

July 27, 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  
1 Deerfield Lane, Ansonia, Connecticut**

Dear Attorney Bachman:

Cellco Partnership d/b/a Verizon Wireless (“Cellco”) currently maintains an existing wireless telecommunications facility at the above-referenced property address (the “Property”). Cellco’s facility consists of antennas and remote radio heads attached to a tower. Equipment associated with the facility is located on the ground adjacent to the tower. The existing facility was approved by the Siting Council (“Council”) in November of 2007 (Docket No. 340). A copy of the Council’s Docket No. 340 Decision and Order is included in Attachment 1.

Cellco’s proposed modification involves the installation of two (2) interference mitigation filters (“filter”) on the 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 Ansonia’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 antennas.

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

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

4. The installation of 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 platform and mounting assembly can support Cellco's proposed modifications. Copies of the SA and MA are included in Attachment 3.

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

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

Sincerely,



Kenneth C. Baldwin

Enclosures

Copy to:

David S. Casseti, Ansonia Mayor  
Ronda Porrini, Land Use Administrator  
Macabee Properties LLC, Property Owner  
Kamoya Bautista, Verizon Wireless

# ATTACHMENT 1

**DOCKET NO. 340** - Optasite Towers LLC and Omnipoint } Connecticut  
Communications, Inc. application for a Certificate of }  
Environmental Compatibility and Public Need for the } Siting  
construction, maintenance and operation of a telecommunications }  
facility located at 1 Deerfield Lane, Ansonia, Connecticut. } Council

November 29, 2007

### **Decision and Order**

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate, either alone or cumulatively with other effects, when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application, and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to Optasite Towers LLC (Optasite) and Omnipoint Communications, Inc. (T-Mobile), hereinafter collectively referred to as the Certificate Holder, for a telecommunications facility at 1 Deerfield Lane, Ansonia, Connecticut.

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

1. The tower shall be constructed as a monopole, no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of T-Mobile and other entities, both public and private, but such tower shall not exceed a height of 170 feet above ground level. The height at the top of Certificate Holder's antennas shall not exceed 170 feet above ground level.
2. Such tower shall incorporate a yield point to eliminate the potential fall radius onto the adjacent property.
3. All cellular and PCS antennas shall be attached to the tower with T-arms.
4. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the City of Ansonia for comment, and all parties and intervenors as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:
  - a) a final site plan(s) of site development to include specifications for the tower, tower foundation, antennas, equipment compound, radio equipment, access road, utility line, and landscaping; and
  - b) construction plans for site clearing, grading, water drainage, and erosion and sedimentation control consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.
5. Utilities shall be underground and follow the general alignment of the access drive.
6. During construction activities, no soils should be removed from the site without proper waste characterization to determine disposal requirements.

7. The Certificate Holder shall, prior to the commencement of operation, provide the Council worst-case modeling of the electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of the electromagnetic radio frequency power density be submitted to the Council if and when circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.
8. Upon the establishment of any new State or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.
9. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.
10. The Certificate Holder shall provide reasonable space on the tower for no compensation for any City of Ansonia and Town of Woodbridge public safety services (police, fire and medical services), provided such use can be accommodated and is compatible with the structural integrity of the tower.
11. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed and providing wireless services within eighteen months from the date of the mailing of the Council's Findings of Fact, Opinion, and Decision and Order (collectively called "Final Decision"), this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's Final Decision shall not be counted in calculating this deadline.
12. Any request for extension of the time period referred to in Condition 11 shall be filed with the Council not later than 60 days prior to the expiration date of this Certificate and shall be served on all parties and intervenors, as listed in the service list, and the City of Ansonia. Any proposed modifications to this Decision and Order shall likewise be so served.
13. If the facility ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.
14. The Certificate Holder shall remove any nonfunctioning antenna, and associated antenna mounting equipment, within 60 days of the date the antenna ceased to function.
15. In accordance with Section 16-50j-77 of the Regulations of Connecticut State Agencies, the Certificate Holder shall provide the Council with written notice two weeks prior to the commencement of site construction activities. In addition, the Certificate Holder shall provide the Council with written notice of the completion of site construction and the commencement of site operation.

Pursuant to General Statutes § 16-50p, the Council hereby directs that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in The New Haven Register and in the Amity Observer.

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

The parties and intervenors to this proceeding are:

**Applicant**

Optasite Towers LLC and  
Omnipoint Communications, Inc.

**Its Representative**

Julie Kohler, Esq.  
Carrie L. Larson, Esq.  
Cohen and Wolf, P.C.  
1115 Broad Street  
Bridgeport, CT 06604  
(203) 368-1821  
(203) 394-9901  
[jkohler@cohenandwolf.com](mailto:jkohler@cohenandwolf.com)  
[clarson@cohenandwolf.com](mailto:clarson@cohenandwolf.com)

**Intervenor**

Cellco Partnership d/b/a Verizon Wireless

**Its Representative**

Kenneth C. Baldwin, Esq.  
Robinson & Cole LLP  
280 Trumbull Street  
Hartford, CT 06103-3597  
(860) 275-8200  
(860) 275-8299 fax  
[kbaldwin@rc.com](mailto:kbaldwin@rc.com)

**Intervenor**

Osborne Lane Associates, LLC

**Its Representative**

William Fieber  
Keith A. Russo  
c/o The Fieber Group  
47 Elm Street  
New Canaan, CT 06840  
(203) 972-4975  
(203) 972-4977 fax  
[krusso@fiebergroup.com](mailto:krusso@fiebergroup.com)

**Intervenor**

Gennaro Savino

**Its Representative**

Gennaro Savino  
128 Ford Road  
Woodbridge, CT 06525  
(203) 387-1573  
[savinovineyards@sbcglobal.net](mailto:savinovineyards@sbcglobal.net)

**Intervenor**

Brian Freeman

**Its Representative**

Brian Freeman  
5 Hampton Trail  
Wallingford, CT 06492  
(203) 793-7505  
[Brian@sparc.us](mailto:Brian@sparc.us)

# **ATTACHMENT 2**



# BSF0020F3V1-1

## TWIN BANDSTOP 900MHZ INTERFERENCE MITIGATION FILTER

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



### FEATURES

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

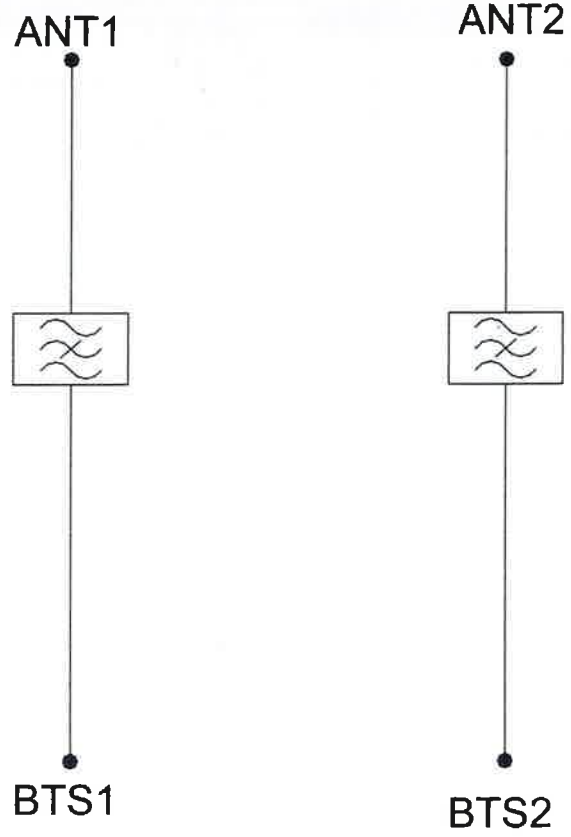
### TECHNICAL SPECIFICATIONS

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

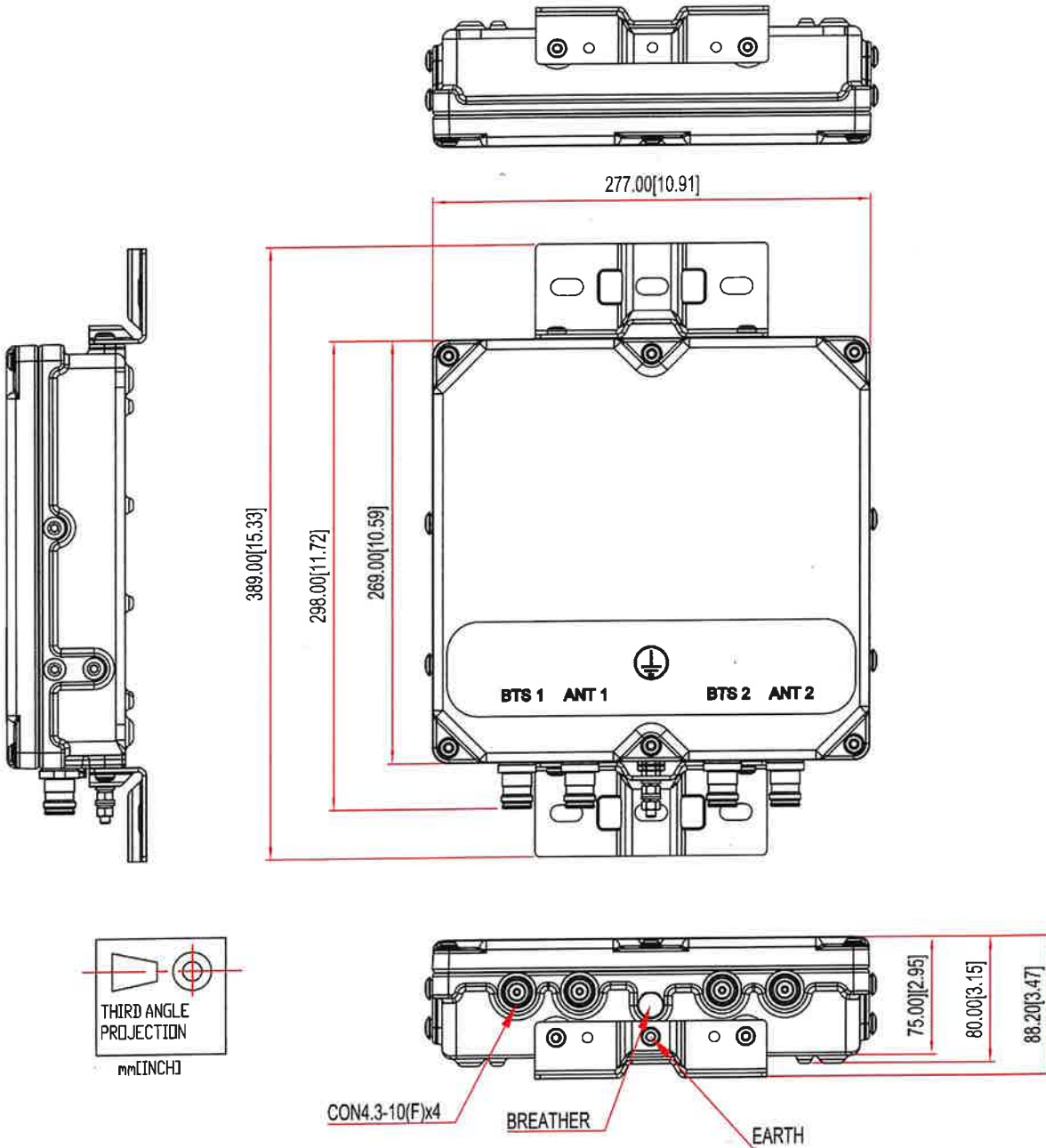
## ORDERING INFORMATION

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

ELECTRICAL BLOCK DIAGRAM



**MECHANICAL BLOCK DIAGRAM**



# **ATTACHMENT 3**



**Tower Engineering Solutions**

Phone (972) 483-0607, Fax (972) 975-9615  
1320 Greenway Drive, Suite 600, Irving, Texas 75038

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## Structural Analysis Report

**Existing 169 ft SABRE Monopole**

**Customer Name: SBA Communications Corp**

**Customer Site Number: CT13071-A**

**Customer Site Name: Woodbridge**

**Carrier Name: Verizon (App#: 232177, V#2)**

**Carrier Site ID / Name: 5000382749 / Ansonia East CT**

**Site Location: 1 Deerfield Lane**

**Ansonia, Connecticut**

**New Haven County**

**Latitude: 41.350750**

**Longitude: -73.049250**

### Analysis Result:

**Max Structural Usage: 82.0% [Pass]**

**Max Foundation Usage: 79.0% [Pass]**

**Additional Usage Caused by New Mount/Mount Modification: N/A**



**Report Prepared By: Wei-Hsiang Chen**



**Tower Engineering Solutions**

Phone (972) 483-0607, Fax (972) 975-9615  
1320 Greenway Drive, Suite 600, Irving, Texas 75038

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**New Haven County**

**Latitude: 41.350750**

**Longitude: -73.049250**

### **Analysis Result:**

**Max Structural Usage: 82.0% [Pass]**

**Max Foundation Usage: 79.0% [Pass]**

**Additional Usage Caused by New Mount/Mount Modification: N/A**

**Report Prepared By: Wei-Hsiang Chen**

## Introduction

The purpose of this report is to summarize the analysis results on the 169 ft SABRE Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

## Sources of Information

<b>Tower Drawings</b>	Sabre, DWG # 08-01016-PE, dated 1/7/2008
<b>Foundation Drawing</b>	Sabre, DWG # 08-01016, dated 1/30/2008
<b>Geotechnical Report</b>	JGI Eastern, Inc., Project # J2085109, dated 1/29/2008
<b>Modification Drawings</b>	TES, Project # 17022, dated 9/1/2015 TES, Project # 19194, dated 12/9/2015 TES, Project # 22848 dated 6/23/2016
<b>Mount Analysis</b>	Verizon SMART Tool Project # 10206260, dated 6/30/2023

## Analysis Criteria

The comprehensive analysis was performed in accordance with the requirements and stipulations of the TIA-222-H. In accordance with this standard, the structure was analyzed using **TESPoles**, a proprietary analysis software. The program considers the structure as an elastic 3-D model with second-order effects and temperature effects incorporated in the analysis. The analysis was performed using multiple wind directions.

<b>Wind Speed Used in the Analysis:</b>	119.0 mph (3-Sec. Gust) (Ultimate wind speed)
<b>Wind Speed with Ice:</b>	50 mph (3-Sec. Gust) with 1" radial ice concurrent
<b>Service Load Wind Speed:</b>	60 mph + 0" Radial ice
<b>Standard/Codes:</b>	TIA-222-H / 2021 IBC / 2022 Connecticut State Building Code
<b>Exposure Category:</b>	B
<b>Risk Category:</b>	II
<b>Topographic Category:</b>	1
<b>Crest Height:</b>	0 ft
<b>Seismic Parameters:</b>	$S_s = 0.201$ , $S_1 = 0.054$

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.



## Existing Antennas, Mounts and Transmission Lines

The table below summarizes the antennas, mounts and transmission lines that were considered in the analysis as existing on the tower.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	167.0	3	RFS APXVAA24_43-U-A20 - Panel	(3) T-Arms/Commscope VSR-MS-B	(10) 1-5/8" Coax (3) 1-5/8" Fiber (1) 1-1/4" Fiber	T-Mobile
2		3	Air 32 KRD901146-1_B66A_B2A - Panel			
3		3	Ericsson AIR 21 B2A/B4P - Panel			
4		3	Ericsson AIR6449 B41 - Panel			
5		3	Ericsson KRY 112 144/1			
6		3	Ericsson Radio 4449 B71+B85			
7		3	Ericsson Radio 4415 B25			
-	157.0	6	JMA Wireless MX06FRO660-03 - Panel	(3) T-Arms w/ (3) JMA Wireless 91900314-02 Brackets	(16) 1 5/8" (1) 1 5/8" Hybrid (1) 1/2"	Verizon
-		3	Samsung MT6407-77A - Panel			
-		3	Samsung RF4439d-25A RRU			
-		3	Samsung RF4440d-13A RRU			
-		1	Raycap DB-C1-12C-24AB-0Z - OVP			
-		4	Andrew DB846F65ZAXY - Panel			
-		2	Andrew DB846H80E-SX - Panel			
16	150.0	3	Ericsson Air6419 B77G - Panel	(3) T-Arms w/ (6) 2" STD Steel Pipe Brace Secured Existing Mount & Tower	(7) 1 5/8" (4) 1" DC (2) 1/2" Fiber (2) 3/4" DC	AT&T
17	148.0	1	Quintel QD6616-7 - Panel			
18		2	Quintel QD8616-7 - Panel			
19		2	CCI DMP65R-BU8DA - Panel			
20		1	CCI DMP65R-BU6DA - Panel			
21		6	Powerwave LGP13519 Diplexer			
22		3	Ericsson RRUS 8843 B2 B66A			
23		3	Ericsson RRUS 32			
24		3	Ericsson RRUS 4449 B5/B12			
25		3	Ericsson RRUS 4478 B14			
26		2	Raycap DC9-48-60-24-8C-EV			
27		3	Powerwave 1001940			
28		1	Commscope WCS-IMGQ-AMT			
29		6	Powerwave 21401			
30	146.0	3	Ericsson Air6449 B77D - Panel	(1) SitePro Low Profile Platform w/ handrail (RMQP-4096-HK)	(4) 1/2" Coax (1) 1-5/8" Fiber (4) 1-1/4" Fiber	Sprint Nextel
31	127.0	3	Nokia AAHC - Panel			
32		3	Commscope NNVV-65B-R4 - Panel			
33		4	Dragonwave Horizon Duo			
34		3	ALU 1900 Mhz - RRU			
35		6	ALU 800 Mhz - RRU			
36		3	ALU TD-RRH8x20-25 - RRU			
37		3	Andrew VHLP2-11 - Dish			
38		1	Andrew VHLP800-11 - Dish			
39	117.0	3	JMA MX08FRO665-21 - Panel	Commscope MC-PK8-DSH Platform	(1) 1.6" Hybrid	Dish Network
40		3	Fujitsu TA08025-B605 RRU			
41		3	Fujitsu TA08025-B604 RRU			
42		1	Raycap RDIDC-9181-PF-48-OVP			

**Proposed Carrier's Final Configuration of Antennas, Mounts and Transmission Lines**

Information pertaining to the proposed carrier's final configuration of antennas and transmission lines was provided by SBA Communications Corp. The proposed antennas and lines are listed below.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
8	157.0	6	JMA Wireless MX06FRO660-03 - Panel	(3) T-Arms w/ (3) JMA Wireless 91900314-02 Brackets	(16) 1 5/8" (1) 1 5/8" Hybrid (1) 1/2"	Verizon
9		3	Samsung MT6407-77A - Panel			
10		4	Andrew DB846F65ZAXY - Panel			
11		2	Andrew DB846H80E-SX - Panel			
12		3	Samsung RF4439d-25A RRU			
13		3	Samsung RF4440d-13A RRU			
14		1	Raycap DB-C1-12C-24AB-0Z - OVP			
15		2	Kaelus BSF0020F3V1-1 - Filter			

See the attached coax layout for the line placement considered in the analysis.

## **Analysis Results**

The results of the structural analysis, performed for the wind and ice loading and antenna equipment as defined above, are summarized as the following:

	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:	<b>82.0%</b>	<b>73.1%</b>	<b>60.0%</b>
Pass/Fail	<b>Pass</b>	<b>Pass</b>	<b>Pass</b>

## **Foundations**

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	4477.65	35.1	60.4

The foundation has been investigated using the supplied documents and soils report and was found adequate. Therefore, no modification to the foundation will be required.

## **Service Load Condition (Rigidity):**

Operational characteristics of the tower are found to be within the limits prescribed by TIA-222 for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 1.5353 degrees under the operational wind speed as specified in the Analysis Criteria.

## **Conclusions**

Based on the analysis results, the existing structure and its foundation were found to be adequate to safely support the existing and proposed equipment and meet the minimum requirements per the TIA-222 Standard under the design basic wind speed as specified in the Analysis Criteria.

## Standard Conditions

1. This analysis was performed based on the information supplied to **(TES) Tower Engineering Solutions, LLC**. Verification of the information provided was not included in the Scope of Work for **TES**. The accuracy of the analysis is dependent on the accuracy of the information provided.
2. The structural analysis was performance based upon the evidence available at the time of this report. All information provided by the client is considered to be accurate.
3. The analyses will be performed based on the codes as specified by the client or based on the best knowledge of the engineering staff of **TES**. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/TIA-222. If wind speed and/or ice loads are different from the minimum values recommended by the ANSI/TIA-222 standard or other codes, **TES** should be notified in writing and the applicable minimum values provided by the client.
4. The configuration of the existing mounts, antennas, coax and other appurtenances were supplied by the customer for the current structural analysis. **TES** has not visited the tower site to verify the adequacy of the information provided. If there is any discrepancy found in the report regarding the existing conditions, **TES** should be notified immediately to evaluate the effect of the discrepancy on the analysis results.
5. The client will assume responsibility for rework associated with the differences in initially provided information, including tower and foundation information, existing and/or proposed equipment and transmission lines.
6. If a feasibility analysis was performed, final acceptance of changed conditions shall be based upon a rigorous structural analysis.

## Usage Diagram - Max Ratio 82.03% at 102.3ft

**Structure:** CT13071-A-SBA  
**Site Name:** Woodbridge  
**Height:** 169.00 (ft)  
**Base Elev:** 0.000 (ft)

**Code:** EIA/TIA-222-H  
**Exposure:** B  
**Gh:** 1.1

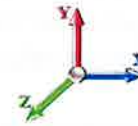
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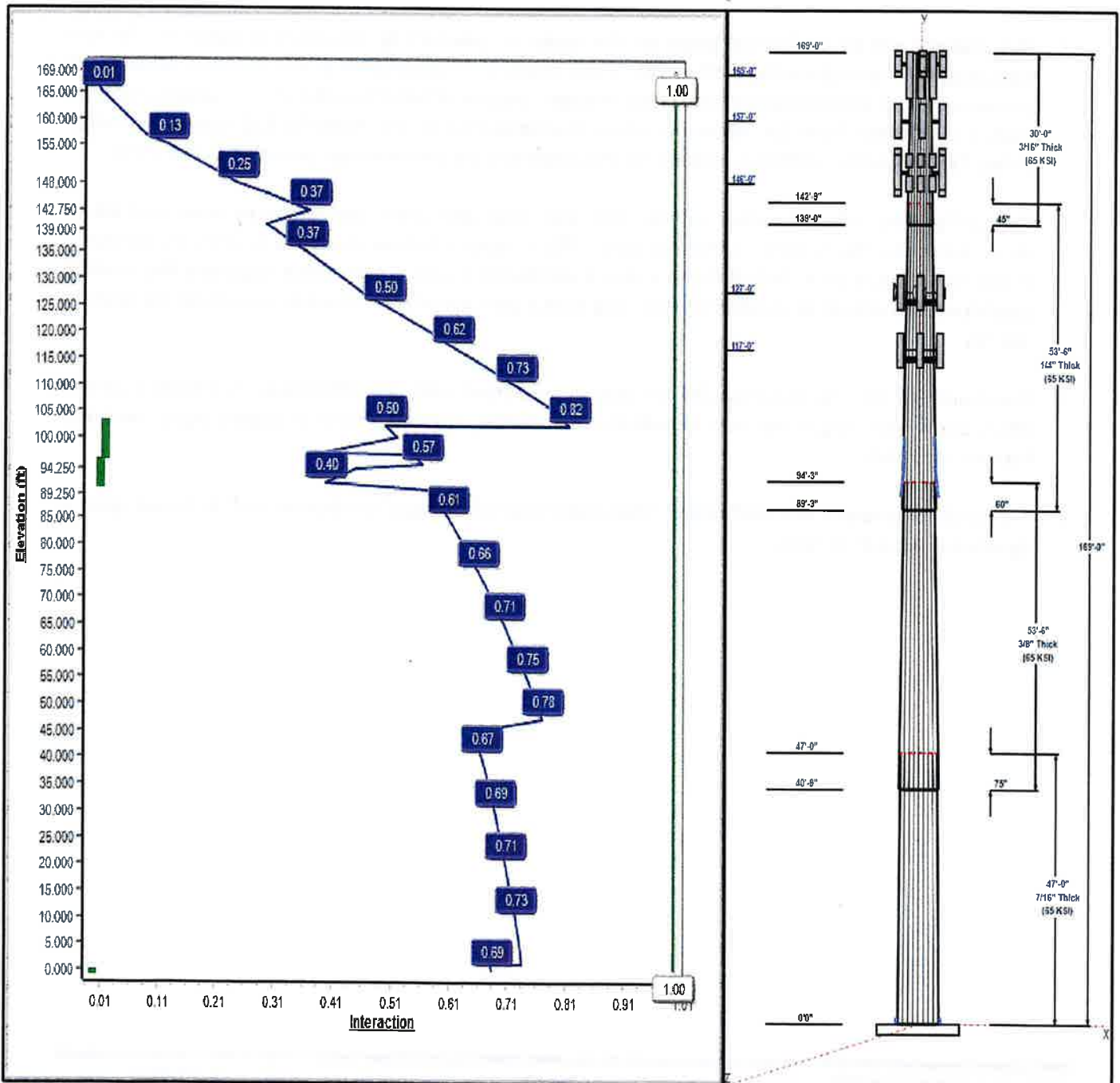
**Dead Load Factor:** 1.20  
**Wind Load Factor:** 1.00

**Load Case : 1.2D + 1.0W 119 mph Wind**



**Iterations:** 27

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**Structure: CT13071-A-SBA**

**Type:** Tapered  
**Site Name:** Woodbridge  
**Height:** 169.00 (ft)  
**Base Elev:** 0.00 (ft)

**Base Shape:** 18 Sided  
**Taper:** 0.20003

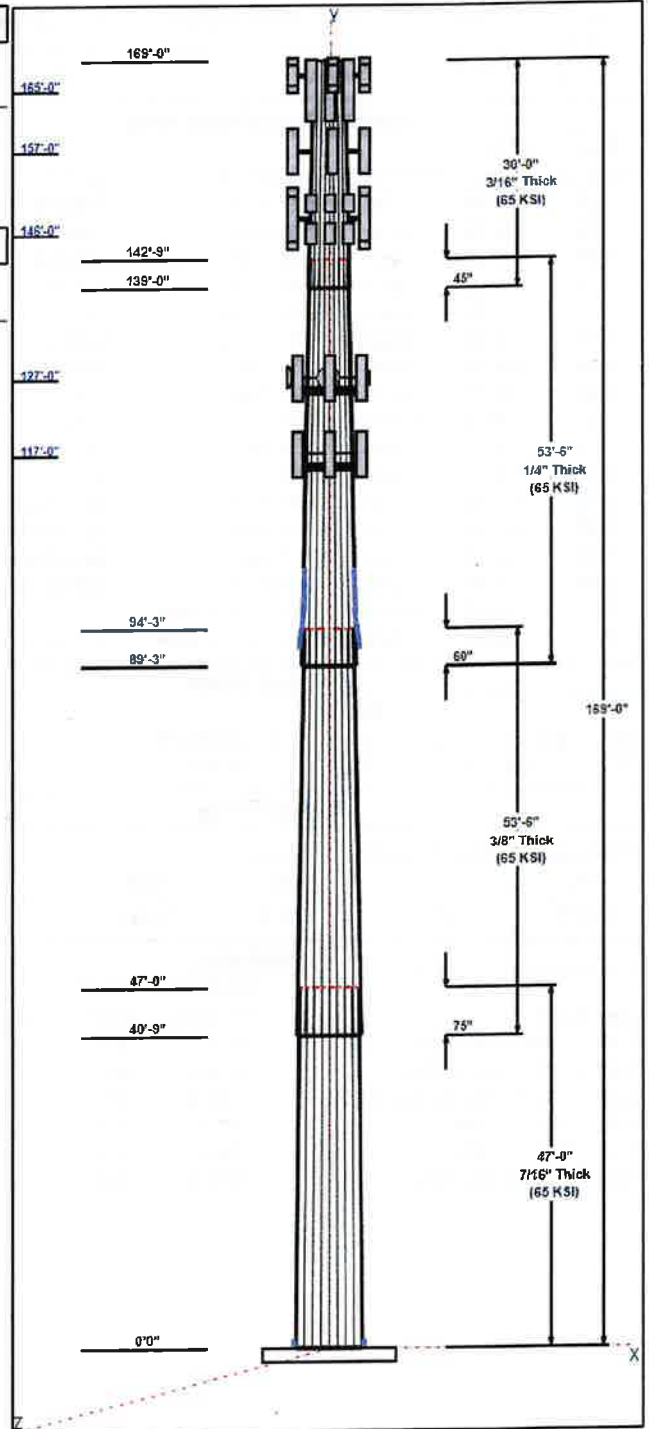
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Shaft Properties							
Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	47.00	46.78	56.18	0.438		0.20003	65
2	53.50	38.08	48.78	0.375	Slip	0.20003	65
3	53.50	28.88	39.58	0.250	Slip	0.20003	65
4	30.00	24.00	30.00	0.188	Slip	0.20003	65

Discrete Appurtenances				
Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
167.00	167.00	3	RRUS 4415 B25	T-Mobile
167.00	167.00	3	Ericsson - Radio 4449	T-Mobile
167.00	167.00	3	AIR 6449 B41	T-Mobile
167.00	167.50	3	T-Arms/Commscope	T-Mobile
167.00	167.00	3	AIR 21 B2A/B4P	T-Mobile
167.00	167.00	3	Ericsson - KRY 112 144/2	T-Mobile
165.00	165.00	3	APXVAA24_43-U-A20	T-Mobile
165.00	165.00	3	Air 32	T-Mobile
157.00	157.00	2	BSF0020F3V1-1	Verizon
157.00	157.00	6	MX06FRO660-03	Verizon
157.00	157.00	3	MT6407-77A	Verizon
157.00	157.00	3	T-Arms	Verizon
157.00	157.00	4	DB846F65ZAXY	Verizon
157.00	157.00	2	DB846H80E-SX	Verizon
157.00	157.00	3	RF4439d-25A	Verizon
157.00	157.00	3	RF4440d-13A	Verizon
157.00	157.00	1	DB-C1-12C-24AB-0Z	Verizon
150.00	150.00	1	Collar Mount	AT&T
150.00	150.00	3	Ericsson Air6419 B77G	AT&T
148.00	148.00	1	Quintel QD6616-7	AT&T
148.00	148.00	2	Quintel QD8616-7	AT&T
148.00	148.00	3	T-Arms w/ Modifications	AT&T
148.00	148.00	3	Ericsson RRUS 8843 B2	AT&T
148.00	148.00	3	Ericsson RRUS 32	AT&T
148.00	148.00	3	Ericsson RRUS 4449	AT&T
148.00	148.00	3	Ericsson RRUS 4478 B14	AT&T
148.00	148.00	2	Raycap	AT&T
148.00	148.00	3	Powerwave 1001940	AT&T
148.00	148.00	1	Commscope	AT&T
148.00	148.00	6	Powerwave 21401	AT&T
148.00	148.00	2	CCI DMP65R-BU8DA	AT&T
148.00	148.00	1	CCI DMP65R-BU6DA	AT&T
148.00	148.00	6	Powerwave LGP13519	AT&T
146.00	146.00	3	Ericsson Air6449 B77D	AT&T
127.00	127.00	3	VHLP2-11	Sprint Nextel
127.00	127.00	1	VHLP800-11	Sprint Nextel
127.00	127.00	3	AAHC	Sprint Nextel
127.00	127.00	3	NNVV-65B-R4	Sprint Nextel
127.00	127.00	1	RMQP-4096-HK	Sprint Nextel
127.00	127.00	4	Horizon Duo	Sprint Nextel
127.00	127.00	3	1900MHz RRH	Sprint Nextel
127.00	127.00	6	800 MHz RRH	Sprint Nextel
127.00	127.00	3	TD-RRH8x20-25	Sprint Nextel
117.00	117.00	3	JMA MX08FRO665-21	Dish Network
117.00	117.00	1	Commscope MC-PK8-DSH	Dish Network



**Structure: CT13071-A-SBA**

**Type:** Tapered      **Base Shape:** 18 Sided      7/7/2023  
**Site Name:** Woodbridge      **Taper:** 0.20003  
**Height:** 169.00 (ft)  
**Base Elev:** 0.00 (ft)      Page: 3



117.00	117.00	3	Fujitsu TA08025-B605	Dish Network
117.00	117.00	3	Fujitsu TA08025-B604	Dish Network
117.00	117.00	1	Raycap	Dish Network

**Linear Appurtenances**

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	167.00	Inside	1 5/8" Coax	T-Mobile
0.00	167.00	Inside	1 5/8" Fiber	T-Mobile
0.00	167.00	Inside	1-1/4" Fiber	T-Mobile
0.00	157.00	Inside	1 5/8" Coax	Verizon
0.00	157.00	Outside	1 5/8" Coax	Verizon
0.00	157.00	Inside	1 5/8" Hybrid	Verizon
0.00	157.00	Inside	1/2" Coax	Verizon
0.00	148.00	Inside	1 5/8" Coax	AT&T
0.00	148.00	Inside	1" DC	AT&T
0.00	148.00	Inside	1/2" Fiber	AT&T
0.00	148.00	Inside	3/4" DC	AT&T
0.00	127.00	Inside	1 5/8" Fiber	Sprint Nextel
0.00	127.00	Inside	1-1/4" Fiber	Sprint Nextel
0.00	127.00	Inside	1/2" Coax	Sprint Nextel
0.00	117.00	Inside	1.6" Hybrid	Dish Network
99.25	104.50	Outside	1" Reinforcing plate	
89.25	99.25	Outside	1" Reinforcing plate	44 Farms

**Anchor Bolts**

Qty	Specifications	Grade (ksi)	Arrangement
16	2.25" 18J	75.0	Cluster

**Base Plate**

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
3.0000	61.3	60.0	Clipped

**Reactions**

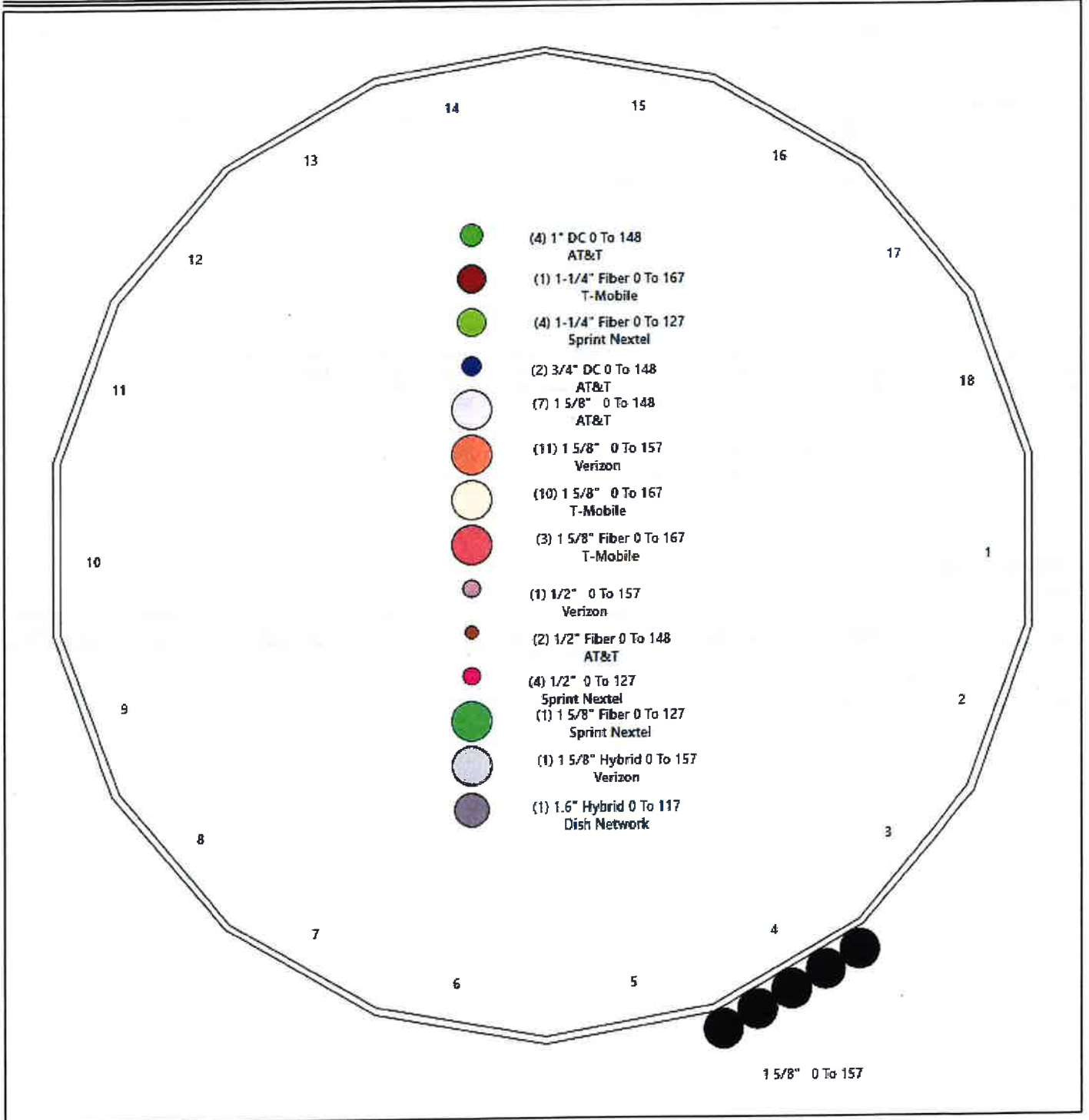
Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.0W 119 mph Wind	4477.7	35.1	60.4
0.9D + 1.0W 119 mph Wind	4410.0	35.1	45.3
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1142.9	9.0	82.8
1.2D + 1.0Ev + 1.0Eh	97.3	0.7	62.7
0.9D + 1.0Ev + 1.0Eh	96.2	0.7	47.5
1.0D + 1.0W 60 mph Wind	1010.0	8.0	50.4

Structure: CT13071-A-SBA - Coax Line Placement

Type: Monopole  
 Site Name: Woodbridge  
 Height: 169.00 (ft)

7/7/2023

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## Shaft Properties

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	47.000	0.4375	65		0.00	11,335
2	18	53.500	0.3750	65	Slip	75.00	9,329
3	18	53.500	0.2500	65	Slip	60.00	4,908
4	18	30.000	0.1875	65	Slip	45.00	1,629
<b>Total Shaft Weight:</b>							<b>27,200</b>

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	56.18	0.00	77.40	30386.58	21.23	128.41	46.78	47.00	64.35	17459.0	17.44	106.9	0.200030
2	48.78	40.75	57.61	17053.51	21.53	130.08	38.08	94.25	44.87	8058.91	16.49	101.5	0.200030
3	39.58	89.25	31.21	6097.74	26.50	158.31	28.88	142.75	22.71	2351.56	18.96	115.5	0.200030
4	30.00	139.0	17.74	1992.41	26.80	160.00	24.00	169.00	14.17	1015.22	21.16	128.0	0.200030

### Additional Steel

Elev From (ft)	Elev To (ft)	Qty	Description	Fy (ksi)	Fu (ksi)	Offset (in)	Intermediate Connectors		Termination Connectors			
							Description	Spacing (in)	Description	Spacing (in)	Lower Qty	Upper Qty
0.00	1.00	3	SOL 1 3/4" William R71	128	150	0.00	5/8" Hollo Bolt	12.00	5/8" Hollo Bolt	3.00		
91.50	97.00	3	LNP LP6X100-G-10TT	65	80	0.00	5/8" Hollo Bolt	23.00	5/8" Hollo Bolt		9	9
96.75	102.2	3	LNP LP6X100-G-10TT	65	80	0.00	5/8" Hollo Bolt	23.00	5/8" Hollo Bolt		9	9

## Load Summary

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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### Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
1	167.00	RRUS 4415 B25	3	46.00	1.64	0.67	73.70	1.987	0.67	0.00	0.00
2	167.00	Ericsson - Radio 4449 B71+B12	3	74.00	1.65	0.75	115.60	1.974	0.75	0.00	0.00
3	167.00	AIR 6449 B41	3	103.00	5.65	0.70	200.15	6.294	0.70	0.00	0.00
4	167.00	T-Arms/Commscope VSR-MS-B	3	340.00	6.75	0.75	499.94	10.719	0.75	0.00	0.50
5	167.00	AIR 21 B2A/B4P	3	92.00	6.09	0.86	198.74	6.769	0.86	0.00	0.00
6	167.00	Ericsson - KRY 112 144/2	3	11.00	0.41	0.75	18.27	0.730	0.75	0.00	0.00
7	165.00	APXVAA24_43-U-A20	3	128.00	20.24	0.73	404.47	21.528	0.73	0.00	0.00
8	165.00	Air 32 KRD901146-1_B66A_B2A	3	105.80	6.51	0.87	222.56	7.305	0.87	0.00	0.00
9	157.00	BSF0020F3V1-1	2	17.60	0.77	1.00	32.30	1.196	1.00	0.00	0.00
10	157.00	MX06FRO660-03	6	60.00	9.87	0.87	231.12	10.775	0.87	0.00	0.00
11	157.00	MT6407-77A	3	79.40	4.69	0.70	154.00	5.318	0.70	0.00	0.00
12	157.00	T-Arms	3	506.90	17.50	0.75	743.88	27.727	0.75	0.00	0.00
13	157.00	DB846F65ZAXY	4	21.00	7.05	0.92	144.79	7.849	0.93	0.00	0.00
14	157.00	DB846H80E-SX	2	16.00	5.01	1.10	114.76	5.794	1.10	0.00	0.00
15	157.00	RF4439d-25A	3	84.40	1.88	0.83	118.73	2.249	0.83	0.00	0.00
16	157.00	RF4440d-13A	3	84.40	1.88	0.83	118.73	2.249	0.83	0.00	0.00
17	157.00	DB-C1-12C-24AB-OZ	1	32.00	4.06	1.00	108.30	4.611	1.00	0.00	0.00
18	150.00	Collar Mount	1	100.00	3.50	1.00	155.85	5.129	1.00	0.00	0.00
19	150.00	Ericsson Air6419 B77G	3	66.10	3.80	0.76	130.24	4.330	0.76	0.00	0.00
20	148.00	Quintel QD6616-7	1	111.00	8.13	0.92	253.58	8.975	0.92	0.00	0.00
21	148.00	Quintel QD8616-7	2	111.00	8.13	0.92	253.58	8.975	0.92	0.00	0.00
22	148.00	T-Arms w/ Modifications	3	450.00	12.00	0.75	659.14	18.971	0.75	0.00	0.00
23	148.00	Ericsson RRUS 8843 B2 B66A	3	75.00	1.65	0.67	120.77	1.995	0.67	0.00	0.00
24	148.00	Ericsson RRUS 32	3	77.00	1.65	0.67	105.81	2.024	0.67	0.00	0.00
25	148.00	Ericsson RRUS 4449 B5/B12	3	71.00	1.97	0.67	106.54	2.334	0.67	0.00	0.00
26	148.00	Ericsson RRUS 4478 B14	3	59.40	1.65	0.67	87.01	1.995	0.67	0.00	0.00
27	148.00	Raycap DC9-48-60-24-8C-EV	2	26.20	1.14	1.00	96.77	2.196	1.00	0.00	0.00
28	148.00	Powerwave 1001940	3	2.20	0.25	0.67	7.42	0.530	0.67	0.00	0.00
29	148.00	Commscope WCS-IMGQ-AMT	1	34.50	0.99	0.67	60.20	1.262	0.67	0.00	0.00
30	148.00	Powerwave 21401	6	14.10	1.29	0.67	30.75	1.846	0.67	0.00	0.00
31	148.00	CCI DMP65R-BU8DA	2	95.70	17.87	0.73	360.12	19.066	0.73	0.00	0.00
32	148.00	CCi DMP65R-BU6DA	1	79.40	12.71	0.72	275.50	13.685	0.72	0.00	0.00
33	148.00	Powerwave LGP13519 Diplexer	6	14.10	1.29	1.00	30.75	1.846	1.00	0.00	0.00
34	146.00	Ericsson Air6449 B77D	3	88.00	4.13	0.85	173.86	4.688	0.85	0.00	0.00
35	127.00	VHLP2-11	3	27.00	4.68	1.00	91.16	5.515	1.00	0.10	0.00
36	127.00	VHLP800-11	1	48.00	8.43	1.00	162.18	9.549	1.00	0.10	0.00
37	127.00	AAHC	3	103.60	4.21	0.75	172.78	4.742	0.75	0.00	0.00
38	127.00	NNVV-65B-R4	3	77.40	12.27	0.74	264.63	13.225	0.74	0.00	0.00
39	127.00	RMQP-4096-HK	1	2645.00	51.70	1.00	4460.96	76.783	1.00	0.00	0.00
40	127.00	Horizon Duo	4	7.00	0.59	0.75	17.18	0.958	0.75	0.00	0.00
41	127.00	1900MHz RRH	3	60.00	2.77	0.99	114.71	3.602	0.99	0.00	0.00
42	127.00	800 MHz RRH	6	53.00	2.49	0.92	101.49	3.240	0.92	0.00	0.00
43	127.00	TD-RRH8x20-25	3	70.00	4.05	0.69	137.33	4.568	0.71	0.00	0.00
44	117.00	JMA MX08FRO665-21	3	64.50	12.49	0.74	253.66	13.443	0.74	0.00	0.00
45	117.00	Commscope MC-PK8-DSH	1	1727.00	37.59	1.00	2824.61	68.306	1.00	0.00	0.00
46	117.00	Fujitsu TA08025-B605 RRU	3	75.00	1.96	0.67	109.01	2.325	0.67	0.00	0.00
47	117.00	Fujitsu TA08025-B604 RRU	3	63.90	1.96	0.67	96.82	2.325	0.67	0.00	0.00
48	117.00	Raycap RDIDC-9181-PF-48-OVP	1	21.90	2.01	1.00	56.53	2.380	1.00	0.00	0.00
<b>Totals:</b>			<b>135</b>	<b>15,546.00</b>			<b>29,584.23</b>				

**Discrete Appurtenances**

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		

**Linear Appurtenances**

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	167.00	(10) 1 5/8" Coax	0.00	Inside
0.00	167.00	(3) 1 5/8" Fiber	0.00	Inside
0.00	167.00	(1) 1-1/4" Fiber	0.00	Inside
0.00	157.00	(11) 1 5/8" Coax	0.00	Inside
0.00	157.00	(5) 1 5/8" Coax	1.98	Outside
0.00	157.00	(1) 1 5/8" Hybrid	0.00	Inside
0.00	157.00	(1) 1/2" Coax	0.00	Inside
0.00	148.00	(7) 1 5/8" Coax	0.00	Inside
0.00	148.00	(4) 1" DC	0.00	Inside
0.00	148.00	(2) 1/2" Fiber	0.00	Inside
0.00	148.00	(2) 3/4" DC	0.00	Inside
0.00	127.00	(1) 1 5/8" Fiber	0.00	Inside
0.00	127.00	(4) 1-1/4" Fiber	0.00	Inside
0.00	127.00	(4) 1/2" Coax	0.00	Inside
0.00	117.00	(1) 1.6" Hybrid	0.00	Inside
99.25	104.50	(3) 1" Reinforcing plate	1.00	Outside
89.25	99.25	(3) 1" Reinforcing plate	1.00	Outside

## Shaft Section Properties

**Structure:** CT13071-A-SBA      **Code:** TIA-222-H      7/7/2023  
**Site Name:** Woodbridge      **Exposure:** B  
**Height:** 169.00 (ft)      **Crest Height:** 0.00  
**Base Elev:** 0.000 (ft)      **Site Class:** D - Stiff Soil  
**Gh:** 1.1      **Topography:** 1      **Struct Class:** II      Page: 8



