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October 20, 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**
370 Rockland Road (a/k/a 360 Rockland Road), Guilford, 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 and associated equipment on the ground adjacent to the tower. The tower was approved by the Siting Council ("Council") in August of 2004 (Docket No. 257). Cellco's Petition to extend the tower was approved by the Council in June of 2009 (Petition No. 899). A copy of the Council's Docket No 257 approval and Petition No 899 Staff Report are included in Attachment 1.

Cellco now intends to modify its facility by replacing twelve (12) existing antennas with three (3) new Samsung MT6407-77A antennas and six (6) JAHH-65B-R3B antennas on Cellco's existing antenna platform. Cellco also intends to install six (6) remote radio heads ("RRHs") behind its antennas. A set of project plans showing Cellco's proposed facility modifications and specifications for the 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 Guilford's Chief Elected Official and Land Use Officer.

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

1. The proposed modifications will not result in an increase in the height of the existing tower. 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 platform 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:
Matthew T. Hoey III, Guilford First Selectman
George Kral, Town Planner
Woodbridge Sportsmen Club, Inc., 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@po.state.ct.us
www.ct.gov/csc

Certified Mail

August 27, 2004

Thomas J. Regan, Esq.
Brown, Rudnick, Berlack, Israels LLP
CityPlace I
Hartford, CT 06103

RE: **DOCKET NO. 271** - Sprint Spectrum, L.P., d/b/a Sprint PCS Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a wireless telecommunications facility at 370 Rockland Road, Guilford, Connecticut.

Dear Mr. Regan:

At a public meeting held on August 26, 2004, the Connecticut Siting Council (Council) considered and approved the Development and Management Plan (D&M Plan) for the site at 370 Rockland Road, Guilford, Connecticut, with the condition that landscaping of the compound is be planted in a less regimented, more naturalistic manner. To this end, the Certificate Holder is directed to submit a revised landscaping plan for staff review.

This approval applies only to the D&M Plan as submitted on August 10, 2004 and on August 20, 2004. Any other changes to this D&M Plan require advance Council notification and approval. Failure to obtain Council approval before implementing any changes to this D&M plan may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

Please notify the Council when the conditions of the approval are completed.

Enclosed is a copy of the staff report on the D&M Plan, dated August 26, 2004.

Very truly yours,

Pamela B. Katz, P.E.
Chairman

PBK/CML

c: Parties and Intervenors

Enclosure (1)

L:\siting\dockets\271\dl031704.doc

CSC
CONNECTICUT SITING COUNCIL

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@po.state.ct.us
www.ct.gov/csc

Docket No. 271
Sprint Spectrum LP d/b/a Sprint PCS
Development and Management Plan
370 Rockland Road, Guilford
August 26, 2004

Sprint Spectrum LP d/b/a Sprint PCS (Sprint) has submitted a Development and Management (D&M) Plan to the Connecticut Siting Council (Council) consistent with the Council's decision of April 15, 2004.

Consistent with the Council's Decision and Order (D&O), Condition (1) the telecommunications monopole will be constructed no taller than 150 feet above ground level (agl). Sprint will install antennas on a t-arm mounted at the 147-foot six-inch level. Sprint's antennas will not exceed a total height of 150 feet agl. Space will be available at the 137-foot six-inch level and the 127-foot six-inch level to accommodate future carriers. Sprint will also install a GPS antenna at the 75-foot level on the southwest side of the tower. The 150-foot tower is designed to withstand a 90 mile per hour (mph) wind speed with ½ inch of radial ice. A Connecticut licensed engineer has certified the tower and foundation design.

The compound will be 60 feet by 40 feet, within a 100-foot by 100-foot lease area, and surrounded by a six-foot high chain link fence with three strands of barbed wire at the top. Sprint will install equipment cabinets on an 18-foot by nine-foot six-inch concrete pad.

Access to the site will extend from Rockland Road along an existing access road for a distance of approximately 1,350 feet. Sprint will pave the first 520 feet of the existing access road and the remaining portion of the access road will be resurfaced gravel. Sprint will install rip rap aprons with pressure treated spreaders at approximately 170 feet, 300 feet and 370 feet into the access road. Sprint will also replace an existing culvert located approximately 300 feet into the access road. Utilities will run underground along the access road from a nearby utility pole to the site.

Sprint will remove vegetation that is within the compound area. The paved section of the access road will have two foot wide by six inch deep swales on both sides. Silt fencing will be installed along both sides of the access road on the downslope of the swale, and backed with staked hay bales, prior to construction. Silt fencing will extend along both sides of the access road to the compound. An erosion control blanket will be located in a swale surrounding the compound. A 25-foot level spreader will be installed on the west side of the compound. Several Blue Spruce trees will be planted around the equipment compound.

Jaworski Geotech, Inc. (JGI) performed an engineering evaluation on the subsurface conditions at the site. Bedrock was encountered at the site at a depth between 6.5 feet and 7.8 feet. JGI made recommendations for the construction of the tower and equipment. The foundation design was based on the recommendations of JGI.

Consistent with the Council's D&O, Condition (3), the worst-case radio frequency power density level for Sprint would be approximately 8.5% of the applicable ANSI standard at the closest point of uncontrolled access at the tower base.

Sprint has complied with the Council's Decision and Order dated April 15, 2004 for the Guilford site and Council staff recommends approval of this D&M plan with the condition that landscaping surrounding the compound is planted in an irregular, natural pa

CSC
CONNECTICUT SITING COUNCIL

Petition No. 899
Cellco Partnership d/b/a Verizon Wireless
Guilford, Connecticut
Staff Report
May 19, 2009

On May 6, 2009, Verizon filed a petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the extension of an existing telecommunications tower in Guilford, Connecticut. Connecticut Siting Council member Phil Ashton and Council staff member David Martin conducted a field review of the proposed modifications on May 19, 2009. Rachel Mayo represented Verizon at the field review.

Verizon proposes to add a ten-foot extension to an existing 150-foot monopole tower located at 370 Rockland Road in Guilford. The existing tower is owned by TowerCo and was certificated by the Council in Docket 271, which was approved on April 15, 2004. The application for this certificate was submitted by Sprint. Verizon would use T-arm mounts to attach its antennas to the tower in accordance with the Decision and Order for this docket.

From this location, Verizon is seeking to cover an area that encompasses portions of Route 77 in the northern section of Guilford along with local streets in the surrounding vicinity. There are currently antenna arrays installed at centerline heights of 147 and 137 feet above ground level. Verizon asserts that it cannot achieve its coverage objectives at the next available height of 127 feet above ground level. For this reason, Verizon seeks to add ten feet onto the tower's height in order to install its antennas at a centerline height of 157 feet.

The tower is located on an 87-acre parcel owned by the Woodbridge Sportsmen Club and used primarily for hunting and fishing. The property is heavily wooded with little development nearby. There is a small agricultural operation and one large single-family home to the south of the tower. Although the top of the tower is barely visible from a short stretch of the road that passes the agricultural operation, the tower is not visible from the operation itself or the residence. The top of the tower is visible from the southern end of Quonnipaug Lake, but the view is so far that the tower is barely noticeable, even to those who are actively looking for it. An additional ten feet should not result in any significant difference in visibility.

Verizon notified the Town of Guilford, the owner of the host property, and abutting property owners of its proposal to extend the height of this tower.

The addition of Verizon's antennas would bring the cumulative power density of the antenna systems on the tower to 25.33% of the FCC limit.

View of Tower and Compound

View of Tower from Quonnipaug Lake

ATTACHMENT 2

verizon

WIRELESS COMMUNICATIONS FACILITY UPGRADE

GUILFORD NORTH 2 CT
370 ROCKLAND RD,
GUILFORD, CT 06437

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

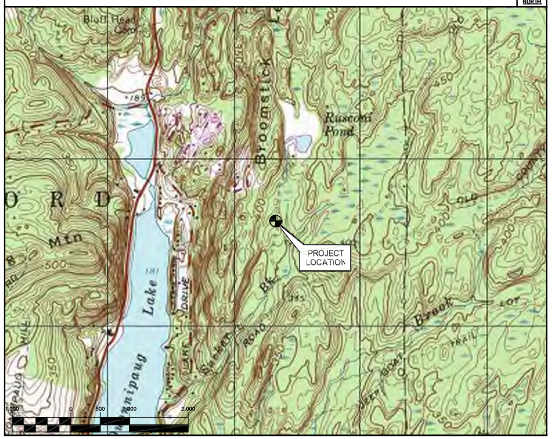
FROM: 20 ALEXANDER DRIVE WALLINGFORD, CONNECTICUT

TO: 370 ROCKLAND RD, GUILFORD, CT 06437

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 THE 1ST RIGHT ONTO CT-68.	2.75 MI
4.	TURN SLIGHT LEFT ONTO DURHAM RD/CT-68. CONTINUE TO FOLLOW CT-68.	4.25 MI
5.	TURN RIGHT ONTO MAIN ST/CT-17. CONTINUE TO FOLLOW CT-17.	1.02 MI
6.	TURN SLIGHT LEFT ONTO GUILFORD RD/CT-77. CONTINUE TO FOLLOW CT-77.	4.63 MI
7.	TURN SLIGHT LEFT ONTO LAKE DR.	1.12 MI
8.	TURN SHARP LEFT ONTO ROCKLAND RD (PORTIONS UNPAVED).	0.69 MI
9.	370 ROCKLAND RD, GUILFORD, CT 06437-1117, 370 ROCKLAND RD IS ON THE LEFT AT THE END OF THE ROAD. FOLLOW ROAD TOWARDS THE LEFT, DIRECTLY IN FRONT OF 370 ROCKLAND RD RESIDENCE, TO THE END TO REACH TOWER.	

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 (3) EXISTING ANTEL – BXA-70063-6CF ANTENNAS.
- REMOVE (1) EXISTING AMPHENOL – BXA 171063-12BF-EDIN ANTENNA.
- REMOVE (2) EXISTING AMPHENOL – BXA 171063-8BF-EDIN ANTENNAS.
- REMOVE (6) EXISTING COMMSCOPE – DB846F65ZAXY ANTENNAS.
- REMOVE (6) EXISTING COAXIAL CABLES
- RETAIN (12) EXISTING COAXIAL CABLES.
- INSTALL (6) COMMSCOPE – JAHH-65B-R3B ANTENNAS.
- INSTALL (3) SAMSUNG – MT6407-77A ALL-IN-ONE ANTENNA/ RRUs.
- INSTALL (3) SAMSUNG – B2/B66A RRH-BR049 RRUs.
- INSTALL (3) SAMSUNG – B5/B13 RRH-BR04C RRUs.
- INSTALL (3) COMMSCOPE – BASMNT-SBS-2-2 ANTENNA MOUNTS.
- INSTALL (3) COMMSCOPE – CBC78T-DS-43-2X.
- INSTALL (2) 6x12 HYBRIFLEX LI CABLES.
- INSTALL (1) OVP-12 BOX.

B. AT THE EXISTING VERIZON WIRELESS EQUIPMENT SHELTER:

- REMOVE (3) EXISTING NOKIA RRUs.

PROJECT INFORMATION

SITE NAME:	GUILFORD NORTH 2 CT
SITE ADDRESS:	370 ROCKLAND RD, GUILFORD, CT 06437
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°-23'-48.66"N LONGITUDE: 72°-41'-19.7088"W GROUND ELEVATION: 448'± AMSL COORDINATES REFERENCED FROM VERIZON WIRELESS RFDS, DATED 06/22/2021. GROUND ELEVATION REFERENCED FROM GOOGLE EARTH SOFTWARE.

SHEET INDEX

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

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
1	10/27/21	ANC	DMD	CONSTRUCTION DRAWINGS – REVISED REFERENCE TO MOUNT MODS
0	10/07/21	ANC	DMD	CONSTRUCTION DRAWINGS – ISSUED FOR CONSTRUCTION
C	08/26/21	ANC	DMD	CONSTRUCTION DRAWINGS – REVISED STRUCTURAL ANALYSIS DATE
B	07/27/21	ANC	DMD	CONSTRUCTION DRAWINGS – REVISED PER RFDS
A	07/08/21	DMD	TJL	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

GUILFORD NORTH 2 CT

370 ROCKLAND RD,
GUILFORD, CT 06437

DATE: 03/10/21
SCALE: AS NOTED
JOB NO. 21007.19

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 WIND SPEED (TOWER): 101 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.

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
1	11/17/21	ANC	DMD	CONSTRUCTION DRAWINGS – REVISED REFERENCE TO MOUNT MODS
0	11/04/21	ANC	DMD	CONSTRUCTION DRAWINGS – ISSUED FOR CONSTRUCTION
C	09/15/21	ANC	DMD	CONSTRUCTION DRAWINGS – REVISED STRUCTURAL ANALYSIS DATE
B	07/27/21	ANC	DMD	CONSTRUCTION DRAWINGS – REVISED PER RFDS
A	07/08/21	DMD	TJL	CONSTRUCTION DRAWINGS – ISSUED FOR CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL

verizon

CENTEK Engineering
Centered on Solutions
(203) 488-0580
(203) 488-8587 Fax
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Branford, CT 06405
www.CentekEng.com

Cellco Partnership d/b/a Verizon Wireless

GUILFORD NORTH 2 CT

370 ROCKLAND RD.
GUILFORD, CT 06437

DATE: 03/10/21
SCALE: AS NOTED
JOB NO. 21007.19

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.

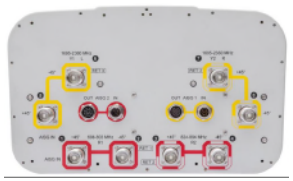
C. CAP AND WEATHERPROOF UNUSED ANTENNA PORTS.

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

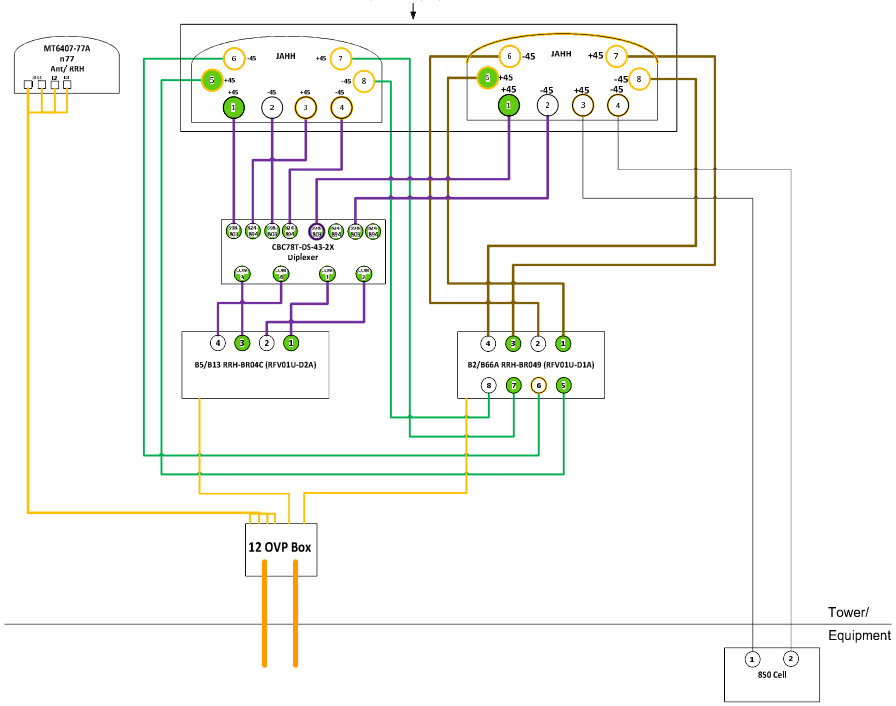
DC SIGNAL CAPABLE PORT

AISG CABLE

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



BSAMNT-SBS-2-2



NOTES:

1. INFORMATION SHOWN HEREIN IS FOR USE BY VERIZON WIRELESS EQUIPMENT OPERATIONS.
2. THIS B.O.M. DRAWING IS BASED ON FACILITY UPGRADE DESIGN DRAWINGS PREPARED BY CENTEK ENGINEERING (REV.1 DATED: 10.12.21), & VERIZON WIRELESS RF ANTENNA EQUIPMENT RECOMMENDATION (DATED 06.22.21).

BILL OF MATERIALS

TECHNOLOGY	QUANTITY	ANTENNA
LTE 700 CDMA LTE 5G 850 LTE PCS 1900 LTE AWS 2100	6	COMMSCOPE ANTENNA MODEL: JAHH-65B-R3B
5G	3	SAMSUNG ANTENNA MODEL: MT6407-77A

CABLES	QUANTITY	LENGTH	COMMENTS
HYBRID CABLE	2	±210 FT EA	6X12 LI HYBRIFLEX CABLE

RADIOS	QUANTITY	COMMENTS
LTE 700 LTE 850	3	SAMSUNG MODEL: B5/B13 RRH-BR04C
LTE PCS 1900 LTE AWS 2100	3	SAMSUNG MODEL: B2/B66A RRH-BR049
5G	3	INTEGRATED INTO MT6407-77A ANTENNA

DIPLEXERS	QUANTITY	COMMENTS
COMMSCOPE DIPLEXER	3	COMMSCOPE MODEL: CBC78T-DS-43-2X

OVP BOXES	QUANTITY	COMMENTS
OVP	1	OVP-12: RAYCAP MODEL RVZDC-6627-PF-48

ANTENNA MOUNT	QUANTITY	COMMENTS
SIDE-BY-SIDE MOUNTING KIT	3	COMMSCOPE MODEL: BASMNT-SBS-2-2

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
A	07/08/21	DMD	TJL	ISSUED FOR CLIENT REVIEW
B	07/27/21	ANC	DMD	REVISED PER RFDS
C	08/26/21	ANC	DMD	REVISED STRUCTURAL ANALYSIS DATE
1	10/27/21	ANC	DMD	CONSTRUCTION DRAWINGS – REVISED PER RFDS
2	11/12/21	ANC	DMD	CONSTRUCTION DRAWINGS – REVISED PER RFDS
3	12/10/21	ANC	DMD	CONSTRUCTION DRAWINGS – REVISED PER RFDS

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DATE: 03/10/21
SCALE: AS NOTED
JOB NO. 21007.19

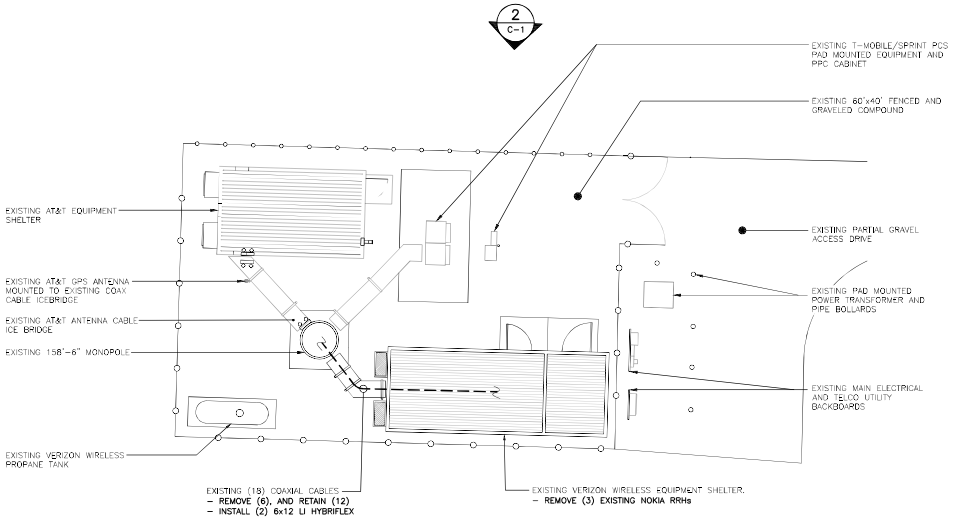
RF BILL OF MATERIALS

B-1

Sheet No. 3 of 7

TOWER STRUCTURAL ANALYSIS NOTE:

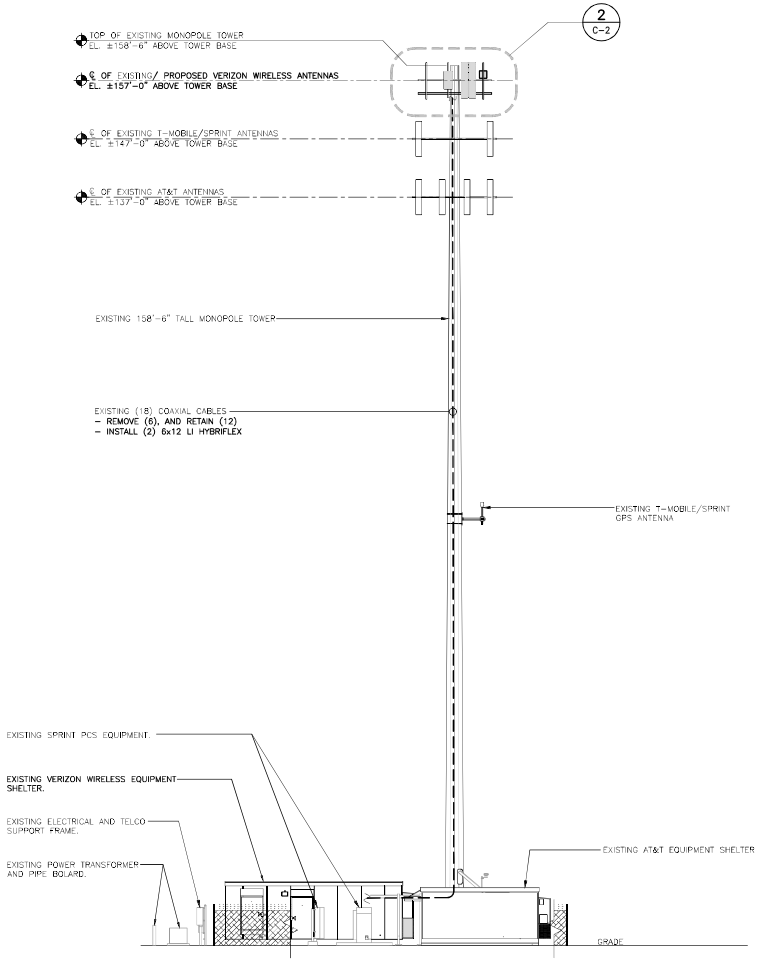
REFER TO PASSING STRUCTURAL ANALYSIS REPORT PREPARED BY TOWER ENGINEERING SOLUTIONS (TES), DATED 08/13/2021. TES PROJECT NO. 113022 FOR ADDITIONAL INFORMATION.



1 C-1 **COMPOUND PLAN - PROPOSED**
SCALE: 1/8" = 1'-0"

TRUE NORTH

GRAPHIC SCALE
(IN FEET)
1 inch = 8 ft.



2 C-1 **NORTH ELEVATION - PROPOSED**
SCALE: 1" = 10'-0"

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

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
A	07/08/21	DMD	TJL	CONSTRUCTION DRAWINGS – ISSUED FOR CLIENT REVIEW
B	07/27/21	AMC	DMD	CONSTRUCTION DRAWINGS – REVISED PER RFDS
C	08/26/21	AMC	DMD	CONSTRUCTION DRAWINGS – REVISED STRUCTURAL ANALYSIS DATE
D	09/27/21	AMC	DMD	CONSTRUCTION DRAWINGS – ISSUED FOR CONSTRUCTION
1	10/27/21	AMC	DMD	CONSTRUCTION DRAWINGS – REVISED PER COMMENTS
2	11/04/21	AMC	DMD	CONSTRUCTION DRAWINGS – REMOVED REFERENCE TO MOUNT MODS

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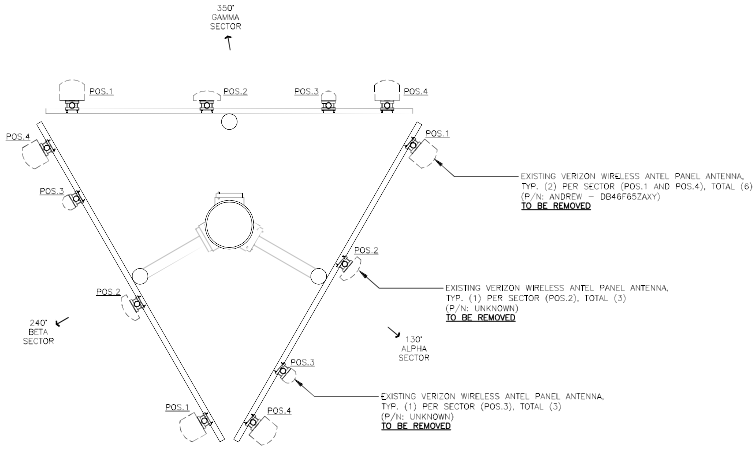
COMPOUND PLAN AND ELEVATION

C-1

Sheet No. 4 of 7

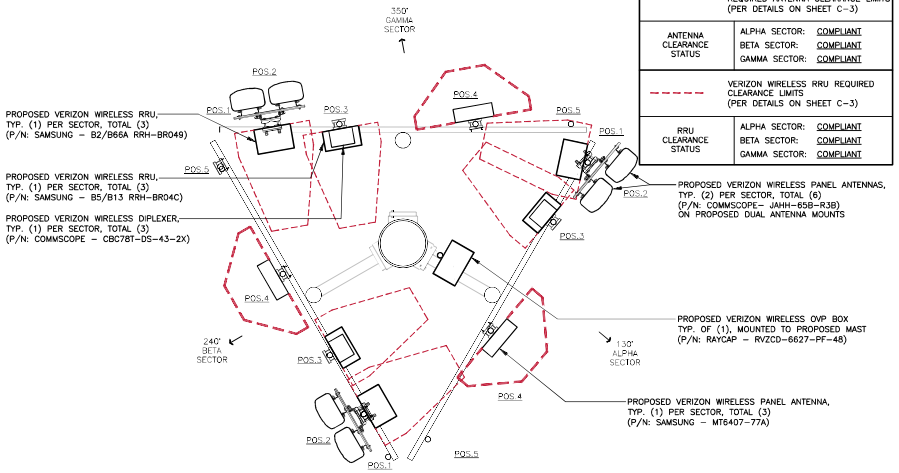
EXISTING ANTENNA CONFIGURATIONS



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

PROPOSED ANTENNA CONFIGURATIONS

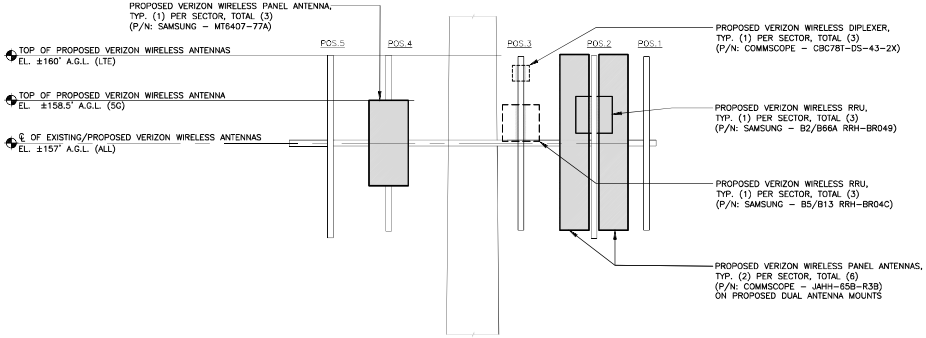
LEGEND		
	VERIZON WIRELESS MT6407-77A REQUIRED ANTENNA CLEARANCE LIMITS (PER DETAILS ON SHEET C-3)	
ANTENNA CLEARANCE STATUS	ALPHA SECTOR: COMPLIANT BETA SECTOR: COMPLIANT GAMMA SECTOR: COMPLIANT	
	VERIZON WIRELESS RRU REQUIRED CLEARANCE LIMITS (PER DETAILS ON SHEET C-3)	
RRU CLEARANCE STATUS	ALPHA SECTOR: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



1A / C-2 **PROPOSED SECTOR CONFIGURATION PLAN**
SCALE: 1/2" = 1'-0"
APPROXIMATE NORTH

ANTENNA MOUNT ANALYSIS AND MOD. NOTES:

1. REFER TO PASSING VERIZON WIRELESS MOUNT ANALYSIS REPORT PREPARED BY MASER CONSULTING CONNECTICUT DATED 07/06/2021 FOR ADDITIONAL INFORMATION.



TYPICAL SECTOR
FACE OF ANTENNA
ELEVATION PERSPECTIVE

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

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
A	07/08/21	DMD	TJL	CONSTRUCTION DRAWINGS – ISSUED FOR CLIENT REVIEW
B	07/26/21	DMD	TJL	CONSTRUCTION DRAWINGS – REVISED PER RFDS
C	08/26/21	DMD	TJL	CONSTRUCTION DRAWINGS – REVISED STRUCTURAL ANALYSIS DATE
1	10/04/21	ANC	TJL	CONSTRUCTION DRAWINGS – ISSUED FOR CONSTRUCTION
2	10/27/21	ANC	TJL	CONSTRUCTION DRAWINGS – REMOVED REFERENCE TO MOUNT MODS

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ANTENNA SECTOR CONFIGURATION DETAILS

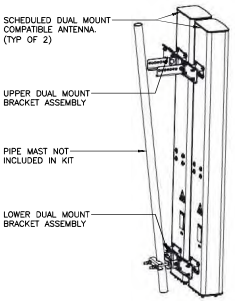
C-2

Sheet No. 5 of 7

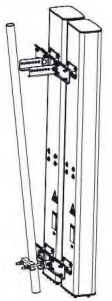
ANTENNA FRONT

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: (ANT. TO ANT.) 31.5"	
FRONT, SIDES & BOTTOM: 15.7"	VERTICAL DISTANCE: (ANT. TO ANT.) 63.0"	
NOTES: 1. THIS ANTENNA HAS ITS OWN BUILT-IN RRH.		

1 / C-3 **SECTOR ANTENNA DETAIL**
NOT TO SCALE



ANTENNA MOUNT ISOMETRIC



ANTENNA MOUNT PROFILE

DUAL ANTENNA MOUNTING KIT		
EQUIPMENT	DESCRIPTION	WEIGHT
MOUNT MAKE: COMMSCOPE MODEL: BSAMNT-SBS-2-2	• SIDE-BY-SIDE MOUNTING KIT, ACCOMMODATES (2) COMPATABLE ANTENNAS • ACCOMMODATES MAST DIAMETERS FROM 2.375" TO 4.5" (O.D.)	67.5 LB

2 / C-3 **DUAL ANTENNA MOUNT DETAIL**
NOT TO SCALE

ELEVATION - ISOMETRIC

BOTTOM

8-PORT SECTOR ANTENNA		
EQUIPMENT	DIMENSIONS	WEIGHT
MAKE: COMMSCOPE MODEL: JAHH-65B-R3B	72.0"L x 13.8"W x 8.2"D	64.4 LBS. (W/OUT MOUNT KIT)

3 / C-3 **SECTOR ANTENNA DETAIL**
NOT TO SCALE

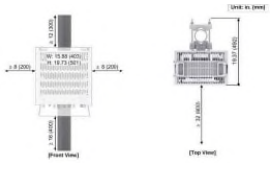
DIPLEXER			
EQUIPMENT	DESCRIPTION	DIMENSIONS	WEIGHT
MAKE: COMMSCOPE MODEL: CBC78T-DS-43-2X	4 PACK DIPLEXER 700MHz/850MHz	6.4"H x 6.9"W x 9.6"D	21.8 LBS. (W/MNTG HDWR)
NOTES: 1. CONTRACTOR TO COORDINATE FINAL EQUIPMENT MODEL SELECTION WITH VERIZON WIRELESS CONSTRUCTION MANAGER PRIOR TO ORDERING.			

4 / C-3 **DIPLEXER DETAIL**
NOT TO SCALE

OVP BOX		
EQUIPMENT	DIMENSIONS	WEIGHT
MAKE: RAYCAP MODEL: RVZDC-6627-PF-48	19.18"H x 15.73"W x 10.25"D	26.9 LBS.
NOTES: 1. CONTRACTOR TO CONFIRM OVP BOX MAKE/MODEL AND QUANTITY WITH VERIZON WIRELESS CONSTRUCTION MANAGER PRIOR TO ORDERING. 2. UNIT PROVIDES DC SURGE PROTECTION FOR 12 RRH UNITS.		

5 / C-3 **OVER-VOLTAGE PROTECTION BOX**
NOT TO SCALE

RRH ISOMETRIC

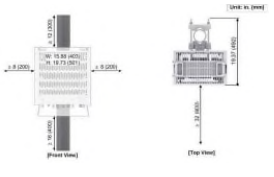


RRH CLEARANCES

DUAL BAND RRU (REMOTE RADIO UNIT)			
EQUIPMENT	BANDS	DIMENSIONS	WEIGHT
MAKE: SAMSUNG MODEL: B2/B66A RRH-BR049 (RFV01U-D1A)	B2: PCS (1900 MHz) B66: AWS (2100 MHz)	15.0"H x 15.0"W x 10.0"D	84.4 LBS.
NOTES: 1. CONTRACTOR TO COORDINATE FINAL EQUIPMENT MODEL SELECTION WITH VERIZON WIRELESS CONSTRUCTION MANAGER PRIOR TO ORDERING.			

6 / C-3 **DUAL-BAND AWS/PCS RADIO UNIT DETAIL**
NOT TO SCALE

RRH ISOMETRIC



RRH CLEARANCES

DUAL BAND RRU (REMOTE RADIO UNIT)			
EQUIPMENT	BANDS	DIMENSIONS	WEIGHT
MAKE: SAMSUNG MODEL: B5/B13 RRH-BR04C (RFV01U-D2A)	B5: 850 MHz B13: 700 MHz	15.0"H x 15.0"W x 8.1"D	70.3 LBS.
NOTES: 1. CONTRACTOR TO COORDINATE FINAL EQUIPMENT MODEL SELECTION WITH VERIZON WIRELESS CONSTRUCTION MANAGER PRIOR TO ORDERING.			

7 / C-3 **DUAL-BAND 700/850 MHZ RADIO UNIT DETAIL**
NOT TO SCALE

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
1	10/27/21	ANC	DMD	CONSTRUCTION DRAWINGS – REVISED REFERENCE TO MOUNT MODS
0	10/04/21	ANC	DMD	CONSTRUCTION DRAWINGS – ISSUED FOR CONSTRUCTION
C	09/16/21	ANC	DMD	CONSTRUCTION DRAWINGS – REVISED STRUCTURAL ANALYSIS
B	07/27/21	ANC	DMD	CONSTRUCTION DRAWINGS – REVISED PER RFDS
A	07/08/21	DMD	TJL	CONSTRUCTION DRAWINGS – ISSUED FOR CLIENT REVIEW

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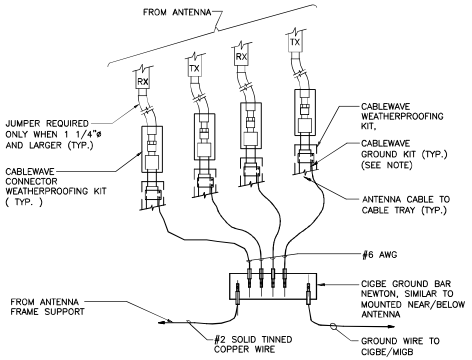
RF DETAILS

C-3

Sheet No. 6 of 7

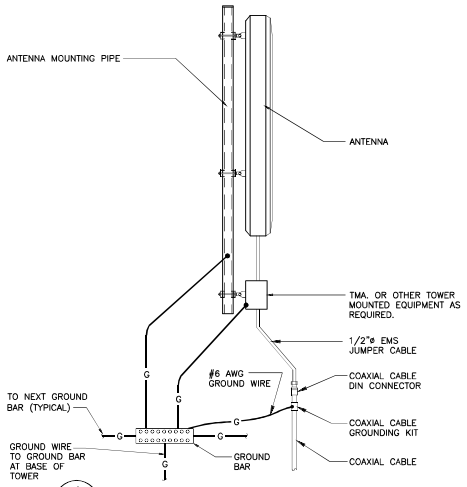


NOTES:

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

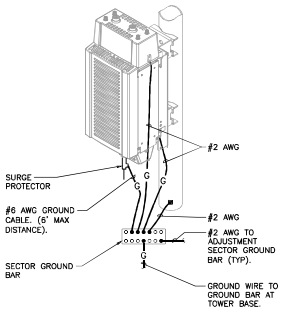


4 E-1 TYPICAL ANTENNA GROUNDING DETAIL

NOT TO SCALE

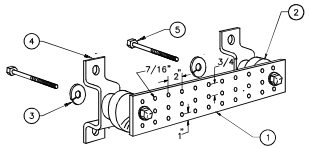
EACH RRH CABINET SHALL BE GROUNDED IN THE FOLLOWING MANNER:

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



2 E-1 RRH POLE MOUNT GROUNDING

NOT TO SCALE

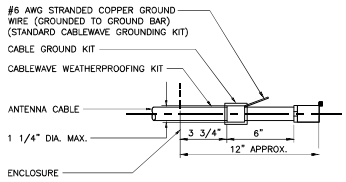


NOTES

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
-	10/27/21	ANC	DMD	CONSTRUCTION DRAWINGS - REVISED REFERENCE TO MOUNT MODS
-	10/27/21	ANC	DMD	CONSTRUCTION DRAWINGS - REVISED PER CLIENT COMMENTS
-	08/26/21	ANC	DMD	CONSTRUCTION DRAWINGS - REVISED STRUCTURAL ANALYSIS DATE
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ELECTRICAL DETAILS AND SPECIFICATIONS

E-1

Sheet No. 7 of 7

SAMSUNG

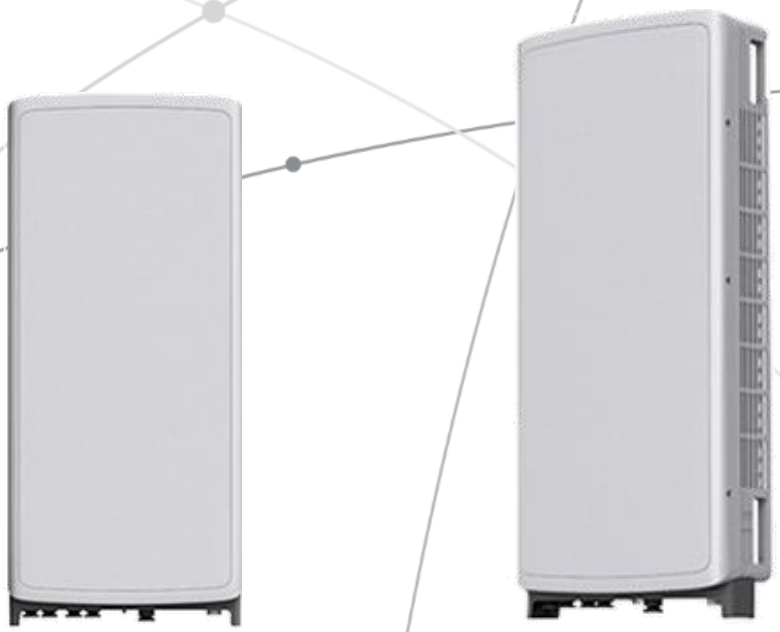
SAMSUNG

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

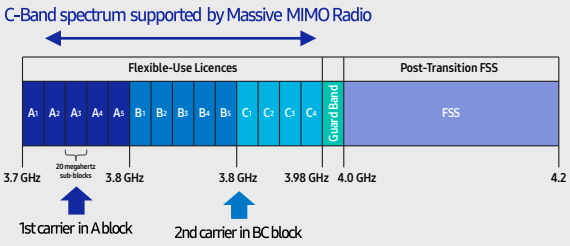


Points of Differentiation

Wide Bandwidth

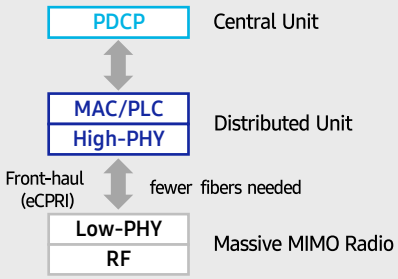
With capability to support up to 2 CC carrier configuration, Samsung C-Band massive MIMO Radio supports 200 MHz bandwidth in the C-Band spectrum.

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.

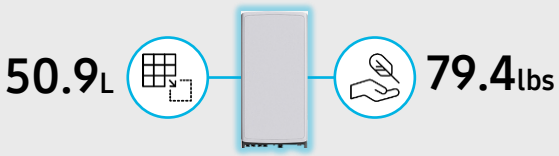
This helps operators reduce their CAPEX as they now need less products to cover the same area than before.

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

Dual-Band Radio Unit
AWS/PCS (B66/B2)
RFV01U-D1A

Samsung's RFV01U-D1A is a compact remote Radio Unit (RU) designed for deployments that require flexibility in installation and rapid onlining, without compromising on coverage, capacity or operational expenses.

The RFV01U-D1A RU targets dual-band support across Band 66 (AWS) and Band 2 (PCS), making it an ideal product for broad coverage footprints across multiple common mid-range frequencies.

The RU handles all Radio Frequency (RF) processing in a single, compact unit, and is designed to interface via CPRI with Samsung's CDU baseband offerings, in both distributed- and central-RAN configurations.

In addition to its minimal footprint and ease of installation, the RU is also designed to reduce cost of ownership through its integrated spectrum analyzer, which allows for remote RF monitoring, greatly reducing the need for on-site maintenance visits.

Features and Benefits

- Dual-band support for broad frequency coverage
- Minimal footprint reduces site costs
- Rapid, easy installation
- Flexibly deployable in any location
- Remote RF monitoring capability
- Convection cooled, silent operation
- Built-in Broadcast Auxiliary Services (BAS) filter ensures compliant AWS operation without impacting footprint

Key Technical Specifications

Duplex Type: FDD
Operating Frequencies:
    B66: DL(2,110-2,180MHz)/UL(1,710-1,780MHz)
    B2: DL(1,930-1,990MHz)/UL(1,850-1,910MHz)
Instantaneous Bandwidth:
    70MHz(B66) + 60MHz(B2)
RF Chain: 4T4R/2T4R/2T2R
Output Power: Total 320W
DU-RU Interface: CPRI (10Gbps)
Dimensions: 380 x 380 x 255mm (36.8L)
Weight: 38.3kg
Input Power: -48V DC
Operating Temp.: -40 - 55°(w/o solar load)
Cooling: Natural convection

SAMSUNG

Dual-Band Radio Unit
700/850MHz (B13/B5)
RFV01U-D2A

Samsung's RFV01U-D2A is a compact remote Radio Unit (RU) designed for deployments that require flexibility in installation and rapid onlining, without compromising on coverage, capacity or operational expenses.

The RFV01U-D2A RU targets dual-band support across Band 13 (700MHz) and Band 5 (850MHz), making it an ideal product for broad coverage footprints across multiple common low-end, long-range frequencies.

The RU handles all Radio Frequency (RF) processing in a single, compact unit, and is designed to interface via CPRI with Samsung's CDU baseband offerings, in both distributed- and central-RAN configurations.

In addition to its minimal footprint and ease of installation, the RU is also designed to reduce cost of ownership through its integrated spectrum analyzer, which allows for remote RF monitoring, greatly reducing the need for on-site maintenance visits.

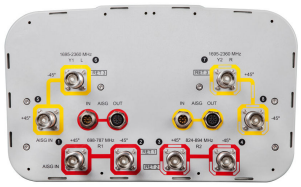
Features and Benefits

- Dual-band support for broad frequency coverage
- Minimal footprint reduces site costs
- Rapid, easy installation
- Flexibly deployable in any location
- Remote RF monitoring capability
- Convection cooled, silent operation

Key Technical Specifications

Duplex Type: FDD
Operating Frequencies:
B13: DL(746-756MHz)/UL(777-787MHz)
B5: DL(869-894MHz)/UL(824-849MHz)
Instantaneous Bandwidth: 10MHz(B13) + 25MHz(B5)
RF Chain: 4T4R/2T4R/2T2R
Output Power: Total 320W
DU-RU Interface: CPRI (10Gbps)
Dimensions: 380 x 380 x 207mm (29.9L)
Weight: 31.9kg
Input Power: -48V DC
Operating Temp.: -40 - 55°(w/o solar load)
Cooling: Natural convection

JAHH-65B-R3B



8-port sector antenna, 2x 698–787, 2x 824-894 and 4x 1695–2360 MHz, 65° HPBW, 3x RET and low bands have diplexers. Internal SBT's on first LB(Port 1) and first HB(Port 5).

