

KENNETH C. BALDWIN

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Hartford, CT 06103-3597  
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Direct (860) 275-8345

Also admitted in Massachusetts  
and New York

October 27, 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  
193 Windham Center Road, Windham (Willimantic East), Connecticut**

Dear Attorney Bachman:

Cellco Partnership d/b/a Verizon Wireless (“Cellco”) currently maintains an existing wireless telecommunications facility at the above-referenced property address (the “Property”). The facility consists of antennas and remote radio heads attached to a tower and related equipment on the ground, near the base of the tower. The tower was approved by the Town of Windham (“Town”) in May of 2000. Cellco’s shared use of the tower was approved by the Council in November of 2001 (TS-VER-163-011018). A copy of Town’s approval and the Council’s TS-VER-163-011018 approval are included in [Attachment 1](#).

Cellco now intends to modify its facility by removing six (6) antennas and installing three (3) new Samsung MT6407-77A antennas and six (6) MX06FRO660-03 antennas on its existing antenna platform. Cellco will also 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 Windham’s Chief Elected Official and Land Use Officer. Please note that the Town of Windham is the owner of the Property.

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 mounts.
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 and RRHs 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, with certain modifications, can support Cellco's proposed modifications. Copies of the SA and MA are included in Attachment 4.

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

Melanie A. Bachman, Esq.  
October 27, 2021  
Page 3

Sincerely,

A handwritten signature in black ink, appearing to read "Kenneth C. Baldwin". The signature is fluid and cursive, with a long horizontal stroke at the end.

Kenneth C. Baldwin

Enclosures

Copy to:

James Rivers, Windham Town Manger

Matthew Vertefeuille, Windham Director of Code Enforcement

Alex Tyurin

# **ATTACHMENT 1**



NOTICE OF ACTION

SPECIAL PERMIT: X SPECIAL EXCEPTION: \_\_\_\_\_ VARIANCE: \_\_\_\_\_

SITE PLAN: \_\_\_\_\_ ZONE CHANGE: \_\_\_\_\_ APPEAL: \_\_\_\_\_

SUBDIVISION: \_\_\_\_\_ WETLANDS: \_\_\_\_\_ OTHER: \_\_\_\_\_

ZONING REG: \_\_\_\_\_ SECTION: \_\_\_\_\_

APPLICANT: SBA Inc.

NAME OF RECORD OWNER (IF DIFFERENT): Town of Windham

STREET ADDRESS OF PROPERTY: 193 Windham Center Road

DEED REFERENCE - VOLUME: 234 PAGE: 304 ZONE: R-3

DESCRIPTION OF PROPERTY: (MAY BE ATTACHED)

DESCRIPTION OF ACTION: Approved the construction of a wireless telecommunication tower.

DATE APPROVED: 06/15/00 EFFECTIVE DATE: 07/06/00

LEGAL NOTICE OF ACTION PUBLISHED - DATE: 06/21/00

CONDITIONS - IF ANY: \_\_\_\_\_

TOWN CLERK

Clarence Sylvester  
Clarence Sylvester  
CHAIRMAN

DATE

Windham Zoning Commission  
AGENCY

TIME

June 28, 2000  
DATE

This Notice of Action must be recorded by the applicant within 90 days of the effective date, otherwise it shall become null and void.

NOTICE OF ACTION

SPECIAL PERMIT: \_\_\_\_\_ SECTION: \_\_\_\_\_ VARIANCE: \_\_\_\_\_

SITE PLAN: \_\_\_\_\_ ZONE CHANGE: \_\_\_\_\_ APPEAL: \_\_\_\_\_

SUBDIVISION: \_\_\_\_\_ WETLANDS: X OTHER: \_\_\_\_\_

ZONING REG: \_\_\_\_\_ SECTION: \_\_\_\_\_

APPLICANT: SBA Inc.

NAME OF RECORD OWNER (IF DIFFERENT): Town of Windham

STREET ADDRESS OF PROPERTY: 193 Windham Center Road

DEED REFERENCE - VOLUME: \_\_\_\_\_ PAGE: \_\_\_\_\_ ZONE: \_\_\_\_\_

DESCRIPTION OF PROPERTY: (MAY BE ATTACHED)

DESCRIPTION OF ACTION: Approved a declaratory ruling for construction of a cell tower.

DATE APPROVED: 05/11/00 EFFECTIVE DATE: 06/03/00

LEGAL NOTICE OF ACTION PUBLISHED - DATE: 05/19/00

CONDITIONS - IF ANY: \_\_\_\_\_

TOWN CLERK

DATE

TIME

*George F. LeCloutier*

George Cloutier  
CHAIRMAN

Windham Conservation Commission  
AGENCY

June 1, 2000  
DATE

This Notice of Action must be recorded by the applicant within 90 days of the effective date, otherwise it shall become null and void.

NOTICE OF ACTION

SPECIAL PERMIT: \_\_\_\_\_ SPECIAL EXCEPTION: \_\_\_\_\_ VARIANCE:  X

SITE PLAN: \_\_\_\_\_ ZONE CHANGE: \_\_\_\_\_ APPEAL: \_\_\_\_\_

SUBDIVISION: \_\_\_\_\_ WETLANDS: \_\_\_\_\_ OTHER: \_\_\_\_\_

ZONING REG: \_\_\_\_\_ SECTION:  62.6.6a & 78.3.8

APPLICANT:  SBA Inc.

NAME OF RECORD OWNER (IF DIFFERENT):  Town of Windham

STREET ADDRESS OF PROPERTY:  193 Windham Center Road

DEED REFERENCE - VOLUME:  234  PAGE:  304  ZONE:  R-3

DESCRIPTION OF PROPERTY: (MAY BE ATTACHED)

DESCRIPTION OF ACTION:  Granted a Variance from Section 62.6.6a on setback requirements and Section 78.3.8 on maximum length in order to construct a cellular tower for lease.

DATE APPROVED:  05/04/00  EFFECTIVE DATE:  05/28/00

LEGAL NOTICE OF ACTION PUBLISHED - DATE:  05/13/00

CONDITIONS - IF ANY: \_\_\_\_\_

\_\_\_\_\_  
TOWN CLERK

*Thomas Praakli*

\_\_\_\_\_  
Thomas Praakli  
VICE CHAIRMAN

\_\_\_\_\_  
DATE

\_\_\_\_\_  
Windham Zoning Board of Appeals  
AGENCY

\_\_\_\_\_  
TIME

\_\_\_\_\_  
May 10, 2000  
DATE

This Notice of Action must be recorded by the applicant within 90 days of the effective date, otherwise it shall become null and void.

November 9, 2001

David S. Malko  
Manager-Engineering  
Verizon Wireless  
Network Department  
99 East River Drive  
East Hartford, CT 06108

RE: **TS-VER-163-011018** - Cellco Partnership d/b/a Verizon Wireless request for an order to approve tower sharing at a telecommunications facility located at 193 Windham Center Road, Windham, Connecticut.

Dear Mr. Malko:

At a public meeting held November 7, 2001, the Connecticut Siting Council (Council) ruled that the shared use of this existing tower site is technically, legally, environmentally, and economically feasible and meets public safety concerns, and therefore, in compliance with General Statutes § 16-50aa, the Council has ordered the shared use of this facility to avoid the unnecessary proliferation of tower structures. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

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

This decision applies only to this request for tower sharing and is not applicable to any other request or construction.

The proposed shared use is to be implemented as specified in your letter dated October 11, 2001.

Thank you for your attention and cooperation.

Very truly yours,

Mortimer A. Gelston  
Chairman

MAG/RKE/laf

c: Honorable John J. Lescoe, First Selectman, Town of Windham  
James E. Finger, Town Planner, Town of Windham  
Esther McNany, SBA, Inc.

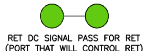
# **ATTACHMENT 2**





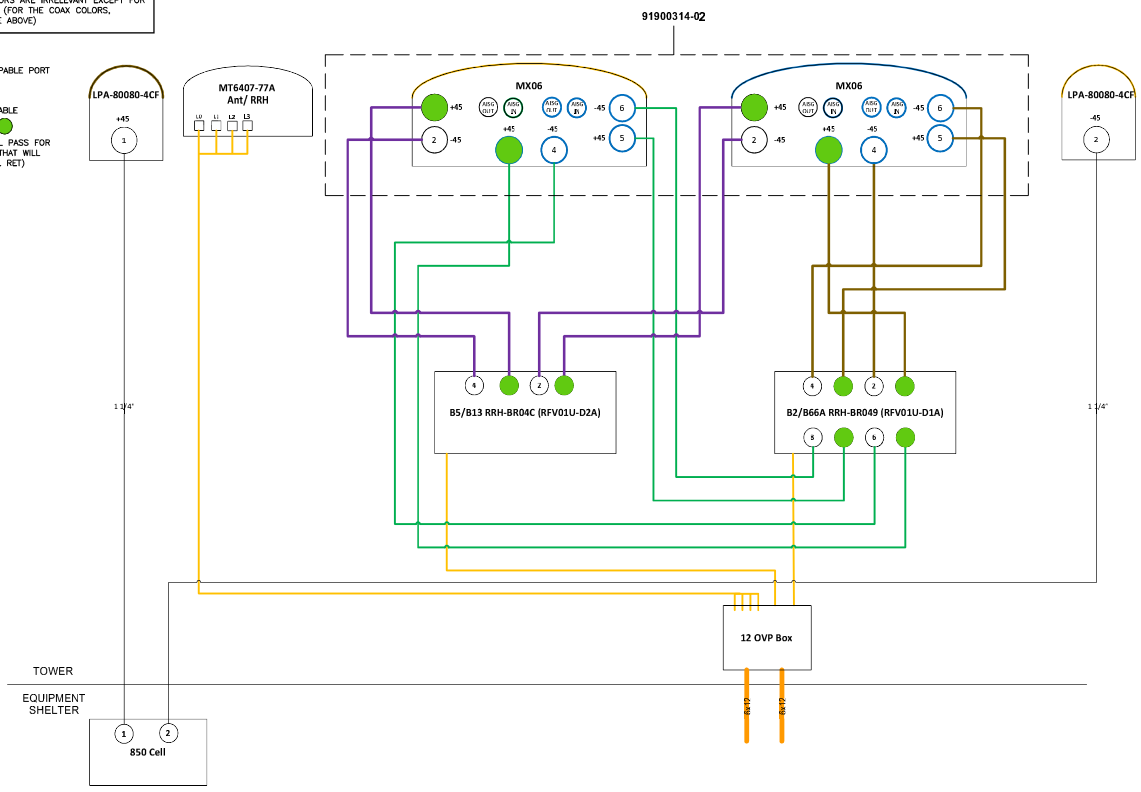
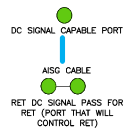
**PLUMBING DIAGRAM NOTES:**

1. PORTS 1 & 2 ARE FOR LOW BAND (698-896 MHz).
2. PORTS 3, 4, 5 & 6 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.



**PLUMBING DIAGRAM COMMENTS:**

- DIAGRAMS SHOW ANTENNA PORT CONFIGURATIONS AS VIEWED FROM BELOW ANTENNAS.
- ANTENNA POSITIONS ARE INDICATED AS VIEWED FROM IN FRONT OF ANTENNAS.
- CAP AND WEATHERPROOF UNUSED ANTENNA PORTS.
- ALL PLUMBING DIAGRAM COLORS ARE IRRELEVANT EXCEPT FOR AISG AND HYBRIFLEX CABLE. (FOR THE COAX COLORS, FOLLOW COAX COLORS GUIDE ABOVE)



**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.A DATED: 06.22.21), & VERIZON WIRELESS RF ANTENNA EQUIPMENT RECOMMENDATION (DATED 02.11.21).

BILL OF MATERIALS		
TECHNOLOGY	QUANTITY	ANTENNA
LTE 700	6	JMA ANTENNA MODEL: MX06FR0660-03
LTE 850		
LTE PCS 1900		
LTE AWS 2100		
5G	3	SAMSUNG ANTENNA MODEL: MT6407-77A

CABLES	QUANTITY	LENGTH EA	COMMENTS
HYBRID CABLE	2	285 FT EA	6X12 HYBRIFLEX LI

RADIOS	QUANTITY	COMMENTS
LTE 700	3	SAMSUNG MODEL: B5/B13 RRH-BRD4C
LTE 850		
LTE PCS 1900	3	SAMSUNG MODEL: B2/B66A RRH-BRD49
LTE AWS 2100		
5G	3	INTEGRATED INTO MT6407-77A ANTENNA

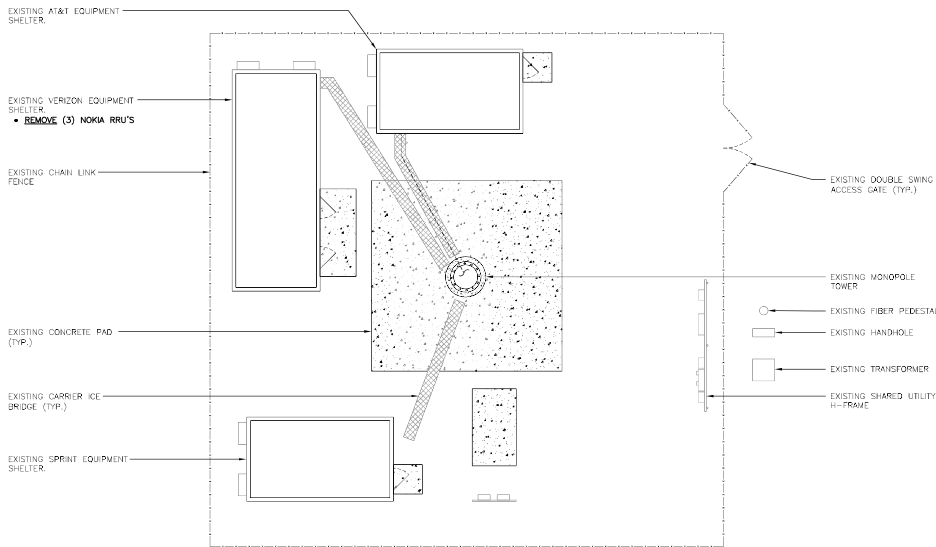
DIPLEXERS	QUANTITY	COMMENTS
-	0	-

OVP BOXES	QUANTITY	COMMENTS
OVP	1	RAYCAP OVP-12

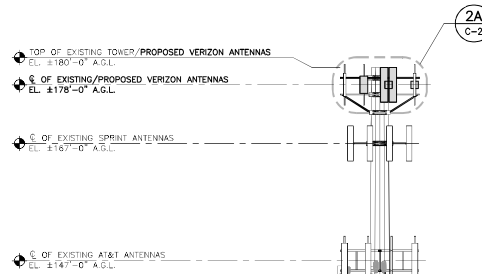
ANTENNA MOUNT	QUANTITY	COMMENTS
SIDE-BY-SIDE MOUNTING KIT	3	JMA MODEL: 91900314-02

PROFESSIONAL ENGINEER SEAL  
 CENTEK Engineering  
 193 WINDHAM CENTER ROAD, WINDHAM, CT 06280  
 www.CentekEng.com  
 DATE: 05/14/21  
 SCALE: AS NOTED  
 JOB NO.: 21007.22  
 RF BILL OF MATERIALS  
**B-1**  
 Sheet No. 2 of 1





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



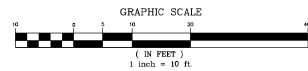
**TOWER STRUCTURAL NOTES**

1. TOWER STRUCTURAL ANALYSIS TO BE PERFORMED BY OTHERS.
2. TOWER STRUCTURAL ANALYSIS REPORT, SIGNED AND SEALED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF CONNECTICUT, TO BE PROVIDED PRIOR TO INSTALLATION OF THE ADDITIONAL TOWER LOADING DEPICTED HEREIN.
3. ALL ANTENNAS, CABLES AND APPURTENANCES TO BE INSTALLED IN ACCORDANCE WITH SAID STRUCTURAL ANALYSIS.

EXISTING ±180' TALL MONOPOLE TOWER

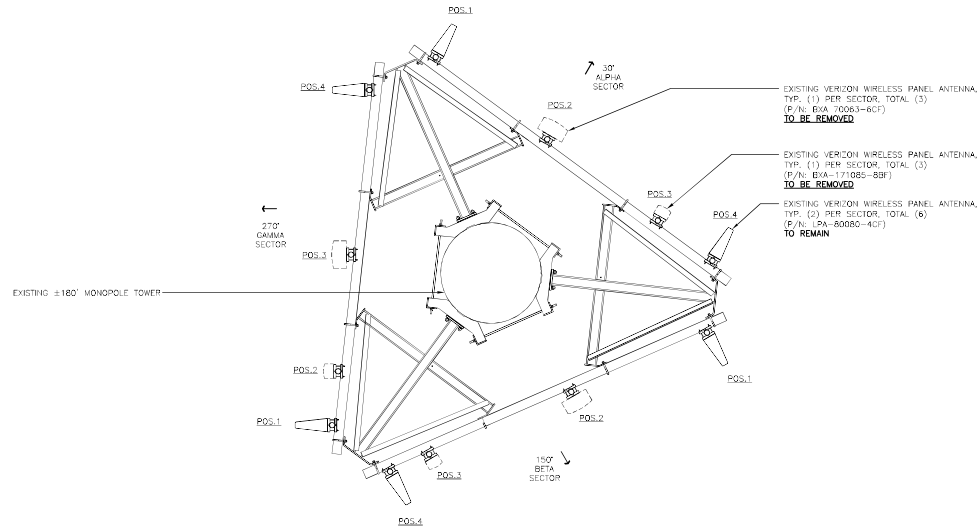
EXISTING VERIZON WIRELESS COAX CABLES LOCATED INSIDE MONOPOLE:  
• REMOVE (2) COAX CABLES  
• INSTALL (2) 6X12 HYBRIFLEX CABLES

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



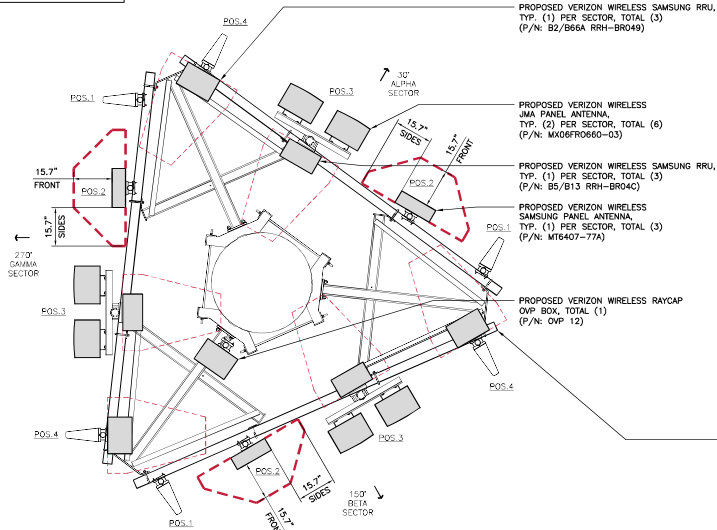
<b>Cellco Partnership d/b/a Verizon Wireless</b> <b>WILLIMANTIC EAST CT</b> 180 WINDHAM CENTER ROAD, WINDHAM, CT 06280	
CENTEK Engineering 0031 486-4360 0031 488-8387 Fax 652 North Branch Road Windham, CT 06280 www.CentekEng.com	PROFESSIONAL ENGINEER SEAL 
DATE: 05/14/21 SCALE: AS NOTED JOB NO.: 2100722	CONSTRUCTION DRAWINGS - ISSUED FOR CONSTRUCTION CONSTRUCTION DRAWINGS - ISSUED FOR CLIENT REVIEW
<b>C-1</b> Sheet No. 1 of 1	

EXISTING ANTENNA CONFIGURATIONS



1 EXISTING SECTOR CONFIGURATION PLAN SCALE: 1/2" = 1'-0" APPROXIMATE 2021

PROPOSED ANTENNA CONFIGURATIONS

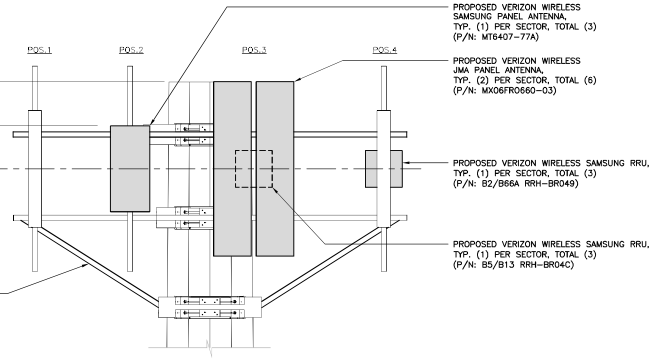


LEGEND	
---	VERIZON WIRELESS M16407-77A REQUIRED ANTENNA CLEARANCE LIMITS (PER DETAILS ON SHEET C-3)
---	VERIZON WIRELESS RRU REQUIRED ANTENNA CLEARANCE LIMITS (PER DETAILS ON SHEET C-3)
ANTENNA CLEARANCE STATUS	ALPHA SECTOR: <b>COMPLIANT</b> BETA SECTOR: <b>COMPLIANT</b> GAMMA SECTOR: <b>COMPLIANT</b>
RRU CLEARANCE STATUS	ALPHA SECTOR: <b>COMPLIANT</b> BETA SECTOR: <b>COMPLIANT</b> GAMMA SECTOR: <b>COMPLIANT</b>

- ANTENNA MOUNT ANALYSIS AND MOD NOTES:**
- REFER TO PASSING VERIZON WIRELESS MOUNT ANALYSIS REPORT PREPARED BY MASER CONSULTING CONNECTICUT DATED 04/22/2021 FOR ADDITIONAL INFORMATION.
  - REFER TO FINAL VERIZON WIRELESS MOUNT MODIFICATION DESIGN PREPARED BY MASER CONSULTING CONNECTICUT DATED 04/22/2021 FOR ANTENNA MOUNT MODIFICATIONS.

- TOP OF EXISTING TOWER/PROPOSED VERIZON WIRELESS ANTENNAS  
EL. ±180'-0" A.G.L.
- TOP OF PROPOSED VERIZON WIRELESS ANTENNA  
EL. ±179.9'-0" A.G.L.
- ± OF EXISTING/PROPOSED VERIZON ANTENNAS  
EL. ±178'-0" A.G.L.

\*\*\* PROPOSED MOUNT BRACING (TYP) (REFER TO MOUNT ANALYSIS AND MOUNT MODIFICATION NOTES ON THIS SHEET REGARDING ALL MODIFICATIONS)



2A PROPOSED SECTOR CONFIGURATION ELEVATION SCALE: 1/2" = 1'-0" APPROXIMATE 2021

2 PROPOSED SECTOR CONFIGURATION PLAN SCALE: 1/2" = 1'-0" APPROXIMATE 2021

PROFESSIONAL ENGINEER SEAL

verizon

**Willimantic East CT**  
180 WINDHAM CENTER ROAD,  
WINDHAM, CT 06280

Celco Partnership d/b/a Verizon Wireless

DATE: 05/14/21  
SCALE: AS NOTED  
JOB NO.: 2100722

ANTENNA SECTOR CONFIGURATION DETAILS

C-2  
Sheet No. 2 of 1

CONSTRUCTION DRAWINGS - ISSUED FOR CONSTRUCTION  
CONSTRUCTION DRAWINGS - ISSUED FOR CLIENT REVIEW

DATE: 05/27/21  
DRAWN BY: JMD  
CHECKED BY: JMD

TEL: (203) 866-4560  
FAX: (203) 866-8587  
682 North Ironwood Road  
Windham, CT 06280  
www.CentelEng.com



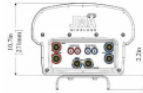
ANTENNA FRONT

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

1 SECTOR ANTENNA DETAIL  
C-3 NOT TO SCALE



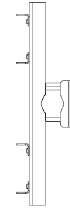
ELEVATION - ISOMETRIC



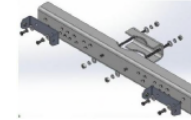
BOTTOM

8-PORT SECTOR ANTENNA		
EQUIPMENT	DIMENSIONS	WEIGHT
MAKE: JMA MODEL: MX08FR0660-03	71.3"L x 15.4"W x 10.7"D	80.0 LBS. (W/O/UT MOUNT KIT)

2 SECTOR ANTENNA DETAIL  
C-3 NOT TO SCALE



PLAN VIEW



ANTENNA MOUNT ISOMETRIC

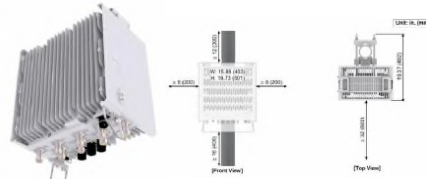
DUAL ANTENNA MOUNTING KIT	
EQUIPMENT	DESCRIPTION
MOUNT MAKE: JMA MODEL: 919003314-02	<ul style="list-style-type: none"> <li>SIDE-BY-SIDE MOUNTING KIT, ACCOMMODATES (2) COMPATIBLE ANTENNAS</li> <li>2 BRACKETS REQUIRED FOR 4'-6" ANTENNAS</li> <li>3 BRACKETS REQUIRED FOR 6'-8" ANTENNAS</li> </ul>

3 DUAL ANTENNA MOUNT DETAIL  
C-3 NOT TO SCALE



OVP BOX		
EQUIPMENT	DIMENSIONS	WEIGHT
MAKE: RFS MODEL: DB-B1-6C-12AB-02	29.0"H x 15.7"W x 10.3"D	32 LBS.
NOTES: 1. CONTRACTOR TO CONFIRM OVP BOX MAKE/MODEL AND QUANTITY WITH VERIZON WIRELESS CONSTRUCTION MANAGER PRIOR TO ORDERING.		

4 PROPOSED OVER-VOLTAGE PROTECTION BOX  
C-3 NOT TO SCALE

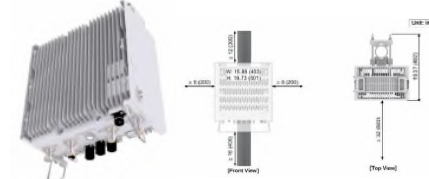


ISOMETRIC ELEVATION

BOTTOM CLEARANCE

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.			

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



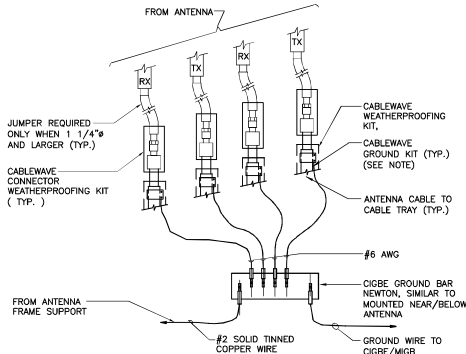
ISOMETRIC ELEVATION

BOTTOM CLEARANCE

DUAL BAND RRU (REMOTE RADIO UNIT)			
EQUIPMENT	BANDS	DIMENSIONS	WEIGHT
MAKE: SAMSUNG MODEL: B5/B13 RRH-BR04C (RFV01U-S2A)	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.			

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

PROFESSIONAL ENGINEER SEAL  
  
**verizon**  
**CENTEK Engineering, Inc.**  
 10031 466-0360  
 10031 466-8387 Fax  
 65-2 North Branch Road  
 Windham, CT 06095  
 www.CentekEng.com  
**Cellco Partnership d/b/a Verizon Wireless**  
**WILLIMANTIC EAST CT**  
 180 WINDHAM CENTER ROAD,  
 WINDHAM, CT 06090  
 DATE: 05/14/21  
 SCALE: AS NOTED  
 JOB NO. 2100722  
 RF DETAILS  
**C-3**  
 Sheet No. 8 of 1

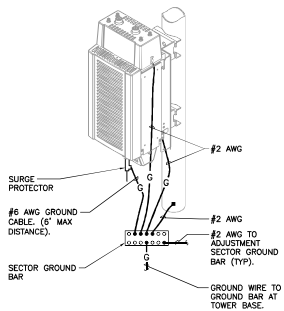


**NOTES**

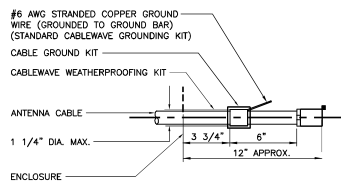
- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE

**1 CONNECTION OF GROUND WIRES TO GROUND BAR**  
E-1 NOT TO SCALE

- EACH RRH CABINET SHALL BE GROUNDED IN THE FOLLOWING MANNER:
- AT TOP OF THE CABINET
  - AT RIGHT SIDE OF THE CABINET.



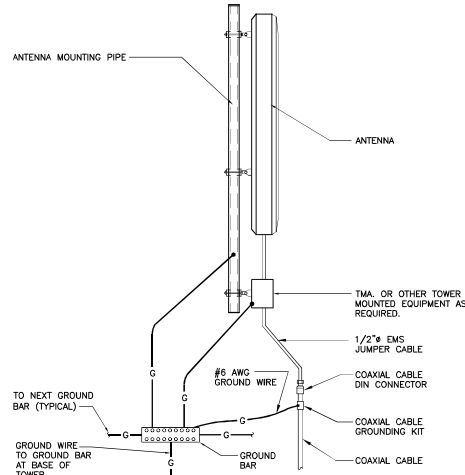
**2 RRH POLE MOUNT GROUNDING**  
E-1 NOT TO SCALE



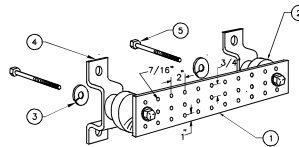
**NOTES**

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

**3 ANTENNA CABLE GROUNDING DETAIL**  
E-1 NOT TO SCALE



**4 TYPICAL ANTENNA GROUNDING DETAIL**  
E-1 NOT TO SCALE



**NOTES**

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

**5 GROUND BAR DETAIL**  
E-1 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,

- GROUND BARS
- 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.

PROFESSIONAL ENGINEER SEAL

CONSTRUCTION DRAWINGS - ISSUED FOR CONSTRUCTION  
CONSTRUCTION DRAWINGS - ISSUED FOR CLIENT REVIEW

DATE: 05/14/21  
SCALE: AS NOTED  
JOB NO. 21007.22

ELECTRICAL DETAILS AND SPECIFICATIONS

**E-1**

Sheet No. 2 of 1

Cellco Partnership d/b/a Verizon Wireless  
WILLIMANTIC EAST CT  
193 WINDHAM CENTER ROAD,  
WINDHAM, CT 06280

CENTEK Engineering  
Contractors Inc. LLC  
0203 884-9500  
0203 888-8387 Fax  
65-2 North Ironwood Road  
Windham, CT 06280  
www.CentekEng.com

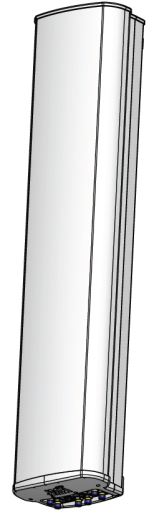
# MX06FRO660-03

## NWAV™ X-Pol Hex-Port Antenna

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

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

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



NWAV™

### Fast Roll-Off antennas increase data throughput without compromising coverage

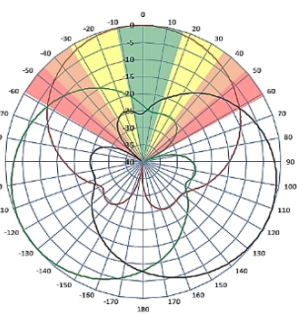
The horizontal beam produced by Fast Roll-Off (FRO) technology increases the Signal to Interference & Noise Ratio (SINR) by eliminating overlap between sectors.

#### Non-FRO antenna

Large traditional antenna pattern overlap creates harmful interference.

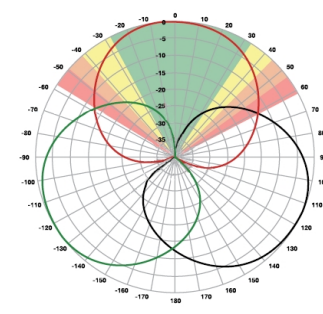
JMA's FRO antenna pattern minimizes overlap, thereby minimizing interference.

#### JMA FRO antenna



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

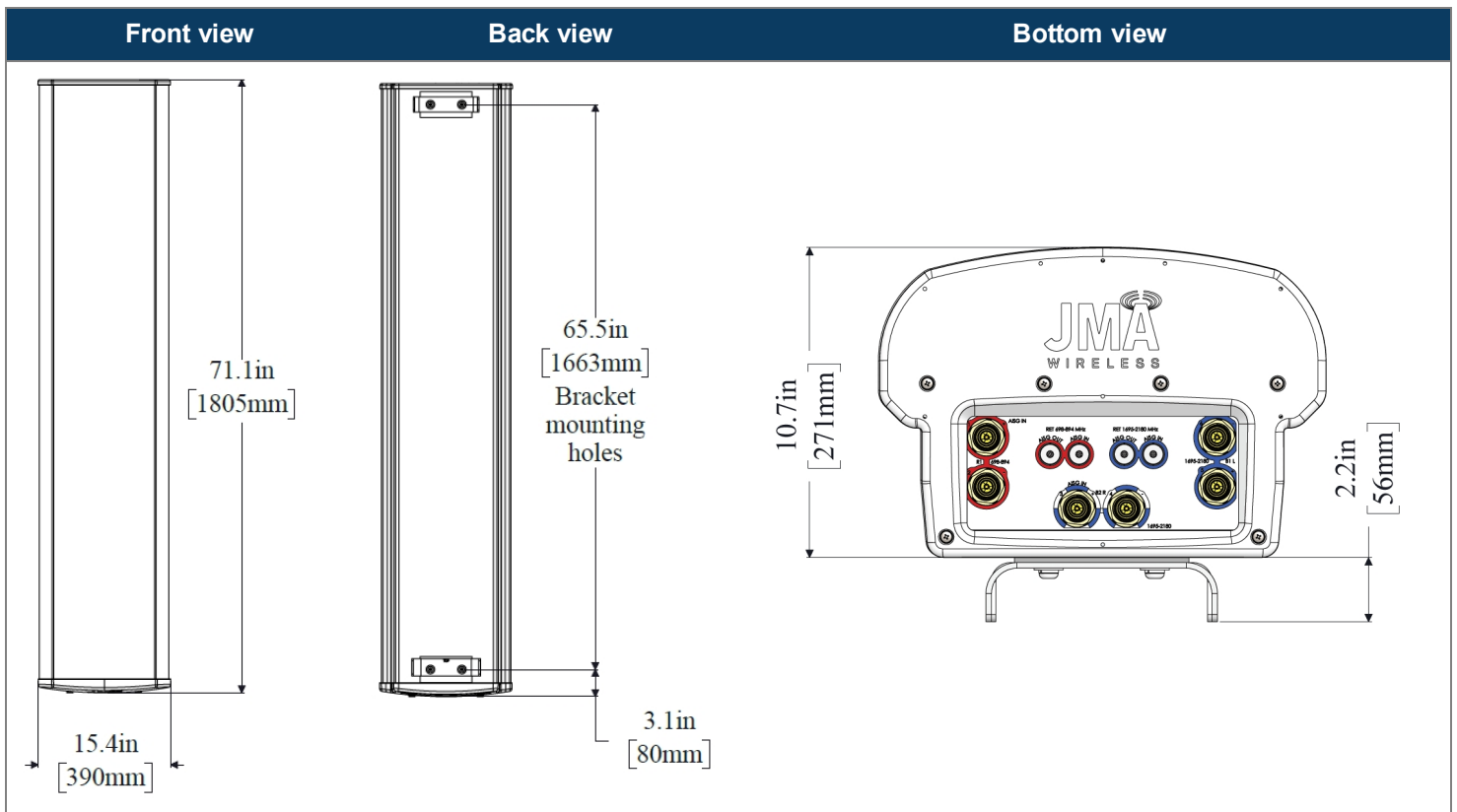
The LTE radio automatically selects the best throughput based on measured SINR.



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

<sup>1</sup> Typical value over frequency and tilt

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



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

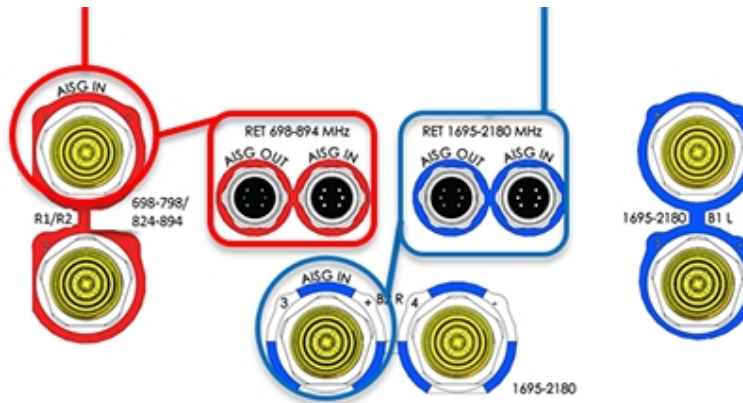
Remote electrical tilt (RET 1000) information	
RET location	Integrated into antenna
RET interface connector type	8-pin AISG connector per IEC 60130-9
RET connector torque	Min 0.5 N·m to max 1.0 N·m (hand pressure & finger tight)
RET interface connector quantity	2 pairs of AISG male/female connectors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

### RET and RF connector topology

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

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

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



### Array topology

3 sets of radiating arrays R1/R2: 698-894 MHz B1: 1695-2180 MHz B2: 1695-2180 MHz	<table border="1"> <thead> <tr> <th>Band</th> <th>RF port</th> </tr> </thead> <tbody> <tr> <td>1695-2180</td> <td>3-4</td> </tr> <tr> <td>698-894</td> <td>1-2</td> </tr> <tr> <td>1695-2180</td> <td>5-6</td> </tr> </tbody> </table>	Band	RF port	1695-2180	3-4	698-894	1-2	1695-2180	5-6	
	Band	RF port								
1695-2180	3-4									
698-894	1-2									
1695-2180	5-6									

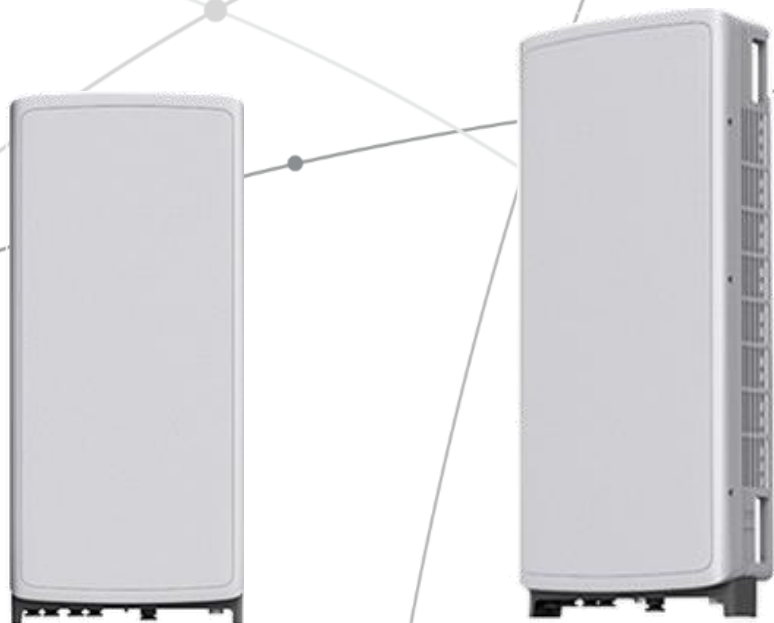


## **SAMSUNG** C-Band 64T64R Massive MIMO Radio

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





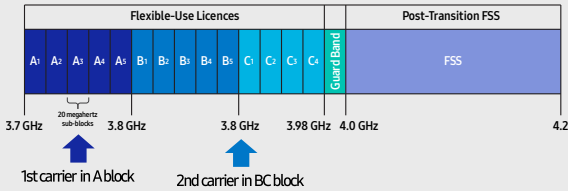
# Points of Differentiation

## 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

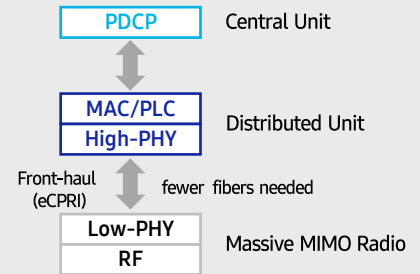
C-Band spectrum supported by Massive MIMO Radio



## 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.

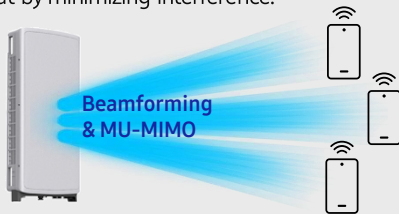


## Enhanced Performance

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.

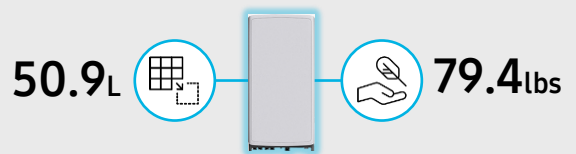
Furthermore, as C-Band massive MIMO Radio supports MU-MIMO (Multi-user MIMO), it enables to increase user throughput by minimizing interference.



## 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

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# 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

# **ATTACHMENT 3**

	General	Power	Density					
<b>Site Name: Willimantic E</b>								
<b>Tower Height: Verizon @ 178ft</b>								
CARRIER	# OF CHAN.	WATTS ERP	HEIGHT	FREQ.	CALC. POWER DENS	MAX. PERMISS.EXP.	FRACTION MPE	Total
*T-Mobile	4	6747.14	167	2100	0.374431161	1	3.74%	
*T-Mobile	4	3707.83	167	700	0.205765271	0.466666667	4.41%	
*T-Mobile	2	1577.94	167	600	0.04378373	0.4	1.09%	
*T-Mobile	2	1183.45	167	600	0.032837658	0.4	0.82%	
*T-Mobile	1	5612.03	167	1900	0.077859616	1	0.78%	
*T-Mobile	1	526.13	167	1900	0.007299369	1	0.07%	
*T-Mobile	1	15461.18	167	2500	0.214503759	1	2.15%	
*T-Mobile	1	15461.18	167	2500	0.214503759	1	2.15%	
*T-Mobile	1	982.02	167	2500	0.01362425	1	0.14%	
*T-Mobile	1	982.02	167	2500	0.01362425	1	0.14%	
*AT&T	1	1282	147	850	0.02318963	0.566666667	0.41%	
*AT&T	1	1675	147	1900	0.030298464	1	0.30%	
*AT&T	1	2951	147	700	0.053379562	0.466666667	1.14%	
*AT&T	1	3837	147	2100	0.0694	1	0.69%	
*AT&T	1	1476	147	700	0.0267	0.466666667	0.57%	
*AT&T	1	3664	147	1900	0.0663	1	0.66%	
*AT&T	1	1000	147	850	0.0181	0.566666667	0.32%	
*AT&T	1	1000	147	850	0.0181	0.566666667	0.32%	
*Sprint	1	438	167	850	0.0061	0.566666667	0.11%	
*Sprint	2	438	167	850	0.0122	0.5667	0.21%	
*Sprint	5	623	167	1900	0.0432	1.0000	0.43%	
*Sprint	2	1556	167	1900	0.0432	1.0000	0.43%	
*Sprint	8	788	167	2500	0.0875	1.0000	0.87%	
<b>VZW 700</b>	<b>4</b>	<b>623</b>	<b>178</b>	<b>751</b>	<b>0.0028</b>	<b>0.5007</b>	<b>0.57%</b>	
<b>VZW Cellular</b>	<b>4</b>	<b>623</b>	<b>178</b>	<b>874</b>	<b>0.0028</b>	<b>0.5827</b>	<b>0.49%</b>	
<b>VZW PCS</b>	<b>4</b>	<b>1428</b>	<b>178</b>	<b>1977.5</b>	<b>0.0065</b>	<b>1.0000</b>	<b>0.65%</b>	
<b>VZW AWS</b>	<b>4</b>	<b>1530</b>	<b>178</b>	<b>2120</b>	<b>0.0069</b>	<b>1.0000</b>	<b>0.69%</b>	
<b>VZW CBAND</b>	<b>4</b>	<b>6531</b>	<b>178</b>	<b>3730.08</b>	<b>0.0297</b>	<b>1.0000</b>	<b>2.97%</b>	
								<b>27.34%</b>
* Source: Siting Council								

# **ATTACHMENT 4**



**Tower Engineering Solutions**

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

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## **Structural Analysis Report**

**Existing 180 ft Valmont Monopole**

**Customer Name: SBA Communications Corp**

**Customer Site Number: CT02721-S**

**Customer Site Name: South Windham**

**Carrier Name: Verizon (App#: 157618-2)**

**Carrier Site ID / Name: 467192 / WILLIMANTIC\_EAST\_CT**

**Site Location: 193 Windham Center Road**

**Windham, Connecticut**

**Windham County**

**Latitude: 41.690055**

**Longitude: -72.162536**

Exp.10/31/2021



10/01/2021

### **Analysis Result:**

**Max Structural Usage: 97.3% [Pass]**

**Max Foundation Usage: 75.0% [Pass]**

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

**Report Prepared By: Mohammed Al Rubaye**





**Tower Engineering Solutions**

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

---

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**Existing 180 ft Valmont Monopole**

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**Latitude: 41.690055**

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### **Analysis Result:**

**Max Structural Usage: 97.3% [Pass]**

**Max Foundation Usage: 75.0% [Pass]**

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

**Report Prepared By: Mohammed Al Rubaye**

## Introduction

The purpose of this report is to summarize the analysis results on the 180 ft Valmont Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

## Sources of Information

<b>Tower Drawings</b>	Valmont#: 11872-00. dated 06/23/2000.
<b>Foundation Drawing</b>	Valmont#: 11872-00. dated 06/23/2000.
<b>Geotechnical Report</b>	FDH Project Number 1202237EG1 Revision 1, dated 08/16/2012.
<b>Modification Drawings</b>	
<b>Mount Analysis</b>	Maser Consulting Connecticut Project #: 20777650A. dated April 22, 2021
<b>Mount Modification Drawings</b>	Maser Consulting Connecticut Project #: 20777650A. dated April 22, 2021

## 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.

<b>Wind Speed Used in the Analysis:</b>	Ultimate Design Wind Speed $V_{ult} = 130.0$ mph (3-Sec. Gust)/ Nominal Design Wind Speed $V_{asd} = 101.0$ mph (3-Sec. Gust)
<b>Wind Speed with Ice:</b>	50 mph (3-Sec. Gust) with 1" radial ice concurrent
<b>Operational Wind Speed:</b>	60 mph + 0" Radial ice
<b>Standard/Codes:</b>	TIA-222-G-2 / 2015 IBC / 2018 Connecticut State Building Code
<b>Exposure Category:</b>	
<b>Structure Class:</b>	
<b>Topographic Category:</b>	
<b>Crest Height:</b>	0 ft
<b>Seismic Parameters:</b>	

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
			Antel - BXA-70063-6CF - Panel	Low Profile Platform		Verizon
			Antel - LPA-80080-4CF - Panel			
			Antel - BXA-171085-8BF - Panel			
			RFS FD9R6004-2C-3L Diplexers			
		3	RFS - APX16DWV-16DWVS-E-A20 - Panel	SitePro1	(3) 1.99" Hybrid - 6x24	T-Mobile Sprint
			RFS - APXVAALL24_43-U-NA20 - Panel			
			Ericsson - AIR6449 B41 - Panel			
			Ericsson 4424 B25			
			Ericsson 4449 B71 + B85			
			Ericsson 4415 B66A			
			Alcatel Lucent 800 MHz Filter			
			Power wave - Panel	(1) Platform w/ Rail Site Pro 1:	(1)3" conduit housing (2) 3/4" DC & (1) 1/2" Fiber (2)3" conduit housing (4) 3/4" DC & (1) 1/2" Fiber	
			Cci - Panel			
			Cci - Panel			
			Nokia CS72188.01	Direct Mount		

**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
			JMA Wireless MX06FR0660-03 - Panel	Modified 13.83-Ft Platform w/ (3)  Side by side Mounting Kit.	(10) 1-5/8" Coax (2) 1- 5/8" Hybrid (1) 1/2" Coax	Verizon
			Samsung MT6407-77A - Panel			
		3	Samsung B5/B13 RRH-BR04C (RFV01U-D2A)			
		3	Samsung B2/B66A RRH-BR049 (RFV01U-D1A)			
			Raycap RVZDC-6627-PF-48			
			Antel - LPA-80080-4CF - Panel	(2) Side Arms		
			Lucent KS-24019 - GPS			

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	<b>Pass</b>	<b>Pass</b>	<b>Pass</b>

## **Foundations**

	Moment (Kip-Ft)	Shear (Kips)
Original Design Reactions		
Analysis Reactions		
Factored Reactions*		
% of Design Reactions		

\* Per section 15.5.1 of the TIA-222-G standard, factored reactions were obtained by multiplying a 1.35 factor to the original design 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 1.7726 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 97.30% at 98.5ft

**Structure:** CT02721-S-SBA  
**Site Name:** South Windham  
**Height:** 180.00 (ft)  
**Base Elev:** 0.000 (ft)

**Code:** EIA/TIA-222-G  
**Exposure:** C  
**Gh:** 1.1

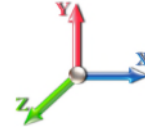
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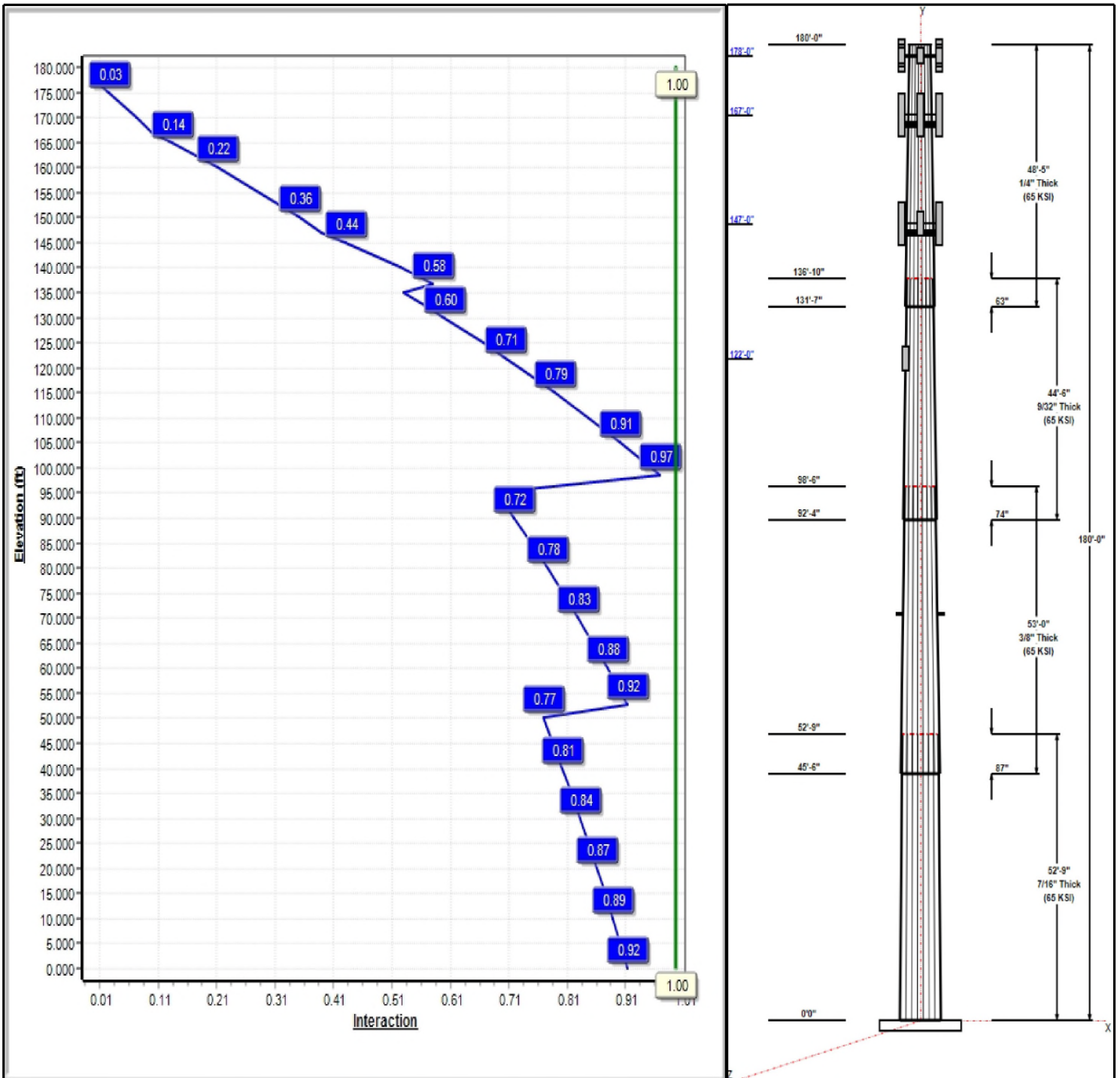
Dead Load Factor: 1.20  
 Wind Load Factor: 1.60

