Robinson+Cole

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August 2, 2023

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

Re: **Notice of Exempt Modification – Facility Modification**
134 R Creamery Road, (aka 128 R), Durham, Connecticut

Dear Attorney Bachman:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains a wireless telecommunications facility at the above-referenced address (the "Property"). Cellco's facility consists of antennas and remote radio heads attached to a tower. Equipment associated with the facility is located on the ground adjacent to the tower. Cellco's facility was approved by the Siting Council ("Council") in March of 2014 (Petition No. 1092). A copy of the Council's Petition No. 1092 staff report approval is included in Attachment 1.

Cellco's proposed modification involves the installation of two (2) interference mitigation filters ("filters") on Cellco's existing antenna platform and mounting assembly. The filter specification sheet 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 Durham's Chief Elected Official and Land Use Officer.

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

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

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

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

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

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

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

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:
George Eamos, First Selectman
Robin Newton, Consulting Town Planner
ADCR, LLC, Property Owner
Alex Tyurin, Verizon Wireless

ATTACHMENT 1

Petition No. 1092
Verizon
Durham, Connecticut
Staff Report
March 6, 2014

On January 16, 2014, the Connecticut Siting Council (Council) received a petition from Cellco Partnership d/b/a Verizon Wireless (Verizon) for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the extension of an existing telecommunications facility at 134R Creamery Road in Durham, Connecticut. Council member Dr. Barbara Bell and Siting Analyst David Martin visited the site on February 21, 2014 to review the proposal. Attorney Kenneth Baldwin represented Verizon at the field review. Durham's First Selectman Laura Francis and two members of the Durham South End Cellular Action Group, Charles Stengel and Carleton Stoup, were also present at the field review. The Town of Durham's Communications Officer, Scott Wright, participated in the field review via cellphone.

The existing telecommunications tower is currently owned by SBA and was approved by the Council under Docket 254 on December 9, 2003 at a height of 100 feet and capable of being increased in height by means of a petition to the Council. The Decision and Order also specified that all antennas on the tower would have to be flush mounted. According to engineering drawings submitted with the Development and Management Plan, the tower was designed to be extendable to a maximum height of 130 feet, which is the height the docket applicant, Sprint, originally proposed. Currently, Sprint has three flush mounted antennas at a centerline height of 96.5 feet and the Town of Durham has a whip antenna at a mounting height of 78.5 feet and a dipole antenna at a mounting height of 71.7 feet.

Verizon now proposes to extend the tower by 10 feet to a height of 110 feet in order to install nine cluster mounted antennas at a centerline height of 107 feet. Verizon would also install a 12-foot by 30-foot shelter, within the existing 50-foot by 50-foot compound, for its ground equipment and a diesel generator for backup power.

In addition to notifying the Town, Verizon provided notice to abutting property owners. No opposing comments have been received.

This petition is somewhat unusual in that a local citizens' group, the Durham South End Cellular Action Group, is asking the Council to consider approving a higher extension of the tower than the petitioner is proposing. This group is concerned about the lack of wireless coverage in the southern part of Durham and has been working with town officials to find a solution for this problem. The group has submitted a letter to the Council stating its concerns and suggesting that the tower be extended to 140 feet and that platforms be allowed instead of restricting antennas to flush-mounts. During the field review, the First Selectman made it clear that she supported this group's efforts to improve coverage in this part of the town. The town's Communications Officer also stated that Verizon's proposed tower extension would be welcomed because it would enable the town to improve the coverage of its emergency services wireless network. Durham's State Senator, Ed Meyer, submitted a letter requesting an extension of the tower to 140 feet, and State Representative Vincent Candelora wrote to support the proposed height extension. This municipal and legislative support for the petition is especially noteworthy given the considerable opposition voiced by neighbors and town officials during the original docket proceeding.

For this petition, Council staff sent a memo to telecom carriers asking if any of them had an interest in co-locating on this tower. To date, only T-Mobile has responded, stating that it does have an interest in this site "in the immediate future."

The maps of Verizon's existing and proposed coverage submitted in support of this petition indicate that extending the tower to 110 feet will meet Verizon's coverage objectives and that going to a height of 140 feet would not significantly improve the coverage possible from this tower. At the request of the Cellular Action Group and the Council for evidence of this position, Verizon supplied supplemental maps showing the predicted coverage from 140 feet. These maps corroborate Verizon's stance that locating its antennas at the 140-foot height would not result in any significant improvement in coverage.

A Visibility Analysis was submitted as part of the petition materials. The low height of the existing tower makes it scarcely visible in the surrounding area. This condition was confirmed by the two members of the Durham South End Cellular Action Group, who took their own, informal visual survey from vantage points in the neighborhood. It was also confirmed by the Council's representatives who, while standing in the driveway of the property owner's house, could not see the tower. A 10-foot extension of the tower should hardly make a discernible difference in its visibility.

The proposed tower extension is not expected to have any substantial adverse environmental effects. Staff recommends approval.

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

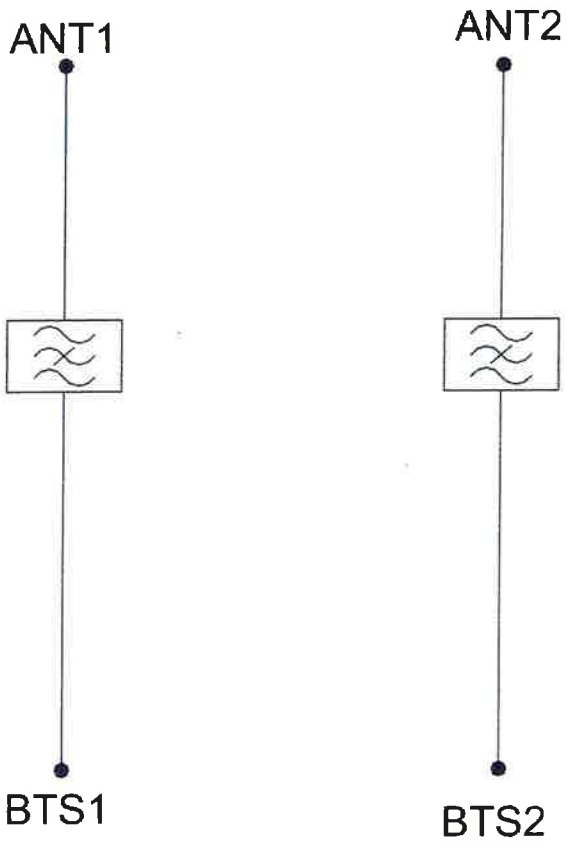
MECHANICAL	
Dimensions H x D x W	269 x 277 x 80mm | 10.60 x 10.90 x 3.15in (Excluding brackets and connectors)
Weight	8.0 kg | 17.6 lbs (no bracket)
Finish	Powder coated, light grey (RAL7035)
Connectors	RF: 4.3-10 (F) x 4
Mounting	Optional pole/wall bracket supplied with two metal clamps 45-178mm diameter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

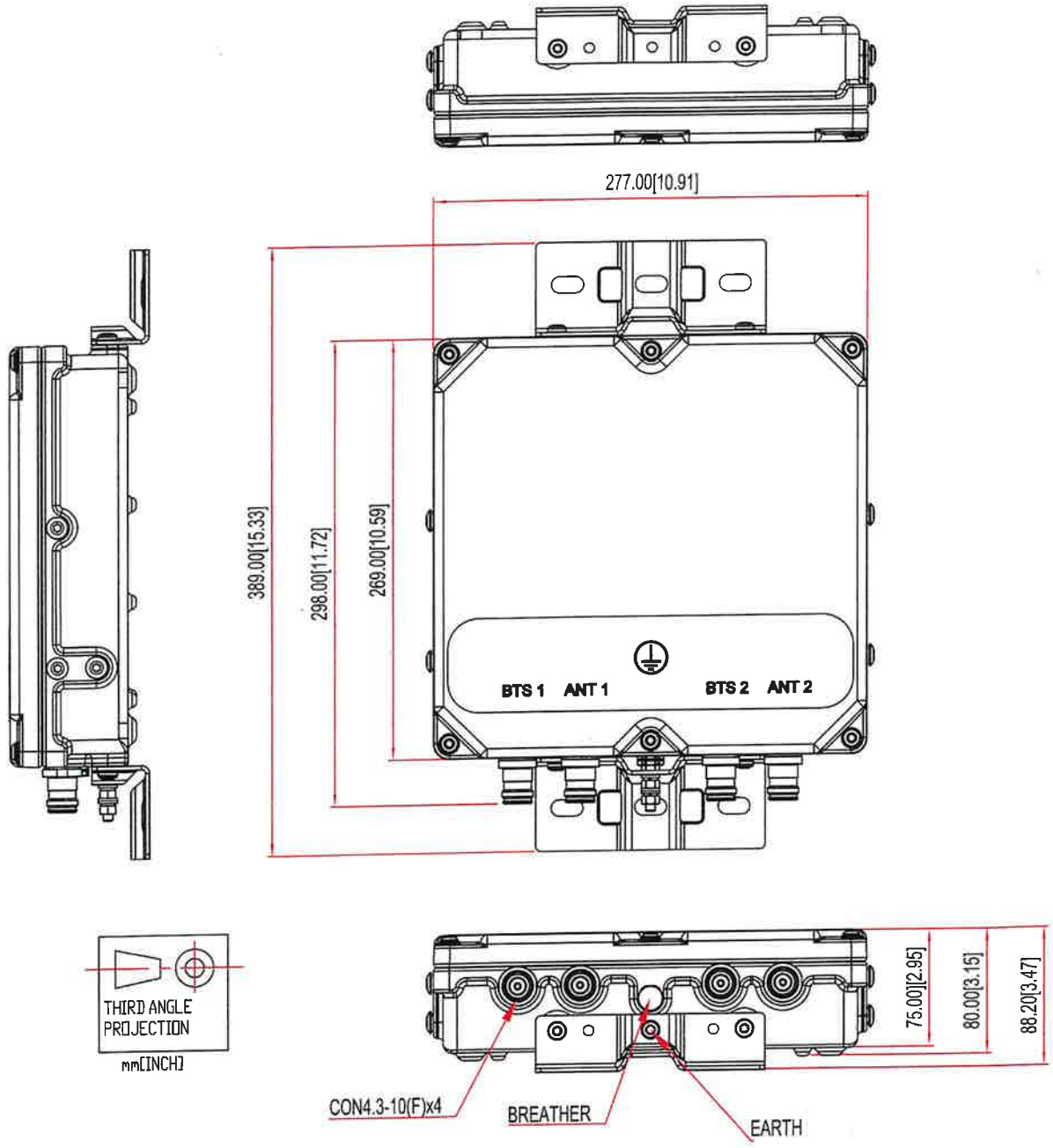
Contact Us: +1 303 768 8080 | +61 (0) 7 3907 1200 | www.kaelus.com

ELECTRICAL BLOCK DIAGRAM



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

MECHANICAL BLOCK DIAGRAM



ATTACHMENT 3

SBA Communications Corporation
8051 Congress Avenue
Boca Raton, FL 33487-1307

T + 561 995 7670
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sbasite.com

Structural Analysis Report

Client: Verizon

Client Site ID / Name: 5000398053 / DURHAM SOUTH CT
Application #: 232676, v2

SBA Site ID / Name: CT46140-A / S. Durham-rt 17- Lawson

108.5 ft Monopole

128 R Creamery Road
Durham, Connecticut 06422
Lat: 41.441352, Long: -72.696147

Project number: CT46140-VZW-071123

Analysis Results

Tower	58.8%	Pass
Foundation	33.0%	Pass

Change in tower stress due to mount modification / replacement	N/A

Prepared by:

Serge Berthomieux
Structural Engineer I
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Reviewed by:

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July 19, 2023

07/19/23

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Reviewed by:

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July 19, 2023

Table of Contents

Introduction

The purpose of this report is to summarize the analysis results on the 108.5 ft Monopole to support the proposed antennas and transmissions lines in addition to those currently installed.

Table 1 List of Documents Used

Item	Document
Tower design/drawings	Engineered Endeavors, Inc., Job No. 12807-E01 Rev. 1, dated August 4, 2004
Foundation drawings	Engineered Endeavors, Inc., Project No. 12807, dated July 28, 2004
Geotechnical report	Clarence Welti Assoc., Inc., Project Name Sprint Site-CT33XC526, dated October 25, 2000
Mount Analysis	N/A
Modification drawings	FDH, Project # 13TFSP1400, Dated December 27, 2013
Latest SA	TES, Project #: 107755, dated April 17, 2021

Analysis Criteria

Table 2 Code Related Data

Jurisdiction (State/County/City)	Connecticut/MIDDLESEX/Durham
Governing Codes	ANSI/TIA/EIA 222-H, 2021 IBC / 2022 CSBC
Ultimate Wind Speed (3-Sec gust)	120.0 mph
Wind Speed with Ice (3-Sec gust)	50 mph
Service Wind Speed (3-Sec gust)	60 mph
Ice Thickness	1.00"
Risk Category	II
Exposure Category	C
Topographic Category	1
Crest Height	0 ft
Ground Elevation	462.57 ft.
Seismic Parameter S_s	0.21
Seismic Parameter S_1	0.055

This structural analysis is based upon the tower being classified as a risk category II; however, if a different classification is required subsequent to the date hereof, the tower classification will be changed to meet such requirement and a new structural analysis will be run.

Appurtenance Loading

Existing Loading:

Table 3 Existing Appurtenances

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	108.0	6	Andrew JAHH-65B-R3B Panel	(1) Flush Mount	(2) 1 5/8" Hybrid	Verizon
2		3	Samsung VZS01 Panel			
3		3	Samsung B2/B66A RRH-BR049 RRU			
4		3	Samsung B5/B13 RRH-BR04C RRU			
5		2	RFS DB-T1-6Z-8AB-0Z OVP			
7	96.0	3	Ericsson - Ericsson AIR32 KRD901146-1_B66A_B2A (Octo) - Panel	(3) Sector Mount Site Pro 1: ULPD12-472	(3) 2" Hybrid	T-Mobile Spri
8		3	RFS - RFS APXVAALL24-43-U-NA20 - Panel			
9		3	Ericsson - Ericsson AIR6449 B41 - Panel			
10		3	Ericsson 4415 B25 RRU			
11		3	Ericsson 4449 B71 + B85 RRU			
12		6	ALU 800 MHz RRH RRU			
13	86.0	3	JMA Wireless MX08FRO665-21 Panel	Platform w/ handrail Sitepro1 SNP8HR-3XX	(1) 1.4" Hybrid	Dish Wireles
14		3	Fujitsu TA08025-B605 RRU			
15		3	Fujitsu TA08025-B604 RRU			
16		1	Raycap RDIDC-9181-PF-48 OVP			
17	78.5	1	10'x1" Omni	(1) Side Mount @ 73.5	(2) 1/2"	Town of Durham
18	71.7	1	3'6" x 2'6" Dipole			

Proposed Loading:

Information pertaining to proposed antennas and transmission lines were based upon the Application #: 232676, v2 from Verizon and is listed in Table 4.

Table 4 Proposed Appurtenances

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	108.0	6	Andrew JAHH-65B-R3B Panel	(1) Flush Mount	(2) 1 5/8" Hybrid	Verizon
2		3	Samsung VZS01 Panel			
3		3	Samsung B2/B66A RRH-BR049 RRU			
4		3	Samsung B5/B13 RRH-BR04C RRU			
5		2	RFS DB-T1-6Z-8AB-0Z OVP			
6		2	Kaelus BSF0020F3V1-1 Filter			

Analysis Results

Tower

The results of the structural analysis are shown below in table 5. Additional information for the tower analysis is provided within the Appendix.

Table 5 Tower Analysis Summary

	Pole shafts	Anchor Bolts	Base Plate	Flange Plate
Max. Usage:	50.3%	46.0%	58.8%	15.7%
Pass/Fail	Pass	Pass	Pass	Pass

Foundation

The results of the foundation analysis are shown below in table 6. Additional information for the foundation analysis is provided within the Appendix.

Table 6 Foundation Analysis Summary

Structural Component	Max Usage (%)	Analysis Result
Foundation	33.0%	Pass

Conclusions

Based on the analysis results, the existing tower and foundation were found to be ***sufficient*** to safely support the equipment listed in this analysis. No modification to the tower and foundation is needed at this time.

Installation Requirements

This analysis was performed under the assumption that the carrier will place the proposed equipment and feed lines at the installation height listed in Table 4 and in accordance with the coax layout shown. TMAs and RRUs are to be installed on existing mounts behind tenant's antennas unless otherwise noted. No equipment is to be installed directly in the climbing path. All equipment is to be installed per mount manufacturer specifications. In case site conditions do not allow for the required installation parameters to be met the carrier must notify SBA Communications Corporation engineers for approval of an alternative placement.

Assumptions and Limitations

Assumptions

This analysis was completed based on the following assumptions:

- Tower and foundation were built in accordance to manufacturer specifications.
- Tower and foundation has been properly maintained in accordance with the manufacturer's specifications
- All existing structural members were assumed to be in good condition with no physical damage or deterioration associated with corrosion
- Welds and bolts are assumed able to carry their intended original design loads.
- The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Table 3 and 4.
- This analysis may be affected if any assumptions are not valid or have been made in error. SBA should be notified to determine the effect on the structural integrity of the tower.

Limitations

The computer generated analysis performed by the tower software is limited to theoretical capacities of the towers structural members and does not account for any missing or damaged members or connections. The tower and foundation are assumed to have been properly designed, fabricated, installed and maintained, barring any conflicting findings from the most recent inspection.

SBA Communications Corporation has used its due diligence to verify the information provided to perform this analysis. It is unreasonable to perform a more detailed inspection of a tower and its components. This report is not a condition assessment of the tower or foundation.

Appendix

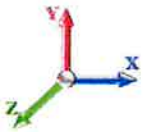
Usage Diagram - Max Ratio 50.31% at 0.0ft

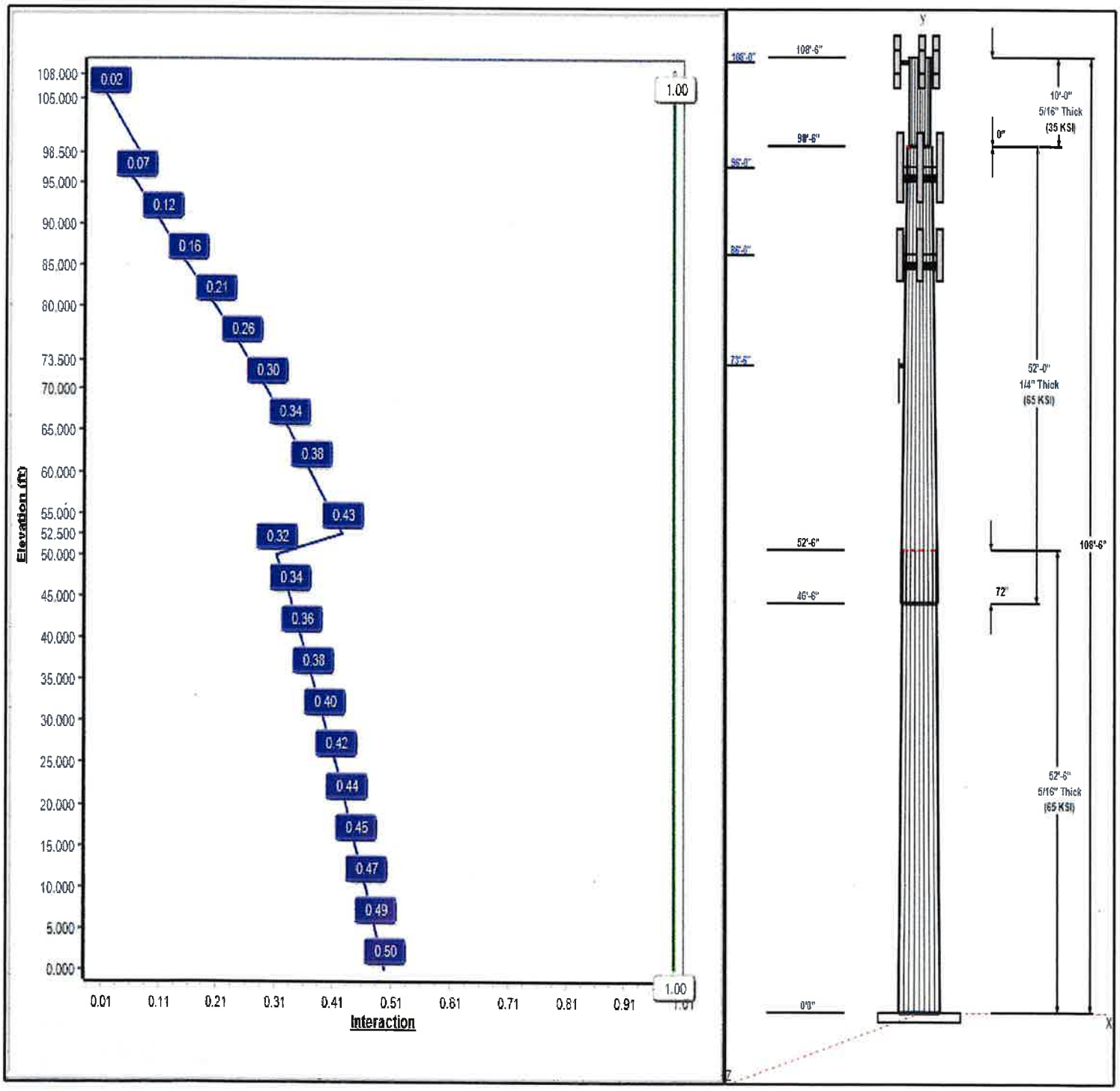
Structure:	CT46140-A	**Code:**	EIA/TIA-222-H	7/19/2023
Site Name:	S. Durham-rt 17/ Lawson	**Exposure:**	C	
Height:	108.50 (ft)	**Gh:**	1.1	
Base Elev:	0.000 (ft)			Page: 1

SBA

Dead Load Factor:	1.20	**Iterations:**	19
Wind Load Factor:	1.00		

Load Case : 1.2D + 1.0W 120 mph Wind





Structure: CT46140-A

Type: Custom
Site Name: S. Durham-rt 17/ Lawson
Height: 108.50 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.25659

7/19/2023

Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	52.50	41.09	56.00	0.313		0.25659	65
2	52.00	28.66	43.42	0.250	Slip	0.25659	65
3	10.00	28.00	28.00	0.312	Butt	0.00000	35

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
108.50	108.50	1	Lightning Rod	
108.00	108.00	1	Flush Mount	Verizon
108.00	108.00	6	Andrew JAHH-65B-R3B	Verizon
108.00	108.00	3	Samsung VZS01	Verizon
108.00	108.00	3	Samsung B2/B66A	Verizon
108.00	108.00	3	Samsung B5/B13	Verizon
108.00	108.00	2	RFS DB-T1-6Z-8AB-0Z	Verizon
108.00	108.00	6	mount pipe	Verizon
108.00	108.00	2	Kaelus BSF0020F3V1-1	Verizon
96.00	96.00	12	mount pipe	T-Mobile Sprint
96.00	96.00	3	Ericsson AIR32	T-Mobile Sprint
96.00	96.00	3	RFS	T-Mobile Sprint
96.00	96.00	3	Ericsson AIR6449 B41	T-Mobile Sprint
96.00	96.00	3	Ericsson 4415 B25 RRU	T-Mobile Sprint
96.00	96.00	3	Ericsson 4449 B71 + B85	T-Mobile Sprint
96.00	96.00	6	ALU 800 MHz RRH RRU	T-Mobile Sprint
96.00	96.00	1	Site Pro 1: ULPD12-472	T-Mobile Sprint
86.00	86.00	3	JMA MX08FRO665-21	Dish Wireless
86.00	86.00	1	Site Pro 1: SNP8HR-3XX	Dish Wireless
86.00	86.00	3	Fujitsu TA08025-B605	Dish Wireless
86.00	86.00	3	Fujitsu TA08025-B604	Dish Wireless
86.00	86.00	1	Raycap	Dish Wireless
86.00	86.00	9	mount pipe	Dish Wireless
73.50	78.50	1	10' x1" Omni	Town of Durham
73.50	71.70	1	3'6" x 2'6" Dipole	Town of Durham
73.50	73.50	1	Sidearm	Town of Durham

Linear Appurtenances

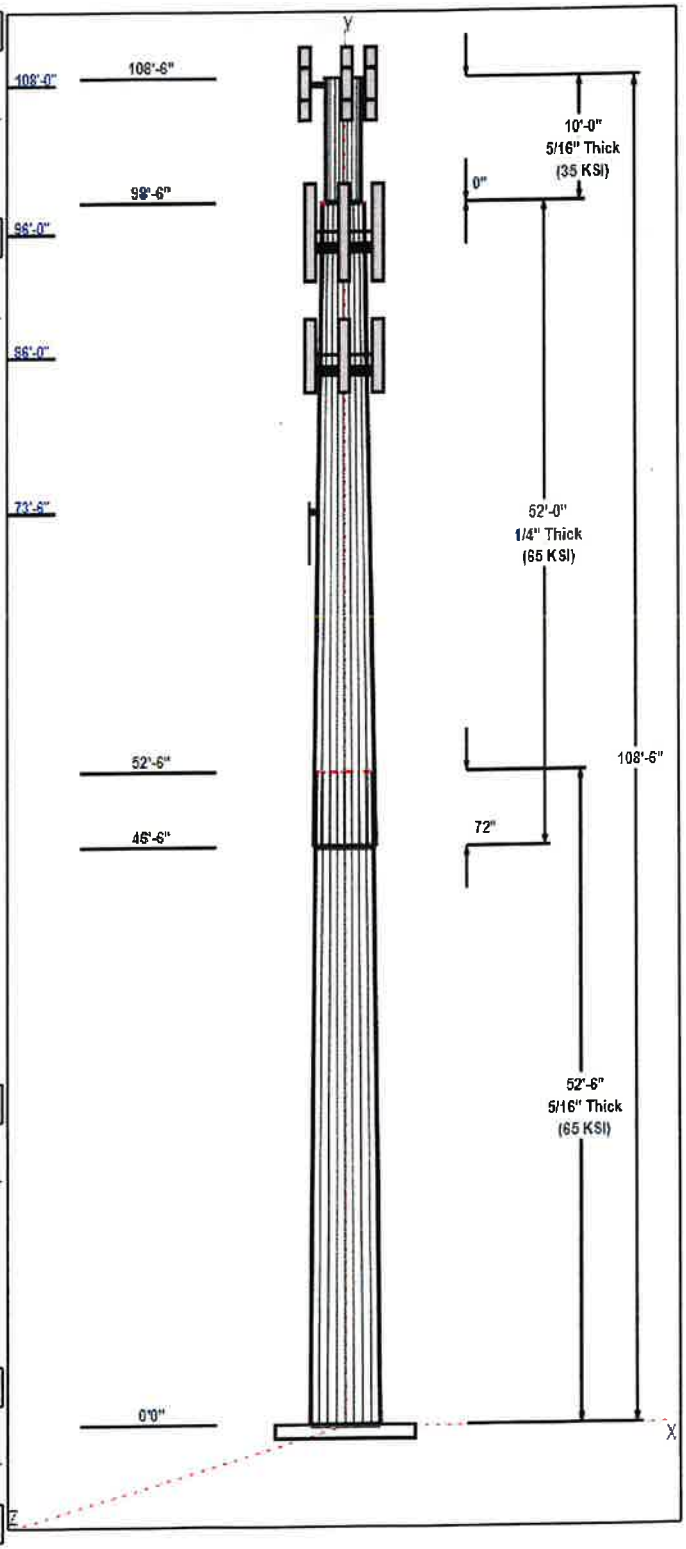
Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	108.50	Outside	Safety Cable	
0.00	108.50	Outside	Step bolts	
0.00	108.00	Inside	1 5/8" Hybrid	Verizon
0.00	96.60	Inside	2" Hybrid	T-Mobile Sprint
0.00	86.00	Inside	1.4" Hybrid	Dish Wireless
0.00	73.50	Inside	1/2" Coax	Town of Durham

Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
12	2.25" 18J	75.0	Radial

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
1.5000	71.0	60.0	Round



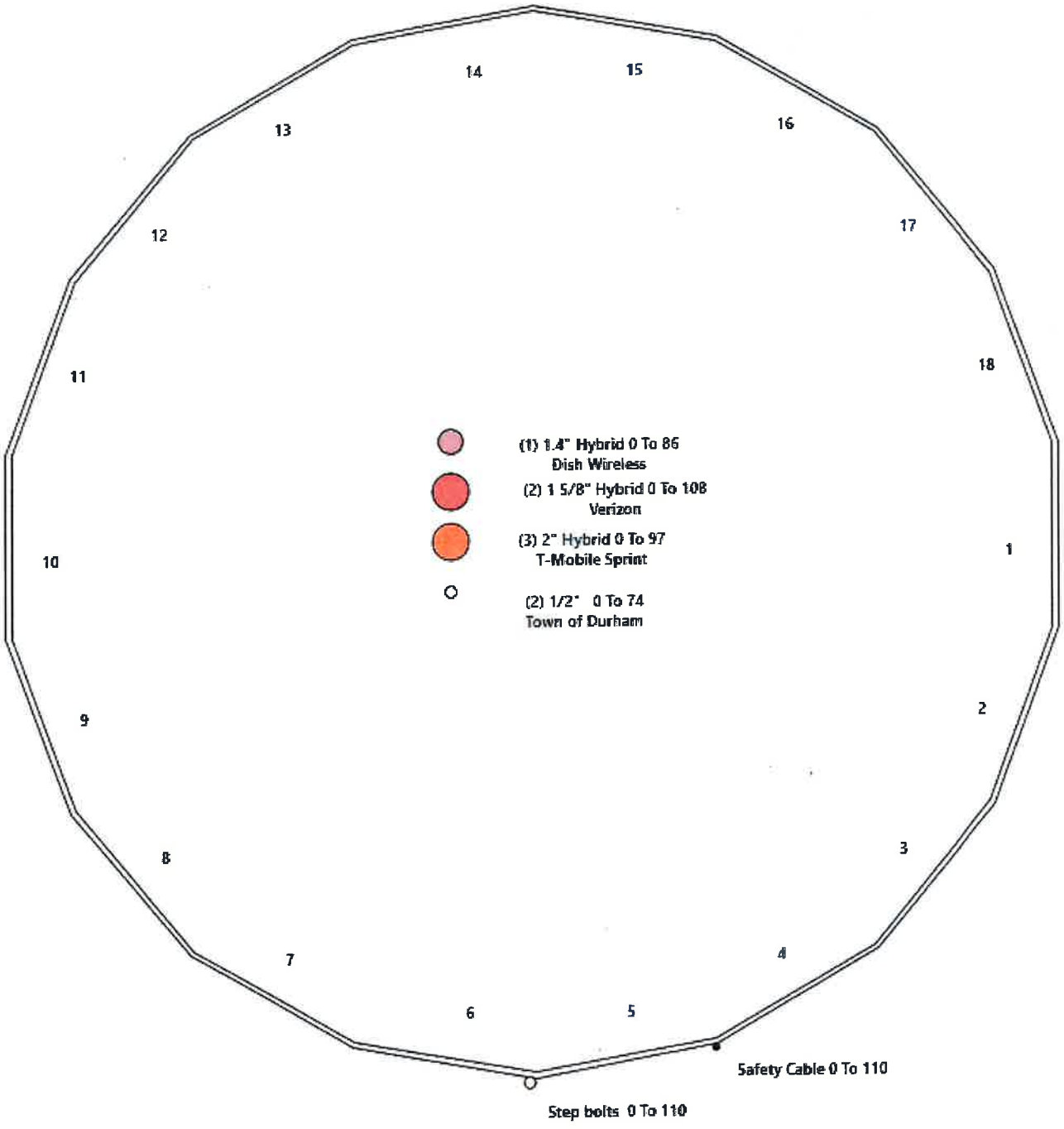
Reactions

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.0W 120 mph Wind	1857.5	23.9	28.5
0.9D + 1.0W 120 mph Wind	1849.7	23.9	21.4
1.2D + 1.0Di + 1.0Wi 50 mph Wind	464.3	6.3	25.8
1.2D + 1.0Ev + 1.0Eh	78.8	0.9	29.6
0.9D + 1.0Ev + 1.0Eh	78.6	0.9	22.4
1.0D + 1.0W 60 mph Wind	414.4	5.3	23.8

Structure: CT46140-A - Coax Line Placement

Type: Monopole
Site Name: S. Durham-rt 17/ Lawson
Height: 108.50 (ft)

7/19/2023



Shaft Properties

Structure:	CT46140-A	**Code:**	TIA-222-H	7/19/2023	
Site Name:	S. Durham-rt 17/ Lawson	**Exposure:**	C		
Height:	108.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 5	

Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	52.500	0.3125	65		0.00	8,674
2	18	52.000	0.2500	65	Slip	72.00	5,124
3	18	10.000	0.3120	35	Flange	0.00	933
					Total Shaft Weight:		**14,731**

	Bottom						Top						
Sec. No.	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Taper
1	56.00	0.00	55.23	21640.51	30.19	179.20	41.09	52.50	41.87	9428.49	22.59	131.4	0.256590
2	43.42	46.50	34.25	8065.49	29.21	173.68	28.66	98.50	23.67	2660.28	19.80	114.6	0.256590
3	28.00	98.50	27.42	2655.67	14.41	89.74	28.00	108.50	27.42	2655.67	14.41	89.74	0.000000

Load Summary

Structure:	CT46140-A	**Code:**	TIA-222-H	7/19/2023	
Site Name:	S. Durham-rt 17/ Lawson	**Exposure:**	C		
Height:	108.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 6	

Discrete Appurtenances

				No Ice			Ice				
No.	Elev (ft)	Description	Qty	Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor	Hor. Ecc. (ft)	Vert Ecc (ft)
1	108.50	Lightning Rod	1	5.00	0.50	1.00	18.52	1.626	1.00	0.00	0.00
2	108.00	Flush Mount	1	350.00	5.00	1.00	539.15	7.252	1.00	0.00	0.00
3	108.00	Andrew JAHH-65B-R3B	6	63.30	9.11	0.83	202.96	9.961	0.83	0.00	0.00
4	108.00	Samsung VZS01	3	87.10	4.30	0.76	153.35	4.859	0.76	0.00	0.00
5	108.00	Samsung B2/B66A RRH-BR049	3	84.40	1.87	0.67	129.65	2.228	0.67	0.00	0.00
6	108.00	Samsung B5/B13 RRH-BR04C RRU	3	70.30	1.87	0.67	111.08	2.228	0.67	0.00	0.00
7	108.00	RFS DB-T1-6Z-8AB-0Z	2	18.90	4.80	0.75	97.01	5.449	0.75	0.00	0.00
8	108.00	mount pipe	6	30.00	1.33	1.00	46.21	1.929	1.00	0.00	0.00
9	108.00	Kaelus BSF0020F3V1-1 Filter	2	17.60	0.96	0.90	90.34	1.090	0.90	0.00	0.00
10	96.00	mount pipe	12	30.00	1.42	1.00	56.70	2.368	1.00	0.00	0.00
11	96.00	Ericsson AIR32	3	132.20	6.51	0.87	242.06	7.264	0.87	0.00	0.00
12	96.00	RFS APXVAALL24-43-U-NA20	3	122.80	20.24	0.73	383.25	21.435	0.73	0.00	0.00
13	96.00	Ericsson AIR6449 B41	3	103.00	5.65	0.71	190.42	6.256	0.71	0.00	0.00
14	96.00	Ericsson 4415 B25 RRU	3	46.30	1.86	0.67	81.25	2.205	0.67	0.00	0.00
15	96.00	Ericsson 4449 B71 + B85 RRUs	3	73.20	1.97	0.67	110.02	2.333	0.67	0.00	0.00
16	96.00	ALU 800 MHz RRH RRU	6	53.00	2.49	0.67	100.15	3.219	0.67	0.00	0.00
17	96.00	Site Pro 1: ULPD12-472	1	2060.00	24.71	1.00	3893.72	41.207	1.00	0.00	0.00
18	86.00	JMA MX08FRO665-21	3	64.50	12.49	0.74	247.92	13.414	0.74	0.00	0.00
19	86.00	Site Pro 1: SNP8HR-3XX	1	1472.00	26.45	1.00	2443.98	47.408	1.00	0.00	0.00
20	86.00	Fujitsu TA08025-B605	3	75.00	1.96	0.67	107.98	2.314	0.67	0.00	0.00
21	86.00	Fujitsu TA08025-B604	3	63.90	1.96	0.67	95.83	2.314	0.67	0.00	0.00
22	86.00	Raycap RDIDC-9181-PF-48	1	21.85	2.01	1.00	55.35	2.368	1.00	0.00	0.00
23	86.00	mount pipe	9	30.00	1.64	1.00	49.81	2.939	1.00	0.00	0.00
24	73.50	10' x1" Omni	1	12.00	1.25	1.00	27.60	3.958	1.00	0.00	5.00
25	73.50	3'6" x 2'6" Dipole	1	15.00	1.74	1.00	50.08	3.143	1.00	0.00	-1.80
26	73.50	Sidearm	1	53.32	3.50	1.00	119.80	8.462	1.00	0.00	0.00
		Totals:	**84**	**8,338.07**			**16,306.07**				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	108.50	(1) Safety Cable	0.38	Outside
0.00	108.50	(1) Step bolts	0.63	Outside
0.00	108.00	(2) 1 5/8" Hybrid	0.00	Inside
0.00	96.60	(3) 2" Hybrid	0.00	Inside
0.00	86.00	(1) 1.4" Hybrid	0.00	Inside
0.00	73.50	(2) 1/2" Coax	0.00	Inside