- Internal SBT on low and high band allow remote RET control from the radio over the RF jumper cable
- One RET for 700MHz, one RET for 850MHz, and one RET for both high bands to ensure same tilt level for 4x Rx or 4x MIMO
- Internal filter on low band and interleaved dipole technology providing for attractive, low wind load mechanical package
- Separate RS-485 RET input/output for low and high band

General Specifications

Antenna Type	Sector
Band	Multiband
Color	Light gray
Effective Projective Area (EPA), frontal	0.28 m^2 | 3.014 ft^2
Effective Projective Area (EPA), lateral	0.24 m^2 | 2.583 ft^2
Grounding Type	RF connector body grounded to reflector and mounting bracket
Performance Note	Outdoor usage | Wind loading figures are validated by wind tunnel measurements described in white paper WP-112534-EN
Radome Material	Fiberglass, UV resistant
Radiator Material	Aluminum | Low loss circuit board
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female
RF Connector Location	Bottom
RF Connector Quantity, high band	4
RF Connector Quantity, low band	4
RF Connector Quantity, total	8

Remote Electrical Tilt (RET) Information, General

RET Interface	8-pin DIN Female | 8-pin DIN Male
RET Interface, quantity	2 female | 2 male

Dimensions

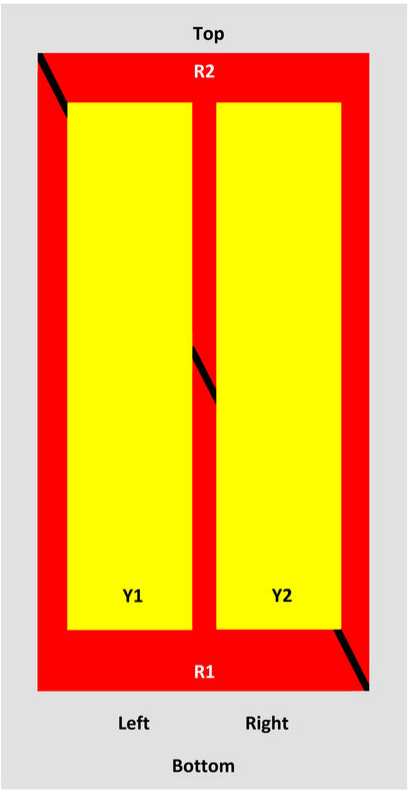
Width	350 mm | 13.78 in

JAHH-65B-R3B

Length	1828 mm | 71.969 in
Depth	208 mm | 8.189 in

Array Layout

JAHH-65A-R3B JAHH-65B-R3B JAHH-65C-R3B



Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	698-798	1-2	1	ANxxxxxxxxxxxxxxx1
R2	824-894	3-4	2	ANxxxxxxxxxxxxxxx2
Y1	1695-2360	5-6	3	ANxxxxxxxxxxxxxxx3
Y2	1695-2360	7-8		

View from the front of the antenna

(Sizes of colored boxes are not true depictions of array sizes)

Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1695 – 2360 MHz | 698 – 787 MHz | 824 – 894 MHz
Polarization	±45°

Remote Electrical Tilt (RET) Information, Electrical

Protocol	3GPP/AISG 2.0 (Single RET)
Power Consumption, idle state, maximum	2 W

JAHH-65B-R3B

Power Consumption, normal conditions, maximum	13 W
Input Voltage	10–30 Vdc
Internal Bias Tee	Port 1 | Port 5
Internal RET	High band (1) | Low band (2)

Electrical Specifications

Frequency Band, MHz	**698–787**	**824–894**	**1695–1880**	**1850–1990**	**1920–2200**	**2300–2360**
Gain, dBi	14.5	15.8	18	18.4	18.5	18.8
Beamwidth, Horizontal, degrees	67	65	63	63	65	68
Beamwidth, Vertical, degrees	12.4	10.5	5.7	5.2	4.9	4.4
Beam Tilt, degrees	2–14	2–14	0–10	0–10	0–10	0–10
USLS (First Lobe), dB	18	18	20	20	21	23
Front-to-Back Ratio at 180°, dB	32	34	31	35	36	38
Isolation, Cross Polarization, dB	25	25	25	25	25	25
Isolation, Inter-band, dB	30	30	30	30	30	30
VSWR | Return loss, dB	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-153
Input Power per Port at 50° C, maximum, watts	200	200	300	300	300	250

Electrical Specifications, BASTA

Frequency Band, MHz	**698–787**	**824–894**	**1695–1880**	**1850–1990**	**1920–2200**	**2300–2360**
Gain by all Beam Tilts, average, dBi	14.3	14.9	17.6	18.1	18.2	18.5
Gain by all Beam Tilts Tolerance, dB	±0.3	±0.5	±0.6	±0.4	±0.5	±0.6
Gain by Beam Tilt, average, dBi	2 ° | 14.3 8 ° | 14.3 14 ° | 14.3	2 ° | 15.0 8 ° | 14.9 14 ° | 15.4	0 ° | 17.2 5 ° | 17.6 10 ° | 17.6	0 ° | 17.6 5 ° | 18.2 10 ° | 18.2	0 ° | 17.7 5 ° | 18.3 10 ° | 18.3	0 ° | 17.9 5 ° | 18.7 10 ° | 18.7
Beamwidth, Horizontal Tolerance, degrees	±1.2	±1.4	±4	±2.4	±2.9	±2.7
Beamwidth, Vertical Tolerance, degrees	±0.9	±0.5	±0.3	±0.2	±0.3	±0.1
USLS, beampeak to 20° above beampeak, dB	18	17	17	18	19	18
Front-to-Back Total Power at 180° ± 30°, dB	25	24	26	29	27	29
CPR at Boresight, dB	22	23	20	21	21	24

CPR at Sector, dB	11	12	11	11	11	8

Mechanical Specifications

Wind Loading at Velocity, frontal	301.0 N @ 150 km/h | 67.7 lbf @ 150 km/h
Wind Loading at Velocity, lateral	254.0 N @ 150 km/h | 57.1 lbf @ 150 km/h
Wind Loading at Velocity, maximum	143.4 lbf @ 150 km/h | 638.0 N @ 150 km/h
Wind Speed, maximum	241 km/h | 149.75 mph

Packaging and Weights

Width, packed	456 mm | 17.953 in
Depth, packed	357 mm | 14.055 in
Length, packed	1975 mm | 77.756 in
Net Weight, without mounting kit	29.2 kg | 64.375 lb
Weight, gross	42.5 kg | 93.696 lb

Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Above maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
ROHS	Compliant/Exempted

Included Products

BSAMNT-3	—	Wide Profile Antenna Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.

* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance

ATTACHMENT 3

	General	Power	Density					
Site Name: Guilford N 2								
Tower Height: Verizon @ 157ft								
CARRIER	**# OF CHAN.**	**WATTS ERP**	**HEIGHT**	**FREQ.**	**CALC. POWER DENS**	**MAX. PERMISS. EXP.**	**FRACTION MPE**	**Total**
*T-Mobile	4	1028	147	1900	0.0744	1.0000	0.74%	
*T-Mobile	2	2057	147	1900	0.0744	1.0000	0.74%	
*T-Mobile	2	2308	147	2100	0.0835	1.0000	0.83%	
*T-Mobile	2	592	147	600	0.0214	0.4000	0.54%	
*T-Mobile	1	1578	147	600	0.0285	0.4000	0.71%	
*T-Mobile	2	695	147	700	0.0251	0.4667	0.54%	
*T-Mobile	2	2105	147	1900	0.0762	1.0000	0.76%	
*T-Mobile	1	19239	147	2500	0.3480	1.0000	3.48%	
*T-Mobile	1	19239	147	2500	0.3480	1.0000	3.48%	
*AT&T	2	565	137	880	0.0237	0.5867	0.40%	
*AT&T	2	875	137	1900	0.0367	1.0000	0.37%	
*AT&T	1	283	137	880	0.0059	0.5867	0.10%	
*AT&T	4	525	137	1900	0.0440	1.0000	0.44%	
*AT&T	1	1313	137	734	0.0275	0.4893	0.56%	
VZW 700	**4**	**634**	**157**	**751**	**0.0037**	**0.5007**	**0.74%**	
VZW CDMA	**2**	**370**	**157**	**876.03**	**0.0011**	**0.5840**	**0.18%**	
VZW Cellular	**4**	**725**	**157**	**874**	**0.0021**	**0.5827**	**0.36%**	
VZW PCS	**4**	**1406**	**157**	**1975**	**0.0082**	**1.0000**	**0.82%**	
VZW AWS	**4**	**1414**	**157**	**2120**	**0.0083**	**1.0000**	**0.83%**	
VZW CBAND	**4**	**6531**	**157**	**3730.08**	**0.0381**	**1.0000**	**3.81%**	
								20.45%
* 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 159 ft EEI Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT46139-A

Customer Site Name: West Haven-rt15 /Woodbridge

Carrier Name: Verizon (App#: 150989, V2)

Carrier Site ID / Name: 468190 / GUILFORD_NORTH_2_CT

Site Location: 370 Rockland Road

Guilford, Connecticut

New Heaven County

Latitude: 41.396833

Longitude: -72.688805

Exp.10/31/2021

08/13/2021

Analysis Result:

Max Structural Usage: 83.9% [Pass]

Max Foundation Usage: 62.0% [Pass]

Additional Usage Caused by New Mount/Mount Modification:

Report Prepared By: Sital Shrestha

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Report Prepared By: Sital Shrestha

Introduction

The purpose of this report is to summarize the analysis results on the 159 ft EEI 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	Tower Drawing by Engineered Endeavors, Job#12806-E01 dated 7/30/04
Foundation Drawing	Foundation Design by Vertical Solutions, Job# 121192.02 dated 7/16/12
Geotechnical Report	Geotechnical Report by Jaworski, Job# 04197G, dated 3/24/04
Modification Drawings	
Mount Analysis	

Analysis Criteria

The rigorous analysis was performed in accordance with the requirements and stipulations of the TIA- 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} =130.0 mph (3-Sec. Gust)/ Nominal Design Wind Speed V_{asd} = 101.0 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:	
Structure Class:	
Topographic Category:	
Crest Height:	0 ft
Seismic Parameters:	

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
			Decibel - DB846F65ZAXY - Panel	(3) T-Arms		Verizon
			Antel - BXA171063/12BF - Panel			
			Antel - BXA70063/6CF - Panel			
			Antel – BXA-171063/8BF - Panel			
			Ericsson – 1_B66A_B2A (Octo) - Panel	(3) T-Arms	(3) 2" Hybrid	T-Mobile Sprint
			RFS - APXVAALL24_43-U-NA20 - Panel			
			Ericsson - AIR6449 B41 - Panel			
			Ericsson - 4415 B25 –	(1) Collar Mount		
			ALU - 800 MHz RRH –			
			Ericsson - 4449 B71 + B85 - RRU			
			– 800 MHz Filter – Filter			
			Powerwave - RA21.7770.00 - Panel	(3) T-Arms	(1) 1/2" Fiber Power	
			KMW - AM-X-CD-16-65-00T - Panel			
			Ericsson - RRUS11 –			
			Powerwave - LGP21401-TMA			
			Raycap - DC6-48-60-18-8F- OVP			

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

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
			Samsung VZS01- Panel	(3) T-Arms	(12) 1 5/8" Coax (2) 1 5/8" Hybrid	Verizon
			Andrew JAHH-65B-R3B- Panel			
		3	Commscope CBC78T-DS-43/E14F05P19			
			Samsung B2/B66A RRH-BR049- RRH			
			Samsung B5/B13 RRH-BR04C- RRH			
			Raycap FE-16148-OVP-B12			

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:			
Pass/Fail	**Pass**	**Pass**	**Pass**

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions			

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 1.3022 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

This analysis was performed based on the information supplied to **Tower Engineering Solutions,** Verification of the information provided was not included in the Scope of Work for . The accuracy of the analysis is dependent on the accuracy of the information provided.

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.

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 . 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, should be notified in writing and the applicable minimum values provided by the client.

The configuration of the existing mounts, antennas, coax and other appurtenances were supplied by the customer for the current structural analysis. 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, should be notified immediately to evaluate the effect of the discrepancy on the analysis results.

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.

If a feasibility analysis was performed, final acceptance of changed conditions shall be based upon a rigorous structural analysis.

Usage Diagram - Max Ratio 76.92% at 120.0ft

Structure:	CT46139-A-SBA	**Code:**	EIA/TIA-222-G	8/13/2021
Site Name:	West Haven-rt15 /Woodbridge	**Exposure:**	C	
Height:	158.50 (ft)	**Gh:**	1.1	
Base Elev:	0.000 (ft)			Page: 1

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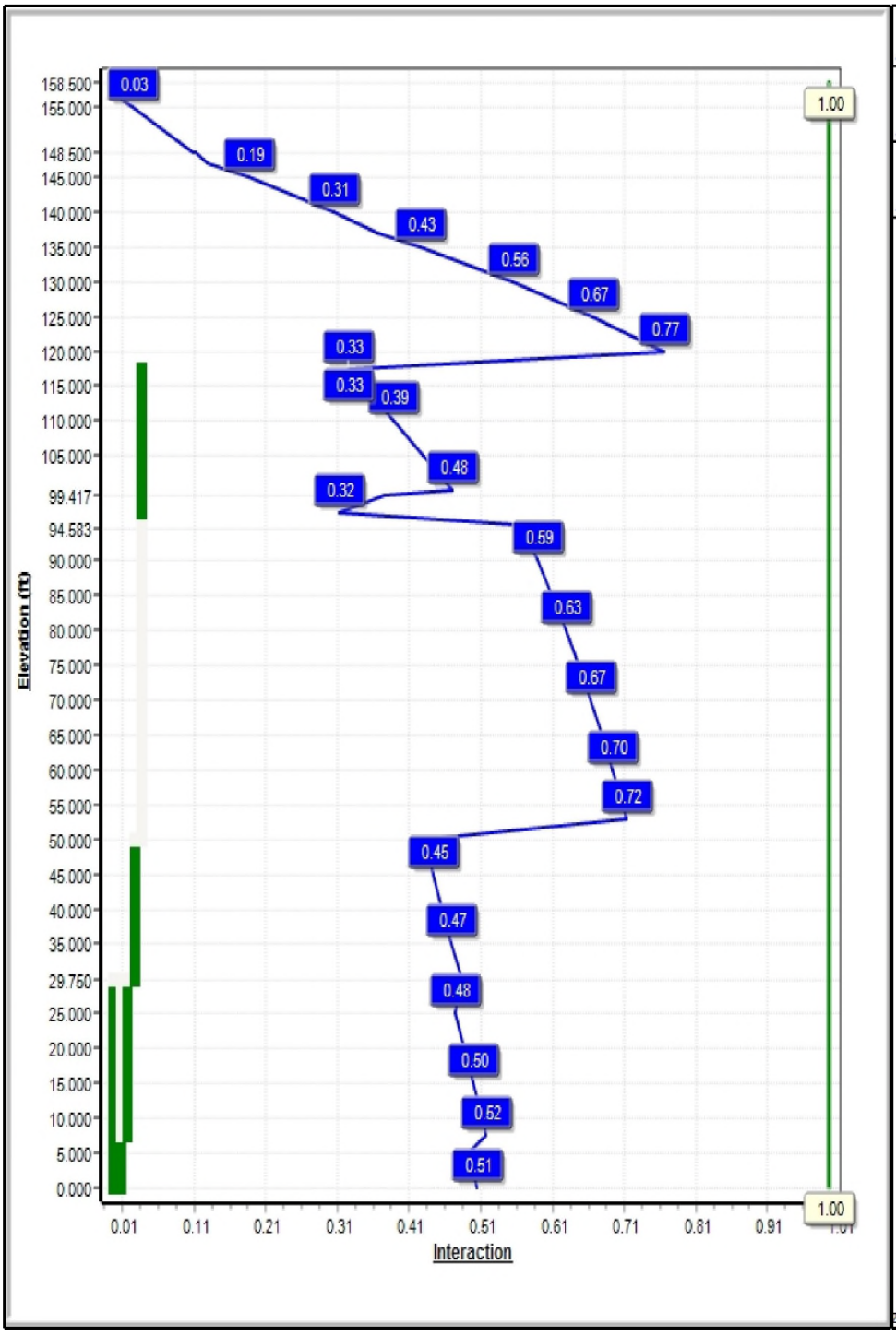
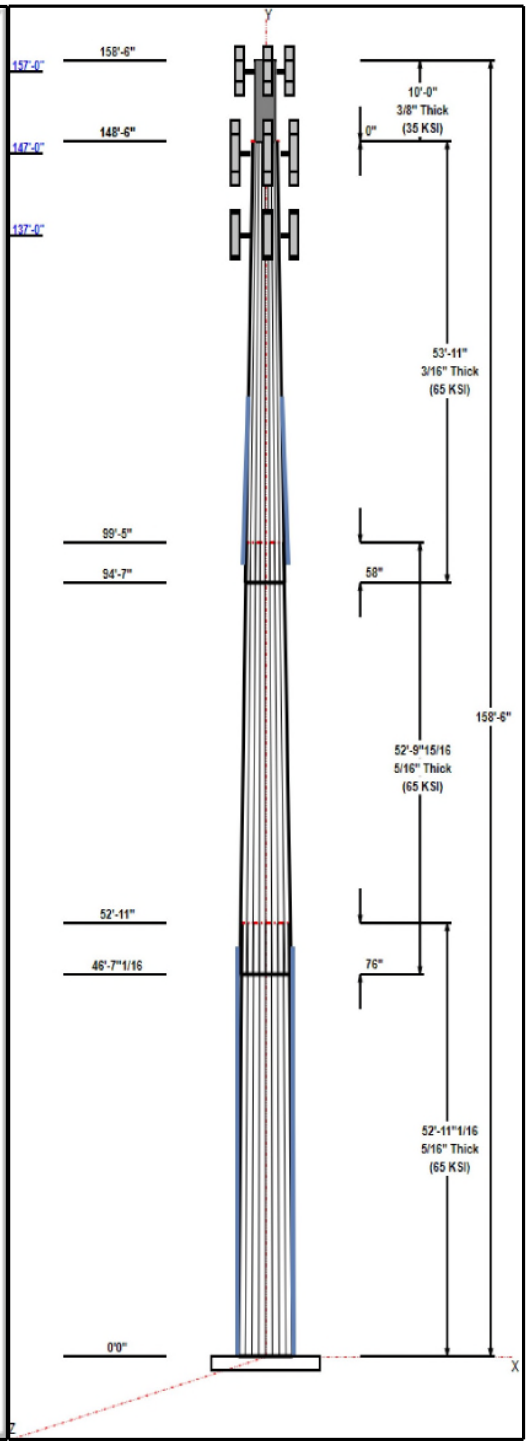
Dead Load Factor:	1.20	**Iterations:**	24
Wind Load Factor:	1.60		

Load Case : 1.2D + 1.6W 101 mph Wind





Structure: CT46139-A-SBA

Type: Custom
Site Name: West Haven-rt15 /Woodbridge
Height: 158.50 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.25926

8/13/2021

Tower Engineering Solutions

Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	52.92	44.28	58.00	0.313		0.25926	65
2	52.83	32.85	46.55	0.313	Slip	0.25926	65
3	53.92	20.50	34.48	0.188	Slip	0.25926	65
4	10.00	20.00	20.00	0.375	Butt	0.00000	35

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
157.00	157.00	3	VZS01	Verizon
157.00	157.00	6	JAHH-65B-R3B	Verizon
157.00	157.00	3	CBC78T-DS-43/E14F05P1	Verizon
157.00	157.00	2	B2/B66A RRH-BR049	Verizon
157.00	157.00	2	B5/B13 RRH-BR04C	Verizon
157.00	157.00	1	FE-16148-OVP-B12	Verizon
157.00	157.00	3	T-Arm	Verizon
147.00	147.00	3	800 MHz RRH	T-Mobile Sprint
147.00	147.00	3	ALU 800MHz External	T-Mobile Sprint
147.00	147.00	3	T-Arm	T-Mobile Sprint
147.00	147.00	3	KRD 9011461-B66A-B2A	T-Mobile Sprint
147.00	147.00	3	APXVAARR24_43-U-NA20	T-Mobile Sprint
147.00	147.00	3	AIR6449 B41	T-Mobile Sprint
147.00	147.00	1	(3) T-Arm Kit	T-Mobile Sprint
147.00	147.00	4	ACU-A20-N	T-Mobile Sprint
147.00	147.00	3	RRUS 4415 B25	T-Mobile Sprint
147.00	147.00	3	4449 B71 + B85	T-Mobile Sprint
137.00	137.00	3	T-Arm	AT&T
137.00	137.00	1	DC6-48-60-18-8F	AT&T
137.00	137.00	6	RA21.7770.00	AT&T
137.00	137.00	6	RRUS 11	AT&T
137.00	137.00	3	AM-X-CD-16-65-00T-RET	AT&T
137.00	137.00	12	LGP21401	AT&T

Linear Appurtenances

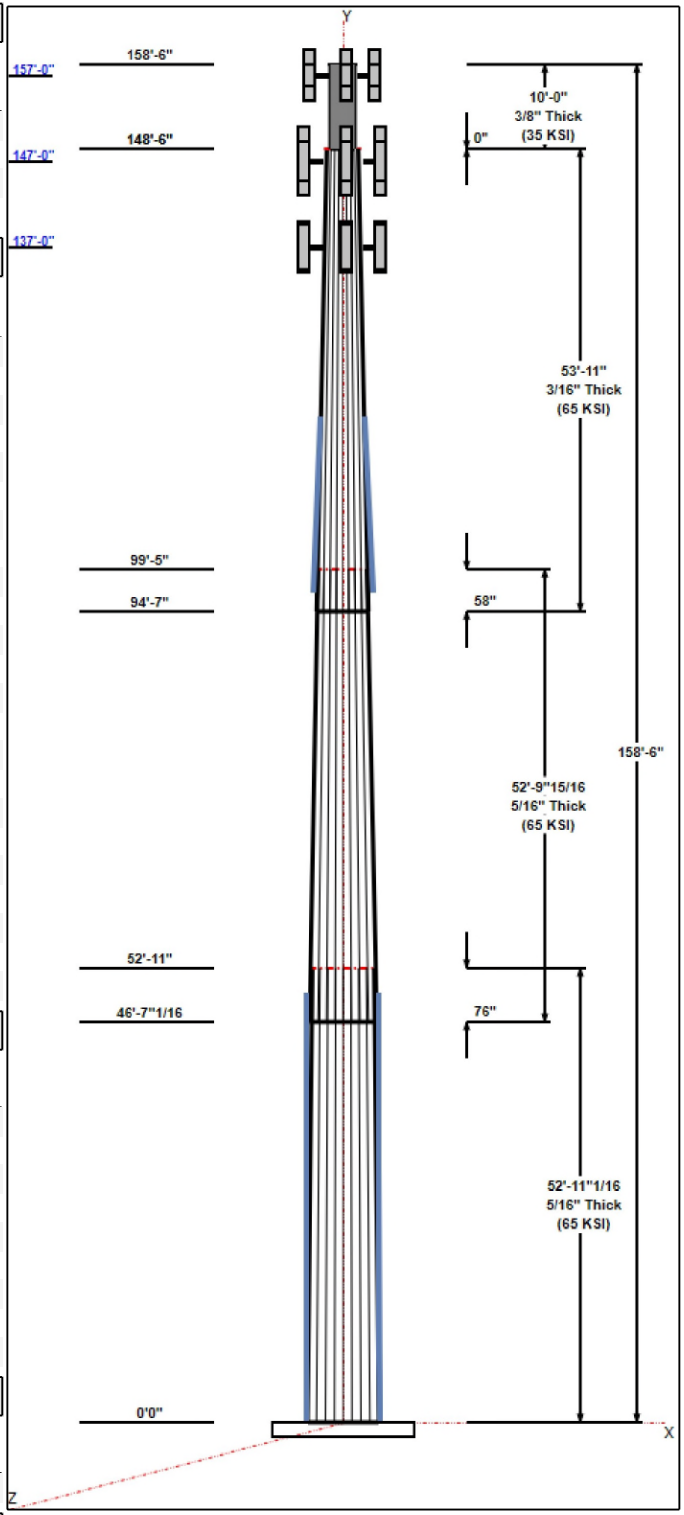
Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	157.00	Inside	1 5/8" Coax	Verizon
0.00	157.00	Inside	1 5/8" Hybrid	Verizon
0.00	147.00	Inside	1 5/8" Hybrid	T-Mobile Sprint
0.00	137.00	Inside	1 5/8" Coax	AT&T
0.00	137.00	Inside	1/2" Coax	AT&T
0.00	137.00	Inside	3/4" DC	AT&T
94.50	104.50	Outside	1.25" Reinforcing plate	
8.92	53.00	Outside	1.25" Reinforcing plate	
0.00	8.92	Outside	1.25" Reinforcing plate	

Anchor Bolts

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

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry



1.7500	72.0	60.0	Round

Reactions

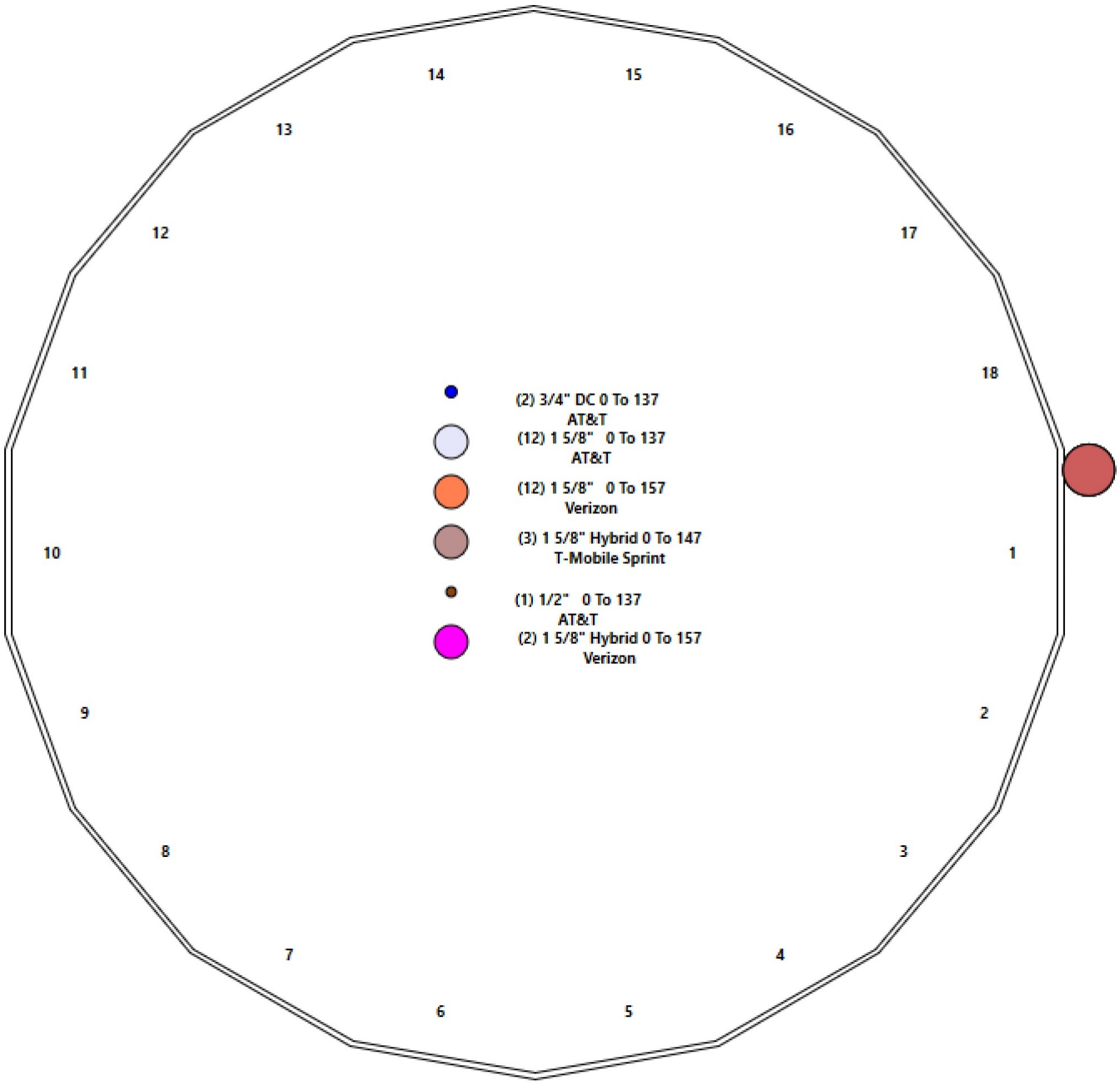
Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 101 mph Wind	3375.2	30.4	38.5
0.9D + 1.6W 101 mph Wind	3346.9	30.4	28.9
1.2D + 1.0Di + 1.0Wi 50 mph Wind	875.6	8.1	59.5
1.2D + 1.0E	222.0	1.7	38.6
0.9D + 1.0E	220.0	1.7	28.9
1.0D + 1.0W 60 mph Wind	741.1	6.7	32.1

Structure: CT46139-A-SBA - Coax Line Placement

Type: Monopole
Site Name: West Haven-rt15 /Woodbridge
Height: 158.50 (ft)

8/13/2021

Tower Engineering Solutions



Shaft Properties

Structure:	CT46139-A-SBA	**Code:**	EIA/TIA-222-G	8/13/2021	
Site Name:	West Haven-rt15 /Woodbridge	**Exposure:**	C		
Height:	158.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 5	

Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	52.920	0.3125	65		0.00	9,078
2	18	52.830	0.3125	65	Slip	76.00	7,023
3	18	53.917	0.1875	65	Slip	58.00	2,981
4	R	10.000	0.3750	35	Flange	0.00	787
					Total Shaft Weight:		**19,868**

	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	58.00	0.00	57.22	24056.89	31.32	185.60	44.28	52.92	43.61	10650.9	23.57	141.7	0.259259
2	46.55	46.59	45.86	12384.89	24.85	148.95	32.85	99.42	32.27	4316.77	17.13	105.1	0.259259
3	34.48	94.58	20.41	3031.67	31.01	183.88	20.50	148.50	12.09	630.14	17.87	109.3	0.259259
4	20.00	148.5	23.12	1113.92	0.00	53.33	20.00	158.50	23.12	1113.92	0.00	53.33	0.000000

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
0.00	29.75	2	PLT 7.25x1.5(31mm Hole)	50	65	0.00	AJM20&sleeve	15.00	AJM20&sleeve	3.00	13	9
0.00	7.42	2	PLT 7.25x1.5(31mm Hole)	50	65	0.00	AJM20&sleeve	15.00	AJM20&sleeve	3.00	9	9
7.42	29.75	1	PLT 7.25x1.5(31mm Hole)	50	65	0.00	AJM20&sleeve	15.00	AJM20&sleeve	3.00	13	9
29.75	50.00	3	PLT 6.5x1.5(31mm Hole)	50	65	0.00	AJM20&sleeve	18.00	AJM20&sleeve	3.00	13	12
96.75	117.2	3	PLT 5"x1.5" (1.25" Hole)	50	65	0.00	AJM20&sleeve	21.00	AJM20&sleeve	3.00	9	7

Load Summary

Structure:	CT46139-A-SBA	**Code:**	EIA/TIA-222-G	8/13/2021	
Site Name:	West Haven-rt15 /Woodbridge	**Exposure:**	C		
Height:	158.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 6	

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	157.00	VZS01	3	87.10	4.30	0.69	198.74	5.188	0.69	0.00	0.00
2	157.00	JAHH-65B-R3B	6	68.56	9.11	0.83	300.26	10.463	0.83	0.00	0.00
3	157.00	CBC78T-DS-43/E14F05P19	3	10.40	0.37	0.67	31.28	0.654	0.67	0.00	0.00
4	157.00	B2/B66A RRH-BR049	2	70.30	1.87	0.67	147.29	2.446	0.67	0.00	0.00
5	157.00	B5/B13 RRH-BR04C (RFV01U-D2A)	2	84.40	1.87	0.67	154.16	2.446	0.67	0.00	0.00
6	157.00	FE-16148-OVP-B12	1	15.21	2.01	0.67	52.36	2.581	0.67	0.00	0.00
7	157.00	T-Arm	3	400.00	10.00	0.75	680.51	18.766	0.75	0.00	0.00
8	147.00	800 MHz RRH	3	53.00	2.49	0.67	126.81	3.631	0.67	0.00	0.00
9	147.00	ALU 800MHz External Notch Filt	3	8.80	0.78	0.67	26.41	1.426	0.67	0.00	0.00
10	147.00	T-Arm	3	400.00	10.00	0.75	678.67	18.709	0.75	0.00	0.00
11	147.00	KRD 9011461-B66A-B2A	3	132.20	6.51	0.87	315.00	7.629	0.87	0.00	0.00
12	147.00	APXVAARR24_43-U-NA20	3	128.00	20.24	0.70	544.98	22.136	0.70	0.00	0.00
13	147.00	AIR6449 B41	3	103.00	5.65	0.71	239.84	6.599	0.71	0.00	0.00
14	147.00	(3) T-Arm Kit	1	500.00	16.50	1.00	1092.18	32.593	1.00	0.00	0.00
15	147.00	ACU-A20-N	4	1.00	0.14	0.67	5.29	0.436	0.67	0.00	0.00
16	147.00	RRUS 4415 B25	3	46.00	1.64	0.67	87.02	2.154	0.67	0.00	0.00
17	147.00	4449 B71 + B85	3	73.20	1.97	0.67	130.83	2.538	0.67	0.00	0.00
18	137.00	T-Arm	3	400.00	10.00	0.75	676.71	18.647	0.75	0.00	0.00
19	137.00	DC6-48-60-18-8F	1	31.80	0.92	1.00	93.07	1.354	1.00	0.00	0.00
20	137.00	RA21.7770.00	6	37.20	6.55	0.73	166.31	8.997	0.73	0.00	0.00
21	137.00	RRUS 11	6	50.70	2.52	0.67	138.91	3.165	0.67	0.00	0.00
22	137.00	AM-X-CD-16-65-00T-RET	3	48.50	8.02	0.75	209.31	10.789	0.75	0.00	0.00
23	137.00	LGP21401	12	14.10	1.29	0.67	38.88	2.118	0.67	0.00	0.00
		Totals:	**80**	**7,638.97**			**17,799.43**				

Linear Appurtenances

Bottom Elev. (ft)	**Top Elev. (ft)**	**Description**	**Exposed Width**	**Exposed**
0.00	157.00	(12) 1 5/8" Coax	0.00	Inside
0.00	157.00	(2) 1 5/8" Hybrid	0.00	Inside
0.00	147.00	(3) 1 5/8" Hybrid	0.00	Inside
0.00	137.00	(12) 1 5/8" Coax	0.00	Inside
0.00	137.00	(1) 1/2" Coax	0.00	Inside
0.00	137.00	(2) 3/4" DC	0.00	Inside
94.50	104.50	(1) 1.25" Reinforcing plate	1.50	Outside
8.92	53.00	(1) 1.25" Reinforcing plate	1.50	Outside
0.00	8.92	(1) 1.25" Reinforcing plate	3.00	Outside

Shaft Section Properties

Structure:	CT46139-A-SBA	**Code:**	EIA/TIA-222-G	8/13/2021	
Site Name:	West Haven-rt15 /Woodbridge	**Exposure:**	C		
Height:	158.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 7	

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	RB1 RB2	0.3125	58.000	57.217	24056.9	31.32	185.60	65	65	0.0	43.50	20646.9	16791.8	
5.00		0.3125	56.704	55.931	22471.3	30.58	181.45	65	65	962.5	43.50	19749.9	16072.5	700.2
7.42	RT2 RB3	0.3125	56.076	55.309	21729.6	30.23	179.44	65	66	458.0	32.63	13593.6	13593.6	254.2
10.00		0.3125	55.407	54.645	20957.0	29.85	177.30	65	66	482.7	32.63	13281.3	13281.3	271.0
15.00		0.3125	54.111	53.360	19512.3	29.12	173.16	65	67	918.8	32.63	12686.5	12686.5	525.1
20.00		0.3125	52.815	52.074	18135.5	28.39	169.01	65	68	896.9	32.63	12105.4	12105.4	525.1
25.00		0.3125	51.519	50.788	16825.1	27.66	164.86	65	69	875.0	32.63	11538.0	11538.0	525.1
29.75	RT1 RT3 RB4	0.3125	50.287	49.567	15640.1	26.96	160.92	65	70	811.0	29.25	9859.9	9859.9	472.8
30.00		0.3125	50.222	49.502	15579.4	26.93	160.71	65	70	42.1	29.25	9835.4	9835.4	24.9
35.00		0.3125	48.926	48.217	14396.7	26.20	156.56	65	71	831.3	29.25	9351.3	9351.3	497.7
40.00		0.3125	47.630	46.931	13275.5	25.46	152.41	65	71	809.4	29.25	8879.4	8879.4	497.7
45.00		0.3125	46.333	45.645	12214.0	24.73	148.27	65	72	787.5	29.25	8419.8	8419.8	497.7
46.59	Bot - Section 2	0.3125	45.922	45.237	11889.4	24.50	146.95	65	73	245.3	29.25	8276.6	8276.6	157.9
50.00	RT4	0.3125	45.037	44.360	11210.7	24.00	144.12	65	73	1047.9	29.25	8186.7	8186.7	339.8
52.92	Top - Section 1	0.3125	44.905	44.229	11111.7	23.93	143.70	65	73	880.2				
55.00		0.3125	44.366	43.694	10713.4	23.62	141.97	65	74	311.1				
60.00		0.3125	43.069	42.408	9795.2	22.89	137.82	65	74	732.5				
65.00		0.3125	41.773	41.122	8931.1	22.16	133.67	65	75	710.6				
70.00		0.3125	40.477	39.837	8119.3	21.43	129.53	65	76	688.7				
75.00		0.3125	39.181	38.551	7358.2	20.70	125.38	65	77	666.8				
80.00		0.3125	37.884	37.265	6646.3	19.97	121.23	65	78	645.0				
85.00		0.3125	36.588	35.979	5981.8	19.23	117.08	65	79	623.1				
90.00		0.3125	35.292	34.694	5363.2	18.50	112.93	65	80	601.2				
94.58	Bot - Section 3	0.3125	34.103	33.515	4835.0	17.83	109.13	65	80	531.9				
95.00		0.3125	33.995	33.408	4788.7	17.77	108.79	65	80	76.3				
96.75	RB5	0.3125	33.542	32.958	4597.8	17.52	107.33	65	81	317.9	22.50	3553.4	3553.4	134.0
99.42	Top - Section 2	0.1875	33.225	19.661	2711.3	29.83	177.20	65	66	476.2	22.50	3417.0	3417.0	204.2
100.00		0.1875	33.074	19.571	2674.2	29.69	176.40	65	66	38.9	22.50	3387.5	3387.5	44.7
105.00		0.1875	31.778	18.799	2370.3	28.47	169.48	65	68	326.4	22.50	3140.1	3140.1	382.8
110.00		0.1875	30.481	18.028	2090.3	27.25	162.57	65	69	313.3	22.50	2902.2	2902.2	382.8
115.00		0.1875	29.185	17.257	1833.3	26.04	155.65	65	71	300.2	22.50	2673.7	2673.7	382.8
117.25	RT5	0.1875	28.602	16.909	1724.9	25.49	152.54	65	71	130.8	22.50	2574.0	2574.0	172.3
120.00		0.1875	27.889	16.485	1598.3	24.82	148.74	65	72	156.2				
125.00		0.1875	26.593	15.714	1384.2	23.60	141.83	65	74	273.9				
130.00		0.1875	25.296	14.942	1190.2	22.38	134.91	65	75	260.8				
135.00		0.1875	24.000	14.171	1015.2	21.16	128.00	65	77	247.7				
137.00		0.1875	23.481	13.862	950.3	20.67	125.23	65	77	95.4				
140.00		0.1875	22.704	13.399	858.3	19.94	121.09	65	78	139.1				
145.00		0.1875	21.407	12.628	718.4	18.72	114.17	65	79	221.4				
147.00		0.1875	20.889	12.319	667.0	18.23	111.41	65	80	84.9				
148.50	Top - Section 3	0.1875	20.500	12.088	630.1	17.87	109.33	65	80	62.3				
148.50	Bot - Section 4	0.3750	20.000	23.120	1113.9	8.93	54.67	35	35					
150.00		0.3750	20.000	23.120	1113.9	0.00	53.33	35	35	118.0				
155.00		0.3750	20.000	23.120	1113.9	0.00	53.33	35	35	393.4				
157.00		0.3750	20.000	23.120	1113.9	0.00	53.33	35	35	157.3				
158.50		0.3750	20.000	23.120	1113.9	0.00	53.33	35	35	118.0				
							Total Weight			**19868.3**				**6992.8**

Wind Loading - Shaft

Structure:	CT46139-A-SBA	**Code:**	EIA/TIA-222-G	8/13/2021	
Site Name:	West Haven-rt15 /Woodbridge	**Exposure:**	C		
Height:	158.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 8	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60

Iterations 24

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00	RB1 RB2	1.00	0.85	21.088	23.20	457.01	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	21.088	23.20	446.80	0.650	0.000	5.00	24.265	15.77	585.4	0.0	1155.0
7.42	RT2 RB3	1.00	0.85	21.088	23.20	441.85	0.650	0.000	2.42	11.547	7.51	278.6	0.0	549.6
10.00		1.00	0.85	21.088	23.20	436.58	0.650	0.000	2.58	12.169	7.91	293.6	0.0	579.2
15.00		1.00	0.85	21.088	23.20	426.37	0.650	0.000	5.00	23.168	15.06	558.9	0.0	1102.5
20.00		1.00	0.90	22.375	24.61	428.67	0.650	0.000	5.00	22.620	14.70	579.0	0.0	1076.3
25.00		1.00	0.95	23.451	25.80	428.08	0.650	0.000	5.00	22.071	14.35	592.1	0.0	1050.0
29.75	RT1 RT3 RB4	1.00	0.98	24.326	26.76	425.57	0.650	0.000	4.75	20.460	13.30	569.4	0.0	973.2
30.00		1.00	0.98	24.369	26.81	425.40	0.650	0.000	0.25	1.063	0.69	29.6	0.0	50.6
35.00		1.00	1.01	25.172	27.69	421.20	0.650	0.000	5.00	20.975	13.63	604.0	0.0	997.5
40.00		1.00	1.04	25.890	28.48	415.84	0.650	0.000	5.00	20.426	13.28	605.0	0.0	971.3
45.00		1.00	1.07	26.540	29.19	409.57	0.650	0.000	5.00	19.878	12.92	603.5	0.0	945.0
46.59	Bot - Section 2	1.00	1.08	26.734	29.41	407.42	0.650	0.000	1.59	6.193	4.03	189.4	0.0	294.4
50.00	RT4	1.00	1.09	27.135	29.85	402.55	0.650	0.000	3.41	13.316	8.66	413.4	0.0	1257.4
52.92	Top - Section 1	1.00	1.11	27.461	30.21	398.16	0.650	0.000	2.92	11.189	7.27	351.5	0.0	1056.3
55.00		1.00	1.12	27.685	30.45	400.55	0.650	0.000	2.08	7.856	5.11	248.8	0.0	373.4
60.00		1.00	1.14	28.197	31.02	392.43	0.650	0.000	5.00	18.497	12.02	596.7	0.0	879.0
65.00		1.00	1.16	28.676	31.54	383.83	0.650	0.000	5.00	17.948	11.67	588.8	0.0	852.7
70.00		1.00	1.17	29.127	32.04	374.84	0.650	0.000	5.00	17.400	11.31	579.8	0.0	826.5
75.00		1.00	1.19	29.553	32.51	365.48	0.650	0.000	5.00	16.851	10.95	569.7	0.0	800.2
80.00		1.00	1.21	29.958	32.95	355.79	0.650	0.000	5.00	16.303	10.60	558.7	0.0	774.0
85.00		1.00	1.22	30.342	33.38	345.82	0.650	0.000	5.00	15.754	10.24	546.9	0.0	747.7
90.00		1.00	1.24	30.710	33.78	335.58	0.650	0.000	5.00	15.206	9.88	534.2	0.0	721.5
94.58	Bot - Section 3	1.00	1.25	31.033	34.14	325.98	0.650	0.000	4.58	13.457	8.75	477.7	0.0	638.3
95.00		1.00	1.25	31.061	34.17	325.10	0.650	0.000	0.42	1.214	0.79	43.1	0.0	91.6
96.75	RB5	1.00	1.26	31.181	34.30	321.38	0.650	0.000	1.75	5.056	3.29	180.4	0.0	381.5
99.42	Top - Section 2	1.00	1.26	31.360	34.50	315.65	0.650	0.000	2.67	7.575	4.92	271.8	0.0	571.5
100.00		1.00	1.27	31.399	34.54	318.00	0.650	0.000	0.58	1.636	1.06	58.8	0.0	46.7
105.00		1.00	1.28	31.723	34.89	307.11	0.650	0.000	5.00	13.719	8.92	497.9	0.0	391.7
110.00		1.00	1.29	32.035	35.24	296.03	0.650	0.000	5.00	13.171	8.56	482.7	0.0	375.9
115.00		1.00	1.30	32.336	35.57	284.77	0.650	0.000	5.00	12.622	8.20	466.9	0.0	360.2
117.25	RT5	1.00	1.31	32.468	35.72	279.65	0.650	0.000	2.25	5.501	3.58	204.3	0.0	157.0
120.00		1.00	1.32	32.627	35.89	273.34	0.650	0.000	2.75	6.573	4.27	245.3	0.0	187.5
125.00		1.00	1.33	32.909	36.20	261.76	0.650	0.000	5.00	11.525	7.49	433.9	0.0	328.7
130.00		1.00	1.34	33.182	36.50	250.03	0.650	0.000	5.00	10.977	7.14	416.7	0.0	312.9
135.00		1.00	1.35	33.446	36.79	238.16	0.650	0.000	5.00	10.428	6.78	399.0	0.0	297.2
137.00	Appurtenance(s)	1.00	1.35	33.550	36.90	233.38	0.650	0.000	2.00	4.018	2.61	154.2	0.0	114.5
140.00		1.00	1.36	33.703	37.07	226.16	0.650	0.000	3.00	5.862	3.81	226.0	0.0	167.0
145.00		1.00	1.37	33.953	37.35	214.04	0.650	0.000	5.00	9.332	6.07	362.5	0.0	265.7
147.00	Appurtenance(s)	1.00	1.37	34.051	37.46	209.15	0.650	0.000	2.00	3.579	2.33	139.4	0.0	101.9
148.50	Top - Section 3	1.00	1.38	34.124	37.54	205.48	0.650	0.000	1.50	2.627	1.71	102.5	0.0	74.7
150.00		1.00	1.38	34.196	37.62	197.63	0.600	0.000	1.50	2.500	1.50	90.3	0.0	141.6
155.00		1.00	1.39	34.433	37.88	198.32	0.600	0.000	5.00	8.333	5.00	303.0	0.0	472.0
157.00	Appurtenance(s)	1.00	1.39	34.526	37.98	198.58	0.600	0.000	2.00	3.333	2.00	121.5	0.0	188.8
158.50		1.00	1.39	34.596	38.06	198.78	0.600	0.000	1.50	2.500	1.50	91.3	0.0	141.6
								Totals:	**158.50**			**16,246.3**		**23,841.9**

