Robinson+Cole

KENNETH C. BALDWIN

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Also admitted in Massachusetts
and New York

December 8, 2021

Via Electronic Mail

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

Re: **Notice of Exempt Modification – Facility Modification**
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"). The facility consists of antennas and remote radio heads attached to a tower and related equipment on the ground, near the base of the tower. The tower and Cellco's use of the tower were approved by the Siting Council ("Council") in April of 2008 (Docket No 340). A copy of the Council's Docket No. 340 Decision and Order is included in Attachment 1.

Cellco now intends to modify its facility by removing nine (9) existing antennas and installing three (3) new Samsung MT6407-77A antennas and six (6) MX06FRO660-03 antennas. Cellco also intends to remove three (3) existing remote radio heads ("RRHs") and install six (6) new RRHs. All new equipment will be installed on Cellco's existing antenna mounts. A set of project plans showing Cellco's proposed facility modifications and specification for Cellco's new antennas and RRHs are included in Attachment 2.

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

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

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

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 antennas will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A cumulative general power density table for Cellco's modified facility is included in Attachment 3. The modified facility will be capable of providing Cellco's 5G wireless service.

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 ("SA") and Mount Analysis ("MA"), the existing tower, tower foundation and antenna mounts with certain modifications, can support Cellco's proposed modifications. Copies of the SA and MA are included in Attachment 4.

A copy of the parcel map and Property owner information is included in Attachment 5. A Certificate of Mailing verifying that this filing was sent to municipal officials and the property owner is included in Attachment 6.

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. Cassetti, Mayor
Ronda Porrini, Land Use Administrator
MACABEE Properties LLC, Property Owner
Alex Tyurin, Verizon Wireless

ATTACHMENT 1

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
Internet: ct.gov/csc

Daniel F. Caruso
Chairman

April 9, 2008

Carrie L. Larson, Esq.
Cohen and Wolf P.C.
1115 Broad Street
P.O. Box 1821
Bridgeport, CT 06601-1821

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

Dear Attorney Larson:

At a public meeting of the Connecticut Siting Council held on March 26, 2008, the Connecticut Siting Council (Council) considered and approved an Amendment to the Decision and Order deleting Condition No. 5. The Council also approved the modification to the Development and Management Plan (D&M Plan) submitted for this project as specified in your correspondence dated February 21, 2008.

This approval applies only to the correspondence submitted on February 21, 2008. Any further changes to the D&M Plan require advance Council notification and approval.

Please be advised that deviations from this plan are enforceable under the provisions of the Connecticut General Statutes § 16-50u. Enclosed is a copy of the staff report, dated March 26, 2008 and the amended Decision and Order dated March 26, 2008.

Thank you for your attention and cooperation.

Very truly yours,

Daniel F. Caruso
Chairman

DFC/MP/laf

Enclosure: Staff Report, dated March 26, 2008
Amended Decision and Order, dated March 26, 2008
Service List dated September 19, 2007

c: Parties and Intervenors
The Honorable James T. DellaVolpe, Mayor, City of Ansonia
Peter Crabtree, Zoning Enforcement Officer, City of Ansonia

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL
Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
Internet: ct.gov/csc

Daniel F. Caruso
Chairman

Docket No. 340
Optasite and T-Mobile
1 Deerfield Lane, Ansonia
Modification to D&M Plan and Decision and Order
Staff Report
March 26, 2008

On July 7, 2007, the Connecticut Siting Council (Council) received an application (Application) for a Certificate of Environmental Compatibility and Public Need from Optasite and T-Mobile (collectively, the Applicant) for a telecommunications facility to be located at 1 Deerfield Lane, Ansonia. In the Application, the Applicant proposed that the utilities be run overhead. Specifically, utilities would be installed overhead from existing service on Osbourne Lane to the compound. Approximately ten, 30-foot utility poles would be installed along the proposed access roadway with approximately 100-foot spacing. However, during the hearing, Optasite testified that it is amenable to running the utilities underground.

On November 29, 2007, the Council approved the Application and per Order No. 5 of the Decision and Order (D&O), required that the utilities be run underground following the general alignment of the access drive. On January 24, 2008, the Council approved the Development and Management Plan (D&M Plan) which included underground utilities, consistent with the D&O.

Subsequent to the D&M Plan approval, Optasite had discussions with The United Illuminating Company (UI) and the property owner. By letter dated February 21, 2008, Optasite advised the Council that both UI and the property owner have safety concerns regarding the proposed underground utilities. The underground utility run is located immediately adjacent to paddock fencing used in the operation of the horse farm. The fencing is pressure-operated and the digging for the underground utilities would disrupt the operation of the fencing. Also, given the topography, installation of underground utilities could result in the destabilization of the ground and the fence collapsing. Finally, the utility routing runs along an existing roadway that is used on a daily basis for the operation of the horse farm. The installation would also require the disturbance and installation of a second, temporary route to maintain the operation of the farm. Thus, Optasite requests a modification of the D&M Plan to allow the utilities to be run overhead and relief from Order No. 5 (the requirement to underground utilities).

DOCKET NO. 340 - Optasite Towers LLC and Omnipoint Communications, Inc. application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility located at 1 Deerfield Lane, Ansonia, Connecticut.	Connecticut Siting Council March 26, 2008

Amended Decision and Order
(*Deleted material is in brackets.)

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 Ominipoint 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	Its Representative
Optasite Towers LLC and Omnipoint Communications, Inc.	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 clarson@cohenandwolf.com
Intervenor	**Its Representative**
Cellco Partnership d/b/a Verizon Wireless	Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103-3597 (860) 275-8200 (860) 275-8299 fax kbaldwin@rc.com
Intervenor	**Its Representative**
Osborne Lane Associates, LLC	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
Intervenor	**Its Representative**
Gennaro Savino	Gennaro Savino 128 Ford Road Woodbridge, CT 06525 (203) 387-1573 savinovineyards@sbcglobal.net

Intervenor

Brian Freeman

Its Representative

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

STATE OF CONNECTICUT)

ss. New Britain, Connecticut :

COUNTY OF HARTFORD)

I hereby certify that the foregoing is a true and correct copy of the amended Decision and Order issued by the Connecticut Siting Council, State of Connecticut.

ATTEST:

S. Derek Phelps
Executive Director
Connecticut Siting Council

I certify that a copy of amended Decision and Order in Docket No. 340 has been forwarded by Certified First Class Return Receipt Requested mail on April 9, 2008, to all parties and intervenors of record as listed on the attached service list, dated September 19, 2007.

ATTEST:

Lisa A. Fontaine
Fiscal Administrative Officer
Connecticut Siting Council

Date: September 19, 2007

LIST OF PARTIES AND INTERVENORS
SERVICE LIST

Status Granted	Status Holder (name, address & phone number)	Representative (name, address & phone number)
Applicant	Optasite Towers LLC and Omnipoint Communications, Inc.	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 clarson@cohenandwolf.com
Intervenor (approved 08/29/07)	Cellco Partnership d/b/a Verizon Wireless	Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103-3597 (860) 275-8200 (860) 275-8299 fax kbaldwin@rc.com
Intervenor (approved 08/29/07)	Osborne Lane Associates, LLC	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
Intervenor (approved 09/18/07)	Gennaro Savino	Gennaro Savino 128 Ford Road Woodbridge, CT 06525 (203) 387-1573 savinovineyards@sbcglobal.net
Intervenor (approved 09/18/07)	Brian Freeman	Brian Freeman 5 Hampton Trail Wallingford, CT 06492 (203) 793-7505 Brian@sparc.us

ATTACHMENT 2

verizon

ANSONIA EAST CT
1 DEERFIELD LANE
ANSONIA, CT 06401

GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2015 INTERNATIONAL BUILDING CODE AS MODIFIED BY THE 2018 CONNECTICUT SUPPLEMENT, INCLUDING THE TIA/EIA-222 REVISION "G" STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND SUPPORTING STRUCTURES, 2017 CONNECTICUT FIRE SAFETY CODE, NATIONAL ELECTRICAL CODE, AND LOCAL CODES.
2. SHOULD ANY FIELD CONDITIONS PRECLUDE COMPLIANCE WITH THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND SHALL NOT PROCEED WITH ANY AFFECTED WORK.
3. CONTRACTOR SHALL REVIEW ALL DRAWINGS AND SPECIFICATIONS IN THE CONTRACT DOCUMENT SET. CONTRACTOR SHALL COORDINATE ALL WORK SHOWN IN THE SET OF DRAWINGS. THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF DRAWINGS TO ALL SUBCONTRACTORS AND ALL RELATED PARTIES. THE SUBCONTRACTORS SHALL EXAMINE ALL THE DRAWINGS AND SPECIFICATIONS FOR THE INFORMATION THAT AFFECTS THEIR WORK.
4. CONTRACTOR SHALL PROVIDE A COMPLETE BUILD-OUT WITH ALL FINISHES, STRUCTURAL, MECHANICAL, AND ELECTRICAL COMPONENTS AND PROVIDE ALL ITEMS AS SHOWN OR INDICATED ON THE DRAWINGS OR IN THE WRITTEN SPECIFICATIONS.
5. CONTRACTOR SHALL FURNISH ALL MATERIAL, LABOR AND EQUIPMENT TO COMPLETE THE WORK AND FURNISH A COMPLETED JOB ALL IN ACCORDANCE WITH LOCAL AND STATE GOVERNING AUTHORITIES AND OTHER AUTHORITIES HAVING LAWFUL JURISDICTION OVER THE WORK.
6. CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND ALL INSPECTIONS REQUIRED AND SHALL ALSO PAY FEES REQUIRED FOR THE GENERAL CONSTRUCTION, AND ALL TRADES AS APPLICABLE PERMITS SHALL BE PAID FOR BY THE RESPECTIVE SUBCONTRACTORS.
7. CONTRACTOR SHALL MAINTAIN A CURRENT SET OF DRAWINGS AND SPECIFICATIONS ON SITE AT ALL TIMES AND INSURE DISTRIBUTION OF NEW DRAWINGS TO SUBCONTRACTORS AND OTHER RELEVANT PARTIES AS SOON AS THEY ARE MADE AVAILABLE. ALL OLD DRAWINGS SHALL BE MARKED VOID AND REMOVED FROM THE CONTRACT AREA. THE CONTRACTOR SHALL FURNISH AN "AS-BUILT" SET OF DRAWINGS TO OWNER UPON COMPLETION OF PROJECT.
8. LOCATION OF EQUIPMENT, AND WORK SUPPLIED BY OTHERS THAT IS DIAGRAMMATICALLY INDICATED ON THE DRAWINGS SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR SHALL DETERMINE LOCATIONS AND DIMENSIONS SUBJECT TO STRUCTURAL CONDITIONS AND WORK OF THE SUBCONTRACTORS.
9. THE CONTRACTOR IS SOLELY RESPONSIBLE TO DETERMINE CONSTRUCTION PROCEDURE AND SEQUENCE, AND TO ENSURE THE SAFETY OF THE EXISTING STRUCTURES AND ITS COMPONENT PARTS DURING CONSTRUCTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, BRACING, UNDERPINNING, ETC. THAT MAY BE NECESSARY. MAINTAIN EXISTING BUILDING'S/PROPERTY'S OPERATIONS, COORDINATE WORK WITH BUILDING/PROPERTY OWNER.
10. DRAWINGS INDICATE THE MINIMUM STANDARDS, BUT IF ANY WORK SHOULD BE INDICATED TO BE SUBSTANDARD TO ANY ORDINANCES, LAWS, CODES, RULES, OR REGULATIONS BEARING ON THE WORK, THE CONTRACTOR SHALL INCLUDE IN HIS WORK AND SHALL EXECUTE THE WORK CORRECTLY IN ACCORDANCE WITH SUCH ORDINANCES, LAWS, CODES, RULES OR REGULATIONS WITH NO INCREASE IN COSTS.
11. ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH LOCAL UTILITY COMPANY REQUIREMENTS AND SPECIFICATIONS.
12. ALL EQUIPMENT AND PRODUCTS PURCHASED ARE TO BE REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUBCONTRACTORS FOR ANY CONDITION PER MFR.'S RECOMMENDATIONS. CONTRACTOR TO SUPPLY THESE ITEMS AT NO COST TO OWNER OR CONSTRUCTION MANAGER.
13. ANY AND ALL ERRORS, DISCREPANCIES, AND "MISSED" ITEMS ARE TO BE BROUGHT TO THE ATTENTION OF THE VERIZON WIRELESS CONSTRUCTION MANAGER DURING THE BIDDING PROCESS BY THE CONTRACTOR. ALL THESE ITEMS ARE TO BE INCLUDED IN THE BID. NO "EXTRA" WILL BE ALLOWED FOR MISSED ITEMS.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ON-SITE SAFETY FROM THE TIME THE JOB IS AWARDED UNTIL ALL WORK IS COMPLETE AND ACCEPTED BY THE OWNER.
15. CONTRACTOR TO REVIEW ALL SHOP DRAWINGS AND SUBMIT COPY TO ENGINEER FOR APPROVAL. DRAWINGS MUST BEAR THE CHECKER'S INITIALS BEFORE SUBMITTING TO THE CONSTRUCTION MANAGER FOR REVIEW.
16. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, ANGLES, AND EXISTING CONDITIONS AT THE SITE, PRIOR TO FABRICATION AND/OR INSTALLATION OF ANY WORK IN THE CONTRACT AREA.
17. COORDINATION, LAYOUT, FURNISHING AND INSTALLATION OF CONDUIT AND ALL APPURTENANCES REQUIRED FOR PROPER INSTALLATION OF ELECTRICAL AND TELECOMMUNICATION SERVICE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
18. ALL EQUIPMENT AND PRODUCTS PURCHASED ARE TO BE REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUB- CONTRACTORS FOR ANY CONDITION PER THE MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR TO SUPPLY THESE ITEMS AT NO COST TO OWNER OR CONSTRUCTION MANAGER.
19. ALL DAMAGE CAUSED TO ANY EXISTING STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE HELD LIABLE FOR ALL REPAIRS REQUIRED FOR EXISTING STRUCTURES IF DAMAGED DURING CONSTRUCTION ACTIVITIES.
20. THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" AT LEAST 48 HOURS PRIOR TO ANY EXCAVATIONS AT 1-800-922-4455. ALL UTILITIES SHALL BE IDENTIFIED AND CLEARLY MARKED PRIOR TO ANY EXCAVATION WORK. CONTRACTOR SHALL MAINTAIN AND PROTECT MARKED UTILITIES THROUGHOUT PROJECT COMPLETION.

SITE DIRECTIONS

FROM: 20 ALEXANDER DRIVE, WALLINGFORD, CONNECTICUT **TO:** 1 DEERFIELD LANE, ANSONIA, CT 06401

1. START OUT GOING NORTH ON ALEXANDER DR TOWARD BARNES INDUSTRIAL RD.	0.18 MI
2. TURN RIGHT ONTO BARNES INDUSTRIAL RD.	0.11 MI
3. TAKE FIRST LEFT ONTO CT-68	0.35 MI
4. TURN RIGHT ONTO RAMP	0.17 MI
5. TURN RIGHT ONTO N COLONY RD/ US-5 N	0.39 MI
6. MERGE ONTO CT-15 S VIA THE RAMP ON THE LEFT.	14.44 MI
7. TAKE THE CT-69 EXIT, EXIT 59, TOWARD WOODBRIDGE/NEW HAVEN/CT-63.	0.20 MI
8. TURN LEFT ONTO WHALLEY AVE/CT-69. CONTINUE TO FOLLOW CT-69	0.34 MI
9. TURN LEFT ONTO BRADLEY RD.	0.28 MI
10. TURN RIGHT ONTO AMITY RD/CT-63.	0.85 MI
11. TURN LEFT ONTO CENTER RD/CT-114. CONTINUE TO FOLLOW CT-114.	2.08 MI
12. TURN RIGHT ONTO RIMMON RD/CT-313.	0.56 MI
13. TURN LEFT ONTO NORTHROP RD.	0.01 MI
14. STAY STRAIGHT TO GO ONTO FORD RD.	0.48 MI
15. TURN RIGHT ONTO OSBORNE LN.	0.33 MI
16. 1 DEERFIELD LN, ANSONIA, CT 06401-2629, 1 DEERFIELD LN IS AT END OF ROAD.	

VICINITY MAP

SCALE: 1" = 1000'

PROJECT SUMMARY

1. THE PROPOSED UPGRADE SCOPE OF WORK AT THE EXISTING UNMANNED TELECOMMUNICATIONS FACILITY GENERALLY INCLUDES THE FOLLOWING:

A. AT THE EXISTING MONOPOLE TOWER MOUNTED ANTENNA SECTORS:

- REMOVE (6) EXISTING ANDREW ANTENNAS.
- REMOVE (1) EXISTING ANTEL ANTENNA.
- REMOVE (1) EXISTING AMPHENOL ANTENNA.
- REMOVE (1) EXISTING SWEDCOM ANTENNA.
- REMOVE (1) EXISTING 1-5/8" COAX CABLE.
- REMOVE (1) EXISTING 6x12 HYBRID CABLE.
- REMOVE (3) EXISTING NOKIA RADIOS.
- REMOVE (1) EXISTING OVP-6 BOX.
- RETAIN (4) EXISTING ANDREW - DB846F65ZAXY ANTENNAS.
- RETAIN (2) EXISTING DECIBEL PRODUCTS - DB846H80E-SX ANTENNAS.
- RETAIN (10) EXISTING SPARE 1-5/8" COAX CABLES.
- RETAIN (6) EXISTING CDMA 1-5/8" COAX CABLES.
- INSTALL (6) NEW JMA - MX06FRO660-03 ANTENNAS.
- INSTALL (3) NEW MT6407-77A L-SUB6 ALL-IN-ONE ANTENNA/RRHS.
- INSTALL (3) NEW B5/B13 RRH-RF4440D-13A AND (3) NEW SAMSUNG B2/B66A RRH-RF4439D-25A.
- INSTALL (1) NEW RAYCAP - DB-C1-12C-24AB-0Z OVP-12 BOX.
- INSTALL (1) 12X24 HYBRIFLEX LI HYBRID CABLE.
- INSTALL (3) NEW JMA 91900314-02 ANTENNA MOUNTS.
- ROTATE EXISTING BETA AND GAMMA HORIZONTAL MOUNT MEMBERS.

B. AT THE EXISTING VERIZON WIRELESS EQUIPMENT SHELTER:

- REMOVE (3) EXISTING NOKIA RADIOS.

PROJECT INFORMATION

SITE NAME:	ANSONIA EAST CT
SITE ADDRESS:	1 DEERFIELD LANE ANSONIA, CT 06401
LESSEE/TENANT:	CELLCO PARTNERSHIP d.b.a. VERIZON WIRELESS 20 ALEXANDER DRIVE WALLINGFORD, CT 06492
CONTACT PERSON:	WALTER CHARCZNSKI (CONSTRUCTION MANAGER) VERIZON WIRELESS (860) 306-1806
ENGINEER:	CENTEK ENGINEERING, INC. 63-2 NORTH BRANFORD RD. BRANFORD, CT. 06405 (203) 488-0580
PROJECT COORDINATES:	LATITUDE: 41°-21'-2.7"N LONGITUDE: 73°-2'-57.3"W COORDINATES BASED ON VERIZON WIRELESS RFDS, DATED AUGUST 18, 2021.

SHEET INDEX

SHT. NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	0
N-1	NOTES AND SPECIFICATIONS	0
B-1	RF BILL OF MATERIALS	0
C-1	COMPOUND PLAN AND ELEVATION	0
C-2	ANTENNA SECTOR CONFIGURATION DETAILS	0
C-3	RF DETAILS	0
E-1	ELECTRICAL DETAILS AND SPECIFICATIONS	0

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
0	08/03/21	ANC	DMD	CONSTRUCTION DRAWINGS - ISSUED FOR CONSTRUCTION
C	08/09/21	ANC	DMD	CONSTRUCTION DRAWINGS - REVISED PER CLIENT COMMENTS
B	08/19/21	ANC	DMD	CONSTRUCTION DRAWINGS - REVISED PER RFDS DATED 08/18/21
A	08/18/21	ANC	DMD	CONSTRUCTION DRAWINGS - ISSUED FOR CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL

verizon

CENTEK engineering
Centered on Solutions
(203) 488-0580
(203) 488-8587 Fax
63-2 North Branford Road
Branford, CT 06405
www.CentekEng.com

Cellco Partnership d/b/a Verizon Wireless

ANSONIA EAST CT
1 DEERFIELD LANE
ANSONIA, CT 06401

DATE: 08/18/21
SCALE: AS NOTED
JOB NO. 21007.38

TITLE SHEET

T-1

Sheet No. 1 of 7

NOTES AND SPECIFICATIONS

DESIGN BASIS:

GOVERNING CODE: 2015 INTERNATIONAL BUILDING (IBC) AS MODIFIED BY THE 2018 CT STATE BUILDING CODE AND AMENDMENTS.

1. DESIGN CRITERIA:

- RISK CATEGORY: II (BASED ON TABLE 1604.5 OF THE 2015 IBC)
- NOMINAL DESIGN SPEED (TOWER): 97 MPH (Vasd) (EXPOSURE B/IMPORTANCE FACTOR 1.0 BASED ON ASCE 7-10) PER 2015 INTERNATIONAL BUILDING CODE (IBC) AS MODIFIED BY THE 2018 CONNECTICUT STATE BUILDING CODE.
- SEISMIC LOAD (DOES NOT CONTROL): PER ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES.

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE GOVERNING BUILDING CODE.
2. DRAWINGS INDICATE THE MINIMUM STANDARDS, BUT IF ANY WORK SHOULD BE INDICATED TO BE SUBSTANDARD TO ANY ORDINANCES, LAWS, CODES, RULES, OR REGULATIONS BEARING ON THE WORK, THE CONTRACTOR SHALL INCLUDE IN HIS WORK AND SHALL EXECUTE THE WORK CORRECTLY IN ACCORDANCE WITH SUCH ORDINANCES, LAWS, CODES, RULES OR REGULATIONS WITH NO INCREASE IN COSTS.
3. BEFORE BEGINNING THE WORK, THE CONTRACTOR IS RESPONSIBLE FOR MAKING SUCH INVESTIGATIONS CONCERNING PHYSICAL CONDITIONS (SURFACE AND SUBSURFACE) AT OR CONTIGUOUS TO THE SITE WHICH MAY AFFECT PERFORMANCE AND COST OF THE WORK.
4. DIMENSIONS AND DETAILS SHALL BE CHECKED AGAINST EXISTING FIELD CONDITIONS.
5. THE CONTRACTOR SHALL VERIFY AND COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS, SLEEVES AND ANCHOR BOLTS AS REQUIRED BY ALL TRADES.
6. ALL DIMENSIONS, ELEVATIONS, AND OTHER REFERENCES TO EXISTING STRUCTURES, SURFACE, AND SUBSURFACE CONDITIONS ARE APPROXIMATE. NO GUARANTEE IS MADE FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS, ELEVATIONS, ANGLES WITH EXISTING CONDITIONS AND WITH ARCHITECTURAL AND SITE DRAWINGS BEFORE PROCEEDING WITH ANY WORK.
7. AS THE WORK PROGRESSES, THE CONTRACTOR SHALL NOTIFY THE OWNER OF ANY CONDITIONS WHICH ARE IN CONFLICT OR OTHERWISE NOT CONSISTENT WITH THE CONSTRUCTION DOCUMENTS AND SHALL NOT PROCEED WITH SUCH WORK UNTIL THE CONFLICT IS SATISFACTORILY RESOLVED.
8. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING AND MAINTAINING ADEQUATE SHORING, BRACING, AND BARRICADES AS MAY BE REQUIRED FOR THE PROTECTION OF EXISTING PROPERTY, CONSTRUCTION WORKERS, AND FOR PUBLIC SAFETY.
9. THE CONTRACTOR IS SOLELY RESPONSIBLE TO DETERMINE CONSTRUCTION PROCEDURE AND SEQUENCE, AND TO ENSURE THE SAFETY OF THE EXISTING STRUCTURES AND ITS COMPONENT PARTS DURING CONSTRUCTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, BRACING, UNDERPINNING, ETC. THAT MAY BE NECESSARY. MAINTAIN EXISTING SITE OPERATIONS, COORDINATE WORK WITH NORTHEAST UTILITIES
10. ALL DAMAGE CAUSED TO ANY EXISTING STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE HELD LIABLE FOR ALL REPAIRS REQUIRED FOR EXISTING STRUCTURES IF DAMAGED DURING CONSTRUCTION ACTIVITIES.
11. REFER TO DRAWING T1 FOR ADDITIONAL NOTES AND REQUIREMENTS.

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0	11/03/21	ANC	DMD	CONSTRUCTION DRAWINGS – ISSUED FOR CONSTRUCTION
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NOTES AND SPECIFICATIONS

N-1

Sheet No. 2 of 7

PLUMBING DIAGRAM NOTES:

1. PORTS 1 & 2 ARE FOR LOW BAND (698–896 MHz).
2. PORTS 3, 4, 5 & 5 ARE FOR HIGH BAND (1695–2360 MHz).
3. SMART BIAS TEE (SBT) IS THROUGH ANTENNA PORTS 1 & 3 (1 FOR LOW BAND AND 3 FOR HIGH BAND).
4. AISG CABLE IS ONLY NEEDED WHEN DRAWN IN THE DIAGRAMS ABOVE. IF IT IS NOT DRAWN THEN SBT IS ENOUGH TO CONTROL ALL RET MOTORS.
5. NOT ALL SBT PORTS ARE NEEDED TO CONTROL RET. ONLY GREEN PORT CONNECTION TO GREEN PORT WILL CONTROL RET.

RET DC SIGNAL PASS FOR RET
(PORT THAT WILL CONTROL RET)

PLUMBING DIAGRAM COMMENTS:

A. DIAGRAMS SHOW ANTENNA PORT CONFIGURATIONS AS VIEWED FROM BELOW ANTENNAS.

B. ANTENNA POSITIONS ARE INDICATED AS VIEWED FROM IN FRONT OF ANTENNAS.

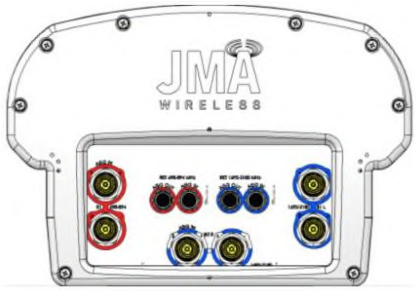
C. CAP AND WEATHERPROOF UNUSED ANTENNA PORTS.

D. ALL PLUMBING DIAGRAM COLORS ARE IRRELEVANT EXCEPT FOR AISG AND HYBRIFLEX CABLE. (FOR THE COAX COLORS, FOLLOW COAX COLORS GUIDE ABOVE)

DC SIGNAL CAPABLE PORT

AISG CABLE

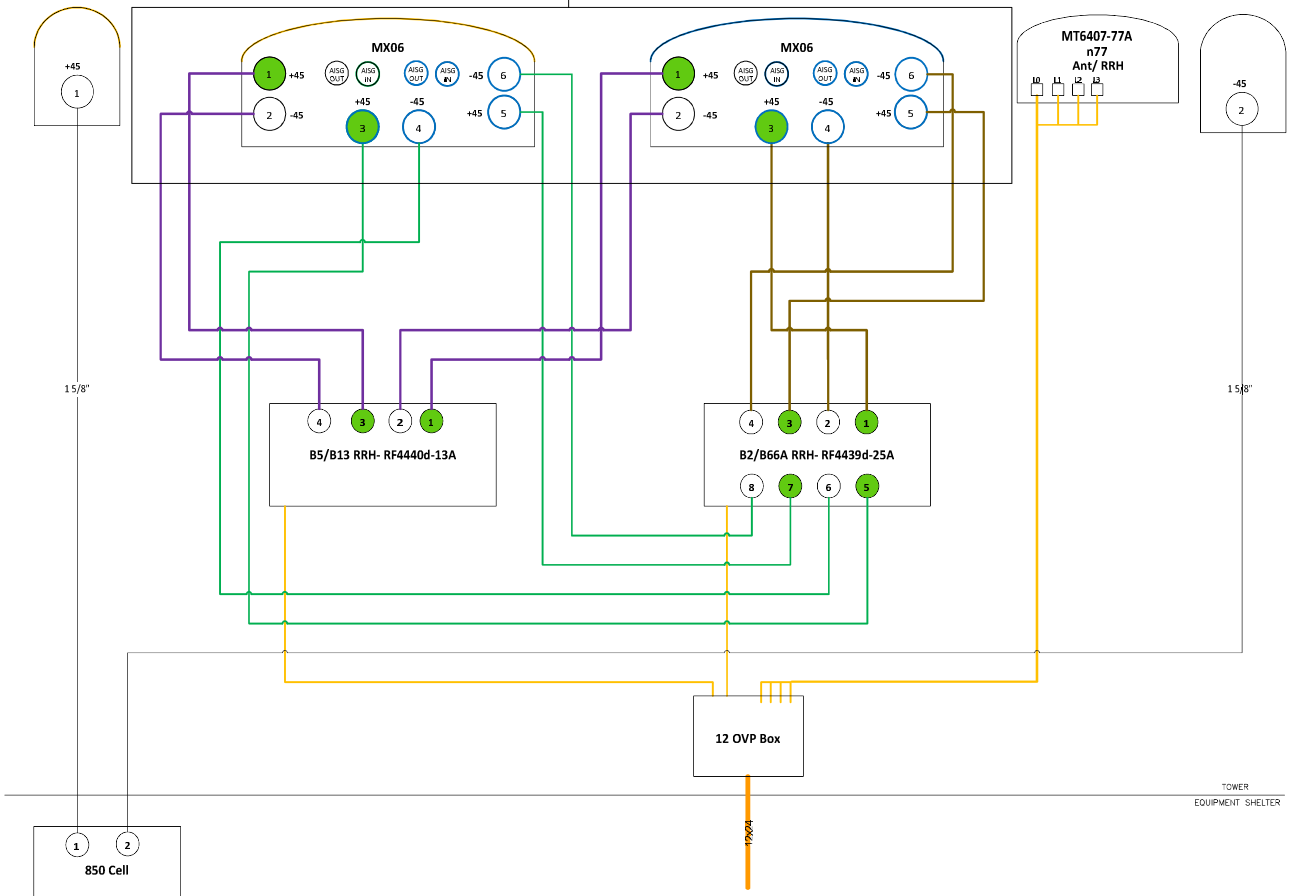
RET DC SIGNAL PASS FOR RET (PORT THAT WILL CONTROL RET)



A/G: DB846F65ZAXY
B: DB846H80E-SX

91900314-02

A/G: DB846F65ZAXY
B: DB846H80E-SX



NOTES:

1. INFORMATION SHOWN HEREIN IS FOR USE BY VERIZON WIRELESS EQUIPMENT OPERATIONS.
2. THIS B.O.M. DRAWING IS BASED OFF FACILITY UPGRADE DESIGN DRAWINGS PREPARED BY CENTEK ENGINEERING (REV.0 DATED: 11.03.21), & VERIZON WIRELESS RF ANTENNA EQUIPMENT RECOMMENDATION (DATED 08.18.21).

BILL OF MATERIALS		
TECHNOLOGY	QUANTITY	ANTENNA
LTE 700 LTE 850 LTE PCS 1900 LTE AWS 2100	6	JMA WIRELESS ANTENNA MODEL: MX06FRO660-03
5G	3	SAMSUNG ANTENNA MODEL: MT6407-77A

CABLES	QUANTITY	LENGTH	COMMENTS
HYBRID CABLE	1	±285FT	12X24 HYBRIFLEX LI

RADIOS	QUANTITY	COMMENTS
LTE 700 LTE 5G 850	3	SAMSUNG MODEL: RF4440-13A
LTE PCS 1900 LTE AWS 2100	3	SAMSUNG MODEL: RF4439D-25A
5G	3	INTEGRATED INTO MT6407-77A ANTENNA

DIPLEXERS	QUANTITY	COMMENTS
–	–	–

OVP BOXES	QUANTITY	COMMENTS
RAYCAP OVP-12 BOX	1	RAYCAP MODEL: DB-C1-12C-24AB-0Z

ANTENNA MOUNT	QUANTITY	COMMENTS
JMA ANTENNA MOUNT	3	JMA MODEL: 91900314-02

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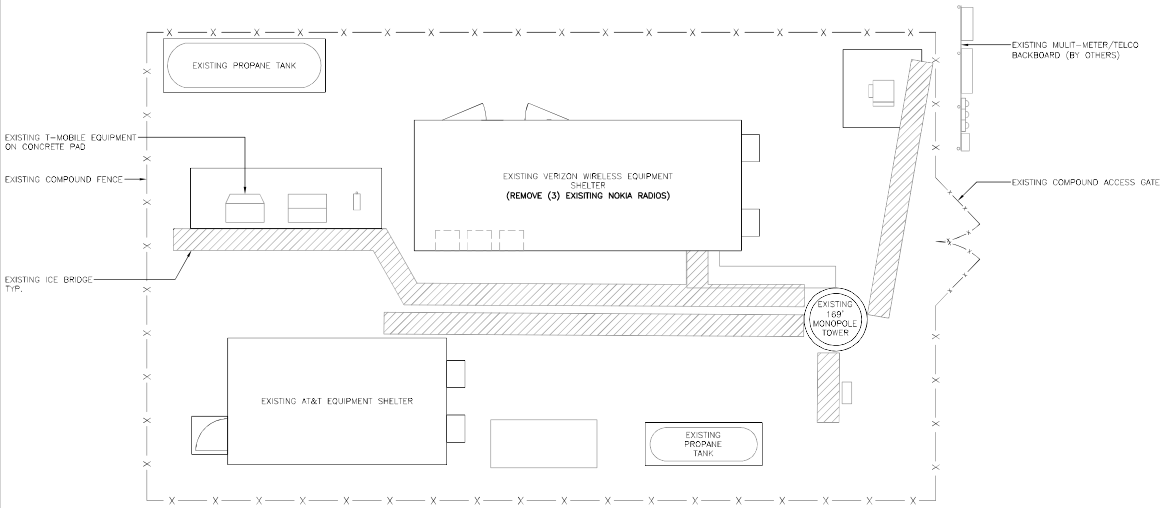
RF BILL OF MATERIALS

B-1

Sheet No. 3 of 7

TOWER STRUCTURAL ANALYSIS REFERENCE NOTE:

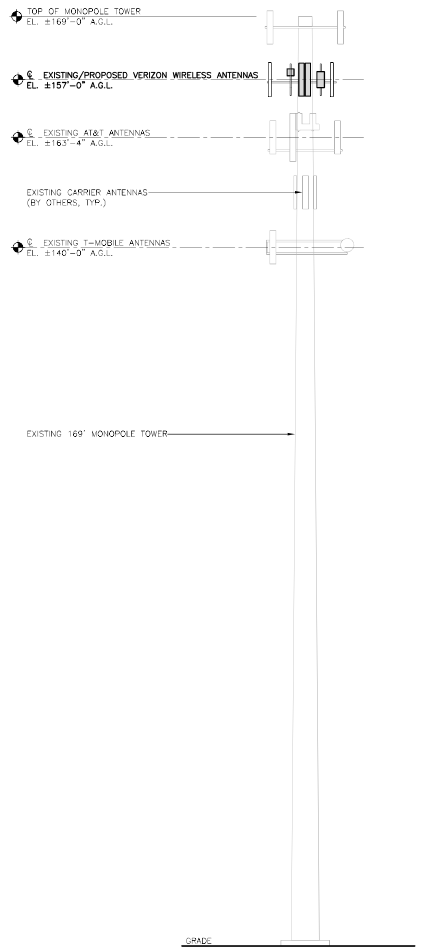
REFER TO PASSING TOWER STRUCTURAL ANALYSIS REPORT PREPARED FOR SBA COMMUNICATIONS CORP., BY TOWER ENGINEERING SOLUTIONS (TES), DATED 10/28/2021. TES PROJECT NUMBER 118278.



1 / C-1 **COMPOUND PLAN - PROPOSED**
SCALE: 1" = 10'

APPROXIMATE NORTH

GRAPHIC SCALE
(IN FEET)
1 inch = 10 ft.



2 / C-1 **TOWER ELEVATION - PROPOSED**
SCALE: 3/32" = 1'

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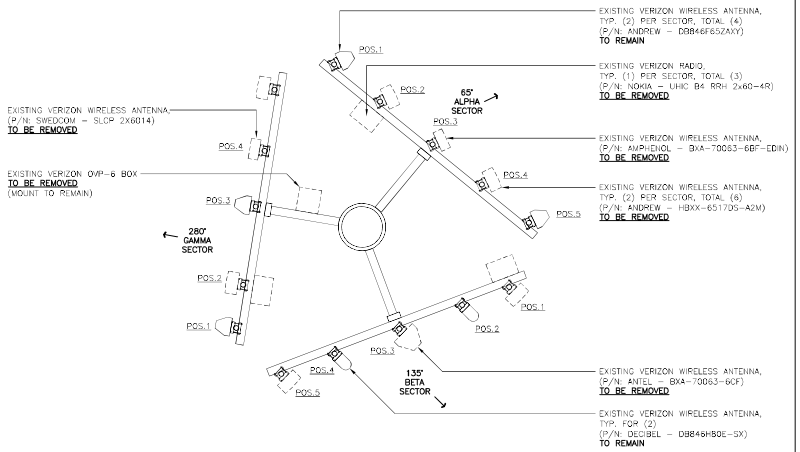
COMPOUND PLAN AND ELEVATION

C-1

Sheet No. 4 of 7

EXISTING ANTENNA CONFIGURATIONS

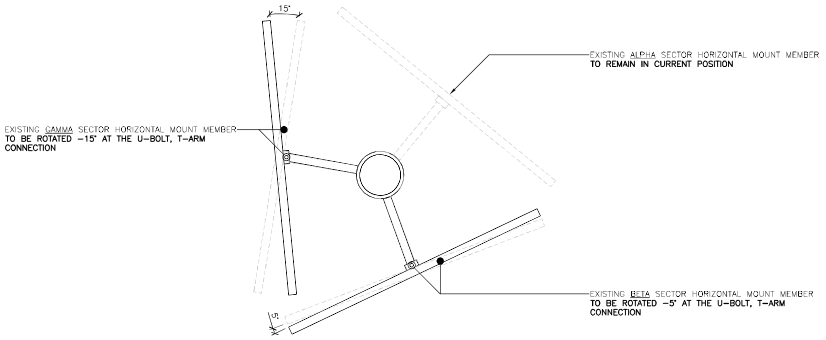


1 C-2 **EXISTING SECTOR CONFIGURATION PLAN**
SCALE: 3/8" = 1'-0"

APPROXIMATE NORTH

ANTENNA MOUNT ANALYSIS NOTE:

REFER TO PASSING VERIZON WIRELESS MOUNT ANALYSIS REPORT PREPARED BY MASER CONSULTING CONNECTICUT DATED 07/30/2021 FOR ADDITIONAL INFORMATION.

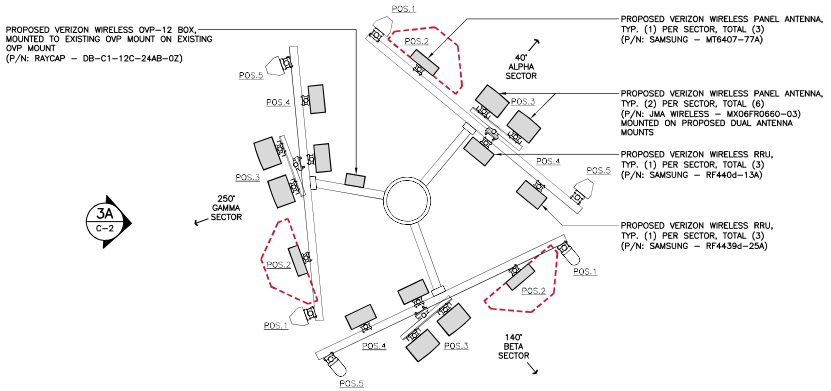


2 C-2 **PROPOSED HORIZONTAL MOUNT ROTATION**
SCALE: 3/8" = 1'-0"

APPROXIMATE NORTH

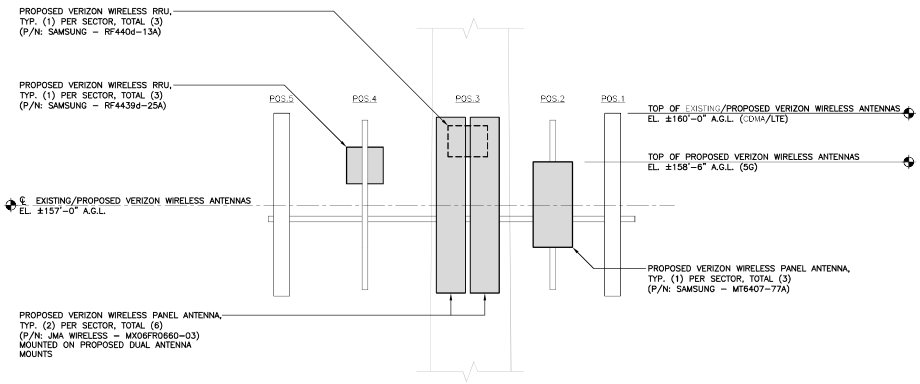
PROPOSED ANTENNA CONFIGURATIONS

LEGEND	
VERIZON WIRELESS MT6407-77A REQUIRED ANTENNA CLEARANCE LIMITS (PER DETAILS ON SHEET C-3)	
ANTENNA CLEARANCE STATUS	ALPHA SECTOR: COMPLIANT BETA SECTOR: COMPLIANT GAMMA SECTOR: COMPLIANT



3 C-2 **PROPOSED SECTOR CONFIGURATION PLAN**
SCALE: 3/8" = 1'-0"

APPROXIMATE NORTH



TYPICAL SECTOR

3A C-2 **PROPOSED SECTOR CONFIGURATION ELEVATION**
SCALE: 1/2" = 1'-0"

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ANTENNA SECTOR CONFIGURATION DETAILS

C-2

Sheet No. 5 of 7

ELEVATION - ISOMETRIC

BOTTOM

8-PORT SECTOR ANTENNA		
EQUIPMENT	DIMENSIONS	WEIGHT
MAKE: JMA MODEL: MX06FRO660-03	71.3"L x 15.4"W x 10.7"D	60.0 LBS. (W/OUT MOUNT KIT)

1 C-3 **SECTOR ANTENNA DETAIL**

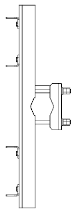
NOT TO SCALE

ANTENNA FRONT

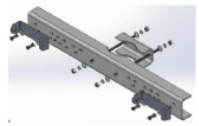
SECTOR ANTENNA		
EQUIPMENT	DIMENSIONS	WEIGHT
MAKE: SAMSUNG MODEL: MT6407-77A	35.1"h x 16.1"W x 5.5"D (NOT TO EXCEED)	87 LBS. (NOT TO EXCEED)
CLEARANCES AND SERVICE AREA		
TOP: 31.5"	HORIZONTAL DISTANCE: 31.5" (ANT. TO ANT.)	
FRONT, SIDES & BOTTOM: 15.7"	VERTICAL DISTANCE: 63.0" (ANT. TO ANT.)	
NOTES: 1. THIS ANTENNA HAS ITS OWN BUILT-IN RRH.		

2 C-3 **SECTOR ANTENNA DETAIL**

NOT TO SCALE



PLAN VIEW



ANTENNA MOUNT ISOMETRIC

DUAL ANTENNA MOUNTING KIT	
EQUIPMENT	DESCRIPTION
MOUNT MAKE: JMA MODEL: 919003314	• SIDE-BY-SIDE MOUNTING KIT, ACCOMMODATES (2) COMPATABLE ANTENNAS • 2 BRACKETS REQUIRED FOR 4'-6' ANTENNAS • 3 BRACKETS REQUIRED FOR 6'-8' ANTENNAS

3 C-3 **DUAL ANTENNA MOUNT DETAIL**

NOT TO SCALE

OVP BOX		
EQUIPMENT	DIMENSIONS	WEIGHT
MAKE: RAYCAP MODEL: DB-C1-12C-24AB-0Z	29.5"H x 16.5"W x 12.6"D	32 LBS.
NOTES: 1. CONTRACTOR TO CONFIRM OVP BOX MAKE/MODEL AND QUANTITY WITH VERIZON WIRELESS CONSTRUCTION MANAGER PRIOR TO ORDERING.		

4 C-3 **PROPOSED OVER-VOLTAGE PROTECTION BOX**

NOT TO SCALE

RRH - ISOMETRIC

DUAL BAND RRU (REMOTE RADIO UNIT)			
EQUIPMENT	BANDS	DIMENSIONS	WEIGHT
MAKE: SAMSUNG MODEL: RF4439d-25A	B25: PCS (1900 MHz) B66: AWS (2100 MHz)	15.0"H x 15.0"W x 10.0"D	74.7 LBS.
NOTES: 1. CONTRACTOR TO COORDINATE FINAL EQUIPMENT MODEL SELECTION WITH VERIZON WIRELESS CONSTRUCTION MANAGER PRIOR TO ORDERING.			

5 C-3 **DUAL-BAND AWS/PCS MACRO RADIO UNIT DETAIL**

NOT TO SCALE

RRH - ISOMETRIC

DUAL BAND RRU (REMOTE RADIO UNIT)			
EQUIPMENT	BANDS	DIMENSIONS	WEIGHT
MAKE: SAMSUNG MODEL: RF4440d-13A	B5: 850 MHz B13: 700 MHz	15.0"H x 15.0"W x 9.0"D	70.3 LBS.
NOTES: 1. CONTRACTOR TO COORDINATE FINAL EQUIPMENT MODEL SELECTION WITH VERIZON WIRELESS CONSTRUCTION MANAGER PRIOR TO ORDERING.			

6 C-3 **DUAL-BAND 700/850 MHZ MACRO RADIO UNIT DETAIL**

NOT TO SCALE

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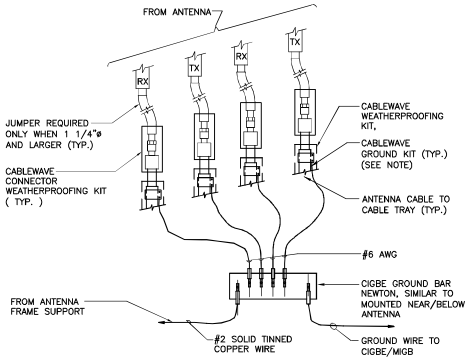
RF DETAILS

C-3

Sheet No. 6 of 7

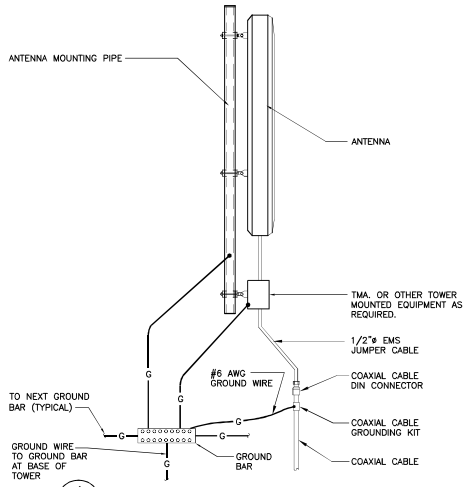


NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE

1 E-1 CONNECTION OF GROUND WIRES TO GROUND BAR

NOT TO SCALE

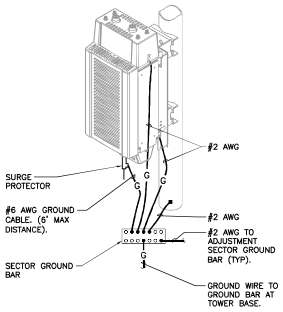


4 E-1 TYPICAL ANTENNA GROUNDING DETAIL

NOT TO SCALE

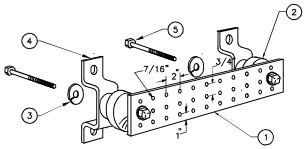
EACH RRH CABINET SHALL BE GROUNDED IN THE FOLLOWING MANNER:

1. AT TOP OF THE CABINET
2. AT RIGHT SIDE OF THE CABINET.



2 E-1 RRH POLE MOUNT GROUNDING

NOT TO SCALE

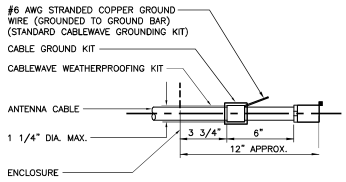


NOTES

1. TINNED COPPER GROUND BAR, 1/4" x 4" x 20", NEWTON INSTRUMENT CO. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION.
2. INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4.
3. 5/8" LOCK WASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8.
4. WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A-6056.
5. 5/8-11 x 1" STAINLESS STEEL TRUSS SPANNER MACHINE SCREWS.

5 E-1 GROUND BAR DETAIL

NOT TO SCALE



NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.

3 E-1 ANTENNA CABLE GROUNDING DETAIL

NOT TO SCALE

ELECTRICAL SPECIFICATIONS

SECTION 16010

1.01. SCOPE OF WORK

A. WORK SHALL INCLUDE ALL LABOR, EQUIPMENT AND SERVICES REQUIRED TO COMPLETE (MAKE READY FOR OPERATION) ALL THE ELECTRICAL WORK INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

1. CELLULAR GROUNDING SYSTEMS CONSISTING OF ANTENNA GROUNDING, GROUND BARS, ETC.

1.02. GENERAL REQUIREMENTS

A. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE MADE IN STRICT ACCORDANCE WITH ALL LOCAL, STATE AND NATIONAL CODES AND REGULATIONS WHICH MAY APPLY AND NOTHING IN THE DRAWINGS OR SPECIFICATIONS SHALL BE INTERPRETED AS AN INFRINGEMENT OF SUCH CODES OR REGULATIONS.

B. THE ELECTRICAL CONTRACTOR IS TO BE RESPONSIBLE FOR THE COMPLETE INSTALLATION AND COORDINATION OF THE ENTIRE ELECTRICAL SERVICE. ALL ACTIVITIES TO BE COORDINATED THROUGH OWNERS REPRESENTATIVE, DESIGN ENGINEER AND OTHER AUTHORITIES HAVING JURISDICTION OF TRADES.

C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND PAY ALL FEES THAT MAY BE REQUIRED FOR THE ELECTRICAL WORK AND FOR SCHEDULING OF ALL INSPECTIONS THAT MAY BE REQUIRED BY THE LOCAL AUTHORITY.

D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE BUILDING OWNER FOR NEW AND/OR DEMOLITION WORK INVOLVED.

E. NO MATERIAL OTHER THAN THAT CONTAINED IN THE "LATEST LIST OF ELECTRICAL FITTINGS" APPROVED BY THE UNDERWRITERS' LABORATORIES, SHALL BE USED IN ANY PART OF THE WORK. ALL MATERIAL FOR WHICH LABEL SERVICE HAS BEEN ESTABLISHED SHALL BEAR THE U.L. LABEL.

F. THE CONTRACTOR SHALL GUARANTEE ALL NEW WORK FOR A PERIOD OF ONE YEAR FROM THE ACCEPTANCE DATE BY THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING WARRANTIES FROM ALL EQUIPMENT MANUFACTURERS FOR SUBMISSION TO THE OWNER.

G. DRAWINGS INDICATE GENERAL ARRANGEMENT OF WORK INCLUDED IN CONTRACT. CONTRACTOR SHALL, WITHOUT EXTRA CHARGE, MAKE MODIFICATIONS TO THE LAYOUT OF THE WORK TO PREVENT CONFLICT WITH WORK OF OTHER TRADES AND FOR THE PROPER INSTALLATION OF WORK. CHECK ALL DRAWINGS AND VISIT JOB SITE TO VERIFY SPACE AND TYPE OF EXISTING CONDITIONS IN WHICH WORK WILL BE DONE, PRIOR TO SUBMITTAL OF BID.