**Load Case : 1.2D + 1.6W 101 mph Wind**



**Iterations:** 26

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## Structure: CT02721-S-SBA

**Type:** Tapered  
**Site Name:** South Windham  
**Height:** 180.00 (ft)  
**Base Elev:** 0.00 (ft)

**Base Shape:** 16 Sided  
**Taper:** 0.19501

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### Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	52.75	49.71	60.00	0.438		0.19501	65
2	53.00	41.54	51.88	0.375	Slip	0.19501	65
3	44.50	34.63	43.31	0.281	Slip	0.19501	65
4	48.42	26.71	36.15	0.250	Slip	0.19501	65

### Discrete Appurtenances

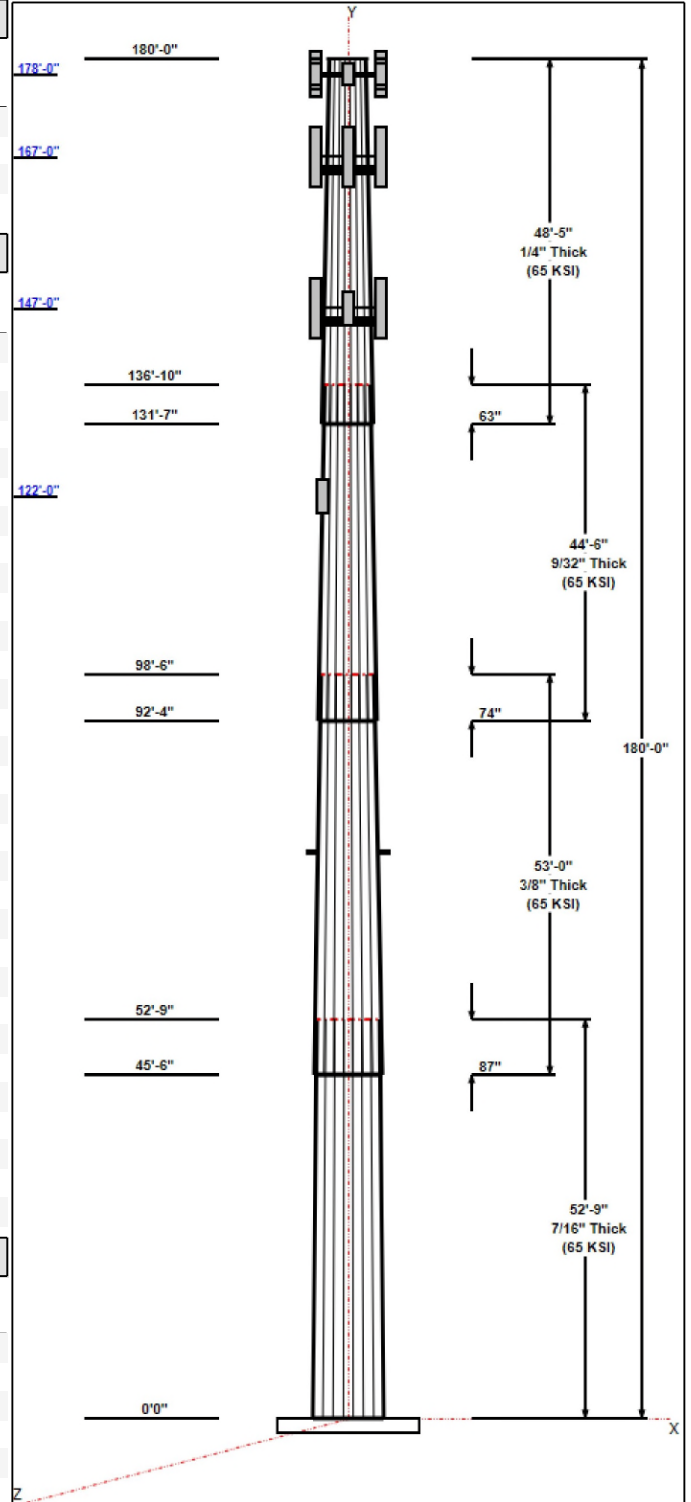
Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
178.00	178.00	6	JMA Wireless	Verizon
178.00	178.00	3	Samsung MT6407-77A	Verizon
178.00	178.00	3	Samsung B5/B13	Verizon
178.00	178.00	3	Samsung B2/B66A	Verizon
178.00	178.00	1	Raycap	Verizon
178.00	178.00	3	JMA 919003314 SBS	Verizon
178.00	178.00	1	Low Profile Platform	Verizon
178.00	178.00	6	LPA-80080-4CF	Verizon
178.00	178.00	1	MS-HR35	Verizon
178.00	178.00	1	MS-KI22-5 (Kickers w/o	Verizon
167.00	167.00	3	APX16DWV-16DWVS-E-A	T-Mobile Sprint
167.00	167.00	3	APXVAALL24_43-U-NA20	T-Mobile Sprint
167.00	167.00	3	AIR6449 B41	T-Mobile Sprint
167.00	167.00	4	RFS ACU-A20-N RET	T-Mobile Sprint
167.00	167.00	3	Ericsson 4424 B25	T-Mobile Sprint
167.00	167.00	3	Ericsson 4449 B71 + B85	T-Mobile Sprint
167.00	167.00	3	Ericsson 4415 B66A	T-Mobile Sprint
167.00	167.00	3	Alcatel Lucent 800 MHz	T-Mobile Sprint
167.00	167.00	1	RMQP-4096-HK	T-Mobile Sprint
147.00	147.00	1	RMQP-496-HK	AT&T
147.00	147.00	3	7770	AT&T
147.00	147.00	6	Cci DMP65R-BU8DA	AT&T
147.00	147.00	3	Cci DTMAPB7819VG12A	AT&T
147.00	147.00	3	Powerwave	AT&T
147.00	147.00	3	Ericsson RRUS 4478 B14	AT&T
147.00	147.00	3	Ericsson RRUS 8843 B2	AT&T
147.00	147.00	3	Ericsson RRUS 4449	AT&T
147.00	147.00	3	Raycap DC6-48-60-18-8F	AT&T
122.00	122.00	1	Nokia CS72188.01	AT&T
75.00	75.00	1	Lucent KS-24019	Verizon
75.00	75.00	2	Side Arms	Verizon

### Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	178.00	Inside	1 5/8" Coax	Verizon
0.00	178.00	Inside	1-5/8" Hybrid	Verizon
0.00	178.00	Inside	1/2" Coax	Verizon
0.00	167.00	Inside	1.99" Hybrid - 6x24	T-Mobile Sprint
0.00	147.00	Inside	1 5/8" Coax	AT&T
0.00	147.00	Inside	3" conduit	AT&T

### Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
20	2.25" 18J	75.0	Radial



**Structure: CT02721-S-SBA**

**Type:** Tapered  
**Site Name:** South Windham  
**Height:** 180.00 (ft)  
**Base Elev:** 0.00 (ft)

**Base Shape:** 16 Sided  
**Taper:** 0.19501

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**Base Plate**

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
3.0000	74.6	50.0	Round

**Reactions**

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 101 mph Wind	6085.0	47.4	59.2
0.9D + 1.6W 101 mph Wind	6005.4	47.4	44.4
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1638.5	12.2	102.7
1.2D + 1.0E	325.1	2.3	59.3
0.9D + 1.0E	320.4	2.3	44.5
1.0D + 1.0W 60 mph Wind	1333.9	10.4	49.4



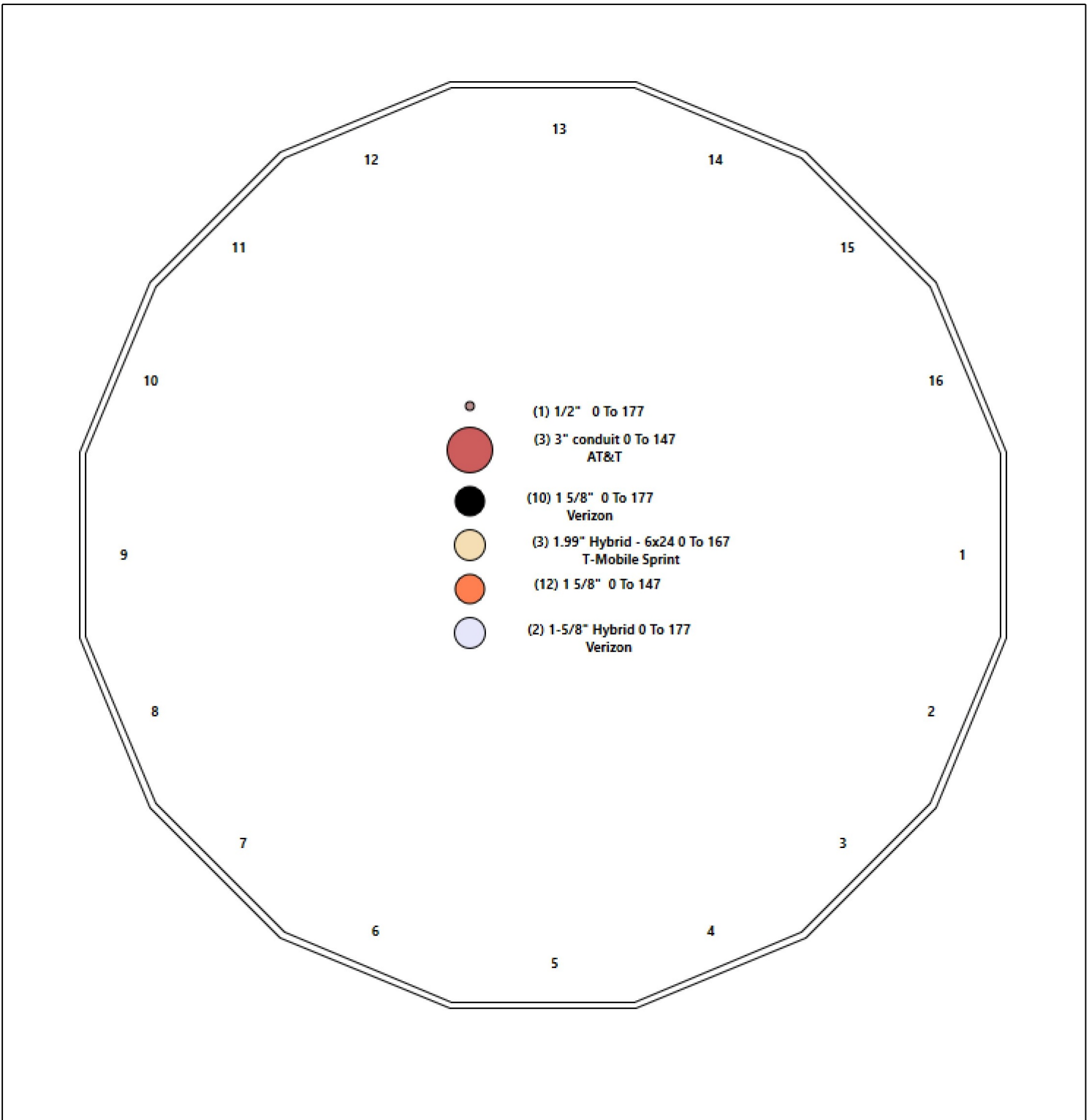
# Structure: CT02721-S-SBA - Coax Line Placement

**Type:** Monopole  
**Site Name:** South Windham  
**Height:** 180.00 (ft)

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## Shaft Properties

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	16	52.750	0.4375	65		0.00	13,633
2	16	53.000	0.3750	65	Slip	87.00	9,996
3	16	44.500	0.2813	65	Slip	74.00	5,256
4	16	48.417	0.2500	65	Slip	63.00	4,097
<b>Total Shaft Weight:</b>							<b>32,982</b>

Bottom

Top

Sec. No.	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Taper
1	60.00	0.00	83.13	37256.48	25.69	137.14	49.71	52.75	68.77	21095.3	21.01	113.6	0.195007
2	51.88	45.50	61.61	20644.91	25.93	138.34	41.54	98.50	49.25	10543.3	20.44	110.7	0.195007
3	43.31	92.33	38.60	9027.72	29.04	153.98	34.63	136.83	30.82	4592.96	22.90	123.1	0.195007
4	36.15	131.5	28.63	4662.62	27.17	144.61	26.71	180.00	21.10	1866.70	19.66	106.8	0.195007

## Load Summary

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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### Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
1	178.00	JMA Wireless MX06FR0660-03	6	46.00	9.87	0.87	430.98	11.772	0.87	0.00	0.00
2	178.00	Samsung MT6407-77A	3	79.40	4.69	0.70	253.93	5.997	0.70	0.00	0.00
3	178.00	Samsung B5/B13 RRH-BR04C	3	70.30	1.87	0.67	173.22	2.674	0.67	0.00	0.00
4	178.00	Samsung B2/B66A RRH-BR049	3	84.40	1.87	0.67	197.44	2.674	0.67	0.00	0.00
5	178.00	Raycap RVZDC-6627-PF-48	1	32.00	4.06	1.00	186.53	5.175	1.00	0.00	0.00
6	178.00	JMA 919003314 SBS	3	25.35	0.00	1.00	49.35	0.000	1.00	0.00	0.00
7	178.00	Low Profile Platform	1	1500.00	22.00	1.00	3275.34	45.955	1.00	0.00	0.00
8	178.00	LPA-80080-4CF	6	12.00	2.61	1.70	168.82	3.828	1.70	0.00	0.00
9	178.00	MS-HR35	1	430.00	8.75	1.00	1122.15	20.349	1.00	0.00	0.00
10	178.00	MS-KI22-5 (Kickers w/o Collar)	1	146.00	5.33	1.00	422.48	12.900	1.00	0.00	0.00
11	167.00	APX16DWV-16DWVS-E-A20	3	40.70	6.61	0.62	198.46	9.545	0.62	0.00	0.00
12	167.00	APXVAALL24_43-U-NA20	3	128.00	20.24	0.70	716.40	22.834	0.70	0.00	0.00
13	167.00	AIR6449 B41	3	103.00	5.65	0.71	287.80	6.931	0.71	0.00	0.00
14	167.00	RFS ACU-A20-N RET	4	1.00	0.14	0.79	6.79	0.540	0.79	0.00	0.00
15	167.00	Ericsson 4424 B25	3	88.00	2.05	0.67	213.87	2.880	0.67	0.00	0.00
16	167.00	Ericsson 4449 B71 + B85	3	73.20	1.97	0.67	151.02	2.737	0.67	0.00	0.00
17	167.00	Ericsson 4415 B66A	3	49.60	1.64	0.67	134.48	2.402	0.67	0.00	0.00
18	167.00	Alcatel Lucent 800 MHz Filter	3	8.80	0.78	0.67	32.58	1.652	0.67	0.00	0.00
19	167.00	RMQP-4096-HK	1	2449.00	46.00	1.00	5905.13	89.278	1.00	0.00	0.00
20	147.00	RMQP-496-HK	1	2449.00	46.00	1.00	5861.32	88.730	1.00	0.00	0.00
21	147.00	7770	3	35.00	5.50	0.73	228.61	6.948	0.73	0.00	0.00
22	147.00	Cci DMP65R-BU8DA	6	95.70	17.87	0.73	624.19	20.260	0.73	0.00	0.00
23	147.00	Cci DTMABP7819VG12A	3	19.20	1.14	0.67	53.16	2.164	0.67	0.00	0.00
24	147.00	Powerwave TT08-19DB111-001 TMA	3	22.00	0.92	0.90	57.42	1.904	0.90	0.00	0.00
25	147.00	Ericsson RRUS 4478 B14	3	59.40	1.65	0.67	114.58	2.340	0.67	0.00	0.00
26	147.00	Ericsson RRUS 8843 B2 B66A	3	75.00	1.65	0.67	182.64	2.392	0.67	0.00	0.00
27	147.00	Ericsson RRUS 4449 B5/B12	3	71.00	1.97	0.67	142.03	2.698	0.67	0.00	0.00
28	147.00	Raycap DC6-48-60-18-8F	3	31.80	0.92	1.00	114.07	1.503	1.00	0.00	0.00
29	122.00	Nokia CS72188.01	1	16.50	3.15	1.00	94.61	5.419	1.00	0.00	0.00
30	75.00	Lucent KS-24019	1	4.00	0.91	1.00	35.38	2.160	1.00	0.00	0.00
31	75.00	Side Arms	2	40.00	2.63	1.00	139.87	10.055	1.00	0.00	0.00
<b>Totals:</b>			<b>86</b>	<b>11,225.15</b>			<b>34,456.91</b>				

### Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	178.00	(10) 1 5/8" Coax	0.00	Inside
0.00	178.00	(2) 1-5/8" Hybrid	0.00	Inside
0.00	178.00	(1) 1/2" Coax	0.00	Inside
0.00	167.00	(3) 1.99" Hybrid - 6x24	0.00	Inside
0.00	147.00	(12) 1 5/8" Coax	0.00	Inside
0.00	147.00	(3) 3" conduit	0.00	Inside

## Shaft Section Properties

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Increment Length:** 5 (ft)

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in^3)	Weight (lb)
0.00		0.4375	60.000	83.127	37256.5	25.69	137.14	73.5	1218.	0.0
5.00		0.4375	59.025	81.766	35456.6	25.24	134.91	74.0	1178.	1402.7
10.00		0.4375	58.050	80.405	33715.7	24.80	132.69	74.5	1139.	1379.6
15.00		0.4375	57.075	79.045	32032.6	24.36	130.46	75.0	1100.	1356.4
20.00		0.4375	56.100	77.684	30406.6	23.91	128.23	75.5	1063.	1333.3
25.00		0.4375	55.125	76.323	28836.5	23.47	126.00	76.0	1026.	1310.1
30.00		0.4375	54.150	74.962	27321.5	23.03	123.77	76.5	989.7	1287.0
35.00		0.4375	53.175	73.601	25860.4	22.58	121.54	77.0	954.0	1263.8
40.00		0.4375	52.200	72.241	24452.4	22.14	119.31	77.5	918.9	1240.7
45.00		0.4375	51.225	70.880	23096.5	21.70	117.08	78.0	884.4	1217.5
45.50	Bot - Section 2	0.4375	51.127	70.744	22963.7	21.65	116.86	78.1	881.0	120.5
50.00		0.4375	50.250	69.519	21791.6	21.26	114.86	78.5	850.7	2009.2
52.75	Top - Section 1	0.3750	50.463	59.918	18991.0	25.18	134.57	0.0	0.0	1210.7
55.00		0.3750	50.025	59.393	18496.2	24.94	133.40	74.3	725.3	456.7
60.00		0.3750	49.050	58.227	17427.8	24.43	130.80	74.9	697.0	1000.6
65.00		0.3750	48.075	57.061	16401.3	23.91	128.20	75.5	669.2	980.7
70.00		0.3750	47.099	55.894	15415.9	23.39	125.60	76.1	642.0	960.9
75.00		0.3750	46.124	54.728	14470.9	22.87	123.00	76.7	615.4	941.1
80.00		0.3750	45.149	53.561	13565.2	22.36	120.40	77.3	589.4	921.2
85.00		0.3750	44.174	52.395	12698.1	21.84	117.80	77.9	563.9	901.4
90.00		0.3750	43.199	51.229	11868.9	21.32	115.20	78.4	538.9	881.5
92.33	Bot - Section 3	0.3750	42.744	50.684	11494.5	21.08	113.98	78.7	527.5	404.6
95.00		0.3750	42.224	50.062	11076.5	20.81	112.60	79.0	514.6	805.3
98.50	Top - Section 2	0.2813	42.104	37.523	8291.7	28.19	149.70	0.0	0.0	1041.9
100.00		0.2813	41.812	37.261	8119.0	27.98	148.66	70.9	380.9	190.9
105.00		0.2813	40.837	36.386	7560.4	27.29	145.20	71.7	363.2	626.5
110.00		0.2813	39.862	35.511	7028.1	26.60	141.73	72.5	345.9	611.6
115.00		0.2813	38.887	34.636	6521.4	25.91	138.26	73.3	329.0	596.7
120.00		0.2813	37.912	33.762	6039.7	25.22	134.80	74.0	312.5	581.9
122.00		0.2813	37.522	33.412	5853.8	24.95	133.41	74.3	306.0	228.6
125.00		0.2813	36.937	32.887	5582.3	24.53	131.33	74.8	296.5	338.4
130.00		0.2813	35.962	32.012	5148.5	23.84	127.86	75.6	280.8	552.1
131.58	Bot - Section 4	0.2813	35.653	31.735	5016.0	23.62	126.77	75.8	276.0	171.7
135.00		0.2813	34.987	31.137	4737.9	23.15	124.40	76.4	265.6	695.3
136.83	Top - Section 3	0.2500	35.129	27.816	4275.0	26.36	140.52	0.0	0.0	367.7
140.00		0.2500	34.511	27.324	4051.9	25.87	138.05	73.3	230.3	297.1
145.00		0.2500	33.536	26.546	3715.8	25.09	134.15	74.2	217.3	458.3
147.00		0.2500	33.146	26.235	3586.7	24.78	132.59	74.5	212.3	179.6
150.00		0.2500	32.561	25.768	3398.7	24.32	130.25	75.1	204.7	265.4
155.00		0.2500	31.586	24.991	3100.2	23.54	126.35	75.9	192.5	431.8
160.00		0.2500	30.611	24.213	2819.7	22.76	122.45	76.8	180.7	418.6
165.00		0.2500	29.636	23.436	2556.7	21.99	118.55	77.7	169.2	405.3
167.00		0.2500	29.246	23.125	2456.2	21.68	116.99	78.0	164.7	158.4
170.00		0.2500	28.661	22.658	2310.6	21.21	114.65	78.6	158.1	233.7
175.00		0.2500	27.686	21.880	2080.7	20.44	110.74	79.4	147.4	378.9
178.00		0.2500	27.101	21.414	1950.5	19.97	108.40	80.0	141.2	221.0
180.00		0.2500	26.711	21.103	1866.7	19.66	106.84	80.3	137.1	144.7

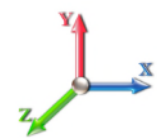
**32981.5**

## Wind Loading - Shaft

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



<b>Load Case:</b> 1.2D + 1.6W 101 mph Wind	<b>Iterations</b> 26
<b>Dead Load Factor</b> 1.20	
<b>Wind Load Factor</b> 1.60	



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	21.088	23.20	474.71	0.750	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	21.088	23.20	466.99	0.750	0.000	5.00	25.283	18.96	703.8	0.0	1683.3
10.00		1.00	0.85	21.088	23.20	459.28	0.750	0.000	5.00	24.868	18.65	692.2	0.0	1655.5
15.00		1.00	0.85	21.088	23.20	451.57	0.750	0.000	5.00	24.454	18.34	680.7	0.0	1627.7
20.00		1.00	0.90	22.375	24.61	457.20	0.750	0.000	5.00	24.040	18.03	710.0	0.0	1599.9
25.00		1.00	0.95	23.451	25.80	459.93	0.750	0.000	5.00	23.626	17.72	731.3	0.0	1572.2
30.00		1.00	0.98	24.369	26.81	460.55	0.750	0.000	5.00	23.212	17.41	746.6	0.0	1544.4
35.00		1.00	1.01	25.172	27.69	459.65	0.750	0.000	5.00	22.797	17.10	757.5	0.0	1516.6
40.00		1.00	1.04	25.890	28.48	457.61	0.750	0.000	5.00	22.383	16.79	764.9	0.0	1488.8
45.00		1.00	1.07	26.540	29.19	454.67	0.750	0.000	5.00	21.969	16.48	769.6	0.0	1461.0
45.50 Bot - Section 2		1.00	1.07	26.602	29.26	454.33	0.750	0.000	0.50	2.174	1.63	76.3	0.0	144.6
50.00		1.00	1.09	27.135	29.85	450.99	0.750	0.000	4.50	19.667	14.75	704.5	0.0	2411.1
52.75 Top - Section 1		1.00	1.11	27.443	30.19	448.69	0.750	0.000	2.75	11.854	8.89	429.4	0.0	1452.9
55.00		1.00	1.12	27.685	30.45	453.49	0.750	0.000	2.25	9.605	7.20	351.0	0.0	548.1
60.00		1.00	1.14	28.197	31.02	448.75	0.750	0.000	5.00	21.045	15.78	783.3	0.0	1200.7
65.00		1.00	1.16	28.676	31.54	443.55	0.750	0.000	5.00	20.631	15.47	780.9	0.0	1176.9
70.00		1.00	1.17	29.127	32.04	437.95	0.750	0.000	5.00	20.216	15.16	777.3	0.0	1153.1
75.00 Appurtenance(s)		1.00	1.19	29.553	32.51	432.01	0.750	0.000	5.00	19.802	14.85	772.5	0.0	1129.3
80.00		1.00	1.21	29.958	32.95	425.76	0.750	0.000	5.00	19.388	14.54	766.7	0.0	1105.5
85.00		1.00	1.22	30.342	33.38	419.24	0.750	0.000	5.00	18.974	14.23	759.9	0.0	1081.6
90.00		1.00	1.24	30.710	33.78	412.46	0.750	0.000	5.00	18.559	13.92	752.3	0.0	1057.8
92.33 Bot - Section 3		1.00	1.24	30.876	33.96	409.21	0.750	0.000	2.33	8.519	6.39	347.2	0.0	485.5
95.00		1.00	1.25	31.061	34.17	405.45	0.750	0.000	2.67	9.753	7.32	399.9	0.0	966.3
98.50 Top - Section 2		1.00	1.26	31.299	34.43	400.42	0.750	0.000	3.50	12.622	9.47	521.5	0.0	1250.3
100.00		1.00	1.27	31.399	34.54	403.66	0.750	0.000	1.50	5.348	4.01	221.6	0.0	229.0
105.00		1.00	1.28	31.723	34.89	396.28	0.750	0.000	5.00	17.556	13.17	735.1	0.0	751.8
110.00		1.00	1.29	32.035	35.24	388.71	0.750	0.000	5.00	17.142	12.86	724.8	0.0	733.9
115.00		1.00	1.30	32.336	35.57	380.98	0.750	0.000	5.00	16.727	12.55	714.0	0.0	716.1
120.00		1.00	1.32	32.627	35.89	373.10	0.750	0.000	5.00	16.313	12.23	702.6	0.0	698.2
122.00 Appurtenance(s)		1.00	1.32	32.741	36.01	369.90	0.750	0.000	2.00	6.409	4.81	277.0	0.0	274.3
125.00		1.00	1.33	32.909	36.20	365.07	0.750	0.000	3.00	9.490	7.12	412.2	0.0	406.1
130.00		1.00	1.34	33.182	36.50	356.90	0.750	0.000	5.00	15.485	11.61	678.2	0.0	662.5
131.58 Bot - Section 4		1.00	1.34	33.266	36.59	354.29	0.750	0.000	1.58	4.817	3.61	211.5	0.0	206.1
135.00		1.00	1.35	33.446	36.79	348.61	0.750	0.000	3.42	10.398	7.80	459.1	0.0	834.3
136.83 Top - Section 3		1.00	1.35	33.541	36.90	345.54	0.750	0.000	1.83	5.500	4.12	243.5	0.0	441.2
140.00		1.00	1.36	33.703	37.07	345.19	0.750	0.000	3.17	9.369	7.03	416.8	0.0	356.5
145.00		1.00	1.37	33.953	37.35	336.68	0.750	0.000	5.00	14.454	10.84	647.8	0.0	549.9
147.00 Appurtenance(s)		1.00	1.37	34.051	37.46	333.25	0.750	0.000	2.00	5.666	4.25	254.7	0.0	215.5
150.00		1.00	1.38	34.196	37.62	328.06	0.750	0.000	3.00	8.374	6.28	378.0	0.0	318.5
155.00		1.00	1.39	34.433	37.88	319.34	0.750	0.000	5.00	13.626	10.22	619.3	0.0	518.2
160.00		1.00	1.40	34.664	38.13	310.52	0.750	0.000	5.00	13.212	9.91	604.5	0.0	502.3
165.00		1.00	1.41	34.890	38.38	301.60	0.750	0.000	5.00	12.797	9.60	589.4	0.0	486.4
167.00 Appurtenance(s)		1.00	1.41	34.978	38.48	298.01	0.750	0.000	2.00	5.003	3.75	231.0	0.0	190.1
170.00		1.00	1.42	35.110	38.62	292.60	0.750	0.000	3.00	7.380	5.54	342.0	0.0	280.4
175.00		1.00	1.42	35.324	38.86	283.51	0.750	0.000	5.00	11.969	8.98	558.1	0.0	454.7
178.00 Appurtenance(s)		1.00	1.43	35.451	39.00	278.01	0.750	0.000	3.00	6.983	5.24	326.8	0.0	265.2
180.00		1.00	1.43	35.535	39.09	274.34	0.750	0.000	2.00	4.572	3.43	214.5	0.0	173.6

## Wind Loading - Shaft

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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<b>Totals:</b>	<b>180.00</b>	<b>25,342.1</b>	<b>39,577.8</b>
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## Discrete Appurtenance Forces

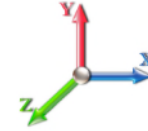
<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II
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**Load Case:** 1.2D + 1.6W 101 mph Wind

**Dead Load Factor** 1.20

**Wind Load Factor** 1.60



**Iterations** 26

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	178.00	Samsung B2/B66A	3	35.451	38.996	0.54	0.80	3.01	303.84	0.000	0.000	187.62	0.00	0.00
2	178.00	LPA-80080-4CF	6	35.451	38.996	1.36	0.80	21.30	86.40	0.000	0.000	1328.84	0.00	0.00
3	178.00	JMA Wireless	6	35.451	38.996	0.70	0.80	41.22	331.20	0.000	0.000	2571.70	0.00	0.00
4	178.00	Samsung MT6407-77A	3	35.451	38.996	0.56	0.80	7.88	285.84	0.000	0.000	491.61	0.00	0.00
5	178.00	Samsung B5/B13	3	35.451	38.996	0.54	0.80	3.01	253.08	0.000	0.000	187.62	0.00	0.00
6	178.00	MS-KI22-5 (Kickers w/o	1	35.451	38.996	1.00	1.00	5.33	175.20	0.000	0.000	332.56	0.00	0.00
7	178.00	Raycap	1	35.451	38.996	1.00	1.00	4.06	38.40	0.000	0.000	253.32	0.00	0.00
8	178.00	JMA 919003314 SBS	3	35.451	38.996	1.00	1.00	0.00	91.26	0.000	0.000	0.00	0.00	0.00
9	178.00	Low Profile Platform	1	35.451	38.996	1.00	1.00	22.00	1800.00	0.000	0.000	1372.67	0.00	0.00
10	178.00	MS-HR35	1	35.451	38.996	1.00	1.00	8.75	516.00	0.000	0.000	545.95	0.00	0.00
11	167.00	RMQP-4096-HK	1	34.978	38.476	1.00	1.00	46.00	2938.80	0.000	0.000	2831.83	0.00	0.00
12	167.00	Alcatel Lucent 800 MHz	3	34.978	38.476	0.50	0.75	1.18	31.68	0.000	0.000	72.39	0.00	0.00
13	167.00	Ericsson 4415 B66A	3	34.978	38.476	0.50	0.75	2.47	178.56	0.000	0.000	152.20	0.00	0.00
14	167.00	Ericsson 4449 B71 + B85	3	34.978	38.476	0.50	0.75	2.97	263.52	0.000	0.000	182.82	0.00	0.00
15	167.00	Ericsson 4424 B25	3	34.978	38.476	0.50	0.75	3.09	316.80	0.000	0.000	190.25	0.00	0.00
16	167.00	RFS ACU-A20-N RET	4	34.978	38.476	0.59	0.75	0.33	4.80	0.000	0.000	20.43	0.00	0.00
17	167.00	AIR6449 B41	3	34.978	38.476	0.53	0.75	9.03	370.80	0.000	0.000	555.65	0.00	0.00
18	167.00	APXVAALL24_43-U-NA20	3	34.978	38.476	0.52	0.75	31.88	460.80	0.000	0.000	1962.46	0.00	0.00
19	167.00	APX16DWV-16DWVS-E-A	3	34.978	38.476	0.46	0.75	9.22	146.52	0.000	0.000	567.66	0.00	0.00
20	147.00	RMQP-496-HK	1	34.051	37.456	1.00	1.00	46.00	2938.80	0.000	0.000	2756.79	0.00	0.00
21	147.00	7770	3	34.051	37.456	0.55	0.75	9.03	126.00	0.000	0.000	541.40	0.00	0.00
22	147.00	Cci DMP65R-BU8DA	6	34.051	37.456	0.55	0.75	58.70	689.04	0.000	0.000	3518.09	0.00	0.00
23	147.00	Cci DTMAPB7819VG12A	3	34.051	37.456	0.50	0.75	1.72	69.12	0.000	0.000	102.99	0.00	0.00
24	147.00	Powerwave	3	34.051	37.456	0.68	0.75	1.86	79.20	0.000	0.000	111.65	0.00	0.00
25	147.00	Ericsson RRUS 4478 B14	3	34.051	37.456	0.50	0.75	2.49	213.84	0.000	0.000	149.07	0.00	0.00
26	147.00	Ericsson RRUS 8843 B2	3	34.051	37.456	0.50	0.75	2.49	270.00	0.000	0.000	149.07	0.00	0.00
27	147.00	Ericsson RRUS 4449	3	34.051	37.456	0.50	0.75	2.97	255.60	0.000	0.000	177.98	0.00	0.00
28	147.00	Raycap DC6-48-60-18-8F	3	34.051	37.456	0.75	0.75	2.07	114.48	0.000	0.000	124.06	0.00	0.00
29	122.00	Nokia CS72188.01	1	32.741	36.015	1.00	1.00	3.15	19.80	0.000	0.000	181.52	0.00	0.00
30	75.00	Side Arms	2	29.553	32.509	1.00	1.00	5.26	96.00	0.000	0.000	273.59	0.00	0.00
31	75.00	Lucent KS-24019	1	29.553	32.509	1.00	1.00	0.91	4.80	0.000	0.000	47.33	0.00	0.00

**Totals:** 13,470.18

**21,941.08**

## Total Applied Force Summary

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II

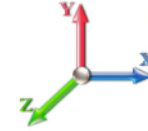


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**Load Case:** 1.2D + 1.6W 101 mph Wind

**Dead Load Factor** 1.20

**Wind Load Factor** 1.60



**Iterations** 26

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		703.76	1878.64	0.00	0.00
10.00		692.23	1850.86	0.00	0.00
15.00		680.70	1823.08	0.00	0.00
20.00		710.01	1795.30	0.00	0.00
25.00		731.34	1767.51	0.00	0.00
30.00		746.63	1739.73	0.00	0.00
35.00		757.50	1711.95	0.00	0.00
40.00		764.94	1684.16	0.00	0.00
45.00		769.63	1656.38	0.00	0.00
45.50		76.34	164.11	0.00	0.00
50.00		704.45	2586.92	0.00	0.00
52.75		429.40	1560.32	0.00	0.00
55.00		351.02	636.00	0.00	0.00
60.00		783.29	1396.07	0.00	0.00
65.00		780.92	1372.25	0.00	0.00
70.00		777.28	1348.44	0.00	0.00
75.00	(3) attachments	1093.41	1425.43	0.00	0.00
80.00		766.68	1300.81	0.00	0.00
85.00		759.93	1277.00	0.00	0.00
90.00		752.34	1253.18	0.00	0.00
92.33		347.21	576.67	0.00	0.00
95.00		399.90	1070.49	0.00	0.00
98.50		521.49	1387.03	0.00	0.00
100.00		221.63	287.63	0.00	0.00
105.00		735.13	947.17	0.00	0.00
110.00		724.85	929.31	0.00	0.00
115.00		713.98	911.45	0.00	0.00
120.00		702.57	893.59	0.00	0.00
122.00	(1) attachments	458.51	372.23	0.00	0.00
125.00		412.22	523.29	0.00	0.00
130.00		678.22	857.87	0.00	0.00
131.58		211.53	267.93	0.00	0.00
135.00		459.08	967.83	0.00	0.00
136.83		243.51	512.83	0.00	0.00
140.00		416.80	480.22	0.00	0.00
145.00		647.82	745.28	0.00	0.00
147.00	(28) attachments	7885.76	5049.75	0.00	0.00
150.00		378.01	371.58	0.00	0.00
155.00		619.33	606.61	0.00	0.00
160.00		604.53	590.73	0.00	0.00
165.00		589.38	574.85	0.00	0.00
167.00	(26) attachments	6766.67	4937.78	0.00	0.00
170.00		342.03	326.35	0.00	0.00
175.00		558.10	531.22	0.00	0.00
178.00	(28) attachments	7598.62	4192.33	0.00	0.00
180.00		214.46	173.61	0.00	0.00



## Total Applied Force Summary

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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<b>Totals:</b>	<b>47,283.16</b>	<b>59,313.79</b>	<b>0.00</b>	<b>0.00</b>
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## Calculated Forces

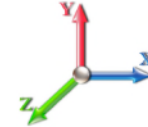
<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



**Load Case:** 1.2D + 1.6W 101 mph Wind

**Iterations** 26

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.60



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	-59.22	-47.40	0.00	-6084.9	0.00	6084.99	5499.24	2749.62	13525.8	6714.82	0.00	0.000	0.000	0.917
5.00	-57.15	-46.92	0.00	-5847.9	0.00	5847.98	5446.13	2723.06	13174.3	6540.31	0.12	-0.228	0.000	0.905
10.00	-55.12	-46.44	0.00	-5613.3	0.00	5613.36	5391.79	2695.89	12824.2	6366.50	0.48	-0.458	0.000	0.892
15.00	-53.12	-45.96	0.00	-5381.1	0.00	5381.15	5336.22	2668.11	12475.6	6193.44	1.09	-0.690	0.000	0.879
20.00	-51.15	-45.44	0.00	-5151.3	0.00	5151.35	5279.42	2639.71	12128.7	6021.23	1.94	-0.924	0.000	0.866
25.00	-49.21	-44.88	0.00	-4924.1	0.00	4924.17	5221.40	2610.70	11783.6	5849.92	3.03	-1.159	0.000	0.851
30.00	-47.30	-44.29	0.00	-4699.8	0.00	4699.80	5162.14	2581.07	11440.6	5679.60	4.37	-1.397	0.000	0.837
35.00	-45.43	-43.68	0.00	-4478.3	0.00	4478.37	5101.66	2550.83	11099.6	5510.34	5.96	-1.636	0.000	0.822
40.00	-43.59	-43.04	0.00	-4260.0	0.00	4260.00	5039.95	2519.97	10760.9	5342.21	7.80	-1.876	0.000	0.806
45.00	-41.86	-42.31	0.00	-4044.7	0.00	4044.79	4977.01	2488.50	10424.7	5175.29	9.90	-2.117	0.000	0.790
45.50	-41.61	-42.32	0.00	-4023.6	0.00	4023.63	4970.65	2485.32	10391.2	5158.66	10.12	-2.142	0.000	0.789
50.00	-38.92	-41.63	0.00	-3833.2	0.00	3833.20	4912.84	2456.42	10091.1	5009.65	12.25	-2.361	0.000	0.773
52.75	-37.29	-41.22	0.00	-3718.7	0.00	3718.71	3995.11	1997.56	8262.19	4101.70	13.65	-2.497	0.000	0.916
55.00	-36.54	-40.96	0.00	-3625.9	0.00	3625.97	3974.19	1987.10	8146.39	4044.21	14.85	-2.608	0.000	0.906
60.00	-34.99	-40.28	0.00	-3421.1	0.00	3421.16	3926.81	1963.41	7890.01	3916.93	17.73	-2.879	0.000	0.883
65.00	-33.47	-39.59	0.00	-3219.7	0.00	3219.76	3878.20	1939.10	7635.05	3790.36	20.89	-3.150	0.000	0.859
70.00	-31.99	-38.88	0.00	-3021.8	0.00	3021.83	3828.36	1914.18	7381.67	3664.57	24.33	-3.421	0.000	0.833
75.00	-30.46	-37.85	0.00	-2827.4	0.00	2827.41	3777.30	1888.65	7130.01	3539.64	28.06	-3.691	0.000	0.807
80.00	-29.04	-37.13	0.00	-2638.1	0.00	2638.18	3725.00	1862.50	6880.23	3415.63	32.06	-3.959	0.000	0.781
85.00	-27.65	-36.41	0.00	-2452.5	0.00	2452.52	3671.48	1835.74	6632.46	3292.63	36.35	-4.226	0.000	0.753
90.00	-26.34	-35.66	0.00	-2270.4	0.00	2270.46	3616.73	1808.36	6386.87	3170.71	40.91	-4.491	0.000	0.724
92.33	-25.71	-35.32	0.00	-2187.2	0.00	2187.27	3590.75	1795.38	6273.05	3114.21	43.14	-4.616	0.000	0.710
95.00	-24.57	-34.91	0.00	-2093.0	0.00	2093.07	3560.74	1780.37	6143.61	3049.94	45.75	-4.757	0.000	0.694
98.50	-23.16	-34.32	0.00	-1970.9	0.00	1970.90	2386.86	1193.43	4124.78	2047.71	49.31	-4.940	0.000	0.973
100.00	-22.77	-34.16	0.00	-1919.4	0.00	1919.42	2378.02	1189.01	4080.56	2025.76	50.87	-5.018	0.000	0.958
105.00	-21.71	-33.46	0.00	-1748.6	0.00	1748.63	2347.74	1173.87	3933.38	1952.70	56.29	-5.340	0.000	0.906
110.00	-20.68	-32.76	0.00	-1581.3	0.00	1581.33	2316.23	1158.11	3786.65	1879.85	62.05	-5.653	0.000	0.851
115.00	-19.68	-32.06	0.00	-1417.5	0.00	1417.52	2283.49	1141.75	3640.52	1807.31	68.12	-5.956	0.000	0.794
120.00	-18.75	-31.33	0.00	-1257.2	0.00	1257.21	2249.53	1124.76	3495.14	1735.13	74.50	-6.248	0.000	0.734
122.00	-18.36	-30.88	0.00	-1194.5	0.00	1194.54	2235.60	1117.80	3437.23	1706.38	77.14	-6.364	0.000	0.709
125.00	-17.77	-30.48	0.00	-1101.8	0.00	1101.89	2214.33	1107.17	3350.65	1663.40	81.19	-6.531	0.000	0.671
130.00	-16.91	-29.76	0.00	-949.48	0.00	949.48	2177.91	1088.96	3207.21	1592.19	88.16	-6.792	0.000	0.605
131.58	-16.60	-29.55	0.00	-902.36	0.00	902.36	2166.12	1083.06	3162.03	1569.76	90.42	-6.873	0.000	0.583
135.00	-15.63	-29.01	0.00	-801.39	0.00	801.39	2140.26	1070.13	3064.96	1521.58	95.39	-7.038	0.000	0.535
136.83	-15.10	-28.74	0.00	-748.20	0.00	748.20	1821.16	910.58	2623.48	1302.41	98.10	-7.124	0.000	0.584
140.00	-14.59	-28.31	0.00	-657.19	0.00	657.19	1802.58	901.29	2550.43	1266.14	102.86	-7.262	0.000	0.528
145.00	-13.87	-27.61	0.00	-515.64	0.00	515.64	1772.26	886.13	2435.64	1209.15	110.56	-7.467	0.000	0.435
147.00	-9.86	-19.14	0.00	-460.43	0.00	460.43	1759.78	879.89	2389.94	1186.47	113.70	-7.542	0.000	0.394
150.00	-9.50	-18.74	0.00	-403.01	0.00	403.01	1740.70	870.35	2321.67	1152.58	118.46	-7.645	0.000	0.356
155.00	-8.94	-18.07	0.00	-309.31	0.00	309.31	1707.91	853.96	2208.68	1096.48	126.52	-7.794	0.000	0.288
160.00	-8.41	-17.40	0.00	-218.98	0.00	218.98	1673.90	836.95	2096.80	1040.94	134.73	-7.915	0.000	0.216
165.00	-7.90	-16.75	0.00	-131.97	0.00	131.97	1638.66	819.33	1986.20	986.03	143.04	-8.004	0.000	0.139
167.00	-3.95	-9.36	0.00	-98.48	0.00	98.48	1624.22	812.11	1942.34	964.26	146.39	-8.029	0.000	0.105
170.00	-3.67	-8.98	0.00	-70.40	0.00	70.40	1602.19	801.09	1877.01	931.83	151.43	-8.059	0.000	0.078
175.00	-3.22	-8.35	0.00	-25.52	0.00	25.52	1564.49	782.24	1769.40	878.40	159.86	-8.088	0.000	0.031
178.00	-0.14	-0.24	0.00	-0.47	0.00	0.47	1541.28	770.64	1705.64	846.75	164.93	-8.094	0.000	0.001
180.00	0.00	-0.21	0.00	0.00	0.00	0.00	1525.56	762.78	1663.50	825.83	168.31	-8.094	0.000	0.000

## Calculated Forces

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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## Wind Loading - Shaft

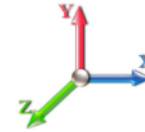
<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



**Load Case:** 0.9D + 1.6W 101 mph Wind

**Iterations** 26

**Dead Load Factor** 0.90  
**Wind Load Factor** 1.60



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	21.088	23.20	474.71	0.750	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	21.088	23.20	466.99	0.750	0.000	5.00	25.283	18.96	703.8	0.0	1262.5
10.00		1.00	0.85	21.088	23.20	459.28	0.750	0.000	5.00	24.868	18.65	692.2	0.0	1241.6
15.00		1.00	0.85	21.088	23.20	451.57	0.750	0.000	5.00	24.454	18.34	680.7	0.0	1220.8
20.00		1.00	0.90	22.375	24.61	457.20	0.750	0.000	5.00	24.040	18.03	710.0	0.0	1200.0
25.00		1.00	0.95	23.451	25.80	459.93	0.750	0.000	5.00	23.626	17.72	731.3	0.0	1179.1
30.00		1.00	0.98	24.369	26.81	460.55	0.750	0.000	5.00	23.212	17.41	746.6	0.0	1158.3
35.00		1.00	1.01	25.172	27.69	459.65	0.750	0.000	5.00	22.797	17.10	757.5	0.0	1137.4
40.00		1.00	1.04	25.890	28.48	457.61	0.750	0.000	5.00	22.383	16.79	764.9	0.0	1116.6
45.00		1.00	1.07	26.540	29.19	454.67	0.750	0.000	5.00	21.969	16.48	769.6	0.0	1095.8
45.50	Bot - Section 2	1.00	1.07	26.602	29.26	454.33	0.750	0.000	0.50	2.174	1.63	76.3	0.0	108.4
50.00		1.00	1.09	27.135	29.85	450.99	0.750	0.000	4.50	19.667	14.75	704.5	0.0	1808.3
52.75	Top - Section 1	1.00	1.11	27.443	30.19	448.69	0.750	0.000	2.75	11.854	8.89	429.4	0.0	1089.7
55.00		1.00	1.12	27.685	30.45	453.49	0.750	0.000	2.25	9.605	7.20	351.0	0.0	411.1
60.00		1.00	1.14	28.197	31.02	448.75	0.750	0.000	5.00	21.045	15.78	783.3	0.0	900.5
65.00		1.00	1.16	28.676	31.54	443.55	0.750	0.000	5.00	20.631	15.47	780.9	0.0	882.7
70.00		1.00	1.17	29.127	32.04	437.95	0.750	0.000	5.00	20.216	15.16	777.3	0.0	864.8
75.00	Appurtenance(s)	1.00	1.19	29.553	32.51	432.01	0.750	0.000	5.00	19.802	14.85	772.5	0.0	846.9
80.00		1.00	1.21	29.958	32.95	425.76	0.750	0.000	5.00	19.388	14.54	766.7	0.0	829.1
85.00		1.00	1.22	30.342	33.38	419.24	0.750	0.000	5.00	18.974	14.23	759.9	0.0	811.2
90.00		1.00	1.24	30.710	33.78	412.46	0.750	0.000	5.00	18.559	13.92	752.3	0.0	793.4
92.33	Bot - Section 3	1.00	1.24	30.876	33.96	409.21	0.750	0.000	2.33	8.519	6.39	347.2	0.0	364.1
95.00		1.00	1.25	31.061	34.17	405.45	0.750	0.000	2.67	9.753	7.32	399.9	0.0	724.7
98.50	Top - Section 2	1.00	1.26	31.299	34.43	400.42	0.750	0.000	3.50	12.622	9.47	521.5	0.0	937.7
100.00		1.00	1.27	31.399	34.54	403.66	0.750	0.000	1.50	5.348	4.01	221.6	0.0	171.8
105.00		1.00	1.28	31.723	34.89	396.28	0.750	0.000	5.00	17.556	13.17	735.1	0.0	563.9
110.00		1.00	1.29	32.035	35.24	388.71	0.750	0.000	5.00	17.142	12.86	724.8	0.0	550.5
115.00		1.00	1.30	32.336	35.57	380.98	0.750	0.000	5.00	16.727	12.55	714.0	0.0	537.1
120.00		1.00	1.32	32.627	35.89	373.10	0.750	0.000	5.00	16.313	12.23	702.6	0.0	523.7
122.00	Appurtenance(s)	1.00	1.32	32.741	36.01	369.90	0.750	0.000	2.00	6.409	4.81	277.0	0.0	205.7
125.00		1.00	1.33	32.909	36.20	365.07	0.750	0.000	3.00	9.490	7.12	412.2	0.0	304.6
130.00		1.00	1.34	33.182	36.50	356.90	0.750	0.000	5.00	15.485	11.61	678.2	0.0	496.9
131.58	Bot - Section 4	1.00	1.34	33.266	36.59	354.29	0.750	0.000	1.58	4.817	3.61	211.5	0.0	154.6
135.00		1.00	1.35	33.446	36.79	348.61	0.750	0.000	3.42	10.398	7.80	459.1	0.0	625.7
136.83	Top - Section 3	1.00	1.35	33.541	36.90	345.54	0.750	0.000	1.83	5.500	4.12	243.5	0.0	330.9
140.00		1.00	1.36	33.703	37.07	345.19	0.750	0.000	3.17	9.369	7.03	416.8	0.0	267.4
145.00		1.00	1.37	33.953	37.35	336.68	0.750	0.000	5.00	14.454	10.84	647.8	0.0	412.4
147.00	Appurtenance(s)	1.00	1.37	34.051	37.46	333.25	0.750	0.000	2.00	5.666	4.25	254.7	0.0	161.6
150.00		1.00	1.38	34.196	37.62	328.06	0.750	0.000	3.00	8.374	6.28	378.0	0.0	238.9
155.00		1.00	1.39	34.433	37.88	319.34	0.750	0.000	5.00	13.626	10.22	619.3	0.0	388.6
160.00		1.00	1.40	34.664	38.13	310.52	0.750	0.000	5.00	13.212	9.91	604.5	0.0	376.7
165.00		1.00	1.41	34.890	38.38	301.60	0.750	0.000	5.00	12.797	9.60	589.4	0.0	364.8
167.00	Appurtenance(s)	1.00	1.41	34.978	38.48	298.01	0.750	0.000	2.00	5.003	3.75	231.0	0.0	142.6
170.00		1.00	1.42	35.110	38.62	292.60	0.750	0.000	3.00	7.380	5.54	342.0	0.0	210.3
175.00		1.00	1.42	35.324	38.86	283.51	0.750	0.000	5.00	11.969	8.98	558.1	0.0	341.0
178.00	Appurtenance(s)	1.00	1.43	35.451	39.00	278.01	0.750	0.000	3.00	6.983	5.24	326.8	0.0	198.9
180.00		1.00	1.43	35.535	39.09	274.34	0.750	0.000	2.00	4.572	3.43	214.5	0.0	130.2