**Increment Length:** 5 (ft)

Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)	Additional Reinforcing			
											Area (in^2)	Ixp (in^4)	Iyp (in^4)	Weight (lb)
0.00	RB1	0.4375	56.180	77.403	30386.6	21.23	128.41	65	76	0.0	7.80	4011.8	2519.6	
1.00	RT1	0.4375	55.980	77.125	30060.6	21.15	127.95	65	77	262.9	7.80	3984.1	2502.2	27.2
5.00		0.4375	55.180	76.014	28780.1	20.83	126.13	65	77	1042.2				
10.00		0.4375	54.180	74.625	27231.3	20.43	123.84	65	77	1281.5				
15.00		0.4375	53.180	73.236	25739.1	20.02	121.55	65	78	1257.8				
20.00		0.4375	52.179	71.848	24302.4	19.62	119.27	65	78	1234.2				
25.00		0.4375	51.179	70.459	22920.2	19.22	116.98	65	79	1210.6				
30.00		0.4375	50.179	69.070	21591.5	18.81	114.70	65	79	1187.0				
35.00		0.4375	49.179	67.681	20315.1	18.41	112.41	65	80	1163.3				
40.00		0.4375	48.179	66.292	19090.0	18.01	110.12	65	80	1139.7				
40.75	Bot - Section 2	0.4375	48.029	66.084	18910.6	17.95	109.78	65	80	168.9				
45.00		0.4375	47.179	64.904	17915.2	17.60	107.84	65	81	1773.0				
47.00	Top - Section 1	0.3750	47.529	56.123	15766.0	20.94	126.74	65	77	823.4				
50.00		0.3750	46.929	55.408	15171.7	20.66	125.14	65	77	569.3				
55.00		0.3750	45.928	54.218	14214.7	20.19	122.48	65	78	932.6				
60.00		0.3750	44.928	53.028	13298.8	19.71	119.81	65	78	912.3				
65.00		0.3750	43.928	51.837	12423.2	19.24	117.14	65	79	892.1				
70.00		0.3750	42.928	50.647	11586.8	18.77	114.47	65	79	871.8				
75.00		0.3750	41.928	49.456	10788.9	18.30	111.81	65	80	851.6				
80.00		0.3750	40.928	48.266	10028.4	17.83	109.14	65	80	831.3				
85.00		0.3750	39.927	47.076	9304.6	17.36	106.47	65	81	811.1				
89.25	Bot - Section 3	0.3750	39.077	46.064	8717.4	16.96	104.21	65	81	673.5				
90.00		0.3750	38.927	45.885	8616.4	16.89	103.81	65	82	196.8				
91.50	RB2	0.3750	38.627	45.528	8416.8	16.75	103.01	65	82	391.4	18.00	3650.7	3650.7	91.9
94.25	Top - Section 2	0.2500	38.577	30.412	5644.2	25.80	154.31	65	71	709.6	18.00	3552.1	3552.1	168.4
95.00		0.2500	38.427	30.293	5578.2	25.69	153.71	65	71	77.5	18.00	3525.4	3525.4	45.9
96.75	RB3	0.2500	38.077	30.015	5426.2	25.45	152.31	65	71	179.6	36.00	6927.1	6927.1	214.4
97.00	RT2	0.2500	38.027	29.975	5404.7	25.41	152.11	65	72	25.5	36.00	6909.5	6909.5	30.6
100.00		0.2500	37.427	29.499	5151.2	24.99	149.71	65	72	303.6	18.00	3350.2	3350.2	183.7
102.25	RT3	0.2500	36.977	29.142	4966.4	24.67	147.91	65	72	224.5	18.00	3272.8	3272.8	137.8
105.00		0.2500	36.427	28.705	4746.6	24.28	145.71	65	73	270.7				
110.00		0.2500	35.427	27.912	4363.7	23.58	141.71	65	74	481.6				
115.00		0.2500	34.427	27.118	4001.9	22.87	137.71	65	75	468.1				
117.00		0.2500	34.027	26.801	3863.0	22.59	136.11	65	75	183.5				
120.00		0.2500	33.426	26.325	3660.8	22.17	133.71	65	75	271.2				
125.00		0.2500	32.426	25.531	3339.6	21.46	129.71	65	76	441.1				
127.00		0.2500	32.026	25.214	3216.6	21.18	128.10	65	76	172.7				
130.00		0.2500	31.426	24.737	3037.7	20.75	125.70	65	77	255.0				
135.00		0.2500	30.426	23.944	2754.7	20.05	121.70	65	78	414.1				
139.00	Bot - Section 4	0.2500	29.626	23.309	2541.3	19.48	118.50	65	78	321.6				
140.00		0.2500	29.426	23.150	2489.7	19.34	117.70	65	79	139.2				
142.75	Top - Section 3	0.1875	29.251	17.296	1845.8	26.10	156.00	65	71	378.0				
145.00		0.1875	28.801	17.028	1761.3	25.67	153.60	65	71	131.4				
146.00		0.1875	28.601	16.909	1724.7	25.49	152.54	65	71	57.7				
148.00		0.1875	28.201	16.671	1652.8	25.11	150.40	65	72	114.3				
150.00		0.1875	27.801	16.433	1583.0	24.73	148.27	65	72	112.6				
155.00		0.1875	26.800	15.837	1417.2	23.79	142.94	65	73	274.5				
157.00		0.1875	26.400	15.599	1354.2	23.42	140.80	65	74	107.0				
160.00		0.1875	25.800	15.242	1263.3	22.85	137.60	65	75	157.4				
165.00		0.1875	24.800	14.647	1121.0	21.91	132.27	65	76	254.3				

Increment Length: 5 (ft)

Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)	Additional Reinforcing			
											Area (in^2)	Ixp (in^4)	Iyp (in^4)	Weight (lb)
167.00		0.1875	24.400	14.409	1067.3	21.54	130.13	65	76	98.9				
169.00		0.1875	24.000	14.171	1015.2	21.16	128.00	65	77	97.3				
<b>Total Weight</b>										<b>27200.5</b>				<b>900.0</b>

## Wind Loading - Shaft

**Structure:** CT13071-A-SBA  
**Site Name:** Woodbridge  
**Height:** 169.00 (ft)  
**Base Elev:** 0.000 (ft)  
**Gh:** 1.1

**Topography:** 1

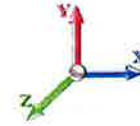
**Code:** TIA-222-H  
**Exposure:** B  
**Crest Height:** 0.00  
**Site Class:** D - Stiff Soil  
**Struct Class:** II

7/7/2023  
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**Load Case:** 1.2D + 1.0W 119 mph Wind

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.00



**Iterations** 27

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	RB1	1.00	0.70	23.689	26.06	469.19	0.730	0.000	0.00	0.000	0.00	0.0	0.0	0.0
1.00	RT1	1.00	0.70	23.689	26.06	467.52	0.730	0.000	1.00	4.745	3.46	90.3	0.0	315.5
5.00		1.00	0.70	23.689	26.06	460.83	0.730	0.000	4.00	18.812	13.73	357.9	0.0	1250.6
10.00		1.00	0.70	23.689	26.06	452.48	0.730	0.000	5.00	23.135	16.89	440.1	0.0	1537.8
15.00		1.00	0.70	23.689	26.06	444.13	0.730	0.000	5.00	22.712	16.58	432.0	0.0	1509.4
20.00		1.00	0.70	23.689	26.06	435.77	0.730	0.000	5.00	22.288	16.27	424.0	0.0	1481.1
25.00		1.00	0.70	23.689	26.06	427.42	0.730	0.000	5.00	21.865	15.96	415.9	0.0	1452.7
30.00		1.00	0.70	23.709	26.08	419.25	0.730	0.000	5.00	21.442	15.65	408.2	0.0	1424.4
35.00		1.00	0.73	24.777	27.25	420.04	0.730	0.000	5.00	21.019	15.34	418.2	0.0	1396.0
40.00		1.00	0.76	25.741	28.31	419.42	0.730	0.000	5.00	20.596	15.03	425.7	0.0	1367.6
40.75	Bot - Section 2	1.00	0.76	25.878	28.47	419.23	0.730	0.000	0.75	3.053	2.23	63.4	0.0	202.7
45.00		1.00	0.79	26.622	29.28	417.68	0.730	0.000	4.25	17.389	12.69	371.7	0.0	2127.6
47.00	Top - Section 1	1.00	0.80	26.954	29.65	416.72	0.730	0.000	2.00	8.077	5.90	174.8	0.0	988.1
50.00		1.00	0.81	27.435	30.18	421.77	0.730	0.000	3.00	11.989	8.75	264.1	0.0	683.1
55.00		1.00	0.83	28.192	31.01	418.44	0.730	0.000	5.00	19.644	14.34	444.7	0.0	1119.1
60.00		1.00	0.85	28.902	31.79	414.45	0.730	0.000	5.00	19.220	14.03	446.1	0.0	1094.8
65.00		1.00	0.87	29.571	32.53	409.88	0.730	0.000	5.00	18.797	13.72	446.3	0.0	1070.5
70.00		1.00	0.89	30.204	33.22	404.81	0.730	0.000	5.00	18.374	13.41	445.6	0.0	1046.2
75.00		1.00	0.91	30.805	33.89	399.30	0.730	0.000	5.00	17.951	13.10	444.0	0.0	1021.9
80.00		1.00	0.93	31.378	34.52	393.38	0.730	0.000	5.00	17.528	12.80	441.6	0.0	997.6
85.00		1.00	0.94	31.926	35.12	387.11	0.730	0.000	5.00	17.105	12.49	438.5	0.0	973.3
89.25	Bot - Section 3	1.00	0.96	32.375	35.61	381.52	0.730	0.000	4.25	14.206	10.37	369.3	0.0	808.2
90.00		1.00	0.96	32.452	35.70	380.51	0.730	0.000	0.75	2.507	1.83	65.3	0.0	236.2
91.50	RB2	1.00	0.96	32.606	35.87	378.47	0.730	0.000	1.50	4.985	3.64	130.5	0.0	469.6
94.25	Top - Section 2	1.00	0.97	32.883	36.17	374.66	0.730	0.000	2.75	9.041	6.60	238.7	0.0	851.5
95.00		1.00	0.97	32.957	36.25	378.53	0.730	0.000	0.75	2.444	1.78	64.7	0.0	93.0
96.75	RB3	1.00	0.98	33.130	36.44	376.06	0.730	0.000	1.75	5.664	4.14	150.7	0.0	215.5
97.00	RT2	1.00	0.98	33.154	36.47	375.71	0.730	0.000	0.25	0.805	0.59	21.4	0.0	30.6
100.00		1.00	0.99	33.444	36.79	371.39	0.730	0.000	3.00	9.577	6.99	257.2	0.0	364.3
102.25	RT3	1.00	0.99	33.657	37.02	368.09	0.730	0.000	2.25	7.083	5.17	191.4	0.0	269.4
105.00		1.00	1.00	33.913	37.30	363.99	0.730	0.000	2.75	8.541	6.23	232.6	0.0	324.8
110.00		1.00	1.02	34.367	37.80	356.36	0.730	0.000	5.00	15.200	11.10	419.5	0.0	578.0
115.00		1.00	1.03	34.806	38.29	348.50	0.730	0.000	5.00	14.777	10.79	413.0	0.0	561.8
117.00	Appurtenance(s)	1.00	1.03	34.978	38.48	345.30	0.730	0.000	2.00	5.792	4.23	162.7	0.0	220.2
120.00		1.00	1.04	35.232	38.76	340.44	0.730	0.000	3.00	8.562	6.25	242.2	0.0	325.4
125.00		1.00	1.05	35.645	39.21	332.19	0.730	0.000	5.00	13.931	10.17	398.8	0.0	529.4
127.00	Appurtenance(s)	1.00	1.06	35.807	39.39	328.84	0.730	0.000	2.00	5.454	3.98	156.8	0.0	207.2
130.00		1.00	1.07	36.047	39.65	323.75	0.730	0.000	3.00	8.054	5.88	233.1	0.0	305.9
135.00		1.00	1.08	36.438	40.08	315.14	0.730	0.000	5.00	13.085	9.55	382.9	0.0	497.0
139.00	Bot - Section 4	1.00	1.09	36.743	40.42	308.14	0.730	0.000	4.00	10.163	7.42	299.9	0.0	385.9
140.00		1.00	1.09	36.819	40.50	306.37	0.730	0.000	1.00	2.530	1.85	74.8	0.0	167.1
142.75	Top - Section 3	1.00	1.09	37.024	40.73	301.48	0.730	0.000	2.75	6.871	5.02	204.3	0.0	453.6
145.00		1.00	1.10	37.190	40.91	301.37	0.730	0.000	2.25	5.526	4.03	165.0	0.0	157.7
146.00	Appurtenance(s)	1.00	1.10	37.263	40.99	299.57	0.730	0.000	1.00	2.429	1.77	72.7	0.0	69.3
148.00	Appurtenance(s)	1.00	1.11	37.408	41.15	295.95	0.730	0.000	2.00	4.806	3.51	144.4	0.0	137.1
150.00	Appurtenance(s)	1.00	1.11	37.552	41.31	292.32	0.730	0.000	2.00	4.739	3.46	142.9	0.0	135.2
155.00		1.00	1.12	37.905	41.70	283.12	0.730	0.000	5.00	11.551	8.43	351.6	0.0	329.4

## Wind Loading - Shaft

**Structure:** CT13071-A-SBA

**Code:** TIA-222-H

7/7/2023

**Site Name:** Woodbridge

**Exposure:** B

**Height:** 169.00 (ft)

**Crest Height:** 0.00

**Base Elev:** 0.000 (ft)

**Site Class:** D - Stiff Soil

**Gh:** 1.1

**Topography:** 1

**Struct Class:** II

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157.00 Appurtenance(s)	1.00	1.12	38.044	41.85	279.41	0.730	0.000	2.00	4.502	3.29	137.5	0.0	128.4
160.00	1.00	1.13	38.250	42.08	273.80	0.730	0.000	3.00	6.626	4.84	203.5	0.0	188.9
165.00 Appurtenance(s)	1.00	1.14	38.588	42.45	264.34	0.730	0.000	5.00	10.704	7.81	331.7	0.0	305.1
167.00 Appurtenance(s)	1.00	1.14	38.721	42.59	260.53	0.730	0.000	2.00	4.163	3.04	129.4	0.0	118.6
169.00	1.00	1.15	38.853	42.74	256.69	0.730	0.000	2.00	4.096	2.99	127.8	0.0	116.7
<b>Totals:</b>								<b>169.00</b>			<b>13,909.7</b>		<b>32,640.6</b>

## Discrete Appurtenance Forces

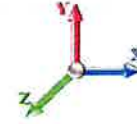
<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 1.2D + 1.0W 119 mph Wind

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.00



**Iterations** 27

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	167.00	AIR 6449 B41	3	38.721	42.593	0.56	0.80	9.49	370.80	0.000	0.000	404.30	0.00	0.00
2	167.00	RRUS 4415 B25	3	38.721	42.593	0.54	0.80	2.64	165.60	0.000	0.000	112.32	0.00	0.00
3	167.00	Ericsson - Radio 4449	3	38.721	42.593	0.60	0.80	2.97	266.40	0.000	0.000	126.50	0.00	0.00
4	167.00	Ericsson - KRY 112 144/2	3	38.721	42.593	0.60	0.80	0.74	39.60	0.000	0.000	31.43	0.00	0.00
5	167.00	T-Arms/Commscope	3	38.754	42.630	0.56	0.75	11.39	1224.00	0.000	0.500	485.58	0.00	242.79
6	167.00	AIR 21 B2A/B4P	3	38.721	42.593	0.77	0.90	14.14	331.20	0.000	0.000	602.31	0.00	0.00
7	165.00	Air 32	3	38.588	42.447	0.78	0.90	15.29	380.88	0.000	0.000	649.10	0.00	0.00
8	165.00	APXVAA24_43-U-A20	3	38.588	42.447	0.66	0.90	39.89	460.80	0.000	0.000	1693.34	0.00	0.00
9	157.00	BSF0020F3V1-1	2	38.044	41.848	0.80	0.80	1.23	42.24	0.000	0.000	51.56	0.00	0.00
10	157.00	MX06FRO660-03	6	38.044	41.848	0.70	0.80	41.22	432.00	0.000	0.000	1724.87	0.00	0.00
11	157.00	MT6407-77A	3	38.044	41.848	0.56	0.80	7.88	285.84	0.000	0.000	329.73	0.00	0.00
12	157.00	T-Arms	3	38.044	41.848	0.56	0.75	29.53	1824.84	0.000	0.000	1235.84	0.00	0.00
13	157.00	DB846H80E-SX	2	38.044	41.848	0.88	0.80	8.82	38.40	0.000	0.000	369.00	0.00	0.00
14	157.00	DB846F65ZAXY	4	38.044	41.848	0.74	0.80	20.76	100.80	0.000	0.000	868.57	0.00	0.00
15	157.00	RF4439d-25A	3	38.044	41.848	0.66	0.80	3.74	303.84	0.000	0.000	156.72	0.00	0.00
16	157.00	RF4440d-13A	3	38.044	41.848	0.66	0.80	3.74	303.84	0.000	0.000	156.72	0.00	0.00
17	157.00	DB-C1-12C-24AB-OZ	1	38.044	41.848	1.00	1.00	4.06	38.40	0.000	0.000	169.90	0.00	0.00
18	150.00	Collar Mount	1	37.552	41.307	1.00	1.00	3.50	120.00	0.000	0.000	144.57	0.00	0.00
19	150.00	Ericsson Air6419 B77G	3	37.552	41.307	0.61	0.80	6.93	237.96	0.000	0.000	286.30	0.00	0.00
20	148.00	Powerwave LGP13519	6	37.408	41.149	0.80	0.80	6.19	101.52	0.000	0.000	254.79	0.00	0.00
21	148.00	CCi DMP65R-BU6DA	1	37.408	41.149	0.58	0.80	7.32	95.28	0.000	0.000	301.25	0.00	0.00
22	148.00	CCI DMP65R-BU8DA	2	37.408	41.149	0.58	0.80	20.87	229.68	0.000	0.000	858.86	0.00	0.00
23	148.00	Powerwave 21401	6	37.408	41.149	0.54	0.80	4.15	101.52	0.000	0.000	170.71	0.00	0.00
24	148.00	Commscope	1	37.408	41.149	0.54	0.80	0.53	41.40	0.000	0.000	21.84	0.00	0.00
25	148.00	Powerwave 1001940	3	37.408	41.149	0.54	0.80	0.40	7.92	0.000	0.000	16.54	0.00	0.00
26	148.00	Raycap	2	37.408	41.149	0.80	0.80	1.82	62.88	0.000	0.000	75.05	0.00	0.00
27	148.00	Ericsson RRUS 4478 B14	3	37.408	41.149	0.54	0.80	2.65	213.84	0.000	0.000	109.18	0.00	0.00
28	148.00	Ericsson RRUS 4449	3	37.408	41.149	0.54	0.80	3.17	255.60	0.000	0.000	130.35	0.00	0.00
29	148.00	Ericsson RRUS 32	3	37.408	41.149	0.54	0.80	2.65	277.20	0.000	0.000	109.18	0.00	0.00
30	148.00	Ericsson RRUS 8843 B2	3	37.408	41.149	0.54	0.80	2.65	270.00	0.000	0.000	109.18	0.00	0.00
31	148.00	T-Arms w/ Modifications	3	37.408	41.149	0.56	0.75	20.25	1620.00	0.000	0.000	833.26	0.00	0.00
32	148.00	Quintel QD8616-7	2	37.408	41.149	0.74	0.80	11.97	266.40	0.000	0.000	492.44	0.00	0.00
33	148.00	Quintel QD6616-7	1	37.408	41.149	0.74	0.80	5.98	133.20	0.000	0.000	246.22	0.00	0.00
34	146.00	Ericsson Air6449 B77D	3	37.263	40.989	0.68	0.80	8.43	316.80	0.000	0.000	345.34	0.00	0.00
35	127.00	AAHC	3	35.807	39.388	0.56	0.75	7.10	372.96	0.000	0.000	279.83	0.00	0.00
36	127.00	NNVV-65B-R4	3	35.807	39.388	0.55	0.75	20.43	278.64	0.000	0.000	804.68	0.00	0.00
37	127.00	VHLP800-11	1	35.807	39.388	1.00	1.00	8.43	57.60	1.455	0.000	332.04	483.13	0.00
38	127.00	VHLP2-11	3	35.807	39.388	1.00	1.00	14.04	97.20	1.455	0.000	553.01	804.64	0.00
39	127.00	1900MHz RRH	3	35.807	39.388	0.74	0.75	6.17	216.00	0.000	0.000	243.03	0.00	0.00
40	127.00	RMQP-4096-HK	1	35.807	39.388	1.00	1.00	51.70	3174.00	0.000	0.000	2036.37	0.00	0.00
41	127.00	Horizon Duo	4	35.807	39.388	0.60	0.80	1.42	33.60	0.000	0.000	55.77	0.00	0.00
42	127.00	800 MHz RRH	6	35.807	39.388	0.69	0.75	10.31	381.60	0.000	0.000	406.04	0.00	0.00
43	127.00	TD-RRH8x20-25	3	35.807	39.388	0.52	0.75	6.29	252.00	0.000	0.000	247.66	0.00	0.00
44	117.00	Raycap	1	34.978	38.476	1.00	1.00	2.01	26.28	0.000	0.000	77.34	0.00	0.00
45	117.00	Fujitsu TA08025-B604	3	34.978	38.476	0.50	0.75	2.95	230.04	0.000	0.000	113.69	0.00	0.00
46	117.00	Fujitsu TA08025-B605	3	34.978	38.476	0.50	0.75	2.95	270.00	0.000	0.000	113.69	0.00	0.00
47	117.00	Commscope	1	34.978	38.476	1.00	1.00	37.59	2072.40	0.000	0.000	1446.31	0.00	0.00



## Discrete Appurtenance Forces

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II
		<b>Page:</b> 13



48	117.00 JMA MX08FRO665-21	3	34.978	38.476	0.55	0.75	20.80	232.20	0.000	0.000	800.14	0.00	0.00
<b>Totals:</b>											<b>18,655.20</b>	<b>21,182.45</b>	

## Total Applied Force Summary

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Page:</b> 14
	<b>Struct Class:</b> II	



**Load Case:** 1.2D + 1.0W 119 mph Wind

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.00



**Iterations** 27

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
1.00		90.27	375.17	0.00	0.00
5.00		357.86	1489.34	0.00	0.00
10.00		440.08	1836.15	0.00	0.00
15.00		432.03	1807.80	0.00	0.00
20.00		423.98	1779.44	0.00	0.00
25.00		415.93	1751.09	0.00	0.00
30.00		408.23	1722.74	0.00	0.00
35.00		418.19	1694.38	0.00	0.00
40.00		425.71	1666.03	0.00	0.00
40.75		63.44	247.46	0.00	0.00
45.00		371.74	2381.22	0.00	0.00
47.00		174.83	1107.41	0.00	0.00
50.00		264.13	862.15	0.00	0.00
55.00		444.70	1417.48	0.00	0.00
60.00		446.08	1393.18	0.00	0.00
65.00		446.35	1368.87	0.00	0.00
70.00		445.64	1344.57	0.00	0.00
75.00		444.04	1320.27	0.00	0.00
80.00		441.64	1295.96	0.00	0.00
85.00		438.51	1271.66	0.00	0.00
89.25		369.32	1061.80	0.00	0.00
90.00		65.33	280.94	0.00	0.00
91.50		130.53	559.14	0.00	0.00
94.25		238.73	1015.62	0.00	0.00
95.00		64.67	137.71	0.00	0.00
96.75		150.69	319.91	0.00	0.00
97.00		21.43	45.54	0.00	0.00
100.00		257.20	543.31	0.00	0.00
102.25		191.43	403.65	0.00	0.00
105.00		232.58	488.90	0.00	0.00
110.00		419.48	876.35	0.00	0.00
115.00		413.02	860.14	0.00	0.00
117.00	(11) attachments	2713.86	3170.44	0.00	0.00
120.00		242.22	497.87	0.00	0.00
125.00		398.75	816.82	0.00	0.00
127.00	(27) attachments	5115.26	5185.79	1287.76	0.00
130.00		233.13	458.42	0.00	0.00
135.00		382.85	751.08	0.00	0.00
139.00		299.86	589.20	0.00	0.00
140.00		74.81	217.88	0.00	0.00
142.75		204.27	593.33	0.00	0.00
145.00		165.03	272.03	0.00	0.00
146.00	(3) attachments	418.01	436.91	0.00	0.00
148.00	(39) attachments	3873.21	3915.21	0.00	0.00
150.00	(4) attachments	573.77	571.26	0.00	0.00
155.00		351.58	524.75	0.00	0.00

## Total Applied Force Summary

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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157.00	(27) attachments	5200.45	3576.70	0.00	0.00
160.00		203.51	241.66	0.00	0.00
165.00	(6) attachments	2674.12	1234.72	0.00	0.00
167.00	(18) attachments	1891.89	2551.42	0.00	242.79
169.00		127.78	116.70	0.00	0.00
<b>Totals:</b>		<b>35,092.14</b>	<b>60,447.55</b>	<b>1,287.76</b>	<b>242.79</b>

## Linear Appurtenance Segment Forces (Factored)

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 1.2D + 1.0W 119 mph Wind

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.00



**Iterations** 27

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)
1.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.035	0.000	23.689	0.00	6.24
5.00	1 5/8" Coax	Yes	4.00	0.000	1.98	0.66	0.00	0.035	0.000	23.689	0.00	24.96
10.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.036	0.000	23.689	0.00	31.20
15.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.036	0.000	23.689	0.00	31.20
20.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.037	0.000	23.689	0.00	31.20
25.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.038	0.000	23.689	0.00	31.20
30.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.038	0.000	23.709	0.00	31.20
35.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.039	0.000	24.777	0.00	31.20
40.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.040	0.000	25.741	0.00	31.20
40.75	1 5/8" Coax	Yes	0.75	0.000	1.98	0.12	0.00	0.041	0.000	25.878	0.00	4.68
45.00	1 5/8" Coax	Yes	4.25	0.000	1.98	0.70	0.00	0.041	0.000	26.622	0.00	26.52
47.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.042	0.000	26.954	0.00	12.48
50.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.041	0.000	27.435	0.00	18.72
55.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.042	0.000	28.192	0.00	31.20
60.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.043	0.000	28.902	0.00	31.20
65.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.044	0.000	29.571	0.00	31.20
70.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.045	0.000	30.204	0.00	31.20
75.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.046	0.000	30.805	0.00	31.20
80.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.047	0.000	31.378	0.00	31.20
85.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.048	0.000	31.926	0.00	31.20
89.25	1 5/8" Coax	Yes	4.25	0.000	1.98	0.70	0.00	0.049	0.000	32.375	0.00	26.52
90.00	1 5/8" Coax	Yes	0.75	0.000	1.98	0.12	0.00	0.075	0.000	32.452	0.00	4.68
90.00	1" Reinforcing plate	Yes	0.75	0.000	1.00	0.06	0.00	0.075	0.000	32.452	0.00	0.00
91.50	1 5/8" Coax	Yes	1.50	0.000	1.98	0.25	0.00	0.076	0.000	32.606	0.00	9.36
91.50	1" Reinforcing plate	Yes	1.50	0.000	1.00	0.13	0.00	0.076	0.000	32.606	0.00	0.00
94.25	1 5/8" Coax	Yes	2.75	0.000	1.98	0.45	0.00	0.077	0.000	32.883	0.00	17.16
94.25	1" Reinforcing plate	Yes	2.75	0.000	1.00	0.23	0.00	0.077	0.000	32.883	0.00	0.00
95.00	1 5/8" Coax	Yes	0.75	0.000	1.98	0.12	0.00	0.076	0.000	32.957	0.00	4.68
95.00	1" Reinforcing plate	Yes	0.75	0.000	1.00	0.06	0.00	0.076	0.000	32.957	0.00	0.00
96.75	1 5/8" Coax	Yes	1.75	0.000	1.98	0.29	0.00	0.077	0.000	33.130	0.00	10.92
96.75	1" Reinforcing plate	Yes	1.75	0.000	1.00	0.15	0.00	0.077	0.000	33.130	0.00	0.00
97.00	1 5/8" Coax	Yes	0.25	0.000	1.98	0.04	0.00	0.077	0.000	33.154	0.00	1.56
97.00	1" Reinforcing plate	Yes	0.25	0.000	1.00	0.02	0.00	0.077	0.000	33.154	0.00	0.00
100.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.078	0.000	33.444	0.00	18.72
100.00	1" Reinforcing plate	Yes	0.75	0.000	1.00	0.06	0.00	0.078	0.000	33.444	0.00	0.00
100.00	1" Reinforcing plate	Yes	2.25	0.000	1.00	0.19	0.00	0.078	0.000	33.444	0.00	0.00
102.25	1 5/8" Coax	Yes	2.25	0.000	1.98	0.37	0.00	0.079	0.000	33.657	0.00	14.04
102.25	1" Reinforcing plate	Yes	2.25	0.000	1.00	0.19	0.00	0.079	0.000	33.657	0.00	0.00
105.00	1 5/8" Coax	Yes	2.75	0.000	1.98	0.45	0.00	0.075	0.000	33.913	0.00	17.16
105.00	1" Reinforcing plate	Yes	2.25	0.000	1.00	0.19	0.00	0.075	0.000	33.913	0.00	0.00
110.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.054	0.000	34.367	0.00	31.20
115.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.056	0.000	34.806	0.00	31.20
117.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.057	0.000	34.978	0.00	12.48
120.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.058	0.000	35.232	0.00	18.72
125.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.059	0.000	35.645	0.00	31.20
127.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.061	0.000	35.807	0.00	12.48
130.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.061	0.000	36.047	0.00	18.72

## Linear Appurtenance Segment Forces (Factored)

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 1.2D + 1.0W 119 mph Wind

**Dead Load Factor** 1.20

**Wind Load Factor** 1.00



**Iterations** 27

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)
135.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.063	0.000	36.438	0.00	31.20
139.00	1 5/8" Coax	Yes	4.00	0.000	1.98	0.66	0.00	0.065	0.000	36.743	0.00	24.96
140.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.066	0.000	36.819	0.00	6.24
142.75	1 5/8" Coax	Yes	2.75	0.000	1.98	0.45	0.00	0.067	0.000	37.024	0.00	17.16
145.00	1 5/8" Coax	Yes	2.25	0.000	1.98	0.37	0.00	0.067	0.000	37.190	0.00	14.04
146.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.068	0.000	37.263	0.00	6.24
148.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.069	0.000	37.408	0.00	12.48
150.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.070	0.000	37.552	0.00	12.48
155.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.071	0.000	37.905	0.00	31.20
157.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.073	0.000	38.044	0.00	12.48
<b>Totals:</b>											<b>0.0</b>	<b>979.7</b>

## Calculated Forces

**Structure:** CT13071-A-SBA  
**Site Name:** Woodbridge  
**Height:** 169.00 (ft)  
**Base Elev:** 0.000 (ft)  
**Gh:** 1.1

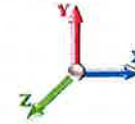
**Code:** TIA-222-H  
**Exposure:** B  
**Crest Height:** 0.00  
**Site Class:** D - Stiff Soil  
**Struct Class:** II

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**Load Case:** 1.2D + 1.0W 119 mph Wind


**Dead Load Factor** 1.20  
**Wind Load Factor** 1.00



**Iterations** 27

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	-60.43	-35.11	-1.26	-4477.6	-0.03	4477.65	5324.18	1358.42	6282.52	6106.56	0.00	0.000	0.000	0.688
1.00	-60.00	-35.12	-1.26	-4442.5	-0.03	4442.54	5311.65	1353.54	6237.51	6070.17	0.00	-0.039	0.000	0.686
1.00	-60.00	-35.12	-1.26	-4442.5	-0.03	4442.54	5311.65	1353.54	6237.51	6070.17	0.00	-0.039	0.000	0.741
5.00	-58.40	-34.95	-1.26	-4302.0	-0.03	4302.05	5261.08	1334.04	6059.10	5925.09	0.10	-0.191	0.000	0.738
10.00	-56.44	-34.71	-1.26	-4127.3	-0.03	4127.32	5196.80	1309.67	5839.72	5744.92	0.41	-0.400	0.000	0.730
15.00	-54.51	-34.46	-1.26	-3953.7	-0.03	3953.79	5131.34	1285.30	5624.39	5566.13	0.95	-0.611	0.000	0.722
20.00	-52.61	-34.21	-1.26	-3781.5	-0.03	3781.50	5064.69	1260.92	5413.10	5388.80	1.70	-0.824	0.000	0.713
25.00	-50.74	-33.96	-1.26	-3610.4	-0.03	3610.45	4996.86	1236.55	5205.86	5212.99	2.68	-1.041	0.000	0.704
30.00	-48.89	-33.70	-1.26	-3440.6	-0.03	3440.66	4927.84	1212.18	5002.66	5038.79	3.89	-1.260	0.000	0.694
35.00	-47.08	-33.43	-1.26	-3272.1	-0.03	3272.14	4857.63	1187.80	4803.50	4866.26	5.32	-1.481	0.000	0.683
40.00	-45.35	-33.06	-1.26	-3105.0	-0.03	3105.00	4786.24	1163.43	4608.40	4695.49	7.00	-1.704	-0.001	0.672
40.75	-45.04	-33.08	-1.26	-3080.2	-0.04	3080.21	4775.43	1159.78	4579.48	4670.03	7.27	-1.739	-0.001	0.670
45.00	-42.59	-32.73	-1.26	-2939.6	-0.04	2939.64	4713.67	1139.06	4417.33	4526.53	8.90	-1.931	-0.001	0.659
47.00	-41.43	-32.61	-1.26	-2874.1	-0.04	2874.17	3877.89	984.95	3853.40	3762.05	9.73	-2.023	-0.001	0.776
50.00	-40.46	-32.45	-1.26	-2776.3	-0.04	2776.35	3845.09	972.42	3755.95	3682.38	11.05	-2.162	-0.001	0.766
55.00	-38.92	-32.12	-1.26	-2614.1	-0.04	2614.11	3789.47	951.52	3596.29	3550.52	13.44	-2.414	-0.001	0.748
60.00	-37.41	-31.78	-1.27	-2453.5	-0.04	2453.51	3732.67	930.63	3440.11	3419.89	16.11	-2.668	-0.001	0.729
65.00	-35.93	-31.43	-1.27	-2294.6	-0.05	2294.62	3674.68	909.74	3287.40	3290.55	19.04	-2.922	-0.001	0.708
70.00	-34.47	-31.06	-1.27	-2137.5	-0.05	2137.50	3615.51	888.85	3138.15	3162.58	22.23	-3.175	-0.001	0.687
75.00	-33.04	-30.69	-1.27	-1982.1	-0.05	1982.19	3555.15	867.96	2992.36	3036.06	25.69	-3.428	-0.001	0.663
80.00	-31.64	-30.31	-1.27	-1828.7	-0.06	1828.76	3493.61	847.07	2850.05	2911.05	29.42	-3.680	-0.002	0.639
85.00	-30.29	-29.90	-1.27	-1677.2	-0.06	1677.23	3430.88	826.18	2711.20	2787.63	33.40	-3.928	-0.002	0.612
89.25	-29.19	-29.52	-1.27	-1550.1	-0.06	1550.14	3376.63	808.42	2595.91	2684.02	36.99	-4.138	-0.002	0.588
90.00	-28.88	-29.47	-1.27	-1528.0	-0.06	1528.00	3366.97	805.29	2575.82	2665.87	37.64	-4.176	-0.002	0.583
91.50	-28.29	-29.34	-1.27	-1483.8	-0.06	1483.80	3347.56	799.02	2535.88	2629.68	38.97	-4.250	-0.002	0.401
94.25	-27.27	-29.05	-1.27	-1403.1	-0.06	1403.12	1944.87	533.72	1697.22	1535.78	41.44	-4.344	-0.002	0.454
95.00	-27.11	-29.00	-1.27	-1381.3	-0.06	1381.34	1940.65	531.63	1683.96	1526.41	42.13	-4.369	-0.002	0.566
96.75	-26.78	-28.84	-1.28	-1330.5	-0.06	1330.59	1930.70	526.76	1653.22	1504.57	43.74	-4.444	-0.002	0.552
97.00	-26.72	-28.84	-1.28	-1323.3	-0.06	1323.38	1929.27	526.06	1648.85	1501.45	43.97	-4.451	-0.002	0.396
100.00	-26.15	-28.58	-1.28	-1236.8	-0.06	1236.85	1911.84	517.71	1596.88	1464.09	46.80	-4.540	-0.003	0.524
102.25	-25.71	-28.41	-1.28	-1172.5	-0.07	1172.54	1898.49	511.44	1558.45	1436.15	48.96	-4.631	-0.003	0.504
102.25	-25.71	-28.41	-1.28	-1172.5	-0.07	1172.54	1898.49	511.44	1558.45	1436.15	48.96	-4.631	-0.003	0.820
105.00	-25.14	-28.23	-1.28	-1094.4	-0.07	1094.43	1881.84	503.78	1512.12	1402.09	51.65	-4.738	-0.003	0.797
110.00	-24.16	-27.86	-1.28	-953.30	-0.07	953.30	1850.66	489.85	1429.66	1340.48	56.78	-5.045	-0.003	0.728
115.00	-23.24	-27.45	-1.28	-814.01	-0.08	814.01	1818.29	475.92	1349.52	1279.32	62.21	-5.333	-0.004	0.653
117.00	-20.29	-24.50	-1.28	-759.11	-0.08	759.11	1805.01	470.35	1318.11	1255.00	64.47	-5.445	-0.004	0.619
120.00	-19.73	-24.28	-1.29	-685.61	-0.09	685.61	1784.73	462.00	1271.69	1218.70	67.94	-5.605	-0.004	0.576
125.00	-18.89	-23.86	-1.29	-564.21	-0.09	564.21	1749.99	448.07	1196.18	1158.68	73.93	-5.847	-0.005	0.501
127.00	-14.22	-18.26	0.00	-516.50	0.04	516.50	1735.77	442.50	1166.62	1134.86	76.40	-5.939	-0.005	0.465
130.00	-13.73	-18.02	0.00	-461.72	0.03	461.72	1714.07	434.14	1122.97	1099.35	80.16	-6.069	-0.005	0.430
135.00	-12.98	-17.60	0.00	-371.61	0.03	371.61	1676.96	420.21	1052.07	1040.77	86.62	-6.264	-0.005	0.367
139.00	-12.40	-17.25	0.00	-301.21	0.02	301.21	1646.42	409.07	997.02	994.50	91.92	-6.403	-0.005	0.312
140.00	-12.17	-17.17	0.00	-283.96	0.02	283.96	1638.67	406.29	983.49	983.02	93.26	-6.436	-0.005	0.298
142.75	-11.59	-16.91	0.00	-236.75	0.02	236.75	1100.62	303.54	731.94	659.08	96.98	-6.518	-0.005	0.373
145.00	-11.32	-16.73	0.00	-198.70	0.01	198.70	1091.20	298.84	709.44	643.26	100.06	-6.577	-0.005	0.322
146.00	-10.92	-16.27	0.00	-181.98	0.01	181.98	1086.94	296.75	699.56	636.24	101.44	-6.608	-0.005	0.299
148.00	-7.47	-11.98	0.00	-149.44	0.01	149.44	1078.27	292.57	680.00	622.22	104.22	-6.663	-0.005	0.249
150.00	-6.96	-11.35	0.00	-125.49	0.01	125.49	1069.42	288.39	660.71	608.24	107.01	-6.710	-0.005	0.214

## Calculated Forces

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Struct Class:</b> II	
<b>Topography:</b> 1		<b>Page:</b> 19

155.00	-6.47	-10.94	0.00	-68.75	0.01	68.75	1046.45	277.95	613.72	573.48	114.08	-6.797	-0.005	0.128
157.00	-3.53	-5.36	0.00	-46.87	0.00	46.87	1036.93	273.77	595.41	559.66	116.92	-6.820	-0.005	0.088
160.00	-3.31	-5.13	0.00	-30.80	0.00	30.80	1022.30	267.50	568.46	539.04	121.21	-6.845	-0.005	0.061
165.00	-2.41	-2.32	0.00	-5.17	0.00	5.17	996.96	257.06	524.93	505.00	128.37	-6.865	-0.005	0.013
167.00	-0.10	-0.14	0.00	-0.28	0.00	0.28	986.50	252.88	508.00	491.52	131.24	-6.867	-0.005	0.001
169.00	0.00	-0.13	0.00	0.00	0.00	0.00	975.84	248.70	491.35	478.11	134.11	-6.867	-0.005	0.000

## Wind Loading - Shaft

**Structure:** CT13071-A-SBA  
**Site Name:** Woodbridge  
**Height:** 169.00 (ft)  
**Base Elev:** 0.000 (ft)  
**Gh:** 1.1

**Topography:** 1

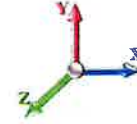
**Code:** TIA-222-H  
**Exposure:** B  
**Crest Height:** 0.00  
**Site Class:** D - Stiff Soil  
**Struct Class:** II

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**Load Case:** 0.9D + 1.0W 119 mph Wind

**Dead Load Factor** 0.90  
**Wind Load Factor** 1.00



**Iterations** 27

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	RB1	1.00	0.70	23.689	26.06	469.19	0.730	0.000	0.00	0.000	0.00	0.0	0.0	0.0
1.00	RT1	1.00	0.70	23.689	26.06	467.52	0.730	0.000	1.00	4.745	3.46	90.3	0.0	236.6
5.00		1.00	0.70	23.689	26.06	460.83	0.730	0.000	4.00	18.812	13.73	357.9	0.0	938.0
10.00		1.00	0.70	23.689	26.06	452.48	0.730	0.000	5.00	23.135	16.89	440.1	0.0	1153.3
15.00		1.00	0.70	23.689	26.06	444.13	0.730	0.000	5.00	22.712	16.58	432.0	0.0	1132.1
20.00		1.00	0.70	23.689	26.06	435.77	0.730	0.000	5.00	22.288	16.27	424.0	0.0	1110.8
25.00		1.00	0.70	23.689	26.06	427.42	0.730	0.000	5.00	21.865	15.96	415.9	0.0	1089.5
30.00		1.00	0.70	23.709	26.08	419.25	0.730	0.000	5.00	21.442	15.65	408.2	0.0	1068.3
35.00		1.00	0.73	24.777	27.25	420.04	0.730	0.000	5.00	21.019	15.34	418.2	0.0	1047.0
40.00		1.00	0.76	25.741	28.31	419.42	0.730	0.000	5.00	20.596	15.03	425.7	0.0	1025.7
40.75	Bot - Section 2	1.00	0.76	25.878	28.47	419.23	0.730	0.000	0.75	3.053	2.23	63.4	0.0	152.0
45.00		1.00	0.79	26.622	29.28	417.68	0.730	0.000	4.25	17.389	12.69	371.7	0.0	1595.7
47.00	Top - Section 1	1.00	0.80	26.954	29.65	416.72	0.730	0.000	2.00	8.077	5.90	174.8	0.0	741.0
50.00		1.00	0.81	27.435	30.18	421.77	0.730	0.000	3.00	11.989	8.75	264.1	0.0	512.3
55.00		1.00	0.83	28.192	31.01	418.44	0.730	0.000	5.00	19.644	14.34	444.7	0.0	839.3
60.00		1.00	0.85	28.902	31.79	414.45	0.730	0.000	5.00	19.220	14.03	446.1	0.0	821.1
65.00		1.00	0.87	29.571	32.53	409.88	0.730	0.000	5.00	18.797	13.72	446.3	0.0	802.9
70.00		1.00	0.89	30.204	33.22	404.81	0.730	0.000	5.00	18.374	13.41	445.6	0.0	784.6
75.00		1.00	0.91	30.805	33.89	399.30	0.730	0.000	5.00	17.951	13.10	444.0	0.0	766.4
80.00		1.00	0.93	31.378	34.52	393.38	0.730	0.000	5.00	17.528	12.80	441.6	0.0	748.2
85.00		1.00	0.94	31.926	35.12	387.11	0.730	0.000	5.00	17.105	12.49	438.5	0.0	730.0
89.25	Bot - Section 3	1.00	0.96	32.375	35.61	381.52	0.730	0.000	4.25	14.206	10.37	369.3	0.0	606.1
90.00		1.00	0.96	32.452	35.70	380.51	0.730	0.000	0.75	2.507	1.83	65.3	0.0	177.1
91.50	RB2	1.00	0.96	32.606	35.87	378.47	0.730	0.000	1.50	4.985	3.64	130.5	0.0	352.2
94.25	Top - Section 2	1.00	0.97	32.883	36.17	374.66	0.730	0.000	2.75	9.041	6.60	238.7	0.0	638.6
95.00		1.00	0.97	32.957	36.25	378.53	0.730	0.000	0.75	2.444	1.78	64.7	0.0	69.7
96.75	RB3	1.00	0.98	33.130	36.44	376.06	0.730	0.000	1.75	5.664	4.14	150.7	0.0	161.6
97.00	RT2	1.00	0.98	33.154	36.47	375.71	0.730	0.000	0.25	0.805	0.59	21.4	0.0	23.0
100.00		1.00	0.99	33.444	36.79	371.39	0.730	0.000	3.00	9.577	6.99	257.2	0.0	273.2
102.25	RT3	1.00	0.99	33.657	37.02	368.09	0.730	0.000	2.25	7.083	5.17	191.4	0.0	202.0
105.00		1.00	1.00	33.913	37.30	363.99	0.730	0.000	2.75	8.541	6.23	232.6	0.0	243.6
110.00		1.00	1.02	34.367	37.80	356.36	0.730	0.000	5.00	15.200	11.10	419.5	0.0	433.5
115.00		1.00	1.03	34.806	38.29	348.50	0.730	0.000	5.00	14.777	10.79	413.0	0.0	421.3
117.00	Appurtenance(s)	1.00	1.03	34.978	38.48	345.30	0.730	0.000	2.00	5.792	4.23	162.7	0.0	165.1
120.00		1.00	1.04	35.232	38.76	340.44	0.730	0.000	3.00	8.562	6.25	242.2	0.0	244.0
125.00		1.00	1.05	35.645	39.21	332.19	0.730	0.000	5.00	13.931	10.17	398.8	0.0	397.0
127.00	Appurtenance(s)	1.00	1.06	35.807	39.39	328.84	0.730	0.000	2.00	5.454	3.98	156.8	0.0	155.4
130.00		1.00	1.07	36.047	39.65	323.75	0.730	0.000	3.00	8.054	5.88	233.1	0.0	229.5
135.00		1.00	1.08	36.438	40.08	315.14	0.730	0.000	5.00	13.085	9.55	382.9	0.0	372.7
139.00	Bot - Section 4	1.00	1.09	36.743	40.42	308.14	0.730	0.000	4.00	10.163	7.42	299.9	0.0	289.4
140.00		1.00	1.09	36.819	40.50	306.37	0.730	0.000	1.00	2.530	1.85	74.8	0.0	125.3
142.75	Top - Section 3	1.00	1.09	37.024	40.73	301.48	0.730	0.000	2.75	6.871	5.02	204.3	0.0	340.2
145.00		1.00	1.10	37.190	40.91	301.37	0.730	0.000	2.25	5.526	4.03	165.0	0.0	118.3
146.00	Appurtenance(s)	1.00	1.10	37.263	40.99	299.57	0.730	0.000	1.00	2.429	1.77	72.7	0.0	52.0
148.00	Appurtenance(s)	1.00	1.11	37.408	41.15	295.95	0.730	0.000	2.00	4.806	3.51	144.4	0.0	102.8
150.00	Appurtenance(s)	1.00	1.11	37.552	41.31	292.32	0.730	0.000	2.00	4.739	3.46	142.9	0.0	101.4
155.00		1.00	1.12	37.905	41.70	283.12	0.730	0.000	5.00	11.551	8.43	351.6	0.0	247.1



## Wind Loading - Shaft

**Structure:** CT13071-A-SBA

**Code:** TIA-222-H

7/7/2023

**Site Name:** Woodbridge

**Exposure:** B

**Height:** 169.00 (ft)

**Crest Height:** 0.00

**Base Elev:** 0.000 (ft)

**Site Class:** D - Stiff Soil

**Gh:** 1.1

**Topography:** 1

**Struct Class:** II

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157.00 Appurtenance(s)	1.00	1.12	38.044	41.85	279.41	0.730	0.000	2.00	4.502	3.29	137.5	0.0	96.3	
160.00	1.00	1.13	38.250	42.08	273.80	0.730	0.000	3.00	6.626	4.84	203.5	0.0	141.7	
165.00 Appurtenance(s)	1.00	1.14	38.588	42.45	264.34	0.730	0.000	5.00	10.704	7.81	331.7	0.0	228.8	
167.00 Appurtenance(s)	1.00	1.14	38.721	42.59	260.53	0.730	0.000	2.00	4.163	3.04	129.4	0.0	89.0	
169.00	1.00	1.15	38.853	42.74	256.69	0.730	0.000	2.00	4.096	2.99	127.8	0.0	87.5	
<b>Totals:</b>								<b>169.00</b>				<b>13,909.7</b>	<b>24,480.4</b>	

## Discrete Appurtenance Forces

**Structure:** CT13071-A-SBA  
**Site Name:** Woodbridge  
**Height:** 169.00 (ft)  
**Base Elev:** 0.000 (ft)  
**Gh:** 1.1

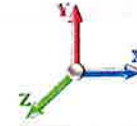
**Code:** TIA-222-H  
**Exposure:** B  
**Crest Height:** 0.00  
**Site Class:** D - Stiff Soil  
**Struct Class:** II

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**Load Case:** 0.9D + 1.0W 119 mph Wind