Shaft Section Properties

Structure:	CT46140-A	**Code:**	TIA-222-H	7/19/2023	
Site Name:	S. Durham-rt 17/ Lawson	**Exposure:**	C		
Height:	108.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 7	

Increment Length: **5 (ft)**

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in^3)	Weight (lb)
0.00		0.3125	56.000	55.233	21640.5	30.19	179.20	65.9	761.1	0.0
5.00		0.3125	54.717	53.961	20179.0	29.46	175.09	66.7	726.4	928.9
10.00		0.3125	53.434	52.688	18784.9	28.74	170.99	67.6	692.4	907.3
15.00		0.3125	52.151	51.416	17456.4	28.02	166.88	68.4	659.3	885.6
20.00		0.3125	50.868	50.143	16192.2	27.29	162.78	69.3	627.0	864.0
25.00		0.3125	49.585	48.871	14990.5	26.57	158.67	70.2	595.4	842.3
30.00		0.3125	48.302	47.598	13849.7	25.84	154.57	71.0	564.7	820.7
35.00		0.3125	47.019	46.326	12768.4	25.12	150.46	71.9	534.9	799.0
40.00		0.3125	45.736	45.053	11744.9	24.40	146.36	72.7	505.8	777.4
45.00		0.3125	44.453	43.781	10777.5	23.67	142.25	73.6	477.5	755.7
46.50	Bot - Section 2	0.3125	44.069	43.399	10498.1	23.45	141.02	73.8	469.2	222.5
50.00		0.3125	43.171	42.508	9864.8	22.95	138.15	74.4	450.1	915.3
52.50	Top - Section 1	0.2500	41.880	33.033	7233.0	28.13	167.52	0.0	0.0	642.1
55.00		0.2500	41.239	32.524	6903.8	27.68	164.96	68.8	329.7	278.8
60.00		0.2500	39.956	31.506	6275.6	26.77	159.82	69.9	309.4	544.7
65.00		0.2500	38.673	30.488	5686.7	25.87	154.69	71.0	289.6	527.4
70.00		0.2500	37.390	29.470	5135.9	24.96	149.56	72.0	270.5	510.1
73.50		0.2500	36.492	28.757	4772.3	24.33	145.97	72.8	257.6	346.7
75.00		0.2500	36.107	28.452	4621.8	24.06	144.43	73.1	252.1	146.0
80.00		0.2500	34.824	27.434	4143.3	23.15	139.30	74.2	234.3	475.4
85.00		0.2500	33.541	26.416	3698.9	22.25	134.17	75.2	217.2	458.1
86.00		0.2500	33.285	26.212	3614.1	22.07	133.14	75.4	213.9	89.5
90.00		0.2500	32.258	25.398	3287.6	21.34	129.03	76.3	200.7	351.2
95.00		0.2500	30.975	24.380	2907.9	20.44	123.90	77.4	184.9	423.5
96.00		0.2500	30.719	24.176	2835.6	20.26	122.88	77.6	181.8	82.6
98.50	Top - Section 2	0.2500	30.077	23.667	2660.3	19.80	120.31	78.1	174.2	203.5
98.50	Bot - Section 3	0.3120	28.000	27.418	2655.7	15.87	96.40	44.5	186.8	
100.00		0.3120	28.000	27.418	2655.7	14.41	89.74	44.5	186.8	139.9
105.00		0.3120	28.000	27.418	2655.7	14.41	89.74	44.5	186.8	466.5
108.00		0.3120	28.000	27.418	2655.7	14.41	89.74	44.5	186.8	279.9
108.50		0.3120	28.000	27.418	2655.7	14.41	89.74	44.5	186.8	46.6
										14731.1

Wind Loading - Shaft

Structure: CT46140-A
Site Name: S. Durham-rt 17/ Lawson
Height: 108.50 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1 **Topography:** 1

Code: TIA-222-H 7/19/2023
Exposure: C
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

Load Case: 1.2D + 1.0W 120 mph Wind
Dead Load Factor 1.20
Wind Load Factor 1.00

Iterations 19

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	29.768	32.74	524.26	0.730	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	29.768	32.74	512.25	0.730	0.000	5.00	23.422	17.10	559.9	0.0	1114.7
10.00		1.00	0.85	29.768	32.74	500.24	0.730	0.000	5.00	22.879	16.70	546.9	0.0	1088.7
15.00		1.00	0.85	29.768	32.74	488.23	0.730	0.000	5.00	22.336	16.31	533.9	0.0	1062.7
20.00		1.00	0.90	31.585	34.74	490.54	0.730	0.000	5.00	21.793	15.91	552.7	0.0	1036.7
25.00		1.00	0.95	33.104	36.41	489.53	0.730	0.000	5.00	21.251	15.51	564.9	0.0	1010.8
30.00		1.00	0.98	34.399	37.84	486.10	0.730	0.000	5.00	20.708	15.12	572.0	0.0	984.8
35.00		1.00	1.01	35.534	39.09	480.93	0.730	0.000	5.00	20.165	14.72	575.4	0.0	958.8
40.00		1.00	1.04	36.547	40.20	474.43	0.730	0.000	5.00	19.622	14.32	575.9	0.0	932.8
45.00		1.00	1.07	37.465	41.21	466.88	0.730	0.000	5.00	19.079	13.93	574.0	0.0	906.8
46.50	Bot - Section 2	1.00	1.08	37.724	41.50	464.43	0.730	0.000	1.50	5.618	4.10	170.2	0.0	267.0
50.00		1.00	1.09	38.305	42.14	458.46	0.730	0.000	3.50	12.727	9.29	391.5	0.0	1098.3
52.50	Top - Section 1	1.00	1.11	38.700	42.57	453.97	0.730	0.000	2.50	8.928	6.52	277.4	0.0	770.5
55.00		1.00	1.12	39.081	42.99	442.36	0.730	0.000	2.50	8.792	6.42	275.9	0.0	334.6
60.00		1.00	1.14	39.804	43.78	432.54	0.730	0.000	5.00	17.177	12.54	549.0	0.0	653.6
65.00		1.00	1.16	40.480	44.53	422.20	0.730	0.000	5.00	16.634	12.14	540.7	0.0	632.8
70.00		1.00	1.17	41.117	45.23	411.39	0.730	0.000	5.00	16.091	11.75	531.3	0.0	612.1
73.50	Appurtenance(s)	1.00	1.19	41.541	45.70	403.57	0.730	0.000	3.50	10.941	7.99	365.0	0.0	416.1
75.00		1.00	1.19	41.718	45.89	400.17	0.730	0.000	1.50	4.607	3.36	154.3	0.0	175.2
80.00		1.00	1.21	42.289	46.52	388.58	0.730	0.000	5.00	15.005	10.95	509.6	0.0	570.5
85.00		1.00	1.22	42.832	47.12	376.66	0.730	0.000	5.00	14.463	10.56	497.4	0.0	549.7
86.00	Appurtenance(s)	1.00	1.23	42.938	47.23	374.24	0.730	0.000	1.00	2.827	2.06	97.5	0.0	107.4
90.00		1.00	1.24	43.351	47.69	364.44	0.730	0.000	4.00	11.092	8.10	386.1	0.0	421.5
95.00		1.00	1.25	43.847	48.23	351.94	0.730	0.000	5.00	13.377	9.77	471.0	0.0	508.1
96.00	Appurtenance(s)	1.00	1.25	43.944	48.34	349.41	0.730	0.000	1.00	2.610	1.91	92.1	0.0	99.1
98.50	Top - Section 2	1.00	1.26	44.182	48.60	343.04	0.730	0.000	2.50	6.431	4.69	228.1	0.0	244.2
100.00		1.00	1.27	44.323	48.76	319.86	0.730	0.000	1.50	3.554	2.59	126.5	0.0	167.9
105.00		1.00	1.28	44.781	49.26	321.51	0.730	0.000	5.00	11.847	8.65	426.0	0.0	559.8
108.00	Appurtenance(s)	1.00	1.29	45.047	49.55	322.46	0.730	0.000	3.00	7.108	5.19	257.1	0.0	335.9
108.50	Appurtenance(s)	1.00	1.29	45.091	49.60	322.62	0.730	0.000	0.50	1.185	0.86	42.9	0.0	56.0
								Totals:	**108.50**			**11,445.1**		**17,677.3**

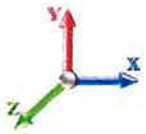
Discrete Appurtenance Forces

Structure:	CT46140-A	**Code:**	TIA-222-H	7/19/2023	
Site Name:	S. Durham-rt 17/ Lawson	**Exposure:**	C		
Height:	108.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 9	

Load Case: 1.2D + 1.0W 120 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 19

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	108.50	Lightning Rod	1	45.091	49.600	1.00	1.00	0.50	6.00	0.000	0.000	24.80	0.00	0.00
2	108.00	Samsung B2/B66A	3	45.047	49.552	0.67	1.00	3.76	303.84	0.000	0.000	186.25	0.00	0.00
3	108.00	Flush Mount	1	45.047	49.552	1.00	1.00	5.00	420.00	0.000	0.000	247.76	0.00	0.00
4	108.00	Andrew JAHH-65B-R3B	6	45.047	49.552	0.83	1.00	45.37	455.76	0.000	0.000	2248.05	0.00	0.00
5	108.00	Samsung VZS01	3	45.047	49.552	0.76	1.00	9.80	313.56	0.000	0.000	485.80	0.00	0.00
6	108.00	Samsung B5/B13	3	45.047	49.552	0.67	1.00	3.76	253.08	0.000	0.000	186.25	0.00	0.00
7	108.00	RFS DB-T1-6Z-8AB-0Z	2	45.047	49.552	0.75	1.00	7.20	45.36	0.000	0.000	356.77	0.00	0.00
8	108.00	mount pipe	6	45.047	49.552	1.00	1.00	7.98	216.00	0.000	0.000	395.42	0.00	0.00
9	108.00	Kaelus BSF0020F3V1-1	2	45.047	49.552	0.90	1.00	1.73	42.24	0.000	0.000	85.63	0.00	0.00
10	96.00	Site Pro 1: ULPD12-472	1	43.944	48.338	0.75	0.75	18.53	2472.00	0.000	0.000	895.83	0.00	0.00
11	96.00	ALU 800 MHz RRH RRU	6	43.944	48.338	0.54	0.80	8.01	381.60	0.000	0.000	387.08	0.00	0.00
12	96.00	Ericsson 4449 B71 + B85	3	43.944	48.338	0.54	0.80	3.17	263.52	0.000	0.000	153.12	0.00	0.00
13	96.00	Ericsson 4415 B25 RRU	3	43.944	48.338	0.54	0.80	2.99	166.68	0.000	0.000	144.57	0.00	0.00
14	96.00	Ericsson AIR6449 B41	3	43.944	48.338	0.57	0.80	9.63	370.80	0.000	0.000	465.38	0.00	0.00
15	96.00	Ericsson AIR32	3	43.944	48.338	0.70	0.80	13.59	475.92	0.000	0.000	657.05	0.00	0.00
16	96.00	mount pipe	12	43.944	48.338	0.80	0.80	13.63	432.00	0.000	0.000	658.94	0.00	0.00
17	96.00	RFS	3	43.944	48.338	0.58	0.80	35.46	442.08	0.000	0.000	1714.09	0.00	0.00
18	86.00	Fujitsu TA08025-B605	3	42.938	47.232	0.50	0.75	2.95	270.00	0.000	0.000	139.55	0.00	0.00
19	86.00	JMA MX08FRO665-21	3	42.938	47.232	0.55	0.75	20.80	232.20	0.000	0.000	982.22	0.00	0.00
20	86.00	Site Pro 1: SNP8HR-3XX	1	42.938	47.232	0.75	0.75	19.84	1766.40	0.000	0.000	936.96	0.00	0.00
21	86.00	Fujitsu TA08025-B604	3	42.938	47.232	0.50	0.75	2.95	230.04	0.000	0.000	139.55	0.00	0.00
22	86.00	Raycap	1	42.938	47.232	1.00	1.00	2.01	26.22	0.000	0.000	94.94	0.00	0.00
23	86.00	mount pipe	9	42.938	47.232	0.75	0.75	11.07	324.00	0.000	0.000	522.85	0.00	0.00
24	73.50	Sidearm	1	41.541	45.695	1.00	1.00	3.50	63.98	0.000	0.000	159.93	0.00	0.00
25	73.50	3'6" x 2'6" Dipole	1	41.325	45.457	1.00	1.00	1.74	18.00	0.000	-1.800	79.10	0.00	-142.37
26	73.50	10' x1" Omni	1	42.121	46.333	1.00	1.00	1.25	14.40	0.000	5.000	57.92	0.00	289.58
							Totals:		**10,005.68**			**12,405.82**		

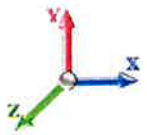
Total Applied Force Summary

Structure:	CT46140-A	**Code:**	TIA-222-H	7/19/2023	
Site Name:	S. Durham-rt 17/ Lawson	**Exposure:**	C		
Height:	108.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 10	

Load Case: 1.2D + 1.0W 120 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 19

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		559.86	1156.40	0.00	0.00
10.00		546.89	1130.42	0.00	0.00
15.00		533.91	1104.44	0.00	0.00
20.00		552.74	1078.46	0.00	0.00
25.00		564.89	1052.48	0.00	0.00
30.00		572.00	1026.50	0.00	0.00
35.00		575.38	1000.52	0.00	0.00
40.00		575.86	974.54	0.00	0.00
45.00		573.99	948.56	0.00	0.00
46.50		170.18	279.50	0.00	0.00
50.00		391.45	1127.54	0.00	0.00
52.50		277.44	791.36	0.00	0.00
55.00		275.91	355.47	0.00	0.00
60.00		549.00	695.35	0.00	0.00
65.00		540.69	674.57	0.00	0.00
70.00		531.27	653.78	0.00	0.00
73.50	(3) attachments	661.90	541.66	0.00	147.21
75.00		154.35	187.14	0.00	0.00
80.00		509.55	610.29	0.00	0.00
85.00		497.43	589.51	0.00	0.00
86.00	(20) attachments	2913.56	2964.27	0.00	0.00
90.00		386.13	447.85	0.00	0.00
95.00		470.99	541.10	0.00	0.00
96.00	(34) attachments	5168.18	5110.33	0.00	0.00
98.50		228.15	256.16	0.00	0.00
100.00		126.49	174.26	0.00	0.00
105.00		425.99	580.86	0.00	0.00
108.00	(26) attachments	4449.05	2398.36	0.00	0.00
108.50	(1) attachments	67.69	62.77	0.00	0.00
	Totals:	**23,850.94**	**28,514.48**	**0.00**	**147.21**

Linear Appurtenance Segment Forces (Factored)

Structure:	CT46140-A	**Code:**	TIA-222-H	7/19/2023	
Site Name:	S. Durham-rt 17/ Lawson	**Exposure:**	C		
Height:	108.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 11	

Load Case: 1.2D + 1.0W 120 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00

Iterations 19

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.018	0.000	29.768	0.00	1.64
5.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.018	0.000	29.768	0.00	6.24
10.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.018	0.000	29.768	0.00	1.64
10.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.018	0.000	29.768	0.00	6.24
15.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.019	0.000	29.768	0.00	1.64
15.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.019	0.000	29.768	0.00	6.24
20.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.019	0.000	31.585	0.00	1.64
20.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.019	0.000	31.585	0.00	6.24
25.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.020	0.000	33.104	0.00	1.64
25.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.020	0.000	33.104	0.00	6.24
30.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.020	0.000	34.399	0.00	1.64
30.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.020	0.000	34.399	0.00	6.24
35.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.021	0.000	35.534	0.00	1.64
35.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.021	0.000	35.534	0.00	6.24
40.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.021	0.000	36.547	0.00	1.64
40.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.021	0.000	36.547	0.00	6.24
45.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.022	0.000	37.465	0.00	1.64
45.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.022	0.000	37.465	0.00	6.24
46.50	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.022	0.000	37.724	0.00	0.49
46.50	Step bolts	Yes	1.50	0.000	0.63	0.08	0.00	0.022	0.000	37.724	0.00	1.87
50.00	Safety Cable	Yes	3.50	0.000	0.38	0.11	0.00	0.023	0.000	38.305	0.00	1.15
50.00	Step bolts	Yes	3.50	0.000	0.63	0.18	0.00	0.023	0.000	38.305	0.00	4.37
52.50	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.023	0.000	38.700	0.00	0.82
52.50	Step bolts	Yes	2.50	0.000	0.63	0.13	0.00	0.023	0.000	38.700	0.00	3.12
55.00	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.024	0.000	39.081	0.00	0.82
55.00	Step bolts	Yes	2.50	0.000	0.63	0.13	0.00	0.024	0.000	39.081	0.00	3.12
60.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.025	0.000	39.804	0.00	1.64
60.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.025	0.000	39.804	0.00	6.24
65.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.025	0.000	40.480	0.00	1.64
65.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.025	0.000	40.480	0.00	6.24
70.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.026	0.000	41.117	0.00	1.64
70.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.026	0.000	41.117	0.00	6.24
73.50	Safety Cable	Yes	3.50	0.000	0.38	0.11	0.00	0.027	0.000	41.541	0.00	1.15
73.50	Step bolts	Yes	3.50	0.000	0.63	0.18	0.00	0.027	0.000	41.541	0.00	4.37
75.00	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.027	0.000	41.718	0.00	0.49
75.00	Step bolts	Yes	1.50	0.000	0.63	0.08	0.00	0.027	0.000	41.718	0.00	1.87
80.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.028	0.000	42.289	0.00	1.64
80.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.028	0.000	42.289	0.00	6.24
85.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.029	0.000	42.832	0.00	1.64
85.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.029	0.000	42.832	0.00	6.24
86.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.030	0.000	42.938	0.00	0.33
86.00	Step bolts	Yes	1.00	0.000	0.63	0.05	0.00	0.030	0.000	42.938	0.00	1.25
90.00	Safety Cable	Yes	4.00	0.000	0.38	0.13	0.00	0.030	0.000	43.351	0.00	1.31
90.00	Step bolts	Yes	4.00	0.000	0.63	0.21	0.00	0.030	0.000	43.351	0.00	4.99
95.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.031	0.000	43.847	0.00	1.64
95.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.031	0.000	43.847	0.00	6.24
96.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.032	0.000	43.944	0.00	0.33

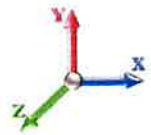
Linear Appurtenance Segment Forces (Factored)

Structure:	CT46140-A	**Code:**	TIA-222-H	7/19/2023	
Site Name:	S. Durham-rt 17/ Lawson	**Exposure:**	C		
Height:	108.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 12	

Load Case: 1.2D + 1.0W 120 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 19

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
96.00	Step bolts	Yes	1.00	0.000	0.63	0.05	0.00	0.032	0.000	43.944	0.00	1.25
98.50	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.033	0.000	44.182	0.00	0.82
98.50	Step bolts	Yes	2.50	0.000	0.63	0.13	0.00	0.033	0.000	44.182	0.00	3.12
100.00	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.036	0.000	44.323	0.00	0.49
100.00	Step bolts	Yes	1.50	0.000	0.63	0.08	0.00	0.036	0.000	44.323	0.00	1.87
105.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.036	0.000	44.781	0.00	1.64
105.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.036	0.000	44.781	0.00	6.24
108.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.036	0.000	45.047	0.00	0.98
108.00	Step bolts	Yes	3.00	0.000	0.63	0.16	0.00	0.036	0.000	45.047	0.00	3.74
108.50	Safety Cable	Yes	0.50	0.000	0.38	0.02	0.00	0.036	0.000	45.091	0.00	0.16
108.50	Step bolts	Yes	0.50	0.000	0.63	0.03	0.00	0.036	0.000	45.091	0.00	0.62
										Totals:	**0.0**	**171.0**

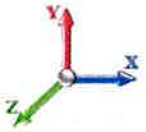
Calculated Forces

Structure:	CT46140-A	**Code:**	TIA-222-H	7/19/2023	
Site Name:	S. Durham-rt 17/ Lawson	**Exposure:**	C		
Height:	108.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 13	

Load Case: 1.2D + 1.0W 120 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 19

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-28.49	-23.88	0.00	-1857.4	0.00	1857.49	3275.65	969.34	4478.66	3761.64	0.00	0.000	0.000	0.503
5.00	-27.28	-23.38	0.00	-1738.0	0.00	1738.08	3241.53	947.01	4274.68	3636.23	0.06	-0.118	0.000	0.487
10.00	-26.11	-22.88	0.00	-1621.2	0.00	1621.20	3205.46	924.68	4075.45	3510.49	0.25	-0.237	0.000	0.471
15.00	-24.96	-22.39	0.00	-1506.8	0.00	1506.81	3167.44	902.34	3880.97	3384.59	0.56	-0.355	0.000	0.454
20.00	-23.84	-21.88	0.00	-1394.8	0.00	1394.85	3127.48	880.01	3691.25	3258.68	1.00	-0.473	0.000	0.436
25.00	-22.75	-21.35	0.00	-1285.4	0.00	1285.45	3085.56	857.68	3506.28	3132.91	1.56	-0.591	0.000	0.418
30.00	-21.69	-20.81	0.00	-1178.6	0.00	1178.69	3041.69	835.35	3326.07	3007.45	2.24	-0.708	0.000	0.400
35.00	-20.66	-20.27	0.00	-1074.6	0.00	1074.62	2995.87	813.02	3150.61	2882.45	3.05	-0.824	0.000	0.380
40.00	-19.65	-19.71	0.00	-973.30	0.00	973.30	2948.10	790.68	2979.90	2758.06	3.97	-0.938	0.000	0.360
45.00	-18.69	-19.15	0.00	-874.73	0.00	874.73	2898.39	768.35	2813.95	2634.44	5.02	-1.050	0.000	0.339
46.50	-18.39	-18.99	0.00	-846.01	0.00	846.01	2883.09	761.65	2765.09	2597.52	5.35	-1.084	0.000	0.333
50.00	-17.25	-18.60	0.00	-779.55	0.00	779.55	2846.72	746.02	2652.75	2511.74	6.18	-1.161	0.000	0.317
52.50	-16.45	-18.32	0.00	-733.06	0.00	733.06	2031.03	579.72	2002.37	1742.93	6.80	-1.215	0.000	0.430
55.00	-16.07	-18.06	0.00	-687.26	0.00	687.26	2015.31	570.79	1941.14	1702.63	7.45	-1.269	0.000	0.413
60.00	-15.35	-17.53	0.00	-596.96	0.00	596.96	1982.41	552.92	1821.53	1622.10	8.85	-1.401	0.000	0.377
65.00	-14.65	-17.00	0.00	-509.31	0.00	509.31	1947.55	535.06	1705.72	1541.77	10.39	-1.527	0.000	0.339
70.00	-13.99	-16.48	0.00	-424.30	0.00	424.30	1910.75	517.19	1593.71	1461.80	12.05	-1.643	0.000	0.299
73.50	-13.45	-15.81	0.00	-366.48	0.00	366.48	1883.83	504.69	1517.57	1406.12	13.29	-1.720	0.000	0.269
75.00	-13.25	-15.67	0.00	-342.76	0.00	342.76	1872.00	499.33	1485.51	1382.35	13.83	-1.752	0.000	0.256
80.00	-12.63	-15.16	0.00	-264.43	0.00	264.43	1831.30	481.46	1381.11	1303.58	15.72	-1.845	0.000	0.211
85.00	-12.05	-14.65	0.00	-188.64	0.00	188.64	1788.65	463.60	1280.51	1225.63	17.70	-1.923	0.000	0.162
86.00	-9.18	-11.64	0.00	-173.99	0.00	173.99	1779.88	460.02	1260.85	1210.15	18.10	-1.937	0.000	0.150
90.00	-8.73	-11.25	0.00	-127.41	0.00	127.41	1744.04	445.73	1183.72	1148.67	19.75	-1.984	0.000	0.117
95.00	-8.21	-10.76	0.00	-71.17	0.00	71.17	1697.49	427.86	1090.73	1072.85	21.85	-2.027	0.000	0.072
96.00	-3.28	-5.42	0.00	-60.40	0.00	60.40	1687.95	424.29	1072.59	1057.84	22.28	-2.034	0.000	0.059
98.50	-3.03	-5.18	0.00	-46.86	0.00	46.86	1663.75	415.36	1027.90	1020.54	23.35	-2.047	0.000	0.048
98.50	-3.03	-5.18	0.00	-46.86	0.00	46.86	1096.86	259.10	595.22	622.77	23.35	-2.047	0.000	0.078
100.00	-2.86	-5.05	0.00	-39.09	0.00	39.09	1096.86	259.10	595.22	622.77	23.99	-2.054	0.000	0.066
105.00	-2.30	-4.60	0.00	-13.84	0.00	13.84	1096.86	259.10	595.22	622.77	26.15	-2.068	0.000	0.025
108.00	-0.06	-0.07	0.00	-0.03	0.00	0.03	1096.86	259.10	595.22	622.77	27.45	-2.070	0.000	0.000
108.50	0.00	-0.07	0.00	0.00	0.00	0.00	1096.86	259.10	595.22	622.77	27.67	-2.070	0.000	0.000

Wind Loading - Shaft

Structure: CT46140-A
Site Name: S. Durham-rt 17/ Lawson
Height: 108.50 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1 **Topography:** 1

Code: TIA-222-H
Exposure: C
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

7/19/2023

Page: 14

Load Case: 0.9D + 1.0W 120 mph Wind
Dead Load Factor 0.90
Wind Load Factor 1.00

Iterations 19

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	29.768	32.74	524.26	0.730	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	29.768	32.74	512.25	0.730	0.000	5.00	23.422	17.10	559.9	0.0	836.0
10.00		1.00	0.85	29.768	32.74	500.24	0.730	0.000	5.00	22.879	16.70	546.9	0.0	816.5
15.00		1.00	0.85	29.768	32.74	488.23	0.730	0.000	5.00	22.336	16.31	533.9	0.0	797.0
20.00		1.00	0.90	31.585	34.74	490.54	0.730	0.000	5.00	21.793	15.91	552.7	0.0	777.6
25.00		1.00	0.95	33.104	36.41	489.53	0.730	0.000	5.00	21.251	15.51	564.9	0.0	758.1
30.00		1.00	0.98	34.399	37.84	486.10	0.730	0.000	5.00	20.708	15.12	572.0	0.0	738.6
35.00		1.00	1.01	35.534	39.09	480.93	0.730	0.000	5.00	20.165	14.72	575.4	0.0	719.1
40.00		1.00	1.04	36.547	40.20	474.43	0.730	0.000	5.00	19.622	14.32	575.9	0.0	699.6
45.00		1.00	1.07	37.465	41.21	466.88	0.730	0.000	5.00	19.079	13.93	574.0	0.0	680.1
46.50	Bot - Section 2	1.00	1.08	37.724	41.50	464.43	0.730	0.000	1.50	5.618	4.10	170.2	0.0	200.2
50.00		1.00	1.09	38.305	42.14	458.46	0.730	0.000	3.50	12.727	9.29	391.5	0.0	823.8
52.50	Top - Section 1	1.00	1.11	38.700	42.57	453.97	0.730	0.000	2.50	8.928	6.52	277.4	0.0	577.9
55.00		1.00	1.12	39.081	42.99	442.36	0.730	0.000	2.50	8.792	6.42	275.9	0.0	251.0
60.00		1.00	1.14	39.804	43.78	432.54	0.730	0.000	5.00	17.177	12.54	549.0	0.0	490.2
65.00		1.00	1.16	40.480	44.53	422.20	0.730	0.000	5.00	16.634	12.14	540.7	0.0	474.6
70.00		1.00	1.17	41.117	45.23	411.39	0.730	0.000	5.00	16.091	11.75	531.3	0.0	459.0
73.50	Appurtenance(s)	1.00	1.19	41.541	45.70	403.57	0.730	0.000	3.50	10.941	7.99	365.0	0.0	312.1
75.00		1.00	1.19	41.718	45.89	400.17	0.730	0.000	1.50	4.607	3.36	154.3	0.0	131.4
80.00		1.00	1.21	42.289	46.52	388.58	0.730	0.000	5.00	15.005	10.95	509.6	0.0	427.9
85.00		1.00	1.22	42.832	47.12	376.66	0.730	0.000	5.00	14.463	10.56	497.4	0.0	412.3
86.00	Appurtenance(s)	1.00	1.23	42.938	47.23	374.24	0.730	0.000	1.00	2.827	2.06	97.5	0.0	80.6
90.00		1.00	1.24	43.351	47.69	364.44	0.730	0.000	4.00	11.092	8.10	386.1	0.0	316.1
95.00		1.00	1.25	43.847	48.23	351.94	0.730	0.000	5.00	13.377	9.77	471.0	0.0	381.1
96.00	Appurtenance(s)	1.00	1.25	43.944	48.34	349.41	0.730	0.000	1.00	2.610	1.91	92.1	0.0	74.4
98.50	Top - Section 2	1.00	1.26	44.182	48.60	343.04	0.730	0.000	2.50	6.431	4.69	228.1	0.0	183.1
100.00		1.00	1.27	44.323	48.76	319.86	0.730	0.000	1.50	3.554	2.59	126.5	0.0	126.0
105.00		1.00	1.28	44.781	49.26	321.51	0.730	0.000	5.00	11.847	8.65	426.0	0.0	419.8
108.00	Appurtenance(s)	1.00	1.29	45.047	49.55	322.46	0.730	0.000	3.00	7.108	5.19	257.1	0.0	251.9
108.50	Appurtenance(s)	1.00	1.29	45.091	49.60	322.62	0.730	0.000	0.50	1.185	0.86	42.9	0.0	42.0
								Totals:	**108.50**			**11,445.1**		**13,258.0**

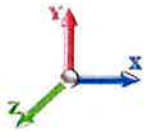
Discrete Appurtenance Forces

Structure:	CT46140-A	**Code:**	TIA-222-H	7/19/2023	
Site Name:	S. Durham-rt 17/ Lawson	**Exposure:**	C		
Height:	108.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 15	

Load Case: 0.9D + 1.0W 120 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.00



Iterations 19

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	108.50	Lightning Rod	1	45.091	49.600	1.00	1.00	0.50	4.50	0.000	0.000	24.80	0.00	0.00
2	108.00	Samsung B2/B66A	3	45.047	49.552	0.67	1.00	3.76	227.88	0.000	0.000	186.25	0.00	0.00
3	108.00	Flush Mount	1	45.047	49.552	1.00	1.00	5.00	315.00	0.000	0.000	247.76	0.00	0.00
4	108.00	Andrew JAHH-65B-R3B	6	45.047	49.552	0.83	1.00	45.37	341.82	0.000	0.000	2248.05	0.00	0.00
5	108.00	Samsung VZS01	3	45.047	49.552	0.76	1.00	9.80	235.17	0.000	0.000	485.80	0.00	0.00
6	108.00	Samsung B5/B13	3	45.047	49.552	0.67	1.00	3.76	189.81	0.000	0.000	186.25	0.00	0.00
7	108.00	RFS DB-T1-6Z-8AB-0Z	2	45.047	49.552	0.75	1.00	7.20	34.02	0.000	0.000	356.77	0.00	0.00
8	108.00	mount pipe	6	45.047	49.552	1.00	1.00	7.98	162.00	0.000	0.000	395.42	0.00	0.00
9	108.00	Kaelus BSF0020F3V1-1	2	45.047	49.552	0.90	1.00	1.73	31.68	0.000	0.000	85.63	0.00	0.00
10	96.00	Site Pro 1: ULPD12-472	1	43.944	48.338	0.75	0.75	18.53	1854.00	0.000	0.000	895.83	0.00	0.00
11	96.00	ALU 800 MHz RRH RRU	6	43.944	48.338	0.54	0.80	8.01	286.20	0.000	0.000	387.08	0.00	0.00
12	96.00	Ericsson 4449 B71 + B85	3	43.944	48.338	0.54	0.80	3.17	197.64	0.000	0.000	153.12	0.00	0.00
13	96.00	Ericsson 4415 B25 RRU	3	43.944	48.338	0.54	0.80	2.99	125.01	0.000	0.000	144.57	0.00	0.00
14	96.00	Ericsson AIR6449 B41	3	43.944	48.338	0.57	0.80	9.63	278.10	0.000	0.000	465.38	0.00	0.00
15	96.00	Ericsson AIR32	3	43.944	48.338	0.70	0.80	13.59	356.94	0.000	0.000	657.05	0.00	0.00
16	96.00	mount pipe	12	43.944	48.338	0.80	0.80	13.63	324.00	0.000	0.000	658.94	0.00	0.00
17	96.00	RFS	3	43.944	48.338	0.58	0.80	35.46	331.56	0.000	0.000	1714.09	0.00	0.00
18	86.00	Fujitsu TA08025-B605	3	42.938	47.232	0.50	0.75	2.95	202.50	0.000	0.000	139.55	0.00	0.00
19	86.00	JMA MX08FRO665-21	3	42.938	47.232	0.55	0.75	20.80	174.15	0.000	0.000	982.22	0.00	0.00
20	86.00	Site Pro 1: SNP8HR-3XX	1	42.938	47.232	0.75	0.75	19.84	1324.80	0.000	0.000	936.96	0.00	0.00
21	86.00	Fujitsu TA08025-B604	3	42.938	47.232	0.50	0.75	2.95	172.53	0.000	0.000	139.55	0.00	0.00
22	86.00	Raycap	1	42.938	47.232	1.00	1.00	2.01	19.67	0.000	0.000	94.94	0.00	0.00
23	86.00	mount pipe	9	42.938	47.232	0.75	0.75	11.07	243.00	0.000	0.000	522.85	0.00	0.00
24	73.50	Sidearm	1	41.541	45.695	1.00	1.00	3.50	47.99	0.000	0.000	159.93	0.00	0.00
25	73.50	3'6" x 2'6" Dipole	1	41.325	45.457	1.00	1.00	1.74	13.50	0.000	-1.800	79.10	0.00	-142.37
26	73.50	10' x1" Omni	1	42.121	46.333	1.00	1.00	1.25	10.80	0.000	5.000	57.92	0.00	289.58
							Totals:		**7,504.26**			**12,405.82**		

Total Applied Force Summary

Structure:	CT46140-A	**Code:**	TIA-222-H	7/19/2023	
Site Name:	S. Durham-rt 17/ Lawson	**Exposure:**	C		
Height:	108.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 16	

Load Case: 0.9D + 1.0W 120 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.00

Iterations 19

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		559.86	867.30	0.00	0.00
10.00		546.89	847.82	0.00	0.00
15.00		533.91	828.33	0.00	0.00
20.00		552.74	808.85	0.00	0.00
25.00		564.89	789.36	0.00	0.00
30.00		572.00	769.88	0.00	0.00
35.00		575.38	750.39	0.00	0.00
40.00		575.86	730.91	0.00	0.00
45.00		573.99	711.42	0.00	0.00
46.50		170.18	209.63	0.00	0.00
50.00		391.45	845.65	0.00	0.00
52.50		277.44	593.52	0.00	0.00
55.00		275.91	266.60	0.00	0.00
60.00		549.00	521.51	0.00	0.00
65.00		540.69	505.92	0.00	0.00
70.00		531.27	490.34	0.00	0.00
73.50	(3) attachments	661.90	406.25	0.00	147.21
75.00		154.35	140.36	0.00	0.00
80.00		509.55	457.72	0.00	0.00
85.00		497.43	442.13	0.00	0.00
86.00	(20) attachments	2913.56	2223.20	0.00	0.00
90.00		386.13	335.88	0.00	0.00
95.00		470.99	405.83	0.00	0.00
96.00	(34) attachments	5168.18	3832.74	0.00	0.00
98.50		228.15	192.12	0.00	0.00
100.00		126.49	130.69	0.00	0.00
105.00		425.99	435.65	0.00	0.00
108.00	(26) attachments	4449.05	1798.77	0.00	0.00
108.50	(1) attachments	67.69	47.07	0.00	0.00
	Totals:	**23,850.94**	**21,385.86**	**0.00**	**147.21**

