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Also admitted in Massachusetts
and New York

June 24, 2025

Via Electronic Mail

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
14-20 Isham Road, West Hartford, Connecticut**

Dear Attorney Bachman:

Cellco Partnership d/b/a Verizon Wireless (“Cellco”) currently maintains an existing wireless telecommunications facility at the above reference address (the “Property”). The Cellco facility consists of antennas and remote radio heads attached to an existing telecommunications tower and associated equipment on the roof of the building. The tower was approved by the Town of West Hartford (“Town”) in August of 1997. Cellco’s shared use of the tower was approved by the Siting Council (“Council”) in September of 2008. A copy of the Town’s original approval and Council’s 2008 approval are included in Attachment 1.

Cellco’s proposed modification involve the installation of four (4) interference mitigation filters (“Filters”) on its existing antenna mounts. The specification sheet for the new Filters 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 the Town’s Chief Elected Official and Land Use Officer. A copy of this letter is being sent to the tower owner and Property owner.

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

32421604-v1

Melanie A. Bachman, Esq.
June 24, 2025
Page 2

1. The proposed modifications will not result in an increase in the height of the existing tower. Cellco's new Filters will be installed on its existing antenna mounts, at the same height on the tower.

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 new 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 Comprehensive Structural Analysis ("SA") report and Antenna Mount Analysis Report ("MA"), the existing tower, tower foundation and proposed antenna mounts can support Cellco's proposed modifications. Copies 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:

Shari Cantor, Mayor
Todd Dumais, Town Planner
M & R Gassner Family LLC, Property Owner
Joseph Pereira, Verizon Wireless
Rebecca Rafferty, SAI Communications

ATTACHMENT 1

DEPARTMENT OF
COMMUNITY SERVICES

August 11, 1997

Michael Gassner
10 Isham Road
West Hartford, CT 06107

Subject: 14-20 Isham Road - Site Plan Approval

Dear Mr. Gassner:

Donald R. Foster, Town Planner, has approved the site plan application for the subject property with the following conditions.

1. Site Plan approval is limited to 1,000 square feet of office area to be occupied by "General Communications" with a rooftop communication tower as an accessory use. The tower should be no greater than 100 feet in height.
2. The remaining portion of the building, approximately 13,500 square feet, should remain vacant until such time that a comprehensive site plan is submitted demonstrating compliance with the zoning regulations for additional uses.

Please submit to the Planning Office one (1) mylar of the approved plan, signed and sealed by the professional responsible for preparing the plan.

If you have comments or questions, please call me at 523-3123.

Very truly yours,



Mila Limson
Senior Planner

c: Ron Van Winkle, Director of Community Services
Don Foster, Town Planner
Pat Alair, Asst. Corp. Counsel

14-20Isham



TOWN OF WEST HARTFORD 50 SOUTH MAIN STREET
WEST HARTFORD, CONNECTICUT 06107-2431
(860) 523-3123 FAX: (860) 523-3200

 Printed on Recycled Paper

SP 781



Daniel F. Caruso
Chairman

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

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

E-Mail: siting.council@ct.gov

Internet: ct.gov/csc

September 16, 2008

Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103

RE: **EM-VER-155-080729** – Celco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 14-20 Isham Road, West Hartford, Connecticut.

Dear Attorney Baldwin:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies, with the following conditions:

- A letter and/or plans sealed by a Professional Engineer duly licensed in the State of Connecticut shall be provided to the Council prior to the installation of the equipment shelter to certify that the building can support the equipment shelter on the roof.
- The applicant shall take steps to reduce the post-construction percent capacity (regarding the tower mast shear reaction) to not more than 100 percent; and
- A signed letter from a Professional Engineer duly licensed in the State of Connecticut shall be submitted to the Council to certify that a post-construction percent capacity (regarding the tower mast shear reaction) of not more than 100 percent have been achieved.

The proposed modifications are to be implemented as specified here and in your notice dated July 29, 2008, including the placement of all necessary equipment and shelters within the tower compound. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.



Thank you for your attention and cooperation.

Very truly yours,

A handwritten signature in black ink, appearing to read "S. Derek Phelps", is written over the typed name and title.

S. Derek Phelps
Executive Director

SDP/MP/jb

- c: The Honorable Scott Slifka, Mayor, Town of West Hartford
Barry M. Feldman, Town Manager, Town of West Hartford
Mila Linson, Town Planner, Town of West Hartford
M&R Gassner Family II, LLC

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



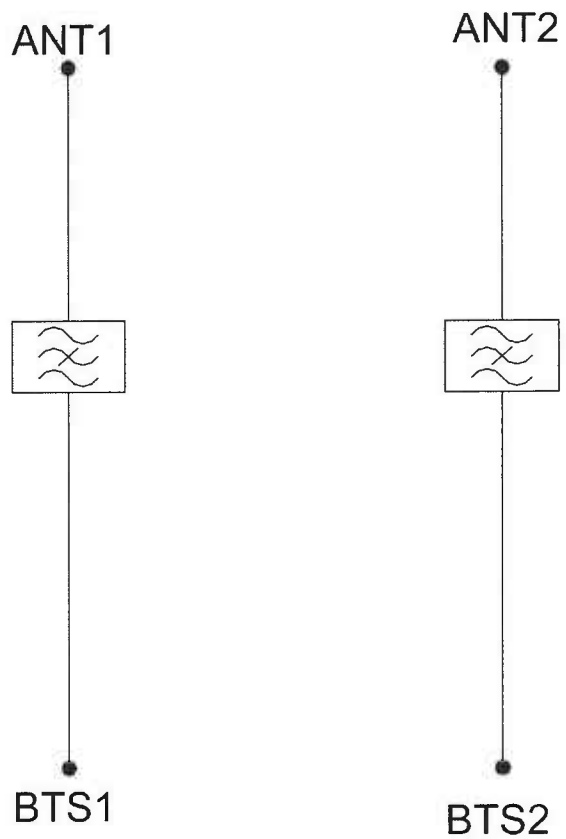
TECHNICAL SPECIFICATIONS

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

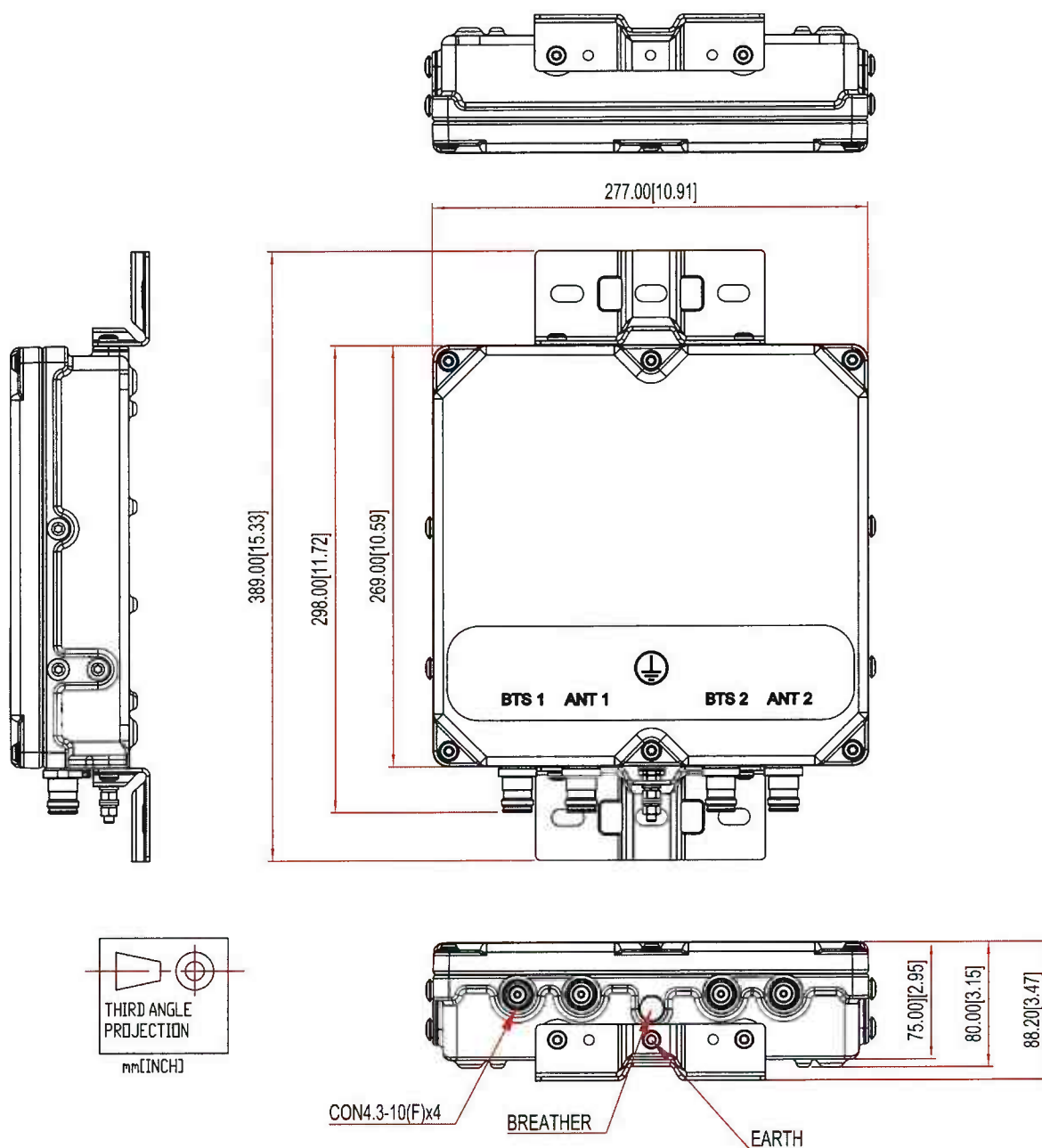
ORDERING INFORMATION

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 a 100-ft Guyed Tower

Site Name: West Hartford Center CT

Site No.: 535840

Fuze#: 17390716

Site Address: 14-20 Isham Road

West Hartford, CT 06107

Hartford County

Prepared for:

Verizon Wireless

51 Alder Street

Medway, MA 02053

May 13, 2025

(Rev. 0)

Prepared by:

Dewberry Engineers Inc.

99 Summer Street, Suite 700

Boston, MA 02110


Dewberry Project Number: 50187322

Tower Controlling Member	% Capacity	Result
Tower Components	58.0	Sufficient
Foundation	-	Sufficient

Tower/Foundation Previously Reinforced?	YES <input type="checkbox"/> / NO <input checked="" type="checkbox"/>
Previous Reinforcement Verified?	YES <input type="checkbox"/> / NO <input type="checkbox"/> Date: <u>N/A</u>
Additional Reinforcement Required?	YES <input type="checkbox"/> / NO <input checked="" type="checkbox"/>

Prepared by:

Approved by:


Ashley Deuschle, P.E. (FL)
Project Engineer

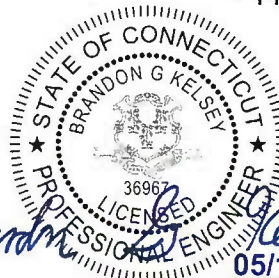



05/13/2025
Brandon Kelsey, P.E.
Project Structural Engineer

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1.0 INTRODUCTION AND PROJECT SUMMARY

The objective of this report is to assess the proposed installation of new antennas, sector frame mounts and support equipment on an existing 100-ft. steel guy tower located in Hartford, CT. This report is limited to the analysis of the tower only. The telecommunication upgrade is proposed by Verizon Wireless at a proposed mount centerline of 102 ft and the tower base elevation is set 25' above ground level.

Please refer to the appendices for the structural analysis package regarding the structural analysis.

2.0 CODES, STANDARDS, AND REFERENCES

The structural analysis was completed according to the provisions of the following Codes and standards:

- *2022 Connecticut State Building Code, Amendments to IBC 2021*
- *International Building Code (IBC) 2021*, International Code Council
- *ASCE 7-16 Minimum design Loads for Buildings and Other Structures*, American Society of Civil Engineers
- *TIA-222-H, Structural Standard for Antenna Supporting Structures and Antennas*
- *Steel Construction Manual 15th Ed*, American Institute of Steel Construction
- *Site Visit by Dewberry Engineers Inc. on 02/24/2021*
- *FCCA Photos dated 11/10/2023*

The analysis was in compliance with the minimum requirements as specified by TIA-222-H for the County of Hartford, CT under the following load parameters:

Risk Category:	II	
Exposure Category:	C	IBC 2021
Design Ultimate Wind Speed	125 mph	2022 CT Bldg. Code
Design Ice Wind Speed:	50 mph	ASCE 7-16 Hazard Tool
Design Ice Thickness:	1.00 in.	ASCE 7-16 Hazard Tool
Serviceability Wind Speed:	60 mph	Sect. 2.8.3, TIA Rev H

The tower geometry, member sizes, existing antenna loading, and foundation design loading were referenced from the following reports:

- Previous structural tower analysis by Dewberry Engineers dated April 27, 2022.
- New/Replacement Antenna Mount Analysis by Maser Consulting dated March 16, 2022.
- Radio Frequency Design Sheet (RFDS Name: West Hartford Center CT) by Verizon Wireless dated November 15, 2024.
- Latest Construction Drawings by Dewberry Engineers, Inc.
- Antenna Mount Analysis by Colliers Engineering & Design dated 04/11/2025
- Structural & Equipment Mapping Report by GPD Group dated 07/09/2012
- Original Tower Drawings by Cianci & Cianci Structural Engineers dated 10/22/1997

Client: Verizon Wireless
 Site Name: West Hartford Center CT
 Date: May 13, 2025

3.0 EXISTING AND PROPOSED TOWER LOADING

3.1 Existing (includes Reserved, if applicable) Antenna and Cable Information

Mounting Elevation (ft) AGL	Mounting Elevation (ft) ARL	Center Line Elevation (ft) ARL	Carrier	QTY.	APPURTENANCES DESCRIPTION	COAX
125	100	106	-	1	12' Omni	(1) 1/2" (2) 5/8" (1) 7/8"
		105		1	4 Bay Dipole	
		103		1	10' Omni	
		103		1	6' Omni	
122	97	97	Clearwire (Abandoned)	12	2-3/8" Mast Pipes	(12) 1-1/4" (1) 2" Flex Conduit (3) 7/8"
				3	13' Standoff Mount	
102	77	80.5	VZW	3	MTC6413-77A w/ Integrated RRH	(12) 1-5/8" (2) Hybrid
		79		6	SBNHH-1D65B	
				3	B2/B66A RRH	
				3	B5/B13 RRH	
				1	RVZDC-6627-PF-48	
		3		Sector Mount (VFA12-HD)		
77	3	CBRS RRH RT4401-48A w/ XXDWMM-12.5-65-8T- CBRS Antenna				
69	44	48	-	1	4' Yagi	(1) 1-5/8"
55	30	30		1	4' Yagi	(1) 1/2"
32	7	7		1	2'x2'x1' Junction Box	-

*Equipment to be removed

AGL: At Grade Line

ARL: At Roof Line (Roofline being elevation 25' above ground)

3.2 Proposed Appurtenance Loading Configuration on Tower:

Mounting Elevation (ft) AGL	Mounting Elevation (ft) ARL	Center Line Elevation (ft) ARL	Carrier	QTY.	APPURTENANCES DESCRIPTION	COAX
102	77	77	VZW	4	BSF0020F3V1-1	-

AGL: At Grade Line

ARL: At Roof Line (Roofline being elevation 25' above ground)

Client: Verizon Wireless
 Site Name: West Hartford Center CT
 Date: May 13, 2025

3.3 Final Appurtenance Loading Configuration on Tower:

Mounting Elevation (ft) AGL	Mounting Elevation (ft) ARL	Center Line Elevation (ft) ARL	Carrier	QTY.	APPURTENANCES DESCRIPTION	COAX
102	77	80.5		3	MT6413-77A w/ Integrated RRH	(12) 1-5/8" (2) Hybrid
		79	VZW	6	SBNHH-1D65B	
				3	B2/B66A RRH	
				3	B5/B13 RRH	
				4	BSF0020F3V1-1	
				1	RVZDC-6627-PF-48	
				3	Sector Mount (VFA12-HD)	
		77		3	CBRS RRH RT4401-48A w/ XXDWMM-12.5-65-8T-CBRS Antenna	

AGL: At Grade Line

ARL: At Roof Line (Roofline being elevation 25' above ground)

3.4 Method:

tnxTower, a commercially available engineering software program, was used to create a three-dimensional model of the tower members and calculate primary member stresses under various loading conditions. Selected output from the analysis is included in Appendix A.

Client: Verizon Wireless
 Site Name: West Hartford Center CT
 Date: May 13, 2025

4.0 TOWER ANALYSIS RESULTS SUMMARY

4.1 Tower Structure Results

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail	
T1	125 - 105	Leg	2	2	-15123.50	74093.50	20.4	Pass	
		Diagonal	7/8	40	-1812.48	9631.38	18.8	Pass	
		Horizontal	L2x2x3/16	16	1394.26	23166.00	6.0	Pass	
		Top Girt	L2x2x3/16	4	142.86	18739.00	0.8	Pass	
		Bottom Girt	L2x2x3/16	7	844.84	23166.00	3.6	Pass	
		Guy A@116.958	3/4	258	17927.90	34980.00	51.3	Pass	
		Guy B@116.958	3/4	257	19152.50	34980.00	54.8	Pass	
		Guy C@116.958	3/4	256	18738.50	34980.00	53.6	Pass	
		Top Guy Pull-Off@116.958	3" x 1/4" Plate	36	2169.96	24300.00	16.2	Pass	
T2	105 - 85	Leg	2	54	-34731.90	74093.50	46.9	Pass	
		Diagonal	7/8	64	-4923.97	9631.38	51.1	Pass	
		Horizontal	L2x2x3/16	94	1925.42	23166.00	8.3	Pass	
		Top Girt	L2x2x3/16	55	859.69	18739.00	4.6	Pass	
		Bottom Girt	L2x2x3/16	59	1871.20	23166.00	8.1	Pass	
T3	85 - 65	Leg	2 1/4	105	-57527.10	107392.00	53.6	Pass	
		Diagonal	7/8	151	-5316.34	9729.92	54.6	Pass	
		Horizontal	L2x2x3/16	128	2648.67	23166.00	11.4	Pass	
		Top Girt	L2x2x3/16	107	-996.40	17680.00	5.6	Pass	
		Bottom Girt	L2x2x3/16	110	-996.40	17079.90	5.8	Pass	
		Guy A@76.9583	7/8	261	24561.70	47820.00	51.4	Pass	
		Guy B@76.9583	7/8	260	27751.60	47820.00	58.0	Pass	
		Guy C@76.9583	7/8	259	26149.30	47820.00	54.7	Pass	
T4	65 - 45	Top Guy Pull-Off@76.9583	3" x 1/4" Plate	136	7076.18	24300.00	29.1	Pass	
		Leg	2	156	-35852.40	74093.50	48.4	Pass	
		Diagonal	7/8	204	-4217.07	9631.38	43.8	Pass	
		Horizontal	L2x2x1/8	197	2551.69	15693.80	16.3	Pass	
		Top Girt	L2x2x1/8	158	1710.54	15693.80	10.9	Pass	
T5	45 - 29	Bottom Girt	L2x2x1/8	160	1494.28	15693.80	9.5	Pass	
		Leg	2	206	-28178.80	74603.20	37.8	Pass	
		Diagonal	7/8	246	-2534.44	9676.41	26.2	Pass	
		Horizontal	L2x2x1/8	238	2690.32	15693.80	17.1	Pass	
		Top Girt	L2x2x1/8	209	1265.23	15693.80	8.1	Pass	
T6	29 - 25	Bottom Girt	L2x2x1/8	211	4313.94	15693.80	27.5	Pass	
		Leg	2	248	-31882.50	95668.20	33.3	Pass	
		Top Girt	L3x3x1/8	250	4198.20	23793.80	17.6	Pass	
		Bottom Girt	12" x 3/8" Plate	253	-246.07	116106.00	0.3	Pass	
							Summary		
							Leg (T3)	53.6	Pass
							Diagonal (T3)	54.6	Pass
							Horizontal (T5)	17.1	Pass
							Top Girt (T6)	17.6	Pass
							Bottom Girt (T5)	27.5	Pass
							Guy A (T3)	51.4	Pass
							Guy B (T3)	58.0	Pass
							Guy C (T3)	54.7	Pass
							Top Guy Pull-Off (T3)	29.1	Pass
							Bolt Checks	16.3	Pass
							RATING =	58.0	Pass

Table above displays the summary of the ratio (as the percentage) of force in the member to their capacities. Values greater than 100% indicate the maximum force in the member exceeds its capacity.

4.2 Foundation results

Guy forces are transferred to the existing building structure via three (3) 7/8"Ø and three (3) 3/4"Ø galvanized steel guy wires with turnbuckles. All guy anchorage posts are positively attached to the existing building structure. Connections to the existing building were originally designed by Cianci & Cianci Structural Engineers job no: 97-113-01 dated October 22, 1997.

Review of the guy anchor and tower base connections consisted of a comparison of the proposed reactions and the design reactions obtained from the aforementioned design documents:

Calculated Proposed + Existing Equipment Loading Reactions Compared to Previous Reactions:

Condition	Calculated Foundation Reactions (Rev H) (kip)	Original Design Reactions (Rev F) (kip)	Original Design Reaction x 1.35 (Rev G) (kip)	% Original Reactions	Pass/Fail
Tower Base Vert.	86.084	106.0	143.10	60.1%	Pass
Tower Base Horiz.	1.647	1.6	2.16	76.3%	Pass
Guy Anchor A @ 45' Vert.	34.649	45.1	60.89	56.9%	Pass
Guy Anchor A @ 45' Horiz.	23.465	31.7	42.80	54.8%	Pass
Guy Anchor B @ 39' Vert.	39.964	51.6	69.66	57.4%	Pass
Guy Anchor B @ 39' Horiz.	23.605	32.0	43.20	54.6%	Pass
Guy Anchor C @ 37.5' Vert.	37.531	47.8	64.53	58.2%	Pass
Guy Anchor C @ 37.5' Horiz.	23.606	31.6	42.66	55.3%	Pass

5.0 CONCLUSIONS AND COMMENTARY

After analysis, it was determined that the existing tower structure and foundation **is adequate** to support the proposed forces as a result of the telecommunication upgrade.

This engineering analysis is based upon the theoretical capacity of the structure. It is not a condition assessment of the tower and its foundation. Dewberry Engineers Inc. reserves the right to add to or modify this report if more information becomes available. The conclusions reached by Dewberry Engineers Inc. in this report are only applicable to the previously mentioned existing structural elements supporting the proposed wireless telecommunications installation. The results of this report are based on the assumption that existing structural elements have been installed per the original design documents, have been well maintained and are uncompromised. This report does not imply that a thorough inspection of the existing structure has been performed. Any

deviation of the support condition, loading, location, placement, equipment configuration, etc, will require Dewberry Engineers Inc. to generate an additional structural analysis.

6.0 ASSUMPTIONS

This analysis is from information supplied, and therefore, its results are based on and are as accurate as that supplied data. Dewberry Engineers Inc. has made no independent determination, nor is it required to, of its accuracy. The following assumptions were made for this structural analysis.

1. The tower member sizes and shapes are considered accurate as supplied. The material grade is as per data supplied and/or as assumed and as stated in the materials section.
2. The antenna configuration is as supplied and/or as modeled in the analysis. It is assumed to be complete and accurate. All antennas, mounts, coax and waveguides are assumed to be properly installed and supported as per manufacturer requirements.
3. Some assumptions are made regarding antennas and mount sizes and their projected areas based on best interpretation of data supplied and of best knowledge of antenna type and industry practice.
4. All mounts, if applicable, are considered adequate to support the loading. No actual analysis of the mount(s) is performed. This analysis is limited to analyzing the tower only.
5. The soil parameters are as per data supplied or as assumed and stated in the calculations.
6. Foundations are properly designed and constructed to resist the original design loads indicated in the documents provided.
7. The tower and structures have been properly maintained in accordance with TIA Standards and/or with manufacturer's specifications.
8. All welds and connections are assumed to develop at least the member capacity unless determined otherwise and explicitly stated in this report.
9. All prior structural modifications are assumed to be as per data supplied/ available and to have been properly installed.
10. Loading interpreted from photos is accurate to $\pm 5'$ AGL, antenna size accurate to ± 3.3 sf, and coax equal to the number of existing antennas without reserves
11. All sector frames have their elevation based on the vertical centerline of the platform – half the distance between the 2 connection points to the tower leg.
12. Analysis considers no additional changes to the tower equipment configuration since photos were taken on July 1, 2022. Sector frame, mast pipes and coax cables have been abandoned and left on the mount and are still considered in this analysis.

If any of these assumptions are not valid or have been made in error, this analysis may be affected, and Dewberry Engineering Inc. should be allowed to review any new information to determine its effect on the structural integrity of the tower.

7.0 DISCLAIMER OF WARRANTIES

If the existing conditions are not as represented on the tower elevation contained in this report, we should be contacted immediately to evaluate the significance of the discrepancy. This is not a condition assessment of the tower or foundation. This report does not replace a full tower inspection. The tower and foundations are assumed to have been properly fabricated, erected, maintained, in good condition, twist free, and plumb.

The engineering services rendered by Dewberry Engineers Inc. in connection with this Structural Analysis are limited to a computer analysis of the tower structure and theoretical capacity of its main structural members. All tower components have been assumed to only resist dead loads when no other loads are applied. No allowance was made for any damaged, bent, missing, loose or rusted members (above and below ground). No allowance was made for loose bolts or cracked welds.

This analysis is limited to the designated maximum wind and seismic conditions per the governing tower standards and code. Wind forces resulting in tower vibrations near the structure's resonant frequencies were not considered in this analysis and are outside the scope of this analysis. Lateral loading from any dynamic response was not evaluated under a time-domain based fatigue analysis.

Dewberry Engineers Inc. does not analyze the fabrication of the structure (including welding). It is not possible to have all the very detailed information needed to perform a thorough analysis of every structural sub-component and connection of an existing tower. Dewberry Engineers Inc. provides a limited scope of service in that we cannot verify the adequacy of every weld, plate connection detail, etc. The purpose of this report is to calculate the structural integrity for the existing tower under existing and proposed loadings.

It is the owner's responsibility to determine the amount of ice accumulation in excess of the code specified amount, if any, that should be considered in the structural analysis.

The attached sketches are a schematic representation of the analyzed tower. If any material is fabricated from these sketches, the contractor shall be responsible for field verifying the existing condition, proper fit, and clearance in the field. Any mentions of structural modifications are reasonable estimates and should not be used as a precise construction document. Precise modification drawings are obtainable from Dewberry Engineering Inc., but are beyond the scope of this report.

Miscellaneous items such as antenna mounts, etc., have not been designed or detailed as a part of our work. We recommend that material of adequate size and strength be purchased from a reputable tower manufacturer.

Towers are designed to carry gravity, wind, and ice loads. All members, legs, diagonals, struts, and redundant members provide structural stability to the tower with little redundancy. Absence or removal of a member can trigger catastrophic failure unless a substitute is provided before any removal. Legs carry axial loads and derive their strength from shorter unbraced lengths by the presence of redundant members and their connections to the diagonals with bolts or welds. If the bolts or welds are removed without providing any substitute to the frame, the leg is subjected to a higher unbraced length that immediately reduces its load carrying capacity. If a diagonal is also removed in addition to the connection, the unbraced length of the leg is greatly increased, jeopardizing its load carrying capacity. Failure of one leg can result in a tower collapse because there is no redundancy. Redundant members and diagonals are critical to the stability of the tower.

Dewberry Engineers Inc. makes no warranties, expresses and/or implied in connection with this report and disclaims any liability arising from material, fabrication, and erection of this tower. Dewberry will not be responsible whatsoever for, or on account of, consequential or incidental damages sustained by any person, firm, or organization as a result of any data or conclusions contained in this report. The maximum liability of Dewberry pursuant to this report will be limited to the total fee received for preparation of this report.

APPENDIX A

OPEN TOWER OUTPUT FOR PROPOSED LOADING

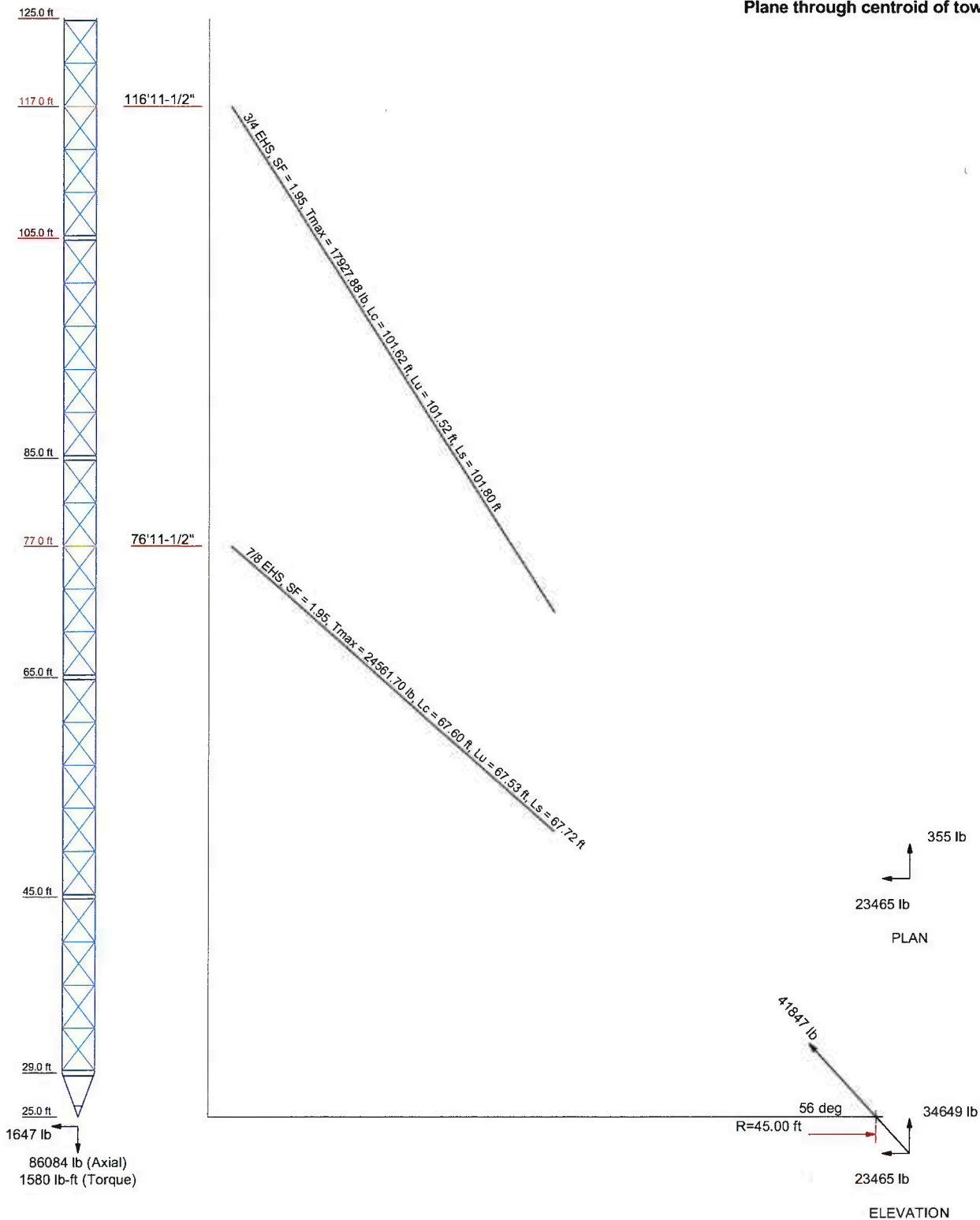
_____ Round _____ Flat _____ App In Face _____ App Out Face



Job: West Hartford Center CT			
Project: 50002925 / 50104156			
Client: Verizon Wireless	Drawn by: adeuschle	App'd:	
Code: TIA-222-H	Date: 05/06/25	Scale:	NTS
Path:		Dwg No.:	E-7

Guy Tensions and Tower Reactions **TIA-222-H - 125 mph/50 mph 1.5000 in Ice Exposure C**

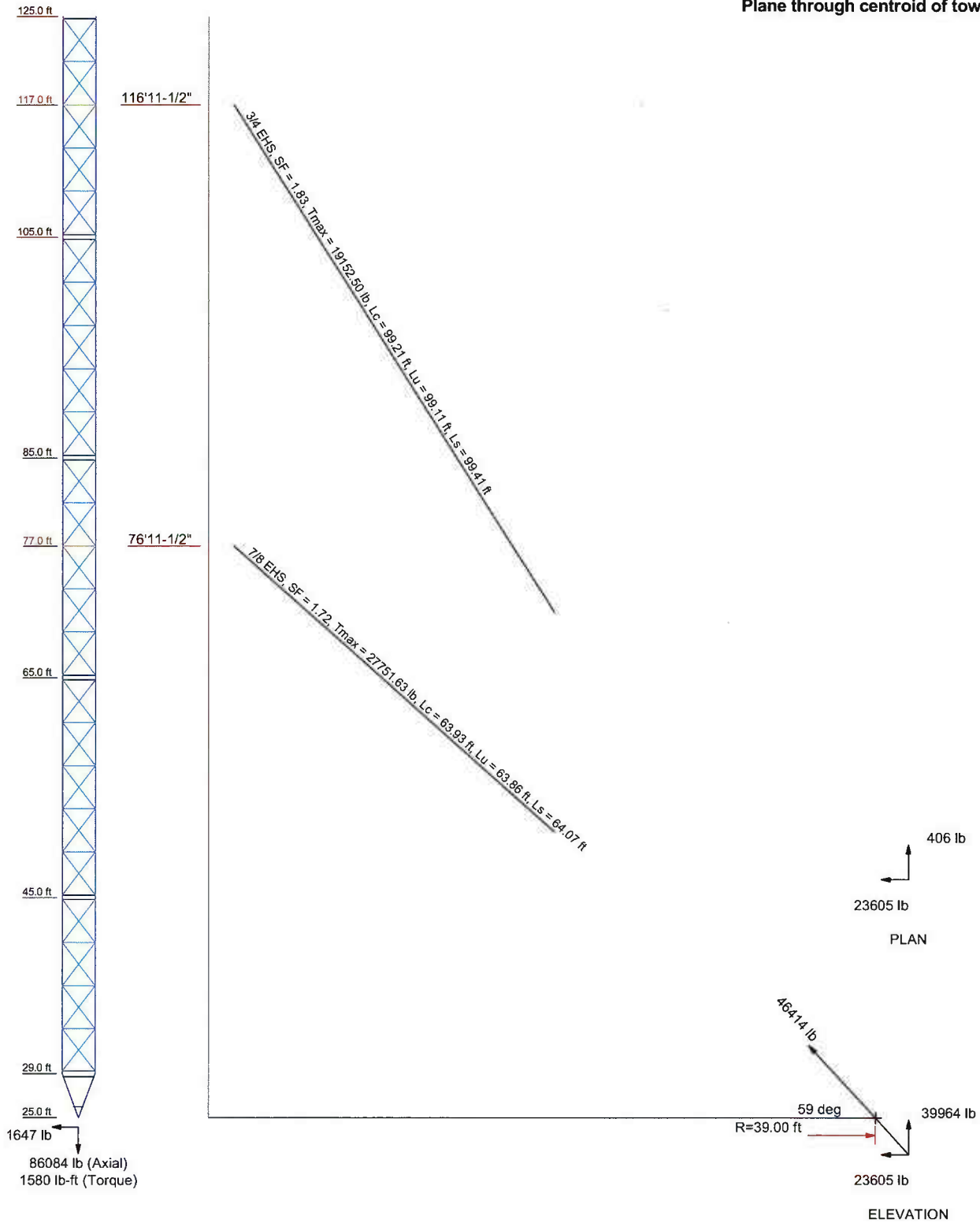
Maximum Values
Anchor 'A'@45 ft Azimuth 0 deg Elev 25 ft
Plane through centroid of tower



Dewberry Engineers, Inc.		West Hartford Center CT	
99 Summer Street, Suite 700		Project: 50002925 / 50104156	
Boston, MA 02110		Client: Verizon Wireless	Drawn by: adeuschle
Phone: 617-531-0744		Code: TIA-222-H	Date: 05/06/25
FAX: 631-836-1919		Path:	Scale: NTS
			Dwg No. E-6

Guy Tensions and Tower Reactions
TIA-222-H - 125 mph/50 mph 1.5000 in Ice Exposure C

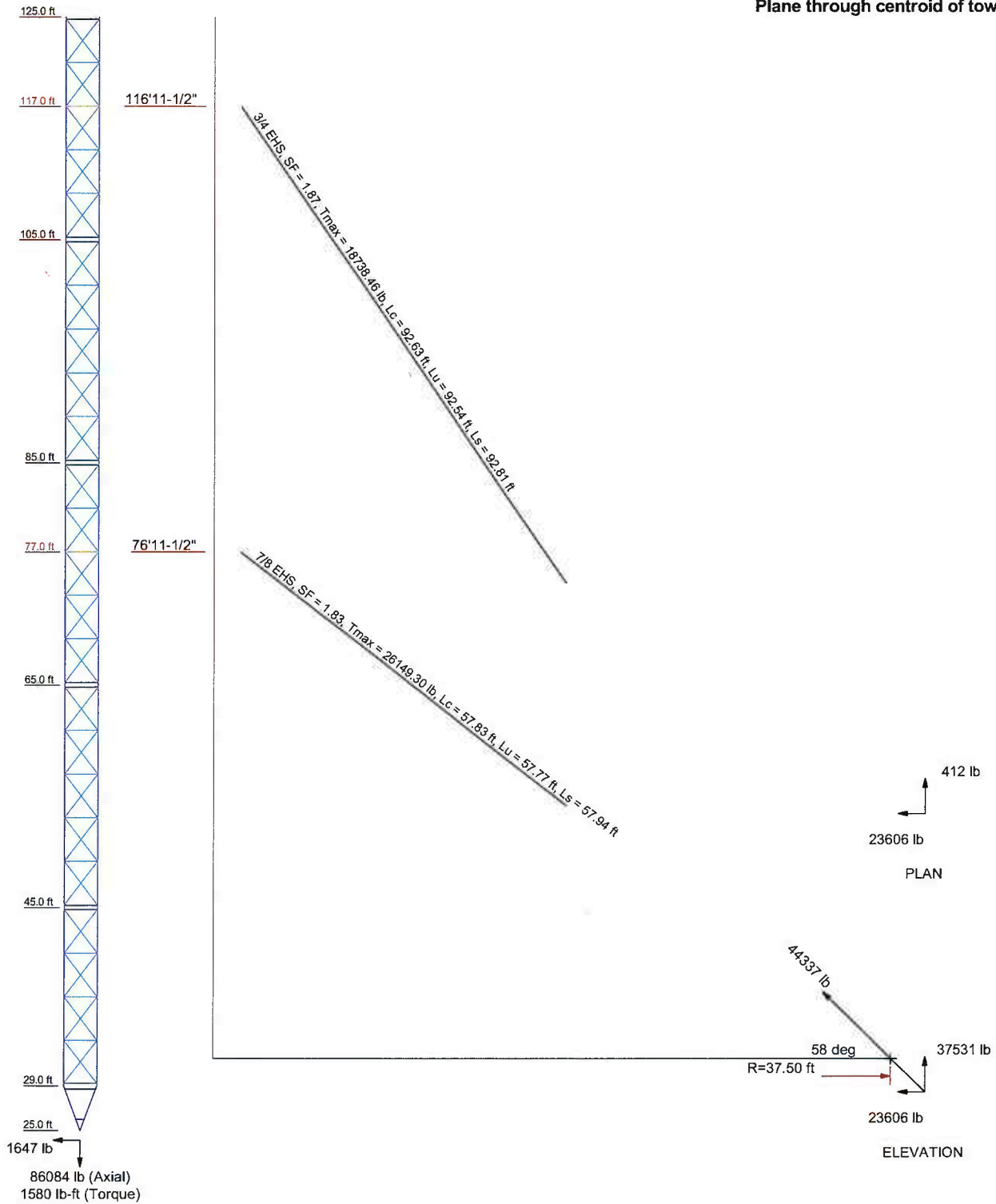
Maximum Values
Anchor 'B'@39 ft Azimuth 120 deg Elev 25 ft
Plane through centroid of tower



Dewberry Engineers, Inc.		Job: West Hartford Center CT	
99 Summer Street, Suite 700		Project: 50002925 / 50104156	
Boston, MA 02110		Client: Verizon Wireless	Drawn by: adeuschle
Phone: 617-531-0744		Code: TIA-222-H	Date: 05/06/25
FAX: 631-836-1919		Path:	Scale: NTS
			Dwg No. E-6

Guy Tensions and Tower Reactions
TIA-222-H - 125 mph/50 mph 1.5000 in Ice Exposure C

Maximum Values
Anchor 'C'@37.5 ft Azimuth 240 deg Elev 31.5 ft
Plane through centroid of tower



Dewberry Engineers, Inc.		West Hartford Center CT	
99 Summer Street, Suite 700		Project: 50002925 / 50104156	
Boston, MA 02110		Client: Verizon Wireless	Drawn by: adeuschle
Phone: 617-531-0744		Code: TIA-222-H	Date: 05/06/25
FAX: 631-836-1919		Path:	Scale: NTS
			Dwg No. E-6

<i>tnxTower</i> Dewberry Engineers, Inc. 99 Summer Street, Suite 700 Boston, MA 02110 Phone: 617-531-0744 FAX: 631-836-1919	Job	West Hartford Center CT	Page	1 of 38
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	Client	Verizon Wireless	Designed by	adeuschle

Tower Input Data

The main tower is a 3x guyed tower with an overall height of 125.00 ft above the ground line.