**Dead Load Factor** 0.90  
**Wind Load Factor** 1.00



**Iterations** 27

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	167.00	AIR 6449 B41	3	38.721	42.593	0.56	0.80	9.49	278.10	0.000	0.000	404.30	0.00	0.00
2	167.00	RRUS 4415 B25	3	38.721	42.593	0.54	0.80	2.64	124.20	0.000	0.000	112.32	0.00	0.00
3	167.00	Ericsson - Radio 4449	3	38.721	42.593	0.60	0.80	2.97	199.80	0.000	0.000	126.50	0.00	0.00
4	167.00	Ericsson - KRY 112 144/2	3	38.721	42.593	0.60	0.80	0.74	29.70	0.000	0.000	31.43	0.00	0.00
5	167.00	T-Arms/Commscope	3	38.754	42.630	0.56	0.75	11.39	918.00	0.000	0.500	485.58	0.00	242.79
6	167.00	AIR 21 B2A/B4P	3	38.721	42.593	0.77	0.90	14.14	248.40	0.000	0.000	602.31	0.00	0.00
7	165.00	Air 32	3	38.588	42.447	0.78	0.90	15.29	285.66	0.000	0.000	649.10	0.00	0.00
8	165.00	APXVAA24_43-U-A20	3	38.588	42.447	0.66	0.90	39.89	345.60	0.000	0.000	1693.34	0.00	0.00
9	157.00	BSF0020F3V1-1	2	38.044	41.848	0.80	0.80	1.23	31.68	0.000	0.000	51.56	0.00	0.00
10	157.00	MX06FRO660-03	6	38.044	41.848	0.70	0.80	41.22	324.00	0.000	0.000	1724.87	0.00	0.00
11	157.00	MT6407-77A	3	38.044	41.848	0.56	0.80	7.88	214.38	0.000	0.000	329.73	0.00	0.00
12	157.00	T-Arms	3	38.044	41.848	0.56	0.75	29.53	1368.63	0.000	0.000	1235.84	0.00	0.00
13	157.00	DB846H80E-SX	2	38.044	41.848	0.88	0.80	8.82	28.80	0.000	0.000	369.00	0.00	0.00
14	157.00	DB846F65ZAXY	4	38.044	41.848	0.74	0.80	20.76	75.60	0.000	0.000	868.57	0.00	0.00
15	157.00	RF4439d-25A	3	38.044	41.848	0.66	0.80	3.74	227.88	0.000	0.000	156.72	0.00	0.00
16	157.00	RF4440d-13A	3	38.044	41.848	0.66	0.80	3.74	227.88	0.000	0.000	156.72	0.00	0.00
17	157.00	DB-C1-12C-24AB-0Z	1	38.044	41.848	1.00	1.00	4.06	28.80	0.000	0.000	169.90	0.00	0.00
18	150.00	Collar Mount	1	37.552	41.307	1.00	1.00	3.50	90.00	0.000	0.000	144.57	0.00	0.00
19	150.00	Ericsson Air6419 B77G	3	37.552	41.307	0.61	0.80	6.93	178.47	0.000	0.000	286.30	0.00	0.00
20	148.00	Powerwave LGP13519	6	37.408	41.149	0.80	0.80	6.19	76.14	0.000	0.000	254.79	0.00	0.00
21	148.00	CCi DMP65R-BU6DA	1	37.408	41.149	0.58	0.80	7.32	71.46	0.000	0.000	301.25	0.00	0.00
22	148.00	CCi DMP65R-BU8DA	2	37.408	41.149	0.58	0.80	20.87	172.26	0.000	0.000	858.86	0.00	0.00
23	148.00	Powerwave 21401	6	37.408	41.149	0.54	0.80	4.15	76.14	0.000	0.000	170.71	0.00	0.00
24	148.00	Commscope	1	37.408	41.149	0.54	0.80	0.53	31.05	0.000	0.000	21.84	0.00	0.00
25	148.00	Powerwave 1001940	3	37.408	41.149	0.54	0.80	0.40	5.94	0.000	0.000	16.54	0.00	0.00
26	148.00	Raycap	2	37.408	41.149	0.80	0.80	1.82	47.16	0.000	0.000	75.05	0.00	0.00
27	148.00	Ericsson RRUS 4478 B14	3	37.408	41.149	0.54	0.80	2.65	160.38	0.000	0.000	109.18	0.00	0.00
28	148.00	Ericsson RRUS 4449	3	37.408	41.149	0.54	0.80	3.17	191.70	0.000	0.000	130.35	0.00	0.00
29	148.00	Ericsson RRUS 32	3	37.408	41.149	0.54	0.80	2.65	207.90	0.000	0.000	109.18	0.00	0.00
30	148.00	Ericsson RRUS 8843 B2	3	37.408	41.149	0.54	0.80	2.65	202.50	0.000	0.000	109.18	0.00	0.00
31	148.00	T-Arms w/ Modifications	3	37.408	41.149	0.56	0.75	20.25	1215.00	0.000	0.000	833.26	0.00	0.00
32	148.00	Quintel QD8616-7	2	37.408	41.149	0.74	0.80	11.97	199.80	0.000	0.000	492.44	0.00	0.00
33	148.00	Quintel QD6616-7	1	37.408	41.149	0.74	0.80	5.98	99.90	0.000	0.000	246.22	0.00	0.00
34	146.00	Ericsson Air6449 B77D	3	37.263	40.989	0.68	0.80	8.43	237.60	0.000	0.000	345.34	0.00	0.00
35	127.00	AAHC	3	35.807	39.388	0.56	0.75	7.10	279.72	0.000	0.000	279.83	0.00	0.00
36	127.00	NNVV-65B-R4	3	35.807	39.388	0.55	0.75	20.43	208.98	0.000	0.000	804.68	0.00	0.00
37	127.00	VHLP800-11	1	35.807	39.388	1.00	1.00	8.43	43.20	1.455	0.000	332.04	483.13	0.00
38	127.00	VHLP2-11	3	35.807	39.388	1.00	1.00	14.04	72.90	1.455	0.000	553.01	804.64	0.00
39	127.00	1900MHz RRH	3	35.807	39.388	0.74	0.75	6.17	162.00	0.000	0.000	243.03	0.00	0.00
40	127.00	RMQP-4096-HK	1	35.807	39.388	1.00	1.00	51.70	2380.50	0.000	0.000	2036.37	0.00	0.00
41	127.00	Horizon Duo	4	35.807	39.388	0.60	0.80	1.42	25.20	0.000	0.000	55.77	0.00	0.00
42	127.00	800 MHz RRH	6	35.807	39.388	0.69	0.75	10.31	286.20	0.000	0.000	406.04	0.00	0.00
43	127.00	TD-RRH8x20-25	3	35.807	39.388	0.52	0.75	6.29	189.00	0.000	0.000	247.66	0.00	0.00
44	117.00	Raycap	1	34.978	38.476	1.00	1.00	2.01	19.71	0.000	0.000	77.34	0.00	0.00
45	117.00	Fujitsu TA08025-B604	3	34.978	38.476	0.50	0.75	2.95	172.53	0.000	0.000	113.69	0.00	0.00
46	117.00	Fujitsu TA08025-B605	3	34.978	38.476	0.50	0.75	2.95	202.50	0.000	0.000	113.69	0.00	0.00
47	117.00	Commscope	1	34.978	38.476	1.00	1.00	37.59	1554.30	0.000	0.000	1446.31	0.00	0.00

## Discrete Appurtenanca Forces

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023	
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B		
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00		
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil		
<b>Gh:</b> 1.1	<b>Struct Class:</b> II	Page: 23	

48	117.00 JMA MX08FRO665-21	3	34.978	38.476	0.55	0.75	20.80	174.15	0.000	0.000	800.14	0.00	0.00
<b>Totals:</b>											<b>13,991.40</b>	<b>21,182.45</b>	

## Total Applied Force Summary

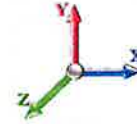
<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 0.9D + 1.0W 119 mph Wind

**Dead Load Factor** 0.90  
**Wind Load Factor** 1.00



**Iterations** 27

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
1.00		90.27	281.38	0.00	0.00
5.00		357.86	1117.00	0.00	0.00
10.00		440.08	1377.11	0.00	0.00
15.00		432.03	1355.85	0.00	0.00
20.00		423.98	1334.58	0.00	0.00
25.00		415.93	1313.32	0.00	0.00
30.00		408.23	1292.05	0.00	0.00
35.00		418.19	1270.79	0.00	0.00
40.00		425.71	1249.52	0.00	0.00
40.75		63.44	185.59	0.00	0.00
45.00		371.74	1785.91	0.00	0.00
47.00		174.83	830.56	0.00	0.00
50.00		264.13	646.62	0.00	0.00
55.00		444.70	1063.11	0.00	0.00
60.00		446.08	1044.88	0.00	0.00
65.00		446.35	1026.66	0.00	0.00
70.00		445.64	1008.43	0.00	0.00
75.00		444.04	990.20	0.00	0.00
80.00		441.64	971.97	0.00	0.00
85.00		438.51	953.74	0.00	0.00
89.25		369.32	796.35	0.00	0.00
90.00		65.33	210.70	0.00	0.00
91.50		130.53	419.36	0.00	0.00
94.25		238.73	761.72	0.00	0.00
95.00		64.67	103.28	0.00	0.00
96.75		150.69	239.93	0.00	0.00
97.00		21.43	34.15	0.00	0.00
100.00		257.20	407.48	0.00	0.00
102.25		191.43	302.74	0.00	0.00
105.00		232.58	366.67	0.00	0.00
110.00		419.48	657.26	0.00	0.00
115.00		413.02	645.11	0.00	0.00
117.00	(11) attachments	2713.86	2377.83	0.00	0.00
120.00		242.22	373.40	0.00	0.00
125.00		398.75	612.61	0.00	0.00
127.00	(27) attachments	5115.26	3889.34	1287.76	0.00
130.00		233.13	343.82	0.00	0.00
135.00		382.85	563.31	0.00	0.00
139.00		299.86	441.90	0.00	0.00
140.00		74.81	163.41	0.00	0.00
142.75		204.27	445.00	0.00	0.00
145.00		165.03	204.02	0.00	0.00
146.00	(3) attachments	418.01	327.68	0.00	0.00
148.00	(39) attachments	3873.21	2936.40	0.00	0.00
150.00	(4) attachments	573.77	428.45	0.00	0.00
155.00		351.58	393.56	0.00	0.00

## Total Applied Force Summary

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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157.00	(27) attachments	5200.45	2682.52	0.00	0.00
160.00		203.51	181.24	0.00	0.00
165.00	(6) attachments	2674.12	926.04	0.00	0.00
167.00	(18) attachments	1891.89	1913.56	0.00	242.79
169.00		127.78	87.53	0.00	0.00
<b>Totals:</b>		<b>35,092.14</b>	<b>45,335.66</b>	<b>1,287.76</b>	<b>242.79</b>

## Linear Appurtenance Segment Forces (Factored)

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 0.9D + 1.0W 119 mph Wind

**Dead Load Factor** 0.90  
**Wind Load Factor** 1.00



**Iterations** 27

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)
1.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.035	0.000	23.689	0.00	4.68
5.00	1 5/8" Coax	Yes	4.00	0.000	1.98	0.66	0.00	0.035	0.000	23.689	0.00	18.72
10.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.036	0.000	23.689	0.00	23.40
15.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.036	0.000	23.689	0.00	23.40
20.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.037	0.000	23.689	0.00	23.40
25.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.038	0.000	23.689	0.00	23.40
30.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.038	0.000	23.709	0.00	23.40
35.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.039	0.000	24.777	0.00	23.40
40.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.040	0.000	25.741	0.00	23.40
40.75	1 5/8" Coax	Yes	0.75	0.000	1.98	0.12	0.00	0.041	0.000	25.878	0.00	3.51
45.00	1 5/8" Coax	Yes	4.25	0.000	1.98	0.70	0.00	0.041	0.000	26.622	0.00	19.89
47.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.042	0.000	26.954	0.00	9.36
50.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.041	0.000	27.435	0.00	14.04
55.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.042	0.000	28.192	0.00	23.40
60.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.043	0.000	28.902	0.00	23.40
65.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.044	0.000	29.571	0.00	23.40
70.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.045	0.000	30.204	0.00	23.40
75.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.046	0.000	30.805	0.00	23.40
80.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.047	0.000	31.378	0.00	23.40
85.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.048	0.000	31.926	0.00	23.40
89.25	1 5/8" Coax	Yes	4.25	0.000	1.98	0.70	0.00	0.049	0.000	32.375	0.00	19.89
90.00	1 5/8" Coax	Yes	0.75	0.000	1.98	0.12	0.00	0.075	0.000	32.452	0.00	3.51
90.00	1" Reinforcing plate	Yes	0.75	0.000	1.00	0.06	0.00	0.075	0.000	32.452	0.00	0.00
91.50	1 5/8" Coax	Yes	1.50	0.000	1.98	0.25	0.00	0.076	0.000	32.606	0.00	7.02
91.50	1" Reinforcing plate	Yes	1.50	0.000	1.00	0.13	0.00	0.076	0.000	32.606	0.00	0.00
94.25	1 5/8" Coax	Yes	2.75	0.000	1.98	0.45	0.00	0.077	0.000	32.883	0.00	12.87
94.25	1" Reinforcing plate	Yes	2.75	0.000	1.00	0.23	0.00	0.077	0.000	32.883	0.00	0.00
95.00	1 5/8" Coax	Yes	0.75	0.000	1.98	0.12	0.00	0.076	0.000	32.957	0.00	3.51
95.00	1" Reinforcing plate	Yes	0.75	0.000	1.00	0.06	0.00	0.076	0.000	32.957	0.00	0.00
96.75	1 5/8" Coax	Yes	1.75	0.000	1.98	0.29	0.00	0.077	0.000	33.130	0.00	8.19
96.75	1" Reinforcing plate	Yes	1.75	0.000	1.00	0.15	0.00	0.077	0.000	33.130	0.00	0.00
97.00	1 5/8" Coax	Yes	0.25	0.000	1.98	0.04	0.00	0.077	0.000	33.154	0.00	1.17
97.00	1" Reinforcing plate	Yes	0.25	0.000	1.00	0.02	0.00	0.077	0.000	33.154	0.00	0.00
100.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.078	0.000	33.444	0.00	14.04
100.00	1" Reinforcing plate	Yes	0.75	0.000	1.00	0.06	0.00	0.078	0.000	33.444	0.00	0.00
100.00	1" Reinforcing plate	Yes	2.25	0.000	1.00	0.19	0.00	0.078	0.000	33.444	0.00	0.00
102.25	1 5/8" Coax	Yes	2.25	0.000	1.98	0.37	0.00	0.079	0.000	33.657	0.00	10.53
102.25	1" Reinforcing plate	Yes	2.25	0.000	1.00	0.19	0.00	0.079	0.000	33.657	0.00	0.00
105.00	1 5/8" Coax	Yes	2.75	0.000	1.98	0.45	0.00	0.075	0.000	33.913	0.00	12.87
105.00	1" Reinforcing plate	Yes	2.25	0.000	1.00	0.19	0.00	0.075	0.000	33.913	0.00	0.00
110.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.054	0.000	34.367	0.00	23.40
115.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.056	0.000	34.806	0.00	23.40
117.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.057	0.000	34.978	0.00	9.36
120.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.058	0.000	35.232	0.00	14.04
125.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.059	0.000	35.645	0.00	23.40
127.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.061	0.000	35.807	0.00	9.36
130.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.061	0.000	36.047	0.00	14.04

## Linear Appurtenance Segment Forces (Factored)

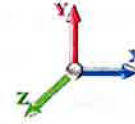
<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Page:</b> 27
	<b>Struct Class:</b> II	



**Load Case:** 0.9D + 1.0W 119 mph Wind

**Dead Load Factor** 0.90

**Wind Load Factor** 1.00



**Iterations** 27

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)
135.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.063	0.000	36.438	0.00	23.40
139.00	1 5/8" Coax	Yes	4.00	0.000	1.98	0.66	0.00	0.065	0.000	36.743	0.00	18.72
140.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.066	0.000	36.819	0.00	4.68
142.75	1 5/8" Coax	Yes	2.75	0.000	1.98	0.45	0.00	0.067	0.000	37.024	0.00	12.87
145.00	1 5/8" Coax	Yes	2.25	0.000	1.98	0.37	0.00	0.067	0.000	37.190	0.00	10.53
146.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.068	0.000	37.263	0.00	4.68
148.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.069	0.000	37.408	0.00	9.36
150.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.070	0.000	37.552	0.00	9.36
155.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.071	0.000	37.905	0.00	23.40
157.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.073	0.000	38.044	0.00	9.36
<b>Totals:</b>											<b>0.0</b>	<b>734.8</b>

## Calculated Forces

**Structure:** CT13071-A-SBA  
**Site Name:** Woodbridge  
**Height:** 169.00 (ft)  
**Base Elev:** 0.000 (ft)  
**Gh:** 1.1

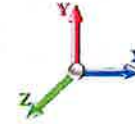
**Code:** TIA-222-H  
**Exposure:** B  
**Crest Height:** 0.00  
**Site Class:** D - Stiff Soil  
**Struct Class:** II

7/7/2023  
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**Load Case:** 0.9D + 1.0W 119 mph Wind

**Dead Load Factor** 0.90  
**Wind Load Factor** 1.00



**Iterations** 27

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	-45.32	-35.11	-1.26	-4409.9	-0.02	4409.98	5324.18	1358.42	6282.52	6106.56	0.00	0.000	0.000	0.675
1.00	-44.98	-35.09	-1.26	-4374.8	-0.02	4374.88	5311.65	1353.54	6237.51	6070.17	0.00	-0.038	0.000	0.674
1.00	-44.98	-35.09	-1.26	-4374.8	-0.02	4374.88	5311.65	1353.54	6237.51	6070.17	0.00	-0.038	0.000	0.727
5.00	-43.76	-34.87	-1.26	-4234.5	-0.02	4234.51	5261.08	1334.04	6059.10	5925.09	0.10	-0.188	0.000	0.724
10.00	-42.26	-34.57	-1.26	-4060.1	-0.02	4060.17	5196.80	1309.67	5839.72	5744.92	0.41	-0.393	0.000	0.716
15.00	-40.78	-34.28	-1.26	-3887.3	-0.02	3887.31	5131.34	1285.30	5624.39	5566.13	0.93	-0.601	0.000	0.707
20.00	-39.33	-33.98	-1.26	-3715.9	-0.02	3715.92	5064.69	1260.92	5413.10	5388.80	1.67	-0.811	0.000	0.698
25.00	-37.90	-33.69	-1.26	-3546.0	-0.02	3546.01	4996.86	1236.55	5205.86	5212.99	2.64	-1.024	0.000	0.689
30.00	-36.49	-33.39	-1.26	-3377.5	-0.03	3377.57	4927.84	1212.18	5002.66	5038.79	3.82	-1.238	0.000	0.678
35.00	-35.10	-33.08	-1.26	-3210.6	-0.03	3210.61	4857.63	1187.80	4803.50	4866.26	5.24	-1.455	0.000	0.668
40.00	-33.79	-32.69	-1.26	-3045.2	-0.03	3045.23	4786.24	1163.43	4608.40	4695.49	6.88	-1.675	-0.001	0.656
40.75	-33.55	-32.69	-1.26	-3020.7	-0.03	3020.71	4775.43	1159.78	4579.48	4670.03	7.15	-1.708	-0.001	0.655
45.00	-31.69	-32.34	-1.26	-2881.7	-0.03	2881.78	4713.67	1139.06	4417.33	4526.53	8.75	-1.897	-0.001	0.644
47.00	-30.81	-32.20	-1.26	-2817.1	-0.03	2817.11	3877.89	984.95	3853.40	3762.05	9.57	-1.988	-0.001	0.758
50.00	-30.06	-32.01	-1.27	-2720.5	-0.03	2720.52	3845.09	972.42	3755.95	3682.38	10.86	-2.123	-0.001	0.748
55.00	-28.88	-31.65	-1.27	-2560.4	-0.03	2560.47	3789.47	951.52	3596.29	3550.52	13.21	-2.371	-0.001	0.730
60.00	-27.72	-31.28	-1.27	-2402.2	-0.04	2402.22	3732.67	930.63	3440.11	3419.89	15.83	-2.619	-0.001	0.711
65.00	-26.58	-30.90	-1.27	-2245.8	-0.04	2245.83	3674.68	909.74	3287.40	3290.55	18.71	-2.867	-0.001	0.691
70.00	-25.47	-30.51	-1.27	-2091.3	-0.04	2091.34	3615.51	888.85	3138.15	3162.58	21.84	-3.116	-0.001	0.670
75.00	-24.37	-30.12	-1.27	-1938.7	-0.04	1938.78	3555.15	867.96	2992.36	3036.06	25.24	-3.363	-0.001	0.647
80.00	-23.30	-29.72	-1.27	-1788.1	-0.05	1788.19	3493.61	847.07	2850.05	2911.05	28.89	-3.609	-0.002	0.622
85.00	-22.27	-29.31	-1.27	-1639.6	-0.05	1639.60	3430.88	826.18	2711.20	2787.63	32.80	-3.852	-0.002	0.596
89.25	-21.44	-28.93	-1.27	-1515.0	-0.05	1515.06	3376.63	808.42	2595.91	2684.02	36.32	-4.057	-0.002	0.572
90.00	-21.20	-28.87	-1.27	-1493.3	-0.05	1493.36	3366.97	805.29	2575.82	2665.87	36.96	-4.094	-0.002	0.568
91.50	-20.75	-28.74	-1.27	-1450.0	-0.06	1450.06	3347.56	799.02	2535.88	2629.68	38.25	-4.167	-0.002	0.390
94.25	-19.98	-28.46	-1.27	-1371.0	-0.06	1371.04	1944.87	533.72	1697.22	1535.78	40.68	-4.258	-0.002	0.442
95.00	-19.86	-28.41	-1.28	-1349.6	-0.06	1349.69	1940.65	531.63	1683.96	1526.41	41.35	-4.283	-0.002	0.551
96.75	-19.61	-28.25	-1.28	-1299.9	-0.06	1299.98	1930.70	526.76	1653.22	1504.57	42.93	-4.356	-0.002	0.537
97.00	-19.56	-28.24	-1.28	-1292.9	-0.06	1292.92	1929.27	526.06	1648.85	1501.45	43.16	-4.363	-0.002	0.386
100.00	-19.13	-27.99	-1.28	-1208.1	-0.06	1208.19	1911.84	517.71	1596.88	1464.09	45.93	-4.450	-0.003	0.509
102.25	-18.79	-27.80	-1.28	-1145.2	-0.06	1145.22	1898.49	511.44	1558.45	1436.15	48.04	-4.538	-0.003	0.490
102.25	-18.79	-27.80	-1.28	-1145.2	-0.06	1145.22	1898.49	511.44	1558.45	1436.15	48.04	-4.538	-0.003	0.799
105.00	-18.35	-27.61	-1.28	-1068.7	-0.06	1068.76	1881.84	503.78	1512.12	1402.09	50.69	-4.643	-0.003	0.775
110.00	-17.59	-27.23	-1.28	-930.72	-0.07	930.72	1850.66	489.85	1429.66	1340.48	55.71	-4.943	-0.003	0.707
115.00	-16.89	-26.81	-1.28	-794.59	-0.07	794.59	1818.29	475.92	1349.52	1279.32	61.03	-5.224	-0.004	0.634
117.00	-14.72	-23.93	-1.28	-740.97	-0.08	740.97	1805.01	470.35	1318.11	1255.00	63.24	-5.333	-0.004	0.601
120.00	-14.29	-23.70	-1.29	-669.19	-0.08	669.19	1784.73	462.00	1271.69	1218.70	66.64	-5.489	-0.004	0.560
125.00	-13.65	-23.28	-1.29	-550.69	-0.09	550.69	1749.99	448.07	1196.18	1158.68	72.51	-5.726	-0.005	0.486
127.00	-10.27	-17.82	0.00	-504.13	0.04	504.13	1735.77	442.50	1166.62	1134.86	74.93	-5.816	-0.005	0.452
130.00	-9.90	-17.58	0.00	-450.67	0.04	450.67	1714.07	434.14	1122.97	1099.35	78.62	-5.943	-0.005	0.417
135.00	-9.33	-17.17	0.00	-362.77	0.03	362.77	1676.96	420.21	1052.07	1040.77	84.93	-6.133	-0.005	0.356
139.00	-8.90	-16.83	0.00	-294.10	0.02	294.10	1646.42	409.07	997.02	994.50	90.12	-6.269	-0.005	0.303
140.00	-8.73	-16.75	0.00	-277.26	0.02	277.26	1638.67	406.29	983.49	983.02	91.44	-6.301	-0.005	0.289
142.75	-8.29	-16.51	0.00	-231.20	0.02	231.20	1100.62	303.54	731.94	659.08	95.08	-6.381	-0.005	0.361
145.00	-8.09	-16.33	0.00	-194.06	0.02	194.06	1091.20	298.84	709.44	643.26	98.10	-6.439	-0.005	0.312
146.00	-7.80	-15.88	0.00	-177.73	0.01	177.73	1086.94	296.75	699.56	636.24	99.45	-6.469	-0.005	0.289
148.00	-5.31	-11.71	0.00	-145.97	0.01	145.97	1078.27	292.57	680.00	622.22	102.17	-6.522	-0.005	0.241
150.00	-4.94	-11.09	0.00	-122.56	0.01	122.56	1069.42	288.39	660.71	608.24	104.90	-6.568	-0.005	0.208



## Calculated Forces

**Structure:** CT13071-A-SBA

**Code:** TIA-222-H

7/7/2023

**Site Name:** Woodbridge

**Exposure:** B

**Height:** 169.00 (ft)

**Crest Height:** 0.00

**Base Elev:** 0.000 (ft)

**Site Class:** D - Stiff Soil

**Gh:** 1.1

**Topography:** 1

**Struct Class:** II

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155.00	-4.58	-10.70	0.00	-67.10	0.01	67.10	1046.45	277.95	613.72	573.48	111.82	-6.654	-0.005	0.123
157.00	-2.52	-5.23	0.00	-45.69	0.00	45.69	1036.93	273.77	595.41	559.66	114.60	-6.676	-0.005	0.084
160.00	-2.36	-5.00	0.00	-30.02	0.00	30.02	1022.30	267.50	568.46	539.04	118.80	-6.700	-0.005	0.058
165.00	-1.75	-2.24	0.00	-5.00	0.00	5.00	996.96	257.06	524.93	505.00	125.81	-6.720	-0.005	0.012
167.00	-0.07	-0.14	0.00	-0.27	0.00	0.27	986.50	252.88	508.00	491.52	128.62	-6.721	-0.005	0.001
169.00	0.00	-0.13	0.00	0.00	0.00	0.00	975.84	248.70	491.35	478.11	131.43	-6.721	-0.005	0.000

## Wind Loading - Shaft

**Structure:** CT13071-A-SBA  
**Site Name:** Woodbridge  
**Height:** 169.00 (ft)  
**Base Elev:** 0.000 (ft)  
**Gh:** 1.1

**Topography:** 1

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

7/7/2023  
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**Load Case:** 1.2D + 1.0Di + 1.0Wi 50 mph Wind

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.00



**Iterations** 26

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	RB1	1.00	0.70	4.182	4.60	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
1.00	RT1	1.00	0.70	4.182	4.60	0.00	1.200	0.705	1.00	4.863	5.84	26.8	50.1	365.6
5.00		1.00	0.70	4.182	4.60	0.00	1.200	0.828	4.00	19.364	23.24	106.9	232.4	1483.1
10.00		1.00	0.70	4.182	4.60	0.00	1.200	0.887	5.00	23.874	28.65	131.8	306.2	1843.9
15.00		1.00	0.70	4.182	4.60	0.00	1.200	0.924	5.00	23.482	28.18	129.6	313.3	1822.7
20.00		1.00	0.70	4.182	4.60	0.00	1.200	0.951	5.00	23.081	27.70	127.4	316.6	1797.7
25.00		1.00	0.70	4.182	4.60	0.00	1.200	0.973	5.00	22.676	27.21	125.2	317.8	1770.5
30.00		1.00	0.70	4.186	4.60	0.00	1.200	0.991	5.00	22.268	26.72	123.0	317.5	1741.9
35.00		1.00	0.73	4.374	4.81	0.00	1.200	1.006	5.00	21.857	26.23	126.2	316.3	1712.3
40.00		1.00	0.76	4.544	5.00	0.00	1.200	1.019	5.00	21.445	25.73	128.6	314.2	1681.8
40.75	Bot - Section 2	1.00	0.76	4.568	5.03	0.00	1.200	1.021	0.75	3.181	3.82	19.2	47.1	249.8
45.00		1.00	0.79	4.700	5.17	0.00	1.200	1.032	4.25	18.120	21.74	112.4	268.9	2396.5
47.00	Top - Section 1	1.00	0.80	4.759	5.23	0.00	1.200	1.036	2.00	8.423	10.11	52.9	126.1	1114.1
50.00		1.00	0.81	4.843	5.33	0.00	1.200	1.042	3.00	12.510	15.01	80.0	188.0	871.1
55.00		1.00	0.83	4.977	5.47	0.00	1.200	1.052	5.00	20.521	24.62	134.8	309.7	1428.8
60.00		1.00	0.85	5.102	5.61	0.00	1.200	1.062	5.00	20.105	24.13	135.4	305.9	1400.6
65.00		1.00	0.87	5.220	5.74	0.00	1.200	1.070	5.00	19.689	23.63	135.7	301.7	1372.2
70.00		1.00	0.89	5.332	5.87	0.00	1.200	1.078	5.00	19.273	23.13	135.6	297.2	1343.4
75.00		1.00	0.91	5.438	5.98	0.00	1.200	1.086	5.00	18.856	22.63	135.4	292.5	1314.4
80.00		1.00	0.93	5.540	6.09	0.00	1.200	1.093	5.00	18.438	22.13	134.8	287.6	1285.2
85.00		1.00	0.94	5.636	6.20	0.00	1.200	1.099	5.00	18.021	21.62	134.1	282.5	1255.8
89.25	Bot - Section 3	1.00	0.96	5.715	6.29	0.00	1.200	1.105	4.25	14.989	17.99	113.1	236.3	1044.5
90.00		1.00	0.96	5.729	6.30	0.00	1.200	1.106	0.75	2.645	3.17	20.0	42.1	278.3
91.50	RB2	1.00	0.96	5.756	6.33	0.00	1.200	1.107	1.50	5.262	6.31	40.0	83.7	553.4
94.25	Top - Section 2	1.00	0.97	5.805	6.39	0.00	1.200	1.111	2.75	9.550	11.46	73.2	151.9	1003.4
95.00		1.00	0.97	5.818	6.40	0.00	1.200	1.112	0.75	2.582	3.10	19.8	41.3	134.2
96.75	RB3	1.00	0.98	5.849	6.43	0.00	1.200	1.114	1.75	5.989	7.19	46.2	95.7	311.2
97.00	RT2	1.00	0.98	5.853	6.44	0.00	1.200	1.114	0.25	0.851	1.02	6.6	13.7	44.3
100.00		1.00	0.99	5.904	6.49	0.00	1.200	1.117	3.00	10.136	12.16	79.0	161.8	526.1
102.25	RT3	1.00	0.99	5.942	6.54	0.00	1.200	1.120	2.25	7.503	9.00	58.8	120.2	389.6
105.00		1.00	1.00	5.987	6.59	0.00	1.200	1.123	2.75	9.055	10.87	71.6	145.2	470.0
110.00		1.00	1.02	6.067	6.67	0.00	1.200	1.128	5.00	16.140	19.37	129.3	258.3	836.2
115.00		1.00	1.03	6.145	6.76	0.00	1.200	1.133	5.00	15.721	18.87	127.5	252.3	814.1
117.00	Appurtenance(s)	1.00	1.03	6.175	6.79	0.00	1.200	1.135	2.00	6.171	7.40	50.3	100.0	320.1
120.00		1.00	1.04	6.220	6.84	0.00	1.200	1.138	3.00	9.131	10.96	75.0	147.8	473.2
125.00		1.00	1.05	6.293	6.92	0.00	1.200	1.142	5.00	14.883	17.86	123.6	240.2	769.6
127.00	Appurtenance(s)	1.00	1.06	6.321	6.95	0.00	1.200	1.144	2.00	5.835	7.00	48.7	95.1	302.3
130.00		1.00	1.07	6.364	7.00	0.00	1.200	1.147	3.00	8.627	10.35	72.5	140.4	446.3
135.00		1.00	1.08	6.433	7.08	0.00	1.200	1.151	5.00	14.044	16.85	119.3	227.7	724.6
139.00	Bot - Section 4	1.00	1.09	6.487	7.14	0.00	1.200	1.155	4.00	10.933	13.12	93.6	178.1	564.0
140.00		1.00	1.09	6.500	7.15	0.00	1.200	1.155	1.00	2.723	3.27	23.4	44.8	211.9
142.75	Top - Section 3	1.00	1.09	6.536	7.19	0.00	1.200	1.158	2.75	7.401	8.88	63.9	121.3	574.8
145.00		1.00	1.10	6.565	7.22	0.00	1.200	1.160	2.25	5.961	7.15	51.7	97.9	255.6
146.00	Appurtenance(s)	1.00	1.10	6.578	7.24	0.00	1.200	1.160	1.00	2.622	3.15	22.8	43.3	112.5
148.00	Appurtenance(s)	1.00	1.11	6.604	7.26	0.00	1.200	1.162	2.00	5.194	6.23	45.3	85.5	222.6
150.00	Appurtenance(s)	1.00	1.11	6.629	7.29	0.00	1.200	1.163	2.00	5.127	6.15	44.9	84.4	219.6
155.00		1.00	1.12	6.692	7.36	0.00	1.200	1.167	5.00	12.523	15.03	110.6	204.5	533.9

## Wind Loading - Shaft

**Structure:** CT13071-A-SBA  
**Site Name:** Woodbridge  
**Height:** 169.00 (ft)  
**Base Elev:** 0.000 (ft)  
**Gh:** 1.1

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

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**Topography:** 1

157.00 Appurtenance(s)	1.00	1.12	6.716	7.39	0.00	1.200	1.169	2.00	4.891	5.87	43.4	80.7	209.1	
160.00	1.00	1.13	6.753	7.43	0.00	1.200	1.171	3.00	7.211	8.65	64.3	118.7	307.6	
165.00 Appurtenance(s)	1.00	1.14	6.812	7.49	0.00	1.200	1.175	5.00	11.683	14.02	105.1	191.1	496.2	
167.00 Appurtenance(s)	1.00	1.14	6.836	7.52	0.00	1.200	1.176	2.00	4.555	5.47	41.1	75.3	194.0	
169.00	1.00	1.15	6.859	7.55	0.00	1.200	1.177	2.00	4.488	5.39	40.6	74.3	191.0	
<b>Totals:</b>								<b>169.00</b>				<b>4,260.8</b>	<b>41,785.4</b>	

## Discrete Appurtenance Forces

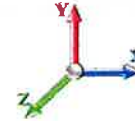
<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.00



**Iterations** 26

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	167.00	AIR 6449 B41	3	6.836	7.519	0.56	0.80	10.57	662.26	0.000	0.000	79.51	0.00	0.00
2	167.00	RRUS 4415 B25	3	6.836	7.519	0.54	0.80	3.20	220.49	0.000	0.000	24.03	0.00	0.00
3	167.00	Ericsson - Radio 4449	3	6.836	7.519	0.60	0.80	3.55	391.21	0.000	0.000	26.71	0.00	0.00
4	167.00	Ericsson - KRY 112 144/2	3	6.836	7.519	0.60	0.80	1.31	52.10	0.000	0.000	9.88	0.00	0.00
5	167.00	T-Arms/Commscope	3	6.842	7.526	0.56	0.75	18.09	1463.82	0.000	0.500	136.13	0.00	68.07
6	167.00	AIR 21 B2A/B4P	3	6.836	7.519	0.77	0.90	15.72	651.41	0.000	0.000	118.19	0.00	0.00
7	165.00	Air 32	3	6.812	7.494	0.78	0.90	17.16	731.15	0.000	0.000	128.59	0.00	0.00
8	165.00	APXVAA24_43-U-A20	3	6.812	7.494	0.66	0.90	42.43	1290.20	0.000	0.000	317.97	0.00	0.00
9	157.00	BSF0020F3V1-1	2	6.716	7.388	0.80	0.80	1.91	62.05	0.000	0.000	14.14	0.00	0.00
10	157.00	MX06FRO660-03	6	6.716	7.388	0.70	0.80	44.99	1458.72	0.000	0.000	332.42	0.00	0.00
11	157.00	MT6407-77A	3	6.716	7.388	0.56	0.80	8.93	509.63	0.000	0.000	66.00	0.00	0.00
12	157.00	T-Arms	3	6.716	7.388	0.56	0.75	46.79	2796.49	0.000	0.000	345.68	0.00	0.00
13	157.00	DB846H80E-SX	2	6.716	7.388	0.88	0.80	10.20	235.92	0.000	0.000	75.34	0.00	0.00
14	157.00	DB846F65ZAXY	4	6.716	7.388	0.74	0.80	23.36	595.94	0.000	0.000	172.57	0.00	0.00
15	157.00	RF4439d-25A	3	6.716	7.388	0.66	0.80	4.48	301.23	0.000	0.000	33.10	0.00	0.00
16	157.00	RF4440d-13A	3	6.716	7.388	0.66	0.80	4.48	301.23	0.000	0.000	33.10	0.00	0.00
17	157.00	DB-C1-12C-24AB-0Z	1	6.716	7.388	1.00	1.00	4.61	86.10	0.000	0.000	34.06	0.00	0.00
18	150.00	Collar Mount	1	6.629	7.292	1.00	1.00	5.13	-174.15	0.000	0.000	37.40	0.00	0.00
19	150.00	Ericsson Air6419 B77G	3	6.629	7.292	0.61	0.80	7.90	362.28	0.000	0.000	57.60	0.00	0.00
20	148.00	Powerwave LGP13519	6	6.604	7.264	0.80	0.80	8.86	158.79	0.000	0.000	64.38	0.00	0.00
21	148.00	CCi DMP65R-BU6DA	1	6.604	7.264	0.58	0.80	7.88	224.08	0.000	0.000	57.26	0.00	0.00
22	148.00	CCi DMP65R-BU8DA	2	6.604	7.264	0.58	0.80	22.27	949.93	0.000	0.000	161.77	0.00	0.00
23	148.00	Powerwave 21401	6	6.604	7.264	0.54	0.80	5.94	158.79	0.000	0.000	43.14	0.00	0.00
24	148.00	Commscope	1	6.604	7.264	0.54	0.80	0.68	67.10	0.000	0.000	4.91	0.00	0.00
25	148.00	Powerwave 1001940	3	6.604	7.264	0.54	0.80	0.85	16.99	0.000	0.000	6.19	0.00	0.00
26	148.00	Raycap	2	6.604	7.264	0.80	0.80	3.51	169.81	0.000	0.000	25.53	0.00	0.00
27	148.00	Ericsson RRUS 4478 B14	3	6.604	7.264	0.54	0.80	3.21	268.46	0.000	0.000	23.30	0.00	0.00
28	148.00	Ericsson RRUS 4449	3	6.604	7.264	0.54	0.80	3.75	321.42	0.000	0.000	27.27	0.00	0.00
29	148.00	Ericsson RRUS 32	3	6.604	7.264	0.54	0.80	3.25	363.64	0.000	0.000	23.65	0.00	0.00
30	148.00	Ericsson RRUS 8843 B2	3	6.604	7.264	0.54	0.80	3.21	407.31	0.000	0.000	23.30	0.00	0.00
31	148.00	T-Arms w/ Modifications	3	6.604	7.264	0.56	0.75	32.01	2337.43	0.000	0.000	232.57	0.00	0.00
32	148.00	Quintel QD8616-7	2	6.604	7.264	0.74	0.80	13.21	551.57	0.000	0.000	95.98	0.00	0.00
33	148.00	Quintel QD6616-7	1	6.604	7.264	0.74	0.80	6.61	275.78	0.000	0.000	47.99	0.00	0.00
34	146.00	Ericsson Air6449 B77D	3	6.578	7.236	0.68	0.80	9.56	574.39	0.000	0.000	69.20	0.00	0.00
35	127.00	AAHC	3	6.321	6.954	0.56	0.75	8.00	505.21	0.000	0.000	55.64	0.00	0.00
36	127.00	NNVV-65B-R4	3	6.321	6.954	0.55	0.75	22.02	642.93	0.000	0.000	153.11	0.00	0.00
37	127.00	VHLP800-11	1	6.321	6.954	1.00	1.00	9.55	122.78	1.455	0.000	66.40	96.61	0.00
38	127.00	VHLP2-11	3	6.321	6.954	1.00	1.00	16.55	205.69	1.455	0.000	115.06	167.41	0.00
39	127.00	1900MHz RRH	3	6.321	6.954	0.74	0.75	8.02	308.42	0.000	0.000	55.79	0.00	0.00
40	127.00	RMQP-4096-HK	1	6.321	6.954	1.00	1.00	76.78	4234.96	0.000	0.000	533.92	0.00	0.00
41	127.00	Horizon Duo	4	6.321	6.954	0.60	0.80	2.30	56.70	0.000	0.000	15.99	0.00	0.00
42	127.00	800 MHz RRH	6	6.321	6.954	0.69	0.75	13.41	545.96	0.000	0.000	93.27	0.00	0.00
43	127.00	TD-RRH8x20-25	3	6.321	6.954	0.53	0.75	7.30	453.99	0.000	0.000	50.75	0.00	0.00
44	117.00	Raycap	1	6.175	6.793	1.00	1.00	2.38	48.21	0.000	0.000	16.16	0.00	0.00
45	117.00	Fujitsu TA08025-B604	3	6.175	6.793	0.50	0.75	3.50	292.51	0.000	0.000	23.81	0.00	0.00
46	117.00	Fujitsu TA08025-B605	3	6.175	6.793	0.50	0.75	3.50	334.24	0.000	0.000	23.81	0.00	0.00
47	117.00	Commscope	1	6.175	6.793	1.00	1.00	68.31	2797.01	0.000	0.000	463.98	0.00	0.00

## Discrete Appurtenance Forces

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Page:</b> 33
<b>Struct Class:</b> II		



48	117.00	JMA MX08FRO665-21	3	6.175	6.793	0.55	0.75	22.38	598.07	0.000	0.000	152.03	0.00	0.00
<b>Totals:</b>											<b>29,990.23</b>	<b>4,768.58</b>		

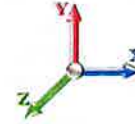
## Total Applied Force Summary

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Page:</b> 34
	<b>Struct Class:</b> II	



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

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.00



**Iterations** 26

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
1.00		26.85	432.91	0.00	0.00
5.00		106.90	1757.18	0.00	0.00
10.00		131.80	2189.49	0.00	0.00
15.00		129.63	2170.04	0.00	0.00
20.00		127.42	2146.37	0.00	0.00
25.00		125.18	2120.27	0.00	0.00
30.00		123.03	2092.57	0.00	0.00
35.00		126.20	2063.72	0.00	0.00
40.00		128.64	2034.00	0.00	0.00
40.75		19.18	302.61	0.00	0.00
45.00		112.41	2696.37	0.00	0.00
47.00		52.91	1255.33	0.00	0.00
50.00		79.98	1083.09	0.00	0.00
55.00		134.82	1782.68	0.00	0.00
60.00		135.41	1754.96	0.00	0.00
65.00		135.68	1726.91	0.00	0.00
70.00		135.65	1698.55	0.00	0.00
75.00		135.36	1669.94	0.00	0.00
80.00		134.82	1641.09	0.00	0.00
85.00		134.07	1612.04	0.00	0.00
89.25		113.08	1347.57	0.00	0.00
90.00		20.00	335.02	0.00	0.00
91.50		39.98	666.86	0.00	0.00
94.25		73.18	1211.61	0.00	0.00
95.00		19.83	191.05	0.00	0.00
96.75		46.24	443.74	0.00	0.00
97.00		6.58	63.22	0.00	0.00
100.00		78.99	753.59	0.00	0.00
102.25		58.85	560.31	0.00	0.00
105.00		71.56	676.56	0.00	0.00
110.00		129.26	1193.99	0.00	0.00
115.00		127.52	1172.13	0.00	0.00
117.00	(11) attachments	730.08	4533.44	0.00	0.00
120.00		74.96	681.60	0.00	0.00
125.00		123.63	1117.16	0.00	0.00
127.00	(27) attachments	1188.63	7518.01	264.02	0.00
130.00		72.47	635.04	0.00	0.00
135.00		119.25	1039.37	0.00	0.00
139.00		93.61	815.89	0.00	0.00
140.00		23.36	274.85	0.00	0.00
142.75		63.86	748.11	0.00	0.00
145.00		51.66	397.40	0.00	0.00
146.00	(3) attachments	91.97	749.97	0.00	0.00
148.00	(39) attachments	882.51	6619.79	0.00	0.00
150.00	(4) attachments	139.86	510.34	0.00	0.00
155.00		110.62	790.65	0.00	0.00

## Total Applied Force Summary

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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157.00	(27) attachments	1149.77	6659.13	0.00	0.00
160.00		64.28	360.34	0.00	0.00
165.00	(6) attachments	551.62	2605.47	0.00	0.00
167.00	(18) attachments	435.56	3670.45	0.00	68.07
169.00		40.64	190.96	0.00	0.00
<b>Totals:</b>		<b>9,029.37</b>	<b>82,763.75</b>	<b>264.02</b>	<b>68.07</b>

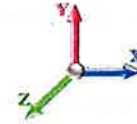
## Linear Appurtenance Segment Forces (Factored)

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.00



**Iterations** 26

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)
1.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.28	0.00	0.035	0.000	4.182	0.00	13.91
5.00	1 5/8" Coax	Yes	4.00	0.000	1.98	1.21	0.00	0.035	0.000	4.182	0.00	60.36
10.00	1 5/8" Coax	Yes	5.00	0.000	1.98	1.56	0.00	0.036	0.000	4.182	0.00	78.36
15.00	1 5/8" Coax	Yes	5.00	0.000	1.98	1.60	0.00	0.036	0.000	4.182	0.00	80.18
20.00	1 5/8" Coax	Yes	5.00	0.000	1.98	1.62	0.00	0.037	0.000	4.182	0.00	81.53
25.00	1 5/8" Coax	Yes	5.00	0.000	1.98	1.64	0.00	0.038	0.000	4.182	0.00	82.60
30.00	1 5/8" Coax	Yes	5.00	0.000	1.98	1.65	0.00	0.038	0.000	4.186	0.00	83.51
35.00	1 5/8" Coax	Yes	5.00	0.000	1.98	1.66	0.00	0.039	0.000	4.374	0.00	84.29
40.00	1 5/8" Coax	Yes	5.00	0.000	1.98	1.67	0.00	0.040	0.000	4.544	0.00	84.98
40.75	1 5/8" Coax	Yes	0.75	0.000	1.98	0.25	0.00	0.041	0.000	4.568	0.00	12.76
45.00	1 5/8" Coax	Yes	4.25	0.000	1.98	1.43	0.00	0.041	0.000	4.700	0.00	72.75
47.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.68	0.00	0.042	0.000	4.759	0.00	34.33
50.00	1 5/8" Coax	Yes	3.00	0.000	1.98	1.02	0.00	0.041	0.000	4.843	0.00	51.69
55.00	1 5/8" Coax	Yes	5.00	0.000	1.98	1.70	0.00	0.042	0.000	4.977	0.00	86.66
60.00	1 5/8" Coax	Yes	5.00	0.000	1.98	1.71	0.00	0.043	0.000	5.102	0.00	87.14
65.00	1 5/8" Coax	Yes	5.00	0.000	1.98	1.72	0.00	0.044	0.000	5.220	0.00	87.58
70.00	1 5/8" Coax	Yes	5.00	0.000	1.98	1.72	0.00	0.045	0.000	5.332	0.00	87.99
75.00	1 5/8" Coax	Yes	5.00	0.000	1.98	1.73	0.00	0.046	0.000	5.438	0.00	88.37
80.00	1 5/8" Coax	Yes	5.00	0.000	1.98	1.74	0.00	0.047	0.000	5.540	0.00	88.74
85.00	1 5/8" Coax	Yes	5.00	0.000	1.98	1.74	0.00	0.048	0.000	5.636	0.00	89.08
89.25	1 5/8" Coax	Yes	4.25	0.000	1.98	1.48	0.00	0.049	0.000	5.715	0.00	75.96
90.00	1 5/8" Coax	Yes	0.75	0.000	1.98	0.26	0.00	0.075	0.000	5.729	0.00	13.41
90.00	1" Reinforcing plate	Yes	0.75	0.000	1.00	0.20	0.00	0.075	0.000	5.729	0.00	3.24
91.50	1 5/8" Coax	Yes	1.50	0.000	1.98	0.52	0.00	0.076	0.000	5.756	0.00	26.85
91.50	1" Reinforcing plate	Yes	1.50	0.000	1.00	0.40	0.00	0.076	0.000	5.756	0.00	6.50
94.25	1 5/8" Coax	Yes	2.75	0.000	1.98	0.96	0.00	0.077	0.000	5.805	0.00	49.32
94.25	1" Reinforcing plate	Yes	2.75	0.000	1.00	0.74	0.00	0.077	0.000	5.805	0.00	11.96
95.00	1 5/8" Coax	Yes	0.75	0.000	1.98	0.26	0.00	0.076	0.000	5.818	0.00	13.46
95.00	1" Reinforcing plate	Yes	0.75	0.000	1.00	0.20	0.00	0.076	0.000	5.818	0.00	3.27
96.75	1 5/8" Coax	Yes	1.75	0.000	1.98	0.61	0.00	0.077	0.000	5.849	0.00	31.44
96.75	1" Reinforcing plate	Yes	1.75	0.000	1.00	0.47	0.00	0.077	0.000	5.849	0.00	7.64
97.00	1 5/8" Coax	Yes	0.25	0.000	1.98	0.09	0.00	0.077	0.000	5.853	0.00	4.49
97.00	1" Reinforcing plate	Yes	0.25	0.000	1.00	0.07	0.00	0.077	0.000	5.853	0.00	1.09
100.00	1 5/8" Coax	Yes	3.00	0.000	1.98	1.05	0.00	0.078	0.000	5.904	0.00	54.01
100.00	1" Reinforcing plate	Yes	0.75	0.000	1.00	0.20	0.00	0.078	0.000	5.904	0.00	3.29
100.00	1" Reinforcing plate	Yes	2.25	0.000	1.00	0.61	0.00	0.078	0.000	5.904	0.00	9.86
102.25	1 5/8" Coax	Yes	2.25	0.000	1.98	0.79	0.00	0.079	0.000	5.942	0.00	40.57
102.25	1" Reinforcing plate	Yes	2.25	0.000	1.00	0.61	0.00	0.079	0.000	5.942	0.00	9.89
105.00	1 5/8" Coax	Yes	2.75	0.000	1.98	0.97	0.00	0.075	0.000	5.987	0.00	49.67
105.00	1" Reinforcing plate	Yes	2.25	0.000	1.00	0.61	0.00	0.075	0.000	5.987	0.00	9.92
110.00	1 5/8" Coax	Yes	5.00	0.000	1.98	1.76	0.00	0.054	0.000	6.067	0.00	90.58
115.00	1 5/8" Coax	Yes	5.00	0.000	1.98	1.77	0.00	0.056	0.000	6.145	0.00	90.84
117.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.71	0.00	0.057	0.000	6.175	0.00	36.38
120.00	1 5/8" Coax	Yes	3.00	0.000	1.98	1.06	0.00	0.058	0.000	6.220	0.00	54.66
125.00	1 5/8" Coax	Yes	5.00	0.000	1.98	1.78	0.00	0.059	0.000	6.293	0.00	91.34
127.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.71	0.00	0.061	0.000	6.321	0.00	36.57
130.00	1 5/8" Coax	Yes	3.00	0.000	1.98	1.07	0.00	0.061	0.000	6.364	0.00	54.94