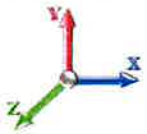
Linear Appurtenance Segment Forces (Factored)

Structure:	CT46140-A	**Code:**	TIA-222-H	7/19/2023	
Site Name:	S. Durham-rt 17/ Lawson	**Exposure:**	C		
Height:	108.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 17	

Load Case: 0.9D + 1.0W 120 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.00



Iterations 19

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.018	0.000	29.768	0.00	1.23
5.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.018	0.000	29.768	0.00	4.68
10.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.018	0.000	29.768	0.00	1.23
10.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.018	0.000	29.768	0.00	4.68
15.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.019	0.000	29.768	0.00	1.23
15.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.019	0.000	29.768	0.00	4.68
20.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.019	0.000	31.585	0.00	1.23
20.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.019	0.000	31.585	0.00	4.68
25.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.020	0.000	33.104	0.00	1.23
25.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.020	0.000	33.104	0.00	4.68
30.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.020	0.000	34.399	0.00	1.23
30.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.020	0.000	34.399	0.00	4.68
35.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.021	0.000	35.534	0.00	1.23
35.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.021	0.000	35.534	0.00	4.68
40.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.021	0.000	36.547	0.00	1.23
40.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.021	0.000	36.547	0.00	4.68
45.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.022	0.000	37.465	0.00	1.23
45.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.022	0.000	37.465	0.00	4.68
46.50	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.022	0.000	37.724	0.00	0.37
46.50	Step bolts	Yes	1.50	0.000	0.63	0.08	0.00	0.022	0.000	37.724	0.00	1.40
50.00	Safety Cable	Yes	3.50	0.000	0.38	0.11	0.00	0.023	0.000	38.305	0.00	0.86
50.00	Step bolts	Yes	3.50	0.000	0.63	0.18	0.00	0.023	0.000	38.305	0.00	3.28
52.50	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.023	0.000	38.700	0.00	0.61
52.50	Step bolts	Yes	2.50	0.000	0.63	0.13	0.00	0.023	0.000	38.700	0.00	2.34
55.00	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.024	0.000	39.081	0.00	0.61
55.00	Step bolts	Yes	2.50	0.000	0.63	0.13	0.00	0.024	0.000	39.081	0.00	2.34
60.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.025	0.000	39.804	0.00	1.23
60.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.025	0.000	39.804	0.00	4.68
65.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.025	0.000	40.480	0.00	1.23
65.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.025	0.000	40.480	0.00	4.68
70.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.026	0.000	41.117	0.00	1.23
70.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.026	0.000	41.117	0.00	4.68
73.50	Safety Cable	Yes	3.50	0.000	0.38	0.11	0.00	0.027	0.000	41.541	0.00	0.86
73.50	Step bolts	Yes	3.50	0.000	0.63	0.18	0.00	0.027	0.000	41.541	0.00	3.28
75.00	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.027	0.000	41.718	0.00	0.37
75.00	Step bolts	Yes	1.50	0.000	0.63	0.08	0.00	0.027	0.000	41.718	0.00	1.40
80.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.028	0.000	42.289	0.00	1.23
80.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.028	0.000	42.289	0.00	4.68
85.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.029	0.000	42.832	0.00	1.23
85.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.029	0.000	42.832	0.00	4.68
86.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.030	0.000	42.938	0.00	0.25
86.00	Step bolts	Yes	1.00	0.000	0.63	0.05	0.00	0.030	0.000	42.938	0.00	0.94
90.00	Safety Cable	Yes	4.00	0.000	0.38	0.13	0.00	0.030	0.000	43.351	0.00	0.98
90.00	Step bolts	Yes	4.00	0.000	0.63	0.21	0.00	0.030	0.000	43.351	0.00	3.74
95.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.031	0.000	43.847	0.00	1.23
95.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.031	0.000	43.847	0.00	4.68
96.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.032	0.000	43.944	0.00	0.25

Linear Appurtenance Segment Forces (Factored)

Structure:	CT46140-A	**Code:**	TIA-222-H	7/19/2023	
Site Name:	S. Durham-rt 17/ Lawson	**Exposure:**	C		
Height:	108.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 18	

Load Case: 0.9D + 1.0W 120 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.00

Iterations 19

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
96.00	Step bolts	Yes	1.00	0.000	0.63	0.05	0.00	0.032	0.000	43.944	0.00	0.94
98.50	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.033	0.000	44.182	0.00	0.61
98.50	Step bolts	Yes	2.50	0.000	0.63	0.13	0.00	0.033	0.000	44.182	0.00	2.34
100.00	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.036	0.000	44.323	0.00	0.37
100.00	Step bolts	Yes	1.50	0.000	0.63	0.08	0.00	0.036	0.000	44.323	0.00	1.40
105.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.036	0.000	44.781	0.00	1.23
105.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.036	0.000	44.781	0.00	4.68
108.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.036	0.000	45.047	0.00	0.74
108.00	Step bolts	Yes	3.00	0.000	0.63	0.16	0.00	0.036	0.000	45.047	0.00	2.81
108.50	Safety Cable	Yes	0.50	0.000	0.38	0.02	0.00	0.036	0.000	45.091	0.00	0.12
108.50	Step bolts	Yes	0.50	0.000	0.63	0.03	0.00	0.036	0.000	45.091	0.00	0.47
										Totals:	**0.0**	**128.2**

Calculated Forces

Structure:	CT46140-A	**Code:**	TIA-222-H	7/19/2023	
Site Name:	S. Durham-rt 17/ Lawson	**Exposure:**	C		
Height:	108.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 19	

Load Case: 0.9D + 1.0W 120 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.00

Iterations 19

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-21.36	-23.87	0.00	-1849.7	0.00	1849.75	3275.65	969.34	4478.66	3761.64	0.00	0.000	0.000	0.499
5.00	-20.45	-23.35	0.00	-1730.3	0.00	1730.38	3241.53	947.01	4274.68	3636.23	0.06	-0.118	0.000	0.483
10.00	-19.55	-22.85	0.00	-1613.6	0.00	1613.61	3205.46	924.68	4075.45	3510.49	0.25	-0.236	0.000	0.466
15.00	-18.68	-22.35	0.00	-1499.3	0.00	1499.39	3167.44	902.34	3880.97	3384.59	0.56	-0.353	0.000	0.450
20.00	-17.83	-21.82	0.00	-1387.6	0.00	1387.66	3127.48	880.01	3691.25	3258.68	1.00	-0.471	0.000	0.432
25.00	-17.00	-21.29	0.00	-1278.5	0.00	1278.54	3085.56	857.68	3506.28	3132.91	1.55	-0.588	0.000	0.414
30.00	-16.20	-20.74	0.00	-1172.1	0.00	1172.11	3041.69	835.35	3326.07	3007.45	2.23	-0.704	0.000	0.396
35.00	-15.42	-20.18	0.00	-1068.4	0.00	1068.42	2995.87	813.02	3150.61	2882.45	3.03	-0.819	0.000	0.376
40.00	-14.66	-19.63	0.00	-967.50	0.00	967.50	2948.10	790.68	2979.90	2758.06	3.95	-0.933	0.000	0.356
45.00	-13.93	-19.06	0.00	-869.38	0.00	869.38	2898.39	768.35	2813.95	2634.44	4.99	-1.044	0.000	0.335
46.50	-13.71	-18.90	0.00	-840.79	0.00	840.79	2883.09	761.65	2765.09	2597.52	5.33	-1.078	0.000	0.329
50.00	-12.85	-18.50	0.00	-774.66	0.00	774.66	2846.72	746.02	2652.75	2511.74	6.15	-1.155	0.000	0.314
52.50	-12.24	-18.22	0.00	-728.40	0.00	728.40	2031.03	579.72	2002.37	1742.93	6.77	-1.209	0.000	0.425
55.00	-11.95	-17.96	0.00	-682.84	0.00	682.84	2015.31	570.79	1941.14	1702.63	7.41	-1.262	0.000	0.408
60.00	-11.40	-17.43	0.00	-593.03	0.00	593.03	1982.41	552.92	1821.53	1622.10	8.81	-1.393	0.000	0.372
65.00	-10.88	-16.90	0.00	-505.89	0.00	505.89	1947.55	535.06	1705.72	1541.77	10.34	-1.518	0.000	0.335
70.00	-10.37	-16.37	0.00	-421.41	0.00	421.41	1910.75	517.19	1593.71	1461.80	11.99	-1.634	0.000	0.295
73.50	-9.97	-15.71	0.00	-363.97	0.00	363.97	1883.83	504.69	1517.57	1406.12	13.22	-1.710	0.000	0.265
75.00	-9.82	-15.56	0.00	-340.41	0.00	340.41	1872.00	499.33	1485.51	1382.35	13.76	-1.742	0.000	0.252
80.00	-9.36	-15.05	0.00	-262.62	0.00	262.62	1831.30	481.46	1381.11	1303.58	15.64	-1.834	0.000	0.208
85.00	-8.92	-14.54	0.00	-187.38	0.00	187.38	1788.65	463.60	1280.51	1225.63	17.60	-1.912	0.000	0.159
86.00	-6.79	-11.56	0.00	-172.84	0.00	172.84	1779.88	460.02	1260.85	1210.15	18.01	-1.926	0.000	0.147
90.00	-6.46	-11.17	0.00	-126.60	0.00	126.60	1744.04	445.73	1183.72	1148.67	19.64	-1.973	0.000	0.115
95.00	-6.06	-10.69	0.00	-70.76	0.00	70.76	1697.49	427.86	1090.73	1072.85	21.73	-2.015	0.000	0.070
96.00	-2.42	-5.39	0.00	-60.07	0.00	60.07	1687.95	424.29	1072.59	1057.84	22.16	-2.022	0.000	0.058
98.50	-2.23	-5.15	0.00	-46.61	0.00	46.61	1663.75	415.36	1027.90	1020.54	23.22	-2.035	0.000	0.047
98.50	-2.23	-5.15	0.00	-46.61	0.00	46.61	1096.86	259.10	595.22	622.77	23.22	-2.035	0.000	0.077
100.00	-2.10	-5.02	0.00	-38.88	0.00	38.88	1096.86	259.10	595.22	622.77	23.86	-2.042	0.000	0.065
105.00	-1.68	-4.58	0.00	-13.77	0.00	13.77	1096.86	259.10	595.22	622.77	26.01	-2.056	0.000	0.024
108.00	-0.04	-0.07	0.00	-0.03	0.00	0.03	1096.86	259.10	595.22	622.77	27.30	-2.058	0.000	0.000
108.50	0.00	-0.07	0.00	0.00	0.00	0.00	1096.86	259.10	595.22	622.77	27.51	-2.058	0.000	0.000

Wind Loading - Shaft

Structure: CT46140-A
Site Name: S. Durham-rt 17/ Lawson
Height: 108.50 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1 **Topography:** 1

Code: TIA-222-H 7/19/2023
Exposure: C
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind
Dead Load Factor 1.20
Wind Load Factor 1.00

Iterations 18

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	5.168	5.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	5.168	5.68	0.00	1.200	0.828	5.00	24.112	28.93	164.5	288.2	1402.8
10.00		1.00	0.85	5.168	5.68	0.00	1.200	0.887	5.00	23.619	28.34	161.1	302.0	1390.7
15.00		1.00	0.85	5.168	5.68	0.00	1.200	0.924	5.00	23.106	27.73	157.6	307.3	1370.0
20.00		1.00	0.90	5.483	6.03	0.00	1.200	0.951	5.00	22.586	27.10	163.5	308.8	1345.5
25.00		1.00	0.95	5.747	6.32	0.00	1.200	0.973	5.00	22.061	26.47	167.4	308.1	1318.8
30.00		1.00	0.98	5.972	6.57	0.00	1.200	0.991	5.00	21.533	25.84	169.8	305.9	1290.7
35.00		1.00	1.01	6.169	6.79	0.00	1.200	1.006	5.00	21.003	25.20	171.0	302.6	1261.4
40.00		1.00	1.04	6.345	6.98	0.00	1.200	1.019	5.00	20.472	24.57	171.5	298.6	1231.4
45.00		1.00	1.07	6.504	7.15	0.00	1.200	1.032	5.00	19.939	23.93	171.2	293.9	1200.8
46.50	Bot - Section 2	1.00	1.08	6.549	7.20	0.00	1.200	1.035	1.50	5.877	7.05	50.8	87.7	354.7
50.00		1.00	1.09	6.650	7.32	0.00	1.200	1.042	3.50	13.335	16.00	117.1	199.1	1297.5
52.50	Top - Section 1	1.00	1.11	6.719	7.39	0.00	1.200	1.048	2.50	9.364	11.24	83.0	140.8	911.3
55.00		1.00	1.12	6.785	7.46	0.00	1.200	1.052	2.50	9.230	11.08	82.7	139.4	474.0
60.00		1.00	1.14	6.910	7.60	0.00	1.200	1.062	5.00	18.061	21.67	164.7	272.8	926.4
65.00		1.00	1.16	7.028	7.73	0.00	1.200	1.070	5.00	17.526	21.03	162.6	266.4	899.3
70.00		1.00	1.17	7.138	7.85	0.00	1.200	1.078	5.00	16.989	20.39	160.1	259.8	871.8
73.50	Appurtenance(s)	1.00	1.19	7.212	7.93	0.00	1.200	1.083	3.50	11.573	13.89	110.2	178.5	594.6
75.00		1.00	1.19	7.243	7.97	0.00	1.200	1.086	1.50	4.879	5.85	46.6	75.9	251.1
80.00		1.00	1.21	7.342	8.08	0.00	1.200	1.093	5.00	15.916	19.10	154.2	245.8	816.3
85.00		1.00	1.22	7.436	8.18	0.00	1.200	1.099	5.00	15.379	18.45	151.0	238.5	788.2
86.00	Appurtenance(s)	1.00	1.23	7.454	8.20	0.00	1.200	1.101	1.00	3.011	3.61	29.6	47.4	154.9
90.00		1.00	1.24	7.526	8.28	0.00	1.200	1.106	4.00	11.829	14.20	117.5	184.8	606.3
95.00		1.00	1.25	7.612	8.37	0.00	1.200	1.112	5.00	14.303	17.16	143.7	223.4	731.5
96.00	Appurtenance(s)	1.00	1.25	7.629	8.39	0.00	1.200	1.113	1.00	2.796	3.35	28.2	44.4	143.5
98.50	Top - Section 2	1.00	1.26	7.671	8.44	0.00	1.200	1.116	2.50	6.895	8.27	69.8	109.0	353.2
100.00		1.00	1.27	7.695	8.46	0.00	1.200	1.117	1.50	3.833	4.60	38.9	61.1	229.1
105.00		1.00	1.28	7.774	8.55	0.00	1.200	1.123	5.00	12.782	15.34	131.2	204.8	764.6
108.00	Appurtenance(s)	1.00	1.29	7.821	8.60	0.00	1.200	1.126	3.00	7.671	9.21	79.2	123.2	459.1
108.50	Appurtenance(s)	1.00	1.29	7.828	8.61	0.00	1.200	1.126	0.50	1.279	1.53	13.2	20.5	76.5
								Totals:	**108.50**			**3,431.9**		**23,516.1**

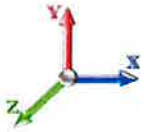
Discrete Appurtenance Forces

Structure:	CT46140-A	**Code:**	TIA-222-H	7/19/2023	
Site Name:	S. Durham-rt 17/ Lawson	**Exposure:**	C		
Height:	108.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 21	

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 18

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	108.50	Lightning Rod	1	7.828	8.611	1.00	1.00	1.63	13.52	0.000	0.000	14.01	0.00	0.00
2	108.00	Samsung B2/B66A	3	7.821	8.603	0.67	1.00	4.48	439.60	0.000	0.000	38.53	0.00	0.00
3	108.00	Flush Mount	1	7.821	8.603	1.00	1.00	7.25	509.15	0.000	0.000	62.38	0.00	0.00
4	108.00	Andrew JAHH-65B-R3B	6	7.821	8.603	0.83	1.00	49.60	1293.74	0.000	0.000	426.73	0.00	0.00
5	108.00	Samsung VZS01	3	7.821	8.603	0.76	1.00	11.08	512.32	0.000	0.000	95.31	0.00	0.00
6	108.00	Samsung B5/B13	3	7.821	8.603	0.67	1.00	4.48	375.43	0.000	0.000	38.53	0.00	0.00
7	108.00	RFS DB-T1-6Z-8AB-0Z	2	7.821	8.603	0.75	1.00	8.17	147.38	0.000	0.000	70.31	0.00	0.00
8	108.00	mount pipe	6	7.821	8.603	1.00	1.00	11.57	-2206.72	0.000	0.000	99.57	0.00	0.00
9	108.00	Kaelus BSF0020F3V1-1	2	7.821	8.603	0.90	1.00	1.96	130.92	0.000	0.000	16.87	0.00	0.00
10	96.00	Site Pro 1: ULPD12-472	1	7.629	8.392	0.75	0.75	30.91	2944.72	0.000	0.000	259.36	0.00	0.00
11	96.00	ALU 800 MHz RRH RRU	6	7.629	8.392	0.54	0.80	10.35	537.93	0.000	0.000	86.88	0.00	0.00
12	96.00	Ericsson 4449 B71 + B85	3	7.629	8.392	0.54	0.80	3.75	198.77	0.000	0.000	31.48	0.00	0.00
13	96.00	Ericsson 4415 B25 RRU	3	7.629	8.392	0.54	0.80	3.55	271.53	0.000	0.000	29.75	0.00	0.00
14	96.00	Ericsson AIR6449 B41	3	7.629	8.392	0.57	0.80	10.66	537.97	0.000	0.000	89.46	0.00	0.00
15	96.00	Ericsson AIR32	3	7.629	8.392	0.70	0.80	15.17	805.50	0.000	0.000	127.29	0.00	0.00
16	96.00	mount pipe	12	7.629	8.392	0.80	0.80	22.73	-39939.5	0.000	0.000	190.78	0.00	0.00
17	96.00	RFS	3	7.629	8.392	0.58	0.80	37.55	1223.44	0.000	0.000	315.16	0.00	0.00
18	86.00	Fujitsu TA08025-B605	3	7.454	8.200	0.50	0.75	3.49	331.15	0.000	0.000	28.60	0.00	0.00
19	86.00	JMA MX08FRO665-21	3	7.454	8.200	0.55	0.75	22.33	580.87	0.000	0.000	183.14	0.00	0.00
20	86.00	Site Pro 1: SNP8HR-3XX	1	7.454	8.200	0.75	0.75	35.56	2262.38	0.000	0.000	291.56	0.00	0.00
21	86.00	Fujitsu TA08025-B604	3	7.454	8.200	0.50	0.75	3.49	289.52	0.000	0.000	28.60	0.00	0.00
22	86.00	Raycap	1	7.454	8.200	1.00	1.00	2.37	81.57	0.000	0.000	19.42	0.00	0.00
23	86.00	mount pipe	9	7.454	8.200	0.75	0.75	19.84	-16759.7	0.000	0.000	162.70	0.00	0.00
24	73.50	Sidearm	1	7.212	7.933	1.00	1.00	8.46	99.78	0.000	0.000	67.13	0.00	0.00
25	73.50	3'6" x 2'6" Dipole	1	7.174	7.892	1.00	1.00	3.14	36.88	0.000	-1.800	24.80	0.00	-44.64
26	73.50	10' x1" Omni	1	7.313	8.044	1.00	1.00	3.96	16.00	0.000	5.000	31.84	0.00	159.21
							Totals:		**-45,265.95**			**2,830.17**		

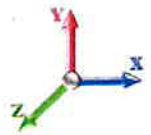
Total Applied Force Summary

Structure:	CT46140-A	**Code:**	TIA-222-H	7/19/2023	
Site Name:	S. Durham-rt 17/ Lawson	**Exposure:**	C		
Height:	108.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 22	

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 18

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		164.49	1456.38	0.00	0.00
10.00		161.12	1445.75	0.00	0.00
15.00		157.63	1426.00	0.00	0.00
20.00		163.48	1402.22	0.00	0.00
25.00		167.36	1376.11	0.00	0.00
30.00		169.75	1348.44	0.00	0.00
35.00		171.03	1319.66	0.00	0.00
40.00		171.46	1290.02	0.00	0.00
45.00		171.19	1259.71	0.00	0.00
46.50		50.80	372.42	0.00	0.00
50.00		117.05	1338.96	0.00	0.00
52.50		83.05	941.05	0.00	0.00
55.00		82.67	503.80	0.00	0.00
60.00		164.75	986.24	0.00	0.00
65.00		162.58	959.36	0.00	0.00
70.00		160.08	932.18	0.00	0.00
73.50	(3) attachments	233.94	789.57	0.00	114.57
75.00		46.64	268.66	0.00	0.00
80.00		154.24	875.15	0.00	0.00
85.00		150.95	847.28	0.00	0.00
86.00	(20) attachments	743.64	-13047.56	0.00	0.00
90.00		117.52	648.23	0.00	0.00
95.00		143.72	784.13	0.00	0.00
96.00	(34) attachments	1158.31	-33265.67	0.00	0.00
98.50		69.82	375.02	0.00	0.00
100.00		38.94	241.33	0.00	0.00
105.00		131.17	805.63	0.00	0.00
108.00	(26) attachments	927.41	1685.61	0.00	0.00
108.50	(1) attachments	27.22	92.84	0.00	0.00
	Totals:	**6,262.03**	**-20,541.48**	**0.00**	**114.57**

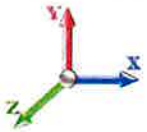
Linear Appurtenance Segment Forces (Factored)

Structure:	CT46140-A	**Code:**	TIA-222-H	7/19/2023	
Site Name:	S. Durham-rt 17/ Lawson	**Exposure:**	C		
Height:	108.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 23	

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 18

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	Safety Cable	Yes	5.00	0.000	0.38	0.85	0.00	0.018	0.000	5.168	0.00	7.09
5.00	Step bolts	Yes	5.00	0.000	0.63	0.95	0.00	0.018	0.000	5.168	0.00	12.60
10.00	Safety Cable	Yes	5.00	0.000	0.38	0.90	0.00	0.018	0.000	5.168	0.00	7.80
10.00	Step bolts	Yes	5.00	0.000	0.63	1.00	0.00	0.018	0.000	5.168	0.00	13.37
15.00	Safety Cable	Yes	5.00	0.000	0.38	0.93	0.00	0.019	0.000	5.168	0.00	8.26
15.00	Step bolts	Yes	5.00	0.000	0.63	1.03	0.00	0.019	0.000	5.168	0.00	13.87
20.00	Safety Cable	Yes	5.00	0.000	0.38	0.95	0.00	0.019	0.000	5.483	0.00	8.61
20.00	Step bolts	Yes	5.00	0.000	0.63	1.06	0.00	0.019	0.000	5.483	0.00	14.24
25.00	Safety Cable	Yes	5.00	0.000	0.38	0.97	0.00	0.020	0.000	5.747	0.00	8.89
25.00	Step bolts	Yes	5.00	0.000	0.63	1.07	0.00	0.020	0.000	5.747	0.00	14.55
30.00	Safety Cable	Yes	5.00	0.000	0.38	0.98	0.00	0.020	0.000	5.972	0.00	9.13
30.00	Step bolts	Yes	5.00	0.000	0.63	1.09	0.00	0.020	0.000	5.972	0.00	14.80
35.00	Safety Cable	Yes	5.00	0.000	0.38	1.00	0.00	0.021	0.000	6.169	0.00	9.34
35.00	Step bolts	Yes	5.00	0.000	0.63	1.10	0.00	0.021	0.000	6.169	0.00	15.03
40.00	Safety Cable	Yes	5.00	0.000	0.38	1.01	0.00	0.021	0.000	6.345	0.00	9.53
40.00	Step bolts	Yes	5.00	0.000	0.63	1.11	0.00	0.021	0.000	6.345	0.00	15.23
45.00	Safety Cable	Yes	5.00	0.000	0.38	1.02	0.00	0.022	0.000	6.504	0.00	9.70
45.00	Step bolts	Yes	5.00	0.000	0.63	1.12	0.00	0.022	0.000	6.504	0.00	15.41
46.50	Safety Cable	Yes	1.50	0.000	0.38	0.31	0.00	0.022	0.000	6.549	0.00	2.92
46.50	Step bolts	Yes	1.50	0.000	0.63	0.34	0.00	0.022	0.000	6.549	0.00	4.64
50.00	Safety Cable	Yes	3.50	0.000	0.38	0.72	0.00	0.023	0.000	6.650	0.00	6.90
50.00	Step bolts	Yes	3.50	0.000	0.63	0.79	0.00	0.023	0.000	6.650	0.00	10.90
52.50	Safety Cable	Yes	2.50	0.000	0.38	0.52	0.00	0.023	0.000	6.719	0.00	4.96
52.50	Step bolts	Yes	2.50	0.000	0.63	0.57	0.00	0.023	0.000	6.719	0.00	7.83
55.00	Safety Cable	Yes	2.50	0.000	0.38	0.52	0.00	0.024	0.000	6.785	0.00	5.00
55.00	Step bolts	Yes	2.50	0.000	0.63	0.57	0.00	0.024	0.000	6.785	0.00	7.86
60.00	Safety Cable	Yes	5.00	0.000	0.38	1.04	0.00	0.025	0.000	6.910	0.00	10.13
60.00	Step bolts	Yes	5.00	0.000	0.63	1.15	0.00	0.025	0.000	6.910	0.00	15.87
65.00	Safety Cable	Yes	5.00	0.000	0.38	1.05	0.00	0.025	0.000	7.028	0.00	10.25
65.00	Step bolts	Yes	5.00	0.000	0.63	1.15	0.00	0.025	0.000	7.028	0.00	16.00
70.00	Safety Cable	Yes	5.00	0.000	0.38	1.06	0.00	0.026	0.000	7.138	0.00	10.37
70.00	Step bolts	Yes	5.00	0.000	0.63	1.16	0.00	0.026	0.000	7.138	0.00	16.12
73.50	Safety Cable	Yes	3.50	0.000	0.38	0.74	0.00	0.027	0.000	7.212	0.00	7.31
73.50	Step bolts	Yes	3.50	0.000	0.63	0.82	0.00	0.027	0.000	7.212	0.00	11.34
75.00	Safety Cable	Yes	1.50	0.000	0.38	0.32	0.00	0.027	0.000	7.243	0.00	3.14
75.00	Step bolts	Yes	1.50	0.000	0.63	0.35	0.00	0.027	0.000	7.243	0.00	4.87
80.00	Safety Cable	Yes	5.00	0.000	0.38	1.07	0.00	0.028	0.000	7.342	0.00	10.58
80.00	Step bolts	Yes	5.00	0.000	0.63	1.17	0.00	0.028	0.000	7.342	0.00	16.35
85.00	Safety Cable	Yes	5.00	0.000	0.38	1.07	0.00	0.029	0.000	7.436	0.00	10.68
85.00	Step bolts	Yes	5.00	0.000	0.63	1.18	0.00	0.029	0.000	7.436	0.00	16.46
86.00	Safety Cable	Yes	1.00	0.000	0.38	0.22	0.00	0.030	0.000	7.454	0.00	2.14
86.00	Step bolts	Yes	1.00	0.000	0.63	0.24	0.00	0.030	0.000	7.454	0.00	3.30
90.00	Safety Cable	Yes	4.00	0.000	0.38	0.86	0.00	0.030	0.000	7.526	0.00	8.62
90.00	Step bolts	Yes	4.00	0.000	0.63	0.95	0.00	0.030	0.000	7.526	0.00	13.24
95.00	Safety Cable	Yes	5.00	0.000	0.38	1.08	0.00	0.031	0.000	7.612	0.00	10.86
95.00	Step bolts	Yes	5.00	0.000	0.63	1.19	0.00	0.031	0.000	7.612	0.00	16.65
96.00	Safety Cable	Yes	1.00	0.000	0.38	0.22	0.00	0.032	0.000	7.629	0.00	2.18

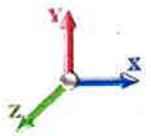
Linear Appurtenance Segment Forces (Factored)

Structure:	CT46140-A	**Code:**	TIA-222-H	7/19/2023
Site Name:	S. Durham-rt 17/ Lawson	**Exposure:**	C	
Height:	108.50 (ft)	**Crest Height:**	0.00	
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil	
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 24

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 18

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
96.00	Step bolts	Yes	1.00	0.000	0.63	0.24	0.00	0.032	0.000	7.629	0.00	3.33
98.50	Safety Cable	Yes	2.50	0.000	0.38	0.54	0.00	0.033	0.000	7.671	0.00	5.46
98.50	Step bolts	Yes	2.50	0.000	0.63	0.60	0.00	0.033	0.000	7.671	0.00	8.36
100.00	Safety Cable	Yes	1.50	0.000	0.38	0.33	0.00	0.036	0.000	7.695	0.00	3.29
100.00	Step bolts	Yes	1.50	0.000	0.63	0.36	0.00	0.036	0.000	7.695	0.00	5.02
105.00	Safety Cable	Yes	5.00	0.000	0.38	1.09	0.00	0.036	0.000	7.774	0.00	11.03
105.00	Step bolts	Yes	5.00	0.000	0.63	1.20	0.00	0.036	0.000	7.774	0.00	16.83
108.00	Safety Cable	Yes	3.00	0.000	0.38	0.66	0.00	0.036	0.000	7.821	0.00	6.65
108.00	Step bolts	Yes	3.00	0.000	0.63	0.72	0.00	0.036	0.000	7.821	0.00	10.13
108.50	Safety Cable	Yes	0.50	0.000	0.38	0.11	0.00	0.036	0.000	7.828	0.00	1.11
108.50	Step bolts	Yes	0.50	0.000	0.63	0.12	0.00	0.036	0.000	7.828	0.00	1.69
										Totals:	**0.0**	**547.9**

Calculated Forces

Structure:	CT46140-A	**Code:**	TIA-222-H	7/19/2023	
Site Name:	S. Durham-rt 17/ Lawson	**Exposure:**	C		
Height:	108.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 25	

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00

Iterations 18

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-25.77	-6.27	0.00	-464.35	0.00	464.35	3275.65	969.34	4478.66	3761.64	0.00	0.000	0.000	0.131
5.00	-24.31	-6.12	0.00	-433.00	0.00	433.00	3241.53	947.01	4274.68	3636.23	0.02	-0.029	0.000	0.127
10.00	-22.86	-5.97	0.00	-402.42	0.00	402.42	3205.46	924.68	4075.45	3510.49	0.06	-0.059	0.000	0.122
15.00	-21.43	-5.82	0.00	-372.60	0.00	372.60	3167.44	902.34	3880.97	3384.59	0.14	-0.088	0.000	0.117
20.00	-20.03	-5.66	0.00	-343.51	0.00	343.51	3127.48	880.01	3691.25	3258.68	0.25	-0.117	0.000	0.112
25.00	-18.65	-5.50	0.00	-315.21	0.00	315.21	3085.56	857.68	3506.28	3132.91	0.39	-0.146	0.000	0.107
30.00	-17.30	-5.34	0.00	-287.71	0.00	287.71	3041.69	835.35	3326.07	3007.45	0.56	-0.175	0.000	0.101
35.00	-15.98	-5.17	0.00	-261.03	0.00	261.03	2995.87	813.02	3150.61	2882.45	0.76	-0.203	0.000	0.096
40.00	-14.69	-5.00	0.00	-235.19	0.00	235.19	2948.10	790.68	2979.90	2758.06	0.98	-0.231	0.000	0.090
45.00	-13.43	-4.83	0.00	-210.20	0.00	210.20	2898.39	768.35	2813.95	2634.44	1.24	-0.258	0.000	0.084
46.50	-13.05	-4.78	0.00	-202.96	0.00	202.96	2883.09	761.65	2765.09	2597.52	1.32	-0.266	0.000	0.083
50.00	-11.71	-4.66	0.00	-186.25	0.00	186.25	2846.72	746.02	2652.75	2511.74	1.52	-0.284	0.000	0.078
52.50	-10.77	-4.57	0.00	-174.61	0.00	174.61	2031.03	579.72	2002.37	1742.93	1.68	-0.297	0.000	0.106
55.00	-10.27	-4.49	0.00	-163.18	0.00	163.18	2015.31	570.79	1941.14	1702.63	1.84	-0.310	0.000	0.101
60.00	-9.28	-4.32	0.00	-140.74	0.00	140.74	1982.41	552.92	1821.53	1622.10	2.18	-0.341	0.000	0.092
65.00	-8.32	-4.16	0.00	-119.12	0.00	119.12	1947.55	535.06	1705.72	1541.77	2.55	-0.371	0.000	0.082
70.00	-7.39	-4.00	0.00	-98.32	0.00	98.32	1910.75	517.19	1593.71	1461.80	2.96	-0.398	0.000	0.071
73.50	-6.60	-3.76	0.00	-84.22	0.00	84.22	1883.83	504.69	1517.57	1406.12	3.26	-0.416	0.000	0.063
75.00	-6.33	-3.71	0.00	-78.58	0.00	78.58	1872.00	499.33	1485.51	1382.35	3.39	-0.423	0.000	0.060
80.00	-5.45	-3.55	0.00	-60.03	0.00	60.03	1831.30	481.46	1381.11	1303.58	3.84	-0.444	0.000	0.049
85.00	-4.61	-3.39	0.00	-42.27	0.00	42.27	1788.65	463.60	1280.51	1225.63	4.32	-0.462	0.000	0.037
86.00	-4.61	-2.65	0.00	-38.88	0.00	38.88	1779.88	460.02	1260.85	1210.15	4.42	-0.465	0.000	0.035
90.00	-3.96	-2.53	0.00	-28.27	0.00	28.27	1744.04	445.73	1183.72	1148.67	4.81	-0.476	0.000	0.027
95.00	-3.18	-2.38	0.00	-15.62	0.00	15.62	1697.49	427.86	1090.73	1072.85	5.31	-0.485	0.000	0.016
96.00	-3.19	-1.22	0.00	-13.24	0.00	13.24	1687.95	424.29	1072.59	1057.84	5.42	-0.487	0.000	0.014
98.50	-2.82	-1.15	0.00	-10.19	0.00	10.19	1663.75	415.36	1027.90	1020.54	5.67	-0.490	0.000	0.012
98.50	-2.82	-1.15	0.00	-10.19	0.00	10.19	1096.86	259.10	595.22	622.77	5.67	-0.490	0.000	0.019
100.00	-2.57	-1.11	0.00	-8.46	0.00	8.46	1096.86	259.10	595.22	622.77	5.83	-0.491	0.000	0.016
105.00	-1.77	-0.97	0.00	-2.92	0.00	2.92	1096.86	259.10	595.22	622.77	6.34	-0.494	0.000	0.006
108.00	-0.09	-0.03	0.00	-0.01	0.00	0.01	1096.86	259.10	595.22	622.77	6.65	-0.495	0.000	0.000
108.50	0.00	-0.03	0.00	0.00	0.00	0.00	1096.86	259.10	595.22	622.77	6.70	-0.495	0.000	0.000

Seismic Segment Forces (Factored)

Structure:	CT46140-A	**Code:**	TIA-222-H	7/19/2023	
Site Name:	S. Durham-rt 17/ Lawson	**Exposure:**	C		
Height:	108.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 26	

Load Case: 1.2D + 1.0Ev + 1.0Eh

Gust Response Factor	1.10			**Sds**	0.22	**Iterations**	17
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.09	**Ss**	0.21
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.63	**SA**	0.06	**S1**	0.06
						Seismic Importance Factor	1.00

