot A_g = 162.36 \text{ kip}$

Bolt Design Shear Rupture Strength =  $\phi_v R_{nv} := 0.75 \cdot 0.5 \cdot F_{ub} \cdot A_g = 90.2 \text{ kip}$

Bolt Design Shear Yield Strength =  $\phi_c R_{nvc} := 0.90 \cdot 0.6 \cdot 0.75 \cdot F_{yb} \cdot A_g = 73.06 \text{ kip}$

Bolt Design Buckling Strength =  $\phi_c R_{nb} := 0.90 \cdot F_{cr} \cdot A_g = 162.19 \text{ kip}$

Bolt Design Flexural Strength =  $\phi M_n := 0.90 F_{yb} \cdot Z_x = 42.31 \text{ in} \cdot \text{kip}$



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Anchor Bolt and Base Plate Analysis  
 (Circular Pattern)

Prepared by: JRM: Checked by: MST, P.E.

10.11.23 - Rev 2

Anchor Rod Usage =

**Note:**

Per TIA-222-H Section 4.9.9 when the anchor rod projection ( $l_{ar}$ ) exceeds  $1(d)$  but is not more than 3 in., it shall be permitted to consider ( $l_{ar}$ ) less than or equal to  $1(d)$  when 5,000 psi min. 7 day strength non shrink, non metallic grout is installed between the supporting structure and the leveling nuts, otherwise all interaction equations shall be investigated based on ( $l_{ar}$ ).

$$Usage1 := \begin{cases} \text{if } l_{ar} \leq 1.0 \cdot D & = 0.28 \\ \max \left( \left( \frac{P_{ut}}{\phi_t R_{nt}} \right)^2 + \left( \frac{V_u}{\phi_v R_{nv}} \right)^2 \right) \\ \left( \frac{P_{uc}}{\phi_c R_{nc}} \right) + \left( \frac{V_u}{\phi_c R_{nvc}} \right) \\ \text{also if } 1.0 \cdot D < l_{ar} \leq 4.0 \cdot D \\ \max \left( \left( \frac{P_{ut}}{\phi_t R_{nt}} \right) + \left( \frac{M_{ub}}{\phi_t M_n} \right) \right)^2 + \left( \frac{V_u}{\phi_v R_{nv}} \right)^2 \\ \left( \frac{P_{uc}}{\phi_c R_{nc}} \right) + \left( \frac{M_{ub}}{\phi_t M_n} \right) + \left( \frac{V_u}{\phi_c R_{nvc}} \right) \\ \text{else} \\ \max \left( \left( \frac{P_{ut}}{\phi_t R_{nt}} \right) + \left( \frac{M_{ub}}{\phi_t M_n} \right) \right)^2 + \left( \frac{V_u}{\phi_v R_{nv}} \right)^2 \\ \left( \frac{P_{uc}}{\phi_c R_{nc}} \right) + \left( \frac{M_{ub}}{\phi_t M_n} \right) + \left( \frac{V_u}{\phi_c R_{nvc}} \right) \end{cases}$$

**Base Plate Analysis:**

Plate Plastic Section Modulus =  $Z_p := \frac{B_{eff} \cdot t_{bp}^2}{4} = 52.9 \text{ in}^3$

Plate Bending =  $M_p := \sum C_i \cdot MA_i = 458.13 \text{ in} \cdot \text{kip}$

Available Plate Bending Strength =  $\phi M_n := 0.90 \cdot F_y \cdot Z_p = 2380.4 \text{ in} \cdot \text{kip}$

Plate Flexural Usage =  $Usage2 := \frac{M_p}{\phi M_n} = 0.19$

**Anchor Bolt and Base Plate Analysis Summary:**

Anchor Bolt Usage  
 (% of Capacity) = **Usage1 = 28%**

Base Plate Bending Usage  
 (% of Capacity) = **Usage2 = 19%**





Colliers Engineering & Design CT, P.C.  
1055 Washington Boulevard  
Stamford, CT 06901  
203.324.0800  
peter.albano@collierseng.com

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## Antenna Mount Analysis Report and PMI Requirements

### Mount ReAnalysis

SMART Tool Project #: 10206406  
Colliers Engineering & Design CT, P.C. Project #: 23777082 (Rev 1)

August 29, 2023

#### Site Information

Site ID: 5000093356-VZW / LEBANON CENTER CT - A  
Site Name: LEBANON CENTER CT - A  
Carrier Name: Verizon Wireless  
Address: 917 Exeter Road  
Lebanon, Connecticut 06249  
New London County  
Latitude: 41.62168042°  
Longitude: -72.23718933°

#### Structure Information

Tower Type: 150-Ft Monopole  
Mount Type: 14.50-Ft Platform

FUZE ID # 17123863

#### Analysis Results

Platform: 38.7% Pass\*

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

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

*Included at the end of this MA report*

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

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

Report Prepared By: Ismaias Recinos



### **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:**

<b>Document Type</b>	<b>Remarks</b>
<i>Radio Frequency Data Sheet (RFDS)</i>	<i>Verizon RFDS Site ID: 5003078, dated February 9, 2022</i>
<i>Mount Mapping Report</i>	<i>Hudson Design Group, LLC., Project #: 469950 dated April 18, 2022</i>
<i>Final Loading Configuration</i>	<i>Filter Add Scope Provided by Verizon Wireless</i>

### **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), $V_{ULT}$ : 125 mph Ice Wind Speed (3-sec. Gust): 50 mph Design Ice Thickness: 1.00 in Risk Category: II Exposure Category: C Topographic Category: 1 Topographic Feature Considered: N/A Topographic Method: N/A Ground Elevation Factor, $K_e$ : 0.982
Seismic Parameters:	$S_s$ : 0.196 g $S_1$ : 0.055 g
Maintenance Parameters:	Wind Speed (3-sec. Gust): 30 mph Maintenance Load, $L_v$ : 250 lbs. Maintenance Load, $L_m$ : 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
140.00	140.00	3	Samsung	MT6407-77A	Added
		2	Kaelus	KA-6030	
		6	Quintel	QS6656-5	Retained
		3	Samsung	B2/B66A RRH-BR049	
		3	Samsung	B5/B13 RRH-BR04C	
		1	Raycap	RHSDC-6627-PF-48	

Any proposed antennas not currently installed should be mounted such that the centerline of the antennas does not exceed 6 inches vertically from the center of the antenna mount.

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 CT, P.C. and used in this analysis is current and correct. The existing equipment loading has been applied at locations determined from the supplied documentation. Any deviation from the loading locations specified in this report shall be communicated to Colliers Engineering & Design CT, P.C. 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 CT, P.C. is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.
7. Structural Steel Grades have been assumed as follows, if applicable, unless otherwise noted in this analysis:
  - o Channel, Solid Round, Angle, Plate      ASTM A36 (Gr. 36)
  - o HSS (Rectangular)                            ASTM 500 (Gr. B-46)
  - o Pipe    ASTM A53 (Gr. B-35)
  - o Threaded Rod                                  F1554 (Gr. 36)
  - o Bolts    ASTM A325

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

**Analysis Results:**

Component	Utilization %	Pass/Fail
Grating Support	33.8%	Pass
Standoff Horizontal	11.8%	Pass
Grating Plate	8.9%	Pass
Grating Bracing	23.3%	Pass
Face Horizontal	22.6%	Pass
Secondary Standoff	29.4%	Pass
Lower Standoff	29.1%	Pass
Standoff Bracing	38.7%	Pass
Grating Pipe	9.6%	Pass
Platform Bracing	8.6%	Pass
Mount Pipe	36.6%	Pass
Support Rail Corner Angle	25.6%	Pass
Mount Connection	12.1%	Pass

<b>Structure Rating – (Controlling Utilization of all Components)</b>	<b>38.7%</b>
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**Mount Steel (EPA)a per ANSI/TIA-222-H Section 2.6.11.2:**

Ice Thickness (In)	Mount Pipes Excluded		Mount Pipes Included	
	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)
0	36.8	36.6	59.2	59.1
0.5	52.1	52.3	82.5	82.3
1	65.0	65.2	103.3	103.0

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 sectors.
- Ka factors included in (EPA)a calculations

### **Requirements:**

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

Contractor shall install the proposed filter units on new Site Pro 1 Dual Swivel Mount Kit (Part #: RRUDSM or EOR approved equivalent) in the location shown in the placement diagrams.

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

### **Attachments:**

1. **Contractor Required Post Installation Inspection (PMI) Report Deliverables**
2. Antenna Placement Diagrams
3. Mount Photos
4. 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](mailto:pmisupport@colliersengineering.com)

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MDG #: 5000093356

SMART Project #: 10206406

Fuze Project ID: 17123863

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

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

### **Base Requirements:**

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

### **Photo Requirements:**

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

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

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

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

OR

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

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

**Issue:**

Contractor shall install the proposed filter units on new Site Pro 1 Dual Swivel Mount Kit (Part #: RRUDSM or EOR approved equivalent) in the location shown in the placement diagrams.

**Response:**

**Special Instruction Confirmation:**

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

OR

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

**Comments:**

--

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

Yes       No

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

Yes       No

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

Safety Climb in Good Condition       Safety Climb Damaged

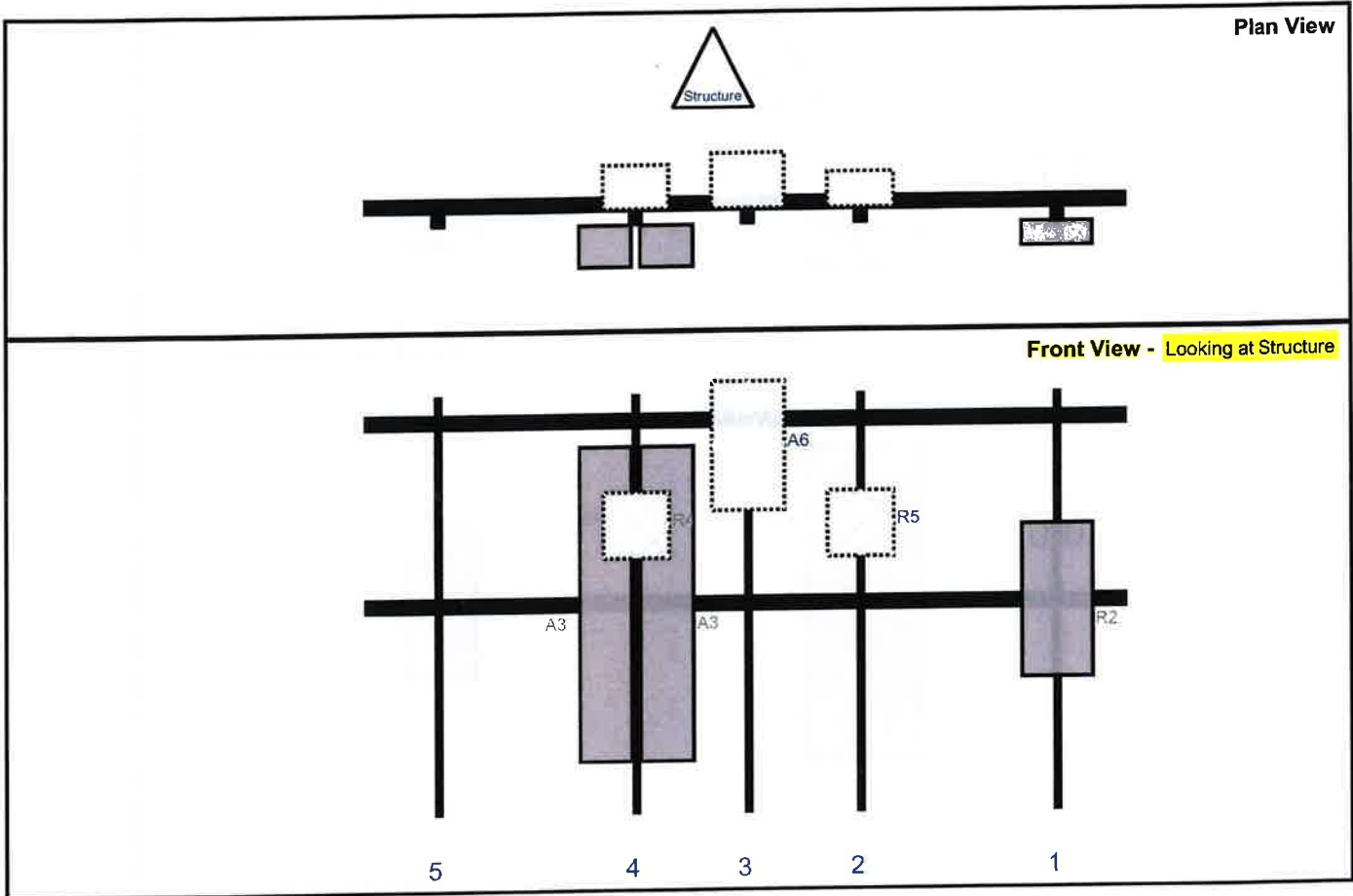
**Certifying Individual:**

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

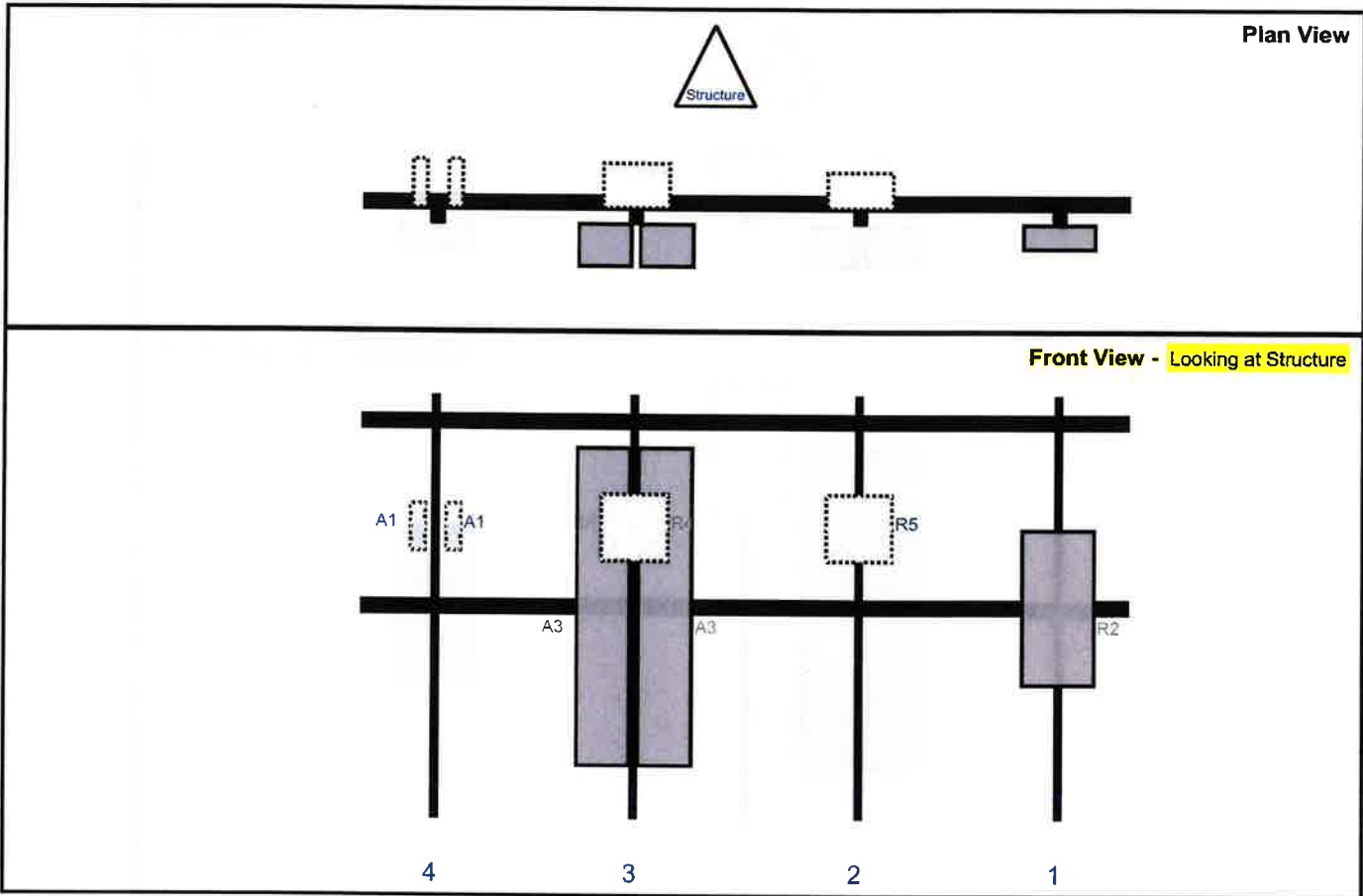


Sector: A  
 Structure Type: Monopole  
 Mount Elev: 140.00

10209456



Ref#	Model	Height (in)	Width (in)	H Dist Fm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Fm T.	Ant H Off	Status	Validation
R2	MT6407-77A	35.1	16.1	158	1	a	Front	48	0	Added	
R5	B5/B13 RRH-BR04C	15	15	113	2	a	Behind	30	0	Retained	04/18/2022
A6	RHSDC-6627-PF-48	29.5	16.5	87.5	3	a	Behind	12	0	Retained	04/18/2022
A3	QS6656-5	72	12	62	4	a	Front	48	-7	Retained	04/18/2022
A3	QS6656-5	72	12	62	4	b	Front	48	7	Retained	04/18/2022
R4	B2/B66A RRH-BR049	15	15	62	4	a	Behind	30	0	Retained	04/18/2022



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
R2	MT6407-77A	35.1	16.1	158	1	a	Front	48	0	Added	
R5	B5/B13 RRH-BR04C	15	15	113	2	a	Behind	30	0	Retained	04/18/2022
A3	QS6656-5	72	12	62	3	a	Front	48	-7	Retained	04/18/2022
A3	QS6656-5	72	12	62	3	b	Front	48	7	Retained	04/18/2022
R4	B2/B66A RRH-BR049	15	15	62	3	a	Behind	30	0	Retained	04/18/2022
A1	KA-6030	10.6	3.2	17	4	a	Behind	30	-4	Added	
A1	KA-6030	10.6	3.2	17	4	b	Behind	30	4	Added	

Structure: 5000093356-VZW - LEBANON CENTER CT - A

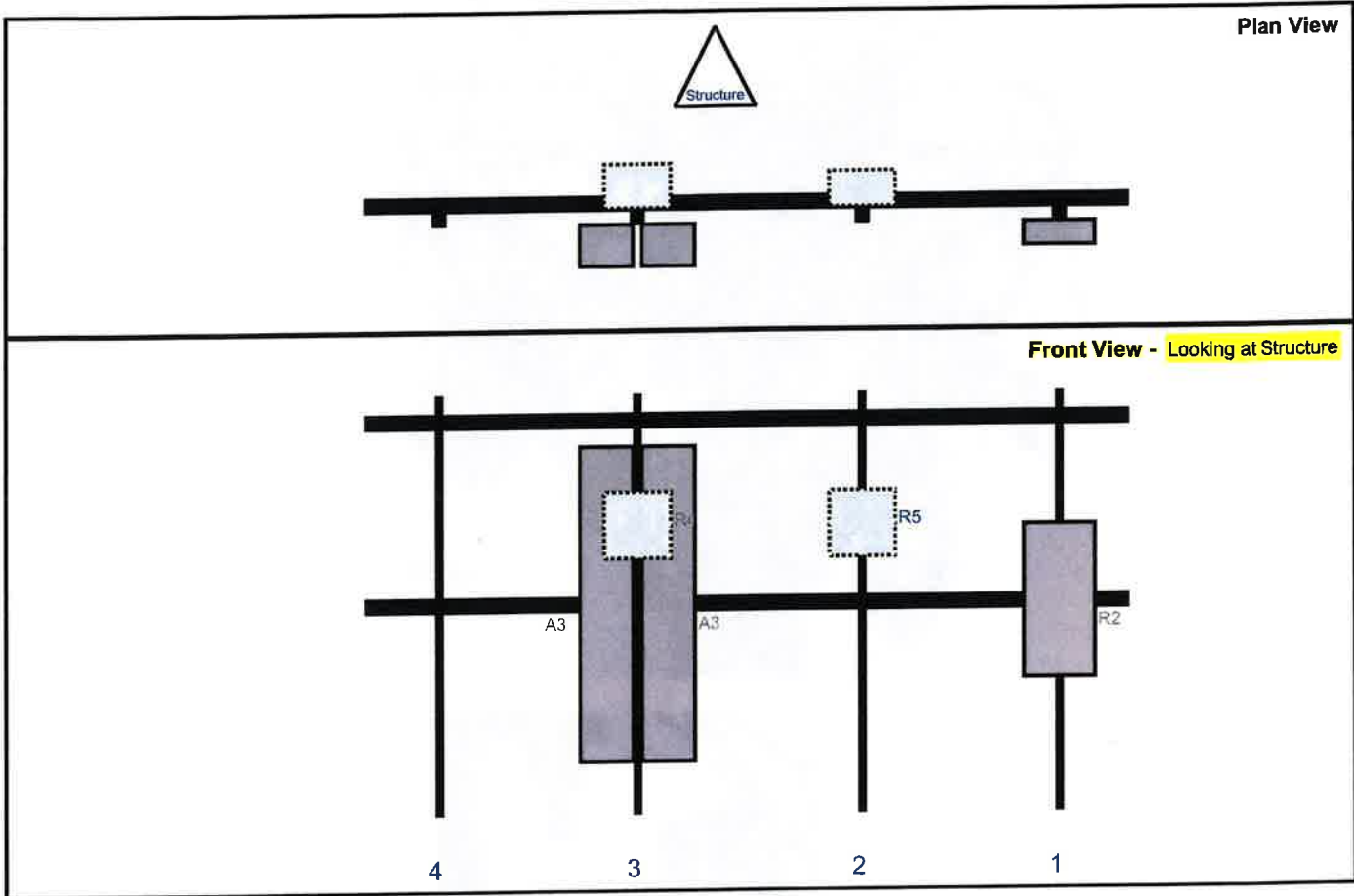
Sector: **C**  
 Structure Type: Monopole  
 Mount Elev: 140.00

10209456

8/29/2023



Page: 3



Ref#	Model	Height (in)	Width (in)	H Dist Fm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Fm T.	Ant H Off	Status	Validation
R2	MT6407-77A	35.1	16.1	158	1	a	Front	48	0	Added	
R5	B5/B13 RRH-BR04C	15	15	113	2	a	Behind	30	0	Retained	04/18/2022
A3	QS6656-5	72	12	62	3	a	Front	48	-7	Retained	04/18/2022
A3	QS6656-5	72	12	62	3	b	Front	48	7	Retained	04/18/2022
R4	B2/B66A RRH-BR049	15	15	62	3	a	Behind	30	0	Retained	04/18/2022

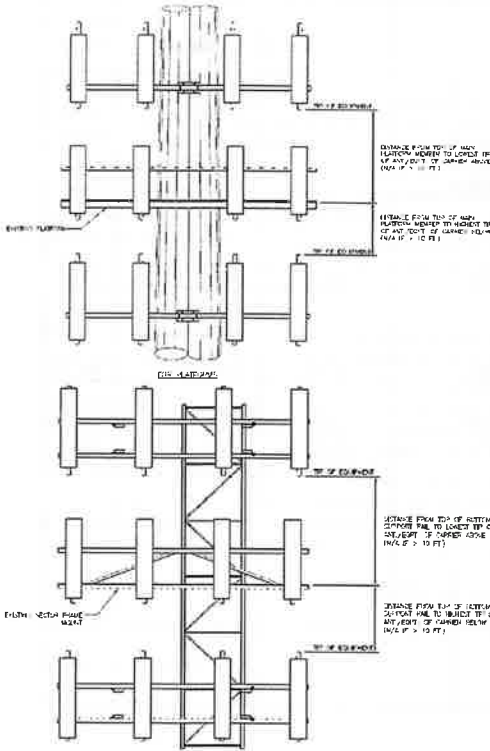






Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector				Sector B											
Sector A:	100.00	Deg	Leg A:		Deg	Ant <sub>1a</sub>													
Sector B:	220.00	Deg	Leg B:		Deg	Ant <sub>1b</sub>	EMPTY												
Sector C:	340.00	Deg	Leg C:		Deg	Ant <sub>1c</sub>													
Sector D:		Deg	Leg D:		Deg	Ant <sub>2a</sub>	RFV01U-D2A	16.00	10.00	15.50	141.41		25.00	-8.50					30,115
<b>Climbing Facility Information</b>						Ant <sub>2b</sub>													
Location:	70.00	Deg	N/A		Deg	Ant <sub>2c</sub>													
Climbing Facility	Corrosion Type:	Good condition.				Ant <sub>3a</sub>	RFV01U-D1A	16.00	12.00	15.50	142.41		24.00	-9.50					122,144
	Access:	Climbing path was obstructed.				Ant <sub>3b</sub>	(2) QS66565M5	12.00	9.50	73.00	143.5		48.00	13.00	210.00				31,123
	Condition:	Good condition.				Ant <sub>3c</sub>													
						Ant <sub>4a</sub>													
						Ant <sub>4b</sub>	EMPTY												
						Ant <sub>4c</sub>													
						Ant <sub>5a</sub>													
						Ant <sub>5b</sub>													
						Ant <sub>5c</sub>													
						Ant on Standoff													
						Ant on Standoff													
						Ant on Tower													
						Ant on Tower													
<b>Sector C</b>																			
						Ant <sub>1a</sub>													
						Ant <sub>1b</sub>	EMPTY												
						Ant <sub>1c</sub>													
						Ant <sub>2a</sub>	RFV01U-D2A	16.00	10.00	15.50	141.41		25.00	-8.50				18,115	
						Ant <sub>2b</sub>													
						Ant <sub>2c</sub>													
						Ant <sub>3a</sub>	RFV01U-D1A	16.00	12.00	15.50	142.41		24.00	-9.50				122,149	
						Ant <sub>3b</sub>	(2) QS66565M5	12.00	9.50	73.00	143.5		48.00	13.00	340.00			17,123	
						Ant <sub>3c</sub>													
						Ant <sub>4a</sub>													
						Ant <sub>4b</sub>	EMPTY												
						Ant <sub>4c</sub>													
						Ant <sub>5a</sub>													
						Ant <sub>5b</sub>													
						Ant <sub>5c</sub>													
						Ant on Standoff													
						Ant on Standoff													
						Ant on Tower													
						Ant on Tower													
<b>Sector D</b>																			
						Ant <sub>1a</sub>													
						Ant <sub>1b</sub>													
						Ant <sub>1c</sub>													
						Ant <sub>2a</sub>													
						Ant <sub>2b</sub>													
						Ant <sub>2c</sub>													
						Ant <sub>3a</sub>													
						Ant <sub>3b</sub>													
						Ant <sub>3c</sub>													
						Ant <sub>4a</sub>													
						Ant <sub>4b</sub>													
						Ant <sub>4c</sub>													
						Ant <sub>5a</sub>													
						Ant <sub>5b</sub>													
						Ant <sub>5c</sub>													
						Ant on Standoff													
						Ant on Standoff													
						Ant on Tower													
						Ant on Tower													

Please insert a photo of the mount centerline measurement here.



Observed Safety and Structural Issues During the Mount Mapping		
Issue #	Description of Issue	Photo #
1	OVP UNIT IS ONLY 17 INCHES FROM THE NEXT CARRIER'S MOUNT & CABLING	154
2	SAFETY CLIMB IS DIVERTED AROUND MOUNT COLLAR (PARTIAL OBSTRUCTION)	22
3		
4		
5		
6		
7		
8		

Mapping Notes
<p>1. Please report any visible structural or safety issues observed on the antenna mounts (Damaged members, loose connections, tilting mounts, safety climb issues, etc.)</p> <p>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.</p> <p>3. Please create all required detail sketches of the mounts and insert them into the "Sketches" tab.</p> <p>4. Please measure and enter the bolt sizes and types under the Members Box in the spreadsheet of the mount type.</p> <p>5. Take and label the photos of the tower, mounts, connections, antennas and all measurements. Minimum 50 photos are required.</p> <p>6. Please measure and report the size and length of all existing antenna mounting pipes.</p> <p>7. Please measure and report the antenna information for all sectors.</p> <p>8. Don't delete or rearrange any sheet or contents of any sheet from this mapping form.</p>

Standard Conditions
<p>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.</p>



**SMART Tool<sup>®</sup>**  
**Vendor**

**Antenna Mount Mapping Form (PATENT PENDING)**

FCC #

Tower Owner:		Mapping Date:	4/18/2022
Site Name:	LEBANON CENTER CT - A	Tower Type:	Monopole
Site Number or ID:	469950	Tower Height (FL):	150
Mapping Contractor:	HUDSON DESIGN GROUP, LLC.	Mount Elevation (FL):	139.5

This antenna mapping form is the property of TES and under PATENT PENDING. The formation contained herein is considered confidential in nature and is to be used only for the specific customer it was intended for. Reproduction, transmission, publication, modification or disclosure by any method is prohibited except by express written permission of TES. All means and methods are the responsibility of the contractor and the work shall be compliant with ANSI/ASSE A 10.48, OSHA, FCC, FAA and other safety requirements that may apply. TES is not warranting the usability of the safety climb as it must be assessed prior to each use in compliance with OSHA requirements.

Please Insert Sketches of the Antenna Mount

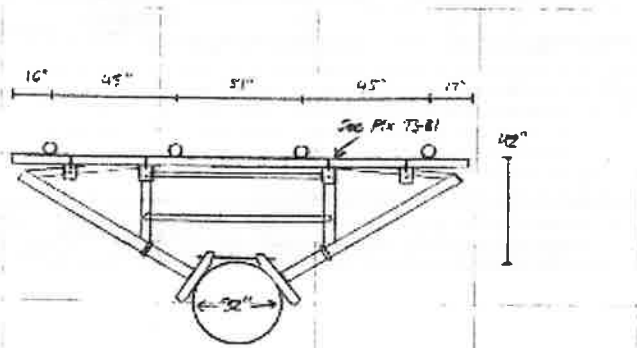
DATE: 4/18/22  
Project Name: Lebanon Center CT  
Project No.:  
Design By: Josh Chk'd By: \_\_\_\_\_

Page \_\_\_ of \_\_\_



MS = 1396

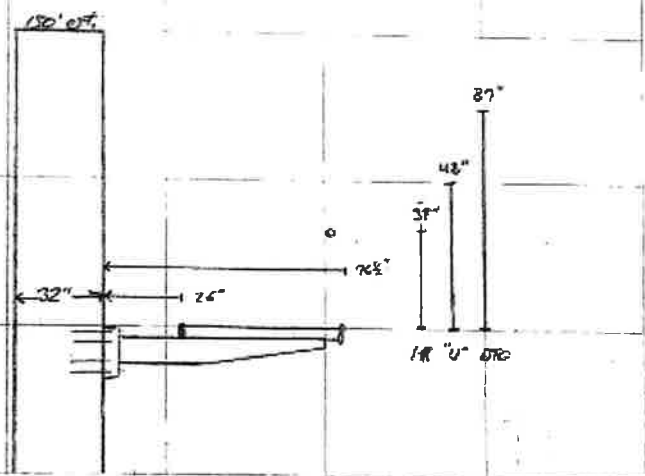
Ant Poles:  $2\frac{1}{2} \times \frac{3}{4} \times 96$   
Face Pipes:  $2\frac{1}{8} \times \frac{3}{4} \times 174$   
- Ubolts:  $3\frac{1}{2}$   
Angles:  $3\frac{1}{2} \times 3\frac{1}{2} \times 8\frac{1}{2}$   
ALB:  $4\frac{1}{2} \times 4\frac{1}{4} \times 50\frac{1}{2}$   
Cathwalk R/M:  $1\frac{3}{4}$   
Stand off:  $12\frac{3}{8} \times \frac{1}{2} \times 3\frac{1}{8} \times 72$   
J/O Flange:  $16 \times 8 \times 5\frac{1}{8}$   
- Bolts:  $(8) \frac{3}{8}$   
Collar:  $18 \times \frac{1}{2}$   
- Bolts:  $(4) \frac{3}{8}$   
Pole:  $32$   
Pole  $\rightarrow$  Stave:  $26$   
Pole  $\rightarrow$  Apex:  $76\frac{1}{2}$   
Pole  $\rightarrow$  Face:  $42$   
All U:  $48$   
#2 Ant. Pipe:  $2\frac{1}{8} \times \frac{3}{4} \times 96$   
#1 other Pipe:  $2\frac{1}{8} \times \frac{1}{2} \times 96$



Inventory  
#1  
RFV02U-D2A  
(16" 10" 15 1/2")  
E: 25"  
H: 6 1/2"

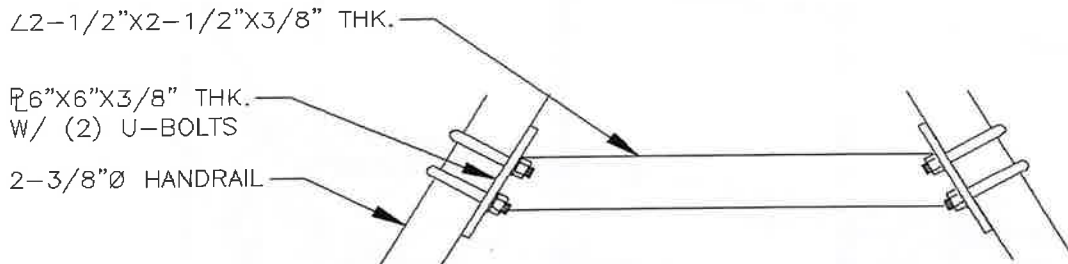
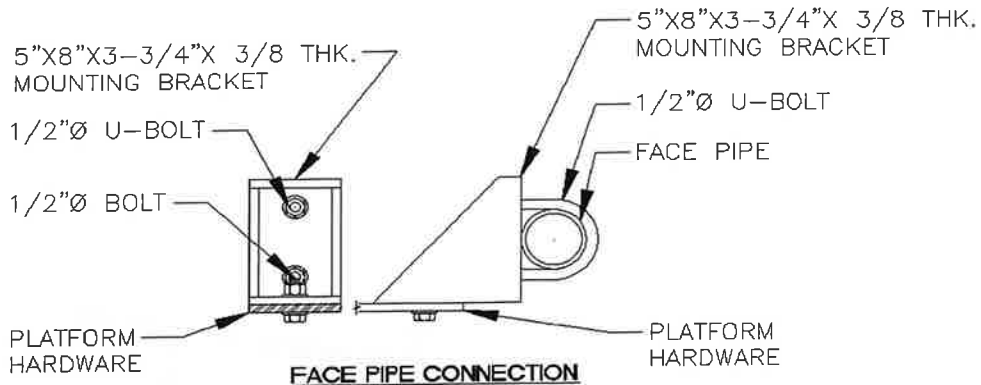
#2  
(2) G Ant. Mast/Beam  
(12" 9 1/2" 75")  
E: 48"  
H: 15"  
RFV02U-D2A  
(16" 12" 15 1/2")  
E: 24"  
H: 9 1/2"