## Linear Appurtenance Segment Forces (Factored)

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Page:</b> 37
	<b>Struct Class:</b> II	



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

**Dead Load Factor** 1.20

**Wind Load Factor** 1.00



**Iterations** 26

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)
135.00	1 5/8" Coax	Yes	5.00	0.000	1.98	1.78	0.00	0.063	0.000	6.433	0.00	91.80
139.00	1 5/8" Coax	Yes	4.00	0.000	1.98	1.43	0.00	0.065	0.000	6.487	0.00	73.58
140.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.36	0.00	0.066	0.000	6.500	0.00	18.40
142.75	1 5/8" Coax	Yes	2.75	0.000	1.98	0.98	0.00	0.067	0.000	6.536	0.00	50.68
145.00	1 5/8" Coax	Yes	2.25	0.000	1.98	0.81	0.00	0.067	0.000	6.565	0.00	41.51
146.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.36	0.00	0.068	0.000	6.578	0.00	18.46
148.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.72	0.00	0.069	0.000	6.604	0.00	36.94
150.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.72	0.00	0.070	0.000	6.629	0.00	36.98
155.00	1 5/8" Coax	Yes	5.00	0.000	1.98	1.80	0.00	0.071	0.000	6.692	0.00	92.64
157.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.72	0.00	0.073	0.000	6.716	0.00	37.09
<b>Totals:</b>											<b>0.0</b>	<b>2,816.0</b>

## Calculated Forces

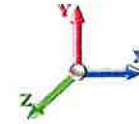
<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.00



**Iterations** 26

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	-82.76	-9.04	-0.26	-1142.9	0.00	1142.95	5324.18	1358.42	6282.52	6106.56	0.00	0.000	0.000	0.187
1.00	-82.33	-9.04	-0.26	-1133.9	0.00	1133.91	5311.65	1353.54	6237.51	6070.17	0.00	-0.010	0.000	0.187
1.00	-82.33	-9.04	-0.26	-1133.9	0.00	1133.91	5311.65	1353.54	6237.51	6070.17	0.00	-0.010	0.000	0.200
5.00	-80.56	-9.00	-0.26	-1097.7	0.00	1097.73	5261.08	1334.04	6059.10	5925.09	0.03	-0.049	0.000	0.201
10.00	-78.36	-8.94	-0.26	-1052.7	0.00	1052.72	5196.80	1309.67	5839.72	5744.92	0.11	-0.102	0.000	0.198
15.00	-76.19	-8.88	-0.26	-1008.0	0.00	1008.02	5131.34	1285.30	5624.39	5566.13	0.24	-0.156	0.000	0.196
20.00	-74.03	-8.81	-0.26	-963.64	0.00	963.64	5064.69	1260.92	5413.10	5388.80	0.43	-0.210	0.000	0.193
25.00	-71.90	-8.75	-0.26	-919.56	0.00	919.56	4996.86	1236.55	5205.86	5212.99	0.68	-0.265	0.000	0.191
30.00	-69.80	-8.68	-0.26	-875.82	0.00	875.82	4927.84	1212.18	5002.66	5038.79	0.99	-0.321	0.000	0.188
35.00	-67.73	-8.61	-0.26	-832.39	0.00	832.39	4857.63	1187.80	4803.50	4866.26	1.36	-0.377	0.000	0.185
40.00	-65.69	-8.51	-0.26	-789.33	0.00	789.33	4786.24	1163.43	4608.40	4695.49	1.78	-0.434	0.000	0.182
40.75	-65.39	-8.52	-0.26	-782.95	0.00	782.95	4775.43	1159.78	4579.48	4670.03	1.85	-0.443	0.000	0.181
45.00	-62.69	-8.42	-0.26	-746.75	0.00	746.75	4713.67	1139.06	4417.33	4526.53	2.27	-0.492	0.000	0.178
47.00	-61.43	-8.39	-0.26	-729.90	0.00	729.90	3877.89	984.95	3853.40	3762.05	2.48	-0.515	0.000	0.210
50.00	-60.34	-8.35	-0.26	-704.73	0.00	704.73	3845.09	972.42	3755.95	3682.38	2.82	-0.550	0.000	0.207
55.00	-58.55	-8.27	-0.26	-662.97	0.00	662.97	3789.47	951.52	3596.29	3550.52	3.43	-0.614	0.000	0.202
60.00	-56.78	-8.17	-0.26	-621.64	0.00	621.64	3732.67	930.63	3440.11	3419.89	4.10	-0.679	0.000	0.197
65.00	-55.05	-8.08	-0.26	-580.77	0.00	580.77	3674.68	909.74	3287.40	3290.55	4.85	-0.743	0.000	0.192
70.00	-53.35	-7.98	-0.26	-540.37	0.00	540.37	3615.51	888.85	3138.15	3162.58	5.66	-0.807	0.000	0.186
75.00	-51.67	-7.88	-0.26	-500.47	0.00	500.47	3555.15	867.96	2992.36	3036.06	6.54	-0.871	0.000	0.179
80.00	-50.02	-7.77	-0.26	-461.08	0.00	461.08	3493.61	847.07	2850.05	2911.05	7.49	-0.935	0.000	0.173
85.00	-48.40	-7.66	-0.26	-422.22	0.00	422.22	3430.88	826.18	2711.20	2787.63	8.50	-0.997	0.000	0.166
89.25	-47.06	-7.55	-0.26	-389.67	0.00	389.67	3376.63	808.42	2595.91	2684.02	9.41	-1.050	0.000	0.159
90.00	-46.72	-7.53	-0.26	-384.01	0.00	384.01	3366.97	805.29	2575.82	2665.87	9.58	-1.059	0.000	0.158
91.50	-46.05	-7.50	-0.26	-372.71	0.00	372.71	3347.56	799.02	2535.88	2629.68	9.92	-1.078	0.000	0.109
94.25	-44.84	-7.41	-0.26	-352.09	0.00	352.09	1944.87	533.72	1697.22	1535.78	10.54	-1.102	0.000	0.123
95.00	-44.65	-7.40	-0.26	-346.53	0.00	346.53	1940.65	531.63	1683.96	1526.41	10.72	-1.108	0.000	0.154
96.75	-44.20	-7.35	-0.26	-333.59	0.00	333.59	1930.70	526.76	1653.22	1504.57	11.13	-1.127	0.000	0.150
97.00	-44.14	-7.35	-0.26	-331.75	0.00	331.75	1929.27	526.06	1648.85	1501.45	11.19	-1.129	0.000	0.108
100.00	-43.38	-7.28	-0.26	-309.69	0.00	309.69	1911.84	517.71	1596.88	1464.09	11.90	-1.151	-0.001	0.142
102.25	-42.82	-7.23	-0.26	-293.31	0.00	293.31	1898.49	511.44	1558.45	1436.15	12.45	-1.174	-0.001	0.137
102.25	-42.82	-7.23	-0.26	-293.31	0.00	293.31	1898.49	511.44	1558.45	1436.15	12.45	-1.174	-0.001	0.216
105.00	-42.14	-7.18	-0.26	-273.44	0.00	273.44	1881.84	503.78	1512.12	1402.09	13.13	-1.200	-0.001	0.218
110.00	-40.94	-7.08	-0.26	-237.55	0.00	237.55	1850.66	489.85	1429.66	1340.48	14.43	-1.277	-0.001	0.200
115.00	-39.76	-6.96	-0.26	-202.17	0.00	202.17	1818.29	475.92	1349.52	1279.32	15.81	-1.349	-0.001	0.180
117.00	-35.25	-6.14	-0.26	-188.26	0.00	188.26	1805.01	470.35	1318.11	1255.00	16.38	-1.376	-0.001	0.170
120.00	-34.56	-6.08	-0.26	-169.84	-0.01	169.84	1784.73	462.00	1271.69	1218.70	17.26	-1.416	-0.001	0.159
125.00	-33.44	-5.95	-0.26	-139.45	-0.01	139.45	1749.99	448.07	1196.18	1158.68	18.77	-1.476	-0.001	0.140
127.00	-25.96	-4.58	0.00	-127.55	0.00	127.55	1735.77	442.50	1166.62	1134.86	19.40	-1.499	-0.001	0.127
130.00	-25.32	-4.51	0.00	-113.82	0.00	113.82	1714.07	434.14	1122.97	1099.35	20.35	-1.531	-0.001	0.118
135.00	-24.28	-4.38	0.00	-91.28	0.00	91.28	1676.96	420.21	1052.07	1040.77	21.98	-1.579	-0.001	0.102
139.00	-23.47	-4.27	0.00	-73.77	0.00	73.77	1646.42	409.07	997.02	994.50	23.32	-1.613	-0.001	0.089
140.00	-23.19	-4.24	0.00	-69.50	0.00	69.50	1638.67	406.29	983.49	983.02	23.66	-1.621	-0.001	0.085
142.75	-22.44	-4.17	0.00	-57.83	0.00	57.83	1100.62	303.54	731.94	659.08	24.60	-1.641	-0.001	0.108
145.00	-22.05	-4.11	0.00	-48.46	0.00	48.46	1091.20	298.84	709.44	643.26	25.37	-1.655	-0.001	0.096
146.00	-21.30	-4.00	0.00	-44.35	0.00	44.35	1086.94	296.75	699.56	636.24	25.72	-1.663	-0.001	0.089
148.00	-14.71	-2.93	0.00	-36.35	0.00	36.35	1078.27	292.57	680.00	622.22	26.42	-1.676	-0.001	0.072
150.00	-14.20	-2.77	0.00	-30.50	0.00	30.50	1069.42	288.39	660.71	608.24	27.13	-1.688	-0.001	0.064

## Calculated Forces

**Structure:** CT13071-A-SBA

**Code:** TIA-222-H

7/7/2023

**Site Name:** Woodbridge

**Exposure:** B

**Height:** 169.00 (ft)

**Crest Height:** 0.00

**Base Elev:** 0.000 (ft)

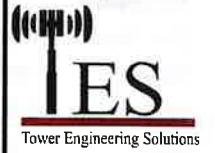
**Site Class:** D - Stiff Soil

**Gh:** 1.1

**Topography:** 1

**Struct Class:** II

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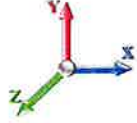
155.00	-13.41	-2.64	0.00	-16.63	0.00	16.63	1046.45	277.95	613.72	573.48	28.91	-1.709	-0.001	0.042
157.00	-6.79	-1.30	0.00	-11.34	0.00	11.34	1036.93	273.77	595.41	559.66	29.62	-1.715	-0.001	0.027
160.00	-6.43	-1.22	0.00	-7.45	0.00	7.45	1022.30	267.50	568.46	539.04	30.70	-1.720	-0.001	0.020
165.00	-3.85	-0.59	0.00	-1.35	0.00	1.35	996.96	257.06	524.93	505.00	32.51	-1.725	-0.001	0.007
167.00	-0.19	-0.05	0.00	-0.09	0.00	0.09	986.50	252.88	508.00	491.52	33.23	-1.726	-0.001	0.000
169.00	0.00	-0.04	0.00	0.00	0.00	0.00	975.84	248.70	491.35	478.11	33.95	-1.726	-0.001	0.000

## Seismic Segment Forces (Factored)

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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<b>Load Case:</b> 1.2D + 1.0Ev + 1.0Eh					<b>Iterations</b> 23
<b>Gust Response Factor</b>	1.10	<b>Sds</b>	0.21	<b>Ss</b>	0.20
<b>Dead Load Factor</b>	1.20	<b>Seismic Load Factor</b>	1.00	<b>Sd1</b>	0.09
<b>Wind Load Factor</b>	0.00	<b>Structure Frequency (f1)</b>	0.27	<b>SA</b>	0.02
				<b>Seismic Importance Factor</b>	1.00

Top Elev (ft)	Description	Wz (lb)	Hz (lb)	Vertical Ev (lb)	Lateral Fs (lb)	R: 1.50
0.00	RB1	0.00	0.00	0.00	0.00	
1.00	RT1	322.59	0.50	13.83	0.00	
5.00		1280.9	3.00	54.92	0.01	
10.00		1579.8	7.50	67.74	0.08	
15.00		1556.2	12.50	66.73	0.22	
20.00		1532.6	17.50	65.72	0.42	
25.00		1508.9	22.50	64.70	0.67	
30.00		1485.3	27.50	63.69	0.97	
35.00		1461.7	32.50	62.68	1.31	
40.00		1438.0	37.50	61.67	1.68	
40.75	Bot - Section 2	213.67	40.38	9.16	0.04	
45.00		2026.6	42.88	86.90	4.37	
47.00	Top - Section 1	942.73	46.00	40.42	1.09	
50.00		748.30	48.50	32.09	0.76	
55.00		1230.9	52.50	52.78	2.42	
60.00		1210.7	57.50	51.92	2.81	
65.00		1190.4	62.50	51.05	3.21	
70.00		1170.2	67.50	50.18	3.61	
75.00		1149.9	72.50	49.31	4.03	
80.00		1129.7	77.50	48.44	4.44	
85.00		1109.4	82.50	47.57	4.85	
89.25	Bot - Section 3	927.11	87.13	39.75	3.78	
90.00		241.57	89.63	10.36	0.27	
91.50	RB2	480.87	90.75	20.62	1.10	
94.25	Top - Section 2	873.70	92.88	37.46	3.81	
95.00		122.22	94.63	5.24	0.08	
96.75	RB3	283.99	95.88	12.18	0.43	
97.00	RT2	40.44	96.88	1.73	0.01	
100.00		482.59	98.50	20.69	1.31	
102.25	RT3	358.76	101.13	15.38	0.76	
105.00		434.77	103.63	18.64	1.18	
110.00		780.02	107.50	33.45	4.07	
115.00		766.52	112.50	32.87	4.31	
117.00	Appurtenance(s)	2661.9	116.00	114.14	55.23	
120.00		443.64	118.50	19.02	1.60	
125.00		728.59	122.50	31.24	4.61	
127.00	Appurtenance(s)	4340.6	126.00	186.13	173.26	
130.00		407.43	128.50	17.47	1.59	
135.00		668.25	132.50	28.65	4.54	
139.00	Bot - Section 4	524.88	137.00	22.51	3.00	
140.00		190.04	139.50	8.15	0.41	
142.75	Top - Section 3	517.74	141.38	22.20	3.10	
145.00		245.75	143.88	10.54	0.72	
146.00	Appurtenance(s)	372.56	145.50	15.98	1.70	
148.00	Appurtenance(s)	3279.6	147.00	140.63	134.63	
150.00	Appurtenance(s)	489.07	149.00	20.97	3.08	

## Seismic Segment Forces (Factored)

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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155.00		469.84	152.50	20.15	2.97	
157.00	Appurtenance(s)	2993.6	156.00	128.37	126.32	
160.00		210.18	158.50	9.01	0.64	
165.00	Appurtenance(s)	1043.5	162.50	44.75	16.66	
167.00	Appurtenance(s)	2132.0	166.00	91.42	72.55	
169.00		97.25	168.00	4.17	0.15	
	<b>Totals:</b>	<b>51,898.3</b>		<b>2,225.4</b>	<b>664.9</b>	<b>Total Wind: 35,092.1</b>

## Calculated Forces

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 1.2D + 1.0Ev + 1.0Eh

**Iterations** 23

**Gust Response Factor** 1.10

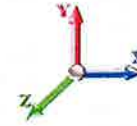
**Sds** 0.21

**Ss** 0.20

**Dead Load Factor** 1.20 **Seismic Load Factor** 1.00 **Sd1** 0.09

**S1** 0.05

**Wind Load Factor** 0.00 **Structure Frequency (f1)** 0.27 **SA** 0.02 **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	-62.67	-0.66	0.00	-97.33	0.00	97.33	5324.18	1358.42	6282.52	6106.56	0.00	0.00	0.00	0.025
1.00	-62.28	-0.67	0.00	-96.67	0.00	96.67	5311.65	1353.54	6237.51	6070.17	0.00	0.00	0.00	0.025
1.00	-62.28	-0.67	0.00	-96.67	0.00	96.67	5311.65	1353.54	6237.51	6070.17	0.00	0.00	0.00	0.027
5.00	-60.74	-0.67	0.00	-94.00	0.00	94.00	5261.08	1334.04	6059.10	5925.09	0.00	0.00	0.00	0.027
10.00	-58.84	-0.68	0.00	-90.65	0.00	90.65	5196.80	1309.67	5839.72	5744.92	0.01	-0.01	0.00	0.027
15.00	-56.96	-0.68	0.00	-87.27	0.00	87.27	5131.34	1285.30	5624.39	5566.13	0.02	-0.01	0.00	0.027
20.00	-55.12	-0.68	0.00	-83.88	0.00	83.88	5064.69	1260.92	5413.10	5388.80	0.04	-0.02	0.00	0.026
25.00	-53.30	-0.69	0.00	-80.46	0.00	80.46	4996.86	1236.55	5205.86	5212.99	0.06	-0.02	0.00	0.026
30.00	-51.51	-0.69	0.00	-77.03	0.00	77.03	4927.84	1212.18	5002.66	5038.79	0.09	-0.03	0.00	0.026
35.00	-49.76	-0.69	0.00	-73.59	0.00	73.59	4857.63	1187.80	4803.50	4866.26	0.12	-0.03	0.00	0.025
40.00	-48.03	-0.69	0.00	-70.13	0.00	70.13	4786.24	1163.43	4608.40	4695.49	0.15	-0.04	0.00	0.025
40.75	-47.77	-0.69	0.00	-69.62	0.00	69.62	4775.43	1159.78	4579.48	4670.03	0.16	-0.04	0.00	0.025
45.00	-45.30	-0.69	0.00	-66.67	0.00	66.67	4713.67	1139.06	4417.33	4526.53	0.20	-0.04	0.00	0.024
47.00	-44.16	-0.69	0.00	-65.29	0.00	65.29	3877.89	984.95	3853.40	3762.05	0.21	-0.05	0.00	0.029
50.00	-43.26	-0.69	0.00	-63.23	0.00	63.23	3845.09	972.42	3755.95	3682.38	0.24	-0.05	0.00	0.028
55.00	-41.79	-0.69	0.00	-59.77	0.00	59.77	3789.47	951.52	3596.29	3550.52	0.30	-0.05	0.00	0.028
60.00	-40.35	-0.69	0.00	-56.32	0.00	56.32	3732.67	930.63	3440.11	3419.89	0.36	-0.06	0.00	0.027
65.00	-38.93	-0.69	0.00	-52.86	0.00	52.86	3674.68	909.74	3287.40	3290.55	0.42	-0.07	0.00	0.027
70.00	-37.53	-0.69	0.00	-49.41	0.00	49.41	3615.51	888.85	3138.15	3162.58	0.49	-0.07	0.00	0.026
75.00	-36.16	-0.69	0.00	-45.96	0.00	45.96	3555.15	867.96	2992.36	3036.06	0.57	-0.08	0.00	0.025
80.00	-34.82	-0.68	0.00	-42.53	0.00	42.53	3493.61	847.07	2850.05	2911.05	0.66	-0.08	0.00	0.025
85.00	-33.50	-0.68	0.00	-39.11	0.00	39.11	3430.88	826.18	2711.20	2787.63	0.75	-0.09	0.00	0.024
89.25	-32.40	-0.68	0.00	-36.22	0.00	36.22	3376.63	808.42	2595.91	2684.02	0.83	-0.09	0.00	0.023
90.00	-32.11	-0.68	0.00	-35.71	0.00	35.71	3366.97	805.29	2575.82	2665.87	0.84	-0.09	0.00	0.023
91.50	-31.53	-0.68	0.00	-34.69	0.00	34.69	3347.56	799.02	2535.88	2629.68	0.87	-0.10	0.00	0.016
94.25	-30.47	-0.67	0.00	-32.84	0.00	32.84	1944.87	533.72	1697.22	1535.78	0.93	-0.10	0.00	0.018
95.00	-30.33	-0.67	0.00	-32.33	0.00	32.33	1940.65	531.63	1683.96	1526.41	0.95	-0.10	0.00	0.023
96.75	-30.00	-0.67	0.00	-31.16	0.00	31.16	1930.70	526.76	1653.22	1504.57	0.98	-0.10	0.00	0.022
97.00	-29.95	-0.67	0.00	-30.99	0.00	30.99	1929.27	526.06	1648.85	1501.45	0.99	-0.10	0.00	0.016
100.00	-29.39	-0.67	0.00	-28.98	0.00	28.98	1911.84	517.71	1596.88	1464.09	1.05	-0.10	0.00	0.022
102.25	-28.97	-0.67	0.00	-27.47	0.00	27.47	1898.49	511.44	1558.45	1436.15	1.10	-0.11	0.00	0.021
102.25	-28.97	-0.67	0.00	-27.47	0.00	27.47	1898.49	511.44	1558.45	1436.15	1.10	-0.11	0.00	0.028
105.00	-28.46	-0.67	0.00	-25.63	0.00	25.63	1881.84	503.78	1512.12	1402.09	1.16	-0.11	0.00	0.033
110.00	-27.55	-0.67	0.00	-22.28	0.00	22.28	1850.66	489.85	1429.66	1340.48	1.28	-0.12	0.00	0.032
115.00	-26.66	-0.66	0.00	-18.94	0.00	18.94	1818.29	475.92	1349.52	1279.32	1.40	-0.12	0.00	0.029
117.00	-23.37	-0.60	0.00	-17.62	0.00	17.62	1805.01	470.35	1318.11	1255.00	1.45	-0.12	0.00	0.027
120.00	-22.85	-0.60	0.00	-15.81	0.00	15.81	1784.73	462.00	1271.69	1218.70	1.53	-0.13	0.00	0.026
125.00	-22.01	-0.60	0.00	-12.80	0.00	12.80	1749.99	448.07	1196.18	1158.68	1.67	-0.13	0.00	0.024
127.00	-16.64	-0.41	0.00	-11.61	0.00	11.61	1735.77	442.50	1166.62	1134.86	1.73	-0.14	0.00	0.020
130.00	-16.16	-0.41	0.00	-10.38	0.00	10.38	1714.07	434.14	1122.97	1099.35	1.81	-0.14	0.00	0.019
135.00	-15.38	-0.40	0.00	-8.33	0.00	8.33	1676.96	420.21	1052.07	1040.77	1.96	-0.14	0.00	0.017
139.00	-14.77	-0.40	0.00	-6.71	0.00	6.71	1646.42	409.07	997.02	994.50	2.08	-0.15	0.00	0.016
140.00	-14.54	-0.40	0.00	-6.31	0.00	6.31	1638.67	406.29	983.49	983.02	2.11	-0.15	0.00	0.015
142.75	-13.93	-0.40	0.00	-5.21	0.00	5.21	1100.62	303.54	731.94	659.08	2.20	-0.15	0.00	0.021
145.00	-13.64	-0.39	0.00	-4.32	0.00	4.32	1091.20	298.84	709.44	643.26	2.27	-0.15	0.00	0.019
146.00	-13.19	-0.39	0.00	-3.93	0.00	3.93	1086.94	296.75	699.56	636.24	2.30	-0.15	0.00	0.018
148.00	-9.14	-0.25	0.00	-3.14	0.00	3.14	1078.27	292.57	680.00	622.22	2.36	-0.15	0.00	0.014

## Calculated Forces

**Structure:** CT13071-A-SBA

**Code:** TIA-222-H

7/7/2023

**Site Name:** Woodbridge

**Exposure:** B

**Height:** 169.00 (ft)

**Crest Height:** 0.00

**Base Elev:** 0.000 (ft)

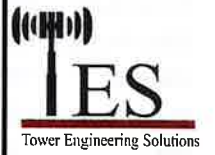
**Site Class:** D - Stiff Soil

**Gh:** 1.1

**Topography:** 1

**Struct Class:** II

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150.00	-8.54	-0.24	0.00	-2.65	0.00	2.65	1069.42	288.39	660.71	608.24	2.43	-0.15	0.012
155.00	-8.00	-0.24	0.00	-1.44	0.00	1.44	1046.45	277.95	613.72	573.48	2.59	-0.15	0.010
157.00	-4.29	-0.10	0.00	-0.97	0.00	0.97	1036.93	273.77	595.41	559.66	2.65	-0.16	0.006
160.00	-4.04	-0.10	0.00	-0.66	0.00	0.66	1022.30	267.50	568.46	539.04	2.75	-0.16	0.005
165.00	-2.76	-0.08	0.00	-0.16	0.00	0.16	996.96	257.06	524.93	505.00	2.91	-0.16	0.003
167.00	-0.12	0.00	0.00	0.00	0.00	0.00	986.50	252.88	508.00	491.52	2.98	-0.16	0.000
169.00	0.00	0.00	0.00	0.00	0.00	0.00	975.84	248.70	491.35	478.11	3.05	-0.16	0.000

## Seismic Segment Forces (Factored)

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 0.9D + 1.0Ev + 1.0Eh

**Gust Response Factor** 1.10

**Sds** 0.21

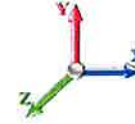
**Iterations** 23

**Dead Load Factor** 0.90 **Seismic Load Factor** 1.00 **Sd1** 0.09

**Ss** 0.20

**Wind Load Factor** 0.00 **Structure Frequency (f1)** 0.27 **SA** 0.02

**Seismic Importance Factor** 1.00



Top Elev (ft)	Description	Wz (lb)	Hz (lb)	Vertical Ev (lb)	Lateral Fs (lb)	R: 1.50
0.00	RB1	0.00	0.00	0.00	0.00	
1.00	RT1	307.67	0.50	13.19	0.00	
5.00		1221.2	3.00	52.37	0.01	
10.00		1505.2	7.50	64.55	0.08	
15.00		1481.6	12.50	63.53	0.20	
20.00		1458.0	17.50	62.52	0.39	
25.00		1434.3	22.50	61.51	0.62	
30.00		1410.7	27.50	60.49	0.90	
35.00		1387.1	32.50	59.48	1.21	
40.00		1363.4	37.50	58.47	1.56	
40.75	Bot - Section 2	202.49	40.38	8.68	0.04	
45.00		1963.2	42.88	84.18	4.23	
47.00	Top - Section 1	912.89	46.00	39.14	1.05	
50.00		703.54	48.50	30.17	0.70	
55.00		1156.3	52.50	49.59	2.20	
60.00		1136.1	57.50	48.72	2.55	
65.00		1115.8	62.50	47.85	2.91	
70.00		1095.6	67.50	46.98	3.27	
75.00		1075.3	72.50	46.11	3.63	
80.00		1055.1	77.50	45.24	3.99	
85.00		1034.8	82.50	44.37	4.35	
89.25	Bot - Section 3	863.70	87.13	37.04	3.38	
90.00		230.38	89.63	9.88	0.25	
91.50	RB2	458.49	90.75	19.66	1.03	
94.25	Top - Section 2	832.68	92.88	35.71	3.57	
95.00		111.03	94.63	4.76	0.07	
96.75	RB3	257.89	95.88	11.06	0.37	
97.00	RT2	36.71	96.88	1.57	0.01	
100.00		437.84	98.50	18.77	1.11	
102.25	RT3	325.19	101.13	13.94	0.65	
105.00		393.74	103.63	16.88	0.99	
110.00		705.42	107.50	30.25	3.44	
115.00		691.92	112.50	29.67	3.62	
117.00	Appurtenance(s)	2632.0	116.00	112.86	55.70	
120.00		400.52	118.50	17.17	1.35	
125.00		656.73	122.50	28.16	3.87	
127.00	Appurtenance(s)	4311.9	126.00	184.89	176.35	
130.00		369.31	128.50	15.84	1.35	
135.00		604.72	132.50	25.93	3.84	
139.00	Bot - Section 4	474.06	137.00	20.33	2.52	
140.00		177.33	139.50	7.60	0.37	
142.75	Top - Section 3	482.79	141.38	20.70	2.78	
145.00		217.16	143.88	9.31	0.58	
146.00	Appurtenance(s)	359.86	145.50	15.43	1.64	
148.00	Appurtenance(s)	3254.2	147.00	139.54	136.72	
150.00	Appurtenance(s)	469.54	149.00	20.13	2.92	



## Seismic Segment Forces (Factored)

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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155.00		421.01	152.50	18.05	2.46
157.00	Appurtenance(s)	2974.0	156.00	127.53	128.61
160.00		196.99	158.50	8.45	0.58
165.00	Appurtenance(s)	1021.6	162.50	43.81	16.47
167.00	Appurtenance(s)	2123.2	166.00	91.04	74.22
169.00		97.25	168.00	4.17	0.16
	<b>Totals:</b>	<b>49,610.3</b>		<b>2,127.3</b>	<b>664.9</b>
					<b>Total Wind: 35,092.1</b>

## Calculated Forces

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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<b>Load Case:</b> 0.9D + 1.0Ev + 1.0Eh						<b>Iterations</b> 23	
<b>Gust Response Factor</b>	1.10	<b>Sds</b>	0.21			<b>Ss</b> 0.20	
<b>Dead Load Factor</b>	0.90	<b>Seismic Load Factor</b>	1.00			<b>Sd1</b> 0.09	<b>S1</b> 0.05
<b>Wind Load Factor</b>	0.00	<b>Structure Frequency (f1)</b>	0.27			<b>SA</b> 0.02	<b>Seismic Importance Factor</b> 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	-47.46	-0.66	0.00	-96.21	0.00	96.21	5324.18	1358.42	6282.52	6106.56	0.00	0.00	0.00	0.023
1.00	-47.17	-0.67	0.00	-95.54	0.00	95.54	5311.65	1353.54	6237.51	6070.17	0.00	0.00	0.00	0.023
1.00	-47.17	-0.67	0.00	-95.54	0.00	95.54	5311.65	1353.54	6237.51	6070.17	0.00	0.00	0.00	0.024
5.00	-46.00	-0.67	0.00	-92.88	0.00	92.88	5261.08	1334.04	6059.10	5925.09	0.00	0.00	0.00	0.024
10.00	-44.56	-0.67	0.00	-89.53	0.00	89.53	5196.80	1309.67	5839.72	5744.92	0.01	-0.01	0.00	0.024
15.00	-43.14	-0.68	0.00	-86.17	0.00	86.17	5131.34	1285.30	5624.39	5566.13	0.02	-0.01	0.00	0.024
20.00	-41.74	-0.68	0.00	-82.79	0.00	82.79	5064.69	1260.92	5413.10	5388.80	0.04	-0.02	0.00	0.024
25.00	-40.37	-0.68	0.00	-79.40	0.00	79.40	4996.86	1236.55	5205.86	5212.99	0.06	-0.02	0.00	0.023
30.00	-39.01	-0.68	0.00	-76.00	0.00	76.00	4927.84	1212.18	5002.66	5038.79	0.08	-0.03	0.00	0.023
35.00	-37.68	-0.68	0.00	-72.59	0.00	72.59	4857.63	1187.80	4803.50	4866.26	0.12	-0.03	0.00	0.023
40.00	-36.37	-0.68	0.00	-69.17	0.00	69.17	4786.24	1163.43	4608.40	4695.49	0.15	-0.04	0.00	0.022
40.75	-36.18	-0.68	0.00	-68.66	0.00	68.66	4775.43	1159.78	4579.48	4670.03	0.16	-0.04	0.00	0.022
45.00	-34.31	-0.68	0.00	-65.75	0.00	65.75	4713.67	1139.06	4417.33	4526.53	0.19	-0.04	0.00	0.022
47.00	-33.44	-0.68	0.00	-64.39	0.00	64.39	3877.89	984.95	3853.40	3762.05	0.21	-0.04	0.00	0.026
50.00	-32.76	-0.68	0.00	-62.35	0.00	62.35	3845.09	972.42	3755.95	3682.38	0.24	-0.05	0.00	0.025
55.00	-31.65	-0.68	0.00	-58.94	0.00	58.94	3789.47	951.52	3596.29	3550.52	0.29	-0.05	0.00	0.025
60.00	-30.56	-0.68	0.00	-55.53	0.00	55.53	3732.67	930.63	3440.11	3419.89	0.35	-0.06	0.00	0.024
65.00	-29.48	-0.68	0.00	-52.12	0.00	52.12	3674.68	909.74	3287.40	3290.55	0.42	-0.06	0.00	0.024
70.00	-28.43	-0.68	0.00	-48.72	0.00	48.72	3615.51	888.85	3138.15	3162.58	0.49	-0.07	0.00	0.023
75.00	-27.39	-0.68	0.00	-45.33	0.00	45.33	3555.15	867.96	2992.36	3036.06	0.57	-0.08	0.00	0.023
80.00	-26.37	-0.67	0.00	-41.95	0.00	41.95	3493.61	847.07	2850.05	2911.05	0.65	-0.08	0.00	0.022
85.00	-25.38	-0.67	0.00	-38.58	0.00	38.58	3430.88	826.18	2711.20	2787.63	0.74	-0.09	0.00	0.021
89.25	-24.54	-0.67	0.00	-35.73	0.00	35.73	3376.63	808.42	2595.91	2684.02	0.82	-0.09	0.00	0.021
90.00	-24.32	-0.67	0.00	-35.23	0.00	35.23	3366.97	805.29	2575.82	2665.87	0.83	-0.09	0.00	0.020
91.50	-23.88	-0.67	0.00	-34.23	0.00	34.23	3347.56	799.02	2535.88	2629.68	0.86	-0.10	0.00	0.014
94.25	-23.09	-0.66	0.00	-32.40	0.00	32.40	1944.87	533.72	1697.22	1535.78	0.92	-0.10	0.00	0.016
95.00	-22.98	-0.66	0.00	-31.90	0.00	31.90	1940.65	531.63	1683.96	1526.41	0.93	-0.10	0.00	0.020
96.75	-22.73	-0.66	0.00	-30.75	0.00	30.75	1930.70	526.76	1653.22	1504.57	0.97	-0.10	0.00	0.020
97.00	-22.69	-0.66	0.00	-30.58	0.00	30.58	1929.27	526.06	1648.85	1501.45	0.97	-0.10	0.00	0.014
100.00	-22.26	-0.66	0.00	-28.60	0.00	28.60	1911.84	517.71	1596.88	1464.09	1.04	-0.10	0.00	0.019
102.25	-21.95	-0.66	0.00	-27.11	0.00	27.11	1898.49	511.44	1558.45	1436.15	1.09	-0.10	0.00	0.019
102.25	-21.95	-0.66	0.00	-27.11	0.00	27.11	1898.49	511.44	1558.45	1436.15	1.09	-0.10	0.00	0.026
105.00	-21.56	-0.66	0.00	-25.30	0.00	25.30	1881.84	503.78	1512.12	1402.09	1.15	-0.11	0.00	0.030
110.00	-20.88	-0.66	0.00	-21.99	0.00	21.99	1850.66	489.85	1429.66	1340.48	1.26	-0.11	0.00	0.028
115.00	-20.20	-0.65	0.00	-18.70	0.00	18.70	1818.29	475.92	1349.52	1279.32	1.38	-0.12	0.00	0.026
117.00	-17.71	-0.59	0.00	-17.39	0.00	17.39	1805.01	470.35	1318.11	1255.00	1.44	-0.12	0.00	0.024
120.00	-17.32	-0.59	0.00	-15.61	0.00	15.61	1784.73	462.00	1271.69	1218.70	1.51	-0.13	0.00	0.023
125.00	-16.68	-0.59	0.00	-12.64	0.00	12.64	1749.99	448.07	1196.18	1158.68	1.65	-0.13	0.00	0.020
127.00	-12.61	-0.40	0.00	-11.46	0.00	11.46	1735.77	442.50	1166.62	1134.86	1.70	-0.13	0.00	0.017
130.00	-12.25	-0.40	0.00	-10.25	0.00	10.25	1714.07	434.14	1122.97	1099.35	1.79	-0.14	0.00	0.016
135.00	-11.66	-0.40	0.00	-8.23	0.00	8.23	1676.96	420.21	1052.07	1040.77	1.94	-0.14	0.00	0.015
139.00	-11.19	-0.40	0.00	-6.64	0.00	6.64	1646.42	409.07	997.02	994.50	2.06	-0.14	0.00	0.013
140.00	-11.02	-0.39	0.00	-6.24	0.00	6.24	1638.67	406.29	983.49	983.02	2.09	-0.14	0.00	0.013
142.75	-10.56	-0.39	0.00	-5.16	0.00	5.16	1100.62	303.54	731.94	659.08	2.17	-0.15	0.00	0.017
145.00	-10.34	-0.39	0.00	-4.28	0.00	4.28	1091.20	298.84	709.44	643.26	2.24	-0.15	0.00	0.016
146.00	-10.00	-0.39	0.00	-3.89	0.00	3.89	1086.94	296.75	699.56	636.24	2.27	-0.15	0.00	0.015
148.00	-6.93	-0.24	0.00	-3.11	0.00	3.11	1078.27	292.57	680.00	622.22	2.33	-0.15	0.00	0.011

## Calculated Forces

**Structure:** CT13071-A-SBA

**Code:** TIA-222-H

7/7/2023

**Site Name:** Woodbridge

**Exposure:** B

**Height:** 169.00 (ft)

**Crest Height:** 0.00

**Base Elev:** 0.000 (ft)

**Site Class:** D - Stiff Soil

**Gh:** 1.1

**Topography:** 1

**Struct Class:** II

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150.00	-6.48	-0.24	0.00	-2.62	0.00	2.62	1069.42	288.39	660.71	608.24	2.40	-0.15	0.010
155.00	-6.07	-0.24	0.00	-1.43	0.00	1.43	1046.45	277.95	613.72	573.48	2.55	-0.15	0.008
157.00	-3.26	-0.10	0.00	-0.96	0.00	0.96	1036.93	273.77	595.41	559.66	2.62	-0.15	0.005
160.00	-3.07	-0.10	0.00	-0.66	0.00	0.66	1022.30	267.50	568.46	539.04	2.72	-0.15	0.004
165.00	-2.10	-0.08	0.00	-0.16	0.00	0.16	996.96	257.06	524.93	505.00	2.88	-0.15	0.002
167.00	-0.09	0.00	0.00	0.00	0.00	0.00	986.50	252.88	508.00	491.52	2.94	-0.15	0.000
169.00	0.00	0.00	0.00	0.00	0.00	0.00	975.84	248.70	491.35	478.11	3.01	-0.15	0.000

## Wind Loading - Shaft

**Structure:** CT13071-A-SBA  
**Site Name:** Woodbridge  
**Height:** 169.00 (ft)  
**Base Elev:** 0.000 (ft)  
**Gh:** 1.1

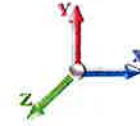
**Code:** TIA-222-H  
**Exposure:** B  
**Crest Height:** 0.00  
**Site Class:** D - Stiff Soil  
**Struct Class:** II

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**Load Case:** 1.0D + 1.0W 60 mph Wind

**Dead Load Factor** 1.00  
**Wind Load Factor** 1.00



**Iterations** 25

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	RB1	1.00	0.70	5.388	5.93	236.56	0.730	0.000	0.00	0.000	0.00	0.0	0.0	0.0
1.00	RT1	1.00	0.70	5.388	5.93	235.72	0.730	0.000	1.00	4.745	3.46	20.5	0.0	262.9
5.00		1.00	0.70	5.388	5.93	232.35	0.730	0.000	4.00	18.812	13.73	81.4	0.0	1042.2
10.00		1.00	0.70	5.388	5.93	228.14	0.730	0.000	5.00	23.135	16.89	100.1	0.0	1281.5
15.00		1.00	0.70	5.388	5.93	223.93	0.730	0.000	5.00	22.712	16.58	98.3	0.0	1257.8
20.00		1.00	0.70	5.388	5.93	219.72	0.730	0.000	5.00	22.288	16.27	96.4	0.0	1234.2
25.00		1.00	0.70	5.388	5.93	215.51	0.730	0.000	5.00	21.865	15.96	94.6	0.0	1210.6
30.00		1.00	0.70	5.393	5.93	211.38	0.730	0.000	5.00	21.442	15.65	92.9	0.0	1187.0
35.00		1.00	0.73	5.636	6.20	211.78	0.730	0.000	5.00	21.019	15.34	95.1	0.0	1163.3
40.00		1.00	0.76	5.855	6.44	211.47	0.730	0.000	5.00	20.596	15.03	96.8	0.0	1139.7
40.75	Bot - Section 2	1.00	0.76	5.886	6.47	211.37	0.730	0.000	0.75	3.053	2.23	14.4	0.0	168.9
45.00		1.00	0.79	6.055	6.66	210.60	0.730	0.000	4.25	17.389	12.69	84.6	0.0	1773.0
47.00	Top - Section 1	1.00	0.80	6.131	6.74	210.11	0.730	0.000	2.00	8.077	5.90	39.8	0.0	823.4
50.00		1.00	0.81	6.240	6.86	212.66	0.730	0.000	3.00	11.989	8.75	60.1	0.0	569.3
55.00		1.00	0.83	6.413	7.05	210.98	0.730	0.000	5.00	19.644	14.34	101.2	0.0	932.6
60.00		1.00	0.85	6.574	7.23	208.97	0.730	0.000	5.00	19.220	14.03	101.5	0.0	912.3
65.00		1.00	0.87	6.726	7.40	206.66	0.730	0.000	5.00	18.797	13.72	101.5	0.0	892.1
70.00		1.00	0.89	6.870	7.56	204.11	0.730	0.000	5.00	18.374	13.41	101.4	0.0	871.8
75.00		1.00	0.91	7.007	7.71	201.33	0.730	0.000	5.00	17.951	13.10	101.0	0.0	851.6
80.00		1.00	0.93	7.137	7.85	198.34	0.730	0.000	5.00	17.528	12.80	100.5	0.0	831.3
85.00		1.00	0.94	7.262	7.99	195.18	0.730	0.000	5.00	17.105	12.49	99.7	0.0	811.1
89.25	Bot - Section 3	1.00	0.96	7.364	8.10	192.36	0.730	0.000	4.25	14.206	10.37	84.0	0.0	673.5
90.00		1.00	0.96	7.382	8.12	191.85	0.730	0.000	0.75	2.507	1.83	14.9	0.0	196.8
91.50	RB2	1.00	0.96	7.416	8.16	190.82	0.730	0.000	1.50	4.985	3.64	29.7	0.0	391.4
94.25	Top - Section 2	1.00	0.97	7.479	8.23	188.90	0.730	0.000	2.75	9.041	6.60	54.3	0.0	709.6
95.00		1.00	0.97	7.496	8.25	190.86	0.730	0.000	0.75	2.444	1.78	14.7	0.0	77.5
96.75	RB3	1.00	0.98	7.536	8.29	189.61	0.730	0.000	1.75	5.664	4.14	34.3	0.0	179.6
97.00	RT2	1.00	0.98	7.541	8.30	189.43	0.730	0.000	0.25	0.805	0.59	4.9	0.0	25.5
100.00		1.00	0.99	7.607	8.37	187.25	0.730	0.000	3.00	9.577	6.99	58.5	0.0	303.6
102.25	RT3	1.00	0.99	7.656	8.42	185.59	0.730	0.000	2.25	7.083	5.17	43.5	0.0	224.5
105.00		1.00	1.00	7.714	8.49	183.53	0.730	0.000	2.75	8.541	6.23	52.9	0.0	270.7
110.00		1.00	1.02	7.817	8.60	179.68	0.730	0.000	5.00	15.200	11.10	95.4	0.0	481.6
115.00		1.00	1.03	7.917	8.71	175.72	0.730	0.000	5.00	14.777	10.79	93.9	0.0	468.1
117.00	Appurtenance(s)	1.00	1.03	7.956	8.75	174.10	0.730	0.000	2.00	5.792	4.23	37.0	0.0	183.5
120.00		1.00	1.04	8.014	8.82	171.65	0.730	0.000	3.00	8.562	6.25	55.1	0.0	271.2
125.00		1.00	1.05	8.108	8.92	167.49	0.730	0.000	5.00	13.931	10.17	90.7	0.0	441.1
127.00	Appurtenance(s)	1.00	1.06	8.145	8.96	165.80	0.730	0.000	2.00	5.454	3.98	35.7	0.0	172.7
130.00		1.00	1.07	8.199	9.02	163.24	0.730	0.000	3.00	8.054	5.88	53.0	0.0	255.0
135.00		1.00	1.08	8.288	9.12	158.90	0.730	0.000	5.00	13.085	9.55	87.1	0.0	414.1
139.00	Bot - Section 4	1.00	1.09	8.358	9.19	155.36	0.730	0.000	4.00	10.163	7.42	68.2	0.0	321.6
140.00		1.00	1.09	8.375	9.21	154.47	0.730	0.000	1.00	2.530	1.85	17.0	0.0	139.2
142.75	Top - Section 3	1.00	1.09	8.421	9.26	152.01	0.730	0.000	2.75	6.871	5.02	46.5	0.0	378.0
145.00		1.00	1.10	8.459	9.31	151.95	0.730	0.000	2.25	5.526	4.03	37.5	0.0	131.4
146.00	Appurtenance(s)	1.00	1.10	8.476	9.32	151.04	0.730	0.000	1.00	2.429	1.77	16.5	0.0	57.7
148.00	Appurtenance(s)	1.00	1.11	8.509	9.36	149.22	0.730	0.000	2.00	4.806	3.51	32.8	0.0	114.3
150.00	Appurtenance(s)	1.00	1.11	8.541	9.40	147.39	0.730	0.000	2.00	4.739	3.46	32.5	0.0	112.6
155.00		1.00	1.12	8.622	9.48	142.75	0.730	0.000	5.00	11.551	8.43	80.0	0.0	274.5

## Wind Loading - Shaft

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II
		<b>Page:</b> 49



157.00 Appurtenance(s)	1.00	1.12	8.653	9.52	140.88	0.730	0.000	2.00	4.502	3.29	31.3	0.0	107.0
160.00	1.00	1.13	8.700	9.57	138.05	0.730	0.000	3.00	6.626	4.84	46.3	0.0	157.4
165.00 Appurtenance(s)	1.00	1.14	8.777	9.65	133.28	0.730	0.000	5.00	10.704	7.81	75.4	0.0	254.3
167.00 Appurtenance(s)	1.00	1.14	8.808	9.69	131.36	0.730	0.000	2.00	4.163	3.04	29.4	0.0	98.9
169.00	1.00	1.15	8.838	9.72	129.42	0.730	0.000	2.00	4.096	2.99	29.1	0.0	97.3
<b>Totals:</b>								<b>169.00</b>			<b>3,163.9</b>		<b>27,200.5</b>

## Discrete Appurtenance Forces

**Structure:** CT13071-A-SBA  
**Site Name:** Woodbridge  
**Height:** 169.00 (ft)  
**Base Elev:** 0.000 (ft)  
**Gh:** 1.1

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

7/7/2023  
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**Load Case:** 1.0D + 1.0W 60 mph Wind **Iterations** 25