R: 1.50

Top Elev (ft)	Description	Wz (lb)	Hz (lb)	Vertical Ev (lb)	Lateral Fs (lb)
0.00		0.00	0.00	0.00	0.00
5.00		970.62	2.50	43.48	0.15
10.00		948.97	7.50	42.51	0.77
15.00		927.32	12.50	41.54	1.63
20.00		905.67	17.50	40.57	2.64
25.00		884.02	22.50	39.60	3.75
30.00		862.37	27.50	38.63	4.93
35.00		840.72	32.50	37.66	6.13
40.00		819.07	37.50	36.69	7.34
45.00		797.42	42.50	35.72	8.55
46.50	Bot - Section 2	235.01	45.75	10.53	1.45
50.00		944.48	48.25	42.31	13.51
52.50	Top - Section 1	662.94	51.25	29.70	8.58
55.00		299.70	53.75	13.43	2.71
60.00		586.41	57.50	26.27	8.48
65.00		569.09	62.50	25.50	9.21
70.00		551.77	67.50	24.72	9.89
73.50	Appurtenance(s)	456.25	71.75	20.44	8.10
75.00		157.94	74.25	7.08	1.66
80.00		515.21	77.50	23.08	11.01
85.00		497.89	82.50	22.31	11.50
86.00	Appurtenance(s)	2471.5	85.50	110.73	144.32
90.00		377.60	88.00	16.92	8.29
95.00		456.41	92.50	20.45	12.00
96.00	Appurtenance(s)	4259.7	95.50	190.83	396.78
98.50	Top - Section 2	215.46	97.25	9.65	4.07
100.00		146.27	99.25	6.55	2.31
105.00		487.57	102.50	21.84	15.57
108.00	Appurtenance(s)	2000.7	106.50	89.63	146.18
108.50	Appurtenance(s)	52.44	108.25	2.35	0.54
	Totals:	**23,900.6**		**1,070.7**	**852.1**

Total Wind: **23,850.9**

Calculated Forces

Structure:	CT46140-A	**Code:**	TIA-222-H	7/19/2023	
Site Name:	S. Durham-rt 17/ Lawson	**Exposure:**	C		
Height:	108.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 27	

Load Case: 1.2D + 1.0Ev + 1.0Eh

Iterations 17

Gust Response Factor	1.10			**Sds**	0.22			**Ss**	0.21
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.09			**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.63	**SA**	0.06	**Seismic Importance Factor**			1.00

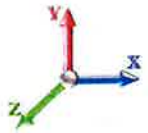
Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-29.59	-0.85	0.00	-78.83	0.00	78.83	3275.65	969.34	4478.66	3761.64		0.00	0.00	0.030
5.00	-28.39	-0.86	0.00	-74.56	0.00	74.56	3241.53	947.01	4274.68	3636.23		0.00	-0.01	0.029
10.00	-27.21	-0.86	0.00	-70.29	0.00	70.29	3205.46	924.68	4075.45	3510.49		0.01	-0.01	0.029
15.00	-26.07	-0.86	0.00	-66.00	0.00	66.00	3167.44	902.34	3880.97	3384.59		0.02	-0.02	0.028
20.00	-24.95	-0.86	0.00	-61.72	0.00	61.72	3127.48	880.01	3691.25	3258.68		0.04	-0.02	0.027
25.00	-23.85	-0.85	0.00	-57.43	0.00	57.43	3085.56	857.68	3506.28	3132.91		0.07	-0.03	0.026
30.00	-22.79	-0.85	0.00	-53.16	0.00	53.16	3041.69	835.35	3326.07	3007.45		0.10	-0.03	0.025
35.00	-21.75	-0.85	0.00	-48.90	0.00	48.90	2995.87	813.02	3150.61	2882.45		0.13	-0.04	0.024
40.00	-20.74	-0.84	0.00	-44.67	0.00	44.67	2948.10	790.68	2979.90	2758.06		0.17	-0.04	0.023
45.00	-19.76	-0.83	0.00	-40.47	0.00	40.47	2898.39	768.35	2813.95	2634.44		0.22	-0.05	0.022
46.50	-19.47	-0.83	0.00	-39.22	0.00	39.22	2883.09	761.65	2765.09	2597.52		0.23	-0.05	0.022
50.00	-18.30	-0.82	0.00	-36.31	0.00	36.31	2846.72	746.02	2652.75	2511.74		0.27	-0.05	0.021
52.50	-17.47	-0.81	0.00	-34.27	0.00	34.27	2031.03	579.72	2002.37	1742.93		0.30	-0.05	0.028
55.00	-17.11	-0.81	0.00	-32.24	0.00	32.24	2015.31	570.79	1941.14	1702.63		0.33	-0.06	0.027
60.00	-16.38	-0.80	0.00	-28.21	0.00	28.21	1982.41	552.92	1821.53	1622.10		0.39	-0.06	0.026
65.00	-15.68	-0.79	0.00	-24.21	0.00	24.21	1947.55	535.06	1705.72	1541.77		0.46	-0.07	0.024
70.00	-15.01	-0.78	0.00	-20.25	0.00	20.25	1910.75	517.19	1593.71	1461.80		0.54	-0.07	0.022
73.50	-14.44	-0.77	0.00	-17.51	0.00	17.51	1883.83	504.69	1517.57	1406.12		0.59	-0.08	0.020
75.00	-14.25	-0.77	0.00	-16.35	0.00	16.35	1872.00	499.33	1485.51	1382.35		0.62	-0.08	0.019
80.00	-13.62	-0.76	0.00	-12.49	0.00	12.49	1831.30	481.46	1381.11	1303.58		0.70	-0.08	0.017
85.00	-13.00	-0.75	0.00	-8.68	0.00	8.68	1788.65	463.60	1280.51	1225.63		0.79	-0.09	0.014
86.00	-9.93	-0.60	0.00	-7.93	0.00	7.93	1779.88	460.02	1260.85	1210.15		0.81	-0.09	0.012
90.00	-9.46	-0.59	0.00	-5.52	0.00	5.52	1744.04	445.73	1183.72	1148.67		0.89	-0.09	0.010
95.00	-8.90	-0.58	0.00	-2.56	0.00	2.56	1697.49	427.86	1090.73	1072.85		0.98	-0.09	0.008
96.00	-3.60	-0.17	0.00	-1.98	0.00	1.98	1687.95	424.29	1072.59	1057.84		1.00	-0.09	0.004
98.50	-3.34	-0.17	0.00	-1.54	0.00	1.54	1663.75	415.36	1027.90	1020.54		1.05	-0.09	0.004
98.50	-3.34	-0.17	0.00	-1.54	0.00	1.54	1096.86	259.10	595.22	622.77		1.05	-0.09	0.006
100.00	-3.16	-0.17	0.00	-1.29	0.00	1.29	1096.86	259.10	595.22	622.77		1.08	-0.09	0.005
105.00	-2.55	-0.15	0.00	-0.45	0.00	0.45	1096.86	259.10	595.22	622.77		1.18	-0.09	0.003
108.00	-0.07	0.00	0.00	0.00	0.00	0.00	1096.86	259.10	595.22	622.77		1.24	-0.09	0.000
108.50	0.00	0.00	0.00	0.00	0.00	0.00	1096.86	259.10	595.22	622.77		1.25	-0.09	0.000

Seismic Segment Forces (Factored)

Structure:	CT46140-A	**Code:**	TIA-222-H	7/19/2023	
Site Name:	S. Durham-rt 17/ Lawson	**Exposure:**	C		
Height:	108.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 28	

Load Case: 0.9D + 1.0Ev + 1.0Eh

Gust Response Factor	1.10			**Sds**	0.22	**Iterations**	17
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.09	**Ss**	0.21
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.63	**SA**	0.06	**S1**	0.06
						Seismic Importance Factor	1.00



R: 1.50

Top Elev (ft)	Description	Wz (lb)	Hz (lb)	Vertical Ev (lb)	Lateral Fs (lb)
0.00		0.00	0.00	0.00	0.00
5.00		960.19	2.50	43.02	0.14
10.00		938.54	7.50	42.05	0.76
15.00		916.89	12.50	41.08	1.61
20.00		895.24	17.50	40.11	2.61
25.00		873.59	22.50	39.14	3.71
30.00		851.94	27.50	38.17	4.86
35.00		830.29	32.50	37.20	6.04
40.00		808.64	37.50	36.23	7.24
45.00		786.99	42.50	35.26	8.42
46.50	Bot - Section 2	231.88	45.75	10.39	1.43
50.00		937.18	48.25	41.99	13.42
52.50	Top - Section 1	657.72	51.25	29.47	8.52
55.00		294.49	53.75	13.19	2.65
60.00		575.98	57.50	25.80	8.29
65.00		558.66	62.50	25.03	9.00
70.00		541.34	67.50	24.25	9.65
73.50	Appurtenance(s)	448.95	71.75	20.11	7.95
75.00		154.96	74.25	6.94	1.62
80.00		505.26	77.50	22.64	10.74
85.00		487.94	82.50	21.86	11.21
86.00	Appurtenance(s)	2469.5	85.50	110.64	144.90
90.00		371.01	88.00	16.62	8.11
95.00		448.17	92.50	20.08	11.73
96.00	Appurtenance(s)	4258.0	95.50	190.76	398.64
98.50	Top - Section 2	212.47	97.25	9.52	4.00
100.00		144.69	99.25	6.48	2.28
105.00		482.30	102.50	21.61	15.40
108.00	Appurtenance(s)	1997.5	106.50	89.49	146.59
108.50	Appurtenance(s)	52.24	108.25	2.34	0.54
	Totals:	**23,692.8**		**1,061.4**	**852.1**

Total Wind: **23,850.9**

Calculated Forces

Structure:	CT46140-A	**Code:**	TIA-222-H	7/19/2023	
Site Name:	S. Durham-rt 17/ Lawson	**Exposure:**	C		
Height:	108.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 29	

Load Case: 0.9D + 1.0Ev + 1.0Eh

Gust Response Factor	1.10			**Sds**	0.22			**Iterations**	17
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.09			**Ss**	0.21
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.63	**SA**	0.06			**S1**	0.06
								Seismic Importance Factor	1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-22.45	-0.85	0.00	-78.56	0.00	78.56	3275.65	969.34	4478.66	3761.64		0.00	0.00	0.028
5.00	-21.54	-0.85	0.00	-74.29	0.00	74.29	3241.53	947.01	4274.68	3636.23		0.00	-0.01	0.027
10.00	-20.65	-0.86	0.00	-70.02	0.00	70.02	3205.46	924.68	4075.45	3510.49		0.01	-0.01	0.026
15.00	-19.78	-0.86	0.00	-65.74	0.00	65.74	3167.44	902.34	3880.97	3384.59		0.02	-0.02	0.026
20.00	-18.93	-0.85	0.00	-61.47	0.00	61.47	3127.48	880.01	3691.25	3258.68		0.04	-0.02	0.025
25.00	-18.10	-0.85	0.00	-57.19	0.00	57.19	3085.56	857.68	3506.28	3132.91		0.07	-0.03	0.024
30.00	-17.29	-0.85	0.00	-52.93	0.00	52.93	3041.69	835.35	3326.07	3007.45		0.10	-0.03	0.023
35.00	-16.50	-0.84	0.00	-48.69	0.00	48.69	2995.87	813.02	3150.61	2882.45		0.13	-0.04	0.022
40.00	-15.74	-0.84	0.00	-44.48	0.00	44.48	2948.10	790.68	2979.90	2758.06		0.17	-0.04	0.021
45.00	-14.99	-0.83	0.00	-40.29	0.00	40.29	2898.39	768.35	2813.95	2634.44		0.22	-0.05	0.020
46.50	-14.77	-0.83	0.00	-39.05	0.00	39.05	2883.09	761.65	2765.09	2597.52		0.23	-0.05	0.020
50.00	-13.88	-0.81	0.00	-36.15	0.00	36.15	2846.72	746.02	2652.75	2511.74		0.27	-0.05	0.019
52.50	-13.26	-0.81	0.00	-34.12	0.00	34.12	2031.03	579.72	2002.37	1742.93		0.30	-0.05	0.026
55.00	-12.98	-0.80	0.00	-32.10	0.00	32.10	2015.31	570.79	1941.14	1702.63		0.33	-0.06	0.025
60.00	-12.43	-0.80	0.00	-28.08	0.00	28.08	1982.41	552.92	1821.53	1622.10		0.39	-0.06	0.024
65.00	-11.90	-0.79	0.00	-24.10	0.00	24.10	1947.55	535.06	1705.72	1541.77		0.46	-0.07	0.022
70.00	-11.39	-0.78	0.00	-20.16	0.00	20.16	1910.75	517.19	1593.71	1461.80		0.53	-0.07	0.020
73.50	-10.96	-0.77	0.00	-17.44	0.00	17.44	1883.83	504.69	1517.57	1406.12		0.59	-0.08	0.018
75.00	-10.81	-0.77	0.00	-16.28	0.00	16.28	1872.00	499.33	1485.51	1382.35		0.61	-0.08	0.018
80.00	-10.33	-0.76	0.00	-12.43	0.00	12.43	1831.30	481.46	1381.11	1303.58		0.70	-0.08	0.015
85.00	-9.87	-0.75	0.00	-8.64	0.00	8.64	1788.65	463.60	1280.51	1225.63		0.79	-0.09	0.013
86.00	-7.53	-0.60	0.00	-7.89	0.00	7.89	1779.88	460.02	1260.85	1210.15		0.81	-0.09	0.011
90.00	-7.18	-0.59	0.00	-5.50	0.00	5.50	1744.04	445.73	1183.72	1148.67		0.88	-0.09	0.009
95.00	-6.76	-0.58	0.00	-2.55	0.00	2.55	1697.49	427.86	1090.73	1072.85		0.98	-0.09	0.006
96.00	-2.73	-0.17	0.00	-1.97	0.00	1.97	1687.95	424.29	1072.59	1057.84		1.00	-0.09	0.003
98.50	-2.53	-0.17	0.00	-1.54	0.00	1.54	1663.75	415.36	1027.90	1020.54		1.05	-0.09	0.003
98.50	-2.53	-0.17	0.00	-1.54	0.00	1.54	1096.86	259.10	595.22	622.77		1.05	-0.09	0.005
100.00	-2.39	-0.17	0.00	-1.28	0.00	1.28	1096.86	259.10	595.22	622.77		1.08	-0.09	0.004
105.00	-1.94	-0.15	0.00	-0.45	0.00	0.45	1096.86	259.10	595.22	622.77		1.17	-0.09	0.002
108.00	-0.05	0.00	0.00	0.00	0.00	0.00	1096.86	259.10	595.22	622.77		1.23	-0.09	0.000
108.50	0.00	0.00	0.00	0.00	0.00	0.00	1096.86	259.10	595.22	622.77		1.24	-0.09	0.000

Wind Loading - Shaft

Structure: CT46140-A
Site Name: S. Durham-rt 17/ Lawson
Height: 108.50 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1 **Topography:** 1

Code: TIA-222-H 7/19/2023
Exposure: C
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

Load Case: 1.0D + 1.0W 60 mph Wind
Dead Load Factor 1.00
Wind Load Factor 1.00

Iterations 18

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	6.659	7.32	262.13	0.730	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	6.659	7.32	256.12	0.730	0.000	5.00	23.422	17.10	125.2	0.0	928.9
10.00		1.00	0.85	6.659	7.32	250.12	0.730	0.000	5.00	22.879	16.70	122.3	0.0	907.3
15.00		1.00	0.85	6.659	7.32	244.11	0.730	0.000	5.00	22.336	16.31	119.4	0.0	885.6
20.00		1.00	0.90	7.065	7.77	245.27	0.730	0.000	5.00	21.793	15.91	123.6	0.0	864.0
25.00		1.00	0.95	7.405	8.15	244.76	0.730	0.000	5.00	21.251	15.51	126.4	0.0	842.3
30.00		1.00	0.98	7.695	8.46	243.05	0.730	0.000	5.00	20.708	15.12	127.9	0.0	820.7
35.00		1.00	1.01	7.948	8.74	240.47	0.730	0.000	5.00	20.165	14.72	128.7	0.0	799.0
40.00		1.00	1.04	8.175	8.99	237.22	0.730	0.000	5.00	19.622	14.32	128.8	0.0	777.4
45.00		1.00	1.07	8.380	9.22	233.44	0.730	0.000	5.00	19.079	13.93	128.4	0.0	755.7
46.50	Bot - Section 2	1.00	1.08	8.438	9.28	232.22	0.730	0.000	1.50	5.618	4.10	38.1	0.0	222.5
50.00		1.00	1.09	8.568	9.43	229.23	0.730	0.000	3.50	12.727	9.29	87.6	0.0	915.3
52.50	Top - Section 1	1.00	1.11	8.657	9.52	226.99	0.730	0.000	2.50	8.928	6.52	62.1	0.0	642.1
55.00		1.00	1.12	8.742	9.62	221.18	0.730	0.000	2.50	8.792	6.42	61.7	0.0	278.8
60.00		1.00	1.14	8.903	9.79	216.27	0.730	0.000	5.00	17.177	12.54	122.8	0.0	544.7
65.00		1.00	1.16	9.055	9.96	211.10	0.730	0.000	5.00	16.634	12.14	120.9	0.0	527.4
70.00		1.00	1.17	9.197	10.12	205.69	0.730	0.000	5.00	16.091	11.75	118.8	0.0	510.1
73.50	Appurtenance(s)	1.00	1.19	9.292	10.22	201.79	0.730	0.000	3.50	10.941	7.99	81.6	0.0	346.7
75.00		1.00	1.19	9.332	10.26	200.08	0.730	0.000	1.50	4.607	3.36	34.5	0.0	146.0
80.00		1.00	1.21	9.459	10.41	194.29	0.730	0.000	5.00	15.005	10.95	114.0	0.0	475.4
85.00		1.00	1.22	9.581	10.54	188.33	0.730	0.000	5.00	14.463	10.56	111.3	0.0	458.1
86.00	Appurtenance(s)	1.00	1.23	9.604	10.56	187.12	0.730	0.000	1.00	2.827	2.06	21.8	0.0	89.5
90.00		1.00	1.24	9.697	10.67	182.22	0.730	0.000	4.00	11.092	8.10	86.4	0.0	351.2
95.00		1.00	1.25	9.808	10.79	175.97	0.730	0.000	5.00	13.377	9.77	105.4	0.0	423.5
96.00	Appurtenance(s)	1.00	1.25	9.830	10.81	174.71	0.730	0.000	1.00	2.610	1.91	20.6	0.0	82.6
98.50	Top - Section 2	1.00	1.26	9.883	10.87	171.52	0.730	0.000	2.50	6.431	4.69	51.0	0.0	203.5
100.00		1.00	1.27	9.914	10.91	159.93	0.730	0.000	1.50	3.554	2.59	28.3	0.0	139.9
105.00		1.00	1.28	10.017	11.02	160.75	0.730	0.000	5.00	11.847	8.65	95.3	0.0	466.5
108.00	Appurtenance(s)	1.00	1.29	10.076	11.08	161.23	0.730	0.000	3.00	7.108	5.19	57.5	0.0	279.9
108.50	Appurtenance(s)	1.00	1.29	10.086	11.09	161.31	0.730	0.000	0.50	1.185	0.86	9.6	0.0	46.6
								Totals:	**108.50**			**2,560.1**		**14,731.1**

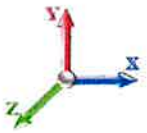
Discrete Appurtenance Forces

Structure:	CT46140-A	**Code:**	TIA-222-H	7/19/2023	
Site Name:	S. Durham-rt 17/ Lawson	**Exposure:**	C		
Height:	108.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 31	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 18

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	108.50	Lightning Rod	1	10.086	11.095	1.00	1.00	0.50	5.00	0.000	0.000	5.55	0.00	0.00
2	108.00	Samsung B2/B66A	3	10.076	11.084	0.67	1.00	3.76	253.20	0.000	0.000	41.66	0.00	0.00
3	108.00	Flush Mount	1	10.076	11.084	1.00	1.00	5.00	350.00	0.000	0.000	55.42	0.00	0.00
4	108.00	Andrew JAHH-65B-R3B	6	10.076	11.084	0.83	1.00	45.37	379.80	0.000	0.000	502.85	0.00	0.00
5	108.00	Samsung VZS01	3	10.076	11.084	0.76	1.00	9.80	261.30	0.000	0.000	108.67	0.00	0.00
6	108.00	Samsung B5/B13	3	10.076	11.084	0.67	1.00	3.76	210.90	0.000	0.000	41.66	0.00	0.00
7	108.00	RFS DB-T1-6Z-8AB-0Z	2	10.076	11.084	0.75	1.00	7.20	37.80	0.000	0.000	79.80	0.00	0.00
8	108.00	mount pipe	6	10.076	11.084	1.00	1.00	7.98	180.00	0.000	0.000	88.45	0.00	0.00
9	108.00	Kaelus BSF0020F3V1-1	2	10.076	11.084	0.90	1.00	1.73	35.20	0.000	0.000	19.15	0.00	0.00
10	96.00	Site Pro 1: ULPD12-472	1	9.830	10.812	0.75	0.75	18.53	2060.00	0.000	0.000	200.38	0.00	0.00
11	96.00	ALU 800 MHz RRH RRU	6	9.830	10.812	0.54	0.80	8.01	318.00	0.000	0.000	86.58	0.00	0.00
12	96.00	Ericsson 4449 B71 + B85	3	9.830	10.812	0.54	0.80	3.17	219.60	0.000	0.000	34.25	0.00	0.00
13	96.00	Ericsson 4415 B25 RRU	3	9.830	10.812	0.54	0.80	2.99	138.90	0.000	0.000	32.34	0.00	0.00
14	96.00	Ericsson AIR6449 B41	3	9.830	10.812	0.57	0.80	9.63	309.00	0.000	0.000	104.10	0.00	0.00
15	96.00	Ericsson AIR32	3	9.830	10.812	0.70	0.80	13.59	396.60	0.000	0.000	146.97	0.00	0.00
16	96.00	mount pipe	12	9.830	10.812	0.80	0.80	13.63	360.00	0.000	0.000	147.40	0.00	0.00
17	96.00	RFS	3	9.830	10.812	0.58	0.80	35.46	368.40	0.000	0.000	383.42	0.00	0.00
18	86.00	Fujitsu TA08025-B605	3	9.604	10.565	0.50	0.75	2.95	225.00	0.000	0.000	31.22	0.00	0.00
19	86.00	JMA MX08FRO665-21	3	9.604	10.565	0.55	0.75	20.80	193.50	0.000	0.000	219.71	0.00	0.00
20	86.00	Site Pro 1: SNP8HR-3XX	1	9.604	10.565	0.75	0.75	19.84	1472.00	0.000	0.000	209.58	0.00	0.00
21	86.00	Fujitsu TA08025-B604	3	9.604	10.565	0.50	0.75	2.95	191.70	0.000	0.000	31.22	0.00	0.00
22	86.00	Raycap	1	9.604	10.565	1.00	1.00	2.01	21.85	0.000	0.000	21.24	0.00	0.00
23	86.00	mount pipe	9	9.604	10.565	0.75	0.75	11.07	270.00	0.000	0.000	116.95	0.00	0.00
24	73.50	Sidearm	1	9.292	10.221	1.00	1.00	3.50	53.32	0.000	0.000	35.77	0.00	0.00
25	73.50	3'6" x 2'6" Dipole	1	9.244	10.168	1.00	1.00	1.74	15.00	0.000	-1.800	17.69	0.00	-31.85
26	73.50	10' x1" Omni	1	9.422	10.364	1.00	1.00	1.25	12.00	0.000	5.000	12.95	0.00	64.77
							Totals:		**8,338.07**			**2,774.99**		

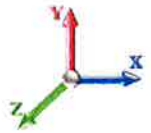
Total Applied Force Summary

Structure:	CT46140-A	**Code:**	TIA-222-H	7/19/2023	
Site Name:	S. Durham-rt 17/ Lawson	**Exposure:**	C		
Height:	108.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 32	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 18

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		125.23	963.67	0.00	0.00
10.00		122.33	942.02	0.00	0.00
15.00		119.43	920.37	0.00	0.00
20.00		123.64	898.72	0.00	0.00
25.00		126.36	877.07	0.00	0.00
30.00		127.95	855.42	0.00	0.00
35.00		128.70	833.77	0.00	0.00
40.00		128.81	812.12	0.00	0.00
45.00		128.39	790.47	0.00	0.00
46.50		38.07	232.92	0.00	0.00
50.00		87.56	939.62	0.00	0.00
52.50		62.06	659.46	0.00	0.00
55.00		61.72	296.22	0.00	0.00
60.00		122.80	579.46	0.00	0.00
65.00		120.94	562.14	0.00	0.00
70.00		118.84	544.82	0.00	0.00
73.50	(3) attachments	148.06	451.39	0.00	32.93
75.00		34.53	155.95	0.00	0.00
80.00		113.98	508.58	0.00	0.00
85.00		111.27	491.26	0.00	0.00
86.00	(20) attachments	651.72	2470.22	0.00	0.00
90.00		86.37	373.21	0.00	0.00
95.00		105.35	450.92	0.00	0.00
96.00	(34) attachments	1156.04	4258.61	0.00	0.00
98.50		51.03	213.47	0.00	0.00
100.00		28.29	145.22	0.00	0.00
105.00		95.29	484.05	0.00	0.00
108.00	(26) attachments	995.18	1998.63	0.00	0.00
108.50	(1) attachments	15.14	52.31	0.00	0.00
	Totals:	**5,335.08**	**23,762.07**	**0.00**	**32.93**

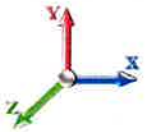
Linear Appurtenance Segment Forces (Factored)

Structure:	CT46140-A	**Code:**	TIA-222-H	7/19/2023	
Site Name:	S. Durham-rt 17/ Lawson	**Exposure:**	C		
Height:	108.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 33	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 18

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.018	0.000	6.659	0.00	1.37
5.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.018	0.000	6.659	0.00	5.20
10.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.018	0.000	6.659	0.00	1.37
10.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.018	0.000	6.659	0.00	5.20
15.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.019	0.000	6.659	0.00	1.37
15.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.019	0.000	6.659	0.00	5.20
20.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.019	0.000	7.065	0.00	1.37
20.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.019	0.000	7.065	0.00	5.20
25.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.020	0.000	7.405	0.00	1.37
25.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.020	0.000	7.405	0.00	5.20
30.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.020	0.000	7.695	0.00	1.37
30.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.020	0.000	7.695	0.00	5.20
35.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.021	0.000	7.948	0.00	1.37
35.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.021	0.000	7.948	0.00	5.20
40.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.021	0.000	8.175	0.00	1.37
40.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.021	0.000	8.175	0.00	5.20
45.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.022	0.000	8.380	0.00	1.37
45.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.022	0.000	8.380	0.00	5.20
46.50	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.022	0.000	8.438	0.00	0.41
46.50	Step bolts	Yes	1.50	0.000	0.63	0.08	0.00	0.022	0.000	8.438	0.00	1.56
50.00	Safety Cable	Yes	3.50	0.000	0.38	0.11	0.00	0.023	0.000	8.568	0.00	0.96
50.00	Step bolts	Yes	3.50	0.000	0.63	0.18	0.00	0.023	0.000	8.568	0.00	3.64
52.50	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.023	0.000	8.657	0.00	0.68
52.50	Step bolts	Yes	2.50	0.000	0.63	0.13	0.00	0.023	0.000	8.657	0.00	2.60
55.00	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.024	0.000	8.742	0.00	0.68
55.00	Step bolts	Yes	2.50	0.000	0.63	0.13	0.00	0.024	0.000	8.742	0.00	2.60
60.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.025	0.000	8.903	0.00	1.37
60.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.025	0.000	8.903	0.00	5.20
65.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.025	0.000	9.055	0.00	1.37
65.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.025	0.000	9.055	0.00	5.20
70.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.026	0.000	9.197	0.00	1.37
70.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.026	0.000	9.197	0.00	5.20
73.50	Safety Cable	Yes	3.50	0.000	0.38	0.11	0.00	0.027	0.000	9.292	0.00	0.96
73.50	Step bolts	Yes	3.50	0.000	0.63	0.18	0.00	0.027	0.000	9.292	0.00	3.64
75.00	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.027	0.000	9.332	0.00	0.41
75.00	Step bolts	Yes	1.50	0.000	0.63	0.08	0.00	0.027	0.000	9.332	0.00	1.56
80.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.028	0.000	9.459	0.00	1.37
80.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.028	0.000	9.459	0.00	5.20
85.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.029	0.000	9.581	0.00	1.37
85.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.029	0.000	9.581	0.00	5.20
86.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.030	0.000	9.604	0.00	0.27
86.00	Step bolts	Yes	1.00	0.000	0.63	0.05	0.00	0.030	0.000	9.604	0.00	1.04
90.00	Safety Cable	Yes	4.00	0.000	0.38	0.13	0.00	0.030	0.000	9.697	0.00	1.09
90.00	Step bolts	Yes	4.00	0.000	0.63	0.21	0.00	0.030	0.000	9.697	0.00	4.16
95.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.031	0.000	9.808	0.00	1.37
95.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.031	0.000	9.808	0.00	5.20
96.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.032	0.000	9.830	0.00	0.27

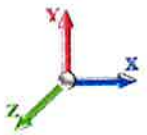
Linear Appurtenance Segment Forces (Factored)

Structure:	CT46140-A	**Code:**	TIA-222-H	7/19/2023	
Site Name:	S. Durham-rt 17/ Lawson	**Exposure:**	C		
Height:	108.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 34	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 18

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
96.00	Step bolts	Yes	1.00	0.000	0.63	0.05	0.00	0.032	0.000	9.830	0.00	1.04
98.50	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.033	0.000	9.883	0.00	0.68
98.50	Step bolts	Yes	2.50	0.000	0.63	0.13	0.00	0.033	0.000	9.883	0.00	2.60
100.00	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.036	0.000	9.914	0.00	0.41
100.00	Step bolts	Yes	1.50	0.000	0.63	0.08	0.00	0.036	0.000	9.914	0.00	1.56
105.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.036	0.000	10.017	0.00	1.37
105.00	Step bolts	Yes	5.00	0.000	0.63	0.26	0.00	0.036	0.000	10.017	0.00	5.20
108.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.036	0.000	10.076	0.00	0.82
108.00	Step bolts	Yes	3.00	0.000	0.63	0.16	0.00	0.036	0.000	10.076	0.00	3.12
108.50	Safety Cable	Yes	0.50	0.000	0.38	0.02	0.00	0.036	0.000	10.086	0.00	0.14
108.50	Step bolts	Yes	0.50	0.000	0.63	0.03	0.00	0.036	0.000	10.086	0.00	0.52
										Totals:	**0.0**	**142.5**

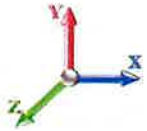
Calculated Forces

Structure:	CT46140-A	**Code:**	TIA-222-H	7/19/2023	
Site Name:	S. Durham-rt 17/ Lawson	**Exposure:**	C		
Height:	108.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 35	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 18

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-23.76	-5.34	0.00	-414.40	0.00	414.40	3275.65	969.34	4478.66	3761.64	0.00	0.000	0.000	0.117
5.00	-22.79	-5.23	0.00	-387.69	0.00	387.69	3241.53	947.01	4274.68	3636.23	0.01	-0.026	0.000	0.114
10.00	-21.85	-5.11	0.00	-361.57	0.00	361.57	3205.46	924.68	4075.45	3510.49	0.06	-0.053	0.000	0.110
15.00	-20.93	-5.00	0.00	-336.00	0.00	336.00	3167.44	902.34	3880.97	3384.59	0.13	-0.079	0.000	0.106
20.00	-20.03	-4.89	0.00	-311.00	0.00	311.00	3127.48	880.01	3691.25	3258.68	0.22	-0.106	0.000	0.102
25.00	-19.15	-4.77	0.00	-286.57	0.00	286.57	3085.56	857.68	3506.28	3132.91	0.35	-0.132	0.000	0.098
30.00	-18.29	-4.64	0.00	-262.74	0.00	262.74	3041.69	835.35	3326.07	3007.45	0.50	-0.158	0.000	0.093
35.00	-17.46	-4.52	0.00	-239.51	0.00	239.51	2995.87	813.02	3150.61	2882.45	0.68	-0.184	0.000	0.089
40.00	-16.64	-4.40	0.00	-216.91	0.00	216.91	2948.10	790.68	2979.90	2758.06	0.89	-0.209	0.000	0.084
45.00	-15.85	-4.27	0.00	-194.93	0.00	194.93	2898.39	768.35	2813.95	2634.44	1.12	-0.234	0.000	0.079
46.50	-15.62	-4.23	0.00	-188.52	0.00	188.52	2883.09	761.65	2765.09	2597.52	1.19	-0.242	0.000	0.078
50.00	-14.68	-4.15	0.00	-173.70	0.00	173.70	2846.72	746.02	2652.75	2511.74	1.38	-0.259	0.000	0.074
52.50	-14.02	-4.08	0.00	-163.34	0.00	163.34	2031.03	579.72	2002.37	1742.93	1.52	-0.271	0.000	0.101
55.00	-13.72	-4.03	0.00	-153.13	0.00	153.13	2015.31	570.79	1941.14	1702.63	1.66	-0.283	0.000	0.097
60.00	-13.14	-3.91	0.00	-133.00	0.00	133.00	1982.41	552.92	1821.53	1622.10	1.97	-0.312	0.000	0.089
65.00	-12.58	-3.79	0.00	-113.46	0.00	113.46	1947.55	535.06	1705.72	1541.77	2.32	-0.340	0.000	0.080
70.00	-12.03	-3.67	0.00	-94.52	0.00	94.52	1910.75	517.19	1593.71	1461.80	2.69	-0.366	0.000	0.071
73.50	-11.58	-3.52	0.00	-81.64	0.00	81.64	1883.83	504.69	1517.57	1406.12	2.96	-0.383	0.000	0.064
75.00	-11.42	-3.49	0.00	-76.36	0.00	76.36	1872.00	499.33	1485.51	1382.35	3.08	-0.390	0.000	0.061
80.00	-10.91	-3.38	0.00	-58.91	0.00	58.91	1831.30	481.46	1381.11	1303.58	3.51	-0.411	0.000	0.051
85.00	-10.42	-3.26	0.00	-42.03	0.00	42.03	1788.65	463.60	1280.51	1225.63	3.95	-0.429	0.000	0.040
86.00	-7.96	-2.59	0.00	-38.77	0.00	38.77	1779.88	460.02	1260.85	1210.15	4.04	-0.432	0.000	0.037
90.00	-7.58	-2.51	0.00	-28.39	0.00	28.39	1744.04	445.73	1183.72	1148.67	4.40	-0.442	0.000	0.029
95.00	-7.13	-2.40	0.00	-15.87	0.00	15.87	1697.49	427.86	1090.73	1072.85	4.87	-0.452	0.000	0.019
96.00	-2.88	-1.21	0.00	-13.47	0.00	13.47	1687.95	424.29	1072.59	1057.84	4.97	-0.453	0.000	0.014
98.50	-2.67	-1.16	0.00	-10.45	0.00	10.45	1663.75	415.36	1027.90	1020.54	5.20	-0.456	0.000	0.012
98.50	-2.67	-1.16	0.00	-10.45	0.00	10.45	1096.86	259.10	595.22	622.77	5.20	-0.456	0.000	0.019
100.00	-2.53	-1.13	0.00	-8.72	0.00	8.72	1096.86	259.10	595.22	622.77	5.35	-0.458	0.000	0.016
105.00	-2.04	-1.03	0.00	-3.09	0.00	3.09	1096.86	259.10	595.22	622.77	5.83	-0.461	0.000	0.007
108.00	-0.05	-0.02	0.00	-0.01	0.00	0.01	1096.86	259.10	595.22	622.77	6.12	-0.461	0.000	0.000
108.50	0.00	-0.02	0.00	0.00	0.00	0.00	1096.86	259.10	595.22	622.77	6.17	-0.461	0.000	0.000

Final Analysis Summary

Structure:	CT46140-A	**Code:**	TIA-222-H	7/19/2023	
Site Name:	S. Durham-rt 17/ Lawson	**Exposure:**	C		
Height:	108.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 36	

Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.0W 120 mph Wind	23.9	0.00	28.49	0.00	0.00	1857.49
0.9D + 1.0W 120 mph Wind	23.9	0.00	21.36	0.00	0.00	1849.75
1.2D + 1.0Di + 1.0Wi 50 mph Wind	6.3	0.00	25.77	0.00	0.00	464.35
1.2D + 1.0Ev + 1.0Eh	0.9	0.00	29.59	0.00	0.00	78.83
0.9D + 1.0Ev + 1.0Eh	0.9	0.00	22.45	0.00	0.00	78.56
1.0D + 1.0W 60 mph Wind	5.3	0.00	23.76	0.00	0.00	414.40