H. THE ELECTRICAL CONTRACTOR SHALL SUPPLY THREE (3) COMPLETE SETS OF APPROVED DRAWINGS, ENGINEERING DATA SHEETS, MAINTENANCE AND OPERATING INSTRUCTION MANUALS FOR ALL SYSTEMS AND THEIR RESPECTIVE EQUIPMENT. THESE MANUALS SHALL BE INSERTED IN VINYL COVERED 3-RING BINDERS AND TURNED OVER TO OWNER'S REPRESENTATIVE ONE (1) WEEK PRIOR TO FINAL PUNCH LIST.

I. ALL WORK SHALL BE INSTALLED IN A NEAT AND WORKMAN LIKE MANNER AND WILL BE SUBJECT TO THE APPROVAL OF THE OWNER'S REPRESENTATIVE.

J. ALL EQUIPMENT AND MATERIALS TO BE INSTALLED SHALL BE NEW, UNLESS OTHERWISE NOTED.

K. BEFORE FINAL PAYMENT, THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF PRINTS (AS-BUILTS), LEGIBLY MARKED IN RED PENCIL TO SHOW ALL CHANGES FROM THE ORIGINAL PLANS.

L. ENTIRE ELECTRICAL INSTALLATION SHALL BE IN ACCORDANCE WITH OWNER'S SPECIFICATIONS, AND REQUIREMENTS OF ALL LOCAL AUTHORITIES HAVING JURISDICTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH APPROPRIATE INDIVIDUALS TO OBTAIN ALL SUCH SPECIFICATIONS AND REQUIREMENTS. NOTHING CONTAINED IN, OR OMITTED FROM, THESE DOCUMENTS SHALL RELIEVE CONTRACTOR FROM THIS OBLIGATION.

SECTION 16450

1.01. GROUNDING

A. ALL NON-CURRENT CARRYING PARTS OF THE ELECTRICAL AND TELEPHONE CONDUIT SYSTEMS SHALL BE MECHANICALLY AND ELECTRICALLY CONNECTED TO PROVIDE AN INDEPENDENT RETURN PATH TO THE EQUIPMENT GROUNDING SOURCES.

B. GROUNDING SYSTEM WILL BE IN ACCORDANCE WITH THE LATEST ACCEPTABLE EDITION OF THE NATIONAL ELECTRICAL CODE AND REQUIREMENTS PER LOCAL INSPECTOR HAVING JURISDICTION.

C. EQUIPMENT GROUNDING CONDUCTOR:

1. EACH EQUIPMENT GROUND CONDUCTOR SHALL BE SIZED IN ACCORDANCE WITH THE N.E.C. ARTICLE 250-122.

2. THE MINIMUM SIZE OF EQUIPMENT GROUND CONDUCTOR SHALL BE #12 AWG COPPER.

D. CELLULAR GROUNDING SYSTEM:

PROVIDE THE CELLULAR GROUNDING SYSTEM AS SPECIFIED ON DRAWINGS, INCLUDING, BUT NOT LIMITED TO:

1. GROUND BARS
2. ANTENNA GROUND CONNECTIONS AND PLATES.

E. ALL EQUIPMENT SHALL BE BONDED TO GROUND AS REQUIRED BY N.E.C., MFG. SPECIFICATIONS, AND OWNER'S SPECIFICATIONS.

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
0	11/06/21	ANC	DMD	CONSTRUCTION DRAWINGS – ISSUED FOR CONSTRUCTION
A	09/08/21	ANC	DMD	CONSTRUCTION DRAWINGS – REVISED PER CLIENT COMMENTS
B	08/19/21	ANC	DMD	CONSTRUCTION DRAWINGS – REVISED PER RFDS DATED 08/18/21
C	08/18/21	ANC	DMD	CONSTRUCTION DRAWINGS – ISSUED FOR CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL

verizon

CENTEK engineering
Centered on Solutions
(203) 488-0580
(203) 488-8587 Fax
63-2 North Branford Road
Branford, CT 06405
www.CentekEng.com

Cellco Partnership d/b/a Verizon Wireless

ANSONIA EAST CT

1 DEERFIELD LANE
ANSONIA, CT 06401

DATE: 08/18/21
SCALE: AS NOTED
JOB NO. 21007.38

E-1

Sheet No. 7 of 7

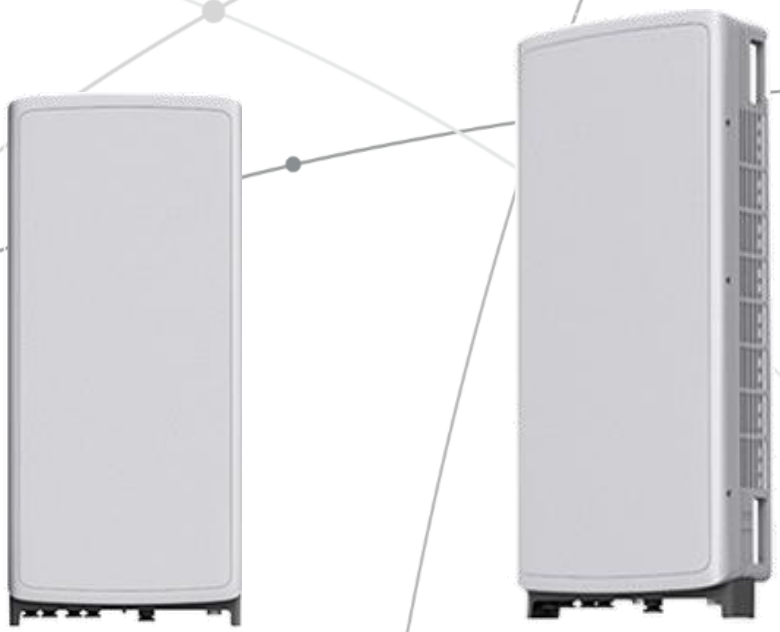
SAMSUNG

SAMSUNG C-Band 64T64R Massive MIMO Radio

for High Capacity and Wide Coverage

Samsung C-Band 64T64R Massive MIMO Radio enables mobile operators to increase coverage range, boost data speeds and ultimately offer enriched 5G experiences to users in the U.S..

Model Code : MT6407-77A

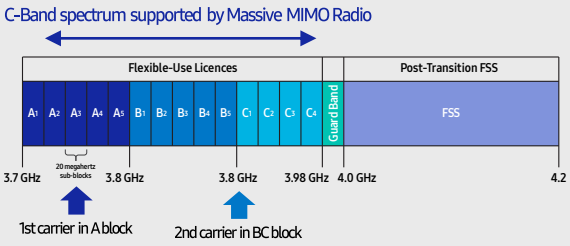


Points of Differentiation

Wide Bandwidth

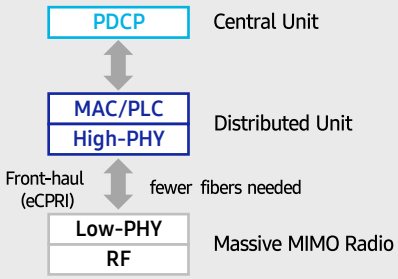
With capability to support up to 2 CC carrier configuration, Samsung C-Band massive MIMO Radio supports 200 MHz bandwidth in the C-Band spectrum.

Samsung C-Band massive MIMO Radio covers the entire C-Band 280 MHz spectrum, so it can meet the operator's needs in current A block and future B/C blocks



Future Proof Product

Samsung C-Band 64T64R Massive MIMO radio supports not only CPRI but also eCPRI as front-haul interface.
It enables operators can cut down on OPEX/CAPEX by reducing front-haul bandwidth through low layer split and using ethernet based higher efficient line.



Enhanced Performance

C-Band massive MIMO Radio creates sharp beams and extends networks' coverage on the critical mid-band spectrum using a large number of antenna elements and high output power to boost data speeds.

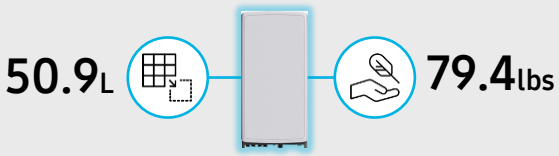
This helps operators reduce their CAPEX as they now need less products to cover the same area than before.

Furthermore, as C-Band massive MIMO Radio supports MU-MIMO(Multi-user MIMO) , it enables to increase user throughput by minimizing interference.

Well Matched Design

Samsung C-Band Massive MIMO radio utilizes 64 antennas, supports up to 280MHz bandwidth, and delivers a 200W output power. despite the above advanced performance, the Radio has a compact size of 50.9L and 79.4lbs. This makes it easy to install the Radio.

It is designed to look solid and compact, with a low profile appearance so that, when installed, harmonizes well with the surrounding environment..



Technical Specifications

Item	Specification
Tech	NR
Band	n77
Frequency Band	3700 - 3980 MHz
EIRP	78.5dBm (53.0 dBm+25.5 dBi)
IBW/OBW	280 MHz / 200 MHz
Installation	Pole/Wall
Size/ Weight	16.06 x 35.06 x 5.51 inch (50.86L)/ 79.4 lbs

SAMSUNG

About Samsung Electronics Co., Ltd.

Samsung inspires the world and shapes the future with transformative ideas and technologies. The company is redefining the worlds of TVs, smartphones, wearable devices, tablets, digital appliances, network systems, and memory, system LSI, foundry and LED solutions.

129 Samsung-ro, Yeongtong-gu, Suwon-si Gyeonggi-do, Korea

SAMSUNG

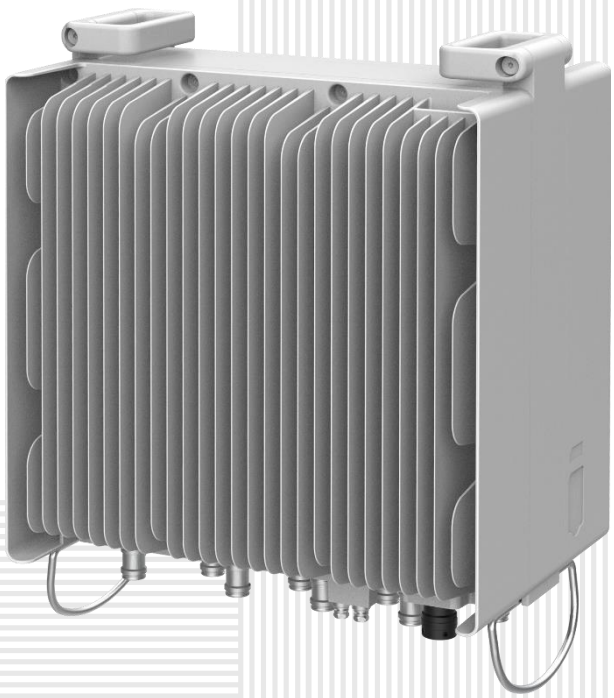
AWS/PCS MACRO RADIO

DUAL-BAND AND HIGH POWER FOR MACRO COVERAGE

Samsung's future proof dual-band radio is designed to help effectively increase the coverage areas in wireless networks. This AWS/PCS 4T4R dual-band radio has 4Tx/4Rx to 2Tx/2Rx RF chains options and a total output power of 320W, making it ideal for macro sites.

57196

Model Code	RF4439d-25A



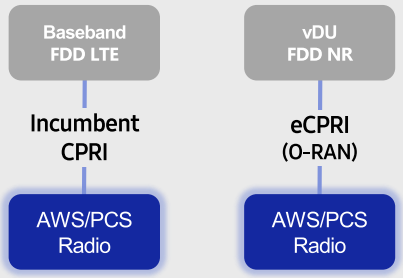
Homepage
samsungnetworks.com

Youtube
www.youtube.com/samsung5g

Points of Differentiation

Continuous Migration

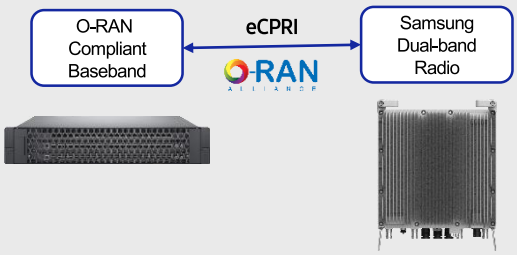
Samsung's AWS/PCS macro radio can support each incumbent CPRI interface as well as advanced eCPRI interfaces. This feature provides installable options for both legacy LTE networks and added NR networks.



O-RAN Compliant

A standardized O-RAN radio can help in implementing cost-effective networks, which are capable of sending more data without compromising additional investments.

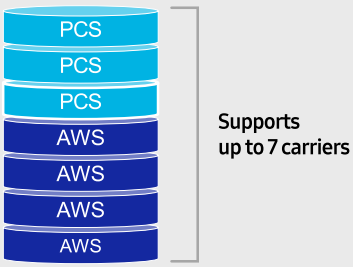
Samsung's state-of-the-art O-RAN technology will help accelerate the effort toward constructing a solid O-RAN ecosystem.



Optimum Spectrum Utilization

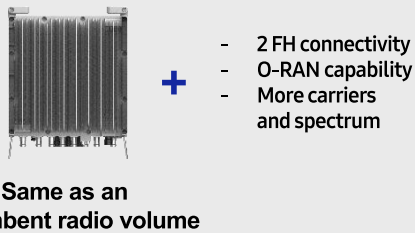
The number of required carriers varies according to site (region). Supporting many carriers is essential for using all frequencies that the operator has available.

The new AWS/PCS dual-band radio can support up to 3 carriers in the PCS (1.9GHz) band and 4 carriers in the AWS (2.1GHz) band, respectively.



Brand New Features in a Compact Size

Samsung's AWS/PCS macro radio offers several features, such as dual connectivity for baseband for both CDU and vDU, O-RAN capability, more carriers and an enlarged PCS spectrum, combined into an incumbent radio volume of 36.8L.



Technical Specifications

Item	Specification
Tech	LTE / NR
Brand	B25(PCS), B66(AWS)
Frequency Band	DL: 1930 – 1995MHz, UL: 1850 – 1915MHz DL: 2110 – 2200MHz, UL: 1710 – 1780MHz
RF Power	(B25) 4 × 40W or 2 × 60W (B66) 4 × 60W or 2 × 80W
IBW/OBW	(B25) 65MHz / 30MHz (B66) DL 90MHz, UL 70MHz / 60MHz
Installation	Pole, Wall
Size/ Weight	14.96 x 14.96 x 10.04inch (36.8L) / 74.7lb

SAMSUNG

700/850MHZ MACRO RADIO

DUAL-BAND AND HIGH POWER FOR MACRO COVERAGE

Samsung's future proof dual-band radio is designed to help effectively increase the coverage areas in wireless networks. This 700/850MHz 4T4R dual-band radio has 4Tx/4Rx to 2Tx/2Rx RF chains options and a total output power of 320W, making it ideal for macro sites.

Model Code	RF4440d-13A

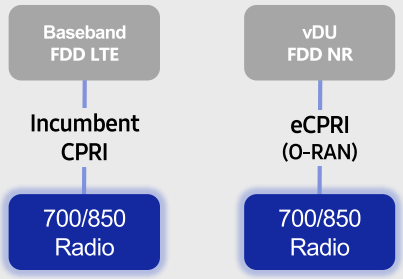
Homepage
samsungnetworks.com

Youtube
www.youtube.com/samsung5g

Points of Differentiation

Continuous Migration

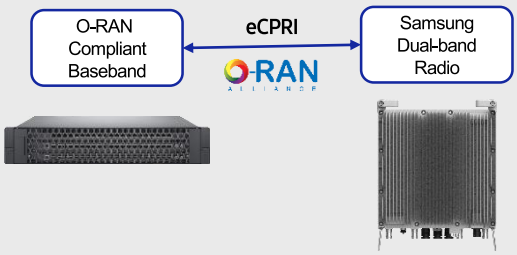
Samsung's 700/850MHz macro radio can support each incumbent CPRI interface as well as an advanced eCPRI interface. This feature provides installable options for both legacy LTE networks and added NR networks.



O-RAN Compliant

A standardized O-RAN radio can help when implementing cost-effective networks because it is capable of sending more data without compromising additional investments.

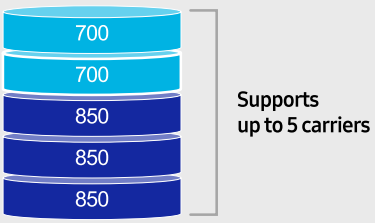
Samsung's state-of-the-art O-RAN technology will help accelerate the effort toward constructing a solid O-RAN ecosystem.



Optimum Spectrum Utilization

The number of required carriers varies according to site (region). The ability to support many carriers is essential for using all frequencies that the operator has available.

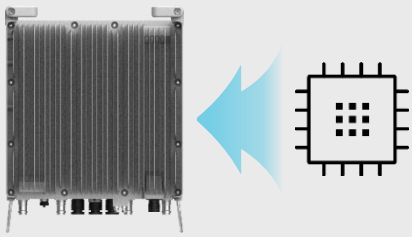
The new 700/850MHz dual-band radio can support up to 2 carriers in the B13 (700MHz) band and 3 carriers in the B5 (850MHz) band, respectively.



Secured Integrity

Access to sensitive data is allowed only to authorized software.

The Samsung radio's CPU can protect root of trust, which is credential information to verify SW integrity, and secure storage provides access control to sensitive data by using dedicated hardware (TPM).



Technical Specifications

Item	Specification
Tech	LTE / NR
Brand	B13(700MHz), B5(850MHz)
Frequency Band	DL: 746 – 756MHz, UL: 777 – 787MHz DL: 869 – 894MHz, UL: 824 – 849MHz
RF Power	(B13) 4 × 40W or 2 × 60W (B5) 4 × 40W or 2 × 60W
IBW/OBW	(B13) 10MHz / 10MHz (B5) 25MHz / 25MHz
Installation	Pole, Wall
Size/ Weight	14.96 x 14.96 x 9.05inch (33.2L) / 70.33 lb

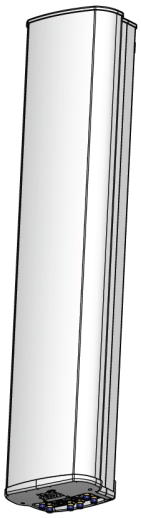
MX06FRO660-03

NWAV™ X-Pol Hex-Port Antenna

X-Pol Hex-Port 6 ft 60° Fast Roll Off antenna with independent tilt on 700 & 850 MHz:

2 ports 698-798, 824-894 MHz and 4 ports 1695-2180 MHz

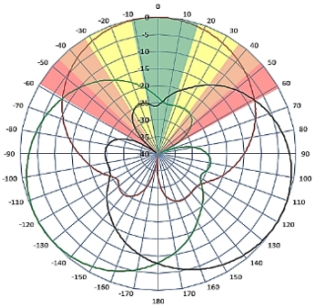
- Fast Roll Off (FRO™) azimuth beam pattern improves Intra- and Inter-cell SINR
- Compatible with dual band 700/850 MHz radios with independent low band EDT without external diplexers
- Fully integrated (iRETs) with independent RET control for low and high bands for ease of network optimization
- SON-Ready array spacing supports beamforming capabilities
- Suitable for LTE/CDMA/PCS/UMTS/GSM air interface technologies
- Integrated Smart Bias-Ts reduce leasing costs



Fast Roll-Off antennas increase data throughput without compromising coverage

The horizontal beam produced by Fast Roll-Off (FRO) technology increases the Signal to Interference & Noise Ratio (SINR) by eliminating overlap between sectors .

Non-FRO antenna



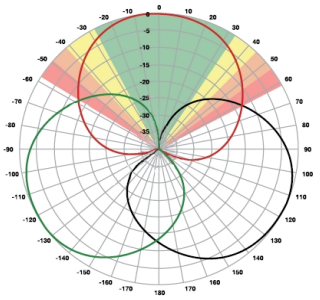
Large traditional antenna pattern overlap creates harmful interference.

JMA's FRO antenna pattern minimizes overlap, thereby minimizing interference.

LTE throughput	SINR	Speed (bps/Hz)	Speed increase	CQI
Excellent	>18	>4.5	333+%	8-10
Good	15-18	3.3-4.5	277%	6-7
Fair	10-15	2-3.3	160%	4-6
Poor	<10	<2	0%	1-3

The LTE radio automatically selects the best throughput based on measured SINR.

JMA FRO antenna



Electrical specification (minimum/maximum)	Ports 1, 2		Ports 3, 4, 5, 6		
Frequency bands, MHz	698-798	824-894	1695-1880	1850-1990	1920-2180
Polarization	± 45°		± 45°		
Average gain over all tilts, dBi	14.4	14.0	17.6	18.0	18.2
Horizontal beamwidth (HBW), degrees	60.5	53.0	55.0	55.0	55.5
Front-to-back ratio, co-polar power @180°± 30°, dB	>24	>24.0	>25.0	>25.0	>25.0
X-Pol discrimination (CPR) at boresight, dB	>15.0	>14.2	>18	>18	>15
Sector power ratio, percent	<3.5	<3.0	<3.7	<3.8	<3.6
Vertical beamwidth (VBW), degrees[1]	13.1	11.8	6.0	5.5	5.5
Electrical downtilt (EDT) range, degrees	2-14	2-14	0-9		
First upper side lobe (USLS) suppression, dB[1]	≤-15.0	≤-16.5	≤-16.0	≤-16.0	≤-16.0
Cross-polar isolation, port-to-port, dB[1]	25	25	25	25	25
Max VSWR / return loss, dB	1.5:1 / -14.0		1.5:1 / -14.0		
Max passive intermodulation (PIM), 2x20W carrier, dBc	-153		-153		
Max input power per any port, watts	300		250		
Total composite power all ports, watts	1500				

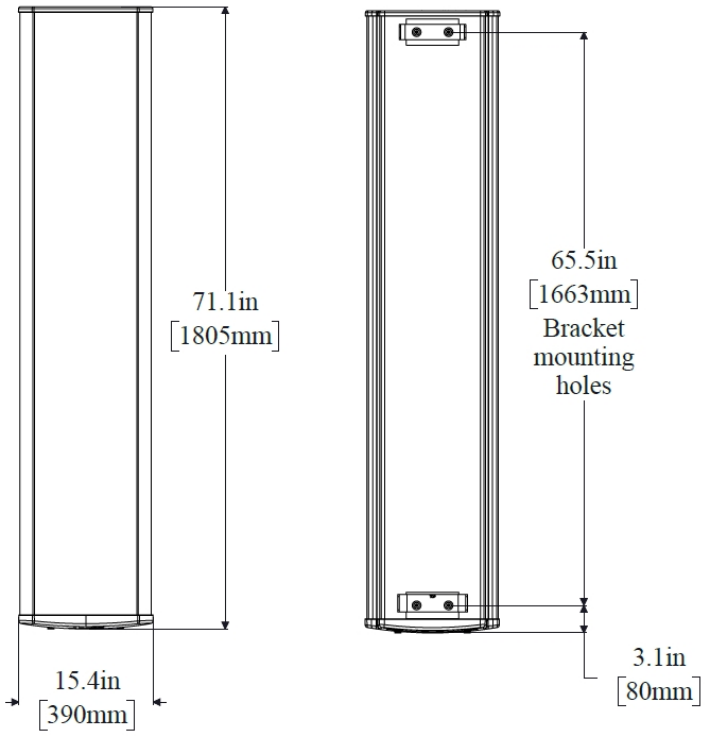
[1] Typical value over frequency and tilt

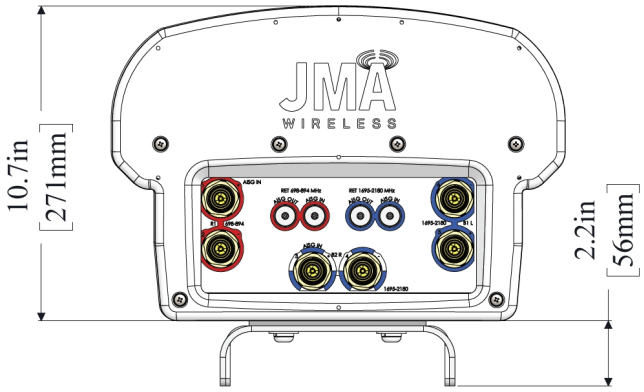
MX06FRO660-03

NWAV™ X-Pol Hex-Port Antenna

Mechanical specifications	
Dimensions height/width/depth, inches (mm)	71.3/ 15.4/ 10.7 (1811/ 392/ 273)
Shipping dimensions length/width/height, inches (mm)	82/ 20/ 15 (2083/ 508/ 381)
No. of RF input ports, connector type, and location	6 x 4.3-10 female, bottom
RF connector torque	96 lbf·in (10.85 N·m or 8 lbf·ft)
Net antenna weight, lb (kg)	60 (27.0)
Shipping weight, lb (kg)	90 (41.0)
Antenna mounting and downtilt kit included with antenna	91900318
Net weight of the mounting and downtilt kit, lb (kg)	18 (8.18)
Range of mechanical up/down tilt	-2° to 14°
Rated wind survival speed, mph (km/h)	150 (241)
Frontal, lateral, and rear wind loading @ 150 km/h, lbf (N)	154 (685), 73 (325), 158 (703)
Equivalent flat plate @ 100 mph and Cd=2, sq ft	2.6

Front view | **Back view** | **Bottom view**





Ordering information	
Antenna model	**Description**
MX06FRO660-03	6F X-Pol HEX FRO 60° independent tilt 700/850 RET, 4.3-10 & SBT
Optional accessories	
AISG cables	M/F cables for AISG connections
PCU-1000 RET controller	Stand-alone controller for RET control and configurations

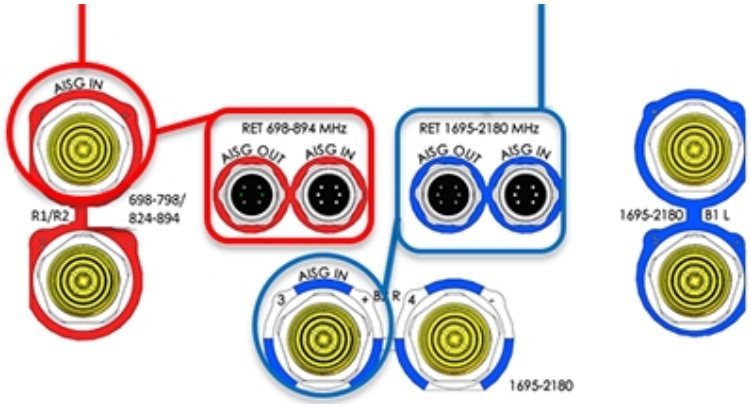
Remote electrical tilt (RET 1000) information	
RET location	Integrated into antenna
RET interface connector type	8-pin AISG connector per IEC 60130-9
RET connector torque	Min 0.5 N·m to max 1.0 N·m (hand pressure & finger tight)
RET interface connector quantity	2 pairs of AISG male/female connectors
RET interface connector location	Bottom of the antenna
Total no. of internal RETs (low bands)	2
Total no. of internal RETs (high bands)	1
RET input operating voltage, vdc	10-30
RET max power consumption, idle state, W	≤ 2.0
RET max power consumption, normal operating conditions, W	≤ 13.0
RET communication protocol	AISG 2.0 / 3GPP

RET and RF connector topology

Each RET device can be controlled either via the designated external AISG connector or RF port as shown below:

RET device	Band	RF port
R1	698-798	1-2
R2	824-894	1-2

RET device	Band	RF port
B1/B2	1695-2180	3-6

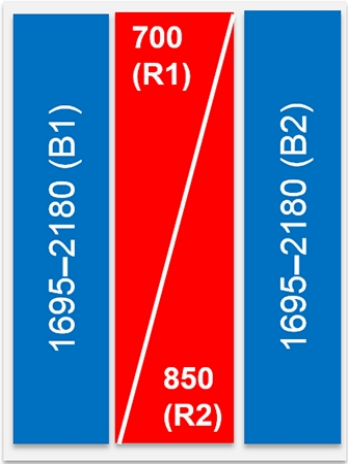


Array topology

3 sets of radiating arrays

R1/R2: 698-894 MHz
B1: 1695-2180 MHz
B2: 1695-2180 MHz

Band	RF port
1695-2180	3-4
698-894	1-2
1695-2180	5-6



ATTACHMENT 3

	General	Power	Density					
Site Name: Ansonia E								
Tower Height: Verizon @ 157ft								
CARRIER	**# OF CHAN.**	**WATTS ERP**	**HEIGHT**	**FREQ.**	**CALC. POWER DENS**	**MAX. PERMISS.EXP.**	**FRACTION MPE**	**Total**
*DISH	2	1469	117	1900	0.085753106	1	0.008575311	
*DISH	2	1469	117	2020	0.085753106	1	0.008575311	
*T-Mobile	4	1028	167	1900	0.057048651	1	0.005704865	
*T-Mobile	2	1028	167	1900	0.028524325	1	0.002852433	
*T-Mobile	2	1028	167	2100	0.028524325	1	0.002852433	
*T-Mobile	2	592	167	600	0.01642646	0.4	0.004106615	
*T-Mobile	1	1578	167	600	0.021892697	0.4	0.005473174	
*T-Mobile	2	649	167	700	0.018008061	0.466666667	0.00385887	
*T-Mobile	2	2204	167	1900	0.061155266	1	0.006115527	
*T-Mobile	2	2057	167	1900	0.057076398	1	0.00570764	
*T-Mobile	2	2308	167	2100	0.064040995	1	0.0064041	
*T-Mobile	2	6413	167	2500	0.177944065	1	0.017794407	
*T-Mobile	2	6413	167	2500	0.177944065	1	0.017794407	
*Sprint	1	432	127	850	0.010611017	0.566666667	0.001872532	
*Pocket (now MetroPCS)	3	631	137	2130	0.039669073	1	0.40%	
*AT&T-GSM	1	294	148	850	0.00524342	0.566666667	0.09%	
*AT&T-UMTS	1	294	148	850	0.00524342	0.566666667	0.09%	
*AT&T-LTE	1	1476	148	700	0.02632411	0.466666667	0.56%	
*AT&T-LTE	2	4842	148	1900	0.172711842	1	1.73%	
*AT&T-LTE	1	5070	148	2100	0.090422247	1	0.90%	
*AT&T-LTE	1	1285	148	2300	0.02291767	1	0.23%	
VZW 700	**4**	**638**	**157**	**751**	**0.0037**	**0.5007**	**0.74%**	
VZW CDMA	**2**	**499**	**157**	**877.26**	**0.0015**	**0.5848**	**0.25%**	
VZW Cellular	**4**	**653**	**157**	**874**	**0.0038**	**0.5827**	**0.65%**	
VZW PCS	**4**	**1496**	**157**	**1975**	**0.0087**	**1.0000**	**0.87%**	
VZW AWS	**4**	**1603**	**157**	**2120**	**0.0094**	**1.0000**	**0.94%**	
VZW CBAND	**2**	**21627**	**157**	**3730.08**	**0.0631**	**1.0000**	**6.31%**	
								23.54%
* Source: Siting Council								

ATTACHMENT 4

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

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#: 172426, V1)

Carrier Site ID / Name: 467455 / Ansonia_East_CT

Site Location: 1 Deerfield Lane

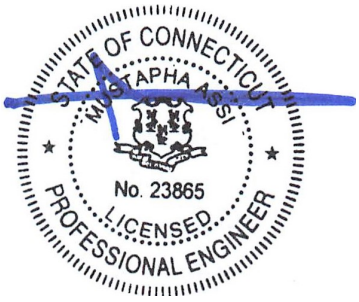
Ansonia, Connecticut

New Haven County

Latitude: 41.350750

Longitude: -73.049250

Exp.10/31/2021



10/28/2021

Analysis Result:

Max Structural Usage: 82.0% [Pass]

Max Foundation Usage: 80% [Pass]

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

Report Prepared By : Mariana Franco

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

Tower Drawings	Sabre, DWG # 08-01016-PE, dated 1/7/2008
Foundation Drawing	Sabre, DWG # 08-01016, dated 1/30/2008
Geotechnical Report	JGI Eastern, Inc., Project # J2085109, dated 1/29/2008
Modification Drawings	TES, Project # 17022, dated 9/1/2015 TES, Project # 19194, dated 12/9/2015 TES, Project # 22848 dated 6/23/2016
Mount Analysis	Maser Consulting Connecticut Project #: 21777793A Dated: 07/30/21

Analysis Criteria

The rigorous analysis was performed in accordance with the requirements and stipulations of the TIA-222-G-2**.** 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.

Wind Speed Used in the Analysis:	Ultimate Design Wind Speed V_{ult} = 125 mph (3-Sec. Gust)/ Nominal Design Wind Speed V_{asd} = 97.0 mph (3-Sec. Gust)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 3/4" radial ice concurrent
Operational Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	TIA-222-G-2 / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	B
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	S_S = 0.176, S_1 = 0.063

This structural analysis is based upon the tower being classified as a Structure Class 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	3	ALU RRH2X60-AWS RRH	(3) T-Arms	(6) 1 5/8" (12) 1 5/8" (1) 1 5/8" Fiber (1) 1/2"	Verizon
		3	ALU/900 RRH2X60W - RRH			
		1	Antel BXA-70063/6CF - Panel			
		4	Decibel - DB846F65ZAXY - Panel			
		2	Decibel - DB846H80E-SX - Panel			
		1	GPS			
		6	Andrew - HBX-6517DS-VTM - Panel			
		1	RFS DB T1-6Z-8AB-OZ Distribution Box			
		2	Swedcom - SLCP 2x6014F - Panel			
15	148.0	3	Powerwave 7770 - Panel	(3) T-Arms w/ (6) 2" STD Steel Pipe Brace Secured Existing Mount & Tower *	(12) 1 5/8" (1) 1/2" Fiber (2) 3/4" DC Power	AT&T
16		1	Cci OPA-65R-LCUU-H6 - Panel			
17		2	Cci OPA-65R-LCUU-H8 - Panel			
18		2	CCI HPA-65R-BUU-H6 - Panel			
19		4	CCI HPA-65R-BUU-H8 - Panel			
20		6	Powerwave LGP21401 TMA			
21		6	Powerwave LGP13519 Diplexer			
22		3	Ericsson RRUS-11 (17.8x17.3x7.2) - RRU			
23		9	Ericsson RRUS 32 - RRU			
24		3	Powerwave 1001940 - Bias-T			
25		2	Raycap DC6-48-60-18-8F - Surge			
26		1	Commscope - WCS-IMFQ-AMT - Filter			
27	127.0	3	Nokia AAHC - 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
28		3	Commscope NNVV-65B-R4 - Panel			
29		4	Dragonwave Horizon Duo			
30		3	ALU 1900 Mhz - RRU			
31		6	ALU 800 Mhz - RRU			
32		3	ALU TD-RRH8x20-25 - RRU			
33		3	Andrew VHLP2-11 - Dish			
34		1	Andrew VHLP800-11 - Dish			
35	117.0	2	Ericsson 4415 RRU	Standoff Sector Frame (3) Commscope SF-SU7-2-96	(1) 1-1/4" Hybrid	Dish Network
36		3	Ericsson 0208 RRU			
37		3	Comba ODI2-065R18K-GQ - Panel			

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		3	Samsung RF4439d-25A			
11		3	Samsung RF4440d-13A			
12		1	Raycap DB-C1-12C-24AB-0Z			
13		4	Andrew DB846F65ZAXY - Panel			
14		2	Andrew DB846H80E-SX - Panel			

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:	**82.0%**	**74.7%**	**62.2%**
Pass/Fail	**Pass**	**Pass**	**Pass**

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	4528.0	35.2	59.7

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.

Operational 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 1.6744 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 82.04% at 105.0ft

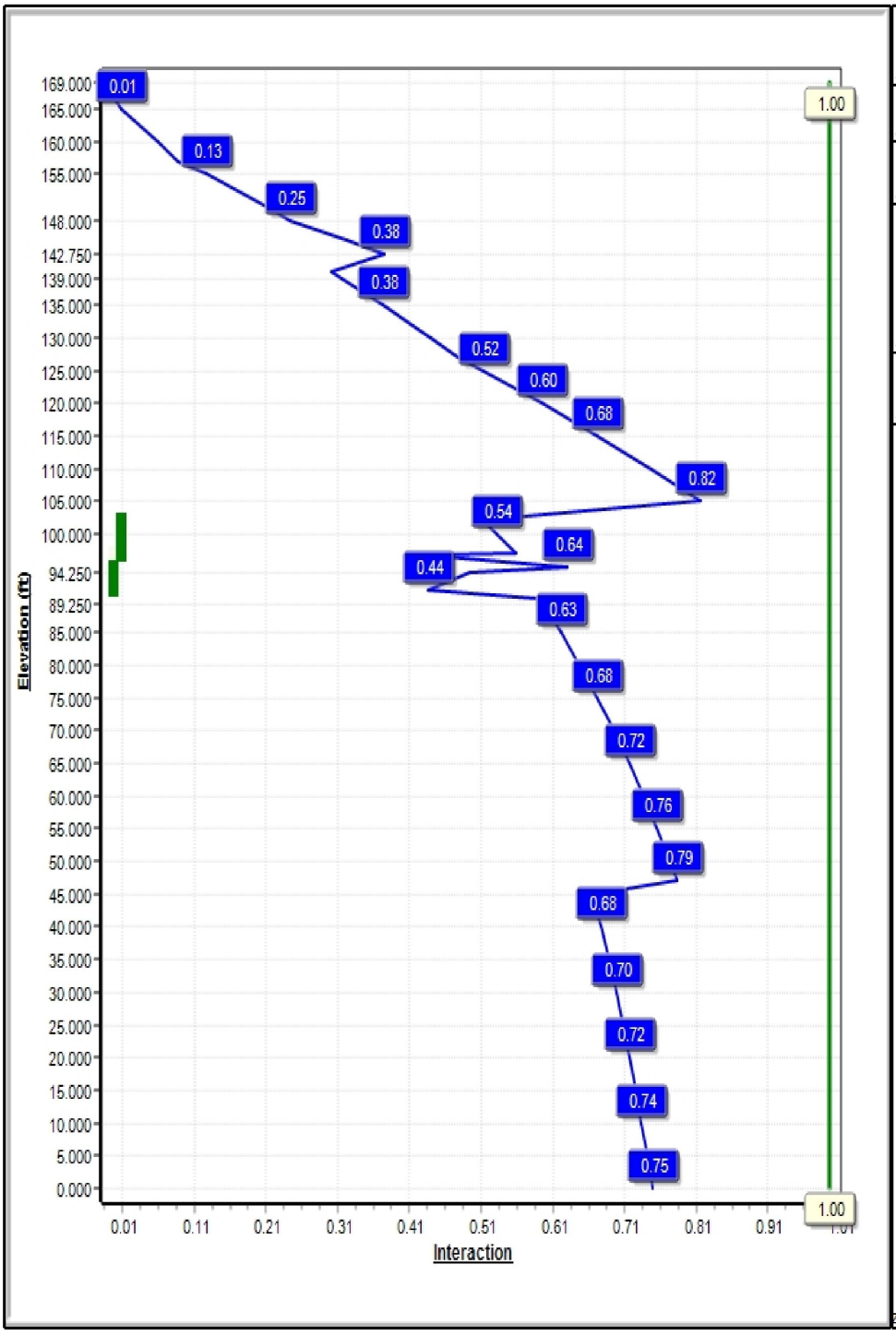
Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021
Site Name:	Woodbridge	**Exposure:**	B	
Height:	169.00 (ft)	**Gh:**	1.1	
Base Elev:	0.000 (ft)			Page: 1

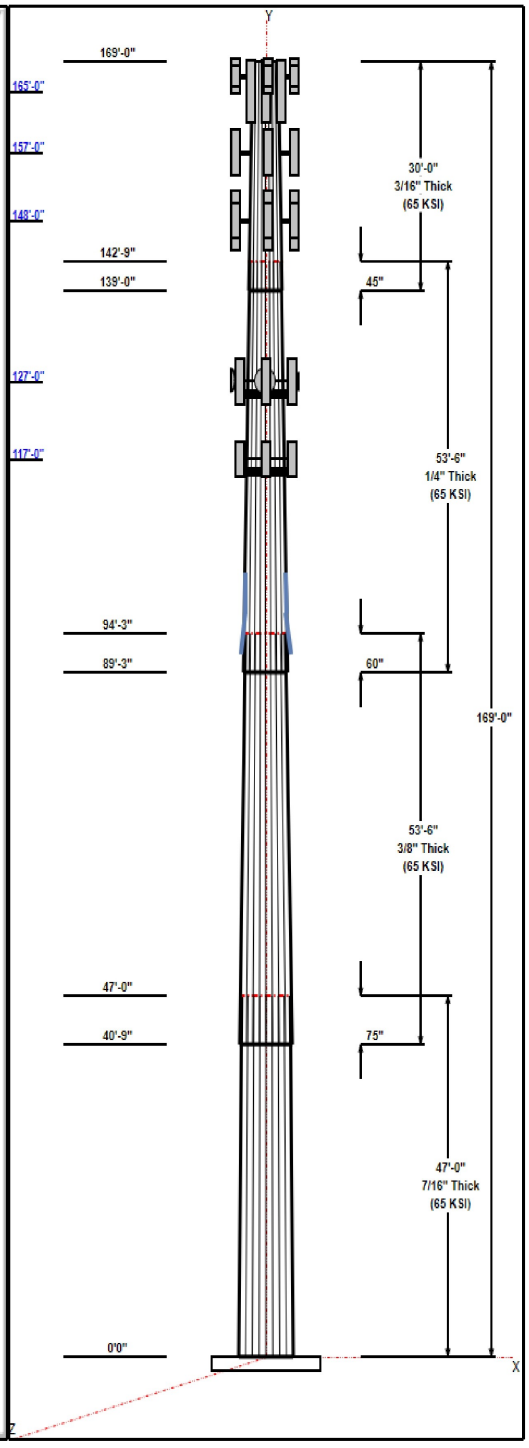
Tower Engineering Solutions

Dead Load Factor:	1.20
Wind Load Factor:	1.60

Load Case : 1.2D + 1.6W 97 mph Wind

Iterations: 27





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

10/28/2021

Tower Engineering Solutions

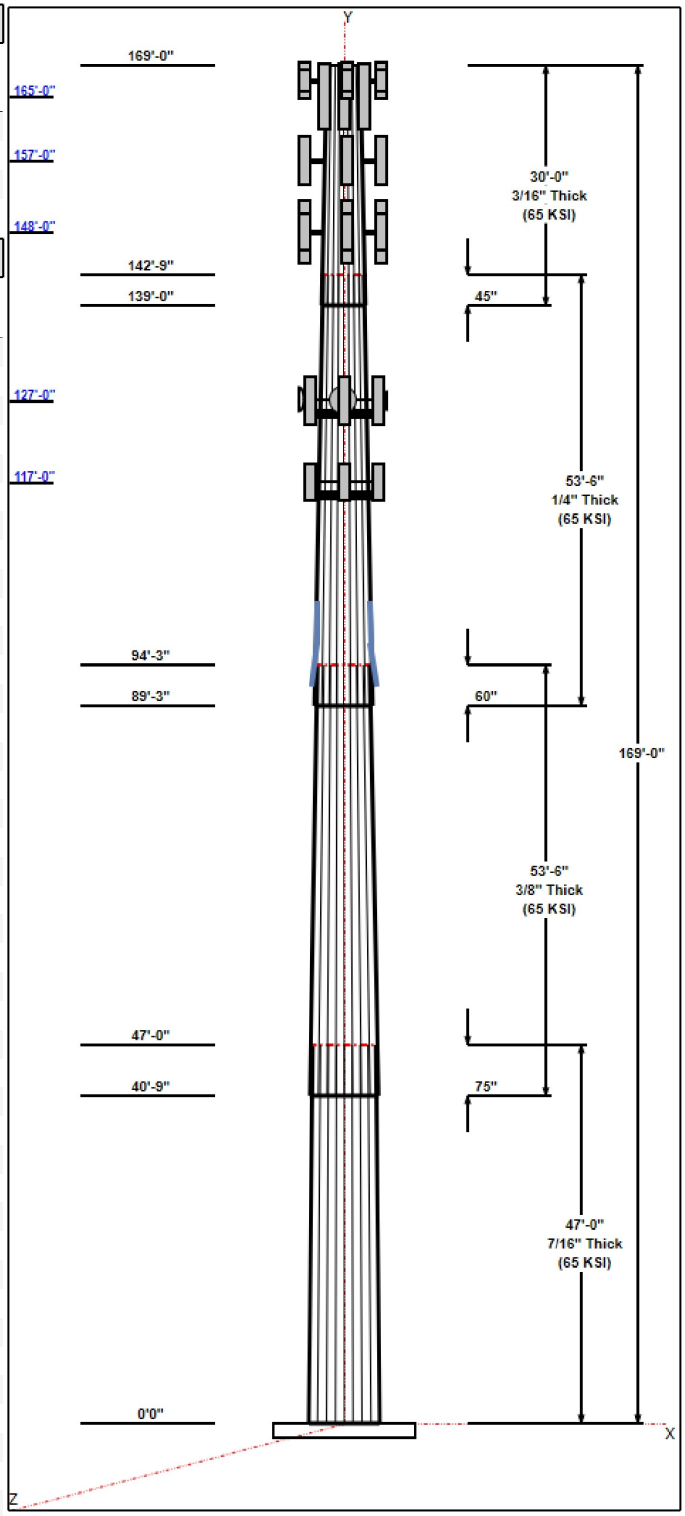
Shaft Properties

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	167.50	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
167.00	167.00	3	AIR 6449 B41	T-Mobile
167.00	167.00	3	RRUS 4415 B25	T-Mobile
167.00	167.00	3	Ericsson - Radio 4449	T-Mobile
165.00	165.00	3	Air 32	T-Mobile
165.00	165.00	3	APXVAA24_43-U-A20	T-Mobile
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
157.00	157.00	6	MX06FRO660-02	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
150.00	150.00	1	Collar Mount	AT&T
148.00	148.00	3	Ericsson RRUS-11-RRU	AT&T
148.00	148.00	2	Raycap	AT&T
148.00	148.00	3	T-Arms w/ Modifications	AT&T
148.00	148.00	3	Powerwave 7770	AT&T
148.00	148.00	6	Powerwave LGP21401	AT&T
148.00	148.00	6	Powerwave LGP13519	AT&T
148.00	148.00	1	Cci OPA-65R-LCUU-H6	AT&T
148.00	148.00	2	Cci OPA-65R-LCUU-H8	AT&T
148.00	148.00	1	Commscope	AT&T
148.00	148.00	2	CCI HPA-65R-BUU-H6	AT&T
148.00	148.00	4	CCI HPA-65R-BUU-H8	AT&T
148.00	148.00	3	Powerwave 1001940-Bias	AT&T
148.00	148.00	9	Ericsson RRUS 32-RRU	AT&T
127.00	127.00	3	VHLP2-11	Sprint Nextel
127.00	127.00	1	VHLP800-11	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
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
117.00	117.00	3	Comba	Dish Network
117.00	117.00	3	Standoff Sector Frame	Dish Network
117.00	117.00	2	Ericsson 4415 RRU	Dish Network
117.00	117.00	3	Ericsson 0208 RRU	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	Outside	1 5/8" Coax	Verizon
0.00	157.00	Inside	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	1/2" Fiber	AT&T
0.00	148.00	Inside	3/4" DC	AT&T
0.00	137.00	Inside	1 5/8" Coax	Metro PCS
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	1-1/4" 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 + 1.6W 97 mph Wind	4528.0	35.2	59.7
0.9D + 1.6W 97 mph Wind	4461.9	35.2	44.7
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1216.4	9.5	93.2
1.2D + 1.0E	253.7	2.0	59.7
0.9D + 1.0E	249.8	2.0	44.8
1.0D + 1.0W 60 mph Wind	1074.4	8.4	49.8

Structure: CT13071-A-SBA - Coax Line Placement

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

10/28/2021

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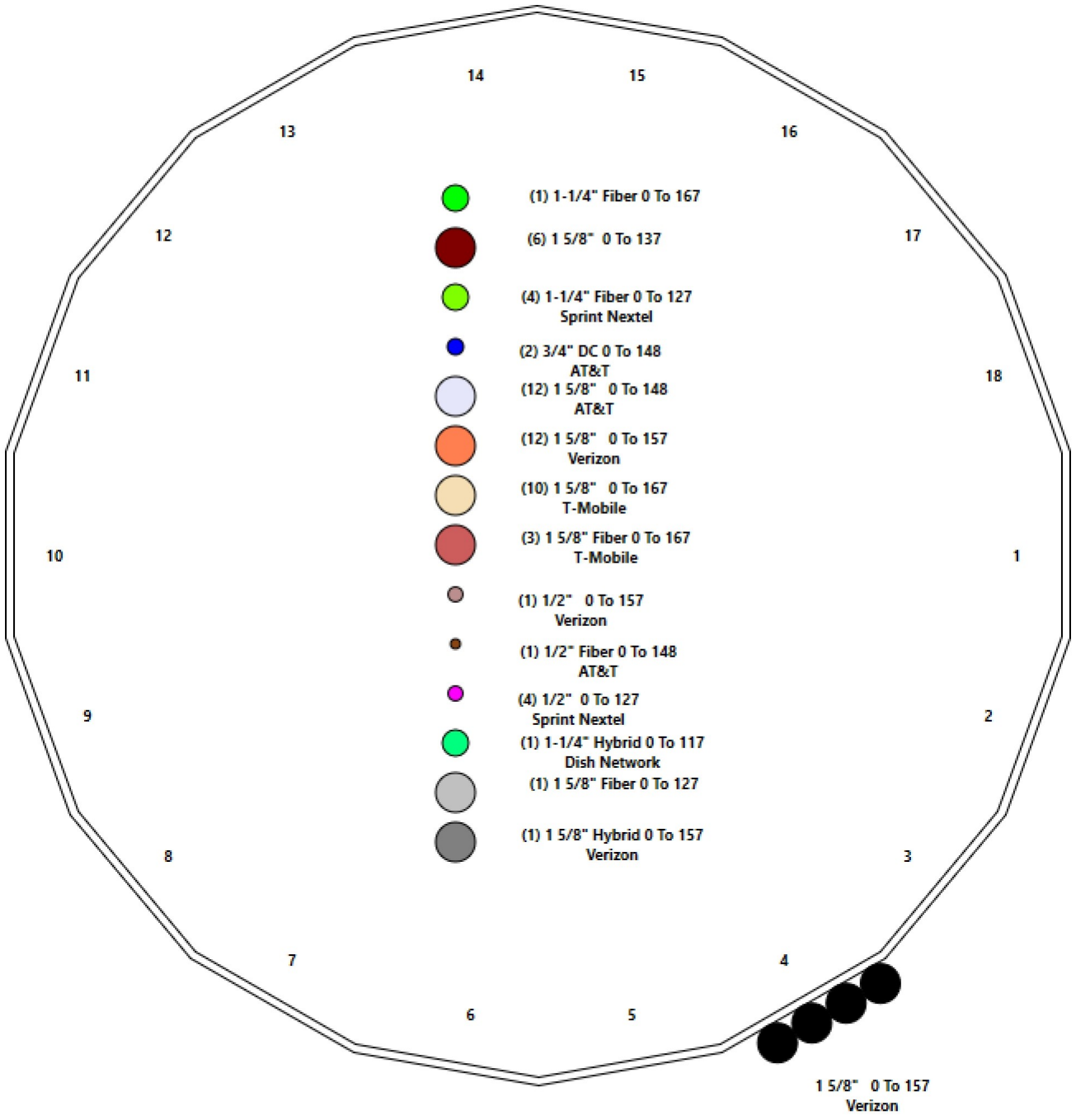

Shaft Properties

Structure:	CT13071-A-SBA		**Code:**	EIA/TIA-222-G	10/28/2021
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: 5

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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
					Total Shaft Weight:		**27,200**

	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

							Intermediate Connectors		Termination Connectors			
Elev From (ft)	**Elev To (ft)**	**Qty**	**Description**	**Fy (ksi)**	**Fu (ksi)**	**Offset (in)**	**Description**	**Spacing (in)**	**Description**	**Spacing (in)**	**Lower Qty**	**Upper Qty**
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

Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
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: 6	