**Dead Load Factor** 1.00

**Wind Load Factor** 1.00

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	167.00	AIR 6449 B41	3	8.808	9.688	0.56	0.80	9.49	309.00	0.000	0.000	91.96	0.00	0.00
2	167.00	RRUS 4415 B25	3	8.808	9.688	0.54	0.80	2.64	138.00	0.000	0.000	25.55	0.00	0.00
3	167.00	Ericsson - Radio 4449	3	8.808	9.688	0.60	0.80	2.97	222.00	0.000	0.000	28.77	0.00	0.00
4	167.00	Ericsson - KRY 112 144/2	3	8.808	9.688	0.60	0.80	0.74	33.00	0.000	0.000	7.15	0.00	0.00
5	167.00	T-Arms/Commscope	3	8.815	9.697	0.56	0.75	11.39	1020.00	0.000	0.500	110.45	0.00	55.22
6	167.00	AIR 21 B2A/B4P	3	8.808	9.688	0.77	0.90	14.14	276.00	0.000	0.000	137.00	0.00	0.00
7	165.00	Air 32	3	8.777	9.655	0.78	0.90	15.29	317.40	0.000	0.000	147.64	0.00	0.00
8	165.00	APXVAA24_43-U-A20	3	8.777	9.655	0.66	0.90	39.89	384.00	0.000	0.000	385.17	0.00	0.00
9	157.00	BSF0020F3V1-1	2	8.653	9.519	0.80	0.80	1.23	35.20	0.000	0.000	11.73	0.00	0.00
10	157.00	MX06FRO660-03	6	8.653	9.519	0.70	0.80	41.22	360.00	0.000	0.000	392.34	0.00	0.00
11	157.00	MT6407-77A	3	8.653	9.519	0.56	0.80	7.88	238.20	0.000	0.000	75.00	0.00	0.00
12	157.00	T-Arms	3	8.653	9.519	0.56	0.75	29.53	1520.70	0.000	0.000	281.10	0.00	0.00
13	157.00	DB846H80E-SX	2	8.653	9.519	0.88	0.80	8.82	32.00	0.000	0.000	83.93	0.00	0.00
14	157.00	DB846F65ZAXY	4	8.653	9.519	0.74	0.80	20.76	84.00	0.000	0.000	197.57	0.00	0.00
15	157.00	RF4439d-25A	3	8.653	9.519	0.66	0.80	3.74	253.20	0.000	0.000	35.65	0.00	0.00
16	157.00	RF4440d-13A	3	8.653	9.519	0.66	0.80	3.74	253.20	0.000	0.000	35.65	0.00	0.00
17	157.00	DB-C1-12C-24AB-OZ	1	8.653	9.519	1.00	1.00	4.06	32.00	0.000	0.000	38.65	0.00	0.00
18	150.00	Collar Mount	1	8.541	9.396	1.00	1.00	3.50	100.00	0.000	0.000	32.88	0.00	0.00
19	150.00	Ericsson Air6419 B77G	3	8.541	9.396	0.61	0.80	6.93	198.30	0.000	0.000	65.12	0.00	0.00
20	148.00	Powerwave LGP13519	6	8.509	9.360	0.80	0.80	6.19	84.60	0.000	0.000	57.95	0.00	0.00
21	148.00	CCI DMP65R-BU6DA	1	8.509	9.360	0.58	0.80	7.32	79.40	0.000	0.000	68.52	0.00	0.00
22	148.00	CCI DMP65R-BU8DA	2	8.509	9.360	0.58	0.80	20.87	191.40	0.000	0.000	195.36	0.00	0.00
23	148.00	Powerwave 21401	6	8.509	9.360	0.54	0.80	4.15	84.60	0.000	0.000	38.83	0.00	0.00
24	148.00	Commscope	1	8.509	9.360	0.54	0.80	0.53	34.50	0.000	0.000	4.97	0.00	0.00
25	148.00	Powerwave 1001940	3	8.509	9.360	0.54	0.80	0.40	6.60	0.000	0.000	3.76	0.00	0.00
26	148.00	Raycap	2	8.509	9.360	0.80	0.80	1.82	52.40	0.000	0.000	17.07	0.00	0.00
27	148.00	Ericsson RRUS 4478 B14	3	8.509	9.360	0.54	0.80	2.65	178.20	0.000	0.000	24.83	0.00	0.00
28	148.00	Ericsson RRUS 4449	3	8.509	9.360	0.54	0.80	3.17	213.00	0.000	0.000	29.65	0.00	0.00
29	148.00	Ericsson RRUS 32	3	8.509	9.360	0.54	0.80	2.65	231.00	0.000	0.000	24.83	0.00	0.00
30	148.00	Ericsson RRUS 8843 B2	3	8.509	9.360	0.54	0.80	2.65	225.00	0.000	0.000	24.83	0.00	0.00
31	148.00	T-Arms w/ Modifications	3	8.509	9.360	0.56	0.75	20.25	1350.00	0.000	0.000	189.53	0.00	0.00
32	148.00	Quintel QD8616-7	2	8.509	9.360	0.74	0.80	11.97	222.00	0.000	0.000	112.01	0.00	0.00
33	148.00	Quintel QD6616-7	1	8.509	9.360	0.74	0.80	5.98	111.00	0.000	0.000	56.00	0.00	0.00
34	146.00	Ericsson Air6449 B77D	3	8.476	9.323	0.68	0.80	8.43	264.00	0.000	0.000	78.55	0.00	0.00
35	127.00	AAHC	3	8.145	8.959	0.56	0.75	7.10	310.80	0.000	0.000	63.65	0.00	0.00
36	127.00	NNVV-65B-R4	3	8.145	8.959	0.55	0.75	20.43	232.20	0.000	0.000	183.03	0.00	0.00
37	127.00	VHLP800-11	1	8.145	8.959	1.00	1.00	8.43	48.00	1.455	0.000	75.53	109.89	0.00
38	127.00	VHLP2-11	3	8.145	8.959	1.00	1.00	14.04	81.00	1.455	0.000	125.79	183.02	0.00
39	127.00	1900MHz RRH	3	8.145	8.959	0.74	0.75	6.17	180.00	0.000	0.000	55.28	0.00	0.00
40	127.00	RMQP-4096-HK	1	8.145	8.959	1.00	1.00	51.70	2645.00	0.000	0.000	463.19	0.00	0.00
41	127.00	Horizon Duo	4	8.145	8.959	0.60	0.80	1.42	28.00	0.000	0.000	12.69	0.00	0.00
42	127.00	800 MHz RRH	6	8.145	8.959	0.69	0.75	10.31	318.00	0.000	0.000	92.36	0.00	0.00
43	127.00	TD-RRH8x20-25	3	8.145	8.959	0.52	0.75	6.29	210.00	0.000	0.000	56.33	0.00	0.00
44	117.00	Raycap	1	7.956	8.752	1.00	1.00	2.01	21.90	0.000	0.000	17.59	0.00	0.00
45	117.00	Fujitsu TA08025-B604	3	7.956	8.752	0.50	0.75	2.95	191.70	0.000	0.000	25.86	0.00	0.00
46	117.00	Fujitsu TA08025-B605	3	7.956	8.752	0.50	0.75	2.95	225.00	0.000	0.000	25.86	0.00	0.00
47	117.00	Commscope	1	7.956	8.752	1.00	1.00	37.59	1727.00	0.000	0.000	328.98	0.00	0.00

## Discrete Appurtenance Forces

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Struct Class:</b> II	
<b>Topography:</b> 1		Page: 51
48 117.00 JMA MX08FRO665-21 3 7.956 8.752 0.55 0.75 20.80 193.50 0.000 0.000 182.00 0.00 0.00	<b>Totals:</b> 15,546.00	4,818.15

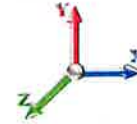
## Total Applied Force Summary

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II
		Page: 52



**Load Case:** 1.0D + 1.0W 60 mph Wind

**Dead Load Factor** 1.00  
**Wind Load Factor** 1.00



**Iterations** 25

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
1.00		20.53	312.64	0.00	0.00
5.00		81.40	1241.11	0.00	0.00
10.00		100.10	1530.13	0.00	0.00
15.00		98.27	1506.50	0.00	0.00
20.00		96.44	1482.87	0.00	0.00
25.00		94.61	1459.24	0.00	0.00
30.00		92.86	1435.61	0.00	0.00
35.00		95.12	1411.98	0.00	0.00
40.00		96.83	1388.36	0.00	0.00
40.75		14.43	206.22	0.00	0.00
45.00		84.55	1984.35	0.00	0.00
47.00		39.77	922.84	0.00	0.00
50.00		60.08	718.46	0.00	0.00
55.00		101.15	1181.23	0.00	0.00
60.00		101.46	1160.98	0.00	0.00
65.00		101.53	1140.73	0.00	0.00
70.00		101.36	1120.48	0.00	0.00
75.00		101.00	1100.22	0.00	0.00
80.00		100.46	1079.97	0.00	0.00
85.00		99.74	1059.72	0.00	0.00
89.25		84.00	884.83	0.00	0.00
90.00		14.86	234.11	0.00	0.00
91.50		29.69	465.95	0.00	0.00
94.25		54.30	846.35	0.00	0.00
95.00		14.71	114.76	0.00	0.00
96.75		34.28	266.59	0.00	0.00
97.00		4.87	37.95	0.00	0.00
100.00		58.50	452.76	0.00	0.00
102.25		43.54	336.38	0.00	0.00
105.00		52.90	407.41	0.00	0.00
110.00		95.42	730.29	0.00	0.00
115.00		93.94	716.79	0.00	0.00
117.00	(11) attachments	617.29	2642.03	0.00	0.00
120.00		55.10	414.89	0.00	0.00
125.00		90.70	680.68	0.00	0.00
127.00	(27) attachments	1163.51	4321.49	292.91	0.00
130.00		53.03	382.02	0.00	0.00
135.00		87.08	625.90	0.00	0.00
139.00		68.21	491.00	0.00	0.00
140.00		17.02	181.57	0.00	0.00
142.75		46.46	494.44	0.00	0.00
145.00		37.54	226.69	0.00	0.00
146.00	(3) attachments	95.08	364.09	0.00	0.00
148.00	(39) attachments	881.00	3262.67	0.00	0.00
150.00	(4) attachments	130.51	476.05	0.00	0.00
155.00		79.97	437.29	0.00	0.00



## Total Applied Force Summary

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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157.00	(27) attachments	1182.89	2980.58	0.00	0.00
160.00		46.29	201.38	0.00	0.00
165.00	(6) attachments	608.25	1028.94	0.00	0.00
167.00	(18) attachments	430.33	2126.18	0.00	55.22
169.00		29.06	97.25	0.00	0.00
	<b>Totals:</b>	<b>7,982.04</b>	<b>50,372.96</b>	<b>292.91</b>	<b>55.22</b>

## Linear Appurtenance Segment Forces (Factored)

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 1.0D + 1.0W 60 mph Wind

**Dead Load Factor** 1.00  
**Wind Load Factor** 1.00



**Iterations** 25

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)
1.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.035	0.000	5.388	0.00	5.20
5.00	1 5/8" Coax	Yes	4.00	0.000	1.98	0.66	0.00	0.035	0.000	5.388	0.00	20.80
10.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.036	0.000	5.388	0.00	26.00
15.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.036	0.000	5.388	0.00	26.00
20.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.037	0.000	5.388	0.00	26.00
25.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.038	0.000	5.388	0.00	26.00
30.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.038	0.000	5.393	0.00	26.00
35.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.039	0.000	5.636	0.00	26.00
40.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.040	0.000	5.855	0.00	26.00
40.75	1 5/8" Coax	Yes	0.75	0.000	1.98	0.12	0.00	0.041	0.000	5.886	0.00	3.90
45.00	1 5/8" Coax	Yes	4.25	0.000	1.98	0.70	0.00	0.041	0.000	6.055	0.00	22.10
47.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.042	0.000	6.131	0.00	10.40
50.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.041	0.000	6.240	0.00	15.60
55.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.042	0.000	6.413	0.00	26.00
60.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.043	0.000	6.574	0.00	26.00
65.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.044	0.000	6.726	0.00	26.00
70.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.045	0.000	6.870	0.00	26.00
75.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.046	0.000	7.007	0.00	26.00
80.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.047	0.000	7.137	0.00	26.00
85.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.048	0.000	7.262	0.00	26.00
89.25	1 5/8" Coax	Yes	4.25	0.000	1.98	0.70	0.00	0.049	0.000	7.364	0.00	22.10
90.00	1 5/8" Coax	Yes	0.75	0.000	1.98	0.12	0.00	0.075	0.000	7.382	0.00	3.90
90.00	1" Reinforcing plate	Yes	0.75	0.000	1.00	0.06	0.00	0.075	0.000	7.382	0.00	0.00
91.50	1 5/8" Coax	Yes	1.50	0.000	1.98	0.25	0.00	0.076	0.000	7.416	0.00	7.80
91.50	1" Reinforcing plate	Yes	1.50	0.000	1.00	0.13	0.00	0.076	0.000	7.416	0.00	0.00
94.25	1 5/8" Coax	Yes	2.75	0.000	1.98	0.45	0.00	0.077	0.000	7.479	0.00	14.30
94.25	1" Reinforcing plate	Yes	2.75	0.000	1.00	0.23	0.00	0.077	0.000	7.479	0.00	0.00
95.00	1 5/8" Coax	Yes	0.75	0.000	1.98	0.12	0.00	0.076	0.000	7.496	0.00	3.90
95.00	1" Reinforcing plate	Yes	0.75	0.000	1.00	0.06	0.00	0.076	0.000	7.496	0.00	0.00
96.75	1 5/8" Coax	Yes	1.75	0.000	1.98	0.29	0.00	0.077	0.000	7.536	0.00	9.10
96.75	1" Reinforcing plate	Yes	1.75	0.000	1.00	0.15	0.00	0.077	0.000	7.536	0.00	0.00
97.00	1 5/8" Coax	Yes	0.25	0.000	1.98	0.04	0.00	0.077	0.000	7.541	0.00	1.30
97.00	1" Reinforcing plate	Yes	0.25	0.000	1.00	0.02	0.00	0.077	0.000	7.541	0.00	0.00
100.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.078	0.000	7.607	0.00	15.60
100.00	1" Reinforcing plate	Yes	0.75	0.000	1.00	0.06	0.00	0.078	0.000	7.607	0.00	0.00
100.00	1" Reinforcing plate	Yes	2.25	0.000	1.00	0.19	0.00	0.078	0.000	7.607	0.00	0.00
102.25	1 5/8" Coax	Yes	2.25	0.000	1.98	0.37	0.00	0.079	0.000	7.656	0.00	11.70
102.25	1" Reinforcing plate	Yes	2.25	0.000	1.00	0.19	0.00	0.079	0.000	7.656	0.00	0.00
105.00	1 5/8" Coax	Yes	2.75	0.000	1.98	0.45	0.00	0.075	0.000	7.714	0.00	14.30
105.00	1" Reinforcing plate	Yes	2.25	0.000	1.00	0.19	0.00	0.075	0.000	7.714	0.00	0.00
110.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.054	0.000	7.817	0.00	26.00
115.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.056	0.000	7.917	0.00	26.00
117.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.057	0.000	7.956	0.00	10.40
120.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.058	0.000	8.014	0.00	15.60
125.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.059	0.000	8.108	0.00	26.00
127.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.061	0.000	8.145	0.00	10.40
130.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.061	0.000	8.199	0.00	15.60

## Linear Appurtenance Segment Forces (Factored)

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 1.0D + 1.0W 60 mph Wind

**Dead Load Factor** 1.00

**Wind Load Factor** 1.00



**Iterations** 25

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)
135.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.063	0.000	8.288	0.00	26.00
139.00	1 5/8" Coax	Yes	4.00	0.000	1.98	0.66	0.00	0.065	0.000	8.358	0.00	20.80
140.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.066	0.000	8.375	0.00	5.20
142.75	1 5/8" Coax	Yes	2.75	0.000	1.98	0.45	0.00	0.067	0.000	8.421	0.00	14.30
145.00	1 5/8" Coax	Yes	2.25	0.000	1.98	0.37	0.00	0.067	0.000	8.459	0.00	11.70
146.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.068	0.000	8.476	0.00	5.20
148.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.069	0.000	8.509	0.00	10.40
150.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.070	0.000	8.541	0.00	10.40
155.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.071	0.000	8.622	0.00	26.00
157.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.073	0.000	8.653	0.00	10.40
<b>Totals:</b>											<b>0.0</b>	<b>816.4</b>

## Calculated Forces

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



<b>Load Case:</b> 1.0D + 1.0W 60 mph Wind	<b>Iterations</b> 25
<b>Dead Load Factor</b> 1.00	
<b>Wind Load Factor</b> 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	-50.37	-7.99	-0.29	-1010.0	0.00	1010.04	5324.18	1358.42	6282.52	6106.56	0.00	0.000	0.000	0.161
1.00	-50.06	-7.98	-0.29	-1002.0	0.00	1002.06	5311.65	1353.54	6237.51	6070.17	0.00	-0.009	0.000	0.161
1.00	-50.06	-7.98	-0.29	-1002.0	0.00	1002.06	5311.65	1353.54	6237.51	6070.17	0.00	-0.009	0.000	0.173
5.00	-48.81	-7.94	-0.29	-970.13	0.00	970.13	5261.08	1334.04	6059.10	5925.09	0.02	-0.043	0.000	0.173
10.00	-47.27	-7.87	-0.29	-930.45	0.00	930.45	5196.80	1309.67	5839.72	5744.92	0.09	-0.090	0.000	0.171
15.00	-45.76	-7.81	-0.29	-891.08	0.00	891.08	5131.34	1285.30	5624.39	5566.13	0.21	-0.138	0.000	0.169
20.00	-44.27	-7.75	-0.29	-852.03	0.00	852.03	5064.69	1260.92	5413.10	5388.80	0.38	-0.186	0.000	0.167
25.00	-42.81	-7.68	-0.29	-813.29	0.00	813.29	4996.86	1236.55	5205.86	5212.99	0.60	-0.235	0.000	0.165
30.00	-41.36	-7.62	-0.29	-774.88	0.00	774.88	4927.84	1212.18	5002.66	5038.79	0.88	-0.284	0.000	0.162
35.00	-39.95	-7.55	-0.29	-736.78	0.00	736.78	4857.63	1187.80	4803.50	4866.26	1.20	-0.334	0.000	0.160
40.00	-38.55	-7.47	-0.29	-699.01	0.00	699.01	4786.24	1163.43	4608.40	4695.49	1.58	-0.384	0.000	0.157
40.75	-38.35	-7.47	-0.29	-693.42	0.00	693.42	4775.43	1159.78	4579.48	4670.03	1.64	-0.392	0.000	0.157
45.00	-36.36	-7.39	-0.29	-661.68	0.00	661.68	4713.67	1139.06	4417.33	4526.53	2.01	-0.435	0.000	0.154
47.00	-35.43	-7.36	-0.29	-646.90	0.00	646.90	3877.89	984.95	3853.40	3762.05	2.19	-0.456	0.000	0.181
50.00	-34.71	-7.32	-0.29	-624.83	0.00	624.83	3845.09	972.42	3755.95	3682.38	2.49	-0.487	0.000	0.179
55.00	-33.52	-7.24	-0.29	-588.23	0.00	588.23	3789.47	951.52	3596.29	3550.52	3.03	-0.544	0.000	0.175
60.00	-32.35	-7.16	-0.29	-552.03	0.00	552.03	3732.67	930.63	3440.11	3419.89	3.63	-0.601	0.000	0.170
65.00	-31.21	-7.08	-0.29	-516.23	0.00	516.23	3674.68	909.74	3287.40	3290.55	4.29	-0.658	0.000	0.165
70.00	-30.08	-6.99	-0.29	-480.85	0.00	480.85	3615.51	888.85	3138.15	3162.58	5.01	-0.715	0.000	0.160
75.00	-28.98	-6.91	-0.29	-445.89	0.00	445.89	3555.15	867.96	2992.36	3036.06	5.79	-0.772	0.000	0.155
80.00	-27.89	-6.82	-0.29	-411.37	0.00	411.37	3493.61	847.07	2850.05	2911.05	6.63	-0.828	0.000	0.149
85.00	-26.83	-6.73	-0.29	-377.28	0.00	377.28	3430.88	826.18	2711.20	2787.63	7.53	-0.884	0.000	0.143
89.25	-25.94	-6.64	-0.29	-348.70	0.00	348.70	3376.63	808.42	2595.91	2684.02	8.34	-0.932	0.000	0.138
90.00	-25.70	-6.63	-0.29	-343.72	0.00	343.72	3366.97	805.29	2575.82	2665.87	8.48	-0.940	0.000	0.137
91.50	-25.24	-6.60	-0.29	-333.78	0.00	333.78	3347.56	799.02	2535.88	2629.68	8.78	-0.957	0.000	0.094
94.25	-24.39	-6.54	-0.29	-315.63	0.00	315.63	1944.87	533.72	1697.22	1535.78	9.34	-0.978	-0.001	0.106
95.00	-24.27	-6.52	-0.29	-310.73	0.00	310.73	1940.65	531.63	1683.96	1526.41	9.49	-0.984	-0.001	0.133
96.75	-24.01	-6.49	-0.29	-299.32	0.00	299.32	1930.70	526.76	1653.22	1504.57	9.86	-1.000	-0.001	0.129
97.00	-23.97	-6.49	-0.29	-297.69	0.00	297.69	1929.27	526.06	1648.85	1501.45	9.91	-1.002	-0.001	0.093
100.00	-23.51	-6.43	-0.29	-278.23	0.00	278.23	1911.84	517.71	1596.88	1464.09	10.54	-1.022	-0.001	0.123
102.25	-23.18	-6.39	-0.29	-263.77	0.00	263.77	1898.49	511.44	1558.45	1436.15	11.03	-1.042	-0.001	0.118
102.25	-23.18	-6.39	-0.29	-263.77	0.00	263.77	1898.49	511.44	1558.45	1436.15	11.03	-1.042	-0.001	0.190
105.00	-22.76	-6.35	-0.29	-246.20	0.00	246.20	1881.84	503.78	1512.12	1402.09	11.64	-1.067	-0.001	0.188
110.00	-22.03	-6.26	-0.29	-214.46	0.00	214.46	1850.66	489.85	1429.66	1340.48	12.79	-1.136	-0.001	0.172
115.00	-21.31	-6.17	-0.29	-183.15	0.00	183.15	1818.29	475.92	1349.52	1279.32	14.02	-1.200	-0.001	0.155
117.00	-18.68	-5.51	-0.29	-170.81	0.00	170.81	1805.01	470.35	1318.11	1255.00	14.53	-1.226	-0.001	0.147
120.00	-18.26	-5.46	-0.29	-154.28	0.00	154.28	1784.73	462.00	1271.69	1218.70	15.31	-1.262	-0.001	0.137
125.00	-17.58	-5.36	-0.29	-126.99	0.00	126.99	1749.99	448.07	1196.18	1158.68	16.66	-1.316	-0.001	0.120
127.00	-13.28	-4.11	0.00	-116.26	0.00	116.26	1735.77	442.50	1166.62	1134.86	17.22	-1.337	-0.001	0.110
130.00	-12.90	-4.05	0.00	-103.94	0.00	103.94	1714.07	434.14	1122.97	1099.35	18.07	-1.366	-0.001	0.102
135.00	-12.27	-3.96	0.00	-83.67	0.00	83.67	1676.96	420.21	1052.07	1040.77	19.52	-1.410	-0.001	0.088
139.00	-11.78	-3.88	0.00	-67.84	0.00	67.84	1646.42	409.07	997.02	994.50	20.72	-1.441	-0.001	0.075
140.00	-11.60	-3.86	0.00	-63.96	0.00	63.96	1638.67	406.29	983.49	983.02	21.02	-1.449	-0.001	0.072
142.75	-11.11	-3.81	0.00	-53.33	0.00	53.33	1100.62	303.54	731.94	659.08	21.86	-1.467	-0.001	0.091
145.00	-10.88	-3.77	0.00	-44.77	0.00	44.77	1091.20	298.84	709.44	643.26	22.55	-1.480	-0.001	0.080
146.00	-10.52	-3.66	0.00	-41.00	0.00	41.00	1086.94	296.75	699.56	636.24	22.86	-1.487	-0.001	0.074
148.00	-7.28	-2.70	0.00	-33.67	0.00	33.67	1078.27	292.57	680.00	622.22	23.49	-1.500	-0.001	0.061
150.00	-6.81	-2.56	0.00	-28.27	0.00	28.27	1069.42	288.39	660.71	608.24	24.12	-1.510	-0.001	0.053

## Calculated Forces

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Page:</b> 57
	<b>Struct Class:</b> II	



155.00	-6.37	-2.47	0.00	-15.48	0.00	15.48	1046.45	277.95	613.72	573.48	25.71	-1.530	-0.001	0.033
157.00	-3.42	-1.21	0.00	-10.55	0.00	10.55	1036.93	273.77	595.41	559.66	26.36	-1.535	-0.001	0.022
160.00	-3.22	-1.15	0.00	-6.93	0.00	6.93	1022.30	267.50	568.46	539.04	27.32	-1.541	-0.001	0.016
165.00	-2.21	-0.52	0.00	-1.16	0.00	1.16	996.96	257.06	524.93	505.00	28.94	-1.545	-0.001	0.005
167.00	-0.10	-0.03	0.00	-0.06	0.00	0.06	986.50	252.88	508.00	491.52	29.59	-1.546	-0.001	0.000
169.00	0.00	-0.03	0.00	0.00	0.00	0.00	975.84	248.70	491.35	478.11	30.24	-1.546	-0.001	0.000

## Final Analysis Summary

<b>Structure:</b> CT13071-A-SBA	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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### 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 119 mph Wind	35.1	0.00	60.43	0.03	1.26	4477.65
0.9D + 1.0W 119 mph Wind	35.1	0.00	45.32	0.02	1.26	4409.98
1.2D + 1.0Di + 1.0Wi 50 mph Wind	9.0	0.00	82.76	0.00	0.26	1142.95
1.2D + 1.0Ev + 1.0Eh	0.7	0.00	62.67	0.00	0.00	97.33
0.9D + 1.0Ev + 1.0Eh	0.7	0.00	47.46	0.00	0.00	96.21
1.0D + 1.0W 60 mph Wind	8.0	0.00	50.37	0.00	0.29	1010.04

### 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 119 mph Wind	-25.71	-28.41	-1.28	-1172.5	-0.07	-1172.5	1898.49	511.44	1558.45	1436.15	102.25	0.820
0.9D + 1.0W 119 mph Wind	-18.79	-27.80	-1.28	-1145.2	-0.06	-1145.2	1898.49	511.44	1558.45	1436.15	102.25	0.799
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-42.14	-7.18	-0.26	-273.44	0.00	-273.44	1881.84	503.78	1512.12	1402.09	105.00	0.218
1.2D + 1.0Ev + 1.0Eh	-28.46	-0.67	0.00	-25.63	0.00	-25.63	1881.84	503.78	1512.12	1402.09	105.00	0.030
0.9D + 1.0Ev + 1.0Eh	-21.56	-0.66	0.00	-25.30	0.00	-25.30	1881.84	503.78	1512.12	1402.09	105.00	0.030
1.0D + 1.0W 60 mph Wind	-23.18	-6.39	-0.29	-263.77	0.00	-263.77	1898.49	511.44	1558.45	1436.15	102.25	0.190

### Additional Steel Summary

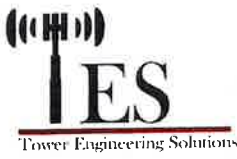
Elev From (ft)	Elev To (ft)	Member	Intermediate Connectors			Lower Termination			Upper Termination			Max Member					
			VQ/l (lb/in)	Vu (kips)	phi Vn (kips)	MQ/l (kips)	phi Vn (kips)	Num Reqd	Num Actual	MQ/l (kips)	phi Vn (kips)	Num Reqd	Num Actual	Pu (kips)	phi Pn (kips)	phi Tn (kips)	Ratio
0.0	1.0	(3) SOL-1 3/4" William R71	-79.5	-0.95	25.3	120.8	25.3	5	0	120.7	25.3	5	0	120.83	288.5	298.82	0.419
91.5	97.0	(3) LNP-LP6X100-G-10TT	380.4	8.75	25.3	177.6	25.3	8	9	151.0	25.3	6	9	215.37	301.8	288.75	0.746
96.8	102.3	(3) LNP-LP6X100-G-10TT	392.8	9.03	25.3	151.5	25.3	6	9	194.6	25.3	8	9	201.26	301.8	288.75	0.697

## Base Plate Summary

<b>Structure:</b> CT13071-A-SB	<b>Code:</b> TIA-222-H	7/7/2023
<b>Site Name:</b> Woodbridge	<b>Exposure:</b> B	
<b>Height:</b> 169.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II
		<b>Page:</b> 59



Reactions	Base Plate	Anchor Bolts
Original Design	<b>Yield (ksi):</b> 60.00	<b>Bolt Circle:</b> 62.75
<b>Moment (kip-ft):</b> 4977.00	<b>Width (in):</b> 61.25	<b>Number Bolts:</b> 16.00
<b>Axial (kip):</b> 60.20	<b>Style:</b> Clipped	<b>Bolt Type:</b> 2.25" 18J
<b>Shear (kip):</b> 43.70	<b>Polygon Sides:</b> 0.00	<b>Bolt Diameter (in):</b> 2.25
Analysis (1.2D + 1.0W)	<b>Clip Length (in):</b> 12.00	<b>Yield (ksi):</b> 75.00
<b>Moment (kip-ft):</b> 4477.65	<b>Effective Len (in):</b> 8.31	<b>Ultimate (ksi):</b> 100.00
<b>Axial (kip):</b> 60.43	<b>Moment (kip-in):</b> 608.29	<b>Arrangement:</b> Clustered
<b>Shear (kip):</b> 35.11	<b>Allow Stress (ksi):</b> 81.00	<b>Cluster Dist (in):</b> 6.00
	<b>Applied Stress (ksi):</b> 48.60	<b>Start Angle (deg):</b> 45.00
	<b>Stress Ratio:</b> 0.60	<b>Compression</b>
		<b>Force (kip):</b> 185.72
		<b>Allowable (kip):</b> 268.39
		<b>Ratio:</b> 0.69
		<b>Tension</b>
		<b>Force (kip):</b> 178.17
		<b>Allowable (kip):</b> 243.75
		<b>Ratio:</b> 0.73

	<b>Monopole Mat Foundation Design</b>			Date 7/7/2023
	Customer Name:	Verizon	TIA Standard:	TIA-222-H
	Site Name:		Structure Height (Ft.):	169
	Site Number:	CT13071-A-SBA	Engineer Name:	J. Tibbetts
	Engr. Number:	141597	Engineer Login ID:	

**Foundation Info Obtained from:**

**Structure Type:**

**Analysis or Design?**

**Base Reactions (Factored):**

Axial Load (Kips):	60.4	Shear Force (Kips):	35.1
Uplift Force (Kips):	0.0	Moment (Kips-ft):	4477.7

**Foundation Geometries:**

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	7.0	Depth of Base BG (ft.):	6.0
Pier Height A. G. (ft.):	0.50	Thickness of Pad (ft):	2.00
Length of Pad (ft.):	24.5	Width of Pad (ft.):	24.5
Final Length of pad (ft)	24.5	Final width of pad (ft):	24.5

**Material Properties and Rebar 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:	36	Tie Spacing (in):	6.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	8	
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):	46	Qty. of Rebar in Pad (W):	46	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	46	Qty. of Rebar in Pad (W):	46	

**Soil Design Parameters:**

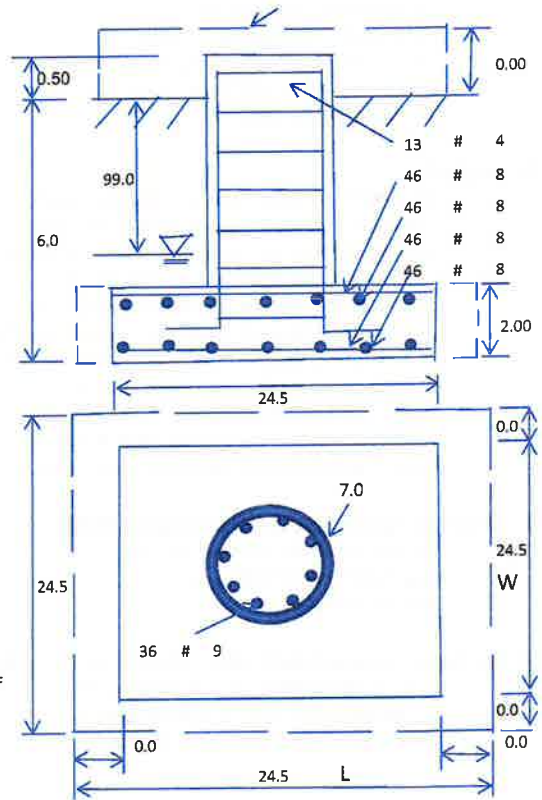
Soil Unit Weight (pcf):	120.0	Soil Buoyant Weight:	50.0	Pcf	
Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad: 30
Ultimate Bearing Pressure (psf):	10000	Ultimate Skin Friction:	200	Psf	Angle from Bottm of Pad: 25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No	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.):	2247.06	Total Dry Soil Weight (Kips):	269.65
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	269.65	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	1373.68	Total Dry Concrete Weight (Kips):	206.05
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	206.05	Total Vertical Load on Base (Kips):	536.10

**Check Soil Capacities:**

Calculated Maxium Net Soil Pressure under the base (psf):	3777	<	Allowable Factored Soil Bearing (psf):	7500	0.50	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	5984.5	>	Design Factored Momont (kips-ft):	4706	0.79	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.27	OK!				





**Check the capacities of Reinforcing Concrete:**

Strength reduction factor (Flexure and axial tension):	0.90	Strength reduction factor (Shear):	0.75	
Strength reduction factor (Axial compression):	0.65	Wind Load Factor on Concrete Design:	1.00	

**(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):	6026.1	> Design Factored Moment (Mu, Kips-F	4635.6	0.77	OK!
Calculated Shear Capacity (Kips):	794.5	> Design Factored Shear (Kips):	35.1	0.04	OK!
Calculated Tension Capacity (Tn, Kips):	1944.0	> Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	9734.2	> Design Factored Axial Load (Pu Kips):	60.4	0.01	OK!
Moment & Axial Strength Combination:	0.77	OK! Check Tie Spacing (Design/Required):		0.5	OK!
Pier Reinforcement Ratio:	0.006	Reinforcement Ratio is satisfied per ACI			

**(2) Concrete Pad:**

One-Way Design Shear Capacity (L-Direction, Kips):	571.8	> One-Way Factored Shear (L-D, Kips):	304.2	0.53	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	571.8	> One-Way Factored Shear (W-D., Kips):	304.2	0.53	OK!
One-Way Design Shear Capacity (Corner-Corner, Kips):	565.5	> One-Way Factored Shear (C-C, Kips):	314.4	0.56	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct. ):	0.0060	OK! Lower Steel Pad Reinf. Ratio (W-Direc	0.0060		
Lower Steel Pad Moment Capacity (L-Direction, Kips-ft):	3174.0	> Moment at Bottom ( L-Dir. K-Ft):	1438.3	0.45	OK!
Lower Steel Pad Moment Capacity (W-Direction, Kips-ft):	3174.0	> Moment at Bottom ( W-Dir. K-Ft):	1438.3	0.45	OK!
Lower Steel Pad Moment Capacity (Corner-Corner, K-ft):	4424.9	> Moment at Bottom ( C-C Dir. K-Ft):	2034.1	0.46	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct. ):	0.0060	OK! Upper Steel Reinf. Ratio (W-Dir. ):	0.0060		
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):	3174.0	> Moment at the top (L-Dir K-Ft):	690.3	0.22	OK!
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):	3174.0	> Moment at the top (W-Dir K-Ft):	690.3	0.22	OK!
Upper Steel Pad Moment Capacity (Corner-Corner, K-ft):	4424.9	> Moment at the top (C-C Dir. K-Ft):	648.1	0.15	OK!

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

Moment transferred by punching shear:	1791.1	k-ft.	Max. factored shear stress $v_{u,cd}$ :	4.7	Psi
Max. factored shear stress $v_{u,AB}$ :	19.7	Psi	Factored shear Strength $\phi v_n$ :	189.7	Psi
Max. factored shear stress $v_u$ :	19.7	Psi	Check Usage of Punching Shear Capacity:	0.10	OK!

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

Overturning moment to be transferred by flexure:	1343.3	k-ft.	Effective Width for resisting OT moment:	13.0	ft.
Calculated number of Rebar in Effective width:	25		Actual number of Rebar in Effective width:	25	
Steel Pad Moment Capacity ( L-Direc. Kips-ft):	1722.7	k-ft.	Check Usage of the Flexure Capacity:	0.78	OK!



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## Antenna Mount Analysis Report and PMI Requirements

### Mount ReAnalysis

SMART Tool Project #: 10206260  
Colliers Engineering & Design, CT. P.C. Project #: 23777025 (Rev. 1)

July 10, 2023

#### Site Information

Site ID: 5000382749-VZW / ANSONIA EAST CT  
Site Name: ANSONIA EAST CT  
Carrier Name: Verizon Wireless  
Address: 1 Deerfield Lane  
Ansonia, Connecticut 06401  
New Haven County  
Latitude: 41.350750°  
Longitude: -73.049250°

#### Structure Information

Tower Type: 169-Ft Monopole  
Mount Type: 12.50-Ft T-Arm

FUZE ID # 17123817

#### Analysis Results

T-Arm: 95.0% Pass\*

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

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

Included at the end of this MA report  
Available & Submitted via portal at <https://pmi.vzwsmart.com>  
For additional questions and support, please reach out to:  
[pmisupport@colliersengineering.com](mailto:pmisupport@colliersengineering.com)

Report Prepared By: Frank Centone



**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: 600860, dated July 15, 2021
Mount Mapping Report	Structural Components, Site ID: 16092560, dated April 18, 2021
Previous PMI Report	Maser Consulting Connecticut, Project #: 21777793A dated October 21, 2022
PMI Photos	Photos dated October 6, 2022
Filter Add Guidance	Guidance provided by Verizon

**Analysis Criteria:**

Codes and Standards:	ANSI/TIA-222-H Connecticut State Building Code, Effective October 1, 2022	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), $V_{ULT}$ : Ice Wind Speed (3-sec. Gust): Design Ice Thickness: Risk Category: Exposure Category: Topographic Category: Topographic Feature Considered: Topographic Method: Ground Elevation Factor, $K_e$ :	119 mph 50 mph 1.00 in II B 1 N/A N/A 0.983
Seismic Parameters:	$S_S$ : $S_1$ :	0.201 g 0.054 g
Maintenance Parameters:	Wind Speed (3-sec. Gust): Maintenance Load, $L_v$ : Maintenance Load, $L_m$ :	30 mph 250 lbs. 500 lbs.
Analysis Software:	RISA-3D (V17)	

**Final Loading Configuration:**

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

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
156.25	157.00	4	Andrew	DB846F65ZAXY	Retained
		2	Decibel	DB846H80E-SX	
		6	JMA Wireless	MX06FRO660-03	
		3	Samsung	MT6407-77A	
		3	Samsung	RF4439d-25A	
		3	Samsung	RF4440d-13A	
		1	Raycap	RVZDC-6627-PF-48	
		2	Kaelus	BSF0020F3V1-1	Added

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

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

**Standard Conditions:**

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

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

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

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

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

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

**Analysis Results:**

Component	Utilization %	Pass/Fail
Standoff Arm	44.2 %	Pass
Propose Antenna Pipe	19.4 %	Pass
Face Horizontal	95.0 %	Pass
Antenna Pipe	23.3 %	Pass
Mount Connection	33.0 %	Pass

<b>Structure Rating – (Controlling Utilization of all Components)</b>	<b>95.0%</b>
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*The mount has been found structurally adequate for all steel and external connection capacities. Serviceability in accordance with TIA-222-H Section 4.9.11.3 has not been considered.*

**BASELINE mount weight per SBA agreement: 1,520.58 lbs**

**Increase in mount weight due to Verizon loading change per SBA agreement: No Change**

**The weights listed above include 3 sector(s).**

**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	7.1	2.5	17.5	12.9
0.5	9.4	3.5	24.0	18.0
1	11.5	4.1	30.3	22.9

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 wire rope guides in locations where wire rope is rubbing against the mount or mount-to-tower connection steel. 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. Analysis Calculations

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

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

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

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

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

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MDG #: 5000382749

SMART Project #: 10206260

Fuze Project ID: 17123817

**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 wire rope guides in locations where wire rope is rubbing against the mount or mount-to-tower connection steel. 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: 5000382749-VZW - ANSONIA EAST CT

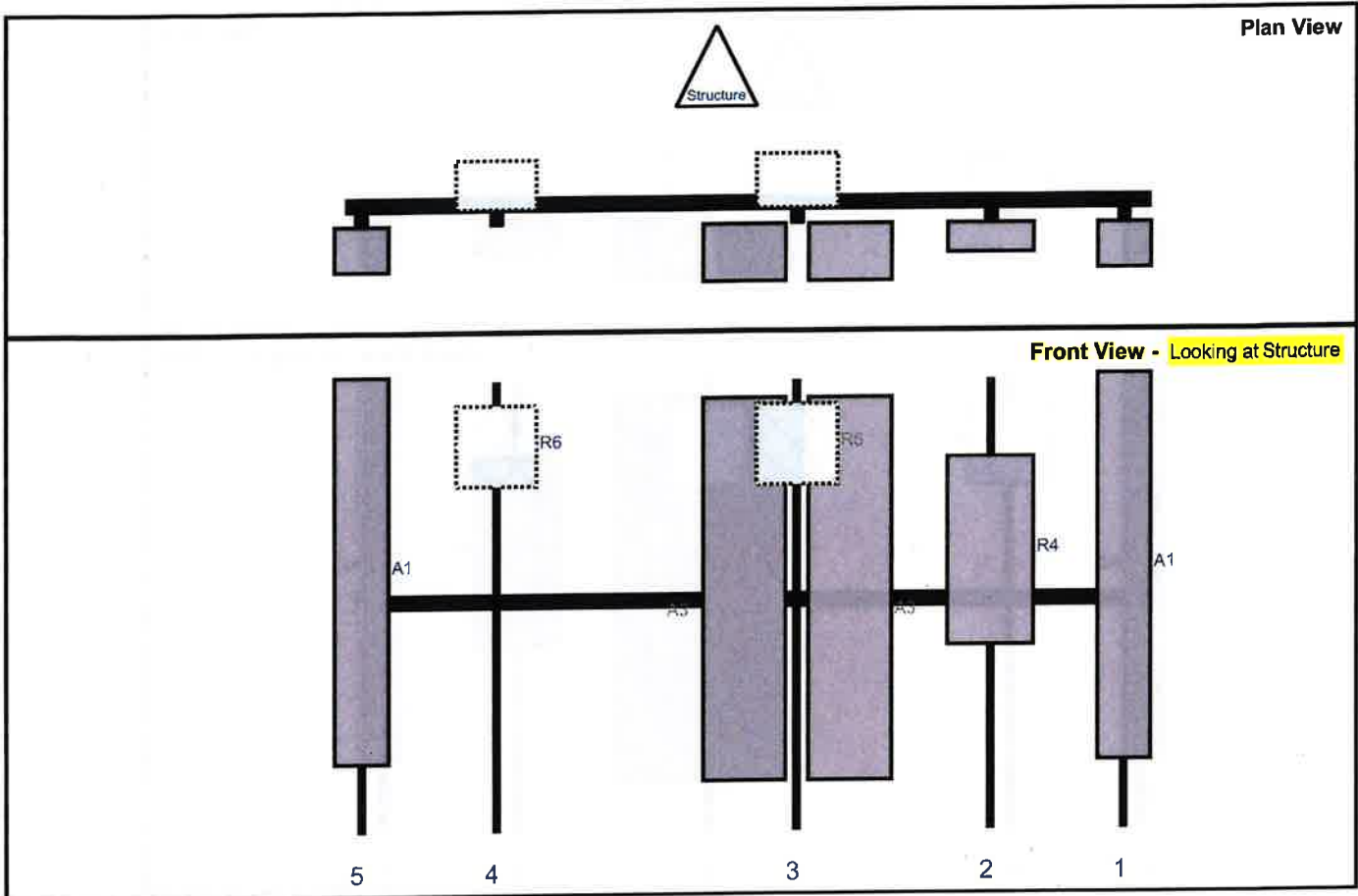
Sector: **A**  
 Structure Type: Monopole  
 Mount Elev: 156.25

10206260

7/10/2023



Page: 1



Reff#	Model	Height (in)	Width (in)	H Dist Fm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Fm T.	Ant H Off	Status	Validation
A1	DB846F65ZAXY	72	10	145	1	a	Front	35.04	0	Retained	10/06/2022
R4	MT6407-77A	35.1	16.1	120	2	a	Front	32.04	0	Retained	10/06/2022
A3	MX06FRO660-03	71.3	15.4	84	3	a	Front	39	9.8	Retained	10/06/2022
A3	MX06FRO660-03	71.3	15.4	84	3	b	Front	39	-9.8	Retained	10/06/2022
R5	RF4439d-25A	15	15	84	3	a	Behind	12	0	Retained	10/06/2022
R6	RF4440d-13A	15	15	28	4	a	Behind	12	0	Retained	10/06/2022
A1	DB846F65ZAXY	72	10	3	5	a	Front	35.04	0	Retained	10/06/2022
OVP1	RVZDC-6627-PF-48	29.5	16.5		Member					Retained	10/06/2022

Structure: 5000382749-VZW - ANSONIA EAST CT

Sector: B

7/10/2023

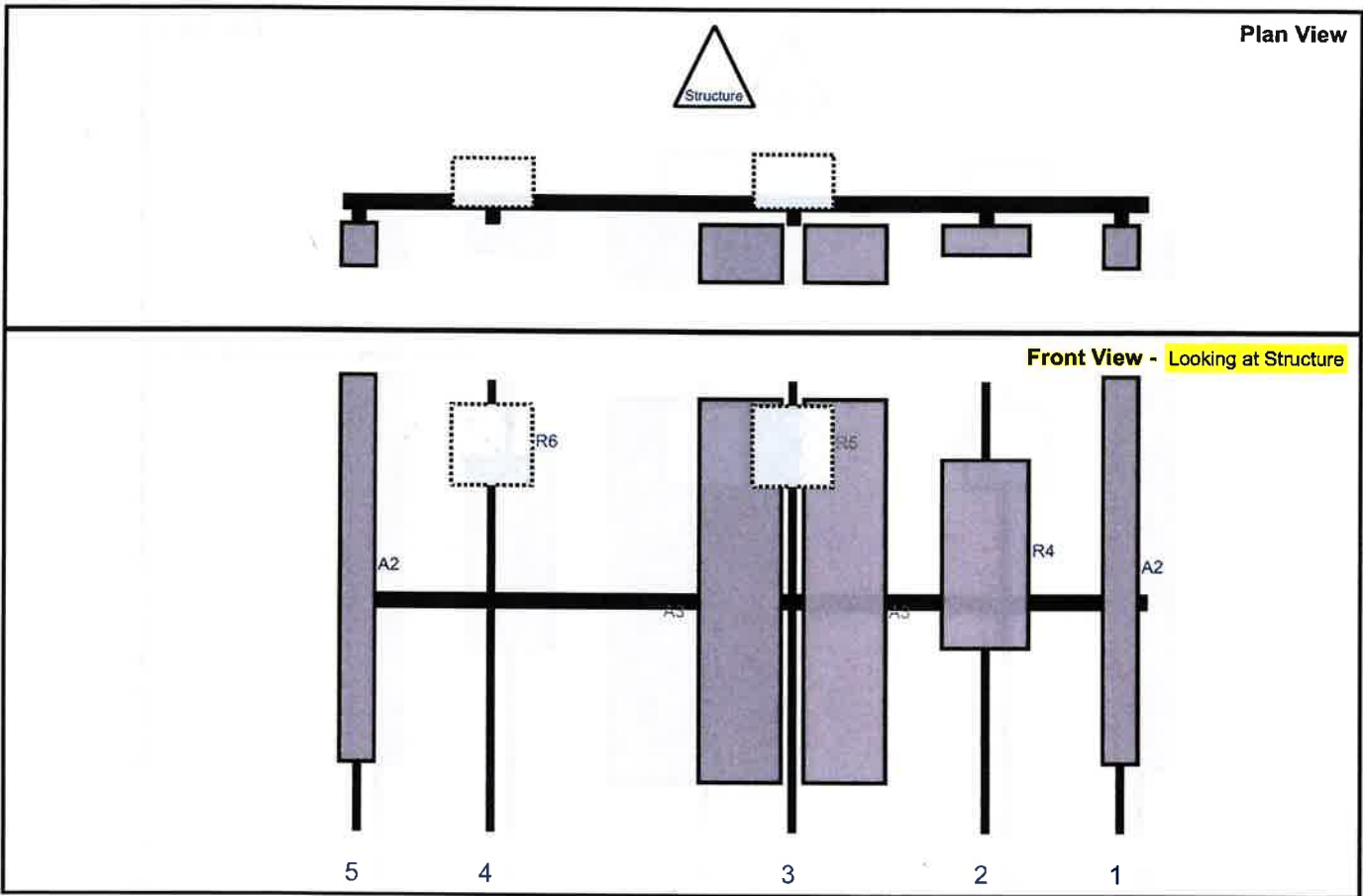
Structure Type: Monopole

10206260



Mount Elev: 156.25

Page: 2



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A2	DB846H80E-SX	72	6.5	145	1	a	Front	35.04	0	Retained	10/06/2022
R4	MT6407-77A	35.1	16.1	120	2	a	Front	32.04	0	Retained	10/06/2022
A3	MX06FRO660-03	71.3	15.4	84	3	a	Front	39	9.8	Retained	10/06/2022
A3	MX06FRO660-03	71.3	15.4	84	3	b	Front	39	-9.8	Retained	10/06/2022
R5	RF4439d-25A	15	15	84	3	a	Behind	12	0	Retained	10/06/2022
R6	RF4440d-13A	15	15	28	4	a	Behind	12	0	Retained	10/06/2022
A2	DB846H80E-SX	72	6.5	3	5	a	Front	35.04	0	Retained	10/06/2022