Max Stresses

Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.0W 120 mph Wind	-28.49	-23.88	0.00	-1857.4	0.00	-1857.4	3275.65	969.34	4478.66	3761.64	0.00	0.503
0.9D + 1.0W 120 mph Wind	-21.36	-23.87	0.00	-1849.7	0.00	-1849.7	3275.65	969.34	4478.66	3761.64	0.00	0.499
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-25.77	-6.27	0.00	-464.35	0.00	-464.35	3275.65	969.34	4478.66	3761.64	0.00	0.131
1.2D + 1.0Ev + 1.0Eh	-29.59	-0.85	0.00	-78.83	0.00	-78.83	3275.65	969.34	4478.66	3761.64	0.00	0.030
0.9D + 1.0Ev + 1.0Eh	-22.45	-0.85	0.00	-78.56	0.00	-78.56	3275.65	969.34	4478.66	3761.64	0.00	0.028
1.0D + 1.0W 60 mph Wind	-23.76	-5.34	0.00	-414.40	0.00	-414.40	3275.65	969.34	4478.66	3761.64	0.00	0.117

Base Plate Summary

Structure:	CT46140-A		**Code:**	TIA-222-H	7/19/2023
Site Name:	S. Durham-rt 17/ Lawson		**Exposure:**	C	
Height:	108.50 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 37

SBA

Reactions		Base Plate		Anchor Bolts	
Original Design		**Yield (ksi):**	60.00	**Bolt Circle:**	65.00
Moment (kip-ft):	2596.40	**Width (in):**	71.00	**Number Bolts:**	12.00
Axial (kip):	24.00	**Style:**	Round	**Bolt Type:**	2.25" 18J
Shear (kip):	28.50	**Polygon Sides:**	0.00	**Bolt Diameter (in):**	2.25
		Clip Length (in):	0.00	**Yield (ksi):**	75.00
Analysis (1.2D + 1.0W)				**Ultimate (ksi):**	100.00
Moment (kip-ft):	1857.49	**Effective Len (in):**	29.39	**Arrangement:**	Radial
Axial (kip):	28.49	**Moment (kip-in):**	525.06	**Cluster Dist (in):**	0.00
Shear (kip):	23.88	**Allow Stress (ksi):**	81.00	**Start Angle (deg):**	0.00
		Applied Stress (ksi):	47.79	Compression	
		Stress Ratio:	0.59	**Force (kip):**	116.68
				Allowable (kip):	268.39
				Ratio:	0.44
				Tension	
				Force (kip):	111.93
				Allowable (kip):	243.75
				Ratio:	0.46

Stiffened or Unstiffened, Exterior Flange Plate - Any Bolt Material TIA Rev H

Site Data

:

Reactions		
Mu	46.86	ft-kips
Axial, Pu:	3.03	kips
Shear, Vu:	5.18	kips
Elevation:	98.5	feet

Bolt Threads:
X-Excluded
φVn=φ(0.55*Ab*Fu)
φ=0.75, φ*Vn (kips):
43.05

Pole Manufacturer:	Other

If No stiffeners, Criteria:	TIA H	<-Only Applcable to Unstiffened Cases

Bolt Data			
Qty:	12		
Diameter (in.):	1.125	Bolt Fu:	105
Bolt Material:	A325	Bolt Fy:	81
N/A:	100	<-- Disregard	
N/A:	75	<-- Disregard	
Circle (in.):	33		

Plate Data		
Diam:	36	in
Thick, t:	1	in
Grade (Fy):	36	ksi
Strength, Fu:	58	ksi
Single-Rod B-eff:	7.41	in

Stiffener Data (Welding at Both Sides)		
Config:	0	*
Weld Type:		
Groove Depth:		<-- Disregard
Groove Angle:		<-- Disregard
Fillet H. Weld:		in
Fillet V. Weld:		in
Width:		in
Height:		in
Thick:		in
Notch:		in
Grade:		ksi
Weld str.:		ksi

Pole Data		
Diam:	28	in
Thick:	0.312	in
Grade:	35	ksi
# of Sides:	18	"0" IF Round
Fu	60	ksi
Reinf. Fillet Weld	0	"0" if None

Flange Bolt Results

Bolt Tension Capacity, φ*Tn,B1:	60.09	kips
Adjusted φ*Tn (due to Vu=Vu/Qty), B:	60.08	kips
Max Bolt directly applied Tu:	5.43	Kips
Min. PL "tc" for B cap. w/o Pry:	1.103	in
Min PL "treq" for actual T w/ Pry:	0.244	in
Min PL "t1" for actual T w/o Pry:	0.331	in
T allowable with Prying:	54.92	kips
Prying Force, q:	0.00	kips
Total Bolt Tension=Tu+q:	5.43	kips
Prying Bolt Stress Ratio=(Tu+q)/(B):	9.0%	Pass

Non-Rigid
φ*Tn
φTn[(1-(Vu/φVn)^2]^0.5

0≤α'≤1 case

Exterior Flange Plate Results — Flexural Check

Compression Side Plate Stress:	5.1	ksi
Allowable Plate Stress:	32.4	ksi
Compression Plate Stress Ratio:	15.7%	Pass
No Prying		
Tension Side Stress Ratio, (treq/t)^2:	6.0%	Pass

Non-Rigid
TIA G
φ*Fy
Comp. Y.L. Length: 17.46

n/a

Stiffener Results

Horizontal Weld :	n/a
Vertical Weld:	n/a
Plate Flex+Shear, fb/Fb+(fv/Fv)^2:	n/a
Plate Tension+Shear, ft/Ft+(fv/Fv)^2:	n/a
Plate Comp. (AISC Bracket):	n/a

Pole Results

Pole Punching Shear Check: n/a

* 0 = none, 1 = every bolt, 2 = every 2 bolts, 3 = 2 per bolt

** Note: for complete joint penetration groove welds the groove depth must be exactly 1/2 the stiffener thickness for calculation purposes

Analysis Date: 7/19/2023

Monopole Mat Foundation Design

				Date
				7/11/2023
Customer Name:	Verizon	TIA Standard:	TIA-222-H
Site Name:	S Durham-rt 17- Lawson	Structure Height (Ft.):	108.5
Site Number:	CT46140-A	Engineer Name:	S. Berthomieux
Engr. Number:		Engineer Login ID:	

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Monopole

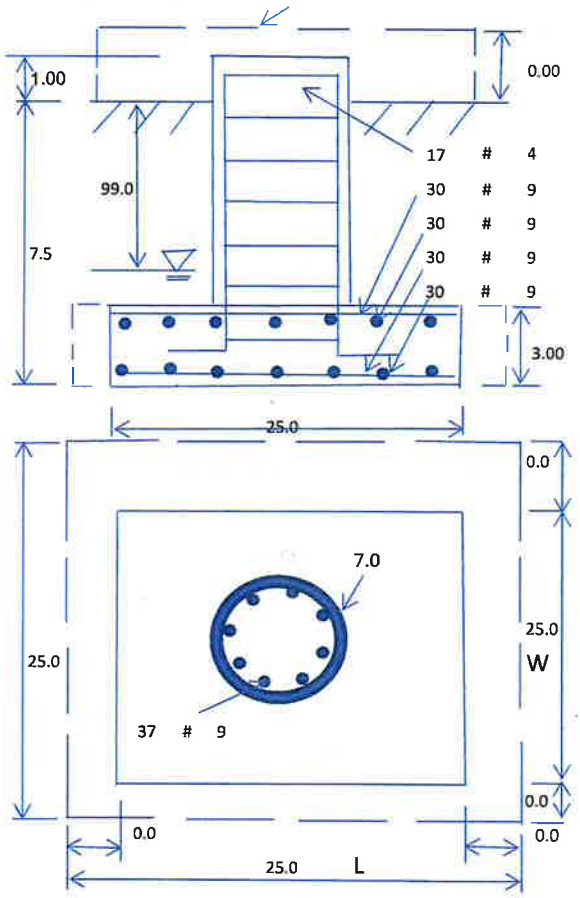
Analysis or Design? Analysis

Base Reactions (Factored):

Axial Load (Kips):	28.5	Shear Force (Kips):	23.9
Uplift Force (Kips):	0.0	Moment (Kips-ft):	1857.5

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	7.0	Depth of Base BG (ft.):	7.5
Pier Height A. G. (ft.):	1.00	Thickness of Pad (ft):	3.00
Length of Pad (ft.):	25	Width of Pad (ft.):	25
Final Length of pad (ft)	25.0	Final width of pad (ft):	25.0



Material Properties and Reabr Info:

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	9	Tie / Stirrup Size #:	4	
Qty. of Vertical Rebars:	37	Tie Spacing (in):	6.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	9	
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf
Rebar at the bottom of the concrete pad:				
Qty. of Rebar in Pad (L):	30	Qty. of Rebar in Pad (W):	30	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	30	Qty. of Rebar in Pad (W):	30	

Soil Design Parameters:

Soil Unit Weight (pcf):	125.0	Soil Buoyant Weight:	62.6	Pcf		
Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad:	30
Ultimate Bearing Pressure (psf):	12000	Ultimate Skin Friction:	0	Psf	Angle from Bottm of Pad:	25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No		Angle from Bottm of Pad:	25
Consider soil hor. resist. for OTM.:	No	Reduction factor on the maximum soil bearing pressure:	1.00			

Foundation Analysis and Design: Uplift Strength Reduction Factor: 0.75 — Compression Strength Reduction Factor: 0.75

Total Dry Soil Volume (cu. Ft.):	2639.32	Total Dry Soil Weight (Kips):	329.91
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	329.91	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	2086.66	Total Dry Concrete Weight (Kips):	313.00
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	313.00	Total Vertical Load on Base (Kips):	671.40

Check Soil Capacities:

				Load/ Capacity Ratio	
Calculated Maxium Net Soil Pressure under the base (psf):	1557	<	Allowable Factored Soil Bearing (psf): 9000	0.17	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	7588.9	>	Design Factored Momont (kips-ft): 2061	0.27	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	3.68	OK!			

Check the capacities of Reinforceing Concrete:

Strength reduction factor (Flexure and axial tension):	0.90		Strength reduction factor (Shear):	0.75		
Strength reduction factor (Axial compresion):	0.65		Wind Load Factor on Concrete Design:	1.00		
					Load/ Capacity Ratio	
(1) Concrete Pier:						
Vertical Steel Rebar Area (sq. in./each):	1.00		Tie / Stirrup Area (sq. in./each):	0.20		
Calculated Moment Capacity (Mn,Kips-Ft):	6034.8	>	Design Factored Moment (Mu, Kips-Ft	1988.9	0.33	OK!
Calculated Shear Capacity (Kips):	794.5	>	Design Factored Shear (Kips):	23.9	0.03	OK!
Calculated Tension Capacity (Tn, Kips):	1998.0	>	Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	9732.4	>	Design Factored Axial Load (Pu Kips):	28.5	0.00	OK!
Moment & Axial Strength Combination:	0.33	OK!	Check Tie Spacing (Design/Required):		0.5	OK!
Pier Reinforcement Ratio:	0.007		Reinforcement Ratio is satisfied per ACI			
(2).Concrete Pad:						
One-Way Design Shear Capacity (L-Direction, Kips):	923.2	>	One-Way Factored Shear (L-D. Kips):	158.0	0.17	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	923.2	>	One-Way Factored Shear (W-D., Kips):	158.0	0.17	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	847.5	>	One-Way Factored Shear (C-C, Kips):	133.9	0.16	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0031	OK!	Lower Steel Pad Reinf. Ratio (W-Direct	0.0031		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	4259.9	>	Moment at Bottom (L-Dir. K-Ft):	889.0	0.21	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	4259.9	>	Moment at Bottom (W-Dir. K-Ft):	889.0	0.21	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	5982.9	>	Moment at Bottom (C-C Dir. K-Ft):	1257.2	0.21	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0031	OK!	Upper Steel Reinf. Ratio (W-Dir.):	0.0031		
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):	4259.9	>	Moment at the top (L-Dir K-Ft):	334.0	0.08	OK!
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):	4259.9	>	Moment at the top (W-Dir K-Ft):	334.0	0.08	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	5982.9	>	Moment at the top (C-C Dir. K-Ft):	313.4	0.05	OK!

(3).Check Punching Shear Capacity due to Moment in the Pier:

Moment transferred by punching shear:	743.0	k-ft.	Max. factored shear stress v_{u_CO}:	1.7	Psi
Max. factored shear stress v_{u_AB}:	5.5	Psi	Factored shear Strength ϕv_n:	189.7	Psi
Max. factored shear stress v_u:	5.5	Psi	Check Usage of Punching Shear Capacity:	0.03	OK!

(4).Check Bending Capacity of the Pad Within the Effective Slab Width:

Overturning moment to be transferred by flexure:	557.2	k-ft.	Effective Width for resisting OT moment:	16.0	ft.
Calculated number of Rebar in Effective width:	20		Actual number of Rebar in Effective width:	20	
Steel Pad Moment Capacity (L-Direc. Kips-ft):	2836.7	k-ft.	Check Usage of the Flexure Capacity:	0.20	OK!

Colliers Engineering & Design CT, P.C.
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Antenna Mount Analysis Report and PMI Requirements

Mount ReAnalysis

SMART Tool Project #: 10207054
Colliers Engineering & Design Project CT, P.C. #: 23777130

July 24, 2023

Site Information	*Site ID:*	*5000398053-VZW / DURHAM SOUTH CT*
	Site Name:	*DURHAM SOUTH CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*134 R Creamery Rd* *Durham, Connecticut 06422* *Middlesex County*
	Latitude:	*41.441353°*
	Longitude:	*-72.696147°*
Structure Information	*Tower Type:*	*110-Ft Monopole*
	Mount Type:	*4.00-Ft T-Arm*

FUZE ID # 17123798

Analysis Results

T-Arm: **40.7% Pass***

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

******Contractor PMI Requirements:***
Included at the end of this MA report
Available & Submitted via portal at https://pmi.vzwsmart.com

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

Report Prepared By: Grant Walters

Digitally signed by Derek Hartzell
Date: 2023.07.24 09:06:33-07'00'

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: 1989478, Dated February 26, 2021*
Mount Mapping Report	*Roaming Networks Inc., Site ID: SBA: CT467330 Dated March 25, 2021*
Previous Post Modification Inspection	*Maser Consulting Connecticut, Project #: 21777321 Dated May 3, 2022*
Filter Add Scope	*Provided by Verizon Wireless*

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H Connecticut State Building Code (CSBC), Effective October 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:	1.00 in
	Risk Category:	II
	Exposure Category:	B
	Topographic Category:	1
	Topographic Feature Considered:	N/A
	Topographic Method:	N/A
	Ground Elevation Factor, K_e:	0.984
Seismic Parameters:	S_S:	0.211 g
	S_1:	0.055 g
Maintenance Parameters:	Wind Speed (3-sec. Gust):	30 mph
	Maintenance Live Load, Lv:	250 lbs.
	Maintenance Live Load, Lm:	500 lbs.
Analysis Software:	RISA-3D (V17)	

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
107.00	107.00	6	Commscope	JAHH-65B-R3B	Retained
		3	Samsung	MT6407-77A	
		3	Commscope	CBC78T-DS-43-2X	
		3	Samsung	B5/B13 RRH-BR04C	
		3	Samsung	B2/B66a RRH-BR049	
		2	Raycap	RRFDC-3315-PF-48	
		2	KAelus	KA-6030	Added

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

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

Model Number	Ports	AKA
DB-B1-6C-24AB-0Z	6	OVP-6
RVZDC-6627-PF-48	12	OVP-12

Standard Conditions:

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

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

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

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

3. For mount analyses completed from other data sources (including new replacement mounts) and not specifically mapped in accordance with the NSTD-446 Standard, the mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.

4. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.

5. The mount was checked up to, and including, the bolts that fasten it to the mount collar/attachment and threaded rod connections in collar members if applicable. Local deformation and interaction between the mount collar/attachment and the supporting tower structure are outside the scope of this analysis.

6. All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. Colliers Engineering & Design is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.

7. Structural Steel Grades have been assumed as follows, if applicable, unless otherwise noted in this analysis:
   - Channel, Solid Round, Angle, Plate — ASTM A36 (Gr. 36)
   - HSS (Rectangular) — ASTM 500 (Gr. B-46)
   - Pipe — ASTM A53 (Gr. B-35)
   - Threaded Rod — F1554 (Gr. 36)
   - Bolts — ASTM A325

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

Analysis Results:

Component	Utilization %	Pass/Fail
Standoff Arm	18.3 %	Pass
Horizontal	32.1 %	Pass
Antenna Pipe	40.7 %	Pass
Mount Connection	27.7 %	Pass

Structure Rating – *(Controlling Utilization of all Components)*	**40.7%**

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	1.5	0.3	5.8	4.5
0.5	2.0	0.3	8.1	6.4
1	2.5	0.4	10.4	8.2

Notes:
- (EPA)a values listed above may be used in the absence of more precise information
- (EPA)a values in the table above include 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 inspect climbing facilities and safety climb and ensure they are in good condition. Contractor shall install safety climb head assembly extension plate to the existing head assembly. Wire brush clean any observed corrosion and protect with two (2) coats of cold galvanization (Zinga or Zinc Kote). Contractor shall provide photos of wire rope guide installation as part of PMI documents. Contact EOR if additional guidance is required.

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 #: 5000398053 SMART Project #: 10207054 Fuze Project ID: 17123798

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 inspect climbing facilities and safety climb and ensure they are in good condition. Contractor shall install safety climb head assembly extension plate to the existing head assembly. Wire brush clean any observed corrosion and protect with two (2) coats of cold galvanization (Zinga or Zinc Kote). Contractor shall provide photos of wire rope guide installation as part of PMI documents. Contact EOR if additional guidance is required.

Response:

Special Instruction Confirmation:

☐ The contractor has read and acknowledges the above special instructions.

☐ All hardware listed in the Special Instructions above (if applicable) has been properly installed, and the existing hardware was inspected.

☐ The material utilized was as specified in the SMART Tool engineering vendor Special Instructions above (if applicable) and included in the material certification folder is a packing list or invoice for these materials.

OR

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

Comments:

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

☐ Yes ☐ No

Contractor certifies no new damage created during the current installation:

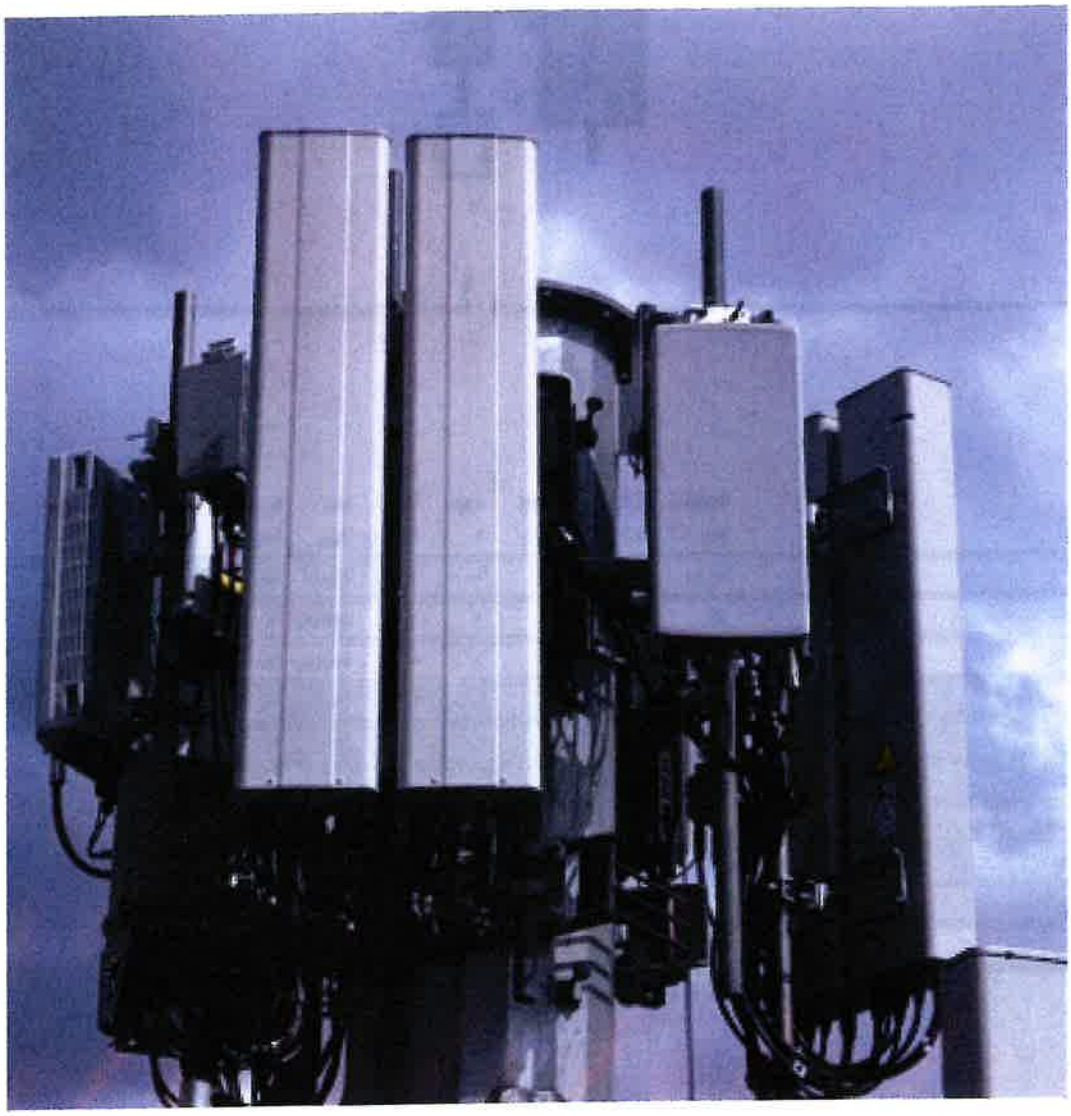
☐ Yes ☐ No

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

☐ Safety Climb in Good Condition ☐ Safety Climb Damaged

Certifying Individual:

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



Structure: 5000398053-VZW - DURHAM SOUTH CT

Sector: A

Structure Type: Self Support

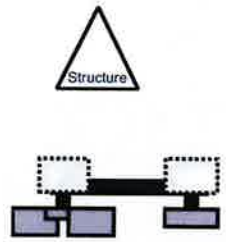
Mount Elev: 101.00

10207054

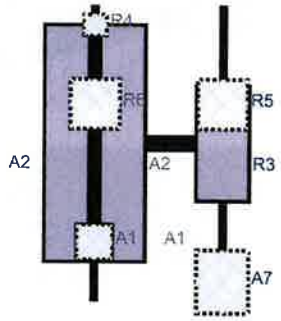
7/24/2023

Colliers Engineering & Design

Plan View



Front View - Looking at Structure



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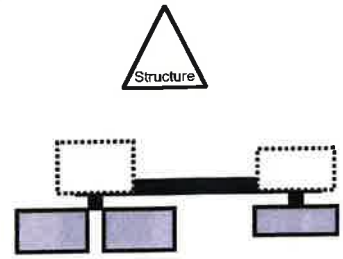
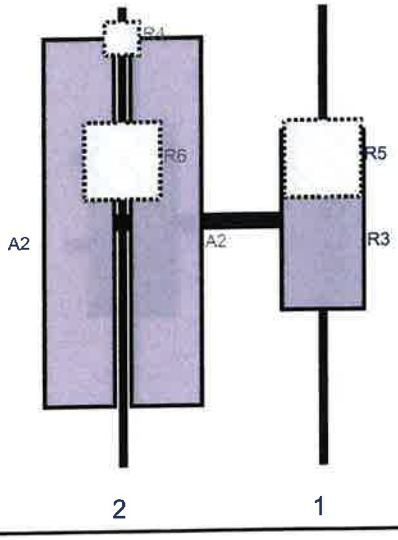
Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
R3	MT6407-77A	35.1	16.1	43	1	a	Front	42	0	Retained	03/28/2022
R5	B5/B13 RRH-BR04C	15	15	43	1	a	Behind	30	0	Retained	03/28/2022
A7	RRFDC-3315-PF-48	19.1	15.7	43	1	a	Behind	84	0	Retained	03/28/2022
A2	JAHH-65B-R3B	72	13.8	4	2	a	Front	42	8.5	Retained	03/28/2022
A2	JAHH-65B-R3B	72	13.8	4	2	b	Front	42	-8.5	Retained	03/28/2022
A1	KA-6030	10.6	10.9	4	2	a	Front	72	0	Added	
A1	KA-6030	10.6	10.9	4	2	b	Behind	72	0	Added	
R4	CBC78T-DS-43-2X	6.4	6.9	4	2	a	Behind	6	0	Retained	03/28/2022
R6	B2/B66A RRH-BR049	15	15	4	2	a	Behind	30	0	Retained	03/28/2022

Plan View

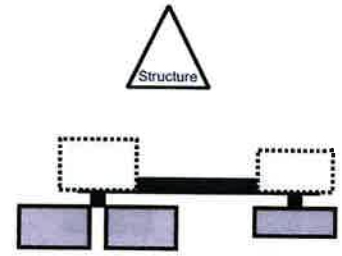


Front View - Looking at Structure

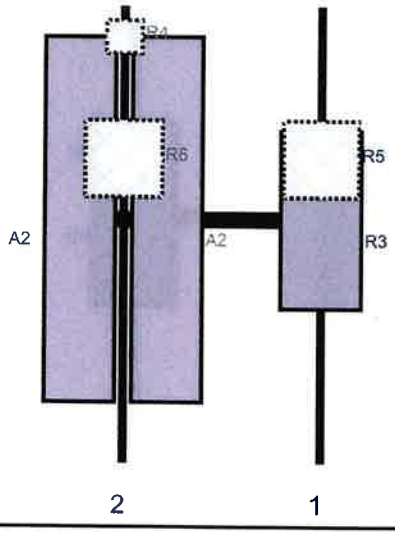


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
R3	MT6407-77A	35.1	16.1	43	1	a	Front	42	0	Retained	03/28/2022
R5	B5/B13 RRH-BR04C	15	15	43	1	a	Behind	30	0	Retained	03/28/2022
A2	JAHH-65B-R3B	72	13.8	4	2	a	Front	42	8.5	Retained	03/28/2022
A2	JAHH-65B-R3B	72	13.8	4	2	b	Front	42	-8.5	Retained	03/28/2022
R4	CBC78T-DS-43-2X	6.4	6.9	4	2	a	Behind	6	0	Retained	03/28/2022
R6	B2/B66A RRH-BR049	15	15	4	2	a	Behind	30	0	Retained	03/28/2022

Plan View



Front View - Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
R3	MT6407-77A	35.1	16.1	43	1	a	Front	42	0	Retained	03/28/2022
R5	B5/B13 RRH-BR04C	15	15	43	1	a	Behind	30	0	Retained	03/28/2022
A2	JAHH-65B-R3B	72	13.8	4	2	a	Front	42	8.5	Retained	03/28/2022
A2	JAHH-65B-R3B	72	13.8	4	2	b	Front	42	-8.5	Retained	03/28/2022
R4	CBC78T-DS-43-2X	6.4	6.9	4	2	a	Behind	6	0	Retained	03/28/2022
R6	B2/B66A RRH-BR049	15	15	4	2	a	Behind	30	0	Retained	03/28/2022

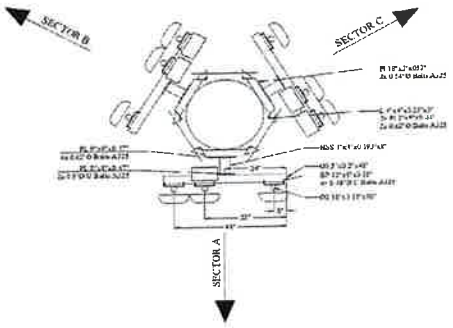
V3.0 Updated on 8-31-2020

PAUL J. FORD & COMPANY

Antenna Mount Mapping Form (PATENT PENDING)

FCC #: 1270239

Tower Owner:	SBA:	**Mapping Date:**	03.25.2021.
Site Name:	SBA:DURHAM SOUTH CT	**Tower Type:**	Monopole
Site Number or ID:	SBA:CT467330	**Tower Height (Ft.):**	
Mapping Contractor:	Roaming Networks inc.	**Mount Elevation (Ft.):**	107

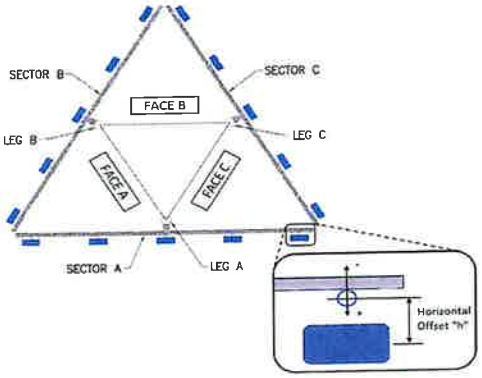


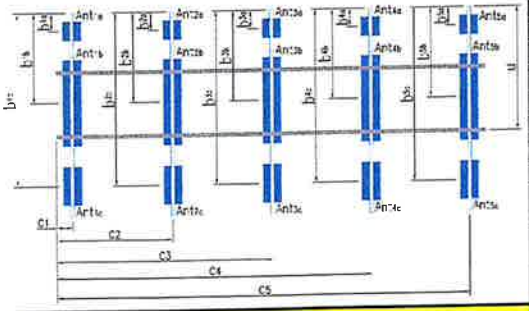
Mount Pipe Configuration and Geometries [Unit = Inches]

Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "d"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "d"	Horizontal Offset "C1, C2, C3, etc."
A1	PIPE Ø 2.38 x 0.15" x90"	41.00	5.00	C1	PIPE Ø 2.38 x 0.15" x90"	41.00	5.00
A2	PIPE Ø 2.38 x 0.15" x90"	42.00	32.00	C2	PIPE Ø 2.38 x 0.15" x90"	42.00	32.00
A3	PIPE Ø 2.38 x 0.15" x90"	42.00	44.00	C3	PIPE Ø 2.38 x 0.15" x90"	42.00	44.00
A4				C4			
A5				C5			
A6				C6			
B1	PIPE Ø 2.38 x 0.15" x90"	41.00	5.00	D1			
B2	PIPE Ø 2.38 x 0.15" x90"	42.00	32.00	D2			
B3	PIPE Ø 2.38 x 0.15" x90"	42.00	44.00	D3			
B4				D4			
B5				D5			
B6				D6			

Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :	
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :	
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :	5.4
Please enter additional infomation or comments below.	

Tower Face Width at Mount Elev. (ft.):		Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):	30.25



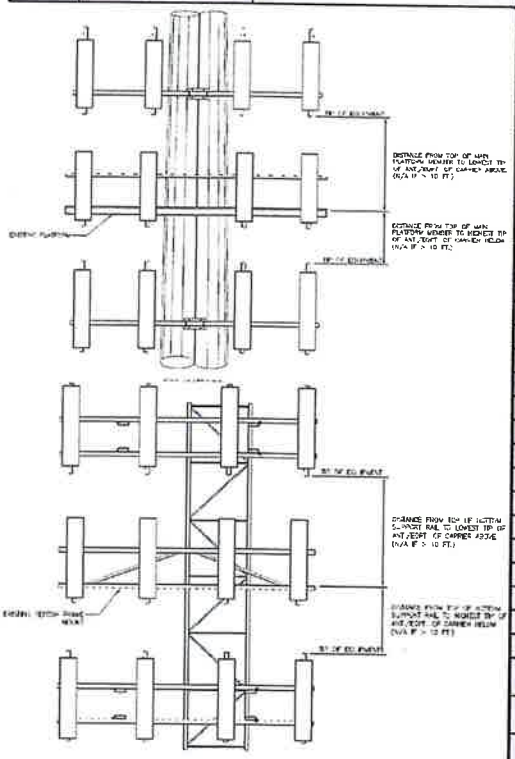


Antenna Layout (Looking Out From Tower)

Ants. Items	Enter antenna model. If not labeled, enter "Unknown". Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Mounting Locations [Units are inches and degrees] Vertical Distances "b_{1a}, b_{2a}, b_{3a}, b_{1b}..." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photos of antennas Photo Numbers
	Sector A									
Ant_{1a}	SBNHH-1D65B	11.85	7.09	72.87		106.667	45.00	8.00	19.00	149
Ant_{1b}										
Ant_{1c}										
Ant_{2a}	SBNHH-1D65B	11.85	7.09	72.87		106.75	45.00	8.00	19.00	149
Ant_{2b}	B66a RRH 4x45	12.00	9.00	21.60		108.5	24.00	7.00		149
Ant_{2c}										
Ant_{3a}	SBNHH-1D65B	11.85	7.09	72.87		106.75	45.00	8.00	19.00	149
Ant_{3b}										
Ant_{3c}										
Ant_{4a}	B13 RRH 4x30	13.80	8.20	72.00		107				149
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector	
Sector A:	19.00	Deg	Leg A:		Deg
Sector B:	155.00	Deg	Leg B:		Deg
Sector C:	258.00	Deg	Leg C:		Deg
Sector D:		Deg	Leg D:		Deg

Climbing Facility Information		
Location:	155.00 Deg	Sector B
Climbing Facility	Corrosion Type:	Good condition.
	Access:	Climbing path was unobstructed.
	Condition:	Loose hardware.