The base of the tower is set at an elevation of 25.00 ft above the ground line.

The face width of the tower is 3.04 ft at the top and tapered at the base.

This tower is designed using the TIA-222-H standard.

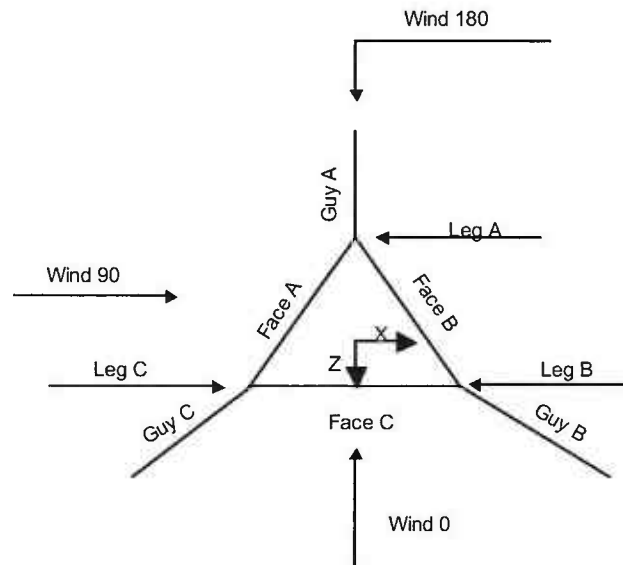
The following design criteria apply:

- Tower base elevation above sea level: 25.00 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 1.5000 in.
- Ice thickness is considered to increase with height.
- Ice density of 56 pcf.
- A wind speed of 50 mph is used in combination with ice.
- Temperature drop of 50 °F.
- Deflections calculated using a wind speed of 60 mph.
- Pressures are calculated at each section.
- Stress ratio used in tower member design is 1.
- Safety factor used in guy design is 1.
- Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

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

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Corner & Starmount Guyed Tower

Tower Section Geometry

Tower Section	Tower Elevation	Assembly Database	Description	Section Width	Number of Sections	Section Length
	ft			ft		ft
T1	125.00-105.00			3.04	1	20.00
T2	105.00-85.00			3.04	1	20.00
T3	85.00-65.00			3.04	1	20.00
T4	65.00-45.00			3.04	1	20.00
T5	45.00-29.00			3.04	1	16.00
T6	29.00-25.00			3.04	1	4.00

Tower Section Geometry (cont'd)

Tower Section	Tower Elevation	Diagonal Spacing	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset	Bottom Girt Offset
	ft	ft				in	in
T1	125.00-105.00	3.92	X Brace	No	Yes	2.5000	2.5000
T2	105.00-85.00	3.92	X Brace	No	Yes	2.5000	2.5000
T3	85.00-65.00	3.92	X Brace	No	Yes	2.5000	2.5000
T4	65.00-45.00	3.92	X Brace	No	Yes	2.5000	2.5000
T5	45.00-29.00	3.90	X Brace	No	Yes	2.5000	2.5000
T6	29.00-25.00	2.79	X Brace	No	Yes	2.5390	12.0000

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Tower Section Geometry (cont'd)

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 125.00-105.00	Solid Round	2	A572-50 (50 ksi)	Solid Round	7/8	A36 (36 ksi)
T2 105.00-85.00	Solid Round	2	A572-50 (50 ksi)	Solid Round	7/8	A36 (36 ksi)
T3 85.00-65.00	Solid Round	2 1/4	A572-50 (50 ksi)	Solid Round	7/8	A36 (36 ksi)
T4 65.00-45.00	Solid Round	2	A572-50 (50 ksi)	Solid Round	7/8	A36 (36 ksi)
T5 45.00-29.00	Solid Round	2	A572-50 (50 ksi)	Solid Round	7/8	A36 (36 ksi)
T6 29.00-25.00	Solid Round	2	A572-50 (50 ksi)	Flat Bar		A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 125.00-105.00	Single Angle	L2x2x3/16	A36 (36 ksi)	Single Angle	L2x2x3/16	A36 (36 ksi)
T2 105.00-85.00	Single Angle	L2x2x3/16	A36 (36 ksi)	Single Angle	L2x2x3/16	A36 (36 ksi)
T3 85.00-65.00	Single Angle	L2x2x3/16	A36 (36 ksi)	Single Angle	L2x2x3/16	A36 (36 ksi)
T4 65.00-45.00	Single Angle	L2x2x1/8	A36 (36 ksi)	Single Angle	L2x2x1/8	A36 (36 ksi)
T5 45.00-29.00	Single Angle	L2x2x1/8	A36 (36 ksi)	Single Angle	L2x2x1/8	A36 (36 ksi)
T6 29.00-25.00	Single Angle	L3x3x1/8	A36 (36 ksi)	Flat Bar	12" x 3/8" Plate	A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation ft	No. of Mid Girts	Mid Girt Type	Mid Girt Size	Mid Girt Grade	Horizontal Type	Horizontal Size	Horizontal Grade
T1 125.00-105.00	None	Flat Bar		A36 (36 ksi)	Single Angle	L2x2x3/16	A36 (36 ksi)
T2 105.00-85.00	None	Flat Bar		A36 (36 ksi)	Single Angle	L2x2x3/16	A36 (36 ksi)
T3 85.00-65.00	None	Flat Bar		A36 (36 ksi)	Single Angle	L2x2x3/16	A36 (36 ksi)
T4 65.00-45.00	None	Flat Bar		A36 (36 ksi)	Single Angle	L2x2x1/8	A36 (36 ksi)
T5 45.00-29.00	None	Flat Bar		A36 (36 ksi)	Single Angle	L2x2x1/8	A36 (36 ksi)
T6 29.00-25.00	1	Single Angle	L2x2x1/4	A36 (36 ksi)	Single Angle		A36 (36 ksi)

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Tower Section Geometry (cont'd)

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontal in	Double Angle Stitch Bolt Spacing Redundants in
ft	ft ²	in							
T1 125.00-105.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T2 105.00-85.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T3 85.00-65.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T4 65.00-45.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T5 45.00-29.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T6 29.00-25.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000

Tower Section Geometry (cont'd)

Tower Elevation	Calc K Single Angles	Calc K Solid Rounds	K Factors ¹							
			Legs	X Brace Diags	K Brace Diags	Single Diags	Girts	Horiz.	Sec. Horiz.	Inner Brace
				X Y	X Y	X Y	X Y	X Y	X Y	X Y
T1 125.00-105.00	Yes	Yes	1	1	1	1	1	1	1	1
T2 105.00-85.00	Yes	Yes	1	1	1	1	1	1	1	1
T3 85.00-65.00	Yes	Yes	1	1	1	1	1	1	1	1
T4 65.00-45.00	Yes	Yes	1	1	1	1	1	1	1	1
T5 45.00-29.00	Yes	Yes	1	1	1	1	1	1	1	1
T6 29.00-25.00	Yes	Yes	1	1	1	1	1	1	1	1

¹Note: K factors are applied to member segment lengths. K-braces without inner supporting members will have the K factor in the out-of-plane direction applied to the overall length.

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Guy Data

Guy Elevation	Guy Grade	Guy Size	Initial Tension	%	Guy Modulus	Guy Weight	L_u	Anchor Radius	Anchor Azimuth Adj.	Anchor Elevation	End Fitting Efficiency	
ft			lb		ksi	plf	ft	ft	°	ft	%	
116.958	EHS	A	3/4	5830.00	10%	19000	1.155	101.53	45.00	0.0000	25.00	100%
		B	3/4	5830.00	10%	19000	1.155	99.12	39.00	0.0000	25.00	100%
		C	3/4	5830.00	10%	19000	1.155	92.55	37.50	0.0000	31.50	100%
76.9583	EHS	A	7/8	7970.00	10%	19000	1.581	67.54	45.00	0.0000	25.00	100%
		B	7/8	7970.00	10%	19000	1.581	63.87	39.00	0.0000	25.00	100%
		C	7/8	7970.00	10%	19000	1.581	57.78	37.50	0.0000	31.50	100%

Guy Data(cont'd)

Guy Elevation	Mount Type	Torque-Arm Spread	Torque-Arm Leg Angle	Torque-Arm Style	Torque-Arm Grade	Torque-Arm Type	Torque-Arm Size
ft		ft	°				
116.958	Corner						
76.9583	Corner						

Guy Data (cont'd)

Guy Elevation	Diagonal Grade	Diagonal Type	Upper Diagonal Size	Lower Diagonal Size	Is Strap.	Pull-Off Grade	Pull-Off Type	Pull-Off Size
ft								
116.96	A572-50 (50 ksi)	Solid Round			No	A36 (36 ksi)	Flat Bar	3" x 1/4" Plate
76.96	A572-50 (50 ksi)	Solid Round			No	A36 (36 ksi)	Flat Bar	3" x 1/4" Plate

Guy Data (cont'd)

Guy Elevation	Cable Weight A	Cable Weight B	Cable Weight C	Cable Weight D	Tower Intercept A	Tower Intercept B	Tower Intercept C	Tower Intercept D
ft	lb	lb	lb	lb	ft	ft	ft	ft
116.958	117.26	114.49	106.89		1.01	0.97	0.84	
					1.7 sec/pulse	1.7 sec/pulse	1.6 sec/pulse	
76.9583	106.78	100.98	91.34		0.45	0.40	0.33	
					1.2 sec/pulse	1.1 sec/pulse	1.0 sec/pulse	

Guy Data (cont'd)

Guy Elevation	Calc K Single Angles	Calc K Solid Rounds	Torque Arm		Pull Off		Diagonal	
			K_x	K_y	K_x	K_y	K_x	K_y
116.958	No	No			1	1	1	1
76.9583	No	No			1	1	1	1

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Guy Data (cont'd)

Guy Elevation ft	Torque-Arm				Pull Off				Diagonal			
	Bolt Size in	Number	Net Width Deduct in	U	Bolt Size in	Number	Net Width Deduct in	U	Bolt Size in	Number	Net Width Deduct in	U
116.958	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
76.9583	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75

Guy Pressures

Guy Elevation ft	Guy Location	z ft	q _z psf	q _z Ice psf	Ice Thickness in
116.958	A	70.98	40	6	1.6194
	B	70.98	40	6	1.6194
	C	74.23	40	6	1.6267
76.9583	A	50.98	37	6	1.5667
	B	50.98	37	6	1.5667
	C	54.23	38	6	1.5764

Guy-Mast Forces (Excluding Wind) - No Ice

Guy Elevation	Guy Location	Chord Angle	Guy Tension Top Bottom lb	F _x	F _y	F _z	M _x	M _y	M _z
ft		°		lb	lb	lb	lb-ft	lb-ft	lb-ft
116.958	A	64.8140	5936.11 5830.00	0.00	5382.38	-2503.49	-9446.85	0.00	0.00
	B	67.9511	5936.11 5830.00	1912.54	5510.03	1104.20	4835.45	0.00	-8375.24
	C	67.3018	5928.61 5830.00	-1964.69	5477.39	1134.31	4806.81	-0.00	8325.63
76.9583	A	50.2294	Sum: 8052.07 7970.00	-52.15 0.00	16369.79 6210.75	-264.98 -5124.69	195.40 -10900.77	-0.00 0.00	-49.60 0.00
	B	54.3662	8052.07 7970.00	4041.89	6561.50	2333.59	5758.19	0.00	-9973.49
	C	51.8213	8041.80 7970.00	-4285.54	6338.99	2474.26	5562.92	-0.00	9635.26
			Sum:	-243.65	19111.24	-316.84	420.35	-0.00	-338.22

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	Verizon Wireless	adeuschle

Guy-Mast Forces (Excluding Wind) - Ice

Guy Elevation	Guy Location	Chord Angle	Guy Tension Top Bottom lb	F _x	F _y	F _z	M _x	M _y	M _z
ft		°		lb	lb	lb	lb-ft	lb-ft	lb-ft
116.958	A	64.8140	8461.34 7924.56	0.00	7710.33	-3484.97	-13532.74	0.00	0.00
	B	67.9511	8403.88 7867.10	2643.70	7829.83	1526.34	6871.25	0.00	-11901.35
	C	67.3018	8371.40 7869.53	-2712.63	7763.32	1566.14	6812.88	-0.00	11800.25
			Sum:	-68.93	23303.48	-392.49	151.38	-0.00	-101.10
76.9583	A	50.2294	11202.96 10878.29	0.00	8696.93	-7061.84	-15264.38	0.00	0.00
	B	54.3662	11154.92 10830.25	5545.58	9133.87	3201.74	8015.63	0.00	-13883.48
	C	51.8213	11121.71 10835.49	-5876.28	8812.01	3392.67	7733.18	-0.00	13394.26
			Sum:	-330.69	26642.82	-467.43	484.43	-0.00	-489.22

Guy-Mast Forces (Excluding Wind) - Service

Guy Elevation	Guy Location	Chord Angle	Guy Tension Top Bottom lb	F _x	F _y	F _z	M _x	M _y	M _z
ft		°		lb	lb	lb	lb-ft	lb-ft	lb-ft
116.958	A	64.8140	5936.11 5830.00	0.00	5382.38	-2503.49	-9446.85	0.00	0.00
	B	67.9511	5936.11 5830.00	1912.54	5510.03	1104.20	4835.45	0.00	-8375.24
	C	67.3018	5928.61 5830.00	-1964.69	5477.39	1134.31	4806.81	-0.00	8325.63
			Sum:	-52.15	16369.79	-264.98	195.40	-0.00	-49.60
76.9583	A	50.2294	8052.07 7970.00	0.00	6210.75	-5124.69	-10900.77	0.00	0.00
	B	54.3662	8052.07 7970.00	4041.89	6561.50	2333.59	5758.19	0.00	-9973.49
	C	51.8213	8041.80 7970.00	-4285.54	6338.99	2474.26	5562.92	-0.00	9635.26
			Sum:	-243.65	19111.24	-316.84	420.35	-0.00	-338.22

Guy-Tensioning Information

Temperature At Time Of Tensioning																	
Guy Elevation	H	V	0 F		20 F		40 F		60 F		80 F		100 F		120 F		
			Initial Tension	Intercept	Initial Tension	Intercept	Initial Tension	Intercept	Initial Tension	Intercept	Initial Tension	Intercept	Initial Tension	Intercept	Initial Tension	Intercept	
			lb	ft	lb	ft	lb	ft	lb	ft	lb	ft	lb	ft	lb	ft	
116.958	A	43.24	91.96	6279	0.94	6129	0.96	5979	0.99	5830	1.01	5681	1.04	5531	1.07	5382	1.10
	B	37.24	91.96	6180	0.91	6063	0.93	5946	0.95	5830	0.97	5714	0.99	5597	1.01	5481	1.03
	C	35.74	85.46	6200	0.79	6076	0.81	5953	0.82	5830	0.84	5707	0.86	5584	0.88	5461	0.90
76.9583	A	43.24	51.96	9357	0.38	8894	0.40	8432	0.43	7970	0.45	7509	0.48	7049	0.51	6590	0.54
	B	37.24	51.96	9122	0.35	8737	0.37	8353	0.38	7970	0.40	7587	0.42	7204	0.45	6822	0.47
	C	35.74	45.46	9267	0.28	8834	0.30	8402	0.31	7970	0.33	7539	0.35	7108	0.37	6678	0.39

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Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
Climbing Pegs	C	No	No	Ar (CaAa)	125.00 - 29.00	0.0000	0.5	1	1	0.2500 0.0000	0.1500		0.31
1DF7-50A (1 5/8 FOAM) (Verizon)	A	No	No	Ar (CaAa)	104.00 - 29.00	1.0000	0	12	6	0.5000	1.9800		0.82
Hybriflex (Verizon)	A	No	No	Ar (CaAa)	104.00 - 29.00	1.0000	-0.25	2	1	0.5000	1.5400		1.08
LDF6-50A (1-1/4 FOAM) (Clearwire)	C	No	No	Ar (CaAa)	122.00 - 29.00	-0.5000	0	8	8	0.5000	1.5500		0.66
LDF6-50A (1-1/4 FOAM) (Clearwire)	C	No	No	Ar (CaAa)	122.00 - 29.00	-2.0000	0	3	3	0.5000	1.5500		0.66
1DF7-50A (1 5/8 FOAM)	B	No	No	Ar (CaAa)	125.00 - 29.00	-0.5000	-0.05	1	1	0.5000	1.9800		0.82
1DF7-50A (1 5/8 FOAM)	B	No	No	Ar (CaAa)	125.00 - 29.00	-0.5000	0.07	1	1	0.5000	1.9800		0.82
LDF5-50A (7/8 FOAM)	B	No	No	Ar (CaAa)	125.00 - 29.00	-0.5000	0.02	1	1	0.5000	1.0900		0.33
LDF4P-50A (1/2 FOAM) (dishes)	B	No	No	Ar (CaAa)	122.00 - 29.00	-0.5000	-0.15	3	3	0.5000	0.6300		0.15
LDF5-50A (7/8 FOAM) (unused)	B	No	No	Ar (CaAa)	122.00 - 29.00	-0.5000	-0.3	3	3	0.5000	1.0900		0.33
LDF6-50A (1-1/4 FOAM) (Clearwire)	B	No	No	Ar (CaAa)	122.00 - 29.00	-0.5000	0.15	1	1	0.5000	1.5500		0.66
2" FLEX CONDUIT (Clearwire)	B	No	No	Ar (CaAa)	122.00 - 29.00	-0.5000	0.21	1	1	0.5000	2.0000		0.32
LDF4P-50A (1/2 FOAM) (Yagi)	B	No	No	Ar (CaAa)	55.00 - 29.00	-0.5000	0.3	1	1	0.5000	0.6300		0.15
1DF7-50A (1 5/8 FOAM)	B	No	No	Ar (CaAa)	69.00 - 29.00	-0.5000	0.38	1	1	0.5000	1.9800		0.82
Safety Line 5/8	C	No	No	Ar (CaAa)	125.00 - 29.00	0.0000	0.5	1	1	0.8800	0.8800		0.40

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight lb
T1	125.00-105.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	24.907	0.000	80.54
		C	0.000	0.000	31.045	0.000	137.62
T2	105.00-85.00	A	0.000	0.000	50.996	0.000	228.00
		B	0.000	0.000	27.520	0.000	87.80
		C	0.000	0.000	36.160	0.000	159.40
T3	85.00-65.00	A	0.000	0.000	53.680	0.000	240.00
		B	0.000	0.000	28.312	0.000	91.08
		C	0.000	0.000	36.160	0.000	159.40

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Tower Section	Tower Elevation ft	Face	A_R ft ²	A_F ft ²	$C_A A_A$ In Face ft ²	$C_A A_A$ Out Face ft ²	Weight lb
T4	65.00-45.00	A	0.000	0.000	53.680	0.000	240.00
		B	0.000	0.000	32.110	0.000	105.70
		C	0.000	0.000	36.160	0.000	159.40
T5	45.00-29.00	A	0.000	0.000	42.944	0.000	192.00
		B	0.000	0.000	26.192	0.000	85.76
		C	0.000	0.000	28.928	0.000	127.52
T6	29.00-25.00	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	0.000	0.00

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft ²	A_F ft ²	$C_A A_A$ In Face ft ²	$C_A A_A$ Out Face ft ²	Weight lb
T1	125.00-105.00	A	1.699	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	82.839	0.000	1066.02
		C		0.000	0.000	79.910	0.000	1042.29
T2	105.00-85.00	A	1.667	0.000	0.000	66.058	0.000	1178.71
		B		0.000	0.000	90.991	0.000	1143.47
		C		0.000	0.000	90.577	0.000	1168.21
T3	85.00-65.00	A	1.628	0.000	0.000	69.006	0.000	1217.50
		B		0.000	0.000	91.772	0.000	1140.39
		C		0.000	0.000	89.765	0.000	1140.55
T4	65.00-45.00	A	1.579	0.000	0.000	68.333	0.000	1188.15
		B		0.000	0.000	102.062	0.000	1262.13
		C		0.000	0.000	88.729	0.000	1105.68
T5	45.00-29.00	A	1.517	0.000	0.000	54.002	0.000	921.95
		B		0.000	0.000	82.632	0.000	991.90
		C		0.000	0.000	69.962	0.000	850.65
T6	29.00-25.00	A	1.470	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	0.000	0.00

Feed Line Center of Pressure

Section	Elevation ft	CP_x in	CP_z in	CP_x Ice in	CP_z Ice in
T1	125.00-105.00	1.4010	-1.1517	0.8746	-0.5898
T2	105.00-85.00	-0.6716	-2.4264	-0.0928	-1.1642
T3	85.00-65.00	-0.6865	-2.4046	-0.1036	-1.1641
T4	65.00-45.00	-0.2837	-2.1101	0.3588	-0.9050
T5	45.00-29.00	-0.1905	-2.0506	0.5673	-0.8208
T6	29.00-25.00	0.0000	0.0000	0.0000	0.0000

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Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T1	1	Climbing Pegs	105.00 - 125.00	0.6000	0.3979
T1	4	LDF6-50A (1-1/4 FOAM)	105.00 - 122.00	1.0000	1.0000
T1	5	LDF6-50A (1-1/4 FOAM)	105.00 - 122.00	1.0000	1.0000
T1	6	1DF7-50A (1 5/8 FOAM)	105.00 - 125.00	0.6000	0.3979
T1	7	1DF7-50A (1 5/8 FOAM)	105.00 - 125.00	0.6000	0.3979
T1	8	LDF5-50A (7/8 FOAM)	105.00 - 125.00	1.0000	1.0000
T1	9	LDF4P-50A (1/2 FOAM)	105.00 - 122.00	1.0000	1.0000
T1	10	LDF5-50A (7/8 FOAM)	105.00 - 122.00	1.0000	1.0000
T1	11	LDF6-50A (1-1/4 FOAM)	105.00 - 122.00	1.0000	1.0000
T1	12	2" FLEX CONDUIT	105.00 - 122.00	0.6000	0.3979
T1	15	Safety Line 5/8	105.00 - 125.00	1.0000	1.0000
T2	1	Climbing Pegs	85.00 - 105.00	0.6000	0.3990
T2	2	1DF7-50A (1 5/8 FOAM)	85.00 - 104.00	0.6000	0.3990
T2	3	Hybriflex	85.00 - 104.00	0.6000	0.3990
T2	4	LDF6-50A (1-1/4 FOAM)	85.00 - 105.00	1.0000	1.0000
T2	5	LDF6-50A (1-1/4 FOAM)	85.00 - 105.00	1.0000	1.0000
T2	6	1DF7-50A (1 5/8 FOAM)	85.00 - 105.00	0.6000	0.3990
T2	7	1DF7-50A (1 5/8 FOAM)	85.00 - 105.00	0.6000	0.3990
T2	8	LDF5-50A (7/8 FOAM)	85.00 - 105.00	1.0000	1.0000
T2	9	LDF4P-50A (1/2 FOAM)	85.00 - 105.00	1.0000	1.0000
T2	10	LDF5-50A (7/8 FOAM)	85.00 - 105.00	1.0000	1.0000
T2	11	LDF6-50A (1-1/4 FOAM)	85.00 - 105.00	1.0000	1.0000
T2	12	2" FLEX CONDUIT	85.00 - 105.00	0.6000	0.3990
T2	15	Safety Line 5/8	85.00 - 105.00	1.0000	1.0000
T3	1	Climbing Pegs	65.00 - 85.00	0.6000	0.4076
T3	2	1DF7-50A (1 5/8 FOAM)	65.00 - 85.00	0.6000	0.4076
T3	3	Hybriflex	65.00 - 85.00	0.6000	0.4076
T3	4	LDF6-50A (1-1/4 FOAM)	65.00 - 85.00	1.0000	1.0000
T3	5	LDF6-50A (1-1/4 FOAM)	65.00 - 85.00	1.0000	1.0000
T3	6	1DF7-50A (1 5/8 FOAM)	65.00 - 85.00	0.6000	0.4076
T3	7	1DF7-50A (1 5/8 FOAM)	65.00 - 85.00	0.6000	0.4076
T3	8	LDF5-50A (7/8 FOAM)	65.00 - 85.00	1.0000	1.0000
T3	9	LDF4P-50A (1/2 FOAM)	65.00 - 85.00	1.0000	1.0000
T3	10	LDF5-50A (7/8 FOAM)	65.00 - 85.00	1.0000	1.0000
T3	11	LDF6-50A (1-1/4 FOAM)	65.00 - 85.00	1.0000	1.0000
T3	12	2" FLEX CONDUIT	65.00 - 85.00	0.6000	0.4076
T3	14	1DF7-50A (1 5/8 FOAM)	65.00 - 69.00	0.6000	0.4076
T3	15	Safety Line 5/8	65.00 - 85.00	1.0000	1.0000
T4	1	Climbing Pegs	45.00 - 65.00	0.6000	0.4186
T4	2	1DF7-50A (1 5/8 FOAM)	45.00 - 65.00	0.6000	0.4186
T4	3	Hybriflex	45.00 - 65.00	0.6000	0.4186
T4	4	LDF6-50A (1-1/4 FOAM)	45.00 - 65.00	1.0000	1.0000
T4	5	LDF6-50A (1-1/4 FOAM)	45.00 - 65.00	1.0000	1.0000
T4	6	1DF7-50A (1 5/8 FOAM)	45.00 - 65.00	0.6000	0.4186
T4	7	1DF7-50A (1 5/8 FOAM)	45.00 - 65.00	0.6000	0.4186
T4	8	LDF5-50A (7/8 FOAM)	45.00 - 65.00	1.0000	1.0000
T4	9	LDF4P-50A (1/2 FOAM)	45.00 - 65.00	1.0000	1.0000
T4	10	LDF5-50A (7/8 FOAM)	45.00 - 65.00	1.0000	1.0000

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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T4	11	LDF6-50A (1-1/4 FOAM)	45.00 - 65.00	1.0000	1.0000
T4	12	2" FLEX CONDUIT	45.00 - 65.00	0.6000	0.4186
T4	13	LDF4P-50A (1/2 FOAM)	45.00 - 55.00	1.0000	1.0000
T4	14	1DF7-50A (1 5/8 FOAM)	45.00 - 65.00	0.6000	0.4186
T4	15	Safety Line 5/8	45.00 - 65.00	1.0000	1.0000
T5	1	Climbing Pegs	29.00 - 45.00	0.6000	0.4286
T5	2	1DF7-50A (1 5/8 FOAM)	29.00 - 45.00	0.6000	0.4286
T5	3	Hybriflex	29.00 - 45.00	0.6000	0.4286
T5	4	LDF6-50A (1-1/4 FOAM)	29.00 - 45.00	1.0000	1.0000
T5	5	LDF6-50A (1-1/4 FOAM)	29.00 - 45.00	1.0000	1.0000
T5	6	1DF7-50A (1 5/8 FOAM)	29.00 - 45.00	0.6000	0.4286
T5	7	1DF7-50A (1 5/8 FOAM)	29.00 - 45.00	0.6000	0.4286
T5	8	LDF5-50A (7/8 FOAM)	29.00 - 45.00	1.0000	1.0000
T5	9	LDF4P-50A (1/2 FOAM)	29.00 - 45.00	1.0000	1.0000
T5	10	LDF5-50A (7/8 FOAM)	29.00 - 45.00	1.0000	1.0000
T5	11	LDF6-50A (1-1/4 FOAM)	29.00 - 45.00	1.0000	1.0000
T5	12	2" FLEX CONDUIT	29.00 - 45.00	0.6000	0.4286
T5	13	LDF4P-50A (1/2 FOAM)	29.00 - 45.00	1.0000	1.0000
T5	14	1DF7-50A (1 5/8 FOAM)	29.00 - 45.00	0.6000	0.4286
T5	15	Safety Line 5/8	29.00 - 45.00	1.0000	1.0000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight lb
10'x3" Dia Omni	A	From Leg	0.25	0.0000	125.00	No Ice	3.00	3.00	35.00
			0.00			1/2" Ice	4.03	4.03	56.79
			5.00			1" Ice	5.03	5.03	85.14
						2" Ice	6.26	6.26	162.16
4 Bay DiPole	B	From Leg	0.25	0.0000	125.00	No Ice	3.15	3.15	32.00
			0.00			1/2" Ice	5.67	5.67	42.00
			5.00			1" Ice	8.19	8.19	52.00
						2" Ice	13.23	13.23	72.00
12'x3" Dia Omni	B	From Leg	0.25	0.0000	125.00	No Ice	3.60	3.60	36.00
			0.00			1/2" Ice	4.83	4.83	62.06
			16.00			1" Ice	6.08	6.08	95.92
						2" Ice	8.02	8.02	187.60
6'x3" Dia Omni	C	From Leg	0.25	0.0000	125.00	No Ice	1.77	1.77	20.00
			0.00			1/2" Ice	2.13	2.13	33.24
			3.00			1" Ice	2.50	2.50	50.59
						2" Ice	3.27	3.27	98.29
Valmont 13' standoff Mounting Frame (Clearwire)	A	From Leg	2.25	0.0000	122.00	No Ice	20.60	12.90	517.00
			0.00			1/2" Ice	28.80	19.40	784.00
			0.00			1" Ice	37.00	25.90	1051.00
						2" Ice	53.40	38.90	1585.00
Valmont 13' standoff Mounting Frame (Clearwire)	B	From Leg	2.25	0.0000	122.00	No Ice	20.60	12.90	517.00
			0.00			1/2" Ice	28.80	19.40	784.00
			0.00			1" Ice	37.00	25.90	1051.00
						2" Ice	53.40	38.90	1585.00
Valmont 13' standoff	C	From Leg	2.25	0.0000	122.00	No Ice	20.60	12.90	517.00

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Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C _{AA} Front ft ²	C _{AA} Side ft ²	Weight lb
Mounting Frame (Clearwire)			0.00 0.00			1/2" Ice 28.80 1" Ice 37.00 2" Ice 53.40	19.40 25.90 38.90	784.00 1051.00 1585.00
(4) 2-3/8" OD Mast Pipe (6' Long) (Clearwire)	A	From Leg	4.50 2.00 0.00	0.0000	122.00	No Ice 1.43 1/2" Ice 1.92 1" Ice 2.29 2" Ice 3.06	1.43 1.92 2.29 3.06	21.96 32.79 47.67 90.24
(4) 2-3/8" OD Mast Pipe (6' Long) (Clearwire)	B	From Leg	4.50 2.00 0.00	0.0000	122.00	No Ice 1.43 1/2" Ice 1.92 1" Ice 2.29 2" Ice 3.06	1.43 1.92 2.29 3.06	21.96 32.79 47.67 90.24
(4) 2-3/8" OD Mast Pipe (6' Long) (Clearwire)	C	From Leg	4.50 2.00 0.00	0.0000	122.00	No Ice 1.43 1/2" Ice 1.92 1" Ice 2.29 2" Ice 3.06	1.43 1.92 2.29 3.06	21.96 32.79 47.67 90.24
Valmont VFA12-HD Sector Frame (Verizon)	A	From Leg	1.50 0.00 0.00	0.0000	102.00	No Ice 13.20 1/2" Ice 19.50 1" Ice 25.80 2" Ice 38.40	9.20 14.60 20.00 30.80	658.00 804.00 950.00 1242.00
Valmont VFA12-HD Sector Frame (Verizon)	B	From Leg	1.50 0.00 0.00	0.0000	102.00	No Ice 13.20 1/2" Ice 19.50 1" Ice 25.80 2" Ice 38.40	9.20 14.60 20.00 30.80	658.00 804.00 950.00 1242.00
Valmont VFA12-HD Sector Frame (Verizon)	C	From Leg	1.50 0.00 0.00	0.0000	102.00	No Ice 13.20 1/2" Ice 19.50 1" Ice 25.80 2" Ice 38.40	9.20 14.60 20.00 30.80	658.00 804.00 950.00 1242.00
CBRS RRH w/ Clip-on Antenna w/ mast pipe (Verizon)	A	From Leg	3.00 -6.00 1.00	0.0000	102.00	No Ice 2.64 1/2" Ice 3.19 1" Ice 3.64 2" Ice 4.58	2.18 2.80 3.29 4.34	45.20 73.10 105.01 184.16
(2) SBNHH-1D65B w/ Mast Pipe (Verizon)	A	From Leg	3.00 -0.50 1.00	0.0000	102.00	No Ice 8.62 1/2" Ice 9.28 1" Ice 9.91 2" Ice 11.11	7.30 8.58 9.72 11.66	84.80 156.34 236.09 424.23
MT6413-77A w/ 8' long pipe (Verizon)	A	From Leg	3.00 2.50 1.00	0.0000	102.00	No Ice 5.11 1/2" Ice 5.94 1" Ice 6.67 2" Ice 7.90	3.36 4.38 5.25 6.65	86.50 131.91 182.84 305.27
CBRS RRH w/ Clip-on Antenna w/ mast pipe (Verizon)	B	From Leg	3.00 -6.00 1.00	0.0000	102.00	No Ice 2.64 1/2" Ice 3.19 1" Ice 3.64 2" Ice 4.58	2.18 2.80 3.29 4.34	45.20 73.10 105.01 184.16
(2) SBNHH-1D65B w/ Mast Pipe (Verizon)	B	From Leg	3.00 -0.50 1.00	0.0000	102.00	No Ice 8.62 1/2" Ice 9.28 1" Ice 9.91 2" Ice 11.11	7.30 8.58 9.72 11.66	84.80 156.34 236.09 424.23
MT6413-77A w/ 8' long pipe (Verizon)	B	From Leg	3.00 2.50 1.00	0.0000	102.00	No Ice 5.11 1/2" Ice 5.94 1" Ice 6.67 2" Ice 7.90	3.36 4.38 5.25 6.65	86.50 131.91 182.84 305.27
CBRS RRH w/ Clip-on Antenna w/ mast pipe (Verizon)	C	From Leg	3.00 -6.00 1.00	0.0000	102.00	No Ice 2.64 1/2" Ice 3.19 1" Ice 3.64 2" Ice 4.58	2.18 2.80 3.29 4.34	45.20 73.10 105.01 184.16
(2) SBNHH-1D65B w/ Mast Pipe	C	From Leg	3.00 -0.50	0.0000	102.00	No Ice 8.62 1/2" Ice 9.28	7.30 8.58	84.80 156.34

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	Client	Verizon Wireless	Designed by	adeuschle

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C _{AA} Front ft ²	C _{AA} Side ft ²	Weight lb
(Verizon)			1.00			1" Ice 9.91	9.72	236.09
MT6413-77A w/ 8' long pipe	C	From Leg	3.00	0.0000	102.00	2" Ice 11.11	11.66	424.23
(Verizon)			2.50			No Ice 5.11	3.36	86.50
			1.00			1/2" Ice 5.94	4.38	131.91
						1" Ice 6.67	5.25	182.84
						2" Ice 7.90	6.65	305.27
B5/B13 RRH	A	From Face	0.50	0.0000	102.00	No Ice 1.88	1.01	82.00
(Verizon)			-1.25			1/2" Ice 2.05	1.14	98.43
			3.00			1" Ice 2.22	1.28	117.53
						2" Ice 2.60	1.59	164.50
B5/B13 RRH	B	From Face	0.50	0.0000	102.00	No Ice 1.88	1.01	82.00
(Verizon)			-1.25			1/2" Ice 2.05	1.14	98.43
			3.00			1" Ice 2.22	1.28	117.53
						2" Ice 2.60	1.59	164.50
B5/B13 RRH	C	From Face	0.50	0.0000	102.00	No Ice 1.88	1.01	82.00
(Verizon)			-1.25			1/2" Ice 2.05	1.14	98.43
			3.00			1" Ice 2.22	1.28	117.53
						2" Ice 2.60	1.59	164.50
B2/B66A RRH	A	From Face	0.50	0.0000	102.00	No Ice 1.88	1.25	97.50
(Verizon)			1.25			1/2" Ice 2.05	1.39	115.84
			3.00			1" Ice 2.22	1.54	136.97
						2" Ice 2.60	1.86	188.37
B2/B66A RRH	B	From Face	0.50	0.0000	102.00	No Ice 1.88	1.25	97.50
(Verizon)			1.25			1/2" Ice 2.05	1.39	115.84
			3.00			1" Ice 2.22	1.54	136.97
						2" Ice 2.60	1.86	188.37
B2/B66A RRH	C	From Face	0.50	0.0000	102.00	No Ice 1.88	1.25	97.50
(Verizon)			1.25			1/2" Ice 2.05	1.39	115.84
			3.00			1" Ice 2.22	1.54	136.97
						2" Ice 2.60	1.86	188.37
(2) DB-T1-6Z-12AB-OZ	B	From Face	0.50	0.0000	102.00	No Ice 2.82	1.85	26.00
OVP			0.00			1/2" Ice 3.04	2.03	51.02
(Verizon)			5.00			1" Ice 3.25	2.22	79.31
						2" Ice 3.71	2.62	146.52
4' Yagi	A	From Leg	2.00	0.0000	69.00	No Ice 1.20	1.20	20.00
			0.00			1/2" Ice 1.80	1.80	30.00
			0.00			1" Ice 2.40	2.40	40.00
						2" Ice 3.60	3.60	60.00
4' Yagi	A	From Leg	2.00	0.0000	55.00	No Ice 1.20	1.20	20.00
			0.00			1/2" Ice 1.80	1.80	30.00
			0.00			1" Ice 2.40	2.40	40.00
						2" Ice 3.60	3.60	60.00
2'x2'x1' junction box	B	From Face	0.50	0.0000	32.00	No Ice 4.80	2.40	30.00
			0.00			1/2" Ice 5.07	2.60	69.31
			0.00			1" Ice 5.35	2.81	112.70
						2" Ice 5.93	3.26	212.52
BSF0020F3V1-1 (2 Side by	A	From Leg	2.00	0.0000	102.00	No Ice 0.56	0.96	35.20
Side)			-0.50			1/2" Ice 0.65	1.09	44.27
(Verizon)			0.00			1" Ice 0.76	1.22	55.33
						2" Ice 0.99	1.50	84.22
BSF0020F3V1-1 (2 Side by	B	From Leg	2.00	0.0000	102.00	No Ice 0.56	0.96	35.20
Side)			-0.50			1/2" Ice 0.65	1.09	44.27
(Verizon)			0.00			1" Ice 0.76	1.22	55.33
						2" Ice 0.99	1.50	84.22

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Tower Pressures - No Ice

$$G_H = 0.850$$

Section Elevation	z	K _z	q _z	A _G	F a c e	A _F	A _R	A _{leg}	Leg %	C _A A _A In Face ft ²	C _A A _A Out Face ft ²
ft	ft		psf	ft ²		ft ²	ft ²	ft ²			
T1 125.00-105.00	115.00	1.303	44	64.133	A	2.454	10.084	6.667	53.17	0.000	0.000
					B	2.454	10.084		53.17	24.907	0.000
					C	2.454	10.084		53.17	31.045	0.000
T2 105.00-85.00	95.00	1.252	43	64.133	A	2.873	10.084	6.667	51.45	50.996	0.000
					B	2.873	10.084		51.45	27.520	0.000
					C	2.873	10.084		51.45	36.160	0.000
T3 85.00-65.00	75.00	1.191	41	64.550	A	2.437	10.892	7.500	56.27	53.680	0.000
					B	2.437	10.892		56.27	28.312	0.000
					C	2.437	10.892		56.27	36.160	0.000
T4 65.00-45.00	55.00	1.116	38	64.133	A	2.873	10.084	6.667	51.45	53.680	0.000
					B	2.873	10.084		51.45	32.110	0.000
					C	2.873	10.084		51.45	36.160	0.000
T5 45.00-29.00	37.00	1.027	35	51.307	A	2.394	8.058	5.333	51.03	42.944	0.000
					B	2.394	8.058		51.03	26.192	0.000
					C	2.394	8.058		51.03	28.928	0.000
T6 29.00-25.00	27.00	0.961	33	6.793	A	0.697	1.456	1.456	67.64	0.000	0.000
					B	0.697	1.456		67.64	0.000	0.000
					C	0.697	1.456		67.64	0.000	0.000

