



10 INDUSTRIAL AVENUE,
SUITE 3
MAHWAH, NJ 07430

PHONE: 201.684.0055
FAX: 201.684.0066

July 31, 2019

Melanie A. Bachman
Acting Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Notice of Exempt Modification
864 Opening Hill Road, Madison CT
Latitude 41.35731667
Longitude -72.63876111
T-Mobile site: CT11394A /L600

Dear Ms. Bachman:

T-Mobile currently maintains (6) antennas at the 130 foot level of the existing 180 -foot self-support lattice located at 864 Opening Hill Road in Madison CT. The self-support lattice is owned by American Tower and the property is owned by North Madison Volunteer Fire Co. T-Mobile now intends to replace (3) of its existing antennas with (3) 600/700 MHz antennas. The new antennas would be installed at the 130 foot level of the tower with proposed mount modifications as per the attached mount analysis.

Planned Modifications:

Remove and Replace:

Antennas/TMAs/RRUs:

- (3) LNX-6515DS-A1M (REMOVE) – Add (3) APXVAARR24_43-U-NA20 (REPLACE) - 600 MHz / 700 MHz
- (3) RFS ATMAP1412D-1A20 TMAs (REMOVE) – (3) Ericsson KRY 112 489/2 TMAs (REPLACE)

Existing to Remain:

Antennas/TMAs/RRUs/coax:

- (3) RR90-17-02DP – no frequencies transmitted
- (3) KRY 112 489/2
- (12) 1-5/8" coax
- (1) 1-1/4" Hybrid

Install New:

Antennas/TMAs/RRUs/coax:

- (3) KRY 112 144/1
- (3) Ericsson Radio 4449 B12, B71
- (2) 1-5/8" hybrid

This facility was approved by the Town of Madison on April 17, 1997 by a Special Exception permit for a replacement tower of 180 feet, and a subsequent approval granted May, 20, 1999 for an expanded compound for Nextel and Sprint PCS's base station equipment. There are no known conditions that would restrict exempt modifications. A copy of those decisions are attached

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to The Honorable Thomas Banisch, First Selectman, and David Anderson, Town Planner

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 structure.
2. The proposed modifications 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 operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading.

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

Sincerely,

Elizabeth Jamieson

Elizabeth Jamieson
Transcend Wireless
10 Industrial Ave., Suite 3
Mahwah, New Jersey 07430
860-605-7808
EJamieson@TranscendWireless.com

cc:

The Honorable Thomas Banisch, First Selectman
David Anderson, Town Planner
American Tower, Tower Owner
North Madison Volunteer Fire Dept., Property Owner

Exhibit A

Original Facility Approval



TOWN OF MADISON
CONNECTICUT
LAND USE OFFICE

8 CAMPUS DRIVE
MADISON, CONNECTICUT 06443-2563
(203) 245-5632
FAX (203) 245-5613

MADISON PLANNING AND ZONING COMMISSION
CERTIFICATION OF SPECIAL EXCEPTION PERMIT OR
MODIFICATION OF SPECIAL EXCEPTION PERMIT

APPL. NO.: 97-5D

DATE OF APPROVAL: April 17, 1997

This certifies that on the above date a MODIFICATION OF SPECIAL EXCEPTION PERMIT was granted by the Madison Planning and Zoning Commission to:

OWNER OF RECORD: North Madison Volunteer Fire Department

under the provisions of Sec. 4.7 of the Zoning Regulations of the Town of Madison on property located at:

STREET ADDRESS OR LOCATION: 864 OPENING HILL ROAD

TO ALLOW: Construction of a 180 ft. communications tower to replace existing tower, installation of equipment building and emergency back-up generator waiving requirements of 1) a traffic study; 2) a waste water report and engineering study; and 3) final floor plans for the equipment building. The temporary installation of the "Cell on Wheels" was also approved. This approval is conditioned on plastic slats being placed in the chain link fence to obscure the view of the materials enclosed.

In accordance with Section 4.6 of said Regulations, this approval and permit are conditioned upon completion of all proposed improvements in accordance with approved plans within five years from date of approval, and shall become null and void in the event of failure to complete such improvements within said five year period or any extension thereof granted by the Commission.

Appl.: Owner

William B. Bilcheck
Chairman, Planning and Zoning Commission

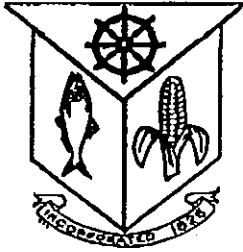
Received for Record _____, 19____

at _____ h _____ m

Signature of Town Clerk

Copy filed May 30, 1997

FRM.SEPERMIT 6/91



TOWN OF MADISON
CONNECTICUT
LAND USE OFFICE

8 CAMPUS DRIVE
MADISON, CONNECTICUT 06443-2563
(203) 245-5632
FAX (203) 245-5613

May 24, 1999

CERTIFIED MAIL

North Madison Volunteer Fire Company, Inc.
864 Opening Hill Road
Madison, CT 06443

Re: Application #99-26D: 864 OPENING HILL ROAD. Request for Modification of Special Exception Permit to allow relocation of the site for emergency generator, enlarge the fenced compound, change the style of the fence, add landscaping and permit Nextel Communications and Sprint PCS to install radio equipment shelters inside the enlarged compound.

Gentlemen:

At their regular meeting on May 20, 1999, the Planning and Zoning Commission approved the application above referenced as presented at the meeting.

Before this Modification of Special Exception Permit will become effective, it is necessary to file a Certificate in the Land Records of the Town for which there is a \$10.00 filing fee. At your earliest convenience, please forward this amount to our office so that we may file this Certificate in your behalf. Your check should be made payable to the Town of Madison.

When this Certificate is filed at the end of the appeal period, you may apply for building permits through normal Building Department procedures.

Very truly yours,

William McMinn
Planning and Zoning Administrator

: drk

Copy to: Ronald C. Clark, Nextel Communications

Exhibit B

Property card

864 OPENING HILL RD

Location 864 OPENING HILL RD

MBLU 134/ 17/ //

Acct# 00665700

Owner NORTH MADISON
VOLUNTEER FIRE COMPANY
INC

Assessment \$938,700

Appraisal \$1,341,000

PID 7027

Building Count 1

Current Value

Appraisal					
Valuation Year	Building	Extra Features	Outbuildings	Land	Total
2018	\$1,211,400	\$0	\$7,000	\$122,600	\$1,341,000

Assessment					
Valuation Year	Building	Extra Features	Outbuildings	Land	Total
2018	\$848,000	\$0	\$4,900	\$85,800	\$938,700

Parcel Addresses

Additional Addresses		
Address	City, State Zip	Type
864 OPENING HILL RD		Primary

Owner of Record

Owner NORTH MADISON VOLUNTEER FIRE COMPANY INC **Sale Price** \$0
Co-Owner **Book & Page** 44/ 130
Care Of **Sale Date**

Ownership History

Ownership History			
Owner	Sale Price	Book & Page	Sale Date
NORTH MADISON VOLUNTEER FIRE COMPANY INC	\$0	44/ 130	

Building Information

Building 1 : Section 1

Year Built: 1971
Living Area: 10,480

Building Attributes

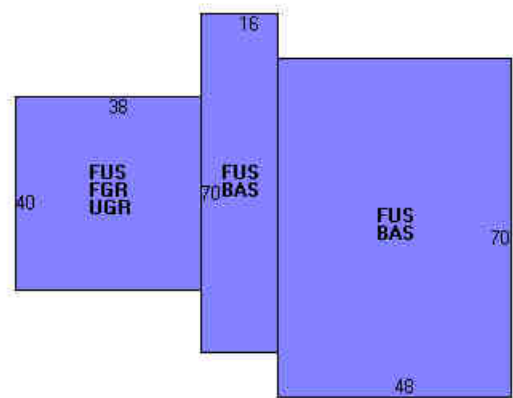
Field	Description
STYLE	Fire Station
MODEL	Commercial
Stories:	2
Exterior Wall 1	Brick Veneer
Exterior Wall 2	Vinyl Siding
Roof Structure	Gambrel
Roof Cover	Asphalt Shngl.
Interior Wall 1	Minim/Masonry
Interior Wall 2	Plywood Panel
Interior Floor 1	Concr-Finished
Interior Floor 2	Carpet
Heating Fuel	Oil
Heating Type	Hot Water
AC Type	None
Bldg Use	Municipal Fire
Total Rooms	
Total Bedrms	00
Total Baths	0
Fireplace	
Xtra Fireplaces	
Heat/AC	None
Frame Type	Masonry
Baths/Plumbing	Average
Ceiling/Wall	None
Rooms/Prtns	Average
Wall Height	10

Building Photo



(<http://images.vgsi.com/photos/MadisonCTPhotos//\01\01\63\75>)

Building Layout



(<http://images.vgsi.com/photos/MadisonCTPhotos//Sketches/702>)

Building Sub-Areas (sq ft)

Code	Description	Gross Area	Living Area
FUS	Finished Upper Story	6,000	6,000
BAS	First Floor	4,480	4,480
FGR	Garage	1,520	0
UGR	Basement Garage	1,520	0
		13,520	10,480

Extra Features

Extra Features
No Data for Extra Features

Land

Land Use

Land Line Valuation

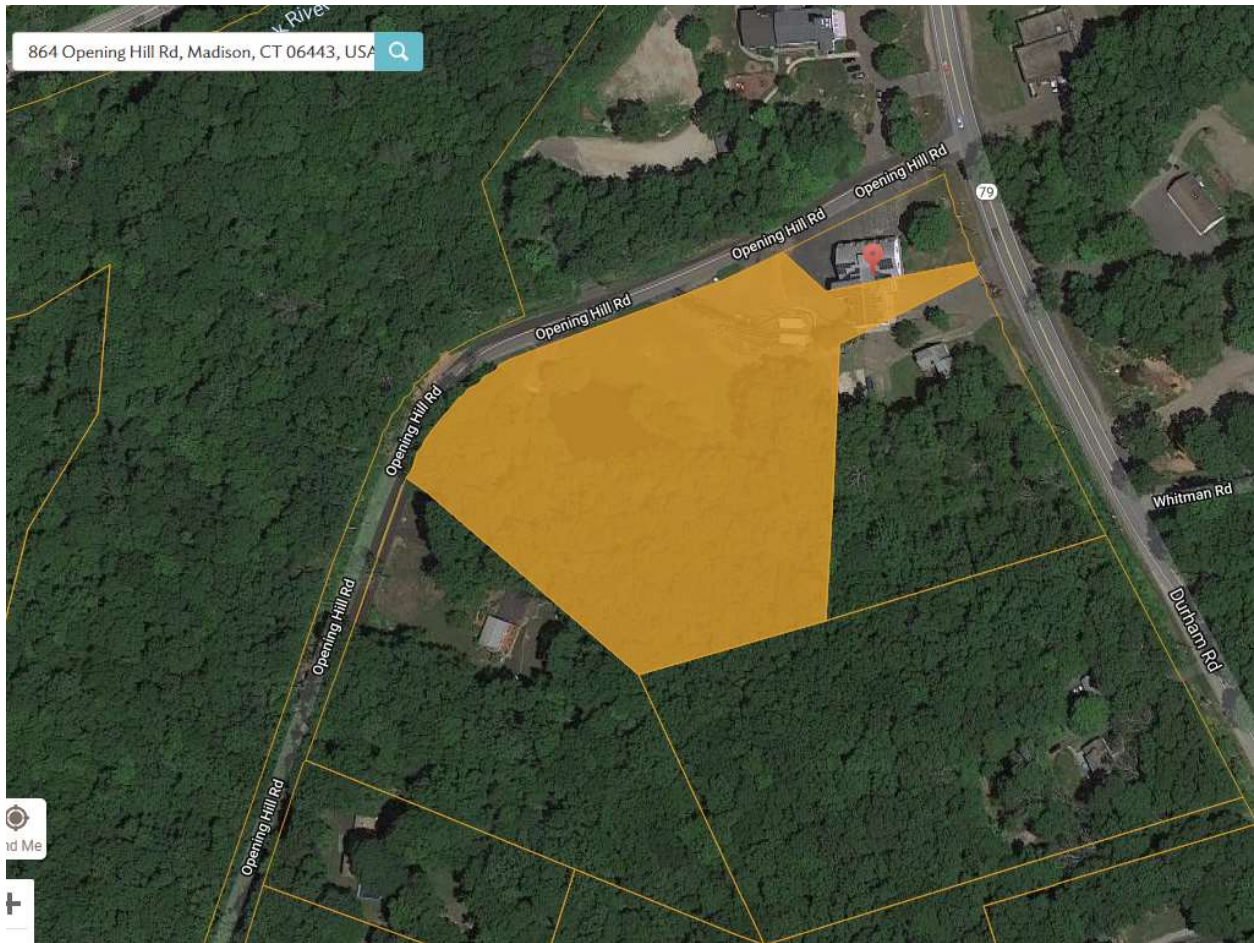
Use Code 903L
Description Municipal Fire
Zone RU-1

Size (Acres) 0.38

Outbuildings

Outbuildings						
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
PAV1	Paving Asphalt			10000 S.F.	\$7,000	1

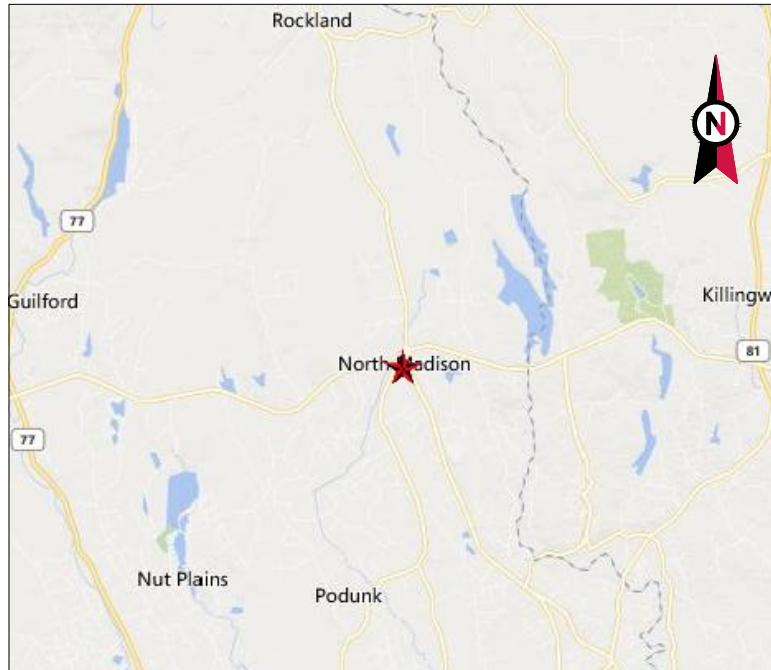
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864 Opening Hill Rd, Madison, CT 06443

Exhibit C

Construction Drawings



VICINITY MAP



AMERICAN TOWER®

ATC SITE NAME: NORTH MADISON
VOLUNTEER FD

ATC SITE NUMBER: 383660
T-MOBILE SITE ID: CT11394A
SITE ADDRESS: 864 OPENING HILL RD
MADISON, CT 06443

T-MOBILE L600 ANTENNA AMENDMENT
67D94AR CONFIGURATION



LOCATION MAP

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: P-1177

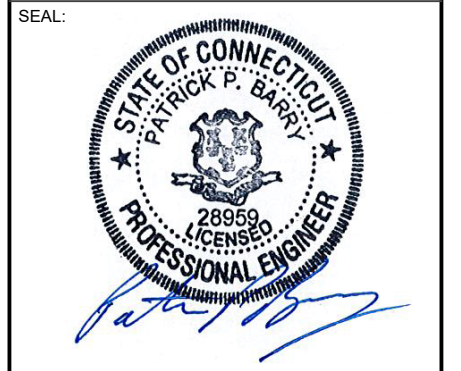
THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATION AS INSTRUMENTS OR SERVICE ARE THE EXCLUSIVE PROPERTY OF AMERICAN TOWER. THEIR USE AND PUBLICATION SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. TITLE TO THESE DOCUMENTS SHALL REMAIN THE PROPERTY OF AMERICAN TOWER WHETHER OR NOT THE PROJECT IS EXECUTED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION ON FILE WITH AMERICAN TOWER.

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	LR	07/24/19

ATC SITE NUMBER:
383660

ATC SITE NAME:
**NORTH MADISON
VOLUNTEER FD**

SITE ADDRESS:
864 OPENING HILL RD
MADISON, CT 06443



Authorized by "EOR"
Jul 24 2019 11:14 AM
T-Mobile design

DRAWN BY:	AZ
APPROVED BY:	PPB
DATE DRAWN:	07/24/19
ATC JOB NO:	12967499

TITLE SHEET

SHEET NUMBER:
G-001

REVISION:
0

COMPLIANCE CODE	PROJECT SUMMARY	PROJECT DESCRIPTION	SHEET INDEX				
<p>ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.</p> <p>1. INTERNATIONAL BUILDING CODE (IBC) 2. NATIONAL ELECTRIC CODE (NEC) 3. LOCAL BUILDING CODE 4. CITY/COUNTY ORDINANCES</p>	<p><u>SITE ADDRESS:</u> 864 OPENING HILL RD MADISON, CT 06443 COUNTY: NEW HAVEN</p> <p><u>GEOGRAPHIC COORDINATES:</u> LATITUDE: 41.35733333 LONGITUDE: -72.63877777 GROUND ELEVATION: 297' AMSL</p>	<p>THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW: <u>TOWER:</u> REMOVE (3) PANELS, (3) TTAs, AND (3) T-ARMS INSTALL (3) NEW PANELS, (6) TTAs, (3) RRUs, (1) 1-1/4" HYBRID CABLE, (3) SECTOR MOUNTS, AND (2) 1-5/8" HYBRID CABLES EXISTING (3) PANELS, AND (12) 1-5/8" COAX CABLES TO REMAIN</p> <p><u>GROUND WORK:</u> REMOVE (1) 6201 CABINET INSTALL (1) 6102 CABINET</p>	SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
	<p><u>PROJECT TEAM</u></p> <p><u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801</p> <p><u>ENGINEER:</u> ATC TOWER SERVICES, LLC 3500 REGENCY PKWY STE 100 CARY, NC 27518</p> <p><u>PROPERTY OWNER:</u> NORTH MADISON VOLUNTARY 1255 DURHAM RD MADISON, CT 06443</p>	<p><u>PROJECT NOTES</u></p> <p>1. THE FACILITY IS UNMANNED. 2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE. 3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE. 4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED. 5. HANDICAP ACCESS IS NOT REQUIRED.</p>	<p>G-001 TITLE SHEET</p> <p>G-002 GENERAL NOTES</p> <p>C-101 DETAILED SITE PLAN & TOWER ELEVATION</p> <p>C-501 ANTENNA INFORMATION & SCHEDULE</p> <p>C-502 ANTENNA DETAILS</p> <p>C-503 MOUNTING DETAILS</p> <p>E-501 GROUNDING DETAILS</p> <p>R-601 SUPPLEMENTAL</p> <p>R-602 SUPPLEMENTAL</p> <p>R-603 SUPPLEMENTAL</p> <p>R-604 SUPPLEMENTAL</p>				
<p><u>UTILITY COMPANIES</u></p> <p>POWER COMPANY: UNKNOWN PHONE: N/A</p> <p>TELEPHONE COMPANY: UNKNOWN PHONE: N/A</p>	<p><u>PROJECT LOCATION DIRECTIONS</u></p> <p>FROM MADISON, CT: FROM NEW HAVEN CT TURN LEFT TO TAKE THE I-91 RAMP TOWARD I-95. MERGE ONTO I-91 N VIA THE RAMP ON THE LEFT TOWARD HARTFORD. TAKE THE CT-80/CT-17/MIDDLETOWN AVE EXIT, EXIT 8, TOWARD NORTH BRANFORD. TURN SLIGHT RIGHT ONTO FOXON BLVD/CT-80. CONTINUE TO FOLLOW CT-80. ENTER NEXT ROUNDABOUT AND TAKE THE 1ST EXIT ONTO DURHAM RD/CT-79. TURN RIGHT ONTO OPENING HILL RD.882 OPENING HILL RD IS ON THE LEFT.</p>						



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GENERAL CONSTRUCTION NOTES:

1. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
2. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
4. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
5. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
6. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
7. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
8. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
9. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
10. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE T-MOBILE WIRELESS REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE T-MOBILE WIRELESS REP PRIOR TO PROCEEDING.
11. EACH CONTRACTOR SHALL COOPERATE WITH THE T-MOBILE WIRELESS REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
12. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE T-MOBILE WIRELESS CONSTRUCTION MANAGER.
13. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
14. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE T-MOBILE WIRELESS REP IMMEDIATELY.
15. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
16. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
17. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH LANDLORD AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
18. CONTRACTOR SHALL FURNISH T-MOBILE WIRELESS WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
19. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE WIRELESS REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.
20. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE WIRELESS REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY T-MOBILE WIRELESS MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
21. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH T-MOBILE WIRELESS SPECIFICATIONS AND REQUIREMENTS.
22. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO T-MOBILE WIRELESS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
23. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO T-MOBILE WIRELESS SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
24. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
25. CONTRACTOR SHALL NOTIFY T-MOBILE WIRELESS REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
26. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.

27. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
28. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE T-MOBILE WIRELESS REP. ANY WORK FOUND BY THE T-MOBILE WIRELESS REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
29. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS."
2. STRUCTURAL STEEL ROLLED SHAPES, PLATES AND BARS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:
 - A. ASTM A-572, GRADE 50 - ALL W SHAPES, UNLESS NOTED OR A992 OTHERWISE
 - B. ASTM A-36 - ALL OTHER ROLLED SHAPES, PLATES AND BARS UNLESS NOTED OTHERWISE.
 - C. ASTM A-500, GRADE B - HSS SECTION (SQUARE, RECTANGULAR, AND ROUND)
 - D. ASTM A-325, TYPE SC OR N - ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS
 - E. ASTM F-1554 07 - ALL ANCHOR BOLTS, UNLESS NOTED OTHERWISE
3. ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
4. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.
5. DO NOT DRILL HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
6. CONNECTIONS:
 - A. ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.
 - B. ALL WELDS SHALL BE INSPECTED VISUALLY. 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.
 - C. INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
 - D. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE BURNING/WELDING PERMITS AS REQUIRED BY LOCAL GOVERNING AUTHORITY AND IF REQUIRED SHALL HAVE FIRE DEPARTMENT DETAIL FOR ANY WELDING ACTIVITY.
 - E. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.
 - F. MINIMUM WELD SIZE TO BE 0.1875 INCH FILLET WELDS, UNLESS NOTED OTHERWISE.
 - G. PRIOR TO FIELD WELDING GALVANIZING MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING 1/2" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.



THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATION AS INSTRUMENTS OR SERVICE ARE THE EXCLUSIVE PROPERTY OF AMERICAN TOWER. THEIR USE AND PUBLICATION SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. TITLE TO THESE DOCUMENTS SHALL REMAIN THE PROPERTY OF AMERICAN TOWER WHETHER OR NOT THE PROJECT IS EXECUTED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION ON FILE WITH AMERICAN TOWER.

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	LR	07/24/19

ATC SITE NUMBER:

383660

ATC SITE NAME:

**NORTH MADISON
VOLUNTEER FD**

SITE ADDRESS:

864 OPENING HILL RD
MADISON, CT 06443

SEAL:



Authorized by "EOR"
Jul 24 2019 11:14 AM
T-Mobileesign

DRAWN BY:	AZ
APPROVED BY:	PPB
DATE DRAWN:	07/24/19
ATC JOB NO:	12967499

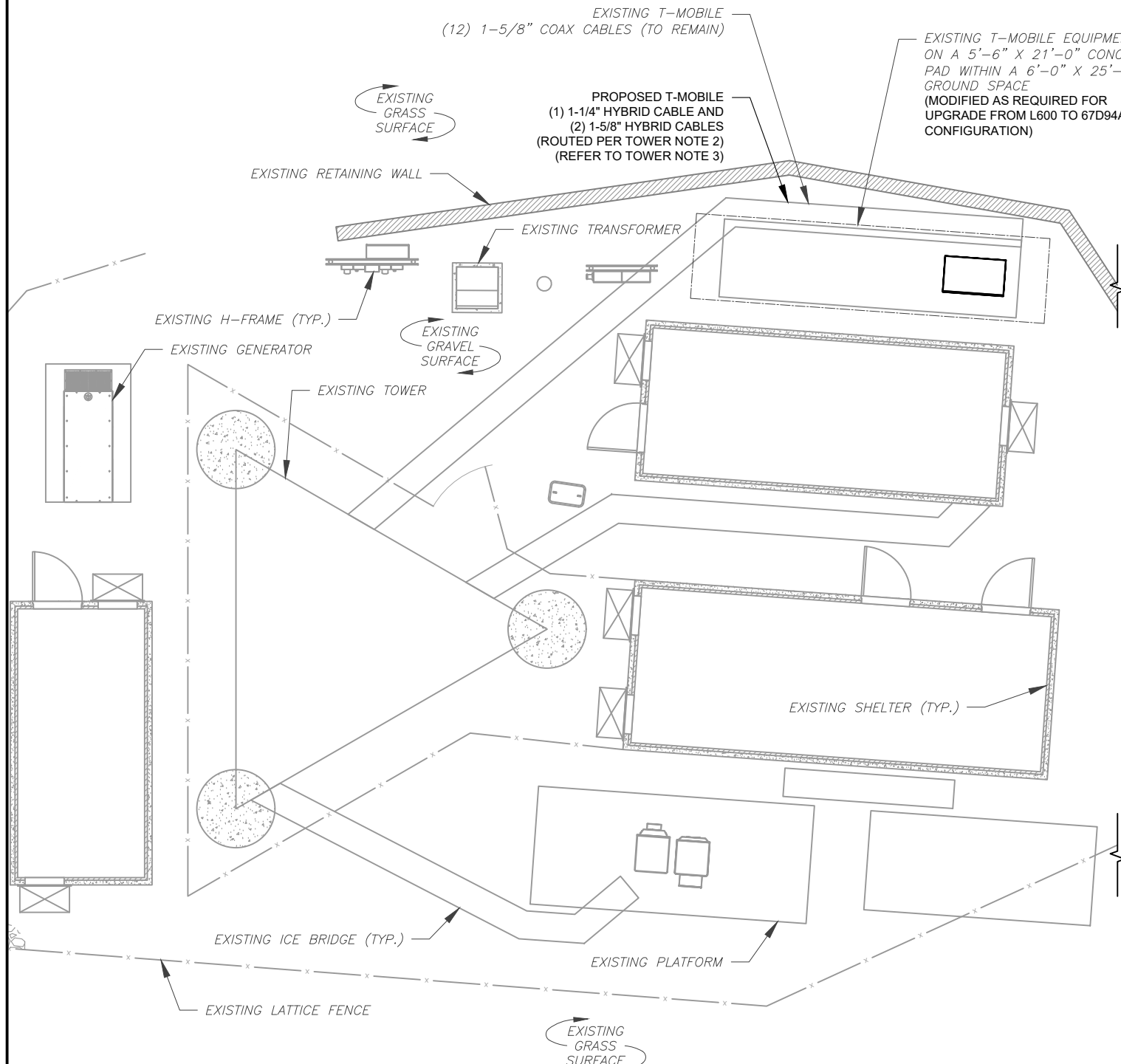
GENERAL NOTES

SHEET NUMBER:	REVISION:
G-002	0

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SITE PLAN NOTES:

1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE T-MOBILE REPRESENTATIVE AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.



1 DETAILED SITE PLAN
 SCALE: 1"=10' (11X17)
 1"=5' (22X34)



TOP OF EXISTING HIGHEST APPURTENANCE ELEV. 201.5'

TOP OF EXISTING TOWER ELEV. 180'

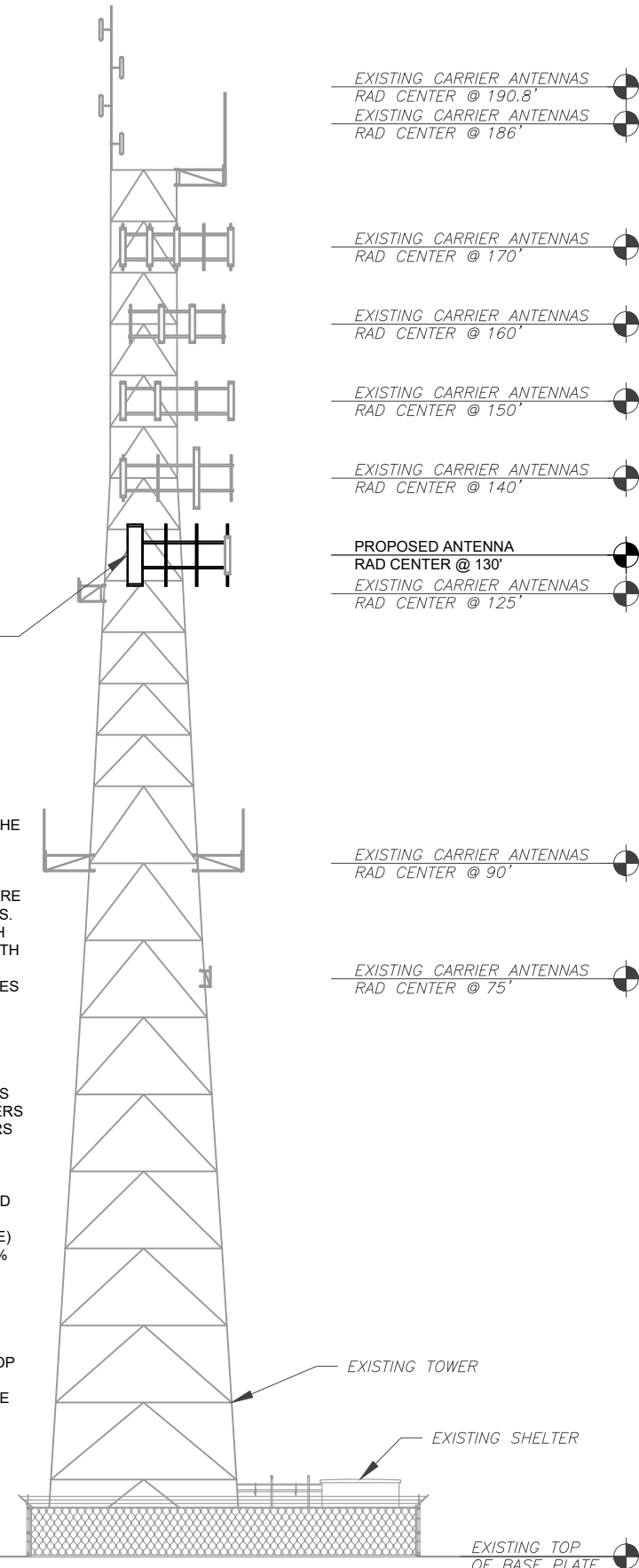
1 4
R-601 E-501

1 2
C-501 C-501

TOWER NOTE:

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE AMERICAN TOWER CONSTRUCTION MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. WHERE POSSIBLE UTILIZE EXISTING CABLE SUPPORT STRUCTURES AS PROVIDED FOR CARRIER TO ADEQUATELY SECURE CABLES. USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER. OTHERWISE, ATTACH CABLES TO HORIZONTAL OR DIAGONAL TOWER MEMBERS USING PROPOSED STAINLESS STEEL ADAPTERS (DO NOT ATTACH TO TOWER LEG).
2. ESTIMATED LENGTH OF PROPOSED CABLE IS 205'. ESTIMATED LENGTH OF CABLE IS CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES).
3. ATC DID NOT CONFIRM EXISTING SITE CONDITIONS INCLUDING, BUT NOT LIMITED TO, ANTENNA HEIGHTS, ANTENNA AZIMUTHS AND MOUNT CONFIGURATION.
4. TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)

PER MOUNT ANALYSIS COMPLETED BY CLS ENGINEERING, DATED 07-03-19, THE EXISTING MOUNT CAN NOT ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT REPLACEMENT PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT



2 TOWER ELEVATION
 SCALE: NOT TO SCALE

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A.T. ENGINEERING SERVICE, PLLC
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 SUITE 100
 CARY, NC 27518
 PHONE: (919) 468-0112
 COA: P-1177

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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	LR	07/24/19

ATC SITE NUMBER:
383660

ATC SITE NAME:
NORTH MADISON VOLUNTEER FD

SITE ADDRESS:
 864 OPENING HILL RD
 MADISON, CT 06443

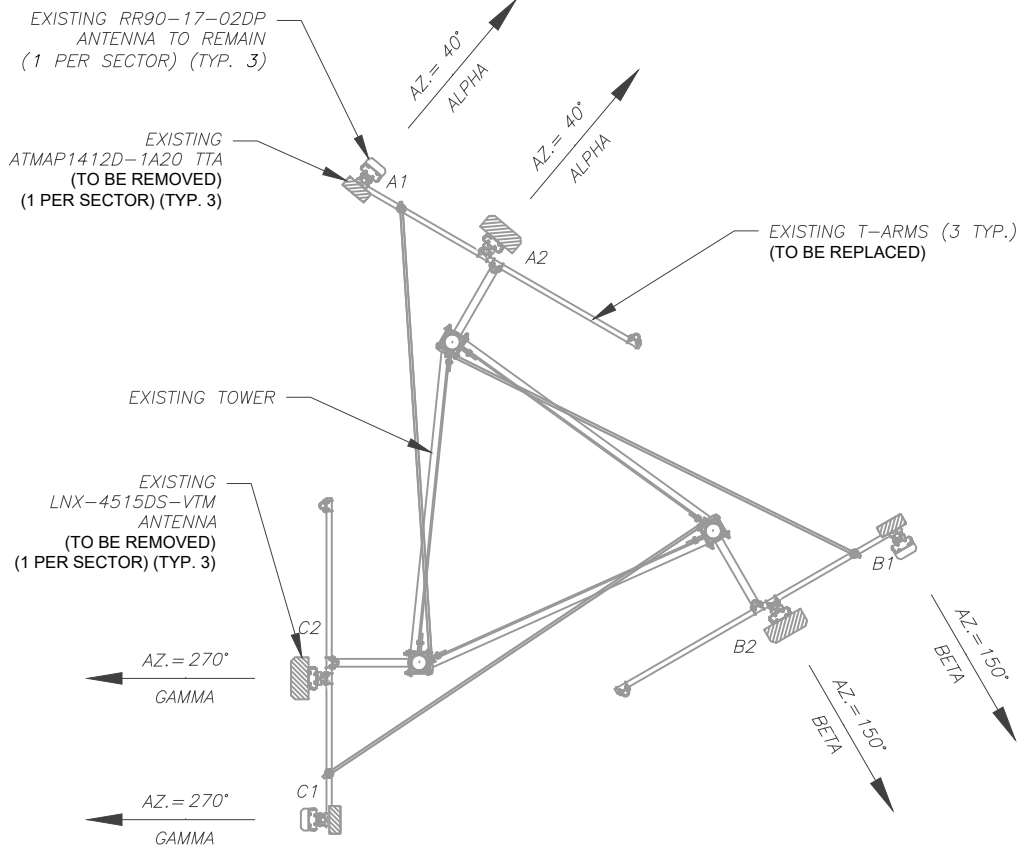
SEAL:

Authorized by "EOR"
 Jul 24 2019 11:14 AM
 T-Mobile design

DRAWN BY:	AZ
APPROVED BY:	PPB
DATE DRAWN:	07/24/19
ATC JOB NO:	12967499

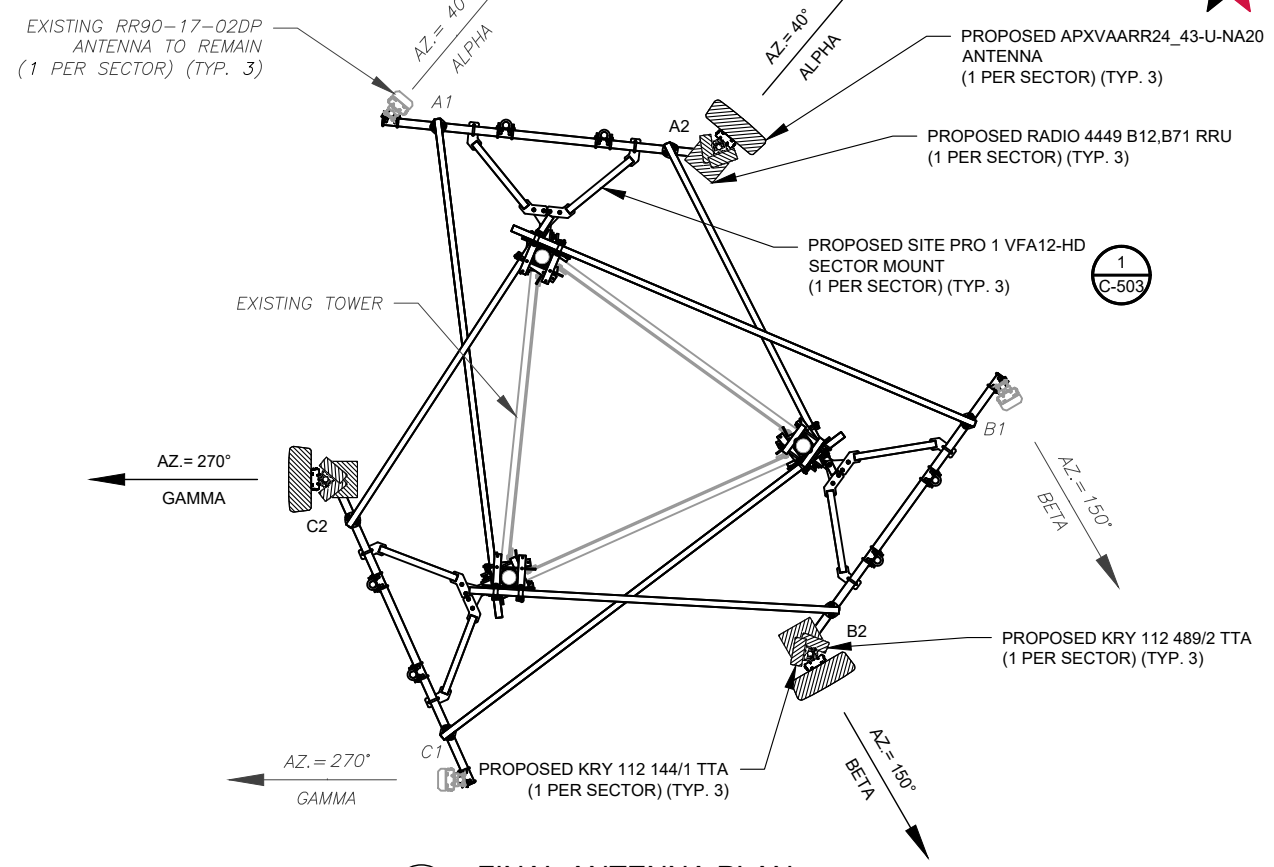
DETAILED SITE PLAN & TOWER ELEVATION	
SHEET NUMBER:	REVISION:
C-101	0

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1 EXISTING ANTENNA PLAN

PER MOUNT ANALYSIS COMPLETED BY CLS ENGINEERING, DATED 07-03-19, THE EXISTING MOUNT CAN NOT ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT REPLACEMENT PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT



2 FINAL ANTENNA PLAN

EXISTING ANTENNA / EQUIPMENT SCHEDULE

SECTOR	ANT.	MANUFACTURER (MODEL #)	RAD CENTER	AZIMUTH (TN)	MECH. D-TILT	ELEC. D-TILT	ADDITIONAL TOWER MOUNTED EQUIPMENT
ALPHA	A1	RR90-17-02DP	130'-0"	40°	0°	2°	ATMAP1412D-1A20
ALPHA	A2	LNx-4515DS-VTM	130'-0"	40°	0°	2°	-
BETA	B1	RR90-17-02DP	130'-0"	150°	0°	2°	ATMAP1412D-1A20
BETA	B2	LNx-4515DS-VTM	130'-0"	150°	0°	2°	-
GAMMA	C1	RR90-17-02DP	130'-0"	270°	0°	2°	ATMAP1412D-1A20
GAMMA	C2	LNx-4515DS-VTM	130'-0"	270°	0°	2°	-

NOTES

- BASED ON APPROVED ATC APPLICATION 12927180, DATED 04/02/19. CONFIRM WITH T-MOBILE REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
- ATC HAS NOT YET VERIFIED ANY EXISTING ANTENNA CONFIG OR MOUNT CONFIG. CONTRACTOR TO VERIFY MOUNT CONFIG HAS SUFFICIENT SPACE FOR PROPOSED LESSEE EQUIPMENT (EQUIP) (I.E. CLEARANCES, MOUNT PIPE, SUFFICIENT LENGTH, ETC.) ATC DID NOT ANALYZE ANTENNA MOUNT TO DETERMINE ADEQUATE STRUCTURAL CAPACITY FOR ANY LESSEE LOADING.
- ALL PROPOSED EQUIP INCLUDING ANTENNAS, COAX, ETC. SHALL BE MOUNTED IN ACCORDANCE WITH THE TOWER STRUCTURAL ANALYSIS ON FILE WITH ATC'S CM.
- CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.
- POSITIONS START WITH FIRST PIPE ON THE LEFT SIDE (AS VIEWED FROM BEHIND THE MOUNT).

FINAL ANTENNA / EQUIPMENT SCHEDULE

SECTOR	ANT.	MANUFACTURER (MODEL #)	RAD CENTER	AZIMUTH (TN)	MECH. D-TILT	ELEC. D-TILT	ADDITIONAL TOWER MOUNTED EQUIPMENT
ALPHA	A1	RR90-17-02DP	130'-0"	40°	0°	-	-
ALPHA	A2	APXVAARR24_43-U-NA20	130'-0"	40°	0°	2°	RADIO 4449 B12,B71 KRY 112 144/1 KRY 112 489/2
BETA	B1	RR90-17-02DP	130'-0"	150°	0°	-	-
BETA	B2	APXVAARR24_43-U-NA20	130'-0"	150°	0°	2°	RADIO 4449 B12,B71 KRY 112 144/1 KRY 112 489/2
GAMMA	C1	RR90-17-02DP	130'-0"	270°	0°	-	-
GAMMA	C2	APXVAARR24_43-U-NA20	130'-0"	270°	0°	2°	RADIO 4449 B12,B71 KRY 112 144/1 KRY 112 489/2

CURRENT FIBER DISTRIBUTION/OVP BOX		CURRENT CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
-	-	(12) 1-5/8"	-	RMN
-	-	-	-	-

STATUS ABBREVIATIONS	
RMV:	TO BE REMOVED
RMN:	TO REMAIN
REL:	TO BE RELOCATED
DSC:	TO BE DISCONNECTED & REMAIN
ADD:	TO BE ADDED

3 ANTENNA SCHEDULE

PROPOSED FIBER DISTRIBUTION/OVP BOX		PROPOSED CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
-	-	(12) 1-5/8"	-	RMN
-	-	-	(1) 1-1/4" (2) 1-5/8"	ADD

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 COA: P-1177

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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	LR	07/24/19

ATC SITE NUMBER:
383660
 ATC SITE NAME:
NORTH MADISON VOLUNTEER FD
 SITE ADDRESS:
 864 OPENING HILL RD
 MADISON, CT 06443

SEAL:

Authorized by "EOR"
 Jul 24 2019 11:14 AM
 T-Mobile design

DRAWN BY:	AZ
APPROVED BY:	PPB
DATE DRAWN:	07/24/19
ATC JOB NO:	12967499

ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:	REVISION:
C-501	0



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0	FOR CONSTRUCTION	LR	07/24/19

ATC SITE NUMBER:

383660

ATC SITE NAME:

**NORTH MADISON
VOLUNTEER FD**

SITE ADDRESS:

864 OPENING HILL RD
MADISON, CT 06443

SEAL:



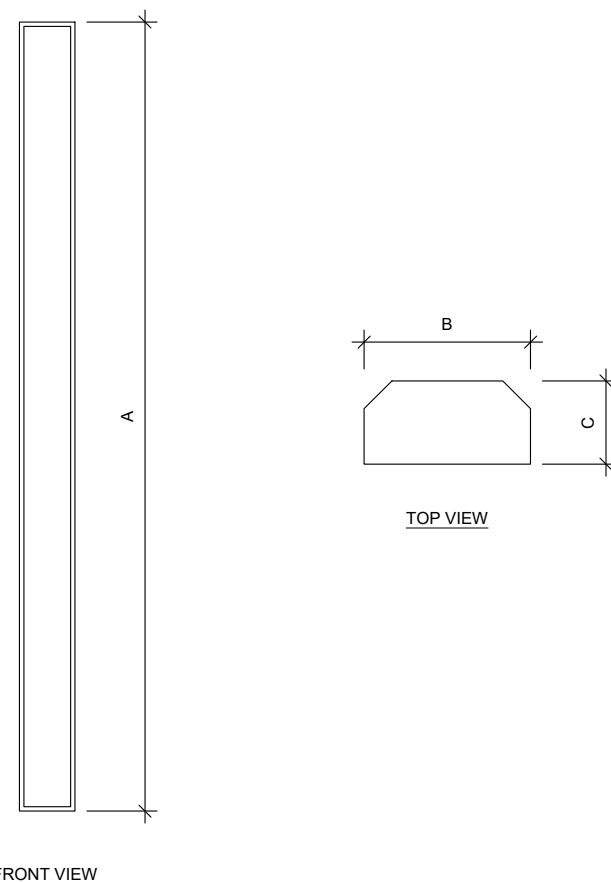
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DRAWN BY:	AZ
APPROVED BY:	PPB
DATE DRAWN:	07/24/19
ATC JOB NO:	12967499

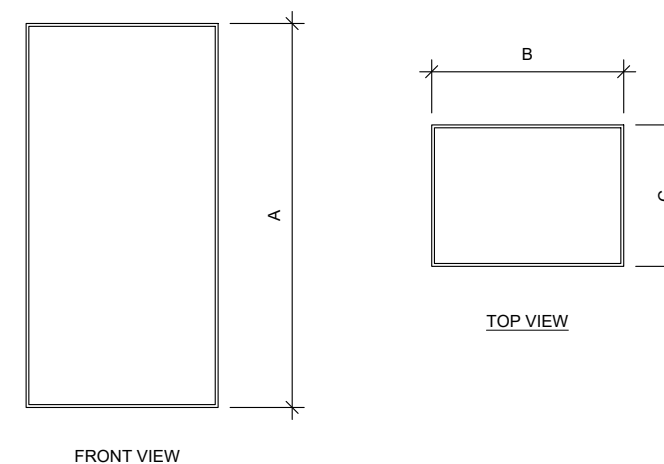
ANTENNA DETAILS

SHEET NUMBER:	REVISION:
C-502	0



1 ANTENNA SPECIFICATIONS
FOR ILLUSTRATIVE PURPOSES ONLY - NOT TO SCALE

ANTENNA SPECIFICATIONS				
ANTENNA MODEL	A	B	C	WEIGHT (LBS)
APXVAARR24_43-UNA20	95.9"	24"	8.7"	127.9



2 RRU SPECIFICATIONS
FOR ILLUSTRATIVE PURPOSES ONLY - NOT TO SCALE

RRU SPECIFICATIONS				
RRU / TTA MODEL	A	B	C	WEIGHT (LBS)
KRY 112 144/1	6.9"	6.1"	2.7"	11.0
KRY 112 489/2	11"	6.1"	3.9"	15.4
RADIO 4449 B12,B71	14.9"	13.2"	9.3"	74.0

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0	FOR CONSTRUCTION	LR	07/24/19

ATC SITE NUMBER:

383660

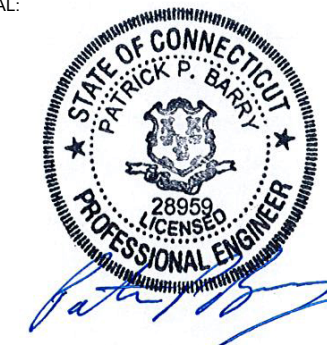
ATC SITE NAME:

**NORTH MADISON
VOLUNTEER FD**

SITE ADDRESS:

864 OPENING HILL RD
MADISON, CT 06443

SEAL:



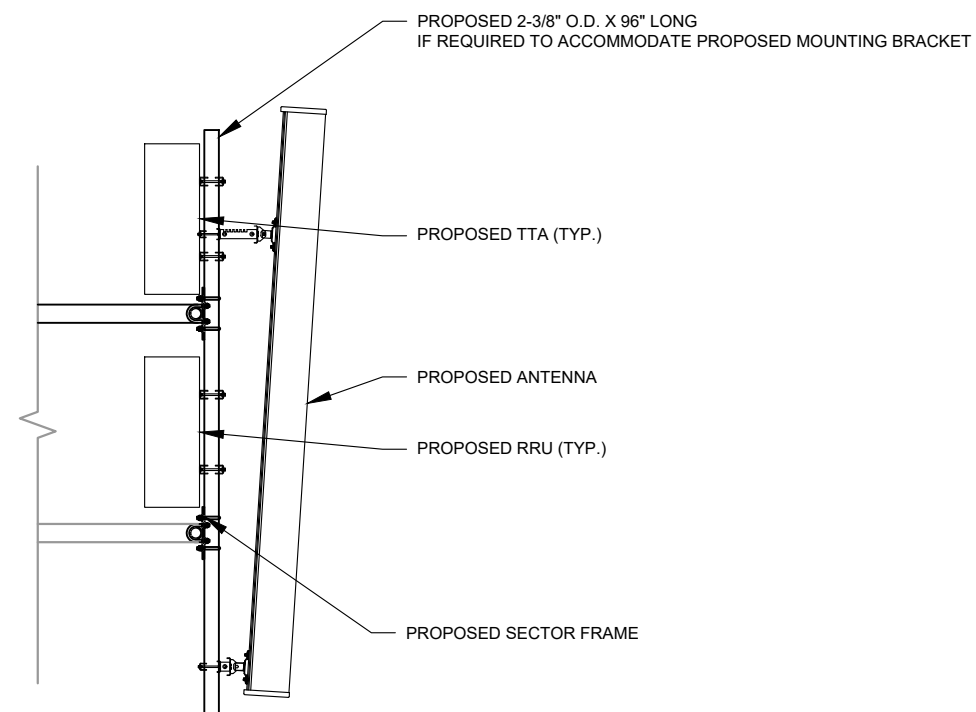
Authorized by "EOR"

Jul 24 2019 11:14 AM

DRAWN BY:	AZ
APPROVED BY:	PPB
DATE DRAWN:	07/24/19
ATC JOB NO:	12967499

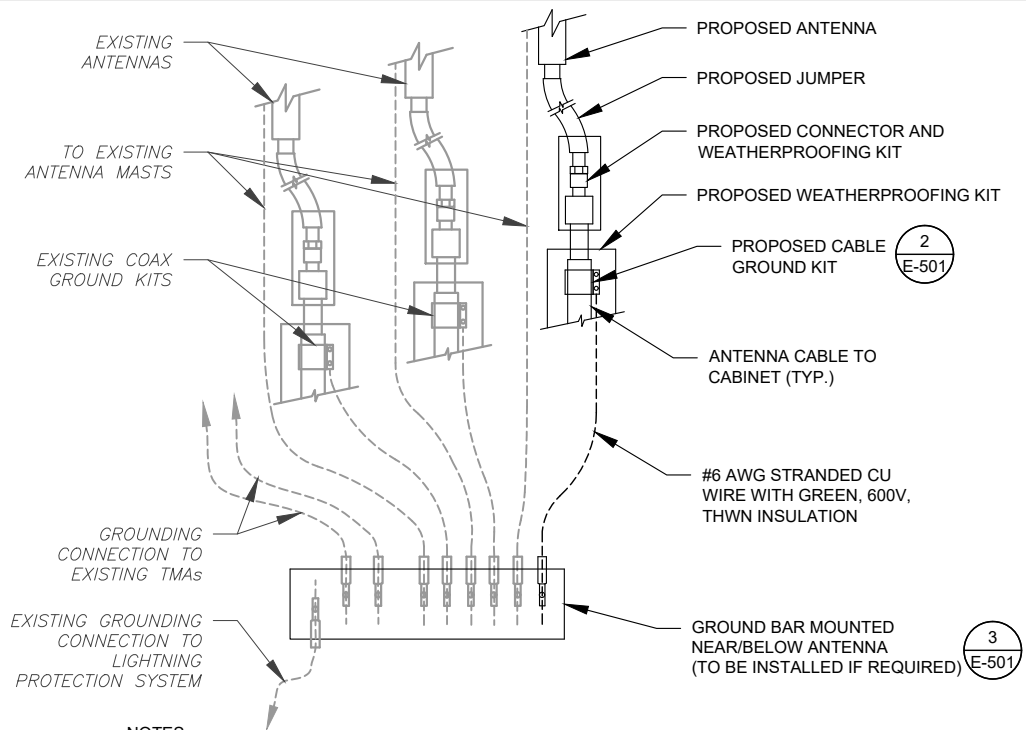
MOUNTING DETAILS

SHEET NUMBER:	REVISION:
C-503	0



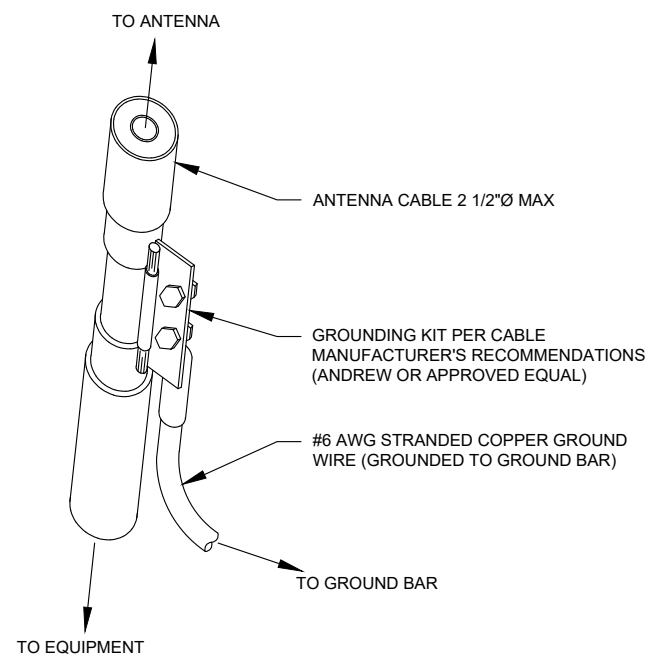
1 PROPOSED ANTENNA MOUNTING DETAIL - TYPICAL
SCALE: NOT TO SCALE

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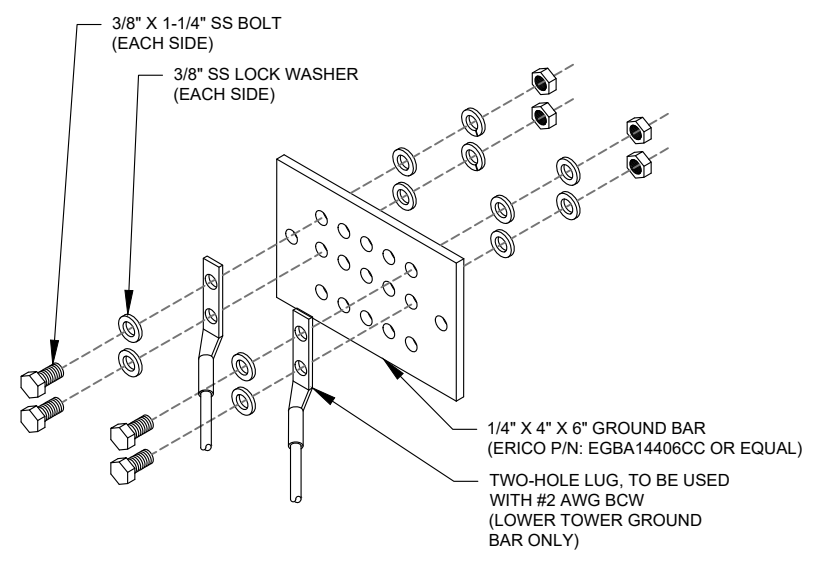
- NOTES:**
1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
 2. SITE GROUNDING SHALL COMPLY WITH T-MOBILE GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH T-MOBILE GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.