Sector B										
Ant_{1a}	SBNHH-1D65B	11.85	7.09	72.87		106.667	45.00	8.00	155.00	158
Ant_{1b}										
Ant_{1c}										
Ant_{2a}	SBNHH-1D65B	11.85	7.09	72.87		106.75	45.00	8.00	155.00	158
Ant_{2b}	B66a RRH 4x45	12.00	9.00	21.60		108.5	24.00	7.00		158
Ant_{2c}										
Ant_{3a}	SBNHH-1D65B	11.85	7.09	72.87		106.75	45.00	8.00	155.00	158
Ant_{3b}	RRFDC-3315-PF-48	15.73	10.30	28.93		110.5				158
Ant_{3c}										
Ant_{4a}	B13 RRH 4x30	13.80	8.20	72.00		107				158
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector C										
Ant_{1a}	SBNHH-1D65B	11.85	7.09	72.87		106.667	45.00	8.00	258.00	170
Ant_{1b}										
Ant_{1c}										
Ant_{2a}	SBNHH-1D65B	11.85	7.09	72.87		106.75	45.00	8.00	258.00	170
Ant_{2b}	B66a RRH 4x45	12.00	9.00	21.60		108.5	24.00	7.00		170
Ant_{2c}										
Ant_{3a}	SBNHH-1D65B	11.85	7.09	72.87		106.75	45.00	8.00	258.00	170
Ant_{3b}	RRFDC-3315-PF-48	15.73	10.30	28.93		110.5				170
Ant_{3c}										
Ant_{4a}	B13 RRH 4x30	13.80	8.20	72.00		107				170
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector D										
Ant_{1a}										
Ant_{1b}										
Ant_{1c}										
Ant_{2a}										
Ant_{2b}										
Ant_{2c}										
Ant_{3a}										
Ant_{3b}										
Ant_{3c}										
Ant_{4a}										
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Observed Safety and Structural Issues During the Mount Mapping		
Issue #	Description of Issue	Photo #

1		
2		
3		
4		
5		
6		
7		
8		

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

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

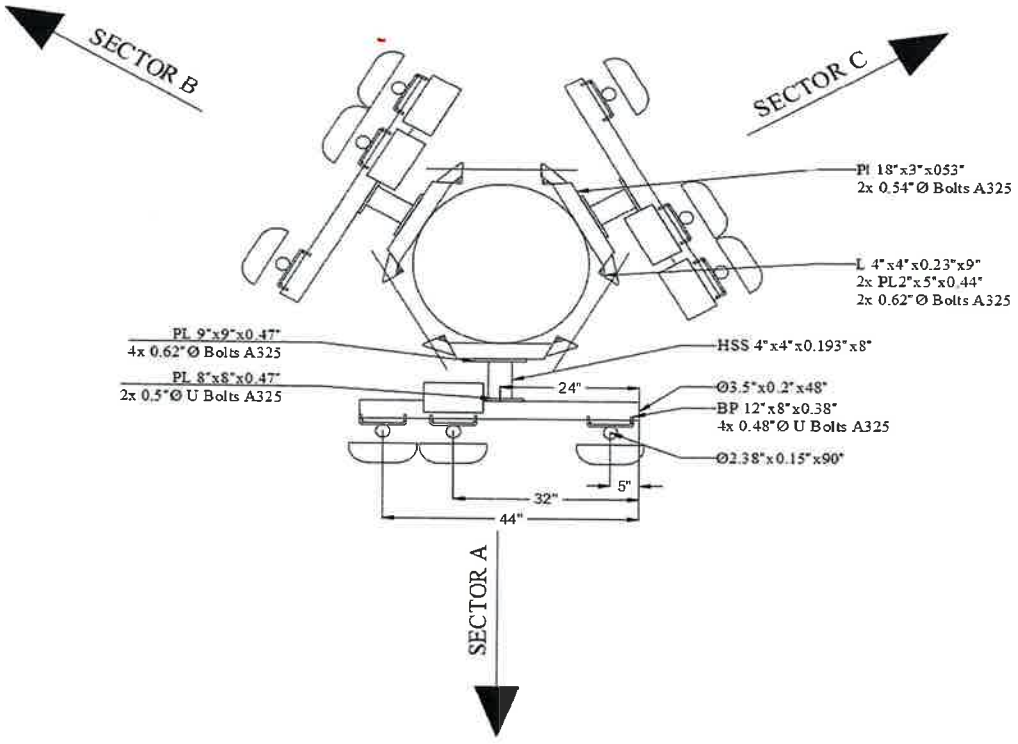
V3.0 Updated on 8-31-2020

Antenna Mount Mapping Form (PATENT PENDING)

FCC #
1270239

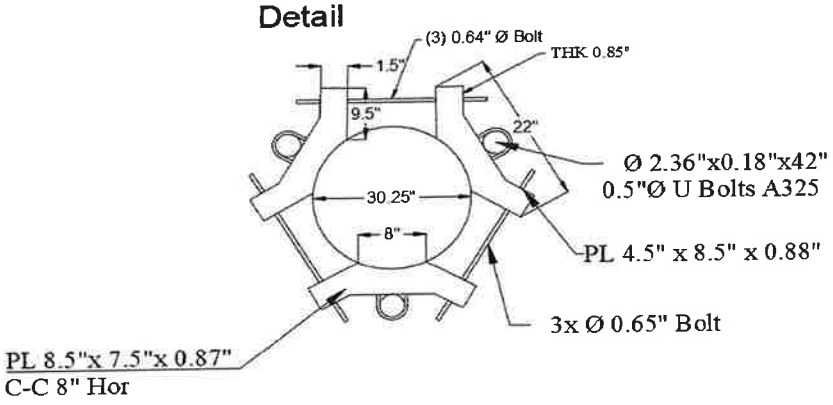
Tower Owner:	SBA:	Mapping Date:	03.25.2021.
Site Name:	SBA:DURHAM SOUTH CT	Tower Type:	Monopole
Site Number or ID:	SBA:CT467330	Tower Height (Ft.):	
Mapping Contractor:	Roaming Networks inc.	Mount Elevation (Ft.):	107

Please Insert Sketches of the Antenna Mount



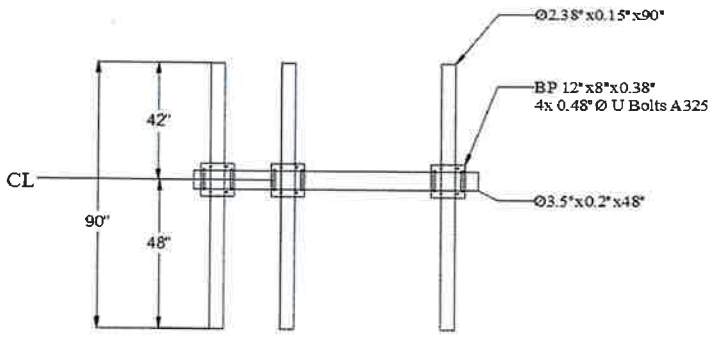
Please Insert Sketches of the Antenna Mount, cont'd

Tower
Attachment
Detail

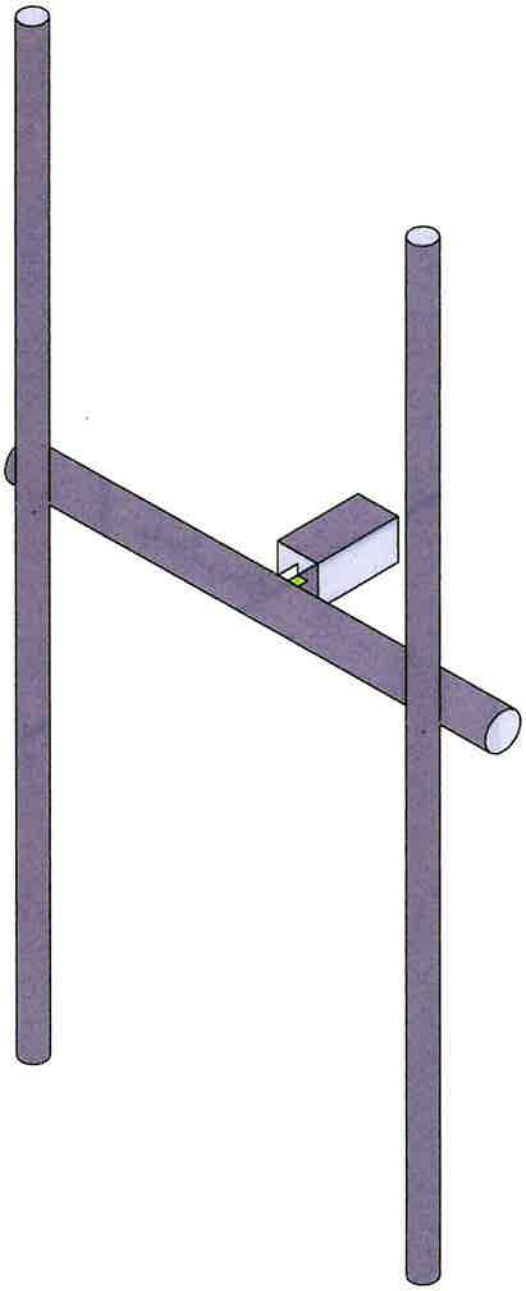


RRU
PLAN
VIEW

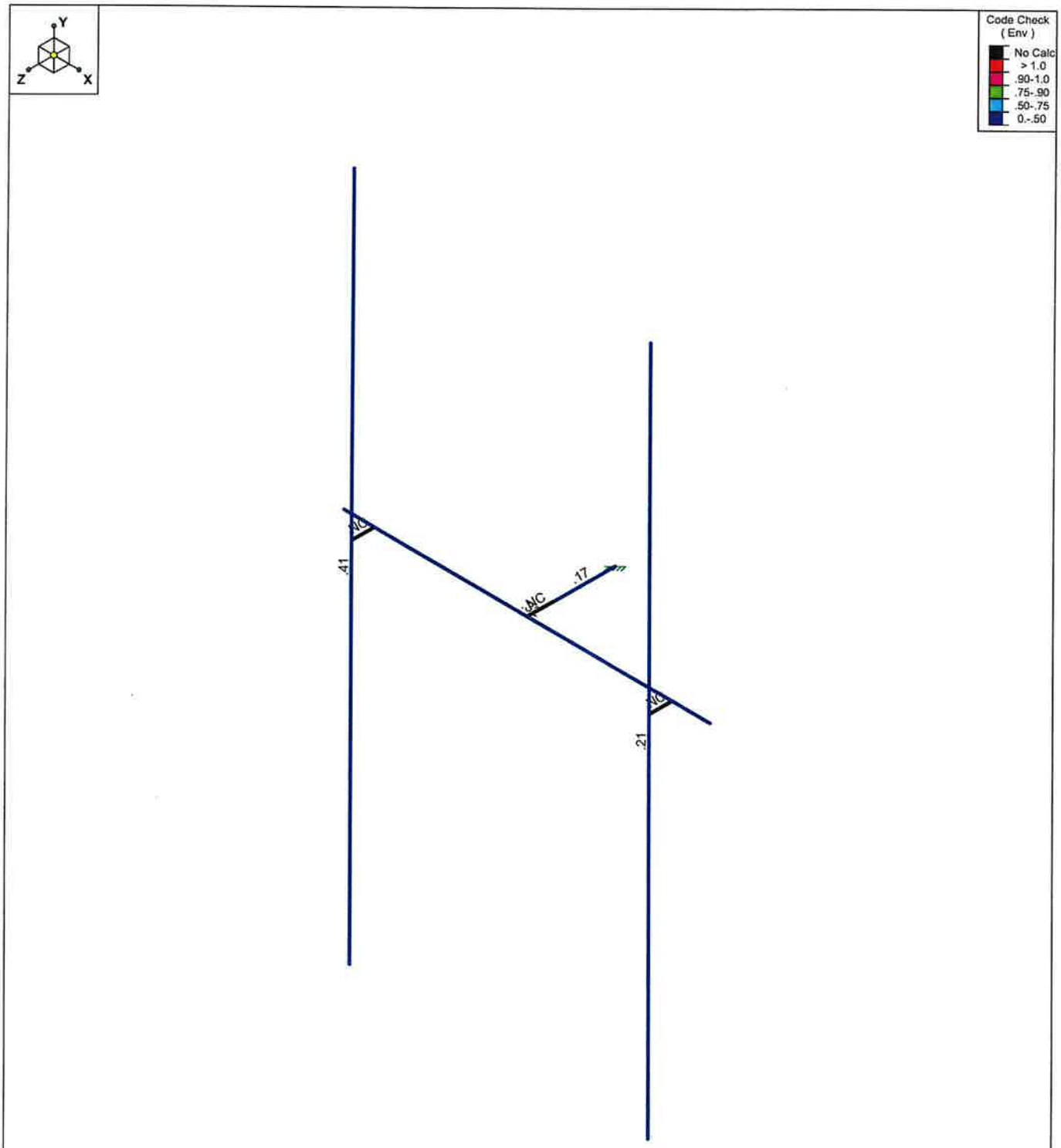
Please Insert Sketches of the Antenna Mount, cont'd



SECTOR A, B and C

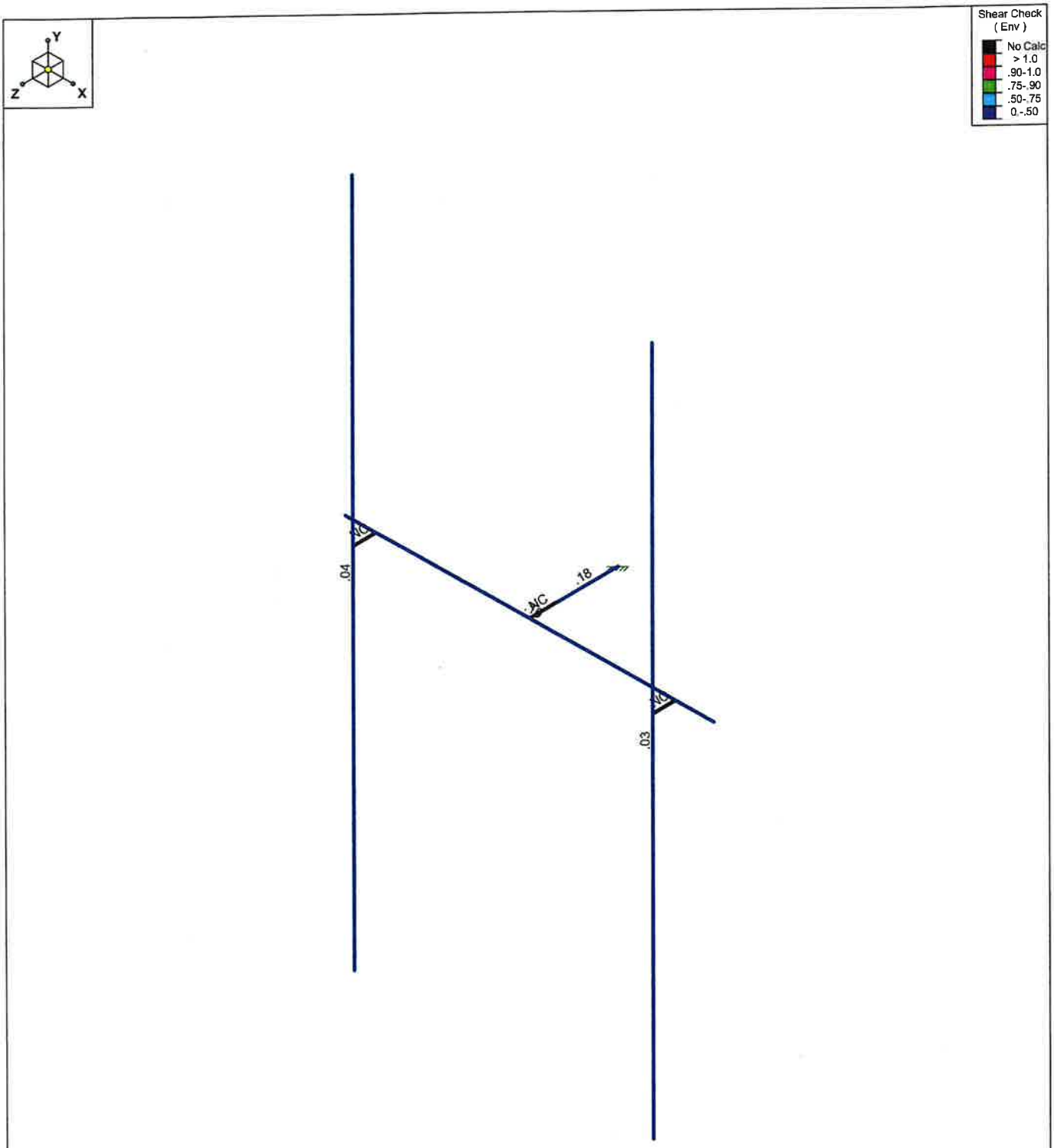


		SK - 1
		July 20, 2023 at 11:37 AM
		5000398053-VZW_MT_LOT_A_H....



Member Code Checks Displayed (Enveloped)
Results for LC 1, 1.2D+1.0Wo (0 Deg)

		SK - 2
		July 20, 2023 at 11:37 AM
		5000398053-VZW_MT_LOT_A_H....



Member Shear Checks Displayed (Enveloped)
Results for LC 1, 1.2D+1.0Wo (0 Deg)

		SK - 3
		July 20, 2023 at 11:37 AM
		5000398053-VZW_MT_LOT_A_H....

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(...
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						4		
41	Structure Wo (0 Deg)	None						8		
42	Structure Wo (30 Deg)	None						8		
43	Structure Wo (60 Deg)	None						8		
44	Structure Wo (90 Deg)	None						8		
45	Structure Wo (120 Deg)	None						8		
46	Structure Wo (150 Deg)	None						8		
47	Structure Wo (180 Deg)	None						8		
48	Structure Wo (210 Deg)	None						8		
49	Structure Wo (240 Deg)	None						8		
50	Structure Wo (270 Deg)	None						8		
51	Structure Wo (300 Deg)	None						8		
52	Structure Wo (330 Deg)	None						8		
53	Structure Wi (0 Deg)	None						8		
54	Structure Wi (30 Deg)	None						8		
55	Structure Wi (60 Deg)	None						8		
56	Structure Wi (90 Deg)	None						8		

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(...
57	Structure Wi (120 Deg)	None						8		
58	Structure Wi (150 Deg)	None						8		
59	Structure Wi (180 Deg)	None						8		
60	Structure Wi (210 Deg)	None						8		
61	Structure Wi (240 Deg)	None						8		
62	Structure Wi (270 Deg)	None						8		
63	Structure Wi (300 Deg)	None						8		
64	Structure Wi (330 Deg)	None						8		
65	Structure Wm (0 Deg)	None						8		
66	Structure Wm (30 Deg)	None						8		
67	Structure Wm (60 Deg)	None						8		
68	Structure Wm (90 Deg)	None						8		
69	Structure Wm (120 Deg)	None						8		
70	Structure Wm (150 Deg)	None						8		
71	Structure Wm (180 Deg)	None						8		
72	Structure Wm (210 Deg)	None						8		
73	Structure Wm (240 Deg)	None						8		
74	Structure Wm (270 Deg)	None						8		
75	Structure Wm (300 Deg)	None						8		
76	Structure Wm (330 Deg)	None						8		
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		-.045						
85	Structure Eh (0 Deg)	ELZ			-.113					
86	Structure Eh (90 Deg)	ELX	.113							

Load Combinations

	Description	Solve	PDelta	S...	B...	Fa...	B...	Fa...	B...	Fa...	BLC	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	1.2D+1.0Wo (0 Deg)	Yes	Y		1	1.2	39	1.2	3	1	41	1												
2	1.2D+1.0Wo (30 D...	Yes	Y		1	1.2	39	1.2	4	1	42	1												
3	1.2D+1.0Wo (60 D...	Yes	Y		1	1.2	39	1.2	5	1	43	1												
4	1.2D+1.0Wo (90 D...	Yes	Y		1	1.2	39	1.2	6	1	44	1												
5	1.2D+1.0Wo (120 ...	Yes	Y		1	1.2	39	1.2	7	1	45	1												
6	1.2D+1.0Wo (150 ...	Yes	Y		1	1.2	39	1.2	8	1	46	1												
7	1.2D+1.0Wo (180 ...	Yes	Y		1	1.2	39	1.2	9	1	47	1												
8	1.2D+1.0Wo (210 ...	Yes	Y		1	1.2	39	1.2	10	1	48	1												
9	1.2D+1.0Wo (240 ...	Yes	Y		1	1.2	39	1.2	11	1	49	1												
10	1.2D+1.0Wo (270 ...	Yes	Y		1	1.2	39	1.2	12	1	50	1												
11	1.2D+1.0Wo (300 ...	Yes	Y		1	1.2	39	1.2	13	1	51	1												
12	1.2D+1.0Wo (330 ...	Yes	Y		1	1.2	39	1.2	14	1	52	1												
13	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1								
14	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1								
15	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1								
16	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1								
17	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1								
18	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1								
19	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1								
20	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1								
21	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1								
22	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1								

Load Combinations (Continued)

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

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	0	0	1.239583	0	
2	N2	0	0	1.90625	0	
3	N5	0	0	2.197917	0	
4	N6	2	0	2.197917	0	
5	N7	-2	0	2.197917	0	
6	N11	1.583333	0	2.197917	0	
7	N12	1.583333	0	2.447917	0	
8	N13	1.583333	3.5	2.447917	0	
9	N14	1.583333	-4	2.447917	0	
10	N17	-1.5	3.5	2.447917	0	
11	N23A	-1.666667	0	2.197917	0	
12	N24B	-1.666667	0	2.447917	0	
13	N25A	-1.666667	3.5	2.447917	0	
14	N26	-1.666667	-4	2.447917	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Antenna Pipe	PIPE_2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
2	Standoff Arm	HSS4X4X3	Beam	Tube	A500 Gr.46	Typical	2.58	6.21	6.21	10
3	Standoff Pipe	HSS3.500X0...	Column	Pipe	A53 Gr. B	Typical	2.08	2.84	2.84	5.69
4	Horizontal	PIPE_3.0	Column	Pipe	A53 Gr. B	Typical	2.07	2.85	2.85	5.69
5	Antenna Pipe 2	PIPE_2.5	Column	Pipe	A53 Gr. B	Typical	1.61	1.45	1.45	2.89

Hot Rolled Steel Properties

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

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N1	N2			Standoff Arm	Beam	Tube	A500 Gr.46	Typical
2	M4	N7	N6			Horizontal	Column	Pipe	A53 Gr. B	Typical
3	MP1A	N13	N14			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
4	M8	N11	N12			RIGID	None	None	RIGID	Typical
5	M10A	N2	N5			RIGID	None	None	RIGID	Typical
6	MP2A	N25A	N26			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
7	M11A	N23A	N24B			RIGID	None	None	RIGID	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rati...A...		Inactive	Seismic ...
1	M1						Yes	Default			None
2	M4						Yes	** NA **			None
3	MP1A						Yes	** NA **			None
4	M8						Yes	** NA **			None
5	M10A						Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rati...	A...	Inactive	Seismic ...
6	MP2A						Yes	** NA **			None
7	M11A						Yes	** NA **			None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Y	-31.65	1.5
2	MP2A	My	0	1.5
3	MP2A	Mz	.022	1.5
4	MP2A	Y	-31.65	5.5
5	MP2A	My	0	5.5
6	MP2A	Mz	.022	5.5
7	MP2A	Y	-31.65	1.5
8	MP2A	My	0	1.5
9	MP2A	Mz	-.022	1.5
10	MP2A	Y	-31.65	5.5
11	MP2A	My	0	5.5
12	MP2A	Mz	-.022	5.5
13	MP1A	Y	-43.55	2.5
14	MP1A	My	-.025	2.5
15	MP1A	Mz	0	2.5
16	MP1A	Y	-43.55	4.5
17	MP1A	My	-.025	4.5
18	MP1A	Mz	0	4.5
19	MP2A	Y	-10.4	.5
20	MP2A	My	.006	.5
21	MP2A	Mz	0	.5
22	MP1A	Y	-70.3	2.5
23	MP1A	My	.041	2.5
24	MP1A	Mz	0	2.5
25	MP2A	Y	-84.4	2.5
26	MP2A	My	.049	2.5
27	MP2A	Mz	0	2.5
28	MP1A	Y	-26.9	7
29	MP1A	My	.012	7
30	MP1A	Mz	-.007	7
31	MP2A	Y	-17.6	6
32	MP2A	My	-.015	6
33	MP2A	Mz	0	6
34	MP2A	Y	-17.6	6
35	MP2A	My	.015	6
36	MP2A	Mz	0	6

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Y	-67.59	1.5
2	MP2A	My	0	1.5
3	MP2A	Mz	.048	1.5
4	MP2A	Y	-67.59	5.5
5	MP2A	My	0	5.5
6	MP2A	Mz	.048	5.5
7	MP2A	Y	-67.59	1.5
8	MP2A	My	0	1.5
9	MP2A	Mz	-.048	1.5
10	MP2A	Y	-67.59	5.5
11	MP2A	My	0	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
12	MP2A	Mz	-.048	5.5
13	MP1A	Y	-34.392	2.5
14	MP1A	My	-.02	2.5
15	MP1A	Mz	0	2.5
16	MP1A	Y	-34.392	4.5
17	MP1A	My	-.02	4.5
18	MP1A	Mz	0	4.5
19	MP2A	Y	-10.323	.5
20	MP2A	My	.006	.5
21	MP2A	Mz	0	.5
22	MP1A	Y	-38.965	2.5
23	MP1A	My	.023	2.5
24	MP1A	Mz	0	2.5
25	MP2A	Y	-43.339	2.5
26	MP2A	My	.025	2.5
27	MP2A	Mz	0	2.5
28	MP1A	Y	-53.386	7
29	MP1A	My	.023	7
30	MP1A	Mz	-.013	7
31	MP2A	Y	6.6	6
32	MP2A	My	.005	6
33	MP2A	Mz	0	6
34	MP2A	Y	6.6	6
35	MP2A	My	-.005	6
36	MP2A	Mz	0	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	1.5
2	MP2A	Z	-139.936	1.5
3	MP2A	Mx	-.099	1.5
4	MP2A	X	0	5.5
5	MP2A	Z	-139.936	5.5
6	MP2A	Mx	-.099	5.5
7	MP2A	X	0	1.5
8	MP2A	Z	-139.936	1.5
9	MP2A	Mx	.099	1.5
10	MP2A	X	0	5.5
11	MP2A	Z	-139.936	5.5
12	MP2A	Mx	.099	5.5
13	MP1A	X	0	2.5
14	MP1A	Z	-60.214	2.5
15	MP1A	Mx	0	2.5
16	MP1A	X	0	4.5
17	MP1A	Z	-60.214	4.5
18	MP1A	Mx	0	4.5
19	MP2A	X	0	.5
20	MP2A	Z	-11.367	.5
21	MP2A	Mx	0	.5
22	MP1A	X	0	2.5
23	MP1A	Z	-47.618	2.5
24	MP1A	Mx	0	2.5
25	MP2A	X	0	2.5
26	MP2A	Z	-47.618	2.5
27	MP2A	Mx	0	2.5
28	MP1A	X	0	7

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP1A	Z	-70.072	7
30	MP1A	Mx	.018	7
31	MP2A	X	0	6
32	MP2A	Z	-29.493	6
33	MP2A	Mx	0	6
34	MP2A	X	0	6
35	MP2A	Z	-29.493	6
36	MP2A	Mx	0	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	63.965	1.5
2	MP2A	Z	-110.79	1.5
3	MP2A	Mx	-.078	1.5
4	MP2A	X	63.965	5.5
5	MP2A	Z	-110.79	5.5
6	MP2A	Mx	-.078	5.5
7	MP2A	X	63.965	1.5
8	MP2A	Z	-110.79	1.5
9	MP2A	Mx	.078	1.5
10	MP2A	X	63.965	5.5
11	MP2A	Z	-110.79	5.5
12	MP2A	Mx	.078	5.5
13	MP1A	X	25.172	2.5
14	MP1A	Z	-43.6	2.5
15	MP1A	Mx	-.015	2.5
16	MP1A	X	25.172	4.5
17	MP1A	Z	-43.6	4.5
18	MP1A	Mx	-.015	4.5
19	MP2A	X	5.246	.5
20	MP2A	Z	-9.086	.5
21	MP2A	Mx	.003	.5
22	MP1A	X	21.121	2.5
23	MP1A	Z	-36.583	2.5
24	MP1A	Mx	.012	2.5
25	MP2A	X	21.851	2.5
26	MP2A	Z	-37.846	2.5
27	MP2A	Mx	.013	2.5
28	MP1A	X	28.304	7
29	MP1A	Z	-49.024	7
30	MP1A	Mx	.025	7
31	MP2A	X	12.178	6
32	MP2A	Z	-21.093	6
33	MP2A	Mx	-.01	6
34	MP2A	X	12.178	6
35	MP2A	Z	-21.093	6
36	MP2A	Mx	.01	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	89.993	1.5
2	MP2A	Z	-51.958	1.5
3	MP2A	Mx	-.037	1.5
4	MP2A	X	89.993	5.5
5	MP2A	Z	-51.958	5.5
6	MP2A	Mx	-.037	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
7	MP2A	X	89.993	1.5
8	MP2A	Z	-51.958	1.5
9	MP2A	Mx	.037	1.5
10	MP2A	X	89.993	5.5
11	MP2A	Z	-51.958	5.5
12	MP2A	Mx	.037	5.5
13	MP1A	X	26.506	2.5
14	MP1A	Z	-15.303	2.5
15	MP1A	Mx	-.015	2.5
16	MP1A	X	26.506	4.5
17	MP1A	Z	-15.303	4.5
18	MP1A	Mx	-.015	4.5
19	MP2A	X	7.569	.5
20	MP2A	Z	-4.37	.5
21	MP2A	Mx	.004	.5
22	MP1A	X	27.271	2.5
23	MP1A	Z	-15.745	2.5
24	MP1A	Mx	.016	2.5
25	MP2A	X	31.062	2.5
26	MP2A	Z	-17.934	2.5
27	MP2A	Mx	.018	2.5
28	MP1A	X	43.194	7
29	MP1A	Z	-24.938	7
30	MP1A	Mx	.025	7
31	MP2A	X	12.195	6
32	MP2A	Z	-7.041	6
33	MP2A	Mx	-.01	6
34	MP2A	X	12.195	6
35	MP2A	Z	-7.041	6
36	MP2A	Mx	.01	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	91.908	1.5
2	MP2A	Z	0	1.5
3	MP2A	Mx	0	1.5
4	MP2A	X	91.908	5.5
5	MP2A	Z	0	5.5
6	MP2A	Mx	0	5.5
7	MP2A	X	91.908	1.5
8	MP2A	Z	0	1.5
9	MP2A	Mx	0	1.5
10	MP2A	X	91.908	5.5
11	MP2A	Z	0	5.5
12	MP2A	Mx	0	5.5
13	MP1A	X	20.737	2.5
14	MP1A	Z	0	2.5
15	MP1A	Mx	-.012	2.5
16	MP1A	X	20.737	4.5
17	MP1A	Z	0	4.5
18	MP1A	Mx	-.012	4.5
19	MP2A	X	7.865	.5
20	MP2A	Z	0	.5
21	MP2A	Mx	.005	.5
22	MP1A	X	26.113	2.5
23	MP1A	Z	0	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
24	MP1A	Mx	.015	2.5
25	MP2A	X	31.95	2.5
26	MP2A	Z	0	2.5
27	MP2A	Mx	.019	2.5
28	MP1A	X	56.608	7
29	MP1A	Z	0	7
30	MP1A	Mx	.025	7
31	MP2A	X	8.945	6
32	MP2A	Z	0	6
33	MP2A	Mx	-.007	6
34	MP2A	X	8.945	6
35	MP2A	Z	0	6
36	MP2A	Mx	.007	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	89.993	1.5
2	MP2A	Z	51.958	1.5
3	MP2A	Mx	.037	1.5
4	MP2A	X	89.993	5.5
5	MP2A	Z	51.958	5.5
6	MP2A	Mx	.037	5.5
7	MP2A	X	89.993	1.5
8	MP2A	Z	51.958	1.5
9	MP2A	Mx	-.037	1.5
10	MP2A	X	89.993	5.5
11	MP2A	Z	51.958	5.5
12	MP2A	Mx	-.037	5.5
13	MP1A	X	26.506	2.5
14	MP1A	Z	15.303	2.5
15	MP1A	Mx	-.015	2.5
16	MP1A	X	26.506	4.5
17	MP1A	Z	15.303	4.5
18	MP1A	Mx	-.015	4.5
19	MP2A	X	7.569	.5
20	MP2A	Z	4.37	.5
21	MP2A	Mx	.004	.5
22	MP1A	X	27.271	2.5
23	MP1A	Z	15.745	2.5
24	MP1A	Mx	.016	2.5
25	MP2A	X	31.062	2.5
26	MP2A	Z	17.934	2.5
27	MP2A	Mx	.018	2.5
28	MP1A	X	60.684	7
29	MP1A	Z	35.036	7
30	MP1A	Mx	.018	7
31	MP2A	X	12.195	6
32	MP2A	Z	7.041	6
33	MP2A	Mx	-.01	6
34	MP2A	X	12.195	6
35	MP2A	Z	7.041	6
36	MP2A	Mx	.01	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	63.965	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
2	MP2A	Z	110.79	1.5
3	MP2A	Mx	.078	1.5
4	MP2A	X	63.965	5.5
5	MP2A	Z	110.79	5.5
6	MP2A	Mx	.078	5.5
7	MP2A	X	63.965	1.5
8	MP2A	Z	110.79	1.5
9	MP2A	Mx	-.078	1.5
10	MP2A	X	63.965	5.5
11	MP2A	Z	110.79	5.5
12	MP2A	Mx	-.078	5.5
13	MP1A	X	25.172	2.5
14	MP1A	Z	43.6	2.5
15	MP1A	Mx	-.015	2.5
16	MP1A	X	25.172	4.5
17	MP1A	Z	43.6	4.5
18	MP1A	Mx	-.015	4.5
19	MP2A	X	5.246	.5
20	MP2A	Z	9.086	.5
21	MP2A	Mx	.003	.5
22	MP1A	X	21.121	2.5
23	MP1A	Z	36.583	2.5
24	MP1A	Mx	.012	2.5
25	MP2A	X	21.851	2.5
26	MP2A	Z	37.846	2.5
27	MP2A	Mx	.013	2.5
28	MP1A	X	38.402	7
29	MP1A	Z	66.514	7
30	MP1A	Mx	0	7
31	MP2A	X	12.178	6
32	MP2A	Z	21.093	6
33	MP2A	Mx	-.01	6
34	MP2A	X	12.178	6
35	MP2A	Z	21.093	6
36	MP2A	Mx	.01	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	1.5
2	MP2A	Z	139.936	1.5
3	MP2A	Mx	.099	1.5
4	MP2A	X	0	5.5
5	MP2A	Z	139.936	5.5
6	MP2A	Mx	.099	5.5
7	MP2A	X	0	1.5
8	MP2A	Z	139.936	1.5
9	MP2A	Mx	-.099	1.5
10	MP2A	X	0	5.5
11	MP2A	Z	139.936	5.5
12	MP2A	Mx	-.099	5.5
13	MP1A	X	0	2.5
14	MP1A	Z	60.214	2.5
15	MP1A	Mx	0	2.5
16	MP1A	X	0	4.5
17	MP1A	Z	60.214	4.5
18	MP1A	Mx	0	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
19	MP2A	X	0	.5
20	MP2A	Z	11.367	.5
21	MP2A	Mx	0	.5
22	MP1A	X	0	2.5
23	MP1A	Z	47.618	2.5
24	MP1A	Mx	0	2.5
25	MP2A	X	0	2.5
26	MP2A	Z	47.618	2.5
27	MP2A	Mx	0	2.5
28	MP1A	X	0	7
29	MP1A	Z	70.072	7
30	MP1A	Mx	-.018	7
31	MP2A	X	0	6
32	MP2A	Z	29.493	6
33	MP2A	Mx	0	6
34	MP2A	X	0	6
35	MP2A	Z	29.493	6
36	MP2A	Mx	0	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-63.965	1.5
2	MP2A	Z	110.79	1.5
3	MP2A	Mx	.078	1.5
4	MP2A	X	-63.965	5.5
5	MP2A	Z	110.79	5.5
6	MP2A	Mx	.078	5.5
7	MP2A	X	-63.965	1.5
8	MP2A	Z	110.79	1.5
9	MP2A	Mx	-.078	1.5
10	MP2A	X	-63.965	5.5
11	MP2A	Z	110.79	5.5
12	MP2A	Mx	-.078	5.5
13	MP1A	X	-25.172	2.5
14	MP1A	Z	43.6	2.5
15	MP1A	Mx	.015	2.5
16	MP1A	X	-25.172	4.5
17	MP1A	Z	43.6	4.5
18	MP1A	Mx	.015	4.5
19	MP2A	X	-5.246	.5
20	MP2A	Z	9.086	.5
21	MP2A	Mx	-.003	.5
22	MP1A	X	-21.121	2.5
23	MP1A	Z	36.583	2.5
24	MP1A	Mx	-.012	2.5
25	MP2A	X	-21.851	2.5
26	MP2A	Z	37.846	2.5
27	MP2A	Mx	-.013	2.5
28	MP1A	X	-28.304	7
29	MP1A	Z	49.024	7
30	MP1A	Mx	-.025	7
31	MP2A	X	-12.178	6
32	MP2A	Z	21.093	6
33	MP2A	Mx	.01	6
34	MP2A	X	-12.178	6
35	MP2A	Z	21.093	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
36	MP2A	Mx	-.01	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-89.993	1.5
2	MP2A	Z	51.958	1.5
3	MP2A	Mx	.037	1.5
4	MP2A	X	-89.993	5.5
5	MP2A	Z	51.958	5.5
6	MP2A	Mx	.037	5.5
7	MP2A	X	-89.993	1.5
8	MP2A	Z	51.958	1.5
9	MP2A	Mx	-.037	1.5
10	MP2A	X	-89.993	5.5
11	MP2A	Z	51.958	5.5
12	MP2A	Mx	-.037	5.5
13	MP1A	X	-26.506	2.5
14	MP1A	Z	15.303	2.5
15	MP1A	Mx	.015	2.5
16	MP1A	X	-26.506	4.5
17	MP1A	Z	15.303	4.5
18	MP1A	Mx	.015	4.5
19	MP2A	X	-7.569	.5
20	MP2A	Z	4.37	.5
21	MP2A	Mx	-.004	.5
22	MP1A	X	-27.271	2.5
23	MP1A	Z	15.745	2.5
24	MP1A	Mx	-.016	2.5
25	MP2A	X	-31.062	2.5
26	MP2A	Z	17.934	2.5
27	MP2A	Mx	-.018	2.5
28	MP1A	X	-43.194	7
29	MP1A	Z	24.938	7
30	MP1A	Mx	-.025	7
31	MP2A	X	-12.195	6
32	MP2A	Z	7.041	6
33	MP2A	Mx	.01	6
34	MP2A	X	-12.195	6
35	MP2A	Z	7.041	6
36	MP2A	Mx	-.01	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-91.908	1.5
2	MP2A	Z	0	1.5
3	MP2A	Mx	0	1.5
4	MP2A	X	-91.908	5.5
5	MP2A	Z	0	5.5
6	MP2A	Mx	0	5.5
7	MP2A	X	-91.908	1.5
8	MP2A	Z	0	1.5
9	MP2A	Mx	0	1.5
10	MP2A	X	-91.908	5.5
11	MP2A	Z	0	5.5
12	MP2A	Mx	0	5.5
13	MP1A	X	-20.737	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
14	MP1A	Z	0	2.5
15	MP1A	Mx	.012	2.5
16	MP1A	X	-20.737	4.5
17	MP1A	Z	0	4.5
18	MP1A	Mx	.012	4.5
19	MP2A	X	-7.865	.5
20	MP2A	Z	0	.5
21	MP2A	Mx	-.005	.5
22	MP1A	X	-26.113	2.5
23	MP1A	Z	0	2.5
24	MP1A	Mx	-.015	2.5
25	MP2A	X	-31.95	2.5
26	MP2A	Z	0	2.5
27	MP2A	Mx	-.019	2.5
28	MP1A	X	-56.608	7
29	MP1A	Z	0	7
30	MP1A	Mx	-.025	7
31	MP2A	X	-8.945	6
32	MP2A	Z	0	6
33	MP2A	Mx	.007	6
34	MP2A	X	-8.945	6
35	MP2A	Z	0	6
36	MP2A	Mx	-.007	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-89.993	1.5
2	MP2A	Z	-51.958	1.5
3	MP2A	Mx	-.037	1.5
4	MP2A	X	-89.993	5.5
5	MP2A	Z	-51.958	5.5
6	MP2A	Mx	-.037	5.5
7	MP2A	X	-89.993	1.5
8	MP2A	Z	-51.958	1.5
9	MP2A	Mx	.037	1.5
10	MP2A	X	-89.993	5.5
11	MP2A	Z	-51.958	5.5
12	MP2A	Mx	.037	5.5
13	MP1A	X	-26.506	2.5
14	MP1A	Z	-15.303	2.5
15	MP1A	Mx	.015	2.5
16	MP1A	X	-26.506	4.5
17	MP1A	Z	-15.303	4.5
18	MP1A	Mx	.015	4.5
19	MP2A	X	-7.569	.5
20	MP2A	Z	-4.37	.5
21	MP2A	Mx	-.004	.5
22	MP1A	X	-27.271	2.5
23	MP1A	Z	-15.745	2.5
24	MP1A	Mx	-.016	2.5
25	MP2A	X	-31.062	2.5
26	MP2A	Z	-17.934	2.5
27	MP2A	Mx	-.018	2.5
28	MP1A	X	-60.684	7
29	MP1A	Z	-35.036	7
30	MP1A	Mx	-.018	7