Tower Pressure - With Ice

$$G_H = 0.850$$

Section Elevation	z	K _z	q _z	t _z	A _G	F a c e	A _F	A _R	A _{leg}	Leg %	C _A A _A In Face ft ²	C _A A _A Out Face ft ²
ft	ft		psf	in	ft ²		ft ²	ft ²	ft ²			
T1 125.00-105.00	115.00	1.303	7	1.6995	69.798	A	2.454	39.570	17.996	42.82	0.000	0.000
						B	2.454	39.570		42.82	82.839	0.000
						C	2.454	39.570		42.82	79.910	0.000
T2 105.00-85.00	95.00	1.252	7	1.6673	69.691	A	2.873	39.012	17.782	42.45	66.058	0.000
						B	2.873	39.012		42.45	90.991	0.000
						C	2.873	39.012		42.45	90.577	0.000
T3 85.00-65.00	75.00	1.191	6	1.6283	69.978	A	2.437	39.018	18.356	44.28	69.006	0.000
						B	2.437	39.018		44.28	91.772	0.000
						C	2.437	39.018		44.28	89.765	0.000
T4 65.00-45.00	55.00	1.116	6	1.5786	69.395	A	2.873	37.473	17.191	42.61	68.333	0.000
						B	2.873	37.473		42.61	102.062	0.000
						C	2.873	37.473		42.61	88.729	0.000
T5 45.00-29.00	37.00	1.027	6	1.5173	55.353	A	2.394	29.232	13.425	42.45	54.002	0.000
						B	2.394	29.232		42.45	82.632	0.000
						C	2.394	29.232		42.45	69.962	0.000
T6 29.00-25.00	27.00	0.961	5	1.4702	7.842	A	0.697	4.407	3.597	70.48	0.000	0.000
						B	0.697	4.407		70.48	0.000	0.000
						C	0.697	4.407		70.48	0.000	0.000

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Tower Pressure - Service

$$G_H = 0.850$$

Section Elevation ft	z ft	K _z	q _z psf	A _G ft ²	F a c e	A _F ft ²	A _R ft ²	A _{leg} ft ²	Leg % %	C _A A _A In Face ft ²	C _A A _A Out Face ft ²
T1 125.00-105.00	115.00	1.303	10	64.133	A	2.454	10.084	6.667	53.17	0.000	0.000
					B	2.454	10.084		53.17	24.907	0.000
					C	2.454	10.084		53.17	31.045	0.000
T2 105.00-85.00	95.00	1.252	10	64.133	A	2.873	10.084	6.667	51.45	50.996	0.000
					B	2.873	10.084		51.45	27.520	0.000
					C	2.873	10.084		51.45	36.160	0.000
T3 85.00-65.00	75.00	1.191	9	64.550	A	2.437	10.892	7.500	56.27	53.680	0.000
					B	2.437	10.892		56.27	28.312	0.000
					C	2.437	10.892		56.27	36.160	0.000
T4 65.00-45.00	55.00	1.116	9	64.133	A	2.873	10.084	6.667	51.45	53.680	0.000
					B	2.873	10.084		51.45	32.110	0.000
					C	2.873	10.084		51.45	36.160	0.000
T5 45.00-29.00	37.00	1.027	8	51.307	A	2.394	8.058	5.333	51.03	42.944	0.000
					B	2.394	8.058		51.03	26.192	0.000
					C	2.394	8.058		51.03	28.928	0.000
T6 29.00-25.00	27.00	0.961	8	6.793	A	0.697	1.456	1.456	67.64	0.000	0.000
					B	0.697	1.456		67.64	0.000	0.000
					C	0.697	1.456		67.64	0.000	0.000

Tower Forces - No Ice - Wind Normal To Face

Section Elevation ft	Add Weight lb	Self Weight lb	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F lb	w plf	Ctrl. Face
T1 125.00-105.00	218.16	1079.98	A	0.195	2.611	44	1	1	8.239	2659.06	132.95	C
			B	0.195	2.611		1	1	8.239			
			C	0.195	2.611		1	1	8.239			
T2 105.00-85.00	475.20	1078.89	A	0.202	2.589	43	1	1	8.670	3329.64	166.48	C
			B	0.202	2.589		1	1	8.670			
			C	0.202	2.589		1	1	8.670			
T3 85.00-65.00	490.48	1250.35	A	0.206	2.574	41	1	1	8.707	3207.49	160.37	C
			B	0.206	2.574		1	1	8.707			
			C	0.206	2.574		1	1	8.707			
T4 65.00-45.00	505.10	1035.95	A	0.202	2.589	38	1	1	8.670	3087.44	154.37	C
			B	0.202	2.589		1	1	8.670			
			C	0.202	2.589		1	1	8.670			
T5 45.00-29.00	405.28	830.96	A	0.204	2.584	35	1	1	7.029	2293.11	143.32	C
			B	0.204	2.584		1	1	7.029			
			C	0.204	2.584		1	1	7.029			
T6 29.00-25.00	0.00	196.59	A	0.317	2.252	33	1	1	1.577	98.58	24.65	C
			B	0.317	2.252		1	1	1.577			
			C	0.317	2.252		1	1	1.577			
Sum Weight:	2094.22	5472.71								14675.31		

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	Client	Verizon Wireless	Designed by	adeuschle

Tower Forces - No Ice - Wind 60 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F lb	w plf	Ctrl. Face
ft	lb	lb										
T1 125.00-105.00	218.16	1079.98	A	0.195	2.611	44	0.8	1	7.749	2610.78	130.54	A
			B	0.195	2.611		0.8	1	7.749			
			C	0.195	2.611		0.8	1	7.749			
T2 105.00-85.00	475.20	1078.89	A	0.202	2.589	43	0.8	1	8.095	3275.80	163.79	A
			B	0.202	2.589		0.8	1	8.095			
			C	0.202	2.589		0.8	1	8.095			
T3 85.00-65.00	490.48	1250.35	A	0.206	2.574	41	0.8	1	8.219	3164.30	158.21	A
			B	0.206	2.574		0.8	1	8.219			
			C	0.206	2.574		0.8	1	8.219			
T4 65.00-45.00	505.10	1035.95	A	0.202	2.589	38	0.8	1	8.095	3039.45	151.97	A
			B	0.202	2.589		0.8	1	8.095			
			C	0.202	2.589		0.8	1	8.095			
T5 45.00-29.00	405.28	830.96	A	0.204	2.584	35	0.8	1	6.550	2256.40	141.03	A
			B	0.204	2.584		0.8	1	6.550			
			C	0.204	2.584		0.8	1	6.550			
T6 29.00-25.00	0.00	196.59	A	0.317	2.252	33	0.8	1	1.437	89.87	22.47	C
			B	0.317	2.252		0.8	1	1.437			
			C	0.317	2.252		0.8	1	1.437			
Sum Weight:	2094.22	5472.71								14436.60		

Tower Forces - No Ice - Wind 90 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F lb	w plf	Ctrl. Face
ft	lb	lb										
T1 125.00-105.00	218.16	1079.98	A	0.195	2.611	44	0.85	1	7.871	2706.74	135.34	A
			B	0.195	2.611		0.85	1	7.871			
			C	0.195	2.611		0.85	1	7.871			
T2 105.00-85.00	475.20	1078.89	A	0.202	2.589	43	0.85	1	8.239	3400.63	170.03	B
			B	0.202	2.589		0.85	1	8.239			
			C	0.202	2.589		0.85	1	8.239			
T3 85.00-65.00	490.48	1250.35	A	0.206	2.574	41	0.85	1	8.341	3292.80	164.64	B
			B	0.206	2.574		0.85	1	8.341			
			C	0.206	2.574		0.85	1	8.341			
T4 65.00-45.00	505.10	1035.95	A	0.202	2.589	38	0.85	1	8.239	3161.71	158.09	B
			B	0.202	2.589		0.85	1	8.239			
			C	0.202	2.589		0.85	1	8.239			
T5 45.00-29.00	405.28	830.96	A	0.204	2.584	35	0.85	1	6.670	2346.73	146.67	B
			B	0.204	2.584		0.85	1	6.670			
			C	0.204	2.584		0.85	1	6.670			
T6 29.00-25.00	0.00	196.59	A	0.317	2.252	33	0.85	1	1.472	92.05	23.01	C
			B	0.317	2.252		0.85	1	1.472			
			C	0.317	2.252		0.85	1	1.472			
Sum Weight:	2094.22	5472.71								15000.66		

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Tower Forces - With Ice - Wind Normal To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F lb	w plf	Ctrl. Face
ft	lb	lb	e									
T1 125.00-105.00	2108.31	2853.78	A	0.602	1.803	7	1	1	31.937	883.41*	44.17	C
			B	0.602	1.803		1	1	31.937			
			C	0.602	1.803		1	1	31.937			
T2 105.00-85.00	3490.38	2798.48	A	0.601	1.803	7	1	1	31.914	847.28*	42.36	C
			B	0.601	1.803		1	1	31.914			
			C	0.601	1.803		1	1	31.914			
T3 85.00-65.00	3498.44	2942.50	A	0.592	1.809	6	1	1	31.270	809.46*	40.47	C
			B	0.592	1.809		1	1	31.270			
			C	0.592	1.809		1	1	31.270			
T4 65.00-45.00	3555.96	2619.02	A	0.581	1.817	6	1	1	30.309	751.99*	37.60	C
			B	0.581	1.817		1	1	30.309			
			C	0.581	1.817		1	1	30.309			
T5 45.00-29.00	2764.50	2037.16	A	0.571	1.825	6	1	1	23.616	551.79*	34.49	C
			B	0.571	1.825		1	1	23.616			
			C	0.571	1.825		1	1	23.616			
T6 29.00-25.00	0.00	422.09	A	0.651	1.781	5	1	1	4.121	32.61	8.15	C
			B	0.651	1.781		1	1	4.121			
			C	0.651	1.781		1	1	4.121			
Sum Weight:	15417.60	13673.03			*2.1A _g limit					3876.54		

Tower Forces - With Ice - Wind 60 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F lb	w plf	Ctrl. Face
ft	lb	lb	e									
T1 125.00-105.00	2108.31	2853.78	A	0.602	1.803	7	0.8	1	31.446	883.41*	44.17	C
			B	0.602	1.803		0.8	1	31.446			
			C	0.602	1.803		0.8	1	31.446			
T2 105.00-85.00	3490.38	2798.48	A	0.601	1.803	7	0.8	1	31.339	847.28*	42.36	C
			B	0.601	1.803		0.8	1	31.339			
			C	0.601	1.803		0.8	1	31.339			
T3 85.00-65.00	3498.44	2942.50	A	0.592	1.809	6	0.8	1	30.783	809.46*	40.47	C
			B	0.592	1.809		0.8	1	30.783			
			C	0.592	1.809		0.8	1	30.783			
T4 65.00-45.00	3555.96	2619.02	A	0.581	1.817	6	0.8	1	29.734	751.99*	37.60	C
			B	0.581	1.817		0.8	1	29.734			
			C	0.581	1.817		0.8	1	29.734			
T5 45.00-29.00	2764.50	2037.16	A	0.571	1.825	6	0.8	1	23.138	551.79*	34.49	C
			B	0.571	1.825		0.8	1	23.138			
			C	0.571	1.825		0.8	1	23.138			
T6 29.00-25.00	0.00	422.09	A	0.651	1.781	5	0.8	1	3.981	31.50	7.88	C
			B	0.651	1.781		0.8	1	3.981			
			C	0.651	1.781		0.8	1	3.981			
Sum Weight:	15417.60	13673.03			*2.1A _g limit					3875.44		

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	Client	Verizon Wireless	Designed by	adeuschle

Tower Forces - With Ice - Wind 90 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F lb	w plf	Ctrl. Face
ft	lb	lb										
T1 125.00-105.00	2108.31	2853.78	A	0.602	1.803	7	0.85	1	31.569	883.41*	44.17	B
			B	0.602	1.803		0.85	1	31.569			
			C	0.602	1.803		0.85	1	31.569			
T2 105.00-85.00	3490.38	2798.48	A	0.601	1.803	7	0.85	1	31.483	847.28*	42.36	C
			B	0.601	1.803		0.85	1	31.483			
			C	0.601	1.803		0.85	1	31.483			
T3 85.00-65.00	3498.44	2942.50	A	0.592	1.809	6	0.85	1	30.905	809.46*	40.47	C
			B	0.592	1.809		0.85	1	30.905			
			C	0.592	1.809		0.85	1	30.905			
T4 65.00-45.00	3555.96	2619.02	A	0.581	1.817	6	0.85	1	29.878	751.99*	37.60	C
			B	0.581	1.817		0.85	1	29.878			
			C	0.581	1.817		0.85	1	29.878			
T5 45.00-29.00	2764.50	2037.16	A	0.571	1.825	6	0.85	1	23.257	551.79*	34.49	C
			B	0.571	1.825		0.85	1	23.257			
			C	0.571	1.825		0.85	1	23.257			
T6 29.00-25.00	0.00	422.09	A	0.651	1.781	5	0.85	1	4.016	31.78	7.94	C
			B	0.651	1.781		0.85	1	4.016			
			C	0.651	1.781		0.85	1	4.016			
Sum Weight:	15417.60	13673.03			*2.1A _s limit					3875.71		

Tower Forces - Service - Wind Normal To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F lb	w plf	Ctrl. Face
ft	lb	lb										
T1 125.00-105.00	218.16	1079.98	A	0.195	2.611	10	1	1	8.239	612.65	30.63	C
			B	0.195	2.611		1	1	8.239			
			C	0.195	2.611		1	1	8.239			
T2 105.00-85.00	475.20	1078.89	A	0.202	2.589	10	1	1	8.670	767.15	38.36	C
			B	0.202	2.589		1	1	8.670			
			C	0.202	2.589		1	1	8.670			
T3 85.00-65.00	490.48	1250.35	A	0.206	2.574	9	1	1	8.707	739.01	36.95	C
			B	0.206	2.574		1	1	8.707			
			C	0.206	2.574		1	1	8.707			
T4 65.00-45.00	505.10	1035.95	A	0.202	2.589	9	1	1	8.670	711.35	35.57	C
			B	0.202	2.589		1	1	8.670			
			C	0.202	2.589		1	1	8.670			
T5 45.00-29.00	405.28	830.96	A	0.204	2.584	8	1	1	7.029	528.33	33.02	C
			B	0.204	2.584		1	1	7.029			
			C	0.204	2.584		1	1	7.029			
T6 29.00-25.00	0.00	196.59	A	0.317	2.252	8	1	1	1.577	22.71	5.68	C
			B	0.317	2.252		1	1	1.577			
			C	0.317	2.252		1	1	1.577			
Sum Weight:	2094.22	5472.71								3381.19		

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Tower Forces - Service - Wind 60 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F lb	w plf	Ctrl. Face
T1 125.00-105.00	218.16	1079.98	A	0.195	2.611	10	0.8	1	7.749	601.52	30.08	A
			B	0.195	2.611		0.8	1	7.749			
			C	0.195	2.611		0.8	1	7.749			
T2 105.00-85.00	475.20	1078.89	A	0.202	2.589	10	0.8	1	8.095	754.74	37.74	A
			B	0.202	2.589		0.8	1	8.095			
			C	0.202	2.589		0.8	1	8.095			
T3 85.00-65.00	490.48	1250.35	A	0.206	2.574	9	0.8	1	8.219	729.05	36.45	A
			B	0.206	2.574		0.8	1	8.219			
			C	0.206	2.574		0.8	1	8.219			
T4 65.00-45.00	505.10	1035.95	A	0.202	2.589	9	0.8	1	8.095	700.29	35.01	A
			B	0.202	2.589		0.8	1	8.095			
			C	0.202	2.589		0.8	1	8.095			
T5 45.00-29.00	405.28	830.96	A	0.204	2.584	8	0.8	1	6.550	519.88	32.49	A
			B	0.204	2.584		0.8	1	6.550			
			C	0.204	2.584		0.8	1	6.550			
T6 29.00-25.00	0.00	196.59	A	0.317	2.252	8	0.8	1	1.437	20.71	5.18	C
			B	0.317	2.252		0.8	1	1.437			
			C	0.317	2.252		0.8	1	1.437			
Sum Weight:	2094.22	5472.71								3326.19		

Tower Forces - Service - Wind 90 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F lb	w plf	Ctrl. Face
T1 125.00-105.00	218.16	1079.98	A	0.195	2.611	10	0.85	1	7.871	623.63	31.18	A
			B	0.195	2.611		0.85	1	7.871			
			C	0.195	2.611		0.85	1	7.871			
T2 105.00-85.00	475.20	1078.89	A	0.202	2.589	10	0.85	1	8.239	783.51	39.18	B
			B	0.202	2.589		0.85	1	8.239			
			C	0.202	2.589		0.85	1	8.239			
T3 85.00-65.00	490.48	1250.35	A	0.206	2.574	9	0.85	1	8.341	758.66	37.93	B
			B	0.206	2.574		0.85	1	8.341			
			C	0.206	2.574		0.85	1	8.341			
T4 65.00-45.00	505.10	1035.95	A	0.202	2.589	9	0.85	1	8.239	728.46	36.42	B
			B	0.202	2.589		0.85	1	8.239			
			C	0.202	2.589		0.85	1	8.239			
T5 45.00-29.00	405.28	830.96	A	0.204	2.584	8	0.85	1	6.670	540.69	33.79	B
			B	0.204	2.584		0.85	1	6.670			
			C	0.204	2.584		0.85	1	6.670			
T6 29.00-25.00	0.00	196.59	A	0.317	2.252	8	0.85	1	1.472	21.21	5.30	C
			B	0.317	2.252		0.85	1	1.472			
			C	0.317	2.252		0.85	1	1.472			
Sum Weight:	2094.22	5472.71								3456.15		

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Force Totals (Does not include forces on guys)

Load Case	Vertical Forces lb	Sum of Forces X lb	Sum of Forces Z lb	Sum of Torques lb-ft
Leg Weight	3389.24			
Bracing Weight	2083.48			
Total Member Self-Weight	5472.71			
Guy Weight	637.74			
Total Weight	13750.99			
Wind 0 deg - No Ice		66.35	-20787.46	504.48
Wind 30 deg - No Ice		10375.66	-17838.47	1707.88
Wind 60 deg - No Ice		16219.59	-9364.38	-115.02
Wind 90 deg - No Ice		17772.04	-66.35	-2396.95
Wind 120 deg - No Ice		17056.34	9770.87	-429.27
Wind 150 deg - No Ice		10440.88	18084.13	1283.80
Wind 180 deg - No Ice		-66.35	20548.75	-504.48
Wind 210 deg - No Ice		-10375.66	17838.47	-1707.88
Wind 240 deg - No Ice		-16426.32	9483.74	115.02
Wind 270 deg - No Ice		-17772.04	66.35	2396.95
Wind 300 deg - No Ice		-16849.61	-9651.51	429.27
Wind 330 deg - No Ice		-10440.88	-18084.13	-1283.80
Member Ice	8200.32			
Guy Ice	2264.63			
Total Weight Ice	46209.92			
Wind 0 deg - Ice		11.71	-5881.44	335.54
Wind 30 deg - Ice		2957.21	-5098.62	419.44
Wind 60 deg - Ice		5110.09	-2950.31	20.21
Wind 90 deg - Ice		5888.85	-11.71	-376.28
Wind 120 deg - Ice		5099.33	2930.58	-213.86
Wind 150 deg - Ice		2936.93	5086.91	-103.22
Wind 180 deg - Ice		-11.71	5880.34	-336.47
Wind 210 deg - Ice		-2957.21	5098.62	-419.44
Wind 240 deg - Ice		-5111.04	2950.86	-20.39
Wind 270 deg - Ice		-5888.85	11.71	376.28
Wind 300 deg - Ice		-5098.38	-2930.03	213.87
Wind 330 deg - Ice		-2936.93	-5086.91	103.22
Total Weight	13750.99			
Wind 0 deg - Service		15.29	-4789.43	116.23
Wind 30 deg - Service		2390.55	-4109.98	393.50
Wind 60 deg - Service		3736.99	-2157.55	-26.50
Wind 90 deg - Service		4094.68	-15.29	-552.26
Wind 120 deg - Service		3929.78	2251.21	-98.90
Wind 150 deg - Service		2405.58	4166.58	295.79
Wind 180 deg - Service		-15.29	4734.43	-116.23
Wind 210 deg - Service		-2390.55	4109.98	-393.50
Wind 240 deg - Service		-3784.62	2185.05	26.50
Wind 270 deg - Service		-4094.68	15.29	552.26
Wind 300 deg - Service		-3882.15	-2223.71	98.90
Wind 330 deg - Service		-2405.58	-4166.58	-295.79

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Load Combinations

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

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
T1	125 - 105	Leg	Max Tension	8	4205.57	-1.46	-239.53
			Max. Compression	13	-17352.97	86.79	163.64
			Max. Mx	11	962.98	-382.99	1.82
			Max. My	2	237.23	-7.63	-384.27
			Max. Vy	11	-566.65	251.59	7.72
			Max. Vx	2	-565.37	-7.63	245.52
		Diagonal	Max Tension	8	2182.45	0.00	0.00
			Max. Compression	2	-1812.48	0.00	0.00
			Max. Mx	24	-447.70	-4.45	-0.01
			Max. My	2	-976.26	-0.78	0.49
			Max. Vy	22	7.72	-4.41	-0.15
			Max. Vx	2	0.23	-0.78	0.49

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
T2	105 - 85	Horizontal	Max Tension	2	1394.26	0.00	0.00
			Max. Compression	9	-158.26	0.00	0.00
			Max. Mx	14	908.54	-14.23	0.00
			Max. My	11	931.18	0.00	0.00
			Max. Vy	14	18.73	0.00	0.00
		Top Girt	Max. Vx	11	-0.00	0.00	0.00
			Max Tension	2	142.86	0.00	0.00
			Max. Compression	8	-105.65	0.00	0.00
			Max. Mx	14	37.28	-14.23	0.00
			Max. My	11	31.96	0.00	0.00
		Bottom Girt	Max. Vy	14	18.73	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
			Max Tension	2	844.84	0.00	0.00
			Max. Compression	8	-5.32	0.00	0.00
			Max. Mx	14	475.37	-14.23	0.00
		Guy A	Max. My	11	494.03	0.00	0.00
			Max. Vy	14	18.73	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
			Bottom Tension	9	17823.20		
			Top Tension	9	17927.88		
		Guy B	Top Cable Vert	9	16244.50		
			Top Cable Norm	9	7584.51		
			Top Cable Tan	9	13.36		
			Bot Cable Vert	9	-16046.92		
			Bot Cable Norm	9	7755.32		
		Guy C	Bot Cable Tan	9	133.78		
			Bottom Tension	13	19048.11		
			Top Tension	13	19152.50		
			Top Cable Vert	13	17760.14		
			Top Cable Norm	13	7169.04		
		Top Guy Pull-Off	Top Cable Tan	13	26.25		
			Bot Cable Vert	13	-17573.58		
			Bot Cable Norm	13	7347.01		
			Bot Cable Tan	13	145.86		
			Bottom Tension	3	18641.41		
		Leg	Top Tension	3	18738.46		
			Top Cable Vert	3	17296.09		
			Top Cable Norm	3	7209.32		
			Top Cable Tan	3	30.29		
			Bot Cable Vert	3	-17119.93		
		Diagonal	Bot Cable Norm	3	7374.95		
			Bot Cable Tan	3	142.64		
			Max Tension	2	3613.60	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	1744.29	14.83	0.00
		Horizontal	Max. My	11	2146.42	0.00	-0.00
			Max. Vy	14	-19.52	0.00	0.00
			Max. Vx	11	0.00	0.00	0.00
			Max Tension	4	14721.65	292.58	-155.83
			Max. Compression	2	-42169.08	2.22	155.73
		Diagonal	Max. Mx	11	-8986.18	-661.05	-1.12
			Max. My	8	-5417.27	2.91	659.13
			Max. Vy	10	-2088.74	126.01	-65.53
			Max. Vx	2	-2576.77	2.22	155.73
			Max Tension	8	2557.79	0.00	0.00
		Horizontal	Max. Compression	2	-4923.97	0.00	0.00
			Max. Mx	18	-133.27	-4.96	-0.01
			Max. My	4	-1817.43	-0.22	1.93
			Max. Vy	16	7.82	-4.96	0.07
			Max. Vx	4	0.79	-0.22	1.93
		Horizontal	Max Tension	2	1925.42	0.00	0.00

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
T3	85 - 65	Top Girt	Max. Compression	8	-26.55	0.00	0.00
			Max. Mx	14	1354.56	-13.95	0.00
			Max. My	11	1058.40	0.00	0.00
			Max. Vy	14	18.36	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
			Max Tension	2	859.69	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	528.48	-13.95	0.00
			Max. My	11	497.92	0.00	0.00
			Max. Vy	14	18.36	0.00	0.00
		Bottom Girt	Max. Vx	11	-0.00	0.00	0.00
			Max Tension	3	1871.20	0.00	0.00
			Max. Compression	2	-825.53	0.00	0.00
			Max. Mx	14	705.72	-13.95	0.00
			Max. My	11	598.58	0.00	0.00
			Max. Vy	14	18.36	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
			Max Tension	4	28273.12	119.18	-62.46
			Max. Compression	2	-57527.08	-6.25	49.55
			Max. Mx	10	-38496.63	560.41	-283.97
		Diagonal	Max. My	2	-42172.89	25.98	691.55
			Max. Vy	10	-2086.18	560.41	-283.97
			Max. Vx	2	-2573.15	25.98	691.55
			Max Tension	8	3841.42	0.00	0.00
			Max. Compression	2	-5316.34	0.00	0.00
			Max. Mx	18	-1911.83	-5.63	0.06
			Max. My	4	-2181.64	0.09	3.73
			Max. Vy	18	7.93	-5.63	0.06
			Max. Vx	4	1.51	0.09	3.73
		Horizontal	Max Tension	3	2648.67	0.00	0.00
			Max. Compression	2	-1206.31	0.00	0.00
			Max. Mx	14	1830.84	-13.62	0.00
			Max. My	11	641.26	0.00	0.00
			Max. Vy	14	17.91	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
		Top Girt	Max Tension	2	792.74	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	611.37	-13.62	0.00
			Max. My	11	457.62	0.00	0.00
			Max. Vy	14	17.91	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
		Bottom Girt	Max Tension	2	1306.70	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	1023.96	-13.62	0.00
			Max. My	11	925.99	0.00	0.00
			Max. Vy	14	17.91	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
		Guy A	Bottom Tension	7	24480.22		
			Top Tension	7	24561.70		
			Top Cable Vert	7	18898.17		
			Top Cable Norm	7	15688.71		
			Top Cable Tan	7	22.89		
			Bot Cable Vert	7	-18724.91		
			Bot Cable Norm	7	15768.59		
			Bot Cable Tan	7	100.96		
		Guy B	Bottom Tension	13	27670.32		
			Top Tension	13	27751.63		
			Top Cable Vert	13	22553.98		
			Top Cable Norm	13	16169.99		
			Top Cable Tan	13	48.11		
			Bot Cable Vert	13	-22390.21		

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
T4	65 - 45	Guy C	Bot Cable Norm	13	16257.59		
			Bot Cable Tan	13	124.68		
			Bottom Tension	3	26078.11		
			Top Tension	3	26149.30		
			Top Cable Vert	3	20559.90		
			Top Cable Norm	3	16157.78		
			Top Cable Tan	3	49.36		
			Bot Cable Vert	3	-20410.80		
			Bot Cable Norm	3	16231.25		
			Bot Cable Tan	3	118.00		
			Max Tension	2	7076.18	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
		Top Guy Pull-Off	Max. Mx	14	4123.90	14.20	0.00
			Max. My	11	4653.70	0.00	-0.00
			Max. Vy	14	-18.68	0.00	0.00
			Max. Vx	11	0.00	0.00	0.00
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	2	-42273.36	12.40	-261.29
			Max. Mx	6	-31938.88	214.12	112.00
			Max. My	2	-35800.49	12.48	-261.31
			Max. Vy	6	-1437.98	-85.38	-44.02
			Max. Vx	2	1756.21	-6.31	104.45
		Diagonal	Max Tension	8	645.59	0.00	0.00
			Max. Compression	2	-4217.07	0.00	0.00
			Max. Mx	18	-2175.85	-5.03	-0.07
			Max. My	2	-4209.47	-3.39	2.22
			Max. Vy	18	7.50	-5.03	-0.07
			Max. Vx	2	-0.91	-3.39	2.22
		Horizontal	Max Tension	2	2551.69	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	2239.00	-12.10	0.00
			Max. My	11	1929.90	0.00	0.00
			Max. Vy	14	-15.93	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
		Top Girt	Max Tension	3	1710.54	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	1046.24	-12.10	0.00
			Max. My	11	975.55	0.00	0.00
			Max. Vy	14	-15.93	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
		Bottom Girt	Max Tension	2	1494.28	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	1202.57	-12.10	0.00
			Max. My	11	1021.36	0.00	0.00
			Max. Vy	14	-15.93	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
T5	45 - 29	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	13	-30446.48	-18.66	-75.29
			Max. Mx	2	-29139.07	1050.97	582.75
			Max. My	21	-28725.34	28.53	-1173.74
			Max. Vy	13	-5132.61	970.34	674.70
			Max. Vx	21	5712.73	28.53	-1173.74
		Diagonal	Max Tension	1	0.00	0.00	0.00
			Max. Compression	3	-2534.44	0.00	0.00
			Max. Mx	21	-1988.28	-4.80	-0.02
			Max. My	2	-2164.10	0.48	1.27
			Max. Vy	21	7.18	-4.80	-0.02
			Max. Vx	2	0.53	0.48	1.27
		Horizontal	Max Tension	2	2690.32	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	2106.24	-11.59	0.00

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
T6	29 - 25	Top Girt	Max. My	11	1730.19	0.00	0.00
			Max. Vy	14	-15.25	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
			Max. Tension	17	1265.23	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	1194.58	-11.59	0.00
			Max. My	11	1033.19	0.00	0.00
			Max. Vy	14	-15.25	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
			Max. Tension	2	4313.94	0.00	0.00
		Bottom Girt	Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	4154.04	-11.59	0.00
			Max. My	11	3366.82	0.00	0.00
			Max. Vy	14	-15.25	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
			Max. Tension	1	0.00	0.00	0.00
			Max. Compression	2	-31882.49	46.20	112.59
			Max. Mx	2	-29058.01	1201.58	-19.00
			Max. My	5	-22756.73	32.45	-571.89
			Max. Vy	17	6397.09	-298.34	0.46
		Leg	Max. Vx	11	-502.32	-248.08	-34.15
			Max. Tension	2	4198.20	109.37	-8.69
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	11	3390.42	220.78	72.42
			Max. My	11	3226.64	-23.09	-137.61
			Max. Vy	5	-110.25	220.36	72.60
			Max. Vx	11	76.60	162.47	80.27
			Max. Tension	8	134.81	-15.09	-162.13
			Max. Compression	13	-324.45	28.82	-150.80
			Max. Mx	11	14.37	-70.96	-178.70
		Top Girt	Max. My	13	-193.06	-35.67	-238.69
			Max. Vy	11	-190.97	-70.96	-178.70
			Max. Vx	13	258.65	-35.67	-238.69
		Bottom Girt					

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
Mast	Max. Vert	17	86084.50	-161.49	55.72
	Max. H _x	12	57957.08	1252.20	688.84
	Max. H _z	13	76594.05	866.76	1028.96
	Max. M _x	1	0.00	9.09	-20.92
	Max. M _z	1	0.00	9.09	-20.92
	Max. Torsion	5	1580.24	-912.54	109.70
	Min. Vert	35	48171.12	289.96	-194.28
	Min. H _x	4	58237.61	-1016.58	576.11
	Min. H _z	8	56353.61	21.03	-1646.93
	Min. M _x	1	0.00	9.09	-20.92
	Min. M _z	1	0.00	9.09	-20.92
	Min. Torsion	11	-1573.71	928.04	93.88
	Max. Vert	10	-742.74	-206.48	119.68
Guy C @ 37.5 ft Elev 31.5 ft Azimuth 240 deg	Max. H _x	10	-742.74	-206.48	119.68
	Max. H _z	3	-37530.72	-20313.24	12028.82
	Min. Vert	3	-37530.72	-20313.24	12028.82

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Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
Guy B @ 39 ft Elev 25 ft Azimuth 120 deg	Min. H _x	3	-37530.72	-20313.24	12028.82
	Min. H _z	10	-742.74	-206.48	119.68
	Max. Vert	6	-945.99	271.70	156.95
	Max. H _x	13	-39963.80	20306.92	12036.59
	Max. H _z	13	-39963.80	20306.92	12036.59
	Min. Vert	13	-39963.80	20306.92	12036.59
	Min. H _x	6	-945.99	271.70	156.95
	Min. H _z	6	-945.99	271.70	156.95
	Max. Vert	2	-672.61	0.32	-238.67
	Max. H _x	10	-27701.53	355.02	-18685.91
Guy A @ 45 ft Elev 25 ft Azimuth 0 deg	Max. H _z	2	-672.61	0.32	-238.67
	Min. Vert	7	-34648.87	-229.84	-23464.73
	Min. H _x	6	-28319.82	-344.77	-19174.73
	Min. H _z	7	-34648.87	-229.84	-23464.73

Tower Mast Reaction Summary

Load Combination	Vertical lb	Shear _x lb	Shear _z lb	Overturning Moment, M _x lb-ft	Overturning Moment, M _z lb-ft	Torque lb-ft
Dead Only	48520.72	-9.09	20.92	0.00	0.00	-2.72
1.2 Dead+1.0 Wind 0 deg - No Ice+1.0 Guy	83861.52	-15.74	-966.23	0.00	0.00	311.38
1.2 Dead+1.0 Wind 30 deg - No Ice+1.0 Guy	75434.72	744.09	-865.27	0.00	0.00	1063.20
1.2 Dead+1.0 Wind 60 deg - No Ice+1.0 Guy	58237.61	1016.58	-576.11	0.00	0.00	-99.73
1.2 Dead+1.0 Wind 90 deg - No Ice+1.0 Guy	66900.11	912.54	-109.70	0.00	0.00	-1580.24
1.2 Dead+1.0 Wind 120 deg - No Ice+1.0 Guy	76479.33	927.62	651.77	0.00	0.00	-289.44
1.2 Dead+1.0 Wind 150 deg - No Ice+1.0 Guy	71673.95	546.43	1454.81	0.00	0.00	787.12
1.2 Dead+1.0 Wind 180 deg - No Ice+1.0 Guy	56353.61	-21.03	1646.93	0.00	0.00	-340.41
1.2 Dead+1.0 Wind 210 deg - No Ice+1.0 Guy	72470.12	-473.61	1279.06	0.00	0.00	-1049.26
1.2 Dead+1.0 Wind 240 deg - No Ice+1.0 Guy	76888.98	-719.67	518.45	0.00	0.00	88.80
1.2 Dead+1.0 Wind 270 deg - No Ice+1.0 Guy	68342.12	-928.04	-93.88	0.00	0.00	1573.71
1.2 Dead+1.0 Wind 300 deg - No Ice+1.0 Guy	57957.08	-1252.20	-688.84	0.00	0.00	317.46
1.2 Dead+1.0 Wind 330 deg - No Ice+1.0 Guy	76594.05	-866.76	-1028.96	0.00	0.00	-779.06
1.2 Dead+1.0 Ice+1.0 Temp+Guy	84809.50	3.97	47.31	0.00	0.00	-2.21
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp+1.0 Guy	85390.17	4.89	-232.44	0.00	0.00	244.41
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp+1.0 Guy	85863.15	91.80	-166.12	0.00	0.00	311.64
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp+1.0 Guy	86084.50	161.49	-55.72	0.00	0.00	4.66

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Load Combination	Vertical lb	Shear _x lb	Shear _y lb	Overturning Moment, M _x lb-ft	Overturning Moment, M _y lb-ft	Torque lb-ft
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp+1.0 Guy	85803.85	208.21	68.49	0.00	0.00	-295.91
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp+1.0 Guy	85312.96	208.20	186.75	0.00	0.00	-166.87
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp+1.0 Guy	85246.74	117.38	249.49	0.00	0.00	-67.34
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp+1.0 Guy	85140.56	0.20	269.65	0.00	0.00	-241.26
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp+1.0 Guy	84822.73	-116.58	251.49	0.00	0.00	-310.95
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp+1.0 Guy	84556.03	-207.26	191.57	0.00	0.00	-4.58
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp+1.0 Guy	84906.47	-201.17	74.04	0.00	0.00	299.25
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp+1.0 Guy	85290.38	-151.05	-49.79	0.00	0.00	167.59
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp+1.0 Guy	85399.99	-81.11	-162.53	0.00	0.00	69.07
Dead+Wind 0 deg - Service+Guy	48688.89	-8.31	-398.82	0.00	0.00	86.01
Dead+Wind 30 deg - Service+Guy	48887.59	178.82	-323.68	0.00	0.00	288.87
Dead+Wind 60 deg - Service+Guy	48959.29	259.88	-143.58	0.00	0.00	-23.02
Dead+Wind 90 deg - Service+Guy	48927.13	285.97	21.85	0.00	0.00	-407.90
Dead+Wind 120 deg - Service+Guy	48828.04	321.56	222.23	0.00	0.00	-76.42
Dead+Wind 150 deg - Service+Guy	48644.29	201.74	402.97	0.00	0.00	214.80
Dead+Wind 180 deg - Service+Guy	48428.90	-9.97	427.47	0.00	0.00	-84.21
Dead+Wind 210 deg - Service+Guy	48241.05	-199.24	365.63	0.00	0.00	-288.09
Dead+Wind 240 deg - Service+Guy	48171.12	-289.96	194.28	0.00	0.00	23.53
Dead+Wind 270 deg - Service+Guy	48217.22	-304.47	24.67	0.00	0.00	411.84
Dead+Wind 300 deg - Service+Guy	48305.36	-328.32	-171.75	0.00	0.00	77.39
Dead+Wind 330 deg - Service+Guy	48477.77	-217.81	-361.53	0.00	0.00	-216.30

Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX lb	PY lb	PZ lb	PX lb	PY lb	PZ lb	
1	0.00	-13750.93	0.00	-3.46	13750.87	-5.31	0.046%
2	65.79	-16375.00	-21824.65	-67.60	16374.31	21798.39	0.097%
3	10905.88	-16353.81	-18738.14	-10906.80	16353.40	18720.48	0.065%
4	17145.23	-16338.13	-9885.82	-17135.00	16337.92	9877.02	0.053%
5	18844.33	-16365.75	-66.25	-18826.10	16365.29	76.68	0.084%
6	17982.18	-16395.37	10293.07	-17962.61	16394.81	-10281.72	0.086%
7	10971.76	-16385.51	18984.74	-10956.36	16385.10	-18975.52	0.066%
8	-65.79	-16372.16	21585.93	71.05	16371.94	-21571.89	0.055%
9	-10905.88	-16393.34	18738.14	10890.18	16392.95	-18730.20	0.065%
10	-17351.97	-16409.03	10005.18	17331.68	16408.48	-9995.21	0.087%