Tower Engineering Solutions

Discrete Appurtenances

				No Ice			Ice				
No.	Elev (ft)	Description	Qty	Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor	Hor. Ecc. (ft)	Vert Ecc (ft)
1	167.00	T-Arms/Commscope VSR-MS-B	3	340.00	6.75	0.75	579.91	12.704	0.75	0.00	0.50
2	167.00	AIR 21 B2A/B4P	3	92.00	6.09	0.86	263.11	7.155	0.86	0.00	0.00
3	167.00	Ericsson - KRY 112 144/2	3	11.00	0.41	0.75	21.90	0.890	0.75	0.00	0.00
4	167.00	AIR 6449 B41	3	103.00	5.65	0.70	257.84	6.634	0.70	0.00	0.00
5	167.00	RRUS 4415 B25	3	46.00	1.64	0.67	87.55	2.161	0.67	0.00	0.00
6	167.00	Ericsson - Radio 4449 B71+B12	3	74.00	1.65	0.75	142.20	2.167	0.75	0.00	0.00
7	165.00	Air 32 KRD901146-1_B66A_B2A	3	105.80	6.51	0.87	292.27	7.702	0.87	0.00	0.00
8	165.00	APXVAA24_43-U-A20	3	128.00	20.24	0.73	560.73	22.184	0.73	0.00	0.00
9	157.00	RF4439d-25A	3	84.40	1.88	0.83	135.89	2.434	0.83	0.00	0.00
10	157.00	RF4440d-13A	3	84.40	1.88	0.83	135.89	2.434	0.83	0.00	0.00
11	157.00	DB-C1-12C-24AB-0Z	1	32.00	4.06	1.00	146.45	4.886	1.00	0.00	0.00
12	157.00	MX06FRO660-02	6	60.00	9.87	0.87	330.39	11.252	0.87	0.00	0.00
13	157.00	MT6407-77A	3	79.40	4.69	0.70	199.60	5.642	0.70	0.00	0.00
14	157.00	T-Arms	3	350.00	8.00	0.75	595.45	15.013	0.75	0.00	0.00
15	157.00	DB846F65ZAXY	4	21.00	7.05	0.92	219.47	8.287	0.93	0.00	0.00
16	157.00	DB846H80E-SX	2	16.00	5.01	1.10	176.40	6.231	1.10	0.00	0.00
17	150.00	Collar Mount	1	100.00	3.50	1.00	183.77	5.943	1.00	0.00	0.00
18	148.00	Ericsson RRUS-11-RRU	3	50.00	2.52	0.76	140.08	3.220	0.78	0.00	0.00
19	148.00	Raycap DC6-48-60-18-8F-Surge	2	32.80	1.47	0.90	96.48	2.169	0.90	0.00	0.00
20	148.00	T-Arms w/ Modifications	3	450.00	12.00	0.75	763.72	22.457	0.75	0.00	0.00
21	148.00	Powerwave 7770	3	35.00	5.51	0.77	169.93	6.566	0.80	0.00	0.00
22	148.00	Powerwave LGP21401 TMA	6	14.10	1.29	0.75	39.07	2.125	0.77	0.00	0.00
23	148.00	Powerwave LGP13519	6	5.30	0.34	0.75	14.78	0.793	0.77	0.00	0.00
24	148.00	Cci OPA-65R-LCUU-H6	1	73.00	9.66	0.79	304.40	11.024	0.79	0.00	0.00
25	148.00	Cci OPA-65R-LCUU-H8	2	88.00	12.75	0.79	373.59	14.593	0.79	0.00	0.00
26	148.00	Commscope WCS-IMFQ-AMT -	1	6.60	1.19	1.00	30.81	1.976	1.00	0.00	0.00
27	148.00	CCI HPA-65R-BUU-H6	2	51.00	9.66	0.85	298.72	11.024	0.85	0.00	0.00
28	148.00	CCI HPA-65R-BUU-H8	4	68.00	12.98	0.79	358.59	14.593	0.79	0.00	0.00
29	148.00	Powerwave 1001940-Bias Ts	3	2.00	0.07	0.90	9.46	0.300	0.91	0.00	0.00
30	148.00	Ericsson RRUS 32-RRU	9	77.00	1.65	0.70	125.40	2.229	0.72	0.00	0.00
31	127.00	VHLP2-11	3	27.00	4.68	1.00	123.25	5.933	1.00	0.10	0.00
32	127.00	VHLP800-11	1	48.00	8.43	1.00	219.27	10.108	1.00	0.10	0.00
33	127.00	Horizon Duo	4	7.00	0.59	0.75	22.26	1.143	0.75	0.00	0.00
34	127.00	1900MHz RRH	3	60.00	2.77	0.99	142.06	4.018	0.99	0.00	0.00
35	127.00	800 MHz RRH	6	53.00	2.49	0.92	125.74	3.615	0.92	0.00	0.00
36	127.00	TD-RRH8x20-25	3	70.00	4.05	0.69	178.26	4.849	0.71	0.00	0.00
37	127.00	AAHC	3	103.60	4.21	0.75	207.38	5.008	0.75	0.00	0.00
38	127.00	NNVV-65B-R4	3	77.40	12.27	0.74	358.24	13.702	0.74	0.00	0.00
39	127.00	RMQP-4096-HK	1	2645.00	51.70	1.00	5368.94	89.325	1.00	0.00	0.00
40	117.00	Comba ODI2-065R18K-GQ	3	25.10	4.85	0.70	129.02	5.808	0.70	0.00	0.00
41	117.00	Standoff Sector Frame Commscope	3	395.00	15.10	0.75	771.57	33.608	0.75	0.00	0.00
42	117.00	Ericsson 4415 RRU	2	44.10	1.86	0.67	90.38	2.419	0.67	0.00	0.00
43	117.00	Ericsson 0208 RRU	3	19.80	1.37	0.67	53.88	1.856	0.67	0.00	0.00
		Totals:	**133**	**13,678.50**			**33,872.21**				

Linear Appurtenances

Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	No Ice CaAa Factor	Ice Weight (lb)	Ice CaAa (sf)	Ice CaAa Factor	Hor. Ecc. (ft)	Vert Ecc (ft)
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	(4) 1 5/8" Coax		1.98	Outside						
0.00	157.00	(12) 1 5/8" Coax		0.00	Inside						
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	(12) 1 5/8" Coax		0.00	Inside						
0.00	148.00	(1) 1/2" Fiber		0.00	Inside						
0.00	148.00	(2) 3/4" DC		0.00	Inside						
0.00	137.00	(6) 1 5/8" Coax		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) 1-1/4" Hybrid		0.00	Inside						
99.25	104.50	(1) 1" Reinforcing plate		1.00	Outside						
89.25	99.25	(1) 1" Reinforcing plate		1.00	Outside						

Shaft Section Properties

Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
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	

Tower Engineering Solutions

Increment Length: **5 (ft)**

											Additional Reinforcing			
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)	Area (in^2)	Ixp (in^4)	Iyp (in^4)	Weight (lb)
0.00		0.4375	56.180	77.403	30386.6	21.23	128.41	65	76	0.0				
5.00		0.4375	55.180	76.014	28780.1	20.83	126.13	65	77	1305.1				
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	RB1	0.3750	38.627	45.528	8416.8	16.75	103.01	65	82	391.4	18.00	4449.0	2805.1	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	4328.3	2729.4	168.4
95.00		0.2500	38.427	30.293	5578.2	25.69	153.71	65	71	77.5	18.00	4290.5	2703.4	45.9
96.75	RB2	0.2500	38.077	30.015	5426.2	25.45	152.31	65	71	179.6	36.00	7688.0	6129.7	214.4
97.00	RT1	0.2500	38.027	29.975	5404.7	25.41	152.11	65	72	25.5	18.00	3454.8	3454.8	15.3
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	RT2	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				
148.00		0.1875	28.201	16.671	1652.8	25.11	150.40	65	72	172.0				
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				
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				

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)	Additional Reinforcing Ixp (in^4)	Additional Reinforcing Iyp (in^4)	Additional Reinforcing Weight (lb)
							Total Weight			27200.5				857.5

Wind Loading - Shaft

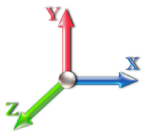
Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
Site Name:	Woodbridge	**Exposure:**	B		
Height:	169.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 10	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



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		1.00	0.70	16.018	17.62	385.81	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	16.018	17.62	378.94	0.650	0.000	5.00	23.558	15.31	431.7	0.0	1566.1
10.00		1.00	0.70	16.018	17.62	372.07	0.650	0.000	5.00	23.135	15.04	423.9	0.0	1537.8
15.00		1.00	0.70	16.018	17.62	365.20	0.650	0.000	5.00	22.712	14.76	416.2	0.0	1509.4
20.00		1.00	0.70	16.018	17.62	358.33	0.650	0.000	5.00	22.288	14.49	408.4	0.0	1481.1
25.00		1.00	0.70	16.018	17.62	351.46	0.650	0.000	5.00	21.865	14.21	400.7	0.0	1452.7
30.00		1.00	0.70	16.031	17.63	344.74	0.650	0.000	5.00	21.442	13.94	393.2	0.0	1424.4
35.00		1.00	0.73	16.753	18.43	345.39	0.650	0.000	5.00	21.019	13.66	402.8	0.0	1396.0
40.00		1.00	0.76	17.405	19.15	344.89	0.650	0.000	5.00	20.596	13.39	410.1	0.0	1367.6
40.75	Bot - Section 2	1.00	0.76	17.497	19.25	344.73	0.650	0.000	0.75	3.053	1.98	61.1	0.0	202.7
45.00		1.00	0.79	18.000	19.80	343.46	0.650	0.000	4.25	17.389	11.30	358.1	0.0	2127.6
47.00	Top - Section 1	1.00	0.80	18.225	20.05	342.67	0.650	0.000	2.00	8.077	5.25	168.4	0.0	988.1
50.00		1.00	0.81	18.551	20.41	346.82	0.650	0.000	3.00	11.989	7.79	254.4	0.0	683.1
55.00		1.00	0.83	19.063	20.97	344.08	0.650	0.000	5.00	19.644	12.77	428.4	0.0	1119.1
60.00		1.00	0.85	19.543	21.50	340.80	0.650	0.000	5.00	19.220	12.49	429.7	0.0	1094.8
65.00		1.00	0.87	19.995	21.99	337.04	0.650	0.000	5.00	18.797	12.22	430.0	0.0	1070.5
70.00		1.00	0.89	20.422	22.46	332.87	0.650	0.000	5.00	18.374	11.94	429.3	0.0	1046.2
75.00		1.00	0.91	20.829	22.91	328.34	0.650	0.000	5.00	17.951	11.67	427.7	0.0	1021.9
80.00		1.00	0.93	21.217	23.34	323.47	0.650	0.000	5.00	17.528	11.39	425.4	0.0	997.6
85.00		1.00	0.94	21.587	23.75	318.32	0.650	0.000	5.00	17.105	11.12	422.4	0.0	973.3
89.25	Bot - Section 3	1.00	0.96	21.890	24.08	313.72	0.650	0.000	4.25	14.206	9.23	355.8	0.0	808.2
90.00		1.00	0.96	21.943	24.14	312.89	0.650	0.000	0.75	2.507	1.63	62.9	0.0	236.2
91.50	RB1	1.00	0.96	22.047	24.25	311.21	0.650	0.000	1.50	4.985	3.24	125.7	0.0	469.6
94.25	Top - Section 2	1.00	0.97	22.234	24.46	308.08	0.650	0.000	2.75	9.041	5.88	230.0	0.0	851.5
95.00		1.00	0.97	22.284	24.51	311.26	0.650	0.000	0.75	2.444	1.59	62.3	0.0	93.0
96.75	RB2	1.00	0.98	22.401	24.64	309.23	0.650	0.000	1.75	5.664	3.68	145.2	0.0	215.5
97.00	RT1	1.00	0.98	22.417	24.66	308.94	0.650	0.000	0.25	0.805	0.52	20.6	0.0	30.6
100.00		1.00	0.99	22.613	24.87	305.39	0.650	0.000	3.00	9.577	6.23	247.8	0.0	364.3
102.25	RT2	1.00	0.99	22.758	25.03	302.68	0.650	0.000	2.25	7.083	4.60	184.4	0.0	269.4
105.00		1.00	1.00	22.931	25.22	299.31	0.650	0.000	2.75	8.541	5.55	224.0	0.0	324.8
110.00		1.00	1.02	23.238	25.56	293.03	0.650	0.000	5.00	15.200	9.88	404.1	0.0	578.0
115.00		1.00	1.03	23.535	25.89	286.57	0.650	0.000	5.00	14.777	9.61	397.9	0.0	561.8
117.00	Appurtenance(s)	1.00	1.03	23.651	26.02	283.94	0.650	0.000	2.00	5.792	3.77	156.7	0.0	220.2
120.00		1.00	1.04	23.823	26.20	279.94	0.650	0.000	3.00	8.562	5.57	233.3	0.0	325.4
125.00		1.00	1.05	24.102	26.51	273.16	0.650	0.000	5.00	13.931	9.06	384.1	0.0	529.4
127.00	Appurtenance(s)	1.00	1.06	24.212	26.63	270.40	0.650	0.000	2.00	5.454	3.55	151.1	0.0	207.2
130.00		1.00	1.07	24.374	26.81	266.22	0.650	0.000	3.00	8.054	5.24	224.6	0.0	305.9
135.00		1.00	1.08	24.638	27.10	259.14	0.650	0.000	5.00	13.085	8.51	368.8	0.0	497.0
139.00	Bot - Section 4	1.00	1.09	24.844	27.33	253.38	0.650	0.000	4.00	10.163	6.61	288.9	0.0	385.9
140.00		1.00	1.09	24.895	27.38	251.93	0.650	0.000	1.00	2.530	1.64	72.1	0.0	167.1
142.75	Top - Section 3	1.00	1.09	25.034	27.54	247.90	0.650	0.000	2.75	6.871	4.47	196.8	0.0	453.6
145.00		1.00	1.10	25.146	27.66	247.81	0.650	0.000	2.25	5.526	3.59	159.0	0.0	157.7
148.00	Appurtenance(s)	1.00	1.11	25.294	27.82	243.36	0.650	0.000	3.00	7.235	4.70	209.4	0.0	206.4
150.00	Appurtenance(s)	1.00	1.11	25.391	27.93	240.37	0.650	0.000	2.00	4.739	3.08	137.6	0.0	135.2
155.00		1.00	1.12	25.630	28.19	232.81	0.650	0.000	5.00	11.551	7.51	338.7	0.0	329.4
157.00	Appurtenance(s)	1.00	1.12	25.724	28.30	229.75	0.650	0.000	2.00	4.502	2.93	132.5	0.0	128.4
160.00		1.00	1.13	25.863	28.45	225.14	0.650	0.000	3.00	6.626	4.31	196.0	0.0	188.9

Wind Loading - Shaft

Structure:	CT13071-A-SBA		**Code:**	EIA/TIA-222-G	10/28/2021
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: 11

165.00 Appurtenance(s)	1.00	1.14	26.092	28.70	217.37	0.650	0.000	5.00	10.704	6.96	319.5	0.0	305.1
167.00 Appurtenance(s)	1.00	1.14	26.182	28.80	214.23	0.650	0.000	2.00	4.163	2.71	124.7	0.0	118.6
169.00	1.00	1.15	26.271	28.90	211.07	0.650	0.000	2.00	4.096	2.66	123.1	0.0	116.7
							Totals:	**169.00**			**13,399.4**		**32,640.6**

Discrete Appurtenance Forces

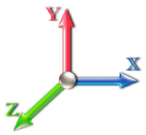
Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
Site Name:	Woodbridge	**Exposure:**	B		
Height:	169.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 12	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



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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	Ericsson - Radio 4449	3	26.182	28.800	0.60	0.80	2.97	266.40	0.000	0.000	136.86	0.00	0.00
2	167.00	RRUS 4415 B25	3	26.182	28.800	0.54	0.80	2.64	165.60	0.000	0.000	121.52	0.00	0.00
3	167.00	AIR 6449 B41	3	26.182	28.800	0.56	0.80	9.49	370.80	0.000	0.000	437.39	0.00	0.00
4	167.00	Ericsson - KRY 112 144/2	3	26.182	28.800	0.60	0.80	0.74	39.60	0.000	0.000	34.01	0.00	0.00
5	167.00	AIR 21 B2A/B4P	3	26.182	28.800	0.77	0.90	14.14	331.20	0.000	0.000	651.61	0.00	0.00
6	167.00	T-Arms/Commscope	3	26.204	28.825	0.56	0.75	11.39	1224.00	0.000	0.500	525.33	0.00	262.66
7	165.00	APXVAA24_43-U-A20	3	26.092	28.701	0.66	0.90	39.89	460.80	0.000	0.000	1831.95	0.00	0.00
8	165.00	Air 32	3	26.092	28.701	0.78	0.90	15.29	380.88	0.000	0.000	702.23	0.00	0.00
9	157.00	DB-C1-12C-24AB-0Z	1	25.724	28.296	1.00	1.00	4.06	38.40	0.000	0.000	183.81	0.00	0.00
10	157.00	MX06FRO660-02	6	25.724	28.296	0.70	0.80	41.22	432.00	0.000	0.000	1866.07	0.00	0.00
11	157.00	RF4440d-13A	3	25.724	28.296	0.66	0.80	3.74	303.84	0.000	0.000	169.55	0.00	0.00
12	157.00	RF4439d-25A	3	25.724	28.296	0.66	0.80	3.74	303.84	0.000	0.000	169.55	0.00	0.00
13	157.00	T-Arms	3	25.724	28.296	0.56	0.75	13.50	1260.00	0.000	0.000	611.20	0.00	0.00
14	157.00	MT6407-77A	3	25.724	28.296	0.56	0.80	7.88	285.84	0.000	0.000	356.72	0.00	0.00
15	157.00	DB846F65ZAXY	4	25.724	28.296	0.74	0.80	20.76	100.80	0.000	0.000	939.67	0.00	0.00
16	157.00	DB846H80E-SX	2	25.724	28.296	0.88	0.80	8.82	38.40	0.000	0.000	399.21	0.00	0.00
17	150.00	Collar Mount	1	25.391	27.930	1.00	1.00	3.50	120.00	0.000	0.000	156.41	0.00	0.00
18	148.00	Ericsson RRUS 32-RRU	9	25.294	27.823	0.56	0.80	8.32	831.60	0.000	0.000	370.20	0.00	0.00
19	148.00	Powerwave 1001940-Bias	3	25.294	27.823	0.72	0.80	0.15	7.20	0.000	0.000	6.73	0.00	0.00
20	148.00	CCI HPA-65R-BUU-H8	4	25.294	27.823	0.63	0.80	32.81	326.40	0.000	0.000	1460.75	0.00	0.00
21	148.00	CCI HPA-65R-BUU-H6	2	25.294	27.823	0.68	0.80	13.14	122.40	0.000	0.000	584.84	0.00	0.00
22	148.00	Commscope	1	25.294	27.823	1.00	1.00	1.19	7.92	0.000	0.000	52.98	0.00	0.00
23	148.00	Cci OPA-65R-LCUU-H8	2	25.294	27.823	0.63	0.80	16.12	211.20	0.000	0.000	717.43	0.00	0.00
24	148.00	Cci OPA-65R-LCUU-H6	1	25.294	27.823	0.63	0.80	6.11	87.60	0.000	0.000	271.78	0.00	0.00
25	148.00	Powerwave LGP13519	6	25.294	27.823	0.60	0.80	1.22	38.16	0.000	0.000	54.49	0.00	0.00
26	148.00	Powerwave LGP21401	6	25.294	27.823	0.60	0.80	4.64	101.52	0.000	0.000	206.74	0.00	0.00
27	148.00	Powerwave 7770	3	25.294	27.823	0.61	0.80	10.13	126.00	0.000	0.000	450.94	0.00	0.00
28	148.00	T-Arms w/ Modifications	3	25.294	27.823	0.60	0.80	21.60	1620.00	0.000	0.000	961.56	0.00	0.00
29	148.00	Raycap	2	25.294	27.823	0.81	0.90	2.38	78.72	0.000	0.000	106.01	0.00	0.00
30	148.00	Ericsson RRUS-11-RRU	3	25.294	27.823	0.61	0.80	4.60	180.00	0.000	0.000	204.62	0.00	0.00
31	127.00	Horizon Duo	4	24.212	26.633	0.60	0.80	1.42	33.60	0.000	0.000	60.34	0.00	0.00
32	127.00	1900MHz RRH	3	24.212	26.633	0.74	0.75	6.17	216.00	0.000	0.000	262.93	0.00	0.00
33	127.00	VHLP800-11	1	24.212	26.633	1.00	1.00	8.43	57.60	1.455	0.000	359.22	326.67	0.00
34	127.00	VHLP2-11	3	24.212	26.633	1.00	1.00	14.04	97.20	1.455	0.000	598.28	544.06	0.00
35	127.00	AAHC	3	24.212	26.633	0.56	0.75	7.10	372.96	0.000	0.000	302.73	0.00	0.00
36	127.00	800 MHz RRH	6	24.212	26.633	0.69	0.75	10.31	381.60	0.000	0.000	439.27	0.00	0.00
37	127.00	TD-RRH8x20-25	3	24.212	26.633	0.52	0.75	6.29	252.00	0.000	0.000	267.93	0.00	0.00
38	127.00	NNVV-65B-R4	3	24.212	26.633	0.55	0.75	20.43	278.64	0.000	0.000	870.55	0.00	0.00
39	127.00	RMQP-4096-HK	1	24.212	26.633	1.00	1.00	51.70	3174.00	0.000	0.000	2203.06	0.00	0.00
40	117.00	Ericsson 0208 RRU	3	23.651	26.016	0.54	0.80	2.20	71.28	0.000	0.000	91.70	0.00	0.00
41	117.00	Ericsson 4415 RRU	2	23.651	26.016	0.54	0.80	1.99	105.84	0.000	0.000	83.00	0.00	0.00
42	117.00	Standoff Sector Frame	3	23.651	26.016	0.56	0.75	25.48	1422.00	0.000	0.000	1060.67	0.00	0.00
43	117.00	Comba	3	23.651	26.016	0.56	0.80	8.15	90.36	0.000	0.000	339.16	0.00	0.00
							Totals:		**16,414.20**			**21,681.02**		

Total Applied Force Summary

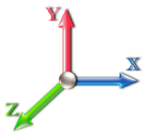
Structure:	CT13071-A-SBA		**Code:**	EIA/TIA-222-G	10/28/2021
Site Name:	Woodbridge		**Exposure:**	B	
Height:	169.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 13

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



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
5.00		431.69	1917.99	0.00	0.00
10.00		423.93	1889.64	0.00	0.00
15.00		416.18	1861.28	0.00	0.00
20.00		408.42	1832.93	0.00	0.00
25.00		400.67	1804.57	0.00	0.00
30.00		393.25	1776.22	0.00	0.00
35.00		402.84	1747.87	0.00	0.00
40.00		410.08	1719.51	0.00	0.00
40.75		61.11	255.48	0.00	0.00
45.00		358.09	2426.68	0.00	0.00
47.00		168.42	1128.80	0.00	0.00
50.00		254.43	894.25	0.00	0.00
55.00		428.38	1470.97	0.00	0.00
60.00		429.70	1446.66	0.00	0.00
65.00		429.97	1422.36	0.00	0.00
70.00		429.28	1398.05	0.00	0.00
75.00		427.74	1373.75	0.00	0.00
80.00		425.43	1349.45	0.00	0.00
85.00		422.42	1325.14	0.00	0.00
89.25		355.76	1107.26	0.00	0.00
90.00		62.93	288.96	0.00	0.00
91.50		125.74	575.19	0.00	0.00
94.25		229.96	1045.04	0.00	0.00
95.00		62.29	145.73	0.00	0.00
96.75		145.16	338.63	0.00	0.00
97.00		20.64	48.21	0.00	0.00
100.00		247.76	575.40	0.00	0.00
102.25		184.40	427.72	0.00	0.00
105.00		224.04	518.31	0.00	0.00
110.00		404.09	929.83	0.00	0.00
115.00		397.86	913.63	0.00	0.00
117.00	(11) attachments	1731.26	2050.39	0.00	0.00
120.00		233.33	533.08	0.00	0.00
125.00		384.12	875.50	0.00	0.00
127.00	(27) attachments	5515.39	5209.26	870.74	0.00
130.00		224.57	493.63	0.00	0.00
135.00		368.80	809.76	0.00	0.00
139.00		288.85	621.16	0.00	0.00
140.00		72.06	222.13	0.00	0.00
142.75		196.77	605.01	0.00	0.00
145.00		158.98	281.59	0.00	0.00
148.00	(45) attachments	5658.43	4110.34	0.00	0.00
150.00	(1) attachments	294.06	333.30	0.00	0.00
155.00		338.67	524.75	0.00	0.00
157.00	(25) attachments	4828.26	2969.62	0.00	0.00
160.00		196.04	241.66	0.00	0.00

Total Applied Force Summary

Structure:	CT13071-A-SBA		**Code:**	EIA/TIA-222-G	10/28/2021
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: 14

Tower Engineering Solutions

165.00	(6) attachments	2853.70	1234.72	0.00	0.00
167.00	(18) attachments	2031.41	2551.42	0.00	262.66
169.00		123.09	116.70	0.00	0.00
	Totals:	**35,080.47**	**59,739.52**	**870.74**	**262.66**

Linear Appurtenance Segment Forces (Factored)

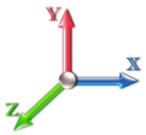
Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
Site Name:	Woodbridge	**Exposure:**	B		
Height:	169.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 15	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



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)
5.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.035	0.000	16.018	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	16.018	0.00	24.96
15.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.036	0.000	16.018	0.00	24.96
20.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.037	0.000	16.018	0.00	24.96
25.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.038	0.000	16.018	0.00	24.96
30.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.038	0.000	16.031	0.00	24.96
35.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.039	0.000	16.753	0.00	24.96
40.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.040	0.000	17.405	0.00	24.96
40.75	1 5/8" Coax	Yes	0.75	0.000	1.98	0.12	0.00	0.041	0.000	17.497	0.00	3.74
45.00	1 5/8" Coax	Yes	4.25	0.000	1.98	0.70	0.00	0.041	0.000	18.000	0.00	21.22
47.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.042	0.000	18.225	0.00	9.98
50.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.041	0.000	18.551	0.00	14.98
55.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.042	0.000	19.063	0.00	24.96
60.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.043	0.000	19.543	0.00	24.96
65.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.044	0.000	19.995	0.00	24.96
70.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.045	0.000	20.422	0.00	24.96
75.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.046	0.000	20.829	0.00	24.96
80.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.047	0.000	21.217	0.00	24.96
85.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.048	0.000	21.587	0.00	24.96
89.25	1 5/8" Coax	Yes	4.25	0.000	1.98	0.70	0.00	0.049	0.000	21.890	0.00	21.22
90.00	1 5/8" Coax	Yes	0.75	0.000	1.98	0.12	0.00	0.075	0.000	21.943	0.00	3.74
90.00	1" Reinforcing plate	Yes	0.75	0.000	1.00	0.06	0.00	0.075	0.000	21.943	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	22.047	0.00	7.49
91.50	1" Reinforcing plate	Yes	1.50	0.000	1.00	0.13	0.00	0.076	0.000	22.047	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	22.234	0.00	13.73
94.25	1" Reinforcing plate	Yes	2.75	0.000	1.00	0.23	0.00	0.077	0.000	22.234	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	22.284	0.00	3.74
95.00	1" Reinforcing plate	Yes	0.75	0.000	1.00	0.06	0.00	0.076	0.000	22.284	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	22.401	0.00	8.74
96.75	1" Reinforcing plate	Yes	1.75	0.000	1.00	0.15	0.00	0.077	0.000	22.401	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	22.417	0.00	1.25
97.00	1" Reinforcing plate	Yes	0.25	0.000	1.00	0.02	0.00	0.077	0.000	22.417	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	22.613	0.00	14.98
100.00	1" Reinforcing plate	Yes	0.75	0.000	1.00	0.06	0.00	0.078	0.000	22.613	0.00	0.00
100.00	1" Reinforcing plate	Yes	2.25	0.000	1.00	0.19	0.00	0.078	0.000	22.613	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	22.758	0.00	11.23
102.25	1" Reinforcing plate	Yes	2.25	0.000	1.00	0.19	0.00	0.079	0.000	22.758	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	22.931	0.00	13.73
105.00	1" Reinforcing plate	Yes	2.25	0.000	1.00	0.19	0.00	0.075	0.000	22.931	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	23.238	0.00	24.96
115.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.056	0.000	23.535	0.00	24.96
117.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.057	0.000	23.651	0.00	9.98
120.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.058	0.000	23.823	0.00	14.98
125.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.059	0.000	24.102	0.00	24.96
127.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.061	0.000	24.212	0.00	9.98
130.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.061	0.000	24.374	0.00	14.98
135.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.063	0.000	24.638	0.00	24.96

Linear Appurtenance Segment Forces (Factored)

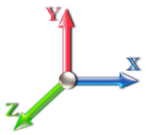
Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
Site Name:	Woodbridge	**Exposure:**	B		
Height:	169.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 16	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



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)
139.00	1 5/8" Coax	Yes	4.00	0.000	1.98	0.66	0.00	0.065	0.000	24.844	0.00	19.97
140.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.066	0.000	24.895	0.00	4.99
142.75	1 5/8" Coax	Yes	2.75	0.000	1.98	0.45	0.00	0.067	0.000	25.034	0.00	13.73
145.00	1 5/8" Coax	Yes	2.25	0.000	1.98	0.37	0.00	0.067	0.000	25.146	0.00	11.23
148.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.068	0.000	25.294	0.00	14.98
150.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.070	0.000	25.391	0.00	9.98
155.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.071	0.000	25.630	0.00	24.96
157.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.073	0.000	25.724	0.00	9.98
										Totals:	**0.0**	**783.7**

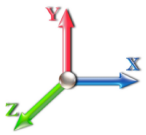
Calculated Forces

Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
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: 17	

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



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	-59.67	-35.19	-0.85	-4527.9	-0.02	4527.96	5324.18	2662.09	12195.0	6106.56	0.00	0.000	0.000	0.753
5.00	-57.63	-34.97	-0.85	-4352.0	-0.02	4352.01	5261.08	2630.54	11832.5	5925.09	0.11	-0.208	0.000	0.746
10.00	-55.61	-34.74	-0.85	-4177.1	-0.02	4177.18	5196.80	2598.40	11472.7	5744.92	0.44	-0.419	0.000	0.738
15.00	-53.63	-34.51	-0.85	-4003.4	-0.02	4003.49	5131.34	2565.67	11115.7	5566.13	1.00	-0.632	0.000	0.730
20.00	-51.67	-34.27	-0.85	-3830.9	-0.02	3830.96	5064.69	2532.35	10761.6	5388.80	1.77	-0.849	0.000	0.721
25.00	-49.74	-34.03	-0.85	-3659.6	-0.02	3659.61	4996.86	2498.43	10410.5	5212.99	2.78	-1.068	0.000	0.712
30.00	-47.84	-33.79	-0.85	-3489.4	-0.02	3489.45	4927.84	2463.92	10062.6	5038.79	4.02	-1.290	0.000	0.702
35.00	-45.97	-33.52	-0.85	-3320.5	-0.02	3320.51	4857.63	2428.82	9718.08	4866.26	5.49	-1.514	0.000	0.692
40.00	-44.19	-33.17	-0.85	-3152.8	-0.02	3152.89	4786.24	2393.12	9377.03	4695.49	7.20	-1.741	0.000	0.681
40.75	-43.87	-33.19	-0.85	-3128.0	-0.02	3128.02	4775.43	2387.72	9326.19	4670.03	7.47	-1.776	0.000	0.679
45.00	-41.37	-32.85	-0.85	-2986.9	-0.02	2986.98	4713.67	2356.83	9039.63	4526.53	9.14	-1.971	0.000	0.669
47.00	-40.19	-32.73	-0.85	-2921.2	-0.02	2921.27	3877.89	1938.95	7512.92	3762.05	9.99	-2.065	0.000	0.787
50.00	-39.19	-32.58	-0.85	-2823.0	-0.03	2823.09	3845.09	1922.55	7353.82	3682.38	11.33	-2.206	-0.001	0.777
55.00	-37.59	-32.26	-0.85	-2660.2	-0.03	2660.21	3789.47	1894.74	7090.51	3550.52	13.78	-2.463	-0.001	0.759
60.00	-36.02	-31.93	-0.85	-2498.9	-0.03	2498.93	3732.67	1866.34	6829.63	3419.89	16.50	-2.721	-0.001	0.741
65.00	-34.48	-31.58	-0.86	-2339.3	-0.03	2339.30	3674.68	1837.34	6571.34	3290.55	19.48	-2.980	-0.001	0.721
70.00	-32.97	-31.23	-0.86	-2181.4	-0.03	2181.40	3615.51	1807.76	6315.78	3162.58	22.74	-3.238	-0.001	0.699
75.00	-31.48	-30.86	-0.86	-2025.2	-0.03	2025.27	3555.15	1777.58	6063.10	3036.06	26.27	-3.497	-0.001	0.676
80.00	-30.03	-30.49	-0.86	-1870.9	-0.04	1870.97	3493.61	1746.80	5813.45	2911.05	30.07	-3.754	-0.001	0.652
85.00	-28.61	-30.09	-0.86	-1718.5	-0.04	1718.54	3430.88	1715.44	5566.98	2787.63	34.13	-4.008	-0.001	0.625
89.25	-27.47	-29.72	-0.86	-1590.6	-0.04	1590.66	3376.63	1688.32	5360.08	2684.02	37.80	-4.223	-0.001	0.601
90.00	-27.15	-29.66	-0.86	-1568.3	-0.04	1568.37	3366.97	1683.48	5323.83	2665.87	38.46	-4.262	-0.001	0.597
91.50	-26.54	-29.53	-0.86	-1523.8	-0.04	1523.88	3347.56	1673.78	5251.55	2629.68	39.81	-4.338	-0.001	0.440
94.25	-25.48	-29.25	-0.86	-1442.6	-0.04	1442.67	1944.87	972.44	3066.99	1535.78	42.34	-4.442	-0.001	0.498
95.00	-25.32	-29.20	-0.86	-1420.7	-0.04	1420.73	1940.65	970.33	3048.28	1526.41	43.04	-4.470	-0.001	0.635
96.75	-24.97	-29.05	-0.86	-1369.6	-0.04	1369.62	1930.70	965.35	3004.67	1504.57	44.69	-4.554	-0.002	0.434
97.00	-24.89	-29.06	-0.86	-1362.3	-0.04	1362.36	1929.27	964.63	2998.44	1501.45	44.93	-4.562	-0.002	0.563
100.00	-24.28	-28.81	-0.86	-1275.1	-0.04	1275.18	1911.84	955.92	2923.84	1464.09	47.84	-4.689	-0.002	0.537
102.25	-23.81	-28.64	-0.86	-1210.3	-0.04	1210.36	1898.49	949.24	2868.04	1436.15	50.07	-4.783	-0.002	0.517
102.25	-23.81	-28.64	-0.86	-1210.3	-0.04	1210.36	1898.49	949.24	2868.04	1436.15	50.07	-4.783	-0.002	0.517
105.00	-23.21	-28.46	-0.86	-1131.6	-0.05	1131.61	1881.84	940.92	2800.02	1402.09	52.85	-4.894	-0.002	0.820
110.00	-22.17	-28.09	-0.87	-989.33	-0.05	989.33	1850.66	925.33	2676.97	1340.48	58.14	-5.212	-0.002	0.751
115.00	-21.19	-27.69	-0.87	-848.87	-0.05	848.87	1818.29	909.14	2554.84	1279.32	63.76	-5.511	-0.003	0.676
117.00	-19.26	-25.81	-0.87	-793.50	-0.06	793.50	1805.01	902.50	2506.28	1255.00	66.09	-5.628	-0.003	0.644
120.00	-18.66	-25.60	-0.87	-716.06	-0.06	716.06	1784.73	892.37	2433.78	1218.70	69.68	-5.795	-0.003	0.599
125.00	-17.75	-25.18	-0.87	-588.08	-0.06	588.08	1749.99	875.00	2313.93	1158.68	75.87	-6.048	-0.003	0.519
127.00	-13.12	-19.17	0.00	-537.72	0.03	537.72	1735.77	867.88	2266.36	1134.86	78.43	-6.144	-0.003	0.482
130.00	-12.59	-18.93	0.00	-480.22	0.02	480.22	1714.07	857.04	2195.44	1099.35	82.32	-6.279	-0.003	0.445
135.00	-11.78	-18.51	0.00	-385.59	0.02	385.59	1676.96	838.48	2078.45	1040.77	89.00	-6.482	-0.003	0.378
139.00	-11.16	-18.17	0.00	-311.56	0.02	311.56	1646.42	823.21	1986.05	994.50	94.48	-6.626	-0.003	0.321
140.00	-10.93	-18.08	0.00	-293.40	0.02	293.40	1638.67	819.33	1963.12	983.02	95.87	-6.660	-0.003	0.306
142.75	-10.33	-17.83	0.00	-243.68	0.01	243.68	1100.62	550.31	1316.21	659.08	99.72	-6.744	-0.003	0.380
145.00	-10.05	-17.65	0.00	-203.57	0.01	203.57	1091.20	545.60	1284.61	643.26	102.91	-6.805	-0.003	0.327
148.00	-6.63	-11.55	0.00	-150.62	0.01	150.62	1078.27	539.14	1242.60	622.22	107.21	-6.891	-0.003	0.249
150.00	-6.32	-11.22	0.00	-127.53	0.01	127.53	1069.42	534.71	1214.68	608.24	110.10	-6.939	-0.003	0.216
155.00	-5.83	-10.83	0.00	-71.41	0.00	71.41	1046.45	523.23	1145.25	573.48	117.40	-7.028	-0.003	0.131
157.00	-3.47	-5.67	0.00	-49.75	0.00	49.75	1036.93	518.47	1117.66	559.66	120.34	-7.053	-0.003	0.092
160.00	-3.25	-5.45	0.00	-32.73	0.00	32.73	1022.30	511.15	1076.48	539.04	124.77	-7.079	-0.003	0.064

Calculated Forces

Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G
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

10/28/2021

Tower Engineering Solutions

165.00	-2.38	-2.47	0.00	-5.47	0.00	5.47	996.96	498.48	1008.51	505.00	132.18	-7.100	-0.003	0.013
167.00	-0.10	-0.14	0.00	-0.27	0.00	0.27	986.50	493.25	981.58	491.52	135.15	-7.102	-0.003	0.001
169.00	0.00	-0.12	0.00	0.00	0.00	0.00	975.84	487.92	954.81	478.11	138.12	-7.102	-0.003	0.000

Wind Loading - Shaft

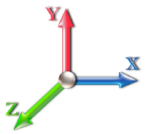
Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
Site Name:	Woodbridge	**Exposure:**	B		
Height:	169.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 19	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



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		1.00	0.70	16.018	17.62	385.81	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	16.018	17.62	378.94	0.650	0.000	5.00	23.558	15.31	431.7	0.0	1174.6
10.00		1.00	0.70	16.018	17.62	372.07	0.650	0.000	5.00	23.135	15.04	423.9	0.0	1153.3
15.00		1.00	0.70	16.018	17.62	365.20	0.650	0.000	5.00	22.712	14.76	416.2	0.0	1132.1
20.00		1.00	0.70	16.018	17.62	358.33	0.650	0.000	5.00	22.288	14.49	408.4	0.0	1110.8
25.00		1.00	0.70	16.018	17.62	351.46	0.650	0.000	5.00	21.865	14.21	400.7	0.0	1089.5
30.00		1.00	0.70	16.031	17.63	344.74	0.650	0.000	5.00	21.442	13.94	393.2	0.0	1068.3
35.00		1.00	0.73	16.753	18.43	345.39	0.650	0.000	5.00	21.019	13.66	402.8	0.0	1047.0
40.00		1.00	0.76	17.405	19.15	344.89	0.650	0.000	5.00	20.596	13.39	410.1	0.0	1025.7
40.75	Bot - Section 2	1.00	0.76	17.497	19.25	344.73	0.650	0.000	0.75	3.053	1.98	61.1	0.0	152.0
45.00		1.00	0.79	18.000	19.80	343.46	0.650	0.000	4.25	17.389	11.30	358.1	0.0	1595.7
47.00	Top - Section 1	1.00	0.80	18.225	20.05	342.67	0.650	0.000	2.00	8.077	5.25	168.4	0.0	741.0
50.00		1.00	0.81	18.551	20.41	346.82	0.650	0.000	3.00	11.989	7.79	254.4	0.0	512.3
55.00		1.00	0.83	19.063	20.97	344.08	0.650	0.000	5.00	19.644	12.77	428.4	0.0	839.3
60.00		1.00	0.85	19.543	21.50	340.80	0.650	0.000	5.00	19.220	12.49	429.7	0.0	821.1
65.00		1.00	0.87	19.995	21.99	337.04	0.650	0.000	5.00	18.797	12.22	430.0	0.0	802.9
70.00		1.00	0.89	20.422	22.46	332.87	0.650	0.000	5.00	18.374	11.94	429.3	0.0	784.6
75.00		1.00	0.91	20.829	22.91	328.34	0.650	0.000	5.00	17.951	11.67	427.7	0.0	766.4
80.00		1.00	0.93	21.217	23.34	323.47	0.650	0.000	5.00	17.528	11.39	425.4	0.0	748.2
85.00		1.00	0.94	21.587	23.75	318.32	0.650	0.000	5.00	17.105	11.12	422.4	0.0	730.0
89.25	Bot - Section 3	1.00	0.96	21.890	24.08	313.72	0.650	0.000	4.25	14.206	9.23	355.8	0.0	606.1
90.00		1.00	0.96	21.943	24.14	312.89	0.650	0.000	0.75	2.507	1.63	62.9	0.0	177.1
91.50	RB1	1.00	0.96	22.047	24.25	311.21	0.650	0.000	1.50	4.985	3.24	125.7	0.0	352.2
94.25	Top - Section 2	1.00	0.97	22.234	24.46	308.08	0.650	0.000	2.75	9.041	5.88	230.0	0.0	638.6
95.00		1.00	0.97	22.284	24.51	311.26	0.650	0.000	0.75	2.444	1.59	62.3	0.0	69.7
96.75	RB2	1.00	0.98	22.401	24.64	309.23	0.650	0.000	1.75	5.664	3.68	145.2	0.0	161.6
97.00	RT1	1.00	0.98	22.417	24.66	308.94	0.650	0.000	0.25	0.805	0.52	20.6	0.0	23.0
100.00		1.00	0.99	22.613	24.87	305.39	0.650	0.000	3.00	9.577	6.23	247.8	0.0	273.2
102.25	RT2	1.00	0.99	22.758	25.03	302.68	0.650	0.000	2.25	7.083	4.60	184.4	0.0	202.0
105.00		1.00	1.00	22.931	25.22	299.31	0.650	0.000	2.75	8.541	5.55	224.0	0.0	243.6
110.00		1.00	1.02	23.238	25.56	293.03	0.650	0.000	5.00	15.200	9.88	404.1	0.0	433.5
115.00		1.00	1.03	23.535	25.89	286.57	0.650	0.000	5.00	14.777	9.61	397.9	0.0	421.3
117.00	Appurtenance(s)	1.00	1.03	23.651	26.02	283.94	0.650	0.000	2.00	5.792	3.77	156.7	0.0	165.1
120.00		1.00	1.04	23.823	26.20	279.94	0.650	0.000	3.00	8.562	5.57	233.3	0.0	244.0
125.00		1.00	1.05	24.102	26.51	273.16	0.650	0.000	5.00	13.931	9.06	384.1	0.0	397.0
127.00	Appurtenance(s)	1.00	1.06	24.212	26.63	270.40	0.650	0.000	2.00	5.454	3.55	151.1	0.0	155.4
130.00		1.00	1.07	24.374	26.81	266.22	0.650	0.000	3.00	8.054	5.24	224.6	0.0	229.5
135.00		1.00	1.08	24.638	27.10	259.14	0.650	0.000	5.00	13.085	8.51	368.8	0.0	372.7
139.00	Bot - Section 4	1.00	1.09	24.844	27.33	253.38	0.650	0.000	4.00	10.163	6.61	288.9	0.0	289.4
140.00		1.00	1.09	24.895	27.38	251.93	0.650	0.000	1.00	2.530	1.64	72.1	0.0	125.3
142.75	Top - Section 3	1.00	1.09	25.034	27.54	247.90	0.650	0.000	2.75	6.871	4.47	196.8	0.0	340.2
145.00		1.00	1.10	25.146	27.66	247.81	0.650	0.000	2.25	5.526	3.59	159.0	0.0	118.3
148.00	Appurtenance(s)	1.00	1.11	25.294	27.82	243.36	0.650	0.000	3.00	7.235	4.70	209.4	0.0	154.8
150.00	Appurtenance(s)	1.00	1.11	25.391	27.93	240.37	0.650	0.000	2.00	4.739	3.08	137.6	0.0	101.4
155.00		1.00	1.12	25.630	28.19	232.81	0.650	0.000	5.00	11.551	7.51	338.7	0.0	247.1
157.00	Appurtenance(s)	1.00	1.12	25.724	28.30	229.75	0.650	0.000	2.00	4.502	2.93	132.5	0.0	96.3
160.00		1.00	1.13	25.863	28.45	225.14	0.650	0.000	3.00	6.626	4.31	196.0	0.0	141.7

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: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

10/28/2021

Tower Engineering Solutions

165.00 Appurtenance(s)	1.00	1.14	26.092	28.70	217.37	0.650	0.000	5.00	10.704	6.96	319.5	0.0	228.8
167.00 Appurtenance(s)	1.00	1.14	26.182	28.80	214.23	0.650	0.000	2.00	4.163	2.71	124.7	0.0	89.0
169.00	1.00	1.15	26.271	28.90	211.07	0.650	0.000	2.00	4.096	2.66	123.1	0.0	87.5
							Totals:	**169.00**			**13,399.4**		**24,480.4**

Discrete Appurtenance Forces

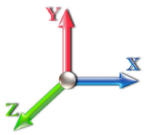
Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
Site Name:	Woodbridge	**Exposure:**	B		
Height:	169.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 21	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



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	Ericsson - Radio 4449	3	26.182	28.800	0.60	0.80	2.97	199.80	0.000	0.000	136.86	0.00	0.00
2	167.00	RRUS 4415 B25	3	26.182	28.800	0.54	0.80	2.64	124.20	0.000	0.000	121.52	0.00	0.00
3	167.00	AIR 6449 B41	3	26.182	28.800	0.56	0.80	9.49	278.10	0.000	0.000	437.39	0.00	0.00
4	167.00	Ericsson - KRY 112 144/2	3	26.182	28.800	0.60	0.80	0.74	29.70	0.000	0.000	34.01	0.00	0.00
5	167.00	AIR 21 B2A/B4P	3	26.182	28.800	0.77	0.90	14.14	248.40	0.000	0.000	651.61	0.00	0.00
6	167.00	T-Arms/Commscope	3	26.204	28.825	0.56	0.75	11.39	918.00	0.000	0.500	525.33	0.00	262.66
7	165.00	APXVAA24_43-U-A20	3	26.092	28.701	0.66	0.90	39.89	345.60	0.000	0.000	1831.95	0.00	0.00
8	165.00	Air 32	3	26.092	28.701	0.78	0.90	15.29	285.66	0.000	0.000	702.23	0.00	0.00
9	157.00	DB-C1-12C-24AB-0Z	1	25.724	28.296	1.00	1.00	4.06	28.80	0.000	0.000	183.81	0.00	0.00
10	157.00	MX06FRO660-02	6	25.724	28.296	0.70	0.80	41.22	324.00	0.000	0.000	1866.07	0.00	0.00
11	157.00	RF4440d-13A	3	25.724	28.296	0.66	0.80	3.74	227.88	0.000	0.000	169.55	0.00	0.00
12	157.00	RF4439d-25A	3	25.724	28.296	0.66	0.80	3.74	227.88	0.000	0.000	169.55	0.00	0.00
13	157.00	T-Arms	3	25.724	28.296	0.56	0.75	13.50	945.00	0.000	0.000	611.20	0.00	0.00
14	157.00	MT6407-77A	3	25.724	28.296	0.56	0.80	7.88	214.38	0.000	0.000	356.72	0.00	0.00
15	157.00	DB846F65ZAXY	4	25.724	28.296	0.74	0.80	20.76	75.60	0.000	0.000	939.67	0.00	0.00
16	157.00	DB846H80E-SX	2	25.724	28.296	0.88	0.80	8.82	28.80	0.000	0.000	399.21	0.00	0.00
17	150.00	Collar Mount	1	25.391	27.930	1.00	1.00	3.50	90.00	0.000	0.000	156.41	0.00	0.00
18	148.00	Ericsson RRUS 32-RRU	9	25.294	27.823	0.56	0.80	8.32	623.70	0.000	0.000	370.20	0.00	0.00
19	148.00	Powerwave 1001940-Bias	3	25.294	27.823	0.72	0.80	0.15	5.40	0.000	0.000	6.73	0.00	0.00
20	148.00	CCI HPA-65R-BUU-H8	4	25.294	27.823	0.63	0.80	32.81	244.80	0.000	0.000	1460.75	0.00	0.00
21	148.00	CCI HPA-65R-BUU-H6	2	25.294	27.823	0.68	0.80	13.14	91.80	0.000	0.000	584.84	0.00	0.00
22	148.00	Commscope	1	25.294	27.823	1.00	1.00	1.19	5.94	0.000	0.000	52.98	0.00	0.00
23	148.00	Cci OPA-65R-LCUU-H8	2	25.294	27.823	0.63	0.80	16.12	158.40	0.000	0.000	717.43	0.00	0.00
24	148.00	Cci OPA-65R-LCUU-H6	1	25.294	27.823	0.63	0.80	6.11	65.70	0.000	0.000	271.78	0.00	0.00
25	148.00	Powerwave LGP13519	6	25.294	27.823	0.60	0.80	1.22	28.62	0.000	0.000	54.49	0.00	0.00
26	148.00	Powerwave LGP21401	6	25.294	27.823	0.60	0.80	4.64	76.14	0.000	0.000	206.74	0.00	0.00
27	148.00	Powerwave 7770	3	25.294	27.823	0.61	0.80	10.13	94.50	0.000	0.000	450.94	0.00	0.00
28	148.00	T-Arms w/ Modifications	3	25.294	27.823	0.60	0.80	21.60	1215.00	0.000	0.000	961.56	0.00	0.00
29	148.00	Raycap	2	25.294	27.823	0.81	0.90	2.38	59.04	0.000	0.000	106.01	0.00	0.00
30	148.00	Ericsson RRUS-11-RRU	3	25.294	27.823	0.61	0.80	4.60	135.00	0.000	0.000	204.62	0.00	0.00
31	127.00	Horizon Duo	4	24.212	26.633	0.60	0.80	1.42	25.20	0.000	0.000	60.34	0.00	0.00
32	127.00	1900MHz RRH	3	24.212	26.633	0.74	0.75	6.17	162.00	0.000	0.000	262.93	0.00	0.00
33	127.00	VHLP800-11	1	24.212	26.633	1.00	1.00	8.43	43.20	1.455	0.000	359.22	326.67	0.00
34	127.00	VHLP2-11	3	24.212	26.633	1.00	1.00	14.04	72.90	1.455	0.000	598.28	544.06	0.00
35	127.00	AAHC	3	24.212	26.633	0.56	0.75	7.10	279.72	0.000	0.000	302.73	0.00	0.00
36	127.00	800 MHz RRH	6	24.212	26.633	0.69	0.75	10.31	286.20	0.000	0.000	439.27	0.00	0.00
37	127.00	TD-RRH8x20-25	3	24.212	26.633	0.52	0.75	6.29	189.00	0.000	0.000	267.93	0.00	0.00
38	127.00	NNVV-65B-R4	3	24.212	26.633	0.55	0.75	20.43	208.98	0.000	0.000	870.55	0.00	0.00
39	127.00	RMQP-4096-HK	1	24.212	26.633	1.00	1.00	51.70	2380.50	0.000	0.000	2203.06	0.00	0.00
40	117.00	Ericsson 0208 RRU	3	23.651	26.016	0.54	0.80	2.20	53.46	0.000	0.000	91.70	0.00	0.00
41	117.00	Ericsson 4415 RRU	2	23.651	26.016	0.54	0.80	1.99	79.38	0.000	0.000	83.00	0.00	0.00
42	117.00	Standoff Sector Frame	3	23.651	26.016	0.56	0.75	25.48	1066.50	0.000	0.000	1060.67	0.00	0.00
43	117.00	Comba	3	23.651	26.016	0.56	0.80	8.15	67.77	0.000	0.000	339.16	0.00	0.00
							Totals:		**12,310.65**			**21,681.02**		