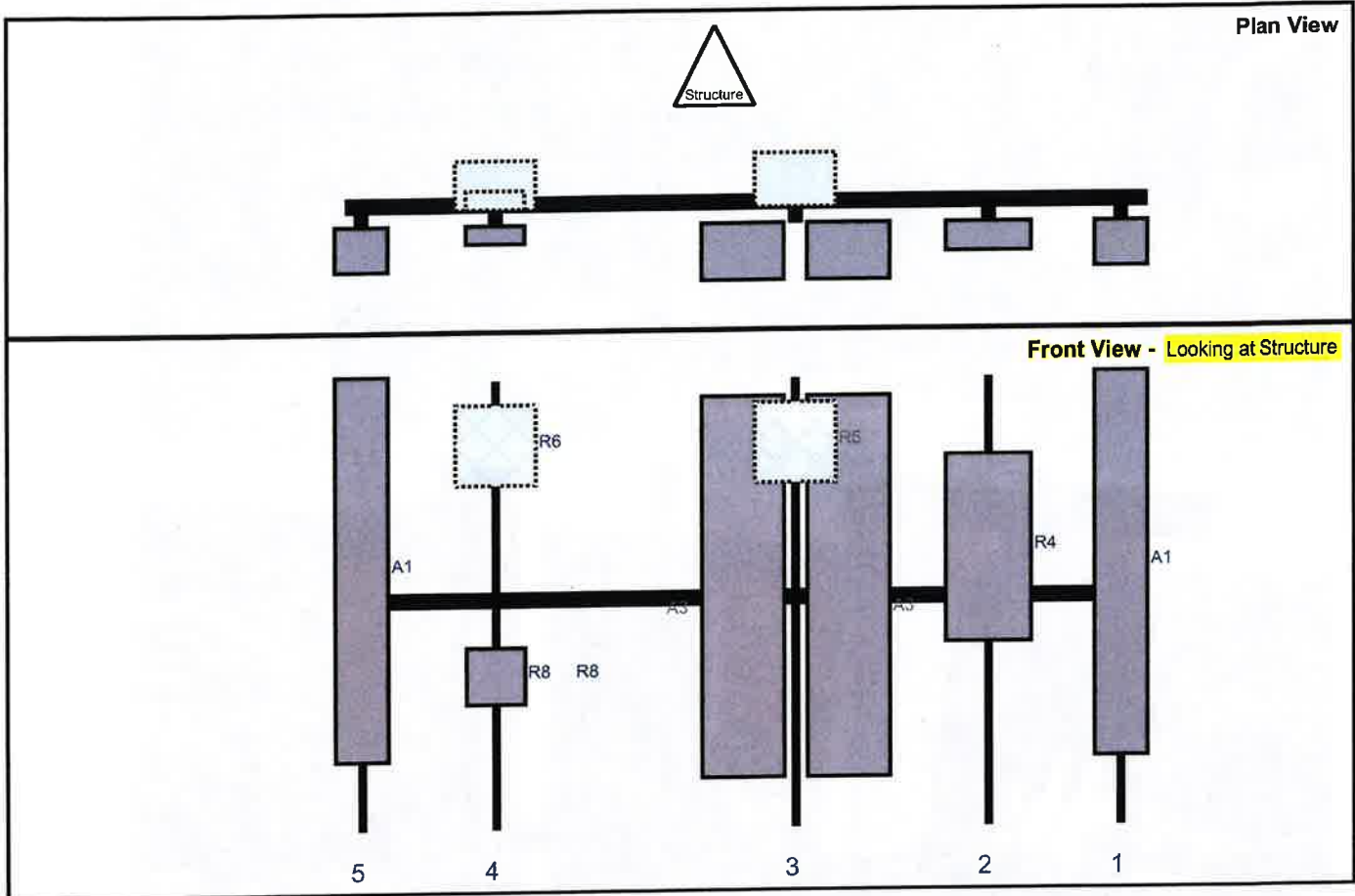
Sector: C  
 Structure Type: Monopole  
 Mount Elev: 156.25

10206260

7/10/2023

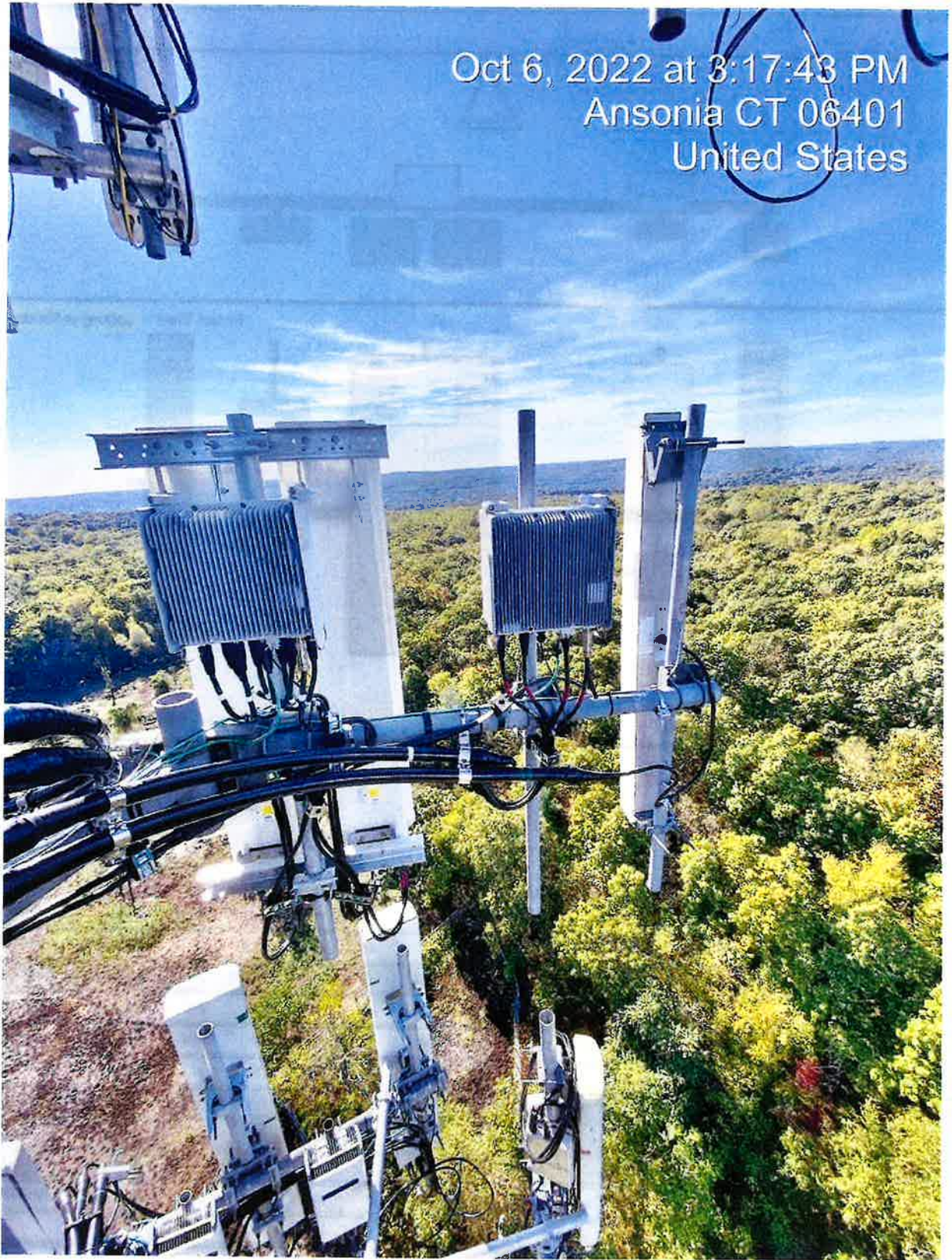


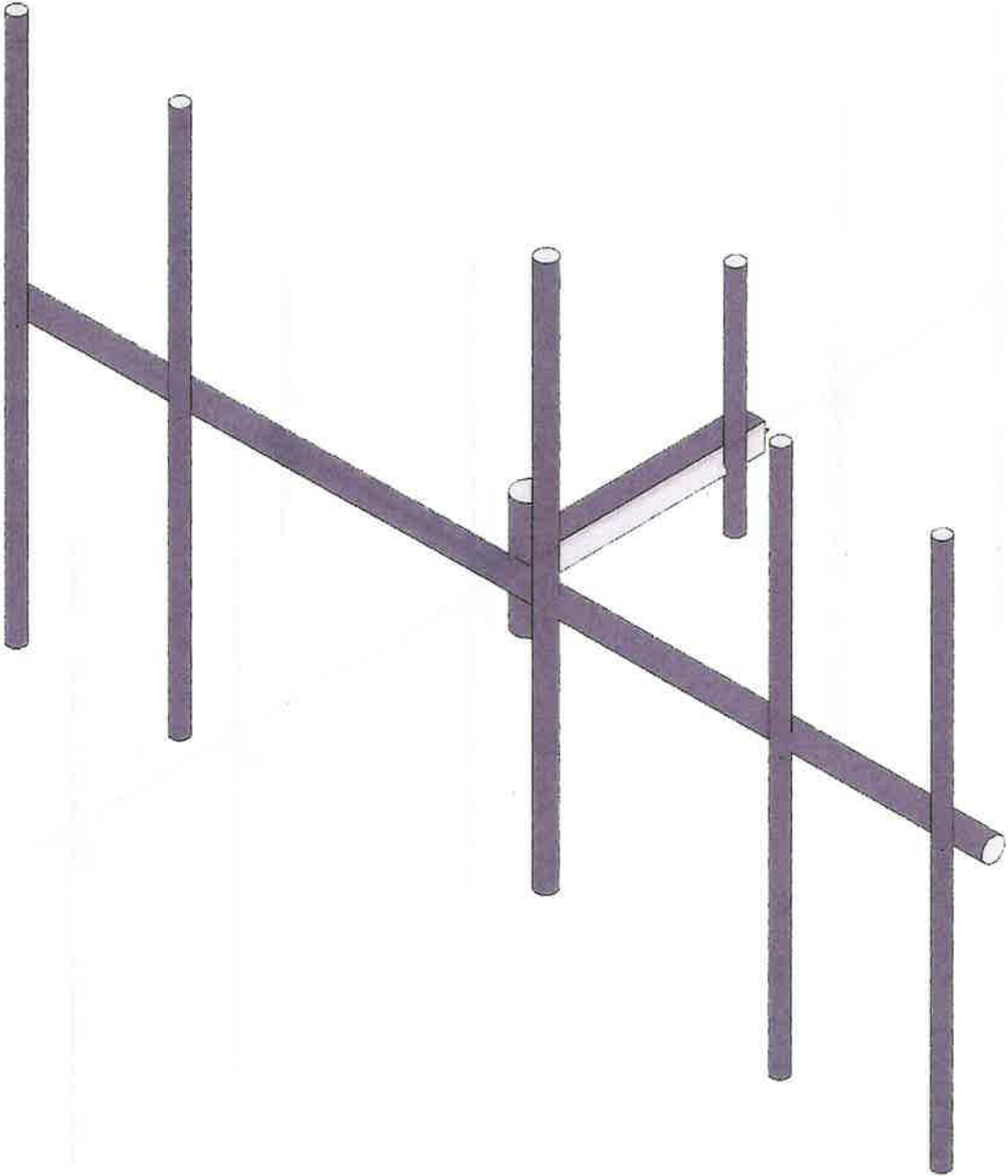
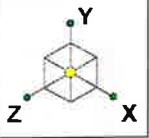
Page: 3



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A1	DB846F65ZAXY	72	10	145	1	a	Front	35.04	0	Retained	10/06/2022
R4	MT6407-77A	35.1	16.1	120	2	a	Front	32.04	0	Retained	10/06/2022
A3	MX06FRO660-03	71.3	15.4	84	3	a	Front	39	9.8	Retained	10/06/2022
A3	MX06FRO660-03	71.3	15.4	84	3	b	Front	39	-9.8	Retained	10/06/2022
R5	RF4439d-25A	15	15	84	3	a	Behind	12	0	Retained	10/06/2022
R6	RF4440d-13A	15	15	28	4	a	Behind	12	0	Retained	10/06/2022
R8	BSF0020F3V1-1	10.6	10.9	28	4	a	Behind	55.2	0	Added	
R8	BSF0020F3V1-1	10.6	10.9	28	4	b	Front	55.2	0	Added	
A1	DB846F65ZAXY	72	10	3	5	a	Front	35.04	0	Retained	10/06/2022

Oct 6, 2022 at 3:17:43 PM  
Ansonia CT 06401  
United States





Envelope Only Solution

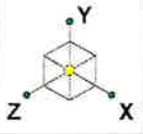
Colliers Engineering & Des..

5000382749-VZW\_MT\_LOT\_SectorA\_H

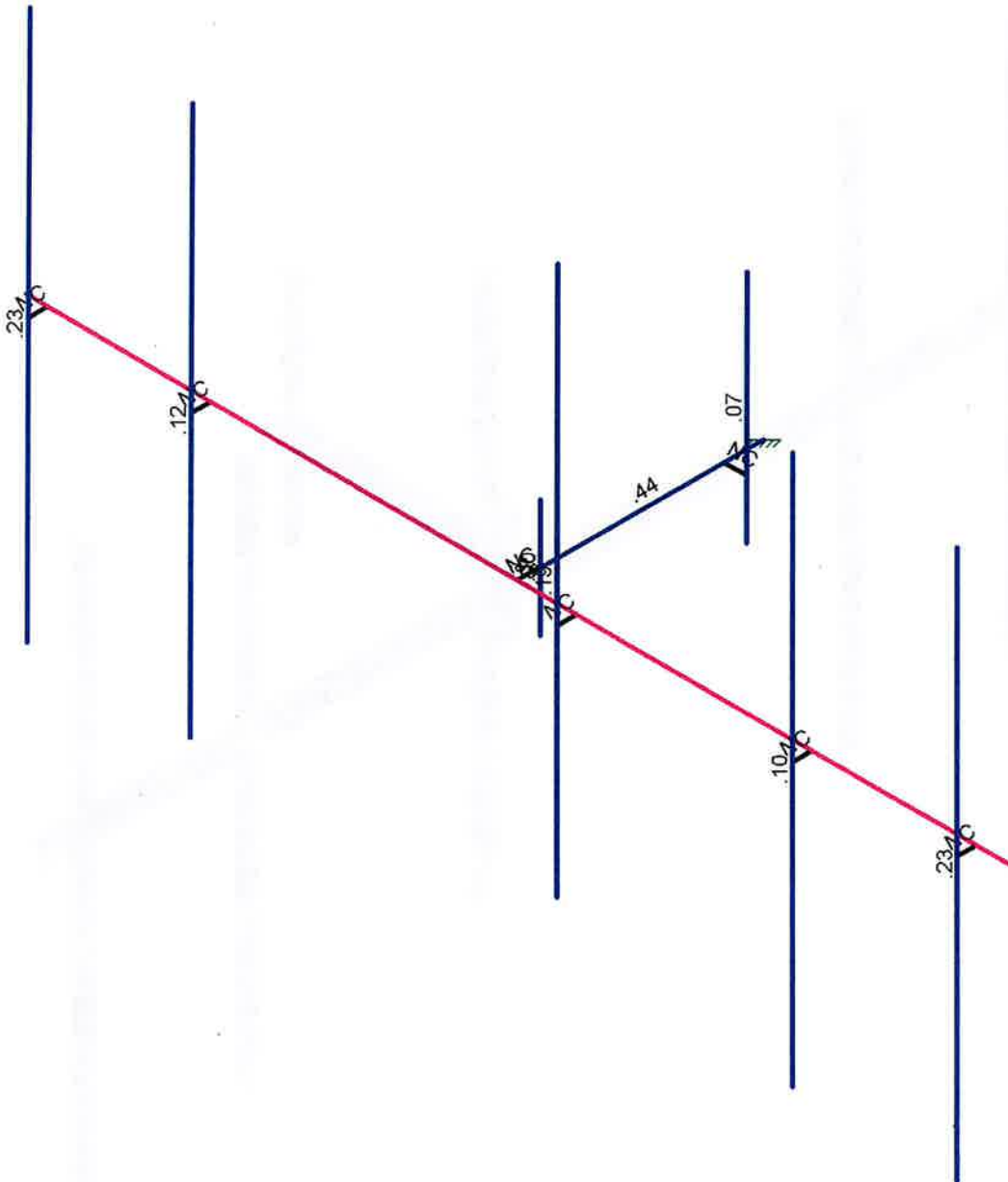
SK - 1

June 30, 2023 at 4:49 PM

5000382749-VZW\_MT\_LOT\_C\_H.r3d

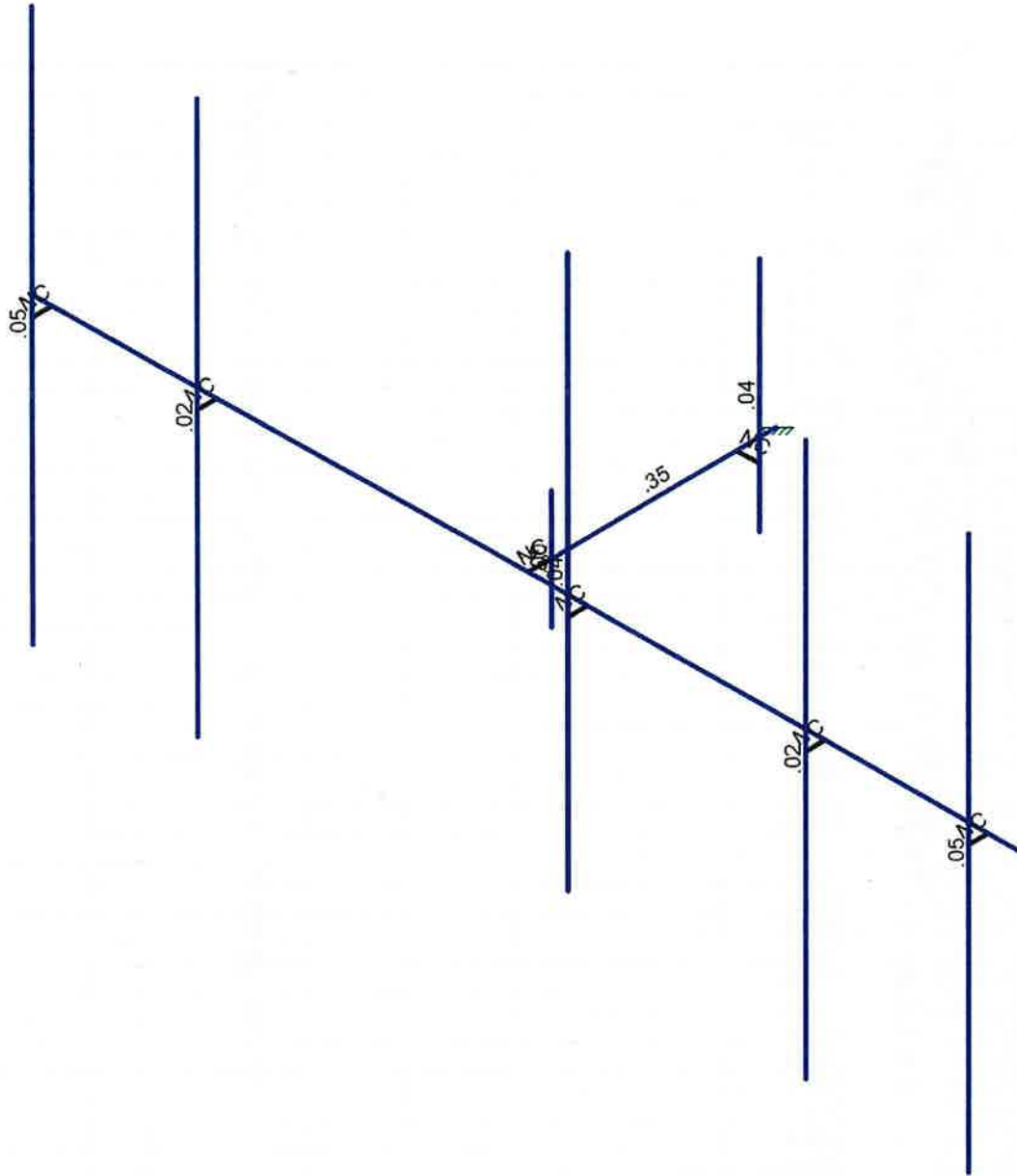
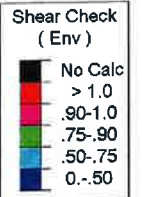
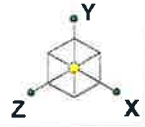


Code Check ( Env )	
Black	No Calc
Red	> 1.0
Orange	.90-1.0
Yellow	.75-.90
Light Green	.50-.75
Dark Green	0.-.50



Member Code Checks Displayed (Enveloped)  
Envelope Only Solution

Colliers Engineering & Des...	5000382749-VZW_MT_LOT_SectorA_H	SK - 2
		June 30, 2023 at 4:49 PM
		5000382749-VZW_MT_LOT_C_H.r3d



Member Shear Checks Displayed (Enveloped)  
Envelope Only Solution

Colliers Engineering & Des...

5000382749-VZW\_MT\_LOT\_SectorA\_H

SK - 3

June 30, 2023 at 4:50 PM

5000382749-VZW\_MT\_LOT\_C\_H.r3d





Company : Colliers Engineering & Design  
 Designer :  
 Job Number :  
 Model Name : 5000382749-VZW\_MT\_LOT\_SectorA\_H

June 30, 2023  
 4:50 PM  
 Checked By: \_\_\_\_\_

**Basic Load Cases**

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



Company : Colliers Engineering & Design  
 Designer :  
 Job Number :  
 Model Name : 5000382749-VZW\_MT\_LOT\_SectorA\_H

June 30, 2023  
 4:50 PM  
 Checked By: \_\_\_\_\_

**Basic Load Cases (Continued)**

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...)	Surface(P...
54	Structure Wi (30 Deg)	None						18	
55	Structure Wi (60 Deg)	None						18	
56	Structure Wi (90 Deg)	None						18	
57	Structure Wi (120 De..)	None						18	
58	Structure Wi (150 De..)	None						18	
59	Structure Wi (180 De..)	None						18	
60	Structure Wi (210 De..)	None						18	
61	Structure Wi (240 De..)	None						18	
62	Structure Wi (270 De..)	None						18	
63	Structure Wi (300 De..)	None						18	
64	Structure Wi (330 De..)	None						18	
65	Structure Wm (0 Deg)	None						18	
66	Structure Wm (30 De..)	None						18	
67	Structure Wm (60 De..)	None						18	
68	Structure Wm (90 De..)	None						18	
69	Structure Wm (120 D..)	None						18	
70	Structure Wm (150 D..)	None						18	
71	Structure Wm (180 D..)	None						18	
72	Structure Wm (210 D..)	None						18	
73	Structure Wm (240 D..)	None						18	
74	Structure Wm (270 D..)	None						18	
75	Structure Wm (300 D..)	None						18	
76	Structure Wm (330 D..)	None						18	
77	Lm1	None					1		
78	Lm2	None					1		
79	Lv1	None					1		
80	Lv2	None					1		
81	Antenna Ev	None					42		
82	Antenna Eh (0 Deg)	None					28		
83	Antenna Eh (90 Deg)	None					28		
84	Structure Ev	ELY		-043					
85	Structure Eh (0 Deg)	ELZ			-107				
86	Structure Eh (90 Deg)	ELX	.107						

**Load Combinations**

	Description	Sol...	P...	SR...	BLC Fact...	BLC Fact...	BLC Fact...	BLC Fact...	BLC Fact...	BLC Fact...	BLC Fact...	BLC Fact...	BLC Fact...	BLC Fact...	BLC Fact...	BLC Fact...
1	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	3	1	41	1				
2	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	4	1	42	1				
3	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	5	1	43	1				
4	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	6	1	44	1				
5	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	7	1	45	1				
6	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	8	1	46	1				
7	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	9	1	47	1				
8	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	10	1	48	1				
9	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	11	1	49	1				
10	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	12	1	50	1				
11	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	13	1	51	1				
12	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	14	1	52	1				
13	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1
14	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1
15	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1
16	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1
17	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1
18	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1
19	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1



**Load Combinations (Continued)**

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



**Joint Coordinates and Temperatures**

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	0	0	-3.125	0	
2	N2	0	0	-0.291667	0	
3	N3	0	-.75	-0.291667	0	
4	N4	0	.75	-0.291667	0	
5	N5	0	0	0	0	
6	N6	6.25	0	0	0	
7	N7	-6.25	0	0	0	
8	N11	5.833333	0	0	0	
9	N12	5.833333	0	0.25	0	
10	N13	5.833333	3.416667	0.25	0	
11	N14	5.833333	-3.583333	0.25	0	
12	N12A	3.75	0	0	0	
13	N13A	3.75	0	0.25	0	
14	N14A	3.75	3.416667	.25	0	
15	N15	3.75	-3.583333	.25	0	
16	N16	.75	0	0	0	
17	N17	.75	0	0.25	0	
18	N18	.75	4	0.25	0	
19	N19	.75	-3	0.25	0	
20	N20	-3.916667	0	0	0	
21	N21	-3.916667	0	0.25	0	
22	N22	-3.916667	3.416667	0.25	0	
23	N23	-3.916667	-3.583333	0.25	0	
24	N24	-6	0	0	0	
25	N25	-6	0	.25	0	
26	N26	-6.000003	3.416667	0.25	0	
27	N27	-6.000003	-3.583333	0.25	0	
28	ANTENNA3	.75	.75	.25	0	
29	N35	0	0	-2.625	0	
30	N36	0.291667	0	-2.625	0	
31	N37	0.291667	-.75	-2.625	0	
32	N38	0.291667	2.25	-2.625	0	
33	N35A	5.833333	3.25	.25	0	
34	ANTENNA1	5.833333	.75	.25	0	
35	N36A	5.833333	-2.25	0.25	0	
36	ANTENNA2	3.75	.75	.25	0	
37	N38A	3.75	1.75	.25	0	
38	N38B	.75	2.75	.25	0	

**Hot Rolled Steel Section Sets**

	Label	Shape	Type	Design List	Material	Design R...	A [in <sup>2</sup> ]	I <sub>yy</sub> [in <sup>4</sup> ]	I <sub>zz</sub> [in <sup>4</sup> ]	J [in <sup>4</sup> ]
1	Antenna Pipe	PIPE 2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
2	Standoff Arm	HSS4X4X4	Beam	Tube	A500 Gr.46	Typical	3.37	7.8	7.8	12.8
3	Standoff Pipe	PIPE 4.0	Column	Pipe	A53 Gr. B	Typical	2.96	6.82	6.82	13.6
4	Horizontal	PIPE 3.0	Column	Pipe	A53 Gr. B	Typical	2.07	2.85	2.85	5.69
5	Propose Antenna Pipe	PIPE 2.5	Column	Pipe	A53 Gr. B	Typical	1.61	1.45	1.45	2.89

**Hot Rolled Steel Properties**

	Label	E [ksil]	G [ksil]	Nu	Therm (/1E...Density[k/ft...	Yield[ksil]	Rv	Fu[ksil]	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



**Hot Rolled Steel Properties (Continued)**

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E...	Density[k/ft...	Yield[ksi]	Rv	Fu[ksi]	Rt
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	M2	N4	N3			Standoff Pipe	Column	Pipe	A53 Gr. B	Typical
2	M1	N1	N2			Standoff Arm	Beam	Tube	A500 Gr.46	Typical
3	M8	N11	N12			RIGID	None	None	RIGID	Typical
4	M10A	N2	N5			RIGID	None	None	RIGID	Typical
5	M8A	N12A	N13A			RIGID	None	None	RIGID	Typical
6	M10	N16	N17			RIGID	None	None	RIGID	Typical
7	M12	N20	N21			RIGID	None	None	RIGID	Typical
8	M14	N24	N25			RIGID	None	None	RIGID	Typical
9	M15	N35	N36			RIGID	None	None	RIGID	Typical
10	MP3A	N18	N19			Propose Anten..	Column	Pipe	A53 Gr. B	Typical
11	M4	N7	N6			Horizontal	Column	Pipe	A53 Gr. B	Typical
12	MP1A	N13	N14			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
13	MP2A	N14A	N15			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
14	MP4A	N22	N23			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
15	MP5A	N26	N27			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
16	OVP1	N38	N37			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical

**Member Advanced Data**

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M2						Yes	** NA **			None
2	M1						Yes	Default			None
3	M8						Yes	** NA **			None
4	M10A						Yes	** NA **			None
5	M8A						Yes	** NA **			None
6	M10						Yes	** NA **			None
7	M12						Yes	** NA **			None
8	M14						Yes	** NA **			None
9	M15						Yes	** NA **			None
10	MP3A						Yes	** NA **			None
11	M4						Yes	** NA **			None
12	MP1A						Yes	** NA **			None
13	MP2A						Yes	** NA **			None
14	MP4A						Yes	** NA **			None
15	MP5A						Yes	** NA **			None
16	OVP1						Yes	** NA **			None

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP1A	Y	-10.5	.17
2	MP1A	My	.005	.17
3	MP1A	Mz	.000912	.17
4	MP1A	Y	-10.5	5.67
5	MP1A	My	.005	5.67
6	MP1A	Mz	.000912	5.67
7	MP5A	Y	-10.5	.17
8	MP5A	My	.005	.17



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
9	MP5A	Mz	.000912	.17
10	MP5A	Y	-10.5	5.67
11	MP5A	Mv	.005	5.67
12	MP5A	Mz	.000912	5.67
13	MP3A	Y	-23	1.25
14	MP3A	My	.018	1.25
15	MP3A	Mz	-.016	1.25
16	MP3A	Y	-23	5.25
17	MP3A	Mv	.018	5.25
18	MP3A	Mz	-.016	5.25
19	MP3A	Y	-23	1.25
20	MP3A	My	.012	1.25
21	MP3A	Mz	.021	1.25
22	MP3A	Y	-23	5.25
23	MP3A	Mv	.012	5.25
24	MP3A	Mz	.021	5.25
25	MP2A	Y	-43.55	1.67
26	MP2A	My	.029	1.67
27	MP2A	Mz	.005	1.67
28	MP2A	Y	-43.55	3.67
29	MP2A	Mv	.029	3.67
30	MP2A	Mz	.005	3.67
31	MP3A	Y	-74.7	1
32	MP3A	My	-.049	1
33	MP3A	Mz	-.009	1
34	MP4A	Y	-70.3	1
35	MP4A	Mv	-.046	1
36	MP4A	Mz	-.008	1
37	OVP1	Y	-32	1.5
38	OVP1	My	.021	1.5
39	OVP1	Mz	.004	1.5
40	MP3A	Y	-17.6	5
41	MP3A	My	.009	5
42	MP3A	Mz	0	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	Y	-60.043	.17
2	MP1A	My	.03	.17
3	MP1A	Mz	.005	.17
4	MP1A	Y	-60.043	5.67
5	MP1A	Mv	.03	5.67
6	MP1A	Mz	.005	5.67
7	MP5A	Y	-60.043	.17
8	MP5A	My	.03	.17
9	MP5A	Mz	.005	.17
10	MP5A	Y	-60.043	5.67
11	MP5A	Mv	.03	5.67
12	MP5A	Mz	.005	5.67
13	MP3A	Y	-83.567	1.25
14	MP3A	My	.067	1.25
15	MP3A	Mz	-.058	1.25
16	MP3A	Y	-83.567	5.25
17	MP3A	My	.067	5.25
18	MP3A	Mz	-.058	5.25
19	MP3A	Y	-83.567	1.25



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
20	MP3A	My	.043	1.25
21	MP3A	Mz	.077	1.25
22	MP3A	Y	-83.567	5.25
23	MP3A	My	.043	5.25
24	MP3A	Mz	.077	5.25
25	MP2A	Y	-36.103	1.67
26	MP2A	Mv	.024	1.67
27	MP2A	Mz	.004	1.67
28	MP2A	Y	-36.103	3.67
29	MP2A	Mv	.024	3.67
30	MP2A	Mz	.004	3.67
31	MP3A	Y	-45.527	1
32	MP3A	My	-.03	1
33	MP3A	Mz	-.005	1
34	MP4A	Y	-43.357	1
35	MP4A	Mv	-.028	1
36	MP4A	Mz	-.005	1
37	OVP1	Y	-89.102	1.5
38	OVP1	My	.058	1.5
39	OVP1	Mz	.01	1.5
40	MP3A	Y	-18.137	5
41	MP3A	My	.009	5
42	MP3A	Mz	0	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	0	.17
2	MP1A	Z	-120.068	.17
3	MP1A	Mx	-.01	.17
4	MP1A	X	0	5.67
5	MP1A	Z	-120.068	5.67
6	MP1A	Mx	-.01	5.67
7	MP5A	X	0	.17
8	MP5A	Z	-120.068	.17
9	MP5A	Mx	-.01	.17
10	MP5A	X	0	5.67
11	MP5A	Z	-120.068	5.67
12	MP5A	Mx	-.01	5.67
13	MP3A	X	0	1.25
14	MP3A	Z	-80.251	1.25
15	MP3A	Mx	.055	1.25
16	MP3A	X	0	5.25
17	MP3A	Z	-80.251	5.25
18	MP3A	Mx	.055	5.25
19	MP3A	X	0	1.25
20	MP3A	Z	-80.251	1.25
21	MP3A	Mx	-.074	1.25
22	MP3A	X	0	5.25
23	MP3A	Z	-80.251	5.25
24	MP3A	Mx	-.074	5.25
25	MP2A	X	0	1.67
26	MP2A	Z	-65.692	1.67
27	MP2A	Mx	-.008	1.67
28	MP2A	X	0	3.67
29	MP2A	Z	-65.692	3.67
30	MP2A	Mx	-.008	3.67



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
31	MP3A	X	0	1
32	MP3A	Z	-52.472	1
33	MP3A	Mx	.006	1
34	MP4A	X	0	1
35	MP4A	Z	-52.369	1
36	MP4A	Mx	.006	1
37	OVP1	X	0	1.5
38	OVP1	Z	-107.606	1.5
39	OVP1	Mx	-.012	1.5
40	MP3A	X	0	5
41	MP3A	Z	-32.825	5
42	MP3A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	59.372	.17
2	MP1A	Z	-102.836	.17
3	MP1A	Mx	.02	.17
4	MP1A	X	59.372	5.67
5	MP1A	Z	-102.836	5.67
6	MP1A	Mx	.02	5.67
7	MP5A	X	59.372	.17
8	MP5A	Z	-102.836	.17
9	MP5A	Mx	.02	.17
10	MP5A	X	59.372	5.67
11	MP5A	Z	-102.836	5.67
12	MP5A	Mx	.02	5.67
13	MP3A	X	39.242	1.25
14	MP3A	Z	-67.97	1.25
15	MP3A	Mx	.078	1.25
16	MP3A	X	39.242	5.25
17	MP3A	Z	-67.97	5.25
18	MP3A	Mx	.078	5.25
19	MP3A	X	39.242	1.25
20	MP3A	Z	-67.97	1.25
21	MP3A	Mx	-.042	1.25
22	MP3A	X	39.242	5.25
23	MP3A	Z	-67.97	5.25
24	MP3A	Mx	-.042	5.25
25	MP2A	X	30.939	1.67
26	MP2A	Z	-53.587	1.67
27	MP2A	Mx	.014	1.67
28	MP2A	X	30.939	3.67
29	MP2A	Z	-53.587	3.67
30	MP2A	Mx	.014	3.67
31	MP3A	X	25.479	1
32	MP3A	Z	-44.131	1
33	MP3A	Mx	-.012	1
34	MP4A	X	25.279	1
35	MP4A	Z	-43.785	1
36	MP4A	Mx	-.012	1
37	OVP1	X	52.675	1.5
38	OVP1	Z	-91.236	1.5
39	OVP1	Mx	.024	1.5
40	MP3A	X	13.656	5
41	MP3A	Z	-23.654	5





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
42	MP3A	Mx	.007	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	96.633	.17
2	MP1A	Z	-55.791	.17
3	MP1A	Mx	.043	.17
4	MP1A	X	96.633	5.67
5	MP1A	Z	-55.791	5.67
6	MP1A	Mx	.043	5.67
7	MP5A	X	96.633	.17
8	MP5A	Z	-55.791	.17
9	MP5A	Mx	.043	.17
10	MP5A	X	96.633	5.67
11	MP5A	Z	-55.791	5.67
12	MP5A	Mx	.043	5.67
13	MP3A	X	59.692	1.25
14	MP3A	Z	-34.463	1.25
15	MP3A	Mx	.071	1.25
16	MP3A	X	59.692	5.25
17	MP3A	Z	-34.463	5.25
18	MP3A	Mx	.071	5.25
19	MP3A	X	59.692	1.25
20	MP3A	Z	-34.463	1.25
21	MP3A	Mx	-0.00982	1.25
22	MP3A	X	59.692	5.25
23	MP3A	Z	-34.463	5.25
24	MP3A	Mx	-0.00982	5.25
25	MP2A	X	35.709	1.67
26	MP2A	Z	-20.617	1.67
27	MP2A	Mx	.021	1.67
28	MP2A	X	35.709	3.67
29	MP2A	Z	-20.617	3.67
30	MP2A	Mx	.021	3.67
31	MP3A	X	37.036	1
32	MP3A	Z	-21.382	1
33	MP3A	Mx	-.022	1
34	MP4A	X	35.298	1
35	MP4A	Z	-20.379	1
36	MP4A	Mx	-.021	1
37	OVP1	X	80.662	1.5
38	OVP1	Z	-46.57	1.5
39	OVP1	Mx	.048	1.5
40	MP3A	X	14.107	5
41	MP3A	Z	-8.145	5
42	MP3A	Mx	.007	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	105.743	.17
2	MP1A	Z	0	.17
3	MP1A	Mx	.052	.17
4	MP1A	X	105.743	5.67
5	MP1A	Z	0	5.67
6	MP1A	Mx	.052	5.67
7	MP5A	X	105.743	.17



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
8	MP5A	Z	0	.17
9	MP5A	Mx	.052	.17
10	MP5A	X	105.743	5.67
11	MP5A	Z	0	5.67
12	MP5A	Mx	.052	5.67
13	MP3A	X	61.134	1.25
14	MP3A	Z	0	1.25
15	MP3A	Mx	.049	1.25
16	MP3A	X	61.134	5.25
17	MP3A	Z	0	5.25
18	MP3A	Mx	.049	5.25
19	MP3A	X	61.134	1.25
20	MP3A	Z	0	1.25
21	MP3A	Mx	.031	1.25
22	MP3A	X	61.134	5.25
23	MP3A	Z	0	5.25
24	MP3A	Mx	.031	5.25
25	MP2A	X	24.405	1.67
26	MP2A	Z	0	1.67
27	MP2A	Mx	.016	1.67
28	MP2A	X	24.405	3.67
29	MP2A	Z	0	3.67
30	MP2A	Mx	.016	3.67
31	MP3A	X	36.086	1
32	MP3A	Z	0	1
33	MP3A	Mx	-.024	1
34	MP4A	X	32.77	1
35	MP4A	Z	0	1
36	MP4A	Mx	-.022	1
37	OVP1	X	83.187	1.5
38	OVP1	Z	0	1.5
39	OVP1	Mx	.055	1.5
40	MP3A	X	10.778	5
41	MP3A	Z	0	5
42	MP3A	Mx	.005	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	92.723	.17
2	MP1A	Z	53.533	.17
3	MP1A	Mx	.05	.17
4	MP1A	X	92.723	5.67
5	MP1A	Z	53.533	5.67
6	MP1A	Mx	.05	5.67
7	MP5A	X	92.723	.17
8	MP5A	Z	53.533	.17
9	MP5A	Mx	.05	.17
10	MP5A	X	92.723	5.67
11	MP5A	Z	53.533	5.67
12	MP5A	Mx	.05	5.67
13	MP3A	X	54.473	1.25
14	MP3A	Z	31.45	1.25
15	MP3A	Mx	.022	1.25
16	MP3A	X	54.473	5.25
17	MP3A	Z	31.45	5.25
18	MP3A	Mx	.022	5.25



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
19	MP3A	X	54.473	1.25
20	MP3A	Z	31.45	1.25
21	MP3A	Mx	.057	1.25
22	MP3A	X	54.473	5.25
23	MP3A	Z	31.45	5.25
24	MP3A	Mx	.057	5.25
25	MP2A	X	24.439	1.67
26	MP2A	Z	14.11	1.67
27	MP2A	Mx	.018	1.67
28	MP2A	X	24.439	3.67
29	MP2A	Z	14.11	3.67
30	MP2A	Mx	.018	3.67
31	MP3A	X	32.562	1
32	MP3A	Z	18.8	1
33	MP3A	Mx	-.024	1
34	MP4A	X	29.948	1
35	MP4A	Z	17.29	1
36	MP4A	Mx	-.022	1
37	OVP1	X	73.996	1.5
38	OVP1	Z	42.722	1.5
39	OVP1	Mx	.054	1.5
40	MP3A	X	14.107	5
41	MP3A	Z	8.145	5
42	MP3A	Mx	.007	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	57.115	.17
2	MP1A	Z	98.925	.17
3	MP1A	Mx	.037	.17
4	MP1A	X	57.115	5.67
5	MP1A	Z	98.925	5.67
6	MP1A	Mx	.037	5.67
7	MP5A	X	57.115	.17
8	MP5A	Z	98.925	.17
9	MP5A	Mx	.037	.17
10	MP5A	X	57.115	5.67
11	MP5A	Z	98.925	5.67
12	MP5A	Mx	.037	5.67
13	MP3A	X	36.229	1.25
14	MP3A	Z	62.751	1.25
15	MP3A	Mx	-.014	1.25
16	MP3A	X	36.229	5.25
17	MP3A	Z	62.751	5.25
18	MP3A	Mx	-.014	5.25
19	MP3A	X	36.229	1.25
20	MP3A	Z	62.751	1.25
21	MP3A	Mx	.076	1.25
22	MP3A	X	36.229	5.25
23	MP3A	Z	62.751	5.25
24	MP3A	Mx	.076	5.25
25	MP2A	X	24.432	1.67
26	MP2A	Z	42.317	1.67
27	MP2A	Mx	.021	1.67
28	MP2A	X	24.432	3.67
29	MP2A	Z	42.317	3.67



Company : Colliers Engineering & Design  
 Designer :  
 Job Number :  
 Model Name : 5000382749-VZW\_MT\_LOT\_SectorA\_H

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
30	MP2A	Mx	.021	3.67
31	MP3A	X	22.897	1
32	MP3A	Z	39.658	1
33	MP3A	Mx	-.02	1
34	MP4A	X	22.19	1
35	MP4A	Z	38.434	1
36	MP4A	Mx	-.019	1
37	OVP1	X	48.826	1.5
38	OVP1	Z	84.57	1.5
39	OVP1	Mx	.042	1.5
40	MP3A	X	13.656	5
41	MP3A	Z	23.654	5
42	MP3A	Mx	.007	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	0	.17
2	MP1A	Z	120.068	.17
3	MP1A	Mx	.01	.17
4	MP1A	X	0	5.67
5	MP1A	Z	120.068	5.67
6	MP1A	Mx	.01	5.67
7	MP5A	X	0	.17
8	MP5A	Z	120.068	.17
9	MP5A	Mx	.01	.17
10	MP5A	X	0	5.67
11	MP5A	Z	120.068	5.67
12	MP5A	Mx	.01	5.67
13	MP3A	X	0	1.25
14	MP3A	Z	80.251	1.25
15	MP3A	Mx	-.055	1.25
16	MP3A	X	0	5.25
17	MP3A	Z	80.251	5.25
18	MP3A	Mx	-.055	5.25
19	MP3A	X	0	1.25
20	MP3A	Z	80.251	1.25
21	MP3A	Mx	.074	1.25
22	MP3A	X	0	5.25
23	MP3A	Z	80.251	5.25
24	MP3A	Mx	.074	5.25
25	MP2A	X	0	1.67
26	MP2A	Z	65.692	1.67
27	MP2A	Mx	.008	1.67
28	MP2A	X	0	3.67
29	MP2A	Z	65.692	3.67
30	MP2A	Mx	.008	3.67
31	MP3A	X	0	1
32	MP3A	Z	52.472	1
33	MP3A	Mx	-.006	1
34	MP4A	X	0	1
35	MP4A	Z	52.369	1
36	MP4A	Mx	-.006	1
37	OVP1	X	0	1.5
38	OVP1	Z	107.606	1.5
39	OVP1	Mx	.012	1.5
40	MP3A	X	0	5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
41	MP3A	Z	32.825	5
42	MP3A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP1A	X	-59.372	.17
2	MP1A	Z	102.836	.17
3	MP1A	Mx	-.02	.17
4	MP1A	X	-59.372	5.67
5	MP1A	Z	102.836	5.67
6	MP1A	Mx	-.02	5.67
7	MP5A	X	-59.372	.17
8	MP5A	Z	102.836	.17
9	MP5A	Mx	-.02	.17
10	MP5A	X	-59.372	5.67
11	MP5A	Z	102.836	5.67
12	MP5A	Mx	-.02	5.67
13	MP3A	X	-39.242	1.25
14	MP3A	Z	67.97	1.25
15	MP3A	Mx	-.078	1.25
16	MP3A	X	-39.242	5.25
17	MP3A	Z	67.97	5.25
18	MP3A	Mx	-.078	5.25
19	MP3A	X	-39.242	1.25
20	MP3A	Z	67.97	1.25
21	MP3A	Mx	.042	1.25
22	MP3A	X	-39.242	5.25
23	MP3A	Z	67.97	5.25
24	MP3A	Mx	.042	5.25
25	MP2A	X	-30.939	1.67
26	MP2A	Z	53.587	1.67
27	MP2A	Mx	-.014	1.67
28	MP2A	X	-30.939	3.67
29	MP2A	Z	53.587	3.67
30	MP2A	Mx	-.014	3.67
31	MP3A	X	-25.479	1
32	MP3A	Z	44.131	1
33	MP3A	Mx	.012	1
34	MP4A	X	-25.279	1
35	MP4A	Z	43.785	1
36	MP4A	Mx	.012	1
37	OVP1	X	-52.675	1.5
38	OVP1	Z	91.236	1.5
39	OVP1	Mx	-.024	1.5
40	MP3A	X	-13.656	5
41	MP3A	Z	23.654	5
42	MP3A	Mx	-.007	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP1A	X	-96.633	.17
2	MP1A	Z	55.791	.17
3	MP1A	Mx	-.043	.17
4	MP1A	X	-96.633	5.67
5	MP1A	Z	55.791	5.67
6	MP1A	Mx	-.043	5.67



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
7	MP5A	X	-96.633	.17
8	MP5A	Z	55.791	.17
9	MP5A	Mx	-.043	.17
10	MP5A	X	-96.633	5.67
11	MP5A	Z	55.791	5.67
12	MP5A	Mx	-.043	5.67
13	MP3A	X	-59.692	1.25
14	MP3A	Z	34.463	1.25
15	MP3A	Mx	-.071	1.25
16	MP3A	X	-59.692	5.25
17	MP3A	Z	34.463	5.25
18	MP3A	Mx	-.071	5.25
19	MP3A	X	-59.692	1.25
20	MP3A	Z	34.463	1.25
21	MP3A	Mx	.000982	1.25
22	MP3A	X	-59.692	5.25
23	MP3A	Z	34.463	5.25
24	MP3A	Mx	.000982	5.25
25	MP2A	X	-35.709	1.67
26	MP2A	Z	20.617	1.67
27	MP2A	Mx	-.021	1.67
28	MP2A	X	-35.709	3.67
29	MP2A	Z	20.617	3.67
30	MP2A	Mx	-.021	3.67
31	MP3A	X	-37.036	1
32	MP3A	Z	21.382	1
33	MP3A	Mx	.022	1
34	MP4A	X	-35.298	1
35	MP4A	Z	20.379	1
36	MP4A	Mx	.021	1
37	OVP1	X	-80.662	1.5
38	OVP1	Z	46.57	1.5
39	OVP1	Mx	-.048	1.5
40	MP3A	X	-14.107	5
41	MP3A	Z	8.145	5
42	MP3A	Mx	-.007	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-105.743	.17
2	MP1A	Z	0	.17
3	MP1A	Mx	-.052	.17
4	MP1A	X	-105.743	5.67
5	MP1A	Z	0	5.67
6	MP1A	Mx	-.052	5.67
7	MP5A	X	-105.743	.17
8	MP5A	Z	0	.17
9	MP5A	Mx	-.052	.17
10	MP5A	X	-105.743	5.67
11	MP5A	Z	0	5.67
12	MP5A	Mx	-.052	5.67
13	MP3A	X	-61.134	1.25
14	MP3A	Z	0	1.25
15	MP3A	Mx	-.049	1.25
16	MP3A	X	-61.134	5.25
17	MP3A	Z	0	5.25