Lines: (1) Z Hybrid  
Azimuth: 30, 90  
A: 100°  
B: 210°  
G: 340°

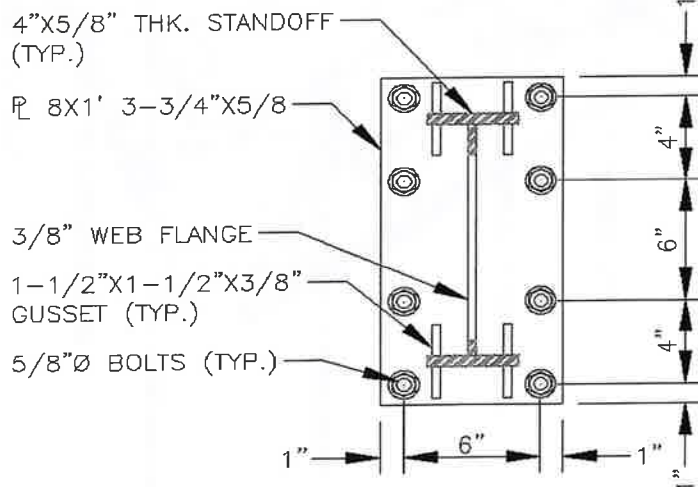




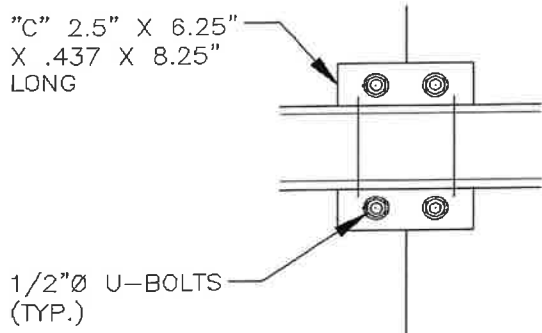
Please Insert Sketches of the Antenna Mount, cont'd



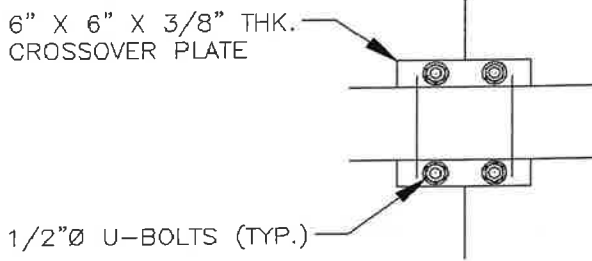
HANDRAIL APEX SUPPORT DETAIL



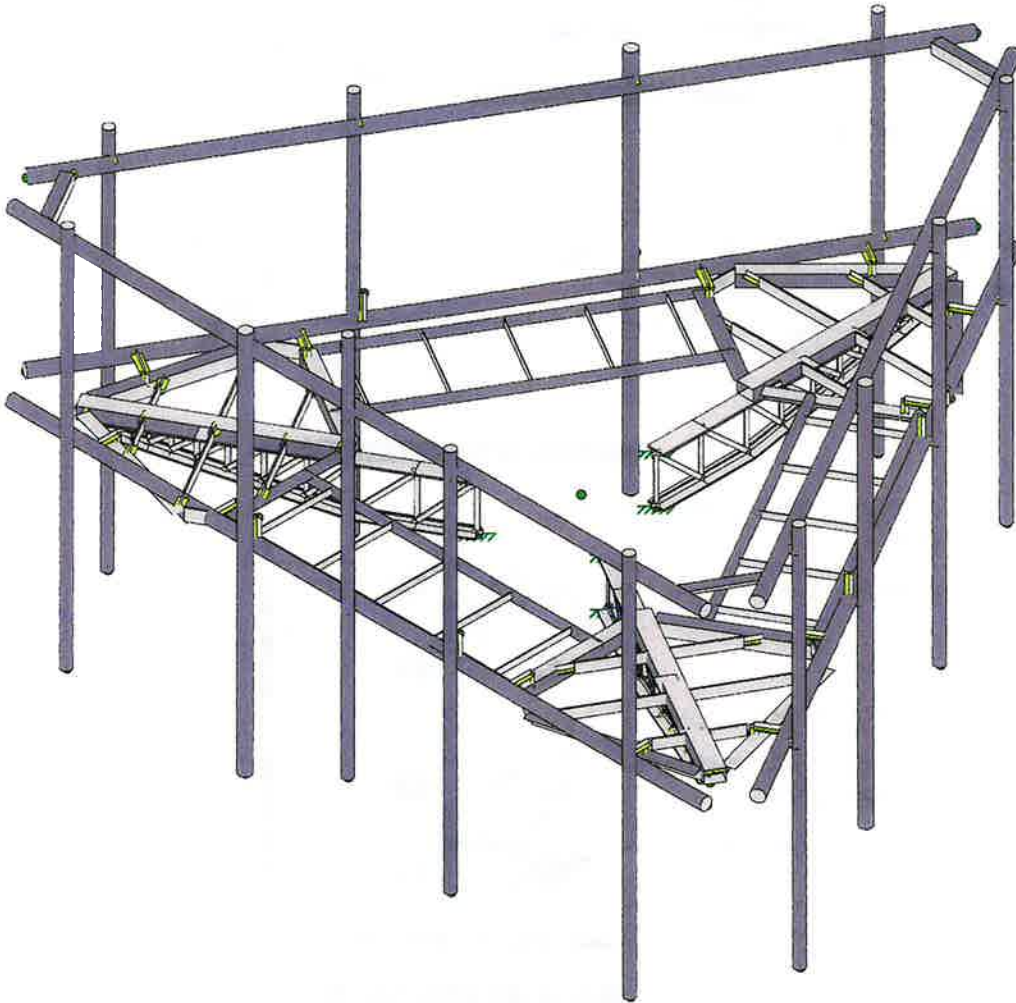
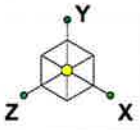
RING MOUNT CONNECTION



CROSSOVER PLATE DETAIL



CROSSOVER PLATE DETAIL



### Envelope Only Solution

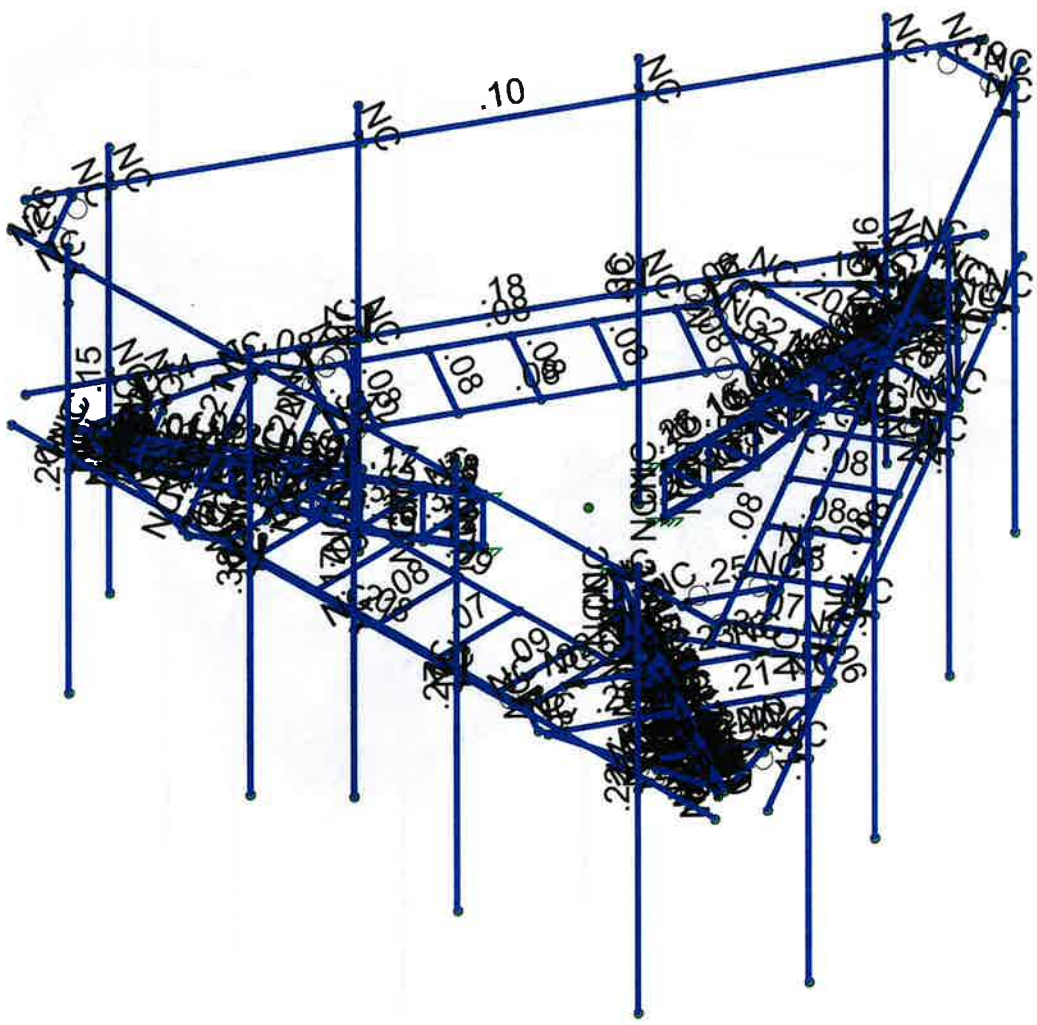
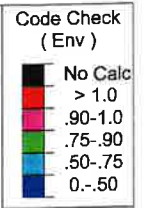
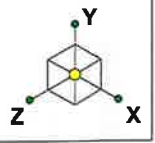
Colliers Engineering & De...

5000093356-VZW\_MT\_LO\_H

Aug 29, 2023 at 11:14 PM

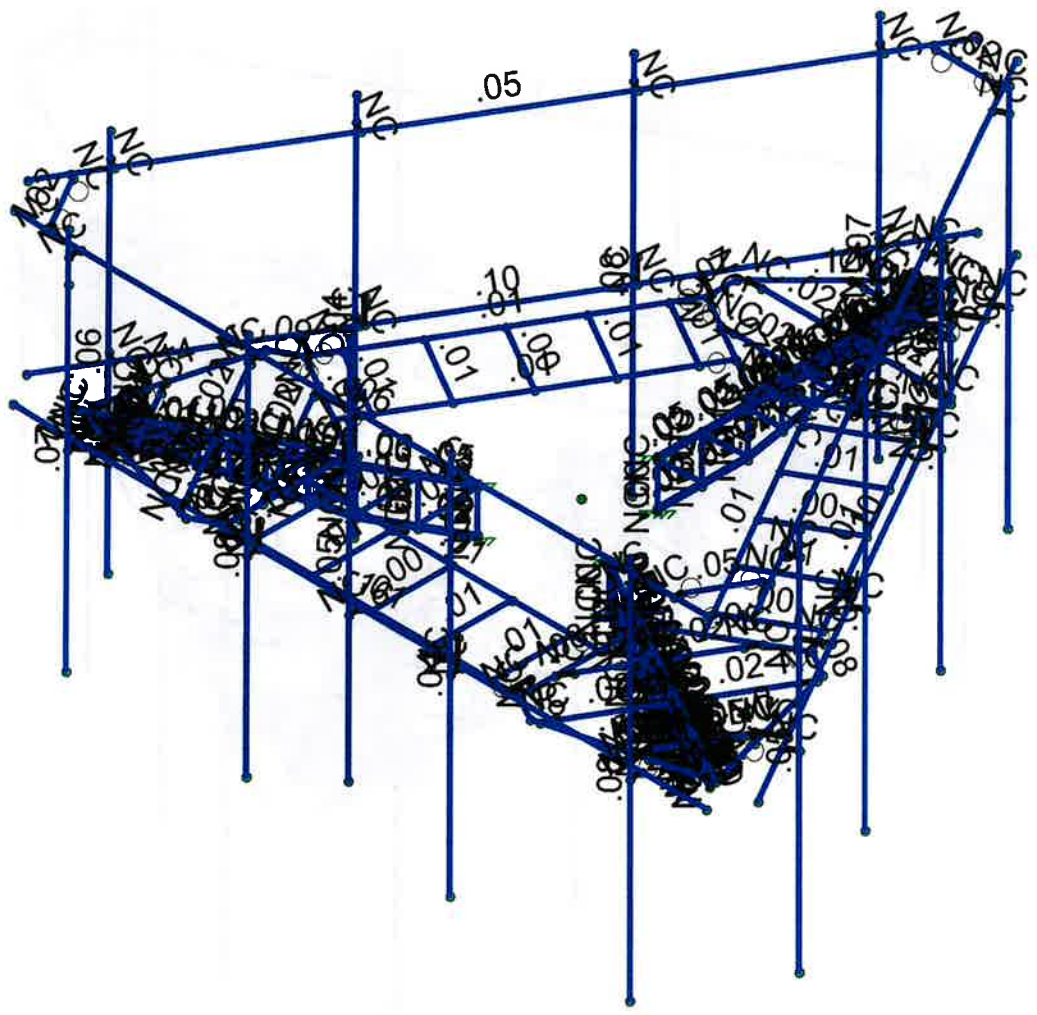
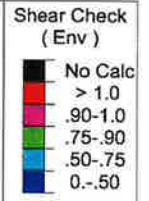
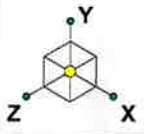
Project No. 10209456

5000093356-VZW\_MT\_LO\_H.r3d



Member Code Checks Displayed (Enveloped)  
Envelope Only Solution

Colliers Engineering & De...	5000093356-VZW_MT_LO_H	Aug 29, 2023 at 11:14 PM
Project No. 10209456		5000093356-VZW_MT_LO_H.r3d



Member Shear Checks Displayed (Enveloped)  
Envelope Only Solution

Colliers Engineering & De...	5000093356-VZW_MT_LO_H	
Project No. 10209456		Aug 29, 2023 at 11:14 PM 5000093356-VZW_MT_LO_H.r3d





Company : Colliers Engineering & Design  
 Designer :  
 Job Number : Project No. 10209456  
 Model Name : 5000093356-VZW\_MT\_LO\_H

Aug 29, 2023  
 11:13 PM  
 Checked By: \_\_\_\_\_

**Basic Load Cases**

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...)	Surface(P...
1	Antenna D	None					81		
2	Antenna Di	None					81		
3	Antenna Wo (0 Deg)	None					81		
4	Antenna Wo (30 Deg)	None					81		
5	Antenna Wo (60 Deg)	None					81		
6	Antenna Wo (90 Deg)	None					81		
7	Antenna Wo (120 Deg)	None					81		
8	Antenna Wo (150 Deg)	None					81		
9	Antenna Wo (180 Deg)	None					81		
10	Antenna Wo (210 Deg)	None					81		
11	Antenna Wo (240 Deg)	None					81		
12	Antenna Wo (270 Deg)	None					81		
13	Antenna Wo (300 Deg)	None					81		
14	Antenna Wo (330 Deg)	None					81		
15	Antenna Wi (0 Deg)	None					81		
16	Antenna Wi (30 Deg)	None					81		
17	Antenna Wi (60 Deg)	None					81		
18	Antenna Wi (90 Deg)	None					81		
19	Antenna Wi (120 Deg)	None					81		
20	Antenna Wi (150 Deg)	None					81		
21	Antenna Wi (180 Deg)	None					81		
22	Antenna Wi (210 Deg)	None					81		
23	Antenna Wi (240 Deg)	None					81		
24	Antenna Wi (270 Deg)	None					81		
25	Antenna Wi (300 Deg)	None					81		
26	Antenna Wi (330 Deg)	None					81		
27	Antenna Wm (0 Deg)	None					81		
28	Antenna Wm (30 Deg)	None					81		
29	Antenna Wm (60 Deg)	None					81		
30	Antenna Wm (90 Deg)	None					81		
31	Antenna Wm (120 Deg)	None					81		
32	Antenna Wm (150 Deg)	None					81		
33	Antenna Wm (180 Deg)	None					81		
34	Antenna Wm (210 Deg)	None					81		
35	Antenna Wm (240 Deg)	None					81		
36	Antenna Wm (270 Deg)	None					81		
37	Antenna Wm (300 Deg)	None					81		
38	Antenna Wm (330 Deg)	None					81		
39	Structure D	None		-1				229	9
40	Structure Di	None						458	
41	Structure Wo (0 Deg)	None						458	
42	Structure Wo (30 Deg)	None						458	
43	Structure Wo (60 Deg)	None						458	
44	Structure Wo (90 Deg)	None						458	
45	Structure Wo (120 D...	None						458	
46	Structure Wo (150 D...	None						458	
47	Structure Wo (180 D...	None						458	
48	Structure Wo (210 D...	None						458	
49	Structure Wo (240 D...	None						458	
50	Structure Wo (270 D...	None						458	
51	Structure Wo (300 D...	None						458	
52	Structure Wo (330 D...	None						458	
53	Structure Wi (0 Deg)	None						458	
54	Structure Wi (30 Deg)	None						458	
55	Structure Wi (60 Deg)	None						458	
56	Structure Wi (90 Deg)	None						458	



**Basic Load Cases (Continued)**

BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...)	Surface(P...
57 Structure Wi (120 De..)	None						458	
58 Structure Wi (150 De..)	None						458	
59 Structure Wi (180 De..)	None						458	
60 Structure Wi (210 De..)	None						458	
61 Structure Wi (240 De..)	None						458	
62 Structure Wi (270 De..)	None						458	
63 Structure Wi (300 De..)	None						458	
64 Structure Wi (330 De..)	None						458	
65 Structure Wm (0 Deg)	None						458	
66 Structure Wm (30 De..)	None						458	
67 Structure Wm (60 De..)	None						458	
68 Structure Wm (90 De..)	None						458	
69 Structure Wm (120 D..)	None						458	
70 Structure Wm (150 D..)	None						458	
71 Structure Wm (180 D..)	None						458	
72 Structure Wm (210 D..)	None						458	
73 Structure Wm (240 D..)	None						458	
74 Structure Wm (270 D..)	None						458	
75 Structure Wm (300 D..)	None						458	
76 Structure Wm (330 D..)	None						458	
77 Lm1	None					1		
78 Lm2	None					1		
79 Lv1	None					1		
80 Lv2	None					1		
81 Antenna Ev	None					81		
82 Antenna Eh (0 Deg)	None					54		
83 Antenna Eh (90 Deg)	None					54		
84 Structure Ev	ELY		-042				9	
85 Structure Eh (0 Deg)	ELZ			-105			9	
86 Structure Eh (90 Deg)	ELX	.105					9	
87 BLC 39 Transient Are..	None						368	
88 BLC 40 Transient Are..	None						368	
89 BLC 84 Transient Are..	None						368	
90 BLC 85 Transient Are..	None						368	
91 BLC 86 Transient Are..	None						368	

**Load Combinations**

Description	Sol.	PD.	SR.	BLC Fact..	BLC Fact..	BLC Fact..	BLC Fact..	BLC Fact..	BLC Fact..	BLC Fact..	BLC Fact..	BLC Fact..	BLC Fact..
1 1.2D+1.0...	Yes	Y		1	1.2	39	1.2	3	1	41	1		
2 1.2D+1.0...	Yes	Y		1	1.2	39	1.2	4	1	42	1		
3 1.2D+1.0...	Yes	Y		1	1.2	39	1.2	5	1	43	1		
4 1.2D+1.0...	Yes	Y		1	1.2	39	1.2	6	1	44	1		
5 1.2D+1.0...	Yes	Y		1	1.2	39	1.2	7	1	45	1		
6 1.2D+1.0...	Yes	Y		1	1.2	39	1.2	8	1	46	1		
7 1.2D+1.0...	Yes	Y		1	1.2	39	1.2	9	1	47	1		
8 1.2D+1.0...	Yes	Y		1	1.2	39	1.2	10	1	48	1		
9 1.2D+1.0...	Yes	Y		1	1.2	39	1.2	11	1	49	1		
10 1.2D+1.0...	Yes	Y		1	1.2	39	1.2	12	1	50	1		
11 1.2D+1.0...	Yes	Y		1	1.2	39	1.2	13	1	51	1		
12 1.2D+1.0...	Yes	Y		1	1.2	39	1.2	14	1	52	1		
13 1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1
14 1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1
15 1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1
16 1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1
17 1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1





Company : Colliers Engineering & Design  
 Designer :  
 Job Number : Project No. 10209456  
 Model Name : 5000093356-VZW\_MT\_LO\_H

Aug 29, 2023  
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 Checked By: \_\_\_\_\_

**Load Combinations (Continued)**

	Description	Sol.	PD.	SR.	BLC Fact.	BLC Fact.	BLC Fact.	BLC Fact.	BLC Fact.	BLC Fact.	BLC Fact.	BLC Fact.	BLC Fact.	BLC Fact.	BLC Fact.	BLC Fact.
18	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1
19	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1
20	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1
21	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1
22	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1
23	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1
24	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1
25	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1		
26	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1		
27	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1		
28	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1		
29	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1		
30	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1		
31	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1		
32	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1		
33	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1		
34	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1		
35	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1		
36	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1		
37	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1		
38	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1		
39	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1		
40	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1		
41	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1		
42	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1		
43	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1		
44	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1		
45	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1		
46	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1		
47	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1		
48	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	38	1	76	1		
49	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	79	1.5						
50	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	80	1.5						
51	1.4D	Yes	Y		1	1.4	39	1.4								
52	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	1	83	ELZ 1 ELX
53	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.866	83	.5 ELZ .866 ELX .5
54	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.5	83	.866 ELZ .5 ELX .866
55	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82		83	1 ELZ ELX 1
56	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.5	83	.866 ELZ -.5 ELX .866
57	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.866	83	.5 ELZ -.866 ELX .5
58	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-1	83	ELZ -1 ELX
59	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.866	83	-.5 ELZ -.866 ELX -.5
60	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.5	83	-.866 ELZ -.5 ELX -.866
61	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82		83	-1 ELZ ELX -1
62	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.5	83	-.866 ELZ .5 ELX -.866
63	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.866	83	-.5 ELZ .866 ELX -.5
64	0.9D - 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	1	83	ELZ 1 ELX
65	0.9D - 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.866	83	.5 ELZ .866 ELX .5
66	0.9D - 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.5	83	.866 ELZ .5 ELX .866
67	0.9D - 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82		83	1 ELZ ELX 1
68	0.9D - 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.5	83	.866 ELZ -.5 ELX .866
69	0.9D - 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.866	83	.5 ELZ -.866 ELX .5
70	0.9D - 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-1	83	ELZ -1 ELX
71	0.9D - 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.866	83	-.5 ELZ -.866 ELX -.5
72	0.9D - 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.5	83	-.866 ELZ -.5 ELX -.866
73	0.9D - 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82		83	-1 ELZ ELX -1
74	0.9D - 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.5	83	-.866 ELZ .5 ELX -.866





**Load Combinations (Continued)**

Description	Sol.	PD	SR	BLC Fact.	BLC Fact.	BLC Fact.	BLC Fact.	BLC Fact.	BLC Fact.	BLC Fact.	BLC Fact.	BLC Fact.	BLC Fact.						
75 0.9D - 1.0...	Yes	Y		1	.9	.39	.9	.81	-.1	ELY	-.1	.82	.866	.83	-.5	ELZ	.866	ELX	-.5

**Hot Rolled Steel Section Sets**

Label	Shape	Type	Design List	Material	Design R...	A [in <sup>2</sup> ]	I <sub>yy</sub> [in <sup>4</sup> ]	I <sub>zz</sub> [in <sup>4</sup> ]	J [in <sup>4</sup> ]	
1	Face Horizontal	PIPE 2.5	None	None	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
2	Mount Pipe (P2.5)	PIPE 2.5	None	None	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
3	Mount Pipe (P2)	PIPE 2.0	None	None	A53 Gr.B	Typical	1.02	.627	.627	1.25
4	Standoff Horizontal	HSS4X3X4	None	None	A500 Gr....	Typical	2.91	3.91	6.15	7.96
5	Grating Support	L3X3X6	None	None	A36 Gr.36	Typical	2.11	1.75	1.75	.101
6	Secondary Standoff	PL1/2X4	None	None	A36 Gr.36	Typical	2	.042	2.667	.154
7	Lower Standoff	PL3/8X4	None	None	A36 Gr.36	Typical	1.5	.018	2	.066
8	Standoff Bracing	PL3/8X1	None	None	A36 Gr.36	Typical	.375	.004	.031	.013
9	Grating Bracing	PL3/8X2.375	None	None	A36 Gr.36	Typical	.891	.01	.419	.038
10	Support Rail Corner An...	L2.5x2.5x4	None	None	A36 Gr.36	Typical	1.19	.692	.692	.026
11	Grating Pipe	PIPE 1.5	None	None	A53 Gr.B	Typical	.749	.293	.293	.586
12	Support Rail	PIPE 2.5	None	None	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
13	Grating Plate	PL3/8X3	None	None	A36 Gr.36	Typical	1.125	.013	.844	.049
14	Platform Bracing	PL3/16x1.5	None	None	A36 Gr.36	Typical	.281	.000824	.053	.003

**Hot Rolled Steel Properties**

Label	E [ksi]	G [ksi]	Nu	Therm (1/E...)	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(d...	Section/Sh...	Type	Design List	Material	Design Rules
1	R3	N77	N35			RIGID	None	RIGID	Typical
2	R4	N27	N38			RIGID	None	RIGID	Typical
3	R5	N28	N39			RIGID	None	RIGID	Typical
4	R6	N79	N41			RIGID	None	RIGID	Typical
5	R7	N29	N41A			RIGID	None	RIGID	Typical
6	R8	N31	N42			RIGID	None	RIGID	Typical
7	R9	N47	N50			RIGID	None	RIGID	Typical
8	R10	N49	N52A			RIGID	None	RIGID	Typical
9	M57	N77	N69			RIGID	None	RIGID	Typical
10	M58	N27	N70			RIGID	None	RIGID	Typical
11	M59	N28	N71			RIGID	None	RIGID	Typical
12	M63	N64	N72			RIGID	None	RIGID	Typical
13	M64	N67	N73			RIGID	None	RIGID	Typical
14	M65	N68	N74			RIGID	None	RIGID	Typical
15	M67	N47	N78			RIGID	None	RIGID	Typical
16	M70	N49	N80			RIGID	None	RIGID	Typical
17	M45A	N50	N52	180	Grating Sup...	None	None	A36 Gr.36	Typical
18	M68	N78	N79A	90	Grating Sup...	None	None	A36 Gr.36	Typical
19	M74B	N80	N60	180	Grating Sup...	None	None	A36 Gr.36	Typical
20	M75B	N52A	N62	90	Grating Sup...	None	None	A36 Gr.36	Typical





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**Member Primary Data (Continued)**

	Label	I Joint	J Joint	K Joint	Rotate(d)	Section/Sh...	Type	Design List	Material	Design Rules
21	M54	N74A	N75A		90	Standoff Ho...	None	None	A500 Gr.B Rect	Typical
22	M66	N79A	N60			Grating Plate	None	None	A36 Gr.36	Typical
23	M74C	N52	N62			Grating Plate	None	None	A36 Gr.36	Typical
24	M31	N38	N29			Grating Bra...	None	None	A36 Gr.36	Typical
25	M33	N39	N31			Grating Bra...	None	None	A36 Gr.36	Typical
26	M34A	N35	N79			Grating Bra...	None	None	A36 Gr.36	Typical
27	M60	N70	N67			Grating Bra...	None	None	A36 Gr.36	Typical
28	M61	N71	N68			Grating Bra...	None	None	A36 Gr.36	Typical
29	M62	N69	N64			Grating Bra...	None	None	A36 Gr.36	Typical
30	M50	N63	N69A			RIGID	None	None	RIGID	Typical
31	M51	N65	N70A			RIGID	None	None	RIGID	Typical
32	M52	N66	N71A			RIGID	None	None	RIGID	Typical
33	M53	N64A	N72A			RIGID	None	None	RIGID	Typical
34	M54A	N67A	N73B			RIGID	None	None	RIGID	Typical
35	M55	N68A	N74B			RIGID	None	None	RIGID	Typical
36	M56	N75	N77A			RIGID	None	None	RIGID	Typical
37	M57A	N76A	N79B			RIGID	None	None	RIGID	Typical
38	M59A	N63	N83			RIGID	None	None	RIGID	Typical
39	M60A	N65	N84			RIGID	None	None	RIGID	Typical
40	M61A	N66	N85			RIGID	None	None	RIGID	Typical
41	M62A	N80A	N86			RIGID	None	None	RIGID	Typical
42	M63A	N81	N87			RIGID	None	None	RIGID	Typical
43	M64A	N82	N88			RIGID	None	None	RIGID	Typical
44	M65A	N75	N89			RIGID	None	None	RIGID	Typical
45	M66A	N76A	N91			RIGID	None	None	RIGID	Typical
46	M73	N77A	N78A		180	Grating Sup...	None	None	A36 Gr.36	Typical
47	M74	N89	N90		90	Grating Sup...	None	None	A36 Gr.36	Typical
48	M75	N91	N93		180	Grating Sup...	None	None	A36 Gr.36	Typical
49	M76	N79B	N94		90	Grating Sup...	None	None	A36 Gr.36	Typical
50	M77	N60A	N61		90	Standoff Ho...	None	None	A500 Gr.B Rect	Typical
51	M78	N90	N93			Grating Plate	None	None	A36 Gr.36	Typical
52	M79	N78A	N94			Grating Plate	None	None	A36 Gr.36	Typical
53	M80	N70A	N67A			Grating Bra...	None	None	A36 Gr.36	Typical
54	M81	N71A	N68A			Grating Bra...	None	None	A36 Gr.36	Typical
55	M82	N69A	N64A			Grating Bra...	None	None	A36 Gr.36	Typical
56	M83	N84	N81			Grating Bra...	None	None	A36 Gr.36	Typical
57	M84	N85	N82			Grating Bra...	None	None	A36 Gr.36	Typical
58	M85	N83	N80A			Grating Bra...	None	None	A36 Gr.36	Typical
59	M94	N111	N109			RIGID	None	None	RIGID	Typical
60	M95	N109	N112			RIGID	None	None	RIGID	Typical
61	M96	N113	N110			RIGID	None	None	RIGID	Typical
62	M97	N110	N114			RIGID	None	None	RIGID	Typical
63	M99	N120	N126			RIGID	None	None	RIGID	Typical
64	M100	N122	N127			RIGID	None	None	RIGID	Typical
65	M101	N123	N128			RIGID	None	None	RIGID	Typical
66	M102	N121	N129			RIGID	None	None	RIGID	Typical
67	M103	N124	N130			RIGID	None	None	RIGID	Typical
68	M104	N125	N131			RIGID	None	None	RIGID	Typical
69	M105	N132	N134			RIGID	None	None	RIGID	Typical
70	M106	N133	N136			RIGID	None	None	RIGID	Typical
71	M108	N120	N140			RIGID	None	None	RIGID	Typical
72	M109	N122	N141			RIGID	None	None	RIGID	Typical
73	M110	N123	N142			RIGID	None	None	RIGID	Typical
74	M111	N137	N143			RIGID	None	None	RIGID	Typical
75	M112	N138	N144			RIGID	None	None	RIGID	Typical
76	M113	N139	N145			RIGID	None	None	RIGID	Typical
77	M114	N132	N146			RIGID	None	None	RIGID	Typical





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**Member Primary Data (Continued)**

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Sh...	Type	Design List	Material	Design Rules
78	M115	N133	N148			RIGID	None	None	RIGID	Typical
79	M116	N162	N149			RIGID	None	None	RIGID	Typical
80	M117	N149	N163			RIGID	None	None	RIGID	Typical
81	M118	N164	N152			RIGID	None	None	RIGID	Typical
82	M119	N152	N165			RIGID	None	None	RIGID	Typical
83	M122	N134	N135		180	Grating Sup...	None	None	A36 Gr.36	Typical
84	M123	N146	N147		90	Grating Sup...	None	None	A36 Gr.36	Typical
85	M124	N148	N150		180	Grating Sup...	None	None	A36 Gr.36	Typical
86	M125	N136	N151		90	Grating Sup...	None	None	A36 Gr.36	Typical
87	M126	N117	N118		90	Standoff Ho...	None	None	A500 Gr.B Rect	Typical
88	M127	N147	N150			Grating Plate	None	None	A36 Gr.36	Typical
89	M128	N135	N151			Grating Plate	None	None	A36 Gr.36	Typical
90	M129	N127	N124			Grating Bra...	None	None	A36 Gr.36	Typical
91	M130	N128	N125			Grating Bra...	None	None	A36 Gr.36	Typical
92	M131	N126	N121			Grating Bra...	None	None	A36 Gr.36	Typical
93	M132	N141	N138			Grating Bra...	None	None	A36 Gr.36	Typical
94	M133	N142	N139			Grating Bra...	None	None	A36 Gr.36	Typical
95	M134	N140	N137			Grating Bra...	None	None	A36 Gr.36	Typical
96	M127A	N154A	N152A			RIGID	None	None	RIGID	Typical
97	M128A	N152A	N155A			RIGID	None	None	RIGID	Typical
98	M129A	N156A	N153A			RIGID	None	None	RIGID	Typical
99	M130A	N153A	N157A			RIGID	None	None	RIGID	Typical
100	M131A	N160A	N158A			RIGID	None	None	RIGID	Typical
101	M132A	N158A	N161A			RIGID	None	None	RIGID	Typical
102	M133A	N162A	N159A			RIGID	None	None	RIGID	Typical
103	M134A	N159A	N163A			RIGID	None	None	RIGID	Typical
104	M136A	N168	N166			RIGID	None	None	RIGID	Typical
105	M137A	N166	N169			RIGID	None	None	RIGID	Typical
106	M138A	N170	N167			RIGID	None	None	RIGID	Typical
107	M139A	N167	N171			RIGID	None	None	RIGID	Typical
108	M140A	N174	N172A			RIGID	None	None	RIGID	Typical
109	M141A	N172A	N175			RIGID	None	None	RIGID	Typical
110	M142	N52C	N173A			RIGID	None	None	RIGID	Typical
111	M143	N173A	N177			RIGID	None	None	RIGID	Typical
112	M174A	N308	N183			RIGID	None	None	RIGID	Typical
113	M175	N307A	N182			RIGID	None	None	RIGID	Typical
114	M179	N310	N194			RIGID	None	None	RIGID	Typical
115	M180	N309	N193A			RIGID	None	None	RIGID	Typical
116	LV	N205	N204			Face Horizo...	None	None	A53 Gr.B	Typical
117	M184	N312	N203			RIGID	None	None	RIGID	Typical
118	M185	N311	N202			RIGID	None	None	RIGID	Typical
119	M265	N266	N261A			RIGID	None	None	RIGID	Typical
120	M266	N273	N267			RIGID	None	None	RIGID	Typical
121	M267	N274	N268			RIGID	None	None	RIGID	Typical
122	M268	N275	N269			RIGID	None	None	RIGID	Typical
123	M269	N276	N270			RIGID	None	None	RIGID	Typical
124	M270	N277	N263			RIGID	None	None	RIGID	Typical
125	M271	N278	N271			RIGID	None	None	RIGID	Typical
126	M272	N279	N272			RIGID	None	None	RIGID	Typical
127	M273	N295A	N264			RIGID	None	None	RIGID	Typical
128	M274	N297A	N296A			RIGID	None	None	RIGID	Typical
129	M275	N288	N294			RIGID	None	None	RIGID	Typical
130	M276	N287	N293			RIGID	None	None	RIGID	Typical
131	M277	N286	N292			RIGID	None	None	RIGID	Typical
132	M278	N285	N291			RIGID	None	None	RIGID	Typical
133	M279	N283	N290			RIGID	None	None	RIGID	Typical
134	M280	N284	N281			RIGID	None	None	RIGID	Typical





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**Member Primary Data (Continued)**