Total Applied Force Summary

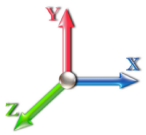
Structure:	CT13071-A-SBA		**Code:**	EIA/TIA-222-G	10/28/2021
Site Name:	Woodbridge		**Exposure:**	B	
Height:	169.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 22

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



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
5.00		431.69	1438.49	0.00	0.00
10.00		423.93	1417.23	0.00	0.00
15.00		416.18	1395.96	0.00	0.00
20.00		408.42	1374.70	0.00	0.00
25.00		400.67	1353.43	0.00	0.00
30.00		393.25	1332.16	0.00	0.00
35.00		402.84	1310.90	0.00	0.00
40.00		410.08	1289.63	0.00	0.00
40.75		61.11	191.61	0.00	0.00
45.00		358.09	1820.01	0.00	0.00
47.00		168.42	846.60	0.00	0.00
50.00		254.43	670.68	0.00	0.00
55.00		428.38	1103.22	0.00	0.00
60.00		429.70	1085.00	0.00	0.00
65.00		429.97	1066.77	0.00	0.00
70.00		429.28	1048.54	0.00	0.00
75.00		427.74	1030.31	0.00	0.00
80.00		425.43	1012.09	0.00	0.00
85.00		422.42	993.86	0.00	0.00
89.25		355.76	830.45	0.00	0.00
90.00		62.93	216.72	0.00	0.00
91.50		125.74	431.39	0.00	0.00
94.25		229.96	783.78	0.00	0.00
95.00		62.29	109.30	0.00	0.00
96.75		145.16	253.97	0.00	0.00
97.00		20.64	36.16	0.00	0.00
100.00		247.76	431.55	0.00	0.00
102.25		184.40	320.79	0.00	0.00
105.00		224.04	388.73	0.00	0.00
110.00		404.09	697.37	0.00	0.00
115.00		397.86	685.22	0.00	0.00
117.00	(11) attachments	1731.26	1537.80	0.00	0.00
120.00		233.33	399.81	0.00	0.00
125.00		384.12	656.62	0.00	0.00
127.00	(27) attachments	5515.39	3906.95	870.74	0.00
130.00		224.57	370.22	0.00	0.00
135.00		368.80	607.32	0.00	0.00
139.00		288.85	465.87	0.00	0.00
140.00		72.06	166.60	0.00	0.00
142.75		196.77	453.76	0.00	0.00
145.00		158.98	211.19	0.00	0.00
148.00	(45) attachments	5658.43	3082.76	0.00	0.00
150.00	(1) attachments	294.06	249.98	0.00	0.00
155.00		338.67	393.56	0.00	0.00
157.00	(25) attachments	4828.26	2227.21	0.00	0.00
160.00		196.04	181.24	0.00	0.00

Total Applied Force Summary

Structure:	CT13071-A-SBA		**Code:**	EIA/TIA-222-G	10/28/2021
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: 23

Tower Engineering Solutions

165.00	(6) attachments	2853.70	926.04	0.00	0.00
167.00	(18) attachments	2031.41	1913.56	0.00	262.66
169.00		123.09	87.53	0.00	0.00
	Totals:	**35,080.47**	**44,804.64**	**870.74**	**262.66**

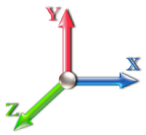
Linear Appurtenance Segment Forces (Factored)

Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
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: 24	

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



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)
5.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.035	0.000	16.018	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	16.018	0.00	18.72
15.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.036	0.000	16.018	0.00	18.72
20.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.037	0.000	16.018	0.00	18.72
25.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.038	0.000	16.018	0.00	18.72
30.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.038	0.000	16.031	0.00	18.72
35.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.039	0.000	16.753	0.00	18.72
40.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.040	0.000	17.405	0.00	18.72
40.75	1 5/8" Coax	Yes	0.75	0.000	1.98	0.12	0.00	0.041	0.000	17.497	0.00	2.81
45.00	1 5/8" Coax	Yes	4.25	0.000	1.98	0.70	0.00	0.041	0.000	18.000	0.00	15.91
47.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.042	0.000	18.225	0.00	7.49
50.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.041	0.000	18.551	0.00	11.23
55.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.042	0.000	19.063	0.00	18.72
60.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.043	0.000	19.543	0.00	18.72
65.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.044	0.000	19.995	0.00	18.72
70.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.045	0.000	20.422	0.00	18.72
75.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.046	0.000	20.829	0.00	18.72
80.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.047	0.000	21.217	0.00	18.72
85.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.048	0.000	21.587	0.00	18.72
89.25	1 5/8" Coax	Yes	4.25	0.000	1.98	0.70	0.00	0.049	0.000	21.890	0.00	15.91
90.00	1 5/8" Coax	Yes	0.75	0.000	1.98	0.12	0.00	0.075	0.000	21.943	0.00	2.81
90.00	1" Reinforcing plate	Yes	0.75	0.000	1.00	0.06	0.00	0.075	0.000	21.943	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	22.047	0.00	5.62
91.50	1" Reinforcing plate	Yes	1.50	0.000	1.00	0.13	0.00	0.076	0.000	22.047	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	22.234	0.00	10.30
94.25	1" Reinforcing plate	Yes	2.75	0.000	1.00	0.23	0.00	0.077	0.000	22.234	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	22.284	0.00	2.81
95.00	1" Reinforcing plate	Yes	0.75	0.000	1.00	0.06	0.00	0.076	0.000	22.284	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	22.401	0.00	6.55
96.75	1" Reinforcing plate	Yes	1.75	0.000	1.00	0.15	0.00	0.077	0.000	22.401	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	22.417	0.00	0.94
97.00	1" Reinforcing plate	Yes	0.25	0.000	1.00	0.02	0.00	0.077	0.000	22.417	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	22.613	0.00	11.23
100.00	1" Reinforcing plate	Yes	0.75	0.000	1.00	0.06	0.00	0.078	0.000	22.613	0.00	0.00
100.00	1" Reinforcing plate	Yes	2.25	0.000	1.00	0.19	0.00	0.078	0.000	22.613	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	22.758	0.00	8.42
102.25	1" Reinforcing plate	Yes	2.25	0.000	1.00	0.19	0.00	0.079	0.000	22.758	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	22.931	0.00	10.30
105.00	1" Reinforcing plate	Yes	2.25	0.000	1.00	0.19	0.00	0.075	0.000	22.931	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	23.238	0.00	18.72
115.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.056	0.000	23.535	0.00	18.72
117.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.057	0.000	23.651	0.00	7.49
120.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.058	0.000	23.823	0.00	11.23
125.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.059	0.000	24.102	0.00	18.72
127.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.061	0.000	24.212	0.00	7.49
130.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.061	0.000	24.374	0.00	11.23
135.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.063	0.000	24.638	0.00	18.72

Linear Appurtenance Segment Forces (Factored)

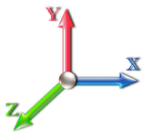
Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
Site Name:	Woodbridge	**Exposure:**	B		
Height:	169.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 25	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



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)
139.00	1 5/8" Coax	Yes	4.00	0.000	1.98	0.66	0.00	0.065	0.000	24.844	0.00	14.98
140.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.066	0.000	24.895	0.00	3.74
142.75	1 5/8" Coax	Yes	2.75	0.000	1.98	0.45	0.00	0.067	0.000	25.034	0.00	10.30
145.00	1 5/8" Coax	Yes	2.25	0.000	1.98	0.37	0.00	0.067	0.000	25.146	0.00	8.42
148.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.068	0.000	25.294	0.00	11.23
150.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.070	0.000	25.391	0.00	7.49
155.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.071	0.000	25.630	0.00	18.72
157.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.073	0.000	25.724	0.00	7.49
										Totals:	**0.0**	**587.8**

Calculated Forces

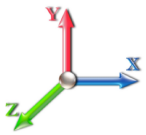
Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
Site Name:	Woodbridge	**Exposure:**	B		
Height:	169.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 26	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



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	-44.74	-35.16	-0.85	-4461.8	-0.01	4461.88	5324.18	2662.09	12195.0	6106.56	0.00	0.000	0.000	0.739
5.00	-43.18	-34.88	-0.85	-4286.0	-0.01	4286.07	5261.08	2630.54	11832.5	5925.09	0.11	-0.205	0.000	0.732
10.00	-41.64	-34.60	-0.85	-4111.6	-0.01	4111.66	5196.80	2598.40	11472.7	5744.92	0.44	-0.412	0.000	0.724
15.00	-40.12	-34.32	-0.85	-3938.6	-0.02	3938.64	5131.34	2565.67	11115.7	5566.13	0.98	-0.623	0.000	0.716
20.00	-38.62	-34.04	-0.85	-3767.0	-0.02	3767.03	5064.69	2532.35	10761.6	5388.80	1.75	-0.836	0.000	0.707
25.00	-37.15	-33.76	-0.85	-3596.8	-0.02	3596.82	4996.86	2498.43	10410.5	5212.99	2.74	-1.051	0.000	0.698
30.00	-35.70	-33.48	-0.85	-3428.0	-0.02	3428.02	4927.84	2463.92	10062.6	5038.79	3.95	-1.269	0.000	0.688
35.00	-34.27	-33.18	-0.85	-3260.6	-0.02	3260.64	4857.63	2428.82	9718.08	4866.26	5.40	-1.489	0.000	0.677
40.00	-32.92	-32.80	-0.85	-3094.7	-0.02	3094.77	4786.24	2393.12	9377.03	4695.49	7.08	-1.712	0.000	0.666
40.75	-32.66	-32.80	-0.85	-3070.1	-0.02	3070.17	4775.43	2387.72	9326.19	4670.03	7.35	-1.746	0.000	0.664
45.00	-30.77	-32.46	-0.85	-2930.7	-0.02	2930.77	4713.67	2356.83	9039.63	4526.53	8.99	-1.938	0.000	0.654
47.00	-29.87	-32.32	-0.85	-2865.8	-0.02	2865.85	3877.89	1938.95	7512.92	3762.05	9.83	-2.030	0.000	0.770
50.00	-29.10	-32.14	-0.85	-2768.8	-0.02	2768.89	3845.09	1922.55	7353.82	3682.38	11.15	-2.168	-0.001	0.760
55.00	-27.87	-31.79	-0.85	-2608.1	-0.02	2608.17	3789.47	1894.74	7090.51	3550.52	13.55	-2.420	-0.001	0.742
60.00	-26.67	-31.44	-0.86	-2449.2	-0.02	2449.20	3732.67	1866.34	6829.63	3419.89	16.22	-2.673	-0.001	0.724
65.00	-25.49	-31.07	-0.86	-2292.0	-0.03	2292.03	3674.68	1837.34	6571.34	3290.55	19.16	-2.927	-0.001	0.704
70.00	-24.33	-30.69	-0.86	-2136.7	-0.03	2136.70	3615.51	1807.76	6315.78	3162.58	22.36	-3.180	-0.001	0.683
75.00	-23.19	-30.31	-0.86	-1983.2	-0.03	1983.25	3555.15	1777.58	6063.10	3036.06	25.82	-3.433	-0.001	0.660
80.00	-22.08	-29.92	-0.86	-1831.7	-0.03	1831.73	3493.61	1746.80	5813.45	2911.05	29.55	-3.685	-0.001	0.636
85.00	-21.00	-29.51	-0.86	-1682.1	-0.03	1682.16	3430.88	1715.44	5566.98	2787.63	33.54	-3.934	-0.001	0.610
89.25	-20.13	-29.14	-0.86	-1556.7	-0.04	1556.73	3376.63	1688.32	5360.08	2684.02	37.14	-4.144	-0.001	0.586
90.00	-19.89	-29.08	-0.86	-1534.8	-0.04	1534.88	3366.97	1683.48	5323.83	2665.87	37.79	-4.182	-0.001	0.582
91.50	-19.42	-28.96	-0.86	-1491.2	-0.04	1491.25	3347.56	1673.78	5251.55	2629.68	39.11	-4.257	-0.001	0.429
94.25	-18.63	-28.69	-0.86	-1411.6	-0.04	1411.63	1944.87	972.44	3066.99	1535.78	41.59	-4.358	-0.001	0.486
95.00	-18.50	-28.64	-0.86	-1390.1	-0.04	1390.11	1940.65	970.33	3048.28	1526.41	42.28	-4.386	-0.002	0.619
96.75	-18.23	-28.49	-0.86	-1340.0	-0.04	1340.00	1930.70	965.35	3004.67	1504.57	43.90	-4.468	-0.002	0.423
97.00	-18.16	-28.48	-0.86	-1332.8	-0.04	1332.88	1929.27	964.63	2998.44	1501.45	44.14	-4.476	-0.002	0.548
100.00	-17.70	-28.24	-0.86	-1247.4	-0.04	1247.43	1911.84	955.92	2923.84	1464.09	46.99	-4.600	-0.002	0.523
102.25	-17.35	-28.06	-0.86	-1183.9	-0.04	1183.90	1898.49	949.24	2868.04	1436.15	49.18	-4.692	-0.002	0.503
102.25	-17.35	-28.06	-0.86	-1183.9	-0.04	1183.90	1898.49	949.24	2868.04	1436.15	49.18	-4.692	-0.002	0.503
105.00	-16.87	-27.86	-0.86	-1106.7	-0.04	1106.75	1881.84	940.92	2800.02	1402.09	51.91	-4.801	-0.002	0.799
110.00	-16.07	-27.49	-0.87	-967.43	-0.05	967.43	1850.66	925.33	2676.97	1340.48	57.10	-5.111	-0.002	0.731
115.00	-15.33	-27.08	-0.87	-830.00	-0.05	830.00	1818.29	909.14	2554.84	1279.32	62.60	-5.404	-0.003	0.658
117.00	-13.90	-25.24	-0.87	-775.84	-0.05	775.84	1805.01	902.50	2506.28	1255.00	64.89	-5.519	-0.003	0.627
120.00	-13.44	-25.02	-0.87	-700.11	-0.06	700.11	1784.73	892.37	2433.78	1218.70	68.41	-5.682	-0.003	0.583
125.00	-12.75	-24.61	-0.87	-575.00	-0.06	575.00	1749.99	875.00	2313.93	1158.68	74.48	-5.929	-0.003	0.504
127.00	-9.40	-18.74	0.00	-525.78	0.03	525.78	1735.77	867.88	2266.36	1134.86	76.98	-6.023	-0.003	0.469
130.00	-9.00	-18.50	0.00	-469.57	0.03	469.57	1714.07	857.04	2195.44	1099.35	80.81	-6.155	-0.003	0.433
135.00	-8.39	-18.09	0.00	-377.06	0.02	377.06	1676.96	838.48	2078.45	1040.77	87.35	-6.353	-0.003	0.368
139.00	-7.93	-17.77	0.00	-304.69	0.02	304.69	1646.42	823.21	1986.05	994.50	92.72	-6.494	-0.003	0.312
140.00	-7.75	-17.68	0.00	-286.93	0.02	286.93	1638.67	819.33	1963.12	983.02	94.09	-6.527	-0.003	0.297
142.75	-7.30	-17.44	0.00	-238.30	0.01	238.30	1100.62	550.31	1316.21	659.08	97.86	-6.610	-0.003	0.369
145.00	-7.09	-17.27	0.00	-199.05	0.01	199.05	1091.20	545.60	1284.61	643.26	100.99	-6.669	-0.003	0.317
148.00	-4.68	-11.30	0.00	-147.24	0.01	147.24	1078.27	539.14	1242.60	622.22	105.20	-6.753	-0.003	0.241
150.00	-4.45	-10.98	0.00	-124.64	0.01	124.64	1069.42	534.71	1214.68	608.24	108.03	-6.800	-0.003	0.210
155.00	-4.09	-10.60	0.00	-69.74	0.00	69.74	1046.45	523.23	1145.25	573.48	115.19	-6.887	-0.003	0.126
157.00	-2.46	-5.54	0.00	-48.54	0.00	48.54	1036.93	518.47	1117.66	559.66	118.07	-6.911	-0.003	0.089
160.00	-2.30	-5.33	0.00	-31.92	0.00	31.92	1022.30	511.15	1076.48	539.04	122.41	-6.937	-0.003	0.062

Calculated Forces

Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
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: 27	

165.00	-1.73	-2.38	0.00	-5.29	0.00	5.29	996.96	498.48	1008.51	505.00	129.67	-6.957	-0.003	0.012
167.00	-0.07	-0.13	0.00	-0.27	0.00	0.27	986.50	493.25	981.58	491.52	132.58	-6.959	-0.003	0.001
169.00	0.00	-0.12	0.00	0.00	0.00	0.00	975.84	487.92	954.81	478.11	135.49	-6.959	-0.003	0.000

Wind Loading - Shaft

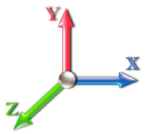
Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
Site Name:	Woodbridge	**Exposure:**	B		
Height:	169.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 28	

TES Tower Engineering Solutions

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		1.00	0.70	4.256	4.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	4.256	4.68	0.00	1.200	1.242	5.00	24.593	29.51	138.2	439.0	2005.1
10.00		1.00	0.70	4.256	4.68	0.00	1.200	1.331	5.00	24.244	29.09	136.2	462.9	2000.7
15.00		1.00	0.70	4.256	4.68	0.00	1.200	1.386	5.00	23.867	28.64	134.1	473.8	1983.3
20.00		1.00	0.70	4.256	4.68	0.00	1.200	1.427	5.00	23.477	28.17	131.9	479.1	1960.2
25.00		1.00	0.70	4.256	4.68	0.00	1.200	1.459	5.00	23.081	27.70	129.7	481.0	1933.8
30.00		1.00	0.70	4.260	4.69	0.00	1.200	1.486	5.00	22.680	27.22	127.5	480.8	1905.2
35.00		1.00	0.73	4.451	4.90	0.00	1.200	1.509	5.00	22.276	26.73	130.9	479.1	1875.1
40.00		1.00	0.76	4.625	5.09	0.00	1.200	1.529	5.00	21.870	26.24	133.5	476.1	1843.8
40.75	Bot - Section 2	1.00	0.76	4.649	5.11	0.00	1.200	1.532	0.75	3.244	3.89	19.9	71.3	274.0
45.00		1.00	0.79	4.783	5.26	0.00	1.200	1.547	4.25	18.485	22.18	116.7	407.6	2535.2
47.00	Top - Section 1	1.00	0.80	4.843	5.33	0.00	1.200	1.554	2.00	8.595	10.31	54.9	191.1	1179.2
50.00		1.00	0.81	4.929	5.42	0.00	1.200	1.564	3.00	12.771	15.33	83.1	285.0	968.1
55.00		1.00	0.83	5.065	5.57	0.00	1.200	1.579	5.00	20.959	25.15	140.1	469.7	1588.8
60.00		1.00	0.85	5.193	5.71	0.00	1.200	1.592	5.00	20.547	24.66	140.8	464.0	1558.8
65.00		1.00	0.87	5.313	5.84	0.00	1.200	1.605	5.00	20.135	24.16	141.2	457.8	1528.3
70.00		1.00	0.89	5.426	5.97	0.00	1.200	1.617	5.00	19.722	23.67	141.3	451.2	1497.4
75.00		1.00	0.91	5.534	6.09	0.00	1.200	1.628	5.00	19.308	23.17	141.1	444.2	1466.1
80.00		1.00	0.93	5.637	6.20	0.00	1.200	1.639	5.00	18.894	22.67	140.6	436.9	1434.5
85.00		1.00	0.94	5.736	6.31	0.00	1.200	1.649	5.00	18.479	22.17	139.9	429.3	1402.6
89.25	Bot - Section 3	1.00	0.96	5.816	6.40	0.00	1.200	1.657	4.25	15.380	18.46	118.1	359.3	1167.5
90.00		1.00	0.96	5.830	6.41	0.00	1.200	1.658	0.75	2.714	3.26	20.9	64.0	300.2
91.50	RB1	1.00	0.96	5.858	6.44	0.00	1.200	1.661	1.50	5.401	6.48	41.8	127.3	596.9
94.25	Top - Section 2	1.00	0.97	5.908	6.50	0.00	1.200	1.666	2.75	9.805	11.77	76.5	230.9	1082.4
95.00		1.00	0.97	5.921	6.51	0.00	1.200	1.667	0.75	2.652	3.18	20.7	62.8	155.8
96.75	RB2	1.00	0.98	5.952	6.55	0.00	1.200	1.670	1.75	6.152	7.38	48.3	145.5	361.0
97.00	RT1	1.00	0.98	5.956	6.55	0.00	1.200	1.671	0.25	0.875	1.05	6.9	20.8	51.4
100.00		1.00	0.99	6.008	6.61	0.00	1.200	1.676	3.00	10.415	12.50	82.6	246.2	610.5
102.25	RT2	1.00	0.99	6.047	6.65	0.00	1.200	1.680	2.25	7.713	9.26	61.6	183.0	452.4
105.00		1.00	1.00	6.093	6.70	0.00	1.200	1.684	2.75	9.312	11.17	74.9	221.1	545.9
110.00		1.00	1.02	6.174	6.79	0.00	1.200	1.692	5.00	16.610	19.93	135.4	393.3	971.2
115.00		1.00	1.03	6.253	6.88	0.00	1.200	1.699	5.00	16.193	19.43	133.7	384.5	946.2
117.00	Appurtenance(s)	1.00	1.03	6.284	6.91	0.00	1.200	1.702	2.00	6.360	7.63	52.8	152.4	372.5
120.00		1.00	1.04	6.330	6.96	0.00	1.200	1.707	3.00	9.415	11.30	78.7	225.3	550.7
125.00		1.00	1.05	6.404	7.04	0.00	1.200	1.714	5.00	15.359	18.43	129.8	366.4	895.7
127.00	Appurtenance(s)	1.00	1.06	6.433	7.08	0.00	1.200	1.716	2.00	6.026	7.23	51.2	145.1	352.3
130.00		1.00	1.07	6.476	7.12	0.00	1.200	1.720	3.00	8.914	10.70	76.2	214.2	520.2
135.00		1.00	1.08	6.546	7.20	0.00	1.200	1.727	5.00	14.524	17.43	125.5	347.7	844.6
139.00	Bot - Section 4	1.00	1.09	6.601	7.26	0.00	1.200	1.732	4.00	11.318	13.58	98.6	272.0	657.9
140.00		1.00	1.09	6.615	7.28	0.00	1.200	1.733	1.00	2.819	3.38	24.6	68.4	235.5
142.75	Top - Section 3	1.00	1.09	6.652	7.32	0.00	1.200	1.737	2.75	7.667	9.20	67.3	185.3	638.9
145.00		1.00	1.10	6.681	7.35	0.00	1.200	1.739	2.25	6.179	7.41	54.5	149.7	307.3
148.00	Appurtenance(s)	1.00	1.11	6.721	7.39	0.00	1.200	1.743	3.00	8.107	9.73	71.9	196.1	402.5
150.00	Appurtenance(s)	1.00	1.11	6.746	7.42	0.00	1.200	1.745	2.00	5.320	6.38	47.4	129.1	264.3
155.00		1.00	1.12	6.810	7.49	0.00	1.200	1.751	5.00	13.010	15.61	116.9	313.0	642.4
157.00	Appurtenance(s)	1.00	1.12	6.835	7.52	0.00	1.200	1.753	2.00	5.086	6.10	45.9	123.6	252.0
160.00		1.00	1.13	6.872	7.56	0.00	1.200	1.757	3.00	7.504	9.00	68.1	181.8	370.7

Wind Loading - Shaft

Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
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: 29	

165.00 Appurtenance(s)	1.00	1.14	6.933	7.63	0.00	1.200	1.762	5.00	12.173	14.61	111.4	293.0	598.1
167.00 Appurtenance(s)	1.00	1.14	6.957	7.65	0.00	1.200	1.764	2.00	4.751	5.70	43.6	115.6	234.2
169.00	1.00	1.15	6.980	7.68	0.00	1.200	1.766	2.00	4.684	5.62	43.2	114.0	230.7
							Totals:	**169.00**			**4,450.3**		**46,551.8**

Discrete Appurtenance Forces

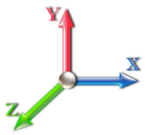
Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
Site Name:	Woodbridge	**Exposure:**	B		
Height:	169.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 30	

Tower Engineering Solutions

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	Ericsson - Radio 4449	3	6.957	7.652	0.60	0.80	3.90	471.00	0.000	0.000	29.85	0.00	0.00
2	167.00	RRUS 4415 B25	3	6.957	7.652	0.54	0.80	3.47	262.04	0.000	0.000	26.59	0.00	0.00
3	167.00	AIR 6449 B41	3	6.957	7.652	0.56	0.80	11.15	835.33	0.000	0.000	85.29	0.00	0.00
4	167.00	Ericsson - KRY 112 144/2	3	6.957	7.652	0.60	0.80	1.60	62.99	0.000	0.000	12.26	0.00	0.00
5	167.00	AIR 21 B2A/B4P	3	6.957	7.652	0.77	0.90	16.61	844.54	0.000	0.000	127.14	0.00	0.00
6	167.00	T-Arms/Commscope	3	6.963	7.659	0.56	0.75	21.44	1703.73	0.000	0.500	164.18	0.00	82.09
7	165.00	APXVAA24_43-U-A20	3	6.933	7.626	0.66	0.90	43.73	1758.98	0.000	0.000	333.45	0.00	0.00
8	165.00	Air 32	3	6.933	7.626	0.78	0.90	18.09	940.28	0.000	0.000	137.96	0.00	0.00
9	157.00	DB-C1-12C-24AB-0Z	1	6.835	7.518	1.00	1.00	4.89	124.25	0.000	0.000	36.73	0.00	0.00
10	157.00	MX06FRO660-02	6	6.835	7.518	0.70	0.80	46.99	2054.36	0.000	0.000	353.29	0.00	0.00
11	157.00	RF4440d-13A	3	6.835	7.518	0.66	0.80	4.85	352.72	0.000	0.000	36.45	0.00	0.00
12	157.00	RF4439d-25A	3	6.835	7.518	0.66	0.80	4.85	352.72	0.000	0.000	36.45	0.00	0.00
13	157.00	T-Arms	3	6.835	7.518	0.56	0.75	25.33	1786.34	0.000	0.000	190.47	0.00	0.00
14	157.00	MT6407-77A	3	6.835	7.518	0.56	0.80	9.48	646.45	0.000	0.000	71.26	0.00	0.00
15	157.00	DB846F65ZAXY	4	6.835	7.518	0.74	0.80	24.66	894.70	0.000	0.000	185.42	0.00	0.00
16	157.00	DB846H80E-SX	2	6.835	7.518	0.88	0.80	10.97	359.21	0.000	0.000	82.45	0.00	0.00
17	150.00	Collar Mount	1	6.746	7.421	1.00	1.00	5.94	-146.23	0.000	0.000	44.11	0.00	0.00
18	148.00	Ericsson RRUS 32-RRU	9	6.721	7.393	0.58	0.80	11.55	1267.24	0.000	0.000	85.41	0.00	0.00
19	148.00	Powerwave 1001940-Bias	3	6.721	7.393	0.73	0.80	0.65	31.38	0.000	0.000	4.84	0.00	0.00
20	148.00	CCI HPA-65R-BUU-H8	4	6.721	7.393	0.63	0.80	36.89	1488.76	0.000	0.000	272.72	0.00	0.00
21	148.00	CCI HPA-65R-BUU-H6	2	6.721	7.393	0.68	0.80	14.99	617.83	0.000	0.000	110.84	0.00	0.00
22	148.00	Commscope	1	6.721	7.393	1.00	1.00	1.98	25.23	0.000	0.000	14.61	0.00	0.00
23	148.00	Cci OPA-65R-LCUU-H8	2	6.721	7.393	0.63	0.80	18.45	782.38	0.000	0.000	136.36	0.00	0.00
24	148.00	Cci OPA-65R-LCUU-H6	1	6.721	7.393	0.63	0.80	6.97	319.00	0.000	0.000	51.51	0.00	0.00
25	148.00	Powerwave LGP13519	6	6.721	7.393	0.62	0.80	2.93	78.87	0.000	0.000	21.68	0.00	0.00
26	148.00	Powerwave LGP21401	6	6.721	7.393	0.62	0.80	7.85	208.73	0.000	0.000	58.05	0.00	0.00
27	148.00	Powerwave 7770	3	6.721	7.393	0.64	0.80	12.54	635.80	0.000	0.000	92.74	0.00	0.00
28	148.00	T-Arms w/ Modifications	3	6.721	7.393	0.60	0.80	40.42	2651.15	0.000	0.000	298.83	0.00	0.00
29	148.00	Raycap	2	6.721	7.393	0.81	0.90	3.51	172.69	0.000	0.000	25.98	0.00	0.00
30	148.00	Ericsson RRUS-11-RRU	3	6.721	7.393	0.62	0.80	6.03	450.24	0.000	0.000	44.56	0.00	0.00
31	127.00	Horizon Duo	4	6.433	7.076	0.60	0.80	2.74	77.05	0.000	0.000	19.40	0.00	0.00
32	127.00	1900MHz RRH	3	6.433	7.076	0.74	0.75	8.95	390.47	0.000	0.000	63.33	0.00	0.00
33	127.00	VHLP800-11	1	6.433	7.076	1.00	1.00	10.11	179.87	1.455	0.000	71.53	104.08	0.00
34	127.00	VHLP2-11	3	6.433	7.076	1.00	1.00	17.80	301.94	1.455	0.000	125.96	183.27	0.00
35	127.00	AAHC	3	6.433	7.076	0.56	0.75	8.45	608.99	0.000	0.000	59.80	0.00	0.00
36	127.00	800 MHz RRH	6	6.433	7.076	0.69	0.75	14.97	691.44	0.000	0.000	105.90	0.00	0.00
37	127.00	TD-RRH8x20-25	3	6.433	7.076	0.53	0.75	7.75	576.79	0.000	0.000	54.81	0.00	0.00
38	127.00	NNVV-65B-R4	3	6.433	7.076	0.55	0.75	22.81	923.77	0.000	0.000	161.44	0.00	0.00
39	127.00	RMQP-4096-HK	1	6.433	7.076	1.00	1.00	89.33	5142.94	0.000	0.000	632.10	0.00	0.00
40	117.00	Ericsson 0208 RRU	3	6.284	6.913	0.54	0.80	2.98	151.63	0.000	0.000	20.63	0.00	0.00
41	117.00	Ericsson 4415 RRU	2	6.284	6.913	0.54	0.80	2.59	177.99	0.000	0.000	17.92	0.00	0.00
42	117.00	Standoff Sector Frame	3	6.284	6.913	0.56	0.75	56.71	2086.70	0.000	0.000	392.04	0.00	0.00
43	117.00	Comba	3	6.284	6.913	0.56	0.80	9.76	336.12	0.000	0.000	67.45	0.00	0.00
							Totals:		**33,678.41**			**4,963.79**		

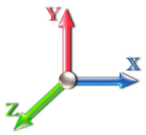
Total Applied Force Summary

Structure:	CT13071-A-SBA		**Code:**	EIA/TIA-222-G	10/28/2021
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: 31

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
5.00		138.16	2411.22	0.00	0.00
10.00		136.20	2410.91	0.00	0.00
15.00		134.08	2396.11	0.00	0.00
20.00		131.89	2374.94	0.00	0.00
25.00		129.67	2350.10	0.00	0.00
30.00		127.52	2322.84	0.00	0.00
35.00		130.89	2293.85	0.00	0.00
40.00		133.50	2263.54	0.00	0.00
40.75		19.91	337.03	0.00	0.00
45.00		116.70	2892.75	0.00	0.00
47.00		54.94	1347.57	0.00	0.00
50.00		83.09	1220.99	0.00	0.00
55.00		140.13	2011.08	0.00	0.00
60.00		140.83	1981.73	0.00	0.00
65.00		141.20	1951.87	0.00	0.00
70.00		141.26	1921.56	0.00	0.00
75.00		141.05	1890.85	0.00	0.00
80.00		140.59	1859.79	0.00	0.00
85.00		139.91	1828.42	0.00	0.00
89.25		118.08	1529.75	0.00	0.00
90.00		20.89	367.68	0.00	0.00
91.50		41.76	731.97	0.00	0.00
94.25		76.46	1330.24	0.00	0.00
95.00		20.73	223.35	0.00	0.00
96.75		48.33	518.80	0.00	0.00
97.00		6.88	73.93	0.00	0.00
100.00		82.60	881.28	0.00	0.00
102.25		61.56	655.55	0.00	0.00
105.00		74.90	791.96	0.00	0.00
110.00		135.38	1399.25	0.00	0.00
115.00		133.67	1374.62	0.00	0.00
117.00	(11) attachments	550.79	3296.39	0.00	0.00
120.00		78.67	804.51	0.00	0.00
125.00		129.83	1319.11	0.00	0.00
127.00	(27) attachments	1345.45	9414.95	287.35	0.00
130.00		76.20	754.45	0.00	0.00
135.00		125.50	1235.38	0.00	0.00
139.00		98.62	955.78	0.00	0.00
140.00		24.61	306.23	0.00	0.00
142.75		67.31	833.47	0.00	0.00
145.00		54.49	466.62	0.00	0.00
148.00	(45) attachments	1290.04	9344.23	0.00	0.00
150.00	(1) attachments	91.49	227.77	0.00	0.00
155.00		116.95	916.94	0.00	0.00
157.00	(25) attachments	1038.42	6932.57	0.00	0.00
160.00		68.07	423.48	0.00	0.00

Total Applied Force Summary

Structure:	CT13071-A-SBA		**Code:**	EIA/TIA-222-G	10/28/2021
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: 32

165.00	(6) attachments	582.80	3385.29	0.00	0.00
167.00	(18) attachments	488.94	4449.03	0.00	82.09
169.00		43.16	230.65	0.00	0.00
	Totals:	**9,414.12**	**93,242.40**	**287.35**	**82.09**

Linear Appurtenance Segment Forces (Factored)

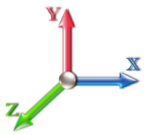
Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
Site Name:	Woodbridge	**Exposure:**	B		
Height:	169.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 33	

Tower Engineering Solutions

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)
5.00	1 5/8" Coax	Yes	5.00	0.000	1.98	1.86	0.00	0.035	0.000	4.256	0.00	79.18
10.00	1 5/8" Coax	Yes	5.00	0.000	1.98	1.93	0.00	0.036	0.000	4.256	0.00	83.33
15.00	1 5/8" Coax	Yes	5.00	0.000	1.98	1.98	0.00	0.036	0.000	4.256	0.00	85.94
20.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.01	0.00	0.037	0.000	4.256	0.00	87.88
25.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.04	0.00	0.038	0.000	4.256	0.00	89.44
30.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.06	0.00	0.038	0.000	4.260	0.00	90.75
35.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.08	0.00	0.039	0.000	4.451	0.00	91.88
40.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.10	0.00	0.040	0.000	4.625	0.00	92.88
40.75	1 5/8" Coax	Yes	0.75	0.000	1.98	0.32	0.00	0.041	0.000	4.649	0.00	13.95
45.00	1 5/8" Coax	Yes	4.25	0.000	1.98	1.80	0.00	0.041	0.000	4.783	0.00	79.72
47.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.85	0.00	0.042	0.000	4.843	0.00	37.65
50.00	1 5/8" Coax	Yes	3.00	0.000	1.98	1.28	0.00	0.041	0.000	4.929	0.00	56.76
55.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.14	0.00	0.042	0.000	5.065	0.00	95.35
60.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.15	0.00	0.043	0.000	5.193	0.00	96.04
65.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.16	0.00	0.044	0.000	5.313	0.00	96.68
70.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.17	0.00	0.045	0.000	5.426	0.00	97.29
75.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.18	0.00	0.046	0.000	5.534	0.00	97.85
80.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.19	0.00	0.047	0.000	5.637	0.00	98.39
85.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.20	0.00	0.048	0.000	5.736	0.00	98.90
89.25	1 5/8" Coax	Yes	4.25	0.000	1.98	1.87	0.00	0.049	0.000	5.816	0.00	84.41
90.00	1 5/8" Coax	Yes	0.75	0.000	1.98	0.33	0.00	0.075	0.000	5.830	0.00	14.91
90.00	1" Reinforcing plate	Yes	0.75	0.000	1.00	0.27	0.00	0.075	0.000	5.830	0.00	3.55
91.50	1 5/8" Coax	Yes	1.50	0.000	1.98	0.66	0.00	0.076	0.000	5.858	0.00	29.86
91.50	1" Reinforcing plate	Yes	1.50	0.000	1.00	0.54	0.00	0.076	0.000	5.858	0.00	7.12
94.25	1 5/8" Coax	Yes	2.75	0.000	1.98	1.22	0.00	0.077	0.000	5.908	0.00	54.87
94.25	1" Reinforcing plate	Yes	2.75	0.000	1.00	0.99	0.00	0.077	0.000	5.908	0.00	13.12
95.00	1 5/8" Coax	Yes	0.75	0.000	1.98	0.33	0.00	0.076	0.000	5.921	0.00	14.98
95.00	1" Reinforcing plate	Yes	0.75	0.000	1.00	0.27	0.00	0.076	0.000	5.921	0.00	3.58
96.75	1 5/8" Coax	Yes	1.75	0.000	1.98	0.78	0.00	0.077	0.000	5.952	0.00	35.00
96.75	1" Reinforcing plate	Yes	1.75	0.000	1.00	0.63	0.00	0.077	0.000	5.952	0.00	8.38
97.00	1 5/8" Coax	Yes	0.25	0.000	1.98	0.11	0.00	0.077	0.000	5.956	0.00	5.00
97.00	1" Reinforcing plate	Yes	0.25	0.000	1.00	0.09	0.00	0.077	0.000	5.956	0.00	1.20
100.00	1 5/8" Coax	Yes	3.00	0.000	1.98	1.33	0.00	0.078	0.000	6.008	0.00	60.17
100.00	1" Reinforcing plate	Yes	0.75	0.000	1.00	0.27	0.00	0.078	0.000	6.008	0.00	3.61
100.00	1" Reinforcing plate	Yes	2.25	0.000	1.00	0.82	0.00	0.078	0.000	6.008	0.00	10.84
102.25	1 5/8" Coax	Yes	2.25	0.000	1.98	1.00	0.00	0.079	0.000	6.047	0.00	45.21
102.25	1" Reinforcing plate	Yes	2.25	0.000	1.00	0.82	0.00	0.079	0.000	6.047	0.00	10.88
105.00	1 5/8" Coax	Yes	2.75	0.000	1.98	1.23	0.00	0.075	0.000	6.093	0.00	55.38
105.00	1" Reinforcing plate	Yes	2.25	0.000	1.00	0.82	0.00	0.075	0.000	6.093	0.00	10.93
110.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.23	0.00	0.054	0.000	6.174	0.00	101.10
115.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.24	0.00	0.056	0.000	6.253	0.00	101.49
117.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.90	0.00	0.057	0.000	6.284	0.00	40.66
120.00	1 5/8" Coax	Yes	3.00	0.000	1.98	1.35	0.00	0.058	0.000	6.330	0.00	61.12
125.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.25	0.00	0.059	0.000	6.404	0.00	102.22
127.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.90	0.00	0.061	0.000	6.433	0.00	40.95
130.00	1 5/8" Coax	Yes	3.00	0.000	1.98	1.36	0.00	0.061	0.000	6.476	0.00	61.54
135.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.26	0.00	0.063	0.000	6.546	0.00	102.91

Linear Appurtenance Segment Forces (Factored)

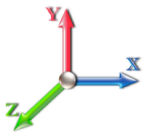
Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
Site Name:	Woodbridge	**Exposure:**	B		
Height:	169.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 34	

Tower Engineering Solutions

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)
139.00	1 5/8" Coax	Yes	4.00	0.000	1.98	1.81	0.00	0.065	0.000	6.601	0.00	82.54
140.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.45	0.00	0.066	0.000	6.615	0.00	20.65
142.75	1 5/8" Coax	Yes	2.75	0.000	1.98	1.25	0.00	0.067	0.000	6.652	0.00	56.88
145.00	1 5/8" Coax	Yes	2.25	0.000	1.98	1.02	0.00	0.067	0.000	6.681	0.00	46.60
148.00	1 5/8" Coax	Yes	3.00	0.000	1.98	1.37	0.00	0.068	0.000	6.721	0.00	62.24
150.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.91	0.00	0.070	0.000	6.746	0.00	41.54
155.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.28	0.00	0.071	0.000	6.810	0.00	104.16
157.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.91	0.00	0.073	0.000	6.835	0.00	41.71
										Totals:	**0.0**	**3,111.2**

Calculated Forces

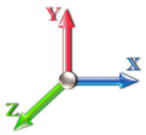
Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
Site Name:	Woodbridge	**Exposure:**	B		
Height:	169.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 35	

Tower Engineering Solutions

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	-93.24	-9.46	-0.29	-1216.3	0.00	1216.37	5324.18	2662.09	12195.0	6106.56	0.00	0.000	0.000	0.217
5.00	-90.82	-9.41	-0.29	-1169.0	0.00	1169.07	5261.08	2630.54	11832.5	5925.09	0.03	-0.056	0.000	0.215
10.00	-88.40	-9.36	-0.29	-1122.0	0.00	1122.02	5196.80	2598.40	11472.7	5744.92	0.12	-0.112	0.000	0.212
15.00	-85.99	-9.30	-0.29	-1075.2	0.00	1075.23	5131.34	2565.67	11115.7	5566.13	0.27	-0.170	0.000	0.210
20.00	-83.61	-9.25	-0.29	-1028.7	0.00	1028.71	5064.69	2532.35	10761.6	5388.80	0.48	-0.228	0.000	0.207
25.00	-81.25	-9.19	-0.29	-982.46	0.00	982.46	4996.86	2498.43	10410.5	5212.99	0.75	-0.287	0.000	0.205
30.00	-78.92	-9.14	-0.29	-936.50	0.00	936.50	4927.84	2463.92	10062.6	5038.79	1.08	-0.346	0.000	0.202
35.00	-76.62	-9.07	-0.29	-890.82	0.00	890.82	4857.63	2428.82	9718.08	4866.26	1.47	-0.407	0.000	0.199
40.00	-74.35	-8.97	-0.29	-845.47	0.00	845.47	4786.24	2393.12	9377.03	4695.49	1.93	-0.467	0.000	0.196
40.75	-74.01	-8.98	-0.29	-838.74	0.00	838.74	4775.43	2387.72	9326.19	4670.03	2.01	-0.477	0.000	0.195
45.00	-71.11	-8.89	-0.29	-800.57	0.00	800.57	4713.67	2356.83	9039.63	4526.53	2.46	-0.529	0.000	0.192
47.00	-69.76	-8.86	-0.29	-782.79	0.00	782.79	3877.89	1938.95	7512.92	3762.05	2.68	-0.554	0.000	0.226
50.00	-68.53	-8.83	-0.29	-756.21	0.00	756.21	3845.09	1922.55	7353.82	3682.38	3.04	-0.592	0.000	0.223
55.00	-66.51	-8.75	-0.29	-712.08	0.00	712.08	3789.47	1894.74	7090.51	3550.52	3.70	-0.661	0.000	0.218
60.00	-64.52	-8.66	-0.29	-668.35	0.00	668.35	3732.67	1866.34	6829.63	3419.89	4.43	-0.730	0.000	0.213
65.00	-62.56	-8.57	-0.29	-625.06	0.00	625.06	3674.68	1837.34	6571.34	3290.55	5.23	-0.799	0.000	0.207
70.00	-60.63	-8.47	-0.29	-582.22	0.00	582.22	3615.51	1807.76	6315.78	3162.58	6.10	-0.868	0.000	0.201
75.00	-58.73	-8.37	-0.29	-539.87	0.00	539.87	3555.15	1777.58	6063.10	3036.06	7.05	-0.937	0.000	0.194
80.00	-56.86	-8.27	-0.29	-498.02	0.00	498.02	3493.61	1746.80	5813.45	2911.05	8.07	-1.005	0.000	0.187
85.00	-55.03	-8.15	-0.29	-456.69	0.00	456.69	3430.88	1715.44	5566.98	2787.63	9.16	-1.073	0.000	0.180
89.25	-53.50	-8.04	-0.29	-422.04	-0.01	422.04	3376.63	1688.32	5360.08	2684.02	10.14	-1.130	0.000	0.173
90.00	-53.13	-8.02	-0.29	-416.02	-0.01	416.02	3366.97	1683.48	5323.83	2665.87	10.32	-1.141	0.000	0.172
91.50	-52.39	-7.99	-0.29	-403.98	-0.01	403.98	3347.56	1673.78	5251.55	2629.68	10.68	-1.161	0.000	0.126
94.25	-51.06	-7.90	-0.29	-382.02	-0.01	382.02	1944.87	972.44	3066.99	1535.78	11.36	-1.188	0.000	0.143
95.00	-50.84	-7.89	-0.29	-376.09	-0.01	376.09	1940.65	970.33	3048.28	1526.41	11.54	-1.196	-0.001	0.182
96.75	-50.32	-7.84	-0.29	-362.29	-0.01	362.29	1930.70	965.35	3004.67	1504.57	11.99	-1.218	-0.001	0.125
97.00	-50.24	-7.85	-0.29	-360.33	-0.01	360.33	1929.27	964.63	2998.44	1501.45	12.05	-1.220	-0.001	0.163
100.00	-49.36	-7.77	-0.29	-336.79	-0.01	336.79	1911.84	955.92	2923.84	1464.09	12.83	-1.254	-0.001	0.155
102.25	-48.70	-7.72	-0.29	-319.31	-0.01	319.31	1898.49	949.24	2868.04	1436.15	13.42	-1.278	-0.001	0.150
102.25	-48.70	-7.72	-0.29	-319.31	-0.01	319.31	1898.49	949.24	2868.04	1436.15	13.42	-1.278	-0.001	0.150
105.00	-47.90	-7.67	-0.29	-298.09	-0.01	298.09	1881.84	940.92	2800.02	1402.09	14.17	-1.308	-0.001	0.238
110.00	-46.50	-7.57	-0.29	-259.74	-0.01	259.74	1850.66	925.33	2676.97	1340.48	15.59	-1.391	-0.001	0.219
115.00	-45.12	-7.44	-0.29	-221.89	-0.01	221.89	1818.29	909.14	2554.84	1279.32	17.09	-1.470	-0.001	0.198
117.00	-41.83	-6.83	-0.29	-207.00	-0.01	207.00	1805.01	902.50	2506.28	1255.00	17.71	-1.500	-0.001	0.188
120.00	-41.02	-6.77	-0.29	-186.50	-0.01	186.50	1784.73	892.37	2433.78	1218.70	18.66	-1.544	-0.001	0.176
125.00	-39.70	-6.64	-0.29	-152.63	-0.01	152.63	1749.99	875.00	2313.93	1158.68	20.32	-1.610	-0.001	0.154
127.00	-30.33	-5.04	0.00	-139.35	0.00	139.35	1735.77	867.88	2266.36	1134.86	21.00	-1.635	-0.001	0.140
130.00	-29.57	-4.97	0.00	-124.22	0.00	124.22	1714.07	857.04	2195.44	1099.35	22.04	-1.669	-0.001	0.130
135.00	-28.34	-4.83	0.00	-99.38	0.00	99.38	1676.96	838.48	2078.45	1040.77	23.81	-1.722	-0.001	0.112
139.00	-27.38	-4.71	0.00	-80.07	0.00	80.07	1646.42	823.21	1986.05	994.50	25.27	-1.759	-0.001	0.097
140.00	-27.08	-4.68	0.00	-75.36	0.00	75.36	1638.67	819.33	1963.12	983.02	25.64	-1.768	-0.001	0.093
142.75	-26.25	-4.60	0.00	-62.48	0.00	62.48	1100.62	550.31	1316.21	659.08	26.67	-1.789	-0.001	0.119
145.00	-25.78	-4.54	0.00	-52.13	0.00	52.13	1091.20	545.60	1284.61	643.26	27.51	-1.805	-0.001	0.105
148.00	-16.48	-2.96	0.00	-38.51	0.00	38.51	1078.27	539.14	1242.60	622.22	28.66	-1.827	-0.001	0.077
150.00	-16.25	-2.87	0.00	-32.59	0.00	32.59	1069.42	534.71	1214.68	608.24	29.42	-1.839	-0.001	0.069
155.00	-15.34	-2.72	0.00	-18.27	0.00	18.27	1046.45	523.23	1145.25	573.48	31.36	-1.862	-0.001	0.047
157.00	-8.45	-1.46	0.00	-12.83	0.00	12.83	1036.93	518.47	1117.66	559.66	32.14	-1.868	-0.001	0.031
160.00	-8.02	-1.38	0.00	-8.45	0.00	8.45	1022.30	511.15	1076.48	539.04	33.32	-1.875	-0.001	0.024

Calculated Forces

Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
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: 36	

165.00	-4.66	-0.69	0.00	-1.55	0.00	1.55	996.96	498.48	1008.51	505.00	35.29	-1.880	-0.001	0.008
167.00	-0.23	-0.05	0.00	-0.10	0.00	0.10	986.50	493.25	981.58	491.52	36.07	-1.881	-0.001	0.000
169.00	0.00	-0.04	0.00	0.00	0.00	0.00	975.84	487.92	954.81	478.11	36.86	-1.881	-0.001	0.000

Seismic Segment Forces (Factored)

Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
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: 37	

Tower Engineering Solutions

Load Case:	1.2D + 1.0E							**Iterations**	24
Gust Response Factor	1.10				**Sds**	0.19		**Ss**	0.18
Dead Load Factor	1.20	**Seismic Load Factor**	1.00		**Sd1**	0.10		**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.28		**SA**	0.03	**Seismic Importance Factor**		1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1305.1	0.00	0.03	0.02	24.51	
10.00		1281.4	0.01	0.05	0.03	34.85	
15.00		1257.8	0.01	0.06	0.04	39.63	
20.00		1234.2	0.03	0.07	0.04	41.72	
25.00		1210.5	0.04	0.07	0.04	42.51	
30.00		1186.9	0.06	0.07	0.04	42.75	
35.00		1163.3	0.08	0.07	0.04	42.81	
40.00		1139.7	0.11	0.07	0.04	42.86	
40.75	Bot - Section 2	168.92	0.11	0.07	0.04	6.37	
45.00		1773.0	0.13	0.07	0.03	68.10	
47.00	Top - Section 1	823.38	0.15	0.07	0.03	31.87	
50.00		569.27	0.17	0.07	0.03	22.24	
55.00		932.58	0.20	0.06	0.02	36.64	
60.00		912.33	0.24	0.06	0.02	35.24	
65.00		892.08	0.28	0.05	0.01	32.58	
70.00		871.83	0.32	0.04	0.01	28.12	
75.00		851.57	0.37	0.03	0.01	21.41	
80.00		831.32	0.42	0.01	0.01	12.37	
85.00		811.07	0.48	-0.01	0.01	1.59	
89.25	Bot - Section 3	673.48	0.53	-0.03	0.01	-6.69	
90.00		196.82	0.54	-0.03	0.01	-2.37	
91.50	RB1	391.36	0.55	-0.04	0.01	-6.30	
94.25	Top - Section 2	709.60	0.59	-0.05	0.01	-16.40	
95.00		77.46	0.60	-0.05	0.01	-1.93	
96.75	RB2	179.56	0.62	-0.06	0.02	-5.16	
97.00	RT1	25.52	0.62	-0.06	0.02	-0.75	
100.00		303.57	0.66	-0.07	0.02	-10.55	
102.25	RT2	224.48	0.69	-0.08	0.03	-8.52	
105.00		270.66	0.73	-0.10	0.04	-11.01	
110.00		481.64	0.80	-0.11	0.05	-20.38	
115.00		468.14	0.88	-0.12	0.08	-18.64	
117.00	Appurtenance(s)	1591.3	0.91	-0.12	0.09	-59.99	
120.00		271.16	0.95	-0.12	0.11	-9.04	
125.00		441.13	1.03	-0.10	0.15	-10.15	
127.00	Appurtenance(s)	4225.6	1.07	-0.09	0.17	-75.29	
130.00		254.96	1.12	-0.06	0.20	-2.27	
135.00		414.13	1.21	0.01	0.26	3.71	
139.00	Bot - Section 4	321.58	1.28	0.09	0.32	8.35	
140.00		139.21	1.30	0.12	0.33	4.26	
142.75	Top - Section 3	377.97	1.35	0.19	0.38	16.69	
145.00		131.39	1.39	0.27	0.42	7.37	
148.00	Appurtenance(s)	3287.6	1.45	0.38	0.48	241.02	
150.00	Appurtenance(s)	212.64	1.49	0.47	0.53	18.19	
155.00		274.52	1.59	0.75	0.66	32.67	
157.00	Appurtenance(s)	2409.5	1.63	0.88	0.71	321.77	