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Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX lb	PY lb	PZ lb	PX lb	PY lb	PZ lb	
11	-18844.33	-16381.41	66.25	18822.65	16380.89	-55.71	0.097%
12	-17775.45	-16351.79	-10173.71	17769.32	16351.54	10157.27	0.067%
13	-10971.76	-16361.65	-18984.74	10970.00	16361.15	18964.25	0.075%
14	0.00	-48832.28	0.00	-0.84	48832.27	-3.37	0.007%
15	11.17	-48832.94	-6720.36	-12.01	48832.91	6715.65	0.010%
16	3385.64	-48816.91	-5826.18	-3384.58	48816.88	5821.79	0.009%
17	5857.88	-48805.15	-3371.90	-5854.99	48805.12	3369.69	0.007%
18	6755.12	-48826.63	-11.53	-6751.40	48826.61	11.58	0.008%
19	5847.47	-48849.55	3352.98	-5844.47	48849.54	-3351.65	0.007%
20	3366.10	-48842.00	5815.39	-3363.69	48841.98	-5812.83	0.007%
21	-11.17	-48831.61	6719.26	12.11	48831.59	-6712.71	0.013%
22	-3385.64	-48847.65	5826.18	3381.30	48847.63	-5821.30	0.013%
23	-5858.84	-48859.41	3372.45	5851.65	48859.39	-3371.23	0.015%
24	-6755.12	-48837.93	11.53	6750.68	48837.91	-12.72	0.009%
25	-5846.52	-48815.01	-3352.43	5842.39	48814.98	3348.78	0.011%
26	-3366.10	-48822.56	-5815.39	3363.38	48822.52	5809.92	0.012%
27	15.17	-13750.87	-5029.24	-16.09	13750.86	5025.38	0.027%
28	2512.71	-13746.38	-4317.27	-2511.41	13746.36	4314.15	0.023%
29	3950.26	-13742.76	-2277.69	-3947.41	13742.75	2276.11	0.023%
30	4341.73	-13749.12	-15.26	-4338.28	13749.11	15.30	0.024%
31	4143.10	-13755.95	2371.52	-4139.61	13755.94	-2369.90	0.026%
32	2527.89	-13753.68	4374.08	-2525.52	13753.67	-4371.32	0.025%
33	-15.16	-13750.60	4973.40	15.50	13750.59	-4970.51	0.020%
34	-2512.71	-13755.48	4317.27	2510.86	13755.48	-4315.15	0.019%
35	-3997.89	-13759.10	2305.19	3994.48	13759.09	-2304.65	0.024%
36	-4341.73	-13752.73	15.26	4337.68	13752.73	-16.38	0.029%
37	-4095.46	-13745.91	-2344.02	4091.36	13745.90	2341.34	0.034%
38	-2527.89	-13748.18	-4374.08	2524.90	13748.17	4370.30	0.033%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	6	0.00000001	0.00042265
2	Yes	15	0.00077682	0.00074738
3	Yes	15	0.00064744	0.00054935
4	Yes	9	0.00064887	0.00092810
5	Yes	13	0.00095834	0.00075662
6	Yes	14	0.00078776	0.00072944
7	Yes	14	0.00068235	0.00061588
8	Yes	9	0.00069157	0.00081473
9	Yes	15	0.00066060	0.00054077
10	Yes	15	0.00075624	0.00065536
11	Yes	14	0.00098550	0.00077663
12	Yes	10	0.00083515	0.00072023
13	Yes	15	0.00068100	0.00063801
14	Yes	7	0.00000001	0.00019898
15	Yes	9	0.00000001	0.00023663
16	Yes	9	0.00000001	0.00026474
17	Yes	9	0.00000001	0.00022745
18	Yes	9	0.00000001	0.00022475
19	Yes	9	0.00000001	0.00017216
20	Yes	9	0.00000001	0.00019433
21	Yes	8	0.00096416	0.00039437
22	Yes	8	0.00096395	0.00041379
23	Yes	8	0.00097449	0.00040843

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24	Yes	9	0.00000001	0.00026401
25	Yes	9	0.00000001	0.00030620
26	Yes	9	0.00068404	0.00033055
27	Yes	8	0.00000001	0.00035860
28	Yes	8	0.00000001	0.00033942
29	Yes	8	0.00000001	0.00034666
30	Yes	8	0.00000001	0.00035546
31	Yes	8	0.00000001	0.00036754
32	Yes	8	0.00000001	0.00033110
33	Yes	8	0.00000001	0.00027266
34	Yes	8	0.00000001	0.00029610
35	Yes	8	0.00000001	0.00036236
36	Yes	8	0.00000001	0.00041674
37	Yes	8	0.00000001	0.00045868
38	Yes	8	0.00000001	0.00043335

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	125 - 105	1.358	38	0.0793	0.2302
T2	105 - 85	1.034	38	0.0826	0.2319
T3	85 - 65	0.667	38	0.0771	0.2287
T4	65 - 45	0.418	38	0.0469	0.2211
T5	45 - 29	0.233	38	0.0496	0.2073
T6	29 - 25	0.050	38	0.0579	0.1880

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
125.00	10'x3" Dia Omni	38	1.358	0.0793	0.2302	173668
122.00	Valmont 13' standoff Mounting Frame	38	1.312	0.0798	0.2310	173668
116.96	Guy	38	1.234	0.0807	0.2320	107980
102.00	Valmont VFA12-HD Sector Frame	38	0.979	0.0830	0.2310	73828
76.96	Guy	38	0.551	0.0649	0.2337	31153
69.00	4' Yagi	38	0.458	0.0517	0.2306	40432
55.00	4' Yagi	38	0.327	0.0442	0.1821	206927
32.00	2'x2'x1' junction box	38	0.086	0.0572	0.2672	140706

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	125 - 105	10.616	2	0.6325	0.8831
T2	105 - 85	7.987	2	0.6395	0.8925
T3	85 - 65	5.270	2	0.5828	0.8819

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Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T4	65 - 45	3.236	2	0.4100	0.8567
T5	45 - 29	1.668	2	0.3825	0.8078
T6	29 - 25	0.344	2	0.4059	0.7343

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
125.00	10'x3" Dia Omni	2	10.616	0.6325	0.8831	46823
122.00	Valmont 13' standoff Mounting Frame	2	10.231	0.6351	0.8865	46823
116.96	Guy	2	9.580	0.6388	0.8913	29113
102.00	Valmont VFA12-HD Sector Frame	2	7.570	0.6367	0.8893	21135
76.96	Guy	2	4.360	0.5277	0.9032	5997
69.00	4' Yagi	2	3.586	0.4539	0.8930	7819
55.00	4' Yagi	2	2.437	0.3135	0.7073	31380
32.00	2'x2'x1' junction box	2	0.600	0.5471	1.0435	35751

Bolt Design Data

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt lb	Allowable Load per Bolt lb	Ratio Load Allowable	Allowable Ratio	Criteria
T1	125	Leg	A325N	0.7500	3	1928.11	30101.40	0.064 ✓	1	Bolt Tension
		Top Girt	A325N	0.6250	1	142.86	6830.86	0.021 ✓	1	Member Block Shear
T2	105	Leg	A325N	0.7500	3	4907.21	30101.40	0.163 ✓	1	Bolt Tension
		Top Girt	A325N	0.6250	1	859.69	6830.86	0.126 ✓	1	Member Block Shear
T3	85	Leg	A325N	0.7500	3	4696.75	30101.40	0.156 ✓	1	Bolt Tension
		Top Girt	A325N	0.6250	1	996.40	6830.86	0.146 ✓	1	Member Block Shear
T4	65	Leg	A325N	0.7500	3	3382.74	30101.40	0.112 ✓	1	Bolt Tension
T5	45	Leg	A325N	0.7500	3	3237.67	30101.40	0.108 ✓	1	Bolt Tension

Guy Design Data

Section No.	Elevation ft	Size	Initial Tension lb	Breaking Load lb	Actual T _n lb	Allowable φT _n lb	Required S.F.	Actual S.F.
T1	116.96 (A) (258)	3/4 EHS	5830.00	58299.91	17927.90	34980.00	1.000	1.951 ✓

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Section No.	Elevation ft	Size	Initial Tension lb	Breaking Load lb	Actual T_u lb	Allowable ϕT_n lb	Required S.F.	Actual S.F.
T3	116.96 (B) (257)	3/4 EHS	5830.00	58299.91	19152.50	34980.00	1.000	1.826 ✓
	116.96 (C) (256)	3/4 EHS	5830.00	58299.91	18738.50	34980.00	1.000	1.867 ✓
	76.96 (A) (261)	7/8 EHS	7970.00	79699.84	24561.70	47820.00	1.000	1.947 ✓
	76.96 (B) (260)	7/8 EHS	7970.00	79699.84	27751.60	47820.00	1.000	1.723 ✓
	76.96 (C) (259)	7/8 EHS	7970.00	79699.84	26149.30	47820.00	1.000	1.829 ✓

Compression Checks

Leg Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in ²	Mast Stability Index	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	125 - 105	2	20.00	3.92	94.0 K=1.00	3.1416	1.00	-15123.50	74093.50	0.204 ¹ ✓
T2	105 - 85	2	20.00	3.92	94.0 K=1.00	3.1416	1.00	-34731.90	74093.50	0.469 ¹ ✓
T3	85 - 65	2 1/4	20.00	3.92	83.6 K=1.00	3.9761	1.00	-57527.10	107392.00	0.536 ¹ ✓
T4	65 - 45	2	20.00	3.92	94.0 K=1.00	3.1416	1.00	-35852.40	74093.50	0.484 ¹ ✓
T5	45 - 29	2	16.00	3.90	93.5 K=1.00	3.1416	1.00	-28178.80	74603.20	0.378 ¹ ✓
T6	29 - 25	2	4.37	3.05	73.1 K=1.00	3.1416	1.00	-31882.50	95668.20	0.333 ¹ ✓

¹ $P_u / \phi P_n$ controls

Diagonal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in ²	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	125 - 105	7/8	4.96	2.34	115.7 K=0.90	0.6013	-1812.48	9631.38	0.188 ¹ ✓
T2	105 - 85	7/8	4.96	2.34	115.7 K=0.90	0.6013	-4923.97	9631.38	0.511 ¹ ✓
T3	85 - 65	7/8	4.96	2.33	114.8 K=0.90	0.6013	-5316.34	9729.92	0.546 ¹ ✓
T4	65 - 45	7/8	4.96	2.34	115.7 K=0.90	0.6013	-4217.07	9631.38	0.438 ¹ ✓

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Section No.	Elevation	Size	L	L _u	Kl/r	A	P _u	φP _n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in ²	lb	lb	$\frac{P_u}{\phi P_n}$
T5	45 - 29	7/8	4.94	2.34	115.3 K=0.90	0.6013	-2534.44	9676.41	0.262 ¹ ✓

¹ P_u / φP_n controls

Horizontal Design Data (Compression)

Section No.	Elevation	Size	L	L _u	Kl/r	A	P _u	φP _n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in ²	lb	lb	$\frac{P_u}{\phi P_n}$
T1	125 - 105	L2x2x3/16	3.04	2.87	103.8 K=1.19	0.7150	-300.56	17026.70	0.018 ¹ ✓
T2	105 - 85	L2x2x3/16	3.04	2.87	103.8 K=1.19	0.7150	-730.39	17026.70	0.043 ¹ ✓
T3	85 - 65	L2x2x3/16	3.04	2.85	103.4 K=1.19	0.7150	-1206.31	17079.90	0.071 ¹ ✓
T4	65 - 45	L2x2x1/8	3.04	2.87	103.4 K=1.19	0.4844	-732.20	11378.60	0.064 ¹ ✓
T5	45 - 29	L2x2x1/8	3.04	2.87	103.4 K=1.19	0.4844	-527.35	11378.60	0.046 ¹ ✓

¹ P_u / φP_n controls

Top Girt Design Data (Compression)

Section No.	Elevation	Size	L	L _u	Kl/r	A	P _u	φP _n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in ²	lb	lb	$\frac{P_u}{\phi P_n}$
T1	125 - 105	L2x2x3/16	3.04	2.63	100.1 K=1.25	0.7150	-105.65	17628.70	0.006 ¹ ✓
T2	105 - 85	L2x2x3/16	3.04	2.63	100.1 K=1.25	0.7150	-730.39	17628.70	0.041 ¹ ✓
T3	85 - 65	L2x2x3/16	3.04	2.61	99.8 K=1.25	0.7150	-996.40	17680.00	0.056 ¹ ✓
T4	65 - 45	L2x2x1/8	3.04	2.87	103.4 K=1.19	0.4844	-732.20	11378.60	0.064 ¹ ✓
T5	45 - 29	L2x2x1/8	3.04	2.87	103.4 K=1.19	0.4844	-527.35	11378.60	0.046 ¹ ✓
T6	29 - 25	L3x3x1/8	2.88	2.71	87.1 K=1.61	0.7344	-589.03	12827.10	0.046 ¹ ✓

¹ P_u / φP_n controls

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Bottom Girt Design Data (Compression)

Section No.	Elevation	Size	L	L _u	Kl/r	A	P _u	φP _n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in ²	lb	lb	
T1	125 - 105	L2x2x3/16	3.04	2.87	103.8 K=1.19	0.7150	-300.56	17026.70	0.018 ¹ ✓
T2	105 - 85	L2x2x3/16	3.04	2.87	103.8 K=1.19	0.7150	-825.53	17026.70	0.048 ¹ ✓
T3	85 - 65	L2x2x3/16	3.04	2.85	103.4 K=1.19	0.7150	-996.40	17079.90	0.058 ¹ ✓
T4	65 - 45	L2x2x1/8	3.04	2.87	103.4 K=1.19	0.4844	-732.20	11378.60	0.064 ¹ ✓
T5	45 - 29	L2x2x1/8	3.04	2.87	103.4 K=1.19	0.4844	-527.35	11378.60	0.046 ¹ ✓
T6	29 - 25	12" x 3/8" Plate	0.76	0.59	65.8 K=1.00	4.5000	-324.45	116106.00	0.003 ¹ ✓

¹ P_u / φP_n controls

Tension Checks

Leg Design Data (Tension)

Section No.	Elevation	Size	L	L _u	Kl/r	A	P _u	φP _n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in ²	lb	lb	
T1	125 - 105	2	20.00	3.92	94.0	3.1416	4205.57	141372.00	0.030 ¹ ✓
T2	105 - 85	2	20.00	0.21	5.0	3.1416	14721.60	141372.00	0.104 ¹ ✓
T3	85 - 65	2 1/4	20.00	3.92	83.6	3.9761	28273.10	178924.00	0.158 ¹ ✓

¹ P_u / φP_n controls

Diagonal Design Data (Tension)

Section No.	Elevation	Size	L	L _u	Kl/r	A	P _u	φP _n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in ²	lb	lb	
T1	125 - 105	7/8	4.96	2.34	128.5	0.6013	2182.45	19482.80	0.112 ¹ ✓
T2	105 - 85	7/8	4.96	2.34	128.5	0.6013	2557.79	19482.80	0.131 ¹ ✓
T3	85 - 65	7/8	4.96	2.33	127.6	0.6013	3841.42	19482.80	0.197 ¹ ✓

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Section No.	Elevation	Size	L	L _u	Kl/r	A	P _u	φP _n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in ²	lb	lb	
T4	65 - 45	7/8	4.96	2.34	128.5	0.6013	645.59	19482.80	0.033 ¹

¹ P_u / φP_n controls

Horizontal Design Data (Tension)

Section No.	Elevation	Size	L	L _u	Kl/r	A	P _u	φP _n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in ²	lb	lb	
T1	125 - 105	L2x2x3/16	3.04	2.87	55.9	0.7150	1394.26	23166.00	0.060 ¹
T2	105 - 85	L2x2x3/16	3.04	2.87	55.9	0.7150	1925.42	23166.00	0.083 ¹
T3	85 - 65	L2x2x3/16	3.04	2.85	55.5	0.7150	2648.67	23166.00	0.114 ¹
T4	65 - 45	L2x2x1/8	3.04	2.87	55.1	0.4844	2551.69	15693.80	0.163 ¹
T5	45 - 29	L2x2x1/8	3.04	2.87	55.1	0.4844	2690.32	15693.80	0.171 ¹

¹ P_u / φP_n controls

Top Girt Design Data (Tension)

Section No.	Elevation	Size	L	L _u	Kl/r	A	P _u	φP _n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in ²	lb	lb	
T1	125 - 105	L2x2x3/16	3.04	2.63	55.9	0.4308	142.86	18739.00	0.008 ¹
T2	105 - 85	L2x2x3/16	3.04	2.63	55.9	0.4308	859.69	18739.00	0.046 ¹
T3	85 - 65	L2x2x3/16	3.04	2.61	55.5	0.4308	996.40	18739.00	0.053 ¹
T4	65 - 45	L2x2x1/8	3.04	2.87	55.1	0.4844	1710.54	15693.80	0.109 ¹
T5	45 - 29	L2x2x1/8	3.04	2.87	55.1	0.4844	1265.23	15693.80	0.081 ¹
T6	29 - 25	L3x3x1/8	2.88	2.71	34.3	0.7344	4198.20	23793.80	0.176 ¹

¹ P_u / φP_n controls

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Bottom Girt Design Data (Tension)

Section No.	Elevation	Size	L	L _u	Kl/r	A	P _u	φP _n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in ²	lb	lb	
T1	125 - 105	L2x2x3/16	3.04	2.87	55.9	0.7150	844.84	23166.00	0.036 ¹
T2	105 - 85	L2x2x3/16	3.04	2.87	55.9	0.7150	1871.20	23166.00	0.081 ¹
T3	85 - 65	L2x2x3/16	3.04	2.85	55.5	0.7150	1306.70	23166.00	0.056 ¹
T4	65 - 45	L2x2x1/8	3.04	2.87	55.1	0.4844	1494.28	15693.80	0.095 ¹
T5	45 - 29	L2x2x1/8	3.04	2.87	55.1	0.4844	4313.94	15693.80	0.275 ¹
T6	29 - 25	12" x 3/8" Plate	0.76	0.59	65.8	4.5000	134.81	145800.00	0.001 ¹

¹ P_u / φP_n controls

Top Guy Pull-Off Design Data (Tension)

Section No.	Elevation	Size	L	L _u	Kl/r	A	P _u	φP _n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in ²	lb	lb	
T1	125 - 105	3" x 1/4" Plate	3.04	2.87	477.8	0.7500	2169.96	24300.00	0.089
T3	85 - 65	3" x 1/4" Plate	3.04	2.85	474.3	0.7500	7076.18	24300.00	0.291 ¹

¹ P_u / φP_n controls

Top Guy Pull-Off Bending Design Data

Section No.	Elevation	Size	M _{ux}	φM _{ux}	Ratio $\frac{M_{ux}}{\phi M_{ux}}$	M _{uy}	φM _{uy}	Ratio $\frac{M_{uy}}{\phi M_{uy}}$
	ft		lb-ft	lb-ft		lb-ft	lb-ft	
T1	125 - 105	3" x 1/4" Plate	14.83	126.56	0.117	0.00	1518.75	0.000
T3	85 - 65	3" x 1/4" Plate	0.00	126.56	0.000	0.00	1518.75	0.000

Top Guy Pull-Off Interaction Design Data

Section No.	Elevation	Size	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{ux}}$	Ratio $\frac{M_{uy}}{\phi M_{uy}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
	ft							
T1	125 - 105	3" x 1/4" Plate	0.089	0.117	0.000	0.162	1.000	4.8.1 ✓
T3	85 - 65	3" x 1/4" Plate	0.291	0.000	0.000	0.291 ¹	1.000	4.8.1 ✓

¹ P_u / φP_n controls

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Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail	
T1	125 - 105	Leg	2	2	-15123.50	74093.50	20.4	Pass	
		Diagonal	7/8	40	-1812.48	9631.38	18.8	Pass	
		Horizontal	L2x2x3/16	16	1394.26	23166.00	6.0	Pass	
		Top Girt	L2x2x3/16	4	142.86	18739.00	0.8	Pass	
		Bottom Girt	L2x2x3/16	7	844.84	23166.00	3.6	Pass	
		Guy A@116.958	3/4	258	17927.90	34980.00	51.3	Pass	
		Guy B@116.958	3/4	257	19152.50	34980.00	54.8	Pass	
		Guy C@116.958	3/4	256	18738.50	34980.00	53.6	Pass	
		Top Guy	3" x 1/4" Plate	36	2169.96	24300.00	16.2	Pass	
		Pull-Off@116.958							
T2	105 - 85	Leg	2	54	-34731.90	74093.50	46.9	Pass	
		Diagonal	7/8	64	-4923.97	9631.38	51.1	Pass	
		Horizontal	L2x2x3/16	94	1925.42	23166.00	8.3	Pass	
		Top Girt	L2x2x3/16	55	859.69	18739.00	4.6	Pass	
		Bottom Girt	L2x2x3/16	59	1871.20	23166.00	8.1	Pass	
T3	85 - 65	Leg	2 1/4	105	-57527.10	107392.00	53.6	Pass	
		Diagonal	7/8	151	-5316.34	9729.92	54.6	Pass	
		Horizontal	L2x2x3/16	128	2648.67	23166.00	11.4	Pass	
		Top Girt	L2x2x3/16	107	-996.40	17680.00	5.6	Pass	
		Bottom Girt	L2x2x3/16	110	-996.40	17079.90	5.8	Pass	
		Guy A@76.9583	7/8	261	24561.70	47820.00	51.4	Pass	
		Guy B@76.9583	7/8	260	27751.60	47820.00	58.0	Pass	
		Guy C@76.9583	7/8	259	26149.30	47820.00	54.7	Pass	
		Top Guy	3" x 1/4" Plate	136	7076.18	24300.00	29.1	Pass	
		Pull-Off@76.9583							
T4	65 - 45	Leg	2	156	-35852.40	74093.50	48.4	Pass	
		Diagonal	7/8	204	-4217.07	9631.38	43.8	Pass	
		Horizontal	L2x2x1/8	197	2551.69	15693.80	16.3	Pass	
		Top Girt	L2x2x1/8	158	1710.54	15693.80	10.9	Pass	
		Bottom Girt	L2x2x1/8	160	1494.28	15693.80	9.5	Pass	
T5	45 - 29	Leg	2	206	-28178.80	74603.20	37.8	Pass	
		Diagonal	7/8	246	-2534.44	9676.41	26.2	Pass	
		Horizontal	L2x2x1/8	238	2690.32	15693.80	17.1	Pass	
		Top Girt	L2x2x1/8	209	1265.23	15693.80	8.1	Pass	
		Bottom Girt	L2x2x1/8	211	4313.94	15693.80	27.5	Pass	
T6	29 - 25	Leg	2	248	-31882.50	95668.20	33.3	Pass	
		Top Girt	L3x3x1/8	250	4198.20	23793.80	17.6	Pass	
		Bottom Girt	12" x 3/8" Plate	253	-246.07	116106.00	0.3	Pass	
							Summary		
							Leg (T3)	53.6	Pass
							Diagonal (T3)	54.6	Pass
							Horizontal (T5)	17.1	Pass
							Top Girt (T6)	17.6	Pass
							Bottom Girt (T5)	27.5	Pass
							Guy A (T3)	51.4	Pass
							Guy B (T3)	58.0	Pass
							Guy C (T3)	54.7	Pass
							Top Guy Pull-Off (T3)	29.1	Pass
							Bolt Checks	16.3	Pass
							RATING =	58.0	Pass

APPENDIX B
REFERENCE MATERIAL



NORTHEAST > North East > New England > Windsor-3 > WEST HARTFORD CENTER CT

Qazi, Farhat - farhat.qazi@verizonwireless.com - 20241115_160718

Project Details		Location Information	
Carrier Aggregation	N	Site Id	325091
Ecip	N	Search Ring#	
Project Name	BAS FILTER ADD	E-NodeB ID#	068960 0689551
Project Alt Name	WEST_HARTFORD_CTR_CT - 850 FILTER ADD	PSLC#	535840
Project Id	17390716	Switch Name	Windsor-3
Designed Sector Carrier 4G	15	Tower Type	
Designed Sector Carrier 5G	6	Site Type	MACRO
Additional Sector Carrier 4G	0	Street Address	14-20 Isham Road
Additional Sector Carrier 5G	0	City	West Hartford
Suffix		State	CT
FP Solution Type & Tech Type	MODIFICATION;4G ANTMOD	Zip Code	06107
		County	Hartford
		Latitude	41.761556/ 41° 45' 41.602"
		Longitude	-72.740375/ 72° 44' 25.350"

Project Scope
Filter add for Eversource Interference.

Antenna Summary												
Added Antenna												
700	850	1900	AWS	CBRS	L-Sub6	Make	Model	Center line	Tip Height	Azimuth	Install Type	Quantit

Removed Antenna												
700	850	1900	AWS	CBRS	L-Sub6	Make	Model	Center line	Tip Height	Azimuth	Install Type	Quantit

Retained Antenna												
700	850	1900	AWS	CBRS	L-Sub6	Make	Model	Center line	Tip Height	Azimuth	Install Type	Quantit
					5G	Samsung	MT6413-77A	101	102.2	60(A),180(B),290(C)	PHYSICAL	3
LTE	5G,LTE	LTE	LTE			ANDREW	SBNHH-1D65B	99.2	102.2	60(A),180(B),290(C)	PHYSICAL	6
				LTE		SAMSUNG	XXDWMM-12.5-65-8T-CBRS	97.6	98.1	60(A),180(B),290(C)	PHYSICAL	3

Added: 0	Removed: 0	Retained: 12
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Non Antenna Summary

Added Non Antenna

Equipment Type	Location	700	850	1900	AWS	CBRS	Make	Model	Install Type	Quantity
In-Band	Tower		LTE,5G				Kaelus	BSF0020F3V1-1	PHYSICAL	4

Removed Non Antenna

Equipment Type	Location	700	850	1900	AWS	CBRS	Make	Model	Install Type	Quantity

Retained Non Antenna

Equipment Type	Location	700	850	1900	AWS	CBRS	Make	Model	Install Type	Quantity
RRU	Tower			LTE	LTE		Samsung	B2/B66A RRH-BR049 (RFV01U-D1A)	PHYSICAL	3
RRU	Tower	LTE	5G,LTE				Samsung	B5/B13 RRH-BR04C (RFV01U-D2A)	PHYSICAL	3
RRU	Tower					LTE	Samsung	CBRS RRH - RT4401-48A	PHYSICAL	3

Added: 4	Removed: 0	Retained: 9
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Services						
700 LTE	0000 (8595128)			FLTR (9041154)		
Sector	01	02	03	01	02	03
Azimuth	60	180	290	60	180	290
Cell/Enodeb-Id	068960	068960	068960	068960	068960	068960
Antenna Model	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B
Antenna Make	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW
Centerline	99.2	99.2	99.2	99.2	99.2	99.2
DLEARFCN	5230	5230	5230	5230	5230	5230
Mech Down-tilt	0	0	0	0	0	0
Elect Down-tilt	3	5	5	3	5	5
Tip Height	102.2	102.2	102.2	102.2	102.2	102.2
Regulatory Power	77.46 (W/MHz) ERP	77.46 (W/MHz) ERP	77.46 (W/MHz) ERP	77.46 (W/MHz) ERP	77.46 (W/MHz) ERP	77.46 (W/MHz) ERP
Transmitter Max Power	46.0 dBm	46.0 dBm	46.0 dBm	46.0 dBm	46.0 dBm	46.0 dBm
TMA Make						
TMA Model						
RRU Make	Samsung	Samsung	Samsung	Samsung	Samsung	Samsung
RRU Model	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)
Number of Tx,Rx	4 , 4	4 , 4	4 , 4	4 , 4	4 , 4	4 , 4
Operational Port Count	0	0	0	0	0	0
Position	2,3	2,3	2,3	2,3	2,3	2,3
Transmitter Id	16565036	16565039	16565042	22699062	22699065	22699068
Source	VZNPP	VZNPP	VZNPP	VZNPP	VZNPP	VZNPP
Bandwidth	10	10	10	10	10	10
Ant. Dimensions H x W x D(inch)	72.59 x 11.88 x 7.08	72.59 x 11.88 x 7.08	72.59 x 11.88 x 7.08	72.59 x 11.88 x 7.08	72.59 x 11.88 x 7.08	72.59 x 11.88 x 7.08
Weight(lb)	40.51	40.51	40.51	40.51	40.51	40.51

Services

850 LTE	0000 (8595128)			FLTR (9041154)		
Sector	01	02	03	01	02	03
Azimuth	60	180	290	60	180	290
Cell/Enodeb-Id	068960	068960	068960	068960	068960	068960
Antenna Model	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B
Antenna Make	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW
Centerline	99.2	99.2	99.2	99.2	99.2	99.2
DLEARFCN	2450	2450	2450	2450	2450	2450
Mech Down-tilt	0	0	0	0	0	0
Elect Down-tilt	3	5	5	3	5	5
Tip Height	102.2	102.2	102.2	102.2	102.2	102.2
Regulatory Power	366.87 (W/MHz) ERPSPD	366.96 (W/MHz) ERPSPD	366.96 (W/MHz) ERPSPD	366.87 (W/MHz) ERPSPD	366.96 (W/MHz) ERPSPD	366.96 (W/MHz) ERPSPD
Transmitter Max Power	46.0 dBm	46.0 dBm	46.0 dBm	46.0 dBm	46.0 dBm	46.0 dBm
TMA Make						
TMA Model						
RRU Make	Samsung	Samsung	Samsung	Samsung	Samsung	Samsung
RRU Model	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)
Number of Tx,Rx	4 , 4	4 , 4	4 , 4	4 , 4	4 , 4	4 , 4
Operational Port Count	0	0	0	0	0	0
Position	2,3	2,3	2,3	2,3	2,3	2,3
Transmitter Id	16565033	16565034	16565035	22699059	22699060	22699061
Source	VZNPP	VZNPP	VZNPP	VZNPP	VZNPP	VZNPP
Bandwidth	10	10	10	10	10	10
Ant. Dimensions H x W x D(inch)	72.0 x 11.88 x 7.08	72.0 x 11.88 x 7.08	72.0 x 11.88 x 7.08	72.0 x 11.88 x 7.08	72.0 x 11.88 x 7.08	72.0 x 11.88 x 7.08
Weight(lb)	40.51	40.51	40.51	40.51	40.51	40.51

Services						
850 NR	0000 (8595128)			FLTR (9041154)		
Sector	0046	0047	0048	0046	0047	0048
Azimuth	60	180	290	60	180	290
Cell/Enodeb-Id	0689551	0689551	0689551	0689551	0689551	0689551
Antenna Model	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B
Antenna Make	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW
Centerline	99.2	99.2	99.2	99.2	99.2	99.2
DLEARFCN	174800	174800	174800	174800	174800	174800
Mech Down-tilt	0	0	0	0	0	0
Elect Down-tilt	3	5	5	3	5	5
Tip Height	102.2	102.2	102.2	102.2	102.2	102.2
Regulatory Power	366.87 (W/MHz) ERPSD	366.96 (W/MHz) ERPSD	366.96 (W/MHz) ERPSD	366.87 (W/MHz) ERPSD	366.96 (W/MHz) ERPSD	366.96 (W/MHz) ERPSD
Transmitter Max Power	46.0 dBm	46.0 dBm	46.0 dBm	46.0 dBm	46.0 dBm	46.0 dBm
TMA Make						
TMA Model						
RRU Make	Samsung	Samsung	Samsung	Samsung	Samsung	Samsung
RRU Model	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)
Number of Tx,Rx	4 , 4	4 , 4	4 , 4	4 , 4	4 , 4	4 , 4
Operational Port Count	0	0	0	0	0	0
Position	2,3	2,3	2,3	2,3	2,3	2,3
Transmitter Id	16565033	16565034	16565035	22699059	22699060	22699061
Source	VZNPP	VZNPP	VZNPP	VZNPP	VZNPP	VZNPP
Bandwidth	10	10	10	10	10	10
Ant. Dimensions H x W x D(inch)	72.0 x 11.88 x 7.08	72.0 x 11.88 x 7.08	72.0 x 11.88 x 7.08	72.0 x 11.88 x 7.08	72.0 x 11.88 x 7.08	72.0 x 11.88 x 7.08
Weight(lb)	40.51	40.51	40.51	40.51	40.51	40.51

Services						
1900 LTE	0000 (8595128)			FLTR (9041154)		
Sector	01	02	03	01	02	03
Azimuth	60	180	290	60	180	290
Cell/Enodeb-Id	068960	068960	068960	068960	068960	068960
Antenna Model	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B
Antenna Make	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW
Centerline	99.2	99.2	99.2	99.2	99.2	99.2
DLEARFCN	1050	1050	1050	1050	1050	1050
Mech Down-tilt	0	0	0	0	0	0
Elect Down-tilt	0	0	0	0	0	0
Tip Height	102.2	102.2	102.2	102.2	102.2	102.2
Regulatory Power	290.31 (W/MHz) EIRP	290.31 (W/MHz) EIRP	290.31 (W/MHz) EIRP	290.31 (W/MHz) EIRP	290.31 (W/MHz) EIRP	290.31 (W/MHz) EIRP
Transmitter Max Power	46.0 dBm	46.0 dBm	46.0 dBm	46.0 dBm	46.0 dBm	46.0 dBm
TMA Make						
TMA Model						
RRU Make	Samsung	Samsung	Samsung	Samsung	Samsung	Samsung
RRU Model	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)
Number of Tx,Rx	4 , 4	4 , 4	4 , 4	4 , 4	4 , 4	4 , 4
Operational Port Count	0	0	0	0	0	0
Position	3	3	3	3	3	3
Transmitter Id	16565037	16565040	16565043	22699063	22699066	22699069
Source	VZNPP	VZNPP	VZNPP	VZNPP	VZNPP	VZNPP
Bandwidth	10	10	10	10	10	10
Ant. Dimensions H x W x D(inch)	72.59 x 11.88 x 7.08	72.59 x 11.88 x 7.08	72.59 x 11.88 x 7.08	72.59 x 11.88 x 7.08	72.59 x 11.88 x 7.08	72.59 x 11.88 x 7.08
Weight(lb)	40.51	40.51	40.51	40.51	40.51	40.51

Services						
AWS LTE	0000 (8595128)			FLTR (9041154)		
Sector	01	02	03	01	02	03
Azimuth	60	180	290	60	180	290
Cell/Enodeb-Id	068960	068960	068960	068960	068960	068960
Antenna Model	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B
Antenna Make	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW
Centerline	99.2	99.2	99.2	99.2	99.2	99.2
DLEARFCN	2050	2050	2050	2050	2050	2050
Mech Down-tilt	0	0	0	0	0	0
Elect Down-tilt	0	0	0	0	0	0
Tip Height	102.2	102.2	102.2	102.2	102.2	102.2
Regulatory Power	144.05 (W/MHz) EIRP	144.05 (W/MHz) EIRP	144.05 (W/MHz) EIRP	144.05 (W/MHz) EIRP	144.05 (W/MHz) EIRP	144.05 (W/MHz) EIRP
Transmitter Max Power	46.0 dBm	46.0 dBm	46.0 dBm	46.0 dBm	46.0 dBm	46.0 dBm
TMA Make						
TMA Model						
RRU Make	Samsung	Samsung	Samsung	Samsung	Samsung	Samsung
RRU Model	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)
Number of Tx,Rx	4 , 4	4 , 4	4 , 4	4 , 4	4 , 4	4 , 4
Operational Port Count	0	0	0	0	0	0
Position	2	2	2	2	2	2
Transmitter Id	16565038	16565041	16565044	22699064	22699067	22699070
Source	VZNPP	VZNPP	VZNPP	VZNPP	VZNPP	VZNPP
Bandwidth	20	20	20	20	20	20
Ant. Dimensions H x W x D(inch)	72.59 x 11.88 x 7.08	72.59 x 11.88 x 7.08	72.59 x 11.88 x 7.08	72.59 x 11.88 x 7.08	72.59 x 11.88 x 7.08	72.59 x 11.88 x 7.08
Weight(lb)	40.51	40.51	40.51	40.51	40.51	40.51

Services						
CBRS LTE	0000 (8595128)			FLTR (9041154)		
Sector	19	20	21	19	20	21
Azimuth	60	180	290	60	180	290
Cell/Enodeb-Id	068960	068960	068960	068960	068960	068960
Antenna Model	XXDWMM-12.5-65-8T-C BRS	XXDWMM-12.5-65-8T-C BRS	XXDWMM-12.5-65-8T-C BRS	XXDWMM-12.5-65-8T-C BRS	XXDWMM-12.5-65-8T-C BRS	XXDWMM-12.5-65-8T-C BRS
Antenna Make	SAMSUNG	SAMSUNG	SAMSUNG	SAMSUNG	SAMSUNG	SAMSUNG
Centerline	97.6	97.6	97.6	97.6	97.6	97.6
DLEARFCN	55343, 55541, 55792, 55936	55343, 55541, 55792, 55936	55343, 55541, 55792, 55936	55343, 55541, 55792, 55936	55343, 55541, 55792, 55936	55343, 55541, 55792, 55936
Mech Down-tilt	0	0	0	0	0	0
Elect Down-tilt	8	8	8	8	8	8
Tip Height	98.1	98.1	98.1	98.1	98.1	98.1
Regulatory Power	4.86 (W/MHz) EIRPSD, 4.86 (W/MHz) EIRPSD, 4.86 (W/MHz)	4.86 (W/MHz) EIRPSD, 4.86 (W/MHz) EIRPSD, 4.86 (W/MHz)	4.86 (W/MHz) EIRPSD, 4.86 (W/MHz) EIRPSD, 4.86 (W/MHz)	4.86 (W/MHz) EIRPSD, 4.86 (W/MHz) EIRPSD, 4.86 (W/MHz)	4.86 (W/MHz) EIRPSD, 4.86 (W/MHz) EIRPSD, 4.86 (W/MHz)	4.86 (W/MHz) EIRPSD, 4.86 (W/MHz) EIRPSD, 4.86 (W/MHz)
Transmitter Max Power	36.44 dBm	36.44 dBm	36.44 dBm	36.44 dBm	36.44 dBm	36.44 dBm
TMA Make						
TMA Model						
RRU Make	Samsung	Samsung	Samsung	Samsung	Samsung	Samsung
RRU Model	CBRS RRH - RT4401-48A	CBRS RRH - RT4401-48A	CBRS RRH - RT4401-48A	CBRS RRH - RT4401-48A	CBRS RRH - RT4401-48A	CBRS RRH - RT4401-48A
Number of Tx,Rx	4 , 4	4 , 4	4 , 4	4 , 4	4 , 4	4 , 4
Operational Port Count	0	0	0	0	0	0
Position	4	4	4	4	4	4
Transmitter Id	16565045	16565046	16565047	22699071	22699072	22699073
Source	VZNPP	VZNPP	VZNPP	VZNPP	VZNPP	VZNPP
Bandwidth	20, 20, 10, 20	20, 20, 10, 20	20, 20, 10, 20	20, 20, 10, 20	20, 20, 10, 20	20, 20, 10, 20
Ant. Dimensions H x W x D(inch)	12.32 x 8.66 x 1.35	12.32 x 8.66 x 1.35	12.32 x 8.66 x 1.35	12.32 x 8.66 x 1.35	12.32 x 8.66 x 1.35	12.32 x 8.66 x 1.35
Weight(lb)	2.86	2.86	2.86	2.86	2.86	2.86

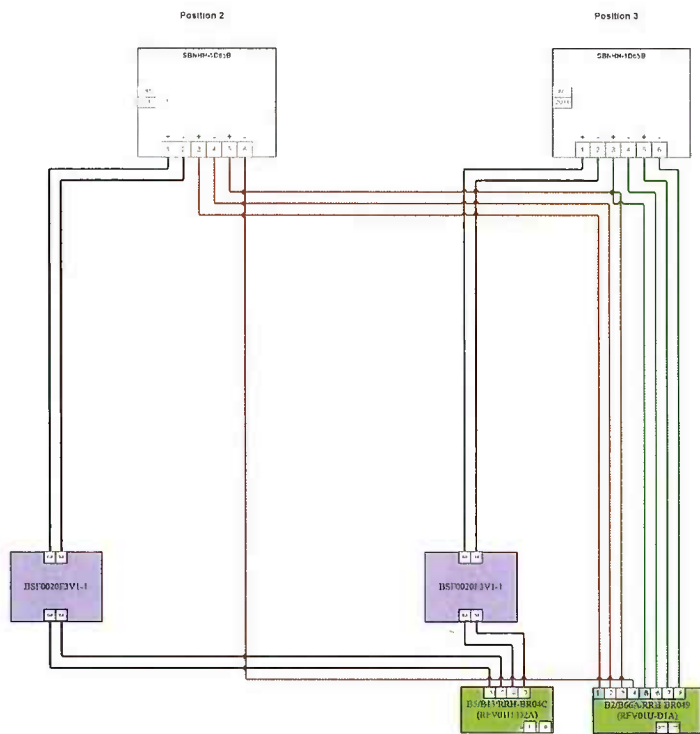
Services						
CBAND NR	0000 (8595128)			FLTR (9041154)		
Sector	0046	0047	0048	0046	0047	0048
Azimuth	60	180	290	60	180	290
Cell/Enodeb-Id	0689551	0689551	0689551	0689551	0689551	0689551
Antenna Model	MT6413-77A	MT6413-77A	MT6413-77A	MT6413-77A	MT6413-77A	MT6413-77A
Antenna Make	Samsung	Samsung	Samsung	Samsung	Samsung	Samsung
Centerline	101	101	101	101	101	101
DLEARFCN	650006, 655324	650006, 655324	650006, 655324	650006, 655324	650006, 655324	650006, 655324
Mech Down-tilt	0	0	0	0	0	0
Elect Down-tilt	1	1	1	1	1	1
Tip Height	102.2	102.2	102.2	102.2	102.2	102.2
Regulatory Power	951.6 (W/MHz) EIRP, 398.39 (W/MHz) EIRP	951.6 (W/MHz) EIRP, 398.39 (W/MHz) EIRP	951.6 (W/MHz) EIRP, 398.39 (W/MHz) EIRP	951.6 (W/MHz) EIRP, 398.39 (W/MHz) EIRP	951.6 (W/MHz) EIRP, 398.39 (W/MHz) EIRP	951.6 (W/MHz) EIRP, 398.39 (W/MHz) EIRP
Transmitter Max . Power	52.02 dBm	52.02 dBm	52.02 dBm	52.02 dBm	52.02 dBm	52.02 dBm
TMA Make						
TMA Model						
RRU Make	Samsung	Samsung	Samsung	Samsung	Samsung	Samsung
RRU Model	MT6413-77A	MT6413-77A	MT6413-77A	MT6413-77A	MT6413-77A	MT6413-77A
Number of Tx,Rx	2 , 2	2 , 2	2 , 2	2 , 2	2 , 2	2 , 2
Operational Port Count	64	64	64	64	64	64
Position	4	4	4	4	4	4
Transmitter Id	16565030	16565031	16565032	22699056	22699057	22699058
Source	VZNPP	VZNPP	VZNPP	VZNPP	VZNPP	VZNPP
Bandwidth	100, 60	100, 60	100, 60	100, 60	100, 60	100, 60
Ant. Dimensions H x W x D(inch)	29.53 x 15.75 x 5.51	29.53 x 15.75 x 5.51	29.53 x 15.75 x 5.51	29.53 x 15.75 x 5.51	29.53 x 15.75 x 5.51	29.53 x 15.75 x 5.51
Weight(lb)	55.1	55.1	55.1	55.1	55.1	55.1