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
18	MP3A	Mx	-.049	5.25
19	MP3A	X	-61.134	1.25
20	MP3A	Z	0	1.25
21	MP3A	Mx	-.031	1.25
22	MP3A	X	-61.134	5.25
23	MP3A	Z	0	5.25
24	MP3A	Mx	-.031	5.25
25	MP2A	X	-24.405	1.67
26	MP2A	Z	0	1.67
27	MP2A	Mx	-.016	1.67
28	MP2A	X	-24.405	3.67
29	MP2A	Z	0	3.67
30	MP2A	Mx	-.016	3.67
31	MP3A	X	-36.086	1
32	MP3A	Z	0	1
33	MP3A	Mx	.024	1
34	MP4A	X	-32.77	1
35	MP4A	Z	0	1
36	MP4A	Mx	.022	1
37	OVP1	X	-83.187	1.5
38	OVP1	Z	0	1.5
39	OVP1	Mx	-.055	1.5
40	MP3A	X	-10.778	5
41	MP3A	Z	0	5
42	MP3A	Mx	-.005	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP1A	X	-92.723	.17
2	MP1A	Z	-53.533	.17
3	MP1A	Mx	-.05	.17
4	MP1A	X	-92.723	5.67
5	MP1A	Z	-53.533	5.67
6	MP1A	Mx	-.05	5.67
7	MP5A	X	-92.723	.17
8	MP5A	Z	-53.533	.17
9	MP5A	Mx	-.05	.17
10	MP5A	X	-92.723	5.67
11	MP5A	Z	-53.533	5.67
12	MP5A	Mx	-.05	5.67
13	MP3A	X	-54.473	1.25
14	MP3A	Z	-31.45	1.25
15	MP3A	Mx	-.022	1.25
16	MP3A	X	-54.473	5.25
17	MP3A	Z	-31.45	5.25
18	MP3A	Mx	-.022	5.25
19	MP3A	X	-54.473	1.25
20	MP3A	Z	-31.45	1.25
21	MP3A	Mx	-.057	1.25
22	MP3A	X	-54.473	5.25
23	MP3A	Z	-31.45	5.25
24	MP3A	Mx	-.057	5.25
25	MP2A	X	-24.439	1.67
26	MP2A	Z	-14.11	1.67
27	MP2A	Mx	-.018	1.67
28	MP2A	X	-24.439	3.67



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
29	MP2A	Z	-14.11	3.67
30	MP2A	Mx	-.018	3.67
31	MP3A	X	-32.562	1
32	MP3A	Z	-18.8	1
33	MP3A	Mx	.024	1
34	MP4A	X	-29.948	1
35	MP4A	Z	-17.29	1
36	MP4A	Mx	.022	1
37	OVP1	X	-73.996	1.5
38	OVP1	Z	-42.722	1.5
39	OVP1	Mx	-.054	1.5
40	MP3A	X	-14.107	5
41	MP3A	Z	-8.145	5
42	MP3A	Mx	-.007	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-57.115	.17
2	MP1A	Z	-98.925	.17
3	MP1A	Mx	-.037	.17
4	MP1A	X	-57.115	5.67
5	MP1A	Z	-98.925	5.67
6	MP1A	Mx	-.037	5.67
7	MP5A	X	-57.115	.17
8	MP5A	Z	-98.925	.17
9	MP5A	Mx	-.037	.17
10	MP5A	X	-57.115	5.67
11	MP5A	Z	-98.925	5.67
12	MP5A	Mx	-.037	5.67
13	MP3A	X	-36.229	1.25
14	MP3A	Z	-62.751	1.25
15	MP3A	Mx	.014	1.25
16	MP3A	X	-36.229	5.25
17	MP3A	Z	-62.751	5.25
18	MP3A	Mx	.014	5.25
19	MP3A	X	-36.229	1.25
20	MP3A	Z	-62.751	1.25
21	MP3A	Mx	-.076	1.25
22	MP3A	X	-36.229	5.25
23	MP3A	Z	-62.751	5.25
24	MP3A	Mx	-.076	5.25
25	MP2A	X	-24.432	1.67
26	MP2A	Z	-42.317	1.67
27	MP2A	Mx	-.021	1.67
28	MP2A	X	-24.432	3.67
29	MP2A	Z	-42.317	3.67
30	MP2A	Mx	-.021	3.67
31	MP3A	X	-22.897	1
32	MP3A	Z	-39.658	1
33	MP3A	Mx	.02	1
34	MP4A	X	-22.19	1
35	MP4A	Z	-38.434	1
36	MP4A	Mx	.019	1
37	OVP1	X	-48.826	1.5
38	OVP1	Z	-84.57	1.5
39	OVP1	Mx	-.042	1.5





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
40	MP3A	X	-13.656	5
41	MP3A	Z	-23.654	5
42	MP3A	Mx	-.007	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	0	.17
2	MP1A	Z	-23.611	.17
3	MP1A	Mx	-.002	.17
4	MP1A	X	0	5.67
5	MP1A	Z	-23.611	5.67
6	MP1A	Mx	-.002	5.67
7	MP5A	X	0	.17
8	MP5A	Z	-23.611	.17
9	MP5A	Mx	-.002	.17
10	MP5A	X	0	5.67
11	MP5A	Z	-23.611	5.67
12	MP5A	Mx	-.002	5.67
13	MP3A	X	0	1.25
14	MP3A	Z	-32.28	1.25
15	MP3A	Mx	.022	1.25
16	MP3A	X	0	5.25
17	MP3A	Z	-32.28	5.25
18	MP3A	Mx	.022	5.25
19	MP3A	X	0	1.25
20	MP3A	Z	-32.28	1.25
21	MP3A	Mx	-.03	1.25
22	MP3A	X	0	5.25
23	MP3A	Z	-32.28	5.25
24	MP3A	Mx	-.03	5.25
25	MP2A	X	0	1.67
26	MP2A	Z	-15.771	1.67
27	MP2A	Mx	-.002	1.67
28	MP2A	X	0	3.67
29	MP2A	Z	-15.771	3.67
30	MP2A	Mx	-.002	3.67
31	MP3A	X	0	1
32	MP3A	Z	-13.411	1
33	MP3A	Mx	.002	1
34	MP4A	X	0	1
35	MP4A	Z	-13.389	1
36	MP4A	Mx	.002	1
37	OVP1	X	0	1.5
38	OVP1	Z	-27.616	1.5
39	OVP1	Mx	-.003	1.5
40	MP3A	X	0	5
41	MP3A	Z	-7.446	5
42	MP3A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	11.693	.17
2	MP1A	Z	-20.254	.17
3	MP1A	Mx	.004	.17
4	MP1A	X	11.693	5.67
5	MP1A	Z	-20.254	5.67



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

	Member Label	Direction	Magnitude[lb. k-ft]	Location[ft. %]
6	MP1A	Mx	.004	5.67
7	MP5A	X	11.693	.17
8	MP5A	Z	-20.254	.17
9	MP5A	Mx	.004	.17
10	MP5A	X	11.693	5.67
11	MP5A	Z	-20.254	5.67
12	MP5A	Mx	.004	5.67
13	MP3A	X	15.796	1.25
14	MP3A	Z	-27.36	1.25
15	MP3A	Mx	.031	1.25
16	MP3A	X	15.796	5.25
17	MP3A	Z	-27.36	5.25
18	MP3A	Mx	.031	5.25
19	MP3A	X	15.796	1.25
20	MP3A	Z	-27.36	1.25
21	MP3A	Mx	-.017	1.25
22	MP3A	X	15.796	5.25
23	MP3A	Z	-27.36	5.25
24	MP3A	Mx	-.017	5.25
25	MP2A	X	7.486	1.67
26	MP2A	Z	-12.966	1.67
27	MP2A	Mx	.003	1.67
28	MP2A	X	7.486	3.67
29	MP2A	Z	-12.966	3.67
30	MP2A	Mx	.003	3.67
31	MP3A	X	6.527	1
32	MP3A	Z	-11.305	1
33	MP3A	Mx	-.003	1
34	MP4A	X	6.484	1
35	MP4A	Z	-11.23	1
36	MP4A	Mx	-.003	1
37	OVP1	X	13.545	1.5
38	OVP1	Z	-23.461	1.5
39	OVP1	Mx	.006	1.5
40	MP3A	X	3.166	5
41	MP3A	Z	-5.484	5
42	MP3A	Mx	.002	5

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

	Member Label	Direction	Magnitude[lb. k-ft]	Location[ft. %]
1	MP1A	X	19.205	.17
2	MP1A	Z	-11.088	.17
3	MP1A	Mx	.008	.17
4	MP1A	X	19.205	5.67
5	MP1A	Z	-11.088	5.67
6	MP1A	Mx	.008	5.67
7	MP5A	X	19.205	.17
8	MP5A	Z	-11.088	.17
9	MP5A	Mx	.008	.17
10	MP5A	X	19.205	5.67
11	MP5A	Z	-11.088	5.67
12	MP5A	Mx	.008	5.67
13	MP3A	X	24.141	1.25
14	MP3A	Z	-13.938	1.25
15	MP3A	Mx	.029	1.25
16	MP3A	X	24.141	5.25



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
17	MP3A	Z	-13.938	5.25
18	MP3A	Mx	.029	5.25
19	MP3A	X	24.141	1.25
20	MP3A	Z	-13.938	1.25
21	MP3A	Mx	-.000397	1.25
22	MP3A	X	24.141	5.25
23	MP3A	Z	-13.938	5.25
24	MP3A	Mx	-.000397	5.25
25	MP2A	X	9.22	1.67
26	MP2A	Z	-5.323	1.67
27	MP2A	Mx	.005	1.67
28	MP2A	X	9.22	3.67
29	MP2A	Z	-5.323	3.67
30	MP2A	Mx	.005	3.67
31	MP3A	X	9.63	1
32	MP3A	Z	-5.56	1
33	MP3A	Mx	-.006	1
34	MP4A	X	9.254	1
35	MP4A	Z	-5.343	1
36	MP4A	Mx	-.005	1
37	OVP1	X	20.997	1.5
38	OVP1	Z	-12.123	1.5
39	OVP1	Mx	.012	1.5
40	MP3A	X	3.556	5
41	MP3A	Z	-2.053	5
42	MP3A	Mx	.002	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	21.189	.17
2	MP1A	Z	0	.17
3	MP1A	Mx	.01	.17
4	MP1A	X	21.189	5.67
5	MP1A	Z	0	5.67
6	MP1A	Mx	.01	5.67
7	MP5A	X	21.189	.17
8	MP5A	Z	0	.17
9	MP5A	Mx	.01	.17
10	MP5A	X	21.189	5.67
11	MP5A	Z	0	5.67
12	MP5A	Mx	.01	5.67
13	MP3A	X	24.844	1.25
14	MP3A	Z	0	1.25
15	MP3A	Mx	.02	1.25
16	MP3A	X	24.844	5.25
17	MP3A	Z	0	5.25
18	MP3A	Mx	.02	5.25
19	MP3A	X	24.844	1.25
20	MP3A	Z	0	1.25
21	MP3A	Mx	.013	1.25
22	MP3A	X	24.844	5.25
23	MP3A	Z	0	5.25
24	MP3A	Mx	.013	5.25
25	MP2A	X	7.121	1.67
26	MP2A	Z	0	1.67
27	MP2A	Mx	.005	1.67



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
28	MP2A	X	7.121	3.67
29	MP2A	Z	0	3.67
30	MP2A	Mx	.005	3.67
31	MP3A	X	9.544	1
32	MP3A	Z	0	1
33	MP3A	Mx	-.006	1
34	MP4A	X	8.825	1
35	MP4A	Z	0	1
36	MP4A	Mx	-.006	1
37	OVP1	X	21.927	1.5
38	OVP1	Z	0	1.5
39	OVP1	Mx	.014	1.5
40	MP3A	X	2.993	5
41	MP3A	Z	0	5
42	MP3A	Mx	.001	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	18.544	.17
2	MP1A	Z	10.706	.17
3	MP1A	Mx	.01	.17
4	MP1A	X	18.544	5.67
5	MP1A	Z	10.706	5.67
6	MP1A	Mx	.01	5.67
7	MP5A	X	18.544	.17
8	MP5A	Z	10.706	.17
9	MP5A	Mx	.01	.17
10	MP5A	X	18.544	5.67
11	MP5A	Z	10.706	5.67
12	MP5A	Mx	.01	5.67
13	MP3A	X	22.111	1.25
14	MP3A	Z	12.766	1.25
15	MP3A	Mx	.009	1.25
16	MP3A	X	22.111	5.25
17	MP3A	Z	12.766	5.25
18	MP3A	Mx	.009	5.25
19	MP3A	X	22.111	1.25
20	MP3A	Z	12.766	1.25
21	MP3A	Mx	.023	1.25
22	MP3A	X	22.111	5.25
23	MP3A	Z	12.766	5.25
24	MP3A	Mx	.023	5.25
25	MP2A	X	6.859	1.67
26	MP2A	Z	3.96	1.67
27	MP2A	Mx	.005	1.67
28	MP2A	X	6.859	3.67
29	MP2A	Z	3.96	3.67
30	MP2A	Mx	.005	3.67
31	MP3A	X	8.575	1
32	MP3A	Z	4.951	1
33	MP3A	Mx	-.006	1
34	MP4A	X	8.008	1
35	MP4A	Z	4.623	1
36	MP4A	Mx	-.006	1
37	OVP1	X	19.444	1.5
38	OVP1	Z	11.226	1.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
39	OVP1	Mx	.014	1.5
40	MP3A	X	3.556	5
41	MP3A	Z	2.053	5
42	MP3A	Mx	.002	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	11.312	.17
2	MP1A	Z	19.592	.17
3	MP1A	Mx	.007	.17
4	MP1A	X	11.312	5.67
5	MP1A	Z	19.592	5.67
6	MP1A	Mx	.007	5.67
7	MP5A	X	11.312	.17
8	MP5A	Z	19.592	.17
9	MP5A	Mx	.007	.17
10	MP5A	X	11.312	5.67
11	MP5A	Z	19.592	5.67
12	MP5A	Mx	.007	5.67
13	MP3A	X	14.625	1.25
14	MP3A	Z	25.331	1.25
15	MP3A	Mx	-.006	1.25
16	MP3A	X	14.625	5.25
17	MP3A	Z	25.331	5.25
18	MP3A	Mx	-.006	5.25
19	MP3A	X	14.625	1.25
20	MP3A	Z	25.331	1.25
21	MP3A	Mx	.031	1.25
22	MP3A	X	14.625	5.25
23	MP3A	Z	25.331	5.25
24	MP3A	Mx	.031	5.25
25	MP2A	X	6.123	1.67
26	MP2A	Z	10.605	1.67
27	MP2A	Mx	.005	1.67
28	MP2A	X	6.123	3.67
29	MP2A	Z	10.605	3.67
30	MP2A	Mx	.005	3.67
31	MP3A	X	5.917	1
32	MP3A	Z	10.249	1
33	MP3A	Mx	-.005	1
34	MP4A	X	5.764	1
35	MP4A	Z	9.984	1
36	MP4A	Mx	-.005	1
37	OVP1	X	12.649	1.5
38	OVP1	Z	21.908	1.5
39	OVP1	Mx	.011	1.5
40	MP3A	X	3.166	5
41	MP3A	Z	5.484	5
42	MP3A	Mx	.002	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	0	.17
2	MP1A	Z	23.611	.17
3	MP1A	Mx	.002	.17
4	MP1A	X	0	5.67



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
5	MP1A	Z	23.611	5.67
6	MP1A	Mx	.002	5.67
7	MP5A	X	0	.17
8	MP5A	Z	23.611	.17
9	MP5A	Mx	.002	.17
10	MP5A	X	0	5.67
11	MP5A	Z	23.611	5.67
12	MP5A	Mx	.002	5.67
13	MP3A	X	0	1.25
14	MP3A	Z	32.28	1.25
15	MP3A	Mx	-.022	1.25
16	MP3A	X	0	5.25
17	MP3A	Z	32.28	5.25
18	MP3A	Mx	-.022	5.25
19	MP3A	X	0	1.25
20	MP3A	Z	32.28	1.25
21	MP3A	Mx	.03	1.25
22	MP3A	X	0	5.25
23	MP3A	Z	32.28	5.25
24	MP3A	Mx	.03	5.25
25	MP2A	X	0	1.67
26	MP2A	Z	15.771	1.67
27	MP2A	Mx	.002	1.67
28	MP2A	X	0	3.67
29	MP2A	Z	15.771	3.67
30	MP2A	Mx	.002	3.67
31	MP3A	X	0	1
32	MP3A	Z	13.411	1
33	MP3A	Mx	-.002	1
34	MP4A	X	0	1
35	MP4A	Z	13.389	1
36	MP4A	Mx	-.002	1
37	OVP1	X	0	1.5
38	OVP1	Z	27.616	1.5
39	OVP1	Mx	.003	1.5
40	MP3A	X	0	5
41	MP3A	Z	7.446	5
42	MP3A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-11.693	.17
2	MP1A	Z	20.254	.17
3	MP1A	Mx	-.004	.17
4	MP1A	X	-11.693	5.67
5	MP1A	Z	20.254	5.67
6	MP1A	Mx	-.004	5.67
7	MP5A	X	-11.693	.17
8	MP5A	Z	20.254	.17
9	MP5A	Mx	-.004	.17
10	MP5A	X	-11.693	5.67
11	MP5A	Z	20.254	5.67
12	MP5A	Mx	-.004	5.67
13	MP3A	X	-15.796	1.25
14	MP3A	Z	27.36	1.25
15	MP3A	Mx	-.031	1.25



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
16	MP3A	X	-15.796	5.25
17	MP3A	Z	27.36	5.25
18	MP3A	Mx	-.031	5.25
19	MP3A	X	-15.796	1.25
20	MP3A	Z	27.36	1.25
21	MP3A	Mx	.017	1.25
22	MP3A	X	-15.796	5.25
23	MP3A	Z	27.36	5.25
24	MP3A	Mx	.017	5.25
25	MP2A	X	-7.486	1.67
26	MP2A	Z	12.966	1.67
27	MP2A	Mx	-.003	1.67
28	MP2A	X	-7.486	3.67
29	MP2A	Z	12.966	3.67
30	MP2A	Mx	-.003	3.67
31	MP3A	X	-6.527	1
32	MP3A	Z	11.305	1
33	MP3A	Mx	.003	1
34	MP4A	X	-6.484	1
35	MP4A	Z	11.23	1
36	MP4A	Mx	.003	1
37	OVP1	X	-13.545	1.5
38	OVP1	Z	23.461	1.5
39	OVP1	Mx	-.006	1.5
40	MP3A	X	-3.166	5
41	MP3A	Z	5.484	5
42	MP3A	Mx	-.002	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-19.205	.17
2	MP1A	Z	11.088	.17
3	MP1A	Mx	-.008	.17
4	MP1A	X	-19.205	5.67
5	MP1A	Z	11.088	5.67
6	MP1A	Mx	-.008	5.67
7	MP5A	X	-19.205	.17
8	MP5A	Z	11.088	.17
9	MP5A	Mx	-.008	.17
10	MP5A	X	-19.205	5.67
11	MP5A	Z	11.088	5.67
12	MP5A	Mx	-.008	5.67
13	MP3A	X	-24.141	1.25
14	MP3A	Z	13.938	1.25
15	MP3A	Mx	-.029	1.25
16	MP3A	X	-24.141	5.25
17	MP3A	Z	13.938	5.25
18	MP3A	Mx	-.029	5.25
19	MP3A	X	-24.141	1.25
20	MP3A	Z	13.938	1.25
21	MP3A	Mx	.000397	1.25
22	MP3A	X	-24.141	5.25
23	MP3A	Z	13.938	5.25
24	MP3A	Mx	.000397	5.25
25	MP2A	X	-9.22	1.67
26	MP2A	Z	5.323	1.67



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
27	MP2A	Mx	-.005	1.67
28	MP2A	X	-9.22	3.67
29	MP2A	Z	5.323	3.67
30	MP2A	Mx	-.005	3.67
31	MP3A	X	-9.63	1
32	MP3A	Z	5.56	1
33	MP3A	Mx	.006	1
34	MP4A	X	-9.254	1
35	MP4A	Z	5.343	1
36	MP4A	Mx	.005	1
37	OVP1	X	-20.997	1.5
38	OVP1	Z	12.123	1.5
39	OVP1	Mx	-.012	1.5
40	MP3A	X	-3.556	5
41	MP3A	Z	2.053	5
42	MP3A	Mx	-.002	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-21.189	.17
2	MP1A	Z	0	.17
3	MP1A	Mx	-.01	.17
4	MP1A	X	-21.189	5.67
5	MP1A	Z	0	5.67
6	MP1A	Mx	-.01	5.67
7	MP5A	X	-21.189	.17
8	MP5A	Z	0	.17
9	MP5A	Mx	-.01	.17
10	MP5A	X	-21.189	5.67
11	MP5A	Z	0	5.67
12	MP5A	Mx	-.01	5.67
13	MP3A	X	-24.844	1.25
14	MP3A	Z	0	1.25
15	MP3A	Mx	-.02	1.25
16	MP3A	X	-24.844	5.25
17	MP3A	Z	0	5.25
18	MP3A	Mx	-.02	5.25
19	MP3A	X	-24.844	1.25
20	MP3A	Z	0	1.25
21	MP3A	Mx	-.013	1.25
22	MP3A	X	-24.844	5.25
23	MP3A	Z	0	5.25
24	MP3A	Mx	-.013	5.25
25	MP2A	X	-7.121	1.67
26	MP2A	Z	0	1.67
27	MP2A	Mx	-.005	1.67
28	MP2A	X	-7.121	3.67
29	MP2A	Z	0	3.67
30	MP2A	Mx	-.005	3.67
31	MP3A	X	-9.544	1
32	MP3A	Z	0	1
33	MP3A	Mx	.006	1
34	MP4A	X	-8.825	1
35	MP4A	Z	0	1
36	MP4A	Mx	.006	1
37	OVP1	X	-21.927	1.5





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
38	OVP1	Z	0	1.5
39	OVP1	Mx	-.014	1.5
40	MP3A	X	-2.993	5
41	MP3A	Z	0	5
42	MP3A	Mx	-.001	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-18.544	.17
2	MP1A	Z	-10.706	.17
3	MP1A	Mx	-.01	.17
4	MP1A	X	-18.544	5.67
5	MP1A	Z	-10.706	5.67
6	MP1A	Mx	-.01	5.67
7	MP5A	X	-18.544	.17
8	MP5A	Z	-10.706	.17
9	MP5A	Mx	-.01	.17
10	MP5A	X	-18.544	5.67
11	MP5A	Z	-10.706	5.67
12	MP5A	Mx	-.01	5.67
13	MP3A	X	-22.111	1.25
14	MP3A	Z	-12.766	1.25
15	MP3A	Mx	-.009	1.25
16	MP3A	X	-22.111	5.25
17	MP3A	Z	-12.766	5.25
18	MP3A	Mx	-.009	5.25
19	MP3A	X	-22.111	1.25
20	MP3A	Z	-12.766	1.25
21	MP3A	Mx	-.023	1.25
22	MP3A	X	-22.111	5.25
23	MP3A	Z	-12.766	5.25
24	MP3A	Mx	-.023	5.25
25	MP2A	X	-6.859	1.67
26	MP2A	Z	-3.96	1.67
27	MP2A	Mx	-.005	1.67
28	MP2A	X	-6.859	3.67
29	MP2A	Z	-3.96	3.67
30	MP2A	Mx	-.005	3.67
31	MP3A	X	-8.575	1
32	MP3A	Z	-4.951	1
33	MP3A	Mx	.006	1
34	MP4A	X	-8.008	1
35	MP4A	Z	-4.623	1
36	MP4A	Mx	.006	1
37	OVP1	X	-19.444	1.5
38	OVP1	Z	-11.226	1.5
39	OVP1	Mx	-.014	1.5
40	MP3A	X	-3.556	5
41	MP3A	Z	-2.053	5
42	MP3A	Mx	-.002	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-11.312	.17
2	MP1A	Z	-19.592	.17
3	MP1A	Mx	-.007	.17



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
4	MP1A	X	-11.312	5.67
5	MP1A	Z	-19.592	5.67
6	MP1A	Mx	-.007	5.67
7	MP5A	X	-11.312	.17
8	MP5A	Z	-19.592	.17
9	MP5A	Mx	-.007	.17
10	MP5A	X	-11.312	5.67
11	MP5A	Z	-19.592	5.67
12	MP5A	Mx	-.007	5.67
13	MP3A	X	-14.625	1.25
14	MP3A	Z	-25.331	1.25
15	MP3A	Mx	.006	1.25
16	MP3A	X	-14.625	5.25
17	MP3A	Z	-25.331	5.25
18	MP3A	Mx	.006	5.25
19	MP3A	X	-14.625	1.25
20	MP3A	Z	-25.331	1.25
21	MP3A	Mx	-.031	1.25
22	MP3A	X	-14.625	5.25
23	MP3A	Z	-25.331	5.25
24	MP3A	Mx	-.031	5.25
25	MP2A	X	-6.123	1.67
26	MP2A	Z	-10.605	1.67
27	MP2A	Mx	-.005	1.67
28	MP2A	X	-6.123	3.67
29	MP2A	Z	-10.605	3.67
30	MP2A	Mx	-.005	3.67
31	MP3A	X	-5.917	1
32	MP3A	Z	-10.249	1
33	MP3A	Mx	.005	1
34	MP4A	X	-5.764	1
35	MP4A	Z	-9.984	1
36	MP4A	Mx	.005	1
37	OVP1	X	-12.649	1.5
38	OVP1	Z	-21.908	1.5
39	OVP1	Mx	-.011	1.5
40	MP3A	X	-3.166	5
41	MP3A	Z	-5.484	5
42	MP3A	Mx	-.002	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	0	.17
2	MP1A	Z	-7.631	.17
3	MP1A	Mx	-.000663	.17
4	MP1A	X	0	5.67
5	MP1A	Z	-7.631	5.67
6	MP1A	Mx	-.000663	5.67
7	MP5A	X	0	.17
8	MP5A	Z	-7.631	.17
9	MP5A	Mx	-.000663	.17
10	MP5A	X	0	5.67
11	MP5A	Z	-7.631	5.67
12	MP5A	Mx	-.000663	5.67
13	MP3A	X	0	1.25
14	MP3A	Z	-5.1	1.25



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
15	MP3A	Mx	.004	1.25
16	MP3A	X	0	5.25
17	MP3A	Z	-5.1	5.25
18	MP3A	Mx	.004	5.25
19	MP3A	X	0	1.25
20	MP3A	Z	-5.1	1.25
21	MP3A	Mx	-.005	1.25
22	MP3A	X	0	5.25
23	MP3A	Z	-5.1	5.25
24	MP3A	Mx	-.005	5.25
25	MP2A	X	0	1.67
26	MP2A	Z	-4.175	1.67
27	MP2A	Mx	-.000483	1.67
28	MP2A	X	0	3.67
29	MP2A	Z	-4.175	3.67
30	MP2A	Mx	-.000483	3.67
31	MP3A	X	0	1
32	MP3A	Z	-3.335	1
33	MP3A	Mx	.000386	1
34	MP4A	X	0	1
35	MP4A	Z	-3.328	1
36	MP4A	Mx	.000385	1
37	OVP1	X	0	1.5
38	OVP1	Z	-6.839	1.5
39	OVP1	Mx	-.000792	1.5
40	MP3A	X	0	5
41	MP3A	Z	-2.086	5
42	MP3A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	3.773	.17
2	MP1A	Z	-6.536	.17
3	MP1A	Mx	.001	.17
4	MP1A	X	3.773	5.67
5	MP1A	Z	-6.536	5.67
6	MP1A	Mx	.001	5.67
7	MP5A	X	3.773	.17
8	MP5A	Z	-6.536	.17
9	MP5A	Mx	.001	.17
10	MP5A	X	3.773	5.67
11	MP5A	Z	-6.536	5.67
12	MP5A	Mx	.001	5.67
13	MP3A	X	2.494	1.25
14	MP3A	Z	-4.32	1.25
15	MP3A	Mx	.005	1.25
16	MP3A	X	2.494	5.25
17	MP3A	Z	-4.32	5.25
18	MP3A	Mx	.005	5.25
19	MP3A	X	2.494	1.25
20	MP3A	Z	-4.32	1.25
21	MP3A	Mx	-.003	1.25
22	MP3A	X	2.494	5.25
23	MP3A	Z	-4.32	5.25
24	MP3A	Mx	-.003	5.25
25	MP2A	X	1.966	1.67



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
26	MP2A	Z	-3.406	1.67
27	MP2A	Mx	.000896	1.67
28	MP2A	X	1.966	3.67
29	MP2A	Z	-3.406	3.67
30	MP2A	Mx	.000896	3.67
31	MP3A	X	1.619	1
32	MP3A	Z	-2.805	1
33	MP3A	Mx	-.000738	1
34	MP4A	X	1.607	1
35	MP4A	Z	-2.783	1
36	MP4A	Mx	-.000733	1
37	OVP1	X	3.348	1.5
38	OVP1	Z	-5.798	1.5
39	OVP1	Mx	.002	1.5
40	MP3A	X	868	5
41	MP3A	Z	-1.503	5
42	MP3A	Mx	.000434	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	6.141	.17
2	MP1A	Z	-3.546	.17
3	MP1A	Mx	.003	.17
4	MP1A	X	6.141	5.67
5	MP1A	Z	-3.546	5.67
6	MP1A	Mx	.003	5.67
7	MP5A	X	6.141	.17
8	MP5A	Z	-3.546	.17
9	MP5A	Mx	.003	.17
10	MP5A	X	6.141	5.67
11	MP5A	Z	-3.546	5.67
12	MP5A	Mx	.003	5.67
13	MP3A	X	3.794	1.25
14	MP3A	Z	-2.19	1.25
15	MP3A	Mx	.005	1.25
16	MP3A	X	3.794	5.25
17	MP3A	Z	-2.19	5.25
18	MP3A	Mx	.005	5.25
19	MP3A	X	3.794	1.25
20	MP3A	Z	-2.19	1.25
21	MP3A	Mx	-6.2e-5	1.25
22	MP3A	X	3.794	5.25
23	MP3A	Z	-2.19	5.25
24	MP3A	Mx	-6.2e-5	5.25
25	MP2A	X	2.269	1.67
26	MP2A	Z	-1.31	1.67
27	MP2A	Mx	.001	1.67
28	MP2A	X	2.269	3.67
29	MP2A	Z	-1.31	3.67
30	MP2A	Mx	.001	3.67
31	MP3A	X	2.354	1
32	MP3A	Z	-1.359	1
33	MP3A	Mx	-.001	1
34	MP4A	X	2.243	1
35	MP4A	Z	-1.295	1
36	MP4A	Mx	-.001	1



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
37	OVP1	X	5.126	1.5
38	OVP1	Z	-2.96	1.5
39	OVP1	Mx	.003	1.5
40	MP3A	X	.897	5
41	MP3A	Z	-.518	5
42	MP3A	Mx	.000448	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	6.721	.17
2	MP1A	Z	0	.17
3	MP1A	Mx	.003	.17
4	MP1A	X	6.721	5.67
5	MP1A	Z	0	5.67
6	MP1A	Mx	.003	5.67
7	MP5A	X	6.721	.17
8	MP5A	Z	0	.17
9	MP5A	Mx	.003	.17
10	MP5A	X	6.721	5.67
11	MP5A	Z	0	5.67
12	MP5A	Mx	.003	5.67
13	MP3A	X	3.885	1.25
14	MP3A	Z	0	1.25
15	MP3A	Mx	.003	1.25
16	MP3A	X	3.885	5.25
17	MP3A	Z	0	5.25
18	MP3A	Mx	.003	5.25
19	MP3A	X	3.885	1.25
20	MP3A	Z	0	1.25
21	MP3A	Mx	.002	1.25
22	MP3A	X	3.885	5.25
23	MP3A	Z	0	5.25
24	MP3A	Mx	.002	5.25
25	MP2A	X	1.551	1.67
26	MP2A	Z	0	1.67
27	MP2A	Mx	.001	1.67
28	MP2A	X	1.551	3.67
29	MP2A	Z	0	3.67
30	MP2A	Mx	.001	3.67
31	MP3A	X	2.293	1
32	MP3A	Z	0	1
33	MP3A	Mx	-.002	1
34	MP4A	X	2.083	1
35	MP4A	Z	0	1
36	MP4A	Mx	-.001	1
37	OVP1	X	5.287	1.5
38	OVP1	Z	0	1.5
39	OVP1	Mx	.003	1.5
40	MP3A	X	.685	5
41	MP3A	Z	0	5
42	MP3A	Mx	.000343	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	5.893	.17
2	MP1A	Z	3.402	.17



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
3	MP1A	Mx	.003	.17
4	MP1A	X	5.893	5.67
5	MP1A	Z	3.402	5.67
6	MP1A	Mx	.003	5.67
7	MP5A	X	5.893	.17
8	MP5A	Z	3.402	.17
9	MP5A	Mx	.003	.17
10	MP5A	X	5.893	5.67
11	MP5A	Z	3.402	5.67
12	MP5A	Mx	.003	5.67
13	MP3A	X	3.462	1.25
14	MP3A	Z	1.999	1.25
15	MP3A	Mx	.001	1.25
16	MP3A	X	3.462	5.25
17	MP3A	Z	1.999	5.25
18	MP3A	Mx	.001	5.25
19	MP3A	X	3.462	1.25
20	MP3A	Z	1.999	1.25
21	MP3A	Mx	.004	1.25
22	MP3A	X	3.462	5.25
23	MP3A	Z	1.999	5.25
24	MP3A	Mx	.004	5.25
25	MP2A	X	1.553	1.67
26	MP2A	Z	.897	1.67
27	MP2A	Mx	.001	1.67
28	MP2A	X	1.553	3.67
29	MP2A	Z	.897	3.67
30	MP2A	Mx	.001	3.67
31	MP3A	X	2.069	1
32	MP3A	Z	1.195	1
33	MP3A	Mx	-.001	1
34	MP4A	X	1.903	1
35	MP4A	Z	1.099	1
36	MP4A	Mx	-.001	1
37	OVP1	X	4.703	1.5
38	OVP1	Z	2.715	1.5
39	OVP1	Mx	.003	1.5
40	MP3A	X	.897	5
41	MP3A	Z	.518	5
42	MP3A	Mx	.000448	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	3.63	.17
2	MP1A	Z	6.287	.17
3	MP1A	Mx	.002	.17
4	MP1A	X	3.63	5.67
5	MP1A	Z	6.287	5.67
6	MP1A	Mx	.002	5.67
7	MP5A	X	3.63	.17
8	MP5A	Z	6.287	.17
9	MP5A	Mx	.002	.17
10	MP5A	X	3.63	5.67
11	MP5A	Z	6.287	5.67
12	MP5A	Mx	.002	5.67
13	MP3A	X	2.303	1.25



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
14	MP3A	Z	3.988	1.25
15	MP3A	Mx	-.000907	1.25
16	MP3A	X	2.303	5.25
17	MP3A	Z	3.988	5.25
18	MP3A	Mx	-.000907	5.25
19	MP3A	X	2.303	1.25
20	MP3A	Z	3.988	1.25
21	MP3A	Mx	.005	1.25
22	MP3A	X	2.303	5.25
23	MP3A	Z	3.988	5.25
24	MP3A	Mx	.005	5.25
25	MP2A	X	1.553	1.67
26	MP2A	Z	2.689	1.67
27	MP2A	Mx	.001	1.67
28	MP2A	X	1.553	3.67
29	MP2A	Z	2.689	3.67
30	MP2A	Mx	.001	3.67
31	MP3A	X	1.455	1
32	MP3A	Z	2.52	1
33	MP3A	Mx	-.001	1
34	MP4A	X	1.41	1
35	MP4A	Z	2.443	1
36	MP4A	Mx	-.001	1
37	OVP1	X	3.103	1.5
38	OVP1	Z	5.375	1.5
39	OVP1	Mx	.003	1.5
40	MP3A	X	.868	5
41	MP3A	Z	1.503	5
42	MP3A	Mx	.000434	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	0	.17
2	MP1A	Z	7.631	.17
3	MP1A	Mx	.000663	.17
4	MP1A	X	0	5.67
5	MP1A	Z	7.631	5.67
6	MP1A	Mx	.000663	5.67
7	MP5A	X	0	.17
8	MP5A	Z	7.631	.17
9	MP5A	Mx	.000663	.17
10	MP5A	X	0	5.67
11	MP5A	Z	7.631	5.67
12	MP5A	Mx	.000663	5.67
13	MP3A	X	0	1.25
14	MP3A	Z	5.1	1.25
15	MP3A	Mx	-.004	1.25
16	MP3A	X	0	5.25
17	MP3A	Z	5.1	5.25
18	MP3A	Mx	-.004	5.25
19	MP3A	X	0	1.25
20	MP3A	Z	5.1	1.25
21	MP3A	Mx	.005	1.25
22	MP3A	X	0	5.25
23	MP3A	Z	5.1	5.25
24	MP3A	Mx	.005	5.25



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
25	MP2A	X	0	1.67
26	MP2A	Z	4.175	1.67
27	MP2A	Mx	.000483	1.67
28	MP2A	X	0	3.67
29	MP2A	Z	4.175	3.67
30	MP2A	Mx	.000483	3.67
31	MP3A	X	0	1
32	MP3A	Z	3.335	1
33	MP3A	Mx	-.000386	1
34	MP4A	X	0	1
35	MP4A	Z	3.328	1
36	MP4A	Mx	-.000385	1
37	OVP1	X	0	1.5
38	OVP1	Z	6.839	1.5
39	OVP1	Mx	.000792	1.5
40	MP3A	X	0	5
41	MP3A	Z	2.086	5
42	MP3A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-3.773	.17
2	MP1A	Z	6.536	.17
3	MP1A	Mx	-.001	.17
4	MP1A	X	-3.773	5.67
5	MP1A	Z	6.536	5.67
6	MP1A	Mx	-.001	5.67
7	MP5A	X	-3.773	.17
8	MP5A	Z	6.536	.17
9	MP5A	Mx	-.001	.17
10	MP5A	X	-3.773	5.67
11	MP5A	Z	6.536	5.67
12	MP5A	Mx	-.001	5.67
13	MP3A	X	-2.494	1.25
14	MP3A	Z	4.32	1.25
15	MP3A	Mx	-.005	1.25
16	MP3A	X	-2.494	5.25
17	MP3A	Z	4.32	5.25
18	MP3A	Mx	-.005	5.25
19	MP3A	X	-2.494	1.25
20	MP3A	Z	4.32	1.25
21	MP3A	Mx	.003	1.25
22	MP3A	X	-2.494	5.25
23	MP3A	Z	4.32	5.25
24	MP3A	Mx	.003	5.25
25	MP2A	X	-1.966	1.67
26	MP2A	Z	3.406	1.67
27	MP2A	Mx	-.000896	1.67
28	MP2A	X	-1.966	3.67
29	MP2A	Z	3.406	3.67
30	MP2A	Mx	-.000896	3.67
31	MP3A	X	-1.619	1
32	MP3A	Z	2.805	1
33	MP3A	Mx	.000738	1
34	MP4A	X	-1.607	1
35	MP4A	Z	2.783	1





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
36	MP4A	Mx	.000733	1
37	OVP1	X	-3.348	1.5
38	OVP1	Z	5.798	1.5
39	OVP1	Mx	-.002	1.5
40	MP3A	X	-.868	5
41	MP3A	Z	1.503	5
42	MP3A	Mx	-.000434	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-6.141	.17
2	MP1A	Z	3.546	.17
3	MP1A	Mx	-.003	.17
4	MP1A	X	-6.141	5.67
5	MP1A	Z	3.546	5.67
6	MP1A	Mx	-.003	5.67
7	MP5A	X	-6.141	.17
8	MP5A	Z	3.546	.17
9	MP5A	Mx	-.003	.17
10	MP5A	X	-6.141	5.67
11	MP5A	Z	3.546	5.67
12	MP5A	Mx	-.003	5.67
13	MP3A	X	-3.794	1.25
14	MP3A	Z	2.19	1.25
15	MP3A	Mx	-.005	1.25
16	MP3A	X	-3.794	5.25
17	MP3A	Z	2.19	5.25
18	MP3A	Mx	-.005	5.25
19	MP3A	X	-3.794	1.25
20	MP3A	Z	2.19	1.25
21	MP3A	Mx	6.2e-5	1.25
22	MP3A	X	-3.794	5.25
23	MP3A	Z	2.19	5.25
24	MP3A	Mx	6.2e-5	5.25
25	MP2A	X	-2.269	1.67
26	MP2A	Z	1.31	1.67
27	MP2A	Mx	-.001	1.67
28	MP2A	X	-2.269	3.67
29	MP2A	Z	1.31	3.67
30	MP2A	Mx	-.001	3.67
31	MP3A	X	-2.354	1
32	MP3A	Z	1.359	1
33	MP3A	Mx	.001	1
34	MP4A	X	-2.243	1
35	MP4A	Z	1.295	1
36	MP4A	Mx	.001	1
37	OVP1	X	-5.126	1.5
38	OVP1	Z	2.96	1.5
39	OVP1	Mx	-.003	1.5
40	MP3A	X	-.897	5
41	MP3A	Z	.518	5
42	MP3A	Mx	-.000448	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-6.721	.17



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
2	MP1A	Z	0	.17
3	MP1A	Mx	-.003	.17
4	MP1A	X	-6.721	5.67
5	MP1A	Z	0	5.67
6	MP1A	Mx	-.003	5.67
7	MP5A	X	-6.721	.17
8	MP5A	Z	0	.17
9	MP5A	Mx	-.003	.17
10	MP5A	X	-6.721	5.67
11	MP5A	Z	0	5.67
12	MP5A	Mx	-.003	5.67
13	MP3A	X	-3.885	1.25
14	MP3A	Z	0	1.25
15	MP3A	Mx	-.003	1.25
16	MP3A	X	-3.885	5.25
17	MP3A	Z	0	5.25
18	MP3A	Mx	-.003	5.25
19	MP3A	X	-3.885	1.25
20	MP3A	Z	0	1.25
21	MP3A	Mx	-.002	1.25
22	MP3A	X	-3.885	5.25
23	MP3A	Z	0	5.25
24	MP3A	Mx	-.002	5.25
25	MP2A	X	-1.551	1.67
26	MP2A	Z	0	1.67
27	MP2A	Mx	-.001	1.67
28	MP2A	X	-1.551	3.67
29	MP2A	Z	0	3.67
30	MP2A	Mx	-.001	3.67
31	MP3A	X	-2.293	1
32	MP3A	Z	0	1
33	MP3A	Mx	.002	1
34	MP4A	X	-2.083	1
35	MP4A	Z	0	1
36	MP4A	Mx	.001	1
37	OVP1	X	-5.287	1.5
38	OVP1	Z	0	1.5
39	OVP1	Mx	-.003	1.5
40	MP3A	X	-.685	5
41	MP3A	Z	0	5
42	MP3A	Mx	-.000343	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-5.893	.17
2	MP1A	Z	-3.402	.17
3	MP1A	Mx	-.003	.17
4	MP1A	X	-5.893	5.67
5	MP1A	Z	-3.402	5.67
6	MP1A	Mx	-.003	5.67
7	MP5A	X	-5.893	.17
8	MP5A	Z	-3.402	.17
9	MP5A	Mx	-.003	.17
10	MP5A	X	-5.893	5.67
11	MP5A	Z	-3.402	5.67
12	MP5A	Mx	-.003	5.67



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
13	MP3A	X	-3.462	1.25
14	MP3A	Z	-1.999	1.25
15	MP3A	Mx	-.001	1.25
16	MP3A	X	-3.462	5.25
17	MP3A	Z	-1.999	5.25
18	MP3A	Mx	-.001	5.25
19	MP3A	X	-3.462	1.25
20	MP3A	Z	-1.999	1.25
21	MP3A	Mx	-.004	1.25
22	MP3A	X	-3.462	5.25
23	MP3A	Z	-1.999	5.25
24	MP3A	Mx	-.004	5.25
25	MP2A	X	-1.553	1.67
26	MP2A	Z	-.897	1.67
27	MP2A	Mx	-.001	1.67
28	MP2A	X	-1.553	3.67
29	MP2A	Z	-.897	3.67
30	MP2A	Mx	-.001	3.67
31	MP3A	X	-2.069	1
32	MP3A	Z	-1.195	1
33	MP3A	Mx	.001	1
34	MP4A	X	-1.903	1
35	MP4A	Z	-1.099	1
36	MP4A	Mx	.001	1
37	OVP1	X	-4.703	1.5
38	OVP1	Z	-2.715	1.5
39	OVP1	Mx	-.003	1.5
40	MP3A	X	-.897	5
41	MP3A	Z	-.518	5
42	MP3A	Mx	-.000448	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-3.63	.17
2	MP1A	Z	-6.287	.17
3	MP1A	Mx	-.002	.17
4	MP1A	X	-3.63	5.67
5	MP1A	Z	-6.287	5.67
6	MP1A	Mx	-.002	5.67
7	MP5A	X	-3.63	.17
8	MP5A	Z	-6.287	.17
9	MP5A	Mx	-.002	.17
10	MP5A	X	-3.63	5.67
11	MP5A	Z	-6.287	5.67
12	MP5A	Mx	-.002	5.67
13	MP3A	X	-2.303	1.25
14	MP3A	Z	-3.988	1.25
15	MP3A	Mx	.000907	1.25
16	MP3A	X	-2.303	5.25
17	MP3A	Z	-3.988	5.25
18	MP3A	Mx	.000907	5.25
19	MP3A	X	-2.303	1.25
20	MP3A	Z	-3.988	1.25
21	MP3A	Mx	-.005	1.25
22	MP3A	X	-2.303	5.25
23	MP3A	Z	-3.988	5.25



Company : Colliers Engineering & Design  
 Designer :  
 Job Number :  
 Model Name : 5000382749-VZW\_MT\_LOT\_SectorA\_H

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
24	MP3A	Mx	-.005	5.25
25	MP2A	X	-1.553	1.67
26	MP2A	Z	-2.689	1.67
27	MP2A	Mx	-.001	1.67
28	MP2A	X	-1.553	3.67
29	MP2A	Z	-2.689	3.67
30	MP2A	Mx	-.001	3.67
31	MP3A	X	-1.455	1
32	MP3A	Z	-2.52	1
33	MP3A	Mx	.001	1
34	MP4A	X	-1.41	1
35	MP4A	Z	-2.443	1
36	MP4A	Mx	.001	1
37	OVP1	X	-3.103	1.5
38	OVP1	Z	-5.375	1.5
39	OVP1	Mx	-.003	1.5
40	MP3A	X	-.868	5
41	MP3A	Z	-1.503	5
42	MP3A	Mx	-.000434	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	M4	Y	-500	%56

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	M4	Y	-500	%2

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

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

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	M4	Y	-250	%100

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	Y	-.45	.17
2	MP1A	My	.000222	.17
3	MP1A	Mz	3.9e-5	.17
4	MP1A	Y	-.45	5.67
5	MP1A	My	.000222	5.67
6	MP1A	Mz	3.9e-5	5.67
7	MP5A	Y	-.45	.17
8	MP5A	My	.000222	.17
9	MP5A	Mz	3.9e-5	.17
10	MP5A	Y	-.45	5.67
11	MP5A	My	.000222	5.67
12	MP5A	Mz	3.9e-5	5.67
13	MP3A	Y	-.986	1.25
14	MP3A	My	.000787	1.25
15	MP3A	Mz	-.000679	1.25
16	MP3A	Y	-.986	5.25



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
17	MP3A	My	.000787	5.25
18	MP3A	Mz	-.000679	5.25
19	MP3A	Y	-.986	1.25
20	MP3A	My	.000508	1.25
21	MP3A	Mz	.000907	1.25
22	MP3A	Y	-.986	5.25
23	MP3A	My	.000508	5.25
24	MP3A	Mz	.000907	5.25
25	MP2A	Y	-1.867	1.67
26	MP2A	Mv	.001	1.67
27	MP2A	Mz	.000216	1.67
28	MP2A	Y	-1.867	3.67
29	MP2A	Mv	.001	3.67
30	MP2A	Mz	.000216	3.67
31	MP3A	Y	-3.203	1
32	MP3A	Mv	-.002	1
33	MP3A	Mz	-.000371	1
34	MP4A	Y	-3.014	1
35	MP4A	Mv	-.002	1
36	MP4A	Mz	-.000349	1
37	OVP1	Y	-1.372	1.5
38	OVP1	Mv	.000901	1.5
39	OVP1	Mz	.000159	1.5
40	MP3A	Y	-.755	5
41	MP3A	Mv	.000377	5
42	MP3A	Mz	0	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	Z	-1.126	.17
2	MP1A	Mx	-9.8e-5	.17
3	MP1A	Z	-1.126	5.67
4	MP1A	Mx	-9.8e-5	5.67
5	MP5A	Z	-1.126	.17
6	MP5A	Mx	-9.8e-5	.17
7	MP5A	Z	-1.126	5.67
8	MP5A	Mx	-9.8e-5	5.67
9	MP3A	Z	-2.466	1.25
10	MP3A	Mx	.002	1.25
11	MP3A	Z	-2.466	5.25
12	MP3A	Mx	.002	5.25
13	MP3A	Z	-2.466	1.25
14	MP3A	Mx	-.002	1.25
15	MP3A	Z	-2.466	5.25
16	MP3A	Mx	-.002	5.25
17	MP2A	Z	-4.669	1.67
18	MP2A	Mx	-.00054	1.67
19	MP2A	Z	-4.669	3.67
20	MP2A	Mx	-.00054	3.67
21	MP3A	Z	-8.008	1
22	MP3A	Mx	.000927	1
23	MP4A	Z	-7.536	1
24	MP4A	Mx	.000872	1
25	OVP1	Z	-3.43	1.5
26	OVP1	Mx	-.000397	1.5
27	MP3A	Z	-1.887	5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
28	MP3A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	1.126	.17
2	MP1A	Mx	.000554	.17
3	MP1A	X	1.126	5.67
4	MP1A	Mx	.000554	5.67
5	MP5A	X	1.126	.17
6	MP5A	Mx	.000554	.17
7	MP5A	X	1.126	5.67
8	MP5A	Mx	.000554	5.67
9	MP3A	X	2.466	1.25
10	MP3A	Mx	.002	1.25
11	MP3A	X	2.466	5.25
12	MP3A	Mx	.002	5.25
13	MP3A	X	2.466	1.25
14	MP3A	Mx	.001	1.25
15	MP3A	X	2.466	5.25
16	MP3A	Mx	.001	5.25
17	MP2A	X	4.669	1.67
18	MP2A	Mx	.003	1.67
19	MP2A	X	4.669	3.67
20	MP2A	Mx	.003	3.67
21	MP3A	X	8.008	1
22	MP3A	Mx	-.005	1
23	MP4A	X	7.536	1
24	MP4A	Mx	-.005	1
25	OVP1	X	3.43	1.5
26	OVP1	Mx	.002	1.5
27	MP3A	X	1.887	5
28	MP3A	Mx	.000943	5