Discrete Appurtenance Forces

Structure:	CT46139-A-SBA	**Code:**	EIA/TIA-222-G	8/13/2021	
Site Name:	West Haven-rt15 /Woodbridge	**Exposure:**	C		
Height:	158.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 9	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60

Iterations 24

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	157.00	JAHH-65B-R3B	6	34.526	37.979	0.66	0.80	36.29	493.63	0.000	0.000	2205.47	0.00	0.00
2	157.00	T-Arm	3	34.526	37.979	0.56	0.75	16.88	1440.00	0.000	0.000	1025.43	0.00	0.00
3	157.00	VZS01	3	34.526	37.979	0.55	0.80	7.12	313.56	0.000	0.000	432.71	0.00	0.00
4	157.00	FE-16148-OVP-B12	1	34.526	37.979	0.54	0.80	1.08	18.25	0.000	0.000	65.47	0.00	0.00
5	157.00	CBC78T-DS-43/E14F05P	3	34.526	37.979	0.54	0.80	0.59	37.44	0.000	0.000	36.15	0.00	0.00
6	157.00	B2/B66A RRH-BR049	2	34.526	37.979	0.54	0.80	2.00	168.72	0.000	0.000	121.81	0.00	0.00
7	157.00	B5/B13 RRH-BR04C	2	34.526	37.979	0.54	0.80	2.00	202.56	0.000	0.000	121.81	0.00	0.00
8	147.00	4449 B71 + B85	3	34.051	37.456	0.54	0.80	3.17	263.52	0.000	0.000	189.84	0.00	0.00
9	147.00	RRUS 4415 B25	3	34.051	37.456	0.54	0.80	2.64	165.60	0.000	0.000	158.04	0.00	0.00
10	147.00	ACU-A20-N	4	34.051	37.456	0.54	0.80	0.30	4.80	0.000	0.000	17.99	0.00	0.00
11	147.00	AIR6449 B41	3	34.051	37.456	0.57	0.80	9.63	370.80	0.000	0.000	576.99	0.00	0.00
12	147.00	APXVAARR24_43-U-NA2	3	34.051	37.456	0.56	0.80	34.00	460.80	0.000	0.000	2037.82	0.00	0.00
13	147.00	T-Arm	3	34.051	37.456	0.56	0.75	16.88	1440.00	0.000	0.000	1011.32	0.00	0.00
14	147.00	(3) T-Arm Kit	1	34.051	37.456	0.75	0.75	12.38	600.00	0.000	0.000	741.64	0.00	0.00
15	147.00	ALU 800MHz External	3	34.051	37.456	0.54	0.80	1.25	31.68	0.000	0.000	75.17	0.00	0.00
16	147.00	800 MHz RRH	3	34.051	37.456	0.54	0.80	4.00	190.80	0.000	0.000	239.96	0.00	0.00
17	147.00	KRD 9011461-B66A-B2A	3	34.051	37.456	0.70	0.80	13.59	475.92	0.000	0.000	814.63	0.00	0.00
18	137.00	RA21.7770.00	6	33.550	36.905	0.58	0.80	22.95	267.84	0.000	0.000	1355.22	0.00	0.00
19	137.00	DC6-48-60-18-8F	1	33.550	36.905	0.80	0.80	0.74	38.16	0.000	0.000	43.46	0.00	0.00
20	137.00	T-Arm	3	33.550	36.905	0.56	0.75	16.88	1440.00	0.000	0.000	996.43	0.00	0.00
21	137.00	LGP21401	12	33.550	36.905	0.54	0.80	8.30	203.04	0.000	0.000	489.94	0.00	0.00
22	137.00	RRUS 11	6	33.550	36.905	0.54	0.80	8.10	365.04	0.000	0.000	478.54	0.00	0.00
23	137.00	AM-X-CD-16-65-00T-RET	3	33.550	36.905	0.60	0.80	14.44	174.60	0.000	0.000	852.42	0.00	0.00
							Totals:		**9,166.76**			**14,088.27**		

Total Applied Force Summary

Structure:	CT46139-A-SBA		**Code:**	EIA/TIA-222-G	8/13/2021
Site Name:	West Haven-rt15 /Woodbridge		**Exposure:**	C	
Height:	158.50 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 10

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60

Iterations 24

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		585.38	1343.57	0.00	0.00
7.42		278.57	640.86	0.00	0.00
10.00		293.58	676.46	0.00	0.00
15.00		558.92	1291.07	0.00	0.00
20.00		578.99	1264.82	0.00	0.00
25.00		592.13	1238.57	0.00	0.00
29.75		569.37	1152.33	0.00	0.00
30.00		29.64	59.99	0.00	0.00
35.00		604.01	1186.07	0.00	0.00
40.00		604.98	1159.82	0.00	0.00
45.00		603.52	1133.57	0.00	0.00
46.59		189.41	354.23	0.00	0.00
50.00		413.38	1386.12	0.00	0.00
52.92		351.51	1166.36	0.00	0.00
55.00		248.82	451.80	0.00	0.00
60.00		596.66	1067.48	0.00	0.00
65.00		588.80	1041.23	0.00	0.00
70.00		579.79	1014.98	0.00	0.00
75.00		569.73	988.73	0.00	0.00
80.00		558.72	962.48	0.00	0.00
85.00		546.86	936.23	0.00	0.00
90.00		534.21	909.97	0.00	0.00
94.58		477.74	811.08	0.00	0.00
95.00		43.13	107.31	0.00	0.00
96.75		180.35	447.50	0.00	0.00
99.42		271.77	672.01	0.00	0.00
100.00		58.78	68.72	0.00	0.00
105.00		497.88	580.22	0.00	0.00
110.00		482.68	564.47	0.00	0.00
115.00		466.93	548.72	0.00	0.00
117.25		204.33	241.78	0.00	0.00
120.00		245.33	291.18	0.00	0.00
125.00		433.90	517.22	0.00	0.00
130.00		416.68	501.47	0.00	0.00
135.00		399.02	485.72	0.00	0.00
137.00	(31) attachments	4370.22	2678.56	0.00	0.00
140.00		226.03	231.71	0.00	0.00
145.00		362.46	373.58	0.00	0.00
147.00	(29) attachments	6002.82	4148.94	0.00	0.00
148.50		102.54	101.17	0.00	0.00
150.00		90.28	168.03	0.00	0.00
155.00		303.01	560.12	0.00	0.00
157.00	(20) attachments	4130.40	2898.21	0.00	0.00
158.50		91.33	141.61	0.00	0.00
	Totals:	**30,334.59**	**38,566.04**	**0.00**	**0.00**

Linear Appurtenance Segment Forces (Factored)

Structure:	CT46139-A-SBA	**Code:**	EIA/TIA-222-G	8/13/2021	
Site Name:	West Haven-rt15 /Woodbridge	**Exposure:**	C		
Height:	158.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 11	

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60

Iterations 24

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	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.052	0.000	21.088	0.00	0.00
7.42	1.25" Reinforcing	Yes	2.42	0.000	3.00	0.60	0.00	0.052	0.000	21.088	0.00	0.00
10.00	1.25" Reinforcing	Yes	1.08	0.000	1.50	0.14	0.00	0.042	0.000	21.088	0.00	0.00
10.00	1.25" Reinforcing	Yes	1.50	0.000	3.00	0.38	0.00	0.042	0.000	21.088	0.00	0.00
15.00	1.25" Reinforcing	Yes	5.00	0.000	1.50	0.63	0.00	0.027	0.000	21.088	0.00	0.00
20.00	1.25" Reinforcing	Yes	5.00	0.000	1.50	0.63	0.00	0.028	0.000	22.375	0.00	0.00
25.00	1.25" Reinforcing	Yes	5.00	0.000	1.50	0.63	0.00	0.028	0.000	23.451	0.00	0.00
29.75	1.25" Reinforcing	Yes	4.75	0.000	1.50	0.59	0.00	0.029	0.000	24.326	0.00	0.00
30.00	1.25" Reinforcing	Yes	0.25	0.000	1.50	0.03	0.00	0.029	0.000	24.369	0.00	0.00
35.00	1.25" Reinforcing	Yes	5.00	0.000	1.50	0.63	0.00	0.030	0.000	25.172	0.00	0.00
40.00	1.25" Reinforcing	Yes	5.00	0.000	1.50	0.63	0.00	0.031	0.000	25.890	0.00	0.00
45.00	1.25" Reinforcing	Yes	5.00	0.000	1.50	0.63	0.00	0.031	0.000	26.540	0.00	0.00
46.59	1.25" Reinforcing	Yes	1.59	0.000	1.50	0.20	0.00	0.032	0.000	26.734	0.00	0.00
50.00	1.25" Reinforcing	Yes	3.41	0.000	1.50	0.43	0.00	0.032	0.000	27.135	0.00	0.00
52.92	1.25" Reinforcing	Yes	2.92	0.000	1.50	0.37	0.00	0.033	0.000	27.461	0.00	0.00
55.00	1.25" Reinforcing	Yes	0.08	0.000	1.50	0.01	0.00	0.001	0.000	27.685	0.00	0.00
94.58	1.25" Reinforcing	Yes	0.08	0.000	1.50	0.01	0.00	0.001	0.000	31.033	0.00	0.00
95.00	1.25" Reinforcing	Yes	0.42	0.000	1.50	0.05	0.00	0.043	0.000	31.061	0.00	0.00
96.75	1.25" Reinforcing	Yes	1.75	0.000	1.50	0.22	0.00	0.044	0.000	31.181	0.00	0.00
99.42	1.25" Reinforcing	Yes	2.67	0.000	1.50	0.33	0.00	0.044	0.000	31.360	0.00	0.00
100.00	1.25" Reinforcing	Yes	0.58	0.000	1.50	0.07	0.00	0.045	0.000	31.399	0.00	0.00
105.00	1.25" Reinforcing	Yes	4.50	0.000	1.50	0.56	0.00	0.041	0.000	31.723	0.00	0.00
										Totals:	**0.0**	**0.0**

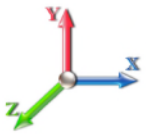
Calculated Forces

Structure:	CT46139-A-SBA	**Code:**	EIA/TIA-222-G	8/13/2021	
Site Name:	West Haven-rt15 /Woodbridge	**Exposure:**	C		
Height:	158.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 12	

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 24

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	-38.53	-30.37	0.00	-3375.1	0.00	3375.17	3324.94	1662.47	7900.55	3956.15	0.00	0.000	0.000	0.509
5.00	-37.15	-29.84	0.00	-3223.3	0.00	3223.30	3293.53	1646.77	7649.11	3830.24	0.06	-0.115	0.000	0.497
7.42	-36.48	-29.60	0.00	-3151.0	0.00	3151.09	3277.61	1638.81	7526.99	3769.09	0.14	-0.172	0.000	0.522
10.00	-35.75	-29.36	0.00	-3074.7	0.00	3074.72	3260.13	1630.06	7396.53	3703.76	0.25	-0.237	0.000	0.515
15.00	-34.40	-28.87	0.00	-2927.9	0.00	2927.90	3224.74	1612.37	7143.12	3576.87	0.56	-0.361	0.000	0.503
20.00	-33.08	-28.36	0.00	-2783.5	0.00	2783.54	3187.35	1593.68	6889.21	3449.73	1.01	-0.487	0.000	0.491
25.00	-31.78	-27.82	0.00	-2641.7	0.00	2641.75	3147.98	1573.99	6635.12	3322.49	1.59	-0.615	0.000	0.478
29.75	-30.61	-27.28	0.00	-2509.5	0.00	2509.59	3108.73	1554.36	6393.85	3201.68	2.26	-0.738	0.000	0.487
30.00	-30.51	-27.28	0.00	-2502.7	0.00	2502.77	3106.61	1553.31	6381.16	3195.32	2.30	-0.745	0.000	0.487
35.00	-29.27	-26.73	0.00	-2366.3	0.00	2366.36	3063.26	1531.63	6127.67	3068.39	3.15	-0.881	0.000	0.474
40.00	-28.06	-26.18	0.00	-2232.6	0.00	2232.69	3017.91	1508.96	5874.95	2941.84	4.15	-1.019	0.000	0.461
45.00	-26.90	-25.59	0.00	-2101.8	0.00	2101.81	2970.57	1485.29	5623.33	2815.85	5.29	-1.158	0.000	0.448
46.59	-26.51	-25.43	0.00	-2061.2	0.00	2061.21	2955.13	1477.57	5543.77	2776.00	5.68	-1.203	0.000	0.444
50.00	-25.10	-25.03	0.00	-1974.4	0.00	1974.40	2921.24	1460.62	5373.14	2690.56	6.58	-1.301	0.000	0.430
52.92	-23.90	-24.69	0.00	-1901.3	0.00	1901.32	2916.11	1458.05	5347.75	2677.85	7.40	-1.384	0.000	0.719
55.00	-23.38	-24.50	0.00	-1849.9	0.00	1849.98	2894.92	1447.46	5244.24	2626.02	8.03	-1.488	0.000	0.713
60.00	-22.23	-23.96	0.00	-1727.4	0.00	1727.49	2842.57	1421.28	4996.81	2502.12	9.71	-1.725	0.000	0.699
65.00	-21.11	-23.43	0.00	-1607.6	0.00	1607.67	2788.22	1394.11	4751.61	2379.34	11.65	-1.967	0.000	0.684
70.00	-20.02	-22.90	0.00	-1490.5	0.00	1490.51	2731.89	1365.95	4508.96	2257.83	13.84	-2.214	0.000	0.668
75.00	-18.95	-22.38	0.00	-1375.9	0.00	1375.99	2673.57	1336.78	4269.18	2137.76	16.30	-2.465	0.000	0.651
80.00	-17.92	-21.86	0.00	-1264.1	0.00	1264.10	2613.25	1306.63	4032.59	2019.29	19.02	-2.720	0.000	0.633
85.00	-16.91	-21.34	0.00	-1154.8	0.00	1154.82	2550.95	1275.47	3799.51	1902.58	22.00	-2.979	0.000	0.614
90.00	-15.94	-20.83	0.00	-1048.1	0.00	1048.12	2486.65	1243.33	3570.26	1787.78	25.26	-3.241	0.000	0.593
94.58	-15.12	-20.34	0.00	-952.65	0.00	952.65	2425.96	1212.98	3363.76	1684.38	28.49	-3.485	0.000	0.572
95.00	-14.99	-20.31	0.00	-944.18	0.00	944.18	2420.36	1210.18	3345.16	1675.07	28.80	-3.508	0.000	0.570
96.75	-14.52	-20.12	0.00	-908.65	0.00	908.65	2396.69	1198.35	3267.42	1636.14	30.10	-3.604	0.000	0.317
99.42	-13.85	-19.82	0.00	-854.99	0.00	854.99	1173.34	586.67	1596.31	799.34	32.14	-3.686	0.000	0.380
100.00	-13.75	-19.78	0.00	-843.43	0.00	843.43	1170.92	585.46	1585.67	794.02	32.59	-3.704	0.000	0.475
105.00	-13.14	-19.29	0.00	-744.54	0.00	744.54	1149.02	574.51	1494.34	748.28	36.57	-3.891	0.000	0.434
110.00	-12.56	-18.80	0.00	-648.10	0.00	648.10	1125.14	562.57	1402.88	702.48	40.74	-4.070	0.000	0.392
115.00	-12.00	-18.32	0.00	-554.08	0.00	554.08	1099.26	549.63	1311.60	656.78	45.09	-4.242	0.000	0.349
117.25	-11.75	-18.12	0.00	-512.85	0.00	512.85	1086.96	543.48	1270.68	636.28	47.11	-4.317	0.000	0.329
117.25	-11.75	-18.12	0.00	-512.85	0.00	512.85	1086.96	543.48	1270.68	636.28	47.11	-4.317	0.000	0.329
120.00	-11.41	-17.90	0.00	-463.02	0.00	463.02	1071.39	535.70	1220.84	611.33	49.62	-4.406	0.000	0.769
125.00	-10.82	-17.49	0.00	-373.52	0.00	373.52	1041.53	520.77	1130.90	566.29	54.43	-4.779	0.000	0.671
130.00	-10.26	-17.09	0.00	-286.05	0.00	286.05	1009.68	504.84	1042.12	521.83	59.62	-5.117	0.000	0.559
135.00	-9.76	-16.68	0.00	-200.58	0.00	200.58	975.84	487.92	954.81	478.11	65.14	-5.408	0.000	0.431
137.00	-7.48	-12.09	0.00	-167.22	0.00	167.22	961.75	480.87	920.37	460.87	67.42	-5.511	0.000	0.371
140.00	-7.24	-11.87	0.00	-130.94	0.00	130.94	940.01	470.00	869.29	435.29	70.93	-5.645	0.000	0.309
145.00	-6.89	-11.48	0.00	-71.61	0.00	71.61	902.19	451.09	785.88	393.52	76.93	-5.813	0.000	0.190
147.00	-3.37	-5.09	0.00	-48.65	0.00	48.65	886.50	443.25	753.18	377.15	79.37	-5.861	0.000	0.133
148.50	-3.27	-4.98	0.00	-41.01	0.00	41.01	874.53	437.26	728.93	365.00	81.21	-5.889	0.000	0.116
148.50	-3.27	-4.98	0.00	-41.01	0.00	41.01	728.28	364.14	584.01	379.17	81.21	-5.889	0.000	0.113
150.00	-3.11	-4.87	0.00	-33.55	0.00	33.55	728.28	364.14	584.01	379.17	83.06	-5.915	0.000	0.093
155.00	-2.59	-4.51	0.00	-9.19	0.00	9.19	728.28	364.14	584.01	379.17	89.27	-5.942	0.000	0.028
157.00	-0.13	-0.11	0.00	-0.16	0.00	0.16	728.28	364.14	584.01	379.17	91.75	-5.944	0.000	0.001
158.50	0.00	-0.09	0.00	0.00	0.00	0.00	728.28	364.14	584.01	379.17	93.62	-5.944	0.000	0.000

Calculated Forces

Structure:	CT46139-A-SBA		**Code:**	EIA/TIA-222-G	8/13/2021
Site Name:	West Haven-rt15 /Woodbridge		**Exposure:**	C	
Height:	158.50 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 13

Wind Loading - Shaft

Structure:	CT46139-A-SBA	**Code:**	EIA/TIA-222-G	8/13/2021	
Site Name:	West Haven-rt15 /Woodbridge	**Exposure:**	C		
Height:	158.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 14	

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60

Iterations 24

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00	RB1 RB2	1.00	0.85	21.088	23.20	457.01	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	21.088	23.20	446.80	0.650	0.000	5.00	24.265	15.77	585.4	0.0	866.3
7.42	RT2 RB3	1.00	0.85	21.088	23.20	441.85	0.650	0.000	2.42	11.547	7.51	278.6	0.0	412.2
10.00		1.00	0.85	21.088	23.20	436.58	0.650	0.000	2.58	12.169	7.91	293.6	0.0	434.4
15.00		1.00	0.85	21.088	23.20	426.37	0.650	0.000	5.00	23.168	15.06	558.9	0.0	826.9
20.00		1.00	0.90	22.375	24.61	428.67	0.650	0.000	5.00	22.620	14.70	579.0	0.0	807.2
25.00		1.00	0.95	23.451	25.80	428.08	0.650	0.000	5.00	22.071	14.35	592.1	0.0	787.5
29.75	RT1 RT3 RB4	1.00	0.98	24.326	26.76	425.57	0.650	0.000	4.75	20.460	13.30	569.4	0.0	729.9
30.00		1.00	0.98	24.369	26.81	425.40	0.650	0.000	0.25	1.063	0.69	29.6	0.0	37.9
35.00		1.00	1.01	25.172	27.69	421.20	0.650	0.000	5.00	20.975	13.63	604.0	0.0	748.2
40.00		1.00	1.04	25.890	28.48	415.84	0.650	0.000	5.00	20.426	13.28	605.0	0.0	728.5
45.00		1.00	1.07	26.540	29.19	409.57	0.650	0.000	5.00	19.878	12.92	603.5	0.0	708.8
46.59	Bot - Section 2	1.00	1.08	26.734	29.41	407.42	0.650	0.000	1.59	6.193	4.03	189.4	0.0	220.8
50.00	RT4	1.00	1.09	27.135	29.85	402.55	0.650	0.000	3.41	13.316	8.66	413.4	0.0	943.1
52.92	Top - Section 1	1.00	1.11	27.461	30.21	398.16	0.650	0.000	2.92	11.189	7.27	351.5	0.0	792.2
55.00		1.00	1.12	27.685	30.45	400.55	0.650	0.000	2.08	7.856	5.11	248.8	0.0	280.0
60.00		1.00	1.14	28.197	31.02	392.43	0.650	0.000	5.00	18.497	12.02	596.7	0.0	659.2
65.00		1.00	1.16	28.676	31.54	383.83	0.650	0.000	5.00	17.948	11.67	588.8	0.0	639.5
70.00		1.00	1.17	29.127	32.04	374.84	0.650	0.000	5.00	17.400	11.31	579.8	0.0	619.8
75.00		1.00	1.19	29.553	32.51	365.48	0.650	0.000	5.00	16.851	10.95	569.7	0.0	600.2
80.00		1.00	1.21	29.958	32.95	355.79	0.650	0.000	5.00	16.303	10.60	558.7	0.0	580.5
85.00		1.00	1.22	30.342	33.38	345.82	0.650	0.000	5.00	15.754	10.24	546.9	0.0	560.8
90.00		1.00	1.24	30.710	33.78	335.58	0.650	0.000	5.00	15.206	9.88	534.2	0.0	541.1
94.58	Bot - Section 3	1.00	1.25	31.033	34.14	325.98	0.650	0.000	4.58	13.457	8.75	477.7	0.0	478.7
95.00		1.00	1.25	31.061	34.17	325.10	0.650	0.000	0.42	1.214	0.79	43.1	0.0	68.7
96.75	RB5	1.00	1.26	31.181	34.30	321.38	0.650	0.000	1.75	5.056	3.29	180.4	0.0	286.1
99.42	Top - Section 2	1.00	1.26	31.360	34.50	315.65	0.650	0.000	2.67	7.575	4.92	271.8	0.0	428.6
100.00		1.00	1.27	31.399	34.54	318.00	0.650	0.000	0.58	1.636	1.06	58.8	0.0	35.0
105.00		1.00	1.28	31.723	34.89	307.11	0.650	0.000	5.00	13.719	8.92	497.9	0.0	293.8
110.00		1.00	1.29	32.035	35.24	296.03	0.650	0.000	5.00	13.171	8.56	482.7	0.0	282.0
115.00		1.00	1.30	32.336	35.57	284.77	0.650	0.000	5.00	12.622	8.20	466.9	0.0	270.1
117.25	RT5	1.00	1.31	32.468	35.72	279.65	0.650	0.000	2.25	5.501	3.58	204.3	0.0	117.7
120.00		1.00	1.32	32.627	35.89	273.34	0.650	0.000	2.75	6.573	4.27	245.3	0.0	140.6
125.00		1.00	1.33	32.909	36.20	261.76	0.650	0.000	5.00	11.525	7.49	433.9	0.0	246.5
130.00		1.00	1.34	33.182	36.50	250.03	0.650	0.000	5.00	10.977	7.14	416.7	0.0	234.7
135.00		1.00	1.35	33.446	36.79	238.16	0.650	0.000	5.00	10.428	6.78	399.0	0.0	222.9
137.00	Appurtenance(s)	1.00	1.35	33.550	36.90	233.38	0.650	0.000	2.00	4.018	2.61	154.2	0.0	85.9
140.00		1.00	1.36	33.703	37.07	226.16	0.650	0.000	3.00	5.862	3.81	226.0	0.0	125.2
145.00		1.00	1.37	33.953	37.35	214.04	0.650	0.000	5.00	9.332	6.07	362.5	0.0	199.3
147.00	Appurtenance(s)	1.00	1.37	34.051	37.46	209.15	0.650	0.000	2.00	3.579	2.33	139.4	0.0	76.4
148.50	Top - Section 3	1.00	1.38	34.124	37.54	205.48	0.650	0.000	1.50	2.627	1.71	102.5	0.0	56.1
150.00		1.00	1.38	34.196	37.62	197.63	0.600	0.000	1.50	2.500	1.50	90.3	0.0	106.2
155.00		1.00	1.39	34.433	37.88	198.32	0.600	0.000	5.00	8.333	5.00	303.0	0.0	354.0
157.00	Appurtenance(s)	1.00	1.39	34.526	37.98	198.58	0.600	0.000	2.00	3.333	2.00	121.5	0.0	141.6
158.50		1.00	1.39	34.596	38.06	198.78	0.600	0.000	1.50	2.500	1.50	91.3	0.0	106.2
								Totals:	**158.50**			**16,246.3**		**17,881.4**

Discrete Appurtenance Forces

Structure:	CT46139-A-SBA	**Code:**	EIA/TIA-222-G	8/13/2021	
Site Name:	West Haven-rt15 /Woodbridge	**Exposure:**	C		
Height:	158.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 15	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60

Iterations 24

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	157.00	JAHH-65B-R3B	6	34.526	37.979	0.66	0.80	36.29	370.22	0.000	0.000	2205.47	0.00	0.00
2	157.00	T-Arm	3	34.526	37.979	0.56	0.75	16.88	1080.00	0.000	0.000	1025.43	0.00	0.00
3	157.00	VZS01	3	34.526	37.979	0.55	0.80	7.12	235.17	0.000	0.000	432.71	0.00	0.00
4	157.00	FE-16148-OVP-B12	1	34.526	37.979	0.54	0.80	1.08	13.69	0.000	0.000	65.47	0.00	0.00
5	157.00	CBC78T-DS-43/E14F05P	3	34.526	37.979	0.54	0.80	0.59	28.08	0.000	0.000	36.15	0.00	0.00
6	157.00	B2/B66A RRH-BR049	2	34.526	37.979	0.54	0.80	2.00	126.54	0.000	0.000	121.81	0.00	0.00
7	157.00	B5/B13 RRH-BR04C	2	34.526	37.979	0.54	0.80	2.00	151.92	0.000	0.000	121.81	0.00	0.00
8	147.00	4449 B71 + B85	3	34.051	37.456	0.54	0.80	3.17	197.64	0.000	0.000	189.84	0.00	0.00
9	147.00	RRUS 4415 B25	3	34.051	37.456	0.54	0.80	2.64	124.20	0.000	0.000	158.04	0.00	0.00
10	147.00	ACU-A20-N	4	34.051	37.456	0.54	0.80	0.30	3.60	0.000	0.000	17.99	0.00	0.00
11	147.00	AIR6449 B41	3	34.051	37.456	0.57	0.80	9.63	278.10	0.000	0.000	576.99	0.00	0.00
12	147.00	APXVAARR24_43-U-NA2	3	34.051	37.456	0.56	0.80	34.00	345.60	0.000	0.000	2037.82	0.00	0.00
13	147.00	T-Arm	3	34.051	37.456	0.56	0.75	16.88	1080.00	0.000	0.000	1011.32	0.00	0.00
14	147.00	(3) T-Arm Kit	1	34.051	37.456	0.75	0.75	12.38	450.00	0.000	0.000	741.64	0.00	0.00
15	147.00	ALU 800MHz External	3	34.051	37.456	0.54	0.80	1.25	23.76	0.000	0.000	75.17	0.00	0.00
16	147.00	800 MHz RRH	3	34.051	37.456	0.54	0.80	4.00	143.10	0.000	0.000	239.96	0.00	0.00
17	147.00	KRD 9011461-B66A-B2A	3	34.051	37.456	0.70	0.80	13.59	356.94	0.000	0.000	814.63	0.00	0.00
18	137.00	RA21.7770.00	6	33.550	36.905	0.58	0.80	22.95	200.88	0.000	0.000	1355.22	0.00	0.00
19	137.00	DC6-48-60-18-8F	1	33.550	36.905	0.80	0.80	0.74	28.62	0.000	0.000	43.46	0.00	0.00
20	137.00	T-Arm	3	33.550	36.905	0.56	0.75	16.88	1080.00	0.000	0.000	996.43	0.00	0.00
21	137.00	LGP21401	12	33.550	36.905	0.54	0.80	8.30	152.28	0.000	0.000	489.94	0.00	0.00
22	137.00	RRUS 11	6	33.550	36.905	0.54	0.80	8.10	273.78	0.000	0.000	478.54	0.00	0.00
23	137.00	AM-X-CD-16-65-00T-RET	3	33.550	36.905	0.60	0.80	14.44	130.95	0.000	0.000	852.42	0.00	0.00
							Totals:		**6,875.07**			**14,088.27**		

Total Applied Force Summary

Structure:	CT46139-A-SBA		**Code:**	EIA/TIA-222-G	8/13/2021
Site Name:	West Haven-rt15 /Woodbridge		**Exposure:**	C	
Height:	158.50 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 16

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60

Iterations 24

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		585.38	1007.68	0.00	0.00
7.42		278.57	480.65	0.00	0.00
10.00		293.58	507.34	0.00	0.00
15.00		558.92	968.30	0.00	0.00
20.00		578.99	948.61	0.00	0.00
25.00		592.13	928.93	0.00	0.00
29.75		569.37	864.25	0.00	0.00
30.00		29.64	44.99	0.00	0.00
35.00		604.01	889.55	0.00	0.00
40.00		604.98	869.86	0.00	0.00
45.00		603.52	850.18	0.00	0.00
46.59		189.41	265.67	0.00	0.00
50.00		413.38	1039.59	0.00	0.00
52.92		351.51	874.77	0.00	0.00
55.00		248.82	338.85	0.00	0.00
60.00		596.66	800.61	0.00	0.00
65.00		588.80	780.92	0.00	0.00
70.00		579.79	761.23	0.00	0.00
75.00		569.73	741.54	0.00	0.00
80.00		558.72	721.86	0.00	0.00
85.00		546.86	702.17	0.00	0.00
90.00		534.21	682.48	0.00	0.00
94.58		477.74	608.31	0.00	0.00
95.00		43.13	80.48	0.00	0.00
96.75		180.35	335.63	0.00	0.00
99.42		271.77	504.01	0.00	0.00
100.00		58.78	51.54	0.00	0.00
105.00		497.88	435.16	0.00	0.00
110.00		482.68	423.35	0.00	0.00
115.00		466.93	411.54	0.00	0.00
117.25		204.33	181.34	0.00	0.00
120.00		245.33	218.39	0.00	0.00
125.00		433.90	387.91	0.00	0.00
130.00		416.68	376.10	0.00	0.00
135.00		399.02	364.29	0.00	0.00
137.00	(31) attachments	4370.22	2008.92	0.00	0.00
140.00		226.03	173.78	0.00	0.00
145.00		362.46	280.18	0.00	0.00
147.00	(29) attachments	6002.82	3111.71	0.00	0.00
148.50		102.54	75.88	0.00	0.00
150.00		90.28	126.03	0.00	0.00
155.00		303.01	420.09	0.00	0.00
157.00	(20) attachments	4130.40	2173.66	0.00	0.00
158.50		91.33	106.21	0.00	0.00
	Totals:	**30,334.59**	**28,924.53**	**0.00**	**0.00**

Linear Appurtenance Segment Forces (Factored)

Structure:	CT46139-A-SBA	**Code:**	EIA/TIA-222-G	8/13/2021	
Site Name:	West Haven-rt15 /Woodbridge	**Exposure:**	C		
Height:	158.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 17	

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60

Iterations 24

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	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.052	0.000	21.088	0.00	0.00
7.42	1.25" Reinforcing	Yes	2.42	0.000	3.00	0.60	0.00	0.052	0.000	21.088	0.00	0.00
10.00	1.25" Reinforcing	Yes	1.08	0.000	1.50	0.14	0.00	0.042	0.000	21.088	0.00	0.00
10.00	1.25" Reinforcing	Yes	1.50	0.000	3.00	0.38	0.00	0.042	0.000	21.088	0.00	0.00
15.00	1.25" Reinforcing	Yes	5.00	0.000	1.50	0.63	0.00	0.027	0.000	21.088	0.00	0.00
20.00	1.25" Reinforcing	Yes	5.00	0.000	1.50	0.63	0.00	0.028	0.000	22.375	0.00	0.00
25.00	1.25" Reinforcing	Yes	5.00	0.000	1.50	0.63	0.00	0.028	0.000	23.451	0.00	0.00
29.75	1.25" Reinforcing	Yes	4.75	0.000	1.50	0.59	0.00	0.029	0.000	24.326	0.00	0.00
30.00	1.25" Reinforcing	Yes	0.25	0.000	1.50	0.03	0.00	0.029	0.000	24.369	0.00	0.00
35.00	1.25" Reinforcing	Yes	5.00	0.000	1.50	0.63	0.00	0.030	0.000	25.172	0.00	0.00
40.00	1.25" Reinforcing	Yes	5.00	0.000	1.50	0.63	0.00	0.031	0.000	25.890	0.00	0.00
45.00	1.25" Reinforcing	Yes	5.00	0.000	1.50	0.63	0.00	0.031	0.000	26.540	0.00	0.00
46.59	1.25" Reinforcing	Yes	1.59	0.000	1.50	0.20	0.00	0.032	0.000	26.734	0.00	0.00
50.00	1.25" Reinforcing	Yes	3.41	0.000	1.50	0.43	0.00	0.032	0.000	27.135	0.00	0.00
52.92	1.25" Reinforcing	Yes	2.92	0.000	1.50	0.37	0.00	0.033	0.000	27.461	0.00	0.00
55.00	1.25" Reinforcing	Yes	0.08	0.000	1.50	0.01	0.00	0.001	0.000	27.685	0.00	0.00
94.58	1.25" Reinforcing	Yes	0.08	0.000	1.50	0.01	0.00	0.001	0.000	31.033	0.00	0.00
95.00	1.25" Reinforcing	Yes	0.42	0.000	1.50	0.05	0.00	0.043	0.000	31.061	0.00	0.00
96.75	1.25" Reinforcing	Yes	1.75	0.000	1.50	0.22	0.00	0.044	0.000	31.181	0.00	0.00
99.42	1.25" Reinforcing	Yes	2.67	0.000	1.50	0.33	0.00	0.044	0.000	31.360	0.00	0.00
100.00	1.25" Reinforcing	Yes	0.58	0.000	1.50	0.07	0.00	0.045	0.000	31.399	0.00	0.00
105.00	1.25" Reinforcing	Yes	4.50	0.000	1.50	0.56	0.00	0.041	0.000	31.723	0.00	0.00
										Totals:	**0.0**	**0.0**

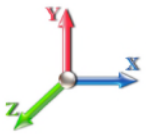
Calculated Forces

Structure:	CT46139-A-SBA	**Code:**	EIA/TIA-222-G	8/13/2021	
Site Name:	West Haven-rt15 /Woodbridge	**Exposure:**	C		
Height:	158.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 18	

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 24

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-28.89	-30.36	0.00	-3346.9	0.00	3346.92	3324.94	1662.47	7900.55	3956.15	0.00	0.000	0.000	0.504
5.00	-27.84	-29.82	0.00	-3195.1	0.00	3195.11	3293.53	1646.77	7649.11	3830.24	0.06	-0.114	0.000	0.491
7.42	-27.33	-29.57	0.00	-3122.9	0.00	3122.95	3277.61	1638.81	7526.99	3769.09	0.13	-0.170	0.000	0.515
10.00	-26.78	-29.32	0.00	-3046.6	0.00	3046.67	3260.13	1630.06	7396.53	3703.76	0.24	-0.234	0.000	0.509
15.00	-25.75	-28.81	0.00	-2900.0	0.00	2900.09	3224.74	1612.37	7143.12	3576.87	0.56	-0.358	0.000	0.497
20.00	-24.74	-28.28	0.00	-2756.0	0.00	2756.06	3187.35	1593.68	6889.21	3449.73	1.00	-0.483	0.000	0.484
25.00	-23.76	-27.73	0.00	-2614.6	0.00	2614.68	3147.98	1573.99	6635.12	3322.49	1.57	-0.609	0.000	0.472
29.75	-22.87	-27.17	0.00	-2482.9	0.00	2482.98	3108.73	1554.36	6393.85	3201.68	2.24	-0.731	0.000	0.481
30.00	-22.79	-27.17	0.00	-2476.1	0.00	2476.19	3106.61	1553.31	6381.16	3195.32	2.28	-0.738	0.000	0.480
35.00	-21.85	-26.61	0.00	-2340.3	0.00	2340.34	3063.26	1531.63	6127.67	3068.39	3.12	-0.872	0.000	0.467
40.00	-20.93	-26.04	0.00	-2207.3	0.00	2207.31	3017.91	1508.96	5874.95	2941.84	4.11	-1.009	0.000	0.454
45.00	-20.05	-25.45	0.00	-2077.1	0.00	2077.13	2970.57	1485.29	5623.33	2815.85	5.24	-1.146	0.000	0.441
46.59	-19.76	-25.28	0.00	-2036.7	0.00	2036.75	2955.13	1477.57	5543.77	2776.00	5.63	-1.191	0.000	0.437
50.00	-18.69	-24.87	0.00	-1950.4	0.00	1950.47	2921.24	1460.62	5373.14	2690.56	6.52	-1.287	0.000	0.423
52.92	-17.78	-24.53	0.00	-1877.8	0.00	1877.84	2916.11	1458.05	5347.75	2677.85	7.33	-1.369	0.000	0.708
55.00	-17.38	-24.32	0.00	-1826.8	0.00	1826.82	2894.92	1447.46	5244.24	2626.02	7.95	-1.472	0.000	0.702
60.00	-16.49	-23.77	0.00	-1705.2	0.00	1705.21	2842.57	1421.28	4996.81	2502.12	9.62	-1.707	0.000	0.688
65.00	-15.63	-23.23	0.00	-1586.3	0.00	1586.34	2788.22	1394.11	4751.61	2379.34	11.53	-1.946	0.000	0.673
70.00	-14.80	-22.68	0.00	-1470.2	0.00	1470.22	2731.89	1365.95	4508.96	2257.83	13.70	-2.189	0.000	0.657
75.00	-13.98	-22.14	0.00	-1356.8	0.00	1356.80	2673.57	1336.78	4269.18	2137.76	16.13	-2.437	0.000	0.640
80.00	-13.19	-21.61	0.00	-1246.0	0.00	1246.08	2613.25	1306.63	4032.59	2019.29	18.81	-2.688	0.000	0.622
85.00	-12.42	-21.09	0.00	-1138.0	0.00	1138.02	2550.95	1275.47	3799.51	1902.58	21.77	-2.943	0.000	0.603
90.00	-11.68	-20.57	0.00	-1032.5	0.00	1032.58	2486.65	1243.33	3570.26	1787.78	24.99	-3.201	0.000	0.583
94.58	-11.06	-20.08	0.00	-938.31	0.00	938.31	2425.96	1212.98	3363.76	1684.38	28.18	-3.441	0.000	0.562
95.00	-10.96	-20.05	0.00	-929.94	0.00	929.94	2420.36	1210.18	3345.16	1675.07	28.48	-3.464	0.000	0.560
96.75	-10.60	-19.86	0.00	-894.87	0.00	894.87	2396.69	1198.35	3267.42	1636.14	29.77	-3.559	0.000	0.311
99.42	-10.10	-19.57	0.00	-841.90	0.00	841.90	1173.34	586.67	1596.31	799.34	31.77	-3.640	0.000	0.373
100.00	-10.02	-19.52	0.00	-830.49	0.00	830.49	1170.92	585.46	1585.67	794.02	32.22	-3.658	0.000	0.467
105.00	-9.56	-19.03	0.00	-732.88	0.00	732.88	1149.02	574.51	1494.34	748.28	36.15	-3.841	0.000	0.426
110.00	-9.11	-18.54	0.00	-637.74	0.00	637.74	1125.14	562.57	1402.88	702.48	40.26	-4.018	0.000	0.385
115.00	-8.70	-18.07	0.00	-545.02	0.00	545.02	1099.26	549.63	1311.60	656.78	44.56	-4.186	0.000	0.342
117.25	-8.51	-17.86	0.00	-504.37	0.00	504.37	1086.96	543.48	1270.68	636.28	46.55	-4.261	0.000	0.322
117.25	-8.51	-17.86	0.00	-504.37	0.00	504.37	1086.96	543.48	1270.68	636.28	46.55	-4.261	0.000	0.322
120.00	-8.23	-17.64	0.00	-455.25	0.00	455.25	1071.39	535.70	1220.84	611.33	49.03	-4.348	0.000	0.753
125.00	-7.78	-17.22	0.00	-367.07	0.00	367.07	1041.53	520.77	1130.90	566.29	53.78	-4.714	0.000	0.657
130.00	-7.35	-16.81	0.00	-280.98	0.00	280.98	1009.68	504.84	1042.12	521.83	58.90	-5.047	0.000	0.547
135.00	-6.97	-16.41	0.00	-196.91	0.00	196.91	975.84	487.92	954.81	478.11	64.34	-5.333	0.000	0.420
137.00	-5.35	-11.88	0.00	-164.10	0.00	164.10	961.75	480.87	920.37	460.87	66.59	-5.434	0.000	0.362
140.00	-5.17	-11.65	0.00	-128.47	0.00	128.47	940.01	470.00	869.29	435.29	70.05	-5.565	0.000	0.301
145.00	-4.91	-11.27	0.00	-70.23	0.00	70.23	902.19	451.09	785.88	393.52	75.96	-5.730	0.000	0.185
147.00	-2.41	-4.99	0.00	-47.69	0.00	47.69	886.50	443.25	753.18	377.15	78.37	-5.777	0.000	0.129
148.50	-2.34	-4.88	0.00	-40.21	0.00	40.21	874.53	437.26	728.93	365.00	80.19	-5.805	0.000	0.113
148.50	-2.34	-4.88	0.00	-40.21	0.00	40.21	728.28	364.14	584.01	379.17	80.19	-5.805	0.000	0.109
150.00	-2.23	-4.78	0.00	-32.90	0.00	32.90	728.28	364.14	584.01	379.17	82.01	-5.830	0.000	0.090
155.00	-1.84	-4.43	0.00	-9.02	0.00	9.02	728.28	364.14	584.01	379.17	88.12	-5.856	0.000	0.026
157.00	-0.10	-0.10	0.00	-0.15	0.00	0.15	728.28	364.14	584.01	379.17	90.57	-5.859	0.000	0.001
158.50	0.00	-0.09	0.00	0.00	0.00	0.00	728.28	364.14	584.01	379.17	92.41	-5.859	0.000	0.000

Calculated Forces

Structure:	CT46139-A-SBA		**Code:**	EIA/TIA-222-G	8/13/2021
Site Name:	West Haven-rt15 /Woodbridge		**Exposure:**	C	
Height:	158.50 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 19

Wind Loading - Shaft

Structure:	CT46139-A-SBA	**Code:**	EIA/TIA-222-G	8/13/2021	
Site Name:	West Haven-rt15 /Woodbridge	**Exposure:**	C		
Height:	158.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 20	