Seismic Segment Forces (Factored)

Structure:	CT13071-A-SBA		**Code:**	EIA/TIA-222-G	10/28/2021
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: 38

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160.00			157.42	1.69	1.10	0.81	24.65		
165.00	Appurtenance(s)		955.67	1.80	1.55	0.98	189.53		
167.00	Appurtenance(s)		2096.8	1.85	1.75	1.06	453.39		
169.00			97.25	1.89	1.98	1.14	22.84		
		Totals:	**40,879.0**				**1,687.2**	**Total Wind:**	**35,080.5**

Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
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: 39	

TES Tower Engineering Solutions

Load Case:	1.2D + 1.0E							**Iterations**	24
Gust Response Factor	1.10			**Sds**	0.19			**Ss**	0.18
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.10			**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.28	**SA**	0.03	**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	-59.74	-1.96	0.00	-253.72	0.00	253.72	5324.18	2662.09	12195.0	6106.56		0.00	0.00	0.053
5.00	-57.82	-1.95	0.00	-243.93	0.00	243.93	5261.08	2630.54	11832.5	5925.09		0.01	-0.01	0.052
10.00	-55.93	-1.92	0.00	-234.21	0.00	234.21	5196.80	2598.40	11472.7	5744.92		0.02	-0.02	0.052
15.00	-54.07	-1.89	0.00	-224.60	0.00	224.60	5131.34	2565.67	11115.7	5566.13		0.06	-0.04	0.051
20.00	-52.24	-1.86	0.00	-215.14	0.00	215.14	5064.69	2532.35	10761.6	5388.80		0.10	-0.05	0.050
25.00	-50.43	-1.83	0.00	-205.84	0.00	205.84	4996.86	2498.43	10410.5	5212.99		0.16	-0.06	0.050
30.00	-48.65	-1.79	0.00	-196.70	0.00	196.70	4927.84	2463.92	10062.6	5038.79		0.23	-0.07	0.049
35.00	-46.91	-1.76	0.00	-187.74	0.00	187.74	4857.63	2428.82	9718.08	4866.26		0.31	-0.09	0.048
40.00	-45.19	-1.72	0.00	-178.95	0.00	178.95	4786.24	2393.12	9377.03	4695.49		0.40	-0.10	0.048
40.75	-44.93	-1.72	0.00	-177.66	0.00	177.66	4775.43	2387.72	9326.19	4670.03		0.42	-0.10	0.047
45.00	-42.50	-1.65	0.00	-170.36	0.00	170.36	4713.67	2356.83	9039.63	4526.53		0.51	-0.11	0.047
47.00	-41.38	-1.62	0.00	-167.06	0.00	167.06	3877.89	1938.95	7512.92	3762.05		0.56	-0.12	0.055
50.00	-40.48	-1.60	0.00	-162.20	0.00	162.20	3845.09	1922.55	7353.82	3682.38		0.64	-0.12	0.055
55.00	-39.01	-1.58	0.00	-154.18	0.00	154.18	3789.47	1894.74	7090.51	3550.52		0.78	-0.14	0.054
60.00	-37.56	-1.55	0.00	-146.30	0.00	146.30	3732.67	1866.34	6829.63	3419.89		0.93	-0.15	0.053
65.00	-36.14	-1.52	0.00	-138.57	0.00	138.57	3674.68	1837.34	6571.34	3290.55		1.10	-0.17	0.052
70.00	-34.74	-1.50	0.00	-130.98	0.00	130.98	3615.51	1807.76	6315.78	3162.58		1.28	-0.18	0.051
75.00	-33.37	-1.48	0.00	-123.50	0.00	123.50	3555.15	1777.58	6063.10	3036.06		1.49	-0.20	0.050
80.00	-32.02	-1.47	0.00	-116.10	0.00	116.10	3493.61	1746.80	5813.45	2911.05		1.71	-0.22	0.049
85.00	-30.69	-1.47	0.00	-108.75	0.00	108.75	3430.88	1715.44	5566.98	2787.63		1.94	-0.23	0.048
89.25	-29.58	-1.47	0.00	-102.49	0.00	102.49	3376.63	1688.32	5360.08	2684.02		2.15	-0.25	0.047
90.00	-29.30	-1.47	0.00	-101.39	0.00	101.39	3366.97	1683.48	5323.83	2665.87		2.19	-0.25	0.047
91.50	-28.72	-1.47	0.00	-99.18	0.00	99.18	3347.56	1673.78	5251.55	2629.68		2.27	-0.25	0.034
94.25	-27.68	-1.47	0.00	-95.13	0.00	95.13	1944.87	972.44	3066.99	1535.78		2.42	-0.26	0.039
95.00	-27.53	-1.47	0.00	-94.03	0.00	94.03	1940.65	970.33	3048.28	1526.41		2.46	-0.26	0.050
96.75	-27.19	-1.47	0.00	-91.45	0.00	91.45	1930.70	965.35	3004.67	1504.57		2.56	-0.27	0.035
97.00	-27.14	-1.47	0.00	-91.08	0.00	91.08	1929.27	964.63	2998.44	1501.45		2.57	-0.27	0.046
100.00	-26.57	-1.47	0.00	-86.66	0.00	86.66	1911.84	955.92	2923.84	1464.09		2.74	-0.28	0.044
102.25	-26.14	-1.47	0.00	-83.35	0.00	83.35	1898.49	949.24	2868.04	1436.15		2.87	-0.28	0.043
102.25	-26.14	-1.47	0.00	-83.35	0.00	83.35	1898.49	949.24	2868.04	1436.15		2.87	-0.28	0.043
105.00	-25.62	-1.48	0.00	-79.29	0.00	79.29	1881.84	940.92	2800.02	1402.09		3.04	-0.29	0.070
110.00	-24.69	-1.48	0.00	-71.90	0.00	71.90	1850.66	925.33	2676.97	1340.48		3.36	-0.31	0.067
115.00	-23.78	-1.49	0.00	-64.48	0.00	64.48	1818.29	909.14	2554.84	1279.32		3.70	-0.34	0.063
117.00	-21.72	-1.48	0.00	-61.51	0.00	61.51	1805.01	902.50	2506.28	1255.00		3.84	-0.34	0.061
120.00	-21.19	-1.48	0.00	-57.07	0.00	57.07	1784.73	892.37	2433.78	1218.70		4.06	-0.36	0.059
125.00	-20.32	-1.48	0.00	-49.67	0.00	49.67	1749.99	875.00	2313.93	1158.68		4.45	-0.38	0.054
127.00	-15.11	-1.45	0.00	-46.71	0.00	46.71	1735.77	867.88	2266.36	1134.86		4.61	-0.39	0.050
130.00	-14.61	-1.45	0.00	-42.37	0.00	42.37	1714.07	857.04	2195.44	1099.35		4.85	-0.40	0.047
135.00	-13.80	-1.44	0.00	-35.13	0.00	35.13	1676.96	838.48	2078.45	1040.77		5.28	-0.42	0.042
139.00	-13.18	-1.43	0.00	-29.36	0.00	29.36	1646.42	823.21	1986.05	994.50		5.64	-0.43	0.038
140.00	-12.96	-1.43	0.00	-27.93	0.00	27.93	1638.67	819.33	1963.12	983.02		5.73	-0.43	0.036
142.75	-12.35	-1.41	0.00	-24.00	0.00	24.00	1100.62	550.31	1316.21	659.08		5.98	-0.44	0.048
145.00	-12.07	-1.40	0.00	-20.84	0.00	20.84	1091.20	545.60	1284.61	643.26		6.19	-0.45	0.043
148.00	-7.96	-1.13	0.00	-16.64	0.00	16.64	1078.27	539.14	1242.60	622.22		6.47	-0.46	0.034
150.00	-7.63	-1.11	0.00	-14.39	0.00	14.39	1069.42	534.71	1214.68	608.24		6.67	-0.46	0.031
155.00	-7.11	-1.07	0.00	-8.85	0.00	8.85	1046.45	523.23	1145.25	573.48		7.16	-0.47	0.022
157.00	-4.14	-0.72	0.00	-6.71	0.00	6.71	1036.93	518.47	1117.66	559.66		7.36	-0.48	0.016

Calculated Forces

Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
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: 40	

160.00	-3.90	-0.70	0.00	-4.54	0.00	4.54	1022.30	511.15	1076.48	539.04	7.66	-0.48	0.012
165.00	-2.66	-0.50	0.00	-1.04	0.00	1.04	996.96	498.48	1008.51	505.00	8.16	-0.48	0.005
167.00	-0.12	-0.02	0.00	-0.05	0.00	0.05	986.50	493.25	981.58	491.52	8.36	-0.48	0.000
169.00	0.00	-0.02	0.00	0.00	0.00	0.00	975.84	487.92	954.81	478.11	8.56	-0.48	0.000

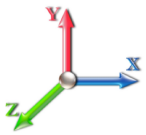
Seismic Segment Forces (Factored)

Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
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: 41	

Tower Engineering Solutions

Load Case: 0.9D + 1.0E

Gust Response Factor	1.10			**Sds**	0.19	**Iterations**	24
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.10	**Ss**	0.18
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.28	**SA**	0.03	**S1**	0.06
						Seismic Importance Factor	1.00



Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1305.1	0.00	0.03	0.02	24.51	
10.00		1281.4	0.01	0.05	0.03	34.85	
15.00		1257.8	0.01	0.06	0.04	39.63	
20.00		1234.2	0.03	0.07	0.04	41.72	
25.00		1210.5	0.04	0.07	0.04	42.51	
30.00		1186.9	0.06	0.07	0.04	42.75	
35.00		1163.3	0.08	0.07	0.04	42.81	
40.00		1139.7	0.11	0.07	0.04	42.86	
40.75	Bot - Section 2	168.92	0.11	0.07	0.04	6.37	
45.00		1773.0	0.13	0.07	0.03	68.10	
47.00	Top - Section 1	823.38	0.15	0.07	0.03	31.87	
50.00		569.27	0.17	0.07	0.03	22.24	
55.00		932.58	0.20	0.06	0.02	36.64	
60.00		912.33	0.24	0.06	0.02	35.24	
65.00		892.08	0.28	0.05	0.01	32.58	
70.00		871.83	0.32	0.04	0.01	28.12	
75.00		851.57	0.37	0.03	0.01	21.41	
80.00		831.32	0.42	0.01	0.01	12.37	
85.00		811.07	0.48	-0.01	0.01	1.59	
89.25	Bot - Section 3	673.48	0.53	-0.03	0.01	-6.69	
90.00		196.82	0.54	-0.03	0.01	-2.37	
91.50	RB1	391.36	0.55	-0.04	0.01	-6.30	
94.25	Top - Section 2	709.60	0.59	-0.05	0.01	-16.40	
95.00		77.46	0.60	-0.05	0.01	-1.93	
96.75	RB2	179.56	0.62	-0.06	0.02	-5.16	
97.00	RT1	25.52	0.62	-0.06	0.02	-0.75	
100.00		303.57	0.66	-0.07	0.02	-10.55	
102.25	RT2	224.48	0.69	-0.08	0.03	-8.52	
105.00		270.66	0.73	-0.10	0.04	-11.01	
110.00		481.64	0.80	-0.11	0.05	-20.38	
115.00		468.14	0.88	-0.12	0.08	-18.64	
117.00	Appurtenance(s)	1591.3	0.91	-0.12	0.09	-59.99	
120.00		271.16	0.95	-0.12	0.11	-9.04	
125.00		441.13	1.03	-0.10	0.15	-10.15	
127.00	Appurtenance(s)	4225.6	1.07	-0.09	0.17	-75.29	
130.00		254.96	1.12	-0.06	0.20	-2.27	
135.00		414.13	1.21	0.01	0.26	3.71	
139.00	Bot - Section 4	321.58	1.28	0.09	0.32	8.35	
140.00		139.21	1.30	0.12	0.33	4.26	
142.75	Top - Section 3	377.97	1.35	0.19	0.38	16.69	
145.00		131.39	1.39	0.27	0.42	7.37	
148.00	Appurtenance(s)	3287.6	1.45	0.38	0.48	241.02	
150.00	Appurtenance(s)	212.64	1.49	0.47	0.53	18.19	
155.00		274.52	1.59	0.75	0.66	32.67	
157.00	Appurtenance(s)	2409.5	1.63	0.88	0.71	321.77	

Seismic Segment Forces (Factored)

Structure:	CT13071-A-SBA		**Code:**	EIA/TIA-222-G	10/28/2021
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: 42

160.00			157.42	1.69	1.10	0.81	24.65		
165.00	Appurtenance(s)		955.67	1.80	1.55	0.98	189.53		
167.00	Appurtenance(s)		2096.8	1.85	1.75	1.06	453.39		
169.00			97.25	1.89	1.98	1.14	22.84		
		Totals:	**40,879.0**				**1,687.2**	**Total Wind:**	**35,080.5**

Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
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: 43	

Tower Engineering Solutions

Load Case:	0.9D + 1.0E							**Iterations**	24
Gust Response Factor	1.10			**Sds**	0.19			**Ss**	0.18
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.10			**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.28	**SA**	0.03	**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	-44.80	-1.96	0.00	-249.77	0.00	249.77	5324.18	2662.09	12195.0	6106.56		0.00	0.00	0.049
5.00	-43.37	-1.94	0.00	-239.99	0.00	239.99	5261.08	2630.54	11832.5	5925.09		0.01	-0.01	0.049
10.00	-41.95	-1.91	0.00	-230.28	0.00	230.28	5196.80	2598.40	11472.7	5744.92		0.02	-0.02	0.048
15.00	-40.55	-1.88	0.00	-220.71	0.00	220.71	5131.34	2565.67	11115.7	5566.13		0.05	-0.03	0.048
20.00	-39.18	-1.85	0.00	-211.30	0.00	211.30	5064.69	2532.35	10761.6	5388.80		0.10	-0.05	0.047
25.00	-37.82	-1.81	0.00	-202.07	0.00	202.07	4996.86	2498.43	10410.5	5212.99		0.15	-0.06	0.046
30.00	-36.49	-1.78	0.00	-193.01	0.00	193.01	4927.84	2463.92	10062.6	5038.79		0.22	-0.07	0.046
35.00	-35.18	-1.74	0.00	-184.13	0.00	184.13	4857.63	2428.82	9718.08	4866.26		0.30	-0.08	0.045
40.00	-33.89	-1.70	0.00	-175.44	0.00	175.44	4786.24	2393.12	9377.03	4695.49		0.40	-0.10	0.044
40.75	-33.70	-1.69	0.00	-174.17	0.00	174.17	4775.43	2387.72	9326.19	4670.03		0.41	-0.10	0.044
45.00	-31.88	-1.63	0.00	-166.96	0.00	166.96	4713.67	2356.83	9039.63	4526.53		0.50	-0.11	0.044
47.00	-31.03	-1.60	0.00	-163.71	0.00	163.71	3877.89	1938.95	7512.92	3762.05		0.55	-0.11	0.052
50.00	-30.36	-1.58	0.00	-158.91	0.00	158.91	3845.09	1922.55	7353.82	3682.38		0.63	-0.12	0.051
55.00	-29.26	-1.55	0.00	-151.01	0.00	151.01	3789.47	1894.74	7090.51	3550.52		0.76	-0.14	0.050
60.00	-28.17	-1.52	0.00	-143.27	0.00	143.27	3732.67	1866.34	6829.63	3419.89		0.91	-0.15	0.049
65.00	-27.10	-1.49	0.00	-135.68	0.00	135.68	3674.68	1837.34	6571.34	3290.55		1.08	-0.17	0.049
70.00	-26.05	-1.47	0.00	-128.23	0.00	128.23	3615.51	1807.76	6315.78	3162.58		1.26	-0.18	0.048
75.00	-25.02	-1.45	0.00	-120.90	0.00	120.90	3555.15	1777.58	6063.10	3036.06		1.46	-0.20	0.047
80.00	-24.01	-1.44	0.00	-113.67	0.00	113.67	3493.61	1746.80	5813.45	2911.05		1.67	-0.21	0.046
85.00	-23.02	-1.44	0.00	-106.48	0.00	106.48	3430.88	1715.44	5566.98	2787.63		1.90	-0.23	0.045
89.25	-22.19	-1.44	0.00	-100.37	0.00	100.37	3376.63	1688.32	5360.08	2684.02		2.11	-0.24	0.044
90.00	-21.97	-1.44	0.00	-99.29	0.00	99.29	3366.97	1683.48	5323.83	2665.87		2.15	-0.24	0.044
91.50	-21.54	-1.44	0.00	-97.13	0.00	97.13	3347.56	1673.78	5251.55	2629.68		2.23	-0.25	0.032
94.25	-20.75	-1.44	0.00	-93.18	0.00	93.18	1944.87	972.44	3066.99	1535.78		2.37	-0.26	0.037
95.00	-20.65	-1.44	0.00	-92.10	0.00	92.10	1940.65	970.33	3048.28	1526.41		2.41	-0.26	0.047
96.75	-20.39	-1.44	0.00	-89.58	0.00	89.58	1930.70	965.35	3004.67	1504.57		2.51	-0.26	0.033
97.00	-20.36	-1.44	0.00	-89.22	0.00	89.22	1929.27	964.63	2998.44	1501.45		2.52	-0.26	0.043
100.00	-19.92	-1.44	0.00	-84.91	0.00	84.91	1911.84	955.92	2923.84	1464.09		2.69	-0.27	0.042
102.25	-19.60	-1.44	0.00	-81.67	0.00	81.67	1898.49	949.24	2868.04	1436.15		2.82	-0.28	0.041
102.25	-19.60	-1.44	0.00	-81.67	0.00	81.67	1898.49	949.24	2868.04	1436.15		2.82	-0.28	0.041
105.00	-19.21	-1.44	0.00	-77.71	0.00	77.71	1881.84	940.92	2800.02	1402.09		2.98	-0.29	0.066
110.00	-18.52	-1.45	0.00	-70.49	0.00	70.49	1850.66	925.33	2676.97	1340.48		3.29	-0.31	0.063
115.00	-17.83	-1.45	0.00	-63.26	0.00	63.26	1818.29	909.14	2554.84	1279.32		3.63	-0.33	0.059
117.00	-16.29	-1.44	0.00	-60.36	0.00	60.36	1805.01	902.50	2506.28	1255.00		3.77	-0.34	0.057
120.00	-15.89	-1.44	0.00	-56.03	0.00	56.03	1784.73	892.37	2433.78	1218.70		3.98	-0.35	0.055
125.00	-15.23	-1.44	0.00	-48.81	0.00	48.81	1749.99	875.00	2313.93	1158.68		4.36	-0.37	0.051
127.00	-11.33	-1.42	0.00	-45.92	0.00	45.92	1735.77	867.88	2266.36	1134.86		4.52	-0.38	0.047
130.00	-10.96	-1.42	0.00	-41.66	0.00	41.66	1714.07	857.04	2195.44	1099.35		4.76	-0.39	0.044
135.00	-10.35	-1.42	0.00	-34.56	0.00	34.56	1676.96	838.48	2078.45	1040.77		5.18	-0.41	0.039
139.00	-9.88	-1.41	0.00	-28.90	0.00	28.90	1646.42	823.21	1986.05	994.50		5.53	-0.42	0.035
140.00	-9.72	-1.40	0.00	-27.49	0.00	27.49	1638.67	819.33	1963.12	983.02		5.62	-0.43	0.034
142.75	-9.26	-1.38	0.00	-23.64	0.00	23.64	1100.62	550.31	1316.21	659.08		5.87	-0.43	0.044
145.00	-9.05	-1.37	0.00	-20.53	0.00	20.53	1091.20	545.60	1284.61	643.26		6.07	-0.44	0.040
148.00	-5.97	-1.11	0.00	-16.41	0.00	16.41	1078.27	539.14	1242.60	622.22		6.35	-0.45	0.032
150.00	-5.72	-1.09	0.00	-14.19	0.00	14.19	1069.42	534.71	1214.68	608.24		6.54	-0.45	0.029
155.00	-5.33	-1.06	0.00	-8.74	0.00	8.74	1046.45	523.23	1145.25	573.48		7.02	-0.46	0.020
157.00	-3.10	-0.72	0.00	-6.63	0.00	6.63	1036.93	518.47	1117.66	559.66		7.22	-0.47	0.015

Calculated Forces

Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
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: 44	

160.00	-2.92	-0.69	0.00	-4.48	0.00	4.48	1022.30	511.15	1076.48	539.04	7.51	-0.47	0.011
165.00	-2.00	-0.49	0.00	-1.03	0.00	1.03	996.96	498.48	1008.51	505.00	8.00	-0.47	0.004
167.00	-0.09	-0.02	0.00	-0.05	0.00	0.05	986.50	493.25	981.58	491.52	8.20	-0.47	0.000
169.00	0.00	-0.02	0.00	0.00	0.00	0.00	975.84	487.92	954.81	478.11	8.40	-0.47	0.000

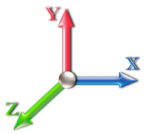
Wind Loading - Shaft

Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
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: 45	

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		1.00	0.70	6.129	6.74	238.64	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	6.129	6.74	234.39	0.650	0.000	5.00	23.558	15.31	103.2	0.0	1305.1
10.00		1.00	0.70	6.129	6.74	230.15	0.650	0.000	5.00	23.135	15.04	101.4	0.0	1281.5
15.00		1.00	0.70	6.129	6.74	225.90	0.650	0.000	5.00	22.712	14.76	99.5	0.0	1257.8
20.00		1.00	0.70	6.129	6.74	221.65	0.650	0.000	5.00	22.288	14.49	97.7	0.0	1234.2
25.00		1.00	0.70	6.129	6.74	217.40	0.650	0.000	5.00	21.865	14.21	95.8	0.0	1210.6
30.00		1.00	0.70	6.134	6.75	213.24	0.650	0.000	5.00	21.442	13.94	94.0	0.0	1187.0
35.00		1.00	0.73	6.410	7.05	213.65	0.650	0.000	5.00	21.019	13.66	96.3	0.0	1163.3
40.00		1.00	0.76	6.659	7.33	213.33	0.650	0.000	5.00	20.596	13.39	98.1	0.0	1139.7
40.75	Bot - Section 2	1.00	0.76	6.695	7.36	213.23	0.650	0.000	0.75	3.053	1.98	14.6	0.0	168.9
45.00		1.00	0.79	6.887	7.58	212.45	0.650	0.000	4.25	17.389	11.30	85.6	0.0	1773.0
47.00	Top - Section 1	1.00	0.80	6.973	7.67	211.96	0.650	0.000	2.00	8.077	5.25	40.3	0.0	823.4
50.00		1.00	0.81	7.098	7.81	214.53	0.650	0.000	3.00	11.989	7.79	60.8	0.0	569.3
55.00		1.00	0.83	7.294	8.02	212.83	0.650	0.000	5.00	19.644	12.77	102.4	0.0	932.6
60.00		1.00	0.85	7.477	8.22	210.80	0.650	0.000	5.00	19.220	12.49	102.8	0.0	912.3
65.00		1.00	0.87	7.650	8.42	208.48	0.650	0.000	5.00	18.797	12.22	102.8	0.0	892.1
70.00		1.00	0.89	7.814	8.60	205.90	0.650	0.000	5.00	18.374	11.94	102.7	0.0	871.8
75.00		1.00	0.91	7.969	8.77	203.10	0.650	0.000	5.00	17.951	11.67	102.3	0.0	851.6
80.00		1.00	0.93	8.118	8.93	200.09	0.650	0.000	5.00	17.528	11.39	101.7	0.0	831.3
85.00		1.00	0.94	8.260	9.09	196.90	0.650	0.000	5.00	17.105	11.12	101.0	0.0	811.1
89.25	Bot - Section 3	1.00	0.96	8.376	9.21	194.05	0.650	0.000	4.25	14.206	9.23	85.1	0.0	673.5
90.00		1.00	0.96	8.396	9.24	193.54	0.650	0.000	0.75	2.507	1.63	15.0	0.0	196.8
91.50	RB1	1.00	0.96	8.435	9.28	192.50	0.650	0.000	1.50	4.985	3.24	30.1	0.0	391.4
94.25	Top - Section 2	1.00	0.97	8.507	9.36	190.56	0.650	0.000	2.75	9.041	5.88	55.0	0.0	709.6
95.00		1.00	0.97	8.526	9.38	192.53	0.650	0.000	0.75	2.444	1.59	14.9	0.0	77.5
96.75	RB2	1.00	0.98	8.571	9.43	191.28	0.650	0.000	1.75	5.664	3.68	34.7	0.0	179.6
97.00	RT1	1.00	0.98	8.577	9.43	191.10	0.650	0.000	0.25	0.805	0.52	4.9	0.0	25.5
100.00		1.00	0.99	8.652	9.52	188.90	0.650	0.000	3.00	9.577	6.23	59.2	0.0	303.6
102.25	RT2	1.00	0.99	8.707	9.58	187.22	0.650	0.000	2.25	7.083	4.60	44.1	0.0	224.5
105.00		1.00	1.00	8.774	9.65	185.14	0.650	0.000	2.75	8.541	5.55	53.6	0.0	270.7
110.00		1.00	1.02	8.891	9.78	181.26	0.650	0.000	5.00	15.200	9.88	96.6	0.0	481.6
115.00		1.00	1.03	9.005	9.91	177.26	0.650	0.000	5.00	14.777	9.61	95.1	0.0	468.1
117.00	Appurtenance(s)	1.00	1.03	9.049	9.95	175.63	0.650	0.000	2.00	5.792	3.77	37.5	0.0	183.5
120.00		1.00	1.04	9.115	10.03	173.16	0.650	0.000	3.00	8.562	5.57	55.8	0.0	271.2
125.00		1.00	1.05	9.222	10.14	168.96	0.650	0.000	5.00	13.931	9.06	91.9	0.0	441.1
127.00	Appurtenance(s)	1.00	1.06	9.264	10.19	167.26	0.650	0.000	2.00	5.454	3.55	36.1	0.0	172.7
130.00		1.00	1.07	9.326	10.26	164.67	0.650	0.000	3.00	8.054	5.24	53.7	0.0	255.0
135.00		1.00	1.08	9.427	10.37	160.29	0.650	0.000	5.00	13.085	8.51	88.2	0.0	414.1
139.00	Bot - Section 4	1.00	1.09	9.506	10.46	156.73	0.650	0.000	4.00	10.163	6.61	69.1	0.0	321.6
140.00		1.00	1.09	9.525	10.48	155.83	0.650	0.000	1.00	2.530	1.64	17.2	0.0	139.2
142.75	Top - Section 3	1.00	1.09	9.578	10.54	153.34	0.650	0.000	2.75	6.871	4.47	47.1	0.0	378.0
145.00		1.00	1.10	9.621	10.58	153.29	0.650	0.000	2.25	5.526	3.59	38.0	0.0	131.4
148.00	Appurtenance(s)	1.00	1.11	9.678	10.65	150.53	0.650	0.000	3.00	7.235	4.70	50.1	0.0	172.0
150.00	Appurtenance(s)	1.00	1.11	9.715	10.69	148.68	0.650	0.000	2.00	4.739	3.08	32.9	0.0	112.6
155.00		1.00	1.12	9.806	10.79	144.01	0.650	0.000	5.00	11.551	7.51	81.0	0.0	274.5
157.00	Appurtenance(s)	1.00	1.12	9.842	10.83	142.12	0.650	0.000	2.00	4.502	2.93	31.7	0.0	107.0
160.00		1.00	1.13	9.896	10.89	139.26	0.650	0.000	3.00	6.626	4.31	46.9	0.0	157.4

Wind Loading - Shaft

Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
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: 46	

165.00 Appurtenance(s)	1.00	1.14	9.983	10.98	134.45	0.650	0.000	5.00	10.704	6.96	76.4	0.0	254.3
167.00 Appurtenance(s)	1.00	1.14	10.017	11.02	132.51	0.650	0.000	2.00	4.163	2.71	29.8	0.0	98.9
169.00	1.00	1.15	10.052	11.06	130.56	0.650	0.000	2.00	4.096	2.66	29.4	0.0	97.3
							Totals:	**169.00**			**3,204.2**		**27,200.5**

Discrete Appurtenance Forces

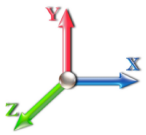
Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
Site Name:	Woodbridge	**Exposure:**	B		
Height:	169.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 47	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 25

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	Ericsson - Radio 4449	3	10.017	11.019	0.60	0.80	2.97	222.00	0.000	0.000	32.73	0.00	0.00
2	167.00	RRUS 4415 B25	3	10.017	11.019	0.54	0.80	2.64	138.00	0.000	0.000	29.06	0.00	0.00
3	167.00	AIR 6449 B41	3	10.017	11.019	0.56	0.80	9.49	309.00	0.000	0.000	104.59	0.00	0.00
4	167.00	Ericsson - KRY 112 144/2	3	10.017	11.019	0.60	0.80	0.74	33.00	0.000	0.000	8.13	0.00	0.00
5	167.00	AIR 21 B2A/B4P	3	10.017	11.019	0.77	0.90	14.14	276.00	0.000	0.000	155.82	0.00	0.00
6	167.00	T-Arms/Commscope	3	10.026	11.029	0.56	0.75	11.39	1020.00	0.000	0.500	125.62	0.00	62.81
7	165.00	APXVAA24_43-U-A20	3	9.983	10.981	0.66	0.90	39.89	384.00	0.000	0.000	438.08	0.00	0.00
8	165.00	Air 32	3	9.983	10.981	0.78	0.90	15.29	317.40	0.000	0.000	167.93	0.00	0.00
9	157.00	DB-C1-12C-24AB-0Z	1	9.842	10.827	1.00	1.00	4.06	32.00	0.000	0.000	43.96	0.00	0.00
10	157.00	MX06FRO660-02	6	9.842	10.827	0.70	0.80	41.22	360.00	0.000	0.000	446.24	0.00	0.00
11	157.00	RF4440d-13A	3	9.842	10.827	0.66	0.80	3.74	253.20	0.000	0.000	40.54	0.00	0.00
12	157.00	RF4439d-25A	3	9.842	10.827	0.66	0.80	3.74	253.20	0.000	0.000	40.54	0.00	0.00
13	157.00	T-Arms	3	9.842	10.827	0.56	0.75	13.50	1050.00	0.000	0.000	146.16	0.00	0.00
14	157.00	MT6407-77A	3	9.842	10.827	0.56	0.80	7.88	238.20	0.000	0.000	85.30	0.00	0.00
15	157.00	DB846F65ZAXY	4	9.842	10.827	0.74	0.80	20.76	84.00	0.000	0.000	224.71	0.00	0.00
16	157.00	DB846H80E-SX	2	9.842	10.827	0.88	0.80	8.82	32.00	0.000	0.000	95.46	0.00	0.00
17	150.00	Collar Mount	1	9.715	10.686	1.00	1.00	3.50	100.00	0.000	0.000	37.40	0.00	0.00
18	148.00	Ericsson RRUS 32-RRU	9	9.678	10.645	0.56	0.80	8.32	693.00	0.000	0.000	88.53	0.00	0.00
19	148.00	Powerwave 1001940-Bias	3	9.678	10.645	0.72	0.80	0.15	6.00	0.000	0.000	1.61	0.00	0.00
20	148.00	CCI HPA-65R-BUU-H8	4	9.678	10.645	0.63	0.80	32.81	272.00	0.000	0.000	349.31	0.00	0.00
21	148.00	CCI HPA-65R-BUU-H6	2	9.678	10.645	0.68	0.80	13.14	102.00	0.000	0.000	139.86	0.00	0.00
22	148.00	Commscope	1	9.678	10.645	1.00	1.00	1.19	6.60	0.000	0.000	12.67	0.00	0.00
23	148.00	Cci OPA-65R-LCUU-H8	2	9.678	10.645	0.63	0.80	16.12	176.00	0.000	0.000	171.56	0.00	0.00
24	148.00	Cci OPA-65R-LCUU-H6	1	9.678	10.645	0.63	0.80	6.11	73.00	0.000	0.000	64.99	0.00	0.00
25	148.00	Powerwave LGP13519	6	9.678	10.645	0.60	0.80	1.22	31.80	0.000	0.000	13.03	0.00	0.00
26	148.00	Powerwave LGP21401	6	9.678	10.645	0.60	0.80	4.64	84.60	0.000	0.000	49.44	0.00	0.00
27	148.00	Powerwave 7770	3	9.678	10.645	0.61	0.80	10.13	105.00	0.000	0.000	107.83	0.00	0.00
28	148.00	T-Arms w/ Modifications	3	9.678	10.645	0.60	0.80	21.60	1350.00	0.000	0.000	229.94	0.00	0.00
29	148.00	Raycap	2	9.678	10.645	0.81	0.90	2.38	65.60	0.000	0.000	25.35	0.00	0.00
30	148.00	Ericsson RRUS-11-RRU	3	9.678	10.645	0.61	0.80	4.60	150.00	0.000	0.000	48.93	0.00	0.00
31	127.00	Horizon Duo	4	9.264	10.190	0.60	0.80	1.42	28.00	0.000	0.000	14.43	0.00	0.00
32	127.00	1900MHz RRH	3	9.264	10.190	0.74	0.75	6.17	180.00	0.000	0.000	62.87	0.00	0.00
33	127.00	VHLP800-11	1	9.264	10.190	1.00	1.00	8.43	48.00	1.455	0.000	85.90	124.99	0.00
34	127.00	VHLP2-11	3	9.264	10.190	1.00	1.00	14.04	81.00	1.455	0.000	143.07	208.17	0.00
35	127.00	AAHC	3	9.264	10.190	0.56	0.75	7.10	310.80	0.000	0.000	72.39	0.00	0.00
36	127.00	800 MHz RRH	6	9.264	10.190	0.69	0.75	10.31	318.00	0.000	0.000	105.04	0.00	0.00
37	127.00	TD-RRH8x20-25	3	9.264	10.190	0.52	0.75	6.29	210.00	0.000	0.000	64.07	0.00	0.00
38	127.00	NNVV-65B-R4	3	9.264	10.190	0.55	0.75	20.43	232.20	0.000	0.000	208.18	0.00	0.00
39	127.00	RMQP-4096-HK	1	9.264	10.190	1.00	1.00	51.70	2645.00	0.000	0.000	526.82	0.00	0.00
40	117.00	Ericsson 0208 RRU	3	9.049	9.954	0.54	0.80	2.20	59.40	0.000	0.000	21.93	0.00	0.00
41	117.00	Ericsson 4415 RRU	2	9.049	9.954	0.54	0.80	1.99	88.20	0.000	0.000	19.85	0.00	0.00
42	117.00	Standoff Sector Frame	3	9.049	9.954	0.56	0.75	25.48	1185.00	0.000	0.000	253.64	0.00	0.00
43	117.00	Comba	3	9.049	9.954	0.56	0.80	8.15	75.30	0.000	0.000	81.11	0.00	0.00
							Totals:		**13,678.50**			**5,184.64**		

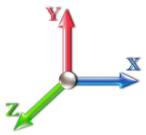
Total Applied Force Summary

Structure:	CT13071-A-SBA		**Code:**	EIA/TIA-222-G	10/28/2021
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: 48

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
5.00		103.23	1598.33	0.00	0.00
10.00		101.38	1574.70	0.00	0.00
15.00		99.52	1551.07	0.00	0.00
20.00		97.67	1527.44	0.00	0.00
25.00		95.81	1503.81	0.00	0.00
30.00		94.04	1480.18	0.00	0.00
35.00		96.33	1456.55	0.00	0.00
40.00		98.06	1432.93	0.00	0.00
40.75		14.61	212.90	0.00	0.00
45.00		85.63	2022.23	0.00	0.00
47.00		40.27	940.67	0.00	0.00
50.00		60.84	745.20	0.00	0.00
55.00		102.44	1225.80	0.00	0.00
60.00		102.76	1205.55	0.00	0.00
65.00		102.82	1185.30	0.00	0.00
70.00		102.66	1165.05	0.00	0.00
75.00		102.29	1144.79	0.00	0.00
80.00		101.73	1124.54	0.00	0.00
85.00		101.01	1104.29	0.00	0.00
89.25		85.07	922.72	0.00	0.00
90.00		15.05	240.80	0.00	0.00
91.50		30.07	479.32	0.00	0.00
94.25		54.99	870.87	0.00	0.00
95.00		14.90	121.44	0.00	0.00
96.75		34.71	282.19	0.00	0.00
97.00		4.94	40.18	0.00	0.00
100.00		59.25	479.50	0.00	0.00
102.25		44.10	356.43	0.00	0.00
105.00		53.58	431.93	0.00	0.00
110.00		96.63	774.86	0.00	0.00
115.00		95.14	761.36	0.00	0.00
117.00	(11) attachments	414.00	1708.66	0.00	0.00
120.00		55.80	444.23	0.00	0.00
125.00		91.85	729.58	0.00	0.00
127.00	(27) attachments	1318.91	4341.05	333.15	0.00
130.00		53.70	411.36	0.00	0.00
135.00		88.19	674.80	0.00	0.00
139.00		69.07	517.64	0.00	0.00
140.00		17.23	185.11	0.00	0.00
142.75		47.05	504.18	0.00	0.00
145.00		38.02	234.66	0.00	0.00
148.00	(45) attachments	1353.12	3425.28	0.00	0.00
150.00	(1) attachments	70.32	277.75	0.00	0.00
155.00		80.99	437.29	0.00	0.00
157.00	(25) attachments	1154.60	2474.68	0.00	0.00
160.00		46.88	201.38	0.00	0.00

Total Applied Force Summary

Structure:	CT13071-A-SBA		**Code:**	EIA/TIA-222-G	10/28/2021
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: 49

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165.00	(6) attachments	682.41	1028.94	0.00	0.00
167.00	(18) attachments	485.78	2126.18	0.00	62.81
169.00		29.43	97.25	0.00	0.00
	Totals:	**8,388.89**	**49,782.94**	**333.15**	**62.81**

Linear Appurtenance Segment Forces (Factored)

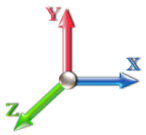
Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
Site Name:	Woodbridge	**Exposure:**	B		
Height:	169.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 50	

Tower Engineering Solutions

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)
5.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.035	0.000	6.129	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	6.129	0.00	20.80
15.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.036	0.000	6.129	0.00	20.80
20.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.037	0.000	6.129	0.00	20.80
25.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.038	0.000	6.129	0.00	20.80
30.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.038	0.000	6.134	0.00	20.80
35.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.039	0.000	6.410	0.00	20.80
40.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.040	0.000	6.659	0.00	20.80
40.75	1 5/8" Coax	Yes	0.75	0.000	1.98	0.12	0.00	0.041	0.000	6.695	0.00	3.12
45.00	1 5/8" Coax	Yes	4.25	0.000	1.98	0.70	0.00	0.041	0.000	6.887	0.00	17.68
47.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.042	0.000	6.973	0.00	8.32
50.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.041	0.000	7.098	0.00	12.48
55.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.042	0.000	7.294	0.00	20.80
60.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.043	0.000	7.477	0.00	20.80
65.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.044	0.000	7.650	0.00	20.80
70.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.045	0.000	7.814	0.00	20.80
75.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.046	0.000	7.969	0.00	20.80
80.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.047	0.000	8.118	0.00	20.80
85.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.048	0.000	8.260	0.00	20.80
89.25	1 5/8" Coax	Yes	4.25	0.000	1.98	0.70	0.00	0.049	0.000	8.376	0.00	17.68
90.00	1 5/8" Coax	Yes	0.75	0.000	1.98	0.12	0.00	0.075	0.000	8.396	0.00	3.12
90.00	1" Reinforcing plate	Yes	0.75	0.000	1.00	0.06	0.00	0.075	0.000	8.396	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	8.435	0.00	6.24
91.50	1" Reinforcing plate	Yes	1.50	0.000	1.00	0.13	0.00	0.076	0.000	8.435	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	8.507	0.00	11.44
94.25	1" Reinforcing plate	Yes	2.75	0.000	1.00	0.23	0.00	0.077	0.000	8.507	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	8.526	0.00	3.12
95.00	1" Reinforcing plate	Yes	0.75	0.000	1.00	0.06	0.00	0.076	0.000	8.526	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	8.571	0.00	7.28
96.75	1" Reinforcing plate	Yes	1.75	0.000	1.00	0.15	0.00	0.077	0.000	8.571	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	8.577	0.00	1.04
97.00	1" Reinforcing plate	Yes	0.25	0.000	1.00	0.02	0.00	0.077	0.000	8.577	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	8.652	0.00	12.48
100.00	1" Reinforcing plate	Yes	0.75	0.000	1.00	0.06	0.00	0.078	0.000	8.652	0.00	0.00
100.00	1" Reinforcing plate	Yes	2.25	0.000	1.00	0.19	0.00	0.078	0.000	8.652	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	8.707	0.00	9.36
102.25	1" Reinforcing plate	Yes	2.25	0.000	1.00	0.19	0.00	0.079	0.000	8.707	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	8.774	0.00	11.44
105.00	1" Reinforcing plate	Yes	2.25	0.000	1.00	0.19	0.00	0.075	0.000	8.774	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	8.891	0.00	20.80
115.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.056	0.000	9.005	0.00	20.80
117.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.057	0.000	9.049	0.00	8.32
120.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.058	0.000	9.115	0.00	12.48
125.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.059	0.000	9.222	0.00	20.80
127.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.061	0.000	9.264	0.00	8.32
130.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.061	0.000	9.326	0.00	12.48
135.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.063	0.000	9.427	0.00	20.80

Linear Appurtenance Segment Forces (Factored)

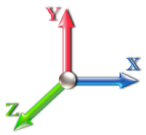
Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
Site Name:	Woodbridge	**Exposure:**	B		
Height:	169.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 51	

Tower Engineering Solutions

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)
139.00	1 5/8" Coax	Yes	4.00	0.000	1.98	0.66	0.00	0.065	0.000	9.506	0.00	16.64
140.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.066	0.000	9.525	0.00	4.16
142.75	1 5/8" Coax	Yes	2.75	0.000	1.98	0.45	0.00	0.067	0.000	9.578	0.00	11.44
145.00	1 5/8" Coax	Yes	2.25	0.000	1.98	0.37	0.00	0.067	0.000	9.621	0.00	9.36
148.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.068	0.000	9.678	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	9.715	0.00	8.32
155.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.071	0.000	9.806	0.00	20.80
157.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.073	0.000	9.842	0.00	8.32
										Totals:	**0.0**	**653.1**

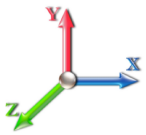
Calculated Forces

Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
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: 52	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 25

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	-49.78	-8.41	-0.33	-1074.3	0.00	1074.38	5324.18	2662.09	12195.0	6106.56	0.00	0.000	0.000	0.185
5.00	-48.17	-8.35	-0.33	-1032.3	0.00	1032.33	5261.08	2630.54	11832.5	5925.09	0.03	-0.049	0.000	0.183
10.00	-46.59	-8.29	-0.33	-990.59	0.00	990.59	5196.80	2598.40	11472.7	5744.92	0.10	-0.099	0.000	0.181
15.00	-45.03	-8.22	-0.33	-949.16	0.00	949.16	5131.34	2565.67	11115.7	5566.13	0.24	-0.150	0.000	0.179
20.00	-43.50	-8.16	-0.33	-908.05	0.00	908.05	5064.69	2532.35	10761.6	5388.80	0.42	-0.201	0.000	0.177
25.00	-41.99	-8.10	-0.33	-867.26	0.00	867.26	4996.86	2498.43	10410.5	5212.99	0.66	-0.253	0.000	0.175
30.00	-40.50	-8.03	-0.33	-826.78	0.00	826.78	4927.84	2463.92	10062.6	5038.79	0.95	-0.306	0.000	0.172
35.00	-39.04	-7.96	-0.33	-786.62	0.00	786.62	4857.63	2428.82	9718.08	4866.26	1.30	-0.359	0.000	0.170
40.00	-37.60	-7.88	-0.33	-746.80	0.00	746.80	4786.24	2393.12	9377.03	4695.49	1.71	-0.413	0.000	0.167
40.75	-37.38	-7.88	-0.33	-740.90	0.00	740.90	4775.43	2387.72	9326.19	4670.03	1.77	-0.421	0.000	0.166
45.00	-35.36	-7.80	-0.33	-707.42	0.00	707.42	4713.67	2356.83	9039.63	4526.53	2.17	-0.467	0.000	0.164
47.00	-34.41	-7.77	-0.33	-691.82	0.00	691.82	3877.89	1938.95	7512.92	3762.05	2.37	-0.489	0.000	0.193
50.00	-33.66	-7.73	-0.33	-668.53	0.00	668.53	3845.09	1922.55	7353.82	3682.38	2.69	-0.523	0.000	0.190
55.00	-32.43	-7.65	-0.33	-629.89	0.00	629.89	3789.47	1894.74	7090.51	3550.52	3.27	-0.584	0.000	0.186
60.00	-31.22	-7.56	-0.33	-591.66	0.00	591.66	3732.67	1866.34	6829.63	3419.89	3.91	-0.645	0.000	0.181
65.00	-30.03	-7.48	-0.33	-553.84	0.00	553.84	3674.68	1837.34	6571.34	3290.55	4.62	-0.706	0.000	0.177
70.00	-28.85	-7.39	-0.33	-516.44	0.00	516.44	3615.51	1807.76	6315.78	3162.58	5.39	-0.767	0.000	0.171
75.00	-27.70	-7.30	-0.33	-479.48	0.00	479.48	3555.15	1777.58	6063.10	3036.06	6.23	-0.828	0.000	0.166
80.00	-26.57	-7.21	-0.33	-442.96	0.00	442.96	3493.61	1746.80	5813.45	2911.05	7.13	-0.889	0.000	0.160
85.00	-25.46	-7.12	-0.33	-406.89	0.00	406.89	3430.88	1715.44	5566.98	2787.63	8.09	-0.949	0.000	0.153
89.25	-24.54	-7.03	-0.33	-376.63	0.00	376.63	3376.63	1688.32	5360.08	2684.02	8.96	-1.000	-0.001	0.148
90.00	-24.30	-7.02	-0.33	-371.36	0.00	371.36	3366.97	1683.48	5323.83	2665.87	9.12	-1.010	-0.001	0.147
91.50	-23.82	-6.99	-0.33	-360.83	0.00	360.83	3347.56	1673.78	5251.55	2629.68	9.44	-1.028	-0.001	0.108
94.25	-22.94	-6.92	-0.33	-341.61	0.00	341.61	1944.87	972.44	3066.99	1535.78	10.04	-1.052	-0.001	0.122
95.00	-22.82	-6.91	-0.33	-336.42	0.00	336.42	1940.65	970.33	3048.28	1526.41	10.20	-1.059	-0.001	0.156
96.75	-22.54	-6.88	-0.33	-324.32	0.00	324.32	1930.70	965.35	3004.67	1504.57	10.60	-1.079	-0.001	0.107
97.00	-22.50	-6.88	-0.33	-322.61	0.00	322.61	1929.27	964.63	2998.44	1501.45	10.65	-1.081	-0.001	0.138
100.00	-22.02	-6.82	-0.33	-301.98	0.00	301.98	1911.84	955.92	2923.84	1464.09	11.34	-1.111	-0.001	0.132
102.25	-21.66	-6.78	-0.33	-286.63	0.00	286.63	1898.49	949.24	2868.04	1436.15	11.87	-1.133	-0.001	0.127
102.25	-21.66	-6.78	-0.33	-286.63	0.00	286.63	1898.49	949.24	2868.04	1436.15	11.87	-1.133	-0.001	0.127
105.00	-21.22	-6.73	-0.33	-268.00	0.00	268.00	1881.84	940.92	2800.02	1402.09	12.53	-1.159	-0.001	0.202
110.00	-20.44	-6.65	-0.33	-234.33	0.00	234.33	1850.66	925.33	2676.97	1340.48	13.79	-1.235	-0.001	0.186
115.00	-19.67	-6.55	-0.33	-201.09	0.00	201.09	1818.29	909.14	2554.84	1279.32	15.12	-1.306	-0.001	0.168
117.00	-17.97	-6.11	-0.33	-187.99	-0.01	187.99	1805.01	902.50	2506.28	1255.00	15.67	-1.333	-0.001	0.160
120.00	-17.52	-6.06	-0.33	-169.66	-0.01	169.66	1784.73	892.37	2433.78	1218.70	16.52	-1.373	-0.001	0.149
125.00	-16.79	-5.96	-0.33	-139.37	-0.01	139.37	1749.99	875.00	2313.93	1158.68	17.99	-1.433	-0.001	0.130
127.00	-12.48	-4.54	0.00	-127.45	0.00	127.45	1735.77	867.88	2266.36	1134.86	18.60	-1.455	-0.001	0.120
130.00	-12.07	-4.48	0.00	-113.84	0.00	113.84	1714.07	857.04	2195.44	1099.35	19.52	-1.487	-0.001	0.111
135.00	-11.40	-4.39	0.00	-91.42	0.00	91.42	1676.96	838.48	2078.45	1040.77	21.11	-1.536	-0.001	0.095
139.00	-10.88	-4.31	0.00	-73.88	0.00	73.88	1646.42	823.21	1986.05	994.50	22.41	-1.570	-0.001	0.081
140.00	-10.69	-4.29	0.00	-69.58	0.00	69.58	1638.67	819.33	1963.12	983.02	22.74	-1.578	-0.001	0.077
142.75	-10.19	-4.23	0.00	-57.79	0.00	57.79	1100.62	550.31	1316.21	659.08	23.65	-1.598	-0.001	0.097
145.00	-9.95	-4.19	0.00	-48.28	0.00	48.28	1091.20	545.60	1284.61	643.26	24.41	-1.612	-0.001	0.084
148.00	-6.57	-2.74	0.00	-35.72	0.00	35.72	1078.27	539.14	1242.60	622.22	25.43	-1.632	-0.001	0.064
150.00	-6.29	-2.66	0.00	-30.24	0.00	30.24	1069.42	534.71	1214.68	608.24	26.12	-1.644	-0.001	0.056
155.00	-5.86	-2.57	0.00	-16.92	0.00	16.92	1046.45	523.23	1145.25	573.48	27.85	-1.665	-0.001	0.035
157.00	-3.42	-1.34	0.00	-11.78	0.00	11.78	1036.93	518.47	1117.66	559.66	28.55	-1.671	-0.001	0.024
160.00	-3.22	-1.29	0.00	-7.75	0.00	7.75	1022.30	511.15	1076.48	539.04	29.60	-1.677	-0.001	0.018

Calculated Forces

Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
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: 53	

165.00	-2.21	-0.58	0.00	-1.29	0.00	1.29	996.96	498.48	1008.51	505.00	31.36	-1.682	-0.001	0.005
167.00	-0.10	-0.03	0.00	-0.06	0.00	0.06	986.50	493.25	981.58	491.52	32.06	-1.682	-0.001	0.000
169.00	0.00	-0.03	0.00	0.00	0.00	0.00	975.84	487.92	954.81	478.11	32.77	-1.682	-0.001	0.000

Final Analysis Summary

Structure:	CT13071-A-SBA	**Code:**	EIA/TIA-222-G	10/28/2021	
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: 54	

Tower Engineering Solutions

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 + 1.6W 97 mph Wind	35.2	0.00	59.67	0.02	0.85	4527.96
0.9D + 1.6W 97 mph Wind	35.2	0.00	44.74	0.01	0.85	4461.88
1.2D + 1.0Di + 1.0Wi 50 mph Wind	9.5	0.00	93.24	0.00	0.29	1216.37
1.2D + 1.0E	2.0	0.00	59.74	0.00	0.00	253.72
0.9D + 1.0E	2.0	0.00	44.80	0.00	0.00	249.77
1.0D + 1.0W 60 mph Wind	8.4	0.00	49.78	0.00	0.33	1074.38

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 + 1.6W 97 mph Wind	-23.21	-28.46	-0.86	-1131.6	-0.05	-1131.6	1881.84	940.92	2800.02	1402.09	105.00	0.820
0.9D + 1.6W 97 mph Wind	-16.87	-27.86	-0.86	-1106.7	-0.04	-1106.7	1881.84	940.92	2800.02	1402.09	105.00	0.799
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-47.90	-7.67	-0.29	-298.09	-0.01	-298.09	1881.84	940.92	2800.02	1402.09	105.00	0.238
1.2D + 1.0E	-25.62	-1.48	0.00	-79.29	0.00	-79.29	1881.84	940.92	2800.02	1402.09	105.00	0.070
0.9D + 1.0E	-19.21	-1.44	0.00	-77.71	0.00	-77.71	1881.84	940.92	2800.02	1402.09	105.00	0.066
1.0D + 1.0W 60 mph Wind	-21.22	-6.73	-0.33	-268.00	0.00	-268.00	1881.84	940.92	2800.02	1402.09	105.00	0.202

Additional Steel Summary

			Intermediate Connectors			Lower Termination				Upper Termination				Max Member			
Elev From (ft)	Elev To (ft)	Member	VQ/I (lb/in)	Vu (kips)	phi Vn (kips)	MQ/I (kips)	phi Vn (kips)	Num Reqd	Num Actual	MQ/I (kips)	phi Vn (kips)	Num Reqd	Num Actual	Pu (kips)	phi Pn (kips)	phi Tn (kips)	Ratio
91.5	97.0	(3) LNP-LP6X100-G-10TT	-394.2	-9.07	25.3	186.2	25.3	8	9	158.2	25.3	7	9	227.83	301.8	288.75	0.789
96.8	102.3	(3) LNP-LP6X100-G-10TT	396.0	9.11	25.3	162.5	25.3	7	9	200.8	25.3	8	9	216.05	301.8	288.75	0.748

Base Plate Summary

Structure:	CT13071-A-SB		**Code:**	EIA/TIA-222-G	10/28/2021
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: 55

Tower Engineering Solutions

Reactions

Original Design

Moment (kip-ft):	4977.00
Axial (kip):	60.20
Shear (kip):	43.70

Analysis (1.2D + 1.6W)

Moment (kip-ft):	4527.96
Axial (kip):	59.67
Shear (kip):	35.19

Base Plate

Yield (ksi):	60.00
Width (in):	61.25
Style:	Clipped
Polygon Sides:	0.00
Clip Length (in):	12.00
Effective Len (in):	8.31
Moment (kip-in):	628.03
Allow Stress (ksi):	81.00
Applied Stress (ksi):	50.22
Stress Ratio:	0.62

Anchor Bolts

Bolt Circle:	62.75
Number Bolts:	16.00
Bolt Type:	2.25" 18J
Bolt Diameter (in):	2.25
Yield (ksi):	75.00
Ultimate (ksi):	100.00
Arrangement:	Clustered
Cluster Dist (in):	6.00
Start Angle (deg):	45.00

Compression

Force (kip):	189.82
Allowable (kip):	260.00
Ratio:	0.75

Tension

Force (kip):	178.16
Allowable (kip):	260.00
Ratio:	0.70

Monopole Mat Foundation Design

				Date
				10/28/2021
Customer Name:	Verizon	**EIA/TIA Standard:**	EIA-222-G
Site Name:		**Structure Height (Ft.):**	169
Site Number:	CT13071-A-SBA	**Engineer Name:**	M. Franco
Engr. Number:	118278	**Engineer Login ID:**	

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Monopole

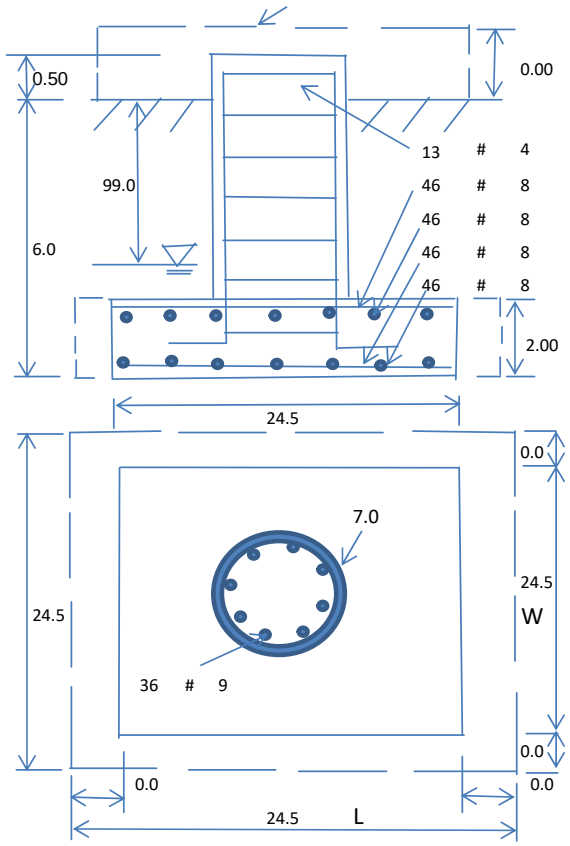
Analysis or Design? Analysis

Base Reactions (Factored):

Axial Load (Kips):	59.7	Shear Force (Kips):	35.2
Uplift Force (Kips):	0.0	Moment (Kips-ft):	4535.6
Allowable overstress %:	5.0%		

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 Reabr Info:

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	9	Tie / Stirrup Size #:	4	
Qty. of Vertical Rebars:	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
Apply 1.35 factor for e/w Per G:	1.35		

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		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):	535.40

Check Soil Capacities:

					Load/ Capacity Ratio	
Calculated Maxium Net Soil Pressure under the base (psf):	3916	<	Allowable Factored Soil Bearing (psf):	7500	0.52	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	5975.9	>	Design Factored Momont (kips-ft):	4764	0.80	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.25	OK!				