Callsigns Per Antenna

Sector	Make	Model	Ant CL Height AG	Ant Tip Height	Azimuth	Elect Down-tilt	Mech Down-tilt	Gain	Bandwidth	Regulator y Power	700	850	1900	2100	28 GHz	31 GHz	39 GHz	LSub-6	CBRS
01	ANDREW	SBNHH-1D65	99.2	102.2	60	3	0	12.61	69	77.46	WQJQ689								
02	ANDREW	SBNHH-1D65	99.2	102.2	180	5	0	12.63	69.25	77.46	WQJQ689								
03	ANDREW	SBNHH-1D65	99.2	102.2	290	5	0	12.63	69.25	77.46	WQJQ689								
0046	ANDREW	SBNHH-1D65	99.2	102.2	60	3	0	12.49	66	366.87		KNKA404							
0047	ANDREW	SBNHH-1D65	99.2	102.2	180	5	0	12.38	66	366.96		KNKA404							
0048	ANDREW	SBNHH-1D65	99.2	102.2	290	5	0	12.38	66	366.96		KNKA404							
01	ANDREW	SBNHH-1D65	99.2	102.2	60	3	0	12.49	66	366.87		KNKA404							
02	ANDREW	SBNHH-1D65	99.2	102.2	180	5	0	12.38	66	366.96		KNKA404							
03	ANDREW	SBNHH-1D65	99.2	102.2	290	5	0	12.38	66	366.96		KNKA404							
01	ANDREW	SBNHH-1D65	99.2	102.2	60	0	0	16.19	53	290.31			KNLH251,WP OJ730						
02	ANDREW	SBNHH-1D65	99.2	102.2	180	0	0	16.19	53	290.31			KNLH251,WP OJ730						
03	ANDREW	SBNHH-1D65	99.2	102.2	290	0	0	16.19	53	290.31			KNLH251,WP OJ730						
01	ANDREW	SBNHH-1D65	99.2	102.2	60	0	0	16.19	60.25	144.05				WQGA906,WQ GB276					
02	ANDREW	SBNHH-1D65	99.2	102.2	180	0	0	16.19	60.25	144.05				WQGA906,WQ GB276					
03	ANDREW	SBNHH-1D65	99.2	102.2	290	0	0	16.19	60.25	144.05				WQGA906,WQ GB276					
0046	Samsung	MT6413-77A	101	102.2	60	1	0	23.15	105	951.6								WRNE581,WR NE582,WRNE 583,WRNE58 4,WRNE585	
0047	Samsung	MT6413-77A	101	102.2	180	1	0	23.15	105	951.6								WRNE581,WR NE582,WRNE 583,WRNE58 4,WRNE585	
0048	Samsung	MT6413-77A	101	102.2	290	1	0	23.15	105	951.6								WRNE581,WR NE582,WRNE 583,WRNE58 4,WRNE585	
0046	Samsung	MT6413-77A	101	102.2	60	1	0	23.15	105	398.39								WRNE585,WR NE586,WRNE 587,WRNE58	
0047	Samsung	MT6413-77A	101	102.2	180	1	0	23.15	105	398.39								WRNE585,WR NE586,WRNE 587,WRNE58	
0048	Samsung	MT6413-77A	101	102.2	290	1	0	23.15	105	398.39								WRNE585,WR NE586,WRNE 587,WRNE58	
19	SAMSUNG	XXDWMM-12- 5-65-8T-CB RS	97.6	98.1	60	8	0	10.45	64.7	4.86									
20	SAMSUNG	XXDWMM-12- 5-65-8T-CB RS	97.6	98.1	180	8	0	10.45	64.7	4.86									
21	SAMSUNG	XXDWMM-12- 5-65-8T-CB RS	97.6	98.1	290	8	0	10.45	64.7	4.86									

CallSigns																			
CallSign	Market	Radio Code	Market #	Block	State	County	License Name	Wholly Owner	Total MHZ	Freq Range 1	Freq Range 2	Freq Range 3	Freq Range 4	Regulatory Power	Threshold (W)	POPs/Sq. mil	Status	Action	Approve for Insvc
WQJQ689	Northeast	WU	REA001	C	CT	9003	Cellco Partnersh lp	Yes	22.000	746.000 - 757.000/ .000 - .000	776.000 - 787.000/ .000 - .000	746.000 - 757.000/ .000 - .000	776.000 - 787.000/ .000 - .000	77.46	1000	1223.64	proposed	retained	1
KNKA404	Hartford- New Britain-B ristol, CT	CL	CMA032	A	CT	9003	Cellco Partnersh lp	Yes	25.000	824.000 - 835.000/8 45.000 - 846.500	869.000 - 880.000/8 90.000 - 891.500	824.000 - 835.000/8 45.000 - 846.500	869.000 - 880.000/8 90.000 - 891.500	366.96	1000	1223.64	proposed	retained	1
WPOJ730	Hartford, CT	CW	BTA184	C	CT	9003	Cellco Partnersh lp	Yes	10.000	1895.000 1900.000/ .000 - .000	1975.000 1980.000/ .000 - .000	1895.000 1900.000/ .000 - .000	1975.000 1980.000/ .000 - .000	290.31	1640	1223.64	proposed	retained	1
KNLH251	Hartford, CT	CW	BTA184	F	CT	9003	Cellco Partnersh lp	Yes	10.000	1890.000 1895.000/ .000 - .000	1970.000 1975.000/ .000 - .000	1890.000 1895.000/ .000 - .000	1970.000 1975.000/ .000 - .000	290.31	1640	1223.64	proposed	retained	1
CBRS_CALL SIGN	UNLICENSE	3.5 GHz	UNLICENSE	UNLICENSE	CT	UNLICENSE	UNLICENSE	UNLICENSE	UNLICENSE	UNLICENSE D - UNLICENSE D/UNLICE SED - UNLICENSE	UNLICENSE D - UNLICENSE D/UNLICE SED - UNLICENSE	- / -	- / -	4.86		1223.64	proposed	retained	
WRLD515	D09003 - Hartford, CT	PL	D09003	0	CT	9003	Verizon Wireless Network Procureme nt LP	Yes	100.000	3550.000 3650.000/ .000 - .000	.000 - .000/ .000 - .000	3550.000 3650.000/ .000 - .000	.000 - .000/ .000 - .000	4.86	501	1223.64	proposed	retained	1
WRLD514	D09003 - Hartford, CT	PL	D09003	0	CT	9003	Verizon Wireless Network Procureme nt LP	Yes	100.000	3550.000 3650.000/ .000 - .000	.000 - .000/ .000 - .000	3550.000 3650.000/ .000 - .000	.000 - .000/ .000 - .000	4.86	501	1223.64	proposed	retained	1
WRLD513	D09003 - Hartford, CT	PL	D09003	0	CT	9003	Verizon Wireless Network Procureme nt LP	Yes	100.000	3550.000 3650.000/ .000 - .000	.000 - .000/ .000 - .000	3550.000 3650.000/ .000 - .000	.000 - .000/ .000 - .000	4.86	501	1223.64	proposed	retained	1
WQGB276	Hartford- New Britain-B ristol, CT	AW	CMA032	A	CT	9003	Cellco Partnersh lp	Yes	20.000	1710.000 1720.000/ .000 - .000	2110.000 2120.000/ .000 - .000	1710.000 1720.000/ .000 - .000	2110.000 2120.000/ .000 - .000	144.05	1640	1223.64	proposed	retained	1
WRNE581	New York, NY	PM	PEA001	A1	CT	9003	Cellco Partnersh lp	Yes	20.000	3700.000 3720.000/ .000 - .000	.000 - .000/ .000 - .000	3700.000 3720.000/ .000 - .000	.000 - .000/ .000 - .000	951.6	1640	1223.64	proposed	retained	1
WRNE582	New York, NY	PM	PEA001	A2	CT	9003	Cellco Partnersh lp	Yes	20.000	3720.000 3740.000/ .000 - .000	.000 - .000/ .000 - .000	3720.000 3740.000/ .000 - .000	.000 - .000/ .000 - .000	951.6	1640	1223.64	proposed	retained	1

WRNE583	New York, NY	PM	PEA001	A3	CT	9003	Cellco Partnersh ip	Yes	20.000	3740.000 3760.000/ .000 - .000	.000 - .000/.000 - .000	3740.000 3760.000/ .000 - .000	.000 - .000/.000 - .000	951.6	1640	1223.64	proposed	retained	1
WRNE584	New York, NY	PM	PEA001	A4	CT	9003	Cellco Partnersh ip	Yes	20.000	3760.000 3780.000/ .000 - .000	.000 - .000/.000 - .000	3760.000 3780.000/ .000 - .000	.000 - .000/.000 - .000	951.6	1640	1223.64	proposed	retained	1
WRNE585	New York, NY	PM	PEA001	A5	CT	9003	Cellco Partnersh ip	Yes	20.000	3780.000 3800.000/ .000 - .000	.000 - .000/.000 - .000	3780.000 3800.000/ .000 - .000	.000 - .000/.000 - .000	951.6	1640	1223.64	proposed	retained	1
WQGA906	New York-No. New Jer.-Long Island, NY-NJ-CT- PA-MA-	AW	BEA010	B	CT	9003	Cellco Partnersh ip	Yes	20.000	1720.000 1730.000/ .000 - .000	2120.000 2130.000/ .000 - .000	1720.000 1730.000/ .000 - .000	2120.000 2130.000/ .000 - .000	144.05	1640	1223.64	proposed	retained	1
WRNE586	New York, NY	PM	PEA001	B1	CT	9003	Cellco Partnersh ip	Yes	20.000	3800.000 3820.000/ .000 - .000	.000 - .000/.000 - .000	3800.000 3820.000/ .000 - .000	.000 - .000/.000 - .000	398.39	1640	1223.64	proposed	retained	1
WRNE587	New York, NY	PM	PEA001	B2	CT	9003	Cellco Partnersh ip	Yes	20.000	3820.000 3840.000/ .000 - .000	.000 - .000/.000 - .000	3820.000 3840.000/ .000 - .000	.000 - .000/.000 - .000	398.39	1640	1223.64	proposed	retained	1
WRNE588	New York, NY	PM	PEA001	B3	CT	9003	Cellco Partnersh ip	Yes	20.000	3840.000 3860.000/ .000 - .000	.000 - .000/.000 - .000	3840.000 3860.000/ .000 - .000	.000 - .000/.000 - .000	398.39	1640	1223.64	proposed	retained	1



Alpha (Proposed)

Legends

RET dc signal capable port

- 700/850(LB)
- 700(LT)
- 850(CB)
- AWS(AW)
- PCS(PC)
- AWS/PCS(HB)
- 28GHz(U28)
- 39GHz(U39)
- L-Sub6(S6)
- CBRS(RS)
- LAA(LA)
- Fiber
- AISG
- DC

Coax

Coax Jumper

Sectors Shared Equipments

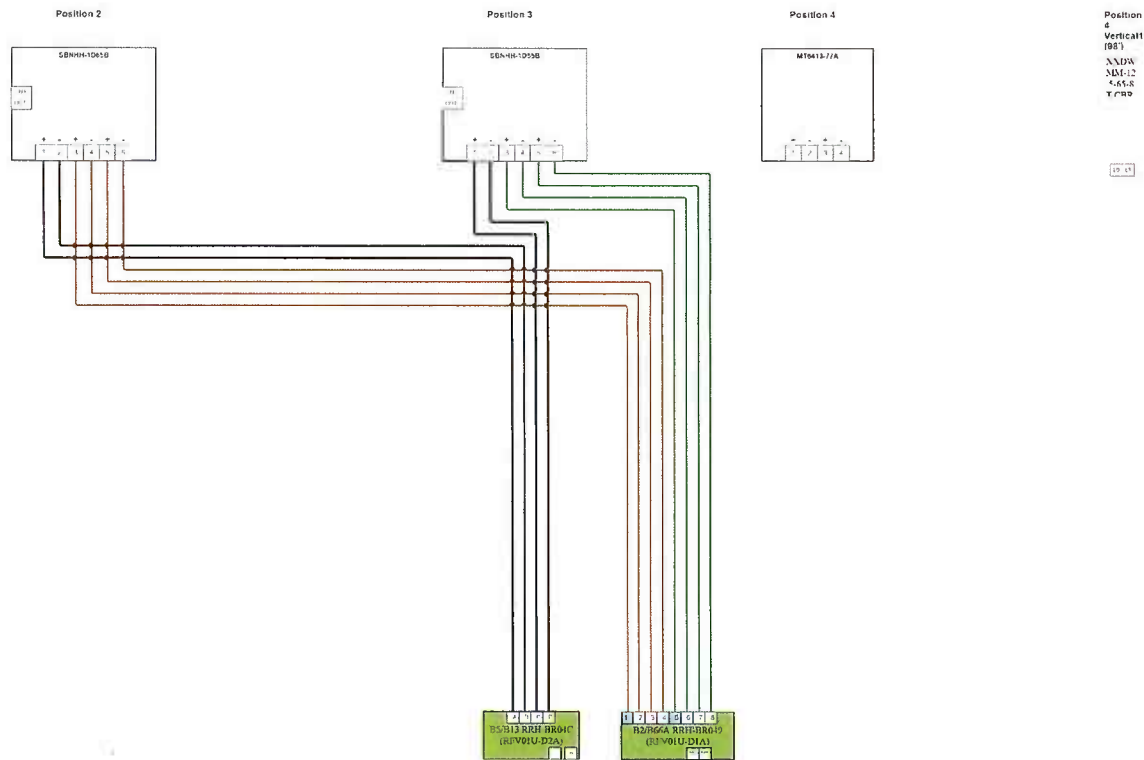
Notes:

- Antenna view is from the back of the antennas
- Colors of connections are just for clarification
- Size of objects in drawing doesn't reflect equipment true dimensions

Sector design

Shelter

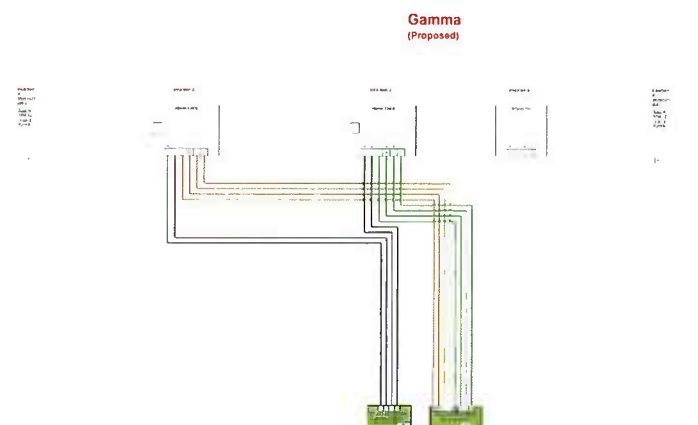
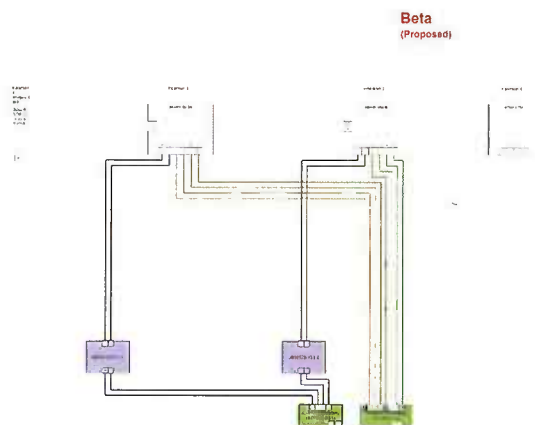
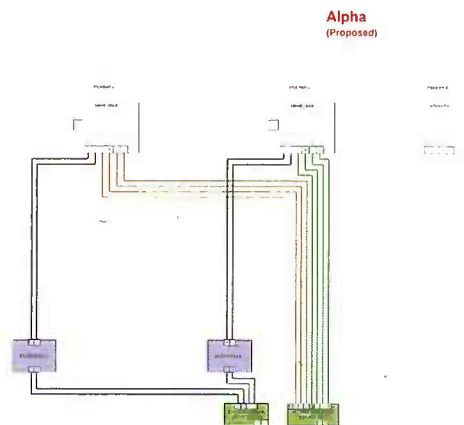
Gamma (Proposed)



Legends	
RET dc signal capable port	
700/850(LB)	
700(LT)	
850(CB)	
AWS(AW)	
PCS(PC)	
AWS/PCS(HB)	
28GHz(U28)	
39GHz(U39)	
L-Sub6(S6)	
CBRS(RS)	
LAA(LA)	
Fiber	
AISG	
DC	
Coax	
Coax Jumper	
Sectors Shared Equipments	

Notes:

- Antenna view is from the back of the antennas
- Colors of connections are just for clarification
- Size of objects in drawing doesn't reflect equipment true dimensions





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Antenna Mount Analysis Report and PMI Requirements

Mount ReAnalysis

SMART Tool Project #: 10290128
Colliers Engineering & Design Project #: 25777219

April 11, 2025

Site Information

Site ID: 5000179615-VZW / WEST HARTFORD
CENTER CT
Site Name: WEST HARTFORD CENTER CT
Carrier Name: Verizon Wireless
Address: 14-20 ISHAM ROAD
West Hartford, Connecticut 06107
Hartford County
Latitude: 41.761556°
Longitude: -72.740375°

Structure Information

Tower Type: 125-Ft Guyed
Mount Type: 12.50-Ft Sector Frame

FUZE ID # 17390716

Analysis Results

Sector Frame: 46.4% Pass*

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

***Contractor PMI Requirements:

Included at the end of this MA report

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

**For additional questions and support, please reach out to:
pmisupport@colliersengineering.com**

Report Prepared By: Ana Mora

Digitally signed by Grant Walters
Date: 2025.04.11 10:15:45-05'00'

Executive Summary:

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

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

Sources of Information:

Document Type	Remarks
Radio Frequency Data Sheet (RFDS)	Verizon RFDS, Site ID: 325091, dated November 15, 2024
Post-Modification Inspection Report	Colliers Engineering & Design, Project #: 23777094, dated November 2, 2023

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H 2022 Connecticut State Building Code (CSBC), Effective 1,2022
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT} : 120 mph Ice Wind Speed (3-sec. Gust): 50 mph Design Ice Thickness: 1.50 in Risk Category: II Exposure Category: B Topographic Category: 1 Topographic Feature Considered: N/A Topographic Method: N/A Ground Elevation Factor, K_e : 0.996
Seismic Parameters:	S_s : 0.187 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 (V22)

Final Loading Configuration:

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

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
97.00	101.00	3	Samsung	MT6413-77A	Retained
	99.2	6	Andrew	SBNHH-1D65B	
	97.6	3	Samsung	XXDWMM-12.5-65-8T-CBRS	
		3	Samsung	B2/B66A RRH-BR049	
		3	Samsung	B5/B13 RRH-BR04C	
		1	Raycap	RVZDC-6627-PF-48*	
		4	KAelus	BSF0020F3V1-1	Added

* Equipment is flush mounted directly to the Guyed. They are not mounted on Sector Frame mounts and are not included in this mount analysis.

It is acceptable to install up to three (3) OVPs with dimensions not to exceed 30" x 17" x 13" and 40 lbs. 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.

Standard Conditions:

1. All engineering services are performed on the basis that the information provided to Colliers Engineering & Design and used in this analysis is current and correct. The existing equipment loading has been applied at locations determined from the supplied documentation. Any deviation from the loading locations specified in this report shall be communicated to Colliers Engineering & Design to verify deviation will not adversely impact the analysis.
2. Mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.

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

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

3. For mount analyses completed from other data sources (including new replacement mounts) and not specifically mapped in accordance with the NSTD-446 Standard, the mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.
4. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.
5. The mount was checked up to, and including, the bolts that fasten it to the mount collar/attachment and threaded rod connections in collar members if applicable. Local deformation and interaction between the mount collar/attachment and the supporting tower structure are outside the scope of this analysis.

6. All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. Colliers Engineering & Design is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.
7. Structural Steel Grades have been assumed as follows, if applicable, unless otherwise noted in this analysis:
 - Channel, Solid Round, Angle, Plate ASTM A36 (Gr. 36)
 - HSS (Rectangular) ASTM 500 (Gr. B-46)
 - Pipe ASTM A53 (Gr. B-35)
 - Threaded Rod F1554 (Gr. 36)
 - Bolts ASTM A325

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

Analysis Results:

Component	Utilization %	Pass/Fail
Horizontal mount pipe	29.6 %	Pass
Standoff Plate	46.4 %	Pass
Standoff Horizontal	16.6 %	Pass
Standoff Diagonal	8.4 %	Pass
Antenna Pipe	42.5 %	Pass
Standoff Vertical	8.4 %	Pass
Tieback	4.4 %	Pass
RRU Pipes	4.1 %	Pass
Connection Check	12.2 %	Pass

Structure Rating – (Controlling Utilization of all Components)	46.4%
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Mount Connection Envelope Reactions:

Connection Description	Elev. AGL (Ft)	Node Label	Envelope Wind Reactions				Envelope Wind + Ice Reactions			
			Axial (Lbs)	Lateral (Lbs)	Moment (K-Ft)	Torsion (K-Ft)	Axial (Lbs)	Lateral (Lbs)	Moment (K-Ft)	Torsion (K-Ft)
Sector A Bottom Standoff	98.7	N35	490	778	0.223	0.000	1344	1619	0.562	0.000
Sector A Top Standoff	95.3	N36	482	1499	0.200	0.000	1323	1863	0.533	0.000

Notes:

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

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

Ice Thickness (In)	Mount Pipes Excluded		Mount Pipes Included	
	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)
0	17.3	9.7	26.4	18.8
0.5	26.8	16.5	39.8	29.4
1	35.6	22.7	52.4	39.5

Notes:

- (EPA)a values listed above may be used in the absence of more precise information
- (EPA)a values in the table above include 1 sector(s).
- Ka factors included in (EPA)a calculations

Requirements:

The existing mounts are **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

MDG #: 5000179615

SMART Project #: 10290128

Fuze Project ID: 17390716

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

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

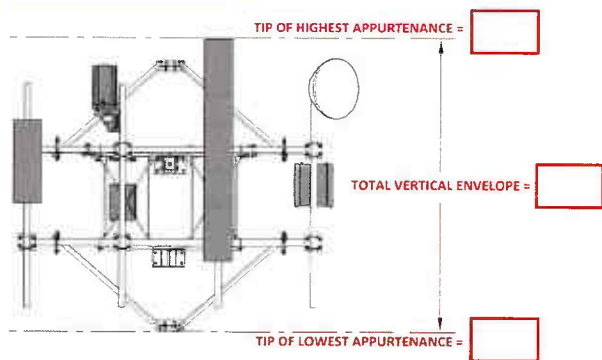


Illustration #1

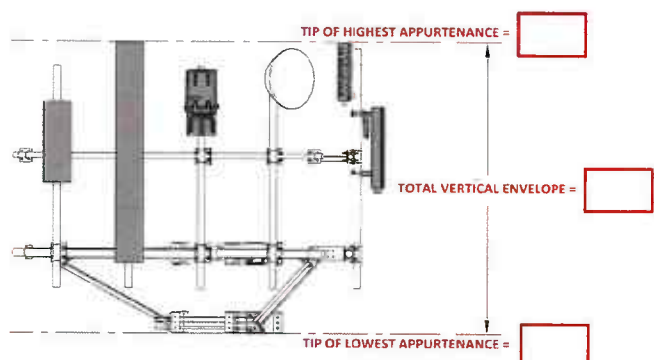


Illustration #2

Certifying Individual:

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

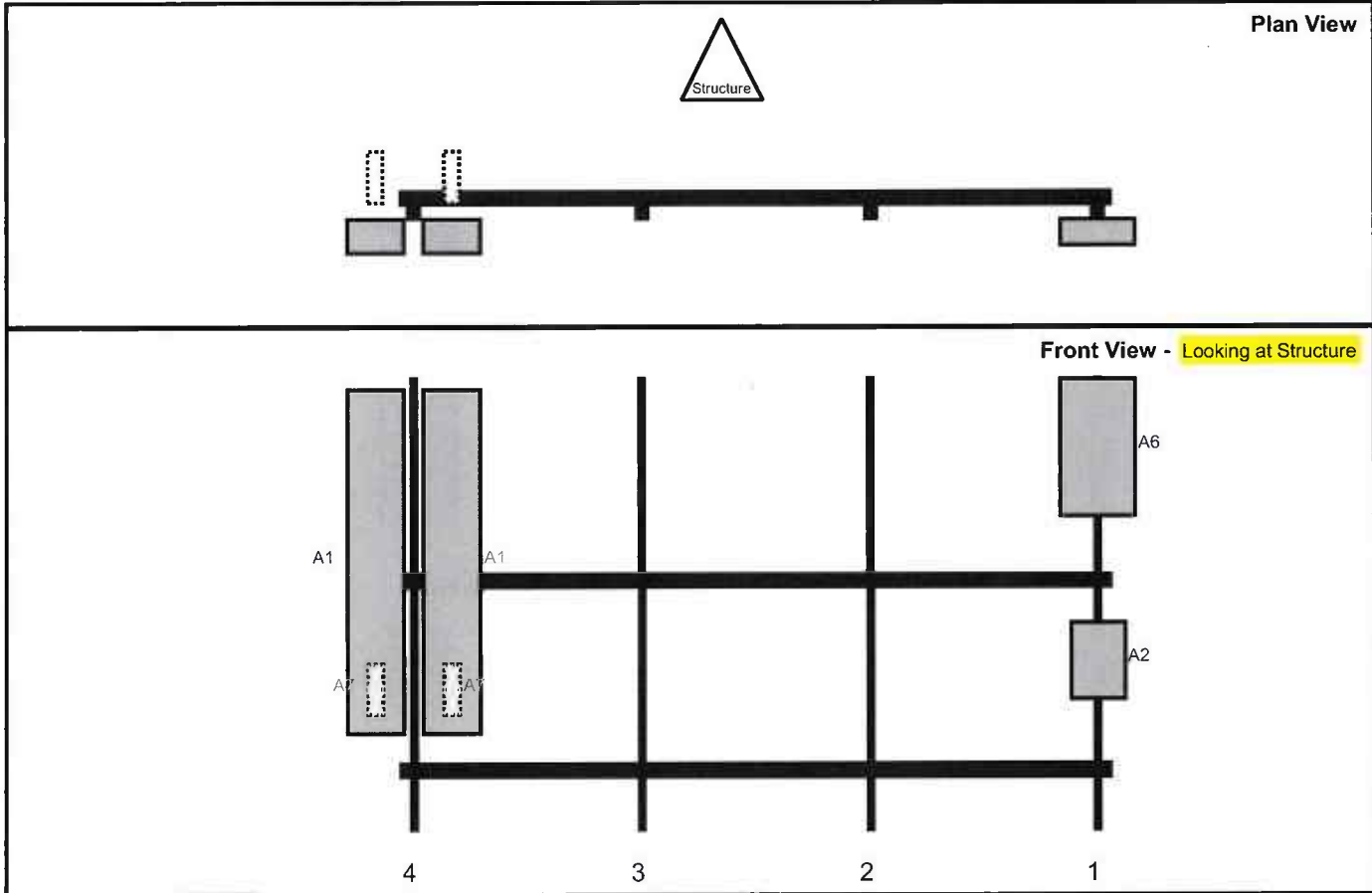
Structure: 5000179615-VZW - WEST HARTFORD CENTER CT

Sector: A
Structure Type: Guyed
Mount Elev: 97.00

10290128

4/11/2025

Page: 1



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
A2	XXDWM-12.5-65-8T-CBRS	16.2	11.4	147	1	a	Front	60	0	Retained	10/25/2023
A6	MT6413-77A	28.9	15.8	147	1	a	Front	15	0	Retained	10/25/2023
A1	SBNHH-1D65B	72.6	11.9	3	4	a	Front	39	8	Retained	10/25/2023
A1	SBNHH-1D65B	72.6	11.9	3	4	b	Front	39	-8	Retained	10/25/2023
A7	BSF0020F3V1-1	10.6	3.2	3	4	a	Behind	66	-8	Added	
A7	BSF0020F3V1-1	10.6	3.2	3	4	b	Behind	66	8	Added	
RRU1	B2/B66A RRH-BR049	15	15		Member					Retained	10/25/2023
RRU2	B5/B13 RRH-BR04C	15	15		Member					Retained	10/25/2023

Structure: 5000179615-VZW - WEST HARTFORD CENTER CT

Sector: B

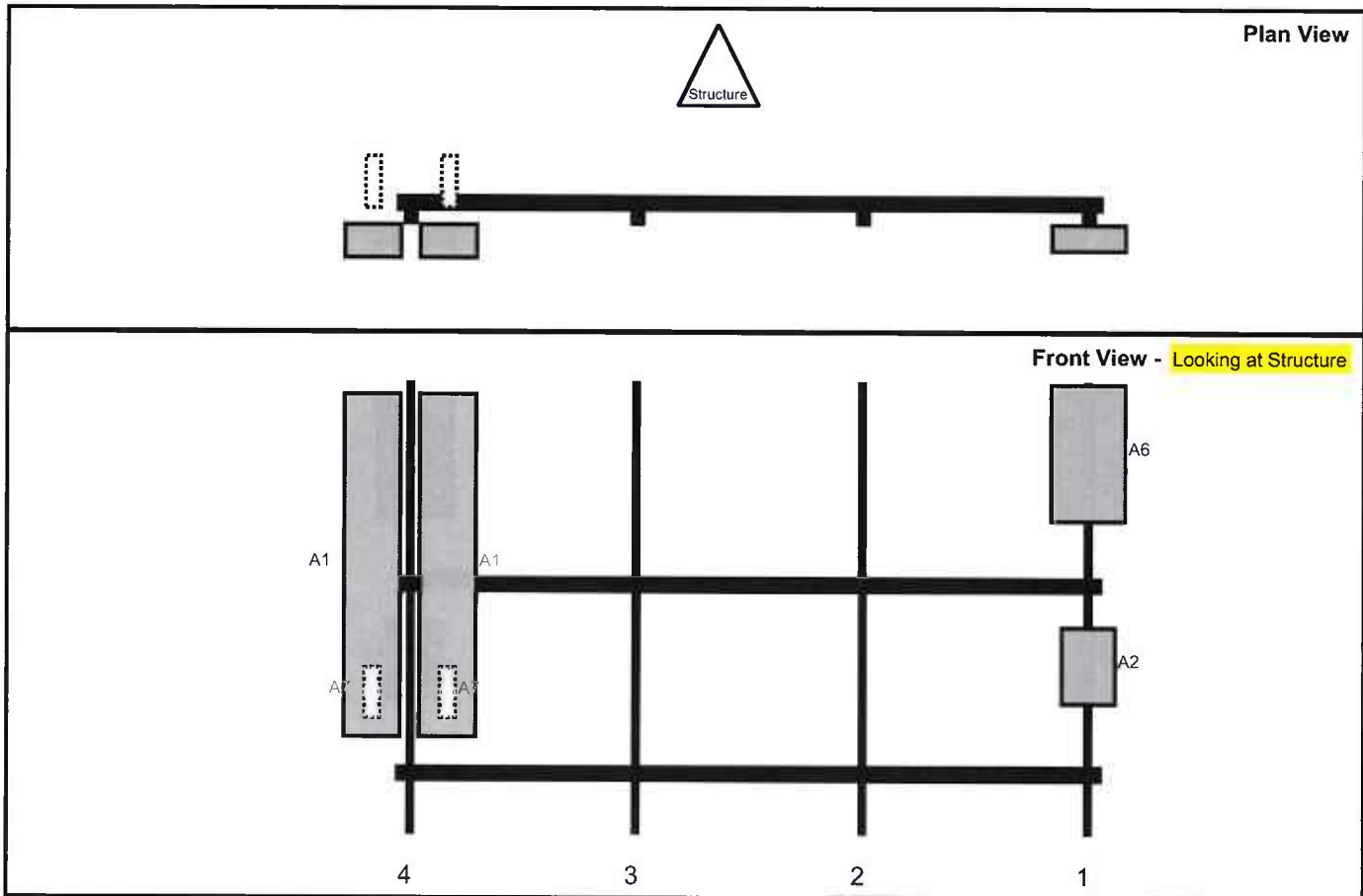
4/11/2025

Structure Type: Guyed

10290128

Mount Elev: 97.00

Page: 2



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
A2	XXDWMM-12.5-65-8T-CBRS	16.2	11.4	147	1	a	Front	60	0	Retained	10/25/2023
A6	MT6413-77A	28.9	15.8	147	1	a	Front	15	0	Retained	10/25/2023
A1	SBNHH-1D65B	72.6	11.9	3	4	a	Front	39	8	Retained	10/25/2023
A1	SBNHH-1D65B	72.6	11.9	3	4	b	Front	39	-8	Retained	10/25/2023
A7	BSF0020F3V1-1	10.6	3.2	3	4	a	Behind	66	-8	Added	
A7	BSF0020F3V1-1	10.6	3.2	3	4	b	Behind	66	8	Added	

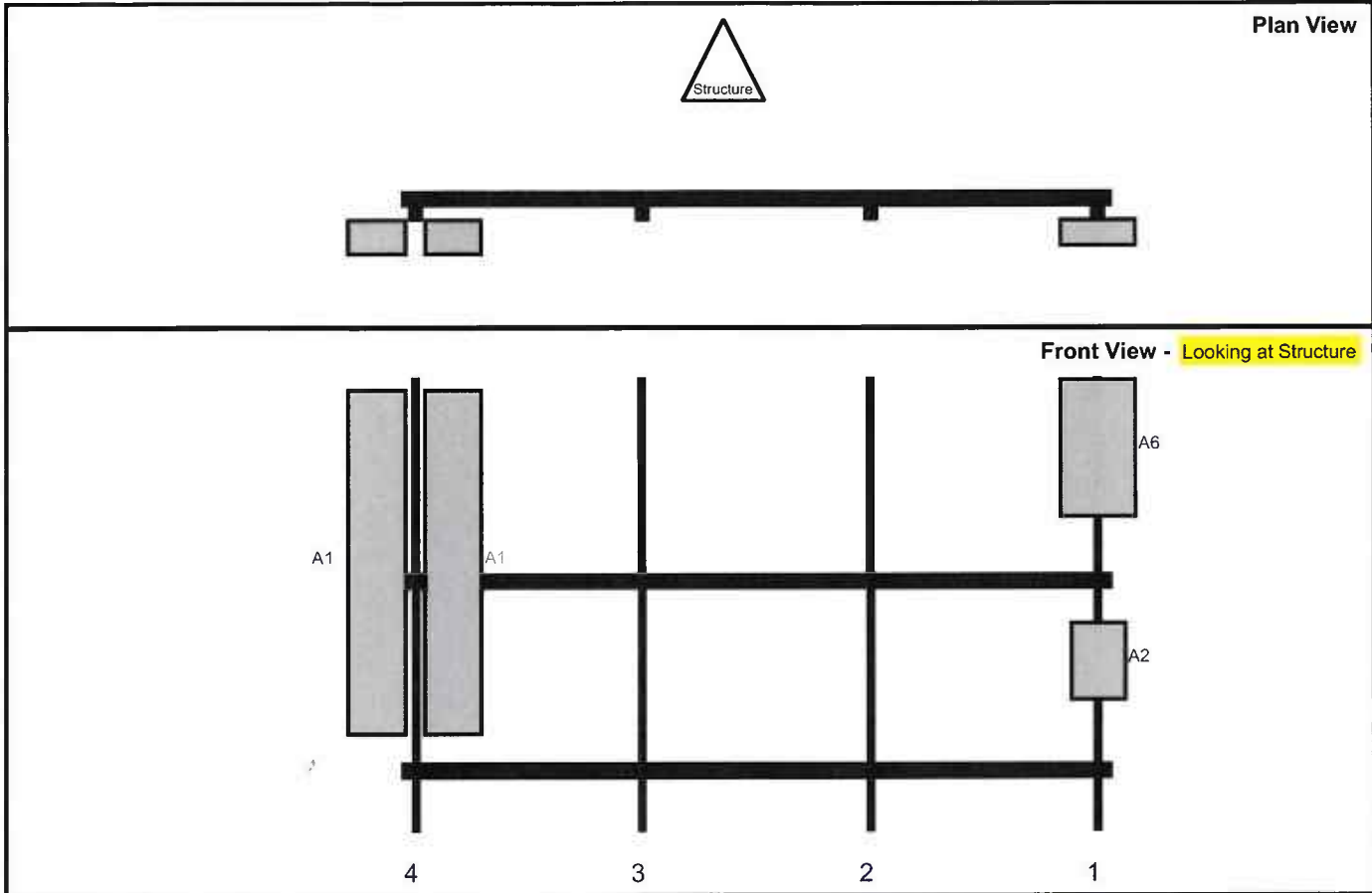
Structure: 5000179615-VZW - WEST HARTFORD CENTER CT