## Wind Loading - Shaft

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II
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<b>Totals:</b>	<b>180.00</b>	<b>25,342.1</b>	<b>29,683.4</b>
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## Discrete Appurtenance Forces

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II

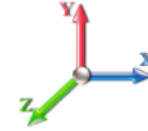


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**Load Case:** 0.9D + 1.6W 101 mph Wind

**Dead Load Factor** 0.90

**Wind Load Factor** 1.60



**Iterations** 26

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	178.00	Samsung B2/B66A	3	35.451	38.996	0.54	0.80	3.01	227.88	0.000	0.000	187.62	0.00	0.00
2	178.00	LPA-80080-4CF	6	35.451	38.996	1.36	0.80	21.30	64.80	0.000	0.000	1328.84	0.00	0.00
3	178.00	JMA Wireless	6	35.451	38.996	0.70	0.80	41.22	248.40	0.000	0.000	2571.70	0.00	0.00
4	178.00	Samsung MT6407-77A	3	35.451	38.996	0.56	0.80	7.88	214.38	0.000	0.000	491.61	0.00	0.00
5	178.00	Samsung B5/B13	3	35.451	38.996	0.54	0.80	3.01	189.81	0.000	0.000	187.62	0.00	0.00
6	178.00	MS-KI22-5 (Kickers w/o	1	35.451	38.996	1.00	1.00	5.33	131.40	0.000	0.000	332.56	0.00	0.00
7	178.00	Raycap	1	35.451	38.996	1.00	1.00	4.06	28.80	0.000	0.000	253.32	0.00	0.00
8	178.00	JMA 919003314 SBS	3	35.451	38.996	1.00	1.00	0.00	68.45	0.000	0.000	0.00	0.00	0.00
9	178.00	Low Profile Platform	1	35.451	38.996	1.00	1.00	22.00	1350.00	0.000	0.000	1372.67	0.00	0.00
10	178.00	MS-HR35	1	35.451	38.996	1.00	1.00	8.75	387.00	0.000	0.000	545.95	0.00	0.00
11	167.00	RMQP-4096-HK	1	34.978	38.476	1.00	1.00	46.00	2204.10	0.000	0.000	2831.83	0.00	0.00
12	167.00	Alcatel Lucent 800 MHz	3	34.978	38.476	0.50	0.75	1.18	23.76	0.000	0.000	72.39	0.00	0.00
13	167.00	Ericsson 4415 B66A	3	34.978	38.476	0.50	0.75	2.47	133.92	0.000	0.000	152.20	0.00	0.00
14	167.00	Ericsson 4449 B71 + B85	3	34.978	38.476	0.50	0.75	2.97	197.64	0.000	0.000	182.82	0.00	0.00
15	167.00	Ericsson 4424 B25	3	34.978	38.476	0.50	0.75	3.09	237.60	0.000	0.000	190.25	0.00	0.00
16	167.00	RFS ACU-A20-N RET	4	34.978	38.476	0.59	0.75	0.33	3.60	0.000	0.000	20.43	0.00	0.00
17	167.00	AIR6449 B41	3	34.978	38.476	0.53	0.75	9.03	278.10	0.000	0.000	555.65	0.00	0.00
18	167.00	APXVAALL24_43-U-NA20	3	34.978	38.476	0.52	0.75	31.88	345.60	0.000	0.000	1962.46	0.00	0.00
19	167.00	APX16DWV-16DWVS-E-A	3	34.978	38.476	0.46	0.75	9.22	109.89	0.000	0.000	567.66	0.00	0.00
20	147.00	RMQP-496-HK	1	34.051	37.456	1.00	1.00	46.00	2204.10	0.000	0.000	2756.79	0.00	0.00
21	147.00	7770	3	34.051	37.456	0.55	0.75	9.03	94.50	0.000	0.000	541.40	0.00	0.00
22	147.00	Cci DMP65R-BU8DA	6	34.051	37.456	0.55	0.75	58.70	516.78	0.000	0.000	3518.09	0.00	0.00
23	147.00	Cci DTMABP7819VG12A	3	34.051	37.456	0.50	0.75	1.72	51.84	0.000	0.000	102.99	0.00	0.00
24	147.00	Powerwave	3	34.051	37.456	0.68	0.75	1.86	59.40	0.000	0.000	111.65	0.00	0.00
25	147.00	Ericsson RRUS 4478 B14	3	34.051	37.456	0.50	0.75	2.49	160.38	0.000	0.000	149.07	0.00	0.00
26	147.00	Ericsson RRUS 8843 B2	3	34.051	37.456	0.50	0.75	2.49	202.50	0.000	0.000	149.07	0.00	0.00
27	147.00	Ericsson RRUS 4449	3	34.051	37.456	0.50	0.75	2.97	191.70	0.000	0.000	177.98	0.00	0.00
28	147.00	Raycap DC6-48-60-18-8F	3	34.051	37.456	0.75	0.75	2.07	85.86	0.000	0.000	124.06	0.00	0.00
29	122.00	Nokia CS72188.01	1	32.741	36.015	1.00	1.00	3.15	14.85	0.000	0.000	181.52	0.00	0.00
30	75.00	Side Arms	2	29.553	32.509	1.00	1.00	5.26	72.00	0.000	0.000	273.59	0.00	0.00
31	75.00	Lucent KS-24019	1	29.553	32.509	1.00	1.00	0.91	3.60	0.000	0.000	47.33	0.00	0.00

**Totals: 10,102.64**

**21,941.08**

## Total Applied Force Summary

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II

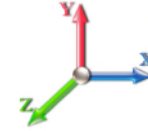


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**Load Case:** 0.9D + 1.6W 101 mph Wind

**Dead Load Factor** 0.90

**Wind Load Factor** 1.60



**Iterations** 26

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		703.76	1408.98	0.00	0.00
10.00		692.23	1388.15	0.00	0.00
15.00		680.70	1367.31	0.00	0.00
20.00		710.01	1346.47	0.00	0.00
25.00		731.34	1325.63	0.00	0.00
30.00		746.63	1304.80	0.00	0.00
35.00		757.50	1283.96	0.00	0.00
40.00		764.94	1263.12	0.00	0.00
45.00		769.63	1242.29	0.00	0.00
45.50		76.34	123.08	0.00	0.00
50.00		704.45	1940.19	0.00	0.00
52.75		429.40	1170.24	0.00	0.00
55.00		351.02	477.00	0.00	0.00
60.00		783.29	1047.05	0.00	0.00
65.00		780.92	1029.19	0.00	0.00
70.00		777.28	1011.33	0.00	0.00
75.00	(3) attachments	1093.41	1069.07	0.00	0.00
80.00		766.68	975.61	0.00	0.00
85.00		759.93	957.75	0.00	0.00
90.00		752.34	939.89	0.00	0.00
92.33		347.21	432.50	0.00	0.00
95.00		399.90	802.87	0.00	0.00
98.50		521.49	1040.28	0.00	0.00
100.00		221.63	215.72	0.00	0.00
105.00		735.13	710.38	0.00	0.00
110.00		724.85	696.98	0.00	0.00
115.00		713.98	683.59	0.00	0.00
120.00		702.57	670.19	0.00	0.00
122.00	(1) attachments	458.51	279.18	0.00	0.00
125.00		412.22	392.47	0.00	0.00
130.00		678.22	643.40	0.00	0.00
131.58		211.53	200.95	0.00	0.00
135.00		459.08	725.87	0.00	0.00
136.83		243.51	384.62	0.00	0.00
140.00		416.80	360.17	0.00	0.00
145.00		647.82	558.96	0.00	0.00
147.00	(28) attachments	7885.76	3787.31	0.00	0.00
150.00		378.01	278.69	0.00	0.00
155.00		619.33	454.95	0.00	0.00
160.00		604.53	443.05	0.00	0.00
165.00		589.38	431.14	0.00	0.00
167.00	(26) attachments	6766.67	3703.33	0.00	0.00
170.00		342.03	244.77	0.00	0.00
175.00		558.10	398.42	0.00	0.00
178.00	(28) attachments	7598.62	3144.25	0.00	0.00
180.00		214.46	130.21	0.00	0.00

## Total Applied Force Summary

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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<b>Totals:</b>	<b>47,283.16</b>	<b>44,485.34</b>	<b>0.00</b>	<b>0.00</b>
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## Calculated Forces

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



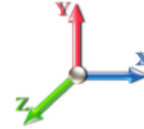
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**Load Case:** 0.9D + 1.6W 101 mph Wind

**Iterations** 26

**Dead Load Factor** 0.90

**Wind Load Factor** 1.60



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-44.39	-47.37	0.00	-6005.3	0.00	6005.37	5499.24	2749.62	13525.8	6714.82	0.00	0.000	0.000	0.903
5.00	-42.80	-46.83	0.00	-5768.5	0.00	5768.51	5446.13	2723.06	13174.3	6540.31	0.12	-0.225	0.000	0.890
10.00	-41.23	-46.30	0.00	-5534.3	0.00	5534.34	5391.79	2695.89	12824.2	6366.50	0.48	-0.452	0.000	0.877
15.00	-39.69	-45.76	0.00	-5302.8	0.00	5302.86	5336.22	2668.11	12475.6	6193.44	1.07	-0.680	0.000	0.864
20.00	-38.17	-45.19	0.00	-5074.0	0.00	5074.04	5279.42	2639.71	12128.7	6021.23	1.91	-0.911	0.000	0.850
25.00	-36.68	-44.58	0.00	-4848.1	0.00	4848.10	5221.40	2610.70	11783.6	5849.92	2.99	-1.143	0.000	0.836
30.00	-35.21	-43.95	0.00	-4625.1	0.00	4625.19	5162.14	2581.07	11440.6	5679.60	4.31	-1.376	0.000	0.821
35.00	-33.77	-43.30	0.00	-4405.4	0.00	4405.43	5101.66	2550.83	11099.6	5510.34	5.88	-1.611	0.000	0.806
40.00	-32.35	-42.63	0.00	-4188.9	0.00	4188.93	5039.95	2519.97	10760.9	5342.21	7.69	-1.848	0.000	0.791
45.00	-31.04	-41.89	0.00	-3975.7	0.00	3975.77	4977.01	2488.50	10424.7	5175.29	9.75	-2.085	0.000	0.775
45.50	-30.83	-41.88	0.00	-3954.8	0.00	3954.82	4970.65	2485.32	10391.2	5158.66	9.97	-2.110	0.000	0.773
50.00	-28.80	-41.18	0.00	-3766.3	0.00	3766.38	4912.84	2456.42	10091.1	5009.65	12.07	-2.325	0.000	0.758
52.75	-27.56	-40.76	0.00	-3653.1	0.00	3653.13	3995.11	1997.56	8262.19	4101.70	13.45	-2.458	0.000	0.898
55.00	-26.96	-40.48	0.00	-3561.4	0.00	3561.41	3974.19	1987.10	8146.39	4044.21	14.63	-2.568	0.000	0.888
60.00	-25.77	-39.77	0.00	-3359.0	0.00	3359.01	3926.81	1963.41	7890.01	3916.93	17.46	-2.834	0.000	0.865
65.00	-24.60	-39.05	0.00	-3160.1	0.00	3160.16	3878.20	1939.10	7635.05	3790.36	20.57	-3.100	0.000	0.840
70.00	-23.46	-38.33	0.00	-2964.9	0.00	2964.90	3828.36	1914.18	7381.67	3664.57	23.96	-3.365	0.000	0.816
75.00	-22.29	-37.27	0.00	-2773.2	0.00	2773.27	3777.30	1888.65	7130.01	3539.64	27.62	-3.630	0.000	0.790
80.00	-21.20	-36.54	0.00	-2586.9	0.00	2586.90	3725.00	1862.50	6880.23	3415.63	31.56	-3.894	0.000	0.763
85.00	-20.13	-35.81	0.00	-2404.1	0.00	2404.19	3671.48	1835.74	6632.46	3292.63	35.78	-4.155	0.000	0.736
90.00	-19.14	-35.05	0.00	-2225.1	0.00	2225.15	3616.73	1808.36	6386.87	3170.71	40.27	-4.415	0.000	0.707
92.33	-18.65	-34.71	0.00	-2143.3	0.00	2143.36	3590.75	1795.38	6273.05	3114.21	42.45	-4.537	0.000	0.694
95.00	-17.79	-34.30	0.00	-2050.7	0.00	2050.79	3560.74	1780.37	6143.61	3049.94	45.03	-4.675	0.000	0.678
98.50	-16.72	-33.73	0.00	-1930.7	0.00	1930.73	2386.86	1193.43	4124.78	2047.71	48.52	-4.854	0.000	0.951
100.00	-16.41	-33.55	0.00	-1880.1	0.00	1880.14	2378.02	1189.01	4080.56	2025.76	50.05	-4.931	0.000	0.936
105.00	-15.59	-32.84	0.00	-1712.3	0.00	1712.39	2347.74	1173.87	3933.38	1952.70	55.38	-5.246	0.000	0.884
110.00	-14.79	-32.13	0.00	-1548.1	0.00	1548.19	2316.23	1158.11	3786.65	1879.85	61.03	-5.553	0.000	0.831
115.00	-14.02	-31.42	0.00	-1387.5	0.00	1387.54	2283.49	1141.75	3640.52	1807.31	67.00	-5.850	0.000	0.775
120.00	-13.33	-30.70	0.00	-1230.4	0.00	1230.42	2249.53	1124.76	3495.14	1735.13	73.27	-6.135	0.000	0.716
122.00	-13.02	-30.25	0.00	-1169.0	0.00	1169.02	2235.60	1117.80	3437.23	1706.38	75.86	-6.248	0.000	0.692
125.00	-12.57	-29.84	0.00	-1078.2	0.00	1078.27	2214.33	1107.17	3350.65	1663.40	79.83	-6.412	0.000	0.655
130.00	-11.92	-29.13	0.00	-929.07	0.00	929.07	2177.91	1088.96	3207.21	1592.19	86.67	-6.668	0.000	0.590
131.58	-11.69	-28.92	0.00	-882.95	0.00	882.95	2166.12	1083.06	3162.03	1569.76	88.89	-6.747	0.000	0.569
135.00	-10.96	-28.40	0.00	-784.14	0.00	784.14	2140.26	1070.13	3064.96	1521.58	93.77	-6.909	0.000	0.521
136.83	-10.56	-28.13	0.00	-732.08	0.00	732.08	1821.16	910.58	2623.48	1302.41	96.44	-6.992	0.000	0.569
140.00	-10.17	-27.71	0.00	-642.99	0.00	642.99	1802.58	901.29	2550.43	1266.14	101.11	-7.127	0.000	0.514
145.00	-9.63	-27.02	0.00	-504.46	0.00	504.46	1772.26	886.13	2435.64	1209.15	108.67	-7.328	0.000	0.424
147.00	-6.86	-18.72	0.00	-450.43	0.00	450.43	1759.78	879.89	2389.94	1186.47	111.74	-7.402	0.000	0.384
150.00	-6.59	-18.32	0.00	-394.28	0.00	394.28	1740.70	870.35	2321.67	1152.58	116.42	-7.502	0.000	0.346
155.00	-6.18	-17.66	0.00	-302.67	0.00	302.67	1707.91	853.96	2208.68	1096.48	124.33	-7.648	0.000	0.280
160.00	-5.79	-17.01	0.00	-214.35	0.00	214.35	1673.90	836.95	2096.80	1040.94	132.38	-7.767	0.000	0.210
165.00	-5.43	-16.38	0.00	-129.28	0.00	129.28	1638.66	819.33	1986.20	986.03	140.54	-7.853	0.000	0.135
167.00	-2.68	-9.17	0.00	-96.53	0.00	96.53	1624.22	812.11	1942.34	964.26	143.83	-7.878	0.000	0.102
170.00	-2.48	-8.80	0.00	-69.02	0.00	69.02	1602.19	801.09	1877.01	931.83	148.78	-7.907	0.000	0.076
175.00	-2.16	-8.19	0.00	-25.03	0.00	25.03	1564.49	782.24	1769.40	878.40	157.05	-7.936	0.000	0.030
178.00	-0.10	-0.23	0.00	-0.46	0.00	0.46	1541.28	770.64	1705.64	846.75	162.02	-7.941	0.000	0.001
180.00	0.00	-0.21	0.00	0.00	0.00	0.00	1525.56	762.78	1663.50	825.83	165.34	-7.941	0.000	0.000

## Calculated Forces

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II

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## Wind Loading - Shaft

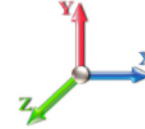
<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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

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



**Iterations** 26

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	5.168	5.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	5.168	5.68	0.00	1.200	1.656	5.00	26.663	32.00	181.9	635.2	2318.5
10.00		1.00	0.85	5.168	5.68	0.00	1.200	1.775	5.00	26.348	31.62	179.7	671.2	2326.7
15.00		1.00	0.85	5.168	5.68	0.00	1.200	1.848	5.00	25.995	31.19	177.3	688.4	2316.1
20.00		1.00	0.90	5.483	6.03	0.00	1.200	1.902	5.00	25.625	30.75	185.5	697.4	2297.3
25.00		1.00	0.95	5.747	6.32	0.00	1.200	1.945	5.00	25.247	30.30	191.5	701.6	2273.8
30.00		1.00	0.98	5.972	6.57	0.00	1.200	1.981	5.00	24.862	29.83	196.0	702.8	2247.1
35.00		1.00	1.01	6.169	6.79	0.00	1.200	2.012	5.00	24.474	29.37	199.3	701.7	2218.2
40.00		1.00	1.04	6.345	6.98	0.00	1.200	2.039	5.00	24.082	28.90	201.7	698.9	2187.7
45.00		1.00	1.07	6.504	7.15	0.00	1.200	2.063	5.00	23.688	28.43	203.4	694.7	2155.8
45.50 Bot - Section 2		1.00	1.07	6.519	7.17	0.00	1.200	2.065	0.50	2.346	2.82	20.2	69.4	214.0
50.00		1.00	1.09	6.650	7.32	0.00	1.200	2.085	4.50	21.231	25.48	186.4	629.5	3040.6
52.75 Top - Section 1		1.00	1.11	6.726	7.40	0.00	1.200	2.096	2.75	12.814	15.38	113.8	382.9	1835.8
55.00		1.00	1.12	6.785	7.46	0.00	1.200	2.105	2.25	10.395	12.47	93.1	312.0	860.1
60.00		1.00	1.14	6.910	7.60	0.00	1.200	2.123	5.00	22.814	27.38	208.1	686.6	1887.3
65.00		1.00	1.16	7.028	7.73	0.00	1.200	2.140	5.00	22.414	26.90	207.9	679.1	1856.0
70.00		1.00	1.17	7.138	7.85	0.00	1.200	2.156	5.00	22.013	26.42	207.4	671.1	1824.2
75.00 Appurtenance(s)		1.00	1.19	7.243	7.97	0.00	1.200	2.171	5.00	21.611	25.93	206.6	662.6	1791.8
80.00		1.00	1.21	7.342	8.08	0.00	1.200	2.185	5.00	21.209	25.45	205.5	653.6	1759.0
85.00		1.00	1.22	7.436	8.18	0.00	1.200	2.198	5.00	20.806	24.97	204.2	644.2	1725.8
90.00		1.00	1.24	7.526	8.28	0.00	1.200	2.211	5.00	20.402	24.48	202.7	634.4	1692.2
92.33 Bot - Section 3		1.00	1.24	7.567	8.32	0.00	1.200	2.217	2.33	9.381	11.26	93.7	293.9	779.4
95.00		1.00	1.25	7.612	8.37	0.00	1.200	2.223	2.67	10.741	12.89	107.9	337.2	1303.5
98.50 Top - Section 2		1.00	1.26	7.671	8.44	0.00	1.200	2.231	3.50	13.924	16.71	141.0	437.5	1687.8
100.00		1.00	1.27	7.695	8.46	0.00	1.200	2.234	1.50	5.906	7.09	60.0	186.6	415.6
105.00		1.00	1.28	7.774	8.55	0.00	1.200	2.245	5.00	19.427	23.31	199.4	611.2	1363.0
110.00		1.00	1.29	7.851	8.64	0.00	1.200	2.256	5.00	19.021	22.83	197.1	600.3	1334.2
115.00		1.00	1.30	7.925	8.72	0.00	1.200	2.266	5.00	18.616	22.34	194.7	589.1	1305.2
120.00		1.00	1.32	7.996	8.80	0.00	1.200	2.276	5.00	18.209	21.85	192.2	577.7	1276.0
122.00 Appurtenance(s)		1.00	1.32	8.024	8.83	0.00	1.200	2.279	2.00	7.169	8.60	75.9	229.2	503.5
125.00		1.00	1.33	8.065	8.87	0.00	1.200	2.285	3.00	10.632	12.76	113.2	339.7	745.8
130.00		1.00	1.34	8.132	8.95	0.00	1.200	2.294	5.00	17.396	20.88	186.7	554.3	1216.8
131.58 Bot - Section 4		1.00	1.34	8.153	8.97	0.00	1.200	2.297	1.58	5.423	6.51	58.4	174.3	380.4
135.00		1.00	1.35	8.197	9.02	0.00	1.200	2.303	3.42	11.710	14.05	126.7	375.6	1209.9
136.83 Top - Section 3		1.00	1.35	8.220	9.04	0.00	1.200	2.306	1.83	6.204	7.45	67.3	199.9	641.1
140.00		1.00	1.36	8.260	9.09	0.00	1.200	2.311	3.17	10.588	12.71	115.4	340.4	696.9
145.00		1.00	1.37	8.321	9.15	0.00	1.200	2.319	5.00	16.387	19.66	180.0	525.2	1075.1
147.00 Appurtenance(s)		1.00	1.37	8.345	9.18	0.00	1.200	2.322	2.00	6.440	7.73	70.9	208.1	423.6
150.00		1.00	1.38	8.381	9.22	0.00	1.200	2.327	3.00	9.538	11.45	105.5	307.7	626.2
155.00		1.00	1.39	8.439	9.28	0.00	1.200	2.335	5.00	15.571	18.69	173.5	500.2	1018.3
160.00		1.00	1.40	8.495	9.34	0.00	1.200	2.342	5.00	15.163	18.20	170.0	487.4	989.7
165.00		1.00	1.41	8.551	9.41	0.00	1.200	2.349	5.00	14.755	17.71	166.5	474.5	961.0
167.00 Appurtenance(s)		1.00	1.41	8.572	9.43	0.00	1.200	2.352	2.00	5.787	6.94	65.5	187.7	377.9
170.00		1.00	1.42	8.604	9.46	0.00	1.200	2.356	3.00	8.558	10.27	97.2	276.9	557.3
175.00		1.00	1.42	8.657	9.52	0.00	1.200	2.363	5.00	13.938	16.73	159.3	448.4	903.1
178.00 Appurtenance(s)		1.00	1.43	8.688	9.56	0.00	1.200	2.367	3.00	8.166	9.80	93.7	264.3	529.5
180.00		1.00	1.43	8.709	9.58	0.00	1.200	2.370	2.00	5.362	6.43	61.6	174.1	347.7

## Wind Loading - Shaft

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II
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<b>Totals:</b>	<b>180.00</b>	<b>6,845.7</b>	<b>61,496.4</b>
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## Discrete Appurtenance Forces

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II

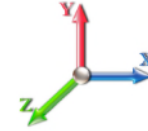


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**Load Case:** 1.2D + 1.0Di + 1.0Wi 50 mph Wind

**Dead Load Factor** 1.20

**Wind Load Factor** 1.00



**Iterations** 26

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	178.00	Samsung B2/B66A	3	8.688	9.557	0.54	0.80	4.30	642.96	0.000	0.000	41.10	0.00	0.00
2	178.00	LPA-80080-4CF	6	8.688	9.557	1.36	0.80	31.24	828.73	0.000	0.000	298.55	0.00	0.00
3	178.00	JMA Wireless	6	8.688	9.557	0.70	0.80	49.16	2641.07	0.000	0.000	469.83	0.00	0.00
4	178.00	Samsung MT6407-77A	3	8.688	9.557	0.56	0.80	10.07	809.43	0.000	0.000	96.28	0.00	0.00
5	178.00	Samsung B5/B13	3	8.688	9.557	0.54	0.80	4.30	561.83	0.000	0.000	41.10	0.00	0.00
6	178.00	MS-KI22-5 (Kickers w/o	1	8.688	9.557	1.00	1.00	12.90	387.68	0.000	0.000	123.29	0.00	0.00
7	178.00	Raycap	1	8.688	9.557	1.00	1.00	5.17	167.73	0.000	0.000	49.46	0.00	0.00
8	178.00	JMA 919003314 SBS	3	8.688	9.557	1.00	1.00	0.00	159.82	0.000	0.000	0.00	0.00	0.00
9	178.00	Low Profile Platform	1	8.688	9.557	1.00	1.00	45.96	3275.34	0.000	0.000	439.19	0.00	0.00
10	178.00	MS-HR35	1	8.688	9.557	1.00	1.00	20.35	1638.15	0.000	0.000	194.47	0.00	0.00
11	167.00	RMQP-4096-HK	1	8.572	9.429	1.00	1.00	89.28	5604.93	0.000	0.000	841.84	0.00	0.00
12	167.00	Alcatel Lucent 800 MHz	3	8.572	9.429	0.50	0.75	2.49	88.01	0.000	0.000	23.48	0.00	0.00
13	167.00	Ericsson 4415 B66A	3	8.572	9.429	0.50	0.75	3.62	433.21	0.000	0.000	34.15	0.00	0.00
14	167.00	Ericsson 4449 B71 + B85	3	8.572	9.429	0.50	0.75	4.13	321.78	0.000	0.000	38.91	0.00	0.00
15	167.00	Ericsson 4424 B25	3	8.572	9.429	0.50	0.75	4.34	694.41	0.000	0.000	40.94	0.00	0.00
16	167.00	RFS ACU-A20-N RET	4	8.572	9.429	0.59	0.75	1.28	22.76	0.000	0.000	12.07	0.00	0.00
17	167.00	AIR6449 B41	3	8.572	9.429	0.53	0.75	11.07	830.10	0.000	0.000	104.41	0.00	0.00
18	167.00	APXVAALL24_43-U-NA20	3	8.572	9.429	0.52	0.75	35.96	2226.01	0.000	0.000	339.12	0.00	0.00
19	167.00	APX16DWV-16DWVS-E-A	3	8.572	9.429	0.46	0.75	13.32	519.31	0.000	0.000	125.56	0.00	0.00
20	147.00	RMQP-496-HK	1	8.345	9.180	1.00	1.00	88.73	5561.12	0.000	0.000	814.50	0.00	0.00
21	147.00	7770	3	8.345	9.180	0.55	0.75	11.41	706.84	0.000	0.000	104.76	0.00	0.00
22	147.00	Cci DMP65R-BU8DA	6	8.345	9.180	0.55	0.75	66.56	4434.16	0.000	0.000	610.95	0.00	0.00
23	147.00	Cci DTMAPB7819VG12A	3	8.345	9.180	0.50	0.75	3.26	149.09	0.000	0.000	29.95	0.00	0.00
24	147.00	Powerwave	3	8.345	9.180	0.68	0.75	3.85	162.65	0.000	0.000	35.39	0.00	0.00
25	147.00	Ericsson RRUS 4478 B14	3	8.345	9.180	0.50	0.75	3.53	351.17	0.000	0.000	32.38	0.00	0.00
26	147.00	Ericsson RRUS 8843 B2	3	8.345	9.180	0.50	0.75	3.61	592.91	0.000	0.000	33.09	0.00	0.00
27	147.00	Ericsson RRUS 4449	3	8.345	9.180	0.50	0.75	4.07	427.89	0.000	0.000	37.34	0.00	0.00
28	147.00	Raycap DC6-48-60-18-8F	3	8.345	9.180	0.75	0.75	3.38	308.18	0.000	0.000	31.04	0.00	0.00
29	122.00	Nokia CS72188.01	1	8.024	8.826	1.00	1.00	5.42	80.71	0.000	0.000	47.83	0.00	0.00
30	75.00	Side Arms	2	7.243	7.967	1.00	1.00	20.11	249.74	0.000	0.000	160.22	0.00	0.00
31	75.00	Lucent KS-24019	1	7.243	7.967	1.00	1.00	2.16	28.98	0.000	0.000	17.21	0.00	0.00

**Totals:** 34,906.69

5,268.39

## Total Applied Force Summary

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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

**Dead Load Factor** 1.20

**Wind Load Factor** 1.00



**Iterations** 26

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		181.89	2513.85	0.00	0.00
10.00		179.74	2522.02	0.00	0.00
15.00		177.33	2511.45	0.00	0.00
20.00		185.48	2492.67	0.00	0.00
25.00		191.53	2469.14	0.00	0.00
30.00		195.99	2442.49	0.00	0.00
35.00		199.30	2413.61	0.00	0.00
40.00		201.70	2383.03	0.00	0.00
45.00		203.38	2351.11	0.00	0.00
45.50		20.19	233.54	0.00	0.00
50.00		186.37	3216.38	0.00	0.00
52.75		113.76	1943.23	0.00	0.00
55.00		93.10	948.02	0.00	0.00
60.00		208.10	2082.66	0.00	0.00
65.00		207.93	2051.39	0.00	0.00
70.00		207.42	2019.55	0.00	0.00
75.00	(3) attachments	384.05	2265.91	0.00	0.00
80.00		205.54	1954.38	0.00	0.00
85.00		204.22	1921.17	0.00	0.00
90.00		202.68	1887.59	0.00	0.00
92.33		93.70	870.54	0.00	0.00
95.00		107.93	1407.67	0.00	0.00
98.50		140.98	1824.52	0.00	0.00
100.00		59.99	474.18	0.00	0.00
105.00		199.36	1558.35	0.00	0.00
110.00		197.12	1529.58	0.00	0.00
115.00		194.73	1500.56	0.00	0.00
120.00		192.20	1471.32	0.00	0.00
122.00	(1) attachments	123.76	662.39	0.00	0.00
125.00		113.19	862.97	0.00	0.00
130.00		186.73	1412.21	0.00	0.00
131.58		58.36	442.28	0.00	0.00
135.00		126.70	1343.42	0.00	0.00
136.83		67.32	712.74	0.00	0.00
140.00		115.44	820.65	0.00	0.00
145.00		179.99	1270.50	0.00	0.00
147.00	(28) attachments	1800.34	13195.79	0.00	0.00
150.00		105.51	679.25	0.00	0.00
155.00		173.45	1106.78	0.00	0.00
160.00		170.04	1078.16	0.00	0.00
165.00		166.54	1049.40	0.00	0.00
167.00	(26) attachments	1625.96	11153.76	0.00	0.00
170.00		97.20	603.28	0.00	0.00
175.00		159.28	979.63	0.00	0.00
178.00	(28) attachments	1846.91	11688.12	0.00	0.00
180.00		61.64	347.67	0.00	0.00

## Total Applied Force Summary

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Struct Class:</b> II	Page: 26



<b>Totals:</b>	12,114.08	102,668.8 9	0.00	0.00
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## Calculated Forces

**Structure:** CT02721-S-SBA  
**Site Name:** South Windham  
**Height:** 180.00 (ft)  
**Base Elev:** 0.000 (ft)  
**Gh:** 1.1

**Topography:** 1

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

9/27/2021  
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**Load Case:** 1.2D + 1.0Di + 1.0Wi 50 mph Wind

**Iterations** 26

**Dead Load Factor** 1.20  
**Wind Load 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	-102.6	-12.17	0.00	-1638.5	0.00	1638.55	5499.24	2749.62	13525.8	6714.82	0.00	0.000	0.000	0.263
5.00	-100.1	-12.09	0.00	-1577.7	0.00	1577.70	5446.13	2723.06	13174.3	6540.31	0.03	-0.061	0.000	0.260
10.00	-97.60	-12.02	0.00	-1517.2	0.00	1517.23	5391.79	2695.89	12824.2	6366.50	0.13	-0.123	0.000	0.256
15.00	-95.08	-11.94	0.00	-1457.1	0.00	1457.15	5336.22	2668.11	12475.6	6193.44	0.29	-0.186	0.000	0.253
20.00	-92.57	-11.85	0.00	-1397.4	0.00	1397.46	5279.42	2639.71	12128.7	6021.23	0.52	-0.250	0.000	0.250
25.00	-90.09	-11.74	0.00	-1338.2	0.00	1338.23	5221.40	2610.70	11783.6	5849.92	0.82	-0.314	0.000	0.246
30.00	-87.64	-11.63	0.00	-1279.5	0.00	1279.52	5162.14	2581.07	11440.6	5679.60	1.18	-0.378	0.000	0.242
35.00	-85.21	-11.51	0.00	-1221.3	0.00	1221.36	5101.66	2550.83	11099.6	5510.34	1.61	-0.443	0.000	0.238
40.00	-82.82	-11.39	0.00	-1163.8	0.00	1163.80	5039.95	2519.97	10760.9	5342.21	2.11	-0.509	0.000	0.234
45.00	-80.46	-11.21	0.00	-1106.8	0.00	1106.88	4977.01	2488.50	10424.7	5175.29	2.68	-0.575	0.000	0.230
45.50	-80.22	-11.24	0.00	-1101.2	0.00	1101.27	4970.65	2485.32	10391.2	5158.66	2.74	-0.582	0.000	0.230
50.00	-77.00	-11.08	0.00	-1050.7	0.00	1050.71	4912.84	2456.42	10091.1	5009.65	3.32	-0.642	0.000	0.225
52.75	-75.05	-10.99	0.00	-1020.2	0.00	1020.25	3995.11	1997.56	8262.19	4101.70	3.70	-0.679	0.000	0.268
55.00	-74.09	-10.95	0.00	-995.52	0.00	995.52	3974.19	1987.10	8146.39	4044.21	4.03	-0.709	0.000	0.265
60.00	-72.00	-10.81	0.00	-940.77	0.00	940.77	3926.81	1963.41	7890.01	3916.93	4.81	-0.784	0.000	0.259
65.00	-69.94	-10.66	0.00	-886.72	0.00	886.72	3878.20	1939.10	7635.05	3790.36	5.67	-0.859	0.000	0.252
70.00	-67.91	-10.51	0.00	-833.40	0.00	833.40	3828.36	1914.18	7381.67	3664.57	6.61	-0.933	0.000	0.245
75.00	-65.63	-10.18	0.00	-780.83	0.00	780.83	3777.30	1888.65	7130.01	3539.64	7.63	-1.008	0.000	0.238
80.00	-63.67	-10.02	0.00	-729.96	0.00	729.96	3725.00	1862.50	6880.23	3415.63	8.72	-1.082	0.000	0.231
85.00	-61.74	-9.86	0.00	-679.87	0.00	679.87	3671.48	1835.74	6632.46	3292.63	9.89	-1.156	0.000	0.223
90.00	-59.85	-9.67	0.00	-630.60	0.00	630.60	3616.73	1808.36	6386.87	3170.71	11.14	-1.229	0.000	0.215
92.33	-58.97	-9.59	0.00	-608.04	0.00	608.04	3590.75	1795.38	6273.05	3114.21	11.75	-1.264	0.000	0.212
95.00	-57.56	-9.50	0.00	-582.45	0.00	582.45	3560.74	1780.37	6143.61	3049.94	12.47	-1.303	0.000	0.207
98.50	-55.74	-9.35	0.00	-549.20	0.00	549.20	2386.86	1193.43	4124.78	2047.71	13.45	-1.354	0.000	0.292
100.00	-55.25	-9.34	0.00	-535.17	0.00	535.17	2378.02	1189.01	4080.56	2025.76	13.87	-1.376	0.000	0.287
105.00	-53.69	-9.18	0.00	-488.50	0.00	488.50	2347.74	1173.87	3933.38	1952.70	15.36	-1.466	0.000	0.273
110.00	-52.15	-9.02	0.00	-442.59	0.00	442.59	2316.23	1158.11	3786.65	1879.85	16.95	-1.553	0.000	0.258
115.00	-50.64	-8.86	0.00	-397.48	0.00	397.48	2283.49	1141.75	3640.52	1807.31	18.62	-1.638	0.000	0.242
120.00	-49.17	-8.67	0.00	-353.19	0.00	353.19	2249.53	1124.76	3495.14	1735.13	20.38	-1.720	0.000	0.225
122.00	-48.50	-8.56	0.00	-335.84	0.00	335.84	2235.60	1117.80	3437.23	1706.38	21.11	-1.753	0.000	0.219
125.00	-47.64	-8.47	0.00	-310.15	0.00	310.15	2214.33	1107.17	3350.65	1663.40	22.22	-1.800	0.000	0.208
130.00	-46.22	-8.28	0.00	-267.79	0.00	267.79	2177.91	1088.96	3207.21	1592.19	24.15	-1.873	0.000	0.189
131.58	-45.78	-8.24	0.00	-254.68	0.00	254.68	2166.12	1083.06	3162.03	1569.76	24.77	-1.896	0.000	0.183
135.00	-44.44	-8.09	0.00	-226.54	0.00	226.54	2140.26	1070.13	3064.96	1521.58	26.15	-1.943	0.000	0.170
136.83	-43.72	-8.02	0.00	-211.71	0.00	211.71	1821.16	910.58	2623.48	1302.41	26.90	-1.967	0.000	0.187
140.00	-42.90	-7.92	0.00	-186.30	0.00	186.30	1802.58	901.29	2550.43	1266.14	28.22	-2.006	0.000	0.171
145.00	-41.63	-7.72	0.00	-146.72	0.00	146.72	1772.26	886.13	2435.64	1209.15	30.35	-2.064	0.000	0.145
147.00	-28.51	-5.46	0.00	-131.28	0.00	131.28	1759.78	879.89	2389.94	1186.47	31.22	-2.086	0.000	0.127
150.00	-27.83	-5.34	0.00	-114.92	0.00	114.92	1740.70	870.35	2321.67	1152.58	32.54	-2.115	0.000	0.116
155.00	-26.72	-5.15	0.00	-88.20	0.00	88.20	1707.91	853.96	2208.68	1096.48	34.78	-2.157	0.000	0.096
160.00	-25.65	-4.95	0.00	-62.48	0.00	62.48	1673.90	836.95	2096.80	1040.94	37.06	-2.192	0.000	0.075
165.00	-24.61	-4.75	0.00	-37.73	0.00	37.73	1638.66	819.33	1986.20	986.03	39.37	-2.217	0.000	0.053
167.00	-13.52	-2.69	0.00	-28.24	0.00	28.24	1624.22	812.11	1942.34	964.26	40.30	-2.225	0.000	0.038
170.00	-12.92	-2.57	0.00	-20.16	0.00	20.16	1602.19	801.09	1877.01	931.83	41.70	-2.233	0.000	0.030
175.00	-11.95	-2.38	0.00	-7.28	0.00	7.28	1564.49	782.24	1769.40	878.40	44.04	-2.241	0.000	0.016
178.00	-0.34	-0.08	0.00	-0.15	0.00	0.15	1541.28	770.64	1705.64	846.75	45.45	-2.243	0.000	0.000
180.00	0.00	-0.06	0.00	0.00	0.00	0.00	1525.56	762.78	1663.50	825.83	46.39	-2.243	0.000	0.000



## Calculated Forces

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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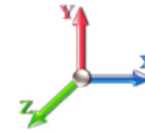
## Seismic Segment Forces (Factored)

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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<b>Load Case:</b> 1.2D + 1.0E						<b>Iterations</b> 23
<b>Gust Response Factor</b>	1.10			<b>Sds</b>	0.18	<b>Ss</b> 0.17
<b>Dead Load Factor</b>	1.20	<b>Seismic Load Factor</b>	1.00	<b>Sd1</b>	0.10	<b>S1</b> 0.06
<b>Wind Load Factor</b>	0.00	<b>Structure Frequency (f1)</b>	0.29	<b>SA</b>	0.03	<b>Seismic Importance Factor</b> 1.00



Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1402.7	0.00	0.03	0.02	24.19	
10.00		1379.5	0.01	0.05	0.03	35.11	
15.00		1356.4	0.01	0.06	0.03	40.45	
20.00		1333.2	0.02	0.07	0.04	42.99	
25.00		1310.1	0.04	0.07	0.04	44.09	
30.00		1286.9	0.05	0.07	0.04	44.50	
35.00		1263.8	0.07	0.07	0.04	44.63	
40.00		1240.6	0.09	0.07	0.04	44.70	
45.00		1217.5	0.12	0.07	0.03	44.76	
45.50	Bot - Section 2	120.48	0.12	0.07	0.03	4.44	
50.00		2009.2	0.15	0.07	0.03	75.23	
52.75	Top - Section 1	1210.7	0.16	0.07	0.03	45.69	
55.00		456.74	0.18	0.07	0.03	17.32	
60.00		1000.5	0.21	0.06	0.02	37.92	
65.00		980.74	0.25	0.06	0.02	36.31	
70.00		960.90	0.29	0.05	0.01	33.44	
75.00	Appurtenance(s)	1025.0	0.33	0.04	0.01	31.48	
80.00		921.21	0.37	0.03	0.01	22.33	
85.00		901.37	0.42	0.01	0.01	13.68	
90.00		881.52	0.47	-0.01	0.01	3.43	
92.33	Bot - Section 3	404.58	0.50	-0.02	0.01	-0.75	
95.00		805.25	0.53	-0.03	0.01	-6.86	
98.50	Top - Section 2	1041.9	0.57	-0.04	0.01	-17.69	
100.00		190.85	0.58	-0.05	0.01	-3.89	
105.00		626.51	0.64	-0.07	0.02	-18.91	
110.00		611.62	0.71	-0.09	0.03	-22.55	
115.00		596.74	0.77	-0.11	0.05	-23.88	
120.00		581.86	0.84	-0.12	0.07	-23.00	
122.00	Appurtenance(s)	245.08	0.87	-0.12	0.08	-9.40	
125.00		338.40	0.91	-0.12	0.09	-12.03	
130.00		552.09	0.99	-0.11	0.12	-15.54	
131.58	Bot - Section 4	171.73	1.01	-0.11	0.14	-4.31	
135.00		695.28	1.06	-0.09	0.17	-12.11	
136.83	Top - Section 3	367.66	1.09	-0.07	0.18	-4.66	
140.00		297.08	1.14	-0.04	0.21	-1.01	
145.00		458.26	1.23	0.03	0.27	6.36	
147.00	Appurtenance(s)	4143.0	1.26	0.07	0.30	90.02	
150.00		265.43	1.31	0.14	0.35	9.16	
155.00		431.80	1.40	0.29	0.43	25.24	
160.00		418.58	1.49	0.48	0.53	35.94	
165.00		405.35	1.59	0.74	0.65	47.32	
167.00	Appurtenance(s)	4085.3	1.63	0.86	0.71	531.44	
170.00		233.68	1.69	1.07	0.79	35.33	
175.00		378.89	1.79	1.48	0.95	71.71	
178.00	Appurtenance(s)	3455.3	1.85	1.77	1.06	739.09	

## Seismic Segment Forces (Factored)

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021	
<b>Site Name:</b> South Windham	<b>Exposure:</b> C		
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00		
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil		
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II	Page: 30



180.00	144.67	1.89	1.98	1.14	33.43	
<b>Totals:</b>	<b>44,206.7</b>				<b>2,135.1</b>	<b>Total Wind: 47,283.2</b>

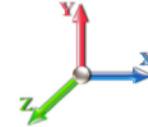
Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

## Calculated Forces

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



<b>Load Case:</b> 1.2D + 1.0E		<b>Iterations</b> 23
<b>Gust Response Factor</b>	1.10	<b>Sds</b> 0.18
<b>Dead Load Factor</b>	1.20	<b>Ss</b> 0.17
<b>Wind Load Factor</b>	0.00	<b>S1</b> 0.06
<b>Seismic Load Factor</b>	1.00	<b>Sd1</b> 0.10
<b>Structure Frequency (f1)</b>	0.29	<b>SA</b> 0.03
<b>Seismic Importance Factor</b>	1.00	



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-59.31	-2.32	0.00	-325.10	0.00	325.10	5499.24	2749.62	13525.8	6714.82	0.00	0.00	0.00	0.059
5.00	-57.43	-2.30	0.00	-313.52	0.00	313.52	5446.13	2723.06	13174.3	6540.31	0.01	-0.01	0.058	
10.00	-55.58	-2.28	0.00	-301.99	0.00	301.99	5391.79	2695.89	12824.2	6366.50	0.03	-0.02	0.058	
15.00	-53.76	-2.25	0.00	-290.59	0.00	290.59	5336.22	2668.11	12475.6	6193.44	0.06	-0.04	0.057	
20.00	-51.96	-2.22	0.00	-279.33	0.00	279.33	5279.42	2639.71	12128.7	6021.23	0.10	-0.05	0.056	
25.00	-50.20	-2.18	0.00	-268.24	0.00	268.24	5221.40	2610.70	11783.6	5849.92	0.16	-0.06	0.055	
30.00	-48.46	-2.15	0.00	-257.32	0.00	257.32	5162.14	2581.07	11440.6	5679.60	0.24	-0.08	0.055	
35.00	-46.74	-2.11	0.00	-246.58	0.00	246.58	5101.66	2550.83	11099.6	5510.34	0.32	-0.09	0.054	
40.00	-45.06	-2.08	0.00	-236.02	0.00	236.02	5039.95	2519.97	10760.9	5342.21	0.42	-0.10	0.053	
45.00	-43.40	-2.03	0.00	-225.64	0.00	225.64	4977.01	2488.50	10424.7	5175.29	0.54	-0.12	0.052	
45.50	-43.24	-2.03	0.00	-224.62	0.00	224.62	4970.65	2485.32	10391.2	5158.66	0.55	-0.12	0.052	
50.00	-40.65	-1.96	0.00	-215.47	0.00	215.47	4912.84	2456.42	10091.1	5009.65	0.66	-0.13	0.051	
52.75	-39.09	-1.92	0.00	-210.09	0.00	210.09	3995.11	1997.56	8262.19	4101.70	0.74	-0.14	0.061	
55.00	-38.45	-1.90	0.00	-205.78	0.00	205.78	3974.19	1987.10	8146.39	4044.21	0.81	-0.14	0.061	
60.00	-37.06	-1.87	0.00	-196.26	0.00	196.26	3926.81	1963.41	7890.01	3916.93	0.96	-0.16	0.060	
65.00	-35.68	-1.84	0.00	-186.90	0.00	186.90	3878.20	1939.10	7635.05	3790.36	1.14	-0.17	0.059	
70.00	-34.34	-1.81	0.00	-177.69	0.00	177.69	3828.36	1914.18	7381.67	3664.57	1.33	-0.19	0.057	
75.00	-32.91	-1.79	0.00	-168.63	0.00	168.63	3777.30	1888.65	7130.01	3539.64	1.54	-0.21	0.056	
80.00	-31.61	-1.77	0.00	-159.70	0.00	159.70	3725.00	1862.50	6880.23	3415.63	1.76	-0.22	0.055	
85.00	-30.33	-1.76	0.00	-150.86	0.00	150.86	3671.48	1835.74	6632.46	3292.63	2.00	-0.24	0.054	
90.00	-29.08	-1.76	0.00	-142.07	0.00	142.07	3616.73	1808.36	6386.87	3170.71	2.26	-0.25	0.053	
92.33	-28.50	-1.76	0.00	-137.97	0.00	137.97	3590.75	1795.38	6273.05	3114.21	2.39	-0.26	0.052	
95.00	-27.43	-1.76	0.00	-133.29	0.00	133.29	3560.74	1780.37	6143.61	3049.94	2.53	-0.27	0.051	
98.50	-26.04	-1.75	0.00	-127.14	0.00	127.14	2386.86	1193.43	4124.78	2047.71	2.74	-0.28	0.073	
100.00	-25.75	-1.76	0.00	-124.51	0.00	124.51	2378.02	1189.01	4080.56	2025.76	2.83	-0.29	0.072	
105.00	-24.81	-1.76	0.00	-115.72	0.00	115.72	2347.74	1173.87	3933.38	1952.70	3.14	-0.31	0.070	
110.00	-23.88	-1.77	0.00	-106.91	0.00	106.91	2316.23	1158.11	3786.65	1879.85	3.48	-0.33	0.067	
115.00	-22.97	-1.77	0.00	-98.08	0.00	98.08	2283.49	1141.75	3640.52	1807.31	3.83	-0.35	0.064	
120.00	-22.07	-1.77	0.00	-89.23	0.00	89.23	2249.53	1124.76	3495.14	1735.13	4.21	-0.37	0.061	
122.00	-21.70	-1.77	0.00	-85.69	0.00	85.69	2235.60	1117.80	3437.23	1706.38	4.37	-0.38	0.060	
125.00	-21.17	-1.77	0.00	-80.38	0.00	80.38	2214.33	1107.17	3350.65	1663.40	4.61	-0.39	0.058	
130.00	-20.32	-1.77	0.00	-71.52	0.00	71.52	2177.91	1088.96	3207.21	1592.19	5.03	-0.41	0.054	
131.58	-20.05	-1.77	0.00	-68.72	0.00	68.72	2166.12	1083.06	3162.03	1569.76	5.17	-0.42	0.053	
135.00	-19.08	-1.77	0.00	-62.66	0.00	62.66	2140.26	1070.13	3064.96	1521.58	5.47	-0.43	0.050	
136.83	-18.57	-1.77	0.00	-59.42	0.00	59.42	1821.16	910.58	2623.48	1302.41	5.64	-0.44	0.056	
140.00	-18.09	-1.77	0.00	-53.82	0.00	53.82	1802.58	901.29	2550.43	1266.14	5.93	-0.45	0.053	
145.00	-17.34	-1.76	0.00	-44.98	0.00	44.98	1772.26	886.13	2435.64	1209.15	6.41	-0.47	0.047	
147.00	-12.29	-1.63	0.00	-41.46	0.00	41.46	1759.78	879.89	2389.94	1186.47	6.61	-0.47	0.042	
150.00	-11.92	-1.62	0.00	-36.57	0.00	36.57	1740.70	870.35	2321.67	1152.58	6.91	-0.48	0.039	
155.00	-11.31	-1.59	0.00	-28.46	0.00	28.46	1707.91	853.96	2208.68	1096.48	7.42	-0.49	0.033	
160.00	-10.72	-1.55	0.00	-20.50	0.00	20.50	1673.90	836.95	2096.80	1040.94	7.94	-0.51	0.026	
165.00	-10.15	-1.50	0.00	-12.73	0.00	12.73	1638.66	819.33	1986.20	986.03	8.48	-0.51	0.019	
167.00	-5.22	-0.93	0.00	-9.73	0.00	9.73	1624.22	812.11	1942.34	964.26	8.69	-0.52	0.013	
170.00	-4.89	-0.89	0.00	-6.95	0.00	6.95	1602.19	801.09	1877.01	931.83	9.02	-0.52	0.011	
175.00	-4.36	-0.81	0.00	-2.51	0.00	2.51	1564.49	782.24	1769.40	878.40	9.57	-0.52	0.006	
178.00	-0.17	-0.03	0.00	-0.07	0.00	0.07	1541.28	770.64	1705.64	846.75	9.89	-0.52	0.000	
180.00	0.00	-0.03	0.00	0.00	0.00	0.00	1525.56	762.78	1663.50	825.83	10.11	-0.52	0.000	