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
31	MP2A	X	-12.195	6
32	MP2A	Z	-7.041	6
33	MP2A	Mx	.01	6
34	MP2A	X	-12.195	6
35	MP2A	Z	-7.041	6
36	MP2A	Mx	-.01	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-63.965	1.5
2	MP2A	Z	-110.79	1.5
3	MP2A	Mx	-.078	1.5
4	MP2A	X	-63.965	5.5
5	MP2A	Z	-110.79	5.5
6	MP2A	Mx	-.078	5.5
7	MP2A	X	-63.965	1.5
8	MP2A	Z	-110.79	1.5
9	MP2A	Mx	.078	1.5
10	MP2A	X	-63.965	5.5
11	MP2A	Z	-110.79	5.5
12	MP2A	Mx	.078	5.5
13	MP1A	X	-25.172	2.5
14	MP1A	Z	-43.6	2.5
15	MP1A	Mx	.015	2.5
16	MP1A	X	-25.172	4.5
17	MP1A	Z	-43.6	4.5
18	MP1A	Mx	.015	4.5
19	MP2A	X	-5.246	.5
20	MP2A	Z	-9.086	.5
21	MP2A	Mx	-.003	.5
22	MP1A	X	-21.121	2.5
23	MP1A	Z	-36.583	2.5
24	MP1A	Mx	-.012	2.5
25	MP2A	X	-21.851	2.5
26	MP2A	Z	-37.846	2.5
27	MP2A	Mx	-.013	2.5
28	MP1A	X	-38.402	7
29	MP1A	Z	-66.514	7
30	MP1A	Mx	0	7
31	MP2A	X	-12.178	6
32	MP2A	Z	-21.093	6
33	MP2A	Mx	.01	6
34	MP2A	X	-12.178	6
35	MP2A	Z	-21.093	6
36	MP2A	Mx	-.01	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	1.5
2	MP2A	Z	-26.548	1.5
3	MP2A	Mx	-.019	1.5
4	MP2A	X	0	5.5
5	MP2A	Z	-26.548	5.5
6	MP2A	Mx	-.019	5.5
7	MP2A	X	0	1.5
8	MP2A	Z	-26.548	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
9	MP2A	Mx	.019	1.5
10	MP2A	X	0	5.5
11	MP2A	Z	-26.548	5.5
12	MP2A	Mx	.019	5.5
13	MP1A	X	0	2.5
14	MP1A	Z	-14.108	2.5
15	MP1A	Mx	0	2.5
16	MP1A	X	0	4.5
17	MP1A	Z	-14.108	4.5
18	MP1A	Mx	0	4.5
19	MP2A	X	0	.5
20	MP2A	Z	-2.864	.5
21	MP2A	Mx	0	.5
22	MP1A	X	0	2.5
23	MP1A	Z	-11.87	2.5
24	MP1A	Mx	0	2.5
25	MP2A	X	0	2.5
26	MP2A	Z	-11.87	2.5
27	MP2A	Mx	0	2.5
28	MP1A	X	0	7
29	MP1A	Z	-14.229	7
30	MP1A	Mx	.004	7
31	MP2A	X	0	6
32	MP2A	Z	-6.512	6
33	MP2A	Mx	0	6
34	MP2A	X	0	6
35	MP2A	Z	-6.512	6
36	MP2A	Mx	0	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	12.216	1.5
2	MP2A	Z	-21.16	1.5
3	MP2A	Mx	-.015	1.5
4	MP2A	X	12.216	5.5
5	MP2A	Z	-21.16	5.5
6	MP2A	Mx	-.015	5.5
7	MP2A	X	12.216	1.5
8	MP2A	Z	-21.16	1.5
9	MP2A	Mx	.015	1.5
10	MP2A	X	12.216	5.5
11	MP2A	Z	-21.16	5.5
12	MP2A	Mx	.015	5.5
13	MP1A	X	6.04	2.5
14	MP1A	Z	-10.461	2.5
15	MP1A	Mx	-.004	2.5
16	MP1A	X	6.04	4.5
17	MP1A	Z	-10.461	4.5
18	MP1A	Mx	-.004	4.5
19	MP2A	X	1.342	.5
20	MP2A	Z	-2.324	.5
21	MP2A	Mx	.000783	.5
22	MP1A	X	5.31	2.5
23	MP1A	Z	-9.197	2.5
24	MP1A	Mx	.003	2.5
25	MP2A	X	5.482	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
26	MP2A	Z	-9.495	2.5
27	MP2A	Mx	.003	2.5
28	MP1A	X	5.867	7
29	MP1A	Z	-10.163	7
30	MP1A	Mx	.005	7
31	MP2A	X	2.747	6
32	MP2A	Z	-4.757	6
33	MP2A	Mx	-.002	6
34	MP2A	X	2.747	6
35	MP2A	Z	-4.757	6
36	MP2A	Mx	.002	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	17.497	1.5
2	MP2A	Z	-10.102	1.5
3	MP2A	Mx	-.007	1.5
4	MP2A	X	17.497	5.5
5	MP2A	Z	-10.102	5.5
6	MP2A	Mx	-.007	5.5
7	MP2A	X	17.497	1.5
8	MP2A	Z	-10.102	1.5
9	MP2A	Mx	.007	1.5
10	MP2A	X	17.497	5.5
11	MP2A	Z	-10.102	5.5
12	MP2A	Mx	.007	5.5
13	MP1A	X	6.947	2.5
14	MP1A	Z	-4.011	2.5
15	MP1A	Mx	-.004	2.5
16	MP1A	X	6.947	4.5
17	MP1A	Z	-4.011	4.5
18	MP1A	Mx	-.004	4.5
19	MP2A	X	2.013	.5
20	MP2A	Z	-1.162	.5
21	MP2A	Mx	.001	.5
22	MP1A	X	7.032	2.5
23	MP1A	Z	-4.06	2.5
24	MP1A	Mx	.004	2.5
25	MP2A	X	7.926	2.5
26	MP2A	Z	-4.576	2.5
27	MP2A	Mx	.005	2.5
28	MP1A	X	9.083	7
29	MP1A	Z	-5.244	7
30	MP1A	Mx	.005	7
31	MP2A	X	2.993	6
32	MP2A	Z	-1.728	6
33	MP2A	Mx	-.002	6
34	MP2A	X	2.993	6
35	MP2A	Z	-1.728	6
36	MP2A	Mx	.002	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	18.089	1.5
2	MP2A	Z	0	1.5
3	MP2A	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
4	MP2A	X	18.089	5.5
5	MP2A	Z	0	5.5
6	MP2A	Mx	0	5.5
7	MP2A	X	18.089	1.5
8	MP2A	Z	0	1.5
9	MP2A	Mx	0	1.5
10	MP2A	X	18.089	5.5
11	MP2A	Z	0	5.5
12	MP2A	Mx	0	5.5
13	MP1A	X	5.994	2.5
14	MP1A	Z	0	2.5
15	MP1A	Mx	-.003	2.5
16	MP1A	X	5.994	4.5
17	MP1A	Z	0	4.5
18	MP1A	Mx	-.003	4.5
19	MP2A	X	2.145	.5
20	MP2A	Z	0	.5
21	MP2A	Mx	.001	.5
22	MP1A	X	6.87	2.5
23	MP1A	Z	0	2.5
24	MP1A	Mx	.004	2.5
25	MP2A	X	8.246	2.5
26	MP2A	Z	0	2.5
27	MP2A	Mx	.005	2.5
28	MP1A	X	11.735	7
29	MP1A	Z	0	7
30	MP1A	Mx	.005	7
31	MP2A	X	2.438	6
32	MP2A	Z	0	6
33	MP2A	Mx	-.002	6
34	MP2A	X	2.438	6
35	MP2A	Z	0	6
36	MP2A	Mx	.002	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	17.497	1.5
2	MP2A	Z	10.102	1.5
3	MP2A	Mx	.007	1.5
4	MP2A	X	17.497	5.5
5	MP2A	Z	10.102	5.5
6	MP2A	Mx	.007	5.5
7	MP2A	X	17.497	1.5
8	MP2A	Z	10.102	1.5
9	MP2A	Mx	-.007	1.5
10	MP2A	X	17.497	5.5
11	MP2A	Z	10.102	5.5
12	MP2A	Mx	-.007	5.5
13	MP1A	X	6.947	2.5
14	MP1A	Z	4.011	2.5
15	MP1A	Mx	-.004	2.5
16	MP1A	X	6.947	4.5
17	MP1A	Z	4.011	4.5
18	MP1A	Mx	-.004	4.5
19	MP2A	X	2.013	.5
20	MP2A	Z	1.162	.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
21	MP2A	Mx	.001	.5
22	MP1A	X	7.032	2.5
23	MP1A	Z	4.06	2.5
24	MP1A	Mx	.004	2.5
25	MP2A	X	7.926	2.5
26	MP2A	Z	4.576	2.5
27	MP2A	Mx	.005	2.5
28	MP1A	X	12.323	7
29	MP1A	Z	7.114	7
30	MP1A	Mx	.004	7
31	MP2A	X	2.993	6
32	MP2A	Z	1.728	6
33	MP2A	Mx	-.002	6
34	MP2A	X	2.993	6
35	MP2A	Z	1.728	6
36	MP2A	Mx	.002	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	12.216	1.5
2	MP2A	Z	21.16	1.5
3	MP2A	Mx	.015	1.5
4	MP2A	X	12.216	5.5
5	MP2A	Z	21.16	5.5
6	MP2A	Mx	.015	5.5
7	MP2A	X	12.216	1.5
8	MP2A	Z	21.16	1.5
9	MP2A	Mx	-.015	1.5
10	MP2A	X	12.216	5.5
11	MP2A	Z	21.16	5.5
12	MP2A	Mx	-.015	5.5
13	MP1A	X	6.04	2.5
14	MP1A	Z	10.461	2.5
15	MP1A	Mx	-.004	2.5
16	MP1A	X	6.04	4.5
17	MP1A	Z	10.461	4.5
18	MP1A	Mx	-.004	4.5
19	MP2A	X	1.342	.5
20	MP2A	Z	2.324	.5
21	MP2A	Mx	.000783	.5
22	MP1A	X	5.31	2.5
23	MP1A	Z	9.197	2.5
24	MP1A	Mx	.003	2.5
25	MP2A	X	5.482	2.5
26	MP2A	Z	9.495	2.5
27	MP2A	Mx	.003	2.5
28	MP1A	X	7.738	7
29	MP1A	Z	13.403	7
30	MP1A	Mx	0	7
31	MP2A	X	2.747	6
32	MP2A	Z	4.757	6
33	MP2A	Mx	-.002	6
34	MP2A	X	2.747	6
35	MP2A	Z	4.757	6
36	MP2A	Mx	.002	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	1.5
2	MP2A	Z	26.548	1.5
3	MP2A	Mx	.019	1.5
4	MP2A	X	0	5.5
5	MP2A	Z	26.548	5.5
6	MP2A	Mx	.019	5.5
7	MP2A	X	0	1.5
8	MP2A	Z	26.548	1.5
9	MP2A	Mx	-.019	1.5
10	MP2A	X	0	5.5
11	MP2A	Z	26.548	5.5
12	MP2A	Mx	-.019	5.5
13	MP1A	X	0	2.5
14	MP1A	Z	14.108	2.5
15	MP1A	Mx	0	2.5
16	MP1A	X	0	4.5
17	MP1A	Z	14.108	4.5
18	MP1A	Mx	0	4.5
19	MP2A	X	0	.5
20	MP2A	Z	2.864	.5
21	MP2A	Mx	0	.5
22	MP1A	X	0	2.5
23	MP1A	Z	11.87	2.5
24	MP1A	Mx	0	2.5
25	MP2A	X	0	2.5
26	MP2A	Z	11.87	2.5
27	MP2A	Mx	0	2.5
28	MP1A	X	0	7
29	MP1A	Z	14.229	7
30	MP1A	Mx	-.004	7
31	MP2A	X	0	6
32	MP2A	Z	6.512	6
33	MP2A	Mx	0	6
34	MP2A	X	0	6
35	MP2A	Z	6.512	6
36	MP2A	Mx	0	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-12.216	1.5
2	MP2A	Z	21.16	1.5
3	MP2A	Mx	.015	1.5
4	MP2A	X	-12.216	5.5
5	MP2A	Z	21.16	5.5
6	MP2A	Mx	.015	5.5
7	MP2A	X	-12.216	1.5
8	MP2A	Z	21.16	1.5
9	MP2A	Mx	-.015	1.5
10	MP2A	X	-12.216	5.5
11	MP2A	Z	21.16	5.5
12	MP2A	Mx	-.015	5.5
13	MP1A	X	-6.04	2.5
14	MP1A	Z	10.461	2.5
15	MP1A	Mx	.004	2.5
16	MP1A	X	-6.04	4.5
17	MP1A	Z	10.461	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
18	MP1A	Mx	.004	4.5
19	MP2A	X	-1.342	.5
20	MP2A	Z	2.324	.5
21	MP2A	Mx	-.000783	.5
22	MP1A	X	-5.31	2.5
23	MP1A	Z	9.197	2.5
24	MP1A	Mx	-.003	2.5
25	MP2A	X	-5.482	2.5
26	MP2A	Z	9.495	2.5
27	MP2A	Mx	-.003	2.5
28	MP1A	X	-5.867	7
29	MP1A	Z	10.163	7
30	MP1A	Mx	-.005	7
31	MP2A	X	-2.747	6
32	MP2A	Z	4.757	6
33	MP2A	Mx	.002	6
34	MP2A	X	-2.747	6
35	MP2A	Z	4.757	6
36	MP2A	Mx	-.002	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-17.497	1.5
2	MP2A	Z	10.102	1.5
3	MP2A	Mx	.007	1.5
4	MP2A	X	-17.497	5.5
5	MP2A	Z	10.102	5.5
6	MP2A	Mx	.007	5.5
7	MP2A	X	-17.497	1.5
8	MP2A	Z	10.102	1.5
9	MP2A	Mx	-.007	1.5
10	MP2A	X	-17.497	5.5
11	MP2A	Z	10.102	5.5
12	MP2A	Mx	-.007	5.5
13	MP1A	X	-6.947	2.5
14	MP1A	Z	4.011	2.5
15	MP1A	Mx	.004	2.5
16	MP1A	X	-6.947	4.5
17	MP1A	Z	4.011	4.5
18	MP1A	Mx	.004	4.5
19	MP2A	X	-2.013	.5
20	MP2A	Z	1.162	.5
21	MP2A	Mx	-.001	.5
22	MP1A	X	-7.032	2.5
23	MP1A	Z	4.06	2.5
24	MP1A	Mx	-.004	2.5
25	MP2A	X	-7.926	2.5
26	MP2A	Z	4.576	2.5
27	MP2A	Mx	-.005	2.5
28	MP1A	X	-9.083	7
29	MP1A	Z	5.244	7
30	MP1A	Mx	-.005	7
31	MP2A	X	-2.993	6
32	MP2A	Z	1.728	6
33	MP2A	Mx	.002	6
34	MP2A	X	-2.993	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
35	MP2A	Z	1.728	6
36	MP2A	Mx	-.002	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-18.089	1.5
2	MP2A	Z	0	1.5
3	MP2A	Mx	0	1.5
4	MP2A	X	-18.089	5.5
5	MP2A	Z	0	5.5
6	MP2A	Mx	0	5.5
7	MP2A	X	-18.089	1.5
8	MP2A	Z	0	1.5
9	MP2A	Mx	0	1.5
10	MP2A	X	-18.089	5.5
11	MP2A	Z	0	5.5
12	MP2A	Mx	0	5.5
13	MP1A	X	-5.994	2.5
14	MP1A	Z	0	2.5
15	MP1A	Mx	.003	2.5
16	MP1A	X	-5.994	4.5
17	MP1A	Z	0	4.5
18	MP1A	Mx	.003	4.5
19	MP2A	X	-2.145	.5
20	MP2A	Z	0	.5
21	MP2A	Mx	-.001	.5
22	MP1A	X	-6.87	2.5
23	MP1A	Z	0	2.5
24	MP1A	Mx	-.004	2.5
25	MP2A	X	-8.246	2.5
26	MP2A	Z	0	2.5
27	MP2A	Mx	-.005	2.5
28	MP1A	X	-11.735	7
29	MP1A	Z	0	7
30	MP1A	Mx	-.005	7
31	MP2A	X	-2.438	6
32	MP2A	Z	0	6
33	MP2A	Mx	.002	6
34	MP2A	X	-2.438	6
35	MP2A	Z	0	6
36	MP2A	Mx	-.002	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-17.497	1.5
2	MP2A	Z	-10.102	1.5
3	MP2A	Mx	-.007	1.5
4	MP2A	X	-17.497	5.5
5	MP2A	Z	-10.102	5.5
6	MP2A	Mx	-.007	5.5
7	MP2A	X	-17.497	1.5
8	MP2A	Z	-10.102	1.5
9	MP2A	Mx	.007	1.5
10	MP2A	X	-17.497	5.5
11	MP2A	Z	-10.102	5.5
12	MP2A	Mx	.007	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP1A	X	-6.947	2.5
14	MP1A	Z	-4.011	2.5
15	MP1A	Mx	.004	2.5
16	MP1A	X	-6.947	4.5
17	MP1A	Z	-4.011	4.5
18	MP1A	Mx	.004	4.5
19	MP2A	X	-2.013	.5
20	MP2A	Z	-1.162	.5
21	MP2A	Mx	-.001	.5
22	MP1A	X	-7.032	2.5
23	MP1A	Z	-4.06	2.5
24	MP1A	Mx	-.004	2.5
25	MP2A	X	-7.926	2.5
26	MP2A	Z	-4.576	2.5
27	MP2A	Mx	-.005	2.5
28	MP1A	X	-12.323	7
29	MP1A	Z	-7.114	7
30	MP1A	Mx	-.004	7
31	MP2A	X	-2.993	6
32	MP2A	Z	-1.728	6
33	MP2A	Mx	.002	6
34	MP2A	X	-2.993	6
35	MP2A	Z	-1.728	6
36	MP2A	Mx	-.002	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-12.216	1.5
2	MP2A	Z	-21.16	1.5
3	MP2A	Mx	-.015	1.5
4	MP2A	X	-12.216	5.5
5	MP2A	Z	-21.16	5.5
6	MP2A	Mx	-.015	5.5
7	MP2A	X	-12.216	1.5
8	MP2A	Z	-21.16	1.5
9	MP2A	Mx	.015	1.5
10	MP2A	X	-12.216	5.5
11	MP2A	Z	-21.16	5.5
12	MP2A	Mx	.015	5.5
13	MP1A	X	-6.04	2.5
14	MP1A	Z	-10.461	2.5
15	MP1A	Mx	.004	2.5
16	MP1A	X	-6.04	4.5
17	MP1A	Z	-10.461	4.5
18	MP1A	Mx	.004	4.5
19	MP2A	X	-1.342	.5
20	MP2A	Z	-2.324	.5
21	MP2A	Mx	-.000783	.5
22	MP1A	X	-5.31	2.5
23	MP1A	Z	-9.197	2.5
24	MP1A	Mx	-.003	2.5
25	MP2A	X	-5.482	2.5
26	MP2A	Z	-9.495	2.5
27	MP2A	Mx	-.003	2.5
28	MP1A	X	-7.738	7
29	MP1A	Z	-13.403	7

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
30	MP1A	Mx	0	7
31	MP2A	X	-2.747	6
32	MP2A	Z	-4.757	6
33	MP2A	Mx	.002	6
34	MP2A	X	-2.747	6
35	MP2A	Z	-4.757	6
36	MP2A	Mx	-.002	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	1.5
2	MP2A	Z	-8.746	1.5
3	MP2A	Mx	-.006	1.5
4	MP2A	X	0	5.5
5	MP2A	Z	-8.746	5.5
6	MP2A	Mx	-.006	5.5
7	MP2A	X	0	1.5
8	MP2A	Z	-8.746	1.5
9	MP2A	Mx	.006	1.5
10	MP2A	X	0	5.5
11	MP2A	Z	-8.746	5.5
12	MP2A	Mx	.006	5.5
13	MP1A	X	0	2.5
14	MP1A	Z	-3.763	2.5
15	MP1A	Mx	0	2.5
16	MP1A	X	0	4.5
17	MP1A	Z	-3.763	4.5
18	MP1A	Mx	0	4.5
19	MP2A	X	0	.5
20	MP2A	Z	-.71	.5
21	MP2A	Mx	0	.5
22	MP1A	X	0	2.5
23	MP1A	Z	-2.976	2.5
24	MP1A	Mx	0	2.5
25	MP2A	X	0	2.5
26	MP2A	Z	-2.976	2.5
27	MP2A	Mx	0	2.5
28	MP1A	X	0	7
29	MP1A	Z	-4.379	7
30	MP1A	Mx	.001	7
31	MP2A	X	0	6
32	MP2A	Z	-1.843	6
33	MP2A	Mx	0	6
34	MP2A	X	0	6
35	MP2A	Z	-1.843	6
36	MP2A	Mx	0	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	3.998	1.5
2	MP2A	Z	-6.924	1.5
3	MP2A	Mx	-.005	1.5
4	MP2A	X	3.998	5.5
5	MP2A	Z	-6.924	5.5
6	MP2A	Mx	-.005	5.5
7	MP2A	X	3.998	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
8	MP2A	Z	-6.924	1.5
9	MP2A	Mx	.005	1.5
10	MP2A	X	3.998	5.5
11	MP2A	Z	-6.924	5.5
12	MP2A	Mx	.005	5.5
13	MP1A	X	1.573	2.5
14	MP1A	Z	-2.725	2.5
15	MP1A	Mx	-.000918	2.5
16	MP1A	X	1.573	4.5
17	MP1A	Z	-2.725	4.5
18	MP1A	Mx	-.000918	4.5
19	MP2A	X	.328	.5
20	MP2A	Z	-.568	.5
21	MP2A	Mx	.000191	.5
22	MP1A	X	1.32	2.5
23	MP1A	Z	-2.286	2.5
24	MP1A	Mx	.00077	2.5
25	MP2A	X	1.366	2.5
26	MP2A	Z	-2.365	2.5
27	MP2A	Mx	.000797	2.5
28	MP1A	X	1.769	7
29	MP1A	Z	-3.064	7
30	MP1A	Mx	.002	7
31	MP2A	X	.761	6
32	MP2A	Z	-1.318	6
33	MP2A	Mx	-.000634	6
34	MP2A	X	.761	6
35	MP2A	Z	-1.318	6
36	MP2A	Mx	.000634	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	5.625	1.5
2	MP2A	Z	-3.247	1.5
3	MP2A	Mx	-.002	1.5
4	MP2A	X	5.625	5.5
5	MP2A	Z	-3.247	5.5
6	MP2A	Mx	-.002	5.5
7	MP2A	X	5.625	1.5
8	MP2A	Z	-3.247	1.5
9	MP2A	Mx	.002	1.5
10	MP2A	X	5.625	5.5
11	MP2A	Z	-3.247	5.5
12	MP2A	Mx	.002	5.5
13	MP1A	X	1.657	2.5
14	MP1A	Z	-.956	2.5
15	MP1A	Mx	-.000967	2.5
16	MP1A	X	1.657	4.5
17	MP1A	Z	-.956	4.5
18	MP1A	Mx	-.000967	4.5
19	MP2A	X	.473	.5
20	MP2A	Z	-.273	.5
21	MP2A	Mx	.000276	.5
22	MP1A	X	1.704	2.5
23	MP1A	Z	-.984	2.5
24	MP1A	Mx	.000994	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	MP2A	X	1.941	2.5
26	MP2A	Z	-1.121	2.5
27	MP2A	Mx	.001	2.5
28	MP1A	X	2.7	7
29	MP1A	Z	-1.559	7
30	MP1A	Mx	.002	7
31	MP2A	X	.762	6
32	MP2A	Z	-.44	6
33	MP2A	Mx	-.000635	6
34	MP2A	X	.762	6
35	MP2A	Z	-.44	6
36	MP2A	Mx	.000635	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	5.744	1.5
2	MP2A	Z	0	1.5
3	MP2A	Mx	0	1.5
4	MP2A	X	5.744	5.5
5	MP2A	Z	0	5.5
6	MP2A	Mx	0	5.5
7	MP2A	X	5.744	1.5
8	MP2A	Z	0	1.5
9	MP2A	Mx	0	1.5
10	MP2A	X	5.744	5.5
11	MP2A	Z	0	5.5
12	MP2A	Mx	0	5.5
13	MP1A	X	1.296	2.5
14	MP1A	Z	0	2.5
15	MP1A	Mx	-.000756	2.5
16	MP1A	X	1.296	4.5
17	MP1A	Z	0	4.5
18	MP1A	Mx	-.000756	4.5
19	MP2A	X	.492	.5
20	MP2A	Z	0	.5
21	MP2A	Mx	.000287	.5
22	MP1A	X	1.632	2.5
23	MP1A	Z	0	2.5
24	MP1A	Mx	.000952	2.5
25	MP2A	X	1.997	2.5
26	MP2A	Z	0	2.5
27	MP2A	Mx	.001	2.5
28	MP1A	X	3.538	7
29	MP1A	Z	0	7
30	MP1A	Mx	.002	7
31	MP2A	X	.559	6
32	MP2A	Z	0	6
33	MP2A	Mx	-.000466	6
34	MP2A	X	.559	6
35	MP2A	Z	0	6
36	MP2A	Mx	.000466	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	5.625	1.5
2	MP2A	Z	3.247	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
3	MP2A	Mx	.002	1.5
4	MP2A	X	5.625	5.5
5	MP2A	Z	3.247	5.5
6	MP2A	Mx	.002	5.5
7	MP2A	X	5.625	1.5
8	MP2A	Z	3.247	1.5
9	MP2A	Mx	-.002	1.5
10	MP2A	X	5.625	5.5
11	MP2A	Z	3.247	5.5
12	MP2A	Mx	-.002	5.5
13	MP1A	X	1.657	2.5
14	MP1A	Z	.956	2.5
15	MP1A	Mx	-.000967	2.5
16	MP1A	X	1.657	4.5
17	MP1A	Z	.956	4.5
18	MP1A	Mx	-.000967	4.5
19	MP2A	X	.473	.5
20	MP2A	Z	.273	.5
21	MP2A	Mx	.000276	.5
22	MP1A	X	1.704	2.5
23	MP1A	Z	.984	2.5
24	MP1A	Mx	.000994	2.5
25	MP2A	X	1.941	2.5
26	MP2A	Z	1.121	2.5
27	MP2A	Mx	.001	2.5
28	MP1A	X	3.793	7
29	MP1A	Z	2.19	7
30	MP1A	Mx	.001	7
31	MP2A	X	.762	6
32	MP2A	Z	.44	6
33	MP2A	Mx	-.000635	6
34	MP2A	X	.762	6
35	MP2A	Z	.44	6
36	MP2A	Mx	.000635	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	3.998	1.5
2	MP2A	Z	6.924	1.5
3	MP2A	Mx	.005	1.5
4	MP2A	X	3.998	5.5
5	MP2A	Z	6.924	5.5
6	MP2A	Mx	.005	5.5
7	MP2A	X	3.998	1.5
8	MP2A	Z	6.924	1.5
9	MP2A	Mx	-.005	1.5
10	MP2A	X	3.998	5.5
11	MP2A	Z	6.924	5.5
12	MP2A	Mx	-.005	5.5
13	MP1A	X	1.573	2.5
14	MP1A	Z	2.725	2.5
15	MP1A	Mx	-.000918	2.5
16	MP1A	X	1.573	4.5
17	MP1A	Z	2.725	4.5
18	MP1A	Mx	-.000918	4.5
19	MP2A	X	.328	.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
20	MP2A	Z	.568	.5
21	MP2A	Mx	.000191	.5
22	MP1A	X	1.32	2.5
23	MP1A	Z	2.286	2.5
24	MP1A	Mx	.00077	2.5
25	MP2A	X	1.366	2.5
26	MP2A	Z	2.365	2.5
27	MP2A	Mx	.000797	2.5
28	MP1A	X	2.4	7
29	MP1A	Z	4.157	7
30	MP1A	Mx	0	7
31	MP2A	X	.761	6
32	MP2A	Z	1.318	6
33	MP2A	Mx	-.000634	6
34	MP2A	X	.761	6
35	MP2A	Z	1.318	6
36	MP2A	Mx	.000634	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	1.5
2	MP2A	Z	8.746	1.5
3	MP2A	Mx	.006	1.5
4	MP2A	X	0	5.5
5	MP2A	Z	8.746	5.5
6	MP2A	Mx	.006	5.5
7	MP2A	X	0	1.5
8	MP2A	Z	8.746	1.5
9	MP2A	Mx	-.006	1.5
10	MP2A	X	0	5.5
11	MP2A	Z	8.746	5.5
12	MP2A	Mx	-.006	5.5
13	MP1A	X	0	2.5
14	MP1A	Z	3.763	2.5
15	MP1A	Mx	0	2.5
16	MP1A	X	0	4.5
17	MP1A	Z	3.763	4.5
18	MP1A	Mx	0	4.5
19	MP2A	X	0	.5
20	MP2A	Z	.71	.5
21	MP2A	Mx	0	.5
22	MP1A	X	0	2.5
23	MP1A	Z	2.976	2.5
24	MP1A	Mx	0	2.5
25	MP2A	X	0	2.5
26	MP2A	Z	2.976	2.5
27	MP2A	Mx	0	2.5
28	MP1A	X	0	7
29	MP1A	Z	4.379	7
30	MP1A	Mx	-.001	7
31	MP2A	X	0	6
32	MP2A	Z	1.843	6
33	MP2A	Mx	0	6
34	MP2A	X	0	6
35	MP2A	Z	1.843	6
36	MP2A	Mx	0	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-3.998	1.5
2	MP2A	Z	6.924	1.5
3	MP2A	Mx	.005	1.5
4	MP2A	X	-3.998	5.5
5	MP2A	Z	6.924	5.5
6	MP2A	Mx	.005	5.5
7	MP2A	X	-3.998	1.5
8	MP2A	Z	6.924	1.5
9	MP2A	Mx	-.005	1.5
10	MP2A	X	-3.998	5.5
11	MP2A	Z	6.924	5.5
12	MP2A	Mx	-.005	5.5
13	MP1A	X	-1.573	2.5
14	MP1A	Z	2.725	2.5
15	MP1A	Mx	.000918	2.5
16	MP1A	X	-1.573	4.5
17	MP1A	Z	2.725	4.5
18	MP1A	Mx	.000918	4.5
19	MP2A	X	-.328	.5
20	MP2A	Z	.568	.5
21	MP2A	Mx	-.000191	.5
22	MP1A	X	-1.32	2.5
23	MP1A	Z	2.286	2.5
24	MP1A	Mx	-.00077	2.5
25	MP2A	X	-1.366	2.5
26	MP2A	Z	2.365	2.5
27	MP2A	Mx	-.000797	2.5
28	MP1A	X	-1.769	7
29	MP1A	Z	3.064	7
30	MP1A	Mx	-.002	7
31	MP2A	X	-.761	6
32	MP2A	Z	1.318	6
33	MP2A	Mx	.000634	6
34	MP2A	X	-.761	6
35	MP2A	Z	1.318	6
36	MP2A	Mx	-.000634	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-5.625	1.5
2	MP2A	Z	3.247	1.5
3	MP2A	Mx	.002	1.5
4	MP2A	X	-5.625	5.5
5	MP2A	Z	3.247	5.5
6	MP2A	Mx	.002	5.5
7	MP2A	X	-5.625	1.5
8	MP2A	Z	3.247	1.5
9	MP2A	Mx	-.002	1.5
10	MP2A	X	-5.625	5.5
11	MP2A	Z	3.247	5.5
12	MP2A	Mx	-.002	5.5
13	MP1A	X	-1.657	2.5
14	MP1A	Z	.956	2.5
15	MP1A	Mx	.000967	2.5
16	MP1A	X	-1.657	4.5
17	MP1A	Z	.956	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
18	MP1A	Mx	.000967	4.5
19	MP2A	X	-.473	.5
20	MP2A	Z	.273	.5
21	MP2A	Mx	-.000276	.5
22	MP1A	X	-1.704	2.5
23	MP1A	Z	.984	2.5
24	MP1A	Mx	-.000994	2.5
25	MP2A	X	-1.941	2.5
26	MP2A	Z	1.121	2.5
27	MP2A	Mx	-.001	2.5
28	MP1A	X	-2.7	7
29	MP1A	Z	1.559	7
30	MP1A	Mx	-.002	7
31	MP2A	X	-.762	6
32	MP2A	Z	.44	6
33	MP2A	Mx	.000635	6
34	MP2A	X	-.762	6
35	MP2A	Z	.44	6
36	MP2A	Mx	-.000635	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-5.744	1.5
2	MP2A	Z	0	1.5
3	MP2A	Mx	0	1.5
4	MP2A	X	-5.744	5.5
5	MP2A	Z	0	5.5
6	MP2A	Mx	0	5.5
7	MP2A	X	-5.744	1.5
8	MP2A	Z	0	1.5
9	MP2A	Mx	0	1.5
10	MP2A	X	-5.744	5.5
11	MP2A	Z	0	5.5
12	MP2A	Mx	0	5.5
13	MP1A	X	-1.296	2.5
14	MP1A	Z	0	2.5
15	MP1A	Mx	.000756	2.5
16	MP1A	X	-1.296	4.5
17	MP1A	Z	0	4.5
18	MP1A	Mx	.000756	4.5
19	MP2A	X	-.492	.5
20	MP2A	Z	0	.5
21	MP2A	Mx	-.000287	.5
22	MP1A	X	-1.632	2.5
23	MP1A	Z	0	2.5
24	MP1A	Mx	-.000952	2.5
25	MP2A	X	-1.997	2.5
26	MP2A	Z	0	2.5
27	MP2A	Mx	-.001	2.5
28	MP1A	X	-3.538	7
29	MP1A	Z	0	7
30	MP1A	Mx	-.002	7
31	MP2A	X	-.559	6
32	MP2A	Z	0	6
33	MP2A	Mx	.000466	6
34	MP2A	X	-.559	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
35	MP2A	Z	0	6
36	MP2A	Mx	-.000466	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-5.625	1.5
2	MP2A	Z	-3.247	1.5
3	MP2A	Mx	-.002	1.5
4	MP2A	X	-5.625	5.5
5	MP2A	Z	-3.247	5.5
6	MP2A	Mx	-.002	5.5
7	MP2A	X	-5.625	1.5
8	MP2A	Z	-3.247	1.5
9	MP2A	Mx	.002	1.5
10	MP2A	X	-5.625	5.5
11	MP2A	Z	-3.247	5.5
12	MP2A	Mx	.002	5.5
13	MP1A	X	-1.657	2.5
14	MP1A	Z	-.956	2.5
15	MP1A	Mx	.000967	2.5
16	MP1A	X	-1.657	4.5
17	MP1A	Z	-.956	4.5
18	MP1A	Mx	.000967	4.5
19	MP2A	X	-.473	.5
20	MP2A	Z	-.273	.5
21	MP2A	Mx	-.000276	.5
22	MP1A	X	-1.704	2.5
23	MP1A	Z	-.984	2.5
24	MP1A	Mx	-.000994	2.5
25	MP2A	X	-1.941	2.5
26	MP2A	Z	-1.121	2.5
27	MP2A	Mx	-.001	2.5
28	MP1A	X	-3.793	7
29	MP1A	Z	-2.19	7
30	MP1A	Mx	-.001	7
31	MP2A	X	-.762	6
32	MP2A	Z	-.44	6
33	MP2A	Mx	.000635	6
34	MP2A	X	-.762	6
35	MP2A	Z	-.44	6
36	MP2A	Mx	-.000635	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-3.998	1.5
2	MP2A	Z	-6.924	1.5
3	MP2A	Mx	-.005	1.5
4	MP2A	X	-3.998	5.5
5	MP2A	Z	-6.924	5.5
6	MP2A	Mx	-.005	5.5
7	MP2A	X	-3.998	1.5
8	MP2A	Z	-6.924	1.5
9	MP2A	Mx	.005	1.5
10	MP2A	X	-3.998	5.5
11	MP2A	Z	-6.924	5.5
12	MP2A	Mx	.005	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP1A	X	-1.573	2.5
14	MP1A	Z	-2.725	2.5
15	MP1A	Mx	.000918	2.5
16	MP1A	X	-1.573	4.5
17	MP1A	Z	-2.725	4.5
18	MP1A	Mx	.000918	4.5
19	MP2A	X	-.328	.5
20	MP2A	Z	-.568	.5
21	MP2A	Mx	-.000191	.5
22	MP1A	X	-1.32	2.5
23	MP1A	Z	-2.286	2.5
24	MP1A	Mx	-.00077	2.5
25	MP2A	X	-1.366	2.5
26	MP2A	Z	-2.365	2.5
27	MP2A	Mx	-.000797	2.5
28	MP1A	X	-2.4	7
29	MP1A	Z	-4.157	7
30	MP1A	Mx	0	7
31	MP2A	X	-.761	6
32	MP2A	Z	-1.318	6
33	MP2A	Mx	.000634	6
34	MP2A	X	-.761	6
35	MP2A	Z	-1.318	6
36	MP2A	Mx	-.000634	6