Check the capacities of Reinforceing Concrete:

Strength reduction factor (Flexure and axial tension):	0.90		Strength reduction factor (Shear):	0.75		
Strength reduction factor (Axial compresion):	0.65		Wind Load Factor on Concrete Design:	1.00		
					Load/ Capacity Ratio	
(1) Concrete Pier:						
Vertical Steel Rebar Area (sq. in./each):	1.00		Tie / Stirrup Area (sq. in./each):	0.20		
Calculated Moment Capacity (Mn,Kips-Ft):	6026.1	>	Design Factored Moment (Mu, Kips-F	4694.0	0.78	OK!
Calculated Shear Capacity (Kips):	794.5	>	Design Factored Shear (Kips):	35.2	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):	59.7	0.01	OK!
Moment & Axial Strength Combination:	0.78	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):	303.6	0.53	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	571.8	>	One-Way Factored Shear (W-D., Kips)	303.6	0.53	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	565.5	>	One-Way Factored Shear (C-C, Kips):	322.2	0.57	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):	1435.6	0.45	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	3174.0	>	Moment at Bottom (W-Dir. K-Ft):	1435.6	0.45	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	4424.9	>	Moment at Bottom (C-C Dir. K-Ft):	2030.2	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):	699.9	0.22	OK!
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):	3174.0	>	Moment at the top (W-Dir K-Ft):	699.9	0.22	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	4424.9	>	Moment at the top (C-C Dir. K-Ft):	657.2	0.15	OK!
(3).Check Punching Shear Capacity due to Moment in the Pier:						
Moment transferred by punching shear:	1814.2	k-ft.	Max. factored shear stress v_{u_CD}:		5.0	Psi
Max. factored shear stress v_{u_AB}:	19.8	Psi	Factored shear Strength ϕv_n:		189.7	Psi
Max. factored shear stress v_u:	19.8	Psi	Check Usage of Punching Shear Capacity:		0.10	OK!

Maser Consulting Connecticut
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Mount Laurel, NJ 80854
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Antenna Mount Analysis Report and Hardware Upgrades

Mount Analysis

SMART Tool Project #: 10059018
Maser Consulting Connecticut Project #: 21777793A

July 30, 2021

Site Information	*Site ID:*	*467455-VZW / ANSONIA EAST CT*
	Site Name:	*ANSONIA EAST CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*1 Deerfield Lane* *Ansonia, Connecticut 06401* *New Haven County*
	Latitude:	*41.35075°*
	Longitude:	*-73.04925°*
Structure Information	*Tower Type:*	*169-Ft Monopole*
	Mount Type:	*12.50-Ft T-Arm*

FUZE ID # 16092560

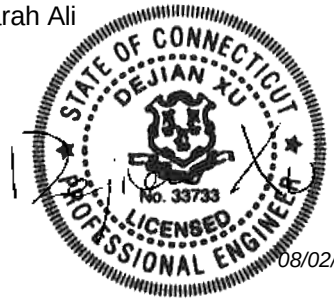
Analysis Results

T-Arm: **94.3% Pass***

* Results are valid after hardware upgrades noted in the PMI Requirements are installed.

******Contractor PMI Requirements***:
Included at the end of this MA report
Available & Submitted via portal at https://pmi.vzwsmart.com
Contractor - Please Review Specific Site PMI Requirements Upon Award
Requirements may also be Noted on A & E drawings

Report Prepared By: Sarah Ali



08/02/2021

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*

Analysis Criteria:

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

Final Loading Configuration:

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

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

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

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

Standard Conditions:

1. All engineering services are performed on the basis that the information provided to Maser Consulting Connecticut and used in this analysis is current and correct. The existing equipment loading has been applied at locations determined from the supplied documentation and field observations. Any deviation from the loading locations specified in this report shall be communicated to Maser Consulting Connecticut 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 by Maser Consulting Connecticut, 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. Maser Consulting Connecticut 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 Maser Consulting Connecticut.

Analysis Results:

Component	Utilization %	Pass/Fail
Antenna Pipe	*33.4%*	*Pass*
Standoff Arm	*52.3%*	*Pass*
Horizontal Rail	*94.3%*	*Pass*
Connection Check	*48.3%*	*Pass*

Structure Rating – *(Controlling Utilization of all Components)*	**94.3%**

* 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

Recommendation:

The existing mounts are **SUFFICIENT** for the final loading configuration upon the completion of the recommendations listed in the Special Instruction section of the below referenced PMI document.

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

Attachments:

1. Mount Photos
2. Mount Mapping Report (for reference only)
3. Analysis Calculations
4. **Contractor Required Post Installation Inspection (PMI) Report Deliverables**
5. Antenna Placement Diagrams
6. TIA Adoption and Wind Speed Usage Letter


04.18.2021 10:53


04 18 2021 07 28

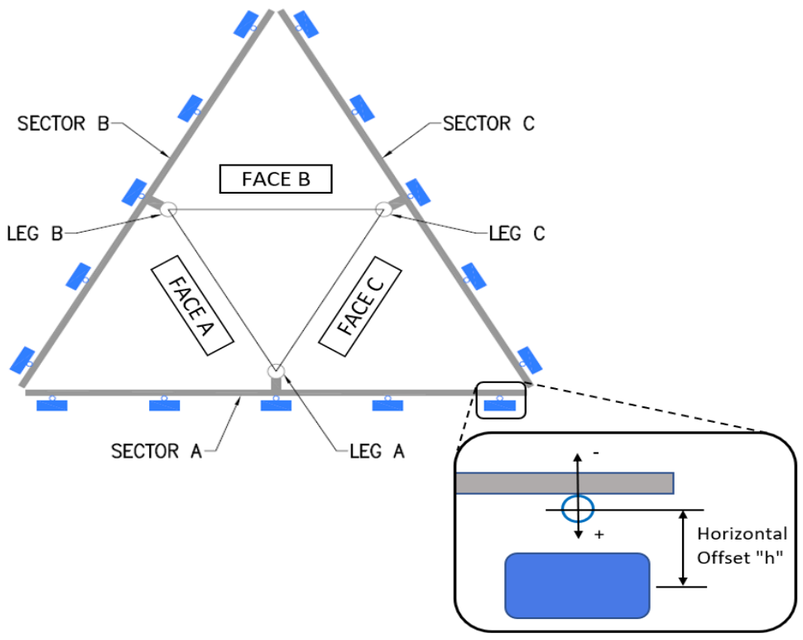
V4.0 Updated on 3-31-2021

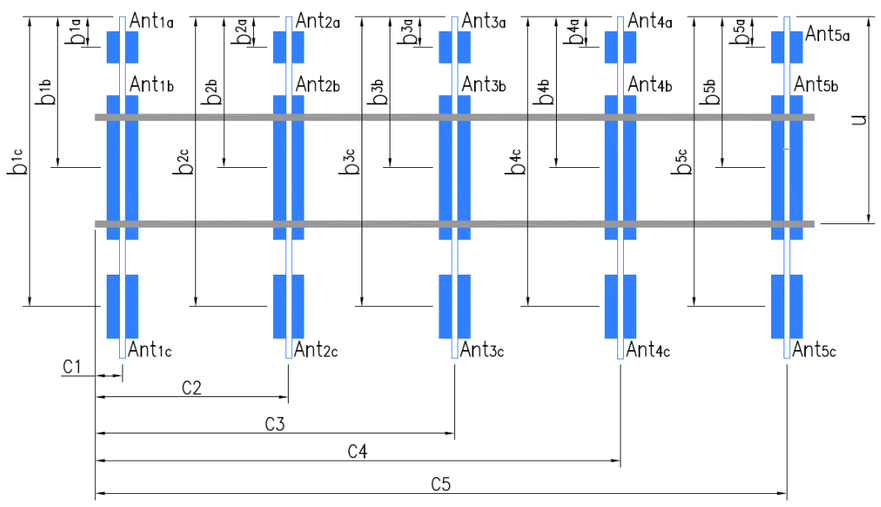
Antenna Mount Mapping Form (PATENT PENDING)

Tower Owner:	SBA	**Mapping Date:**	4/18/2021
Site Name:	Ansonia E CT	**Tower Type:**	Monopole
Site Number or ID:	16092560	**Tower Height (Ft.):**	170
Mapping Contractor:	Structural Components	**Mount Elevation (Ft.):**	160

FCC #

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





Antenna Layout (Looking Out From Tower)

Mount Pipe Configuration and Geometries [Unit = Inches]							
Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."
A1	2-3/8x .15x 84	40.50	6.00	C1	2-3/8x .15x 84	41.00	5.00
A2	2-3/8x .15x 84	41.00	30.00	C2	2-3/8x .15x 84	40.50	30.00
A3	2-3/8x .15x 84	48.00	95.00	C3	2-3/8x .15x 84	48.00	64.50
A4	2-3/8x .15x 84	40.50	152.00	C4	2-3/8x .15x 84	40.50	126.00
A5	2-3/8x .15x 84	41.00	176.50	C5	2-3/8x .15x 84	40.50	150.38
A6				C6			
B1	2-3/8x .15x 84	41.00	5.00	D1			
B2	2-3/8x .15x 84	40.50	30.00	D2			
B3	2-3/8x .15x 84	48.00	64.50	D3			
B4	2-3/8x .15x 84	40.50	126.00	D4			
B5	2-3/8x .15x 84	40.50	150.38	D5			
B6				D6			

Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :	0.00
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :	57.5
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :	11

Please enter additional infomation or comments below.

mount was standoff T arms; didn't have full acess to all of equipment.

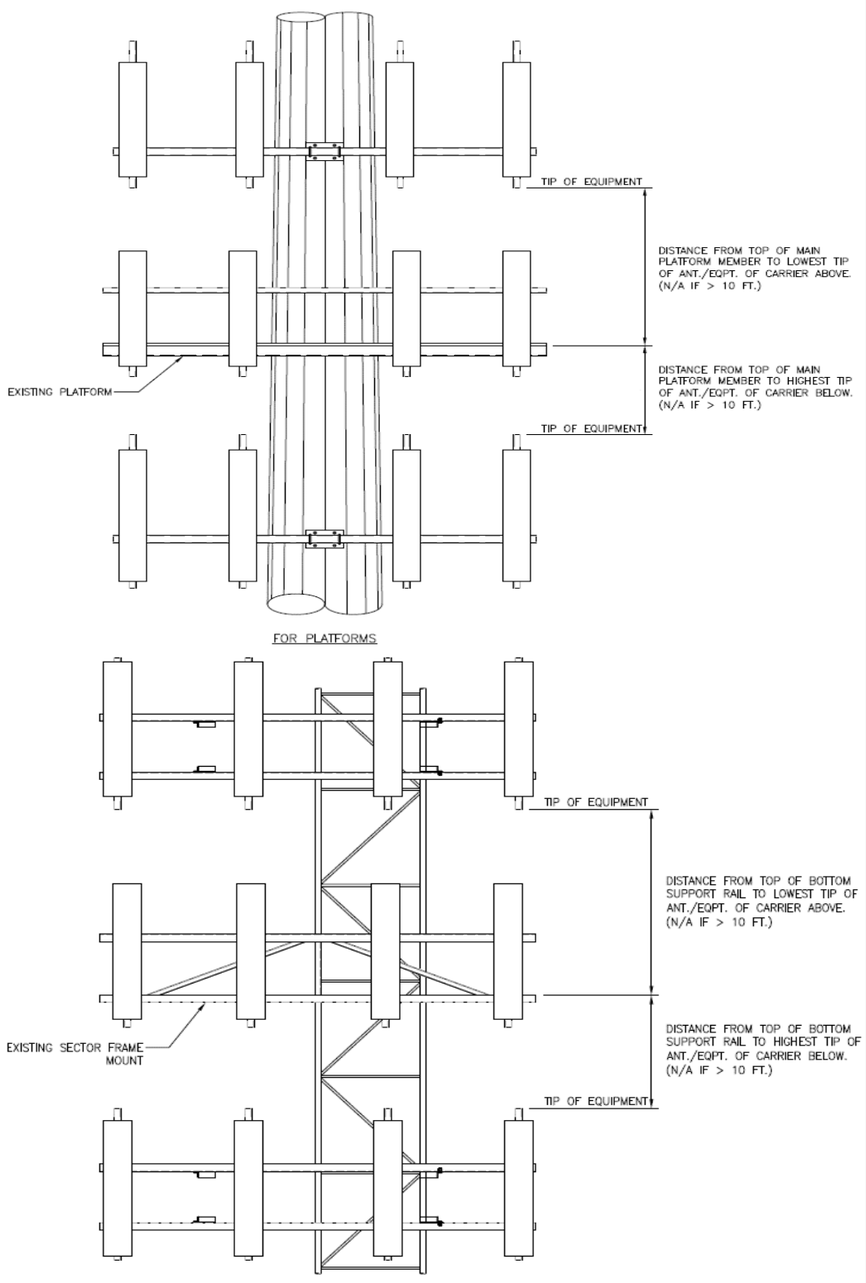
Tower Face Width at Mount Elev. (ft.):		Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):	25.8
For T-Arms/Platforms on monopoles, report the weld size from the main standoff to the plate bolting into the collar mount.			0.5

	Enter antenna model. If not labeled, enter "Unknown".						Mounting Locations [Units are inches and degrees]			Photos of antennas
Ants. Items	Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Vertical Distances"b_{1a}, b_{2a}, b_{3a}, b_{1b}...." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photo Numbers
Sector A										
Ant_{1a}										
Ant_{1b}	unknown	6.25	8.00	72.00	1) 1-5/8 T	160.375	36.00	10.00	65.00	110
Ant_{1c}										
Ant_{2a}										
Ant_{2b}	hBxx-6517ds-a2m	12.00	7.00	75.00	1) 1-5/8 T	160	41.00	9.00	65.00	110
Ant_{2c}	b4 rrh2x60-4r	11.00	5.50	35.50	jumpers	162.188	14.75	-8.00		110
Ant_{3a}										
Ant_{3b}	bxa-70063/6bf-edin-8	11.00	5.00	71.00	jumpers	160.938	36.75	10.00	65.00	111
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	hBxx-6517ds-a2m	12.00	7.00	75.00	1) 1-5/8 T	160.125	39.00	9.00	65.00	111, 112
Ant_{4c}										
Ant_{5a}										
Ant_{5b}	unknown	6.25	8.00	72.00	1) 1-5/8 T	160.417	36.00	10.50	65.00	112
Ant_{5c}										
Ant on Standoff	Raycap OVP	14.00	10.00	19.00	1) 1.5" Hy	162				196
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Mount Azimuth (Degree) for Each Sector			Tower Leg Azimuth (Degree) for Each Sector		
Sector A:	40.00	Deg	Leg A:		Deg
Sector B:	160.00	Deg	Leg B:		Deg
Sector C:	280.00	Deg	Leg C:		Deg
Sector D:		Deg	Leg D:		Deg

Climbing Facility Information		
Location:	30.00 Deg	
Climbing Facility	Corrosion Type:	Good condition.
	Access:	Climbing path was obstructed.
	Condition:	Good condition.

Please insert a photo of the mount centerline measurement here.



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

Sector B										
Ant_{1a}										
Ant_{1b}	unknown	9.75	7.00	72.50	1) 1-5/8 T	160.396	36.25	10.00	135.00	
Ant_{1c}										
Ant_{2a}										
Ant_{2b}	hBxx-6517ds-a2m	12.00	7.00	75.00	1) 1-5/8 T	160	40.50	9.00	135.00	
Ant_{2c}	b4 rrh2x60-4r	11.00	5.50	35.50	jumpers	162.313	12.75	-8.00		
Ant_{3a}										
Ant_{3b}	slcp 2x6014	14.00	11.00	53.00	jumpers	160.667	40.00	10.00	135.00	
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	hBxx-6517ds-a2m	12.00	7.00	75.00	1) 1-5/8 T	160.292	37.00	9.00	135.00	
Ant_{4c}										
Ant_{5a}										
Ant_{5b}	unknown	9.75	7.00	72.50	1) 1-5/8 T	160.354	36.25	10.50	135.00	
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector C										
Ant_{1a}										
Ant_{1b}	unknown	9.75	7.00	72.50	1) 1-5/8 T	160.396	36.25	10.00	280.00	
Ant_{1c}										
Ant_{2a}										
Ant_{2b}	hBxx-6517ds-a2m	12.00	7.00	75.00	1) 1-5/8 T	160	40.50	9.00	280.00	
Ant_{2c}	b4 rrh2x60-4r	11.00	5.50	35.50	jumpers	162.313	12.75	-8.00		
Ant_{3a}										
Ant_{3b}	slcp 2x6014	14.00	11.00	53.00	jumpers	160.667	40.00	10.00	280.00	
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	hBxx-6517ds-a2m	12.00	7.00	75.00	1) 1-5/8 T	160.292	37.00	9.00	280.00	
Ant_{4c}										
Ant_{5a}										
Ant_{5b}	unknown	9.75	7.00	72.50	1) 1-5/8 T	160.354	36.25	10.50	305.00	
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector D										
Ant_{1a}										
Ant_{1b}										
Ant_{1c}										
Ant_{2a}										
Ant_{2b}										
Ant_{2c}										
Ant_{3a}										
Ant_{3b}										
Ant_{3c}										
Ant_{4a}										
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Observed Safety and Structural Issues During the Mount Mapping		
Issue #	Description of Issue	Photo #
1	safety climb path obstructed by vzw mount	24
2		
3		
4		
5		
6		
7		
8		

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

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

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

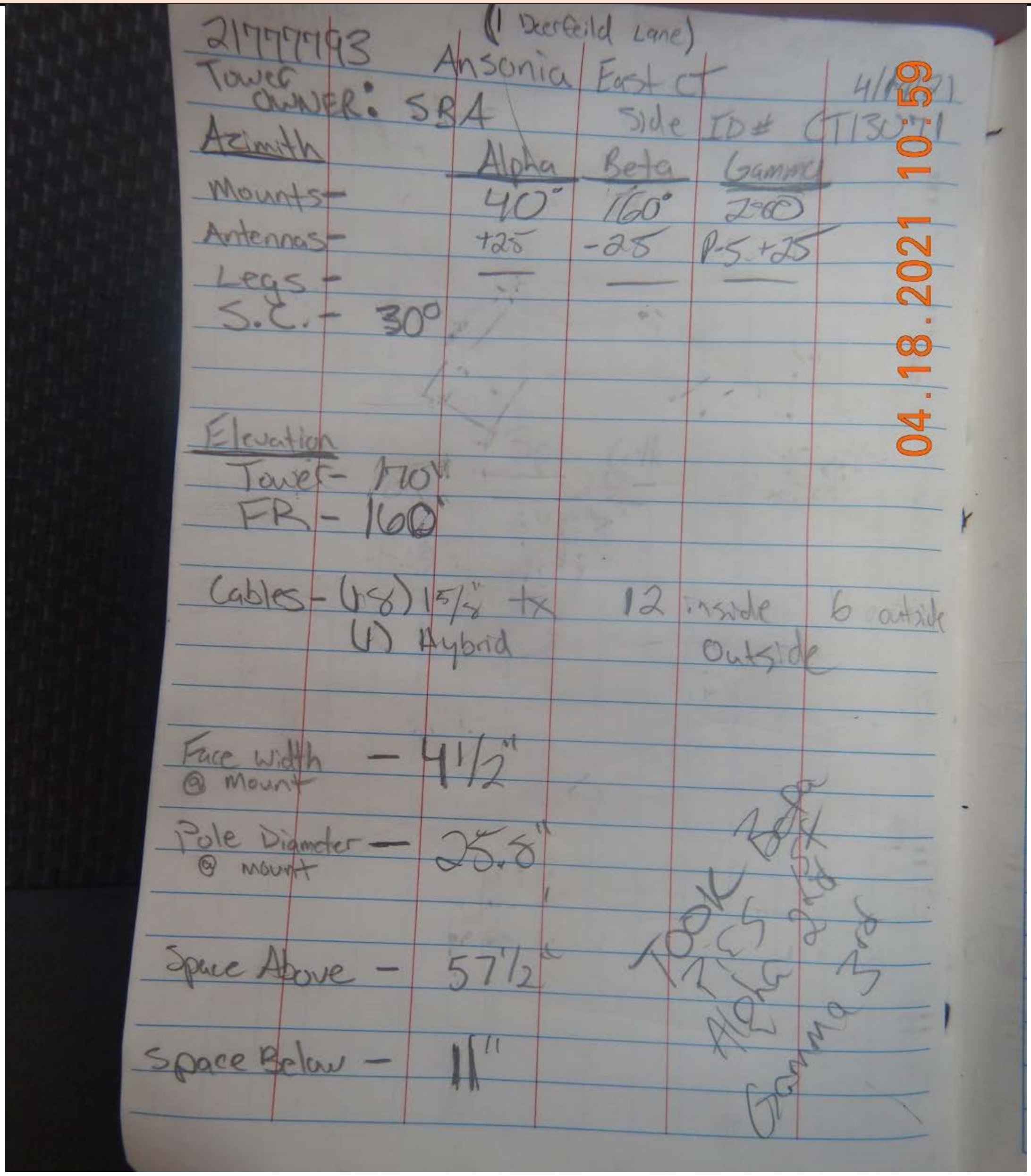
V4.0 Updated on 3-31-2021

Antenna Mount Mapping Form (PATENT PENDING)

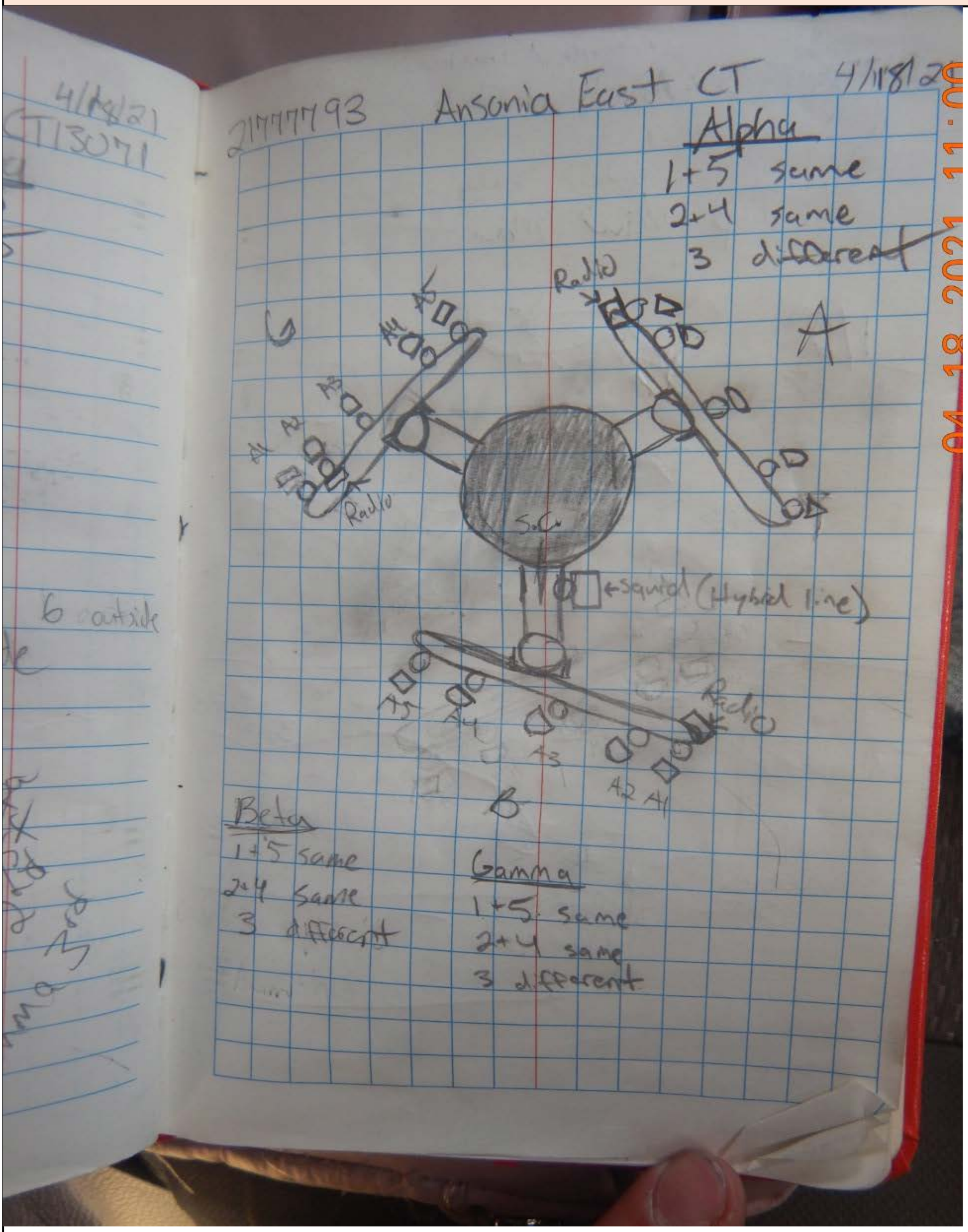
Tower Owner:	SBA	**Mapping Date:**	4/18/2021
Site Name:	Ansonia E CT	**Tower Type:**	Monopole
Site Number or ID:	16092560	**Tower Height (Ft.):**	170
Mapping Contractor:	Structural Components	**Mount Elevation (Ft.):**	160

FCC #

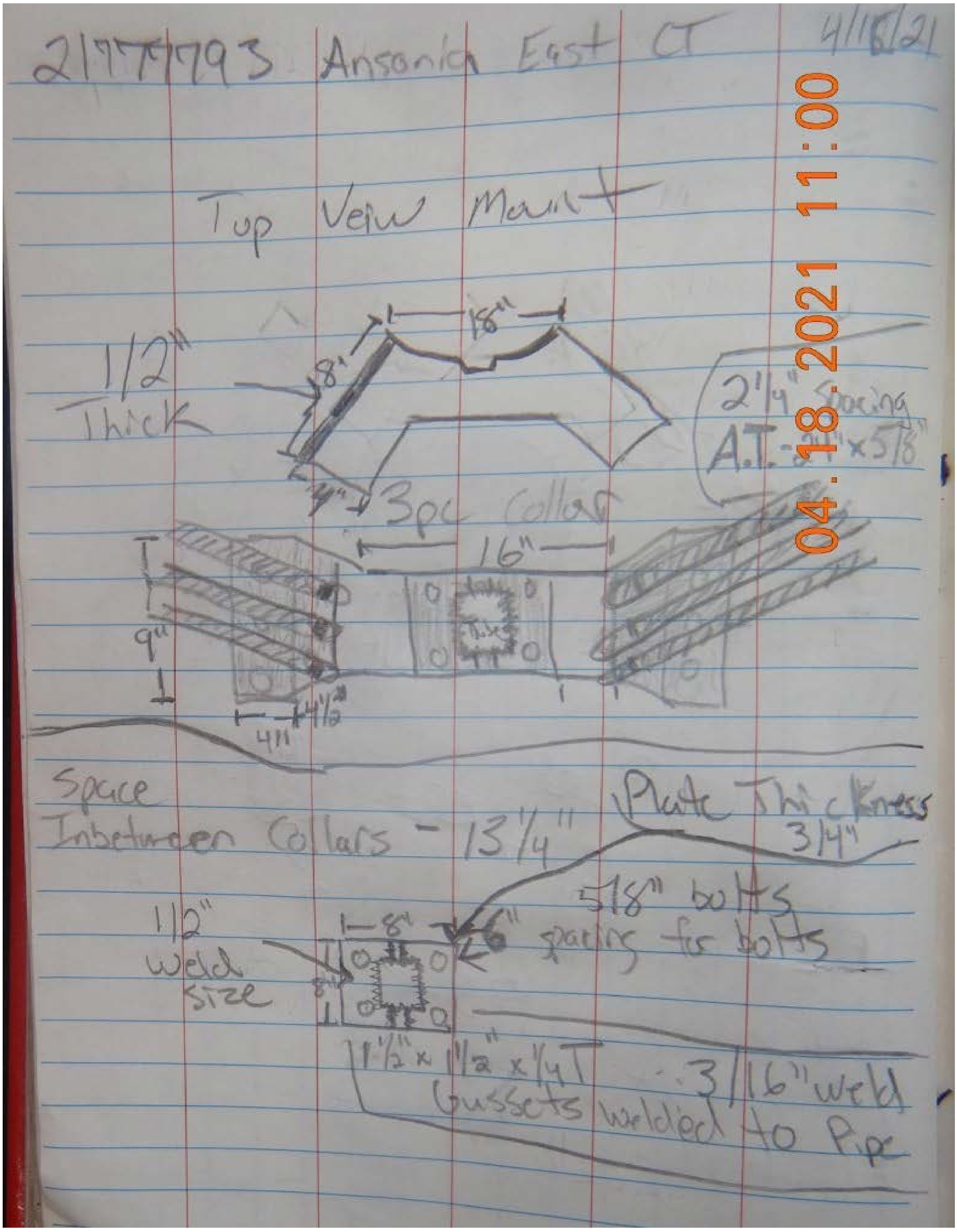
Please Insert Sketches of the Antenna Mount



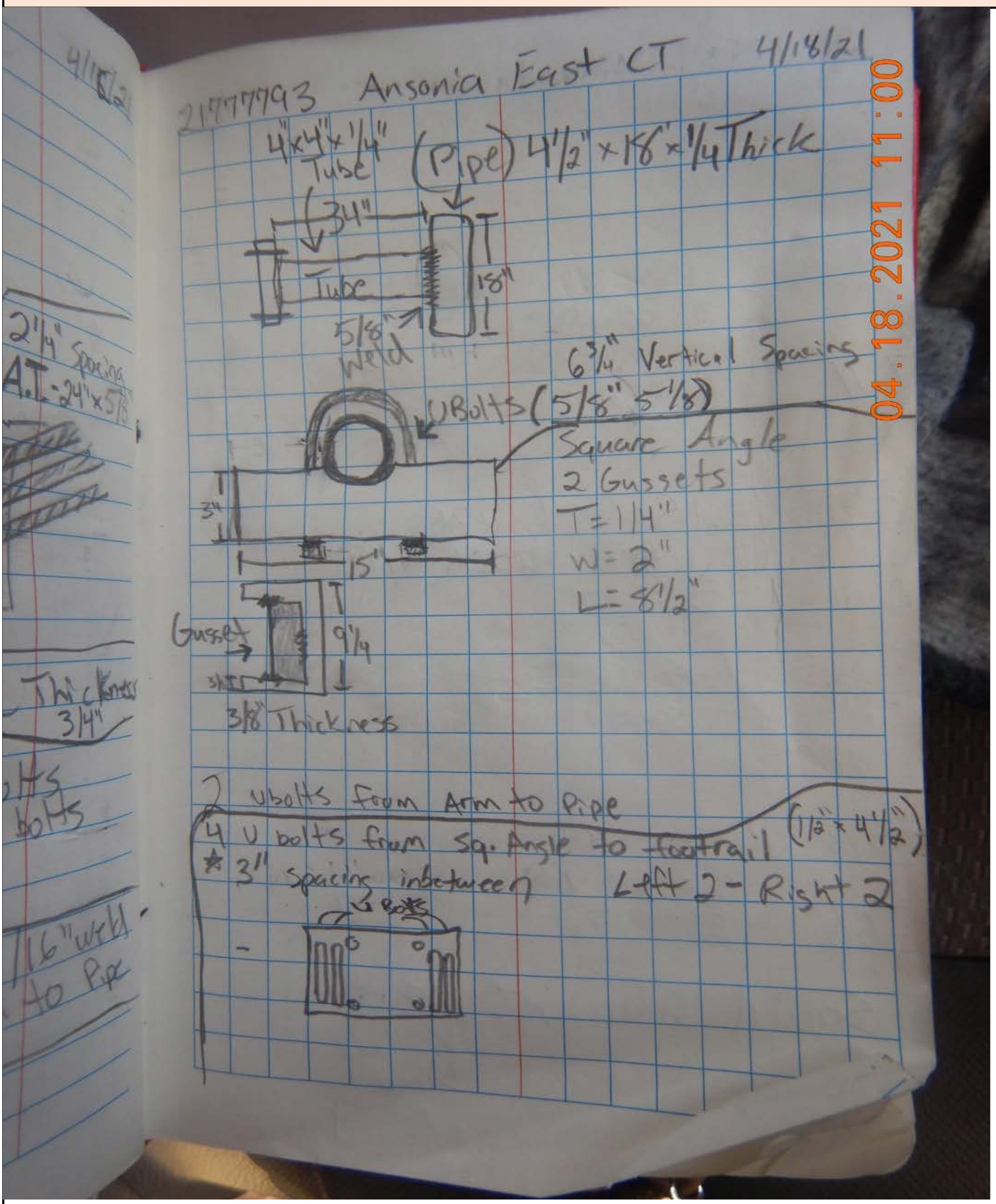
Please Insert Sketches of the Antenna Mount, cont'd



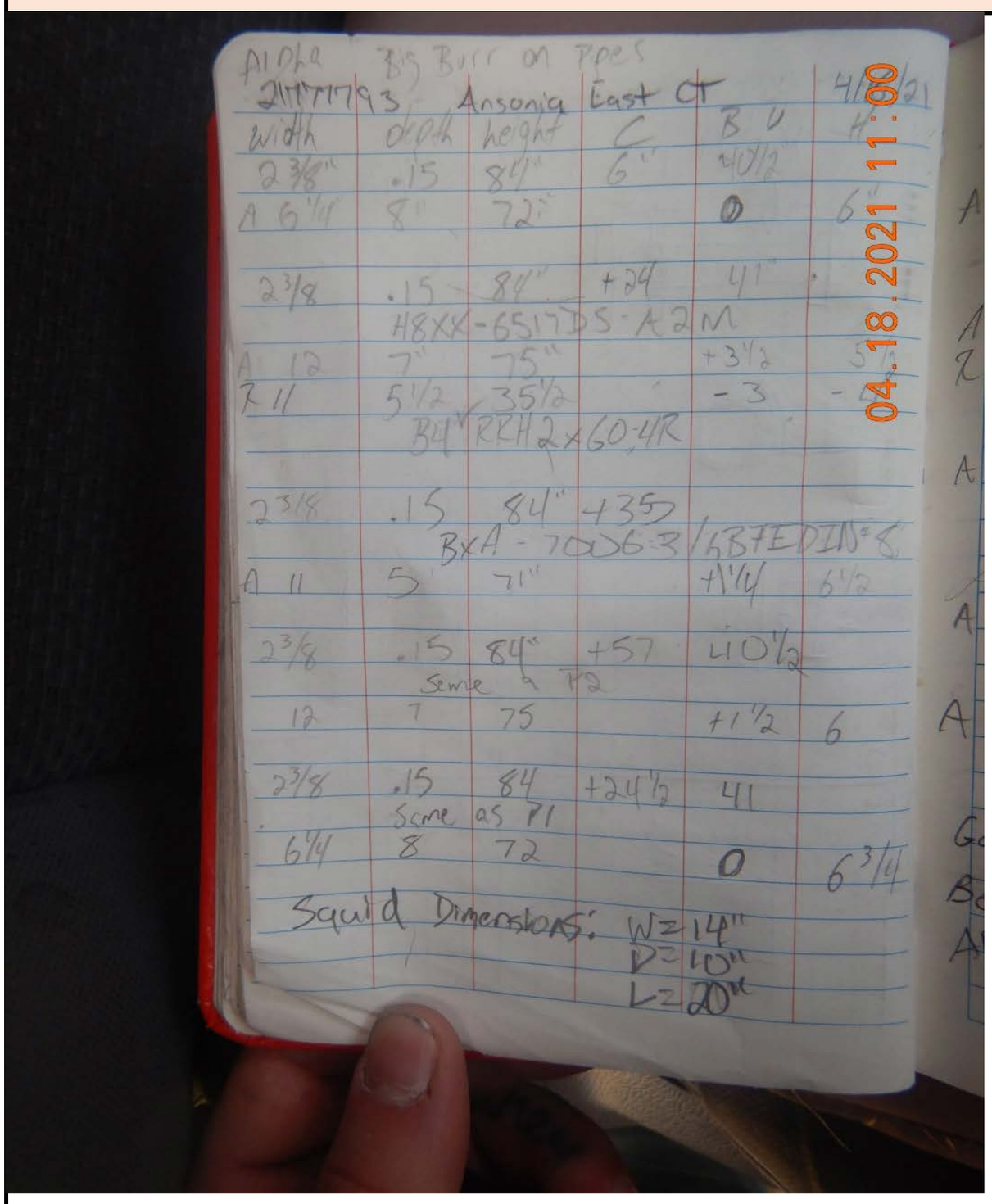
Please Insert Sketches of the Antenna Mount, cont'd

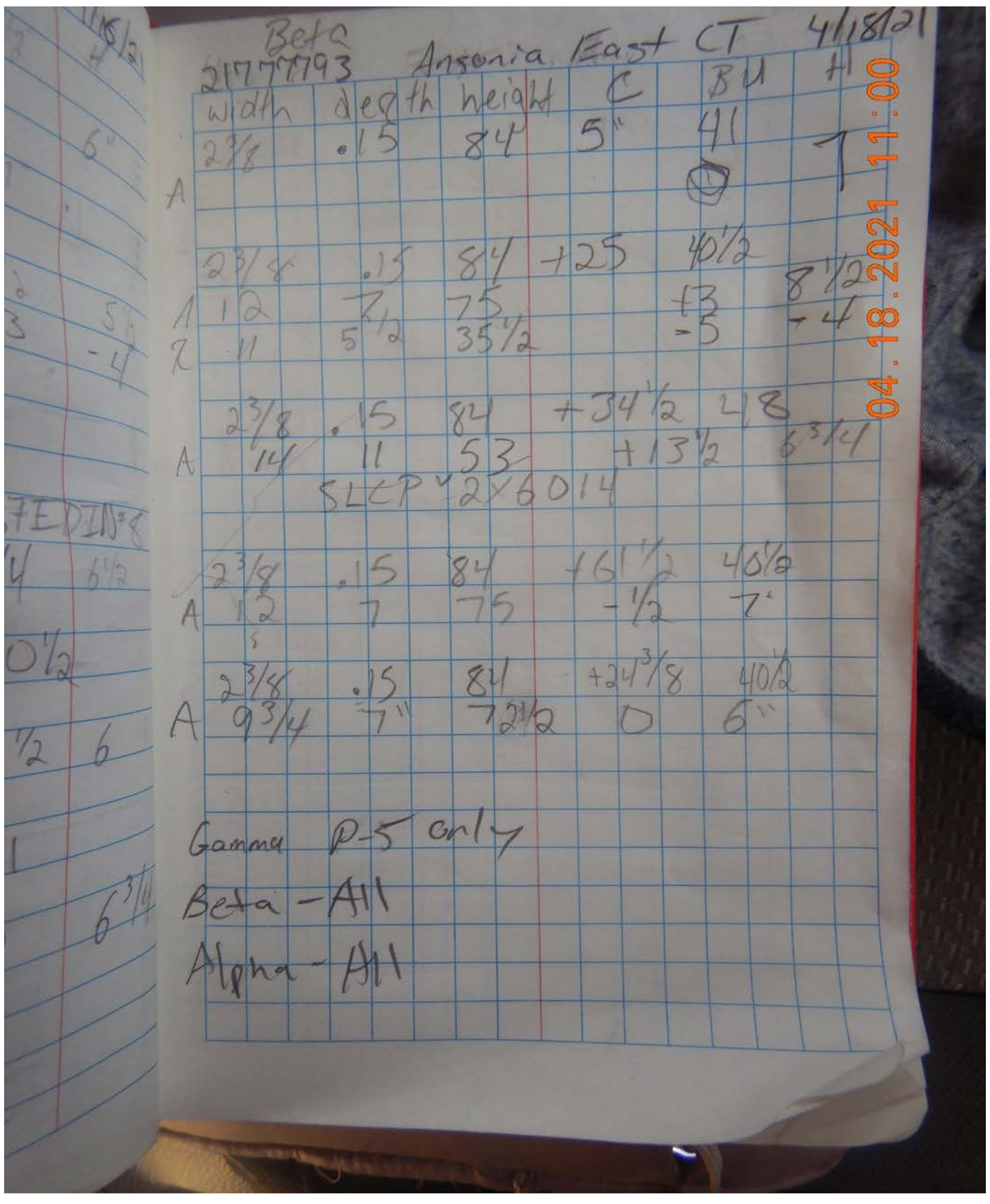


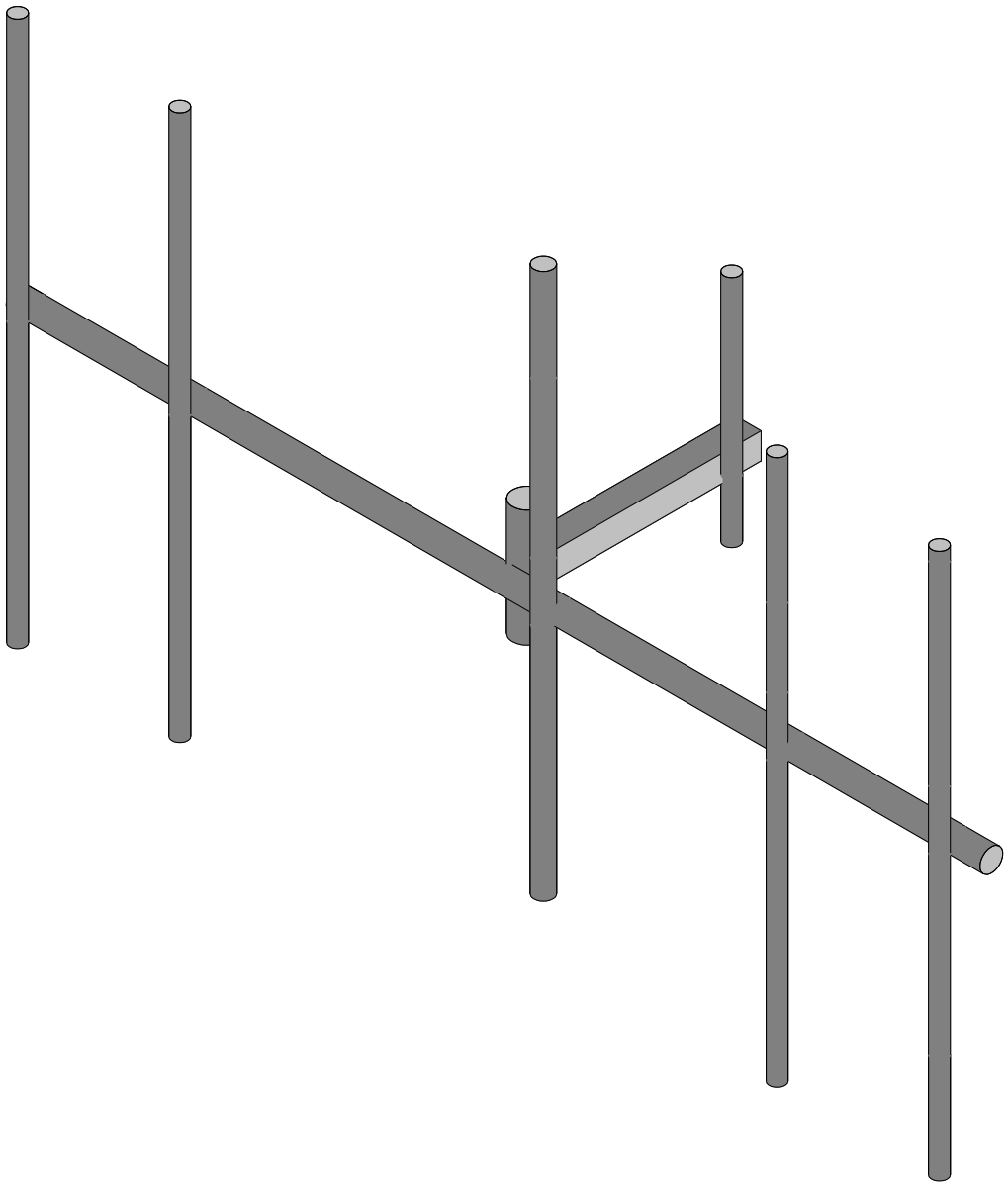
Please Insert Sketches of the Antenna Mount, cont'd