1 TYPICAL ANTENNA GROUNDING DIAGRAM
SCALE: NOT TO SCALE



- GROUND KIT NOTES:**
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
 2. CONTRACTOR SHALL PROVIDE WEATHERPROOFING KIT (ANDREW PART NUMBER 221213) AND INSTALL/TAPE PER MANUFACTURER'S SPECIFICATIONS.

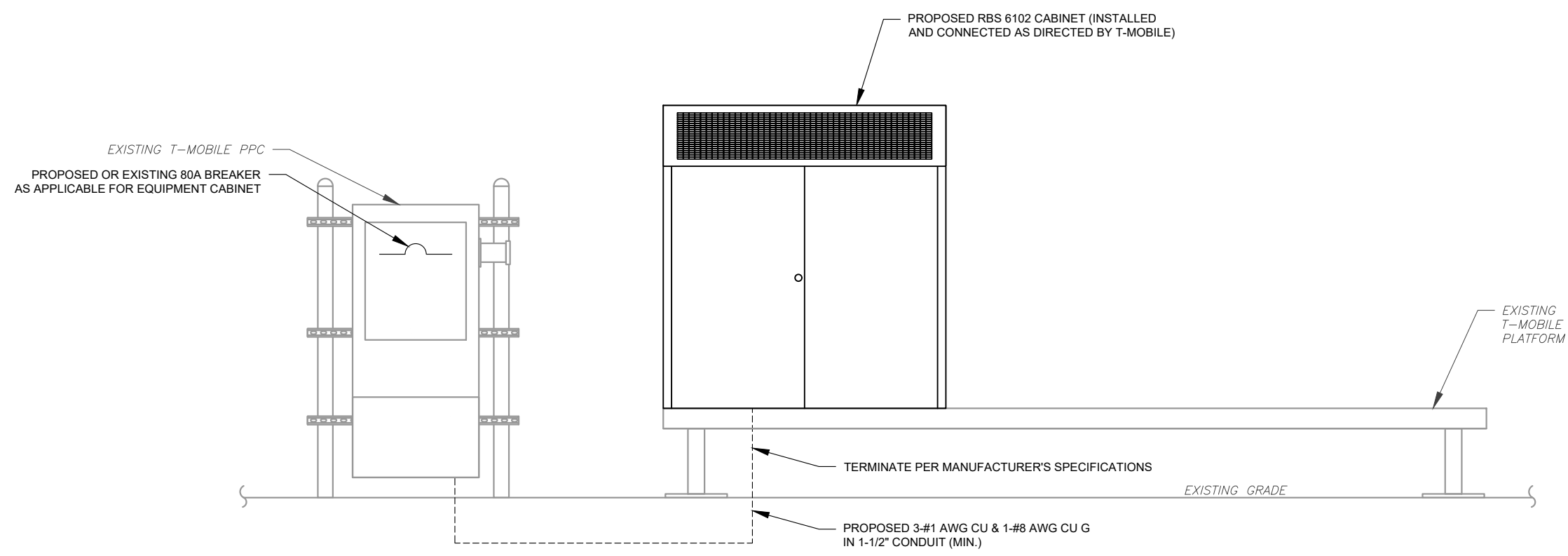
2 CABLE GROUND KIT CONNECTION DETAIL
SCALE: NOT TO SCALE



- GROUND BAR NOTES:**
1. GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
 2. GROUND BAR TO BE BONDED DIRECTLY TO TOWER.

3 TOWER GROUND BAR DETAIL
SCALE: NOT TO SCALE

- ELECTRICAL NOTES:**
1. THIS DIAGRAM REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
 2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE T-MOBILE REPRESENTATIVE AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.
 3. ATC HAS NOT YET VERIFIED ANY EXISTING T-MOBILE GROUND EQUIPMENT OR ELECTRICAL LOADING. PROPOSED WORK BASED ON INSTALLATION CONFIGURATION PROVIDED BY T-MOBILE. CONTRACTOR TO VERIFY EXISTING T-MOBILE PANEL HAS SUFFICIENT SPACE FOR PROPOSED BREAKER.



4 ELECTRICAL UPGRADE DIAGRAM
SCALE: NOT TO SCALE

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SUITE 100
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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	LR	07/24/19

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383660

ATC SITE NAME:
NORTH MADISON VOLUNTEER FD

SITE ADDRESS:
864 OPENING HILL RD
MADISON, CT 06443

SEAL:

Authorized by "EOR"
Jul 24 2019 11:14 AM
T-Mobile design

DRAWN BY:	AZ
APPROVED BY:	PPB
DATE DRAWN:	07/24/19
ATC JOB NO:	12967499

GROUNDING DETAILS	
SHEET NUMBER:	REVISION:
E-501	0

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RAN Template: 67D94AR V2 Outdoor	A&L Template: 67D94AR V2_2QP+1OP	Power System Template: Custom
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CT11394A_L600_3.1_draft

Section 5 - RAN Equipment

Existing RAN Equipment			
Template: 704G			
Enclosure	1		
Enclosure Type	RBS6201 ODE		
Baseband	<table border="1"> <tr> <td>DUG20 G1900</td> <td>DUS41 L1900 L700</td> </tr> </table>	DUG20 G1900	DUS41 L1900 L700
DUG20 G1900	DUS41 L1900 L700		
Hybrid Cable System	Ericsson 9x18 HCS *Select Length*		
Radio	<table border="1"> <tr> <td>RUS01 B12 (x 6) L700</td> <td>RUS02 B2 (x 6) L1900 G1900</td> </tr> </table>	RUS01 B12 (x 6) L700	RUS02 B2 (x 6) L1900 G1900
RUS01 B12 (x 6) L700	RUS02 B2 (x 6) L1900 G1900		

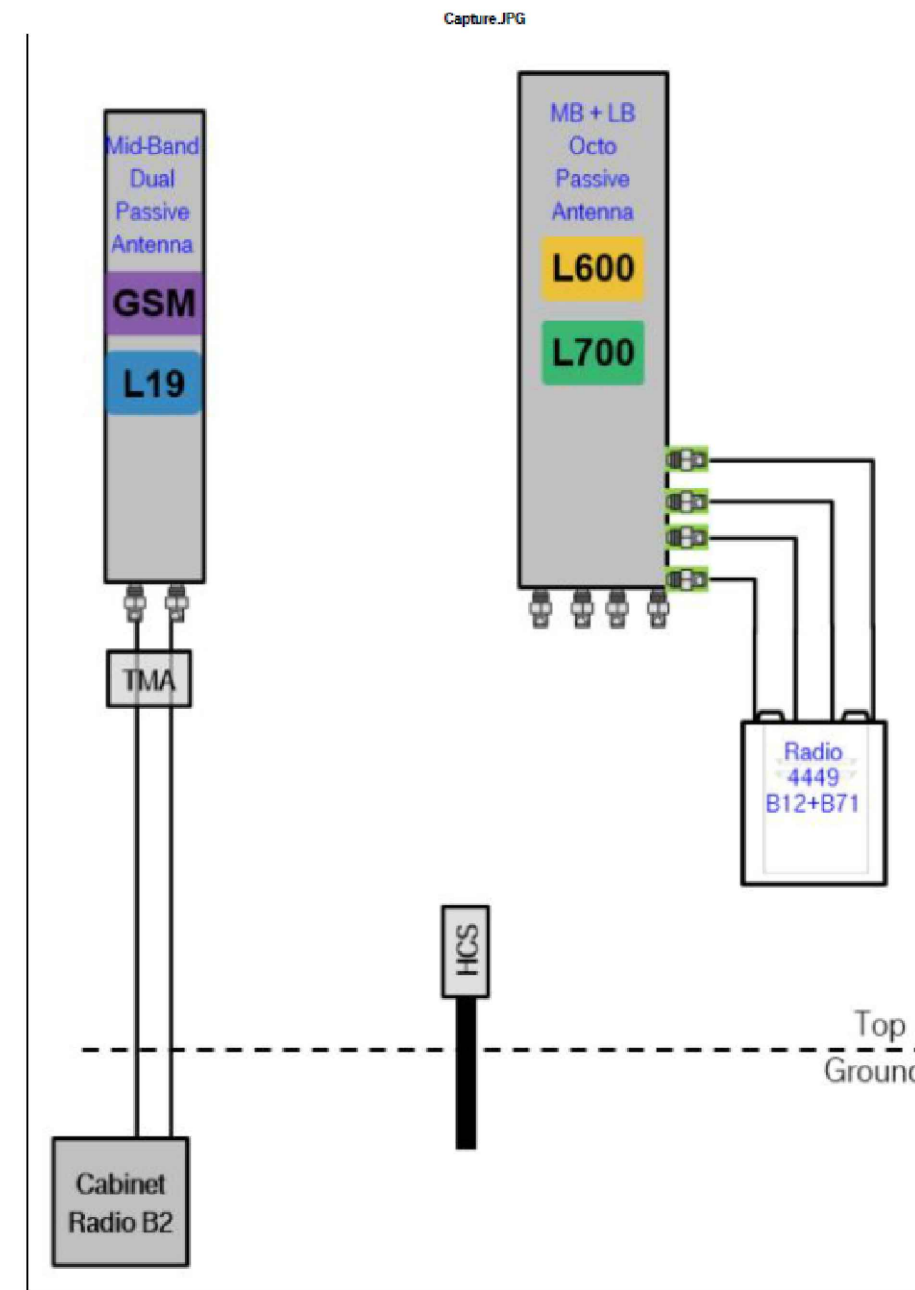
Proposed RAN Equipment				
Template: 67D94AR V2 Outdoor				
Enclosure	1			
Enclosure Type	RBS6102			
Baseband	<table border="1"> <tr> <td>DUG20 G1900</td> <td>BB 6630 L2100 L1900 L700 L600</td> <td>BB 6630 N600 (DARK)</td> </tr> </table>	DUG20 G1900	BB 6630 L2100 L1900 L700 L600	BB 6630 N600 (DARK)
DUG20 G1900	BB 6630 L2100 L1900 L700 L600	BB 6630 N600 (DARK)		
Hybrid Cable System	Ericsson 6x12 HCS *Select Length & AWG* (x 2) Ericsson 9x18 HCS *Select Length*			
Radio	<table border="1"> <tr> <td>RUS01 B4 (x 6) L2100</td> <td>RUS02 B2 (x 6) L1900 G1900</td> </tr> </table>	RUS01 B4 (x 6) L2100	RUS02 B2 (x 6) L1900 G1900	
RUS01 B4 (x 6) L2100	RUS02 B2 (x 6) L1900 G1900			

RAN Scope of Work:

Replace existing RBS6201 ODE cabinet with (1) full RBS6102.
 Replace DUS41 with (1) BB6630 for L2100, L1900, L700, and L600.
 Add (1) BB6630 for future 5G N600.
 Add (6) RUS01 B4 for L2100 .
 Add (2) 6X12 HCS.
 1 Existing 9X18 Hybrid. All 12 Coax Lines will Stay.

1 CABINET CONFIGURATION
SCALE: NOT TO SCALE

Section 3 - Proposed Template Images



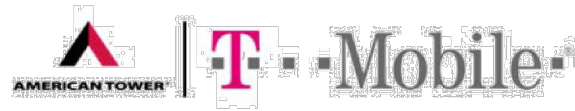
Notes:

2 ANTENNA CONFIGURATION
SCALE: NOT TO SCALE

SUPPLEMENTAL

SHEET NUMBER: R-601
REVISION: 0

NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.



**Mount Analysis of Proposed Site Pro 1 VFA12-HD Sector Frames for
American Tower on behalf of T-Mobile
383660 - North Madison Volunteer FD
Project #: 12927180
T-Mobile Site ID: CT11394A
Program: L600**

CLS Engineering PLLC Project #41124-12927180-01-MR-R1
July 3, 2019

MOUNT DESCRIPTION	Proposed Site Pro 1 VFA12-HD Sector Frames at 130 ft AGL
ANTENNA ELEVATION	Nominal Rad. Elevation of 130 ft AGL
SITE DESCRIPTION	180 ft Self-Supporting Tower
SITE ADDRESS	864 Opening Hill Road, Madison, CT 6443, New Haven County
GPS COORDINATES	41.35733333, -72.63877777
ANALYSIS STANDARD	2015 IBC / 2018 Connecticut State Building Code / TIA-222-G
LOADING CRITERIA	130 mph, V_{ult} (3-Second Gust) w/o ice & 50 mph (3-Second Gust) w/ 1" Ice

■ ANALYSIS RESULT: **Pass (Replacement)**

MEMBER USAGE	40%	Pass
--------------	-----	------

Existing mounts to be replaced; see conclusion for details.

Prepared by:
Sandeep Patel, E.I.

Reviewed and Approved by:
Tyler M. Barker, P.E.



Tyler M. Barker
CLS Engineering, PLLC
Director of Engineering
PE # 32402 Exp. 1/31/2020
COA # PEC.091833 Exp. 8/14/2019

Digitally signed by
Tyler Barker
DN: c=US,
o=Telamon
Corporation,
ou=A01437E5000016
A4525ADF80001D1
7, cn=Tyler Barker
Date: 2019.07.03
12:48:18 -0400

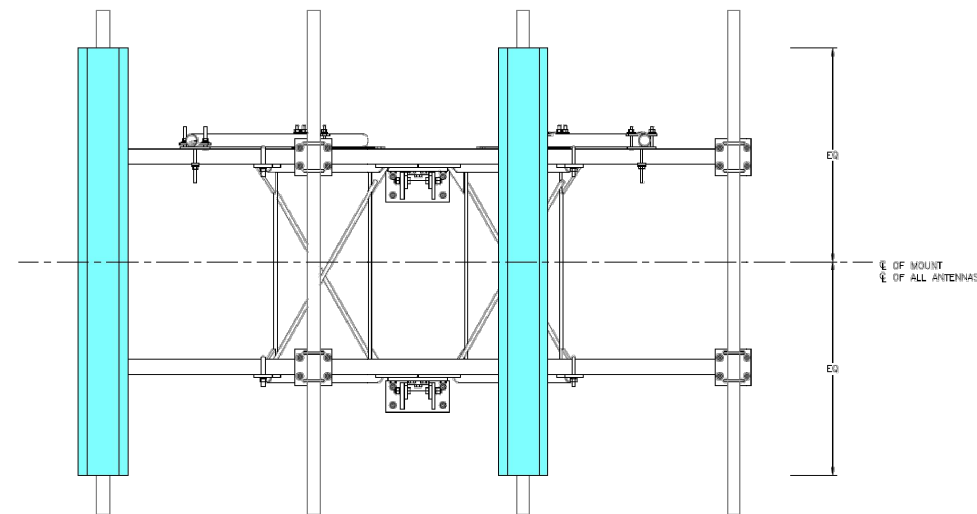
■ CONCLUSION AND RECOMMENDATIONS

According to our structural analysis, the mounts have been found to **PASS PENDING REPLACEMENT**. The mounting configuration considered in this analysis will be capable of supporting the referenced loading pursuant to referenced standards once the following scope is executed:

- Replace existing T-Frame mounts from tower face and install (3) new Site Pro 1 VFA12-HD Sector Frames directly on tower legs.
- Install (4) Site Pro 1 P30120 Mount Pipes at each sector frame mount (12 total). Connect to face horizontal members using Site Pro 1 SCX2 crossover plate kits included with VFA12-HD Sector Frames.
- Install (2) 16'-0" long Pipe 2 STD, A53 Gr. B, stiff arms in lieu of those included in the sector frame kit at each sector frame mount (6 total). Connect to nearest adjacent tower leg with connection hardware included with VFA kit. Connect to face horizontal members with proposed Site Pro 1 PUCK (6 total) as shown in the sketches.
- All mount pipes are to be installed equidistant from each other as shown in the assembly drawings.
- Install existing and proposed antennas such that they are vertically centered on the mounts. Install existing and proposed RRUS and TMAs behind the antennas.

NOTE:
MOUNT SHOWN IS REPRESENTATIVE.
ACTUAL GEOMETRY MAY DIFFER.

NOTE:
INSTALL ANTENNAS SUCH THAT THEY
ARE VERTICALLY CENTERED BETWEEN
MOUNT FACE HORIZONTALS.

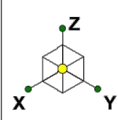


See following sketches and Site Pro 1 assembly drawings for additional details.

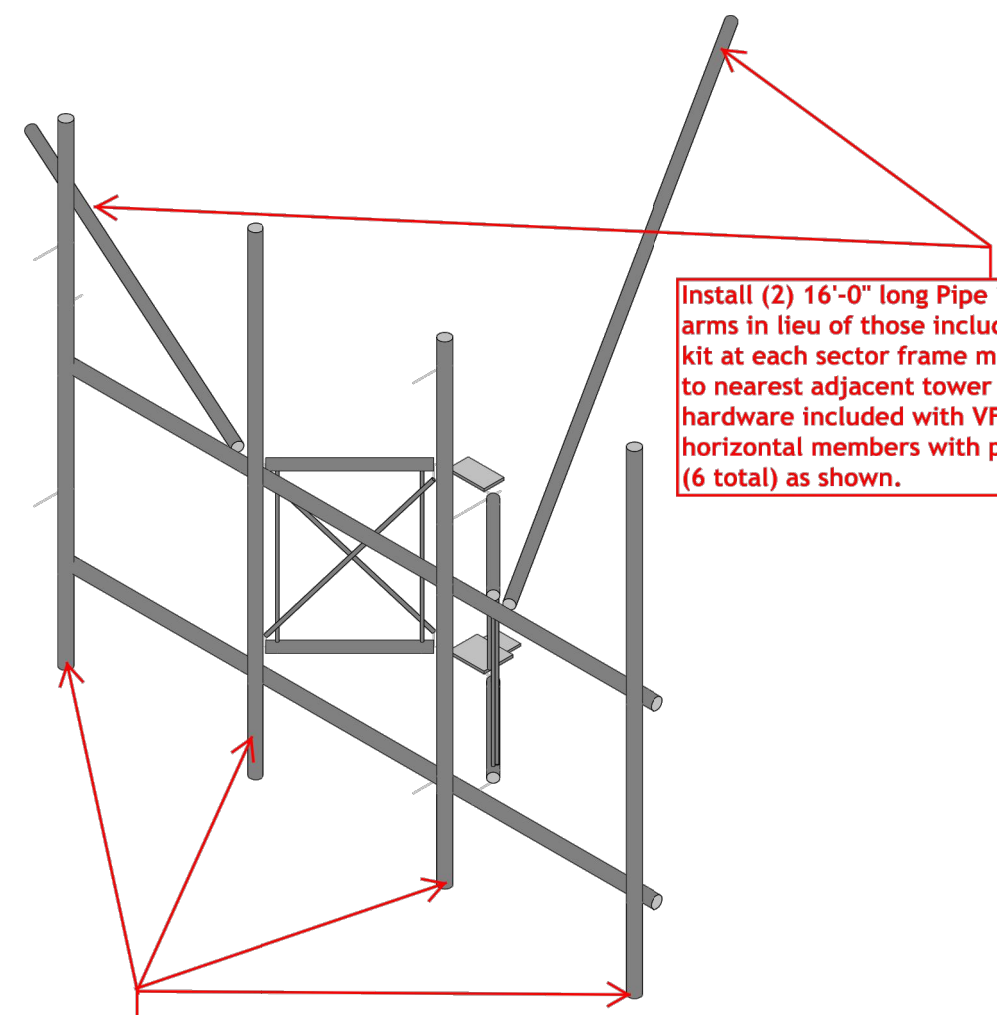
NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. PLEASE REFERENCE THE MOUNT ANALYSIS REPORT FOR COMPLETE MOUNT ANALYSIS CALCULATIONS AND DETAILS. SUPPLEMENTAL PAGES INCLUDED IN THE CONSTRUCTION DRAWINGS ARE FOR REFERENCE ONLY. GENERAL CONTRACTOR IS TO VERIFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONSTRUCTION.

SUPPLEMENTAL

SHEET NUMBER: R-602	REVISION: 0
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Replace existing T-Frame mounts from tower face and install (3) new Site Pro 1 VFA12-HD Sector Frames directly on tower legs.

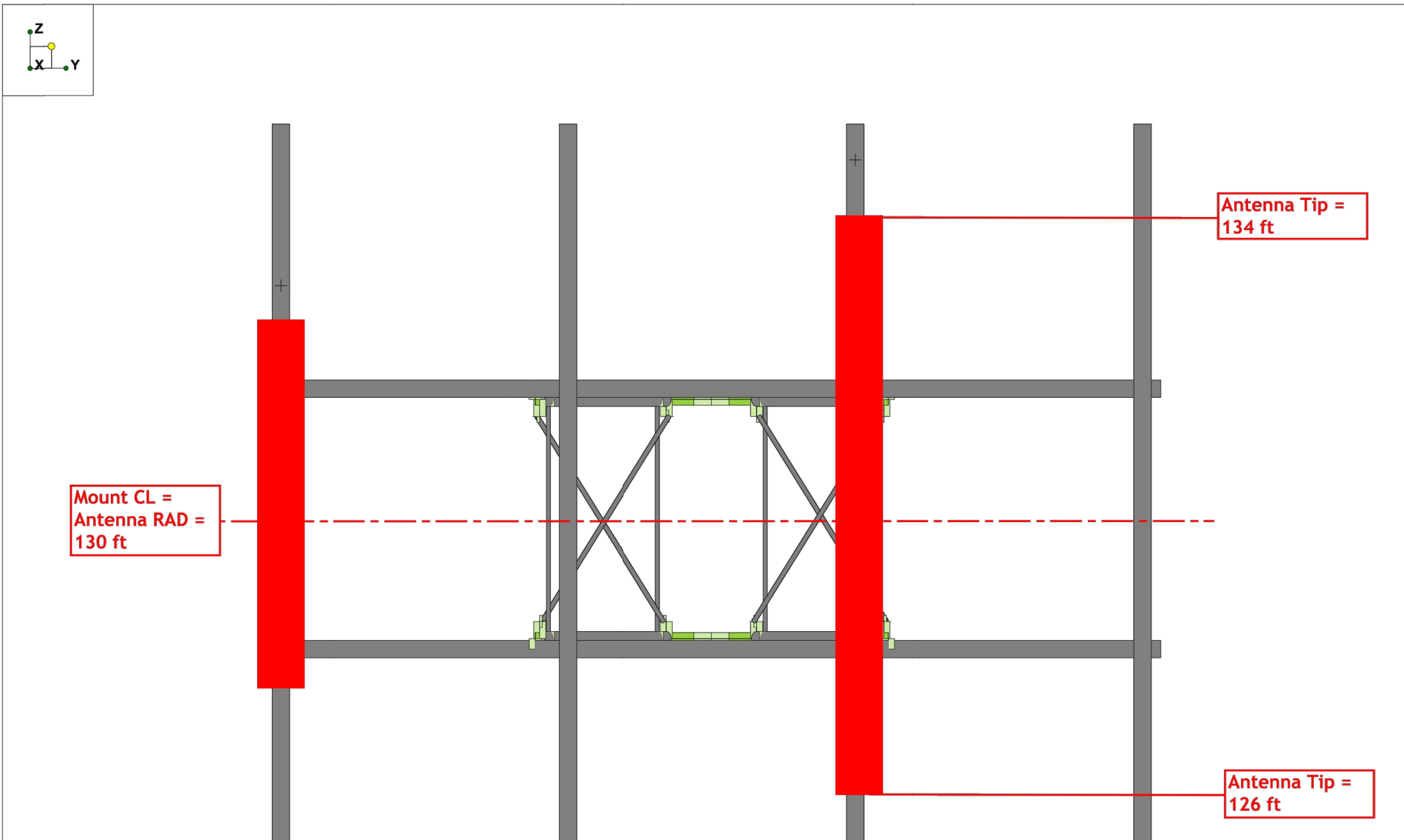


Install (2) 16'-0" long Pipe 2 STD, A53 Gr. B, stiff arms in lieu of those included in the sector frame kit at each sector frame mount (6 total). Connect to nearest adjacent tower leg with connection hardware included with VFA kit. Connect to face horizontal members with proposed Site Pro 1 PUCK (6 total) as shown.

Install (4) Site Pro 1 P30120 Mount Pipes at each sector frame mount (12 total). Connect to face horizontal members using Site Pro 1 SCX2 crossover plate kits included with VFA12-HD Sector Frames.

CLS	41124-12927180-North Madison Volunteer FD Proposed Site Pro 1 VFA12-HD Sector Frame Kit	MOD - 1
SRP		June 5, 2019 at 7:54 PM
41124-12927180-01-MR		tip.r3d

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. PLEASE REFERENCE THE MOUNT ANALYSIS REPORT FOR COMPLETE MOUNT ANALYSIS CALCULATIONS AND DETAILS. SUPPLEMENTAL PAGES INCLUDED IN THE CONSTRUCTION DRAWINGS ARE FOR REFERENCE ONLY. GENERAL CONTRACTOR IS TO VERIFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONSTRUCTION.



All mount pipes are to be installed equidistant from each other as shown in the assembly drawings. Install existing and proposed antennas such that they are vertically centered on the mounts. Install existing and proposed RRUS and TMAs behind the antennas.

CLS	41124-12927180-North Madison Volunteer FD	MOD - 2
SRP		June 5, 2019 at 7:54 PM
41124-12927180-01-MR		tip.r3d
Antenna Tip Height		

1 MOUNT ANALYSIS
SCALE: NOT TO SCALE

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. PLEASE REFERENCE THE MOUNT ANALYSIS REPORT FOR COMPLETE MOUNT ANALYSIS CALCULATIONS AND DETAILS. SUPPLEMENTAL PAGES INCLUDED IN THE CONSTRUCTION DRAWINGS ARE FOR REFERENCE ONLY. GENERAL CONTRACTOR IS TO VERIFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONSTRUCTION.

SUPPLEMENTAL

SHEET NUMBER: R-604
REVISION: 0

Exhibit D

Structural Analysis Report



AMERICAN TOWER®
CORPORATION

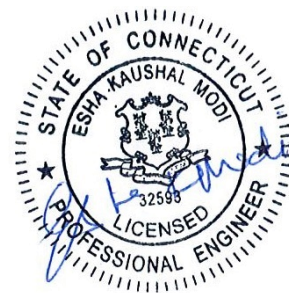
Structural Analysis Report

Structure : 180 ft Self Supported Tower
ATC Site Name : North Madison Volunteer FD, CT
ATC Site Number : 383660
Engineering Number : 12927180_C3_03
Proposed Carrier : T-Mobile
Carrier Site Name : North Madison
Carrier Site Number : CT11394A
Site Location : 864 Opening Hill Road
Madison, CT 06443
41.357300,-72.638800
County : New Haven
Date : July 18, 2019
Max Usage : 75%
Result : Pass

Prepared By:
Robert D. Barrett, E.I.
Structural Engineer II

Robert D. Barrett

Reviewed By:



Authorized by "EOR"
Jul 19 2019 2:52 PM

cosign

COA: PEC.0001553



Table of Contents

Introduction	1
Supporting Documents	1
Analysis	1
Conclusion.....	1
Existing and Reserved Equipment.....	2
Equipment to be Removed.....	3
Proposed Equipment	3
Structure Usages	4
Foundations	4
Deflection, Twist, and Sway.....	4
Standard Conditions	5
Calculations	Attached



Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 180 ft self supported tower to reflect the change in loading by T-Mobile.

Supporting Documents

Tower Drawings	Rohn Drawing #C981756, dated December 2, 1998
Foundation Drawing	Rohn Drawing #A992935-1, dated July 21, 1999
Geotechnical Report	Clarence Welti Assoc. Job #35130AE, dated June 9, 1997
Mount Analysis	CLS Engineering PLLC Project #41124-12927180-01-MR-R1, dated July 3, 2019

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	101 mph (3-Second Gust, V_{asd}) / 130 mph (3-Second Gust, V_{ult})
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Code:	ANSI/TIA-222-G / 2015 IBC / 2018 Connecticut State Building Code
Structure Class:	II
Exposure Category:	B
Topographic Category:	1
Crest Height:	0 ft
Spectral Response:	$S_s = 0.17$, $S_1 = 0.06$
Site Class:	D - Stiff Soil

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.



Existing and Reserved Equipment

Elev. ¹ (ft)	Qty	Antenna	Mount Type	Lines	Carrier
197.0	1	Generic 9' Omni	Side Arms	(1) 7/8" Coax	Other
192.0	1	Generic 15' Dipole		(1) 7/8" Coax	
190.8	2	RFS PD455		(3) 7/8" Coax	
186.0	1	4-Bay Dipole		(1) 1/2" Coax	
183.0	1	2-Bay Dipole		(1) 2" Conduit (1) 1" Conduit	
175.0	12	Generic RF-PRO-1B	Sector Frames	(6) 1 5/8" Coax	Verizon Wireless
170.0	3	Alcatel Lucent RRH ALU 4X45 AWS		(12) 1 5/8" Coax (2) 1 5/8" Hybrid (1) 1 1/4" Coax	
	3	ALU RRH2X60PCS			
	3	ALU RRH4X60LTE			
	6	Commscope SBNHH-1D65B			
	3	Commscope LNX6514DS-A1M			
	1	Andrew 8' MW Dish			
	1	Antel BXA-70063/6CF			
	2	Antel BXA-70063/4CF			
	6	RFS FD9R6004/2C-3L			
	2	RFS DB-T1-6Z-8AB-OZ			
160.0	12	Andrew DB844H90E-XY	Sector Frames	(12) 1 5/8" Coax	Sprint Nextel
154.0	6	Generic RF-PRO-1B	Sector Frames	(4) 1 1/4" Hybriflex Cable	
150.0	3	ALU 800MHz 2X50W RRH w/ Filter			
	3	ALU 1900MHz 4X45 RRH			
	3	ALU TD-RRH8X20			
	3	RFS APXVTM14-C-I20			
3	RFS APXVSP18-C-A20				
140.0	3	Ericsson RRUS 4449 B5, B12	Sector Frames	(1) 0.35" Fiber (2) 0.39" Fiber Trunk (4) 0.78" 8 AWG 6 (12) 1 1/4" Coax	AT&T Mobility
	3	Powerwave Allgon 7770.00			
	3	CCI HPA65R-BU6A			
	3	Kathrein Scala 80010965			
	3	Ericsson RRUS 8843 B2, B66A			
	6	Powerwave Allgon LGP21401			
	1	Raycap DC6-48-60-18-8F			
	1	Raycap DC6-48-60-18-8F (23.5" Height)			
130.0	1	Generic 4' Omni	Stand-Off	(1) 7/8" Coax	Other
	3	EMS RR90-17-02DP	-	(12) 1 5/8" Coax	T-Mobile
125.0	1	Sinclair SC323-HF2LDF	Side Arm	(1) 7/8" Coax	Town of Madison, CT
96.0	1	Generic 6' Dipole	Stand-Off	(3) 7/8" Coax	Other
	1	Generic 8' Grid Dish			
94.0	1	Generic 4' Omni	Side Arms	(2) 7/8" Coax	Town of Madison, CT
90.0	1	RFI FSA10-67-DIN			
	1	Sinclair SC323-HF2LDF			
75.0	1	PCTEL GPS-TMG-HR-26N	Stand-Off	(1) 1/2" Coax	Sprint Nextel
58.0	1	Generic GPS	Stand-Off	(1) 1/2" Coax	



Equipment to be Removed

Elev. ¹ (ft)	Qty	Antenna	Mount Type	Lines	Carrier
130.0	3	Commscope LNX-6515DS-VTM	T-Arms	-	T-Mobile
	3	RFS ATMAP1412D-1A20			

Proposed Equipment

Elev. ¹ (ft)	Qty	Antenna	Mount Type	Lines	Carrier
130.0	3	Ericsson KRY 112 144/1	Site Pro 1 VFA12-HD Sector Frames	(1) 1 1/4" Fiber (2) 1 5/8" Fiber	T-Mobile
	3	Ericsson KRY 112 489/2			
	3	Ericsson Radio 4449 B12,B71			
	3	RFS APXVAARR24_43-U-NA20			

¹ Contracted elevations are shown for appurtenances within contracted installation tolerances. Appurtenances outside of contract limits are shown at installed elevations.

Install proposed lines stacked on top of existing T-Mobile coax.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	54%	Pass
Diagonals	75%	Pass
Horizontals	60%	Pass
Anchor Bolts	41%	Pass
Leg Bolts	52%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Uplift (Kips)	322.7	66%
Axial (Kips)	367.3	30%
Shear (Kips)	43.9	11%

The structure base reactions resulting from this analysis were found to be acceptable through analysis based on geotechnical and foundation information, therefore no modification or reinforcement of the foundation will be required.

Deflection, Twist and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Twist (°)	Sway (Rotation) (°)
170.0	Andrew 8' MW Dish	Verizon Wireless	0.193	0.011	0.131
130.0	Ericsson KRY 112 144/1	T-Mobile	0.109	0.009	0.108
	Ericsson KRY 112 489/2				
	Ericsson Radio 4449 B12,B71				
	RFS APXVAARR24_43-U-NA20				
96.0	Generic 8' Grid Dish	Other	0.066	0.006	0.076

*Deflection, Twist and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-G



Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

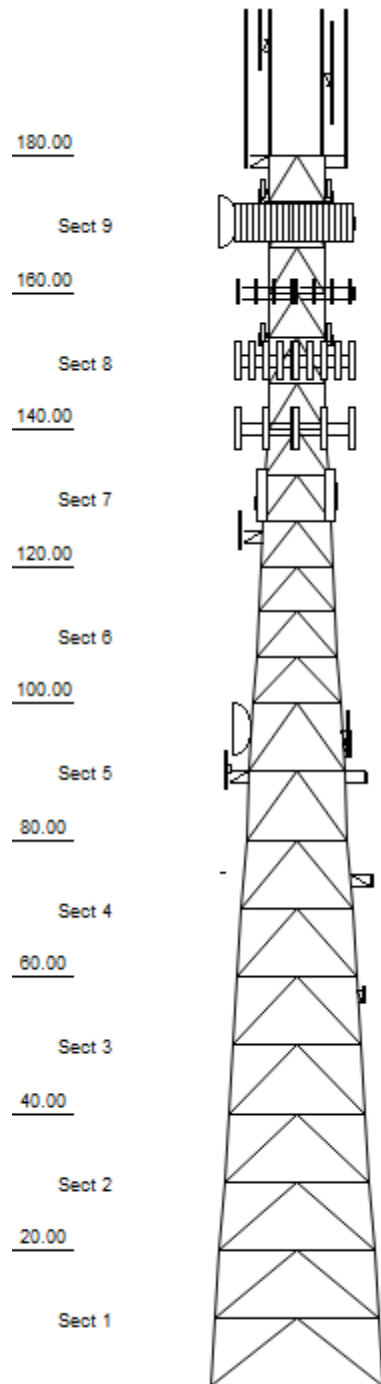
It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

All assets of American Tower Corporation, its affiliates and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

Quadrant 1



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Loads: 101 mph no ice
50 mph w/ 3/4" radial ice
Site Class: D Ss: 0.17 S1: 0.06
60 mph Serviceability

Job Information

Client : T-MOBILE
Tower : 383660 Location : North Madison Base Width : 25.33 ft
Code : ANSI/TIA-222-G Top Width : 8.54 ft
Tower Ht : 180.00 ft
Shape : Triangle

Sections Properties

Section	Leg Members	Diagonal Members	Horizontal Members
1	PX 50 ksi 10" DIA PIPE	PX 50 ksi 3-1/2" DIA PIPE	PST 50 ksi 3" DIA PIPE
2	PX 50 ksi 10" DIA PIPE	PST 50 ksi 3" DIA PIPE	PST 50 ksi 2-1/2" DIA PIPE
3	PX 50 ksi 8" DIA PIPE	PST 50 ksi 3" DIA PIPE	PST 50 ksi 2-1/2" DIA PIPE
4	PX 50 ksi 8" DIA PIPE	PST 50 ksi 3" DIA PIPE	PST 50 ksi 2" DIA PIPE
5	PSP 50 ksi ROHN 8 EHS	PST 50 ksi 3" DIA PIPE	PST 50 ksi 2" DIA PIPE
6	PSP 50 ksi ROHN 6 EHS	PST 50 ksi 2-1/2" DIA PIPE	PST 50 ksi 2" DIA PIPE
7	PSP 50 ksi ROHN 5 EH	PX 50 ksi 2" DIA PIPE	PST 50 ksi 1-1/2" DIA PIPE
8	PX 50 ksi 4" DIA PIPE	PX 50 ksi 2" DIA PIPE	PST 50 ksi 1-1/2" DIA PIPE
9	PST 50 ksi 3" DIA PIPE	PST 50 ksi 2" DIA PIPE	PST 50 ksi 1-1/2" DIA PIPE

Discrete Appurtenance

Elev (ft)	Type	Qty	Description
197.00	Whip	1	Generic 9' Omni
192.00	Whip	1	Generic 15' Dipole
180.00	Straight Arm	3	Flat Side Arm
180.00	Whip	2	RFS PD455
180.00	Whip	1	4-Bay Dipole
180.00	Whip	1	2-Bay Dipole
175.00	Panel	12	Generic RF-PRO-1B
170.00	Mounting Frame	3	Flat Light Sector Frame
170.00	Dish	1	Andrew 8' MW Dish
170.00	Panel	6	Commscope SBNHH-1D65B
170.00	Panel	1	Antel BXA-70063/6CF
170.00	Panel	3	Commscope LNX6514DS-A1M
170.00	Panel	1	RFS DB-T1-6Z-8AB-OZ
170.00	Panel	1	RFS DB-T1-6Z-8AB-OZ
170.00	Panel	2	Antel BXA-70063/4CF
170.00	Panel	3	Alcatel Lucent RRH ALU 4X45 AW
170.00	Panel	3	ALU RRH2X60PCS
170.00	Panel	3	ALU RRH4X60LTE
170.00	Panel	6	RFS FD9R6004/2C-3L
160.00	Mounting Frame	3	Flat Light Sector Frame
160.00	Panel	12	Andrew DB844H90E-XY
154.00	Panel	6	Generic RF-PRO-1B
150.00	Mounting Frame	3	Flat Light Sector Frame
150.00	Panel	3	RFS APXVSP18-C-A20
150.00	Panel	3	RFS APXVTM14-C-I20
150.00	Panel	3	ALU TD-RRH8X20
150.00	Panel	3	ALU 1900 MHz 4X45 RRH
150.00	Panel	3	ALU 800 MHz 2X50W RRH w/ Filte
140.00	Mounting Frame	3	Flat Light Sector Frame
140.00	Panel	3	Kathrein Scala 80010965
140.00	Panel	3	CCI HPA65R-BU6A
140.00	Panel	3	Powerwave Allgon 7770.00
140.00	Panel	3	Ericsson RRUS 4449 B5, B12
140.00	Panel	3	Ericsson RRUS 8843 B2, B66A
140.00	Panel	1	Raycap DC6-48-60-18-8F (23.5"
140.00	Panel	1	Raycap DC6-48-60-18-8F
140.00	Panel	6	Powerwave Allgon LGP21401
130.00	Panel	3	RFS APXVAARR24_43-U-NA20
130.00	Panel	3	EMS RR90-17-02DP
130.00	Panel	3	Ericsson Radio 4449 B12,B71
130.00	Panel	3	Ericsson KRY 112 489/2
130.00	Other	3	Pro 1 VFA12-HD Sector Frame
130.00	Panel	3	Ericsson KRY 112 144/1
130.00	Whip	1	Generic 4' Omni

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Job Information		
Client : T-MOBILE		
Tower : 383660	Location : North Madison	Base Width : 25.33 ft
Code : ANSI/TIA-222-G		Top Width : 8.54 ft
		Tower Ht : 180.00 ft
		Shape : Triangle

125.00	Straight Arm	1	Flat Side Arm
125.00	Whip	1	Sinclair SC323-HF2LDF
96.00	Dish	1	Generic 8' Grid Dish
96.00	Whip	1	Generic 6' Dipole
94.00	Whip	1	Generic 4' Omni
90.00	Straight Arm	2	Flat Side Arm
90.00	Panel	1	RFI FSA10-67-DIN
90.00	Whip	1	Sinclair SC323-HF2LDF
75.00	Straight Arm	1	Stand-Off
75.00	Panel	1	PCTEL GPS-TMG-HR-26N
58.00	Whip	1	Generic GPS

Linear Appurtenance

Elev (ft)			
From	To	Qty	Description
0.00	197.00	1	7/8" Coax
0.00	192.00	1	7/8" Coax
0.00	180.00	3	7/8" Coax
0.00	180.00	1	2" Conduit
0.00	180.00	1	1/2" Coax
0.00	180.00	1	1" Conduit
0.00	175.00	6	1 5/8" Coax
0.00	170.00	1	Waveguide
0.00	170.00	1	1 5/8" Hybrid
0.00	170.00	1	1 5/8" Hybrid
0.00	170.00	12	1 5/8" Coax
0.00	170.00	1	1 1/4" Coax
0.00	160.00	1	Waveguide
0.00	160.00	1	Waveguide
0.00	160.00	12	1 5/8" Coax
0.00	154.00	4	1 1/4" Hybriflex Cab
0.00	150.00	1	Waveguide
0.00	150.00	1	1 1/4" Hybriflex
0.00	150.00	3	1 1/4" Hybriflex
0.00	143.00	1	0.35" (9mm) Fiber
0.00	140.00	1	Waveguide
0.00	140.00	12	1 1/4" Coax
0.00	140.00	4	0.78" (19.7mm) 8 AWG
0.00	140.00	2	0.39" (10mm) Fiber T
0.00	130.00	1	Waveguide
0.00	130.00	1	7/8" Coax
0.00	130.00	12	1 5/8" Coax
0.00	130.00	2	1 5/8" (1.63"-41.3mm
0.00	130.00	1	1 1/4" (1.25"- 31.8m
0.00	125.00	1	7/8" Coax
0.00	96.00	2	7/8" Coax
0.00	94.00	1	7/8" Coax
0.00	90.00	2	7/8" Coax
0.00	75.00	1	1/2" Coax
0.00	58.00	1	1/2" Coax

Global Base Foundation Design Loads

Load Case	Moment (k-ft)	Vertical (kip)	Horizontal (kip)
DL + WL	7,502.19	75.92	71.40
DL + WL + IL	2,527.62	207.72	25.28

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Job Information		
Client : T-MOBILE		
Tower : 383660	Location : North Madison	Base Width : 25.33 ft
Code : ANSI/TIA-222-G		Top Width : 8.54 ft
		Tower Ht : 180.00 ft
		Shape : Triangle

Individual Base Foundation Design Loads		
Vertical (kip)	Uplift (kip)	Horizontal (kip)
367.26	322.70	43.88

Analysis Parameters

Location:	New Haven County, CT	Height (ft):	180
Code:	ANSI/TIA-222-G	Base Elevation (ft):	0.00
Shape:	Triangle	Bottom Face Width (ft):	25.33
Tower Manufacturer:	Rohn	Top Face Width (ft):	8.54
Tower Type:	Self Support	Anchor Bolt Detail Type	c
Kd:			
Ke:			

Ice & Wind Parameters

Structure Class:	II	Design Windspeed Without Ice:	101 mph
Exposure Category:	B	Design Windspeed With Ice:	50 mph
Topographic Category:	1	Operational Windspeed:	60 mph
Crest Height:	0 ft	Design Ice Thickness:	0.75 in

Seismic Parameters

Analysis Method:	Equivalent Modal Analysis & Equivalent Lateral Force Methods		
Site Class:	D - Stiff Soil		
Period Based on Rayleigh Method (sec):	0.69		
T _L (sec):	6	p:	1.3
S _S :	0.173	S ₁ :	0.060
F _a :	1.600	F _V :	2.400
S _{ds} :	0.185	S _{d1} :	0.096
		C _S :	0.046
		C _S , Max:	0.046
		C _S , Min:	0.030

Load Cases

1.2D + 1.6W Normal	101 mph Normal to Face with No Ice
1.2D + 1.6W 60 deg	101 mph 60 degree with No Ice
1.2D + 1.6W 90 deg	101 mph 90 degree with No Ice
1.2D + 1.6W 120 deg	101 mph 120 degree with No Ice
1.2D + 1.6W 180 deg	101 mph 180 degree with No Ice
1.2D + 1.6W 210 deg	101 mph 210 degree with No Ice
1.2D + 1.6W 240 deg	101 mph 240 degree with No Ice
1.2D + 1.6W 300 deg	101 mph 300 degree with No Ice
1.2D + 1.6W 330 deg	101 mph 330 degree with No Ice
0.9D + 1.6W Normal	101 mph Normal to Face with No Ice (Reduced DL)
0.9D + 1.6W 60 deg	101 mph 60 deg with No Ice (Reduced DL)
0.9D + 1.6W 90 deg	101 mph 90 deg with No Ice (Reduced DL)
0.9D + 1.6W 120 deg	101 mph 120 deg with No Ice (Reduced DL)
0.9D + 1.6W 180 deg	101 mph 180 deg with No Ice (Reduced DL)
0.9D + 1.6W 210 deg	101 mph 210 deg with No Ice (Reduced DL)
0.9D + 1.6W 240 deg	101 mph 240 deg with No Ice (Reduced DL)
0.9D + 1.6W 300 deg	101 mph 300 deg with No Ice (Reduced DL)
0.9D + 1.6W 330 deg	101 mph 330 deg with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi Normal	50 mph Normal with 0.75 in Radial Ice

Analysis Parameters

1.2D + 1.0Di + 1.0Wi 60 deg	50 mph 60 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 90 deg	50 mph 90 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 120 deg	50 mph 120 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 180 deg	50 mph 180 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 210 deg	50 mph 210 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 240 deg	50 mph 240 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 300 deg	50 mph 300 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 330 deg	50 mph 330 deg with 0.75 in Radial Ice
(1.2 + 0.2Sds) * DL + E Normal	Seismic Normal
(1.2 + 0.2Sds) * DL + E 60 deg	Seismic 60 deg
(1.2 + 0.2Sds) * DL + E 90 deg	Seismic 90 deg
(1.2 + 0.2Sds) * DL + E 120 deg	Seismic 120 deg
(1.2 + 0.2Sds) * DL + E 180 deg	Seismic 180 deg
(1.2 + 0.2Sds) * DL + E 210 deg	Seismic 210 deg
(1.2 + 0.2Sds) * DL + E 240 deg	Seismic 240 deg
(1.2 + 0.2Sds) * DL + E 300 deg	Seismic 300 deg
(1.2 + 0.2Sds) * DL + E 330 deg	Seismic 330 deg
(0.9 - 0.2Sds) * DL + E Normal	Seismic (Reduced DL) Normal
(0.9 - 0.2Sds) * DL + E 60 deg	Seismic (Reduced DL) 60 deg
(0.9 - 0.2Sds) * DL + E 90 deg	Seismic (Reduced DL) 90 deg
(0.9 - 0.2Sds) * DL + E 120 deg	Seismic (Reduced DL) 120 deg
(0.9 - 0.2Sds) * DL + E 180 deg	Seismic (Reduced DL) 180 deg
(0.9 - 0.2Sds) * DL + E 210 deg	Seismic (Reduced DL) 210 deg
(0.9 - 0.2Sds) * DL + E 240 deg	Seismic (Reduced DL) 240 deg
(0.9 - 0.2Sds) * DL + E 300 deg	Seismic (Reduced DL) 300 deg
(0.9 - 0.2Sds) * DL + E 330 deg	Seismic (Reduced DL) 330 deg
1.0D + 1.0W Service Normal	Serviceability - 60 mph Wind Normal
1.0D + 1.0W Service 60 deg	Serviceability - 60 mph Wind 60 deg
1.0D + 1.0W Service 90 deg	Serviceability - 60 mph Wind 90 deg
1.0D + 1.0W Service 120 deg	Serviceability - 60 mph Wind 120 deg
1.0D + 1.0W Service 180 deg	Serviceability - 60 mph Wind 180 deg
1.0D + 1.0W Service 210 deg	Serviceability - 60 mph Wind 210 deg
1.0D + 1.0W Service 240 deg	Serviceability - 60 mph Wind 240 deg
1.0D + 1.0W Service 300 deg	Serviceability - 60 mph Wind 300 deg
1.0D + 1.0W Service 330 deg	Serviceability - 60 mph Wind 330 deg

Tower Loading

Discrete Appurtenance Properties 1.2D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
197.0	Generic 9' Omni	1	25	2.7	9.0	3.0	3.0	1.00	1.00	0.0	0.0	26.63	98	30
192.0	Generic 15' Dipole	1	45	5.6	15.0	3.0	3.0	1.00	1.00	0.0	0.0	26.43	203	54
180.0	2-Bay Dipole	1	18	2.0	6.0	4.0	4.0	0.80	1.00	3.0	165.9	26.07	55	21
180.0	4-Bay Dipole	1	35	3.9	12.0	4.0	4.0	0.80	1.00	6.0	666.8	26.19	111	42
180.0	Flat Side Arm	3	150	6.3	0.0	0.0	0.0	1.00	0.67	0.0	0.0	25.95	447	540
180.0	RFS PD455	2	24	6.0	21.5	2.8	2.8	0.80	1.00	10.8	3715.0	26.38	346	58
175.0	Generic RF-PRO-1B	12	3	0.3	3.2	1.0	1.0	1.00	1.00	0.0	0.0	25.74	134	43
170.0	Alcatel Lucent RRH	3	63	2.5	2.2	11.4	5.9	0.80	0.67	0.0	0.0	25.53	138	228
170.0	ALU RRH2X60PCS	3	55	2.2	1.8	12.0	9.4	0.80	0.67	0.0	0.0	25.53	123	198
170.0	ALU RRH4X60LTE	3	53	2.1	1.8	12.0	7.2	0.80	0.67	0.0	0.0	25.53	118	191
170.0	Andrew 8' MW Dish	1	400	83.6	8.0	96.0	0.0	1.00	1.00	0.0	0.0	25.53	2904	480
170.0	Antel BXA-70063/4CF	2	10	4.7	4.0	11.2	5.2	0.80	0.77	0.0	0.0	25.53	202	24
170.0	Antel BXA-70063/6CF	1	17	7.6	5.9	11.2	5.2	0.80	0.77	0.0	0.0	25.53	162	20
170.0	Commscope	3	29	5.1	4.0	11.9	7.1	0.80	0.83	0.0	0.0	25.53	352	103
170.0	Commscope SBNHH-	6	41	8.1	6.0	11.9	7.1	0.80	0.83	0.0	0.0	25.53	1118	292
170.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.0	25.53	937	1440
170.0	RFS DB-T1-6Z-8AB-	1	44	4.8	2.0	24.0	10.0	0.80	0.67	0.0	0.0	25.53	89	53
170.0	RFS DB-T1-6Z-8AB-	1	44	4.8	2.0	24.0	10.0	0.80	0.67	0.0	0.0	25.53	89	53
170.0	RFS FD9R6004/2C-3L	6	3	0.4	0.5	6.5	1.5	0.80	0.50	0.0	0.0	25.53	31	19
160.0	Andrew DB844H90E-	12	14	3.6	4.0	8.0	4.5	0.80	0.82	0.0	0.0	25.09	970	202
160.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	25.09	1031	1440
154.0	Generic RF-PRO-1B	6	3	0.3	3.2	1.0	1.0	1.00	1.00	0.0	0.0	24.82	65	22
150.0	ALU 1900 MHz 4X45	3	60	2.3	2.1	11.1	10.7	0.80	0.67	0.0	0.0	24.63	125	216
150.0	ALU 800 MHz 2X50W	3	64	2.1	1.6	13.0	12.2	0.80	0.67	0.0	0.0	24.63	111	230
150.0	ALU TD-RRH8X20	3	66	3.7	2.1	17.5	5.7	0.80	0.67	0.0	0.0	24.63	199	238
150.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	24.63	1012	1440
150.0	RFS APXVSP18-C-	3	57	8.0	6.0	11.8	7.0	0.80	0.83	0.0	0.0	24.63	535	205
150.0	RFS APXVTM14-C-I20	3	53	6.3	4.7	12.6	6.3	0.80	0.78	0.0	0.0	24.63	398	190
140.0	CCI HPA65R-BU6A	3	42	7.9	5.9	11.7	7.6	0.80	0.70	0.0	0.0	24.15	434	151
140.0	Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.0	24.15	78	256
140.0	Ericsson RRUS 8843	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.0	24.15	65	259
140.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	24.15	992	1440
140.0	Kathrein Scala	3	98	13.8	6.6	20.0	6.9	0.80	0.62	0.0	0.0	24.15	675	351
140.0	Powerwave Allgon	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	24.15	282	126
140.0	Powerwave Allgon	6	14	1.1	1.2	9.2	2.6	0.80	0.50	3.0	261.7	24.30	87	102
140.0	Raycap DC6-48-60-	1	20	1.3	2.0	9.7	9.7	0.80	1.00	0.0	0.0	24.15	33	24
140.0	Raycap DC6-48-60-	1	20	1.3	2.0	9.7	9.7	0.80	1.00	3.0	99.9	24.30	33	24
130.0	EMS RR90-17-02DP	3	14	4.4	4.7	8.0	2.8	0.80	0.64	4.0	868.9	23.85	217	49
130.0	Ericsson KRY 112	3	11	0.3	0.6	6.1	2.7	0.80	0.50	0.0	0.0	23.64	14	40
130.0	Ericsson KRY 112	3	15	0.6	0.9	6.1	3.9	0.80	0.50	0.0	0.0	23.64	22	55
130.0	Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	23.64	63	266
130.0	Generic 4' Omni	1	10	1.0	4.0	3.0	3.0	1.00	1.00	0.0	0.0	23.64	32	12
130.0	Pro 1 VFA12-HD	3	738	19.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	23.64	1053	2657
130.0	RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	23.64	984	460
125.0	Flat Side Arm	1	150	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	23.38	200	180
125.0	Sinclair SC323-	1	6	1.1	5.6	2.0	2.0	1.00	1.00	0.0	0.0	23.38	36	7
96.00	Generic 6' Dipole	1	20	2.2	6.0	3.0	3.0	1.00	1.00	0.0	0.0	21.68	65	24
96.00	Generic 8' Grid Dish	1	282	29.9	8.0	96.0	0.0	1.00	1.00	0.0	0.0	21.68	880	338
94.00	Generic 4' Omni	1	10	1.0	4.0	3.0	3.0	1.00	1.00	0.0	0.0	21.55	29	12
90.00	Flat Side Arm	2	150	6.3	0.0	0.0	0.0	0.90	0.90	0.0	0.0	21.29	295	360
90.00	RFI FSA10-67-DIN	1	9	1.4	1.7	23.5	10.0	1.00	1.00	0.0	0.0	21.29	41	11
90.00	Sinclair SC323-	1	6	1.1	5.6	2.0	2.0	1.00	1.00	0.0	0.0	21.29	33	7
75.00	PCTEL GPS-TMG-HR-	1	1	0.2	0.4	3.2	3.2	1.00	1.00	0.0	0.0	20.21	4	1
75.00	Stand-Off	1	75	2.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	20.21	69	90

Site Number: 383660

Code: ANSI/TIA-222-G

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Site Name: North Madison Volunteer FD, CT