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 24

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00	RB1 RB2	1.00	0.85	5.168	5.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	5.168	5.68	0.00	1.200	1.242	5.00	25.300	30.36	172.6	446.3	1601.3
7.42	RT2 RB3	1.00	0.85	5.168	5.68	0.00	1.200	1.292	2.42	12.069	14.48	82.3	222.5	772.1
10.00		1.00	0.85	5.168	5.68	0.00	1.200	1.331	2.58	12.742	15.29	86.9	241.7	820.8
15.00		1.00	0.85	5.168	5.68	0.00	1.200	1.386	5.00	24.324	29.19	165.9	477.0	1579.6
20.00		1.00	0.90	5.483	6.03	0.00	1.200	1.427	5.00	23.809	28.57	172.3	479.8	1556.1
25.00		1.00	0.95	5.747	6.32	0.00	1.200	1.459	5.00	23.287	27.94	176.7	479.2	1529.3
29.75	RT1 RT3 RB4	1.00	0.98	5.962	6.56	0.00	1.200	1.485	4.75	21.635	25.96	170.3	452.7	1425.9
30.00		1.00	0.98	5.972	6.57	0.00	1.200	1.486	0.25	1.125	1.35	8.9	23.8	74.4
35.00		1.00	1.01	6.169	6.79	0.00	1.200	1.509	5.00	22.232	26.68	181.0	471.8	1469.4
40.00		1.00	1.04	6.345	6.98	0.00	1.200	1.529	5.00	21.700	26.04	181.7	466.1	1437.4
45.00		1.00	1.07	6.504	7.15	0.00	1.200	1.547	5.00	21.167	25.40	181.7	459.3	1404.4
46.59	Bot - Section 2	1.00	1.08	6.552	7.21	0.00	1.200	1.553	1.59	6.604	7.92	57.1	145.0	439.4
50.00	RT4	1.00	1.09	6.650	7.32	0.00	1.200	1.564	3.41	14.206	17.05	124.7	312.5	1570.0
52.92	Top - Section 1	1.00	1.11	6.730	7.40	0.00	1.200	1.573	2.92	11.954	14.35	106.2	264.6	1320.9
55.00		1.00	1.12	6.785	7.46	0.00	1.200	1.579	2.08	8.403	10.08	75.3	187.1	560.4
60.00		1.00	1.14	6.910	7.60	0.00	1.200	1.592	5.00	19.824	23.79	180.8	440.9	1319.9
65.00		1.00	1.16	7.028	7.73	0.00	1.200	1.605	5.00	19.286	23.14	178.9	431.7	1284.4
70.00		1.00	1.17	7.138	7.85	0.00	1.200	1.617	5.00	18.747	22.50	176.6	422.0	1248.5
75.00		1.00	1.19	7.243	7.97	0.00	1.200	1.628	5.00	18.208	21.85	174.1	411.9	1212.1
80.00		1.00	1.21	7.342	8.08	0.00	1.200	1.639	5.00	17.669	21.20	171.2	401.5	1175.5
85.00		1.00	1.22	7.436	8.18	0.00	1.200	1.649	5.00	17.128	20.55	168.1	390.8	1138.5
90.00		1.00	1.24	7.526	8.28	0.00	1.200	1.658	5.00	16.588	19.91	164.8	379.8	1101.3
94.58	Bot - Section 3	1.00	1.25	7.605	8.37	0.00	1.200	1.667	4.58	14.730	17.68	147.9	338.7	977.0
95.00		1.00	1.25	7.612	8.37	0.00	1.200	1.667	0.42	1.330	1.60	13.4	31.0	122.6
96.75	RB5	1.00	1.26	7.642	8.41	0.00	1.200	1.670	1.75	5.543	6.65	55.9	129.0	510.5
99.42	Top - Section 2	1.00	1.26	7.685	8.45	0.00	1.200	1.675	2.67	8.320	9.98	84.4	193.2	764.7
100.00		1.00	1.27	7.695	8.46	0.00	1.200	1.676	0.58	1.799	2.16	18.3	42.1	88.8
105.00		1.00	1.28	7.774	8.55	0.00	1.200	1.684	5.00	15.123	18.15	155.2	349.3	741.0
110.00		1.00	1.29	7.851	8.64	0.00	1.200	1.692	5.00	14.581	17.50	151.1	337.4	713.3
115.00		1.00	1.30	7.925	8.72	0.00	1.200	1.699	5.00	14.039	16.85	146.9	325.3	685.5
117.25	RT5	1.00	1.31	7.957	8.75	0.00	1.200	1.703	2.25	6.140	7.37	64.5	143.9	300.9
120.00		1.00	1.32	7.996	8.80	0.00	1.200	1.707	2.75	7.355	8.83	77.6	172.2	359.7
125.00		1.00	1.33	8.065	8.87	0.00	1.200	1.714	5.00	12.953	15.54	137.9	300.6	629.3
130.00		1.00	1.34	8.132	8.95	0.00	1.200	1.720	5.00	12.411	14.89	133.2	288.0	601.0
135.00		1.00	1.35	8.197	9.02	0.00	1.200	1.727	5.00	11.868	14.24	128.4	275.3	572.5
137.00	Appurtenance(s)	1.00	1.35	8.222	9.04	0.00	1.200	1.729	2.00	4.594	5.51	49.9	108.1	222.5
140.00		1.00	1.36	8.260	9.09	0.00	1.200	1.733	3.00	6.729	8.07	73.4	157.5	324.4
145.00		1.00	1.37	8.321	9.15	0.00	1.200	1.739	5.00	10.781	12.94	118.4	249.4	515.1
147.00	Appurtenance(s)	1.00	1.37	8.345	9.18	0.00	1.200	1.742	2.00	4.160	4.99	45.8	97.7	199.6
148.50	Top - Section 3	1.00	1.38	8.363	9.20	0.00	1.200	1.743	1.50	3.063	3.68	33.8	72.1	146.8
150.00		1.00	1.38	8.381	9.22	0.00	1.200	1.745	1.50	2.936	3.52	32.5	69.5	211.2
155.00		1.00	1.39	8.439	9.28	0.00	1.200	1.751	5.00	9.792	11.75	109.1	232.6	704.7
157.00	Appurtenance(s)	1.00	1.39	8.462	9.31	0.00	1.200	1.753	2.00	3.918	4.70	43.8	93.2	282.0
158.50		1.00	1.39	8.478	9.33	0.00	1.200	1.755	1.50	2.939	3.53	32.9	70.0	211.6
								Totals:	**158.50**			**5,012.4**		**35,926.1**

Discrete Appurtenance Forces

Structure:	CT46139-A-SBA	**Code:**	EIA/TIA-222-G	8/13/2021	
Site Name:	West Haven-rt15 /Woodbridge	**Exposure:**	C		
Height:	158.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 21	

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 24

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	157.00	JAHH-65B-R3B	6	8.462	9.308	0.66	0.80	41.69	1883.85	0.000	0.000	388.01	0.00	0.00
2	157.00	T-Arm	3	8.462	9.308	0.56	0.75	31.67	2041.53	0.000	0.000	294.75	0.00	0.00
3	157.00	VZS01	3	8.462	9.308	0.55	0.80	8.59	648.49	0.000	0.000	79.97	0.00	0.00
4	157.00	FE-16148-OVP-B12	1	8.462	9.308	0.54	0.80	1.38	36.01	0.000	0.000	12.88	0.00	0.00
5	157.00	CBC78T-DS-43/E14F05P	3	8.462	9.308	0.54	0.80	1.05	100.08	0.000	0.000	9.80	0.00	0.00
6	157.00	B2/B66A RRH-BR049	2	8.462	9.308	0.54	0.80	2.62	322.70	0.000	0.000	24.41	0.00	0.00
7	157.00	B5/B13 RRH-BR04C	2	8.462	9.308	0.54	0.80	2.62	342.08	0.000	0.000	24.41	0.00	0.00
8	147.00	4449 B71 + B85	3	8.345	9.180	0.54	0.80	4.08	261.20	0.000	0.000	37.47	0.00	0.00
9	147.00	RRUS 4415 B25	3	8.345	9.180	0.54	0.80	3.46	260.46	0.000	0.000	31.80	0.00	0.00
10	147.00	ACU-A20-N	4	8.345	9.180	0.54	0.80	0.94	16.75	0.000	0.000	8.58	0.00	0.00
11	147.00	AIR6449 B41	3	8.345	9.180	0.57	0.80	11.24	686.23	0.000	0.000	103.22	0.00	0.00
12	147.00	APXVAARR24_43-U-NA2	3	8.345	9.180	0.56	0.80	37.19	1711.75	0.000	0.000	341.38	0.00	0.00
13	147.00	T-Arm	3	8.345	9.180	0.56	0.75	31.57	2036.01	0.000	0.000	289.80	0.00	0.00
14	147.00	(3) T-Arm Kit	1	8.345	9.180	0.75	0.75	24.44	1042.18	0.000	0.000	224.39	0.00	0.00
15	147.00	ALU 800MHz External	3	8.345	9.180	0.54	0.80	2.29	69.50	0.000	0.000	21.04	0.00	0.00
16	147.00	800 MHz RRH	3	8.345	9.180	0.54	0.80	5.84	348.93	0.000	0.000	53.60	0.00	0.00
17	147.00	KRD 9011461-B66A-B2A	3	8.345	9.180	0.70	0.80	15.93	1024.32	0.000	0.000	146.23	0.00	0.00
18	137.00	RA21.7770.00	6	8.222	9.044	0.58	0.80	31.52	818.70	0.000	0.000	285.13	0.00	0.00
19	137.00	DC6-48-60-18-8F	1	8.222	9.044	0.80	0.80	1.08	81.73	0.000	0.000	9.80	0.00	0.00
20	137.00	T-Arm	3	8.222	9.044	0.56	0.75	31.47	2030.14	0.000	0.000	284.61	0.00	0.00
21	137.00	LGP21401	12	8.222	9.044	0.54	0.80	13.62	415.15	0.000	0.000	123.22	0.00	0.00
22	137.00	RRUS 11	6	8.222	9.044	0.54	0.80	10.18	894.30	0.000	0.000	92.06	0.00	0.00
23	137.00	AM-X-CD-16-65-00T-RET	3	8.222	9.044	0.60	0.80	19.42	517.54	0.000	0.000	175.64	0.00	0.00
							Totals:		**17,589.64**			**3,062.17**		

Total Applied Force Summary

Structure:	CT46139-A-SBA	**Code:**	EIA/TIA-222-G	8/13/2021	
Site Name:	West Haven-rt15 /Woodbridge	**Exposure:**	C		
Height:	158.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 22	

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

Dead Load Factor 1.20

Wind Load Factor 1.00

Iterations 24

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		172.59	1817.52	0.00	0.00
7.42		82.33	877.37	0.00	0.00
10.00		86.92	933.66	0.00	0.00
15.00		165.93	1799.77	0.00	0.00
20.00		172.33	1777.49	0.00	0.00
25.00		176.66	1751.57	0.00	0.00
29.75		170.25	1637.84	0.00	0.00
30.00		8.87	85.54	0.00	0.00
35.00		181.04	1693.15	0.00	0.00
40.00		181.75	1661.75	0.00	0.00
45.00		181.73	1629.31	0.00	0.00
46.59		57.11	510.86	0.00	0.00
50.00		124.70	1723.87	0.00	0.00
52.92		106.20	1452.71	0.00	0.00
55.00		75.26	639.45	0.00	0.00
60.00		180.83	1508.39	0.00	0.00
65.00		178.91	1472.90	0.00	0.00
70.00		176.65	1436.97	0.00	0.00
75.00		174.08	1400.66	0.00	0.00
80.00		171.23	1364.01	0.00	0.00
85.00		168.13	1327.04	0.00	0.00
90.00		164.79	1289.79	0.00	0.00
94.58		147.87	1150.47	0.00	0.00
95.00		13.36	141.69	0.00	0.00
96.75		55.91	590.56	0.00	0.00
99.42		84.40	886.81	0.00	0.00
100.00		18.28	115.55	0.00	0.00
105.00		155.19	966.15	0.00	0.00
110.00		151.10	901.85	0.00	0.00
115.00		146.85	874.02	0.00	0.00
117.25		64.49	385.70	0.00	0.00
120.00		77.63	463.35	0.00	0.00
125.00		137.90	817.83	0.00	0.00
130.00		133.22	789.50	0.00	0.00
135.00		128.40	761.02	0.00	0.00
137.00	(31) attachments	1020.31	5055.50	0.00	0.00
140.00		73.36	389.17	0.00	0.00
145.00		118.42	623.02	0.00	0.00
147.00	(29) attachments	1303.33	7700.03	0.00	0.00
148.50		33.81	173.25	0.00	0.00
150.00		32.48	237.58	0.00	0.00
155.00		109.08	792.76	0.00	0.00
157.00	(20) attachments	877.97	5691.99	0.00	0.00
158.50		32.89	211.57	0.00	0.00
	Totals:	**8,074.56**	**59,511.01**	**0.00**	**0.00**

Linear Appurtenance Segment Forces (Factored)

Structure:	CT46139-A-SBA	**Code:**	EIA/TIA-222-G	8/13/2021	
Site Name:	West Haven-rt15 /Woodbridge	**Exposure:**	C		
Height:	158.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 23	

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

Dead Load Factor 1.20

Wind Load Factor 1.00

Iterations 24

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	1.25" Reinforcing	Yes	5.00	0.000	3.00	2.29	0.00	0.052	0.000	5.168	0.00	27.67
7.42	1.25" Reinforcing	Yes	2.42	0.000	3.00	1.13	0.00	0.052	0.000	5.168	0.00	14.05
10.00	1.25" Reinforcing	Yes	1.08	0.000	1.50	0.37	0.00	0.042	0.000	5.168	0.00	6.50
10.00	1.25" Reinforcing	Yes	1.50	0.000	3.00	0.71	0.00	0.042	0.000	5.168	0.00	9.03
15.00	1.25" Reinforcing	Yes	5.00	0.000	1.50	1.78	0.00	0.027	0.000	5.168	0.00	31.67
20.00	1.25" Reinforcing	Yes	5.00	0.000	1.50	1.81	0.00	0.028	0.000	5.483	0.00	32.84
25.00	1.25" Reinforcing	Yes	5.00	0.000	1.50	1.84	0.00	0.028	0.000	5.747	0.00	33.78
29.75	1.25" Reinforcing	Yes	4.75	0.000	1.50	1.77	0.00	0.029	0.000	5.962	0.00	32.81
30.00	1.25" Reinforcing	Yes	0.25	0.000	1.50	0.09	0.00	0.029	0.000	5.972	0.00	1.73
35.00	1.25" Reinforcing	Yes	5.00	0.000	1.50	1.88	0.00	0.030	0.000	6.169	0.00	35.27
40.00	1.25" Reinforcing	Yes	5.00	0.000	1.50	1.90	0.00	0.031	0.000	6.345	0.00	35.88
45.00	1.25" Reinforcing	Yes	5.00	0.000	1.50	1.91	0.00	0.031	0.000	6.504	0.00	36.43
46.59	1.25" Reinforcing	Yes	1.59	0.000	1.50	0.61	0.00	0.032	0.000	6.552	0.00	11.61
50.00	1.25" Reinforcing	Yes	3.41	0.000	1.50	1.32	0.00	0.032	0.000	6.650	0.00	25.21
52.92	1.25" Reinforcing	Yes	2.92	0.000	1.50	1.13	0.00	0.033	0.000	6.730	0.00	21.73
55.00	1.25" Reinforcing	Yes	0.08	0.000	1.50	0.03	0.00	0.001	0.000	6.785	0.00	0.60
94.58	1.25" Reinforcing	Yes	0.08	0.000	1.50	0.03	0.00	0.001	0.000	7.605	0.00	0.67
95.00	1.25" Reinforcing	Yes	0.42	0.000	1.50	0.17	0.00	0.043	0.000	7.612	0.00	3.35
96.75	1.25" Reinforcing	Yes	1.75	0.000	1.50	0.71	0.00	0.044	0.000	7.642	0.00	14.10
99.42	1.25" Reinforcing	Yes	2.67	0.000	1.50	1.08	0.00	0.044	0.000	7.685	0.00	21.56
100.00	1.25" Reinforcing	Yes	0.58	0.000	1.50	0.24	0.00	0.045	0.000	7.695	0.00	4.72
105.00	1.25" Reinforcing	Yes	4.50	0.000	1.50	1.83	0.00	0.041	0.000	7.774	0.00	36.65
										Totals:	**0.0**	**437.9**

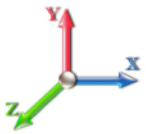
Calculated Forces

Structure:	CT46139-A-SBA	**Code:**	EIA/TIA-222-G	8/13/2021	
Site Name:	West Haven-rt15 /Woodbridge	**Exposure:**	C		
Height:	158.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 24	

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 24

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	-59.51	-8.09	0.00	-875.56	0.00	875.56	3324.94	1662.47	7900.55	3956.15	0.00	0.000	0.000	0.141
5.00	-57.69	-7.94	0.00	-835.11	0.00	835.11	3293.53	1646.77	7649.11	3830.24	0.02	-0.030	0.000	0.137
7.42	-56.81	-7.87	0.00	-815.90	0.00	815.90	3277.61	1638.81	7526.99	3769.09	0.04	-0.045	0.000	0.144
10.00	-55.87	-7.81	0.00	-795.59	0.00	795.59	3260.13	1630.06	7396.53	3703.76	0.06	-0.061	0.000	0.142
15.00	-54.07	-7.67	0.00	-756.55	0.00	756.55	3224.74	1612.37	7143.12	3576.87	0.15	-0.094	0.000	0.139
20.00	-52.29	-7.52	0.00	-718.20	0.00	718.20	3187.35	1593.68	6889.21	3449.73	0.26	-0.126	0.000	0.135
25.00	-50.53	-7.37	0.00	-680.58	0.00	680.58	3147.98	1573.99	6635.12	3322.49	0.41	-0.159	0.000	0.131
29.75	-48.89	-7.21	0.00	-645.56	0.00	645.56	3108.73	1554.36	6393.85	3201.68	0.59	-0.191	0.000	0.134
30.00	-48.80	-7.22	0.00	-643.76	0.00	643.76	3106.61	1553.31	6381.16	3195.32	0.60	-0.192	0.000	0.133
35.00	-47.11	-7.06	0.00	-607.67	0.00	607.67	3063.26	1531.63	6127.67	3068.39	0.82	-0.227	0.000	0.130
40.00	-45.44	-6.90	0.00	-572.37	0.00	572.37	3017.91	1508.96	5874.95	2941.84	1.07	-0.263	0.000	0.126
45.00	-43.81	-6.73	0.00	-537.88	0.00	537.88	2970.57	1485.29	5623.33	2815.85	1.37	-0.298	0.000	0.122
46.59	-43.30	-6.68	0.00	-527.21	0.00	527.21	2955.13	1477.57	5543.77	2776.00	1.47	-0.310	0.000	0.121
50.00	-41.57	-6.56	0.00	-504.41	0.00	504.41	2921.24	1460.62	5373.14	2690.56	1.70	-0.335	0.000	0.117
52.92	-40.12	-6.46	0.00	-485.24	0.00	485.24	2916.11	1458.05	5347.75	2677.85	1.91	-0.356	0.000	0.195
55.00	-39.47	-6.42	0.00	-471.80	0.00	471.80	2894.92	1447.46	5244.24	2626.02	2.07	-0.383	0.000	0.193
60.00	-37.96	-6.26	0.00	-439.72	0.00	439.72	2842.57	1421.28	4996.81	2502.12	2.51	-0.443	0.000	0.189
65.00	-36.48	-6.11	0.00	-408.40	0.00	408.40	2788.22	1394.11	4751.61	2379.34	3.00	-0.505	0.000	0.185
70.00	-35.04	-5.96	0.00	-377.83	0.00	377.83	2731.89	1365.95	4508.96	2257.83	3.56	-0.567	0.000	0.180
75.00	-33.64	-5.81	0.00	-348.03	0.00	348.03	2673.57	1336.78	4269.18	2137.76	4.19	-0.631	0.000	0.175
80.00	-32.27	-5.66	0.00	-318.98	0.00	318.98	2613.25	1306.63	4032.59	2019.29	4.89	-0.695	0.000	0.170
85.00	-30.94	-5.51	0.00	-290.68	0.00	290.68	2550.95	1275.47	3799.51	1902.58	5.65	-0.761	0.000	0.165
90.00	-29.64	-5.36	0.00	-263.13	0.00	263.13	2486.65	1243.33	3570.26	1787.78	6.48	-0.827	0.000	0.159
94.58	-28.49	-5.21	0.00	-238.56	0.00	238.56	2425.96	1212.98	3363.76	1684.38	7.31	-0.888	0.000	0.153
95.00	-28.35	-5.20	0.00	-236.39	0.00	236.39	2420.36	1210.18	3345.16	1675.07	7.39	-0.893	0.000	0.153
96.75	-27.76	-5.15	0.00	-227.28	0.00	227.28	2396.69	1198.35	3267.42	1636.14	7.72	-0.917	0.000	0.085
99.42	-26.87	-5.06	0.00	-213.55	0.00	213.55	1173.34	586.67	1596.31	799.34	8.24	-0.938	0.000	0.102
100.00	-26.75	-5.05	0.00	-210.60	0.00	210.60	1170.92	585.46	1585.67	794.02	8.35	-0.943	0.000	0.128
105.00	-25.79	-4.90	0.00	-185.36	0.00	185.36	1149.02	574.51	1494.34	748.28	9.36	-0.989	0.000	0.117
110.00	-24.88	-4.75	0.00	-160.88	0.00	160.88	1125.14	562.57	1402.88	702.48	10.42	-1.034	0.000	0.106
115.00	-24.01	-4.60	0.00	-137.13	0.00	137.13	1099.26	549.63	1311.60	656.78	11.53	-1.076	0.000	0.094
117.25	-23.62	-4.54	0.00	-126.78	0.00	126.78	1086.96	543.48	1270.68	636.28	12.04	-1.095	0.000	0.089
117.25	-23.62	-4.54	0.00	-126.78	0.00	126.78	1086.96	543.48	1270.68	636.28	12.04	-1.095	0.000	0.089
120.00	-23.16	-4.47	0.00	-114.31	0.00	114.31	1071.39	535.70	1220.84	611.33	12.68	-1.117	0.000	0.209
125.00	-22.34	-4.35	0.00	-91.95	0.00	91.95	1041.53	520.77	1130.90	566.29	13.90	-1.209	0.000	0.184
130.00	-21.54	-4.23	0.00	-70.19	0.00	70.19	1009.68	504.84	1042.12	521.83	15.21	-1.292	0.000	0.156
135.00	-20.78	-4.10	0.00	-49.03	0.00	49.03	975.84	487.92	954.81	478.11	16.60	-1.363	0.000	0.124
137.00	-15.75	-2.97	0.00	-40.83	0.00	40.83	961.75	480.87	920.37	460.87	17.18	-1.388	0.000	0.105
140.00	-15.36	-2.90	0.00	-31.92	0.00	31.92	940.01	470.00	869.29	435.29	18.06	-1.421	0.000	0.090
145.00	-14.74	-2.77	0.00	-17.44	0.00	17.44	902.19	451.09	785.88	393.52	19.58	-1.462	0.000	0.061
147.00	-7.08	-1.27	0.00	-11.91	0.00	11.91	886.50	443.25	753.18	377.15	20.19	-1.474	0.000	0.040
148.50	-6.90	-1.23	0.00	-10.00	0.00	10.00	874.53	437.26	728.93	365.00	20.66	-1.481	0.000	0.035
148.50	-6.90	-1.23	0.00	-10.00	0.00	10.00	728.28	364.14	584.01	379.17	20.66	-1.481	0.000	0.036
150.00	-6.67	-1.19	0.00	-8.15	0.00	8.15	728.28	364.14	584.01	379.17	21.12	-1.487	0.000	0.031
155.00	-5.88	-1.06	0.00	-2.19	0.00	2.19	728.28	364.14	584.01	379.17	22.68	-1.493	0.000	0.014
157.00	-0.21	-0.04	0.00	-0.06	0.00	0.06	728.28	364.14	584.01	379.17	23.31	-1.494	0.000	0.000
158.50	0.00	-0.03	0.00	0.00	0.00	0.00	728.28	364.14	584.01	379.17	23.78	-1.494	0.000	0.000

Calculated Forces

Structure:	CT46139-A-SBA	**Code:**	EIA/TIA-222-G	8/13/2021	
Site Name:	West Haven-rt15 /Woodbridge	**Exposure:**	C		
Height:	158.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 25	

Seismic Segment Forces (Factored)

Structure:	CT46139-A-SBA	**Code:**	EIA/TIA-222-G	8/13/2021	
Site Name:	West Haven-rt15 /Woodbridge	**Exposure:**	C		
Height:	158.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 26	

Tower Engineering Solutions

Load Case:	1.2D + 1.0E							**Iterations**	22
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)**	0.35		**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	RB1 RB2	0.00	0.00	0.00	0.00	0.00	
5.00		962.54	0.00	0.03	0.02	16.65	
7.42	RT2 RB3	458.01	0.00	0.04	0.02	10.04	
10.00		482.65	0.01	0.05	0.03	12.26	
15.00		918.79	0.02	0.06	0.04	27.14	
20.00		896.92	0.03	0.07	0.04	28.45	
25.00		875.04	0.05	0.07	0.04	28.86	
29.75	RT1 RT3 RB4	811.03	0.07	0.07	0.04	27.44	
30.00		42.14	0.07	0.07	0.04	1.43	
35.00		831.29	0.09	0.07	0.04	28.82	
40.00		809.42	0.12	0.07	0.03	28.70	
45.00		787.54	0.15	0.07	0.03	28.46	
46.59	Bot - Section 2	245.34	0.16	0.07	0.03	8.90	
50.00	RT4	1047.8	0.19	0.06	0.02	38.20	
52.92	Top - Section 1	880.22	0.21	0.06	0.02	31.98	
55.00		311.15	0.23	0.06	0.02	11.21	
60.00		732.46	0.27	0.05	0.01	25.14	
65.00		710.59	0.32	0.04	0.01	21.82	
70.00		688.71	0.37	0.03	0.01	16.93	
75.00		666.84	0.42	0.01	0.01	10.43	
80.00		644.96	0.48	-0.01	0.01	2.77	
85.00		623.09	0.54	-0.03	0.01	-5.13	
90.00		601.21	0.61	-0.06	0.02	-12.05	
94.58	Bot - Section 3	531.89	0.67	-0.08	0.02	-15.23	
95.00		76.33	0.68	-0.08	0.03	-2.23	
96.75	RB5	317.93	0.70	-0.09	0.03	-10.06	
99.42	Top - Section 2	476.22	0.74	-0.10	0.04	-16.32	
100.00		38.94	0.75	-0.10	0.04	-1.35	
105.00		326.41	0.83	-0.12	0.06	-11.64	
110.00		313.29	0.91	-0.12	0.09	-10.05	
115.00		300.16	0.99	-0.11	0.13	-7.20	
117.25	RT5	130.79	1.03	-0.10	0.15	-2.47	
120.00		156.25	1.08	-0.08	0.18	-1.79	
125.00		273.91	1.18	-0.02	0.24	1.50	
130.00		260.79	1.27	0.08	0.31	7.00	
135.00		247.66	1.37	0.23	0.40	13.04	
137.00	Appurtenance(s)	2169.2	1.41	0.31	0.44	139.34	
140.00		139.15	1.47	0.44	0.51	11.55	
145.00		221.41	1.58	0.72	0.65	26.11	
147.00	Appurtenance(s)	3421.4	1.63	0.86	0.71	455.85	
148.50	Top - Section 3	62.29	1.66	0.97	0.75	9.04	
150.00		118.01	1.69	1.09	0.80	18.60	
155.00		393.36	1.81	1.57	0.99	79.49	
157.00	Appurtenance(s)	2385.8	1.85	1.80	1.07	527.82	
158.50		118.01	1.89	1.98	1.14	27.86	
	Totals:	**27,507.2**				**1,627.3**	**Total Wind:** **30,334.6**

Seismic Segment Forces (Factored)

Structure:	CT46139-A-SBA	**Code:**	EIA/TIA-222-G	8/13/2021	
Site Name:	West Haven-rt15 /Woodbridge	**Exposure:**	C		
Height:	158.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 27	

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

Calculated Forces

Structure:	CT46139-A-SBA	**Code:**	EIA/TIA-222-G	8/13/2021	
Site Name:	West Haven-rt15 /Woodbridge	**Exposure:**	C		
Height:	158.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 28	

Tower Engineering Solutions

Load Case:	1.2D + 1.0E							**Iterations**	22
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)**	0.35	**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	-38.57	-1.72	0.00	-222.04	0.00	222.04	3324.94	1662.47	7900.55	3956.15		0.00	0.00	0.040
5.00	-37.22	-1.71	0.00	-213.42	0.00	213.42	3293.53	1646.77	7649.11	3830.24		0.00	-0.01	0.039
7.42	-36.58	-1.70	0.00	-209.28	0.00	209.28	3277.61	1638.81	7526.99	3769.09		0.01	-0.01	0.041
10.00	-35.90	-1.70	0.00	-204.88	0.00	204.88	3260.13	1630.06	7396.53	3703.76		0.02	-0.02	0.041
15.00	-34.61	-1.67	0.00	-196.41	0.00	196.41	3224.74	1612.37	7143.12	3576.87		0.04	-0.02	0.040
20.00	-33.35	-1.65	0.00	-188.04	0.00	188.04	3187.35	1593.68	6889.21	3449.73		0.07	-0.03	0.039
25.00	-32.11	-1.62	0.00	-179.80	0.00	179.80	3147.98	1573.99	6635.12	3322.49		0.11	-0.04	0.038
29.75	-30.96	-1.60	0.00	-172.08	0.00	172.08	3108.73	1554.36	6393.85	3201.68		0.15	-0.05	0.039
30.00	-30.90	-1.60	0.00	-171.69	0.00	171.69	3106.61	1553.31	6381.16	3195.32		0.15	-0.05	0.039
35.00	-29.71	-1.57	0.00	-163.69	0.00	163.69	3063.26	1531.63	6127.67	3068.39		0.21	-0.06	0.038
40.00	-28.55	-1.55	0.00	-155.82	0.00	155.82	3017.91	1508.96	5874.95	2941.84		0.28	-0.07	0.038
45.00	-27.42	-1.52	0.00	-148.08	0.00	148.08	2970.57	1485.29	5623.33	2815.85		0.36	-0.08	0.037
46.59	-27.06	-1.52	0.00	-145.66	0.00	145.66	2955.13	1477.57	5543.77	2776.00		0.38	-0.08	0.036
50.00	-25.68	-1.48	0.00	-140.49	0.00	140.49	2921.24	1460.62	5373.14	2690.56		0.44	-0.09	0.035
52.92	-24.51	-1.45	0.00	-136.17	0.00	136.17	2916.11	1458.05	5347.75	2677.85		0.50	-0.09	0.059
55.00	-24.06	-1.44	0.00	-133.17	0.00	133.17	2894.92	1447.46	5244.24	2626.02		0.54	-0.10	0.059
60.00	-22.99	-1.42	0.00	-125.97	0.00	125.97	2842.57	1421.28	4996.81	2502.12		0.66	-0.12	0.058
65.00	-21.95	-1.40	0.00	-118.87	0.00	118.87	2788.22	1394.11	4751.61	2379.34		0.79	-0.14	0.058
70.00	-20.93	-1.39	0.00	-111.86	0.00	111.86	2731.89	1365.95	4508.96	2257.83		0.95	-0.16	0.057
75.00	-19.94	-1.38	0.00	-104.91	0.00	104.91	2673.57	1336.78	4269.18	2137.76		1.12	-0.17	0.057
80.00	-18.98	-1.38	0.00	-97.99	0.00	97.99	2613.25	1306.63	4032.59	2019.29		1.31	-0.19	0.056
85.00	-18.04	-1.39	0.00	-91.07	0.00	91.07	2550.95	1275.47	3799.51	1902.58		1.53	-0.21	0.055
90.00	-17.13	-1.39	0.00	-84.14	0.00	84.14	2486.65	1243.33	3570.26	1787.78		1.76	-0.24	0.054
94.58	-16.32	-1.39	0.00	-77.77	0.00	77.77	2425.96	1212.98	3363.76	1684.38		2.00	-0.25	0.053
95.00	-16.21	-1.39	0.00	-77.19	0.00	77.19	2420.36	1210.18	3345.16	1675.07		2.02	-0.26	0.053
96.75	-15.77	-1.39	0.00	-74.75	0.00	74.75	2396.69	1198.35	3267.42	1636.14		2.12	-0.26	0.030
99.42	-15.09	-1.39	0.00	-71.05	0.00	71.05	1173.34	586.67	1596.31	799.34		2.27	-0.27	0.036
100.00	-15.03	-1.39	0.00	-70.24	0.00	70.24	1170.92	585.46	1585.67	794.02		2.30	-0.27	0.045
105.00	-14.45	-1.39	0.00	-63.29	0.00	63.29	1149.02	574.51	1494.34	748.28		2.59	-0.29	0.042
110.00	-13.88	-1.39	0.00	-56.33	0.00	56.33	1125.14	562.57	1402.88	702.48		2.90	-0.30	0.039
115.00	-13.33	-1.39	0.00	-49.37	0.00	49.37	1099.26	549.63	1311.60	656.78		3.23	-0.32	0.036
117.25	-13.09	-1.39	0.00	-46.24	0.00	46.24	1086.96	543.48	1270.68	636.28		3.38	-0.33	0.034
117.25	-13.09	-1.39	0.00	-46.24	0.00	46.24	1086.96	543.48	1270.68	636.28		3.38	-0.33	0.034
120.00	-12.80	-1.40	0.00	-42.41	0.00	42.41	1071.39	535.70	1220.84	611.33		3.57	-0.33	0.081
125.00	-12.28	-1.40	0.00	-35.44	0.00	35.44	1041.53	520.77	1130.90	566.29		3.94	-0.37	0.074
130.00	-11.78	-1.39	0.00	-28.45	0.00	28.45	1009.68	504.84	1042.12	521.83		4.35	-0.40	0.066
135.00	-11.29	-1.38	0.00	-21.48	0.00	21.48	975.84	487.92	954.81	478.11		4.78	-0.43	0.057
137.00	-8.61	-1.22	0.00	-18.72	0.00	18.72	961.75	480.87	920.37	460.87		4.97	-0.44	0.050
140.00	-8.38	-1.21	0.00	-15.04	0.00	15.04	940.01	470.00	869.29	435.29		5.25	-0.46	0.043
145.00	-8.01	-1.19	0.00	-8.98	0.00	8.98	902.19	451.09	785.88	393.52		5.74	-0.48	0.032
147.00	-3.86	-0.70	0.00	-6.61	0.00	6.61	886.50	443.25	753.18	377.15		5.94	-0.48	0.022
148.50	-3.76	-0.69	0.00	-5.57	0.00	5.57	874.53	437.26	728.93	365.00		6.10	-0.49	0.020
148.50	-3.76	-0.69	0.00	-5.57	0.00	5.57	728.28	364.14	584.01	379.17		6.10	-0.49	0.020
150.00	-3.59	-0.67	0.00	-4.54	0.00	4.54	728.28	364.14	584.01	379.17		6.25	-0.49	0.017
155.00	-3.03	-0.58	0.00	-1.21	0.00	1.21	728.28	364.14	584.01	379.17		6.77	-0.49	0.007
157.00	-0.14	-0.03	0.00	-0.04	0.00	0.04	728.28	364.14	584.01	379.17		6.97	-0.50	0.000
158.50	0.00	-0.03	0.00	0.00	0.00	0.00	728.28	364.14	584.01	379.17		7.13	-0.50	0.000

Calculated Forces

Structure:	CT46139-A-SBA		**Code:**	EIA/TIA-222-G	8/13/2021
Site Name:	West Haven-rt15 /Woodbridge		**Exposure:**	C	
Height:	158.50 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 29

Seismic Segment Forces (Factored)

Structure:	CT46139-A-SBA	**Code:**	EIA/TIA-222-G	8/13/2021	
Site Name:	West Haven-rt15 /Woodbridge	**Exposure:**	C		
Height:	158.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 30	

Tower Engineering Solutions

Load Case: 0.9D + 1.0E

Gust Response Factor	1.10			**Sds**	0.19	**Iterations**	22
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.10	**Ss**	0.18
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.35	**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	RB1 RB2	0.00	0.00	0.00	0.00	0.00	
5.00		962.54	0.00	0.03	0.02	16.65	
7.42	RT2 RB3	458.01	0.00	0.04	0.02	10.04	
10.00		482.65	0.01	0.05	0.03	12.26	
15.00		918.79	0.02	0.06	0.04	27.14	
20.00		896.92	0.03	0.07	0.04	28.45	
25.00		875.04	0.05	0.07	0.04	28.86	
29.75	RT1 RT3 RB4	811.03	0.07	0.07	0.04	27.44	
30.00		42.14	0.07	0.07	0.04	1.43	
35.00		831.29	0.09	0.07	0.04	28.82	
40.00		809.42	0.12	0.07	0.03	28.70	
45.00		787.54	0.15	0.07	0.03	28.46	
46.59	Bot - Section 2	245.34	0.16	0.07	0.03	8.90	
50.00	RT4	1047.8	0.19	0.06	0.02	38.20	
52.92	Top - Section 1	880.22	0.21	0.06	0.02	31.98	
55.00		311.15	0.23	0.06	0.02	11.21	
60.00		732.46	0.27	0.05	0.01	25.14	
65.00		710.59	0.32	0.04	0.01	21.82	
70.00		688.71	0.37	0.03	0.01	16.93	
75.00		666.84	0.42	0.01	0.01	10.43	
80.00		644.96	0.48	-0.01	0.01	2.77	
85.00		623.09	0.54	-0.03	0.01	-5.13	
90.00		601.21	0.61	-0.06	0.02	-12.05	
94.58	Bot - Section 3	531.89	0.67	-0.08	0.02	-15.23	
95.00		76.33	0.68	-0.08	0.03	-2.23	
96.75	RB5	317.93	0.70	-0.09	0.03	-10.06	
99.42	Top - Section 2	476.22	0.74	-0.10	0.04	-16.32	
100.00		38.94	0.75	-0.10	0.04	-1.35	
105.00		326.41	0.83	-0.12	0.06	-11.64	
110.00		313.29	0.91	-0.12	0.09	-10.05	
115.00		300.16	0.99	-0.11	0.13	-7.20	
117.25	RT5	130.79	1.03	-0.10	0.15	-2.47	
120.00		156.25	1.08	-0.08	0.18	-1.79	
125.00		273.91	1.18	-0.02	0.24	1.50	
130.00		260.79	1.27	0.08	0.31	7.00	
135.00		247.66	1.37	0.23	0.40	13.04	
137.00	Appurtenance(s)	2169.2	1.41	0.31	0.44	139.34	
140.00		139.15	1.47	0.44	0.51	11.55	
145.00		221.41	1.58	0.72	0.65	26.11	
147.00	Appurtenance(s)	3421.4	1.63	0.86	0.71	455.85	
148.50	Top - Section 3	62.29	1.66	0.97	0.75	9.04	
150.00		118.01	1.69	1.09	0.80	18.60	
155.00		393.36	1.81	1.57	0.99	79.49	
157.00	Appurtenance(s)	2385.8	1.85	1.80	1.07	527.82	
158.50		118.01	1.89	1.98	1.14	27.86	
	Totals:	**27,507.2**				**1,627.3**	**Total Wind:** **30,334.6**

Seismic Segment Forces (Factored)

Structure:	CT46139-A-SBA	**Code:**	EIA/TIA-222-G	8/13/2021	
Site Name:	West Haven-rt15 /Woodbridge	**Exposure:**	C		
Height:	158.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 31	

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

Calculated Forces

Structure:	CT46139-A-SBA	**Code:**	EIA/TIA-222-G	8/13/2021	
Site Name:	West Haven-rt15 /Woodbridge	**Exposure:**	C		
Height:	158.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 32	

Tower Engineering Solutions

Load Case:	0.9D + 1.0E							**Iterations**	22
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)**	0.35	**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	-28.92	-1.72	0.00	-219.96	0.00	219.96	3324.94	1662.47	7900.55	3956.15		0.00	0.00	0.038
5.00	-27.92	-1.71	0.00	-211.34	0.00	211.34	3293.53	1646.77	7649.11	3830.24		0.00	-0.01	0.037
7.42	-27.44	-1.70	0.00	-207.20	0.00	207.20	3277.61	1638.81	7526.99	3769.09		0.01	-0.01	0.039
10.00	-26.93	-1.69	0.00	-202.81	0.00	202.81	3260.13	1630.06	7396.53	3703.76		0.02	-0.02	0.039
15.00	-25.96	-1.67	0.00	-194.35	0.00	194.35	3224.74	1612.37	7143.12	3576.87		0.04	-0.02	0.038
20.00	-25.01	-1.64	0.00	-186.01	0.00	186.01	3187.35	1593.68	6889.21	3449.73		0.07	-0.03	0.037
25.00	-24.08	-1.62	0.00	-177.79	0.00	177.79	3147.98	1573.99	6635.12	3322.49		0.10	-0.04	0.036
29.75	-23.22	-1.59	0.00	-170.11	0.00	170.11	3108.73	1554.36	6393.85	3201.68		0.15	-0.05	0.037
30.00	-23.17	-1.59	0.00	-169.71	0.00	169.71	3106.61	1553.31	6381.16	3195.32		0.15	-0.05	0.037
35.00	-22.28	-1.57	0.00	-161.76	0.00	161.76	3063.26	1531.63	6127.67	3068.39		0.21	-0.06	0.036
40.00	-21.41	-1.54	0.00	-153.93	0.00	153.93	3017.91	1508.96	5874.95	2941.84		0.28	-0.07	0.036
45.00	-20.56	-1.51	0.00	-146.23	0.00	146.23	2970.57	1485.29	5623.33	2815.85		0.35	-0.08	0.035
46.59	-20.30	-1.50	0.00	-143.83	0.00	143.83	2955.13	1477.57	5543.77	2776.00		0.38	-0.08	0.035
50.00	-19.26	-1.47	0.00	-138.70	0.00	138.70	2921.24	1460.62	5373.14	2690.56		0.44	-0.09	0.034
52.92	-18.38	-1.44	0.00	-134.41	0.00	134.41	2916.11	1458.05	5347.75	2677.85		0.49	-0.09	0.056
55.00	-18.04	-1.43	0.00	-131.43	0.00	131.43	2894.92	1447.46	5244.24	2626.02		0.54	-0.10	0.056
60.00	-17.24	-1.41	0.00	-124.29	0.00	124.29	2842.57	1421.28	4996.81	2502.12		0.65	-0.12	0.056
65.00	-16.46	-1.39	0.00	-117.26	0.00	117.26	2788.22	1394.11	4751.61	2379.34		0.78	-0.14	0.055
70.00	-15.70	-1.37	0.00	-110.32	0.00	110.32	2731.89	1365.95	4508.96	2257.83		0.94	-0.15	0.055
75.00	-14.96	-1.37	0.00	-103.44	0.00	103.44	2673.57	1336.78	4269.18	2137.76		1.11	-0.17	0.054
80.00	-14.23	-1.37	0.00	-96.61	0.00	96.61	2613.25	1306.63	4032.59	2019.29		1.30	-0.19	0.053
85.00	-13.53	-1.37	0.00	-89.78	0.00	89.78	2550.95	1275.47	3799.51	1902.58		1.51	-0.21	0.052
90.00	-12.85	-1.37	0.00	-82.93	0.00	82.93	2486.65	1243.33	3570.26	1787.78		1.74	-0.23	0.052
94.58	-12.24	-1.37	0.00	-76.65	0.00	76.65	2425.96	1212.98	3363.76	1684.38		1.97	-0.25	0.051
95.00	-12.16	-1.37	0.00	-76.08	0.00	76.08	2420.36	1210.18	3345.16	1675.07		2.00	-0.25	0.050
96.75	-11.82	-1.37	0.00	-73.68	0.00	73.68	2396.69	1198.35	3267.42	1636.14		2.09	-0.26	0.028
99.42	-11.32	-1.37	0.00	-70.03	0.00	70.03	1173.34	586.67	1596.31	799.34		2.24	-0.27	0.034
100.00	-11.27	-1.37	0.00	-69.23	0.00	69.23	1170.92	585.46	1585.67	794.02		2.27	-0.27	0.043
105.00	-10.83	-1.37	0.00	-62.37	0.00	62.37	1149.02	574.51	1494.34	748.28		2.56	-0.28	0.040
110.00	-10.41	-1.37	0.00	-55.51	0.00	55.51	1125.14	562.57	1402.88	702.48		2.87	-0.30	0.037
115.00	-10.00	-1.37	0.00	-48.65	0.00	48.65	1099.26	549.63	1311.60	656.78		3.19	-0.31	0.034
117.25	-9.82	-1.37	0.00	-45.56	0.00	45.56	1086.96	543.48	1270.68	636.28		3.34	-0.32	0.033
117.25	-9.82	-1.37	0.00	-45.56	0.00	45.56	1086.96	543.48	1270.68	636.28		3.34	-0.32	0.033
120.00	-9.60	-1.37	0.00	-41.79	0.00	41.79	1071.39	535.70	1220.84	611.33		3.53	-0.33	0.077
125.00	-9.21	-1.38	0.00	-34.92	0.00	34.92	1041.53	520.77	1130.90	566.29		3.89	-0.36	0.071
130.00	-8.83	-1.37	0.00	-28.03	0.00	28.03	1009.68	504.84	1042.12	521.83		4.29	-0.40	0.062
135.00	-8.47	-1.36	0.00	-21.18	0.00	21.18	975.84	487.92	954.81	478.11		4.72	-0.43	0.053
137.00	-6.46	-1.21	0.00	-18.46	0.00	18.46	961.75	480.87	920.37	460.87		4.90	-0.44	0.047
140.00	-6.28	-1.20	0.00	-14.84	0.00	14.84	940.01	470.00	869.29	435.29		5.18	-0.45	0.041
145.00	-6.00	-1.17	0.00	-8.86	0.00	8.86	902.19	451.09	785.88	393.52		5.67	-0.47	0.029
147.00	-2.90	-0.69	0.00	-6.53	0.00	6.53	886.50	443.25	753.18	377.15		5.87	-0.48	0.021
148.50	-2.82	-0.68	0.00	-5.50	0.00	5.50	874.53	437.26	728.93	365.00		6.02	-0.48	0.018
148.50	-2.82	-0.68	0.00	-5.50	0.00	5.50	728.28	364.14	584.01	379.17		6.02	-0.48	0.018
150.00	-2.69	-0.66	0.00	-4.48	0.00	4.48	728.28	364.14	584.01	379.17		6.17	-0.48	0.016
155.00	-2.28	-0.57	0.00	-1.19	0.00	1.19	728.28	364.14	584.01	379.17		6.68	-0.49	0.006
157.00	-0.11	-0.03	0.00	-0.04	0.00	0.04	728.28	364.14	584.01	379.17		6.88	-0.49	0.000
158.50	0.00	-0.03	0.00	0.00	0.00	0.00	728.28	364.14	584.01	379.17		7.04	-0.49	0.000