## Calculated Forces

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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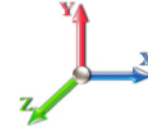
## Seismic Segment Forces (Factored)

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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<b>Load Case:</b> 0.9D + 1.0E						<b>Iterations</b> 23
<b>Gust Response Factor</b>	1.10			<b>Sds</b>	0.18	<b>Ss</b> 0.17
<b>Dead Load Factor</b>	0.90	<b>Seismic Load Factor</b>	1.00	<b>Sd1</b>	0.10	<b>S1</b> 0.06
<b>Wind Load Factor</b>	0.00	<b>Structure Frequency (f1)</b>	0.29	<b>SA</b>	0.03	<b>Seismic Importance Factor</b> 1.00



Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1402.7	0.00	0.03	0.02	24.19	
10.00		1379.5	0.01	0.05	0.03	35.11	
15.00		1356.4	0.01	0.06	0.03	40.45	
20.00		1333.2	0.02	0.07	0.04	42.99	
25.00		1310.1	0.04	0.07	0.04	44.09	
30.00		1286.9	0.05	0.07	0.04	44.50	
35.00		1263.8	0.07	0.07	0.04	44.63	
40.00		1240.6	0.09	0.07	0.04	44.70	
45.00		1217.5	0.12	0.07	0.03	44.76	
45.50	Bot - Section 2	120.48	0.12	0.07	0.03	4.44	
50.00		2009.2	0.15	0.07	0.03	75.23	
52.75	Top - Section 1	1210.7	0.16	0.07	0.03	45.69	
55.00		456.74	0.18	0.07	0.03	17.32	
60.00		1000.5	0.21	0.06	0.02	37.92	
65.00		980.74	0.25	0.06	0.02	36.31	
70.00		960.90	0.29	0.05	0.01	33.44	
75.00	Appurtenance(s)	1025.0	0.33	0.04	0.01	31.48	
80.00		921.21	0.37	0.03	0.01	22.33	
85.00		901.37	0.42	0.01	0.01	13.68	
90.00		881.52	0.47	-0.01	0.01	3.43	
92.33	Bot - Section 3	404.58	0.50	-0.02	0.01	-0.75	
95.00		805.25	0.53	-0.03	0.01	-6.86	
98.50	Top - Section 2	1041.9	0.57	-0.04	0.01	-17.69	
100.00		190.85	0.58	-0.05	0.01	-3.89	
105.00		626.51	0.64	-0.07	0.02	-18.91	
110.00		611.62	0.71	-0.09	0.03	-22.55	
115.00		596.74	0.77	-0.11	0.05	-23.88	
120.00		581.86	0.84	-0.12	0.07	-23.00	
122.00	Appurtenance(s)	245.08	0.87	-0.12	0.08	-9.40	
125.00		338.40	0.91	-0.12	0.09	-12.03	
130.00		552.09	0.99	-0.11	0.12	-15.54	
131.58	Bot - Section 4	171.73	1.01	-0.11	0.14	-4.31	
135.00		695.28	1.06	-0.09	0.17	-12.11	
136.83	Top - Section 3	367.66	1.09	-0.07	0.18	-4.66	
140.00		297.08	1.14	-0.04	0.21	-1.01	
145.00		458.26	1.23	0.03	0.27	6.36	
147.00	Appurtenance(s)	4143.0	1.26	0.07	0.30	90.02	
150.00		265.43	1.31	0.14	0.35	9.16	
155.00		431.80	1.40	0.29	0.43	25.24	
160.00		418.58	1.49	0.48	0.53	35.94	
165.00		405.35	1.59	0.74	0.65	47.32	
167.00	Appurtenance(s)	4085.3	1.63	0.86	0.71	531.44	
170.00		233.68	1.69	1.07	0.79	35.33	
175.00		378.89	1.79	1.48	0.95	71.71	
178.00	Appurtenance(s)	3455.3	1.85	1.77	1.06	739.09	

## Seismic Segment Forces (Factored)

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021	
<b>Site Name:</b> South Windham	<b>Exposure:</b> C		
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00		
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil		
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II	Page: 34



180.00	144.67	1.89	1.98	1.14	33.43	
<b>Totals:</b>	<b>44,206.7</b>				<b>2,135.1</b>	<b>Total Wind: 47,283.2</b>

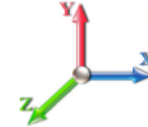
Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

## Calculated Forces

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



<b>Load Case:</b> 0.9D + 1.0E		<b>Iterations</b> 23
<b>Gust Response Factor</b> 1.10	<b>Sds</b> 0.18	<b>Ss</b> 0.17
<b>Dead Load Factor</b> 0.90	<b>Seismic Load Factor</b> 1.00	<b>S1</b> 0.06
<b>Wind Load Factor</b> 0.00	<b>Structure Frequency (f1)</b> 0.29	<b>SA</b> 0.03
	<b>Seismic Importance Factor</b> 1.00	



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-44.49	-2.32	0.00	-320.45	0.00	320.45	5499.24	2749.62	13525.8	6714.82	0.00	0.00	0.00	0.056
5.00	-43.08	-2.30	0.00	-308.87	0.00	308.87	5446.13	2723.06	13174.3	6540.31	0.01	-0.01	0.055	
10.00	-41.69	-2.27	0.00	-297.37	0.00	297.37	5391.79	2695.89	12824.2	6366.50	0.03	-0.02	0.054	
15.00	-40.32	-2.24	0.00	-286.00	0.00	286.00	5336.22	2668.11	12475.6	6193.44	0.06	-0.04	0.054	
20.00	-38.97	-2.21	0.00	-274.80	0.00	274.80	5279.42	2639.71	12128.7	6021.23	0.10	-0.05	0.053	
25.00	-37.65	-2.17	0.00	-263.77	0.00	263.77	5221.40	2610.70	11783.6	5849.92	0.16	-0.06	0.052	
30.00	-36.34	-2.13	0.00	-252.93	0.00	252.93	5162.14	2581.07	11440.6	5679.60	0.23	-0.07	0.052	
35.00	-35.06	-2.09	0.00	-242.28	0.00	242.28	5101.66	2550.83	11099.6	5510.34	0.32	-0.09	0.051	
40.00	-33.79	-2.05	0.00	-231.82	0.00	231.82	5039.95	2519.97	10760.9	5342.21	0.41	-0.10	0.050	
45.00	-32.55	-2.01	0.00	-221.56	0.00	221.56	4977.01	2488.50	10424.7	5175.29	0.53	-0.11	0.049	
45.50	-32.43	-2.01	0.00	-220.55	0.00	220.55	4970.65	2485.32	10391.2	5158.66	0.54	-0.11	0.049	
50.00	-30.49	-1.93	0.00	-211.51	0.00	211.51	4912.84	2456.42	10091.1	5009.65	0.65	-0.13	0.048	
52.75	-29.32	-1.89	0.00	-206.19	0.00	206.19	3995.11	1997.56	8262.19	4101.70	0.73	-0.13	0.058	
55.00	-28.84	-1.88	0.00	-201.94	0.00	201.94	3974.19	1987.10	8146.39	4044.21	0.79	-0.14	0.057	
60.00	-27.79	-1.84	0.00	-192.55	0.00	192.55	3926.81	1963.41	7890.01	3916.93	0.95	-0.16	0.056	
65.00	-26.76	-1.81	0.00	-183.33	0.00	183.33	3878.20	1939.10	7635.05	3790.36	1.12	-0.17	0.055	
70.00	-25.75	-1.78	0.00	-174.27	0.00	174.27	3828.36	1914.18	7381.67	3664.57	1.31	-0.19	0.054	
75.00	-24.68	-1.75	0.00	-165.36	0.00	165.36	3777.30	1888.65	7130.01	3539.64	1.51	-0.20	0.053	
80.00	-23.71	-1.73	0.00	-156.59	0.00	156.59	3725.00	1862.50	6880.23	3415.63	1.73	-0.22	0.052	
85.00	-22.75	-1.72	0.00	-147.92	0.00	147.92	3671.48	1835.74	6632.46	3292.63	1.97	-0.23	0.051	
90.00	-21.81	-1.72	0.00	-139.30	0.00	139.30	3616.73	1808.36	6386.87	3170.71	2.22	-0.25	0.050	
92.33	-21.37	-1.72	0.00	-135.29	0.00	135.29	3590.75	1795.38	6273.05	3114.21	2.35	-0.26	0.049	
95.00	-20.57	-1.72	0.00	-130.70	0.00	130.70	3560.74	1780.37	6143.61	3049.94	2.49	-0.27	0.049	
98.50	-19.53	-1.72	0.00	-124.67	0.00	124.67	2386.86	1193.43	4124.78	2047.71	2.69	-0.28	0.069	
100.00	-19.31	-1.72	0.00	-122.09	0.00	122.09	2378.02	1189.01	4080.56	2025.76	2.78	-0.28	0.068	
105.00	-18.60	-1.73	0.00	-113.48	0.00	113.48	2347.74	1173.87	3933.38	1952.70	3.09	-0.30	0.066	
110.00	-17.91	-1.73	0.00	-104.85	0.00	104.85	2316.23	1158.11	3786.65	1879.85	3.42	-0.32	0.064	
115.00	-17.22	-1.73	0.00	-96.20	0.00	96.20	2283.49	1141.75	3640.52	1807.31	3.77	-0.34	0.061	
120.00	-16.55	-1.73	0.00	-87.55	0.00	87.55	2249.53	1124.76	3495.14	1735.13	4.14	-0.36	0.058	
122.00	-16.27	-1.73	0.00	-84.09	0.00	84.09	2235.60	1117.80	3437.23	1706.38	4.29	-0.37	0.057	
125.00	-15.88	-1.73	0.00	-78.89	0.00	78.89	2214.33	1107.17	3350.65	1663.40	4.53	-0.38	0.055	
130.00	-15.23	-1.73	0.00	-70.22	0.00	70.22	2177.91	1088.96	3207.21	1592.19	4.94	-0.40	0.051	
131.58	-15.03	-1.73	0.00	-67.48	0.00	67.48	2166.12	1083.06	3162.03	1569.76	5.08	-0.41	0.050	
135.00	-14.31	-1.73	0.00	-61.56	0.00	61.56	2140.26	1070.13	3064.96	1521.58	5.38	-0.42	0.047	
136.83	-13.92	-1.73	0.00	-58.39	0.00	58.39	1821.16	910.58	2623.48	1302.41	5.54	-0.43	0.052	
140.00	-13.56	-1.73	0.00	-52.91	0.00	52.91	1802.58	901.29	2550.43	1266.14	5.83	-0.44	0.049	
145.00	-13.00	-1.72	0.00	-44.26	0.00	44.26	1772.26	886.13	2435.64	1209.15	6.30	-0.46	0.044	
147.00	-9.22	-1.60	0.00	-40.81	0.00	40.81	1759.78	879.89	2389.94	1186.47	6.49	-0.46	0.040	
150.00	-8.94	-1.59	0.00	-36.00	0.00	36.00	1740.70	870.35	2321.67	1152.58	6.78	-0.47	0.036	
155.00	-8.48	-1.57	0.00	-28.03	0.00	28.03	1707.91	853.96	2208.68	1096.48	7.29	-0.49	0.031	
160.00	-8.04	-1.53	0.00	-20.20	0.00	20.20	1673.90	836.95	2096.80	1040.94	7.80	-0.50	0.024	
165.00	-7.61	-1.48	0.00	-12.56	0.00	12.56	1638.66	819.33	1986.20	986.03	8.33	-0.50	0.017	
167.00	-3.91	-0.91	0.00	-9.60	0.00	9.60	1624.22	812.11	1942.34	964.26	8.54	-0.51	0.012	
170.00	-3.67	-0.88	0.00	-6.86	0.00	6.86	1602.19	801.09	1877.01	931.83	8.86	-0.51	0.010	
175.00	-3.27	-0.80	0.00	-2.47	0.00	2.47	1564.49	782.24	1769.40	878.40	9.39	-0.51	0.005	
178.00	-0.13	-0.03	0.00	-0.07	0.00	0.07	1541.28	770.64	1705.64	846.75	9.72	-0.51	0.000	
180.00	0.00	-0.03	0.00	0.00	0.00	0.00	1525.56	762.78	1663.50	825.83	9.93	-0.51	0.000	



## Calculated Forces

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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## Wind Loading - Shaft

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II

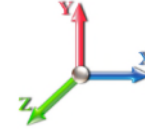


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**Load Case:** 1.0D + 1.0W 60 mph Wind

**Iterations** 24

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



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	7.442	8.19	282.00	0.750	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	7.442	8.19	277.42	0.750	0.000	5.00	25.283	18.96	155.2	0.0	1402.7
10.00		1.00	0.85	7.442	8.19	272.84	0.750	0.000	5.00	24.868	18.65	152.7	0.0	1379.6
15.00		1.00	0.85	7.442	8.19	268.26	0.750	0.000	5.00	24.454	18.34	150.1	0.0	1356.4
20.00		1.00	0.90	7.896	8.69	271.60	0.750	0.000	5.00	24.040	18.03	156.6	0.0	1333.3
25.00		1.00	0.95	8.276	9.10	273.22	0.750	0.000	5.00	23.626	17.72	161.3	0.0	1310.1
30.00		1.00	0.98	8.600	9.46	273.59	0.750	0.000	5.00	23.212	17.41	164.7	0.0	1287.0
35.00		1.00	1.01	8.883	9.77	273.06	0.750	0.000	5.00	22.797	17.10	167.1	0.0	1263.8
40.00		1.00	1.04	9.137	10.05	271.85	0.750	0.000	5.00	22.383	16.79	168.7	0.0	1240.7
45.00		1.00	1.07	9.366	10.30	270.10	0.750	0.000	5.00	21.969	16.48	169.8	0.0	1217.5
45.50	Bot - Section 2	1.00	1.07	9.388	10.33	269.90	0.750	0.000	0.50	2.174	1.63	16.8	0.0	120.5
50.00		1.00	1.09	9.576	10.53	267.91	0.750	0.000	4.50	19.667	14.75	155.4	0.0	2009.2
52.75	Top - Section 1	1.00	1.11	9.685	10.65	266.55	0.750	0.000	2.75	11.854	8.89	94.7	0.0	1210.7
55.00		1.00	1.12	9.770	10.75	269.40	0.750	0.000	2.25	9.605	7.20	77.4	0.0	456.7
60.00		1.00	1.14	9.951	10.95	266.58	0.750	0.000	5.00	21.045	15.78	172.8	0.0	1000.6
65.00		1.00	1.16	10.120	11.13	263.49	0.750	0.000	5.00	20.631	15.47	172.2	0.0	980.7
70.00		1.00	1.17	10.279	11.31	260.17	0.750	0.000	5.00	20.216	15.16	171.4	0.0	960.9
75.00	Appurtenance(s)	1.00	1.19	10.430	11.47	256.64	0.750	0.000	5.00	19.802	14.85	170.4	0.0	941.1
80.00		1.00	1.21	10.572	11.63	252.93	0.750	0.000	5.00	19.388	14.54	169.1	0.0	921.2
85.00		1.00	1.22	10.708	11.78	249.05	0.750	0.000	5.00	18.974	14.23	167.6	0.0	901.4
90.00		1.00	1.24	10.838	11.92	245.02	0.750	0.000	5.00	18.559	13.92	165.9	0.0	881.5
92.33	Bot - Section 3	1.00	1.24	10.896	11.99	243.10	0.750	0.000	2.33	8.519	6.39	76.6	0.0	404.6
95.00		1.00	1.25	10.962	12.06	240.86	0.750	0.000	2.67	9.753	7.32	88.2	0.0	805.3
98.50	Top - Section 2	1.00	1.26	11.046	12.15	237.87	0.750	0.000	3.50	12.622	9.47	115.0	0.0	1041.9
100.00		1.00	1.27	11.081	12.19	239.80	0.750	0.000	1.50	5.348	4.01	48.9	0.0	190.9
105.00		1.00	1.28	11.195	12.31	235.41	0.750	0.000	5.00	17.556	13.17	162.1	0.0	626.5
110.00		1.00	1.29	11.305	12.44	230.92	0.750	0.000	5.00	17.142	12.86	159.9	0.0	611.6
115.00		1.00	1.30	11.412	12.55	226.33	0.750	0.000	5.00	16.727	12.55	157.5	0.0	596.7
120.00		1.00	1.32	11.514	12.67	221.64	0.750	0.000	5.00	16.313	12.23	155.0	0.0	581.9
122.00	Appurtenance(s)	1.00	1.32	11.554	12.71	219.75	0.750	0.000	2.00	6.409	4.81	61.1	0.0	228.6
125.00		1.00	1.33	11.614	12.78	216.87	0.750	0.000	3.00	9.490	7.12	90.9	0.0	338.4
130.00		1.00	1.34	11.710	12.88	212.02	0.750	0.000	5.00	15.485	11.61	149.6	0.0	552.1
131.58	Bot - Section 4	1.00	1.34	11.740	12.91	210.47	0.750	0.000	1.58	4.817	3.61	46.7	0.0	171.7
135.00		1.00	1.35	11.803	12.98	207.09	0.750	0.000	3.42	10.398	7.80	101.3	0.0	695.3
136.83	Top - Section 3	1.00	1.35	11.837	13.02	205.27	0.750	0.000	1.83	5.500	4.12	53.7	0.0	367.7
140.00		1.00	1.36	11.894	13.08	205.07	0.750	0.000	3.17	9.369	7.03	91.9	0.0	297.1
145.00		1.00	1.37	11.982	13.18	200.01	0.750	0.000	5.00	14.454	10.84	142.9	0.0	458.3
147.00	Appurtenance(s)	1.00	1.37	12.017	13.22	197.97	0.750	0.000	2.00	5.666	4.25	56.2	0.0	179.6
150.00		1.00	1.38	12.068	13.27	194.89	0.750	0.000	3.00	8.374	6.28	83.4	0.0	265.4
155.00		1.00	1.39	12.152	13.37	189.71	0.750	0.000	5.00	13.626	10.22	136.6	0.0	431.8
160.00		1.00	1.40	12.233	13.46	184.47	0.750	0.000	5.00	13.212	9.91	133.3	0.0	418.6
165.00		1.00	1.41	12.313	13.54	179.17	0.750	0.000	5.00	12.797	9.60	130.0	0.0	405.3
167.00	Appurtenance(s)	1.00	1.41	12.344	13.58	177.04	0.750	0.000	2.00	5.003	3.75	50.9	0.0	158.4
170.00		1.00	1.42	12.390	13.63	173.82	0.750	0.000	3.00	7.380	5.54	75.4	0.0	233.7
175.00		1.00	1.42	12.466	13.71	168.42	0.750	0.000	5.00	11.969	8.98	123.1	0.0	378.9
178.00	Appurtenance(s)	1.00	1.43	12.511	13.76	165.16	0.750	0.000	3.00	6.983	5.24	72.1	0.0	221.0
180.00		1.00	1.43	12.540	13.79	162.97	0.750	0.000	2.00	4.572	3.43	47.3	0.0	144.7

## Wind Loading - Shaft

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II
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<b>Totals:</b>	<b>180.00</b>	<b>5,589.6</b>	<b>32,981.5</b>
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## Discrete Appurtenance Forces

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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

**Dead Load Factor** 1.00

**Wind Load Factor** 1.00



**Iterations** 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	178.00	Samsung B2/B66A	3	12.511	13.762	0.54	0.80	3.01	253.20	0.000	0.000	41.38	0.00	0.00
2	178.00	LPA-80080-4CF	6	12.511	13.762	1.36	0.80	21.30	72.00	0.000	0.000	293.10	0.00	0.00
3	178.00	JMA Wireless	6	12.511	13.762	0.70	0.80	41.22	276.00	0.000	0.000	567.23	0.00	0.00
4	178.00	Samsung MT6407-77A	3	12.511	13.762	0.56	0.80	7.88	238.20	0.000	0.000	108.43	0.00	0.00
5	178.00	Samsung B5/B13	3	12.511	13.762	0.54	0.80	3.01	210.90	0.000	0.000	41.38	0.00	0.00
6	178.00	MS-KI22-5 (Kickers w/o	1	12.511	13.762	1.00	1.00	5.33	146.00	0.000	0.000	73.35	0.00	0.00
7	178.00	Raycap	1	12.511	13.762	1.00	1.00	4.06	32.00	0.000	0.000	55.87	0.00	0.00
8	178.00	JMA 919003314 SBS	3	12.511	13.762	1.00	1.00	0.00	76.05	0.000	0.000	0.00	0.00	0.00
9	178.00	Low Profile Platform	1	12.511	13.762	1.00	1.00	22.00	1500.00	0.000	0.000	302.76	0.00	0.00
10	178.00	MS-HR35	1	12.511	13.762	1.00	1.00	8.75	430.00	0.000	0.000	120.42	0.00	0.00
11	167.00	RMQP-4096-HK	1	12.344	13.578	1.00	1.00	46.00	2449.00	0.000	0.000	624.61	0.00	0.00
12	167.00	Alcatel Lucent 800 MHz	3	12.344	13.578	0.50	0.75	1.18	26.40	0.000	0.000	15.97	0.00	0.00
13	167.00	Ericsson 4415 B66A	3	12.344	13.578	0.50	0.75	2.47	148.80	0.000	0.000	33.57	0.00	0.00
14	167.00	Ericsson 4449 B71 + B85	3	12.344	13.578	0.50	0.75	2.97	219.60	0.000	0.000	40.32	0.00	0.00
15	167.00	Ericsson 4424 B25	3	12.344	13.578	0.50	0.75	3.09	264.00	0.000	0.000	41.96	0.00	0.00
16	167.00	RFS ACU-A20-N RET	4	12.344	13.578	0.59	0.75	0.33	4.00	0.000	0.000	4.51	0.00	0.00
17	167.00	AIR6449 B41	3	12.344	13.578	0.53	0.75	9.03	309.00	0.000	0.000	122.56	0.00	0.00
18	167.00	APXVAALL24_43-U-NA20	3	12.344	13.578	0.52	0.75	31.88	384.00	0.000	0.000	432.85	0.00	0.00
19	167.00	APX16DWV-16DWVS-E-A	3	12.344	13.578	0.46	0.75	9.22	122.10	0.000	0.000	125.21	0.00	0.00
20	147.00	RMQP-496-HK	1	12.017	13.219	1.00	1.00	46.00	2449.00	0.000	0.000	608.06	0.00	0.00
21	147.00	7770	3	12.017	13.219	0.55	0.75	9.03	105.00	0.000	0.000	119.41	0.00	0.00
22	147.00	Cci DMP65R-BU8DA	6	12.017	13.219	0.55	0.75	58.70	574.20	0.000	0.000	775.97	0.00	0.00
23	147.00	Cci DTMAPB7819VG12A	3	12.017	13.219	0.50	0.75	1.72	57.60	0.000	0.000	22.72	0.00	0.00
24	147.00	Powerwave	3	12.017	13.219	0.68	0.75	1.86	66.00	0.000	0.000	24.63	0.00	0.00
25	147.00	Ericsson RRUS 4478 B14	3	12.017	13.219	0.50	0.75	2.49	178.20	0.000	0.000	32.88	0.00	0.00
26	147.00	Ericsson RRUS 8843 B2	3	12.017	13.219	0.50	0.75	2.49	225.00	0.000	0.000	32.88	0.00	0.00
27	147.00	Ericsson RRUS 4449	3	12.017	13.219	0.50	0.75	2.97	213.00	0.000	0.000	39.26	0.00	0.00
28	147.00	Raycap DC6-48-60-18-8F	3	12.017	13.219	0.75	0.75	2.07	95.40	0.000	0.000	27.36	0.00	0.00
29	122.00	Nokia CS72188.01	1	11.554	12.710	1.00	1.00	3.15	16.50	0.000	0.000	40.04	0.00	0.00
30	75.00	Side Arms	2	10.430	11.473	1.00	1.00	5.26	80.00	0.000	0.000	60.35	0.00	0.00
31	75.00	Lucent KS-24019	1	10.430	11.473	1.00	1.00	0.91	4.00	0.000	0.000	10.44	0.00	0.00

**Totals: 11,225.15**

**4,839.47**

## Total Applied Force Summary

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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

**Dead Load Factor** 1.00

**Wind Load Factor** 1.00



**Iterations** 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		155.23	1565.54	0.00	0.00
10.00		152.68	1542.38	0.00	0.00
15.00		150.14	1519.23	0.00	0.00
20.00		156.61	1496.08	0.00	0.00
25.00		161.31	1472.93	0.00	0.00
30.00		164.68	1449.77	0.00	0.00
35.00		167.08	1426.62	0.00	0.00
40.00		168.72	1403.47	0.00	0.00
45.00		169.76	1380.32	0.00	0.00
45.50		16.84	136.76	0.00	0.00
50.00		155.38	2155.77	0.00	0.00
52.75		94.71	1300.27	0.00	0.00
55.00		77.42	530.00	0.00	0.00
60.00		172.77	1163.39	0.00	0.00
65.00		172.25	1143.54	0.00	0.00
70.00		171.44	1123.70	0.00	0.00
75.00	(3) attachments	241.17	1187.85	0.00	0.00
80.00		169.10	1084.01	0.00	0.00
85.00		167.62	1064.17	0.00	0.00
90.00		165.94	1044.32	0.00	0.00
92.33		76.58	480.56	0.00	0.00
95.00		88.20	892.08	0.00	0.00
98.50		115.02	1155.86	0.00	0.00
100.00		48.88	239.69	0.00	0.00
105.00		162.15	789.31	0.00	0.00
110.00		159.88	774.42	0.00	0.00
115.00		157.48	759.54	0.00	0.00
120.00		154.96	744.66	0.00	0.00
122.00	(1) attachments	101.13	310.20	0.00	0.00
125.00		90.92	436.08	0.00	0.00
130.00		149.59	714.89	0.00	0.00
131.58		46.66	223.28	0.00	0.00
135.00		101.26	806.52	0.00	0.00
136.83		53.71	427.36	0.00	0.00
140.00		91.93	400.18	0.00	0.00
145.00		142.89	621.06	0.00	0.00
147.00	(28) attachments	1739.33	4208.12	0.00	0.00
150.00		83.38	309.65	0.00	0.00
155.00		136.60	505.50	0.00	0.00
160.00		133.34	492.28	0.00	0.00
165.00		130.00	479.05	0.00	0.00
167.00	(26) attachments	1492.50	4114.81	0.00	0.00
170.00		75.44	271.96	0.00	0.00
175.00		123.10	442.69	0.00	0.00
178.00	(28) attachments	1676.00	3493.61	0.00	0.00
180.00		47.30	144.67	0.00	0.00

## Total Applied Force Summary

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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<b>Totals:</b>	<b>10,429.09</b>	<b>49,428.15</b>	<b>0.00</b>	<b>0.00</b>
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## Calculated Forces

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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<b>Load Case:</b> 1.0D + 1.0W 60 mph Wind	<b>Iterations</b> 24
<b>Dead Load Factor</b> 1.00	
<b>Wind Load Factor</b> 1.00	

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-49.42	-10.45	0.00	-1333.9	0.00	1333.93	5499.24	2749.62	13525.8	6714.82	0.00	0.000	0.000	0.208
5.00	-47.85	-10.34	0.00	-1281.6	0.00	1281.68	5446.13	2723.06	13174.3	6540.31	0.03	-0.050	0.000	0.205
10.00	-46.30	-10.22	0.00	-1230.0	0.00	1230.00	5391.79	2695.89	12824.2	6366.50	0.11	-0.100	0.000	0.202
15.00	-44.77	-10.11	0.00	-1178.9	0.00	1178.90	5336.22	2668.11	12475.6	6193.44	0.24	-0.151	0.000	0.199
20.00	-43.27	-9.99	0.00	-1128.3	0.00	1128.36	5279.42	2639.71	12128.7	6021.23	0.42	-0.202	0.000	0.196
25.00	-41.78	-9.86	0.00	-1078.4	0.00	1078.43	5221.40	2610.70	11783.6	5849.92	0.66	-0.254	0.000	0.192
30.00	-40.33	-9.72	0.00	-1029.1	0.00	1029.15	5162.14	2581.07	11440.6	5679.60	0.96	-0.306	0.000	0.189
35.00	-38.89	-9.58	0.00	-980.54	0.00	980.54	5101.66	2550.83	11099.6	5510.34	1.31	-0.358	0.000	0.186
40.00	-37.48	-9.44	0.00	-932.64	0.00	932.64	5039.95	2519.97	10760.9	5342.21	1.71	-0.411	0.000	0.182
45.00	-36.10	-9.28	0.00	-885.45	0.00	885.45	4977.01	2488.50	10424.7	5175.29	2.17	-0.464	0.000	0.178
45.50	-35.96	-9.27	0.00	-880.81	0.00	880.81	4970.65	2485.32	10391.2	5158.66	2.22	-0.469	0.000	0.178
50.00	-33.80	-9.12	0.00	-839.08	0.00	839.08	4912.84	2456.42	10091.1	5009.65	2.68	-0.517	0.000	0.174
52.75	-32.49	-9.03	0.00	-813.99	0.00	813.99	3995.11	1997.56	8262.19	4101.70	2.99	-0.547	0.000	0.207
55.00	-31.96	-8.97	0.00	-793.66	0.00	793.66	3974.19	1987.10	8146.39	4044.21	3.25	-0.571	0.000	0.204
60.00	-30.79	-8.82	0.00	-748.80	0.00	748.80	3926.81	1963.41	7890.01	3916.93	3.88	-0.631	0.000	0.199
65.00	-29.64	-8.67	0.00	-704.70	0.00	704.70	3878.20	1939.10	7635.05	3790.36	4.58	-0.690	0.000	0.194
70.00	-28.51	-8.51	0.00	-661.37	0.00	661.37	3828.36	1914.18	7381.67	3664.57	5.33	-0.749	0.000	0.188
75.00	-27.31	-8.28	0.00	-618.83	0.00	618.83	3777.30	1888.65	7130.01	3539.64	6.15	-0.808	0.000	0.182
80.00	-26.22	-8.12	0.00	-577.43	0.00	577.43	3725.00	1862.50	6880.23	3415.63	7.02	-0.867	0.000	0.176
85.00	-25.15	-7.96	0.00	-536.82	0.00	536.82	3671.48	1835.74	6632.46	3292.63	7.96	-0.925	0.000	0.170
90.00	-24.11	-7.80	0.00	-497.01	0.00	497.01	3616.73	1808.36	6386.87	3170.71	8.96	-0.983	0.000	0.163
92.33	-23.62	-7.72	0.00	-478.81	0.00	478.81	3590.75	1795.38	6273.05	3114.21	9.45	-1.011	0.000	0.160
95.00	-22.73	-7.63	0.00	-458.21	0.00	458.21	3560.74	1780.37	6143.61	3049.94	10.03	-1.042	0.000	0.157
98.50	-21.57	-7.51	0.00	-431.49	0.00	431.49	2386.86	1193.43	4124.78	2047.71	10.80	-1.082	0.000	0.220
100.00	-21.33	-7.47	0.00	-420.23	0.00	420.23	2378.02	1189.01	4080.56	2025.76	11.15	-1.099	0.000	0.216
105.00	-20.53	-7.32	0.00	-382.87	0.00	382.87	2347.74	1173.87	3933.38	1952.70	12.34	-1.169	0.000	0.205
110.00	-19.75	-7.17	0.00	-346.27	0.00	346.27	2316.23	1158.11	3786.65	1879.85	13.60	-1.238	0.000	0.193
115.00	-18.99	-7.01	0.00	-310.44	0.00	310.44	2283.49	1141.75	3640.52	1807.31	14.93	-1.304	0.000	0.180
120.00	-18.24	-6.86	0.00	-275.37	0.00	275.37	2249.53	1124.76	3495.14	1735.13	16.33	-1.368	0.000	0.167
122.00	-17.93	-6.76	0.00	-261.66	0.00	261.66	2235.60	1117.80	3437.23	1706.38	16.91	-1.393	0.000	0.161
125.00	-17.49	-6.67	0.00	-241.39	0.00	241.39	2214.33	1107.17	3350.65	1663.40	17.80	-1.430	0.000	0.153
130.00	-16.78	-6.51	0.00	-208.04	0.00	208.04	2177.91	1088.96	3207.21	1592.19	19.33	-1.487	0.000	0.138
131.58	-16.55	-6.47	0.00	-197.73	0.00	197.73	2166.12	1083.06	3162.03	1569.76	19.82	-1.505	0.000	0.134
135.00	-15.74	-6.35	0.00	-175.63	0.00	175.63	2140.26	1070.13	3064.96	1521.58	20.91	-1.541	0.000	0.123
136.83	-15.32	-6.29	0.00	-163.98	0.00	163.98	1821.16	910.58	2623.48	1302.41	21.51	-1.560	0.000	0.134
140.00	-14.91	-6.20	0.00	-144.05	0.00	144.05	1802.58	901.29	2550.43	1266.14	22.55	-1.590	0.000	0.122
145.00	-14.29	-6.05	0.00	-113.04	0.00	113.04	1772.26	886.13	2435.64	1209.15	24.24	-1.635	0.000	0.102
147.00	-10.14	-4.19	0.00	-100.94	0.00	100.94	1759.78	879.89	2389.94	1186.47	24.93	-1.652	0.000	0.091
150.00	-9.83	-4.11	0.00	-88.37	0.00	88.37	1740.70	870.35	2321.67	1152.58	25.98	-1.674	0.000	0.082
155.00	-9.32	-3.96	0.00	-67.84	0.00	67.84	1707.91	853.96	2208.68	1096.48	27.75	-1.707	0.000	0.067
160.00	-8.83	-3.81	0.00	-48.04	0.00	48.04	1673.90	836.95	2096.80	1040.94	29.55	-1.733	0.000	0.051
165.00	-8.36	-3.67	0.00	-28.97	0.00	28.97	1638.66	819.33	1986.20	986.03	31.38	-1.753	0.000	0.035
167.00	-4.29	-2.05	0.00	-21.63	0.00	21.63	1624.22	812.11	1942.34	964.26	32.11	-1.758	0.000	0.025
170.00	-4.02	-1.97	0.00	-15.46	0.00	15.46	1602.19	801.09	1877.01	931.83	33.22	-1.765	0.000	0.019
175.00	-3.58	-1.83	0.00	-5.61	0.00	5.61	1564.49	782.24	1769.40	878.40	35.07	-1.771	0.000	0.009
178.00	-0.14	-0.05	0.00	-0.10	0.00	0.10	1541.28	770.64	1705.64	846.75	36.19	-1.773	0.000	0.000
180.00	0.00	-0.05	0.00	0.00	0.00	0.00	1525.56	762.78	1663.50	825.83	36.93	-1.773	0.000	0.000

## Calculated Forces

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II
		Page: 43





## Final Analysis Summary

<b>Structure:</b> CT02721-S-SBA	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II
		<b>Page:</b> 44



### 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	47.4	0.00	59.22	0.00	0.00	6084.99
0.9D + 1.6W 101 mph Wind	47.4	0.00	44.39	0.00	0.00	6005.37
1.2D + 1.0Di + 1.0Wi 50 mph Wind	12.2	0.00	102.66	0.00	0.00	1638.55
1.2D + 1.0E	2.3	0.00	59.31	0.00	0.00	325.10
0.9D + 1.0E	2.3	0.00	44.49	0.00	0.00	320.45
1.0D + 1.0W 60 mph Wind	10.4	0.00	49.42	0.00	0.00	1333.93

### 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	-23.16	-34.32	0.00	-1970.9	0.00	-1970.9	2386.86	1193.4	4124.78	2047.71	98.50	0.973
0.9D + 1.6W 101 mph Wind	-16.72	-33.73	0.00	-1930.7	0.00	-1930.7	2386.86	1193.4	4124.78	2047.71	98.50	0.951
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-55.74	-9.35	0.00	-549.20	0.00	-549.20	2386.86	1193.4	4124.78	2047.71	98.50	0.292
1.2D + 1.0E	-26.04	-1.75	0.00	-127.14	0.00	-127.14	2386.86	1193.4	4124.78	2047.71	98.50	0.073
0.9D + 1.0E	-19.53	-1.72	0.00	-124.67	0.00	-124.67	2386.86	1193.4	4124.78	2047.71	98.50	0.069
1.0D + 1.0W 60 mph Wind	-21.57	-7.51	0.00	-431.49	0.00	-431.49	2386.86	1193.4	4124.78	2047.71	98.50	0.220

## Base Plate Summary

<b>Structure:</b> CT02721-S-SB	<b>Code:</b> EIA/TIA-222-G	9/27/2021
<b>Site Name:</b> South Windham	<b>Exposure:</b> C	
<b>Height:</b> 180.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II
		Page: 45



Reactions	Base Plate	Anchor Bolts
Original Design	<b>Yield (ksi):</b> 50.00	<b>Bolt Circle:</b> 68.62
<b>Moment (kip-ft):</b> 5047.00	<b>Width (in):</b> 74.62	<b>Number Bolts:</b> 20.00
<b>Axial (kip):</b> 57.10	<b>Style:</b> Round	<b>Bolt Type:</b> 2.25" 18J
<b>Shear (kip):</b> 40.10	<b>Polygon Sides:</b> 0.00	<b>Bolt Diameter (in):</b> 2.25
Analysis (1.2D + 1.6W)	<b>Clip Length (in):</b> 0.00	<b>Yield (ksi):</b> 75.00
<b>Moment (kip-ft):</b> 6084.99	<b>Effective Len (in):</b> 14.60	<b>Ultimate (ksi):</b> 100.00
<b>Axial (kip):</b> 59.22	<b>Moment (kip-in):</b> 939.39	<b>Arrangement:</b> Radial
<b>Shear (kip):</b> 47.40	<b>Allow Stress (ksi):</b> 67.50	<b>Cluster Dist (in):</b> 0.00
	<b>Applied Stress (ksi):</b> 43.20	<b>Start Angle (deg):</b> 0.00
	<b>Stress Ratio:</b> 0.64	<b>Compression</b>
		<b>Force (kip):</b> 217.96
		<b>Allowable (kip):</b> 260.00
		<b>Ratio:</b> 0.86
		<b>Tension</b>
		<b>Force (kip):</b> 207.69
		<b>Allowable (kip):</b> 260.00
		<b>Ratio:</b> 0.82



# Monopole Mat Foundation Design

Date

7/30/2020

<b>Customer Name:</b>		<b>EIA/TIA Standard:</b>	EIA-222-G
<b>Site Name:</b>		<b>Structure Height (Ft.):</b>	300
<b>Site Number:</b>	194213-VZW	<b>Engineer Name:</b>	T. Alajaj
<b>Engr. Number:</b>		<b>Engineer Login ID:</b>	

## Foundation Info Obtained from:

Mapping Operation

## Structure Type:

Monopole

## Analysis or Design?

Analysis

## Base Reactions (Factored):

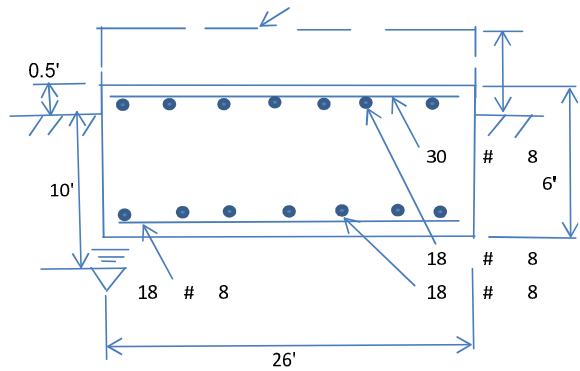
Axial Load (Kips):	102.7	Shear Force (Kips):	47.4
Uplift Force (Kips):	0.0	Moment (Kips-ft):	6085.0

Allowable overstress %: 5.0%

## Foundation Geometries:

Anchor Bolt Circle (ft.):	5.72	Depth of Base BG (ft.):	5.50
Thickness of Pad (ft.):	6.00	Width of Pad (ft.):	26
Length of Pad (ft.):	26	Width of Pad (ft.):	26

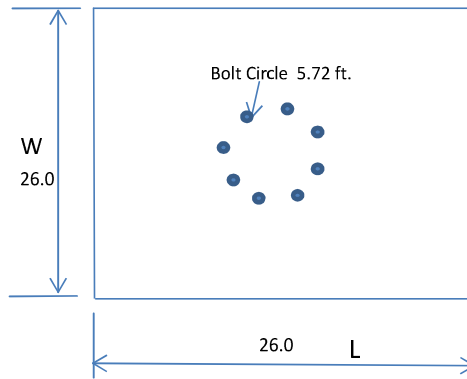
Final Length of pad (ft) 26.0 Final width of pad (ft): 26.0



## Material Properties and Rebar Info:

Concrete Strength (psi):	3000	Steel Elastic Modulus:	29000	ksi
Pad Rebar Yield (Ksi):	60	Tie Spacing (in):	12.0	
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):	30	Qty. of Rebar in Pad (W):	30	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	18	Qty. of Rebar in Pad (W):	18	

Apply 1.35 factor for e/w Per G: 1.35



## Soil Design Parameters:

Water Table B.G.S. (ft):	10.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad:	30
Ultimate Bearing Pressure (psf):	30000	Ultimate Skin Friction:	0	Psf	Angle from Bottm of Pad:	25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No		Angle from Bottm of Pad:	25
Consider soil hor. resist. for OTM.:	No	Reduction factor on the maximum soil bearing pressure:	1.00			

## Foundation Analysis and Design:

Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.75
Total Dry Soil Volume (cu. Ft.):	0.00	Total Dry Soil Weight (Kips):	0.00
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	0.00	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	4056.00	Total Dry Concrete Weight (Kips):	608.40
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	608.40	Total Vertical Load on Base (Kips):	711.06

## Check Soil Capacities:

Calculated Maxium Net Soil Pressure under the base (psf):	4826	<	Allowable Factored Soil Bearing (psf):	22500	0.21	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	8452.9	>	Design Factored Momnt (kips-ft):	6372	0.75	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.33					OK!

Load/  
Capacity  
Ratio

**Check the capacities of Reinforcing Concrete:**

Strength reduction factor (Flexure and axial tension):

0.90 Strength reduction factor (Shear):

Strength reduction factor (Axial compression):

0.65 Wind Load Factor on Concrete Design:

**Concrete Pad:**

One-Way Design Shear Capacity (L-Direction, Kips):	One-Way Factored Shear (L-D. Kips):	326.0	
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):	929.9	
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-Direct. K-Ft):	681.5	
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	Moment at Bottom ( W-Direct. K-Ft):	681.5	
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	Moment at Bottom ( C-C Dir. K-Ft):		
Upper Steel Pad Reinforcement Ratio (L-Direct. ):	Upper Steel Reinf. Ratio (W-Direct. ):	0.0007	
Upper Steel Pad Moment Capacity (L-Direction. Kips-ft):	Moment at the top (L-Dir Kips-Ft):		
Upper Steel Pad Moment Capacity (W-Direction. Kips-ft):	Moment at the top (W-Dir Kips-Ft):	245.5	
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	Moment at the top (C-C Direc. K-Ft):	806.1	



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Mt. Laurel, NJ 08054  
856.797.0412  
greg.dulnik@colliersengineering.com

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## Post-Mod Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10053691  
Maser Consulting Connecticut Project #: 20777650A

April 22, 2021

### Site Information

Site ID: 467192-VZW / Willimantic East CT  
Site Name: Willimantic East CT  
Carrier Name: Verizon Wireless  
Address: 193 Windham Center Road  
Windham, Connecticut 06280  
Windham County  
Latitude: 41.690056°  
Longitude: -72.162536°

### Structure Information

Tower Type: 180.00-Ft Monopole  
Mount Type: 13.83-Ft Platform

FUZE ID # 16244637

### Analysis Results

Platform: 75.4% 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**

Digitally signed by Taqi Khawaja-Ghulam  
Date: 2021.04.23 17:33:21-04'00'

Report Prepared By: Selene Chen

**Executive Summary:**

The objective of this report is to summarize the analysis results of the antenna support mount including the proposed modifications at the subject facility for the final wireless telecommunications configuration, per the applicable codes and standards.

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: 675100, dated February 11, 2021
Mount Mapping Report	Hudson Design Group LLC, Site ID: 467192, dated February 2, 2021
Mount Analysis Report	Maser Consulting Connecticut, Project #: 20777650A, dated March 15, 2021
Mount Modification Drawings	Maser Consulting Connecticut, Project #: 20777650A, dated April 22, 2021

**Analysis Criteria:**

Codes and Standards:	ANSI/TIA-222-H
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), $V_{ULT}$ : 121 mph Ice Wind Speed (3-sec. Gust): 50 mph Design Ice Thickness: 1.00 in Risk Category: II Exposure Category: C Topographic Category: 1 Topographic Feature Considered: N/A Topographic Method: N/A Ground Elevation Factor, $K_e$ : 0.993
Seismic Parameters:	$S_s$ : 0.191 $S_1$ : 0.055
Maintenance Parameters:	Wind Speed (3-sec. Gust): 30 mph Maintenance Live Load, $L_v$ : 250 lbs. Maintenance Live Load, $L_m$ : 500 lbs.
Analysis Software:	RISA-3D (V17)



8. Any mount modifications listed under Sources of Information are assumed to have been installed per the design specifications.

**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
<i>Mount Pipe</i>	63.5%	<i>Pass</i>
<i>Face Horizontal</i>	21.8%	<i>Pass</i>
<i>Corner Plate</i>	35.8%	<i>Pass</i>
<i>Cross Arm Plate</i>	49.9%	<i>Pass</i>
<i>Grating Support</i>	75.4%	<i>Pass</i>
<i>Platform Crossmember</i>	24.2%	<i>Pass</i>
<i>Standoff Horizontal</i>	19.9%	<i>Pass</i>
<i>Support Rail</i>	31.8%	<i>Pass</i>
<i>Support Rail Corner</i>	74.0%	<i>Pass</i>
<i>Kicker</i>	9.0%	<i>Pass</i>
<i>Connection Check</i>	38.0%	<i>Pass</i>

<b>Structure Rating – (Controlling Utilization of all Components)</b>	<b>75.4%</b>
---	--------------

**Recommendation:**

The existing mount will be **SUFFICIENT** for the final loading after the proposed modifications are successfully completed.