Engineering Number: 12927180_C3_03

7/18/2019 7:35:28 PM

Customer: T-MOBILE

Tower Loading

58.00	Generic GPS	1	10	0.9	1.0	9.0	6.0	1.00	1.00	0.0	0.0	18.77	23	12
Totals		150	12822	874.2									18840	15386

Discrete Appurtenance Properties 0.9D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
197.0	Generic 9' Omni	1	25	2.7	9.0	3.0	3.0	1.00	1.00	0.0	0.0	26.63	98	23
192.0	Generic 15' Dipole	1	45	5.6	15.0	3.0	3.0	1.00	1.00	0.0	0.0	26.43	203	41
180.0	2-Bay Dipole	1	18	2.0	6.0	4.0	4.0	0.80	1.00	3.0	165.9	26.07	55	16
180.0	4-Bay Dipole	1	35	3.9	12.0	4.0	4.0	0.80	1.00	6.0	666.8	26.19	111	32
180.0	Flat Side Arm	3	150	6.3	0.0	0.0	0.0	1.00	0.67	0.0	0.0	25.95	447	405
180.0	RFS PD455	2	24	6.0	21.5	2.8	2.8	0.80	1.00	10.8	3715.0	26.38	346	43
175.0	Generic RF-PRO-1B	12	3	0.3	3.2	1.0	1.0	1.00	1.00	0.0	0.0	25.74	134	32
170.0	Alcatel Lucent RRH	3	63	2.5	2.2	11.4	5.9	0.80	0.67	0.0	0.0	25.53	138	171
170.0	ALU RRH2X60PCS	3	55	2.2	1.8	12.0	9.4	0.80	0.67	0.0	0.0	25.53	123	149
170.0	ALU RRH4X60LTE	3	53	2.1	1.8	12.0	7.2	0.80	0.67	0.0	0.0	25.53	118	143
170.0	Andrew 8' MW Dish	1	400	83.6	8.0	96.0	0.0	1.00	1.00	0.0	0.0	25.53	2904	360
170.0	Antel BXA-70063/4CF	2	10	4.7	4.0	11.2	5.2	0.80	0.77	0.0	0.0	25.53	202	18
170.0	Antel BXA-70063/6CF	1	17	7.6	5.9	11.2	5.2	0.80	0.77	0.0	0.0	25.53	162	15
170.0	Commscope	3	29	5.1	4.0	11.9	7.1	0.80	0.83	0.0	0.0	25.53	352	77
170.0	Commscope SBNHH-	6	41	8.1	6.0	11.9	7.1	0.80	0.83	0.0	0.0	25.53	1118	219
170.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.0	25.53	937	1080
170.0	RFS DB-T1-6Z-8AB-	1	44	4.8	2.0	24.0	10.0	0.80	0.67	0.0	0.0	25.53	89	40
170.0	RFS DB-T1-6Z-8AB-	1	44	4.8	2.0	24.0	10.0	0.80	0.67	0.0	0.0	25.53	89	40
170.0	RFS FD9R6004/2C-3L	6	3	0.4	0.5	6.5	1.5	0.80	0.50	0.0	0.0	25.53	31	14
160.0	Andrew DB844H90E-	12	14	3.6	4.0	8.0	4.5	0.80	0.82	0.0	0.0	25.09	970	151
160.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	25.09	1031	1080
154.0	Generic RF-PRO-1B	6	3	0.3	3.2	1.0	1.0	1.00	1.00	0.0	0.0	24.82	65	16
150.0	ALU 1900 MHz 4X45	3	60	2.3	2.1	11.1	10.7	0.80	0.67	0.0	0.0	24.63	125	162
150.0	ALU 800 MHz 2X50W	3	64	2.1	1.6	13.0	12.2	0.80	0.67	0.0	0.0	24.63	111	173
150.0	ALU TD-RRH8X20	3	66	3.7	2.1	17.5	5.7	0.80	0.67	0.0	0.0	24.63	199	178
150.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	24.63	1012	1080
150.0	RFS APXVSP18-C-	3	57	8.0	6.0	11.8	7.0	0.80	0.83	0.0	0.0	24.63	535	154
150.0	RFS APXVTM14-C-I20	3	53	6.3	4.7	12.6	6.3	0.80	0.78	0.0	0.0	24.63	398	143
140.0	CCI HPA65R-BU6A	3	42	7.9	5.9	11.7	7.6	0.80	0.70	0.0	0.0	24.15	434	113
140.0	Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.0	24.15	78	192
140.0	Ericsson RRUS 8843	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.0	24.15	65	194
140.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	24.15	992	1080
140.0	Kathrein Scala	3	98	13.8	6.6	20.0	6.9	0.80	0.62	0.0	0.0	24.15	675	264
140.0	Powerwave Allgon	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	24.15	282	95
140.0	Powerwave Allgon	6	14	1.1	1.2	9.2	2.6	0.80	0.50	3.0	261.7	24.30	87	76
140.0	Raycap DC6-48-60-	1	20	1.3	2.0	9.7	9.7	0.80	1.00	0.0	0.0	24.15	33	18
140.0	Raycap DC6-48-60-	1	20	1.3	2.0	9.7	9.7	0.80	1.00	3.0	99.9	24.30	33	18
130.0	EMS RR90-17-02DP	3	14	4.4	4.7	8.0	2.8	0.80	0.64	4.0	868.9	23.85	217	36
130.0	Ericsson KRY 112	3	11	0.3	0.6	6.1	2.7	0.80	0.50	0.0	0.0	23.64	14	30
130.0	Ericsson KRY 112	3	15	0.6	0.9	6.1	3.9	0.80	0.50	0.0	0.0	23.64	22	42
130.0	Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	23.64	63	200
130.0	Generic 4' Omni	1	10	1.0	4.0	3.0	3.0	1.00	1.00	0.0	0.0	23.64	32	9
130.0	Pro 1 VFA12-HD	3	738	19.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	23.64	1053	1993
130.0	RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	23.64	984	345
125.0	Flat Side Arm	1	150	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	23.38	200	135
125.0	Sinclair SC323-	1	6	1.1	5.6	2.0	2.0	1.00	1.00	0.0	0.0	23.38	36	6
96.00	Generic 6' Dipole	1	20	2.2	6.0	3.0	3.0	1.00	1.00	0.0	0.0	21.68	65	18
96.00	Generic 8' Grid Dish	1	282	29.9	8.0	96.0	0.0	1.00	1.00	0.0	0.0	21.68	880	254
94.00	Generic 4' Omni	1	10	1.0	4.0	3.0	3.0	1.00	1.00	0.0	0.0	21.55	29	9

Site Number: 383660

Code: ANSI/TIA-222-G

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Site Name: North Madison Volunteer FD, CT

Engineering Number: 12927180_C3_03

7/18/2019 7:35:28 PM

Customer: T-MOBILE

Tower Loading

90.00	Flat Side Arm	2	150	6.3	0.0	0.0	0.0	0.90	0.90	0.0	0.0	21.29	295	270
90.00	RFI FSA10-67-DIN	1	9	1.4	1.7	23.5	10.0	1.00	1.00	0.0	0.0	21.29	41	8
90.00	Sinclair SC323-	1	6	1.1	5.6	2.0	2.0	1.00	1.00	0.0	0.0	21.29	33	6
75.00	PCTEL GPS-TMG-HR-	1	1	0.2	0.4	3.2	3.2	1.00	1.00	0.0	0.0	20.21	4	1
75.00	Stand-Off	1	75	2.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	20.21	69	68
58.00	Generic GPS	1	10	0.9	1.0	9.0	6.0	1.00	1.00	0.0	0.0	18.77	23	9
Totals		150	12822	874.2									18840	11540

Discrete Appurtenance Properties 1.2D + 1.0Di + 1.0Wi

Elevation (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
197.0	Generic 9' Omni	1	94	6.0	9.0	3.0	3.0	1.00	1.00	0.0	0.0	6.53	33	99
192.0	Generic 15' Dipole	1	214	14.7	15.0	3.0	3.0	1.00	1.00	0.0	0.0	6.48	81	223
180.0	2-Bay Dipole	1	71	4.6	6.0	4.0	4.0	0.80	1.00	3.0	60.1	6.39	20	74
180.0	4-Bay Dipole	1	142	9.2	12.0	4.0	4.0	0.80	1.00	6.0	241.6	6.42	40	149
180.0	Flat Side Arm	3	224	8.8	0.0	0.0	0.0	1.00	0.67	0.0	0.0	6.36	96	763
180.0	RFS PD455	2	299	13.8	21.5	2.8	2.8	0.80	1.00	10.8	1304.9	6.47	121	607
175.0	Generic RF-PRO-1B	12	14	1.3	3.2	1.0	1.0	1.00	1.00	0.0	0.0	6.31	82	171
170.0	Alcatel Lucent RRH	3	141	3.2	2.2	11.4	5.9	0.80	0.67	0.0	0.0	6.26	27	462
170.0	ALU RRH2X60PCS	3	127	3.2	1.8	12.0	9.4	0.80	0.67	0.0	0.0	6.26	28	414
170.0	ALU RRH4X60LTE	3	127	2.8	1.8	12.0	7.2	0.80	0.67	0.0	0.0	6.26	24	414
170.0	Andrew 8' MW Dish	1	1396	89.8	8.0	96.0	0.0	1.00	1.00	0.0	0.0	6.26	478	1476
170.0	Antel BXA-70063/4CF	2	133	5.7	4.0	11.2	5.2	0.80	0.77	0.0	0.0	6.26	37	270
170.0	Antel BXA-70063/6CF	1	194	8.8	5.9	11.2	5.2	0.80	0.77	0.0	0.0	6.26	29	197
170.0	Commscope	3	173	6.1	4.0	11.9	7.1	0.80	0.83	0.0	0.0	6.26	65	535
170.0	Commscope SBNHH-	6	245	9.4	6.0	11.9	7.1	0.80	0.83	0.0	0.0	6.26	199	1520
170.0	Flat Light Sector	3	705	33.2	0.0	0.0	0.0	0.75	0.67	0.0	0.0	6.26	266	2356
170.0	RFS DB-T1-6Z-8AB-	1	190	5.7	2.0	24.0	10.0	0.80	0.67	0.0	0.0	6.26	16	199
170.0	RFS DB-T1-6Z-8AB-	1	190	5.7	2.0	24.0	10.0	0.80	0.67	0.0	0.0	6.26	16	199
170.0	RFS FD9R6004/2C-3L	6	16	0.6	0.5	6.5	1.5	0.80	0.50	0.0	0.0	6.26	7	99
160.0	Andrew DB844H90E-	12	111	4.5	4.0	8.0	4.5	0.80	0.82	0.0	0.0	6.15	185	1368
160.0	Flat Light Sector	3	702	33.0	0.0	0.0	0.0	0.75	0.75	0.0	0.0	6.15	291	2345
154.0	Generic RF-PRO-1B	6	13	1.3	3.2	1.0	1.0	1.00	1.00	0.0	0.0	6.08	39	85
150.0	ALU 1900 MHz 4X45	3	155	3.0	2.1	11.1	10.7	0.80	0.67	0.0	0.0	6.04	25	502
150.0	ALU 800 MHz 2X50W	3	155	2.7	1.6	13.0	12.2	0.80	0.67	0.0	0.0	6.04	22	503
150.0	ALU TD-RRH8X20	3	156	4.9	2.1	17.5	5.7	0.80	0.67	0.0	0.0	6.04	40	506
150.0	Flat Light Sector	3	702	33.0	0.0	0.0	0.0	0.75	0.75	0.0	0.0	6.04	286	2345
150.0	RFS APXVSP18-C-	3	257	9.3	6.0	11.8	7.0	0.80	0.83	0.0	0.0	6.04	95	804
150.0	RFS APXVTM14-C-I20	3	191	8.5	4.7	12.6	6.3	0.80	0.78	0.0	0.0	6.04	82	604
140.0	CCI HPA65R-BU6A	3	215	10.6	5.9	11.7	7.6	0.80	0.70	0.0	0.0	5.92	89	670
140.0	Ericsson RRUS 4449	3	135	2.9	1.5	13.2	9.4	0.80	0.50	0.0	0.0	5.92	17	447
140.0	Ericsson RRUS 8843	3	133	2.5	1.2	13.2	10.9	0.80	0.50	0.0	0.0	5.92	15	441
140.0	Flat Light Sector	3	697	32.8	0.0	0.0	0.0	0.75	0.75	0.0	0.0	5.92	278	2332
140.0	Kathrein Scala	3	361	16.8	6.6	20.0	6.9	0.80	0.62	0.0	0.0	5.92	126	1141
140.0	Powerwave Allgon	3	168	6.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	5.92	51	524
140.0	Powerwave Allgon	6	39	1.8	1.2	9.2	2.6	0.80	0.50	3.0	65.7	5.95	22	249
140.0	Raycap DC6-48-60-	1	72	1.9	2.0	9.7	9.7	0.80	1.00	0.0	0.0	5.92	8	76
140.0	Raycap DC6-48-60-	1	72	1.9	2.0	9.7	9.7	0.80	1.00	3.0	23.2	5.95	8	76
130.0	EMS RR90-17-02DP	3	110	5.3	4.7	8.0	2.8	0.80	0.64	4.0	162.7	5.84	41	339
130.0	Ericsson KRY 112	3	22	0.7	0.6	6.1	2.7	0.80	0.50	0.0	0.0	5.79	4	71
130.0	Ericsson KRY 112	3	33	1.1	0.9	6.1	3.9	0.80	0.50	0.0	0.0	5.79	6	108
130.0	Ericsson Radio 4449	3	129	2.5	1.2	13.2	9.3	0.80	0.50	0.0	0.0	5.79	15	432
130.0	Generic 4' Omni	1	41	1.9	4.0	3.0	3.0	1.00	1.00	0.0	0.0	5.79	9	43
130.0	Pro 1 VFA12-HD	3	1246	32.8	0.0	0.0	0.0	0.75	0.75	0.0	0.0	5.79	272	4180
130.0	RFS	3	516	23.9	8.0	24.0	8.7	0.80	0.63	0.0	0.0	5.79	178	1624

Tower Loading

125.0	Flat Side Arm	1	222	8.7	0.0	0.0	0.0	1.00	1.00	0.0	0.0	5.73	43	252
125.0	Sinclair SC323-	1	66	2.5	5.6	2.0	2.0	1.00	1.00	0.0	0.0	5.73	12	67
96.00	Generic 6' Dipole	1	84	4.8	6.0	3.0	3.0	1.00	1.00	0.0	0.0	5.31	22	88
96.00	Generic 8' Grid Dish	1	1156	214.1	8.0	96.0	0.0	1.00	1.00	0.0	0.0	5.31	967	1212
94.00	Generic 4' Omni	1	40	1.8	4.0	3.0	3.0	1.00	1.00	0.0	0.0	5.28	8	42
90.00	Flat Side Arm	2	220	8.6	0.0	0.0	0.0	0.90	0.90	0.0	0.0	5.22	62	499
90.00	RFI FSA10-67-DIN	1	127	4.7	1.7	23.5	10.0	1.00	1.00	0.0	0.0	5.22	21	128
90.00	Sinclair SC323-	1	62	2.5	5.6	2.0	2.0	1.00	1.00	0.0	0.0	5.22	11	64
75.00	PCTEL GPS-TMG-HR-	1	10	0.3	0.4	3.2	3.2	1.00	1.00	0.0	0.0	4.95	1	10
75.00	Stand-Off	1	109	3.7	0.0	0.0	0.0	1.00	1.00	0.0	0.0	4.95	16	124
58.00	Generic GPS	1	36	1.5	1.0	9.0	6.0	1.00	1.00	0.0	0.0	4.60	6	38
Totals		150	32003	1469.1									5040	34568

Discrete Appurtenance Properties 1.0D + 1.0W Service

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
197.0	Generic 9' Omni	1	25	2.7	9.0	3.0	3.0	1.00	1.00	0.0	0.0	9.40	22	25
192.0	Generic 15' Dipole	1	45	5.6	15.0	3.0	3.0	1.00	1.00	0.0	0.0	9.33	45	45
180.0	2-Bay Dipole	1	18	2.0	6.0	4.0	4.0	0.80	1.00	3.0	36.6	9.20	12	18
180.0	4-Bay Dipole	1	35	3.9	12.0	4.0	4.0	0.80	1.00	6.0	147.1	9.24	25	35
180.0	Flat Side Arm	3	150	6.3	0.0	0.0	0.0	1.00	0.67	0.0	0.0	9.16	99	450
180.0	RFS PD455	2	24	6.0	21.5	2.8	2.8	0.80	1.00	10.8	819.4	9.31	76	48
175.0	Generic RF-PRO-1B	12	3	0.3	3.2	1.0	1.0	1.00	1.00	0.0	0.0	9.08	30	36
170.0	Alcatel Lucent RRH	3	63	2.5	2.2	11.4	5.9	0.80	0.67	0.0	0.0	9.01	30	190
170.0	ALU RRH2X60PCS	3	55	2.2	1.8	12.0	9.4	0.80	0.67	0.0	0.0	9.01	27	165
170.0	ALU RRH4X60LTE	3	53	2.1	1.8	12.0	7.2	0.80	0.67	0.0	0.0	9.01	26	159
170.0	Andrew 8' MW Dish	1	400	83.6	8.0	96.0	0.0	1.00	1.00	0.0	0.0	9.01	640	400
170.0	Antel BXA-70063/4CF	2	10	4.7	4.0	11.2	5.2	0.80	0.77	0.0	0.0	9.01	45	20
170.0	Antel BXA-70063/6CF	1	17	7.6	5.9	11.2	5.2	0.80	0.77	0.0	0.0	9.01	36	17
170.0	Commscope	3	29	5.1	4.0	11.9	7.1	0.80	0.83	0.0	0.0	9.01	78	86
170.0	Commscope SBNHH-	6	41	8.1	6.0	11.9	7.1	0.80	0.83	0.0	0.0	9.01	246	244
170.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.0	9.01	207	1200
170.0	RFS DB-T1-6Z-8AB-	1	44	4.8	2.0	24.0	10.0	0.80	0.67	0.0	0.0	9.01	20	44
170.0	RFS DB-T1-6Z-8AB-	1	44	4.8	2.0	24.0	10.0	0.80	0.67	0.0	0.0	9.01	20	44
170.0	RFS FD9R6004/2C-3L	6	3	0.4	0.5	6.5	1.5	0.80	0.50	0.0	0.0	9.01	7	16
160.0	Andrew DB844H90E-	12	14	3.6	4.0	8.0	4.5	0.80	0.82	0.0	0.0	8.85	214	168
160.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	8.85	227	1200
154.0	Generic RF-PRO-1B	6	3	0.3	3.2	1.0	1.0	1.00	1.00	0.0	0.0	8.76	14	18
150.0	ALU 1900 MHz 4X45	3	60	2.3	2.1	11.1	10.7	0.80	0.67	0.0	0.0	8.69	28	180
150.0	ALU 800 MHz 2X50W	3	64	2.1	1.6	13.0	12.2	0.80	0.67	0.0	0.0	8.69	24	192
150.0	ALU TD-RRH8X20	3	66	3.7	2.1	17.5	5.7	0.80	0.67	0.0	0.0	8.69	44	198
150.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	8.69	223	1200
150.0	RFS APXVSP18-C-	3	57	8.0	6.0	11.8	7.0	0.80	0.83	0.0	0.0	8.69	118	171
150.0	RFS APXVTM14-C-I20	3	53	6.3	4.7	12.6	6.3	0.80	0.78	0.0	0.0	8.69	88	159
140.0	CCI HPA65R-BU6A	3	42	7.9	5.9	11.7	7.6	0.80	0.70	0.0	0.0	8.52	96	126
140.0	Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.0	8.52	17	213
140.0	Ericsson RRUS 8843	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.0	8.52	14	216
140.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	8.52	219	1200
140.0	Kathrein Scala	3	98	13.8	6.6	20.0	6.9	0.80	0.62	0.0	0.0	8.52	149	293
140.0	Powerwave Allgon	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	8.52	62	105
140.0	Powerwave Allgon	6	14	1.1	1.2	9.2	2.6	0.80	0.50	3.0	57.7	8.57	19	85
140.0	Raycap DC6-48-60-	1	20	1.3	2.0	9.7	9.7	0.80	1.00	0.0	0.0	8.52	7	20
140.0	Raycap DC6-48-60-	1	20	1.3	2.0	9.7	9.7	0.80	1.00	3.0	22.0	8.57	7	20
130.0	EMS RR90-17-02DP	3	14	4.4	4.7	8.0	2.8	0.80	0.64	4.0	191.6	8.42	48	41
130.0	Ericsson KRY 112	3	11	0.3	0.6	6.1	2.7	0.80	0.50	0.0	0.0	8.34	3	33

Site Number: 383660

Code: ANSI/TIA-222-G

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Site Name: North Madison Volunteer FD, CT

Engineering Number: 12927180_C3_03

7/18/2019 7:35:28 PM

Customer: T-MOBILE

Tower Loading

130.0	Ericsson KRY 112	3	15	0.6	0.9	6.1	3.9	0.80	0.50	0.0	0.0	8.34	5	46
130.0	Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	8.34	14	222
130.0	Generic 4' Omni	1	10	1.0	4.0	3.0	3.0	1.00	1.00	0.0	0.0	8.34	7	10
130.0	Pro 1 VFA12-HD	3	738	19.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	8.34	232	2214
130.0	RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	8.34	217	384
125.0	Flat Side Arm	1	150	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	8.25	44	150
125.0	Sinclair SC323-	1	6	1.1	5.6	2.0	2.0	1.00	1.00	0.0	0.0	8.25	8	6
96.00	Generic 6' Dipole	1	20	2.2	6.0	3.0	3.0	1.00	1.00	0.0	0.0	7.65	14	20
96.00	Generic 8' Grid Dish	1	282	29.9	8.0	96.0	0.0	1.00	1.00	0.0	0.0	7.65	194	282
94.00	Generic 4' Omni	1	10	1.0	4.0	3.0	3.0	1.00	1.00	0.0	0.0	7.61	6	10
90.00	Flat Side Arm	2	150	6.3	0.0	0.0	0.0	0.90	0.90	0.0	0.0	7.51	65	300
90.00	RFI FSA10-67-DIN	1	9	1.4	1.7	23.5	10.0	1.00	1.00	0.0	0.0	7.51	9	9
90.00	Sinclair SC323-	1	6	1.1	5.6	2.0	2.0	1.00	1.00	0.0	0.0	7.51	7	6
75.00	PCTEL GPS-TMG-HR-	1	1	0.2	0.4	3.2	3.2	1.00	1.00	0.0	0.0	7.13	1	1
75.00	Stand-Off	1	75	2.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	7.13	15	75
58.00	Generic GPS	1	10	0.9	1.0	9.0	6.0	1.00	1.00	0.0	0.0	6.63	5	10
	Totals	150	12822	874.2									4156	12822

Tower Loading

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out Of Zone	Spacing (in)	Orientation Factor	Ka Override
0.00	197.0	7/8" Coax	1	1.09	0.33	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	192.0	7/8" Coax	1	1.09	0.33	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	180.0	1" Conduit	1	1.30	1.68	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	180.0	1/2" Coax	1	0.63	0.15	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	180.0	2" Conduit	1	2.38	3.65	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	180.0	7/8" Coax	3	1.09	0.33	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	175.0	1 5/8" Coax	6	1.98	0.82	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	170.0	1 1/4" Coax	1	1.55	0.63	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	170.0	1 5/8" Coax	12	1.98	0.82	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	170.0	1 5/8" Hybrid	1	1.63	1.61	100	Lin App	Individual	0.00	N	1.00	1.00	0.01
0.00	170.0	1 5/8" Hybrid	1	1.63	1.61	100	Lin App	Individual	0.00	N	1.00	1.00	0.01
0.00	170.0	Waveguide	1	1.50	6.00	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	160.0	1 5/8" Coax	12	1.98	0.82	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	160.0	Waveguide	1	1.50	6.00	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	160.0	Waveguide	1	1.50	6.00	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	154.0	1 1/4" Hybriflex	4	1.54	1.00	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	150.0	1 1/4" Hybriflex	3	1.54	1.00	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	150.0	1 1/4" Hybriflex	1	1.54	1.00	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	150.0	Waveguide	1	1.50	6.00	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	143.0	0.35" (9mm) Fiber	1	0.35	0.05	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	140.0	0.39" (10mm) Fiber	2	0.39	0.06	50	Lin App	Block	0.00	N	1.00	1.00	0.00
0.00	140.0	0.78" (19.7mm) 8	4	0.78	0.59	50	Lin App	Block	0.00	N	1.00	1.00	0.00
0.00	140.0	1 1/4" Coax	12	1.55	0.63	50	Lin App	Block	0.00	N	1.00	1.00	0.00
0.00	140.0	Waveguide	1	1.50	6.00	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	130.0	1 1/4" (1.25"-	1	1.25	1.05	100	Lin App	Individual	0.00	N	1.00	1.00	0.01
0.00	130.0	1 5/8" (1.63"-	2	1.63	1.61	100	Lin App	Individual	0.00	N	1.00	1.00	0.01
0.00	130.0	1 5/8" Coax	12	1.98	0.82	50	Lin App	Block	0.00	N	1.00	1.00	0.00
0.00	130.0	7/8" Coax	1	1.09	0.33	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	130.0	Waveguide	1	1.50	6.00	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	125.0	7/8" Coax	1	1.09	0.33	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	96.00	7/8" Coax	2	1.09	0.33	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	94.00	7/8" Coax	1	1.09	0.33	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	90.00	7/8" Coax	2	1.09	0.33	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	75.00	1/2" Coax	1	0.63	0.15	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	58.00	1/2" Coax	1	0.63	0.15	100	Lin App	Individual	0.00	N	1.00	1.00	0.00

Section Forces

LoadCase 1.2D + 1.6W Normal

101 mph Normal to Face with No Ice

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9	170.00	25.53	0.000	24.617	0.000	0.139	2.81	1.00	1.00	0.0	14.25	40.09	0.00	2046	0	1392	1358	2750
8	150.00	24.63	0.000	27.928	0.000	0.154	2.76	1.00	1.00	0.0	15.67	43.19	0.00	3796	0	1447	3495	4942
7	130.00	23.64	0.000	32.050	0.000	0.157	2.75	1.00	1.00	0.0	17.30	47.50	0.00	5076	0	1528	5019	6547
6	110.00	22.54	0.000	40.881	0.000	0.165	2.72	1.00	1.00	0.0	21.49	58.42	0.00	5968	0	1791	5271	7062
5	90.00	21.29	0.000	47.618	0.000	0.161	2.73	1.00	1.00	0.0	23.49	64.14	0.00	6805	0	1857	5102	6959
4	70.00	19.81	0.000	49.430	0.000	0.144	2.79	1.00	1.00	0.0	24.23	67.67	0.00	7741	0	1823	4824	6647
3	50.00	17.99	0.000	52.869	0.000	0.134	2.83	1.00	1.00	0.0	26.09	73.86	0.00	8365	0	1808	4403	6210
2	30.00	15.55	0.000	62.148	0.000	0.138	2.82	1.00	1.00	0.0	30.40	85.58	0.00	9447	0	1810	3806	5616
1	10.00	15.54	0.000	69.273	0.000	0.139	2.81	1.00	1.00	0.0	34.60	97.35	0.00	11287	0	2057	3803	5860
														60530	0			52594

LoadCase 1.2D + 1.6W 60 deg

101 mph 60 degree with No Ice

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9	170.00	25.53	0.000	24.617	0.000	0.139	2.81	0.80	1.00	0.0	14.25	40.09	0.00	2046	0	1392	1358	2750
8	150.00	24.63	0.000	27.928	0.000	0.154	2.76	0.80	1.00	0.0	15.67	43.19	0.00	3796	0	1447	3495	4942
7	130.00	23.64	0.000	32.050	0.000	0.157	2.75	0.80	1.00	0.0	17.30	47.50	0.00	5076	0	1528	5019	6547
6	110.00	22.54	0.000	40.881	0.000	0.165	2.72	0.80	1.00	0.0	21.49	58.42	0.00	5968	0	1791	5271	7062
5	90.00	21.29	0.000	47.618	0.000	0.161	2.73	0.80	1.00	0.0	23.49	64.14	0.00	6805	0	1857	5102	6959
4	70.00	19.81	0.000	49.430	0.000	0.144	2.79	0.80	1.00	0.0	24.23	67.67	0.00	7741	0	1823	4824	6647
3	50.00	17.99	0.000	52.869	0.000	0.134	2.83	0.80	1.00	0.0	26.09	73.86	0.00	8365	0	1808	4403	6210
2	30.00	15.55	0.000	62.148	0.000	0.138	2.82	0.80	1.00	0.0	30.40	85.58	0.00	9447	0	1810	3806	5616
1	10.00	15.54	0.000	69.273	0.000	0.139	2.81	0.80	1.00	0.0	34.60	97.35	0.00	11287	0	2057	3803	5860
														60530	0			52594

LoadCase 1.2D + 1.6W 90 deg

101 mph 90 degree with No Ice

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9	170.00	25.53	0.000	24.617	0.000	0.139	2.81	0.85	1.00	0.0	14.25	40.09	0.00	2046	0	1392	1358	2750
8	150.00	24.63	0.000	27.928	0.000	0.154	2.76	0.85	1.00	0.0	15.67	43.19	0.00	3796	0	1447	3495	4942
7	130.00	23.64	0.000	32.050	0.000	0.157	2.75	0.85	1.00	0.0	17.30	47.50	0.00	5076	0	1528	5019	6547
6	110.00	22.54	0.000	40.881	0.000	0.165	2.72	0.85	1.00	0.0	21.49	58.42	0.00	5968	0	1791	5271	7062
5	90.00	21.29	0.000	47.618	0.000	0.161	2.73	0.85	1.00	0.0	23.49	64.14	0.00	6805	0	1857	5102	6959
4	70.00	19.81	0.000	49.430	0.000	0.144	2.79	0.85	1.00	0.0	24.23	67.67	0.00	7741	0	1823	4824	6647
3	50.00	17.99	0.000	52.869	0.000	0.134	2.83	0.85	1.00	0.0	26.09	73.86	0.00	8365	0	1808	4403	6210
2	30.00	15.55	0.000	62.148	0.000	0.138	2.82	0.85	1.00	0.0	30.40	85.58	0.00	9447	0	1810	3806	5616
1	10.00	15.54	0.000	69.273	0.000	0.139	2.81	0.85	1.00	0.0	34.60	97.35	0.00	11287	0	2057	3803	5860
														60530	0			52594

Site Number: 383660

Code: ANSI/TIA-222-G

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Site Name: North Madison Volunteer FD, CT

Engineering Number: 12927180_C3_03

7/18/2019 7:35:28 PM

Customer: T-MOBILE

Section Forces

LoadCase 1.2D + 1.6W 120 deg

101 mph 120 degree with No Ice

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9	170.00	25.53	0.000	24.617	0.000	0.139	2.81	1.00	1.00	0.0	14.25	40.09	0.00	2046	0	1392	1358	2750
8	150.00	24.63	0.000	27.928	0.000	0.154	2.76	1.00	1.00	0.0	15.67	43.19	0.00	3796	0	1447	3495	4942
7	130.00	23.64	0.000	32.050	0.000	0.157	2.75	1.00	1.00	0.0	17.30	47.50	0.00	5076	0	1528	5019	6547
6	110.00	22.54	0.000	40.881	0.000	0.165	2.72	1.00	1.00	0.0	21.49	58.42	0.00	5968	0	1791	5271	7062
5	90.00	21.29	0.000	47.618	0.000	0.161	2.73	1.00	1.00	0.0	23.49	64.14	0.00	6805	0	1857	5102	6959
4	70.00	19.81	0.000	49.430	0.000	0.144	2.79	1.00	1.00	0.0	24.23	67.67	0.00	7741	0	1823	4824	6647
3	50.00	17.99	0.000	52.869	0.000	0.134	2.83	1.00	1.00	0.0	26.09	73.86	0.00	8365	0	1808	4403	6210
2	30.00	15.55	0.000	62.148	0.000	0.138	2.82	1.00	1.00	0.0	30.40	85.58	0.00	9447	0	1810	3806	5616
1	10.00	15.54	0.000	69.273	0.000	0.139	2.81	1.00	1.00	0.0	34.60	97.35	0.00	11287	0	2057	3803	5860
														60530	0			52594

LoadCase 1.2D + 1.6W 180 deg

101 mph 180 degree with No Ice

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9	170.00	25.53	0.000	24.617	0.000	0.139	2.81	0.80	1.00	0.0	14.25	40.09	0.00	2046	0	1392	1358	2750
8	150.00	24.63	0.000	27.928	0.000	0.154	2.76	0.80	1.00	0.0	15.67	43.19	0.00	3796	0	1447	3495	4942
7	130.00	23.64	0.000	32.050	0.000	0.157	2.75	0.80	1.00	0.0	17.30	47.50	0.00	5076	0	1528	5019	6547
6	110.00	22.54	0.000	40.881	0.000	0.165	2.72	0.80	1.00	0.0	21.49	58.42	0.00	5968	0	1791	5271	7062
5	90.00	21.29	0.000	47.618	0.000	0.161	2.73	0.80	1.00	0.0	23.49	64.14	0.00	6805	0	1857	5102	6959
4	70.00	19.81	0.000	49.430	0.000	0.144	2.79	0.80	1.00	0.0	24.23	67.67	0.00	7741	0	1823	4824	6647
3	50.00	17.99	0.000	52.869	0.000	0.134	2.83	0.80	1.00	0.0	26.09	73.86	0.00	8365	0	1808	4403	6210
2	30.00	15.55	0.000	62.148	0.000	0.138	2.82	0.80	1.00	0.0	30.40	85.58	0.00	9447	0	1810	3806	5616
1	10.00	15.54	0.000	69.273	0.000	0.139	2.81	0.80	1.00	0.0	34.60	97.35	0.00	11287	0	2057	3803	5860
														60530	0			52594

LoadCase 1.2D + 1.6W 210 deg

101 mph 210 degree with No Ice

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9	170.00	25.53	0.000	24.617	0.000	0.139	2.81	0.85	1.00	0.0	14.25	40.09	0.00	2046	0	1392	1358	2750
8	150.00	24.63	0.000	27.928	0.000	0.154	2.76	0.85	1.00	0.0	15.67	43.19	0.00	3796	0	1447	3495	4942
7	130.00	23.64	0.000	32.050	0.000	0.157	2.75	0.85	1.00	0.0	17.30	47.50	0.00	5076	0	1528	5019	6547
6	110.00	22.54	0.000	40.881	0.000	0.165	2.72	0.85	1.00	0.0	21.49	58.42	0.00	5968	0	1791	5271	7062
5	90.00	21.29	0.000	47.618	0.000	0.161	2.73	0.85	1.00	0.0	23.49	64.14	0.00	6805	0	1857	5102	6959
4	70.00	19.81	0.000	49.430	0.000	0.144	2.79	0.85	1.00	0.0	24.23	67.67	0.00	7741	0	1823	4824	6647
3	50.00	17.99	0.000	52.869	0.000	0.134	2.83	0.85	1.00	0.0	26.09	73.86	0.00	8365	0	1808	4403	6210
2	30.00	15.55	0.000	62.148	0.000	0.138	2.82	0.85	1.00	0.0	30.40	85.58	0.00	9447	0	1810	3806	5616
1	10.00	15.54	0.000	69.273	0.000	0.139	2.81	0.85	1.00	0.0	34.60	97.35	0.00	11287	0	2057	3803	5860
														60530	0			52594

Section Forces

LoadCase 1.2D + 1.6W 240 deg

101 mph 240 degree with No Ice

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9	170.00	25.53	0.000	24.617	0.000	0.139	2.81	1.00	1.00	0.0	14.25	40.09	0.00	2046	0	1392	1358	2750
8	150.00	24.63	0.000	27.928	0.000	0.154	2.76	1.00	1.00	0.0	15.67	43.19	0.00	3796	0	1447	3495	4942
7	130.00	23.64	0.000	32.050	0.000	0.157	2.75	1.00	1.00	0.0	17.30	47.50	0.00	5076	0	1528	5019	6547
6	110.00	22.54	0.000	40.881	0.000	0.165	2.72	1.00	1.00	0.0	21.49	58.42	0.00	5968	0	1791	5271	7062
5	90.00	21.29	0.000	47.618	0.000	0.161	2.73	1.00	1.00	0.0	23.49	64.14	0.00	6805	0	1857	5102	6959
4	70.00	19.81	0.000	49.430	0.000	0.144	2.79	1.00	1.00	0.0	24.23	67.67	0.00	7741	0	1823	4824	6647
3	50.00	17.99	0.000	52.869	0.000	0.134	2.83	1.00	1.00	0.0	26.09	73.86	0.00	8365	0	1808	4403	6210
2	30.00	15.55	0.000	62.148	0.000	0.138	2.82	1.00	1.00	0.0	30.40	85.58	0.00	9447	0	1810	3806	5616
1	10.00	15.54	0.000	69.273	0.000	0.139	2.81	1.00	1.00	0.0	34.60	97.35	0.00	11287	0	2057	3803	5860
														60530	0			52594

LoadCase 1.2D + 1.6W 300 deg

101 mph 300 degree with No Ice

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9	170.00	25.53	0.000	24.617	0.000	0.139	2.81	0.80	1.00	0.0	14.25	40.09	0.00	2046	0	1392	1358	2750
8	150.00	24.63	0.000	27.928	0.000	0.154	2.76	0.80	1.00	0.0	15.67	43.19	0.00	3796	0	1447	3495	4942
7	130.00	23.64	0.000	32.050	0.000	0.157	2.75	0.80	1.00	0.0	17.30	47.50	0.00	5076	0	1528	5019	6547
6	110.00	22.54	0.000	40.881	0.000	0.165	2.72	0.80	1.00	0.0	21.49	58.42	0.00	5968	0	1791	5271	7062
5	90.00	21.29	0.000	47.618	0.000	0.161	2.73	0.80	1.00	0.0	23.49	64.14	0.00	6805	0	1857	5102	6959
4	70.00	19.81	0.000	49.430	0.000	0.144	2.79	0.80	1.00	0.0	24.23	67.67	0.00	7741	0	1823	4824	6647
3	50.00	17.99	0.000	52.869	0.000	0.134	2.83	0.80	1.00	0.0	26.09	73.86	0.00	8365	0	1808	4403	6210
2	30.00	15.55	0.000	62.148	0.000	0.138	2.82	0.80	1.00	0.0	30.40	85.58	0.00	9447	0	1810	3806	5616
1	10.00	15.54	0.000	69.273	0.000	0.139	2.81	0.80	1.00	0.0	34.60	97.35	0.00	11287	0	2057	3803	5860
														60530	0			52594

LoadCase 1.2D + 1.6W 330 deg

101 mph 330 degree with No Ice

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9	170.00	25.53	0.000	24.617	0.000	0.139	2.81	0.85	1.00	0.0	14.25	40.09	0.00	2046	0	1392	1358	2750
8	150.00	24.63	0.000	27.928	0.000	0.154	2.76	0.85	1.00	0.0	15.67	43.19	0.00	3796	0	1447	3495	4942
7	130.00	23.64	0.000	32.050	0.000	0.157	2.75	0.85	1.00	0.0	17.30	47.50	0.00	5076	0	1528	5019	6547
6	110.00	22.54	0.000	40.881	0.000	0.165	2.72	0.85	1.00	0.0	21.49	58.42	0.00	5968	0	1791	5271	7062
5	90.00	21.29	0.000	47.618	0.000	0.161	2.73	0.85	1.00	0.0	23.49	64.14	0.00	6805	0	1857	5102	6959
4	70.00	19.81	0.000	49.430	0.000	0.144	2.79	0.85	1.00	0.0	24.23	67.67	0.00	7741	0	1823	4824	6647
3	50.00	17.99	0.000	52.869	0.000	0.134	2.83	0.85	1.00	0.0	26.09	73.86	0.00	8365	0	1808	4403	6210
2	30.00	15.55	0.000	62.148	0.000	0.138	2.82	0.85	1.00	0.0	30.40	85.58	0.00	9447	0	1810	3806	5616
1	10.00	15.54	0.000	69.273	0.000	0.139	2.81	0.85	1.00	0.0	34.60	97.35	0.00	11287	0	2057	3803	5860
														60530	0			52594

Section Forces

LoadCase 0.9D + 1.6W Normal

101 mph Normal to Face with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9	170.00	25.53	0.000	24.617	0.000	0.139	2.81	1.00	1.00	0.0	14.25	40.09	0.00	1535	0	1392	1358	2750
8	150.00	24.63	0.000	27.928	0.000	0.154	2.76	1.00	1.00	0.0	15.67	43.19	0.00	2847	0	1447	3495	4942
7	130.00	23.64	0.000	32.050	0.000	0.157	2.75	1.00	1.00	0.0	17.30	47.50	0.00	3807	0	1528	5019	6547
6	110.00	22.54	0.000	40.881	0.000	0.165	2.72	1.00	1.00	0.0	21.49	58.42	0.00	4476	0	1791	5271	7062
5	90.00	21.29	0.000	47.618	0.000	0.161	2.73	1.00	1.00	0.0	23.49	64.14	0.00	5103	0	1857	5102	6959
4	70.00	19.81	0.000	49.430	0.000	0.144	2.79	1.00	1.00	0.0	24.23	67.67	0.00	5806	0	1823	4824	6647
3	50.00	17.99	0.000	52.869	0.000	0.134	2.83	1.00	1.00	0.0	26.09	73.86	0.00	6274	0	1808	4403	6210
2	30.00	15.55	0.000	62.148	0.000	0.138	2.82	1.00	1.00	0.0	30.40	85.58	0.00	7085	0	1810	3806	5616
1	10.00	15.54	0.000	69.273	0.000	0.139	2.81	1.00	1.00	0.0	34.60	97.35	0.00	8465	0	2057	3803	5860
														45398	0			52594

LoadCase 0.9D + 1.6W 60 deg

101 mph 60 deg with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9	170.00	25.53	0.000	24.617	0.000	0.139	2.81	0.80	1.00	0.0	14.25	40.09	0.00	1535	0	1392	1358	2750
8	150.00	24.63	0.000	27.928	0.000	0.154	2.76	0.80	1.00	0.0	15.67	43.19	0.00	2847	0	1447	3495	4942
7	130.00	23.64	0.000	32.050	0.000	0.157	2.75	0.80	1.00	0.0	17.30	47.50	0.00	3807	0	1528	5019	6547
6	110.00	22.54	0.000	40.881	0.000	0.165	2.72	0.80	1.00	0.0	21.49	58.42	0.00	4476	0	1791	5271	7062
5	90.00	21.29	0.000	47.618	0.000	0.161	2.73	0.80	1.00	0.0	23.49	64.14	0.00	5103	0	1857	5102	6959
4	70.00	19.81	0.000	49.430	0.000	0.144	2.79	0.80	1.00	0.0	24.23	67.67	0.00	5806	0	1823	4824	6647
3	50.00	17.99	0.000	52.869	0.000	0.134	2.83	0.80	1.00	0.0	26.09	73.86	0.00	6274	0	1808	4403	6210
2	30.00	15.55	0.000	62.148	0.000	0.138	2.82	0.80	1.00	0.0	30.40	85.58	0.00	7085	0	1810	3806	5616
1	10.00	15.54	0.000	69.273	0.000	0.139	2.81	0.80	1.00	0.0	34.60	97.35	0.00	8465	0	2057	3803	5860
														45398	0			52594

LoadCase 0.9D + 1.6W 90 deg

101 mph 90 deg with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9	170.00	25.53	0.000	24.617	0.000	0.139	2.81	0.85	1.00	0.0	14.25	40.09	0.00	1535	0	1392	1358	2750
8	150.00	24.63	0.000	27.928	0.000	0.154	2.76	0.85	1.00	0.0	15.67	43.19	0.00	2847	0	1447	3495	4942
7	130.00	23.64	0.000	32.050	0.000	0.157	2.75	0.85	1.00	0.0	17.30	47.50	0.00	3807	0	1528	5019	6547
6	110.00	22.54	0.000	40.881	0.000	0.165	2.72	0.85	1.00	0.0	21.49	58.42	0.00	4476	0	1791	5271	7062
5	90.00	21.29	0.000	47.618	0.000	0.161	2.73	0.85	1.00	0.0	23.49	64.14	0.00	5103	0	1857	5102	6959
4	70.00	19.81	0.000	49.430	0.000	0.144	2.79	0.85	1.00	0.0	24.23	67.67	0.00	5806	0	1823	4824	6647
3	50.00	17.99	0.000	52.869	0.000	0.134	2.83	0.85	1.00	0.0	26.09	73.86	0.00	6274	0	1808	4403	6210
2	30.00	15.55	0.000	62.148	0.000	0.138	2.82	0.85	1.00	0.0	30.40	85.58	0.00	7085	0	1810	3806	5616
1	10.00	15.54	0.000	69.273	0.000	0.139	2.81	0.85	1.00	0.0	34.60	97.35	0.00	8465	0	2057	3803	5860
														45398	0			52594

Section Forces

LoadCase 0.9D + 1.6W 120 deg

101 mph 120 deg with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9	170.00	25.53	0.000	24.617	0.000	0.139	2.81	1.00	1.00	0.0	14.25	40.09	0.00	1535	0	1392	1358	2750
8	150.00	24.63	0.000	27.928	0.000	0.154	2.76	1.00	1.00	0.0	15.67	43.19	0.00	2847	0	1447	3495	4942
7	130.00	23.64	0.000	32.050	0.000	0.157	2.75	1.00	1.00	0.0	17.30	47.50	0.00	3807	0	1528	5019	6547
6	110.00	22.54	0.000	40.881	0.000	0.165	2.72	1.00	1.00	0.0	21.49	58.42	0.00	4476	0	1791	5271	7062
5	90.00	21.29	0.000	47.618	0.000	0.161	2.73	1.00	1.00	0.0	23.49	64.14	0.00	5103	0	1857	5102	6959
4	70.00	19.81	0.000	49.430	0.000	0.144	2.79	1.00	1.00	0.0	24.23	67.67	0.00	5806	0	1823	4824	6647
3	50.00	17.99	0.000	52.869	0.000	0.134	2.83	1.00	1.00	0.0	26.09	73.86	0.00	6274	0	1808	4403	6210
2	30.00	15.55	0.000	62.148	0.000	0.138	2.82	1.00	1.00	0.0	30.40	85.58	0.00	7085	0	1810	3806	5616
1	10.00	15.54	0.000	69.273	0.000	0.139	2.81	1.00	1.00	0.0	34.60	97.35	0.00	8465	0	2057	3803	5860
														45398	0			52594

LoadCase 0.9D + 1.6W 180 deg

101 mph 180 deg with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9	170.00	25.53	0.000	24.617	0.000	0.139	2.81	0.80	1.00	0.0	14.25	40.09	0.00	1535	0	1392	1358	2750
8	150.00	24.63	0.000	27.928	0.000	0.154	2.76	0.80	1.00	0.0	15.67	43.19	0.00	2847	0	1447	3495	4942
7	130.00	23.64	0.000	32.050	0.000	0.157	2.75	0.80	1.00	0.0	17.30	47.50	0.00	3807	0	1528	5019	6547
6	110.00	22.54	0.000	40.881	0.000	0.165	2.72	0.80	1.00	0.0	21.49	58.42	0.00	4476	0	1791	5271	7062
5	90.00	21.29	0.000	47.618	0.000	0.161	2.73	0.80	1.00	0.0	23.49	64.14	0.00	5103	0	1857	5102	6959
4	70.00	19.81	0.000	49.430	0.000	0.144	2.79	0.80	1.00	0.0	24.23	67.67	0.00	5806	0	1823	4824	6647
3	50.00	17.99	0.000	52.869	0.000	0.134	2.83	0.80	1.00	0.0	26.09	73.86	0.00	6274	0	1808	4403	6210
2	30.00	15.55	0.000	62.148	0.000	0.138	2.82	0.80	1.00	0.0	30.40	85.58	0.00	7085	0	1810	3806	5616
1	10.00	15.54	0.000	69.273	0.000	0.139	2.81	0.80	1.00	0.0	34.60	97.35	0.00	8465	0	2057	3803	5860
														45398	0			52594

LoadCase 0.9D + 1.6W 210 deg

101 mph 210 deg with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9	170.00	25.53	0.000	24.617	0.000	0.139	2.81	0.85	1.00	0.0	14.25	40.09	0.00	1535	0	1392	1358	2750
8	150.00	24.63	0.000	27.928	0.000	0.154	2.76	0.85	1.00	0.0	15.67	43.19	0.00	2847	0	1447	3495	4942
7	130.00	23.64	0.000	32.050	0.000	0.157	2.75	0.85	1.00	0.0	17.30	47.50	0.00	3807	0	1528	5019	6547
6	110.00	22.54	0.000	40.881	0.000	0.165	2.72	0.85	1.00	0.0	21.49	58.42	0.00	4476	0	1791	5271	7062
5	90.00	21.29	0.000	47.618	0.000	0.161	2.73	0.85	1.00	0.0	23.49	64.14	0.00	5103	0	1857	5102	6959
4	70.00	19.81	0.000	49.430	0.000	0.144	2.79	0.85	1.00	0.0	24.23	67.67	0.00	5806	0	1823	4824	6647
3	50.00	17.99	0.000	52.869	0.000	0.134	2.83	0.85	1.00	0.0	26.09	73.86	0.00	6274	0	1808	4403	6210
2	30.00	15.55	0.000	62.148	0.000	0.138	2.82	0.85	1.00	0.0	30.40	85.58	0.00	7085	0	1810	3806	5616
1	10.00	15.54	0.000	69.273	0.000	0.139	2.81	0.85	1.00	0.0	34.60	97.35	0.00	8465	0	2057	3803	5860
														45398	0			52594

Section Forces

LoadCase 0.9D + 1.6W 240 deg

101 mph 240 deg with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9	170.00	25.53	0.000	24.617	0.000	0.139	2.81	1.00	1.00	0.0	14.25	40.09	0.00	1535	0	1392	1358	2750
8	150.00	24.63	0.000	27.928	0.000	0.154	2.76	1.00	1.00	0.0	15.67	43.19	0.00	2847	0	1447	3495	4942
7	130.00	23.64	0.000	32.050	0.000	0.157	2.75	1.00	1.00	0.0	17.30	47.50	0.00	3807	0	1528	5019	6547
6	110.00	22.54	0.000	40.881	0.000	0.165	2.72	1.00	1.00	0.0	21.49	58.42	0.00	4476	0	1791	5271	7062
5	90.00	21.29	0.000	47.618	0.000	0.161	2.73	1.00	1.00	0.0	23.49	64.14	0.00	5103	0	1857	5102	6959
4	70.00	19.81	0.000	49.430	0.000	0.144	2.79	1.00	1.00	0.0	24.23	67.67	0.00	5806	0	1823	4824	6647
3	50.00	17.99	0.000	52.869	0.000	0.134	2.83	1.00	1.00	0.0	26.09	73.86	0.00	6274	0	1808	4403	6210
2	30.00	15.55	0.000	62.148	0.000	0.138	2.82	1.00	1.00	0.0	30.40	85.58	0.00	7085	0	1810	3806	5616
1	10.00	15.54	0.000	69.273	0.000	0.139	2.81	1.00	1.00	0.0	34.60	97.35	0.00	8465	0	2057	3803	5860
														45398	0			52594

LoadCase 0.9D + 1.6W 300 deg

101 mph 300 deg with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9	170.00	25.53	0.000	24.617	0.000	0.139	2.81	0.80	1.00	0.0	14.25	40.09	0.00	1535	0	1392	1358	2750
8	150.00	24.63	0.000	27.928	0.000	0.154	2.76	0.80	1.00	0.0	15.67	43.19	0.00	2847	0	1447	3495	4942
7	130.00	23.64	0.000	32.050	0.000	0.157	2.75	0.80	1.00	0.0	17.30	47.50	0.00	3807	0	1528	5019	6547
6	110.00	22.54	0.000	40.881	0.000	0.165	2.72	0.80	1.00	0.0	21.49	58.42	0.00	4476	0	1791	5271	7062
5	90.00	21.29	0.000	47.618	0.000	0.161	2.73	0.80	1.00	0.0	23.49	64.14	0.00	5103	0	1857	5102	6959
4	70.00	19.81	0.000	49.430	0.000	0.144	2.79	0.80	1.00	0.0	24.23	67.67	0.00	5806	0	1823	4824	6647
3	50.00	17.99	0.000	52.869	0.000	0.134	2.83	0.80	1.00	0.0	26.09	73.86	0.00	6274	0	1808	4403	6210
2	30.00	15.55	0.000	62.148	0.000	0.138	2.82	0.80	1.00	0.0	30.40	85.58	0.00	7085	0	1810	3806	5616
1	10.00	15.54	0.000	69.273	0.000	0.139	2.81	0.80	1.00	0.0	34.60	97.35	0.00	8465	0	2057	3803	5860
														45398	0			52594

LoadCase 0.9D + 1.6W 330 deg

101 mph 330 deg with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9	170.00	25.53	0.000	24.617	0.000	0.139	2.81	0.85	1.00	0.0	14.25	40.09	0.00	1535	0	1392	1358	2750
8	150.00	24.63	0.000	27.928	0.000	0.154	2.76	0.85	1.00	0.0	15.67	43.19	0.00	2847	0	1447	3495	4942
7	130.00	23.64	0.000	32.050	0.000	0.157	2.75	0.85	1.00	0.0	17.30	47.50	0.00	3807	0	1528	5019	6547
6	110.00	22.54	0.000	40.881	0.000	0.165	2.72	0.85	1.00	0.0	21.49	58.42	0.00	4476	0	1791	5271	7062
5	90.00	21.29	0.000	47.618	0.000	0.161	2.73	0.85	1.00	0.0	23.49	64.14	0.00	5103	0	1857	5102	6959
4	70.00	19.81	0.000	49.430	0.000	0.144	2.79	0.85	1.00	0.0	24.23	67.67	0.00	5806	0	1823	4824	6647
3	50.00	17.99	0.000	52.869	0.000	0.134	2.83	0.85	1.00	0.0	26.09	73.86	0.00	6274	0	1808	4403	6210
2	30.00	15.55	0.000	62.148	0.000	0.138	2.82	0.85	1.00	0.0	30.40	85.58	0.00	7085	0	1810	3806	5616
1	10.00	15.54	0.000	69.273	0.000	0.139	2.81	0.85	1.00	0.0	34.60	97.35	0.00	8465	0	2057	3803	5860
														45398	0			52594

Site Number: 383660

Code: ANSI/TIA-222-G

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Site Name: North Madison Volunteer FD, CT

Engineering Number: 12927180_C3_03

7/18/2019 7:35:28 PM

Customer: T-MOBILE

Section Forces

LoadCase 1.2D + 1.0Di + 1.0Wi Normal

50 mph Normal with 0.75 in Radial Ice

Gust Response Factor (Gh): 0.85

Ice Dead Load Factor :1.00

Ice Importance Factor :1.00

Wind Importance Factor (Iw) : 1.00

Section Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9 170.00	6.26	0.000	57.989	33.37	0.316	2.25	1.00	1.00	1.8	35.36	79.69	33.37	7941	5895	424	744	1167
8 150.00	6.04	0.000	60.996	33.06	0.327	2.23	1.00	1.00	1.7	37.45	83.41	33.07	14136	10341	428	1780	2011 **
7 130.00	5.79	0.000	66.025	33.97	0.315	2.26	1.00	1.00	1.7	40.28	90.96	33.98	18055	12980	448	2249	2171 **
6 110.00	5.52	0.000	77.219	36.33	0.304	2.28	1.00	1.00	1.7	47.00	107.39	36.34	20261	14293	504	2278	2503 **
5 90.00	5.22	0.000	79.852	32.23	0.265	2.39	1.00	1.00	1.7	47.61	113.89	32.23	21099	14295	505	2306	2802 **
4 70.00	4.86	0.000	82.932	33.50	0.238	2.47	1.00	1.00	1.6	48.86	120.86	33.50	22056	14315	499	2237	2736
3 50.00	4.41	0.000	87.512	34.64	0.219	2.53	1.00	1.00	1.6	51.24	129.83	34.64	22566	14201	487	2054	2541
2 30.00	3.81	0.000	97.265	35.11	0.214	2.55	1.00	1.00	1.5	56.86	144.98	35.12	23225	13778	470	1731	2201
1 10.00	3.81	0.000	102.69	33.41	0.204	2.58	1.00	1.00	1.3	59.95	154.87	33.42	23813	12526	501	1638	2140
													173153	112623			20272