Sector: C
Structure Type: Guyed
Mount Elev: 97.00

10290128

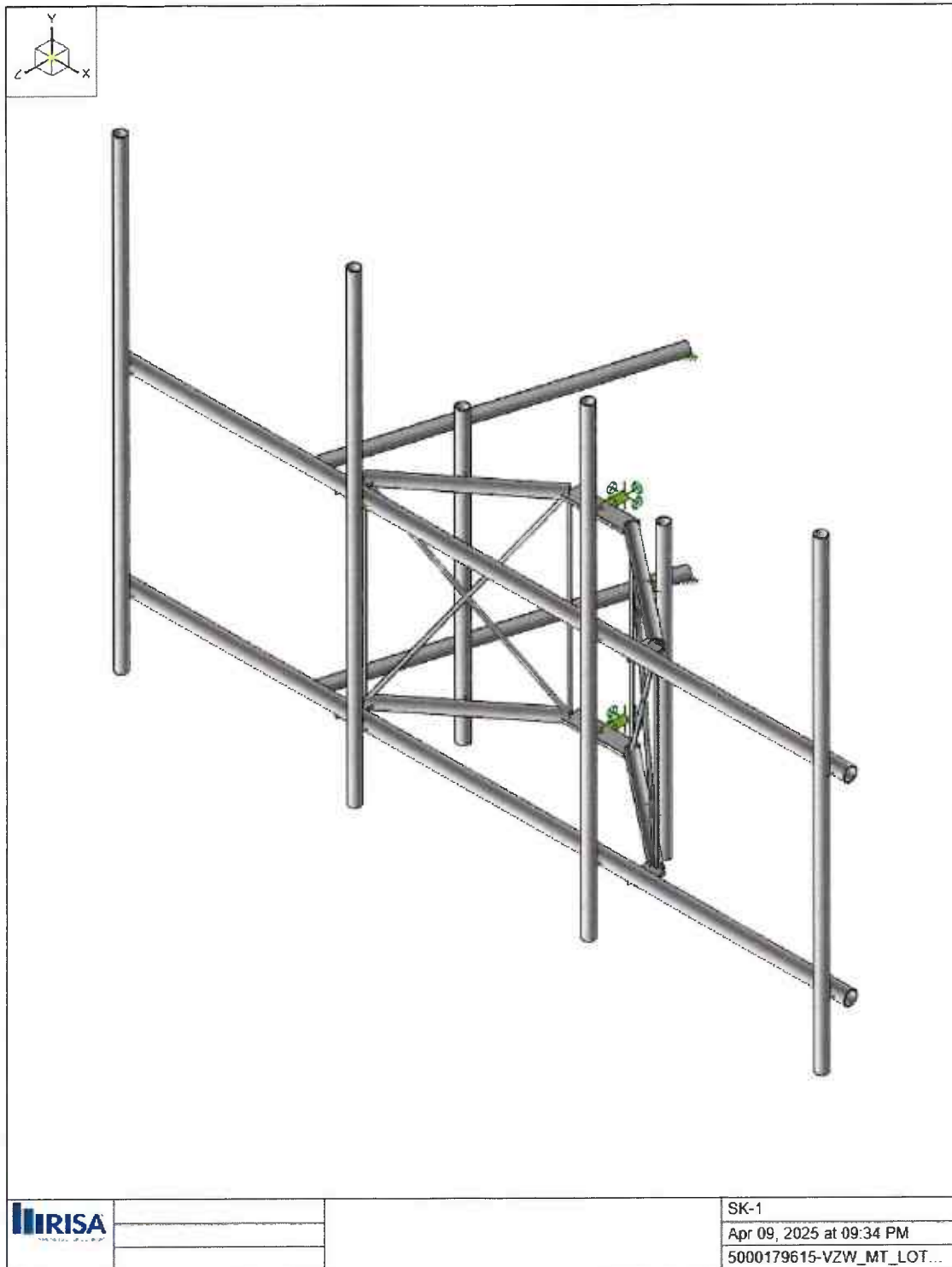
4/11/2025

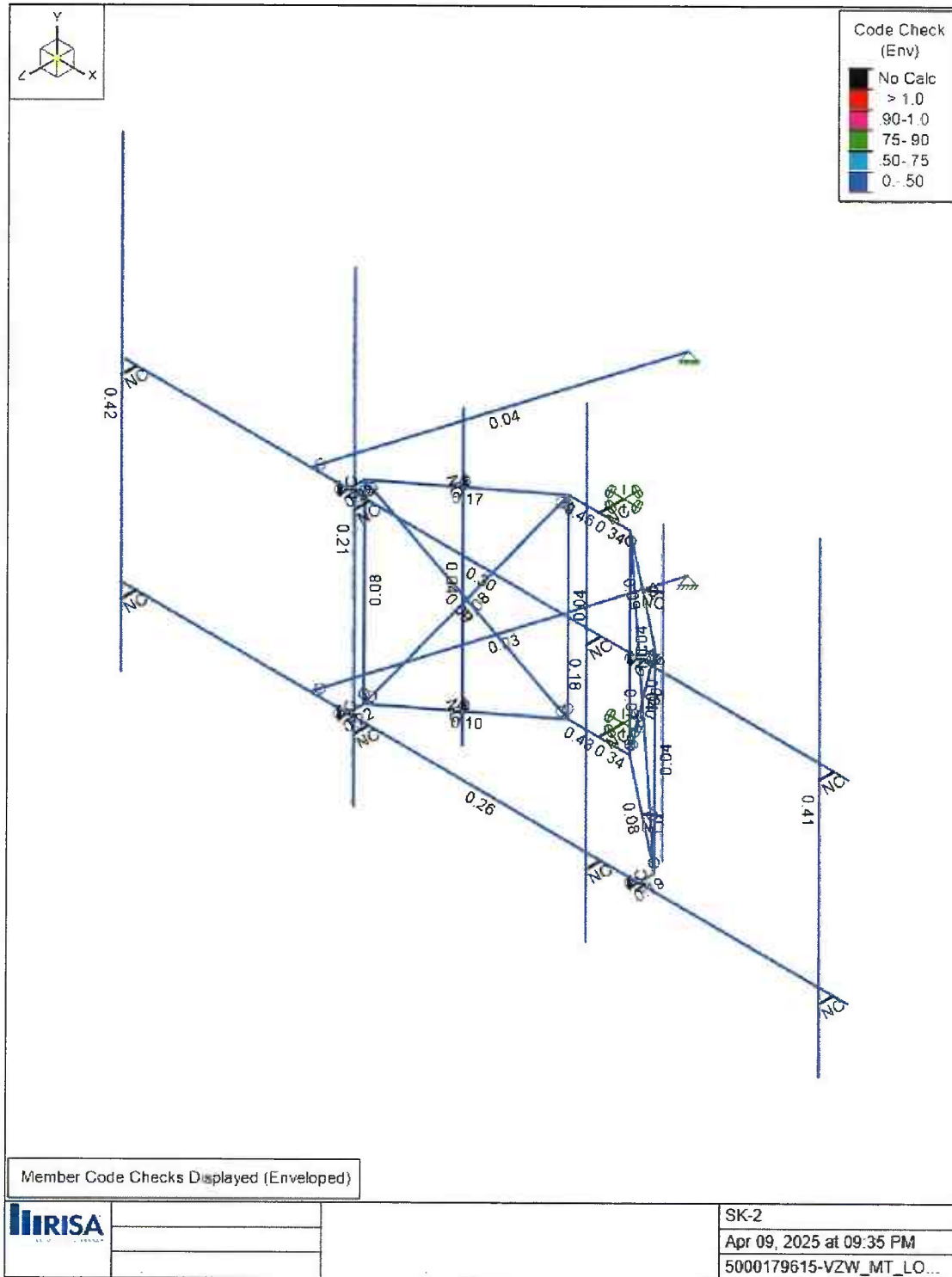
Page: 3

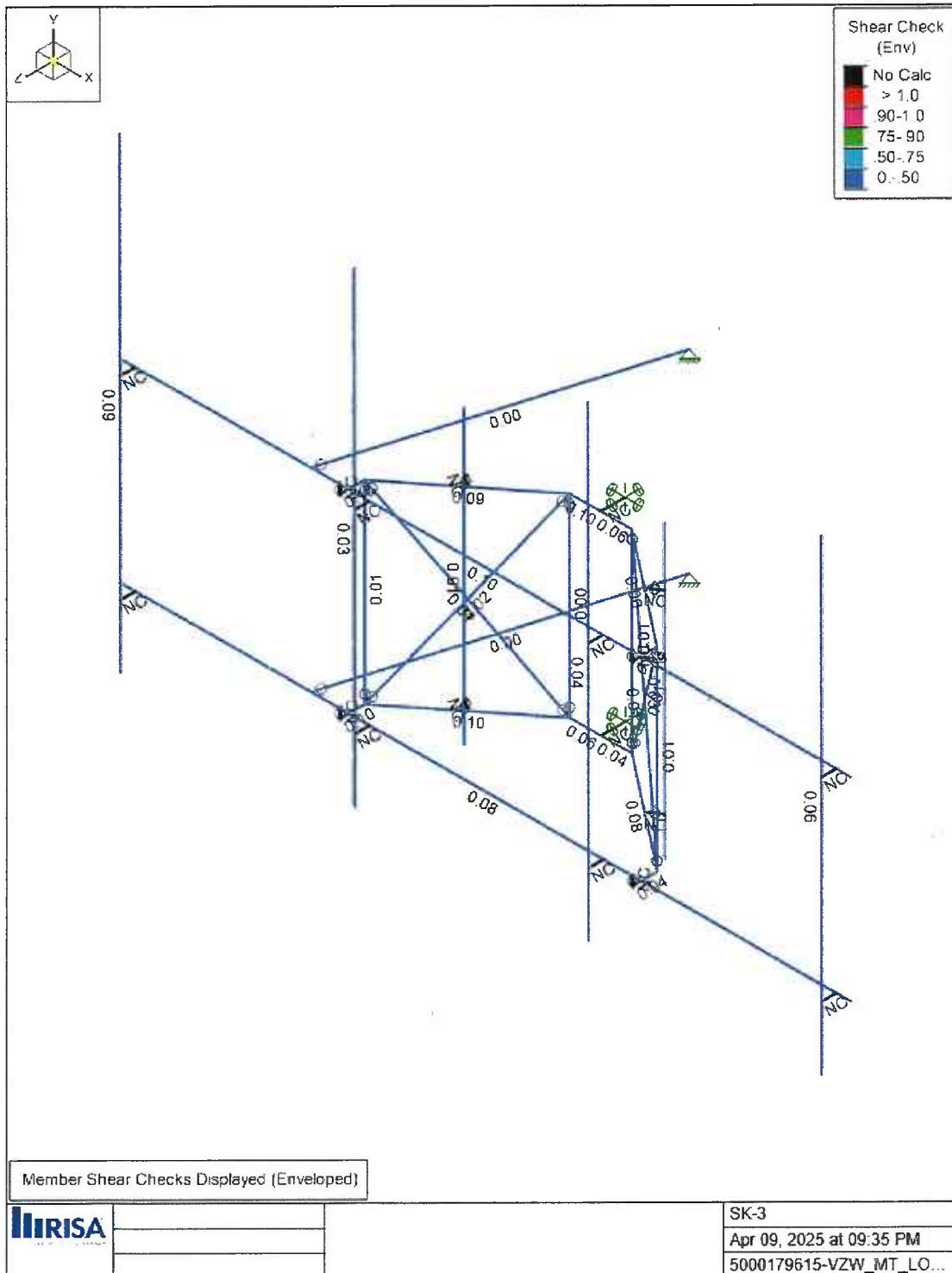


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A2	XXDWMM-12.5-65-8T-CBRS	16.2	11.4	147	1	a	Front	60	0	Retained	10/25/2023
A6	MT6413-77A	28.9	15.8	147	1	a	Front	15	0	Retained	10/25/2023
A1	SBNHH-1D65B	72.6	11.9	3	4	a	Front	39	8	Retained	10/25/2023
A1	SBNHH-1D65B	72.6	11.9	3	4	b	Front	39	-8	Retained	10/25/2023









Basic Load Cases

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

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Point	Distributed
56	Structure Wi (90 Deg)	None					60
57	Structure Wi (120 Deg)	None					60
58	Structure Wi (150 Deg)	None					60
59	Structure Wi (180 Deg)	None					60
60	Structure Wi (210 Deg)	None					60
61	Structure Wi (240 Deg)	None					60
62	Structure Wi (270 Deg)	None					60
63	Structure Wi (300 Deg)	None					60
64	Structure Wi (330 Deg)	None					60
65	Structure Wm (0 Deg)	None					60
66	Structure Wm (30 Deg)	None					60
67	Structure Wm (60 Deg)	None					60
68	Structure Wm (90 Deg)	None					60
69	Structure Wm (120 Deg)	None					60
70	Structure Wm (150 Deg)	None					60
71	Structure Wm (180 Deg)	None					60
72	Structure Wm (210 Deg)	None					60
73	Structure Wm (240 Deg)	None					60
74	Structure Wm (270 Deg)	None					60
75	Structure Wm (300 Deg)	None					60
76	Structure Wm (330 Deg)	None					60
77	Lm1	None				1	
78	Lm2	None				1	
79	Lv1	None				1	
80	Lv2	None				1	
81	Antenna Ev	None				36	
82	Antenna Eh (0 Deg)	None				24	
83	Antenna Eh (90 Deg)	None				24	
84	Structure Ev	ELY		-0.04			
85	Structure Eh (0 Deg)	ELZ			-0.1		
86	Structure Eh (90 Deg)	ELX	0.1				

Load Combinations

	Description	Solve	P-Delta	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor
1	1.2D+1.0Wo (0 Deg)	Yes	Y	1	1.2	39	1.2	3	1	41	1								
2	1.2D+1.0Wo (30 Deg)	Yes	Y	1	1.2	39	1.2	4	1	42	1								
3	1.2D+1.0Wo (60 Deg)	Yes	Y	1	1.2	39	1.2	5	1	43	1								
4	1.2D+1.0Wo (90 Deg)	Yes	Y	1	1.2	39	1.2	6	1	44	1								
5	1.2D+1.0Wo (120 Deg)	Yes	Y	1	1.2	39	1.2	7	1	45	1								
6	1.2D+1.0Wo (150 Deg)	Yes	Y	1	1.2	39	1.2	8	1	46	1								
7	1.2D+1.0Wo (180 Deg)	Yes	Y	1	1.2	39	1.2	9	1	47	1								
8	1.2D+1.0Wo (210 Deg)	Yes	Y	1	1.2	39	1.2	10	1	48	1								
9	1.2D+1.0Wo (240 Deg)	Yes	Y	1	1.2	39	1.2	11	1	49	1								
10	1.2D+1.0Wo (270 Deg)	Yes	Y	1	1.2	39	1.2	12	1	50	1								
11	1.2D+1.0Wo (300 Deg)	Yes	Y	1	1.2	39	1.2	13	1	51	1								
12	1.2D+1.0Wo (330 Deg)	Yes	Y	1	1.2	39	1.2	14	1	52	1								
13	1.2D + 1.0Di + 1.0Wi (0 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	15	1	53	1				
14	1.2D + 1.0Di + 1.0Wi (30 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	16	1	54	1				
15	1.2D + 1.0Di + 1.0Wi (60 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	17	1	55	1				
16	1.2D + 1.0Di + 1.0Wi (90 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	18	1	56	1				
17	1.2D + 1.0Di + 1.0Wi (120 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	19	1	57	1				
18	1.2D + 1.0Di + 1.0Wi (150 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	20	1	58	1				
19	1.2D + 1.0Di + 1.0Wi (180 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	21	1	59	1				
20	1.2D + 1.0Di + 1.0Wi (210 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	22	1	60	1				
21	1.2D + 1.0Di + 1.0Wi (240 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	23	1	61	1				

Load Combinations (Continued)

[illegible]

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in ²]	Iyy [in ⁴]	Izz [in ⁴]	J [in ⁴]
1	Antenna Pipe	PIPE 2.0	Beam	Pipe	A53 Gr. B	Typical	1.02	0.627	0.627	1.25
2	Horizontal mount pipe	PIPE 2.5	Beam	Pipe	Q235	Typical	1.61	1.45	1.45	2.89
3	Standoff Horizontal	PIPE 2.0	Beam	Pipe	Q235	Typical	1.02	0.627	0.627	1.25
4	Standoff Diagonal	SR 0.75	Beam	BAR	Q235	Typical	0.442	0.016	0.016	0.031
5	Tieback	PIPE 2.0	Beam	Pipe	Q235	Typical	1.02	0.627	0.627	1.25
6	Standoff Vertical	SR 0.625	Beam	BAR	Q235	Typical	0.307	0.007	0.007	0.015
7	Standoff Plate	PL5/8X3.5	Beam	BAR	Q235	Typical	2.188	0.071	2.233	0.253
8	tower pipe	PIPE 3.0	Column	Pipe	A53 Gr. B	Typical	2.07	2.85	2.85	5.69
9	RRU Pipes	PIPE 2.0	Column	Pipe	A53 Gr. B	Typical	1.02	0.627	0.627	1.25

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e ⁻⁶ F ⁻¹]	Density [k/ft ³]	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2
2	A53 Gr. B	29000	11154	0.3	0.65	0.49	35	1.5	60	1.2
3	A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
4	A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
5	A500 Gr. B 42	29000	11154	0.3	0.65	0.49	42	1.4	58	1.3
6	A500 Gr. B 46	29000	11154	0.3	0.65	0.49	46	1.4	58	1.3
7	Q235	29000	11154	0.3	0.65	0.49	35	1.5	58	1.2

Member Primary Data

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	M1	N2	N1		Horizontal mount pipe	Beam	Pipe	Q235	Typical
2	M2	N4	N3		Horizontal mount pipe	Beam	Pipe	Q235	Typical
3	M3	N5	N13		RIGID	None	None	RIGID	Typical
4	M4	N6	N14		RIGID	None	None	RIGID	Typical
5	M5	N8	N16		RIGID	None	None	RIGID	Typical
6	M6	N7	N15		RIGID	None	None	RIGID	Typical
7	M9	N10	N18		RIGID	None	None	RIGID	Typical
8	M10	N9	N17		RIGID	None	None	RIGID	Typical
9	M11	N12	N20		RIGID	None	None	RIGID	Typical
10	M12	N11	N19		RIGID	None	None	RIGID	Typical
11	M13	N22	N26	90	Standoff Plate	Beam	BAR	Q235	Typical
12	M14	N21	N25	90	Standoff Plate	Beam	BAR	Q235	Typical
13	M15	N23	N27	90	Standoff Plate	Beam	BAR	Q235	Typical
14	M16	N24	N28	90	Standoff Plate	Beam	BAR	Q235	Typical
15	M17	N26	N32		Standoff Horizontal	Beam	Pipe	Q235	Typical
16	M18	N25	N31		Standoff Horizontal	Beam	Pipe	Q235	Typical
17	M19	N27	N33		Standoff Horizontal	Beam	Pipe	Q235	Typical
18	M20	N28	N34		Standoff Horizontal	Beam	Pipe	Q235	Typical
19	M21	N32	N30	90	Standoff Plate	Beam	BAR	Q235	Typical
20	M22	N34	N30	90	Standoff Plate	Beam	BAR	Q235	Typical
21	M23	N31	N29	90	Standoff Plate	Beam	BAR	Q235	Typical
22	M24	N33	N29	90	Standoff Plate	Beam	BAR	Q235	Typical
23	M25	N31	N26		Standoff Diagonal	Beam	BAR	Q235	Typical
24	M26	N32	N25		Standoff Diagonal	Beam	BAR	Q235	Typical
25	M27	N33	N28		Standoff Diagonal	Beam	BAR	Q235	Typical
26	M28	N27	N34		Standoff Diagonal	Beam	BAR	Q235	Typical
27	M29	N29	N35		RIGID	None	None	RIGID	Typical
28	M30	N30	N36		RIGID	None	None	RIGID	Typical
29	MP4A	N39	N43		Antenna Pipe	Beam	Pipe	A53 Gr. B	Typical
30	MP3A	N40	N44		Antenna Pipe	Beam	Pipe	A53 Gr. B	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
31	MP2A	N41	N45		Antenna Pipe	Beam	Pipe	A53 Gr. B	Typical
32	MP1A	N42	N46		Antenna Pipe	Beam	Pipe	A53 Gr. B	Typical
33	M44	N25	N26		Standoff Vertical	Beam	BAR	Q235	Typical
34	M45	N31	N32		Standoff Vertical	Beam	BAR	Q235	Typical
35	M46	N33	N34		Standoff Vertical	Beam	BAR	Q235	Typical
36	M47	N27	N28		Standoff Vertical	Beam	BAR	Q235	Typical
37	M47B	N22	N60		RIGID	None	None	RIGID	Typical
38	M48A	N21	N59		RIGID	None	None	RIGID	Typical
39	M49A	N24	N62		RIGID	None	None	RIGID	Typical
40	M50A	N23	N61		RIGID	None	None	RIGID	Typical
41	M51A	N30	N36		RIGID	None	None	RIGID	Typical
42	M52A	N29	N35		RIGID	None	None	RIGID	Typical
43	M43	N59A	N63		Tieback	Beam	Pipe	Q235	Typical
44	RRU1	N75	N77A		RRU Pipes	Column	Pipe	A53 Gr. B	Typical
45	RRU2	N74	N76A		RRU Pipes	Column	Pipe	A53 Gr. B	Typical
46	M47A	N69	N71		RIGID	None	None	RIGID	Typical
47	M48	N68	N70		RIGID	None	None	RIGID	Typical
48	M49	N66	N72		RIGID	None	None	RIGID	Typical
49	M50	N67	N73		RIGID	None	None	RIGID	Typical
50	M51	N78A	N79A		Tieback	Beam	Pipe	Q235	Typical

Member Advanced Data

	Label	I Release	J Release	Col-Wall	Vert Release	T/C Only	Physical	Deflection Ratio	Options Activation	Seismic DR
1	M1						Yes	N/A		None
2	M2						Yes	N/A		None
3	M3						Yes	** NA **		None
4	M4						Yes	** NA **		None
5	M5						Yes	** NA **		None
6	M6						Yes	** NA **		None
7	M9						Yes	** NA **		None
8	M10						Yes	** NA **		None
9	M11						Yes	** NA **		None
10	M12						Yes	** NA **		None
11	M13						Yes	Default		None
12	M14						Yes	Default		None
13	M15						Yes	N/A		None
14	M16						Yes	N/A		None
15	M17						Yes	Default		None
16	M18						Yes	N/A		None
17	M19						Yes	N/A		None
18	M20						Yes	Default		None
19	M21						Yes	Default		None
20	M22						Yes	N/A		None
21	M23						Yes	N/A		None
22	M24						Yes	N/A		None
23	M25	BenPIN	BenPIN			Euler Buckling	Yes	Default		None
24	M26	BenPIN	BenPIN			Euler Buckling	Yes	Default		None
25	M27	BenPIN	BenPIN			Euler Buckling	Yes	N/A		None
26	M28	BenPIN	BenPIN			Euler Buckling	Yes	N/A		None
27	M29						Yes	** NA **	Inactive	None
28	M30						Yes	** NA **	Inactive	None
29	MP4A						Yes	N/A		None
30	MP3A						Yes	N/A		None
31	MP2A						Yes	N/A		None
32	MP1A						Yes	N/A		None



Company :
 Designer :
 Job Number :
 Model Name :

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Member Advanced Data (Continued)

	Label	I Release	J Release	Col-Wall	Vert Release	T/C Only	Physical	Deflection Ratio	Options Activation	Seismic DR
33	M44	BenPIN	BenPIN				Yes	N/A		None
34	M45	BenPIN	BenPIN				Yes	N/A		None
35	M46	BenPIN	BenPIN				Yes	N/A		None
36	M47	BenPIN	BenPIN				Yes	Default		None
37	M47B		OOOXOX				Yes	** NA **		None
38	M48A		OOOXOX				Yes	** NA **		None
39	M49A		OOOXOX				Yes	** NA **		None
40	M50A		OOOXOX				Yes	** NA **		None
41	M51A						Yes	** NA **		None
42	M52A						Yes	** NA **		None
43	M43	BenPIN					Yes	Default		None
44	RRU1						Yes	** NA **		None
45	RRU2						Yes	** NA **		None
46	M47A		OOOXOX				Yes	** NA **		None
47	M48		OOOXOX				Yes	** NA **		None
48	M49		OOOXOX				Yes	** NA **		None
49	M50		OOOXOX				Yes	** NA **		None
50	M51	BenPIN					Yes	Default		None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	Y	-20	1.25
2	MP4A	My	-0.013	1.25
3	MP4A	Mz	0.013	1.25
4	MP4A	Y	-20	5.25
5	MP4A	My	-0.013	5.25
6	MP4A	Mz	0.013	5.25
7	MP4A	Y	-20	1.25
8	MP4A	My	-0.013	1.25
9	MP4A	Mz	-0.013	1.25
10	MP4A	Y	-20	5.25
11	MP4A	My	-0.013	5.25
12	MP4A	Mz	-0.013	5.25
13	MP1A	Y	-23.2	5
14	MP1A	My	-0.012	5
15	MP1A	Mz	0	5
16	RRU1	Y	-84.4	2
17	RRU1	My	0.042	2
18	RRU1	Mz	0	2
19	RRU2	Y	-70.3	2
20	RRU2	My	0.035	2
21	RRU2	Mz	0	2
22	MP3A	Y	-32	1
23	MP3A	My	0.016	1
24	MP3A	Mz	0	1
25	MP1A	Y	-28.65	0.25
26	MP1A	My	-0.014	0.25
27	MP1A	Mz	0	0.25
28	MP1A	Y	-28.65	2.25
29	MP1A	My	-0.014	2.25
30	MP1A	Mz	0	2.25
31	MP4A	Y	-17.6	5.5
32	MP4A	My	0.009	5.5
33	MP4A	Mz	-0.012	5.5
34	MP4A	Y	-17.6	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
35	MP4A	My	0.009	5.5
36	MP4A	Mz	0.012	5.5

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	Y	-92.596	1.25
2	MP4A	My	-0.062	1.25
3	MP4A	Mz	0.062	1.25
4	MP4A	Y	-92.596	5.25
5	MP4A	My	-0.062	5.25
6	MP4A	Mz	0.062	5.25
7	MP4A	Y	-92.596	1.25
8	MP4A	My	-0.062	1.25
9	MP4A	Mz	-0.062	1.25
10	MP4A	Y	-92.596	5.25
11	MP4A	My	-0.062	5.25
12	MP4A	Mz	-0.062	5.25
13	MP1A	Y	-46.478	5
14	MP1A	My	-0.023	5
15	MP1A	Mz	0	5
16	RRU1	Y	-68.854	2
17	RRU1	My	0.034	2
18	RRU1	Mz	0	2
19	RRU2	Y	-62.141	2
20	RRU2	My	0.031	2
21	RRU2	Mz	0	2
22	MP3A	Y	-132.763	1
23	MP3A	My	0.066	1
24	MP3A	Mz	0	1
25	MP1A	Y	-45.486	0.25
26	MP1A	My	-0.023	0.25
27	MP1A	Mz	0	0.25
28	MP1A	Y	-45.486	2.25
29	MP1A	My	-0.023	2.25
30	MP1A	Mz	0	2.25
31	MP4A	Y	-27.615	5.5
32	MP4A	My	0.014	5.5
33	MP4A	Mz	-0.018	5.5
34	MP4A	Y	-27.615	5.5
35	MP4A	My	0.014	5.5
36	MP4A	Mz	0.018	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	0	1.25
2	MP4A	Z	-84.742	1.25
3	MP4A	Mx	-0.056	1.25
4	MP4A	X	0	5.25
5	MP4A	Z	-84.742	5.25
6	MP4A	Mx	-0.056	5.25
7	MP4A	X	0	1.25
8	MP4A	Z	-84.742	1.25
9	MP4A	Mx	0.056	1.25

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
10	MP4A	X	0	5.25
11	MP4A	Z	-84.742	5.25
12	MP4A	Mx	0.056	5.25
13	MP1A	X	0	5
14	MP1A	Z	-47.062	5
15	MP1A	Mx	0	5
16	RRU1	X	0	2
17	RRU1	Z	-47.677	2
18	RRU1	Mx	0	2
19	RRU2	X	0	2
20	RRU2	Z	-47.677	2
21	RRU2	Mx	0	2
22	MP3A	X	0	1
23	MP3A	Z	-97.507	1
24	MP3A	Mx	0	1
25	MP1A	X	0	0.25
26	MP1A	Z	-48.6	0.25
27	MP1A	Mx	0	0.25
28	MP1A	X	0	2.25
29	MP1A	Z	-48.6	2.25
30	MP1A	Mx	0	2.25
31	MP4A	X	0	5.5
32	MP4A	Z	-29.529	5.5
33	MP4A	Mx	0.02	5.5
34	MP4A	X	0	5.5
35	MP4A	Z	-29.529	5.5
36	MP4A	Mx	-0.02	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	36.335	1.25
2	MP4A	Z	-62.933	1.25
3	MP4A	Mx	-0.066	1.25
4	MP4A	X	36.335	5.25
5	MP4A	Z	-62.933	5.25
6	MP4A	Mx	-0.066	5.25
7	MP4A	X	36.335	1.25
8	MP4A	Z	-62.933	1.25
9	MP4A	Mx	0.018	1.25
10	MP4A	X	36.335	5.25
11	MP4A	Z	-62.933	5.25
12	MP4A	Mx	0.018	5.25
13	MP1A	X	20.55	5
14	MP1A	Z	-35.594	5
15	MP1A	Mx	-0.01	5
16	RRU1	X	21.878	2
17	RRU1	Z	-37.893	2
18	RRU1	Mx	0.011	2
19	RRU2	X	21.147	2
20	RRU2	Z	-36.628	2
21	RRU2	Mx	0.011	2
22	MP3A	X	45.832	1
23	MP3A	Z	-79.383	1
24	MP3A	Mx	0.023	1
25	MP1A	X	20.359	0.25



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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
26	MP1A	Z	-35.263	0.25
27	MP1A	Mx	-0.01	0.25
28	MP1A	X	20.359	2.25
29	MP1A	Z	-35.263	2.25
30	MP1A	Mx	-0.01	2.25
31	MP4A	X	14.775	5.5
32	MP4A	Z	-25.592	5.5
33	MP4A	Mx	0.024	5.5
34	MP4A	X	14.775	5.5
35	MP4A	Z	-25.592	5.5
36	MP4A	Mx	-0.01	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	42.022	1.25
2	MP4A	Z	-24.262	1.25
3	MP4A	Mx	-0.044	1.25
4	MP4A	X	42.022	5.25
5	MP4A	Z	-24.262	5.25
6	MP4A	Mx	-0.044	5.25
7	MP4A	X	42.022	1.25
8	MP4A	Z	-24.262	1.25
9	MP4A	Mx	-0.012	1.25
10	MP4A	X	42.022	5.25
11	MP4A	Z	-24.262	5.25
12	MP4A	Mx	-0.012	5.25
13	MP1A	X	25.268	5
14	MP1A	Z	-14.589	5
15	MP1A	Mx	-0.013	5
16	RRU1	X	31.1	2
17	RRU1	Z	-17.956	2
18	RRU1	Mx	0.016	2
19	RRU2	X	27.304	2
20	RRU2	Z	-15.764	2
21	RRU2	Mx	0.014	2
22	MP3A	X	69.26	1
23	MP3A	Z	-39.987	1
24	MP3A	Mx	0.035	1
25	MP1A	X	21.61	0.25
26	MP1A	Z	-12.477	0.25
27	MP1A	Mx	-0.011	0.25
28	MP1A	X	21.61	2.25
29	MP1A	Z	-12.477	2.25
30	MP1A	Mx	-0.011	2.25
31	MP4A	X	25.63	5.5
32	MP4A	Z	-14.797	5.5
33	MP4A	Mx	0.023	5.5
34	MP4A	X	25.63	5.5
35	MP4A	Z	-14.797	5.5
36	MP4A	Mx	0.003	5.5



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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	36.45	1.25
2	MP4A	Z	0	1.25
3	MP4A	Mx	-0.024	1.25
4	MP4A	X	36.45	5.25
5	MP4A	Z	0	5.25
6	MP4A	Mx	-0.024	5.25
7	MP4A	X	36.45	1.25
8	MP4A	Z	0	1.25
9	MP4A	Mx	-0.024	1.25
10	MP4A	X	36.45	5.25
11	MP4A	Z	0	5.25
12	MP4A	Mx	-0.024	5.25
13	MP1A	X	23.216	5
14	MP1A	Z	0	5
15	MP1A	Mx	-0.012	5
16	RRU1	X	31.99	2
17	RRU1	Z	0	2
18	RRU1	Mx	0.016	2
19	RRU2	X	26.146	2
20	RRU2	Z	0	2
21	RRU2	Mx	0.013	2
22	MP3A	X	74.13	1
23	MP3A	Z	0	1
24	MP3A	Mx	0.037	1
25	MP1A	X	17.071	0.25
26	MP1A	Z	0	0.25
27	MP1A	Mx	-0.009	0.25
28	MP1A	X	17.071	2.25
29	MP1A	Z	0	2.25
30	MP1A	Mx	-0.009	2.25
31	MP4A	X	29.616	5.5
32	MP4A	Z	0	5.5
33	MP4A	Mx	0.015	5.5
34	MP4A	X	29.616	5.5
35	MP4A	Z	0	5.5
36	MP4A	Mx	0.015	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	42.022	1.25
2	MP4A	Z	24.262	1.25
3	MP4A	Mx	-0.012	1.25
4	MP4A	X	42.022	5.25
5	MP4A	Z	24.262	5.25
6	MP4A	Mx	-0.012	5.25
7	MP4A	X	42.022	1.25
8	MP4A	Z	24.262	1.25
9	MP4A	Mx	-0.044	1.25
10	MP4A	X	42.022	5.25
11	MP4A	Z	24.262	5.25
12	MP4A	Mx	-0.044	5.25
13	MP1A	X	25.268	5
14	MP1A	Z	14.589	5
15	MP1A	Mx	-0.013	5



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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
16	RRU1	X	31.1	2
17	RRU1	Z	17.956	2
18	RRU1	Mx	0.016	2
19	RRU2	X	27.304	2
20	RRU2	Z	15.764	2
21	RRU2	Mx	0.014	2
22	MP3A	X	69.26	1
23	MP3A	Z	39.987	1
24	MP3A	Mx	0.035	1
25	MP1A	X	21.61	0.25
26	MP1A	Z	12.477	0.25
27	MP1A	Mx	-0.011	0.25
28	MP1A	X	21.61	2.25
29	MP1A	Z	12.477	2.25
30	MP1A	Mx	-0.011	2.25
31	MP4A	X	25.63	5.5
32	MP4A	Z	14.797	5.5
33	MP4A	Mx	0.003	5.5
34	MP4A	X	25.63	5.5
35	MP4A	Z	14.797	5.5
36	MP4A	Mx	0.023	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	36.335	1.25
2	MP4A	Z	62.933	1.25
3	MP4A	Mx	0.018	1.25
4	MP4A	X	36.335	5.25
5	MP4A	Z	62.933	5.25
6	MP4A	Mx	0.018	5.25
7	MP4A	X	36.335	1.25
8	MP4A	Z	62.933	1.25
9	MP4A	Mx	-0.066	1.25
10	MP4A	X	36.335	5.25
11	MP4A	Z	62.933	5.25
12	MP4A	Mx	-0.066	5.25
13	MP1A	X	20.55	5
14	MP1A	Z	35.594	5
15	MP1A	Mx	-0.01	5
16	RRU1	X	21.878	2
17	RRU1	Z	37.893	2
18	RRU1	Mx	0.011	2
19	RRU2	X	21.147	2
20	RRU2	Z	36.628	2
21	RRU2	Mx	0.011	2
22	MP3A	X	45.832	1
23	MP3A	Z	79.383	1
24	MP3A	Mx	0.023	1
25	MP1A	X	20.359	0.25
26	MP1A	Z	35.263	0.25
27	MP1A	Mx	-0.01	0.25
28	MP1A	X	20.359	2.25
29	MP1A	Z	35.263	2.25
30	MP1A	Mx	-0.01	2.25
31	MP4A	X	14.775	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
32	MP4A	Z	25.592	5.5
33	MP4A	Mx	-0.01	5.5
34	MP4A	X	14.775	5.5
35	MP4A	Z	25.592	5.5
36	MP4A	Mx	0.024	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	0	1.25
2	MP4A	Z	84.742	1.25
3	MP4A	Mx	0.056	1.25
4	MP4A	X	0	5.25
5	MP4A	Z	84.742	5.25
6	MP4A	Mx	0.056	5.25
7	MP4A	X	0	1.25
8	MP4A	Z	84.742	1.25
9	MP4A	Mx	-0.056	1.25
10	MP4A	X	0	5.25
11	MP4A	Z	84.742	5.25
12	MP4A	Mx	-0.056	5.25
13	MP1A	X	0	5
14	MP1A	Z	47.062	5
15	MP1A	Mx	0	5
16	RRU1	X	0	2
17	RRU1	Z	47.677	2
18	RRU1	Mx	0	2
19	RRU2	X	0	2
20	RRU2	Z	47.677	2
21	RRU2	Mx	0	2
22	MP3A	X	0	1
23	MP3A	Z	97.507	1
24	MP3A	Mx	0	1
25	MP1A	X	0	0.25
26	MP1A	Z	48.6	0.25
27	MP1A	Mx	0	0.25
28	MP1A	X	0	2.25
29	MP1A	Z	48.6	2.25
30	MP1A	Mx	0	2.25
31	MP4A	X	0	5.5
32	MP4A	Z	29.529	5.5
33	MP4A	Mx	-0.02	5.5
34	MP4A	X	0	5.5
35	MP4A	Z	29.529	5.5
36	MP4A	Mx	0.02	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	-36.335	1.25
2	MP4A	Z	62.933	1.25
3	MP4A	Mx	0.066	1.25
4	MP4A	X	-36.335	5.25
5	MP4A	Z	62.933	5.25
6	MP4A	Mx	0.066	5.25

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
7	MP4A	X	-36.335	1.25
8	MP4A	Z	62.933	1.25
9	MP4A	Mx	-0.018	1.25
10	MP4A	X	-36.335	5.25
11	MP4A	Z	62.933	5.25
12	MP4A	Mx	-0.018	5.25
13	MP1A	X	-20.55	5
14	MP1A	Z	35.594	5
15	MP1A	Mx	0.01	5
16	RRU1	X	-21.878	2
17	RRU1	Z	37.893	2
18	RRU1	Mx	-0.011	2
19	RRU2	X	-21.147	2
20	RRU2	Z	36.628	2
21	RRU2	Mx	-0.011	2
22	MP3A	X	-45.832	1
23	MP3A	Z	79.383	1
24	MP3A	Mx	-0.023	1
25	MP1A	X	-20.359	0.25
26	MP1A	Z	35.263	0.25
27	MP1A	Mx	0.01	0.25
28	MP1A	X	-20.359	2.25
29	MP1A	Z	35.263	2.25
30	MP1A	Mx	0.01	2.25
31	MP4A	X	-14.775	5.5
32	MP4A	Z	25.592	5.5
33	MP4A	Mx	-0.024	5.5
34	MP4A	X	-14.775	5.5
35	MP4A	Z	25.592	5.5
36	MP4A	Mx	0.01	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	-42.022	1.25
2	MP4A	Z	24.262	1.25
3	MP4A	Mx	0.044	1.25
4	MP4A	X	-42.022	5.25
5	MP4A	Z	24.262	5.25
6	MP4A	Mx	0.044	5.25
7	MP4A	X	-42.022	1.25
8	MP4A	Z	24.262	1.25
9	MP4A	Mx	0.012	1.25
10	MP4A	X	-42.022	5.25
11	MP4A	Z	24.262	5.25
12	MP4A	Mx	0.012	5.25
13	MP1A	X	-25.268	5
14	MP1A	Z	14.589	5
15	MP1A	Mx	0.013	5
16	RRU1	X	-31.1	2
17	RRU1	Z	17.956	2
18	RRU1	Mx	-0.016	2
19	RRU2	X	-27.304	2
20	RRU2	Z	15.764	2
21	RRU2	Mx	-0.014	2
22	MP3A	X	-69.26	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
23	MP3A	Z	39.987	1
24	MP3A	Mx	-0.035	1
25	MP1A	X	-21.61	0.25
26	MP1A	Z	12.477	0.25
27	MP1A	Mx	0.011	0.25
28	MP1A	X	-21.61	2.25
29	MP1A	Z	12.477	2.25
30	MP1A	Mx	0.011	2.25
31	MP4A	X	-25.63	5.5
32	MP4A	Z	14.797	5.5
33	MP4A	Mx	-0.023	5.5
34	MP4A	X	-25.63	5.5
35	MP4A	Z	14.797	5.5
36	MP4A	Mx	-0.003	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	-36.45	1.25
2	MP4A	Z	0	1.25
3	MP4A	Mx	0.024	1.25
4	MP4A	X	-36.45	5.25
5	MP4A	Z	0	5.25
6	MP4A	Mx	0.024	5.25
7	MP4A	X	-36.45	1.25
8	MP4A	Z	0	1.25
9	MP4A	Mx	0.024	1.25
10	MP4A	X	-36.45	5.25
11	MP4A	Z	0	5.25
12	MP4A	Mx	0.024	5.25
13	MP1A	X	-23.216	5
14	MP1A	Z	0	5
15	MP1A	Mx	0.012	5
16	RRU1	X	-31.99	2
17	RRU1	Z	0	2
18	RRU1	Mx	-0.016	2
19	RRU2	X	-26.146	2
20	RRU2	Z	0	2
21	RRU2	Mx	-0.013	2
22	MP3A	X	-74.13	1
23	MP3A	Z	0	1
24	MP3A	Mx	-0.037	1
25	MP1A	X	-17.071	0.25
26	MP1A	Z	0	0.25
27	MP1A	Mx	0.009	0.25
28	MP1A	X	-17.071	2.25
29	MP1A	Z	0	2.25
30	MP1A	Mx	0.009	2.25
31	MP4A	X	-29.616	5.5
32	MP4A	Z	0	5.5
33	MP4A	Mx	-0.015	5.5
34	MP4A	X	-29.616	5.5
35	MP4A	Z	0	5.5
36	MP4A	Mx	-0.015	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	-42.022	1.25
2	MP4A	Z	-24.262	1.25
3	MP4A	Mx	0.012	1.25
4	MP4A	X	-42.022	5.25
5	MP4A	Z	-24.262	5.25
6	MP4A	Mx	0.012	5.25
7	MP4A	X	-42.022	1.25
8	MP4A	Z	-24.262	1.25
9	MP4A	Mx	0.044	1.25
10	MP4A	X	-42.022	5.25
11	MP4A	Z	-24.262	5.25
12	MP4A	Mx	0.044	5.25
13	MP1A	X	-25.268	5
14	MP1A	Z	-14.589	5
15	MP1A	Mx	0.013	5
16	RRU1	X	-31.1	2
17	RRU1	Z	-17.956	2
18	RRU1	Mx	-0.016	2
19	RRU2	X	-27.304	2
20	RRU2	Z	-15.764	2
21	RRU2	Mx	-0.014	2
22	MP3A	X	-69.26	1
23	MP3A	Z	-39.987	1
24	MP3A	Mx	-0.035	1
25	MP1A	X	-21.61	0.25
26	MP1A	Z	-12.477	0.25
27	MP1A	Mx	0.011	0.25
28	MP1A	X	-21.61	2.25
29	MP1A	Z	-12.477	2.25
30	MP1A	Mx	0.011	2.25
31	MP4A	X	-25.63	5.5
32	MP4A	Z	-14.797	5.5
33	MP4A	Mx	-0.003	5.5
34	MP4A	X	-25.63	5.5
35	MP4A	Z	-14.797	5.5
36	MP4A	Mx	-0.023	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	-36.335	1.25
2	MP4A	Z	-62.933	1.25
3	MP4A	Mx	-0.018	1.25
4	MP4A	X	-36.335	5.25
5	MP4A	Z	-62.933	5.25
6	MP4A	Mx	-0.018	5.25
7	MP4A	X	-36.335	1.25
8	MP4A	Z	-62.933	1.25
9	MP4A	Mx	0.066	1.25
10	MP4A	X	-36.335	5.25
11	MP4A	Z	-62.933	5.25
12	MP4A	Mx	0.066	5.25
13	MP1A	X	-20.55	5
14	MP1A	Z	-35.594	5
15	MP1A	Mx	0.01	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
16	RRU1	X	-21.878	2
17	RRU1	Z	-37.893	2
18	RRU1	Mx	-0.011	2
19	RRU2	X	-21.147	2
20	RRU2	Z	-36.628	2
21	RRU2	Mx	-0.011	2
22	MP3A	X	-45.832	1
23	MP3A	Z	-79.383	1
24	MP3A	Mx	-0.023	1
25	MP1A	X	-20.359	0.25
26	MP1A	Z	-35.263	0.25
27	MP1A	Mx	0.01	0.25
28	MP1A	X	-20.359	2.25
29	MP1A	Z	-35.263	2.25
30	MP1A	Mx	0.01	2.25
31	MP4A	X	-14.775	5.5
32	MP4A	Z	-25.592	5.5
33	MP4A	Mx	0.01	5.5
34	MP4A	X	-14.775	5.5
35	MP4A	Z	-25.592	5.5
36	MP4A	Mx	-0.024	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	0	1.25
2	MP4A	Z	-25.101	1.25
3	MP4A	Mx	-0.017	1.25
4	MP4A	X	0	5.25
5	MP4A	Z	-25.101	5.25
6	MP4A	Mx	-0.017	5.25
7	MP4A	X	0	1.25
8	MP4A	Z	-25.101	1.25
9	MP4A	Mx	0.017	1.25
10	MP4A	X	0	5.25
11	MP4A	Z	-25.101	5.25
12	MP4A	Mx	0.017	5.25
13	MP1A	X	0	5
14	MP1A	Z	-10.903	5
15	MP1A	Mx	0	5
16	RRU1	X	0	2
17	RRU1	Z	-12.905	2
18	RRU1	Mx	0	2
19	RRU2	X	0	2
20	RRU2	Z	-12.905	2
21	RRU2	Mx	0	2
22	MP3A	X	0	1
23	MP3A	Z	-25.941	1
24	MP3A	Mx	0	1
25	MP1A	X	0	0.25
26	MP1A	Z	-12.244	0.25
27	MP1A	Mx	0	0.25
28	MP1A	X	0	2.25
29	MP1A	Z	-12.244	2.25
30	MP1A	Mx	0	2.25
31	MP4A	X	0	5.5