	Label	I Joint	J Joint	K Joint	Rotate(d)	Section/Sh...	Type	Design List	Material	Design Rules
135	M281	N282	N289			RIGID	None	None	RIGID	Typical
136	M282	N265	N280			RIGID	None	None	RIGID	Typical
137	M283	N270	N268		90	Secondary ...	None	None	A36 Gr.36	Typical
138	M284	N268	N267		90	Secondary ...	None	None	A36 Gr.36	Typical
139	M285	N267	N261A		90	Secondary ...	None	None	A36 Gr.36	Typical
140	M286	N285	N284		90	Lower Stand...	None	None	A36 Gr.36	Typical
141	M287	N284	N282		90	Lower Stand...	None	None	A36 Gr.36	Typical
142	M288	N282	N265		90	Lower Stand...	None	None	A36 Gr.36	Typical
143	M289	N276	N274			Standoff Bra...	None	None	A36 Gr.36	Typical
144	M290	N274	N273			Standoff Bra...	None	None	A36 Gr.36	Typical
145	M291	N273	N266			Standoff Bra...	None	None	A36 Gr.36	Typical
146	M292	N291	N281			Standoff Bra...	None	None	A36 Gr.36	Typical
147	M293	N281	N289			Standoff Bra...	None	None	A36 Gr.36	Typical
148	M294	N289	N280			Standoff Bra...	None	None	A36 Gr.36	Typical
149	M295	N280	N266			Standoff Bra...	None	None	A36 Gr.36	Typical
150	M296	N296A	N295A			Standoff Bra...	None	None	A36 Gr.36	Typical
151	M297	N266	N289			Standoff Bra...	None	None	A36 Gr.36	Typical
152	M298	N289	N273			Standoff Bra...	None	None	A36 Gr.36	Typical
153	M299	N273	N281			Standoff Bra...	None	None	A36 Gr.36	Typical
154	M300	N281	N274		270	Standoff Bra...	None	None	A36 Gr.36	Typical
155	M301	N290	N274			Standoff Bra...	None	None	A36 Gr.36	Typical
156	M302	N290	N275		270	Standoff Bra...	None	None	A36 Gr.36	Typical
157	M303	N291	N275			Standoff Bra...	None	None	A36 Gr.36	Typical
158	M304	N291	N276		270	Standoff Bra...	None	None	A36 Gr.36	Typical
159	M305	N292	N276			Standoff Bra...	None	None	A36 Gr.36	Typical
160	M306	N292	N277		270	Standoff Bra...	None	None	A36 Gr.36	Typical
161	M307A	N293	N277			Standoff Bra...	None	None	A36 Gr.36	Typical
162	M308A	N293	N278		60	Standoff Bra...	None	None	A36 Gr.36	Typical
163	M310A	N294	N279			Standoff Bra...	None	None	A36 Gr.36	Typical
164	M311A	N306	N307			RIGID	None	None	RIGID	Typical
165	M312A	N262	N76A			RIGID	None	None	RIGID	Typical
166	M313A	N265	N299A		90	Lower Stand...	None	None	A36 Gr.36	Typical
167	M314A	N299A	N303		90	Lower Stand...	None	None	A36 Gr.36	Typical
168	M315A	N280	N301A			Standoff Bra...	None	None	A36 Gr.36	Typical
169	M316A	N301A	N305			Standoff Bra...	None	None	A36 Gr.36	Typical
170	M317A	N266	N300			Standoff Bra...	None	None	A36 Gr.36	Typical
171	M318A	N300	N304			Standoff Bra...	None	None	A36 Gr.36	Typical
172	M319A	N280	N300			Standoff Bra...	None	None	A36 Gr.36	Typical
173	M320A	N301A	N300		270	Standoff Bra...	None	None	A36 Gr.36	Typical
174	M321A	N301A	N304			Standoff Bra...	None	None	A36 Gr.36	Typical
175	M322A	N305	N304		270	Standoff Bra...	None	None	A36 Gr.36	Typical
176	M323	N261A	N298A		90	Secondary ...	None	None	A36 Gr.36	Typical
177	M324	N298A	N302		90	Secondary ...	None	None	A36 Gr.36	Typical
178	M325	N300	N298A		90	RIGID	None	None	RIGID	Typical
179	M326	N304	N302		90	RIGID	None	None	RIGID	Typical
180	M327	N303	N305		90	RIGID	None	None	RIGID	Typical
181	M328	N299A	N301A		90	RIGID	None	None	RIGID	Typical
182	M329	N297A	N287		90	Lower Stand...	None	None	A36 Gr.36	Typical
183	M330	N264	N271		90	Secondary ...	None	None	A36 Gr.36	Typical
184	M331	N295A	N278			Standoff Bra...	None	None	A36 Gr.36	Typical
185	M332	N296A	N293			Standoff Bra...	None	None	A36 Gr.36	Typical
186	M332A	N271	N270		90	Secondary ...	None	None	A36 Gr.36	Typical
187	M333	N278	N276			Standoff Bra...	None	None	A36 Gr.36	Typical
188	M334	N293	N291			Standoff Bra...	None	None	A36 Gr.36	Typical
189	M335	N287	N285		90	Lower Stand...	None	None	A36 Gr.36	Typical
190	M342	N278	N294			Standoff Bra...	None	None	A36 Gr.36	Typical
191	M343	N279	N307B			Standoff Bra...	None	None	A36 Gr.36	Typical





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**Member Primary Data (Continued)**

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Sh...	Type	Design List	Material	Design Rules
192	M346	N150	N94			Grating Pipe	None	None	A53 Gr.B	Typical
193	M347	N312A	N311A			Grating Pipe	None	None	A53 Gr.B	Typical
194	M348	N323	N322			Platform Bra...	None	None	A36 Gr.36	Typical
195	M349	N321	N320			Platform Bra...	None	None	A36 Gr.36	Typical
196	M350	N315	N314			Platform Bra...	None	None	A36 Gr.36	Typical
197	M351	N317	N316			Platform Bra...	None	None	A36 Gr.36	Typical
198	M352	N319	N318			Platform Bra...	None	None	A36 Gr.36	Typical
199	M353	N93	N62			Grating Pipe	None	None	A53 Gr.B	Typical
200	M354	N310A	N309A			Grating Pipe	None	None	A53 Gr.B	Typical
201	M355	N337	N336			Platform Bra...	None	None	A36 Gr.36	Typical
202	M356	N335	N334			Platform Bra...	None	None	A36 Gr.36	Typical
203	M357	N329	N328			Platform Bra...	None	None	A36 Gr.36	Typical
204	M358	N331	N330			Platform Bra...	None	None	A36 Gr.36	Typical
205	M359	N333	N332			Platform Bra...	None	None	A36 Gr.36	Typical
206	M360	N60	N151			Grating Pipe	None	None	A53 Gr.B	Typical
207	M361	N308C	N313			Grating Pipe	None	None	A53 Gr.B	Typical
208	M362	N347	N346			Platform Bra...	None	None	A36 Gr.36	Typical
209	M363	N345	N344			Platform Bra...	None	None	A36 Gr.36	Typical
210	M364	N339	N338			Platform Bra...	None	None	A36 Gr.36	Typical
211	M365	N341	N340			Platform Bra...	None	None	A36 Gr.36	Typical
212	M366	N343	N342			Platform Bra...	None	None	A36 Gr.36	Typical
213	MP1A	N454A	N455A			Mount Pipe ...	None	None	A53 Gr.B	Typical
214	MP2A	N403A	N404A			Mount Pipe ...	None	None	A53 Gr.B	Typical
215	MP4A	N418A	N419			Mount Pipe ...	None	None	A53 Gr.B	Typical
216	M339A	N392	N308A_1			RIGID	None	None	RIGID	Typical
217	LM2	N312	N309A_1			RIGID	None	None	RIGID	Typical
218	LM1	N310_1	N311_1			RIGID	None	None	RIGID	Typical
219	MP5A	N313A	N314_1			Mount Pipe ...	None	None	A53 Gr.B	Typical
220	M343_1	N312_1	N315_1			RIGID	None	None	RIGID	Typical
221	M343A	N315A	N314A			Face Horizo...	None	None	A53 Gr.B	Typical
222	M344A	N316_1	N318_1			RIGID	None	None	RIGID	Typical
223	M345A	N317_1	N319_1			RIGID	None	None	RIGID	Typical
224	M346_1	N320_1	N321_1			RIGID	None	None	RIGID	Typical
225	M347_1	N322_1	N323_1			RIGID	None	None	RIGID	Typical
226	MP1C	N327	N328_1			Mount Pipe ...	None	None	A53 Gr.B	Typical
227	MP2C	N330_1	N331_1			Mount Pipe ...	None	None	A53 Gr.B	Typical
228	MP3C	N333_1	N334_1			Mount Pipe ...	None	None	A53 Gr.B	Typical
229	M352_1	N329_1	N335_1			RIGID	None	None	RIGID	Typical
230	M353_1	N308	N336_1			RIGID	None	None	RIGID	Typical
231	M354_1	N337_1	N338_1			RIGID	None	None	RIGID	Typical
232	MP4C	N340_1	N341_1			Mount Pipe ...	None	None	A53 Gr.B	Typical
233	M356_1	N339_1	N342_1			RIGID	None	None	RIGID	Typical
234	M357_1	N344_1	N343_1			Face Horizo...	None	None	A53 Gr.B	Typical
235	M358_1	N345_1	N347_1			RIGID	None	None	RIGID	Typical
236	M359_1	N346_1	N348			RIGID	None	None	RIGID	Typical
237	M360_1	N349	N350			RIGID	None	None	RIGID	Typical
238	M361_1	N351	N352			RIGID	None	None	RIGID	Typical
239	MP1B	N356	N357			Mount Pipe ...	None	None	A53 Gr.B	Typical
240	MP2B	N359	N360			Mount Pipe ...	None	None	A53 Gr.B	Typical
241	MP3B	N362	N363			Mount Pipe ...	None	None	A53 Gr.B	Typical
242	M366_1	N358	N364			RIGID	None	None	RIGID	Typical
243	M367A	N310	N365			RIGID	None	None	RIGID	Typical
244	M368	N366	N367			RIGID	None	None	RIGID	Typical
245	MP4B	N369	N370			Mount Pipe ...	None	None	A53 Gr.B	Typical
246	M370	N368	N371			RIGID	None	None	RIGID	Typical
247	M371	N373	N372			Face Horizo...	None	None	A53 Gr.B	Typical
248	M372	N374	N376			RIGID	None	None	RIGID	Typical





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**Member Primary Data (Continued)**

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Sh...	Type	Design List	Material	Design Rules
249	M373	N375	N377			RIGID	None	None	RIGID	Typical
250	M374	N378	N379			RIGID	None	None	RIGID	Typical
251	M375	N380	N381			RIGID	None	None	RIGID	Typical
252	M376	N380A	N382			RIGID	None	None	RIGID	Typical
253	M377	N381A	N383			RIGID	None	None	RIGID	Typical
254	M378	N385	N387			RIGID	None	None	RIGID	Typical
255	M379	N386	N388			RIGID	None	None	RIGID	Typical
256	M380	N390	N392A			RIGID	None	None	RIGID	Typical
257	M381	N391	N393			RIGID	None	None	RIGID	Typical
258	M382	N382	N393		180	Support Rail...	None	None	A36 Gr.36	Typical
259	M389	N387	N383		180	Support Rail...	None	None	A36 Gr.36	Typical
260	M396	N392A	N388		180	Support Rail...	None	None	A36 Gr.36	Typical
261	MP3A	N435A	N436			Mount Pipe ...	None	None	A53 Gr.B	Typical
262	M419	N434A	N437			RIGID	None	None	RIGID	Typical
263	M420	N438	N439			RIGID	None	None	RIGID	Typical
264	M641	N693	N689		120	RIGID	None	None	RIGID	Typical
265	M642	N700	N694		120	RIGID	None	None	RIGID	Typical
266	M643	N701	N695		120	RIGID	None	None	RIGID	Typical
267	M644	N702	N696		120	RIGID	None	None	RIGID	Typical
268	M645	N703	N697		120	RIGID	None	None	RIGID	Typical
269	M646	N704	N690		120	RIGID	None	None	RIGID	Typical
270	M647	N705	N698		120	RIGID	None	None	RIGID	Typical
271	M648	N706	N699		120	RIGID	None	None	RIGID	Typical
272	M649	N722	N691		120	RIGID	None	None	RIGID	Typical
273	M650	N724	N723			RIGID	None	None	RIGID	Typical
274	M651	N715	N721			RIGID	None	None	RIGID	Typical
275	M652	N714	N720			RIGID	None	None	RIGID	Typical
276	M653	N713	N719			RIGID	None	None	RIGID	Typical
277	M654	N712	N718			RIGID	None	None	RIGID	Typical
278	M655	N710	N717			RIGID	None	None	RIGID	Typical
279	M656	N711	N708			RIGID	None	None	RIGID	Typical
280	M657	N709	N716			RIGID	None	None	RIGID	Typical
281	M658	N692	N707			RIGID	None	None	RIGID	Typical
282	M659	N697	N695		90	Secondary ...	None	None	A36 Gr.36	Typical
283	M660	N695	N694		90	Secondary ...	None	None	A36 Gr.36	Typical
284	M661	N694	N689		90	Secondary ...	None	None	A36 Gr.36	Typical
285	M662	N712	N711		90	Lower Stand...	None	None	A36 Gr.36	Typical
286	M663	N711	N709		90	Lower Stand...	None	None	A36 Gr.36	Typical
287	M664	N709	N692		90	Lower Stand...	None	None	A36 Gr.36	Typical
288	M665	N703	N701			Standoff Bra...	None	None	A36 Gr.36	Typical
289	M666	N701	N700			Standoff Bra...	None	None	A36 Gr.36	Typical
290	M667	N700	N693			Standoff Bra...	None	None	A36 Gr.36	Typical
291	M668	N718	N708			Standoff Bra...	None	None	A36 Gr.36	Typical
292	M669	N708	N716			Standoff Bra...	None	None	A36 Gr.36	Typical
293	M670	N716	N707			Standoff Bra...	None	None	A36 Gr.36	Typical
294	M671	N707	N693			Standoff Bra...	None	None	A36 Gr.36	Typical
295	M672	N723	N722			Standoff Bra...	None	None	A36 Gr.36	Typical
296	M673	N693	N716			Standoff Bra...	None	None	A36 Gr.36	Typical
297	M674	N716	N700			Standoff Bra...	None	None	A36 Gr.36	Typical
298	M675	N700	N708			Standoff Bra...	None	None	A36 Gr.36	Typical
299	M676	N708	N701		30	Standoff Bra...	None	None	A36 Gr.36	Typical
300	M677	N717	N701			Standoff Bra...	None	None	A36 Gr.36	Typical
301	M678	N717	N702		30	Standoff Bra...	None	None	A36 Gr.36	Typical
302	M679	N718	N702			Standoff Bra...	None	None	A36 Gr.36	Typical
303	M680	N718	N703		30	Standoff Bra...	None	None	A36 Gr.36	Typical
304	M681	N719	N703			Standoff Bra...	None	None	A36 Gr.36	Typical
305	M682	N719	N704		30	Standoff Bra...	None	None	A36 Gr.36	Typical





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 Designer :  
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**Member Primary Data (Continued)**

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Sh...	Type	Design List	Material	Design Rules
306	M683	N720	N704			Standoff Bra...	None	None	A36 Gr.36	Typical
307	M684	N720	N705		180	Standoff Bra...	None	None	A36 Gr.36	Typical
308	M685	N721	N706		120	Standoff Bra...	None	None	A36 Gr.36	Typical
309	M686	N692	N726		90	Lower Stand...	None	None	A36 Gr.36	Typical
310	M687	N726	N730		90	Lower Stand...	None	None	A36 Gr.36	Typical
311	M688	N707	N728			Standoff Bra...	None	None	A36 Gr.36	Typical
312	M689	N728	N732			Standoff Bra...	None	None	A36 Gr.36	Typical
313	M690	N693	N727			Standoff Bra...	None	None	A36 Gr.36	Typical
314	M691	N727	N731			Standoff Bra...	None	None	A36 Gr.36	Typical
315	M692	N707	N727			Standoff Bra...	None	None	A36 Gr.36	Typical
316	M693	N728	N727		30	Standoff Bra...	None	None	A36 Gr.36	Typical
317	M694	N728	N731			Standoff Bra...	None	None	A36 Gr.36	Typical
318	M695	N732	N731		30	Standoff Bra...	None	None	A36 Gr.36	Typical
319	M696	N689	N725		90	Secondary ...	None	None	A36 Gr.36	Typical
320	M697	N725	N729		90	Secondary ...	None	None	A36 Gr.36	Typical
321	M698	N727	N725		210	RIGID	None	None	RIGID	Typical
322	M699	N731	N729		210	RIGID	None	None	RIGID	Typical
323	M700	N730	N732		210	RIGID	None	None	RIGID	Typical
324	M701	N726	N728		210	RIGID	None	None	RIGID	Typical
325	M702	N724	N714		90	Lower Stand...	None	None	A36 Gr.36	Typical
326	M703	N691	N698		90	Secondary ...	None	None	A36 Gr.36	Typical
327	M704	N722	N705			Standoff Bra...	None	None	A36 Gr.36	Typical
328	M705	N723	N720			Standoff Bra...	None	None	A36 Gr.36	Typical
329	M706	N698	N697		90	Secondary ...	None	None	A36 Gr.36	Typical
330	M707	N705	N703			Standoff Bra...	None	None	A36 Gr.36	Typical
331	M708	N720	N718			Standoff Bra...	None	None	A36 Gr.36	Typical
332	M709	N714	N712		90	Lower Stand...	None	None	A36 Gr.36	Typical
333	M710	N705	N721			Standoff Bra...	None	None	A36 Gr.36	Typical
334	M711	N706	N733			Standoff Bra...	None	None	A36 Gr.36	Typical
335	M712	N740	N736		240	RIGID	None	None	RIGID	Typical
336	M713	N747	N741		240	RIGID	None	None	RIGID	Typical
337	M714	N748	N742		240	RIGID	None	None	RIGID	Typical
338	M715	N749	N743		240	RIGID	None	None	RIGID	Typical
339	M716	N750	N744		240	RIGID	None	None	RIGID	Typical
340	M717	N751	N737		240	RIGID	None	None	RIGID	Typical
341	M718	N752	N745		240	RIGID	None	None	RIGID	Typical
342	M719	N753	N746		240	RIGID	None	None	RIGID	Typical
343	M720	N769	N738		240	RIGID	None	None	RIGID	Typical
344	M721	N771	N770			RIGID	None	None	RIGID	Typical
345	M722	N762	N768			RIGID	None	None	RIGID	Typical
346	M723	N761	N767			RIGID	None	None	RIGID	Typical
347	M724	N760	N766			RIGID	None	None	RIGID	Typical
348	M725	N759	N765			RIGID	None	None	RIGID	Typical
349	M726	N757	N764			RIGID	None	None	RIGID	Typical
350	M727	N758	N755			RIGID	None	None	RIGID	Typical
351	M728	N756	N763			RIGID	None	None	RIGID	Typical
352	M729	N739	N754			RIGID	None	None	RIGID	Typical
353	M730	N744	N742		90	Secondary ...	None	None	A36 Gr.36	Typical
354	M731	N742	N741		90	Secondary ...	None	None	A36 Gr.36	Typical
355	M732	N741	N736		90	Secondary ...	None	None	A36 Gr.36	Typical
356	M733	N759	N758		90	Lower Stand...	None	None	A36 Gr.36	Typical
357	M734	N758	N756		90	Lower Stand...	None	None	A36 Gr.36	Typical
358	M735	N756	N739		90	Lower Stand...	None	None	A36 Gr.36	Typical
359	M736	N750	N748			Standoff Bra...	None	None	A36 Gr.36	Typical
360	M737	N748	N747			Standoff Bra...	None	None	A36 Gr.36	Typical
361	M738	N747	N740			Standoff Bra...	None	None	A36 Gr.36	Typical
362	M739	N765	N755			Standoff Bra...	None	None	A36 Gr.36	Typical





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**Member Primary Data (Continued)**

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Sh...	Type	Design List	Material	Design Rules
363	M740	N755	N763			Standoff Bra...	None	None	A36 Gr.36	Typical
364	M741	N763	N754			Standoff Bra...	None	None	A36 Gr.36	Typical
365	M742	N754	N740			Standoff Bra...	None	None	A36 Gr.36	Typical
366	M743	N770	N769			Standoff Bra...	None	None	A36 Gr.36	Typical
367	M744	N740	N763			Standoff Bra...	None	None	A36 Gr.36	Typical
368	M745	N763	N747			Standoff Bra...	None	None	A36 Gr.36	Typical
369	M746	N747	N755			Standoff Bra...	None	None	A36 Gr.36	Typical
370	M747	N755	N748		150	Standoff Bra...	None	None	A36 Gr.36	Typical
371	M748	N764	N748			Standoff Bra...	None	None	A36 Gr.36	Typical
372	M749	N764	N749		150	Standoff Bra...	None	None	A36 Gr.36	Typical
373	M750	N765	N749			Standoff Bra...	None	None	A36 Gr.36	Typical
374	M751	N765	N750		150	Standoff Bra...	None	None	A36 Gr.36	Typical
375	M752	N766	N750			Standoff Bra...	None	None	A36 Gr.36	Typical
376	M753	N766	N751		150	Standoff Bra...	None	None	A36 Gr.36	Typical
377	M754	N767	N751			Standoff Bra...	None	None	A36 Gr.36	Typical
378	M755	N767	N752		300	Standoff Bra...	None	None	A36 Gr.36	Typical
379	M756	N768	N753		240	Standoff Bra...	None	None	A36 Gr.36	Typical
380	M757	N739	N773		90	Lower Stand...	None	None	A36 Gr.36	Typical
381	M758	N773	N777		90	Lower Stand...	None	None	A36 Gr.36	Typical
382	M759	N754	N775			Standoff Bra...	None	None	A36 Gr.36	Typical
383	M760	N775	N779			Standoff Bra...	None	None	A36 Gr.36	Typical
384	M761	N740	N774			Standoff Bra...	None	None	A36 Gr.36	Typical
385	M762	N774	N778			Standoff Bra...	None	None	A36 Gr.36	Typical
386	M763	N754	N774			Standoff Bra...	None	None	A36 Gr.36	Typical
387	M764	N775	N774		150	Standoff Bra...	None	None	A36 Gr.36	Typical
388	M765	N775	N778			Standoff Bra...	None	None	A36 Gr.36	Typical
389	M766	N779	N778		150	Standoff Bra...	None	None	A36 Gr.36	Typical
390	M767	N736	N772		90	Secondary ...	None	None	A36 Gr.36	Typical
391	M768	N772	N776		90	Secondary ...	None	None	A36 Gr.36	Typical
392	M769	N774	N772		330	RIGID	None	None	RIGID	Typical
393	M770	N778	N776		330	RIGID	None	None	RIGID	Typical
394	M771	N777	N779		330	RIGID	None	None	RIGID	Typical
395	M772	N773	N775		330	RIGID	None	None	RIGID	Typical
396	M773	N771	N761		90	Lower Stand...	None	None	A36 Gr.36	Typical
397	M774	N738	N745		90	Secondary ...	None	None	A36 Gr.36	Typical
398	M775	N769	N752			Standoff Bra...	None	None	A36 Gr.36	Typical
399	M776	N770	N767			Standoff Bra...	None	None	A36 Gr.36	Typical
400	M777	N745	N744		90	Secondary ...	None	None	A36 Gr.36	Typical
401	M778	N752	N750			Standoff Bra...	None	None	A36 Gr.36	Typical
402	M779	N767	N765			Standoff Bra...	None	None	A36 Gr.36	Typical
403	M780	N761	N759		90	Lower Stand...	None	None	A36 Gr.36	Typical
404	M781	N752	N768			Standoff Bra...	None	None	A36 Gr.36	Typical
405	M782	N753	N780			Standoff Bra...	None	None	A36 Gr.36	Typical
406	M418	N426	N425			Face Horizo...	None	None	A53 Gr.B	Typical
407	M419A	N429	N428			Face Horizo...	None	None	A53 Gr.B	Typical
408	M408	N432	N212		120	RIGID	None	None	RIGID	Typical
409	M409	N431	N49		120	RIGID	None	None	RIGID	Typical
410	M410	N437A	N260		240	RIGID	None	None	RIGID	Typical
411	M411	N436A	N133		240	RIGID	None	None	RIGID	Typical

**Member Advanced Data**

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	R3						Yes	** NA **			None
2	R4						Yes	** NA **			None
3	R5						Yes	** NA **			None





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**Member Advanced Data (Continued)**

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
4	R6						Yes	** NA **			None
5	R7						Yes	** NA **			None
6	R8						Yes	** NA **			None
7	R9						Yes	** NA **			None
8	R10						Yes	** NA **			None
9	M57						Yes	** NA **			None
10	M58						Yes	** NA **			None
11	M59						Yes	** NA **			None
12	M63						Yes	** NA **			None
13	M64						Yes	** NA **			None
14	M65						Yes	** NA **			None
15	M67						Yes	** NA **			None
16	M70						Yes	** NA **			None
17	M45A						Yes	** NA **			None
18	M68						Yes	** NA **			None
19	M74B						Yes	** NA **			None
20	M75B						Yes	** NA **			None
21	M54						Yes	** NA **			None
22	M66						Yes	** NA **			None
23	M74C						Yes	** NA **			None
24	M31						Yes	** NA **			None
25	M33						Yes	** NA **			None
26	M34A						Yes	** NA **			None
27	M60						Yes	** NA **			None
28	M61						Yes	** NA **			None
29	M62						Yes	** NA **			None
30	M50						Yes	** NA **			None
31	M51						Yes	** NA **			None
32	M52						Yes	** NA **			None
33	M53						Yes	** NA **			None
34	M54A						Yes	** NA **			None
35	M55						Yes	** NA **			None
36	M56						Yes	** NA **			None
37	M57A						Yes	** NA **			None
38	M59A						Yes	** NA **			None
39	M60A						Yes	** NA **			None
40	M61A						Yes	** NA **			None
41	M62A						Yes	** NA **			None
42	M63A						Yes	** NA **			None
43	M64A						Yes	** NA **			None
44	M65A						Yes	** NA **			None
45	M66A						Yes	** NA **			None
46	M73						Yes	** NA **			None
47	M74						Yes	** NA **			None
48	M75						Yes	** NA **			None
49	M76						Yes	** NA **			None
50	M77						Yes	** NA **			None
51	M78						Yes	** NA **			None
52	M79						Yes	** NA **			None
53	M80						Yes	** NA **			None
54	M81						Yes	** NA **			None
55	M82						Yes	** NA **			None
56	M83						Yes	** NA **			None
57	M84						Yes	** NA **			None
58	M85						Yes	** NA **			None
59	M94		OOOXOO				Yes	** NA **			None
60	M95						Yes	** NA **			None





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**Member Advanced Data (Continued)**

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
61	M96		OOOXOO				Yes	** NA **			None
62	M97						Yes	** NA **			None
63	M99						Yes	** NA **			None
64	M100						Yes	** NA **			None
65	M101						Yes	** NA **			None
66	M102						Yes	** NA **			None
67	M103						Yes	** NA **			None
68	M104						Yes	** NA **			None
69	M105						Yes	** NA **			None
70	M106						Yes	** NA **			None
71	M108						Yes	** NA **			None
72	M109						Yes	** NA **			None
73	M110						Yes	** NA **			None
74	M111						Yes	** NA **			None
75	M112						Yes	** NA **			None
76	M113						Yes	** NA **			None
77	M114						Yes	** NA **			None
78	M115						Yes	** NA **			None
79	M116		OOOXOO				Yes	** NA **			None
80	M117						Yes	** NA **			None
81	M118		OOOXOO				Yes	** NA **			None
82	M119						Yes	** NA **			None
83	M122						Yes	** NA **			None
84	M123						Yes	** NA **			None
85	M124						Yes	** NA **			None
86	M125						Yes	** NA **			None
87	M126						Yes	** NA **			None
88	M127						Yes	** NA **			None
89	M128						Yes	** NA **			None
90	M129						Yes	** NA **			None
91	M130						Yes	** NA **			None
92	M131						Yes	** NA **			None
93	M132						Yes	** NA **			None
94	M133						Yes	** NA **			None
95	M134						Yes	** NA **			None
96	M127A		OOOXOO				Yes	** NA **			None
97	M128A						Yes	** NA **			None
98	M129A		OOOXOO				Yes	** NA **			None
99	M130A						Yes	** NA **			None
100	M131A		OOOXOO				Yes	** NA **			None
101	M132A						Yes	** NA **			None
102	M133A		OOOXOO				Yes	** NA **			None
103	M134A						Yes	** NA **			None
104	M136A		OOOXOO				Yes	** NA **			None
105	M137A						Yes	** NA **			None
106	M138A		OOOXOO				Yes	** NA **			None
107	M139A						Yes	** NA **			None
108	M140A		OOOXOO				Yes	** NA **			None
109	M141A						Yes	** NA **			None
110	M142		OOOXOO				Yes	** NA **			None
111	M143						Yes	** NA **			None
112	M174A						Yes	** NA **			None
113	M175						Yes	** NA **			None
114	M179						Yes	** NA **			None
115	M180						Yes	** NA **			None
116	LV						Yes	** NA **			None
117	M184						Yes	** NA **			None



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**Member Advanced Data (Continued)**

Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
118	M185					Yes	** NA **			None
119	M265					Yes	** NA **			None
120	M266					Yes	** NA **			None
121	M267					Yes	** NA **			None
122	M268					Yes	** NA **			None
123	M269					Yes	** NA **			None
124	M270					Yes	** NA **			None
125	M271					Yes	** NA **			None
126	M272					Yes	** NA **			None
127	M273					Yes	** NA **			None
128	M274					Yes	** NA **			None
129	M275					Yes	** NA **			None
130	M276					Yes	** NA **			None
131	M277					Yes	** NA **			None
132	M278					Yes	** NA **			None
133	M279					Yes	** NA **			None
134	M280					Yes	** NA **			None
135	M281					Yes	** NA **			None
136	M282					Yes	** NA **			None
137	M283					Yes	** NA **			None
138	M284					Yes	** NA **			None
139	M285					Yes	** NA **			None
140	M286					Yes	** NA **			None
141	M287					Yes	** NA **			None
142	M288					Yes	** NA **			None
143	M289					Yes	** NA **			None
144	M290					Yes	** NA **			None
145	M291					Yes	** NA **			None
146	M292					Yes	** NA **			None
147	M293					Yes	** NA **			None
148	M294					Yes	** NA **			None
149	M295					Yes	** NA **			None
150	M296					Yes	** NA **			None
151	M297					Yes	** NA **			None
152	M298					Yes	** NA **			None
153	M299					Yes	** NA **			None
154	M300					Yes	** NA **			None
155	M301					Yes	** NA **			None
156	M302					Yes	** NA **			None
157	M303					Yes	** NA **			None
158	M304					Yes	** NA **			None
159	M305					Yes	** NA **			None
160	M306					Yes	** NA **			None
161	M307A					Yes	** NA **			None
162	M308A					Yes	** NA **			None
163	M310A					Yes	** NA **			None
164	M311A					Yes	** NA **			None
165	M312A					Yes	** NA **			None
166	M313A					Yes	** NA **			None
167	M314A					Yes	** NA **			None
168	M315A					Yes	** NA **			None
169	M316A					Yes	** NA **			None
170	M317A					Yes	** NA **			None
171	M318A					Yes	** NA **			None
172	M319A					Yes	** NA **			None
173	M320A					Yes	** NA **			None
174	M321A					Yes	** NA **			None





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**Member Advanced Data (Continued)**

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
175	M322A						Yes	** NA **			None
176	M323						Yes	** NA **			None
177	M324						Yes	** NA **			None
178	M325						Yes	** NA **			None
179	M326						Yes	** NA **			None
180	M327						Yes	** NA **			None
181	M328						Yes	** NA **			None
182	M329						Yes	** NA **			None
183	M330						Yes	** NA **			None
184	M331						Yes	** NA **			None
185	M332						Yes	** NA **			None
186	M332A						Yes	** NA **			None
187	M333						Yes	** NA **			None
188	M334						Yes	** NA **			None
189	M335						Yes	** NA **			None
190	M342						Yes	** NA **			None
191	M343						Yes	** NA **			None
192	M346	OOOXOO	OOOXOO				Yes	** NA **			None
193	M347	OOOXOO	OOOXOO				Yes	** NA **			None
194	M348						Yes	** NA **			None
195	M349						Yes	** NA **			None
196	M350						Yes	** NA **			None
197	M351						Yes	** NA **			None
198	M352						Yes	** NA **			None
199	M353	OOOXOO	OOOXOO				Yes	** NA **			None
200	M354	OOOXOO	OOOXOO				Yes	** NA **			None
201	M355						Yes	** NA **			None
202	M356						Yes	** NA **			None
203	M357						Yes	** NA **			None
204	M358						Yes	** NA **			None
205	M359						Yes	** NA **			None
206	M360	OOOXOO	OOOXOO				Yes	** NA **			None
207	M361	OOOXOO	OOOXOO				Yes	** NA **			None
208	M362						Yes	** NA **			None
209	M363						Yes	** NA **			None
210	M364						Yes	** NA **			None
211	M365						Yes	** NA **			None
212	M366						Yes	** NA **			None
213	MP1A						Yes	** NA **			None
214	MP2A						Yes	** NA **			None
215	MP4A						Yes	** NA **			None
216	M339A						Yes	** NA **			None
217	LM2						Yes	** NA **			None
218	LM1						Yes	** NA **			None
219	MP5A						Yes	** NA **			None
220	M343 1						Yes	** NA **			None
221	M343A						Yes	** NA **			None
222	M344A						Yes	** NA **			None
223	M345A						Yes	** NA **			None
224	M346 1						Yes	** NA **			None
225	M347 1						Yes	** NA **			None
226	MP1C						Yes	** NA **			None
227	MP2C						Yes	** NA **			None
228	MP3C						Yes	** NA **			None
229	M352 1						Yes	** NA **			None
230	M353 1						Yes	** NA **			None
231	M354 1						Yes	** NA **			None



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**Member Advanced Data (Continued)**

	Label	I Release	J Release	I Offset(in)	J Offset(in)	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
232	MP4C						Yes	** NA **			None
233	M356 1						Yes	** NA **			None
234	M357 1						Yes	** NA **			None
235	M358 1						Yes	** NA **			None
236	M359 1						Yes	** NA **			None
237	M360 1						Yes	** NA **			None
238	M361 1						Yes	** NA **			None
239	MP1B						Yes	** NA **			None
240	MP2B						Yes	** NA **			None
241	MP3B						Yes	** NA **			None
242	M366 1						Yes	** NA **			None
243	M367A						Yes	** NA **			None
244	M368						Yes	** NA **			None
245	MP4B						Yes	** NA **			None
246	M370						Yes	** NA **			None
247	M371						Yes	** NA **			None
248	M372						Yes	** NA **			None
249	M373						Yes	** NA **			None
250	M374						Yes	** NA **			None
251	M375						Yes	** NA **			None
252	M376	OOOOOX					Yes	** NA **			None
253	M377	OOOOOX					Yes	** NA **			None
254	M378	OOOOOX					Yes	** NA **			None
255	M379	OOOOOX					Yes	** NA **			None
256	M380	OOOOOX					Yes	** NA **			None
257	M381	OOOOOX					Yes	** NA **			None
258	M382						Yes	** NA **			None
259	M389						Yes	** NA **			None
260	M396						Yes	** NA **			None
261	MP3A						Yes	** NA **			None
262	M419						Yes	** NA **			None
263	M420						Yes	** NA **			None
264	M641						Yes	** NA **			None
265	M642						Yes	** NA **			None
266	M643						Yes	** NA **			None
267	M644						Yes	** NA **			None
268	M645						Yes	** NA **			None
269	M646						Yes	** NA **			None
270	M647						Yes	** NA **			None
271	M648						Yes	** NA **			None
272	M649						Yes	** NA **			None
273	M650						Yes	** NA **			None
274	M651						Yes	** NA **			None
275	M652						Yes	** NA **			None
276	M653						Yes	** NA **			None
277	M654						Yes	** NA **			None
278	M655						Yes	** NA **			None
279	M656						Yes	** NA **			None
280	M657						Yes	** NA **			None
281	M658						Yes	** NA **			None
282	M659						Yes	** NA **			None
283	M660						Yes	** NA **			None
284	M661						Yes	** NA **			None
285	M662						Yes	** NA **			None
286	M663						Yes	** NA **			None
287	M664						Yes	** NA **			None
288	M665						Yes	** NA **			None