Calculated Forces

Structure:	CT46139-A-SBA		**Code:**	EIA/TIA-222-G	8/13/2021
Site Name:	West Haven-rt15 /Woodbridge		**Exposure:**	C	
Height:	158.50 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 33

Wind Loading - Shaft

Structure:	CT46139-A-SBA	**Code:**	EIA/TIA-222-G	8/13/2021	
Site Name:	West Haven-rt15 /Woodbridge	**Exposure:**	C		
Height:	158.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 34	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations 23

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00	RB1 RB2	1.00	0.85	7.442	8.19	271.49	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	7.442	8.19	265.42	0.650	0.000	5.00	24.265	15.77	129.1	0.0	962.5
7.42	RT2 RB3	1.00	0.85	7.442	8.19	262.49	0.650	0.000	2.42	11.547	7.51	61.4	0.0	458.0
10.00		1.00	0.85	7.442	8.19	259.36	0.650	0.000	2.58	12.169	7.91	64.8	0.0	482.7
15.00		1.00	0.85	7.442	8.19	253.29	0.650	0.000	5.00	23.168	15.06	123.3	0.0	918.8
20.00		1.00	0.90	7.896	8.69	254.65	0.650	0.000	5.00	22.620	14.70	127.7	0.0	896.9
25.00		1.00	0.95	8.276	9.10	254.31	0.650	0.000	5.00	22.071	14.35	130.6	0.0	875.0
29.75	RT1 RT3 RB4	1.00	0.98	8.585	9.44	252.82	0.650	0.000	4.75	20.460	13.30	125.6	0.0	811.0
30.00		1.00	0.98	8.600	9.46	252.71	0.650	0.000	0.25	1.063	0.69	6.5	0.0	42.1
35.00		1.00	1.01	8.883	9.77	250.22	0.650	0.000	5.00	20.975	13.63	133.2	0.0	831.3
40.00		1.00	1.04	9.137	10.05	247.04	0.650	0.000	5.00	20.426	13.28	133.4	0.0	809.4
45.00		1.00	1.07	9.366	10.30	243.31	0.650	0.000	5.00	19.878	12.92	133.1	0.0	787.5
46.59	Bot - Section 2	1.00	1.08	9.435	10.38	242.03	0.650	0.000	1.59	6.193	4.03	41.8	0.0	245.3
50.00	RT4	1.00	1.09	9.576	10.53	239.14	0.650	0.000	3.41	13.316	8.66	91.2	0.0	1047.9
52.92	Top - Section 1	1.00	1.11	9.691	10.66	236.53	0.650	0.000	2.92	11.189	7.27	77.5	0.0	880.2
55.00		1.00	1.12	9.770	10.75	237.95	0.650	0.000	2.08	7.856	5.11	54.9	0.0	311.1
60.00		1.00	1.14	9.951	10.95	233.12	0.650	0.000	5.00	18.497	12.02	131.6	0.0	732.5
65.00		1.00	1.16	10.120	11.13	228.02	0.650	0.000	5.00	17.948	11.67	129.9	0.0	710.6
70.00		1.00	1.17	10.279	11.31	222.67	0.650	0.000	5.00	17.400	11.31	127.9	0.0	688.7
75.00		1.00	1.19	10.430	11.47	217.11	0.650	0.000	5.00	16.851	10.95	125.7	0.0	666.8
80.00		1.00	1.21	10.572	11.63	211.36	0.650	0.000	5.00	16.303	10.60	123.2	0.0	645.0
85.00		1.00	1.22	10.708	11.78	205.44	0.650	0.000	5.00	15.754	10.24	120.6	0.0	623.1
90.00		1.00	1.24	10.838	11.92	199.35	0.650	0.000	5.00	15.206	9.88	117.8	0.0	601.2
94.58	Bot - Section 3	1.00	1.25	10.952	12.05	193.65	0.650	0.000	4.58	13.457	8.75	105.4	0.0	531.9
95.00		1.00	1.25	10.962	12.06	193.13	0.650	0.000	0.42	1.214	0.79	9.5	0.0	76.3
96.75	RB5	1.00	1.26	11.004	12.10	190.92	0.650	0.000	1.75	5.056	3.29	39.8	0.0	317.9
99.42	Top - Section 2	1.00	1.26	11.067	12.17	187.52	0.650	0.000	2.67	7.575	4.92	59.9	0.0	476.2
100.00		1.00	1.27	11.081	12.19	188.91	0.650	0.000	0.58	1.636	1.06	13.0	0.0	38.9
105.00		1.00	1.28	11.195	12.31	182.44	0.650	0.000	5.00	13.719	8.92	109.8	0.0	326.4
110.00		1.00	1.29	11.305	12.44	175.86	0.650	0.000	5.00	13.171	8.56	106.5	0.0	313.3
115.00		1.00	1.30	11.412	12.55	169.17	0.650	0.000	5.00	12.622	8.20	103.0	0.0	300.2
117.25	RT5	1.00	1.31	11.458	12.60	166.13	0.650	0.000	2.25	5.501	3.58	45.1	0.0	130.8
120.00		1.00	1.32	11.514	12.67	162.38	0.650	0.000	2.75	6.573	4.27	54.1	0.0	156.2
125.00		1.00	1.33	11.614	12.78	155.50	0.650	0.000	5.00	11.525	7.49	95.7	0.0	273.9
130.00		1.00	1.34	11.710	12.88	148.53	0.650	0.000	5.00	10.977	7.14	91.9	0.0	260.8
135.00		1.00	1.35	11.803	12.98	141.48	0.650	0.000	5.00	10.428	6.78	88.0	0.0	247.7
137.00	Appurtenance(s)	1.00	1.35	11.840	13.02	138.64	0.650	0.000	2.00	4.018	2.61	34.0	0.0	95.4
140.00		1.00	1.36	11.894	13.08	134.35	0.650	0.000	3.00	5.862	3.81	49.9	0.0	139.1
145.00		1.00	1.37	11.982	13.18	127.15	0.650	0.000	5.00	9.332	6.07	79.9	0.0	221.4
147.00	Appurtenance(s)	1.00	1.37	12.017	13.22	124.25	0.650	0.000	2.00	3.579	2.33	30.8	0.0	84.9
148.50	Top - Section 3	1.00	1.38	12.043	13.25	122.07	0.650	0.000	1.50	2.627	1.71	22.6	0.0	62.3
150.00		1.00	1.38	12.068	13.27	117.41	0.600	0.000	1.50	2.500	1.50	19.9	0.0	118.0
155.00		1.00	1.39	12.152	13.37	117.81	0.600	0.000	5.00	8.333	5.00	66.8	0.0	393.4
157.00	Appurtenance(s)	1.00	1.39	12.185	13.40	117.97	0.600	0.000	2.00	3.333	2.00	26.8	0.0	157.3
158.50		1.00	1.39	12.209	13.43	118.09	0.600	0.000	1.50	2.500	1.50	20.1	0.0	118.0
								Totals:	**158.50**			**3,583.4**		**19,868.3**

Discrete Appurtenance Forces

Structure:	CT46139-A-SBA	**Code:**	EIA/TIA-222-G	8/13/2021	
Site Name:	West Haven-rt15 /Woodbridge	**Exposure:**	C		
Height:	158.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 35	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations 23

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	157.00	JAHH-65B-R3B	6	12.185	13.403	0.66	0.80	36.29	411.36	0.000	0.000	486.45	0.00	0.00
2	157.00	T-Arm	3	12.185	13.403	0.56	0.75	16.88	1200.00	0.000	0.000	226.18	0.00	0.00
3	157.00	VZS01	3	12.185	13.403	0.55	0.80	7.12	261.30	0.000	0.000	95.44	0.00	0.00
4	157.00	FE-16148-OVP-B12	1	12.185	13.403	0.54	0.80	1.08	15.21	0.000	0.000	14.44	0.00	0.00
5	157.00	CBC78T-DS-43/E14F05P	3	12.185	13.403	0.54	0.80	0.59	31.20	0.000	0.000	7.97	0.00	0.00
6	157.00	B2/B66A RRH-BR049	2	12.185	13.403	0.54	0.80	2.00	140.60	0.000	0.000	26.87	0.00	0.00
7	157.00	B5/B13 RRH-BR04C	2	12.185	13.403	0.54	0.80	2.00	168.80	0.000	0.000	26.87	0.00	0.00
8	147.00	4449 B71 + B85	3	12.017	13.219	0.54	0.80	3.17	219.60	0.000	0.000	41.87	0.00	0.00
9	147.00	RRUS 4415 B25	3	12.017	13.219	0.54	0.80	2.64	138.00	0.000	0.000	34.86	0.00	0.00
10	147.00	ACU-A20-N	4	12.017	13.219	0.54	0.80	0.30	4.00	0.000	0.000	3.97	0.00	0.00
11	147.00	AIR6449 B41	3	12.017	13.219	0.57	0.80	9.63	309.00	0.000	0.000	127.26	0.00	0.00
12	147.00	APXVAARR24_43-U-NA2	3	12.017	13.219	0.56	0.80	34.00	384.00	0.000	0.000	449.48	0.00	0.00
13	147.00	T-Arm	3	12.017	13.219	0.56	0.75	16.88	1200.00	0.000	0.000	223.06	0.00	0.00
14	147.00	(3) T-Arm Kit	1	12.017	13.219	0.75	0.75	12.38	500.00	0.000	0.000	163.58	0.00	0.00
15	147.00	ALU 800MHz External	3	12.017	13.219	0.54	0.80	1.25	26.40	0.000	0.000	16.58	0.00	0.00
16	147.00	800 MHz RRH	3	12.017	13.219	0.54	0.80	4.00	159.00	0.000	0.000	52.93	0.00	0.00
17	147.00	KRD 9011461-B66A-B2A	3	12.017	13.219	0.70	0.80	13.59	396.60	0.000	0.000	179.68	0.00	0.00
18	137.00	RA21.7770.00	6	11.840	13.024	0.58	0.80	22.95	223.20	0.000	0.000	298.92	0.00	0.00
19	137.00	DC6-48-60-18-8F	1	11.840	13.024	0.80	0.80	0.74	31.80	0.000	0.000	9.59	0.00	0.00
20	137.00	T-Arm	3	11.840	13.024	0.56	0.75	16.88	1200.00	0.000	0.000	219.78	0.00	0.00
21	137.00	LGP21401	12	11.840	13.024	0.54	0.80	8.30	169.20	0.000	0.000	108.06	0.00	0.00
22	137.00	RRUS 11	6	11.840	13.024	0.54	0.80	8.10	304.20	0.000	0.000	105.55	0.00	0.00
23	137.00	AM-X-CD-16-65-00T-RET	3	11.840	13.024	0.60	0.80	14.44	145.50	0.000	0.000	188.01	0.00	0.00
							Totals:		**7,638.97**			**3,107.40**		

Total Applied Force Summary

Structure:	CT46139-A-SBA		**Code:**	EIA/TIA-222-G	8/13/2021
Site Name:	West Haven-rt15 /Woodbridge		**Exposure:**	C	
Height:	158.50 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 36

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations 23

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		129.11	1119.64	0.00	0.00
7.42		61.44	534.05	0.00	0.00
10.00		64.75	563.72	0.00	0.00
15.00		123.28	1075.89	0.00	0.00
20.00		127.71	1054.02	0.00	0.00
25.00		130.60	1032.14	0.00	0.00
29.75		125.58	960.27	0.00	0.00
30.00		6.54	49.99	0.00	0.00
35.00		133.22	988.39	0.00	0.00
40.00		133.44	966.52	0.00	0.00
45.00		133.12	944.64	0.00	0.00
46.59		41.78	295.19	0.00	0.00
50.00		91.18	1155.10	0.00	0.00
52.92		77.53	971.97	0.00	0.00
55.00		54.88	376.50	0.00	0.00
60.00		131.60	889.56	0.00	0.00
65.00		129.87	867.69	0.00	0.00
70.00		127.88	845.81	0.00	0.00
75.00		125.66	823.94	0.00	0.00
80.00		123.24	802.06	0.00	0.00
85.00		120.62	780.19	0.00	0.00
90.00		117.83	758.31	0.00	0.00
94.58		105.37	675.90	0.00	0.00
95.00		9.51	89.42	0.00	0.00
96.75		39.78	372.92	0.00	0.00
99.42		59.94	560.01	0.00	0.00
100.00		12.96	57.27	0.00	0.00
105.00		109.82	483.51	0.00	0.00
110.00		106.46	470.39	0.00	0.00
115.00		102.99	457.26	0.00	0.00
117.25		45.07	201.49	0.00	0.00
120.00		54.11	242.65	0.00	0.00
125.00		95.70	431.01	0.00	0.00
130.00		91.91	417.89	0.00	0.00
135.00		88.01	404.76	0.00	0.00
137.00	(31) attachments	963.93	2232.13	0.00	0.00
140.00		49.85	193.09	0.00	0.00
145.00		79.95	311.31	0.00	0.00
147.00	(29) attachments	1324.02	3457.45	0.00	0.00
148.50		22.62	84.31	0.00	0.00
150.00		19.91	140.03	0.00	0.00
155.00		66.83	466.76	0.00	0.00
157.00	(20) attachments	911.03	2415.18	0.00	0.00
158.50		20.14	118.01	0.00	0.00
	Totals:	**6,690.80**	**32,138.36**	**0.00**	**0.00**

Linear Appurtenance Segment Forces (Factored)

Structure:	CT46139-A-SBA	**Code:**	EIA/TIA-222-G	8/13/2021	
Site Name:	West Haven-rt15 /Woodbridge	**Exposure:**	C		
Height:	158.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 37	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations 23

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	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.052	0.000	7.442	0.00	0.00
7.42	1.25" Reinforcing	Yes	2.42	0.000	3.00	0.60	0.00	0.052	0.000	7.442	0.00	0.00
10.00	1.25" Reinforcing	Yes	1.08	0.000	1.50	0.14	0.00	0.042	0.000	7.442	0.00	0.00
10.00	1.25" Reinforcing	Yes	1.50	0.000	3.00	0.38	0.00	0.042	0.000	7.442	0.00	0.00
15.00	1.25" Reinforcing	Yes	5.00	0.000	1.50	0.63	0.00	0.027	0.000	7.442	0.00	0.00
20.00	1.25" Reinforcing	Yes	5.00	0.000	1.50	0.63	0.00	0.028	0.000	7.896	0.00	0.00
25.00	1.25" Reinforcing	Yes	5.00	0.000	1.50	0.63	0.00	0.028	0.000	8.276	0.00	0.00
29.75	1.25" Reinforcing	Yes	4.75	0.000	1.50	0.59	0.00	0.029	0.000	8.585	0.00	0.00
30.00	1.25" Reinforcing	Yes	0.25	0.000	1.50	0.03	0.00	0.029	0.000	8.600	0.00	0.00
35.00	1.25" Reinforcing	Yes	5.00	0.000	1.50	0.63	0.00	0.030	0.000	8.883	0.00	0.00
40.00	1.25" Reinforcing	Yes	5.00	0.000	1.50	0.63	0.00	0.031	0.000	9.137	0.00	0.00
45.00	1.25" Reinforcing	Yes	5.00	0.000	1.50	0.63	0.00	0.031	0.000	9.366	0.00	0.00
46.59	1.25" Reinforcing	Yes	1.59	0.000	1.50	0.20	0.00	0.032	0.000	9.435	0.00	0.00
50.00	1.25" Reinforcing	Yes	3.41	0.000	1.50	0.43	0.00	0.032	0.000	9.576	0.00	0.00
52.92	1.25" Reinforcing	Yes	2.92	0.000	1.50	0.37	0.00	0.033	0.000	9.691	0.00	0.00
55.00	1.25" Reinforcing	Yes	0.08	0.000	1.50	0.01	0.00	0.001	0.000	9.770	0.00	0.00
94.58	1.25" Reinforcing	Yes	0.08	0.000	1.50	0.01	0.00	0.001	0.000	10.952	0.00	0.00
95.00	1.25" Reinforcing	Yes	0.42	0.000	1.50	0.05	0.00	0.043	0.000	10.962	0.00	0.00
96.75	1.25" Reinforcing	Yes	1.75	0.000	1.50	0.22	0.00	0.044	0.000	11.004	0.00	0.00
99.42	1.25" Reinforcing	Yes	2.67	0.000	1.50	0.33	0.00	0.044	0.000	11.067	0.00	0.00
100.00	1.25" Reinforcing	Yes	0.58	0.000	1.50	0.07	0.00	0.045	0.000	11.081	0.00	0.00
105.00	1.25" Reinforcing	Yes	4.50	0.000	1.50	0.56	0.00	0.041	0.000	11.195	0.00	0.00
									Totals:		**0.0**	**0.0**

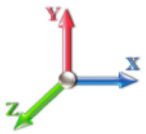
Calculated Forces

Structure:	CT46139-A-SBA	**Code:**	EIA/TIA-222-G	8/13/2021	
Site Name:	West Haven-rt15 /Woodbridge	**Exposure:**	C		
Height:	158.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 38	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 23

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	-32.14	-6.70	0.00	-741.06	0.00	741.06	3324.94	1662.47	7900.55	3956.15	0.00	0.000	0.000	0.116
5.00	-31.02	-6.58	0.00	-707.57	0.00	707.57	3293.53	1646.77	7649.11	3830.24	0.01	-0.025	0.000	0.113
7.42	-30.48	-6.52	0.00	-691.65	0.00	691.65	3277.61	1638.81	7526.99	3769.09	0.03	-0.038	0.000	0.119
10.00	-29.91	-6.47	0.00	-674.82	0.00	674.82	3260.13	1630.06	7396.53	3703.76	0.05	-0.052	0.000	0.117
15.00	-28.83	-6.36	0.00	-642.48	0.00	642.48	3224.74	1612.37	7143.12	3576.87	0.12	-0.079	0.000	0.114
20.00	-27.78	-6.24	0.00	-610.69	0.00	610.69	3187.35	1593.68	6889.21	3449.73	0.22	-0.107	0.000	0.112
25.00	-26.74	-6.12	0.00	-579.48	0.00	579.48	3147.98	1573.99	6635.12	3322.49	0.35	-0.135	0.000	0.109
29.75	-25.78	-6.00	0.00	-550.40	0.00	550.40	3108.73	1554.36	6393.85	3201.68	0.50	-0.162	0.000	0.111
30.00	-25.73	-6.00	0.00	-548.90	0.00	548.90	3106.61	1553.31	6381.16	3195.32	0.50	-0.163	0.000	0.111
35.00	-24.74	-5.88	0.00	-518.89	0.00	518.89	3063.26	1531.63	6127.67	3068.39	0.69	-0.193	0.000	0.108
40.00	-23.77	-5.75	0.00	-489.50	0.00	489.50	3017.91	1508.96	5874.95	2941.84	0.91	-0.223	0.000	0.105
45.00	-22.82	-5.62	0.00	-460.74	0.00	460.74	2970.57	1485.29	5623.33	2815.85	1.16	-0.254	0.000	0.102
46.59	-22.53	-5.59	0.00	-451.81	0.00	451.81	2955.13	1477.57	5543.77	2776.00	1.25	-0.264	0.000	0.101
50.00	-21.37	-5.50	0.00	-432.74	0.00	432.74	2921.24	1460.62	5373.14	2690.56	1.44	-0.285	0.000	0.097
52.92	-20.40	-5.42	0.00	-416.69	0.00	416.69	2916.11	1458.05	5347.75	2677.85	1.62	-0.303	0.000	0.163
55.00	-20.02	-5.38	0.00	-405.41	0.00	405.41	2894.92	1447.46	5244.24	2626.02	1.76	-0.326	0.000	0.161
60.00	-19.12	-5.26	0.00	-378.51	0.00	378.51	2842.57	1421.28	4996.81	2502.12	2.13	-0.378	0.000	0.158
65.00	-18.25	-5.14	0.00	-352.21	0.00	352.21	2788.22	1394.11	4751.61	2379.34	2.56	-0.431	0.000	0.155
70.00	-17.40	-5.02	0.00	-326.51	0.00	326.51	2731.89	1365.95	4508.96	2257.83	3.04	-0.485	0.000	0.151
75.00	-16.58	-4.91	0.00	-301.40	0.00	301.40	2673.57	1336.78	4269.18	2137.76	3.58	-0.540	0.000	0.147
80.00	-15.77	-4.79	0.00	-276.87	0.00	276.87	2613.25	1306.63	4032.59	2019.29	4.17	-0.596	0.000	0.143
85.00	-14.99	-4.68	0.00	-252.92	0.00	252.92	2550.95	1275.47	3799.51	1902.58	4.83	-0.653	0.000	0.139
90.00	-14.23	-4.56	0.00	-229.54	0.00	229.54	2486.65	1243.33	3570.26	1787.78	5.54	-0.710	0.000	0.134
94.58	-13.55	-4.46	0.00	-208.63	0.00	208.63	2425.96	1212.98	3363.76	1684.38	6.25	-0.764	0.000	0.129
95.00	-13.46	-4.45	0.00	-206.77	0.00	206.77	2420.36	1210.18	3345.16	1675.07	6.32	-0.769	0.000	0.129
96.75	-13.08	-4.41	0.00	-198.99	0.00	198.99	2396.69	1198.35	3267.42	1636.14	6.60	-0.790	0.000	0.072
99.42	-12.52	-4.34	0.00	-187.24	0.00	187.24	1173.34	586.67	1596.31	799.34	7.05	-0.808	0.000	0.086
100.00	-12.47	-4.33	0.00	-184.70	0.00	184.70	1170.92	585.46	1585.67	794.02	7.15	-0.812	0.000	0.108
105.00	-11.98	-4.22	0.00	-163.04	0.00	163.04	1149.02	574.51	1494.34	748.28	8.02	-0.853	0.000	0.099
110.00	-11.51	-4.12	0.00	-141.91	0.00	141.91	1125.14	562.57	1402.88	702.48	8.93	-0.892	0.000	0.089
115.00	-11.05	-4.01	0.00	-121.32	0.00	121.32	1099.26	549.63	1311.60	656.78	9.89	-0.930	0.000	0.080
117.25	-10.85	-3.97	0.00	-112.29	0.00	112.29	1086.96	543.48	1270.68	636.28	10.33	-0.946	0.000	0.075
117.25	-10.85	-3.97	0.00	-112.29	0.00	112.29	1086.96	543.48	1270.68	636.28	10.33	-0.946	0.000	0.075
120.00	-10.60	-3.92	0.00	-101.37	0.00	101.37	1071.39	535.70	1220.84	611.33	10.88	-0.966	0.000	0.176
125.00	-10.17	-3.83	0.00	-81.77	0.00	81.77	1041.53	520.77	1130.90	566.29	11.94	-1.047	0.000	0.154
130.00	-9.75	-3.74	0.00	-62.61	0.00	62.61	1009.68	504.84	1042.12	521.83	13.08	-1.121	0.000	0.130
135.00	-9.34	-3.65	0.00	-43.90	0.00	43.90	975.84	487.92	954.81	478.11	14.29	-1.185	0.000	0.101
137.00	-7.13	-2.65	0.00	-36.59	0.00	36.59	961.75	480.87	920.37	460.87	14.79	-1.207	0.000	0.087
140.00	-6.94	-2.60	0.00	-28.65	0.00	28.65	940.01	470.00	869.29	435.29	15.56	-1.237	0.000	0.073
145.00	-6.63	-2.51	0.00	-15.67	0.00	15.67	902.19	451.09	785.88	393.52	16.87	-1.273	0.000	0.047
147.00	-3.20	-1.11	0.00	-10.64	0.00	10.64	886.50	443.25	753.18	377.15	17.41	-1.284	0.000	0.032
148.50	-3.12	-1.09	0.00	-8.97	0.00	8.97	874.53	437.26	728.93	365.00	17.81	-1.290	0.000	0.028
148.50	-3.12	-1.09	0.00	-8.97	0.00	8.97	728.28	364.14	584.01	379.17	17.81	-1.290	0.000	0.028
150.00	-2.98	-1.07	0.00	-7.34	0.00	7.34	728.28	364.14	584.01	379.17	18.22	-1.296	0.000	0.023
155.00	-2.51	-0.99	0.00	-2.01	0.00	2.01	728.28	364.14	584.01	379.17	19.58	-1.302	0.000	0.009
157.00	-0.12	-0.02	0.00	-0.03	0.00	0.03	728.28	364.14	584.01	379.17	20.13	-1.302	0.000	0.000
158.50	0.00	-0.02	0.00	0.00	0.00	0.00	728.28	364.14	584.01	379.17	20.54	-1.302	0.000	0.000

Calculated Forces

Structure:	CT46139-A-SBA		**Code:**	EIA/TIA-222-G	8/13/2021
Site Name:	West Haven-rt15 /Woodbridge		**Exposure:**	C	
Height:	158.50 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 39

Final Analysis Summary

Structure:	CT46139-A-SBA	**Code:**	EIA/TIA-222-G	8/13/2021	
Site Name:	West Haven-rt15 /Woodbridge	**Exposure:**	C		
Height:	158.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 40	

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 101 mph Wind	30.4	0.00	38.53	0.00	0.00	3375.17
0.9D + 1.6W 101 mph Wind	30.4	0.00	28.89	0.00	0.00	3346.92
1.2D + 1.0Di + 1.0Wi 50 mph Wind	8.1	0.00	59.51	0.00	0.00	875.56
1.2D + 1.0E	1.7	0.00	38.57	0.00	0.00	222.04
0.9D + 1.0E	1.7	0.00	28.92	0.00	0.00	219.96
1.0D + 1.0W 60 mph Wind	6.7	0.00	32.14	0.00	0.00	741.06

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 101 mph Wind	-11.41	-17.90	0.00	-463.02	0.00	-463.02	1071.39	535.70	1220.84	611.33	120.00	0.769
0.9D + 1.6W 101 mph Wind	-8.23	-17.64	0.00	-455.25	0.00	-455.25	1071.39	535.70	1220.84	611.33	120.00	0.753
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-23.16	-4.47	0.00	-114.31	0.00	-114.31	1071.39	535.70	1220.84	611.33	120.00	0.209
1.2D + 1.0E	-12.80	-1.40	0.00	-42.41	0.00	-42.41	1071.39	535.70	1220.84	611.33	120.00	0.081
0.9D + 1.0E	-9.60	-1.37	0.00	-41.79	0.00	-41.79	1071.39	535.70	1220.84	611.33	120.00	0.077
1.0D + 1.0W 60 mph Wind	-10.60	-3.92	0.00	-101.37	0.00	-101.37	1071.39	535.70	1220.84	611.33	120.00	0.176

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
0.0	29.8	(2) PLT-7.25x1.5(31mm Hole)	288.2	4.32	37.1	327.1	37.1	9	13	318.2	37.1	9	9	335.14	478.8	436.34	0.768
0.0	7.4	(2) PLT-7.25x1.5(31mm Hole)	206.5	3.10	37.1	268.6	37.1	8	9	263.7	37.1	8	9	268.57	478.8	436.34	0.616
7.4	29.8	(1) PLT-7.25x1.5(31mm Hole)	288.2	4.32	37.1	335.1	37.1	10	13	318.2	37.1	9	9	335.14	478.8	436.34	0.768
29.8	50.0	(3) PLT-6.5x1.5(31mm Hole)	296.6	5.34	37.1	298.2	37.1	9	13	280.8	37.1	8	12	298.15	425.1	381.49	0.782
96.8	117.3	(3) PLT-5"x1.5" (1.25" Hole)	-475.8	-9.99	37.1	177.7	37.1	5	9	161.6	37.1	5	7	216.48	323.3	269.65	0.803

Base Plate Summary

Structure:	CT46139-A-SB		**Code:**	EIA/TIA-222-G	8/13/2021
Site Name:	West Haven-rt15 /Woodbridge		**Exposure:**	C	
Height:	158.50 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 41

Tower Engineering Solutions

Reactions	
Original Design	
Moment (kip-ft):	2913.30
Axial (kip):	22.90
Shear (kip):	28.25
Analysis (1.2D + 1.6W)	
Moment (kip-ft):	3375.17
Axial (kip):	38.53
Shear (kip):	30.37

Base Plate	
Yield (ksi):	60.00
Width (in):	72.00
Style:	Round
Polygon Sides:	0.00
Clip Length (in):	0.00
Effective Len (in):	15.04
Moment (kip-in):	521.69
Allow Stress (ksi):	81.00
Applied Stress (ksi):	68.04
Stress Ratio:	0.84

Anchor Bolts	
Bolt Circle:	66.00
Number Bolts:	16.00
Bolt Type:	2.25" 18J
Bolt Diameter (in):	2.25
Yield (ksi):	75.00
Ultimate (ksi):	100.00
Arrangement:	Radial
Cluster Dist (in):	0.00
Start Angle (deg):	0.00
Compression	
Force (kip):	157.14
Allowable (kip):	260.00
Ratio:	0.62
Tension	
Force (kip):	149.70
Allowable (kip):	260.00
Ratio:	0.59

Monopole Mat Foundation Design

			Date: 8/13/2021
Customer Name:	Verizon	**EIA/TIA Standard:**	EIA-222-G
Site Name:		**Structure Height (Ft.):**	158.5
Site Number:	CT46139-A-SBA	**Engineer Name:**	J. Tibbetts
Engr. Number:	113022	**Engineer Login ID:**	

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Monopole

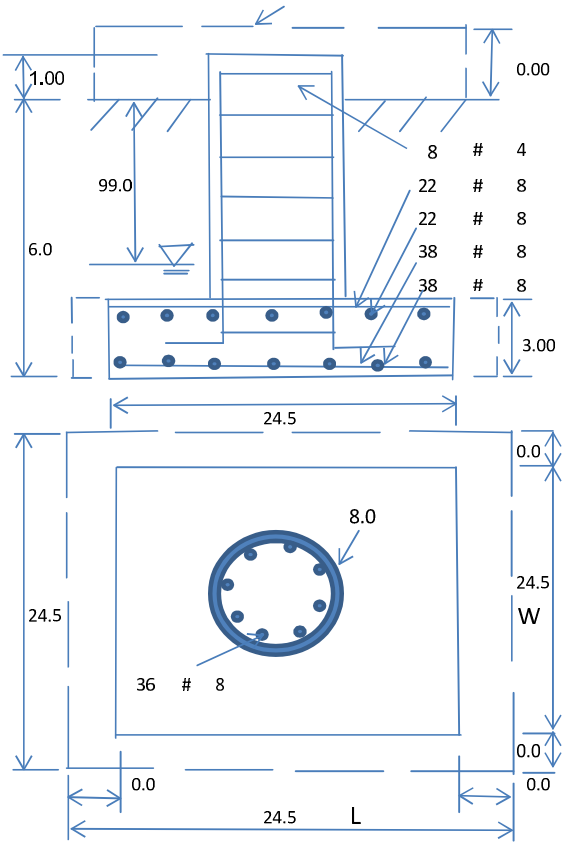
Analysis or Design? Analysis

Base Reactions (Factored):

Axial Load (Kips):	38.5	Shear Force (Kips):	30.4
Uplift Force (Kips):	0.0	Moment (Kips-ft):	3375.2
Allowable overstress %:	5.0%		

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	8.0	Depth of Base BG (ft.):	6.0
Pier Height A. G. (ft.):	1.00	Thickness of Pad (ft):	3.00
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 #:	8	Tie / Stirrup Size #:	4	
Qty. of Vertical Rebars:	36	Tie Spacing (in):	12.0	
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):	38	Qty. of Rebar in Pad (W):	38

Rebar at the top of the concrete pad:

Qty. of Rebar in Pad (L):	22	Qty. of Rebar in Pad (W):	22
Apply 1.35 factor for e/w Per G:	1.35		

Soil Design Parameters:

Soil Unit Weight (pcf):	120.0	Soil Buoyant Weight:	57.6	Pcf		
Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad:	30
Ultimate Bearing Pressure (psf):	16000	Ultimate Skin Friction:	0	Psf	Angle from Bottm of Pad:	25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No		Angle from Bottm of Pad:	25
Consider soil hor. resist. for OTM.:	Yes	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.):	1649.95	Total Dry Soil Weight (Kips):	197.99
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	197.99	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	2001.81	Total Dry Concrete Weight (Kips):	300.27
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	300.27	Total Vertical Load on Base (Kips):	536.77

Check Soil Capacities:

					Load/ Capacity Ratio	
Calculated Maxium Net Soil Pressure under the base (psf):	2558	<	Allowable Factored Soil Bearing (psf):	12000	0.21	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	5965.0	>	Design Factored Momont (kips-ft):	3435	0.58	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.74	OK!				

Check the capacities of Reinforceing Concrete:

Strength reduction factor (Flexure and axial tension):
Strength reduction factor (Axial compresion):
Strength reduction factor (Shear):
Wind Load Factor on Concrete Design:

ad Capacity Ratio

(1) Concrete Pier:

Vertical Steel Rebar Area (sq. in./each):			Tie / Stirrup Area (sq. in./each):		
Calculated Moment Capacity (Mn,Kips-Ft):		>	Design Factored Moment (Mu, Kips-		
Calculated Shear Capacity (Kips):		>	Design Factored Shear (Kips):		
Calculated Tension Capacity (Tn, Kips):		>	Design Factored Tension (Tu Kips):		
Calculated Compression Capacity (Pn, Kips):		>	Design Factored Axial Load (Pu Kips):		
Moment & Axial Strength Combination:		OK!	Check Tie Spacing (Design/Required):		
Pier Reinforcement Ratio:			Reinforcement Ratio is too small		

(2).Concrete Pad:

One-Way Design Shear Capacity (L-Direction, Kips):			One-Way Factored Shear (L-D. Kips):	197.2	
One-Way Design Shear Capacity (W-Direction, Kips):			One-Way Factored Shear (W-D., Kips		
One-Way Design Shear Capacity (Corner-Corner. Kips):			One-Way Factored Shear (C-C, Kips):	191.6	
Lower Steel Pad Reinforcement Ratio (L-Direct.):			Lower Steel Pad Reinf. Ratio (W-Direc		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):			Moment at Bottom (L-Dir. K-Ft):		
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):			Moment at Bottom (W-Dir. K-Ft):		
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):			Moment at Bottom (C-C Dir. K-Ft):	1466.3	
Upper Steel Pad Reinforcement Ratio (L-Direct.):			Upper Steel Reinf. Ratio (W-Dir.):		
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):			Moment at the top (L-Dir K-Ft):		
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):			Moment at the top (W-Dir K-Ft):		
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):			Moment at the top (C-C Dir. K-Ft):		

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

Moment transferred by punching shear:	1350.1	k-ft.	Max. factored shear stress v_{u_CD}	Psi
Max. factored shear stress v_{u_AB}		Psi	Factored shear Strength ϕv_n	Psi
Max. factored shear stress v_u		Psi	Check Usage of Punching Shear Capacity:	OK!

Maser Consulting Connecticut
2000 Midlantic Drive, Suite 100
Mt. Laurel, NJ 08054
856.797.0412
peter.albano@colliersengineering.com

Antenna Mount Analysis Report and PMI Requirements

Mount Re-Analysis-VZW

SMART Tool Project #: 10084188
Maser Consulting Connecticut Project #: 21777299A (Rev. 1)

July 6, 2021

Site Information	*Site ID:*	*468190-VZW / GUILFORD NORTH 2 CT*
	Site Name:	*GUILFORD NORTH 2 CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*370 Rockland Road* *Guilford, Connecticut 06437* *New Haven County*
	Latitude:	*41.396850°*
	Longitude:	*-72.688808°*
Structure Information	*Tower Type:*	*Monopole*
	Mount Type:	*12.50-Ft T-Arm*

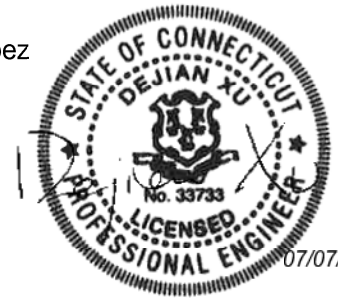
FUZE ID # 16272082

Analysis Results

T-Arm: **72.7% Pass**

******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 also Noted on Mount Modification Drawings
Requirements may also be Noted on A & E drawings

Report Prepared By: Evelina Lopez



07/07/2021

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: 602501, dated June 22, 2021*
Mount Mapping Report	*Roaming Networks Inc, Site ID: PSLC468190, dated March 24, 2021*

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust),	121 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:	0.986
Seismic Parameters:	S_S:	0.210
	S_1:	0.055
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
			Commscope		Added
			Samsung		
			Commscope		
			Raycap		
			Samsung		
			Samsung		

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

The recent mount mapping did not report existing OVP units. However, 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.

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. 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:
   - Channel, Solid Round, Angle, Plate — ASTM A36 (Gr. 36)
   - HSS (Rectangular) — ASTM 500 (Gr. B-46)
   - Pipe — ASTM A53 (Gr. B-35)
   - Threaded Rod — F1554 (Gr. 36)
   - Bolts — ASTM A325

Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by Maser Consulting Connecticut.

Analysis Results:

Component	Utilization %	Pass/Fail
Standoff Arm		*Pass*
Horizontal		*Pass*
Antenna Pipe		*Pass*
Dual Mount Pipe		*Pass*
Mount Connection		*Pass*

Structure Rating – *(Controlling Utilization of all Components)*	**72.7%**

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 and do not require modifications.

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:

Mount Photos
Mount Mapping Report (for reference only)
Analysis Calculations
Contractor Required Post Installation Inspection (PMI) Report Deliverables
Antenna Placement Diagrams
TIA Adoption and Wind Speed Usage Letter


03/23/2021 15:22:22
-72.68848197222222, 41.396991972222224
GUILFORD NORTH 2 CT


03/23/2021 16:23:06
-72.68882497222222, 41.396861
GUILFORD NORTH 2 CT

V3.0 Updated on 8-31-2020

PAUL J. FORD & COMPANY

Antenna Mount Mapping Form (PATENT PENDING)

FCC #
1270237

Tower Owner:	OTHER	**Mapping Date:**	3/24/2021
Site Name:	GUILFORD NORTH 2 CT	**Tower Type:**	Monopole
Site Number or ID:	PSLC468190	**Tower Height (Ft.):**	N/A
Mapping Contractor:	Roaming Networks Inc.	**Mount Elevation (Ft.):**	160

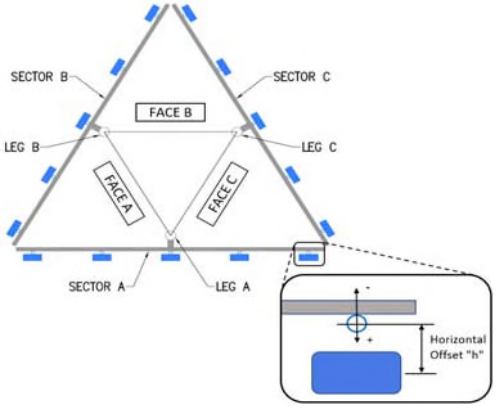
Mount Pipe Configuration and Geometries [Unit = Inches]

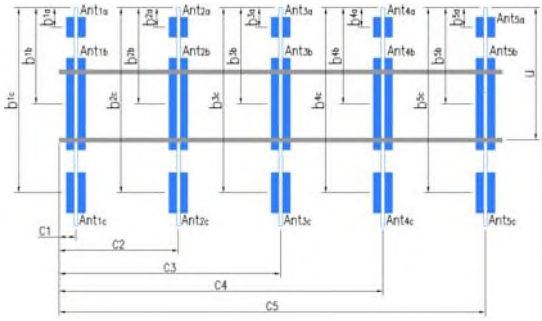
Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."
A1	PIPE 2.4"Ø X 0.17" X 72" LONG	33.00	5.00	C1	PIPE 2.4"Ø X 0.17" X 72" LONG	33.00	5.00
A2	PIPE 2.4"Ø X 0.17" X 72" LONG	33.00	34.00	C2	PIPE 2.4"Ø X 0.17" X 72" LONG	33.00	34.00
A3	PIPE 2.4"Ø X 0.17" X 72" LONG	33.00	64.00	C3	PIPE 2.4"Ø X 0.17" X 72" LONG	33.00	64.00
A4	PIPE 2.4"Ø X 0.17" X 72" LONG	33.00	128.00	C4	PIPE 2.4"Ø X 0.17" X 72" LONG	33.00	128.00
A5	PIPE 2.4"Ø X 0.17" X 72" LONG	33.00	148.00	C5	PIPE 2.4"Ø X 0.17" X 72" LONG	33.00	148.00
A6				C6			
B1	PIPE 2.4"Ø X 0.17" X 72" LONG	33.00	5.00	D1			
B2	PIPE 2.4"Ø X 0.17" X 72" LONG	33.00	34.00	D2			
B3	PIPE 2.4"Ø X 0.17" X 72" LONG	33.00	64.00	D3			
B4	PIPE 2.4"Ø X 0.17" X 72" LONG	33.00	128.00	D4			
B5	PIPE 2.4"Ø X 0.17" X 72" LONG	33.00	148.00	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.) :	0.5
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :	

Please enter additional infomation or comments below.

Tower Face Width at Mount Elev. (ft.):		Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):	20



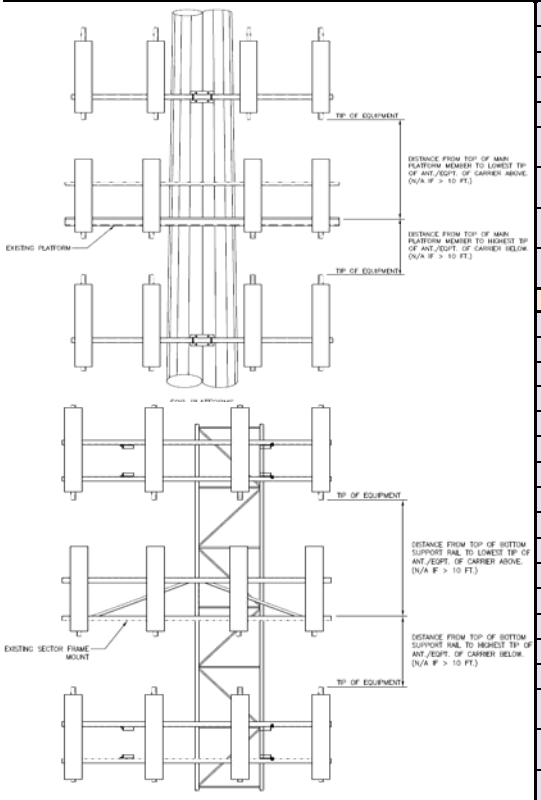


Antenna Layout (Looking Out From Tower)

Ants. Items	Enter antenna model. If not labeled, enter "Unknown". Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Mounting Locations [Units are inches and degrees] Vertical Distances"b_{1a}, b_{2a}, b_{3a}, b_{1b}...." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photos of antennas Photo Numbers
Sector A										
Ant_{1a}	Unknow	10.00	7.80	72.00		160	33.00	7.00	30.00	9
Ant_{1b}										
Ant_{1c}										
Ant_{2a}										
Ant_{2b}										
Ant_{2c}										
Ant_{3a}	Unknow	11.00	4.00	72.00		160	33.00	4.00	30.00	5,6,7
Ant_{3b}										
Ant_{3c}										
Ant_{4a}	Unknow	6.00	4.00	38.00		161.083	20.00	3.00	30.00	8
Ant_{4b}										
Ant_{4c}										
Ant_{5a}	Unknow	10.00	7.80	72.00		160	33.00	7.00	30.00	10
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Mount Azimuth (Degree) for Each Sector			Tower Leg Azimuth (Degree) for Each Sector	
Sector A:	0.00	Deg	Leg A:	Deg
Sector B:	135.00	Deg	Leg B:	Deg
Sector C:	303.00	Deg	Leg C:	Deg
Sector D:		Deg	Leg D:	Deg

Climbing Facility Information			
Location:	210.00	Deg	Sector A
Climbing Facility	Corrosion Type:		Good condition.
	Access:		Climbing path was obstructed.
	Condition:		Good condition.