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.2D + 1.0Di + 1.0Wi 60 deg

50 mph 60 deg with 0.75 in Radial Ice

Gust Response Factor (Gh): 0.85

Ice Dead Load Factor :1.00

Ice Importance Factor :1.00

Wind Importance Factor (Iw) : 1.00

Section Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9 170.00	6.26	0.000	57.989	33.37	0.316	2.25	0.80	1.00	1.8	35.36	79.69	33.37	7941	5895	424	744	1167
8 150.00	6.04	0.000	60.996	33.06	0.327	2.23	0.80	1.00	1.7	37.45	83.41	33.07	14136	10341	428	1780	2011 **
7 130.00	5.79	0.000	66.025	33.97	0.315	2.26	0.80	1.00	1.7	40.28	90.96	33.98	18055	12980	448	2249	2171 **
6 110.00	5.52	0.000	77.219	36.33	0.304	2.28	0.80	1.00	1.7	47.00	107.39	36.34	20261	14293	504	2278	2503 **
5 90.00	5.22	0.000	79.852	32.23	0.265	2.39	0.80	1.00	1.7	47.61	113.89	32.23	21099	14295	505	2306	2802 **
4 70.00	4.86	0.000	82.932	33.50	0.238	2.47	0.80	1.00	1.6	48.86	120.86	33.50	22056	14315	499	2237	2736
3 50.00	4.41	0.000	87.512	34.64	0.219	2.53	0.80	1.00	1.6	51.24	129.83	34.64	22566	14201	487	2054	2541
2 30.00	3.81	0.000	97.265	35.11	0.214	2.55	0.80	1.00	1.5	56.86	144.98	35.12	23225	13778	470	1731	2201
1 10.00	3.81	0.000	102.69	33.41	0.204	2.58	0.80	1.00	1.3	59.95	154.87	33.42	23813	12526	501	1638	2140
													173153	112623			20272

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.2D + 1.0Di + 1.0Wi 90 deg

50 mph 90 deg with 0.75 in Radial Ice

Gust Response Factor (Gh): 0.85

Ice Dead Load Factor :1.00

Ice Importance Factor :1.00

Wind Importance Factor (Iw) : 1.00

Section Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9 170.00	6.26	0.000	57.989	33.37	0.316	2.25	0.85	1.00	1.8	35.36	79.69	33.37	7941	5895	424	744	1167
8 150.00	6.04	0.000	60.996	33.06	0.327	2.23	0.85	1.00	1.7	37.45	83.41	33.07	14136	10341	428	1780	2011 **
7 130.00	5.79	0.000	66.025	33.97	0.315	2.26	0.85	1.00	1.7	40.28	90.96	33.98	18055	12980	448	2249	2171 **
6 110.00	5.52	0.000	77.219	36.33	0.304	2.28	0.85	1.00	1.7	47.00	107.39	36.34	20261	14293	504	2278	2503 **
5 90.00	5.22	0.000	79.852	32.23	0.265	2.39	0.85	1.00	1.7	47.61	113.89	32.23	21099	14295	505	2306	2802 **
4 70.00	4.86	0.000	82.932	33.50	0.238	2.47	0.85	1.00	1.6	48.86	120.86	33.50	22056	14315	499	2237	2736
3 50.00	4.41	0.000	87.512	34.64	0.219	2.53	0.85	1.00	1.6	51.24	129.83	34.64	22566	14201	487	2054	2541
2 30.00	3.81	0.000	97.265	35.11	0.214	2.55	0.85	1.00	1.5	56.86	144.98	35.12	23225	13778	470	1731	2201
1 10.00	3.81	0.000	102.69	33.41	0.204	2.58	0.85	1.00	1.3	59.95	154.87	33.42	23813	12526	501	1638	2140
													173153	112623			20272

** = Section Force Exceeds Solidity Ratio Criteria

Section Forces

LoadCase 1.2D + 1.0Di + 1.0Wi 120 deg

50 mph 120 deg with 0.75 in Radial Ice

Gust Response Factor (Gh): 0.85 Ice Dead Load Factor :1.00 Ice Importance Factor :1.00
 Wind Importance Factor (Iw) : 1.00

Section Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)	
9 170.00	6.26	0.000	57.989	33.37	0.316	2.25	1.00	1.00	1.8	35.36	79.69	33.37	7941	5895	424	744	1167	
8 150.00	6.04	0.000	60.996	33.06	0.327	2.23	1.00	1.00	1.7	37.45	83.41	33.07	14136	10341	428	1780	2011	**
7 130.00	5.79	0.000	66.025	33.97	0.315	2.26	1.00	1.00	1.7	40.28	90.96	33.98	18055	12980	448	2249	2171	**
6 110.00	5.52	0.000	77.219	36.33	0.304	2.28	1.00	1.00	1.7	47.00	107.39	36.34	20261	14293	504	2278	2503	**
5 90.00	5.22	0.000	79.852	32.23	0.265	2.39	1.00	1.00	1.7	47.61	113.89	32.23	21099	14295	505	2306	2802	**
4 70.00	4.86	0.000	82.932	33.50	0.238	2.47	1.00	1.00	1.6	48.86	120.86	33.50	22056	14315	499	2237	2736	
3 50.00	4.41	0.000	87.512	34.64	0.219	2.53	1.00	1.00	1.6	51.24	129.83	34.64	22566	14201	487	2054	2541	
2 30.00	3.81	0.000	97.265	35.11	0.214	2.55	1.00	1.00	1.5	56.86	144.98	35.12	23225	13778	470	1731	2201	
1 10.00	3.81	0.000	102.69	33.41	0.204	2.58	1.00	1.00	1.3	59.95	154.87	33.42	23813	12526	501	1638	2140	
													173153	112623			20272	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.2D + 1.0Di + 1.0Wi 180 deg

50 mph 180 deg with 0.75 in Radial Ice

Gust Response Factor (Gh): 0.85 Ice Dead Load Factor :1.00 Ice Importance Factor :1.00
 Wind Importance Factor (Iw) : 1.00

Section Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)	
9 170.00	6.26	0.000	57.989	33.37	0.316	2.25	0.80	1.00	1.8	35.36	79.69	33.37	7941	5895	424	744	1167	
8 150.00	6.04	0.000	60.996	33.06	0.327	2.23	0.80	1.00	1.7	37.45	83.41	33.07	14136	10341	428	1780	2011	**
7 130.00	5.79	0.000	66.025	33.97	0.315	2.26	0.80	1.00	1.7	40.28	90.96	33.98	18055	12980	448	2249	2171	**
6 110.00	5.52	0.000	77.219	36.33	0.304	2.28	0.80	1.00	1.7	47.00	107.39	36.34	20261	14293	504	2278	2503	**
5 90.00	5.22	0.000	79.852	32.23	0.265	2.39	0.80	1.00	1.7	47.61	113.89	32.23	21099	14295	505	2306	2802	**
4 70.00	4.86	0.000	82.932	33.50	0.238	2.47	0.80	1.00	1.6	48.86	120.86	33.50	22056	14315	499	2237	2736	
3 50.00	4.41	0.000	87.512	34.64	0.219	2.53	0.80	1.00	1.6	51.24	129.83	34.64	22566	14201	487	2054	2541	
2 30.00	3.81	0.000	97.265	35.11	0.214	2.55	0.80	1.00	1.5	56.86	144.98	35.12	23225	13778	470	1731	2201	
1 10.00	3.81	0.000	102.69	33.41	0.204	2.58	0.80	1.00	1.3	59.95	154.87	33.42	23813	12526	501	1638	2140	
													173153	112623			20272	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.2D + 1.0Di + 1.0Wi 210 deg

50 mph 210 deg with 0.75 in Radial Ice

Gust Response Factor (Gh): 0.85 Ice Dead Load Factor :1.00 Ice Importance Factor :1.00
 Wind Importance Factor (Iw) : 1.00

Section Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)	
9 170.00	6.26	0.000	57.989	33.37	0.316	2.25	0.85	1.00	1.8	35.36	79.69	33.37	7941	5895	424	744	1167	
8 150.00	6.04	0.000	60.996	33.06	0.327	2.23	0.85	1.00	1.7	37.45	83.41	33.07	14136	10341	428	1780	2011	**
7 130.00	5.79	0.000	66.025	33.97	0.315	2.26	0.85	1.00	1.7	40.28	90.96	33.98	18055	12980	448	2249	2171	**
6 110.00	5.52	0.000	77.219	36.33	0.304	2.28	0.85	1.00	1.7	47.00	107.39	36.34	20261	14293	504	2278	2503	**
5 90.00	5.22	0.000	79.852	32.23	0.265	2.39	0.85	1.00	1.7	47.61	113.89	32.23	21099	14295	505	2306	2802	**
4 70.00	4.86	0.000	82.932	33.50	0.238	2.47	0.85	1.00	1.6	48.86	120.86	33.50	22056	14315	499	2237	2736	
3 50.00	4.41	0.000	87.512	34.64	0.219	2.53	0.85	1.00	1.6	51.24	129.83	34.64	22566	14201	487	2054	2541	
2 30.00	3.81	0.000	97.265	35.11	0.214	2.55	0.85	1.00	1.5	56.86	144.98	35.12	23225	13778	470	1731	2201	
1 10.00	3.81	0.000	102.69	33.41	0.204	2.58	0.85	1.00	1.3	59.95	154.87	33.42	23813	12526	501	1638	2140	
													173153	112623			20272	

** = Section Force Exceeds Solidity Ratio Criteria

Section Forces

LoadCase 1.2D + 1.0Di + 1.0Wi 240 deg

50 mph 240 deg with 0.75 in Radial Ice

Gust Response Factor (Gh): 0.85 Ice Dead Load Factor :1.00 Ice Importance Factor :1.00
 Wind Importance Factor (Iw) : 1.00

Section Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)	
9 170.00	6.26	0.000	57.989	33.37	0.316	2.25	1.00	1.00	1.8	35.36	79.69	33.37	7941	5895	424	744	1167	
8 150.00	6.04	0.000	60.996	33.06	0.327	2.23	1.00	1.00	1.7	37.45	83.41	33.07	14136	10341	428	1780	2011	**
7 130.00	5.79	0.000	66.025	33.97	0.315	2.26	1.00	1.00	1.7	40.28	90.96	33.98	18055	12980	448	2249	2171	**
6 110.00	5.52	0.000	77.219	36.33	0.304	2.28	1.00	1.00	1.7	47.00	107.39	36.34	20261	14293	504	2278	2503	**
5 90.00	5.22	0.000	79.852	32.23	0.265	2.39	1.00	1.00	1.7	47.61	113.89	32.23	21099	14295	505	2306	2802	**
4 70.00	4.86	0.000	82.932	33.50	0.238	2.47	1.00	1.00	1.6	48.86	120.86	33.50	22056	14315	499	2237	2736	
3 50.00	4.41	0.000	87.512	34.64	0.219	2.53	1.00	1.00	1.6	51.24	129.83	34.64	22566	14201	487	2054	2541	
2 30.00	3.81	0.000	97.265	35.11	0.214	2.55	1.00	1.00	1.5	56.86	144.98	35.12	23225	13778	470	1731	2201	
1 10.00	3.81	0.000	102.69	33.41	0.204	2.58	1.00	1.00	1.3	59.95	154.87	33.42	23813	12526	501	1638	2140	
													173153	112623			20272	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.2D + 1.0Di + 1.0Wi 300 deg

50 mph 300 deg with 0.75 in Radial Ice

Gust Response Factor (Gh): 0.85 Ice Dead Load Factor :1.00 Ice Importance Factor :1.00
 Wind Importance Factor (Iw) : 1.00

Section Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)	
9 170.00	6.26	0.000	57.989	33.37	0.316	2.25	0.80	1.00	1.8	35.36	79.69	33.37	7941	5895	424	744	1167	
8 150.00	6.04	0.000	60.996	33.06	0.327	2.23	0.80	1.00	1.7	37.45	83.41	33.07	14136	10341	428	1780	2011	**
7 130.00	5.79	0.000	66.025	33.97	0.315	2.26	0.80	1.00	1.7	40.28	90.96	33.98	18055	12980	448	2249	2171	**
6 110.00	5.52	0.000	77.219	36.33	0.304	2.28	0.80	1.00	1.7	47.00	107.39	36.34	20261	14293	504	2278	2503	**
5 90.00	5.22	0.000	79.852	32.23	0.265	2.39	0.80	1.00	1.7	47.61	113.89	32.23	21099	14295	505	2306	2802	**
4 70.00	4.86	0.000	82.932	33.50	0.238	2.47	0.80	1.00	1.6	48.86	120.86	33.50	22056	14315	499	2237	2736	
3 50.00	4.41	0.000	87.512	34.64	0.219	2.53	0.80	1.00	1.6	51.24	129.83	34.64	22566	14201	487	2054	2541	
2 30.00	3.81	0.000	97.265	35.11	0.214	2.55	0.80	1.00	1.5	56.86	144.98	35.12	23225	13778	470	1731	2201	
1 10.00	3.81	0.000	102.69	33.41	0.204	2.58	0.80	1.00	1.3	59.95	154.87	33.42	23813	12526	501	1638	2140	
													173153	112623			20272	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.2D + 1.0Di + 1.0Wi 330 deg

50 mph 330 deg with 0.75 in Radial Ice

Gust Response Factor (Gh): 0.85 Ice Dead Load Factor :1.00 Ice Importance Factor :1.00
 Wind Importance Factor (Iw) : 1.00

Section Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)	
9 170.00	6.26	0.000	57.989	33.37	0.316	2.25	0.85	1.00	1.8	35.36	79.69	33.37	7941	5895	424	744	1167	
8 150.00	6.04	0.000	60.996	33.06	0.327	2.23	0.85	1.00	1.7	37.45	83.41	33.07	14136	10341	428	1780	2011	**
7 130.00	5.79	0.000	66.025	33.97	0.315	2.26	0.85	1.00	1.7	40.28	90.96	33.98	18055	12980	448	2249	2171	**
6 110.00	5.52	0.000	77.219	36.33	0.304	2.28	0.85	1.00	1.7	47.00	107.39	36.34	20261	14293	504	2278	2503	**
5 90.00	5.22	0.000	79.852	32.23	0.265	2.39	0.85	1.00	1.7	47.61	113.89	32.23	21099	14295	505	2306	2802	**
4 70.00	4.86	0.000	82.932	33.50	0.238	2.47	0.85	1.00	1.6	48.86	120.86	33.50	22056	14315	499	2237	2736	
3 50.00	4.41	0.000	87.512	34.64	0.219	2.53	0.85	1.00	1.6	51.24	129.83	34.64	22566	14201	487	2054	2541	
2 30.00	3.81	0.000	97.265	35.11	0.214	2.55	0.85	1.00	1.5	56.86	144.98	35.12	23225	13778	470	1731	2201	
1 10.00	3.81	0.000	102.69	33.41	0.204	2.58	0.85	1.00	1.3	59.95	154.87	33.42	23813	12526	501	1638	2140	
													173153	112623			20272	

** = Section Force Exceeds Solidity Ratio Criteria

Section Forces

LoadCase 1.0D + 1.0W Service Normal

Serviceability - 60 mph Wind Normal

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9	170.00	9.01	0.000	24.617	0.000	0.139	2.81	1.00	1.00	0.0	14.25	40.09	0.00	1705	0	307	300	607
8	150.00	8.69	0.000	27.928	0.000	0.154	2.76	1.00	1.00	0.0	16.22	44.69	0.00	3163	0	330	771	1101
7	130.00	8.34	0.000	32.050	0.000	0.157	2.75	1.00	1.00	0.0	18.62	51.13	0.00	4230	0	363	1107	1470
6	110.00	7.96	0.000	40.881	0.000	0.165	2.72	1.00	1.00	0.0	23.75	64.55	0.00	4973	0	436	1163	1599
5	90.00	7.51	0.000	47.618	0.000	0.161	2.73	1.00	1.00	0.0	26.32	71.87	0.00	5670	0	459	1125	1584
4	70.00	6.99	0.000	49.430	0.000	0.144	2.79	1.00	1.00	0.0	27.40	76.52	0.00	6451	0	455	1064	1519
3	50.00	6.35	0.000	52.869	0.000	0.134	2.83	1.00	1.00	0.0	29.61	83.83	0.00	6971	0	453	971	1424
2	30.00	5.49	0.000	62.148	0.000	0.138	2.82	1.00	1.00	0.0	33.68	94.81	0.00	7873	0	442	840	1282
1	10.00	5.48	0.000	69.273	0.000	0.139	2.81	1.00	1.00	0.0	37.88	106.57	0.00	9406	0	497	839	1336
														50442	0			11920

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.0D + 1.0W Service 60 deg

Serviceability - 60 mph Wind 60 deg

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9	170.00	9.01	0.000	24.617	0.000	0.139	2.81	0.80	1.00	0.0	14.25	40.09	0.00	1705	0	307	300	607
8	150.00	8.69	0.000	27.928	0.000	0.154	2.76	0.80	1.00	0.0	16.22	44.69	0.00	3163	0	330	771	1101
7	130.00	8.34	0.000	32.050	0.000	0.157	2.75	0.80	1.00	0.0	18.62	51.13	0.00	4230	0	363	1107	1470
6	110.00	7.96	0.000	40.881	0.000	0.165	2.72	0.80	1.00	0.0	23.75	64.55	0.00	4973	0	436	1163	1599
5	90.00	7.51	0.000	47.618	0.000	0.161	2.73	0.80	1.00	0.0	26.32	71.87	0.00	5670	0	459	1125	1584
4	70.00	6.99	0.000	49.430	0.000	0.144	2.79	0.80	1.00	0.0	27.40	76.52	0.00	6451	0	455	1064	1519
3	50.00	6.35	0.000	52.869	0.000	0.134	2.83	0.80	1.00	0.0	29.61	83.83	0.00	6971	0	453	971	1424
2	30.00	5.49	0.000	62.148	0.000	0.138	2.82	0.80	1.00	0.0	33.68	94.81	0.00	7873	0	442	840	1282
1	10.00	5.48	0.000	69.273	0.000	0.139	2.81	0.80	1.00	0.0	37.88	106.57	0.00	9406	0	497	839	1336
														50442	0			11920

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.0D + 1.0W Service 90 deg

Serviceability - 60 mph Wind 90 deg

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9	170.00	9.01	0.000	24.617	0.000	0.139	2.81	0.85	1.00	0.0	14.25	40.09	0.00	1705	0	307	300	607
8	150.00	8.69	0.000	27.928	0.000	0.154	2.76	0.85	1.00	0.0	16.22	44.69	0.00	3163	0	330	771	1101
7	130.00	8.34	0.000	32.050	0.000	0.157	2.75	0.85	1.00	0.0	18.62	51.13	0.00	4230	0	363	1107	1470
6	110.00	7.96	0.000	40.881	0.000	0.165	2.72	0.85	1.00	0.0	23.75	64.55	0.00	4973	0	436	1163	1599
5	90.00	7.51	0.000	47.618	0.000	0.161	2.73	0.85	1.00	0.0	26.32	71.87	0.00	5670	0	459	1125	1584
4	70.00	6.99	0.000	49.430	0.000	0.144	2.79	0.85	1.00	0.0	27.40	76.52	0.00	6451	0	455	1064	1519
3	50.00	6.35	0.000	52.869	0.000	0.134	2.83	0.85	1.00	0.0	29.61	83.83	0.00	6971	0	453	971	1424
2	30.00	5.49	0.000	62.148	0.000	0.138	2.82	0.85	1.00	0.0	33.68	94.81	0.00	7873	0	442	840	1282
1	10.00	5.48	0.000	69.273	0.000	0.139	2.81	0.85	1.00	0.0	37.88	106.57	0.00	9406	0	497	839	1336
														50442	0			11920

** = Section Force Exceeds Solidity Ratio Criteria

Section Forces

LoadCase 1.0D + 1.0W Service 120 deg

Serviceability - 60 mph Wind 120 deg

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9 170.00	9.01	0.000	24.617	0.000	0.139	2.81	1.00	1.00	0.0	14.25	40.09	0.00	1705	0	307	300	607
8 150.00	8.69	0.000	27.928	0.000	0.154	2.76	1.00	1.00	0.0	16.22	44.69	0.00	3163	0	330	771	1101
7 130.00	8.34	0.000	32.050	0.000	0.157	2.75	1.00	1.00	0.0	18.62	51.13	0.00	4230	0	363	1107	1470
6 110.00	7.96	0.000	40.881	0.000	0.165	2.72	1.00	1.00	0.0	23.75	64.55	0.00	4973	0	436	1163	1599
5 90.00	7.51	0.000	47.618	0.000	0.161	2.73	1.00	1.00	0.0	26.32	71.87	0.00	5670	0	459	1125	1584
4 70.00	6.99	0.000	49.430	0.000	0.144	2.79	1.00	1.00	0.0	27.40	76.52	0.00	6451	0	455	1064	1519
3 50.00	6.35	0.000	52.869	0.000	0.134	2.83	1.00	1.00	0.0	29.61	83.83	0.00	6971	0	453	971	1424
2 30.00	5.49	0.000	62.148	0.000	0.138	2.82	1.00	1.00	0.0	33.68	94.81	0.00	7873	0	442	840	1282
1 10.00	5.48	0.000	69.273	0.000	0.139	2.81	1.00	1.00	0.0	37.88	106.57	0.00	9406	0	497	839	1336
													50442	0			11920

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.0D + 1.0W Service 180 deg

Serviceability - 60 mph Wind 180 deg

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9 170.00	9.01	0.000	24.617	0.000	0.139	2.81	0.80	1.00	0.0	14.25	40.09	0.00	1705	0	307	300	607
8 150.00	8.69	0.000	27.928	0.000	0.154	2.76	0.80	1.00	0.0	16.22	44.69	0.00	3163	0	330	771	1101
7 130.00	8.34	0.000	32.050	0.000	0.157	2.75	0.80	1.00	0.0	18.62	51.13	0.00	4230	0	363	1107	1470
6 110.00	7.96	0.000	40.881	0.000	0.165	2.72	0.80	1.00	0.0	23.75	64.55	0.00	4973	0	436	1163	1599
5 90.00	7.51	0.000	47.618	0.000	0.161	2.73	0.80	1.00	0.0	26.32	71.87	0.00	5670	0	459	1125	1584
4 70.00	6.99	0.000	49.430	0.000	0.144	2.79	0.80	1.00	0.0	27.40	76.52	0.00	6451	0	455	1064	1519
3 50.00	6.35	0.000	52.869	0.000	0.134	2.83	0.80	1.00	0.0	29.61	83.83	0.00	6971	0	453	971	1424
2 30.00	5.49	0.000	62.148	0.000	0.138	2.82	0.80	1.00	0.0	33.68	94.81	0.00	7873	0	442	840	1282
1 10.00	5.48	0.000	69.273	0.000	0.139	2.81	0.80	1.00	0.0	37.88	106.57	0.00	9406	0	497	839	1336
													50442	0			11920

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.0D + 1.0W Service 210 deg

Serviceability - 60 mph Wind 210 deg

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9 170.00	9.01	0.000	24.617	0.000	0.139	2.81	0.85	1.00	0.0	14.25	40.09	0.00	1705	0	307	300	607
8 150.00	8.69	0.000	27.928	0.000	0.154	2.76	0.85	1.00	0.0	16.22	44.69	0.00	3163	0	330	771	1101
7 130.00	8.34	0.000	32.050	0.000	0.157	2.75	0.85	1.00	0.0	18.62	51.13	0.00	4230	0	363	1107	1470
6 110.00	7.96	0.000	40.881	0.000	0.165	2.72	0.85	1.00	0.0	23.75	64.55	0.00	4973	0	436	1163	1599
5 90.00	7.51	0.000	47.618	0.000	0.161	2.73	0.85	1.00	0.0	26.32	71.87	0.00	5670	0	459	1125	1584
4 70.00	6.99	0.000	49.430	0.000	0.144	2.79	0.85	1.00	0.0	27.40	76.52	0.00	6451	0	455	1064	1519
3 50.00	6.35	0.000	52.869	0.000	0.134	2.83	0.85	1.00	0.0	29.61	83.83	0.00	6971	0	453	971	1424
2 30.00	5.49	0.000	62.148	0.000	0.138	2.82	0.85	1.00	0.0	33.68	94.81	0.00	7873	0	442	840	1282
1 10.00	5.48	0.000	69.273	0.000	0.139	2.81	0.85	1.00	0.0	37.88	106.57	0.00	9406	0	497	839	1336
													50442	0			11920

** = Section Force Exceeds Solidity Ratio Criteria

Section Forces

LoadCase 1.0D + 1.0W Service 240 deg

Serviceability - 60 mph Wind 240 deg

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9 170.00	9.01	0.000	24.617	0.000	0.139	2.81	1.00	1.00	0.0	14.25	40.09	0.00	1705	0	307	300	607
8 150.00	8.69	0.000	27.928	0.000	0.154	2.76	1.00	1.00	0.0	16.22	44.69	0.00	3163	0	330	771	1101
7 130.00	8.34	0.000	32.050	0.000	0.157	2.75	1.00	1.00	0.0	18.62	51.13	0.00	4230	0	363	1107	1470
6 110.00	7.96	0.000	40.881	0.000	0.165	2.72	1.00	1.00	0.0	23.75	64.55	0.00	4973	0	436	1163	1599
5 90.00	7.51	0.000	47.618	0.000	0.161	2.73	1.00	1.00	0.0	26.32	71.87	0.00	5670	0	459	1125	1584
4 70.00	6.99	0.000	49.430	0.000	0.144	2.79	1.00	1.00	0.0	27.40	76.52	0.00	6451	0	455	1064	1519
3 50.00	6.35	0.000	52.869	0.000	0.134	2.83	1.00	1.00	0.0	29.61	83.83	0.00	6971	0	453	971	1424
2 30.00	5.49	0.000	62.148	0.000	0.138	2.82	1.00	1.00	0.0	33.68	94.81	0.00	7873	0	442	840	1282
1 10.00	5.48	0.000	69.273	0.000	0.139	2.81	1.00	1.00	0.0	37.88	106.57	0.00	9406	0	497	839	1336
													50442	0			11920

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.0D + 1.0W Service 300 deg

Serviceability - 60 mph Wind 300 deg

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9 170.00	9.01	0.000	24.617	0.000	0.139	2.81	0.80	1.00	0.0	14.25	40.09	0.00	1705	0	307	300	607
8 150.00	8.69	0.000	27.928	0.000	0.154	2.76	0.80	1.00	0.0	16.22	44.69	0.00	3163	0	330	771	1101
7 130.00	8.34	0.000	32.050	0.000	0.157	2.75	0.80	1.00	0.0	18.62	51.13	0.00	4230	0	363	1107	1470
6 110.00	7.96	0.000	40.881	0.000	0.165	2.72	0.80	1.00	0.0	23.75	64.55	0.00	4973	0	436	1163	1599
5 90.00	7.51	0.000	47.618	0.000	0.161	2.73	0.80	1.00	0.0	26.32	71.87	0.00	5670	0	459	1125	1584
4 70.00	6.99	0.000	49.430	0.000	0.144	2.79	0.80	1.00	0.0	27.40	76.52	0.00	6451	0	455	1064	1519
3 50.00	6.35	0.000	52.869	0.000	0.134	2.83	0.80	1.00	0.0	29.61	83.83	0.00	6971	0	453	971	1424
2 30.00	5.49	0.000	62.148	0.000	0.138	2.82	0.80	1.00	0.0	33.68	94.81	0.00	7873	0	442	840	1282
1 10.00	5.48	0.000	69.273	0.000	0.139	2.81	0.80	1.00	0.0	37.88	106.57	0.00	9406	0	497	839	1336
													50442	0			11920

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.0D + 1.0W Service 330 deg

Serviceability - 60 mph Wind 330 deg

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
9 170.00	9.01	0.000	24.617	0.000	0.139	2.81	0.85	1.00	0.0	14.25	40.09	0.00	1705	0	307	300	607
8 150.00	8.69	0.000	27.928	0.000	0.154	2.76	0.85	1.00	0.0	16.22	44.69	0.00	3163	0	330	771	1101
7 130.00	8.34	0.000	32.050	0.000	0.157	2.75	0.85	1.00	0.0	18.62	51.13	0.00	4230	0	363	1107	1470
6 110.00	7.96	0.000	40.881	0.000	0.165	2.72	0.85	1.00	0.0	23.75	64.55	0.00	4973	0	436	1163	1599
5 90.00	7.51	0.000	47.618	0.000	0.161	2.73	0.85	1.00	0.0	26.32	71.87	0.00	5670	0	459	1125	1584
4 70.00	6.99	0.000	49.430	0.000	0.144	2.79	0.85	1.00	0.0	27.40	76.52	0.00	6451	0	455	1064	1519
3 50.00	6.35	0.000	52.869	0.000	0.134	2.83	0.85	1.00	0.0	29.61	83.83	0.00	6971	0	453	971	1424
2 30.00	5.49	0.000	62.148	0.000	0.138	2.82	0.85	1.00	0.0	33.68	94.81	0.00	7873	0	442	840	1282
1 10.00	5.48	0.000	69.273	0.000	0.139	2.81	0.85	1.00	0.0	37.88	106.57	0.00	9406	0	497	839	1336
													50442	0			11920

** = Section Force Exceeds Solidity Ratio Criteria

Site Number: 383660

Code: ANSI/TIA-222-G

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Site Name: North Madison Volunteer FD, CT

Engineering Number: 12927180_C3_03

7/18/2019 7:35:29 PM

Customer: T-MOBILE

Equivalent Lateral Force Method

(Based on ASCE7-10 Chapters 11, 12 & 15)

Spectral Response Acceleration for Short Period (S_s):	0.17
Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.06
Long-Period Transition Period (T_L - Seconds):	6
Importance Factor (I_p):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.18
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Seismic Response Coefficient (C_s):	0.05
Upper Limit C_s :	0.05
Lower Limit C_s :	0.03
Period based on Rayleigh Method (sec):	0.69
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.10
Total Unfactored Dead Load:	63.26 k
Seismic Base Shear (E):	3.80 k

LoadCase (1.2 + 0.2Sds) * DL + E

Seismic

Section	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
9	170.00	1,705	474,899	0.056	214	2,109
8	150.00	3,163	767,915	0.091	346	3,912
7	130.00	4,230	877,833	0.104	396	5,232
6	110.00	4,973	859,363	0.102	387	6,151
5	90.00	5,670	786,413	0.093	354	7,014
4	70.00	6,451	679,217	0.080	306	7,979
3	50.00	6,971	507,584	0.060	229	8,622
2	30.00	7,873	327,479	0.039	148	9,738
1	10.00	9,406	117,354	0.014	53	11,634
Generic 9' Omni	180.00	25	7,412	0.001	3	31
Generic 15' Dipole	180.00	45	13,341	0.002	6	56
2-Bay Dipole	180.00	18	5,188	0.001	2	22
4-Bay Dipole	180.00	35	10,377	0.001	5	43
Flat Side Arm	180.00	450	133,414	0.016	60	557
RFS PD455	180.00	48	14,231	0.002	6	59
Generic RF-PRO-1B	175.00	36	10,349	0.001	5	45
Alcatel Lucent RRH ALU 4X45 AWS	170.00	190	52,882	0.006	24	235
ALU RRH2X60PCS	170.00	165	45,948	0.005	21	204
ALU RRH4X60LTE	170.00	159	44,277	0.005	20	197
Andrew 8' MW Dish	170.00	400	111,389	0.013	50	495
Antel BXA-70063/4CF	170.00	20	5,514	0.001	2	24
Antel BXA-70063/6CF	170.00	17	4,734	0.001	2	21
Commscope LNX6514DS-A1M	170.00	86	23,976	0.003	11	106

Site Number: 383660

Code: ANSI/TIA-222-G

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Site Name: North Madison Volunteer FD, CT

Engineering Number: 12927180_C3_03

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Customer: T-MOBILE

Equivalent Lateral Force Method

Commscope SBNHH-1D65B	170.00	244	67,836	0.008	31	301
Flat Light Sector Frame	170.00	1,200	334,166	0.040	151	1,484
RFS DB-T1-6Z-8AB-0Z	170.00	44	12,253	0.001	6	54
RFS DB-T1-6Z-8AB-0Z	170.00	44	12,253	0.001	6	54
RFS FD9R6004/2C-3L	170.00	16	4,344	0.001	2	19
Andrew DB844H90E-XY	160.00	168	43,776	0.005	20	208
Flat Light Sector Frame	160.00	1,200	312,683	0.037	141	1,484
Generic RF-PRO-1B	154.00	18	4,498	0.001	2	22
ALU 1900 MHz 4X45 RRH	150.00	180	43,699	0.005	20	223
ALU 800 MHz 2X50W RRH w/ Filter	150.00	192	46,612	0.006	21	237
ALU TD-RRH8X20	150.00	198	48,142	0.006	22	245
Flat Light Sector Frame	150.00	1,200	291,328	0.035	131	1,484
RFS APXVSP18-C-A20	150.00	171	41,514	0.005	19	212
RFS APXVTM14-C-I20	150.00	159	38,528	0.005	17	196
CCI HPA65R-BU6A	140.00	126	28,294	0.003	13	155
Ericsson RRUS 4449 B5, B12	140.00	213	47,944	0.006	22	263
Ericsson RRUS 8843 B2, B66A	140.00	216	48,620	0.006	22	267
Flat Light Sector Frame	140.00	1,200	270,109	0.032	122	1,484
Kathrein Scala 80010965	140.00	293	65,907	0.008	30	362
Powerwave Allgon 7770.00	140.00	105	23,635	0.003	11	130
Powerwave Allgon LGP21401	140.00	85	19,043	0.002	9	105
Raycap DC6-48-60-18-8F	140.00	20	4,502	0.001	2	25
Raycap DC6-48-60-18-8F (23.5" Height)	140.00	20	4,502	0.001	2	25
EMS RR90-17-02DP	130.00	41	8,405	0.001	4	50
Ericsson KRY 112 144/1	130.00	33	6,848	0.001	3	41
Ericsson KRY 112 489/2	130.00	46	9,588	0.001	4	57
Ericsson Radio 4449 B12,B71	130.00	222	46,072	0.005	21	275
Generic 4' Omni	130.00	10	2,075	0.000	1	12
Pro 1 VFA12-HD Sector Frame	130.00	2,214	459,471	0.054	207	2,739
RFS APXVAARR24_43-U-NA20	130.00	384	79,629	0.009	36	475
Flat Side Arm	125.00	150	29,820	0.004	13	186
Sinclair SC323-HF2LDF	125.00	6	1,233	0.000	1	8
Generic 6' Dipole	96.00	20	2,977	0.000	1	25
Generic 8' Grid Dish	96.00	282	41,976	0.005	19	349
Generic 4' Omni	94.00	10	1,455	0.000	1	12
Flat Side Arm	90.00	300	41,606	0.005	19	371
RFI FSA10-67-DIN	90.00	9	1,248	0.000	1	11
Sinclair SC323-HF2LDF	90.00	6	860	0.000	0	8
PCTEL GPS-TMG-HR-26N	75.00	1	68	0.000	0	1
Stand-Off	75.00	75	8,517	0.001	4	93
Generic GPS	58.00	10	857	0.000	0	12
		63,264	8,437,980	1.000	3,802	78,251

LoadCase (0.9 - 0.2Sds) * DL + E

Seismic (Reduced DL)

Section	Height Above Base (ft)	Weight (lb)	W _z (lb-ft)	C _{vx}	Horizontal Force (lb)	Vertical Force (lb)
9	170.00	1,705	474,899	0.056	214	1,472
8	150.00	3,163	767,915	0.091	346	2,730
7	130.00	4,230	877,833	0.104	396	3,651
6	110.00	4,973	859,363	0.102	387	4,292
5	90.00	5,670	786,413	0.093	354	4,894
4	70.00	6,451	679,217	0.080	306	5,568
3	50.00	6,971	507,584	0.060	229	6,016

Site Number: 383660

Code:

ANSI/TIA-222-G

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Site Name: North Madison Volunteer FD, CT

Engineering Number: 12927180_C3_03

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Customer: T-MOBILE

Equivalent Lateral Force Method

2	30.00	7,873	327,479	0.039	148	6,795
1	10.00	9,406	117,354	0.014	53	8,118
Generic 9' Omni	180.00	25	7,412	0.001	3	22
Generic 15' Dipole	180.00	45	13,341	0.002	6	39
2-Bay Dipole	180.00	18	5,188	0.001	2	15
4-Bay Dipole	180.00	35	10,377	0.001	5	30
Flat Side Arm	180.00	450	133,414	0.016	60	388
RFS PD455	180.00	48	14,231	0.002	6	41
Generic RF-PRO-1B	175.00	36	10,349	0.001	5	31
Alcatel Lucent RRH ALU 4X45 AWS	170.00	190	52,882	0.006	24	164
ALU RRH2X60PCS	170.00	165	45,948	0.005	21	142
ALU RRH4X60LTE	170.00	159	44,277	0.005	20	137
Andrew 8' MW Dish	170.00	400	111,389	0.013	50	345
Antel BXA-70063/4CF	170.00	20	5,514	0.001	2	17
Antel BXA-70063/6CF	170.00	17	4,734	0.001	2	15
Commscope LNX6514DS-A1M	170.00	86	23,976	0.003	11	74
Commscope SBNHH-1D65B	170.00	244	67,836	0.008	31	210
Flat Light Sector Frame	170.00	1,200	334,166	0.040	151	1,036
RFS DB-T1-6Z-8AB-0Z	170.00	44	12,253	0.001	6	38
RFS DB-T1-6Z-8AB-0Z	170.00	44	12,253	0.001	6	38
RFS FD9R6004/2C-3L	170.00	16	4,344	0.001	2	13
Andrew DB844H90E-XY	160.00	168	43,776	0.005	20	145
Flat Light Sector Frame	160.00	1,200	312,683	0.037	141	1,036
Generic RF-PRO-1B	154.00	18	4,498	0.001	2	16
ALU 1900 MHz 4X45 RRH	150.00	180	43,699	0.005	20	155
ALU 800 MHz 2X50W RRH w/ Filter	150.00	192	46,612	0.006	21	166
ALU TD-RRH8X20	150.00	198	48,142	0.006	22	171
Flat Light Sector Frame	150.00	1,200	291,328	0.035	131	1,036
RFS APXVSP18-C-A20	150.00	171	41,514	0.005	19	148
RFS APXVTM14-C-I20	150.00	159	38,528	0.005	17	137
CCI HPA65R-BU6A	140.00	126	28,294	0.003	13	108
Ericsson RRUS 4449 B5, B12	140.00	213	47,944	0.006	22	184
Ericsson RRUS 8843 B2, B66A	140.00	216	48,620	0.006	22	186
Flat Light Sector Frame	140.00	1,200	270,109	0.032	122	1,036
Kathrein Scala 80010965	140.00	293	65,907	0.008	30	253
Powerwave Allgon 7770.00	140.00	105	23,635	0.003	11	91
Powerwave Allgon LGP21401	140.00	85	19,043	0.002	9	73
Raycap DC6-48-60-18-8F	140.00	20	4,502	0.001	2	17
Raycap DC6-48-60-18-8F (23.5" Height)	140.00	20	4,502	0.001	2	17
EMS RR90-17-02DP	130.00	41	8,405	0.001	4	35
Ericsson KRY 112 144/1	130.00	33	6,848	0.001	3	28
Ericsson KRY 112 489/2	130.00	46	9,588	0.001	4	40
Ericsson Radio 4449 B12,B71	130.00	222	46,072	0.005	21	192
Generic 4' Omni	130.00	10	2,075	0.000	1	9
Pro 1 VFA12-HD Sector Frame	130.00	2,214	459,471	0.054	207	1,911
RFS APXVAARR24_43-U-NA20	130.00	384	79,629	0.009	36	331
Flat Side Arm	125.00	150	29,820	0.004	13	129
Sinclair SC323-HF2LDF	125.00	6	1,233	0.000	1	5
Generic 6' Dipole	96.00	20	2,977	0.000	1	17
Generic 8' Grid Dish	96.00	282	41,976	0.005	19	243
Generic 4' Omni	94.00	10	1,455	0.000	1	9
Flat Side Arm	90.00	300	41,606	0.005	19	259
RFI FSA10-67-DIN	90.00	9	1,248	0.000	1	8
Sinclair SC323-HF2LDF	90.00	6	860	0.000	0	5
PCTEL GPS-TMG-HR-26N	75.00	1	68	0.000	0	1

Site Number: 383660

Code: ANSI/TIA-222-G

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Site Name: North Madison Volunteer FD, CT

Engineering Number: 12927180_C3_03

7/18/2019 7:35:29 PM

Customer: T-MOBILE

Equivalent Lateral Force Method

Stand-Off	75.00	75	8,517	0.001	4	65
Generic GPS	58.00	10	857	0.000	0	9
		63,264	8,437,980	1.000	3,802	54,603

Site Number: 383660

Code:

ANSI/TIA-222-G

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Site Name: North Madison Volunteer FD, CT

Engineering Number: 12927180_C3_03

7/18/2019 7:35:29 PM

Customer: T-MOBILE

Equivalent Modal Analysis Method

(Based on ASCE7-10 Chapters 11, 12 & 15 and ANSI/TIA-G, section 2.7)

Spectral Response Acceleration for Short Period (S_{ps}):	0.17
Spectral Response Acceleration at 1.0 Second Period (S_{p1}):	0.06
Importance Factor (I_p):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.18
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Period Based on Rayleigh Method (sec):	0.69
Redundancy Factor (ρ):	1.30

LoadCase (1.2 + 0.2Sds) * DL + E

Seismic

Section	Height Above Base (ft)	Weight (lb)	a	b	c	S_{az}	Horizontal Force (lb)	Vertical Force (lb)
9	170.00	1,705	1.686	1.069	0.793	0.320	237	2,109
8	150.00	3,163	1.312	0.138	0.347	0.170	233	3,912
7	130.00	4,230	0.986	-0.113	0.124	0.099	181	5,232
6	110.00	4,973	0.706	-0.089	0.031	0.074	160	6,151
5	90.00	5,670	0.472	-0.006	0.006	0.064	156	7,014
4	70.00	6,451	0.286	0.048	0.013	0.051	142	7,979
3	50.00	6,971	0.146	0.068	0.031	0.036	109	8,622
2	30.00	7,873	0.053	0.071	0.042	0.024	82	9,738
1	10.00	9,406	0.006	0.047	0.027	0.012	49	11,634
Generic 9' Omni	180.00	25	1.890	1.980	1.140	0.431	5	31
Generic 15' Dipole	180.00	45	1.890	1.980	1.140	0.431	8	56
2-Bay Dipole	180.00	18	1.890	1.980	1.140	0.431	3	22
4-Bay Dipole	180.00	35	1.890	1.980	1.140	0.431	7	43
Flat Side Arm	180.00	450	1.890	1.980	1.140	0.431	84	557
RFS PD455	180.00	48	1.890	1.980	1.140	0.431	9	59
Generic RF-PRO-1B	175.00	36	1.786	1.478	0.954	0.372	6	45
Alcatel Lucent RRH ALU 4X45	170.00	190	1.686	1.069	0.793	0.320	26	235
ALU RRH2X60PCS	170.00	165	1.686	1.069	0.793	0.320	23	204
ALU RRH4X60LTE	170.00	159	1.686	1.069	0.793	0.320	22	197
Andrew 8' MW Dish	170.00	400	1.686	1.069	0.793	0.320	55	495
Antel BXA-70063/4CF	170.00	20	1.686	1.069	0.793	0.320	3	24
Antel BXA-70063/6CF	170.00	17	1.686	1.069	0.793	0.320	2	21
Commscope LNX6514DS-A1M	170.00	86	1.686	1.069	0.793	0.320	12	106
Commscope SBNHH-1D65B	170.00	244	1.686	1.069	0.793	0.320	34	301
Flat Light Sector Frame	170.00	1,200	1.686	1.069	0.793	0.320	166	1,484
RFS DB-T1-6Z-8AB-0Z	170.00	44	1.686	1.069	0.793	0.320	6	54
RFS DB-T1-6Z-8AB-0Z	170.00	44	1.686	1.069	0.793	0.320	6	54
RFS FD9R6004/2C-3L	170.00	16	1.686	1.069	0.793	0.320	2	19
Andrew DB844H90E-XY	160.00	168	1.493	0.485	0.535	0.234	17	208
Flat Light Sector Frame	160.00	1,200	1.493	0.485	0.535	0.234	122	1,484
Generic RF-PRO-1B	154.00	18	1.383	0.253	0.415	0.193	2	22
ALU 1900 MHz 4X45 RRH	150.00	180	1.312	0.138	0.347	0.170	13	223
ALU 800 MHz 2X50W RRH w/ Filter	150.00	192	1.312	0.138	0.347	0.170	14	237
ALU TD-RRH8X20	150.00	198	1.312	0.138	0.347	0.170	15	245
Flat Light Sector Frame	150.00	1,200	1.312	0.138	0.347	0.170	88	1,484
RFS APXVSP18-C-A20	150.00	171	1.312	0.138	0.347	0.170	13	212
RFS APXVTM14-C-I20	150.00	159	1.312	0.138	0.347	0.170	12	196
CCI HPA65R-BU6A	140.00	126	1.143	-0.042	0.215	0.126	7	155

Site Number: 383660

Code: ANSI/TIA-222-G

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Site Name: North Madison Volunteer FD, CT

Engineering Number: 12927180_C3_03

7/18/2019 7:35:29 PM

Customer: T-MOBILE

Equivalent Modal Analysis Method

Ericsson RRUS 4449 B5, B12	140.00	213	1.143	-0.042	0.215	0.126	12	263
Ericsson RRUS 8843 B2, B66A	140.00	216	1.143	-0.042	0.215	0.126	12	267
Flat Light Sector Frame	140.00	1,200	1.143	-0.042	0.215	0.126	66	1,484
Kathrein Scala 80010965	140.00	293	1.143	-0.042	0.215	0.126	16	362
Powerwave Allgon 7770.00	140.00	105	1.143	-0.042	0.215	0.126	6	130
Powerwave Allgon LGP21401	140.00	85	1.143	-0.042	0.215	0.126	5	105
Raycap DC6-48-60-18-8F	140.00	20	1.143	-0.042	0.215	0.126	1	25
Raycap DC6-48-60-18-8F (23.5"	140.00	20	1.143	-0.042	0.215	0.126	1	25
EMS RR90-17-02DP	130.00	41	0.986	-0.113	0.124	0.099	2	50
Ericsson KRY 112 144/1	130.00	33	0.986	-0.113	0.124	0.099	1	41
Ericsson KRY 112 489/2	130.00	46	0.986	-0.113	0.124	0.099	2	57
Ericsson Radio 4449 B12,B71	130.00	222	0.986	-0.113	0.124	0.099	9	275
Generic 4' Omni	130.00	10	0.986	-0.113	0.124	0.099	0	12
Pro 1 VFA12-HD Sector Frame	130.00	2,214	0.986	-0.113	0.124	0.099	95	2,739
RFS APXVAARR24_43-U-NA20	130.00	384	0.986	-0.113	0.124	0.099	16	475
Flat Side Arm	125.00	150	0.911	-0.122	0.092	0.090	6	186
Sinclair SC323-HF2LDF	125.00	6	0.911	-0.122	0.092	0.090	0	8
Generic 6' Dipole	96.00	20	0.538	-0.030	0.009	0.067	1	25
Generic 8' Grid Dish	96.00	282	0.538	-0.030	0.009	0.067	8	349
Generic 4' Omni	94.00	10	0.515	-0.022	0.008	0.066	0	12
Flat Side Arm	90.00	300	0.472	-0.006	0.006	0.064	8	371
RFI FSA10-67-DIN	90.00	9	0.472	-0.006	0.006	0.064	0	11
Sinclair SC323-HF2LDF	90.00	6	0.472	-0.006	0.006	0.064	0	8
PCTEL GPS-TMG-HR-26N	75.00	1	0.328	0.039	0.010	0.054	0	1
Stand-Off	75.00	75	0.328	0.039	0.010	0.054	2	93
Generic GPS	58.00	10	0.196	0.063	0.024	0.042	0	12
		63,264	74.128	28.100	25.368	11.873	2,399	78,251

LoadCase (0.9 - 0.2Sds) * DL + E

Seismic (Reduced DL)

Section	Height Above Base (ft)	Weight (lb)	Seismic (Reduced DL)				Horizontal Force (lb)	Vertical Force (lb)
			a	b	c	S _{az}		
9	170.00	1,705	1.686	1.069	0.793	0.320	237	1,472
8	150.00	3,163	1.312	0.138	0.347	0.170	233	2,730
7	130.00	4,230	0.986	-0.113	0.124	0.099	181	3,651
6	110.00	4,973	0.706	-0.089	0.031	0.074	160	4,292
5	90.00	5,670	0.472	-0.006	0.006	0.064	156	4,894
4	70.00	6,451	0.286	0.048	0.013	0.051	142	5,568
3	50.00	6,971	0.146	0.068	0.031	0.036	109	6,016
2	30.00	7,873	0.053	0.071	0.042	0.024	82	6,795
1	10.00	9,406	0.006	0.047	0.027	0.012	49	8,118
Generic 9' Omni	180.00	25	1.890	1.980	1.140	0.431	5	22
Generic 15' Dipole	180.00	45	1.890	1.980	1.140	0.431	8	39
2-Bay Dipole	180.00	18	1.890	1.980	1.140	0.431	3	15
4-Bay Dipole	180.00	35	1.890	1.980	1.140	0.431	7	30
Flat Side Arm	180.00	450	1.890	1.980	1.140	0.431	84	388
RFS PD455	180.00	48	1.890	1.980	1.140	0.431	9	41
Generic RF-PRO-1B	175.00	36	1.786	1.478	0.954	0.372	6	31
Alcatel Lucent RRH ALU 4X45	170.00	190	1.686	1.069	0.793	0.320	26	164
ALU RRH2X60PCS	170.00	165	1.686	1.069	0.793	0.320	23	142
ALU RRH4X60LTE	170.00	159	1.686	1.069	0.793	0.320	22	137
Andrew 8' MW Dish	170.00	400	1.686	1.069	0.793	0.320	55	345
Antel BXA-70063/4CF	170.00	20	1.686	1.069	0.793	0.320	3	17
Antel BXA-70063/6CF	170.00	17	1.686	1.069	0.793	0.320	2	15
Commscope LNX6514DS-A1M	170.00	86	1.686	1.069	0.793	0.320	12	74
Commscope SBNHH-1D65B	170.00	244	1.686	1.069	0.793	0.320	34	210
Flat Light Sector Frame	170.00	1,200	1.686	1.069	0.793	0.320	166	1,036
RFS DB-T1-6Z-8AB-0Z	170.00	44	1.686	1.069	0.793	0.320	6	38
RFS DB-T1-6Z-8AB-0Z	170.00	44	1.686	1.069	0.793	0.320	6	38
RFS FD9R6004/2C-3L	170.00	16	1.686	1.069	0.793	0.320	2	13
Andrew DB844H90E-XY	160.00	168	1.493	0.485	0.535	0.234	17	145
Flat Light Sector Frame	160.00	1,200	1.493	0.485	0.535	0.234	122	1,036
Generic RF-PRO-1B	154.00	18	1.383	0.253	0.415	0.193	2	16

Site Number: 383660

Code:

ANSI/TIA-222-G

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Site Name: North Madison Volunteer FD, CT

Engineering Number: 12927180_C3_03

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Customer: T-MOBILE

Equivalent Modal Analysis Method

ALU 1900 MHz 4X45 RRH	150.00	180	1.312	0.138	0.347	0.170	13	155
ALU 800 MHz 2X50W RRH w/ Filter	150.00	192	1.312	0.138	0.347	0.170	14	166
ALU TD-RRH8X20	150.00	198	1.312	0.138	0.347	0.170	15	171
Flat Light Sector Frame	150.00	1,200	1.312	0.138	0.347	0.170	88	1,036
RFS APXVSPP18-C-A20	150.00	171	1.312	0.138	0.347	0.170	13	148
RFS APXVTM14-C-I20	150.00	159	1.312	0.138	0.347	0.170	12	137
CCI HPA65R-BU6A	140.00	126	1.143	-0.042	0.215	0.126	7	108
Ericsson RRUS 4449 B5, B12	140.00	213	1.143	-0.042	0.215	0.126	12	184
Ericsson RRUS 8843 B2, B66A	140.00	216	1.143	-0.042	0.215	0.126	12	186
Flat Light Sector Frame	140.00	1,200	1.143	-0.042	0.215	0.126	66	1,036
Kathrein Scala 80010965	140.00	293	1.143	-0.042	0.215	0.126	16	253
Powerwave Allgon 7770.00	140.00	105	1.143	-0.042	0.215	0.126	6	91
Powerwave Allgon LGP21401	140.00	85	1.143	-0.042	0.215	0.126	5	73
Raycap DC6-48-60-18-8F	140.00	20	1.143	-0.042	0.215	0.126	1	17
Raycap DC6-48-60-18-8F (23.5"	140.00	20	1.143	-0.042	0.215	0.126	1	17
EMS RR90-17-02DP	130.00	41	0.986	-0.113	0.124	0.099	2	35
Ericsson KRY 112 144/1	130.00	33	0.986	-0.113	0.124	0.099	1	28
Ericsson KRY 112 489/2	130.00	46	0.986	-0.113	0.124	0.099	2	40
Ericsson Radio 4449 B12,B71	130.00	222	0.986	-0.113	0.124	0.099	9	192
Generic 4' Omni	130.00	10	0.986	-0.113	0.124	0.099	0	9
Pro 1 VFA12-HD Sector Frame	130.00	2,214	0.986	-0.113	0.124	0.099	95	1,911
RFS APXVAARR24_43-U-NA20	130.00	384	0.986	-0.113	0.124	0.099	16	331
Flat Side Arm	125.00	150	0.911	-0.122	0.092	0.090	6	129
Sinclair SC323-HF2LDF	125.00	6	0.911	-0.122	0.092	0.090	0	5
Generic 6' Dipole	96.00	20	0.538	-0.030	0.009	0.067	1	17
Generic 8' Grid Dish	96.00	282	0.538	-0.030	0.009	0.067	8	243
Generic 4' Omni	94.00	10	0.515	-0.022	0.008	0.066	0	9
Flat Side Arm	90.00	300	0.472	-0.006	0.006	0.064	8	259
RFI FSA10-67-DIN	90.00	9	0.472	-0.006	0.006	0.064	0	8
Sinclair SC323-HF2LDF	90.00	6	0.472	-0.006	0.006	0.064	0	5
PCTEL GPS-TMG-HR-26N	75.00	1	0.328	0.039	0.010	0.054	0	1
Stand-Off	75.00	75	0.328	0.039	0.010	0.054	2	65
Generic GPS	58.00	10	0.196	0.063	0.024	0.042	0	9
		63,264	74.128	28.100	25.368	11.873	2,399	54,603