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**Member Advanced Data (Continued)**

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
289	M666						Yes	** NA **			None
290	M667						Yes	** NA **			None
291	M668						Yes	** NA **			None
292	M669						Yes	** NA **			None
293	M670						Yes	** NA **			None
294	M671						Yes	** NA **			None
295	M672						Yes	** NA **			None
296	M673						Yes	** NA **			None
297	M674						Yes	** NA **			None
298	M675						Yes	** NA **			None
299	M676						Yes	** NA **			None
300	M677						Yes	** NA **			None
301	M678						Yes	** NA **			None
302	M679						Yes	** NA **			None
303	M680						Yes	** NA **			None
304	M681						Yes	** NA **			None
305	M682						Yes	** NA **			None
306	M683						Yes	** NA **			None
307	M684						Yes	** NA **			None
308	M685						Yes	** NA **			None
309	M686						Yes	** NA **			None
310	M687						Yes	** NA **			None
311	M688						Yes	** NA **			None
312	M689						Yes	** NA **			None
313	M690						Yes	** NA **			None
314	M691						Yes	** NA **			None
315	M692						Yes	** NA **			None
316	M693						Yes	** NA **			None
317	M694						Yes	** NA **			None
318	M695						Yes	** NA **			None
319	M696						Yes	** NA **			None
320	M697						Yes	** NA **			None
321	M698						Yes	** NA **			None
322	M699						Yes	** NA **			None
323	M700						Yes	** NA **			None
324	M701						Yes	** NA **			None
325	M702						Yes	** NA **			None
326	M703						Yes	** NA **			None
327	M704						Yes	** NA **			None
328	M705						Yes	** NA **			None
329	M706						Yes	** NA **			None
330	M707						Yes	** NA **			None
331	M708						Yes	** NA **			None
332	M709						Yes	** NA **			None
333	M710						Yes	** NA **			None
334	M711						Yes	** NA **			None
335	M712						Yes	** NA **			None
336	M713						Yes	** NA **			None
337	M714						Yes	** NA **			None
338	M715						Yes	** NA **			None
339	M716						Yes	** NA **			None
340	M717						Yes	** NA **			None
341	M718						Yes	** NA **			None
342	M719						Yes	** NA **			None
343	M720						Yes	** NA **			None
344	M721						Yes	** NA **			None
345	M722						Yes	** NA **			None



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**Member Advanced Data (Continued)**

	Label	I Release	J Release	I Offset(in)	J Offset(in)	T/C Only	Physical	Defl Rat.	Analysis ...	Inactive	Seismic...
346	M723						Yes	** NA **			None
347	M724						Yes	** NA **			None
348	M725						Yes	** NA **			None
349	M726						Yes	** NA **			None
350	M727						Yes	** NA **			None
351	M728						Yes	** NA **			None
352	M729						Yes	** NA **			None
353	M730						Yes	** NA **			None
354	M731						Yes	** NA **			None
355	M732						Yes	** NA **			None
356	M733						Yes	** NA **			None
357	M734						Yes	** NA **			None
358	M735						Yes	** NA **			None
359	M736						Yes	** NA **			None
360	M737						Yes	** NA **			None
361	M738						Yes	** NA **			None
362	M739						Yes	** NA **			None
363	M740						Yes	** NA **			None
364	M741						Yes	** NA **			None
365	M742						Yes	** NA **			None
366	M743						Yes	** NA **			None
367	M744						Yes	** NA **			None
368	M745						Yes	** NA **			None
369	M746						Yes	** NA **			None
370	M747						Yes	** NA **			None
371	M748						Yes	** NA **			None
372	M749						Yes	** NA **			None
373	M750						Yes	** NA **			None
374	M751						Yes	** NA **			None
375	M752						Yes	** NA **			None
376	M753						Yes	** NA **			None
377	M754						Yes	** NA **			None
378	M755						Yes	** NA **			None
379	M756						Yes	** NA **			None
380	M757						Yes	** NA **			None
381	M758						Yes	** NA **			None
382	M759						Yes	** NA **			None
383	M760						Yes	** NA **			None
384	M761						Yes	** NA **			None
385	M762						Yes	** NA **			None
386	M763						Yes	** NA **			None
387	M764						Yes	** NA **			None
388	M765						Yes	** NA **			None
389	M766						Yes	** NA **			None
390	M767						Yes	** NA **			None
391	M768						Yes	** NA **			None
392	M769						Yes	** NA **			None
393	M770						Yes	** NA **			None
394	M771						Yes	** NA **			None
395	M772						Yes	** NA **			None
396	M773						Yes	** NA **			None
397	M774						Yes	** NA **			None
398	M775						Yes	** NA **			None
399	M776						Yes	** NA **			None
400	M777						Yes	** NA **			None
401	M778						Yes	** NA **			None
402	M779						Yes	** NA **			None





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**Member Advanced Data (Continued)**

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
403	M780						Yes	** NA **			None
404	M781						Yes	** NA **			None
405	M782						Yes	** NA **			None
406	M418						Yes	** NA **			None
407	M419A						Yes	** NA **			None
408	M408						Yes	** NA **			None
409	M409						Yes	** NA **			None
410	M410						Yes	** NA **			None
411	M411						Yes	** NA **			None

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4B	Y	-17.6	2.5
2	MP4B	My	-.000507	2.5
3	MP4B	Mz	.019	2.5
4	MP4B	Y	-17.6	2.5
5	MP4B	My	-.012	2.5
6	MP4B	Mz	.015	2.5
7	MP1A	Y	-43.55	3
8	MP1A	My	-.022	3
9	MP1A	Mz	0	3
10	MP1A	Y	-43.55	5
11	MP1A	My	-.022	5
12	MP1A	Mz	0	5
13	MP1B	Y	-43.55	3
14	MP1B	My	.007	3
15	MP1B	Mz	-.02	3
16	MP1B	Y	-43.55	5
17	MP1B	My	.007	5
18	MP1B	Mz	-.02	5
19	MP1C	Y	-43.55	3
20	MP1C	My	.011	3
21	MP1C	Mz	.019	3
22	MP1C	Y	-43.55	5
23	MP1C	My	.011	5
24	MP1C	Mz	.019	5
25	MP3B	Y	-32.5	1
26	MP3B	My	.023	1
27	MP3B	Mz	-.009	1
28	MP3B	Y	-32.5	7
29	MP3B	My	.023	7
30	MP3B	Mz	-.009	7
31	MP3C	Y	-32.5	1
32	MP3C	My	-.008	1
33	MP3C	Mz	.024	1
34	MP3C	Y	-32.5	7
35	MP3C	My	-.008	7
36	MP3C	Mz	.024	7
37	MP3B	Y	-32.5	1
38	MP3B	My	-.012	1
39	MP3B	Mz	-.022	1
40	MP3B	Y	-32.5	7
41	MP3B	My	-.012	7
42	MP3B	Mz	-.022	7
43	MP3C	Y	-32.5	1





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
44	MP3C	Mv	.025	1
45	MP3C	Mz	.005	1
46	MP3C	Y	-32.5	7
47	MP3C	Mv	.025	7
48	MP3C	Mz	.005	7
49	MP4A	Y	-32.5	1
50	MP4A	My	-.016	1
51	MP4A	Mz	-.019	1
52	MP4A	Y	-32.5	7
53	MP4A	Mv	-.016	7
54	MP4A	Mz	-.019	7
55	MP4A	Y	-32.5	1
56	MP4A	Mv	-.016	1
57	MP4A	Mz	.019	1
58	MP4A	Y	-32.5	7
59	MP4A	Mv	-.016	7
60	MP4A	Mz	.019	7
61	MP3B	Y	-84.4	2.5
62	MP3B	My	-.014	2.5
63	MP3B	Mz	.04	2.5
64	MP3C	Y	-84.4	2.5
65	MP3C	Mv	-.021	2.5
66	MP3C	Mz	-.037	2.5
67	MP4A	Y	-84.4	2.5
68	MP4A	My	.042	2.5
69	MP4A	Mz	0	2.5
70	MP2A	Y	-70.3	2.5
71	MP2A	My	.035	2.5
72	MP2A	Mz	0	2.5
73	MP2B	Y	-70.3	2.5
74	MP2B	My	-.012	2.5
75	MP2B	Mz	.033	2.5
76	MP2C	Y	-70.3	2.5
77	MP2C	Mv	-.018	2.5
78	MP2C	Mz	-.03	2.5
79	MP3A	Y	-32	1
80	MP3A	My	.016	1
81	MP3A	Mz	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4B	Y	-17.373	2.5
2	MP4B	My	-.0005	2.5
3	MP4B	Mz	.018	2.5
4	MP4B	Y	-17.373	2.5
5	MP4B	Mv	-.011	2.5
6	MP4B	Mz	.014	2.5
7	MP1A	Y	-35.664	3
8	MP1A	My	-.018	3
9	MP1A	Mz	0	3
10	MP1A	Y	-35.664	5
11	MP1A	Mv	-.018	5
12	MP1A	Mz	0	5
13	MP1B	Y	-35.664	3
14	MP1B	My	.006	3
15	MP1B	Mz	-.017	3



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

	Member Label	Direction	Magnitude(lb.k-ft)	Location(fft.%)
16	MP1B	Y	-35.664	5
17	MP1B	My	.006	5
18	MP1B	Mz	-.017	5
19	MP1C	Y	-35.664	3
20	MP1C	My	.009	3
21	MP1C	Mz	.015	3
22	MP1C	Y	-35.664	5
23	MP1C	My	.009	5
24	MP1C	Mz	.015	5
25	MP3B	Y	-69.016	1
26	MP3B	My	.05	1
27	MP3B	Mz	-.019	1
28	MP3B	Y	-69.016	7
29	MP3B	My	.05	7
30	MP3B	Mz	-.019	7
31	MP3C	Y	-69.016	1
32	MP3C	My	-.018	1
33	MP3C	Mz	.05	1
34	MP3C	Y	-69.016	7
35	MP3C	My	-.018	7
36	MP3C	Mz	.05	7
37	MP3B	Y	-69.016	1
38	MP3B	My	-.026	1
39	MP3B	Mz	-.046	1
40	MP3B	Y	-69.016	7
41	MP3B	Mv	-.026	7
42	MP3B	Mz	-.046	7
43	MP3C	Y	-69.016	1
44	MP3C	My	.052	1
45	MP3C	Mz	.01	1
46	MP3C	Y	-69.016	7
47	MP3C	My	.052	7
48	MP3C	Mz	.01	7
49	MP4A	Y	-69.016	1
50	MP4A	My	-.035	1
51	MP4A	Mz	-.04	1
52	MP4A	Y	-69.016	7
53	MP4A	Mv	-.035	7
54	MP4A	Mz	-.04	7
55	MP4A	Y	-69.016	1
56	MP4A	My	-.035	1
57	MP4A	Mz	.04	1
58	MP4A	Y	-69.016	7
59	MP4A	My	-.035	7
60	MP4A	Mz	.04	7
61	MP3B	Y	-44.965	2.5
62	MP3B	My	-.008	2.5
63	MP3B	Mz	.021	2.5
64	MP3C	Y	-44.965	2.5
65	MP3C	Mv	-.011	2.5
66	MP3C	Mz	-.019	2.5
67	MP4A	Y	-44.965	2.5
68	MP4A	My	.022	2.5
69	MP4A	Mz	0	2.5
70	MP2A	Y	-40.438	2.5
71	MP2A	Mv	.02	2.5
72	MP2A	Mz	0	2.5





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
73	MP2B	Y	-40.438	2.5
74	MP2B	My	-.007	2.5
75	MP2B	Mz	.019	2.5
76	MP2C	Y	-40.438	2.5
77	MP2C	Mv	-.01	2.5
78	MP2C	Mz	-.018	2.5
79	MP3A	Y	-88.036	1
80	MP3A	My	.044	1
81	MP3A	Mz	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP4B	X	0	2.5
2	MP4B	Z	-43.912	2.5
3	MP4B	Mx	-.046	2.5
4	MP4B	X	0	2.5
5	MP4B	Z	-43.912	2.5
6	MP4B	Mx	-.036	2.5
7	MP1A	X	0	3
8	MP1A	Z	-89.421	3
9	MP1A	Mx	0	3
10	MP1A	X	0	5
11	MP1A	Z	-89.421	5
12	MP1A	Mx	0	5
13	MP1B	X	0	3
14	MP1B	Z	-37.654	3
15	MP1B	Mx	.018	3
16	MP1B	X	0	5
17	MP1B	Z	-37.654	5
18	MP1B	Mx	.018	5
19	MP1C	X	0	3
20	MP1C	Z	-45.452	3
21	MP1C	Mx	-.02	3
22	MP1C	X	0	5
23	MP1C	Z	-45.452	5
24	MP1C	Mx	-.02	5
25	MP3B	X	0	1
26	MP3B	Z	-158.668	1
27	MP3B	Mx	.043	1
28	MP3B	X	0	7
29	MP3B	Z	-158.668	7
30	MP3B	Mx	.043	7
31	MP3C	X	0	1
32	MP3C	Z	-162.703	1
33	MP3C	Mx	-.118	1
34	MP3C	X	0	7
35	MP3C	Z	-162.703	7
36	MP3C	Mx	-.118	7
37	MP3B	X	0	1
38	MP3B	Z	-158.668	1
39	MP3B	Mx	.106	1
40	MP3B	X	0	7
41	MP3B	Z	-158.668	7
42	MP3B	Mx	.106	7
43	MP3C	X	0	1
44	MP3C	Z	-162.703	1



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
45	MP3C	Mx	-.023	1
46	MP3C	X	0	7
47	MP3C	Z	-162.703	7
48	MP3C	Mx	-.023	7
49	MP4A	X	0	1
50	MP4A	Z	-185.458	1
51	MP4A	Mx	.108	1
52	MP4A	X	0	7
53	MP4A	Z	-185.458	7
54	MP4A	Mx	.108	7
55	MP4A	X	0	1
56	MP4A	Z	-185.458	1
57	MP4A	Mx	-.108	1
58	MP4A	X	0	7
59	MP4A	Z	-185.458	7
60	MP4A	Mx	-.108	7
61	MP3B	X	0	2.5
62	MP3B	Z	-50.17	2.5
63	MP3B	Mx	-.024	2.5
64	MP3C	X	0	2.5
65	MP3C	Z	-53.265	2.5
66	MP3C	Mx	.023	2.5
67	MP4A	X	0	2.5
68	MP4A	Z	-70.716	2.5
69	MP4A	Mx	0	2.5
70	MP2A	X	0	2.5
71	MP2A	Z	-70.716	2.5
72	MP2A	Mx	0	2.5
73	MP2B	X	0	2.5
74	MP2B	Z	-42.515	2.5
75	MP2B	Mx	-.02	2.5
76	MP2C	X	0	2.5
77	MP2C	Z	-46.764	2.5
78	MP2C	Mx	.02	2.5
79	MP3A	X	0	1
80	MP3A	Z	-144.625	1
81	MP3A	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP4B	X	21.962	2.5
2	MP4B	Z	-38.039	2.5
3	MP4B	Mx	-.041	2.5
4	MP4B	X	21.962	2.5
5	MP4B	Z	-38.039	2.5
6	MP4B	Mx	-.046	2.5
7	MP1A	X	37.382	3
8	MP1A	Z	-64.748	3
9	MP1A	Mx	-.019	3
10	MP1A	X	37.382	5
11	MP1A	Z	-64.748	5
12	MP1A	Mx	-.019	5
13	MP1B	X	16.282	3
14	MP1B	Z	-28.201	3
15	MP1B	Mx	.016	3
16	MP1B	X	16.282	5





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
17	MP1B	Z	-28.201	5
18	MP1B	Mx	.016	5
19	MP1C	X	37.382	3
20	MP1C	Z	-64.748	3
21	MP1C	Mx	-.019	3
22	MP1C	X	37.382	5
23	MP1C	Z	-64.748	5
24	MP1C	Mx	-.019	5
25	MP3B	X	78.017	1
26	MP3B	Z	-135.129	1
27	MP3B	Mx	.093	1
28	MP3B	X	78.017	7
29	MP3B	Z	-135.129	7
30	MP3B	Mx	.093	7
31	MP3C	X	88.937	1
32	MP3C	Z	-154.043	1
33	MP3C	Mx	-.134	1
34	MP3C	X	88.937	7
35	MP3C	Z	-154.043	7
36	MP3C	Mx	-.134	7
37	MP3B	X	78.017	1
38	MP3B	Z	-135.129	1
39	MP3B	Mx	.061	1
40	MP3B	X	78.017	7
41	MP3B	Z	-135.129	7
42	MP3B	Mx	.061	7
43	MP3C	X	88.937	1
44	MP3C	Z	-154.043	1
45	MP3C	Mx	.045	1
46	MP3C	X	88.937	7
47	MP3C	Z	-154.043	7
48	MP3C	Mx	.045	7
49	MP4A	X	88.937	1
50	MP4A	Z	-154.043	1
51	MP4A	Mx	.045	1
52	MP4A	X	88.937	7
53	MP4A	Z	-154.043	7
54	MP4A	Mx	.045	7
55	MP4A	X	88.937	1
56	MP4A	Z	-154.043	1
57	MP4A	Mx	-.134	1
58	MP4A	X	88.937	7
59	MP4A	Z	-154.043	7
60	MP4A	Mx	-.134	7
61	MP3B	X	24.075	2.5
62	MP3B	Z	-41.699	2.5
63	MP3B	Mx	-.024	2.5
64	MP3C	X	32.449	2.5
65	MP3C	Z	-56.204	2.5
66	MP3C	Mx	.016	2.5
67	MP4A	X	32.449	2.5
68	MP4A	Z	-56.204	2.5
69	MP4A	Mx	.016	2.5
70	MP2A	X	31.366	2.5
71	MP2A	Z	-54.327	2.5
72	MP2A	Mx	.016	2.5
73	MP2B	X	19.871	2.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
74	MP2B	Z	-34.418	2.5
75	MP2B	Mx	-.02	2.5
76	MP2C	X	31.366	2.5
77	MP2C	Z	-54.327	2.5
78	MP2C	Mx	.016	2.5
79	MP3A	X	67.978	1
80	MP3A	Z	-117.742	1
81	MP3A	Mx	.034	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4B	X	37.996	2.5
2	MP4B	Z	-21.937	2.5
3	MP4B	Mx	-.024	2.5
4	MP4B	X	37.996	2.5
5	MP4B	Z	-21.937	2.5
6	MP4B	Mx	-.043	2.5
7	MP1A	X	39.363	3
8	MP1A	Z	-22.726	3
9	MP1A	Mx	-.02	3
10	MP1A	X	39.363	5
11	MP1A	Z	-22.726	5
12	MP1A	Mx	-.02	5
13	MP1B	X	47.647	3
14	MP1B	Z	-27.509	3
15	MP1B	Mx	.021	3
16	MP1B	X	47.647	5
17	MP1B	Z	-27.509	5
18	MP1B	Mx	.021	5
19	MP1C	X	77.441	3
20	MP1C	Z	-44.711	3
21	MP1C	Mx	0	3
22	MP1C	X	77.441	5
23	MP1C	Z	-44.711	5
24	MP1C	Mx	0	5
25	MP3B	X	145.193	1
26	MP3B	Z	-83.827	1
27	MP3B	Mx	.127	1
28	MP3B	X	145.193	7
29	MP3B	Z	-83.827	7
30	MP3B	Mx	.127	7
31	MP3C	X	160.611	1
32	MP3C	Z	-92.729	1
33	MP3C	Mx	-.108	1
34	MP3C	X	160.611	7
35	MP3C	Z	-92.729	7
36	MP3C	Mx	-.108	7
37	MP3B	X	145.193	1
38	MP3B	Z	-83.827	1
39	MP3B	Mx	.001	1
40	MP3B	X	145.193	7
41	MP3B	Z	-83.827	7
42	MP3B	Mx	.001	7
43	MP3C	X	160.611	1
44	MP3C	Z	-92.729	1
45	MP3C	Mx	.108	1





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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft, %]
46	MP3C	X	160.611	7
47	MP3C	Z	-92.729	7
48	MP3C	Mx	.108	7
49	MP4A	X	140.905	1
50	MP4A	Z	-81.352	1
51	MP4A	Mx	-.023	1
52	MP4A	X	140.905	7
53	MP4A	Z	-81.352	7
54	MP4A	Mx	-.023	7
55	MP4A	X	140.905	1
56	MP4A	Z	-81.352	1
57	MP4A	Mx	-.118	1
58	MP4A	X	140.905	7
59	MP4A	Z	-81.352	7
60	MP4A	Mx	-.118	7
61	MP3B	X	49.417	2.5
62	MP3B	Z	-28.531	2.5
63	MP3B	Mx	-.022	2.5
64	MP3C	X	61.242	2.5
65	MP3C	Z	-35.358	2.5
66	MP3C	Mx	0	2.5
67	MP4A	X	46.129	2.5
68	MP4A	Z	-26.632	2.5
69	MP4A	Mx	.023	2.5
70	MP2A	X	40.499	2.5
71	MP2A	Z	-23.382	2.5
72	MP2A	Mx	.02	2.5
73	MP2B	X	45.012	2.5
74	MP2B	Z	-25.987	2.5
75	MP2B	Mx	-.02	2.5
76	MP2C	X	61.242	2.5
77	MP2C	Z	-35.358	2.5
78	MP2C	Mx	0	2.5
79	MP3A	X	102.728	1
80	MP3A	Z	-59.31	1
81	MP3A	Mx	.051	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft, %]
1	MP4B	X	43.813	2.5
2	MP4B	Z	0	2.5
3	MP4B	Mx	-.001	2.5
4	MP4B	X	43.813	2.5
5	MP4B	Z	0	2.5
6	MP4B	Mx	-.029	2.5
7	MP1A	X	30.796	3
8	MP1A	Z	0	3
9	MP1A	Mx	-.015	3
10	MP1A	X	30.796	5
11	MP1A	Z	0	5
12	MP1A	Mx	-.015	5
13	MP1B	X	82.563	3
14	MP1B	Z	0	3
15	MP1B	Mx	.014	3
16	MP1B	X	82.563	5
17	MP1B	Z	0	5





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
18	MP1B	Mx	.014	5
19	MP1C	X	74.765	3
20	MP1C	Z	0	3
21	MP1C	Mx	.019	3
22	MP1C	X	74.765	5
23	MP1C	Z	0	5
24	MP1C	Mx	.019	5
25	MP3B	X	181.909	1
26	MP3B	Z	0	1
27	MP3B	Mx	.131	1
28	MP3B	X	181.909	7
29	MP3B	Z	0	7
30	MP3B	Mx	.131	7
31	MP3C	X	177.873	1
32	MP3C	Z	0	1
33	MP3C	Mx	-.045	1
34	MP3C	X	177.873	7
35	MP3C	Z	0	7
36	MP3C	Mx	-.045	7
37	MP3B	X	181.909	1
38	MP3B	Z	0	1
39	MP3B	Mx	-.069	1
40	MP3B	X	181.909	7
41	MP3B	Z	0	7
42	MP3B	Mx	-.069	7
43	MP3C	X	177.873	1
44	MP3C	Z	0	1
45	MP3C	Mx	.134	1
46	MP3C	X	177.873	7
47	MP3C	Z	0	7
48	MP3C	Mx	.134	7
49	MP4A	X	155.119	1
50	MP4A	Z	0	1
51	MP4A	Mx	-.078	1
52	MP4A	X	155.119	7
53	MP4A	Z	0	7
54	MP4A	Mx	-.078	7
55	MP4A	X	155.119	1
56	MP4A	Z	0	1
57	MP4A	Mx	-.078	1
58	MP4A	X	155.119	7
59	MP4A	Z	0	7
60	MP4A	Mx	-.078	7
61	MP3B	X	67.994	2.5
62	MP3B	Z	0	2.5
63	MP3B	Mx	-.012	2.5
64	MP3C	X	64.899	2.5
65	MP3C	Z	0	2.5
66	MP3C	Mx	-.016	2.5
67	MP4A	X	47.448	2.5
68	MP4A	Z	0	2.5
69	MP4A	Mx	.024	2.5
70	MP2A	X	38.78	2.5
71	MP2A	Z	0	2.5
72	MP2A	Mx	.019	2.5
73	MP2B	X	66.98	2.5
74	MP2B	Z	0	2.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
75	MP2B	Mx	-.011	2.5
76	MP2C	X	62.732	2.5
77	MP2C	Z	0	2.5
78	MP2C	Mx	-.016	2.5
79	MP3A	X	109.952	1
80	MP3A	Z	0	1
81	MP3A	Mx	.055	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP4B	X	37.934	2.5
2	MP4B	Z	21.901	2.5
3	MP4B	Mx	.022	2.5
4	MP4B	X	37.934	2.5
5	MP4B	Z	21.901	2.5
6	MP4B	Mx	-.007	2.5
7	MP1A	X	39.363	3
8	MP1A	Z	22.726	3
9	MP1A	Mx	-.02	3
10	MP1A	X	39.363	5
11	MP1A	Z	22.726	5
12	MP1A	Mx	-.02	5
13	MP1B	X	75.91	3
14	MP1B	Z	43.827	3
15	MP1B	Mx	-.008	3
16	MP1B	X	75.91	5
17	MP1B	Z	43.827	5
18	MP1B	Mx	-.008	5
19	MP1C	X	39.363	3
20	MP1C	Z	22.726	3
21	MP1C	Mx	.02	3
22	MP1C	X	39.363	5
23	MP1C	Z	22.726	5
24	MP1C	Mx	.02	5
25	MP3B	X	159.819	1
26	MP3B	Z	92.272	1
27	MP3B	Mx	.09	1
28	MP3B	X	159.819	7
29	MP3B	Z	92.272	7
30	MP3B	Mx	.09	7
31	MP3C	X	140.905	1
32	MP3C	Z	81.352	1
33	MP3C	Mx	.023	1
34	MP3C	X	140.905	7
35	MP3C	Z	81.352	7
36	MP3C	Mx	.023	7
37	MP3B	X	159.819	1
38	MP3B	Z	92.272	1
39	MP3B	Mx	-.122	1
40	MP3B	X	159.819	7
41	MP3B	Z	92.272	7
42	MP3B	Mx	-.122	7
43	MP3C	X	140.905	1
44	MP3C	Z	81.352	1
45	MP3C	Mx	.118	1
46	MP3C	X	140.905	7





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
47	MP3C	Z	81.352	7
48	MP3C	Mx	.118	7
49	MP4A	X	140.905	1
50	MP4A	Z	81.352	1
51	MP4A	Mx	-.118	1
52	MP4A	X	140.905	7
53	MP4A	Z	81.352	7
54	MP4A	Mx	-.118	7
55	MP4A	X	140.905	1
56	MP4A	Z	81.352	1
57	MP4A	Mx	-.023	1
58	MP4A	X	140.905	7
59	MP4A	Z	81.352	7
60	MP4A	Mx	-.023	7
61	MP3B	X	60.634	2.5
62	MP3B	Z	35.007	2.5
63	MP3B	Mx	.006	2.5
64	MP3C	X	46.129	2.5
65	MP3C	Z	26.632	2.5
66	MP3C	Mx	-.023	2.5
67	MP4A	X	46.129	2.5
68	MP4A	Z	26.632	2.5
69	MP4A	Mx	.023	2.5
70	MP2A	X	40.499	2.5
71	MP2A	Z	23.382	2.5
72	MP2A	Mx	.02	2.5
73	MP2B	X	60.408	2.5
74	MP2B	Z	34.876	2.5
75	MP2B	Mx	.006	2.5
76	MP2C	X	40.499	2.5
77	MP2C	Z	23.382	2.5
78	MP2C	Mx	-.02	2.5
79	MP3A	X	102.728	1
80	MP3A	Z	59.31	1
81	MP3A	Mx	.051	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP4B	X	21.926	2.5
2	MP4B	Z	37.977	2.5
3	MP4B	Mx	.039	2.5
4	MP4B	X	21.926	2.5
5	MP4B	Z	37.977	2.5
6	MP4B	Mx	.017	2.5
7	MP1A	X	37.382	3
8	MP1A	Z	64.748	3
9	MP1A	Mx	-.019	3
10	MP1A	X	37.382	5
11	MP1A	Z	64.748	5
12	MP1A	Mx	-.019	5
13	MP1B	X	32.599	3
14	MP1B	Z	56.464	3
15	MP1B	Mx	-.021	3
16	MP1B	X	32.599	5
17	MP1B	Z	56.464	5
18	MP1B	Mx	-.021	5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
19	MP1C	X	15.398	3
20	MP1C	Z	26.67	3
21	MP1C	Mx	.015	3
22	MP1C	X	15.398	5
23	MP1C	Z	26.67	5
24	MP1C	Mx	.015	5
25	MP3B	X	86.461	1
26	MP3B	Z	149.755	1
27	MP3B	Mx	.022	1
28	MP3B	X	86.461	7
29	MP3B	Z	149.755	7
30	MP3B	Mx	.022	7
31	MP3C	X	77.559	1
32	MP3C	Z	134.337	1
33	MP3C	Mx	.078	1
34	MP3C	X	77.559	7
35	MP3C	Z	134.337	7
36	MP3C	Mx	.078	7
37	MP3B	X	86.461	1
38	MP3B	Z	149.755	1
39	MP3B	Mx	-.133	1
40	MP3B	X	86.461	7
41	MP3B	Z	149.755	7
42	MP3B	Mx	-.133	7
43	MP3C	X	77.559	1
44	MP3C	Z	134.337	1
45	MP3C	Mx	.078	1
46	MP3C	X	77.559	7
47	MP3C	Z	134.337	7
48	MP3C	Mx	.078	7
49	MP4A	X	88.937	1
50	MP4A	Z	154.043	1
51	MP4A	Mx	-.134	1
52	MP4A	X	88.937	7
53	MP4A	Z	154.043	7
54	MP4A	Mx	-.134	7
55	MP4A	X	88.937	1
56	MP4A	Z	154.043	1
57	MP4A	Mx	.045	1
58	MP4A	X	88.937	7
59	MP4A	Z	154.043	7
60	MP4A	Mx	.045	7
61	MP3B	X	30.551	2.5
62	MP3B	Z	52.916	2.5
63	MP3B	Mx	.02	2.5
64	MP3C	X	23.724	2.5
65	MP3C	Z	41.091	2.5
66	MP3C	Mx	-.024	2.5
67	MP4A	X	32.449	2.5
68	MP4A	Z	56.204	2.5
69	MP4A	Mx	.016	2.5
70	MP2A	X	31.366	2.5
71	MP2A	Z	54.327	2.5
72	MP2A	Mx	.016	2.5
73	MP2B	X	28.76	2.5
74	MP2B	Z	49.814	2.5
75	MP2B	Mx	.018	2.5





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
76	MP2C	X	19.39	2.5
77	MP2C	Z	33.584	2.5
78	MP2C	Mx	-.019	2.5
79	MP3A	X	67.978	1
80	MP3A	Z	117.742	1
81	MP3A	Mx	.034	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4B	X	0	2.5
2	MP4B	Z	43.912	2.5
3	MP4B	Mx	.046	2.5
4	MP4B	X	0	2.5
5	MP4B	Z	43.912	2.5
6	MP4B	Mx	.036	2.5
7	MP1A	X	0	3
8	MP1A	Z	89.421	3
9	MP1A	Mx	0	3
10	MP1A	X	0	5
11	MP1A	Z	89.421	5
12	MP1A	Mx	0	5
13	MP1B	X	0	3
14	MP1B	Z	37.654	3
15	MP1B	Mx	-.018	3
16	MP1B	X	0	5
17	MP1B	Z	37.654	5
18	MP1B	Mx	-.018	5
19	MP1C	X	0	3
20	MP1C	Z	45.452	3
21	MP1C	Mx	.02	3
22	MP1C	X	0	5
23	MP1C	Z	45.452	5
24	MP1C	Mx	.02	5
25	MP3B	X	0	1
26	MP3B	Z	158.668	1
27	MP3B	Mx	-.043	1
28	MP3B	X	0	7
29	MP3B	Z	158.668	7
30	MP3B	Mx	-.043	7
31	MP3C	X	0	1
32	MP3C	Z	162.703	1
33	MP3C	Mx	.118	1
34	MP3C	X	0	7
35	MP3C	Z	162.703	7
36	MP3C	Mx	.118	7
37	MP3B	X	0	1
38	MP3B	Z	158.668	1
39	MP3B	Mx	-.106	1
40	MP3B	X	0	7
41	MP3B	Z	158.668	7
42	MP3B	Mx	-.106	7
43	MP3C	X	0	1
44	MP3C	Z	162.703	1
45	MP3C	Mx	.023	1
46	MP3C	X	0	7
47	MP3C	Z	162.703	7





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
48	MP3C	Mx	.023	7
49	MP4A	X	0	1
50	MP4A	Z	185.458	1
51	MP4A	Mx	-.108	1
52	MP4A	X	0	7
53	MP4A	Z	185.458	7
54	MP4A	Mx	-.108	7
55	MP4A	X	0	1
56	MP4A	Z	185.458	1
57	MP4A	Mx	.108	1
58	MP4A	X	0	7
59	MP4A	Z	185.458	7
60	MP4A	Mx	.108	7
61	MP3B	X	0	2.5
62	MP3B	Z	50.17	2.5
63	MP3B	Mx	.024	2.5
64	MP3C	X	0	2.5
65	MP3C	Z	53.265	2.5
66	MP3C	Mx	-.023	2.5
67	MP4A	X	0	2.5
68	MP4A	Z	70.716	2.5
69	MP4A	Mx	0	2.5
70	MP2A	X	0	2.5
71	MP2A	Z	70.716	2.5
72	MP2A	Mx	0	2.5
73	MP2B	X	0	2.5
74	MP2B	Z	42.515	2.5
75	MP2B	Mx	.02	2.5
76	MP2C	X	0	2.5
77	MP2C	Z	46.764	2.5
78	MP2C	Mx	-.02	2.5
79	MP3A	X	0	1
80	MP3A	Z	144.625	1
81	MP3A	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4B	X	-21.962	2.5
2	MP4B	Z	38.039	2.5
3	MP4B	Mx	.041	2.5
4	MP4B	X	-21.962	2.5
5	MP4B	Z	38.039	2.5
6	MP4B	Mx	.046	2.5
7	MP1A	X	-37.382	3
8	MP1A	Z	64.748	3
9	MP1A	Mx	.019	3
10	MP1A	X	-37.382	5
11	MP1A	Z	64.748	5
12	MP1A	Mx	.019	5
13	MP1B	X	-16.282	3
14	MP1B	Z	28.201	3
15	MP1B	Mx	-.016	3
16	MP1B	X	-16.282	5
17	MP1B	Z	28.201	5
18	MP1B	Mx	-.016	5
19	MP1C	X	-37.382	3