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

**Attachments:**

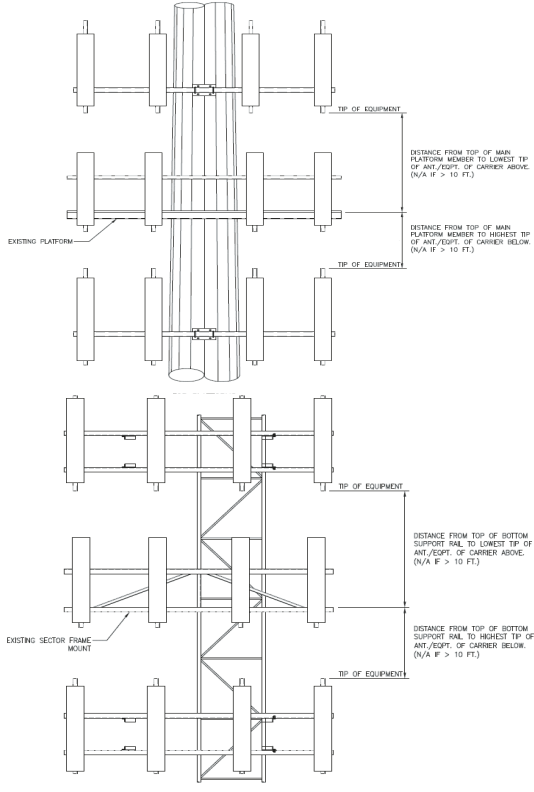
1. Mount Photos
2. Mount Mapping Report (for reference only)
3. Analysis Calculations
- 4. Contractor Required PMI Report Deliverables**
5. Antenna Placement Diagrams
6. TIA Adoption and Wind Speed Usage Letter







SECTION 1		SECTION 2		SECTION 3											
ITEM NO.	DESCRIPTION	ITEM NO.	DESCRIPTION	QTY	UNIT	PRICE	TOTAL	QTY	UNIT	PRICE	TOTAL	QTY	UNIT	PRICE	TOTAL
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1.02	...	2.02	...												
1.03	...	2.03	...												
1.04	...	2.04	...												
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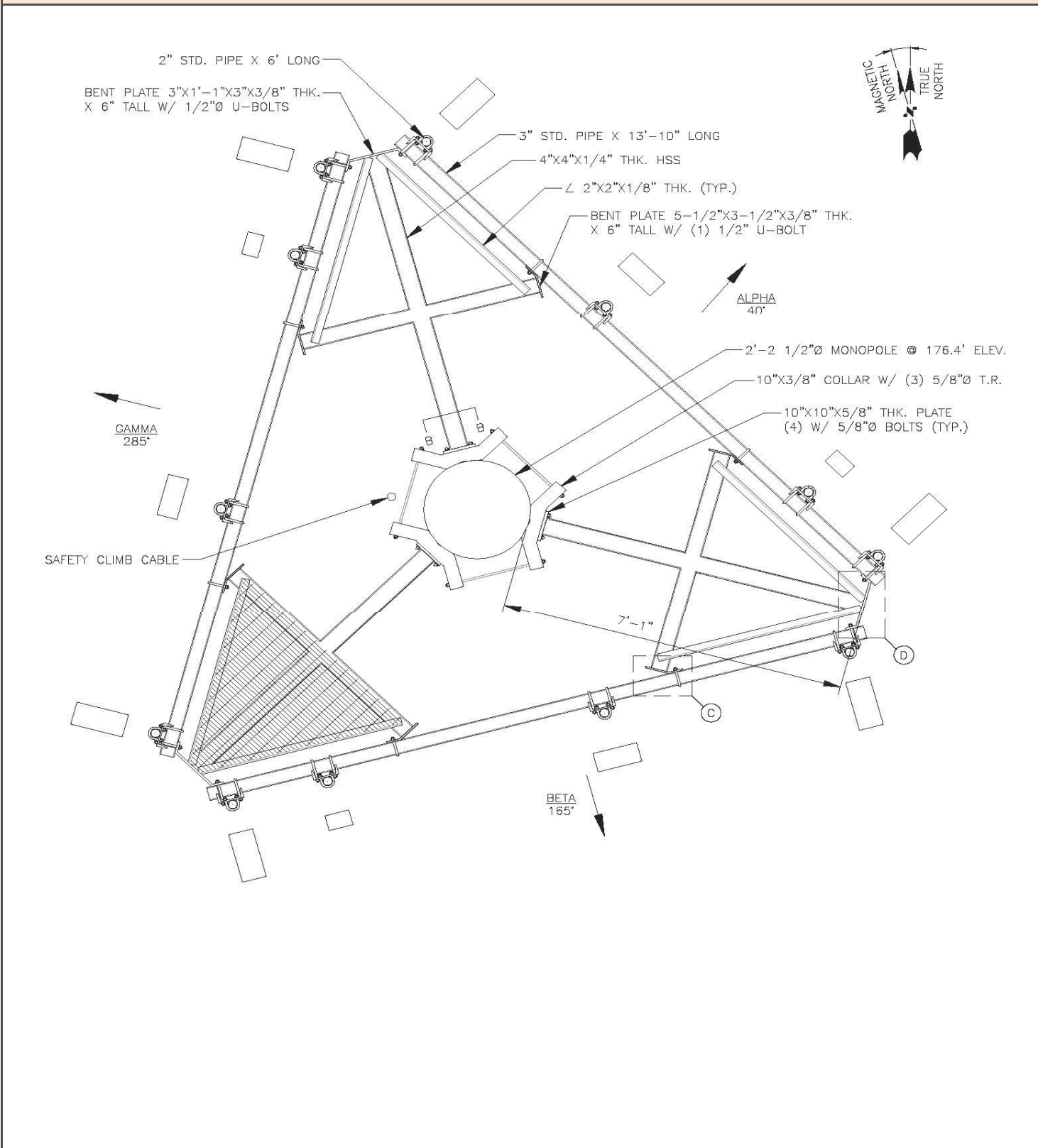
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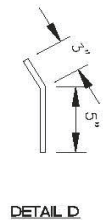
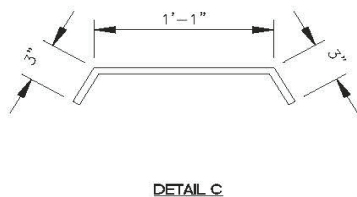
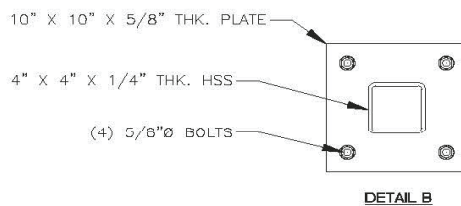
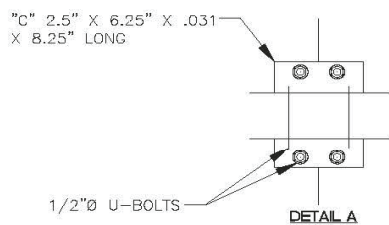
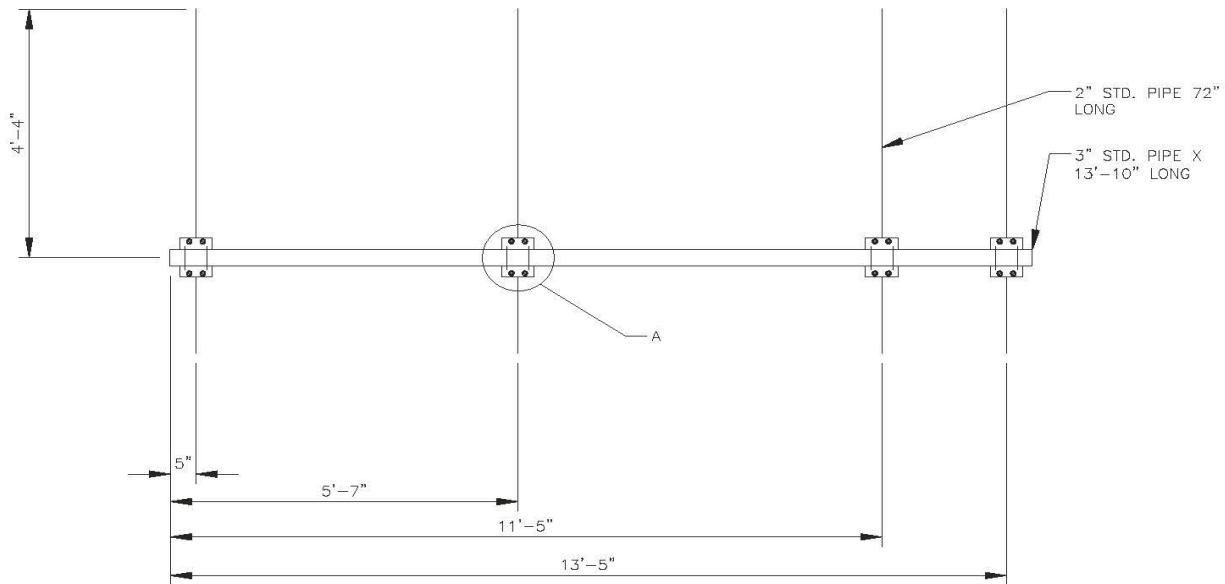


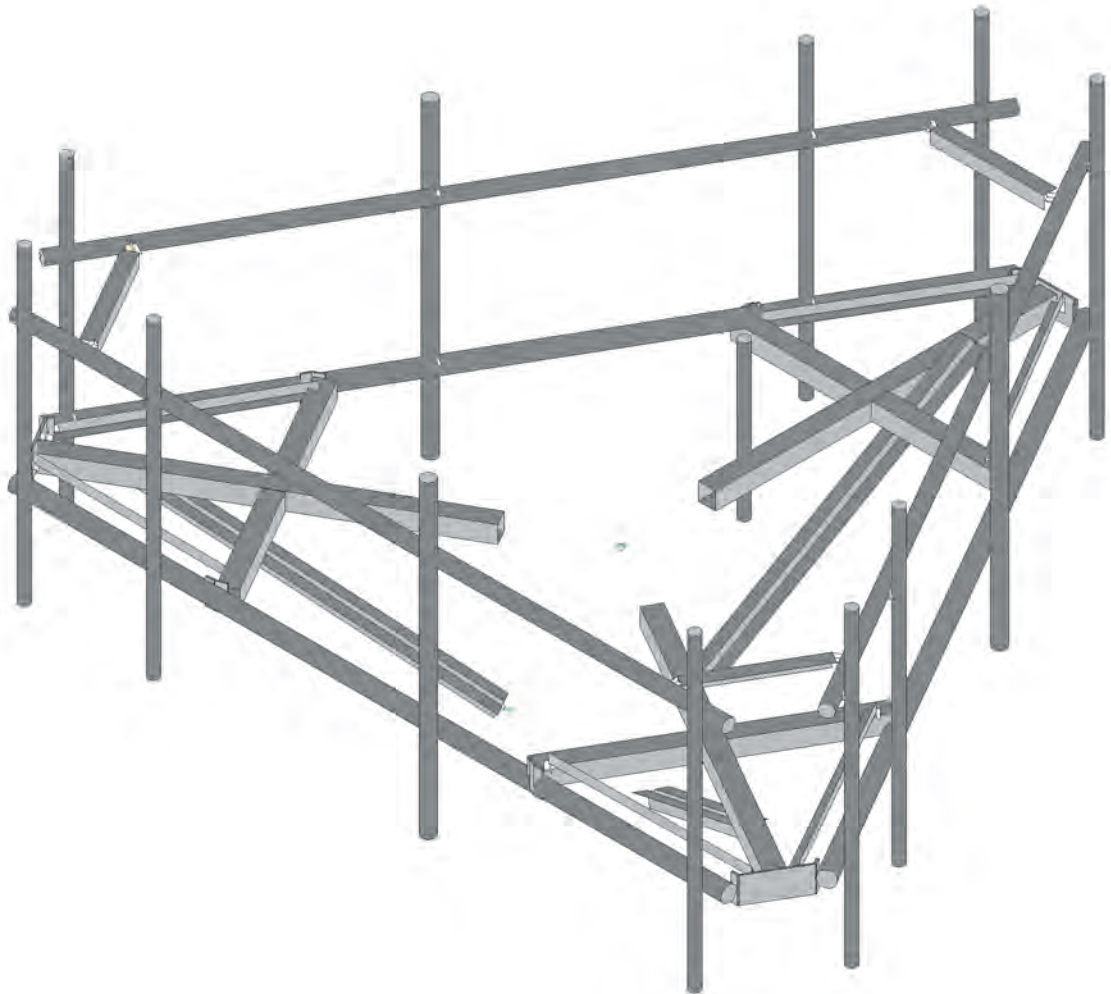


PROJECT INFORMATION			DATE
PROJECT NAME	CLIENT	PROJECT NUMBER	DATE
PROJECT LOCATION	PROJECT TYPE	PROJECT STATUS	DATE
PROJECT DESCRIPTION	PROJECT PHASE	PROJECT BUDGET	DATE
PROJECT CONTACT	PROJECT CONTACT	PROJECT CONTACT	DATE

GENERAL NOTES







Envelope Only Solution

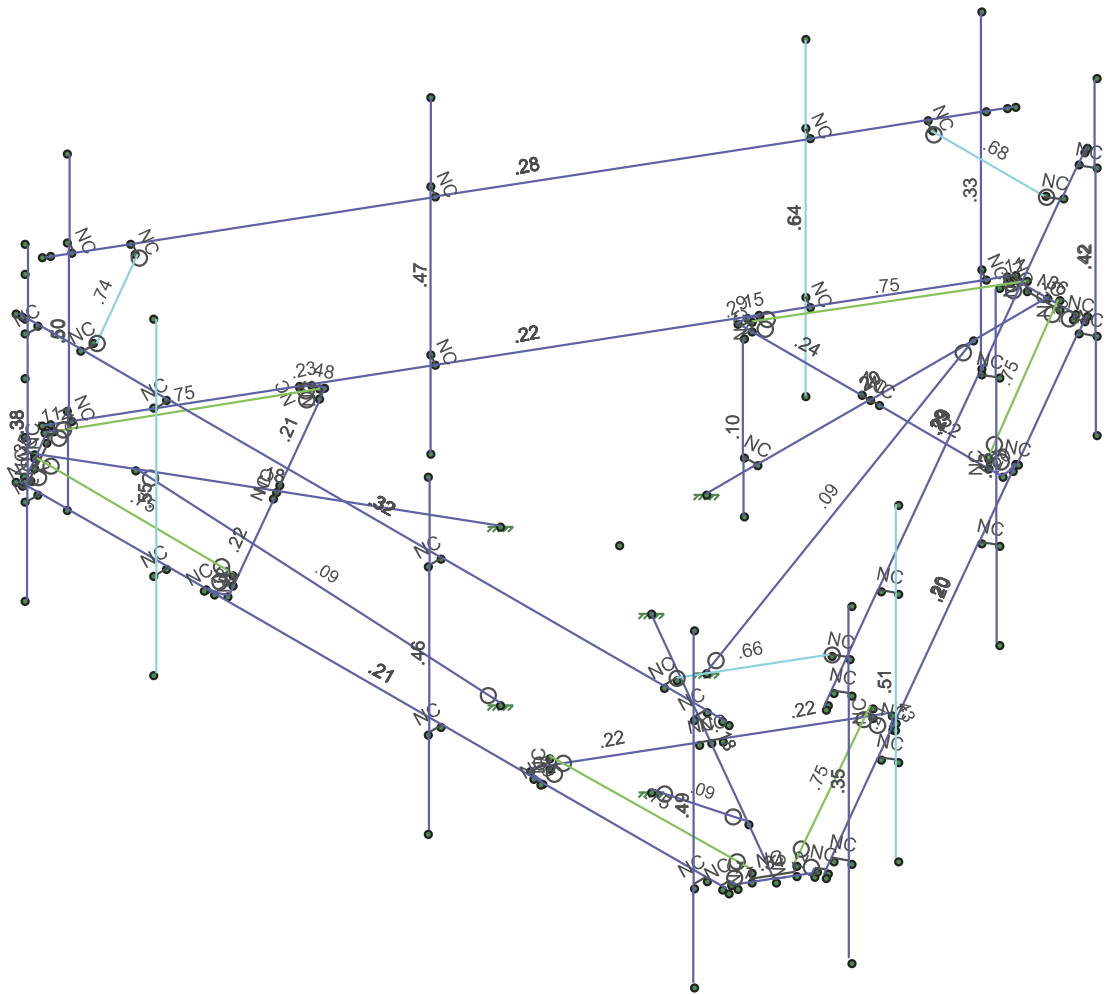
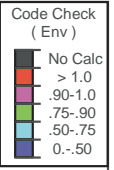
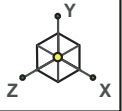
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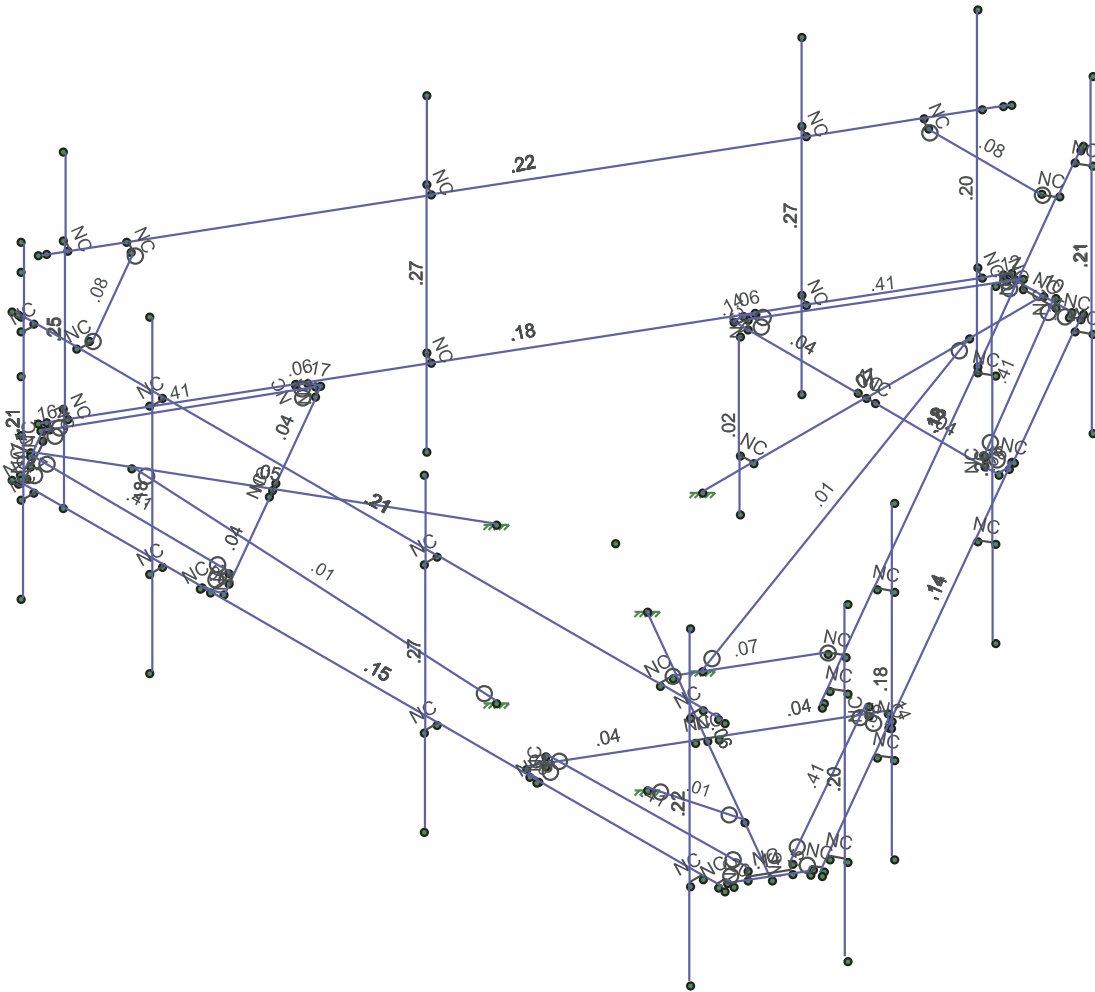
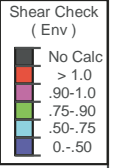
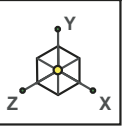




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**Joint Coordinates and Temperatures (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
156	N156	-6.500004	2.833333	4.793436	0	
157	N157	-6.500004	2.833333	5.043436	0	
158	N158	-6.800472	2.833333	4.793432	0	
159	N159	-7.551472	2.833333	3.492662	0	
160	N160	7.55147	2.833333	3.492665	0	
161	N161	6.80047	2.833333	4.793436	0	
162	N162	7.609569	2.833333	3.593288	0	
163	N163	0.692906	2.833333	-8.386724	0	
164	N164	0.901239	2.833333	-8.02588	0	
165	N165	1.117745	2.833333	-8.15088	0	
166	N166	3.484572	2.833333	-3.551415	0	
167	N167	3.701079	2.833333	-3.676415	0	
168	N168	7.401239	2.833333	3.23245	0	
169	N169	7.617745	2.833333	3.10745	0	
170	N170	-0.692906	2.833333	-8.386724	0	
171	N171	-7.609569	2.833333	3.593288	0	
172	N172	-7.401235	2.833333	3.232444	0	
173	N173	-7.617742	2.833333	3.107444	0	
174	N174	-4.817902	2.833333	-1.24202	0	
175	N175	-5.034408	2.833333	-1.36702	0	
176	N176	-0.901235	2.833333	-8.025886	0	
177	N177	6.151239	2.833333	1.067387	0	
178	N178	6.367745	2.833333	0.942387	0	
179	N179	-2.151235	2.833333	-5.860823	0	
180	N180	-2.367742	2.833333	-5.985823	0	
181	N181	-5.666663	2.833333	4.793436	0	
182	N182	5.666663	2.833333	4.793436	0	
183	N183	5.666663	2.833333	4.543436	0	
184	N185	-5.666671	2.833333	4.543436	0	
185	N186	6.984569	2.833333	2.510756	0	
186	N187	1.317906	2.833333	-7.304192	0	
187	N188	1.101399	2.833333	-7.179192	0	
188	N189	6.768066	2.833333	2.635763	0	
189	N191	-1.317906	2.833333	-7.304192	0	
190	N192	-6.984569	2.833333	2.510756	0	
191	N193	-6.768062	2.833333	2.635756	0	
192	N194	-1.101396	2.833333	-7.179199	0	
193	N193A	0.	-3	-1.687497	0	
194	N194A	-1.461416	-3	0.843749	0	
195	N195	1.461416	-3	0.843749	0	
196	N196	-0.	0	-6.877864	0	
197	N199	-5.956405	0	3.438932	0	
198	N202	5.956405	0	3.438932	0	

**Hot Rolled Steel Section Sets**

	Label	Shape	Type	Design List	Material	Design Rules	A [in <sup>2</sup> ]	I <sub>yy</sub> [in <sup>4</sup> ]	I <sub>zz</sub> [in <sup>4</sup> ]	J [in <sup>4</sup> ]
1	Face Horizontal	PIPE 3.0	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
2	Standoff Horizontal	HSS4X4X4	Beam	SquareTube	A500 Gr.B ...	Typical	3.37	7.8	7.8	12.8
3	Corner Plate	PL1/2X6	Beam	BAR	A36 Gr.36	Typical	3	.063	9	.237
4	Platform Crossmemb..	HSS4X4X4	Beam	SquareTube	A500 Gr.B ...	Typical	3.37	7.8	7.8	12.8





### Hot Rolled Steel Section Sets (Continued)

	Label	Shape	Type	Design List	Material	Design Rules	A [in <sup>2</sup> ]	Iyy [in <sup>4</sup> ]	Izz [in <sup>4</sup> ]	J [in <sup>4</sup> ]
5	Grating Support	L2x2x2	Beam	Single Angle	A36 Gr.36	Typical	.491	.189	.189	.003
6	Mod Support Rail Co...	L3X3X4	Beam	Single Angle	A36 Gr.36	Typical	1.44	1.23	1.23	.031
7	Mod Kickers	LL3x3x3x3	Beam	Single Angle	A36 Gr.36	Typical	2.18	4.09	1.9	.027
8	Mount Pipe	PIPE 2.0	Column	Wide Flange	A53 Gr.B	Typical	1.02	.627	.627	1.25
9	MOD P2 Mount pipe	PIPE 2.5	Column	Wide Flange	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
10	Mod Support Rail	PIPE 2.5	Column	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
11	Cross Arm Plate	PL3/8x6	Column	RECT	A36 Gr.36	Typical	2.25	.026	6.75	.101

### Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E...Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt	
1	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	.3	.65	.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	.3	.65	.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	.3	.65	.49	35	1.6	60	1.2
7	A1085	29000	11154	.3	.65	.49	50	1.4	65	1.3
8	Q235	29000	11154	.3	.65	.49	35	1.5	58	1.2

### Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M20	N36	N53A			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
2	M37	N56	N60A			RIGID	None	None	RIGID	Typical
3	MP1A	N64	N68			Mount Pipe	Column	Wide Flange	A53 Gr.B	Typical
4	M72A	N112A	N114			Standoff Horiz...	Beam	SquareTube	A500 Gr.B...	Typical
5	M73	N125	N127			Platform Cross...	Beam	SquareTube	A500 Gr.B...	Typical
6	M74	N126	N115			Platform Cross...	Beam	SquareTube	A500 Gr.B...	Typical
7	M75	N129	N128			Corner Plate	Beam	BAR	A36 Gr.36	Typical
8	M76	N117	N120B			RIGID	None	None	RIGID	Typical
9	M77	N116A	N119			RIGID	None	None	RIGID	Typical
10	M78	N121	N116A			Grating Support	Beam	Single Angle	A36 Gr.36	Typical
11	M79	N117	N122			Grating Support	Beam	Single Angle	A36 Gr.36	Typical
12	M80	N122	N124A			RIGID	None	None	RIGID	Typical
13	M81	N121	N123			RIGID	None	None	RIGID	Typical
14	M82	N126	N113A			RIGID	None	None	RIGID	Typical
15	M83	N113A	N127			RIGID	None	None	RIGID	Typical
16	M84	N115	N130			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
17	M85	N130	N132			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
18	M86A	N132	N133			RIGID	None	None	RIGID	Typical
19	M87A	N129	N134			Corner Plate	Beam	BAR	A36 Gr.36	Typical
20	M88	N134	N135			RIGID	None	None	RIGID	Typical
21	M89A	N125	N131			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
22	M90A	N131	N136			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
23	M91	N136	N137			RIGID	None	None	RIGID	Typical
24	M92	N128	N138			Corner Plate	Beam	BAR	A36 Gr.36	Typical
25	M93A	N138	N139			RIGID	None	None	RIGID	Typical
26	M26	N35	N36A			RIGID	None	None	RIGID	Typical
27	MP2A	N37	N38			MOD P2 Moun...	Column	Wide Flange	A53 Gr.B	Typical
28	M28	N39	N40			RIGID	None	None	RIGID	Typical





**Member Primary Data (Continued)**

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
81	MP1C	N106	N107		240	Mount Pipe	Column	Wide Flange	A53 Gr.B	Typical
82	M82A	N108	N109			RIGID	None	None	RIGID	Typical
83	MP2C	N110	N111		240	MOD P2 Moun..	Column	Wide Flange	A53 Gr.B	Typical
84	M86	N116	N117A			RIGID	None	None	RIGID	Typical
85	MP4C	N118	N119A		240	Mount Pipe	Column	Wide Flange	A53 Gr.B	Typical
86	M88A	N122A	N121A			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
87	M89	N123A	N124			RIGID	None	None	RIGID	Typical
88	MP1B	N125A	N126A		120	Mount Pipe	Column	Wide Flange	A53 Gr.B	Typical
89	M91A	N127A	N128A			RIGID	None	None	RIGID	Typical
90	MP2B	N129A	N130A		120	MOD P2 Moun..	Column	Wide Flange	A53 Gr.B	Typical
91	M95	N135A	N136A			RIGID	None	None	RIGID	Typical
92	MP4B	N137A	N138A		120	Mount Pipe	Column	Wide Flange	A53 Gr.B	Typical
93	M97	N137B	N138B			RIGID	None	None	RIGID	Typical
94	M98	N140	N139A			Mount Pipe	Column	Wide Flange	A53 Gr.B	Typical
95	M95A	N139B	N140A			RIGID	None	None	RIGID	Typical
96	MP3C	N141A	N142A		240	Mount Pipe	Column	Wide Flange	A53 Gr.B	Typical
97	M97A	N144A	N145A			RIGID	None	None	RIGID	Typical
98	MP3B	N146	N147		120	Mount Pipe	Column	Wide Flange	A53 Gr.B	Typical
99	M99	N146A	N147A			Mod Support ...	Column	Pipe	A53 Gr.B	Typical
100	M100	N148	N149			RIGID	None	None	RIGID	Typical
101	M101	N152	N153			RIGID	None	None	RIGID	Typical
102	M102	N154	N155			RIGID	None	None	RIGID	Typical
103	M103	N156	N157			RIGID	None	None	RIGID	Typical
104	M104	N163	N162			Mod Support ...	Column	Pipe	A53 Gr.B	Typical
105	M105	N164	N165			RIGID	None	None	RIGID	Typical
106	M106	N166	N167			RIGID	None	None	RIGID	Typical
107	M107	N168	N169			RIGID	None	None	RIGID	Typical
108	M108	N171	N170			Mod Support ...	Column	Pipe	A53 Gr.B	Typical
109	M109	N172	N173			RIGID	None	None	RIGID	Typical
110	M110	N174	N175			RIGID	None	None	RIGID	Typical
111	M111	N177	N178			RIGID	None	None	RIGID	Typical
112	M112	N179	N180			RIGID	None	None	RIGID	Typical
113	M113	N182	N183			RIGID	None	None	RIGID	Typical
114	M114	N181	N185			RIGID	None	None	RIGID	Typical
115	M115	N187	N188			RIGID	None	None	RIGID	Typical
116	M116	N186	N189			RIGID	None	None	RIGID	Typical
117	M117	N192	N193			RIGID	None	None	RIGID	Typical
118	M118	N191	N194			RIGID	None	None	RIGID	Typical
119	M119	N185	N193		180	Mod Support ...	Beam	Single Angle	A36 Gr.36	Typical
120	M120	N189	N183		180	Mod Support ...	Beam	Single Angle	A36 Gr.36	Typical
121	M121	N194	N188		180	Mod Support ...	Beam	Single Angle	A36 Gr.36	Typical
122	M122	N196	N193A			Mod Kickers	Beam	Single Angle	A36 Gr.36	Typical
123	M123	N199	N194A			Mod Kickers	Beam	Single Angle	A36 Gr.36	Typical
124	M124	N202	N195			Mod Kickers	Beam	Single Angle	A36 Gr.36	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	M20						Yes				None
2	M37						Yes	** NA **			None
3	MP1A						Yes	** NA **			None



























































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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
94	MP1A	X	-38.881	2.25
95	MP1A	Z	67.344	2.25
96	MP1A	Mx	-.019	2.25
97	MP1B	X	-28.339	2.25
98	MP1B	Z	49.084	2.25
99	MP1B	Mx	.028	2.25
100	MP1C	X	-38.881	2.25
101	MP1C	Z	67.344	2.25
102	MP1C	Mx	-.019	2.25
103	MP2A	X	-37.535	2.25
104	MP2A	Z	65.012	2.25
105	MP2A	Mx	-.019	2.25
106	MP2B	X	-22.954	2.25
107	MP2B	Z	39.758	2.25
108	MP2B	Mx	.023	2.25
109	MP2C	X	-37.535	2.25
110	MP2C	Z	65.012	2.25
111	MP2C	Mx	-.019	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-156.5	.5
2	MP2A	Z	90.355	.5
3	MP2A	Mx	.219	.5
4	MP2A	X	-156.5	4
5	MP2A	Z	90.355	4
6	MP2A	Mx	.219	4
7	MP2B	X	-156.5	.5
8	MP2B	Z	90.355	.5
9	MP2B	Mx	-.068	.5
10	MP2B	X	-156.5	4
11	MP2B	Z	90.355	4
12	MP2B	Mx	-.068	4
13	MP2C	X	-193.785	.5
14	MP2C	Z	111.882	.5
15	MP2C	Mx	-.186	.5
16	MP2C	X	-193.785	4
17	MP2C	Z	111.882	4
18	MP2C	Mx	-.186	4
19	MP2A	X	-156.5	.5
20	MP2A	Z	90.355	.5
21	MP2A	Mx	.068	.5
22	MP2A	X	-156.5	4
23	MP2A	Z	90.355	4
24	MP2A	Mx	.068	4
25	MP2B	X	-156.5	.5
26	MP2B	Z	90.355	.5
27	MP2B	Mx	-.219	.5
28	MP2B	X	-156.5	4
29	MP2B	Z	90.355	4
30	MP2B	Mx	-.219	4



















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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
105	MP2A	Mx	-.019	2.25
106	MP2B	X	-37.535	2.25
107	MP2B	Z	-65.012	2.25
108	MP2B	Mx	-.019	2.25
109	MP2C	X	-22.954	2.25
110	MP2C	Z	-39.758	2.25
111	MP2C	Mx	.023	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.5
2	MP2A	Z	-41.752	.5
3	MP2A	Mx	-.035	.5
4	MP2A	X	0	4
5	MP2A	Z	-41.752	4
6	MP2A	Mx	-.035	4
7	MP2B	X	0	.5
8	MP2B	Z	-34.138	.5
9	MP2B	Mx	.041	.5
10	MP2B	X	0	4
11	MP2B	Z	-34.138	4
12	MP2B	Mx	.041	4
13	MP2C	X	0	.5
14	MP2C	Z	-34.138	.5
15	MP2C	Mx	-.013	.5
16	MP2C	X	0	4
17	MP2C	Z	-34.138	4
18	MP2C	Mx	-.013	4
19	MP2A	X	0	.5
20	MP2A	Z	-41.752	.5
21	MP2A	Mx	.035	.5
22	MP2A	X	0	4
23	MP2A	Z	-41.752	4
24	MP2A	Mx	.035	4
25	MP2B	X	0	.5
26	MP2B	Z	-34.138	.5
27	MP2B	Mx	.013	.5
28	MP2B	X	0	4
29	MP2B	Z	-34.138	4
30	MP2B	Mx	.013	4
31	MP2C	X	0	.5
32	MP2C	Z	-34.138	.5
33	MP2C	Mx	-.041	.5
34	MP2C	X	0	4
35	MP2C	Z	-34.138	4
36	MP2C	Mx	-.041	4
37	MP3A	X	0	1.25
38	MP3A	Z	-20.613	1.25
39	MP3A	Mx	0	1.25
40	MP3A	X	0	3.25
41	MP3A	Z	-20.613	3.25





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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
94	MP1A	X	0	2.25
95	MP1A	Z	-17.397	2.25
96	MP1A	Mx	0	2.25
97	MP1B	X	0	2.25
98	MP1B	Z	-13.434	2.25
99	MP1B	Mx	-.006	2.25
100	MP1C	X	0	2.25
101	MP1C	Z	-13.434	2.25
102	MP1C	Mx	.006	2.25
103	MP2A	X	0	2.25
104	MP2A	Z	-17.397	2.25
105	MP2A	Mx	0	2.25
106	MP2B	X	0	2.25
107	MP2B	Z	-11.928	2.25
108	MP2B	Mx	-.005	2.25
109	MP2C	X	0	2.25
110	MP2C	Z	-11.928	2.25
111	MP2C	Mx	.005	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	19.607	.5
2	MP2A	Z	-33.96	.5
3	MP2A	Mx	-.046	.5
4	MP2A	X	19.607	4
5	MP2A	Z	-33.96	4
6	MP2A	Mx	-.046	4
7	MP2B	X	15.8	.5
8	MP2B	Z	-27.366	.5
9	MP2B	Mx	.029	.5
10	MP2B	X	15.8	4
11	MP2B	Z	-27.366	4
12	MP2B	Mx	.029	4
13	MP2C	X	19.607	.5
14	MP2C	Z	-33.96	.5
15	MP2C	Mx	.01	.5
16	MP2C	X	19.607	4
17	MP2C	Z	-33.96	4
18	MP2C	Mx	.01	4
19	MP2A	X	19.607	.5
20	MP2A	Z	-33.96	.5
21	MP2A	Mx	.01	.5
22	MP2A	X	19.607	4
23	MP2A	Z	-33.96	4
24	MP2A	Mx	.01	4
25	MP2B	X	15.8	.5
26	MP2B	Z	-27.366	.5
27	MP2B	Mx	.029	.5
28	MP2B	X	15.8	4
29	MP2B	Z	-27.366	4
30	MP2B	Mx	.029	4

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
31	MP2C	X	19.607	.5
32	MP2C	Z	-33.96	.5
33	MP2C	Mx	-.046	.5
34	MP2C	X	19.607	4
35	MP2C	Z	-33.96	4
36	MP2C	Mx	-.046	4
37	MP3A	X	8.83	1.25
38	MP3A	Z	-15.294	1.25
39	MP3A	Mx	-.004	1.25
40	MP3A	X	8.83	3.25
41	MP3A	Z	-15.294	3.25
42	MP3A	Mx	-.004	3.25
43	MP3B	X	4.399	1.25
44	MP3B	Z	-7.62	1.25
45	MP3B	Mx	.004	1.25
46	MP3B	X	4.399	3.25
47	MP3B	Z	-7.62	3.25
48	MP3B	Mx	.004	3.25
49	MP3C	X	8.83	1.25
50	MP3C	Z	-15.294	1.25
51	MP3C	Mx	-.004	1.25
52	MP3C	X	8.83	3.25
53	MP3C	Z	-15.294	3.25
54	MP3C	Mx	-.004	3.25
55	MP1A	X	7.545	.5
56	MP1A	Z	-13.069	.5
57	MP1A	Mx	-.009	.5
58	MP1A	X	7.545	4
59	MP1A	Z	-13.069	4
60	MP1A	Mx	-.009	4
61	MP1B	X	11.731	.5
62	MP1B	Z	-20.319	.5
63	MP1B	Mx	.027	.5
64	MP1B	X	11.731	4
65	MP1B	Z	-20.319	4
66	MP1B	Mx	.027	4
67	MP1C	X	7.545	.5
68	MP1C	Z	-13.069	.5
69	MP1C	Mx	-.009	.5
70	MP1C	X	7.545	4
71	MP1C	Z	-13.069	4
72	MP1C	Mx	-.009	4
73	MP4A	X	7.545	.5
74	MP4A	Z	-13.069	.5
75	MP4A	Mx	-.009	.5
76	MP4A	X	7.545	4
77	MP4A	Z	-13.069	4
78	MP4A	Mx	-.009	4
79	MP4B	X	11.731	.5
80	MP4B	Z	-20.319	.5
81	MP4B	Mx	.027	.5
82	MP4B	X	11.731	4





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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
83	MP4B	Z	-20.319	4
84	MP4B	Mx	.027	4
85	MP4C	X	7.545	.5
86	MP4C	Z	-13.069	.5
87	MP4C	Mx	-.009	.5
88	MP4C	X	7.545	4
89	MP4C	Z	-13.069	4
90	MP4C	Mx	-.009	4
91	M98	X	12.771	1
92	M98	Z	-22.12	1
93	M98	Mx	0	1
94	MP1A	X	8.038	2.25
95	MP1A	Z	-13.922	2.25
96	MP1A	Mx	.004	2.25
97	MP1B	X	6.056	2.25
98	MP1B	Z	-10.49	2.25
99	MP1B	Mx	-.006	2.25
100	MP1C	X	8.038	2.25
101	MP1C	Z	-13.922	2.25
102	MP1C	Mx	.004	2.25
103	MP2A	X	7.787	2.25
104	MP2A	Z	-13.487	2.25
105	MP2A	Mx	.004	2.25
106	MP2B	X	5.053	2.25
107	MP2B	Z	-8.751	2.25
108	MP2B	Mx	-.005	2.25
109	MP2C	X	7.787	2.25
110	MP2C	Z	-13.487	2.25
111	MP2C	Mx	.004	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	29.564	.5
2	MP2A	Z	-17.069	.5
3	MP2A	Mx	-.041	.5
4	MP2A	X	29.564	4
5	MP2A	Z	-17.069	4
6	MP2A	Mx	-.041	4
7	MP2B	X	29.564	.5
8	MP2B	Z	-17.069	.5
9	MP2B	Mx	.013	.5
10	MP2B	X	29.564	4
11	MP2B	Z	-17.069	4
12	MP2B	Mx	.013	4
13	MP2C	X	36.158	.5
14	MP2C	Z	-20.876	.5
15	MP2C	Mx	.035	.5
16	MP2C	X	36.158	4
17	MP2C	Z	-20.876	4
18	MP2C	Mx	.035	4
19	MP2A	X	29.564	.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
20	MP2A	Z	-17.069	.5
21	MP2A	Mx	-.013	.5
22	MP2A	X	29.564	4
23	MP2A	Z	-17.069	4
24	MP2A	Mx	-.013	4
25	MP2B	X	29.564	.5
26	MP2B	Z	-17.069	.5
27	MP2B	Mx	.041	.5
28	MP2B	X	29.564	4
29	MP2B	Z	-17.069	4
30	MP2B	Mx	.041	4
31	MP2C	X	36.158	.5
32	MP2C	Z	-20.876	.5
33	MP2C	Mx	-.035	.5
34	MP2C	X	36.158	4
35	MP2C	Z	-20.876	4
36	MP2C	Mx	-.035	4
37	MP3A	X	10.178	1.25
38	MP3A	Z	-5.876	1.25
39	MP3A	Mx	-.005	1.25
40	MP3A	X	10.178	3.25
41	MP3A	Z	-5.876	3.25
42	MP3A	Mx	-.005	3.25
43	MP3B	X	10.178	1.25
44	MP3B	Z	-5.876	1.25
45	MP3B	Mx	.005	1.25
46	MP3B	X	10.178	3.25
47	MP3B	Z	-5.876	3.25
48	MP3B	Mx	.005	3.25
49	MP3C	X	17.852	1.25
50	MP3C	Z	-10.307	1.25
51	MP3C	Mx	0	1.25
52	MP3C	X	17.852	3.25
53	MP3C	Z	-10.307	3.25
54	MP3C	Mx	0	3.25
55	MP1A	X	17.902	.5
56	MP1A	Z	-10.336	.5
57	MP1A	Mx	-.021	.5
58	MP1A	X	17.902	4
59	MP1A	Z	-10.336	4
60	MP1A	Mx	-.021	4
61	MP1B	X	17.902	.5
62	MP1B	Z	-10.336	.5
63	MP1B	Mx	.021	.5
64	MP1B	X	17.902	4
65	MP1B	Z	-10.336	4
66	MP1B	Mx	.021	4
67	MP1C	X	10.652	.5
68	MP1C	Z	-6.15	.5
69	MP1C	Mx	0	.5
70	MP1C	X	10.652	4
71	MP1C	Z	-6.15	4



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
72	MP1C	Mx	0	4
73	MP4A	X	17.902	.5
74	MP4A	Z	-10.336	.5
75	MP4A	Mx	-.021	.5
76	MP4A	X	17.902	4
77	MP4A	Z	-10.336	4
78	MP4A	Mx	-.021	4
79	MP4B	X	17.902	.5
80	MP4B	Z	-10.336	.5
81	MP4B	Mx	.021	.5
82	MP4B	X	17.902	4
83	MP4B	Z	-10.336	4
84	MP4B	Mx	.021	4
85	MP4C	X	10.652	.5
86	MP4C	Z	-6.15	.5
87	MP4C	Mx	0	.5
88	MP4C	X	10.652	4
89	MP4C	Z	-6.15	4
90	MP4C	Mx	0	4
91	M98	X	19.836	1
92	M98	Z	-11.452	1
93	M98	Mx	0	1
94	MP1A	X	11.634	2.25
95	MP1A	Z	-6.717	2.25
96	MP1A	Mx	.006	2.25
97	MP1B	X	11.634	2.25
98	MP1B	Z	-6.717	2.25
99	MP1B	Mx	-.006	2.25
100	MP1C	X	15.066	2.25
101	MP1C	Z	-8.698	2.25
102	MP1C	Mx	0	2.25
103	MP2A	X	10.33	2.25
104	MP2A	Z	-5.964	2.25
105	MP2A	Mx	.005	2.25
106	MP2B	X	10.33	2.25
107	MP2B	Z	-5.964	2.25
108	MP2B	Mx	-.005	2.25
109	MP2C	X	15.066	2.25
110	MP2C	Z	-8.698	2.25
111	MP2C	Mx	0	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	31.6	.5
2	MP2A	Z	0	.5
3	MP2A	Mx	-.029	.5
4	MP2A	X	31.6	4
5	MP2A	Z	0	4
6	MP2A	Mx	-.029	4
7	MP2B	X	39.214	.5
8	MP2B	Z	0	.5









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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
53	MP3C	Z	5.876	3.25
54	MP3C	Mx	.005	3.25
55	MP1A	X	17.902	.5
56	MP1A	Z	10.336	.5
57	MP1A	Mx	-.021	.5
58	MP1A	X	17.902	4
59	MP1A	Z	10.336	4
60	MP1A	Mx	-.021	4
61	MP1B	X	10.652	.5
62	MP1B	Z	6.15	.5
63	MP1B	Mx	0	.5
64	MP1B	X	10.652	4
65	MP1B	Z	6.15	4
66	MP1B	Mx	0	4
67	MP1C	X	17.902	.5
68	MP1C	Z	10.336	.5
69	MP1C	Mx	.021	.5
70	MP1C	X	17.902	4
71	MP1C	Z	10.336	4
72	MP1C	Mx	.021	4
73	MP4A	X	17.902	.5
74	MP4A	Z	10.336	.5
75	MP4A	Mx	-.021	.5
76	MP4A	X	17.902	4
77	MP4A	Z	10.336	4
78	MP4A	Mx	-.021	4
79	MP4B	X	10.652	.5
80	MP4B	Z	6.15	.5
81	MP4B	Mx	0	.5
82	MP4B	X	10.652	4
83	MP4B	Z	6.15	4
84	MP4B	Mx	0	4
85	MP4C	X	17.902	.5
86	MP4C	Z	10.336	.5
87	MP4C	Mx	.021	.5
88	MP4C	X	17.902	4
89	MP4C	Z	10.336	4
90	MP4C	Mx	.021	4
91	M98	X	26.688	1
92	M98	Z	15.408	1
93	M98	Mx	0	1
94	MP1A	X	11.634	2.25
95	MP1A	Z	6.717	2.25
96	MP1A	Mx	.006	2.25
97	MP1B	X	15.066	2.25
98	MP1B	Z	8.698	2.25
99	MP1B	Mx	0	2.25
100	MP1C	X	11.634	2.25
101	MP1C	Z	6.717	2.25
102	MP1C	Mx	-.006	2.25
103	MP2A	X	10.33	2.25
104	MP2A	Z	5.964	2.25











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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
31	MP2C	X	0	.5
32	MP2C	Z	34.138	.5
33	MP2C	Mx	.041	.5
34	MP2C	X	0	4
35	MP2C	Z	34.138	4
36	MP2C	Mx	.041	4
37	MP3A	X	0	1.25
38	MP3A	Z	20.613	1.25
39	MP3A	Mx	0	1.25
40	MP3A	X	0	3.25
41	MP3A	Z	20.613	3.25
42	MP3A	Mx	0	3.25
43	MP3B	X	0	1.25
44	MP3B	Z	11.753	1.25
45	MP3B	Mx	-.005	1.25
46	MP3B	X	0	3.25
47	MP3B	Z	11.753	3.25
48	MP3B	Mx	-.005	3.25
49	MP3C	X	0	1.25
50	MP3C	Z	11.753	1.25
51	MP3C	Mx	.005	1.25
52	MP3C	X	0	3.25
53	MP3C	Z	11.753	3.25
54	MP3C	Mx	.005	3.25
55	MP1A	X	0	.5
56	MP1A	Z	12.3	.5
57	MP1A	Mx	0	.5
58	MP1A	X	0	4
59	MP1A	Z	12.3	4
60	MP1A	Mx	0	4
61	MP1B	X	0	.5
62	MP1B	Z	20.671	.5
63	MP1B	Mx	-.021	.5
64	MP1B	X	0	4
65	MP1B	Z	20.671	4
66	MP1B	Mx	-.021	4
67	MP1C	X	0	.5
68	MP1C	Z	20.671	.5
69	MP1C	Mx	.021	.5
70	MP1C	X	0	4
71	MP1C	Z	20.671	4
72	MP1C	Mx	.021	4
73	MP4A	X	0	.5
74	MP4A	Z	12.3	.5
75	MP4A	Mx	0	.5
76	MP4A	X	0	4
77	MP4A	Z	12.3	4
78	MP4A	Mx	0	4
79	MP4B	X	0	.5
80	MP4B	Z	20.671	.5
81	MP4B	Mx	-.021	.5
82	MP4B	X	0	4

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
83	MP4B	Z	20.671	4
84	MP4B	Mx	-.021	4
85	MP4C	X	0	.5
86	MP4C	Z	20.671	.5
87	MP4C	Mx	.021	.5
88	MP4C	X	0	4
89	MP4C	Z	20.671	4
90	MP4C	Mx	.021	4
91	M98	X	0	1
92	M98	Z	30.816	1
93	M98	Mx	0	1
94	MP1A	X	0	2.25
95	MP1A	Z	17.397	2.25
96	MP1A	Mx	0	2.25
97	MP1B	X	0	2.25
98	MP1B	Z	13.434	2.25
99	MP1B	Mx	.006	2.25
100	MP1C	X	0	2.25
101	MP1C	Z	13.434	2.25
102	MP1C	Mx	-.006	2.25
103	MP2A	X	0	2.25
104	MP2A	Z	17.397	2.25
105	MP2A	Mx	0	2.25
106	MP2B	X	0	2.25
107	MP2B	Z	11.928	2.25
108	MP2B	Mx	.005	2.25
109	MP2C	X	0	2.25
110	MP2C	Z	11.928	2.25
111	MP2C	Mx	-.005	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-19.607	.5
2	MP2A	Z	33.96	.5
3	MP2A	Mx	.046	.5
4	MP2A	X	-19.607	4
5	MP2A	Z	33.96	4
6	MP2A	Mx	.046	4
7	MP2B	X	-15.8	.5
8	MP2B	Z	27.366	.5
9	MP2B	Mx	-.029	.5
10	MP2B	X	-15.8	4
11	MP2B	Z	27.366	4
12	MP2B	Mx	-.029	4
13	MP2C	X	-19.607	.5
14	MP2C	Z	33.96	.5
15	MP2C	Mx	-.01	.5
16	MP2C	X	-19.607	4
17	MP2C	Z	33.96	4
18	MP2C	Mx	-.01	4
19	MP2A	X	-19.607	.5









Company : Maser Consulting  
 Designer :  
 Job Number :  
 Model Name :

Apr 20, 2021  
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 Checked By: DX

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
61	MP1B	X	-17.902	.5
62	MP1B	Z	10.336	.5
63	MP1B	Mx	-.021	.5
64	MP1B	X	-17.902	4
65	MP1B	Z	10.336	4
66	MP1B	Mx	-.021	4
67	MP1C	X	-10.652	.5
68	MP1C	Z	6.15	.5
69	MP1C	Mx	0	.5
70	MP1C	X	-10.652	4
71	MP1C	Z	6.15	4
72	MP1C	Mx	0	4
73	MP4A	X	-17.902	.5
74	MP4A	Z	10.336	.5
75	MP4A	Mx	.021	.5
76	MP4A	X	-17.902	4
77	MP4A	Z	10.336	4
78	MP4A	Mx	.021	4
79	MP4B	X	-17.902	.5
80	MP4B	Z	10.336	.5
81	MP4B	Mx	-.021	.5
82	MP4B	X	-17.902	4
83	MP4B	Z	10.336	4
84	MP4B	Mx	-.021	4
85	MP4C	X	-10.652	.5
86	MP4C	Z	6.15	.5
87	MP4C	Mx	0	.5
88	MP4C	X	-10.652	4
89	MP4C	Z	6.15	4
90	MP4C	Mx	0	4
91	M98	X	-19.836	1
92	M98	Z	11.452	1
93	M98	Mx	0	1
94	MP1A	X	-11.634	2.25
95	MP1A	Z	6.717	2.25
96	MP1A	Mx	-.006	2.25
97	MP1B	X	-11.634	2.25
98	MP1B	Z	6.717	2.25
99	MP1B	Mx	.006	2.25
100	MP1C	X	-15.066	2.25
101	MP1C	Z	8.698	2.25
102	MP1C	Mx	0	2.25
103	MP2A	X	-10.33	2.25
104	MP2A	Z	5.964	2.25
105	MP2A	Mx	-.005	2.25
106	MP2B	X	-10.33	2.25
107	MP2B	Z	5.964	2.25
108	MP2B	Mx	.005	2.25
109	MP2C	X	-15.066	2.25
110	MP2C	Z	8.698	2.25
111	MP2C	Mx	0	2.25



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-31.6	.5
2	MP2A	Z	0	.5
3	MP2A	Mx	.029	.5
4	MP2A	X	-31.6	4
5	MP2A	Z	0	4
6	MP2A	Mx	.029	4
7	MP2B	X	-39.214	.5
8	MP2B	Z	0	.5
9	MP2B	Mx	.01	.5
10	MP2B	X	-39.214	4
11	MP2B	Z	0	4
12	MP2B	Mx	.01	4
13	MP2C	X	-39.214	.5
14	MP2C	Z	0	.5
15	MP2C	Mx	-.046	.5
16	MP2C	X	-39.214	4
17	MP2C	Z	0	4
18	MP2C	Mx	-.046	4
19	MP2A	X	-31.6	.5
20	MP2A	Z	0	.5
21	MP2A	Mx	.029	.5
22	MP2A	X	-31.6	4
23	MP2A	Z	0	4
24	MP2A	Mx	.029	4
25	MP2B	X	-39.214	.5
26	MP2B	Z	0	.5
27	MP2B	Mx	-.046	.5
28	MP2B	X	-39.214	4
29	MP2B	Z	0	4
30	MP2B	Mx	-.046	4
31	MP2C	X	-39.214	.5
32	MP2C	Z	0	.5
33	MP2C	Mx	.01	.5
34	MP2C	X	-39.214	4
35	MP2C	Z	0	4
36	MP2C	Mx	.01	4
37	MP3A	X	-8.799	1.25
38	MP3A	Z	0	1.25
39	MP3A	Mx	.004	1.25
40	MP3A	X	-8.799	3.25
41	MP3A	Z	0	3.25
42	MP3A	Mx	.004	3.25
43	MP3B	X	-17.66	1.25
44	MP3B	Z	0	1.25
45	MP3B	Mx	-.004	1.25
46	MP3B	X	-17.66	3.25
47	MP3B	Z	0	3.25
48	MP3B	Mx	-.004	3.25
49	MP3C	X	-17.66	1.25
50	MP3C	Z	0	1.25
51	MP3C	Mx	-.004	1.25
52	MP3C	X	-17.66	3.25