Sector B										
Ant_{1a}	Unknow	10.00	7.80	72.00		160	33.00	7.00	135.00	9
Ant_{1b}										
Ant_{1c}										
Ant_{2a}										
Ant_{2b}										
Ant_{2c}										
Ant_{3a}	Unknow	11.00	4.00	72.00		160	33.00	4.00	135.00	5,6,7
Ant_{3b}										
Ant_{3c}										
Ant_{4a}	Unknow	6.00	4.00	38.00		161.083	20.00	3.00	135.00	8
Ant_{4b}										
Ant_{4c}										
Ant_{5a}	Unknow	10.00	7.80	72.00		160	33.00	7.00	135.00	10
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector C										
Ant_{1a}	Unknow	10.00	7.80	72.00		160	33.00	7.00	303.00	9
Ant_{1b}										
Ant_{1c}										
Ant_{2a}										
Ant_{2b}										
Ant_{2c}										
Ant_{3a}	Unknow	11.00	4.00	72.00		160	33.00	4.00	303.00	5,6,7
Ant_{3b}										
Ant_{3c}										
Ant_{4a}	Unknow	6.00	4.00	38.00		161.083	20.00	3.00	303.00	8
Ant_{4b}										
Ant_{4c}										
Ant_{5a}	Unknow	10.00	7.80	72.00		160	33.00	7.00	303.00	10
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector D										
Ant_{1a}										
Ant_{1b}										
Ant_{1c}										
Ant_{2a}										
Ant_{2b}										
Ant_{2c}										
Ant_{3a}										
Ant_{3b}										
Ant_{3c}										
Ant_{4a}										
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

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

1		
2		
3		
4		
5		
6		
7		
8		

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

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

V3.0 Updated on 8-31-2020

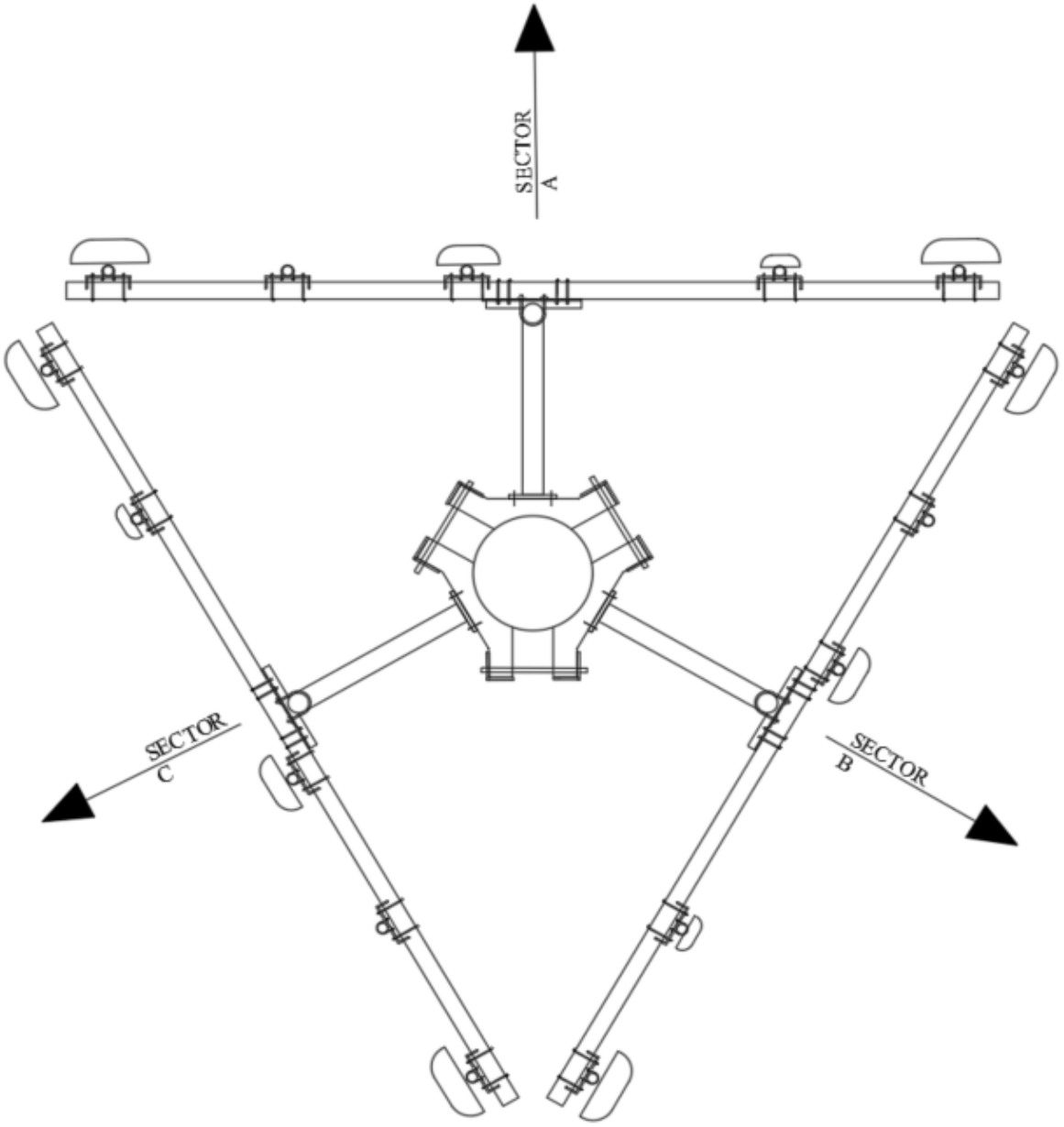
PAUL J. FORD & COMPANY

Antenna Mount Mapping Form (PATENT PENDING)

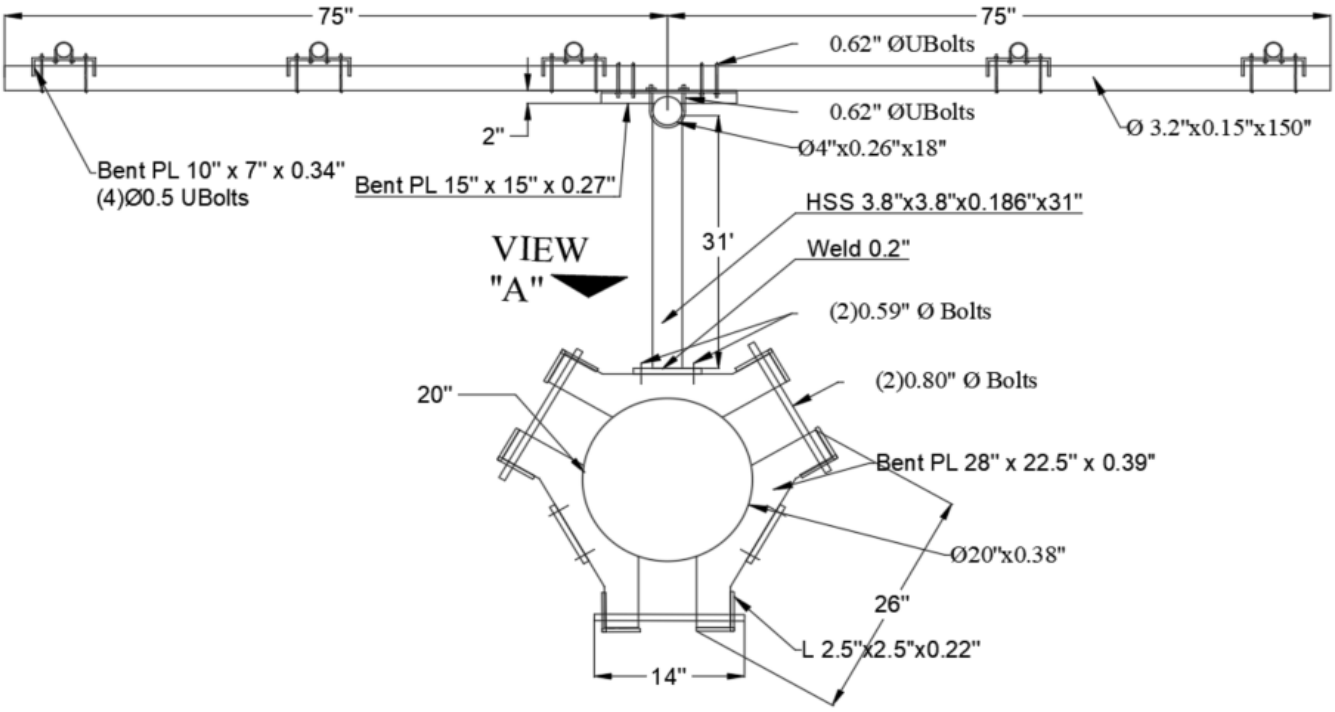
FCC #
1270237

Tower Owner:	OTHER	**Mapping Date:**	3/24/2021
Site Name:	GUILFORD NORTH 2 CT	**Tower Type:**	Monopole
Site Number or ID:	PSLC468190	**Tower Height (Ft.):**	N/A
Mapping Contractor:	Roaming Networks Inc.	**Mount Elevation (Ft.):**	160

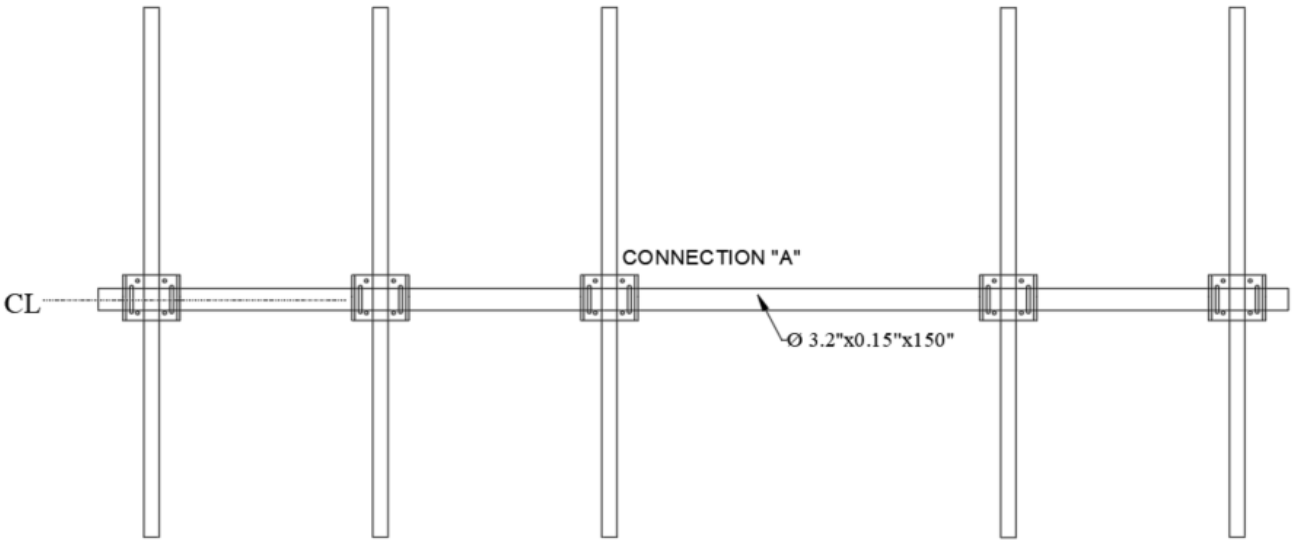
Please Insert Sketches of the Antenna Mount



Please Insert Sketches of the Antenna Mount, cont'd

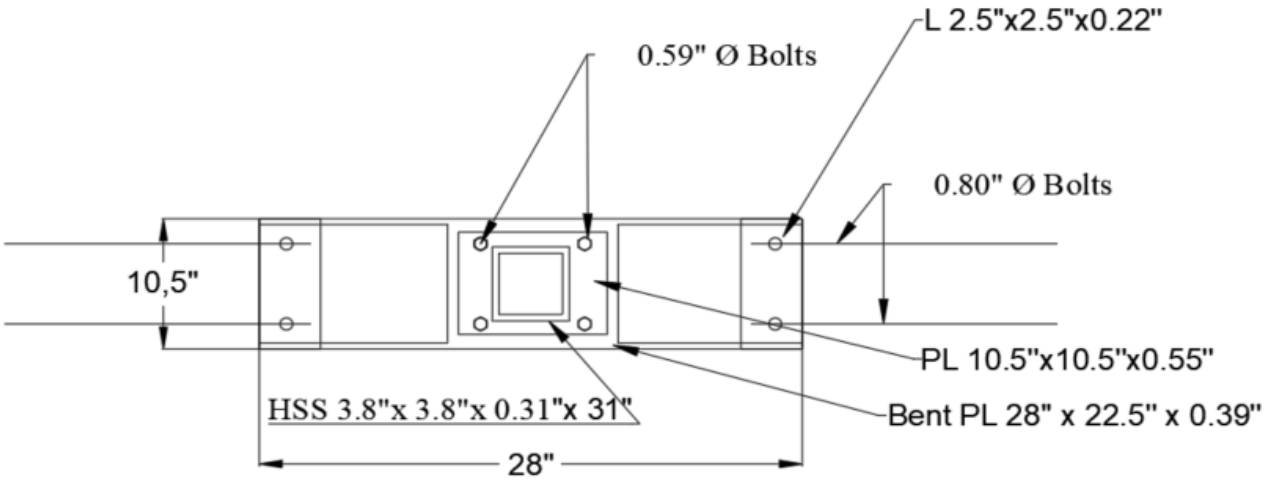


Mount to Tower Connection

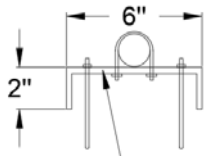


Sector A Sector B Sector C

Please Insert Sketches of the Antenna Mount, cont'd

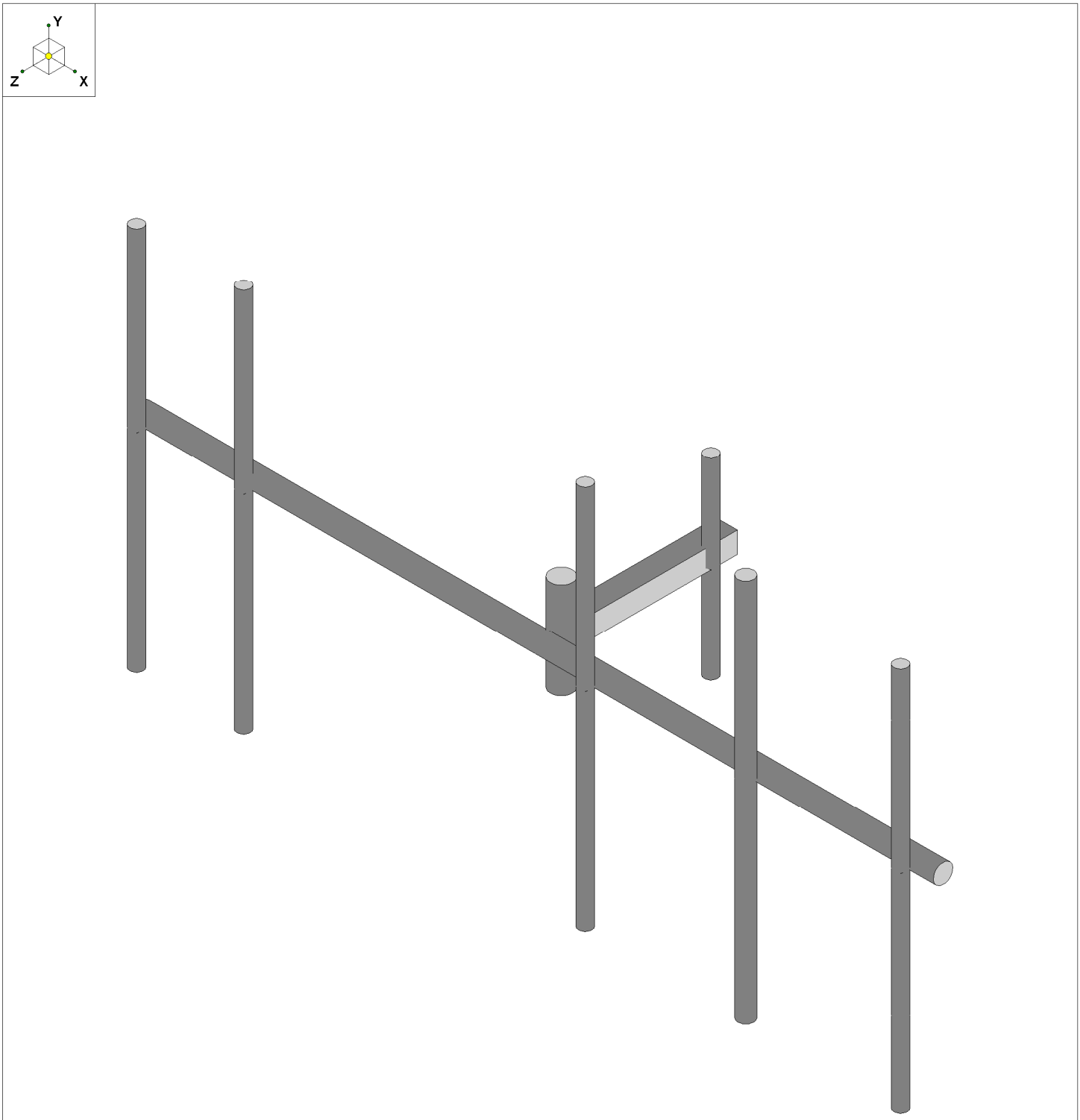


View A



Bent PL 10" x 7" x 0.34"
(4)Ø0.5 UBolts

CONNECTION "A"



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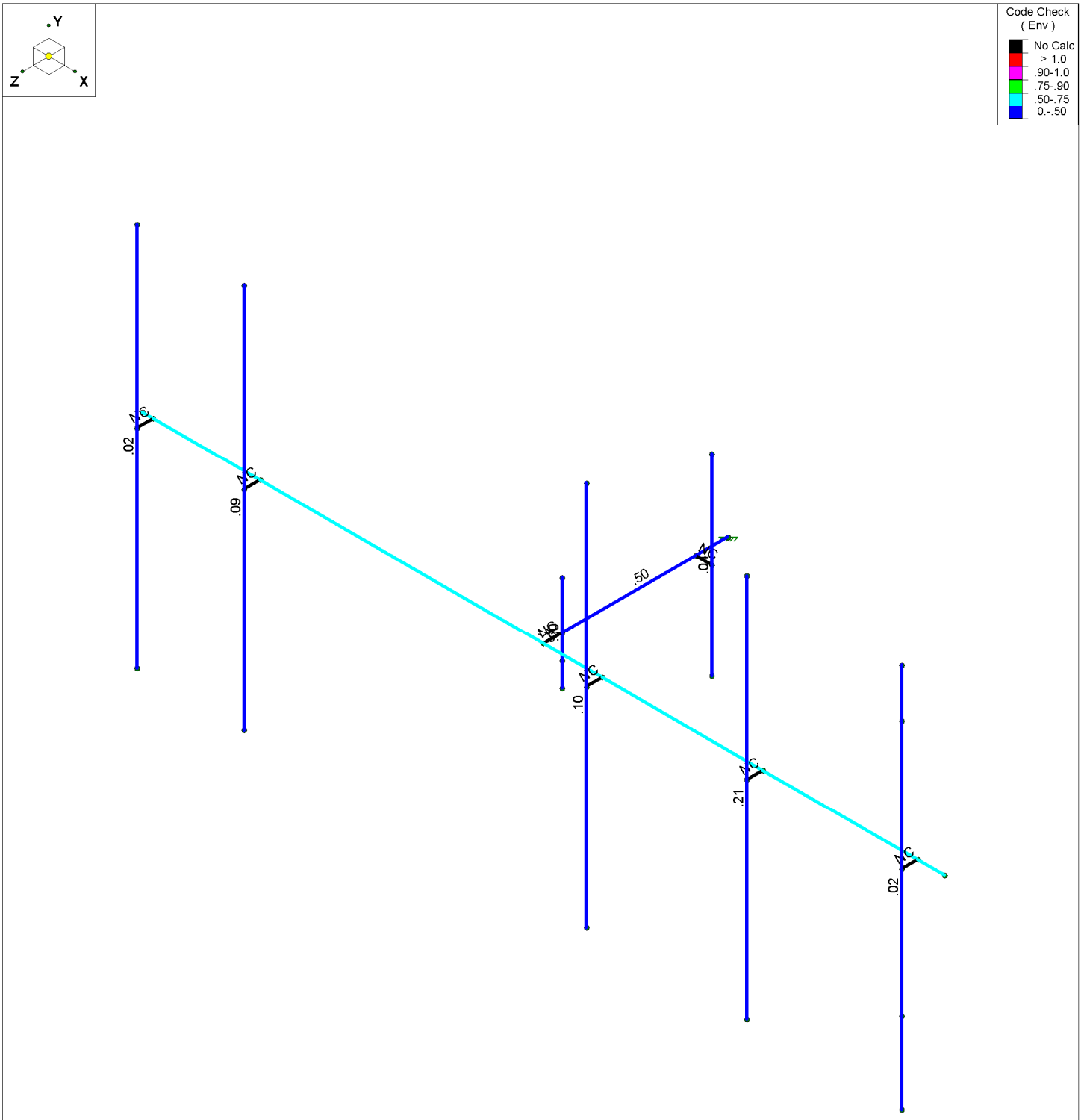
		468190-VZW_MT_LOT_A_H.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

		SK - 2
		July 6, 2021 at 4:32 PM
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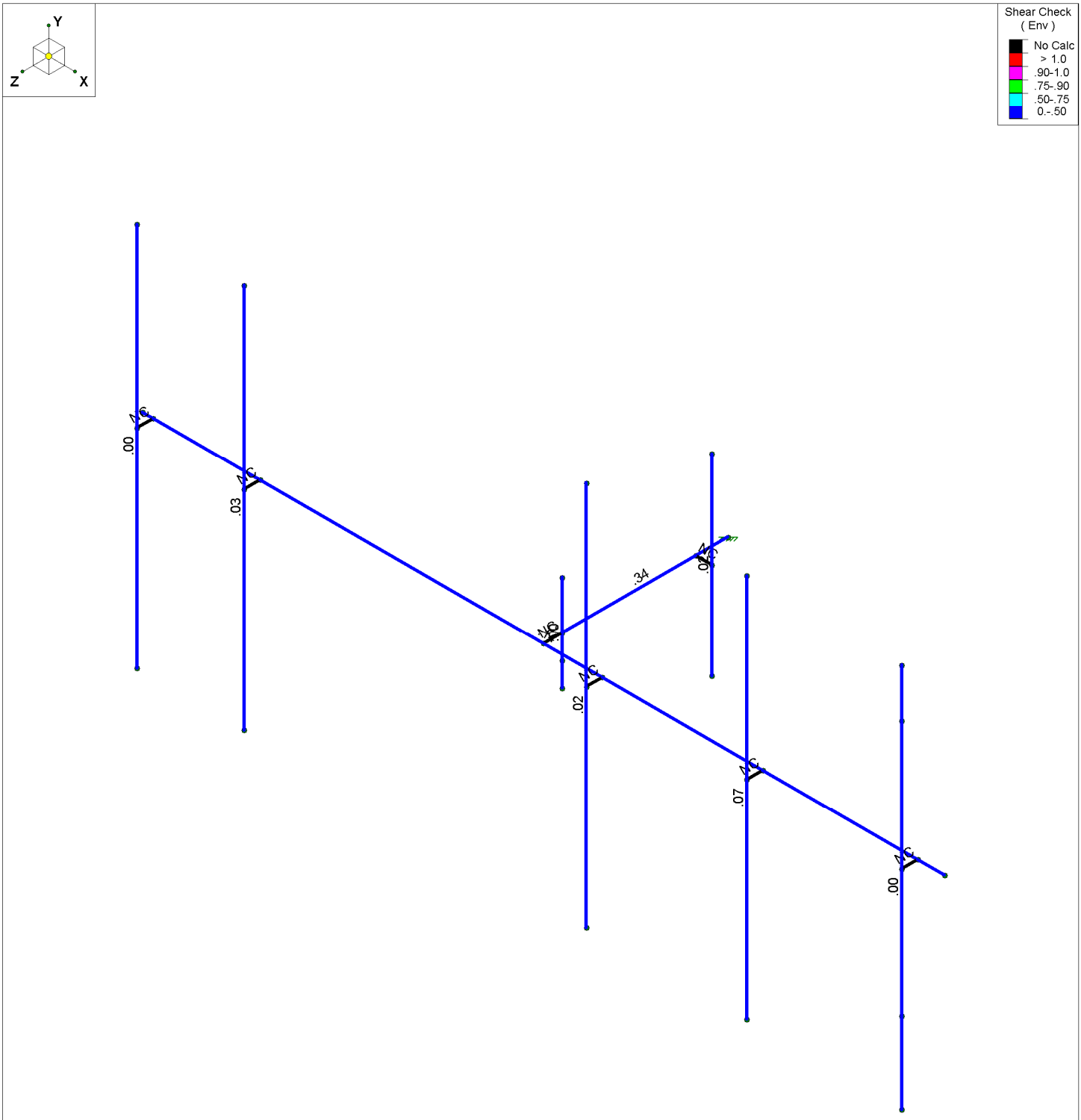


Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

		SK - 3
		July 6, 2021 at 4:32 PM
		468190-VZW_MT_LOT_A_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					30			
2	Antenna Di	None					30			
3	Antenna Wo (0 Deg)	None					30			
4	Antenna Wo (30 Deg)	None					30			
5	Antenna Wo (60 Deg)	None					30			
6	Antenna Wo (90 Deg)	None					30			
7	Antenna Wo (120 Deg)	None					30			
8	Antenna Wo (150 Deg)	None					30			
9	Antenna Wo (180 Deg)	None					30			
10	Antenna Wo (210 Deg)	None					30			
11	Antenna Wo (240 Deg)	None					30			
12	Antenna Wo (270 Deg)	None					30			
13	Antenna Wo (300 Deg)	None					30			
14	Antenna Wo (330 Deg)	None					30			
15	Antenna Wi (0 Deg)	None					30			
16	Antenna Wi (30 Deg)	None					30			
17	Antenna Wi (60 Deg)	None					30			
18	Antenna Wi (90 Deg)	None					30			
19	Antenna Wi (120 Deg)	None					30			
20	Antenna Wi (150 Deg)	None					30			
21	Antenna Wi (180 Deg)	None					30			
22	Antenna Wi (210 Deg)	None					30			
23	Antenna Wi (240 Deg)	None					30			
24	Antenna Wi (270 Deg)	None					30			
25	Antenna Wi (300 Deg)	None					30			
26	Antenna Wi (330 Deg)	None					30			
27	Antenna Wm (0 Deg)	None					30			
28	Antenna Wm (30 Deg)	None					30			
29	Antenna Wm (60 Deg)	None					30			
30	Antenna Wm (90 Deg)	None					30			
31	Antenna Wm (120 Deg)	None					30			
32	Antenna Wm (150 Deg)	None					30			
33	Antenna Wm (180 Deg)	None					30			
34	Antenna Wm (210 Deg)	None					30			
35	Antenna Wm (240 Deg)	None					30			
36	Antenna Wm (270 Deg)	None					30			
37	Antenna Wm (300 Deg)	None					30			
38	Antenna Wm (330 Deg)	None					30			
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		

Basic Load Cases (Continued)

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

Load Combinations

	Description	So...	PDelta	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
1	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	3	1	41	1												
2	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	4	1	42	1												
3	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	5	1	43	1												
4	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	6	1	44	1												
5	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	7	1	45	1												
6	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	8	1	46	1												
7	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	9	1	47	1												
8	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	10	1	48	1												
9	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	11	1	49	1												
10	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	12	1	50	1												
11	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	13	1	51	1												
12	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	14	1	52	1												
13	1.2D + 1....	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1								
14	1.2D + 1....	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1								
15	1.2D + 1....	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1								
16	1.2D + 1....	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1								
17	1.2D + 1....	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1								
18	1.2D + 1....	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1								
19	1.2D + 1....	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1								
20	1.2D + 1....	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1								
21	1.2D + 1....	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1								
22	1.2D + 1....	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1								
23	1.2D + 1....	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1								
24	1.2D + 1....	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1								
25	1.2D + 1....	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1										

Load Combinations (Continued)

	Description	So...	PDelta	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
26	1.2D + 1....	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1										
27	1.2D + 1....	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1										
28	1.2D + 1....	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1										
29	1.2D + 1....	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1										
30	1.2D + 1....	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1										
31	1.2D + 1....	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1										
32	1.2D + 1....	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1										
33	1.2D + 1....	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1										
34	1.2D + 1....	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1										
35	1.2D + 1....	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1										
36	1.2D + 1....	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1										
37	1.2D + 1....	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1										
38	1.2D + 1....	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1										
39	1.2D + 1....	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1										
40	1.2D + 1....	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1										
41	1.2D + 1....	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1										
42	1.2D + 1....	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1										
43	1.2D + 1....	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1										
44	1.2D + 1....	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1										
45	1.2D + 1....	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1										
46	1.2D + 1....	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1										
47	1.2D + 1....	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1										
48	1.2D + 1....	Yes	Y		1	1.2	39	1.2	78	1.5	38	1	76	1										
49	1.2D + 1....	Yes	Y		1	1.2	39	1.2	79	1.5														
50	1.2D + 1....	Yes	Y		1	1.2	39	1.2	80	1.5														
51	1.4D	Yes	Y		1	1.4	39	1.4																
52	Seismic ...		Y		1	1	39	1																
53	1.2D + 1....		Y		1	1.2	39	1.2	SX		SY	1	SZ	-1										
54	1.2D + 1....		Y		1	1.2	39	1.2	SX	.5	SY	1	SZ	-.866										
55	1.2D + 1....		Y		1	1.2	39	1.2	SX	.866	SY	1	SZ	-.5										
56	1.2D + 1....		Y		1	1.2	39	1.2	SX	1	SY	1	SZ											
57	1.2D + 1....		Y		1	1.2	39	1.2	SX	.866	SY	1	SZ	.5										
58	1.2D + 1....		Y		1	1.2	39	1.2	SX	.5	SY	1	SZ	.866										
59	1.2D + 1....		Y		1	1.2	39	1.2	SX		SY	1	SZ	1										
60	1.2D + 1....		Y		1	1.2	39	1.2	SX	-.5	SY	1	SZ	.866										
61	1.2D + 1....		Y		1	1.2	39	1.2	SX	-.866	SY	1	SZ	.5										
62	1.2D + 1....		Y		1	1.2	39	1.2	SX	-1	SY	1	SZ											
63	1.2D + 1....		Y		1	1.2	39	1.2	SX	-.866	SY	1	SZ	-.5										
64	1.2D + 1....		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	-0.677083	0	
2	N2	0	0	1.90625	0	
3	N3	0	-.75	1.90625	0	
4	N4	0	.75	1.90625	0	
5	N5	0	0	2.197917	0	
6	N6	6.25	0	2.197917	0	
7	N7	-6.25	0	2.197917	0	
8	N21	0	-.375	1.90625	0	
9	N9	5.833333	0	2.197917	0	
10	N10	3.416667	0	2.197917	0	
11	N11	0.916667	0	2.197917	0	
12	N12	-4.416667	0	2.197917	0	
13	N13	-6.083333	0	2.197917	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
14	N14	5.833333	0	2.447917	0	
15	N15	3.416667	0	2.447917	0	
16	N16	0.916667	0	2.447917	0	
17	N17	-4.416667	0	2.447917	0	
18	N18	-6.083333	0	2.447917	0	
19	N19	5.833333	2.75	2.447917	0	
20	N20	3.416667	2.75	2.447917	0	
21	N21A	0.916667	2.75	2.447917	0	
22	N22	-4.416667	2.75	2.447917	0	
23	N23	-6.083333	2.75	2.447917	0	
24	N24	5.833333	-3.25	2.447917	0	
25	N25	3.416667	-3.25	2.447917	0	
26	N26	0.916667	-3.25	2.447917	0	
27	N27	-4.416667	-3.25	2.447917	0	
28	N28	-6.083333	-3.25	2.447917	0	
29	N29	0	0	-0.177083	0	
30	N30	.25	1.5	-0.177083	0	
31	N31	.25	-1.5	-0.177083	0	
32	N32	.25	0	-0.177083	0	
33	N33	5.833333	2	2.447917	0	
34	N34	5.833333	-2	2.447917	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Antenna Pipe	PIPE_2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
2	Standoff Arm	HSS4X4X3	Beam	Tube	A500 Gr.46	Typical	2.58	6.21	6.21	10
3	Standoff Pipe	PIPE_3.5	Column	Pipe	A53 Gr. B	Typical	2.5	4.52	4.52	9.04
4	Horizontal	PIPE_3.0	Column	Pipe	A53 Gr. B	Typical	2.07	2.85	2.85	5.69
5	Dual Mount Pipe	PIPE_2.5	Column	Pipe	A53 Gr. B	Typical	1.61	1.45	1.45	2.89

Hot Rolled Steel Properties

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

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rul...
1	M1	N1	N2			Standoff Arm	Beam	Tube	A500 Gr...	Typical
2	M2	N4	N3			Standoff Pipe	Column	Pipe	A53 Gr. B	Typical
3	M4	N7	N6			Horizontal	Column	Pipe	A53 Gr. B	Typical
4	M10A	N2	N5			RIGID	None	None	RIGID	Typical
5	M5	N18	N13			RIGID	None	None	RIGID	Typical
6	M6	N17	N12			RIGID	None	None	RIGID	Typical
7	M7	N16	N11			RIGID	None	None	RIGID	Typical
8	M8	N15	N10			RIGID	None	None	RIGID	Typical
9	M9	N14	N9			RIGID	None	None	RIGID	Typical
10	MP5A	N23	N28			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rul...
11	MP4A	N22	N27			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
12	MP3A	N21A	N26			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
13	MP2A	N20	N25			Dual Mount Pipe	Column	Pipe	A53 Gr. B	Typical
14	MP1A	N19	N24			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
15	OVP	N30	N31			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
16	M16	N32	N29			RIGID	None	None	RIGID	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M1						Yes	Default			None
2	M2						Yes	** NA **			None
3	M4						Yes	** NA **			None
4	M10A						Yes	** NA **			None
5	M5						Yes	** NA **			None
6	M6						Yes	** NA **			None
7	M7						Yes	** NA **			None
8	M8						Yes	** NA **			None
9	M9						Yes	** NA **			None
10	MP5A						Yes	** NA **			None
11	MP4A						Yes	** NA **			None
12	MP3A						Yes	** NA **			None
13	MP2A						Yes	** NA **			None
14	MP1A						Yes	** NA **			None
15	OVP						Yes	** NA **			None
16	M16						Yes	** NA **			None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Y	-31.65	.75
2	MP2A	My	-.024	.75
3	MP2A	Mz	.021	.75
4	MP2A	Y	-31.65	4.75
5	MP2A	My	-.024	4.75
6	MP2A	Mz	.021	4.75
7	MP2A	Y	-31.65	.75
8	MP2A	My	-.024	.75
9	MP2A	Mz	-.021	.75
10	MP2A	Y	-31.65	4.75
11	MP2A	My	-.024	4.75
12	MP2A	Mz	-.021	4.75
13	MP4A	Y	-43.55	1.75
14	MP4A	My	-.033	1.75
15	MP4A	Mz	0	1.75
16	MP4A	Y	-43.55	3.75
17	MP4A	My	-.033	3.75
18	MP4A	Mz	0	3.75
19	MP3A	Y	-10.4	.75
20	MP3A	My	.005	.75
21	MP3A	Mz	0	.75
22	OVP	Y	-32	1
23	OVP	My	0	1
24	OVP	Mz	0	1
25	MP2A	Y	-84.4	1.75
26	MP2A	My	.042	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
27	MP2A	Mz	0	1.75
28	MP3A	Y	-70.3	1.75
29	MP3A	My	.035	1.75
30	MP3A	Mz	0	1.75