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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
32	MP4A	Z	-2.996	5.5
33	MP4A	Mx	0.002	5.5
34	MP4A	X	0	5.5
35	MP4A	Z	-2.996	5.5
36	MP4A	Mx	-0.002	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	11.615	1.25
2	MP4A	Z	-20.117	1.25
3	MP4A	Mx	-0.021	1.25
4	MP4A	X	11.615	5.25
5	MP4A	Z	-20.117	5.25
6	MP4A	Mx	-0.021	5.25
7	MP4A	X	11.615	1.25
8	MP4A	Z	-20.117	1.25
9	MP4A	Mx	0.006	1.25
10	MP4A	X	11.615	5.25
11	MP4A	Z	-20.117	5.25
12	MP4A	Mx	0.006	5.25
13	MP1A	X	4.856	5
14	MP1A	Z	-8.41	5
15	MP1A	Mx	-0.002	5
16	RRU1	X	5.981	2
17	RRU1	Z	-10.36	2
18	RRU1	Mx	0.003	2
19	RRU2	X	5.802	2
20	RRU2	Z	-10.049	2
21	RRU2	Mx	0.003	2
22	MP3A	X	12.288	1
23	MP3A	Z	-21.284	1
24	MP3A	Mx	0.006	1
25	MP1A	X	5.264	0.25
26	MP1A	Z	-9.118	0.25
27	MP1A	Mx	-0.003	0.25
28	MP1A	X	5.264	2.25
29	MP1A	Z	-9.118	2.25
30	MP1A	Mx	-0.003	2.25
31	MP4A	X	2.036	5.5
32	MP4A	Z	-3.526	5.5
33	MP4A	Mx	0.003	5.5
34	MP4A	X	2.036	5.5
35	MP4A	Z	-3.526	5.5
36	MP4A	Mx	-0.001	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	16.876	1.25
2	MP4A	Z	-9.743	1.25
3	MP4A	Mx	-0.018	1.25
4	MP4A	X	16.876	5.25
5	MP4A	Z	-9.743	5.25
6	MP4A	Mx	-0.018	5.25

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
7	MP4A	X	16.876	1.25
8	MP4A	Z	-9.743	1.25
9	MP4A	Mx	-0.005	1.25
10	MP4A	X	16.876	5.25
11	MP4A	Z	-9.743	5.25
12	MP4A	Mx	-0.005	5.25
13	MP1A	X	6.347	5
14	MP1A	Z	-3.664	5
15	MP1A	Mx	-0.003	5
16	RRU1	X	8.727	2
17	RRU1	Z	-5.038	2
18	RRU1	Mx	0.004	2
19	RRU2	X	7.796	2
20	RRU2	Z	-4.501	2
21	RRU2	Mx	0.004	2
22	MP3A	X	18.921	1
23	MP3A	Z	-10.924	1
24	MP3A	Mx	0.009	1
25	MP1A	X	6.148	0.25
26	MP1A	Z	-3.549	0.25
27	MP1A	Mx	-0.003	0.25
28	MP1A	X	6.148	2.25
29	MP1A	Z	-3.549	2.25
30	MP1A	Mx	-0.003	2.25
31	MP4A	X	5.388	5.5
32	MP4A	Z	-3.111	5.5
33	MP4A	Mx	0.005	5.5
34	MP4A	X	5.388	5.5
35	MP4A	Z	-3.111	5.5
36	MP4A	Mx	0.00062	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	17.615	1.25
2	MP4A	Z	0	1.25
3	MP4A	Mx	-0.012	1.25
4	MP4A	X	17.615	5.25
5	MP4A	Z	0	5.25
6	MP4A	Mx	-0.012	5.25
7	MP4A	X	17.615	1.25
8	MP4A	Z	0	1.25
9	MP4A	Mx	-0.012	1.25
10	MP4A	X	17.615	5.25
11	MP4A	Z	0	5.25
12	MP4A	Mx	-0.012	5.25
13	MP1A	X	6.137	5
14	MP1A	Z	0	5
15	MP1A	Mx	-0.003	5
16	RRU1	X	9.134	2
17	RRU1	Z	0	2
18	RRU1	Mx	0.005	2
19	RRU2	X	7.701	2
20	RRU2	Z	0	2
21	RRU2	Mx	0.004	2
22	MP3A	X	20.483	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
23	MP3A	Z	0	1
24	MP3A	Mx	0.01	1
25	MP1A	X	5.383	0.25
26	MP1A	Z	0	0.25
27	MP1A	Mx	-0.003	0.25
28	MP1A	X	5.383	2.25
29	MP1A	Z	0	2.25
30	MP1A	Mx	-0.003	2.25
31	MP4A	X	7.297	5.5
32	MP4A	Z	0	5.5
33	MP4A	Mx	0.004	5.5
34	MP4A	X	7.297	5.5
35	MP4A	Z	0	5.5
36	MP4A	Mx	0.004	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	16.876	1.25
2	MP4A	Z	9.743	1.25
3	MP4A	Mx	-0.005	1.25
4	MP4A	X	16.876	5.25
5	MP4A	Z	9.743	5.25
6	MP4A	Mx	-0.005	5.25
7	MP4A	X	16.876	1.25
8	MP4A	Z	9.743	1.25
9	MP4A	Mx	-0.018	1.25
10	MP4A	X	16.876	5.25
11	MP4A	Z	9.743	5.25
12	MP4A	Mx	-0.018	5.25
13	MP1A	X	6.347	5
14	MP1A	Z	3.664	5
15	MP1A	Mx	-0.003	5
16	RRU1	X	8.727	2
17	RRU1	Z	5.038	2
18	RRU1	Mx	0.004	2
19	RRU2	X	7.796	2
20	RRU2	Z	4.501	2
21	RRU2	Mx	0.004	2
22	MP3A	X	18.921	1
23	MP3A	Z	10.924	1
24	MP3A	Mx	0.009	1
25	MP1A	X	6.148	0.25
26	MP1A	Z	3.549	0.25
27	MP1A	Mx	-0.003	0.25
28	MP1A	X	6.148	2.25
29	MP1A	Z	3.549	2.25
30	MP1A	Mx	-0.003	2.25
31	MP4A	X	5.388	5.5
32	MP4A	Z	3.111	5.5
33	MP4A	Mx	0.00062	5.5
34	MP4A	X	5.388	5.5
35	MP4A	Z	3.111	5.5
36	MP4A	Mx	0.005	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	11.615	1.25
2	MP4A	Z	20.117	1.25
3	MP4A	Mx	0.006	1.25
4	MP4A	X	11.615	5.25
5	MP4A	Z	20.117	5.25
6	MP4A	Mx	0.006	5.25
7	MP4A	X	11.615	1.25
8	MP4A	Z	20.117	1.25
9	MP4A	Mx	-0.021	1.25
10	MP4A	X	11.615	5.25
11	MP4A	Z	20.117	5.25
12	MP4A	Mx	-0.021	5.25
13	MP1A	X	4.856	5
14	MP1A	Z	8.41	5
15	MP1A	Mx	-0.002	5
16	RRU1	X	5.981	2
17	RRU1	Z	10.36	2
18	RRU1	Mx	0.003	2
19	RRU2	X	5.802	2
20	RRU2	Z	10.049	2
21	RRU2	Mx	0.003	2
22	MP3A	X	12.288	1
23	MP3A	Z	21.284	1
24	MP3A	Mx	0.006	1
25	MP1A	X	5.264	0.25
26	MP1A	Z	9.118	0.25
27	MP1A	Mx	-0.003	0.25
28	MP1A	X	5.264	2.25
29	MP1A	Z	9.118	2.25
30	MP1A	Mx	-0.003	2.25
31	MP4A	X	2.036	5.5
32	MP4A	Z	3.526	5.5
33	MP4A	Mx	-0.001	5.5
34	MP4A	X	2.036	5.5
35	MP4A	Z	3.526	5.5
36	MP4A	Mx	0.003	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	0	1.25
2	MP4A	Z	25.101	1.25
3	MP4A	Mx	0.017	1.25
4	MP4A	X	0	5.25
5	MP4A	Z	25.101	5.25
6	MP4A	Mx	0.017	5.25
7	MP4A	X	0	1.25
8	MP4A	Z	25.101	1.25
9	MP4A	Mx	-0.017	1.25
10	MP4A	X	0	5.25
11	MP4A	Z	25.101	5.25
12	MP4A	Mx	-0.017	5.25
13	MP1A	X	0	5
14	MP1A	Z	10.903	5
15	MP1A	Mx	0	5



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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
16	RRU1	X	0	2
17	RRU1	Z	12.905	2
18	RRU1	Mx	0	2
19	RRU2	X	0	2
20	RRU2	Z	12.905	2
21	RRU2	Mx	0	2
22	MP3A	X	0	1
23	MP3A	Z	25.941	1
24	MP3A	Mx	0	1
25	MP1A	X	0	0.25
26	MP1A	Z	12.244	0.25
27	MP1A	Mx	0	0.25
28	MP1A	X	0	2.25
29	MP1A	Z	12.244	2.25
30	MP1A	Mx	0	2.25
31	MP4A	X	0	5.5
32	MP4A	Z	2.996	5.5
33	MP4A	Mx	-0.002	5.5
34	MP4A	X	0	5.5
35	MP4A	Z	2.996	5.5
36	MP4A	Mx	0.002	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	-11.615	1.25
2	MP4A	Z	20.117	1.25
3	MP4A	Mx	0.021	1.25
4	MP4A	X	-11.615	5.25
5	MP4A	Z	20.117	5.25
6	MP4A	Mx	0.021	5.25
7	MP4A	X	-11.615	1.25
8	MP4A	Z	20.117	1.25
9	MP4A	Mx	-0.006	1.25
10	MP4A	X	-11.615	5.25
11	MP4A	Z	20.117	5.25
12	MP4A	Mx	-0.006	5.25
13	MP1A	X	-4.856	5
14	MP1A	Z	8.41	5
15	MP1A	Mx	0.002	5
16	RRU1	X	-5.981	2
17	RRU1	Z	10.36	2
18	RRU1	Mx	-0.003	2
19	RRU2	X	-5.802	2
20	RRU2	Z	10.049	2
21	RRU2	Mx	-0.003	2
22	MP3A	X	-12.288	1
23	MP3A	Z	21.284	1
24	MP3A	Mx	-0.006	1
25	MP1A	X	-5.264	0.25
26	MP1A	Z	9.118	0.25
27	MP1A	Mx	0.003	0.25
28	MP1A	X	-5.264	2.25
29	MP1A	Z	9.118	2.25
30	MP1A	Mx	0.003	2.25
31	MP4A	X	-2.036	5.5



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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
32	MP4A	Z	3.526	5.5
33	MP4A	Mx	-0.003	5.5
34	MP4A	X	-2.036	5.5
35	MP4A	Z	3.526	5.5
36	MP4A	Mx	0.001	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	-16.876	1.25
2	MP4A	Z	9.743	1.25
3	MP4A	Mx	0.018	1.25
4	MP4A	X	-16.876	5.25
5	MP4A	Z	9.743	5.25
6	MP4A	Mx	0.018	5.25
7	MP4A	X	-16.876	1.25
8	MP4A	Z	9.743	1.25
9	MP4A	Mx	0.005	1.25
10	MP4A	X	-16.876	5.25
11	MP4A	Z	9.743	5.25
12	MP4A	Mx	0.005	5.25
13	MP1A	X	-6.347	5
14	MP1A	Z	3.664	5
15	MP1A	Mx	0.003	5
16	RRU1	X	-8.727	2
17	RRU1	Z	5.038	2
18	RRU1	Mx	-0.004	2
19	RRU2	X	-7.796	2
20	RRU2	Z	4.501	2
21	RRU2	Mx	-0.004	2
22	MP3A	X	-18.921	1
23	MP3A	Z	10.924	1
24	MP3A	Mx	-0.009	1
25	MP1A	X	-6.148	0.25
26	MP1A	Z	3.549	0.25
27	MP1A	Mx	0.003	0.25
28	MP1A	X	-6.148	2.25
29	MP1A	Z	3.549	2.25
30	MP1A	Mx	0.003	2.25
31	MP4A	X	-5.388	5.5
32	MP4A	Z	3.111	5.5
33	MP4A	Mx	-0.005	5.5
34	MP4A	X	-5.388	5.5
35	MP4A	Z	3.111	5.5
36	MP4A	Mx	-0.00062	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	-17.615	1.25
2	MP4A	Z	0	1.25
3	MP4A	Mx	0.012	1.25
4	MP4A	X	-17.615	5.25
5	MP4A	Z	0	5.25
6	MP4A	Mx	0.012	5.25



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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
7	MP4A	X	-17.615	1.25
8	MP4A	Z	0	1.25
9	MP4A	Mx	0.012	1.25
10	MP4A	X	-17.615	5.25
11	MP4A	Z	0	5.25
12	MP4A	Mx	0.012	5.25
13	MP1A	X	-6.137	5
14	MP1A	Z	0	5
15	MP1A	Mx	0.003	5
16	RRU1	X	-9.134	2
17	RRU1	Z	0	2
18	RRU1	Mx	-0.005	2
19	RRU2	X	-7.701	2
20	RRU2	Z	0	2
21	RRU2	Mx	-0.004	2
22	MP3A	X	-20.483	1
23	MP3A	Z	0	1
24	MP3A	Mx	-0.01	1
25	MP1A	X	-5.383	0.25
26	MP1A	Z	0	0.25
27	MP1A	Mx	0.003	0.25
28	MP1A	X	-5.383	2.25
29	MP1A	Z	0	2.25
30	MP1A	Mx	0.003	2.25
31	MP4A	X	-7.297	5.5
32	MP4A	Z	0	5.5
33	MP4A	Mx	-0.004	5.5
34	MP4A	X	-7.297	5.5
35	MP4A	Z	0	5.5
36	MP4A	Mx	-0.004	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	-16.876	1.25
2	MP4A	Z	-9.743	1.25
3	MP4A	Mx	0.005	1.25
4	MP4A	X	-16.876	5.25
5	MP4A	Z	-9.743	5.25
6	MP4A	Mx	0.005	5.25
7	MP4A	X	-16.876	1.25
8	MP4A	Z	-9.743	1.25
9	MP4A	Mx	0.018	1.25
10	MP4A	X	-16.876	5.25
11	MP4A	Z	-9.743	5.25
12	MP4A	Mx	0.018	5.25
13	MP1A	X	-6.347	5
14	MP1A	Z	-3.664	5
15	MP1A	Mx	0.003	5
16	RRU1	X	-8.727	2
17	RRU1	Z	-5.038	2
18	RRU1	Mx	-0.004	2
19	RRU2	X	-7.796	2
20	RRU2	Z	-4.501	2
21	RRU2	Mx	-0.004	2
22	MP3A	X	-18.921	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
23	MP3A	Z	-10.924	1
24	MP3A	Mx	-0.009	1
25	MP1A	X	-6.148	0.25
26	MP1A	Z	-3.549	0.25
27	MP1A	Mx	0.003	0.25
28	MP1A	X	-6.148	2.25
29	MP1A	Z	-3.549	2.25
30	MP1A	Mx	0.003	2.25
31	MP4A	X	-5.388	5.5
32	MP4A	Z	-3.111	5.5
33	MP4A	Mx	-0.00062	5.5
34	MP4A	X	-5.388	5.5
35	MP4A	Z	-3.111	5.5
36	MP4A	Mx	-0.005	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	-11.615	1.25
2	MP4A	Z	-20.117	1.25
3	MP4A	Mx	-0.006	1.25
4	MP4A	X	-11.615	5.25
5	MP4A	Z	-20.117	5.25
6	MP4A	Mx	-0.006	5.25
7	MP4A	X	-11.615	1.25
8	MP4A	Z	-20.117	1.25
9	MP4A	Mx	0.021	1.25
10	MP4A	X	-11.615	5.25
11	MP4A	Z	-20.117	5.25
12	MP4A	Mx	0.021	5.25
13	MP1A	X	-4.856	5
14	MP1A	Z	-8.41	5
15	MP1A	Mx	0.002	5
16	RRU1	X	-5.981	2
17	RRU1	Z	-10.36	2
18	RRU1	Mx	-0.003	2
19	RRU2	X	-5.802	2
20	RRU2	Z	-10.049	2
21	RRU2	Mx	-0.003	2
22	MP3A	X	-12.288	1
23	MP3A	Z	-21.284	1
24	MP3A	Mx	-0.006	1
25	MP1A	X	-5.264	0.25
26	MP1A	Z	-9.118	0.25
27	MP1A	Mx	0.003	0.25
28	MP1A	X	-5.264	2.25
29	MP1A	Z	-9.118	2.25
30	MP1A	Mx	0.003	2.25
31	MP4A	X	-2.036	5.5
32	MP4A	Z	-3.526	5.5
33	MP4A	Mx	0.001	5.5
34	MP4A	X	-2.036	5.5
35	MP4A	Z	-3.526	5.5
36	MP4A	Mx	-0.003	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	0	1.25
2	MP4A	Z	-5.296	1.25
3	MP4A	Mx	-0.004	1.25
4	MP4A	X	0	5.25
5	MP4A	Z	-5.296	5.25
6	MP4A	Mx	-0.004	5.25
7	MP4A	X	0	1.25
8	MP4A	Z	-5.296	1.25
9	MP4A	Mx	0.004	1.25
10	MP4A	X	0	5.25
11	MP4A	Z	-5.296	5.25
12	MP4A	Mx	0.004	5.25
13	MP1A	X	0	5
14	MP1A	Z	-2.941	5
15	MP1A	Mx	0	5
16	RRU1	X	0	2
17	RRU1	Z	-2.98	2
18	RRU1	Mx	0	2
19	RRU2	X	0	2
20	RRU2	Z	-2.98	2
21	RRU2	Mx	0	2
22	MP3A	X	0	1
23	MP3A	Z	-6.094	1
24	MP3A	Mx	0	1
25	MP1A	X	0	0.25
26	MP1A	Z	-3.037	0.25
27	MP1A	Mx	0	0.25
28	MP1A	X	0	2.25
29	MP1A	Z	-3.037	2.25
30	MP1A	Mx	0	2.25
31	MP4A	X	0	5.5
32	MP4A	Z	-1.846	5.5
33	MP4A	Mx	0.001	5.5
34	MP4A	X	0	5.5
35	MP4A	Z	-1.846	5.5
36	MP4A	Mx	-0.001	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	2.271	1.25
2	MP4A	Z	-3.933	1.25
3	MP4A	Mx	-0.004	1.25
4	MP4A	X	2.271	5.25
5	MP4A	Z	-3.933	5.25
6	MP4A	Mx	-0.004	5.25
7	MP4A	X	2.271	1.25
8	MP4A	Z	-3.933	1.25
9	MP4A	Mx	0.001	1.25
10	MP4A	X	2.271	5.25
11	MP4A	Z	-3.933	5.25
12	MP4A	Mx	0.001	5.25
13	MP1A	X	1.284	5
14	MP1A	Z	-2.225	5
15	MP1A	Mx	-0.000642	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
16	RRU1	X	1.367	2
17	RRU1	Z	-2.368	2
18	RRU1	Mx	0.000684	2
19	RRU2	X	1.322	2
20	RRU2	Z	-2.289	2
21	RRU2	Mx	0.000661	2
22	MP3A	X	2.864	1
23	MP3A	Z	-4.961	1
24	MP3A	Mx	0.001	1
25	MP1A	X	1.272	0.25
26	MP1A	Z	-2.204	0.25
27	MP1A	Mx	-0.000636	0.25
28	MP1A	X	1.272	2.25
29	MP1A	Z	-2.204	2.25
30	MP1A	Mx	-0.000636	2.25
31	MP4A	X	0.923	5.5
32	MP4A	Z	-1.599	5.5
33	MP4A	Mx	0.002	5.5
34	MP4A	X	0.923	5.5
35	MP4A	Z	-1.599	5.5
36	MP4A	Mx	-0.000604	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	2.626	1.25
2	MP4A	Z	-1.516	1.25
3	MP4A	Mx	-0.003	1.25
4	MP4A	X	2.626	5.25
5	MP4A	Z	-1.516	5.25
6	MP4A	Mx	-0.003	5.25
7	MP4A	X	2.626	1.25
8	MP4A	Z	-1.516	1.25
9	MP4A	Mx	-0.00074	1.25
10	MP4A	X	2.626	5.25
11	MP4A	Z	-1.516	5.25
12	MP4A	Mx	-0.00074	5.25
13	MP1A	X	1.579	5
14	MP1A	Z	-0.912	5
15	MP1A	Mx	-0.00079	5
16	RRU1	X	1.944	2
17	RRU1	Z	-1.122	2
18	RRU1	Mx	0.000972	2
19	RRU2	X	1.707	2
20	RRU2	Z	-0.985	2
21	RRU2	Mx	0.000854	2
22	MP3A	X	4.329	1
23	MP3A	Z	-2.499	1
24	MP3A	Mx	0.002	1
25	MP1A	X	1.351	0.25
26	MP1A	Z	-0.78	0.25
27	MP1A	Mx	-0.000676	0.25
28	MP1A	X	1.351	2.25
29	MP1A	Z	-0.78	2.25
30	MP1A	Mx	-0.000676	2.25
31	MP4A	X	1.602	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
32	MP4A	Z	-0.925	5.5
33	MP4A	Mx	0.001	5.5
34	MP4A	X	1.602	5.5
35	MP4A	Z	-0.925	5.5
36	MP4A	Mx	0.000184	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	2.278	1.25
2	MP4A	Z	0	1.25
3	MP4A	Mx	-0.002	1.25
4	MP4A	X	2.278	5.25
5	MP4A	Z	0	5.25
6	MP4A	Mx	-0.002	5.25
7	MP4A	X	2.278	1.25
8	MP4A	Z	0	1.25
9	MP4A	Mx	-0.002	1.25
10	MP4A	X	2.278	5.25
11	MP4A	Z	0	5.25
12	MP4A	Mx	-0.002	5.25
13	MP1A	X	1.451	5
14	MP1A	Z	0	5
15	MP1A	Mx	-0.000725	5
16	RRU1	X	1.999	2
17	RRU1	Z	0	2
18	RRU1	Mx	0.001	2
19	RRU2	X	1.634	2
20	RRU2	Z	0	2
21	RRU2	Mx	0.000817	2
22	MP3A	X	4.633	1
23	MP3A	Z	0	1
24	MP3A	Mx	0.002	1
25	MP1A	X	1.067	0.25
26	MP1A	Z	0	0.25
27	MP1A	Mx	-0.000533	0.25
28	MP1A	X	1.067	2.25
29	MP1A	Z	0	2.25
30	MP1A	Mx	-0.000533	2.25
31	MP4A	X	1.851	5.5
32	MP4A	Z	0	5.5
33	MP4A	Mx	0.000926	5.5
34	MP4A	X	1.851	5.5
35	MP4A	Z	0	5.5
36	MP4A	Mx	0.000926	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	2.626	1.25
2	MP4A	Z	1.516	1.25
3	MP4A	Mx	-0.00074	1.25
4	MP4A	X	2.626	5.25
5	MP4A	Z	1.516	5.25
6	MP4A	Mx	-0.00074	5.25

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
7	MP4A	X	2.626	1.25
8	MP4A	Z	1.516	1.25
9	MP4A	Mx	-0.003	1.25
10	MP4A	X	2.626	5.25
11	MP4A	Z	1.516	5.25
12	MP4A	Mx	-0.003	5.25
13	MP1A	X	1.579	5
14	MP1A	Z	0.912	5
15	MP1A	Mx	-0.00079	5
16	RRU1	X	1.944	2
17	RRU1	Z	1.122	2
18	RRU1	Mx	0.000972	2
19	RRU2	X	1.707	2
20	RRU2	Z	0.985	2
21	RRU2	Mx	0.000854	2
22	MP3A	X	4.329	1
23	MP3A	Z	2.499	1
24	MP3A	Mx	0.002	1
25	MP1A	X	1.351	0.25
26	MP1A	Z	0.78	0.25
27	MP1A	Mx	-0.000676	0.25
28	MP1A	X	1.351	2.25
29	MP1A	Z	0.78	2.25
30	MP1A	Mx	-0.000676	2.25
31	MP4A	X	1.602	5.5
32	MP4A	Z	0.925	5.5
33	MP4A	Mx	0.000184	5.5
34	MP4A	X	1.602	5.5
35	MP4A	Z	0.925	5.5
36	MP4A	Mx	0.001	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	2.271	1.25
2	MP4A	Z	3.933	1.25
3	MP4A	Mx	0.001	1.25
4	MP4A	X	2.271	5.25
5	MP4A	Z	3.933	5.25
6	MP4A	Mx	0.001	5.25
7	MP4A	X	2.271	1.25
8	MP4A	Z	3.933	1.25
9	MP4A	Mx	-0.004	1.25
10	MP4A	X	2.271	5.25
11	MP4A	Z	3.933	5.25
12	MP4A	Mx	-0.004	5.25
13	MP1A	X	1.284	5
14	MP1A	Z	2.225	5
15	MP1A	Mx	-0.000642	5
16	RRU1	X	1.367	2
17	RRU1	Z	2.368	2
18	RRU1	Mx	0.000684	2
19	RRU2	X	1.322	2
20	RRU2	Z	2.289	2
21	RRU2	Mx	0.000661	2
22	MP3A	X	2.864	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
23	MP3A	Z	4.961	1
24	MP3A	Mx	0.001	1
25	MP1A	X	1.272	0.25
26	MP1A	Z	2.204	0.25
27	MP1A	Mx	-0.000636	0.25
28	MP1A	X	1.272	2.25
29	MP1A	Z	2.204	2.25
30	MP1A	Mx	-0.000636	2.25
31	MP4A	X	0.923	5.5
32	MP4A	Z	1.599	5.5
33	MP4A	Mx	-0.000604	5.5
34	MP4A	X	0.923	5.5
35	MP4A	Z	1.599	5.5
36	MP4A	Mx	0.002	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	0	1.25
2	MP4A	Z	5.296	1.25
3	MP4A	Mx	0.004	1.25
4	MP4A	X	0	5.25
5	MP4A	Z	5.296	5.25
6	MP4A	Mx	0.004	5.25
7	MP4A	X	0	1.25
8	MP4A	Z	5.296	1.25
9	MP4A	Mx	-0.004	1.25
10	MP4A	X	0	5.25
11	MP4A	Z	5.296	5.25
12	MP4A	Mx	-0.004	5.25
13	MP1A	X	0	5
14	MP1A	Z	2.941	5
15	MP1A	Mx	0	5
16	RRU1	X	0	2
17	RRU1	Z	2.98	2
18	RRU1	Mx	0	2
19	RRU2	X	0	2
20	RRU2	Z	2.98	2
21	RRU2	Mx	0	2
22	MP3A	X	0	1
23	MP3A	Z	6.094	1
24	MP3A	Mx	0	1
25	MP1A	X	0	0.25
26	MP1A	Z	3.037	0.25
27	MP1A	Mx	0	0.25
28	MP1A	X	0	2.25
29	MP1A	Z	3.037	2.25
30	MP1A	Mx	0	2.25
31	MP4A	X	0	5.5
32	MP4A	Z	1.846	5.5
33	MP4A	Mx	-0.001	5.5
34	MP4A	X	0	5.5
35	MP4A	Z	1.846	5.5
36	MP4A	Mx	0.001	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	-2.271	1.25
2	MP4A	Z	3.933	1.25
3	MP4A	Mx	0.004	1.25
4	MP4A	X	-2.271	5.25
5	MP4A	Z	3.933	5.25
6	MP4A	Mx	0.004	5.25
7	MP4A	X	-2.271	1.25
8	MP4A	Z	3.933	1.25
9	MP4A	Mx	-0.001	1.25
10	MP4A	X	-2.271	5.25
11	MP4A	Z	3.933	5.25
12	MP4A	Mx	-0.001	5.25
13	MP1A	X	-1.284	5
14	MP1A	Z	2.225	5
15	MP1A	Mx	0.000642	5
16	RRU1	X	-1.367	2
17	RRU1	Z	2.368	2
18	RRU1	Mx	-0.000684	2
19	RRU2	X	-1.322	2
20	RRU2	Z	2.289	2
21	RRU2	Mx	-0.000661	2
22	MP3A	X	-2.864	1
23	MP3A	Z	4.961	1
24	MP3A	Mx	-0.001	1
25	MP1A	X	-1.272	0.25
26	MP1A	Z	2.204	0.25
27	MP1A	Mx	0.000636	0.25
28	MP1A	X	-1.272	2.25
29	MP1A	Z	2.204	2.25
30	MP1A	Mx	0.000636	2.25
31	MP4A	X	-0.923	5.5
32	MP4A	Z	1.599	5.5
33	MP4A	Mx	-0.002	5.5
34	MP4A	X	-0.923	5.5
35	MP4A	Z	1.599	5.5
36	MP4A	Mx	0.000604	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	-2.626	1.25
2	MP4A	Z	1.516	1.25
3	MP4A	Mx	0.003	1.25
4	MP4A	X	-2.626	5.25
5	MP4A	Z	1.516	5.25
6	MP4A	Mx	0.003	5.25
7	MP4A	X	-2.626	1.25
8	MP4A	Z	1.516	1.25
9	MP4A	Mx	0.00074	1.25
10	MP4A	X	-2.626	5.25
11	MP4A	Z	1.516	5.25
12	MP4A	Mx	0.00074	5.25
13	MP1A	X	-1.579	5
14	MP1A	Z	0.912	5
15	MP1A	Mx	0.00079	5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
16	RRU1	X	-1.944	2
17	RRU1	Z	1.122	2
18	RRU1	Mx	-0.000972	2
19	RRU2	X	-1.707	2
20	RRU2	Z	0.985	2
21	RRU2	Mx	-0.000854	2
22	MP3A	X	-4.329	1
23	MP3A	Z	2.499	1
24	MP3A	Mx	-0.002	1
25	MP1A	X	-1.351	0.25
26	MP1A	Z	0.78	0.25
27	MP1A	Mx	0.000676	0.25
28	MP1A	X	-1.351	2.25
29	MP1A	Z	0.78	2.25
30	MP1A	Mx	0.000676	2.25
31	MP4A	X	-1.602	5.5
32	MP4A	Z	0.925	5.5
33	MP4A	Mx	-0.001	5.5
34	MP4A	X	-1.602	5.5
35	MP4A	Z	0.925	5.5
36	MP4A	Mx	-0.000184	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	-2.278	1.25
2	MP4A	Z	0	1.25
3	MP4A	Mx	0.002	1.25
4	MP4A	X	-2.278	5.25
5	MP4A	Z	0	5.25
6	MP4A	Mx	0.002	5.25
7	MP4A	X	-2.278	1.25
8	MP4A	Z	0	1.25
9	MP4A	Mx	0.002	1.25
10	MP4A	X	-2.278	5.25
11	MP4A	Z	0	5.25
12	MP4A	Mx	0.002	5.25
13	MP1A	X	-1.451	5
14	MP1A	Z	0	5
15	MP1A	Mx	0.000725	5
16	RRU1	X	-1.999	2
17	RRU1	Z	0	2
18	RRU1	Mx	-0.001	2
19	RRU2	X	-1.634	2
20	RRU2	Z	0	2
21	RRU2	Mx	-0.000817	2
22	MP3A	X	-4.633	1
23	MP3A	Z	0	1
24	MP3A	Mx	-0.002	1
25	MP1A	X	-1.067	0.25
26	MP1A	Z	0	0.25
27	MP1A	Mx	0.000533	0.25
28	MP1A	X	-1.067	2.25
29	MP1A	Z	0	2.25
30	MP1A	Mx	0.000533	2.25
31	MP4A	X	-1.851	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
32	MP4A	Z	0	5.5
33	MP4A	Mx	-0.000926	5.5
34	MP4A	X	-1.851	5.5
35	MP4A	Z	0	5.5
36	MP4A	Mx	-0.000926	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	-2.626	1.25
2	MP4A	Z	-1.516	1.25
3	MP4A	Mx	0.00074	1.25
4	MP4A	X	-2.626	5.25
5	MP4A	Z	-1.516	5.25
6	MP4A	Mx	0.00074	5.25
7	MP4A	X	-2.626	1.25
8	MP4A	Z	-1.516	1.25
9	MP4A	Mx	0.003	1.25
10	MP4A	X	-2.626	5.25
11	MP4A	Z	-1.516	5.25
12	MP4A	Mx	0.003	5.25
13	MP1A	X	-1.579	5
14	MP1A	Z	-0.912	5
15	MP1A	Mx	0.00079	5
16	RRU1	X	-1.944	2
17	RRU1	Z	-1.122	2
18	RRU1	Mx	-0.000972	2
19	RRU2	X	-1.707	2
20	RRU2	Z	-0.985	2
21	RRU2	Mx	-0.000854	2
22	MP3A	X	-4.329	1
23	MP3A	Z	-2.499	1
24	MP3A	Mx	-0.002	1
25	MP1A	X	-1.351	0.25
26	MP1A	Z	-0.78	0.25
27	MP1A	Mx	0.000676	0.25
28	MP1A	X	-1.351	2.25
29	MP1A	Z	-0.78	2.25
30	MP1A	Mx	0.000676	2.25
31	MP4A	X	-1.602	5.5
32	MP4A	Z	-0.925	5.5
33	MP4A	Mx	-0.000184	5.5
34	MP4A	X	-1.602	5.5
35	MP4A	Z	-0.925	5.5
36	MP4A	Mx	-0.001	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	-2.271	1.25
2	MP4A	Z	-3.933	1.25
3	MP4A	Mx	-0.001	1.25
4	MP4A	X	-2.271	5.25
5	MP4A	Z	-3.933	5.25
6	MP4A	Mx	-0.001	5.25

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
7	MP4A	X	-2.271	1.25
8	MP4A	Z	-3.933	1.25
9	MP4A	Mx	0.004	1.25
10	MP4A	X	-2.271	5.25
11	MP4A	Z	-3.933	5.25
12	MP4A	Mx	0.004	5.25
13	MP1A	X	-1.284	5
14	MP1A	Z	-2.225	5
15	MP1A	Mx	0.000642	5
16	RRU1	X	-1.367	2
17	RRU1	Z	-2.368	2
18	RRU1	Mx	-0.000684	2
19	RRU2	X	-1.322	2
20	RRU2	Z	-2.289	2
21	RRU2	Mx	-0.000661	2
22	MP3A	X	-2.864	1
23	MP3A	Z	-4.961	1
24	MP3A	Mx	-0.001	1
25	MP1A	X	-1.272	0.25
26	MP1A	Z	-2.204	0.25
27	MP1A	Mx	0.000636	0.25
28	MP1A	X	-1.272	2.25
29	MP1A	Z	-2.204	2.25
30	MP1A	Mx	0.000636	2.25
31	MP4A	X	-0.923	5.5
32	MP4A	Z	-1.599	5.5
33	MP4A	Mx	0.000604	5.5
34	MP4A	X	-0.923	5.5
35	MP4A	Z	-1.599	5.5
36	MP4A	Mx	-0.002	5.5

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	M3	Y	-500	0

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	M12	Y	-500	0

Member Point Loads (BLC 79 : Lv1)