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
53	MP3C	Z	0	3.25
54	MP3C	Mx	-.004	3.25
55	MP1A	X	-23.462	.5
56	MP1A	Z	0	.5
57	MP1A	Mx	.027	.5
58	MP1A	X	-23.462	4
59	MP1A	Z	0	4
60	MP1A	Mx	.027	4
61	MP1B	X	-15.09	.5
62	MP1B	Z	0	.5
63	MP1B	Mx	-.009	.5
64	MP1B	X	-15.09	4
65	MP1B	Z	0	4
66	MP1B	Mx	-.009	4
67	MP1C	X	-15.09	.5
68	MP1C	Z	0	.5
69	MP1C	Mx	-.009	.5
70	MP1C	X	-15.09	4
71	MP1C	Z	0	4
72	MP1C	Mx	-.009	4
73	MP4A	X	-23.462	.5
74	MP4A	Z	0	.5
75	MP4A	Mx	.027	.5
76	MP4A	X	-23.462	4
77	MP4A	Z	0	4
78	MP4A	Mx	.027	4
79	MP4B	X	-15.09	.5
80	MP4B	Z	0	.5
81	MP4B	Mx	-.009	.5
82	MP4B	X	-15.09	4
83	MP4B	Z	0	4
84	MP4B	Mx	-.009	4
85	MP4C	X	-15.09	.5
86	MP4C	Z	0	.5
87	MP4C	Mx	-.009	.5
88	MP4C	X	-15.09	4
89	MP4C	Z	0	4
90	MP4C	Mx	-.009	4
91	M98	X	-25.541	1
92	M98	Z	0	1
93	M98	Mx	0	1
94	MP1A	X	-12.113	2.25
95	MP1A	Z	0	2.25
96	MP1A	Mx	-.006	2.25
97	MP1B	X	-16.076	2.25
98	MP1B	Z	0	2.25
99	MP1B	Mx	.004	2.25
100	MP1C	X	-16.076	2.25
101	MP1C	Z	0	2.25
102	MP1C	Mx	.004	2.25
103	MP2A	X	-10.105	2.25
104	MP2A	Z	0	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
105	MP2A	Mx	-.005	2.25
106	MP2B	X	-15.574	2.25
107	MP2B	Z	0	2.25
108	MP2B	Mx	.004	2.25
109	MP2C	X	-15.574	2.25
110	MP2C	Z	0	2.25
111	MP2C	Mx	.004	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-29.564	.5
2	MP2A	Z	-17.069	.5
3	MP2A	Mx	.013	.5
4	MP2A	X	-29.564	4
5	MP2A	Z	-17.069	4
6	MP2A	Mx	.013	4
7	MP2B	X	-36.158	.5
8	MP2B	Z	-20.876	.5
9	MP2B	Mx	.035	.5
10	MP2B	X	-36.158	4
11	MP2B	Z	-20.876	4
12	MP2B	Mx	.035	4
13	MP2C	X	-29.564	.5
14	MP2C	Z	-17.069	.5
15	MP2C	Mx	-.041	.5
16	MP2C	X	-29.564	4
17	MP2C	Z	-17.069	4
18	MP2C	Mx	-.041	4
19	MP2A	X	-29.564	.5
20	MP2A	Z	-17.069	.5
21	MP2A	Mx	.041	.5
22	MP2A	X	-29.564	4
23	MP2A	Z	-17.069	4
24	MP2A	Mx	.041	4
25	MP2B	X	-36.158	.5
26	MP2B	Z	-20.876	.5
27	MP2B	Mx	-.035	.5
28	MP2B	X	-36.158	4
29	MP2B	Z	-20.876	4
30	MP2B	Mx	-.035	4
31	MP2C	X	-29.564	.5
32	MP2C	Z	-17.069	.5
33	MP2C	Mx	-.013	.5
34	MP2C	X	-29.564	4
35	MP2C	Z	-17.069	4
36	MP2C	Mx	-.013	4
37	MP3A	X	-10.178	1.25
38	MP3A	Z	-5.876	1.25
39	MP3A	Mx	.005	1.25
40	MP3A	X	-10.178	3.25
41	MP3A	Z	-5.876	3.25





Company : Maser Consulting  
 Designer :  
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**Member Point Loads (BLC 25 : Antenna Wi (300 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
94	MP1A	X	-11.634	2.25
95	MP1A	Z	-6.717	2.25
96	MP1A	Mx	-.006	2.25
97	MP1B	X	-15.066	2.25
98	MP1B	Z	-8.698	2.25
99	MP1B	Mx	0	2.25
100	MP1C	X	-11.634	2.25
101	MP1C	Z	-6.717	2.25
102	MP1C	Mx	.006	2.25
103	MP2A	X	-10.33	2.25
104	MP2A	Z	-5.964	2.25
105	MP2A	Mx	-.005	2.25
106	MP2B	X	-15.066	2.25
107	MP2B	Z	-8.698	2.25
108	MP2B	Mx	0	2.25
109	MP2C	X	-10.33	2.25
110	MP2C	Z	-5.964	2.25
111	MP2C	Mx	.005	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-19.607	.5
2	MP2A	Z	-33.96	.5
3	MP2A	Mx	-.01	.5
4	MP2A	X	-19.607	4
5	MP2A	Z	-33.96	4
6	MP2A	Mx	-.01	4
7	MP2B	X	-19.607	.5
8	MP2B	Z	-33.96	.5
9	MP2B	Mx	.046	.5
10	MP2B	X	-19.607	4
11	MP2B	Z	-33.96	4
12	MP2B	Mx	.046	4
13	MP2C	X	-15.8	.5
14	MP2C	Z	-27.366	.5
15	MP2C	Mx	-.029	.5
16	MP2C	X	-15.8	4
17	MP2C	Z	-27.366	4
18	MP2C	Mx	-.029	4
19	MP2A	X	-19.607	.5
20	MP2A	Z	-33.96	.5
21	MP2A	Mx	.046	.5
22	MP2A	X	-19.607	4
23	MP2A	Z	-33.96	4
24	MP2A	Mx	.046	4
25	MP2B	X	-19.607	.5
26	MP2B	Z	-33.96	.5
27	MP2B	Mx	-.01	.5
28	MP2B	X	-19.607	4
29	MP2B	Z	-33.96	4
30	MP2B	Mx	-.01	4







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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
20	MP2A	Z	-13.755	.5
21	MP2A	Mx	.011	.5
22	MP2A	X	0	4
23	MP2A	Z	-13.755	4
24	MP2A	Mx	.011	4
25	MP2B	X	0	.5
26	MP2B	Z	-11.108	.5
27	MP2B	Mx	.004	.5
28	MP2B	X	0	4
29	MP2B	Z	-11.108	4
30	MP2B	Mx	.004	4
31	MP2C	X	0	.5
32	MP2C	Z	-11.108	.5
33	MP2C	Mx	-.013	.5
34	MP2C	X	0	4
35	MP2C	Z	-11.108	4
36	MP2C	Mx	-.013	4
37	MP3A	X	0	1.25
38	MP3A	Z	-6.55	1.25
39	MP3A	Mx	0	1.25
40	MP3A	X	0	3.25
41	MP3A	Z	-6.55	3.25
42	MP3A	Mx	0	3.25
43	MP3B	X	0	1.25
44	MP3B	Z	-3.561	1.25
45	MP3B	Mx	.002	1.25
46	MP3B	X	0	3.25
47	MP3B	Z	-3.561	3.25
48	MP3B	Mx	.002	3.25
49	MP3C	X	0	1.25
50	MP3C	Z	-3.561	1.25
51	MP3C	Mx	-.002	1.25
52	MP3C	X	0	3.25
53	MP3C	Z	-3.561	3.25
54	MP3C	Mx	-.002	3.25
55	MP1A	X	0	.5
56	MP1A	Z	-3.637	.5
57	MP1A	Mx	0	.5
58	MP1A	X	0	4
59	MP1A	Z	-3.637	4
60	MP1A	Mx	0	4
61	MP1B	X	0	.5
62	MP1B	Z	-6.552	.5
63	MP1B	Mx	.007	.5
64	MP1B	X	0	4
65	MP1B	Z	-6.552	4
66	MP1B	Mx	.007	4
67	MP1C	X	0	.5
68	MP1C	Z	-6.552	.5
69	MP1C	Mx	-.007	.5
70	MP1C	X	0	4
71	MP1C	Z	-6.552	4





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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
72	MP1C	Mx	-.007	4
73	MP4A	X	0	.5
74	MP4A	Z	-3.637	.5
75	MP4A	Mx	0	.5
76	MP4A	X	0	4
77	MP4A	Z	-3.637	4
78	MP4A	Mx	0	4
79	MP4B	X	0	.5
80	MP4B	Z	-6.552	.5
81	MP4B	Mx	.007	.5
82	MP4B	X	0	4
83	MP4B	Z	-6.552	4
84	MP4B	Mx	.007	4
85	MP4C	X	0	.5
86	MP4C	Z	-6.552	.5
87	MP4C	Mx	-.007	.5
88	MP4C	X	0	4
89	MP4C	Z	-6.552	4
90	MP4C	Mx	-.007	4
91	M98	X	0	1
92	M98	Z	-9.671	1
93	M98	Mx	0	1
94	MP1A	X	0	2.25
95	MP1A	Z	-5.212	2.25
96	MP1A	Mx	0	2.25
97	MP1B	X	0	2.25
98	MP1B	Z	-3.916	2.25
99	MP1B	Mx	-.002	2.25
100	MP1C	X	0	2.25
101	MP1C	Z	-3.916	2.25
102	MP1C	Mx	.002	2.25
103	MP2A	X	0	2.25
104	MP2A	Z	-5.212	2.25
105	MP2A	Mx	0	2.25
106	MP2B	X	0	2.25
107	MP2B	Z	-3.42	2.25
108	MP2B	Mx	-.001	2.25
109	MP2C	X	0	2.25
110	MP2C	Z	-3.42	2.25
111	MP2C	Mx	.001	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	6.436	.5
2	MP2A	Z	-11.148	.5
3	MP2A	Mx	-.015	.5
4	MP2A	X	6.436	4
5	MP2A	Z	-11.148	4
6	MP2A	Mx	-.015	4
7	MP2B	X	5.113	.5
8	MP2B	Z	-8.856	.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
9	MP2B	Mx	.009	.5
10	MP2B	X	5.113	4
11	MP2B	Z	-8.856	4
12	MP2B	Mx	.009	4
13	MP2C	X	6.436	.5
14	MP2C	Z	-11.148	.5
15	MP2C	Mx	.003	.5
16	MP2C	X	6.436	4
17	MP2C	Z	-11.148	4
18	MP2C	Mx	.003	4
19	MP2A	X	6.436	.5
20	MP2A	Z	-11.148	.5
21	MP2A	Mx	.003	.5
22	MP2A	X	6.436	4
23	MP2A	Z	-11.148	4
24	MP2A	Mx	.003	4
25	MP2B	X	5.113	.5
26	MP2B	Z	-8.856	.5
27	MP2B	Mx	.009	.5
28	MP2B	X	5.113	4
29	MP2B	Z	-8.856	4
30	MP2B	Mx	.009	4
31	MP2C	X	6.436	.5
32	MP2C	Z	-11.148	.5
33	MP2C	Mx	-.015	.5
34	MP2C	X	6.436	4
35	MP2C	Z	-11.148	4
36	MP2C	Mx	-.015	4
37	MP3A	X	2.777	1.25
38	MP3A	Z	-4.81	1.25
39	MP3A	Mx	-.001	1.25
40	MP3A	X	2.777	3.25
41	MP3A	Z	-4.81	3.25
42	MP3A	Mx	-.001	3.25
43	MP3B	X	1.282	1.25
44	MP3B	Z	-2.221	1.25
45	MP3B	Mx	.001	1.25
46	MP3B	X	1.282	3.25
47	MP3B	Z	-2.221	3.25
48	MP3B	Mx	.001	3.25
49	MP3C	X	2.777	1.25
50	MP3C	Z	-4.81	1.25
51	MP3C	Mx	-.001	1.25
52	MP3C	X	2.777	3.25
53	MP3C	Z	-4.81	3.25
54	MP3C	Mx	-.001	3.25
55	MP1A	X	2.304	.5
56	MP1A	Z	-3.992	.5
57	MP1A	Mx	-.003	.5
58	MP1A	X	2.304	4
59	MP1A	Z	-3.992	4
60	MP1A	Mx	-.003	4

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
61	MP1B	X	3.762	.5
62	MP1B	Z	-6.516	.5
63	MP1B	Mx	.009	.5
64	MP1B	X	3.762	4
65	MP1B	Z	-6.516	4
66	MP1B	Mx	.009	4
67	MP1C	X	2.304	.5
68	MP1C	Z	-3.992	.5
69	MP1C	Mx	-.003	.5
70	MP1C	X	2.304	4
71	MP1C	Z	-3.992	4
72	MP1C	Mx	-.003	4
73	MP4A	X	2.304	.5
74	MP4A	Z	-3.992	.5
75	MP4A	Mx	-.003	.5
76	MP4A	X	2.304	4
77	MP4A	Z	-3.992	4
78	MP4A	Mx	-.003	4
79	MP4B	X	3.762	.5
80	MP4B	Z	-6.516	.5
81	MP4B	Mx	.009	.5
82	MP4B	X	3.762	4
83	MP4B	Z	-6.516	4
84	MP4B	Mx	.009	4
85	MP4C	X	2.304	.5
86	MP4C	Z	-3.992	.5
87	MP4C	Mx	-.003	.5
88	MP4C	X	2.304	4
89	MP4C	Z	-3.992	4
90	MP4C	Mx	-.003	4
91	M98	X	3.943	1
92	M98	Z	-6.829	1
93	M98	Mx	0	1
94	MP1A	X	2.39	2.25
95	MP1A	Z	-4.14	2.25
96	MP1A	Mx	.001	2.25
97	MP1B	X	1.742	2.25
98	MP1B	Z	-3.017	2.25
99	MP1B	Mx	-.002	2.25
100	MP1C	X	2.39	2.25
101	MP1C	Z	-4.14	2.25
102	MP1C	Mx	.001	2.25
103	MP2A	X	2.307	2.25
104	MP2A	Z	-3.996	2.25
105	MP2A	Mx	.001	2.25
106	MP2B	X	1.411	2.25
107	MP2B	Z	-2.444	2.25
108	MP2B	Mx	-.001	2.25
109	MP2C	X	2.307	2.25
110	MP2C	Z	-3.996	2.25
111	MP2C	Mx	.001	2.25





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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
53	MP3C	Z	-3.275	3.25
54	MP3C	Mx	0	3.25
55	MP1A	X	5.674	.5
56	MP1A	Z	-3.276	.5
57	MP1A	Mx	-.007	.5
58	MP1A	X	5.674	4
59	MP1A	Z	-3.276	4
60	MP1A	Mx	-.007	4
61	MP1B	X	5.674	.5
62	MP1B	Z	-3.276	.5
63	MP1B	Mx	.007	.5
64	MP1B	X	5.674	4
65	MP1B	Z	-3.276	4
66	MP1B	Mx	.007	4
67	MP1C	X	3.15	.5
68	MP1C	Z	-1.819	.5
69	MP1C	Mx	0	.5
70	MP1C	X	3.15	4
71	MP1C	Z	-1.819	4
72	MP1C	Mx	0	4
73	MP4A	X	5.674	.5
74	MP4A	Z	-3.276	.5
75	MP4A	Mx	-.007	.5
76	MP4A	X	5.674	4
77	MP4A	Z	-3.276	4
78	MP4A	Mx	-.007	4
79	MP4B	X	5.674	.5
80	MP4B	Z	-3.276	.5
81	MP4B	Mx	.007	.5
82	MP4B	X	5.674	4
83	MP4B	Z	-3.276	4
84	MP4B	Mx	.007	4
85	MP4C	X	3.15	.5
86	MP4C	Z	-1.819	.5
87	MP4C	Mx	0	.5
88	MP4C	X	3.15	4
89	MP4C	Z	-1.819	4
90	MP4C	Mx	0	4
91	M98	X	6.055	1
92	M98	Z	-3.496	1
93	M98	Mx	0	1
94	MP1A	X	3.391	2.25
95	MP1A	Z	-1.958	2.25
96	MP1A	Mx	.002	2.25
97	MP1B	X	3.391	2.25
98	MP1B	Z	-1.958	2.25
99	MP1B	Mx	-.002	2.25
100	MP1C	X	4.514	2.25
101	MP1C	Z	-2.606	2.25
102	MP1C	Mx	0	2.25
103	MP2A	X	2.961	2.25
104	MP2A	Z	-1.71	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
105	MP2A	Mx	.001	2.25
106	MP2B	X	2.961	2.25
107	MP2B	Z	-1.71	2.25
108	MP2B	Mx	-.001	2.25
109	MP2C	X	4.514	2.25
110	MP2C	Z	-2.606	2.25
111	MP2C	Mx	0	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	10.226	.5
2	MP2A	Z	0	.5
3	MP2A	Mx	-.009	.5
4	MP2A	X	10.226	4
5	MP2A	Z	0	4
6	MP2A	Mx	-.009	4
7	MP2B	X	12.873	.5
8	MP2B	Z	0	.5
9	MP2B	Mx	-.003	.5
10	MP2B	X	12.873	4
11	MP2B	Z	0	4
12	MP2B	Mx	-.003	4
13	MP2C	X	12.873	.5
14	MP2C	Z	0	.5
15	MP2C	Mx	.015	.5
16	MP2C	X	12.873	4
17	MP2C	Z	0	4
18	MP2C	Mx	.015	4
19	MP2A	X	10.226	.5
20	MP2A	Z	0	.5
21	MP2A	Mx	-.009	.5
22	MP2A	X	10.226	4
23	MP2A	Z	0	4
24	MP2A	Mx	-.009	4
25	MP2B	X	12.873	.5
26	MP2B	Z	0	.5
27	MP2B	Mx	.015	.5
28	MP2B	X	12.873	4
29	MP2B	Z	0	4
30	MP2B	Mx	.015	4
31	MP2C	X	12.873	.5
32	MP2C	Z	0	.5
33	MP2C	Mx	-.003	.5
34	MP2C	X	12.873	4
35	MP2C	Z	0	4
36	MP2C	Mx	-.003	4
37	MP3A	X	2.564	1.25
38	MP3A	Z	0	1.25
39	MP3A	Mx	-.001	1.25
40	MP3A	X	2.564	3.25
41	MP3A	Z	0	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
42	MP3A	Mx	-.001	3.25
43	MP3B	X	5.554	1.25
44	MP3B	Z	0	1.25
45	MP3B	Mx	.001	1.25
46	MP3B	X	5.554	3.25
47	MP3B	Z	0	3.25
48	MP3B	Mx	.001	3.25
49	MP3C	X	5.554	1.25
50	MP3C	Z	0	1.25
51	MP3C	Mx	.001	1.25
52	MP3C	X	5.554	3.25
53	MP3C	Z	0	3.25
54	MP3C	Mx	.001	3.25
55	MP1A	X	7.524	.5
56	MP1A	Z	0	.5
57	MP1A	Mx	-.009	.5
58	MP1A	X	7.524	4
59	MP1A	Z	0	4
60	MP1A	Mx	-.009	4
61	MP1B	X	4.609	.5
62	MP1B	Z	0	.5
63	MP1B	Mx	.003	.5
64	MP1B	X	4.609	4
65	MP1B	Z	0	4
66	MP1B	Mx	.003	4
67	MP1C	X	4.609	.5
68	MP1C	Z	0	.5
69	MP1C	Mx	.003	.5
70	MP1C	X	4.609	4
71	MP1C	Z	0	4
72	MP1C	Mx	.003	4
73	MP4A	X	7.524	.5
74	MP4A	Z	0	.5
75	MP4A	Mx	-.009	.5
76	MP4A	X	7.524	4
77	MP4A	Z	0	4
78	MP4A	Mx	-.009	4
79	MP4B	X	4.609	.5
80	MP4B	Z	0	.5
81	MP4B	Mx	.003	.5
82	MP4B	X	4.609	4
83	MP4B	Z	0	4
84	MP4B	Mx	.003	4
85	MP4C	X	4.609	.5
86	MP4C	Z	0	.5
87	MP4C	Mx	.003	.5
88	MP4C	X	4.609	4
89	MP4C	Z	0	4
90	MP4C	Mx	.003	4
91	M98	X	7.885	1
92	M98	Z	0	1
93	M98	Mx	0	1







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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
31	MP2C	X	9.62	.5
32	MP2C	Z	5.554	.5
33	MP2C	Mx	.004	.5
34	MP2C	X	9.62	4
35	MP2C	Z	5.554	4
36	MP2C	Mx	.004	4
37	MP3A	X	3.084	1.25
38	MP3A	Z	1.78	1.25
39	MP3A	Mx	-.002	1.25
40	MP3A	X	3.084	3.25
41	MP3A	Z	1.78	3.25
42	MP3A	Mx	-.002	3.25
43	MP3B	X	5.672	1.25
44	MP3B	Z	3.275	1.25
45	MP3B	Mx	0	1.25
46	MP3B	X	5.672	3.25
47	MP3B	Z	3.275	3.25
48	MP3B	Mx	0	3.25
49	MP3C	X	3.084	1.25
50	MP3C	Z	1.78	1.25
51	MP3C	Mx	.002	1.25
52	MP3C	X	3.084	3.25
53	MP3C	Z	1.78	3.25
54	MP3C	Mx	.002	3.25
55	MP1A	X	5.674	.5
56	MP1A	Z	3.276	.5
57	MP1A	Mx	-.007	.5
58	MP1A	X	5.674	4
59	MP1A	Z	3.276	4
60	MP1A	Mx	-.007	4
61	MP1B	X	3.15	.5
62	MP1B	Z	1.819	.5
63	MP1B	Mx	0	.5
64	MP1B	X	3.15	4
65	MP1B	Z	1.819	4
66	MP1B	Mx	0	4
67	MP1C	X	5.674	.5
68	MP1C	Z	3.276	.5
69	MP1C	Mx	.007	.5
70	MP1C	X	5.674	4
71	MP1C	Z	3.276	4
72	MP1C	Mx	.007	4
73	MP4A	X	5.674	.5
74	MP4A	Z	3.276	.5
75	MP4A	Mx	-.007	.5
76	MP4A	X	5.674	4
77	MP4A	Z	3.276	4
78	MP4A	Mx	-.007	4
79	MP4B	X	3.15	.5
80	MP4B	Z	1.819	.5
81	MP4B	Mx	0	.5
82	MP4B	X	3.15	4

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
83	MP4B	Z	1.819	4
84	MP4B	Mx	0	4
85	MP4C	X	5.674	.5
86	MP4C	Z	3.276	.5
87	MP4C	Mx	.007	.5
88	MP4C	X	5.674	4
89	MP4C	Z	3.276	4
90	MP4C	Mx	.007	4
91	M98	X	8.375	1
92	M98	Z	4.835	1
93	M98	Mx	0	1
94	MP1A	X	3.391	2.25
95	MP1A	Z	1.958	2.25
96	MP1A	Mx	.002	2.25
97	MP1B	X	4.514	2.25
98	MP1B	Z	2.606	2.25
99	MP1B	Mx	0	2.25
100	MP1C	X	3.391	2.25
101	MP1C	Z	1.958	2.25
102	MP1C	Mx	-.002	2.25
103	MP2A	X	2.961	2.25
104	MP2A	Z	1.71	2.25
105	MP2A	Mx	.001	2.25
106	MP2B	X	4.514	2.25
107	MP2B	Z	2.606	2.25
108	MP2B	Mx	0	2.25
109	MP2C	X	2.961	2.25
110	MP2C	Z	1.71	2.25
111	MP2C	Mx	-.001	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	6.436	.5
2	MP2A	Z	11.148	.5
3	MP2A	Mx	.003	.5
4	MP2A	X	6.436	4
5	MP2A	Z	11.148	4
6	MP2A	Mx	.003	4
7	MP2B	X	6.436	.5
8	MP2B	Z	11.148	.5
9	MP2B	Mx	-.015	.5
10	MP2B	X	6.436	4
11	MP2B	Z	11.148	4
12	MP2B	Mx	-.015	4
13	MP2C	X	5.113	.5
14	MP2C	Z	8.856	.5
15	MP2C	Mx	.009	.5
16	MP2C	X	5.113	4
17	MP2C	Z	8.856	4
18	MP2C	Mx	.009	4
19	MP2A	X	6.436	.5







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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
9	MP2B	Mx	-.013	.5
10	MP2B	X	0	4
11	MP2B	Z	11.108	4
12	MP2B	Mx	-.013	4
13	MP2C	X	0	.5
14	MP2C	Z	11.108	.5
15	MP2C	Mx	.004	.5
16	MP2C	X	0	4
17	MP2C	Z	11.108	4
18	MP2C	Mx	.004	4
19	MP2A	X	0	.5
20	MP2A	Z	13.755	.5
21	MP2A	Mx	-.011	.5
22	MP2A	X	0	4
23	MP2A	Z	13.755	4
24	MP2A	Mx	-.011	4
25	MP2B	X	0	.5
26	MP2B	Z	11.108	.5
27	MP2B	Mx	-.004	.5
28	MP2B	X	0	4
29	MP2B	Z	11.108	4
30	MP2B	Mx	-.004	4
31	MP2C	X	0	.5
32	MP2C	Z	11.108	.5
33	MP2C	Mx	.013	.5
34	MP2C	X	0	4
35	MP2C	Z	11.108	4
36	MP2C	Mx	.013	4
37	MP3A	X	0	1.25
38	MP3A	Z	6.55	1.25
39	MP3A	Mx	0	1.25
40	MP3A	X	0	3.25
41	MP3A	Z	6.55	3.25
42	MP3A	Mx	0	3.25
43	MP3B	X	0	1.25
44	MP3B	Z	3.561	1.25
45	MP3B	Mx	-.002	1.25
46	MP3B	X	0	3.25
47	MP3B	Z	3.561	3.25
48	MP3B	Mx	-.002	3.25
49	MP3C	X	0	1.25
50	MP3C	Z	3.561	1.25
51	MP3C	Mx	.002	1.25
52	MP3C	X	0	3.25
53	MP3C	Z	3.561	3.25
54	MP3C	Mx	.002	3.25
55	MP1A	X	0	.5
56	MP1A	Z	3.637	.5
57	MP1A	Mx	0	.5
58	MP1A	X	0	4
59	MP1A	Z	3.637	4
60	MP1A	Mx	0	4



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
61	MP1B	X	0	.5
62	MP1B	Z	6.552	.5
63	MP1B	Mx	-.007	.5
64	MP1B	X	0	4
65	MP1B	Z	6.552	4
66	MP1B	Mx	-.007	4
67	MP1C	X	0	.5
68	MP1C	Z	6.552	.5
69	MP1C	Mx	.007	.5
70	MP1C	X	0	4
71	MP1C	Z	6.552	4
72	MP1C	Mx	.007	4
73	MP4A	X	0	.5
74	MP4A	Z	3.637	.5
75	MP4A	Mx	0	.5
76	MP4A	X	0	4
77	MP4A	Z	3.637	4
78	MP4A	Mx	0	4
79	MP4B	X	0	.5
80	MP4B	Z	6.552	.5
81	MP4B	Mx	-.007	.5
82	MP4B	X	0	4
83	MP4B	Z	6.552	4
84	MP4B	Mx	-.007	4
85	MP4C	X	0	.5
86	MP4C	Z	6.552	.5
87	MP4C	Mx	.007	.5
88	MP4C	X	0	4
89	MP4C	Z	6.552	4
90	MP4C	Mx	.007	4
91	M98	X	0	1
92	M98	Z	9.671	1
93	M98	Mx	0	1
94	MP1A	X	0	2.25
95	MP1A	Z	5.212	2.25
96	MP1A	Mx	0	2.25
97	MP1B	X	0	2.25
98	MP1B	Z	3.916	2.25
99	MP1B	Mx	.002	2.25
100	MP1C	X	0	2.25
101	MP1C	Z	3.916	2.25
102	MP1C	Mx	-.002	2.25
103	MP2A	X	0	2.25
104	MP2A	Z	5.212	2.25
105	MP2A	Mx	0	2.25
106	MP2B	X	0	2.25
107	MP2B	Z	3.42	2.25
108	MP2B	Mx	.001	2.25
109	MP2C	X	0	2.25
110	MP2C	Z	3.42	2.25
111	MP2C	Mx	-.001	2.25



Company : Maser Consulting  
 Designer :  
 Job Number :  
 Model Name :

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-6.436	.5
2	MP2A	Z	11.148	.5
3	MP2A	Mx	.015	.5
4	MP2A	X	-6.436	4
5	MP2A	Z	11.148	4
6	MP2A	Mx	.015	4
7	MP2B	X	-5.113	.5
8	MP2B	Z	8.856	.5
9	MP2B	Mx	-.009	.5
10	MP2B	X	-5.113	4
11	MP2B	Z	8.856	4
12	MP2B	Mx	-.009	4
13	MP2C	X	-6.436	.5
14	MP2C	Z	11.148	.5
15	MP2C	Mx	-.003	.5
16	MP2C	X	-6.436	4
17	MP2C	Z	11.148	4
18	MP2C	Mx	-.003	4
19	MP2A	X	-6.436	.5
20	MP2A	Z	11.148	.5
21	MP2A	Mx	-.003	.5
22	MP2A	X	-6.436	4
23	MP2A	Z	11.148	4
24	MP2A	Mx	-.003	4
25	MP2B	X	-5.113	.5
26	MP2B	Z	8.856	.5
27	MP2B	Mx	-.009	.5
28	MP2B	X	-5.113	4
29	MP2B	Z	8.856	4
30	MP2B	Mx	-.009	4
31	MP2C	X	-6.436	.5
32	MP2C	Z	11.148	.5
33	MP2C	Mx	.015	.5
34	MP2C	X	-6.436	4
35	MP2C	Z	11.148	4
36	MP2C	Mx	.015	4
37	MP3A	X	-2.777	1.25
38	MP3A	Z	4.81	1.25
39	MP3A	Mx	.001	1.25
40	MP3A	X	-2.777	3.25
41	MP3A	Z	4.81	3.25
42	MP3A	Mx	.001	3.25
43	MP3B	X	-1.282	1.25
44	MP3B	Z	2.221	1.25
45	MP3B	Mx	-.001	1.25
46	MP3B	X	-1.282	3.25
47	MP3B	Z	2.221	3.25
48	MP3B	Mx	-.001	3.25
49	MP3C	X	-2.777	1.25
50	MP3C	Z	4.81	1.25
51	MP3C	Mx	.001	1.25
52	MP3C	X	-2.777	3.25



Company : Maser Consulting  
 Designer :  
 Job Number :  
 Model Name :

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
53	MP3C	Z	4.81	3.25
54	MP3C	Mx	.001	3.25
55	MP1A	X	-2.304	.5
56	MP1A	Z	3.992	.5
57	MP1A	Mx	.003	.5
58	MP1A	X	-2.304	4
59	MP1A	Z	3.992	4
60	MP1A	Mx	.003	4
61	MP1B	X	-3.762	.5
62	MP1B	Z	6.516	.5
63	MP1B	Mx	-.009	.5
64	MP1B	X	-3.762	4
65	MP1B	Z	6.516	4
66	MP1B	Mx	-.009	4
67	MP1C	X	-2.304	.5
68	MP1C	Z	3.992	.5
69	MP1C	Mx	.003	.5
70	MP1C	X	-2.304	4
71	MP1C	Z	3.992	4
72	MP1C	Mx	.003	4
73	MP4A	X	-2.304	.5
74	MP4A	Z	3.992	.5
75	MP4A	Mx	.003	.5
76	MP4A	X	-2.304	4
77	MP4A	Z	3.992	4
78	MP4A	Mx	.003	4
79	MP4B	X	-3.762	.5
80	MP4B	Z	6.516	.5
81	MP4B	Mx	-.009	.5
82	MP4B	X	-3.762	4
83	MP4B	Z	6.516	4
84	MP4B	Mx	-.009	4
85	MP4C	X	-2.304	.5
86	MP4C	Z	3.992	.5
87	MP4C	Mx	.003	.5
88	MP4C	X	-2.304	4
89	MP4C	Z	3.992	4
90	MP4C	Mx	.003	4
91	M98	X	-3.943	1
92	M98	Z	6.829	1
93	M98	Mx	0	1
94	MP1A	X	-2.39	2.25
95	MP1A	Z	4.14	2.25
96	MP1A	Mx	-.001	2.25
97	MP1B	X	-1.742	2.25
98	MP1B	Z	3.017	2.25
99	MP1B	Mx	.002	2.25
100	MP1C	X	-2.39	2.25
101	MP1C	Z	4.14	2.25
102	MP1C	Mx	-.001	2.25
103	MP2A	X	-2.307	2.25
104	MP2A	Z	3.996	2.25



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
105	MP2A	Mx	-.001	2.25
106	MP2B	X	-1.411	2.25
107	MP2B	Z	2.444	2.25
108	MP2B	Mx	.001	2.25
109	MP2C	X	-2.307	2.25
110	MP2C	Z	3.996	2.25
111	MP2C	Mx	-.001	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-9.62	.5
2	MP2A	Z	5.554	.5
3	MP2A	Mx	.013	.5
4	MP2A	X	-9.62	4
5	MP2A	Z	5.554	4
6	MP2A	Mx	.013	4
7	MP2B	X	-9.62	.5
8	MP2B	Z	5.554	.5
9	MP2B	Mx	-.004	.5
10	MP2B	X	-9.62	4
11	MP2B	Z	5.554	4
12	MP2B	Mx	-.004	4
13	MP2C	X	-11.912	.5
14	MP2C	Z	6.878	.5
15	MP2C	Mx	-.011	.5
16	MP2C	X	-11.912	4
17	MP2C	Z	6.878	4
18	MP2C	Mx	-.011	4
19	MP2A	X	-9.62	.5
20	MP2A	Z	5.554	.5
21	MP2A	Mx	.004	.5
22	MP2A	X	-9.62	4
23	MP2A	Z	5.554	4
24	MP2A	Mx	.004	4
25	MP2B	X	-9.62	.5
26	MP2B	Z	5.554	.5
27	MP2B	Mx	-.013	.5
28	MP2B	X	-9.62	4
29	MP2B	Z	5.554	4
30	MP2B	Mx	-.013	4
31	MP2C	X	-11.912	.5
32	MP2C	Z	6.878	.5
33	MP2C	Mx	.011	.5
34	MP2C	X	-11.912	4
35	MP2C	Z	6.878	4
36	MP2C	Mx	.011	4
37	MP3A	X	-3.084	1.25
38	MP3A	Z	1.78	1.25
39	MP3A	Mx	.002	1.25
40	MP3A	X	-3.084	3.25
41	MP3A	Z	1.78	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
42	MP3A	Mx	.002	3.25
43	MP3B	X	-3.084	1.25
44	MP3B	Z	1.78	1.25
45	MP3B	Mx	-.002	1.25
46	MP3B	X	-3.084	3.25
47	MP3B	Z	1.78	3.25
48	MP3B	Mx	-.002	3.25
49	MP3C	X	-5.672	1.25
50	MP3C	Z	3.275	1.25
51	MP3C	Mx	0	1.25
52	MP3C	X	-5.672	3.25
53	MP3C	Z	3.275	3.25
54	MP3C	Mx	0	3.25
55	MP1A	X	-5.674	.5
56	MP1A	Z	3.276	.5
57	MP1A	Mx	.007	.5
58	MP1A	X	-5.674	4
59	MP1A	Z	3.276	4
60	MP1A	Mx	.007	4
61	MP1B	X	-5.674	.5
62	MP1B	Z	3.276	.5
63	MP1B	Mx	-.007	.5
64	MP1B	X	-5.674	4
65	MP1B	Z	3.276	4
66	MP1B	Mx	-.007	4
67	MP1C	X	-3.15	.5
68	MP1C	Z	1.819	.5
69	MP1C	Mx	0	.5
70	MP1C	X	-3.15	4
71	MP1C	Z	1.819	4
72	MP1C	Mx	0	4
73	MP4A	X	-5.674	.5
74	MP4A	Z	3.276	.5
75	MP4A	Mx	.007	.5
76	MP4A	X	-5.674	4
77	MP4A	Z	3.276	4
78	MP4A	Mx	.007	4
79	MP4B	X	-5.674	.5
80	MP4B	Z	3.276	.5
81	MP4B	Mx	-.007	.5
82	MP4B	X	-5.674	4
83	MP4B	Z	3.276	4
84	MP4B	Mx	-.007	4
85	MP4C	X	-3.15	.5
86	MP4C	Z	1.819	.5
87	MP4C	Mx	0	.5
88	MP4C	X	-3.15	4
89	MP4C	Z	1.819	4
90	MP4C	Mx	0	4
91	M98	X	-6.055	1
92	M98	Z	3.496	1
93	M98	Mx	0	1



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
31	MP2C	X	-12.873	.5
32	MP2C	Z	0	.5
33	MP2C	Mx	.003	.5
34	MP2C	X	-12.873	4
35	MP2C	Z	0	4
36	MP2C	Mx	.003	4
37	MP3A	X	-2.564	1.25
38	MP3A	Z	0	1.25
39	MP3A	Mx	.001	1.25
40	MP3A	X	-2.564	3.25
41	MP3A	Z	0	3.25
42	MP3A	Mx	.001	3.25
43	MP3B	X	-5.554	1.25
44	MP3B	Z	0	1.25
45	MP3B	Mx	-.001	1.25
46	MP3B	X	-5.554	3.25
47	MP3B	Z	0	3.25
48	MP3B	Mx	-.001	3.25
49	MP3C	X	-5.554	1.25
50	MP3C	Z	0	1.25
51	MP3C	Mx	-.001	1.25
52	MP3C	X	-5.554	3.25
53	MP3C	Z	0	3.25
54	MP3C	Mx	-.001	3.25
55	MP1A	X	-7.524	.5
56	MP1A	Z	0	.5
57	MP1A	Mx	.009	.5
58	MP1A	X	-7.524	4
59	MP1A	Z	0	4
60	MP1A	Mx	.009	4
61	MP1B	X	-4.609	.5
62	MP1B	Z	0	.5
63	MP1B	Mx	-.003	.5
64	MP1B	X	-4.609	4
65	MP1B	Z	0	4
66	MP1B	Mx	-.003	4
67	MP1C	X	-4.609	.5
68	MP1C	Z	0	.5
69	MP1C	Mx	-.003	.5
70	MP1C	X	-4.609	4
71	MP1C	Z	0	4
72	MP1C	Mx	-.003	4
73	MP4A	X	-7.524	.5
74	MP4A	Z	0	.5
75	MP4A	Mx	.009	.5
76	MP4A	X	-7.524	4
77	MP4A	Z	0	4
78	MP4A	Mx	.009	4
79	MP4B	X	-4.609	.5
80	MP4B	Z	0	.5
81	MP4B	Mx	-.003	.5
82	MP4B	X	-4.609	4



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
83	MP4B	Z	0	4
84	MP4B	Mx	-.003	4
85	MP4C	X	-4.609	.5
86	MP4C	Z	0	.5
87	MP4C	Mx	-.003	.5
88	MP4C	X	-4.609	4
89	MP4C	Z	0	4
90	MP4C	Mx	-.003	4
91	M98	X	-7.885	1
92	M98	Z	0	1
93	M98	Mx	0	1
94	MP1A	X	-3.484	2.25
95	MP1A	Z	0	2.25
96	MP1A	Mx	-.002	2.25
97	MP1B	X	-4.78	2.25
98	MP1B	Z	0	2.25
99	MP1B	Mx	.001	2.25
100	MP1C	X	-4.78	2.25
101	MP1C	Z	0	2.25
102	MP1C	Mx	.001	2.25
103	MP2A	X	-2.822	2.25
104	MP2A	Z	0	2.25
105	MP2A	Mx	-.001	2.25
106	MP2B	X	-4.615	2.25
107	MP2B	Z	0	2.25
108	MP2B	Mx	.001	2.25
109	MP2C	X	-4.615	2.25
110	MP2C	Z	0	2.25
111	MP2C	Mx	.001	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-9.62	.5
2	MP2A	Z	-5.554	.5
3	MP2A	Mx	.004	.5
4	MP2A	X	-9.62	4
5	MP2A	Z	-5.554	4
6	MP2A	Mx	.004	4
7	MP2B	X	-11.912	.5
8	MP2B	Z	-6.878	.5
9	MP2B	Mx	.011	.5
10	MP2B	X	-11.912	4
11	MP2B	Z	-6.878	4
12	MP2B	Mx	.011	4
13	MP2C	X	-9.62	.5
14	MP2C	Z	-5.554	.5
15	MP2C	Mx	-.013	.5
16	MP2C	X	-9.62	4
17	MP2C	Z	-5.554	4
18	MP2C	Mx	-.013	4
19	MP2A	X	-9.62	.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
20	MP2A	Z	-5.554	.5
21	MP2A	Mx	.013	.5
22	MP2A	X	-9.62	4
23	MP2A	Z	-5.554	4
24	MP2A	Mx	.013	4
25	MP2B	X	-11.912	.5
26	MP2B	Z	-6.878	.5
27	MP2B	Mx	-.011	.5
28	MP2B	X	-11.912	4
29	MP2B	Z	-6.878	4
30	MP2B	Mx	-.011	4
31	MP2C	X	-9.62	.5
32	MP2C	Z	-5.554	.5
33	MP2C	Mx	-.004	.5
34	MP2C	X	-9.62	4
35	MP2C	Z	-5.554	4
36	MP2C	Mx	-.004	4
37	MP3A	X	-3.084	1.25
38	MP3A	Z	-1.78	1.25
39	MP3A	Mx	.002	1.25
40	MP3A	X	-3.084	3.25
41	MP3A	Z	-1.78	3.25
42	MP3A	Mx	.002	3.25
43	MP3B	X	-5.672	1.25
44	MP3B	Z	-3.275	1.25
45	MP3B	Mx	0	1.25
46	MP3B	X	-5.672	3.25
47	MP3B	Z	-3.275	3.25
48	MP3B	Mx	0	3.25
49	MP3C	X	-3.084	1.25
50	MP3C	Z	-1.78	1.25
51	MP3C	Mx	-.002	1.25
52	MP3C	X	-3.084	3.25
53	MP3C	Z	-1.78	3.25
54	MP3C	Mx	-.002	3.25
55	MP1A	X	-5.674	.5
56	MP1A	Z	-3.276	.5
57	MP1A	Mx	.007	.5
58	MP1A	X	-5.674	4
59	MP1A	Z	-3.276	4
60	MP1A	Mx	.007	4
61	MP1B	X	-3.15	.5
62	MP1B	Z	-1.819	.5
63	MP1B	Mx	0	.5
64	MP1B	X	-3.15	4
65	MP1B	Z	-1.819	4
66	MP1B	Mx	0	4
67	MP1C	X	-5.674	.5
68	MP1C	Z	-3.276	.5
69	MP1C	Mx	-.007	.5
70	MP1C	X	-5.674	4
71	MP1C	Z	-3.276	4





Company : Maser Consulting  
 Designer :  
 Job Number :  
 Model Name :

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
9	MP2B	Mx	.015	.5
10	MP2B	X	-6.436	4
11	MP2B	Z	-11.148	4
12	MP2B	Mx	.015	4
13	MP2C	X	-5.113	.5
14	MP2C	Z	-8.856	.5
15	MP2C	Mx	-.009	.5
16	MP2C	X	-5.113	4
17	MP2C	Z	-8.856	4
18	MP2C	Mx	-.009	4
19	MP2A	X	-6.436	.5
20	MP2A	Z	-11.148	.5
21	MP2A	Mx	.015	.5
22	MP2A	X	-6.436	4
23	MP2A	Z	-11.148	4
24	MP2A	Mx	.015	4
25	MP2B	X	-6.436	.5
26	MP2B	Z	-11.148	.5
27	MP2B	Mx	-.003	.5
28	MP2B	X	-6.436	4
29	MP2B	Z	-11.148	4
30	MP2B	Mx	-.003	4
31	MP2C	X	-5.113	.5
32	MP2C	Z	-8.856	.5
33	MP2C	Mx	-.009	.5
34	MP2C	X	-5.113	4
35	MP2C	Z	-8.856	4
36	MP2C	Mx	-.009	4
37	MP3A	X	-2.777	1.25
38	MP3A	Z	-4.81	1.25
39	MP3A	Mx	.001	1.25
40	MP3A	X	-2.777	3.25
41	MP3A	Z	-4.81	3.25
42	MP3A	Mx	.001	3.25
43	MP3B	X	-2.777	1.25
44	MP3B	Z	-4.81	1.25
45	MP3B	Mx	.001	1.25
46	MP3B	X	-2.777	3.25
47	MP3B	Z	-4.81	3.25
48	MP3B	Mx	.001	3.25
49	MP3C	X	-1.282	1.25
50	MP3C	Z	-2.221	1.25
51	MP3C	Mx	-.001	1.25
52	MP3C	X	-1.282	3.25
53	MP3C	Z	-2.221	3.25
54	MP3C	Mx	-.001	3.25
55	MP1A	X	-2.304	.5
56	MP1A	Z	-3.992	.5
57	MP1A	Mx	.003	.5
58	MP1A	X	-2.304	4
59	MP1A	Z	-3.992	4
60	MP1A	Mx	.003	4





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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
61	MP1B	X	-2.304	.5
62	MP1B	Z	-3.992	.5
63	MP1B	Mx	.003	.5
64	MP1B	X	-2.304	4
65	MP1B	Z	-3.992	4
66	MP1B	Mx	.003	4
67	MP1C	X	-3.762	.5
68	MP1C	Z	-6.516	.5
69	MP1C	Mx	-.009	.5
70	MP1C	X	-3.762	4
71	MP1C	Z	-6.516	4
72	MP1C	Mx	-.009	4
73	MP4A	X	-2.304	.5
74	MP4A	Z	-3.992	.5
75	MP4A	Mx	.003	.5
76	MP4A	X	-2.304	4
77	MP4A	Z	-3.992	4
78	MP4A	Mx	.003	4
79	MP4B	X	-2.304	.5
80	MP4B	Z	-3.992	.5
81	MP4B	Mx	.003	.5
82	MP4B	X	-2.304	4
83	MP4B	Z	-3.992	4
84	MP4B	Mx	.003	4
85	MP4C	X	-3.762	.5
86	MP4C	Z	-6.516	.5
87	MP4C	Mx	-.009	.5
88	MP4C	X	-3.762	4
89	MP4C	Z	-6.516	4
90	MP4C	Mx	-.009	4
91	M98	X	-5.282	1
92	M98	Z	-9.148	1
93	M98	Mx	0	1
94	MP1A	X	-2.39	2.25
95	MP1A	Z	-4.14	2.25
96	MP1A	Mx	-.001	2.25
97	MP1B	X	-2.39	2.25
98	MP1B	Z	-4.14	2.25
99	MP1B	Mx	-.001	2.25
100	MP1C	X	-1.742	2.25
101	MP1C	Z	-3.017	2.25
102	MP1C	Mx	.002	2.25
103	MP2A	X	-2.307	2.25
104	MP2A	Z	-3.996	2.25
105	MP2A	Mx	-.001	2.25
106	MP2B	X	-2.307	2.25
107	MP2B	Z	-3.996	2.25
108	MP2B	Mx	-.001	2.25
109	MP2C	X	-1.411	2.25
110	MP2C	Z	-2.444	2.25
111	MP2C	Mx	.001	2.25







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 Model Name :