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Y	-71.028	.75
2	MP2A	My	-.053	.75
3	MP2A	Mz	.047	.75
4	MP2A	Y	-71.028	4.75
5	MP2A	My	-.053	4.75
6	MP2A	Mz	.047	4.75
7	MP2A	Y	-71.028	.75
8	MP2A	My	-.053	.75
9	MP2A	Mz	-.047	.75
10	MP2A	Y	-71.028	4.75
11	MP2A	My	-.053	4.75
12	MP2A	Mz	-.047	4.75
13	MP4A	Y	-36.174	1.75
14	MP4A	My	-.027	1.75
15	MP4A	Mz	0	1.75
16	MP4A	Y	-36.174	3.75
17	MP4A	My	-.027	3.75
18	MP4A	Mz	0	3.75
19	MP3A	Y	-10.933	.75
20	MP3A	My	.005	.75
21	MP3A	Mz	0	.75
22	OVP	Y	-89.272	1
23	OVP	My	0	1
24	OVP	Mz	0	1
25	MP2A	Y	-45.617	1.75
26	MP2A	My	.023	1.75
27	MP2A	Mz	0	1.75
28	MP3A	Y	-41.028	1.75
29	MP3A	My	.021	1.75
30	MP3A	Mz	0	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.75
2	MP2A	Z	-162.433	.75
3	MP2A	Mx	-.108	.75
4	MP2A	X	0	4.75
5	MP2A	Z	-162.433	4.75
6	MP2A	Mx	-.108	4.75
7	MP2A	X	0	.75
8	MP2A	Z	-162.433	.75
9	MP2A	Mx	.108	.75
10	MP2A	X	0	4.75
11	MP2A	Z	-162.433	4.75
12	MP2A	Mx	.108	4.75
13	MP4A	X	0	1.75
14	MP4A	Z	-83.802	1.75
15	MP4A	Mx	0	1.75
16	MP4A	X	0	3.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP4A	Z	-83.802	3.75
18	MP4A	Mx	0	3.75
19	MP3A	X	0	.75
20	MP3A	Z	-13.194	.75
21	MP3A	Mx	0	.75
22	OVP	X	0	1
23	OVP	Z	-143.746	1
24	OVP	Mx	0	1
25	MP2A	X	0	1.75
26	MP2A	Z	-66.685	1.75
27	MP2A	Mx	0	1.75
28	MP3A	X	0	1.75
29	MP3A	Z	-66.685	1.75
30	MP3A	Mx	0	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	74.248	.75
2	MP2A	Z	-128.601	.75
3	MP2A	Mx	-.141	.75
4	MP2A	X	74.248	4.75
5	MP2A	Z	-128.601	4.75
6	MP2A	Mx	-.141	4.75
7	MP2A	X	74.248	.75
8	MP2A	Z	-128.601	.75
9	MP2A	Mx	.03	.75
10	MP2A	X	74.248	4.75
11	MP2A	Z	-128.601	4.75
12	MP2A	Mx	.03	4.75
13	MP4A	X	35.527	1.75
14	MP4A	Z	-61.534	1.75
15	MP4A	Mx	-.027	1.75
16	MP4A	X	35.527	3.75
17	MP4A	Z	-61.534	3.75
18	MP4A	Mx	-.027	3.75
19	MP3A	X	6.089	.75
20	MP3A	Z	-10.546	.75
21	MP3A	Mx	.003	.75
22	OVP	X	70.383	1
23	OVP	Z	-121.907	1
24	OVP	Mx	0	1
25	MP2A	X	30.579	1.75
26	MP2A	Z	-52.964	1.75
27	MP2A	Mx	.015	1.75
28	MP3A	X	29.52	1.75
29	MP3A	Z	-51.13	1.75
30	MP3A	Mx	.015	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	104.461	.75
2	MP2A	Z	-60.311	.75
3	MP2A	Mx	-.119	.75
4	MP2A	X	104.461	4.75
5	MP2A	Z	-60.311	4.75
6	MP2A	Mx	-.119	4.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
7	MP2A	X	104.461	.75
8	MP2A	Z	-60.311	.75
9	MP2A	Mx	-.038	.75
10	MP2A	X	104.461	4.75
11	MP2A	Z	-60.311	4.75
12	MP2A	Mx	-.038	4.75
13	MP4A	X	39.453	1.75
14	MP4A	Z	-22.778	1.75
15	MP4A	Mx	-.03	1.75
16	MP4A	X	39.453	3.75
17	MP4A	Z	-22.778	3.75
18	MP4A	Mx	-.03	3.75
19	MP3A	X	8.786	.75
20	MP3A	Z	-5.073	.75
21	MP3A	Mx	.004	.75
22	OVP	X	107.941	1
23	OVP	Z	-62.32	1
24	OVP	Mx	0	1
25	MP2A	X	43.39	1.75
26	MP2A	Z	-25.051	1.75
27	MP2A	Mx	.022	1.75
28	MP3A	X	37.889	1.75
29	MP3A	Z	-21.875	1.75
30	MP3A	Mx	.019	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	106.684	.75
2	MP2A	Z	0	.75
3	MP2A	Mx	-.08	.75
4	MP2A	X	106.684	4.75
5	MP2A	Z	0	4.75
6	MP2A	Mx	-.08	4.75
7	MP2A	X	106.684	.75
8	MP2A	Z	0	.75
9	MP2A	Mx	-.08	.75
10	MP2A	X	106.684	4.75
11	MP2A	Z	0	4.75
12	MP2A	Mx	-.08	4.75
13	MP4A	X	32.808	1.75
14	MP4A	Z	0	1.75
15	MP4A	Mx	-.025	1.75
16	MP4A	X	32.808	3.75
17	MP4A	Z	0	3.75
18	MP4A	Mx	-.025	3.75
19	MP3A	X	9.129	.75
20	MP3A	Z	0	.75
21	MP3A	Mx	.005	.75
22	OVP	X	111.493	1
23	OVP	Z	0	1
24	OVP	Mx	0	1
25	MP2A	X	44.576	1.75
26	MP2A	Z	0	1.75
27	MP2A	Mx	.022	1.75
28	MP3A	X	36.106	1.75
29	MP3A	Z	0	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
30	MP3A	Mx	.018	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	104.461	.75
2	MP2A	Z	60.311	.75
3	MP2A	Mx	-.038	.75
4	MP2A	X	104.461	4.75
5	MP2A	Z	60.311	4.75
6	MP2A	Mx	-.038	4.75
7	MP2A	X	104.461	.75
8	MP2A	Z	60.311	.75
9	MP2A	Mx	-.119	.75
10	MP2A	X	104.461	4.75
11	MP2A	Z	60.311	4.75
12	MP2A	Mx	-.119	4.75
13	MP4A	X	39.453	1.75
14	MP4A	Z	22.778	1.75
15	MP4A	Mx	-.03	1.75
16	MP4A	X	39.453	3.75
17	MP4A	Z	22.778	3.75
18	MP4A	Mx	-.03	3.75
19	MP3A	X	8.786	.75
20	MP3A	Z	5.073	.75
21	MP3A	Mx	.004	.75
22	OVP	X	99.137	1
23	OVP	Z	57.237	1
24	OVP	Mx	0	1
25	MP2A	X	43.39	1.75
26	MP2A	Z	25.051	1.75
27	MP2A	Mx	.022	1.75
28	MP3A	X	37.889	1.75
29	MP3A	Z	21.875	1.75
30	MP3A	Mx	.019	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	74.248	.75
2	MP2A	Z	128.601	.75
3	MP2A	Mx	.03	.75
4	MP2A	X	74.248	4.75
5	MP2A	Z	128.601	4.75
6	MP2A	Mx	.03	4.75
7	MP2A	X	74.248	.75
8	MP2A	Z	128.601	.75
9	MP2A	Mx	-.141	.75
10	MP2A	X	74.248	4.75
11	MP2A	Z	128.601	4.75
12	MP2A	Mx	-.141	4.75
13	MP4A	X	35.527	1.75
14	MP4A	Z	61.534	1.75
15	MP4A	Mx	-.027	1.75
16	MP4A	X	35.527	3.75
17	MP4A	Z	61.534	3.75
18	MP4A	Mx	-.027	3.75
19	MP3A	X	6.089	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
20	MP3A	Z	10.546	.75
21	MP3A	Mx	.003	.75
22	OVP	X	65.3	1
23	OVP	Z	113.103	1
24	OVP	Mx	0	1
25	MP2A	X	30.579	1.75
26	MP2A	Z	52.964	1.75
27	MP2A	Mx	.015	1.75
28	MP3A	X	29.52	1.75
29	MP3A	Z	51.13	1.75
30	MP3A	Mx	.015	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.75
2	MP2A	Z	162.433	.75
3	MP2A	Mx	.108	.75
4	MP2A	X	0	4.75
5	MP2A	Z	162.433	4.75
6	MP2A	Mx	.108	4.75
7	MP2A	X	0	.75
8	MP2A	Z	162.433	.75
9	MP2A	Mx	-.108	.75
10	MP2A	X	0	4.75
11	MP2A	Z	162.433	4.75
12	MP2A	Mx	-.108	4.75
13	MP4A	X	0	1.75
14	MP4A	Z	83.802	1.75
15	MP4A	Mx	0	1.75
16	MP4A	X	0	3.75
17	MP4A	Z	83.802	3.75
18	MP4A	Mx	0	3.75
19	MP3A	X	0	.75
20	MP3A	Z	13.194	.75
21	MP3A	Mx	0	.75
22	OVP	X	0	1
23	OVP	Z	143.746	1
24	OVP	Mx	0	1
25	MP2A	X	0	1.75
26	MP2A	Z	66.685	1.75
27	MP2A	Mx	0	1.75
28	MP3A	X	0	1.75
29	MP3A	Z	66.685	1.75
30	MP3A	Mx	0	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-74.248	.75
2	MP2A	Z	128.601	.75
3	MP2A	Mx	.141	.75
4	MP2A	X	-74.248	4.75
5	MP2A	Z	128.601	4.75
6	MP2A	Mx	.141	4.75
7	MP2A	X	-74.248	.75
8	MP2A	Z	128.601	.75
9	MP2A	Mx	-.03	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
10	MP2A	X	-74.248	4.75
11	MP2A	Z	128.601	4.75
12	MP2A	Mx	-.03	4.75
13	MP4A	X	-35.527	1.75
14	MP4A	Z	61.534	1.75
15	MP4A	Mx	.027	1.75
16	MP4A	X	-35.527	3.75
17	MP4A	Z	61.534	3.75
18	MP4A	Mx	.027	3.75
19	MP3A	X	-6.089	.75
20	MP3A	Z	10.546	.75
21	MP3A	Mx	-.003	.75
22	OVP	X	-70.383	1
23	OVP	Z	121.907	1
24	OVP	Mx	0	1
25	MP2A	X	-30.579	1.75
26	MP2A	Z	52.964	1.75
27	MP2A	Mx	-.015	1.75
28	MP3A	X	-29.52	1.75
29	MP3A	Z	51.13	1.75
30	MP3A	Mx	-.015	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-104.461	.75
2	MP2A	Z	60.311	.75
3	MP2A	Mx	.119	.75
4	MP2A	X	-104.461	4.75
5	MP2A	Z	60.311	4.75
6	MP2A	Mx	.119	4.75
7	MP2A	X	-104.461	.75
8	MP2A	Z	60.311	.75
9	MP2A	Mx	.038	.75
10	MP2A	X	-104.461	4.75
11	MP2A	Z	60.311	4.75
12	MP2A	Mx	.038	4.75
13	MP4A	X	-39.453	1.75
14	MP4A	Z	22.778	1.75
15	MP4A	Mx	.03	1.75
16	MP4A	X	-39.453	3.75
17	MP4A	Z	22.778	3.75
18	MP4A	Mx	.03	3.75
19	MP3A	X	-8.786	.75
20	MP3A	Z	5.073	.75
21	MP3A	Mx	-.004	.75
22	OVP	X	-107.941	1
23	OVP	Z	62.32	1
24	OVP	Mx	0	1
25	MP2A	X	-43.39	1.75
26	MP2A	Z	25.051	1.75
27	MP2A	Mx	-.022	1.75
28	MP3A	X	-37.889	1.75
29	MP3A	Z	21.875	1.75
30	MP3A	Mx	-.019	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-106.684	.75
2	MP2A	Z	0	.75
3	MP2A	Mx	.08	.75
4	MP2A	X	-106.684	4.75
5	MP2A	Z	0	4.75
6	MP2A	Mx	.08	4.75
7	MP2A	X	-106.684	.75
8	MP2A	Z	0	.75
9	MP2A	Mx	.08	.75
10	MP2A	X	-106.684	4.75
11	MP2A	Z	0	4.75
12	MP2A	Mx	.08	4.75
13	MP4A	X	-32.808	1.75
14	MP4A	Z	0	1.75
15	MP4A	Mx	.025	1.75
16	MP4A	X	-32.808	3.75
17	MP4A	Z	0	3.75
18	MP4A	Mx	.025	3.75
19	MP3A	X	-9.129	.75
20	MP3A	Z	0	.75
21	MP3A	Mx	-.005	.75
22	OVP	X	-111.493	1
23	OVP	Z	0	1
24	OVP	Mx	0	1
25	MP2A	X	-44.576	1.75
26	MP2A	Z	0	1.75
27	MP2A	Mx	-.022	1.75
28	MP3A	X	-36.106	1.75
29	MP3A	Z	0	1.75
30	MP3A	Mx	-.018	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-104.461	.75
2	MP2A	Z	-60.311	.75
3	MP2A	Mx	.038	.75
4	MP2A	X	-104.461	4.75
5	MP2A	Z	-60.311	4.75
6	MP2A	Mx	.038	4.75
7	MP2A	X	-104.461	.75
8	MP2A	Z	-60.311	.75
9	MP2A	Mx	.119	.75
10	MP2A	X	-104.461	4.75
11	MP2A	Z	-60.311	4.75
12	MP2A	Mx	.119	4.75
13	MP4A	X	-39.453	1.75
14	MP4A	Z	-22.778	1.75
15	MP4A	Mx	.03	1.75
16	MP4A	X	-39.453	3.75
17	MP4A	Z	-22.778	3.75
18	MP4A	Mx	.03	3.75
19	MP3A	X	-8.786	.75
20	MP3A	Z	-5.073	.75
21	MP3A	Mx	-.004	.75
22	OVP	X	-99.137	1
23	OVP	Z	-57.237	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
24	OVP	Mx	0	1
25	MP2A	X	-43.39	1.75
26	MP2A	Z	-25.051	1.75
27	MP2A	Mx	-.022	1.75
28	MP3A	X	-37.889	1.75
29	MP3A	Z	-21.875	1.75
30	MP3A	Mx	-.019	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-74.248	.75
2	MP2A	Z	-128.601	.75
3	MP2A	Mx	-.03	.75
4	MP2A	X	-74.248	4.75
5	MP2A	Z	-128.601	4.75
6	MP2A	Mx	-.03	4.75
7	MP2A	X	-74.248	.75
8	MP2A	Z	-128.601	.75
9	MP2A	Mx	.141	.75
10	MP2A	X	-74.248	4.75
11	MP2A	Z	-128.601	4.75
12	MP2A	Mx	.141	4.75
13	MP4A	X	-35.527	1.75
14	MP4A	Z	-61.534	1.75
15	MP4A	Mx	.027	1.75
16	MP4A	X	-35.527	3.75
17	MP4A	Z	-61.534	3.75
18	MP4A	Mx	.027	3.75
19	MP3A	X	-6.089	.75
20	MP3A	Z	-10.546	.75
21	MP3A	Mx	-.003	.75
22	OVP	X	-65.3	1
23	OVP	Z	-113.103	1
24	OVP	Mx	0	1
25	MP2A	X	-30.579	1.75
26	MP2A	Z	-52.964	1.75
27	MP2A	Mx	-.015	1.75
28	MP3A	X	-29.52	1.75
29	MP3A	Z	-51.13	1.75
30	MP3A	Mx	-.015	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.75
2	MP2A	Z	-30.432	.75
3	MP2A	Mx	-.02	.75
4	MP2A	X	0	4.75
5	MP2A	Z	-30.432	4.75
6	MP2A	Mx	-.02	4.75
7	MP2A	X	0	.75
8	MP2A	Z	-30.432	.75
9	MP2A	Mx	.02	.75
10	MP2A	X	0	4.75
11	MP2A	Z	-30.432	4.75
12	MP2A	Mx	.02	4.75
13	MP4A	X	0	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
14	MP4A	Z	-16.192	1.75
15	MP4A	Mx	0	1.75
16	MP4A	X	0	3.75
17	MP4A	Z	-16.192	3.75
18	MP4A	Mx	0	3.75
19	MP3A	X	0	.75
20	MP3A	Z	-3.324	.75
21	MP3A	Mx	0	.75
22	OVP	X	0	1
23	OVP	Z	-27.864	1
24	OVP	Mx	0	1
25	MP2A	X	0	1.75
26	MP2A	Z	-13.658	1.75
27	MP2A	Mx	0	1.75
28	MP3A	X	0	1.75
29	MP3A	Z	-13.658	1.75
30	MP3A	Mx	0	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	14.008	.75
2	MP2A	Z	-24.263	.75
3	MP2A	Mx	-.027	.75
4	MP2A	X	14.008	4.75
5	MP2A	Z	-24.263	4.75
6	MP2A	Mx	-.027	4.75
7	MP2A	X	14.008	.75
8	MP2A	Z	-24.263	.75
9	MP2A	Mx	.006	.75
10	MP2A	X	14.008	4.75
11	MP2A	Z	-24.263	4.75
12	MP2A	Mx	.006	4.75
13	MP4A	X	6.935	1.75
14	MP4A	Z	-12.012	1.75
15	MP4A	Mx	-.005	1.75
16	MP4A	X	6.935	3.75
17	MP4A	Z	-12.012	3.75
18	MP4A	Mx	-.005	3.75
19	MP3A	X	1.559	.75
20	MP3A	Z	-2.7	.75
21	MP3A	Mx	.000779	.75
22	OVP	X	13.667	1
23	OVP	Z	-23.672	1
24	OVP	Mx	0	1
25	MP2A	X	6.31	1.75
26	MP2A	Z	-10.929	1.75
27	MP2A	Mx	.003	1.75
28	MP3A	X	6.113	1.75
29	MP3A	Z	-10.587	1.75
30	MP3A	Mx	.003	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	20.08	.75
2	MP2A	Z	-11.593	.75
3	MP2A	Mx	-.023	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
4	MP2A	X	20.08	4.75
5	MP2A	Z	-11.593	4.75
6	MP2A	Mx	-.023	4.75
7	MP2A	X	20.08	.75
8	MP2A	Z	-11.593	.75
9	MP2A	Mx	-.007	.75
10	MP2A	X	20.08	4.75
11	MP2A	Z	-11.593	4.75
12	MP2A	Mx	-.007	4.75
13	MP4A	X	7.991	1.75
14	MP4A	Z	-4.614	1.75
15	MP4A	Mx	-.006	1.75
16	MP4A	X	7.991	3.75
17	MP4A	Z	-4.614	3.75
18	MP4A	Mx	-.006	3.75
19	MP3A	X	2.342	.75
20	MP3A	Z	-1.352	.75
21	MP3A	Mx	.001	.75
22	OVP	X	21.186	1
23	OVP	Z	-12.232	1
24	OVP	Mx	0	1
25	MP2A	X	9.131	1.75
26	MP2A	Z	-5.272	1.75
27	MP2A	Mx	.005	1.75
28	MP3A	X	8.106	1.75
29	MP3A	Z	-4.68	1.75
30	MP3A	Mx	.004	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	20.77	.75
2	MP2A	Z	0	.75
3	MP2A	Mx	-.016	.75
4	MP2A	X	20.77	4.75
5	MP2A	Z	0	4.75
6	MP2A	Mx	-.016	4.75
7	MP2A	X	20.77	.75
8	MP2A	Z	0	.75
9	MP2A	Mx	-.016	.75
10	MP2A	X	20.77	4.75
11	MP2A	Z	0	4.75
12	MP2A	Mx	-.016	4.75
13	MP4A	X	6.906	1.75
14	MP4A	Z	0	1.75
15	MP4A	Mx	-.005	1.75
16	MP4A	X	6.906	3.75
17	MP4A	Z	0	3.75
18	MP4A	Mx	-.005	3.75
19	MP3A	X	2.497	.75
20	MP3A	Z	0	.75
21	MP3A	Mx	.001	.75
22	OVP	X	22.124	1
23	OVP	Z	0	1
24	OVP	Mx	0	1
25	MP2A	X	9.506	1.75
26	MP2A	Z	0	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
27	MP2A	Mx	.005	1.75
28	MP3A	X	7.928	1.75
29	MP3A	Z	0	1.75
30	MP3A	Mx	.004	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	20.08	.75
2	MP2A	Z	11.593	.75
3	MP2A	Mx	-.007	.75
4	MP2A	X	20.08	4.75
5	MP2A	Z	11.593	4.75
6	MP2A	Mx	-.007	4.75
7	MP2A	X	20.08	.75
8	MP2A	Z	11.593	.75
9	MP2A	Mx	-.023	.75
10	MP2A	X	20.08	4.75
11	MP2A	Z	11.593	4.75
12	MP2A	Mx	-.023	4.75
13	MP4A	X	7.991	1.75
14	MP4A	Z	4.614	1.75
15	MP4A	Mx	-.006	1.75
16	MP4A	X	7.991	3.75
17	MP4A	Z	4.614	3.75
18	MP4A	Mx	-.006	3.75
19	MP3A	X	2.342	.75
20	MP3A	Z	1.352	.75
21	MP3A	Mx	.001	.75
22	OVP	X	19.619	1
23	OVP	Z	11.327	1
24	OVP	Mx	0	1
25	MP2A	X	9.131	1.75
26	MP2A	Z	5.272	1.75
27	MP2A	Mx	.005	1.75
28	MP3A	X	8.106	1.75
29	MP3A	Z	4.68	1.75
30	MP3A	Mx	.004	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	14.008	.75
2	MP2A	Z	24.263	.75
3	MP2A	Mx	.006	.75
4	MP2A	X	14.008	4.75
5	MP2A	Z	24.263	4.75
6	MP2A	Mx	.006	4.75
7	MP2A	X	14.008	.75
8	MP2A	Z	24.263	.75
9	MP2A	Mx	-.027	.75
10	MP2A	X	14.008	4.75
11	MP2A	Z	24.263	4.75
12	MP2A	Mx	-.027	4.75
13	MP4A	X	6.935	1.75
14	MP4A	Z	12.012	1.75
15	MP4A	Mx	-.005	1.75
16	MP4A	X	6.935	3.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP4A	Z	12.012	3.75
18	MP4A	Mx	-.005	3.75
19	MP3A	X	1.559	.75
20	MP3A	Z	2.7	.75
21	MP3A	Mx	.000779	.75
22	OVP	X	12.762	1
23	OVP	Z	22.105	1
24	OVP	Mx	0	1
25	MP2A	X	6.31	1.75
26	MP2A	Z	10.929	1.75
27	MP2A	Mx	.003	1.75
28	MP3A	X	6.113	1.75
29	MP3A	Z	10.587	1.75
30	MP3A	Mx	.003	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.75
2	MP2A	Z	30.432	.75
3	MP2A	Mx	.02	.75
4	MP2A	X	0	4.75
5	MP2A	Z	30.432	4.75
6	MP2A	Mx	.02	4.75
7	MP2A	X	0	.75
8	MP2A	Z	30.432	.75
9	MP2A	Mx	-.02	.75
10	MP2A	X	0	4.75
11	MP2A	Z	30.432	4.75
12	MP2A	Mx	-.02	4.75
13	MP4A	X	0	1.75
14	MP4A	Z	16.192	1.75
15	MP4A	Mx	0	1.75
16	MP4A	X	0	3.75
17	MP4A	Z	16.192	3.75
18	MP4A	Mx	0	3.75
19	MP3A	X	0	.75
20	MP3A	Z	3.324	.75
21	MP3A	Mx	0	.75
22	OVP	X	0	1
23	OVP	Z	27.864	1
24	OVP	Mx	0	1
25	MP2A	X	0	1.75
26	MP2A	Z	13.658	1.75
27	MP2A	Mx	0	1.75
28	MP3A	X	0	1.75
29	MP3A	Z	13.658	1.75
30	MP3A	Mx	0	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-14.008	.75
2	MP2A	Z	24.263	.75
3	MP2A	Mx	.027	.75
4	MP2A	X	-14.008	4.75
5	MP2A	Z	24.263	4.75
6	MP2A	Mx	.027	4.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
7	MP2A	X	-14.008	.75
8	MP2A	Z	24.263	.75
9	MP2A	Mx	-.006	.75
10	MP2A	X	-14.008	4.75
11	MP2A	Z	24.263	4.75
12	MP2A	Mx	-.006	4.75
13	MP4A	X	-6.935	1.75
14	MP4A	Z	12.012	1.75
15	MP4A	Mx	.005	1.75
16	MP4A	X	-6.935	3.75
17	MP4A	Z	12.012	3.75
18	MP4A	Mx	.005	3.75
19	MP3A	X	-1.559	.75
20	MP3A	Z	2.7	.75
21	MP3A	Mx	-.000779	.75
22	OVP	X	-13.667	1
23	OVP	Z	23.672	1
24	OVP	Mx	0	1
25	MP2A	X	-6.31	1.75
26	MP2A	Z	10.929	1.75
27	MP2A	Mx	-.003	1.75
28	MP3A	X	-6.113	1.75
29	MP3A	Z	10.587	1.75
30	MP3A	Mx	-.003	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-20.08	.75
2	MP2A	Z	11.593	.75
3	MP2A	Mx	.023	.75
4	MP2A	X	-20.08	4.75
5	MP2A	Z	11.593	4.75
6	MP2A	Mx	.023	4.75
7	MP2A	X	-20.08	.75
8	MP2A	Z	11.593	.75
9	MP2A	Mx	.007	.75
10	MP2A	X	-20.08	4.75
11	MP2A	Z	11.593	4.75
12	MP2A	Mx	.007	4.75
13	MP4A	X	-7.991	1.75
14	MP4A	Z	4.614	1.75
15	MP4A	Mx	.006	1.75
16	MP4A	X	-7.991	3.75
17	MP4A	Z	4.614	3.75
18	MP4A	Mx	.006	3.75
19	MP3A	X	-2.342	.75
20	MP3A	Z	1.352	.75
21	MP3A	Mx	-.001	.75
22	OVP	X	-21.186	1
23	OVP	Z	12.232	1
24	OVP	Mx	0	1
25	MP2A	X	-9.131	1.75
26	MP2A	Z	5.272	1.75
27	MP2A	Mx	-.005	1.75
28	MP3A	X	-8.106	1.75
29	MP3A	Z	4.68	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
30	MP3A	Mx	-.004	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-20.77	.75
2	MP2A	Z	0	.75
3	MP2A	Mx	.016	.75
4	MP2A	X	-20.77	4.75
5	MP2A	Z	0	4.75
6	MP2A	Mx	.016	4.75
7	MP2A	X	-20.77	.75
8	MP2A	Z	0	.75
9	MP2A	Mx	.016	.75
10	MP2A	X	-20.77	4.75
11	MP2A	Z	0	4.75
12	MP2A	Mx	.016	4.75
13	MP4A	X	-6.906	1.75
14	MP4A	Z	0	1.75
15	MP4A	Mx	.005	1.75
16	MP4A	X	-6.906	3.75
17	MP4A	Z	0	3.75
18	MP4A	Mx	.005	3.75
19	MP3A	X	-2.497	.75
20	MP3A	Z	0	.75
21	MP3A	Mx	-.001	.75
22	OVP	X	-22.124	1
23	OVP	Z	0	1
24	OVP	Mx	0	1
25	MP2A	X	-9.506	1.75
26	MP2A	Z	0	1.75
27	MP2A	Mx	-.005	1.75
28	MP3A	X	-7.928	1.75
29	MP3A	Z	0	1.75
30	MP3A	Mx	-.004	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-20.08	.75
2	MP2A	Z	-11.593	.75
3	MP2A	Mx	.007	.75
4	MP2A	X	-20.08	4.75
5	MP2A	Z	-11.593	4.75
6	MP2A	Mx	.007	4.75
7	MP2A	X	-20.08	.75
8	MP2A	Z	-11.593	.75
9	MP2A	Mx	.023	.75
10	MP2A	X	-20.08	4.75
11	MP2A	Z	-11.593	4.75
12	MP2A	Mx	.023	4.75
13	MP4A	X	-7.991	1.75
14	MP4A	Z	-4.614	1.75
15	MP4A	Mx	.006	1.75
16	MP4A	X	-7.991	3.75
17	MP4A	Z	-4.614	3.75
18	MP4A	Mx	.006	3.75
19	MP3A	X	-2.342	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
20	MP3A	Z	-1.352	.75
21	MP3A	Mx	-.001	.75
22	OVP	X	-19.619	1
23	OVP	Z	-11.327	1
24	OVP	Mx	0	1
25	MP2A	X	-9.131	1.75
26	MP2A	Z	-5.272	1.75
27	MP2A	Mx	-.005	1.75
28	MP3A	X	-8.106	1.75
29	MP3A	Z	-4.68	1.75
30	MP3A	Mx	-.004	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-14.008	.75
2	MP2A	Z	-24.263	.75
3	MP2A	Mx	-.006	.75
4	MP2A	X	-14.008	4.75
5	MP2A	Z	-24.263	4.75
6	MP2A	Mx	-.006	4.75
7	MP2A	X	-14.008	.75
8	MP2A	Z	-24.263	.75
9	MP2A	Mx	.027	.75
10	MP2A	X	-14.008	4.75
11	MP2A	Z	-24.263	4.75
12	MP2A	Mx	.027	4.75
13	MP4A	X	-6.935	1.75
14	MP4A	Z	-12.012	1.75
15	MP4A	Mx	.005	1.75
16	MP4A	X	-6.935	3.75
17	MP4A	Z	-12.012	3.75
18	MP4A	Mx	.005	3.75
19	MP3A	X	-1.559	.75
20	MP3A	Z	-2.7	.75
21	MP3A	Mx	-.000779	.75
22	OVP	X	-12.762	1
23	OVP	Z	-22.105	1
24	OVP	Mx	0	1
25	MP2A	X	-6.31	1.75
26	MP2A	Z	-10.929	1.75
27	MP2A	Mx	-.003	1.75
28	MP3A	X	-6.113	1.75
29	MP3A	Z	-10.587	1.75
30	MP3A	Mx	-.003	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.75
2	MP2A	Z	-9.985	.75
3	MP2A	Mx	-.007	.75
4	MP2A	X	0	4.75
5	MP2A	Z	-9.985	4.75
6	MP2A	Mx	-.007	4.75
7	MP2A	X	0	.75
8	MP2A	Z	-9.985	.75
9	MP2A	Mx	.007	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
10	MP2A	X	0	4.75
11	MP2A	Z	-9.985	4.75
12	MP2A	Mx	.007	4.75
13	MP4A	X	0	1.75
14	MP4A	Z	-5.151	1.75
15	MP4A	Mx	0	1.75
16	MP4A	X	0	3.75
17	MP4A	Z	-5.151	3.75
18	MP4A	Mx	0	3.75
19	MP3A	X	0	.75
20	MP3A	Z	-.811	.75
21	MP3A	Mx	0	.75
22	OVP	X	0	1
23	OVP	Z	-8.836	1
24	OVP	Mx	0	1
25	MP2A	X	0	1.75
26	MP2A	Z	-4.099	1.75
27	MP2A	Mx	0	1.75
28	MP3A	X	0	1.75
29	MP3A	Z	-4.099	1.75
30	MP3A	Mx	0	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	4.564	.75
2	MP2A	Z	-7.905	.75
3	MP2A	Mx	-.009	.75
4	MP2A	X	4.564	4.75
5	MP2A	Z	-7.905	4.75
6	MP2A	Mx	-.009	4.75
7	MP2A	X	4.564	.75
8	MP2A	Z	-7.905	.75
9	MP2A	Mx	.002	.75
10	MP2A	X	4.564	4.75
11	MP2A	Z	-7.905	4.75
12	MP2A	Mx	.002	4.75
13	MP4A	X	2.184	1.75
14	MP4A	Z	-3.783	1.75
15	MP4A	Mx	-.002	1.75
16	MP4A	X	2.184	3.75
17	MP4A	Z	-3.783	3.75
18	MP4A	Mx	-.002	3.75
19	MP3A	X	.374	.75
20	MP3A	Z	-.648	.75
21	MP3A	Mx	.000187	.75
22	OVP	X	4.327	1
23	OVP	Z	-7.494	1
24	OVP	Mx	0	1
25	MP2A	X	1.88	1.75
26	MP2A	Z	-3.256	1.75
27	MP2A	Mx	.00094	1.75
28	MP3A	X	1.815	1.75
29	MP3A	Z	-3.143	1.75
30	MP3A	Mx	.000908	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	6.421	.75
2	MP2A	Z	-3.707	.75
3	MP2A	Mx	-.007	.75
4	MP2A	X	6.421	4.75
5	MP2A	Z	-3.707	4.75
6	MP2A	Mx	-.007	4.75
7	MP2A	X	6.421	.75
8	MP2A	Z	-3.707	.75
9	MP2A	Mx	-.002	.75
10	MP2A	X	6.421	4.75
11	MP2A	Z	-3.707	4.75
12	MP2A	Mx	-.002	4.75
13	MP4A	X	2.425	1.75
14	MP4A	Z	-1.4	1.75
15	MP4A	Mx	-.002	1.75
16	MP4A	X	2.425	3.75
17	MP4A	Z	-1.4	3.75
18	MP4A	Mx	-.002	3.75
19	MP3A	X	.54	.75
20	MP3A	Z	-.312	.75
21	MP3A	Mx	.00027	.75
22	OVP	X	6.635	1
23	OVP	Z	-3.831	1
24	OVP	Mx	0	1
25	MP2A	X	2.667	1.75
26	MP2A	Z	-1.54	1.75
27	MP2A	Mx	.001	1.75
28	MP3A	X	2.329	1.75
29	MP3A	Z	-1.345	1.75
30	MP3A	Mx	.001	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	6.558	.75
2	MP2A	Z	0	.75
3	MP2A	Mx	-.005	.75
4	MP2A	X	6.558	4.75
5	MP2A	Z	0	4.75
6	MP2A	Mx	-.005	4.75
7	MP2A	X	6.558	.75
8	MP2A	Z	0	.75
9	MP2A	Mx	-.005	.75
10	MP2A	X	6.558	4.75
11	MP2A	Z	0	4.75
12	MP2A	Mx	-.005	4.75
13	MP4A	X	2.017	1.75
14	MP4A	Z	0	1.75
15	MP4A	Mx	-.002	1.75
16	MP4A	X	2.017	3.75
17	MP4A	Z	0	3.75
18	MP4A	Mx	-.002	3.75
19	MP3A	X	.561	.75
20	MP3A	Z	0	.75
21	MP3A	Mx	.000281	.75
22	OVP	X	6.854	1
23	OVP	Z	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
24	OVP	Mx	0	1
25	MP2A	X	2.74	1.75
26	MP2A	Z	0	1.75
27	MP2A	Mx	.001	1.75
28	MP3A	X	2.219	1.75
29	MP3A	Z	0	1.75
30	MP3A	Mx	.001	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	6.421	.75
2	MP2A	Z	3.707	.75
3	MP2A	Mx	-.002	.75
4	MP2A	X	6.421	4.75
5	MP2A	Z	3.707	4.75
6	MP2A	Mx	-.002	4.75
7	MP2A	X	6.421	.75
8	MP2A	Z	3.707	.75
9	MP2A	Mx	-.007	.75
10	MP2A	X	6.421	4.75
11	MP2A	Z	3.707	4.75
12	MP2A	Mx	-.007	4.75
13	MP4A	X	2.425	1.75
14	MP4A	Z	1.4	1.75
15	MP4A	Mx	-.002	1.75
16	MP4A	X	2.425	3.75
17	MP4A	Z	1.4	3.75
18	MP4A	Mx	-.002	3.75
19	MP3A	X	.54	.75
20	MP3A	Z	.312	.75
21	MP3A	Mx	.00027	.75
22	OVP	X	6.094	1
23	OVP	Z	3.518	1
24	OVP	Mx	0	1
25	MP2A	X	2.667	1.75
26	MP2A	Z	1.54	1.75
27	MP2A	Mx	.001	1.75
28	MP3A	X	2.329	1.75
29	MP3A	Z	1.345	1.75
30	MP3A	Mx	.001	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	4.564	.75
2	MP2A	Z	7.905	.75
3	MP2A	Mx	.002	.75
4	MP2A	X	4.564	4.75
5	MP2A	Z	7.905	4.75
6	MP2A	Mx	.002	4.75
7	MP2A	X	4.564	.75
8	MP2A	Z	7.905	.75
9	MP2A	Mx	-.009	.75
10	MP2A	X	4.564	4.75
11	MP2A	Z	7.905	4.75
12	MP2A	Mx	-.009	4.75
13	MP4A	X	2.184	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
14	MP4A	Z	3.783	1.75
15	MP4A	Mx	-.002	1.75
16	MP4A	X	2.184	3.75
17	MP4A	Z	3.783	3.75
18	MP4A	Mx	-.002	3.75
19	MP3A	X	.374	.75
20	MP3A	Z	.648	.75
21	MP3A	Mx	.000187	.75
22	OVP	X	4.014	1
23	OVP	Z	6.953	1
24	OVP	Mx	0	1
25	MP2A	X	1.88	1.75
26	MP2A	Z	3.256	1.75
27	MP2A	Mx	.00094	1.75
28	MP3A	X	1.815	1.75
29	MP3A	Z	3.143	1.75
30	MP3A	Mx	.000908	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.75
2	MP2A	Z	9.985	.75
3	MP2A	Mx	.007	.75
4	MP2A	X	0	4.75
5	MP2A	Z	9.985	4.75
6	MP2A	Mx	.007	4.75
7	MP2A	X	0	.75
8	MP2A	Z	9.985	.75
9	MP2A	Mx	-.007	.75
10	MP2A	X	0	4.75
11	MP2A	Z	9.985	4.75
12	MP2A	Mx	-.007	4.75
13	MP4A	X	0	1.75
14	MP4A	Z	5.151	1.75
15	MP4A	Mx	0	1.75
16	MP4A	X	0	3.75
17	MP4A	Z	5.151	3.75
18	MP4A	Mx	0	3.75
19	MP3A	X	0	.75
20	MP3A	Z	.811	.75
21	MP3A	Mx	0	.75
22	OVP	X	0	1
23	OVP	Z	8.836	1
24	OVP	Mx	0	1
25	MP2A	X	0	1.75
26	MP2A	Z	4.099	1.75
27	MP2A	Mx	0	1.75
28	MP3A	X	0	1.75
29	MP3A	Z	4.099	1.75
30	MP3A	Mx	0	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-4.564	.75
2	MP2A	Z	7.905	.75
3	MP2A	Mx	.009	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
4	MP2A	X	-4.564	4.75
5	MP2A	Z	7.905	4.75
6	MP2A	Mx	.009	4.75
7	MP2A	X	-4.564	.75
8	MP2A	Z	7.905	.75
9	MP2A	Mx	-.002	.75
10	MP2A	X	-4.564	4.75
11	MP2A	Z	7.905	4.75
12	MP2A	Mx	-.002	4.75
13	MP4A	X	-2.184	1.75
14	MP4A	Z	3.783	1.75
15	MP4A	Mx	.002	1.75
16	MP4A	X	-2.184	3.75
17	MP4A	Z	3.783	3.75
18	MP4A	Mx	.002	3.75
19	MP3A	X	-.374	.75
20	MP3A	Z	.648	.75
21	MP3A	Mx	-.000187	.75
22	OVP	X	-4.327	1
23	OVP	Z	7.494	1
24	OVP	Mx	0	1
25	MP2A	X	-1.88	1.75
26	MP2A	Z	3.256	1.75
27	MP2A	Mx	-.00094	1.75
28	MP3A	X	-1.815	1.75
29	MP3A	Z	3.143	1.75
30	MP3A	Mx	-.000908	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-6.421	.75
2	MP2A	Z	3.707	.75
3	MP2A	Mx	.007	.75
4	MP2A	X	-6.421	4.75
5	MP2A	Z	3.707	4.75
6	MP2A	Mx	.007	4.75
7	MP2A	X	-6.421	.75
8	MP2A	Z	3.707	.75
9	MP2A	Mx	.002	.75
10	MP2A	X	-6.421	4.75
11	MP2A	Z	3.707	4.75
12	MP2A	Mx	.002	4.75
13	MP4A	X	-2.425	1.75
14	MP4A	Z	1.4	1.75
15	MP4A	Mx	.002	1.75
16	MP4A	X	-2.425	3.75
17	MP4A	Z	1.4	3.75
18	MP4A	Mx	.002	3.75
19	MP3A	X	-.54	.75
20	MP3A	Z	.312	.75
21	MP3A	Mx	-.00027	.75
22	OVP	X	-6.635	1
23	OVP	Z	3.831	1
24	OVP	Mx	0	1
25	MP2A	X	-2.667	1.75
26	MP2A	Z	1.54	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
27	MP2A	Mx	-.001	1.75
28	MP3A	X	-2.329	1.75
29	MP3A	Z	1.345	1.75
30	MP3A	Mx	-.001	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-6.558	.75
2	MP2A	Z	0	.75
3	MP2A	Mx	.005	.75
4	MP2A	X	-6.558	4.75
5	MP2A	Z	0	4.75
6	MP2A	Mx	.005	4.75
7	MP2A	X	-6.558	.75
8	MP2A	Z	0	.75
9	MP2A	Mx	.005	.75
10	MP2A	X	-6.558	4.75
11	MP2A	Z	0	4.75
12	MP2A	Mx	.005	4.75
13	MP4A	X	-2.017	1.75
14	MP4A	Z	0	1.75
15	MP4A	Mx	.002	1.75
16	MP4A	X	-2.017	3.75
17	MP4A	Z	0	3.75
18	MP4A	Mx	.002	3.75
19	MP3A	X	-.561	.75
20	MP3A	Z	0	.75
21	MP3A	Mx	-.000281	.75
22	OVP	X	-6.854	1
23	OVP	Z	0	1
24	OVP	Mx	0	1
25	MP2A	X	-2.74	1.75
26	MP2A	Z	0	1.75
27	MP2A	Mx	-.001	1.75
28	MP3A	X	-2.219	1.75
29	MP3A	Z	0	1.75
30	MP3A	Mx	-.001	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-6.421	.75
2	MP2A	Z	-3.707	.75
3	MP2A	Mx	.002	.75
4	MP2A	X	-6.421	4.75
5	MP2A	Z	-3.707	4.75
6	MP2A	Mx	.002	4.75
7	MP2A	X	-6.421	.75
8	MP2A	Z	-3.707	.75
9	MP2A	Mx	.007	.75
10	MP2A	X	-6.421	4.75
11	MP2A	Z	-3.707	4.75
12	MP2A	Mx	.007	4.75
13	MP4A	X	-2.425	1.75
14	MP4A	Z	-1.4	1.75
15	MP4A	Mx	.002	1.75
16	MP4A	X	-2.425	3.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP4A	Z	-1.4	3.75
18	MP4A	Mx	.002	3.75
19	MP3A	X	-.54	.75
20	MP3A	Z	-.312	.75
21	MP3A	Mx	-.00027	.75
22	OVP	X	-6.094	1
23	OVP	Z	-3.518	1
24	OVP	Mx	0	1
25	MP2A	X	-2.667	1.75
26	MP2A	Z	-1.54	1.75
27	MP2A	Mx	-.001	1.75
28	MP3A	X	-2.329	1.75
29	MP3A	Z	-1.345	1.75
30	MP3A	Mx	-.001	1.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-4.564	.75
2	MP2A	Z	-7.905	.75
3	MP2A	Mx	-.002	.75
4	MP2A	X	-4.564	4.75
5	MP2A	Z	-7.905	4.75
6	MP2A	Mx	-.002	4.75
7	MP2A	X	-4.564	.75
8	MP2A	Z	-7.905	.75
9	MP2A	Mx	.009	.75
10	MP2A	X	-4.564	4.75
11	MP2A	Z	-7.905	4.75
12	MP2A	Mx	.009	4.75
13	MP4A	X	-2.184	1.75
14	MP4A	Z	-3.783	1.75
15	MP4A	Mx	.002	1.75
16	MP4A	X	-2.184	3.75
17	MP4A	Z	-3.783	3.75
18	MP4A	Mx	.002	3.75
19	MP3A	X	-.374	.75
20	MP3A	Z	-.648	.75
21	MP3A	Mx	-.000187	.75
22	OVP	X	-4.014	1
23	OVP	Z	-6.953	1
24	OVP	Mx	0	1
25	MP2A	X	-1.88	1.75
26	MP2A	Z	-3.256	1.75
27	MP2A	Mx	-.00094	1.75
28	MP3A	X	-1.815	1.75
29	MP3A	Z	-3.143	1.75
30	MP3A	Mx	-.000908	1.75

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M4	Y	-500	%77

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M4	Y	-500	%15

Member Point Loads (BLC 79 : Lv1)

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

Member Point Loads (BLC 80 : Lv2)