Site Number: 383660

Code: ANSI/TIA-222-G

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Site Name: North Madison Volunteer FD, CT

Engineering Number: 12927180_C3_03

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Customer: T-MOBILE

Force/Stress Summary

Section: 1		1		Bot Elev (ft): 0.00				Height (ft): 20.000								
		Pu		Len	Bracing %			F'y	Phic Pn	Num	Shear		Bear		Use	
Max Compression Member		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	%	Controls
LEG	PX - 10" DIA PIPE	-351.34	1.2D + 1.6W Normal	10.03	100	100	100	33.1	50.0	668.58	0	0	0.00	0.00	52	Member X
HORIZ	PST - 3" DIA PIPE	-10.59	1.2D + 1.6W 90 deg	12.04	100	100	100	124.6	50.0	32.47	2	0	0.00	0.00	32	Member X
DIAG	PX - 3-1/2" DIA PIPE	-14.94	1.2D + 1.6W 90 deg	16.14	100	100	100	147.9	50.0	38.02	3	0	0.00	0.00	39	Member X

Max Tension Member		Pu		Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear	Use	Controls
		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	phit Pn	%	
									(kip)	(kip)	(kip)		
LEG	PX - 10" DIA PIPE	308.90	0.9D + 1.6W 60 deg	50	65	724.50	0	0	0.00	0.00		42	Member
HORIZ	PST - 3" DIA PIPE	11.59	1.2D + 1.6W 90 deg	50	65	100.35	2	0	0.00	32.43	0.00	35	Bolt Bear
DIAG	PX - 3-1/2" DIA PIPE	14.84	0.9D + 1.6W 90 deg	50	65	165.60	3	0	0.00	77.51	0.00	19	Bolt Bear

Max Splice Forces		Pu		phiRnt	Use	Num	Bolt Type
		(kip)	Load Case	(kip)	%	Bolts	
Top Tension		292.31	0.9D + 1.6W 180 deg	0.00	0	0	
Top Compression		331.62	1.2D + 1.6W Normal	0.00	0		
Bot Tension		325.26	0.9D + 1.6W 180 deg	969.19	41	16	1" A354-BC
Bot Compression		368.69	1.2D + 1.6W Normal	0.00	0		

Section: 2		2		Bot Elev (ft): 20.00				Height (ft): 20.000								
		Pu		Len	Bracing %			F'y	Phic Pn	Num	Shear		Bear		Use	
Max Compression Member		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	%	Controls
LEG	PX - 10" DIA PIPE	-314.41	1.2D + 1.6W Normal	10.03	100	100	100	33.1	50.0	668.58	0	0	0.00	0.00	47	Member X
HORIZ	PST - 2-1/2" DIA PIP	-10.52	0.9D + 1.6W 90 deg	10.79	100	100	100	136.7	50.0	20.59	2	0	0.00	0.00	51	Member X
DIAG	PST - 3" DIA PIPE	-15.42	1.2D + 1.6W 90 deg	15.18	100	100	100	157.0	50.0	20.43	3	0	0.00	0.00	75	Member X

Max Tension Member		Pu		Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear	Use	Controls
		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	phit Pn	%	
									(kip)	(kip)	(kip)		
LEG	PX - 10" DIA PIPE	277.30	0.9D + 1.6W 60 deg	50	65	724.50	0	0	0.00	0.00		38	Member
HORIZ	PST - 2-1/2" DIA PIP	10.93	1.2D + 1.6W 90 deg	50	65	76.68	2	0	0.00	25.33	0.00	43	Bolt Bear
DIAG	PST - 3" DIA PIPE	14.54	0.9D + 1.6W 90 deg	50	65	100.35	3	0	0.00	43.80	0.00	33	Bolt Bear

Max Splice Forces		Pu		phiRnt	Use	Num	Bolt Type
		(kip)	Load Case	(kip)	%	Bolts	
Top Tension		260.21	0.9D + 1.6W 180 deg	0.00	0	0	
Top Compression		294.01	1.2D + 1.6W Normal	0.00	0		
Bot Tension		292.31	0.9D + 1.6W 180 deg	654.20	45	12	1 A325
Bot Compression		0.00		0.00	0		

Site Number: 383660

Code: ANSI/TIA-222-G

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Site Name: North Madison Volunteer FD, CT

Engineering Number: 12927180_C3_03

7/18/2019 7:35:29 PM

Customer: T-MOBILE

Force/Stress Summary

Section: 3		3		Bot Elev (ft): 40.00				Height (ft): 20.000							
		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
Max Compression Member															
LEG	PX - 8" DIA PIPE	-276.46	1.2D + 1.6W Normal	10.03	100	100	100	41.8	50.0	506.95	0	0	0.00	0.00	54 Member X
HORIZ	PST - 2-1/2" DIA PIP	-9.56	0.9D + 1.6W 90 deg	9.503	100	100	100	120.4	50.0	26.55	2	0	0.00	0.00	36 Member X
DIAG	PST - 3" DIA PIPE	-14.76	1.2D + 1.6W 90 deg	14.26	100	100	100	147.6	50.0	23.13	3	0	0.00	0.00	63 Member X
		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls		
Max Tension Member															
LEG	PX - 8" DIA PIPE	244.67	0.9D + 1.6W 60 deg	50	65	576.00	0	0	0.00	0.00			42	Member	
HORIZ	PST - 2-1/2" DIA PIP	9.80	1.2D + 1.6W 90 deg	50	65	76.68	2	0	0.00	25.33	0.00		38	Bolt Bear	
DIAG	PST - 3" DIA PIPE	13.76	1.2D + 1.6W 90 deg	50	65	100.35	3	0	0.00	43.80	0.00		31	Bolt Bear	
Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type								
Top Tension		227.25	0.9D + 1.6W 180 deg	0.00	0	0									
Top Compression		256.03	1.2D + 1.6W Normal	0.00	0										
Bot Tension		260.21	0.9D + 1.6W 180 deg	654.20	40	12	1 A325								
Bot Compression		0.00		0.00	0										

Section: 4		4		Bot Elev (ft): 60.00				Height (ft): 20.000							
		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
Max Compression Member															
LEG	PX - 8" DIA PIPE	-236.09	1.2D + 1.6W Normal	10.03	100	100	100	41.8	50.0	507.00	0	0	0.00	0.00	46 Member X
HORIZ	PST - 2" DIA PIPE	-9.31	1.2D + 1.6W 90 deg	8.214	100	100	100	125.2	50.0	15.41	2	0	0.00	0.00	60 Member X
DIAG	PST - 3" DIA PIPE	-15.50	1.2D + 1.6W 90 deg	13.35	100	100	100	138.1	50.0	26.41	3	0	0.00	0.00	58 Member X
		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls		
Max Tension Member															
LEG	PX - 8" DIA PIPE	209.08	0.9D + 1.6W 60 deg	50	65	576.00	0	0	0.00	0.00			36	Member	
HORIZ	PST - 2" DIA PIPE	9.53	1.2D + 1.6W 90 deg	50	65	48.15	2	0	0.00	19.22	0.00		49	Bolt Bear	
DIAG	PST - 3" DIA PIPE	14.63	1.2D + 1.6W 90 deg	50	65	100.35	3	0	0.00	43.80	0.00		33	Bolt Bear	
Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type								
Top Tension		189.49	0.9D + 1.6W 180 deg	0.00	0	0									
Top Compression		213.54	1.2D + 1.6W Normal	0.00	0										
Bot Tension		227.25	0.9D + 1.6W 180 deg	436.14	52	8	1 A325								
Bot Compression		0.00		0.00	0										

Force/Stress Summary

Section: 5		5		Bot Elev (ft): 80.00				Height (ft): 20.000							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PSP - ROHN 8 EHS	-190.34	1.2D + 1.6W Normal	10.02	100	100	100	41.2	50.0	386.39	0	0	0.00	0.00	49 Member X
HORIZ	PST - 2" DIA PIPE	-9.37	1.2D + 1.6W 90 deg	7.026	100	100	100	107.1	50.0	20.80	2	0	0.00	0.00	45 Member X
DIAG	PST - 3" DIA PIPE	-16.91	1.2D + 1.6W 90 deg	12.55	100	100	100	129.9	50.0	29.85	3	0	0.00	0.00	56 Member X
Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls		
LEG	PSP - ROHN 8 EHS	167.73	0.9D + 1.6W 60 deg	50	65	437.40	0	0	0.00	0.00		38	Member		
HORIZ	PST - 2" DIA PIPE	9.47	1.2D + 1.6W 90 deg	50	65	48.15	2	0	0.00	19.22	0.00	49	Bolt Bear		
DIAG	PST - 3" DIA PIPE	16.27	0.9D + 1.6W 90 deg	50	65	100.35	3	0	0.00	43.80	0.00	37	Bolt Bear		
Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type								
Top Tension		145.45	0.9D + 1.6W 180 deg	0.00	0	0									
Top Compression		165.09	1.2D + 1.6W Normal	0.00	0										
Bot Tension		189.49	0.9D + 1.6W 180 deg	436.14	43	8	1 A325								
Bot Compression		0.00		0.00	0										

Section: 6		6		Bot Elev (ft): 100.0				Height (ft): 20.000							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PSP - ROHN 6 EHS	-149.41	1.2D + 1.6W Normal	6.68	100	100	100	36.0	50.0	274.62	0	0	0.00	0.00	54 Member X
HORIZ	PST - 2" DIA PIPE	-8.21	1.2D + 1.6W 90 deg	6.108	100	100	100	93.1	50.0	25.54	2	0	0.00	0.00	32 Member X
DIAG	PST - 2-1/2" DIA PIP	-12.68	1.2D + 1.6W 90 deg	9.288	100	100	100	117.7	50.0	27.79	3	0	0.00	0.00	45 Member X
Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls		
LEG	PSP - ROHN 6 EHS	130.76	0.9D + 1.6W 60 deg	50	65	301.95	0	0	0.00	0.00		43	Member		
HORIZ	PST - 2" DIA PIPE	8.33	1.2D + 1.6W 90 deg	50	65	48.15	2	0	0.00	19.22	0.00	43	Bolt Bear		
DIAG	PST - 2-1/2" DIA PIP	12.21	1.2D + 1.6W 90 deg	50	65	76.68	3	0	0.00	41.17	0.00	29	Bolt Bear		
Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type								
Top Tension		99.78	0.9D + 1.6W 180 deg	0.00	0	0									
Top Compression		115.23	1.2D + 1.6W Normal	0.00	0										
Bot Tension		145.45	0.9D + 1.6W 180 deg	436.14	33	8	1 A325								
Bot Compression		0.00		0.00	0										

Site Number: 383660

Code: ANSI/TIA-222-G

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Site Name: North Madison Volunteer FD, CT

Engineering Number: 12927180_C3_03

7/18/2019 7:35:29 PM

Customer: T-MOBILE

Force/Stress Summary

Section: 7		7		Bot Elev (ft): 120.0				Height (ft): 20.000								
		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phiT Pn (kip)	Use %	Controls
Max Compression Member																
LEG	PSP - ROHN 5 EH	-98.48	1.2D + 1.6W Normal	6.68	100	100	100	43.6	50.0	239.34	0	0	0.00	0.00	41 Member X	
HORIZ	PST - 1-1/2" DIA PIP	-7.45	1.2D + 1.6W 90 deg	5.049	100	100	100	97.2	50.0	18.01	2	0	0.00	0.00	41 Member X	
DIAG	PX - 2" DIA PIPE	-12.66	1.2D + 1.6W 210 deg	8.579	99	99	99	133.1	50.0	18.89	3	0	0.00	0.00	67 Member X	
Max Tension Member																
LEG	PSP - ROHN 5 EH	83.20	0.9D + 1.6W 60 deg	50	65	274.95	0	0	0.00	0.00				30 Member		
HORIZ	PST - 1-1/2" DIA PIP	7.48	1.2D + 1.6W 90 deg	50	65	35.96	2	0	0.00	18.10			0.00	41 Bolt Bear		
DIAG	PX - 2" DIA PIPE	12.27	1.2D + 1.6W 90 deg	50	65	66.60	3	0	0.00	44.21			0.00	27 Bolt Bear		
Max Splice Forces																
		Pu (kip)	Load Case		phiRnt (kip)	Use %	Num Bolts	Bolt Type								
	Top Tension	53.92	0.9D + 1.6W 180 deg		0.00	0	0									
	Top Compression	64.12	1.2D + 1.6W Normal		0.00	0										
	Bot Tension	99.78	0.9D + 1.6W 180 deg		327.10	31	6	1 A325								
	Bot Compression	0.00			0.00	0										

Section: 8		8		Bot Elev (ft): 140.0				Height (ft): 20.000								
		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phiT Pn (kip)	Use %	Controls
Max Compression Member																
LEG	PX - 4" DIA PIPE	-45.62	1.2D + 1.6W Normal	6.67	100	100	100	54.1	50.0	160.28	0	0	0.00	0.00	28 Member X	
HORIZ	PST - 1-1/2" DIA PIP	-6.23	1.2D + 1.6W 90 deg	4.340	100	100	100	83.6	50.0	21.57	2	0	0.00	0.00	28 Member X	
DIAG	PX - 2" DIA PIPE	-12.12	1.2D + 1.6W 90 deg	7.963	100	100	100	124.7	50.0	21.49	3	0	0.00	0.00	56 Member X	
Max Tension Member																
LEG	PX - 4" DIA PIPE	37.92	0.9D + 1.6W 180 deg	50	65	198.45	0	0	0.00	0.00				19 Member		
HORIZ	PST - 1-1/2" DIA PIP	6.34	1.2D + 1.6W 90 deg	50	65	35.96	2	0	0.00	18.10			0.00	35 Bolt Bear		
DIAG	PX - 2" DIA PIPE	11.87	1.2D + 1.6W 90 deg	50	65	66.60	3	0	0.00	44.21			0.00	26 Bolt Bear		
Max Splice Forces																
		Pu (kip)	Load Case		phiRnt (kip)	Use %	Num Bolts	Bolt Type								
	Top Tension	12.74	0.9D + 1.6W 180 deg		0.00	0	0									
	Top Compression	17.46	1.2D + 1.6W Normal		0.00	0										
	Bot Tension	53.92	0.9D + 1.6W 180 deg		218.07	25	4	1 A325								
	Bot Compression	0.00			0.00	0										

Site Number: 383660

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Engineering Number: 12927180_C3_03

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Customer: T-MOBILE

Force/Stress Summary

Section: 9		9		Bot Elev (ft): 160.0				Height (ft): 20.000				Shear		Bear		Use	
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn (Bolts)	Num (Holes)	phiRnv (kip)	phiRn (kip)	Use %	Controls		
LEG	PST - 3" DIA PIPE	-7.28	1.2D + 1.6W Normal	6.67	100	100	100	69.0	50.0	70.87	0	0	0.00	0.00	10	Member X	
HORIZ	PST - 1-1/2" DIA PIP	-3.52	1.2D + 1.6W Normal	4.299	100	100	100	82.8	50.0	21.78	2	0	0.00	0.00	16	Member X	
DIAG	PST - 2" DIA PIPE	-6.47	1.2D + 1.6W 210 deg	7.940	100	100	100	121.1	50.0	16.49	3	0	0.00	0.00	39	Member X	
Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn (Bolts)	Num (Holes)	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls				
LEG	PST - 3" DIA PIPE	4.08	0.9D + 1.6W 180 deg	50	65	100.35	0	0	0.00	0.00			4	Member			
HORIZ	PST - 1-1/2" DIA PIP	3.55	1.2D + 1.6W 60 deg	50	65	35.96	2	0	0.00	18.10	0.00		19	Bolt Bear			
DIAG	PST - 2" DIA PIPE	6.27	1.2D + 1.6W 90 deg	50	65	48.15	3	0	0.00	31.23	0.00		20	Bolt Bear			
Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type										
Top Tension		0.00		0.00	0	0											
Top Compression		1.08	1.2D + 1.0Di + 1.0Wi	0.00	0												
Bot Tension		12.74	0.9D + 1.6W 180 deg	166.22	8	4	0.875" A325										
Bot Compression		0.00		0.00	0												

Detailed Reactions

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX (kip)	FY (kip)	FZ (kip)	(-) = Uplift (+) = Down
1.2D + 1.6W Normal	14.63	00.00	0	1	0.00	367.26	-43.88	
	14.63	00.00	120	1a	13.05	-145.67	-13.76	
	14.63	00.00	240	1b	-13.05	-145.67	-13.76	
1.2D + 1.6W 60 deg	14.63	00.00	0	1	-5.26	196.28	-23.27	
	14.63	00.00	120	1a	-22.78	195.89	7.08	
	14.63	00.00	240	1b	-33.80	-316.25	-19.51	
1.2D + 1.6W 90 deg	14.63	00.00	0	1	-6.16	25.31	-2.59	
	14.63	00.00	120	1a	-34.72	320.99	16.57	
	14.63	00.00	240	1b	-30.52	-270.38	-13.99	
1.2D + 1.6W 120 deg	14.63	00.00	0	1	-5.40	-145.67	18.18	
	14.63	00.00	120	1a	-38.00	366.86	21.93	
	14.63	00.00	240	1b	-18.44	-145.27	-4.42	
1.2D + 1.6W 180 deg	14.63	00.00	0	1	0.00	-316.65	39.03	
	14.63	00.00	120	1a	-17.53	196.28	16.19	
	14.63	00.00	240	1b	17.53	196.28	16.19	
1.2D + 1.6W 210 deg	14.63	00.00	0	1	3.15	-270.84	33.44	
	14.63	00.00	120	1a	0.83	25.54	6.62	
	14.63	00.00	240	1b	31.72	321.22	21.78	
1.2D + 1.6W 240 deg	14.63	00.00	0	1	5.40	-145.67	18.18	
	14.63	00.00	120	1a	18.44	-145.27	-4.42	
	14.63	00.00	240	1b	38.00	366.86	21.93	
1.2D + 1.6W 300 deg	14.63	00.00	0	1	5.26	196.28	-23.27	
	14.63	00.00	120	1a	33.80	-316.25	-19.51	
	14.63	00.00	240	1b	22.78	195.89	7.08	
1.2D + 1.6W 330 deg	14.63	00.00	0	1	3.01	321.45	-38.37	
	14.63	00.00	120	1a	27.38	-270.61	-19.43	
	14.63	00.00	240	1b	5.31	25.08	-4.03	
0.9D + 1.6W Normal	14.63	00.00	0	1	0.00	360.66	-43.23	
	14.63	00.00	120	1a	13.60	-151.86	-14.08	
	14.63	00.00	240	1b	-13.60	-151.86	-14.08	
0.9D + 1.6W 60 deg	14.63	00.00	0	1	-5.27	189.82	-22.63	
	14.63	00.00	120	1a	-22.22	189.42	6.75	
	14.63	00.00	240	1b	-34.35	-322.31	-19.83	
0.9D + 1.6W 90 deg	14.63	00.00	0	1	-6.16	18.98	-1.94	
	14.63	00.00	120	1a	-34.16	314.42	16.25	
	14.63	00.00	240	1b	-31.08	-276.47	-14.30	
0.9D + 1.6W 120 deg	14.63	00.00	0	1	-5.41	-151.86	18.82	
	14.63	00.00	120	1a	-37.44	360.26	21.61	
	14.63	00.00	240	1b	-19.00	-151.46	-4.73	
0.9D + 1.6W 180 deg	14.63	00.00	0	1	0.00	-322.70	39.67	
	14.63	00.00	120	1a	-16.97	189.82	15.87	
	14.63	00.00	240	1b	16.97	189.82	15.87	
0.9D + 1.6W 210 deg	14.63	00.00	0	1	3.15	-276.93	34.08	
	14.63	00.00	120	1a	1.39	19.21	6.30	

Site Number: 383660

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	14.63	00.00	240	1b	31.16	314.65	21.46
0.9D + 1.6W 240 deg	14.63	00.00	0	1	5.41	-151.86	18.82
	14.63	00.00	120	1a	19.00	-151.46	-4.73
	14.63	00.00	240	1b	37.44	360.26	21.61
0.9D + 1.6W 300 deg	14.63	00.00	0	1	5.27	189.82	-22.63
	14.63	00.00	120	1a	34.35	-322.31	-19.83
	14.63	00.00	240	1b	22.22	189.42	6.75
0.9D + 1.6W 330 deg	14.63	00.00	0	1	3.01	314.88	-37.72
	14.63	00.00	120	1a	27.93	-276.70	-19.76
	14.63	00.00	240	1b	4.75	18.75	-4.36
1.2D + 1.0Di + 1.0Wi Normal	14.63	00.00	0	1	0.00	184.45	-20.41
	14.63	00.00	120	1a	0.25	11.63	-2.44
	14.63	00.00	240	1b	-0.25	11.63	-2.44
1.2D + 1.0Di + 1.0Wi 60 deg	14.63	00.00	0	1	-1.97	126.85	-13.14
	14.63	00.00	120	1a	-12.36	126.72	4.86
	14.63	00.00	240	1b	-7.57	-45.84	-4.37
1.2D + 1.0Di + 1.0Wi 90 deg	14.63	00.00	0	1	-2.29	69.24	-5.86
	14.63	00.00	120	1a	-16.55	168.87	8.25
	14.63	00.00	240	1b	-6.45	-30.39	-2.39
1.2D + 1.0Di + 1.0Wi 120 deg	14.63	00.00	0	1	-1.99	11.63	1.44
	14.63	00.00	120	1a	-17.67	184.32	10.20
	14.63	00.00	240	1b	-2.24	11.76	1.00
1.2D + 1.0Di + 1.0Wi 180 deg	14.63	00.00	0	1	0.00	-45.97	8.74
	14.63	00.00	120	1a	-10.39	126.85	8.27
	14.63	00.00	240	1b	10.39	126.85	8.27
1.2D + 1.0Di + 1.0Wi 210 deg	14.63	00.00	0	1	1.15	-30.54	6.78
	14.63	00.00	120	1a	-3.93	69.32	4.91
	14.63	00.00	240	1b	15.42	168.94	10.21
1.2D + 1.0Di + 1.0Wi 240 deg	14.63	00.00	0	1	1.99	11.63	1.44
	14.63	00.00	120	1a	2.24	11.76	1.00
	14.63	00.00	240	1b	17.67	184.32	10.20
1.2D + 1.0Di + 1.0Wi 300 deg	14.63	00.00	0	1	1.97	126.85	-13.14
	14.63	00.00	120	1a	7.57	-45.84	-4.37
	14.63	00.00	240	1b	12.36	126.72	4.86
1.2D + 1.0Di + 1.0Wi 330 deg	14.63	00.00	0	1	1.13	169.02	-18.46
	14.63	00.00	120	1a	5.30	-30.46	-4.38
	14.63	00.00	240	1b	6.21	69.17	0.95
(1.2 + 0.2Sds) * DL + E Normal M1	14.63	00.00	0	1	0.00	46.43	-4.91
	14.63	00.00	120	1a	-1.43	14.75	0.57
	14.63	00.00	240	1b	1.43	14.75	0.57
(1.2 + 0.2Sds) * DL + E Normal M2	14.63	00.00	0	1	0.00	39.54	-4.08
	14.63	00.00	120	1a	-1.74	18.19	0.87
	14.63	00.00	240	1b	1.74	18.19	0.87
(1.2 + 0.2Sds) * DL + E 60 deg M1	14.63	00.00	0	1	-0.22	35.87	-3.78
	14.63	00.00	120	1a	-3.38	35.87	1.70
	14.63	00.00	240	1b	0.34	4.18	0.20
(1.2 + 0.2Sds) * DL + E 60 deg M2	14.63	00.00	0	1	-0.12	32.42	-3.37
	14.63	00.00	120	1a	-2.97	32.42	1.58
	14.63	00.00	240	1b	1.06	11.08	0.61

Site Number: 383660

Code:

ANSI/TIA-222-G

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Site Name: North Madison Volunteer FD, CT

Engineering Number: 12927180_C3_03

7/18/2019 7:35:29 PM

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(1.2 + 0.2Sds) * DL + E 90 deg M1	14.63	00.00	0	1	-0.25	25.31	-2.65
	14.63	00.00	120	1a	-4.05	43.60	2.19
	14.63	00.00	240	1b	0.54	7.01	0.46
(1.2 + 0.2Sds) * DL + E 90 deg M2	14.63	00.00	0	1	-0.14	25.31	-2.65
	14.63	00.00	120	1a	-3.40	37.63	1.89
	14.63	00.00	240	1b	1.20	12.99	0.77
(1.2 + 0.2Sds) * DL + E 120 deg M1	14.63	00.00	0	1	-0.22	14.75	-1.53
	14.63	00.00	120	1a	-4.25	46.43	2.45
	14.63	00.00	240	1b	1.21	14.75	0.95
(1.2 + 0.2Sds) * DL + E 120 deg M2	14.63	00.00	0	1	-0.12	18.19	-1.94
	14.63	00.00	120	1a	-3.53	39.54	2.04
	14.63	00.00	240	1b	1.62	18.19	1.07
(1.2 + 0.2Sds) * DL + E 180 deg M1	14.63	00.00	0	1	0.00	4.18	-0.40
	14.63	00.00	120	1a	-3.17	35.87	2.08
	14.63	00.00	240	1b	3.17	35.87	2.08
(1.2 + 0.2Sds) * DL + E 180 deg M2	14.63	00.00	0	1	0.00	11.08	-1.23
	14.63	00.00	120	1a	-2.86	32.42	1.78
	14.63	00.00	240	1b	2.86	32.42	1.78
(1.2 + 0.2Sds) * DL + E 210 deg M1	14.63	00.00	0	1	0.13	7.01	-0.70
	14.63	00.00	120	1a	-2.17	25.31	1.54
	14.63	00.00	240	1b	3.93	43.60	2.41
(1.2 + 0.2Sds) * DL + E 210 deg M2	14.63	00.00	0	1	0.07	12.99	-1.42
	14.63	00.00	120	1a	-2.23	25.31	1.44
	14.63	00.00	240	1b	3.33	37.63	2.00
(1.2 + 0.2Sds) * DL + E 240 deg M1	14.63	00.00	0	1	0.22	14.75	-1.53
	14.63	00.00	120	1a	-1.21	14.75	0.95
	14.63	00.00	240	1b	4.25	46.43	2.45
(1.2 + 0.2Sds) * DL + E 240 deg M2	14.63	00.00	0	1	0.12	18.19	-1.94
	14.63	00.00	120	1a	-1.62	18.19	1.07
	14.63	00.00	240	1b	3.53	39.54	2.04
(1.2 + 0.2Sds) * DL + E 300 deg M1	14.63	00.00	0	1	0.22	35.87	-3.78
	14.63	00.00	120	1a	-0.34	4.18	0.20
	14.63	00.00	240	1b	3.38	35.87	1.70
(1.2 + 0.2Sds) * DL + E 300 deg M2	14.63	00.00	0	1	0.12	32.42	-3.37
	14.63	00.00	120	1a	-1.06	11.08	0.61
	14.63	00.00	240	1b	2.97	32.42	1.58
(1.2 + 0.2Sds) * DL + E 330 deg M1	14.63	00.00	0	1	0.13	43.60	-4.61
	14.63	00.00	120	1a	-0.67	7.01	0.24
	14.63	00.00	240	1b	2.42	25.31	1.11
(1.2 + 0.2Sds) * DL + E 330 deg M2	14.63	00.00	0	1	0.07	37.63	-3.89
	14.63	00.00	120	1a	-1.26	12.99	0.65
	14.63	00.00	240	1b	2.37	25.31	1.21
(0.9 - 0.2Sds) * DL + E Normal M1	14.63	00.00	0	1	0.00	38.76	-4.11
	14.63	00.00	120	1a	-0.74	7.11	0.17
	14.63	00.00	240	1b	0.74	7.11	0.17
(0.9 - 0.2Sds) * DL + E Normal M2	14.63	00.00	0	1	0.00	31.87	-3.28
	14.63	00.00	120	1a	-1.05	10.55	0.47
	14.63	00.00	240	1b	1.05	10.55	0.47

Site Number: 383660

Code:

ANSI/TIA-222-G

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Site Name: North Madison Volunteer FD, CT

Engineering Number: 12927180_C3_03

7/18/2019 7:35:29 PM

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(0.9 - 0.2Sds) * DL + E 60 deg M1	14.63	00.00	0	1	-0.22	28.21	-2.98
	14.63	00.00	120	1a	-2.69	28.21	1.30
	14.63	00.00	240	1b	-0.35	-3.44	-0.20
(0.9 - 0.2Sds) * DL + E 60 deg M2	14.63	00.00	0	1	-0.12	24.77	-2.56
	14.63	00.00	120	1a	-2.28	24.77	1.18
	14.63	00.00	240	1b	0.37	3.45	0.21
(0.9 - 0.2Sds) * DL + E 90 deg M1	14.63	00.00	0	1	-0.25	17.66	-1.85
	14.63	00.00	120	1a	-3.36	35.94	1.79
	14.63	00.00	240	1b	-0.15	-0.62	0.06
(0.9 - 0.2Sds) * DL + E 90 deg M2	14.63	00.00	0	1	-0.14	17.66	-1.85
	14.63	00.00	120	1a	-2.71	29.97	1.48
	14.63	00.00	240	1b	0.50	5.35	0.37
(0.9 - 0.2Sds) * DL + E 120 deg M1	14.63	00.00	0	1	-0.22	7.11	-0.72
	14.63	00.00	120	1a	-3.56	38.76	2.05
	14.63	00.00	240	1b	0.52	7.11	0.55
(0.9 - 0.2Sds) * DL + E 120 deg M2	14.63	00.00	0	1	-0.12	10.55	-1.14
	14.63	00.00	120	1a	-2.84	31.87	1.64
	14.63	00.00	240	1b	0.93	10.55	0.67
(0.9 - 0.2Sds) * DL + E 180 deg M1	14.63	00.00	0	1	0.00	-3.44	0.40
	14.63	00.00	120	1a	-2.47	28.21	1.68
	14.63	00.00	240	1b	2.47	28.21	1.68
(0.9 - 0.2Sds) * DL + E 180 deg M2	14.63	00.00	0	1	0.00	3.45	-0.43
	14.63	00.00	120	1a	-2.16	24.77	1.38
	14.63	00.00	240	1b	2.16	24.77	1.38
(0.9 - 0.2Sds) * DL + E 210 deg M1	14.63	00.00	0	1	0.13	-0.62	0.10
	14.63	00.00	120	1a	-1.48	17.66	1.14
	14.63	00.00	240	1b	3.23	35.94	2.01
(0.9 - 0.2Sds) * DL + E 210 deg M2	14.63	00.00	0	1	0.07	5.35	-0.62
	14.63	00.00	120	1a	-1.54	17.66	1.04
	14.63	00.00	240	1b	2.64	29.97	1.60
(0.9 - 0.2Sds) * DL + E 240 deg M1	14.63	00.00	0	1	0.22	7.11	-0.72
	14.63	00.00	120	1a	-0.52	7.11	0.55
	14.63	00.00	240	1b	3.56	38.76	2.05
(0.9 - 0.2Sds) * DL + E 240 deg M2	14.63	00.00	0	1	0.12	10.55	-1.14
	14.63	00.00	120	1a	-0.93	10.55	0.67
	14.63	00.00	240	1b	2.84	31.87	1.64
(0.9 - 0.2Sds) * DL + E 300 deg M1	14.63	00.00	0	1	0.22	28.21	-2.98
	14.63	00.00	120	1a	0.35	-3.44	-0.20
	14.63	00.00	240	1b	2.69	28.21	1.30
(0.9 - 0.2Sds) * DL + E 300 deg M2	14.63	00.00	0	1	0.12	24.77	-2.56
	14.63	00.00	120	1a	-0.37	3.45	0.21
	14.63	00.00	240	1b	2.28	24.77	1.18
(0.9 - 0.2Sds) * DL + E 330 deg M1	14.63	00.00	0	1	0.13	35.94	-3.80
	14.63	00.00	120	1a	0.02	-0.62	-0.16
	14.63	00.00	240	1b	1.73	17.66	0.71
(0.9 - 0.2Sds) * DL + E 330 deg M2	14.63	00.00	0	1	0.07	29.97	-3.09
	14.63	00.00	120	1a	-0.57	5.35	0.25
	14.63	00.00	240	1b	1.67	17.66	0.81
1.0D + 1.0W Service Normal	14.63	00.00	0	1	0.00	97.28	-11.43

Site Number: 383660

Code:

ANSI/TIA-222-G

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Engineering Number: 12927180_C3_03

7/18/2019 7:35:29 PM

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	14.63	00.00	120	1a	1.56	-17.01	-2.30
	14.63	00.00	240	1b	-1.56	-17.01	-2.30
1.0D + 1.0W Service 60 deg	14.63	00.00	0	1	-1.20	59.19	-6.79
	14.63	00.00	120	1a	-6.48	59.10	2.35
	14.63	00.00	240	1b	-6.20	-55.02	-3.58
1.0D + 1.0W Service 90 deg	14.63	00.00	0	1	-1.39	21.09	-2.15
	14.63	00.00	120	1a	-9.17	86.98	4.49
	14.63	00.00	240	1b	-5.47	-44.80	-2.35
1.0D + 1.0W Service 120 deg	14.63	00.00	0	1	-1.21	-17.01	2.50
	14.63	00.00	120	1a	-9.90	97.20	5.71
	14.63	00.00	240	1b	-2.77	-16.92	-0.20
1.0D + 1.0W Service 180 deg	14.63	00.00	0	1	0.00	-55.11	7.16
	14.63	00.00	120	1a	-5.28	59.19	4.44
	14.63	00.00	240	1b	5.28	59.19	4.44
1.0D + 1.0W Service 210 deg	14.63	00.00	0	1	0.70	-44.90	5.91
	14.63	00.00	120	1a	-1.16	21.14	2.28
	14.63	00.00	240	1b	8.48	87.03	5.69
1.0D + 1.0W Service 240 deg	14.63	00.00	0	1	1.21	-17.01	2.50
	14.63	00.00	120	1a	2.77	-16.92	-0.20
	14.63	00.00	240	1b	9.90	97.20	5.71
1.0D + 1.0W Service 300 deg	14.63	00.00	0	1	1.20	59.19	-6.79
	14.63	00.00	120	1a	6.20	-55.02	-3.58
	14.63	00.00	240	1b	6.48	59.10	2.35
1.0D + 1.0W Service 330 deg	14.63	00.00	0	1	0.69	87.08	-10.19
	14.63	00.00	120	1a	4.77	-44.85	-3.56
	14.63	00.00	240	1b	2.55	21.04	-0.13

Max Uplift:	322.70(kip)	Moment Ice:	2,527.62 (kip-ft)	Moment:	7,502.19 (kip-ft)	1.2D + 1.6W 180 deg
Max Down:	367.26(kip)	Total Down Ice:	207.72 (kip)	Total Down:	75.92 (kip)	
Max Shear:	43.88 (kip)	Total Shear Ice:	25.28 (kip)	Total Shear:	71.40 (kip)	

Deflections and Rotations

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
101 mph Normal to Face with No Ice	60.00	0.108	0.0069	0.1967	0.1969
101 mph Normal to Face with No Ice	70.00	0.146	0.0079	0.2342	0.2343
101 mph Normal to Face with No Ice	90.00	0.240	0.0094	0.3040	0.3042
101 mph Normal to Face with No Ice	100.00	0.296	0.0101	0.3410	0.3411
101 mph Normal to Face with No Ice	126.67	0.491	0.0084	0.4893	0.4894
101 mph Normal to Face with No Ice	140.00	0.610	0.0080	0.5375	0.5376
101 mph Normal to Face with No Ice	146.67	0.673	0.0072	0.5587	0.5587
101 mph Normal to Face with No Ice	153.33	0.739	0.0065	0.5707	0.5708
101 mph Normal to Face with No Ice	160.00	0.806	0.0057	0.5794	0.5794
101 mph Normal to Face with No Ice	166.67	0.874	0.0031	0.5960	0.5960
101 mph Normal to Face with No Ice	173.33	0.939	0.0003	0.4934	0.4934
101 mph Normal to Face with No Ice	180.00	1.006	0.0014	0.8528	0.8528
101 mph 60 degree with No Ice	60.00	0.108	0.0119	0.1962	0.1965
101 mph 60 degree with No Ice	70.00	0.146	0.0142	0.2334	0.2338
101 mph 60 degree with No Ice	90.00	0.239	0.0186	0.3029	0.3034
101 mph 60 degree with No Ice	100.00	0.296	0.0209	0.3396	0.3401
101 mph 60 degree with No Ice	126.67	0.490	0.0314	0.4811	0.4816
101 mph 60 degree with No Ice	140.00	0.608	0.0357	0.5301	0.5310
101 mph 60 degree with No Ice	146.67	0.671	0.0389	0.5559	0.5568
101 mph 60 degree with No Ice	153.33	0.736	0.0420	0.5657	0.5672
101 mph 60 degree with No Ice	160.00	0.803	0.0452	0.5788	0.5805
101 mph 60 degree with No Ice	166.67	0.870	0.0553	0.5635	0.5659
101 mph 60 degree with No Ice	173.33	0.936	0.0664	0.5994	0.6030
101 mph 60 degree with No Ice	180.00	1.001	0.0755	0.4916	0.4971
101 mph 90 degree with No Ice	60.00	0.108	-0.0149	0.1964	0.1969
101 mph 90 degree with No Ice	70.00	0.146	-0.0178	0.2336	0.2343
101 mph 90 degree with No Ice	90.00	0.239	-0.0234	0.3027	0.3036
101 mph 90 degree with No Ice	100.00	0.296	-0.0265	0.3392	0.3403
101 mph 90 degree with No Ice	126.67	0.489	-0.0410	0.4779	0.4784
101 mph 90 degree with No Ice	140.00	0.608	-0.0443	0.5282	0.5301
101 mph 90 degree with No Ice	146.67	0.671	-0.0452	0.5548	0.5552
101 mph 90 degree with No Ice	153.33	0.736	-0.0461	0.5642	0.5661
101 mph 90 degree with No Ice	160.00	0.802	-0.0470	0.5791	0.5811
101 mph 90 degree with No Ice	166.67	0.869	-0.0497	0.5521	0.5538
101 mph 90 degree with No Ice	173.33	0.934	-0.0528	0.6303	0.6309
101 mph 90 degree with No Ice	180.00	0.999	-0.0549	0.2791	0.2844
101 mph 120 degree with No Ice	60.00	0.108	-0.0149	0.1965	0.1966
101 mph 120 degree with No Ice	70.00	0.146	-0.0180	0.2338	0.2340
101 mph 120 degree with No Ice	90.00	0.239	-0.0240	0.3034	0.3036
101 mph 120 degree with No Ice	100.00	0.296	-0.0273	0.3401	0.3404
101 mph 120 degree with No Ice	126.67	0.490	-0.0449	0.4810	0.4814
101 mph 120 degree with No Ice	140.00	0.608	-0.0509	0.5309	0.5320
101 mph 120 degree with No Ice	146.67	0.671	-0.0549	0.5567	0.5567
101 mph 120 degree with No Ice	153.33	0.736	-0.0588	0.5659	0.5688
101 mph 120 degree with No Ice	160.00	0.803	-0.0628	0.5789	0.5821
101 mph 120 degree with No Ice	166.67	0.870	-0.0753	0.5635	0.5680
101 mph 120 degree with No Ice	173.33	0.936	-0.0890	0.5995	0.6035
101 mph 120 degree with No Ice	180.00	1.001	-0.0983	0.4917	0.4998
101 mph 180 degree with No Ice	60.00	0.108	0.0069	0.1966	0.1968
101 mph 180 degree with No Ice	70.00	0.146	0.0079	0.2341	0.2342
101 mph 180 degree with No Ice	90.00	0.240	0.0094	0.3039	0.3041
101 mph 180 degree with No Ice	100.00	0.296	0.0101	0.3408	0.3410
101 mph 180 degree with No Ice	126.67	0.491	0.0083	0.4893	0.4894
101 mph 180 degree with No Ice	140.00	0.609	0.0079	0.5373	0.5373
101 mph 180 degree with No Ice	146.67	0.673	0.0071	0.5579	0.5579

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7/18/2019 7:35:29 PM

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101 mph 180 degree with No Ice	153.33	0.739	0.0063	0.5706	0.5706
101 mph 180 degree with No Ice	160.00	0.806	0.0055	0.5794	0.5794
101 mph 180 degree with No Ice	166.67	0.873	0.0029	0.5959	0.5959
101 mph 180 degree with No Ice	173.33	0.940	0.0000	0.4935	0.4935
101 mph 180 degree with No Ice	180.00	1.006	0.0018	0.8527	0.8527
101 mph 210 degree with No Ice	60.00	0.109	0.0095	0.1971	0.1973
101 mph 210 degree with No Ice	70.00	0.146	0.0115	0.2346	0.2347
101 mph 210 degree with No Ice	90.00	0.240	0.0155	0.3041	0.3043
101 mph 210 degree with No Ice	100.00	0.296	0.0176	0.3410	0.3412
101 mph 210 degree with No Ice	126.67	0.490	0.0300	0.4868	0.4868
101 mph 210 degree with No Ice	140.00	0.609	0.0347	0.5363	0.5363
101 mph 210 degree with No Ice	146.67	0.672	0.0383	0.5567	0.5575
101 mph 210 degree with No Ice	153.33	0.738	0.0420	0.5692	0.5704
101 mph 210 degree with No Ice	160.00	0.805	0.0456	0.5799	0.5799
101 mph 210 degree with No Ice	166.67	0.873	0.0571	0.5852	0.5880
101 mph 210 degree with No Ice	173.33	0.938	0.0697	0.5304	0.5346
101 mph 210 degree with No Ice	180.00	1.004	0.0783	0.7527	0.7537
101 mph 240 degree with No Ice	60.00	0.108	0.0149	0.1965	0.1966
101 mph 240 degree with No Ice	70.00	0.146	0.0180	0.2338	0.2340
101 mph 240 degree with No Ice	90.00	0.239	0.0240	0.3034	0.3036
101 mph 240 degree with No Ice	100.00	0.296	0.0273	0.3401	0.3404
101 mph 240 degree with No Ice	126.67	0.490	0.0449	0.4810	0.4814
101 mph 240 degree with No Ice	140.00	0.608	0.0509	0.5309	0.5320
101 mph 240 degree with No Ice	146.67	0.671	0.0549	0.5567	0.5567
101 mph 240 degree with No Ice	153.33	0.736	0.0588	0.5659	0.5688
101 mph 240 degree with No Ice	160.00	0.803	0.0628	0.5789	0.5821
101 mph 240 degree with No Ice	166.67	0.870	0.0753	0.5635	0.5680
101 mph 240 degree with No Ice	173.33	0.936	0.0890	0.5995	0.6035
101 mph 240 degree with No Ice	180.00	1.001	0.0983	0.4917	0.4998
101 mph 300 degree with No Ice	60.00	0.108	0.0108	0.1962	0.1965
101 mph 300 degree with No Ice	70.00	0.146	0.0129	0.2334	0.2338
101 mph 300 degree with No Ice	90.00	0.239	0.0166	0.3029	0.3034
101 mph 300 degree with No Ice	100.00	0.296	0.0186	0.3396	0.3401
101 mph 300 degree with No Ice	126.67	0.490	0.0261	0.4811	0.4816
101 mph 300 degree with No Ice	140.00	0.608	0.0259	0.5301	0.5310
101 mph 300 degree with No Ice	146.67	0.671	0.0236	0.5559	0.5568
101 mph 300 degree with No Ice	153.33	0.736	0.0211	0.5657	0.5672
101 mph 300 degree with No Ice	160.00	0.803	0.0187	0.5788	0.5805
101 mph 300 degree with No Ice	166.67	0.870	0.0109	0.5635	0.5659
101 mph 300 degree with No Ice	173.33	0.936	0.0024	0.5994	0.6030
101 mph 300 degree with No Ice	180.00	1.001	-0.0032	0.4916	0.4971
101 mph 330 degree with No Ice	60.00	0.109	0.0054	0.1968	0.1972
101 mph 330 degree with No Ice	70.00	0.146	0.0064	0.2342	0.2346
101 mph 330 degree with No Ice	90.00	0.240	0.0080	0.3036	0.3041
101 mph 330 degree with No Ice	100.00	0.296	0.0089	0.3405	0.3410
101 mph 330 degree with No Ice	126.67	0.490	0.0111	0.4870	0.4872
101 mph 330 degree with No Ice	140.00	0.609	0.0097	0.5353	0.5362
101 mph 330 degree with No Ice	146.67	0.672	0.0070	0.5567	0.5568
101 mph 330 degree with No Ice	153.33	0.738	0.0043	0.5690	0.5702
101 mph 330 degree with No Ice	160.00	0.805	0.0015	0.5798	0.5811
101 mph 330 degree with No Ice	166.67	0.873	-0.0072	0.5853	0.5864
101 mph 330 degree with No Ice	173.33	0.938	-0.0169	0.5304	0.5334
101 mph 330 degree with No Ice	180.00	1.004	-0.0233	0.7525	0.7552
101 mph Normal to Face with No Ice (Reduced DL)	60.00	0.108	0.0069	0.1965	0.1967
101 mph Normal to Face with No Ice (Reduced DL)	70.00	0.146	0.0079	0.2339	0.2341
101 mph Normal to Face with No Ice (Reduced DL)	90.00	0.240	0.0094	0.3036	0.3038
101 mph Normal to Face with No Ice (Reduced DL)	100.00	0.296	0.0101	0.3405	0.3407
101 mph Normal to Face with No Ice (Reduced DL)	126.67	0.490	0.0084	0.4886	0.4887
101 mph Normal to Face with No Ice (Reduced DL)	140.00	0.609	0.0080	0.5367	0.5368
101 mph Normal to Face with No Ice (Reduced DL)	146.67	0.672	0.0072	0.5578	0.5578
101 mph Normal to Face with No Ice (Reduced DL)	153.33	0.738	0.0064	0.5699	0.5699
101 mph Normal to Face with No Ice (Reduced DL)	160.00	0.805	0.0057	0.5786	0.5786

Site Number: 383660

Code:

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7/18/2019 7:35:29 PM

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101 mph Normal to Face with No Ice (Reduced DL)	166.67	0.873	0.0031	0.5952	0.5952
101 mph Normal to Face with No Ice (Reduced DL)	173.33	0.938	0.0003	0.4927	0.4927
101 mph Normal to Face with No Ice (Reduced DL)	180.00	1.005	0.0015	0.8520	0.8520
101 mph 60 deg with No Ice (Reduced DL)	60.00	0.108	0.0119	0.1960	0.1963
101 mph 60 deg with No Ice (Reduced DL)	70.00	0.146	0.0142	0.2332	0.2336
101 mph 60 deg with No Ice (Reduced DL)	90.00	0.239	0.0186	0.3026	0.3031
101 mph 60 deg with No Ice (Reduced DL)	100.00	0.296	0.0209	0.3392	0.3397
101 mph 60 deg with No Ice (Reduced DL)	126.67	0.489	0.0313	0.4804	0.4809
101 mph 60 deg with No Ice (Reduced DL)	140.00	0.607	0.0356	0.5294	0.5303
101 mph 60 deg with No Ice (Reduced DL)	146.67	0.670	0.0388	0.5552	0.5561
101 mph 60 deg with No Ice (Reduced DL)	153.33	0.735	0.0419	0.5649	0.5664
101 mph 60 deg with No Ice (Reduced DL)	160.00	0.802	0.0451	0.5779	0.5797
101 mph 60 deg with No Ice (Reduced DL)	166.67	0.869	0.0552	0.5627	0.5651
101 mph 60 deg with No Ice (Reduced DL)	173.33	0.934	0.0663	0.5986	0.6022
101 mph 60 deg with No Ice (Reduced DL)	180.00	1.000	0.0754	0.4909	0.4964
101 mph 90 deg with No Ice (Reduced DL)	60.00	0.108	-0.0149	0.1962	0.1967
101 mph 90 deg with No Ice (Reduced DL)	70.00	0.146	-0.0178	0.2334	0.2340
101 mph 90 deg with No Ice (Reduced DL)	90.00	0.239	-0.0234	0.3023	0.3032
101 mph 90 deg with No Ice (Reduced DL)	100.00	0.296	-0.0264	0.3388	0.3398
101 mph 90 deg with No Ice (Reduced DL)	126.67	0.489	-0.0409	0.4772	0.4777
101 mph 90 deg with No Ice (Reduced DL)	140.00	0.607	-0.0443	0.5275	0.5293
101 mph 90 deg with No Ice (Reduced DL)	146.67	0.670	-0.0452	0.5539	0.5544
101 mph 90 deg with No Ice (Reduced DL)	153.33	0.735	-0.0461	0.5634	0.5653
101 mph 90 deg with No Ice (Reduced DL)	160.00	0.801	-0.0470	0.5783	0.5802
101 mph 90 deg with No Ice (Reduced DL)	166.67	0.868	-0.0497	0.5513	0.5530
101 mph 90 deg with No Ice (Reduced DL)	173.33	0.933	-0.0527	0.6295	0.6301
101 mph 90 deg with No Ice (Reduced DL)	180.00	0.998	-0.0548	0.2783	0.2837
101 mph 120 deg with No Ice (Reduced DL)	60.00	0.108	-0.0149	0.1963	0.1964
101 mph 120 deg with No Ice (Reduced DL)	70.00	0.146	-0.0180	0.2336	0.2337
101 mph 120 deg with No Ice (Reduced DL)	90.00	0.239	-0.0240	0.3030	0.3032
101 mph 120 deg with No Ice (Reduced DL)	100.00	0.296	-0.0273	0.3397	0.3399
101 mph 120 deg with No Ice (Reduced DL)	126.67	0.489	-0.0449	0.4803	0.4807
101 mph 120 deg with No Ice (Reduced DL)	140.00	0.607	-0.0509	0.5301	0.5312
101 mph 120 deg with No Ice (Reduced DL)	146.67	0.670	-0.0548	0.5558	0.5558
101 mph 120 deg with No Ice (Reduced DL)	153.33	0.735	-0.0587	0.5650	0.5680
101 mph 120 deg with No Ice (Reduced DL)	160.00	0.802	-0.0627	0.5781	0.5813
101 mph 120 deg with No Ice (Reduced DL)	166.67	0.869	-0.0752	0.5627	0.5672
101 mph 120 deg with No Ice (Reduced DL)	173.33	0.934	-0.0889	0.5987	0.6027
101 mph 120 deg with No Ice (Reduced DL)	180.00	1.000	-0.0982	0.4910	0.4991
101 mph 180 deg with No Ice (Reduced DL)	60.00	0.108	0.0069	0.1965	0.1966
101 mph 180 deg with No Ice (Reduced DL)	70.00	0.146	0.0079	0.2339	0.2340
101 mph 180 deg with No Ice (Reduced DL)	90.00	0.239	0.0093	0.3036	0.3037
101 mph 180 deg with No Ice (Reduced DL)	100.00	0.296	0.0100	0.3404	0.3406
101 mph 180 deg with No Ice (Reduced DL)	126.67	0.490	0.0083	0.4886	0.4887
101 mph 180 deg with No Ice (Reduced DL)	140.00	0.609	0.0078	0.5366	0.5366
101 mph 180 deg with No Ice (Reduced DL)	146.67	0.672	0.0071	0.5572	0.5572
101 mph 180 deg with No Ice (Reduced DL)	153.33	0.738	0.0063	0.5698	0.5698
101 mph 180 deg with No Ice (Reduced DL)	160.00	0.805	0.0054	0.5785	0.5786
101 mph 180 deg with No Ice (Reduced DL)	166.67	0.872	0.0028	0.5951	0.5951
101 mph 180 deg with No Ice (Reduced DL)	173.33	0.938	0.0000	0.4927	0.4927
101 mph 180 deg with No Ice (Reduced DL)	180.00	1.005	0.0019	0.8519	0.8519
101 mph 210 deg with No Ice (Reduced DL)	60.00	0.108	0.0095	0.1969	0.1971
101 mph 210 deg with No Ice (Reduced DL)	70.00	0.146	0.0115	0.2343	0.2345
101 mph 210 deg with No Ice (Reduced DL)	90.00	0.239	0.0155	0.3037	0.3039
101 mph 210 deg with No Ice (Reduced DL)	100.00	0.296	0.0176	0.3406	0.3407
101 mph 210 deg with No Ice (Reduced DL)	126.67	0.490	0.0299	0.4861	0.4862
101 mph 210 deg with No Ice (Reduced DL)	140.00	0.608	0.0347	0.5355	0.5356
101 mph 210 deg with No Ice (Reduced DL)	146.67	0.672	0.0383	0.5558	0.5568
101 mph 210 deg with No Ice (Reduced DL)	153.33	0.737	0.0419	0.5684	0.5696
101 mph 210 deg with No Ice (Reduced DL)	160.00	0.804	0.0456	0.5790	0.5791
101 mph 210 deg with No Ice (Reduced DL)	166.67	0.871	0.0570	0.5844	0.5872
101 mph 210 deg with No Ice (Reduced DL)	173.33	0.937	0.0697	0.5296	0.5338

Site Number: 383660

Code:

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7/18/2019 7:35:29 PM

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101 mph 210 deg with No Ice (Reduced DL)	180.00	1.003	0.0782	0.7520	0.7530
101 mph 240 deg with No Ice (Reduced DL)	60.00	0.108	0.0149	0.1963	0.1964
101 mph 240 deg with No Ice (Reduced DL)	70.00	0.146	0.0180	0.2336	0.2337
101 mph 240 deg with No Ice (Reduced DL)	90.00	0.239	0.0240	0.3030	0.3032
101 mph 240 deg with No Ice (Reduced DL)	100.00	0.296	0.0273	0.3397	0.3399
101 mph 240 deg with No Ice (Reduced DL)	126.67	0.489	0.0449	0.4803	0.4807
101 mph 240 deg with No Ice (Reduced DL)	140.00	0.607	0.0509	0.5301	0.5312
101 mph 240 deg with No Ice (Reduced DL)	146.67	0.670	0.0548	0.5558	0.5558
101 mph 240 deg with No Ice (Reduced DL)	153.33	0.735	0.0587	0.5650	0.5680
101 mph 240 deg with No Ice (Reduced DL)	160.00	0.802	0.0627	0.5781	0.5813
101 mph 240 deg with No Ice (Reduced DL)	166.67	0.869	0.0752	0.5627	0.5672
101 mph 240 deg with No Ice (Reduced DL)	173.33	0.934	0.0889	0.5987	0.6027
101 mph 240 deg with No Ice (Reduced DL)	180.00	1.000	0.0982	0.4910	0.4991
101 mph 300 deg with No Ice (Reduced DL)	60.00	0.108	0.0108	0.1960	0.1963
101 mph 300 deg with No Ice (Reduced DL)	70.00	0.146	0.0129	0.2332	0.2336
101 mph 300 deg with No Ice (Reduced DL)	90.00	0.239	0.0166	0.3026	0.3031
101 mph 300 deg with No Ice (Reduced DL)	100.00	0.296	0.0185	0.3392	0.3397
101 mph 300 deg with No Ice (Reduced DL)	126.67	0.489	0.0261	0.4804	0.4809
101 mph 300 deg with No Ice (Reduced DL)	140.00	0.607	0.0259	0.5294	0.5303
101 mph 300 deg with No Ice (Reduced DL)	146.67	0.670	0.0235	0.5552	0.5561
101 mph 300 deg with No Ice (Reduced DL)	153.33	0.735	0.0211	0.5649	0.5664
101 mph 300 deg with No Ice (Reduced DL)	160.00	0.802	0.0187	0.5779	0.5797
101 mph 300 deg with No Ice (Reduced DL)	166.67	0.869	0.0110	0.5627	0.5651
101 mph 300 deg with No Ice (Reduced DL)	173.33	0.934	0.0025	0.5986	0.6022
101 mph 300 deg with No Ice (Reduced DL)	180.00	1.000	-0.0032	0.4909	0.4964
101 mph 330 deg with No Ice (Reduced DL)	60.00	0.108	0.0054	0.1966	0.1970
101 mph 330 deg with No Ice (Reduced DL)	70.00	0.146	0.0064	0.2340	0.2344
101 mph 330 deg with No Ice (Reduced DL)	90.00	0.239	0.0080	0.3033	0.3038
101 mph 330 deg with No Ice (Reduced DL)	100.00	0.296	0.0089	0.3400	0.3406
101 mph 330 deg with No Ice (Reduced DL)	126.67	0.490	0.0111	0.4863	0.4865
101 mph 330 deg with No Ice (Reduced DL)	140.00	0.608	0.0097	0.5345	0.5354
101 mph 330 deg with No Ice (Reduced DL)	146.67	0.672	0.0070	0.5559	0.5559
101 mph 330 deg with No Ice (Reduced DL)	153.33	0.737	0.0043	0.5682	0.5694
101 mph 330 deg with No Ice (Reduced DL)	160.00	0.804	0.0015	0.5789	0.5802
101 mph 330 deg with No Ice (Reduced DL)	166.67	0.871	-0.0072	0.5844	0.5856
101 mph 330 deg with No Ice (Reduced DL)	173.33	0.937	-0.0168	0.5296	0.5326
101 mph 330 deg with No Ice (Reduced DL)	180.00	1.003	-0.0232	0.7517	0.7544
50 mph Normal with 0.75 in Radial Ice	60.00	0.038	0.0027	0.0659	0.0660
50 mph Normal with 0.75 in Radial Ice	70.00	0.051	0.0031	0.0777	0.0778
50 mph Normal with 0.75 in Radial Ice	90.00	0.081	0.0037	0.0988	0.0989
50 mph Normal with 0.75 in Radial Ice	100.00	0.099	0.0039	0.1091	0.1091
50 mph Normal with 0.75 in Radial Ice	126.67	0.160	0.0038	0.1513	0.1513
50 mph Normal with 0.75 in Radial Ice	140.00	0.197	0.0036	0.1663	0.1664
50 mph Normal with 0.75 in Radial Ice	146.67	0.216	0.0033	0.1738	0.1738
50 mph Normal with 0.75 in Radial Ice	153.33	0.237	0.0030	0.1764	0.1764
50 mph Normal with 0.75 in Radial Ice	160.00	0.257	0.0028	0.1780	0.1781
50 mph Normal with 0.75 in Radial Ice	166.67	0.278	0.0018	0.1854	0.1854
50 mph Normal with 0.75 in Radial Ice	173.33	0.299	0.0008	0.1508	0.1508
50 mph Normal with 0.75 in Radial Ice	180.00	0.319	0.0002	0.2770	0.2770
50 mph 60 deg with 0.75 in Radial Ice	60.00	0.039	-0.0038	0.0656	0.0656
50 mph 60 deg with 0.75 in Radial Ice	70.00	0.051	-0.0045	0.0774	0.0774
50 mph 60 deg with 0.75 in Radial Ice	90.00	0.082	-0.0057	0.0984	0.0984
50 mph 60 deg with 0.75 in Radial Ice	100.00	0.100	-0.0063	0.1089	0.1090
50 mph 60 deg with 0.75 in Radial Ice	126.67	0.160	-0.0089	0.1496	0.1497
50 mph 60 deg with 0.75 in Radial Ice	140.00	0.197	-0.0093	0.1643	0.1643
50 mph 60 deg with 0.75 in Radial Ice	146.67	0.216	-0.0092	0.1715	0.1718
50 mph 60 deg with 0.75 in Radial Ice	153.33	0.236	-0.0092	0.1748	0.1749
50 mph 60 deg with 0.75 in Radial Ice	160.00	0.257	0.0093	0.1778	0.1780
50 mph 60 deg with 0.75 in Radial Ice	166.67	0.277	0.0103	0.1739	0.1741
50 mph 60 deg with 0.75 in Radial Ice	173.33	0.298	0.0115	0.1887	0.1890
50 mph 60 deg with 0.75 in Radial Ice	180.00	0.318	0.0123	0.1530	0.1535
50 mph 90 deg with 0.75 in Radial Ice	60.00	0.039	-0.0047	0.0657	0.0659

Site Number: 383660

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50 mph 90 deg with 0.75 in Radial Ice	70.00	0.051	-0.0055	0.0774	0.0776
50 mph 90 deg with 0.75 in Radial Ice	90.00	0.081	-0.0070	0.0984	0.0985
50 mph 90 deg with 0.75 in Radial Ice	100.00	0.100	-0.0078	0.1088	0.1089
50 mph 90 deg with 0.75 in Radial Ice	126.67	0.160	-0.0113	0.1489	0.1490
50 mph 90 deg with 0.75 in Radial Ice	140.00	0.196	-0.0122	0.1637	0.1639
50 mph 90 deg with 0.75 in Radial Ice	146.67	0.216	-0.0125	0.1723	0.1724
50 mph 90 deg with 0.75 in Radial Ice	153.33	0.236	-0.0128	0.1743	0.1745
50 mph 90 deg with 0.75 in Radial Ice	160.00	0.256	-0.0131	0.1779	0.1783
50 mph 90 deg with 0.75 in Radial Ice	166.67	0.277	-0.0140	0.1699	0.1704
50 mph 90 deg with 0.75 in Radial Ice	173.33	0.297	-0.0151	0.1995	0.1997
50 mph 90 deg with 0.75 in Radial Ice	180.00	0.317	-0.0158	0.0746	0.0759
50 mph 120 deg with 0.75 in Radial Ice	60.00	0.038	-0.0042	0.0658	0.0659
50 mph 120 deg with 0.75 in Radial Ice	70.00	0.051	-0.0050	0.0776	0.0777
50 mph 120 deg with 0.75 in Radial Ice	90.00	0.081	-0.0065	0.0985	0.0987
50 mph 120 deg with 0.75 in Radial Ice	100.00	0.099	-0.0072	0.1088	0.1089
50 mph 120 deg with 0.75 in Radial Ice	126.67	0.160	-0.0107	0.1494	0.1495
50 mph 120 deg with 0.75 in Radial Ice	140.00	0.196	-0.0118	0.1645	0.1647
50 mph 120 deg with 0.75 in Radial Ice	146.67	0.216	-0.0124	0.1731	0.1731
50 mph 120 deg with 0.75 in Radial Ice	153.33	0.236	-0.0129	0.1748	0.1752
50 mph 120 deg with 0.75 in Radial Ice	160.00	0.256	-0.0135	0.1779	0.1784
50 mph 120 deg with 0.75 in Radial Ice	166.67	0.277	-0.0154	0.1739	0.1745
50 mph 120 deg with 0.75 in Radial Ice	173.33	0.297	-0.0176	0.1884	0.1890
50 mph 120 deg with 0.75 in Radial Ice	180.00	0.318	-0.0190	0.1527	0.1537
50 mph 180 deg with 0.75 in Radial Ice	60.00	0.039	0.0027	0.0656	0.0656
50 mph 180 deg with 0.75 in Radial Ice	70.00	0.051	0.0031	0.0775	0.0775
50 mph 180 deg with 0.75 in Radial Ice	90.00	0.082	0.0037	0.0986	0.0986
50 mph 180 deg with 0.75 in Radial Ice	100.00	0.100	0.0039	0.1092	0.1092
50 mph 180 deg with 0.75 in Radial Ice	126.67	0.160	0.0038	0.1514	0.1514
50 mph 180 deg with 0.75 in Radial Ice	140.00	0.197	0.0036	0.1660	0.1660
50 mph 180 deg with 0.75 in Radial Ice	146.67	0.217	0.0033	0.1723	0.1723
50 mph 180 deg with 0.75 in Radial Ice	153.33	0.237	0.0030	0.1765	0.1765
50 mph 180 deg with 0.75 in Radial Ice	160.00	0.258	0.0027	0.1779	0.1779
50 mph 180 deg with 0.75 in Radial Ice	166.67	0.278	0.0018	0.1853	0.1853
50 mph 180 deg with 0.75 in Radial Ice	173.33	0.299	0.0008	0.1510	0.1510
50 mph 180 deg with 0.75 in Radial Ice	180.00	0.320	0.0001	0.2767	0.2767
50 mph 210 deg with 0.75 in Radial Ice	60.00	0.039	0.0025	0.0659	0.0659
50 mph 210 deg with 0.75 in Radial Ice	70.00	0.051	0.0030	0.0776	0.0777
50 mph 210 deg with 0.75 in Radial Ice	90.00	0.082	0.0039	0.0986	0.0987
50 mph 210 deg with 0.75 in Radial Ice	100.00	0.100	0.0043	0.1090	0.1091
50 mph 210 deg with 0.75 in Radial Ice	126.67	0.160	0.0065	0.1506	0.1508
50 mph 210 deg with 0.75 in Radial Ice	140.00	0.197	0.0073	0.1655	0.1656
50 mph 210 deg with 0.75 in Radial Ice	146.67	0.216	0.0078	0.1731	0.1731
50 mph 210 deg with 0.75 in Radial Ice	153.33	0.237	0.0083	0.1759	0.1761
50 mph 210 deg with 0.75 in Radial Ice	160.00	0.257	0.0088	0.1780	0.1781
50 mph 210 deg with 0.75 in Radial Ice	166.67	0.278	0.0103	0.1815	0.1818
50 mph 210 deg with 0.75 in Radial Ice	173.33	0.299	0.0120	0.1643	0.1648
50 mph 210 deg with 0.75 in Radial Ice	180.00	0.319	0.0132	0.2426	0.2426
50 mph 240 deg with 0.75 in Radial Ice	60.00	0.038	0.0042	0.0658	0.0659
50 mph 240 deg with 0.75 in Radial Ice	70.00	0.051	0.0050	0.0776	0.0777
50 mph 240 deg with 0.75 in Radial Ice	90.00	0.081	0.0065	0.0985	0.0987
50 mph 240 deg with 0.75 in Radial Ice	100.00	0.099	0.0072	0.1088	0.1089
50 mph 240 deg with 0.75 in Radial Ice	126.67	0.160	0.0107	0.1494	0.1495
50 mph 240 deg with 0.75 in Radial Ice	140.00	0.196	0.0118	0.1645	0.1647
50 mph 240 deg with 0.75 in Radial Ice	146.67	0.216	0.0124	0.1731	0.1731
50 mph 240 deg with 0.75 in Radial Ice	153.33	0.236	0.0129	0.1748	0.1752
50 mph 240 deg with 0.75 in Radial Ice	160.00	0.256	0.0135	0.1779	0.1784
50 mph 240 deg with 0.75 in Radial Ice	166.67	0.277	0.0154	0.1739	0.1745
50 mph 240 deg with 0.75 in Radial Ice	173.33	0.297	0.0176	0.1884	0.1890
50 mph 240 deg with 0.75 in Radial Ice	180.00	0.318	0.0190	0.1527	0.1537
50 mph 300 deg with 0.75 in Radial Ice	60.00	0.039	0.0038	0.0656	0.0656
50 mph 300 deg with 0.75 in Radial Ice	70.00	0.051	0.0045	0.0774	0.0774
50 mph 300 deg with 0.75 in Radial Ice	90.00	0.082	0.0057	0.0984	0.0984

Site Number: 383660

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7/18/2019 7:35:30 PM

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50 mph 300 deg with 0.75 in Radial Ice	100.00	0.100	0.0063	0.1089	0.1090
50 mph 300 deg with 0.75 in Radial Ice	126.67	0.160	0.0089	0.1496	0.1497
50 mph 300 deg with 0.75 in Radial Ice	140.00	0.197	0.0093	0.1643	0.1643
50 mph 300 deg with 0.75 in Radial Ice	146.67	0.216	0.0092	0.1715	0.1718
50 mph 300 deg with 0.75 in Radial Ice	153.33	0.236	0.0092	0.1748	0.1749
50 mph 300 deg with 0.75 in Radial Ice	160.00	0.257	0.0091	0.1778	0.1780
50 mph 300 deg with 0.75 in Radial Ice	166.67	0.277	0.0088	0.1739	0.1741
50 mph 300 deg with 0.75 in Radial Ice	173.33	0.298	0.0085	0.1887	0.1890
50 mph 300 deg with 0.75 in Radial Ice	180.00	0.318	0.0083	0.1530	0.1535
50 mph 330 deg with 0.75 in Radial Ice	60.00	0.039	0.0021	0.0658	0.0659
50 mph 330 deg with 0.75 in Radial Ice	70.00	0.051	0.0025	0.0776	0.0777
50 mph 330 deg with 0.75 in Radial Ice	90.00	0.082	0.0032	0.0987	0.0987
50 mph 330 deg with 0.75 in Radial Ice	100.00	0.100	0.0035	0.1091	0.1091
50 mph 330 deg with 0.75 in Radial Ice	126.67	0.160	0.0047	0.1508	0.1508
50 mph 330 deg with 0.75 in Radial Ice	140.00	0.197	0.0049	0.1656	0.1656
50 mph 330 deg with 0.75 in Radial Ice	146.67	0.216	0.0047	0.1731	0.1732
50 mph 330 deg with 0.75 in Radial Ice	153.33	0.237	0.0045	0.1759	0.1759
50 mph 330 deg with 0.75 in Radial Ice	160.00	0.257	0.0043	0.1780	0.1782
50 mph 330 deg with 0.75 in Radial Ice	166.67	0.278	0.0037	0.1816	0.1816
50 mph 330 deg with 0.75 in Radial Ice	173.33	0.298	0.0030	0.1644	0.1646
50 mph 330 deg with 0.75 in Radial Ice	180.00	0.319	0.0026	0.2429	0.2430
Seismic Normal M1	60.00	0.007	0.0006	0.0126	0.0126
Seismic Normal M1	70.00	0.009	0.0007	0.0152	0.0152
Seismic Normal M1	90.00	0.015	0.0009	0.0202	0.0202
Seismic Normal M1	100.00	0.019	0.0010	0.0229	0.0229
Seismic Normal M1	126.67	0.032	0.0014	0.0332	0.0332
Seismic Normal M1	140.00	0.040	0.0014	0.0362	0.0362
Seismic Normal M1	146.67	0.044	0.0014	0.0384	0.0384
Seismic Normal M1	153.33	0.049	0.0013	0.0387	0.0388
Seismic Normal M1	160.00	0.053	0.0013	0.0391	0.0391
Seismic Normal M1	166.67	0.058	0.0013	0.0396	0.0396
Seismic Normal M1	173.33	0.063	0.0013	0.0393	0.0393
Seismic Normal M1	180.00	0.067	0.0013	0.0391	0.0391
Seismic Normal M2	60.00	0.004	0.0003	0.0085	0.0085
Seismic Normal M2	70.00	0.006	0.0004	0.0104	0.0104
Seismic Normal M2	90.00	0.010	0.0006	0.0143	0.0143
Seismic Normal M2	100.00	0.013	0.0006	0.0165	0.0165
Seismic Normal M2	126.67	0.023	0.0009	0.0255	0.0255
Seismic Normal M2	140.00	0.029	0.0009	0.0290	0.0290
Seismic Normal M2	146.67	0.032	0.0008	0.0315	0.0315
Seismic Normal M2	153.33	0.036	0.0008	0.0321	0.0321
Seismic Normal M2	160.00	0.040	0.0008	0.0326	0.0327
Seismic Normal M2	166.67	0.044	0.0008	0.0334	0.0334
Seismic Normal M2	173.33	0.048	0.0008	0.0330	0.0330
Seismic Normal M2	180.00	0.051	0.0008	0.0327	0.0327
Seismic 60 deg M1	60.00	0.007	-0.0006	0.0126	0.0126
Seismic 60 deg M1	70.00	0.009	-0.0007	0.0152	0.0152
Seismic 60 deg M1	90.00	0.015	-0.0009	0.0202	0.0202
Seismic 60 deg M1	100.00	0.019	-0.0010	0.0230	0.0230
Seismic 60 deg M1	126.67	0.032	-0.0014	0.0332	0.0332
Seismic 60 deg M1	140.00	0.040	-0.0014	0.0363	0.0363
Seismic 60 deg M1	146.67	0.044	-0.0014	0.0380	0.0381
Seismic 60 deg M1	153.33	0.049	-0.0013	0.0388	0.0388
Seismic 60 deg M1	160.00	0.053	-0.0013	0.0391	0.0391
Seismic 60 deg M1	166.67	0.058	-0.0013	0.0396	0.0396
Seismic 60 deg M1	173.33	0.063	-0.0013	0.0393	0.0393
Seismic 60 deg M1	180.00	0.067	-0.0013	0.0392	0.0392
Seismic 60 deg M2	60.00	0.004	-0.0003	0.0085	0.0085
Seismic 60 deg M2	70.00	0.006	-0.0004	0.0104	0.0104
Seismic 60 deg M2	90.00	0.010	-0.0006	0.0143	0.0143
Seismic 60 deg M2	100.00	0.013	-0.0006	0.0166	0.0166
Seismic 60 deg M2	126.67	0.023	-0.0009	0.0255	0.0255

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Seismic 60 deg M2	140.00	0.029	-0.0009	0.0290	0.0290
Seismic 60 deg M2	146.67	0.032	-0.0008	0.0311	0.0311
Seismic 60 deg M2	153.33	0.036	-0.0008	0.0321	0.0321
Seismic 60 deg M2	160.00	0.040	-0.0008	0.0327	0.0327
Seismic 60 deg M2	166.67	0.044	-0.0008	0.0334	0.0334
Seismic 60 deg M2	173.33	0.048	-0.0008	0.0330	0.0330
Seismic 60 deg M2	180.00	0.051	-0.0008	0.0329	0.0329
Seismic 90 deg M1	60.00	0.007	-0.0007	0.0126	0.0126
Seismic 90 deg M1	70.00	0.009	-0.0008	0.0152	0.0152
Seismic 90 deg M1	90.00	0.015	-0.0011	0.0202	0.0202
Seismic 90 deg M1	100.00	0.019	-0.0012	0.0229	0.0230
Seismic 90 deg M1	126.67	0.032	-0.0016	0.0332	0.0332
Seismic 90 deg M1	140.00	0.040	-0.0016	0.0363	0.0363
Seismic 90 deg M1	146.67	0.044	-0.0016	0.0383	0.0383
Seismic 90 deg M1	153.33	0.049	-0.0016	0.0388	0.0388
Seismic 90 deg M1	160.00	0.053	-0.0015	0.0391	0.0391
Seismic 90 deg M1	166.67	0.058	-0.0015	0.0396	0.0396
Seismic 90 deg M1	173.33	0.063	-0.0015	0.0393	0.0393
Seismic 90 deg M1	180.00	0.067	-0.0015	0.0392	0.0392
Seismic 90 deg M2	60.00	0.004	-0.0004	0.0085	0.0085
Seismic 90 deg M2	70.00	0.006	-0.0005	0.0104	0.0104
Seismic 90 deg M2	90.00	0.010	-0.0006	0.0143	0.0143
Seismic 90 deg M2	100.00	0.013	-0.0007	0.0166	0.0166
Seismic 90 deg M2	126.67	0.023	-0.0010	0.0255	0.0255
Seismic 90 deg M2	140.00	0.029	-0.0010	0.0290	0.0290
Seismic 90 deg M2	146.67	0.032	-0.0010	0.0314	0.0314
Seismic 90 deg M2	153.33	0.036	-0.0010	0.0321	0.0321
Seismic 90 deg M2	160.00	0.040	-0.0010	0.0327	0.0327
Seismic 90 deg M2	166.67	0.044	-0.0009	0.0334	0.0334
Seismic 90 deg M2	173.33	0.048	-0.0009	0.0330	0.0330
Seismic 90 deg M2	180.00	0.051	-0.0009	0.0328	0.0328
Seismic 120 deg M1	60.00	0.007	-0.0006	0.0126	0.0126
Seismic 120 deg M1	70.00	0.009	-0.0007	0.0152	0.0152
Seismic 120 deg M1	90.00	0.015	-0.0009	0.0202	0.0202
Seismic 120 deg M1	100.00	0.019	-0.0010	0.0229	0.0229
Seismic 120 deg M1	126.67	0.032	-0.0014	0.0332	0.0332
Seismic 120 deg M1	140.00	0.040	-0.0014	0.0362	0.0362
Seismic 120 deg M1	146.67	0.044	-0.0014	0.0384	0.0384
Seismic 120 deg M1	153.33	0.049	-0.0013	0.0387	0.0388
Seismic 120 deg M1	160.00	0.053	-0.0013	0.0391	0.0391
Seismic 120 deg M1	166.67	0.058	-0.0013	0.0396	0.0396
Seismic 120 deg M1	173.33	0.063	-0.0013	0.0393	0.0393
Seismic 120 deg M1	180.00	0.067	-0.0013	0.0391	0.0391
Seismic 120 deg M2	60.00	0.004	0.0003	0.0085	0.0085
Seismic 120 deg M2	70.00	0.006	0.0004	0.0104	0.0104
Seismic 120 deg M2	90.00	0.010	0.0006	0.0143	0.0143
Seismic 120 deg M2	100.00	0.013	-0.0006	0.0165	0.0165
Seismic 120 deg M2	126.67	0.023	-0.0009	0.0255	0.0255
Seismic 120 deg M2	140.00	0.029	0.0009	0.0290	0.0290
Seismic 120 deg M2	146.67	0.032	0.0008	0.0315	0.0315
Seismic 120 deg M2	153.33	0.036	0.0008	0.0321	0.0321
Seismic 120 deg M2	160.00	0.040	0.0008	0.0326	0.0327
Seismic 120 deg M2	166.67	0.044	0.0008	0.0334	0.0334
Seismic 120 deg M2	173.33	0.048	0.0008	0.0330	0.0330
Seismic 120 deg M2	180.00	0.051	0.0008	0.0327	0.0327
Seismic 180 deg M1	60.00	0.007	0.0006	0.0126	0.0126
Seismic 180 deg M1	70.00	0.009	0.0007	0.0152	0.0152
Seismic 180 deg M1	90.00	0.015	0.0009	0.0202	0.0202
Seismic 180 deg M1	100.00	0.019	0.0010	0.0230	0.0230
Seismic 180 deg M1	126.67	0.032	0.0014	0.0332	0.0332
Seismic 180 deg M1	140.00	0.040	0.0014	0.0363	0.0363
Seismic 180 deg M1	146.67	0.044	0.0014	0.0380	0.0381

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Engineering Number: 12927180_C3_03

7/18/2019 7:35:30 PM

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Seismic 180 deg M1	153.33	0.049	0.0013	0.0388	0.0388
Seismic 180 deg M1	160.00	0.053	0.0013	0.0391	0.0391
Seismic 180 deg M1	166.67	0.058	0.0013	0.0396	0.0396
Seismic 180 deg M1	173.33	0.063	0.0013	0.0393	0.0393
Seismic 180 deg M1	180.00	0.067	0.0013	0.0392	0.0392
Seismic 180 deg M2	60.00	0.004	0.0003	0.0085	0.0085
Seismic 180 deg M2	70.00	0.006	0.0004	0.0104	0.0104
Seismic 180 deg M2	90.00	0.010	0.0006	0.0143	0.0143
Seismic 180 deg M2	100.00	0.013	0.0006	0.0166	0.0166
Seismic 180 deg M2	126.67	0.023	0.0009	0.0255	0.0255
Seismic 180 deg M2	140.00	0.029	0.0009	0.0290	0.0290
Seismic 180 deg M2	146.67	0.032	0.0008	0.0311	0.0311
Seismic 180 deg M2	153.33	0.036	0.0008	0.0321	0.0321
Seismic 180 deg M2	160.00	0.040	0.0008	0.0327	0.0327
Seismic 180 deg M2	166.67	0.044	0.0008	0.0334	0.0334
Seismic 180 deg M2	173.33	0.048	0.0008	0.0330	0.0330
Seismic 180 deg M2	180.00	0.051	0.0008	0.0329	0.0329
Seismic 210 deg M1	60.00	0.007	0.0003	0.0126	0.0126
Seismic 210 deg M1	70.00	0.009	0.0004	0.0152	0.0152
Seismic 210 deg M1	90.00	0.015	0.0005	0.0202	0.0202
Seismic 210 deg M1	100.00	0.019	0.0006	0.0229	0.0230
Seismic 210 deg M1	126.67	0.032	0.0008	0.0332	0.0332
Seismic 210 deg M1	140.00	0.040	0.0008	0.0363	0.0363
Seismic 210 deg M1	146.67	0.044	0.0008	0.0383	0.0383
Seismic 210 deg M1	153.33	0.049	0.0008	0.0388	0.0388
Seismic 210 deg M1	160.00	0.053	0.0008	0.0391	0.0391
Seismic 210 deg M1	166.67	0.058	0.0008	0.0396	0.0396
Seismic 210 deg M1	173.33	0.063	0.0007	0.0393	0.0393
Seismic 210 deg M1	180.00	0.067	0.0007	0.0392	0.0392
Seismic 210 deg M2	60.00	0.004	0.0002	0.0085	0.0085
Seismic 210 deg M2	70.00	0.006	0.0002	0.0104	0.0104
Seismic 210 deg M2	90.00	0.010	0.0003	0.0143	0.0143
Seismic 210 deg M2	100.00	0.013	0.0004	0.0166	0.0166
Seismic 210 deg M2	126.67	0.023	0.0005	0.0255	0.0255
Seismic 210 deg M2	140.00	0.029	0.0005	0.0290	0.0290
Seismic 210 deg M2	146.67	0.032	0.0005	0.0314	0.0314
Seismic 210 deg M2	153.33	0.036	0.0005	0.0321	0.0321
Seismic 210 deg M2	160.00	0.040	0.0005	0.0327	0.0327
Seismic 210 deg M2	166.67	0.044	0.0005	0.0334	0.0334
Seismic 210 deg M2	173.33	0.048	0.0004	0.0330	0.0330
Seismic 210 deg M2	180.00	0.051	0.0004	0.0328	0.0328
Seismic 240 deg M1	60.00	0.007	0.0006	0.0126	0.0126
Seismic 240 deg M1	70.00	0.009	0.0007	0.0152	0.0152
Seismic 240 deg M1	90.00	0.015	0.0009	0.0202	0.0202
Seismic 240 deg M1	100.00	0.019	0.0010	0.0229	0.0229
Seismic 240 deg M1	126.67	0.032	0.0014	0.0332	0.0332
Seismic 240 deg M1	140.00	0.040	0.0014	0.0362	0.0362
Seismic 240 deg M1	146.67	0.044	0.0014	0.0384	0.0384
Seismic 240 deg M1	153.33	0.049	0.0013	0.0387	0.0388
Seismic 240 deg M1	160.00	0.053	0.0013	0.0391	0.0391
Seismic 240 deg M1	166.67	0.058	0.0013	0.0396	0.0396
Seismic 240 deg M1	173.33	0.063	0.0013	0.0393	0.0393
Seismic 240 deg M1	180.00	0.067	0.0013	0.0391	0.0391
Seismic 240 deg M2	60.00	0.004	0.0003	0.0085	0.0085
Seismic 240 deg M2	70.00	0.006	0.0004	0.0104	0.0104
Seismic 240 deg M2	90.00	0.010	0.0006	0.0143	0.0143
Seismic 240 deg M2	100.00	0.013	0.0006	0.0165	0.0165
Seismic 240 deg M2	126.67	0.023	0.0009	0.0255	0.0255
Seismic 240 deg M2	140.00	0.029	0.0009	0.0290	0.0290
Seismic 240 deg M2	146.67	0.032	0.0008	0.0315	0.0315
Seismic 240 deg M2	153.33	0.036	0.0008	0.0321	0.0321
Seismic 240 deg M2	160.00	0.040	0.0008	0.0326	0.0327

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Seismic 240 deg M2	166.67	0.044	0.0008	0.0334	0.0334
Seismic 240 deg M2	173.33	0.048	0.0008	0.0330	0.0330
Seismic 240 deg M2	180.00	0.051	0.0008	0.0327	0.0327
Seismic 300 deg M1	60.00	0.007	0.0006	0.0126	0.0126
Seismic 300 deg M1	70.00	0.009	0.0007	0.0152	0.0152
Seismic 300 deg M1	90.00	0.015	0.0009	0.0202	0.0202
Seismic 300 deg M1	100.00	0.019	0.0010	0.0230	0.0230
Seismic 300 deg M1	126.67	0.032	0.0014	0.0332	0.0332
Seismic 300 deg M1	140.00	0.040	0.0014	0.0363	0.0363
Seismic 300 deg M1	146.67	0.044	0.0014	0.0380	0.0381
Seismic 300 deg M1	153.33	0.049	0.0013	0.0388	0.0388
Seismic 300 deg M1	160.00	0.053	0.0013	0.0391	0.0391
Seismic 300 deg M1	166.67	0.058	0.0013	0.0396	0.0396
Seismic 300 deg M1	173.33	0.063	0.0013	0.0393	0.0393
Seismic 300 deg M1	180.00	0.067	0.0013	0.0392	0.0392
Seismic 300 deg M2	60.00	0.004	0.0003	0.0085	0.0085
Seismic 300 deg M2	70.00	0.006	0.0004	0.0104	0.0104
Seismic 300 deg M2	90.00	0.010	0.0006	0.0143	0.0143
Seismic 300 deg M2	100.00	0.013	0.0006	0.0166	0.0166
Seismic 300 deg M2	126.67	0.023	0.0009	0.0255	0.0255
Seismic 300 deg M2	140.00	0.029	0.0009	0.0290	0.0290
Seismic 300 deg M2	146.67	0.032	0.0008	0.0311	0.0311
Seismic 300 deg M2	153.33	0.036	0.0008	0.0321	0.0321
Seismic 300 deg M2	160.00	0.040	0.0008	0.0327	0.0327
Seismic 300 deg M2	166.67	0.044	0.0008	0.0334	0.0334
Seismic 300 deg M2	173.33	0.048	0.0008	0.0330	0.0330
Seismic 300 deg M2	180.00	0.051	0.0008	0.0329	0.0329
Seismic 330 deg M1	60.00	0.007	0.0003	0.0126	0.0126
Seismic 330 deg M1	70.00	0.009	0.0004	0.0152	0.0152
Seismic 330 deg M1	90.00	0.015	0.0005	0.0202	0.0202
Seismic 330 deg M1	100.00	0.019	0.0006	0.0229	0.0230
Seismic 330 deg M1	126.67	0.032	0.0008	0.0332	0.0332
Seismic 330 deg M1	140.00	0.040	0.0008	0.0363	0.0363
Seismic 330 deg M1	146.67	0.044	0.0008	0.0383	0.0383
Seismic 330 deg M1	153.33	0.049	0.0008	0.0388	0.0388
Seismic 330 deg M1	160.00	0.053	0.0008	0.0391	0.0391
Seismic 330 deg M1	166.67	0.058	0.0008	0.0396	0.0396
Seismic 330 deg M1	173.33	0.063	0.0007	0.0393	0.0393
Seismic 330 deg M1	180.00	0.067	0.0007	0.0392	0.0392
Seismic 330 deg M2	60.00	0.004	0.0002	0.0085	0.0085
Seismic 330 deg M2	70.00	0.006	0.0002	0.0104	0.0104
Seismic 330 deg M2	90.00	0.010	0.0003	0.0143	0.0143
Seismic 330 deg M2	100.00	0.013	0.0004	0.0166	0.0166
Seismic 330 deg M2	126.67	0.023	0.0005	0.0255	0.0255
Seismic 330 deg M2	140.00	0.029	0.0005	0.0290	0.0290
Seismic 330 deg M2	146.67	0.032	0.0005	0.0314	0.0314
Seismic 330 deg M2	153.33	0.036	0.0005	0.0321	0.0321
Seismic 330 deg M2	160.00	0.040	0.0005	0.0327	0.0327
Seismic 330 deg M2	166.67	0.044	0.0005	0.0334	0.0334
Seismic 330 deg M2	173.33	0.048	0.0004	0.0330	0.0330
Seismic 330 deg M2	180.00	0.051	0.0004	0.0328	0.0328
Seismic (Reduced DL) Normal M1	60.00	0.007	0.0006	0.0126	0.0126
Seismic (Reduced DL) Normal M1	70.00	0.009	0.0007	0.0152	0.0152
Seismic (Reduced DL) Normal M1	90.00	0.015	0.0009	0.0201	0.0201
Seismic (Reduced DL) Normal M1	100.00	0.019	0.0010	0.0228	0.0228
Seismic (Reduced DL) Normal M1	126.67	0.032	0.0014	0.0331	0.0331
Seismic (Reduced DL) Normal M1	140.00	0.040	0.0014	0.0361	0.0361
Seismic (Reduced DL) Normal M1	146.67	0.044	0.0014	0.0382	0.0382
Seismic (Reduced DL) Normal M1	153.33	0.049	0.0013	0.0387	0.0387
Seismic (Reduced DL) Normal M1	160.00	0.053	0.0013	0.0390	0.0390
Seismic (Reduced DL) Normal M1	166.67	0.058	0.0013	0.0395	0.0395
Seismic (Reduced DL) Normal M1	173.33	0.062	0.0013	0.0392	0.0392

Site Number: 383660

Code:

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Site Name: North Madison Volunteer FD, CT

Engineering Number: 12927180_C3_03

7/18/2019 7:35:30 PM

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Seismic (Reduced DL) Normal M1	180.00	0.067	0.0013	0.0390	0.0390
Seismic (Reduced DL) Normal M2	60.00	0.004	0.0003	0.0085	0.0085
Seismic (Reduced DL) Normal M2	70.00	0.006	0.0004	0.0104	0.0104
Seismic (Reduced DL) Normal M2	90.00	0.010	0.0006	0.0142	0.0142
Seismic (Reduced DL) Normal M2	100.00	0.013	0.0006	0.0164	0.0165
Seismic (Reduced DL) Normal M2	126.67	0.023	0.0009	0.0254	0.0254
Seismic (Reduced DL) Normal M2	140.00	0.029	0.0009	0.0289	0.0289
Seismic (Reduced DL) Normal M2	146.67	0.032	0.0008	0.0313	0.0313
Seismic (Reduced DL) Normal M2	153.33	0.036	0.0008	0.0320	0.0320
Seismic (Reduced DL) Normal M2	160.00	0.040	0.0008	0.0326	0.0326
Seismic (Reduced DL) Normal M2	166.67	0.044	0.0008	0.0333	0.0333
Seismic (Reduced DL) Normal M2	173.33	0.048	0.0008	0.0329	0.0329
Seismic (Reduced DL) Normal M2	180.00	0.051	0.0008	0.0326	0.0327
Seismic (Reduced DL) 60 deg M1	60.00	0.007	-0.0006	0.0125	0.0125
Seismic (Reduced DL) 60 deg M1	70.00	0.009	-0.0007	0.0151	0.0151
Seismic (Reduced DL) 60 deg M1	90.00	0.015	-0.0009	0.0201	0.0201
Seismic (Reduced DL) 60 deg M1	100.00	0.019	-0.0010	0.0229	0.0229
Seismic (Reduced DL) 60 deg M1	126.67	0.032	-0.0014	0.0331	0.0331
Seismic (Reduced DL) 60 deg M1	140.00	0.040	-0.0014	0.0361	0.0361
Seismic (Reduced DL) 60 deg M1	146.67	0.044	-0.0014	0.0379	0.0379
Seismic (Reduced DL) 60 deg M1	153.33	0.049	-0.0013	0.0387	0.0387
Seismic (Reduced DL) 60 deg M1	160.00	0.053	-0.0013	0.0390	0.0390
Seismic (Reduced DL) 60 deg M1	166.67	0.058	-0.0013	0.0395	0.0395
Seismic (Reduced DL) 60 deg M1	173.33	0.062	-0.0013	0.0392	0.0392
Seismic (Reduced DL) 60 deg M1	180.00	0.067	-0.0013	0.0390	0.0390
Seismic (Reduced DL) 60 deg M2	60.00	0.004	-0.0003	0.0085	0.0085
Seismic (Reduced DL) 60 deg M2	70.00	0.006	-0.0004	0.0104	0.0104
Seismic (Reduced DL) 60 deg M2	90.00	0.010	-0.0006	0.0143	0.0143
Seismic (Reduced DL) 60 deg M2	100.00	0.013	-0.0006	0.0165	0.0165
Seismic (Reduced DL) 60 deg M2	126.67	0.023	-0.0009	0.0254	0.0254
Seismic (Reduced DL) 60 deg M2	140.00	0.029	-0.0009	0.0289	0.0289
Seismic (Reduced DL) 60 deg M2	146.67	0.032	-0.0008	0.0310	0.0310
Seismic (Reduced DL) 60 deg M2	153.33	0.036	-0.0008	0.0320	0.0320
Seismic (Reduced DL) 60 deg M2	160.00	0.040	-0.0008	0.0326	0.0326
Seismic (Reduced DL) 60 deg M2	166.67	0.044	-0.0008	0.0333	0.0333
Seismic (Reduced DL) 60 deg M2	173.33	0.048	-0.0008	0.0330	0.0330
Seismic (Reduced DL) 60 deg M2	180.00	0.051	-0.0008	0.0327	0.0327
Seismic (Reduced DL) 90 deg M1	60.00	0.007	-0.0007	0.0126	0.0126
Seismic (Reduced DL) 90 deg M1	70.00	0.009	-0.0008	0.0152	0.0152
Seismic (Reduced DL) 90 deg M1	90.00	0.015	-0.0011	0.0201	0.0201
Seismic (Reduced DL) 90 deg M1	100.00	0.019	-0.0012	0.0228	0.0229
Seismic (Reduced DL) 90 deg M1	126.67	0.032	-0.0016	0.0331	0.0331
Seismic (Reduced DL) 90 deg M1	140.00	0.040	-0.0016	0.0361	0.0361
Seismic (Reduced DL) 90 deg M1	146.67	0.044	-0.0016	0.0381	0.0381
Seismic (Reduced DL) 90 deg M1	153.33	0.049	-0.0016	0.0387	0.0387
Seismic (Reduced DL) 90 deg M1	160.00	0.053	-0.0015	0.0390	0.0390
Seismic (Reduced DL) 90 deg M1	166.67	0.058	-0.0015	0.0395	0.0395
Seismic (Reduced DL) 90 deg M1	173.33	0.062	-0.0015	0.0392	0.0392
Seismic (Reduced DL) 90 deg M1	180.00	0.067	-0.0015	0.0390	0.0390
Seismic (Reduced DL) 90 deg M2	60.00	0.004	-0.0004	0.0085	0.0085
Seismic (Reduced DL) 90 deg M2	70.00	0.006	-0.0005	0.0104	0.0104
Seismic (Reduced DL) 90 deg M2	90.00	0.010	-0.0006	0.0143	0.0143
Seismic (Reduced DL) 90 deg M2	100.00	0.013	-0.0007	0.0165	0.0165
Seismic (Reduced DL) 90 deg M2	126.67	0.023	-0.0010	0.0254	0.0254
Seismic (Reduced DL) 90 deg M2	140.00	0.029	-0.0010	0.0289	0.0289
Seismic (Reduced DL) 90 deg M2	146.67	0.032	-0.0010	0.0312	0.0312
Seismic (Reduced DL) 90 deg M2	153.33	0.036	-0.0010	0.0320	0.0320
Seismic (Reduced DL) 90 deg M2	160.00	0.040	-0.0009	0.0326	0.0326
Seismic (Reduced DL) 90 deg M2	166.67	0.044	-0.0009	0.0333	0.0333
Seismic (Reduced DL) 90 deg M2	173.33	0.048	-0.0009	0.0330	0.0330
Seismic (Reduced DL) 90 deg M2	180.00	0.051	-0.0009	0.0327	0.0327
Seismic (Reduced DL) 120 deg M1	60.00	0.007	-0.0006	0.0126	0.0126

Site Number: 383660

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Site Name: North Madison Volunteer FD, CT

Engineering Number: 12927180_C3_03

7/18/2019 7:35:30 PM

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Seismic (Reduced DL) 120 deg M1	70.00	0.009	-0.0007	0.0152	0.0152
Seismic (Reduced DL) 120 deg M1	90.00	0.015	-0.0009	0.0201	0.0201
Seismic (Reduced DL) 120 deg M1	100.00	0.019	-0.0010	0.0228	0.0228
Seismic (Reduced DL) 120 deg M1	126.67	0.032	-0.0014	0.0331	0.0331
Seismic (Reduced DL) 120 deg M1	140.00	0.040	-0.0014	0.0361	0.0361
Seismic (Reduced DL) 120 deg M1	146.67	0.044	-0.0014	0.0382	0.0382
Seismic (Reduced DL) 120 deg M1	153.33	0.049	-0.0013	0.0387	0.0387
Seismic (Reduced DL) 120 deg M1	160.00	0.053	-0.0013	0.0390	0.0390
Seismic (Reduced DL) 120 deg M1	166.67	0.058	-0.0013	0.0395	0.0395
Seismic (Reduced DL) 120 deg M1	173.33	0.062	-0.0013	0.0392	0.0392
Seismic (Reduced DL) 120 deg M1	180.00	0.067	-0.0013	0.0390	0.0390
Seismic (Reduced DL) 120 deg M2	60.00	0.004	0.0003	0.0085	0.0085
Seismic (Reduced DL) 120 deg M2	70.00	0.006	0.0004	0.0104	0.0104
Seismic (Reduced DL) 120 deg M2	90.00	0.010	0.0006	0.0142	0.0142
Seismic (Reduced DL) 120 deg M2	100.00	0.013	-0.0006	0.0164	0.0165
Seismic (Reduced DL) 120 deg M2	126.67	0.023	-0.0009	0.0254	0.0254
Seismic (Reduced DL) 120 deg M2	140.00	0.029	-0.0009	0.0289	0.0289
Seismic (Reduced DL) 120 deg M2	146.67	0.032	-0.0008	0.0313	0.0313
Seismic (Reduced DL) 120 deg M2	153.33	0.036	-0.0008	0.0320	0.0320
Seismic (Reduced DL) 120 deg M2	160.00	0.040	-0.0008	0.0326	0.0326
Seismic (Reduced DL) 120 deg M2	166.67	0.044	0.0008	0.0333	0.0333
Seismic (Reduced DL) 120 deg M2	173.33	0.048	0.0008	0.0329	0.0329
Seismic (Reduced DL) 120 deg M2	180.00	0.051	0.0008	0.0326	0.0327
Seismic (Reduced DL) 180 deg M1	60.00	0.007	0.0006	0.0125	0.0125
Seismic (Reduced DL) 180 deg M1	70.00	0.009	0.0007	0.0151	0.0151
Seismic (Reduced DL) 180 deg M1	90.00	0.015	0.0009	0.0201	0.0201
Seismic (Reduced DL) 180 deg M1	100.00	0.019	0.0010	0.0229	0.0229
Seismic (Reduced DL) 180 deg M1	126.67	0.032	0.0014	0.0331	0.0331
Seismic (Reduced DL) 180 deg M1	140.00	0.040	0.0014	0.0361	0.0361
Seismic (Reduced DL) 180 deg M1	146.67	0.044	0.0014	0.0379	0.0379
Seismic (Reduced DL) 180 deg M1	153.33	0.049	0.0013	0.0387	0.0387
Seismic (Reduced DL) 180 deg M1	160.00	0.053	0.0013	0.0390	0.0390
Seismic (Reduced DL) 180 deg M1	166.67	0.058	0.0013	0.0395	0.0395
Seismic (Reduced DL) 180 deg M1	173.33	0.062	0.0013	0.0392	0.0392
Seismic (Reduced DL) 180 deg M1	180.00	0.067	0.0013	0.0390	0.0390
Seismic (Reduced DL) 180 deg M2	60.00	0.004	0.0003	0.0085	0.0085
Seismic (Reduced DL) 180 deg M2	70.00	0.006	0.0004	0.0104	0.0104
Seismic (Reduced DL) 180 deg M2	90.00	0.010	0.0006	0.0143	0.0143
Seismic (Reduced DL) 180 deg M2	100.00	0.013	0.0006	0.0165	0.0165
Seismic (Reduced DL) 180 deg M2	126.67	0.023	0.0009	0.0254	0.0254
Seismic (Reduced DL) 180 deg M2	140.00	0.029	0.0009	0.0289	0.0289
Seismic (Reduced DL) 180 deg M2	146.67	0.032	0.0008	0.0310	0.0310
Seismic (Reduced DL) 180 deg M2	153.33	0.036	0.0008	0.0320	0.0320
Seismic (Reduced DL) 180 deg M2	160.00	0.040	0.0008	0.0326	0.0326
Seismic (Reduced DL) 180 deg M2	166.67	0.044	0.0008	0.0333	0.0333
Seismic (Reduced DL) 180 deg M2	173.33	0.048	0.0008	0.0330	0.0330
Seismic (Reduced DL) 180 deg M2	180.00	0.051	0.0008	0.0327	0.0327
Seismic (Reduced DL) 210 deg M1	60.00	0.007	0.0003	0.0126	0.0126
Seismic (Reduced DL) 210 deg M1	70.00	0.009	0.0004	0.0152	0.0152
Seismic (Reduced DL) 210 deg M1	90.00	0.015	0.0005	0.0201	0.0201
Seismic (Reduced DL) 210 deg M1	100.00	0.019	0.0006	0.0228	0.0229
Seismic (Reduced DL) 210 deg M1	126.67	0.032	0.0008	0.0331	0.0331
Seismic (Reduced DL) 210 deg M1	140.00	0.040	0.0008	0.0361	0.0361
Seismic (Reduced DL) 210 deg M1	146.67	0.044	0.0008	0.0381	0.0381
Seismic (Reduced DL) 210 deg M1	153.33	0.049	0.0008	0.0387	0.0387
Seismic (Reduced DL) 210 deg M1	160.00	0.053	0.0008	0.0390	0.0390
Seismic (Reduced DL) 210 deg M1	166.67	0.058	0.0008	0.0395	0.0395
Seismic (Reduced DL) 210 deg M1	173.33	0.062	0.0007	0.0392	0.0392
Seismic (Reduced DL) 210 deg M1	180.00	0.067	0.0007	0.0390	0.0390
Seismic (Reduced DL) 210 deg M2	60.00	0.004	0.0002	0.0085	0.0085
Seismic (Reduced DL) 210 deg M2	70.00	0.006	0.0002	0.0104	0.0104
Seismic (Reduced DL) 210 deg M2	90.00	0.010	0.0003	0.0143	0.0143

Site Number: 383660

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ANSI/TIA-222-G

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Engineering Number: 12927180_C3_03

7/18/2019 7:35:30 PM

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Seismic (Reduced DL) 210 deg M2	100.00	0.013	0.0004	0.0165	0.0165
Seismic (Reduced DL) 210 deg M2	126.67	0.023	0.0005	0.0254	0.0254
Seismic (Reduced DL) 210 deg M2	140.00	0.029	0.0005	0.0289	0.0289
Seismic (Reduced DL) 210 deg M2	146.67	0.032	0.0005	0.0312	0.0312
Seismic (Reduced DL) 210 deg M2	153.33	0.036	0.0005	0.0320	0.0320
Seismic (Reduced DL) 210 deg M2	160.00	0.040	0.0005	0.0326	0.0326
Seismic (Reduced DL) 210 deg M2	166.67	0.044	0.0005	0.0333	0.0333
Seismic (Reduced DL) 210 deg M2	173.33	0.048	0.0004	0.0330	0.0330
Seismic (Reduced DL) 210 deg M2	180.00	0.051	0.0004	0.0327	0.0327
Seismic (Reduced DL) 240 deg M1	60.00	0.007	0.0006	0.0126	0.0126
Seismic (Reduced DL) 240 deg M1	70.00	0.009	0.0007	0.0152	0.0152
Seismic (Reduced DL) 240 deg M1	90.00	0.015	0.0009	0.0201	0.0201
Seismic (Reduced DL) 240 deg M1	100.00	0.019	0.0010	0.0228	0.0228
Seismic (Reduced DL) 240 deg M1	126.67	0.032	0.0014	0.0331	0.0331
Seismic (Reduced DL) 240 deg M1	140.00	0.040	0.0014	0.0361	0.0361
Seismic (Reduced DL) 240 deg M1	146.67	0.044	0.0014	0.0382	0.0382
Seismic (Reduced DL) 240 deg M1	153.33	0.049	0.0013	0.0387	0.0387
Seismic (Reduced DL) 240 deg M1	160.00	0.053	0.0013	0.0390	0.0390
Seismic (Reduced DL) 240 deg M1	166.67	0.058	0.0013	0.0395	0.0395
Seismic (Reduced DL) 240 deg M1	173.33	0.062	0.0013	0.0392	0.0392
Seismic (Reduced DL) 240 deg M1	180.00	0.067	0.0013	0.0390	0.0390
Seismic (Reduced DL) 240 deg M2	60.00	0.004	0.0003	0.0085	0.0085
Seismic (Reduced DL) 240 deg M2	70.00	0.006	0.0004	0.0104	0.0104
Seismic (Reduced DL) 240 deg M2	90.00	0.010	0.0006	0.0142	0.0142
Seismic (Reduced DL) 240 deg M2	100.00	0.013	0.0006	0.0164	0.0165
Seismic (Reduced DL) 240 deg M2	126.67	0.023	0.0009	0.0254	0.0254
Seismic (Reduced DL) 240 deg M2	140.00	0.029	0.0009	0.0289	0.0289
Seismic (Reduced DL) 240 deg M2	146.67	0.032	0.0008	0.0313	0.0313
Seismic (Reduced DL) 240 deg M2	153.33	0.036	0.0008	0.0320	0.0320
Seismic (Reduced DL) 240 deg M2	160.00	0.040	0.0008	0.0326	0.0326
Seismic (Reduced DL) 240 deg M2	166.67	0.044	0.0008	0.0333	0.0333
Seismic (Reduced DL) 240 deg M2	173.33	0.048	0.0008	0.0329	0.0329
Seismic (Reduced DL) 240 deg M2	180.00	0.051	0.0008	0.0326	0.0327
Seismic (Reduced DL) 300 deg M1	60.00	0.007	0.0006	0.0125	0.0125
Seismic (Reduced DL) 300 deg M1	70.00	0.009	0.0007	0.0151	0.0151
Seismic (Reduced DL) 300 deg M1	90.00	0.015	0.0009	0.0201	0.0201
Seismic (Reduced DL) 300 deg M1	100.00	0.019	0.0010	0.0229	0.0229
Seismic (Reduced DL) 300 deg M1	126.67	0.032	0.0014	0.0331	0.0331
Seismic (Reduced DL) 300 deg M1	140.00	0.040	0.0014	0.0361	0.0361
Seismic (Reduced DL) 300 deg M1	146.67	0.044	0.0014	0.0379	0.0379
Seismic (Reduced DL) 300 deg M1	153.33	0.049	0.0013	0.0387	0.0387
Seismic (Reduced DL) 300 deg M1	160.00	0.053	0.0013	0.0390	0.0390
Seismic (Reduced DL) 300 deg M1	166.67	0.058	0.0013	0.0395	0.0395
Seismic (Reduced DL) 300 deg M1	173.33	0.062	0.0013	0.0392	0.0392
Seismic (Reduced DL) 300 deg M1	180.00	0.067	0.0013	0.0390	0.0390
Seismic (Reduced DL) 300 deg M2	60.00	0.004	0.0003	0.0085	0.0085
Seismic (Reduced DL) 300 deg M2	70.00	0.006	0.0004	0.0104	0.0104
Seismic (Reduced DL) 300 deg M2	90.00	0.010	0.0006	0.0143	0.0143
Seismic (Reduced DL) 300 deg M2	100.00	0.013	0.0006	0.0165	0.0165
Seismic (Reduced DL) 300 deg M2	126.67	0.023	0.0009	0.0254	0.0254
Seismic (Reduced DL) 300 deg M2	140.00	0.029	0.0009	0.0289	0.0289
Seismic (Reduced DL) 300 deg M2	146.67	0.032	0.0008	0.0310	0.0310
Seismic (Reduced DL) 300 deg M2	153.33	0.036	0.0008	0.0320	0.0320
Seismic (Reduced DL) 300 deg M2	160.00	0.040	0.0008	0.0326	0.0326
Seismic (Reduced DL) 300 deg M2	166.67	0.044	0.0008	0.0333	0.0333
Seismic (Reduced DL) 300 deg M2	173.33	0.048	0.0008	0.0330	0.0330
Seismic (Reduced DL) 300 deg M2	180.00	0.051	0.0008	0.0327	0.0327
Seismic (Reduced DL) 330 deg M1	60.00	0.007	0.0003	0.0126	0.0126
Seismic (Reduced DL) 330 deg M1	70.00	0.009	0.0004	0.0152	0.0152
Seismic (Reduced DL) 330 deg M1	90.00	0.015	0.0005	0.0201	0.0201
Seismic (Reduced DL) 330 deg M1	100.00	0.019	0.0006	0.0228	0.0229
Seismic (Reduced DL) 330 deg M1	126.67	0.032	0.0008	0.0331	0.0331

Site Number: 383660

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Engineering Number: 12927180_C3_03