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
20	MP1C	Z	64.748	3
21	MP1C	Mx	.019	3
22	MP1C	X	-37.382	5
23	MP1C	Z	64.748	5
24	MP1C	Mx	.019	5
25	MP3B	X	-78.017	1
26	MP3B	Z	135.129	1
27	MP3B	Mx	-.093	1
28	MP3B	X	-78.017	7
29	MP3B	Z	135.129	7
30	MP3B	Mx	-.093	7
31	MP3C	X	-88.937	1
32	MP3C	Z	154.043	1
33	MP3C	Mx	.134	1
34	MP3C	X	-88.937	7
35	MP3C	Z	154.043	7
36	MP3C	Mx	.134	7
37	MP3B	X	-78.017	1
38	MP3B	Z	135.129	1
39	MP3B	Mx	-.061	1
40	MP3B	X	-78.017	7
41	MP3B	Z	135.129	7
42	MP3B	Mx	-.061	7
43	MP3C	X	-88.937	1
44	MP3C	Z	154.043	1
45	MP3C	Mx	-.045	1
46	MP3C	X	-88.937	7
47	MP3C	Z	154.043	7
48	MP3C	Mx	-.045	7
49	MP4A	X	-88.937	1
50	MP4A	Z	154.043	1
51	MP4A	Mx	-.045	1
52	MP4A	X	-88.937	7
53	MP4A	Z	154.043	7
54	MP4A	Mx	-.045	7
55	MP4A	X	-88.937	1
56	MP4A	Z	154.043	1
57	MP4A	Mx	.134	1
58	MP4A	X	-88.937	7
59	MP4A	Z	154.043	7
60	MP4A	Mx	.134	7
61	MP3B	X	-24.075	2.5
62	MP3B	Z	41.699	2.5
63	MP3B	Mx	.024	2.5
64	MP3C	X	-32.449	2.5
65	MP3C	Z	56.204	2.5
66	MP3C	Mx	-.016	2.5
67	MP4A	X	-32.449	2.5
68	MP4A	Z	56.204	2.5
69	MP4A	Mx	-.016	2.5
70	MP2A	X	-31.366	2.5
71	MP2A	Z	54.327	2.5
72	MP2A	Mx	-.016	2.5
73	MP2B	X	-19.871	2.5
74	MP2B	Z	34.418	2.5
75	MP2B	Mx	.02	2.5
76	MP2C	X	-31.366	2.5





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
77	MP2C	Z	54.327	2.5
78	MP2C	Mx	-.016	2.5
79	MP3A	X	-67.978	1
80	MP3A	Z	117.742	1
81	MP3A	Mx	-.034	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP4B	X	-37.996	2.5
2	MP4B	Z	21.937	2.5
3	MP4B	Mx	.024	2.5
4	MP4B	X	-37.996	2.5
5	MP4B	Z	21.937	2.5
6	MP4B	Mx	.043	2.5
7	MP1A	X	-39.363	3
8	MP1A	Z	22.726	3
9	MP1A	Mx	.02	3
10	MP1A	X	-39.363	5
11	MP1A	Z	22.726	5
12	MP1A	Mx	.02	5
13	MP1B	X	-47.647	3
14	MP1B	Z	27.509	3
15	MP1B	Mx	-.021	3
16	MP1B	X	-47.647	5
17	MP1B	Z	27.509	5
18	MP1B	Mx	-.021	5
19	MP1C	X	-77.441	3
20	MP1C	Z	44.711	3
21	MP1C	Mx	0	3
22	MP1C	X	-77.441	5
23	MP1C	Z	44.711	5
24	MP1C	Mx	0	5
25	MP3B	X	-145.193	1
26	MP3B	Z	83.827	1
27	MP3B	Mx	-.127	1
28	MP3B	X	-145.193	7
29	MP3B	Z	83.827	7
30	MP3B	Mx	-.127	7
31	MP3C	X	-160.611	1
32	MP3C	Z	92.729	1
33	MP3C	Mx	.108	1
34	MP3C	X	-160.611	7
35	MP3C	Z	92.729	7
36	MP3C	Mx	.108	7
37	MP3B	X	-145.193	1
38	MP3B	Z	83.827	1
39	MP3B	Mx	-.001	1
40	MP3B	X	-145.193	7
41	MP3B	Z	83.827	7
42	MP3B	Mx	-.001	7
43	MP3C	X	-160.611	1
44	MP3C	Z	92.729	1
45	MP3C	Mx	-.108	1
46	MP3C	X	-160.611	7
47	MP3C	Z	92.729	7
48	MP3C	Mx	-.108	7





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
49	MP4A	X	-140.905	1
50	MP4A	Z	81.352	1
51	MP4A	Mx	.023	1
52	MP4A	X	-140.905	7
53	MP4A	Z	81.352	7
54	MP4A	Mx	.023	7
55	MP4A	X	-140.905	1
56	MP4A	Z	81.352	1
57	MP4A	Mx	.118	1
58	MP4A	X	-140.905	7
59	MP4A	Z	81.352	7
60	MP4A	Mx	.118	7
61	MP3B	X	-49.417	2.5
62	MP3B	Z	28.531	2.5
63	MP3B	Mx	.022	2.5
64	MP3C	X	-61.242	2.5
65	MP3C	Z	35.358	2.5
66	MP3C	Mx	0	2.5
67	MP4A	X	-46.129	2.5
68	MP4A	Z	26.632	2.5
69	MP4A	Mx	-.023	2.5
70	MP2A	X	-40.499	2.5
71	MP2A	Z	23.382	2.5
72	MP2A	Mx	-.02	2.5
73	MP2B	X	-45.012	2.5
74	MP2B	Z	25.987	2.5
75	MP2B	Mx	.02	2.5
76	MP2C	X	-61.242	2.5
77	MP2C	Z	35.358	2.5
78	MP2C	Mx	0	2.5
79	MP3A	X	-102.728	1
80	MP3A	Z	59.31	1
81	MP3A	Mx	-.051	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4B	X	-43.813	2.5
2	MP4B	Z	0	2.5
3	MP4B	Mx	.001	2.5
4	MP4B	X	-43.813	2.5
5	MP4B	Z	0	2.5
6	MP4B	Mx	.029	2.5
7	MP1A	X	-30.796	3
8	MP1A	Z	0	3
9	MP1A	Mx	.015	3
10	MP1A	X	-30.796	5
11	MP1A	Z	0	5
12	MP1A	Mx	.015	5
13	MP1B	X	-82.563	3
14	MP1B	Z	0	3
15	MP1B	Mx	-.014	3
16	MP1B	X	-82.563	5
17	MP1B	Z	0	5
18	MP1B	Mx	-.014	5
19	MP1C	X	-74.765	3
20	MP1C	Z	0	3



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
21	MP1C	Mx	-.019	3
22	MP1C	X	-74.765	5
23	MP1C	Z	0	5
24	MP1C	Mx	-.019	5
25	MP3B	X	-181.909	1
26	MP3B	Z	0	1
27	MP3B	Mx	-.131	1
28	MP3B	X	-181.909	7
29	MP3B	Z	0	7
30	MP3B	Mx	-.131	7
31	MP3C	X	-177.873	1
32	MP3C	Z	0	1
33	MP3C	Mx	.045	1
34	MP3C	X	-177.873	7
35	MP3C	Z	0	7
36	MP3C	Mx	.045	7
37	MP3B	X	-181.909	1
38	MP3B	Z	0	1
39	MP3B	Mx	.069	1
40	MP3B	X	-181.909	7
41	MP3B	Z	0	7
42	MP3B	Mx	.069	7
43	MP3C	X	-177.873	1
44	MP3C	Z	0	1
45	MP3C	Mx	-.134	1
46	MP3C	X	-177.873	7
47	MP3C	Z	0	7
48	MP3C	Mx	-.134	7
49	MP4A	X	-155.119	1
50	MP4A	Z	0	1
51	MP4A	Mx	.078	1
52	MP4A	X	-155.119	7
53	MP4A	Z	0	7
54	MP4A	Mx	.078	7
55	MP4A	X	-155.119	1
56	MP4A	Z	0	1
57	MP4A	Mx	.078	1
58	MP4A	X	-155.119	7
59	MP4A	Z	0	7
60	MP4A	Mx	.078	7
61	MP3B	X	-67.994	2.5
62	MP3B	Z	0	2.5
63	MP3B	Mx	.012	2.5
64	MP3C	X	-64.899	2.5
65	MP3C	Z	0	2.5
66	MP3C	Mx	.016	2.5
67	MP4A	X	-47.448	2.5
68	MP4A	Z	0	2.5
69	MP4A	Mx	-.024	2.5
70	MP2A	X	-38.78	2.5
71	MP2A	Z	0	2.5
72	MP2A	Mx	-.019	2.5
73	MP2B	X	-66.98	2.5
74	MP2B	Z	0	2.5
75	MP2B	Mx	.011	2.5
76	MP2C	X	-62.732	2.5
77	MP2C	Z	0	2.5





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
78	MP2C	Mx	.016	2.5
79	MP3A	X	-109.952	1
80	MP3A	Z	0	1
81	MP3A	Mx	-.055	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4B	X	-37.934	2.5
2	MP4B	Z	-21.901	2.5
3	MP4B	Mx	-.022	2.5
4	MP4B	X	-37.934	2.5
5	MP4B	Z	-21.901	2.5
6	MP4B	Mx	.007	2.5
7	MP1A	X	-39.363	3
8	MP1A	Z	-22.726	3
9	MP1A	Mx	.02	3
10	MP1A	X	-39.363	5
11	MP1A	Z	-22.726	5
12	MP1A	Mx	.02	5
13	MP1B	X	-75.91	3
14	MP1B	Z	-43.827	3
15	MP1B	Mx	.008	3
16	MP1B	X	-75.91	5
17	MP1B	Z	-43.827	5
18	MP1B	Mx	.008	5
19	MP1C	X	-39.363	3
20	MP1C	Z	-22.726	3
21	MP1C	Mx	-.02	3
22	MP1C	X	-39.363	5
23	MP1C	Z	-22.726	5
24	MP1C	Mx	-.02	5
25	MP3B	X	-159.819	1
26	MP3B	Z	-92.272	1
27	MP3B	Mx	-.09	1
28	MP3B	X	-159.819	7
29	MP3B	Z	-92.272	7
30	MP3B	Mx	-.09	7
31	MP3C	X	-140.905	1
32	MP3C	Z	-81.352	1
33	MP3C	Mx	-.023	1
34	MP3C	X	-140.905	7
35	MP3C	Z	-81.352	7
36	MP3C	Mx	-.023	7
37	MP3B	X	-159.819	1
38	MP3B	Z	-92.272	1
39	MP3B	Mx	.122	1
40	MP3B	X	-159.819	7
41	MP3B	Z	-92.272	7
42	MP3B	Mx	.122	7
43	MP3C	X	-140.905	1
44	MP3C	Z	-81.352	1
45	MP3C	Mx	-.118	1
46	MP3C	X	-140.905	7
47	MP3C	Z	-81.352	7
48	MP3C	Mx	-.118	7
49	MP4A	X	-140.905	1





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
50	MP4A	Z	-81.352	1
51	MP4A	Mx	.118	1
52	MP4A	X	-140.905	7
53	MP4A	Z	-81.352	7
54	MP4A	Mx	.118	7
55	MP4A	X	-140.905	1
56	MP4A	Z	-81.352	1
57	MP4A	Mx	.023	1
58	MP4A	X	-140.905	7
59	MP4A	Z	-81.352	7
60	MP4A	Mx	.023	7
61	MP3B	X	-60.634	2.5
62	MP3B	Z	-35.007	2.5
63	MP3B	Mx	-.006	2.5
64	MP3C	X	-46.129	2.5
65	MP3C	Z	-26.632	2.5
66	MP3C	Mx	.023	2.5
67	MP4A	X	-46.129	2.5
68	MP4A	Z	-26.632	2.5
69	MP4A	Mx	-.023	2.5
70	MP2A	X	-40.499	2.5
71	MP2A	Z	-23.382	2.5
72	MP2A	Mx	-.02	2.5
73	MP2B	X	-60.408	2.5
74	MP2B	Z	-34.876	2.5
75	MP2B	Mx	-.006	2.5
76	MP2C	X	-40.499	2.5
77	MP2C	Z	-23.382	2.5
78	MP2C	Mx	.02	2.5
79	MP3A	X	-102.728	1
80	MP3A	Z	-59.31	1
81	MP3A	Mx	-.051	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4B	X	-21.926	2.5
2	MP4B	Z	-37.977	2.5
3	MP4B	Mx	-.039	2.5
4	MP4B	X	-21.926	2.5
5	MP4B	Z	-37.977	2.5
6	MP4B	Mx	-.017	2.5
7	MP1A	X	-37.382	3
8	MP1A	Z	-64.748	3
9	MP1A	Mx	.019	3
10	MP1A	X	-37.382	5
11	MP1A	Z	-64.748	5
12	MP1A	Mx	.019	5
13	MP1B	X	-32.599	3
14	MP1B	Z	-56.464	3
15	MP1B	Mx	.021	3
16	MP1B	X	-32.599	5
17	MP1B	Z	-56.464	5
18	MP1B	Mx	.021	5
19	MP1C	X	-15.398	3
20	MP1C	Z	-26.67	3
21	MP1C	Mx	-.015	3



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
22	MP1C	X	-15.398	5
23	MP1C	Z	-26.67	5
24	MP1C	Mx	-.015	5
25	MP3B	X	-86.461	1
26	MP3B	Z	-149.755	1
27	MP3B	Mx	-.022	1
28	MP3B	X	-86.461	7
29	MP3B	Z	-149.755	7
30	MP3B	Mx	-.022	7
31	MP3C	X	-77.559	1
32	MP3C	Z	-134.337	1
33	MP3C	Mx	-.078	1
34	MP3C	X	-77.559	7
35	MP3C	Z	-134.337	7
36	MP3C	Mx	-.078	7
37	MP3B	X	-86.461	1
38	MP3B	Z	-149.755	1
39	MP3B	Mx	.133	1
40	MP3B	X	-86.461	7
41	MP3B	Z	-149.755	7
42	MP3B	Mx	.133	7
43	MP3C	X	-77.559	1
44	MP3C	Z	-134.337	1
45	MP3C	Mx	-.078	1
46	MP3C	X	-77.559	7
47	MP3C	Z	-134.337	7
48	MP3C	Mx	-.078	7
49	MP4A	X	-88.937	1
50	MP4A	Z	-154.043	1
51	MP4A	Mx	.134	1
52	MP4A	X	-88.937	7
53	MP4A	Z	-154.043	7
54	MP4A	Mx	.134	7
55	MP4A	X	-88.937	1
56	MP4A	Z	-154.043	1
57	MP4A	Mx	-.045	1
58	MP4A	X	-88.937	7
59	MP4A	Z	-154.043	7
60	MP4A	Mx	-.045	7
61	MP3B	X	-30.551	2.5
62	MP3B	Z	-52.916	2.5
63	MP3B	Mx	-.02	2.5
64	MP3C	X	-23.724	2.5
65	MP3C	Z	-41.091	2.5
66	MP3C	Mx	.024	2.5
67	MP4A	X	-32.449	2.5
68	MP4A	Z	-56.204	2.5
69	MP4A	Mx	-.016	2.5
70	MP2A	X	-31.366	2.5
71	MP2A	Z	-54.327	2.5
72	MP2A	Mx	-.016	2.5
73	MP2B	X	-28.76	2.5
74	MP2B	Z	-49.814	2.5
75	MP2B	Mx	-.018	2.5
76	MP2C	X	-19.39	2.5
77	MP2C	Z	-33.584	2.5
78	MP2C	Mx	.019	2.5





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
79	MP3A	X	-67.978	1
80	MP3A	Z	-117.742	1
81	MP3A	Mx	-.034	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP4B	X	0	2.5
2	MP4B	Z	-8.326	2.5
3	MP4B	Mx	-.009	2.5
4	MP4B	X	0	2.5
5	MP4B	Z	-8.326	2.5
6	MP4B	Mx	-.007	2.5
7	MP1A	X	0	3
8	MP1A	Z	-19.382	3
9	MP1A	Mx	0	3
10	MP1A	X	0	5
11	MP1A	Z	-19.382	5
12	MP1A	Mx	0	5
13	MP1B	X	0	3
14	MP1B	Z	-9.558	3
15	MP1B	Mx	.004	3
16	MP1B	X	0	5
17	MP1B	Z	-9.558	5
18	MP1B	Mx	.004	5
19	MP1C	X	0	3
20	MP1C	Z	-11.038	3
21	MP1C	Mx	-.005	3
22	MP1C	X	0	5
23	MP1C	Z	-11.038	5
24	MP1C	Mx	-.005	5
25	MP3B	X	0	1
26	MP3B	Z	-28.363	1
27	MP3B	Mx	.008	1
28	MP3B	X	0	7
29	MP3B	Z	-28.363	7
30	MP3B	Mx	.008	7
31	MP3C	X	0	1
32	MP3C	Z	-29.023	1
33	MP3C	Mx	-.021	1
34	MP3C	X	0	7
35	MP3C	Z	-29.023	7
36	MP3C	Mx	-.021	7
37	MP3B	X	0	1
38	MP3B	Z	-28.363	1
39	MP3B	Mx	.019	1
40	MP3B	X	0	7
41	MP3B	Z	-28.363	7
42	MP3B	Mx	.019	7
43	MP3C	X	0	1
44	MP3C	Z	-29.023	1
45	MP3C	Mx	-.004	1
46	MP3C	X	0	7
47	MP3C	Z	-29.023	7
48	MP3C	Mx	-.004	7
49	MP4A	X	0	1
50	MP4A	Z	-32.741	1





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
51	MP4A	Mx	.019	1
52	MP4A	X	0	7
53	MP4A	Z	-32.741	7
54	MP4A	Mx	.019	7
55	MP4A	X	0	1
56	MP4A	Z	-32.741	1
57	MP4A	Mx	-.019	1
58	MP4A	X	0	7
59	MP4A	Z	-32.741	7
60	MP4A	Mx	-.019	7
61	MP3B	X	0	2.5
62	MP3B	Z	-11.946	2.5
63	MP3B	Mx	-.006	2.5
64	MP3C	X	0	2.5
65	MP3C	Z	-12.607	2.5
66	MP3C	Mx	.005	2.5
67	MP4A	X	0	2.5
68	MP4A	Z	-16.337	2.5
69	MP4A	Mx	0	2.5
70	MP2A	X	0	2.5
71	MP2A	Z	-16.337	2.5
72	MP2A	Mx	0	2.5
73	MP2B	X	0	2.5
74	MP2B	Z	-10.277	2.5
75	MP2B	Mx	-.005	2.5
76	MP2C	X	0	2.5
77	MP2C	Z	-11.19	2.5
78	MP2C	Mx	.005	2.5
79	MP3A	X	0	1
80	MP3A	Z	-33.571	1
81	MP3A	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4B	X	4.406	2.5
2	MP4B	Z	-7.632	2.5
3	MP4B	Mx	-.008	2.5
4	MP4B	X	4.406	2.5
5	MP4B	Z	-7.632	2.5
6	MP4B	Mx	-.009	2.5
7	MP1A	X	8.3	3
8	MP1A	Z	-14.377	3
9	MP1A	Mx	-.004	3
10	MP1A	X	8.3	5
11	MP1A	Z	-14.377	5
12	MP1A	Mx	-.004	5
13	MP1B	X	4.296	3
14	MP1B	Z	-7.441	3
15	MP1B	Mx	.004	3
16	MP1B	X	4.296	5
17	MP1B	Z	-7.441	5
18	MP1B	Mx	.004	5
19	MP1C	X	8.3	3
20	MP1C	Z	-14.377	3
21	MP1C	Mx	-.004	3
22	MP1C	X	8.3	5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
23	MP1C	Z	-14.377	5
24	MP1C	Mx	-.004	5
25	MP3B	X	13.966	1
26	MP3B	Z	-24.19	1
27	MP3B	Mx	.017	1
28	MP3B	X	13.966	7
29	MP3B	Z	-24.19	7
30	MP3B	Mx	.017	7
31	MP3C	X	15.751	1
32	MP3C	Z	-27.281	1
33	MP3C	Mx	-.024	1
34	MP3C	X	15.751	7
35	MP3C	Z	-27.281	7
36	MP3C	Mx	-.024	7
37	MP3B	X	13.966	1
38	MP3B	Z	-24.19	1
39	MP3B	Mx	.011	1
40	MP3B	X	13.966	7
41	MP3B	Z	-24.19	7
42	MP3B	Mx	.011	7
43	MP3C	X	15.751	1
44	MP3C	Z	-27.281	1
45	MP3C	Mx	.008	1
46	MP3C	X	15.751	7
47	MP3C	Z	-27.281	7
48	MP3C	Mx	.008	7
49	MP4A	X	15.751	1
50	MP4A	Z	-27.281	1
51	MP4A	Mx	.008	1
52	MP4A	X	15.751	7
53	MP4A	Z	-27.281	7
54	MP4A	Mx	.008	7
55	MP4A	X	15.751	1
56	MP4A	Z	-27.281	1
57	MP4A	Mx	-.024	1
58	MP4A	X	15.751	7
59	MP4A	Z	-27.281	7
60	MP4A	Mx	-.024	7
61	MP3B	X	5.757	2.5
62	MP3B	Z	-9.972	2.5
63	MP3B	Mx	-.006	2.5
64	MP3C	X	7.547	2.5
65	MP3C	Z	-13.071	2.5
66	MP3C	Mx	.004	2.5
67	MP4A	X	7.547	2.5
68	MP4A	Z	-13.071	2.5
69	MP4A	Mx	.004	2.5
70	MP2A	X	7.311	2.5
71	MP2A	Z	-12.662	2.5
72	MP2A	Mx	.004	2.5
73	MP2B	X	4.841	2.5
74	MP2B	Z	-8.385	2.5
75	MP2B	Mx	-.005	2.5
76	MP2C	X	7.311	2.5
77	MP2C	Z	-12.662	2.5
78	MP2C	Mx	.004	2.5
79	MP3A	X	15.871	1





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
80	MP3A	Z	-27.489	1
81	MP3A	Mx	.008	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP4B	X	5.775	2.5
2	MP4B	Z	-3.334	2.5
3	MP4B	Mx	-.004	2.5
4	MP4B	X	5.775	2.5
5	MP4B	Z	-3.334	2.5
6	MP4B	Mx	-.007	2.5
7	MP1A	X	9.559	3
8	MP1A	Z	-5.519	3
9	MP1A	Mx	-.005	3
10	MP1A	X	9.559	5
11	MP1A	Z	-5.519	5
12	MP1A	Mx	-.005	5
13	MP1B	X	11.132	3
14	MP1B	Z	-6.427	3
15	MP1B	Mx	.005	3
16	MP1B	X	11.132	5
17	MP1B	Z	-6.427	5
18	MP1B	Mx	.005	5
19	MP1C	X	16.785	3
20	MP1C	Z	-9.691	3
21	MP1C	Mx	0	3
22	MP1C	X	16.785	5
23	MP1C	Z	-9.691	5
24	MP1C	Mx	0	5
25	MP3B	X	25.835	1
26	MP3B	Z	-14.916	1
27	MP3B	Mx	.023	1
28	MP3B	X	25.835	7
29	MP3B	Z	-14.916	7
30	MP3B	Mx	.023	7
31	MP3C	X	28.355	1
32	MP3C	Z	-16.37	1
33	MP3C	Mx	-.019	1
34	MP3C	X	28.355	7
35	MP3C	Z	-16.37	7
36	MP3C	Mx	-.019	7
37	MP3B	X	25.835	1
38	MP3B	Z	-14.916	1
39	MP3B	Mx	.000241	1
40	MP3B	X	25.835	7
41	MP3B	Z	-14.916	7
42	MP3B	Mx	.000241	7
43	MP3C	X	28.355	1
44	MP3C	Z	-16.37	1
45	MP3C	Mx	.019	1
46	MP3C	X	28.355	7
47	MP3C	Z	-16.37	7
48	MP3C	Mx	.019	7
49	MP4A	X	25.134	1
50	MP4A	Z	-14.511	1
51	MP4A	Mx	-.004	1





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
52	MP4A	X	25.134	7
53	MP4A	Z	-14.511	7
54	MP4A	Mx	-.004	7
55	MP4A	X	25.134	1
56	MP4A	Z	-14.511	1
57	MP4A	Mx	-.021	1
58	MP4A	X	25.134	7
59	MP4A	Z	-14.511	7
60	MP4A	Mx	-.021	7
61	MP3B	X	11.621	2.5
62	MP3B	Z	-6.709	2.5
63	MP3B	Mx	-.005	2.5
64	MP3C	X	14.148	2.5
65	MP3C	Z	-8.168	2.5
66	MP3C	Mx	0	2.5
67	MP4A	X	10.918	2.5
68	MP4A	Z	-6.304	2.5
69	MP4A	Mx	.005	2.5
70	MP2A	X	9.691	2.5
71	MP2A	Z	-5.595	2.5
72	MP2A	Mx	.005	2.5
73	MP2B	X	10.661	2.5
74	MP2B	Z	-6.155	2.5
75	MP2B	Mx	-.005	2.5
76	MP2C	X	14.148	2.5
77	MP2C	Z	-8.168	2.5
78	MP2C	Mx	0	2.5
79	MP3A	X	24.32	1
80	MP3A	Z	-14.041	1
81	MP3A	Mx	.012	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4B	X	4.039	2.5
2	MP4B	Z	0	2.5
3	MP4B	Mx	-.000116	2.5
4	MP4B	X	4.039	2.5
5	MP4B	Z	0	2.5
6	MP4B	Mx	-.003	2.5
7	MP1A	X	8.257	3
8	MP1A	Z	0	3
9	MP1A	Mx	-.004	3
10	MP1A	X	8.257	5
11	MP1A	Z	0	5
12	MP1A	Mx	-.004	5
13	MP1B	X	18.081	3
14	MP1B	Z	0	3
15	MP1B	Mx	.003	3
16	MP1B	X	18.081	5
17	MP1B	Z	0	5
18	MP1B	Mx	.003	5
19	MP1C	X	16.601	3
20	MP1C	Z	0	3
21	MP1C	Mx	.004	3
22	MP1C	X	16.601	5
23	MP1C	Z	0	5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
24	MP1C	Mx	.004	5
25	MP3B	X	32.161	1
26	MP3B	Z	0	1
27	MP3B	Mx	.023	1
28	MP3B	X	32.161	7
29	MP3B	Z	0	7
30	MP3B	Mx	.023	7
31	MP3C	X	31.502	1
32	MP3C	Z	0	1
33	MP3C	Mx	-.008	1
34	MP3C	X	31.502	7
35	MP3C	Z	0	7
36	MP3C	Mx	-.008	7
37	MP3B	X	32.161	1
38	MP3B	Z	0	1
39	MP3B	Mx	-.012	1
40	MP3B	X	32.161	7
41	MP3B	Z	0	7
42	MP3B	Mx	-.012	7
43	MP3C	X	31.502	1
44	MP3C	Z	0	1
45	MP3C	Mx	.024	1
46	MP3C	X	31.502	7
47	MP3C	Z	0	7
48	MP3C	Mx	.024	7
49	MP4A	X	27.783	1
50	MP4A	Z	0	1
51	MP4A	Mx	-.014	1
52	MP4A	X	27.783	7
53	MP4A	Z	0	7
54	MP4A	Mx	-.014	7
55	MP4A	X	27.783	1
56	MP4A	Z	0	1
57	MP4A	Mx	-.014	1
58	MP4A	X	27.783	7
59	MP4A	Z	0	7
60	MP4A	Mx	-.014	7
61	MP3B	X	15.755	2.5
62	MP3B	Z	0	2.5
63	MP3B	Mx	-.003	2.5
64	MP3C	X	15.093	2.5
65	MP3C	Z	0	2.5
66	MP3C	Mx	-.004	2.5
67	MP4A	X	11.364	2.5
68	MP4A	Z	0	2.5
69	MP4A	Mx	.006	2.5
70	MP2A	X	9.475	2.5
71	MP2A	Z	0	2.5
72	MP2A	Mx	.005	2.5
73	MP2B	X	15.534	2.5
74	MP2B	Z	0	2.5
75	MP2B	Mx	-.003	2.5
76	MP2C	X	14.621	2.5
77	MP2C	Z	0	2.5
78	MP2C	Mx	-.004	2.5
79	MP3A	X	26.253	1
80	MP3A	Z	0	1





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
81	MP3A	Mx	.013	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP4B	X	3.077	2.5
2	MP4B	Z	1.777	2.5
3	MP4B	Mx	.002	2.5
4	MP4B	X	3.077	2.5
5	MP4B	Z	1.777	2.5
6	MP4B	Mx	-.000549	2.5
7	MP1A	X	9.559	3
8	MP1A	Z	5.519	3
9	MP1A	Mx	-.005	3
10	MP1A	X	9.559	5
11	MP1A	Z	5.519	5
12	MP1A	Mx	-.005	5
13	MP1B	X	16.495	3
14	MP1B	Z	9.523	3
15	MP1B	Mx	-.002	3
16	MP1B	X	16.495	5
17	MP1B	Z	9.523	5
18	MP1B	Mx	-.002	5
19	MP1C	X	9.559	3
20	MP1C	Z	5.519	3
21	MP1C	Mx	.005	3
22	MP1C	X	9.559	5
23	MP1C	Z	5.519	5
24	MP1C	Mx	.005	5
25	MP3B	X	28.225	1
26	MP3B	Z	16.296	1
27	MP3B	Mx	.016	1
28	MP3B	X	28.225	7
29	MP3B	Z	16.296	7
30	MP3B	Mx	.016	7
31	MP3C	X	25.134	1
32	MP3C	Z	14.511	1
33	MP3C	Mx	.004	1
34	MP3C	X	25.134	7
35	MP3C	Z	14.511	7
36	MP3C	Mx	.004	7
37	MP3B	X	28.225	1
38	MP3B	Z	16.296	1
39	MP3B	Mx	-.022	1
40	MP3B	X	28.225	7
41	MP3B	Z	16.296	7
42	MP3B	Mx	-.022	7
43	MP3C	X	25.134	1
44	MP3C	Z	14.511	1
45	MP3C	Mx	.021	1
46	MP3C	X	25.134	7
47	MP3C	Z	14.511	7
48	MP3C	Mx	.021	7
49	MP4A	X	25.134	1
50	MP4A	Z	14.511	1
51	MP4A	Mx	-.021	1
52	MP4A	X	25.134	7





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
53	MP4A	Z	14.511	7
54	MP4A	Mx	-.021	7
55	MP4A	X	25.134	1
56	MP4A	Z	14.511	1
57	MP4A	Mx	-.004	1
58	MP4A	X	25.134	7
59	MP4A	Z	14.511	7
60	MP4A	Mx	-.004	7
61	MP3B	X	14.018	2.5
62	MP3B	Z	8.093	2.5
63	MP3B	Mx	.001	2.5
64	MP3C	X	10.918	2.5
65	MP3C	Z	6.304	2.5
66	MP3C	Mx	-.005	2.5
67	MP4A	X	10.918	2.5
68	MP4A	Z	6.304	2.5
69	MP4A	Mx	.005	2.5
70	MP2A	X	9.691	2.5
71	MP2A	Z	5.595	2.5
72	MP2A	Mx	.005	2.5
73	MP2B	X	13.969	2.5
74	MP2B	Z	8.065	2.5
75	MP2B	Mx	.001	2.5
76	MP2C	X	9.691	2.5
77	MP2C	Z	5.595	2.5
78	MP2C	Mx	-.005	2.5
79	MP3A	X	24.32	1
80	MP3A	Z	14.041	1
81	MP3A	Mx	.012	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4B	X	2.848	2.5
2	MP4B	Z	4.934	2.5
3	MP4B	Mx	.005	2.5
4	MP4B	X	2.848	2.5
5	MP4B	Z	4.934	2.5
6	MP4B	Mx	.002	2.5
7	MP1A	X	8.3	3
8	MP1A	Z	14.377	3
9	MP1A	Mx	-.004	3
10	MP1A	X	8.3	5
11	MP1A	Z	14.377	5
12	MP1A	Mx	-.004	5
13	MP1B	X	7.393	3
14	MP1B	Z	12.805	3
15	MP1B	Mx	-.005	3
16	MP1B	X	7.393	5
17	MP1B	Z	12.805	5
18	MP1B	Mx	-.005	5
19	MP1C	X	4.128	3
20	MP1C	Z	7.151	3
21	MP1C	Mx	.004	3
22	MP1C	X	4.128	5
23	MP1C	Z	7.151	5
24	MP1C	Mx	.004	5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
25	MP3B	X	15.346	1
26	MP3B	Z	26.581	1
27	MP3B	Mx	.004	1
28	MP3B	X	15.346	7
29	MP3B	Z	26.581	7
30	MP3B	Mx	.004	7
31	MP3C	X	13.892	1
32	MP3C	Z	24.061	1
33	MP3C	Mx	.014	1
34	MP3C	X	13.892	7
35	MP3C	Z	24.061	7
36	MP3C	Mx	.014	7
37	MP3B	X	15.346	1
38	MP3B	Z	26.581	1
39	MP3B	Mx	-.024	1
40	MP3B	X	15.346	7
41	MP3B	Z	26.581	7
42	MP3B	Mx	-.024	7
43	MP3C	X	13.892	1
44	MP3C	Z	24.061	1
45	MP3C	Mx	.014	1
46	MP3C	X	13.892	7
47	MP3C	Z	24.061	7
48	MP3C	Mx	.014	7
49	MP4A	X	15.751	1
50	MP4A	Z	27.281	1
51	MP4A	Mx	-.024	1
52	MP4A	X	15.751	7
53	MP4A	Z	27.281	7
54	MP4A	Mx	-.024	7
55	MP4A	X	15.751	1
56	MP4A	Z	27.281	1
57	MP4A	Mx	.008	1
58	MP4A	X	15.751	7
59	MP4A	Z	27.281	7
60	MP4A	Mx	.008	7
61	MP3B	X	7.141	2.5
62	MP3B	Z	12.369	2.5
63	MP3B	Mx	.005	2.5
64	MP3C	X	5.682	2.5
65	MP3C	Z	9.842	2.5
66	MP3C	Mx	-.006	2.5
67	MP4A	X	7.547	2.5
68	MP4A	Z	13.071	2.5
69	MP4A	Mx	.004	2.5
70	MP2A	X	7.311	2.5
71	MP2A	Z	12.662	2.5
72	MP2A	Mx	.004	2.5
73	MP2B	X	6.751	2.5
74	MP2B	Z	11.693	2.5
75	MP2B	Mx	.004	2.5
76	MP2C	X	4.737	2.5
77	MP2C	Z	8.205	2.5
78	MP2C	Mx	-.005	2.5
79	MP3A	X	15.871	1
80	MP3A	Z	27.489	1
81	MP3A	Mx	.008	1