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
21	M87A	X	0	0	0	%100
22	M87A	Z	-7.179	-7.179	0	%100
23	M89A	X	0	0	0	%100
24	M89A	Z	0	0	0	%100
25	M90A	X	0	0	0	%100
26	M90A	Z	-6.927	-6.927	0	%100
27	M92	X	0	0	0	%100
28	M92	Z	-7.179	-7.179	0	%100
29	MP2A	X	0	0	0	%100
30	MP2A	Z	-13.036	-13.036	0	%100
31	MP3A	X	0	0	0	%100
32	MP3A	Z	-10.769	-10.769	0	%100
33	MP4A	X	0	0	0	%100
34	MP4A	Z	-10.769	-10.769	0	%100
35	M33	X	0	0	0	%100
36	M33	Z	-13.04	-13.04	0	%100
37	M34	X	0	0	0	%100
38	M34	Z	-3.417	-3.417	0	%100
39	M35	X	0	0	0	%100
40	M35	Z	-3.417	-3.417	0	%100
41	M36	X	0	0	0	%100
42	M36	Z	-6.801	-6.801	0	%100
43	M39	X	0	0	0	%100
44	M39	Z	-3.541	-3.541	0	%100
45	M40	X	0	0	0	%100
46	M40	Z	-14.701	-14.701	0	%100
47	M45	X	0	0	0	%100
48	M45	Z	-20.53	-20.53	0	%100
49	M46	X	0	0	0	%100
50	M46	Z	-27.709	-27.709	0	%100
51	M48	X	0	0	0	%100
52	M48	Z	-28.717	-28.717	0	%100
53	M50	X	0	0	0	%100
54	M50	Z	-20.53	-20.53	0	%100
55	M51	X	0	0	0	%100
56	M51	Z	-6.927	-6.927	0	%100
57	M53	X	0	0	0	%100
58	M53	Z	-7.179	-7.179	0	%100
59	M56	X	0	0	0	%100
60	M56	Z	-13.04	-13.04	0	%100
61	M57	X	0	0	0	%100
62	M57	Z	-3.417	-3.417	0	%100
63	M58	X	0	0	0	%100
64	M58	Z	-3.417	-3.417	0	%100
65	M59	X	0	0	0	%100
66	M59	Z	-6.801	-6.801	0	%100
67	M62	X	0	0	0	%100
68	M62	Z	-14.699	-14.699	0	%100
69	M63	X	0	0	0	%100
70	M63	Z	-3.54	-3.54	0	%100
71	M68	X	0	0	0	%100
72	M68	Z	-20.53	-20.53	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
73	M69	X	0	0	0	%100
74	M69	Z	-6.927	-6.927	0	%100
75	M71	X	0	0	0	%100
76	M71	Z	-7.179	-7.179	0	%100
77	M73A	X	0	0	0	%100
78	M73A	Z	-20.53	-20.53	0	%100
79	M74A	X	0	0	0	%100
80	M74A	Z	-27.709	-27.709	0	%100
81	M76A	X	0	0	0	%100
82	M76A	Z	-28.717	-28.717	0	%100
83	M79A	X	0	0	0	%100
84	M79A	Z	-3.686	-3.686	0	%100
85	MP1C	X	0	0	0	%100
86	MP1C	Z	-10.769	-10.769	0	%100
87	MP2C	X	0	0	0	%100
88	MP2C	Z	-13.036	-13.036	0	%100
89	MP4C	X	0	0	0	%100
90	MP4C	Z	-10.769	-10.769	0	%100
91	M88A	X	0	0	0	%100
92	M88A	Z	-3.686	-3.686	0	%100
93	MP1B	X	0	0	0	%100
94	MP1B	Z	-10.769	-10.769	0	%100
95	MP2B	X	0	0	0	%100
96	MP2B	Z	-13.036	-13.036	0	%100
97	MP4B	X	0	0	0	%100
98	MP4B	Z	-10.769	-10.769	0	%100
99	M98	X	0	0	0	%100
100	M98	Z	-8.806	-8.806	0	%100
101	MP3C	X	0	0	0	%100
102	MP3C	Z	-10.769	-10.769	0	%100
103	MP3B	X	0	0	0	%100
104	MP3B	Z	-10.769	-10.769	0	%100
105	M99	X	0	0	0	%100
106	M99	Z	-13.036	-13.036	0	%100
107	M104	X	0	0	0	%100
108	M104	Z	-3.259	-3.259	0	%100
109	M108	X	0	0	0	%100
110	M108	Z	-3.259	-3.259	0	%100
111	M119	X	0	0	0	%100
112	M119	Z	-4.138	-4.138	0	%100
113	M120	X	0	0	0	%100
114	M120	Z	-4.139	-4.139	0	%100
115	M121	X	0	0	0	%100
116	M121	Z	-16.554	-16.554	0	%100
117	M122	X	0	0	0	%100
118	M122	Z	-9.306	-9.306	0	%100
119	M123	X	0	0	0	%100
120	M123	Z	-19.041	-19.041	0	%100
121	M124	X	0	0	0	%100
122	M124	Z	-19.041	-19.041	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	M20	X	5.529	5.529	0	%100
2	M20	Z	-9.576	-9.576	0	%100
3	MP1A	X	5.384	5.384	0	%100
4	MP1A	Z	-9.326	-9.326	0	%100
5	M72A	X	2.173	2.173	0	%100
6	M72A	Z	-3.764	-3.764	0	%100
7	M73	X	5.125	5.125	0	%100
8	M73	Z	-8.877	-8.877	0	%100
9	M74	X	5.125	5.125	0	%100
10	M74	Z	-8.877	-8.877	0	%100
11	M75	X	10.202	10.202	0	%100
12	M75	Z	-17.67	-17.67	0	%100
13	M78	X	5.58	5.58	0	%100
14	M78	Z	-9.665	-9.665	0	%100
15	M79	X	.000841	.000841	0	%100
16	M79	Z	-.001	-.001	0	%100
17	M84	X	3.422	3.422	0	%100
18	M84	Z	-5.926	-5.926	0	%100
19	M85	X	0	0	0	%100
20	M85	Z	0	0	0	%100
21	M87A	X	0	0	0	%100
22	M87A	Z	0	0	0	%100
23	M89A	X	3.422	3.422	0	%100
24	M89A	Z	-5.926	-5.926	0	%100
25	M90A	X	10.391	10.391	0	%100
26	M90A	Z	-17.998	-17.998	0	%100
27	M92	X	10.769	10.769	0	%100
28	M92	Z	-18.652	-18.652	0	%100
29	MP2A	X	6.518	6.518	0	%100
30	MP2A	Z	-11.289	-11.289	0	%100
31	MP3A	X	5.384	5.384	0	%100
32	MP3A	Z	-9.326	-9.326	0	%100
33	MP4A	X	5.384	5.384	0	%100
34	MP4A	Z	-9.326	-9.326	0	%100
35	M33	X	2.173	2.173	0	%100
36	M33	Z	-3.764	-3.764	0	%100
37	M34	X	5.125	5.125	0	%100
38	M34	Z	-8.877	-8.877	0	%100
39	M35	X	5.125	5.125	0	%100
40	M35	Z	-8.877	-8.877	0	%100
41	M36	X	10.202	10.202	0	%100
42	M36	Z	-17.67	-17.67	0	%100
43	M39	X	.00083	.00083	0	%100
44	M39	Z	-.001	-.001	0	%100
45	M40	X	5.581	5.581	0	%100
46	M40	Z	-9.667	-9.667	0	%100
47	M45	X	3.422	3.422	0	%100
48	M45	Z	-5.926	-5.926	0	%100
49	M46	X	10.391	10.391	0	%100
50	M46	Z	-17.998	-17.998	0	%100
51	M48	X	10.769	10.769	0	%100
52	M48	Z	-18.652	-18.652	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,%]
53	M50	X	3.422	3.422	0 %100
54	M50	Z	-5.926	-5.926	0 %100
55	M51	X	0	0	0 %100
56	M51	Z	0	0	0 %100
57	M53	X	0	0	0 %100
58	M53	Z	0	0	0 %100
59	M56	X	8.693	8.693	0 %100
60	M56	Z	-15.057	-15.057	0 %100
61	M57	X	0	0	0 %100
62	M57	Z	0	0	0 %100
63	M58	X	0	0	0 %100
64	M58	Z	0	0	0 %100
65	M59	X	0	0	0 %100
66	M59	Z	0	0	0 %100
67	M62	X	5.445	5.445	0 %100
68	M62	Z	-9.431	-9.431	0 %100
69	M63	X	5.445	5.445	0 %100
70	M63	Z	-9.431	-9.431	0 %100
71	M68	X	13.687	13.687	0 %100
72	M68	Z	-23.706	-23.706	0 %100
73	M69	X	10.391	10.391	0 %100
74	M69	Z	-17.998	-17.998	0 %100
75	M71	X	10.769	10.769	0 %100
76	M71	Z	-18.652	-18.652	0 %100
77	M73A	X	13.687	13.687	0 %100
78	M73A	Z	-23.706	-23.706	0 %100
79	M74A	X	10.391	10.391	0 %100
80	M74A	Z	-17.998	-17.998	0 %100
81	M76A	X	10.769	10.769	0 %100
82	M76A	Z	-18.652	-18.652	0 %100
83	M79A	X	5.529	5.529	0 %100
84	M79A	Z	-9.576	-9.576	0 %100
85	MP1C	X	5.384	5.384	0 %100
86	MP1C	Z	-9.326	-9.326	0 %100
87	MP2C	X	6.518	6.518	0 %100
88	MP2C	Z	-11.289	-11.289	0 %100
89	MP4C	X	5.384	5.384	0 %100
90	MP4C	Z	-9.326	-9.326	0 %100
91	M88A	X	0	0	0 %100
92	M88A	Z	0	0	0 %100
93	MP1B	X	5.384	5.384	0 %100
94	MP1B	Z	-9.326	-9.326	0 %100
95	MP2B	X	6.518	6.518	0 %100
96	MP2B	Z	-11.289	-11.289	0 %100
97	MP4B	X	5.384	5.384	0 %100
98	MP4B	Z	-9.326	-9.326	0 %100
99	M98	X	4.403	4.403	0 %100
100	M98	Z	-7.626	-7.626	0 %100
101	MP3C	X	5.384	5.384	0 %100
102	MP3C	Z	-9.326	-9.326	0 %100
103	MP3B	X	5.384	5.384	0 %100
104	MP3B	Z	-9.326	-9.326	0 %100









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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
83	M79A	X	12.768	12.768	0	%100
84	M79A	Z	-7.372	-7.372	0	%100
85	MP1C	X	9.326	9.326	0	%100
86	MP1C	Z	-5.384	-5.384	0	%100
87	MP2C	X	11.289	11.289	0	%100
88	MP2C	Z	-6.518	-6.518	0	%100
89	MP4C	X	9.326	9.326	0	%100
90	MP4C	Z	-5.384	-5.384	0	%100
91	M88A	X	3.192	3.192	0	%100
92	M88A	Z	-1.843	-1.843	0	%100
93	MP1B	X	9.326	9.326	0	%100
94	MP1B	Z	-5.384	-5.384	0	%100
95	MP2B	X	11.289	11.289	0	%100
96	MP2B	Z	-6.518	-6.518	0	%100
97	MP4B	X	9.326	9.326	0	%100
98	MP4B	Z	-5.384	-5.384	0	%100
99	M98	X	7.626	7.626	0	%100
100	M98	Z	-4.403	-4.403	0	%100
101	MP3C	X	9.326	9.326	0	%100
102	MP3C	Z	-5.384	-5.384	0	%100
103	MP3B	X	9.326	9.326	0	%100
104	MP3B	Z	-5.384	-5.384	0	%100
105	M99	X	2.822	2.822	0	%100
106	M99	Z	-1.629	-1.629	0	%100
107	M104	X	11.289	11.289	0	%100
108	M104	Z	-6.518	-6.518	0	%100
109	M108	X	2.822	2.822	0	%100
110	M108	Z	-1.629	-1.629	0	%100
111	M119	X	14.336	14.336	0	%100
112	M119	Z	-8.277	-8.277	0	%100
113	M120	X	3.584	3.584	0	%100
114	M120	Z	-2.069	-2.069	0	%100
115	M121	X	3.584	3.584	0	%100
116	M121	Z	-2.069	-2.069	0	%100
117	M122	X	16.49	16.49	0	%100
118	M122	Z	-9.52	-9.52	0	%100
119	M123	X	8.06	8.06	0	%100
120	M123	Z	-4.653	-4.653	0	%100
121	M124	X	16.49	16.49	0	%100
122	M124	Z	-9.52	-9.52	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	M20	X	0	0	0	%100
2	M20	Z	0	0	0	%100
3	MP1A	X	10.769	10.769	0	%100
4	MP1A	Z	0	0	0	%100
5	M72A	X	17.386	17.386	0	%100
6	M72A	Z	0	0	0	%100
7	M73	X	0	0	0	%100
8	M73	Z	0	0	0	%100



Company : Maser Consulting  
 Designer :  
 Job Number :  
 Model Name :

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 Checked By: DX

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
9	M74	X	0	0	0	%100
10	M74	Z	0	0	0	%100
11	M75	X	0	0	0	%100
12	M75	Z	0	0	0	%100
13	M78	X	10.889	10.889	0	%100
14	M78	Z	0	0	0	%100
15	M79	X	10.89	10.89	0	%100
16	M79	Z	0	0	0	%100
17	M84	X	27.373	27.373	0	%100
18	M84	Z	0	0	0	%100
19	M85	X	20.782	20.782	0	%100
20	M85	Z	0	0	0	%100
21	M87A	X	21.538	21.538	0	%100
22	M87A	Z	0	0	0	%100
23	M89A	X	27.373	27.373	0	%100
24	M89A	Z	0	0	0	%100
25	M90A	X	20.782	20.782	0	%100
26	M90A	Z	0	0	0	%100
27	M92	X	21.538	21.538	0	%100
28	M92	Z	0	0	0	%100
29	MP2A	X	13.036	13.036	0	%100
30	MP2A	Z	0	0	0	%100
31	MP3A	X	10.769	10.769	0	%100
32	MP3A	Z	0	0	0	%100
33	MP4A	X	10.769	10.769	0	%100
34	MP4A	Z	0	0	0	%100
35	M33	X	4.347	4.347	0	%100
36	M33	Z	0	0	0	%100
37	M34	X	10.25	10.25	0	%100
38	M34	Z	0	0	0	%100
39	M35	X	10.25	10.25	0	%100
40	M35	Z	0	0	0	%100
41	M36	X	20.404	20.404	0	%100
42	M36	Z	0	0	0	%100
43	M39	X	11.16	11.16	0	%100
44	M39	Z	0	0	0	%100
45	M40	X	.002	.002	0	%100
46	M40	Z	0	0	0	%100
47	M45	X	6.843	6.843	0	%100
48	M45	Z	0	0	0	%100
49	M46	X	0	0	0	%100
50	M46	Z	0	0	0	%100
51	M48	X	0	0	0	%100
52	M48	Z	0	0	0	%100
53	M50	X	6.843	6.843	0	%100
54	M50	Z	0	0	0	%100
55	M51	X	20.782	20.782	0	%100
56	M51	Z	0	0	0	%100
57	M53	X	21.538	21.538	0	%100
58	M53	Z	0	0	0	%100
59	M56	X	4.347	4.347	0	%100
60	M56	Z	0	0	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
61	M57	X	10.25	10.25	0	%100
62	M57	Z	0	0	0	%100
63	M58	X	10.25	10.25	0	%100
64	M58	Z	0	0	0	%100
65	M59	X	20.404	20.404	0	%100
66	M59	Z	0	0	0	%100
67	M62	X	.002	.002	0	%100
68	M62	Z	0	0	0	%100
69	M63	X	11.163	11.163	0	%100
70	M63	Z	0	0	0	%100
71	M68	X	6.843	6.843	0	%100
72	M68	Z	0	0	0	%100
73	M69	X	20.782	20.782	0	%100
74	M69	Z	0	0	0	%100
75	M71	X	21.538	21.538	0	%100
76	M71	Z	0	0	0	%100
77	M73A	X	6.843	6.843	0	%100
78	M73A	Z	0	0	0	%100
79	M74A	X	0	0	0	%100
80	M74A	Z	0	0	0	%100
81	M76A	X	0	0	0	%100
82	M76A	Z	0	0	0	%100
83	M79A	X	11.058	11.058	0	%100
84	M79A	Z	0	0	0	%100
85	MP1C	X	10.769	10.769	0	%100
86	MP1C	Z	0	0	0	%100
87	MP2C	X	13.036	13.036	0	%100
88	MP2C	Z	0	0	0	%100
89	MP4C	X	10.769	10.769	0	%100
90	MP4C	Z	0	0	0	%100
91	M88A	X	11.058	11.058	0	%100
92	M88A	Z	0	0	0	%100
93	MP1B	X	10.769	10.769	0	%100
94	MP1B	Z	0	0	0	%100
95	MP2B	X	13.036	13.036	0	%100
96	MP2B	Z	0	0	0	%100
97	MP4B	X	10.769	10.769	0	%100
98	MP4B	Z	0	0	0	%100
99	M98	X	8.806	8.806	0	%100
100	M98	Z	0	0	0	%100
101	MP3C	X	10.769	10.769	0	%100
102	MP3C	Z	0	0	0	%100
103	MP3B	X	10.769	10.769	0	%100
104	MP3B	Z	0	0	0	%100
105	M99	X	0	0	0	%100
106	M99	Z	0	0	0	%100
107	M104	X	9.777	9.777	0	%100
108	M104	Z	0	0	0	%100
109	M108	X	9.777	9.777	0	%100
110	M108	Z	0	0	0	%100
111	M119	X	12.416	12.416	0	%100
112	M119	Z	0	0	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,%]
39	M35	X	2.959	2.959	0	%100
40	M35	Z	1.708	1.708	0	%100
41	M36	X	5.89	5.89	0	%100
42	M36	Z	3.401	3.401	0	%100
43	M39	X	12.73	12.73	0	%100
44	M39	Z	7.35	7.35	0	%100
45	M40	X	3.066	3.066	0	%100
46	M40	Z	1.77	1.77	0	%100
47	M45	X	17.779	17.779	0	%100
48	M45	Z	10.265	10.265	0	%100
49	M46	X	5.999	5.999	0	%100
50	M46	Z	3.464	3.464	0	%100
51	M48	X	6.217	6.217	0	%100
52	M48	Z	3.59	3.59	0	%100
53	M50	X	17.779	17.779	0	%100
54	M50	Z	10.265	10.265	0	%100
55	M51	X	23.997	23.997	0	%100
56	M51	Z	13.855	13.855	0	%100
57	M53	X	24.869	24.869	0	%100
58	M53	Z	14.358	14.358	0	%100
59	M56	X	0	0	0	%100
60	M56	Z	0	0	0	%100
61	M57	X	11.836	11.836	0	%100
62	M57	Z	6.833	6.833	0	%100
63	M58	X	11.836	11.836	0	%100
64	M58	Z	6.833	6.833	0	%100
65	M59	X	23.56	23.56	0	%100
66	M59	Z	13.603	13.603	0	%100
67	M62	X	3.301	3.301	0	%100
68	M62	Z	1.906	1.906	0	%100
69	M63	X	3.302	3.302	0	%100
70	M63	Z	1.906	1.906	0	%100
71	M68	X	0	0	0	%100
72	M68	Z	0	0	0	%100
73	M69	X	5.999	5.999	0	%100
74	M69	Z	3.464	3.464	0	%100
75	M71	X	6.217	6.217	0	%100
76	M71	Z	3.59	3.59	0	%100
77	M73A	X	0	0	0	%100
78	M73A	Z	0	0	0	%100
79	M74A	X	5.999	5.999	0	%100
80	M74A	Z	3.464	3.464	0	%100
81	M76A	X	6.217	6.217	0	%100
82	M76A	Z	3.59	3.59	0	%100
83	M79A	X	3.192	3.192	0	%100
84	M79A	Z	1.843	1.843	0	%100
85	MP1C	X	9.326	9.326	0	%100
86	MP1C	Z	5.384	5.384	0	%100
87	MP2C	X	11.289	11.289	0	%100
88	MP2C	Z	6.518	6.518	0	%100
89	MP4C	X	9.326	9.326	0	%100
90	MP4C	Z	5.384	5.384	0	%100

























































Company : Maser Consulting  
 Designer :  
 Job Number :  
 Model Name :

Apr 20, 2021  
 10:35 AM  
 Checked By: DX

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
53	M50	X	.718	.718	0	%100
54	M50	Z	-1.243	-1.243	0	%100
55	M51	X	0	0	0	%100
56	M51	Z	0	0	0	%100
57	M53	X	0	0	0	%100
58	M53	Z	0	0	0	%100
59	M56	X	2.4	2.4	0	%100
60	M56	Z	-4.156	-4.156	0	%100
61	M57	X	0	0	0	%100
62	M57	Z	0	0	0	%100
63	M58	X	0	0	0	%100
64	M58	Z	0	0	0	%100
65	M59	X	0	0	0	%100
66	M59	Z	0	0	0	%100
67	M62	X	1.542	1.542	0	%100
68	M62	Z	-2.671	-2.671	0	%100
69	M63	X	1.542	1.542	0	%100
70	M63	Z	-2.671	-2.671	0	%100
71	M68	X	2.871	2.871	0	%100
72	M68	Z	-4.973	-4.973	0	%100
73	M69	X	2.175	2.175	0	%100
74	M69	Z	-3.767	-3.767	0	%100
75	M71	X	2.239	2.239	0	%100
76	M71	Z	-3.878	-3.878	0	%100
77	M73A	X	2.871	2.871	0	%100
78	M73A	Z	-4.973	-4.973	0	%100
79	M74A	X	2.175	2.175	0	%100
80	M74A	Z	-3.767	-3.767	0	%100
81	M76A	X	2.239	2.239	0	%100
82	M76A	Z	-3.878	-3.878	0	%100
83	M79A	X	1.703	1.703	0	%100
84	M79A	Z	-2.949	-2.949	0	%100
85	MP1C	X	1.835	1.835	0	%100
86	MP1C	Z	-3.178	-3.178	0	%100
87	MP2C	X	2.028	2.028	0	%100
88	MP2C	Z	-3.513	-3.513	0	%100
89	MP4C	X	1.835	1.835	0	%100
90	MP4C	Z	-3.178	-3.178	0	%100
91	M88A	X	0	0	0	%100
92	M88A	Z	0	0	0	%100
93	MP1B	X	1.835	1.835	0	%100
94	MP1B	Z	-3.178	-3.178	0	%100
95	MP2B	X	2.028	2.028	0	%100
96	MP2B	Z	-3.513	-3.513	0	%100
97	MP4B	X	1.835	1.835	0	%100
98	MP4B	Z	-3.178	-3.178	0	%100
99	M98	X	1.501	1.501	0	%100
100	M98	Z	-2.601	-2.601	0	%100
101	MP3C	X	1.835	1.835	0	%100
102	MP3C	Z	-3.178	-3.178	0	%100
103	MP3B	X	1.835	1.835	0	%100
104	MP3B	Z	-3.178	-3.178	0	%100





























































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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
93	MP1B	X	-1.835	-1.835	0	%100
94	MP1B	Z	-3.178	-3.178	0	%100
95	MP2B	X	-2.028	-2.028	0	%100
96	MP2B	Z	-3.513	-3.513	0	%100
97	MP4B	X	-1.835	-1.835	0	%100
98	MP4B	Z	-3.178	-3.178	0	%100
99	M98	X	-1.501	-1.501	0	%100
100	M98	Z	-2.601	-2.601	0	%100
101	MP3C	X	-1.835	-1.835	0	%100
102	MP3C	Z	-3.178	-3.178	0	%100
103	MP3B	X	-1.835	-1.835	0	%100
104	MP3B	Z	-3.178	-3.178	0	%100
105	M99	X	-1.521	-1.521	0	%100
106	M99	Z	-2.635	-2.635	0	%100
107	M104	X	0	0	0	%100
108	M104	Z	0	0	0	%100
109	M108	X	-1.521	-1.521	0	%100
110	M108	Z	-2.635	-2.635	0	%100
111	M119	X	0	0	0	%100
112	M119	Z	0	0	0	%100
113	M120	X	-1.571	-1.571	0	%100
114	M120	Z	-2.721	-2.721	0	%100
115	M121	X	-1.571	-1.571	0	%100
116	M121	Z	-2.721	-2.721	0	%100
117	M122	X	-1.472	-1.472	0	%100
118	M122	Z	-2.55	-2.55	0	%100
119	M123	X	-2.818	-2.818	0	%100
120	M123	Z	-4.881	-4.881	0	%100
121	M124	X	-1.472	-1.472	0	%100
122	M124	Z	-2.55	-2.55	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	M20	X	0	0	0	%100
2	M20	Z	-.906	-.906	0	%100
3	MP1A	X	0	0	0	%100
4	MP1A	Z	-.662	-.662	0	%100
5	M72A	X	0	0	0	%100
6	M72A	Z	0	0	0	%100
7	M73	X	0	0	0	%100
8	M73	Z	-.84	-.84	0	%100
9	M74	X	0	0	0	%100
10	M74	Z	-.84	-.84	0	%100
11	M75	X	0	0	0	%100
12	M75	Z	-1.672	-1.672	0	%100
13	M78	X	0	0	0	%100
14	M78	Z	-.234	-.234	0	%100
15	M79	X	0	0	0	%100
16	M79	Z	-.234	-.234	0	%100
17	M84	X	0	0	0	%100
18	M84	Z	0	0	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, %]
91	M88A	X	.785	.785	0	%100
92	M88A	Z	.453	.453	0	%100
93	MP1B	X	.573	.573	0	%100
94	MP1B	Z	.331	.331	0	%100
95	MP2B	X	.694	.694	0	%100
96	MP2B	Z	.401	.401	0	%100
97	MP4B	X	.573	.573	0	%100
98	MP4B	Z	.331	.331	0	%100
99	M98	X	.469	.469	0	%100
100	M98	Z	.271	.271	0	%100
101	MP3C	X	.573	.573	0	%100
102	MP3C	Z	.331	.331	0	%100
103	MP3B	X	.573	.573	0	%100
104	MP3B	Z	.331	.331	0	%100
105	M99	X	.173	.173	0	%100
106	M99	Z	.1	.1	0	%100
107	M104	X	.173	.173	0	%100
108	M104	Z	.1	.1	0	%100
109	M108	X	.694	.694	0	%100
110	M108	Z	.401	.401	0	%100
111	M119	X	.22	.22	0	%100
112	M119	Z	.127	.127	0	%100
113	M120	X	.881	.881	0	%100
114	M120	Z	.509	.509	0	%100
115	M121	X	.22	.22	0	%100
116	M121	Z	.127	.127	0	%100
117	M122	X	1.014	1.014	0	%100
118	M122	Z	.585	.585	0	%100
119	M123	X	1.014	1.014	0	%100
120	M123	Z	.585	.585	0	%100
121	M124	X	.495	.495	0	%100
122	M124	Z	.286	.286	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	M20	X	.34	.34	0	%100
2	M20	Z	.589	.589	0	%100
3	MP1A	X	.331	.331	0	%100
4	MP1A	Z	.573	.573	0	%100
5	M72A	X	.134	.134	0	%100
6	M72A	Z	.231	.231	0	%100
7	M73	X	.315	.315	0	%100
8	M73	Z	.546	.546	0	%100
9	M74	X	.315	.315	0	%100
10	M74	Z	.546	.546	0	%100
11	M75	X	.627	.627	0	%100
12	M75	Z	1.086	1.086	0	%100
13	M78	X	5.1e-5	5.1e-5	0	%100
14	M78	Z	8.8e-5	8.8e-5	0	%100
15	M79	X	.343	.343	0	%100
16	M79	Z	.594	.594	0	%100







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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
121	M124	X	.386	.386	0	%100
122	M124	Z	.668	.668	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	M20	X	0	0	0	%100
2	M20	Z	.906	.906	0	%100
3	MP1A	X	0	0	0	%100
4	MP1A	Z	.662	.662	0	%100
5	M72A	X	0	0	0	%100
6	M72A	Z	0	0	0	%100
7	M73	X	0	0	0	%100
8	M73	Z	.84	.84	0	%100
9	M74	X	0	0	0	%100
10	M74	Z	.84	.84	0	%100
11	M75	X	0	0	0	%100
12	M75	Z	1.672	1.672	0	%100
13	M78	X	0	0	0	%100
14	M78	Z	.234	.234	0	%100
15	M79	X	0	0	0	%100
16	M79	Z	.234	.234	0	%100
17	M84	X	0	0	0	%100
18	M84	Z	0	0	0	%100
19	M85	X	0	0	0	%100
20	M85	Z	.426	.426	0	%100
21	M87A	X	0	0	0	%100
22	M87A	Z	.441	.441	0	%100
23	M89A	X	0	0	0	%100
24	M89A	Z	0	0	0	%100
25	M90A	X	0	0	0	%100
26	M90A	Z	.426	.426	0	%100
27	M92	X	0	0	0	%100
28	M92	Z	.441	.441	0	%100
29	MP2A	X	0	0	0	%100
30	MP2A	Z	.801	.801	0	%100
31	MP3A	X	0	0	0	%100
32	MP3A	Z	.662	.662	0	%100
33	MP4A	X	0	0	0	%100
34	MP4A	Z	.662	.662	0	%100
35	M33	X	0	0	0	%100
36	M33	Z	.802	.802	0	%100
37	M34	X	0	0	0	%100
38	M34	Z	.21	.21	0	%100
39	M35	X	0	0	0	%100
40	M35	Z	.21	.21	0	%100
41	M36	X	0	0	0	%100
42	M36	Z	.418	.418	0	%100
43	M39	X	0	0	0	%100
44	M39	Z	.218	.218	0	%100
45	M40	X	0	0	0	%100
46	M40	Z	.904	.904	0	%100



































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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
93	MP1B	X	-.331	-.331	0	%100
94	MP1B	Z	-.573	-.573	0	%100
95	MP2B	X	-.401	-.401	0	%100
96	MP2B	Z	-.694	-.694	0	%100
97	MP4B	X	-.331	-.331	0	%100
98	MP4B	Z	-.573	-.573	0	%100
99	M98	X	-.271	-.271	0	%100
100	M98	Z	-.469	-.469	0	%100
101	MP3C	X	-.331	-.331	0	%100
102	MP3C	Z	-.573	-.573	0	%100
103	MP3B	X	-.331	-.331	0	%100
104	MP3B	Z	-.573	-.573	0	%100
105	M99	X	-.3	-.3	0	%100
106	M99	Z	-.52	-.52	0	%100
107	M104	X	0	0	0	%100
108	M104	Z	0	0	0	%100
109	M108	X	-.3	-.3	0	%100
110	M108	Z	-.52	-.52	0	%100
111	M119	X	0	0	0	%100
112	M119	Z	0	0	0	%100
113	M120	X	-.382	-.382	0	%100
114	M120	Z	-.661	-.661	0	%100
115	M121	X	-.382	-.382	0	%100
116	M121	Z	-.661	-.661	0	%100
117	M122	X	-.386	-.386	0	%100
118	M122	Z	-.668	-.668	0	%100
119	M123	X	-.685	-.685	0	%100
120	M123	Z	-1.186	-1.186	0	%100
121	M124	X	-.386	-.386	0	%100
122	M124	Z	-.668	-.668	0	%100

**Member Distributed Loads (BLC 81 : BLC 39 Transient Area Loads)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M39	Y	-2.162	-4.792	0	.779
2	M39	Y	-4.792	-6.338	.779	1.557
3	M39	Y	-6.338	-7.88	1.557	2.336
4	M39	Y	-7.88	-7.502	2.336	3.115
5	M39	Y	-7.502	-4.124	3.115	3.893
6	M40	Y	-4.095	-7.411	0	.779
7	M40	Y	-7.411	-7.716	.779	1.558
8	M40	Y	-7.716	-5.989	1.558	2.337
9	M40	Y	-5.989	-4.532	2.337	3.116
10	M40	Y	-4.532	-2.368	3.116	3.895
11	M78	Y	-2.162	-4.792	0	.779
12	M78	Y	-4.792	-6.338	.779	1.557
13	M78	Y	-6.338	-7.88	1.557	2.336
14	M78	Y	-7.88	-7.502	2.336	3.115
15	M78	Y	-7.502	-4.124	3.115	3.893
16	M79	Y	-4.095	-7.411	0	.779
17	M79	Y	-7.411	-7.716	.779	1.558
18	M79	Y	-7.716	-5.989	1.558	2.337





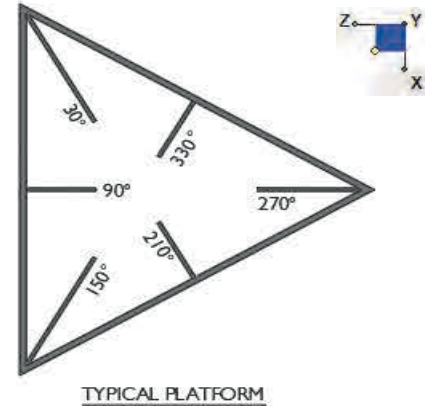




## I. Mount-to-Tower Connection Check

### RISA Model Data

Nodes (labeled per RISA)	Orientation (per graphic of typical platform)
n112a	270
n76	150
n48	30



### Tower Connection Bolt Checks

Any moment resistance?:

Bolt Quantity per Reaction:

$d_x$  (in) (Delta X of typ. bolt config. sketch):

$d_y$  (in) (Delta Y of typ. bolt config. sketch):

Bolt Type:

Bolt Diameter (in):

Required Tensile Strength (kips):

Required Shear Strength (kips):

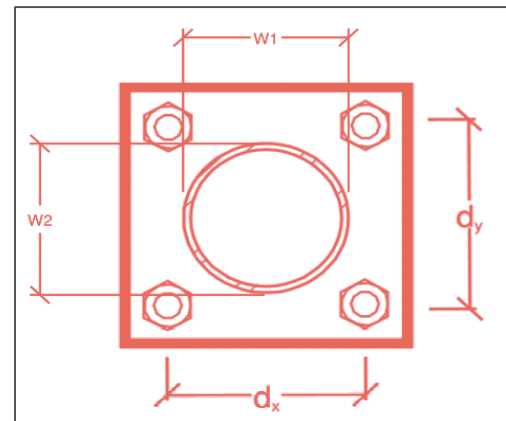
Tensile Strength / bolt (kips):

Shear Strength / bolt (kips):

Tensile Capacity Overall:

Shear Capacity Overall:

yes
4
7
7
A325N
0.625
10.5
2.7
20.7
12.4
<b>12.7%*</b>
<b>5.4%</b>



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

### Tower Connection Plate and Weld Check

Connecting Standoff Member Shape:

Plate Width (in):

Plate Height (in):

W1 (in):

W2 (in):

Fy (ksi, plate):

$t_{plate}$  (in):

Weld Size (1/16 in):

$\Phi * R_n$  (kip/in):

Required Weld Strength (kip/in):

Plate Bending Capacity:

Weld Capacity:

Rect
10
10
4
4
36
0.625
3
4.18
1.59
<b>28.9%</b>
<b>38.0%</b>

### Max Plate Bending Strengths

$Mu_{xx}$ (kip-in):	1.7
$\Phi * Mn_{xx}$ (kip-in):	31.6
$Mu_{yy}$ (kip-in):	7.5
$\Phi * Mn_{yy}$ (kip-in):	31.6



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

## Documents & Photos Required from Contractor – Mount Modification

---

**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 modification was completed in accordance with the modification drawings.
- Contractor shall relay any data that can impact the performance of the mount or the mount modification, this includes safety issues.

### **Base Requirements:**

- Any special photos outside of the standard requirements will be indicated on the drawings
- Provide “as built drawings” showing contractor’s name, preparer’s signature, and date. Any deviations from the drawings (proposed modification) must be shown.
- Notation that all hardware was properly installed, and the existing hardware was inspected for any issues.
- Verification that loading is as communicated in the modification drawings. NOTE If loading is different than what is conveyed in the modification drawing 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 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 modifications. Each entire sector must be in one photo to show in the inter-connection of members.
  - 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
- Close-up photos of each installed modification per the modification drawings; pictures should also include connection hardware (U-bolts, bolts, nuts, all-threaded rods, etc.)
- Photos showing the measurements of the installed modification member sizes (i.e. lengths, widths, depths, diameters, thicknesses)
- Photos showing the elevation or distances of the installed modifications from the appropriate reference locations shown in the modification drawings
- Photos showing the installed modifications onto the tower with tape drop measurements (if applicable) (i.e. ring/collar mounts, tie-backs, V-bracing kits, etc.); if the existing mount elevation needs to be changed according to the modification drawings, a tape drop measurement shall be provided before the elevation change
- 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.

**Material Certification:**

- Materials utilized must be as per specification on the drawings or the equivalent as validated by Maser Consulting Connecticut.
  - If the drawings are as specified on the drawings
    - The contractor should provide the packing list or the materials utilized to perform the mount modification
  - If an equivalent is utilized
    - It is required that the Maser Consulting Connecticut certification of such is included in the contractor submission package. There may be an additional charge for this certification if the equivalent submission doesn't meet specifications as prescribed in the drawings.
- The contractor must certify that the materials meet these specifications by one of these methods.

The Material utilized was as specified on the Maser Consulting Connecticut Mount Modification Drawings and included in the Material certification folder is a packing list or invoice for these materials

The material utilized was an "equivalent" and included as part of the contractor submission is the Maser Consulting Connecticut certification, invoices, or specifications validating accepted status

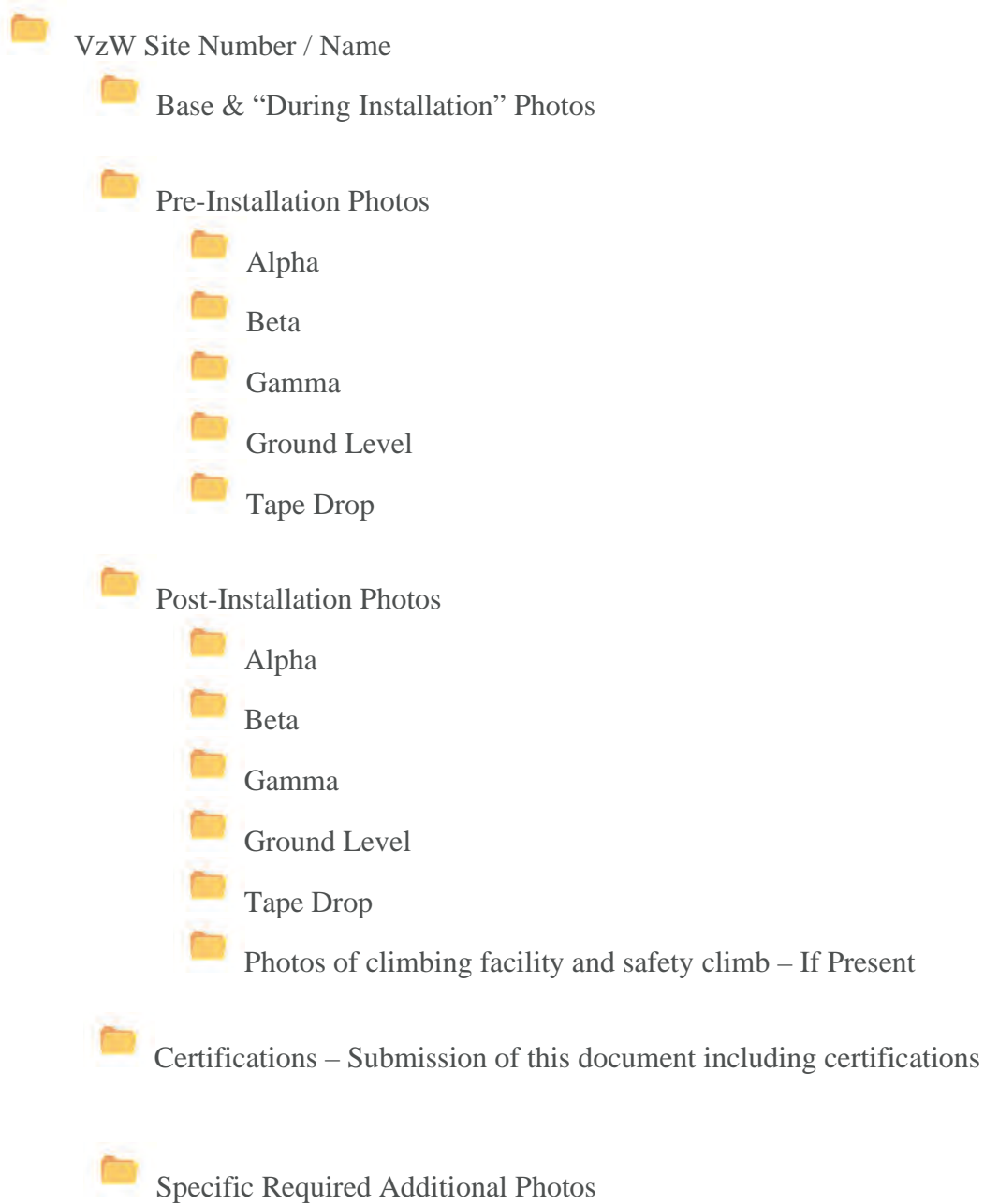
Certifying Individual: Company \_\_\_\_\_

Name \_\_\_\_\_



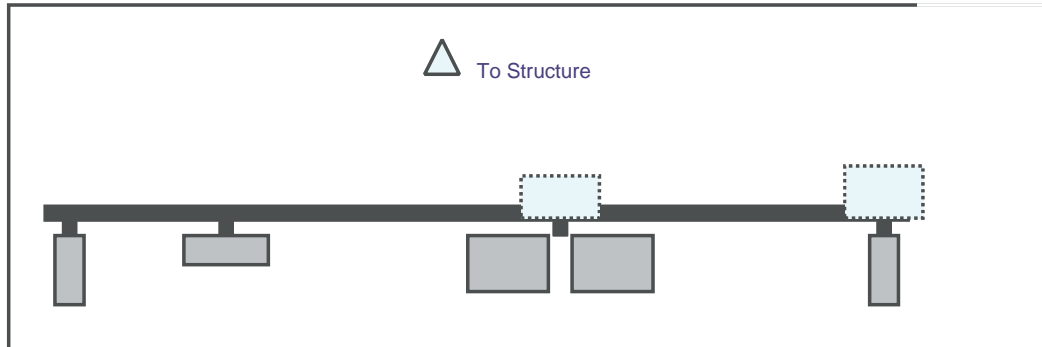


## Schedule A – Photo & Document File Structure

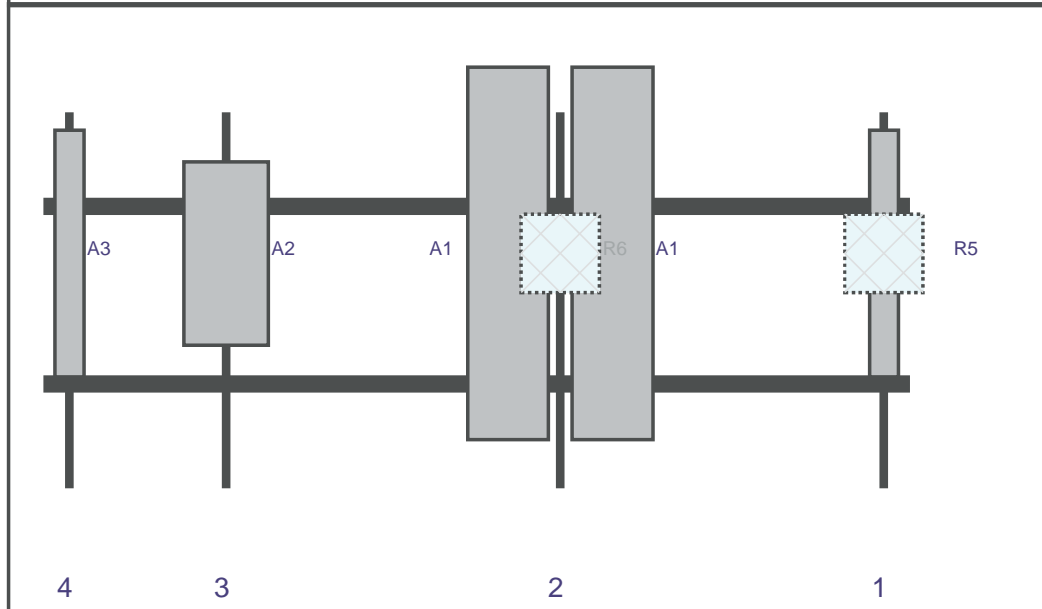




Plan View

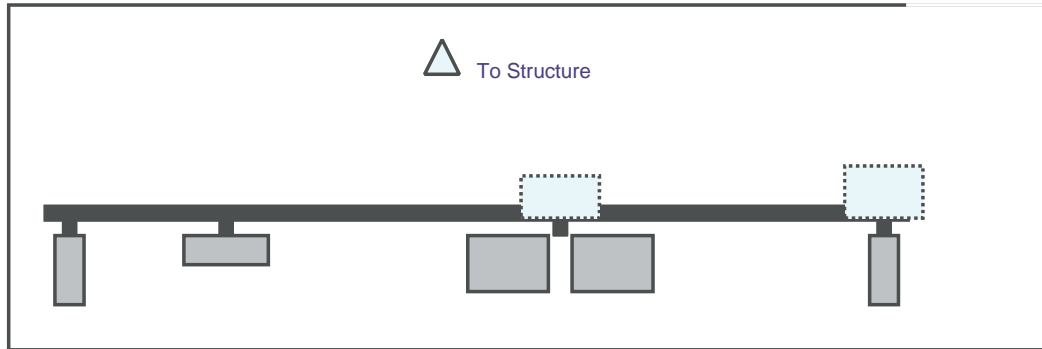


Front View  
 Looking at Structure

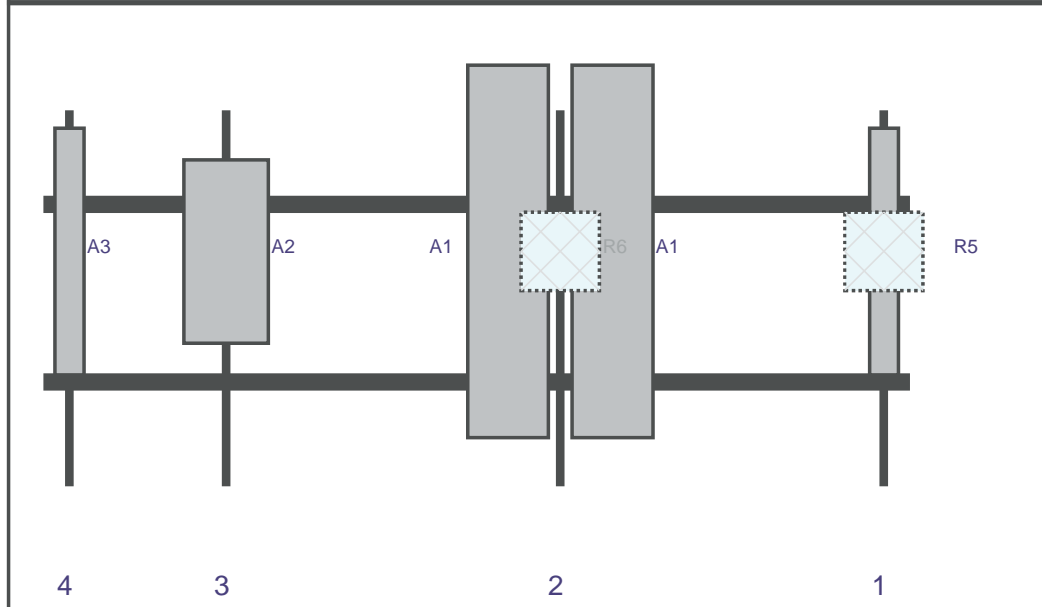


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A3	LPA-80080-4CF	47.2	5.5	161	1	a	Front	27	0	Retained	02/02/2021
R5	B2/B66A RRH-BR049	15	15	161	1	a	Behind	27	0	Added	
A1	MX06FRO660-03	71.3	15.4	99	2	a	Front	27	10	Added	
A1	MX06FRO660-03	71.3	15.4	99	2	b	Front	27	-10	Added	
R6	B5/B13 RRH-BR04C	15	15	99	2	a	Behind	27	0	Added	
A2	MT6407-77A	35.1	16.1	35	3	a	Front	27	0	Added	
A3	LPA-80080-4CF	47.2	5.5	5	4	a	Front	27	0	Retained	02/02/2021

Plan View

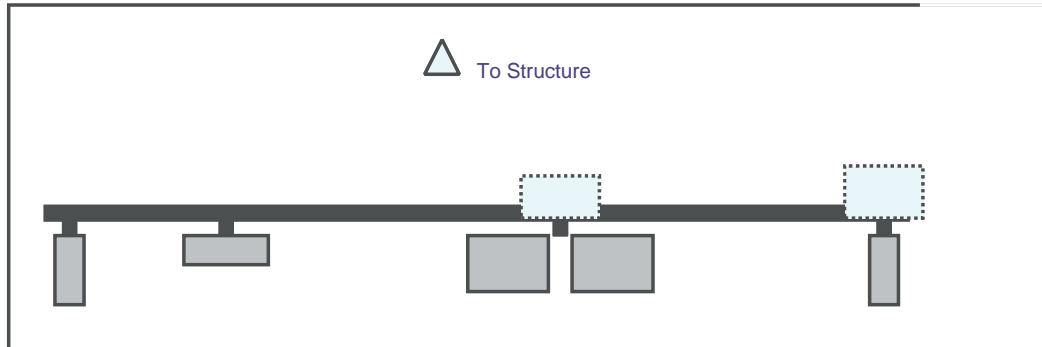


Front View  
Looking at Structure

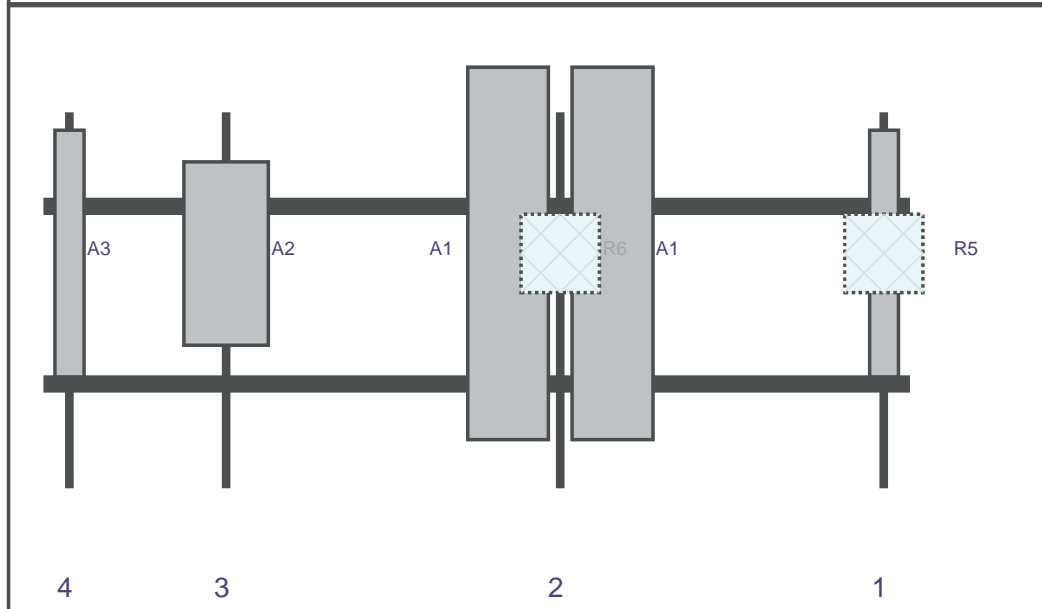


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
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A1	MX06FRO660-03	71.3	15.4	99	2	a	Front	27	10	Added	
A1	MX06FRO660-03	71.3	15.4	99	2	b	Front	27	-10	Added	
R6	B5/B13 RRH-BR04C	15	15	99	2	a	Behind	27	0	Added	
A2	MT6407-77A	35.1	16.1	35	3	a	Front	27	0	Added	
A3	LPA-80080-4CF	47.2	5.5	5	4	a	Front	27	0	Retained	02/02/2021

Plan View



Front View  
 Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A3	LPA-80080-4CF	47.2	5.5	161	1	a	Front	27	0	Retained	02/02/2021
R5	B2/B66A RRH-BR049	15	15	161	1	a	Behind	27	0	Added	
A1	MX06FRO660-03	71.3	15.4	99	2	a	Front	27	10	Added	
A1	MX06FRO660-03	71.3	15.4	99	2	b	Front	27	-10	Added	
R6	B5/B13 RRH-BR04C	15	15	99	2	a	Behind	27	0	Added	
A2	MT6407-77A	35.1	16.1	35	3	a	Front	27	0	Added	
A3	LPA-80080-4CF	47.2	5.5	5	4	a	Front	27	0	Retained	02/02/2021

<b><u>Subject</u></b>	TIA-222-H Usage
<b><u>Site Information</u></b>	Site ID: 467192-VZW / Willimantic East
	Site Name: Willimantic East
	Carrier Name: Verizon Wireless
	Address: 193 Windham Center Road
	Windham, Connecticut 06280
	Windham County
	Latitude: 41.690056°
	Longitude: -72.162536°
<b><u>Structure Information</u></b>	Tower Type: 180.00-Ft Monopole
	Mount Type: 13.83-Ft Platform

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,

Taqi Khawaja, PE  
[Redacted Signature]







**GENERAL NOTES**

- THESE MODIFICATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF THE TELECOMMUNICATIONS INDUSTRY STANDARD TIA-222-H MATERIALS AND SERVICES PROVIDED BY THE CONTRACTOR SHALL CONFORM TO THE ABOVE MENTIONED CODES.
- CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DAMAGE TO EXISTING STRUCTURES, ANY DAMAGE TO EXISTING STRUCTURES AS A RESULT OF THE CONTRACTOR'S WORK OR FROM THE INSTALLATION OF THE STRUCTURE TO BE PROVIDED BY THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE BEGINNING WORK, ORDERING MATERIAL, AND PREPARING OF SHOP DRAWINGS. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER. IF THE CONTRACTOR DISCOVERS ANY EXISTING CONDITIONS THAT ARE NOT REPRESENTED ON THESE DRAWINGS, OR ANY CONDITIONS THAT WOULD INTERFERE WITH THE INSTALLATION OF THE MODIFICATIONS, NOTIFY THE ENGINEER IMMEDIATELY.
- IT IS ASSUMED THAT ANY STRUCTURAL MODIFICATION WORK SPECIFIED WITH TOWER CONSTRUCTION EXPERIENCE.
- THESE PLANS WILL BE ACCOMPLISHED BY KNOWLEDGEABLE WORKMEN SOLELY RESPONSIBLE FOR ALL CONSTRUCTION METHODS, MEANS, TECHNIQUES, SEQUENCES, AND PROCEDURES.
- ALL CONSTRUCTION MEANS AND METHODS INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET ANS/ITIA-322 (LATEST EDITION), OSHA AND GENERAL INDUSTRY STANDARDS. ALL RIGGING PLANS SHALL ADHERE TO ANS/ITIA-322 (LATEST EDITION) INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PROGRAMS IN ACCORDANCE WITH APPLICABLE SAFETY CODES.
- WORK SHALL ONLY BE PERFORMED DURING CALM DRY DAYS (WINDS LESS THAN 30-MPH). THE STRUCTURE SHOWN ON THE DRAWINGS IS CONTRACTOR SHALL BE RESPONSIBLE FOR THE STRENGTH AND STABILITY OF THE STRUCTURE DURING ERECTION. CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT, BRACING AND ANY OTHER STRUCTURAL HANDLING AND ERECTION UNTIL THE STRUCTURE IS FULLY COMPLETED. TEMPORARY SUPPORTS, BRACING AND OTHER STRUCTURAL SYSTEMS REQUIRED DURING CONSTRUCTION SHALL REMAIN THE CONTRACTOR'S PROPERTY AFTER THEIR USE.
- ALL INSTALLATIONS PERFORMED ON THIS STRUCTURE SHALL BE COMPLETED IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF THE STANDARD FOR INSTALLATION ALTERATION AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS, ANS/ITIA-322.
- CONTRACTOR SHALL SECURE SITE BACK TO EXISTING CONDITION UNDER SUPERVISION OF OWNER. ALL FENCE, STONE, GEOPRAC, GRADING, AND SURROUNDING GRADE SHALL BE REPLACED AND REPAIRED AS REQUIRED TO ACHIEVE OWNER APPROVAL. POSITIVE DRAINAGE AWAY FROM TOWER SITE SHALL BE MAINTAINED.
- CONNECTIONS BETWEEN ITEMS SUPPORTED BY THE STRUCTURE AND THE STRUCTURE NOT SPECIFICALLY DETAILED IN THE CONTRACT DOCUMENTS SHALL BE DESIGNED, COORDINATED AND INSPECTED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF THE PROJECT. SUBMIT SIGNED AND SEALED CALCULATIONS DURING SHOP DRAWING REVIEW.
- DO NOT SCALE DRAWINGS.
- DO NOT USE THESE DRAWINGS FOR ANY OTHER SITE.
- ALL MATERIAL UTILIZED FOR THIS PROJECT MUST BE NEW AND FREE OF ANY DEFECTS. ALL MATERIALS AND SERVICES PROVIDED TO BE USED TO BE OF ALTERED SIZE AND/OR STRENGTHS, MUST BE APPROVED BY THE OWNER AND ENGINEER IN WRITING.
- THE POINT UNDER NO CIRCUMSTANCES SHOULD BE USED AS A TIE OFF POINT.