7/18/2019 7:35:30 PM

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Seismic (Reduced DL) 330 deg M1	140.00	0.040	0.0008	0.0361	0.0361
Seismic (Reduced DL) 330 deg M1	146.67	0.044	0.0008	0.0381	0.0381
Seismic (Reduced DL) 330 deg M1	153.33	0.049	0.0008	0.0387	0.0387
Seismic (Reduced DL) 330 deg M1	160.00	0.053	0.0008	0.0390	0.0390
Seismic (Reduced DL) 330 deg M1	166.67	0.058	0.0008	0.0395	0.0395
Seismic (Reduced DL) 330 deg M1	173.33	0.062	0.0007	0.0392	0.0392
Seismic (Reduced DL) 330 deg M1	180.00	0.067	0.0007	0.0390	0.0390
Seismic (Reduced DL) 330 deg M2	60.00	0.004	0.0002	0.0085	0.0085
Seismic (Reduced DL) 330 deg M2	70.00	0.006	0.0002	0.0104	0.0104
Seismic (Reduced DL) 330 deg M2	90.00	0.010	0.0003	0.0143	0.0143
Seismic (Reduced DL) 330 deg M2	100.00	0.013	0.0004	0.0165	0.0165
Seismic (Reduced DL) 330 deg M2	126.67	0.023	0.0005	0.0254	0.0254
Seismic (Reduced DL) 330 deg M2	140.00	0.029	0.0005	0.0289	0.0289
Seismic (Reduced DL) 330 deg M2	146.67	0.032	0.0005	0.0312	0.0312
Seismic (Reduced DL) 330 deg M2	153.33	0.036	0.0005	0.0320	0.0320
Seismic (Reduced DL) 330 deg M2	160.00	0.040	0.0005	0.0326	0.0326
Seismic (Reduced DL) 330 deg M2	166.67	0.044	0.0005	0.0333	0.0333
Seismic (Reduced DL) 330 deg M2	173.33	0.048	0.0004	0.0330	0.0330
Seismic (Reduced DL) 330 deg M2	180.00	0.051	0.0004	0.0327	0.0327
Serviceability - 60 mph Wind Normal	60.00	0.024	0.0015	0.0438	0.0438
Serviceability - 60 mph Wind Normal	70.00	0.033	0.0018	0.0521	0.0521
Serviceability - 60 mph Wind Normal	90.00	0.053	0.0021	0.0675	0.0675
Serviceability - 60 mph Wind Normal	100.00	0.066	0.0022	0.0756	0.0756
Serviceability - 60 mph Wind Normal	126.67	0.109	0.0019	0.1081	0.1081
Serviceability - 60 mph Wind Normal	140.00	0.135	0.0018	0.1187	0.1187
Serviceability - 60 mph Wind Normal	146.67	0.149	0.0016	0.1235	0.1235
Serviceability - 60 mph Wind Normal	153.33	0.164	0.0014	0.1259	0.1259
Serviceability - 60 mph Wind Normal	160.00	0.178	0.0012	0.1278	0.1278
Serviceability - 60 mph Wind Normal	166.67	0.193	0.0006	0.1314	0.1314
Serviceability - 60 mph Wind Normal	173.33	0.208	0.0000	0.1088	0.1088
Serviceability - 60 mph Wind Normal	180.00	0.223	0.0004	0.1881	0.1881
Serviceability - 60 mph Wind 60 deg	60.00	0.024	-0.0027	0.0436	0.0437
Serviceability - 60 mph Wind 60 deg	70.00	0.033	-0.0033	0.0518	0.0519
Serviceability - 60 mph Wind 60 deg	90.00	0.053	-0.0043	0.0672	0.0672
Serviceability - 60 mph Wind 60 deg	100.00	0.066	-0.0048	0.0754	0.0754
Serviceability - 60 mph Wind 60 deg	126.67	0.109	-0.0073	0.1063	0.1064
Serviceability - 60 mph Wind 60 deg	140.00	0.135	-0.0078	0.1169	0.1171
Serviceability - 60 mph Wind 60 deg	146.67	0.149	-0.0078	0.1224	0.1225
Serviceability - 60 mph Wind 60 deg	153.33	0.163	-0.0078	0.1248	0.1250
Serviceability - 60 mph Wind 60 deg	160.00	0.178	-0.0077	0.1276	0.1279
Serviceability - 60 mph Wind 60 deg	166.67	0.193	-0.0077	0.1242	0.1244
Serviceability - 60 mph Wind 60 deg	173.33	0.207	-0.0077	0.1323	0.1324
Serviceability - 60 mph Wind 60 deg	180.00	0.221	-0.0077	0.1082	0.1084
Serviceability - 60 mph Wind 90 deg	60.00	0.024	-0.0033	0.0437	0.0438
Serviceability - 60 mph Wind 90 deg	70.00	0.033	-0.0039	0.0519	0.0521
Serviceability - 60 mph Wind 90 deg	90.00	0.053	-0.0051	0.0672	0.0673
Serviceability - 60 mph Wind 90 deg	100.00	0.066	-0.0058	0.0753	0.0754
Serviceability - 60 mph Wind 90 deg	126.67	0.109	-0.0089	0.1056	0.1057
Serviceability - 60 mph Wind 90 deg	140.00	0.135	-0.0096	0.1166	0.1170
Serviceability - 60 mph Wind 90 deg	146.67	0.149	-0.0098	0.1226	0.1227
Serviceability - 60 mph Wind 90 deg	153.33	0.163	-0.0099	0.1245	0.1248
Serviceability - 60 mph Wind 90 deg	160.00	0.178	-0.0101	0.1277	0.1281
Serviceability - 60 mph Wind 90 deg	166.67	0.192	-0.0106	0.1217	0.1221
Serviceability - 60 mph Wind 90 deg	173.33	0.207	-0.0112	0.1390	0.1391
Serviceability - 60 mph Wind 90 deg	180.00	0.221	-0.0116	0.0615	0.0626
Serviceability - 60 mph Wind 120 deg	60.00	0.024	-0.0029	0.0437	0.0438
Serviceability - 60 mph Wind 120 deg	70.00	0.033	-0.0035	0.0520	0.0520
Serviceability - 60 mph Wind 120 deg	90.00	0.053	-0.0046	0.0673	0.0673
Serviceability - 60 mph Wind 120 deg	100.00	0.066	-0.0052	0.0754	0.0755
Serviceability - 60 mph Wind 120 deg	126.67	0.109	-0.0081	0.1062	0.1063
Serviceability - 60 mph Wind 120 deg	140.00	0.135	-0.0089	0.1172	0.1174
Serviceability - 60 mph Wind 120 deg	146.67	0.149	-0.0091	0.1231	0.1231

Site Number: 383660

Code:

ANSI/TIA-222-G

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Site Name: North Madison Volunteer FD, CT

Engineering Number: 12927180_C3_03

7/18/2019 7:35:30 PM

Customer: T-MOBILE

Serviceability - 60 mph Wind 120 deg	153.33	0.163	-0.0094	0.1249	0.1252
Serviceability - 60 mph Wind 120 deg	160.00	0.178	-0.0097	0.1277	0.1280
Serviceability - 60 mph Wind 120 deg	166.67	0.193	-0.0106	0.1243	0.1246
Serviceability - 60 mph Wind 120 deg	173.33	0.207	-0.0116	0.1322	0.1322
Serviceability - 60 mph Wind 120 deg	180.00	0.221	-0.0124	0.1082	0.1085
Serviceability - 60 mph Wind 180 deg	60.00	0.024	0.0015	0.0437	0.0437
Serviceability - 60 mph Wind 180 deg	70.00	0.033	0.0018	0.0520	0.0520
Serviceability - 60 mph Wind 180 deg	90.00	0.053	0.0021	0.0673	0.0674
Serviceability - 60 mph Wind 180 deg	100.00	0.066	0.0022	0.0755	0.0755
Serviceability - 60 mph Wind 180 deg	126.67	0.109	0.0019	0.1081	0.1081
Serviceability - 60 mph Wind 180 deg	140.00	0.135	0.0018	0.1185	0.1185
Serviceability - 60 mph Wind 180 deg	146.67	0.149	0.0016	0.1229	0.1229
Serviceability - 60 mph Wind 180 deg	153.33	0.164	0.0014	0.1259	0.1259
Serviceability - 60 mph Wind 180 deg	160.00	0.178	0.0012	0.1278	0.1278
Serviceability - 60 mph Wind 180 deg	166.67	0.193	0.0006	0.1314	0.1314
Serviceability - 60 mph Wind 180 deg	173.33	0.208	0.0000	0.1089	0.1089
Serviceability - 60 mph Wind 180 deg	180.00	0.223	0.0004	0.1880	0.1880
Serviceability - 60 mph Wind 210 deg	60.00	0.024	0.0017	0.0438	0.0439
Serviceability - 60 mph Wind 210 deg	70.00	0.033	0.0021	0.0521	0.0522
Serviceability - 60 mph Wind 210 deg	90.00	0.053	0.0027	0.0674	0.0674
Serviceability - 60 mph Wind 210 deg	100.00	0.066	0.0031	0.0755	0.0756
Serviceability - 60 mph Wind 210 deg	126.67	0.109	0.0049	0.1075	0.1075
Serviceability - 60 mph Wind 210 deg	140.00	0.135	0.0054	0.1183	0.1183
Serviceability - 60 mph Wind 210 deg	146.67	0.149	0.0056	0.1230	0.1230
Serviceability - 60 mph Wind 210 deg	153.33	0.163	0.0058	0.1256	0.1257
Serviceability - 60 mph Wind 210 deg	160.00	0.178	0.0060	0.1279	0.1279
Serviceability - 60 mph Wind 210 deg	166.67	0.193	0.0067	0.1290	0.1292
Serviceability - 60 mph Wind 210 deg	173.33	0.208	0.0075	0.1170	0.1172
Serviceability - 60 mph Wind 210 deg	180.00	0.222	0.0081	0.1658	0.1658
Serviceability - 60 mph Wind 240 deg	60.00	0.024	0.0029	0.0437	0.0438
Serviceability - 60 mph Wind 240 deg	70.00	0.033	0.0035	0.0520	0.0520
Serviceability - 60 mph Wind 240 deg	90.00	0.053	0.0046	0.0673	0.0673
Serviceability - 60 mph Wind 240 deg	100.00	0.066	0.0052	0.0754	0.0755
Serviceability - 60 mph Wind 240 deg	126.67	0.109	0.0081	0.1062	0.1063
Serviceability - 60 mph Wind 240 deg	140.00	0.135	0.0089	0.1172	0.1174
Serviceability - 60 mph Wind 240 deg	146.67	0.149	0.0091	0.1231	0.1231
Serviceability - 60 mph Wind 240 deg	153.33	0.163	0.0094	0.1249	0.1252
Serviceability - 60 mph Wind 240 deg	160.00	0.178	0.0097	0.1277	0.1280
Serviceability - 60 mph Wind 240 deg	166.67	0.193	0.0106	0.1243	0.1246
Serviceability - 60 mph Wind 240 deg	173.33	0.207	0.0116	0.1322	0.1322
Serviceability - 60 mph Wind 240 deg	180.00	0.221	0.0124	0.1082	0.1085
Serviceability - 60 mph Wind 300 deg	60.00	0.024	0.0027	0.0436	0.0437
Serviceability - 60 mph Wind 300 deg	70.00	0.033	0.0033	0.0518	0.0519
Serviceability - 60 mph Wind 300 deg	90.00	0.053	0.0043	0.0672	0.0672
Serviceability - 60 mph Wind 300 deg	100.00	0.066	0.0048	0.0754	0.0754
Serviceability - 60 mph Wind 300 deg	126.67	0.109	0.0073	0.1063	0.1064
Serviceability - 60 mph Wind 300 deg	140.00	0.135	0.0078	0.1169	0.1171
Serviceability - 60 mph Wind 300 deg	146.67	0.149	0.0078	0.1224	0.1225
Serviceability - 60 mph Wind 300 deg	153.33	0.163	0.0078	0.1248	0.1250
Serviceability - 60 mph Wind 300 deg	160.00	0.178	0.0077	0.1276	0.1279
Serviceability - 60 mph Wind 300 deg	166.67	0.193	0.0077	0.1242	0.1244
Serviceability - 60 mph Wind 300 deg	173.33	0.207	0.0077	0.1323	0.1324
Serviceability - 60 mph Wind 300 deg	180.00	0.221	0.0077	0.1082	0.1084
Serviceability - 60 mph Wind 330 deg	60.00	0.024	0.0016	0.0438	0.0439
Serviceability - 60 mph Wind 330 deg	70.00	0.033	0.0018	0.0521	0.0521
Serviceability - 60 mph Wind 330 deg	90.00	0.053	0.0024	0.0674	0.0674
Serviceability - 60 mph Wind 330 deg	100.00	0.066	0.0027	0.0755	0.0755
Serviceability - 60 mph Wind 330 deg	126.67	0.109	0.0040	0.1076	0.1076
Serviceability - 60 mph Wind 330 deg	140.00	0.135	0.0043	0.1183	0.1183
Serviceability - 60 mph Wind 330 deg	146.67	0.149	0.0042	0.1230	0.1231
Serviceability - 60 mph Wind 330 deg	153.33	0.163	0.0041	0.1256	0.1256
Serviceability - 60 mph Wind 330 deg	160.00	0.178	0.0041	0.1279	0.1280

Site Number: 383660

Code:

ANSI/TIA-222-G

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Site Name: North Madison Volunteer FD, CT

Engineering Number: 12927180_C3_03

7/18/2019 7:35:30 PM

Customer: T-MOBILE

Serviceability - 60 mph Wind 330 deg	166.67	0.193	0.0039	0.1290	0.1291
Serviceability - 60 mph Wind 330 deg	173.33	0.208	0.0036	0.1170	0.1171
Serviceability - 60 mph Wind 330 deg	180.00	0.222	0.0035	0.1659	0.1659

Maximum Reactions Summary

Anchor Group	Vertical (kip)				Horizontal (kip)		Moment (kip-ft)	
	DL+WL	DL+WL+IL	UpLift	Shear	DL+WL	DL+WL+IL	DL+WL	DL+WL+IL
Base	75.92	207.72	367.26	43.88	71.40	25.28	7502.19	2527.62

Site Name: North Madison Volunteer FD, CT
 Site Number: 383660
 Engineer: RDB
 Engineering Number: 12927180_C3_03
 Date: 07/18/19

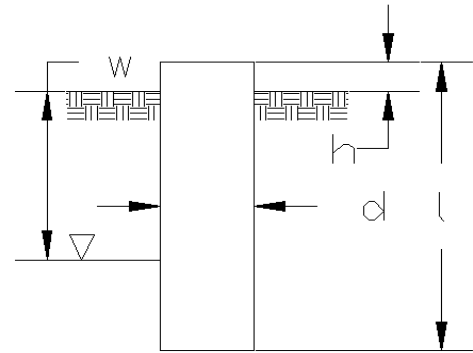
Program Last Updated: 5/13/2014
 American Tower Corporation

Design Base Loads (Factored) - Analysis per TIA-222-G Standards

Analyze or Design a Foundation? Analyze
 Foundation Mapped: N
 Moment (M): 0.0 k-ft
 Shear/Leg (V): 43.9 k
 Compression/Leg (P): 367.3 k
 Uplift/Leg (U): 322.7 k
 Tower Type (GT / SST / MP): SST

Diameter of Caisson (d):
 Caisson Embedment (L-h):
 Caisson Height Above Ground (h):
 Depth Below Ground Surface to Water Table (w):
 Unit Weight of Concrete:
 Unit Weight of Water:
 Tension Skin Friction/Compression Skin Friction:
 Pullout Angle:

6.0 ft
 18.0 ft
 0.5 ft
 2.5 ft
 150.0 pcf
 62.4 pcf
 1.00
 30.0 degrees



Engineer Notes

Soil Mechanical Properties

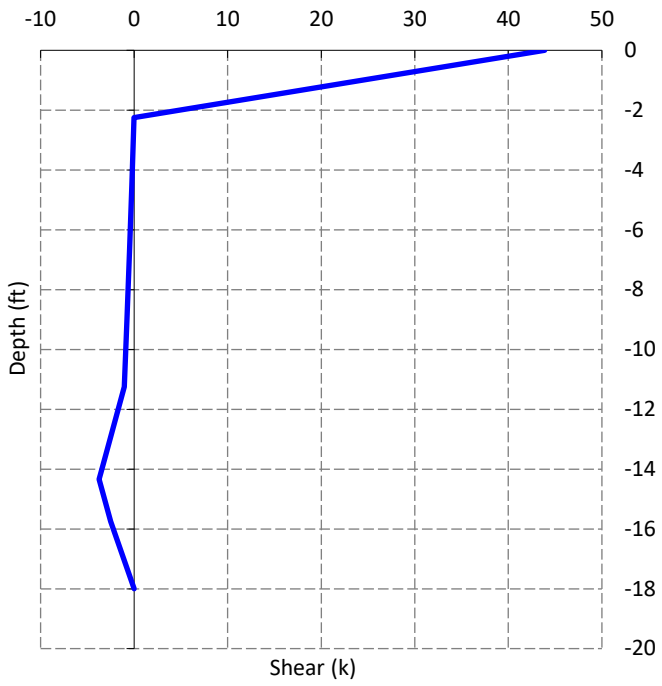
Depth (ft)		γ_{Soil}	Cohesion	ϕ	Ultimate Skin	Ultimate Bearing
Top	Bottom	(pcf)	(psf)	(degree)	Friction (psf)	Pressure (psf)
0.0	2.0	125	0	0	0	0
2.0	10.0	125	625	0	313	0
10.0	14.0	135	6250	0	3125	0
14.0	19.0	145	8000	0	5000	36719

Volume of Concrete: 523.1 ft³ = 19.4 yd³
 Weight of Concrete (Buoyancy Effect Considered): 51.1 k
 Average Soil Unit Weight: 77.9 pcf
 Skin Friction Resistance: 659.8 k
 Compressive Bearing Resistance: 1038.2 k
 Pullout Weight (Minus Concrete Weight): 647.7 k
 Nominal Uplift Capacity per Leg ($\phi_s T_n$): 485.8 k
 Nominal Compressive Capacity per Leg ($\phi_s P_n$): 1273.5 k
 P_u : 378.5 k
 $T_u / \phi_s T_n$: 0.66 Result: OK
 $P_u / \phi_s P_n$: 0.30 Result: OK
 Total Lateral Resistance: 2347.2 k
 Inflection Point (Below Ground Surface): 14.3 ft
 Design Overturning Moment At Inflection Point (M_D): 651.1 k-ft
 Nominal Moment Capacity ($\phi_s M_n$): 4527.1 k-ft
 $M_D / \phi_s M_n$: 0.14 Result: OK
 ϕ_s : 0.75

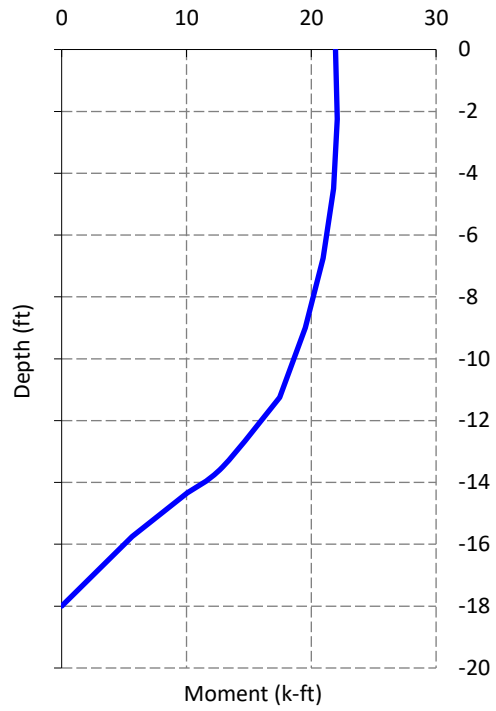
Caisson Strength Capacity

Concrete Compressive Strength (f'_c):	4500 psi
Vertical Steel Rebar Size #:	9
Vertical Steel Rebar Area:	1.00 in ²
# of Vertical Steel Rebars:	26
Vertical Steel Rebar Yield Strength (F_y):	60 ksi
Horizontal Tie / Stirrup Size #:	5
Horizontal Tie / Stirrup Area:	0.31 in ²
Design Horizontal Tie / Stirrup Spacing:	12.0 in
Horizontal Tie / Stirrup Steel Yield Strength (F_y):	60 ksi
Rebar Cage Diameter:	64.0 in
Strength Bending/Tension Reduction Factor (ϕ_B):	0.90 ACI318-05 - 9.3.2.1
Strength Shear Reduction Factor (ϕ_V):	0.75 ACI318-05 - 9.3.2.3
Strength Compression Reduction Factor (ϕ_P):	0.65 ACI318-05 - 9.3.2.2
Steel Elastic Modulus:	29000 ksi
Design Moment (M_u):	219.4 k-ft
Nominal Moment Capacity ($\phi_B M_n$):	3662.7 k-ft - ACI318-005 - 10.2
$M_u / \phi_B M_n$:	0.06 Result: OK
Design Shear (V_u):	43.9 k
Nominal Shear Capacity ($\phi_V V_n$):	393.5 k - ACI318-05 - 11.3.1.1 or 11.5.7.2
$V_u / \phi_V V_n$:	0.11 Result: OK
Design Tension (T_u):	322.7 k
Nominal Tension Capacity ($\phi_T T_n$):	1404.0 k - ACI318-05 - 10.2
$T_u / \phi_T T_n$:	0.23 Result: OK
Design Compression (P_u):	378.5 k
Nominal Compression Capacity ($\phi_P P_n$):	8046.5 k - ACI318-05 - 10.3.6.2
$P_u / \phi_P P_n$:	0.05 Result: OK
Bending Reinforcement Ratio:	0.006 ACI318-05 - 10.8.4 & 10.9.1
$M_u / \phi_B M_n + T_u / \phi_T T_n$:	0.29 Result: OK

Design Factored Shear / Depth



Design Factored Moment / Depth



Nominal and Factored Moment Capacity and Factored Design Loads

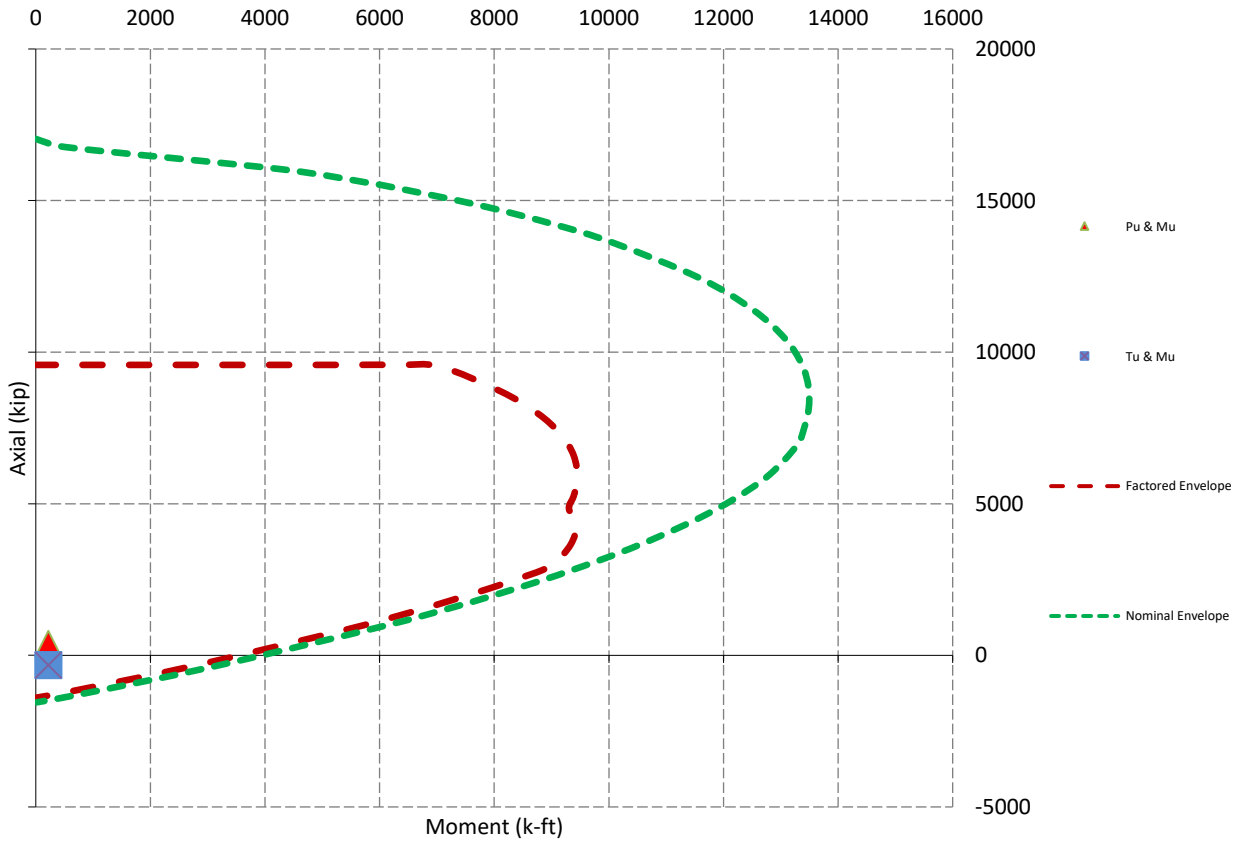


Exhibit E

Mount Analysis

**Mount Analysis of Proposed Site Pro 1 VFA12-HD Sector Frames for
 American Tower on behalf of T-Mobile
 383660 - North Madison Volunteer FD
 Project #: 12927180
 T-Mobile Site ID: CT11394A
 Program: L600**

**CLS Engineering PLLC Project #41124-12927180-01-MR-R1
 July 3, 2019**

MOUNT DESCRIPTION	Proposed Site Pro 1 VFA12-HD Sector Frames at 130 ft AGL
ANTENNA ELEVATION	Nominal Rad. Elevation of 130 ft AGL
SITE DESCRIPTION	180 ft Self-Supporting Tower
SITE ADDRESS	864 Opening Hill Road, Madison, CT 6443, New Haven County
GPS COORDINATES	41.35733333, -72.63877777
ANALYSIS STANDARD	2015 IBC / 2018 Connecticut State Building Code / TIA-222-G
LOADING CRITERIA	130 mph, V_{ult} (3-Second Gust) w/o ice & 50 mph (3-Second Gust) w/ 1" Ice

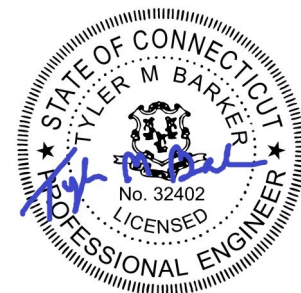
■ ANALYSIS RESULT: **Pass (Replacement)**

MEMBER USAGE	40%	Pass
---------------------	-----	------

Existing mounts to be replaced; see conclusion for details.

Prepared by:
Sandeep Patel, E.I.

Reviewed and Approved by:
Tyler M. Barker, P.E.



Tyler M. Barker
 CLS Engineering, PLLC
 Director of Engineering
 PE # 32402 Exp. 1/31/2020
 COA # PEC.001833 Exp. 8/14/2019



Digitally signed by
 Tyler Barker
 DN: c=US,
 o=Telamon
 Corporation,
 ou=A01427E0000016
 A4525ADF800001D1
 7, cn=Tyler Barker
 Date: 2019.07.03
 12:48:18 -04'00'

■ INTRODUCTION

The proposed equipment is to be mounted to the proposed Site Pro 1 VFA12-HD Sector Frames. This proposed mounting configuration was analyzed using RISA-3D, a commercially available finite element analysis software package. A selection of input and output from our analysis is attached to the end of this report.

■ STRUCTURAL DOCUMENTS PROVIDED

STRUCTURAL DATA	Site Pro 1 Drawing #VFA12-HD Rev D, dated June 29, 2018 Site Pro 1 Dwg. #PUCK, dated August 30, 2010
PREVIOUS ANALYSES	SA by ATC, Engineering #12927180_C3_02, dated April 18, 2019
LOADING DATA	ATC Application, Project #12927180, dated April 2, 2019

■ ANALYSIS CRITERIA

STANDARD	2015 IBC / 2018 Connecticut State Building Code / TIA-222-G
BASIC WIND SPEED	130 mph, V_{ult} (3-Second Gust)
BASIC WIND SPEED W/ ICE	50 mph (3-Second Gust) w/ 1" Radial Ice (Escalating)
EXPOSURE CATEGORY	B
MAX. TOPOGRAPHIC FACTOR, K_{zt}	1.00
RISK CATEGORY	II
MAINTENANCE LIVE LOAD	L_M : 500 lb

■ FINAL EQUIPMENT

ELEVATION (ft)		ANTENNAS	
MOUNT	RAD.	#	NAME
130.0	130.0	3	EMS RR90-17-02DP
		3	Ericsson RADIO 4449 B12/B71
		3	Ericsson KRY 112 489/2
		3	Ericsson KRY 112 144/1
		3	RFS Celwave APXVAARR24_43-U-NA20

■ RESULTS SUMMARY

COMPONENT	PEAK USAGE	RESULT
Mount Pipes	40%	Pass
Bracing Members	38%	Pass
Stand-Off Horizontals	30%	Pass
Face Horizontals	24%	Pass

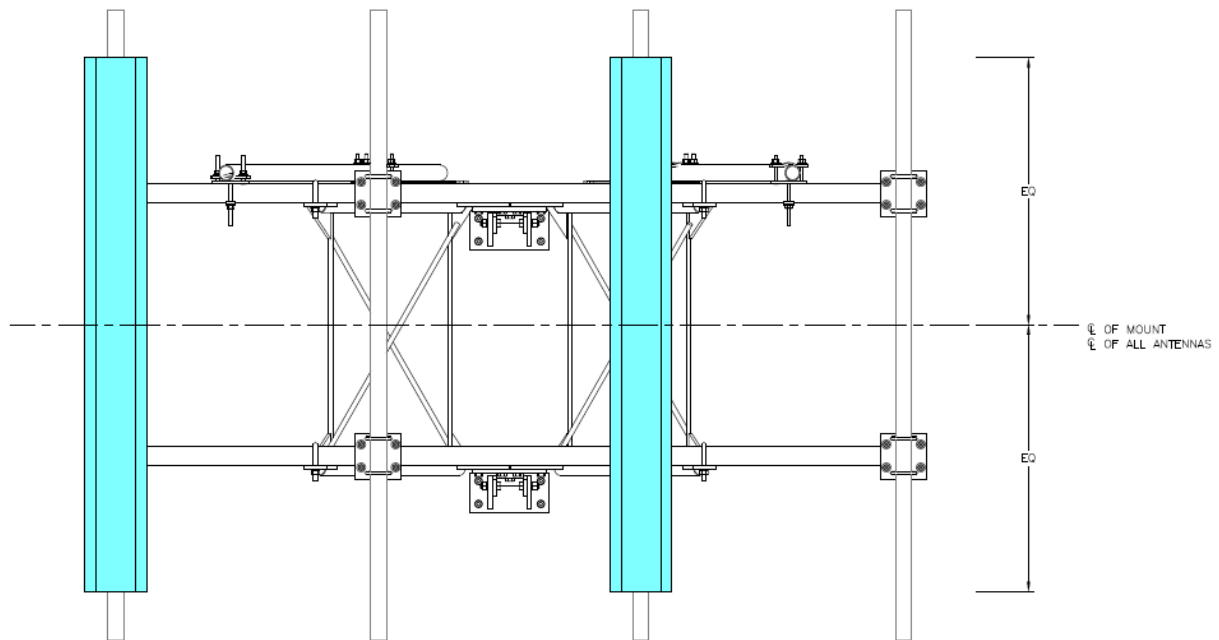
■ CONCLUSION AND RECOMMENDATIONS

According to our structural analysis, the mounts have been found to **PASS PENDING REPLACEMENT**. The mounting configuration considered in this analysis will be capable of supporting the referenced loading pursuant to referenced standards once the following scope is executed:

- Replace existing T-Frame mounts from tower face and install (3) new Site Pro 1 VFA12-HD Sector Frames directly on tower legs.
- Install (4) Site Pro 1 P30120 Mount Pipes at each sector frame mount (12 total). Connect to face horizontal members using Site Pro 1 SCX2 crossover plate kits included with VFA12-HD Sector Frames.
- Install (2) 16'-0" long Pipe 2 STD, A53 Gr. B, stiff arms in lieu of those included in the sector frame kit at each sector frame mount (6 total). Connect to nearest adjacent tower leg with connection hardware included with VFA kit. Connect to face horizontal members with proposed Site Pro 1 PUCK (6 total) as shown in the sketches.
- All mount pipes are to be installed equidistant from each other as shown in the assembly drawings.
- Install existing and proposed antennas such that they are vertically centered on the mounts. Install existing and proposed RRUS and TMAs behind the antennas.

NOTE:
MOUNT SHOWN IS REPRESENTATIVE.
ACTUAL GEOMETRY MAY DIFFER.

NOTE:
INSTALL ANTENNAS SUCH THAT THEY
ARE VERTICALLY CENTERED BETWEEN
MOUNT FACE HORIZONTALS.



See following sketches and Site Pro 1 assembly drawings for additional details.

■ ASSUMPTIONS AND CONDITIONS

This analysis is inclusive of the antenna supporting frames/mounts and all recorded connections that will support the equipment listed in this report. It considers only the theoretical capacity of structural components and it is not a condition assessment. The validity of the analysis may be dependent on the accuracy of structural information supplied by others. The client is responsible for verifying this information. If any provided information is revised after completion of this analysis, CLS Engineering PLLC should be notified immediately to revise results.

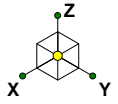
This analysis assumes the following:

1. The tower or other superstructure and mounts (if existing) were properly constructed as per the original design and have been properly maintained in accordance with applicable code standards.
2. Member sizes and strengths are accurate as supplied or are assumed as stated in the calculations.
3. In the absence of sufficient design information, all welds and connections are assumed to develop at least the capacity of the connected member, unless otherwise stated in this analysis.
4. All prior structural modifications, if any, are assumed to be correctly installed and fully effective.
5. The loading configuration is complete and accurate as supplied and/or as modeled in the previous analysis. All appurtenances are assumed to be properly installed and supported as per manufacturer requirements.
6. Some conservative assumptions may be used regarding appurtenances and their projected areas based on careful interpretation of data supplied, previous experience and standard industry practice.

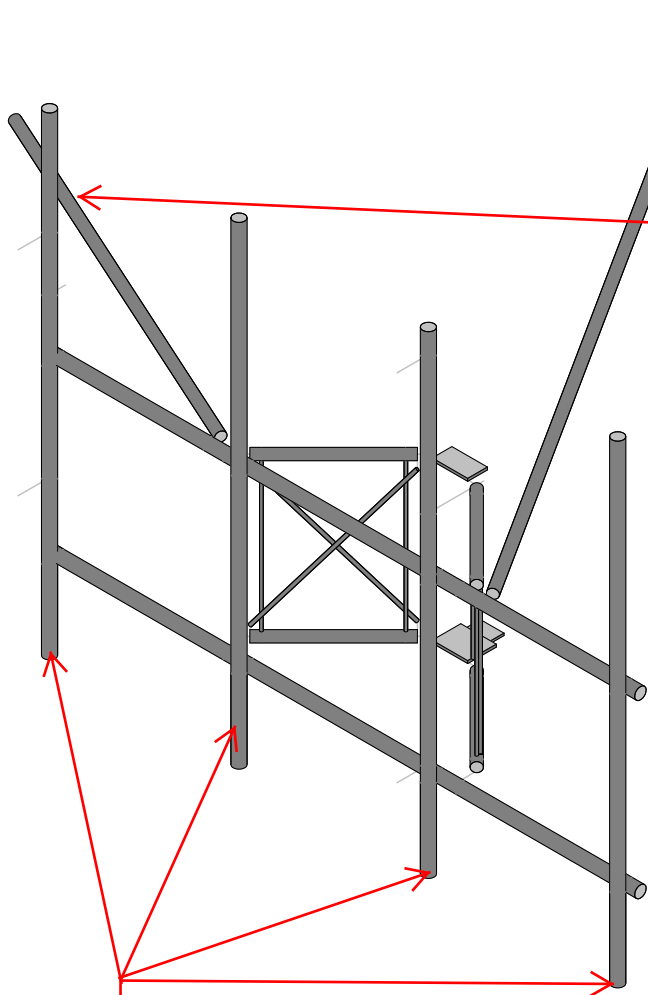
All opinions and conclusions are considered accurate to a reasonable degree of engineering certainty based upon the evidence available at the time of the report. All opinions and conclusions contained herein are subject to revision based upon receipt of new or updated information. All services are provided exercising a level of care and diligence equivalent to the standard of our profession. No warranty or guarantee, either expressed or implied, is offered. All services are confidential in nature and this report will not be released to any other party without the client's consent. The use of this analysis is limited to the expressed purpose for which it was commissioned and it may not be reused, copied or disseminated for any other purpose without consent from CLS Engineering PLLC.

All services were performed, results obtained and recommendations made in accordance with generally accepted engineering principles and practices. CLS Engineering PLLC is not responsible for the conclusions, opinions or recommendations made by others based on the information supplied in this analysis.

It is not possible to have the fully detailed information necessary to perform a complete and thorough analysis of every structural sub-component of an existing structure. The structural analysis by CLS Engineering PLLC verifies the adequacy of the primary members of the structure. CLS Engineering PLLC provides a limited scope of service in that we cannot verify the adequacy of every weld, bolt, gusset, etc.



Replace existing T-Frame mounts from tower face and install (3) new Site Pro 1 VFA12-HD Sector Frames directly on tower legs.



Install (2) 16'-0" long Pipe 2 STD, A53 Gr. B, stiff arms in lieu of those included in the sector frame kit at each sector frame mount (6 total). Connect to nearest adjacent tower leg with connection hardware included with VFA kit. Connect to face horizontal members with proposed Site Pro 1 PUCK (6 total) as shown.

Install (4) Site Pro 1 P30120 Mount Pipes at each sector frame mount (12 total). Connect to face horizontal members using Site Pro 1 SCX2 crossover plate kits included with VFA12-HD Sector Frames.

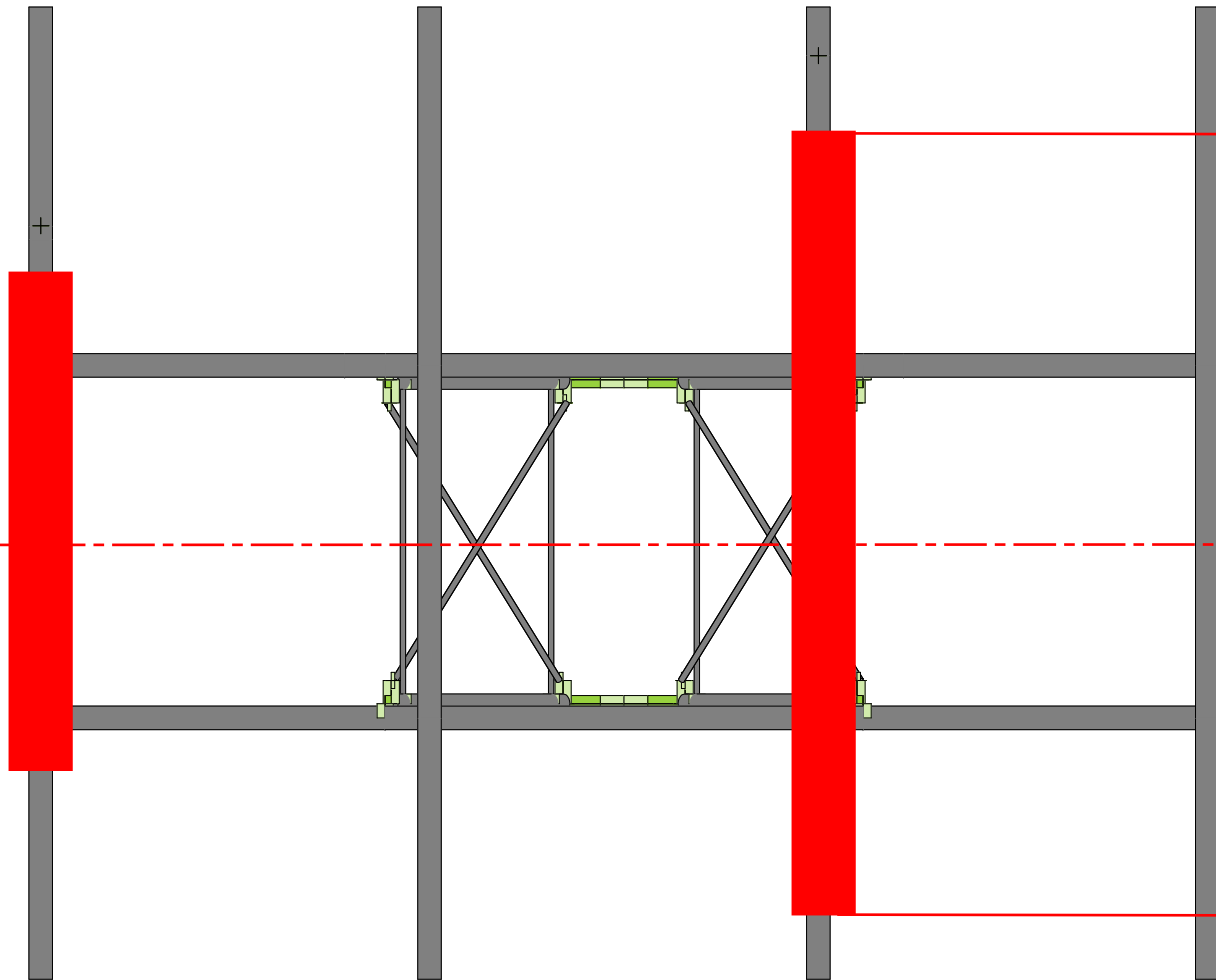
CLS
SRP
41124-12927180-01-MR

41124-12927180-North Madison Volunteer FD
Proposed Site Pro 1 VFA12-HD Sector Frame Kit

MOD - 1
June 5, 2019 at 7:54 PM
tip.r3d



Mount CL =
Antenna RAD =
130 ft



Antenna Tip =
134 ft

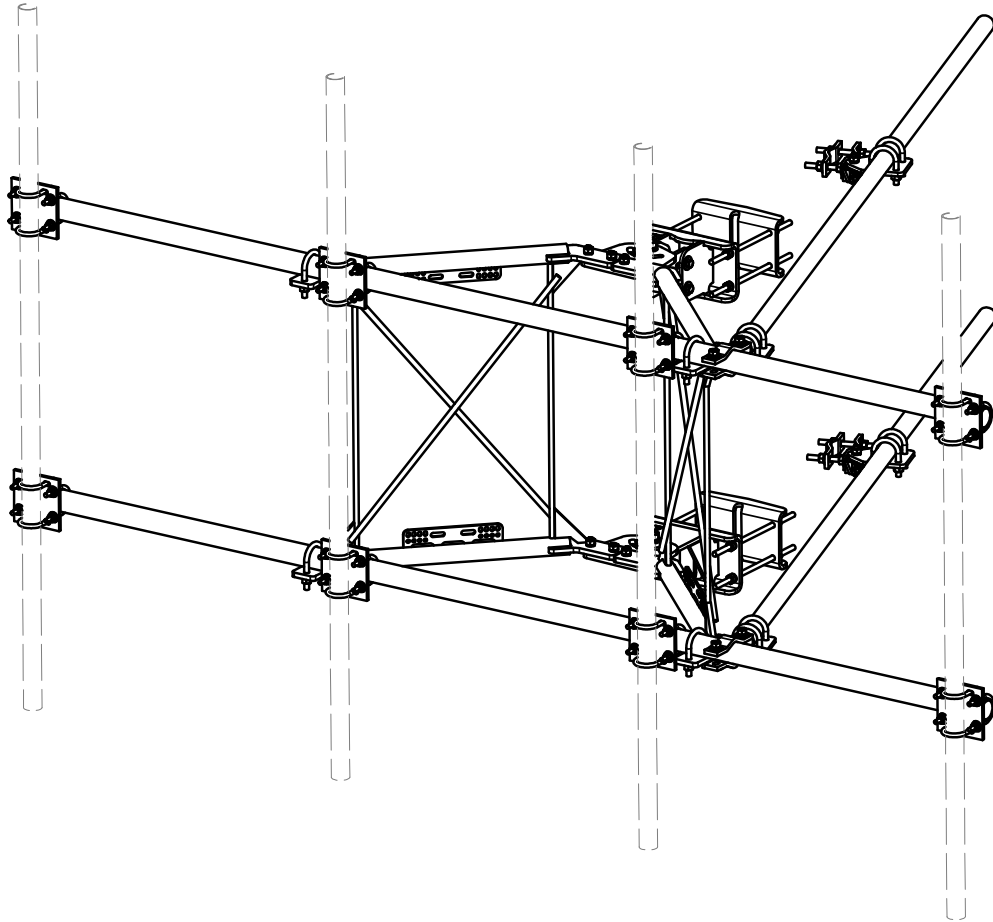
Antenna Tip =
126 ft

All mount pipes are to be installed equidistant from each other as shown in the assembly drawings.
Install existing and proposed antennas such that they are vertically centered on the mounts. Install existing and proposed RRUS and TMAs behind the antennas.

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SRP
41124-12927180-01-MR

41124-12927180-North Madison Volunteer FD
Antenna Tip Height

MOD - 2
June 5, 2019 at 7:54 PM
tip.r3d



PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	2	X-VFAW	SUPPORT ARM		71.41	142.81
2	1	X-HDCAMTBW	CLAMP WELDMENT FOR BCAM-HD		33.86	33.86
3	1	X-MHTPHD	MULTI-HOLE TAPER PLATE WELDMENT		36.24	36.24
4	2	X-VFAPL4	VFA-HD PIVOT PLATE	12 in	15.88	31.77
5	2	X-LCBP4	BENT BACKING PLATE	13 in	19.00	38.01
6	1	X-HDCAMSS	ANGLE ADJUSTMENT WELDMENT FOR BCAM-HD		16.39	16.39
7	4	X-SPTB	SLIDING PIPE TIE BACK PLATE	5 1/2 in	5.87	23.49
8	1	X-HDCAMSP	POSITIONING PLATE WELDMENT FOR BCAM-HD		2.58	2.58
9	4	X-TBCA	TIE BACK CLIP ANGLE		2.01	8.02
10	8	SCX2	CROSSOVER PLATE	7 in	4.80	38.37
11	4	MCP	CLAMP HALF 1/2" THICK, 11-5/8" LONG	12 1/16 in	3.59	14.37
12	8	DCP	1/2" THICK, 5-3/4" CTR TO CENTER CLAMP HALF	8 1/8 in	2.36	18.90
13	2	P2126	2-3/8" X 126" (2" SCH. 40) GALVANIZED PIPE	126 in	40.75	81.50
14	2	P30150	2-7/8" X 150" (2-1/2" SCH. 40) GALVANIZED PIPE	150 in	76.94	153.87
15	4	A34212	3/4" x 2-1/2" UNC HEX BOLT (A325)	2 1/2 in	0.48	1.92
16	4	G34FW	3/4" HDG USS FLATWASHER		0.06	0.24
17	4	G34LW	3/4" HDG LOCKWASHER		0.04	0.17
18	4	G34NUT	3/4" HDG HEAVY 2H HEX NUT		0.21	0.85
19	8	G58R-18	5/8" x 18" THREADED ROD (HDG.)	18 in	0.40	3.19
20	4	G58R-12	5/8" x 12" THREADED ROD (HDG.)		1.05	4.18
21	4	G58R-8	5/8" x 8" THREADED ROD (HDG.)		0.70	2.79
22	4	X-UB5300	5/8" X 3" X 5-1/4" X 2-1/2" U-BOLT (HDG.)		1.15	4.60
23	8	X-UB5258	5/8" X 2-5/8" X 4-1/2" X 2" U-BOLT (HDG.)		1.00	8.00
24	2	G5807	5/8" x 7" HDG HEX BOLT GR5 FULL THREAD	7 in	0.70	1.41
25	1	G5806	5/8" x 6" HDG HEX BOLT GR5 FULL THREAD	6 in	0.62	0.62
26	8	G5804	5/8" x 4" HDG HEX BOLT GR5		0.44	3.55
27	4	G5802	5/8" x 2" HDG HEX BOLT GR5		0.27	1.08
28	8	A582114	5/8" x 2-1/4" HDG A325 HEX BOLT	2 1/4 in	0.31	2.50
29	25	G58FW	5/8" HDG USS FLATWASHER	1/8 in	0.07	1.76
30	66	G58LW	5/8" HDG LOCKWASHER		0.03	1.72
31	71	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	9.22
32	32	X-UB1300	1/2" X 3" X 5" X 2" GALV U-BOLT		0.74	23.64
33	16	X-UB1212	1/2" X 2" X 3" X 1-1/4" U-BOLT (HDG.)		0.60	9.56
34	64	G12FW	1/2" HDG USS FLATWASHER	3/32 in	0.03	2.18
35	64	G12LW	1/2" HDG LOCKWASHER	1/8 in	0.01	0.89
36	64	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	4.58
					TOTAL WT. #	738.06

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
D	UPDATED BCAM VERSION 1 TO BCAM VERSION 2		CEK	6/29/2018
C	UPDATED PIN LEG CONNECTION TO B-CAM CONNECTION		CEK	12/7/2017
B	CHANGED TIE-BACK BACK CONNECTION		CEK	7/31/2017
A	CHANGED TIE-BACK FRONT CONNECTION		CEK	2/2/2017

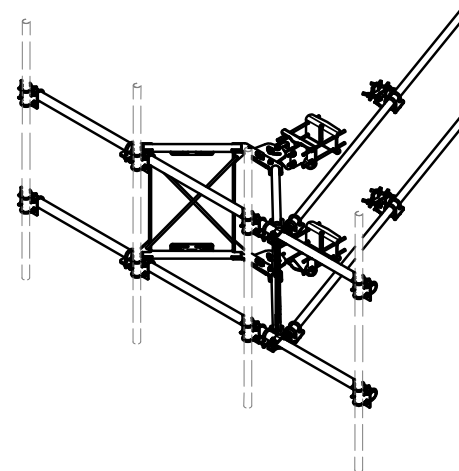
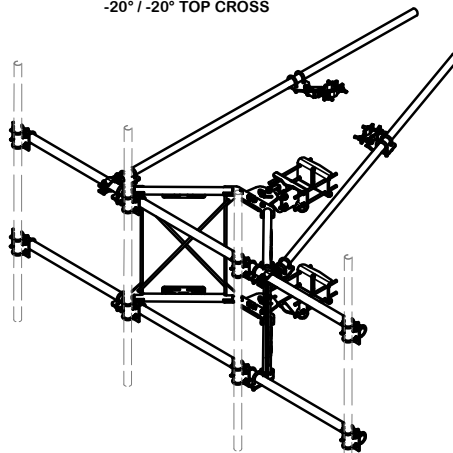
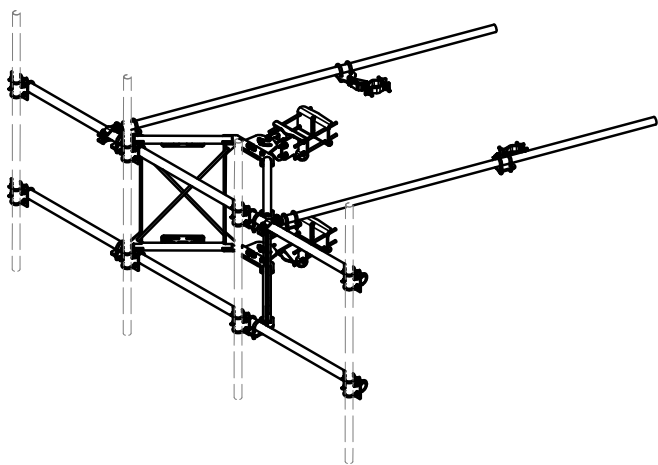
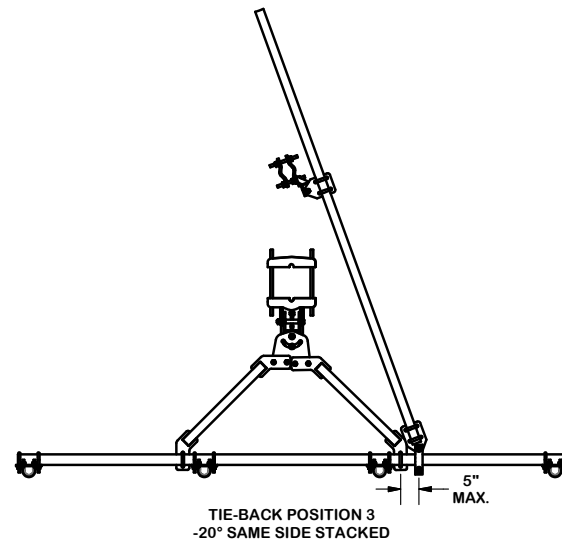
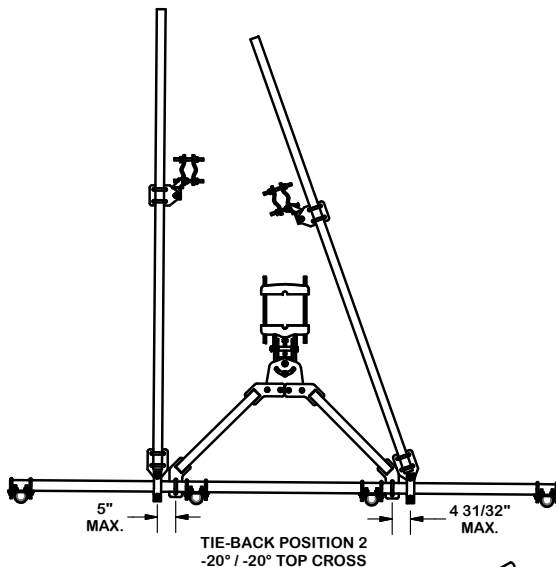
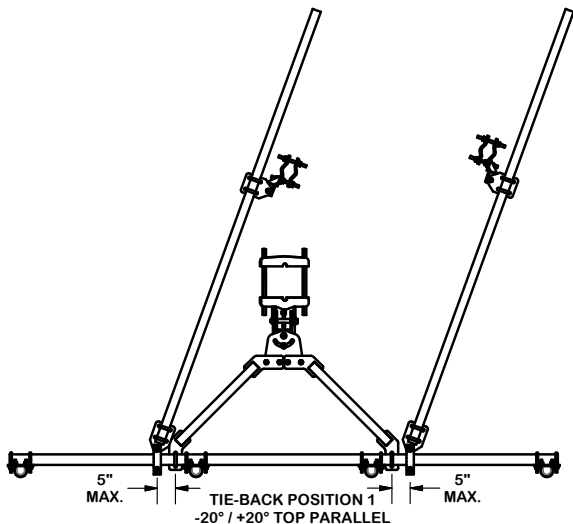
TOLERANCE NOTES
**TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
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 ALL OTHER ASSEMBLY ($\pm 0.060"$)**

PROPRIETARY NOTE:
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DESCRIPTION		12' 6" HEAVY DUTY V-FRAME ASSEMBLY WITH TWO STIFF ARMS	
CPD NO.	DRAWN BY	ENG. APPROVAL	
	CEK 1/25/2017		
CLASS	SUB	DRAWING USAGE	CHECKED BY
81	02	CUSTOMER	BMC 12/13/2017

 A valmont COMPANY	Locations: New York, NY Atlanta, GA Los Angeles, CA Plymouth, IN Salem, OR Dallas, TX
	Engineering Support Team: 1-888-753-7446
PART NO.	VFA12-HD
DWG. NO.	VFA12-HD

TIE-BACK POSITIONS



REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
D	UPDATED BCAM VERSION 1 TO BCAM VERSION 2		CEK	6/29/2018
C	UPDATED PIN LEG CONNECTION TO B-CAM CONNECTION		CEK	12/7/2017
B	CHANGED TIE-BACK BACK CONNECTION		CEK	7/31/2017
A	CHANGED TIE-BACK FRONT CONNECTION		CEK	2/2/2017

REVISION HISTORY

TOLERANCE NOTES

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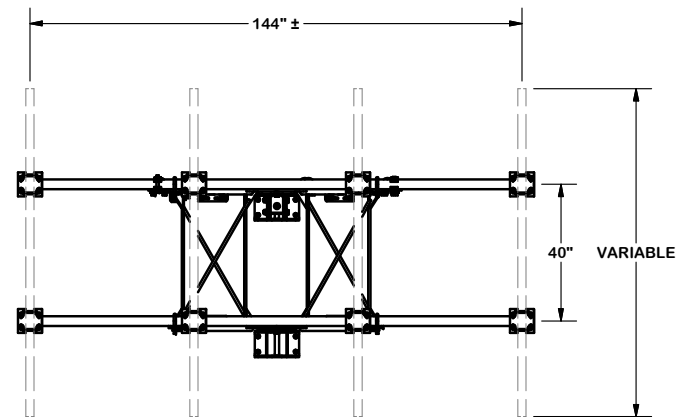
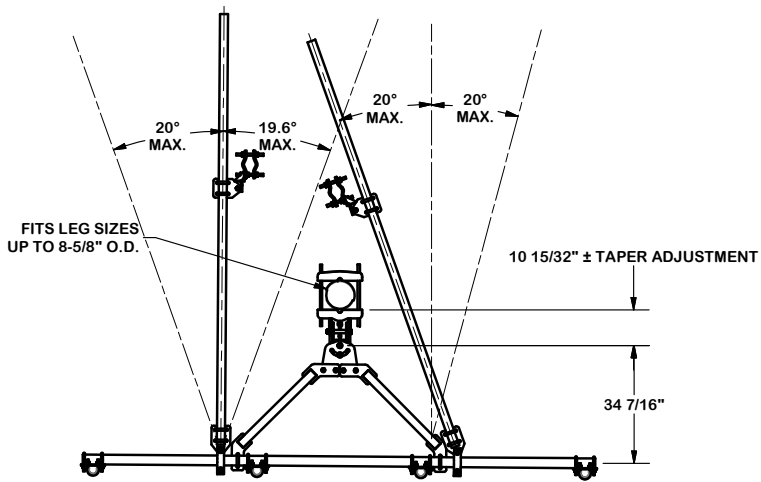
DESCRIPTION
 12' 6" HEAVY DUTY
 V-FRAME ASSEMBLY
 WITH TWO STIFF ARMS

CPD NO.	DRAWN BY	ENG. APPROVAL
	CEK 1/25/2017	
CLASS	DRAWING USAGE	CHECKED BY
81	CUSTOMER	BMC 12/13/2017

SITE PRO 1
 Engineering Support Team:
 1-888-753-7446

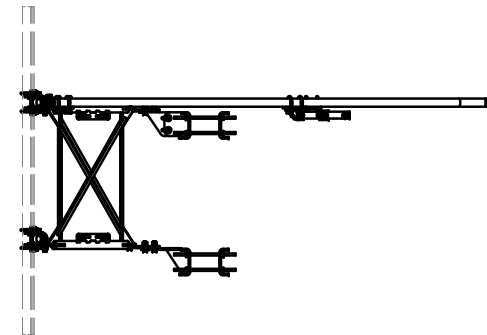
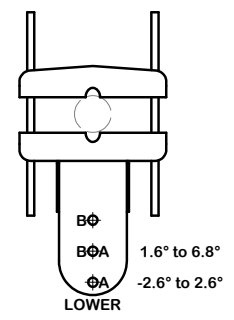
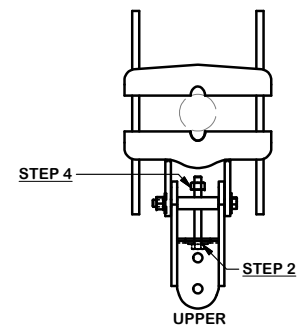
Locations:
 New York, NY
 Atlanta, GA
 Los Angeles, CA
 Plymouth, IN
 Salem, OR
 Dallas, TX

PART NO.	VFA12-HD
DWG. NO.	VFA12-HD



ANGLE CALIBRATING PROCEDURE:

1. MEASURE TOWER TAPER AND PICK LOWER BRACKET HOLE:
 - HOLE A = -2.6° TO 2.6°
 - HOLE B = 1.6° TO 6.8°
2. USE CALIBRATING BOLT TO ADJUST FRAME TO DESIRED TAPER
3. TORQUE LOCKING BOLTS TO 100 ft.-lbs.
4. ADVANCE LOCKING NUT TO POSITIONING PLATE, THEN TIGHTEN.



REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
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REVISION HISTORY				

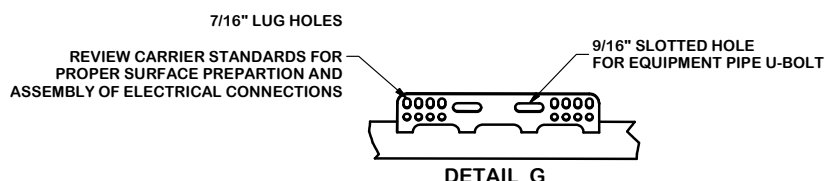
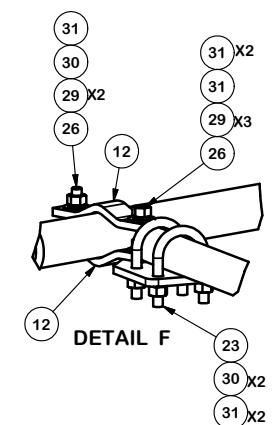
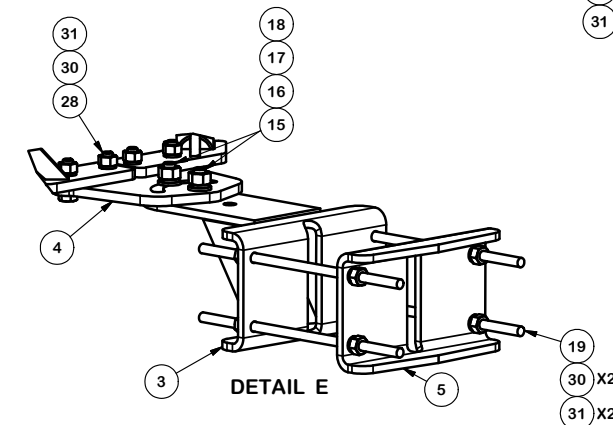
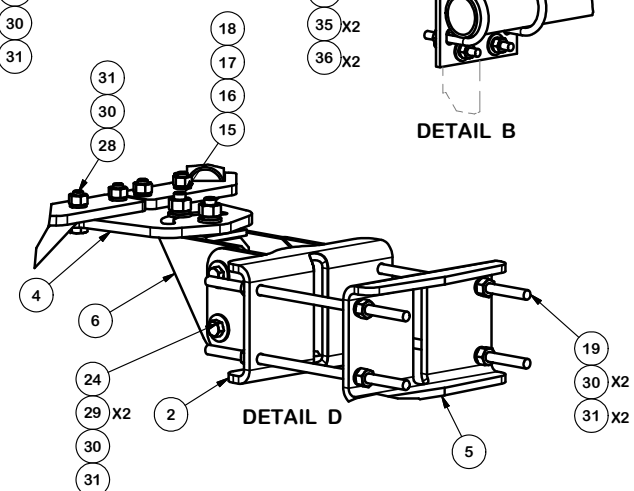
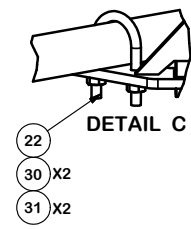
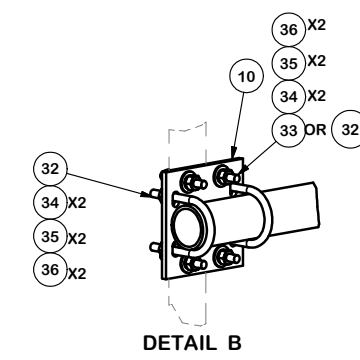
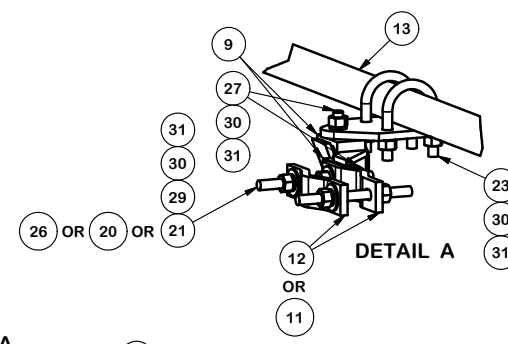
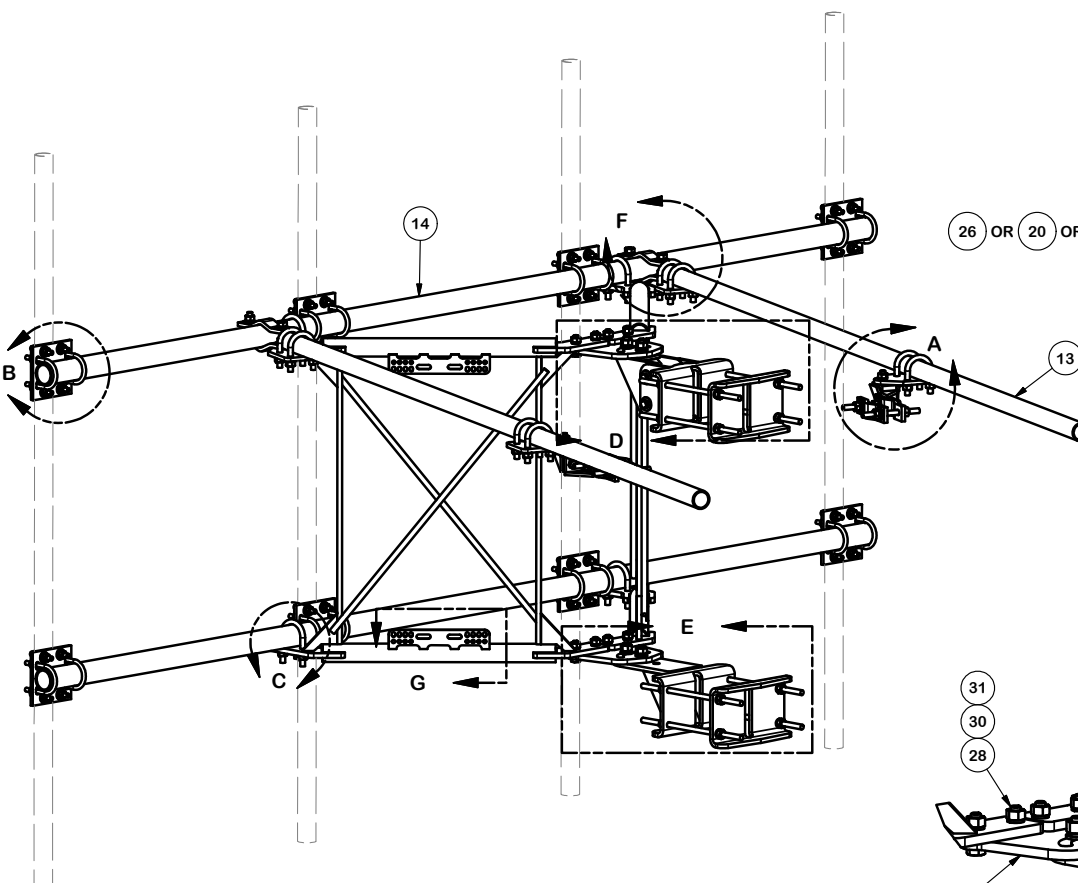
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DESCRIPTION		12' 6" HEAVY DUTY V-FRAME ASSEMBLY WITH TWO STIFF ARMS	
CPD NO.	DRAWN BY	ENG. APPROVAL	
	CEK 1/25/2017		
CLASS	SUB	DRAWING USAGE	CHECKED BY
81	02	CUSTOMER	BMC 12/13/2017

 A valmont COMPANY	Locations: New York, NY Atlanta, GA Los Angeles, CA Plymouth, IN Salem, OR Dallas, TX	
	Engineering Support Team: 1-888-753-7446	
PART NO.	VFA12-HD	PAGE 3 OF 5
DWG. NO.	VFA12-HD	



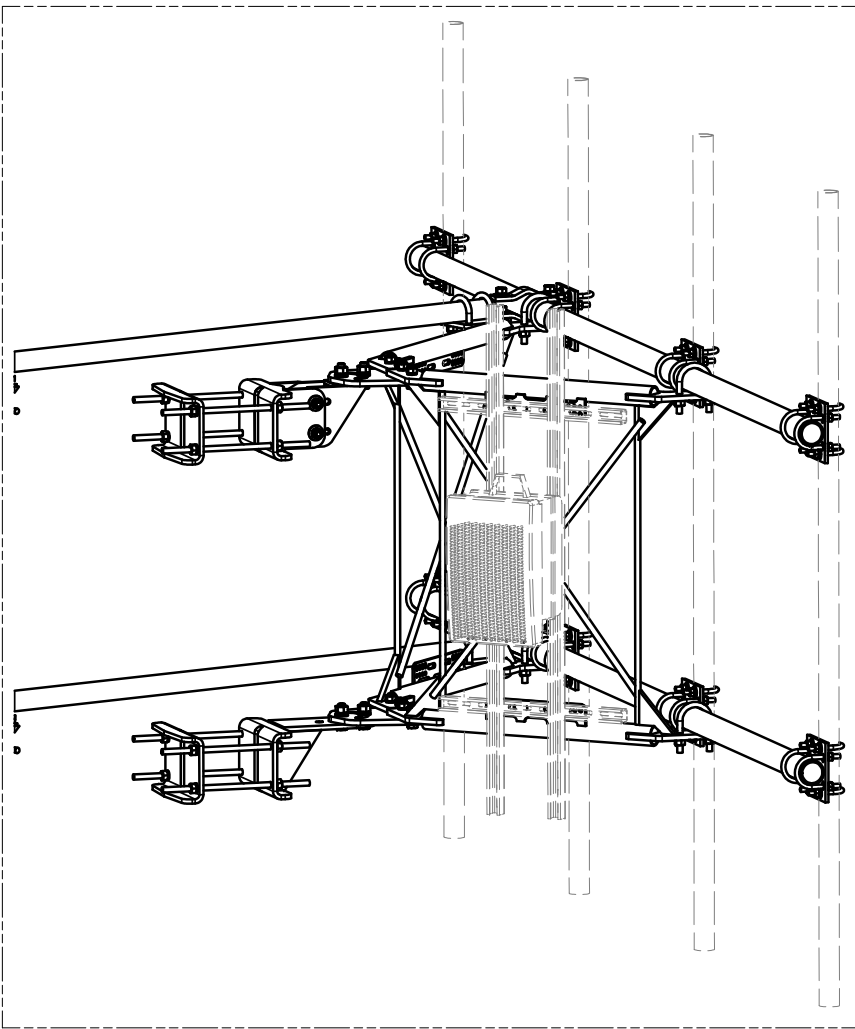
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REVISION HISTORY				

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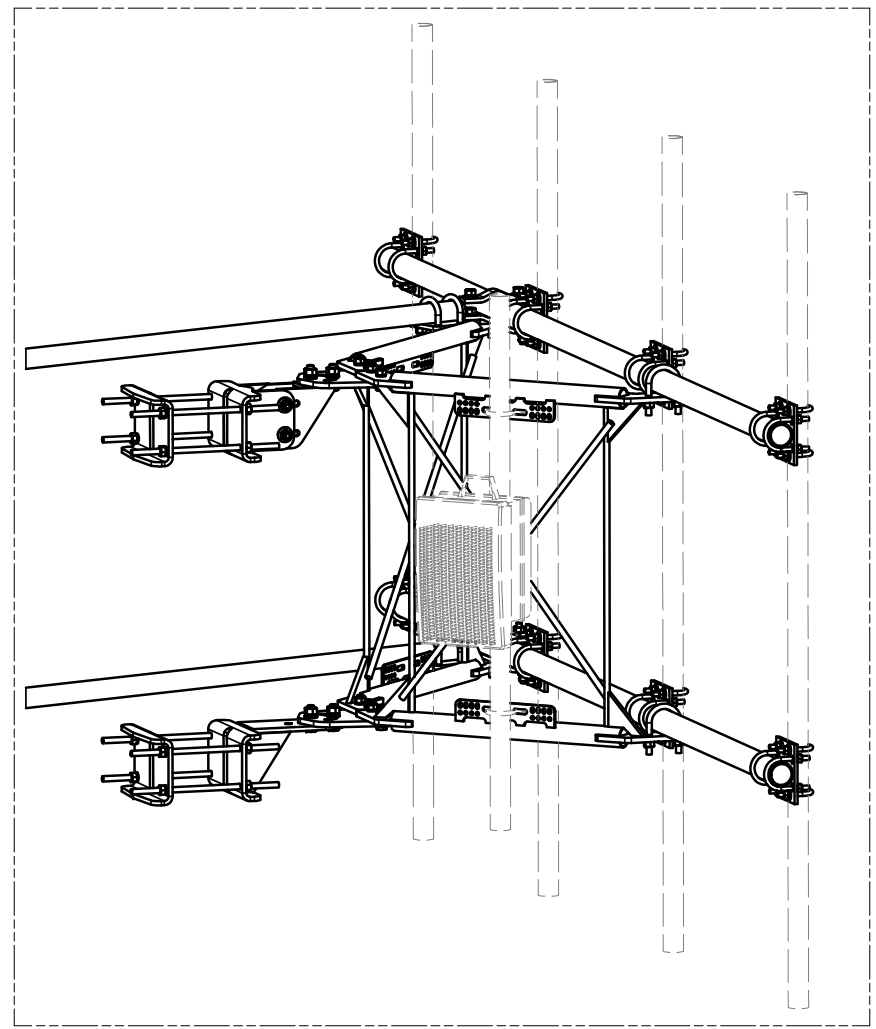
DESCRIPTION	
12' 6" HEAVY DUTY V-FRAME ASSEMBLY WITH TWO STIFF ARMS	
CPD NO.	DRAWN BY
	CEK 1/25/2017
CLASS	ENG. APPROVAL
81	BMC 12/13/2017
SUB	CHECKED BY
02	CUSTOMER

SITE PRO 1		Locations:	
Engineering Support Team: 1-888-753-7446		New York, NY Atlanta, GA Los Angeles, CA Plymouth, IN Salem, OR Dallas, TX	
PART NO.	VFA12-HD	DWG. NO.	VFA12-HD



UNISTRUT AND HARDWARE
SOLD SEPARATELY.

REQUIRES 3/8" HARDWARE



EQUIPMENT PIPE AND HARDWARE
SOLD SEPARATELY.

REQUIRES 1/2" HARDWARE
AND 2-3/8" TO 4-1/2" O.D. PIPE

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
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REVISION HISTORY				

TOLERANCE NOTES

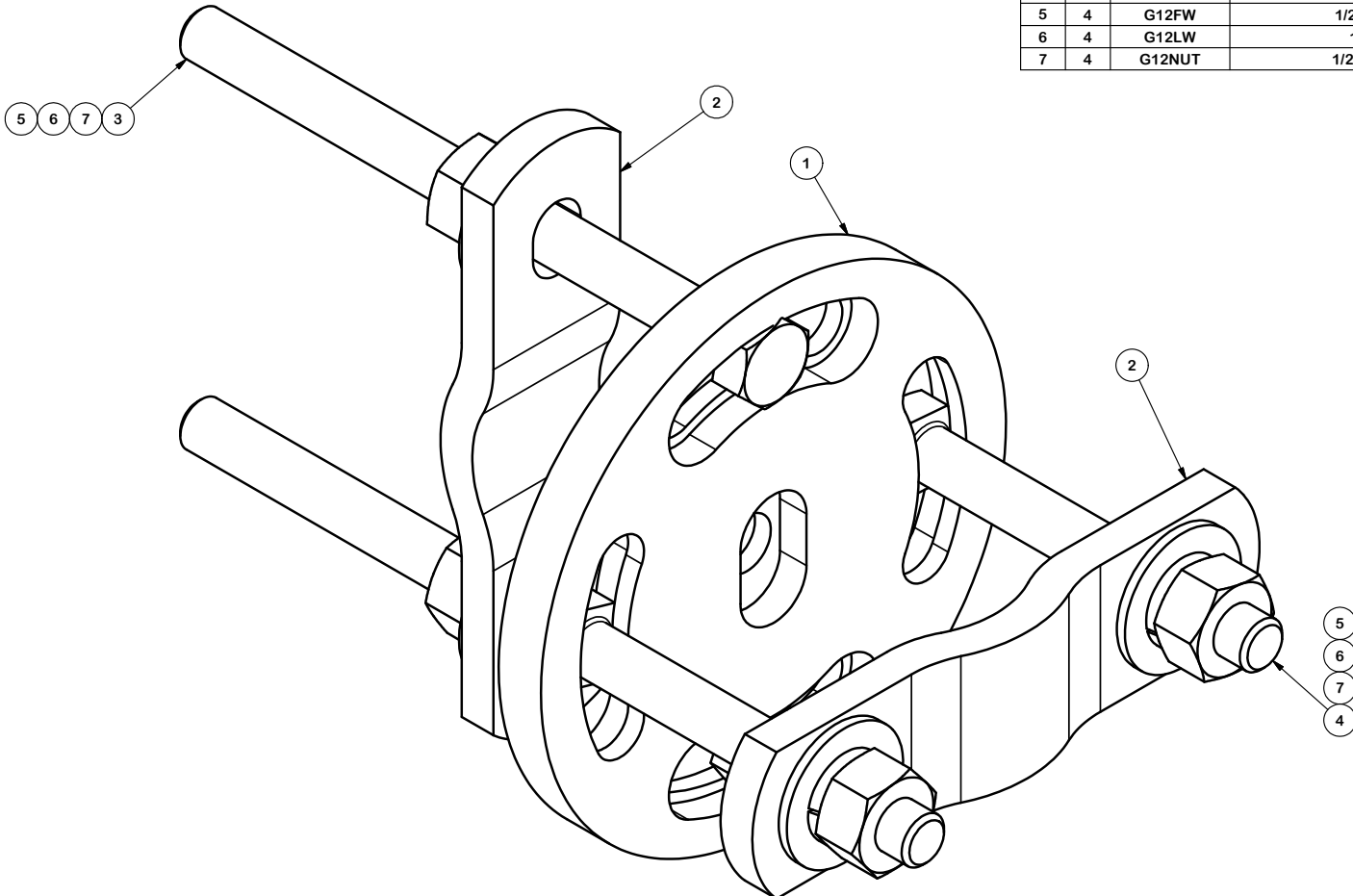
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DESCRIPTION
 12' 6" HEAVY DUTY
 V-FRAME ASSEMBLY
 WITH TWO STIFF ARMS

CPD NO.	DRAWN BY	ENG. APPROVAL
	CEK 1/25/2017	
CLASS	SUB	DRAWING USAGE
81	02	CUSTOMER
		CHECKED BY
		BMC 12/13/2017

 A valmont COMPANY	Engineering Support Team: 1-888-753-7446	Locations: New York, NY Atlanta, GA Los Angeles, CA Plymouth, IN Salem, OR Dallas, TX
	PART NO.	VFA12-HD
DWG. NO.	VFA12-HD	




PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	1	X-127594	FLAT DISK CLAMP PLATE 4" CENTERS (GALVANIZED)		2.48	2.48
2	2	X-100064	CLAMP (S) (4" V-CLAMP) GALVANIZED		0.91	1.83
3	2	G12065	1/2" x 6-1/2" HDG HEX BOLT GR5 FULL THREAD	6 1/2 in	0.41	0.82
4	2	G1204	1/2" x 4" HDG HEX BOLT GR5 FULL THREAD	4 in	0.27	0.54
5	4	G12FW	1/2" HDG USS FLATWASHER		0.03	0.14
6	4	G12LW	1/2" HDG LOCKWASHER		0.01	0.06
7	4	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	0.29
					TOTAL WT. #	6.16

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DESCRIPTION		ADJUSTABLE CLAMP PLATE TIE-BACK ASSEMBLY	
CPD NO.	DRAWN BY	ENG. APPROVAL	
	CEK 8/30/2010		
CLASS	SUB	DRAWING USAGE	CHECKED BY
81	01	CUSTOMER	BMC 9/1/2010

 A valmont COMPANY	Locations: New York, NY Atlanta, GA Los Angeles, CA Plymouth, IN Salem, OR Dallas, TX
	Engineering Support Team: 1-888-753-7446
PART NO.	PUCK
DWG. NO.	PUCK

Wind & Ice Loading

Nominal Mount Elevation (AGL), z_{mount}	130 ft	K_a	0.90
Nominal Rad Elevation (AGL), z_{rad}	130 ft	K_d	0.95
Elevation AMSL (ft)	303 ft	K_e	0.99
TIA Standard	H	K_z	1.07
Basic Wind Speed, V_{ult} (bare)	130 mph	K_{zt}	1.00
Basic Wind Speed, V (ice)	50 mph	K_s	1.00
Design Ice Thickness, t_i	1 in	t_{iz}	1.15 in
Exposure Category	B	G_h	1.00
Risk Category	II	q_z (bare)	43.3 psf
Seismic Response Coeff., C_s	-	q_z (ice)	6.4 psf

Live Loading

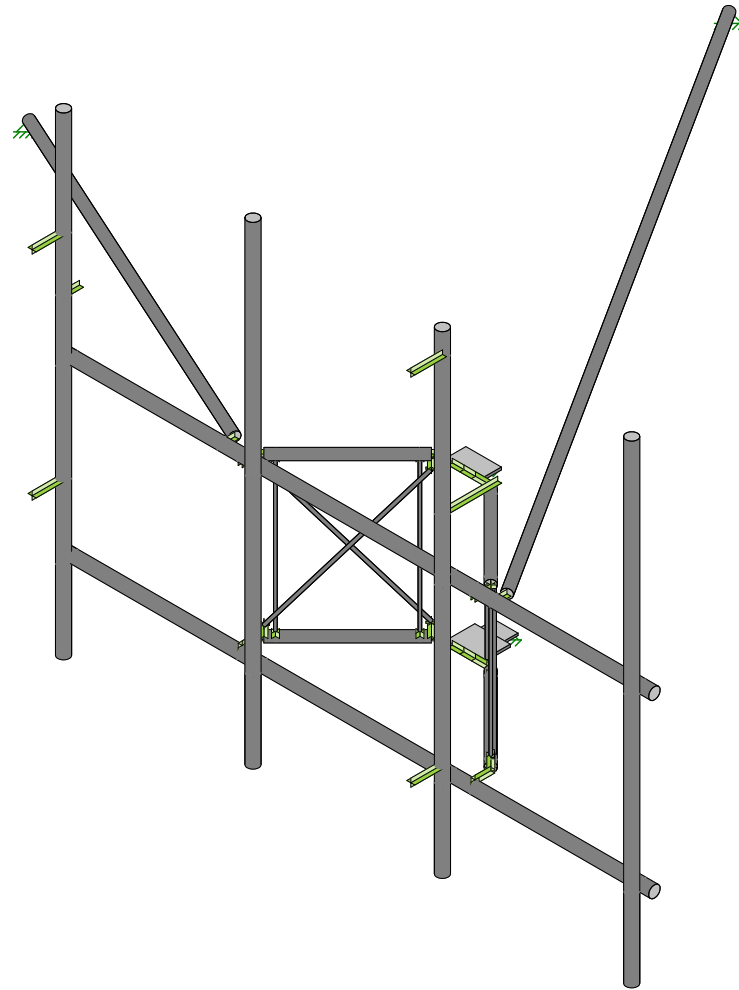
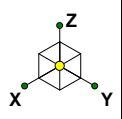
At Mount Pipes, L_M	500 lb
Joint Labels Considered	m1
	m2
	m3
	m4

Member Distributed Loading

Section Set Label	Shape Label	F_A (lb/ft)		Ice Wt. (lb/ft)
		Bare	Ice	
Front Horizontal	PIPE_2.5	11.20	2.98	5.64
Mount Pipe	PIPE_2.5	11.20	2.98	5.64
VFA-HD Pivot PL	PL5/8x9	58.46	6.52	10.19
Stiff Arm	PIPE_2.0	9.26	2.69	4.94
V-Frame Diagonal	.75 Dia.	2.92	1.75	2.66
V-Frame Horizontal	PIPE_2.0	9.26	2.69	4.94
V-Frame Vertical	.625 Dia._HRA	2.44	1.68	2.48
Taper PL	PL1/2x6	38.97	4.79	7.41

Appurtenances

Appurtenance Model	Status	Azimuth Offset (°, °)	Rad Elev. Override (ft)	Swap Width & Depth	Area Factor		Qty.	Total Qty. Override	0° Joints		Height (in)	Width (in)	Depth (in)	Weight (Bare) (lb)	Shape	Weight of Ice (lb)	EPA_A (Bare) (ft²)		EPA_A (Ice) (ft²)		F_A (Bare) (lb)		F_A (Ice) (lb)		
					Front	Side			0°	1							2	N	T	N	T	N	T	N	T
					RR90-17-02DP												<input type="checkbox"/>			1	3	A3	A4	56	8
APXVAARR24_43-U-NA20				<input type="checkbox"/>			1	3	A1	A2	0	0	0	153.3	Generic	258.27	14.67	5.32	16.41	6.86	571.71	207.33	94.62	39.53	
KRY 112 489/2				<input checked="" type="checkbox"/>		0.5	1	3	T		11	6.1	3.94	15.4	Flat	11.64	0.37	0.28	0.69	0.46	14.23	10.90	3.98	2.68	
KRY 112 144/1				<input checked="" type="checkbox"/>		0.5	1	3	T		7	6	3	11	Flat	7.29	0.18	0.18	0.41	0.32	6.82	6.82	2.36	1.85	
RADIO 4449 B12/B71				<input type="checkbox"/>	0.6		1	3	R		15	13.2	10.4	75	Flat	39.47	0.99	1.30	1.34	1.83	38.58	50.66	7.72	10.55	

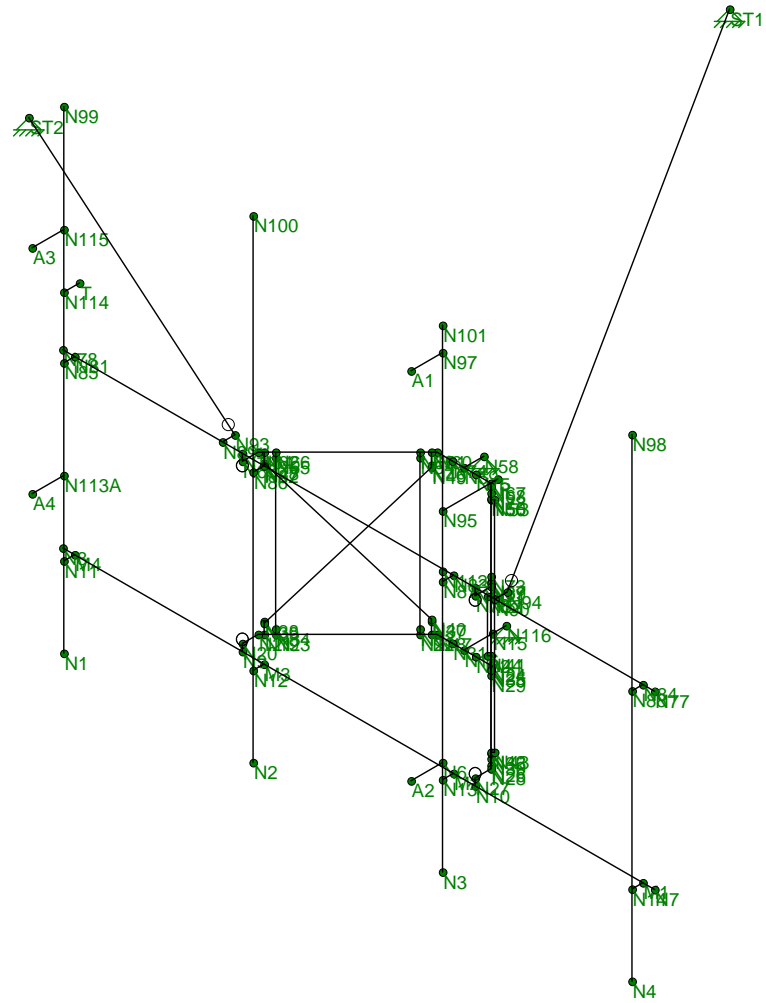
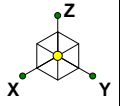


Envelope Only Solution

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41124-12927180-01-MR

41124-12927180-North Madison Volunteer FD
Rendered

SK - 1
June 5, 2019 at 7:50 PM
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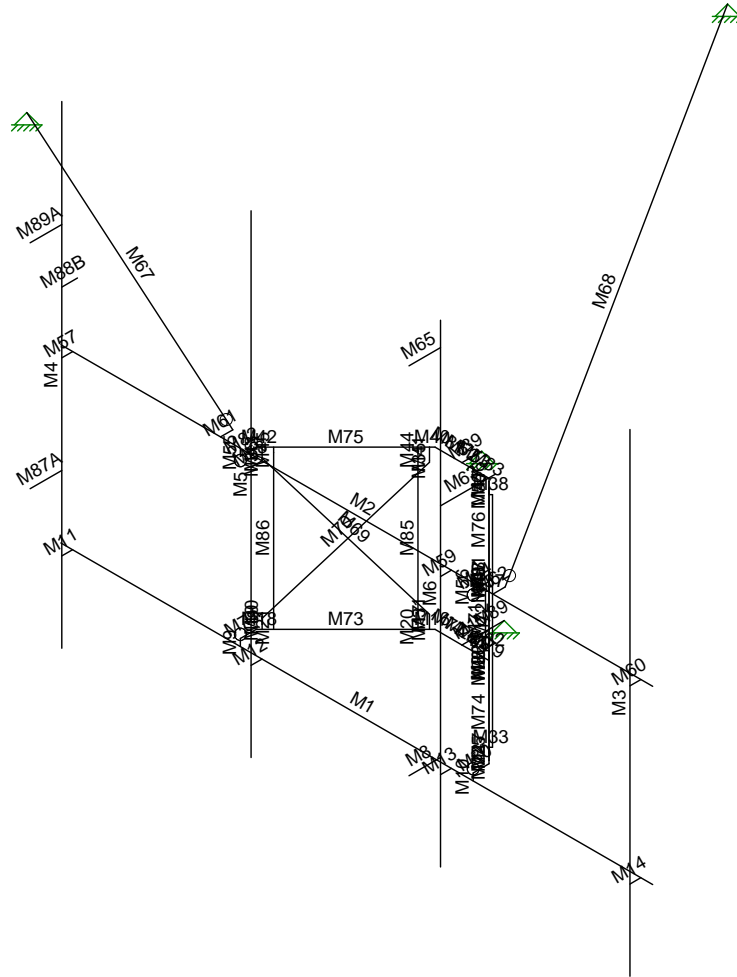
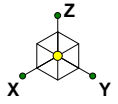


Envelope Only Solution

CLS
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41124-12927180-North Madison Volunteer FD
Joint Labels

SK - 2
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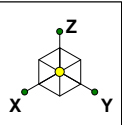


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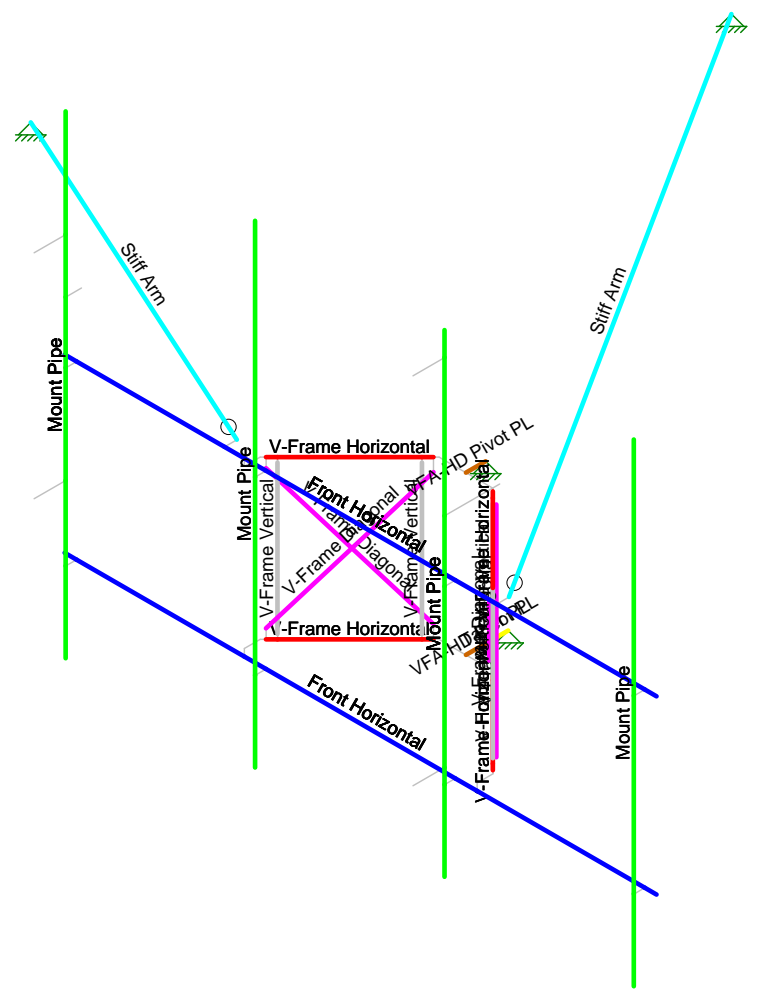
CLS
SRP
41124-12927180-01-MR

41124-12927180-North Madison Volunteer FD
Member Labels

SK - 3
June 5, 2019 at 7:50 PM
41124-12927180-01-MR.r3d



- Section Sets
- Front Horizontal
 - Mount Pipe
 - V-Frame Horizontal
 - V-Frame Vertical
 - V-Frame Diagonal
 - Stiff Arm
 - VFA-HD Pivot PL
 - Taper PL
 - RIGID

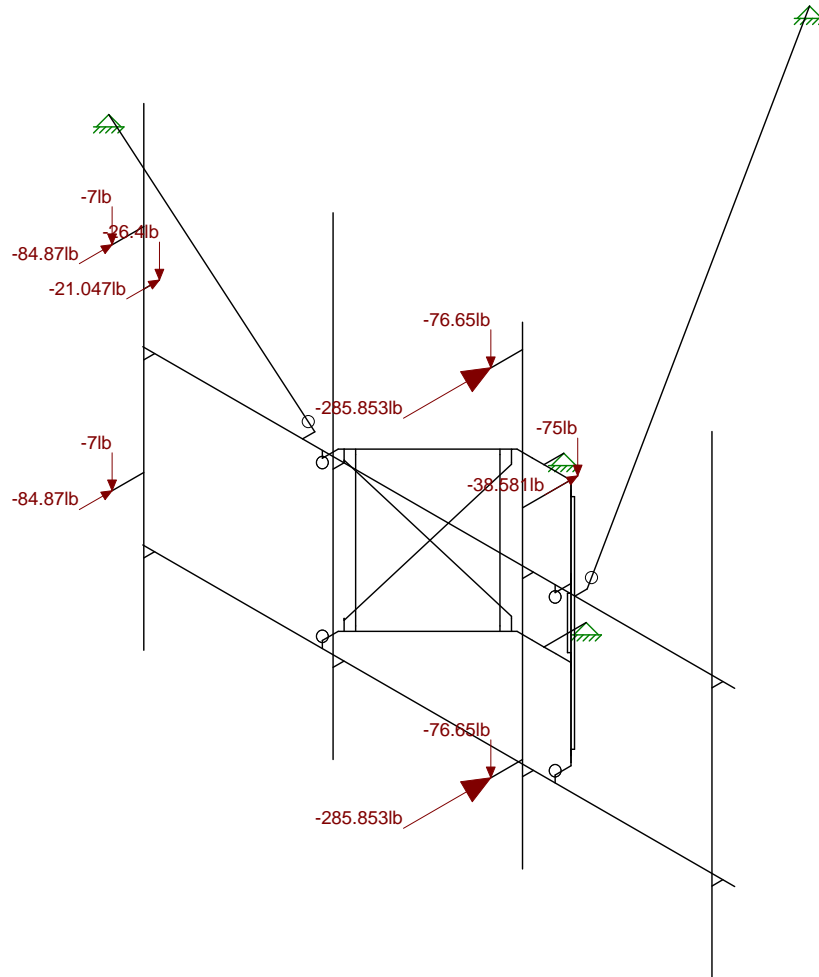
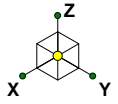


Envelope Only Solution

CLS
SRP
41124-12927180-01-MR

41124-12927180-North Madison Volunteer FD
Section Sets

SK - 4
June 5, 2019 at 7:51 PM
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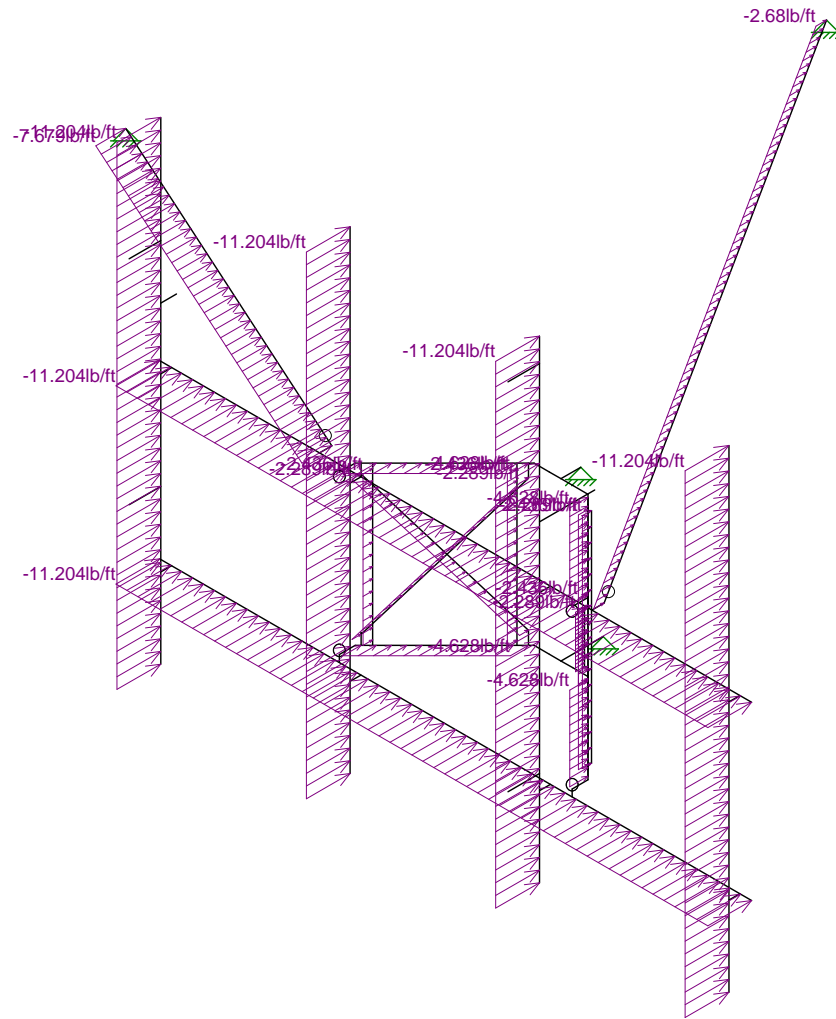
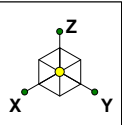


Loads: LC 1, DISPLAY (1.0D + 1.0W_0°)
Envelope Only Solution

CLS
SRP
41124-12927180-01-MR

41124-12927180-North Madison Volunteer FD
Joint Loads - Dead and Normal Wind

SK - 5
June 5, 2019 at 7:51 PM
41124-12927180-01-MR.r3d

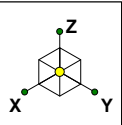


Loads: BLC 4, Structure Wind 0°
Envelope Only Solution

CLS
SRP
41124-12927180-01-MR

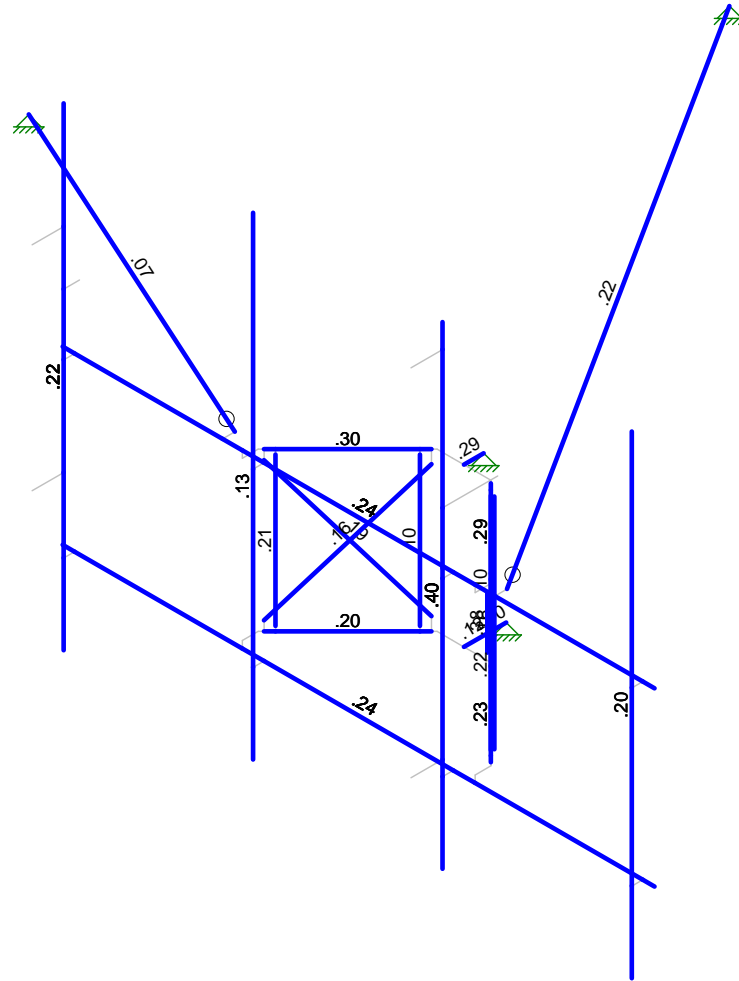
41124-12927180-North Madison Volunteer FD
Distributed Load - Normal Wind

SK - 6
June 5, 2019 at 7:51 PM
41124-12927180-01-MR.r3d



Code Check
(Env)

- No Calc
- > 1.0
- .90-1.0
- .75-.90
- .50-.75
- 0-.50

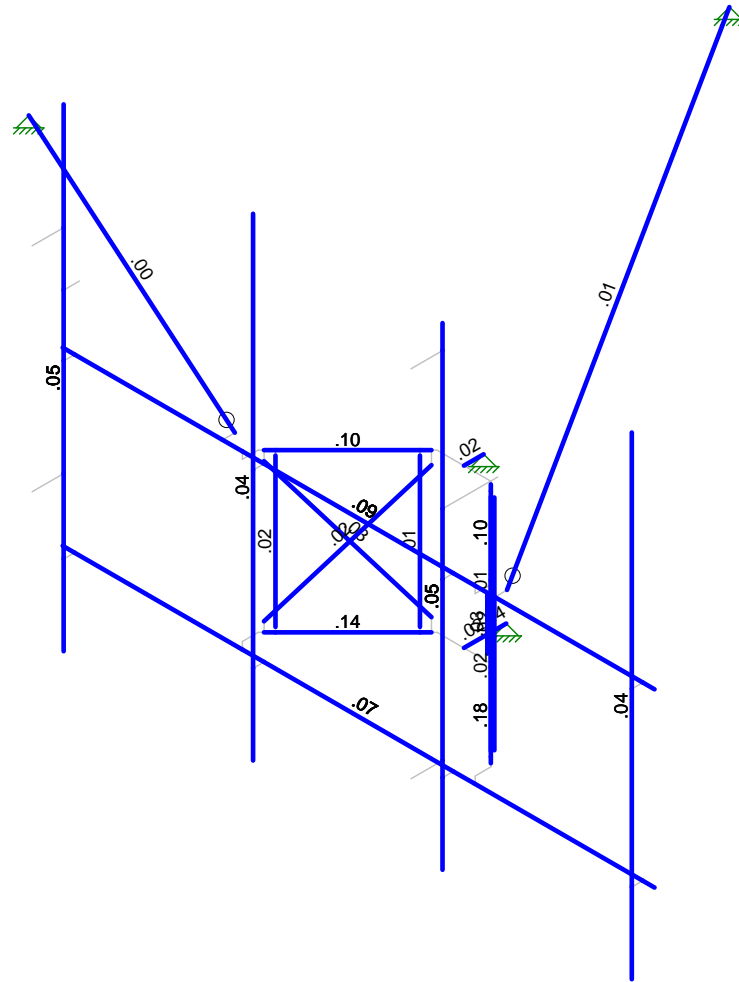
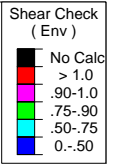
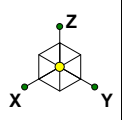


Member Code Checks Displayed (Enveloped)
Envelope Only Solution

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41124-12927180-01-MR

41124-12927180-North Madison Volunteer FD
Envelope Member Unity Check Results - Bending

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June 5, 2019 at 7:51 PM
41124-12927180-01-MR.r3d



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

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41124-12927180-01-MR

41124-12927180-North Madison Volunteer FD
Envelope Member Check Results - Shear

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June 5, 2019 at 7:51 PM
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Exhibit F

Power Density/RF Emissions Report



RADIO FREQUENCY EMISSIONS ANALYSIS REPORT EVALUATION OF HUMAN EXPOSURE POTENTIAL TO NON-IONIZING EMISSIONS

T-Mobile Existing Facility

Site ID: CT11394A

North Madison
864 Opening Hill Road
Madison, Connecticut 06443

May 29, 2019

EBI Project Number: 6219001919

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	11.26%

May 29, 2019

T-Mobile

Attn: Jason Overbey, RF Manager
35 Griffin Road South
Bloomfield, Connecticut 06002

Emissions Analysis for Site: CT11394A - North Madison

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **864 Opening Hill Road in Madison, Connecticut** for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The number of $\mu\text{W}/\text{cm}^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits; therefore, it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general population may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general population would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The general population exposure limits for the 600 MHz and 700 MHz frequency bands are approximately $400 \mu\text{W}/\text{cm}^2$ and $467 \mu\text{W}/\text{cm}^2$, respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 11 GHz frequency bands is $1000 \mu\text{W}/\text{cm}^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed T-Mobile Wireless antenna facility located at 864 Opening Hill Road in Madison, Connecticut using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was focused at the base of the tower. For this report, the sample point is the top of a 6-foot person standing at the base of the tower.

For all calculations, all equipment was calculated using the following assumptions:

- 1) 2 LTE channels (600 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 2) 2 LTE channels (700 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 3) 4 GSM channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 4) 2 LTE channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.
- 5) 2 LTE channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.

- 6) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 7) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 8) The antennas used in this modeling are the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s) in Sector A, the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s) in Sector B, the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s) in Sector C. This is based on feedback from the carrier with regard to anticipated antenna selection. All Antenna gain values and associated transmit power levels are shown in the Site Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 9) The antenna mounting height centerline of the proposed antennas is 130 feet above ground level (AGL).
- 10) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.
- 11) All calculations were done with respect to uncontrolled / general population threshold limits.

T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	I	Antenna #:	I	Antenna #:	I
Make / Model:	RFS APXVAARR24_43-U-NA20	Make / Model:	RFS APXVAARR24_43-U-NA20	Make / Model:	RFS APXVAARR24_43-U-NA20
Frequency Bands:	600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz
Gain:	12.95 dBd / 13.35 dBd / 15.65 dBd / 15.65 dBd / 16.35 dBd	Gain:	12.95 dBd / 13.35 dBd / 15.65 dBd / 15.65 dBd / 16.35 dBd	Gain:	12.95 dBd / 13.35 dBd / 15.65 dBd / 15.65 dBd / 16.35 dBd
Height (AGL):	130 feet	Height (AGL):	130 feet	Height (AGL):	130 feet
Channel Count:	12	Channel Count:	12	Channel Count:	12
Total TX Power (W):	480 Watts	Total TX Power (W):	480 Watts	Total TX Power (W):	480 Watts
ERP (W):	16,474.09	ERP (W):	16,474.09	ERP (W):	16,474.09
Antenna AI MPE %:	4.20%	Antenna BI MPE %:	4.20%	Antenna CI MPE %:	4.20%

Site Composite MPE %	
Carrier	MPE %
T-Mobile (Max at Sector A):	4.20%
Verizon	2.37%
Fire Company	0.06%
Police Department	0.04%
AT&T	1.79%
Sprint	2.56%
Nextel	0.24%
Site Total MPE % :	11.26%

T-Mobile Sector A Total:	4.20%
T-Mobile Sector B Total:	4.20%
T-Mobile Sector C Total:	4.20%
Site Total:	11.26%

T-Mobile Maximum MPE Power Values (Sector A)							
T-Mobile Frequency Band / Technology (Sector A)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu\text{W}/\text{cm}^2$)	Frequency (MHz)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	Calculated % MPE
T-Mobile 600 MHz LTE	2	591.73	130.0	2.52	600 MHz LTE	400	0.63%
T-Mobile 700 MHz LTE	2	648.82	130.0	2.76	700 MHz LTE	467	0.59%
T-Mobile 1900 MHz GSM	4	1101.85	130.0	9.38	1900 MHz GSM	1000	0.94%
T-Mobile 1900 MHz LTE PCS	2	2203.69	130.0	9.38	1900 MHz LTE PCS	1000	0.94%
T-Mobile 2100 MHz LTE AWS	2	2589.11	130.0	11.02	2100 MHz LTE AWS	1000	1.10%
						Total:	4.20%

• NOTE: Totals may vary by approximately 0.01% due to summation of remainders in calculations.

Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general population exposure to RF Emissions.

The anticipated maximum composite contributions from the T-Mobile facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

T-Mobile Sector	Power Density Value (%)
Sector A:	4.20%
Sector B:	4.20%
Sector C:	4.20%
T-Mobile Maximum MPE % (Sector A):	4.20%
Site Total:	11.26%
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **11.26%** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.

Exhibit G

Mailing Receipts/Proof of Notice

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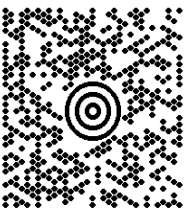



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NEIL GUERRIERO 3473040176 TRANSCEND WIRELESS 10 INDUSTRIAL AVE MAHWAH NJ 07430	1.0 LBS LTR 1 OF 1	SHIP TO: DAVID ANDERSON, TOWN PLANNER TOWN OF MADISON 8 CAMPUS DRIVE MADISON TOWN CAMPUS MADISON CT 06443-2562	 CT 065 2-03 	UPS 2ND DAY AIR TRACKING #: 1Z V25 742 02 9904 8296 2		BILLING: P/P Reference#1: CT11394A Reference#2: Planner  UPS 21.5.24- WNTNVS0 15.04.07/2019
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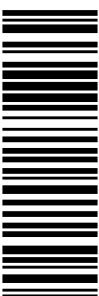
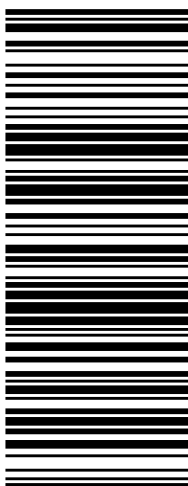

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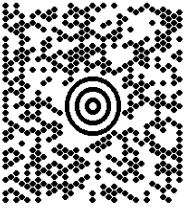
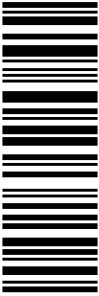
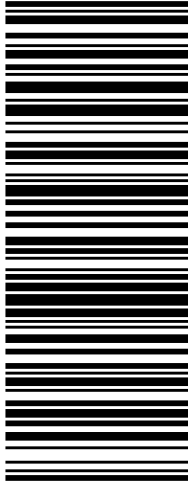

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NEIL GUERRIERO 3473040176 TRANSCEND WIRELESS 10 INDUSTRIAL AVE MAHWAH NJ 07430	1.0 LBS LTR 1 OF 1	SHIP TO: TOM BANISCH, FIRST SELECTMAN TOWN OF MADISON 8 CAMPUS DRIVE MADISON TOWN CAMPUS MADISON CT 06443-2562	 CT 065 2-03 	UPS 2ND DAY AIR TRACKING #: 1Z V25 742 02 9745 8285 2		BILLING: P/P Reference#1: CT11394A Reference#2: Mayor  UPS 21.5.24. WNTNVS0 15.04.07/2019
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<p>NEIL GUERRIERO 3473040176 TRANSCEND WIRELESS 10 INDUSTRIAL AVE MAHWAH NJ 07430</p> <p>SHIP TO: NORTH MADISON VOLUNTEER FIE DEPT 864 OPENING HILL RD MADISON CT 06443-8202</p>	<p>1.0 LBS LTR 1 OF 1</p> <p>CT 065 2-03</p>  	<p>UPS 2ND DAY AIR 2</p> <p>TRACKING #: 1Z V25 742 02 9565 8303</p>		<p>BILLING: P/P</p> <p>Reference#1: CT11394A Reference#2: LL</p>  <p>UPS 21.5.24- WNTNVS0 15.04.07/2019</p>
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