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4B	X	0	2.5
2	MP4B	Z	8.326	2.5
3	MP4B	Mx	.009	2.5
4	MP4B	X	0	2.5
5	MP4B	Z	8.326	2.5
6	MP4B	Mx	.007	2.5
7	MP1A	X	0	3
8	MP1A	Z	19.382	3
9	MP1A	Mx	0	3
10	MP1A	X	0	5
11	MP1A	Z	19.382	5
12	MP1A	Mx	0	5
13	MP1B	X	0	3
14	MP1B	Z	9.558	3
15	MP1B	Mx	-.004	3
16	MP1B	X	0	5
17	MP1B	Z	9.558	5
18	MP1B	Mx	-.004	5
19	MP1C	X	0	3
20	MP1C	Z	11.038	3
21	MP1C	Mx	.005	3
22	MP1C	X	0	5
23	MP1C	Z	11.038	5
24	MP1C	Mx	.005	5
25	MP3B	X	0	1
26	MP3B	Z	28.363	1
27	MP3B	Mx	-.008	1
28	MP3B	X	0	7
29	MP3B	Z	28.363	7
30	MP3B	Mx	-.008	7
31	MP3C	X	0	1
32	MP3C	Z	29.023	1
33	MP3C	Mx	.021	1
34	MP3C	X	0	7
35	MP3C	Z	29.023	7
36	MP3C	Mx	.021	7
37	MP3B	X	0	1
38	MP3B	Z	28.363	1
39	MP3B	Mx	-.019	1
40	MP3B	X	0	7
41	MP3B	Z	28.363	7
42	MP3B	Mx	-.019	7
43	MP3C	X	0	1
44	MP3C	Z	29.023	1
45	MP3C	Mx	.004	1
46	MP3C	X	0	7
47	MP3C	Z	29.023	7
48	MP3C	Mx	.004	7
49	MP4A	X	0	1
50	MP4A	Z	32.741	1
51	MP4A	Mx	-.019	1
52	MP4A	X	0	7
53	MP4A	Z	32.741	7
54	MP4A	Mx	-.019	7
55	MP4A	X	0	1
56	MP4A	Z	32.741	1
57	MP4A	Mx	.019	1





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
58	MP4A	X	0	7
59	MP4A	Z	32.741	7
60	MP4A	Mx	.019	7
61	MP3B	X	0	2.5
62	MP3B	Z	11.946	2.5
63	MP3B	Mx	.006	2.5
64	MP3C	X	0	2.5
65	MP3C	Z	12.607	2.5
66	MP3C	Mx	-.005	2.5
67	MP4A	X	0	2.5
68	MP4A	Z	16.337	2.5
69	MP4A	Mx	0	2.5
70	MP2A	X	0	2.5
71	MP2A	Z	16.337	2.5
72	MP2A	Mx	0	2.5
73	MP2B	X	0	2.5
74	MP2B	Z	10.277	2.5
75	MP2B	Mx	.005	2.5
76	MP2C	X	0	2.5
77	MP2C	Z	11.19	2.5
78	MP2C	Mx	-.005	2.5
79	MP3A	X	0	1
80	MP3A	Z	33.571	1
81	MP3A	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4B	X	-4.406	2.5
2	MP4B	Z	7.632	2.5
3	MP4B	Mx	.008	2.5
4	MP4B	X	-4.406	2.5
5	MP4B	Z	7.632	2.5
6	MP4B	Mx	.009	2.5
7	MP1A	X	-8.3	3
8	MP1A	Z	14.377	3
9	MP1A	Mx	.004	3
10	MP1A	X	-8.3	5
11	MP1A	Z	14.377	5
12	MP1A	Mx	.004	5
13	MP1B	X	-4.296	3
14	MP1B	Z	7.441	3
15	MP1B	Mx	-.004	3
16	MP1B	X	-4.296	5
17	MP1B	Z	7.441	5
18	MP1B	Mx	-.004	5
19	MP1C	X	-8.3	3
20	MP1C	Z	14.377	3
21	MP1C	Mx	.004	3
22	MP1C	X	-8.3	5
23	MP1C	Z	14.377	5
24	MP1C	Mx	.004	5
25	MP3B	X	-13.966	1
26	MP3B	Z	24.19	1
27	MP3B	Mx	-.017	1
28	MP3B	X	-13.966	7
29	MP3B	Z	24.19	7



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
30	MP3B	Mx	-0.17	7
31	MP3C	X	-15.751	1
32	MP3C	Z	27.281	1
33	MP3C	Mx	.024	1
34	MP3C	X	-15.751	7
35	MP3C	Z	27.281	7
36	MP3C	Mx	.024	7
37	MP3B	X	-13.966	1
38	MP3B	Z	24.19	1
39	MP3B	Mx	-.011	1
40	MP3B	X	-13.966	7
41	MP3B	Z	24.19	7
42	MP3B	Mx	-.011	7
43	MP3C	X	-15.751	1
44	MP3C	Z	27.281	1
45	MP3C	Mx	-.008	1
46	MP3C	X	-15.751	7
47	MP3C	Z	27.281	7
48	MP3C	Mx	-.008	7
49	MP4A	X	-15.751	1
50	MP4A	Z	27.281	1
51	MP4A	Mx	-.008	1
52	MP4A	X	-15.751	7
53	MP4A	Z	27.281	7
54	MP4A	Mx	-.008	7
55	MP4A	X	-15.751	1
56	MP4A	Z	27.281	1
57	MP4A	Mx	.024	1
58	MP4A	X	-15.751	7
59	MP4A	Z	27.281	7
60	MP4A	Mx	.024	7
61	MP3B	X	-5.757	2.5
62	MP3B	Z	9.972	2.5
63	MP3B	Mx	.006	2.5
64	MP3C	X	-7.547	2.5
65	MP3C	Z	13.071	2.5
66	MP3C	Mx	-.004	2.5
67	MP4A	X	-7.547	2.5
68	MP4A	Z	13.071	2.5
69	MP4A	Mx	-.004	2.5
70	MP2A	X	-7.311	2.5
71	MP2A	Z	12.662	2.5
72	MP2A	Mx	-.004	2.5
73	MP2B	X	-4.841	2.5
74	MP2B	Z	8.385	2.5
75	MP2B	Mx	.005	2.5
76	MP2C	X	-7.311	2.5
77	MP2C	Z	12.662	2.5
78	MP2C	Mx	-.004	2.5
79	MP3A	X	-15.871	1
80	MP3A	Z	27.489	1
81	MP3A	Mx	-.008	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4B	X	-5.775	2.5





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
2	MP4B	Z	3.334	2.5
3	MP4B	Mx	.004	2.5
4	MP4B	X	-5.775	2.5
5	MP4B	Z	3.334	2.5
6	MP4B	Mx	.007	2.5
7	MP1A	X	-9.559	3
8	MP1A	Z	5.519	3
9	MP1A	Mx	.005	3
10	MP1A	X	-9.559	5
11	MP1A	Z	5.519	5
12	MP1A	Mx	.005	5
13	MP1B	X	-11.132	3
14	MP1B	Z	6.427	3
15	MP1B	Mx	-.005	3
16	MP1B	X	-11.132	5
17	MP1B	Z	6.427	5
18	MP1B	Mx	-.005	5
19	MP1C	X	-16.785	3
20	MP1C	Z	9.691	3
21	MP1C	Mx	0	3
22	MP1C	X	-16.785	5
23	MP1C	Z	9.691	5
24	MP1C	Mx	0	5
25	MP3B	X	-25.835	1
26	MP3B	Z	14.916	1
27	MP3B	Mx	-.023	1
28	MP3B	X	-25.835	7
29	MP3B	Z	14.916	7
30	MP3B	Mx	-.023	7
31	MP3C	X	-28.355	1
32	MP3C	Z	16.37	1
33	MP3C	Mx	.019	1
34	MP3C	X	-28.355	7
35	MP3C	Z	16.37	7
36	MP3C	Mx	.019	7
37	MP3B	X	-25.835	1
38	MP3B	Z	14.916	1
39	MP3B	Mx	-.000241	1
40	MP3B	X	-25.835	7
41	MP3B	Z	14.916	7
42	MP3B	Mx	-.000241	7
43	MP3C	X	-28.355	1
44	MP3C	Z	16.37	1
45	MP3C	Mx	-.019	1
46	MP3C	X	-28.355	7
47	MP3C	Z	16.37	7
48	MP3C	Mx	-.019	7
49	MP4A	X	-25.134	1
50	MP4A	Z	14.511	1
51	MP4A	Mx	.004	1
52	MP4A	X	-25.134	7
53	MP4A	Z	14.511	7
54	MP4A	Mx	.004	7
55	MP4A	X	-25.134	1
56	MP4A	Z	14.511	1
57	MP4A	Mx	.021	1
58	MP4A	X	-25.134	7





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
59	MP4A	Z	14.511	7
60	MP4A	Mx	.021	7
61	MP3B	X	-11.621	2.5
62	MP3B	Z	6.709	2.5
63	MP3B	Mx	.005	2.5
64	MP3C	X	-14.148	2.5
65	MP3C	Z	8.168	2.5
66	MP3C	Mx	0	2.5
67	MP4A	X	-10.918	2.5
68	MP4A	Z	6.304	2.5
69	MP4A	Mx	-.005	2.5
70	MP2A	X	-9.691	2.5
71	MP2A	Z	5.595	2.5
72	MP2A	Mx	-.005	2.5
73	MP2B	X	-10.661	2.5
74	MP2B	Z	6.155	2.5
75	MP2B	Mx	.005	2.5
76	MP2C	X	-14.148	2.5
77	MP2C	Z	8.168	2.5
78	MP2C	Mx	0	2.5
79	MP3A	X	-24.32	1
80	MP3A	Z	14.041	1
81	MP3A	Mx	-.012	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4B	X	-4.039	2.5
2	MP4B	Z	0	2.5
3	MP4B	Mx	.000116	2.5
4	MP4B	X	-4.039	2.5
5	MP4B	Z	0	2.5
6	MP4B	Mx	.003	2.5
7	MP1A	X	-8.257	3
8	MP1A	Z	0	3
9	MP1A	Mx	.004	3
10	MP1A	X	-8.257	5
11	MP1A	Z	0	5
12	MP1A	Mx	.004	5
13	MP1B	X	-18.081	3
14	MP1B	Z	0	3
15	MP1B	Mx	-.003	3
16	MP1B	X	-18.081	5
17	MP1B	Z	0	5
18	MP1B	Mx	-.003	5
19	MP1C	X	-16.601	3
20	MP1C	Z	0	3
21	MP1C	Mx	-.004	3
22	MP1C	X	-16.601	5
23	MP1C	Z	0	5
24	MP1C	Mx	-.004	5
25	MP3B	X	-32.161	1
26	MP3B	Z	0	1
27	MP3B	Mx	-.023	1
28	MP3B	X	-32.161	7
29	MP3B	Z	0	7
30	MP3B	Mx	-.023	7



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
31	MP3C	X	-31.502	1
32	MP3C	Z	0	1
33	MP3C	Mx	.008	1
34	MP3C	X	-31.502	7
35	MP3C	Z	0	7
36	MP3C	Mx	.008	7
37	MP3B	X	-32.161	1
38	MP3B	Z	0	1
39	MP3B	Mx	.012	1
40	MP3B	X	-32.161	7
41	MP3B	Z	0	7
42	MP3B	Mx	.012	7
43	MP3C	X	-31.502	1
44	MP3C	Z	0	1
45	MP3C	Mx	-.024	1
46	MP3C	X	-31.502	7
47	MP3C	Z	0	7
48	MP3C	Mx	-.024	7
49	MP4A	X	-27.783	1
50	MP4A	Z	0	1
51	MP4A	Mx	.014	1
52	MP4A	X	-27.783	7
53	MP4A	Z	0	7
54	MP4A	Mx	.014	7
55	MP4A	X	-27.783	1
56	MP4A	Z	0	1
57	MP4A	Mx	.014	1
58	MP4A	X	-27.783	7
59	MP4A	Z	0	7
60	MP4A	Mx	.014	7
61	MP3B	X	-15.755	2.5
62	MP3B	Z	0	2.5
63	MP3B	Mx	.003	2.5
64	MP3C	X	-15.093	2.5
65	MP3C	Z	0	2.5
66	MP3C	Mx	.004	2.5
67	MP4A	X	-11.364	2.5
68	MP4A	Z	0	2.5
69	MP4A	Mx	-.006	2.5
70	MP2A	X	-9.475	2.5
71	MP2A	Z	0	2.5
72	MP2A	Mx	-.005	2.5
73	MP2B	X	-15.534	2.5
74	MP2B	Z	0	2.5
75	MP2B	Mx	.003	2.5
76	MP2C	X	-14.621	2.5
77	MP2C	Z	0	2.5
78	MP2C	Mx	.004	2.5
79	MP3A	X	-26.253	1
80	MP3A	Z	0	1
81	MP3A	Mx	-.013	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP4B	X	-3.077	2.5
2	MP4B	Z	-1.777	2.5





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
3	MP4B	Mx	-.002	2.5
4	MP4B	X	-3.077	2.5
5	MP4B	Z	-1.777	2.5
6	MP4B	Mx	.000549	2.5
7	MP1A	X	-9.559	3
8	MP1A	Z	-5.519	3
9	MP1A	Mx	.005	3
10	MP1A	X	-9.559	5
11	MP1A	Z	-5.519	5
12	MP1A	Mx	.005	5
13	MP1B	X	-16.495	3
14	MP1B	Z	-9.523	3
15	MP1B	Mx	.002	3
16	MP1B	X	-16.495	5
17	MP1B	Z	-9.523	5
18	MP1B	Mx	.002	5
19	MP1C	X	-9.559	3
20	MP1C	Z	-5.519	3
21	MP1C	Mx	-.005	3
22	MP1C	X	-9.559	5
23	MP1C	Z	-5.519	5
24	MP1C	Mx	-.005	5
25	MP3B	X	-28.225	1
26	MP3B	Z	-16.296	1
27	MP3B	Mx	-.016	1
28	MP3B	X	-28.225	7
29	MP3B	Z	-16.296	7
30	MP3B	Mx	-.016	7
31	MP3C	X	-25.134	1
32	MP3C	Z	-14.511	1
33	MP3C	Mx	-.004	1
34	MP3C	X	-25.134	7
35	MP3C	Z	-14.511	7
36	MP3C	Mx	-.004	7
37	MP3B	X	-28.225	1
38	MP3B	Z	-16.296	1
39	MP3B	Mx	.022	1
40	MP3B	X	-28.225	7
41	MP3B	Z	-16.296	7
42	MP3B	Mx	.022	7
43	MP3C	X	-25.134	1
44	MP3C	Z	-14.511	1
45	MP3C	Mx	-.021	1
46	MP3C	X	-25.134	7
47	MP3C	Z	-14.511	7
48	MP3C	Mx	-.021	7
49	MP4A	X	-25.134	1
50	MP4A	Z	-14.511	1
51	MP4A	Mx	.021	1
52	MP4A	X	-25.134	7
53	MP4A	Z	-14.511	7
54	MP4A	Mx	.021	7
55	MP4A	X	-25.134	1
56	MP4A	Z	-14.511	1
57	MP4A	Mx	.004	1
58	MP4A	X	-25.134	7
59	MP4A	Z	-14.511	7





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
60	MP4A	Mx	.004	7
61	MP3B	X	-14.018	2.5
62	MP3B	Z	-8.093	2.5
63	MP3B	Mx	-.001	2.5
64	MP3C	X	-10.918	2.5
65	MP3C	Z	-6.304	2.5
66	MP3C	Mx	.005	2.5
67	MP4A	X	-10.918	2.5
68	MP4A	Z	-6.304	2.5
69	MP4A	Mx	-.005	2.5
70	MP2A	X	-9.691	2.5
71	MP2A	Z	-5.595	2.5
72	MP2A	Mx	-.005	2.5
73	MP2B	X	-13.969	2.5
74	MP2B	Z	-8.065	2.5
75	MP2B	Mx	-.001	2.5
76	MP2C	X	-9.691	2.5
77	MP2C	Z	-5.595	2.5
78	MP2C	Mx	.005	2.5
79	MP3A	X	-24.32	1
80	MP3A	Z	-14.041	1
81	MP3A	Mx	-.012	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4B	X	-2.848	2.5
2	MP4B	Z	-4.934	2.5
3	MP4B	Mx	-.005	2.5
4	MP4B	X	-2.848	2.5
5	MP4B	Z	-4.934	2.5
6	MP4B	Mx	-.002	2.5
7	MP1A	X	-8.3	3
8	MP1A	Z	-14.377	3
9	MP1A	Mx	.004	3
10	MP1A	X	-8.3	5
11	MP1A	Z	-14.377	5
12	MP1A	Mx	.004	5
13	MP1B	X	-7.393	3
14	MP1B	Z	-12.805	3
15	MP1B	Mx	.005	3
16	MP1B	X	-7.393	5
17	MP1B	Z	-12.805	5
18	MP1B	Mx	.005	5
19	MP1C	X	-4.128	3
20	MP1C	Z	-7.151	3
21	MP1C	Mx	-.004	3
22	MP1C	X	-4.128	5
23	MP1C	Z	-7.151	5
24	MP1C	Mx	-.004	5
25	MP3B	X	-15.346	1
26	MP3B	Z	-26.581	1
27	MP3B	Mx	-.004	1
28	MP3B	X	-15.346	7
29	MP3B	Z	-26.581	7
30	MP3B	Mx	-.004	7
31	MP3C	X	-13.892	1



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
32	MP3C	Z	-24.061	1
33	MP3C	Mx	-.014	1
34	MP3C	X	-13.892	7
35	MP3C	Z	-24.061	7
36	MP3C	Mx	-.014	7
37	MP3B	X	-15.346	1
38	MP3B	Z	-26.581	1
39	MP3B	Mx	.024	1
40	MP3B	X	-15.346	7
41	MP3B	Z	-26.581	7
42	MP3B	Mx	.024	7
43	MP3C	X	-13.892	1
44	MP3C	Z	-24.061	1
45	MP3C	Mx	-.014	1
46	MP3C	X	-13.892	7
47	MP3C	Z	-24.061	7
48	MP3C	Mx	-.014	7
49	MP4A	X	-15.751	1
50	MP4A	Z	-27.281	1
51	MP4A	Mx	.024	1
52	MP4A	X	-15.751	7
53	MP4A	Z	-27.281	7
54	MP4A	Mx	.024	7
55	MP4A	X	-15.751	1
56	MP4A	Z	-27.281	1
57	MP4A	Mx	-.008	1
58	MP4A	X	-15.751	7
59	MP4A	Z	-27.281	7
60	MP4A	Mx	-.008	7
61	MP3B	X	-7.141	2.5
62	MP3B	Z	-12.369	2.5
63	MP3B	Mx	-.005	2.5
64	MP3C	X	-5.682	2.5
65	MP3C	Z	-9.842	2.5
66	MP3C	Mx	.006	2.5
67	MP4A	X	-7.547	2.5
68	MP4A	Z	-13.071	2.5
69	MP4A	Mx	-.004	2.5
70	MP2A	X	-7.311	2.5
71	MP2A	Z	-12.662	2.5
72	MP2A	Mx	-.004	2.5
73	MP2B	X	-6.751	2.5
74	MP2B	Z	-11.693	2.5
75	MP2B	Mx	-.004	2.5
76	MP2C	X	-4.737	2.5
77	MP2C	Z	-8.205	2.5
78	MP2C	Mx	.005	2.5
79	MP3A	X	-15.871	1
80	MP3A	Z	-27.489	1
81	MP3A	Mx	-.008	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4B	X	0	2.5
2	MP4B	Z	-2.529	2.5
3	MP4B	Mx	-.003	2.5





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
4	MP4B	X	0	2.5
5	MP4B	Z	-2.529	2.5
6	MP4B	Mx	-.002	2.5
7	MP1A	X	0	3
8	MP1A	Z	-5.151	3
9	MP1A	Mx	0	3
10	MP1A	X	0	5
11	MP1A	Z	-5.151	5
12	MP1A	Mx	0	5
13	MP1B	X	0	3
14	MP1B	Z	-2.169	3
15	MP1B	Mx	.001	3
16	MP1B	X	0	5
17	MP1B	Z	-2.169	5
18	MP1B	Mx	.001	5
19	MP1C	X	0	3
20	MP1C	Z	-2.618	3
21	MP1C	Mx	-.001	3
22	MP1C	X	0	5
23	MP1C	Z	-2.618	5
24	MP1C	Mx	-.001	5
25	MP3B	X	0	1
26	MP3B	Z	-9.139	1
27	MP3B	Mx	.002	1
28	MP3B	X	0	7
29	MP3B	Z	-9.139	7
30	MP3B	Mx	.002	7
31	MP3C	X	0	1
32	MP3C	Z	-9.372	1
33	MP3C	Mx	-.007	1
34	MP3C	X	0	7
35	MP3C	Z	-9.372	7
36	MP3C	Mx	-.007	7
37	MP3B	X	0	1
38	MP3B	Z	-9.139	1
39	MP3B	Mx	.006	1
40	MP3B	X	0	7
41	MP3B	Z	-9.139	7
42	MP3B	Mx	.006	7
43	MP3C	X	0	1
44	MP3C	Z	-9.372	1
45	MP3C	Mx	-.001	1
46	MP3C	X	0	7
47	MP3C	Z	-9.372	7
48	MP3C	Mx	-.001	7
49	MP4A	X	0	1
50	MP4A	Z	-10.682	1
51	MP4A	Mx	.006	1
52	MP4A	X	0	7
53	MP4A	Z	-10.682	7
54	MP4A	Mx	.006	7
55	MP4A	X	0	1
56	MP4A	Z	-10.682	1
57	MP4A	Mx	-.006	1
58	MP4A	X	0	7
59	MP4A	Z	-10.682	7
60	MP4A	Mx	-.006	7





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
61	MP3B	X	0	2.5
62	MP3B	Z	-2.89	2.5
63	MP3B	Mx	-.001	2.5
64	MP3C	X	0	2.5
65	MP3C	Z	-3.068	2.5
66	MP3C	Mx	.001	2.5
67	MP4A	X	0	2.5
68	MP4A	Z	-4.073	2.5
69	MP4A	Mx	0	2.5
70	MP2A	X	0	2.5
71	MP2A	Z	-4.073	2.5
72	MP2A	Mx	0	2.5
73	MP2B	X	0	2.5
74	MP2B	Z	-2.449	2.5
75	MP2B	Mx	-.001	2.5
76	MP2C	X	0	2.5
77	MP2C	Z	-2.694	2.5
78	MP2C	Mx	.001	2.5
79	MP3A	X	0	1
80	MP3A	Z	-8.33	1
81	MP3A	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4B	X	1.265	2.5
2	MP4B	Z	-2.191	2.5
3	MP4B	Mx	-.002	2.5
4	MP4B	X	1.265	2.5
5	MP4B	Z	-2.191	2.5
6	MP4B	Mx	-.003	2.5
7	MP1A	X	2.153	3
8	MP1A	Z	-3.73	3
9	MP1A	Mx	-.001	3
10	MP1A	X	2.153	5
11	MP1A	Z	-3.73	5
12	MP1A	Mx	-.001	5
13	MP1B	X	.938	3
14	MP1B	Z	-1.624	3
15	MP1B	Mx	.000923	3
16	MP1B	X	.938	5
17	MP1B	Z	-1.624	5
18	MP1B	Mx	.000923	5
19	MP1C	X	2.153	3
20	MP1C	Z	-3.73	3
21	MP1C	Mx	-.001	3
22	MP1C	X	2.153	5
23	MP1C	Z	-3.73	5
24	MP1C	Mx	-.001	5
25	MP3B	X	4.494	1
26	MP3B	Z	-7.783	1
27	MP3B	Mx	.005	1
28	MP3B	X	4.494	7
29	MP3B	Z	-7.783	7
30	MP3B	Mx	.005	7
31	MP3C	X	5.123	1
32	MP3C	Z	-8.873	1



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
33	MP3C	Mx	-.008	1
34	MP3C	X	5.123	7
35	MP3C	Z	-8.873	7
36	MP3C	Mx	-.008	7
37	MP3B	X	4.494	1
38	MP3B	Z	-7.783	1
39	MP3B	Mx	.004	1
40	MP3B	X	4.494	7
41	MP3B	Z	-7.783	7
42	MP3B	Mx	.004	7
43	MP3C	X	5.123	1
44	MP3C	Z	-8.873	1
45	MP3C	Mx	.003	1
46	MP3C	X	5.123	7
47	MP3C	Z	-8.873	7
48	MP3C	Mx	.003	7
49	MP4A	X	5.123	1
50	MP4A	Z	-8.873	1
51	MP4A	Mx	.003	1
52	MP4A	X	5.123	7
53	MP4A	Z	-8.873	7
54	MP4A	Mx	.003	7
55	MP4A	X	5.123	1
56	MP4A	Z	-8.873	1
57	MP4A	Mx	-.008	1
58	MP4A	X	5.123	7
59	MP4A	Z	-8.873	7
60	MP4A	Mx	-.008	7
61	MP3B	X	1.387	2.5
62	MP3B	Z	-2.402	2.5
63	MP3B	Mx	-.001	2.5
64	MP3C	X	1.869	2.5
65	MP3C	Z	-3.237	2.5
66	MP3C	Mx	.000934	2.5
67	MP4A	X	1.869	2.5
68	MP4A	Z	-3.237	2.5
69	MP4A	Mx	.000934	2.5
70	MP2A	X	1.807	2.5
71	MP2A	Z	-3.129	2.5
72	MP2A	Mx	.000903	2.5
73	MP2B	X	1.145	2.5
74	MP2B	Z	-1.982	2.5
75	MP2B	Mx	-.001	2.5
76	MP2C	X	1.807	2.5
77	MP2C	Z	-3.129	2.5
78	MP2C	Mx	.000903	2.5
79	MP3A	X	3.916	1
80	MP3A	Z	-6.782	1
81	MP3A	Mx	.002	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4B	X	2.189	2.5
2	MP4B	Z	-1.264	2.5
3	MP4B	Mx	-.001	2.5
4	MP4B	X	2.189	2.5





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
5	MP4B	Z	-1.264	2.5
6	MP4B	Mx	-0.002	2.5
7	MP1A	X	2.267	3
8	MP1A	Z	-1.309	3
9	MP1A	Mx	-0.001	3
10	MP1A	X	2.267	5
11	MP1A	Z	-1.309	5
12	MP1A	Mx	-0.001	5
13	MP1B	X	2.744	3
14	MP1B	Z	-1.585	3
15	MP1B	Mx	.001	3
16	MP1B	X	2.744	5
17	MP1B	Z	-1.585	5
18	MP1B	Mx	.001	5
19	MP1C	X	4.461	3
20	MP1C	Z	-2.575	3
21	MP1C	Mx	0	3
22	MP1C	X	4.461	5
23	MP1C	Z	-2.575	5
24	MP1C	Mx	0	5
25	MP3B	X	8.363	1
26	MP3B	Z	-4.828	1
27	MP3B	Mx	.007	1
28	MP3B	X	8.363	7
29	MP3B	Z	-4.828	7
30	MP3B	Mx	.007	7
31	MP3C	X	9.251	1
32	MP3C	Z	-5.341	1
33	MP3C	Mx	-0.006	1
34	MP3C	X	9.251	7
35	MP3C	Z	-5.341	7
36	MP3C	Mx	-0.006	7
37	MP3B	X	8.363	1
38	MP3B	Z	-4.828	1
39	MP3B	Mx	7.8e-5	1
40	MP3B	X	8.363	7
41	MP3B	Z	-4.828	7
42	MP3B	Mx	7.8e-5	7
43	MP3C	X	9.251	1
44	MP3C	Z	-5.341	1
45	MP3C	Mx	.006	1
46	MP3C	X	9.251	7
47	MP3C	Z	-5.341	7
48	MP3C	Mx	.006	7
49	MP4A	X	8.116	1
50	MP4A	Z	-4.686	1
51	MP4A	Mx	-0.001	1
52	MP4A	X	8.116	7
53	MP4A	Z	-4.686	7
54	MP4A	Mx	-0.001	7
55	MP4A	X	8.116	1
56	MP4A	Z	-4.686	1
57	MP4A	Mx	-.007	1
58	MP4A	X	8.116	7
59	MP4A	Z	-4.686	7
60	MP4A	Mx	-.007	7
61	MP3B	X	2.846	2.5





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
62	MP3B	Z	-1.643	2.5
63	MP3B	Mx	-0.01	2.5
64	MP3C	X	3.528	2.5
65	MP3C	Z	-2.037	2.5
66	MP3C	Mx	0	2.5
67	MP4A	X	2.657	2.5
68	MP4A	Z	-1.534	2.5
69	MP4A	Mx	.001	2.5
70	MP2A	X	2.333	2.5
71	MP2A	Z	-1.347	2.5
72	MP2A	Mx	.001	2.5
73	MP2B	X	2.593	2.5
74	MP2B	Z	-1.497	2.5
75	MP2B	Mx	-0.01	2.5
76	MP2C	X	3.528	2.5
77	MP2C	Z	-2.037	2.5
78	MP2C	Mx	0	2.5
79	MP3A	X	5.917	1
80	MP3A	Z	-3.416	1
81	MP3A	Mx	.003	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP4B	X	2.524	2.5
2	MP4B	Z	0	2.5
3	MP4B	Mx	-7.3e-5	2.5
4	MP4B	X	2.524	2.5
5	MP4B	Z	0	2.5
6	MP4B	Mx	-0.002	2.5
7	MP1A	X	1.774	3
8	MP1A	Z	0	3
9	MP1A	Mx	-0.00887	3
10	MP1A	X	1.774	5
11	MP1A	Z	0	5
12	MP1A	Mx	-0.00887	5
13	MP1B	X	4.756	3
14	MP1B	Z	0	3
15	MP1B	Mx	.000813	3
16	MP1B	X	4.756	5
17	MP1B	Z	0	5
18	MP1B	Mx	.000813	5
19	MP1C	X	4.306	3
20	MP1C	Z	0	3
21	MP1C	Mx	.001	3
22	MP1C	X	4.306	5
23	MP1C	Z	0	5
24	MP1C	Mx	.001	5
25	MP3B	X	10.478	1
26	MP3B	Z	0	1
27	MP3B	Mx	.008	1
28	MP3B	X	10.478	7
29	MP3B	Z	0	7
30	MP3B	Mx	.008	7
31	MP3C	X	10.245	1
32	MP3C	Z	0	1
33	MP3C	Mx	-0.003	1



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
34	MP3C	X	10.245	7
35	MP3C	Z	0	7
36	MP3C	Mx	-.003	7
37	MP3B	X	10.478	1
38	MP3B	Z	0	1
39	MP3B	Mx	-.004	1
40	MP3B	X	10.478	7
41	MP3B	Z	0	7
42	MP3B	Mx	-.004	7
43	MP3C	X	10.245	1
44	MP3C	Z	0	1
45	MP3C	Mx	.008	1
46	MP3C	X	10.245	7
47	MP3C	Z	0	7
48	MP3C	Mx	.008	7
49	MP4A	X	8.935	1
50	MP4A	Z	0	1
51	MP4A	Mx	-.004	1
52	MP4A	X	8.935	7
53	MP4A	Z	0	7
54	MP4A	Mx	-.004	7
55	MP4A	X	8.935	1
56	MP4A	Z	0	1
57	MP4A	Mx	-.004	1
58	MP4A	X	8.935	7
59	MP4A	Z	0	7
60	MP4A	Mx	-.004	7
61	MP3B	X	3.916	2.5
62	MP3B	Z	0	2.5
63	MP3B	Mx	-.00067	2.5
64	MP3C	X	3.738	2.5
65	MP3C	Z	0	2.5
66	MP3C	Mx	-.000934	2.5
67	MP4A	X	2.733	2.5
68	MP4A	Z	0	2.5
69	MP4A	Mx	.001	2.5
70	MP2A	X	2.234	2.5
71	MP2A	Z	0	2.5
72	MP2A	Mx	.001	2.5
73	MP2B	X	3.858	2.5
74	MP2B	Z	0	2.5
75	MP2B	Mx	-.00066	2.5
76	MP2C	X	3.613	2.5
77	MP2C	Z	0	2.5
78	MP2C	Mx	-.000903	2.5
79	MP3A	X	6.333	1
80	MP3A	Z	0	1
81	MP3A	Mx	.003	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4B	X	2.185	2.5
2	MP4B	Z	1.262	2.5
3	MP4B	Mx	.001	2.5
4	MP4B	X	2.185	2.5
5	MP4B	Z	1.262	2.5





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
6	MP4B	Mx	- .00039	2.5
7	MP1A	X	2.267	3
8	MP1A	Z	1.309	3
9	MP1A	Mx	-.001	3
10	MP1A	X	2.267	5
11	MP1A	Z	1.309	5
12	MP1A	Mx	-.001	5
13	MP1B	X	4.372	3
14	MP1B	Z	2.524	3
15	MP1B	Mx	-.000438	3
16	MP1B	X	4.372	5
17	MP1B	Z	2.524	5
18	MP1B	Mx	-.000438	5
19	MP1C	X	2.267	3
20	MP1C	Z	1.309	3
21	MP1C	Mx	.001	3
22	MP1C	X	2.267	5
23	MP1C	Z	1.309	5
24	MP1C	Mx	.001	5
25	MP3B	X	9.206	1
26	MP3B	Z	5.315	1
27	MP3B	Mx	.005	1
28	MP3B	X	9.206	7
29	MP3B	Z	5.315	7
30	MP3B	Mx	.005	7
31	MP3C	X	8.116	1
32	MP3C	Z	4.686	1
33	MP3C	Mx	.001	1
34	MP3C	X	8.116	7
35	MP3C	Z	4.686	7
36	MP3C	Mx	.001	7
37	MP3B	X	9.206	1
38	MP3B	Z	5.315	1
39	MP3B	Mx	-.007	1
40	MP3B	X	9.206	7
41	MP3B	Z	5.315	7
42	MP3B	Mx	-.007	7
43	MP3C	X	8.116	1
44	MP3C	Z	4.686	1
45	MP3C	Mx	.007	1
46	MP3C	X	8.116	7
47	MP3C	Z	4.686	7
48	MP3C	Mx	.007	7
49	MP4A	X	8.116	1
50	MP4A	Z	4.686	1
51	MP4A	Mx	-.007	1
52	MP4A	X	8.116	7
53	MP4A	Z	4.686	7
54	MP4A	Mx	-.007	7
55	MP4A	X	8.116	1
56	MP4A	Z	4.686	1
57	MP4A	Mx	-.001	1
58	MP4A	X	8.116	7
59	MP4A	Z	4.686	7
60	MP4A	Mx	-.001	7
61	MP3B	X	3.493	2.5
62	MP3B	Z	2.016	2.5





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
63	MP3B	Mx	.00035	2.5
64	MP3C	X	2.657	2.5
65	MP3C	Z	1.534	2.5
66	MP3C	Mx	-.001	2.5
67	MP4A	X	2.657	2.5
68	MP4A	Z	1.534	2.5
69	MP4A	Mx	.001	2.5
70	MP2A	X	2.333	2.5
71	MP2A	Z	1.347	2.5
72	MP2A	Mx	.001	2.5
73	MP2B	X	3.479	2.5
74	MP2B	Z	2.009	2.5
75	MP2B	Mx	.000349	2.5
76	MP2C	X	2.333	2.5
77	MP2C	Z	1.347	2.5
78	MP2C	Mx	-.001	2.5
79	MP3A	X	5.917	1
80	MP3A	Z	3.416	1
81	MP3A	Mx	.003	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4B	X	1.263	2.5
2	MP4B	Z	2.187	2.5
3	MP4B	Mx	.002	2.5
4	MP4B	X	1.263	2.5
5	MP4B	Z	2.187	2.5
6	MP4B	Mx	.000978	2.5
7	MP1A	X	2.153	3
8	MP1A	Z	3.73	3
9	MP1A	Mx	-.001	3
10	MP1A	X	2.153	5
11	MP1A	Z	3.73	5
12	MP1A	Mx	-.001	5
13	MP1B	X	1.878	3
14	MP1B	Z	3.252	3
15	MP1B	Mx	-.001	3
16	MP1B	X	1.878	5
17	MP1B	Z	3.252	5
18	MP1B	Mx	-.001	5
19	MP1C	X	.887	3
20	MP1C	Z	1.536	3
21	MP1C	Mx	.000887	3
22	MP1C	X	.887	5
23	MP1C	Z	1.536	5
24	MP1C	Mx	.000887	5
25	MP3B	X	4.98	1
26	MP3B	Z	8.626	1
27	MP3B	Mx	.001	1
28	MP3B	X	4.98	7
29	MP3B	Z	8.626	7
30	MP3B	Mx	.001	7
31	MP3C	X	4.467	1
32	MP3C	Z	7.738	1
33	MP3C	Mx	.004	1
34	MP3C	X	4.467	7