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

Member Distributed Loads (BLC 40 : Structure Di)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	Y	-9.761	-9.761	0	%100
2	M2	Y	-7.392	-7.392	0	%100
3	M4	Y	-6.677	-6.677	0	%100
4	MP5A	Y	-5.069	-5.069	0	%100
5	MP4A	Y	-5.069	-5.069	0	%100
6	MP3A	Y	-5.069	-5.069	0	%100
7	MP2A	Y	-5.784	-5.784	0	%100
8	MP1A	Y	-5.069	-5.069	0	%100
9	OVP	Y	-5.069	-5.069	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	-8.511	-8.511	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	-12.481	-12.481	0	%100
7	MP5A	X	0	0	0	%100
8	MP5A	Z	-8.469	-8.469	0	%100
9	MP4A	X	0	0	0	%100
10	MP4A	Z	-8.469	-8.469	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	-8.469	-8.469	0	%100
13	MP2A	X	0	0	0	%100
14	MP2A	Z	-10.252	-10.252	0	%100
15	MP1A	X	0	0	0	%100
16	MP1A	Z	-8.469	-8.469	0	%100
17	OVP	X	0	0	0	%100
18	OVP	Z	-6.926	-6.926	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.477	1.477	0	%100
2	M1	Z	-2.559	-2.559	0	%100
3	M2	X	4.256	4.256	0	%100
4	M2	Z	-7.371	-7.371	0	%100
5	M4	X	4.68	4.68	0	%100
6	M4	Z	-8.107	-8.107	0	%100
7	MP5A	X	4.235	4.235	0	%100
8	MP5A	Z	-7.335	-7.335	0	%100
9	MP4A	X	4.235	4.235	0	%100
10	MP4A	Z	-7.335	-7.335	0	%100
11	MP3A	X	4.235	4.235	0	%100
12	MP3A	Z	-7.335	-7.335	0	%100
13	MP2A	X	5.126	5.126	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
14	MP2A	Z	-8.879	-8.879	0	%100
15	MP1A	X	4.235	4.235	0	%100
16	MP1A	Z	-7.335	-7.335	0	%100
17	OVP	X	3.463	3.463	0	%100
18	OVP	Z	-5.998	-5.998	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	7.677	7.677	0	%100
2	M1	Z	-4.432	-4.432	0	%100
3	M2	X	7.371	7.371	0	%100
4	M2	Z	-4.256	-4.256	0	%100
5	M4	X	2.702	2.702	0	%100
6	M4	Z	-1.56	-1.56	0	%100
7	MP5A	X	7.335	7.335	0	%100
8	MP5A	Z	-4.235	-4.235	0	%100
9	MP4A	X	7.335	7.335	0	%100
10	MP4A	Z	-4.235	-4.235	0	%100
11	MP3A	X	7.335	7.335	0	%100
12	MP3A	Z	-4.235	-4.235	0	%100
13	MP2A	X	8.879	8.879	0	%100
14	MP2A	Z	-5.126	-5.126	0	%100
15	MP1A	X	7.335	7.335	0	%100
16	MP1A	Z	-4.235	-4.235	0	%100
17	OVP	X	5.998	5.998	0	%100
18	OVP	Z	-3.463	-3.463	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	11.819	11.819	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	8.511	8.511	0	%100
4	M2	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100
7	MP5A	X	8.469	8.469	0	%100
8	MP5A	Z	0	0	0	%100
9	MP4A	X	8.469	8.469	0	%100
10	MP4A	Z	0	0	0	%100
11	MP3A	X	8.469	8.469	0	%100
12	MP3A	Z	0	0	0	%100
13	MP2A	X	10.252	10.252	0	%100
14	MP2A	Z	0	0	0	%100
15	MP1A	X	8.469	8.469	0	%100
16	MP1A	Z	0	0	0	%100
17	OVP	X	6.926	6.926	0	%100
18	OVP	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	7.677	7.677	0	%100
2	M1	Z	4.432	4.432	0	%100
3	M2	X	7.371	7.371	0	%100
4	M2	Z	4.256	4.256	0	%100
5	M4	X	2.702	2.702	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
6	M4	Z	1.56	1.56	0	%100
7	MP5A	X	7.335	7.335	0	%100
8	MP5A	Z	4.235	4.235	0	%100
9	MP4A	X	7.335	7.335	0	%100
10	MP4A	Z	4.235	4.235	0	%100
11	MP3A	X	7.335	7.335	0	%100
12	MP3A	Z	4.235	4.235	0	%100
13	MP2A	X	8.879	8.879	0	%100
14	MP2A	Z	5.126	5.126	0	%100
15	MP1A	X	7.335	7.335	0	%100
16	MP1A	Z	4.235	4.235	0	%100
17	OVP	X	5.998	5.998	0	%100
18	OVP	Z	3.463	3.463	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.477	1.477	0	%100
2	M1	Z	2.559	2.559	0	%100
3	M2	X	4.256	4.256	0	%100
4	M2	Z	7.371	7.371	0	%100
5	M4	X	4.68	4.68	0	%100
6	M4	Z	8.107	8.107	0	%100
7	MP5A	X	4.235	4.235	0	%100
8	MP5A	Z	7.335	7.335	0	%100
9	MP4A	X	4.235	4.235	0	%100
10	MP4A	Z	7.335	7.335	0	%100
11	MP3A	X	4.235	4.235	0	%100
12	MP3A	Z	7.335	7.335	0	%100
13	MP2A	X	5.126	5.126	0	%100
14	MP2A	Z	8.879	8.879	0	%100
15	MP1A	X	4.235	4.235	0	%100
16	MP1A	Z	7.335	7.335	0	%100
17	OVP	X	3.463	3.463	0	%100
18	OVP	Z	5.998	5.998	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	8.511	8.511	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	12.481	12.481	0	%100
7	MP5A	X	0	0	0	%100
8	MP5A	Z	8.469	8.469	0	%100
9	MP4A	X	0	0	0	%100
10	MP4A	Z	8.469	8.469	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	8.469	8.469	0	%100
13	MP2A	X	0	0	0	%100
14	MP2A	Z	10.252	10.252	0	%100
15	MP1A	X	0	0	0	%100
16	MP1A	Z	8.469	8.469	0	%100
17	OVP	X	0	0	0	%100
18	OVP	Z	6.926	6.926	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.477	-1.477	0	%100
2	M1	Z	2.559	2.559	0	%100
3	M2	X	-4.256	-4.256	0	%100
4	M2	Z	7.371	7.371	0	%100
5	M4	X	-4.68	-4.68	0	%100
6	M4	Z	8.107	8.107	0	%100
7	MP5A	X	-4.235	-4.235	0	%100
8	MP5A	Z	7.335	7.335	0	%100
9	MP4A	X	-4.235	-4.235	0	%100
10	MP4A	Z	7.335	7.335	0	%100
11	MP3A	X	-4.235	-4.235	0	%100
12	MP3A	Z	7.335	7.335	0	%100
13	MP2A	X	-5.126	-5.126	0	%100
14	MP2A	Z	8.879	8.879	0	%100
15	MP1A	X	-4.235	-4.235	0	%100
16	MP1A	Z	7.335	7.335	0	%100
17	OVP	X	-3.463	-3.463	0	%100
18	OVP	Z	5.998	5.998	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-7.677	-7.677	0	%100
2	M1	Z	4.432	4.432	0	%100
3	M2	X	-7.371	-7.371	0	%100
4	M2	Z	4.256	4.256	0	%100
5	M4	X	-2.702	-2.702	0	%100
6	M4	Z	1.56	1.56	0	%100
7	MP5A	X	-7.335	-7.335	0	%100
8	MP5A	Z	4.235	4.235	0	%100
9	MP4A	X	-7.335	-7.335	0	%100
10	MP4A	Z	4.235	4.235	0	%100
11	MP3A	X	-7.335	-7.335	0	%100
12	MP3A	Z	4.235	4.235	0	%100
13	MP2A	X	-8.879	-8.879	0	%100
14	MP2A	Z	5.126	5.126	0	%100
15	MP1A	X	-7.335	-7.335	0	%100
16	MP1A	Z	4.235	4.235	0	%100
17	OVP	X	-5.998	-5.998	0	%100
18	OVP	Z	3.463	3.463	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-11.819	-11.819	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	-8.511	-8.511	0	%100
4	M2	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100
7	MP5A	X	-8.469	-8.469	0	%100
8	MP5A	Z	0	0	0	%100
9	MP4A	X	-8.469	-8.469	0	%100
10	MP4A	Z	0	0	0	%100
11	MP3A	X	-8.469	-8.469	0	%100
12	MP3A	Z	0	0	0	%100
13	MP2A	X	-10.252	-10.252	0	%100
14	MP2A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
15	MP1A	X	-8.469	-8.469	0	%100
16	MP1A	Z	0	0	0	%100
17	OVP	X	-6.926	-6.926	0	%100
18	OVP	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-7.677	-7.677	0	%100
2	M1	Z	-4.432	-4.432	0	%100
3	M2	X	-7.371	-7.371	0	%100
4	M2	Z	-4.256	-4.256	0	%100
5	M4	X	-2.702	-2.702	0	%100
6	M4	Z	-1.56	-1.56	0	%100
7	MP5A	X	-7.335	-7.335	0	%100
8	MP5A	Z	-4.235	-4.235	0	%100
9	MP4A	X	-7.335	-7.335	0	%100
10	MP4A	Z	-4.235	-4.235	0	%100
11	MP3A	X	-7.335	-7.335	0	%100
12	MP3A	Z	-4.235	-4.235	0	%100
13	MP2A	X	-8.879	-8.879	0	%100
14	MP2A	Z	-5.126	-5.126	0	%100
15	MP1A	X	-7.335	-7.335	0	%100
16	MP1A	Z	-4.235	-4.235	0	%100
17	OVP	X	-5.998	-5.998	0	%100
18	OVP	Z	-3.463	-3.463	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.477	-1.477	0	%100
2	M1	Z	-2.559	-2.559	0	%100
3	M2	X	-4.256	-4.256	0	%100
4	M2	Z	-7.371	-7.371	0	%100
5	M4	X	-4.68	-4.68	0	%100
6	M4	Z	-8.107	-8.107	0	%100
7	MP5A	X	-4.235	-4.235	0	%100
8	MP5A	Z	-7.335	-7.335	0	%100
9	MP4A	X	-4.235	-4.235	0	%100
10	MP4A	Z	-7.335	-7.335	0	%100
11	MP3A	X	-4.235	-4.235	0	%100
12	MP3A	Z	-7.335	-7.335	0	%100
13	MP2A	X	-5.126	-5.126	0	%100
14	MP2A	Z	-8.879	-8.879	0	%100
15	MP1A	X	-4.235	-4.235	0	%100
16	MP1A	Z	-7.335	-7.335	0	%100
17	OVP	X	-3.463	-3.463	0	%100
18	OVP	Z	-5.998	-5.998	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	-2.479	-2.479	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	-3.556	-3.556	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
7	MP5A	X	0	0	0	%100
8	MP5A	Z	-2.871	-2.871	0	%100
9	MP4A	X	0	0	0	%100
10	MP4A	Z	-2.871	-2.871	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	-2.871	-2.871	0	%100
13	MP2A	X	0	0	0	%100
14	MP2A	Z	-3.176	-3.176	0	%100
15	MP1A	X	0	0	0	%100
16	MP1A	Z	-2.871	-2.871	0	%100
17	OVP	X	0	0	0	%100
18	OVP	Z	-2.354	-2.354	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.392	.392	0	%100
2	M1	Z	-.678	-.678	0	%100
3	M2	X	1.24	1.24	0	%100
4	M2	Z	-2.147	-2.147	0	%100
5	M4	X	1.334	1.334	0	%100
6	M4	Z	-2.31	-2.31	0	%100
7	MP5A	X	1.436	1.436	0	%100
8	MP5A	Z	-2.487	-2.487	0	%100
9	MP4A	X	1.436	1.436	0	%100
10	MP4A	Z	-2.487	-2.487	0	%100
11	MP3A	X	1.436	1.436	0	%100
12	MP3A	Z	-2.487	-2.487	0	%100
13	MP2A	X	1.588	1.588	0	%100
14	MP2A	Z	-2.75	-2.75	0	%100
15	MP1A	X	1.436	1.436	0	%100
16	MP1A	Z	-2.487	-2.487	0	%100
17	OVP	X	1.177	1.177	0	%100
18	OVP	Z	-2.039	-2.039	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	2.035	2.035	0	%100
2	M1	Z	-1.175	-1.175	0	%100
3	M2	X	2.147	2.147	0	%100
4	M2	Z	-1.24	-1.24	0	%100
5	M4	X	.77	.77	0	%100
6	M4	Z	-.445	-.445	0	%100
7	MP5A	X	2.487	2.487	0	%100
8	MP5A	Z	-1.436	-1.436	0	%100
9	MP4A	X	2.487	2.487	0	%100
10	MP4A	Z	-1.436	-1.436	0	%100
11	MP3A	X	2.487	2.487	0	%100
12	MP3A	Z	-1.436	-1.436	0	%100
13	MP2A	X	2.75	2.75	0	%100
14	MP2A	Z	-1.588	-1.588	0	%100
15	MP1A	X	2.487	2.487	0	%100
16	MP1A	Z	-1.436	-1.436	0	%100
17	OVP	X	2.039	2.039	0	%100
18	OVP	Z	-1.177	-1.177	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	3.133	3.133	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	2.479	2.479	0	%100
4	M2	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100
7	MP5A	X	2.871	2.871	0	%100
8	MP5A	Z	0	0	0	%100
9	MP4A	X	2.871	2.871	0	%100
10	MP4A	Z	0	0	0	%100
11	MP3A	X	2.871	2.871	0	%100
12	MP3A	Z	0	0	0	%100
13	MP2A	X	3.176	3.176	0	%100
14	MP2A	Z	0	0	0	%100
15	MP1A	X	2.871	2.871	0	%100
16	MP1A	Z	0	0	0	%100
17	OVP	X	2.354	2.354	0	%100
18	OVP	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	2.035	2.035	0	%100
2	M1	Z	1.175	1.175	0	%100
3	M2	X	2.147	2.147	0	%100
4	M2	Z	1.24	1.24	0	%100
5	M4	X	.77	.77	0	%100
6	M4	Z	.445	.445	0	%100
7	MP5A	X	2.487	2.487	0	%100
8	MP5A	Z	1.436	1.436	0	%100
9	MP4A	X	2.487	2.487	0	%100
10	MP4A	Z	1.436	1.436	0	%100
11	MP3A	X	2.487	2.487	0	%100
12	MP3A	Z	1.436	1.436	0	%100
13	MP2A	X	2.75	2.75	0	%100
14	MP2A	Z	1.588	1.588	0	%100
15	MP1A	X	2.487	2.487	0	%100
16	MP1A	Z	1.436	1.436	0	%100
17	OVP	X	2.039	2.039	0	%100
18	OVP	Z	1.177	1.177	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.392	.392	0	%100
2	M1	Z	.678	.678	0	%100
3	M2	X	1.24	1.24	0	%100
4	M2	Z	2.147	2.147	0	%100
5	M4	X	1.334	1.334	0	%100
6	M4	Z	2.31	2.31	0	%100
7	MP5A	X	1.436	1.436	0	%100
8	MP5A	Z	2.487	2.487	0	%100
9	MP4A	X	1.436	1.436	0	%100
10	MP4A	Z	2.487	2.487	0	%100
11	MP3A	X	1.436	1.436	0	%100
12	MP3A	Z	2.487	2.487	0	%100
13	MP2A	X	1.588	1.588	0	%100
14	MP2A	Z	2.75	2.75	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
15	MP1A	X	1.436	1.436	0	%100
16	MP1A	Z	2.487	2.487	0	%100
17	OVP	X	1.177	1.177	0	%100
18	OVP	Z	2.039	2.039	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	2.479	2.479	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	3.556	3.556	0	%100
7	MP5A	X	0	0	0	%100
8	MP5A	Z	2.871	2.871	0	%100
9	MP4A	X	0	0	0	%100
10	MP4A	Z	2.871	2.871	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	2.871	2.871	0	%100
13	MP2A	X	0	0	0	%100
14	MP2A	Z	3.176	3.176	0	%100
15	MP1A	X	0	0	0	%100
16	MP1A	Z	2.871	2.871	0	%100
17	OVP	X	0	0	0	%100
18	OVP	Z	2.354	2.354	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.392	-.392	0	%100
2	M1	Z	.678	.678	0	%100
3	M2	X	-1.24	-1.24	0	%100
4	M2	Z	2.147	2.147	0	%100
5	M4	X	-1.334	-1.334	0	%100
6	M4	Z	2.31	2.31	0	%100
7	MP5A	X	-1.436	-1.436	0	%100
8	MP5A	Z	2.487	2.487	0	%100
9	MP4A	X	-1.436	-1.436	0	%100
10	MP4A	Z	2.487	2.487	0	%100
11	MP3A	X	-1.436	-1.436	0	%100
12	MP3A	Z	2.487	2.487	0	%100
13	MP2A	X	-1.588	-1.588	0	%100
14	MP2A	Z	2.75	2.75	0	%100
15	MP1A	X	-1.436	-1.436	0	%100
16	MP1A	Z	2.487	2.487	0	%100
17	OVP	X	-1.177	-1.177	0	%100
18	OVP	Z	2.039	2.039	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-2.035	-2.035	0	%100
2	M1	Z	1.175	1.175	0	%100
3	M2	X	-2.147	-2.147	0	%100
4	M2	Z	1.24	1.24	0	%100
5	M4	X	-.77	-.77	0	%100
6	M4	Z	.445	.445	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
7	MP5A	X	-2.487	-2.487	0	%100
8	MP5A	Z	1.436	1.436	0	%100
9	MP4A	X	-2.487	-2.487	0	%100
10	MP4A	Z	1.436	1.436	0	%100
11	MP3A	X	-2.487	-2.487	0	%100
12	MP3A	Z	1.436	1.436	0	%100
13	MP2A	X	-2.75	-2.75	0	%100
14	MP2A	Z	1.588	1.588	0	%100
15	MP1A	X	-2.487	-2.487	0	%100
16	MP1A	Z	1.436	1.436	0	%100
17	OVP	X	-2.039	-2.039	0	%100
18	OVP	Z	1.177	1.177	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-3.133	-3.133	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	-2.479	-2.479	0	%100
4	M2	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100
7	MP5A	X	-2.871	-2.871	0	%100
8	MP5A	Z	0	0	0	%100
9	MP4A	X	-2.871	-2.871	0	%100
10	MP4A	Z	0	0	0	%100
11	MP3A	X	-2.871	-2.871	0	%100
12	MP3A	Z	0	0	0	%100
13	MP2A	X	-3.176	-3.176	0	%100
14	MP2A	Z	0	0	0	%100
15	MP1A	X	-2.871	-2.871	0	%100
16	MP1A	Z	0	0	0	%100
17	OVP	X	-2.354	-2.354	0	%100
18	OVP	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-2.035	-2.035	0	%100
2	M1	Z	-1.175	-1.175	0	%100
3	M2	X	-2.147	-2.147	0	%100
4	M2	Z	-1.24	-1.24	0	%100
5	M4	X	-.77	-.77	0	%100
6	M4	Z	-.445	-.445	0	%100
7	MP5A	X	-2.487	-2.487	0	%100
8	MP5A	Z	-1.436	-1.436	0	%100
9	MP4A	X	-2.487	-2.487	0	%100
10	MP4A	Z	-1.436	-1.436	0	%100
11	MP3A	X	-2.487	-2.487	0	%100
12	MP3A	Z	-1.436	-1.436	0	%100
13	MP2A	X	-2.75	-2.75	0	%100
14	MP2A	Z	-1.588	-1.588	0	%100
15	MP1A	X	-2.487	-2.487	0	%100
16	MP1A	Z	-1.436	-1.436	0	%100
17	OVP	X	-2.039	-2.039	0	%100
18	OVP	Z	-1.177	-1.177	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.392	-.392	0	%100
2	M1	Z	-.678	-.678	0	%100
3	M2	X	-1.24	-1.24	0	%100
4	M2	Z	-2.147	-2.147	0	%100
5	M4	X	-1.334	-1.334	0	%100
6	M4	Z	-2.31	-2.31	0	%100
7	MP5A	X	-1.436	-1.436	0	%100
8	MP5A	Z	-2.487	-2.487	0	%100
9	MP4A	X	-1.436	-1.436	0	%100
10	MP4A	Z	-2.487	-2.487	0	%100
11	MP3A	X	-1.436	-1.436	0	%100
12	MP3A	Z	-2.487	-2.487	0	%100
13	MP2A	X	-1.588	-1.588	0	%100
14	MP2A	Z	-2.75	-2.75	0	%100
15	MP1A	X	-1.436	-1.436	0	%100
16	MP1A	Z	-2.487	-2.487	0	%100
17	OVP	X	-1.177	-1.177	0	%100
18	OVP	Z	-2.039	-2.039	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	-.523	-.523	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	-.767	-.767	0	%100
7	MP5A	X	0	0	0	%100
8	MP5A	Z	-.521	-.521	0	%100
9	MP4A	X	0	0	0	%100
10	MP4A	Z	-.521	-.521	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	-.521	-.521	0	%100
13	MP2A	X	0	0	0	%100
14	MP2A	Z	-.63	-.63	0	%100
15	MP1A	X	0	0	0	%100
16	MP1A	Z	-.521	-.521	0	%100
17	OVP	X	0	0	0	%100
18	OVP	Z	-.426	-.426	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.091	.091	0	%100
2	M1	Z	-.157	-.157	0	%100
3	M2	X	.262	.262	0	%100
4	M2	Z	-.453	-.453	0	%100
5	M4	X	.288	.288	0	%100
6	M4	Z	-.498	-.498	0	%100
7	MP5A	X	.26	.26	0	%100
8	MP5A	Z	-.451	-.451	0	%100
9	MP4A	X	.26	.26	0	%100
10	MP4A	Z	-.451	-.451	0	%100
11	MP3A	X	.26	.26	0	%100
12	MP3A	Z	-.451	-.451	0	%100
13	MP2A	X	.315	.315	0	%100
14	MP2A	Z	-.546	-.546	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
15	MP1A	X	.26	.26	0	%100
16	MP1A	Z	-.451	-.451	0	%100
17	OVP	X	.213	.213	0	%100
18	OVP	Z	-.369	-.369	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.472	.472	0	%100
2	M1	Z	-.272	-.272	0	%100
3	M2	X	.453	.453	0	%100
4	M2	Z	-.262	-.262	0	%100
5	M4	X	.166	.166	0	%100
6	M4	Z	-.096	-.096	0	%100
7	MP5A	X	.451	.451	0	%100
8	MP5A	Z	-.26	-.26	0	%100
9	MP4A	X	.451	.451	0	%100
10	MP4A	Z	-.26	-.26	0	%100
11	MP3A	X	.451	.451	0	%100
12	MP3A	Z	-.26	-.26	0	%100
13	MP2A	X	.546	.546	0	%100
14	MP2A	Z	-.315	-.315	0	%100
15	MP1A	X	.451	.451	0	%100
16	MP1A	Z	-.26	-.26	0	%100
17	OVP	X	.369	.369	0	%100
18	OVP	Z	-.213	-.213	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.727	.727	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	.523	.523	0	%100
4	M2	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100
7	MP5A	X	.521	.521	0	%100
8	MP5A	Z	0	0	0	%100
9	MP4A	X	.521	.521	0	%100
10	MP4A	Z	0	0	0	%100
11	MP3A	X	.521	.521	0	%100
12	MP3A	Z	0	0	0	%100
13	MP2A	X	.63	.63	0	%100
14	MP2A	Z	0	0	0	%100
15	MP1A	X	.521	.521	0	%100
16	MP1A	Z	0	0	0	%100
17	OVP	X	.426	.426	0	%100
18	OVP	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.472	.472	0	%100
2	M1	Z	.272	.272	0	%100
3	M2	X	.453	.453	0	%100
4	M2	Z	.262	.262	0	%100
5	M4	X	.166	.166	0	%100
6	M4	Z	.096	.096	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
7	MP5A	X	.451	.451	0	%100
8	MP5A	Z	.26	.26	0	%100
9	MP4A	X	.451	.451	0	%100
10	MP4A	Z	.26	.26	0	%100
11	MP3A	X	.451	.451	0	%100
12	MP3A	Z	.26	.26	0	%100
13	MP2A	X	.546	.546	0	%100
14	MP2A	Z	.315	.315	0	%100
15	MP1A	X	.451	.451	0	%100
16	MP1A	Z	.26	.26	0	%100
17	OVP	X	.369	.369	0	%100
18	OVP	Z	.213	.213	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.091	.091	0	%100
2	M1	Z	.157	.157	0	%100
3	M2	X	.262	.262	0	%100
4	M2	Z	.453	.453	0	%100
5	M4	X	.288	.288	0	%100
6	M4	Z	.498	.498	0	%100
7	MP5A	X	.26	.26	0	%100
8	MP5A	Z	.451	.451	0	%100
9	MP4A	X	.26	.26	0	%100
10	MP4A	Z	.451	.451	0	%100
11	MP3A	X	.26	.26	0	%100
12	MP3A	Z	.451	.451	0	%100
13	MP2A	X	.315	.315	0	%100
14	MP2A	Z	.546	.546	0	%100
15	MP1A	X	.26	.26	0	%100
16	MP1A	Z	.451	.451	0	%100
17	OVP	X	.213	.213	0	%100
18	OVP	Z	.369	.369	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	.523	.523	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	.767	.767	0	%100
7	MP5A	X	0	0	0	%100
8	MP5A	Z	.521	.521	0	%100
9	MP4A	X	0	0	0	%100
10	MP4A	Z	.521	.521	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	.521	.521	0	%100
13	MP2A	X	0	0	0	%100
14	MP2A	Z	.63	.63	0	%100
15	MP1A	X	0	0	0	%100
16	MP1A	Z	.521	.521	0	%100
17	OVP	X	0	0	0	%100
18	OVP	Z	.426	.426	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.091	-.091	0	%100
2	M1	Z	.157	.157	0	%100
3	M2	X	-.262	-.262	0	%100
4	M2	Z	.453	.453	0	%100
5	M4	X	-.288	-.288	0	%100
6	M4	Z	.498	.498	0	%100
7	MP5A	X	-.26	-.26	0	%100
8	MP5A	Z	.451	.451	0	%100
9	MP4A	X	-.26	-.26	0	%100
10	MP4A	Z	.451	.451	0	%100
11	MP3A	X	-.26	-.26	0	%100
12	MP3A	Z	.451	.451	0	%100
13	MP2A	X	-.315	-.315	0	%100
14	MP2A	Z	.546	.546	0	%100
15	MP1A	X	-.26	-.26	0	%100
16	MP1A	Z	.451	.451	0	%100
17	OVP	X	-.213	-.213	0	%100
18	OVP	Z	.369	.369	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.472	-.472	0	%100
2	M1	Z	.272	.272	0	%100
3	M2	X	-.453	-.453	0	%100
4	M2	Z	.262	.262	0	%100
5	M4	X	-.166	-.166	0	%100
6	M4	Z	.096	.096	0	%100
7	MP5A	X	-.451	-.451	0	%100
8	MP5A	Z	.26	.26	0	%100
9	MP4A	X	-.451	-.451	0	%100
10	MP4A	Z	.26	.26	0	%100
11	MP3A	X	-.451	-.451	0	%100
12	MP3A	Z	.26	.26	0	%100
13	MP2A	X	-.546	-.546	0	%100
14	MP2A	Z	.315	.315	0	%100
15	MP1A	X	-.451	-.451	0	%100
16	MP1A	Z	.26	.26	0	%100
17	OVP	X	-.369	-.369	0	%100
18	OVP	Z	.213	.213	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.727	-.727	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	-.523	-.523	0	%100
4	M2	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100
7	MP5A	X	-.521	-.521	0	%100
8	MP5A	Z	0	0	0	%100
9	MP4A	X	-.521	-.521	0	%100
10	MP4A	Z	0	0	0	%100
11	MP3A	X	-.521	-.521	0	%100
12	MP3A	Z	0	0	0	%100
13	MP2A	X	-.63	-.63	0	%100
14	MP2A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
15	MP1A	X	-.521	-.521	0	%100
16	MP1A	Z	0	0	0	%100
17	OVP	X	-.426	-.426	0	%100
18	OVP	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.472	-.472	0	%100
2	M1	Z	-.272	-.272	0	%100
3	M2	X	-.453	-.453	0	%100
4	M2	Z	-.262	-.262	0	%100
5	M4	X	-.166	-.166	0	%100
6	M4	Z	-.096	-.096	0	%100
7	MP5A	X	-.451	-.451	0	%100
8	MP5A	Z	-.26	-.26	0	%100
9	MP4A	X	-.451	-.451	0	%100
10	MP4A	Z	-.26	-.26	0	%100
11	MP3A	X	-.451	-.451	0	%100
12	MP3A	Z	-.26	-.26	0	%100
13	MP2A	X	-.546	-.546	0	%100
14	MP2A	Z	-.315	-.315	0	%100
15	MP1A	X	-.451	-.451	0	%100
16	MP1A	Z	-.26	-.26	0	%100
17	OVP	X	-.369	-.369	0	%100
18	OVP	Z	-.213	-.213	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.091	-.091	0	%100
2	M1	Z	-.157	-.157	0	%100
3	M2	X	-.262	-.262	0	%100
4	M2	Z	-.453	-.453	0	%100
5	M4	X	-.288	-.288	0	%100
6	M4	Z	-.498	-.498	0	%100
7	MP5A	X	-.26	-.26	0	%100
8	MP5A	Z	-.451	-.451	0	%100
9	MP4A	X	-.26	-.26	0	%100
10	MP4A	Z	-.451	-.451	0	%100
11	MP3A	X	-.26	-.26	0	%100
12	MP3A	Z	-.451	-.451	0	%100
13	MP2A	X	-.315	-.315	0	%100
14	MP2A	Z	-.546	-.546	0	%100
15	MP1A	X	-.26	-.26	0	%100
16	MP1A	Z	-.451	-.451	0	%100
17	OVP	X	-.213	-.213	0	%100
18	OVP	Z	-.369	-.369	0	%100

Member Area Loads

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

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N1	max	1022.514	10	1627.695	22	1562.061	1	-2.197	1	3.867	9	3.086	27
2		min	-1022.514	4	793.046	12	-1562.06	7	-4.856	19	-3.842	3	-2.741	45
3	Totals:	max	1022.514	10	1627.695	22	1562.061	1						
4		min	-1022.514	4	793.046	12	-1562.06	7						

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

	Mem...	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	phi*...	phi*...	phi*...	phi*...	Cb	Eqn
1	M1	HSS4...	.498	0	9	.344	0	y	27	103...	106...	12....	12....	1...	H1...
2	M2	PIPE...	.000	.75	6	.000	.75		6	780...	787...	7.954	7.954	1...	H1...
3	M4	PIPE...	.727	6.25	38	.137	6.25		19	282...	652...	5.749	5.749	1...	H1...
4	MP5A	PIPE...	.024	2.75	8	.003	2.75		8	208...	321...	1.872	1.872	1...	H1...
5	MP4A	PIPE...	.090	2.75	1	.026	2.75		8	208...	321...	1.872	1.872	1...	H1...
6	MP3A	PIPE...	.095	2.75	1	.022	2.75		5	208...	321...	1.872	1.872	2...	H1...
7	MP2A	PIPE...	.215	2.75	7	.071	2.75		5	377...	507...	3.596	3.596	1...	H1...
8	MP1A	PIPE...	.024	2.75	5	.003	2.75		5	208...	321...	1.872	1.872	1...	H1...
9	OVP	PIPE...	.043	1.5	7	.016	1.5		7	288...	321...	1.872	1.872	1	H1...

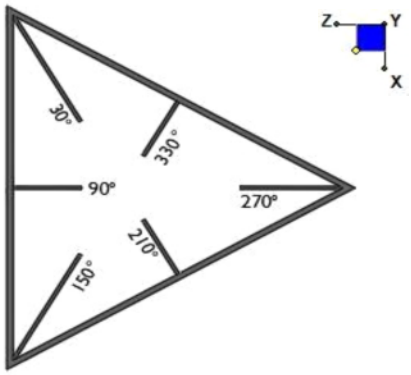
Client:	Verizon	Date:	7/6/2021
Site Name:	Guilford North 2 CT		
Project No.	21777299A		
Title:	Mount Analysis	Page:	1

Version 3.1

I. Mount-to-Tower Connection Check

RISA Model Data

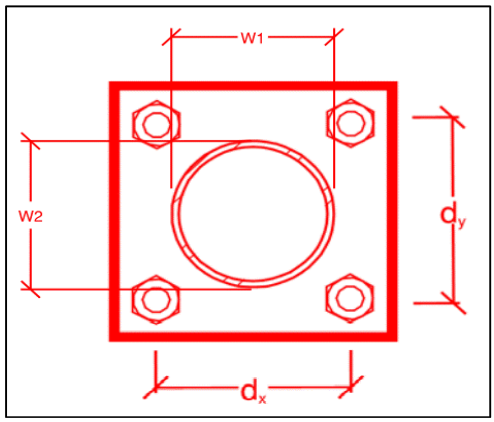
Nodes *(labeled per RISA)*	Orientation *(per graphic of typical platform)*
N1	90



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)*:	7
d_y (in) *(Delta Y of typ. bolt config. sketch)*:	7
Bolt Type:	A325N
Bolt Diameter (in):	0.625
Required Tensile Strength (kips):	17.1
Required Shear Strength (kips):	12.1
Tensile Strength / bolt (kips):	20.7
Shear Strength / bolt (kips):	12.4
Tensile Capacity Overall:	**20.7%***
Shear Capacity Overall:	**24.4%**



**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):	10.5
Plate Height (in):	10.5
W1 (in):	4
W2 (in):	4
Fy (ksi, plate):	36
t_{Plate} (in):	0.55
Weld Size (1/16 in):	3
Phi*Rn (kip/in):	4.18
Required Weld Strength (kip/in):	2.86
Plate Bending Capacity:	**65.8%**
Weld Capacity:	**68.5%**

Max Plate Bending Strengths

Mu_{xx} *(kip-in)*:	6.7
$Phi*Mn_{xx}$ *(kip-in)*:	25.7
Mu_{yy} *(kip-in)*:	10.2
$Phi*Mn_{yy}$ *(kip-in)*:	25.7

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:

-Contractor shall install 36” long P2.0 STD equipment pipe on standoff arm in Alpha sector. Attach the proposed equipment pipe to the standoff with crossover plate (Site Pro 1 Part #: SQCX4-K or EOR approved equivalent). Install equipment pipe 18" above the standoff. Contractor shall attach proposed OVP 12” from the top of equipment pipe.

-Contractor shall replace existing mount pipe in position 2 on all sectors (position 1 being on the left when looking from behind) with new 72" long P2.5 STD mount pipe. Connect new pipe to existing face horizontal using new crossover plates (VZWSMART-MSK2).

-Contractor to install safety climb cable guide (Site Pro 1, Part #: 120-123/317 or EOR approved equivalent) in locations where wire rope is rubbing against mount to tower attachments. Contractor to provide photos of safety climb guide installation.

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: 468190-VZW - GUILFORD NORTH 2 CT

Sector: **A** 7/6/2021

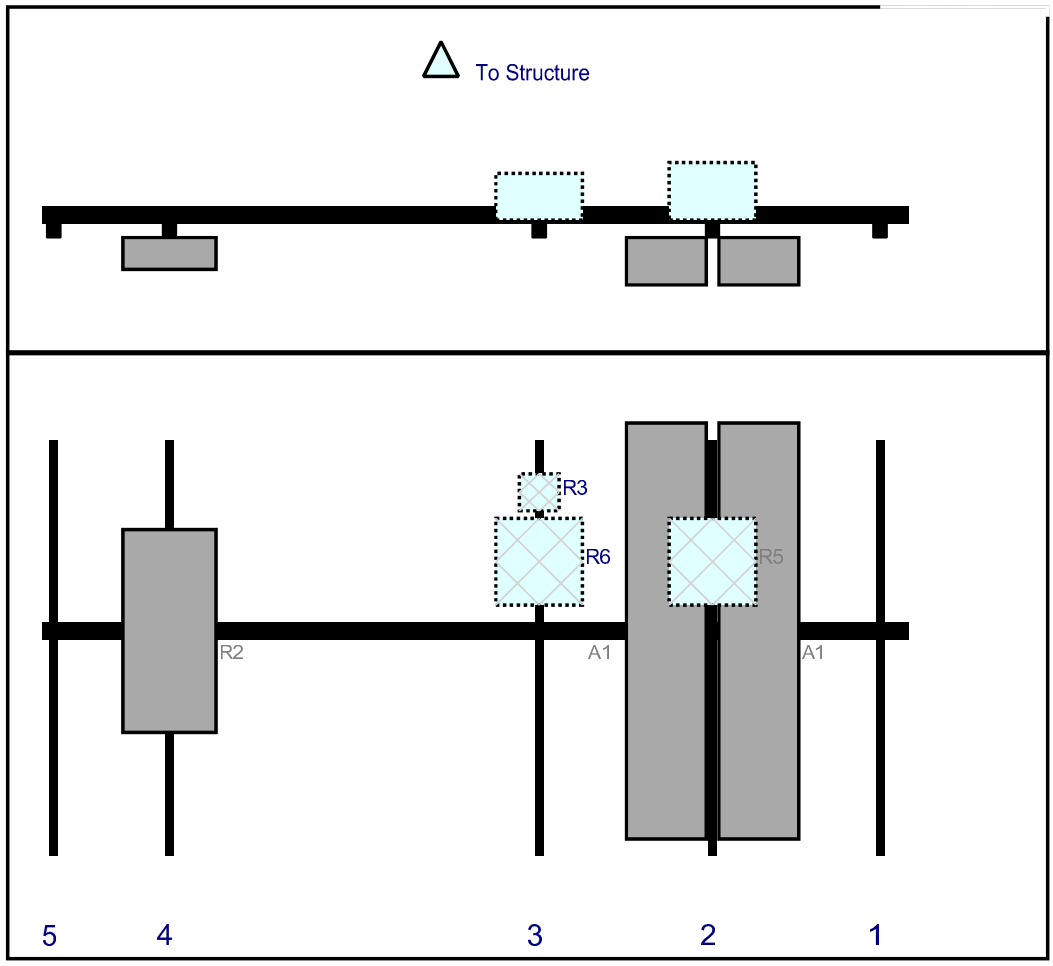
Structure Type: Monopole 10084188

Mount Elev: 157.00

MASER CONSULTING — CONNECTICUT —

Plan View

Front View
Looking at Structure

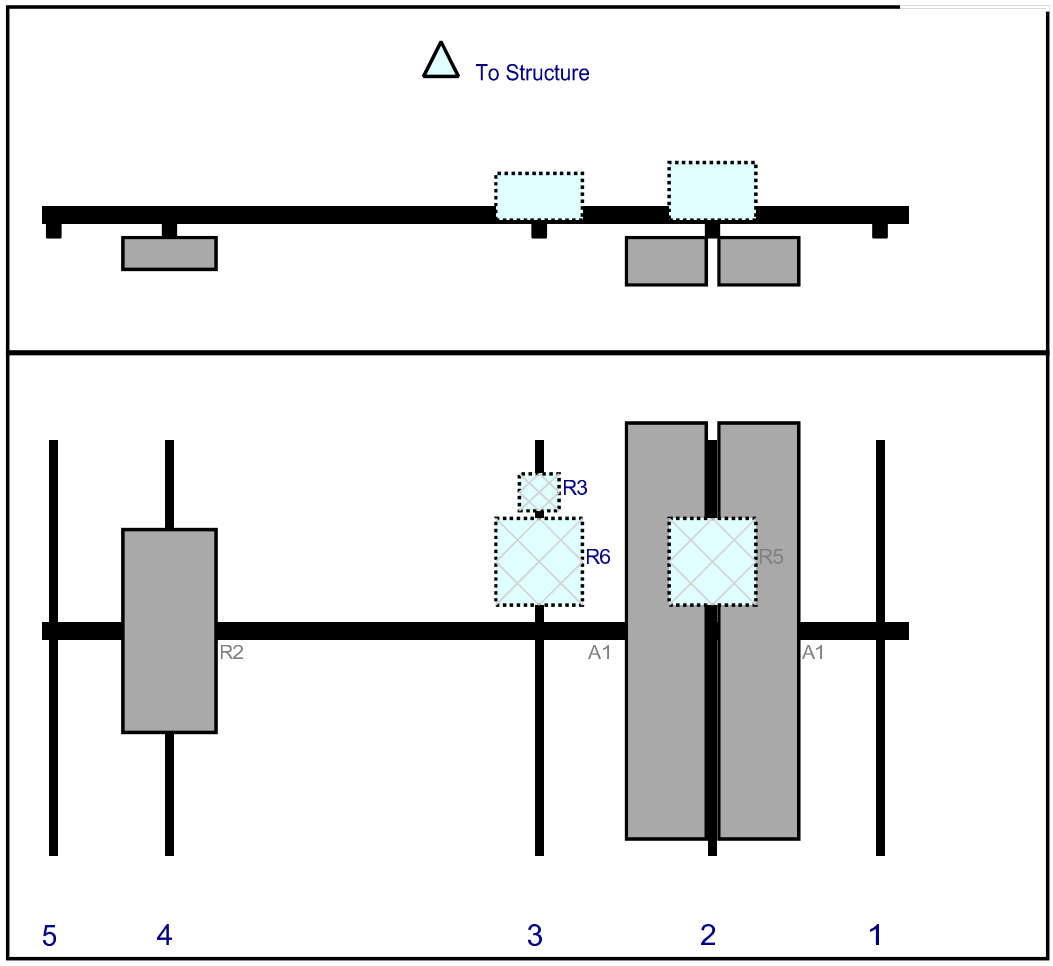


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A1	JAHH-65B-R3B	72	13.8	116	2	a	Front	33	8	Added	
A1	JAHH-65B-R3B	72	13.8	116	2	b	Front	33	-8	Added	
R5	B2/B66A RRH-BR049	15	15	116	2	a	Behind	21	0	Added	
R3	CBC78T-DS-43-2X	6.4	6.9	86	3	a	Behind	9	0	Added	
R6	B5/B13 RRH-BR04C	15	15	86	3	a	Behind	21	0	Added	
R2	MT6407-77A	35.1	16.1	22	4	a	Front	33	0	Added	

MASER CONSULTING CONNECTICUT

Plan View

Front View
Looking at Structure

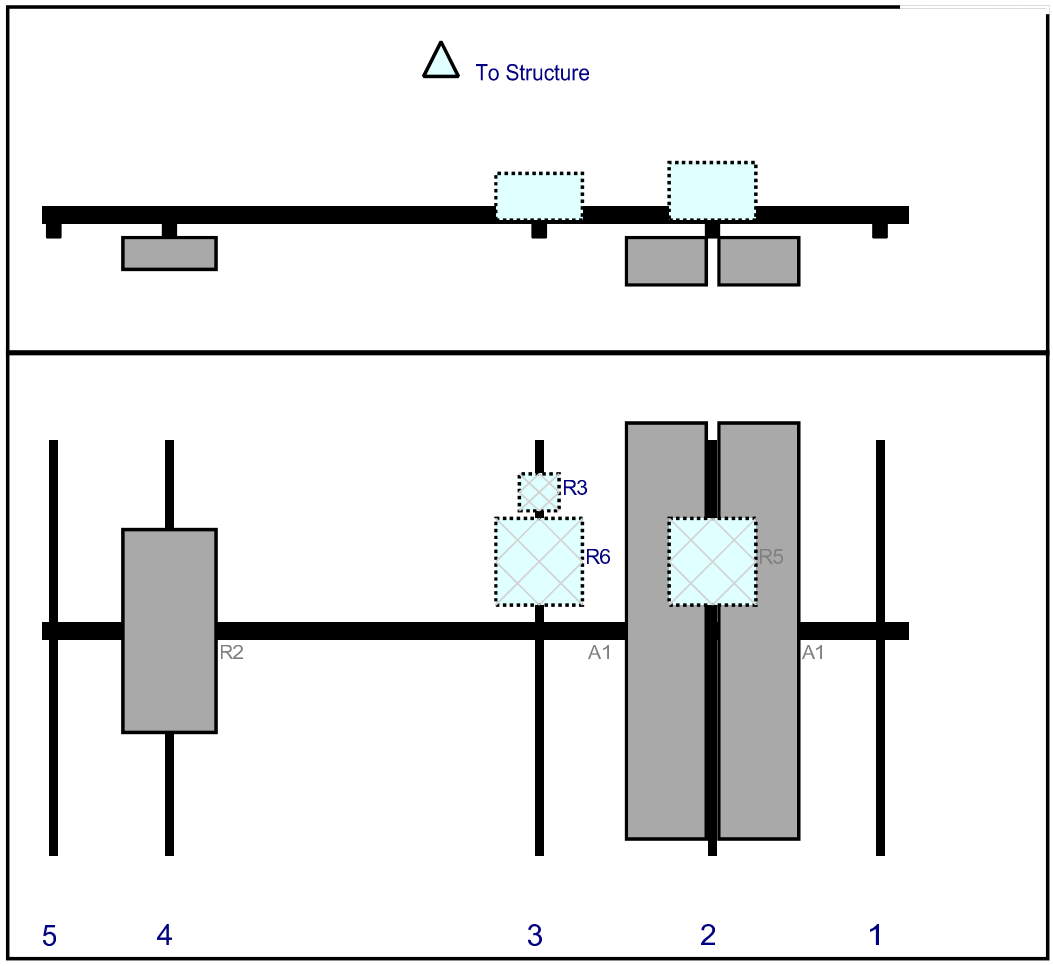


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A1	JAHH-65B-R3B	72	13.8	116	2	a	Front	33	8	Added	
A1	JAHH-65B-R3B	72	13.8	116	2	b	Front	33	-8	Added	
R5	B2/B66A RRH-BR049	15	15	116	2	a	Behind	21	0	Added	
R3	CBC78T-DS-43-2X	6.4	6.9	86	3	a	Behind	9	0	Added	
R6	B5/B13 RRH-BR04C	15	15	86	3	a	Behind	21	0	Added	
R2	MT6407-77A	35.1	16.1	22	4	a	Front	33	0	Added	

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	JAHH-65B-R3B	72	13.8	116	2	a	Front	33	8	Added	
A1	JAHH-65B-R3B	72	13.8	116	2	b	Front	33	-8	Added	
R5	B2/B66A RRH-BR049	15	15	116	2	a	Behind	21	0	Added	
R3	CBC78T-DS-43-2X	6.4	6.9	86	3	a	Behind	9	0	Added	
R6	B5/B13 RRH-BR04C	15	15	86	3	a	Behind	21	0	Added	
R2	MT6407-77A	35.1	16.1	22	4	a	Front	33	0	Added	

Maser Consulting Connecticut

MASER CONSULTING — CONNECTICUT —

Subject:	*TIA-222-H Usage*	
Site Information	*Site ID:*	*468190-VZW / GUILFORD NORTH 2 CT*
	Site Name:	*GUILFORD NORTH 2 CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*370 Rockland Road* *Guilford, Connecticut 06437* *New Haven County*
	Latitude:	*41.396850°*
	Longitude:	*-72.688808°*
Structure Information	*Tower Type:*	*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. The 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 map 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 method, seismic analysis, 30-degree increment wind direction 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,

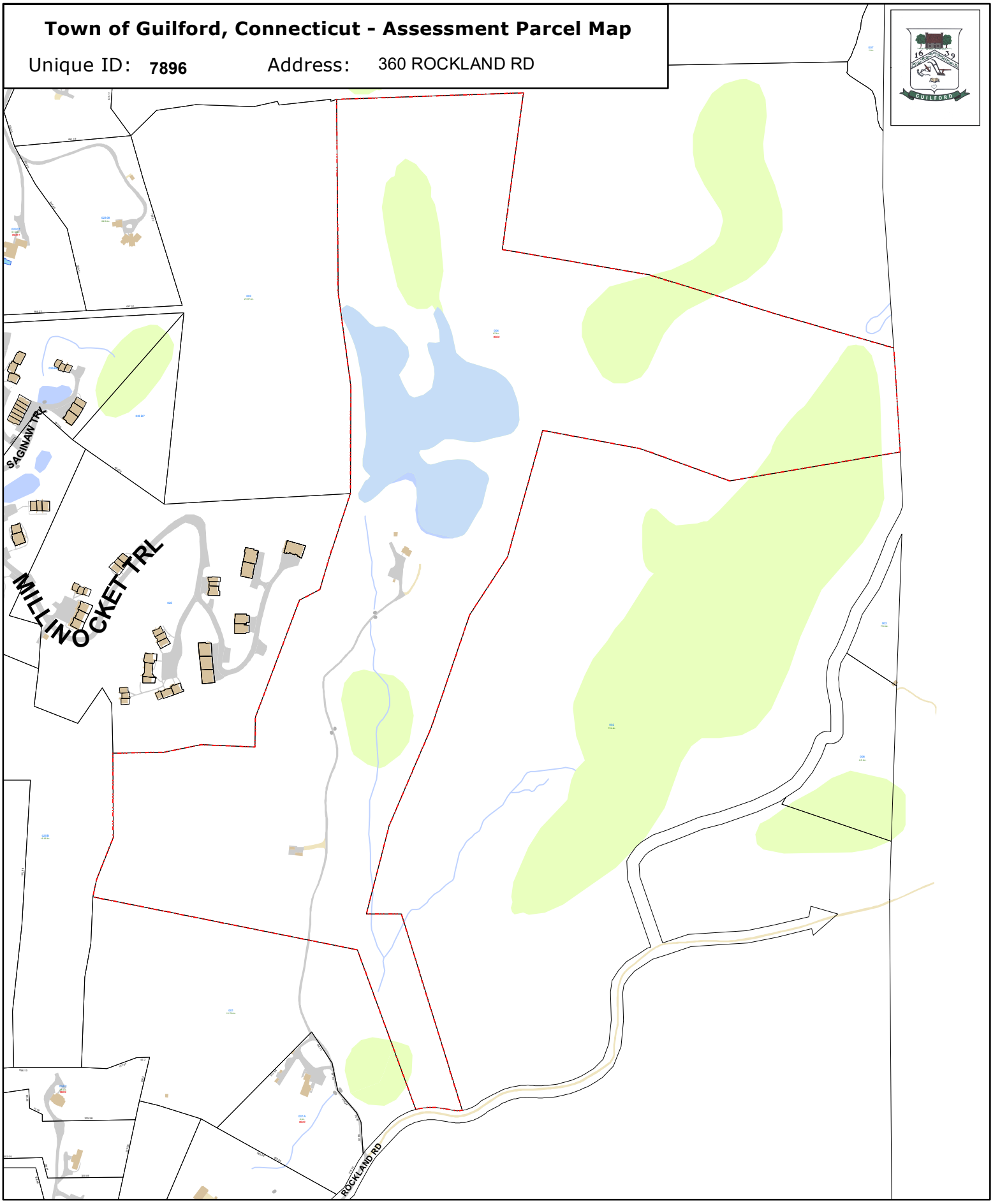
Dejian Xu

Dejian Xu, PE
Technical Manager

ATTACHMENT 5

Town of Guilford, Connecticut - Assessment Parcel Map

Unique ID: **7896** Address: 360 ROCKLAND RD



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Approximate Scale: 1 inch = 500 feet

0 350 700 Feet

Map Produced: August 2021

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

All information is for assessment purposes only. Assessments are calculated at 70% of the estimated October 1, 2017 market value which was the date of the last revaluation as completed by eQuality Valuation Services, LLC.

Information on the Property Records for the Municipality of Guilford was last updated on 10/19/2021.

Property Summary Information

Parcel Data And Values | Building | Sales

Parcel Information

Location:	360 ROCKLAND RD	Map and Parcel:	123004	Census Tract:	1903
Zoning:	R-8	Developer's Map:		Developer's Lot:	
Total Acreage:	87	Farm, Forest, Open Space Acres:	75	Unique ID:	7896

Value Information

	Appraised Value	Assessed Value
Land	795,414	270,100
Buildings	20,261	14,180
Detached Outbuildings	0	0
Total	815,675	284,280

Owner's Information

Owner's Data
WOODBRIDGE SPORTSMENS CLUB INC C/O ANTHONY BALZANO TREASURER 15 FARM RIVER DR NORTHFORD CT 06472

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ATTACHMENT 6

UNITED STATES POSTAL SERVICE®

GUILFORD NORTH 2

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 10/20/2021 US POSTAGE $002.99⁰ 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.	Matthew T. Hoey III, First Selectman Town of Guilford 31 Park Street Guilford, CT 06437				
2.	George Kral, Town Planner Town of Guilford 50 Boston Street Guilford, CT 06437				
3.	Woodbridge Sportsmen Club, Inc. c/o Anthony Balzano Treasurer 15 Farm River Road Northford, CT 06472				
4.					
5.					
6.					

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See Reverse for Instructions