**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	M2	Y	-8.09	-8.09	0	%100
2	M1	Y	-9.741	-9.741	0	%100
3	MP3A	Y	-5.771	-5.771	0	%100
4	M4	Y	-6.663	-6.663	0	%100
5	MP1A	Y	-5.057	-5.057	0	%100
6	MP2A	Y	-5.057	-5.057	0	%100
7	MP4A	Y	-5.057	-5.057	0	%100
8	MP5A	Y	-5.057	-5.057	0	%100
9	OVP1	Y	-5.057	-5.057	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	M2	X	0	0	0	%100
2	M2	Z	-8.645	-8.645	0	%100
3	M1	X	0	0	0	%100
4	M1	Z	0	0	0	%100
5	MP3A	X	0	0	0	%100
6	MP3A	Z	-9.83	-9.83	0	%100
7	M4	X	0	0	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft.F...]	Start Location[ft.%]	End Location[ft.%]
8	M4	Z	-11.967	-11.967	0	%100
9	MP1A	X	0	0	0	%100
10	MP1A	Z	-8.121	-8.121	0	%100
11	MP2A	X	0	0	0	%100
12	MP2A	Z	-8.121	-8.121	0	%100
13	MP4A	X	0	0	0	%100
14	MP4A	Z	-8.121	-8.121	0	%100
15	MP5A	X	0	0	0	%100
16	MP5A	Z	-8.121	-8.121	0	%100
17	OVP1	X	0	0	0	%100
18	OVP1	Z	-6.641	-6.641	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	M2	X	4.323	4.323	0	%100
2	M2	Z	-7.487	-7.487	0	%100
3	M1	X	1.324	1.324	0	%100
4	M1	Z	-2.293	-2.293	0	%100
5	MP3A	X	4.915	4.915	0	%100
6	MP3A	Z	-8.513	-8.513	0	%100
7	M4	X	4.488	4.488	0	%100
8	M4	Z	-7.773	-7.773	0	%100
9	MP1A	X	4.06	4.06	0	%100
10	MP1A	Z	-7.033	-7.033	0	%100
11	MP2A	X	4.06	4.06	0	%100
12	MP2A	Z	-7.033	-7.033	0	%100
13	MP4A	X	4.06	4.06	0	%100
14	MP4A	Z	-7.033	-7.033	0	%100
15	MP5A	X	4.06	4.06	0	%100
16	MP5A	Z	-7.033	-7.033	0	%100
17	OVP1	X	3.32	3.32	0	%100
18	OVP1	Z	-5.751	-5.751	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	M2	X	7.487	7.487	0	%100
2	M2	Z	-4.323	-4.323	0	%100
3	M1	X	6.878	6.878	0	%100
4	M1	Z	-3.971	-3.971	0	%100
5	MP3A	X	8.513	8.513	0	%100
6	MP3A	Z	-4.915	-4.915	0	%100
7	M4	X	2.591	2.591	0	%100
8	M4	Z	-1.496	-1.496	0	%100
9	MP1A	X	7.033	7.033	0	%100
10	MP1A	Z	-4.06	-4.06	0	%100
11	MP2A	X	7.033	7.033	0	%100
12	MP2A	Z	-4.06	-4.06	0	%100
13	MP4A	X	7.033	7.033	0	%100
14	MP4A	Z	-4.06	-4.06	0	%100
15	MP5A	X	7.033	7.033	0	%100
16	MP5A	Z	-4.06	-4.06	0	%100
17	OVP1	X	5.751	5.751	0	%100
18	OVP1	Z	-3.32	-3.32	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.%]
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**Member Distributed Loads (BLC 44 : Structure Wo (90 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft.F...]	Start Location[ft.%]	End Location[ft.%]
1	M2	X	8.645	8.645	0	%100
2	M2	Z	0	0	0	%100
3	M1	X	10.59	10.59	0	%100
4	M1	Z	0	0	0	%100
5	MP3A	X	9.83	9.83	0	%100
6	MP3A	Z	0	0	0	%100
7	M4	X	0	0	0	%100
8	M4	Z	0	0	0	%100
9	MP1A	X	8.121	8.121	0	%100
10	MP1A	Z	0	0	0	%100
11	MP2A	X	8.121	8.121	0	%100
12	MP2A	Z	0	0	0	%100
13	MP4A	X	8.121	8.121	0	%100
14	MP4A	Z	0	0	0	%100
15	MP5A	X	8.121	8.121	0	%100
16	MP5A	Z	0	0	0	%100
17	OVP1	X	6.641	6.641	0	%100
18	OVP1	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	M2	X	7.487	7.487	0	%100
2	M2	Z	4.323	4.323	0	%100
3	M1	X	6.878	6.878	0	%100
4	M1	Z	3.971	3.971	0	%100
5	MP3A	X	8.513	8.513	0	%100
6	MP3A	Z	4.915	4.915	0	%100
7	M4	X	2.591	2.591	0	%100
8	M4	Z	1.496	1.496	0	%100
9	MP1A	X	7.033	7.033	0	%100
10	MP1A	Z	4.06	4.06	0	%100
11	MP2A	X	7.033	7.033	0	%100
12	MP2A	Z	4.06	4.06	0	%100
13	MP4A	X	7.033	7.033	0	%100
14	MP4A	Z	4.06	4.06	0	%100
15	MP5A	X	7.033	7.033	0	%100
16	MP5A	Z	4.06	4.06	0	%100
17	OVP1	X	5.751	5.751	0	%100
18	OVP1	Z	3.32	3.32	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	M2	X	4.323	4.323	0	%100
2	M2	Z	7.487	7.487	0	%100
3	M1	X	1.324	1.324	0	%100
4	M1	Z	2.293	2.293	0	%100
5	MP3A	X	4.915	4.915	0	%100
6	MP3A	Z	8.513	8.513	0	%100
7	M4	X	4.488	4.488	0	%100
8	M4	Z	7.773	7.773	0	%100
9	MP1A	X	4.06	4.06	0	%100
10	MP1A	Z	7.033	7.033	0	%100
11	MP2A	X	4.06	4.06	0	%100
12	MP2A	Z	7.033	7.033	0	%100
13	MP4A	X	4.06	4.06	0	%100
14	MP4A	Z	7.033	7.033	0	%100





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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
15	MP5A	X	4.06	4.06	0	%100
16	MP5A	Z	7.033	7.033	0	%100
17	OVP1	X	3.32	3.32	0	%100
18	OVP1	Z	5.751	5.751	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	M2	X	0	0	0	%100
2	M2	Z	8.645	8.645	0	%100
3	M1	X	0	0	0	%100
4	M1	Z	0	0	0	%100
5	MP3A	X	0	0	0	%100
6	MP3A	Z	9.83	9.83	0	%100
7	M4	X	0	0	0	%100
8	M4	Z	11.967	11.967	0	%100
9	MP1A	X	0	0	0	%100
10	MP1A	Z	8.121	8.121	0	%100
11	MP2A	X	0	0	0	%100
12	MP2A	Z	8.121	8.121	0	%100
13	MP4A	X	0	0	0	%100
14	MP4A	Z	8.121	8.121	0	%100
15	MP5A	X	0	0	0	%100
16	MP5A	Z	8.121	8.121	0	%100
17	OVP1	X	0	0	0	%100
18	OVP1	Z	6.641	6.641	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.%]
1	M2	X	-4.323	-4.323	0	%100
2	M2	Z	7.487	7.487	0	%100
3	M1	X	-1.324	-1.324	0	%100
4	M1	Z	2.293	2.293	0	%100
5	MP3A	X	-4.915	-4.915	0	%100
6	MP3A	Z	8.513	8.513	0	%100
7	M4	X	-4.488	-4.488	0	%100
8	M4	Z	7.773	7.773	0	%100
9	MP1A	X	-4.06	-4.06	0	%100
10	MP1A	Z	7.033	7.033	0	%100
11	MP2A	X	-4.06	-4.06	0	%100
12	MP2A	Z	7.033	7.033	0	%100
13	MP4A	X	-4.06	-4.06	0	%100
14	MP4A	Z	7.033	7.033	0	%100
15	MP5A	X	-4.06	-4.06	0	%100
16	MP5A	Z	7.033	7.033	0	%100
17	OVP1	X	-3.32	-3.32	0	%100
18	OVP1	Z	5.751	5.751	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	M2	X	-7.487	-7.487	0	%100
2	M2	Z	4.323	4.323	0	%100
3	M1	X	-6.878	-6.878	0	%100
4	M1	Z	3.971	3.971	0	%100
5	MP3A	X	-8.513	-8.513	0	%100
6	MP3A	Z	4.915	4.915	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft.F...]	Start Location[ft.%]	End Location[ft.%]
7	M4	X	-2.591	-2.591	0	%100
8	M4	Z	1.496	1.496	0	%100
9	MP1A	X	-7.033	-7.033	0	%100
10	MP1A	Z	4.06	4.06	0	%100
11	MP2A	X	-7.033	-7.033	0	%100
12	MP2A	Z	4.06	4.06	0	%100
13	MP4A	X	-7.033	-7.033	0	%100
14	MP4A	Z	4.06	4.06	0	%100
15	MP5A	X	-7.033	-7.033	0	%100
16	MP5A	Z	4.06	4.06	0	%100
17	OVP1	X	-5.751	-5.751	0	%100
18	OVP1	Z	3.32	3.32	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	M2	X	-8.645	-8.645	0	%100
2	M2	Z	0	0	0	%100
3	M1	X	-10.59	-10.59	0	%100
4	M1	Z	0	0	0	%100
5	MP3A	X	-9.83	-9.83	0	%100
6	MP3A	Z	0	0	0	%100
7	M4	X	0	0	0	%100
8	M4	Z	0	0	0	%100
9	MP1A	X	-8.121	-8.121	0	%100
10	MP1A	Z	0	0	0	%100
11	MP2A	X	-8.121	-8.121	0	%100
12	MP2A	Z	0	0	0	%100
13	MP4A	X	-8.121	-8.121	0	%100
14	MP4A	Z	0	0	0	%100
15	MP5A	X	-8.121	-8.121	0	%100
16	MP5A	Z	0	0	0	%100
17	OVP1	X	-6.641	-6.641	0	%100
18	OVP1	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	M2	X	-7.487	-7.487	0	%100
2	M2	Z	-4.323	-4.323	0	%100
3	M1	X	-6.878	-6.878	0	%100
4	M1	Z	-3.971	-3.971	0	%100
5	MP3A	X	-8.513	-8.513	0	%100
6	MP3A	Z	-4.915	-4.915	0	%100
7	M4	X	-2.591	-2.591	0	%100
8	M4	Z	-1.496	-1.496	0	%100
9	MP1A	X	-7.033	-7.033	0	%100
10	MP1A	Z	-4.06	-4.06	0	%100
11	MP2A	X	-7.033	-7.033	0	%100
12	MP2A	Z	-4.06	-4.06	0	%100
13	MP4A	X	-7.033	-7.033	0	%100
14	MP4A	Z	-4.06	-4.06	0	%100
15	MP5A	X	-7.033	-7.033	0	%100
16	MP5A	Z	-4.06	-4.06	0	%100
17	OVP1	X	-5.751	-5.751	0	%100
18	OVP1	Z	-3.32	-3.32	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	M2	X	-4.323	-4.323	0	%100
2	M2	Z	-7.487	-7.487	0	%100
3	M1	X	-1.324	-1.324	0	%100
4	M1	Z	-2.293	-2.293	0	%100
5	MP3A	X	-4.915	-4.915	0	%100
6	MP3A	Z	-8.513	-8.513	0	%100
7	M4	X	-4.488	-4.488	0	%100
8	M4	Z	-7.773	-7.773	0	%100
9	MP1A	X	-4.06	-4.06	0	%100
10	MP1A	Z	-7.033	-7.033	0	%100
11	MP2A	X	-4.06	-4.06	0	%100
12	MP2A	Z	-7.033	-7.033	0	%100
13	MP4A	X	-4.06	-4.06	0	%100
14	MP4A	Z	-7.033	-7.033	0	%100
15	MP5A	X	-4.06	-4.06	0	%100
16	MP5A	Z	-7.033	-7.033	0	%100
17	OVP1	X	-3.32	-3.32	0	%100
18	OVP1	Z	-5.751	-5.751	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.%]
1	M2	X	0	0	0	%100
2	M2	Z	-2.619	-2.619	0	%100
3	M1	X	0	0	0	%100
4	M1	Z	0	0	0	%100
5	MP3A	X	0	0	0	%100
6	MP3A	Z	-3.146	-3.146	0	%100
7	M4	X	0	0	0	%100
8	M4	Z	-3.523	-3.523	0	%100
9	MP1A	X	0	0	0	%100
10	MP1A	Z	-2.844	-2.844	0	%100
11	MP2A	X	0	0	0	%100
12	MP2A	Z	-2.844	-2.844	0	%100
13	MP4A	X	0	0	0	%100
14	MP4A	Z	-2.844	-2.844	0	%100
15	MP5A	X	0	0	0	%100
16	MP5A	Z	-2.844	-2.844	0	%100
17	OVP1	X	0	0	0	%100
18	OVP1	Z	-2.332	-2.332	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	M2	X	1.309	1.309	0	%100
2	M2	Z	-2.268	-2.268	0	%100
3	M1	X	.376	.376	0	%100
4	M1	Z	-.651	-.651	0	%100
5	MP3A	X	1.573	1.573	0	%100
6	MP3A	Z	-2.724	-2.724	0	%100
7	M4	X	1.321	1.321	0	%100
8	M4	Z	-2.288	-2.288	0	%100
9	MP1A	X	1.422	1.422	0	%100
10	MP1A	Z	-2.463	-2.463	0	%100
11	MP2A	X	1.422	1.422	0	%100
12	MP2A	Z	-2.463	-2.463	0	%100
13	MP4A	X	1.422	1.422	0	%100
14	MP4A	Z	-2.463	-2.463	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft.F....]	Start Location[ft.%]	End Location[ft.%]
15	MP5A	X	1.422	1.422	0	%100
16	MP5A	Z	-2.463	-2.463	0	%100
17	OVP1	X	1.166	1.166	0	%100
18	OVP1	Z	-2.02	-2.02	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	M2	X	2.268	2.268	0	%100
2	M2	Z	-1.309	-1.309	0	%100
3	M1	X	1.953	1.953	0	%100
4	M1	Z	-1.128	-1.128	0	%100
5	MP3A	X	2.724	2.724	0	%100
6	MP3A	Z	-1.573	-1.573	0	%100
7	M4	X	.763	.763	0	%100
8	M4	Z	-.44	-.44	0	%100
9	MP1A	X	2.463	2.463	0	%100
10	MP1A	Z	-1.422	-1.422	0	%100
11	MP2A	X	2.463	2.463	0	%100
12	MP2A	Z	-1.422	-1.422	0	%100
13	MP4A	X	2.463	2.463	0	%100
14	MP4A	Z	-1.422	-1.422	0	%100
15	MP5A	X	2.463	2.463	0	%100
16	MP5A	Z	-1.422	-1.422	0	%100
17	OVP1	X	2.02	2.02	0	%100
18	OVP1	Z	-1.166	-1.166	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	M2	X	2.619	2.619	0	%100
2	M2	Z	0	0	0	%100
3	M1	X	3.007	3.007	0	%100
4	M1	Z	0	0	0	%100
5	MP3A	X	3.146	3.146	0	%100
6	MP3A	Z	0	0	0	%100
7	M4	X	0	0	0	%100
8	M4	Z	0	0	0	%100
9	MP1A	X	2.844	2.844	0	%100
10	MP1A	Z	0	0	0	%100
11	MP2A	X	2.844	2.844	0	%100
12	MP2A	Z	0	0	0	%100
13	MP4A	X	2.844	2.844	0	%100
14	MP4A	Z	0	0	0	%100
15	MP5A	X	2.844	2.844	0	%100
16	MP5A	Z	0	0	0	%100
17	OVP1	X	2.332	2.332	0	%100
18	OVP1	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	M2	X	2.268	2.268	0	%100
2	M2	Z	1.309	1.309	0	%100
3	M1	X	1.953	1.953	0	%100
4	M1	Z	1.128	1.128	0	%100
5	MP3A	X	2.724	2.724	0	%100
6	MP3A	Z	1.573	1.573	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
7	M4	X	.763	.763	0	%100
8	M4	Z	.44	.44	0	%100
9	MP1A	X	2.463	2.463	0	%100
10	MP1A	Z	1.422	1.422	0	%100
11	MP2A	X	2.463	2.463	0	%100
12	MP2A	Z	1.422	1.422	0	%100
13	MP4A	X	2.463	2.463	0	%100
14	MP4A	Z	1.422	1.422	0	%100
15	MP5A	X	2.463	2.463	0	%100
16	MP5A	Z	1.422	1.422	0	%100
17	OVP1	X	2.02	2.02	0	%100
18	OVP1	Z	1.166	1.166	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.%]
1	M2	X	1.309	1.309	0	%100
2	M2	Z	2.268	2.268	0	%100
3	M1	X	.376	.376	0	%100
4	M1	Z	.651	.651	0	%100
5	MP3A	X	1.573	1.573	0	%100
6	MP3A	Z	2.724	2.724	0	%100
7	M4	X	1.321	1.321	0	%100
8	M4	Z	2.288	2.288	0	%100
9	MP1A	X	1.422	1.422	0	%100
10	MP1A	Z	2.463	2.463	0	%100
11	MP2A	X	1.422	1.422	0	%100
12	MP2A	Z	2.463	2.463	0	%100
13	MP4A	X	1.422	1.422	0	%100
14	MP4A	Z	2.463	2.463	0	%100
15	MP5A	X	1.422	1.422	0	%100
16	MP5A	Z	2.463	2.463	0	%100
17	OVP1	X	1.166	1.166	0	%100
18	OVP1	Z	2.02	2.02	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	M2	X	0	0	0	%100
2	M2	Z	2.619	2.619	0	%100
3	M1	X	0	0	0	%100
4	M1	Z	0	0	0	%100
5	MP3A	X	0	0	0	%100
6	MP3A	Z	3.146	3.146	0	%100
7	M4	X	0	0	0	%100
8	M4	Z	3.523	3.523	0	%100
9	MP1A	X	0	0	0	%100
10	MP1A	Z	2.844	2.844	0	%100
11	MP2A	X	0	0	0	%100
12	MP2A	Z	2.844	2.844	0	%100
13	MP4A	X	0	0	0	%100
14	MP4A	Z	2.844	2.844	0	%100
15	MP5A	X	0	0	0	%100
16	MP5A	Z	2.844	2.844	0	%100
17	OVP1	X	0	0	0	%100
18	OVP1	Z	2.332	2.332	0	%100



Company : Colliers Engineering & Design  
 Designer :  
 Job Number :  
 Model Name : 5000382749-VZW\_MT\_LOT\_SectorA\_H

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**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	M2	X	-1.309	-1.309	0	%100
2	M2	Z	2.268	2.268	0	%100
3	M1	X	-0.376	-0.376	0	%100
4	M1	Z	0.651	0.651	0	%100
5	MP3A	X	-1.573	-1.573	0	%100
6	MP3A	Z	2.724	2.724	0	%100
7	M4	X	-1.321	-1.321	0	%100
8	M4	Z	2.288	2.288	0	%100
9	MP1A	X	-1.422	-1.422	0	%100
10	MP1A	Z	2.463	2.463	0	%100
11	MP2A	X	-1.422	-1.422	0	%100
12	MP2A	Z	2.463	2.463	0	%100
13	MP4A	X	-1.422	-1.422	0	%100
14	MP4A	Z	2.463	2.463	0	%100
15	MP5A	X	-1.422	-1.422	0	%100
16	MP5A	Z	2.463	2.463	0	%100
17	OVP1	X	-1.166	-1.166	0	%100
18	OVP1	Z	2.02	2.02	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	M2	X	-2.268	-2.268	0	%100
2	M2	Z	1.309	1.309	0	%100
3	M1	X	-1.953	-1.953	0	%100
4	M1	Z	1.128	1.128	0	%100
5	MP3A	X	-2.724	-2.724	0	%100
6	MP3A	Z	1.573	1.573	0	%100
7	M4	X	-0.763	-0.763	0	%100
8	M4	Z	0.44	0.44	0	%100
9	MP1A	X	-2.463	-2.463	0	%100
10	MP1A	Z	1.422	1.422	0	%100
11	MP2A	X	-2.463	-2.463	0	%100
12	MP2A	Z	1.422	1.422	0	%100
13	MP4A	X	-2.463	-2.463	0	%100
14	MP4A	Z	1.422	1.422	0	%100
15	MP5A	X	-2.463	-2.463	0	%100
16	MP5A	Z	1.422	1.422	0	%100
17	OVP1	X	-2.02	-2.02	0	%100
18	OVP1	Z	1.166	1.166	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	M2	X	-2.619	-2.619	0	%100
2	M2	Z	0	0	0	%100
3	M1	X	-3.007	-3.007	0	%100
4	M1	Z	0	0	0	%100
5	MP3A	X	-3.146	-3.146	0	%100
6	MP3A	Z	0	0	0	%100
7	M4	X	0	0	0	%100
8	M4	Z	0	0	0	%100
9	MP1A	X	-2.844	-2.844	0	%100
10	MP1A	Z	0	0	0	%100
11	MP2A	X	-2.844	-2.844	0	%100
12	MP2A	Z	0	0	0	%100
13	MP4A	X	-2.844	-2.844	0	%100
14	MP4A	Z	0	0	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
15	MP5A	X	-2.844	-2.844	0	%100
16	MP5A	Z	0	0	0	%100
17	OVP1	X	-2.332	-2.332	0	%100
18	OVP1	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.%]
1	M2	X	-2.268	-2.268	0	%100
2	M2	Z	-1.309	-1.309	0	%100
3	M1	X	-1.953	-1.953	0	%100
4	M1	Z	-1.128	-1.128	0	%100
5	MP3A	X	-2.724	-2.724	0	%100
6	MP3A	Z	-1.573	-1.573	0	%100
7	M4	X	-0.763	-0.763	0	%100
8	M4	Z	-0.44	-0.44	0	%100
9	MP1A	X	-2.463	-2.463	0	%100
10	MP1A	Z	-1.422	-1.422	0	%100
11	MP2A	X	-2.463	-2.463	0	%100
12	MP2A	Z	-1.422	-1.422	0	%100
13	MP4A	X	-2.463	-2.463	0	%100
14	MP4A	Z	-1.422	-1.422	0	%100
15	MP5A	X	-2.463	-2.463	0	%100
16	MP5A	Z	-1.422	-1.422	0	%100
17	OVP1	X	-2.02	-2.02	0	%100
18	OVP1	Z	-1.166	-1.166	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	M2	X	-1.309	-1.309	0	%100
2	M2	Z	-2.268	-2.268	0	%100
3	M1	X	-0.376	-0.376	0	%100
4	M1	Z	-0.651	-0.651	0	%100
5	MP3A	X	-1.573	-1.573	0	%100
6	MP3A	Z	-2.724	-2.724	0	%100
7	M4	X	-1.321	-1.321	0	%100
8	M4	Z	-2.288	-2.288	0	%100
9	MP1A	X	-1.422	-1.422	0	%100
10	MP1A	Z	-2.463	-2.463	0	%100
11	MP2A	X	-1.422	-1.422	0	%100
12	MP2A	Z	-2.463	-2.463	0	%100
13	MP4A	X	-1.422	-1.422	0	%100
14	MP4A	Z	-2.463	-2.463	0	%100
15	MP5A	X	-1.422	-1.422	0	%100
16	MP5A	Z	-2.463	-2.463	0	%100
17	OVP1	X	-1.166	-1.166	0	%100
18	OVP1	Z	-2.02	-2.02	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	M2	X	0	0	0	%100
2	M2	Z	-0.549	-0.549	0	%100
3	M1	X	0	0	0	%100
4	M1	Z	0	0	0	%100
5	MP3A	X	0	0	0	%100
6	MP3A	Z	-0.625	-0.625	0	%100



Company : Colliers Engineering & Design  
 Designer :  
 Job Number :  
 Model Name : 5000382749-VZW\_MT\_LOT\_SectorA\_H

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
7	M4	X	0	0	0	%100
8	M4	Z	-761	-761	0	%100
9	MP1A	X	0	0	0	%100
10	MP1A	Z	-516	-516	0	%100
11	MP2A	X	0	0	0	%100
12	MP2A	Z	-516	-516	0	%100
13	MP4A	X	0	0	0	%100
14	MP4A	Z	-516	-516	0	%100
15	MP5A	X	0	0	0	%100
16	MP5A	Z	-516	-516	0	%100
17	OVP1	X	0	0	0	%100
18	OVP1	Z	-422	-422	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	M2	X	.275	.275	0	%100
2	M2	Z	-476	-476	0	%100
3	M1	X	.084	.084	0	%100
4	M1	Z	-146	-146	0	%100
5	MP3A	X	.312	.312	0	%100
6	MP3A	Z	-541	-541	0	%100
7	M4	X	.285	.285	0	%100
8	M4	Z	-494	-494	0	%100
9	MP1A	X	.258	.258	0	%100
10	MP1A	Z	-447	-447	0	%100
11	MP2A	X	.258	.258	0	%100
12	MP2A	Z	-447	-447	0	%100
13	MP4A	X	.258	.258	0	%100
14	MP4A	Z	-447	-447	0	%100
15	MP5A	X	.258	.258	0	%100
16	MP5A	Z	-447	-447	0	%100
17	OVP1	X	.211	.211	0	%100
18	OVP1	Z	-365	-365	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	M2	X	.476	.476	0	%100
2	M2	Z	-275	-275	0	%100
3	M1	X	.437	.437	0	%100
4	M1	Z	-252	-252	0	%100
5	MP3A	X	.541	.541	0	%100
6	MP3A	Z	-312	-312	0	%100
7	M4	X	.165	.165	0	%100
8	M4	Z	-.095	-.095	0	%100
9	MP1A	X	.447	.447	0	%100
10	MP1A	Z	-.258	-.258	0	%100
11	MP2A	X	.447	.447	0	%100
12	MP2A	Z	-.258	-.258	0	%100
13	MP4A	X	.447	.447	0	%100
14	MP4A	Z	-.258	-.258	0	%100
15	MP5A	X	.447	.447	0	%100
16	MP5A	Z	-.258	-.258	0	%100
17	OVP1	X	.365	.365	0	%100
18	OVP1	Z	-.211	-.211	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.%]
1	M2	X	.549	.549	0	%100
2	M2	Z	0	0	0	%100
3	M1	X	.673	.673	0	%100
4	M1	Z	0	0	0	%100
5	MP3A	X	.625	.625	0	%100
6	MP3A	Z	0	0	0	%100
7	M4	X	0	0	0	%100
8	M4	Z	0	0	0	%100
9	MP1A	X	.516	.516	0	%100
10	MP1A	Z	0	0	0	%100
11	MP2A	X	.516	.516	0	%100
12	MP2A	Z	0	0	0	%100
13	MP4A	X	.516	.516	0	%100
14	MP4A	Z	0	0	0	%100
15	MP5A	X	.516	.516	0	%100
16	MP5A	Z	0	0	0	%100
17	OVP1	X	.422	.422	0	%100
18	OVP1	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	M2	X	.476	.476	0	%100
2	M2	Z	.275	.275	0	%100
3	M1	X	.437	.437	0	%100
4	M1	Z	.252	.252	0	%100
5	MP3A	X	.541	.541	0	%100
6	MP3A	Z	.312	.312	0	%100
7	M4	X	.165	.165	0	%100
8	M4	Z	.095	.095	0	%100
9	MP1A	X	.447	.447	0	%100
10	MP1A	Z	.258	.258	0	%100
11	MP2A	X	.447	.447	0	%100
12	MP2A	Z	.258	.258	0	%100
13	MP4A	X	.447	.447	0	%100
14	MP4A	Z	.258	.258	0	%100
15	MP5A	X	.447	.447	0	%100
16	MP5A	Z	.258	.258	0	%100
17	OVP1	X	.365	.365	0	%100
18	OVP1	Z	.211	.211	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	M2	X	.275	.275	0	%100
2	M2	Z	.476	.476	0	%100
3	M1	X	.084	.084	0	%100
4	M1	Z	.146	.146	0	%100
5	MP3A	X	.312	.312	0	%100
6	MP3A	Z	.541	.541	0	%100
7	M4	X	.285	.285	0	%100
8	M4	Z	.494	.494	0	%100
9	MP1A	X	.258	.258	0	%100
10	MP1A	Z	.447	.447	0	%100
11	MP2A	X	.258	.258	0	%100
12	MP2A	Z	.447	.447	0	%100
13	MP4A	X	.258	.258	0	%100
14	MP4A	Z	.447	.447	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft.F...]	Start Location[ft.%]	End Location[ft.%]
15	MP5A	X	.258	.258	0	%100
16	MP5A	Z	.447	.447	0	%100
17	OVP1	X	.211	.211	0	%100
18	OVP1	Z	.365	.365	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	M2	X	0	0	0	%100
2	M2	Z	.549	.549	0	%100
3	M1	X	0	0	0	%100
4	M1	Z	0	0	0	%100
5	MP3A	X	0	0	0	%100
6	MP3A	Z	.625	.625	0	%100
7	M4	X	0	0	0	%100
8	M4	Z	.761	.761	0	%100
9	MP1A	X	0	0	0	%100
10	MP1A	Z	.516	.516	0	%100
11	MP2A	X	0	0	0	%100
12	MP2A	Z	.516	.516	0	%100
13	MP4A	X	0	0	0	%100
14	MP4A	Z	.516	.516	0	%100
15	MP5A	X	0	0	0	%100
16	MP5A	Z	.516	.516	0	%100
17	OVP1	X	0	0	0	%100
18	OVP1	Z	.422	.422	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	M2	X	-.275	-.275	0	%100
2	M2	Z	.476	.476	0	%100
3	M1	X	-.084	-.084	0	%100
4	M1	Z	.146	.146	0	%100
5	MP3A	X	-.312	-.312	0	%100
6	MP3A	Z	.541	.541	0	%100
7	M4	X	-.285	-.285	0	%100
8	M4	Z	.494	.494	0	%100
9	MP1A	X	-.258	-.258	0	%100
10	MP1A	Z	.447	.447	0	%100
11	MP2A	X	-.258	-.258	0	%100
12	MP2A	Z	.447	.447	0	%100
13	MP4A	X	-.258	-.258	0	%100
14	MP4A	Z	.447	.447	0	%100
15	MP5A	X	-.258	-.258	0	%100
16	MP5A	Z	.447	.447	0	%100
17	OVP1	X	-.211	-.211	0	%100
18	OVP1	Z	.365	.365	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.%]
1	M2	X	-.476	-.476	0	%100
2	M2	Z	.275	.275	0	%100
3	M1	X	-.437	-.437	0	%100
4	M1	Z	.252	.252	0	%100
5	MP3A	X	-.541	-.541	0	%100
6	MP3A	Z	.312	.312	0	%100



**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.%]
7	M4	X	-.165	-.165	0	%100
8	M4	Z	.095	.095	0	%100
9	MP1A	X	-.447	-.447	0	%100
10	MP1A	Z	.258	.258	0	%100
11	MP2A	X	-.447	-.447	0	%100
12	MP2A	Z	.258	.258	0	%100
13	MP4A	X	-.447	-.447	0	%100
14	MP4A	Z	.258	.258	0	%100
15	MP5A	X	-.447	-.447	0	%100
16	MP5A	Z	.258	.258	0	%100
17	OVP1	X	-.365	-.365	0	%100
18	OVP1	Z	.211	.211	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	M2	X	-.549	-.549	0	%100
2	M2	Z	0	0	0	%100
3	M1	X	-.673	-.673	0	%100
4	M1	Z	0	0	0	%100
5	MP3A	X	-.625	-.625	0	%100
6	MP3A	Z	0	0	0	%100
7	M4	X	0	0	0	%100
8	M4	Z	0	0	0	%100
9	MP1A	X	-.516	-.516	0	%100
10	MP1A	Z	0	0	0	%100
11	MP2A	X	-.516	-.516	0	%100
12	MP2A	Z	0	0	0	%100
13	MP4A	X	-.516	-.516	0	%100
14	MP4A	Z	0	0	0	%100
15	MP5A	X	-.516	-.516	0	%100
16	MP5A	Z	0	0	0	%100
17	OVP1	X	-.422	-.422	0	%100
18	OVP1	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	M2	X	-.476	-.476	0	%100
2	M2	Z	-.275	-.275	0	%100
3	M1	X	-.437	-.437	0	%100
4	M1	Z	-.252	-.252	0	%100
5	MP3A	X	-.541	-.541	0	%100
6	MP3A	Z	-.312	-.312	0	%100
7	M4	X	-.165	-.165	0	%100
8	M4	Z	-.095	-.095	0	%100
9	MP1A	X	-.447	-.447	0	%100
10	MP1A	Z	-.258	-.258	0	%100
11	MP2A	X	-.447	-.447	0	%100
12	MP2A	Z	-.258	-.258	0	%100
13	MP4A	X	-.447	-.447	0	%100
14	MP4A	Z	-.258	-.258	0	%100
15	MP5A	X	-.447	-.447	0	%100
16	MP5A	Z	-.258	-.258	0	%100
17	OVP1	X	-.365	-.365	0	%100
18	OVP1	Z	-.211	-.211	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	M2	X	-275	-275	0	%100
2	M2	Z	-476	-476	0	%100
3	M1	X	-084	-084	0	%100
4	M1	Z	-146	-146	0	%100
5	MP3A	X	-312	-312	0	%100
6	MP3A	Z	-541	-541	0	%100
7	M4	X	-285	-285	0	%100
8	M4	Z	-494	-494	0	%100
9	MP1A	X	-258	-258	0	%100
10	MP1A	Z	-447	-447	0	%100
11	MP2A	X	-258	-258	0	%100
12	MP2A	Z	-447	-447	0	%100
13	MP4A	X	-258	-258	0	%100
14	MP4A	Z	-447	-447	0	%100
15	MP5A	X	-258	-258	0	%100
16	MP5A	Z	-447	-447	0	%100
17	OVP1	X	-211	-211	0	%100
18	OVP1	Z	-365	-365	0	%100

**Member Area Loads**

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

**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	1238.221	10	1999.719	21	1656.727	1	-1.54	1	3.578	9	2.624	50
2		min	-1238.221	4	597.665	66	-1656.726	7	-5.891	19	-3.557	3	-4.275	46
3	Totals:	max	1238.221	10	1999.719	21	1656.727	1						
4		min	-1238.221	4	597.665	66	-1656.726	7						

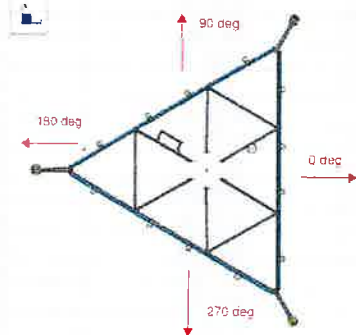
**Envelope AISC 15th(360-16): LRFD Steel Code Checks**

Member	Shape	Code Check	Loc[ft]	LC Shear	Loc[ft]	Dir	LC phi*Pnc	phi*Pnt	phi*Mn y	phi*Mn z	Cb	Eqn			
1	M2	PIPE 4.0	.000	.75	7	.000	.75	7	92571.3...	93240	10.631	10.631	1	H1-1b	
2	M1	HSS4X4X4	.442	0	45	.354	0	y	46	134908...	139518	16.181	16.181	1	H3-6
3	MP3A	PIPE 2.5	.194	3.938	7	.038	4.01	5	33961.6...	50715	3.596	3.596	2	H1-1b	
4	M4	PIPE 3.0	.950	6.25	45	.180	6.25	7	28250.5...	65205	5.749	5.749	1	H1-1b	
5	MP1A	PIPE 2.0	.233	3.354	1	.045	3.427	4	17855.0...	32130	1.872	1.872	1	H1-1b	
6	MP2A	PIPE 2.0	.104	3.354	1	.021	3.427	6	17855.0...	32130	1.872	1.872	1	H1-1b	
7	MP4A	PIPE 2.0	.124	3.354	7	.020	3.354	9	17855.0...	32130	1.872	1.872	2	H1-1b	
8	MP5A	PIPE 2.0	.233	3.354	1	.045	3.427	10	17855.0...	32130	1.872	1.872	1	H1-1b	
9	OVP1	PIPE 2.0	.066	2.25	1	.043	2.25	4	28843.4...	32130	1.872	1.872	1	H1-1b	

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

Custom Orientation Required Yes

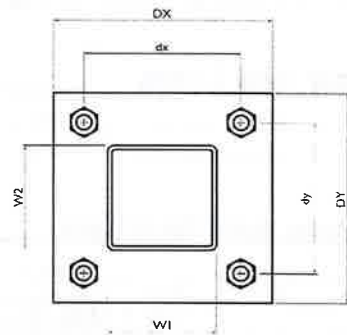
Nodes (labeled per Risa)	Orientation (per graphic of typical platform)
N1	0



Tower Connection Bolt Checks Yes

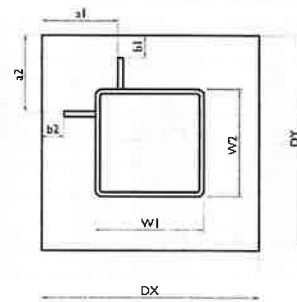
Bolt Orientation Parallel

Bolt Quantity per Reaction:	4
$d_x$ (in) (Delta X of typ. bolt config. sketch):	6
$d_y$ (in) (Delta Y of typ. bolt config. sketch):	6
Bolt Type:	A325N
Bolt Diameter (in):	0.625
Required Tensile Strength / bolt (kips):	5.1
Required Shear Strength / bolt (kips):	3.3
Tensile Capacity / bolt (kips):	20.7
Shear Capacity / bolt (kips):	12.4
Bolt Overall Utilization:	33.0%



Tower Connection Baseplate Checks Yes

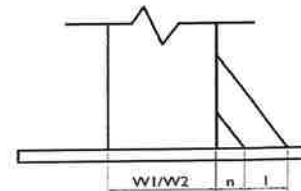
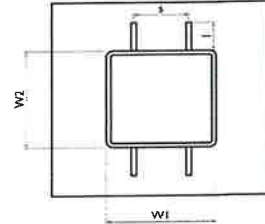
Connecting Standoff Member Shape:	Rect Tube
Weld Stiffener Configuration:	Has Stiffeners
Plate Width, $D_x$ (in):	8
Plate Height, $D_y$ (in):	8
$W_1$ (in):	4
$W_2$ (in):	4
Member Thickness (in):	0.25
Stiffener location $a_1$ (in):	2.25
Stiffener location $b_1$ (in):	0.25
Stiffener location $a_2$ (in):	2.25
Stiffener location $b_2$ (in):	0.25
$F_y$ (ksi, plate):	36
Plate Thickness (in):	0.75
Length of Yield Line, $L_y$ (in):	3.54
Bolt Eccentricity, $e$ (in):	0.35
$M_u$ (kip-in):	2.42
$\Phi * M_n$ (kip-in):	16.11
Plate Bending Utilization:	15.0%



Tower Connection Weld Checks

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

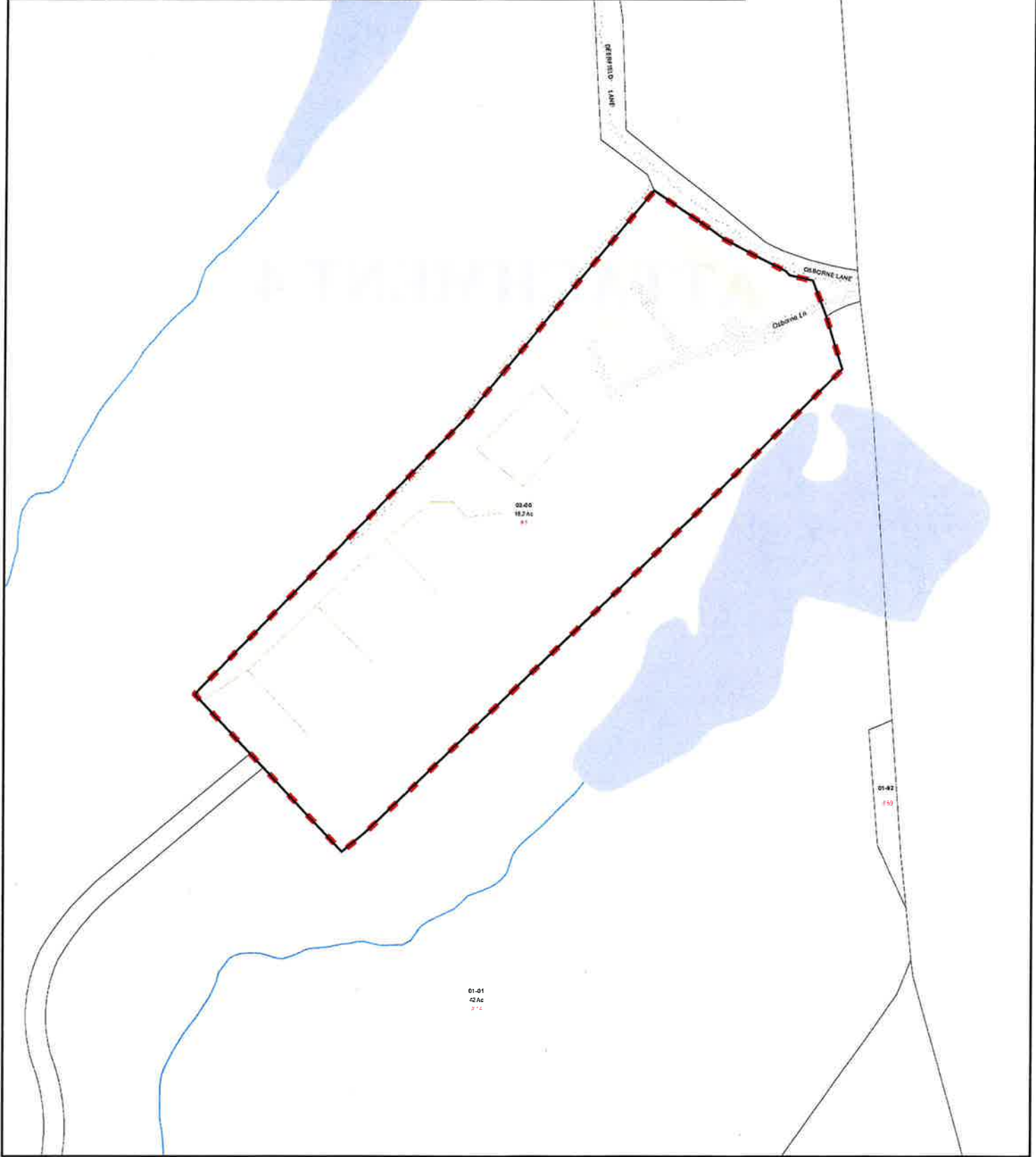
<b>Yes</b>	
<b>Rectangle</b>	
<b>(2) Stiffeners on top/bottom</b>	
	<b>Yes</b>
	1.5
	3.5
	0.5
	4
	4
	4
	28.00
	74.58
	31.83
	266.83
	4
	4
	1.24
	5.57
	<b>22.3%</b>



# **ATTACHMENT 4**



**City of Ansonia, Connecticut- Parcel Map**  
**Parcel: 10000020000**  
**Address: 1 DEERFIELD LA**



**Approximate Scale: 1 inch = 250 feet**



**Map Produced: June 2021**

**Disclaimer: This map is for informational purposes only All information is subject to verification by any user. The City of Ansonia and its mapping contractors assume no legal responsibility for the information contained herein.**





# Town of Ansonia, CT

## Property Listing Report

Map Block Lot

100 0002 0000

Building #

1

Unique Identifier

16660

### Property Information

Property Location	1 DEERFIELD LA
Mailing Address	11 HEMLOCK HOLLOW RD WOODBRIDGE CT 06525
Land Use	Residential
Zoning Code	AA
Neighborhood	X13

Owner	MACABEE PROPERTIES LLC
Co-Owner	
Book / Page	0435/0195
Land Class	Residential
Census Tract	1252
Acreage	17.2

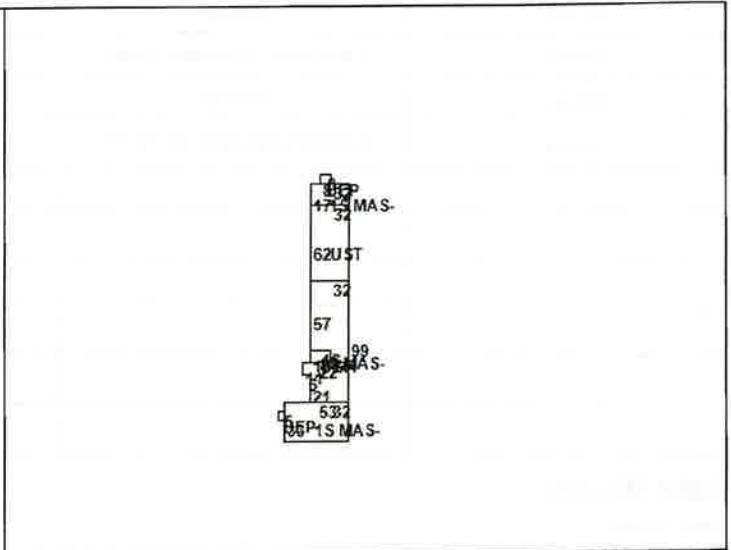
### Valuation Summary

(Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	240300	168200
Outbuildings	27900	19600
Land	280100	106820
<b>Total</b>	<b>548300</b>	<b>294620</b>

### Utility Information

Electric	No
Gas	No
Sewer	No
Public Water	Yes
Well	No



### Primary Construction Details

Year Built	1958
Building Desc.	Residential
Building Style	Family Flat 4
Stories	1
Exterior Walls	Concr/Cinder
Exterior Walls 2	
Interior Walls	Plaster
Interior Walls 2	
Interior Floors 1	Carpet
Interior Floors 2	Softwood

Heating Fuel	Oil
Heating Type	Hot Water
AC Type	
Bedrooms	8
Full Bathrooms	4
Half Bathrooms	0
Extra Fixtures	0
Total Rooms	12
Bath Style	NA
Kitchen Style	Typical
Occupancy	4

Building Use	Four Family
Building Condition	Average
Frame Type	Masonry
Fireplaces	0
Bsmt Gar	0
Fin Bsmt Area	0
Fin Bsmt Quality	
Building Grade	0
Roof Style	Flat
Roof Cover	Tar and Gravel

# Town of Ansonia, CT

Property Listing Report

Map Block Lot

100 0002 0000

Building #

1

Unique Identifier

16660

## Detached Outbuildings

Type	Description	Area (sq ft)	Condition	Year Built
Barn	1 Story Barn	384	Average	2003
Farm	Stable	800	Average	1958
Garage	Poor	1200	Average	2002
Shed	Frame	800	Average	1958

## Attached Extra Features

Type	Description	Area (sq ft)	Condition	Year Built
Utility	Storage	1984	Average	1958
Porch	Unfinished Enclosed Porch	64	Average	1958
Garage	Frame	160	Average	1958
Porch	Unfinished Enclosed Porch	40	Average	1958

## Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
MACABEE PROPERTIES LLC	0435_0195	12/28/2005	0
GELERTNER JOEL & CHERYL	0316_0863	12/2/1998	235000

# **ATTACHMENT 5**



**Certificate of Mailing — Firm**

Name and Address of Sender  Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103	TOTAL NO. of Pieces Listed by Sender  3	TOTAL NO. of Pieces Received at Post Office™  3	Affix Stamp Here Postmark with Date of Receipt.  neopost <sup>SM</sup> 07/27/2023 US POSTAGE \$003.19 <sup>00</sup>  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
1.	David S. Cassetti, Mayor City of Ansonia 253 Main Street Ansonia, CT 06401						
2.	Ronda Porrini, Land Use Administrator City of Ansonia 253 Main Street Ansonia, CT 06401						
3.	Macabee Properties LLC 11 Hemlock Hollow Road Ansonia, CT 06525						
4.							
5.							
6.							