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
35	MP3C	Z	7.738	7
36	MP3C	Mx	.004	7
37	MP3B	X	4.98	1
38	MP3B	Z	8.626	1
39	MP3B	Mx	-.008	1
40	MP3B	X	4.98	7
41	MP3B	Z	8.626	7
42	MP3B	Mx	-.008	7
43	MP3C	X	4.467	1
44	MP3C	Z	7.738	1
45	MP3C	Mx	.004	1
46	MP3C	X	4.467	7
47	MP3C	Z	7.738	7
48	MP3C	Mx	.004	7
49	MP4A	X	5.123	1
50	MP4A	Z	8.873	1
51	MP4A	Mx	-.008	1
52	MP4A	X	5.123	7
53	MP4A	Z	8.873	7
54	MP4A	Mx	-.008	7
55	MP4A	X	5.123	1
56	MP4A	Z	8.873	1
57	MP4A	Mx	.003	1
58	MP4A	X	5.123	7
59	MP4A	Z	8.873	7
60	MP4A	Mx	.003	7
61	MP3B	X	1.76	2.5
62	MP3B	Z	3.048	2.5
63	MP3B	Mx	.001	2.5
64	MP3C	X	1.367	2.5
65	MP3C	Z	2.367	2.5
66	MP3C	Mx	-.001	2.5
67	MP4A	X	1.869	2.5
68	MP4A	Z	3.237	2.5
69	MP4A	Mx	.000934	2.5
70	MP2A	X	1.807	2.5
71	MP2A	Z	3.129	2.5
72	MP2A	Mx	.000903	2.5
73	MP2B	X	1.657	2.5
74	MP2B	Z	2.869	2.5
75	MP2B	Mx	.001	2.5
76	MP2C	X	1.117	2.5
77	MP2C	Z	1.934	2.5
78	MP2C	Mx	-.001	2.5
79	MP3A	X	3.916	1
80	MP3A	Z	6.782	1
81	MP3A	Mx	.002	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4B	X	0	2.5
2	MP4B	Z	2.529	2.5
3	MP4B	Mx	.003	2.5
4	MP4B	X	0	2.5
5	MP4B	Z	2.529	2.5
6	MP4B	Mx	.002	2.5





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
7	MP1A	X	0	3
8	MP1A	Z	5.151	3
9	MP1A	Mx	0	3
10	MP1A	X	0	5
11	MP1A	Z	5.151	5
12	MP1A	Mx	0	5
13	MP1B	X	0	3
14	MP1B	Z	2.169	3
15	MP1B	Mx	-.001	3
16	MP1B	X	0	5
17	MP1B	Z	2.169	5
18	MP1B	Mx	-.001	5
19	MP1C	X	0	3
20	MP1C	Z	2.618	3
21	MP1C	Mx	.001	3
22	MP1C	X	0	5
23	MP1C	Z	2.618	5
24	MP1C	Mx	.001	5
25	MP3B	X	0	1
26	MP3B	Z	9.139	1
27	MP3B	Mx	-.002	1
28	MP3B	X	0	7
29	MP3B	Z	9.139	7
30	MP3B	Mx	-.002	7
31	MP3C	X	0	1
32	MP3C	Z	9.372	1
33	MP3C	Mx	.007	1
34	MP3C	X	0	7
35	MP3C	Z	9.372	7
36	MP3C	Mx	.007	7
37	MP3B	X	0	1
38	MP3B	Z	9.139	1
39	MP3B	Mx	-.006	1
40	MP3B	X	0	7
41	MP3B	Z	9.139	7
42	MP3B	Mx	-.006	7
43	MP3C	X	0	1
44	MP3C	Z	9.372	1
45	MP3C	Mx	.001	1
46	MP3C	X	0	7
47	MP3C	Z	9.372	7
48	MP3C	Mx	.001	7
49	MP4A	X	0	1
50	MP4A	Z	10.682	1
51	MP4A	Mx	-.006	1
52	MP4A	X	0	7
53	MP4A	Z	10.682	7
54	MP4A	Mx	-.006	7
55	MP4A	X	0	1
56	MP4A	Z	10.682	1
57	MP4A	Mx	.006	1
58	MP4A	X	0	7
59	MP4A	Z	10.682	7
60	MP4A	Mx	.006	7
61	MP3B	X	0	2.5
62	MP3B	Z	2.89	2.5
63	MP3B	Mx	.001	2.5





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
64	MP3C	X	0	2.5
65	MP3C	Z	3.068	2.5
66	MP3C	Mx	-.001	2.5
67	MP4A	X	0	2.5
68	MP4A	Z	4.073	2.5
69	MP4A	Mx	0	2.5
70	MP2A	X	0	2.5
71	MP2A	Z	4.073	2.5
72	MP2A	Mx	0	2.5
73	MP2B	X	0	2.5
74	MP2B	Z	2.449	2.5
75	MP2B	Mx	.001	2.5
76	MP2C	X	0	2.5
77	MP2C	Z	2.694	2.5
78	MP2C	Mx	-.001	2.5
79	MP3A	X	0	1
80	MP3A	Z	8.33	1
81	MP3A	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP4B	X	-1.265	2.5
2	MP4B	Z	2.191	2.5
3	MP4B	Mx	.002	2.5
4	MP4B	X	-1.265	2.5
5	MP4B	Z	2.191	2.5
6	MP4B	Mx	.003	2.5
7	MP1A	X	-2.153	3
8	MP1A	Z	3.73	3
9	MP1A	Mx	.001	3
10	MP1A	X	-2.153	5
11	MP1A	Z	3.73	5
12	MP1A	Mx	.001	5
13	MP1B	X	-.938	3
14	MP1B	Z	1.624	3
15	MP1B	Mx	-.000923	3
16	MP1B	X	-.938	5
17	MP1B	Z	1.624	5
18	MP1B	Mx	-.000923	5
19	MP1C	X	-2.153	3
20	MP1C	Z	3.73	3
21	MP1C	Mx	.001	3
22	MP1C	X	-2.153	5
23	MP1C	Z	3.73	5
24	MP1C	Mx	.001	5
25	MP3B	X	-4.494	1
26	MP3B	Z	7.783	1
27	MP3B	Mx	-.005	1
28	MP3B	X	-4.494	7
29	MP3B	Z	7.783	7
30	MP3B	Mx	-.005	7
31	MP3C	X	-5.123	1
32	MP3C	Z	8.873	1
33	MP3C	Mx	.008	1
34	MP3C	X	-5.123	7
35	MP3C	Z	8.873	7



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
36	MP3C	Mx	.008	7
37	MP3B	X	-4.494	1
38	MP3B	Z	7.783	1
39	MP3B	Mx	-.004	1
40	MP3B	X	-4.494	7
41	MP3B	Z	7.783	7
42	MP3B	Mx	-.004	7
43	MP3C	X	-5.123	1
44	MP3C	Z	8.873	1
45	MP3C	Mx	-.003	1
46	MP3C	X	-5.123	7
47	MP3C	Z	8.873	7
48	MP3C	Mx	-.003	7
49	MP4A	X	-5.123	1
50	MP4A	Z	8.873	1
51	MP4A	Mx	-.003	1
52	MP4A	X	-5.123	7
53	MP4A	Z	8.873	7
54	MP4A	Mx	-.003	7
55	MP4A	X	-5.123	1
56	MP4A	Z	8.873	1
57	MP4A	Mx	.008	1
58	MP4A	X	-5.123	7
59	MP4A	Z	8.873	7
60	MP4A	Mx	.008	7
61	MP3B	X	-1.387	2.5
62	MP3B	Z	2.402	2.5
63	MP3B	Mx	.001	2.5
64	MP3C	X	-1.869	2.5
65	MP3C	Z	3.237	2.5
66	MP3C	Mx	-.000934	2.5
67	MP4A	X	-1.869	2.5
68	MP4A	Z	3.237	2.5
69	MP4A	Mx	-.000934	2.5
70	MP4A	X	-1.807	2.5
71	MP2A	Z	3.129	2.5
72	MP2A	Mx	-.000903	2.5
73	MP2B	X	-1.145	2.5
74	MP2B	Z	1.982	2.5
75	MP2B	Mx	.001	2.5
76	MP2C	X	-1.807	2.5
77	MP2C	Z	3.129	2.5
78	MP2C	Mx	-.000903	2.5
79	MP3A	X	-3.916	1
80	MP3A	Z	6.782	1
81	MP3A	Mx	-.002	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4B	X	-2.189	2.5
2	MP4B	Z	1.264	2.5
3	MP4B	Mx	.001	2.5
4	MP4B	X	-2.189	2.5
5	MP4B	Z	1.264	2.5
6	MP4B	Mx	.002	2.5
7	MP1A	X	-2.267	3





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
8	MP1A	Z	1.309	3
9	MP1A	Mx	.001	3
10	MP1A	X	-2.267	5
11	MP1A	Z	1.309	5
12	MP1A	Mx	.001	5
13	MP1B	X	-2.744	3
14	MP1B	Z	1.585	3
15	MP1B	Mx	-.001	3
16	MP1B	X	-2.744	5
17	MP1B	Z	1.585	5
18	MP1B	Mx	-.001	5
19	MP1C	X	-4.461	3
20	MP1C	Z	2.575	3
21	MP1C	Mx	0	3
22	MP1C	X	-4.461	5
23	MP1C	Z	2.575	5
24	MP1C	Mx	0	5
25	MP3B	X	-8.363	1
26	MP3B	Z	4.828	1
27	MP3B	Mx	-.007	1
28	MP3B	X	-8.363	7
29	MP3B	Z	4.828	7
30	MP3B	Mx	-.007	7
31	MP3C	X	-9.251	1
32	MP3C	Z	5.341	1
33	MP3C	Mx	.006	1
34	MP3C	X	-9.251	7
35	MP3C	Z	5.341	7
36	MP3C	Mx	.006	7
37	MP3B	X	-8.363	1
38	MP3B	Z	4.828	1
39	MP3B	Mx	-7.8e-5	1
40	MP3B	X	-8.363	7
41	MP3B	Z	4.828	7
42	MP3B	Mx	-7.8e-5	7
43	MP3C	X	-9.251	1
44	MP3C	Z	5.341	1
45	MP3C	Mx	-.006	1
46	MP3C	X	-9.251	7
47	MP3C	Z	5.341	7
48	MP3C	Mx	-.006	7
49	MP4A	X	-8.116	1
50	MP4A	Z	4.686	1
51	MP4A	Mx	.001	1
52	MP4A	X	-8.116	7
53	MP4A	Z	4.686	7
54	MP4A	Mx	.001	7
55	MP4A	X	-8.116	1
56	MP4A	Z	4.686	1
57	MP4A	Mx	.007	1
58	MP4A	X	-8.116	7
59	MP4A	Z	4.686	7
60	MP4A	Mx	.007	7
61	MP3B	X	-2.846	2.5
62	MP3B	Z	1.643	2.5
63	MP3B	Mx	.001	2.5
64	MP3C	X	-3.528	2.5





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
65	MP3C	Z	2.037	2.5
66	MP3C	Mx	0	2.5
67	MP4A	X	-2.657	2.5
68	MP4A	Z	1.534	2.5
69	MP4A	Mx	-.001	2.5
70	MP2A	X	-2.333	2.5
71	MP2A	Z	1.347	2.5
72	MP2A	Mx	-.001	2.5
73	MP2B	X	-2.593	2.5
74	MP2B	Z	1.497	2.5
75	MP2B	Mx	.001	2.5
76	MP2C	X	-3.528	2.5
77	MP2C	Z	2.037	2.5
78	MP2C	Mx	0	2.5
79	MP3A	X	-5.917	1
80	MP3A	Z	3.416	1
81	MP3A	Mx	-.003	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4B	X	-2.524	2.5
2	MP4B	Z	0	2.5
3	MP4B	Mx	7.3e-5	2.5
4	MP4B	X	-2.524	2.5
5	MP4B	Z	0	2.5
6	MP4B	Mx	.002	2.5
7	MP1A	X	-1.774	3
8	MP1A	Z	0	3
9	MP1A	Mx	.000887	3
10	MP1A	X	-1.774	5
11	MP1A	Z	0	5
12	MP1A	Mx	.000887	5
13	MP1B	X	-4.756	3
14	MP1B	Z	0	3
15	MP1B	Mx	-.000813	3
16	MP1B	X	-4.756	5
17	MP1B	Z	0	5
18	MP1B	Mx	-.000813	5
19	MP1C	X	-4.306	3
20	MP1C	Z	0	3
21	MP1C	Mx	-.001	3
22	MP1C	X	-4.306	5
23	MP1C	Z	0	5
24	MP1C	Mx	-.001	5
25	MP3B	X	-10.478	1
26	MP3B	Z	0	1
27	MP3B	Mx	-.008	1
28	MP3B	X	-10.478	7
29	MP3B	Z	0	7
30	MP3B	Mx	-.008	7
31	MP3C	X	-10.245	1
32	MP3C	Z	0	1
33	MP3C	Mx	.003	1
34	MP3C	X	-10.245	7
35	MP3C	Z	0	7
36	MP3C	Mx	.003	7



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
37	MP3B	X	-10.478	1
38	MP3B	Z	0	1
39	MP3B	Mx	.004	1
40	MP3B	X	-10.478	7
41	MP3B	Z	0	7
42	MP3B	Mx	.004	7
43	MP3C	X	-10.245	1
44	MP3C	Z	0	1
45	MP3C	Mx	-.008	1
46	MP3C	X	-10.245	7
47	MP3C	Z	0	7
48	MP3C	Mx	-.008	7
49	MP4A	X	-8.935	1
50	MP4A	Z	0	1
51	MP4A	Mx	.004	1
52	MP4A	X	-8.935	7
53	MP4A	Z	0	7
54	MP4A	Mx	.004	7
55	MP4A	X	-8.935	1
56	MP4A	Z	0	1
57	MP4A	Mx	.004	1
58	MP4A	X	-8.935	7
59	MP4A	Z	0	7
60	MP4A	Mx	.004	7
61	MP3B	X	-3.916	2.5
62	MP3B	Z	0	2.5
63	MP3B	Mx	.00067	2.5
64	MP3C	X	-3.738	2.5
65	MP3C	Z	0	2.5
66	MP3C	Mx	.000934	2.5
67	MP4A	X	-2.733	2.5
68	MP4A	Z	0	2.5
69	MP4A	Mx	-.001	2.5
70	MP2A	X	-2.234	2.5
71	MP2A	Z	0	2.5
72	MP2A	Mx	-.001	2.5
73	MP2B	X	-3.858	2.5
74	MP2B	Z	0	2.5
75	MP2B	Mx	.00066	2.5
76	MP2C	X	-3.613	2.5
77	MP2C	Z	0	2.5
78	MP2C	Mx	.000903	2.5
79	MP3A	X	-6.333	1
80	MP3A	Z	0	1
81	MP3A	Mx	-.003	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4B	X	-2.185	2.5
2	MP4B	Z	-1.262	2.5
3	MP4B	Mx	-.001	2.5
4	MP4B	X	-2.185	2.5
5	MP4B	Z	-1.262	2.5
6	MP4B	Mx	.00039	2.5
7	MP1A	X	-2.267	3
8	MP1A	Z	-1.309	3





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
9	MP1A	Mx	.001	3
10	MP1A	X	-2.267	5
11	MP1A	Z	-1.309	5
12	MP1A	Mx	.001	5
13	MP1B	X	-4.372	3
14	MP1B	Z	-2.524	3
15	MP1B	Mx	.000438	3
16	MP1B	X	-4.372	5
17	MP1B	Z	-2.524	5
18	MP1B	Mx	.000438	5
19	MP1C	X	-2.267	3
20	MP1C	Z	-1.309	3
21	MP1C	Mx	-.001	3
22	MP1C	X	-2.267	5
23	MP1C	Z	-1.309	5
24	MP1C	Mx	-.001	5
25	MP3B	X	-9.206	1
26	MP3B	Z	-5.315	1
27	MP3B	Mx	-.005	1
28	MP3B	X	-9.206	7
29	MP3B	Z	-5.315	7
30	MP3B	Mx	-.005	7
31	MP3C	X	-8.116	1
32	MP3C	Z	-4.686	1
33	MP3C	Mx	-.001	1
34	MP3C	X	-8.116	7
35	MP3C	Z	-4.686	7
36	MP3C	Mx	-.001	7
37	MP3B	X	-9.206	1
38	MP3B	Z	-5.315	1
39	MP3B	Mx	.007	1
40	MP3B	X	-9.206	7
41	MP3B	Z	-5.315	7
42	MP3B	Mx	.007	7
43	MP3C	X	-8.116	1
44	MP3C	Z	-4.686	1
45	MP3C	Mx	-.007	1
46	MP3C	X	-8.116	7
47	MP3C	Z	-4.686	7
48	MP3C	Mx	-.007	7
49	MP4A	X	-8.116	1
50	MP4A	Z	-4.686	1
51	MP4A	Mx	.007	1
52	MP4A	X	-8.116	7
53	MP4A	Z	-4.686	7
54	MP4A	Mx	.007	7
55	MP4A	X	-8.116	1
56	MP4A	Z	-4.686	1
57	MP4A	Mx	.001	1
58	MP4A	X	-8.116	7
59	MP4A	Z	-4.686	7
60	MP4A	Mx	.001	7
61	MP3B	X	-3.493	2.5
62	MP3B	Z	-2.016	2.5
63	MP3B	Mx	-.00035	2.5
64	MP3C	X	-2.657	2.5
65	MP3C	Z	-1.534	2.5





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
66	MP3C	Mx	.001	2.5
67	MP4A	X	-2.657	2.5
68	MP4A	Z	-1.534	2.5
69	MP4A	Mx	-.001	2.5
70	MP2A	X	-2.333	2.5
71	MP2A	Z	-1.347	2.5
72	MP2A	Mx	-.001	2.5
73	MP2B	X	-3.479	2.5
74	MP2B	Z	-2.009	2.5
75	MP2B	Mx	-.000349	2.5
76	MP2C	X	-2.333	2.5
77	MP2C	Z	-1.347	2.5
78	MP2C	Mx	.001	2.5
79	MP3A	X	-5.917	1
80	MP3A	Z	-3.416	1
81	MP3A	Mx	-.003	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP4B	X	-1.263	2.5
2	MP4B	Z	-2.187	2.5
3	MP4B	Mx	-.002	2.5
4	MP4B	X	-1.263	2.5
5	MP4B	Z	-2.187	2.5
6	MP4B	Mx	-.000978	2.5
7	MP1A	X	-2.153	3
8	MP1A	Z	-3.73	3
9	MP1A	Mx	.001	3
10	MP1A	X	-2.153	5
11	MP1A	Z	-3.73	5
12	MP1A	Mx	.001	5
13	MP1B	X	-1.878	3
14	MP1B	Z	-3.252	3
15	MP1B	Mx	.001	3
16	MP1B	X	-1.878	5
17	MP1B	Z	-3.252	5
18	MP1B	Mx	.001	5
19	MP1C	X	-.887	3
20	MP1C	Z	-1.536	3
21	MP1C	Mx	-.000887	3
22	MP1C	X	-.887	5
23	MP1C	Z	-1.536	5
24	MP1C	Mx	-.000887	5
25	MP3B	X	-4.98	1
26	MP3B	Z	-8.626	1
27	MP3B	Mx	-.001	1
28	MP3B	X	-4.98	7
29	MP3B	Z	-8.626	7
30	MP3B	Mx	-.001	7
31	MP3C	X	-4.467	1
32	MP3C	Z	-7.738	1
33	MP3C	Mx	-.004	1
34	MP3C	X	-4.467	7
35	MP3C	Z	-7.738	7
36	MP3C	Mx	-.004	7
37	MP3B	X	-4.98	1



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
38	MP3B	Z	-8.626	1
39	MP3B	Mx	.008	1
40	MP3B	X	-4.98	7
41	MP3B	Z	-8.626	7
42	MP3B	Mx	.008	7
43	MP3C	X	-4.467	1
44	MP3C	Z	-7.738	1
45	MP3C	Mx	-.004	1
46	MP3C	X	-4.467	7
47	MP3C	Z	-7.738	7
48	MP3C	Mx	-.004	7
49	MP4A	X	-5.123	1
50	MP4A	Z	-8.873	1
51	MP4A	Mx	.008	1
52	MP4A	X	-5.123	7
53	MP4A	Z	-8.873	7
54	MP4A	Mx	.008	7
55	MP4A	X	-5.123	1
56	MP4A	Z	-8.873	1
57	MP4A	Mx	-.003	1
58	MP4A	X	-5.123	7
59	MP4A	Z	-8.873	7
60	MP4A	Mx	-.003	7
61	MP3B	X	-1.76	2.5
62	MP3B	Z	-3.048	2.5
63	MP3B	Mx	-.001	2.5
64	MP3C	X	-1.367	2.5
65	MP3C	Z	-2.367	2.5
66	MP3C	Mx	.001	2.5
67	MP4A	X	-1.869	2.5
68	MP4A	Z	-3.237	2.5
69	MP4A	Mx	-.000934	2.5
70	MP2A	X	-1.807	2.5
71	MP2A	Z	-3.129	2.5
72	MP2A	Mx	-.000903	2.5
73	MP2B	X	-1.657	2.5
74	MP2B	Z	-2.869	2.5
75	MP2B	Mx	-.001	2.5
76	MP2C	X	-1.117	2.5
77	MP2C	Z	-1.934	2.5
78	MP2C	Mx	.001	2.5
79	MP3A	X	-3.916	1
80	MP3A	Z	-6.782	1
81	MP3A	Mx	-.002	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	LM2	Y	-500	0

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	LM1	Y	-500	%100

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
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**Member Point Loads (BLC 79 : Lv1) (Continued)**

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

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

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

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP4B	Y	-.736	2.5
2	MP4B	My	-2.1e-5	2.5
3	MP4B	Mz	.000775	2.5
4	MP4B	Y	-.736	2.5
5	MP4B	Mv	-.000482	2.5
6	MP4B	Mz	.000608	2.5
7	MP1A	Y	-1.821	3
8	MP1A	My	-.00091	3
9	MP1A	Mz	0	3
10	MP1A	Y	-1.821	5
11	MP1A	Mv	-.00091	5
12	MP1A	Mz	0	5
13	MP1B	Y	-1.821	3
14	MP1B	My	.000311	3
15	MP1B	Mz	-.000856	3
16	MP1B	Y	-1.821	5
17	MP1B	Mv	.000311	5
18	MP1B	Mz	-.000856	5
19	MP1C	Y	-1.821	3
20	MP1C	My	.000455	3
21	MP1C	Mz	.000789	3
22	MP1C	Y	-1.821	5
23	MP1C	Mv	.000455	5
24	MP1C	Mz	.000789	5
25	MP3B	Y	-1.359	1
26	MP3B	My	.000977	1
27	MP3B	Mz	-.000367	1
28	MP3B	Y	-1.359	7
29	MP3B	Mv	.000977	7
30	MP3B	Mz	-.000367	7
31	MP3C	Y	-1.359	1
32	MP3C	My	-.000347	1
33	MP3C	Mz	.000985	1
34	MP3C	Y	-1.359	7
35	MP3C	Mv	-.000347	7
36	MP3C	Mz	.000985	7
37	MP3B	Y	-1.359	1
38	MP3B	My	-.000513	1
39	MP3B	Mz	-.00091	1
40	MP3B	Y	-1.359	7
41	MP3B	Mv	-.000513	7
42	MP3B	Mz	-.00091	7
43	MP3C	Y	-1.359	1
44	MP3C	Mv	.001	1
45	MP3C	Mz	.000192	1
46	MP3C	Y	-1.359	7
47	MP3C	Mv	.001	7
48	MP3C	Mz	.000192	7





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
49	MP4A	Y	-1.359	1
50	MP4A	My	-.000679	1
51	MP4A	Mz	-.000793	1
52	MP4A	Y	-1.359	7
53	MP4A	My	-.000679	7
54	MP4A	Mz	-.000793	7
55	MP4A	Y	-1.359	1
56	MP4A	My	-.000679	1
57	MP4A	Mz	.000793	1
58	MP4A	Y	-1.359	7
59	MP4A	My	-.000679	7
60	MP4A	Mz	.000793	7
61	MP3B	Y	-3.529	2.5
62	MP3B	My	-.000604	2.5
63	MP3B	Mz	.002	2.5
64	MP3C	Y	-3.529	2.5
65	MP3C	My	-.000882	2.5
66	MP3C	Mz	-.002	2.5
67	MP4A	Y	-3.529	2.5
68	MP4A	My	.002	2.5
69	MP4A	Mz	0	2.5
70	MP2A	Y	-2.939	2.5
71	MP2A	My	.001	2.5
72	MP2A	Mz	0	2.5
73	MP2B	Y	-2.939	2.5
74	MP2B	My	-.000503	2.5
75	MP2B	Mz	.001	2.5
76	MP2C	Y	-2.939	2.5
77	MP2C	My	-.000735	2.5
78	MP2C	Mz	-.001	2.5
79	MP3A	Y	-1.338	1
80	MP3A	My	.000669	1
81	MP3A	Mz	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP4B	Z	-1.84	2.5
2	MP4B	Mx	-.002	2.5
3	MP4B	Z	-1.84	2.5
4	MP4B	Mx	-.002	2.5
5	MP1A	Z	-4.552	3
6	MP1A	Mx	0	3
7	MP1A	Z	-4.552	5
8	MP1A	Mx	0	5
9	MP1B	Z	-4.552	3
10	MP1B	Mx	.002	3
11	MP1B	Z	-4.552	5
12	MP1B	Mx	.002	5
13	MP1C	Z	-4.552	3
14	MP1C	Mx	-.002	3
15	MP1C	Z	-4.552	5
16	MP1C	Mx	-.002	5
17	MP3B	Z	-3.397	1
18	MP3B	Mx	.000918	1
19	MP3B	Z	-3.397	7
20	MP3B	Mx	.000918	7



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
21	MP3C	Z	-3.397	1
22	MP3C	Mx	-.002	1
23	MP3C	Z	-3.397	7
24	MP3C	Mx	-.002	7
25	MP3B	Z	-3.397	1
26	MP3B	Mx	.002	1
27	MP3B	Z	-3.397	7
28	MP3B	Mx	.002	7
29	MP3C	Z	-3.397	1
30	MP3C	Mx	-.00048	1
31	MP3C	Z	-3.397	7
32	MP3C	Mx	-.00048	7
33	MP4A	Z	-3.397	1
34	MP4A	Mx	.002	1
35	MP4A	Z	-3.397	7
36	MP4A	Mx	.002	7
37	MP4A	Z	-3.397	1
38	MP4A	Mx	-.002	1
39	MP4A	Z	-3.397	7
40	MP4A	Mx	-.002	7
41	MP3B	Z	-8.823	2.5
42	MP3B	Mx	-.004	2.5
43	MP3C	Z	-8.823	2.5
44	MP3C	Mx	.004	2.5
45	MP4A	Z	-8.823	2.5
46	MP4A	Mx	0	2.5
47	MP2A	Z	-7.349	2.5
48	MP2A	Mx	0	2.5
49	MP2B	Z	-7.349	2.5
50	MP2B	Mx	-.003	2.5
51	MP2C	Z	-7.349	2.5
52	MP2C	Mx	.003	2.5
53	MP3A	Z	-3.345	1
54	MP3A	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP4B	X	1.84	2.5
2	MP4B	Mx	-5.3e-5	2.5
3	MP4B	X	1.84	2.5
4	MP4B	Mx	-.001	2.5
5	MP1A	X	4.552	3
6	MP1A	Mx	-.002	3
7	MP1A	X	4.552	5
8	MP1A	Mx	-.002	5
9	MP1B	X	4.552	3
10	MP1B	Mx	.000779	3
11	MP1B	X	4.552	5
12	MP1B	Mx	.000779	5
13	MP1C	X	4.552	3
14	MP1C	Mx	.001	3
15	MP1C	X	4.552	5
16	MP1C	Mx	.001	5
17	MP3B	X	3.397	1
18	MP3B	Mx	.002	1
19	MP3B	X	3.397	7





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
20	MP3B	Mx	.002	7
21	MP3C	X	3.397	1
22	MP3C	Mx	-.000867	1
23	MP3C	X	3.397	7
24	MP3C	Mx	-.000867	7
25	MP3B	X	3.397	1
26	MP3B	Mx	-.001	1
27	MP3B	X	3.397	7
28	MP3B	Mx	-.001	7
29	MP3C	X	3.397	1
30	MP3C	Mx	.003	1
31	MP3C	X	3.397	7
32	MP3C	Mx	.003	7
33	MP4A	X	3.397	1
34	MP4A	Mx	-.002	1
35	MP4A	X	3.397	7
36	MP4A	Mx	-.002	7
37	MP4A	X	3.397	1
38	MP4A	Mx	-.002	1
39	MP4A	X	3.397	7
40	MP4A	Mx	-.002	7
41	MP3B	X	8.823	2.5
42	MP3B	Mx	-.002	2.5
43	MP3C	X	8.823	2.5
44	MP3C	Mx	-.002	2.5
45	MP4A	X	8.823	2.5
46	MP4A	Mx	.004	2.5
47	MP2A	X	7.349	2.5
48	MP2A	Mx	.004	2.5
49	MP2B	X	7.349	2.5
50	MP2B	Mx	-.001	2.5
51	MP2C	X	7.349	2.5
52	MP2C	Mx	-.002	2.5
53	MP3A	X	3.345	1
54	MP3A	Mx	.002	1

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

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[kstf]
1	N47	N79A	N60	N49	Y	Two Way	-.005
2	N47	N52	N62	N49	Y	Two Way	-.005
3	N309A	N310A	N93	N62	Y	Two Way	-.005
4	N93	N90	N75	N76A	Y	Two Way	-.005
5	N78A	N94	N76A	N75	Y	Two Way	-.005
6	N94	N150	N312A	N311A	Y	Two Way	-.005
7	N150	N147	N132	N133	Y	Two Way	-.005
8	N133	N132	N135	N151	Y	Two Way	-.005
9	N151	N313	N308C	N60	Y	Two Way	-.005

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

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[kstf]
1	N47	N79A	N60	N49	Y	Two Way	-.01
2	N47	N52	N62	N49	Y	Two Way	-.01
3	N309A	N310A	N93	N62	Y	Two Way	-.01
4	N93	N90	N75	N76A	Y	Two Way	-.01
5	N78A	N94	N76A	N75	Y	Two Way	-.01





Company : Colliers Engineering & Design  
 Designer :  
 Job Number : Project No. 10209456  
 Model Name : 5000093356-VZW\_MT\_LO\_H

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

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
6	N94	N150	N312A	N311A	Y	Two Way	-.01
7	N150	N147	N132	N133	Y	Two Way	-.01
8	N133	N132	N135	N151	Y	Two Way	-.01
9	N151	N313	N308C	N60	Y	Two Way	-.01

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

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N47	N79A	N60	N49	Y	Two Way	-.000217
2	N47	N52	N62	N49	Y	Two Way	-.000217
3	N309A	N310A	N93	N62	Y	Two Way	-.000217
4	N93	N90	N75	N76A	Y	Two Way	-.000217
5	N78A	N94	N76A	N75	Y	Two Way	-.000217
6	N94	N150	N312A	N311A	Y	Two Way	-.000217
7	N150	N147	N132	N133	Y	Two Way	-.000217
8	N133	N132	N135	N151	Y	Two Way	-.000217
9	N151	N313	N308C	N60	Y	Two Way	-.000217

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

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N47	N79A	N60	N49	Z	Two Way	-.000544
2	N47	N52	N62	N49	Z	Two Way	-.000544
3	N309A	N310A	N93	N62	Z	Two Way	-.000544
4	N93	N90	N75	N76A	Z	Two Way	-.000544
5	N78A	N94	N76A	N75	Z	Two Way	-.000544
6	N94	N150	N312A	N311A	Z	Two Way	-.000544
7	N150	N147	N132	N133	Z	Two Way	-.000544
8	N133	N132	N135	N151	Z	Two Way	-.000544
9	N151	N313	N308C	N60	Z	Two Way	-.000544

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

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N47	N79A	N60	N49	X	Two Way	.000544
2	N47	N52	N62	N49	X	Two Way	.000544
3	N309A	N310A	N93	N62	X	Two Way	.000544
4	N93	N90	N75	N76A	X	Two Way	.000544
5	N78A	N94	N76A	N75	X	Two Way	.000544
6	N94	N150	N312A	N311A	X	Two Way	.000544
7	N150	N147	N132	N133	X	Two Way	.000544
8	N133	N132	N135	N151	X	Two Way	.000544
9	N151	N313	N308C	N60	X	Two Way	.000544

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

Member	Shape	Code Check	Loc[ft]	LC Shear	Loc[ft]	Dir	LC phi*Pnc	[phi*Pnt	[lb	phi*Mn y	phi*Mn z	Cb	Eqn		
1	M45A	L3X3X6	.145	.844	30	.141	2.914	z	20	67839.257	68364	2.307	5.322	1...	H2-1
2	M68	L3X3X6	.137	0	20	.118	2.914	y	22	67839.257	68364	2.307	5.322	1...	H2-1
3	M74B	L3X3X6	.327	0	24	.074	0	y	24	68029.335	68364	2.307	5.322	1...	H2-1
4	M75B	L3X3X6	.320	0	18	.086	0	z	19	68029.335	68364	2.307	5.322	1...	H2-1
5	M54	HSS4X3X4	.081	2.234	21	.052	2.234	z	20	105801.5...	120474	10.764	13.144	1...	H1-1b
6	M66	PL3/8X3	.066	0	14	.073	0	y	20	32932.944	36450	.284	2.279	1...	H1-1b
7	M74C	PL3/8X3	.075	0	16	.095	0	y	21	32932.944	36450	.284	2.279	1...	H1-1b
8	M31	PL3/8X2.375	.214	0	20	.025	0	y	20	26950.403	28856.25	.225	1.428	1...	H1-1b
9	M33	PL3/8X2.375	.224	0	19	.023	0	y	23	26950.403	28856.25	.225	1.428	1...	H1-1b
10	M34A	PL3/8X2.375	.220	0	20	.039	0	y	20	26950.403	28856.25	.225	1.428	1...	H1-1b
11	M60	PL3/8X2.375	.216	0	19	.023	0	y	21	26950.403	28856.25	.225	1.428	1...	H1-1b





Company : Colliers Engineering & Design  
 Designer :  
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**Envelope AISC 15th(360-16): LRFD Steel Code Checks (Continued)**