Please Insert Sketches of the Antenna Mount, cont'd

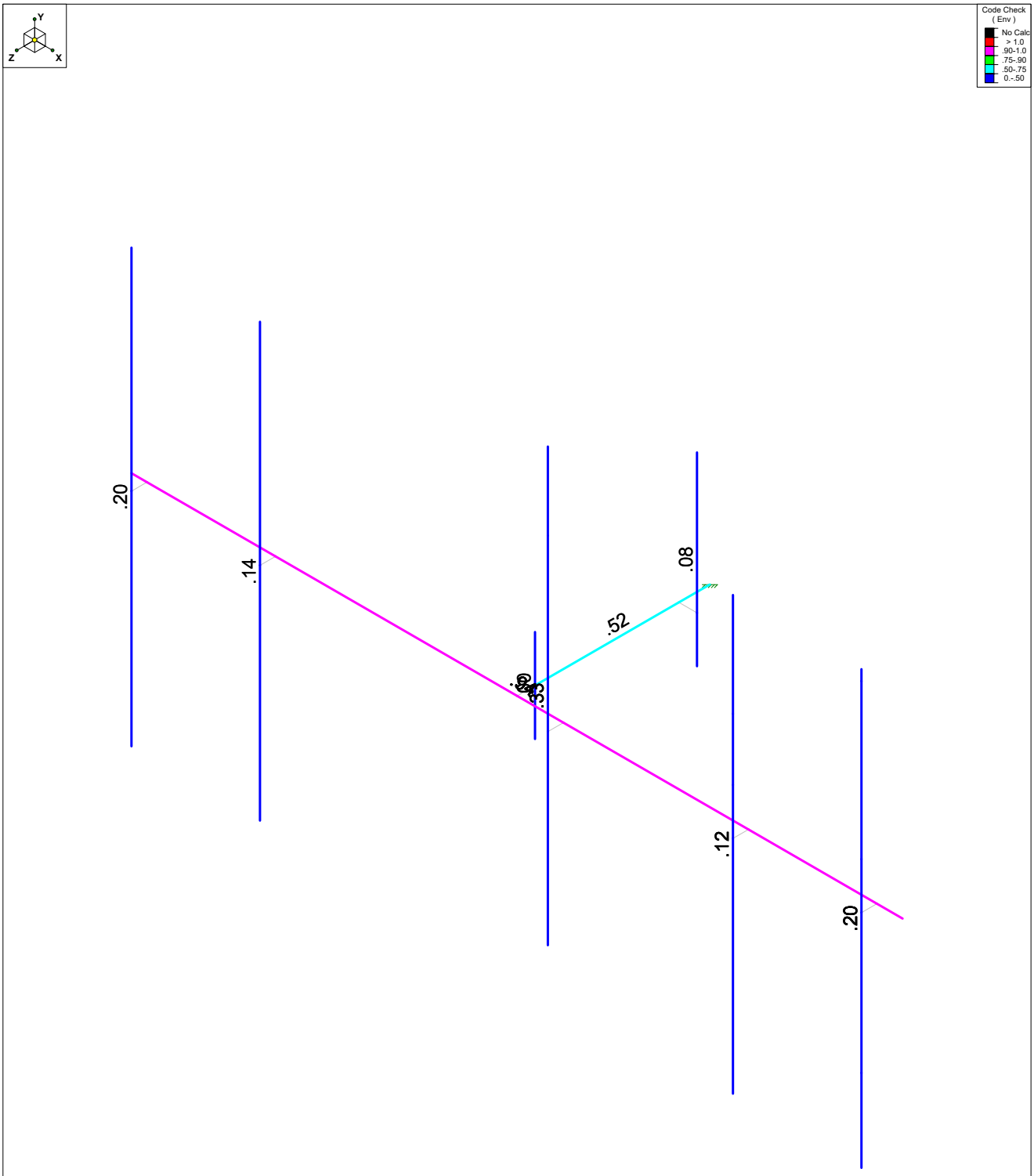






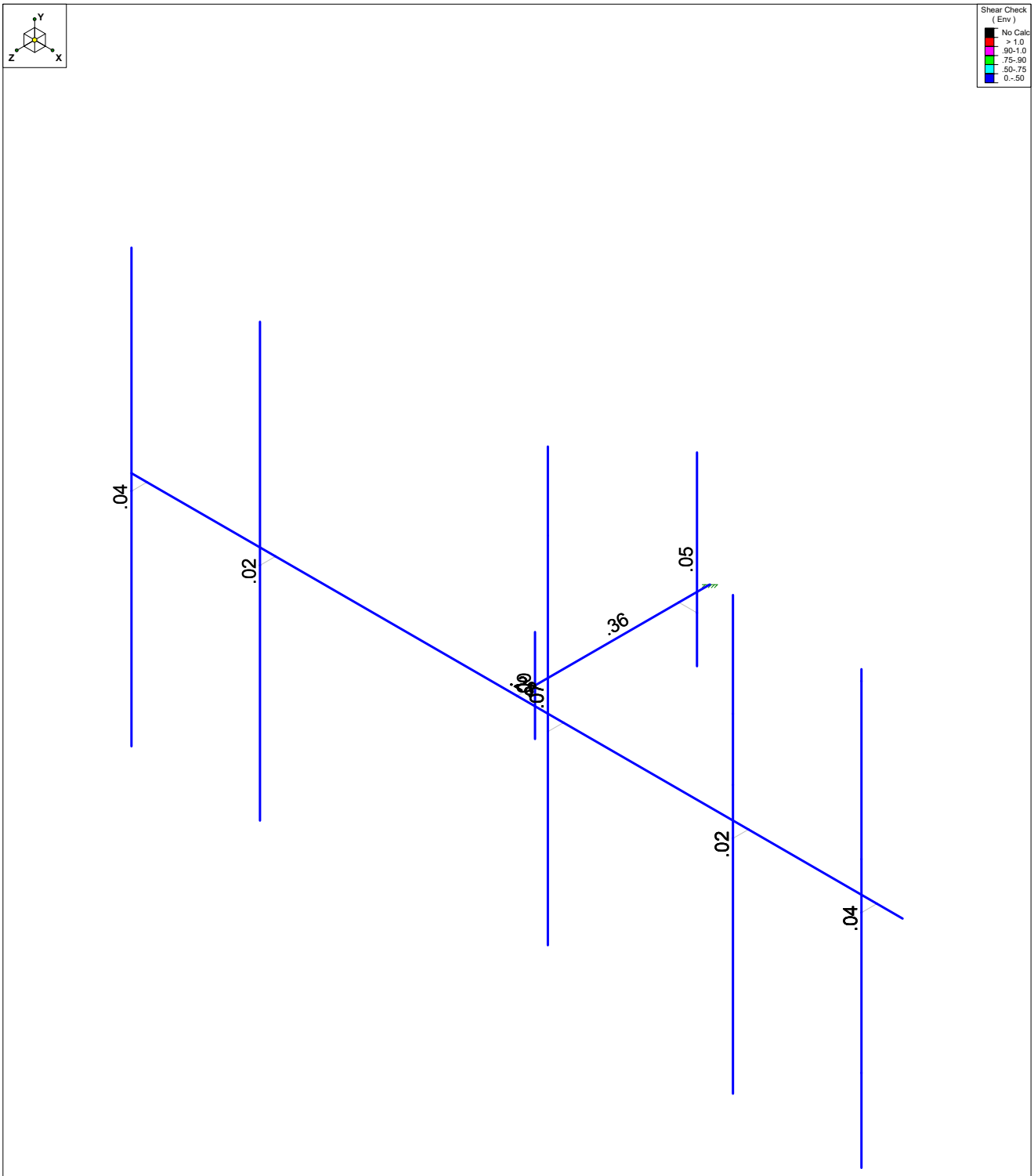
Envelope Only Solution

Maser Consulting	mount Analysis	SK - 1
SEA		July 30, 2021 at 11:59 AM
		467455-VZW_MT_LOT_B_H.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Maser Consulting	Mount Analysis	SK - 2
SEA		July 30, 2021 at 12:05 PM
		467455-VZW_MT_LOT_B_H.r3d



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

Maser Consulting	Mount Analysis	SK - 3
SEA		July 30, 2021 at 12:05 PM
		467455-VZW_MT_LOT_B_H.r3d

Basic Load Cases

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

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
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			

Load Combinations

	Description	So...	P...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
1	1.2D+1.0Wo (0 Deg)	Yes	Y		1	1.2	39	1.2	3	1	41	1												
2	1.2D+1.0Wo (30 Deg)	Yes	Y		1	1.2	39	1.2	4	1	42	1												
3	1.2D+1.0Wo (60 Deg)	Yes	Y		1	1.2	39	1.2	5	1	43	1												
4	1.2D+1.0Wo (90 Deg)	Yes	Y		1	1.2	39	1.2	6	1	44	1												
5	1.2D+1.0Wo (120 D...	Yes	Y		1	1.2	39	1.2	7	1	45	1												
6	1.2D+1.0Wo (150 D...	Yes	Y		1	1.2	39	1.2	8	1	46	1												
7	1.2D+1.0Wo (180 D...	Yes	Y		1	1.2	39	1.2	9	1	47	1												
8	1.2D+1.0Wo (210 D...	Yes	Y		1	1.2	39	1.2	10	1	48	1												
9	1.2D+1.0Wo (240 D...	Yes	Y		1	1.2	39	1.2	11	1	49	1												
10	1.2D+1.0Wo (270 D...	Yes	Y		1	1.2	39	1.2	12	1	50	1												
11	1.2D+1.0Wo (300 D...	Yes	Y		1	1.2	39	1.2	13	1	51	1												
12	1.2D+1.0Wo (330 D...	Yes	Y		1	1.2	39	1.2	14	1	52	1												
13	1.2D + 1.0Di + 1.0W...	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1								
14	1.2D + 1.0Di + 1.0W...	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1								
15	1.2D + 1.0Di + 1.0W...	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1								
16	1.2D + 1.0Di + 1.0W...	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1								
17	1.2D + 1.0Di + 1.0W...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1								
18	1.2D + 1.0Di + 1.0W...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1								
19	1.2D + 1.0Di + 1.0W...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1								
20	1.2D + 1.0Di + 1.0W...	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1								
21	1.2D + 1.0Di + 1.0W...	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1								
22	1.2D + 1.0Di + 1.0W...	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1								
23	1.2D + 1.0Di + 1.0W...	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1								
24	1.2D + 1.0Di + 1.0W...	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1								
25	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1										
26	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1										
27	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1										
28	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1										
29	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1										
30	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1										
31	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1										
32	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1										
33	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1										
34	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1										
35	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1										
36	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1										
37	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1										
38	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1										
39	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1										
40	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1										
41	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1										
42	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1										

Load Combinations (Continued)

	Description	So...	P...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
43	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1										
44	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1										
45	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1										
46	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1										
47	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1										
48	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	38	1	76	1										
49	1.2D + 1.5Lv1	Yes	Y		1	1.2	39	1.2	79	1.5														
50	1.2D + 1.5Lv2	Yes	Y		1	1.2	39	1.2	80	1.5														
51	1.4D	Yes	Y		1	1.4	39	1.4																
52	Seismic Mass		Y		1	1	39	1																
53	1.2D + 1.0Ev + 1.0E...		Y		1	1.2	39	1.2	SX		SY	1	SZ	-1										
54	1.2D + 1.0Ev + 1.0E...		Y		1	1.2	39	1.2	SX	.5	SY	1	SZ	-.866										
55	1.2D + 1.0Ev + 1.0E...		Y		1	1.2	39	1.2	SX	.866	SY	1	SZ	-.5										
56	1.2D + 1.0Ev + 1.0E...		Y		1	1.2	39	1.2	SX	1	SY	1	SZ											
57	1.2D + 1.0Ev + 1.0E...		Y		1	1.2	39	1.2	SX	.866	SY	1	SZ	.5										
58	1.2D + 1.0Ev + 1.0E...		Y		1	1.2	39	1.2	SX	.5	SY	1	SZ	.866										
59	1.2D + 1.0Ev + 1.0E...		Y		1	1.2	39	1.2	SX		SY	1	SZ	1										
60	1.2D + 1.0Ev + 1.0E...		Y		1	1.2	39	1.2	SX	-.5	SY	1	SZ	.866										
61	1.2D + 1.0Ev + 1.0E...		Y		1	1.2	39	1.2	SX	-.866	SY	1	SZ	.5										
62	1.2D + 1.0Ev + 1.0E...		Y		1	1.2	39	1.2	SX	-1	SY	1	SZ											
63	1.2D + 1.0Ev + 1.0E...		Y		1	1.2	39	1.2	SX	-.866	SY	1	SZ	-.5										
64	1.2D + 1.0Ev + 1.0E...		Y		1	1.2	39	1.2	SX	-.5	SY	1	SZ	-.866										

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	ANTENNACL3	.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	ANTENNACL1	5.833333	.75	.25	0	
35	N36A	5.833333	-2.25	0.25	0	
36	ANTENNACL_2	3.75	.75	.25	0	
37	N38A	3.75	1.75	.25	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
38	N38B	.75	2.75	.25	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Antenna Pipe	PIPE_2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
2	Standoff Arm	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 Design Parameters

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torq...	Kyy	Kzz	Cb	Function
1	M2	Standoff Pipe	1.5									Lateral
2	M1	Standoff Arm	2.833			Lbyy						Lateral
3	MP3A	Propose An...	7									Lateral
4	M4	Horizontal	12.5									Lateral
5	MP1A	Antenna Pipe	7									Lateral
6	MP2A	Antenna Pipe	7									Lateral
7	MP4A	Antenna Pipe	7									Lateral
8	MP5A	Antenna Pipe	7									Lateral
9	OVP1	Antenna Pipe	3									Lateral

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rul...
1	M2	N4	N3			Standoff Pipe	Column	Pipe	A53 Gr. B	Typical
2	M1	N1	N2			Standoff Arm	Beam	Tube	A500 Gr...	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 Antenna Pipe	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

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
16	OVP1						Yes	** NA **			None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	Y	-8	.17
2	MP1A	My	-.004	.17
3	MP1A	Mz	-.002	.17
4	MP1A	Y	-8	5.67
5	MP1A	My	-.004	5.67
6	MP1A	Mz	-.002	5.67
7	MP5A	Y	-8	.17
8	MP5A	My	-.004	.17
9	MP5A	Mz	-.002	.17
10	MP5A	Y	-8	5.67
11	MP5A	My	-.004	5.67
12	MP5A	Mz	-.002	5.67
13	MP3A	Y	-23	1.25
14	MP3A	My	-.022	1.25
15	MP3A	Mz	.011	1.25
16	MP3A	Y	-23	5.25
17	MP3A	My	-.022	5.25
18	MP3A	Mz	.011	5.25
19	MP3A	Y	-23	1.25
20	MP3A	My	-.006	1.25
21	MP3A	Mz	-.024	1.25
22	MP3A	Y	-23	5.25
23	MP3A	My	-.006	5.25
24	MP3A	Mz	-.024	5.25
25	MP2A	Y	-43.55	1.67
26	MP2A	My	-.026	1.67
27	MP2A	Mz	-.012	1.67
28	MP2A	Y	-43.55	3.67
29	MP2A	My	-.026	3.67
30	MP2A	Mz	-.012	3.67
31	MP4A	Y	-74.7	1
32	MP4A	My	.045	1
33	MP4A	Mz	.021	1
34	MP3A	Y	-70.3	1
35	MP3A	My	.042	1
36	MP3A	Mz	.02	1
37	OVP1	Y	-32	1.5
38	OVP1	My	.009	1.5
39	OVP1	Mz	-.019	1.5

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	Y	-47.612	.17
2	MP1A	My	-.022	.17
3	MP1A	Mz	-.01	.17
4	MP1A	Y	-47.612	5.67
5	MP1A	My	-.022	5.67
6	MP1A	Mz	-.01	5.67
7	MP5A	Y	-47.612	.17
8	MP5A	My	-.022	.17
9	MP5A	Mz	-.01	.17
10	MP5A	Y	-47.612	5.67
11	MP5A	My	-.022	5.67
12	MP5A	Mz	-.01	5.67
13	MP3A	Y	-83.567	1.25
14	MP3A	My	-.079	1.25
15	MP3A	Mz	.038	1.25
16	MP3A	Y	-83.567	5.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP3A	My	-.079	5.25
18	MP3A	Mz	.038	5.25
19	MP3A	Y	-83.567	1.25
20	MP3A	My	-.022	1.25
21	MP3A	Mz	-.085	1.25
22	MP3A	Y	-83.567	5.25
23	MP3A	My	-.022	5.25
24	MP3A	Mz	-.085	5.25
25	MP2A	Y	-36.103	1.67
26	MP2A	My	-.022	1.67
27	MP2A	Mz	-.01	1.67
28	MP2A	Y	-36.103	3.67
29	MP2A	My	-.022	3.67
30	MP2A	Mz	-.01	3.67
31	MP4A	Y	-45.527	1
32	MP4A	My	.028	1
33	MP4A	Mz	.013	1
34	MP3A	Y	-43.357	1
35	MP3A	My	.026	1
36	MP3A	Mz	.012	1
37	OVP1	Y	-89.102	1.5
38	OVP1	My	.025	1.5
39	OVP1	Mz	-.054	1.5

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	-88.267	.17
3	MP1A	Mx	.019	.17
4	MP1A	X	0	5.67
5	MP1A	Z	-88.267	5.67
6	MP1A	Mx	.019	5.67
7	MP5A	X	0	.17
8	MP5A	Z	-88.267	.17
9	MP5A	Mx	.019	.17
10	MP5A	X	0	5.67
11	MP5A	Z	-88.267	5.67
12	MP5A	Mx	.019	5.67
13	MP3A	X	0	1.25
14	MP3A	Z	-161.007	1.25
15	MP3A	Mx	-.074	1.25
16	MP3A	X	0	5.25
17	MP3A	Z	-161.007	5.25
18	MP3A	Mx	-.074	5.25
19	MP3A	X	0	1.25
20	MP3A	Z	-161.007	1.25
21	MP3A	Mx	.165	1.25
22	MP3A	X	0	5.25
23	MP3A	Z	-161.007	5.25
24	MP3A	Mx	.165	5.25
25	MP2A	X	0	1.67
26	MP2A	Z	-71.619	1.67
27	MP2A	Mx	.02	1.67
28	MP2A	X	0	3.67
29	MP2A	Z	-71.619	3.67
30	MP2A	Mx	.02	3.67
31	MP4A	X	0	1
32	MP4A	Z	-60.153	1
33	MP4A	Mx	-.017	1
34	MP3A	X	0	1
35	MP3A	Z	-59.466	1
36	MP3A	Mx	-.017	1
37	OVP1	X	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
38	OVP1	Z	-111.789	1.5
39	OVP1	Mx	.068	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	42.881	.17
2	MP1A	Z	-74.273	.17
3	MP1A	Mx	-.004	.17
4	MP1A	X	42.881	5.67
5	MP1A	Z	-74.273	5.67
6	MP1A	Mx	-.004	5.67
7	MP5A	X	42.881	.17
8	MP5A	Z	-74.273	.17
9	MP5A	Mx	-.004	.17
10	MP5A	X	42.881	5.67
11	MP5A	Z	-74.273	5.67
12	MP5A	Mx	-.004	5.67
13	MP3A	X	84.205	1.25
14	MP3A	Z	-145.847	1.25
15	MP3A	Mx	-.147	1.25
16	MP3A	X	84.205	5.25
17	MP3A	Z	-145.847	5.25
18	MP3A	Mx	-.147	5.25
19	MP3A	X	84.205	1.25
20	MP3A	Z	-145.847	1.25
21	MP3A	Mx	.127	1.25
22	MP3A	X	84.205	5.25
23	MP3A	Z	-145.847	5.25
24	MP3A	Mx	.127	5.25
25	MP2A	X	39.99	1.67
26	MP2A	Z	-69.265	1.67
27	MP2A	Mx	-.005	1.67
28	MP2A	X	39.99	3.67
29	MP2A	Z	-69.265	3.67
30	MP2A	Mx	-.005	3.67
31	MP4A	X	31.889	1
32	MP4A	Z	-55.234	1
33	MP4A	Mx	.004	1
34	MP3A	X	31.875	1
35	MP3A	Z	-55.209	1
36	MP3A	Mx	.004	1
37	OVP1	X	53.08	1.5
38	OVP1	Z	-91.938	1.5
39	OVP1	Mx	.071	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	78.349	.17
2	MP1A	Z	-45.235	.17
3	MP1A	Mx	-.026	.17
4	MP1A	X	78.349	5.67
5	MP1A	Z	-45.235	5.67
6	MP1A	Mx	-.026	5.67
7	MP5A	X	78.349	.17
8	MP5A	Z	-45.235	.17
9	MP5A	Mx	-.026	.17
10	MP5A	X	78.349	5.67
11	MP5A	Z	-45.235	5.67
12	MP5A	Mx	-.026	5.67
13	MP3A	X	133.799	1.25
14	MP3A	Z	-77.249	1.25
15	MP3A	Mx	-.162	1.25
16	MP3A	X	133.799	5.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP3A	Z	-77.249	5.25
18	MP3A	Mx	-.162	5.25
19	MP3A	X	133.799	1.25
20	MP3A	Z	-77.249	1.25
21	MP3A	Mx	.044	1.25
22	MP3A	X	133.799	5.25
23	MP3A	Z	-77.249	5.25
24	MP3A	Mx	.044	5.25
25	MP2A	X	55.656	1.67
26	MP2A	Z	-32.133	1.67
27	MP2A	Mx	-.025	1.67
28	MP2A	X	55.656	3.67
29	MP2A	Z	-32.133	3.67
30	MP2A	Mx	-.025	3.67
31	MP4A	X	49.333	1
32	MP4A	Z	-28.483	1
33	MP4A	Mx	.022	1
34	MP3A	X	48.237	1
35	MP3A	Z	-27.85	1
36	MP3A	Mx	.021	1
37	OVP1	X	101.098	1.5
38	OVP1	Z	-58.369	1.5
39	OVP1	Mx	.064	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	97.682	.17
2	MP1A	Z	0	.17
3	MP1A	Mx	-.044	.17
4	MP1A	X	97.682	5.67
5	MP1A	Z	0	5.67
6	MP1A	Mx	-.044	5.67
7	MP5A	X	97.682	.17
8	MP5A	Z	0	.17
9	MP5A	Mx	-.044	.17
10	MP5A	X	97.682	5.67
11	MP5A	Z	0	5.67
12	MP5A	Mx	-.044	5.67
13	MP3A	X	133.182	1.25
14	MP3A	Z	0	1.25
15	MP3A	Mx	-.126	1.25
16	MP3A	X	133.182	5.25
17	MP3A	Z	0	5.25
18	MP3A	Mx	-.126	5.25
19	MP3A	X	133.182	1.25
20	MP3A	Z	0	1.25
21	MP3A	Mx	-.035	1.25
22	MP3A	X	133.182	5.25
23	MP3A	Z	0	5.25
24	MP3A	Mx	-.035	5.25
25	MP2A	X	40.19	1.67
26	MP2A	Z	0	1.67
27	MP2A	Mx	-.024	1.67
28	MP2A	X	40.19	3.67
29	MP2A	Z	0	3.67
30	MP2A	Mx	-.024	3.67
31	MP4A	X	46.527	1
32	MP4A	Z	0	1
33	MP4A	Mx	.028	1
34	MP3A	X	43.367	1
35	MP3A	Z	0	1
36	MP3A	Mx	.026	1
37	OVP1	X	132.943	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
38	OVP1	Z	0	1.5
39	OVP1	Mx	.037	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	86.764	.17
2	MP1A	Z	50.093	.17
3	MP1A	Mx	-.05	.17
4	MP1A	X	86.764	5.67
5	MP1A	Z	50.093	5.67
6	MP1A	Mx	-.05	5.67
7	MP5A	X	86.764	.17
8	MP5A	Z	50.093	.17
9	MP5A	Mx	-.05	.17
10	MP5A	X	86.764	5.67
11	MP5A	Z	50.093	5.67
12	MP5A	Mx	-.05	5.67
13	MP3A	X	108.928	1.25
14	MP3A	Z	62.89	1.25
15	MP3A	Mx	-.075	1.25
16	MP3A	X	108.928	5.25
17	MP3A	Z	62.89	5.25
18	MP3A	Mx	-.075	5.25
19	MP3A	X	108.928	1.25
20	MP3A	Z	62.89	1.25
21	MP3A	Mx	-.092	1.25
22	MP3A	X	108.928	5.25
23	MP3A	Z	62.89	5.25
24	MP3A	Mx	-.092	5.25
25	MP2A	X	27.565	1.67
26	MP2A	Z	15.915	1.67
27	MP2A	Mx	-.021	1.67
28	MP2A	X	27.565	3.67
29	MP2A	Z	15.915	3.67
30	MP2A	Mx	-.021	3.67
31	MP4A	X	37.154	1
32	MP4A	Z	21.451	1
33	MP4A	Mx	.028	1
34	MP3A	X	33.848	1
35	MP3A	Z	19.542	1
36	MP3A	Mx	.026	1
37	OVP1	X	120.006	1.5
38	OVP1	Z	69.285	1.5
39	OVP1	Mx	-.008	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	47.74	.17
2	MP1A	Z	82.687	.17
3	MP1A	Mx	-.039	.17
4	MP1A	X	47.74	5.67
5	MP1A	Z	82.687	5.67
6	MP1A	Mx	-.039	5.67
7	MP5A	X	47.74	.17
8	MP5A	Z	82.687	.17
9	MP5A	Mx	-.039	.17
10	MP5A	X	47.74	5.67
11	MP5A	Z	82.687	5.67
12	MP5A	Mx	-.039	5.67
13	MP3A	X	69.846	1.25
14	MP3A	Z	120.977	1.25
15	MP3A	Mx	-.011	1.25
16	MP3A	X	69.846	5.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP3A	Z	120.977	5.25
18	MP3A	Mx	-.011	5.25
19	MP3A	X	69.846	1.25
20	MP3A	Z	120.977	1.25
21	MP3A	Mx	-.142	1.25
22	MP3A	X	69.846	5.25
23	MP3A	Z	120.977	5.25
24	MP3A	Mx	-.142	5.25
25	MP2A	X	23.772	1.67
26	MP2A	Z	41.174	1.67
27	MP2A	Mx	-.026	1.67
28	MP2A	X	23.772	3.67
29	MP2A	Z	41.174	3.67
30	MP2A	Mx	-.026	3.67
31	MP4A	X	24.857	1
32	MP4A	Z	43.054	1
33	MP4A	Mx	.027	1
34	MP3A	X	23.567	1
35	MP3A	Z	40.819	1
36	MP3A	Mx	.026	1
37	OVP1	X	63.997	1.5
38	OVP1	Z	110.846	1.5
39	OVP1	Mx	-.049	1.5

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	88.267	.17
3	MP1A	Mx	-.019	.17
4	MP1A	X	0	5.67
5	MP1A	Z	88.267	5.67
6	MP1A	Mx	-.019	5.67
7	MP5A	X	0	.17
8	MP5A	Z	88.267	.17
9	MP5A	Mx	-.019	.17
10	MP5A	X	0	5.67
11	MP5A	Z	88.267	5.67
12	MP5A	Mx	-.019	5.67
13	MP3A	X	0	1.25
14	MP3A	Z	161.007	1.25
15	MP3A	Mx	.074	1.25
16	MP3A	X	0	5.25
17	MP3A	Z	161.007	5.25
18	MP3A	Mx	.074	5.25
19	MP3A	X	0	1.25
20	MP3A	Z	161.007	1.25
21	MP3A	Mx	-.165	1.25
22	MP3A	X	0	5.25
23	MP3A	Z	161.007	5.25
24	MP3A	Mx	-.165	5.25
25	MP2A	X	0	1.67
26	MP2A	Z	71.619	1.67
27	MP2A	Mx	-.02	1.67
28	MP2A	X	0	3.67
29	MP2A	Z	71.619	3.67
30	MP2A	Mx	-.02	3.67
31	MP4A	X	0	1
32	MP4A	Z	60.153	1
33	MP4A	Mx	.017	1
34	MP3A	X	0	1
35	MP3A	Z	59.466	1
36	MP3A	Mx	.017	1
37	OVP1	X	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
38	OVP1	Z	111.789	1.5
39	OVP1	Mx	-.068	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-42.881	.17
2	MP1A	Z	74.273	.17
3	MP1A	Mx	.004	.17
4	MP1A	X	-42.881	5.67
5	MP1A	Z	74.273	5.67
6	MP1A	Mx	.004	5.67
7	MP5A	X	-42.881	.17
8	MP5A	Z	74.273	.17
9	MP5A	Mx	.004	.17
10	MP5A	X	-42.881	5.67
11	MP5A	Z	74.273	5.67
12	MP5A	Mx	.004	5.67
13	MP3A	X	-84.205	1.25
14	MP3A	Z	145.847	1.25
15	MP3A	Mx	.147	1.25
16	MP3A	X	-84.205	5.25
17	MP3A	Z	145.847	5.25
18	MP3A	Mx	.147	5.25
19	MP3A	X	-84.205	1.25
20	MP3A	Z	145.847	1.25
21	MP3A	Mx	-.127	1.25
22	MP3A	X	-84.205	5.25
23	MP3A	Z	145.847	5.25
24	MP3A	Mx	-.127	5.25
25	MP2A	X	-39.99	1.67
26	MP2A	Z	69.265	1.67
27	MP2A	Mx	.005	1.67
28	MP2A	X	-39.99	3.67
29	MP2A	Z	69.265	3.67
30	MP2A	Mx	.005	3.67
31	MP4A	X	-31.889	1
32	MP4A	Z	55.234	1
33	MP4A	Mx	-.004	1
34	MP3A	X	-31.875	1
35	MP3A	Z	55.209	1
36	MP3A	Mx	-.004	1
37	OVP1	X	-53.08	1.5
38	OVP1	Z	91.938	1.5
39	OVP1	Mx	-.071	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-78.349	.17
2	MP1A	Z	45.235	.17
3	MP1A	Mx	.026	.17
4	MP1A	X	-78.349	5.67
5	MP1A	Z	45.235	5.67
6	MP1A	Mx	.026	5.67
7	MP5A	X	-78.349	.17
8	MP5A	Z	45.235	.17
9	MP5A	Mx	.026	.17
10	MP5A	X	-78.349	5.67
11	MP5A	Z	45.235	5.67
12	MP5A	Mx	.026	5.67
13	MP3A	X	-133.799	1.25
14	MP3A	Z	77.249	1.25
15	MP3A	Mx	.162	1.25
16	MP3A	X	-133.799	5.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP3A	Z	77.249	5.25
18	MP3A	Mx	.162	5.25
19	MP3A	X	-133.799	1.25
20	MP3A	Z	77.249	1.25
21	MP3A	Mx	-.044	1.25
22	MP3A	X	-133.799	5.25
23	MP3A	Z	77.249	5.25
24	MP3A	Mx	-.044	5.25
25	MP2A	X	-55.656	1.67
26	MP2A	Z	32.133	1.67
27	MP2A	Mx	.025	1.67
28	MP2A	X	-55.656	3.67
29	MP2A	Z	32.133	3.67
30	MP2A	Mx	.025	3.67
31	MP4A	X	-49.333	1
32	MP4A	Z	28.483	1
33	MP4A	Mx	-.022	1
34	MP3A	X	-48.237	1
35	MP3A	Z	27.85	1
36	MP3A	Mx	-.021	1
37	OVP1	X	-101.098	1.5
38	OVP1	Z	58.369	1.5
39	OVP1	Mx	-.064	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-97.682	.17
2	MP1A	Z	0	.17
3	MP1A	Mx	.044	.17
4	MP1A	X	-97.682	5.67
5	MP1A	Z	0	5.67
6	MP1A	Mx	.044	5.67
7	MP5A	X	-97.682	.17
8	MP5A	Z	0	.17
9	MP5A	Mx	.044	.17
10	MP5A	X	-97.682	5.67
11	MP5A	Z	0	5.67
12	MP5A	Mx	.044	5.67
13	MP3A	X	-133.182	1.25
14	MP3A	Z	0	1.25
15	MP3A	Mx	.126	1.25
16	MP3A	X	-133.182	5.25
17	MP3A	Z	0	5.25
18	MP3A	Mx	.126	5.25
19	MP3A	X	-133.182	1.25
20	MP3A	Z	0	1.25
21	MP3A	Mx	.035	1.25
22	MP3A	X	-133.182	5.25
23	MP3A	Z	0	5.25
24	MP3A	Mx	.035	5.25
25	MP2A	X	-40.19	1.67
26	MP2A	Z	0	1.67
27	MP2A	Mx	.024	1.67
28	MP2A	X	-40.19	3.67
29	MP2A	Z	0	3.67
30	MP2A	Mx	.024	3.67
31	MP4A	X	-46.527	1
32	MP4A	Z	0	1
33	MP4A	Mx	-.028	1
34	MP3A	X	-43.367	1
35	MP3A	Z	0	1
36	MP3A	Mx	-.026	1
37	OVP1	X	-132.943	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
38	OVP1	Z	0	1.5
39	OVP1	Mx	-.037	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-86.764	.17
2	MP1A	Z	-50.093	.17
3	MP1A	Mx	.05	.17
4	MP1A	X	-86.764	5.67
5	MP1A	Z	-50.093	5.67
6	MP1A	Mx	.05	5.67
7	MP5A	X	-86.764	.17
8	MP5A	Z	-50.093	.17
9	MP5A	Mx	.05	.17
10	MP5A	X	-86.764	5.67
11	MP5A	Z	-50.093	5.67
12	MP5A	Mx	.05	5.67
13	MP3A	X	-108.928	1.25
14	MP3A	Z	-62.89	1.25
15	MP3A	Mx	.075	1.25
16	MP3A	X	-108.928	5.25
17	MP3A	Z	-62.89	5.25
18	MP3A	Mx	.075	5.25
19	MP3A	X	-108.928	1.25
20	MP3A	Z	-62.89	1.25
21	MP3A	Mx	.092	1.25
22	MP3A	X	-108.928	5.25
23	MP3A	Z	-62.89	5.25
24	MP3A	Mx	.092	5.25
25	MP2A	X	-27.565	1.67
26	MP2A	Z	-15.915	1.67
27	MP2A	Mx	.021	1.67
28	MP2A	X	-27.565	3.67
29	MP2A	Z	-15.915	3.67
30	MP2A	Mx	.021	3.67
31	MP4A	X	-37.154	1
32	MP4A	Z	-21.451	1
33	MP4A	Mx	-.028	1
34	MP3A	X	-33.848	1
35	MP3A	Z	-19.542	1
36	MP3A	Mx	-.026	1
37	OVP1	X	-120.006	1.5
38	OVP1	Z	-69.285	1.5
39	OVP1	Mx	.008	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-47.74	.17
2	MP1A	Z	-82.687	.17
3	MP1A	Mx	.039	.17
4	MP1A	X	-47.74	5.67
5	MP1A	Z	-82.687	5.67
6	MP1A	Mx	.039	5.67
7	MP5A	X	-47.74	.17
8	MP5A	Z	-82.687	.17
9	MP5A	Mx	.039	.17
10	MP5A	X	-47.74	5.67
11	MP5A	Z	-82.687	5.67
12	MP5A	Mx	.039	5.67
13	MP3A	X	-69.846	1.25
14	MP3A	Z	-120.977	1.25
15	MP3A	Mx	.011	1.25
16	MP3A	X	-69.846	5.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP3A	Z	-120.977	5.25
18	MP3A	Mx	.011	5.25
19	MP3A	X	-69.846	1.25
20	MP3A	Z	-120.977	1.25
21	MP3A	Mx	.142	1.25
22	MP3A	X	-69.846	5.25
23	MP3A	Z	-120.977	5.25
24	MP3A	Mx	.142	5.25
25	MP2A	X	-23.772	1.67
26	MP2A	Z	-41.174	1.67
27	MP2A	Mx	.026	1.67
28	MP2A	X	-23.772	3.67
29	MP2A	Z	-41.174	3.67
30	MP2A	Mx	.026	3.67
31	MP4A	X	-24.857	1
32	MP4A	Z	-43.054	1
33	MP4A	Mx	-.027	1
34	MP3A	X	-23.567	1
35	MP3A	Z	-40.819	1
36	MP3A	Mx	-.026	1
37	OVP1	X	-63.997	1.5
38	OVP1	Z	-110.846	1.5
39	OVP1	Mx	.049	1.5

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	-17.974	.17
3	MP1A	Mx	.004	.17
4	MP1A	X	0	5.67
5	MP1A	Z	-17.974	5.67
6	MP1A	Mx	.004	5.67
7	MP5A	X	0	.17
8	MP5A	Z	-17.974	.17
9	MP5A	Mx	.004	.17
10	MP5A	X	0	5.67
11	MP5A	Z	-17.974	5.67
12	MP5A	Mx	.004	5.67
13	MP3A	X	0	1.25
14	MP3A	Z	-31.105	1.25
15	MP3A	Mx	-.014	1.25
16	MP3A	X	0	5.25
17	MP3A	Z	-31.105	5.25
18	MP3A	Mx	-.014	5.25
19	MP3A	X	0	1.25
20	MP3A	Z	-31.105	1.25
21	MP3A	Mx	.032	1.25
22	MP3A	X	0	5.25
23	MP3A	Z	-31.105	5.25
24	MP3A	Mx	.032	5.25
25	MP2A	X	0	1.67
26	MP2A	Z	-14.404	1.67
27	MP2A	Mx	.004	1.67
28	MP2A	X	0	3.67
29	MP2A	Z	-14.404	3.67
30	MP2A	Mx	.004	3.67
31	MP4A	X	0	1
32	MP4A	Z	-12.8	1
33	MP4A	Mx	-.004	1
34	MP3A	X	0	1
35	MP3A	Z	-12.668	1
36	MP3A	Mx	-.004	1
37	OVP1	X	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
38	OVP1	Z	-22.826	1.5
39	OVP1	Mx	.014	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	8.753	.17
2	MP1A	Z	-15.161	.17
3	MP1A	Mx	-.000763	.17
4	MP1A	X	8.753	5.67
5	MP1A	Z	-15.161	5.67
6	MP1A	Mx	-.000763	5.67
7	MP5A	X	8.753	.17
8	MP5A	Z	-15.161	.17
9	MP5A	Mx	-.000763	.17
10	MP5A	X	8.753	5.67
11	MP5A	Z	-15.161	5.67
12	MP5A	Mx	-.000763	5.67
13	MP3A	X	16.229	1.25
14	MP3A	Z	-28.11	1.25
15	MP3A	Mx	-.028	1.25
16	MP3A	X	16.229	5.25
17	MP3A	Z	-28.11	5.25
18	MP3A	Mx	-.028	5.25
19	MP3A	X	16.229	1.25
20	MP3A	Z	-28.11	1.25
21	MP3A	Mx	.025	1.25
22	MP3A	X	16.229	5.25
23	MP3A	Z	-28.11	5.25
24	MP3A	Mx	.025	5.25
25	MP2A	X	7.989	1.67
26	MP2A	Z	-13.838	1.67
27	MP2A	Mx	-.000928	1.67
28	MP2A	X	7.989	3.67
29	MP2A	Z	-13.838	3.67
30	MP2A	Mx	-.000928	3.67
31	MP4A	X	6.752	1
32	MP4A	Z	-11.695	1
33	MP4A	Mx	.000785	1
34	MP3A	X	6.749	1
35	MP3A	Z	-11.69	1
36	MP3A	Mx	.000784	1
37	OVP1	X	10.895	1.5
38	OVP1	Z	-18.871	1.5
39	OVP1	Mx	.014	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	15.923	.17
2	MP1A	Z	-9.193	.17
3	MP1A	Mx	-.005	.17
4	MP1A	X	15.923	5.67
5	MP1A	Z	-9.193	5.67
6	MP1A	Mx	-.005	5.67
7	MP5A	X	15.923	.17
8	MP5A	Z	-9.193	.17
9	MP5A	Mx	-.005	.17
10	MP5A	X	15.923	5.67
11	MP5A	Z	-9.193	5.67
12	MP5A	Mx	-.005	5.67
13	MP3A	X	25.907	1.25
14	MP3A	Z	-14.958	1.25
15	MP3A	Mx	-.031	1.25
16	MP3A	X	25.907	5.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP3A	Z	-14.958	5.25
18	MP3A	Mx	-.031	5.25
19	MP3A	X	25.907	1.25
20	MP3A	Z	-14.958	1.25
21	MP3A	Mx	.009	1.25
22	MP3A	X	25.907	5.25
23	MP3A	Z	-14.958	5.25
24	MP3A	Mx	.009	5.25
25	MP2A	X	11.276	1.67
26	MP2A	Z	-6.51	1.67
27	MP2A	Mx	-.005	1.67
28	MP2A	X	11.276	3.67
29	MP2A	Z	-6.51	3.67
30	MP2A	Mx	-.005	3.67
31	MP4A	X	10.549	1
32	MP4A	Z	-6.091	1
33	MP4A	Mx	.005	1
34	MP3A	X	10.338	1
35	MP3A	Z	-5.969	1
36	MP3A	Mx	.005	1
37	OVP1	X	20.556	1.5
38	OVP1	Z	-11.868	1.5
39	OVP1	Mx	.013	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	19.733	.17
2	MP1A	Z	0	.17
3	MP1A	Mx	-.009	.17
4	MP1A	X	19.733	5.67
5	MP1A	Z	0	5.67
6	MP1A	Mx	-.009	5.67
7	MP5A	X	19.733	.17
8	MP5A	Z	0	.17
9	MP5A	Mx	-.009	.17
10	MP5A	X	19.733	5.67
11	MP5A	Z	0	5.67
12	MP5A	Mx	-.009	5.67
13	MP3A	X	26.019	1.25
14	MP3A	Z	0	1.25
15	MP3A	Mx	-.025	1.25
16	MP3A	X	26.019	5.25
17	MP3A	Z	0	5.25
18	MP3A	Mx	-.025	5.25
19	MP3A	X	26.019	1.25
20	MP3A	Z	0	1.25
21	MP3A	Mx	-.007	1.25
22	MP3A	X	26.019	5.25
23	MP3A	Z	0	5.25
24	MP3A	Mx	-.007	5.25
25	MP2A	X	8.487	1.67
26	MP2A	Z	0	1.67
27	MP2A	Mx	-.005	1.67
28	MP2A	X	8.487	3.67
29	MP2A	Z	0	3.67
30	MP2A	Mx	-.005	3.67
31	MP4A	X	10.155	1
32	MP4A	Z	0	1
33	MP4A	Mx	.006	1
34	MP3A	X	9.546	1
35	MP3A	Z	0	1
36	MP3A	Mx	.006	1
37	OVP1	X	26.717	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
38	OVP1	Z	0	1.5
39	OVP1	Mx	.008	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	17.495	.17
2	MP1A	Z	10.1	.17
3	MP1A	Mx	-.01	.17
4	MP1A	X	17.495	5.67
5	MP1A	Z	10.1	5.67
6	MP1A	Mx	-.01	5.67
7	MP5A	X	17.495	.17
8	MP5A	Z	10.1	.17
9	MP5A	Mx	-.01	.17
10	MP5A	X	17.495	5.67
11	MP5A	Z	10.1	5.67
12	MP5A	Mx	-.01	5.67
13	MP3A	X	21.361	1.25
14	MP3A	Z	12.333	1.25
15	MP3A	Mx	-.015	1.25
16	MP3A	X	21.361	5.25
17	MP3A	Z	12.333	5.25
18	MP3A	Mx	-.015	5.25
19	MP3A	X	21.361	1.25
20	MP3A	Z	12.333	1.25
21	MP3A	Mx	-.018	1.25
22	MP3A	X	21.361	5.25
23	MP3A	Z	12.333	5.25
24	MP3A	Mx	-.018	5.25
25	MP2A	X	5.987	1.67
26	MP2A	Z	3.457	1.67
27	MP2A	Mx	-.005	1.67
28	MP2A	X	5.987	3.67
29	MP2A	Z	3.457	3.67
30	MP2A	Mx	-.005	3.67
31	MP4A	X	8.185	1
32	MP4A	Z	4.725	1
33	MP4A	Mx	.006	1
34	MP3A	X	7.548	1
35	MP3A	Z	4.358	1
36	MP3A	Mx	.006	1
37	OVP1	X	24.035	1.5
38	OVP1	Z	13.876	1.5
39	OVP1	Mx	-.002	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	9.661	.17
2	MP1A	Z	16.733	.17
3	MP1A	Mx	-.008	.17
4	MP1A	X	9.661	5.67
5	MP1A	Z	16.733	5.67
6	MP1A	Mx	-.008	5.67
7	MP5A	X	9.661	.17
8	MP5A	Z	16.733	.17
9	MP5A	Mx	-.008	.17
10	MP5A	X	9.661	5.67
11	MP5A	Z	16.733	5.67
12	MP5A	Mx	-.008	5.67
13	MP3A	X	13.605	1.25
14	MP3A	Z	23.564	1.25
15	MP3A	Mx	-.002	1.25
16	MP3A	X	13.605	5.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP3A	Z	23.564	5.25
18	MP3A	Mx	-.002	5.25
19	MP3A	X	13.605	1.25
20	MP3A	Z	23.564	1.25
21	MP3A	Mx	-.028	1.25
22	MP3A	X	13.605	5.25
23	MP3A	Z	23.564	5.25
24	MP3A	Mx	-.028	5.25
25	MP2A	X	4.936	1.67
26	MP2A	Z	8.549	1.67
27	MP2A	Mx	-.005	1.67
28	MP2A	X	4.936	3.67
29	MP2A	Z	8.549	3.67
30	MP2A	Mx	-.005	3.67
31	MP4A	X	5.387	1
32	MP4A	Z	9.33	1
33	MP4A	Mx	.006	1
34	MP3A	X	5.138	1
35	MP3A	Z	8.9	1
36	MP3A	Mx	.006	1
37	OVP1	X	12.903	1.5
38	OVP1	Z	22.349	1.5
39	OVP1	Mx	-.01	1.5

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	17.974	.17
3	MP1A	Mx	-.004	.17
4	MP1A	X	0	5.67
5	MP1A	Z	17.974	5.67
6	MP1A	Mx	-.004	5.67
7	MP5A	X	0	.17
8	MP5A	Z	17.974	.17
9	MP5A	Mx	-.004	.17
10	MP5A	X	0	5.67
11	MP5A	Z	17.974	5.67
12	MP5A	Mx	-.004	5.67
13	MP3A	X	0	1.25
14	MP3A	Z	31.105	1.25
15	MP3A	Mx	.014	1.25
16	MP3A	X	0	5.25
17	MP3A	Z	31.105	5.25
18	MP3A	Mx	.014	5.25
19	MP3A	X	0	1.25
20	MP3A	Z	31.105	1.25
21	MP3A	Mx	-.032	1.25
22	MP3A	X	0	5.25
23	MP3A	Z	31.105	5.25
24	MP3A	Mx	-.032	5.25
25	MP2A	X	0	1.67
26	MP2A	Z	14.404	1.67
27	MP2A	Mx	-.004	1.67
28	MP2A	X	0	3.67
29	MP2A	Z	14.404	3.67
30	MP2A	Mx	-.004	3.67
31	MP4A	X	0	1
32	MP4A	Z	12.8	1
33	MP4A	Mx	.004	1
34	MP3A	X	0	1
35	MP3A	Z	12.668	1
36	MP3A	Mx	.004	1
37	OVP1	X	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
38	OVP1	Z	22.826	1.5
39	OVP1	Mx	-.014	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-8.753	.17
2	MP1A	Z	15.161	.17
3	MP1A	Mx	.000763	.17
4	MP1A	X	-8.753	5.67
5	MP1A	Z	15.161	5.67
6	MP1A	Mx	.000763	5.67
7	MP5A	X	-8.753	.17
8	MP5A	Z	15.161	.17
9	MP5A	Mx	.000763	.17
10	MP5A	X	-8.753	5.67
11	MP5A	Z	15.161	5.67
12	MP5A	Mx	.000763	5.67
13	MP3A	X	-16.229	1.25
14	MP3A	Z	28.11	1.25
15	MP3A	Mx	.028	1.25
16	MP3A	X	-16.229	5.25
17	MP3A	Z	28.11	5.25
18	MP3A	Mx	.028	5.25
19	MP3A	X	-16.229	1.25
20	MP3A	Z	28.11	1.25
21	MP3A	Mx	-.025	1.25
22	MP3A	X	-16.229	5.25
23	MP3A	Z	28.11	5.25
24	MP3A	Mx	-.025	5.25
25	MP2A	X	-7.989	1.67
26	MP2A	Z	13.838	1.67
27	MP2A	Mx	.000928	1.67
28	MP2A	X	-7.989	3.67
29	MP2A	Z	13.838	3.67
30	MP2A	Mx	.000928	3.67
31	MP4A	X	-6.752	1
32	MP4A	Z	11.695	1
33	MP4A	Mx	-.000785	1
34	MP3A	X	-6.749	1
35	MP3A	Z	11.69	1
36	MP3A	Mx	-.000784	1
37	OVP1	X	-10.895	1.5
38	OVP1	Z	18.871	1.5
39	OVP1	Mx	-.014	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-15.923	.17
2	MP1A	Z	9.193	.17
3	MP1A	Mx	.005	.17
4	MP1A	X	-15.923	5.67
5	MP1A	Z	9.193	5.67
6	MP1A	Mx	.005	5.67
7	MP5A	X	-15.923	.17
8	MP5A	Z	9.193	.17
9	MP5A	Mx	.005	.17
10	MP5A	X	-15.923	5.67
11	MP5A	Z	9.193	5.67
12	MP5A	Mx	.005	5.67
13	MP3A	X	-25.907	1.25
14	MP3A	Z	14.958	1.25
15	MP3A	Mx	.031	1.25
16	MP3A	X	-25.907	5.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP3A	Z	14.958	5.25
18	MP3A	Mx	.031	5.25
19	MP3A	X	-25.907	1.25
20	MP3A	Z	14.958	1.25
21	MP3A	Mx	-.009	1.25
22	MP3A	X	-25.907	5.25
23	MP3A	Z	14.958	5.25
24	MP3A	Mx	-.009	5.25
25	MP2A	X	-11.276	1.67
26	MP2A	Z	6.51	1.67
27	MP2A	Mx	.005	1.67
28	MP2A	X	-11.276	3.67
29	MP2A	Z	6.51	3.67
30	MP2A	Mx	.005	3.67
31	MP4A	X	-10.549	1
32	MP4A	Z	6.091	1
33	MP4A	Mx	-.005	1
34	MP3A	X	-10.338	1
35	MP3A	Z	5.969	1
36	MP3A	Mx	-.005	1
37	OVP1	X	-20.556	1.5
38	OVP1	Z	11.868	1.5
39	OVP1	Mx	-.013	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-19.733	.17
2	MP1A	Z	0	.17
3	MP1A	Mx	.009	.17
4	MP1A	X	-19.733	5.67
5	MP1A	Z	0	5.67
6	MP1A	Mx	.009	5.67
7	MP5A	X	-19.733	.17
8	MP5A	Z	0	.17
9	MP5A	Mx	.009	.17
10	MP5A	X	-19.733	5.67
11	MP5A	Z	0	5.67
12	MP5A	Mx	.009	5.67
13	MP3A	X	-26.019	1.25
14	MP3A	Z	0	1.25
15	MP3A	Mx	.025	1.25
16	MP3A	X	-26.019	5.25
17	MP3A	Z	0	5.25
18	MP3A	Mx	.025	5.25
19	MP3A	X	-26.019	1.25
20	MP3A	Z	0	1.25
21	MP3A	Mx	.007	1.25
22	MP3A	X	-26.019	5.25
23	MP3A	Z	0	5.25
24	MP3A	Mx	.007	5.25
25	MP2A	X	-8.487	1.67
26	MP2A	Z	0	1.67
27	MP2A	Mx	.005	1.67
28	MP2A	X	-8.487	3.67
29	MP2A	Z	0	3.67
30	MP2A	Mx	.005	3.67
31	MP4A	X	-10.155	1
32	MP4A	Z	0	1
33	MP4A	Mx	-.006	1
34	MP3A	X	-9.546	1
35	MP3A	Z	0	1
36	MP3A	Mx	-.006	1
37	OVP1	X	-26.717	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	-.008	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-17.495	.17
2	MP1A	Z	-10.1	.17
3	MP1A	Mx	.01	.17
4	MP1A	X	-17.495	5.67
5	MP1A	Z	-10.1	5.67
6	MP1A	Mx	.01	5.67
7	MP5A	X	-17.495	.17
8	MP5A	Z	-10.1	.17
9	MP5A	Mx	.01	.17
10	MP5A	X	-17.495	5.67
11	MP5A	Z	-10.1	5.67
12	MP5A	Mx	.01	5.67
13	MP3A	X	-21.361	1.25
14	MP3A	Z	-12.333	1.25
15	MP3A	Mx	.015	1.25
16	MP3A	X	-21.361	5.25
17	MP3A	Z	-12.333	5.25
18	MP3A	Mx	.015	5.25
19	MP3A	X	-21.361	1.25
20	MP3A	Z	-12.333	1.25
21	MP3A	Mx	.018	1.25
22	MP3A	X	-21.361	5.25
23	MP3A	Z	-12.333	5.25
24	MP3A	Mx	.018	5.25
25	MP2A	X	-5.987	1.67
26	MP2A	Z	-3.457	1.67
27	MP2A	Mx	.005	1.67
28	MP2A	X	-5.987	3.67
29	MP2A	Z	-3.457	3.67
30	MP2A	Mx	.005	3.67
31	MP4A	X	-8.185	1
32	MP4A	Z	-4.725	1
33	MP4A	Mx	-.006	1
34	MP3A	X	-7.548	1
35	MP3A	Z	-4.358	1
36	MP3A	Mx	-.006	1
37	OVP1	X	-24.035	1.5
38	OVP1	Z	-13.876	1.5
39	OVP1	Mx	.002	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-9.661	.17
2	MP1A	Z	-16.733	.17
3	MP1A	Mx	.008	.17
4	MP1A	X	-9.661	5.67
5	MP1A	Z	-16.733	5.67
6	MP1A	Mx	.008	5.67
7	MP5A	X	-9.661	.17
8	MP5A	Z	-16.733	.17
9	MP5A	Mx	.008	.17
10	MP5A	X	-9.661	5.67
11	MP5A	Z	-16.733	5.67
12	MP5A	Mx	.008	5.67
13	MP3A	X	-13.605	1.25
14	MP3A	Z	-23.564	1.25
15	MP3A	Mx	.002	1.25
16	MP3A	X	-13.605	5.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP3A	Z	-23.564	5.25
18	MP3A	Mx	.002	5.25
19	MP3A	X	-13.605	1.25
20	MP3A	Z	-23.564	1.25
21	MP3A	Mx	.028	1.25
22	MP3A	X	-13.605	5.25
23	MP3A	Z	-23.564	5.25
24	MP3A	Mx	.028	5.25
25	MP2A	X	-4.936	1.67
26	MP2A	Z	-8.549	1.67
27	MP2A	Mx	.005	1.67
28	MP2A	X	-4.936	3.67
29	MP2A	Z	-8.549	3.67
30	MP2A	Mx	.005	3.67
31	MP4A	X	-5.387	1
32	MP4A	Z	-9.33	1
33	MP4A	Mx	-.006	1
34	MP3A	X	-5.138	1
35	MP3A	Z	-8.9	1
36	MP3A	Mx	-.006	1
37	OVP1	X	-12.903	1.5
38	OVP1	Z	-22.349	1.5
39	OVP1	Mx	.01	1.5