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

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	M1	Y	-250	%100

Member Point Loads (BLC 81 : Antenna Ev)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	Y	-0.798	1.25
2	MP4A	My	-0.000532	1.25
3	MP4A	Mz	0.000532	1.25
4	MP4A	Y	-0.798	5.25
5	MP4A	My	-0.000532	5.25
6	MP4A	Mz	0.000532	5.25
7	MP4A	Y	-0.798	1.25
8	MP4A	My	-0.000532	1.25
9	MP4A	Mz	-0.000532	1.25
10	MP4A	Y	-0.798	5.25
11	MP4A	My	-0.000532	5.25
12	MP4A	Mz	-0.000532	5.25
13	MP1A	Y	-0.926	5
14	MP1A	My	-0.000463	5
15	MP1A	Mz	0	5
16	RRU1	Y	-3.367	2
17	RRU1	My	0.002	2
18	RRU1	Mz	0	2
19	RRU2	Y	-2.805	2
20	RRU2	My	0.001	2
21	RRU2	Mz	0	2
22	MP3A	Y	-1.277	1
23	MP3A	My	0.000638	1
24	MP3A	Mz	0	1
25	MP1A	Y	-1.143	0.25
26	MP1A	My	-0.000571	0.25
27	MP1A	Mz	0	0.25
28	MP1A	Y	-1.143	2.25
29	MP1A	My	-0.000571	2.25
30	MP1A	Mz	0	2.25
31	MP4A	Y	-0.702	5.5
32	MP4A	My	0.000351	5.5
33	MP4A	Mz	-0.000468	5.5
34	MP4A	Y	-0.702	5.5
35	MP4A	My	0.000351	5.5
36	MP4A	Mz	0.000468	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	Z	-1.995	1.25
2	MP4A	Mx	-0.001	1.25
3	MP4A	Z	-1.995	5.25
4	MP4A	Mx	-0.001	5.25
5	MP4A	Z	-1.995	1.25
6	MP4A	Mx	0.001	1.25
7	MP4A	Z	-1.995	5.25
8	MP4A	Mx	0.001	5.25
9	MP1A	Z	-2.314	5
10	MP1A	Mx	0	5
11	RRU1	Z	-8.417	2
12	RRU1	Mx	0	2
13	RRU2	Z	-7.011	2
14	RRU2	Mx	0	2
15	MP3A	Z	-3.191	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
16	MP3A	Mx	0	1
17	MP1A	Z	-2.857	0.25
18	MP1A	Mx	0	0.25
19	MP1A	Z	-2.857	2.25
20	MP1A	Mx	0	2.25
21	MP4A	Z	-1.755	5.5
22	MP4A	Mx	0.001	5.5
23	MP4A	Z	-1.755	5.5
24	MP4A	Mx	-0.001	5.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP4A	X	1.995	1.25
2	MP4A	Mx	-0.001	1.25
3	MP4A	X	1.995	5.25
4	MP4A	Mx	-0.001	5.25
5	MP4A	X	1.995	1.25
6	MP4A	Mx	-0.001	1.25
7	MP4A	X	1.995	5.25
8	MP4A	Mx	-0.001	5.25
9	MP1A	X	2.314	5
10	MP1A	Mx	-0.001	5
11	RRU1	X	8.417	2
12	RRU1	Mx	0.004	2
13	RRU2	X	7.011	2
14	RRU2	Mx	0.004	2
15	MP3A	X	3.191	1
16	MP3A	Mx	0.002	1
17	MP1A	X	2.857	0.25
18	MP1A	Mx	-0.001	0.25
19	MP1A	X	2.857	2.25
20	MP1A	Mx	-0.001	2.25
21	MP4A	X	1.755	5.5
22	MP4A	Mx	0.000878	5.5
23	MP4A	X	1.755	5.5
24	MP4A	Mx	0.000878	5.5

Member Area Loads

No Data to Print...				
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Envelope Node Reactions

	Node Label		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N35	max	1204.409	47	1344.123	19	1447.255	14	-0.13	75	0	75	0.186	39
2		min	-1401.806	29	339.808	64	136.809	9	-0.547	18	0	1	-0.242	33
3	N36	max	1453.713	35	1322.77	13	396.581	2	-0.124	72	0	75	0.174	39
4		min	-1256.193	41	333.922	70	-1612.739	20	-0.52	15	0	1	-0.23	33
5	N63	max	300.356	6	32.735	18	978.973	12	0	75	0	75	0	75
6		min	-287.191	12	7.754	74	-1021.57	6	0	1	0	1	0	1
7	N79A	max	84.541	5	32.34	17	379.47	11	0	75	0	75	0	75
8		min	-96.062	11	7.752	73	-341.447	5	0	1	0	1	0	1
9	Totals:	max	864.673	11	2723.604	15	1367.249	1						
10		min	-864.673	5	690.925	72	-1367.252	7						

Node Reactions

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1	1	N35	-112.227	460.28	536.757	-0.146	0	-0.021
2	1	N36	339.281	482.185	71.783	-0.182	0	-0.017
3	1	N63	-215.324	10.677	718.128	0	0	0
4	1	N79A	-11.723	10.82	40.582	0	0	0
5	1	Totals:	0.007	963.962	1367.249			
6	1	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
7	2	N35	-227.34	461.707	720.78	-0.164	0	0.006
8	2	N36	-400.498	480.591	396.581	-0.198	0	0.007
9	2	N63	-44.76	10.805	148.288	0	0	0
10	2	N79A	62.574	10.861	-209.017	0	0	0
11	2	Totals:	-610.023	963.962	1056.632			
12	2	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
13	3	N35	-262.252	467.717	731.985	-0.183	0	0.013
14	3	N36	-724.229	474.493	301.425	-0.2	0	0.013
15	3	N63	76.851	10.874	-276.994	0	0	0
16	3	N79A	76.437	10.878	-275.353	0	0	0
17	3	Totals:	-833.192	963.962	481.064			
18	3	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
19	4	N35	-267.115	473.598	696.853	-0.196	0	0.012
20	4	N36	-792.908	468.546	112.768	-0.196	0	0.01
21	4	N63	139.489	10.929	-521.685	0	0	0
22	4	N79A	69.25	10.89	-287.934	0	0	0
23	4	Totals:	-851.284	963.962	0.002			
24	4	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
25	5	N35	-275.964	478.854	688.995	-0.21	0	0.011
26	5	N36	-902.734	463.185	-23.585	-0.195	0	0.008
27	5	N63	229.484	11.013	-823.196	0	0	0
28	5	N79A	84.541	10.91	-341.447	0	0	0
29	5	Totals:	-864.673	963.962	-499.233			
30	5	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
31	6	N35	-226.766	485.175	579.864	-0.223	0	-0.001
32	6	N36	-776.533	456.749	-373.126	-0.188	0	-0.006
33	6	N63	300.356	11.129	-1021.57	0	0	0
34	6	N79A	74.735	10.909	-273.276	0	0	0
35	6	Totals:	-628.207	963.962	-1088.107			
36	6	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
37	7	N35	-96.821	489.798	333.214	-0.221	0	-0.032
38	7	N36	-132.194	452.212	-939.54	-0.169	0	-0.035
39	7	N63	228.809	11.124	-758.687	0	0	0
40	7	N79A	0.199	10.828	-2.238	0	0	0
41	7	Totals:	-0.008	963.961	-1367.252			
42	7	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
43	8	N35	19.151	488.391	147.081	-0.203	0	-0.059
44	8	N36	609.651	453.944	-1267.745	-0.153	0	-0.06
45	8	N63	56.379	10.91	-185.606	0	0	0
46	8	N79A	-75.158	10.716	249.635	0	0	0
47	8	Totals:	610.023	963.96	-1056.634			
48	8	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
49	9	N35	54.015	482.419	136.809	-0.185	0	-0.067
50	9	N36	933.849	460.128	-1172.255	-0.151	0	-0.065
51	9	N63	-65.872	10.721	239.02	0	0	0
52	9	N79A	-88.8	10.692	315.361	0	0	0
53	9	Totals:	833.192	963.96	-481.066			
54	9	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
55	10	N35	58.596	476.566	173.023	-0.171	0	-0.065

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
56	10	N36	1002.176	466.063	-982.534	-0.155	0	-0.063
57	10	N63	-128.285	10.631	482.497	0	0	0
58	10	N79A	-81.204	10.701	327.01	0	0	0
59	10	Totals:	851.283	963.961	-0.004			
60	10	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
61	11	N35	67.185	471.292	181.917	-0.157	0	-0.064
62	11	N36	1111.364	471.436	-844.709	-0.156	0	-0.061
63	11	N63	-217.815	10.538	782.553	0	0	0
64	11	N79A	-96.062	10.695	379.47	0	0	0
65	11	Totals:	864.673	963.961	499.231			
66	11	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
67	12	N35	17.457	464.92	292.056	-0.145	0	-0.052
68	12	N36	983.576	477.77	-492.923	-0.164	0	-0.047
69	12	N63	-287.191	10.533	978.973	0	0	0
70	12	N79A	-85.635	10.739	309.998	0	0	0
71	12	Totals:	628.207	963.961	1088.105			
72	12	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
73	13	N35	-664.449	1336.456	1390.121	-0.526	0	-0.134
74	13	N36	727.887	1322.77	-1131.196	-0.514	0	-0.13
75	13	N63	-37.368	32.17	124.64	0	0	0
76	13	N79A	-26.069	32.208	87.254	0	0	0
77	13	Totals:	0.001	2723.603	470.819			
78	13	COG (ft):	X: -3.807	Y: 2.878	Z: 7.704			
79	14	N35	-714.797	1336.691	1447.255	-0.531	0	-0.126
80	14	N36	484.472	1322.273	-1026.086	-0.519	0	-0.122
81	14	N63	14.696	32.346	-49.099	0	0	0
82	14	N79A	-1.084	32.294	3.296	0	0	0
83	14	Totals:	-216.714	2723.604	375.365			
84	14	COG (ft):	X: -3.807	Y: 2.878	Z: 7.704			
85	15	N35	-732.654	1337.946	1443.887	-0.536	0	-0.122
86	15	N36	351.004	1320.849	-1045.839	-0.52	0	-0.119
87	15	N63	54.487	32.488	-189.118	0	0	0
88	15	N79A	4.296	32.321	-22.523	0	0	0
89	15	Totals:	-322.867	2723.604	186.407			
90	15	COG (ft):	X: -3.807	Y: 2.878	Z: 7.704			
91	16	N35	-736.877	1339.438	1428.577	-0.541	0	-0.121
92	16	N36	300.807	1319.237	-1096.513	-0.519	0	-0.119
93	16	N63	82.975	32.598	-297.865	0	0	0
94	16	N79A	3.517	32.332	-34.202	0	0	0
95	16	Totals:	-349.578	2723.604	-0.002			
96	16	COG (ft):	X: -3.807	Y: 2.878	Z: 7.704			
97	17	N35	-737.715	1341.102	1410.386	-0.545	0	-0.122
98	17	N36	283.2	1317.461	-1160.455	-0.518	0	-0.121
99	17	N63	112.777	32.7	-397.783	0	0	0
100	17	N79A	6.617	32.34	-45.633	0	0	0
101	17	Totals:	-335.121	2723.604	-193.485			
102	17	COG (ft):	X: -3.807	Y: 2.878	Z: 7.704			
103	18	N35	-711.307	1342.94	1346.453	-0.547	0	-0.128
104	18	N36	365.368	1315.633	-1309.268	-0.514	0	-0.126
105	18	N63	124.299	32.735	-422.038	0	0	0
106	18	N79A	-2.151	32.296	-2.771	0	0	0
107	18	Totals:	-223.791	2723.603	-387.623			
108	18	COG (ft):	X: -3.807	Y: 2.878	Z: 7.704			
109	19	N35	-653.285	1344.123	1248.842	-0.545	0	-0.137
110	19	N36	589.51	1314.662	-1507.307	-0.507	0	-0.135

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
111	19	N63	94.1	32.631	-312.396	0	0	0
112	19	N79A	-30.328	32.188	100.036	0	0	0
113	19	Totals:	-0.003	2723.603	-470.825			
114	19	COG (ft):	X: -3.807	Y: 2.878	Z: 7.704			
115	20	N35	-602.851	1343.889	1191.509	-0.54	0	-0.146
116	20	N36	833.12	1315.173	-1612.739	-0.502	0	-0.143
117	20	N63	41.862	32.447	-138.348	0	0	0
118	20	N79A	-55.418	32.093	184.206	0	0	0
119	20	Totals:	216.712	2723.603	-375.372			
120	20	COG (ft):	X: -3.807	Y: 2.878	Z: 7.704			
121	21	N35	-584.974	1342.637	1194.919	-0.535	0	-0.149
122	21	N36	966.654	1316.609	-1593.005	-0.501	0	-0.146
123	21	N63	1.978	32.293	1.662	0	0	0
124	21	N79A	-60.793	32.064	210.01	0	0	0
125	21	Totals:	322.865	2723.603	-186.413			
126	21	COG (ft):	X: -3.807	Y: 2.878	Z: 7.704			
127	22	N35	-580.777	1341.146	1210.362	-0.531	0	-0.15
128	22	N36	1016.806	1318.225	-1542.171	-0.501	0	-0.146
129	22	N63	-26.49	32.177	110.236	0	0	0
130	22	N79A	-59.963	32.055	221.569	0	0	0
131	22	Totals:	349.576	2723.603	-0.004			
132	22	COG (ft):	X: -3.807	Y: 2.878	Z: 7.704			
133	23	N35	-579.981	1339.48	1228.676	-0.527	0	-0.149
134	23	N36	1034.33	1319.998	-1478.046	-0.502	0	-0.145
135	23	N63	-56.223	32.076	209.975	0	0	0
136	23	N79A	-63.007	32.05	232.875	0	0	0
137	23	Totals:	335.119	2723.603	193.479			
138	23	COG (ft):	X: -3.807	Y: 2.878	Z: 7.704			
139	24	N35	-606.447	1337.64	1292.671	-0.524	0	-0.144
140	24	N36	952.019	1321.808	-1329.084	-0.507	0	-0.139
141	24	N63	-67.597	32.055	234.102	0	0	0
142	24	N79A	-54.186	32.1	189.927	0	0	0
143	24	Totals:	223.789	2723.603	387.616			
144	24	COG (ft):	X: -3.807	Y: 2.878	Z: 7.704			
145	25	N35	-1391.377	866.712	1081.888	-0.361	0	-0.239
146	25	N36	1405.499	825.64	-1042.972	-0.318	0	-0.227
147	25	N63	-68.406	10.57	226.857	0	0	0
148	25	N79A	54.282	11.037	-180.325	0	0	0
149	25	Totals:	-0.001	1713.959	85.449			
150	25	COG (ft):	X: -5.723	Y: 1.593	Z: 7.817			
151	26	N35	-1398.672	866.819	1093.487	-0.363	0	-0.237
152	26	N36	1359.28	825.474	-1022.64	-0.319	0	-0.225
153	26	N63	-57.704	10.611	191.245	0	0	0
154	26	N79A	58.971	11.055	-196.059	0	0	0
155	26	Totals:	-38.125	1713.959	66.034			
156	26	COG (ft):	X: -5.723	Y: 1.593	Z: 7.817			
157	27	N35	-1400.908	867.201	1094.169	-0.364	0	-0.237
158	27	N36	1339.089	825.056	-1028.638	-0.319	0	-0.225
159	27	N63	-50.112	10.641	164.799	0	0	0
160	27	N79A	59.856	11.061	-200.267	0	0	0
161	27	Totals:	-52.076	1713.959	30.062			
162	27	COG (ft):	X: -5.723	Y: 1.593	Z: 7.817			
163	28	N35	-1401.229	867.568	1091.938	-0.365	0	-0.237
164	28	N36	1334.835	824.672	-1040.477	-0.319	0	-0.225
165	28	N63	-46.224	10.658	149.613	0	0	0

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
166	28	N79A	59.413	11.062	-201.076	0	0	0
167	28	Totals:	-53.205	1713.959	-0.003			
168	28	COG (ft):	X: -5.723	Y: 1.593	Z: 7.817			
169	29	N35	-1401.806	867.897	1091.417	-0.365	0	-0.237
170	29	N36	1328.021	824.319	-1049.064	-0.318	0	-0.225
171	29	N63	-40.633	10.678	130.889	0	0	0
172	29	N79A	60.374	11.065	-204.446	0	0	0
173	29	Totals:	-54.044	1713.959	-31.204			
174	29	COG (ft):	X: -5.723	Y: 1.593	Z: 7.817			
175	30	N35	-1398.744	868.288	1084.553	-0.366	0	-0.238
176	30	N36	1335.99	823.918	-1070.987	-0.318	0	-0.226
177	30	N63	-36.278	10.691	118.644	0	0	0
178	30	N79A	59.77	11.061	-200.216	0	0	0
179	30	Totals:	-39.262	1713.959	-68.007			
180	30	COG (ft):	X: -5.723	Y: 1.593	Z: 7.817			
181	31	N35	-1390.604	868.56	1069.162	-0.366	0	-0.24
182	31	N36	1376.229	823.683	-1106.287	-0.317	0	-0.228
183	31	N63	-40.775	10.672	135.019	0	0	0
184	31	N79A	55.149	11.043	-183.349	0	0	0
185	31	Totals:	-0.002	1713.959	-85.454			
186	31	COG (ft):	X: -5.723	Y: 1.593	Z: 7.817			
187	32	N35	-1383.306	868.453	1057.555	-0.365	0	-0.241
188	32	N36	1422.457	823.85	-1126.632	-0.316	0	-0.229
189	32	N63	-51.484	10.631	170.643	0	0	0
190	32	N79A	50.456	11.025	-167.606	0	0	0
191	32	Totals:	38.123	1713.959	-66.04			
192	32	COG (ft):	X: -5.723	Y: 1.593	Z: 7.817			
193	33	N35	-1381.07	868.071	1056.877	-0.364	0	-0.242
194	33	N36	1442.65	824.268	-1120.632	-0.316	0	-0.23
195	33	N63	-59.078	10.6	197.087	0	0	0
196	33	N79A	49.572	11.02	-163.4	0	0	0
197	33	Totals:	52.074	1713.959	-30.068			
198	33	COG (ft):	X: -5.723	Y: 1.593	Z: 7.817			
199	34	N35	-1380.75	867.704	1059.113	-0.363	0	-0.242
200	34	N36	1446.902	824.652	-1108.79	-0.316	0	-0.229
201	34	N63	-62.966	10.583	212.268	0	0	0
202	34	N79A	50.016	11.019	-162.594	0	0	0
203	34	Totals:	53.203	1713.959	-0.003			
204	34	COG (ft):	X: -5.723	Y: 1.593	Z: 7.817			
205	35	N35	-1380.174	867.375	1059.637	-0.362	0	-0.242
206	35	N36	1453.713	825.006	-1100.197	-0.316	0	-0.229
207	35	N63	-68.555	10.563	230.986	0	0	0
208	35	N79A	49.057	11.015	-159.229	0	0	0
209	35	Totals:	54.041	1713.959	31.198			
210	35	COG (ft):	X: -5.723	Y: 1.593	Z: 7.817			
211	36	N35	-1383.239	866.984	1066.505	-0.361	0	-0.241
212	36	N36	1445.738	825.406	-1078.265	-0.317	0	-0.228
213	36	N63	-72.904	10.55	243.224	0	0	0
214	36	N79A	49.663	11.019	-163.463	0	0	0
215	36	Totals:	39.259	1713.959	68.001			
216	36	COG (ft):	X: -5.723	Y: 1.593	Z: 7.817			
217	37	N35	1193.167	835.74	651.4	-0.325	0	0.184
218	37	N36	-1178.59	856.58	-614.075	-0.341	0	0.172
219	37	N63	61.969	10.866	-205.794	0	0	0
220	37	N79A	-76.545	10.784	253.922	0	0	0

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
221	37	Totals:	0.001	1713.971	85.452			
222	37	COG (ft):	X: -0.472	Y: 1.593	Z: 7.817			
223	38	N35	1185.903	835.805	662.959	-0.326	0	0.186
224	38	N36	-1224.833	856.506	-593.661	-0.342	0	0.173
225	38	N63	72.665	10.872	-241.494	0	0	0
226	38	N79A	-71.858	10.787	238.234	0	0	0
227	38	Totals:	-38.123	1713.971	66.038			
228	38	COG (ft):	X: -0.472	Y: 1.593	Z: 7.817			
229	39	N35	1183.708	836.165	663.624	-0.327	0	0.186
230	39	N36	-1245.071	856.141	-599.575	-0.342	0	0.174
231	39	N63	80.291	10.877	-268.094	0	0	0
232	39	N79A	-71.001	10.788	234.111	0	0	0
233	39	Totals:	-52.074	1713.971	30.066			
234	39	COG (ft):	X: -0.472	Y: 1.593	Z: 7.817			
235	40	N35	1183.412	836.525	661.392	-0.328	0	0.186
236	40	N36	-1249.354	855.778	-611.37	-0.342	0	0.173
237	40	N63	84.207	10.88	-283.382	0	0	0
238	40	N79A	-71.469	10.787	233.362	0	0	0
239	40	Totals:	-53.204	1713.971	0.001			
240	40	COG (ft):	X: -0.472	Y: 1.593	Z: 7.817			
241	41	N35	1182.858	836.847	660.868	-0.329	0	0.186
242	41	N36	-1256.193	855.451	-619.915	-0.342	0	0.173
243	41	N63	89.823	10.884	-302.208	0	0	0
244	41	N79A	-70.53	10.787	230.055	0	0	0
245	41	Totals:	-54.042	1713.971	-31.2			
246	41	COG (ft):	X: -0.472	Y: 1.593	Z: 7.817			
247	42	N35	1185.95	837.242	654.014	-0.33	0	0.185
248	42	N36	-1248.265	855.055	-641.785	-0.342	0	0.172
249	42	N63	94.229	10.888	-314.603	0	0	0
250	42	N79A	-71.173	10.786	234.372	0	0	0
251	42	Totals:	-39.26	1713.971	-68.003			
252	42	COG (ft):	X: -0.472	Y: 1.593	Z: 7.817			
253	43	N35	1194.099	837.545	638.659	-0.33	0	0.183
254	43	N36	-1208.052	854.758	-677.088	-0.34	0	0.171
255	43	N63	89.785	10.887	-298.307	0	0	0
256	43	N79A	-75.831	10.781	251.286	0	0	0
257	43	Totals:	0	1713.971	-85.45			
258	43	COG (ft):	X: -0.472	Y: 1.593	Z: 7.817			
259	44	N35	1201.366	837.479	627.092	-0.329	0	0.182
260	44	N36	-1161.801	854.833	-697.515	-0.339	0	0.169
261	44	N63	79.082	10.881	-262.594	0	0	0
262	44	N79A	-80.523	10.778	266.982	0	0	0
263	44	Totals:	38.125	1713.971	-66.036			
264	44	COG (ft):	X: -0.472	Y: 1.593	Z: 7.817			
265	45	N35	1203.561	837.12	626.431	-0.327	0	0.181
266	45	N36	-1141.561	855.198	-691.6	-0.339	0	0.169
267	45	N63	71.454	10.875	-235.997	0	0	0
268	45	N79A	-81.378	10.777	271.103	0	0	0
269	45	Totals:	52.075	1713.971	-30.064			
270	45	COG (ft):	X: -0.472	Y: 1.593	Z: 7.817			
271	46	N35	1203.855	836.76	628.667	-0.327	0	0.181
272	46	N36	-1137.279	855.561	-679.8	-0.34	0	0.169
273	46	N63	67.538	10.872	-220.714	0	0	0
274	46	N79A	-80.91	10.778	271.848	0	0	0
275	46	Totals:	53.205	1713.971	0.001			

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
276	46	COG (ft):	X: -0.472	Y: 1.593	Z: 7.817			
277	47	N35	1204.409	836.438	629.195	-0.326	0	0.181
278	47	N36	-1130.443	855.888	-671.25	-0.34	0	0.169
279	47	N63	61.924	10.868	-201.894	0	0	0
280	47	N79A	-81.847	10.778	275.151	0	0	0
281	47	Totals:	54.043	1713.971	31.202			
282	47	COG (ft):	X: -0.472	Y: 1.593	Z: 7.817			
283	48	N35	1201.314	836.043	636.053	-0.325	0	0.182
284	48	N36	-1138.377	856.283	-649.371	-0.34	0	0.17
285	48	N63	57.524	10.864	-189.506	0	0	0
286	48	N79A	-81.201	10.78	270.829	0	0	0
287	48	Totals:	39.261	1713.971	68.005			
288	48	COG (ft):	X: -0.472	Y: 1.593	Z: 7.817			
289	49	N35	-97.641	659.715	635.94	-0.261	0	-0.028
290	49	N36	97.622	657.59	-635.891	-0.258	0	-0.028
291	49	N63	11.667	10.842	-38.714	0	0	0
292	49	N79A	-11.648	10.815	38.663	0	0	0
293	49	Totals:	0	1338.961	-0.002			
294	49	COG (ft):	X: -3.172	Y: 1.998	Z: 7.743			
295	50	N35	574.442	654.747	529.103	-0.254	0	0.082
296	50	N36	-574.364	662.563	-529.226	-0.259	0	0.075
297	50	N63	44.246	10.863	-146.909	0	0	0
298	50	N79A	-44.324	10.793	147.033	0	0	0
299	50	Totals:	0	1338.966	0			
300	50	COG (ft):	X: -1.421	Y: 1.998	Z: 7.743			
301	51	N35	-121.86	554.212	507.55	-0.214	0	-0.031
302	51	N36	121.837	545.145	-507.485	-0.205	0	-0.031
303	51	N63	6.886	12.64	-22.848	0	0	0
304	51	N79A	-6.863	12.624	22.781	0	0	0
305	51	Totals:	0	1124.622	-0.001			
306	51	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
307	52	N35	-108.761	490.064	464.829	-0.189	0	-0.027
308	52	N36	113.364	483.573	-401.792	-0.183	0	-0.027
309	52	N63	1.247	11.189	-3.238	0	0	0
310	52	N79A	-5.849	11.182	20.318	0	0	0
311	52	Totals:	0	996.008	80.116			
312	52	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
313	53	N35	-120.012	490.151	474.511	-0.189	0	-0.026
314	53	N36	74.562	483.475	-385.809	-0.183	0	-0.025
315	53	N63	7.609	11.196	-25.967	0	0	0
316	53	N79A	-2.217	11.186	6.645	0	0	0
317	53	Totals:	-40.058	996.008	69.381			
318	53	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
319	54	N35	-128.022	490.438	477.489	-0.19	0	-0.025
320	54	N36	44.696	483.179	-386.872	-0.184	0	-0.025
321	54	N63	13.565	11.202	-47.157	0	0	0
322	54	N79A	0.381	11.189	-3.402	0	0	0
323	54	Totals:	-69.38	996.008	40.058			
324	54	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
325	55	N35	-130.648	490.848	472.967	-0.191	0	-0.025
326	55	N36	31.761	482.763	-404.696	-0.183	0	-0.025
327	55	N63	17.521	11.206	-61.137	0	0	0
328	55	N79A	1.249	11.19	-7.135	0	0	0
329	55	Totals:	-80.116	996.008	-0.001			
330	55	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
331	56	N35	-127.183	491.271	462.152	-0.191	0	-0.026
332	56	N36	39.23	482.34	-434.508	-0.182	0	-0.026
333	56	N63	18.418	11.207	-64.156	0	0	0
334	56	N79A	0.154	11.189	-3.548	0	0	0
335	56	Totals:	-69.38	996.008	-40.06			
336	56	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
337	57	N35	-118.557	491.594	447.944	-0.191	0	-0.027
338	57	N36	65.098	482.023	-468.317	-0.181	0	-0.027
339	57	N63	16.013	11.205	-55.405	0	0	0
340	57	N79A	-2.611	11.185	6.395	0	0	0
341	57	Totals:	-40.058	996.008	-69.383			
342	57	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
343	58	N35	-107.08	491.731	434.145	-0.191	0	-0.028
344	58	N36	102.438	481.897	-497.072	-0.18	0	-0.028
345	58	N63	10.949	11.199	-37.226	0	0	0
346	58	N79A	-6.307	11.181	20.034	0	0	0
347	58	Totals:	-0.001	996.008	-80.119			
348	58	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
349	59	N35	-95.827	491.644	424.457	-0.19	0	-0.029
350	59	N36	141.244	481.995	-513.062	-0.18	0	-0.029
351	59	N63	4.583	11.192	-14.49	0	0	0
352	59	N79A	-9.943	11.177	33.712	0	0	0
353	59	Totals:	40.057	996.008	-69.383			
354	59	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
355	60	N35	-87.815	491.357	421.477	-0.189	0	-0.03
356	60	N36	171.114	482.292	-512.004	-0.179	0	-0.03
357	60	N63	-1.377	11.185	6.705	0	0	0
358	60	N79A	-12.542	11.174	43.762	0	0	0
359	60	Totals:	69.38	996.007	-40.06			
360	60	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
361	61	N35	-85.19	490.947	426.003	-0.189	0	-0.03
362	61	N36	184.049	482.707	-494.178	-0.18	0	-0.03
363	61	N63	-5.334	11.181	20.682	0	0	0
364	61	N79A	-13.409	11.173	47.492	0	0	0
365	61	Totals:	80.115	996.007	-0.002			
366	61	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
367	62	N35	-88.657	490.524	436.823	-0.188	0	-0.029
368	62	N36	176.575	483.13	-464.36	-0.181	0	-0.029
369	62	N63	-6.226	11.18	23.694	0	0	0
370	62	N79A	-12.311	11.174	43.9	0	0	0
371	62	Totals:	69.38	996.008	40.057			
372	62	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
373	63	N35	-97.285	490.201	451.034	-0.188	0	-0.028
374	63	N36	150.703	483.446	-430.545	-0.182	0	-0.028
375	63	N63	-3.817	11.183	14.938	0	0	0
376	63	N79A	-9.544	11.177	33.954	0	0	0
377	63	Totals:	40.058	996.008	69.38			
378	63	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
379	64	N35	-75.71	339.808	327.133	-0.131	0	-0.018
380	64	N36	80.32	335.599	-264.118	-0.127	0	-0.018
381	64	N63	-0.623	7.76	2.967	0	0	0
382	64	N79A	-3.987	7.758	14.134	0	0	0
383	64	Totals:	0	690.925	80.117			
384	64	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
385	65	N35	-86.962	339.894	336.815	-0.131	0	-0.017

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
386	65	N36	41.52	335.505	-248.134	-0.128	0	-0.017
387	65	N63	5.739	7.765	-19.763	0	0	0
388	65	N79A	-0.355	7.761	0.463	0	0	0
389	65	Totals:	-40.058	690.925	69.381			
390	65	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
391	66	N35	-94.97	340.181	339.789	-0.132	0	-0.017
392	66	N36	11.652	335.212	-249.194	-0.128	0	-0.017
393	66	N63	11.695	7.769	-40.953	0	0	0
394	66	N79A	2.243	7.763	-9.583	0	0	0
395	66	Totals:	-69.38	690.925	40.058			
396	66	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
397	67	N35	-97.591	340.592	335.259	-0.133	0	-0.017
398	67	N36	-1.286	334.797	-267.013	-0.128	0	-0.017
399	67	N63	15.651	7.772	-54.933	0	0	0
400	67	N79A	3.111	7.764	-13.313	0	0	0
401	67	Totals:	-80.116	690.925	0			
402	67	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
403	68	N35	-94.12	341.016	324.435	-0.133	0	-0.017
404	68	N36	6.178	334.373	-296.819	-0.127	0	-0.017
405	68	N63	16.547	7.773	-57.95	0	0	0
406	68	N79A	2.015	7.763	-9.725	0	0	0
407	68	Totals:	-69.38	690.925	-40.059			
408	68	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
409	69	N35	-85.489	341.34	310.22	-0.133	0	-0.018
410	69	N36	32.04	334.053	-330.623	-0.126	0	-0.018
411	69	N63	14.141	7.771	-49.198	0	0	0
412	69	N79A	-0.751	7.761	0.219	0	0	0
413	69	Totals:	-40.058	690.925	-69.382			
414	69	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
415	70	N35	-74.007	341.478	296.417	-0.133	0	-0.02
416	70	N36	69.377	333.922	-359.376	-0.125	0	-0.02
417	70	N63	9.077	7.767	-31.017	0	0	0
418	70	N79A	-4.447	7.758	13.858	0	0	0
419	70	Totals:	0	690.925	-80.118			
420	70	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
421	71	N35	-62.753	341.391	286.729	-0.132	0	-0.021
422	71	N36	108.182	334.016	-375.368	-0.124	0	-0.021
423	71	N63	2.711	7.762	-8.28	0	0	0
424	71	N79A	-8.082	7.754	27.536	0	0	0
425	71	Totals:	40.057	690.925	-69.383			
426	71	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
427	72	N35	-54.743	341.104	283.754	-0.131	0	-0.021
428	72	N36	138.053	334.31	-374.313	-0.124	0	-0.021
429	72	N63	-3.249	7.758	12.915	0	0	0
430	72	N79A	-10.681	7.752	37.584	0	0	0
431	72	Totals:	69.38	690.925	-40.06			
432	72	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
433	73	N35	-52.123	340.694	288.287	-0.131	0	-0.021
434	73	N36	150.991	334.724	-356.493	-0.124	0	-0.021
435	73	N63	-7.205	7.755	26.892	0	0	0
436	73	N79A	-11.548	7.752	41.312	0	0	0
437	73	Totals:	80.115	690.925	-0.001			
438	73	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
439	74	N35	-55.596	340.269	299.117	-0.13	0	-0.021
440	74	N36	143.522	335.148	-326.679	-0.125	0	-0.021

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
441	74	N63	-8.097	7.754	29.902	0	0	0
442	74	N79A	-10.449	7.753	37.718	0	0	0
443	74	Totals:	69.38	690.925	40.058			
444	74	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			
445	75	N35	-64.229	339.945	313.334	-0.13	0	-0.02
446	75	N36	117.656	335.468	-292.87	-0.126	0	-0.019
447	75	N63	-5.687	7.756	21.145	0	0	0
448	75	N79A	-7.682	7.755	27.771	0	0	0
449	75	Totals:	40.058	690.925	69.381			
450	75	COG (ft):	X: -3.303	Y: 2.718	Z: 7.611			

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

Member	Shape	Code Check	Loc [ft]	LC	Shear Check	Loc [ft]	Dir	L _c	phi*P _{nc} [lb]	phi*P _{nt} [lb]	phi*M _n y-y [k-ft]	phi*M _n z-z [k-ft]	C _b	Eqn
1	M1	PIPE 2.5	0.264	3.776	36	0.081	3.776	19	14558.792	50715	3.596	3.596	1	H1-1b
2	M2	PIPE 2.5	0.296	3.255	7	0.104	3.776	20	14558.792	50715	3.596	3.596	1	H1-1b
3	M13	PL5/8X3.5	0.23	0.422	22	0.159	0.422	y 9	66184.77	68906.25	0.897	5.024	1.667	H1-1b
4	M14	PL5/8X3.5	0.225	0	31	0.096	0.422	y 27	66184.77	68906.25	0.897	5.024	1.667	H1-1b
5	M15	PL5/8X3.5	0.192	0	42	0.044	0.018	y 38	66184.77	68906.25	0.897	5.024	1.667	H1-1b
6	M16	PL5/8X3.5	0.162	0.422	43	0.088	0.422	y 7	66184.77	68906.25	0.897	5.024	1.667	H1-1b
7	M17	PIPE 2.0	0.166	0	9	0.092	0	17	31128.25	32130	1.872	1.872	1	H1-1b
8	M18	PIPE 2.0	0.1	0	29	0.1	0	18	31128.25	32130	1.872	1.872	1	H1-1b
9	M19	PIPE 2.0	0.083	2.501	44	0.076	0	42	31128.25	32130	1.872	1.872	1	H1-1b
10	M20	PIPE 2.0	0.093	0	7	0.064	0	37	31128.25	32130	1.872	1.872	1	H1-1b
11	M21	PL5/8X3.5	0.464	0.531	21	0.098	0.443	y 23	67591.76	68906.25	0.897	5.024	1.64	H1-1b
12	M22	PL5/8X3.5	0.337	0.531	42	0.062	0.531	y 42	67591.76	68906.25	0.897	5.024	1.816	H1-1b
13	M23	PL5/8X3.5	0.435	0.531	14	0.063	0.437	y 24	67591.76	68906.25	0.897	5.024	1.649	H1-1b
14	M24	PL5/8X3.5	0.344	0.531	39	0.039	0.531	y 1	67591.76	68906.25	0.897	5.024	1.791	H1-1b
15	M25	SR 0.75	0	4.167	75	0.012	4.167	22	2863.854	13916.274	0.174	0.174	1	H1-1a
16	M26	SR 0.75	0.084	0	21	0.016	4.167	30	2863.854	13916.274	0.174	0.174	1	H1-1b*
17	M27	SR 0.75	0	4.167	75	0.008	4.167	41	2863.854	13916.274	0.174	0.174	1	H1-1a
18	M28	SR 0.75	0.069	4.167	41	0.012	4.167	37	2863.854	13916.274	0.174	0.174	1	H1-1b*
19	MP4A	PIPE 2.0	0.425	3.583	33	0.095	3.583	7	14916.096	32130	1.872	1.872	1	H1-1b
20	MP3A	PIPE 2.0	0.21	3.583	19	0.034	3.583	9	14916.096	32130	1.872	1.872	1	H1-1b
21	MP2A	PIPE 2.0	0.182	3.583	44	0.041	3.583	7	14916.096	32130	1.872	1.872	1	H1-1b
22	MP1A	PIPE 2.0	0.407	3.583	41	0.063	3.583	7	14916.096	32130	1.872	1.872	1	H1-1b
23	M44	SR 0.625	0.084	0	12	0.015	3.333	33	2158.269	9664.074	0.101	0.101	1	H1-1b*
24	M45	SR 0.625	0.041	1.667	8	0.004	3.333	7	2158.269	9664.074	0.101	0.101	1	H1-1b
25	M46	SR 0.625	0.036	1.667	7	0.007	3.333	7	2158.269	9664.074	0.101	0.101	1	H1-1b
26	M47	SR 0.625	0.041	1.667	1	0.011	3.333	35	2158.269	9664.074	0.101	0.101	1	H1-1b
27	M43	PIPE 2.0	0.044	5.199	12	0.003	5.199	23	23235.127	32130	1.872	1.872	1	H1-1b*
28	RRU1	PIPE 2.0	0.041	2.031	7	0.015	1.042	11	23808.54	32130	1.872	1.872	1	H1-1b
29	RRU2	PIPE 2.0	0.037	2.031	7	0.026	1.042	8	23808.54	32130	1.872	1.872	1	H1-1b
30	M51	PIPE 2.0	0.028	2.6	23	0.003	5.199	23	23235.127	32130	1.872	1.872	1	H1-1b

Version 2.00

Yes

A diagram of a triangular prism with a central point. Four red arrows indicate rotation angles: 90 deg (up), 180 deg (left), 270 deg (down), and 0 deg (right).

Yes

Parallel

4

9.5

3.5

A307

0.625

1.3

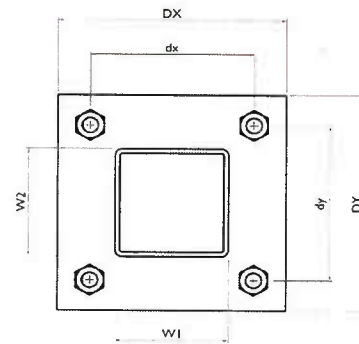
0.5

10.4

6.2

12.2%

No



ATTACHMENT 4



Map Revised June 2020

AppGeo
CT State Plane (NAD83)

This map (or data product) is for informational purposes only. It is not a warranty, and it is not a guarantee. The Town of West Hartford and its employees are not responsible for any errors or omissions in this map or data product. The Town of West Hartford and its employees are not responsible for any errors or omissions in this map or data product.

- Drive
 - ROW
 - Drive Road
 - Railroad (HDC)
 - Survey, The Town

- Building
 - Other Structure
 - Other
 - Pond
 - Driveway & Stables
 - Railroad (HDC)
 - Swamp
 - Water
 - Wetland (HDC)

WEST HARTFORD

Town of West Hartford, CT Tax Assessor Map

N

Scale
0 50 100 200 400 Feet
1 inch = 100 feet

00 01 02
 03 04 05
 06 07 08
 09 10 11

Map No.
F9



WEST HARTFORD,CT



[Search](#) [Street Listing](#) [Sales Search](#) [Feedback](#) [Back](#) [Home](#)

20 ISHAM ROAD

[Sales](#) [Print](#) [Map It](#)

Location	20 ISHAM ROAD	Mblu	F9/ 2901/ 20/ /
Parcel ID	2901 2 20 0001	Owner	M + R GASSNER FAMILY II LLC
Assessment	\$1,526,910	Appraisal	\$2,181,300
Vision Id #	10289	Building Count	1

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2020	\$932,700	\$1,248,600	\$2,181,300

Assessment			
Valuation Year	Improvements	Land	Total
2020	\$652,890	\$874,020	\$1,526,910

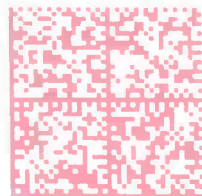


Owner of Record

Owner	M + R GASSNER FAMILY II LLC	Sale Price	\$0
Co-Owner		Certificate	
Address	PO BOX 354 MILLDALE, CT 06467	Book & Page	2394/0221
		Sale Date	12/31/1998
		Instrument	U

ATTACHMENT 5



Certificate of Mailing — Firm

Name and Address of Sender Kenneth C. Baldwin, Esq. Robinson & Cole LLP One State Street Hartford, CT 06103		TOTAL NO. of Pieces Listed by Sender 3	TOTAL NO. of Pieces Received at Post Office™ 3	Affix Stamp Here <i>Postmark with Date of Receipt.</i>  <div> quadrant CORRECTION IMI \$003.44² 06/24/2015 5P 06:10 040102226619 </div> US POSTAGE		
Postmaster, per (name of receiving employee) 						
USPS® Tracking Number Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift	
1.	Shari Cantor, Mayor Town of West Hartford 50 South Main Street West Hartford, CT 06107					
	Todd Dumais, Town Planner Town of West Hartford 50 South Main Street West Hartford, CT 06107					
3.	M & R Gassner Family, LLC Attn: Phil Cote P.O. Box 354 Milldale, CT 06467					
4.						
5.						
6.						