Member	Shape	Code Check	Loc(ft)	LC	Shear	...	Loc(ft)	Dir	LC	phi*Pnc [	phi*Pnt [lb]	phi*Mn v.	phi*Mn z.	Cb	Egn
12	M61	PL3/8X2.375	.229	0	23	.025	0	y	19	26950.403	28856.25	.225	1.428	1...	H1-1b
13	M62	PL3/8X2.375	.223	0	21	.042	0	y	22	26950.403	28856.25	.225	1.428	1...	H1-1b
14	M73	L3X3X6	.133	0	14	.134	2.914	z	24	67839.257	68364	2.307	5.322	1...	H2-1
15	M74	L3X3X6	.134	0	24	.115	2.914	y	14	67839.257	68364	2.307	5.322	1...	H2-1
16	M75	L3X3X6	.305	0	16	.070	0	y	15	68029.335	68364	2.307	5.322	1...	H2-1
17	M76	L3X3X6	.300	0	22	.081	.691	y	22	68029.335	68364	2.307	5.322	1...	H2-1
18	M77	HSS4X3X4	.085	2.234	14	.051	2.234	z	24	105801.5...	120474	10.764	13.144	1...	H1-1b
19	M78	PL3/8X3	.061	0	18	.066	0	y	13	32932.944	36450	.284	2.279	1...	H1-1b
20	M79	PL3/8X3	.075	0	20	.086	0	y	14	32932.944	36450	.284	2.279	1...	H1-1b
21	M80	PL3/8X2.375	.201	0	15	.023	0	y	13	26950.403	28856.25	.225	1.428	1...	H1-1b
22	M81	PL3/8X2.375	.210	0	23	.021	0	y	15	26950.403	28856.25	.225	1.428	1...	H1-1b
23	M82	PL3/8X2.375	.212	0	24	.037	0	y	24	26950.403	28856.25	.225	1.428	1...	H1-1b
24	M83	PL3/8X2.375	.200	0	14	.021	0	y	14	26950.403	28856.25	.225	1.428	1...	H1-1b
25	M84	PL3/8X2.375	.212	0	15	.022	0	y	23	26950.403	28856.25	.225	1.428	1...	H1-1b
26	M85	PL3/8X2.375	.211	0	14	.038	0	y	15	26950.403	28856.25	.225	1.428	1...	H1-1b
27	M122	L3X3X6	.151	0	43	.129	2.914	z	16	67839.257	68364	2.307	5.322	1...	H2-1
28	M123	L3X3X6	.198	.844	46	.125	2.914	y	18	67839.257	68364	2.307	5.322	1...	H2-1
29	M124	L3X3X6	.327	0	20	.079	0	y	19	68029.335	68364	2.307	5.322	1...	H2-1
30	M125	L3X3X6	.322	0	14	.080	0	z	14	68029.338	68364	2.307	5.322	1...	H2-1
31	M126	HSS4X3X4	.120	2.234	41	.064	2.234	z	42	105801.5...	120474	10.764	13.144	1...	H1-1b
32	M127	PL3/8X3	.060	0	40	.079	0	y	17	32932.944	36450	.284	2.279	1...	H1-1b
33	M128	PL3/8X3	.079	0	24	.086	0	y	19	32932.944	36450	.284	2.279	1...	H1-1b
34	M129	PL3/8X2.375	.217	0	19	.023	0	y	17	26950.403	28856.25	.225	1.428	1...	H1-1b
35	M130	PL3/8X2.375	.225	0	15	.025	0	y	19	26950.403	28856.25	.225	1.428	1...	H1-1b
36	M131	PL3/8X2.375	.221	0	17	.037	0	y	16	26950.403	28856.25	.225	1.428	1...	H1-1b
37	M132	PL3/8X2.375	.213	0	18	.024	0	y	18	26950.403	28856.25	.225	1.428	1...	H1-1b
38	M133	PL3/8X2.375	.229	0	19	.023	0	y	15	26950.403	28856.25	.225	1.428	1...	H1-1b
39	M134	PL3/8X2.375	.222	0	18	.046	0	y	43	26950.403	28856.25	.225	1.428	1...	H1-1b
40	LV	PIPE 2.5	.215	10.303	12	.165	1.526		42	24514.781	50715	3.596	3.596	2...	H1-1b
41	M283	PL1/2X4	.226	.512	13	.070	.485	z	12	55166.326	64800	.675	5.4	1...	H1-1b
42	M284	PL1/2X4	.050	.648	14	.003	.648	z	14	60749.121	64800	.675	5.4	1...	H1-1b
43	M285	PL1/2X4	.206	.548	6	.058	.718	y	10	59858.917	64800	.675	5.4	4...	H1-1b
44	M286	PL3/8X4	.078	1.045	14	.007	0	y	8	36054.025	48600	.38	4.05	1...	H1-1b
45	M287	PL3/8X4	.080	.667	14	.007	.667	y	4	43042.87	48600	.38	4.05	1...	H1-1b
46	M288	PL3/8X4	.100	.742	14	.015	0	y	6	41807.362	48600	.38	3.946	1...	H1-1b
47	M289	PL3/8X1	.114	1.023	13	.023	1.023	y	24	9126.835	12150	.095	.253	1...	H1-1b
48	M290	PL3/8X1	.089	.648	13	.014	.648	y	14	10832.811	12150	.095	.253	2...	H1-1b
49	M291	PL3/8X1	.075	0	13	.010	.718	y	2	10552.241	12150	.095	.253	2...	H1-1b
50	M292	PL3/8X1	.164	.495	13	.027	1.045	y	15	9013.812	12150	.095	.253	1...	H1-1b
51	M293	PL3/8X1	.130	.667	13	.017	.667	y	16	10760.866	12150	.095	.253	2...	H1-1b
52	M294	PL3/8X1	.153	.731	13	.022	.731	y	12	10499.358	12150	.095	.253	2...	H1-1b
53	M295	PL3/8X1	.146	0	20	.010	.871	y	10	9876.263	12150	.095	.253	1...	H1-1b*
54	M296	PL3/8X1	.009	0	8	.012	.065	y	16	12116.481	12150	.095	.253	2...	H1-1b
55	M297	PL3/8X1	.094	0	24	.017	1.013	y	8	9176.785	12150	.095	.253	1...	H1-1b
56	M298	PL3/8X1	.145	0	13	.008	.719	y	2	10547.603	12150	.095	.253	2...	H1-1b*
57	M299	PL3/8X1	.110	0	24	.017	0	y	8	9871.034	12150	.095	.253	2...	H1-1b
58	M300	PL3/8X1	.143	0	13	.007	.583	y	14	11071.278	12150	.095	.253	2...	H1-1b*
59	M301	PL3/8X1	.144	0	13	.021	0	y	12	10517.596	12150	.095	.253	2...	H1-1b
60	M302	PL3/8X1	.180	0	13	.008	.467	y	14	11446.625	12150	.095	.253	2...	H1-1b*
61	M303	PL3/8X1	.066	.595	12	.026	0	y	12	11028.188	12150	.095	.253	2...	H1-1b
62	M304	PL3/8X1	.035	.37	12	.004	0	y	17	11704.44	12150	.095	.253	2...	H1-1b
63	M305	PL3/8X1	.018	.487	8	.016	.487	y	8	11386.852	12150	.095	.253	2...	H1-1b
64	M306	PL3/8X1	.018	.288	8	.003	0	y	16	11878.261	12150	.095	.253	2...	H1-1b
65	M307A	PL3/8X1	.010	.397	8	.009	.397	y	8	11637.276	12150	.095	.253	1...	H1-1b
66	M308A	PL3/8X1	.018	.218	8	.003	.218	y	16	11992.545	12150	.095	.253	1...	H1-1b
67	M310A	PL3/8X1	.008	.164	8	.004	.164	y	16	11940.259	12150	.095	.253	1...	H1-1b
68	M313A	PL3/8X4	.160	0	13	.024	.958	y	10	37811.386	48600	.38	4.05	1...	H1-1b*





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

Member	Shape	Code Check	Loc[ft]	LC	Shear	...	Loc[ft]	Dir	LC	phi*Pnc	[...]	phi*Pnt [lb]	phi*Mn y...	phi*Mn z...	Cb	Eqn
69	M314A	PL3/8X4	.263	.917	24	.020	.917	v	4	38628.054		48600	.38	4.05	1...	H1-1a
70	M315A	PL3/8X1	.246	.957	13	.030	.957	y	10	9459.805		12150	.095	.253	2...	H1-1b
71	M316A	PL3/8X1	.313	.917	13	.024	.917	y	10	9657.266		12150	.095	.253	2...	H1-1a
72	M317A	PL3/8X1	.114	.958	13	.018	.958	y	10	9453.116		12150	.095	.253	2...	H1-1b
73	M318A	PL3/8X1	.173	.917	13	.021	.917	v	23	9657.266		12150	.095	.253	2...	H1-1b
74	M319A	PL3/8X1	.350	0	14	.019	0	y	12	7689.512		12150	.095	.253	2...	H1-1a
75	M320A	PL3/8X1	.260	.871	13	.019	0	y	10	9876.338		12150	.095	.253	1...	H1-1a
76	M321A	PL3/8X1	.343	1.264	13	.014	1.264	y	10	7850.075		12150	.095	.253	2...	H1-1a
77	M322A	PL3/8X1	.005	0	10	.000	.871	z	10	9876.338		12150	.095	.252	1	H1-1b
78	M323	PL1/2X4	.164	0	11	.053	.958	y	10	56267.257		64800	.675	5.4	1...	H1-1b
79	M324	PL1/2X4	.261	.917	10	.050	.917	y	10	56947.648		64800	.675	5.4	1...	H1-1b
80	M329	PL3/8X4	.004	.748	16	.005	.472	y	8	41711.636		48600	.38	4.05	1...	H1-1b
81	M330	PL1/2X4	.003	.761	16	.003	.5	y	16	59284.848		64800	.675	5.4	1...	H1-1b
82	M331	PL3/8X1	.003	.5	16	.002	.5	y	16	10373.019		12150	.095	.253	2...	H1-1b
83	M332	PL3/8X1	.005	.759	20	.005	.22	y	16	10381.786		12150	.095	.253	2...	H1-1b
84	M332A	PL1/2X4	.007	.725	16	.011	.725	y	12	59770.72		64800	.675	5.4	1...	H1-1b
85	M333	PL3/8X1	.005	.725	6	.008	.725	y	8	10524.619		12150	.095	.253	2...	H1-1b
86	M334	PL3/8X1	.006	.351	24	.007	.741	y	8	10459.008		12150	.095	.253	1...	H1-1b
87	M335	PL3/8X4	.005	.526	16	.008	.351	y	8	41835.32		48600	.38	4.05	1...	H1-1b
88	M342	PL3/8X1	.005	0	8	.006	.307	y	8	11431.753		12150	.095	.253	1...	H1-1b
89	M343	PL3/8X1	.002	.285	20	.002	.285	y	6	11529.235		12150	.095	.253	2...	H1-1b
90	M346	PIPE 1.5	.077	3.071	21	.013	5.496		14	11590.065		23593.5	1.105	1.105	1...	H1-1b
91	M347	PIPE 1.5	.083	3.071	21	.012	5.496		14	11590.027		23593.5	1.105	1.105	1...	H1-1b
92	M348	PL3/16x1.5	.074	1.667	12	.005	1.667	y	4	1861.519		9112.5	.036	.261	1	H1-1b
93	M349	PL3/16x1.5	.080	1.667	6	.005	0	y	22	1861.519		9112.5	.036	.261	1	H1-1b
94	M350	PL3/16x1.5	.085	1.667	6	.004	0	y	14	1861.519		9112.5	.036	.261	1	H1-1b
95	M351	PL3/16x1.5	.077	1.667	6	.006	1.667	y	14	1861.519		9112.5	.036	.261	1	H1-1b
96	M352	PL3/16x1.5	.076	1.667	6	.006	1.667	y	15	1861.519		9112.5	.036	.285	1...	H1-1b
97	M353	PIPE 1.5	.078	3.071	16	.014	5.496		22	11590.028		23593.5	1.105	1.105	1...	H1-1b
98	M354	PIPE 1.5	.084	3.071	17	.014	5.496		22	11589.99		23593.5	1.105	1.105	1...	H1-1b
99	M355	PL3/16x1.5	.076	1.667	8	.005	0	y	18	1861.519		9112.5	.036	.261	1	H1-1b
100	M356	PL3/16x1.5	.080	1.667	2	.006	0	y	18	1861.519		9112.5	.036	.261	1	H1-1b
101	M357	PL3/16x1.5	.085	1.667	2	.004	0	y	22	1861.519		9112.5	.036	.261	1	H1-1b
102	M358	PL3/16x1.5	.076	1.667	8	.006	1.667	y	22	1861.519		9112.5	.036	.275	1...	H1-1b
103	M359	PL3/16x1.5	.082	1.667	2	.007	1.667	y	23	1861.519		9112.5	.036	.285	1...	H1-1b
104	M360	PIPE 1.5	.084	3.071	24	.014	5.496		33	11590.08		23593.5	1.105	1.105	1...	H1-1b
105	M361	PIPE 1.5	.087	3.071	13	.015	5.496		32	11590.026		23593.5	1.105	1.105	1...	H1-1b
106	M362	PL3/16x1.5	.071	1.667	4	.006	1.667	y	7	1861.519		9112.5	.036	.285	1...	H1-1b
107	M363	PL3/16x1.5	.082	1.667	10	.005	0	y	22	1861.519		9112.5	.036	.261	1	H1-1b
108	M364	PL3/16x1.5	.083	1.667	10	.004	0	y	33	1861.519		9112.5	.036	.261	1	H1-1b
109	M365	PL3/16x1.5	.075	1.667	10	.006	1.667	y	22	1861.519		9112.5	.036	.274	1...	H1-1b
110	M366	PL3/16x1.5	.087	1.667	10	.010	1.667	y	32	1861.519		9112.5	.036	.285	1...	H1-1b
111	MP1A	PIPE 2.0	.215	4	37	.078	4		7	14916.096		32130	1.872	1.872	1...	H1-1b
112	MP2A	PIPE 2.0	.266	4	2	.043	4		7	14916.096		32130	1.872	1.872	1...	H1-1b
113	MP4A	PIPE 2.5	.375	4	1	.083	4		10	30038.461		50715	3.596	3.596	1...	H1-1b
114	MP5A	PIPE 2.0	.204	4	35	.074	.632		7	14916.096		32130	1.872	1.872	1...	H1-1b
115	M343A	PIPE 2.5	.123	7.25	8	.065	12.974		7	24514.734		50715	3.596	3.596	1...	H1-1b
116	MP1C	PIPE 2.0	.153	4	21	.059	4		3	14916.096		32130	1.872	1.872	1...	H1-1b
117	MP2C	PIPE 2.0	.254	4	10	.036	2.316		1	14916.096		32130	1.872	1.872	1...	H1-1b
118	MP3C	PIPE 2.5	.363	4	8	.084	4		6	30038.461		50715	3.596	3.596	1...	H1-1b
119	MP4C	PIPE 2.0	.126	4	20	.051	.632		3	14916.096		32130	1.872	1.872	1...	H1-1b
120	M357_1	PIPE 2.5	.092	9.158	1	.043	12.974		3	24514.734		50715	3.596	3.596	3...	H1-1b
121	MP1B	PIPE 2.0	.154	4	17	.057	4		11	14916.096		32130	1.872	1.872	1...	H1-1b
122	MP2B	PIPE 2.0	.265	4	6	.036	2.316		9	14916.096		32130	1.872	1.872	1...	H1-1b
123	MP3B	PIPE 2.5	.363	4	4	.083	4		2	30038.461		50715	3.596	3.596	1...	H1-1b
124	MP4B	PIPE 2.0	.159	4	3	.066	4		9	14916.096		32130	1.872	1.872	1...	H1-1b
125	M371	PIPE 2.5	.096	9.158	8	.048	12.974		11	24514.734		50715	3.596	3.596	3...	H1-1b





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

Member	Shape	Code Check	Loc(ft)	LC	Shear	...	Loc(ft)	Dir	LC	phi*Pnc	I...	phi*Pnt	(lb)	phi*Mn	v...	phi*Mn	z...	Cb	Egn
126	M382	L2.5x2.5x4	.255	1.239	7	.023	1.239	z	31	36673.235		38556	1.114	2.537	1...	H2-1			
127	M389	L2.5x2.5x4	.248	0	7	.047	0	z	43	36673.235		38556	1.114	2.537	1...	H2-1			
128	M396	L2.5x2.5x4	.193	1.239	11	.017	0	z	3	36673.235		38556	1.114	2.537	1...	H2-1			
129	MP3A	PIPE 2.0	.169	4.842	2	.046	1.474		10	14916.096		32130	1.872	1.872	1...	H1-1b			
130	M659	PL1/2X4	.222	.512	21	.078	.485	z	8	55166.326		64800	.675	5.4	1...	H1-1b			
131	M660	PL1/2X4	.053	.648	22	.003	0	y	12	60749.121		64800	.675	5.4	1...	H1-1b			
132	M661	PL1/2X4	.225	.548	1	.063	.718	y	6	59858.917		64800	.675	5.4	4...	H1-1b			
133	M662	PL3/8X4	.080	.495	21	.015	0	y	32	36054.025		48600	.38	3.881	1...	H1-1b			
134	M663	PL3/8X4	.080	.667	22	.011	0	y	32	43042.87		48600	.38	3.904	1...	H1-1b			
135	M664	PL3/8X4	.101	.742	21	.017	0	y	8	41807.362		48600	.38	4.05	1...	H1-1b*			
136	M665	PL3/8X1	.114	1.023	21	.024	1.023	y	20	9126.835		12150	.095	.253	1...	H1-1b			
137	M666	PL3/8X1	.091	.648	21	.014	.648	y	21	10832.811		12150	.095	.253	2...	H1-1b			
138	M667	PL3/8X1	.078	0	21	.009	.718	y	8	10552.241		12150	.095	.253	2...	H1-1b			
139	M668	PL3/8X1	.166	.495	21	.028	1.045	y	20	9013.812		12150	.095	.253	1...	H1-1b			
140	M669	PL3/8X1	.133	.667	21	.019	.667	y	32	10760.866		12150	.095	.253	2...	H1-1b			
141	M670	PL3/8X1	.157	.731	21	.024	.731	y	8	10499.358		12150	.095	.253	2...	H1-1b			
142	M671	PL3/8X1	.153	0	13	.011	.871	y	6	9876.263		12150	.095	.253	1...	H1-1b*			
143	M672	PL3/8X1	.018	0	32	.033	.065	y	32	12116.481		12150	.095	.253	2...	H1-1b			
144	M673	PL3/8X1	.101	0	20	.030	1.013	y	32	9176.785		12150	.095	.253	1...	H1-1b			
145	M674	PL3/8X1	.148	0	21	.007	.719	y	10	10547.603		12150	.095	.253	2...	H1-1b*			
146	M675	PL3/8X1	.116	0	20	.031	0	y	32	9871.034		12150	.095	.253	2...	H1-1b			
147	M676	PL3/8X1	.146	0	21	.009	.583	y	34	11071.278		12150	.095	.253	2...	H1-1b*			
148	M677	PL3/8X1	.241	0	21	.034	.727	y	32	10517.596		12150	.095	.253	2...	H1-1a			
149	M678	PL3/8X1	.182	0	21	.010	.467	y	34	11446.625		12150	.095	.253	2...	H1-1b*			
150	M679	PL3/8X1	.074	.595	8	.039	0	y	32	11028.188		12150	.095	.253	2...	H1-1b			
151	M680	PL3/8X1	.047	.37	32	.007	.37	y	34	11704.44		12150	.095	.253	2...	H1-1b			
152	M681	PL3/8X1	.020	.487	8	.022	.487	y	32	11386.852		12150	.095	.253	2...	H1-1b			
153	M682	PL3/8X1	.022	.288	32	.007	.288	y	36	11878.261		12150	.095	.253	2...	H1-1b			
154	M683	PL3/8X1	.011	.397	8	.012	.397	y	32	11637.276		12150	.095	.253	2...	H1-1b			
155	M684	PL3/8X1	.020	.218	32	.009	0	y	32	11992.545		12150	.095	.253	1...	H1-1b			
156	M685	PL3/8X1	.012	.164	32	.012	.164	y	32	11940.259		12150	.095	.253	1...	H1-1b			
157	M686	PL3/8X4	.164	0	21	.026	.958	y	6	37811.386		48600	.38	4.05	2...	H1-1b*			
158	M687	PL3/8X4	.273	.917	20	.021	.917	y	12	38628.054		48600	.38	4.05	1...	H1-1a			
159	M688	PL3/8X1	.253	.957	20	.032	.957	y	6	9459.805		12150	.095	.253	2...	H1-1b			
160	M689	PL3/8X1	.323	.917	21	.024	.917	y	6	9657.266		12150	.095	.253	2...	H1-1a			
161	M690	PL3/8X1	.118	.958	21	.029	.958	y	31	9453.116		12150	.095	.253	2...	H1-1b			
162	M691	PL3/8X1	.179	.917	21	.028	.917	y	31	9657.266		12150	.095	.253	2...	H1-1b			
163	M692	PL3/8X1	.360	0	22	.023	0	y	8	7689.512		12150	.095	.253	2...	H1-1a			
164	M693	PL3/8X1	.272	.871	21	.020	.871	y	6	9876.338		12150	.095	.253	1...	H1-1a			
165	M694	PL3/8X1	.355	1.264	21	.014	1.264	y	12	7850.075		12150	.095	.253	2...	H1-1b			
166	M695	PL3/8X1	.003	0	10	.001	0	y	9	9876.338		12150	.095	.253	2...	H1-1b			
167	M696	PL1/2X4	.173	0	7	.057	.958	y	6	56267.257		64800	.675	5.4	1...	H1-1b			
168	M697	PL1/2X4	.275	.917	6	.054	.917	y	6	56947.648		64800	.675	5.4	1...	H1-1b			
169	M702	PL3/8X4	.010	.748	32	.012	.748	y	32	41711.636		48600	.38	4.05	1...	H1-1b			
170	M703	PL1/2X4	.007	.761	32	.010	0	y	32	59284.848		64800	.675	5.4	1...	H1-1b			
171	M704	PL3/8X1	.004	.5	36	.006	.5	y	32	10373.019		12150	.095	.253	3...	H1-1b			
172	M705	PL3/8X1	.010	.759	32	.011	.22	y	32	10381.786		12150	.095	.253	2...	H1-1b			
173	M706	PL1/2X4	.011	.725	36	.013	.725	y	8	59770.72		64800	.675	5.4	1...	H1-1b			
174	M707	PL3/8X1	.006	.725	8	.010	.725	y	8	10524.619		12150	.095	.253	2...	H1-1b			
175	M708	PL3/8X1	.012	.741	32	.015	.351	y	32	10459.008		12150	.095	.253	1...	H1-1b			
176	M709	PL3/8X4	.014	.741	32	.016	.741	y	32	41835.32		48600	.38	4.05	1...	H1-1b			
177	M710	PL3/8X1	.009	.307	32	.005	.307	y	32	11431.753		12150	.095	.253	1...	H1-1b			
178	M711	PL3/8X1	.004	0	36	.002	.285	y	26	11529.025		12150	.095	.253	2...	H1-1b			
179	M730	PL1/2X4	.274	.512	41	.081	.485	z	42	55166.326		64800	.675	5.4	1...	H1-1b			
180	M731	PL1/2X4	.053	.648	16	.005	0	y	44	60749.121		64800	.675	5.4	1...	H1-1b			
181	M732	PL1/2X4	.207	.548	9	.058	.718	y	8	59858.917		64800	.675	5.4	4...	H1-1b			
182	M733	PL3/8X4	.081	.495	41	.009	0	y	6	36054.025		48600	.38	3.949	1...	H1-1b			





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

Member	Shape	Code Check	Loc[ft]	LC	Shear	...	Loc[ft]	Dir	LC	phi*Pnc	[...phi*Pnt [lb]	phi*Mn y...	phi*Mn z...	Cb	Eqn
183	M734	PL3/8X4	.079	.667	18	.007	0	y	6	43042.87	48600	.38	4.05	1...	H1-1b
184	M735	PL3/8X4	.103	.742	18	.015	0	y	6	41807.362	48600	.38	4.05	1...	H1-1b
185	M736	PL3/8X1	.126	1.023	41	.027	1.023	y	42	9126.835	12150	.095	.253	1...	H1-1b
186	M737	PL3/8X1	.091	.648	17	.015	.648	y	41	10832.811	12150	.095	.253	2...	H1-1b
187	M738	PL3/8X1	.077	0	17	.010	.718	y	40	10552.241	12150	.095	.253	2...	H1-1b
188	M739	PL3/8X1	.166	.495	41	.029	1.045	y	42	9013.812	12150	.095	.253	1...	H1-1b
189	M740	PL3/8X1	.131	.667	17	.019	.667	y	42	10760.866	12150	.095	.253	2...	H1-1b
190	M741	PL3/8X1	.156	.731	17	.022	.731	y	6	10499.358	12150	.095	.253	2...	H1-1b
191	M742	PL3/8X1	.154	0	13	.011	.871	y	2	9876.263	12150	.095	.253	1...	H1-1b*
192	M743	PL3/8X1	.011	0	42	.020	.065	y	42	12116.481	12150	.095	.253	2...	H1-1b
193	M744	PL3/8X1	.092	0	18	.019	1.013	y	6	9176.785	12150	.095	.253	1...	H1-1b
194	M745	PL3/8X1	.147	0	17	.007	.719	y	4	10547.603	12150	.095	.253	2...	H1-1b*
195	M746	PL3/8X1	.109	0	18	.020	.872	y	6	9871.034	12150	.095	.253	2...	H1-1b
196	M747	PL3/8X1	.145	0	17	.007	.583	y	4	11071.278	12150	.095	.253	2...	H1-1b*
197	M748	PL3/8X1	.148	0	41	.027	0	y	6	10517.596	12150	.095	.253	2...	H1-1b
198	M749	PL3/8X1	.192	.467	42	.011	.467	y	40	11446.625	12150	.095	.253	2...	H1-1b
199	M750	PL3/8X1	.077	.595	42	.035	0	y	6	11028.188	12150	.095	.253	2...	H1-1b
200	M751	PL3/8X1	.045	.37	6	.005	.37	y	40	11704.44	12150	.095	.253	2...	H1-1b
201	M752	PL3/8X1	.021	.487	6	.018	0	y	6	11386.852	12150	.095	.253	2...	H1-1b
202	M753	PL3/8X1	.021	.288	6	.004	.288	y	40	11878.261	12150	.095	.253	2...	H1-1b
203	M754	PL3/8X1	.011	.397	6	.010	0	y	6	11637.276	12150	.095	.253	1...	H1-1b
204	M755	PL3/8X1	.018	.218	6	.005	.218	y	42	11992.545	12150	.095	.253	1...	H1-1b
205	M756	PL3/8X1	.009	.164	6	.007	.164	y	42	11940.259	12150	.095	.253	1...	H1-1b
206	M757	PL3/8X4	.163	0	17	.027	.958	y	2	37811.386	48600	.38	4.05	1...	H1-1b*
207	M758	PL3/8X4	.273	.917	18	.021	.917	y	2	38628.054	48600	.38	4.05	1...	H1-1a
208	M759	PL3/8X1	.254	.957	17	.033	.957	y	2	9459.805	12150	.095	.253	2...	H1-1b
209	M760	PL3/8X1	.323	.917	17	.025	.917	y	2	9657.266	12150	.095	.253	2...	H1-1a
210	M761	PL3/8X1	.118	.958	17	.020	.958	y	44	9453.116	12150	.095	.253	2...	H1-1b
211	M762	PL3/8X1	.179	.917	17	.021	.917	y	43	9657.266	12150	.095	.253	2...	H1-1b
212	M763	PL3/8X1	.363	0	18	.021	0	y	6	7689.512	12150	.095	.253	2...	H1-1a
213	M764	PL3/8X1	.263	.871	17	.020	0	y	2	9876.338	12150	.095	.253	1...	H1-1a
214	M765	PL3/8X1	.356	1.264	17	.015	1.264	y	2	7850.075	12150	.095	.253	2...	H1-1a
215	M766	PL3/8X1	.003	0	12	.001	.871	y	11	9876.338	12150	.095	.253	2...	H1-1b
216	M767	PL1/2X4	.164	0	3	.055	.958	y	8	56267.257	64800	.675	5.4	1...	H1-1b
217	M768	PL1/2X4	.278	.917	2	.053	.917	y	8	56947.648	64800	.675	5.4	1...	H1-1b
218	M773	PL3/8X4	.005	.748	42	.007	.748	y	42	41711.636	48600	.38	4.05	1...	H1-1b
219	M774	PL1/2X4	.004	.761	42	.006	0	y	42	59284.848	64800	.675	5.4	1...	H1-1b
220	M775	PL3/8X1	.002	.761	10	.004	.5	y	42	10373.019	12150	.095	.253	2...	H1-1b
221	M776	PL3/8X1	.005	.759	42	.007	.22	y	42	10381.786	12150	.095	.253	3...	H1-1b
222	M777	PL1/2X4	.007	.725	39	.013	.725	y	6	59770.72	64800	.675	5.4	1...	H1-1b
223	M778	PL3/8X1	.006	.725	6	.010	.725	y	6	10524.619	12150	.095	.253	2...	H1-1b
224	M779	PL3/8X1	.007	.741	42	.009	.741	y	42	10459.008	12150	.095	.253	1...	H1-1b
225	M780	PL3/8X4	.008	.643	42	.009	.741	y	42	41835.32	48600	.38	4.05	1...	H1-1b
226	M781	PL3/8X1	.006	0	6	.005	0	y	6	11431.753	12150	.095	.253	2...	H1-1b
227	M782	PL3/8X1	.002	0	39	.001	.285	y	40	11529.025	12150	.095	.253	2...	H1-1b
228	M418	PIPE 2.5	.180	10.303	8	.098	4.197	9	24514.781	50715	3.596	3.596	2...	H1-1b	
229	M419A	PIPE 2.5	.181	10.303	4	.102	4.197	5	24514.781	50715	3.596	3.596	2...	H1-1b	

**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	N302	max	944.269	10	2649.533	13	8590.285	1	.012	7	1.119	4	.004	5
2		min	-950.083	4	863.416	70	-1860.273	7	-.096	13	-1.135	10	-.006	11
3	N303	max	51.977	10	108.237	13	-2469.984	7	-.013	7	.151	4	.007	4
4		min	-61.416	4	37.158	70	-10070.188	13	-.067	13	-.143	10	-.007	10
5	N729	max	7405.891	9	2737.74	21	1097.426	3	.046	21	1.195	12	.089	21



Company : Colliers Engineering & Design  
 Designer :  
 Job Number : Project No. 10209456  
 Model Name : 5000093356-VZW\_MT\_LO\_H

Aug 29, 2023  
 11:13 PM  
 Checked By: \_\_\_\_\_

**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	
6		min	-1553.553	3	873.914	66	-4472.352	9	-.005	3	-1.212	6	-.011	3
7	N730	max	-2112.474	3	111.22	21	5176.961	21	.035	20	.16	12	.059	21
8		min	-8928.625	21	37.562	66	1224.502	3	.005	2	-.148	6	.011	3
9	N776	max	1674.832	11	2734.749	17	779.842	11	.049	17	1.203	8	.01	11
10		min	-7497.198	5	872.974	74	-4162.133	17	-.006	10	-1.225	2	-.086	17
11	N777	max	8902.427	17	111.159	17	5149.817	17	.035	18	.145	8	-.012	11
12		min	2125.259	11	37.529	74	1209.877	11	.005	12	-.165	2	-.059	17
13	Totals:	max	5823.285	10	8202.504	17	5769.17	1						
14		min	-5823.283	4	2793.202	74	-5769.165	7						



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

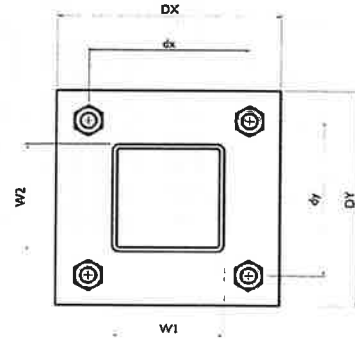
Custom Orientation Required

Tower Connection Bolt Checks

Bolt Orientation

Bolt Quantity per Reaction:	4
$d_x$ (in) (Delta X of typ. bolt config. sketch):	6
$d_y$ (in) (Delta Y of typ. bolt config. sketch):	4
Bolt Type:	A325N
Bolt Diameter (in):	0.625
Required Tensile Strength / bolt (kips):	2.5
Required Shear Strength / bolt (kips):	0.4
Tensile Capacity / bolt (kips):	20.7
Shear Capacity / bolt (kips):	12.4
Bolt Overall Utilization:	12.1%

Tower Connection Baseplate Checks



**VzW**  
**SMART Tool®**  
**Vendor**

Client:	Verizon Wireless	Date:	8/29/2023
Site Name:	LEBANON CENTER CT - A		
MDG #:	5000093356		
Fuze ID #:	17123863	Page:	2

Version 1.01

Tower Connection Weld Checks

No

# **ATTACHMENT 4**





Parcel # 245-13

[Documents & Links](#) [Assessment](#)

ID	2053
PropertyAddress	917 EXETER RD
PropertyStreet	EXETER RD
MapSheet	245
OwnerName	LEBANON TOWN OF
CoOwnerName	N/A
OwnerAddress	917 EXETER RD
OwnerAddress2	N/A
NumberCity	LEBANON
	12

**Property Card: 917 EXETER RD**  
 Town of Lebanon, CT



Parcel Information	
<b>Parcel ID:</b> 245-13 <b>Vision ID:</b> 2597 <b>Owner:</b> LEBANON TOWN OF <b>Co-Owner:</b> HIGH SCHOOL <b>Mailing Address:</b> 917 EXETER RD  LEBANON, CT 06249	<b>Map:</b> 245 <b>Lot:</b> 13 <b>Use Description:</b> MUN PUB SC <b>Zone:</b> RA <b>Land Area in Acres:</b> 38.17
Sale History	Assessed Value
<b>Book/Page:</b> 0137/0247 <b>Sale Date:</b> 10/3/1989 <b>Sale Price:</b> \$0	<b>Land:</b> \$181,630 <b>Buildings:</b> \$13,780,890 <b>Extra Bldg Features:</b> \$119,010 <b>Outbuildings:</b> \$431,820 <b>Total:</b> \$14,513,350

Building Details: Building # 1		
	<b>Model:</b> Industrial <b>Living Area:</b> 128142 <b>Appr. Year Built:</b> 1992 <b>Style:</b> Schools-Public <b>Stories:</b> 2 <b>Occupancy:</b> <b>No. Total Rooms:</b> <b>No. Bedrooms:</b> <b>No. Baths:</b> <b>No. Half Baths:</b>	<b>Int Wall Desc 1:</b> Minim/Masonry <b>Int Wall Desc 2:</b> Drywall/Sheet <b>Ext Wall Desc 1:</b> Brick/Masonry <b>Ext Wall Desc 2:</b> <b>Roof Cover:</b> Tar + Gravel <b>Roof Structure:</b> Flat <b>Heat Type:</b> Forced Air <b>Heat Fuel:</b> Oil <b>A/C Type:</b> Central




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# **ATTACHMENT 5**





Name and Address of Sender  Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103	TOTAL NO. of Pieces Listed by Sender  2	TOTAL NO. of Pieces Received at Post Office™  2	Affix Stamp Here Postmark with Date of Receipt.  
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USPS® Tracking Number Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Kevin Cwikla, First Selectman Town of Lebanon 579 Exeter Road Lebanon, CT 06249				
2.	Philip Chester, Town Planner Town of Lebanon 579 Exeter Road Lebanon, CT 06249				
3.					
4.					
5.					
6.					