**DESIGN LOADS**

- WIND LOADS
- BASIC WIND SPEED (3 SECOND GUST),  $V = 121$  MPH
  - EXPOSURE CATEGORY C
  - TOPOGRAPHIC CATEGORY 1
  - MEAN BASE ELEVATION (AMS) = 303.05'
- ICE LOADS
- ICE WIND SPEED (3 SECOND GUST),  $V = 50$  MPH
  - ICE THICKNESS = 1.00 IN
- SEISMIC LOADS
- SEISMIC DESIGN CATEGORY B
  - SHORT TERM PEER GROUND MOTION,  $S_s = .191$
  - LONG TERM PEER GROUND MOTION,  $S_1 = .055$

**PROTECT STEEL BY ANY OTHER MEANS.**

- ALL EXISTING PAINTED GALVANIZED SURFACES DAMAGED DURING REHAB INCLUDING AREAS UNDER STIFFENER PLATES SHALL BE WIRE BRUSHED CLEAN, REPAIRED BY COLD GALVANIZING (ZINCA OR ZINC COTE), AND REPAINTED TO MATCH THE EXISTING FINISH (IF APPLICABLE).
- ALL HOLES IN STEEL MEMBERS SHALL BE SIZED 1/16" LARGER THAN THE BOLT DIAMETER. STANDARD HOLES SHALL BE USED UNLESS NOTED OTHERWISE.

**STRUCTURAL STEEL**

- DESIGN, DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING PUBLICATIONS EXCEPT AS SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS
  - AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION (15TH EDITION)
  - SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS
  - AISC CODE OF STANDARD PRACTICE
- STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING UNLESS OTHERWISE SHOWN:
  - CHANNELS, ANGLES, PLATES, ETC. ASTM A36 (GR 36)
  - STEEL PIPE ASTM A53 (GR 35)
  - BOLTS ASTM A325
  - LOCK WASHERS LOCKING STRUCTURAL GRADE
- ALL SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE APPROVED IN WRITING BY THE ENGINEER. CONTRACTOR SHALL PROVIDE DOCUMENTATION TO ENGINEER FOR VERIFYING THE SUBSTITUTE IS SUITABLE FOR USE AND MEETS ORIGINAL DESIGN CRITERIA. DIFFERENCES FROM THE ORIGINAL DESIGN, INCLUDING MAINTENANCE, REPAIR AND MODIFICATION, SHALL BE INDICATED BY NOTES AND COMMENTS ATTACHED WITH THE SUBSTITUTIONS. REVISIONS TO BE MADE TO THE CONTRACTOR'S SUB-CONTRACTS SHALL BE PROVIDED TO THE ENGINEER. CONTRACTOR SHALL PROVIDE ADDITIONAL DOCUMENTATION AND/OR SPECIFICATIONS TO THE ENGINEER AS REQUESTED.
- PROVIDE STRUCTURAL STEEL SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
  - SUBMIT SHOP DRAWINGS TO GREG.DUNN@COLLIERENGINEERING.COM
  - PROVIDE MASER CONSULTING PROJECT # AND MASER CONSULTING PROJECT ENGINEER CONTACT IN THE BODY OF THE EMAIL.
- DRILL NO HOLES IN ANY NEW OR EXISTING STRUCTURAL STEEL MEMBERS OTHER THAN THOSE SHOWN ON STRUCTURAL DRAWINGS WITHOUT THE APPROVAL OF THE ENGINEER OF RECORD.
- GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
- ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. IN ADDITION ALL NEW STEEL SHALL BE PAINTED TO MATCH EXISTING STEEL. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
- ALL BOLT ASSEMBLIES FOR STRUCTURAL MEMBERS REPRESENTED IN THIS DRAWING REQUIRE LOCKING DEVICES TO BE INSTALLED IN ACCORDANCE WITH TIA-222-H SECTION 4.9.2 REQUIREMENTS
- WHERE CONNECTIONS ARE NOT FULLY DETAILED ON THESE DRAWINGS FABRICATOR SHALL DESIGN CONNECTIONS TO RESIST LOADS AND FORCES WHERE SHOWN ON DRAWINGS AND AS OUTLINED IN SPECIFICATIONS.
- FOR MEMBERS BEING REPLACED, PROVIDE NEW BOLTS AND MATCH EXISTING SIZE AND GRADE MAINTAIN AISC REQUIREMENTS FOR MINIMUM BOLT DISTANCE AND SPACING.
- ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH TO PERMIT THE BOLT TO BE FULLY TIGHTENED. THE END OF THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.
- GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
- ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO

**MASER CONSULTING**  
 www.maser.com  
 Customer Loyalty through Client Satisfaction  
 10000 Old Orchard Road, Suite 1000  
 Dallas, Texas 75241  
 Tel: 972.382.1100  
 Fax: 972.382.1101

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PROJECT YOURSELF  
 ALL STATE REGISTRATION AND LICENSES  
 REQUIRED TO OBTAIN PROJECTS  
 811  
 Call your local utility company  
 1-800-487-4874  
 www.811.com

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 ALL STATE REGISTRATION AND LICENSES  
 REQUIRED TO OBTAIN PROJECTS  
 811  
 Call your local utility company  
 1-800-487-4874  
 www.811.com

NO.	AS SHOWN	DATE	DESCRIPTION
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

**Digitally signed by Taha Khawaja-Gulati**  
 Date: 2021.09.23 16:55:04 CDT  
 LICENSE NUMBER: PEN000797  
 C.T. COLLEGE PENNSYLVANIA

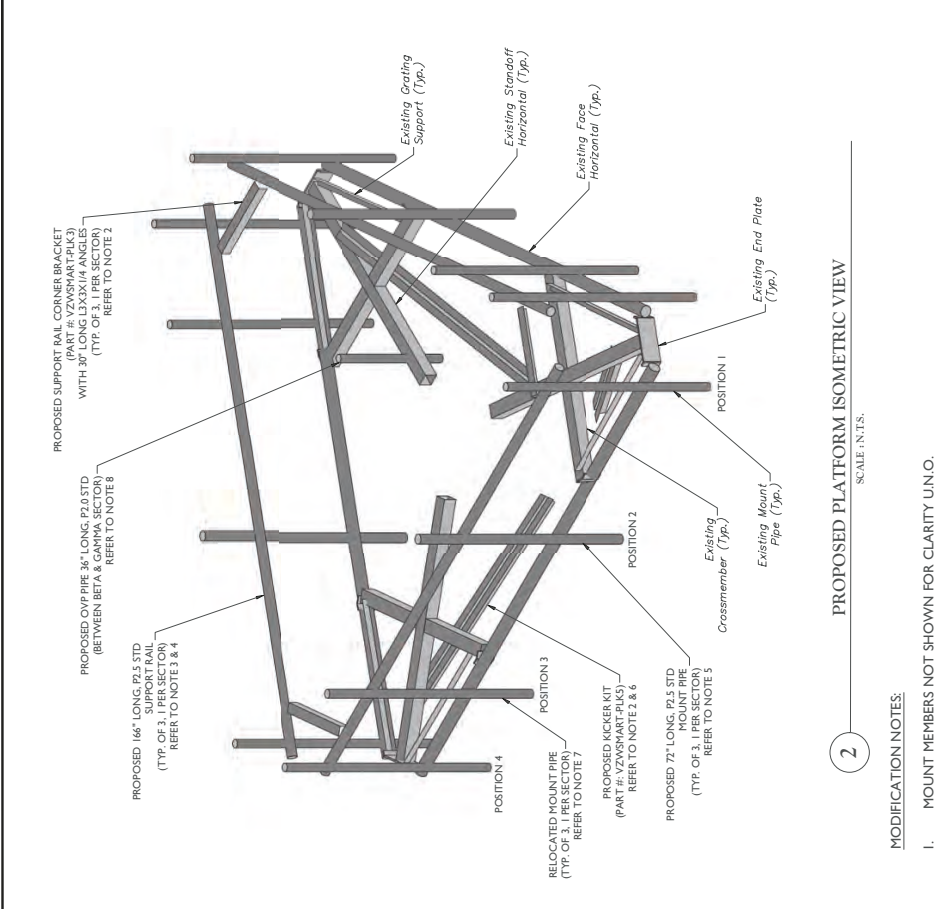
THE STATE OF PENNSYLVANIA  
 UNDER THE AUTHORITY OF THE DIRECTOR  
 OF THE PENNSYLVANIA DEPARTMENT OF REVENUE  
 I HEREBY CERTIFY THAT THIS DOCUMENT  
 IS A TRUE AND CORRECT COPY OF THE ORIGINAL

**SITE NAME:**  
 WILLIMANTIC EAST CT  
 467192  
 193 WINDHAM CENTER RD  
 WINDHAM, CT 06280  
 WINDHAM COUNTY

**STATE OFFICE**  
 1000 Old Orchard Road, Suite 1000  
 Dallas, Texas 75241  
 Tel: 972.382.1100  
 Fax: 972.382.1101

**MODIFICATION NOTES**

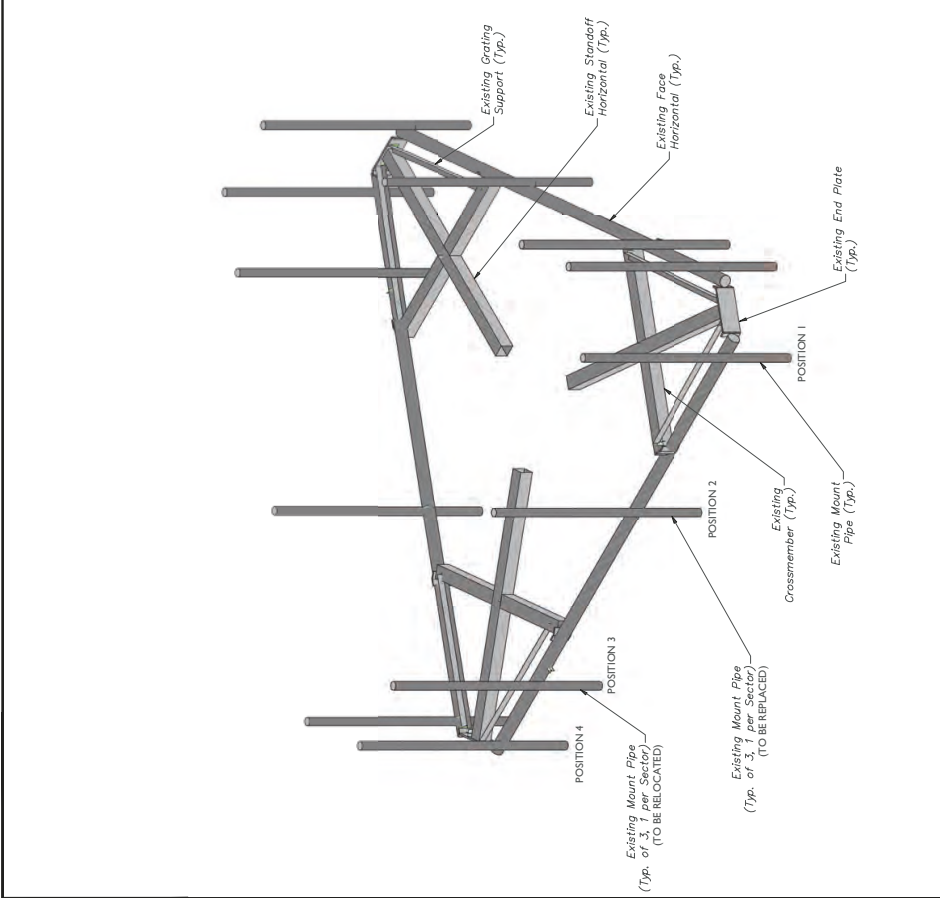




2 PROPOSED PLATFORM ISOMETRIC VIEW  
 SCALE: N.T.S.

MODIFICATION NOTES:

1. MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.
2. CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE STRUCTURAL STEEL NOTES ON SHEET S-2.
3. RADIO AND/OR THE POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF HORIZONTAL AS SHOWN. EOR SHALL BE NOTIFIED IF EQUIPMENT NEEDS TO BE RELOCATED TO ANOTHER MOUNT PIPE.
4. CONNECT NEW SUPPORT RAIL TO ALL VERTICAL MOUNT PIPES WITH CROSSOVER PLATES (PART #: VZWSMART-MSK1).
5. CONNECT NEW MOUNT PIPE TO EXISTING FACE HORIZONTAL WITH CROSSOVER PLATE (PART #: VZWSMART-MSK2).
6. CONNECT OTHER END OF KICKER KIT TO MONOPOLE COLLAR MOUNT ASSEMBLY (PART #: VZWSMART-PLK7).
7. CONNECT RELOCATED MOUNT PIPE TO EXISTING HORIZONTAL WITH EXISTING CONNECTION HARDWARE.
8. CONNECT NEW OVP PIPE TO EXISTING STANDOFF HORIZONTAL WITH CROSSOVER PLATE (PART #: SITE PRO 1 - SOCX-H, OR EOR APPROVED EQUIVA).



1 EXISTING PLATFORM ISOMETRIC VIEW  
 SCALE: N.T.S.

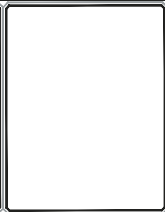
STRUCTURAL NOTES:

1. PER THE MOUNT MAPPING COMPLETED BY HUDSON DESIGN GROUP, LLC ON 2/2/2021, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (176'-0") ARE IN GOOD CONDITION. MASER DOES NOT WARRANT THIS INFORMATION.
2. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE CLIMBING FACILITY. SAFETY CLIMB OR ANY SYSTEM INSTALLED ON THE STRUCTURE, TIMELY NOTICE AND DOCUMENTATION SHALL BE PROVIDED BY CONTRACTORS TO THE EOR (OF STRUCTURAL DESIGN) IF AN OBSTRUCTION WAS REQUIRED TO MEET THE RF SYSTEM DESIGN REQUIREMENTS AND PERFORMANCES.

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ADDRESS: 193 WINDHAM CENTER RD  
CITY: WINDHAM, CT 06250  
PHONE: 860-979-1913  
WWW.MASER.COM

NO.	AS SHOWN	DATE	DESCRIPTION

Digitally signed by **Tarun Khawaja-Gautam**  
Date: 2021.09.23 13:04:00  
LICENSE NUMBER: PEN000797  
C.T. C.O.A.# PC200031

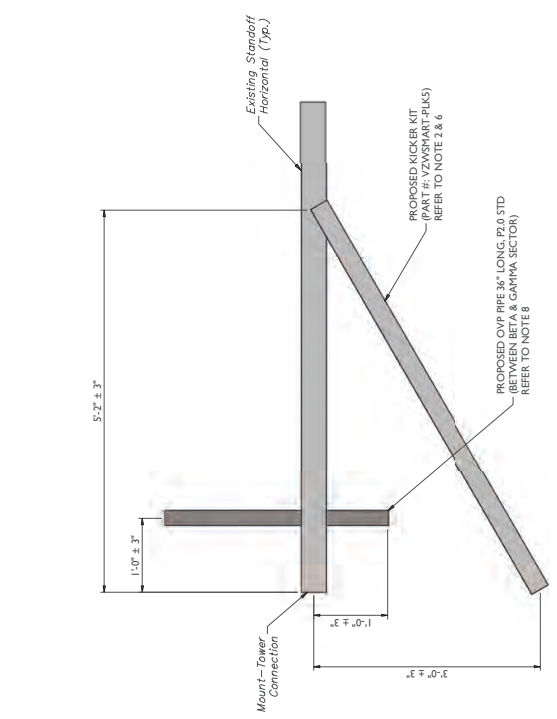
DATE: 2021.09.23 13:04:00

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN FEET AND INCHES. DIMENSIONS TO FACE UNLESS OTHERWISE NOTED.

**SITE NAME:**  
WILLAMANTIC EAST CT  
467192  
193 WINDHAM CENTER RD  
WINDHAM, CT 06250  
WINDHAM COUNTY

**PROJECT OFFICE:**  
100 Main Street  
Windham, CT 06250  
Phone: 860-979-1913  
Fax: 860-972-1130

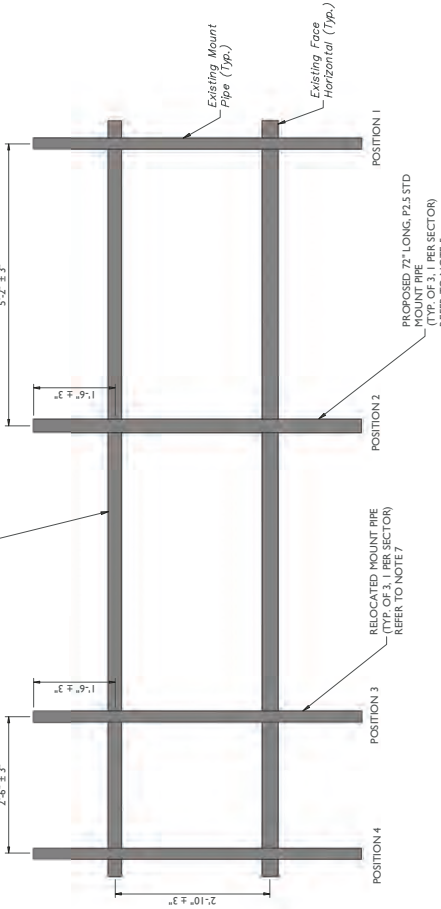
**MODIFICATION DETAILS**



1 PROPOSED FRONT ELEVATION (TYP. ALL SECTORS)  
SCALE: N.T.S.

**MODIFICATION NOTES:**

1. MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.
2. CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE STRUCTURAL STEEL NOTES ON SHEET S-2.
3. RADIO AND/OR THE POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF HORIZONTAL AS SHOWN. EOR SHALL BE NOTIFIED IF EQUIPMENT NEEDS TO BE RELOCATED TO ANOTHER MOUNT PIPE.
4. CONNECT NEW SUPPORT RAIL TO ALL VERTICAL MOUNT PIPES WITH CROSSOVER PLATES (PART #: VZWSMART-MSK1).
5. CONNECT NEW MOUNT PIPE TO EXISTING FACE HORIZONTAL WITH CROSSOVER PLATE (PART #: VZWSMART-MSK2).
6. CONNECT OTHER END OF KICKER KIT TO MONOPOLE COLLAR MOUNT ASSEMBLY (PART #: VZWSMART-PLK7).
7. CONNECT RELOCATED MOUNT PIPE TO EXISTING HORIZONTAL WITH EXISTING CONNECTION HARDWARE.
8. CONNECT NEW OVP PIPE TO EXISTING STANDOFF HORIZONTAL WITH CROSSOVER PLATE (PART #: SITE PRO 1 - SSCX4-K, OR EOR APPROVED EQUAL).



2 PROPOSED SIDE ELEVATION (TYP. ALL SECTORS)  
SCALE: N.T.S.

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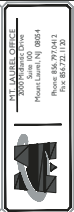


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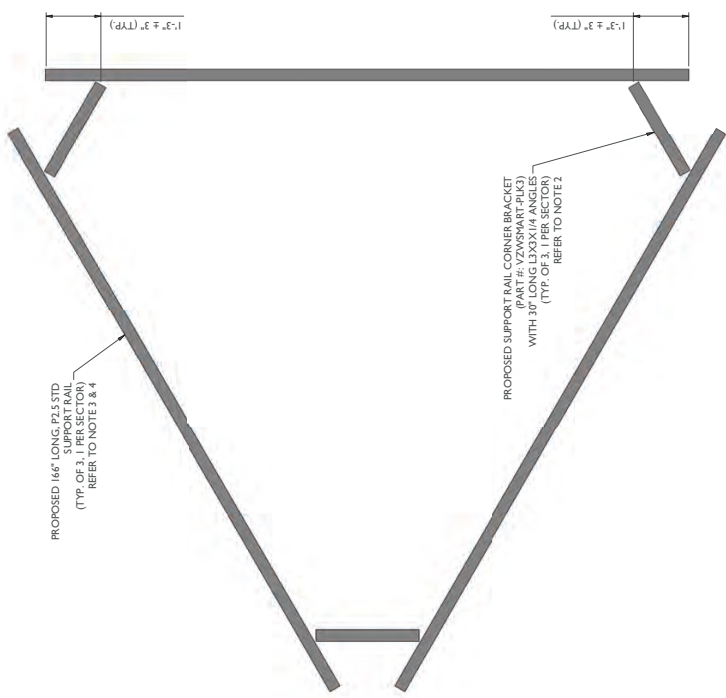
NO.	AS SHOWN	DATE	BY	DESCRIPTION

Digitally signed by **Talal Khawaja-Gaulian**  
Date: 2021.09.22 17:21:04 CDT  
LICENSE NUMBER: PEN000799  
C.T. CO.#: PC200031

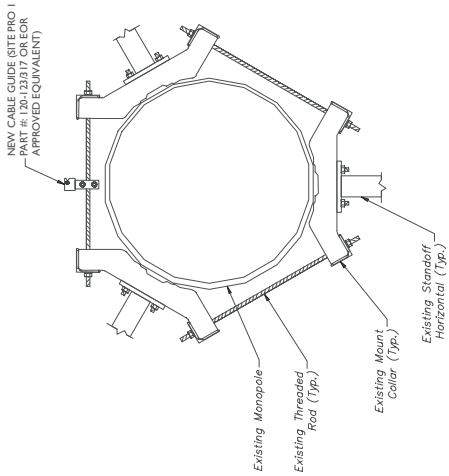
**SITE NAME:**  
WILLAMANTIC EAST CT  
467192  
193 WINDHAM CENTER RD  
WINDHAM, CT 06280  
WINDHAM COUNTY



**MODIFICATION DETAILS**



**1** PROPOSED PLAN VIEW  
SCALE: N.T.S.



**2** PROPOSED CABLE GUIDE THREADED ROD ATTACHMENT - PLAN VIEW  
SCALE: N.T.S.

**MODIFICATION NOTES:**

1. MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.
2. CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET S-2.
3. RADIO AND/OR TME POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF HORIZONTAL AS SHOWN. EOR SHALL BE NOTIFIED IF EQUIPMENT NEEDS TO BE RELOCATED TO ANOTHER MOUNT PIPE.
4. CONNECT NEW SUPPORT RAIL TO ALL VERTICAL MOUNT PIPES WITH CROSSOVER PLATES (PART #: VZWSMART-MSK1).
5. CONNECT NEW MOUNT PIPE TO EXISTING FACE HORIZONTAL WITH CROSSOVER PLATE (PART #: VZWSMART-MSK2).
6. CONNECT OTHER END OF KICKER KIT TO MONOPOLE COLLAR MOUNT ASSEMBLY (PART #: VZWSMART-PLK7).
7. CONNECT RELOCATED MOUNT PIPE TO EXISTING HORIZONTAL WITH EXISTING CONNECTION HARDWARE.
8. CONNECT NEW OVP PIPE TO EXISTING STANDOFF HORIZONTAL WITH CROSSOVER PLATE (PART #: SITE PRO 1 - SQCX4-K OR EOR APPROVED EQUAL).



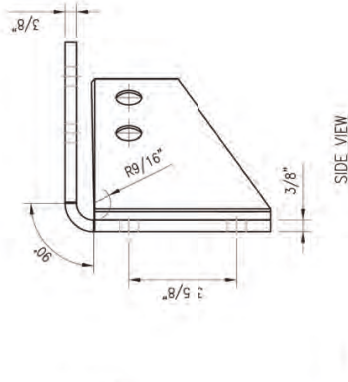
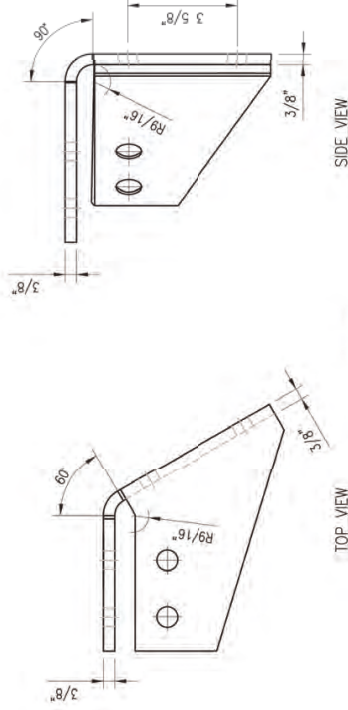


Digitally signed by Faqi  
Khawaja Ghulam  
Date: 2021.04.23 17:27:35-0400

DRAWN BY: HR | CHECKED BY: HMA  
REV. DESCRIPTION | DATE  
1. FIRST ISSUE | H.R. 05/08/20

SHEET TITLE:  
VZWSMART-PLK3  
SUPPORT RAIL CORNER  
BRACKET

SHEET NUMBER:  
VZWSMART-PLK3  
REV #:  
0

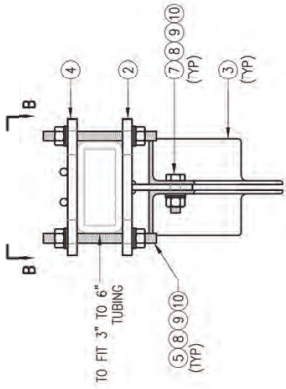
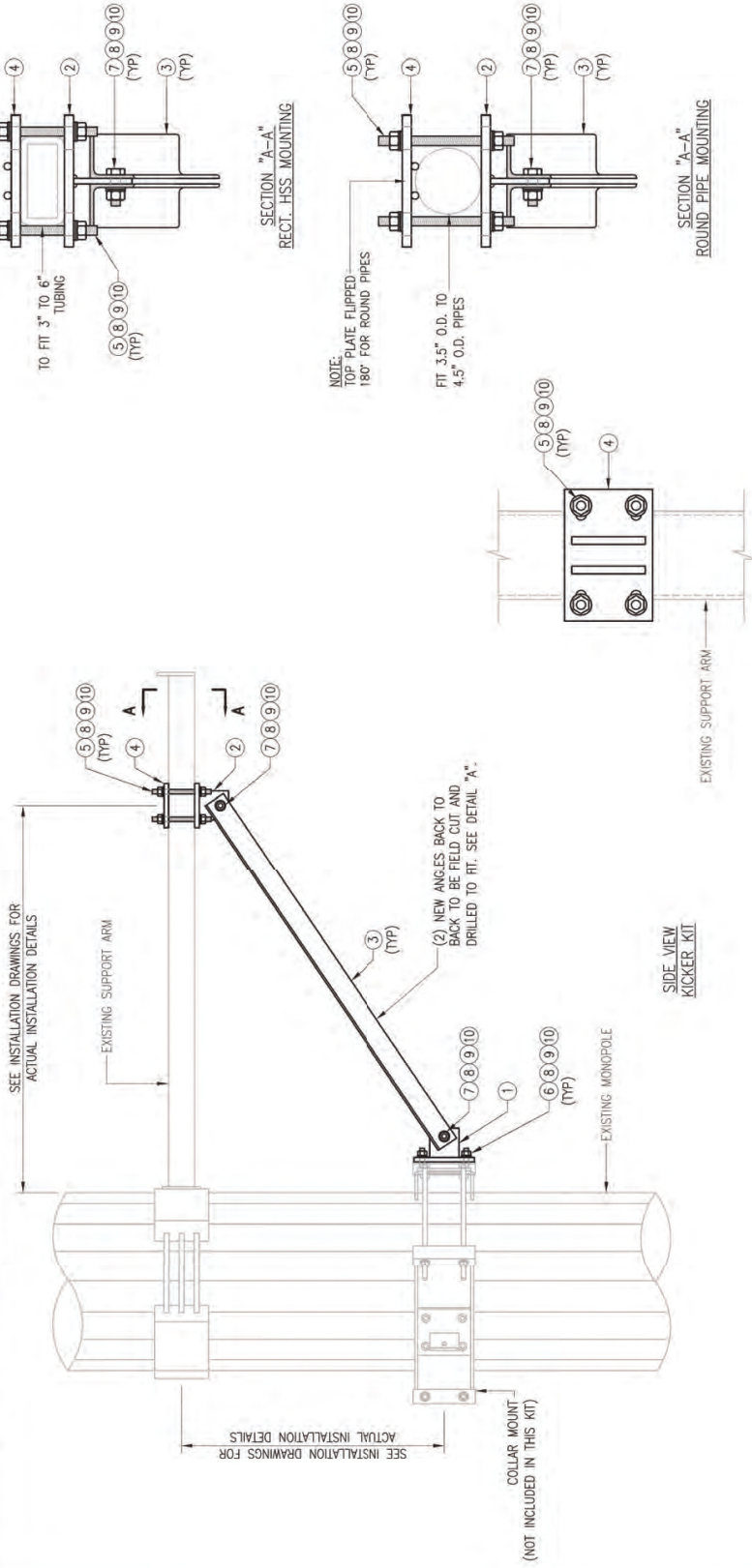


NOTES:  
1. HOT-DIPPED GALVANIZED PER ASTM A123.

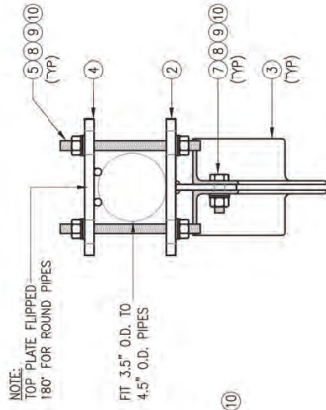
VZWSMART-PLK3 (SUPPORT RAIL CORNER BRACKET)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	CBP-L	CORNER BENT PLATE BRACKET	PLK3-F1	9
2	1	CBP-R	CORNER BENT PLATE BRACKET	PLK3-F1	9
3	4	MS02-625-300-500	RU-BOLT 5/8" X 3" L.W. X 5" L.L. A36 (OR EQUIV.)	RBC-1	5
4	8	---	BOLT 5/8" X 2" A325	---	3
5	16	PW-625	5/8" HDG USS FLAT WASHER	---	1
6	16	LW-625	5/8" HDG LOCK WASHER	---	0
7	16	NUT-625	5/8" HDG HEX NUT	---	2
				GALVANIZED WT	30

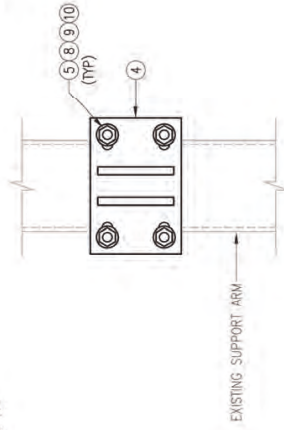
NOTE:  
THE LOCATION OF KICKER AND EXISTING ANTENNA MOUNT SHOWN ON THE DRAWING IS FOR REPRESENTATION PURPOSE ONLY. SEE INSTALLATION DRAWINGS FOR ACTUAL INSTALLATION OF DETAILS.



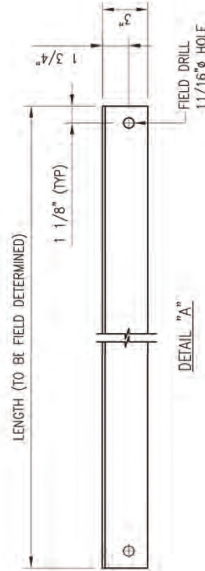
SECTION "A-A"  
RECT. HSS MOUNTING



SECTION "A-A"  
ROUND PIPE MOUNTING



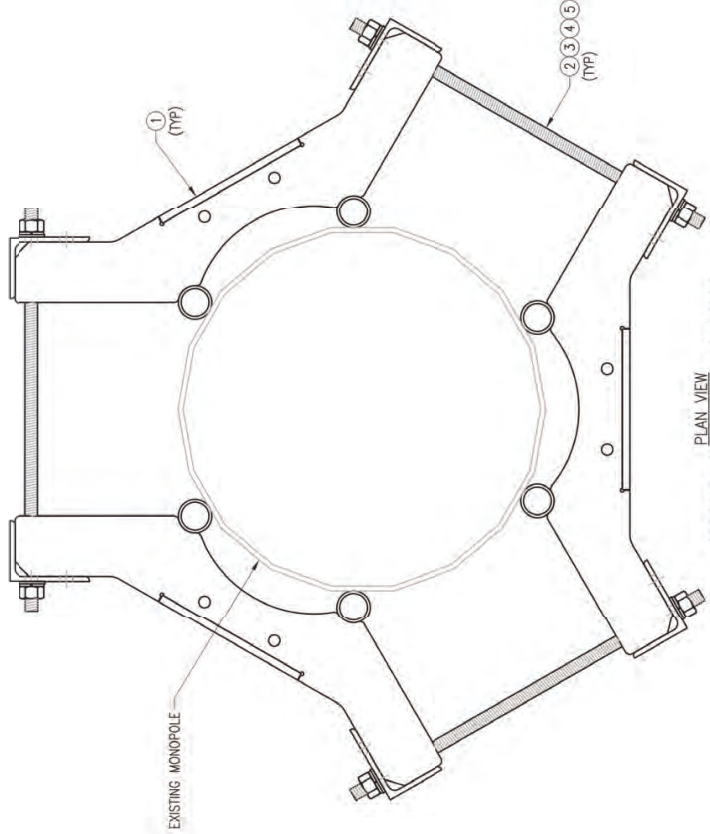
SECTION "B-B"



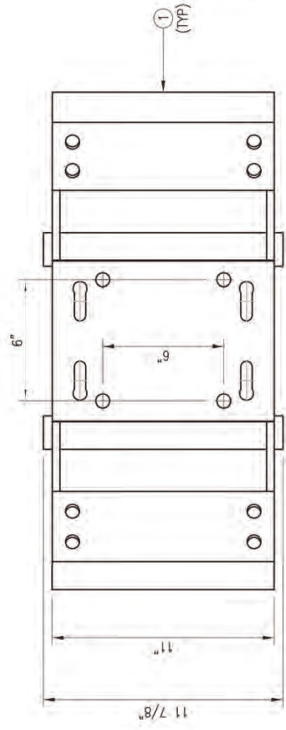
VZWSMART-PLK5 (KICKER KIT)					
ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	3	BRKW-XXX	BRACKET WELDMENT A36	PLK5-F3	43.8
2	3	BRKW-XXXX	BRACKET WELDMENT A36	PLK5-F2	35.7
3	6	L331875-8	L 3" X 3" X 3/16" X 8'-0" A36	PLK5-F4	182.9
4	3	PL-KI	PL 5/8" X 6" X 9" A36	PLK5-F1	29.0
5	12	----	THREADED ROD 5/8" DIA. X 1'-0" F1554-36 HDG	----	----
6	6	----	BOLT 5/8" X 2" A325	----	----
7	12	----	BOLT 5/8" X 2 1/2" A325	----	----
8	42	FW-625	5/8" HIG USS FLAT WASHER	----	3
9	42	LW-625	5/8" HIG LOCK WASHER	----	1
10	42	NUT-625	5/8" HIG HEX NUT	----	5
				GALVANIZED WT 291	

NOTES:  
1. ALL HOLES ARE 11/16" DIA. UNO  
2. HOT-DIPPED GALVANIZED PER ASTM A123.  
3. FIT UP TO 6" SQ. TUBING OR 4 1/2" O.D. PIPE





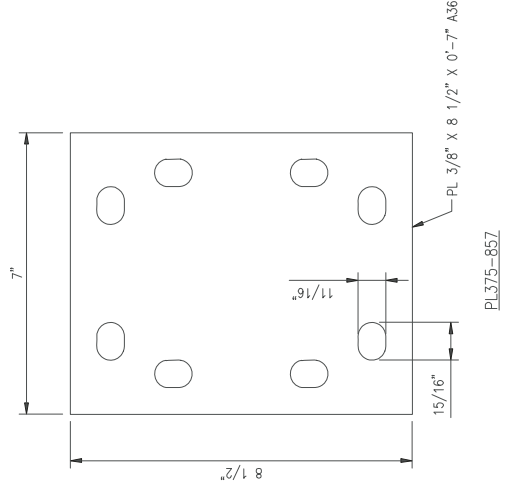
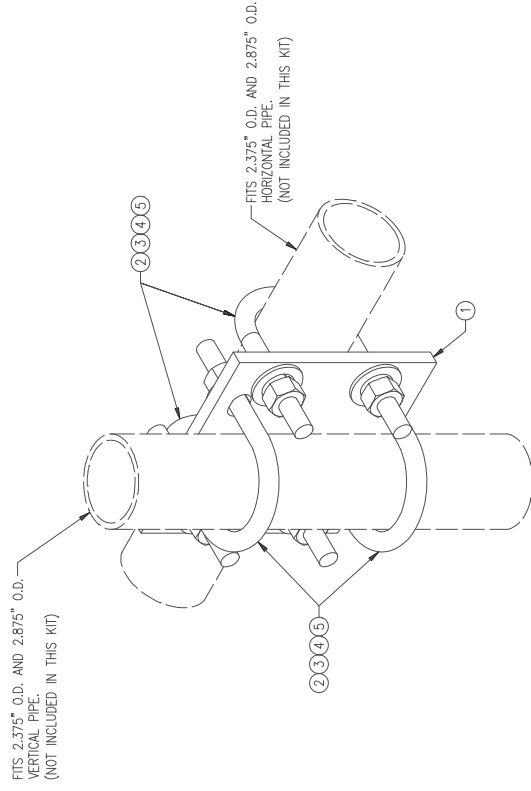
PLAN VIEW  
 MONOPOLE COLLAR MOUNT ASSEMBLY



FRONT VIEW

VZWSMART-PLK7 (MONOPOLE COLLAR MOUNT ASSEMBLY)						
ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT	
1	3	CM-1245	COLLAR MOUNT ASSEMBLY	PLK7-F1	147	
2	6	---	THREADED ROD 5/8" X 4'-0" A193-B7	---	---	
3	12	FW-625	5/8" HDG USS FLAT WASHER	---	1	
4	12	LW-625	5/8" HDG LOGK WASHER	---	0	
5	12	NUT-625	5/8" HDG HEX NUT	---	1	
					GALVANIZED WT	150

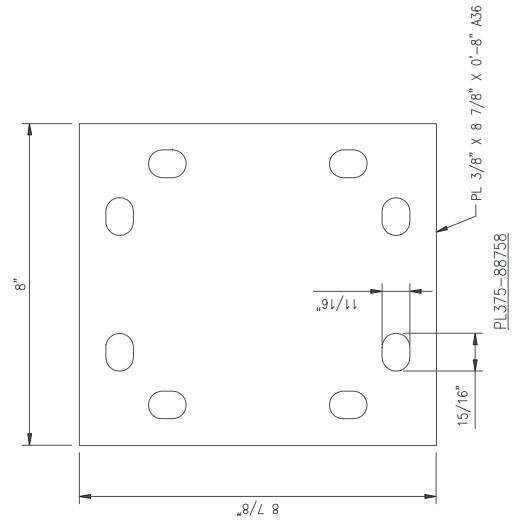
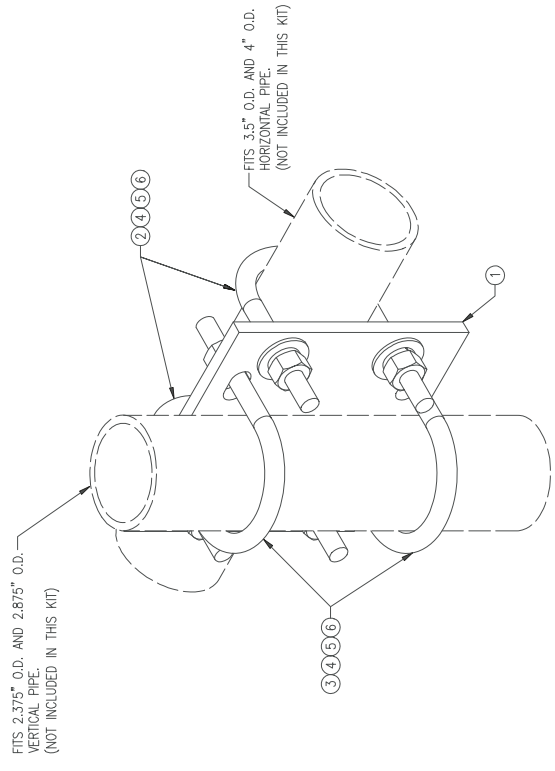
NOTES:  
 1. FIT 12" TO 45" DIA MONOPOLE.  
 2. HOT-DIPPED GALVANIZED PER ASTM A123.



ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PL375-857	PL 3/8" X 8 1/2" X 0'-7" A36	MSK1-F1	6
2	4	MS02-625-300-500	RU-BOLT 5/8" X 3" LW. X 5" LL. A36 (OR EQUIV.)	RBC-1	5
3	8	FW-625	5/8" HDG USS FLAT WASHER	---	1
4	8	LW-625	5/8" HDG LOCK WASHER	---	0
5	8	NUT-625	5/8" HDG HEX NUT	---	1
VZWSMART-MSK1 (CROSSOVER PLATE)				GALVANIZED WT 14	

NOTES:  
 1. HOT-DIPPED GALVANIZED PER ASTM A123.

DRAWN BY: H.R.	CHECKED BY: HMA
REV. DESCRIPTION	BY DATE
△ FIRST ISSUE	H.R. 05/08/20
△	
△	
△	
SHEET TITLE:	
VZWSMART-MSK1 CROSSOVER PLATE	
SHEET NUMBER:	REV #:
VZWSMART-MSK1	0



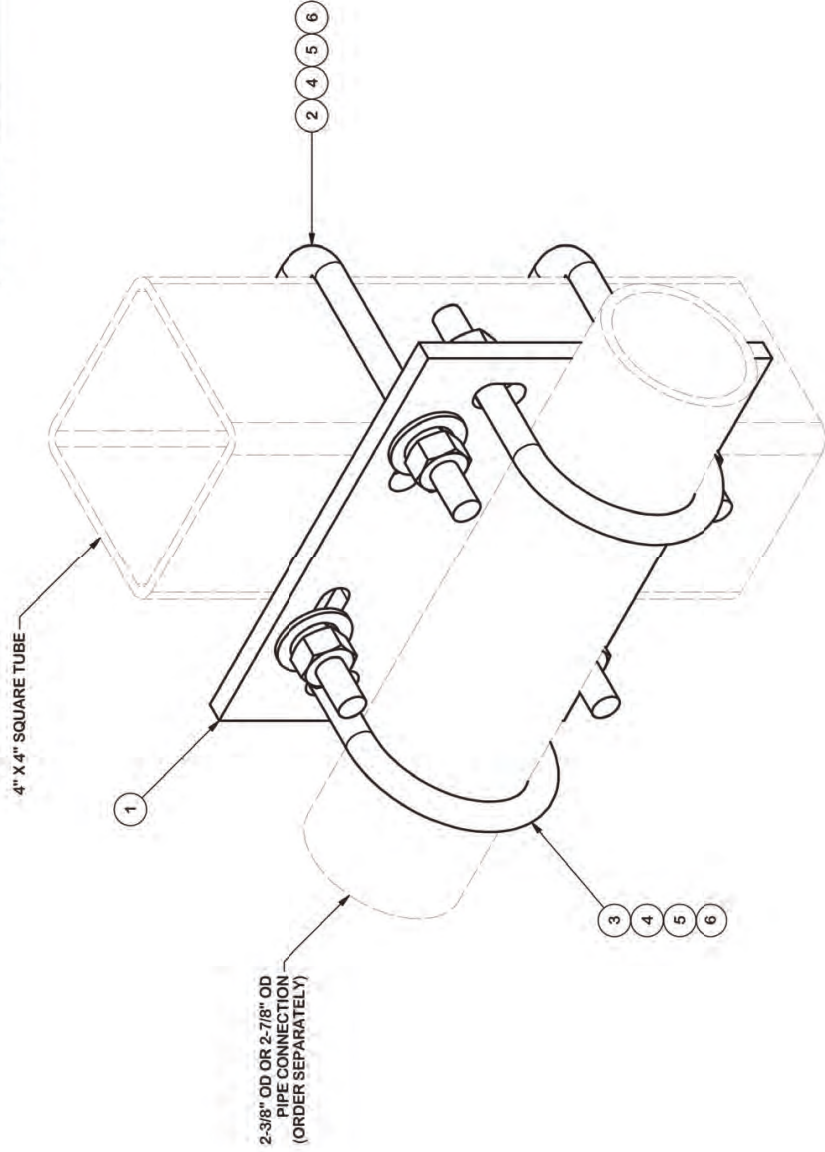
ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PL375-88758	PL 3/8" X 8 3/4" X 0'-8" A36	MSK2-F1	8
2	2	MS02-625-4125-600	RU-BOLT 5/8" X 4 1/8" I.W. X 6" I.L. A36 (OR EQUIV.)	RBC-1	3
3	2	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	3
4	8	FW-625	5/8" HDG USS FLAT WASHER	---	1
5	8	LW-625	5/8" HDG LOCK WASHER	---	0
6	8	NUT-625	5/8" HDG HEX NUT	---	1
				GALVANIZED WT	15

VZWSMART-MSK2 (CROSSOVER PLATE)

DRAWN BY: H.R.	CHECKED BY: HMA
REV. DESCRIPTION	BY DATE
1 FIRST ISSUE	H.R. 05/08/20
△	
△	
△	
△	
SHEET TITLE:	
VZWSMART-MSK2 CROSSOVER PLATE	
SHEET NUMBER:	REV #:
VZWSMART-MSK2	0

NOTES:  
 1. HOT-DIPPED GALVANIZED PER ASTM A123.

ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	1	SCX4	CROSSOVER PLATE	8 1/2 in	6.02	6.02
2	2	X-SUB1418	SQUARE U-BOLT 0.5" DIA. X 4.125" W X 6" IL X 3" TR		0.08	1.06
3	2	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.60	1.19
3	2	X-UB1300	1/2" X 3" X 5" X 2" U-BOLT (HDG.)		0.67	1.34
4	8	G12FW	1/2" HDG USS FLATWASHER	3/32 in	0.03	0.27
5	8	G12LW	1/2" HDG LOCKWASHER	1/8 in	0.01	0.11
6	8	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	0.57
					TOTAL WT. #	11.35



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Engineering  
Support Team:  
1-888-753-7446

Part No. **SQCX4-K**  
Dwg. No. **SQCX4-K**

DESCRIPTION		CROSSOVER PLATE KIT W/ SQUARE U-BOLTS AND STD. U-BOLTS	
CPD NO.	DRAWN BY	ENG. APPROVAL	3RD PARTY
87	CSL	CSL	9/18/2018
CLASS	DRAWING USAGE	CHECKED BY	CUSTOMER
87	02	BMC	11/12/2018


**TOLERANCE NOTES**  
TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:  
SAWED, SHEARED AND GAS CUT EDGES ( $\pm 0.030"$ )  
DRILLED AND GAS CUT HOLES ( $\pm 0.030"$ ) - NO CONING OF HOLES  
LASER CUT EDGES AND HOLES ( $\pm 0.010"$ ) - NO CONING OF HOLES  
BENDS ARE  $\pm 1/2$  DEGREE  
ALL OTHER MACHINING ( $\pm 0.030"$ )  
ALL OTHER ASSEMBLY ( $\pm 0.060"$ )

PROPRIETARY NOTE: THESE DRAWINGS AND DIMENSIONS ARE PROPRIETARY INFORMATION OF VALMONT INDUSTRIES AND CONSIDERED A TRADE SECRET. ANY USE OR DISCLOSURE WITHOUT THE CONSENT OF VALMONT INDUSTRIES IS STRICTLY PROHIBITED.

# **ATTACHMENT 5**



Parcel #: 6-9-240-29



**Documents & Links** **Assessment**

- [Vision Property Card](#)
- [Tax Map](#)
- [CAI Property Card](#)





# Property Card: 193 WINDHAM CENTER RD

Town of Windham, CT



Parcel Information	
<b>Parcel ID:</b> 6-9-240-29 <b>Vision ID:</b> 5764 <b>Owner:</b> WINDHAM TOWN OF <b>Co-Owner:</b> <b>Mailing Address:</b> 979 MAIN ST  WILLIMANTIC, CT 06226	<b>Map:</b> 6-9 <b>Lot:</b> 240-29 <b>Use Description:</b> Exempt Comm <b>Zone:</b> M2 <b>Land Area in Acres:</b> 30.92
Sale History	Assessed Value
<b>Book/Page:</b> 234/ 304 <b>Sale Date:</b> 12/12/1972 <b>Sale Price:</b> \$0	<b>Land:</b> \$353,250 <b>Buildings:</b> \$24,590 <b>Total:</b> \$377,840

Building Details: Building # 1		
	<b>Model:</b> Commercial <b>Living Area:</b> 240 <b>Appr. Year Built:</b> <b>Style:</b> Warehouse <b>Stories:</b> 1 <b>Occupancy:</b> 1 <b>No. Total Rooms:</b> <b>No. Bedrooms:</b> <b>No. Baths:</b> <b>No. Half Baths:</b>	<b>Int Wall Desc 1:</b> <b>Int Wall Desc 2:</b> <b>Ext Wall Desc 1:</b> Reinforc Concr <b>Ext Wall Desc 2:</b> 01 <b>Roof Cover:</b> <b>Roof Structure:</b> 01 <b>Heat Type:</b> <b>Heat Fuel:</b> <b>A/C Type:</b> Central

Building Details: Building # 2		
	<b>Model:</b> Commercial <b>Living Area:</b> 360 <b>Appr. Year Built:</b> <b>Style:</b> Warehouse <b>Stories:</b> 1 <b>Occupancy:</b> 1 <b>No. Total Rooms:</b> <b>No. Bedrooms:</b> <b>No. Baths:</b> <b>No. Half Baths:</b>	<b>Int Wall Desc 1:</b> <b>Int Wall Desc 2:</b> <b>Ext Wall Desc 1:</b> Reinforc Concr <b>Ext Wall Desc 2:</b> 01 <b>Roof Cover:</b> <b>Roof Structure:</b> 01 <b>Heat Type:</b> <b>Heat Fuel:</b> <b>A/C Type:</b> Central



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# **ATTACHMENT 6**





**WILLIMANTIC EAST  
Certificate of Mailing — Firm**

Name and Address of Sender  Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103	TOTAL NO. of Pieces Listed by Sender  <div style="text-align: center; font-size: 2em;">3</div>	TOTAL NO. of Pieces Received at Post Office™  <div style="text-align: center; font-size: 2em;">3</div>	Affix Stamp Here <i>Postmark with Date of Receipt.</i>  
	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.	James Rivers, Town Manager Town of Windham 979 Main Street Windham, CT 06226				
2.	Matthew Vertefeuille, Director of Code Compliance Town of Windham 979 Main Street Windham, CT 06226				
3.					
4.					
5.					
6.					