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	-5.61	.17
3	MP1A	Mx	.001	.17
4	MP1A	X	0	5.67
5	MP1A	Z	-5.61	5.67
6	MP1A	Mx	.001	5.67
7	MP5A	X	0	.17
8	MP5A	Z	-5.61	.17
9	MP5A	Mx	.001	.17
10	MP5A	X	0	5.67
11	MP5A	Z	-5.61	5.67
12	MP5A	Mx	.001	5.67
13	MP3A	X	0	1.25
14	MP3A	Z	-10.233	1.25
15	MP3A	Mx	-.005	1.25
16	MP3A	X	0	5.25
17	MP3A	Z	-10.233	5.25
18	MP3A	Mx	-.005	5.25
19	MP3A	X	0	1.25
20	MP3A	Z	-10.233	1.25
21	MP3A	Mx	.01	1.25
22	MP3A	X	0	5.25
23	MP3A	Z	-10.233	5.25
24	MP3A	Mx	.01	5.25
25	MP2A	X	0	1.67
26	MP2A	Z	-4.552	1.67
27	MP2A	Mx	.001	1.67
28	MP2A	X	0	3.67
29	MP2A	Z	-4.552	3.67
30	MP2A	Mx	.001	3.67
31	MP4A	X	0	1
32	MP4A	Z	-3.823	1
33	MP4A	Mx	-.001	1
34	MP3A	X	0	1
35	MP3A	Z	-3.779	1
36	MP3A	Mx	-.001	1
37	OVP1	X	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
38	OVP1	Z	-7.105	1.5
39	OVP1	Mx	.004	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	2.725	.17
2	MP1A	Z	-4.72	.17
3	MP1A	Mx	-.000237	.17
4	MP1A	X	2.725	5.67
5	MP1A	Z	-4.72	5.67
6	MP1A	Mx	-.000237	5.67
7	MP5A	X	2.725	.17
8	MP5A	Z	-4.72	.17
9	MP5A	Mx	-.000237	.17
10	MP5A	X	2.725	5.67
11	MP5A	Z	-4.72	5.67
12	MP5A	Mx	-.000237	5.67
13	MP3A	X	5.352	1.25
14	MP3A	Z	-9.269	1.25
15	MP3A	Mx	-.009	1.25
16	MP3A	X	5.352	5.25
17	MP3A	Z	-9.269	5.25
18	MP3A	Mx	-.009	5.25
19	MP3A	X	5.352	1.25
20	MP3A	Z	-9.269	1.25
21	MP3A	Mx	.008	1.25
22	MP3A	X	5.352	5.25
23	MP3A	Z	-9.269	5.25
24	MP3A	Mx	.008	5.25
25	MP2A	X	2.542	1.67
26	MP2A	Z	-4.402	1.67
27	MP2A	Mx	-.000296	1.67
28	MP2A	X	2.542	3.67
29	MP2A	Z	-4.402	3.67
30	MP2A	Mx	-.000296	3.67
31	MP4A	X	2.027	1
32	MP4A	Z	-3.51	1
33	MP4A	Mx	.000236	1
34	MP3A	X	2.026	1
35	MP3A	Z	-3.509	1
36	MP3A	Mx	.000235	1
37	OVP1	X	3.374	1.5
38	OVP1	Z	-5.843	1.5
39	OVP1	Mx	.004	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	4.979	.17
2	MP1A	Z	-2.875	.17
3	MP1A	Mx	-.002	.17
4	MP1A	X	4.979	5.67
5	MP1A	Z	-2.875	5.67
6	MP1A	Mx	-.002	5.67
7	MP5A	X	4.979	.17
8	MP5A	Z	-2.875	.17
9	MP5A	Mx	-.002	.17
10	MP5A	X	4.979	5.67
11	MP5A	Z	-2.875	5.67
12	MP5A	Mx	-.002	5.67
13	MP3A	X	8.504	1.25
14	MP3A	Z	-4.91	1.25
15	MP3A	Mx	-.01	1.25
16	MP3A	X	8.504	5.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP3A	Z	-4.91	5.25
18	MP3A	Mx	-.01	5.25
19	MP3A	X	8.504	1.25
20	MP3A	Z	-4.91	1.25
21	MP3A	Mx	.003	1.25
22	MP3A	X	8.504	5.25
23	MP3A	Z	-4.91	5.25
24	MP3A	Mx	.003	5.25
25	MP2A	X	3.537	1.67
26	MP2A	Z	-2.042	1.67
27	MP2A	Mx	-.002	1.67
28	MP2A	X	3.537	3.67
29	MP2A	Z	-2.042	3.67
30	MP2A	Mx	-.002	3.67
31	MP4A	X	3.135	1
32	MP4A	Z	-1.81	1
33	MP4A	Mx	.001	1
34	MP3A	X	3.066	1
35	MP3A	Z	-1.77	1
36	MP3A	Mx	.001	1
37	OVP1	X	6.425	1.5
38	OVP1	Z	-3.71	1.5
39	OVP1	Mx	.004	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	6.208	.17
2	MP1A	Z	0	.17
3	MP1A	Mx	-.003	.17
4	MP1A	X	6.208	5.67
5	MP1A	Z	0	5.67
6	MP1A	Mx	-.003	5.67
7	MP5A	X	6.208	.17
8	MP5A	Z	0	.17
9	MP5A	Mx	-.003	.17
10	MP5A	X	6.208	5.67
11	MP5A	Z	0	5.67
12	MP5A	Mx	-.003	5.67
13	MP3A	X	8.464	1.25
14	MP3A	Z	0	1.25
15	MP3A	Mx	-.008	1.25
16	MP3A	X	8.464	5.25
17	MP3A	Z	0	5.25
18	MP3A	Mx	-.008	5.25
19	MP3A	X	8.464	1.25
20	MP3A	Z	0	1.25
21	MP3A	Mx	-.002	1.25
22	MP3A	X	8.464	5.25
23	MP3A	Z	0	5.25
24	MP3A	Mx	-.002	5.25
25	MP2A	X	2.554	1.67
26	MP2A	Z	0	1.67
27	MP2A	Mx	-.002	1.67
28	MP2A	X	2.554	3.67
29	MP2A	Z	0	3.67
30	MP2A	Mx	-.002	3.67
31	MP4A	X	2.957	1
32	MP4A	Z	0	1
33	MP4A	Mx	.002	1
34	MP3A	X	2.756	1
35	MP3A	Z	0	1
36	MP3A	Mx	.002	1
37	OVP1	X	8.449	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
38	OVP1	Z	0	1.5
39	OVP1	Mx	.002	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	5.514	.17
2	MP1A	Z	3.184	.17
3	MP1A	Mx	-.003	.17
4	MP1A	X	5.514	5.67
5	MP1A	Z	3.184	5.67
6	MP1A	Mx	-.003	5.67
7	MP5A	X	5.514	.17
8	MP5A	Z	3.184	.17
9	MP5A	Mx	-.003	.17
10	MP5A	X	5.514	5.67
11	MP5A	Z	3.184	5.67
12	MP5A	Mx	-.003	5.67
13	MP3A	X	6.923	1.25
14	MP3A	Z	3.997	1.25
15	MP3A	Mx	-.005	1.25
16	MP3A	X	6.923	5.25
17	MP3A	Z	3.997	5.25
18	MP3A	Mx	-.005	5.25
19	MP3A	X	6.923	1.25
20	MP3A	Z	3.997	1.25
21	MP3A	Mx	-.006	1.25
22	MP3A	X	6.923	5.25
23	MP3A	Z	3.997	5.25
24	MP3A	Mx	-.006	5.25
25	MP2A	X	1.752	1.67
26	MP2A	Z	1.011	1.67
27	MP2A	Mx	-.001	1.67
28	MP2A	X	1.752	3.67
29	MP2A	Z	1.011	3.67
30	MP2A	Mx	-.001	3.67
31	MP4A	X	2.361	1
32	MP4A	Z	1.363	1
33	MP4A	Mx	.002	1
34	MP3A	X	2.151	1
35	MP3A	Z	1.242	1
36	MP3A	Mx	.002	1
37	OVP1	X	7.627	1.5
38	OVP1	Z	4.403	1.5
39	OVP1	Mx	-.000511	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	3.034	.17
2	MP1A	Z	5.255	.17
3	MP1A	Mx	-.002	.17
4	MP1A	X	3.034	5.67
5	MP1A	Z	5.255	5.67
6	MP1A	Mx	-.002	5.67
7	MP5A	X	3.034	.17
8	MP5A	Z	5.255	.17
9	MP5A	Mx	-.002	.17
10	MP5A	X	3.034	5.67
11	MP5A	Z	5.255	5.67
12	MP5A	Mx	-.002	5.67
13	MP3A	X	4.439	1.25
14	MP3A	Z	7.689	1.25
15	MP3A	Mx	-.000689	1.25
16	MP3A	X	4.439	5.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP3A	Z	7.689	5.25
18	MP3A	Mx	-.000689	5.25
19	MP3A	X	4.439	1.25
20	MP3A	Z	7.689	1.25
21	MP3A	Mx	-.009	1.25
22	MP3A	X	4.439	5.25
23	MP3A	Z	7.689	5.25
24	MP3A	Mx	-.009	5.25
25	MP2A	X	1.511	1.67
26	MP2A	Z	2.617	1.67
27	MP2A	Mx	-.002	1.67
28	MP2A	X	1.511	3.67
29	MP2A	Z	2.617	3.67
30	MP2A	Mx	-.002	3.67
31	MP4A	X	1.58	1
32	MP4A	Z	2.736	1
33	MP4A	Mx	.002	1
34	MP3A	X	1.498	1
35	MP3A	Z	2.594	1
36	MP3A	Mx	.002	1
37	OVP1	X	4.067	1.5
38	OVP1	Z	7.045	1.5
39	OVP1	Mx	-.003	1.5

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	5.61	.17
3	MP1A	Mx	-.001	.17
4	MP1A	X	0	5.67
5	MP1A	Z	5.61	5.67
6	MP1A	Mx	-.001	5.67
7	MP5A	X	0	.17
8	MP5A	Z	5.61	.17
9	MP5A	Mx	-.001	.17
10	MP5A	X	0	5.67
11	MP5A	Z	5.61	5.67
12	MP5A	Mx	-.001	5.67
13	MP3A	X	0	1.25
14	MP3A	Z	10.233	1.25
15	MP3A	Mx	.005	1.25
16	MP3A	X	0	5.25
17	MP3A	Z	10.233	5.25
18	MP3A	Mx	.005	5.25
19	MP3A	X	0	1.25
20	MP3A	Z	10.233	1.25
21	MP3A	Mx	-.01	1.25
22	MP3A	X	0	5.25
23	MP3A	Z	10.233	5.25
24	MP3A	Mx	-.01	5.25
25	MP2A	X	0	1.67
26	MP2A	Z	4.552	1.67
27	MP2A	Mx	-.001	1.67
28	MP2A	X	0	3.67
29	MP2A	Z	4.552	3.67
30	MP2A	Mx	-.001	3.67
31	MP4A	X	0	1
32	MP4A	Z	3.823	1
33	MP4A	Mx	.001	1
34	MP3A	X	0	1
35	MP3A	Z	3.779	1
36	MP3A	Mx	.001	1
37	OVP1	X	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
38	OVP1	Z	7.105	1.5
39	OVP1	Mx	-.004	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-2.725	.17
2	MP1A	Z	4.72	.17
3	MP1A	Mx	.000237	.17
4	MP1A	X	-2.725	5.67
5	MP1A	Z	4.72	5.67
6	MP1A	Mx	.000237	5.67
7	MP5A	X	-2.725	.17
8	MP5A	Z	4.72	.17
9	MP5A	Mx	.000237	.17
10	MP5A	X	-2.725	5.67
11	MP5A	Z	4.72	5.67
12	MP5A	Mx	.000237	5.67
13	MP3A	X	-5.352	1.25
14	MP3A	Z	9.269	1.25
15	MP3A	Mx	.009	1.25
16	MP3A	X	-5.352	5.25
17	MP3A	Z	9.269	5.25
18	MP3A	Mx	.009	5.25
19	MP3A	X	-5.352	1.25
20	MP3A	Z	9.269	1.25
21	MP3A	Mx	-.008	1.25
22	MP3A	X	-5.352	5.25
23	MP3A	Z	9.269	5.25
24	MP3A	Mx	-.008	5.25
25	MP2A	X	-2.542	1.67
26	MP2A	Z	4.402	1.67
27	MP2A	Mx	.000296	1.67
28	MP2A	X	-2.542	3.67
29	MP2A	Z	4.402	3.67
30	MP2A	Mx	.000296	3.67
31	MP4A	X	-2.027	1
32	MP4A	Z	3.51	1
33	MP4A	Mx	-.000236	1
34	MP3A	X	-2.026	1
35	MP3A	Z	3.509	1
36	MP3A	Mx	-.000235	1
37	OVP1	X	-3.374	1.5
38	OVP1	Z	5.843	1.5
39	OVP1	Mx	-.004	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-4.979	.17
2	MP1A	Z	2.875	.17
3	MP1A	Mx	.002	.17
4	MP1A	X	-4.979	5.67
5	MP1A	Z	2.875	5.67
6	MP1A	Mx	.002	5.67
7	MP5A	X	-4.979	.17
8	MP5A	Z	2.875	.17
9	MP5A	Mx	.002	.17
10	MP5A	X	-4.979	5.67
11	MP5A	Z	2.875	5.67
12	MP5A	Mx	.002	5.67
13	MP3A	X	-8.504	1.25
14	MP3A	Z	4.91	1.25
15	MP3A	Mx	.01	1.25
16	MP3A	X	-8.504	5.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP3A	Z	4.91	5.25
18	MP3A	Mx	.01	5.25
19	MP3A	X	-8.504	1.25
20	MP3A	Z	4.91	1.25
21	MP3A	Mx	-.003	1.25
22	MP3A	X	-8.504	5.25
23	MP3A	Z	4.91	5.25
24	MP3A	Mx	-.003	5.25
25	MP2A	X	-3.537	1.67
26	MP2A	Z	2.042	1.67
27	MP2A	Mx	.002	1.67
28	MP2A	X	-3.537	3.67
29	MP2A	Z	2.042	3.67
30	MP2A	Mx	.002	3.67
31	MP4A	X	-3.135	1
32	MP4A	Z	1.81	1
33	MP4A	Mx	-.001	1
34	MP3A	X	-3.066	1
35	MP3A	Z	1.77	1
36	MP3A	Mx	-.001	1
37	OVP1	X	-6.425	1.5
38	OVP1	Z	3.71	1.5
39	OVP1	Mx	-.004	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-6.208	.17
2	MP1A	Z	0	.17
3	MP1A	Mx	.003	.17
4	MP1A	X	-6.208	5.67
5	MP1A	Z	0	5.67
6	MP1A	Mx	.003	5.67
7	MP5A	X	-6.208	.17
8	MP5A	Z	0	.17
9	MP5A	Mx	.003	.17
10	MP5A	X	-6.208	5.67
11	MP5A	Z	0	5.67
12	MP5A	Mx	.003	5.67
13	MP3A	X	-8.464	1.25
14	MP3A	Z	0	1.25
15	MP3A	Mx	.008	1.25
16	MP3A	X	-8.464	5.25
17	MP3A	Z	0	5.25
18	MP3A	Mx	.008	5.25
19	MP3A	X	-8.464	1.25
20	MP3A	Z	0	1.25
21	MP3A	Mx	.002	1.25
22	MP3A	X	-8.464	5.25
23	MP3A	Z	0	5.25
24	MP3A	Mx	.002	5.25
25	MP2A	X	-2.554	1.67
26	MP2A	Z	0	1.67
27	MP2A	Mx	.002	1.67
28	MP2A	X	-2.554	3.67
29	MP2A	Z	0	3.67
30	MP2A	Mx	.002	3.67
31	MP4A	X	-2.957	1
32	MP4A	Z	0	1
33	MP4A	Mx	-.002	1
34	MP3A	X	-2.756	1
35	MP3A	Z	0	1
36	MP3A	Mx	-.002	1
37	OVP1	X	-8.449	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
38	OVP1	Z	0	1.5
39	OVP1	Mx	-.002	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-5.514	.17
2	MP1A	Z	-3.184	.17
3	MP1A	Mx	.003	.17
4	MP1A	X	-5.514	5.67
5	MP1A	Z	-3.184	5.67
6	MP1A	Mx	.003	5.67
7	MP5A	X	-5.514	.17
8	MP5A	Z	-3.184	.17
9	MP5A	Mx	.003	.17
10	MP5A	X	-5.514	5.67
11	MP5A	Z	-3.184	5.67
12	MP5A	Mx	.003	5.67
13	MP3A	X	-6.923	1.25
14	MP3A	Z	-3.997	1.25
15	MP3A	Mx	.005	1.25
16	MP3A	X	-6.923	5.25
17	MP3A	Z	-3.997	5.25
18	MP3A	Mx	.005	5.25
19	MP3A	X	-6.923	1.25
20	MP3A	Z	-3.997	1.25
21	MP3A	Mx	.006	1.25
22	MP3A	X	-6.923	5.25
23	MP3A	Z	-3.997	5.25
24	MP3A	Mx	.006	5.25
25	MP2A	X	-1.752	1.67
26	MP2A	Z	-1.011	1.67
27	MP2A	Mx	.001	1.67
28	MP2A	X	-1.752	3.67
29	MP2A	Z	-1.011	3.67
30	MP2A	Mx	.001	3.67
31	MP4A	X	-2.361	1
32	MP4A	Z	-1.363	1
33	MP4A	Mx	-.002	1
34	MP3A	X	-2.151	1
35	MP3A	Z	-1.242	1
36	MP3A	Mx	-.002	1
37	OVP1	X	-7.627	1.5
38	OVP1	Z	-4.403	1.5
39	OVP1	Mx	.000511	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-3.034	.17
2	MP1A	Z	-5.255	.17
3	MP1A	Mx	.002	.17
4	MP1A	X	-3.034	5.67
5	MP1A	Z	-5.255	5.67
6	MP1A	Mx	.002	5.67
7	MP5A	X	-3.034	.17
8	MP5A	Z	-5.255	.17
9	MP5A	Mx	.002	.17
10	MP5A	X	-3.034	5.67
11	MP5A	Z	-5.255	5.67
12	MP5A	Mx	.002	5.67
13	MP3A	X	-4.439	1.25
14	MP3A	Z	-7.689	1.25
15	MP3A	Mx	.000689	1.25
16	MP3A	X	-4.439	5.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP3A	Z	-7.689	5.25
18	MP3A	Mx	.000689	5.25
19	MP3A	X	-4.439	1.25
20	MP3A	Z	-7.689	1.25
21	MP3A	Mx	.009	1.25
22	MP3A	X	-4.439	5.25
23	MP3A	Z	-7.689	5.25
24	MP3A	Mx	.009	5.25
25	MP2A	X	-1.511	1.67
26	MP2A	Z	-2.617	1.67
27	MP2A	Mx	.002	1.67
28	MP2A	X	-1.511	3.67
29	MP2A	Z	-2.617	3.67
30	MP2A	Mx	.002	3.67
31	MP4A	X	-1.58	1
32	MP4A	Z	-2.736	1
33	MP4A	Mx	-.002	1
34	MP3A	X	-1.498	1
35	MP3A	Z	-2.594	1
36	MP3A	Mx	-.002	1
37	OVP1	X	-4.067	1.5
38	OVP1	Z	-7.045	1.5
39	OVP1	Mx	.003	1.5

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M4	Y	-500	7

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M4	Y	-500	.25

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 Distributed Loads (BLC 40 : Structure Di)

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

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

	Member Label	Direction	Start Magnitude[lb...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
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 42 : Structure Wo (30 Deg))

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

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

	Member Label	Direction	Start Magnitude[lb...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
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...	End Magnitude[lb/ft,F,ksf]	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...	End Magnitude[lb/ft,F,ksf]	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 47 : Structure Wo (180 Deg))

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

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

	Member Label	Direction	Start Magnitude[lb...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
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...	End Magnitude[lb/ft,F,ksf]	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...	End Magnitude[lb/ft,F,ksf]	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 50 : Structure Wo (270 Deg))

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

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

	Member Label	Direction	Start Magnitude[lb...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
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...	End Magnitude[lb/ft,F,ksf]	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...	End Magnitude[lb/ft,F,ksf]	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...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	-2.619	-2.619	0	%100

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

	Member Label	Direction	Start Magnitude[lb...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
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...	End Magnitude[lb/ft,F,ksf]	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 55 : Structure Wi (60 Deg))

	Member Label	Direction	Start Magnitude[lb...	End Magnitude[lb/ft,F,ksf]	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...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	2.619	2.619	0	%100

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

	Member Label	Direction	Start Magnitude[lb...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
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...	End Magnitude[lb/ft,F,ksf]	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 58 : Structure Wi (150 Deg))

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

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

	Member Label	Direction	Start Magnitude[lb...	End Magnitude[lb/ft,F,ksf]	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 60 : Structure Wi (210 Deg))

	Member Label	Direction	Start Magnitude[lb...	End Magnitude[lb/ft,F,ksf]	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 61 : Structure Wi (240 Deg))

	Member Label	Direction	Start Magnitude[lb...	End Magnitude[lb/ft,F,ksf]	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 62 : Structure Wi (270 Deg))

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

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

	Member Label	Direction	Start Magnitude[lb...	End Magnitude[lb/ft,F,ksf]	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 63 : Structure Wi (300 Deg))

	Member Label	Direction	Start Magnitude[lb...	End Magnitude[lb/ft,F,ksf]	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 64 : Structure Wi (330 Deg))

	Member Label	Direction	Start Magnitude[lb...	End Magnitude[lb/ft,F,ksf]	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 65 : Structure Wm (0 Deg))

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

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

	Member Label	Direction	Start Magnitude[lb...	End Magnitude[lb/ft,F,ksf]	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 66 : Structure Wm (30 Deg))

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

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

	Member Label	Direction	Start Magnitude[lb...	End Magnitude[lb/ft,F,ksf]	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...	End Magnitude[lb/ft,F,ksf]	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...	End Magnitude[lb/ft,F,ksf]	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 71 : Structure Wm (180 Deg))

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

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

	Member Label	Direction	Start Magnitude[lb...	End Magnitude[lb/ft,F,ksf]	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...	End Magnitude[lb/ft,F,ksf]	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...	End Magnitude[lb/ft,F,ksf]	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 74 : Structure Wm (270 Deg))

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

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

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

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	1585.753	10	1898.741	21	1850.517	1	-1.281	1	5.348	9	2.528	50
2		min	-1585.753	4	803.628	3	-1850.517	7	-6.301	19	-5.333	3	-4.393	46
3	Totals:	max	1585.753	10	1898.741	21	1850.517	1						
4		min	-1585.753	4	803.628	3	-1850.517	7						

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

	Member	Shape	Code Check	Loc[ft]	LC	Sh...	Lo.....		LC	phi*...	phi*...	phi*...	phi*...	...	Eqn
1	M4	PIPE_...	.943	6.25	45	.280	6....		7	2825..	65205	5.749	5.749	...	H1-...
2	M1	HSS4...	.523	0	9	.362	0	y	46	1349..	1395..	16.1...	16.1...	...	H1-...
3	MP3A	PIPE_...	.334	3.938	2	.071	4....		5	3396..	50715	3.596	3.596	...	H1-...
4	MP1A	PIPE_...	.196	3.354	5	.043	3....		5	1785..	32130	1.872	1.872	...	H1-...
5	MP5A	PIPE_...	.196	3.354	5	.043	3....		11	1785..	32130	1.872	1.872	...	H1-...
6	MP4A	PIPE_...	.140	3.354	2	.025	3....		10	1785..	32130	1.872	1.872	...	H1-...
7	MP2A	PIPE_...	.117	3.354	8	.024	3....		3	1785..	32130	1.872	1.872	...	H1-...
8	OVP1	PIPE_...	.079	2.25	11	.055	2....		8	2884..	32130	1.872	1.872	...	H1-...
9	M2	PIPE_...	.000	.75	7	.000	.75		7	9257..	93240	10.6...	10.6...	1	H1-...

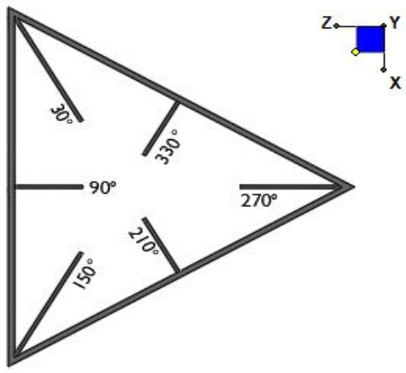
Client:	Verizon Wireless	Date:	7/30/2021
Site Name:	Ansonia East CT		
Project No.	21777794A		
Title:	Mount Analysis	Page:	1

Version 3.1

I. Mount-to-Tower Connection Check

RISA Model Data

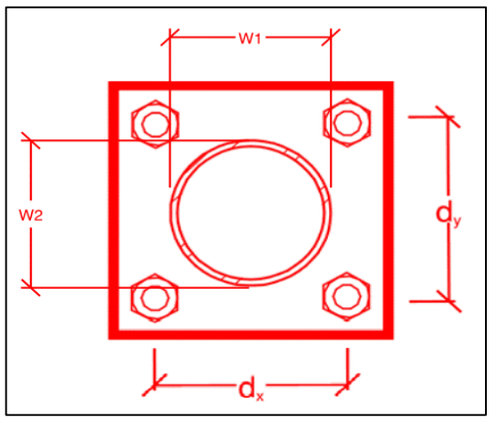
Nodes *(labeled per RISA)*	Orientation *(per graphic of typical platform)*
N1	90



TYPICAL PLATFORM

Tower Connection Bolt Checks

Any moment resistance?:	yes
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 (kips):	26.4
Required Shear Strength (kips):	18.6
Tensile Strength / bolt (kips):	20.7
Shear Strength / bolt (kips):	12.4
Tensile Capacity Overall:	**31.8%***
Shear Capacity Overall:	**37.3%**



**Note: Tension reduction not required if tension or shear capacity < 30%*

Tower Connection Plate and Weld Check

Connecting Standoff Member Shape:	Rect
Plate Width (in):	8
Plate Height (in):	8
W1 (in):	4
W2 (in):	4
Fy (ksi, plate):	36
t_{Plate} (in):	0.75
Weld Size (1/16 in):	8
Phi*Rn (kip/in):	11.14
Required Weld Strength (kip/in):	3.77
Plate Bending Capacity:	**48.3%**
Weld Capacity:	**33.9%**

Max Plate Bending Strengths

Mu_{xx} *(kip-in)* :	6.3
$Phi*Mn_{xx}$ *(kip-in)* :	36.5
Mu_{yy} *(kip-in)* :	11.3
$Phi*Mn_{yy}$ *(kip-in)* :	36.5

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Passing Mount Analysis

Purpose – to provide Maser Consulting Connecticut 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:

- Any special photos outside of the standard requirements will be indicated on the passing MA
- Verification that loading is as communicated in the Passing Mount Analysis. NOTE If loading is different than what is conveyed contact Maser Consulting Connecticut immediately.
- Each photo should be time and date stamped
- Photos should be high resolution and submitted in a Zip File and should be organized in the file structure as depicted in Schedule A attached.
- 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.
- The photos in the file structure should be uploaded to ***https://pmi.vzwsmart.com*** as depicted on the drawings

Photo Requirements:

- *Base and "During Installation Photos"*
  - Base pictures include
    - Photo of Gate Signs showing the tower owner, site name, and number
    - Photo of carrier shelter showing the carrier site name and number if available
    - Photos of the galvanizing compound and/or paint used (if applicable), clearly showing the label and name
  - "During Installation Photos if provided - must be placed only in this folder
- *Photos taken at ground level*
  - Overall tower structure before and after installation of the equipment modifications
  - Photos of the appropriate mount before and after installation of the modifications; if the mounts are at different rad elevations, pictures must be provided for all elevations that the modifications were installed
- *Photos taken at Mount Elevation*
  - Photos showing each individual sector before and also after installation of equipment.
    - These photos should also certify that the placement and geometry of the equipment on the mount is as depicted on the sketch and table in the mount analysis

- Photos showing the safety climb wire rope above and below the mount prior to modification.
- Photos showing the climbing facility and safety climb if present.

Antenna & equipment placement and Geometry Confirmation:

- The contractor must certify that the antenna & equipment placement and geometry is in accordance with the antenna placement diagrams as included in this mount analysis.

☐ The contractor certifies that the photos support and the equipment on the mount is as depicted on the antenna placement diagrams as included in this mount analysis.

☐ The contractor notes that the equipment on the mount is not in accordance with the antenna placement diagrams and has accordingly marked up the diagrams or provided a diagram outlining the differences.

Certifying Individual: Company _____

Name _____

Signature _____

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

Issue:

- If present, contractor shall inspect climbing facilities and ensure that the safety climb is in good condition. Contractor shall install safety climb wire rope guide (Part #: Site Pro 1 - 120-203/317 or EOR approved equal) in locations where the wire rope is rubbing against mount to tower attachments. Contractor shall provide photos of safety climb wire rope guide installation.
- Contractor shall replace existing Position 3 Mount Pipe with new 7’-0” long, P2 ½ STD Pipe 3’-0” from Position 2. Top of pipe shall be 4’-0” from face horizontal. Attach using VZWSMART MSK2 Crossover Plates. Refer to placement diagrams.
- Contractor shall relocated existing Mount Pipe in Position 2 on all sectors to be 2’-0” from the Position 1 Mount Pipe on all sectors.

Response:

Schedule A – Photo & Document File Structure

- VzW Site Number / Name
  - Base & “During Installation” Photos
  - Pre-Installation Photos
    - Alpha
    - Beta
    - Gamma
    - Ground Level
    - Tape Drop
  - Post-Installation Photos
    - Alpha
    - Beta
    - Gamma
    - Ground Level
    - Tape Drop
    - Photos of climbing facility and safety climb – If Present
  - Certifications – Submission of this document including certifications
  - Specific Required Additional Photos

Structure: 467455-VZW - ANSONIA EAST CT

Sector: **A**

Structure Type: Monopole

Mount Elev: 156.25

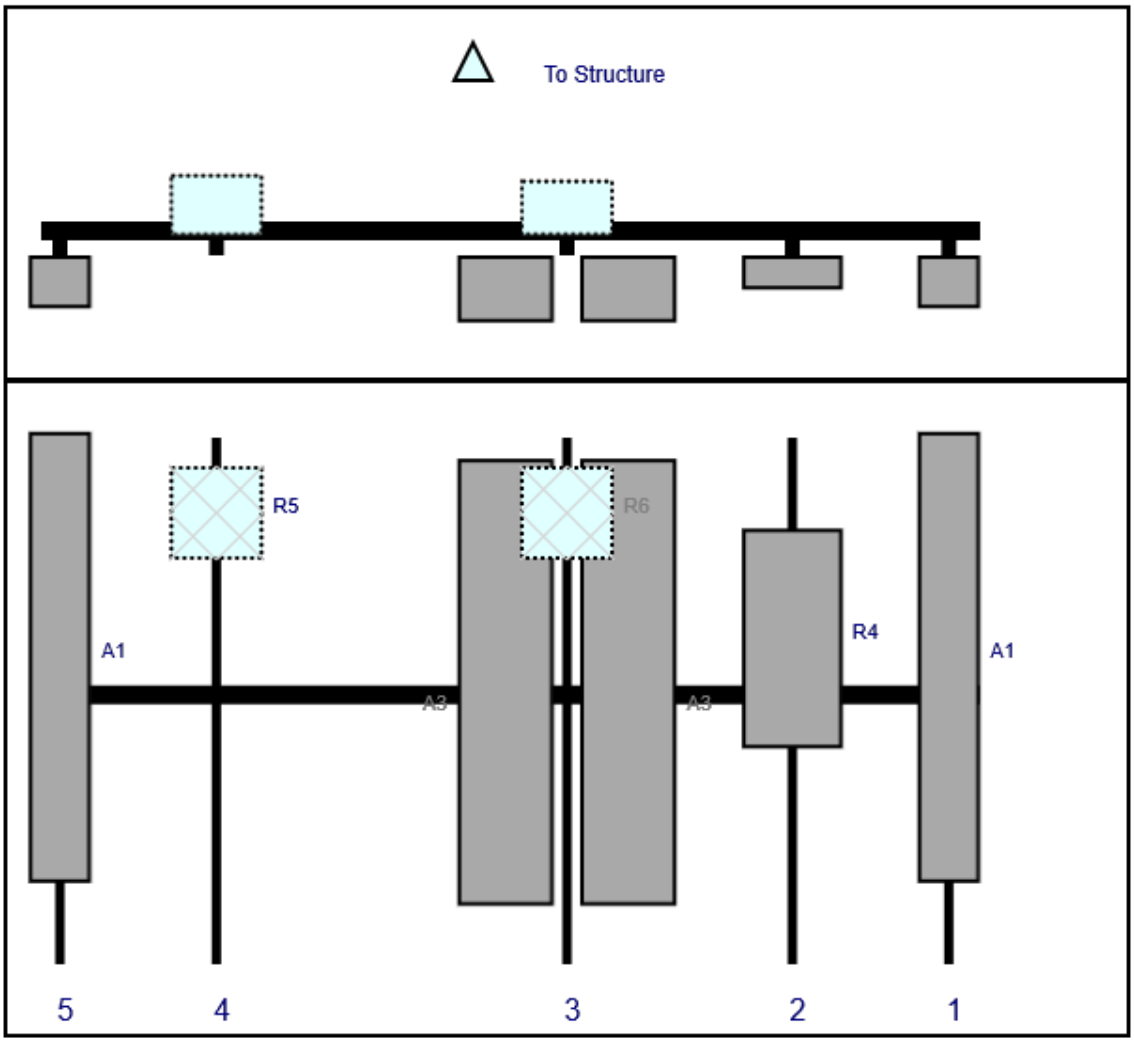
10059018

7/30/2021

MASER CONSULTING — CONNECTICUT —

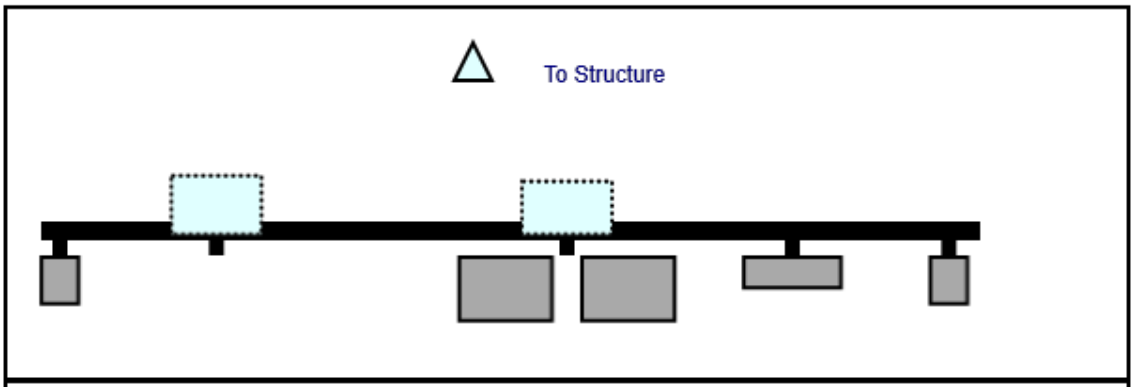
Plan View

Front View
Looking at Structure

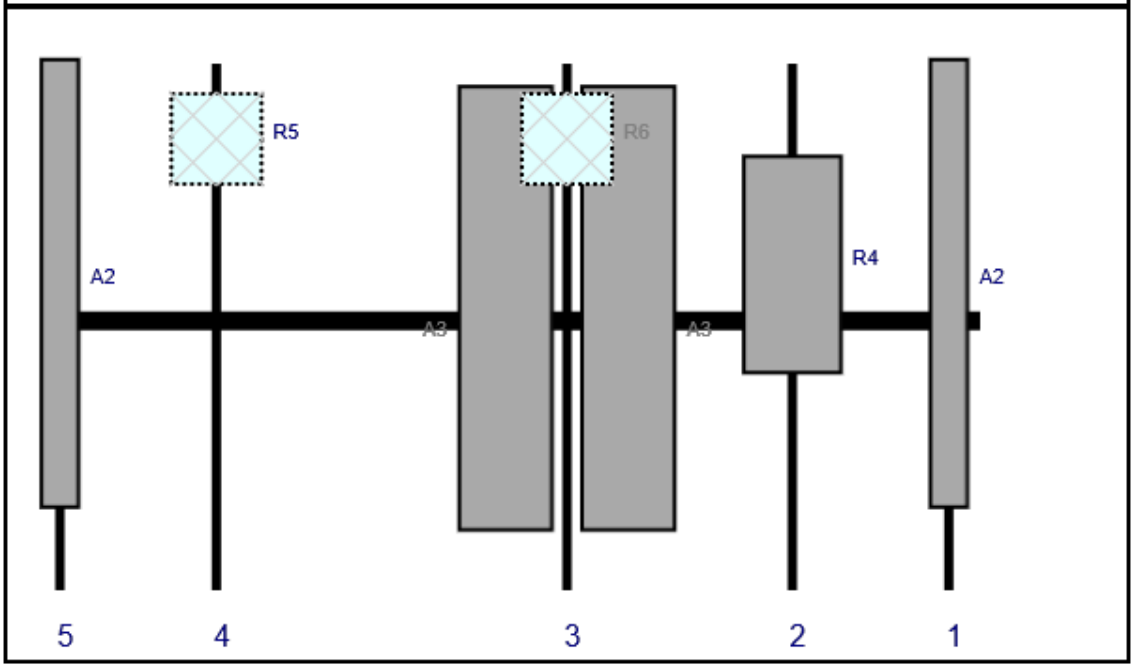


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A1	DB846F65ZAXY	72	10	3	5	a	Front	35.04	0	Retained	04/18/2021
A1	DB846F65ZAXY	72	10	145	1	a	Front	35.04	0	Retained	04/18/2021
R4	MT6407-77A	35.1	16.1	120	2	a	Front	32.04	0	Added	
A3	MX06FRO660-03	71.3	15.4	84	3	a	Front	39	9.8	Added	
A3	MX06FRO660-03	71.3	15.4	84	3	b	Front	39	-9.8	Added	
R6	RF4440d-13A	15	15	84	3	a	Behind	12	0	Added	
R5	RF4439d-25A	15	15	28	4	a	Behind	12	0	Added	

Plan View



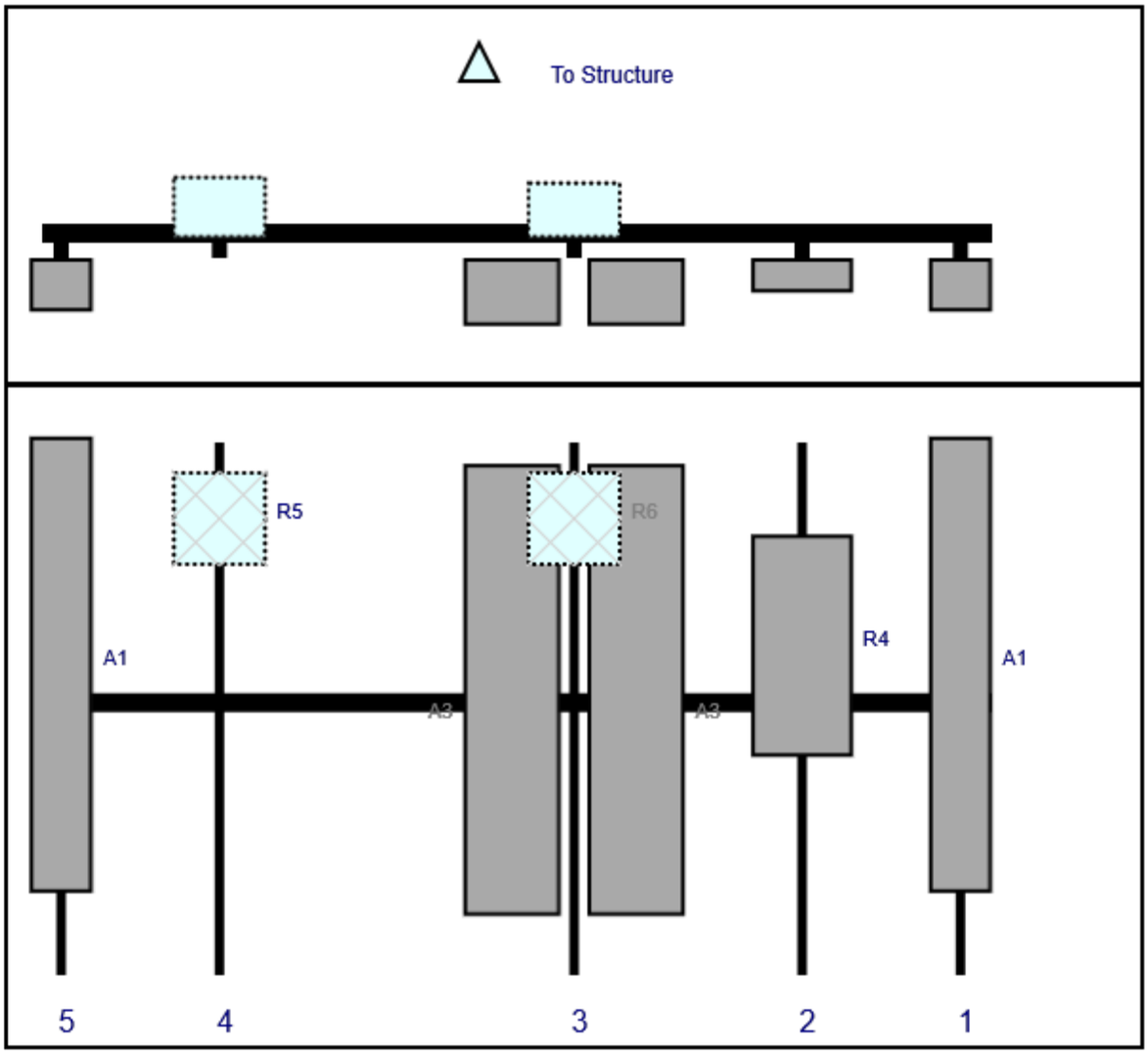
Front View
Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A2	DB846H80E-SX	72	6.5	145	1	a	Front	35.04	0	Retained	04/18/2021
R4	MT6407-77A	35.1	16.1	120	2	a	Front	32.04	0	Added	
A3	MX06FRO660-03	71.3	15.4	84	3	a	Front	39	9.8	Added	
A3	MX06FRO660-03	71.3	15.4	84	3	b	Front	39	-9.8	Added	
R6	RF4440d-13A	15	15	84	3	a	Behind	12	0	Added	
R5	RF4439d-25A	15	15	28	4	a	Behind	12	0	Added	
A2	DB846H80E-SX	72	6.5	3	5	a	Front	35.04	0	Retained	04/18/2021

Plan View

Front View
Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A1	DB846F65ZAXY	72	10	145	1	a	Front	35.04	0	Retained	04/18/2021
R4	MT6407-77A	35.1	16.1	120	2	a	Front	32.04	0	Added	
A3	MX06FRO660-03	71.3	15.4	84	3	a	Front	39	9.8	Added	
A3	MX06FRO660-03	71.3	15.4	84	3	b	Front	39	-9.8	Added	
R6	RF4440d-13A	15	15	84	3	a	Behind	12	0	Added	
R5	RF4439d-25A	15	15	28	4	a	Behind	12	0	Added	
A1	DB846F65ZAXY	72	10	3	5	a	Front	35.04	0	Retained	04/18/2021

Maser Consulting Connecticut

Subject	TIA-222-H Usage	
Site Information	Site ID:	467455-VZW / ANSONIA EAST CT
	Site Name:	ANSONIA EAST CT
	Carrier Name:	Verizon Wireless
	Address:	1 Deerfield Lane Ansonia, Connecticut 06401 New Haven County
	Latitude:	41.35075°
	Longitude:	-73.04925°
Structure Information	Tower Type:	169-Ft Monopole
	Mount Type:	12.50-Ft T-Arm

To Whom It May Concern,

We respectfully submit the above referenced Antenna Mount Structural Analysis report in conformance with ANSI/TIA-222-H, Structural Standard for Antenna Supporting Structures and Antennas and Small Wind Turbine Support Structures.

The 2015 International Building Code states that, in Section 3108, telecommunication towers shall be designed and constructed in accordance with the provisions of TIA-222. TIA-222-H is the latest revision of the TIA-222 Standard, effective as of January 01, 2018.

As with all ANSI standards and engineering best practice is to apply the most current revision of the standard. This ensures the engineer is applying all updates. As an example, the TIA-222-H Standard includes updates to bring it in line with the latest AISC and ACI standards and it also incorporates the latest wind speed maps by ASCE 7 based on updated studies of the wind data.

The TIA-222-H standard clarifies these specific requirements for the antenna mount analysis such as modeling methods, seismic analysis, 30-degree increment wind directions and maintenance loading. Therefore, it is our opinion that TIA-222-H is the most appropriate standard for antenna mount structural analysis and is acceptable for use at this site to ensure the engineer is taking into account the most current engineering standard available.

Sincerely,

Dejian Xu

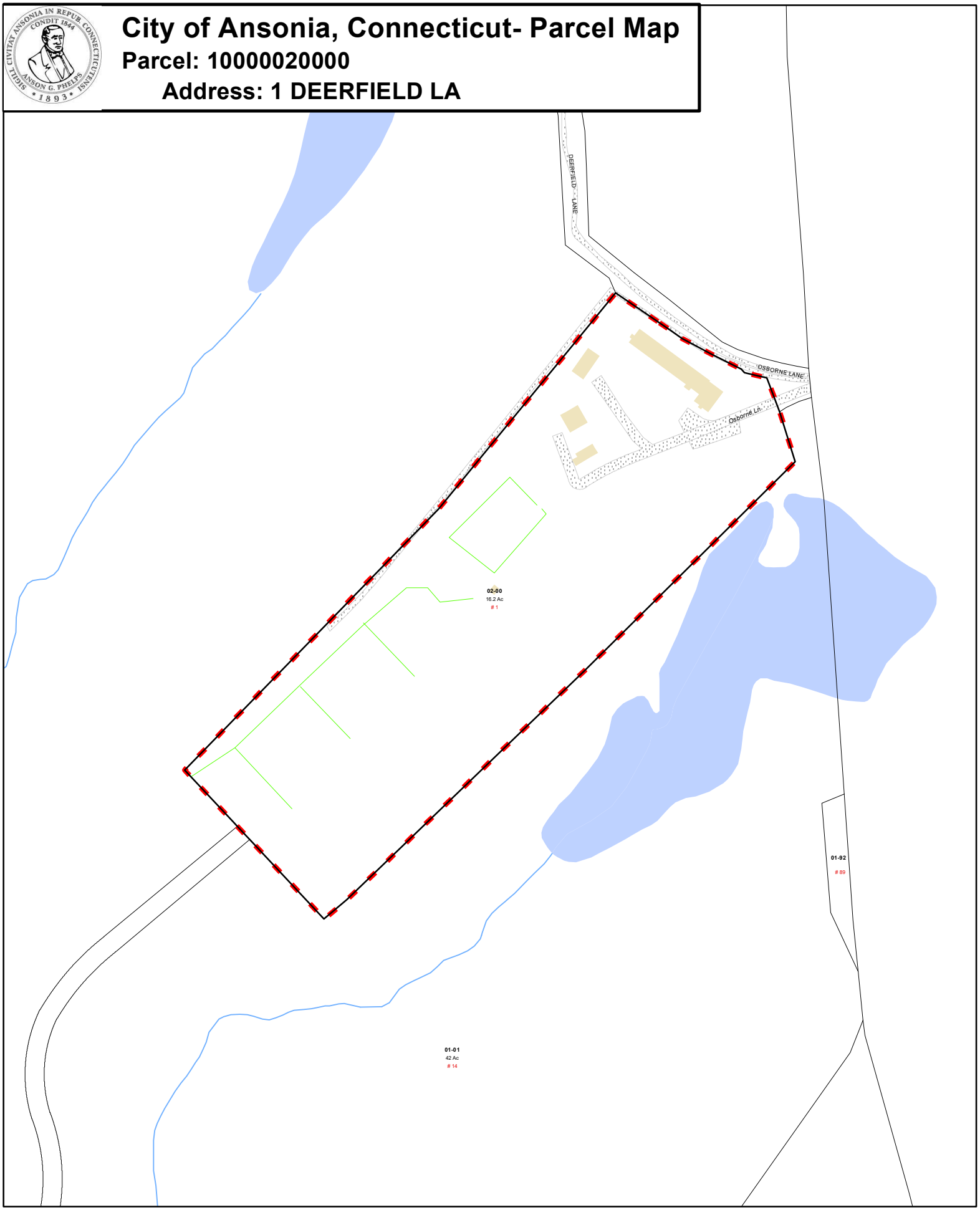
Dejian Xu, PE
Technical Manager

ATTACHMENT 5

City of Ansonia, Connecticut- Parcel Map

Parcel: 10000020000

Address: 1 DEERFIELD LA



Approximate Scale: 1 inch = 250 feet

0 140 280 420 560 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

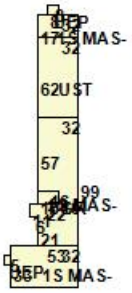
Valuation Summary

(Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	240300	168200
Outbuildings	27900	19600
Land	280100	106820
Total	548300	294620

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

Report Created On 12/6/2021

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

Report Created On **12/6/2021**

ATTACHMENT 6

UNITED STATES POSTAL SERVICE®

ANSONIA EAST

Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here ***Postmark with Date of Receipt.***
Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103		3	neopost 12/08/2021 US POSTAGE $002.99 ZIP 06103 041L12203937
	Postmaster, per *(name of receiving employee)*		

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	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 Woodbridge, CT 06525				
4.					
5.					
6.					

OLD STATE HOUSE STATION 06103 DEC 08 2021 USPS