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M4	Y	-500	%8

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M4	Y	-500	%90

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M4	Y	-250	0

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M4	Y	-250	%50

Member Point Loads (BLC 81 : Antenna Ev)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Y	-1.425	1.5
2	MP2A	My	0	1.5
3	MP2A	Mz	.001	1.5
4	MP2A	Y	-1.425	5.5
5	MP2A	My	0	5.5
6	MP2A	Mz	.001	5.5
7	MP2A	Y	-1.425	1.5
8	MP2A	My	0	1.5
9	MP2A	Mz	-.001	1.5
10	MP2A	Y	-1.425	5.5
11	MP2A	My	0	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
12	MP2A	Mz	-.001	5.5
13	MP1A	Y	-1.96	2.5
14	MP1A	My	-.001	2.5
15	MP1A	Mz	0	2.5
16	MP1A	Y	-1.96	4.5
17	MP1A	My	-.001	4.5
18	MP1A	Mz	0	4.5
19	MP2A	Y	-.468	.5
20	MP2A	My	.000273	.5
21	MP2A	Mz	0	.5
22	MP1A	Y	-3.164	2.5
23	MP1A	My	.002	2.5
24	MP1A	Mz	0	2.5
25	MP2A	Y	-3.799	2.5
26	MP2A	My	.002	2.5
27	MP2A	Mz	0	2.5
28	MP1A	Y	-1.211	7
29	MP1A	My	.000524	7
30	MP1A	Mz	-.000303	7
31	MP2A	Y	-.792	6
32	MP2A	My	-.00066	6
33	MP2A	Mz	0	6
34	MP2A	Y	-.792	6
35	MP2A	My	.00066	6
36	MP2A	Mz	0	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Z	-3.562	1.5
2	MP2A	Mx	-.003	1.5
3	MP2A	Z	-3.562	5.5
4	MP2A	Mx	-.003	5.5
5	MP2A	Z	-3.562	1.5
6	MP2A	Mx	.003	1.5
7	MP2A	Z	-3.562	5.5
8	MP2A	Mx	.003	5.5
9	MP1A	Z	-4.901	2.5
10	MP1A	Mx	0	2.5
11	MP1A	Z	-4.901	4.5
12	MP1A	Mx	0	4.5
13	MP2A	Z	-1.17	.5
14	MP2A	Mx	0	.5
15	MP1A	Z	-7.911	2.5
16	MP1A	Mx	0	2.5
17	MP2A	Z	-9.498	2.5
18	MP2A	Mx	0	2.5
19	MP1A	Z	-3.027	7
20	MP1A	Mx	.000757	7
21	MP2A	Z	-1.981	6
22	MP2A	Mx	0	6
23	MP2A	Z	-1.981	6
24	MP2A	Mx	0	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	3.562	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
2	MP2A	Mx	0	1.5
3	MP2A	X	3.562	5.5
4	MP2A	Mx	0	5.5
5	MP2A	X	3.562	1.5
6	MP2A	Mx	0	1.5
7	MP2A	X	3.562	5.5
8	MP2A	Mx	0	5.5
9	MP1A	X	4.901	2.5
10	MP1A	Mx	-.003	2.5
11	MP1A	X	4.901	4.5
12	MP1A	Mx	-.003	4.5
13	MP2A	X	1.17	.5
14	MP2A	Mx	.000683	.5
15	MP1A	X	7.911	2.5
16	MP1A	Mx	.005	2.5
17	MP2A	X	9.498	2.5
18	MP2A	Mx	.006	2.5
19	MP1A	X	3.027	7
20	MP1A	Mx	.001	7
21	MP2A	X	1.981	6
22	MP2A	Mx	-.002	6
23	MP2A	X	1.981	6
24	MP2A	Mx	.002	6

Member Distributed Loads (BLC 40 : Structure Di)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	Y	-9.257	-9.257	0	%100
2	M4	Y	-6.31	-6.31	0	%100
3	MP1A	Y	-4.773	-4.773	0	%100
4	MP2A	Y	-4.773	-4.773	0	%100

Member Distributed Loads (BLC 41 : Structure Wo (0 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	-8.505	-8.505	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	-7.296	-7.296	0	%100
7	MP2A	X	0	0	0	%100
8	MP2A	Z	-7.296	-7.296	0	%100

Member Distributed Loads (BLC 42 : Structure Wo (30 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.088	1.088	0	%100
2	M1	Z	-1.885	-1.885	0	%100
3	M4	X	3.189	3.189	0	%100
4	M4	Z	-5.524	-5.524	0	%100
5	MP1A	X	3.648	3.648	0	%100
6	MP1A	Z	-6.319	-6.319	0	%100
7	MP2A	X	3.648	3.648	0	%100
8	MP2A	Z	-6.319	-6.319	0	%100

Member Distributed Loads (BLC 43 : Structure Wo (60 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	5.654	5.654	0	%100
2	M1	Z	-3.264	-3.264	0	%100
3	M4	X	1.841	1.841	0	%100
4	M4	Z	-1.063	-1.063	0	%100
5	MP1A	X	6.319	6.319	0	%100
6	MP1A	Z	-3.648	-3.648	0	%100
7	MP2A	X	6.319	6.319	0	%100
8	MP2A	Z	-3.648	-3.648	0	%100

Member Distributed Loads (BLC 44 : Structure Wo (90 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	8.704	8.704	0	%100
2	M1	Z	0	0	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	0	0	0	%100
5	MP1A	X	7.296	7.296	0	%100
6	MP1A	Z	0	0	0	%100
7	MP2A	X	7.296	7.296	0	%100
8	MP2A	Z	0	0	0	%100

Member Distributed Loads (BLC 45 : Structure Wo (120 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	5.654	5.654	0	%100
2	M1	Z	3.264	3.264	0	%100
3	M4	X	1.841	1.841	0	%100
4	M4	Z	1.063	1.063	0	%100
5	MP1A	X	6.319	6.319	0	%100
6	MP1A	Z	3.648	3.648	0	%100
7	MP2A	X	6.319	6.319	0	%100
8	MP2A	Z	3.648	3.648	0	%100

Member Distributed Loads (BLC 46 : Structure Wo (150 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.088	1.088	0	%100
2	M1	Z	1.885	1.885	0	%100
3	M4	X	3.189	3.189	0	%100
4	M4	Z	5.524	5.524	0	%100
5	MP1A	X	3.648	3.648	0	%100
6	MP1A	Z	6.319	6.319	0	%100
7	MP2A	X	3.648	3.648	0	%100
8	MP2A	Z	6.319	6.319	0	%100

Member Distributed Loads (BLC 47 : Structure Wo (180 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	8.505	8.505	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	7.296	7.296	0	%100
7	MP2A	X	0	0	0	%100
8	MP2A	Z	7.296	7.296	0	%100

Member Distributed Loads (BLC 48 : Structure Wo (210 Deg))

Member Label	Direction	Start Magnitude[lb/ft	End Magnitude[lb/ft,F	Start Location[ft,%]	End Location[ft,%]

Member Distributed Loads (BLC 48 : Structure Wo (210 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.088	-1.088	0	%100
2	M1	Z	1.885	1.885	0	%100
3	M4	X	-3.189	-3.189	0	%100
4	M4	Z	5.524	5.524	0	%100
5	MP1A	X	-3.648	-3.648	0	%100
6	MP1A	Z	6.319	6.319	0	%100
7	MP2A	X	-3.648	-3.648	0	%100
8	MP2A	Z	6.319	6.319	0	%100

Member Distributed Loads (BLC 49 : Structure Wo (240 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-5.654	-5.654	0	%100
2	M1	Z	3.264	3.264	0	%100
3	M4	X	-1.841	-1.841	0	%100
4	M4	Z	1.063	1.063	0	%100
5	MP1A	X	-6.319	-6.319	0	%100
6	MP1A	Z	3.648	3.648	0	%100
7	MP2A	X	-6.319	-6.319	0	%100
8	MP2A	Z	3.648	3.648	0	%100

Member Distributed Loads (BLC 50 : Structure Wo (270 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-8.704	-8.704	0	%100
2	M1	Z	0	0	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	0	0	0	%100
5	MP1A	X	-7.296	-7.296	0	%100
6	MP1A	Z	0	0	0	%100
7	MP2A	X	-7.296	-7.296	0	%100
8	MP2A	Z	0	0	0	%100

Member Distributed Loads (BLC 51 : Structure Wo (300 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-5.654	-5.654	0	%100
2	M1	Z	-3.264	-3.264	0	%100
3	M4	X	-1.841	-1.841	0	%100
4	M4	Z	-1.063	-1.063	0	%100
5	MP1A	X	-6.319	-6.319	0	%100
6	MP1A	Z	-3.648	-3.648	0	%100
7	MP2A	X	-6.319	-6.319	0	%100
8	MP2A	Z	-3.648	-3.648	0	%100

Member Distributed Loads (BLC 52 : Structure Wo (330 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.088	-1.088	0	%100
2	M1	Z	-1.885	-1.885	0	%100
3	M4	X	-3.189	-3.189	0	%100
4	M4	Z	-5.524	-5.524	0	%100
5	MP1A	X	-3.648	-3.648	0	%100
6	MP1A	Z	-6.319	-6.319	0	%100
7	MP2A	X	-3.648	-3.648	0	%100
8	MP2A	Z	-6.319	-6.319	0	%100

Member Distributed Loads (BLC 53 : Structure Wi (0 Deg))

Member Label	Direction	Start Magnitude[lb/ft	End Magnitude[lb/ft,F	Start Location[ft,%]	End Location[ft,%]

Member Distributed Loads (BLC 53 : Structure Wi (0 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	-2.591	-2.591	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	-2.46	-2.46	0	%100
7	MP2A	X	0	0	0	%100
8	MP2A	Z	-2.46	-2.46	0	%100

Member Distributed Loads (BLC 54 : Structure Wi (30 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.279	.279	0	%100
2	M1	Z	-.483	-.483	0	%100
3	M4	X	.972	.972	0	%100
4	M4	Z	-1.683	-1.683	0	%100
5	MP1A	X	1.23	1.23	0	%100
6	MP1A	Z	-2.13	-2.13	0	%100
7	MP2A	X	1.23	1.23	0	%100
8	MP2A	Z	-2.13	-2.13	0	%100

Member Distributed Loads (BLC 55 : Structure Wi (60 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.449	1.449	0	%100
2	M1	Z	-.837	-.837	0	%100
3	M4	X	.561	.561	0	%100
4	M4	Z	-.324	-.324	0	%100
5	MP1A	X	2.13	2.13	0	%100
6	MP1A	Z	-1.23	-1.23	0	%100
7	MP2A	X	2.13	2.13	0	%100
8	MP2A	Z	-1.23	-1.23	0	%100

Member Distributed Loads (BLC 56 : Structure Wi (90 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	2.231	2.231	0	%100
2	M1	Z	0	0	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	0	0	0	%100
5	MP1A	X	2.46	2.46	0	%100
6	MP1A	Z	0	0	0	%100
7	MP2A	X	2.46	2.46	0	%100
8	MP2A	Z	0	0	0	%100

Member Distributed Loads (BLC 57 : Structure Wi (120 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.449	1.449	0	%100
2	M1	Z	.837	.837	0	%100
3	M4	X	.561	.561	0	%100
4	M4	Z	.324	.324	0	%100
5	MP1A	X	2.13	2.13	0	%100
6	MP1A	Z	1.23	1.23	0	%100
7	MP2A	X	2.13	2.13	0	%100
8	MP2A	Z	1.23	1.23	0	%100

Member Distributed Loads (BLC 58 : Structure Wi (150 Deg))

Member Label	Direction	Start Magnitude[lb/ft	End Magnitude[lb/ft,F	Start Location[ft,%]	End Location[ft,%]

Member Distributed Loads (BLC 58 : Structure Wi (150 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.279	.279	0	%100
2	M1	Z	.483	.483	0	%100
3	M4	X	.972	.972	0	%100
4	M4	Z	1.683	1.683	0	%100
5	MP1A	X	1.23	1.23	0	%100
6	MP1A	Z	2.13	2.13	0	%100
7	MP2A	X	1.23	1.23	0	%100
8	MP2A	Z	2.13	2.13	0	%100

Member Distributed Loads (BLC 59 : Structure Wi (180 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	2.591	2.591	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	2.46	2.46	0	%100
7	MP2A	X	0	0	0	%100
8	MP2A	Z	2.46	2.46	0	%100

Member Distributed Loads (BLC 60 : Structure Wi (210 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.279	-.279	0	%100
2	M1	Z	.483	.483	0	%100
3	M4	X	-.972	-.972	0	%100
4	M4	Z	1.683	1.683	0	%100
5	MP1A	X	-1.23	-1.23	0	%100
6	MP1A	Z	2.13	2.13	0	%100
7	MP2A	X	-1.23	-1.23	0	%100
8	MP2A	Z	2.13	2.13	0	%100

Member Distributed Loads (BLC 61 : Structure Wi (240 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.449	-1.449	0	%100
2	M1	Z	.837	.837	0	%100
3	M4	X	-.561	-.561	0	%100
4	M4	Z	.324	.324	0	%100
5	MP1A	X	-2.13	-2.13	0	%100
6	MP1A	Z	1.23	1.23	0	%100
7	MP2A	X	-2.13	-2.13	0	%100
8	MP2A	Z	1.23	1.23	0	%100

Member Distributed Loads (BLC 62 : Structure Wi (270 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-2.231	-2.231	0	%100
2	M1	Z	0	0	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	0	0	0	%100
5	MP1A	X	-2.46	-2.46	0	%100
6	MP1A	Z	0	0	0	%100
7	MP2A	X	-2.46	-2.46	0	%100
8	MP2A	Z	0	0	0	%100

Member Distributed Loads (BLC 63 : Structure Wi (300 Deg))

Member Label	Direction	Start Magnitude[lb/ft	End Magnitude[lb/ft,F	Start Location[ft,%]	End Location[ft,%]

Member Distributed Loads (BLC 63 : Structure Wi (300 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.449	-1.449	0	%100
2	M1	Z	-.837	-.837	0	%100
3	M4	X	-.561	-.561	0	%100
4	M4	Z	-.324	-.324	0	%100
5	MP1A	X	-2.13	-2.13	0	%100
6	MP1A	Z	-1.23	-1.23	0	%100
7	MP2A	X	-2.13	-2.13	0	%100
8	MP2A	Z	-1.23	-1.23	0	%100

Member Distributed Loads (BLC 64 : Structure Wi (330 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.279	-.279	0	%100
2	M1	Z	-.483	-.483	0	%100
3	M4	X	-.972	-.972	0	%100
4	M4	Z	-1.683	-1.683	0	%100
5	MP1A	X	-1.23	-1.23	0	%100
6	MP1A	Z	-2.13	-2.13	0	%100
7	MP2A	X	-1.23	-1.23	0	%100
8	MP2A	Z	-2.13	-2.13	0	%100

Member Distributed Loads (BLC 65 : Structure Wm (0 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	-.532	-.532	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	-.456	-.456	0	%100
7	MP2A	X	0	0	0	%100
8	MP2A	Z	-.456	-.456	0	%100

Member Distributed Loads (BLC 66 : Structure Wm (30 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.068	.068	0	%100
2	M1	Z	-.118	-.118	0	%100
3	M4	X	.199	.199	0	%100
4	M4	Z	-.345	-.345	0	%100
5	MP1A	X	.228	.228	0	%100
6	MP1A	Z	-.395	-.395	0	%100
7	MP2A	X	.228	.228	0	%100
8	MP2A	Z	-.395	-.395	0	%100

Member Distributed Loads (BLC 67 : Structure Wm (60 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.353	.353	0	%100
2	M1	Z	-.204	-.204	0	%100
3	M4	X	.115	.115	0	%100
4	M4	Z	-.066	-.066	0	%100
5	MP1A	X	.395	.395	0	%100
6	MP1A	Z	-.228	-.228	0	%100
7	MP2A	X	.395	.395	0	%100
8	MP2A	Z	-.228	-.228	0	%100

Member Distributed Loads (BLC 68 : Structure Wm (90 Deg))

Member Label	Direction	Start Magnitude[lb/ft	End Magnitude[lb/ft,F	Start Location[ft,%]	End Location[ft,%]

Member Distributed Loads (BLC 68 : Structure Wm (90 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.544	.544	0	%100
2	M1	Z	0	0	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	0	0	0	%100
5	MP1A	X	.456	.456	0	%100
6	MP1A	Z	0	0	0	%100
7	MP2A	X	.456	.456	0	%100
8	MP2A	Z	0	0	0	%100

Member Distributed Loads (BLC 69 : Structure Wm (120 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.353	.353	0	%100
2	M1	Z	.204	.204	0	%100
3	M4	X	.115	.115	0	%100
4	M4	Z	.066	.066	0	%100
5	MP1A	X	.395	.395	0	%100
6	MP1A	Z	.228	.228	0	%100
7	MP2A	X	.395	.395	0	%100
8	MP2A	Z	.228	.228	0	%100

Member Distributed Loads (BLC 70 : Structure Wm (150 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.068	.068	0	%100
2	M1	Z	.118	.118	0	%100
3	M4	X	.199	.199	0	%100
4	M4	Z	.345	.345	0	%100
5	MP1A	X	.228	.228	0	%100
6	MP1A	Z	.395	.395	0	%100
7	MP2A	X	.228	.228	0	%100
8	MP2A	Z	.395	.395	0	%100

Member Distributed Loads (BLC 71 : Structure Wm (180 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	.532	.532	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	.456	.456	0	%100
7	MP2A	X	0	0	0	%100
8	MP2A	Z	.456	.456	0	%100

Member Distributed Loads (BLC 72 : Structure Wm (210 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.068	-.068	0	%100
2	M1	Z	.118	.118	0	%100
3	M4	X	-.199	-.199	0	%100
4	M4	Z	.345	.345	0	%100
5	MP1A	X	-.228	-.228	0	%100
6	MP1A	Z	.395	.395	0	%100
7	MP2A	X	-.228	-.228	0	%100
8	MP2A	Z	.395	.395	0	%100

Member Distributed Loads (BLC 73 : Structure Wm (240 Deg))

Member Label	Direction	Start Magnitude[lb/ft...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]

Member Distributed Loads (BLC 73 : Structure Wm (240 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.353	-.353	0	%100
2	M1	Z	.204	.204	0	%100
3	M4	X	-.115	-.115	0	%100
4	M4	Z	.066	.066	0	%100
5	MP1A	X	-.395	-.395	0	%100
6	MP1A	Z	.228	.228	0	%100
7	MP2A	X	-.395	-.395	0	%100
8	MP2A	Z	.228	.228	0	%100

Member Distributed Loads (BLC 74 : Structure Wm (270 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.544	-.544	0	%100
2	M1	Z	0	0	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	0	0	0	%100
5	MP1A	X	-.456	-.456	0	%100
6	MP1A	Z	0	0	0	%100
7	MP2A	X	-.456	-.456	0	%100
8	MP2A	Z	0	0	0	%100

Member Distributed Loads (BLC 75 : Structure Wm (300 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.353	-.353	0	%100
2	M1	Z	-.204	-.204	0	%100
3	M4	X	-.115	-.115	0	%100
4	M4	Z	-.066	-.066	0	%100
5	MP1A	X	-.395	-.395	0	%100
6	MP1A	Z	-.228	-.228	0	%100
7	MP2A	X	-.395	-.395	0	%100
8	MP2A	Z	-.228	-.228	0	%100

Member Distributed Loads (BLC 76 : Structure Wm (330 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.068	-.068	0	%100
2	M1	Z	-.118	-.118	0	%100
3	M4	X	-.199	-.199	0	%100
4	M4	Z	-.345	-.345	0	%100
5	MP1A	X	-.228	-.228	0	%100
6	MP1A	Z	-.395	-.395	0	%100
7	MP2A	X	-.228	-.228	0	%100
8	MP2A	Z	-.395	-.395	0	%100

Member Area Loads

Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
No Data to Print ...						

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

	Member	Shape	Code Check	L...	LC	Shear C...	Loc...	...		phi*P...	phi*P...	phi*M...	phi*M...	...	Eqn
1	M1	HSS4X4...	.171	0	12	.183	0	y	29	10662...	106812	12.662	12.662	...	H1-1b
2	M4	PIPE_3.0	.321	2	30	.095	2		1	59852...	65205	5.749	5.749	...	H1-1b
3	MP1A	PIPE_2.0	.207	3...	12	.027	3.5...		7	16368...	32130	1.872	1.872	...	H1-1b
4	MP2A	PIPE_2.0	.407	3...	7	.044	3.4...		12	16368...	32130	1.872	1.872	...	H1-1b

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N1	max	669.877	11	1382.388	47	1059.3	1	-.395	7	1.173	12	1.04	47
2		min	-669.877	5	450.57	73	-1059.3	7	-1.417	37	-1.174	6	-1.448	29
3	Totals:	max	669.877	11	1382.388	47	1059.3	1						
4		min	-669.877	5	450.57	73	-1059.3	7						

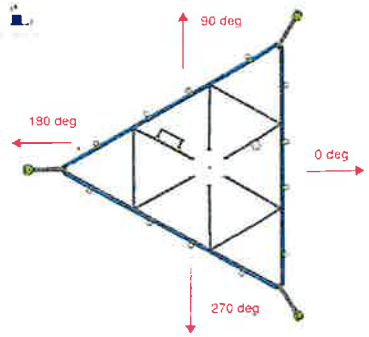
VzW SMART Tool© Vendor

Client:	Verizon Wireless	Date:	7/24/2023
Site Name:	Durham South CT		
MDG #:	500398053		
Fuze ID #:	17123798	Page:	1
			Version 1.01

I. Mount-to-Tower Connection Check

Custom Orientation Required — Yes

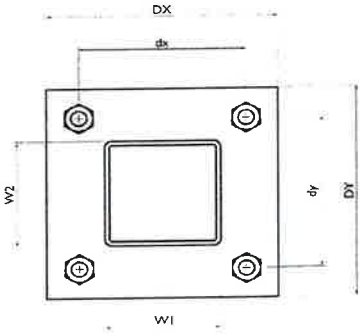
Nodes (labeled per Risa)	Orientation (per graphic of typical platform)
N1	0



Tower Connection Bolt Checks — Yes

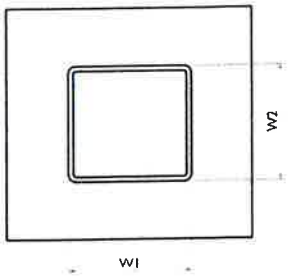
Bolt Orientation — Parallel

Bolt Quantity per Reaction:	4
d_x (in) *(Delta X of typ. bolt config. sketch)*:	6.5
d_y (in) *(Delta Y of typ. bolt config. sketch)*:	6.5
Bolt Type:	A307
Bolt Diameter (in):	0.5
Required Tensile Strength / bolt (kips):	1.4
Required Shear Strength / bolt (kips):	1.2
Tensile Capacity / bolt (kips):	6.6
Shear Capacity / bolt (kips):	4.0
Bolt Overall Utilization:	30.7%



Tower Connection Baseplate Checks — Yes

Connecting Standoff Member Shape:	Rect Tube
Weld Stiffener Configuration:	No Stiffeners
Plate Width, D_x (in):	9
Plate Height, D_y (in):	9
W1(in):	4
W2 (in):	4
Member Thickness (in):	0.1875
Stiffener location a_1 (in):	
Stiffener location b_1 (in):	
Stiffener location a_2 (in):	
Stiffener location b_2 (in):	
F_y (ksi, plate):	36
Plate Thickness (in):	0.47
Length of Yield Line, L_y (in):	6.80
Bolt Eccentricity, e (in):	1.94
M_u (kip-in):	3.38
Phi*M_n (kip-in):	12.17
Plate Bending Utilization:	27.7%



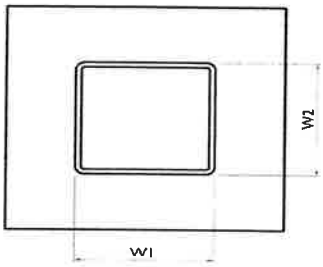
VzW SMART Tool© Vendor

Client:	Verizon Wireless	Date:	7/24/2023
Site Name:	Durham South CT		
PSLC #:	500398053		
Fuze ID #:	17123798	Page:	2

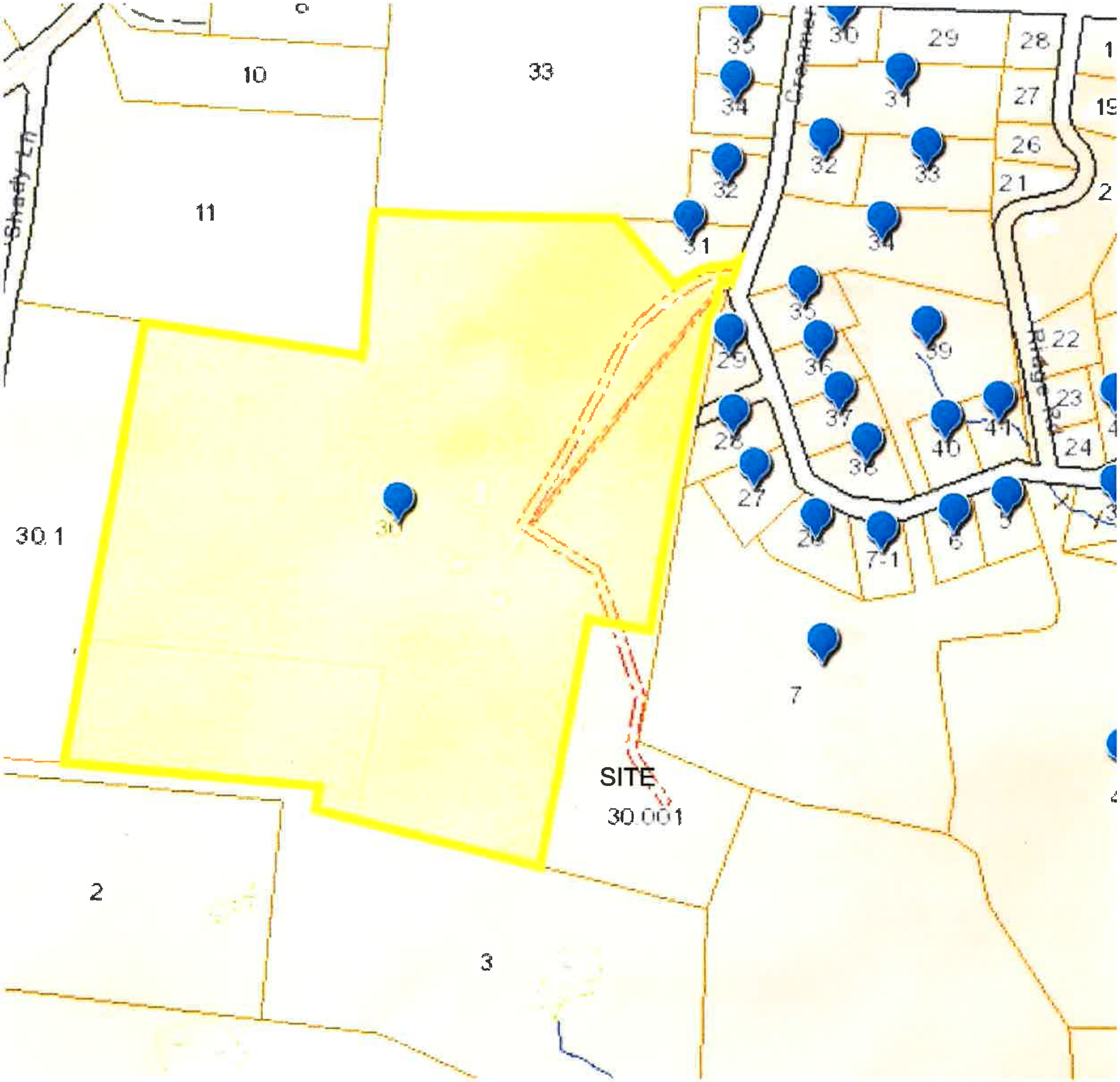
Version 1.01

Tower Connection Weld Checks

	Yes
Weld Shape:	Rectangle
Weld Stiffener Configuration:	None
Stiffener Notch Length, n (in):	
Weld Size (1/16 in):	3
W1 (in):	4
W2 (in):	4
Weld Total Length (in):	16.00
Z_x (in^3/in):	21.33
Z_y (in^3/in):	21.33
J_p (in^4/in):	85.33
c_x (in)	2.1875
c_y (in)	2.1875
Required combined strength (kip/in):	0.79
Weld Capacity (kip/in):	4.18
Weld Utilization:	**19.0%**



ATTACHMENT 4


SITE
30.001
30.1
33
10
11
2
3
7
Shady Ln
Ridge Rd

Property Card: 134 R CREAMERY RD R

Town of Durham, CT

NO PHOTO AVAILABLE

Parcel ID: 100-30
Account #: L0141900

Owner: ADCT LLC

Mailing Address: 34R GOLDFINCH RD

DURHAM, CT 06422

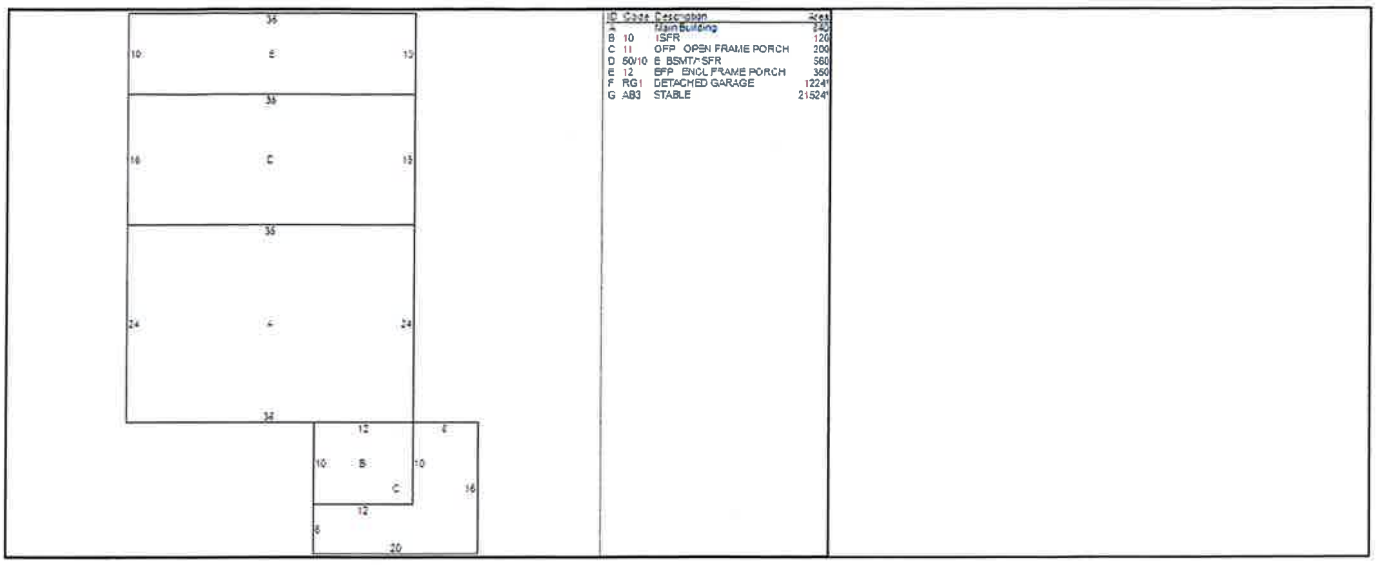
Land: $380100
Building: $649900
Total: $1030000

Building Details

Building Details

Card Number: 1	**Exterior Wall:** 1:FRAME
Land Use Code: 101	**Bedrooms:** 3
Year Built: 1981	**Baths:** 1
Style: 03:COLONIAL	**Half Baths:** 1
Units:	**Heating:** 2:BASIC
SFLA:	**Heating System:** 7:ELECTR BASEBRD
	Fuel: 4:ELECTRIC
Card Number:	**Exterior Wall:**
Land Use Code: 200	**Bedrooms:**
Year Built:	**Baths:**
Style:	**Half Baths:**
Units:	**Heating:**
SFLA:	**Heating System:**
	Fuel:

BUILDING SKETCH



ID	Code	Description	Area
A		Main Building	840
B	10	1SFR	120
C	11	OFP OPEN FRAME PORCH	200
D	50/10	B BSMT/1SFR	360
E	12	EFP ENCL FRAME PORCH	360
F	RG1	DETACHED GARAGE	1224
G	AB3	STABLE	21524

ATTACHMENT 5

Verizon/Durham South

UNITED STATES POSTAL SERVICE®

Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here *Postmark with Date of Receipt.*
Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103	3	3	neopost 08/02/2023 US POSTAGE $003.19⁰ ZIP 06103 041L12203937
	Postmaster, per *(name of receiving employee)*		

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	George Eames, First Selectman Town of Durham 30 Town House Road Durham, CT 06422				
2.	Robin Newton, Consulting Town Planner Town of Durham 30 Town House Road Durham, CT 06422				
3.	ADCT, LLC 34R Goldfinch Road Durham, CT 06422				
4.					
5.					
6.					

OLD STATE HOUSE STATION OFFICE AUG 2 - 2023